CITY/ECOLOGY DEVELOPMENT REVIEW CHECKLIST

All documents submitted to the City associated with proposed development at the Landfill Site must be reviewed for compliance with environmental requirements of the Cleanup Action Plan. The following checklist summarizes environmental requirements for each type of development component and provides a means of highlighting pertinent documentation and tracking City and Ecology reviews. Attach additional pages, as necessary.

Name of Document(s) Under Review: Everett Riverfront Site Building C Permit Plan Set

Received From: Shelter Holdings, Perteet, Weisman Design Group, CT Engineering, Robison Engineering, Herrera, Building Envelope Engineering

Name of City Reviewer: Jeff Gabster, PE

Date Received for City Review: 03/21/2024 **Date City Review Completed**: 04/26/2024

City Review Summary and Requested Action: The City's review finds this submittal in compliance with Consent Decree requirements, and the City requests Washington State Department of Ecology (Ecology) concurrence of this finding.

This plan set is for Everett Riverfront Building C, the third of five buildings planned as part of Phase 1 and Phase 2 development. Phase 1 and 2 development is proceeding west of Riverfront Boulevard. Phase 1, including mixed-use Buildings A and B, a dog park, plaza, and associated parking areas, landscaping, and utilities, is complete. Phase 2 is planned to include two more mixed-used buildings, an entertainment venue, and additional associated parking areas, landscaping, and utilities.

Building C is a six-story mixed-use building of wood framing over structural concrete construction. The first floor includes several commercial/retail spaces, storage, community rooms, central lobby, and equipment rooms. Floors 2 through 6 are primarily residential in nature. The design also includes an amenity rooftop deck.

The attached Building C plan set includes drawings and notes regarding all architectural, structural, mechanical, electrical, plumbing, and landfill gas management design components for the 168-unit mixed-use apartment building. The plan set also includes landscaping plans for the immediate area around the building and details depicting building utility connections to service lines installed as part of Phase 1 and 2 Site Work, which addresses utilities and developed area cover outside the Building C footprint. The Phase 1 and 2 Site Work plans were previously reviewed for Consent Decree compliance and approved by Ecology; Phase 1 site work is complete, while Phase 2 site work is ongoing and will be completed concurrently with Building C construction.

Address of Property: 3710 Riverfront Blvd., Everett, WA 98203.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
General Layout		
Phased development areas.	The Site may be developed in several separate projects or phases, depending on Site ownership and project plans. In that event, the phases shall be adjacent to Site boundaries and to prior phases, allowing CAP requirements to be fully operational and effective for each phase and in total. Special consideration shall be given to landfill gas system boundary conditions. Access will be controlled during development to maintain separation between developed and undeveloped areas of the landfill, and to prevent damage to environmental systems from subsequent construction.	The Riverfront Development Project consists of developing the now-complete Riverfront Boulevard through the site and several mixed-use buildings with a central entertainment venue and other site amenities on top of an existing landfill. The overall site is approximately 44 acres and is planned to eventually include eight mixed-use buildings. The project will occur in multiple phases, beginning with construction of Riverfront Boulevard and associated utilities. Phase 1 is located west of Riverfront Boulevard, north of 41st Street and is now complete, including two mixed-use buildings (Buildings A and B) and associated site preparation, utilities, parking area, and landscaping. Phase 2 will be constructed west of Riverfront Boulevard from the Phase 1 area north to 36th Street. This checklist has been prepared for Everett Riverfront Building C, the first of two mixed-use buildings planned as part of Phase 2 development. Existing site access control described under prior plan set submittals for Riverfront Boulevard, Advanced Site Work, and Phase 1 and 2 Site Work will restrict public access to any undeveloped portions of the landfill, as noted on Building C plan set Sheet G003.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Construction Disruption		
Site re-grading including cut and fill magnitudes typical for an urban redevelopment site. Assume regrading could encounter refuse, and perched groundwater. Subsurface excavation for utilities and structures. Import and export of soils, potential localized refuse removal, and stockpiling.	Dust and odor controls during construction – During Site construction activities, dust and odor controls would be required to prevent migration of materials outside the construction zone at levels of concern. These measures will include daily cover of any exposed waste, and could include localized wetting, application of suppressant foams, or use of temporary cover materials. Stormwater management – Erosion controls using best management practices, as necessary, in accordance with the City of Everett's Stormwater Management Manual and provisions of a NPDES permit for construction sites greater than five acres, as applicable. Run-on controls to prevent run-on of surface water onto exposed landfilled materials. Direct contact controls – Health and safety requirements for construction crews, to be triggered if construction occurs below the elevation of the clean soil cap. Construction dewatering procedures – Excavation construction for future potential development will likely encounter perched groundwater in portions of the waste. This water must be assumed contaminated and handled accordingly. Pumped dewatering water could be discharged into the leachate collection system provided it is approved by City Industrial Pretreatment Program. Or, the water could be stored in mobile tanks, tested for contaminants and disposed of accordingly. Construction performance monitoring and inspection – During Site construction activities, inspections for adequate perimeter dust controls, erosion controls, and dewatering and odor controls are required. On-site construction oversight by a health and safety professional or inspector is required of all applicable development activities as described in the CMCP. Controlled on-site relocation and re-capping of excavated refuse during construction activities is allowed. Location and quantities will be approved prior to excavation. As necessary, excavated refuse could also be disposed off-site in an active municipal landfill. Following construction, all developed areas of the landfill must be covered with pavement, buildings, or clean soil underlain by hydraulic barrier.	Rough site grading for Building C is described under the Phase 1 and 2 Site Work Submittals. Grading for construction of Building C is not expected to encounter refuse or perched water. Environmental requirements related to Building C construction disruption will be met through the measures described below: • Dust and Odor Control: Fugitive dust monitoring and proposed measures for odor control are described on Sheet G003. • Construction Stormwater Management: Erosion and Sediment Controls related to Phase 1 and 2 buildings and parking lots are described under the Phase 1 and 2 Site Work plan set and associated Stormwater Pollution Prevention Plan (SWPPP; Shelter 2019). • Direct Contact Controls: Health and safety requirements for direct contact are described in detail in the previously submitted project Health and Safety Plan (HASP; Rose Environmental 2019). • Construction Dewatering Procedures: Perched water is not anticipated to be encountered during this phase of work. If encountered, groundwater will be handled as leachate, as described in Section 3.3 of the previously provided Landfill Gas Collection System Engineering Design Report (Herrera 2019) and on Phase 1 and 2 Site Work plan set Sheet NT2. • Construction Performance Monitoring and Inspection: On-site performance monitoring will be conducted by designated health and safety and stormwater professionals, per the site HASP and SWPPP (Rose Environmental 2019; Shelter 2019). • Controlled On-Site Relocation and Re-Capping of Excavated Refuse: Not applicable to Building C plan set. If refuse is encountered, the construction team will follow refuse relocation plan shown on Drawing RP1 of the Phase 1 and 2 Site Work plan set. • Final Developed Cover: Entire area of development to be covered by building and cantilevered sidewalk. Areas outside of building and sidewalk footprint are included in the Phase 1 and 2 Site Work plan set.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Temporary Facilities, Operations and Hydraulic Control		
	Describe and acknowledge temporary leachate collection system, gas collection system and stormwater. Maintain hydraulic control of shallow aquifer.	Hydraulic control of the shallow aquifer is maintained by the perimeter leachate collection system. No modifications to the perimeter leachate collection system are included in this phase of work. Temporary gas controls are not required for this phase of work. Construction stormwater management facilities will not allow for infiltration.
Site Infrastructure		
Water lines.	Utility trenches or corridors below developed area cover elevation will be lined with a geotextile and backfilled with clean soil, to allow maintenance without additional health and safety requirements for contaminated materials. Construction methods and materials to accommodate expected settlements are required. Seal entry into buildings or enclosed structures including utility manholes/vaults to prevent landfill gas leaks. Backfill trench with low permeability soil where utility line leaves property.	Building domestic water and fire water supply plans and details are provided on Sheets P0.00 through P7.03. Water lines up to the building apron are grade-supported and shown in the Phase 1 and 2 Site Work plan set. Water enters the building through a 6-inch-diameter domestic water supply and a 6-inch-diameter fire water supply (Sheet P2.00N). The water supply lines are constructed of soldered copper piping (Sheet P0.01). Pipe penetrations through building slab and landfill gas (LFG) liner will be booted and sealed per Sheet LFG1C2, detail 3. Water lines will be hung under the building slab with hangers at 4-foot spacing (Sheet P7.03, detail 1). Per Section 4.6.2 of the Geotechnical Engineering Report for Phase 2, flexible utility connections designed to tolerate rotation and elongation of up to 30 inches will be used at the connection to the building, where the utility transitions from grade-supported to pile-supported (HWA 2021). A flexible ball joint connection will be used at this transition (Drawing A750, detail 7).

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Sanitary sewer lines.	For sanitary sewer and storm drainage systems, watertight manholes using gasketed riser sections and rubber boot connections are recommended. HDPE piping is recommended. Additional measures to mitigate settlement include flexible telescoping sleeves and flexible connections at vaults and interfaces with buildings, and pipe hangers beneath pile supported structures. Seal entry into buildings or manholes to prevent landfill gas leaks. Backfill trench with low permeability soil where utility line leaves property.	Building sanitary sewer plans and details are provided on Sheets P0.00 through P7.03. Building C sanitary sewer will discharge to a grade-supported high-density polyethylene (HDPE) sanitary sewer line that will be constructed along the west side of the building as part of the previously approved Phase 2 site work (refer to Phase 1 and 2 Site Work plan set, Sheets SS1-SS2). The Building C sewer system is schedule 80 solid-core polyvinyl chloride (PVC). Pipe penetrations through building slab and LFG liner will be booted and sealed per Sheet LFG1C2, detail 3. The sewer lines will be hung under the building slab with hangers at a minimum of 4-foot spacing. Pipe hangers are shown on Drawing P7.03, detail 1. Per Section 4.6.2 of the Geotechnical Engineering Report for Phase 2, flexible utility connections designed to tolerate rotation and elongation of up to 30 inches will be used at the connection to the building, where the utility transitions from grade-supported to pile-supported (HWA 2021). A flexible ball joint connection will be used at this transition (Drawing A750, detail 7).

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Site Infrastructure (cont.)		
Storm sewer lines.	Stormwater will not be allowed to infiltrate into the landfill. Measures described above for sanitary sewer and storm drainage systems will be taken. All stormwater will be collected for off-site discharge. Seal entry into catch basins and manholes to prevent landfill gas leaks. Backfill trench with low permeability soil where utility line leaves property.	Building stormwater plans and details are provided on Sheets P0.00 through P7.03. Storm drain facilities outside of the building footprint are included in the Phase 1 and 2 Site Work plan set. Roof drains collect stormwater (Sheets P2.07N and P2.07S), which is conveyed through a tight line pipe system to storm drain facilities via booted penetrations through the floor slabs (Sheets P2.00N through P2.06S). Per Section 4.6.2 of the Geotechnical Engineering Report for Phase 2, flexible utility connections designed to tolerate rotation and elongation of up to 30 inches will be used at the connection to the building, where the utility transitions from grade-supported to pile-supported (HWA 2021). A flexible ball joint connection will be used at this transition (Drawing A750, detail 7). Exterior sidewalk surfaces are sloped to convey surface water runoff away from the building and toward drainage facilities (Sheet A750, detail 10).
Manholes and maintenance access.	Vaults will be designed with water and gas tight joints and will be clearly labeled for necessary confined space entry procedures per gas pathway requirements.	Neither manholes nor vaults are applicable to the plan set. Elevator pits and sumps will be lined with a composite membrane (Sheet LFG1C5, details 1–3; membrane specifications provided on Sheet LFG1C3). Composite boots will be utilized for all penetrations through the building membrane (Sheet LFG1C2, details 2–4). Composite membrane exterior edges will be constructed with reinforcement (Sheet LFG1C2, detail 1) and for exterior membranes constructed below the building concrete slab, will be overlapped 12 inches with adjacent membrane components or attached to the structure with a terminal batten strip (Sheet LFG1C5, details 1–3).

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Site Infrastructure (cont.)		
Electrical, telephone and gas lines.	For electric, telephone, and natural gas systems, settlement can be accommodated by the use of additional wire lengths or flexible piping. Light fixtures and similar features shall either be finished above the underlying gas barrier or, if penetrating the gas barrier, be internally sealed and booted to the barrier layer to preclude intrusion of landfill gas. Seal conduit at building entry to prevent landfill gas leaks. Ensure interior of conduit is sealed as well.	Power and electrical lines are described in Section 3.4.7 of the LFG report. Power supply into the building cabinets will be sealed, yet will allow for the vertical portion of conduits to settle with soils/refuse below slabs. Settlement pull boxes with excess cable and raceway lengths will be used. Electrical and communication settlement pull boxes are shown on Sheets EFC9 through EFC12. Vertical sleeves for slab penetrations are detailed on Sheet LFG1C2, detail 4. Natural gas lines within the building are shown on Sheets P2.01N and P2.06S and diagrammed on Sheet P5.01. Natural gas connection to the building will be provided under Phase 1 and 2 Site Work. Primary electrical within the building is shown on Sheets EFC11, EFC12, and E2.01N through E5.00B. Lighting is shown on Sheets E0.10 through E1.50.
Pavements (concrete and/or asphalt) for roadways, parking lots and sidewalks.	Subgrade reinforcement (such as a geotextile or geogrid material) may be used to minimize areas of localized, uneven settlement. Pavements should be designed to accommodate settlement at boundary conditions to pile-supported buildings. Penetrations below landfill cover sections in paved areas will not be allowed without appropriate procedures to address health and safety and repair. A construction quality assurance plan shall detail pavement permeability testing procedures. Install phased active landfill gas controls including perforated pipes in gravel filled trenches connected to header pipes and a vacuum source. The perforated pipes and gravel bed would be located beneath the pavement. The phased active landfill gas controls will be installed continuously throughout developed areas, below pavement, open space and buildings. Quarterly monitoring with a hand held sensor would trigger repair of pavement cracks if methane concentrations above 500ppm were detected. Routine inspection of paved areas is required to identify and repair areas of pavement cracking or locations where required landfill cover may be compromised.	Large differential settlement is expected to occur between pile-supported structures and adjacent grade-supported improvements. To minimize the impact of these differential settlements on the operation of the proposed buildings, building perimeter sidewalks and frontage walkways will be structurally supported by the pile-supported buildings. A cantilevered concrete slab apron will extend around the outside of Building C. The concrete apron will be composed of low-permeability concrete and serve as the LFG barrier (Sheets A750, detail 7; and S1.0C, part 03000). Concrete topping slabs will be placed over the apron to connect with non-pile-supported improvements surrounding the building (refer to Phase 1 and 2 Site Work checklist). All other landscape and parking areas around Building C are addressed in the Phase 1 and 2 Site Work plan set. LFG barrier abutting the building will be low permeability soil barrier and will overlap the low permeability concrete apron sidewalk by 3 feet horizontally (Sheet A750, detail 7).

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Buildings		
Potential light structures with shallow foundations.	If design of structures can address seismic stability concerns, light structures with shallow foundations would be allowed.	Not applicable.
Heavy structures with pile supported foundations	Pile supported structures are anticipated at the Site. Either driven or drilled pile types may be installed, following implementation of the groundwater compliance monitoring program and completion of evaluation re: potential zones of pile-type restrictions. Piles to support structures would be installed through refuse, through the underlying clay and peat layers into bearing sands. Piling or foundations that penetrate the gas barrier layer shall be booted or sealed to the barrier layer. All areas of the Site are restricted to augercast type pile construction or equivalent. This determination will be made following additional shallow aquifer sampling and evaluation.	Pile foundation design is discussed in the Proposed Pile Foundation Types memorandum (HWA 2018). Building foundations will be supported on 16-inch-diameter and 18-inch-diameter grout-driven piles with steel sleeves through refuse. The pile plan is shown on Sheets S2.01C and S2.02C. Typical pile details are shown on Drawing S6.02.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Buildings (cont.)		
Potential basement or below grade parking areas. Gas controls beneath buildings	Excavation requirements are listed under "Construction Disruption" requirements above. Particular care should be given to design of utility and pavement connections at the interface of pile supported buildings and surrounding Site areas, where significant differential settlement is expected. Buildings will be protected by a geomembrane beneath the foundation slab that is booted and sealed around piles and utility penetrations. Phased active gas controls will be installed continuously below developed areas, including perforated extraction piping in gravel trenches, spaced a maximum of 100' on center. Below buildings, extraction piping would be installed in development fill or slab subgrade – above refuse. The extraction piping will be connected to header pipes, a vacuum source and a discharge location. A full-time continuous ground floor methane monitoring system will be installed in all buildings. Methane concentrations exceeding 1,000 ppm will automatically activate the building's HVAC system and notify operations personnel. Methane concentrations exceeding 10,000 ppm will activate audible alarms and trigger building evacuation. Monitoring with a hand held sensor would be used to identify any locations with methane exceeding 100ppm for repair. Temporary enclosures erected over pavement or open space areas will contain continuous methane monitors that would activate an alarm if triggered.	Temporary enclosures, basements, and below-grade parking areas are not applicable to plan set. Gas controls beneath the building are shown on Sheet LFG1C1. LFG collection piping installed beneath the building will be connected to LFG header and associated vacuum at four locations (Sheet LFG1C1). Gas controls meet the 100-foot spacing requirements for the site and include a perforated HDPE pipe within a 3-foot-deep by 2-foot-wide trench filled with drain gravel and topped with a geotextile (Sheet LFG1C2, detail A). In addition, to prevent LFG from accumulating underneath the building, a 4-inch-thick gravel blanket will be placed under the building's concrete slab and connected to the LFG system via 3-inch-diameter PVC pipe sleeves through the interior-grade beams. The building's LFG barrier will consist of a composite HDPE and polymer modified asphalt membrane placed (1) above the structural slab and below the topping slab (Sheet LFG1C3 and LFG1C4) and (2) on the exterior of the building elevator pit structures (SheetLFG1C5). The building apron around the exterior of the building is a 9-inch-thick pile-supported low permeability concrete slab and will act as the permanent cover and LFG barrier (Sheets A750, detail 4; LFG1C2, details A, 5, and 6; S2.11C, and S2.12C). All penetrations through slabs are to be booted (Sheet LFG1C2, details 1–4). The continuous methane gas detections system will be installed with detectors in each space on the ground floor, including stairwells and elevator shafts (Sheets EFC1, EFC7B, EFC7C). Methane detectors are connected to a central control panel that manages building HVAC and alarm responses to detections of elevated methane concentrations (Sheets EFC2 through EFC7A). These systems are supported by a backup generator to ensure methane monitoring, HVAC, and alarms will continue to function in case of power outage (Sheets EFC2, EFC7A, and EFC8).
Potential ground floor or street level residential units.	Ground floor uses of residential units shall be restricted solely to garage, storage, and laundry. Alternatively, if street level residential units are proposed, they shall be separated from the slab-on-grade by unoccupied and isolated monitoring and ventilation spaces, with landfill gas detectors in the first floor and loft of each street level residential unit and in each monitoring/ventilation space beneath a street level residential unit.	Not applicable to the plan set. Building C will not have street level live/work units.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Open Space / Landscaping		
Landscaped areas around buildings and parking areas. Recreational use/park areas and trails.	Landscaped or open space areas will be constructed with a low permeable hydraulic barrier underlying clean soil established with vegetation to prevent erosion. Hydraulic barriers should obtain permeability similar to that of asphalt pavement. Institutional controls and property management procedures are required to prevent unauthorized digging and potential disturbance of hydraulic barrier. Subdrainage is required above the hydraulic barrier, to collect drainage above the barrier for off-site discharge. In landscaped areas where it is impracticable to connect with the storm water system for discharge, a drain may be placed in the hydraulic barrier to allow infiltration into the landfill, as long as it does not compromise gas collection system effectiveness. Phased active gas controls will be installed continuously below developed areas, including perforated extraction piping in gravel trenches, spaced a maximum of 100' on center. Below landscaped areas, extraction piping would be installed in development fill below the hydraulic barrier – above refuse. The extraction piping will be connected to header pipes, a vacuum source and a discharge location. Quarterly surface monitoring with a hand held sensor would be used to identify any locations with methane exceeding 500 ppm for repair. Fence posts shall either be finished above the underlying gas barrier or, if penetrating the gas barrier, be internally sealed and booted to the barrier layer to preclude intrusion of landfill gas. A Stormwater Pollution Prevention Plan and routine inspection of open space areas will be required to ensure cap integrity is not compromised by erosion.	Landscaping and parking areas immediately adjacent to the building are shown on Sheet LC100.1. Hydraulic and LFG barrier for these areas adjacent to the building apron (barrier) slab are shown on Sheet LFG1C2, details 5 and 6. However, complete landscape and parking area plans, details of the site gas control and barrier systems, and stormwater controls are provided in the Phase 1 and 2 Site Work plan set.
Public Access		
Unlimited public access in developed areas.	Public will be allowed access to all developed areas of the Site, except controlled entry to confined spaces and maintenance corridors. Warning signage may be placed as appropriate. Landfill gas controls must be installed and operational in developed areas for public access.	LFG controls will be installed and operational prior to allowing public access to the building and surrounding area. This requirement will be met through the City's inspection process.

Development Components	Environmental Requirements	City Review Comments and Submittal Reference (i.e., page, sheet #)
Public Access (cont.)		
Access restrictions to undeveloped areas.	Perimeter fencing with secured entries will restrict access to undeveloped portions of the Site.	Existing perimeter fencing restricts public access to the areas of the landfill that are undeveloped or under construction. Supplemental fencing will be installed to restrict public access to any undeveloped portions of the landfill as developed areas are opened to the public, which will be verified through the City's inspection process.

Additional Comments:

Documents included with this submittal reviewed for compliance include the following:

1. Design Drawings: Riverfront Commercial Investment, LLC; Everett Riverfront Development; Everett Riverfront Site Phase 2, Building C
2. HWA Geosciences, Inc. (HWA). 2021. *Geotechnical Engineering Report, Everett Riverfront Development, Phase II, Everett, Washington.* December 8.

In addition, this plan set is supported by the following documents that were previously provided to and reviewed by Ecology as attachments to the checklists for the Riverfront Boulevard, Advanced Site Work, and Phase 1 and 2 Site Work plan sets.

- Herrera Environmental Consultants, Inc. (Herrera). 2019. Everett Riverfront Site Development Support, Environmental Control Requirements and Landfill Gas Collection System Engineering Design Report. Everett, Washington. August 16.
- HWA Geosciences, Inc. (HWA). 2018. Proposed Pile Foundation Types. May 9.
- Rose Environmental. 2019. "Riverfront Commercial Investment LLC Site Specific Health and Safety Plan." October 31.
- Shelter Holdings, LLC (Shelter). 2019. Stormwater Pollution Prevention Plan (SWPPP) for Everett Riverfront Development – Mixed-Use Site and Boulevard Phased Development; Phase – Phase 1 and 2 Buildings and Parking Lots. March 15.

Shelter HOLDINGS

PERTEET

WEISMAN DESIGN GROUP

CT ENGINEERING INC.

ROBISON ENGINEERING, INC

HERRERA Innovate + Protect

BEE Building Envelope Engineering "Design for a Healthier Building"™

EVERETT RIVERFRONT

MG2

3710 RIVERFRONT BLVD, EVERETT, WA 98203

PROJECT NUMBER:21-5905-01A

PERMIT 09/16/2022

NUMBER	NAME	PERMIT - ISSUE DATE	BID - 03/01/2024	CD - ISSUE DATE
GENERAL				
G000	COVER SHEET	•	•	
G001	DRAWING INDEX	•	•	
G002	GENERAL NOTES	•	•	
G003	GENERAL NOTES	•	•	
G100	ZONING ANALYSIS	•	•	
G102	ZONING ANALYSIS - DIAGRAMS	•	•	
G200	BUILDING CODE SUMMARY	•	•	
G201	BUILDING CODE SUMMARY	•	•	
G202	EGRESS PLANS	•	•	
G203	EGRESS PLANS	•	•	
G204	EGRESS PLANS	•	•	
G401	ACCESSIBILITY - PUBLIC AND COMMON USE	•	•	
G402	ACCESSIBILITY - PUBLIC AND COMMON USE	•	•	
G403	ACCESSIBILITY - GENERAL RESIDENTIAL AND TYPE "A" UNITS	•	•	
G404	ACCESSIBILITY - TYPE "B" UNITS	•	•	
LANDSCAPE				
LC100.1	LANDSCAPE PLAN	•	•	
LC101.1	PLANTING PLAN ROOF ENLARGEMENT	•	•	
ARCHITECTURAL				
A001	SITE PLAN PHASE 2 - OVERALL	•	•	
A002	SITE PLAN- BUILDING C	•	•	
A101	FLOOR PLANS - LEVEL 1	•	•	
A101.N	LEVEL 1 PLAN - NORTH	•	•	
A101.S	LEVEL 1 PLAN - SOUTH	•	•	
A102	FLOOR PLANS - LEVEL 2	•	•	
A102.N	LEVEL 2 PLAN - NORTH	•	•	
A103	FLOOR PLANS - LEVEL 3	•	•	
A103.N	LEVEL 3 PLAN - NORTH	•	•	
A103.S	LEVEL 3 PLAN - SOUTH	•	•	
A104	FLOOR PLANS - LEVEL 4	•	•	
A104.N	LEVEL 4 PLAN - NORTH	•	•	
A104.S	LEVEL 4 PLAN - SOUTH	•	•	
A105	FLOOR PLANS - LEVEL 5	•	•	
A105.N	LEVEL 5 PLAN - NORTH	•	•	
A105.S	LEVEL 5 PLAN - SOUTH	•	•	
A106	FLOOR PLANS - LEVEL 6	•	•	
A106.N	LEVEL 6 PLAN - NORTH	•	•	
A106.S	LEVEL 6 PLAN - SOUTH	•	•	
A107	ROOF PLAN	•	•	
A107.N	ROOF PLAN - NORTH	•	•	
A107.S	ROOF PLAN - SOUTH	•	•	
A140	SLAB EDGE PLAN - LEVEL 1 NORTH	•	•	
A141	SLAB EDGE PLAN - LEVEL 1 SOUTH	•	•	
A142	SLAB EDGE PLAN - LEVEL 2 NORTH	•	•	
A143	SLAB EDGE PLAN - LEVEL 2 SOUTH	•	•	
A171.N	REFLECTED CEILING PLAN - LEVEL 1 NORTH	•	•	
A171.S	REFLECTED CEILING PLAN - LEVEL 1 SOUTH	•	•	
A172.N	REFLECTED CEILING PLANS - LEVEL 2 NORTH	•	•	
A172.S	REFLECTED CEILING PLANS - LEVEL 2 SOUTH	•	•	
A176.N	REFLECTED CEILING PLAN - LEVEL 6 NORTH	•	•	
A176.S	REFLECTED CEILING PLAN - LEVEL 6 SOUTH	•	•	
A201	OVERALL ELEVATIONS	•	•	
A202	EXTERIOR ELEVATIONS	•	•	
A203	EXTERIOR ELEVATIONS	•	•	
A204	EXTERIOR ELEVATIONS	•	•	
A205	EXTERIOR ELEVATIONS	•	•	
A206	EXTERIOR ELEVATIONS	•	•	
A301	BUILDING SECTIONS	•	•	
A302	BUILDING SECTIONS	•	•	
A350	WALL SECTIONS	•	•	
A351	WALL SECTIONS	•	•	
A352	WALL SECTIONS	•	•	
A353	WALL SECTIONS	•	•	
A354	WALL SECTIONS	•	•	
A355	WALL SECTIONS	•	•	
A401	ENLARGED PLANS - LOBBY	•	•	
A402	ENLARGED PLANS - LOBBY RCP	•	•	
A403	ENLARGED PLANS - MOVE IN AND AMENITIES	•	•	
A404	ENLARGED PLANS - TRASH	•	•	
A405	ENLARGED PLANS - LEVEL 6 AMENITY	•	•	
A406	ENLARGED PLANS - LEVEL 6 AMENITY RCP	•	•	
A420	ENLARGED UNIT PLANS - B01	•	•	
A421	ENLARGED UNIT PLANS - B02	•	•	
A422	ENLARGED UNIT PLANS - B03 TYPE A	•	•	
A423	ENLARGED UNIT PLANS - C01	•	•	
A424	ENLARGED UNIT PLANS - C02	•	•	
A425	ENLARGED UNIT PLANS - C03	•	•	
A426	ENLARGED UNIT PLANS - C04 TYPE A	•	•	
A427	ENLARGED UNIT PLANS - C05	•	•	
A428	ENLARGED UNIT PLANS - D01	•	•	
A429	ENLARGED UNIT PLANS - D02	•	•	
A430	ENLARGED UNIT PLANS - D03	•	•	
A431	ENLARGED UNIT PLANS - D04 TYPE A	•	•	
A432	ENLARGED UNIT PLANS - D05	•	•	
A450	ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS	•	•	
A451	ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS	•	•	
A452	ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS	•	•	
A453	ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS	•	•	
A454	ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS	•	•	
A455	ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS	•	•	
A456	ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS	•	•	
A457	ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS	•	•	
A501	VERTICAL CIRCULATION - ELEVATOR	•	•	
A502	VERTICAL CIRCULATION - STAIR 1	•	•	
A503	VERTICAL CIRCULATION - STAIR 2	•	•	
A520	STAIR DETAILS	•	•	
A521	STAIR DETAILS	•	•	
A522	ELEVATOR DETAILS	•	•	
A523	ELEVATOR DETAILS	•	•	
A601	HORIZONTAL ASSEMBLIES	•	•	
A602	HORIZONTAL ASSEMBLIES	•	•	
A610	WALL TYPES	•	•	
A611	WALL TYPES	•	•	
A612	WALL TYPES	•	•	
A613	WALL TYPES	•	•	
A701	RATED ASSEMBLY DETAILS	•	•	
A702	RATED ASSEMBLY DETAILS	•	•	
A750	FOUNDATION & SLAB EDGE DETAILS	•	•	
A751	STOREFRONT DETAILS	•	•	
A752	TRANSITION DETAILS	•	•	
A753	TRANSITION DETAILS	•	•	
A754	DOOR DETAILS	•	•	
A755	WINDOW DETAILS	•	•	
A756	WALL DETAILS	•	•	
A757	WALL DETAILS	•	•	
A758	EXTERIOR DETAILS	•	•	
A760	ROOF DETAILS	•	•	
A761	ROOF DETAILS	•	•	
A762	ROOF DETAILS	•	•	
A770	BALCONY & RAILING DETAILS	•	•	
A771	CANOPY DETAILS	•	•	
A772	CANOPY DETAILS	•	•	
A801	WINDOW SCHEDULE	•	•	
A802	STOREFRONT SCHEDULES	•	•	
A803	STOREFRONT SCHEDULES	•	•	
A804	STOREFRONT SCHEDULES	•	•	
A805	LOUVER SCHEDULE		•	
A810	DOOR SCHEDULE	•	•	
A811	DOOR SCHEDULE	•	•	
A812	DOOR SCHEDULE	•	•	
A820	ROOM FINISH SCHEDULE	•		

NUMBER	NAME	PERMIT - ISSUE DATE	BID - 03/01/2024	CD - ISSUE DATE
STRUCTURAL				
S1.0C	BUILDING C STRUCTURAL NOTES	•	•	
S1.01	STRUCTRUAL NOTES AND SCHEDULES	•	•	
S1.02	SHEARWALL SCHEDULE AND DETAILS	•	•	
S1.03	HOLDDOWN SCHEDULE AND DETAILS	•	•	
S1.04	HOLDDOWN DETAILS	•	•	
S2.01C	BUILDING C PILE PLAN (SOUTH)	•	•	
S2.02C	BUILDING C PILE PLAN (NORTH)	•	•	
S2.11C	BUILDING C FOUNDATION PLAN (SOUTH)	•	•	
S2.12C	BUILDING C FOUNDATION PLAN (NORTH)	•	•	
S3.11C	BUILDING C LEVEL 2 PT PLAN (SOUTH)	•	•	
S3.12C	BUILDING C LEVEL 2 PT PLAN (NORTH)	•	•	
S3.21C	BUILDING C LEVEL 2 REINF. PLAN (SOUTH)	•	•	
S3.22C	BUILDING C LEVEL 2 REINF. PLAN (NORTH)	•	•	
S3.91C	BUILDING C SHEARWALL & HOLDDOWN PLAN (SOUTH)	•	•	
S3.92C	BUILDING C SHEARWALL & HOLDDOWN PLAN (NORTH)	•	•	
S4.11C	BUILDING C LEVEL 3 FLOOR FRAMING PLAN (SOUTH)	•	•	
S4.12C	BUILDING C LEVEL 3 FLOOR FRAMING PLAN (NORTH)	•	•	
S4.21C	BUILDING C LEVEL 4 FLOOR FRAMING PLAN (SOUTH)	•	•	
S4.22C	BUILDING C LEVEL 4 FLOOR FRAMING PLAN (NORTH)	•	•	
S4.31C	BUILDING C LEVEL 5 FLOOR FRAMING PLAN (SOUTH)	•	•	
S4.32C	BUILDING C LEVEL 5 FLOOR FRAMING PLAN (NORTH)	•	•	
S4.41C	BUILDING C LEVEL 6 FLOOR FRAMING PLAN (SOUTH)	•	•	
S4.42C	BUILDING C LEVEL 6 FLOOR FRAMING PLAN (NORTH)	•	•	
S4.51C	BUILDING C ROOF FRAMING PLAN (SOUTH)	•	•	
S4.52C	BUILDING C ROOF FRAMING PLAN (NORTH)	•	•	
S6.01	CONCRETE DETAILS	•	•	
S6.02	TYPICAL PILE DETAILS	•	•	
S6.03	CONCRETE DETAILS	•	•	
S6.04	CONCRETE DETAILS	•	•	
S6.05	CONCRETE DETAILS	•	•	
S7.01	PT DETAILS	•	•	
S7.02	PT DETAILS	•	•	
S7.03	PT DETAILS	•	•	
S8.01	ELEVATOR DETAILS	•	•	
S8.02	STEEL DETAILS	•	•	
S8.11C	BUILDING C CANOPY & HSS POST PLAN (SOUTH)	•	•	
S8.12C	BUILDING C CANOPY & HSS POST PLAN (NORTH)	•	•	
S8.13C	BUILDING C CANOPY DETAILS	•	•	
S9.01	WOOD DETAILS	•	•	
S9.02	WOOD DETAILS	•	•	
S9.03	WOOD DETAILS	•	•	
ENVELOPE				
BE000	NOTES & SPECIFICATIONS	•	•	
BE001	MATERIAL LOCATION DIAGRAMS	•	•	
BE002	MATERIAL LOCATION DIAGRAMS	•	•	
BE100	BELOW GRADE DETAILS	•	•	
BE200	WALL DETAILS	•	•	
BE201	WALL DETAILS	•	•	
BE202	WALL DETAILS	•	•	
BE300	PENETRATION DETAILS	•	•	
BE400	DECK & ABOVE GRADE DETAILS	•	•	
BE500	WINDOW & DOOR DETAILS	•	•	
BE501	WINDOW & DOOR DETAILS	•	•	
BE502	WINDOW & DOOR DETAILS	•	•	
BE600	ROOF DETAILS	•	•	
BE601	ROOF DETAILS	•	•	
BE700	AIR BARRIER SEMI-EXTERIOR DETAILS	•	•	
BE800	AIR BARRIER NOTES	•	•	
BE801	AIR BARRIER DIAGRAMS	•	•	
BE802	AIR BARRIER DIAGRAMS	•	•	
BE803	AIR BARRIER DIAGRAMS	•	•	
BE804	AIR BARRIER DIAGRAMS	•	•	
BE900	ENERGY CODE NOTES	•	•	
BE901	BUILDING ENVELOPE ENERGY FORMS	•	•	
BE902	BUILDING ENVELOPE ENERGY FORMS	•	•	
BE903	BUILDING ENVELOPE ENERGY FORMS	•	•	
MECHANICAL				
M0.00	LEGEND, GENERAL NOTES, & DRAWING INDEX	•	•	
M0.01	PROJECT NOTES & TABLES	•	•	
M0.02	VENTILATION CALCULATIONS	•	•	
M0.03	MECHANICAL SCHEDULES	•	•	
M2.01N	LEVEL 1 FLOOR PLAN - NORTH	•	•	
M2.01S	LEVEL 1 FLOOR PLAN - SOUTH	•	•	
M2.02N	LEVEL 2 FLOOR PLAN - NORTH	•	•	
M2.02S	LEVEL 2 FLOOR PLAN - SOUTH	•	•	
M2.03N	LEVEL 3 FLOOR PLAN - NORTH	•	•	
M2.03S	LEVEL 3 FLOOR PLAN - SOUTH	•	•	
M2.04N	LEVEL 4 FLOOR PLAN - NORTH	•	•	
M2.04S	LEVEL 4 FLOOR PLAN - SOUTH	•	•	
M2.05N	LEVEL 5 FLOOR PLAN - NORTH	•	•	
M2.05S	LEVEL 5 FLOOR PLAN - SOUTH	•	•	
M2.06N	LEVEL 6 FLOOR PLAN - NORTH	•	•	
M2.06S	LEVEL 6 FLOOR PLAN - SOUTH	•	•	
M2.07N	ROOF PLAN - NORTH	•	•	
M2.07S	ROOF PLAN - SOUTH	•	•	
M3.00	ENLARGED HVAC UNIT PLAN - B01	•	•	
M3.01	ENLARGED HVAC UNIT PLAN - B02	•	•	
M3.02	ENLARGED HVAC UNIT PLAN - B03 TYPE A	•	•	
M3.03	ENLARGED HVAC UNIT PLAN - C01	•	•	
M3.04	ENLARGED HVAC UNIT PLAN - C02	•	•	
M3.05	ENLARGED HVAC UNIT PLAN - C03 TYPE A	•	•	
M3.06	ENLARGED HVAC UNIT PLAN - C04	•	•	
M3.07	ENLARGED HVAC UNIT PLAN - C05	•	•	
M3.08	ENLARGED HVAC UNIT PLAN - D01	•	•	
M3.09	ENLARGED HVAC UNIT PLAN - D02	•	•	
M3.10	ENLARGED HVAC UNIT PLAN - D03	•	•	
M3.11	ENLARGED HVAC UNIT PLAN - D04 TYPE A	•	•	
M3.12	ENLARGED HVAC PLAN - SOUTH BACK-OF-HOUSE SPACES	•	•	
M3.13	ENLARGED HVAC UNIT PLAN SOUTH LOBBY	•	•	
M3.14	ENLARGED HVAC UNIT PLAN - CLUBROOM	•	•	
M4.00	MECHANICAL DETAILS	•	•	
M4.01	MECHANICAL DETAILS	•	•	
M5.00	VRF RISER DIAGRAM	•	•	
M7.00	WSEC FORMS	•	•	
M7.01	WSEC FORMS	•	•	
M7.02	WSEC FORMS	•	•	
M7.03	WSEC FORMS	•	•	
M7.04	WSEC FORMS	•	•	
M8.00	LOAD CALCULATIONS	•	•	
M8.01	LOAD CALCULATIONS	•	•	
SITE ELECTRICAL / UTILITY				
EFC1	BLDG C LEVEL 1 GAS DETECTION PLAN	•	•	
EFC2	BLDG C METHANE GAS DETECTION & ALARMING RISER DIAGRAM	•	•	
EFC3	BLDG C - MCP - MAIN (GAS) CONTROL PANEL DETAILS	•	•	
EFC4	WIRE DIAGRAM 1 MAIN (GAS) CONTROL PANEL (MCP)_	•	•	
EFC5	WIRE DIAGRAM 2 (MCP)	•	•	
EFC6	WIRE DIAGRAM 3 (MCP)	•	•	
EFC7A	WIRE DIAGRAM 4 (MCP)	•	•	
EFC7B	WIRE DIAGRAM 5 ELEVATOR FANS (MCP)	•	•	
EFC7C	WIRE DIAGRAM 6 STAIRWELL FANS (MCP)	•	•	
EFC8	ONELINE DIAGRAM BLDG C USS	•	•	
EFC9	SETTLING CABINETS DETAILS 1 (MV-LV-EV)	•	•	
EFC10	SETTLEMENT CABINETS DETAILS 2 (FC-IC-DAS)	•	•	
EFC11	BLDG C UNIT SUB STATION (USS)	•	•	
EFC12	BLDG C SITE PLAN	•	•	

NUMBER	NAME	PERMIT - ISSUE DATE	BID - 03/01/2024	CD - ISSUE DATE
ELECTRICAL				
E0.00	LEGEND, GENERAL NOTES, DRAWING INDEX	•	•	
E0.01	GENERAL NOTES	•	•	
E0.10	EXTERIOR LIGHTING PLAN	•	•	
E0.11	EXTERIOR PHOTOMETRIC PLAN	•	•	
E1.01N	LEVEL 1 NORTH LIGHTING PLAN	•	•	
E1.01NP	LEVEL 1 NORTH PHOTOMETRIC PLAN	•	•	
E1.01S	LEVEL 1 SOUTH LIGHTING PLAN	•	•	
E1.01SP	LEVEL 1 SOUTH PHOTOMETRIC PLAN	•	•	
E1.02N	LEVEL 2 NORTH LIGHTING PLAN	•	•	
E1.02NP	LEVEL 2 NORTH PHOTOMETRIC PLAN	•	•	
E1.02S	LEVEL 2 SOUTH LIGHTING PLAN	•	•	
E1.02SP	LEVEL 2 SOUTH PHOTOMETRIC PLAN	•	•	
E1.03N	LEVEL 3 NORTH LIGHTING PLAN	•	•	
E1.03S	LEVEL 3 SOUTH LIGHTING PLAN	•	•	
E1.04N	LEVEL 4 NORTH LIGHTING PLAN	•	•	
E1.04S	LEVEL 4 SOUTH LIGHTING PLAN	•	•	
E1.05N	LEVEL 5 NORTH LIGHTING PLAN	•	•	
E1.05S	LEVEL 5 SOUTH LIGHTING PLAN	•	•	
E1.06N	LEVEL 6 NORTH LIGHTING PLAN	•	•	
E1.06S	LEVEL 6 SOUTH LIGHTING PLAN	•	•	
E1.50	LUMINAIRE SCHEDULE & LIGHTING NOTES	•	•	
E2.01N	LEVEL 1 NORTH POWER PLAN	•	•	
E2.01S	LEVEL 1 SOUTH POWER PLAN	•	•	
E2.02N	LEVEL 2 NORTH POWER PLAN	•	•	
E2.02S	LEVEL 2 SOUTH POWER PLAN	•	•	
E2.03N	LEVEL 3 NORTH POWER PLAN	•	•	
E2.03S	LEVEL 3 SOUTH POWER PLAN	•	•	
E2.04N	LEVEL 4 NORTH POWER PLAN	•	•	
E2.04S	LEVEL 4 SOUTH POWER PLAN	•	•	
E2.05N	LEVEL 5 NORTH POWER PLAN	•	•	
E2.05S	LEVEL 5 SOUTH POWER PLAN	•	•	
E2.06N	LEVEL 6 NORTH POWER PLAN	•	•	
E2.06S	LEVEL 6 SOUTH POWER PLAN	•	•	
E2.07N	ROOF NORTH POWER PLAN	•	•	
E2.07S	ROOF SOUTH POWER PLAN	•	•	
E3.00	ENLARGED POWER PLANS	•	•	
E3.01	ENLARGED POWER PLANS	•	•	
E4.00	UNIT PLAN NOTES	•	•	
E4.01	TYPICAL UNIT PLANS	•	•	
E4.02	TYPICAL UNIT PLANS	•	•	
E4.03	TYPICAL UNIT PLANS	•	•	
E5.00A	ELECTRICAL ONE-LINE	•	•	
E5.00B	ELECTRICAL ONE-LINE	•	•	
E5.01A	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01B	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01C	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01D	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01E	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01F	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01G	ELECTRICAL PANEL SCHEDULES	•	•	
E5.01H	ELECTRICAL PANEL SCHEDULES	•	•	
E5.02	FAULT CURRENT CALCULATIONS	•	•	
E7.00	LIGHTING ENERGY FORMS	•	•	
PLUMBING				
P0.00	LEGEND, GENERAL NOTES, AND DRAWING INDEX	•	•	
P0.01	PLUMBING NOTES AND TABLES	•	•	
P0.02	PLUMBING CALCULATIONS	•	•	
P0.03	PLUMBING SCHEDULES	•	•	
P0.04	PLUMBING SCHEDULES	•	•	
P2.00N	UNDERSLAB PLUMBING PLAN - NORTH	•	•	
P2.00S	UNDERSLAB PLUMBING PLAN - SOUTH	•	•	
P2.01N	LEVEL 1 PLUMBING PLAN - NORTH	•	•	
P2.01S	LEVEL 1 PLUMBING PLAN - SOUTH	•	•	
P2.02N	LEVEL 2 PLUMBING PLAN - NORTH	•	•	
P2.02S	LEVEL 2 PLUMBING PLAN - SOUTH	•	•	
P2.03N	LEVEL 3 PLUMBING PLAN - NORTH	•	•	
P2.03S	LEVEL 3 PLUMBING PLAN - SOUTH	•	•	
P2.04N	LEVEL 4 PLUMBING PLAN - NORTH	•	•	
P2.04S	LEVEL 4 PLUMBING PLAN - SOUTH	•	•	
P2.05N	LEVEL 5 PLUMBING PLAN - NORTH	•	•	
P2.05S	LEVEL 5 PLUMBING PLAN - SOUTH	•	•	
P2.06N	LEVEL 6 PLUMBING PLAN - NORTH	•	•	
P2.06S	LEVEL 6 PLUMBING PLAN - SOUTH	•	•	
P2.07N	ROOF PLUMBING PLAN - NORTH	•	•	
P2.07S	ROOF PLUMBING PLAN - SOUTH	•	•	
P4.00	WASTE & VENT RISER DIAGRAMS	•	•	
P4.01	WASTE & VENT RISER DIAGRAMS	•	•	
P4.02	WASTE & VENT RISER DIAGRAMS	•	•	
P4.03	WASTE & VENT RISER DIAGRAMS	•	•	
P4.04	WASTE & VENT RISER DIAGRAMS	•	•	
P5.00	SUPPLY RISER DIAGRAMS	•	•	
P5.01	GAS RISER DIAGRAMS	•	•	
P6.00	ENLARGED PLANS	•	•	
P7.00	DETAILS	•	•	
P7.01	DETAILS	•	•	
P7.02	DETAILS	•	•	
P7.03	DETAILS	•	•	
LFG				
LFG1C1	BUILDING 1-C SUBGRADE LFG PLAN	•	•	
LFG1C2	LFG STANDARD DETAILS	•	•	
LFG1C3	LINER MEMBRANE SPECIFICATIONS	•	•	
LFG1C4	LINER PENETRATION DETAILS	•	•	
LFG1C5	ELEVATOR PIT DETAILS	•	•	

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/29/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2
3	03/01/24	Bid Set

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

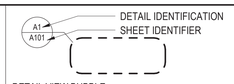
DRAWING INDEX

G001

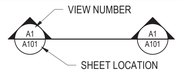
2/28/2024 10:53:06 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

LEGEND OF SYMBOLS

DETAIL

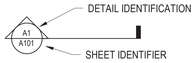


DETAIL VIEW BUBBLE

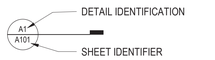


BUILDING SECTION

MATCH LINE REFERENCE

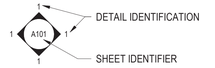


WALL SECTION

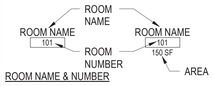


DETAIL SECTION

EXTERIOR ELEVATION



INTERIOR ELEVATION



ROOM NAME & NUMBER

DOOR NUMBERS

WINDOW NUMBER STOREFRONT TAG

EQUIPMENT TAG

KEY NOTES

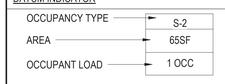
WALL TYPE

DATUM ELEVATION

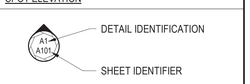
REVISION DELTA & CLOUD

DATUM INDICATOR

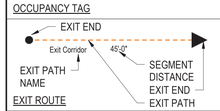
SPOT ELEVATION



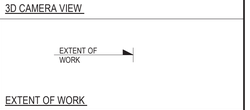
OCCUPANCY TAG



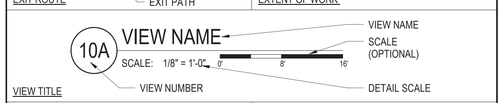
3D CAMERA VIEW



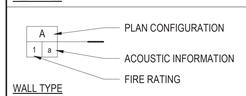
EXIT ROUTE



EXTENT OF WORK



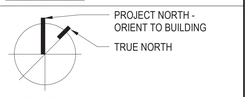
VIEW TITLE



WALL TYPE

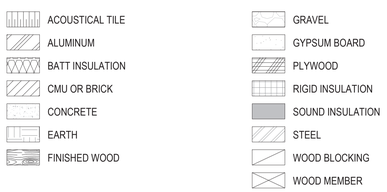
GRIDLINE BUBBLE

PARTITION FIRE RATINGS



NORTH ARROW

MATERIALS



ABBREVIATIONS

ACOUST	ACOUSTICAL
ACSF	ACCESS FLOORING
ACT	ACOUSTICAL CEILING TILE OR PANEL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASPH	ASPHALT
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLK'G	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BTWN	BETWEEN
CAB	CABINET
CB	CATCH BASIN
CEM	CEMENT
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT, CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CPT	CARPET
CR	CARD READER
CT	CERAMIC TILE
CU FT	CUBIC FEET
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
EA	EACH
EFS	EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EPT	EPOXY PAINT
EPX	EPOXY-QUARTZ FLOORING
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPOSED STRUCTURE
EXT	EXTERIOR
FAC FIN	FACTORY FINISH
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FIN	FINISH
FLR	FLOOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER
FOS	FACE OF STUD
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FS	FLOOR SINK
FT	FOOT/FEET
FTG	FOOTING
FURN	FURNISHED
FURR	FURRING
FWP	FABRIC WRAP WALL PANEL
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GI	GALVANIZED IRON
GL	GLASS
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
HB	HOSE BIBB
HC	HOLLOW CORE
HDWR	HARDWARE
HG	HARDWARE GROUP
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
L	LENGTH; LONG
LAM	LAMINATE
LB	POUND
LF	LINEAR FEET
LIQ	LIQUID
LMC	LINEAR METAL CEILING
LP	LOW POINT
LT	LIGHT
LT WT	LIGHT WEIGHT
MAS	MASONRY
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFCR	MANUFACTURER
MH	MANHOLE
MHO	MAGNETIC HOLD OPEN
MIN	MINIMUM, MINUTES
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPN'G	OPENING
OPP	OPPOSITE
PERP	PERPENDICULAR
PL	PROPERTY LINE, PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLBG	PLUMBING
PLT	PLATE
PLYWD	PLYWOOD
PNL	PANEL
PR	PAIR
PREFIN	PREFINISHED
PRESS T	PRESSURE TREATED
PROJ	PROJECT
PT	POST-TENSIONED, POINT, PAINT
QT	QUARRY TILE
QTR	QUARTER
R	RADIUS, RISER
RB	RESILIENT BASE, RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC'D	RECEIVED
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
RF	RUBBER FLOORING
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
SAM	SELF-ADHERED MEMBRANE
SAN	SANITARY
SC	SOLID CORE
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SHT MTL	SHEET METAL
SIM	SIMILAR
SJ	SCORE JOINT
SPEC	SPECIFIED, SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	STONE MASONRY OR TILE
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
SYS	SYSTEM
T	TOP, TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE & GROOVE
TBD	TO BE DETERMINED
TEL	TELEPHONE
TEMP	TEMPORARY
TER	TERRAZZO
TOC	TOP OF CONCRETE
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL / STUD
TOW	TOP OF WALL
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UTL	UTILITY
VAR	VARNISH
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VP	VENEER PLASTER
VT	VINYL TILE
VTF	VINYL TILE FLOORING
W/	WITH
W/O	WITHOUT
WB	WOOD BASE
WC	WATER CLOSET, WALL COVERING
WD	WOOD
WDC	WOOD CEILING
WDP	WOOD PANELING
WF	WOOD FLOORING
WIN	WINDOW
WOM	WALK OF MAT OR CARPET
WP	WATERPROOF, OR WORK POINT
WR	WATER RESISTANT
WRB	WEATHER RESISTANT BARRIER
WS	WEATHERSTRIP
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

PROJECT DIRECTORY

OWNER / DEVELOPER
RIVERFRONT PHASE 2, LLC
ERIC EVANS
ERIC.EVANS@SHELTERHOLDINGS.COM
t: 425.559.2340
11624 SE 5TH STREET
SUITE 210
BELLEVUE, WA 98005

ARCHITECT
MG2 ARCHITECTURE
ELI HARDI
ELI.HARDI@MG2.COM
206.962.6827
1101 SECOND AVENUE
SUITE 100
SEATTLE, WA 98101

GENERAL CONTRACTOR
SHELTER HOLDINGS, LLC
RENAY LUZAMA
RENAY.LUZAMA@SHELTERHOLDINGS.COM
425.559.2300
11624 SE 5TH STREET
SUITE 210
BELLEVUE, WA 98005

CIVIL ENGINEER
PERTEET INC.
VINCENT WEN
VINCENT.WEN@PERTEET.COM
425.322.0258
2702 COLBY AVENUE
SUITE 900
EVERETT, WA 98201

LANDSCAPE ARCHITECT
FORA LANDSCAPE ARCHITECTS
ABBY JONES
ABBY@FORA.LAND
206.322.1732
2329 E MADISON STREET
SEATTLE, WA 98112

STRUCTURAL ENGINEER
CT ENGINEERING
SKOHUT@CTENGINEERING.COM
206.285.4512
180 NICKERSON STREET
SUITE 302
SEATTLE, WA 98109

MECHANICAL ENGINEER
ROBISON ENGINEERING
PETER ROCKSTEAD
PROCKSTEAD@ROBISONENGINEERING.COM
206.364.3343
19401 40TH AVENUE W
SUITE 302
LYNWOOD, WA 98036

ELECTRICAL ENGINEER
ROBISON ENGINEERING
MARK STEINKE
MSTEINKE@ROBISONENGINEERING.COM
206.364.3343
19401 40TH AVENUE W
SUITE 302
LYNWOOD, WA 98036

PLUMBING ENGINEER
ROBISON ENGINEERING
MARVERICK TJENG
MTJENG@ROBISONENGINEERING.COM
206.364.3343
19401 40TH AVENUE W
SUITE 302
LYNWOOD, WA 98036

GEOTECHNICAL ENGINEER
HWA GEOSCIENCES INC.
DONALD HULING
DHULING@HWAGEO.COM
425.774.0106
21312 30TH DRIVE SE
SUITE 110
BOTHELL, WA 98021

INTERIOR DESIGNER
MG2 ARCHITECTURE
NATALIE HYDE
NATALIE.HYDE@MG2.COM
206.962.6869
1101 SECOND AVE
SUITE 100
SEATTLE, WA 98101

ACOUSTICAL CONSULTANT
SSA ACOUSTICS
ALAN BURT
ALAN@SSAACOUSTICS.COM
206.839.0819
7409 GREENWOOD AVE N.
SUITE A
SEATTLE, WA 98103

BUILDING ENVELOPE CONSULTANT
BEE CONSULTING
DENIN DAZEY
DENIN@BEE-ENGINEERS.COM
425.678.1718
170 W DAYTON STREET
SUITE 206
EDMONDS, WA 98020

ENVIRONMENTAL CONSULTANT
HERRERA ENVIRONMENTAL CONSULTANTS
TYSON WRIGHT
TWRIGHT@HERRERAINC.COM
206.441.9080
2200 SIXTH AVENUE
SUITE 1100
SEATTLE, WA 98121

SITE ELECTRICAL ENGINEER
FOLLETT ENGINEERING
VINCE FOLLETT
VINCE@FOLLETTENGINEERING.COM
425.765.6304
1037 NE 65TH STREET
SUITE 316
SEATTLE, WA 98115

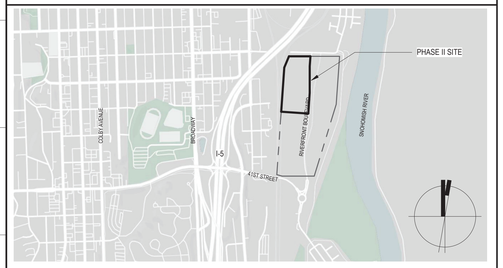
PROJECT DATA

LOCATION:	3710 RIVERFRONT BOULEVARD, EVERETT, WA 98203
PARCEL NUMBER:	29052900401900 29052900401800
LEGAL DESCRIPTION:	SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 26 OF COE BLA # 08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 18 SINES J S ACRE TRACTS SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 29 OF COE BLA # 08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 13 SINES J S ACRE TRACTS
PROJECT SCOPE:	THE PROPOSED PROJECT CONSISTS OF 168 RESIDENTIAL UNITS ON 5 LEVELS ABOVE THE PODIUM. RESIDENTIAL LOBBIES, AMENITIES, UTILITIES, AND COMMERCIAL SPACES ARE LOCATED WITHIN THE PODIUM ON THE GROUND FLOOR. THE PROJECT GROSS AREA IS 195,680SF. THERE ARE 203 PARKING STALLS FOR BUILDING C, AND ARE PROVIDED AT GRADE FOR BOTH THE RESIDENTIAL AND COMMERCIAL USES. THERE IS A ROOF TERRACE AT LEVEL 6 FOR AMENITY USE.
SITE AREA:	435,046 SF (10.01 ACRES)
BUILDING FOOTPRINT:	31,847SF
ZONE:	MU-RIVERFRONT PLANNED DEVELOPMENT B-3 / D5 / D6 PER ATTACHMENT F
CONSTRUCTION TYPE:	TYPE V-A OVER I-A

APPLICABLE CODES

EVERETT MUNICIPAL CODES TITLE 16 BUILDING AND CONSTRUCTION
EVERETT MUNICIPAL CODES TITLE 19 ZONING
ATTACHMENT F: EVERETT RIVERFRONT DISTRICT ZONING AND LAND DIVISION STANDARDS
ATTACHMENT G: EVERETT RIVERFRONT DISTRICT MASTER PLAN
2018 INTERNATIONAL BUILDING CODE (IBC)
2018 WASHINGTON STATE-WIDE AMENDMENTS
2018 CODE, WASHINGTON ADMINISTRATIVE CODE 51-50 (WAC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 UNIFORM PLUMBING CODE (UPC)
2017 WASHINGTON STATE ELECTRICAL CODE (NFPA 70)
2018 WASHINGTON STATE ENERGY CODE WAC 51-11C (WSEC)
2018 WASHINGTON STATE ENERGY CODE WAC 51-11R (WSEC)
ICC/ANSI A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (SWMMWW)

VICINITY MAP



DEFERRED SUBMITTALS

1- FIRE SPRINKLER SYSTEMS

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

GENERAL NOTES

G002

2/2/2024 10:42:05 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

INTERIOR DESIGN GENERAL NOTES

1. DO NOT SCALE THE DRAWING
2. VERIFY FIELD DOCUMENTS PRIOR TO COMMENCEMENT OF EACH PORTION OF THE WORK.
3. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. THE CONTRACTOR SHALL COORDINATE ALL PORTIONS OF THE WORK AS DESCRIBED IN THE CONTRACT DOCUMENTS. NOTIFY THE ARCHITECT FOR RESOLUTION OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION.
4. DIMENSIONS ARE TO THE STRUCTURAL GRID OR TO FINISH SURFACES. UNLESS OTHERWISE INDICATED.
5. VERIFY LEAD TIMES FOR ALL MATERIALS TO ENSURE TIMELY INSTALLATION.
6. ALL INTERIOR DESIGN ELEMENTS, INCLUDING BUT NOT LIMITED TO, CEILING ELEMENTS, CARPET, TILE, TO BE ORDERED IN ADEQUATE TIME PRIOR TO INSTALLATION TO ENSURE TIMELY DELIVERY.
7. ALL ADHESIVES, VOC LIMITS, AEROSOL ADHESIVES MUST MEET THE LOCAL BUILDING CODE OF REGULATION.

CARPET

1. CARPET INSTALLER TO PROVIDE SEAMING PLAN TO DESIGNER AND CLIENT FOR APPROVAL PRIOR TO ORDERING CARPET. DO NOT CROSS SEAM OR SUBSTITUTE MANUFACTURERS.
2. ALL SEAMS SHALL BE SECURED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
3. SEAM SEALER MUST BE USED ON CARPET.
4. INSTALL CARPET FLAT, LEVEL, AND SECURE USING DIRECT GLUE DOWN METHOD AND MANUFACTURERS GUIDELINES.
5. ALL FLOOR OUTLETS OR SIMILAR DEVICES SHALL BE INSTALLED FOLLOWING CARPET INSTALLATION. INSTALLER TO COORDINATE CUTTING OF CARPET FOR FLOOR OUTLETS WITH ELECTRICAL CONTRACTOR.
6. DO NOT BEGIN INSTALLATION UNTIL PAINTING AND FINISHING WORK ARE COMPLETE.
7. ALL ADHESIVES MUST MEET LOCAL BUILDING CODE REGULATIONS.
8. ALL CARPET SHALL MEET THE REQUIREMENTS OF CARPET AND RUG INSTITUTES LOCAL BUILDING CODE PROGRAM.

EQUIPMENT / APPLIANCES

1. FITNESS TRAINING EQUIPMENT TO BE SPECIFIED, LAID OUT, PURCHASED, AND INSTALLED BY OTHERS. INTERIOR DESIGNER TO PROVIDE DESIGN INTENT OF FINISHES AS NECESSARY FROM MANUFACTURERS OF METAL AND FABRIC OFFERING.
2. KITCHEN APPLIANCES PURCHASED AND INSTALLED BY CONTRACTOR.
3. REFER TO SPECIFICATIONS FOR MANUFACTURER REQUIREMENTS FOR ALL APPLIANCES.
4. ALL A/V EQUIPMENT TO BE SELECTED AND PROVIDED BY OTHERS.
5. ALL WIRING / CABLING REQUIRED FOR A/V AND/OR COMPUTER EQUIPMENT TO BE DETERMINED BY QUALIFIED CONSULTANT. LOCATIONS SHOWN ON THESE DRAWINGS ARE FOR DESIGN DIRECTION ONLY.

ELECTRICAL

1. LIGHT SWITCHING SHOWN ADJACENT TO ONE ANOTHER SHALL BE GANGED IN A SINGLE PLATE TO MATCH FINISH THROUGHOUT.
2. OWNER TO VERIFY ELECTRICAL OUTLET LOCATIONS.
3. ALL OUTLETS TO BE AT STANDARD HEIGHT UNLESS NOTED OTHERWISE.
4. ALL FLOOR OUTLETS TO BE RECESSED VAULT-TYPE FIXTURE THAT ALLOWS PLUG TO BE BELOW THE FINISHED FLOOR WHEN PLUGGED-IN (ALLOWING ONLY THE CORD TO COME OUT AND LAY FLAT.

PAINT

1. ALL PAINT TO COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS GOVERNING THE USE OF PAINT MATERIALS.
2. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR ENVIRONMENTAL CONDITIONS UNDER WHICH COATINGS AND COATING SYSTEMS MAY BE APPLIED.
3. PROTECT FLOORS AND ALL ADJACENT SURFACES FROM PAINT SMEARS, SPATTERS, AND DROPPINGS. MASK OFF AREAS WHERE REQUIRED. USE DROP CLOTHS TO PROTECT FLOORS AND ITEMS TO NOT BE PAINTED.
4. PAINT VISIBLE DUCT SURFACES BEHIND VENTS, REGISTERS, AND GRILLES FLAT BLACK.
5. FINISH CEILING ACCESS DOORS, PIPES, CONDUIT, GRILLES AND OTHER ITEMS OF A SIMILAR NATURE IN A SEMI-GLOSS TO MATCH THE COLOR OF THE ADJACENT WALL AND CEILING PAINT COLOR UNLESS PRE-FINISHED IN FINAL INTENDED COLOR, OR AS DIRECTED.
6. ALL WALLS AND CEILINGS IN COMMERCIAL KITCHENS AND RESTROOMS TO HAVE A SEMI-GLOSS FINISH UNLESS NOTED OTHERWISE.
7. ALL REMAINING WALLS TO HAVE AN EGGSHELL FINISH UNLESS NOTED OTHERWISE.
8. ALL REMAINING CEILINGS TO HAVE A FLAT FINISH UNLESS NOTED OTHERWISE.
9. ALL TRIM, CASING, AND BASE TO HAVE A SEMI-GLOSS FINISH UNLESS NOTED OTHERWISE.
10. ALL FLAT PAINT TO BE WASHABLE / SCRUBBABLE TYPE - SHERWIN WILLIAMS "DURATION HOME" OR EQUAL.
11. ALL COLORS MUST BE SUBMITTED TO DESIGNER FOR APPROVAL PRIOR TO INSTALLATION.
12. ALL GRILLES SHOULD BE PAINTED TO MATCH SURROUNDING SURFACE COLOR.

POWER / LIGHTING / COMMUNICATIONS / CEILINGS

1. CONTRACTOR RESPONSIBLE FOR PURCHASING AND INSTALLING ALL LIGHTING AND CEILING ELEMENTS UNLESS NOTED OTHERWISE.
2. REFER TO MECHANICAL, ELECTRICAL, AND FIRE PROTECTION DRAWINGS AND SPECIFICATIONS FOR THE DESIGN OF THESE SYSTEMS, SWITCHES, OUTLETS, FIXTURES, DUCTS, ETC. SHOWN. INTERIOR DESIGNER'S DRAWINGS ARE FOR THE SPECIFIC NEEDS REQUIRED BY THE DESIGNER AND DO NOT INCLUDE GENERAL LIGHTING / ELECTRICAL REQUIREMENTS. GENERAL LIGHTING TO BE ADDED IN FUTURE PLAN SUBMITTALS BY ARCHITECT OR LIGHTING SPECIALIST.
3. VERIFY FIXTURE QUANTITIES PRIOR TO ORDERING.
4. NO SUBSTITUTIONS MAY BE MADE FOR SPECIFIED LIGHT FIXTURES WITHOUT WRITTEN APPROVAL FROM DESIGNER AND CLIENT.
5. LIGHT SWITCHES SHALL CONFORM TO ALL APPLICABLE CODE REQUIREMENTS.
6. LIGHT SWITCHING SHOWN ADJACENT TO ONE ANOTHER SHALL BE GANGED WITH SINGLE DECORATIVE STAINLESS STEEL PLATES.
7. ELECTRICIAN SHALL DETERMINE WHETHER ELECTRONIC OR MAGNETIC DIMMERS ARE REQUIRED FOR LOW VOLTAGE LIGHT FIXTURES.
8. CONTRACTOR IS RESPONSIBLE FOR ADDITIONAL OUTLETS REQUIRED BY CODE.
9. CONTRACTOR TO DETERMINE EQUIPMENT REQUIRING SOLE DEDICATION OF A CIRCUIT.
10. VERIFY THE LOCATION OF REMOTE POWER PANELS, DISCONNECT SWITCHES, SPECIAL PANELS, THERMOSTATS, ALARMS, OR ANY DEVICE EXPOSED TO VIEW WILL NOT CONFLICT WITH ART / CABINETRY AS SHOWN IN THESE DRAWINGS. CONTACT INTERIOR DESIGNER IMMEDIATELY IF DISCREPANCIES ARISE. REFER TO FURNITURE PLANS AND SPECIALTY ELECTRICAL PLANS AS SHOWN IN THESE DRAWINGS FOR COORDINATION.
11. OWNER TO VERIFY ELECTRICAL OUTLET LOCATIONS,
12. ALL OUTLETS AT STANDARD HEIGHT, UNLESS NOTED OTHERWISE. FINISH AND COVER PLATE FINISH TO BE CONFIRMED WITH DESIGNER.
13. GYPSUM BOARD CEILINGS THROUGHOUT UNLESS NOTED OTHERWISE.
14. ALL CEILING GRILLES AND/OR REGISTERS, ETC. TO BE PAINTED AS SURROUNDING COLOR UNLESS NOTED OTHERWISE. ALL GRILLE/LOUVERS MOUNTED ON WOOD PANELS TO BE STAIN GRADE WOOD STAINED TO MATCH PANELING. ALTERNATIVE - SATIN ANODIZED FINISH.
15. SHOP DRAWINGS FOR ALL CUSTOM LIGHTING FIXTURES TO BE SUBMITTED TO INTERIOR DESIGNER FOR APPROVAL.

TILE / STONE / GROUT

1. STONE SUBMITTAL MUST REPRESENT ACTUAL QUARRY MATERIAL AND MUST SHOW ALL POSSIBLE COLOR VARIANCES OF APPROVED COLOR VARIATIONS WILL DETERMINE COMPLIANCE WITH THE SPECIFIED MATERIAL. INSTALLATION OF MATERIAL THAT DEVIATES FROM THE APPROVED SAMPLES WILL BE REQUIRED TO BE REMOVED AND REPLACES BY THE CONTRACTOR.
2. VERIFY LEAD TIMES FOR ALL MATERIALS TO ENSURE TIMELY INSTALLATION.
3. ALL STEPS NECESSARY TO CREATE AN EXTREMELY FLUSH FLOOR ARE TO BE TAKEN BY CONTRACTOR. NO THRESHOLD SHOULD BE GREATER THAN 1/4".
4. FINISH LEVEL OF CARPET AND HARD SURFACE MUST BE FLUSH. FLOORING CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR DETERMINING CORRECT INSTALLATION OF MATERIAL TO MEET THIS OBJECTIVE.
5. SCHLUTER OR EQUIVALENT, TRANSITION STRIPS TO BE USED AS TRANSITIONS BETWEEN FLOOR TYPES UNLESS NOTED OTHERWISE.
6. WHERE SCHLUTER (OR EQUAL) IS SPECIFIED, USE THE MOST MINIMUM SIZE SCHLUTER NECESSARY TO CREATE A FLUSH TRANSITION TO MAKE AS INCONSPICUOUS AS POSSIBLE.
7. STONE MUST BE CLEANED PROPERLY BEFORE SEALING AND/OR ENHANCING. CONTRACTOR WILL BE REQUIRED TO STRIP AND RE-DO IF NOT DONE PROPERLY.
8. AFTER FLOOR IS CLEANED AND SEALED IT MUST BE PROTECTED.
9. WHERE STONE IS USED IN EXTERIOR OR INTERIOR APPLICATION, APPLY AFTER-INSTALLATION COATING TO INCREASE THE COEFFICIENT OF FRICTION.
10. CERAMIC TILE TO BE INSTALLED IN STRICT ACCORDANCE WITH THE REFERENCE STANDARDS PUBLISHED IN THE TILE COUNCIL OF AMERICA'S 'HANDBOOK FOR CERAMIC TILE INSTALLATION' AND WITH THE TILE MANUFACTURER'S RECOMMENDATIONS.
11. OTHER TILE TYPES, PORCELAIN, STONE, GLASS, ETC. SHALL COMPLY WITH THE MANUFACTURER'S / DISTRIBUTOR'S INSTALLATION RECOMMENDATIONS.
12. INSTALL TILE IN PATTERN AND DIRECTION AS SHOWN IN INTERIOR DESIGN DRAWINGS.
13. EXTEND FLOOR TILE INTO RECESSES AND UNDER EQUIPMENT AND MILLWORK WHERE APPLICABLE.
14. MINIMIZE THE NUMBER OF SMALL CUT TILES WHEREVER POSSIBLE.
15. MITER ALL TILE CORNERS. TYP. ALL
16. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR GROUT JOINT SIZES. THE MINIMAL SIZED JOINT SHALL BE USED.
17. STONE AND GROUT TO BE SEALED PER MANUFACTURER'S INSTRUCTIONS.
18. A GROUT RELEASE IS RECOMMENDED TO PREVENT FINELY POWDERED PIGMENTS FROM LODGINING IN THE PORES OF THE TILE SURFACE.
19. ALL GROUT WIDTHS TO BE 1/16"-1/8" UNLESS NOTED OTHERWISE.
20. ALL ADHESIVES AND SEALERS MUST MEET FLOOTSCORE'S STANDARD REQUIREMENTS.
21. ALL ADHESIVES, VOC LIMITS, AEROSOL ADHESIVES MUST MEET SOUTH COAST AIR QUALITY MANAGEMENT DISTRICTS RULE 1168 VOC LIMITS, AEROSOL ADHESIVES MEET GREEN SEAL STANDARD GS-36 AND LOCAL BUILDING CODE OF REGULATIONS.

WALLS

1. ALL WALLS TO HAVE AT LEAST A LEVEL 4 SMOOTH FINISH UNLESS NOTED OTHERWISE.
2. ALL OUTSIDE EDGES TO HAVE SQUARE PROFILE CORNER BEAD UNLESS NOTED OTHERWISE.
3. ALL WALLS WITH A WALLCOVERING FINISH TO HAVE A LEVEL 5 SMOOTH FINISH UNLESS NOTED OTHERWISE.

WALLCOVERING

1. ALL WALLCOVERING PRIMERS, ADHESIVES, SEALERS, SIZING, AND INSTALLATION METHODS SHALL BE PER WALL COVERING MANUFACTURER'S RECOMMENDATIONS.
2. WALL COVERING TO BE INSTALLED SECURE AND FLAT, WITHOUT WRINKLES, GAPS OR OVERLAPS. SEAMS SHALL BE TIGHT AND SECURE. CLEAN WALLCOVERING TO BE FREE OF DIRT AND GLUE.
3. WALLCOVERING SEAMS SHOULD BE NO CLOSER THAN 6 INCHES FROM OUTSIDE CORNERS AND 5 INCHES FROM INSIDE CORNERS. HORIZONTAL SEAMS ARE NOT ACCEPTABLE UNLESS NOTED OTHERWISE.
4. ALL SEAMS SHALL BE VERTICAL AND PLUMB, WITH PATTERN MATCHED TO THE GREATEST DEGREE POSSIBLE WHERE PATTERNS OCCUR.

WINDOW GLAZING

1. WINDOW GLAZING SHALL HAVE SUFFICIENT UV PROTECTION, LIGHT TRANSMISSION AND HEAT TRANSFERENCE REDUCTIONS TO PROTECT AGAINST NEAR TERM INTERIOR FABRIC FADING. FAILURE TO PROVIDE WINDOWS SPECIFIED WITH THESE INHIBITORS WILL CAUSE PREMATURE FABRIC FADING.

WOOD / FINISH CARPENTRY

1. ALL STAINED WOOD TO HAVE A SATIN MATTE FINISH - DO NOT USE LACQUER UNLESS NOTED OTHERWISE
2. TYPES OF ARCHITECTURAL WOODWORK SHALL INCLUDE THE FOLLOWING: INTERIOR STANDING AND RUNNING TRIMS, RAILS, BASE, DOOR CASING, DOOR FRAMES, CHAIR RAILS, DOORS, WOOD CABINETS, BUILT-IN DESKS, WOOD COUNTER APRONS, WOOD BULKHEADS, FLUSH WOOD PANELING AND RAISED WOOD / APPLIED WOOD PANELING.
3. FULL LENGTH CONTINUOUS BOARD SHALL BE USED WHENEVER APPLICABLE OR SPECIFICALLY NOTED.
4. ALL JOINTS SHALL BE TIGHT AND TRUE AND SECURELY FASTENED. CORNERS SHALL BE NEATLY MITERED, BUTTED OR COPED, WITH NAILS SET AND SURFACES FREE OF TOOL MARKS.
5. ALL NAILING SHALL BE DONE WITH FINISH NAILS WHERE PAINT OR STAIN IS TO COVER.
6. ALL WOOD GRAINS TO BE LAID IN THE DIRECTION AS INDICATED ON ELEVATIONS AND DETAILS. CONTACT INTERIOR DESIGNER FOR ANY CONFLICTS OR DISCREPANCIES.
7. STAIN SUBMITTAL MUST BE REPRESENTATIVE OF ALL POSSIBLE COLOR VARIANCES OF MATERIAL. APPROVED COLOR VARIATIONS WILL DETERMINE COMPLIANCE WITH THE SPECIFIED MATERIAL. INSTALLATION OF MATERIAL THAT DEVIATES FROM THE APPROVED SAMPLES WILL BE REQUIRED TO BE REMOVED AND REPLACED BY CONTRACTOR.
8. ALL SEALANTS AND STAINS MUST COMPLY WITH VOC LIMITS IN THE AIR RESOURCES BOARD ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE AND ALL AEROSOLS MUST MEET THE LOCAL BUILDING CODE REGULATIONS.
9. ALL COMPOSITE WOOD AND AGRIFIBER PRODUCTS MUST CONTAIN NO ADDED UREA-FORMALDEHYDE RESINS.

WOOD FLOORING

1. INSTALL WOOD FLOORING TYPE, SIZE, SPECIES AND PATTERN AS SPECIFIED BY INTERIOR DESIGNER
2. INSTALL WOOD FLOORING IN DIRECTION SHOWN ON INTERIOR DESIGN FINISH PLAN. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
3. INSTALL EDGING TRANSITION STRIP OF TYPE, STYLE, AND FINISH AS SPECIFIED BY INTERIOR DESIGNER WHERE WOOD FLOOR ABUTS DISSIMILAR FLOORING MATERIALS.
4. DO NOT INSTALL FLOORING UNTIL OVERHEAD AND ADJACENT WORK IS COMPLETE. PROVIDE CARDBOARD PROTECTIVE COVERING UNTIL READY FOR FINAL CLEANING.
5. WOOD SUBMITTAL MUST BE REPRESENTATIVE OF ALL POSSIBLE COLOR VARIANCES OF MATERIAL. APPROVED COLOR VARIATIONS WILL DETERMINE COMPLIANCE WITH THE SPECIFIED MATERIAL. INSTALLATION OF MATERIAL THAT DEVIATES FROM THE APPROVED SAMPLES WILL BE REQUIRED TO BE REMOVED AND REPLACED BY CONTRACTOR.

VINYL / RUBBER FLOORING

1. ALL MATERIALS MUST BE FLOORSCORE CERTIFIED OR EQUAL
2. ALL ADHESIVES, VOC LIMITS, AEROSOL ADHESIVES MUST MEET SOUTH COAST AIR QUALITY MANAGEMENT DISTRICTS RULE 1168 VOC LIMITS, AEROSOL ADHESIVES MEET THE LOCAL BUILDING CODE OF REGULATION.

CONTRACTOR / CONSTRUCTION

1. CONTRACTOR SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND REGULATIONS REGARDING SAFETY OF PERSONS, PROPERTY AND ENVIRONMENTAL PROTECTION
2. CONTRACTOR SHALL OBTAIN ALL PERMITS AND INSPECTIONS AND COMPLY WITH ALL CODES, LAWS, ORDINANCES, RULES AND REGULATIONS OF ALL PUBLIC AUTHORITIES (FEDERAL, STATE OR LOCAL) GOVERNING THE WORK. THE STRINGENT SHALL APPLY.
3. ALL FINISHES SHALL MEET OR EXCEED REQUIREMENTS OF LOCAL CODES.
4. VERIFY ALL MANUFACTURER'S LEAD TIMES AT BID STAGE AND PURCHASE ALL MATERIALS ACCORDINGLY. SUBSTITUTIONS MAY NOT BE MADE WITHOUT WRITTEN CONSENT FROM THE INTERIOR DESIGNER AND CLIENT.
5. INTERIOR DESIGNER IS NOT RESPONSIBLE FOR ANY RESELECTS REQUIRED DUE TO MATERIALS NOT BEING PURCHASED PRIOR TO MANUFACTURER'S GIVEN LEAD TIMES. CONTRACTOR WILL BE RESPONSIBLE TO RESELECT MATERIAL AND SUBMIT TO INTERIOR DESIGNER FOR APPROVAL WITHOUT IMPACTING SCHEDULE.
6. PRIOR TO PURCHASE OR INSTALLATION OF ANY FINISH, SUBMIT (3) SAMPLES TO INTERIOR DESIGNER FOR REVIEW. ALLOW TIME FOR SUBMITTAL REVIEW AND RESUBMITTALS IF REQUIRED.
7. FLAME CERTIFICATES ARE TO BE OBTAINED FOR ALL FINISH MATERIALS IN DUPLICATE BY CONTRACTOR. SUBMIT (1) COPY TO INTERIOR DESIGNER.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS FOR THE WORK PRIOR TO THE WORK. ANY VARIANCES WHICH MAY AFFECT THE WORK ARE TO BE REPORTED TO THE INTERIOR DESIGNER FOR RESOLUTION BEFORE PROCEEDING.
9. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY SIZES, ARRANGEMENTS AND CLEARANCES OF FIXTURES, EQUIPMENT AND APPLIANCES SPECIFIED BY INTERIOR DESIGNER, "BY OTHERS" OR "NIC"
10. CONTRACTOR SHALL VERIFY QUANTITY, SIZE AND LOCATION OF ALL ITEMS AFFECTING WORK, INCLUDING, BUT NOT LIMITED TO, PLUMBING FIXTURES, ELECTRICAL RECEPTACLES, LIFE SAFETY EQUIPMENT, DUCTWORK, APPLIANCES, AND EQUIPMENT, BEING PROVIDE BY OTHERS. INTERIOR DESIGNER IS TO BE NOTIFIED OF ANY ITEMS IN CONFLICT PRIOR TO CONSTRUCTION.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY BACKING AND/OR BLOCKING FOR ALL DECORATIVE LIGHT FIXTURES, EQUIPMENT, FIXED DECORATIVE ELEMENTS AND WINDOW TREATMENTS WHERE APPLICABLE.
12. ANY UNCERTAINTY AND/OR DISCREPANCY CONCERNING PRODUCT/MATERIAL TYPE SHALL BE VERIFIED WITH THE INTERIOR DESIGNER.
13. TINT ALL EXTERIOR WINDOWS UNLESS WINDOWS ARE PRE-TINTED OR ARE THERMAL DUAL PANE TYPE. FOR THERMAL DUAL PANE WINDOWS CHECK MANUFACTURER'S WARRANTY BEFORE TINTING. ALL TINTING TO MATCH AND TO BE INSTALLED PRIOR TO ANY CARPET INSTALLATION.
14. UNLESS OTHERWISE SPECIFIED ALL ITEMS SHOWN ARE PROVIDED BY CONTRACTOR.
15. CONTRACTOR TO SUBMIT MILLWORK SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION WHICH INCLUDES MODIFICATIONS NECESSARY DUE TO FIELD CONDITIONS TO ENSURE DESIGN INTENT IS FOLLOWED.

DRAWINGS / SPECIFICATIONS

1. INTERIOR DESIGN DRAWINGS ARE THE PROPERTY OF INTERIOR DESIGNER AND SHALL NOT BE USED FOR PURPOSES OTHER THAN SHOWN HEREIN.
2. NO DEVIATIONS SHALL BE MADE FROM THE WORK DESCRIBED IN THE INTERIOR DESIGN DRAWINGS AND SPECIFICATIONS WITHOUT WRITTEN APPROVAL OF THE INTERIOR DESIGNER.
3. SUBSTITUTIONS, REVISIONS, OR CHANGES, MUST BE SUBMITTED TO INTERIOR DESIGNER FOR REVIEW AND APPROVAL PRIOR TO PURCHASING, FABRICATION OR INSTALLATION.
4. IT IS THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR AND/OR MATERIALS TO NOTIFY BOTH THE ARCHITECT AND INTERIOR DESIGNER OF ANY CONFLICTS OR DISCREPANCIES BETWEEN THE INTERIOR DESIGN DRAWINGS / SPECIFICATIONS AND THE DRAWINGS / SPECIFICATIONS PRODUCED BY THE ARCHITECT, ENGINEERS OR OTHER PROJECT CONSULTANTS.
5. DETAILS AND NOTES ARE TO BE CONSIDERED TYPICAL AND ARE TO APPLY IN SIMILAR CONDITIONS IN ALL PARTS OF THE BUILDING UNLESS NOTED OTHERWISE. NOTIFY INTERIOR DESIGNER IN THE EVENT OF ANY DISCREPANCY.
6. DETAILS AND NOTES ARE NOT INTENDED TO CONTRADICT MANUFACTURER'S INSTALLATION GUIDELINES. ALL FINISHES, FIXTURES, EQUIPMENT AND APPLIANCES SHALL BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS
7. DO NOT SCALE DRAWINGS - WRITTEN DIMENSIONS GOVERN.
8. "TYPICAL" OR "TYP" SHALL MEAN THAT THE CONDITION DETAIL OR ELEVATION IS REPRESENTATIVE OF SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE.
9. ALL WORK NOTED AS "NOT IN CONTRACT" OR "BY OTHERS" SHALL BE PROVIDED UNDER A SEPARATE CONTRACT. CONTRACTOR SHALL INCLUDE "NOT IN CONTRACT", "NIC", AND "BY OTHERS" ITEMS IN CONSTRUCTION SCHEDULE AND COORDINATE AS NECESSARY TO ASSURE PROPER AND TIMELY INSTALLATION.
10. SHOP DRAWINGS FOR ALL BUILT IN CABINETRY ARE BY OTHERS. DRAWINGS SHOWN ARE FOR DESIGN DIRECTION ONLY. SHOP DRAWINGS MUST BE APPROVED BY INTERIOR DESIGNER.

CUSTOM LIGHT FIXTURES

1. ALL CUSTOM LIGHT FIXTURES MUST BE OF CONTRACT QUALITY.
2. ALL CUSTOM LIGHT FIXTURES MUST BE UL LISTED.
3. CUSTOM LIGHT FIXTURE FINISHES MUST MATCH DESIGNER PROVIDED CONTROL SAMPLES. GC TO ENSURE VENDOR PROVIDES FINISH SAMPLES FOR DESIGNER APPROVAL PRIOR TO FABRICATION.
4. IN EVENT CUSTOM LIGHT FIXTURES ARE SPECIFIED IN BULK (UNIT CORRIDORS). GC TO ENSURE VENDOR PROVIDES SAMPLE LIGHT FIXTURE FOR DESIGNER APPROVAL PRIOR TO VENDOR FABRICATING THE FIXTURES IN BULK.
5. GC OR PURCHASING BODY/CLIENT TO PROVIDE SCALED SHOP DRAWINGS OF CUSTOM LIGHT FOR DESIGNER APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS MUST CLEARLY INDICATE FINISHES, JUNCTION BOX AND THREADED ROD LOCATIONS (IF ANY).
6. GC TO ENSURE THAT VENDOR HAS PROVIDED MEANS OF VENTING FOR LAMPING AS REQUIRED.
7. FOR CUSTOM LIGHT FIXTURES GC TO COORDINATE WITH STRUCTURAL ENGINEER/ CLIENT AND PROVIDE SECURITY MOUNTING/ ANCHORING AT CEILING AS REQUIRED BASED ON WEIGHT OF FIXTURE.
8. GC TO ENSURE THAT THE FIXTURE CAN BE EASILY RELAMPED.
9. FOR CUSTOM LIGHT FIXTURES, GC TO COORDINATE WITH ELECTRICAL ENGINEER/ CLIENT TO CONFIRM IF LAMPING NEEDS TO BE ON A DIMMER. AND IF VENDOR SPECIFIED-LAMPING IS APPROPRIATE (LAMP TYPE, LIGHT LEVEL, LOAD ON CIRCUIT, COLOR TEMPERATURE, ETC).
10. WHERE LARGE CUSTOM FIXTURES ARE SPECIFIED, GC TO CONFIRM WITH VENDOR THAT FIXTURE IS FABRICATED IN PARTS (THE SECTIONS OF THE FIXTURE ARE USUALLY SHOWN ON VENDOR'S SHOP DRAWINGS) AND CONFIRM EASY PASSAGE OF SECTIONS OF FIXTURE THROUGH DOORS AND ELEVATORS (SIZE CLEARANCE) PRIOR TO FABRICATION OF FIXTURE.
11. ALL WORK MUST BE UP TO CURRENT CODE AND LOCAL JURISTICTION.

CEILINGS

1. THE PLAN IS FOR GENERAL REQUIREMENTS ONLY. GENERAL CONTRACTOR TO REVIEW WITH ALL SUB-CONTRACTORS ANY EXISTING CONDITIONS PRIOR TO CONSTRUCTION FOR REFLECTED CEILING ISSUES, INCLUDING ELECTRICAL , AND MECHANICAL. ELECTRICAL TO VERIFY ALL REQUIRED CHANGES WITH THE ARCHITECT AND INTERIOR DESIGNER.
2. ALL WORK MUST BE UP TO CURRENT CODE AND LOCAL JURISTICTION.
3. ALL CEILINGS WITH NEW WORK ARE TO MATCH EXISTING HEIGHTS, COLOR, TEXTURE AND MATERIALS UNLESS NOTED OTHERWISE.
4. BALLAST TO BE ENGERY SAVING.
5. PATCH GRID AND OR CEILING WHERE WALLS HAVE BEEN REMOVED TO MATCH ADJACENT COLOR, TEXTURE AND MATERIALS UNLESS NOTED OTHERWISE.

GENERAL NOTES FOR SITE CONSTRUCTION AND SAFETY

GENERAL NOTES:

THE WORK TO BE PERFORMED IS IN AN AREA LOCATED OVER THE CLOSED EVERETT LANDFILL. REFUSE, LEACHATE, AND LANDFILL GAS MAY BE PRESENT AND POSE A SAFETY AND HEALTH HAZARD. IN ADDITION, PETROLEUM AND/OR METALS-CONTAMINATED SOILS AND GROUNDWATER MAY BE ENCOUNTERED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACTOR'S HEALTH AND SAFETY PLAN

SPECIAL LANDFILL SITE REQUIREMENTS:

A PORTION OF THE PROJECT IS LOCATED ON THE EVERETT LANDFILL SITE. THE EVERETT LANDFILL SITE IS SUBJECT TO A CONSENT DECREE BETWEEN THE CITY, RIVERFRONT COMMERCIAL INVESTMENT LLC, AND THE STATE DEPARTMENT OF ECOLOGY THAT INCLUDES SPECIAL REQUIREMENTS FOR WORK ON THE LANDFILL SITE AS DESCRIBED BELOW.

TO RESTRICT PUBLIC ACCESS TO THE LANDFILL SITE DURING CONSTRUCTION, FENCING AND LOCKING GATES SHALL BE MAINTAINED DURING CONSTRUCTION AND SECURED DAILY.

CONTRACTOR MUST DEVELOP, SUBMIT FOR OWNER APPROVAL, AND MAINTAIN, A SITE SAFETY AND HEALTH PLAN AT ALL TIMES.

THE SITE HEALTH AND SAFETY PLAN SHALL MEET THE REQUIREMENTS OF CODE OF FEDERAL REGULATIONS (CFR) 1910.120 AND THE CONSENT DECREE, AND BE SUBMITTED TO THE CITY OF EVERETT AND THE STATE DEPARTMENT OF ECOLOGY FOR REVIEW.

DUST AND ODOR CONTROL:

THE SITE SHALL BE MONITORED FOR FUGITIVE DUST. IF FUGITIVE DUST DEVELOPS, CONTRACTOR IS TO WATER DOWN THE WORK AREA UNTIL DUST IS CONTROLLED FROM MIGRATING OUTSIDE OF THE CONSTRUCTION ZONE. DUST CONTROL MEASURES SHOULD NOT RESULT IN SURFACE WATER RUNOFF.

ODOR EMISSIONS SHALL BE CONTROLLED TO ENSURE COMPLIANCE WITH STATE OF WASHINGTON AND PUGET SOUND AIR AGENCY REGULATIONS. METHODS OF CONTROL SHALL INCLUDE BUT IS NOT LIMITED TO AIR MONITORING AT DOWNLOAD PERIMETER WORK AREA LOCATIONS, POLYETHYLENE OR OTHER SHEETING, TARPING, OR TEXTILE TO COVER EXPOSED SOIL AREAS AND WASTE CONTAINERS, AND USE OF WATER SPRAYS.

SPECIAL SAFETY PROVISIONS:

CONSTRUCTION OF THIS PROJECT IS BEING PERFORMED ON, AND ADJACENT TO BURIED WASTES AND REFUSE. AS THESE BURIED MATERIALS DECOMPOSE ANAEROBICALLY, THEY GENERATE LANDFILL GAS (LFG), WHICH NORMALLY CONSISTS OF CARBON DIOXIDE (CO2), METHANE (CH4), OCCASIONALLY HYDROGEN SULFIDE (H2S) AND OTHER GASES, DEPENDENT ON THE COMPOSITION OF THE BURIED MATERIALS. HAZARDOUS CONDITIONS DUE TO LANDFILL GASES INCLUDE BUT ARE NOT LIMITED TO FIRES, EXPLOSIONS, OXYGEN DEFICIENCY, AND TOXIC ENVIRONMENTS. LEACHATE (I.E., CONTAMINATED LIQUID THAT HAS COME IN CONTACT WITH REFUSE AND CONTAINS WASTE DEGRADATION PRODUCTS) MAY BE PRESENT IN EXCAVATIONS.

LANDFILL GASES HAVE THE POTENTIAL TO CREATE HAZARDOUS CONDITIONS IF NOT CONTROLLED OR RECOGNIZED.
SOME OF THE HAZARDS INCLUDE:

1. FIRES THAT MAY START SPONTANEOUSLY FROM EXPOSED AND/OR DECOMPOSING REFUSE.
2. FIRES AND EXPLOSIONS THAT MAY OCCUR FROM THE PRESENCE OF METHANE GAS.
3. LANDFILL GASES AND OTHER TRACE GASES THAT MAY HAVE TOXIC EFFECTS OR CREATE AN OXYGEN DEFICIENCY IN TRENCHES, VAULTS, CONDUITS, AND STRUCTURES.
4. HYDROGEN SULFIDE, A HIGHLY TOXIC AND FLAMMABLE GAS, WHICH MAY BE PRESENT.
5. EXPOSURE TO LEACHATE IS POTENTIALLY HAZARDOUS TO HUMAN HEALTH BECAUSE OF TOXIC AND/OR CARCINOGENIC COMPOUNDS THAT MAY BE PRESENT IN THE LEACHATE.

ALL IMPORTED SOILS WILL BE VISUALLY FIELD SCREENED FOR EVIDENCE OF CONTAMINANTS. ANY SUSPECT SOILS WILL BE SAMPLED FOR CHEMICAL ANALYSIS. ALL OTHER SOIL WILL BE SAMPLED FOR CHEMICAL ANALYSIS AT THE RATE OF ONE COMPOSITE SAMPLE (COMPRISED OF FOUR DISCRETE GRAB SAMPLES) FOR EVERY 5,000 CUBIC YARDS IMPORTED. ANALYSES WILL INCLUDE PETROLEUM HYDROCARBONS BY METHOD NWTPH-HCID (WITH FOLLOW UP AS NEEDED) AND RCRA METALS BY METHOD EPA 6010D/6020B/200.7/200.8. ALL SOIL REMAINING ON SITE WILL MEET THE CRITERIA FOR LIMITED ACCESS PROPERTIES IN THE CURRENT DRAFT REVISIONS TO WAC 173-350 SOLID WASTE HANDLING STANDARDS.

POTENTIAL IMPACTS OF SOIL STOCKPILING ON LANDFILL GAS MIGRATION WILL BE ADDRESSED BY THE CITY'S ONGOING LANDFILL GAS MONITORING PROGRAM, WHICH INCLUDES QUARTERLY SOIL GAS MONITORING AT AROUND 40 LANDFILL GAS PROBE LOCATIONS. WITH THE RECENT COMPLETION OF THE SOUTHERNMOST LEG OF GAS EXTRACTION TRENCH, THE LANDFILL AT THIS POINT IS ALMOST ENTIRELY SURROUNDED BY AN ACTIVE LANDFILL GAS EXTRACTION SYSTEM, WITH THE SOIL FILL AREA SURROUNDED ON ALL SIDES. MULTIPLE PRIOR ROUNDS OF SITE PRELOADING RESULTED IN A FEW TEMPORARY CHANGES IN TH

ZONING ANALYSIS

PROPOSED USES
RESIDENTIAL
COMMERCIAL

MAXIMUM BUILDING HEIGHT
ATTACHMENT F.B.1.a
MAXIMUM HEIGHT, AS APPROVED BY THE CITY AS PART OF THE PLANNED DEVELOPMENT ORDINANCE FOR THE EVERETT RIVERFRONT PROJECT.
MAXIMUM HEIGHT: 75'-0" COMPLIES

MAXIMUM HEIGHT OF ROOFTOP APPURTENANCES
ATTACHMENT F.B.1.b
THE MAXIMUM HEIGHT LIMIT OF ROOFTOP APPURTENANCES SHALL BE 15' ABOVE THE MAXIMUM BUILDING HEIGHT. ROOFTOP APPURTENANCES SHALL BE EITHER SCREENED OR DESIGNED/PAINTED TO BLEND INTO THE BUILDING, AS APPROPRIATE TO THE APPURTENANCE.

COMPLIES

MINIMUM LOT AREA
ATTACHMENT F.1.B.c
THE MINIMUM LOT AREA IS 3,000 SQUARE FEET. THERE SHALL BE NO MINIMUM LOT WIDTH OR DEPTH REQUIREMENTS.

COMPLIES

SETBACKS
ATTACHMENT F.1.B.d
THERE SHALL BE NO MINIMUM REQUIRED SETBACKS.

COMPLIES

OFF-STREET PARKING
ATTACHMENT F.2.a
FOR ALL COMMERCIAL USES OTHER THAN HOTEL, PARKING MUST BE PROVIDED AT A MINIMUM AVERAGE RATIO FOR ALL USES OF THREE PARKING SPACES PER 1,000 SQUARE FEET OF DEVELOPMENT. PLANNING DIRECTOR APPROVAL WOULD BE REQUIRED FOR ANY CHANGE IN PARKING THAT REDUCES THE PARKING QUANTITY TO LESS THAN A MINIMUM AVERAGE RATIO OF THREE SPACES PER 1,000 SQUARE FEET OF DEVELOPMENT

TOTAL COMMERCIAL SQUARE FOOTAGE: 22,767 SF
TOTAL PARKING SPACES REQUIRED: 22,767SF / 1,000 SF = 22.76
TOTAL PARKING PROVIDED: 23 SPACES PROVIDED COMPLIES

ATTACHMENT F.C.3
MULTI-FAMILY AND ATTACHED SINGLE-FAMILY: 1 PARKING SPACE PER UNIT WITH ONE OR FEWER BEDROOMS, AND 1.5 PARKING SPACES PER UNIT WITH TWO OR MORE BEDROOMS.

TOTAL UNITS WITH ONE OR FEWER BEDROOMS: 124
TOTAL UNITS WITH TWO OR MORE BEDROOMS: 44
TOTAL SPACES REQUIRED: 124(1) + 44(1.5) = 190
TOTAL SPACES PROVIDED: 190 SPACES PROVIDED COMPLIES

OFF-STREET LOADING
ATTACHMENT F.3
THE OFF-STREET LOADING REQUIREMENTS OF SUBSECTION B, RATHER THAN SUBSECTION A, OF EMC 19.34.090 SHALL APPLY TO DEVELOPMENT OF THE LANDFILL PAD.
(SUBSECTION A REQUIRES USES WITH 5,000-20,000 SF TO HAVE ONE LOADING BERTH, 20,000-50,000 TWO BERTHS, 50,000-100,000 THREE BERTHS; SUBSECTION B REQUIRES USES WITH 20,000-50,000 SF TO HAVE ONE LOADING BERTH AND 50,000-100,000 TWO BERTHS.)

COMPLIES, REFER TO SITE PLAN SHEET A002

GROUND FLOOR USES FACING MAIN STREET
ATTACHMENT F.4
PEDESTRIAN-ORIENTED GROUND FLOOR RETAIL OR RESTAURANT, PEDESTRIAN-ORIENTED USE OR BUSINESS, RESIDENTIAL ENTRANCES, HOTEL OR A COMPATIBLE BUILDING WITH A USE DRAWING PEOPLE SUCH AS A THEATER OR COMMUNITY CENTER IS REQUIRED ON BUILDING FRONTS FACING THE MAIN STREET.

REFER TO SITE PLAN SHEET A002 DOCUMENTING COMPLIANCE

PRIMARY ENTRANCES TO FACE MAIN STREET OR PLAZA; ALTERNATIVE FACADE TREATMENT
ATTACHMENT F.5.a-e
WHEN POSSIBLE ALL PRIMARY BUILDING ENTRANCES AND STOREFRONTS SHOULD FACE ONTO THE MAIN STREET AND/OR PLAZA AND NOT PARKING LOTS. WHEN THIS IS NOT POSSIBLE THOSE FACADES WILL INCORPORATE (c) OR (d) BELOW AND AT LEAST ONE OF THE OTHER ELEMENTS.

a. TRANSPARENT WINDOWS OR DOORS
b. DISPLAY WINDOWS
c. LANDSCAPE PLANTING BEDS AT LEAST FIVE FEET WIDE OR A RAISED PLANTER BED AT LEAST TWO FEET HIGH AND THREE FEET WIDE IN FRONT OF THE WALL. SUCH PLANTING AREAS SHALL INCLUDE PLANTING MATERIALS THAT ARE SUFFICIENT TO OBSCURE OR SCREEN AT LEAST SIXTY PERCENT OF THE WALL SURFACE WITHIN THREE YEARS.
d. INSTALLING A VERTICAL TRELLIS IN A RAISED PLANTER BED AT LEAST TWO FEET HIGH AND THREE FEET WIDE IN FRONT OF THE WALL WITH CLIMBING VINES OR PLANT MATERIALS SUFFICIENT TO OBSCURE OR SCREEN AT LEAST SIXTY PERCENT OF THE WALL SURFACE WITHIN THREE YEARS. FOR LARGE AREAS, TRELLISES SHOULD BE USED IN CONJUNCTION WITH OTHER BLANK WALL TREATMENTS.
e. OTHER METHODS SUCH AS MURALS OR SPECIAL BUILDING MATERIAL TREATMENTS THAT PROVIDE VISUAL INTEREST TO THE PEDESTRIAN AS APPROVED BY THE CITY.

REFER TO SITE PLAN SHEET A002 DOCUMENTING COMPLIANCE

GROUND FLOOR TRANSPARENCY
EMC 19.22.020.D5.a
FOR ALL BUILDING FACADES FACING MAIN STREET, AT LEAST FORTY PERCENT OF THE AREA BETWEEN TWO AND TEN FEET ABOVE GRADE SHALL BE TRANSPARENT. "TRANSPARENT" MEANS THAT AN INDIVIDUAL CAN SEE INTO THE BUILDING FROM THE OUTSIDE. TRANSPARENT GLASS MAY BE TINTED, LOW-E, OR INCLUDE OTHER SIMILAR TREATMENT. FOR RESIDENTIAL USES, THIS MINIMUM TRANSPARENCY REQUIREMENT IS REDUCED TO TWENTY PERCENT OF THE AREA BETWEEN TWO AND TEN FEET ABOVE GRADE TO ALLOW FOR INCREASED PRIVACY. TRANSPARENT FEATURES MAY INCLUDE WINDOWS AND TRANSPARENT DOORS. DISPLAY CASES ATTACHED TO THE EXTERIOR WALL DO NOT QUALIFY. OTHER TREATMENTS THAT ENHANCE THE PEDESTRIAN ENVIRONMENT MAY BE APPROVED BY THE CITY.

REFER TO SHEET G102 FOR COMPLIANCE

WINDOW TREATMENTS
EMC 19.22.020.D5.b
BUIDLING FACADES FACING MAIN STREET SHALL EMPLOY DISTINCTIVE WINDOW OR FACADE TREATMENT ABOVE THE GROUND FLOOR THAT ADDS VISUAL INTEREST TO THE BUILDING.

REFER TO ELEVATION SHEETS A200 - A205 FOR COMPLIANCE

EXTERIOR MATERIALS FACING MAIN STREET
EMC 19.22.020.D5.c
(1) METAL SIDING. IF METAL SIDING IS USED ON FACADES FACING MAIN STREET, IT SHALL INCORPORATE APPROPRIATE ARCHITECTURAL DETAILING TO ADD VISUAL INTEREST AND INCORPORATE MASONRY OR OTHER SIMILAR DURABLE/PERMANENT MATERIAL NEAR THE GROUND LEVEL.
(2) CONCRETE BLOCK. WHEN USED FOR A FACADE FACING MAIN STREET, CONCRETE BLOCKS SHALL BE SPLIT, PRECISION, ROCK- OR GROUND-FACED, OR SIMILAR MATERIAL. STANDARD CMU SHALL NOT BE USED. IF PRECISION BLOCK IS USED, IT SHALL BE DETAILED WITH MASONRY, METAL OR OTHER APPROPRIATE MATERIALS ON THE SAME WALL SURFACE. TO ADD VISUAL INTEREST, THE USE OF SPECIALIZED TEXTURES AND/OR COLORS USED EFFECTIVELY WITH OTHER BUILDING MATERIALS AND DETAILS IS ENCOURAGED.
(3) EXTERIOR INSULATION AND FINISH SYSTEM (EIFS) FACING MAIN STREET AND SIMILAR TROWELED FINISHES (STUCCO).
(A) EIFS SHALL BE TRIMMED IN WOOD, MASONRY, OR OTHER APPROVED MATERIALS AND SHALL BE SHELTERED FROM EXTREME WEATHER BY ROOF OVERHANGS OR OTHER METHODS.
(B) EIFS MAY ONLY BE USED IN CONJUNCTION WITH OTHER APPROVED BUILDING MATERIALS. GENERALLY, THE USE OF EIFS FOR MORE THAN FIFTY PERCENT OF THE BUILDING FACADE IS DISCOURAGED.
(C) EIFS IS PROHIBITED WITHIN TWO VERTICAL FEET OF THE SIDEWALK OR GROUND LEVEL. MASONRY OR OTHER SIMILAR DURABLE/PERMANENT MATERIALS SHALL BE USED.
(D) HIGH QUALITY FIBER CEMENT PANEL SYSTEMS MAY BE USED, SUCH AS HARDIE BOARD, IN PANELS/SHEETS SMALLER THAN 4'X4' AND WITH APPROPRIATE ARCHITECTURAL DETAILING.
(4) PROHIBITED EXTERIOR MATERIALS.
(A) MIRRORED GLASS IS PROHIBITED AT THE GROUND LEVEL ALONG MAIN STREET. MIRRORED GLASS COVERING MORE THAN TEN PERCENT OF THE EXTERIOR OF ANY BUILDING IS PROHIBITED. (B) TEXTURED OR SCORED PLYWOOD (INCLUDING T-111 OR SIMILAR PLYWOOD).
(C) STUCCO BOARD.

REFER TO ELEVATION SHEETS A200 - A205 FOR COMPLIANCE

BUILDING ENTRANCES
EMC 19.22.020.D5.d
THE MAIN PUBLIC ENTRANCES OF ALL BUILDINGS MUST PROVIDE WEATHER PROTECTION.

WEATHER PROTECTION PROVIDED AT ALL BUILDING ENTRANCES. REFER TO ELEVATION SHEETS A200 - A205

BLANK WALL TREATMENT
EMC 19.22.020.D5.f
BLANK WALLS SHALL BE PROHIBITED. DESIGN TREATMENTS TO ELIMINATE BLANK WALLS ARE SUBJECT TO CITY APPROVAL BASED ON THEIR ABILITY TO ENHANCE THE PEDESTRIAN AND VISUAL ENVIRONMENT AND INCLUDE:
(A) TRANSPARENT WINDOWS OR DOORS.
(B) DISPLAY WINDOWS.
(C) LANDSCAPE PLANTING BED AT LEAST FIVE FEET WIDE OR A RAISED PLANTER BED AT LEAST TWO FEET HIGH AND THREE FEET WIDE IN FRONT OF THE WALL. SUCH PLANTING AREAS SHALL INCLUDE PLANTING MATERIALS THAT ARE SUFFICIENT TO OBSCURE OR SCREEN AT LEAST SIXTY PERCENT OF THE WALL SURFACE WITHIN THREE YEARS.
(D) INSTALLING A VERTICAL TRELLIS IN A RAISED PLANTER BED AT LEAST TWO FEET HIGH AND THREE FEET WIDE IN FRONT OF THE WALL WITH CLIMBING VINES OR PLANT MATERIALS SUFFICIENT TO OBSCURE OR SCREEN AT LEAST SIXTY PERCENT OF THE WALL SURFACE WITHIN THREE YEARS. FOR LARGE AREAS, TRELLISES SHOULD BE USED IN CONJUNCTION WITH OTHER BLANK WALL TREATMENTS.
(E) OTHER METHODS SUCH AS MURALS OR SPECIAL BUILDING MATERIAL TREATMENTS THAT PROVIDE VISUAL INTEREST TO THE PEDESTRIAN AS APPROVED BY THE CITY.

REFER TO ELEVATION SHEETS A200-A205 AND LANDSCAPE PLANS DOCUMENTING COMPLIANCE

STOREFRONT DETAILS
EMC 19.22.020.D6.a
GROUND FLOOR FACADES MUST INCLUDE DISTINCTIVE ELEMENTS THAT ADD VISUAL INTEREST TO THE STOREFRONT. STANDARD CORPORATE LOGOS WILL NOT QUALIFY.

REFER TO SITE PLAN SHEET A002, ELEVATION SHEETS A200 - A205, AND LANDSCAPE PLANS DOCUMENTING COMPLIANCE

OPEN SPACE
EMC 19.20.030.D7
MINIMUM OF 50 SQUARE FEET PER UNIT.

168 TOTAL UNITS * 50 SQUARE FEET = 8,400 SF REQUIRED

ATTACHMENT F.C.4
OPEN SPACE IN THE PUBLIC GATHERING SPACE / PUBLIC PLAZA AND ANY PARK OR PUBLIC RECREATIONAL FACILITY MAY BE COUNTED TOWARDS ONE-HALF THE ON-SITE OPEN SPACE REQUIREMENTS THAT FOR RESIDENTIAL USE, IF SUCH AREAS ARE LOCATED WITHIN 1,000 FEET OF THE RESIDENTIAL USE.

REFER TO LANDSCAPE PLANS FOR COMPLIANCE

MODULATION
EMC 19.22.030.D7.c
(FROM ORIGINAL DESIGN REVIEW)
SHALL INCLUDE AT LEAST 3 OF MODULATION/ARTICULATION FEATURES AT INTERVALS OF NO MORE THAN 40' WHEN FACING A STREET.
- REPEATING DISTINCTIVE WINDOW PATTERNS AT LESS THAN 40';
- VERTICAL BUILDING MODULATION - 2' DEEP X 4' WIDE MIN WITH DIFFERENT MATERIAL OR BUILDING COLOR;
- VERTICAL BUILDING MODULATION - 10' DEEP X 15' WIDE;
- HORIZONTAL MODULATION - 5' MIN.;
- ARTICULATION TOP, MIDDLE, AND BOTTOM;
- CHANGE OF ROOF LINE;
- FLAT ROOFS - ROOFLINE MODULATION 2' OR 0.1 X WALL HEIGHT (WHICHEVER IS GREATER);
- SLOPE ROOF - MIN 3:12;
- CHANGE IN BUILDING MATERIAL OR SIDING STYLE COORDINATED WITH HORIZONTAL BUILDING MODULATION AND CHANGE IN COLOR;
- ALTERNATIVE METHODS APPROVED BY THE CITY.

REFER TO BUILDING ELEVATIONS A200 - A205 FOR COMPLIANCE.

MAXIMUM BUILDING HEIGHT

1 MAXIMUM BUILDING HEIGHT
SCALE: 1" = 20'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ZONING ANALYSIS

G100

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/2/2024 10:42:07 AM

TRANSPARENCY DIAGRAMS

EMC 19.12.130 BUILDING TRANSPARENCY

TRANSPARENT WINDOWS OR DOORS, ON THE GROUND FLOOR AND FACING THE STREET, ARE REQUIRED AS SET FORTH IN TABLE 12-4 BELOW; PROVIDED, HOWEVER, THAT THESE STANDARDS DO NOT APPLY TO STRUCTURED PARKING. TRANSPARENCY MEASUREMENTS ARE DONE ON THE GROUND FLOOR OF THE STREET FACADE, BETWEEN TWO AND TEN FEET ABOVE GRADE. SEE FIGURE 12-6 FOR HOW THIS IS MEASURED.

TRANSPARENCY	TOD	PEDESTRIAN	CONNECTOR	RESIDENTIAL MIXED USE	UNDESIGNATED
PERCENT COMPROMISED OF WINDOWS AND/OR DOORS WITH CLEAR GLASS (2'-10')	90%	60%	45%	45%	SEE BLANK WALLS

EMC 19.12.140 FACADE DESIGN (ARTICULATION, BLANK AND EXPOSED FIRE WALLS, EXTERIOR BUILDING AND FENCING MATERIALS

"BLANK WALL" MEANS EXTERIOR GROUND FLOOR WALLS OF BUILDINGS VISIBLE FROM A STREET OR PUBLICLY ACCESSIBLE OPEN SPACE THAT ARE OVER FOUR FEET IN HEIGHT WITH A HORIZONTAL LENGTH GREATER THAN FIFTEEN FEET, AND DO NOT INCLUDE A WINDOW, DOOR, BUILDING MODULATION OR OTHER ARCHITECTURAL DETAILING. BUILDING WALLS ADJACENT TO AN ALLEY AND EXTERIOR FIRE WALLS BUILT ALONG INTERIOR PROPERTY LINES ARE NOT CONSIDERED BLANK WALLS.

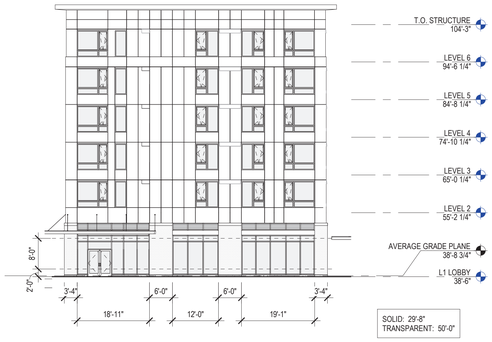
ATTACHMENT F:
GROUND FLOOR TRANSPARENCY. FOR ALL BUILDING FACADES FACING RIVERFRONT BOULEVARD, AT LEAST FORTY PERCENT OF THE AREA BETWEEN TWO AND TEN FEET ABOVE GRADE SHALL BE TRANSPARENT. "TRANSPARENT" MEANS THAT AN INDIVIDUAL CAN SEE INTO THE BUILDING FROM THE OUTSIDE.
TRANSPARENT GLASS MAY BE TINTED, LOW-E, OR INCLUDE OTHER SIMILAR TREATMENT. FOR RESIDENTIAL USES, THIS MINIMUM TRANSPARENCY REQUIREMENT IS REDUCED TO TWENTY PERCENT OF THE AREA BETWEEN TWO AND TEN FEET ABOVE GRADE TO ALLOW FOR INCREASED PRIVACY. TRANSPARENT FEATURES MAY INCLUDE WINDOWS AND TRANSPARENT DOORS. DISPLAY CASES ATTACHED TO THE EXTERIOR WALL DO NOT QUALIFY. OTHER TREATMENTS THAT ENHANCE THE PEDESTRIAN ENVIRONMENT MAY BE APPROVED BY THE CITY.

SOLID FACADE: 385'-11"

TRANSPARENT FACADE: 706'-2"

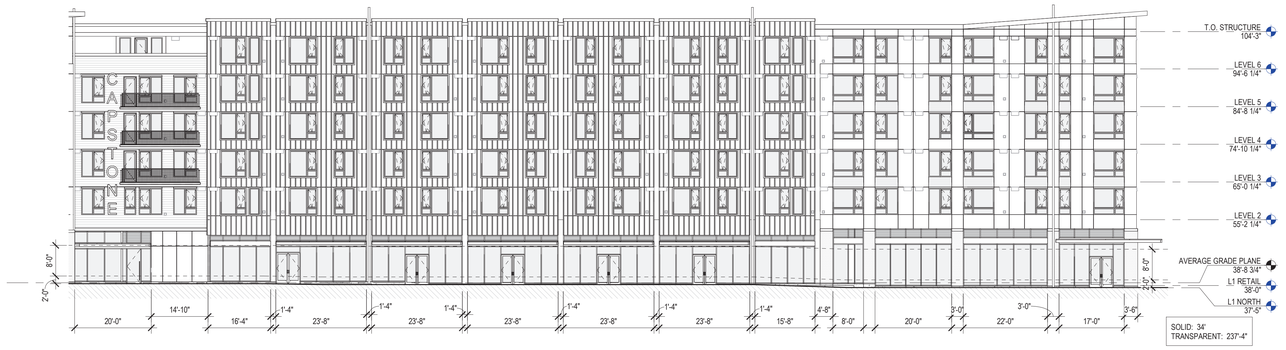
TOTAL FACADE: 1092'-1"

706'-2" / 1092'-1" = 64% COMPLIES



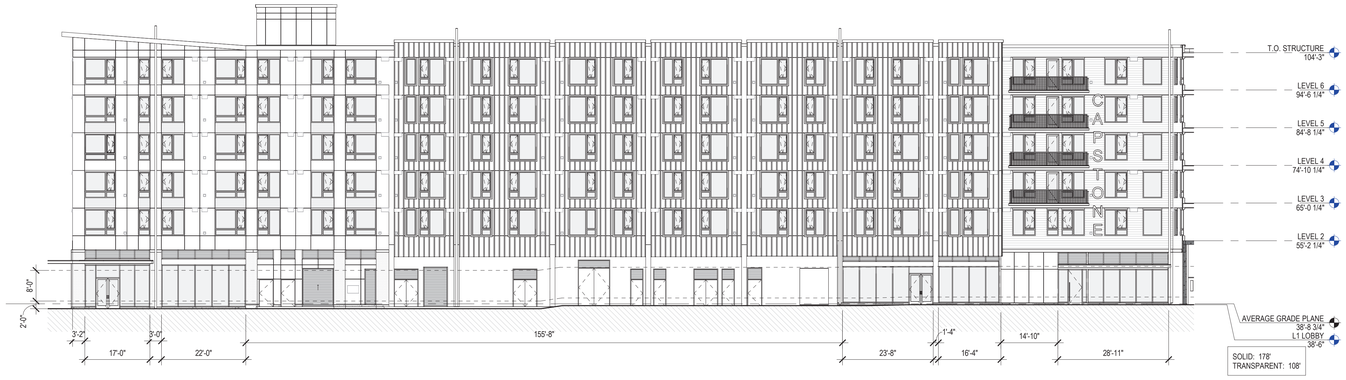
1 EAST ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"



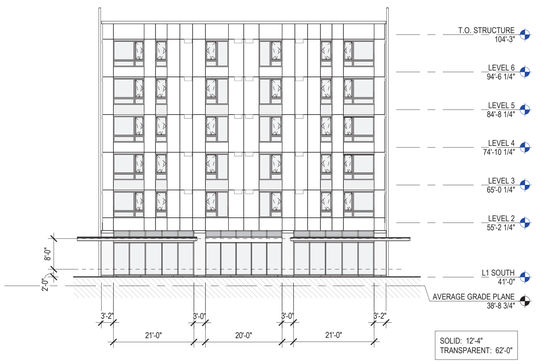
2 EAST ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"



3 WEST ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"

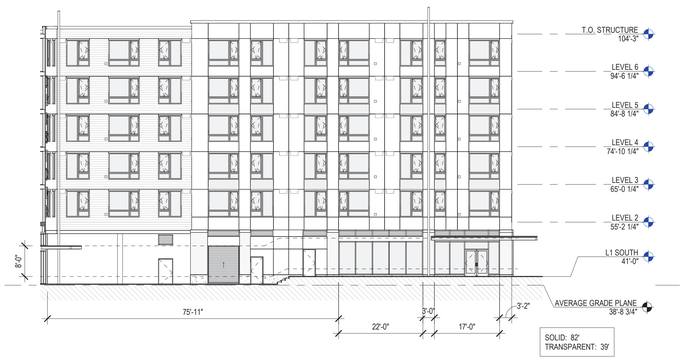


4 WEST ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"

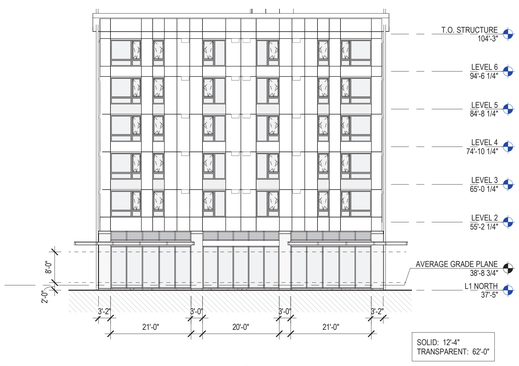
5 SOUTH ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"



6 NORTH ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"



7 NORTH ELEVATION TRANSPARENCY DIAGRAM

SCALE: 1/16" = 1'-0"

2/2/2024 10:42:12 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ZONING ANALYSIS - DIAGRAMS

G102

HORIZONTAL FIRE SEPARATION

HORIZONTAL BUILDING SEPARATION ALLOWANCE
IBC 510.2

A BUILDING SHALL BE CONSIDERED AS SEPARATE AND DISTINCT BUILDINGS FOR THE PURPOSE OF DETERMINING AREA LIMITATIONS, CONTINUITY OF FIRE WALLS, LIMITATION OF NUMBER OF STORIES AND TYPE OF CONSTRUCTION WHERE ALL OF THE FOLLOWING CONDITIONS ARE MET:

1. THE BUILDINGS ARE SEPARATED WITH A HORIZONTAL ASSEMBLY HAVING A FIRE-RESISTANCE RATING OF NOT LESS THAN 3 HOURS WHERE VERTICAL OFFSETS ARE PROVIDED AS PART OF A HORIZONTAL ASSEMBLY, THE VERTICAL OFFSET AND THE STRUCTURE SUPPORTING THE VERTICAL OFFSET SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 3 HOURS.

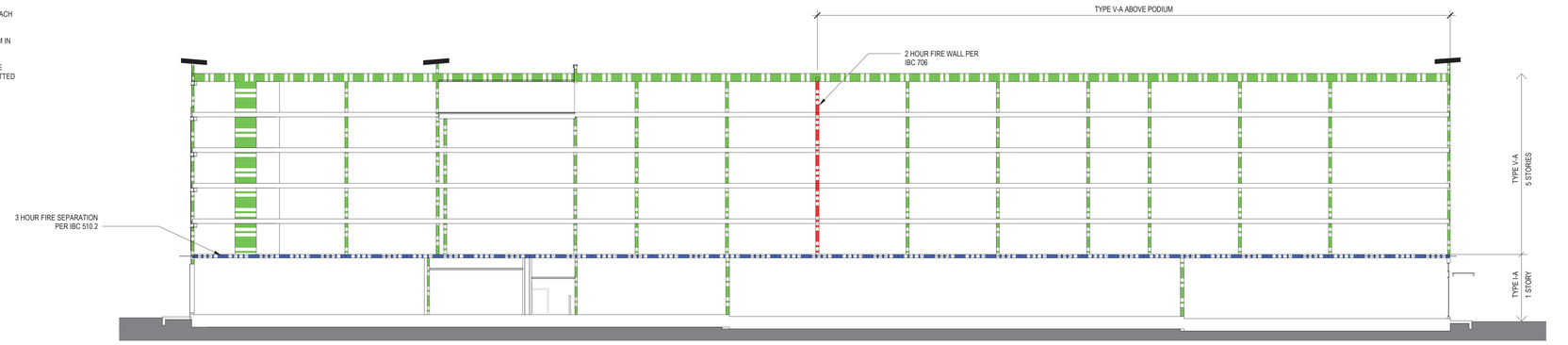
2. THE BUILDING BELOW THE HORIZONTAL ASSEMBLY IS OF TYPE IA CONSTRUCTION.

3. SHAFT, STAIRWAY, RAMP AND ESCALATOR ENCLOSURES THROUGH THE HORIZONTAL ASSEMBLY SHALL HAVE NOT LESS THAN A 2-HOUR FIRE-RESISTANCE RATING WITH OPENING PROTECTIVES IN ACCORDANCE WITH SECTION 716.

4. THE BUILDING OR BUILDINGS ABOVE THE HORIZONTAL ASSEMBLY SHALL BE PERMITTED TO HAVE MULTIPLE GROUP A OCCUPANCY USES, EACH WITH AN OCCUPANT LOAD OF LESS THAN 300, OR GROUP B, GROUP I-1, CONDITION 2 LICENSED CARE FACILITIES, M, R, OR S OCCUPANCIES.

5. THE BUILDING BELOW THE HORIZONTAL ASSEMBLY SHALL BE PROTECTED THROUGHOUT BY AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, AND SHALL BE PERMITTED TO BE ANY OCCUPANCY ALLOWED BY THIS CODE EXCEPT GROUP H.

6. THE MAXIMUM BUILDING HEIGHT IN FEET (MM) SHALL NOT EXCEED THE LIMITS SET FORTH IN SECTION 504.3 FOR THE BUILDING HAVING THE SMALLER ALLOWABLE HEIGHT AS MEASURED FROM THE GRADE PLANE. GROUP I-1, CONDITION 2 LICENSED CARE FACILITIES SHALL BE PERMITTED TO USE THE VALUES FOR MAXIMUM HEIGHT IN FEET FOR GROUP R-2 OCCUPANCIES.



1 FIRE SEPARATION DIAGRAM

SCALE: 1/16" = 1'-0"

RATINGS LEGEND

1-HOUR RATED

2-HOUR RATED

3-HOUR RATED

HEIGHT AND AREA

CONSTRUCTION TYPE IBC CHAPTER 6	V-A OVER I-A		
OCCUPANCY CLASSIFICATIONS IBC CHAPTER 3	RESIDENTIAL UNITS COMMERCIAL ROOF TERRACE	R-2 M ASSEMBLY	RESIDENTIAL MERCANTILE OUTDOOR AREA
CONSTRUTION TYPE I-A IBC TABLE 504.3/504.4/506.2	R-2 OCCUPANCY	STORIES: UNLIMITED AREA: UNLIMITED HEIGHT: UNLIMITED	
	S-2 OCCUPANCY	STORIES: UNLIMITED AREA: UNLIMITED HEIGHT: UNLIMITED	
	M OCCUPANCY	STORIES: UNLIMITED AREA: UNLIMITED HEIGHT: UNLIMITED	
	A-3 OCCUPANCY	STORIES: UNLIMITED AREA: UNLIMITED HEIGHT: UNLIMITED	
CONSTRUTION TYPE I-A IBC TABLE 504.3/504.4/506.2	R-2 OCCUPANCY	STORIES: 5 AREA: 36,000 SF HEIGHT: 70 FEET	
	S-2 OCCUPANCY	STORIES: 5 AREA: 63,000 SF HEIGHT: 70 FEET	
	A-3 OCCUPANCY	STORIES: 3 AREA: 34,500 SF HEIGHT: 70 FEET	

STAIR ENCLOSURE PRESSURIZATION INCREASE
IBC 504.4.1

FOR GROUP R-1, R-2, AND I-1 CONDITION 2 ASSISTED LIVING FACILITIES LICENSED UNDER CHAPTER 388-78A WAC AND RESIDENTIAL TREATMENT FACILITIES AS LICENSED BY WASHINGTON STATE UNDER CHAPTER 246-337 WAC LOCATED IN BUILDINGS OF TYPE VA CONSTRUCTION EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE MAXIMUM NUMBER OF STORIES PERMITTED IN SECTION 504.4 MAY BE INCREASED BY ONE PROVIDED THE INTERIOR EXIT STAIRWAYS AND RAMPS ARE PRESSURIZED IN ACCORDANCE WITH SECTIONS 909.6.3 AND 909.20. LEGALLY REQUIRED STANDBY POWER SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 909.11 AND 2702.2.16 FOR BUILDINGS CONSTRUCTED IN COMPLIANCE WITH THIS SECTION AND BE CONNECTED TO STAIRWAY SHAFT PRESSURIZATION EQUIPMENT, ELEVATORS AND LIFTS USED FOR ACCESSIBLE MEANS OF EGRESS (IF PROVIDED), ELEVATOR HOISTWAY PRESSURIZATION EQUIPMENT (IF PROVIDED) AND OTHER LIFE SAFETY EQUIPMENT AS DETERMINED BY THE AUTHORITY HAVING JURISDICTION. FOR THE PURPOSES OF THIS SECTION, LEGALLY REQUIRED STANDBY POWER SHALL COMPLY WITH 2020 NEC SECTION 701.12, OPTIONS (C), (D), (E), (F), (H) OR (J) OR SUBSEQUENT REVISED SECTION NUMBER(S).

INTERIOR EXIT STAIRWAYS AND RAMPS
IBC 1023.1

INTERIOR EXIT STAIRWAYS AND RAMPS SERVING AS AN EXIT COMPONENT IN A MEANS OF EGRESS SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION. INTERIOR EXIT STAIRWAYS AND RAMPS SHALL BE ENCLOSED AND LEAD DIRECTLY TO THE EXTERIOR OF THE BUILDING OR SHALL BE EXTENDED TO THE EXTERIOR OF THE BUILDING WITH AN EXIT PASSAGEWAY CONFORMING TO THE REQUIREMENTS OF SECTION 1024. EXCEPT AS PERMITTED IN SECTION 1028.1. AN INTERIOR EXIT STAIRWAY OR RAMP SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN AS A MEANS OF EGRESS AND A CIRCULATION PATH.

INTERIOR EXIT STAIRS ARE PRESSURIZED, ALLOWABLE STORIES INCREASED BY (1).
EGRESS CORRIDORS 120 AND 128 TO BE PRESSURIZED

2018 IBC ALLOWABLE AREA CALCULATION
IBC 506.2.3
IBC 506.3

R2 IN TYPE V-A CONSTRUCTION

AREA FACTOR INCREASE = (FRONTAGE/PERIMETER - 0.25) WIDTH OF PUBLIC WAYS/30
AREA FACTOR INCREASE = (100/100) - 0.25) 30/30
AREA FACTOR INCREASE = 0.75

TYPE V-A ALLOWABLE BUILDING AREA = (TABULAR AREA + (NS x AREA FACTOR INCREASE)) x NUMBER OF STORIES NOT MORE THAN 3
TYPE V-A ALLOWABLE BUILDING AREA = (36,000 + (12,000 x 0.75)) x 3
TYPE V-A ALLOWABLE BUILDING AREA = **135,000**

TYPE V-A NORTH OF FIRE WALL AREA= 63,255
TYPE V-A SOUTH OF FIRE WALL AREA= 100,138
TYPE V-A TOTAL COMBINED BUILDING AREA = 163,393

A FIRE WALL, PER IBC 503.1 AND 706, IS PROVIDED AT GRID 13 THAT SEPARATES THE TYPE V-A OCCUPANCY INTO (2) SEPARATE BUILDINGS ABOVE THE 3-HOUR PODIUM, BOTH WITH AN AREA OF LESS THAN 135,000 SF.

RATINGS

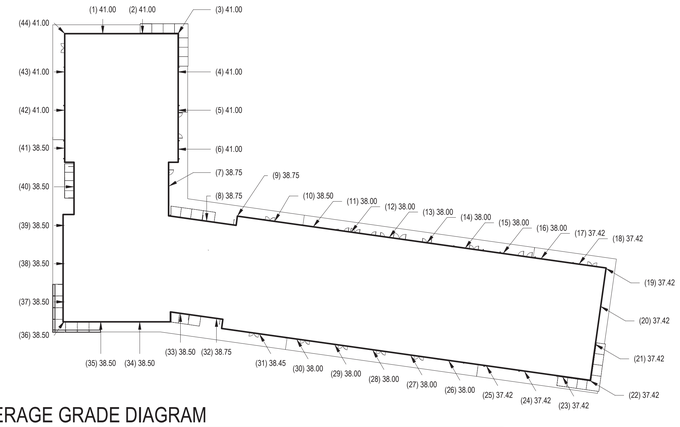
CORRIDORS IBC 1020.1	CORRIDORS SHALL BE FIRE-RESISTANCE RATED TO 1 HOUR.
IBC 1020.6	FIRE RATED CORRIDORS SHALL BE CONTINUOUS FROM THE POINT OF ENTRY TO AN EXIT AND SHALL NOT BE INTERRUPTED BY INTERVENING ROOMS.
EXIT STAIRWAYS AND RAMPS IBC 1023.3	EXIT STAIR SHALL BE CONSTRUCTED AS 2 HOUR FIRE BARRIERS WHERE CONNECTING MORE THAN 4 STORIES.
EXIT PASSAGEWAYS IBC 1024.2	EXIT PASSAGEWAY ENCLOSURES SHALL HAVE WALLS, FLOORS, AND CEILINGS OF NOT LESS THAN 2-HOUR FIRE RESISTANCE RATING.
VERTICAL EXIT ENCLOSURES (FIRE BARRIERS)	2 HOURS WHEN CONNECTING MORE THAN 4 STORIES. 1 HOUR WHEN CONNECTING 4 STORIES AND FEWER.
FIRE PARTITION CORRIDORS IBC 708.3	FIRE PARTITIONS SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 1 HOUR.
SHAFT ENCLOSURES IBC 713.4	SHAFT ENCLOSURES SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 2 HOURS WHEN CONNECTING MORE THAN 4 STORIES AND NOT LESS THAN 1 HOUR WHERE CONNECTING FOUR AND FEWER STORIES. SHAFT ENCLOSURES SHALL HAVE A FIRE RESISTANCE RATING NOT LESS THAN THE FLOOR ASSEMBLY PENETRATED, BUT NEED NOT EXCEED 2 HOURS.

BUILDING ELEMENTS (TABLE 601)	TYPE I-A CONSTRUCTION	TYPE V-A CONSTRUCTION
STRUCTURAL FRAME (COLUMNS, GIRDERS & TRUSSES)	3 HOURS	1 HOUR
EXTERIOR BEARING WALLS	3 HOURS	1 HOUR
INTERIOR BEARING WALLS	3 HOURS	1 HOUR
INTERIOR NON-BEARING WALLS & PARTITIONS	0 HOURS	0 HOURS
FLOOR CONSTRUCTION (INCLUDING BEAMS & JOISTS)	2 HOURS	1 HOUR
ROOF CONSTRUCTION (INCLUDING BEAMS & JOISTS)	1-1/2 HOURS	1 HOUR

EXITING

AUTOMATIC SPRINKLER SYSTEMS IBC 903.1	BUILDING TO BE FULLY SPRINKLERED. SHALL BE PROVIDED IN THE LOCATIONS DESCRIBED IN SECTIONS 903.2.1 THROUGH 903.2.12 SPRINKLER SYSTEM TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH SECTIONS 903.3.1 THROUGH 903.3.8	
NUMBER OF EXITS IBC 1006.2.1	R OCCUPANCY > 10 OCCUPANTS A OCCUPANCY > 49 OCCUPANTS M OCCUPANCY > 49 OCCUPANTS S OCCUPANCY > 29 OCCUPANTS	2 EXITS 2 EXITS 2 EXITS 2 EXITS
EGRESS WIDTH	STAIRWAYS WIDTH/OCCUPANT MINIMUM WIDTH MIN. WIDTH W/ <50 OCCUPANTS	0.2" (IBC 1005.3.1 EX. 1) 44" (IBC 1011.2) 36" (IBC 1011.2 EX. 1)
	OTHER COMPONENTS WIDTH/OCCUPANT MIN. CORRIDOR WIDTH MIN. CORRIDOR WIDTH W/ <50 OCCUPANTS MIN. CLEAR WIDTH OF DOORS	0.15" (IBC 1005.3.2 EX. 1) 44" (IBC TABLE 1020.2) 36 " (IBC TABLE 1020.2) 32" (IBC 1010.1.1.)
EXITING FROM MULTIPLE LEVELS IBC 1005.3.1	WHERE EXITS SERVE MORE THAN ONE FLOOR, THE OCCUPANT LOAD FACTOR FOR EACH FLOOR SHALL BE CONSIDERED INDIVIDUALLY WHEN COMPUTING THE EXITS AT THAT FLOOR, PROVIDED THAT THE EXIT CAPACITY SHALL NOT DECREASE IN THE DIRECTION OF EGRESS TRAVEL.	
STAIRWAYS IBC 1005.3.1	FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2. AUTOMATIC SPRINKLER SYSTEM AND EMERGENCY VOICE/ALARM PROVIDED.	
EGRESS CAPACITY IBC 1005.5	MULTIPLE MEANS OF EGRESS SHALL BE SIZED SUCH THAT THE LOSS OF ANY ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY.	
DOORS 1005.7.1	DOORS, WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 7". DOORS IN ANY POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN ONE-HALF. RESTRICTIONS ON DOOR SWINGS SHALL NOT APPLY TO GROUP R-2 DWELLING AND SLEEPING UNITS.	
ACCESSIBLE MEANS OF EGRESS IBC 1009.1	ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED FROM AN ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.	
ELEVATORS IBC 1009.4, IBC 1009.4 EX. 2	AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE EVERETT ELECTRICAL CODE FOR THE OPERATION OF THE ELEVATOR. THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES. AREAS OF REFUGE ARE NOT REQUIRED IN BUILDINGS AND FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORANCE WITH SECTINO 903.3.1.1 OR 903.3.1.2. ELEVATORS SHALL BE USED AS AN ACCESSIBLE MEANS OF EGRESS. ELEVATOR OPERATION ON EMERGENCY POWER SHALL COMPLY WITH ALL LOCAL CODES.	
DOOR SWING DIRECTION IBC 1010.1.2.1	DOORS SERVING AN OCCUPANT LOAD OF > 50 SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL.	
HOISTWAY OPENING PROTECTION IBC 3006.1.1, 3006.3.4	WHERE HOISTWAY OPENING PROTECTION IS REQUIRED BY SECTION 3006.2, SUCH PROTECTION SHALL BE IN ACCORDANCE WITH SECTION 3006.3 THE ELEVATOR HOISTWAY SHALL BE PRESSURIZED IN ACCORDANCE WITH SECTIONS 909.6.3 AND 909.21	

COMMON PATH OF EGRESS TRAVEL IBC 1006.2.1	R-2 OCCUPANCY A OCCUPANCY M OCCUPANCY S OCCUPANCY	125 FEET 75 FEET 75 FEET 100 FEET
EGRESS BASED ON OCCUPANT LOAD IBC 1006.3.1	EACH STORY WITH AN OCCUPANT LOAD OF 1-500 SHALL HAVE A MINIMUM OF 2 EXITS OR ACCESS TO EXITS.	
EXIT SEPARATION IBC 1007.1.1 EX. 2	DISTANCE SEPARATING EXITS SHALL BE NOT LESS THAN 1/3 OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED (IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER IN ACCORDANCE WITH SBC 903.3.1.1 OR 903.3.1.2).	
EXIT ACCESS TRAVEL DISTANCE IBC TABLE 1017.2	R OCCUPANCY A OCCUPANCY M OCCUPANCY S-2 OCCUPANCY	250 FEET 250 FEET 250 FEET 400 FEET
IBC 1017.3	EXIT ACCESS TRAVEL DISTANCE SHALL BE MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY ALONG THE NATRUAL AND UNOBSTRUCTED PATH OF HORIZONTAL AND VERTICAL EGRESS TRAVEL TO THE ENTRANCE TO AN EXIT.	
EXIT SIGNS IBC 1013.1	EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS MORE THAN 100 FEET OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN. SEE EGRESS & OCCUPANCY PLANS FOR EXIT SIGNAGE LOCATIONS. PROVIDE INTERNALLY ILLUMINATED EXIT SIGNAGE. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES PER IBC 1013.5.	
DEAD ENDS IBC 1020.4 EX. 2	WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE LENGTH OF THE DEAD-END CORRIDOR SHALL NOT EXCEED 50 FEET.	
EXIT PASSAGEWAYS IBC 1024.2	REQUIRED MINIMUM WIDTH OF EXIT PASSAGEWAYS SHALL NOT BE LESS THAN 44 INCHES, EXCEPT THAT EXIT PASSAGEWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES IN WIDTH.	
EXIT DISCHARGE WIDTH OR CAPACITY IBC 1028.2	MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXIT DISCHARGE SHALL NOT BE LESS THAN THE MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXITS BEING SERVED.	
ACCESS TO A PUBLIC WAY IBC 1028.5	THE EXIT DISCHARGE SHALL PROVIDE A DIRECT AND UNOBSTRUCTED ACCESS TO A PUBLIC WAY.	



AVERAGE GRADE DIAGRAM

SCALE: 1" = 40'-0"

POINT	ELEVATION (FT)
1	41.00
2	41.00
3	41.00
4	41.00
5	41.00
6	41.00
7	38.75
8	38.75
9	38.75
10	38.50
11	38.00
12	38.00
13	38.00
14	38.00
15	38.00
16	38.00
17	37.42
18	37.42
19	37.42
20	37.42
21	37.42
22	37.42
23	37.42
24	37.42
25	37.42
26	38.00
27	38.00
28	38.00
29	38.00
30	38.00
31	38.45
32	38.75
33	38.50
34	38.50
35	38.50
36	38.50
37	38.50
38	38.50
39	38.50
40	38.50
41	41.00
42	41.00
43	41.00
44	41.00

AVERAGE = 38.73

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2.Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

BUILDING CODE SUMMARY

G200

2/2/2024 10:42:14 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2\21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FIRE PROTECTION

GENERAL IBC 901.6	FIRE PROTECTION SYSTEMS SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72.
PUMP AND RISER ROOM SIZE IBC 901.8	FIRE PUMP ROOMS AND AUTOMATIC SPRINKLER SYSTEM RISER ROOMS SHALL BE DESIGNED WITH ADEQUATE SPACE FOR ALL EQUIPMENT NECESSARY FOR THE INSTALLATION, WITH SUFFICIENT WORKING ROOM AROUND THE STATIONARY EQUIPMENT. ROOMS SHALL BE PROVIDED WITH A DOOR(S) AND UNOBSTRUCTED PASSAGEWAY LARGE ENOUGH TO ALLOW REMOVAL OF THE LARGEST PIECE OF EQUIPMENT.
AUTOMATIC SPRINKLER SYSTEMS IBC 903.2	AUTOMATIC SPRINKLER SYSTEMS IN NEW BUILDINGS SHALL BE PROVIDED THROUGHOUT BUILDINGS AND PORTIONS THEREOF USED AS GROUP A-2, A-3, R-2, M, AND S-2 OCCUPANCIES. AS WELL IT IS REQUIRED TO BE INSTALLED AT THE TOP OF RUBBISH CHUTES AND IN THEIR TERMINAL ROOMS. CHUTES SHALL HAVE ADDITIONAL SPRINKLER HEADS INSTALLED AT ALTERNATE FLOORS AND AT THE LOWEST INTAKE. AN AUTOMATIC SPRINKLER SYSTEM WILL BE PROVIDED THROUGHOUT THE ENTIRE BUILDING. THE AUTOMATIC SPRINKLER SYSTEM IS A DESIGN-BUILD SYSTEM THAT REQUIRES A DEFERRED SUBMITTAL TO COMPLY WITH NFPA 13 AND SECTION 903.3.1.1 OF THE IBC.
STANDPIPE SYSTEMS IBC 905.1	STANDPIPE SYSTEMS SHALL BE PROVIDED IN NEW BUILDINGS AND STRUCTURES. STANDPIPE SYSTEMS ARE ALLOWED TO BE COMBINED WITH AUTOMATIC SPRINKLER SYSTEMS. CLASS I STANDPIPE HOSE CONNECTIONS SHALL BE PROVIDED IN ALL OF THE FOLLOWING LOCATIONS: 1. IN EVERY REQUIRED INTERIOR EXIT STAIRWAY. A HOSE CONNECTION SHALL BE PROVIDED FOR EACH STORY ABOVE AND BELOW GRADE. HOSE CONNECTIONS SHALL BE LOCATED AT AN INTERMEDIATE LANDING BETWEEN STORIES, OR THE MAIN LANDING AT EACH STORY, BUT MUST BE CONSISTENT THROUGHOUT THE BUILDING. 2. ON EACH SIDE OF THE WALL ADJACENT TO THE EXIT OPENING OF A HORIZONTAL EXIT. 3. IN EVERY EXIT PASSAGEWAY, AT THE ENTRANCE FROM THE EXIT PASSAGEWAY TO OTHER AREAS OF A BUILDING. A STANDPIPE SYSTEM WILL BE PROVIDED IN THE BUILDING. THE STANDPIPE SYSTEM IS A DESIGN-BUILD SYSTEM THAT REQUIRES A DEFERRED SUBMITTAL TO COMPLY WITH NFPA 14 AND SECTION 905 OF THE IBC
PORTABLE FIRE EXTINGUISHERS IBC 906.1	PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN GROUPS A, R-2, M, AND S OCCUPANCY LOCATIONS AND IN ACCORDANCE WITH NFPA 10. THE MAXIMUM DISTANCE OF TRAVEL SHALL NOT EXCEED 75 FEET. SEE EGRESS PLANS FOR FIRE EXTINGUISHER LOCATIONS. FIRE EXTINGUISHERS REQUIRED A DEFERRED SUBMITTAL THAT WILL COMPLY WITH NFPA 10 AND SECTION 906 OF THE SBC.
FIRE ALARM AND DETECTION SYSTEMS IBC 907.2	AN APPROVED FIRE ALARM SYSTEM INSTALLED IN ACCORDANCE WITH IBC 907 AND NFPA 72 SHALL BE PROVIDED IN NEW BUILDINGS AND STRUCURES. NOT FEWER THAN ONE MANUAL FIRE ALARM BOX SHALL BE PROVIDED IN AN APPROVED LOCATION TO INITIATE A FIRE ALARM SIGNAL FOR FIRE ALARM SYSTEMS EMPLOYING AUTOMATIC FIRE DETECTORS OR WATERFLOW DETECTION DEVICES. A FIRE ALARM SYSTEM WILL BE PROVIDED IN THE BUILDING. THE FIRE ALARM SYSTEM IS A DESIGN-BUILD SYSTEM THAT REQUIRES A DEFERRED SUBMITTAL TO COMPLY WITH NFPA 72 AND SECTION 907 OF THE IBC.
GROUP R-2 IBC 907.2.9	FIRE ALARM SYSTEMS AND SMOKE ALARMS SHALL BE INSTALLED IN GROUP R-2 OCCUPANCIES. A MANUAL FIRE ALARM SYSTEM THAT ACTIVATES THE OCCUPANT NOTIFICATION SYSTEM SHALL BE INSTALLED IN GROUP R-2 OCCUPANCIES WHERE THE BUILDING CONTAINS 16 DWELLING UNITS OR SLEEPING UNITS.
IBC 907.2.10.2	SINGLE OR MULTIPLE-STATION SMOKE ALARMS SHALL BE INSTALLED AND MAINTAINED IN GROUP R-2 REGARDLESS OF OCCUPANT LOAD AT ALL OF THE FOLLOWING LOCATIONS: 1. ON THE CEILING OR WALL OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS. 2. IN EACH ROOM USED FOR SLEEPING PURPOSES. 3. IN EACH STORY WITHIN A DWELLING UNIT.
IBC 907.2.10.5	WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT OR SLEEPING UNIT IN GROUP R OCCUPANCIES, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
IBC 907.2.10.7	SMOKE DETECTORS LISTED IN ACCORDANCE WITH UL 268 AND PROVIDED AS PART OF THE BUILDING FIRE ALARM SYSTEM SHALL BE AN ACCEPTABLE ALTERNATIVE TO SINGLE- AND MULTIPLE-STATION SMOKE ALARMS AND SHALL COMPLY WITH THEHE FOLLOWING: 1. THE FIRE ALARM SYSTEM SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS IN SECTION 907. 2. ACTIVATION OF A SMOKE DETECTOR IN A DWELLING UNIT OR SLEEPING UNIT SHALL INITIATE ALARM NOTIFICATION IN THE DWELLING UNIT OR SLEEPING UNIT IN ACCORDANCE WITH SECTION 907.5.2. 3. ACTIVATION OF A SMOKE DETECTOR IN A DWELLING UNIT OR SLEEPING UNIT SHALL NOT ACTIVATE ALARM NOTIFICATION APPLIANCES OUTSIDE OF THE DWELLING UNIT OR SLEEPING UNIT, PROVIDED THAT A SUPERVISORY SIGNAL IS GENERATED AND MONITORED IN ACCORDANCE WITH IBC 907.6.6. REFER TO ENLARGED UNIT REFLECTED CEILING PLANS FOR SMOKE DETECTOR LOCATIONS.
SMOKE CONTROL SYSTEMS IBC 909.11	SMOKE CONTROL SYSTEMS SHALL BE PROVIDED WITH EMERGENCY POWER IN ACCORDANCE WITH SECTION 2702. STAIRWAY AND HOISTWAY PRESSURIZATION SYSTEMS WILL BE PROVIDED WITH STANDBY POWER. SEE MECHANICAL AND ELECTRICAL FOR PRESSURIZATION EQUIPMENT.
IBC 909.21	WHERE ELEVATOR HOISTWAY PRESSURIZATION IS PROVIDED IN LIEU OF REQUIRED ENCLOSED ELEVATOR LOBBIES, THE PRESSURIZATION SYSTEM SHALL COMPLY WITH SECTIONS 909.21.1 THROUGH 909.21.8. ELEVATOR HOISTWAY IS PRESSURIZED. SEE MECHANICAL.
FIRE DEPARTMENT CONNECTIONS IBC 912.1 - 912.6	FIRE DEPARTMENT CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE NFPA STANDARD APPLICABLE TO THE DESIGN SYSTEM AND SHALL COMPLY WITH SECTIONS 912.2 THROUGH 912.6. FIRE DEPARTMENT CONNECTIONS SHALL BE SO LOCATED THAT FIRE APPARATUS AND HOSE CONNECTED TO SUPPLY THE SYSTEM WILL NOT OBSTRUCT ACCESS INTO THE BUILDING FOR OTHER FIRE APPARATUS. THE LOCATION OF THE FIRE DEPARTMENT CONNECTIONS SHALL BE APPROVED BY THE FIRE CHIEF. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF BUILDINGS, FULLY VISIBLE AND RECOGNIZABLE FROM THE STREET OR NEAREST POINT OF FIRE DEPARTMENT VEHICLE ACCESS OR AS OTHERWISE APPROVED BY THE FIRE CHIEF. IMMEDIATE ACCESS TO FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED AT ALL TIMES AND WITHOUT OBSTRUCTION BY FENCES, BUSHES, TREES, WALLS OR ANY OTHER FIXED OR MOVEABLE OBJECT. A WORKING SPACE OF NOT LESS THAN 36 INCHES IN WIDTH, 36 INCHES IN DEPTH AND 78 INCHES IN HEIGHT SHALL BE PROVIDED AND MAINTAINED IN FRONT OF AND TO THE SIDES OF WALL-MOUNTED FIRE DEPARTMENT CONNECTIONS AND AROUNDTHE CIRCUMFERENCE OF FREE-STANDING FIRE DEPARTMENT CONNECTIONS. A METAL SIGN WITH RAISED LETTERS NOT LESS THAN 1 INCH IN SIZE SHALL BE MOUNTED ON ALL FIRE DEPARTMENT CONNECTIONS SERVING AUTOMATIC SPRINKLERS, STANDPIPES OR FIRE PUMP CONNECTIONS. SUCH SIGNS SHALL READ: AUTOMATIC SPRINKLERS OR STANDPIPES OR TEST CONNECTION OR A COMBINATION THEREOF AS APPLICABLE. THE POTABLE WATER SUPPLY TO AUTOMATIC SPRINKLER AND STANDPIPE SYSTEMS SHALL BE PROTECTED AGAINST BACKFLOW AS REQUIRED BY THE UNIFORM PLUMBING CODE.
FIRE PUMPS IBC 913.2.1	FIRE PUMPS SHALL BE LOCATED IN ROOMS THAT ARE SEPARATED FROM ALL OTHER AREAS OF THE BUILDING BY 2-HOUR FIRE BARRIERS CONSTRUCTED IN ACCORDANCE WITH SECTION 707 OR 2-HOUR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH SECTION 711, OR BOTH.
EMERGENCY RESPONDER SAFETY FEATURES IBC 914.1.1	OUTSIDE OPENINGS ACCESSIBLE TO THE FIRE DEPARTMENT AND THAT OPEN DIRECTLY ON A HOISTWAY OR SHAFTWAY COMMUNICATING BETWEEN TWO OR MORE FLOORS IN A BUILDING SHALL BE PLAINLY MARKED WITH THE WORD 'SHAFTWAY' IN RED LETTERS NOT LESS THAN 6 INCHES HIGH ON A WHITE BACKGROUND. SUCH WARNING SIGNS SHALL BE PLACED AS TO BE READILY DISCERNIBLE FROM THE OUTSIDE OF THE BUILDING.
IBC 914.1.2	DOOR OR WINDOW OPENINGS TO A HOISTWAY OR SHAFTWAY FROM THE INTERIOR OF THE BUILDING SHALL BE PLAINLY MARKED WITH THE WORD "SHAFTWAY" IN RED LETTERS NOT LESS THAN 6 INCHES HIGH ON A WHITE BACKGROUND. SUCH WARNING SIGNS SHALL BE PLACED SO AS TO BE READILY DISCERNIBLE.
IBC 914.2	FIRE PROTECTION EQUIPMENT SHALL BE IDENTIFIED IN AN APPROVED MANNER. ROOMS CONTAINING CONTROLS FOR AIR-CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED FOR THE USE OF THE FIRE DEPARTMENT. APPROVED SIGNS REQUIRED TO IDENTIFY FIRE PROTECTION EQUIPMENT AND EQUIPMENT LOCATION SHALL BE CONSTRUCTED OF DURABLE MATERIALS, PERMANENTLY INSTALLED AND READILY VISIBLE.
CARBON MONOXIDE DETECTION IBC 915.1	CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN GROUP R-2 OCCUPANCIES. CARBON MONOXIDE DETECTION SHALL BE INSTALLED IN DWELLING UNITS AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH LEVEL OF THE DWELLING. REFER TO ENLARED UNIT REFLECTED CEILING PLANS FOR CARBON MONOXIDE DETECTOR LOCATIONS.

PLUMBING FIXTURE REQUIREMENTS

SINGLE USER TOILET FACILITES IBC 2902.1.2 IBC 2902.2	SINGLE-USER TOILET FACILITIES AND BATHING ROOMS, AND FAMILY OR ASSISTED-USE TOILET ROOMS AND BATHING ROOMS SHALL BE IDENTIFIED FOR USE BY EITHER SEX SEPARATE FACILITIES SHALL NOT BE REQUIRED WHEN GENDER-NEUTRAL FACILITIES ARE PROVIDED IN ACCORDANCE WITH SECTION 2902.2.2

PLUMBING FACILITIES
IBC 2902

TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

CLASSIFICATION	WATER CLOSETS	
	MALE	FEMALE
ASSEMBLY- WITHOUT PERMANENT SEATING	1 PER 125	1 PER 65
MERCANTILE	1 PER 500	1 PER 500

LOBBY (GENDER NEUTRAL, SINGLE USER)
ASSEMBLY - 146 OCCUPANTS
146/2 = 73 OCCUPANTS FOR EACH SEX

MALE
73 OCCUPANTS * (1 WATERCLOSET PER 125 OCCUPANTS) = .584

FEMALE
73 OCCUPANTS * (1 WATERCLOSET PER 65 OCCUPANTS) = 1.123

.584 + 1.123 = 1.707 = 2 WATERCLOSETS

FLEX COMMERCIAL SPACES*
MERCANTILE 1 - 77 OCCUPANTS
MERCANTILE 2 - 53 OCCUPANTS
MERCANTILE 3 - 94 OCCUPANTS
MERCANTILE 4 - 74 OCCUPANTS
MERCANTILE 5 - 70 OCCUPANTS
368 OCCUPANTS (COMBINED TOTAL)

368/2 = 184 OCCUPANTS FOR EACH SEX
WATER CLOSETS REQ. (MALE) - 1 WATERCLOSET
WATER CLOSETS REQ. (FEMALE) - 1 WATERCLOSET

*CONSTRUCTION OF TENANT SPACES AND ASSOCIATED TOILET FACILITIES UNDER SEPARATE PERMIT

ACCESSIBILITY

ACCESSIBLE ROUTES IBC 1101.2.1	CLEAR WIDTH FOR ACCESSIBLE ROUTES TO COMPLY WITH ICC A117.1 TABLE 403.5. THE MINIMUM CLEAR WIDTH FOR EXTERIOR ROUTES OF TRAVEL IS 44 INCHES.
IBC 1104.2	AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES ON THE SAME SITE.
ACCESSIBLE ENTRANCES IBC 1105.1	AT LEAST 60 PERCENT OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE.
TENANT/DWELLING UNITS IBC 1105.1.6	AT LEAST ONE ACCESSIBLE ENTRANCE SHALL BE PROVIDED TO EACH TENANT SPACE, DWELLING UNIT AND SLEEPING UNIT IN A FACILITY.
ACCESSIBLE PARKING IBC 1106.1	WHERE PARKING IS PROVIDED, ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN COMPLIANCE WITH TABLE 1106.1. *RESIDENTIAL PARKING IS PROVIDED IN COMPLIANCE WITH IBC SECTION 1106.2.3* COMMERCIAL PARKING PROVIDED: 23 SPACES ACCESSIBLE PARKING SPACES REQUIRED: 1 SPACE FOR 1-25 TOTAL PARKING SPACES 1 ACCESSIBLE COMMERCIAL PARKING SPACE PROVIDED COMPLIES
GROUP R-2 IBC 1106.2.3	2 WHERE AT LEAST ONE PARKING SPACE IS PROVIDED FOR EACH DWELLING UNIT OR SLEEPING UNIT, AT LEAST ONE ACCESSIBLE PARKING SPACE SHALL BE PROVIDED FOR EACH ACCESSIBLE AND TYPE A UNIT. AT LEAST ONE PARKING SPACE IS PROVIDED FOR EVERY UNIT - 168 UNITS ON SITE / 208 RESIDENTIAL PARKING SPACES PROVIDED 9 'TYPE A' UNITS PROVIDED WITHIN BUILDING. 9 ACCESSIBLE RESIDENTIAL PARKING SPACES PROVIDED: COMPLIES
VAN SPACES IBC 1106.5	FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, AT LEAST ONE SHALL BE A VAN-ACCESSIBLE PARKING SPACE. 10 ACCESSIBLE PARKING SPACES / 6 = 2 VAN ACCESSIBLE SPACES REQUIRED 2 VAN ACCESSIBLE SPACES PROVIDED: COMPLIES
TYPE 'A' UNITS IBC 1107.6.2.1.1	IN GROUP R-2 OCCUPANCIES CONTAINING MORE THAN 10 DWELLING UNITS, AT LEAST 5% OF THE UNITS SHALL BE TYPE 'A' UNITS. UNITS SHALL BE DISPERSED AMONG THE VARIOUS CLASSES OF UNITS. 168 UNITS X .05 = 8.4 9 TYPE 'A' UNITS PROVIDED
DWELLING UNITS	UNIT TYPE A R TOTAL OPEN ONE-BEDROOM 2 22 24 ONE BEDROOM 5 95 100 TWO BEDROOM 2 42 44 ROOMS AND SPACES AVAILABLE FOR USE BY RESIDENTS AND SERVING TYPE 'A' & TYPE 'B' UNITS SHALL BE ACCESSIBLE, INCLUDING EXTERIOR SPACES (PATIOS, TERRACES, AND BALCONIES).
ACCESSIBLE SPACES IBC 1107.3	

TYPE 'A' UNIT REQUIREMENTS

WASHER/DRYER OPERABLE PARTS AND CONTROLS TO BE WITHIN REACH RANGE PER ICC A117.1-2009 SECTION 308.2.1.

AT TYPE A UNITS
- 30" X 48" CLEAR FLOOR SPACE REQUIRED AT BOTH WASHER AND DRYER
- OPERABILITY MUST BE WITH ONE HAND AND MUST NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. MAX FORCE NEEDED IS 5 LBS.
- OPERABLE PARTS MUST BE LOCATED PER DIAGRAMS ON G403.

OPERABLE PARTS REQUIREMENTS:
LIGHTING CONTROLS, ELECTRICAL SWITCHES, RECEPTACLE OUTLETS & USER CONTROLS.

TYPE 'B' UNIT REQUIREMENTS

WASHER/DRYER OPERABLE PARTS AND CONTROLS TO BE WITHIN REACH RANGE PER ICC A117.1-2009 SECTION 308.2.1.

AT TYPE B UNITS
- 30" X 48" CLEAR FLOOR SPACE REQUIRED AT STACKING WASHER AND DRYER
- OPERABILITY MUST BE WITH ONE HAND AND MUST NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. MAX FORCE NEEDED IS 5 LBS.
- OPERABLE PARTS MUST BE LOCATED PER DIAGRAMS G404.

OPERABLE PARTS REQUIREMENTS:
LIGHTING CONTROLS, ELECTRICAL SWITCHES, RECEPTACLE OUTLETS & USER CONTROLS.

2 ELECTRIC VEHICLE CHARGING

REQUIRED ELECTRIC VEHICLE CHARGING INFRASTRUCTURE IBC 429.2	WHERE PARKING IS PROVIDED, TEN PERCENT OF PARKING SPACES SHALL BE PROVIDED WITH ELECTRIC VEHICLE CHARGING INFRASTRUCTURE IN COMPLIANCE WITH SECTIONS 429.3, 429.4 AND 429.5. WHEN THE CALCULATION OF PERCENT SERVED RESULTS IN A FRACTIONAL PARKING SPACE, THE APPLICANT SHALL ROUND UP TO THE NEXT WHOLE NUMBER. 190 RESIDENTIAL SPACES PROVIDED ON SITE AT BUILDING C 190 X .1 = 19 SPACES REQUIRED 20 SPACES PROVIDED COMPLIES 23 COMMERICAL SPACES PROVIDED ON SITE AT BUILDING C 23 X .1 = 2.3 SPACES REQUIRED 3 SPACES PROVIDED COMPLIES SEE SHEETS A001 AND A002 FOR LOCATIONS AND QUANTITIES.
ELECTRICAL ROOM(S) IBC 429.3	ELECTRICAL ROOM(S) SERVING BUILDINGS WITH ON-SITE PARKING SPACES MUST BE SIZED TO ACCOMMODATE THE POTENTIAL FOR ELECTRICAL EQUIPMENT AND DISTRIBUTION REQUIRED TO SERVE A MINIMUM OF 20 PERCENT OF THE TOTAL PARKING SPACES WITH 208/240 V 40-AMP, CIRCUIT OR EQUIVALENT ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
ELECTRIC VEHICLE CHARGING INFRASTRUCTURE IBC 429.4	ELECTRIC VEHICLE CHARGING INFRASTRUCTURE SHALL MEET THE FOLLOWING REQUIREMENTS: 1. A MINIMUM NUMBER OF 208/240 V 40-AMP, CIRCUIT OR EQUIVALENT ELECTRIC VEHICLE CHARGING STATIONS REQUIRED TO SERVE THE PARKING SPACES SPECIFIED IN SECTION 429.2. THE ELECTRIC VEHICLE CHARGING STATIONS SHALL BE LOCATED TO SERVE SPACES DESIGNATED FOR PARKING AND CHARGING ELECTRIC VEHICLES. 2. ADDITIONAL SERVICE CAPACITY, SPACE FOR FUTURE METERS, PANEL CAPACITY OR SPACE FOR ADDITIONAL PANELS, AND RACEWAYS FOR FUTURE INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS. THE SERVICE CAPACITY AND RACEWAY SIZE SHALL BE DESIGNED TO ACCOMMODATE THE FUTURE INSTALLATION OF THE NUMBER OF 208/240 V 40-AMP, CIRCUIT OR EQUIVALENT ELECTRIC VEHICLE CHARGING STATIONS SPECIFIED IN SECTION 429.2. THE RACEWAY SHALL TERMINATE AT SPACES DESIGNATED FOR PARKING AND CHARGING ELECTRIC VEHICLES IN THE FUTURE. SEE SHEETS A001 AND A002 FOR ALL FUTURE EV STALL LOCATIONS.
ELECTRIC VEHICLE CHARGING INFRASTRUCTURE FOR ACCESSIBLE PARKING SPACES IBC 429.5	WHEN ELECTRIC VEHICLE CHARGING INFRASTRUCTURE IS REQUIRED, TEN PERCENT OF ACCESSIBLE PARKING SPACE, ROUNDED TO THE NEXT WHOLE NUMBER, SHALL BE PROVIDED WITH ELECTRIC VEHICLE CHARGING INFRASTRUCTURE. THE ELECTRIC VEHICLE CHARGING INFRASTRUCTURE MAY ALSO SERVE ADJACENT PARKING SPACES NOT DESIGNATED AS ACCESSIBLE PARKING. A MAXIMUM OF TEN PERCENT ROUNDED TO THE NEXT WHOLE NUMBER, OF THE ACCESSIBLE PARKING SPACES ARE ALLOWED TO BE INCLUDED IN THE TOTAL NUMBER OF ELECTRIC VEHICLE PARKING SPACES REQUIRED UNDER SECTION 429.2. 9 RESIDENTIAL ACCESSIBLE SPACES PROVIDED ON SITE AT BUILDING C 1 COMMERCIAL ACCESSIBLE SACE PROVIDED ON SITE AT BUILDING C 9 X .1 = 1 RESIDENTIAL SPACE REQUIRED 1 X .1 = 1 COMMERCIAL SPACE REQUIRED 3 ACCESSIBLE RESIDENTIAL SPACES PROVIDED AS ELECTRIC VEHICLE CHARGING. COMPLIES 1 ACCESSIBLE COMMERCIAL SPACE PROVIDED AS ELECTRIC VEHICLE CHARGING COMPLIES

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

BUILDING CODE SUMMARY

G201

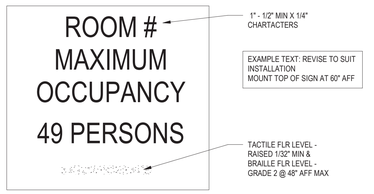
2/2/2024 10:42:15 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. IN THE EVENT OF POWER SUPPLY FAILURE, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE ELECTRICAL EQUIPMENT ROOMS, FIRE COMMAND CENTERS, FIRE PUMP ROOMS, GENERATOR ROOMS, AND PUBLIC RESTROOMS WITH AN AREA GREATER THAN 300 SQUARE FEET.

2. THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATINO OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR. THE INSTALLATION OF THE EMERGENCY POWER SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 2702

3. PER THE ELECTRICAL CODE SECTIONS 450.21 AND 450.42 THE TRANSFORMER ROOM IS ALLOWED A 1 HOUR RATING BECUASE THE TRANSFORMER IS A DRY TYPE AND THE ROOM WILL INCLUDE ONE OF THE FOLLOWING: AUTOMATIC SPRINKLER, WATER SPRAY, CARBON DIOXIDE OR HALON. .



OCCUPANCY SIGNS SHOULD BE PLACED IN ANY ROOM THAT HAS AN ASSEMBLY OCCUPATION OR HAS AN OCCUPANCY OF MORE THAT 50 IN A HIGHLY VISABLE LOCATION

2 SIGNS - MAX OCCUPANCY

SCALE: 3" = 1'-0"

OCCUPANT LOADS

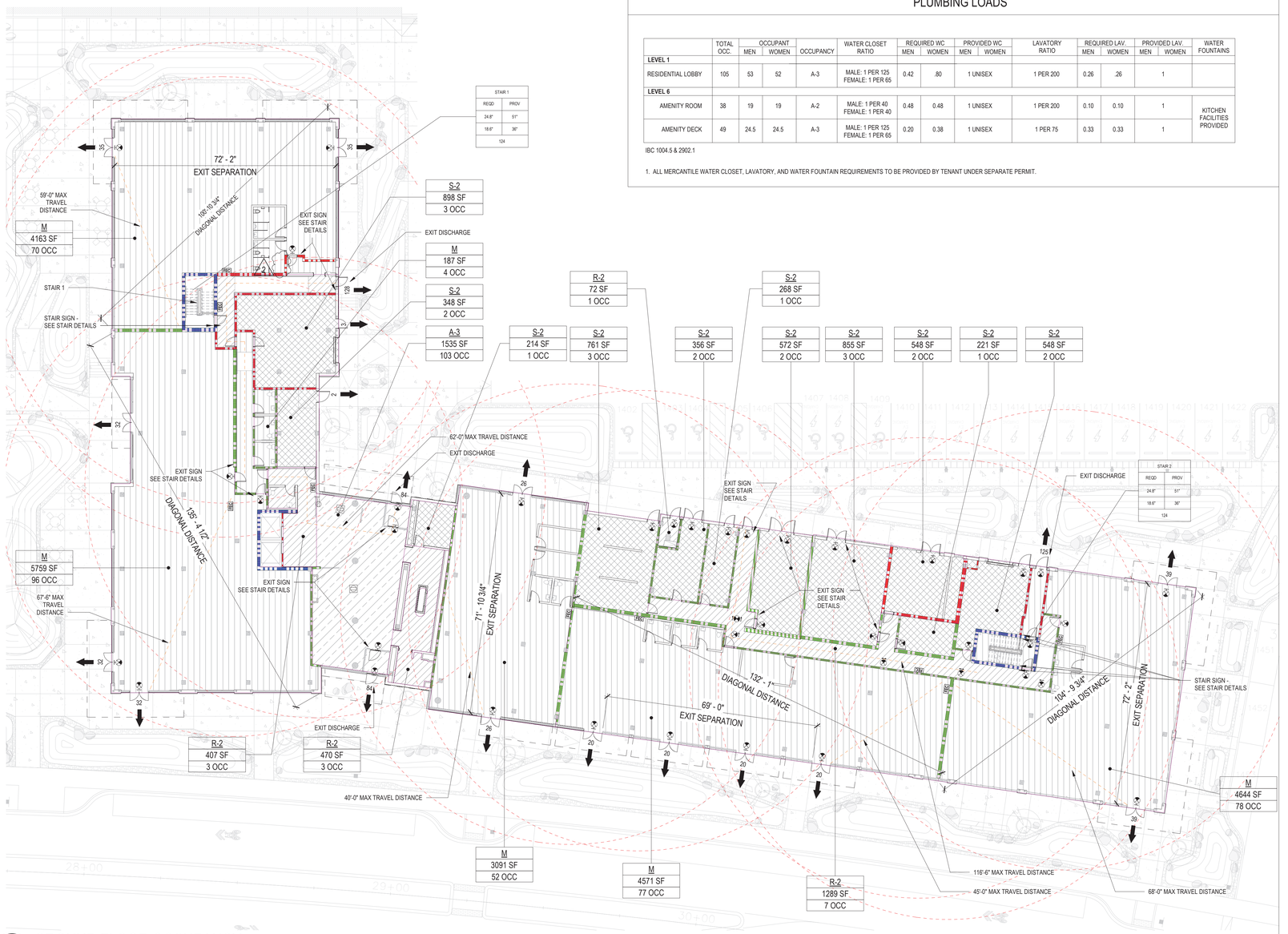
AREA SCHEDULE (OCCUPANCY) LEVEL 1				
OCCUPANCY CLASSIFICATION	FUNCTION	AREA	LOAD FACTOR	OCCUPANT LOAD
L1 LOBBY				
A-3	ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (NET)	1535 SF	15	103
M	MERCANTILE - (GROSS)	4571 SF	60	77
M	MERCANTILE - (GROSS)	3091 SF	60	52
M	MERCANTILE - (GROSS)	5759 SF	60	96
M	MERCANTILE - (GROSS)	4644 SF	60	78
M	MERCANTILE - (GROSS)	4163 SF	60	70
M	MERCANTILE - (GROSS)	365 SF	60	7
M	MERCANTILE - (GROSS)	187 SF	60	4
R-2	RESIDENTIAL (GROSS)	1289 SF	200	7
R-2	RESIDENTIAL (GROSS)	366 SF	200	2
R-2	RESIDENTIAL (GROSS)	72 SF	200	1
R-2	RESIDENTIAL (GROSS)	407 SF	200	3
R-2	RESIDENTIAL (GROSS)	470 SF	200	3
S-2	ACCESSORY STORAGE (GROSS)	761 SF	300	3
S-2	ACCESSORY STORAGE (GROSS)	898 SF	300	3
S-2	ACCESSORY STORAGE (GROSS)	572 SF	300	2
S-2	ACCESSORY STORAGE (GROSS)	855 SF	300	3
S-2	ACCESSORY STORAGE (GROSS)	548 SF	300	2
S-2	ACCESSORY STORAGE (GROSS)	268 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	548 SF	300	2
S-2	ACCESSORY STORAGE (GROSS)	221 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	356 SF	300	2
S-2	ACCESSORY STORAGE (GROSS)	214 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	348 SF	300	2
				525

PLUMBING LOADS

	TOTAL OCC.	OCCUPANT MEN	OCCUPANT WOMEN	OCCUPANCY	WATER CLOSET RATIO	REQUIRED WC MEN	REQUIRED WC WOMEN	PROVIDED WC MEN	PROVIDED WC WOMEN	LAVATORY RATIO	REQUIRED LAV. MEN	REQUIRED LAV. WOMEN	PROVIDED LAV. MEN	PROVIDED LAV. WOMEN	WATER FOUNTAINS
LEVEL 1															
RESIDENTIAL LOBBY	105	53	52	A-3	MALE: 1 PER 125 FEMALE: 1 PER 65	0.42	.80	1 UNISEX		1 PER 200	0.26	.26	1		
LEVEL 6															
AMENITY ROOM	38	19	19	A-2	MALE: 1 PER 40 FEMALE: 1 PER 40	0.48	0.48	1 UNISEX		1 PER 200	0.10	0.10	1		KITCHEN FACILITIES PROVIDED
AMENITY DECK	49	24.5	24.5	A-3	MALE: 1 PER 125 FEMALE: 1 PER 65	0.20	0.38	1 UNISEX		1 PER 75	0.33	0.33	1		

IBC 1004.5 & 2902.1

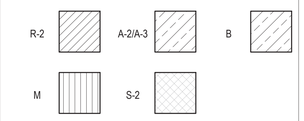
1. ALL MERCANTILE WATER CLOSET, LAVATORY, AND WATER FOUNTAIN REQUIREMENTS TO BE PROVIDED BY TENANT UNDER SEPARATE PERMIT.



1 GROUND FLOOR OCCUPANCY

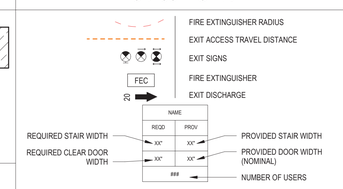
SCALE: 1/16" = 1'-0"

OCCUPANCY LEGEND



RATINGS LEGEND

EGRESS LEGEND



IBC 1005.3.1 EX. 1 — FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

IBC 1005.3.2 EX.1 — FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.15 INCH (3.8 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

EXITING

NUMBER OF EXITS IBC 1006.2.1	R OCCUPANCY > 10 OCCUPANTS A OCCUPANCY > 49 OCCUPANTS S OCCUPANCY > 29 OCCUPANTS	2 EXITS 2 EXITS 2 EXITS
EGRESS WIDTH	STAIRWAYS WIDTH/OCCUPANT MINIMUM WIDTH MIN. WIDTH W/ <50 OCCUPANTS	.2" (IBC 1005.3.1 EX.1) 44" (IBC 1011.2) 36" (IBC 1011.2 EX.1)
	OTHER COMPONENTS WIDTH/OCCUPANT MIN. CORRIDOR WIDTH MIN. CORRIDOR WIDTH 2/ < 50 OCCUPANTS MIN. CLEAR WIDTH OF DOORS	0.15" (IBC 1005.3.2 EX.1) 44" (IBC TABLE 1020.2) 36" (IBC TABLE 1020.2) 32" (IBC 1010.1.1)
EXITING FROM MULTIPLE LEVELS IBC 1005.3.1	WHERE EXITS SERVE MORE THAN ONE FLOOR, THE OCCUPANT LOAD FACTOR FOR EACH FLOOR SHALL BE CONSIDERED INDIVIDUALLY WHEN COMPUTING THE EXITS AT THAT FLOOR, PROVIDED THAT THE EXIT CAPACITY SHALL NOT DECREASE IN THE DIRECTION OF EGRESS TRAVEL.	
STAIRWAYS 1005.3.1	FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2. AUTOMATIC SPRINKLER SYSTEM AND EMERGENCY VOICE/ALARM PROVIDED	
EGRESS CAPACITY IBC 1005.5	MULTIPLE MEANS OF EGRESS SHALL BE SIZED SUCH THAT THE LOSS OF ANY ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY.	
DOORS IBC 1005.7.1	DOORS, WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 7". DOORS IN ANY POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN ONE-HALF. RESTRICTIONS ON DOOR SWINGS SHALL NOT APPLY TO GROUP R-2 DWELLING AND SLEEPING UNITS.	
ACCESSIBLE MEANS OF EGRESS IBC 1009.1	ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED FROM AN ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.	
ELEVATORS IBC 1009.4 IBC 1009.4 EX.2	ELEVATORS WILL BE USED AS AN ACCESSIBLE MEANS OF EGRESS. AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE NATIONAL ELECTRICAL CODE FOR THE OPERATION OF THE ELEVATOR. THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES. AREAS OF REFUGE ARE NOT REQUIRED IN BUILDINGS AND FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. ELEVATOR OPERATION ON EMERGENCY POWER SHALL COMPLY WITH ALL LOCAL CODES.	
DOOR SWING DIRECTION IBC 1010.1.2.1	DOORS SERVING AN OCCUPANT LOAD OF > 50 SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL.	
COMMON PATH OF EGRESS TRAVEL IBC 1006.2.1	R-2 OCCUPANCY S OCCUPANCY A OCCUPANCY M OCCUPANCY	125 FEET 100 FEET 75 FEET 75 FEET
EGRESS BASED ON OCCUPANT LOAD IBC 1006.3.2	EACH STORY WITH AN OCCUPANT LOAD OF 1-500 SHALL HAVE A MINIMUM OF 2 EXITS OR ACCESS TO EXITS. TWO EXITS MINIMUM PROVIDED.	
EXIT SEPARATION IBC 1007.1.1 EX.2	DISTANCE SEPARATING EXITS SHALL BE NOT LESS THAN 1/3 OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED (IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER IN ACCORDANCE WITH IBC 903.3.1.1 OR 903.3.1.2).	
EXIT ACCESS TRAVEL DISTANCE IBC TABLE 1017.2	R OCCUPANCY S-2 OCCUPANCY A OCCUPANCY M OCCUPANCY	250 FEET 400 FEET 250 FEET 250 FEET
IBC 1017.3	EXIT ACCESS TRAVEL DISTANCE SHALL BE MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY ALONG THE NATRUAL AND UNOBSTRUCTED PATH OF HORIZONTAL AND VERTICAL EGRESS TRAVEL TO THE ENTRANCE TO AN EXIT.	
IBC 1017.3.1	TRAVEL DISTANCE ON EXIT ACCESS STAIRWAYS OR RAMPS SHALL BE INCLUDED IN THE EXIT ACCESS TRAVEL DISTANCE MEASUREMENT.	
EXIT SIGNS IBC 1013.1	EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS MORE THAN 100 FEET OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN. REFER TO EGRESS DIAGRAMS FOR LOCATIONS OF EXIT SIGNAGE. PROVIDE INTERNALLY LIT SIGNAGE. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES PER IBC 1013.5.	
DEAD ENDS IBC 1020.4 EX.2	WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE LENGTH OF THE DEAD-END CORRIDOR SHALL NOT EXCEED 50 FEET. SEE EGRESS DIAGRAMS FOR DEAD END DISTANCE MEASUREMENTS DOCUMENTING COMPLIANCE.	
EXIT PASSAGEWAYS IBC 1024.2	REQUIRED MINIMUM WIDTH OF EXIT PASSAGEWAYS SHALL NOT BE LESS THAN 44 INCHES, EXCEPT THAT EXIT PASSAGEWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES IN WIDTH.	
EXIT DISCHARGE WIDTH OR CAPACITY IBC 1028.2	MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXIT DISCHARGE SHALL NOT BE LESS THAN THE MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXITS BEING SERVED.	
ACCESS TO A PUBLIC WAY IBC 1028.5	THE EXIT DISCHARGE SHALL PROVIDE A DIRET AND UNOBSTRUCTED ACCESS TO A PUBLIC WAY.	

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

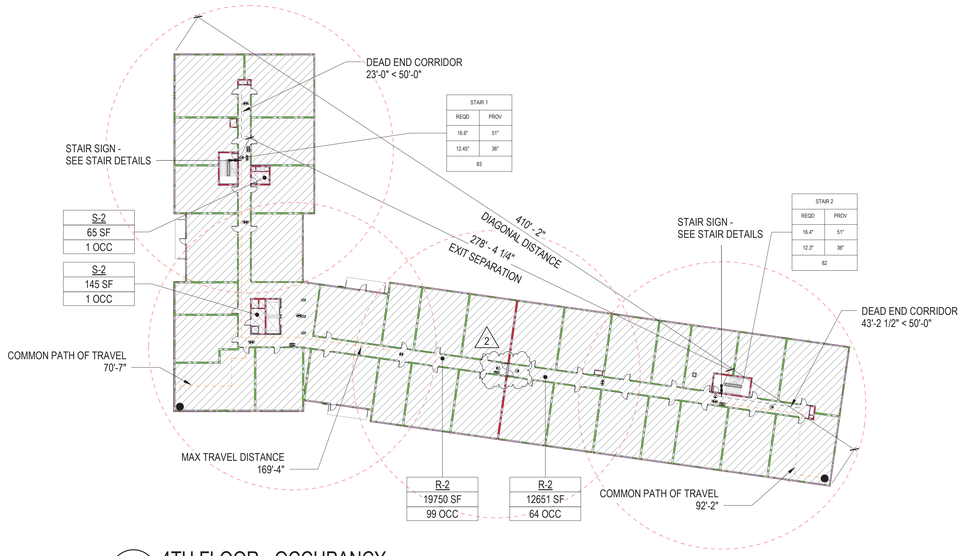
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

EGRESS PLANS

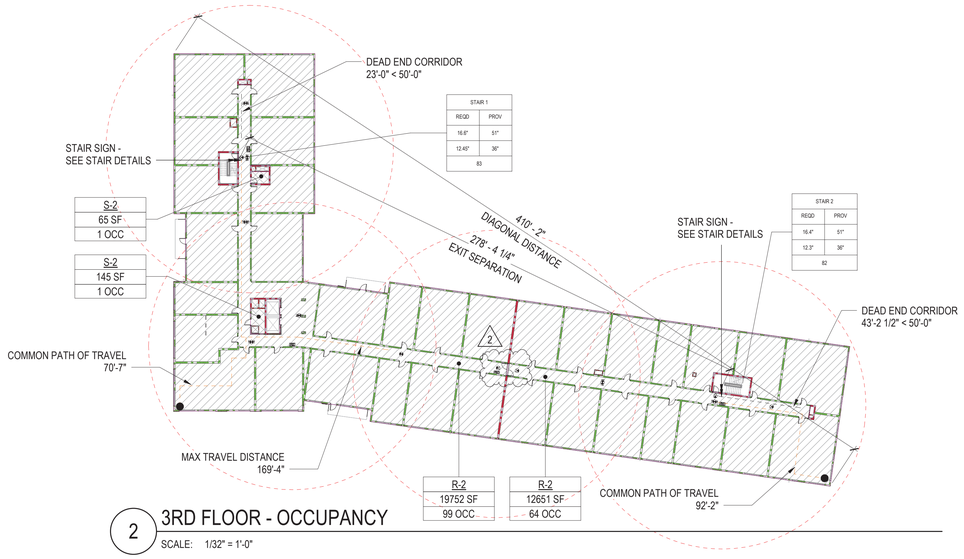
G202

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/8/2024 3:35:03 PM



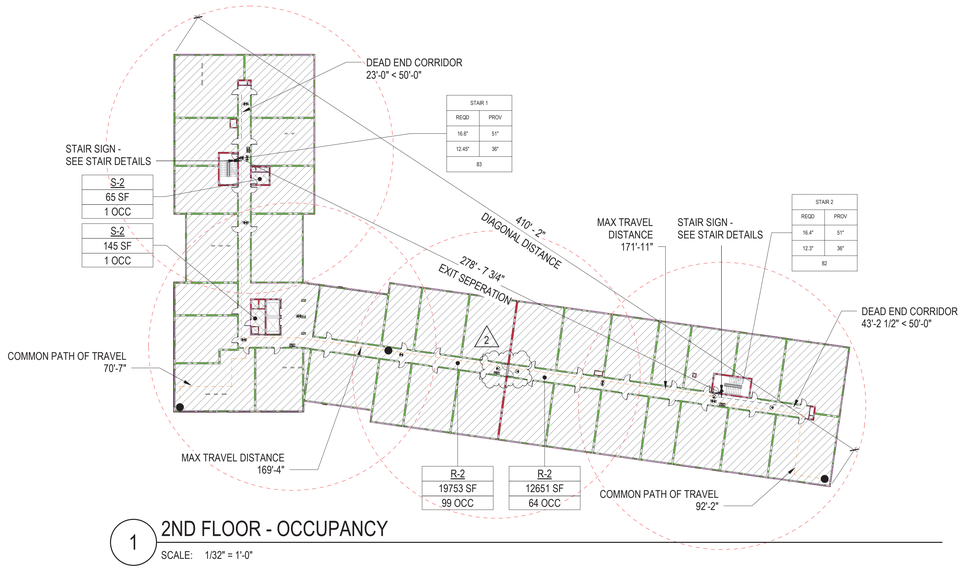
3 4TH FLOOR - OCCUPANCY

SCALE: 1/32" = 1'-0"



2 3RD FLOOR - OCCUPANCY

SCALE: 1/32" = 1'-0"



1 2ND FLOOR - OCCUPANCY

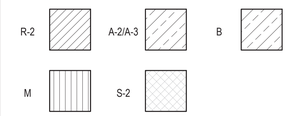
SCALE: 1/32" = 1'-0"

OCCUPANT LOADS

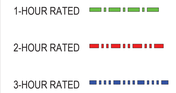
AREA SCHEDULE (OCCUPANCY) LEVELS 2-6

OCCUPANCY CLASSIFICATION	FUNCTION	AREA	LOAD FACTOR	OCCUPANT LOAD
LEVEL 2				
R-2	RESIDENTIAL (GROSS)	19753 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 3				
R-2	RESIDENTIAL (GROSS)	19752 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 4				
R-2	RESIDENTIAL (GROSS)	19750 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 5				
R-2	RESIDENTIAL (GROSS)	19752 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 6				
R-2	RESIDENTIAL (GROSS)	18096 SF	200	91
B	ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (NET)	731 SF	15	49
B	ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (NET)	569 SF	15	38
S-2	RESIDENTIAL (GROSS)	114 SF	200	1
S-2	ACCESSORY STORAGE (GROSS)	214 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	66 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	ACCESSORY STORAGE (GROSS)	80 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				247

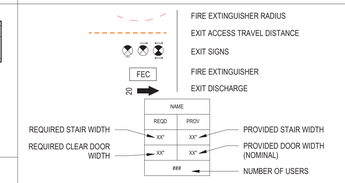
OCCUPANCY LEGEND



RATINGS LEGEND



EGRESS LEGEND



IBC 1005.3.1 EX. 1 — FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

IBC 1005.3.2 EX.1 — FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.15 INCH (3.8 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

EXITING

NUMBER OF EXITS — IBC 1006.2.1

R OCCUPANCY > 10 OCCUPANTS	2 EXITS
A OCCUPANCY > 49 OCCUPANTS	2 EXITS
S OCCUPANCY > 29 OCCUPANTS	2 EXITS

EGRESS WIDTH

STAIRWAYS

WIDTH/OCCUPANT	.2" (IBC 1005.3.1 EX.1)
MINIMUM WIDTH	44" (IBC 1011.2)
MIN. WIDTH W/ <50 OCCUPANTS	36" (IBC 1011.2 EX.1)

OTHER COMPONENTS

WIDTH/OCCUPANT	0.15" (IBC 1005.3.2 EX.1)
MIN. CORRIDOR WIDTH	44" (IBC TABLE 1020.2)
MIN. CORRIDOR WIDTH 2/ < 50 OCCUPANTS	36" (IBC TABLE 1020.2)
MIN. CLEAR WIDTH OF DOORS	32" (IBC 1010.1.1)

EXITING FROM MULTIPLE LEVELS — IBC 1005.3.1
WHERE EXITS SERVE MORE THAN ONE FLOOR, THE OCCUPANT LOAD FACTOR FOR EACH FLOOR SHALL BE CONSIDERED INDIVIDUALLY WHEN COMPUTING THE EXITS AT THAT FLOOR, PROVIDED THAT THE EXIT CAPACITY SHALL NOT DECREASE IN THE DIRECTION OF EGRESS TRAVEL.

STAIRWAYS — 1005.3.1
FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

AUTOMATIC SPRINKLER SYSTEM AND EMERGENCY VOICE/ALARM PROVIDED

EGRESS CAPACITY — IBC 1005.5
MULTIPLE MEANS OF EGRESS SHALL BE SIZED SUCH THAT THE LOSS OF ANY ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY.

DOORS — IBC 1005.7.1
DOORS, WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 7". DOORS IN ANY POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN ONE-HALF. RESTRICTIONS ON DOOR SWINGS SHALL NOT APPLY TO GROUP R-2 DWELLING AND SLEEPING UNITS.

ACCESSIBLE MEANS OF EGRESS — IBC 1009.1
ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED FROM AN ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.

ELEVATORS — IBC 1009.4, IBC 1009.4 EX.2
ELEVATORS WILL BE USED AS AN ACCESSIBLE MEANS OF EGRESS.
AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE NATIONAL ELECTRICAL CODE FOR THE OPERATION OF THE ELEVATOR. THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES.
AREAS OF REFUGE ARE NOT REQUIRED IN BUILDINGS AND FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORANCE WITH SECTION 903.3.1.1 OR 903.3.1.2.

ELEVATOR OPERATION ON EMERGENCY POWER SHALL COMPLY WITH ALL LOCAL CODES.

DOOR SWING DIRECTION — IBC 1010.1.2.1
DOORS SERVING AN OCCUPANT LOAD OF > 50 SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL.

COMMON PATH OF EGRESS TRAVEL — IBC 1006.2.1

R-2 OCCUPANCY	125 FEET
S OCCUPANCY	100 FEET
A OCCUPANCY	75 FEET
M OCCUPANCY	75 FEET

EGRESS BASED ON OCCUPANT LOAD — IBC 1006.3.2
EACH STORY WITH AN OCCUPANT LOAD OF 1-500 SHALL HAVE A MINIMUM OF 2 EXITS OR ACCESS TO EXITS.

TWO EXITS MINIMUM PROVIDED.

EXIT SEPARATION — IBC 1007.1.1 EX.2
DISTANCE SEPARATING EXITS SHALL BE NOT LESS THAN 1/3 OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED (IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER IN ACCORDANCE WITH IBC 903.3.1.1 OR 903.3.1.2).

EXIT ACCESS TRAVEL DISTANCE — IBC TABLE 1017.2

R OCCUPANCY	250 FEET
S-2 OCCUPANCY	400 FEET
A OCCUPANCY	250 FEET
M OCCUPANCY	250 FEET

IBC 1017.3
EXIT ACCESS TRAVEL DISTANCE SHALL BE MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY ALONG THE NATRUAL AND UNOBSTRUCTED PATH OF HORIZONTAL AND VERTICAL EGRESS TRAVEL TO THE ENTRANCE TO AN EXIT.

IBC 1017.3.1
TRAVEL DISTANCE ON EXIT ACCESS STAIRWAYS OR RAMPS SHALL BE INCLUDED IN THE EXIT ACCESS TRAVEL DISTANCE MEASUREMENT.

EXIT SIGNS — IBC 1013.1
EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS MORE THAN 100 FEET OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN.

REFER TO EGRESS DIAGRAMS FOR LOCATIONS OF EXIT SIGNAGE. PROVIDE INTERNALLY LIT SIGNAGE. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES PER IBC 1013.5.

DEAD ENDS — IBC 1020.4 EX.2
WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE LENGTH OF THE DEAD-END CORRIDOR SHALL NOT EXCEED 50 FEET.

SEE EGRESS DIAGRAMS FOR DEAD END DISTANCE MEASUREMENTS DOCUMENTING COMPLIANCE.

EXIT PASSAGEWAYS — IBC 1024.2
REQUIRED MINIMUM WIDTH OF EXIT PASSAGEWAYS SHALL NOT BE LESS THAN 44 INCHES, EXCEPT THAT EXIT PASSAGEWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES IN WIDTH.

EXIT DISCHARGE WIDTH OR CAPACITY — IBC 1028.2
MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXIT DISCHARGE SHALL NOT BE LESS THAN THE MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXITS BEING SERVED.

ACCESS TO A PUBLIC WAY IBC 1028.5
THE EXIT DISCHARGE SHALL PROVIDE A DIRET AND UNOBSTRUCTED ACCESS TO A PUBLIC WAY.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

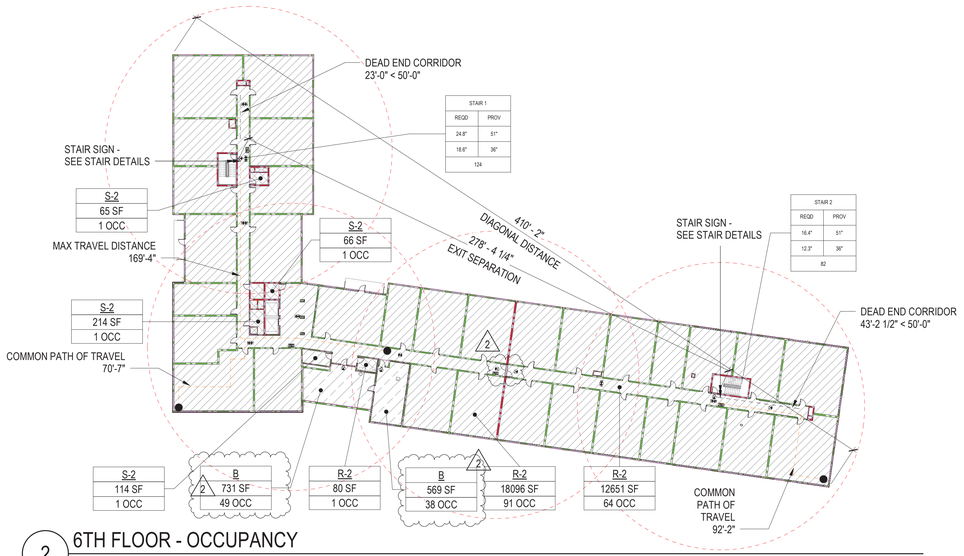
EGRESS PLANS

G203

2/2/2024 10:42:24 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

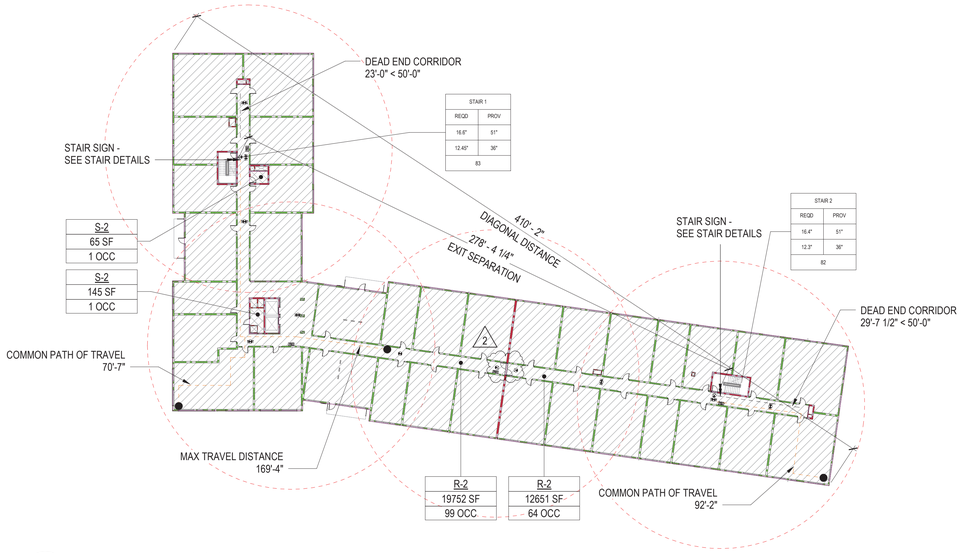
3 ROOF - OCCUPANCY

SCALE: 1/32" = 1'-0"



2 6TH FLOOR - OCCUPANCY

SCALE: 1/32" = 1'-0"



1 5TH FLOOR - OCCUPANCY

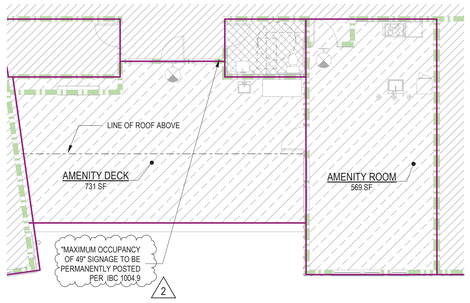
SCALE: 1/32" = 1'-0"

OCCUPANT LOADS

AREA SCHEDULE (OCCUPANCY) LEVELS 2-6

OCCUPANCY CLASSIFICATION	FUNCTION	AREA	LOAD FACTOR	OCCUPANT LOAD
LEVEL 2				
R-2	RESIDENTIAL (GROSS)	19753 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 3				
R-2	RESIDENTIAL (GROSS)	19752 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 4				
R-2	RESIDENTIAL (GROSS)	19750 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 5				
R-2	RESIDENTIAL (GROSS)	19752 SF	200	99
S-2	ACCESSORY STORAGE (GROSS)	145 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				165
LEVEL 6				
R-2	RESIDENTIAL (GROSS)	18096 SF	200	91
B	ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (NET)	731 SF	15	49
B	ASSEMBLY - UNCONCENTRATED TABLES & CHAIRS (NET)	569 SF	15	38
S-2	RESIDENTIAL (GROSS)	114 SF	200	1
S-2	ACCESSORY STORAGE (GROSS)	214 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	66 SF	300	1
S-2	ACCESSORY STORAGE (GROSS)	65 SF	300	1
R-2	ACCESSORY STORAGE (GROSS)	80 SF	300	1
R-2	RESIDENTIAL (GROSS)	12651 SF	200	64
				247

ACCESSORY USE



4 LEVEL 6 AMENITY DECK & ROOM

SCALE: 1/8" = 1'-0"

2

ASSEMBLY OCCUPANCIES
IBC 303.1.2.1
A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES WIHT AN OCCUPANT LOAD OF LESS THAN 50 PERSONS AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED A GROUP B OCCUPANCY OR AS PART OF THAT OCCUPANCY.

IBC 303.1.2.2
A ROOM OR SPACE USED FOR ASSEMBLY PURPOSES THAT IS LESS THAN 750 SQUARE FEET IN AREA AND ACCESSORY TO ANOTHER OCCUPANCY SHALL BE CLASSIFIED AS A GROUP B OCCUPANCY OR AS PART OF THAT OCCUPANCY.

ALLOWABLE BUILDING AREA
IBC 508.2.3
AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE FLOOR AREA OF THE STORY IN WHICH THEY ARE LOCATED.

AREA COMPLIES - 3.6% OF FLOOR AREA ON STORY IN WHICH IT IS LOCATED.

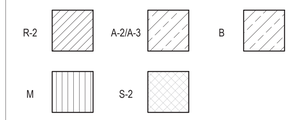
IBC 1004.9
EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE AND PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED AGENT.

SIGNAGE DENOTING MAXIMUM OCCUPANCY OF 49 SHALL BE PROVIDED AT OR NEAR THE MAIN EXIT.

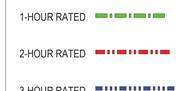
AMENITY DECK AND AMENITY ROOM COMPLY WITH IBC 303.1.2 AS PORTION OF ADJACENT R-2 OCCUPANCY AND THUS ALLOWED AT LEVEL 6.

TOTAL AMENITY AREA: 729 SF + 569 SF = 1,298 SF
TOTAL LEVEL 6 FLOOR AREA: 35,578 SF
TOTAL AGGREGATE ACCESSORY OCCUPANCY: 1,246 SF / 35,578 SF = 3.6% COMPLIES

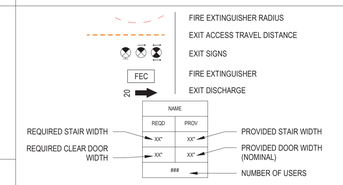
OCCUPANCY LEGEND



RATINGS LEGEND



EGRESS LEGEND



IBC 1005.3.1 EX. 1 FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

IBC 1005.3.2 EX.1 FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS COMPONENTS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.15 INCH (3.8 MM) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

EXITING

NUMBER OF EXITS
IBC 1006.2.1

R OCCUPANCY > 10 OCCUPANTS	2 EXITS
A OCCUPANCY > 49 OCCUPANTS	2 EXITS
S OCCUPANCY > 29 OCCUPANTS	2 EXITS

EGRESS WIDTH

STAIRWAYS	
WIDTH/OCCUPANT	.2" (IBC 1005.3.1 EX.1)
MINIMUM WIDTH	44" (IBC 1011.2)
MIN. WIDTH W/ <50 OCCUPANTS	36" (IBC 1011.2 EX.1)
OTHER COMPONENTS	
WIDTH/OCCUPANT	0.15" (IBC 1005.3.2 EX.1)
MIN. CORRIDOR WIDTH	44" (IBC TABLE 1020.2)
MIN. CORRIDOR WIDTH 2/ < 50 OCCUPANTS	36" (IBC TABLE 1020.2)
MIN. CLEAR WIDTH OF DOORS	32" (IBC 1010.1.1)

EXITING FROM MULTIPLE LEVELS
IBC 1005.3.1
WHERE EXITS SERVE MORE THAN ONE FLOOR, THE OCCUPANT LOAD FACTOR FOR EACH FLOOR SHALL BE CONSIDERED INDIVIDUALLY WHEN COMPUTING THE EXITS AT THAT FLOOR, PROVIDED THAT THE EXIT CAPACITY SHALL NOT DECREASE IN THE DIRECTION OF EGRESS TRAVEL.

STAIRWAYS
1005.3.1
FOR OTHER THAN GROUP H AND I-2 OCCUPANCIES, THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH (5.1mm) PER OCCUPANT IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2 AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5.2.2.

AUTOMATIC SPRINKLER SYSTEM AND EMERGENCY VOICE/ALARM PROVIDED

EGRESS CAPACITY
IBC 1005.5
MULTIPLE MEANS OF EGRESS SHALL BE SIZED SUCH THAT THE LOSS OF ANY ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY.

DOORS
IBC 1005.7.1
DOORS, WHEN FULLY OPENED, SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 7". DOORS IN ANY POSITION SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN ONE-HALF. RESTRICTIONS ON DOOR SWINGS SHALL NOT APPLY TO GROUP R-2 DWELLING AND SLEEPING UNITS.

ACCESSIBLE MEANS OF EGRESS
IBC 1009.1
ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS. WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED FROM AN ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.

ELEVATORS
IBC 1009.4
IBC 1009.4 EX.2
ELEVATORS WILL BE USED AS AN ACCESSIBLE MEANS OF EGRESS.
AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE NATIONAL ELECTRICAL CODE FOR THE OPERATION OF THE ELEVATOR. THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES.
AREAS OF REFUGE ARE NOT REQUIRED IN BUILDINGS AND FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORANCE WITH SECTION 903.3.1.1 OR 903.3.1.2.

ELEVATOR OPERATION ON EMERGENCY POWER SHALL COMPLY WITH ALL LOCAL CODES.

DOOR SWING DIRECTION
IBC 1010.1.2.1
DOORS SERVING AN OCCUPANT LOAD OF > 50 SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL.

COMMON PATH OF EGRESS TRAVEL
IBC 1006.2.1

R-2 OCCUPANCY	125 FEET
S OCCUPANCY	100 FEET
A OCCUPANCY	75 FEET
M OCCUPANCY	75 FEET

EGRESS BASED ON OCCUPANT LOAD
IBC 1006.3.2
EACH STORY WITH AN OCCUPANT LOAD OF 1-500 SHALL HAVE A MINIMUM OF 2 EXITS OR ACCESS TO EXITS.

TWO EXITS MINIMUM PROVIDED.

EXIT SEPARATION
IBC 1007.1.1 EX.2
DISTANCE SEPARATING EXITS SHALL BE NOT LESS THAN 1/3 OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED (IN BUILDINGS EQUIPPED WITH AN AUTOMATIC SPRINKLER IN ACCORDANCE WITH IBC 903.3.1.1 OR 903.3.1.2).

EXIT ACCESS TRAVEL DISTANCE
IBC TABLE 1017.2

R OCCUPANCY	250 FEET
S-2 OCCUPANCY	400 FEET
A OCCUPANCY	250 FEET
M OCCUPANCY	250 FEET

IBC 1017.3
EXIT ACCESS TRAVEL DISTANCE SHALL BE MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY ALONG THE NATRUAL AND UNOBSTRUCTED PATH OF HORIZONTAL AND VERTICAL EGRESS TRAVEL TO THE ENTRANCE TO AN EXIT.

IBC 1017.3.1
TRAVEL DISTANCE ON EXIT ACCESS STAIRWAYS OR RAMPS SHALL BE INCLUDED IN THE EXIT ACCESS TRAVEL DISTANCE MEASUREMENT.

EXIT SIGNS
IBC 1013.1
EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS MORE THAN 100 FEET OR THE LISTED VIEWING DISTANCE FOR THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN.

REFER TO EGRESS DIAGRAMS FOR LOCATIONS OF EXIT SIGNAGE. PROVIDE INTERNALLY LIT SIGNAGE. EXIT SIGNS SHALL BE ILLUMINATED AT ALL TIMES PER IBC 1013.5.

DEAD ENDS
IBC 1020.4 EX.2
WHERE THE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE LENGTH OF THE DEAD-END CORRIDOR SHALL NOT EXCEED 50 FEET.

SEE EGRESS DIAGRAMS FOR DEAD END DISTANCE MEASUREMENTS DOCUMENTING COMPLIANCE.

EXIT PASSAGEWAYS
IBC 1024.2
REQUIRED MINIMUM WIDTH OF EXIT PASSAGEWAYS SHALL NOT BE LESS THAN 44 INCHES, EXCEPT THAT EXIT PASSAGEWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES IN WIDTH.

EXIT DISCHARGE WIDTH OR CAPACITY
IBC 1028.2
MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXIT DISCHARGE SHALL NOT BE LESS THAN THE MINIMUM WIDTH OR REQUIRED CAPACITY OF THE EXITS BEING SERVED.

ACCESS TO A PUBLIC WAY IBC 1028.5
THE EXIT DISCHARGE SHALL PROVIDE A DIRET AND UNOBSTRUCTED ACCESS TO A PUBLIC WAY.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

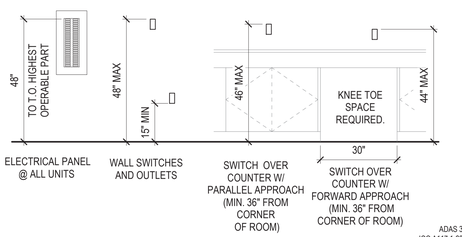
EGRESS PLANS

G204

2/2/2024 10:42:28 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

ACCESSIBILITY - GENERAL NOTES:

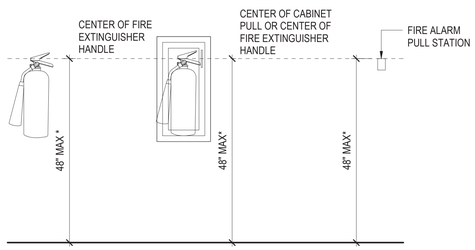
1. ROUTES SHALL BE A MINIMUM OF 36" ON INTERIOR ROUTES AND 44" ON EXTERIOR ROUTES AND BE FREE OF ALL OBJECTS THAT PROTRUDE MORE THAN 4" INTO THE ROUTE BETWEEN 27" AFF AND 80" AFF, INCLUDING FIRE EXTINGUISHER CABINETS, MAILBOXES, WALL-MOUNTED TELEVISIONS, DRINKING FOUNTAINS, ETC.
2. ALL ACCESSIBLE RAMPS SHALL HAVE MAXIMUM SLOPES OF 1:12 ALONG THE SLOPED SURFACE.
3. ALL PUBLIC EXTERIOR DOOR FORCES SHALL MEET 10 POUNDS OF FORCE OR LESS; INTERIOR DOOR FORCES SHALL MEET 5 POUNDS OR LESS; OR COMPLY WITH WAC 1106.10.5. INTERIOR DOOR HARDWARE IN ALL CONDITIONS (EXCLUDING NON-PUBLIC AREAS) SHALL BE EASILY USABLE WITH ONE HAND AND NOT REQUIRE TIGHT GRIPPING OR TWISTING.
4. DOORS ON AN ACCESSIBLE ROUTE, UNIT ENTRY/EXTERIOR DOORS AND TYPE A INTERIOR DOORS MUST HAVE A 32" CLEAR OPENING WHEN OPEN AT 90 DEGREES TO THE FRAME. TYPE B UNIT INTERIOR DOORS MAY HAVE A 31 3/4" CLEAR OPENING. CAUTION SHOULD BE TAKEN IN THE SELECTION OF SLIDING DOORS ON ACCESSIBLE ROUTES TO CONFIRM THE CLEAR OPENINGS COMPLY. HARDWARE TO BE ACCESSIBLE.
5. DOORS ON AN ACCESSIBLE ROUTE, UNIT ENTRY/EXTERIOR DOORS (TYPE A & TYPE B) AND TYPE A INTERIOR DOORS MUST HAVE ACCESSIBLE MANEUVERING CLEARANCE ON EACH SIDE OF THE DOOR PER 2009 ICC/ANSI A117.1 SECTION 404. TYPE B UNIT INTERIOR DOORS ARE NOT REQUIRED TO HAVE MANEUVERING CLEARANCE AT DOORS.
6. EXTERIOR DOOR THRESHOLDS IN TYPE A UNITS, AND COMMON AREAS SHALL BE ACCESSIBLE UP TO A MAXIMUM OF 1/2", BEVELED 1:2, FOR SWING DOORS AND UP TO 3/4" FOR SLIDING DOORS. EXTERIOR DOOR THRESHOLDS IN TYPE B UNITS SHALL BE ACCESSIBLE UP TO A MAXIMUM OF 1/2", BEVELED 1:2, FOR SWING DOORS AND UP TO 3/4" FOR SLIDING DOORS. TYPE B UNIT DECKS AND BALCONIES WITH IMPERVIOUS SURFACES MAY HAVE A TRANSITION OF UP TO 4" DROP FROM THE INTERIOR UNIT LEVEL TO THE DECK AND BE DESIGNED TO ALLOW A RAISED PLATFORM TO BE INSTALLED IN THE FUTURE. ASSOCIATED GUARD HEIGHT TO BE EXTENDED TO 42" AFF AS APPLICABLE.
7. PROVIDE 'LEVEL' LANDINGS (MAX SLOPE 1:48 OR 2%) AT ALL EXTERIOR ENTRANCE DOORS TO THE BUILDING, INCLUDING RETAIL SPACES, FROM THE SIDEWALK OF AT LEAST 60" X 60" THAT PROVIDE ACCESSIBLE MANEUVERING CLEARANCE ORIENTED TO THE ENTRANCE DOOR.
8. FLOOR TEXTURES IN PUBLIC AREAS AND TYPE A DWELLING UNITS MUST BE FIRM, STABLE AND SLIP-RESISTANT.
9. JOINTS BETWEEN EXTERIOR MATERIALS AND OPENINGS IN FLOOR SURFACES SHALL COMPLY WITH 2009 ICC/ANSI A117.1 SECTION 302.
10. SIGNS THAT IDENTIFY PERMANENT ROOMS AND SPACES SHALL HAVE TACTILE, RAISED AND BRAILLE CHARACTERS AND PICTOGRAMS. THESE SIGNS SHALL BE MOUNTED 60" AFF TO THE BOTTOM OF THE TOP MOST LETTERS AND NOT LESS THAN 48" AFF TO THE BOTTOM OF THE LOWEST BRAILLE CELLS. SIGN SHALL BE LOCATED ON THE LATCH SIDE OF THE DOOR. SIGNS CONTAINING RAISED CHARACTERS AND BRAILLE SHALL BE LOCATED SO THAT A CLEAR FLOOR AREA 18" MIN BY 18" MIN CENTERED ON THE RAISED CHARACTERS IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45° OPEN POSITION. SEE 2009 ICC/ANSI A117.1 SECTION 703.3 FOR MORE DETAIL.
11. TRANSITIONS BETWEEN FLOOR MATERIALS SHALL BE LEVEL, VERTICAL UP TO 1/4" OR BEVELED 1:2 UP TO 1/2".
12. TRASH DISPOSAL UNITS MUST BE ON AN ACCESSIBLE ROUTE, HAVE CONTROLS WITHIN THE REACH RANGE, HAVE A CLEAR FLOOR SPACE OF 30" X 48" FOR EITHER A FORWARD OR SIDE APPROACH TO ALLOW USE OF THE DISPOSAL UNIT, CENTERED ON THE CONTROLS AND BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT PINCHING, GRASPING OR TWISTING. THE FORCE TO OPERATE THE UNIT CONTROLS SHALL BE 5 POUNDS MAXIMUM.
13. ALL PUBLIC OR COMMON USE TOILET ROOMS MUST HAVE GRAB BARS INSTALLED.
14. TWO-WAY COMMUNICATION SYSTEMS MUST HAVE BOTH AUDIBLE AND VISUAL INDICATORS AT ALL STATIONS.
15. 5% OF ALL STORAGE UNITS SHALL BE ACCESSIBLE, HAVING AN ACCESSIBLE DOOR (MANEUVERING CLEARANCE, USER PASSAGE WIDTH AND HARDWARE) ON AN ACCESSIBLE ROUTE. ACCESSIBLE STORAGE MUST BE WITHIN ACCESSIBLE REACH RANGE.
16. CENTER OF SURFACE MOUNT FIRE EXTINGUISHER HANDLE, CENTER OF FIRE EXTINGUISHER CABINET PULL, AND CENTER OF CABINET PULL FOR CABINET MOUNTED FIRE EXTINGUISHER, TO BE MOUNTED AT 48" A.F.F., MAXIMUM.
17. ACTIVATING HANDLE OR LEVER OF MANUAL FIRE ALARM PULL STATIONS TO BE MOUNTED AT 48" A.F.F., MAXIMUM.
18. COMMON AREA DOORS ALONG AN ACCESSIBLE ROUTE SHALL HAVE A MAX. THRESHOLD HEIGHT OF 1/2" WITH 1:2 BEVELS.
19. ALL REQUIRED HORIZONTAL GRAB BARS IN THE SAME SHOWER COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR.
20. EACH TYPE "A" UNIT CIRCUIT BREAKER PANELS NEED TO BE WITHIN THE 48" REACH RANGE. THIS IS COUNTER TO WHAT ICC/ANSI A117.1 SECTION 1003.9 SAYS, INCLUDING THE ICC/ANSI CODE COMMENTARY. INSTALLATION TO ADHERE TO THE CITY OF SEATTLE INTERPRETATION. TYPE "B" UNIT CIRCUIT BREAKER PANELS SHALL BE 48" AFF MAX.



ADAS 309
ICC A117.1-2009

B1 MOUNTING HEIGHTS - ELECTRICAL AND CONTROLS

SCALE: 1/2" = 1'-0"



* PROVIDE A CLEAR FLOOR SPACE IS PROVIDED COMPLYING WITH SECTION 305

ICC A117.1-2009
SECTION 308 & 309

FOR CABINET MOUNTED FIRE EXTINGUISHERS, THE HIGHEST OPERABLE ELEMENT SHALL ESTABLISH THE HEIGHT OF THE CABINET INSTALLATION.

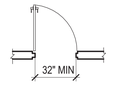
MAXIMUM OPERABLE ELEMENT = CENTER OF CABINET PULL OR CENTER OF FIRE EXTINGUISHER HANDLE - SHALL BE 48" AFF, MAXIMUM.

A1 FIRE EXTINGUISHER AND ALARM

SCALE: 3/4" = 1'-0"

NOTES - PUBLIC AND COMMON USE SPACES:
1. FOR DOORS IN ALCOVES SEE ICC A117.1-2009
2. SINGLE LEAF MUST PROVIDE 32" CLEAR OPENING

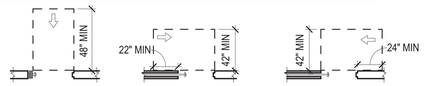
NOTES - TYPE "A" AND TYPE "B" UNITS:
1. FOR DOORS IN ALCOVES SEE ICC A117.1-2009
2. SINGLE LEAF MUST PROVIDE 32" CLEAR OPENING
3. ANY SPACE DEEPER THAN 24" MUST HAVE A USER PASSAGE DOOR. USER PASSAGE DOORS REQUIRE 32" CLEAR OPENING.
4. MANEUVERING CLEARANCE NOT REQUIRED AT THE INTERIOR SIDE OF NON-ACCESSIBLE BATHS OR AT THE OUTSIDE OF NON-PRIMARY EXTERIOR BALCONY DOORS.



CLEAR OPENING REQUIREMENTS

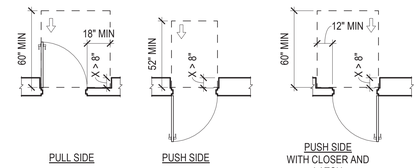
32" MIN SINGLE LEAF @ DOUBLE LEAF DOORS

MANEUVERING CLEARANCES AT SLIDING AND FOLDING DOORS



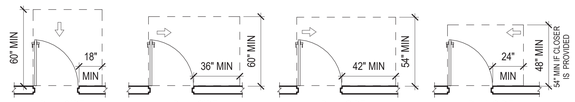
FRONT APPROACH | POCKET OR HINGE APPROACH | STOP OR LATCH APPROACH

MANEUVERING CLEARANCES AT RECESSED DOORS

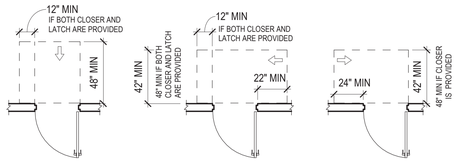


PULL SIDE | PUSH SIDE | PUSH SIDE WITH CLOSER AND LATCH

MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS



PULL SIDE FRONT APPROACH | PULL SIDE HINGE APPROACH A | PULL SIDE HINGE APPROACH B | PULL SIDE LATCH APPROACH



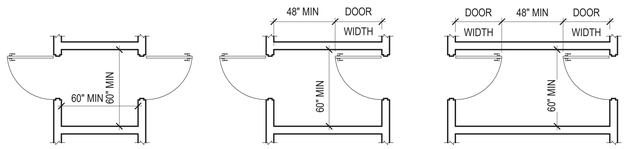
PUSH SIDE FRONT APPROACH | PUSH SIDE HINGE APPROACH | PUSH SIDE LATCH APPROACH

- ALL DOORS IN COMMON USE AND PUBLIC AREAS
- TYPE "A" UNITS - ALL DOORS INTENDED FOR USER PASSAGE
- TYPE "B" UNITS - MAIN ENTRY DOORS ONLY

ICC A117.1-2009
SECTION 404.2.3

D3 DOOR MANEUVERING CLEARANCES

SCALE: 1/4" = 1'-0"

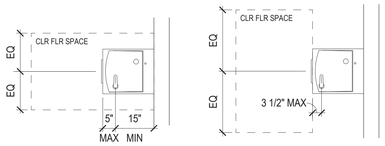


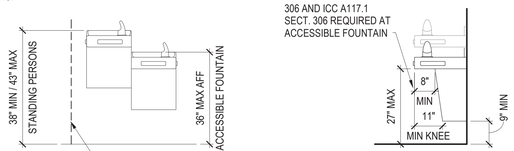
ICC A117.1-2009
SECTION 404.2.5

C3 MANEUVERING CLEARANCES FOR TWO DOORS IN A SERIES

SCALE: 1/4" = 1'-0"

NOTES:
1. ACCESSIBLE DRINKING FOUNTAINS SHALL COMPLY WITH CLEAR FLOOR SPACE, KNEE & TOE CLEARANCES, REACH AND PROTRUDING OBJECTS REQUIREMENTS. SEE GENERAL ADA NOTES.
2. DRINKING FOUNTAINS FOR STANDING PERSONS NEED NOT COMPLY
3. FOUNTAINS PRIMARILY FOR CHILDREN'S USE WHERE THE SPOUT IS 30" MAX AFF & PARALLEL APPROACH IS PERMITTED.
4. PROVIDE WATER FLOW OF 4" MIN HIGH. ANGLE OF THE WATER STREAM FROM SPOUTS LESS THAN 3-1/2" TO FRONT SHALL BE AT 30° MAX, BETWEEN 3-1/2" TO 5" SHALL BE 15° MAX MEASURED HORIZONTALLY FROM FRONT FACE.
5. PROVIDE A MINIMUM OF 27" CLEAR FOR KNEE CLEARANCE AND CANE DETECTION UNDER BOTH FOUNTAINS.





ICC A117.1-2009
SECTION 602
ADAS SECTION 306

A3 DRINKING FOUNTAINS - ACCESSIBLE

SCALE: 1/2" = 1'-0"

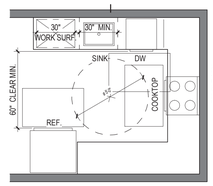
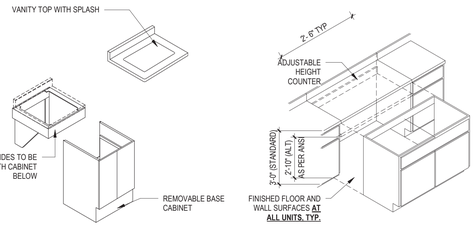


FIG. 804.2.2 - U-SHAPE KITCHEN CLEARANCE FOR ACCESSIBLE UNITS
FIG. 1003.12.1.2 - U-SHAPE KITCHEN CLEARANCE FOR TYPE B UNITS
RESIDENTIAL UNIT KITCHENS

FIG. 804.2.2 - U-SHAPED KITCHEN CLEARANCE FOR ACCESSIBLE UNITS
FIG. 1003.12.1.1 - MIN. KITCHEN CLEARANCES FOR TYPE B UNITS

FIG. 804.2.1 - PASS-THROUGH KITCHEN CLEARANCE FOR ACCESSIBLE UNITS
FIG. 1003.12.1.1 - MIN. KITHCNEN CLEARANCE FOR TYPE B UNITS



OWNER TO PROVIDE ADA COMPLIANT REFRIGERATOR TO MAINTAIN 40" CLEARANCE IN KITCHEN WALKING AISLE IN UNITS LEASED TO TENANTS IN WHEELCHAIRS

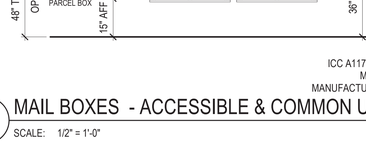
THE MAXIMUM ADJUSTABLE HEIGHT SHALL BE 48" FOR AT LEAST 1 SHELF OF ALL CABINETS AND STORAGE SHELVES MOUNTED ABOVE THE WORK COUNTER.

F5 ACCESSIBLE KITCHEN AND BATHROOM VANITY

SCALE: 1/4" = 1'-0"

3. MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR

4. MINIMUM CLEAR WIDTH FOR TWO WHEELCHAIRS



NOTE: DASHED LINE INDICATES MINIMUM LENGTH OF CLEAR SPACE REQUIRED ON EACH ARM OF THE T-SHAPED SPACE IN ORDER TO COMPLETE THE TURN

5.(A) WHEELCHAIR TURNING RADIUS

5.(B) T-SHAPED TURNING RADIUS

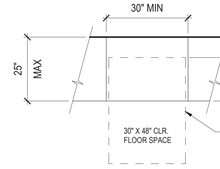
D6 ACCESSIBILITY DIAGRAMS

SCALE: 1/4" = 1'-0"

FHA REQ. 2
ICC A117.1-2009 308 & 309
MODEL: 4CADD-10
MANUFACTURER: FLORANCE

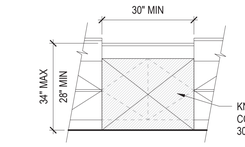
A6 MAIL BOXES - ACCESSIBLE & COMMON USE

SCALE: 1/2" = 1'-0"



A CLEAR FLOOR SPACE COMPLYING WITH SECTION 305.3 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED

PLAN



KNEE / TOE CLEARANCE COMPLYING WITH SECTION 306 SHALL BE PROVIDED

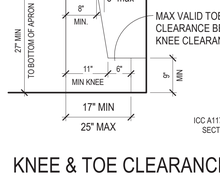
ELEVATION

ICC A117.1-2009
SECTION 804.3

NOTES:
1. KITCHENS THAT DO NOT PROVIDE A COOKTOP OR CONVENTIONAL RANGE SHALL NOT BE REQUIRED TO PROVIDE AN ACCESSIBLE WORK SURFACE.

F8 ACCESSIBLE WORK SURFACES

SCALE: 1/2" = 1'-0"



PLAN

A CLEAR FLOOR SPACE COMPLYING WITH SECTION 305.3 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED

ELEVATION

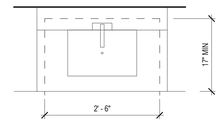
KNEE / TOE CLEARANCE COMPLYING WITH SECTION 306 SHALL BE PROVIDED

ICC A117.1-2009
SECTION 606

NOTES:
1. THE FRONT OF THE SINK SHALL BE 34" MAX ABOVE THE FLOOR, MEASURED TO THE HIGHER OF THE RIM OF SINK OR COUNTER TOP SURFACE
2. WATER SUPPLY AND DRAIN PIPES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.
3. THERE SHALL BE NO SHARP OF ABRASIVE SURFACE UNDER LAV OR SINK.
4. THE REQUIREMENT FOR KNEE AND TOE CLEARANCE SHALL NOT APPLY TO MORE THAN ONE BOWL OF A MULTI BOWL SINK.
5. A PARALLEL APPROACH SHALL BE PERMITTED AT WET BARS.
6. A PARALLEL APPROACH SHALL BE PERMITTED TO A KITCHEN SINK IN A SPACE WHERE A COOK TOP OR CONVENTIONAL RANGE IS NOT PROVIDED.

C8 ACCESSIBLE LAVATORIES AND SINKS

SCALE: 1/2" = 1'-0"



ICC A117.1-2009
SECTION 306

A8 KNEE & TOE CLEARANCE COMPLYING WITH ICC A117.1-2009 SECTION 306

SCALE: 3/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

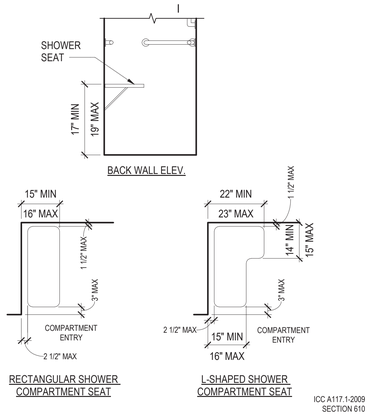
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ACCESSIBILITY - PUBLIC AND COMMON USE

G401

2/2/2024 10:42:29 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



RECTANGULAR SHOWER COMPARTMENT SEAT

L-SHAPED SHOWER COMPARTMENT SEAT

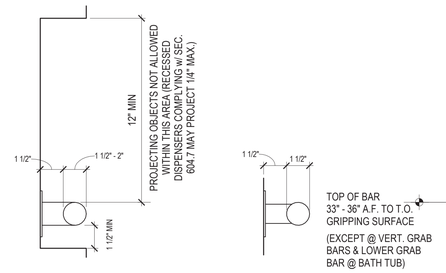
ICC A117.1-2009 SECTION 610

COMPLIANT WITH ICC A117.1-2009 SECTION 610

F1 SHOWER COMPARTMENT SEATS

SCALE: 1/2" = 1'-0"

NOTES:
1. THE SPACE BETWEEN GRAB BARS & SHOWER CONTROLS, SHOWER FITTINGS & OTHER GRAB BARS ABOVE SHALL BE PERMITTED TO BE 1-1/2" MIN.
2. SWING-UP GRAB BARS ARE NOT REQUIRED TO COMPLY WITH REQUIREMENTS FOR PROJECTING OBJECTS
3. ALLOWABLE STRESSES SHALL NOT BE EXCEEDED FOR MATERIALS USED WHERE A VERT. OR HORIZ. FORCE OF 250 LBS IS APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER MOUNTING DEVICE OR SUPPORTING STRUCTURE

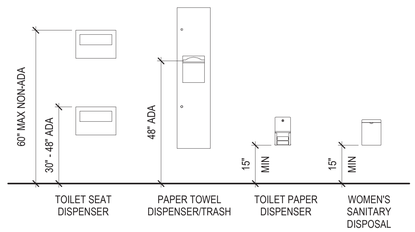


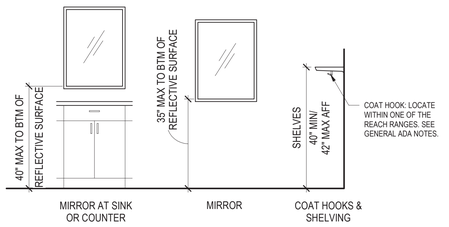
ACCESSIBLE TOILET OR BATHING FACILITY

ICC A117.1-2009 SECTION 609

D1 GRAB BARS

SCALE: 3" = 1'-0"





OPERABLE PARTS ON TOWEL DISPENSERS AND HAND DRYERS SHALL COMPLY WITH THE TABLE BELOW

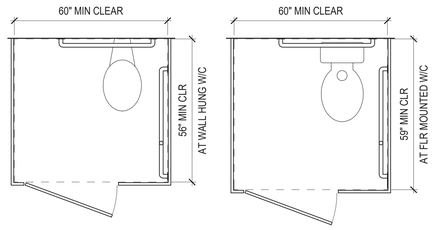
MAXIMUM REACH DEPTH	0.5 INCH	2 INCHES	5 INCHES	6 INCHES	9 INCHES	11 INCHES
MAXIMUM REACH HEIGHT	48 INCHES	46 INCHES	42 INCHES	40 INCHES	36 INCHES	34 INCHES

ICC A117.1-2009

A1 MISC. BATHROOM FIXTURES - ACCESSIBLE

SCALE: 1/2" = 1'-0"

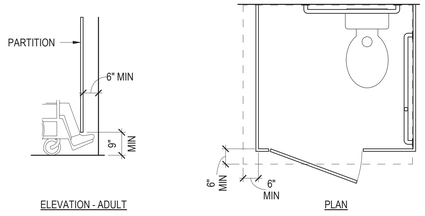
TYPICAL NOTES & CLEAR FLOOR SPACE REQ'S



NOTE:
1. TOILET COMPARTMENT DOORS & HARDWARE SHALL COMPLY WITH ACCESSIBLE DOOR & DOORWAY REQUIREMENTS EXCEPT IF THE APPROACH IS TO THE LATCH SIDE OF THE COMPARTMENT DOOR.
2. THE DOOR SHALL BE SELF-CLOSING
3. A DOOR PULL COMPLYING WITH ACCESSIBLE HARDWARE REQUIREMENTS SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH
4. DOORS SHALL NOT SWING INTO THE REQUIRED MIN AREA OF THE COMPARTMENT

ICC A117.1-2009 SECT. 604.9.2 / ADAS 604.8.1

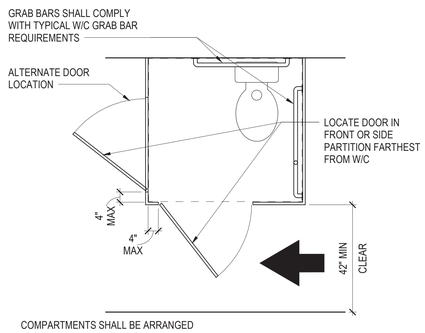
TOE CLEARANCE



NOTE:
1. TOE CLR @ FRONT PARTITION IS NOT REQUIRED IN COMPARTMENT GREATER THAN 62" FOR WALL-HUNG W/C OR GREATER THAN 65" IN DEPTH WITH A FLOOR-MOUNTED W/C.
2. TOE CLEAR @ SIDE PARTITION NOT REQUIRED IN COMPARTMENTS GREATER THAN 66" IN WIDTH

ICC A117.1-2009 SECT. 604.9.5 / ADAS 604.8.1.4

DOOR & APPROACH REQ'S



COMPARTMENTS SHALL BE ARRANGED FOR LEFT-HAND OR RIGHT-HAND APPROACH TO THE W/C

ICC A117.1-2009 SECT. 604.9.3 / ADAS 604.8.1.2

A3 ACCESSIBLE TOILET COMPARTMENTS

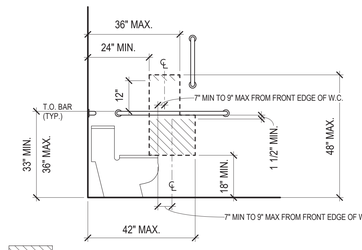
SCALE: 1/2" = 1'-0"

WALL HUNG TYPE

ICC A117.1-2009 SECTION 605

E5 ACCESSIBLE URINALS

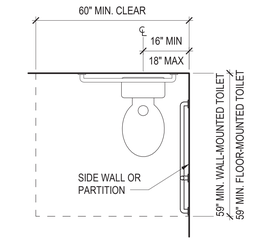
SCALE: 1/2" = 1'-0"



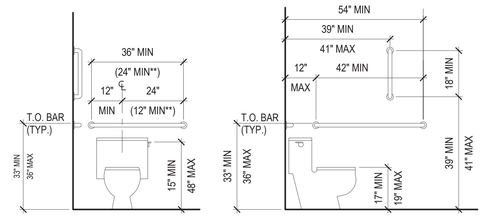
ICC A117.1-2009 SECTIONS 604.2 & 604.5

C5 ACCESSIBLE TOILET PAPER DISPENSER LOCATIONS

SCALE: 1/2" = 1'-0"



NOTE:
**REAR GRAB BAR IS PERMITTED TO BE 24" CENTERED ON THE W.C. WHERE WALL SPACE DOES NOT PERMIT 36" MIN LENGTH DUE TO THE LOCATION OF A RECESSED FIXTURE ADJACENT TO THE W.C.



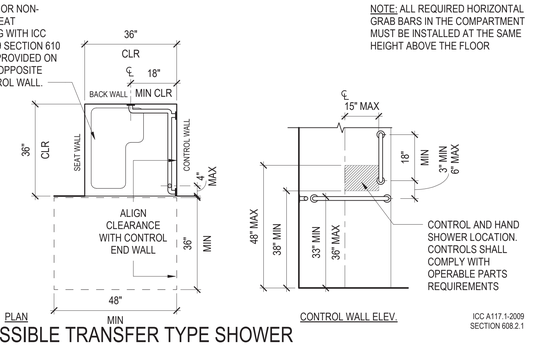
ICC A117.1-2009 SECTIONS 604.2 & 604.5

A5 ACCESSIBLE WATER CLOSETS AND GRAB BARS

SCALE: 1/2" = 1'-0"

A FOLDING OR NON-FOLDING SEAT COMPLYING WITH ICC A117.1-2009 SECTION 610 SHALL BE PROVIDED ON THE WALL OPPOSITE THE CONTROL WALL.

NOTE: ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR



PLAN

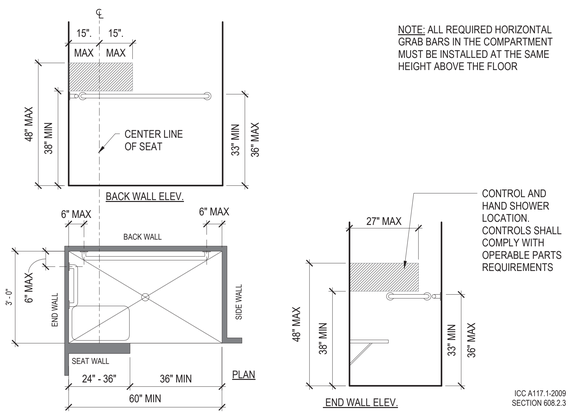
CONTROL WALL ELEV.

ICC A117.1-2009 SECTION 608.2.1

F7 ACCESSIBLE TRANSFER TYPE SHOWER COMPARTMENTS

SCALE: 1/2" = 1'-0"

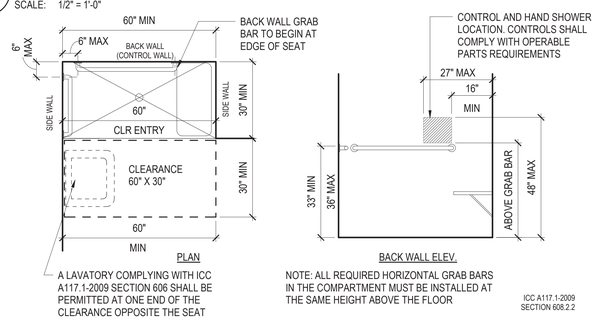
NOTE: ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR



ICC A117.1-2009 SECTION 608.2.3

D7 ACCESSIBLE ALTERNATE ROLL-IN SHOWER

SCALE: 1/2" = 1'-0"



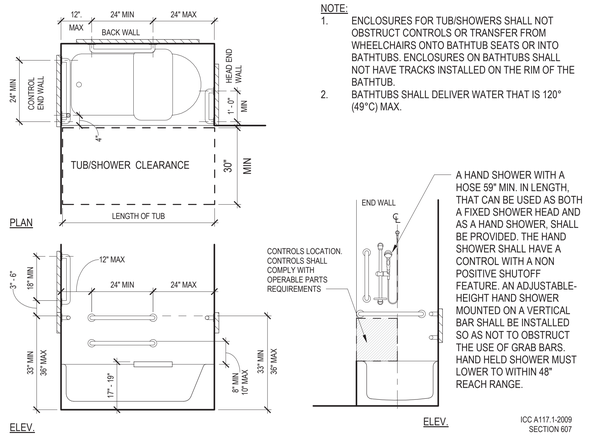
A LAVATORY COMPLYING WITH ICC A117.1-2009 SECTION 606 SHALL BE PERMITTED AT ONE END OF THE CLEARANCE OPPOSITE THE SEAT

NOTE: ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR

ICC A117.1-2009 SECTION 608.2.2

C7 ACCESSIBLE - STANDARD ROLL-IN TYPE SHOWERS

SCALE: 1/2" = 1'-0"



NOTE:
1. ENCLOSURES FOR TUB/SHOWERS SHALL NOT OBSTRUCT CONTROLS OR TRANSFER FROM WHEELCHAIRS ONTO BATHTUB SEATS OR INTO BATHTUBS. ENCLOSURES ON BATHTUBS SHALL NOT HAVE TRACKS INSTALLED ON THE RIM OF THE BATHTUB.
2. BATHTUBS SHALL DELIVER WATER THAT IS 120° (49°C) MAX.

ICC A117.1-2009 SECTION 607

A7 ACCESSIBLE TUB/SHOWERS WITHOUT FIXED SEATS

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

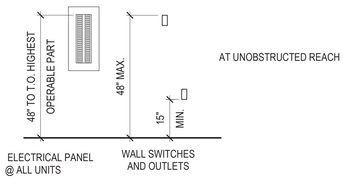
ACCESSIBILITY - PUBLIC AND COMMON USE

G402

2/2/2024 10:42:30 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

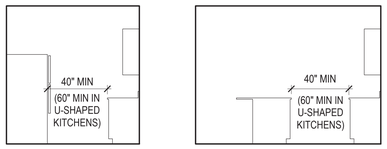
GENERAL NOTES - RESIDENTIAL UNITS

1. ALL RESIDENTIAL DWELLING UNITS ARE CONSIDERED COVERED UNITS UNDER THE FAIR HOUSING ACT DESIGN MANUAL (FHADM). ALL RESIDENTIAL DWELLING UNITS ARE EITHER TYPE "A" UNITS OR TYPE "B" UNITS COVERED UNDER ICC A117.1-2009. TYPE "A" RESIDENTIAL DWELLING UNITS SHALL COMPRISE 5% OF TOTAL NUMBER OF RESIDENTIAL DWELLING UNITS PROVIDED.
2. IN TYPE "A" AND TYPE "B" UNITS, GRAB BARS ARE NOT REQUIRED TO BE INSTALLED WHERE REINFORCEMENT IS INSTALLED FOR FUTURE INSTALLATION OF GRAB BARS. GRAB BAR REINFORCEMENT TO BE INSTALLED PER FHADM CH. 6 AND ICC A117.1-2009.
3. IN TYPE "A" AND TYPE "B" UNITS, REINFORCEMENT FOR THE WATER CLOSET SIDE WALL VERTICAL GRAB BAR IS NOT REQUIRED.
4. AT LEAST 50 PERCENT OF SHELF SPACE IN CABINETS SHALL COMPLY WITH SECTION 905.
5. 'REMOVABLE' CABINETRY SHALL BE ABLE TO BE REMOVED WITHOUT REMOVING THE COUNTER TOP / WORK SURFACE. SIDES OF ADJACENT CABINETS TO BE FINISHED PER CABINET FACE, AND FINISH FLOORING AND FINISH PAINTING/WALL SURFACING SHALL EXTEND BENEATH / BEHIND REMOVABLE CABINETRY.
6. ELECTRICAL OUTLETS IN TYPE "A" AND TYPE "B" KITCHENS AND BATHS SHALL HAVE CLEAR FLOOR SPACE FOR EITHER A FORWARD OR PARALLEL APPROACH. GENERAL RULE OF THUMB IS TO PLACE OUTLETS NO CLOSER THAN 36" FROM INTERIOR CORNERS OF KITCHEN OR 12" FROM OBSTRUCTIONS (COUNTER OR APPLIANCES). OUTLETS OVER COUNTERS SHALL BE 44" MAXIMUM AFF. ONLY 1 INACCESSIBLE OUTLET IN EACH KITCHEN CAN BE PROVIDED ABOVE COUNTER TOP BETWEEN APPLIANCES AND FIXTURES.



F1 ELECTRICAL AND CONTROLS - TYPE "A" AND "B"

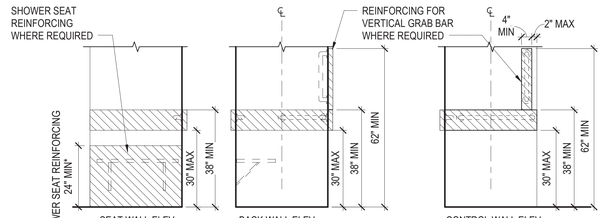
SCALE: 1/2" = 1'-0"



ICC A117.1-2009 SECT. 1003.12 & 1004.12 FHADM CH. 7-7.7

E1 RESIDENTIAL UNIT KITCHEN CLEARANCE

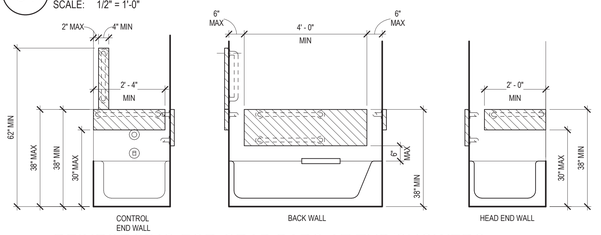
SCALE: 1/4" = 1'-0"



C1 REINFORCING FOR GRAB BARS AND SEAT AT SHOWER COMPARTMENTS - TYPE "A" AND "B" UNITS

SCALE: 1/2" = 1'-0"

ICC A117.1-2009 SECT. 1003.11.1 AND 1004.11.1 FHADM 6.12



B1 REINFORCING FOR GRAB BARS AT TUB/SHOWERS - TYPE "A" AND TYPE "B" UNITS

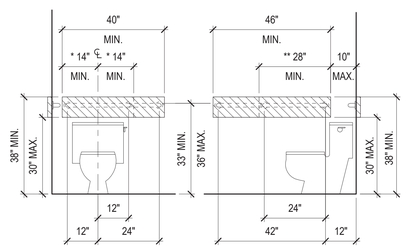
SCALE: 1/2" = 1'-0"

ICC A117.1-2009 SECT. 1003.11.1 AND 1004.11.1 FHADM 6.9

NOTE:
PROVIDE BLOCKING FOR FUTURE GRAB BAR INSTALLATION.

*AT TYPE "A" UNITS WHEN LAVATORY OVERLAPS WATER CLOSET PER EXCEPTION 1003.11.2.4.4 AND TYPE "B" UNITS - WHERE SPACE WILL NOT ALLOW A 36" REAR WALL GRAB BAR, REINFORCEMENT FOR A 24" REAR WALL GRAB BAR SHALL BE PROVIDED AT *MINIMUM LENGTH SHOWN.

**AT TYPE "B" UNITS ONLY - WHERE A SIDE WALL IS NOT AVAILABLE FOR A 42 INCH GRAB BAR, REINFORCEMENT FOR A 24 INCH GRAB BAR SHALL BE PROVIDED AT *MINIMUM LENGTH SHOWN



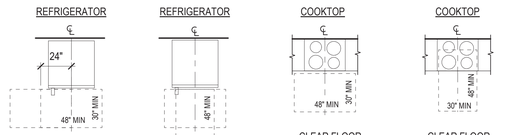
A1 REINFORCING FOR GRAB BARS AT WATER CLOSETS - TYPE "A" AND TYPE "B" UNITS

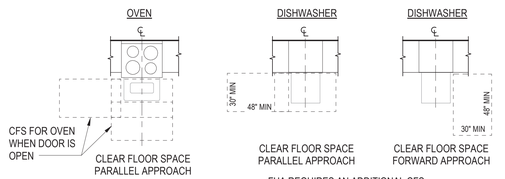
SCALE: 1/2" = 1'-0"

ICC A117.1-2009 SECT. 1003.11.1 AND 1004.11.1 FHADM 6.5

GENERAL NOTES - TYPE "A" UNITS

1. TYPE "A" UNITS REQUIRE A KITCHEN SINK, HEIGHT 34" MAX AFF, WITH A FORWARD APPROACH AND KNEE TOE CLEARANCE COMPLYING WITH ICC A117.1-2009 SECTION 606. THE KITCHEN SINK IS ALLOWED TO HAVE BASE CABINETRY BELOW IF THE CABINETRY IS 'REMOVABLE'.
2. TYPE "A" UNITS ARE REQUIRED TO HAVE AT LEAST ONE SECTION OF COUNTER THAT PROVIDES A 'WORK SURFACE' COMPLYING WITH ICC A117.1-2009 SECTION 902. THE 'WORK SURFACE' IS ALLOWED TO HAVE BASE CABINETRY BELOW IF THE CABINETRY IS 'REMOVABLE'. EXCEPTIONS:
   a. SPACES THAT DO NOT PROVIDE A COOKTOP OR CONVENTIONAL RANGE SHALL NOT BE REQUIRED TO PROVIDE A 'WORK SURFACE' COMPLYING WITH ICC A117.1-2009 SECTION 902.
3. IN TYPE "A" UNITS COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50 PERCENT OF THE FREEZER COMPARTMENT SHELVES, INCLUDING THE BOTTOM OF THE FREEZER, 54 INCHES MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT THE MAXIMUM HEIGHTS POSSIBLE IN THE COMPARTMENT. A CLEAR FLOOR SPACE, POSITIONED FOR A PARALLEL APPROACH SHALL BE PROVIDED. THE CENTERLINE OF THE CLEAR FLOOR SPACE SHALL BE OFFSET 24 INCHES MAXIMUM FROM THE CENTERLINE OF THE DEDICATED SPACE.
4. IN TYPE "A" UNITS WITH A RANGE OR COOKTOP HAVING FLOOR SPACE POSITIONED FOR A FORWARD APPROACH, THE UNDERSIDE OF THE RANGE OR COOKTOP SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PREVENT BURNS, ABRASIONS, OR ELECTRICAL SHOCK. THE LOCATION OF CONTROLS SHALL NOT REQUIRE REACHING ACROSS BURNERS.
5. IN TYPE "A" UNITS, ALL OPERABLE PARTS SHALL COMPLY WITH ICC A117.1-2009 SECTION 1003.9. SEE SECTION FOR EXCEPTIONS.
6. LIVING ROOMS, DINING ROOMS, AND SLEEPING ROOMS WITH OPERABLE WINDOWS IN TYPE A UNITS MUST HAVE AT LEAST ONE OPERABLE WINDOW WITH CONTROLS WITHIN THE REACH RANGE, WITH CLEAR FLOOR SPACE TO APPROACH THE CONTROLS, AND EASILY OPERABLE WITH ONE HAND AND WITH 5 POUNDS OF FORCE OR LESS.
7. IN TYPE "A" UNITS, ALL APPLIANCE CONTROLS SHALL COMPLY WITH ICC A117.1-2009 SECTION 1003.9 - OPERABLE PARTS. EXCEPTIONS:
   a. APPLIANCE DOORS AND DOOR LATCHING DEVICES SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 309.4
   b. BOTTOM HINGED APPLIANCE DOORS, WHEN IN THE OPEN POSITION, SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 309.3
8. IN TYPE "A" UNITS SIDE HINGED OVEN DOORS SHALL HAVE A COUNTER TOP POSITIONED ADJACENT TO THE LATCH SIDE OF THE OVEN DOOR.
9. IN TYPE "A" UNITS BOTTOM HINGED OVEN DOORS SHALL HAVE A COUNTER TOP POSITIONED ADJACENT TO ONE SIDE OF THE DOOR.
10. IN TYPE "A" UNITS OVENS SHALL HAVE FRONT PANEL CONTROLS.



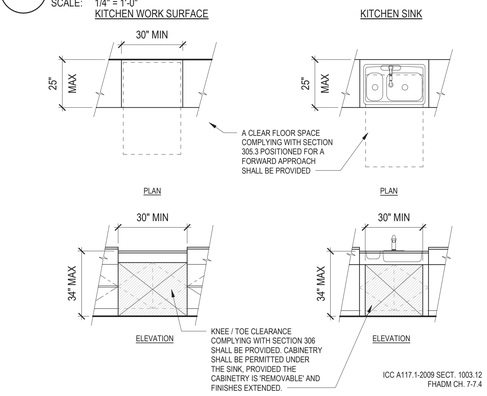


ICC A117.1-2009 SECT. 1003.12 FHADM CH. 7-7.4

TYPE "A" UNIT KITCHEN APPLIANCE NOTES:
1. ALL APPLIANCES MUST MEET AT LEAST ONE OF THE CLEAR FLOOR SPACES SHOWN FOR THAT APPLIANCE TYPE. CLEAR FLOOR SPACES ARE ALLOWED TO OVERLAP EACH OTHER.
2. THE OVEN DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR SPACE FOR THE OVEN. A SECOND CLEAR FLOOR SPACE FOR OPEN OVEN DOOR MUST BE PROVIDED.
3. SIDE HINGED OVEN DOORS SHALL HAVE A COUNTERTOP POSITIONED ADJACENT TO THE LATCH SIDE OF THE OVEN DOOR. BOTTOM HINGED DOOR OVENS SHALL HAVE A COUNTERTOP POSITIONED ADJACENT TO EITHER SIDE OF THE DOOR
4. THE DISHWASHER DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR SPACE FOR THE DISHWASHER OR AN ADJACENT SINK.
5. WHEN A FORWARD APPROACH IS USED FOR THE COOKTOP, KNEE/TOE CLEARANCE COMPLYING WITH A117.1-2009 SECTION 306 SHALL BE PROVIDED AND THE UNDERSIDE OF THE COOKTOP MUST BE INSULATED TO PREVENT BURNS. CABINET FACING, FLOOR AND WALL FINISHES UNDER COOKTOP MUST BE EXTENDED.

C3 CLEAR FLOOR SPACE AT TYPE "A" KITCHEN APPLIANCES

SCALE: 1/4" = 1'-0"



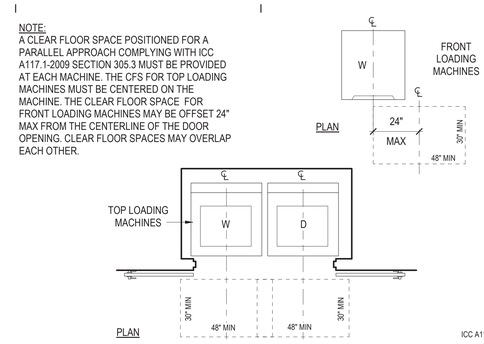
ICC A117.1-2009 SECT. 1003.12 FHADM CH. 7-7.4

NOTES:
1. THE FRONT OF THE SINK SHALL BE 34" MAX ABOVE THE FLOOR, MEASURED TO THE HIGHER OF THE RIM OF SINK OR COUNTER TOP SURFACE
2. WATER SUPPLY AND DRAIN PIPES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.
3. THERE SHALL BE NO SHARP OF ABRASIVE SURFACE UNDER LAV OR SINK.
4. KITCHENS THAT DO NOT PROVIDE A COOKTOP OR CONVENTIONAL RANGE SHALL NOT BE REQUIRED TO PROVIDE AN ACCESSIBLE WORK SURFACE.
5. A PARALLEL APPROACH SHALL BE PERMITTED AT WET BARS.

A3 KITCHEN CABINETS AT TYPE "A" UNITS

SCALE: 3/8" = 1'-0"

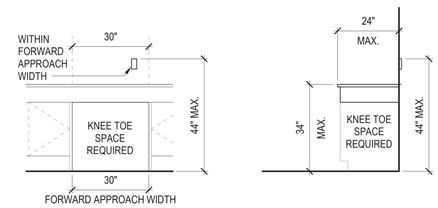
NOTE:
A CLEAR FLOOR SPACE POSITIONED FOR A PARALLEL APPROACH COMPLYING WITH ICC A117.1-2009 SECTION 305.3 MUST BE PROVIDED AT EACH MACHINE. THE CFS FOR TOP LOADING MACHINES MUST BE CENTERED ON THE MACHINE. THE CLEAR FLOOR SPACE FOR FRONT LOADING MACHINES MAY BE OFFSET 24" MAX FROM THE CENTERLINE OF THE DOOR OPENING. CLEAR FLOOR SPACES MAY OVERLAP EACH OTHER.



ICC A117.1-2009 SECT. 611 FHADM CH. 2

F6 WASHER DRYER CLOSETS TYPE "A" UNITS

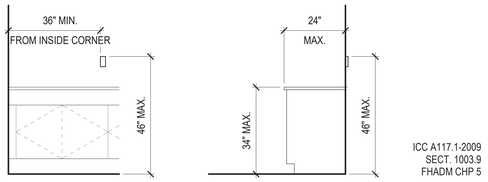
SCALE: 3/8" = 1'-0"



ICC A117.1-2009 SECT. 1003.9 FHADM CHP 5

E6 ELECTRICAL AND CONTROLS AT COUNTER TOPS - TYPE "A" UNIT FORWARD APPROACH

SCALE: 1/2" = 1'-0"



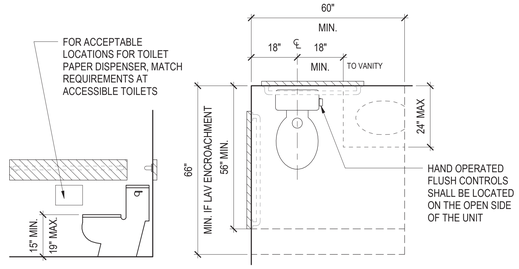
ICC A117.1-2009 SECT. 1003.9 FHADM CHP 5

D6 ELECTRICAL AND CONTROLS AT COUNTER TOPS - TYPE "A" UNIT PARALLEL APPROACH

SCALE: 1/2" = 1'-0"

GENERAL NOTES: TYPE "A" UNIT BATHROOMS

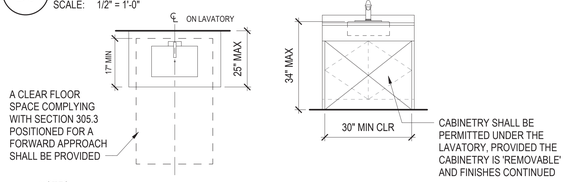
1. IN EACH TYPE "A" UNIT, AT LEAST ONE BATHROOM MUST MEET TYPE "A" UNIT BATHROOM REQUIREMENTS AND HAVE A CLEAR FLOOR SPACE CLEAR OF DOOR SWING. OTHER BATHROOMS IN THE UNIT ARE EXEMPT FROM CLEAR FLOOR SPACE REQUIREMENTS.
2. ALL BATHROOMS MUST MEET MINIMUM GRAB BAR REINFORCING REQUIREMENTS.



ICC A117.1-2009 SECT. 1003.11.2.4 FDADM CH. 7-7.43

B6 TYPICAL WATER CLOSETS AT TYPE A UNITS

SCALE: 1/2" = 1'-0"



NOTES:
1. THE FRONT OF THE SINK SHALL BE 34" MAX ABOVE THE FLOOR, MEASURED TO THE HIGHER OF THE RIM OF SINK OR COUNTER TOP SURFACE
2. WATER SUPPLY AND DRAIN PIPES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.
3. THERE SHALL BE NO SHARP OF ABRASIVE SURFACE UNDER LAV OR SINK.
4. THE REQUIREMENT FOR KNEE AND TOE CLEARANCE SHALL NOT APPLY TO MORE THAN ONE BOWL OF A MULTI BOWL SINK.

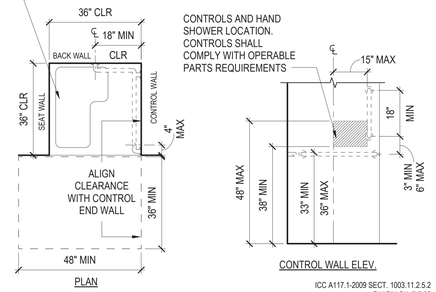
A6 LAVATORIES AT TYPE "A" UNITS

ICC A117.1-2009 SECT. 1003.11.2.2 FHADM CH. 7-7.47

SCALE: 1/2" = 1'-0"

A FOLDING OR NON-FOLDING SEAT COMPLYING WITH ICC A117.1-2009 SECTION 610 SHALL BE PROVIDED ON THE WALL OPPOSITE THE CONTROL WALL.

NOTE: INSTALL REINFORCING FOR ALL GRAB BARS. ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR.

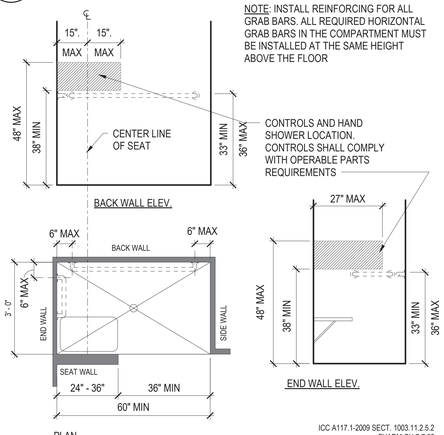


ICC A117.1-2009 SECT. 1003.11.2.5.2 FHADM CH. 7-7.56

F8 TRANSFER TYPE SHOWER COMPARTMENTS TYPE "A" UNITS

SCALE: 1/2" = 1'-0"

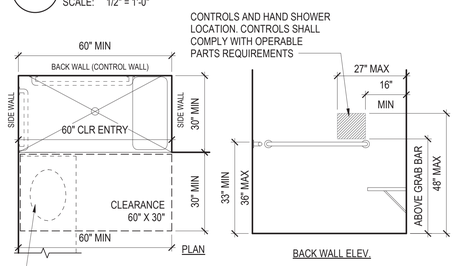
NOTE: INSTALL REINFORCING FOR ALL GRAB BARS. ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR



ICC A117.1-2009 SECT. 1003.11.2.5.2 FHADM CH.7-7.56

D8 ALT. ROLL-IN SHOWERS TYPE "A" UNITS

SCALE: 1/2" = 1'-0"



LAVATORIES, COUNTER TOPS AND CABINETRY PERMITTED AT ONE END OF CLEARANCE IF REMOVABLE AND FINISHES PROVIDED

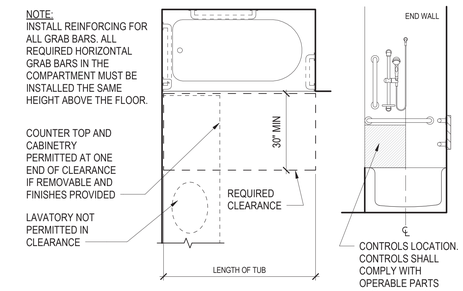
NOTE: INSTALL REINFORCING FOR ALL GRAB BARS. ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR.

ICC A117.1-2009 SECT. 1003.11.2.5.2 FHADM CH. 7-7.56

B8 STD. ROLL-IN SHOWERS TYPE A UNITS

SCALE: 1/2" = 1'-0"

NOTE:
INSTALL REINFORCING FOR ALL GRAB BARS. ALL REQUIRED HORIZONTAL GRAB BARS IN THE COMPARTMENT MUST BE INSTALLED AT THE SAME HEIGHT ABOVE THE FLOOR.



ICC A117.1-2009 SECT. 1003.11.2.5.1 FHADM CH.7- 7.53

A8 TUB/SHOWERS AT TYPE "A" UNITS

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

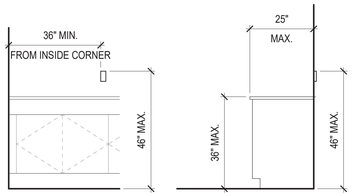
ACCESSIBILITY - GENERAL RESIDENTIAL AND TYPE "A" UNITS

G403

2/2/2024 10:42:32 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES - ACCESSIBILITY - TYPE "B" UNITS

1. IN TYPE "B" UNITS ALL LIGHTING CONTROLS, ELECTRICAL SWITCHES AND RECEPTACLE OUTLETS, ENVIRONMENTAL CONTROLS, ELECTRICAL PANEL BOARDS, AND USER CONTROLS FOR SECURITY OR INTERCOM SYSTEMS SHALL COMPLY WITH ICC A117.1-2009 SECTIONS 309.2 AND 309.3. SEE SECTION 1004.9 FOR EXCEPTIONS.

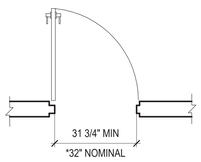


ICC A117.1-2009
SECT. 1004.9
FHADM CHP 5

ELECTRICAL AND CONTROLS AT COUNTER TOPS

F1 TYPE "B" UNITS PARALLEL APPROACH

SCALE: 1/2" = 1'-0"



NOTE:
TYPE "B" UNITS - CLEAR OPENING REQUIREMENT AT ALL USER PASSAGE DOORS (DOES NOT INCLUDE MAIN ENTRY DOOR)

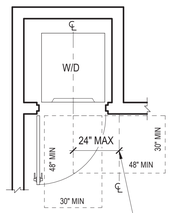
ICC A117.1-2009 CH. 1004.5.2
*FHADM CH. 3-3.5

E1 TYPE "B" UNITS - USER PASSAGE DOORS

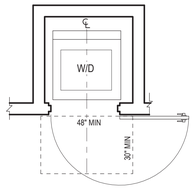
SCALE: 1/2" = 1'-0"

NOTE:
A CLEAR FLOOR SPACE COMPLYING WITH ICC A117.1-2009 SECTION 305.3 MUST BE PROVIDED AT EACH MACHINE. THE CLEAR FLOOR SPACE FOR TOP LOADING MACHINES MUST BE POSITIONED FOR A PARALLEL APPROACH AND CENTERED ON THE MACHINE. THE CLEAR FLOOR SPACE FOR FRONT LOADING MACHINES MAY BE POSITIONED FOR EITHER A FORWARD OR PARALLEL APPROACH. CLEAR FLOOR SPACES MAY OVERLAP EACH OTHER.

FRONT LOADING MACHINE



TOP LOADING MACHINE



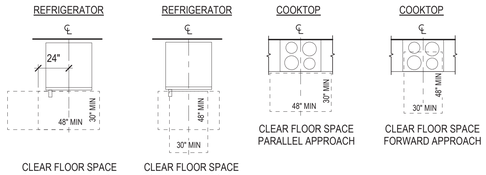
PER 611.2, AT FRONT LOADING MACHINES A PARALLEL APPROACH MAY BE OFFSET 24" MAX

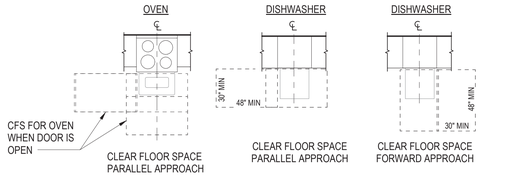
ICC A117.1-2009 SECT. 611
FHADM CH. 2
ICC A117.1-2003 SAFE HARBOR

F4 WASHER DRYER CLOSETS TYPE "B" UNITS

SCALE: 3/8" = 1'-0"

TYPE "B" UNIT APPLIANCE NOTES:
1. ALL APPLIANCES MUST MEET AT LEAST ONE OF THE CLEAR FLOOR SPACES SHOWN FOR THAT APPLIANCE TYPE. CLEAR FLOOR SPACES ARE ALLOWED TO OVERLAP EACH OTHER.
2. THE OVEN DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR SPACE FOR THE OVEN. A SECOND CLEAR FLOOR SPACE FOR OPEN OVEN DOOR MUST BE PROVIDED.
3. THE DISHWASHER DOOR IN THE OPEN POSITION SHALL NOT OBSTRUCT THE CLEAR FLOOR SPACE FOR THE DISHWASHER.
4. WHEN A FORWARD APPROACH IS USED FOR THE COOKTOP, KNEE/TOE CLEARANCE COMPLYING WITH ICC A117.1-2009 SECTION 306 SHALL BE PROVIDED AND THE UNDERSIDE OF THE COOKTOP MUST BE INSULATED TO PREVENT BURNS. CABINET FACING, FLOOR, AND WALL FINISHES UNDER COOKTOP MUST BE EXTENDED.





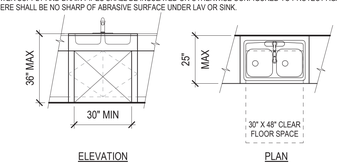
FHA REQUIRES AN ADDITIONAL CFS, EITHER PARALLEL OR FORWARD, CENTERED ON THE DW

ICC A117.1-2009
SECT. 1004.12
FHADM CH. 7-7.4

C4 CLEAR FLOOR SPACE TYPE "B" KITCHEN APPLIANCES

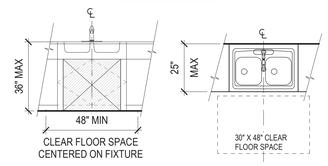
SCALE: 1/4" = 1'-0"

NOTES WHEN A FORWARD APPROACH IS PROVIDED:
1. KNEE/TOE CLEARANCE COMPLYING WITH ICC A117.1-2009 SECTION 306 SHALL BE PROVIDED. CABINETRY SHALL BE PERMITTED UNDER THE SINK, PROVIDED THE CABINETRY IS 'REMOVABLE' AND FLOOR AND WALL FINISHES EXTENDED.
1. WATER SUPPLY AND DRAIN PIPES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.
2. THERE SHALL BE NO SHARP OF ABRASIVE SURFACE UNDER LAV OR SINK.



ELEVATION PLAN

CLEAR FLOOR SPACE AT SINK
FORWARD APPROACH



ELEVATION PLAN

ICC A117.1-2009 SECT. 1004.12.2.1
FHADM CH. 7-7.4

CLEAR FLOOR SPACE AT SINK
PARALLEL APPROACH

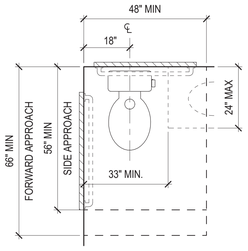
A4 KITCHEN CABINETS IN TYPE "B" UNITS

SCALE: 3/8" = 1'-0"

GENERAL NOTES: TYPE "B" UNITS - OPTION A AND B BATHROOMS

1. IN EACH TYPE "B" UNIT THERE ARE TWO PATHS FOR COMPLIANT BATHROOMS:
   OPTION A: ALL BATHROOMS IN THE UNIT MUST MEET OPTION A REQUIREMENTS AND EVERY TOILET/BATHING FIXTURE IN THE UNIT MUST COMPLY WITH OPTION A REQUIREMENTS.
   - OR -
   OPTION B: ONE BATHROOM IN THE UNIT MUST MEET OPTION B REQUIREMENTS. THE 'OTHER' BATHROOMS IN A UNIT COMPLYING WITH OPTION B ARE EXEMPT FROM "CLEAR FLOOR SPACE" REQUIREMENTS.
2. THE EXEMPT BATHROOMS MUST HAVE USER PASSAGE, ACCESS TO OPERABLE PARTS (SWITCHES, OUTLETS, ETC) AND HAVE REINFORCING INSTALLED FOR TOILET AND BATHING FIXTURES GRAB BARS.
3. ALL OPTION A AND OPTION B BATHROOMS MUST HAVE A 30" X 48" CLEAR FLOOR SPACE CLEAR OF DOOR SWING, EXCLUDING KNEE/TOE SPACE UNDER ELEMENTS. THIS REQUIREMENT DOES NOT APPLY TO THE 'EXEMPT' BATHROOMS IN A UNIT WITH AN OPTION B BATHROOM.
4. ALL BATHROOMS MUST MEET MINIMUM GRAB BAR REINFORCING REQUIREMENTS.

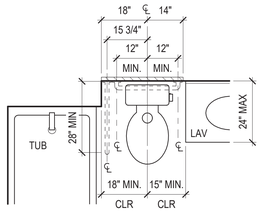
TYPE "B" UNITS - DETAILS THAT MEET BOTH OPTION A AND OPTION B BATH REQUIREMENTS



ICC A117.1-2009 SECT. 1004
FHADM CHP 7-7.43

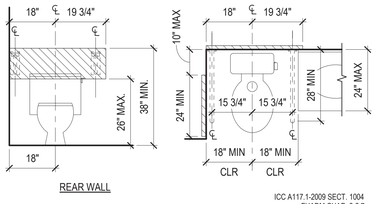
3 TYPICAL WATER CLOSETS IN TYPE B UNITS

SCALE: 1/2" = 1'-0"



ICC A117.1-2009 SECT. 1004
FHADM CHAP. 6-6.7

REINFORCEMENT FOR A SINGLE SWING -UP GRAB BAR IN LIEU OF SIDE WALL GRAB BAR

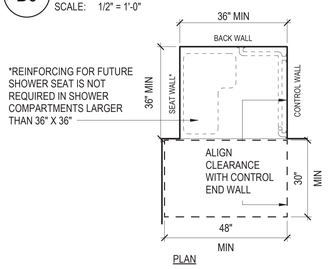


ICC A117.1-2009 SECT. 1004
FHADM CHAP. 6-6.7

REINFORCEMENT FOR TWO SWING -UP GRAB BARS IN LIEU OF REAR WALL AND SIDE WALL GRAB BARS.

B6 REINFORCING FOR SWING UP GRAB BARS IN TYPE "B" UNITS

SCALE: 1/2" = 1'-0"



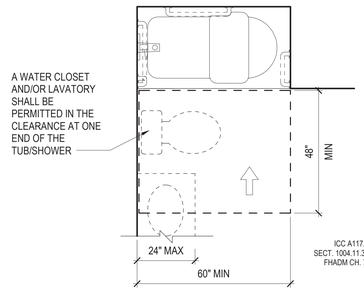
PLAN

ICC A117.1-2009
SECT. 1004.11.3.1.3
FHADM CH. 7-7.56

A6 SHOWER COMPARTMENTS IN TYPE "B" UNITS - BOTH OPTION A AND OPTION B

SCALE: 1/2" = 1'-0"

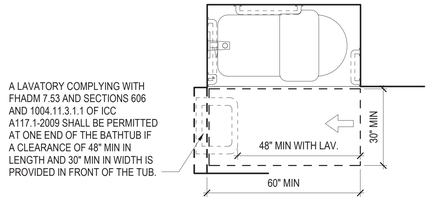
TYPE "B" UNITS - OPTION A BATH



ICC A117.-2009
SECT. 1004.11.3.1.3.2
FHADM CH. 7-7.53

F8 TUB/SHOWER FORWARD APPROACH TYPE "B" UNIT OPTION A BATH

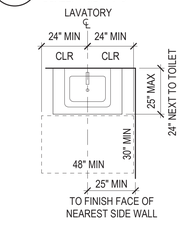
SCALE: 1/2" = 1'-0"



ICC A117.1-2009
SECT. 1004.11.3.1.3.1
FHADM CH. 7-7.53

E8 TUB/SHOWER PARALLEL APPROACH TYPE "B" UNIT OPTION A BATH

SCALE: 1/2" = 1'-0"



PLAN

NOTE:
IN OPTION A BATHROOMS ALL LAVS SHALL MEET PARALLEL APPROACH REQUIREMENTS SHOWN

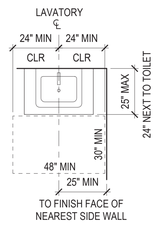
ELEVATION

ICC A117.1-2009
SECT. 1004.11.3.1.1
FHADM CH. 7-7.4

C8 LAVATORY IN TYPE "B" UNIT OPTION A BATH

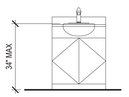
SCALE: 3/8" = 1'-0"

TYPE "B" UNITS - OPTION B BATH



PLAN

NOTE:
IN OPTION B BATHROOMS AT LEAST ONE LAV SHALL MEET PARALLEL APPROACH REQUIREMENTS SHOWN

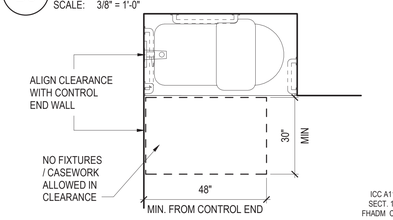


ELEVATION

ICC A117.1-2009
SECT. 1004.11.3.2.1
FHADM CH. 7-7.47

B8 LAVATORY IN TYPE "B" UNIT OPTION B BATH

SCALE: 3/8" = 1'-0"



ICC A117.1-2009
SECT. 104.13.2.3
FHADM CH. 7-7.53

A8 TUB/SHOWER CLEARANCE - TYPE "B" UNIT OPTION B BATH

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

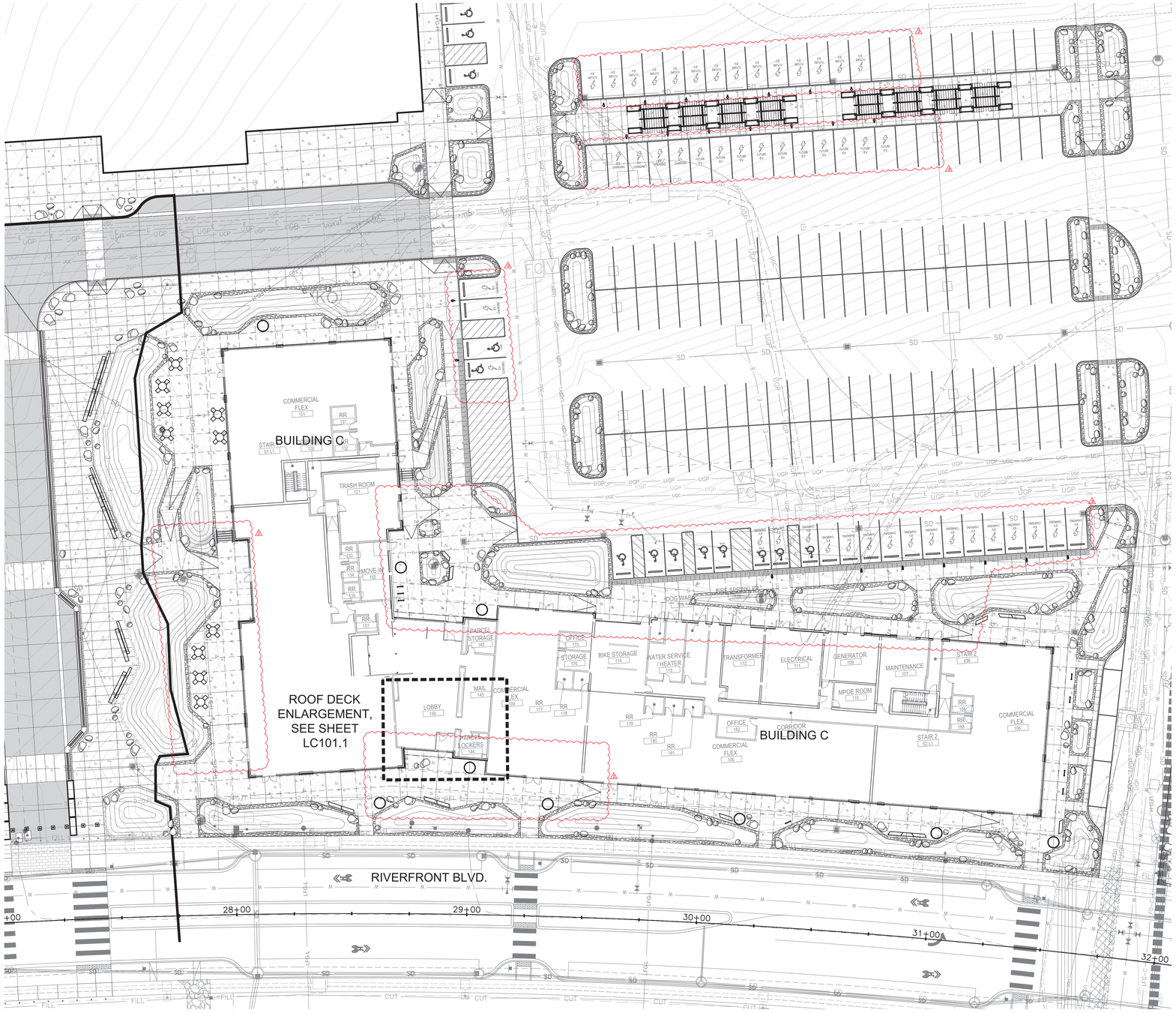
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ACCESSIBILITY - TYPE "B" UNITS

G404

2/2/2024 10:42:33 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



SCALE: 1"=20'-0"

0' 10' 20' 40' 80'

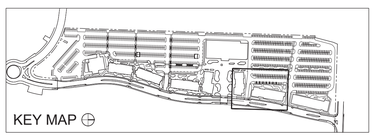
NORTH

SITE IMPROVEMENTS LEGEND

SYMBOL	ITEM
	TYPE 1 BENCH
	TYPE 2 BENCH
	TYPE 3 BENCH
	BOULDERS SEE DETAIL 'A' ON SHEET L4.03 FOR BOULDERS IN PAVING AND DETAIL 'B' ON L4.03 FOR BOULDERS IN PLANTING BED
	TYPE 1 PLANTER
	TYPE 2 PLANTER
	BIKE RACK
	SURFACE MOUNTED CAFE TABLES AND CHAIRS
	6" CONTOURS. MOUND PLANTING BEDS ABOVE ADJACENT HARD SURFACE AS SHOWN
	DRAIN ROCK
	SITE LIGHTING– SEE ELECTRICAL
	STAMPED ASPHALT WALKWAY
	CONCRETE PAVING WITH JOINT AND SCORING PATTERN, SEE CIVIL

NOTES:

1. SEE EVERETT RIVERFRONT SITE PHASE 1 AND 2 PERMIT DRAWINGS FOR SITE PLANTING AND ADDITIONAL SITE WORK REQUIREMENTS.



WEISMANDESIGNGROUP
LANDSCAPE ARCHITECTURE
2329 E MADISON ST SEATTLE WA 98112
206-322-1732 WWW.WDGINC.COM

EVERETT RIVERFRONT BUILDING C

3710 RIVERFRONT BLVD EVERETT, WA 98203

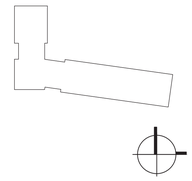
1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

2-C

KEY PLAN



NICHOLAS P HAGAN, LANDSCAPE ARCHITECT

STATE OF WASHINGTON NICHOLAS P HAGAN NO. 23 EXP. 8/17/2024 LANDSCAPE ARCHITECT

© MG2 Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

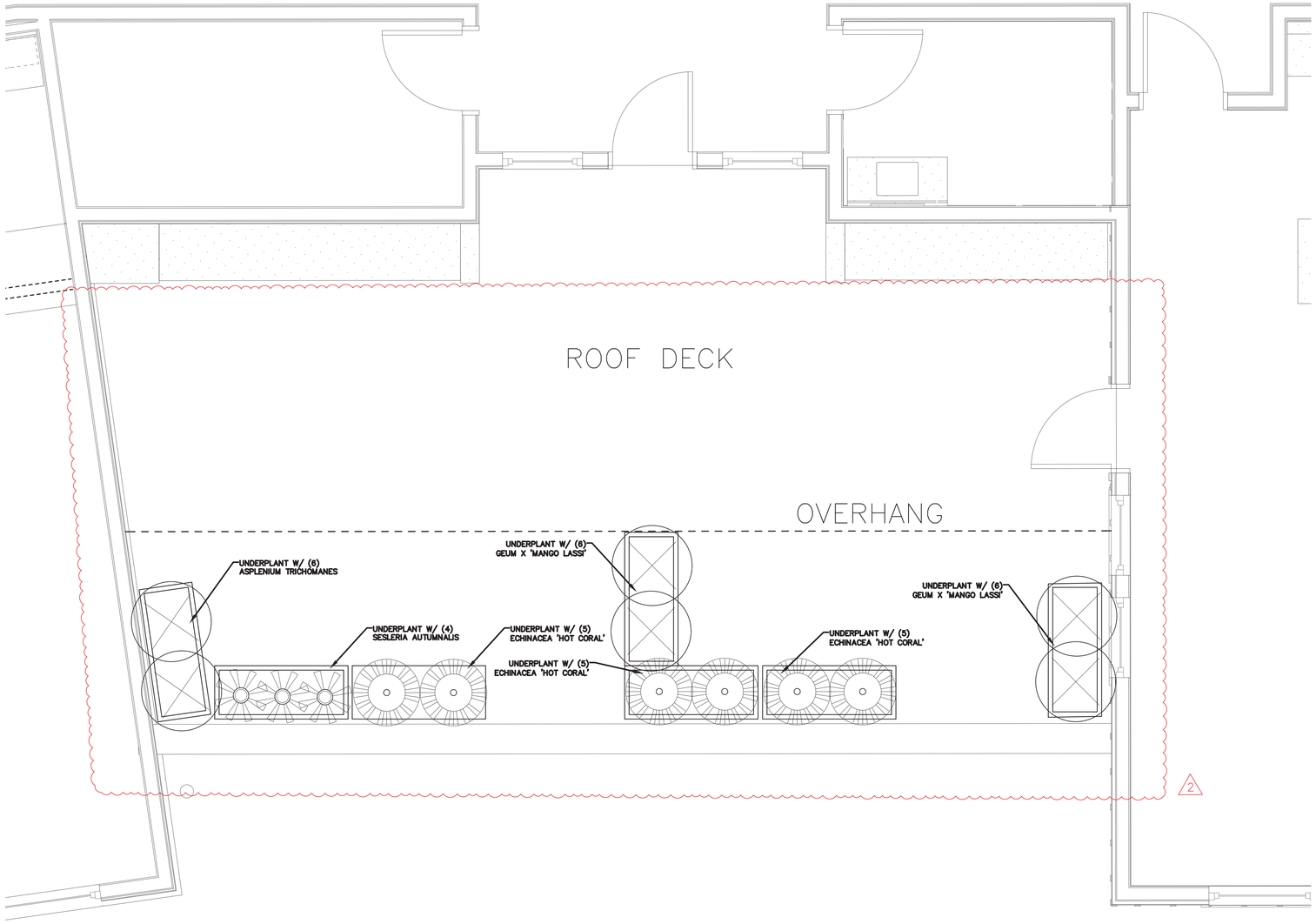
△	DATE	DESCRIPTION
1	9/16/22	Permit Revisions 01
2	1/31/24	Permit Revisions 02

21-5905-01A
PM: ABBY JONES
DRAWN BY: AJ, EB
04/15/2022

LANDSCAPE PLAN

LC100.1

2/22/2022 2:28:39 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



SITE IMPROVEMENTS LEGEND

SYMBOL	ITEM
	GREEN THEORY MARINE GRADE ALUM. OBSIDIAN PLANTER 24"W X 60"L X 30"H WITH 2" TOEKICK REVEAL, WITH CWM MODULAR CONTAINER IRRIGATION WATERING RESERVOIRS OR APPROVED EQUAL. 2

PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL / COMMON NAME	SIZE	CONDITION/REMARKS
SHRUBS				
	6	VACCINIUM OVATUM EVERGREEN HUCKLEBERRY	MIN. 18"–24" HT./SPD.	FULL & BUSHY, SPACING AS SHOWN ON PLAN
	6	MISCANTHUS SINENSIS 'ADAGIO' ADAGIO EULALIA GRASS	MIN. 2 GAL. CONTAINER	FULL & BUSHY, SPACING AS SHOWN ON PLAN
	3	POLYSTICHUM MUNITUM WESTERN SWORD FERN	MIN. 2 GAL. CONTAINER	FULL & BUSHY, SPACING AS SHOWN ON PLAN 2
PERENNIALS, FERNS AND GROUNDCOVER				
NO SYMBOL	15	ECHINACEA X 'HOT PAPAYA' HOT PAPAYA ECHINACEA	MIN. 15"–18" HT./SPD.	FULL & BUSHY, SPACING AS SHOWN ON PLAN
NO SYMBOL	12	GEUM X 'MANGO LASSI' MANGO LASSI AVENS	MIN. 12"–15" HT./SPD.	FULL & BUSHY, SPACING AS SHOWN ON PLAN
NO SYMBOL	6	ASPLENIUM TRICHOMANES MAIDENHAIR SPLEENWORT	MIN. 1 GAL	FULL & BUSHY, MIN. 8 FRONDS
NO SYMBOL	4	SESLERIA AUTUMNALIS AUTUMN MOORE GRASS	MIN. 1 GAL	FULL & BUSHY, MIN. 8 FRONDS 2

SCALE: 1/2"=1'-0"

0' 1' 2' 4' 8'

NORTH

WEISMANDESIGNGROUP
LANDSCAPE ARCHITECTURE
2329 E MADISON ST SEATTLE WA 98112
206-322-1732 WWW.WDGINC.COM

EVERETT RIVERFRONT BUILDING C

3710 RIVERFRONT BLVD EVERETT, WA 98203

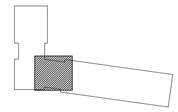
1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

2-C

KEY PLAN



NICHOLAS P HAGAN, LANDSCAPE ARCHITECT

STATE OF WASHINGTON · NICHOLAS P HAGAN · 22793 EXP 4/17/2024 · LANDSCAPE ARCHITECT

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

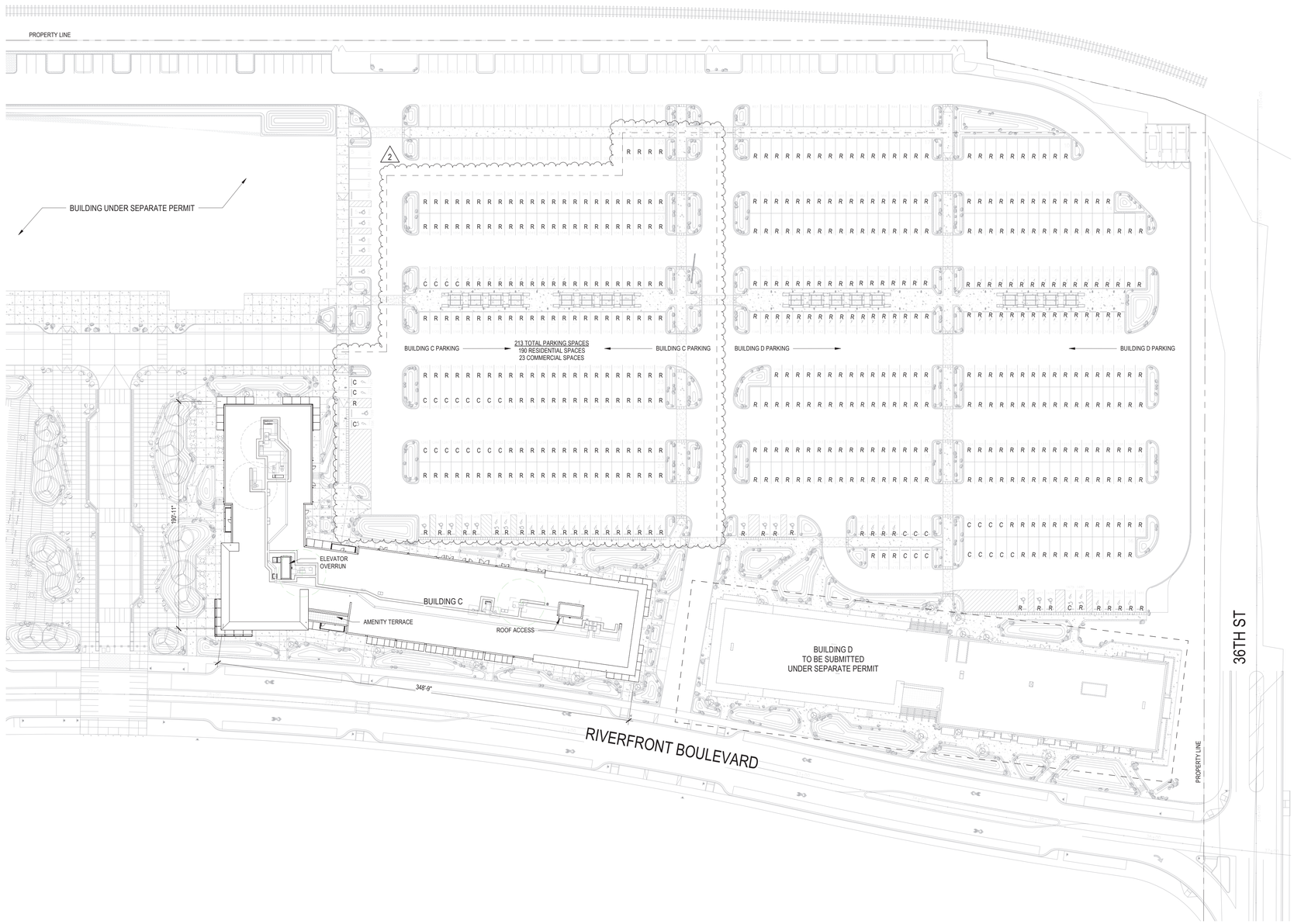
△	DATE	DESCRIPTION
1	9/16/22	Permit Revisions 01
2	1/31/24	Permit Revisions 02

21-5905-01A
PM: ABBY JONES
DRAWN BY: AJ, EB
04/15/2022

PLANTING PLAN - ROOF ENLARGEMENT

LC101.1

2/22/2022 2:28:39 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 PHASE 2 - SITE PLAN - OVERALL

SCALE: 1" = 40'-0"

PROJECT INFORMATION

PROJECT ADDRESS:	3710 RIVERFRONT BOULEVARD, EVERETT, WA 98203
OWNER:	RIVERFRONT PHASE 2, LLC 11624 SE 5TH STREET SUITE 210 BELLEUE, WA 98005
PARCEL NUMBER:	29052900401900 29052900401800
LEGAL DESCRIPTION:	SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 26 OF COE BLA #08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 18 SINES J S ACRE TRACTS SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 29 OF COE BLA #08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 13 SINES J S ACRE TRACTS

GENERAL NOTES

1. ALL EXISTING STRUCTURES, SLABS, FENCES, AND RETAINING WALLS ON SITE TO BE REMOVED. REFERENCE SURVEY FOR SIZE AND LOCATIONS OF EXISTING SITE FEATURES.
2. REFERENCE GENERAL SHEETS G101-G104 FOR DOCUMENTATION DEMONSTRATING COMPLIANCE WITH LAND USE CODE DEVELOPMENT STANDARDS.
3. REFERENCE SURVEY FOR TOPOGRAPHY, SITE UTILITIES, AND EXISTING CONDITIONS.
4. REFERENCE LANDSCAPING PLAN FOR LANDSCAPING, INCLUDING PLANTING STRIP WIDTH AND STREET TREES.
5. REFERENCE STORM DRAINAGE PLAN AND GRADING AND TESC PLAN FOR DRAINAGE CONTROL, TEMPORARY EROSION, AND SEDIMENTATION CONTROL.
6. REFERENCE CIVIL FOR FRONTAGE IMPROVEMENT PLANS FOR STREET AND SIDEWALK IMPROVEMENTS.
7. EXCAVATION OF CONTAMINATED SOILS TO BE PERFORMED UNDER THE CARE OF A QUALIFIED PROFESSIONAL.

PARKING LEGEND

R	RESIDENTIAL STALL
C	COMMERCIAL STALL
	ACCESSIBLE STALL
	EV CHARGING STALL
F	FUTURE EV CHARGING STALL

EVERETT RIVERFRONT

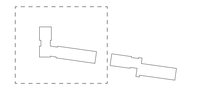
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

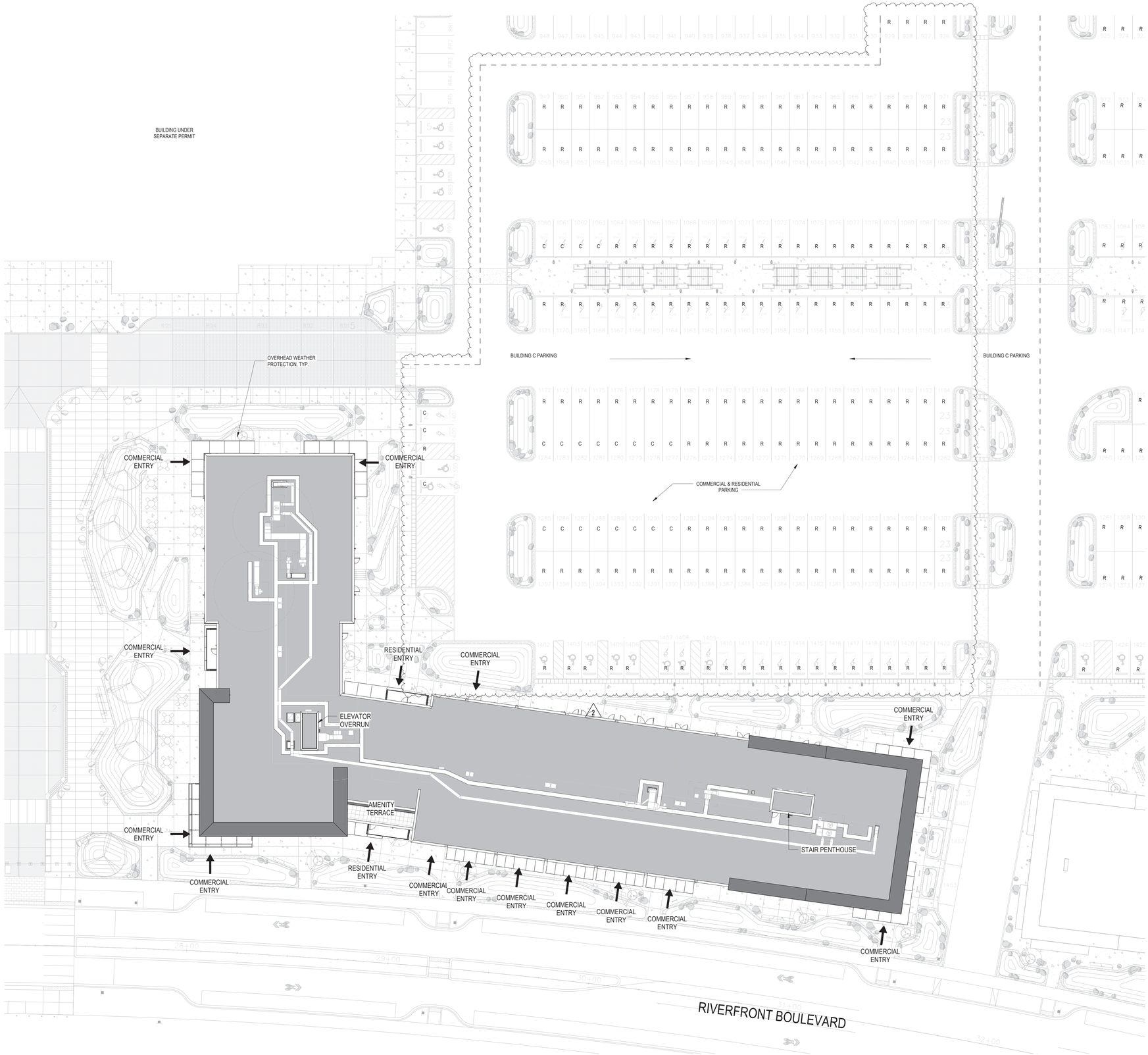
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

SITE PLAN PHASE 2 - OVERALL

A001

2/2/2024 10:37:49 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 SITE PLAN - BUILDING C

SCALE: 1" = 20'-0"

PROJECT INFORMATION

PROJECT ADDRESS: 3710 RIVERFRONT BOULEVARD, EVERETT, WA 98203

OWNER: RIVERFRONT PHASE 2, LLC
11624 SE 5TH STREET
SUITE 210
BELLEUE, WA 98005

PARCEL NUMBER: 29052900401900
29052900401800

LEGAL DESCRIPTION: SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 26 OF COE BLA #08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 18 SINES J S ACRE TRACTS
SECTION 29 TOWNSHIP 29 RANGE 05 QUARTER SE NEW LOT 29 OF COE BLA #08-004 REC AFN 200804080781 & ROS REC AFN 200804085006 BEING A PTN OF GOVT LOT 5 SD SEC TGW A PTN OF BLK 13 SINES J S ACRE TRACTS

GENERAL NOTES

1. ALL EXISTING STRUCTURES, SLABS, FENCES, AND RETAINING WALLS ON SITE TO BE REMOVED. REFERENCE SURVEY FOR SIZE AND LOCATIONS OF EXISTING SITE FEATURES.
2. REFERENCE GENERAL SHEETS G101-G104 FOR DOCUMENTATION DEMONSTRATING COMPLIANCE WITH LAND USE CODE DEVELOPMENT STANDARDS.
3. REFERENCE SURVEY FOR TOPOGRAPHY, SITE UTILITIES, AND EXISTING CONDITIONS.
4. REFERENCE LANDSCAPING PLAN FOR LANDSCAPING, INCLUDING PLANTING STRIP WITDH AND STREET TREES.
5. REFERENCE STORM DRAINAGE PLAN AND GRADING AND TESC PLAN FOR DRAINAGE CONTROL, TEMPORARY EROSION, AND SEDIMENTATION CONTROL.
6. REFERENCE CIVIL FOR FRONTAGE IMPROVEMENT PLANS FOR STREET AND SIDEWALK IMPROVEMENTS.
7. EXCAVATION OF CONTAMINATED SOILS TO BE PERFORMED UNDER THE CARE OF A QUALIFIED PROFESSIONAL.

PARKING LEGEND

R	RESIDENTIAL STALL
C	COMMERCIAL STALL
	ACCESSIBLE STALL
	EV CHARGING STALL
F	FUTURE EV CHARGING STALL

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

BUILDING C BUILDING D

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

SITE PLAN-
BUILDING C

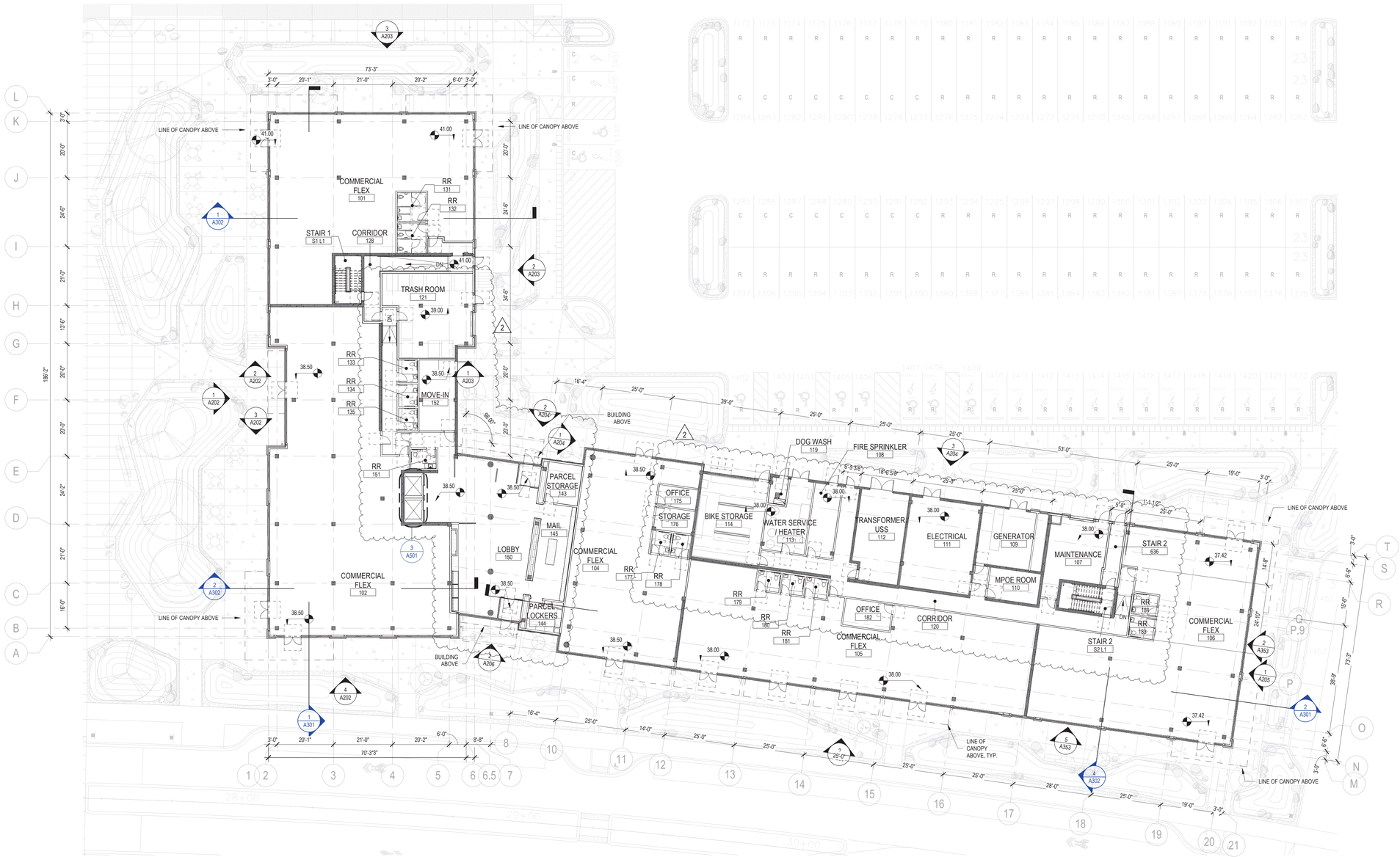
A002

2/2/2024 10:38:01 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

BUILDING C PARKING



1 LEVEL 1 FLOOR PLAN - OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

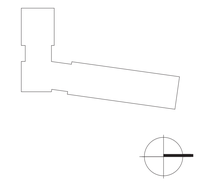
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

© MG2.Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

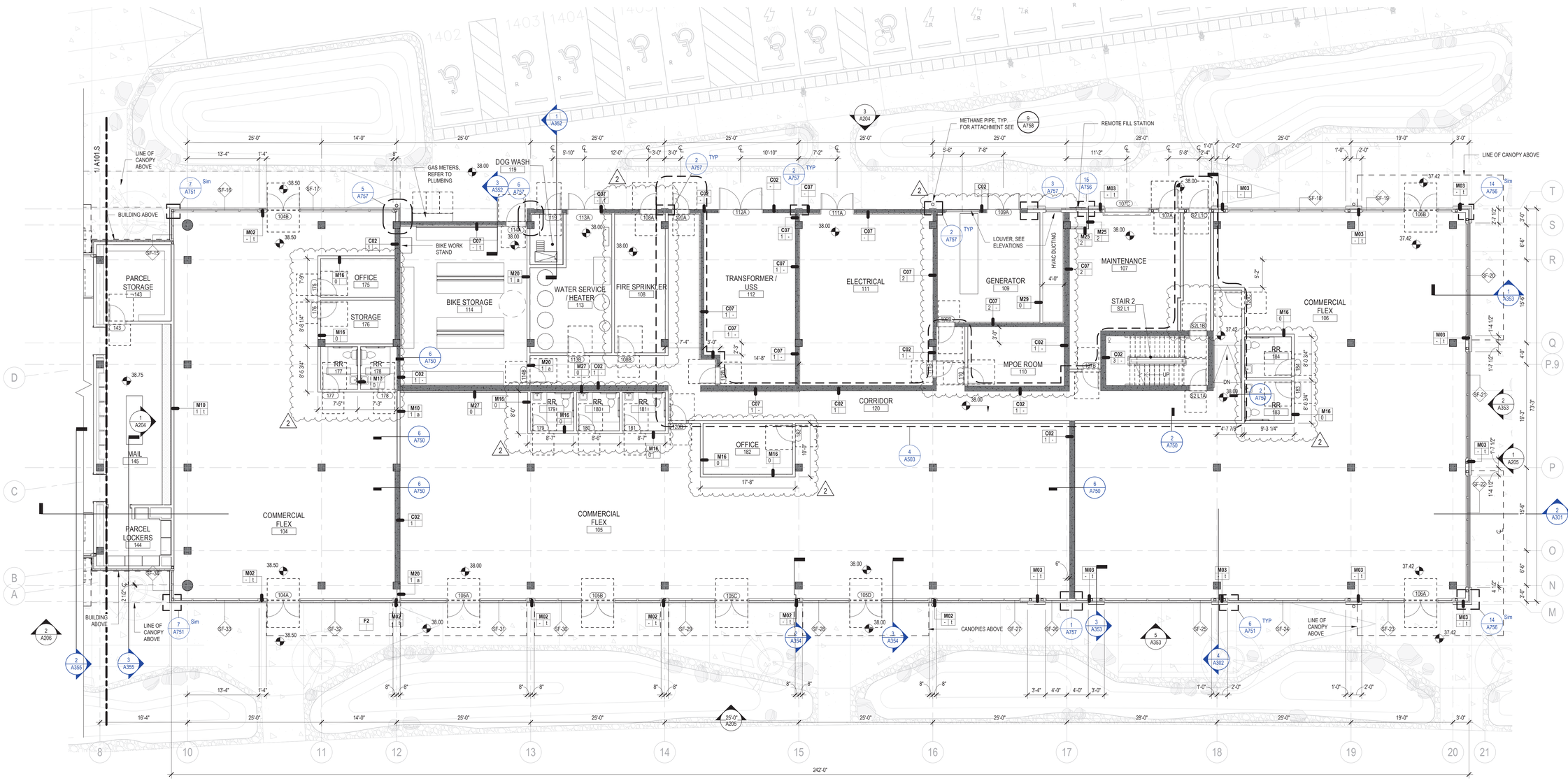
FLOOR PLANS - LEVEL 1

A101

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/8/2024 3:34:13 PM

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 GROUND FLOOR NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

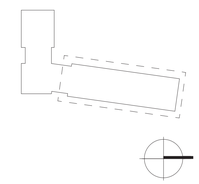
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

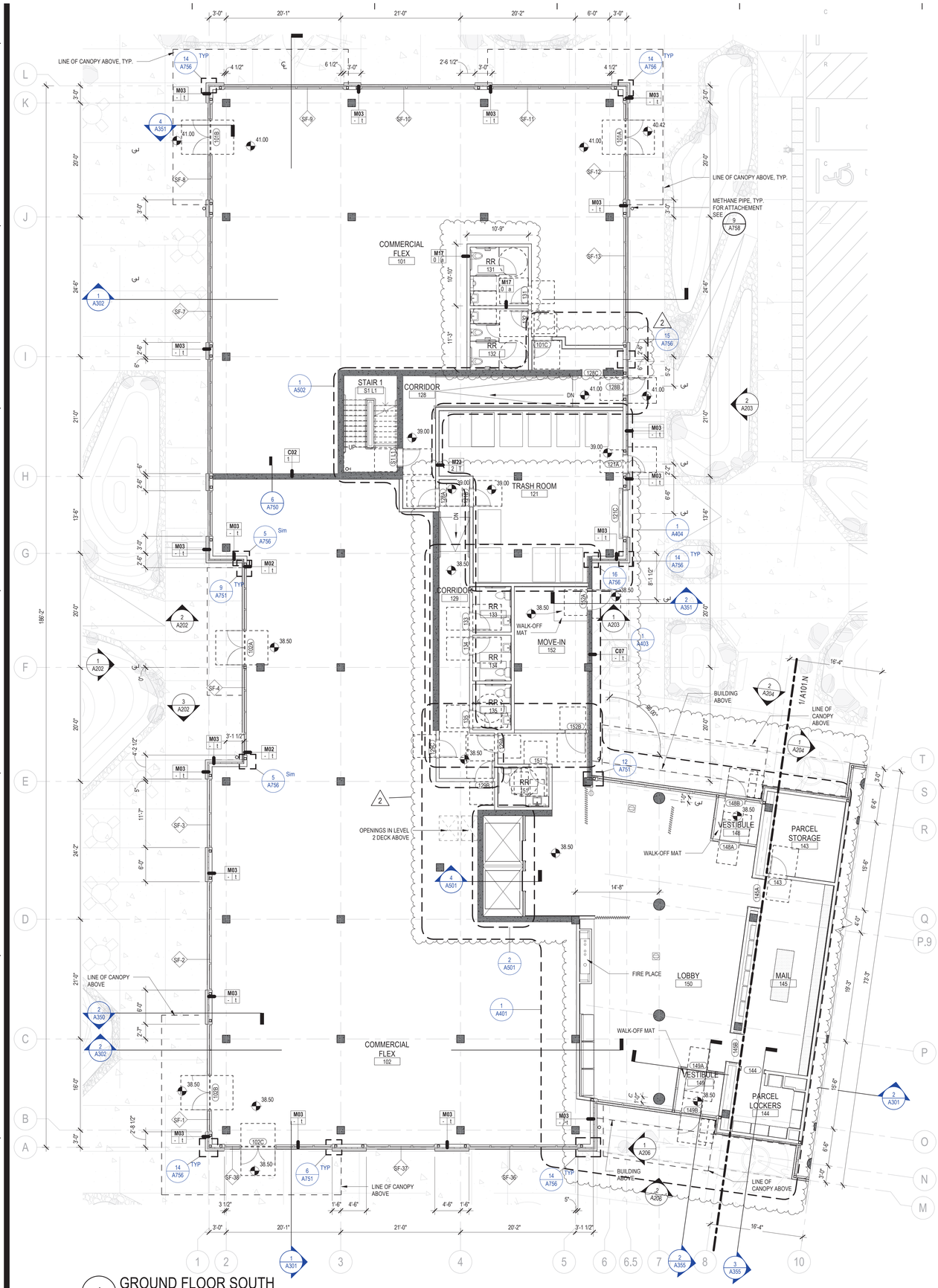
	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 1 PLAN - NORTH

A101.N

2/2/2024 10:38:11 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 GROUND FLOOR SOUTH

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

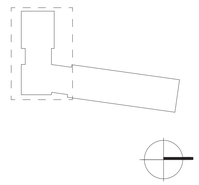
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 1 PLAN - SOUTH

A101.S

2/8/2024 3:34:21 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

1 LEVEL 2 FLOOR PLAN - OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

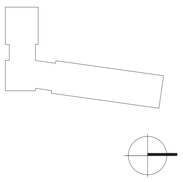
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

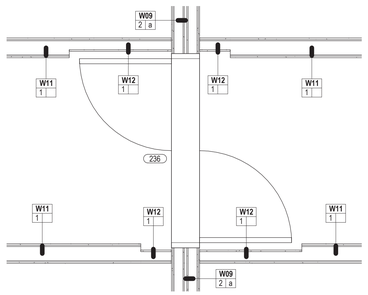
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

FLOOR PLANS - LEVEL 2

A102

2/2/2024 10:38:18 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

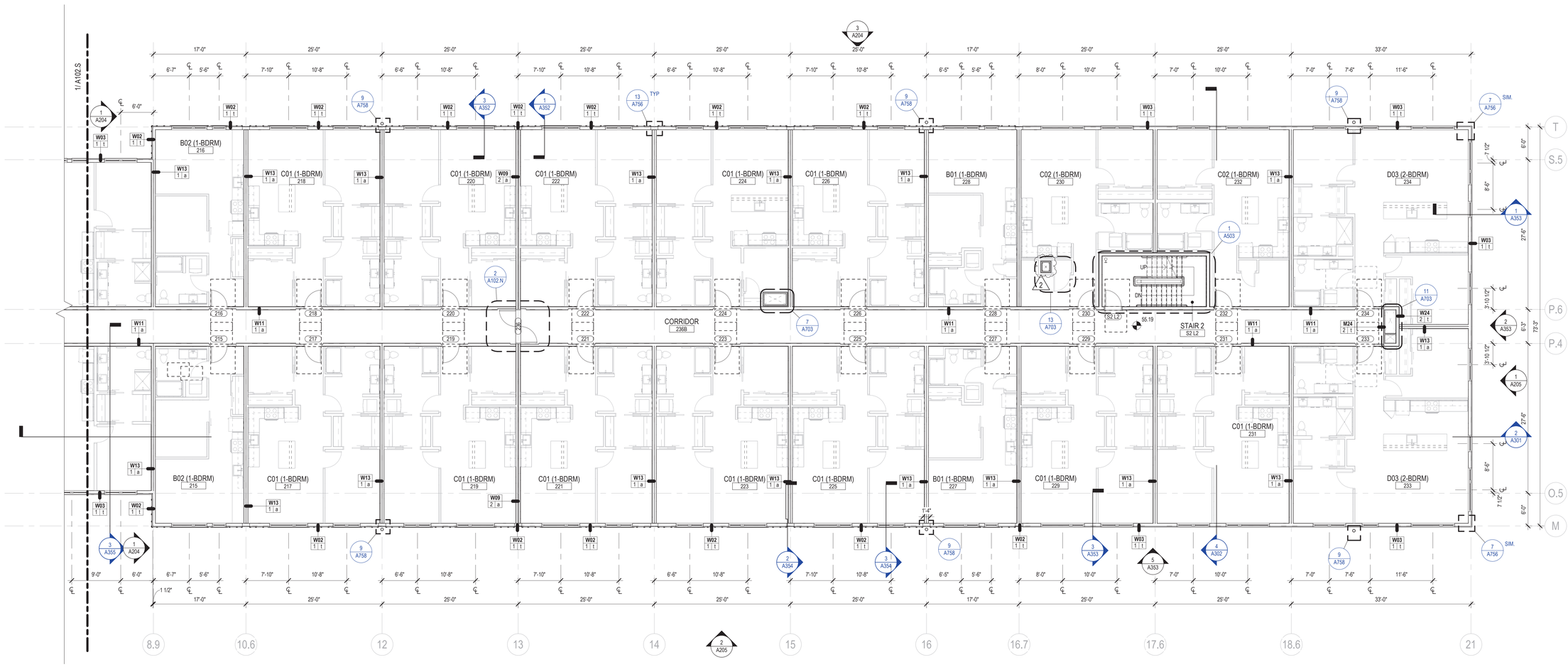


2 CORRIDOR DOUBLE DOORS

SCALE: 1/2" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 LEVEL 2 NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

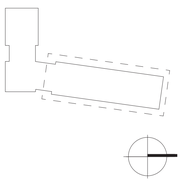
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

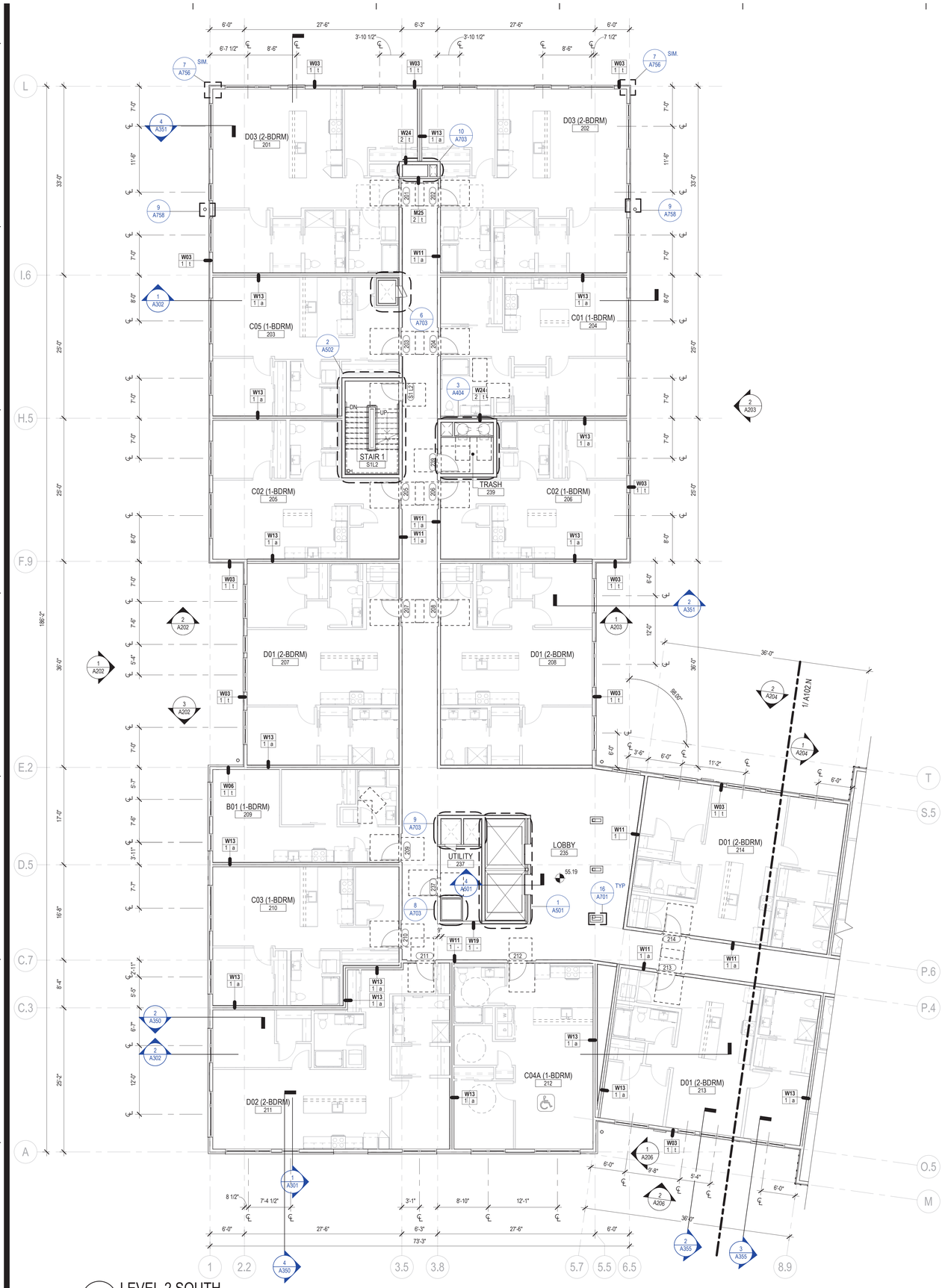
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 2 PLAN - NORTH

A102.N

2/2/2024 10:38:21 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 2 SOUTH

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

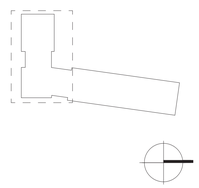
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 2 PLAN - SOUTH

A102.S

2/2/2024 10:38:23 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

1 LEVEL 3 FLOOR PLAN - OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

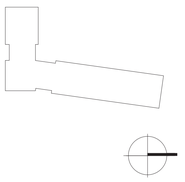
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

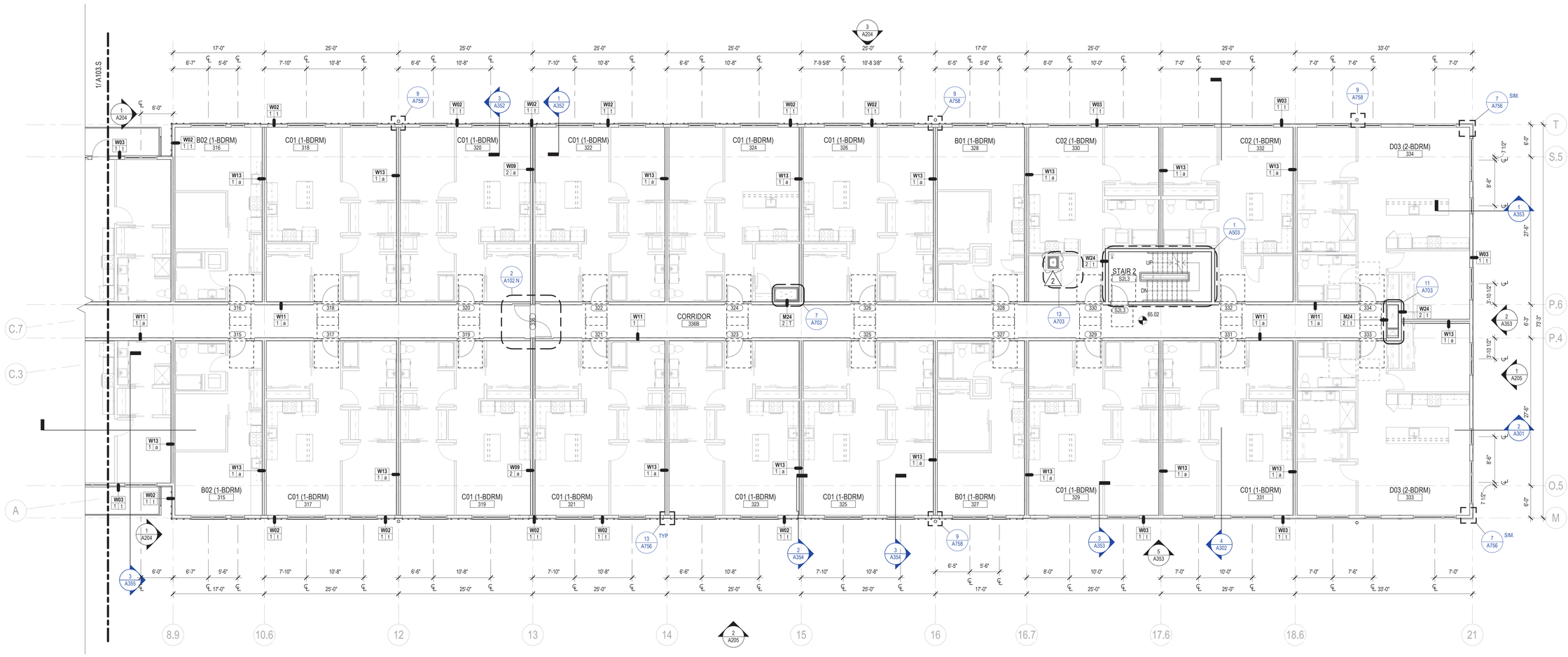
FLOOR PLANS - LEVEL 3

A103

2/2/2024 10:38:26 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 LEVEL 3 NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

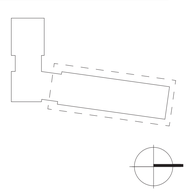
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 3 PLAN - NORTH

A103.N

2/2/2024 10:38:28 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 3 SOUTH

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

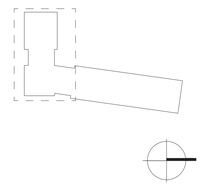
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 3 PLAN - SOUTH

A103.S

2/2/2024 10:38:31 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

1 LEVEL 4 FLOOR PLAN OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

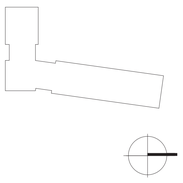
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

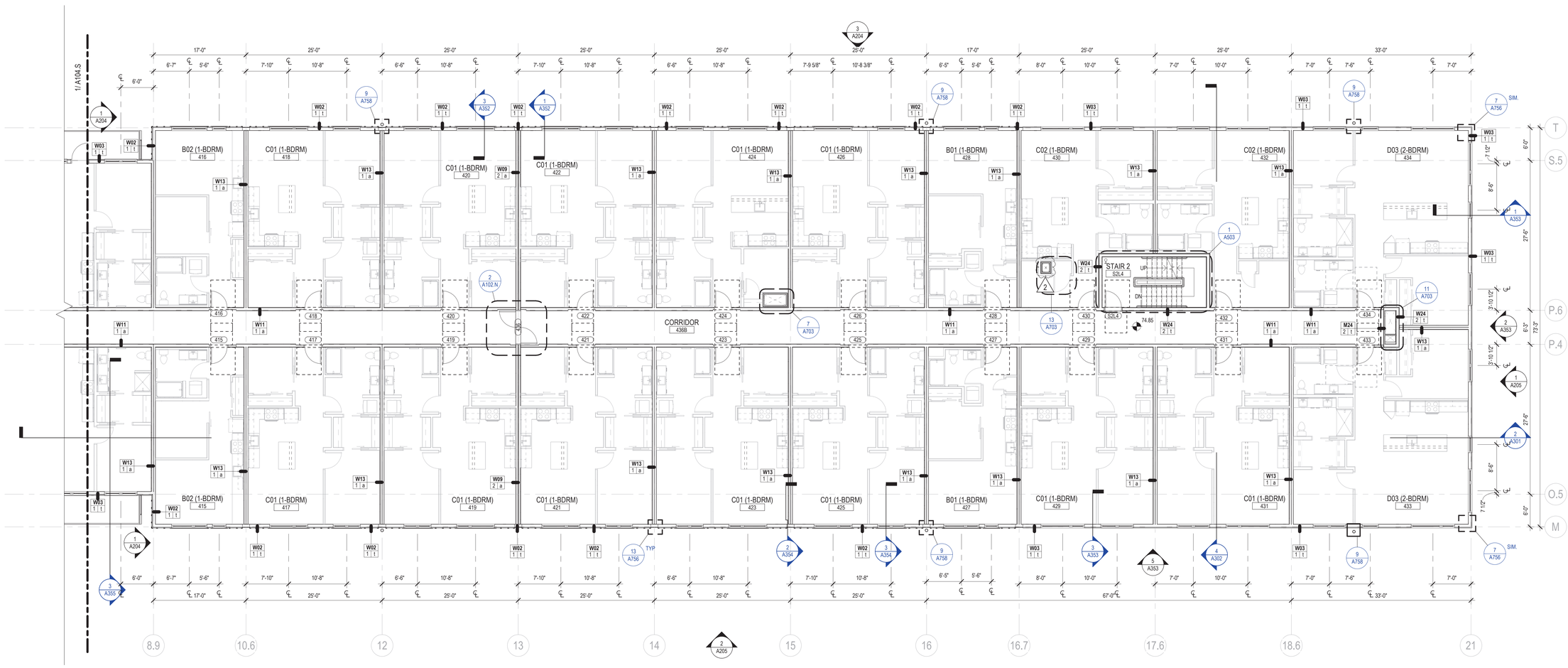
FLOOR PLANS - LEVEL 4

A104

2/2/2024 10:38:33 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 LEVEL 4 NORTH
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

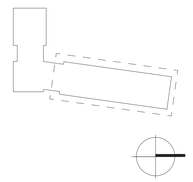
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 4 PLAN - NORTH

A104.N

2/2/2024 10:38:36 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 4 SOUTH

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

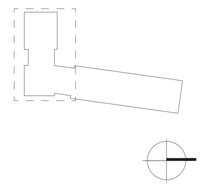
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 4 PLAN - SOUTH

A104.S

2/2/2024 10:38:38 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 5 FLOOR PLAN - OVERALL

SCALE: 1/16" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

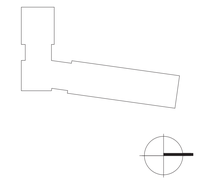
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

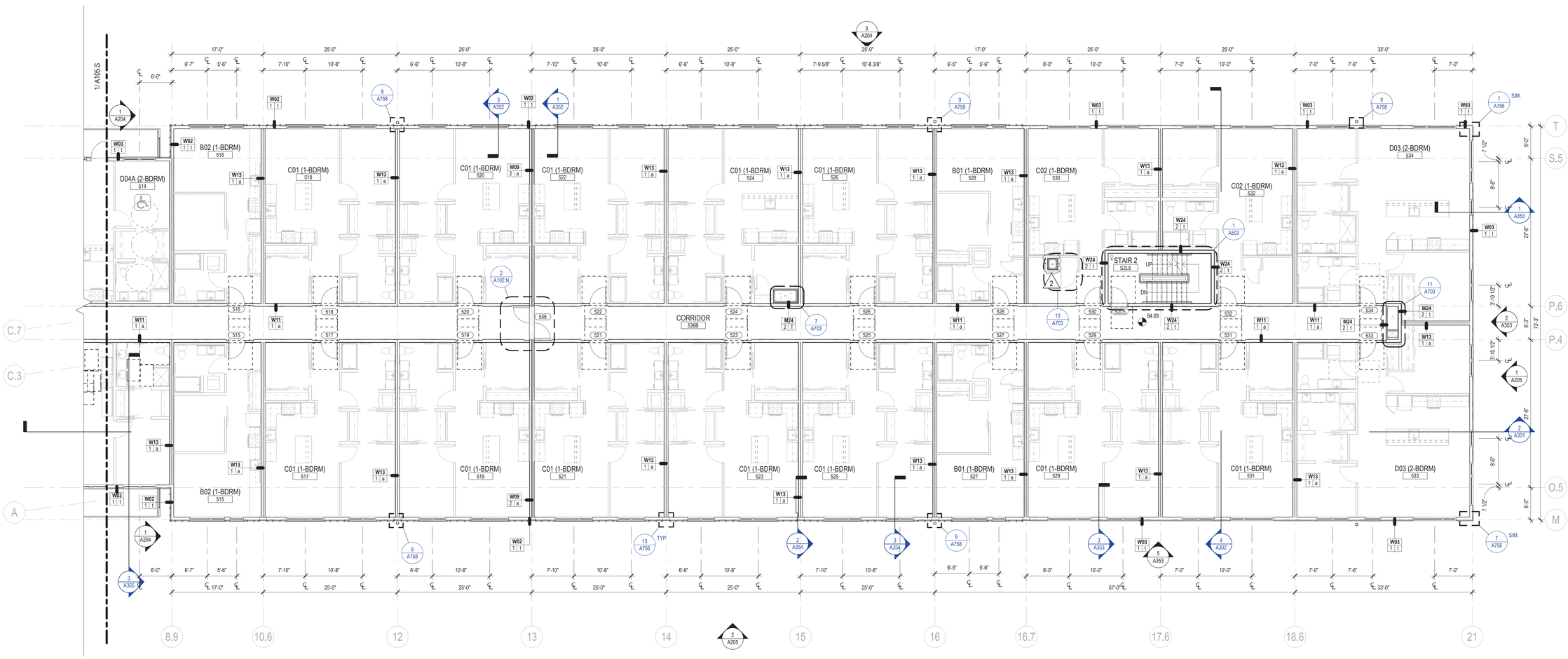
FLOOR PLANS - LEVEL 5

A105

2/2/2024 10:38:41 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 LEVEL 5 NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

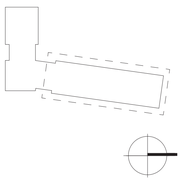
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

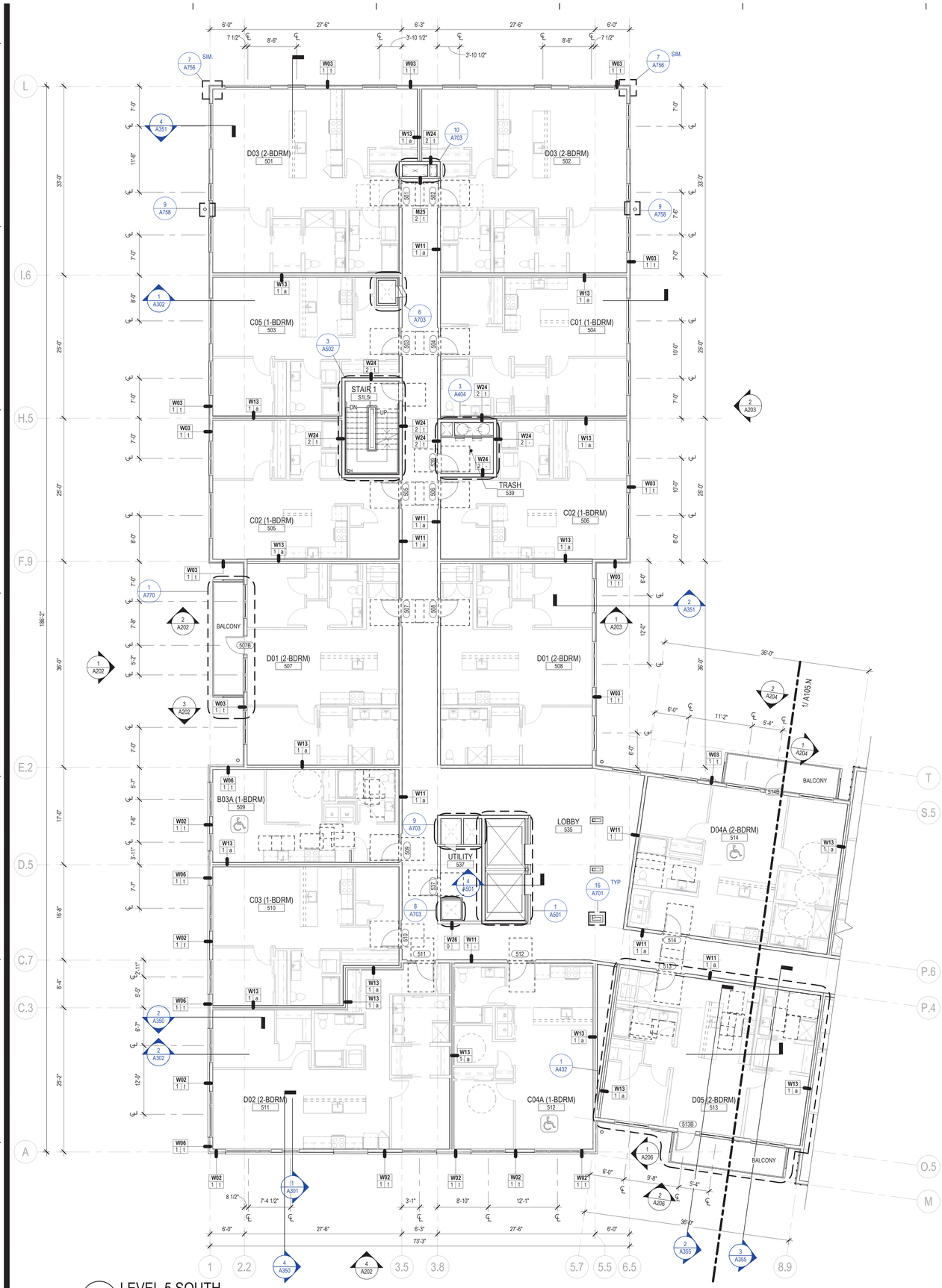
	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 5 PLAN - NORTH

A105.N

2/2/2024 10:38:43 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 5 SOUTH

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

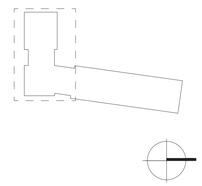
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 5 PLAN - SOUTH

A105.S

2/2/2024 10:38:46 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01AA_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

1 LEVEL 6 FLOOR PLAN OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

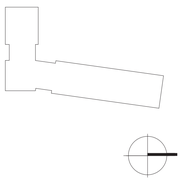
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

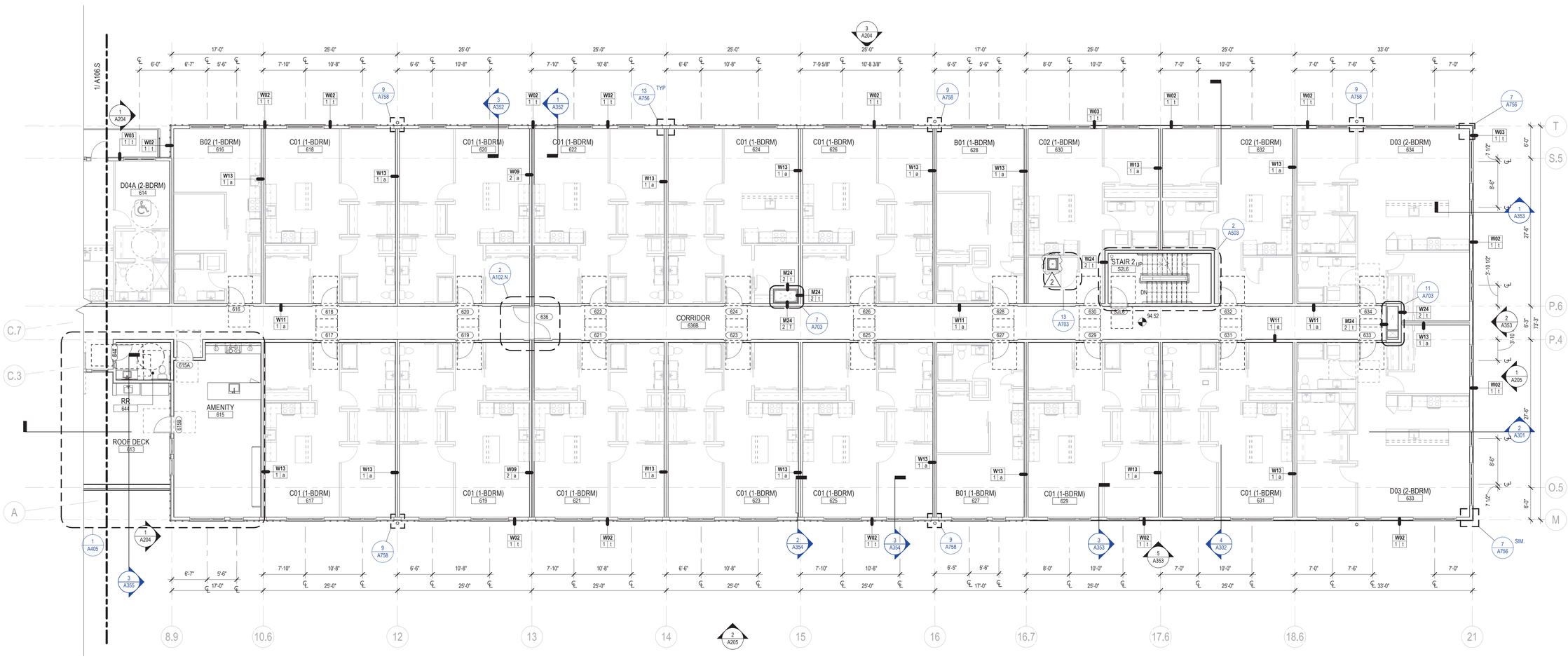
FLOOR PLANS - LEVEL 6

A106

2/2/2024 10:38:48 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.



1 LEVEL 6 NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

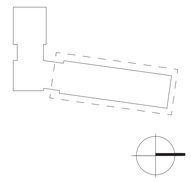
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

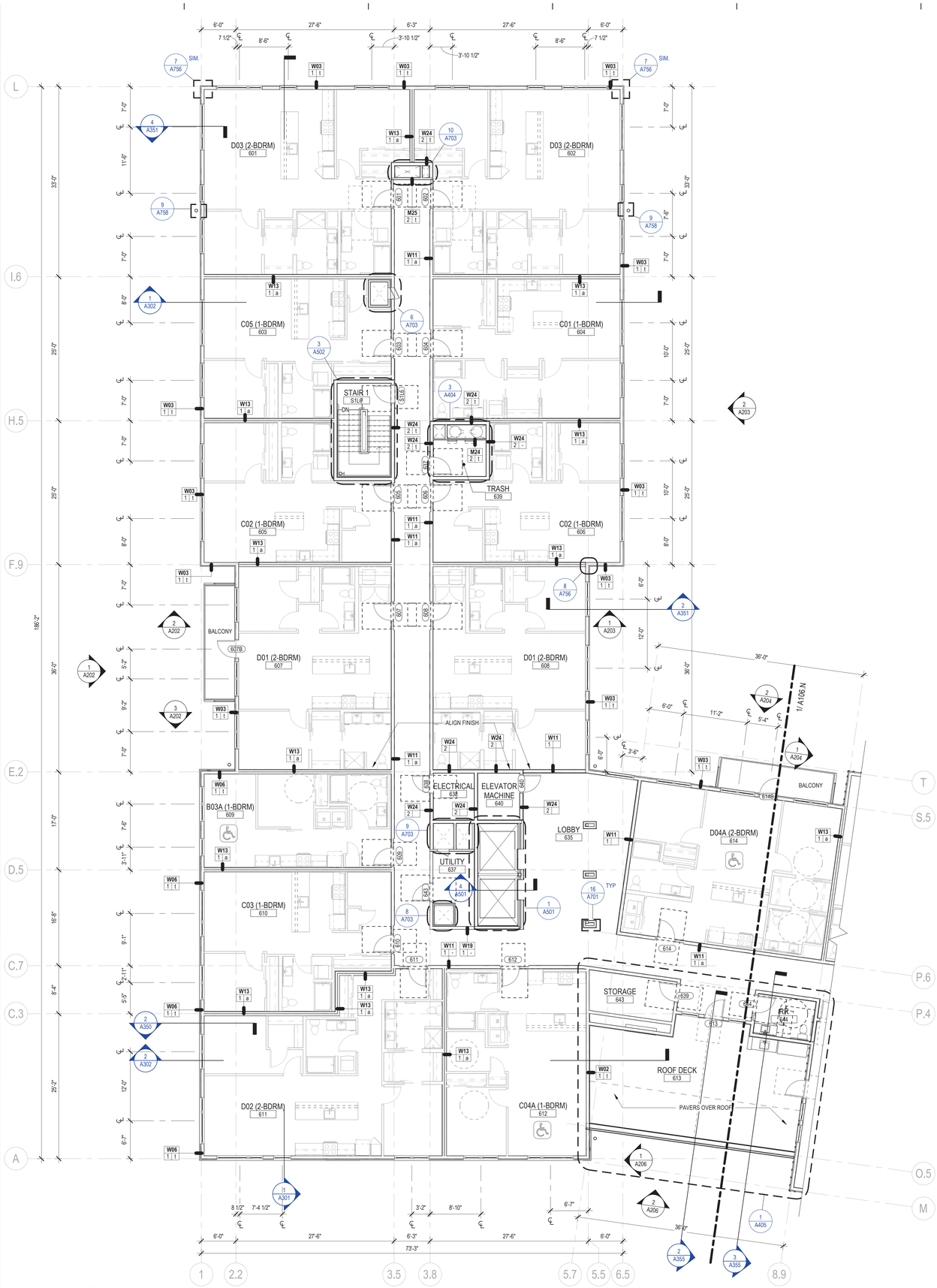
	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 6 PLAN - NORTH

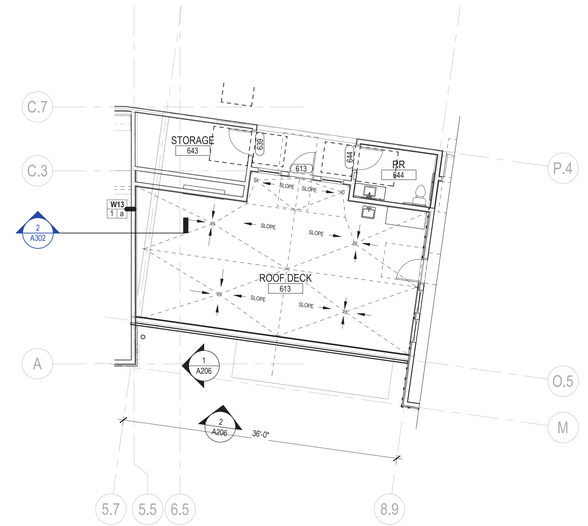
A106.N

2/2/2024 10:38:51 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 6 SOUTH

SCALE: 1/8" = 1'-0"



2 LEVEL 6 SOUTH AMENITY ROOF DRAIN

SCALE: 1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL FRAMING DIMENSIONS ARE TO FACE OF STRUCTURE U.N.O.
2. SEE A140 SHEETS FOR SLAB PLANS.
3. SEE A420 SHEETS FOR ENLARGED UNIT PLANS.
4. SEE A610 SHEETS FOR WALL ASSEMBLIES.
5. SEE A600 SHEETS FOR HORIZONTAL ASSEMBLIES.
6. SEE A810 SHEETS FOR DOOR SCHEDULE.
7. SEE A800 SHEETS FOR WINDOW SCHEDULE.
8. SEE G200 SHEETS FOR EGRESS PLANS.
9. SEE ELECTRICAL DRAWINGS FOR LIGHTING, SWITCHING AND OUTLET LOCATIONS.
10. SEE ENLARGED PLANS AS NOTED FOR ADDITIONAL INFORMATION.
11. COMMERCIAL FLEX SPACE ENTRY VESTIBULES TO BE PROVIDED AS REQUIRED BY TENANT UNDER SEPARATE PERMIT. SEE CIVIL AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
12. DOORS AND CASED OPENINGS INDICATED NEARBY WALL INTERSECTIONS SHALL BE LOCATED SO THAT THE EDGE OF THE FINISH OPENING IS FOUR INCHES FROM THE FACE OF THE NEARBY WALL UNO. ALL OTHER DOORS AND CASED OPENINGS SHALL BE CENTERED BETWEEN ADJACENT WALL INTERSECTIONS.
13. SHAFT WALLS SHALL BE CONTINUOUS PER IBC 713.5. PENETRATIONS SHALL NOT BE PERMITTED WITHIN SHAFTS OTHER THAN THOSE NECESSARY FOR THE PURPOSE OF THE SHAFT PER IBC 713.8.1.
14. STOREFRONT SYSTEMS ARE DIMINSIONED TO THE CENTER OF THE OPENING UNLESS OTHERWISE NOTED.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

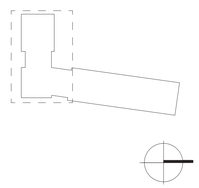
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

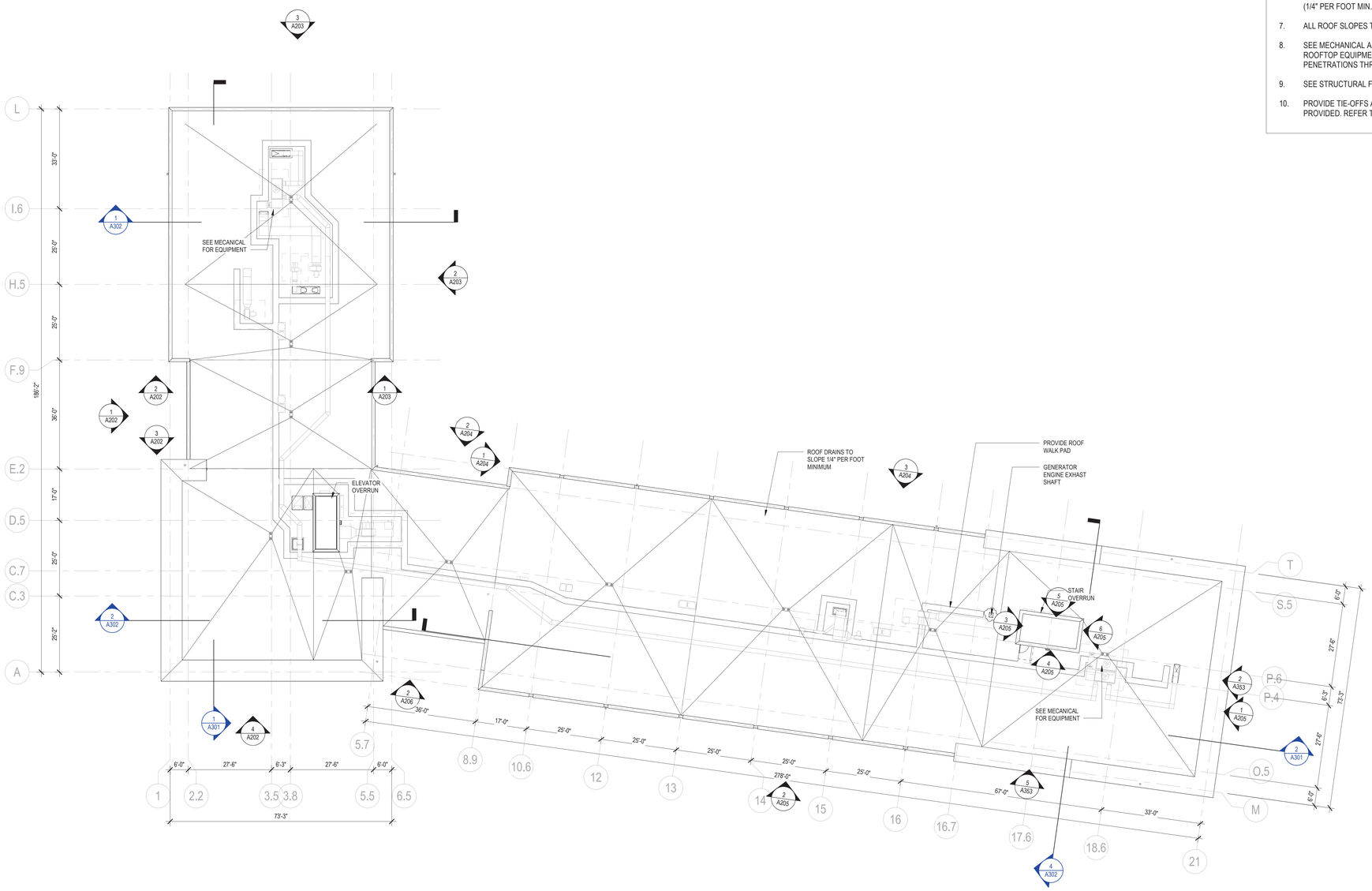
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

LEVEL 6 PLAN - SOUTH

A106.S

2/2/2024 10:38:53 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



GENERAL NOTES

1. ROOF OPENINGS, CURBS AND ROOF TOP HVAC EQUIPMENT PART OF SCOPE OF WORK.
2. LOCATIONS OF ROOF DRAINS AND TAPERED INSULATION ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ROOFING CONTRACTOR TO PROVIDE AN ENGINEERED DRAWING SHOWING ALL TAPERED ROOF INSULATION NOTING THE SLOPE AND THICKNESS OF THE INSULATION. THE LOCATION OF ROOF DRAINS IS TO BE VERIFIED/COORDINATED WITH THE INSULATION SUPPLIER AND THE PLUMNBING CONTRACTOR.
3. SLOPED ROOF STRUCTURE. SEE STRUCTURAL FRAMING PLANS FOR BOTTOM OF DECK ELEVATIONS, TO DETERMINE SLOPE.
4. PROVIDE TAPERED INSULATION CRICKETS TO ROOF DRAINS AS SHOWN.
5. ROOF CONSISTS OF ADHERED TPO ROOF ASSEMBLY. REFER TO SPECIFICATIONS FOR ASSEMBLY AND ALTERNATIVES IF ANY.
6. PROVIDE CONSTANT THICKNESS, MADE UP OF MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION WITH MINIMUM R FVALUE OF R-30. PROVIDE TAPERED INSULATION OVER THE CONSTANT THICKNESS (1/4" PER FOOT MIN. SLOPE).
7. ALL ROOF SLOPES TO BE A MINIMUM OF 1/4" / 1'-0".
8. SEE MECHANICAL AND PLUMBING SHEETS FOR ADDITIONAL ROOFTOP EQUIPMENT, VENTS, AND OTHER ITEMS REQUIRING PENETRATIONS THROUGH THE ROOF , NOT SHOWN ON THIS PLAN.
9. SEE STRUCTURAL FOR BOTTOM OF DECK ELEVATIONS.
10. PROVIDE TIE-OFFS AT ALL LOCATIONS WHERE 42" PARAPET NOT PROVIDED. REFER TO STRUCTURAL FOR ATTACHMENT.

1 ROOF PLAN - OVERALL

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

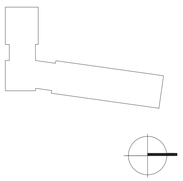
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2
3	TBD	Bid Set

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

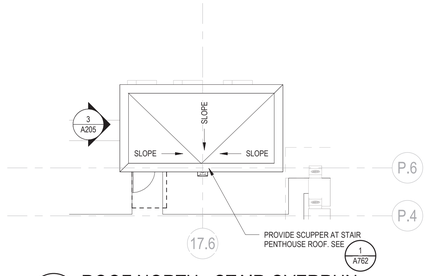
ROOF PLAN

A107

2/2/2024 10:38:54 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01AA_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

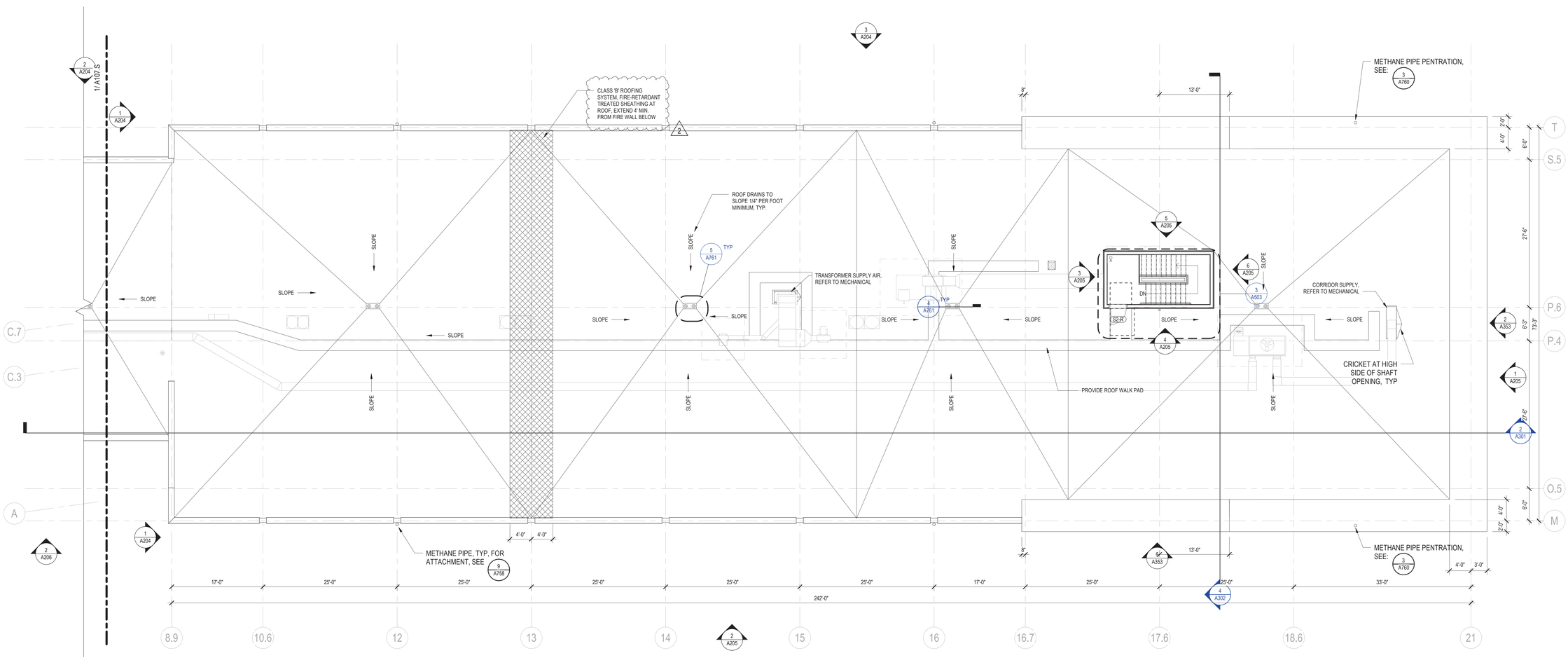
GENERAL NOTES

1. ROOF OPENINGS, CURBS AND ROOF TOP HVAC EQUIPMENT PART OF SCOPE OF WORK.
2. LOCATIONS OF ROOF DRAINS AND TAPERED INSULATION ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ROOFING CONTRACTOR TO PROVIDE AN ENGINEERED DRAWING SHOWING ALL TAPERED ROOF INSULATION NOTING THE SLOPE AND THICKNESS OF THE INSULATION. THE LOCATION OF ROOF DRAINS IS TO BE VERIFIED/COORDINATED WITH THE INSULATION SUPPLIER AND THE PLUMNBING CONTRACTOR.
3. SLOPED ROOF STRUCTURE. SEE STRUCTURAL FRAMING PLANS FOR BOTTOM OF DECK ELEVATIONS, TO DETERMINE SLOPE.
4. PROVIDE TAPERED INSULATION CRICKETS TO ROOF DRAINS AS SHOWN.
5. ROOF CONSISTS OF ADHERED TPO ROOF ASSEMBLY. REFER TO SPECIFICATIONS FOR ASSEMBLY AND ALTERNATIVES IF ANY.
6. PROVIDE CONSTANT THICKNESS, MADE UP OF MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION WITH MINIMUM R FVALUE OF R-30. PROVIDE TAPERED INSULATION OVER THE CONSTANT THICKNESS (1/4" PER FOOT MIN. SLOPE).
7. ALL ROOF SLOPES TO BE A MINIMUM OF 1/4" / 1'-0".
8. SEE MECHANICAL AND PLUMBING SHEETS FOR ADDITIONAL ROOFTOP EQUIPMENT, VENTS, AND OTHER ITEMS REQUIRING PENETRATIONS THROUGH THE ROOF , NOT SHOWN ON THIS PLAN.
9. SEE STRUCTURAL FOR BOTTOM OF DECK ELEVATIONS.
10. PROVIDE TIE-OFFS AT ALL LOCATIONS WHERE 42" PARAPET NOT PROVIDED. REFER TO STRUCTURAL FOR ATTACHMENT.



2 ROOF NORTH - STAIR OVERRUN

SCALE: 1/8" = 1'-0"



1 ROOF NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

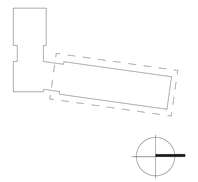
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

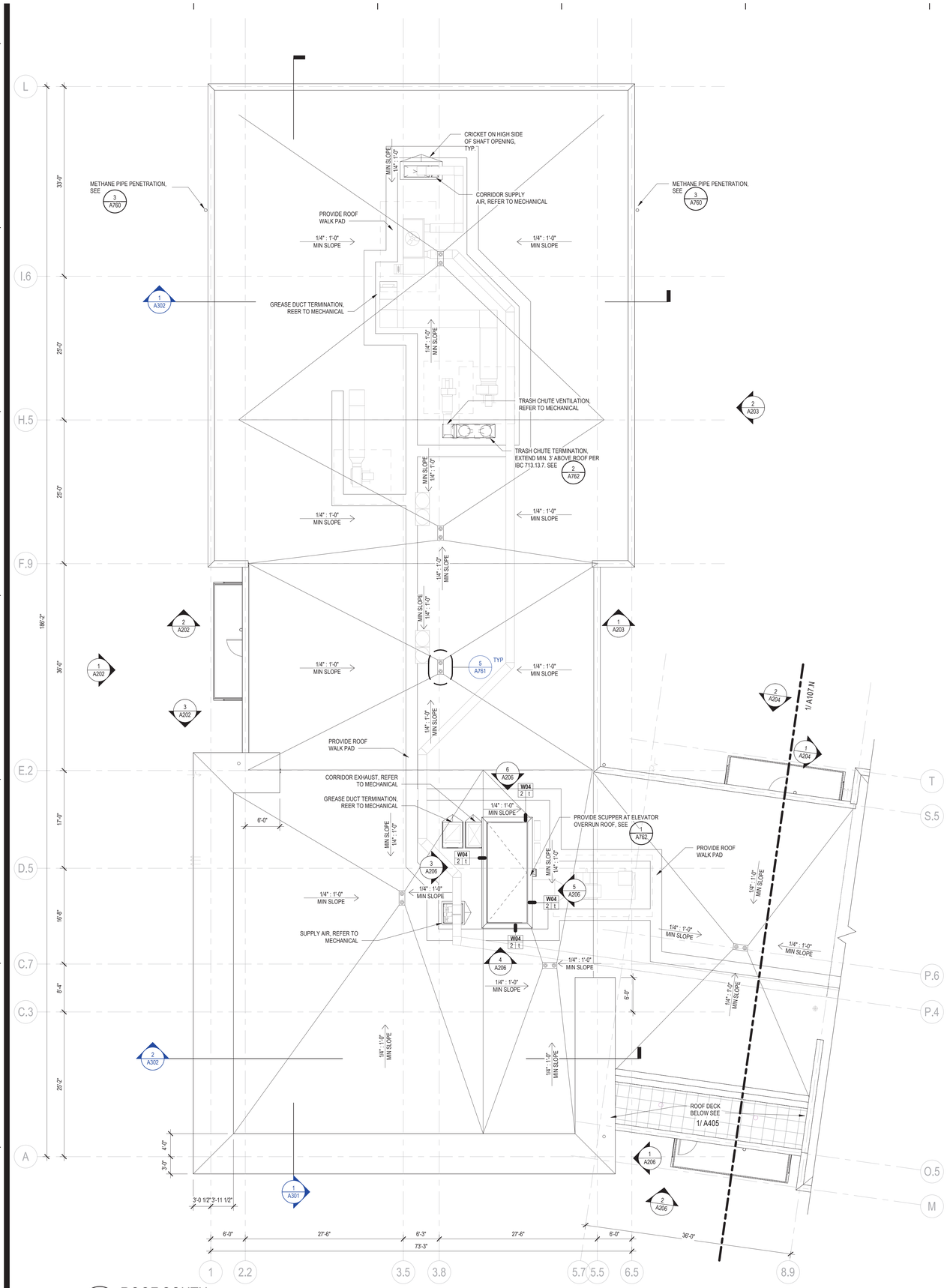
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ROOF PLAN - NORTH

A107.N

2/2/2024 10:38:56 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 ROOF SOUTH

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. ROOF OPENINGS, CURBS AND ROOF TOP HVAC EQUIPMENT PART OF SCOPE OF WORK.
2. LOCATIONS OF ROOF DRAINS AND TAPERED INSULATION ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. ROOFING CONTRACTOR TO PROVIDE AN ENGINEERED DRAWING SHOWING ALL TAPERED ROOF INSULATION NOTING THE SLOPE AND THICKNESS OF THE INSULATION. THE LOCATION OF ROOF DRAINS IS TO BE VERIFIED/COORDINATED WITH THE INSULATION SUPPLIER AND THE PLUMNBING CONTRACTOR.
3. SLOPED ROOF STRUCTURE. SEE STRUCTURAL FRAMING PLANS FOR BOTTOM OF DECK ELEVATIONS, TO DETERMINE SLOPE.
4. PROVIDE TAPERED INSULATION CRICKETS TO ROOF DRAINS AS SHOWN.
5. ROOF CONSISTS OF ADHERED TPO ROOF ASSEMBLY. REFER TO SPECIFICATIONS FOR ASSEMBLY AND ALTERNATIVES IF ANY.
6. PROVIDE CONSTANT THICKNESS, MADE UP OF MINIMUM 2 LAYERS OF POLYISOCYANURATE INSULATION WITH MINIMUM R FVALUE OF R-30. PROVIDE TAPERED INSULATION OVER THE CONSTANT THICKNESS (1/4" PER FOOT MIN. SLOPE).
7. ALL ROOF SLOPES TO BE A MINIMUM OF 1/4" / 1'-0".
8. SEE MECHANICAL AND PLUMBING SHEETS FOR ADDITIONAL ROOFTOP EQUIPMENT, VENTS, AND OTHER ITEMS REQUIRING PENETRATIONS THROUGH THE ROOF , NOT SHOWN ON THIS PLAN.
9. SEE STRUCTURAL FOR BOTTOM OF DECK ELEVATIONS.
10. PROVIDE TIE-OFFS AT ALL LOCATIONS WHERE 42" PARAPET NOT PROVIDED. REFER TO STRUCTURAL FOR ATTACHMENT.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

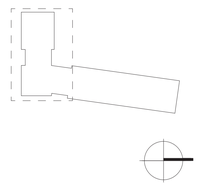
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ROOF PLAN - SOUTH

A107.S

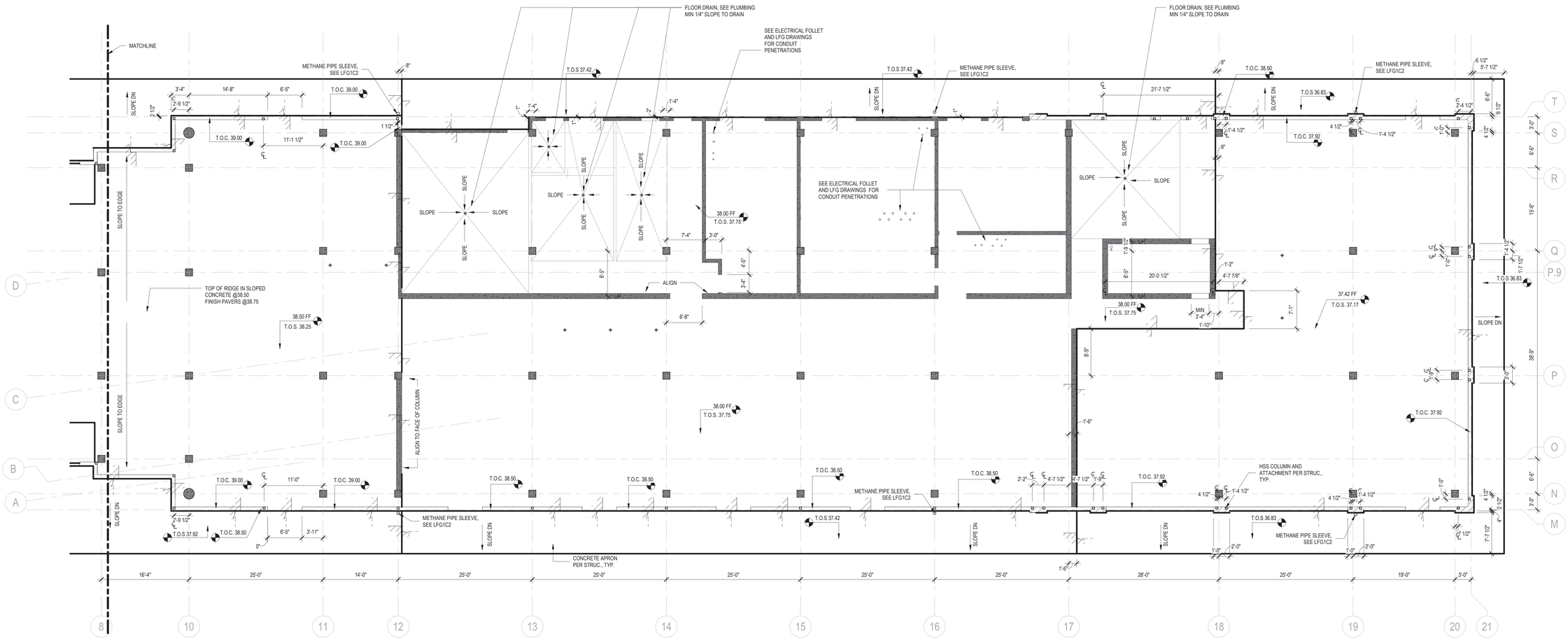
2/2/2024 10:38:57 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

SLAB EDGE PLAN NOTES:

1. SEE PLANS AND STOREFRONT SCHEDULE FOR STORE LOCATIONS. REFER TO ELEVATIONS FOR STOREFRONT TYPES.
2. **REFER TO LFG1C2 FOR ALL SLEEVE PENETRATIONS REQUIREMENTS.**
3. STAIR LANDINGS TO HAVE CONCRETE TOPPING SLAB. REFER TO DRAWINGS FOR RELEVANT THICKNESSES.
4. REFER TO STAIR DETAILS FOR ACCURATE DIMENSIONS AND CONSTRUCTION OF STAIRS.
5. WALLS ARE CENTERED ON GRIDLINES WHEN NOT DIMENSIONED
6. ALIGN FACE OF CMU WALL AND CURBS WITH FACE OF APRON STEP, U.N.O.
7. ALL SLAB PENETRATIONS ARE PLUMBING U.N.O. SEE PLUMBING AND ELECTRICAL FOR PIPE SIZE.
8. ALL CURBS ARE 9" THICK, U.N.O.
9. SLOPED SLABS TO BE SLOPED IN DIRECTION SHOWN AT MIN 1/4" PER FOOT, U.N.O.

EOS LEGEND

- EDGE OF CONCRETE SLAB BELOW
- VOID IN CONCRETE SLAB
- CONCRETE CURB WALLS (PROVIDED TO BASE OF THE STOREFRONT)
- FLOOR DRAIN
- SLAB PENETRATION
- INDICATES RAMP DIRECTION(ARROW ALWAYS TO HIGH POINT) — X" / X" UP
- INDICATES VOID IN SLAB
- INDICATES SLOPED CONCRETE 1/4" PER FOOR MIN.
- LEVEL STEP IN SLAB
- SLOPED STEP IN SLAB
- BOTTOM OF RAMP
- TOP OF RAMP
- TOP OF CURB - VALUE — TOC - X.X'
- TOP OF SLAB - VALUE — TOS - X.X'
- TOP OF WALL - VALUE — TOW - X.X'
- INDICATES DIRECTION AND SLOPE (ARROW ALWAYS TO LOW POINT) — X" / X" DN
- INDICATES 8" WIDE CURB WITH CMU WALL ABOVE
- INDICATES 13" WIDE CURB WITH BRICK FINISH ABOVE
- INDICATES CONCRETE WALL



1 LEVEL 1 SLAB EDGE PLAN NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

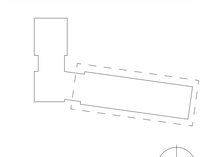
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8078 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/29/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

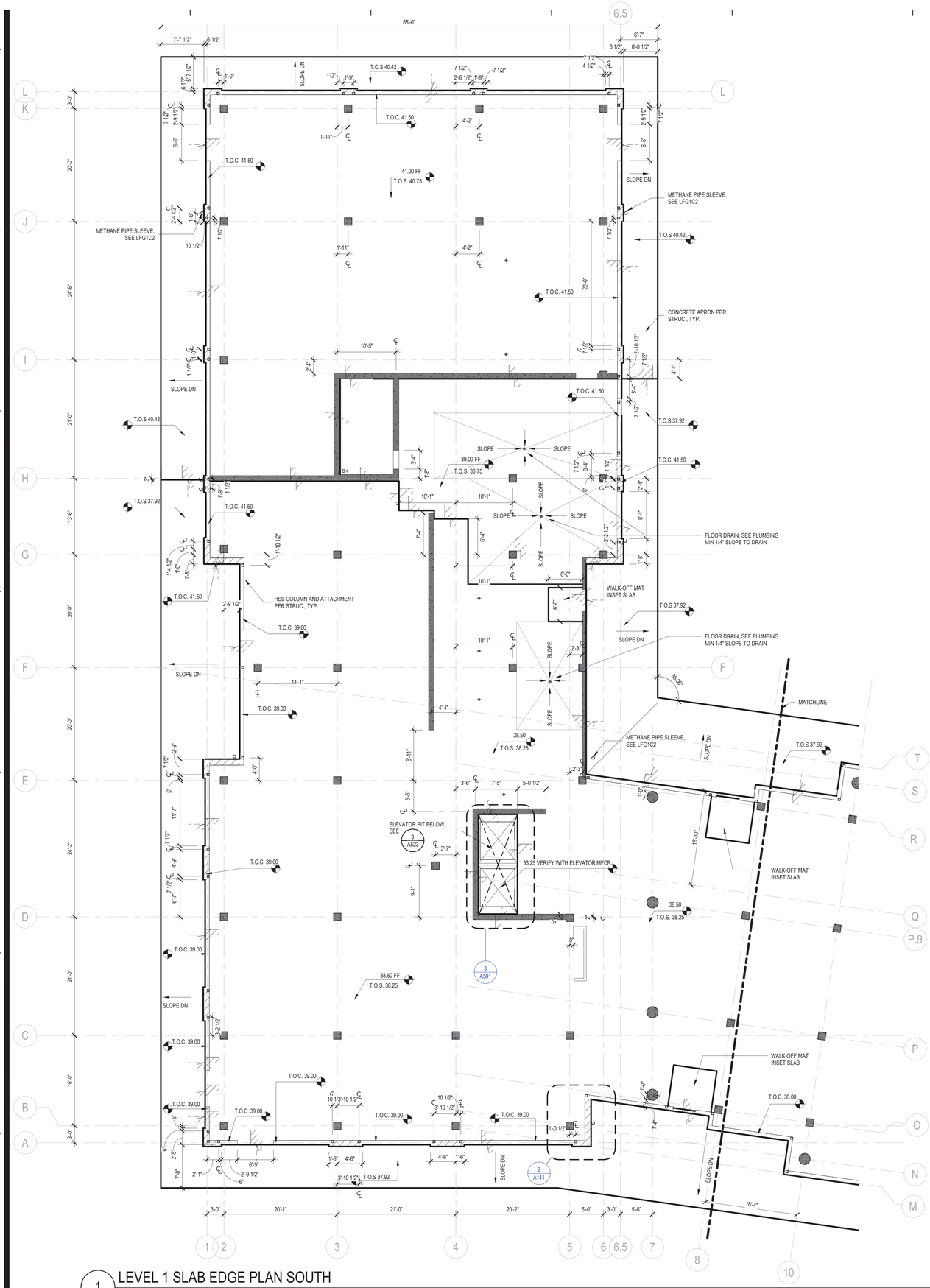
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

SLAB EDGE PLAN - LEVEL 1 NORTH

A140

2/28/2024 10:53:02 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 1 SLAB EDGE PLAN SOUTH

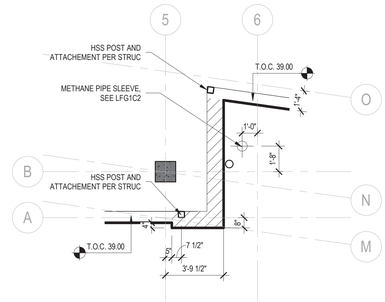
SCALE: 1/8" = 1'-0"

SLAB EDGE PLAN NOTES:

1. SEE PLANS AND STOREFRONT SCHEDULE FOR STORE LOCATIONS. REFER TO ELEVATIONS FOR STOREFRONT TYPES.
2. **REFER TO LFG1C2 FOR ALL SLEEVE PENETRATIONS REQUIREMENTS.**
3. STAIR LANDINGS TO HAVE CONCRETE TOPPING SLAB. REFER TO DRAWINGS FOR RELEVANT THICKNESSES.
4. REFER TO STAIR DETAILS FOR ACCURATE DIMENSIONS AND CONSTRUCTION OF STAIRS.
5. WALLS ARE CENTERED ON GRIDLINES WHEN NOT DIMENSIONED
6. ALIGN FACE OF CMU WALL AND CURBS WITH FACE OF APRON STEP, U.N.O.
7. ALL SLAB PENETRATIONS ARE PLUMBING U.N.O. SEE PLUMBING AND ELECTRICAL FOR PIPE SIZE.
8. ALL CURBS ARE 9" THICK, U.N.O.
9. SLOPED SLABS TO BE SLOPED IN DIRECTION SHOWN AT MIN 1/4" PER FOOT, U.N.O.

EOS LEGEND

- EDGE OF CONCRETE SLAB BELOW
- VOID IN CONCRETE SLAB
- CONCRETE CURB WALLS (PROVIDED TO BASE OF THE STOREFRONT)
- FLOOR DRAIN
- SLAB PENETRATION
- INDICATES RAMP DIRECTION(ARROW ALWAYS TO HIGH POINT) — X".0"/X".UP
- INDICATES VOID IN SLAB
- INDICATES SLOPED CONCRETE 1/4" PER FOOR MIN.
- LEVEL STEP IN SLAB
- SLOPED STEP IN SLAB
- BOTTOM OF RAMP
- TOP OF RAMP
- TOP OF CURB - VALUE — TOC - X.X'
- TOP OF SLAB - VALUE — TOS - X.X'
- TOP OF WALL - VALUE — TOW - X.X'
- INDICATES DIRECTION AND SLOPE (ARROW ALWAYS TO LOW POINT) — X" / X" DN
- INDICATES 8" WIDE CURB WITH CMU WALL ABOVE
- INDICATES 13" WIDE CURB WITH BRICK FINISH ABOVE
- INDICATES CONCRETE WALL



2 ENLARGED SLAB PLAN AT RES. CORNER

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

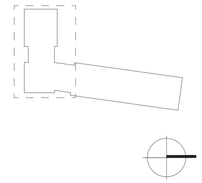
206 962 6500
MG2.com

MG2

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/29/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

SLAB EDGE PLAN - LEVEL 1 SOUTH

A141

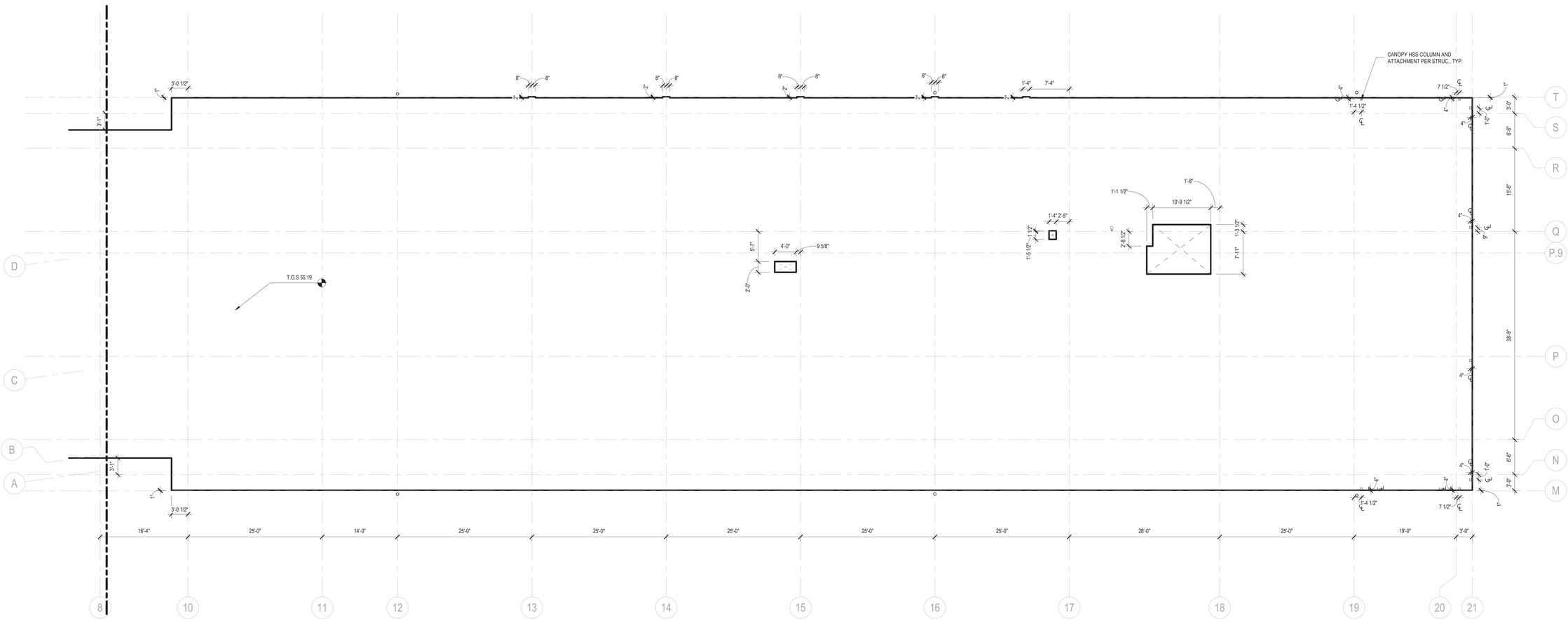
2/28/2024 10:53:03 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

SLAB EDGE PLAN NOTES:

1. SEE PLANS AND STOREFRONT SCHEDULE FOR STORE LOCATIONS. REFER TO ELEVATIONS FOR STOREFRONT TYPES.
2. **REFER TO LFG1C2 FOR ALL SLEEVE PENETRATIONS REQUIREMENTS.**
3. STAIR LANDINGS TO HAVE CONCRETE TOPPING SLAB. REFER TO DRAWINGS FOR RELEVANT THICKNESSES.
4. REFER TO STAIR DETAILS FOR ACCURATE DIMENSIONS AND CONSTRUCTION OF STAIRS.
5. WALLS ARE CENTERED ON GRIDLINES WHEN NOT DIMENSIONED
6. ALIGN FACE OF CMU WALL AND CURBS WITH FACE OF APRON STEP, U.N.O.
7. ALL SLAB PENETRATIONS ARE PLUMBING U.N.O. SEE PLUMBING AND ELECTRICAL FOR PIPE SIZE.
8. ALL CURBS ARE 9" THICK, U.N.O.
9. SLOPED SLABS TO BE SLOPED IN DIRECTION SHOWN AT MIN 1/4" PER FOOT, U.N.O.

EOS LEGEND

- EDGE OF CONCRETE SLAB BELOW
- VOID IN CONCRETE SLAB
- CONCRETE CURB WALLS (PROVIDED TO BASE OF THE STOREFRONT)
- FLOOR DRAIN
- SLAB PENETRATION
- INDICATES RAMP DIRECTION(ARROW ALWAYS TO HIGH POINT) — X".-/X".UP
- INDICATES VOID IN SLAB
- INDICATES SLOPED CONCRETE 1/4" PER FOOR MIN.
- LEVEL STEP IN SLAB
- SLOPED STEP IN SLAB
- BOTTOM OF RAMP
- TOP OF RAMP
- TOP OF CURB - VALUE — TOC - X.X'
- TOP OF SLAB - VALUE — TOS - X.X'
- TOP OF WALL - VALUE — TOW - X.X'
- INDICATES DIRECTION AND SLOPE (ARROW ALWAYS TO LOW POINT) — X" / X" DN
- INDICATES 8" WIDE CURB WITH CMU WALL ABOVE
- INDICATES 13" WIDE CURB WITH BRICK FINISH ABOVE
- INDICATES CONCRETE WALL



1 LEVEL 2 SLAB EDGE PLAN NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

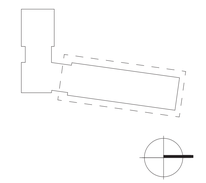
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

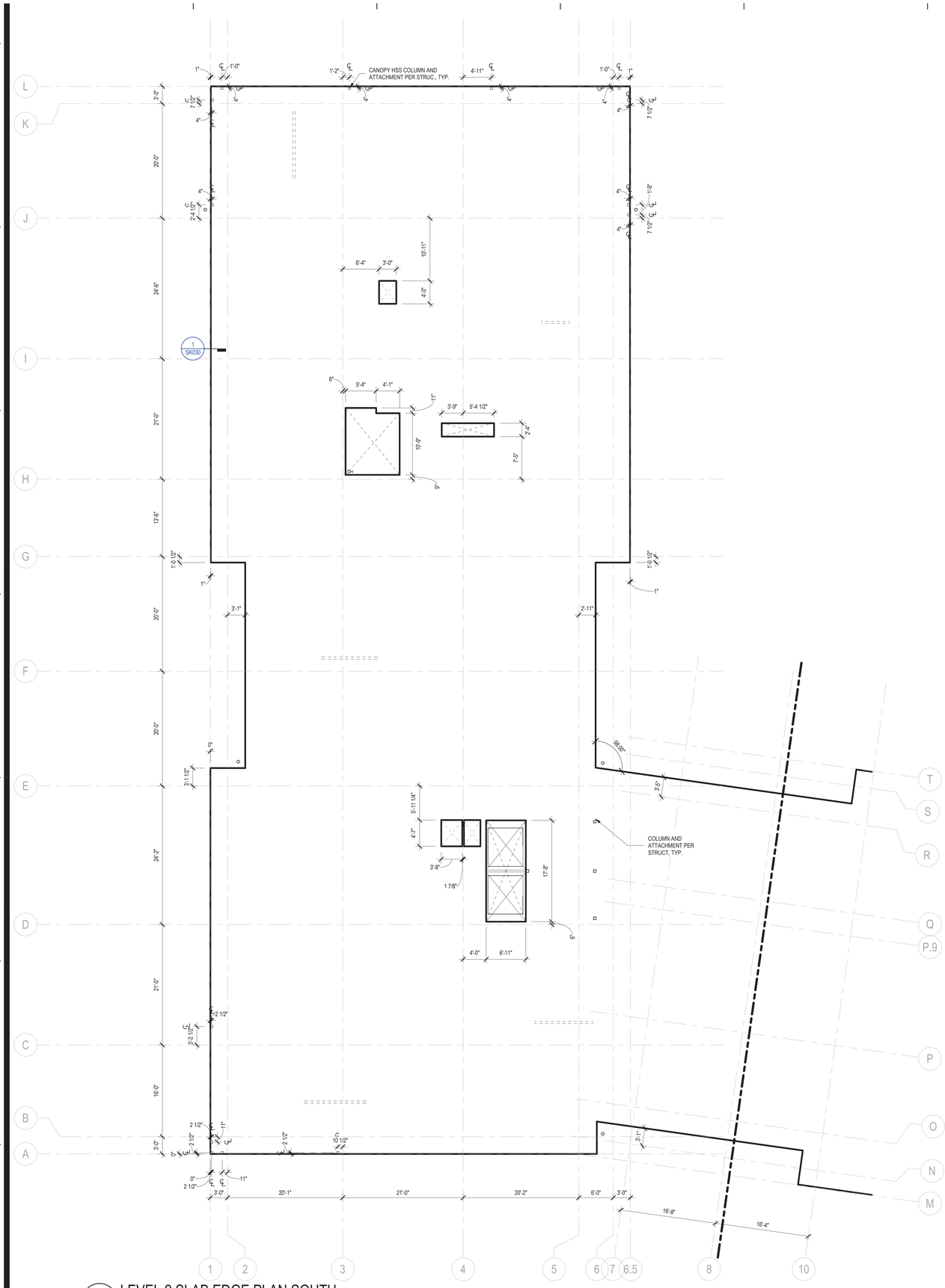
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

SLAB EDGE PLAN - LEVEL 2 NORTH

A142

2/2/2024 10:39:00 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 2 SLAB EDGE PLAN SOUTH

SCALE: 1/8" = 1'-0"

SLAB EDGE PLAN NOTES:

1. SEE PLANS AND STOREFRONT SCHEDULE FOR STORE LOCATIONS. REFER TO ELEVATIONS FOR STOREFRONT TYPES.
2. **REFER TO LFG1C2 FOR ALL SLEEVE PENETRATIONS REQUIREMENTS.**
3. STAIR LANDINGS TO HAVE CONCRETE TOPPING SLAB. REFER TO DRAWINGS FOR RELEVANT THICKNESSES.
4. REFER TO STAIR DETAILS FOR ACCURATE DIMENSIONS AND CONSTRUCTION OF STAIRS.
5. WALLS ARE CENTERED ON GRIDLINES WHEN NOT DIMENSIONED
6. ALIGN FACE OF CMU WALL AND CURBS WITH FACE OF APRON STEP, U.N.O.
7. ALL SLAB PENETRATIONS ARE PLUMBING U.N.O. SEE PLUMBING AND ELECTRICAL FOR PIPE SIZE.
8. ALL CURBS ARE 9" THICK, U.N.O.
9. SLOPED SLABS TO BE SLOPED IN DIRECTION SHOWN AT MIN 1/4" PER FOOT, U.N.O.

EOS LEGEND

- EDGE OF CONCRETE SLAB BELOW
- VOID IN CONCRETE SLAB
- CONCRETE CURB WALLS (PROVIDED TO BASE OF THE STOREFRONT)
- FLOOR DRAIN
- SLAB PENETRATION
- INDICATES RAMP DIRECTION(ARROW ALWAYS TO HIGH POINT) — X".-/.X" UP
- INDICATES VOID IN SLAB
- INDICATES SLOPED CONCRETE 1/4" PER FOOR MIN.
- LEVEL STEP IN SLAB
- SLOPED STEP IN SLAB
- BOTTOM OF RAMP
- TOP OF RAMP
- TOP OF CURB - VALUE — TOC - X.X'
- TOP OF SLAB - VALUE — TOS - X.X'
- TOP OF WALL - VALUE — TOW - X.X'
- INDICATES DIRECTION AND SLOPE (ARROW ALWAYS TO LOW POINT) — X" / X" DN
- INDICATES 8" WIDE CURB WITH CMU WALL ABOVE
- INDICATES 13" WIDE CURB WITH BRICK FINISH ABOVE
- INDICATES CONCRETE WALL

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

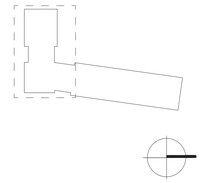
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

SLAB EDGE PLAN - LEVEL 2 SOUTH

A143

2/2/2024 10:39:01 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

GENERAL NOTES

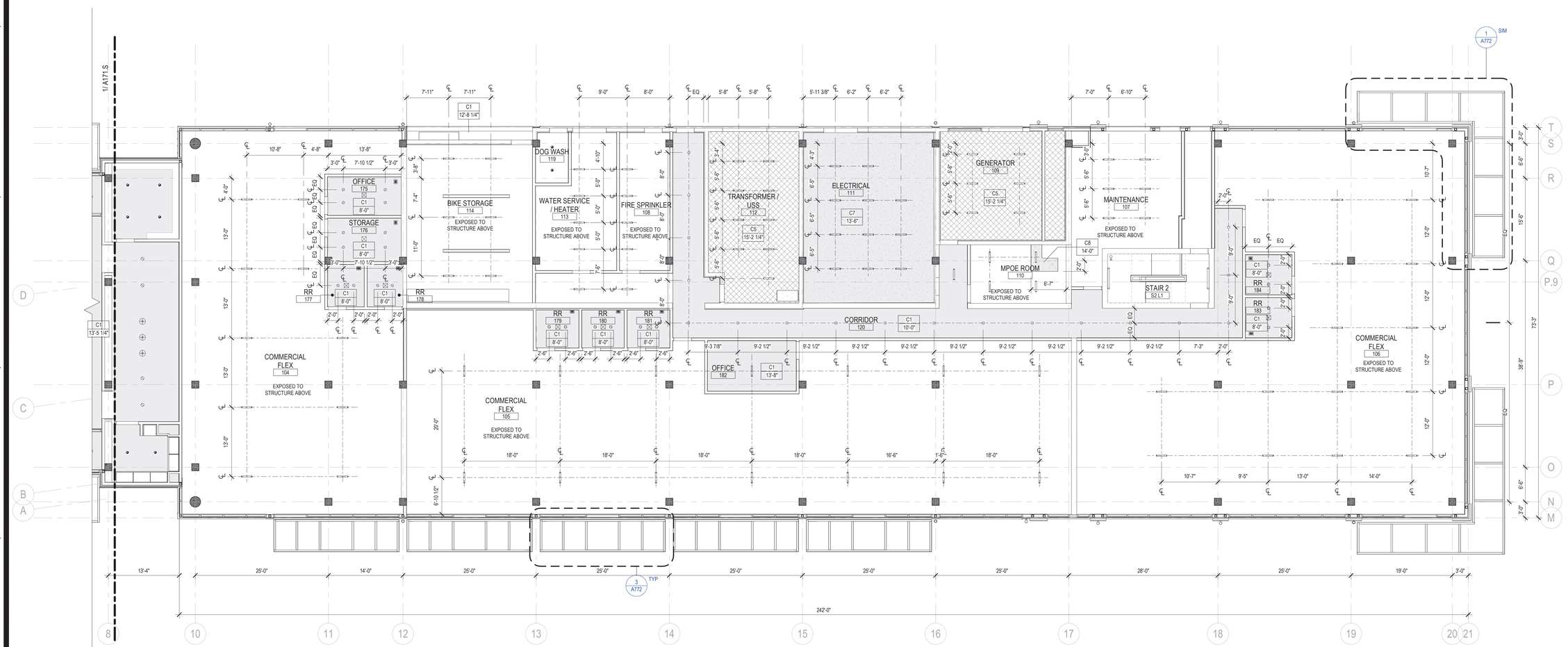
1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.

2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.

3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.

4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.

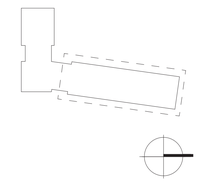
5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.



1 LEVEL 1 - RCP NORTH

SCALE: 1/8" = 1'-0"

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLAN - LEVEL 1 NORTH

A171.N

EVERETT RIVERFRONT

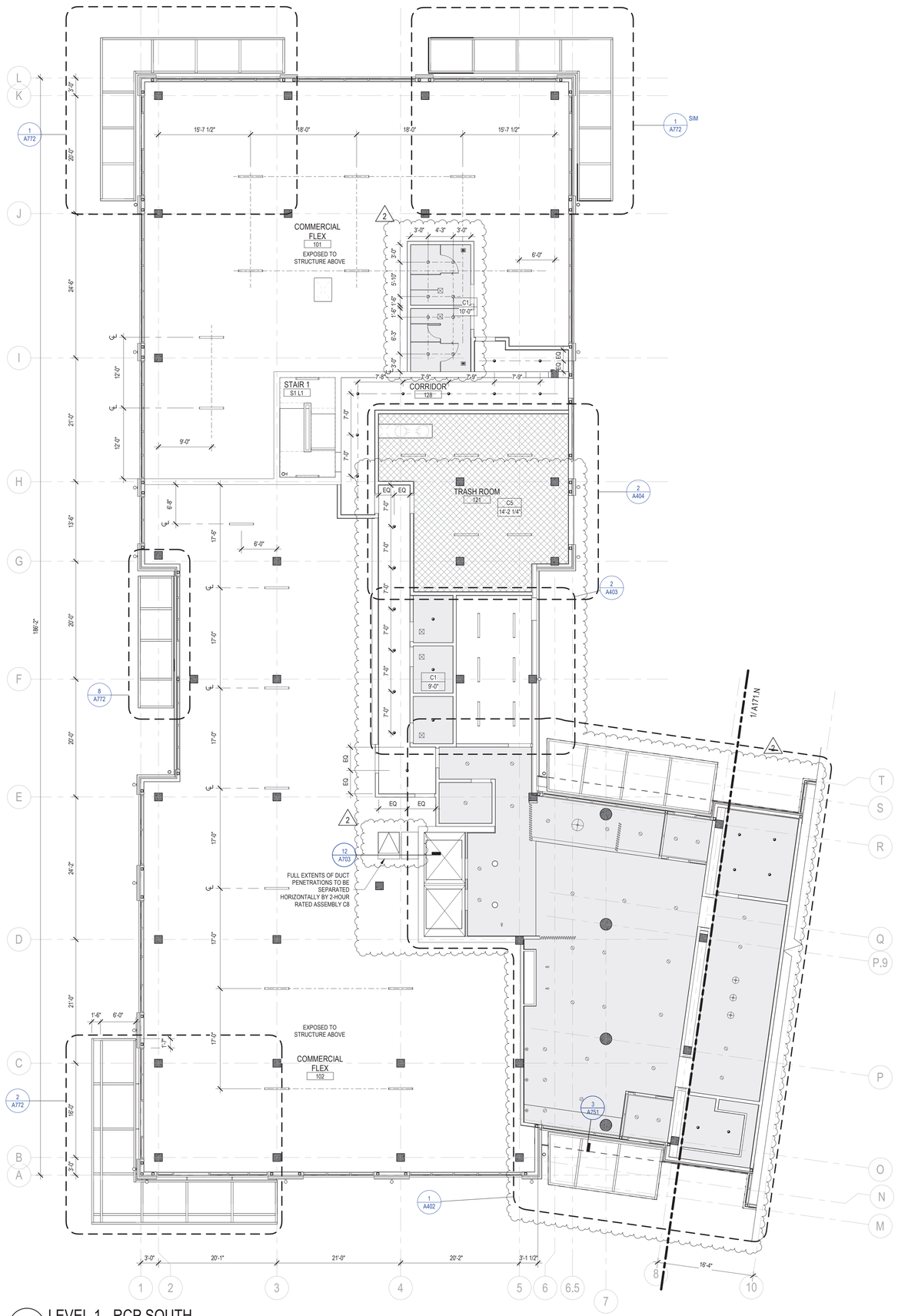
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

2/2/2024 10:39:02 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 LEVEL 1 - RCP SOUTH

SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

- CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
- ACT CEILING
- GWB CEILING (C1 or C7)
- FAUX WOOD SOFFIT (C9)
- RECESSED CAN FIXTURE
- CEILING MOUNTED LIGHT
- PENDANT MOUNTED LIGHT
- COVE LIGHT
- WALL MOUNTED LIGHT
- FLOURESCENT LIGHT
- LINEAR DIFFUSER
- SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
- CFM FAN (50 CFM)
- SMOKE/CO2 DETECTOR (SD, CO)
- FIRE ALARM (FA)
- SUPPLY AIR DEVICE
- RETURN/ EXHAUST AIR DEVICE
- EXIT LIGHT
- MECHOSHADE
- ACCESS PANEL
- GRID STARTING POINT
- ROLLER SHADE

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.

2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.

3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.

4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.

5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

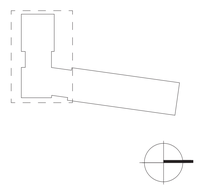
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLAN - LEVEL 1 SOUTH

A171.S

2/8/2024 3:34:25 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

GENERAL NOTES

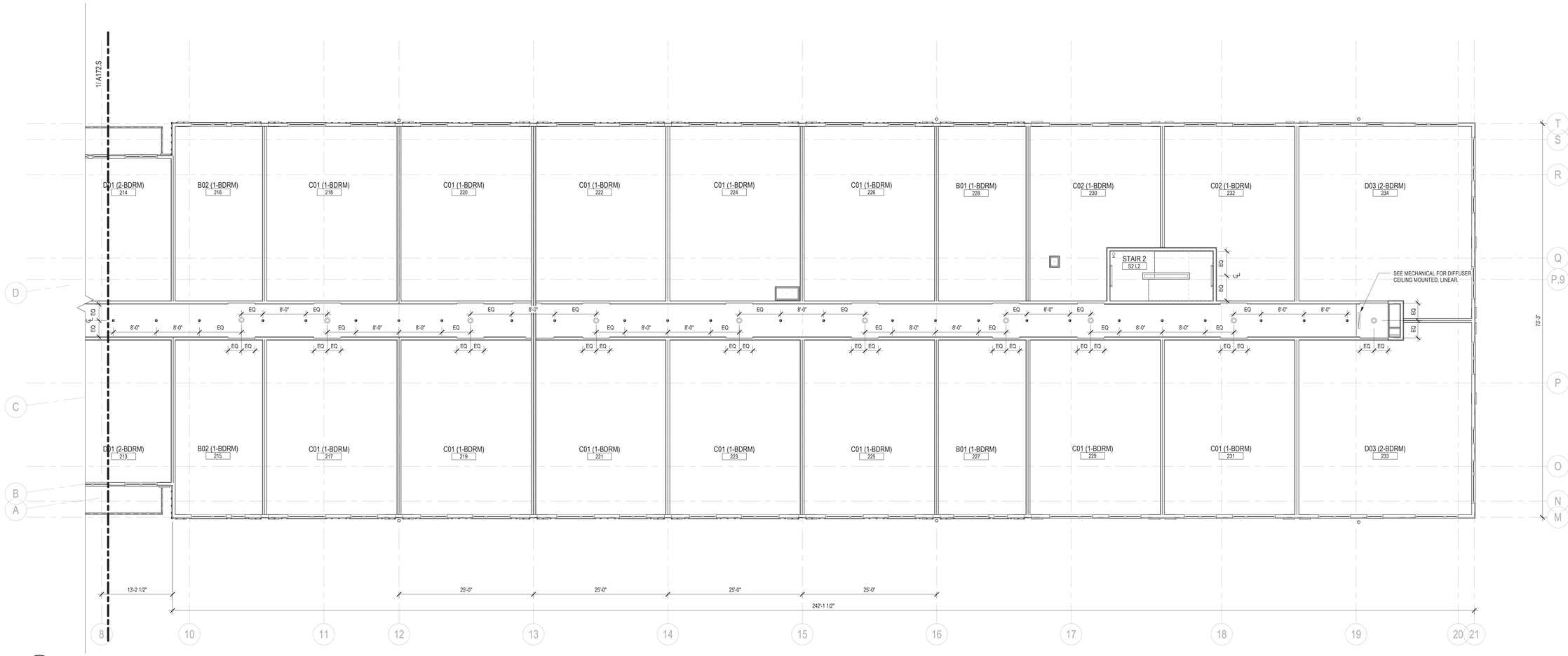
1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.

2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.

3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.

4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.

5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.



1 LEVEL 2 - RCP NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLAN - LEVEL 2 NORTH

A172.N

2/2/2024 10:39:05 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 2 - RCP SOUTH

SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

- CEILING TAG / CEILING HEIGHT (C1, 18' - 6")
- ACT CEILING
- GWB CEILING (C1 or C7)
- FAUX WOOD SOFFIT (C9)
- RECESSED CAN FIXTURE
- CEILING MOUNTED LIGHT
- PENDANT MOUNTED LIGHT
- COVE LIGHT
- WALL MOUNTED LIGHT
- FLOURESCENT LIGHT
- LINEAR DIFFUSER
- SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
- CFM FAN (50 CFM)
- SMOKE/CO2 DETECTOR (SD, CO)
- FIRE ALARM (FA)
- SUPPLY AIR DEVICE
- RETURN/ EXHAUST AIR DEVICE
- EXIT LIGHT
- MECHOSHADE
- ACCESS PANEL
- GRID STARTING POINT
- ROLLER SHADE

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.
2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.
3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.
4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.
5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.

EVERETT RIVERFRONT

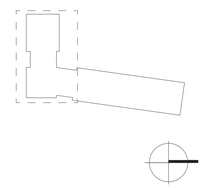
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLANS - LEVEL 2 SOUTH

A172.S

2/2/2024 10:39:06 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD / CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

GENERAL NOTES

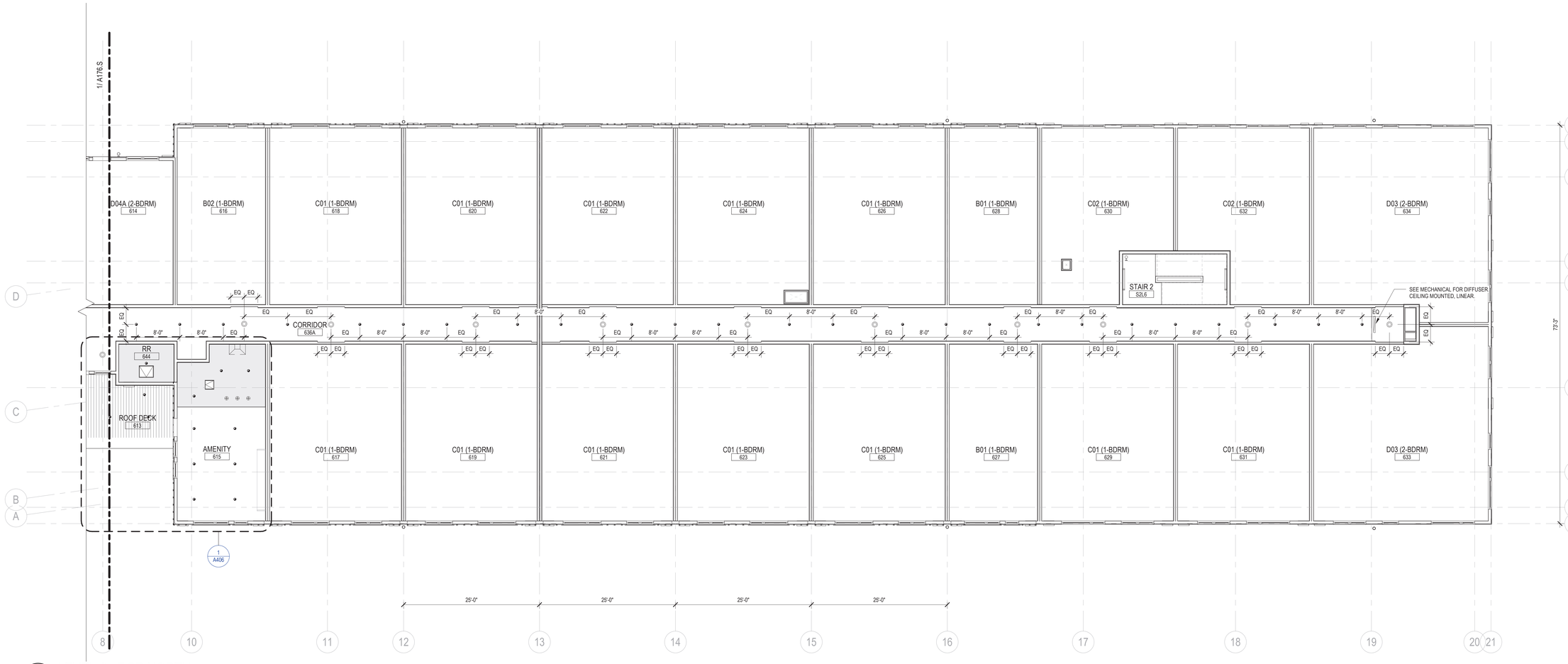
1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.

2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.

3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.

4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.

5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.



1 LEVEL 6 - RCP NORTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

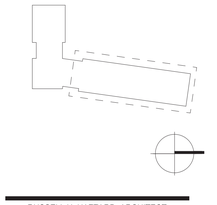
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLAN - LEVEL 6 NORTH

A176.N

2/2/2024 10:39:08 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 6 - RCP SOUTH

SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

- CEILING TAG / CEILING HEIGHT (C1, 18' - 6")
- ACT CEILING
- GWB CEILING (C1 or C7)
- FAUX WOOD SOFFIT (C9)
- RECESSED CAN FIXTURE
- CEILING MOUNTED LIGHT
- PENDANT MOUNTED LIGHT
- COVE LIGHT
- WALL MOUNTED LIGHT
- FLOURESCENT LIGHT
- LINEAR DIFFUSER
- SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
- CFM FAN (50 CFM)
- SMOKE/CO2 DETECTOR (SD, CO)
- FIRE ALARM (FA)
- SUPPLY AIR DEVICE
- RETURN/ EXHAUST AIR DEVICE
- EXIT LIGHT
- MECHOSHADE
- ACCESS PANEL
- GRID STARTING POINT
- ROLLER SHADE

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, THE CEILING IS EXPOSED TO THE STUCTURE OR ASSEMBLY ABOVE.

2. CEILINGS IN RESIDENTIAL CORRIDORS LEVELS 2-6 ARE 8'2 1/2" AFF UNLESS OTHERWISE NOTED.

3. CEILINGS IN RESIDENTIAL LOBBIES LEVELS 2-6 ARE 8'-6 3/8" AFF UNLESS OTHERWISE NOTED.

4. ALL FURRED CEILINGS ARE LOCATED BASED ON FINISH FLOOR DIRECTLY BELOW.

5. ALL LIGHT FIXTURES TO BE CENTERED IN ROOM U.N.O.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

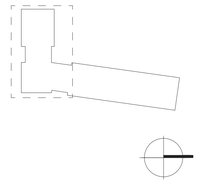
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

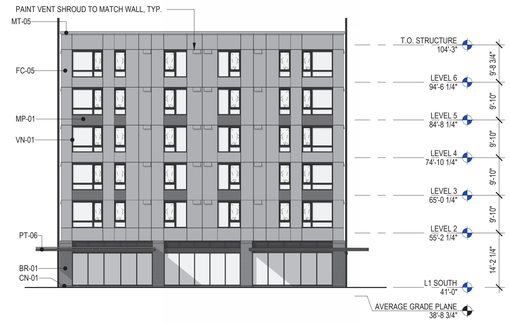
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

REFLECTED CEILING PLAN - LEVEL 6 SOUTH

A176.S

2/2/2024 10:39:09 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 SOUTH WING - WEST ELEVATION

SCALE: 1/16" = 1'-0"

2 SOUTH ELEVATION

SCALE: 1/16" = 1'-0"

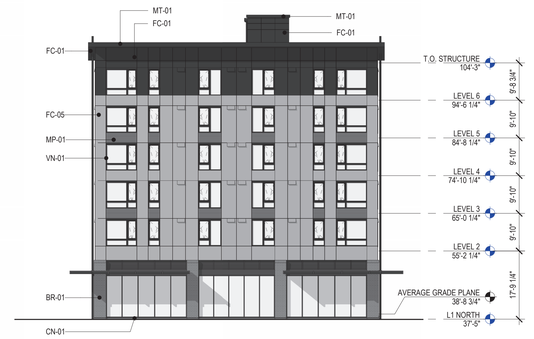
MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

SEE SHEET A821 FOR EXTERIOR MATERIAL SCHEDULE

3 EAST ELEVATION

SCALE: 1/16" = 1'-0"



4 NORTH ELEVATION

SCALE: 1/16" = 1'-0"

5 WEST ELEVATION

SCALE: 1/16" = 1'-0"

6 SOUTH WING - NORTH ELEVATION

SCALE: 1/16" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

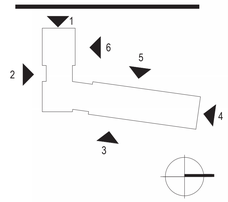
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 STATE OF WASHINGTON REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

OVERALL ELEVATIONS

2 A201

2/2/2024 10:39:39 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 SOUTH ELEVATION

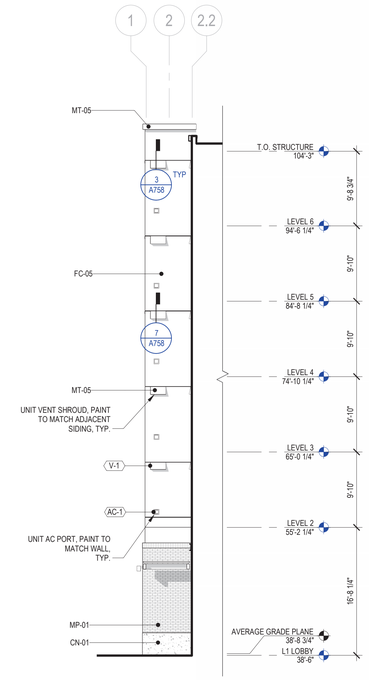
SCALE: 1/8" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

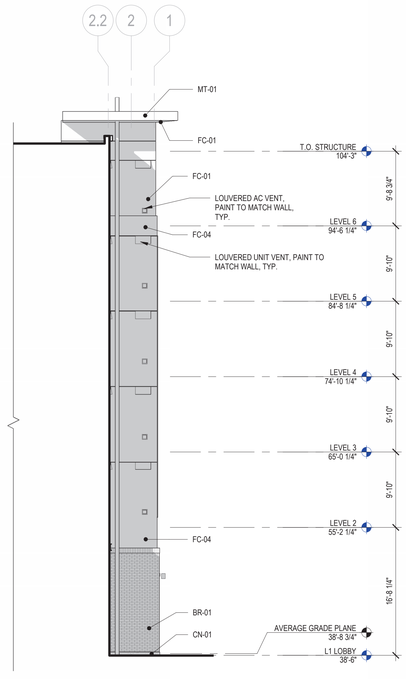
ELEVATION GENERAL NOTES

1. SEE A821 FOR EXTERIOR FINISH SCHEDULE
2.SEE A805 FOR A SCHEDULE OF VENTS, AC PORTS, AND LOUVERS.
3. SEE A802 FOR STOREFRONT FINISHES AND SCHEDULE.
4. SEE A770 FOR BALCONY DETAILS AND FINISHES.



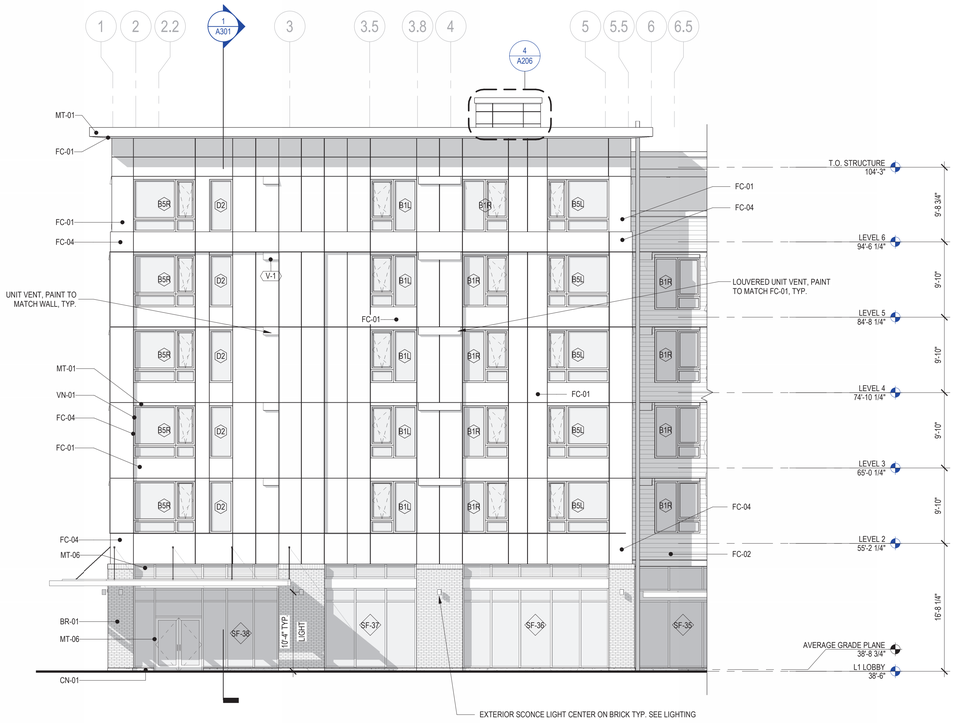
2 SOUTH NICHE ELEVATION EAST

SCALE: 1/8" = 1'-0"



3 SOUTH NICHE ELEVATION WEST

SCALE: 1/8" = 1'-0"



4 SOUTH WING EAST ELEVATION

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

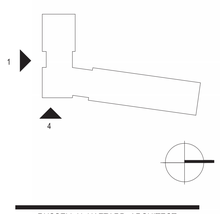
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

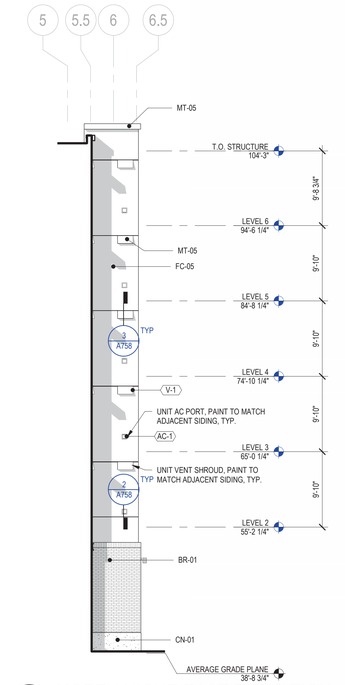
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

EXTERIOR ELEVATIONS

A202

2/2/2024 10:39:46 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 NORTH NICHE EAST ELEVATION

SCALE: 1/8" = 1'-0"

2 SOUTH WING - NORTH ELEVATION

SCALE: 1/8" = 1'-0"

3 SOUTH WING - WEST ELEVATION

SCALE: 1/8" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

ELEVATION GENERAL NOTES

1. SEE A821 FOR EXTERIOR FINISH SCHEDULE
2.SEE A805 FOR A SCHEDULE OF VENTS, AC PORTS, AND LOUVERS.
3. SEE A802 FOR STOREFRONT FINISHES AND SCHEDULE.
4. SEE A770 FOR BALCONY DETAILS AND FINISHES.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

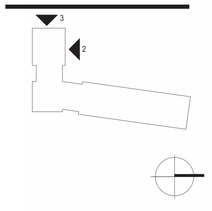
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

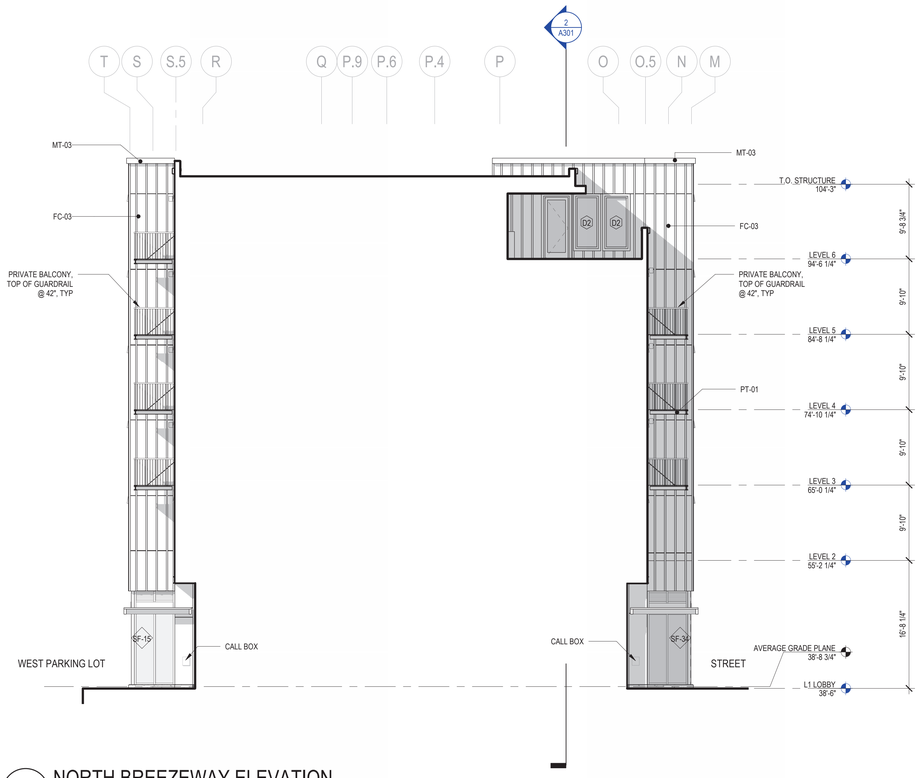
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

EXTERIOR ELEVATIONS

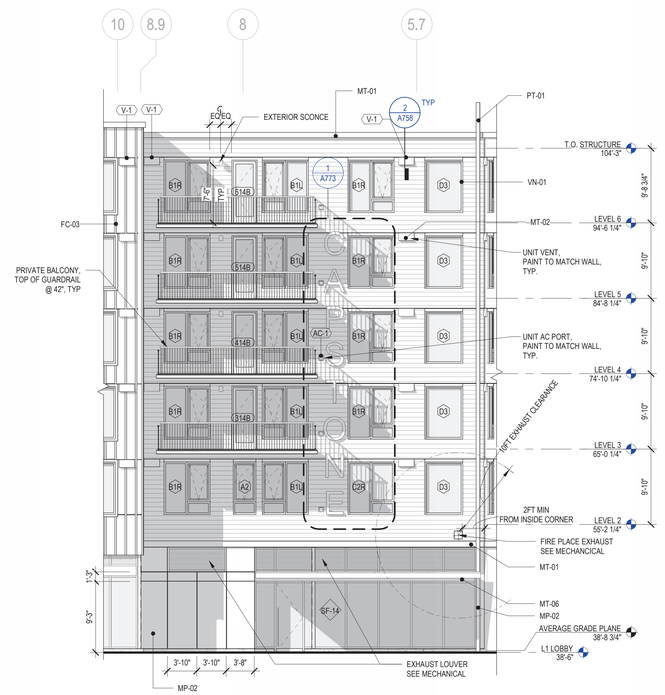
A203

2/2/2024 10:39:49 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 NORTH BREEZEWAY ELEVATION

SCALE: 1/8" = 1'-0"



2 WEST BREEZEWAY ELEVATION

SCALE: 1/8" = 1'-0"

3 NORTH WING - WEST ELEVATION

SCALE: 1/8" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

ELEVATION GENERAL NOTES

1. SEE A821 FOR EXTERIOR FINISH SCHEDULE
2.SEE A805 FOR A SCHEDULE OF VENTS, AC PORTS, AND LOUVERS.
3. SEE A802 FOR STOREFRONT FINISHES AND SCHEDULE.
4. SEE A770 FOR BALCONY DETAILS AND FINISHES.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

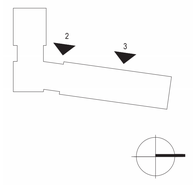
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/09/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

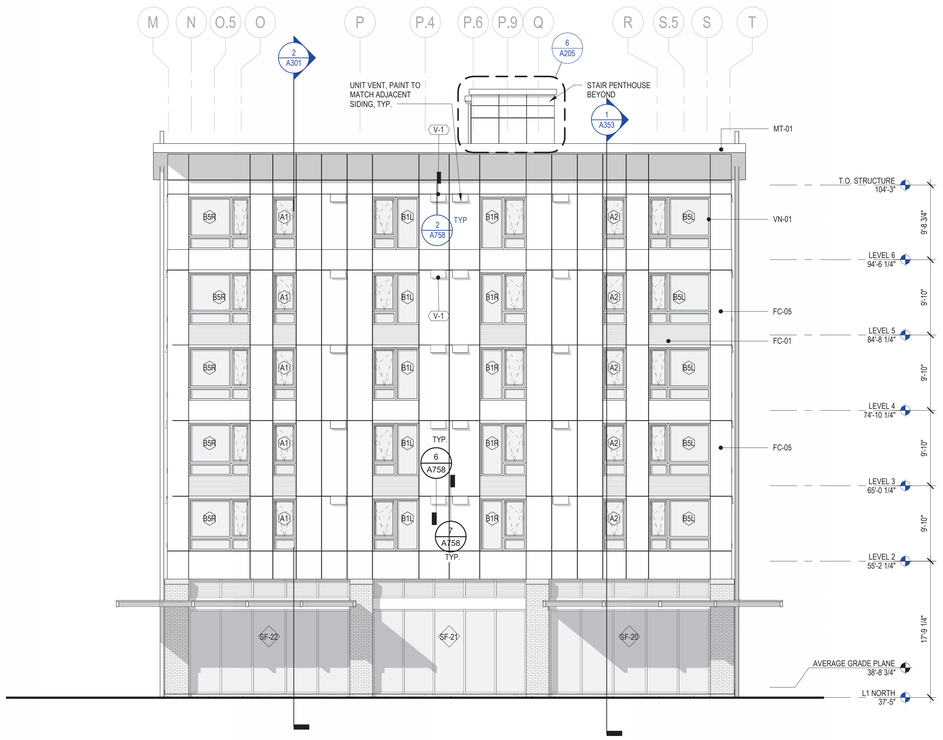
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

EXTERIOR ELEVATIONS

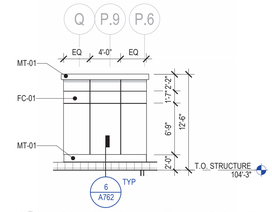
A204

2/8/2024 3:34:35 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



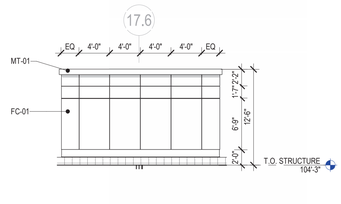
1 NORTH WING - NORTH ELEVATION

SCALE: 1/8" = 1'-0"



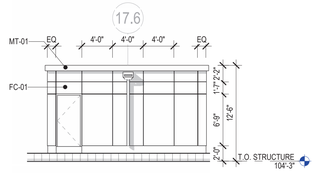
3 STAIR OVERRUN SOUTH

SCALE: 1/8" = 1'-0"



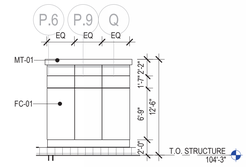
5 STAIR OVERRUN WEST

SCALE: 1/8" = 1'-0"



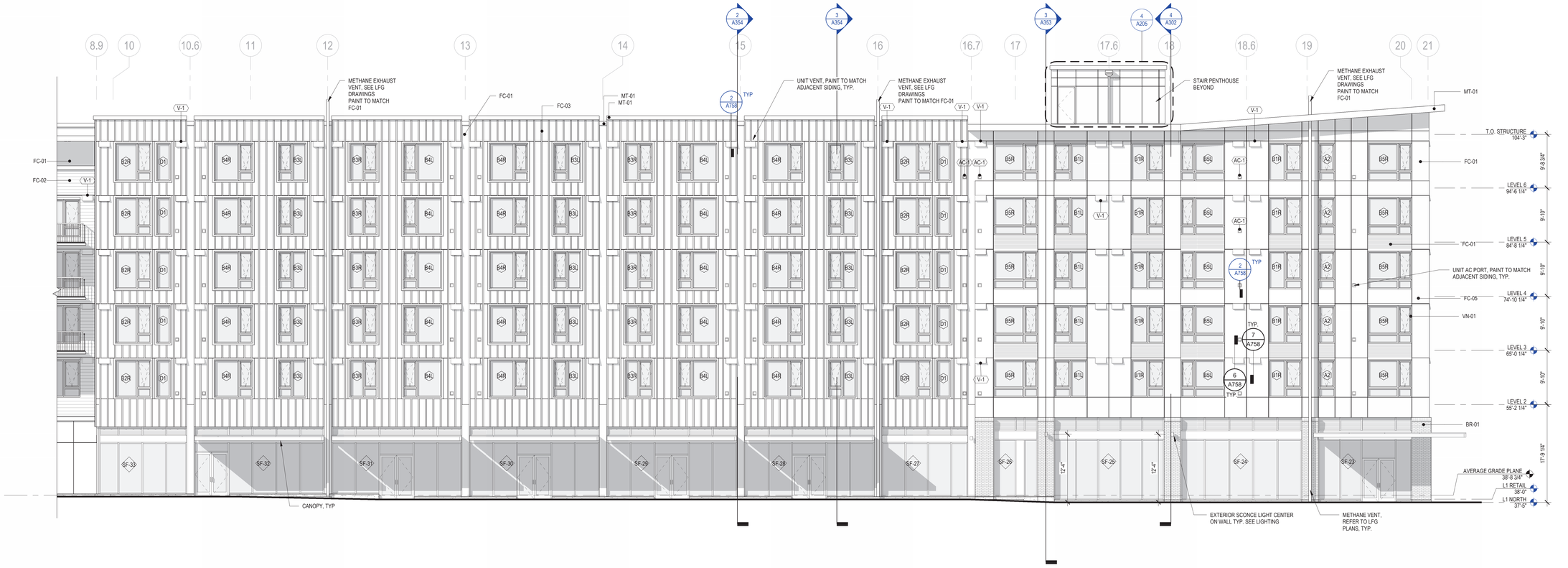
4 STAIR OVERRUN EAST

SCALE: 1/8" = 1'-0"



6 STAIR OVERRUN NORTH

SCALE: 1/8" = 1'-0"



2 NORTH WING - EAST ELEVATION

SCALE: 1/8" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

ELEVATION GENERAL NOTES

1. SEE A821 FOR EXTERIOR FINISH SCHEDULE
2.SEE A805 FOR A SCHEDULE OF VENTS, AC PORTS, AND LOUVERS.
3. SEE A802 FOR STOREFRONT FINISHES AND SCHEDULE.
4. SEE A770 FOR BALCONY DETAILS AND FINISHES.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

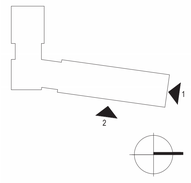
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

EXTERIOR ELEVATIONS

A205

2/2/2024 10:39:59 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

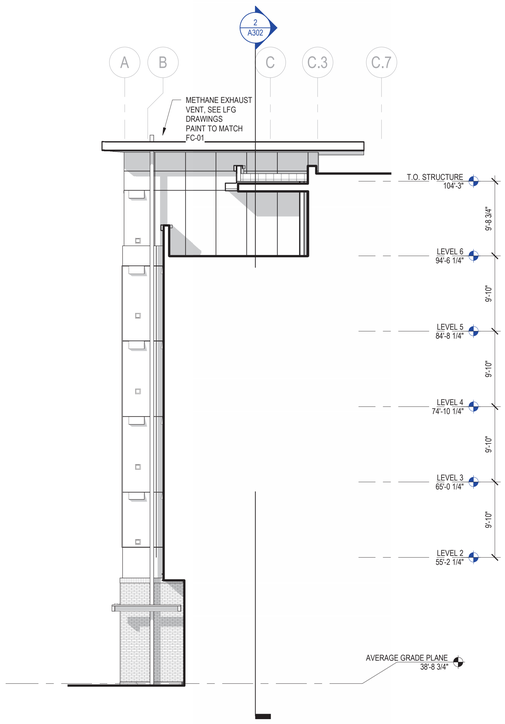
2/2/2024 10:40:00 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

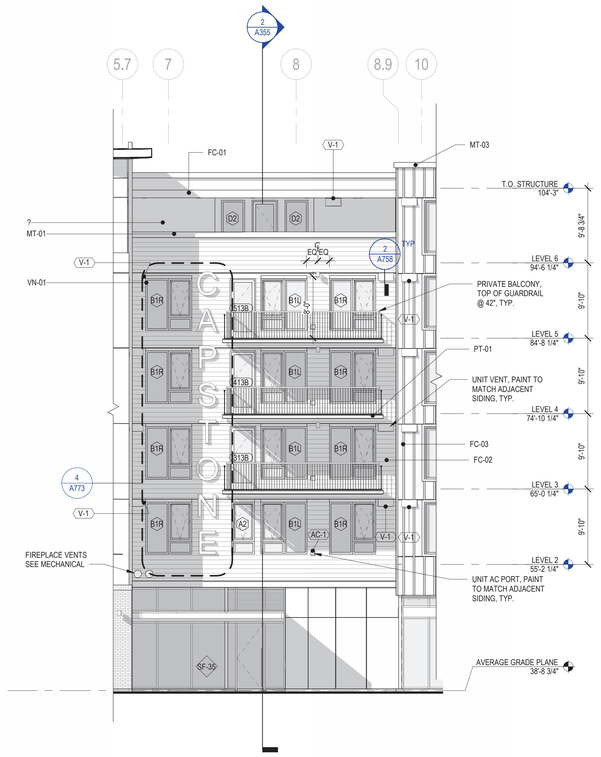
ELEVATION GENERAL NOTES

1. SEE A821 FOR EXTERIOR FINISH SCHEDULE
2.SEE A805 FOR A SCHEDULE OF VENTS, AC PORTS, AND LOUVERS.
3. SEE A802 FOR STOREFRONT FINISHES AND SCHEDULE.
4. SEE A770 FOR BALCONY DETAILS AND FINISHES.



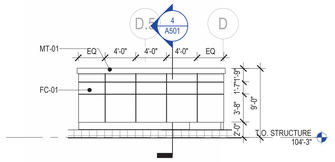
1 BREEZEWAY - SOUTH ELEVATION

SCALE: 1/8" = 1'-0"



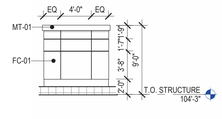
2 BREEZEWAY - EAST ELEVATION

SCALE: 1/8" = 1'-0"



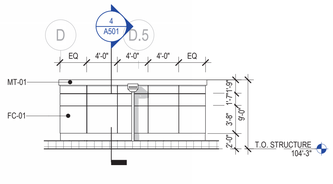
3 ELEVATOR OVERRUN SOUTH

SCALE: 1/8" = 1'-0"



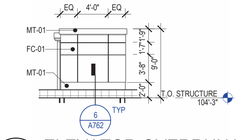
4 ELEVATOR OVERRUN EAST

SCALE: 1/8" = 1'-0"



5 ELEVATOR OVERRUN NORTH

SCALE: 1/8" = 1'-0"



6 ELEVATOR OVERRUN WEST

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

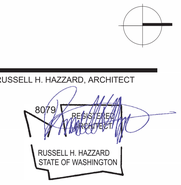
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

RUSSELL H. HAZZARD, ARCHITECT



02/02/2024

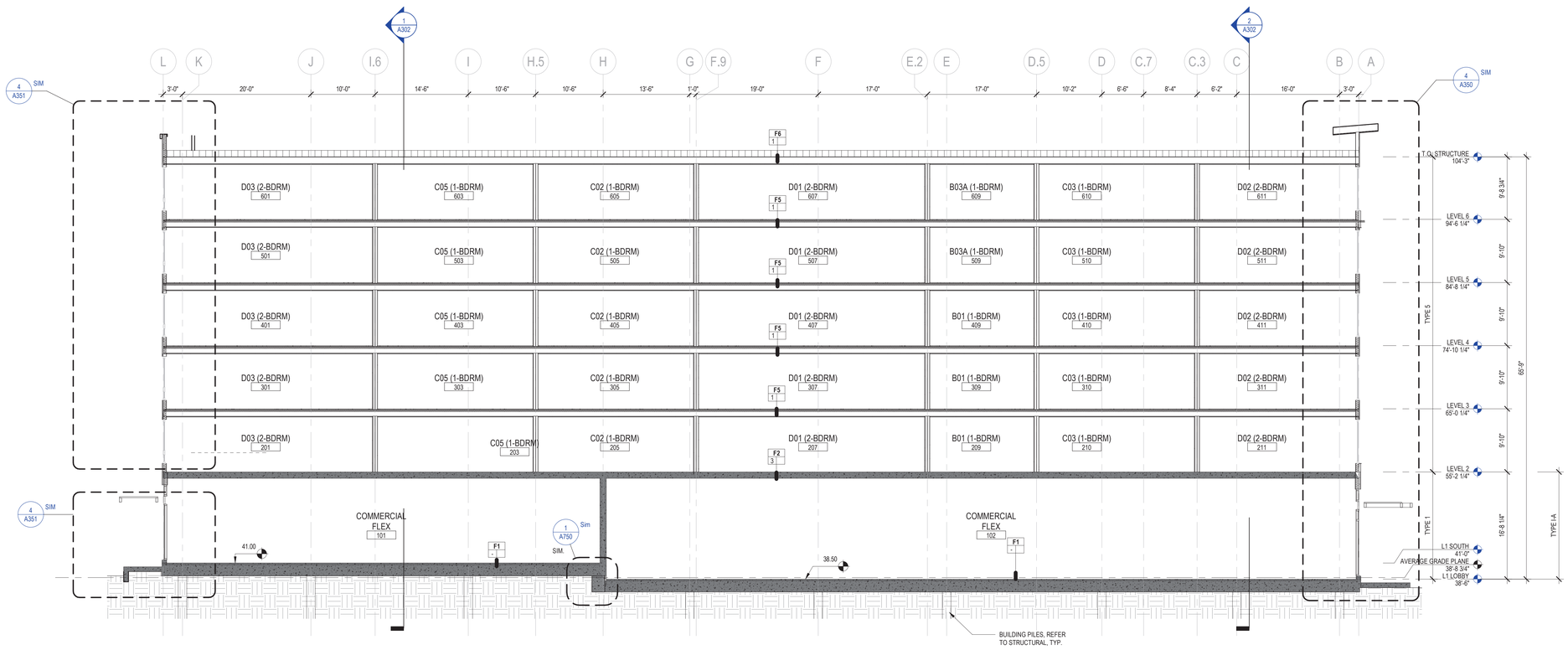
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

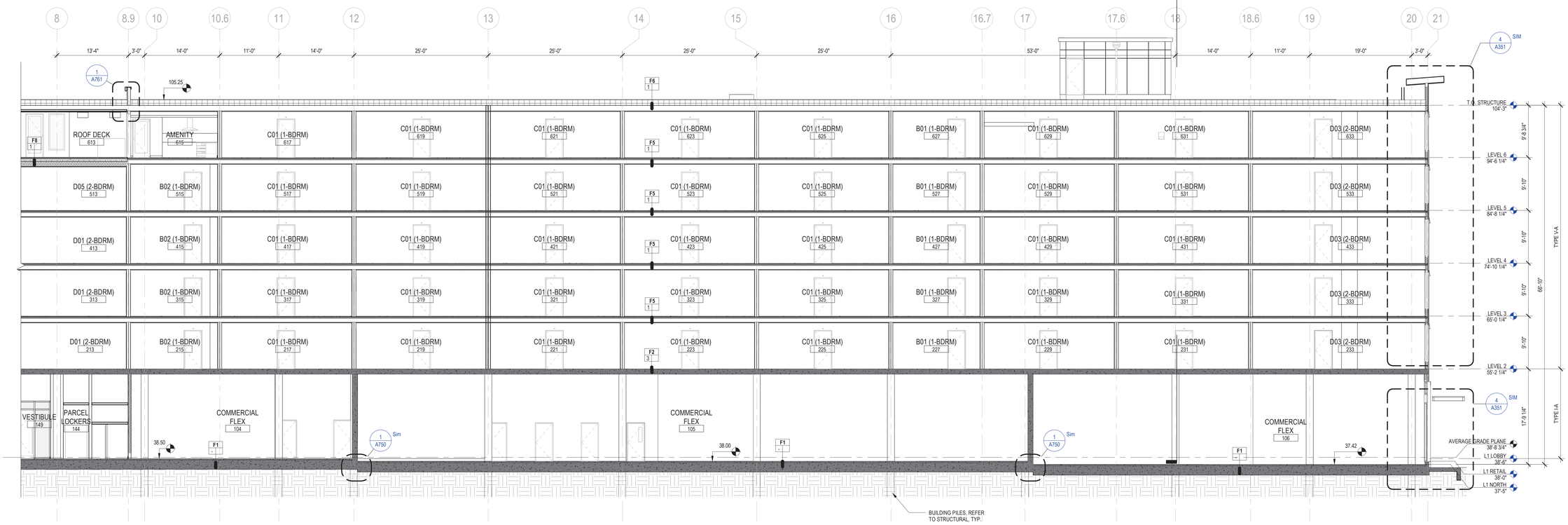
EXTERIOR ELEVATIONS

A206



1 BUILDING SECTION 1 LOOKING NORTH

SCALE: 1/8" = 1'-0"



2 BUILDING SECTION 2 LOOKING WEST

SCALE: 1/8" = 1'-0"

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/8/2024 3:34:39 PM

EVERETT RIVERFRONT

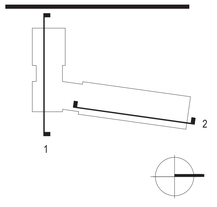
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

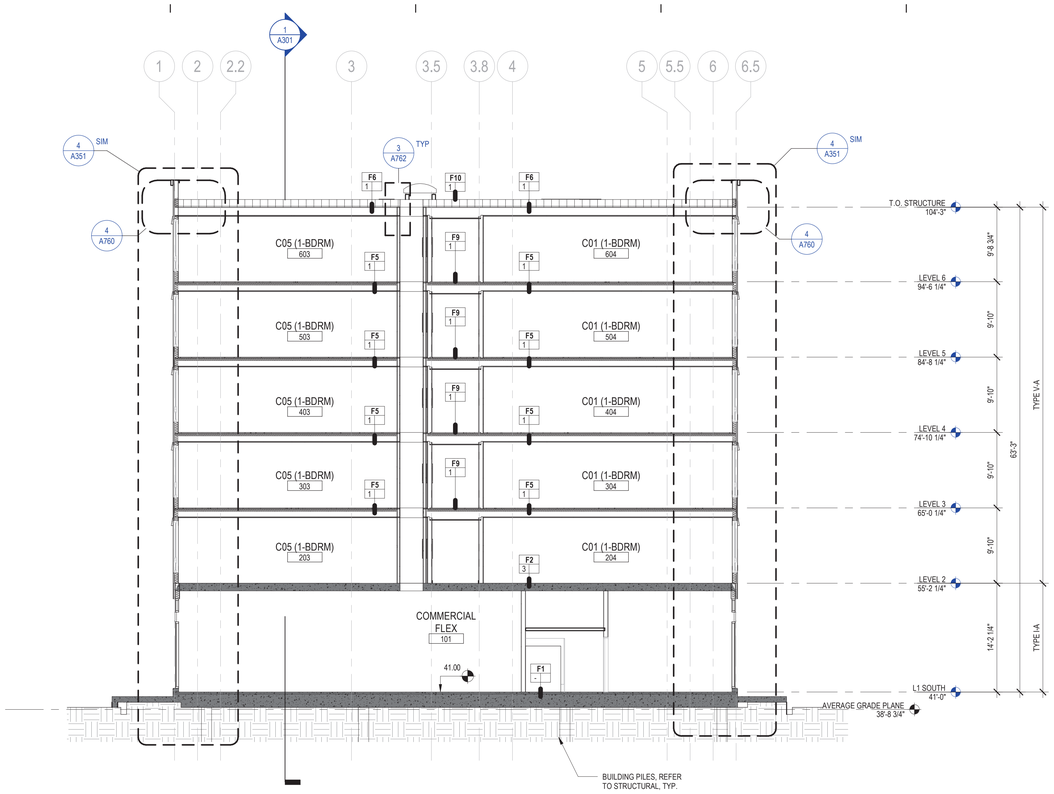
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

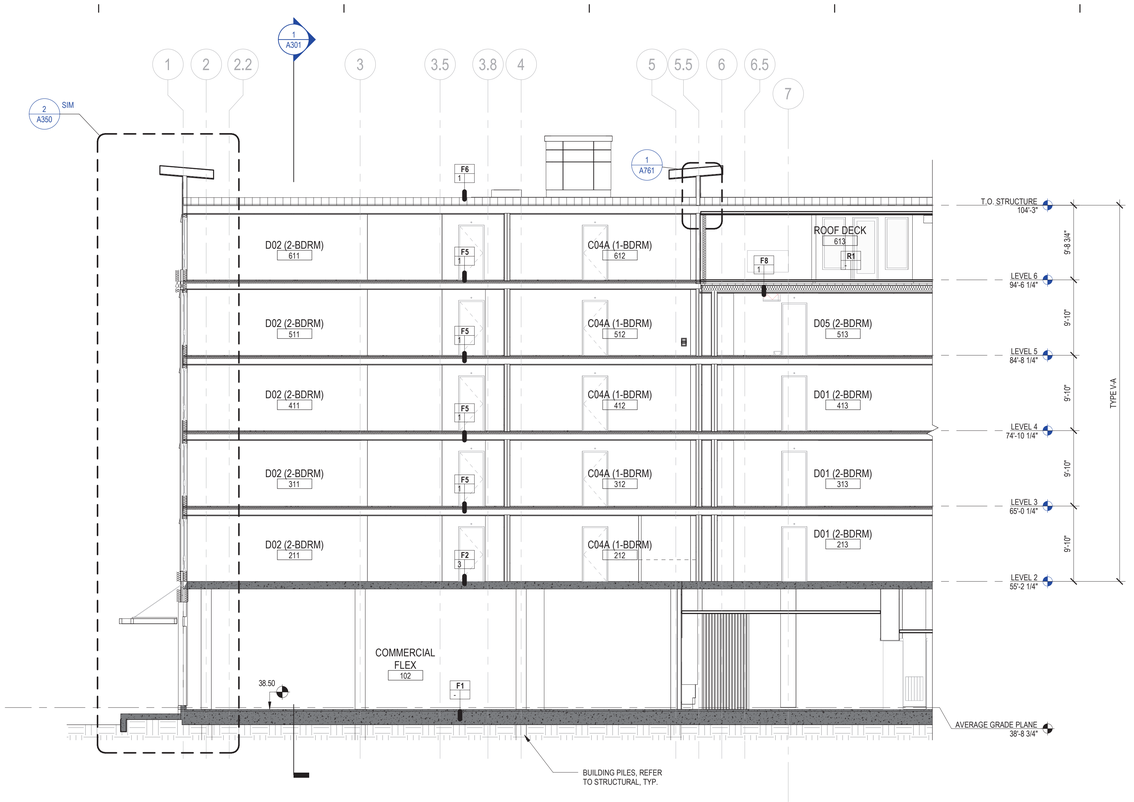
BUILDING SECTIONS

A301



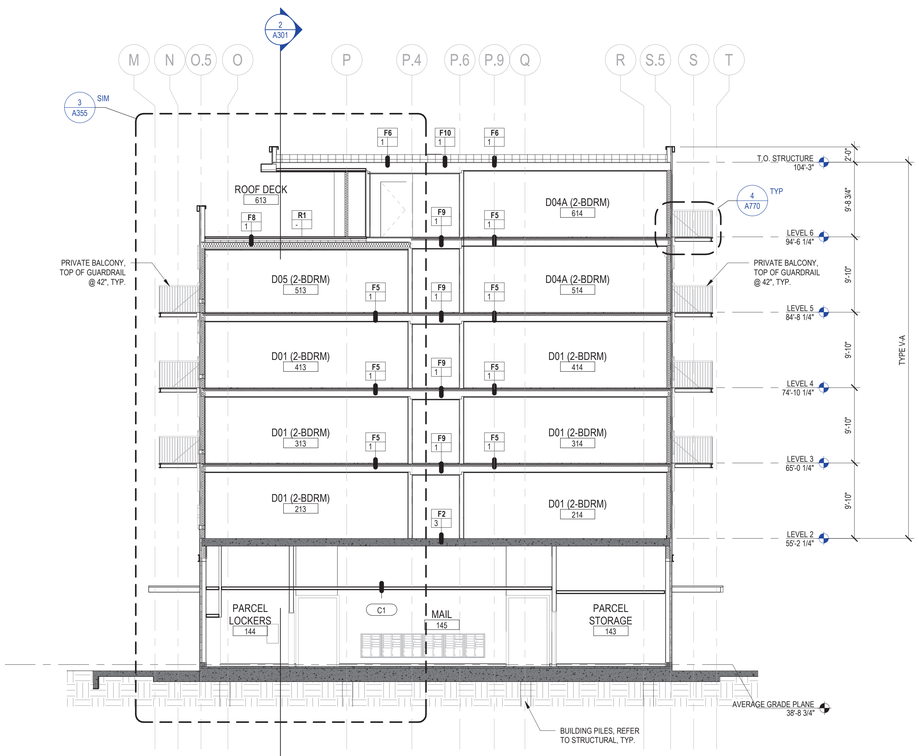
1 BUILDING SECTION 3 LOOKING WEST

SCALE: 1/8" = 1'-0"



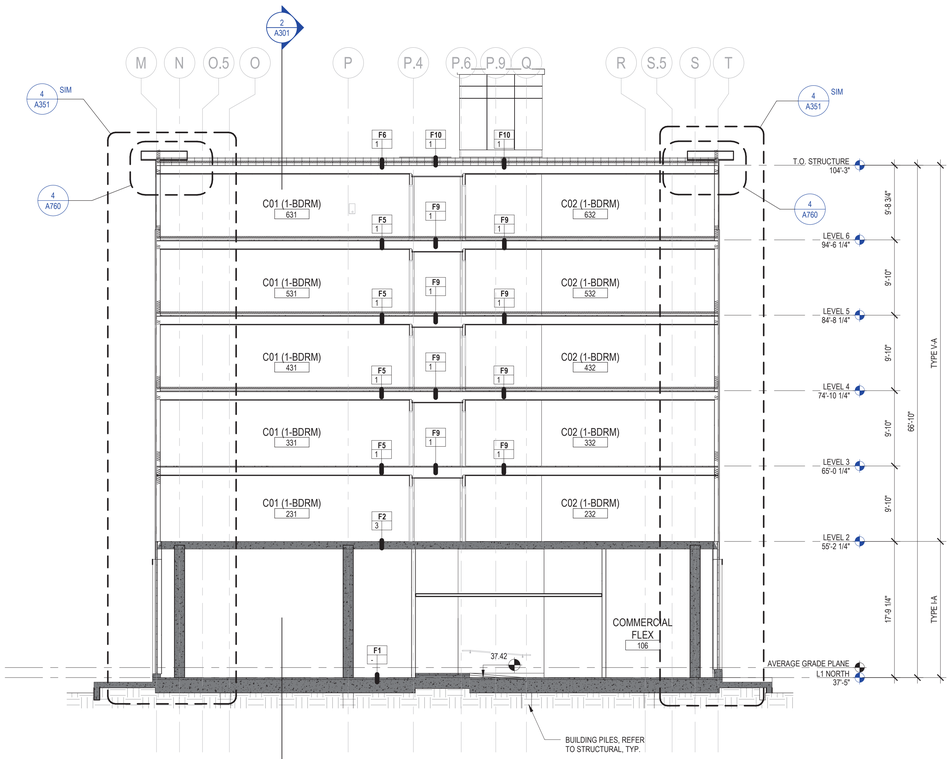
2 BUILDING SECTION 4 LOOKING WEST

SCALE: 1/8" = 1'-0"



3 BUILDING SECTION 5 LOOKING SOUTH

SCALE: 1/8" = 1'-0"



4 BUILDING SECTION 6 LOOKING SOUTH

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

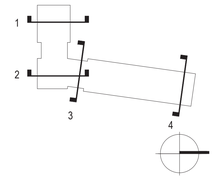
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/09/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

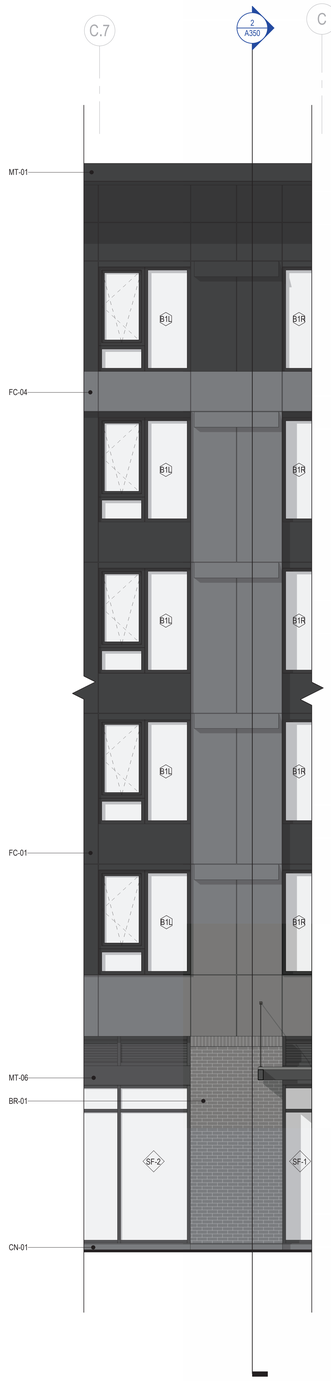
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

BUILDING SECTIONS

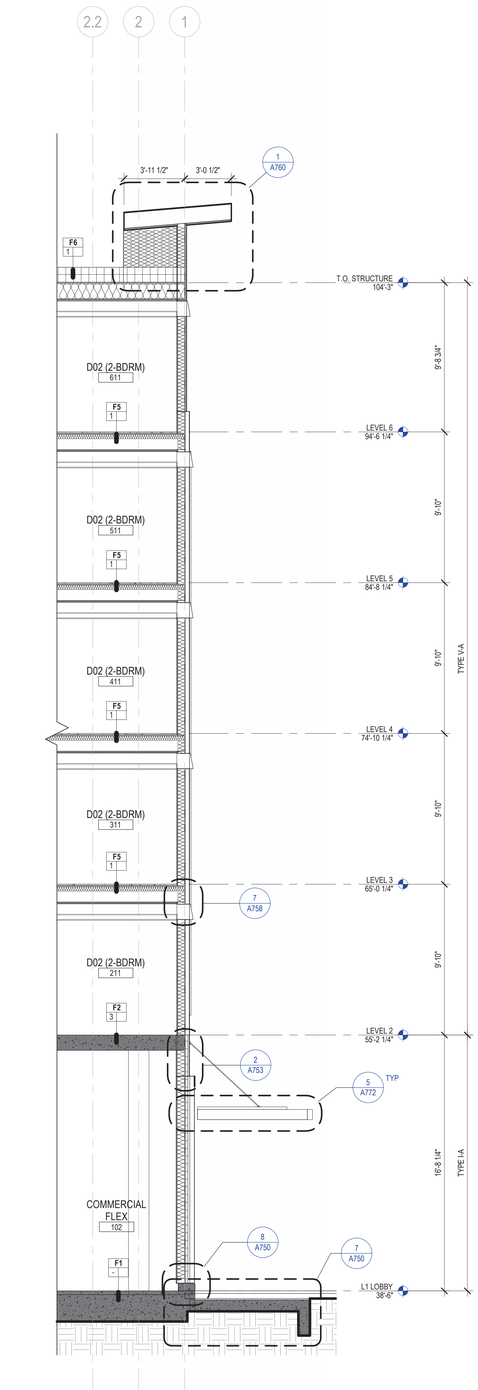
A302

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/8/2024 3:34:44 PM



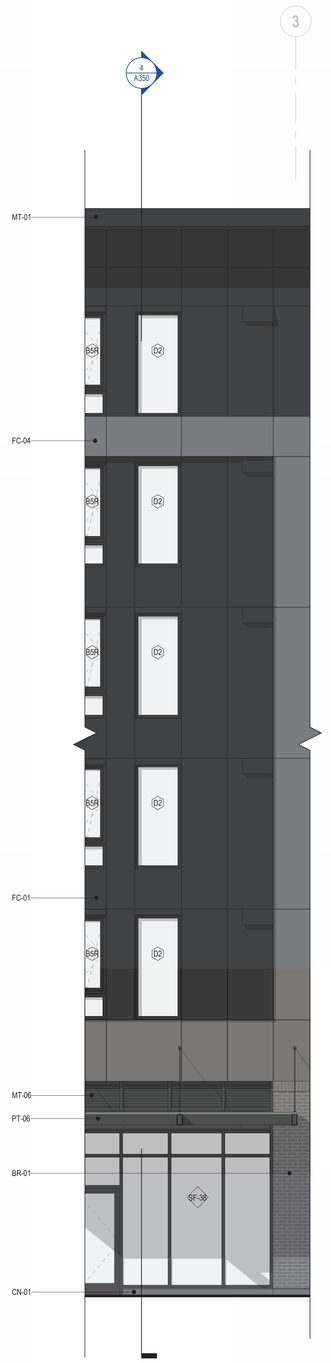
1 ENLARGED ELEVATION 2

SCALE: 1/4" = 1'-0"



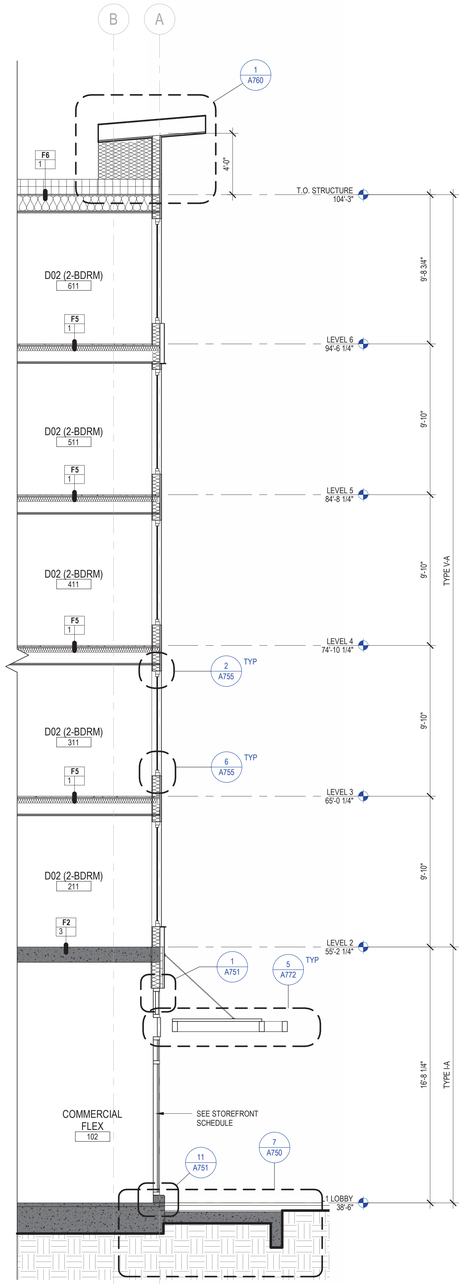
2 WALL SECTION 2

SCALE: 1/4" = 1'-0"



3 ENLARGED ELEVATION 1

SCALE: 1/4" = 1'-0"



4 WALL SECTION 1

SCALE: 1/4" = 1'-0"

MATERIAL KEYNOTES	
BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

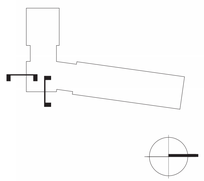
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

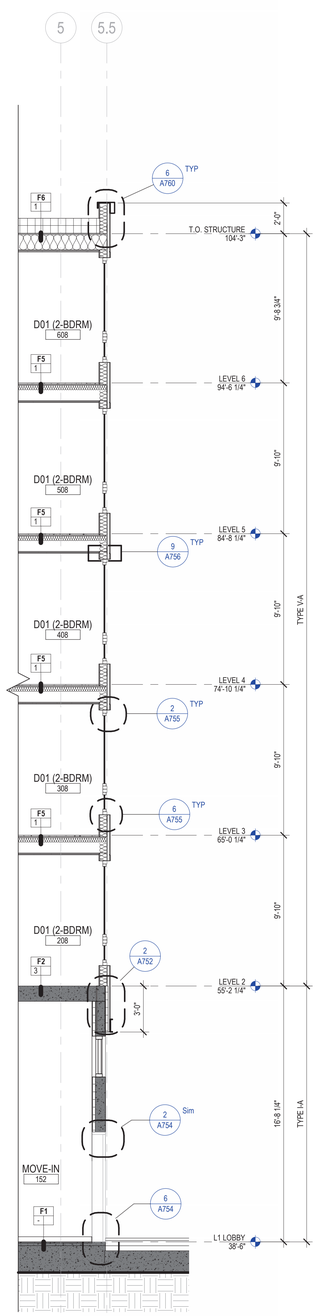
WALL SECTIONS

A350

2/2/2024 10:40:10 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

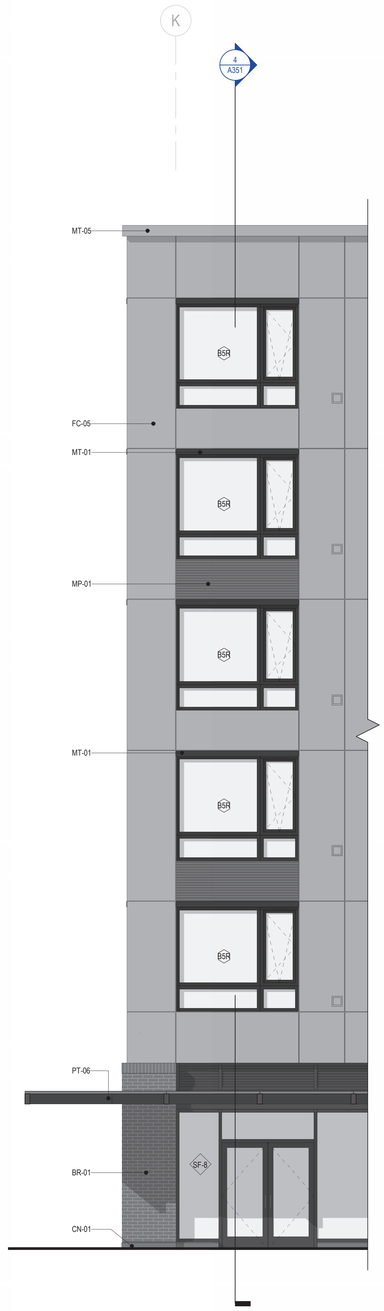
1 ENLARGED ELEVATION 4

SCALE: 1/4" = 1'-0"



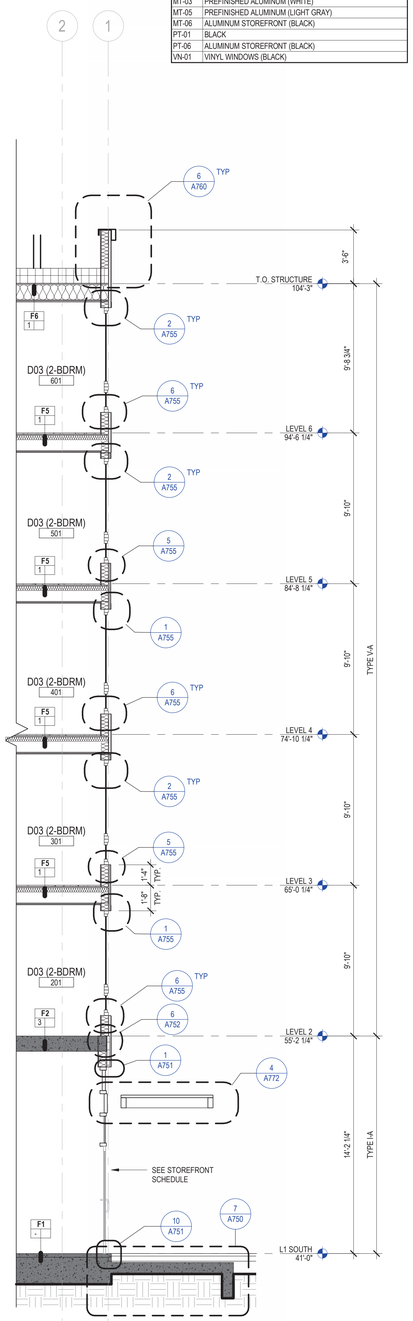
2 WALL SECTION 4

SCALE: 1/4" = 1'-0"



3 ENLARGED ELEVATION 3

SCALE: 1/4" = 1'-0"



4 WALL SECTION 3

SCALE: 1/4" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

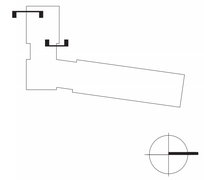
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

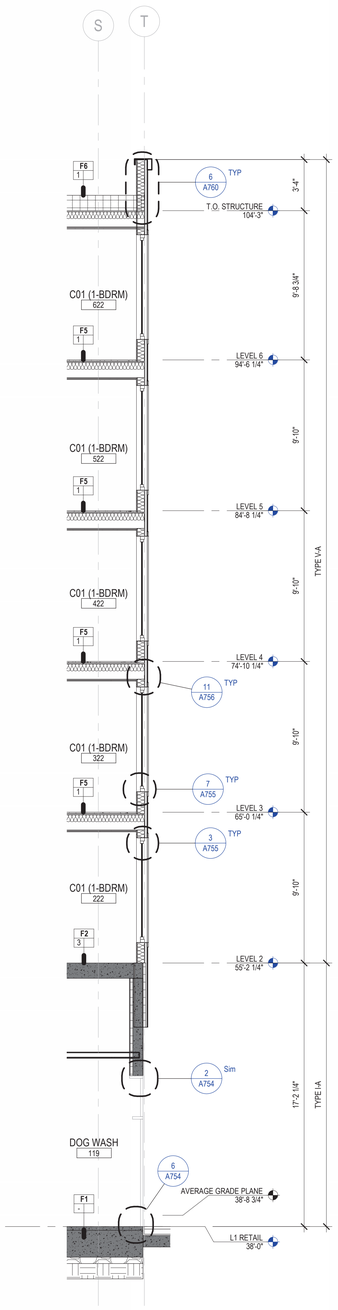
WALL SECTIONS

A351

2/2/2024 10:40:13 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

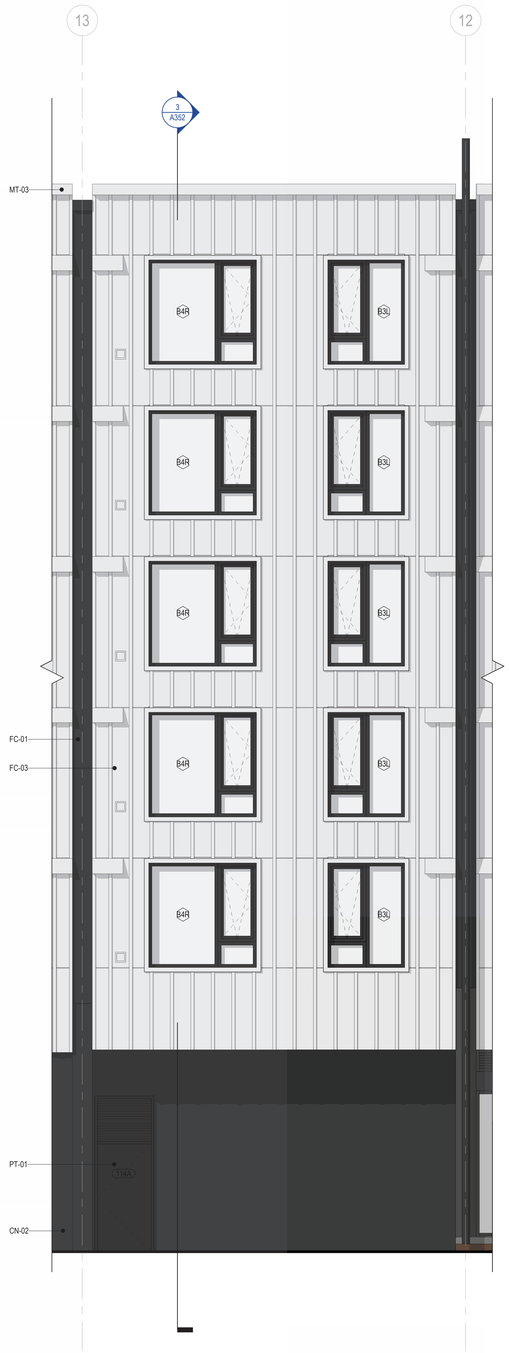
2 ENLARGED ELEVATION 6

SCALE: 1/4" = 1'-0"



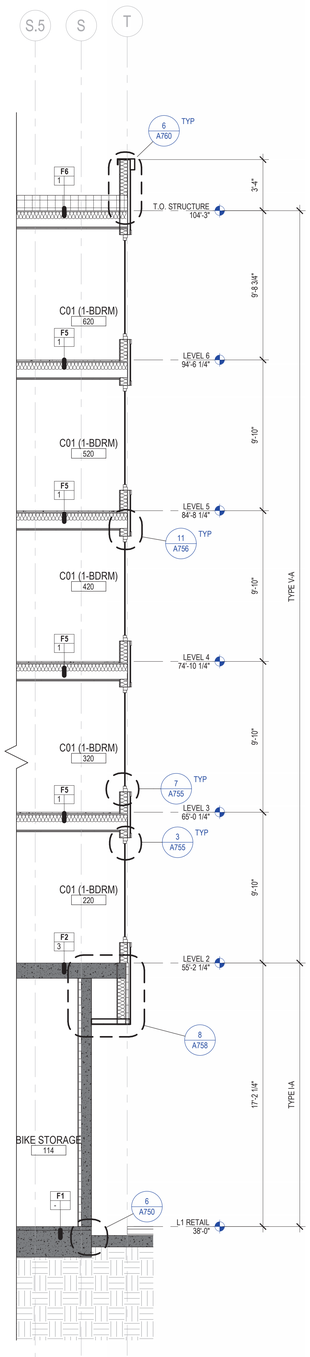
1 WALL SECTION 6

SCALE: 1/4" = 1'-0"



4 ENLARGED ELEVATION 5

SCALE: 1/4" = 1'-0"



3 WALL SECTION 5

SCALE: 1/4" = 1'-0"

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

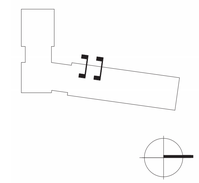
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL SECTIONS

A352

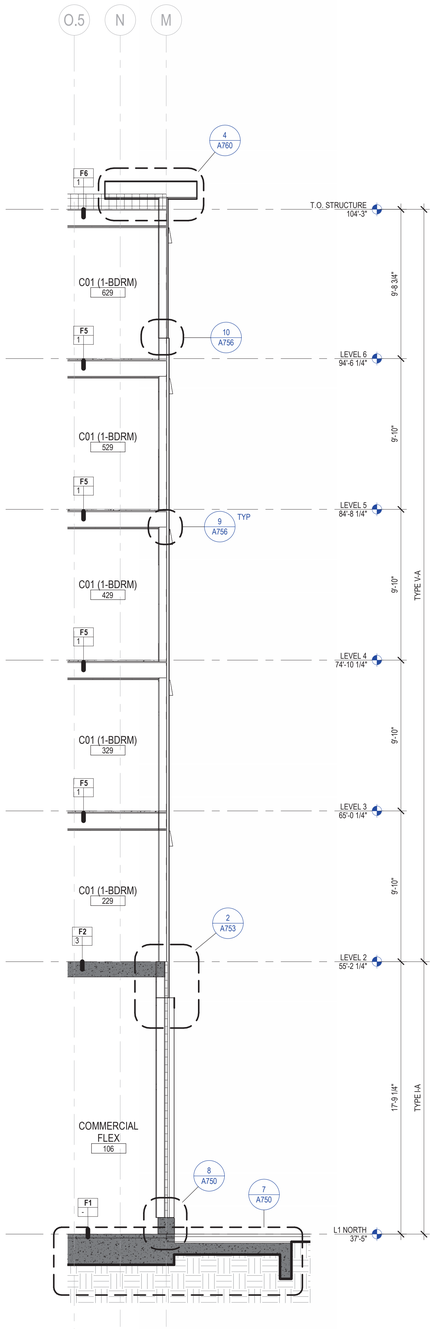
2/2/2024 10:40:17 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

MATERIAL KEYNOTES

BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

5 ENLARGED ELEVATION 8

SCALE: 1/4" = 1'-0"

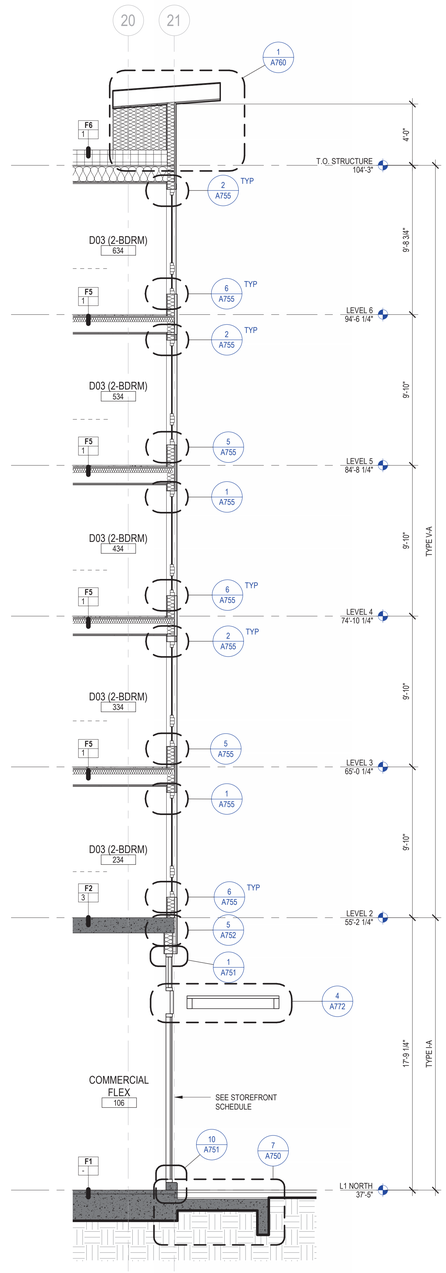


3 WALL SECTION 8

SCALE: 1/4" = 1'-0"

2 ENLARGED ELEVATION 7

SCALE: 1/4" = 1'-0"



1 WALL SECTION 7

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

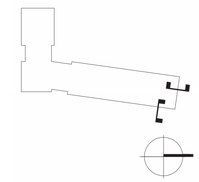
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:Author
12/02/22

WALL SECTIONS

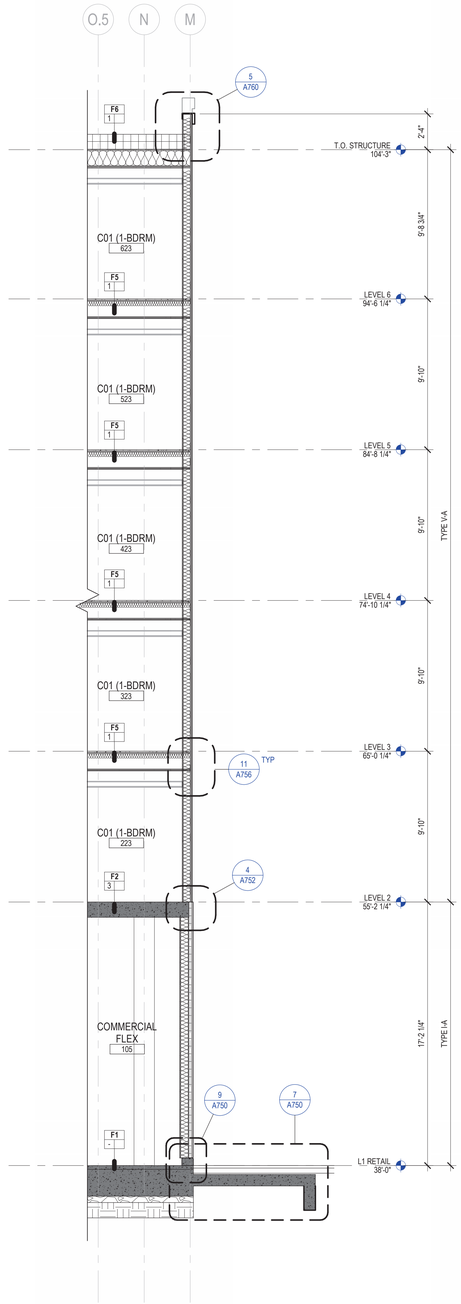
A353

2/2/2024 10:40:21 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

MATERIAL KEYNOTES	
BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

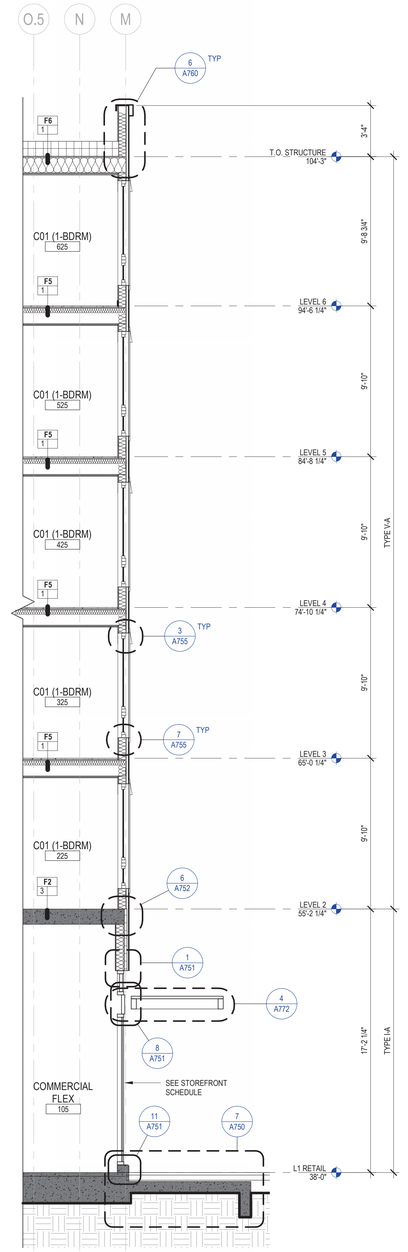
1 ENLARGED ELEVATION 9

SCALE: 1/4" = 1'-0"



2 WALL SECTION 10

SCALE: 1/4" = 1'-0"



3 WALL SECTION 9

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

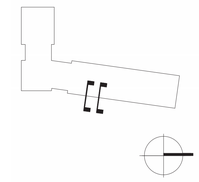
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

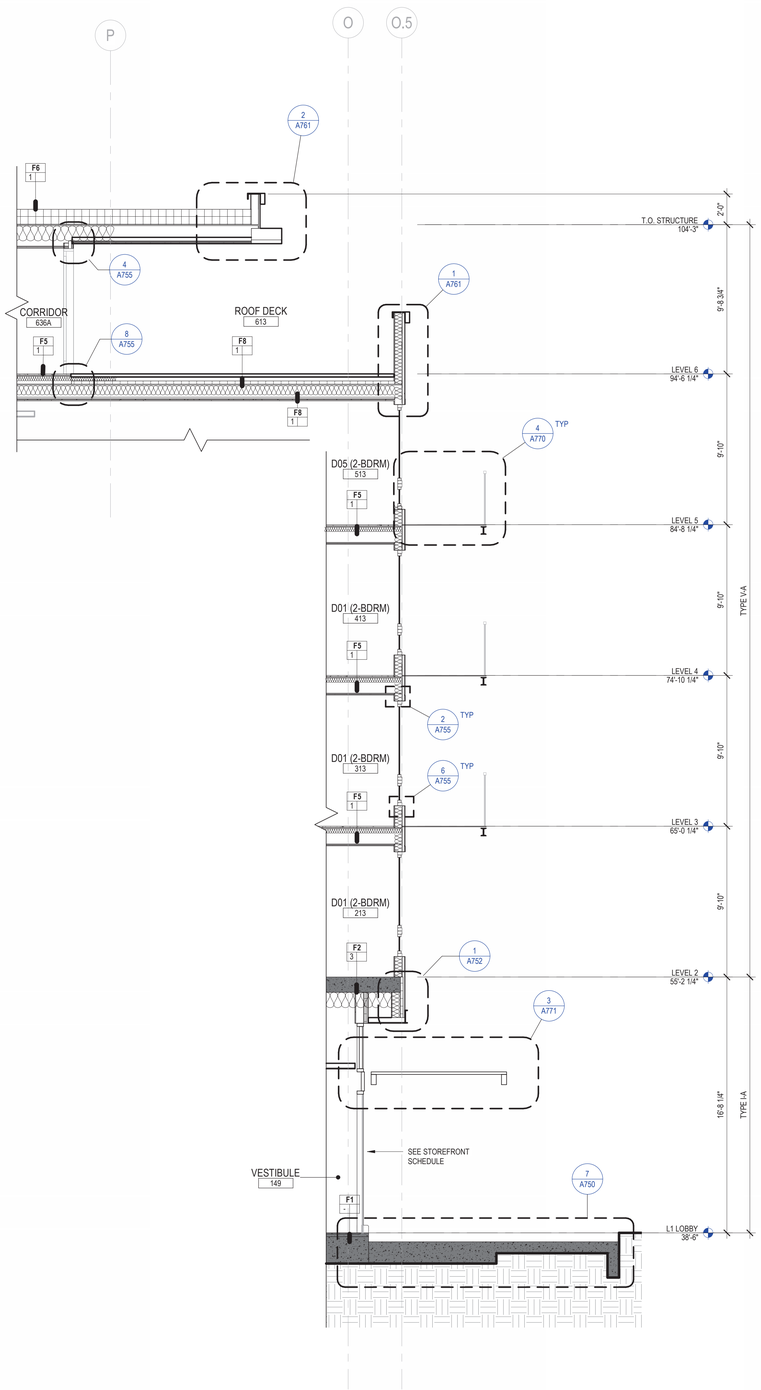
WALL SECTIONS

A354

2/2/2024 10:40:24 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

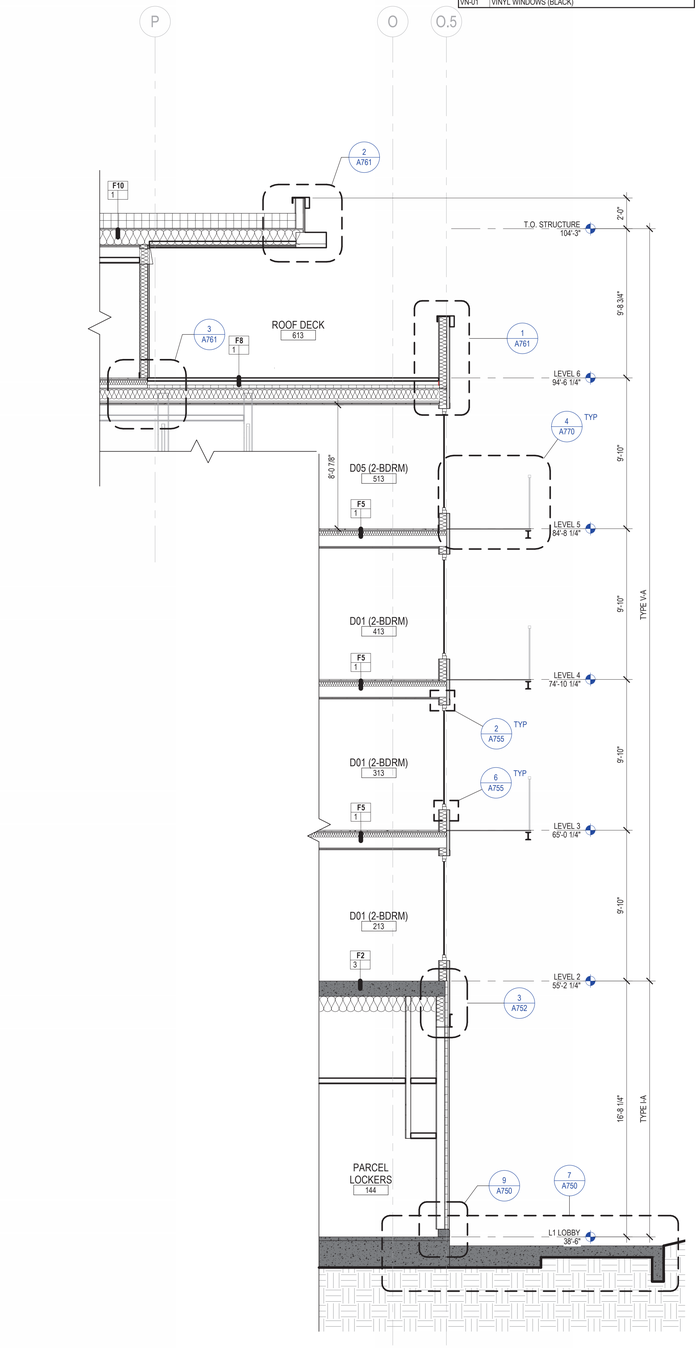
1 ENLARGED ELEVATION 11

SCALE: 1/4" = 1'-0"



2 WALL SECTION 12

SCALE: 1/4" = 1'-0"



3 WALL SECTION 11

SCALE: 1/4" = 1'-0"

MATERIAL KEYNOTES	
BR-01	BRICK FULL FACE VENEER
CN-01	FINISH CONCRETE
CN-02	FINISH CONCRETE PAINTED BLACK
FC-01	FIBER CEMENT BOARD (PAINTED BLACK)
FC-02	FIBER CEMENT V GROOVE (PAINTED RED)
FC-03	FIBER CEMENT BOARD AND BATTON (PAINTED WHITE)
FC-04	FIBER CEMENT BOARD (PAINTED DARK GRAY)
FC-05	FIBER CEMENT BOARD (PAINTED LIGHT GRAY)
GL-01	VISION GLASS WINDOWS DOORS
MP-01	METAL PANEL HORIZONTAL 2" (DARK GRAY)
MP-02	ALUMINUM COMPOSITE PANEL (BLACKENED STEEL)
MT-01	PREFINISHED ALUMINUM (BLACK)
MT-02	PREFINISHED ALUMINUM (RED)
MT-03	PREFINISHED ALUMINUM (WHITE)
MT-05	PREFINISHED ALUMINUM (LIGHT GRAY)
MT-06	ALUMINUM STOREFRONT (BLACK)
PT-01	BLACK
PT-06	ALUMINUM STOREFRONT (BLACK)
VN-01	VINYL WINDOWS (BLACK)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

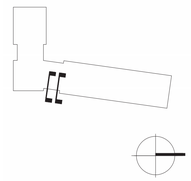
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL SECTIONS

A355

2/2/2024 10:40:28 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

ENLARGED PLAN GENERAL NOTES

1. ALL DIMS ARE TO FACE OF STRUCTURE, U.N.O.

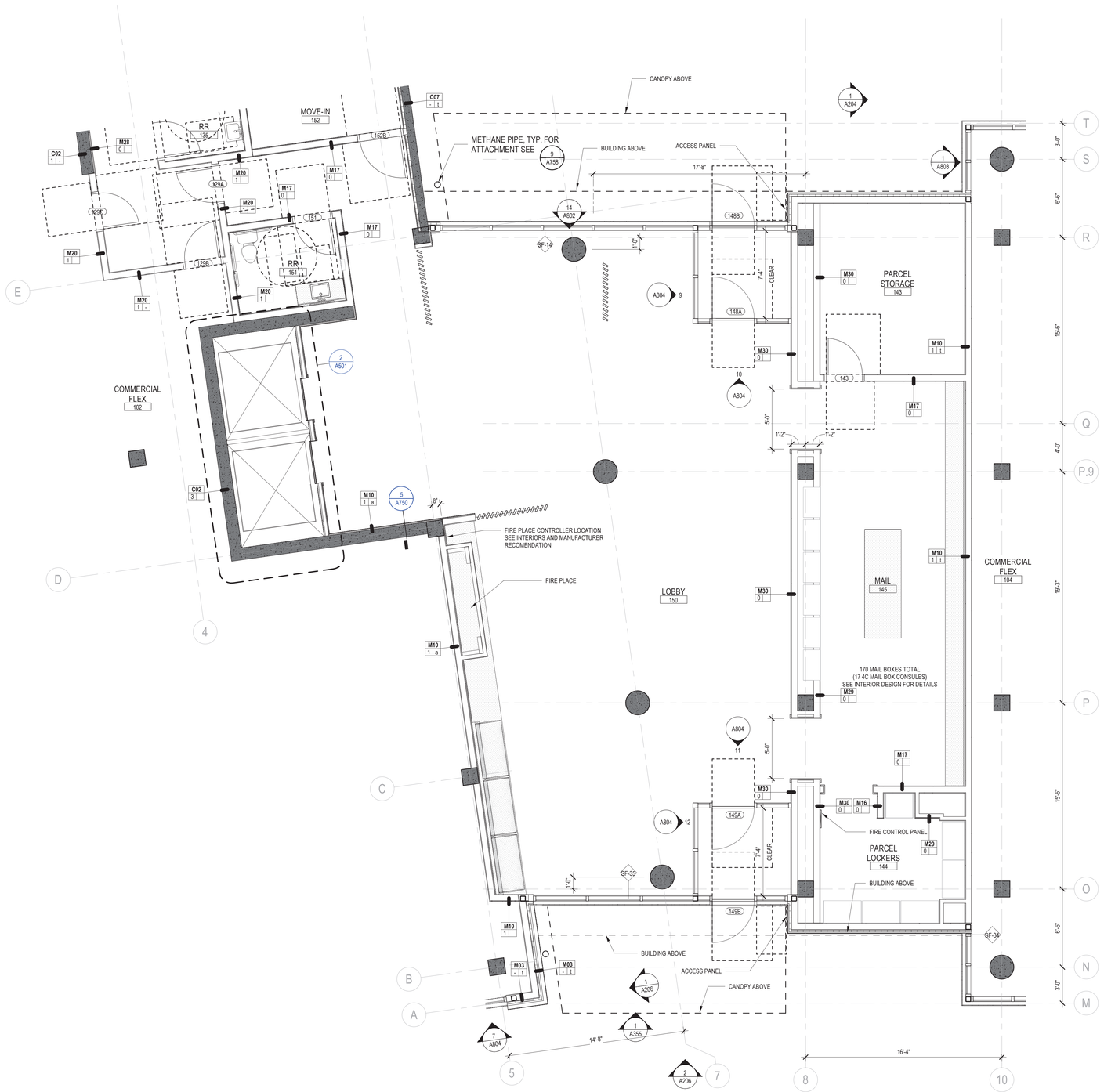
ENLARGED PLAN LEGEND

DOOR SYMBOL 101

STOREFRONT SYMBOL SF-##

PARTITION SYMBOL A / 1 | a — PLAN CONFIGURATION; ACOUSTIC INFORMATION; FIRE RATING

DIRECTION OF SLOPE



1 LOBBY PLAN - LEVEL 1

SCALE: 1/4" = 1'-0"

2/8/2024 3:34:47 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

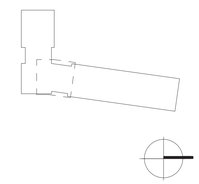
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/09/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - LOBBY

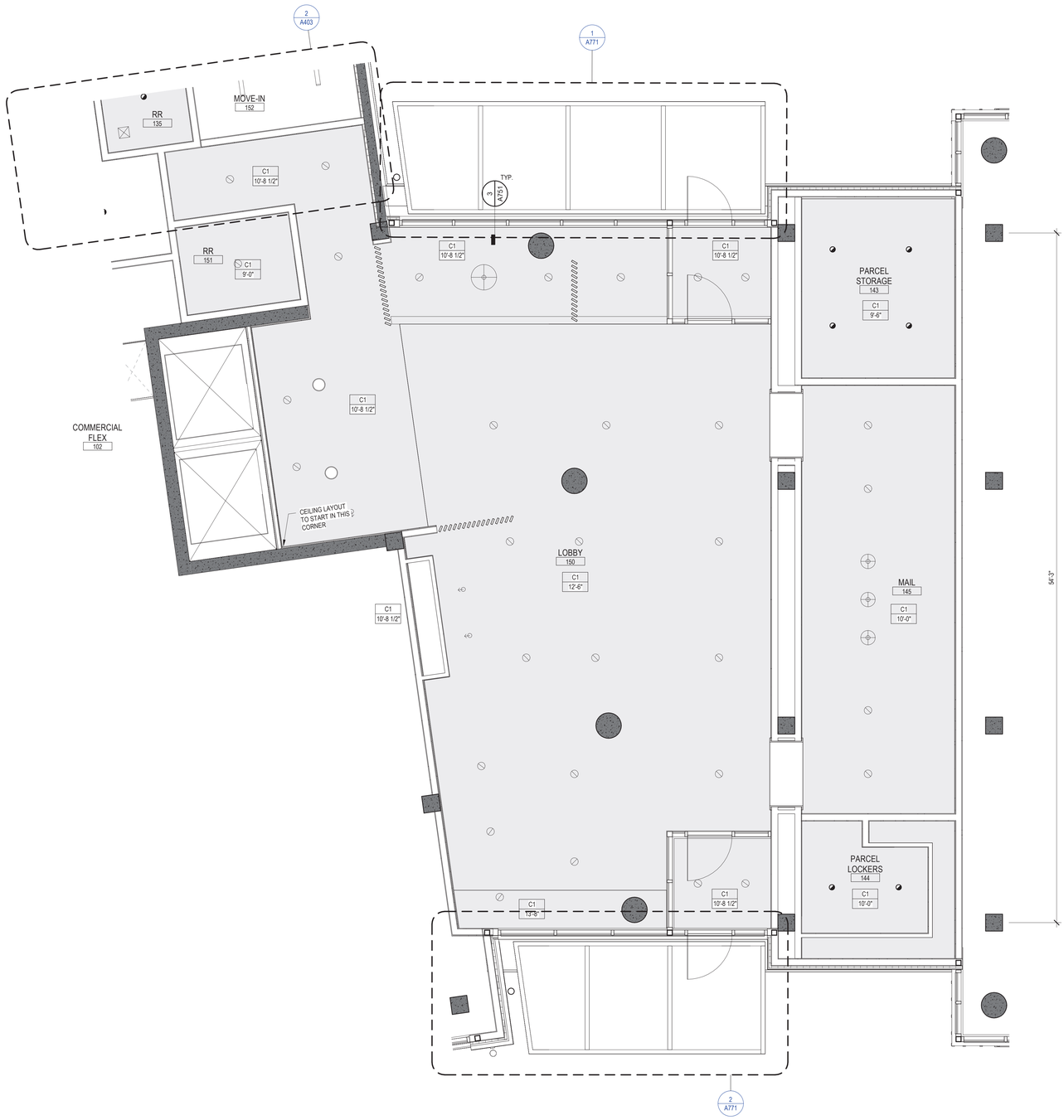
A401

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT — C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD — CS = CEILING, WS = WALL MOUNTED
CFM FAN — 50 CFM
SMOKE/CO2 DETECTOR — SD / CO
FIRE ALARM — FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE



1 LOBBY RCP - LEVEL 1

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

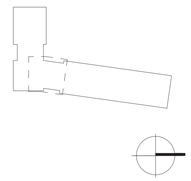
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/09/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - LOBBY RCP

A402

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/8/2024 3:34:49 PM

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

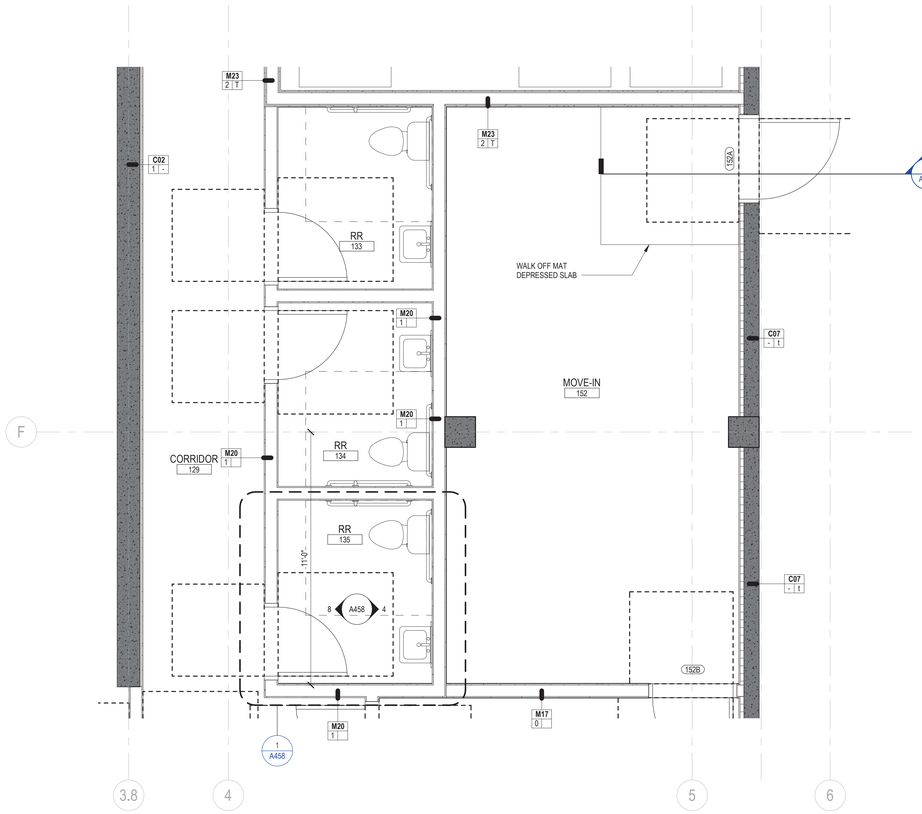
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN: 50 CFM
SMOKE/CO2 DETECTOR: SD / CO
FIRE ALARM: FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED PLAN GENERAL NOTES

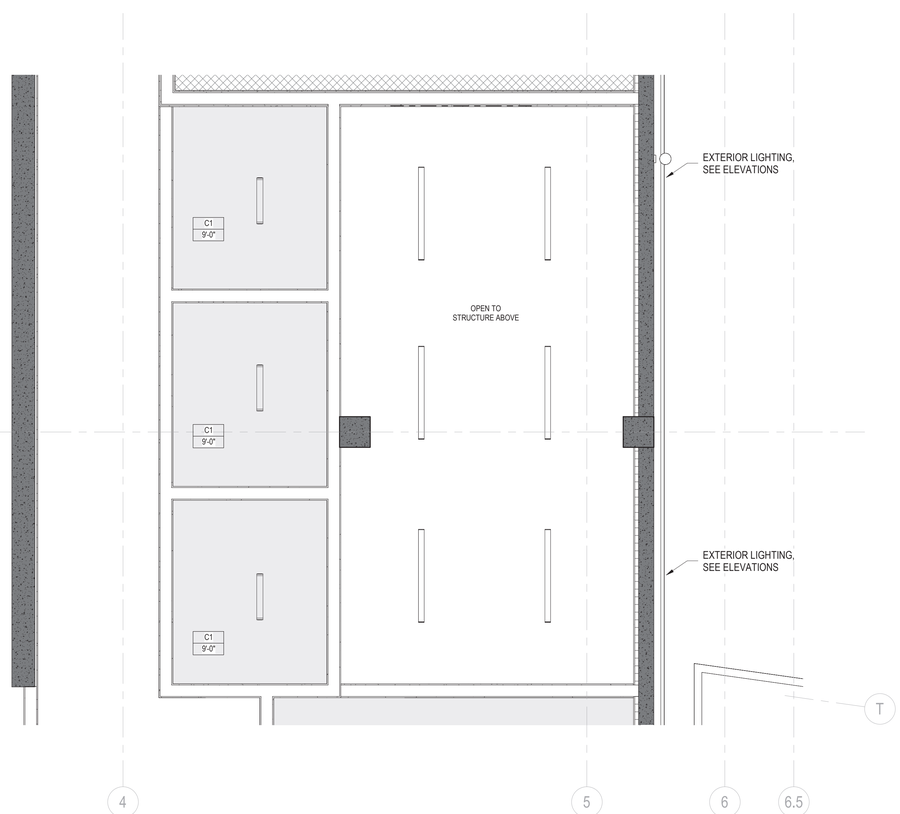
1. ALL DIMS ARE TO FACE OF STRUCTURE, U.N.O.

ENLARGED PLAN LEGEND

DOOR SYMBOL: 101
STOREFRONT SYMBOL: SF-##
PARTITION SYMBOL: A / 1 | a — PLAN CONFIGURATION; ACOUSTIC INFORMATION; FIRE RATING
DIRECTION OF SLOPE



1 MOVE-IN - LEVEL 1
SCALE: 3/8" = 1'-0"



2 MOVE-IN RCP- LEVEL 1
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

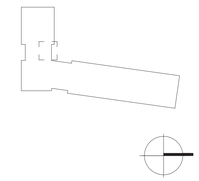
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - MOVE IN AND AMENITIES

A403

2/2/2024 10:40:32 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

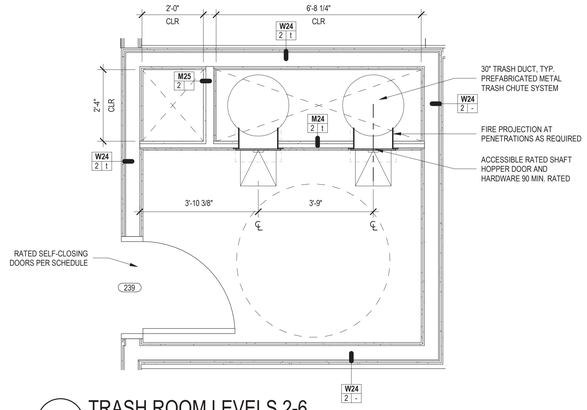
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN — 50 CFM
SMOKE/CO2 DETECTOR — SD / CO
FIRE ALARM — FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED PLAN GENERAL NOTES

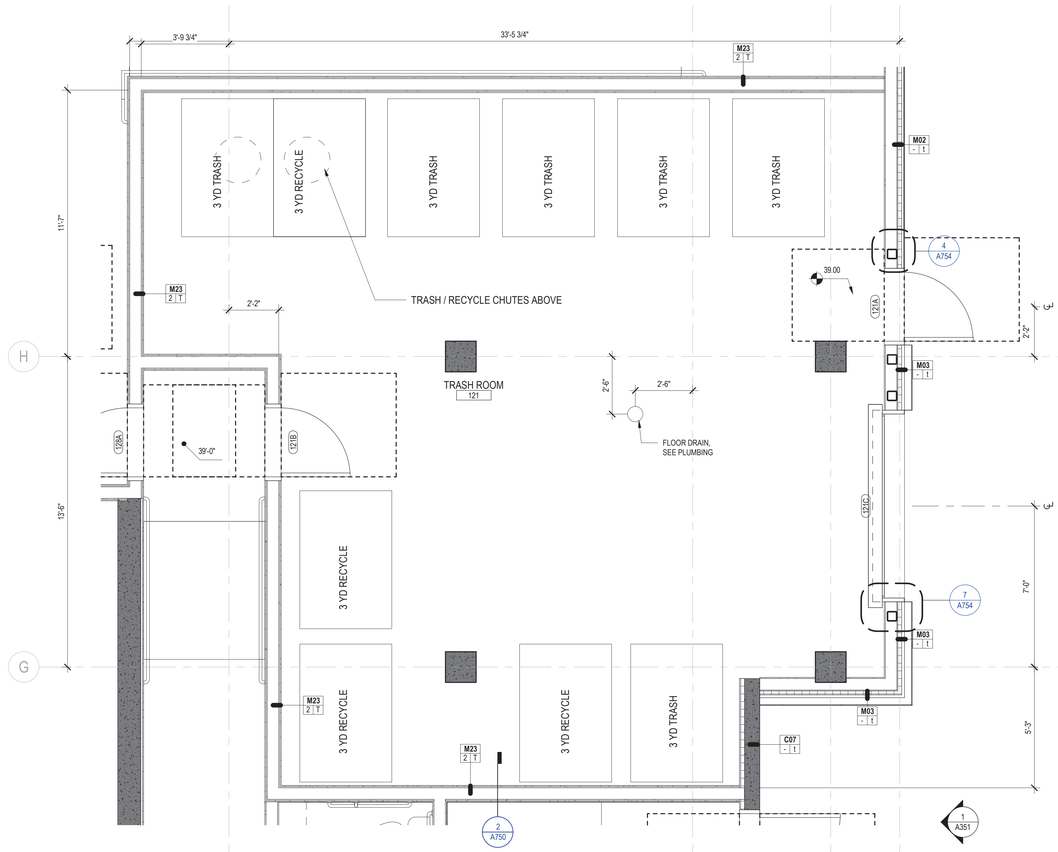
1. ALL DIMS ARE TO FACE OF STRUCTURE, U.N.O.

ENLARGED PLAN LEGEND

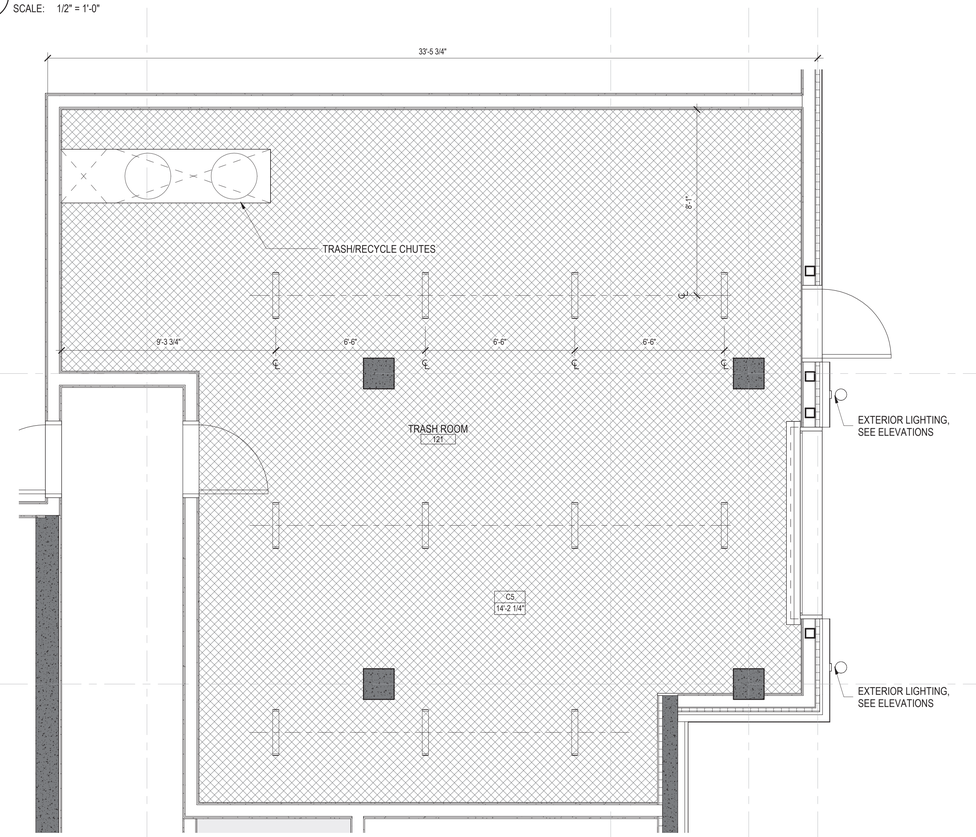
DOOR SYMBOL — 101
STOREFRONT SYMBOL — SF-##
PARTITION SYMBOL — A / 1 | a — PLAN CONFIGURATION / ACOUSTIC INFORMATION / FIRE RATING
DIRECTION OF SLOPE



3 TRASH ROOM LEVELS 2-6
SCALE: 1/2" = 1'-0"



1 TRASH ROOM PLAN - LEVEL 1
SCALE: 3/8" = 1'-0"



2 TRASH ROOM RCP - LEVEL 1
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

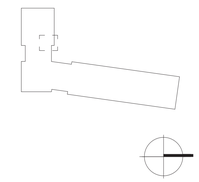
3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - TRASH

A404

2/2/2024 10:40:33 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

ENLARGED PLAN GENERAL NOTES

1. ALL DIMS ARE TO FACE OF STRUCTURE, U.N.O.

ENLARGED PLAN LEGEND

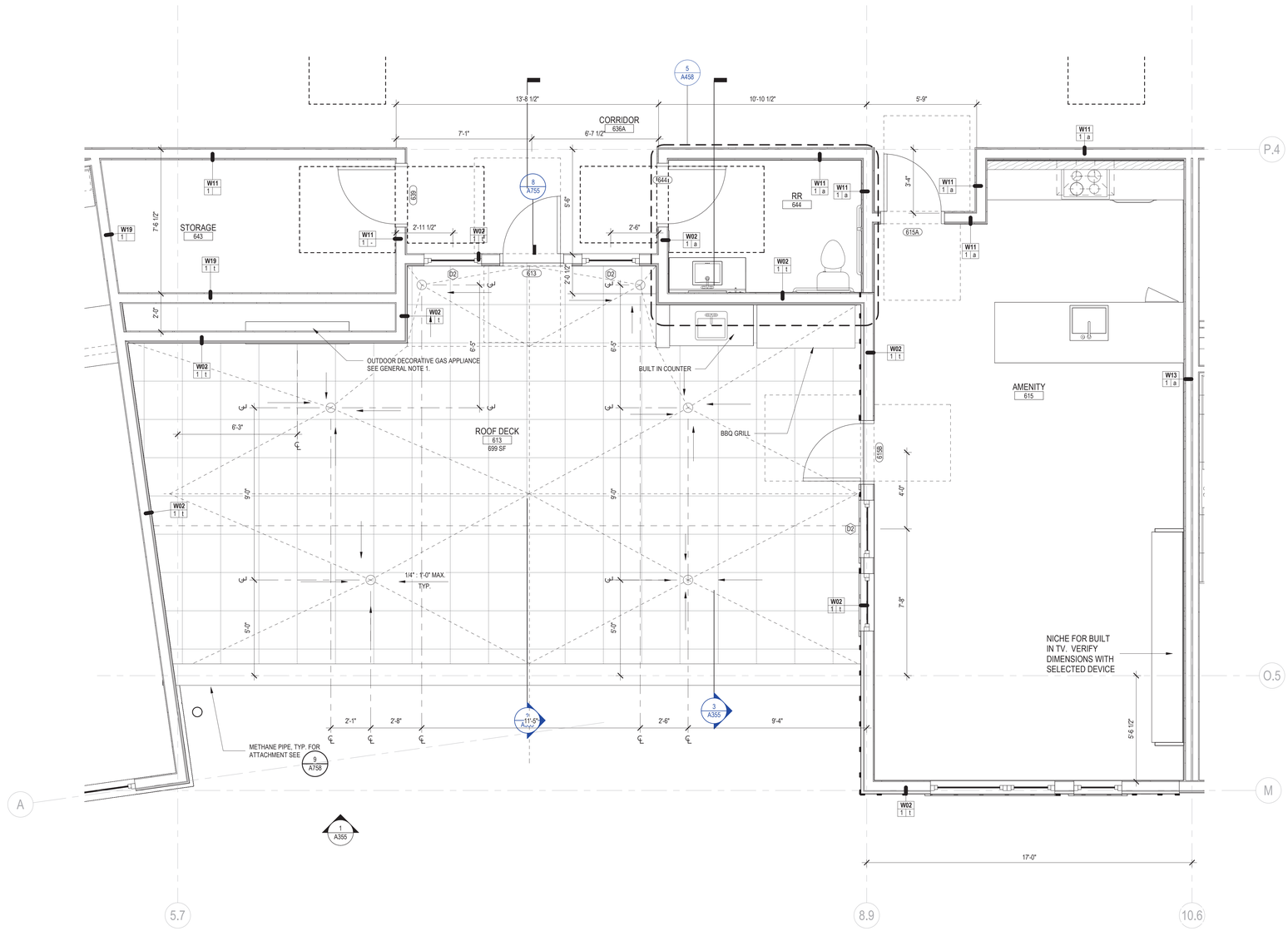
DOOR SYMBOL 101

STOREFRONT SYMBOL SF-##

PARTITION SYMBOL A / 1 | a — PLAN CONFIGURATION; ACOUSTIC INFORMATION; FIRE RATING

DIRECTION OF SLOPE

GENERAL NOTES:
1. THE OUTDOOR DECORATIVE GAS APPLIANCE IS PRODUCT #ODLANAIG-60 IN COMPLIANCE WITH ANSI Z221.97-2017 AND UL RATED MH61458. IT IS AN OPEN AIR GAS PIPED ELEMENT WITH NO REQUIRED VENT OR EXHAUST.



1 ROOF DECK PLAN - LEVEL 6

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

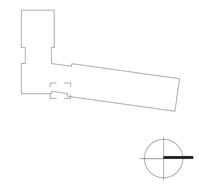
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

90709 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - LEVEL 6 AMENITY

A405

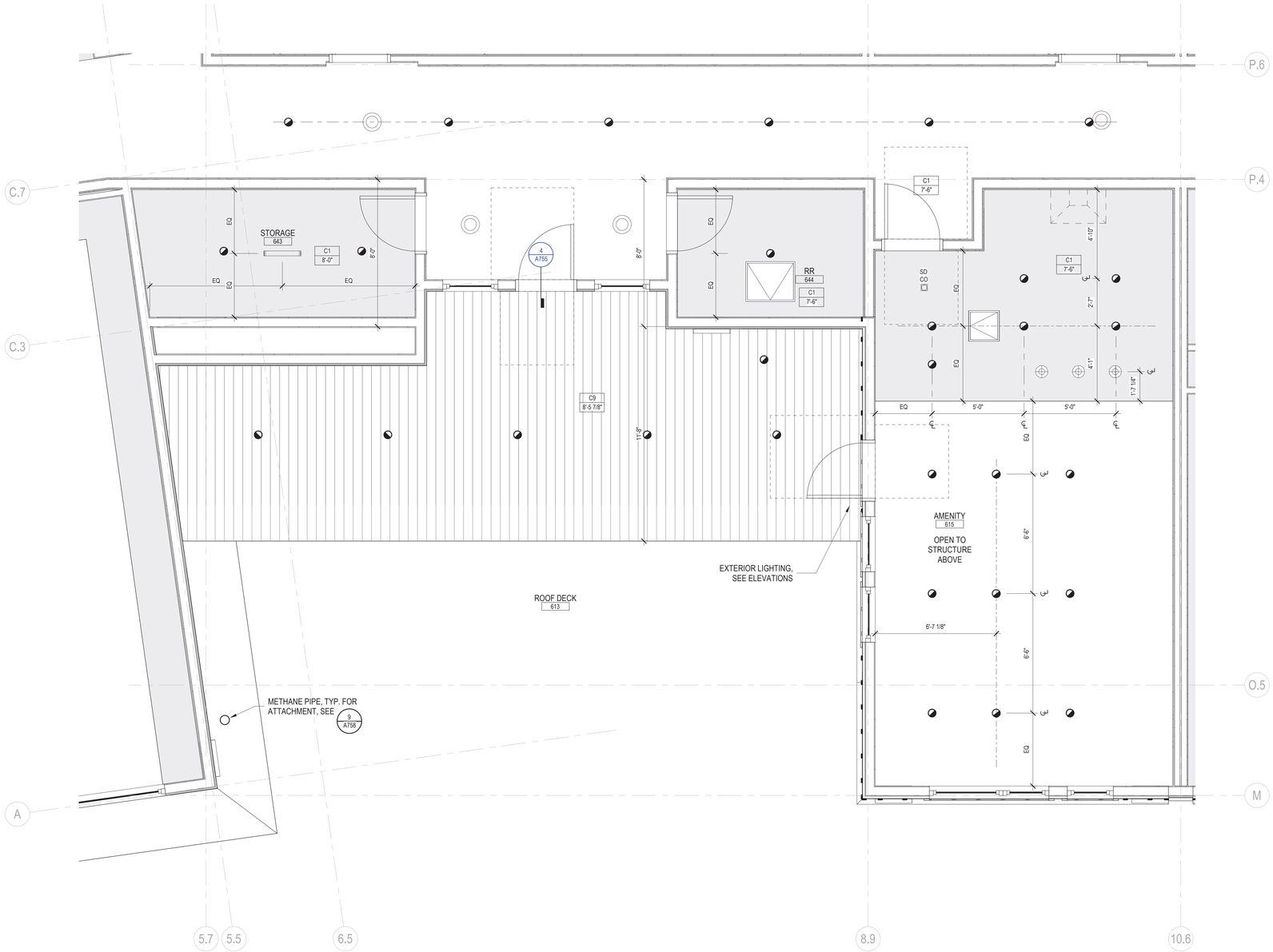
2/2/2024 10:40:34 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE



1 LEVEL 6 AMENTIY RCP

SCALE: 3/8" = 1'-0"

2/2/2024 10:40:35 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

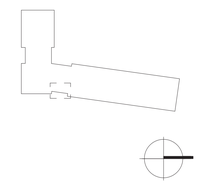
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS - LEVEL 6 AMENITY RCP

A406

REFLECTED CEILING PLAN GENERAL NOTES

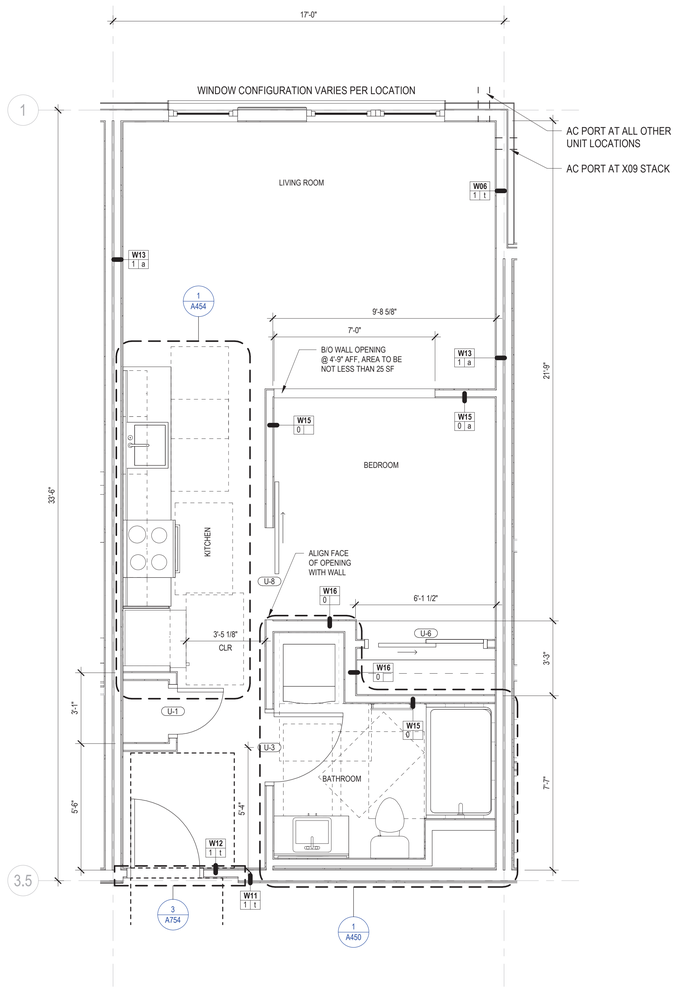
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

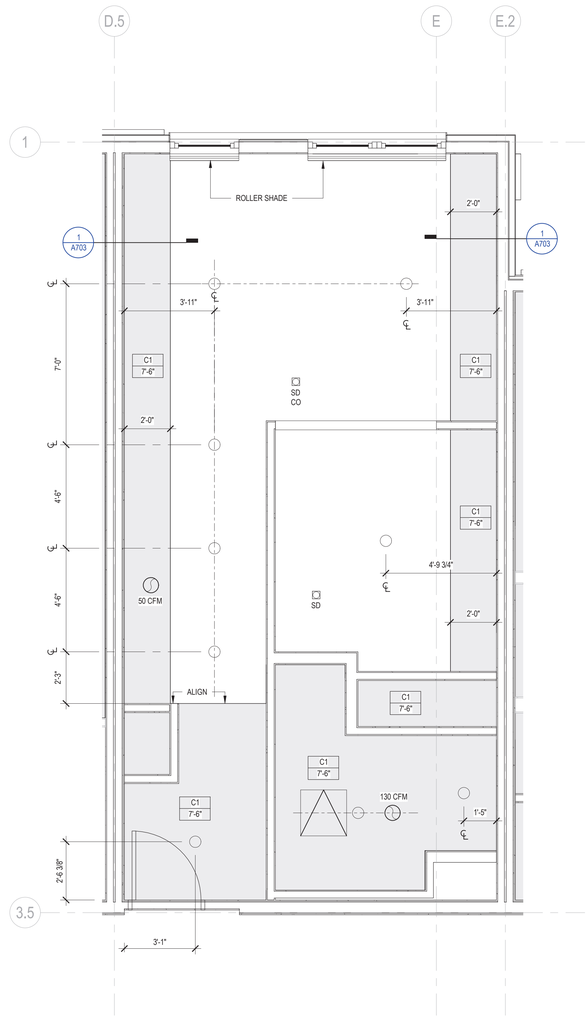
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN: 50 CFM
SMOKE/CO2 DETECTOR: SD CO
FIRE ALARM: FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - B01
SCALE: 3/8" = 1'-0"



2 UNIT RCP - B01
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON
02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - B01

A420

2/2/2024 10:40:36 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

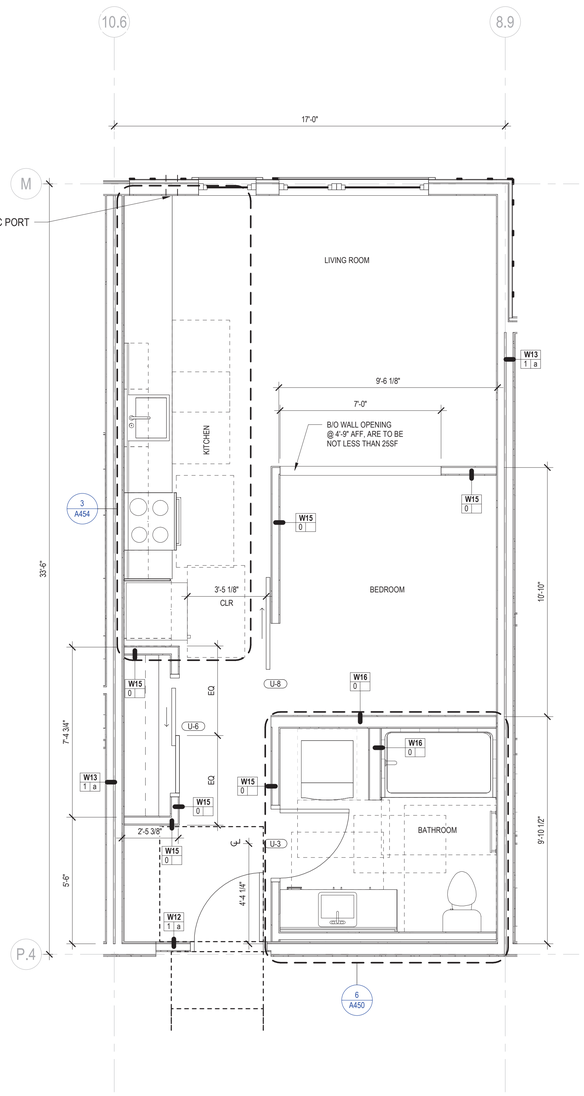
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

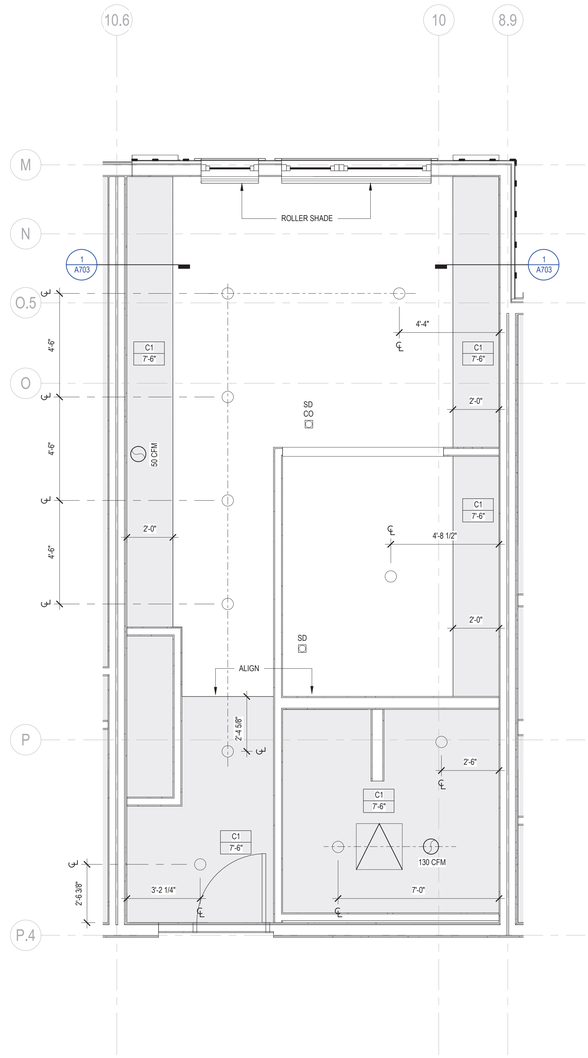
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN: 50 CFM
SMOKE/CO2 DETECTOR: SD / CO
FIRE ALARM: FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - B02
SCALE: 3/8" = 1'-0"



2 UNIT RCP - B02
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - B02

A421

2/2/2024 10:40:37 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

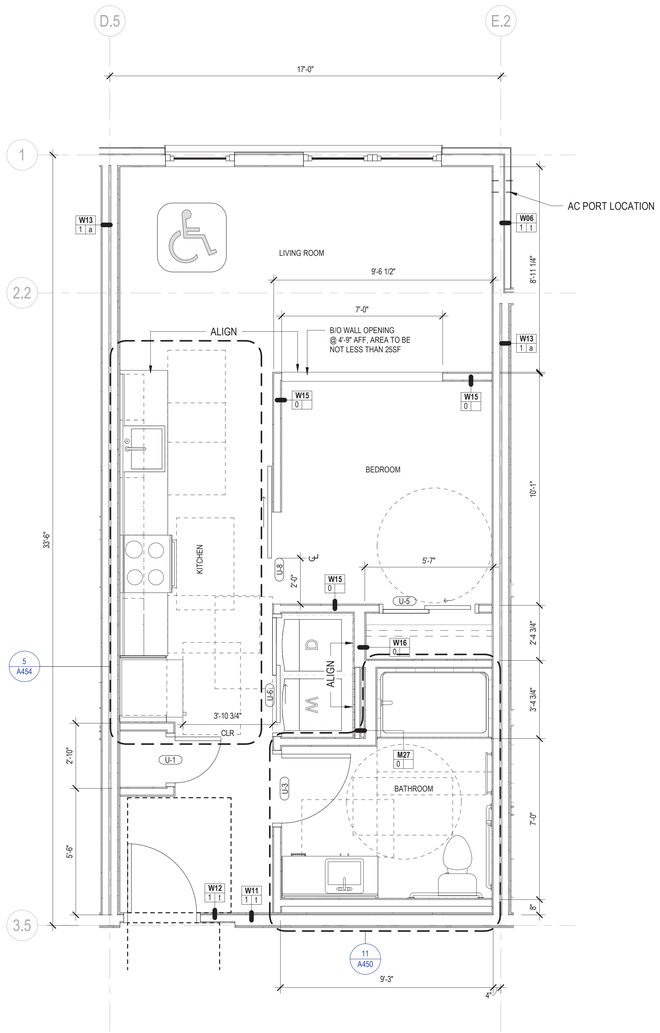
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

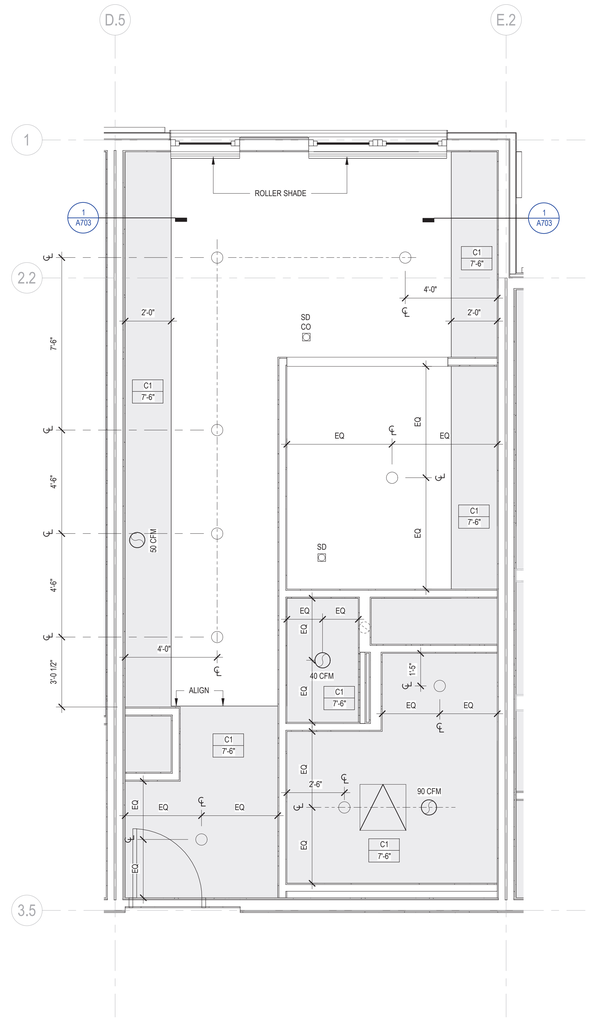
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN: 50 CFM
SMOKE/CO2 DETECTOR: SD / CO
FIRE ALARM: FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - B03 TYPE A
SCALE: 3/8" = 1'-0"



2 UNIT RCP - B03 TYPE A
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8670
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - B03 TYPE A

A422

2/2/2024 10:40:38 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

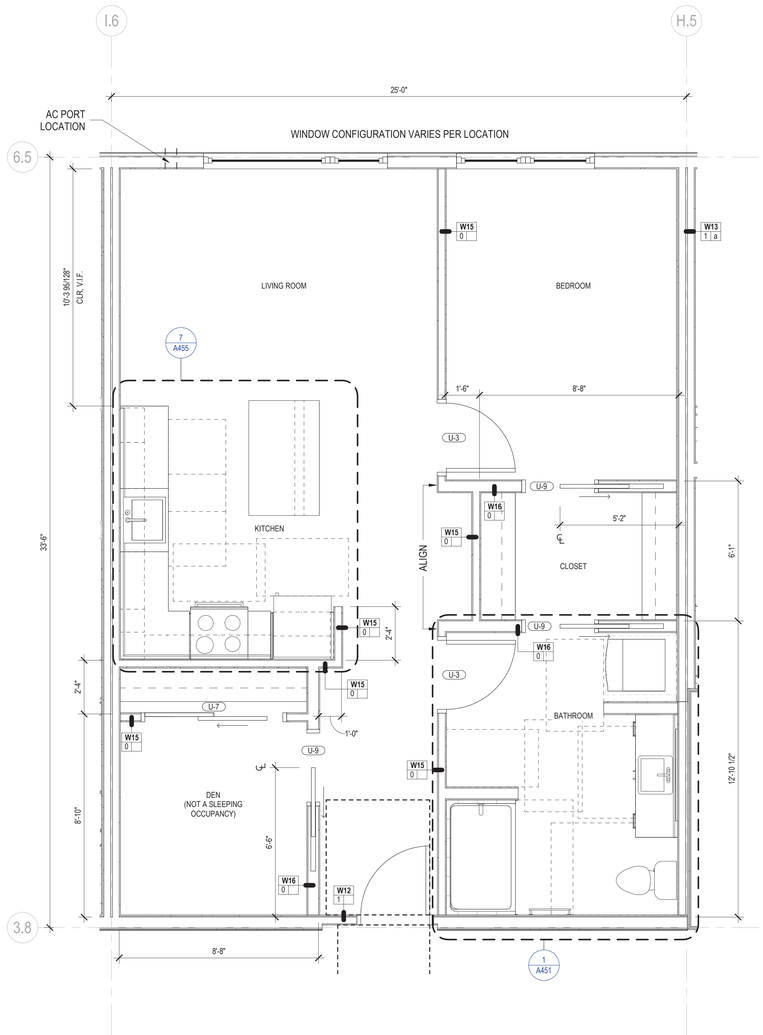
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD, CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

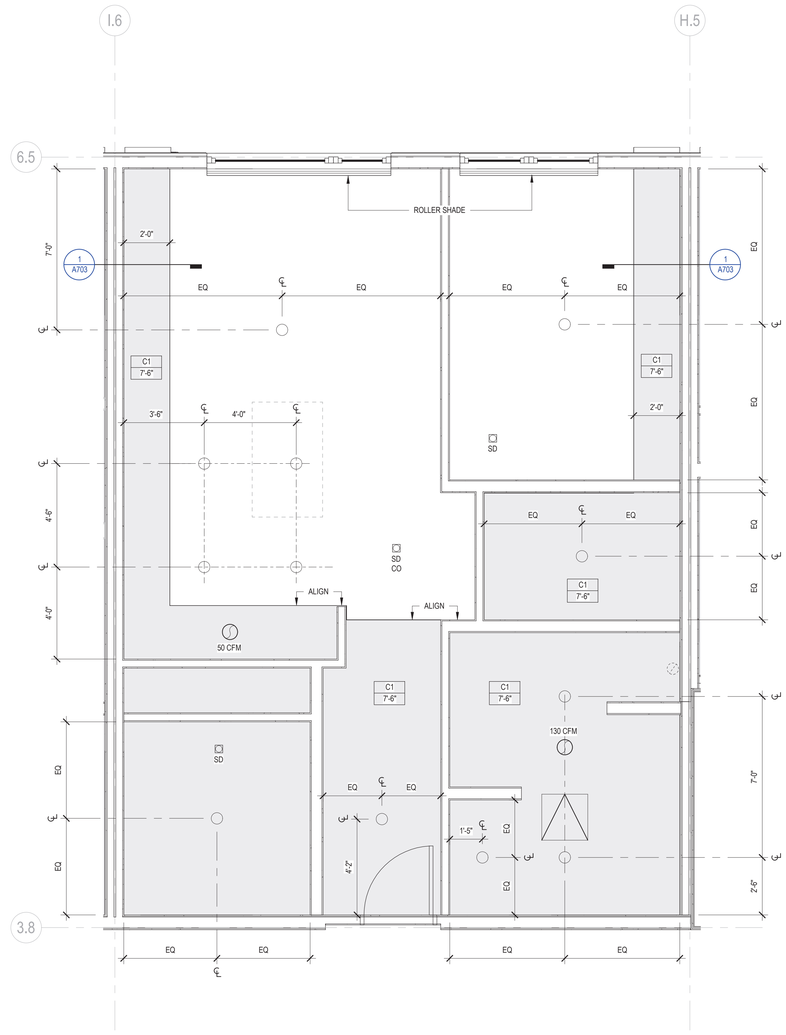
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - C01

SCALE: 3/8" = 1'-0"



2 UNIT RCP - C01

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - C01

A423

2/2/2024 10:40:39 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

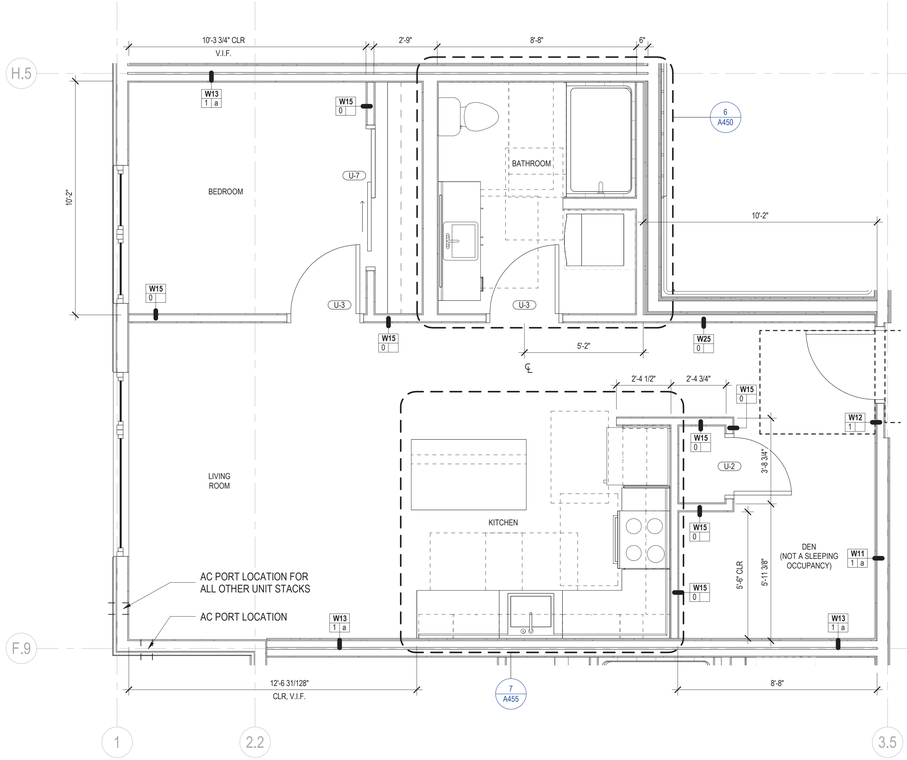
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

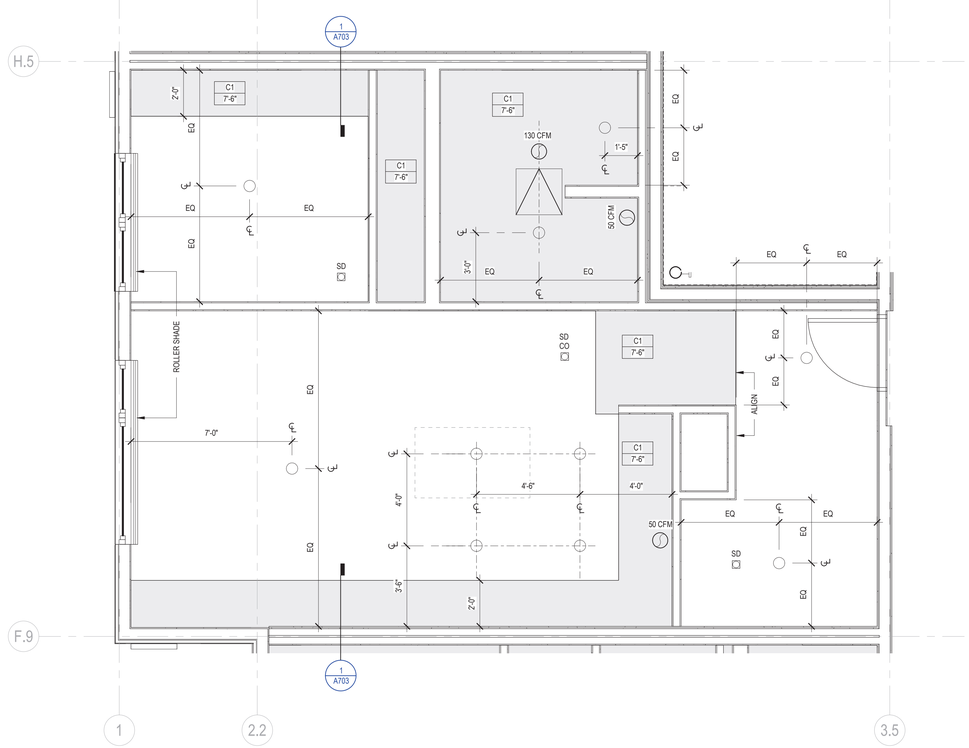
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - C02

SCALE: 3/8" = 1'-0"



2 UNIT RCP - C02

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - C02

A424

2/2/2024 10:40:41 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

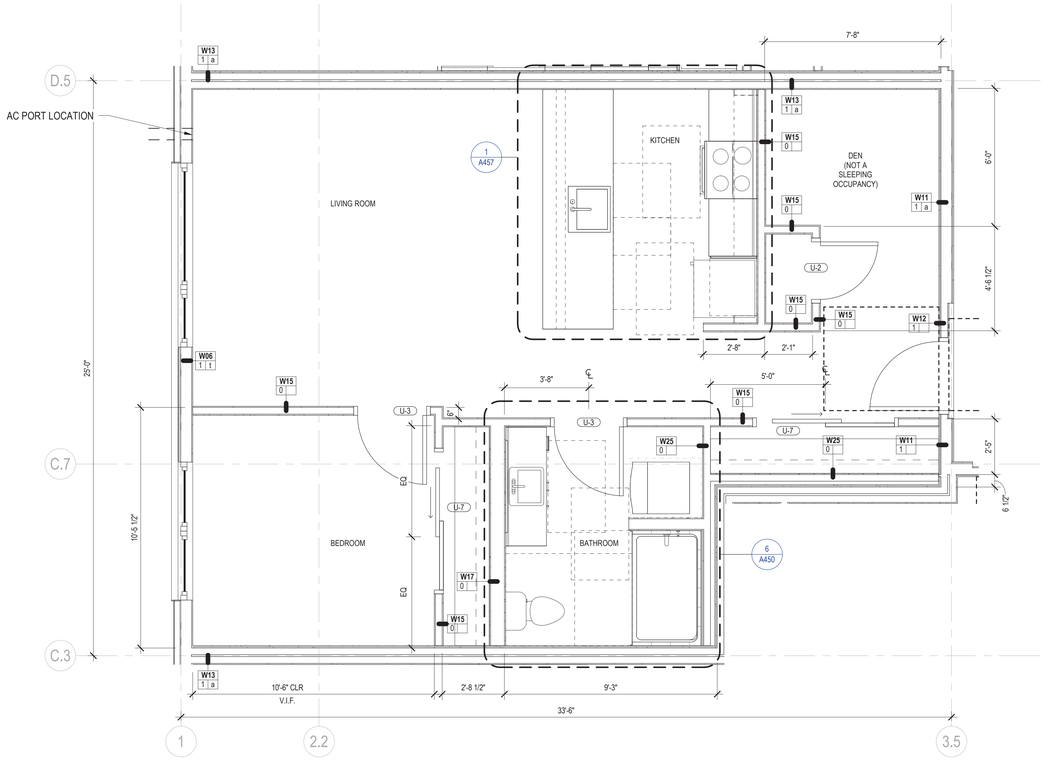
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD / CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

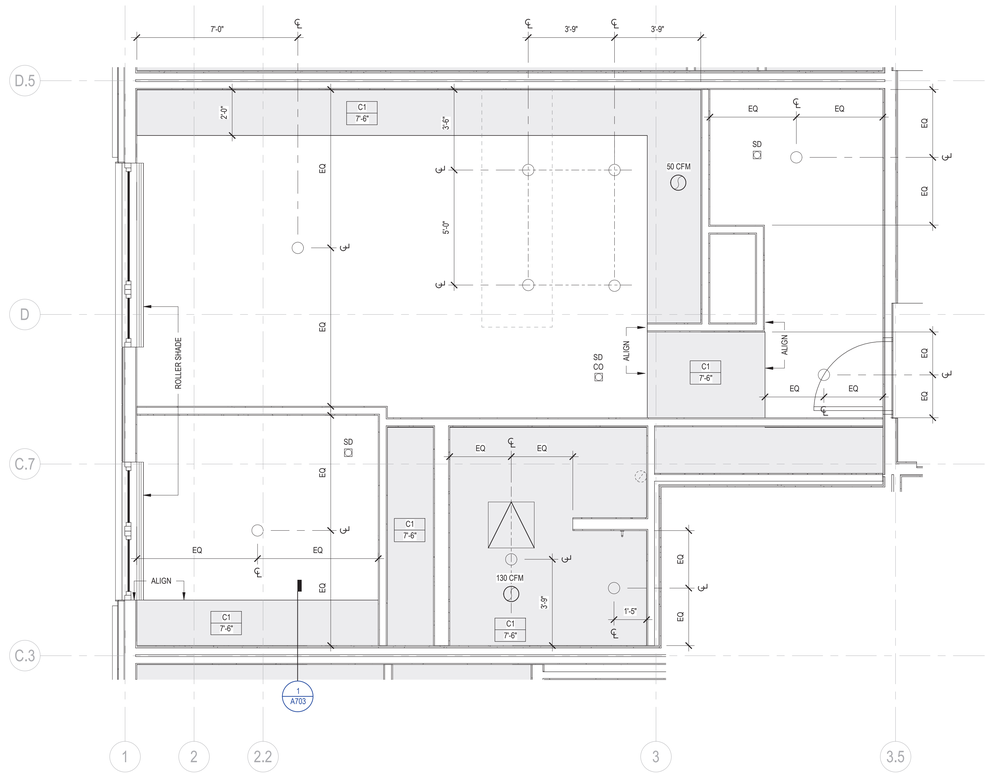
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - C03

SCALE: 3/8" = 1'-0"



2 UNIT RCP - C03

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - C03

A425

2/2/2024 10:40:42 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

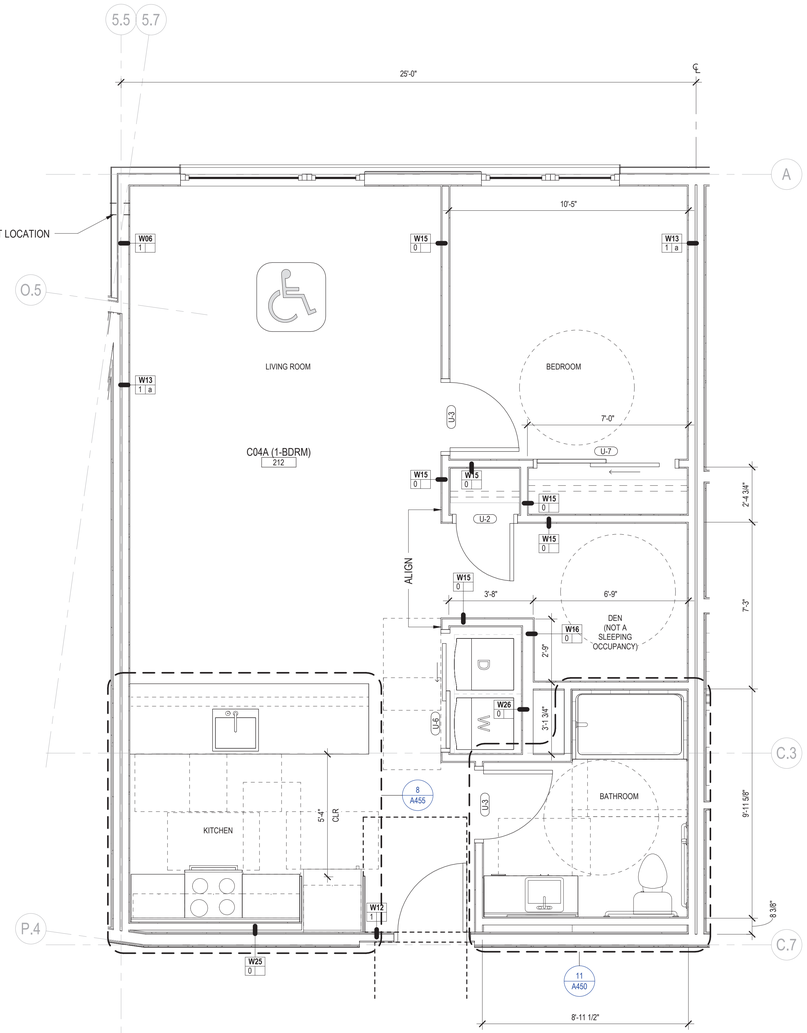
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN: 50 CFM
SMOKE/CO2 DETECTOR: SD / CO
FIRE ALARM: FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

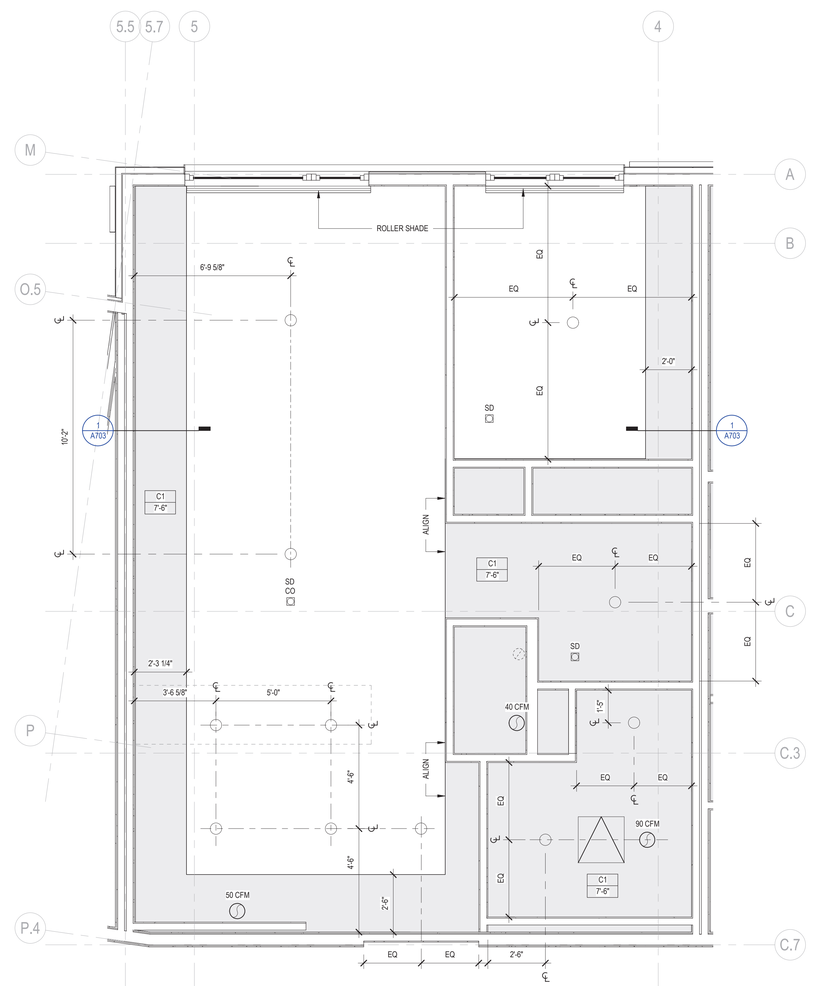
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - C04 TYPE A

SCALE: 3/8" = 1'-0"



2 UNIT RCP - C04 TYPE A

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - C04 TYPE A

A426

2/2/2024 10:40:43 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

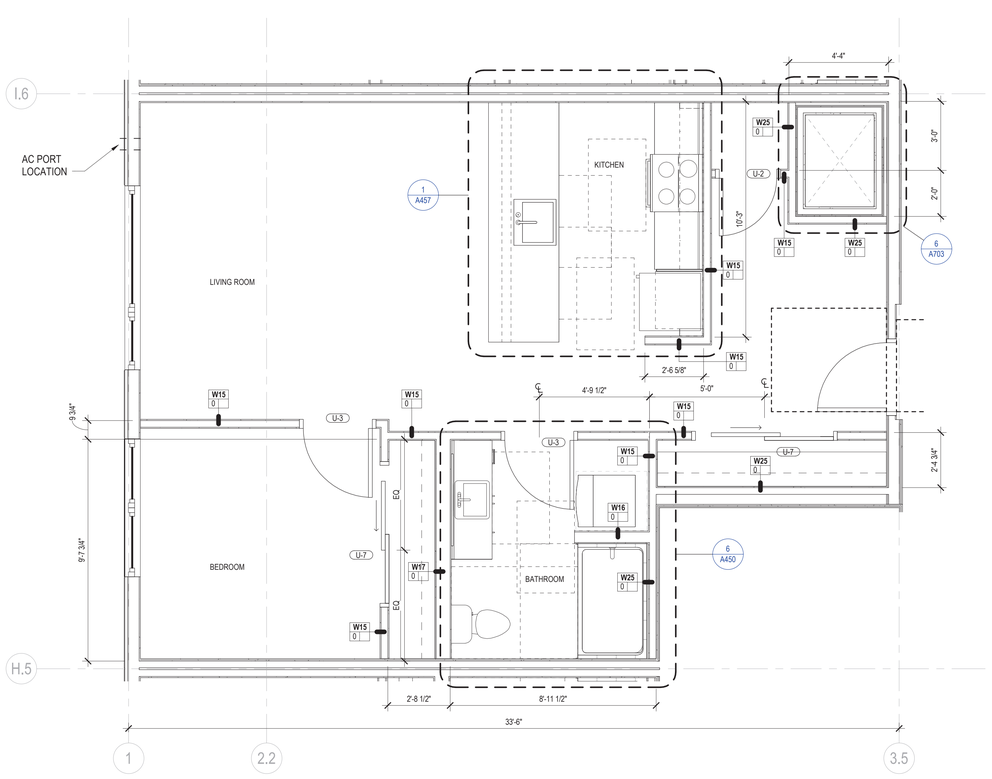
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD / CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

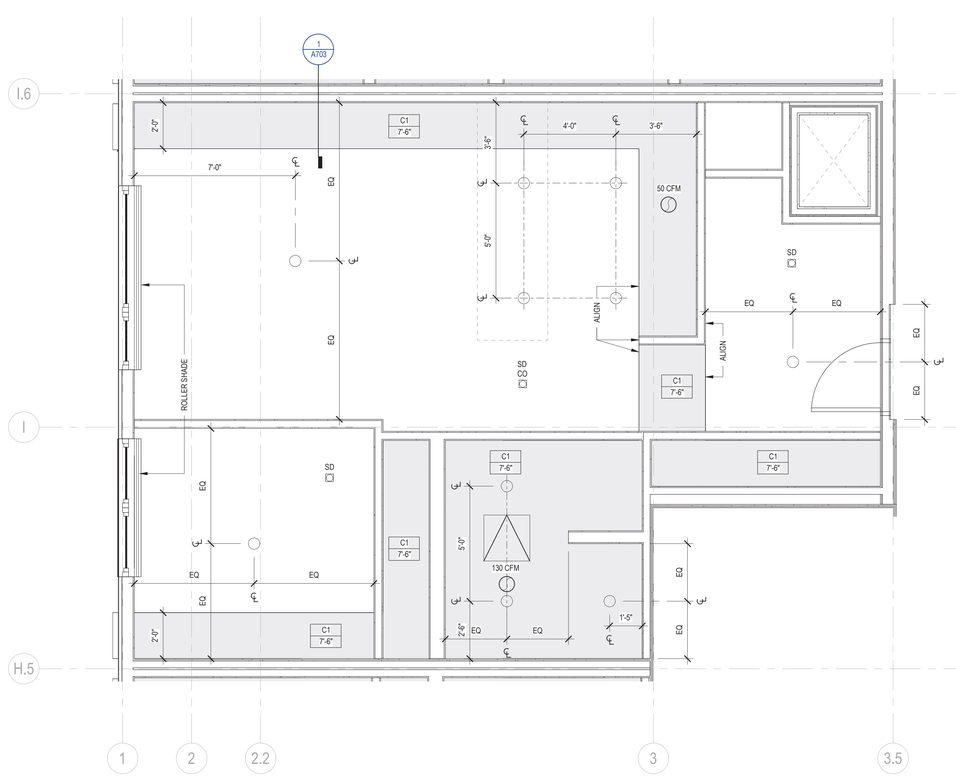
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - C05

SCALE: 3/8" = 1'-0"



2 UNIT RCP - C05

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: Author
05/05/22

ENLARGED UNIT PLANS - C05

A427

2/2/2024 10:40:44 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

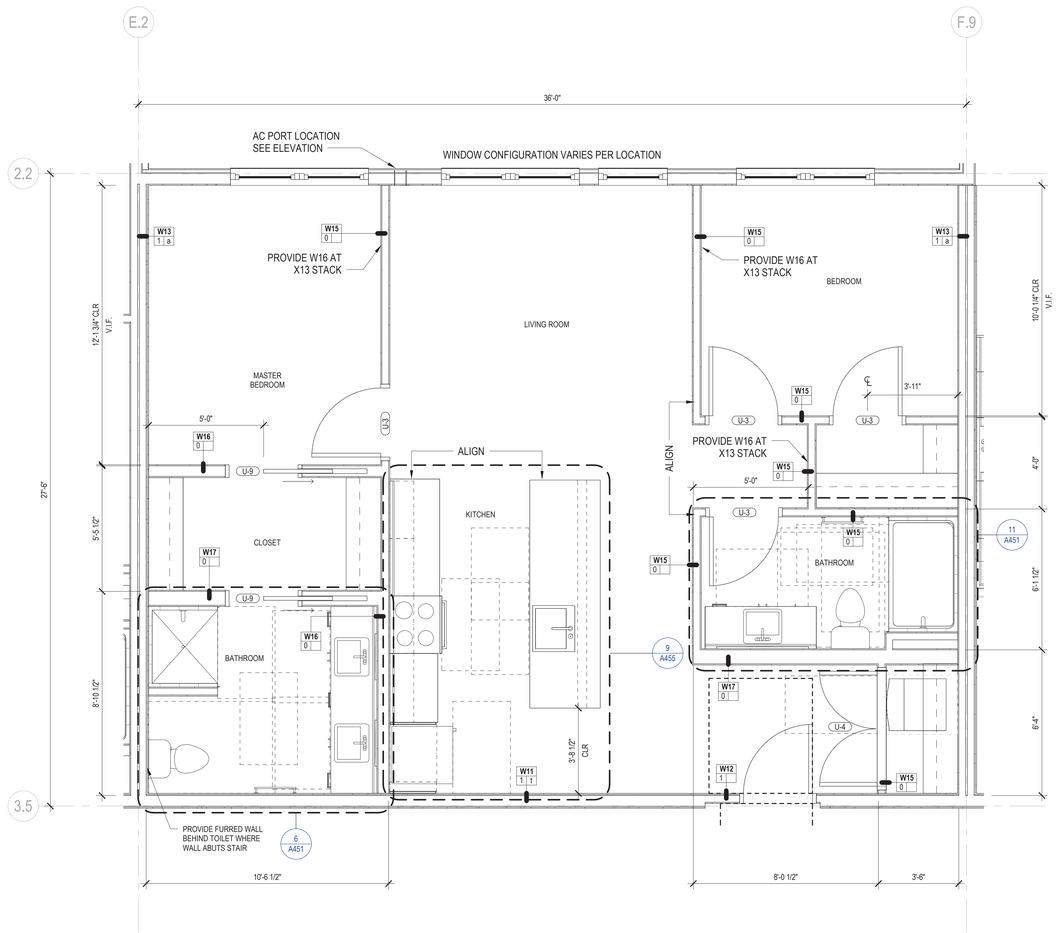
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

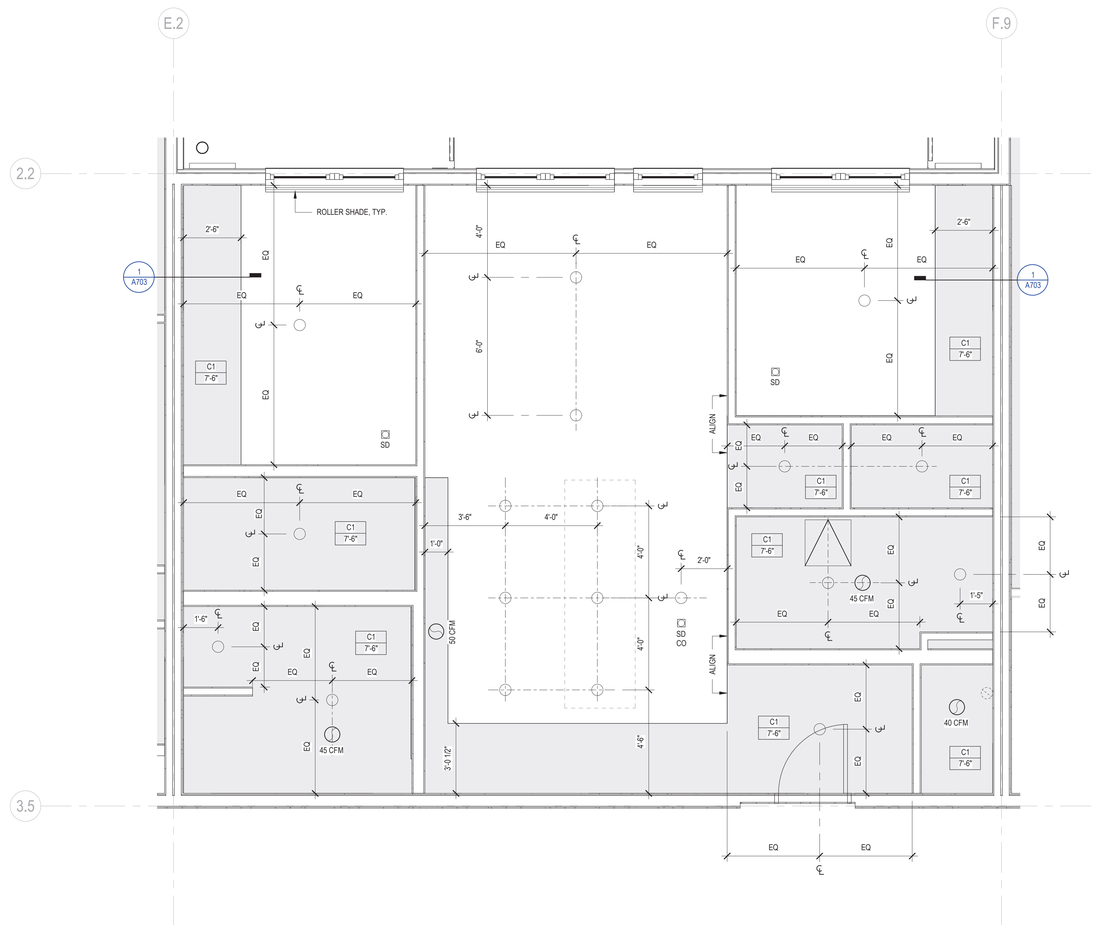
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - D01

SCALE: 3/8" = 1'-0"



2 UNIT RCP - D01

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - D01

A428

2/2/2024 10:40:45 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2\21-5905-01A\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

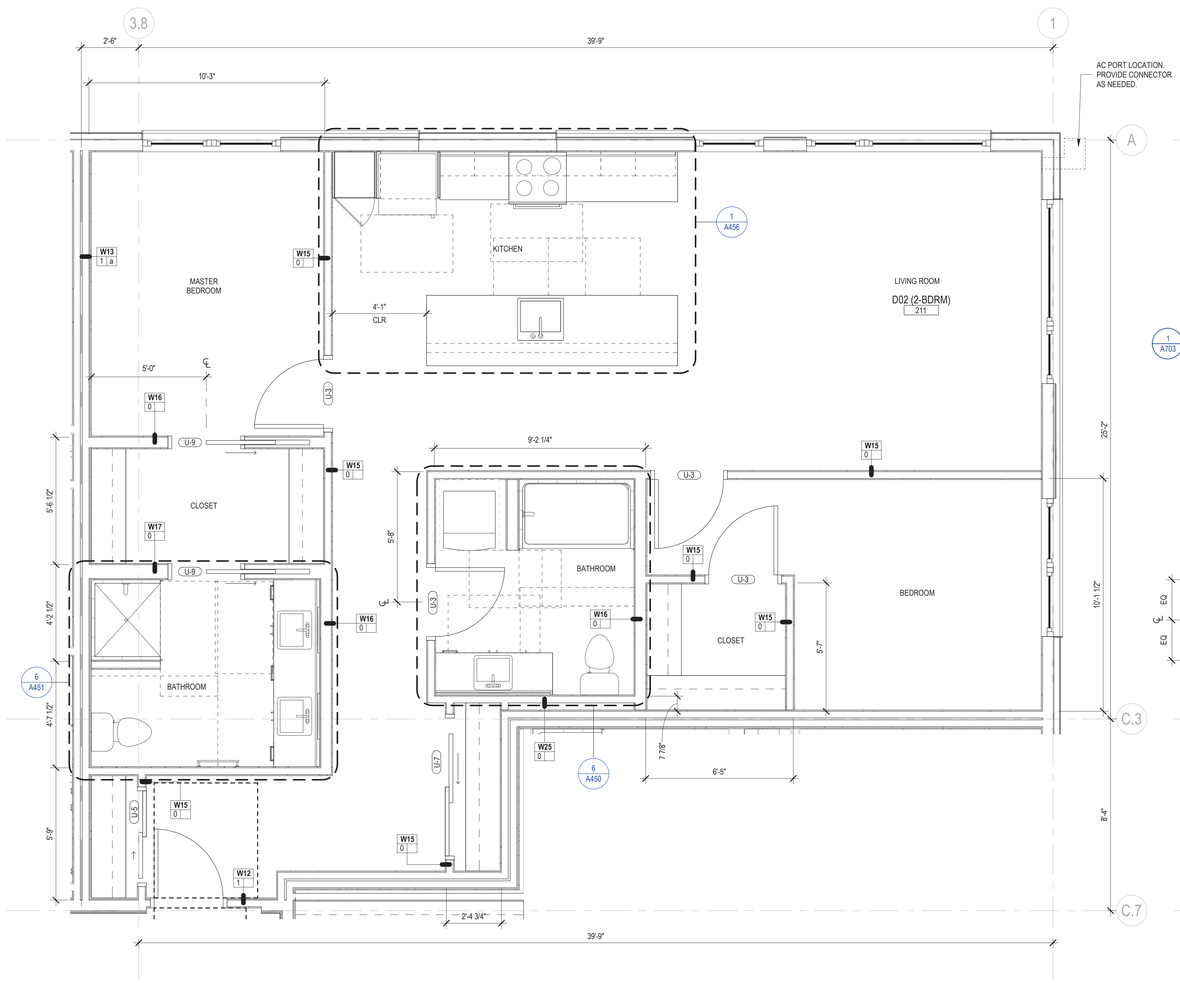
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

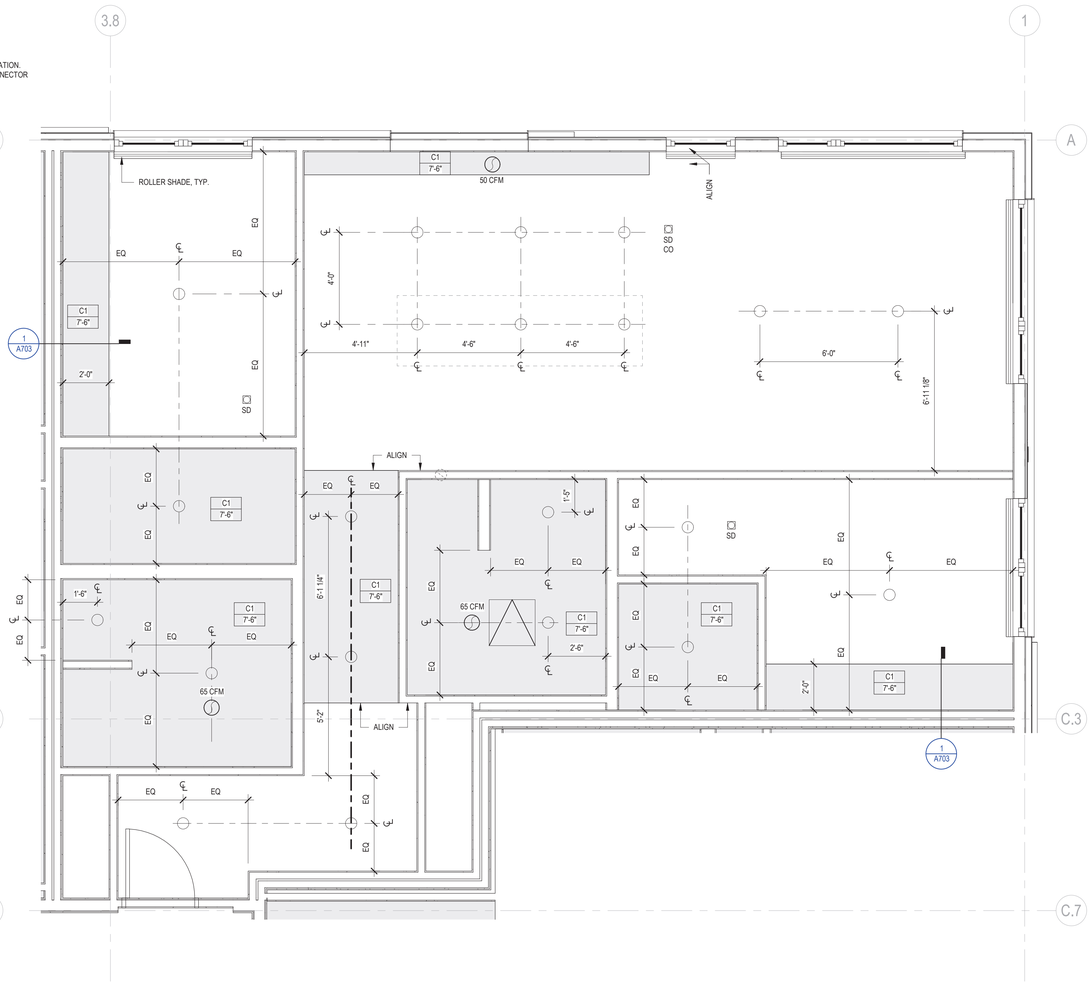
CEILING TAG / CEILING HEIGHT: C1 / 18' - 6"
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN — 50 CFM
SMOKE/CO2 DETECTOR — SD CO
FIRE ALARM — FA
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - D02
SCALE: 3/8" = 1'-0"



2 UNIT RCP - D02
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON
02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - D02

A429

2/2/2024 10:40:47 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

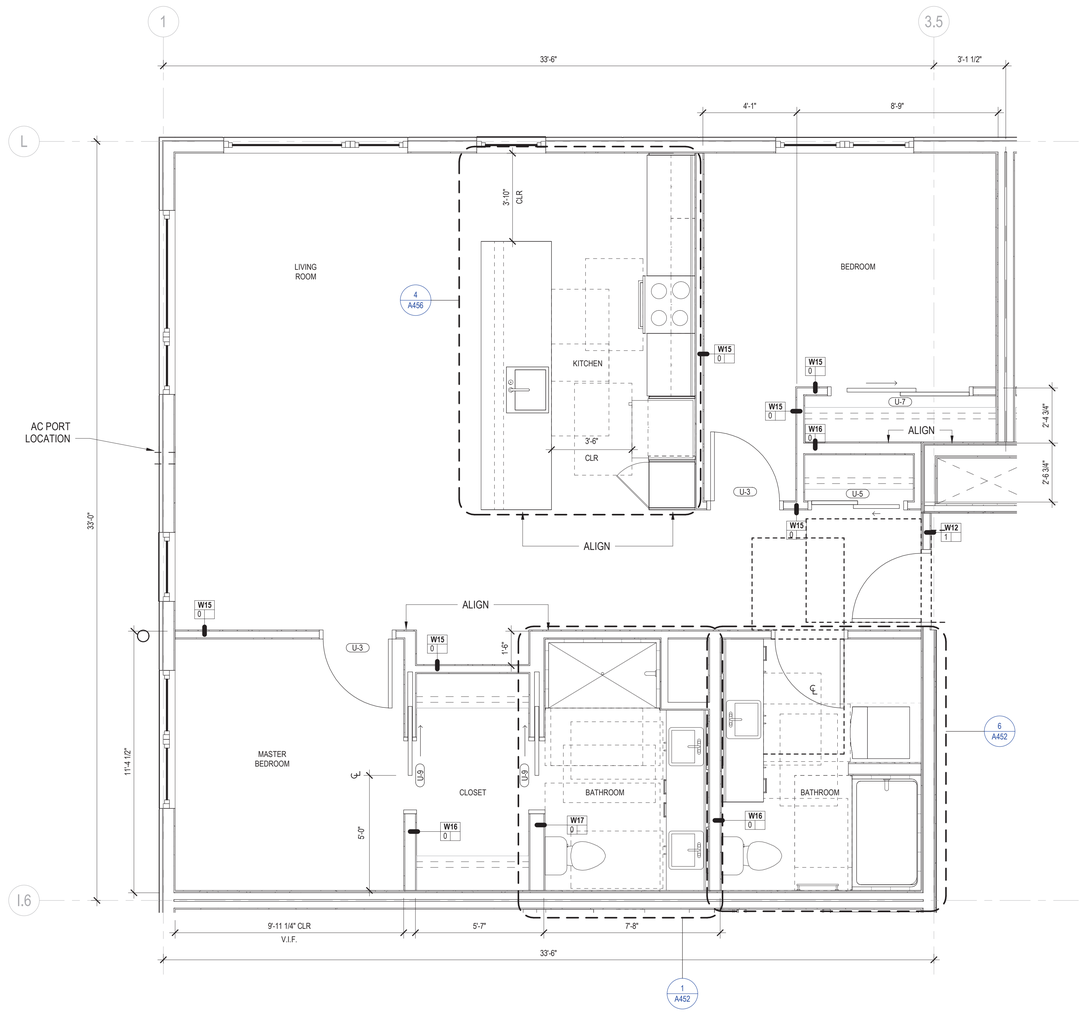
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

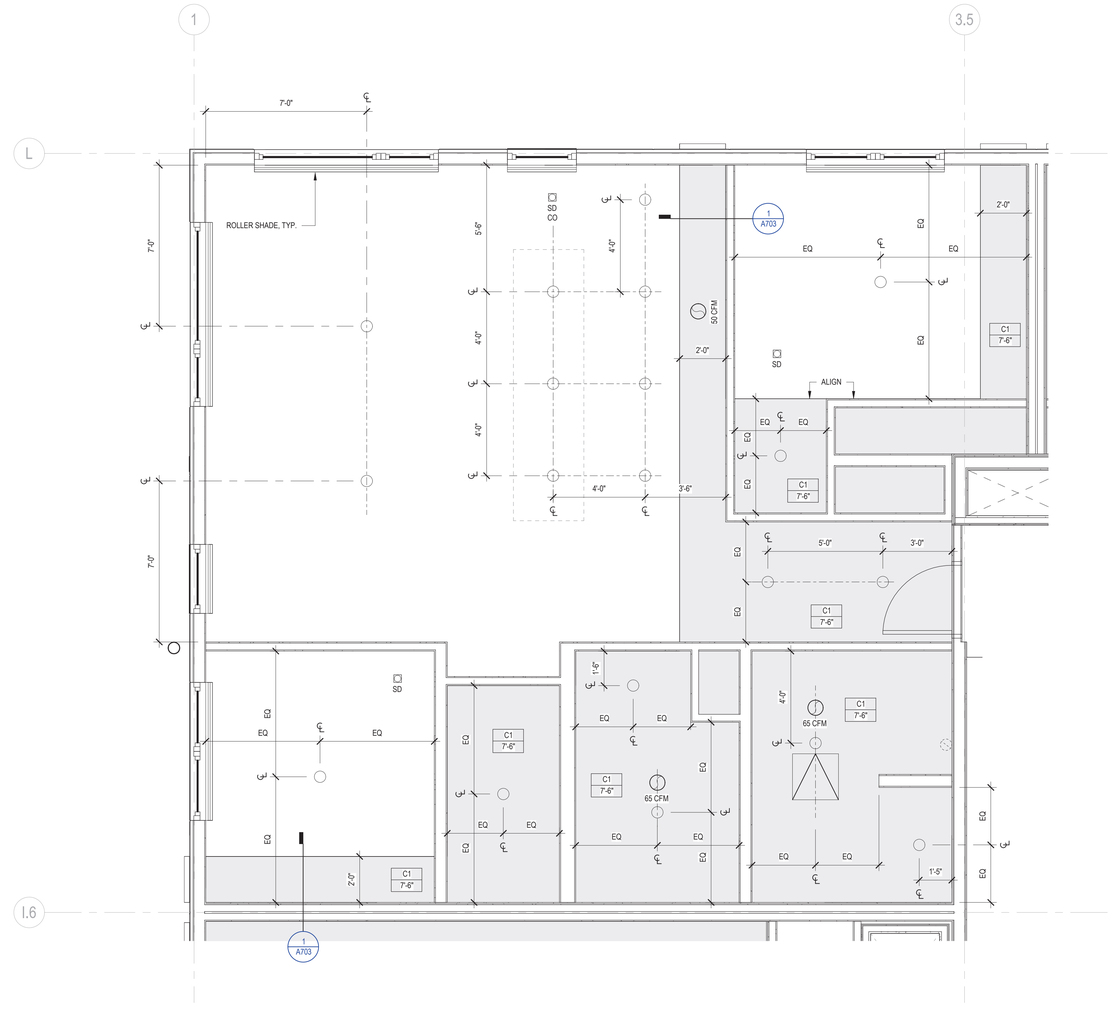
CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - D03
SCALE: 3/8" = 1'-0"



2 UNIT RCP - D03
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - D03

A430

2/2/2024 10:40:48 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2\21-5905-01A\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

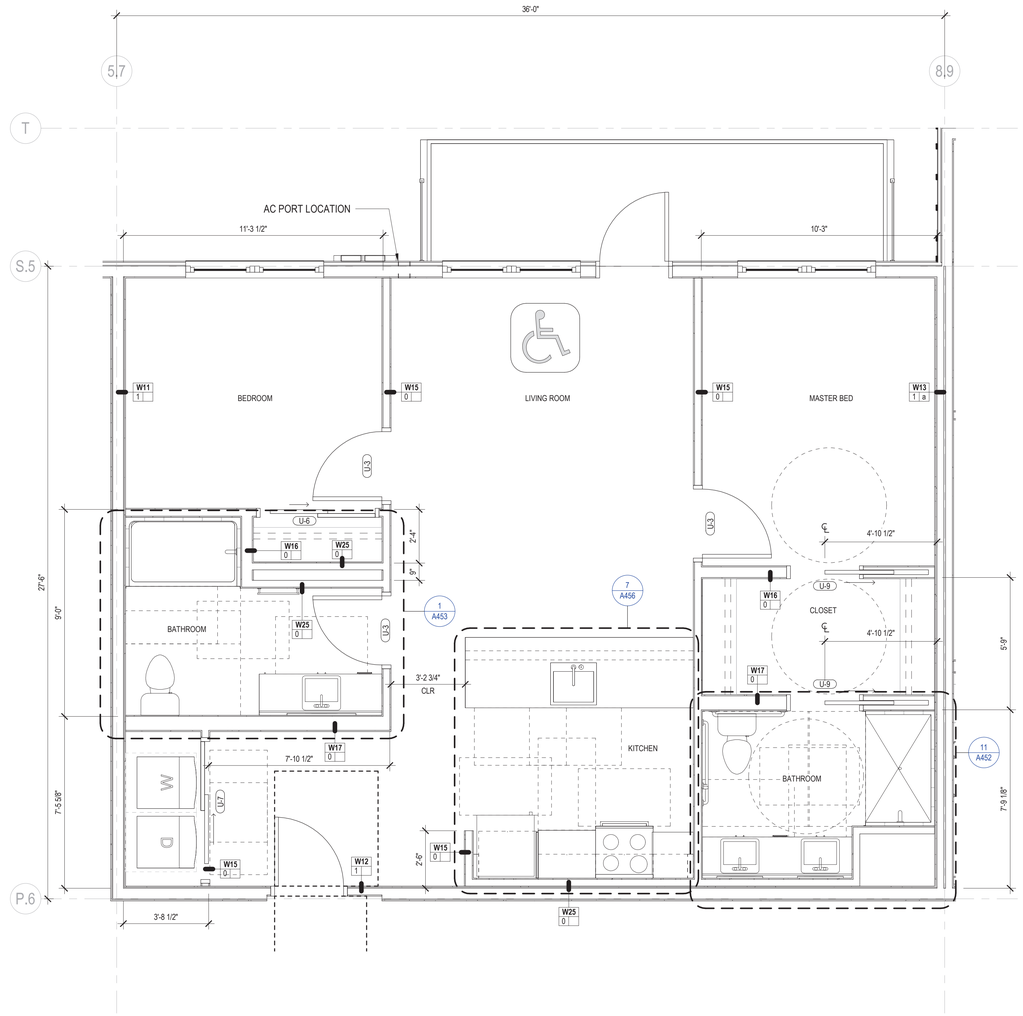
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

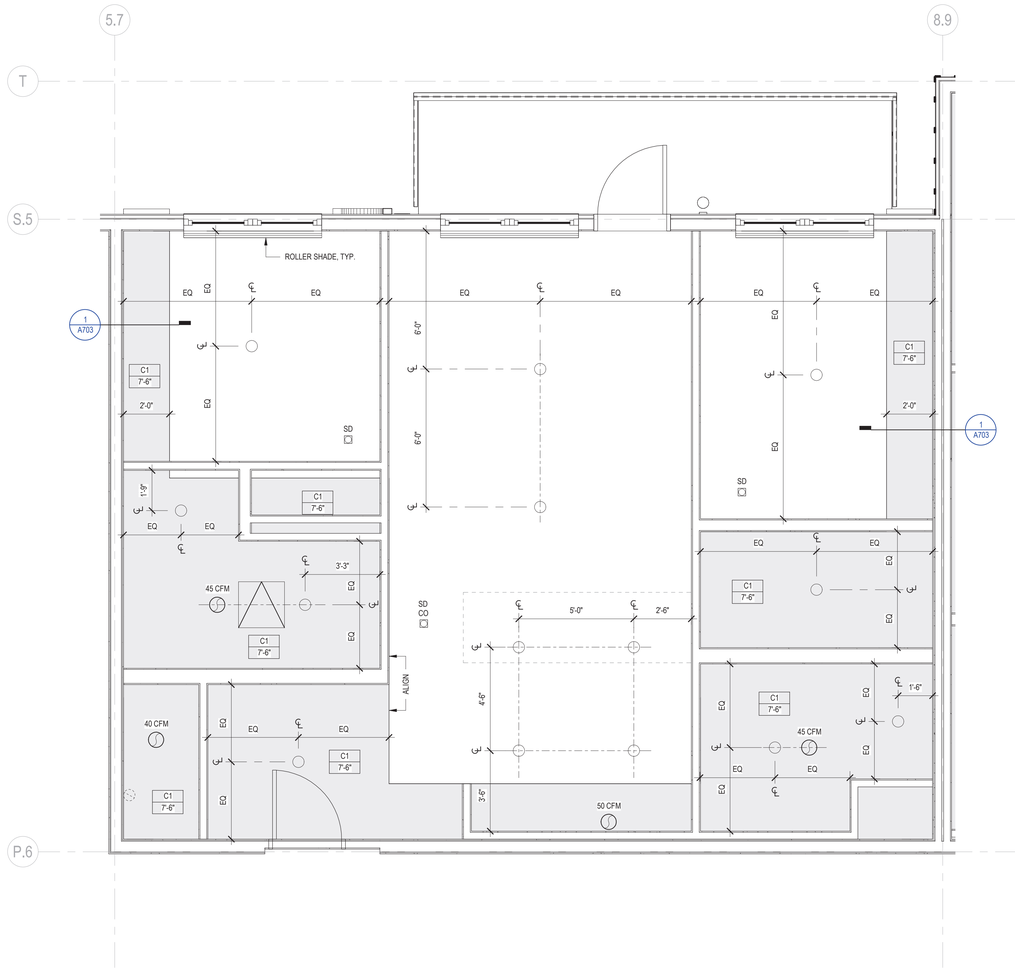
CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD / CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - D04 TYPE A
SCALE: 3/8" = 1'-0"



2 UNIT RCP - D04 TYPE A
SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

RUSSELL H. HAZZARD STATE OF WASHINGTON 8079 REGISTERED ARCHITECT

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED UNIT PLANS - D04 TYPE A

A431

2/2/2024 10:40:49 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

REFLECTED CEILING PLAN GENERAL NOTES

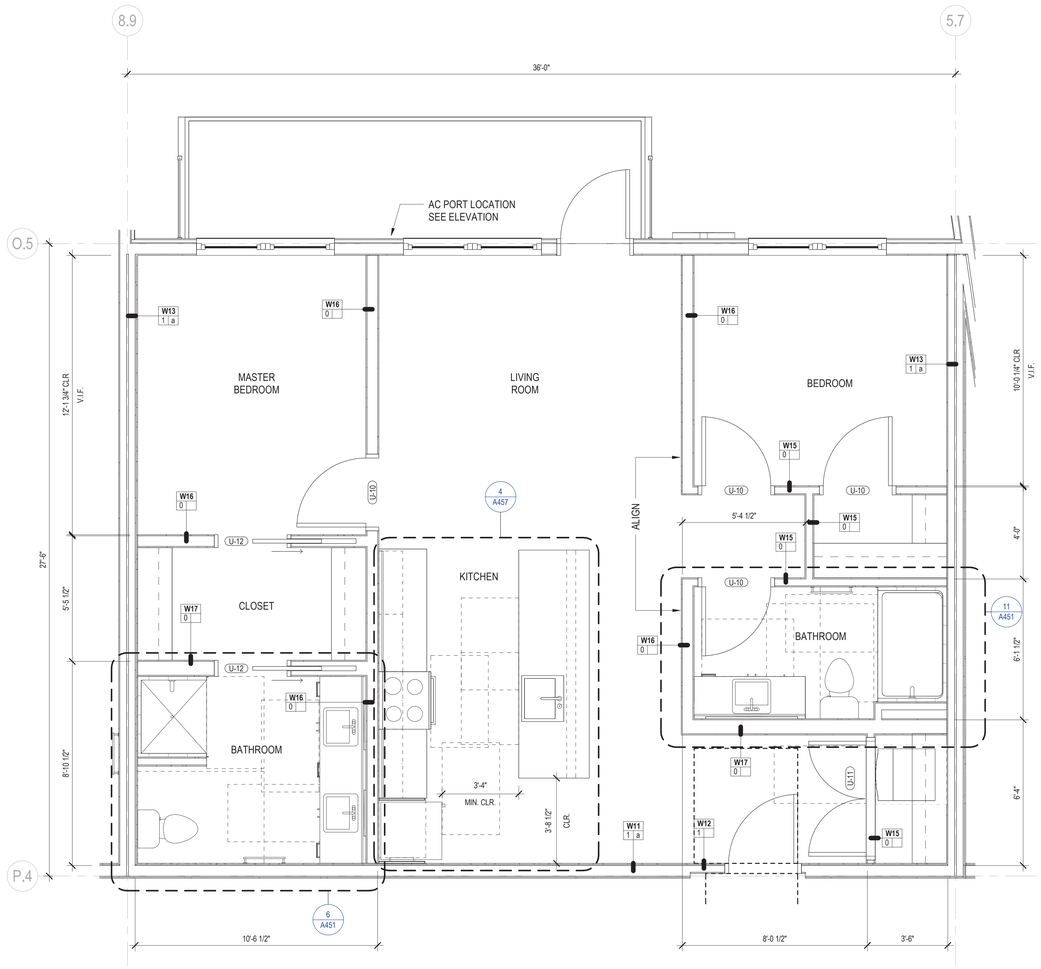
1. ALL LIGHTING FIXTURE DIMENSIONS ARE TO FINISH FACE U.N.O.
2. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. FOR LIGHTING LAYOUTS, SEE ELECTRICAL DRAWINGS.
4. CENTER ACOUSTICAL PANEL CEILING SYSTEM IN ROOM AS SHOWN U.N.O.
5. REF. REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
6. CENTER RECESSED DOWNLIGHTS IN ACOUSTICAL PANEL U.N.O.
7. CENTER DOWN LIGHTS IN GYP. BD. IN BOTH DIRECTIONS AND ALIGN WITH ADJACENT DOWN LIGHTS U.N.O.
8. FIXTURES, DEVICES AND EQUIPMENT SHOWN ON REFLECTED CEILING PLANS ARE FOR COORDINATION PURPOSES. SEE MEP/FP/CODE COMPLIANCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
9. CENTER SPRINKLER HEADS IN ACOUSTICAL PANEL CEILINGS UNO.
10. RECESSED FIXTURE IN BATHROOM MUST MEET REQUIREMENTS FOR WET CONDITIONS.
11. ACCESS PANEL LOCATIONS TO BE COORDINATED WITH MEP DRAWINGS.
12. CEILING HEIGHTS REFERENCED FROM FINISH FLOOR DIRECTLY BELOW.

RCP LEGEND

CEILING TAG / CEILING HEIGHT (C1 / 18' - 6")
ACT CEILING
GWB CEILING (C1 or C7)
FAUX WOOD SOFFIT (C9)
CEILING MOUNTED LIGHT
PENDANT MOUNTED LIGHT
COVE LIGHT
WALL MOUNTED LIGHT
FLOURESCENT LIGHT
RECESSED CAN FIXTURE
LINEAR DIFFUSER
SPRINKLER HEAD (CS = CEILING, WS = WALL MOUNTED)
CFM FAN (50 CFM)
SMOKE/CO2 DETECTOR (SD / CO)
FIRE ALARM (FA)
SUPPLY AIR DEVICE
RETURN/ EXHAUST AIR DEVICE
EXIT LIGHT
MECHOSHADE
ACCESS PANEL
GRID STARTING POINT
ROLLER SHADE

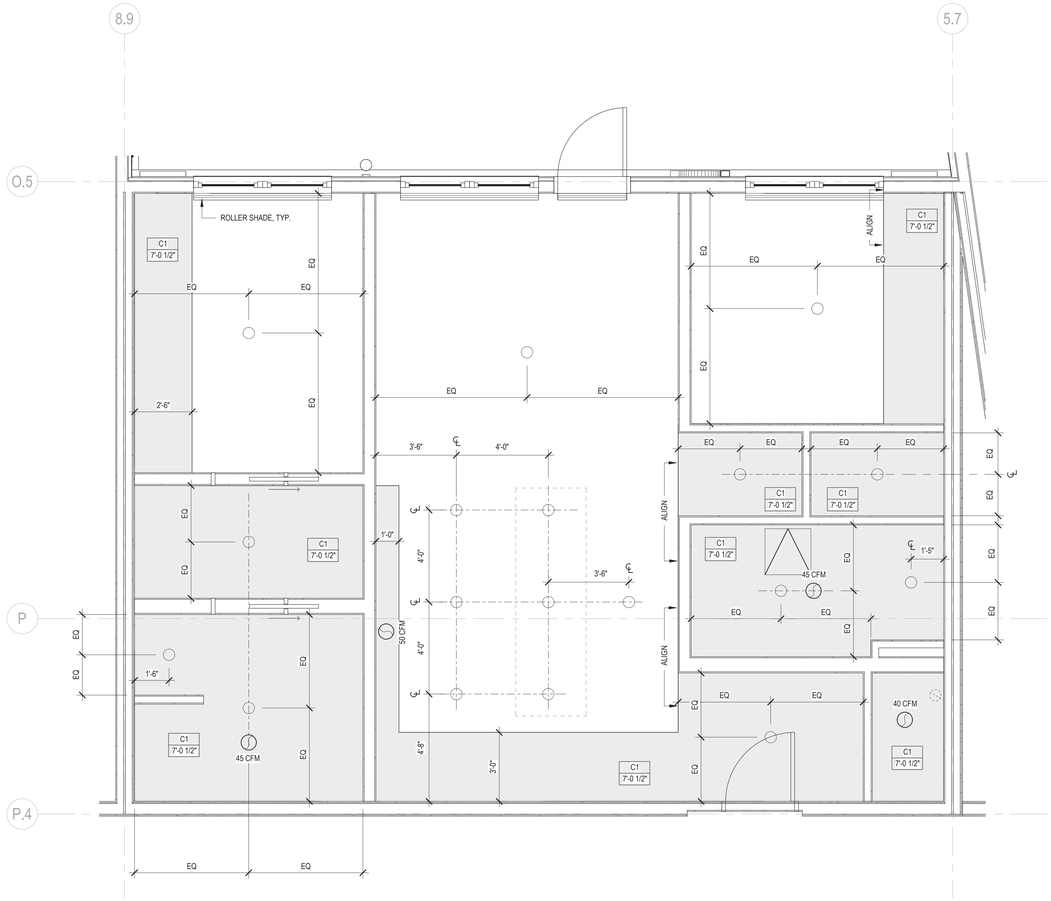
ENLARGED UNIT PLAN GENERAL NOTES:

1. INTERIOR PARTITION WALLS TO BE TYPE W15, UNO.
2. CLOSET DOORS AND SLIDING DOORS TO BE CENTERED ON WALL, UNO.
3. EACH INDIVIDUAL DWELLING UNIT IN A GROUP R-2 MULTIFAMILY RESIDENTIAL OCCUPANCY WITH CENTRAL SERVICE SHALL BE PROVIDED WITH A DOMESTIC HOT WATER METER PER WSEC C404.9.
4. BUILDING SHALL HAVE EQUIPPED TO MEASURE, MONITOR, RECORD, AND DISPLAY ENERGY CONSUMPTION DATA FOR EACH ENERGY SOURCE AND END USE CATEGORY PER THE PROVISIONS OF SECTION C409, TO ENABLE EFFECTIVE ENERGY MANAGEMENT.
5. SEE A450 SERIES FOR ENLARGED BATH AND KITCHEN PLANS.
6. SEE PLANS AND WINDOW SCHEDULE FOR WINDOW LOCATIONS. REFER TO ELEVATIONS FOR WINDOW TYPES.
7. SEE ELECTRICAL DRAWINGS FOR POWER AND SWITCHING.
8. SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
9. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10. SEE A610 SERIES FOR WALL ASSEMBLIES.
11. AC PORTS TO BE INSTALLED AT 24" AFF, TYP.



1 UNIT PLAN - D05

SCALE: 3/8" = 1'-0"



2 UNIT RCP - D05

SCALE: 3/8" = 1'-0"

2/2/2024 10:40:51 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

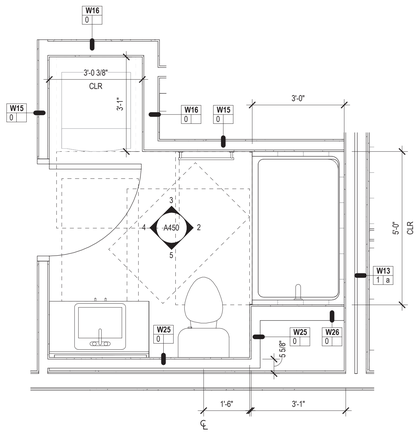
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

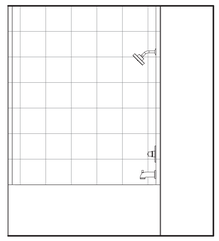
ENLARGED UNIT PLANS - D05

A432



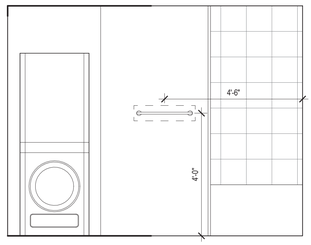
1 BATH TYPE 01 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



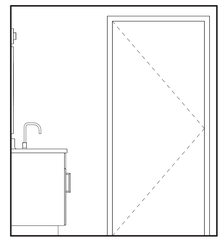
2 BATH TYPE 01 - ELEVATION

SCALE: 1/2" = 1'-0"



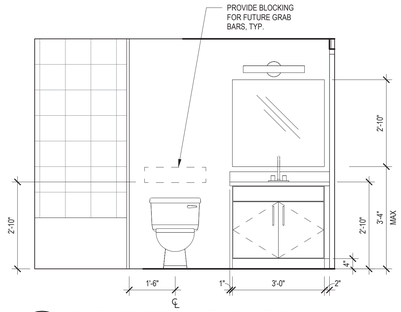
3 BATH TYPE 01 - ELEVATION

SCALE: 1/2" = 1'-0"



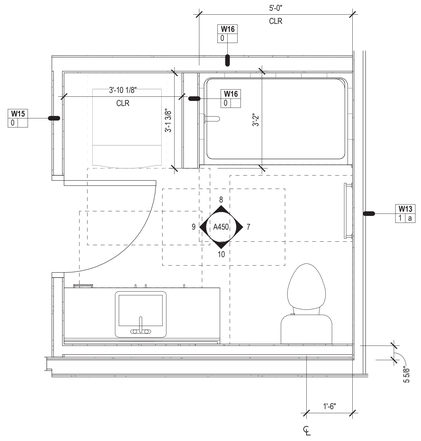
4 BATH TYPE 01 - ELEVATION

SCALE: 1/2" = 1'-0"



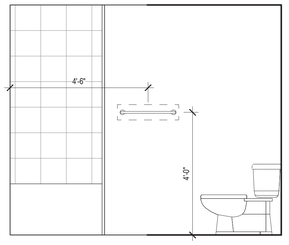
5 BATH TYPE 01 - ELEVATION

SCALE: 1/2" = 1'-0"



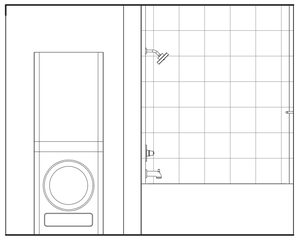
6 BATH TYPE 02 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



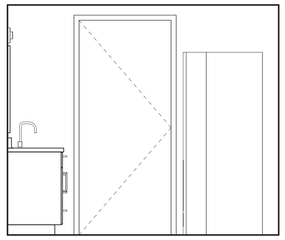
7 BATH TYPE 02 - ELEVATION

SCALE: 1/2" = 1'-0"



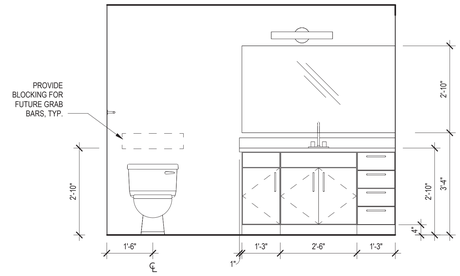
8 BATH TYPE 02 - ELEVATION

SCALE: 1/2" = 1'-0"



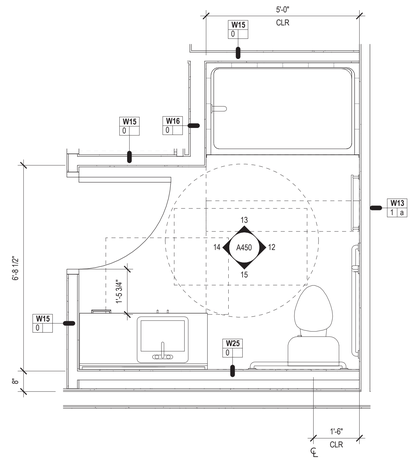
9 BATH TYPE 02 - ELEVATION

SCALE: 1/2" = 1'-0"



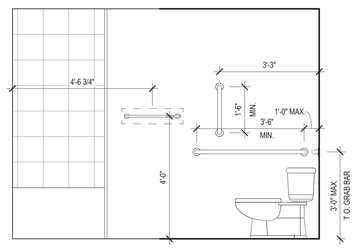
10 BATH TYPE 02 - ELEVATION

SCALE: 1/2" = 1'-0"



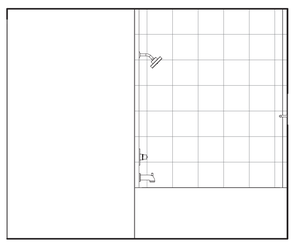
11 BATH TYPE 03 (TYPE A) - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



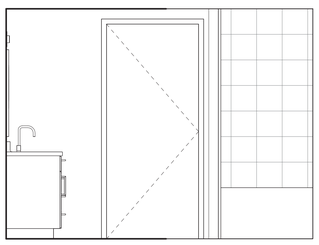
12 BATH TYPE 03 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



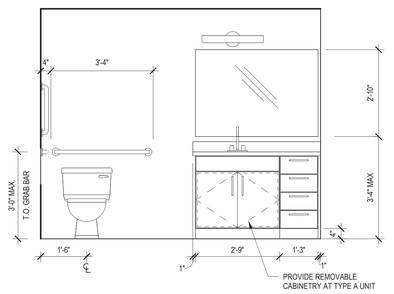
13 BATH TYPE 03 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



14 BATH TYPE 03 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



15 BATH TYPE 03 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

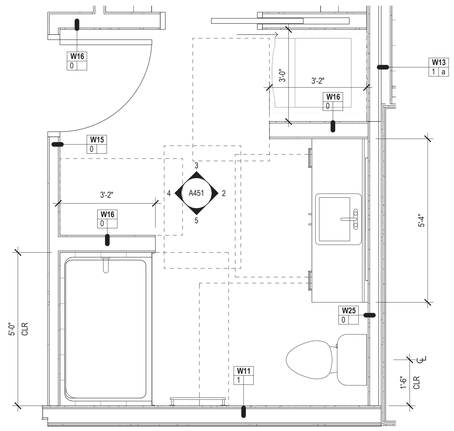
21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS

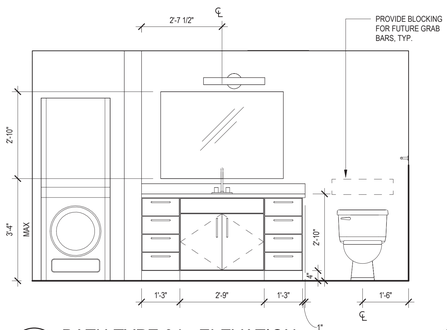
A450

2/2/2024 10:40:54 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

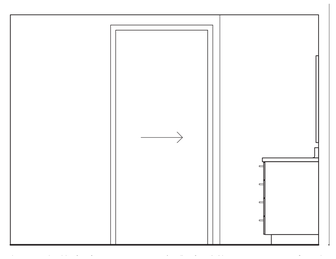
ID602



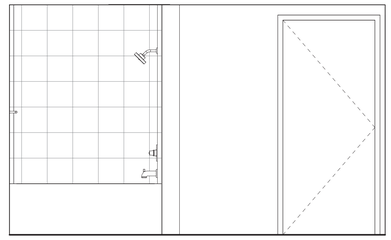
1 BATH TYPE 04 - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



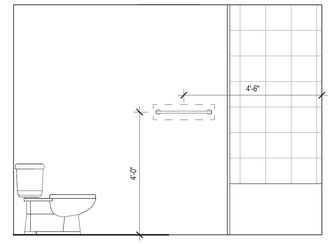
2 BATH TYPE 04 - ELEVATION
SCALE: 1/2" = 1'-0"



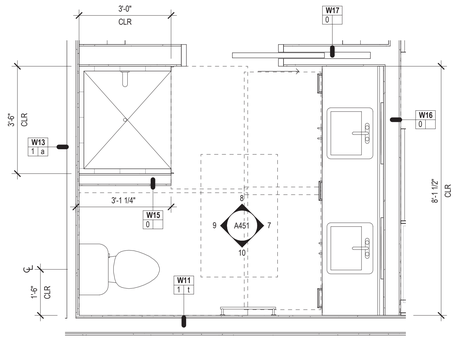
3 BATH TYPE 04 - ELEVATION
SCALE: 1/2" = 1'-0"



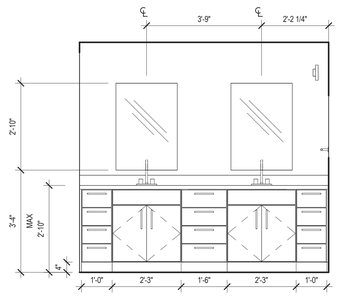
4 BATH 04 - ELEVATION
SCALE: 1/2" = 1'-0"



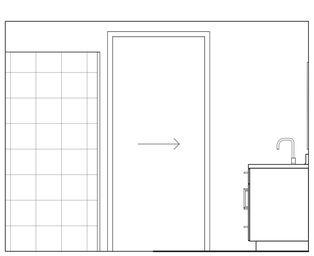
5 BATH TYPE 04 - ELEVATION
SCALE: 1/2" = 1'-0"



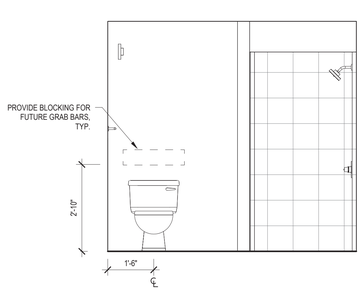
6 BATH TYPE 05 - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



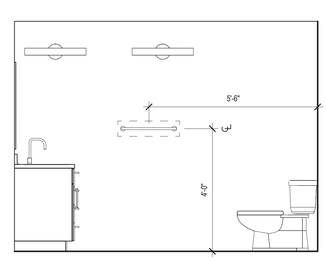
7 BATH TYPE 05 - ELEVATION
SCALE: 1/2" = 1'-0"



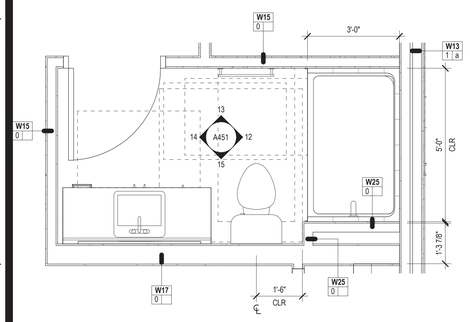
8 BATH TYPE 05 - ELEVATION
SCALE: 1/2" = 1'-0"



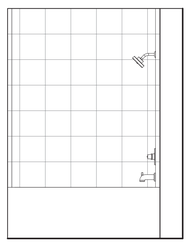
9 BATH TYPE 05 - ELEVATION
SCALE: 1/2" = 1'-0"



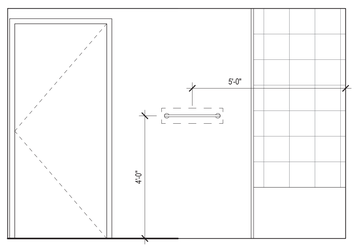
10 BATH TYPE 5 - ELEVATION
SCALE: 1/2" = 1'-0"



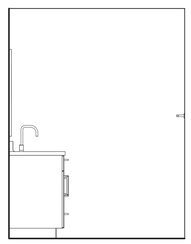
11 BATH TYPE 06 - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



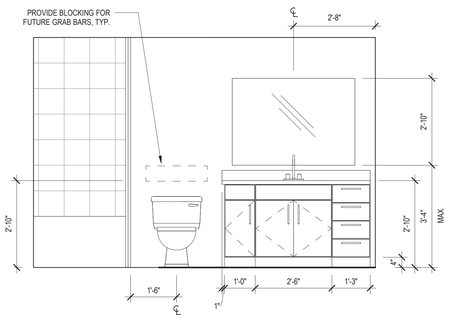
12 BATH TYPE 06 - ELEVATION
SCALE: 1/2" = 1'-0"



13 BATH TYPE 06 - ELEVATION
SCALE: 1/2" = 1'-0"



14 BATH TYPE 06 - ELEVATION
SCALE: 1/2" = 1'-0"



15 BATH TYPE 06 - ELEVATION
SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079
REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

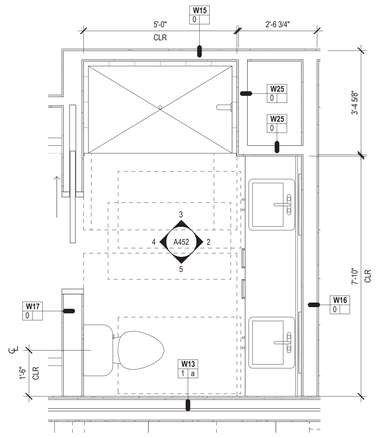
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

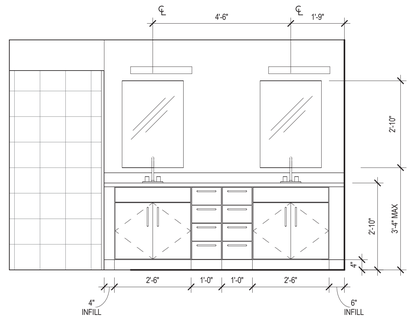
ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS

A451

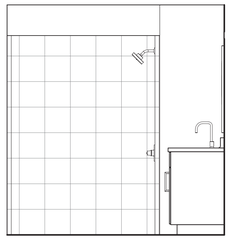
2/2/2024 10:40:57 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



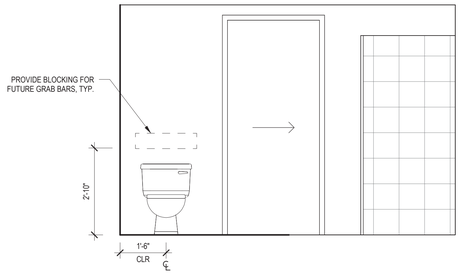
1 BATH TYPE 07 - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



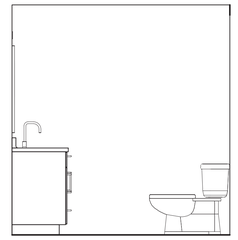
2 BATH TYPE 07 - ELEVATION
SCALE: 1/2" = 1'-0"



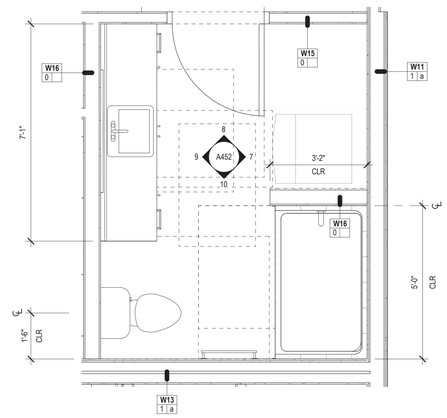
3 BATH TYPE 07 - ELEVATION
SCALE: 1/2" = 1'-0"



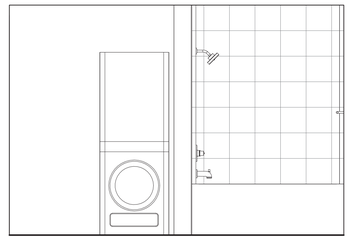
4 BATH TYPE 07 - ELEVATION
SCALE: 1/2" = 1'-0"



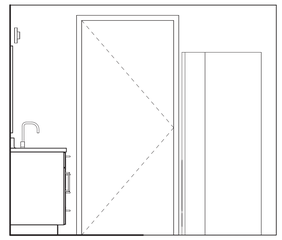
5 BATH TYPE 07 - ELEVATION
SCALE: 1/2" = 1'-0"



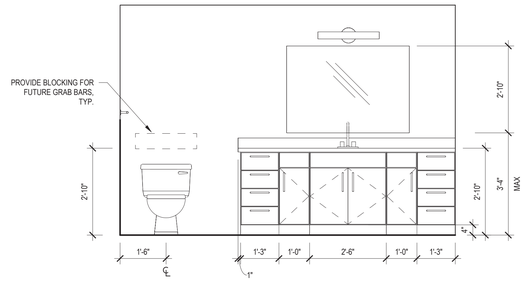
6 BATH TYPE 08 - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



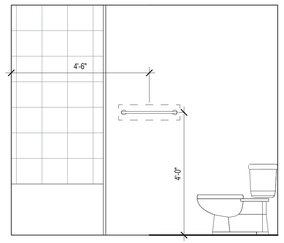
7 BATH TYPE 08 - ELEVATION
SCALE: 1/2" = 1'-0"



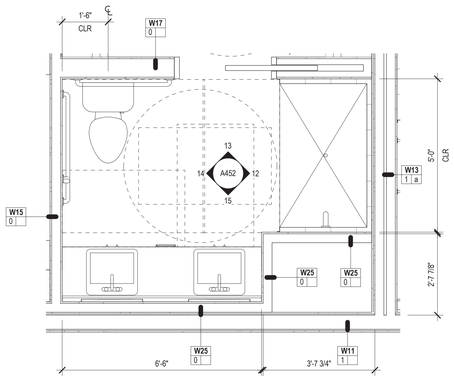
8 BATH TYPE 08 - ELEVATION
SCALE: 1/2" = 1'-0"



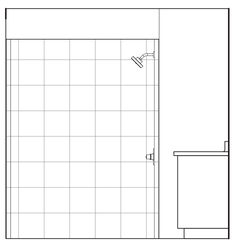
9 BATH TYPE 08 - ELEVATION
SCALE: 1/2" = 1'-0"



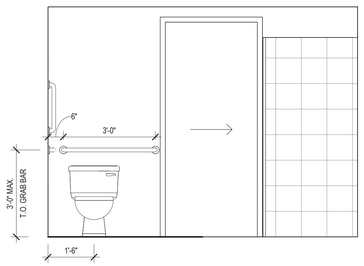
10 BATH 8 TYPE - ELEVATION
SCALE: 1/2" = 1'-0"



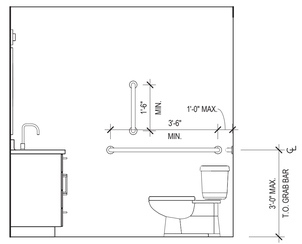
11 BATH TYPE 09 (TYPE A) - ENLARGED PLAN
SCALE: 1/2" = 1'-0"



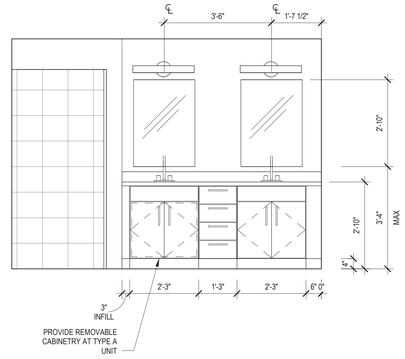
12 BATH TYPE 09 (TYPE A) - ELEVATION
SCALE: 1/2" = 1'-0"



13 BATH TYPE 09 (TYPE A) - ELEVATION
SCALE: 1/2" = 1'-0"



14 BATH TYPE 09 (TYPE A) - ELEVATION
SCALE: 1/2" = 1'-0"



15 BATH TYPE 09 (TYPE A) - ELEVATION
SCALE: 1/2" = 1'-0"

EVERETT
RIVERFRONT

3710 RIVERFRONT
BLVD, EVERETT, WA
98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

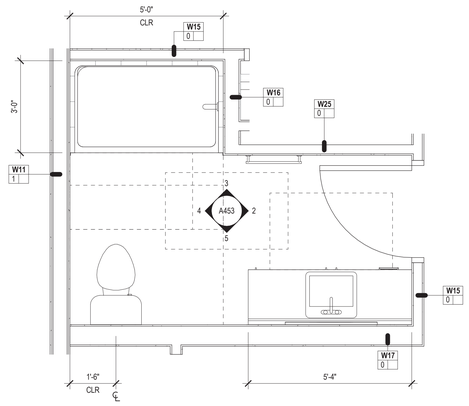
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS
& ELEVATIONS -
UNIT RESTROOMS

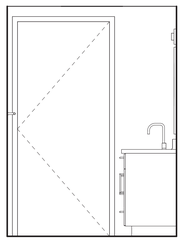
A452

2/2/2024 10:41:00 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



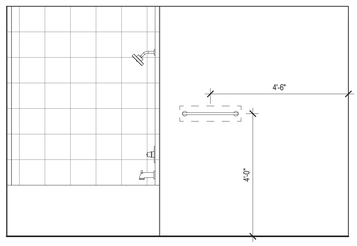
1 BATH TYPE 10 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



2 BATH TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"

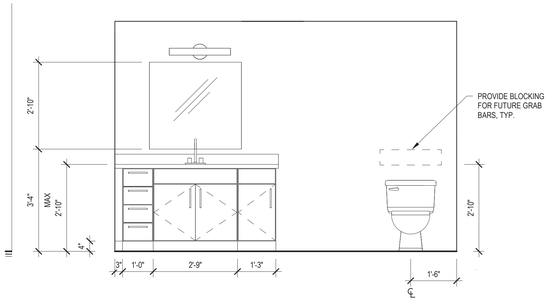


3 BATH TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"

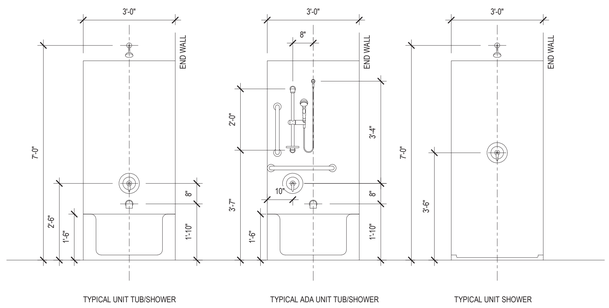
4 BATH TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"



5 BATH TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"



FOR GRAB BAR LOCATIONS SEE DETAIL A8/G403

6 TUB AND SHOWER CONTROL LOCATIONS TYPICAL

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

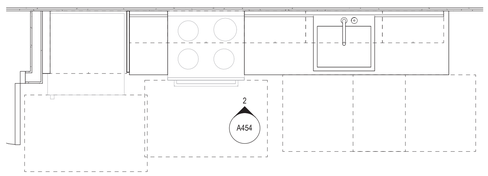
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS & ELEVATIONS - UNIT RESTROOMS

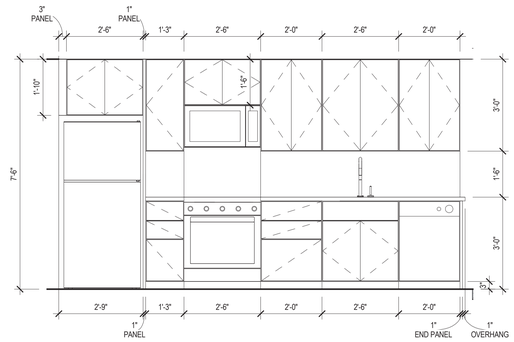
A453

2/2/2024 10:41:01 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



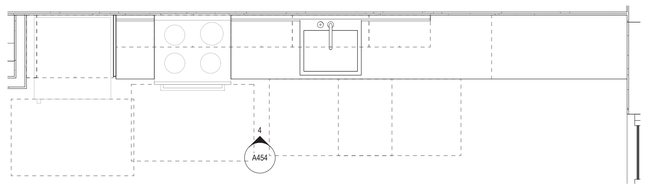
1 KITCHEN TYPE 01 - ENLARGED PLAN

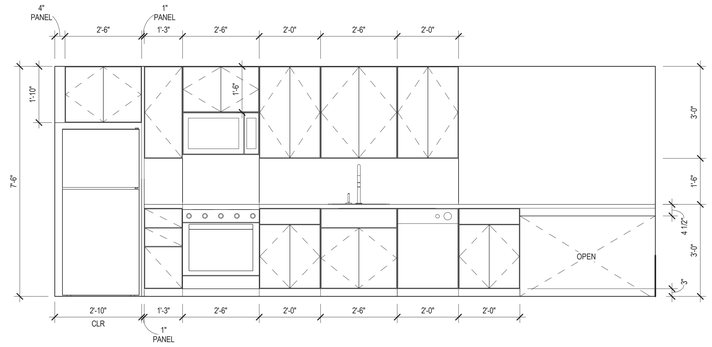
SCALE: 1/2" = 1'-0"



2 KITCHEN TYPE 01 - ELEVATION

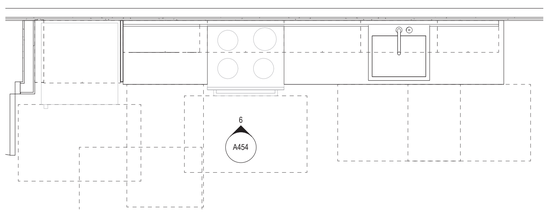
SCALE: 1/2" = 1'-0"





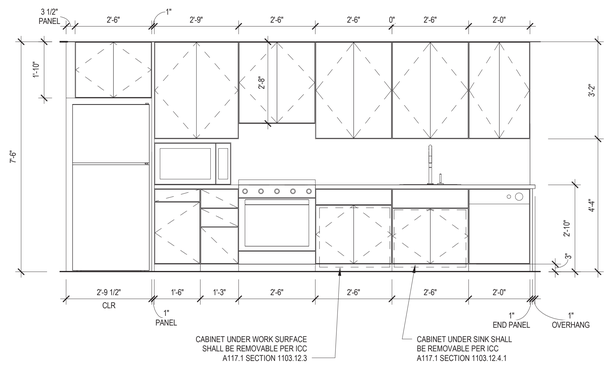
3 KITCHEN TYPE 02 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



4 KITCHEN TYPE 02 - ELEVATION

SCALE: 1/2" = 1'-0"



5 KITCHEN TYPE 03 (TYPE A) - ENLARGED PLAN

SCALE: 1/2" = 1'-0"

6 KITCHEN TYPE 03 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/2/2024 10:41:02 AM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

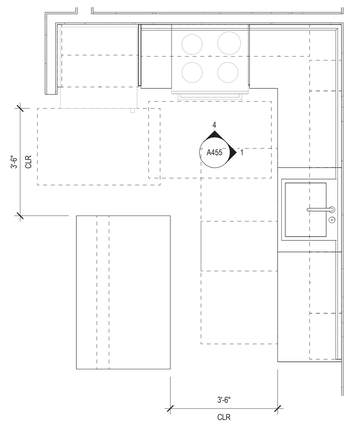
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

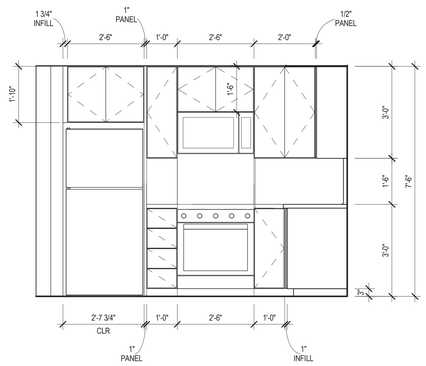
ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS

A454



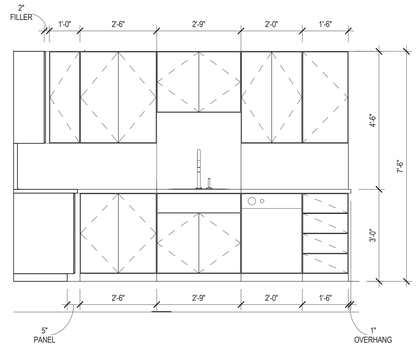
7 KITCHEN TYPE 04 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



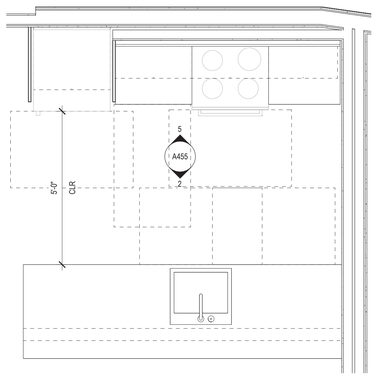
4 KITCHEN TYPE 04 - ELEVATION

SCALE: 1/2" = 1'-0"



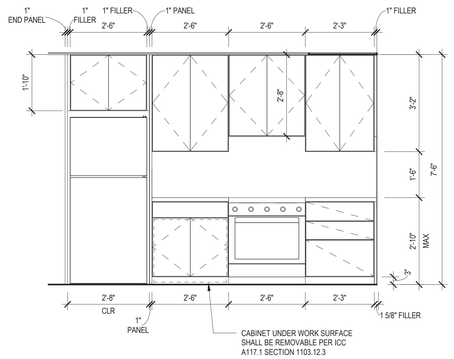
1 KITCHEN TYPE 04 - ELEVATION

SCALE: 1/2" = 1'-0"



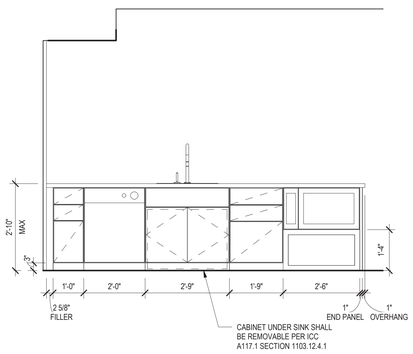
8 KITCHEN TYPE 05 (TYPE A) - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



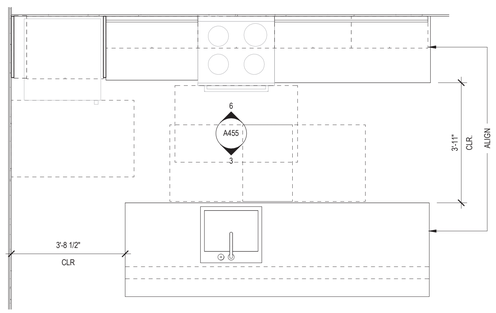
5 KITCHEN TYPE 05 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



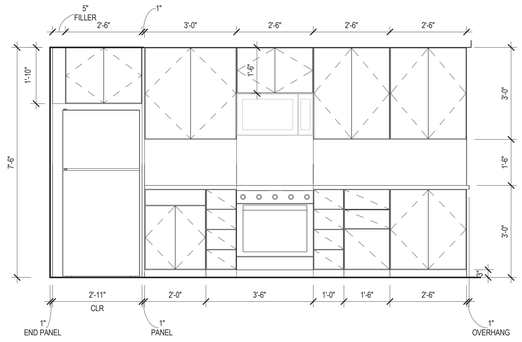
2 KITCHEN TYPE 05 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



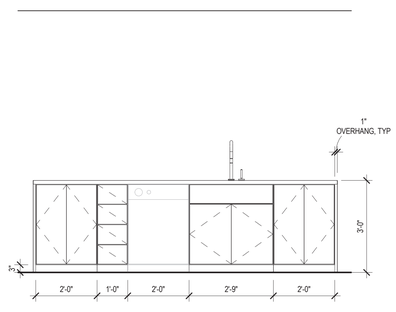
9 KITCHEN TYPE 06 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



6 KITCHEN TYPE 06 - ELEVATION

SCALE: 1/2" = 1'-0"



3 KITCHEN TYPE 06 - ELEVATION

SCALE: 1/2" = 1'-0"

EVERETT
RIVERFRONT

3710 RIVERFRONT
BLVD, EVERETT, WA
98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD,
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

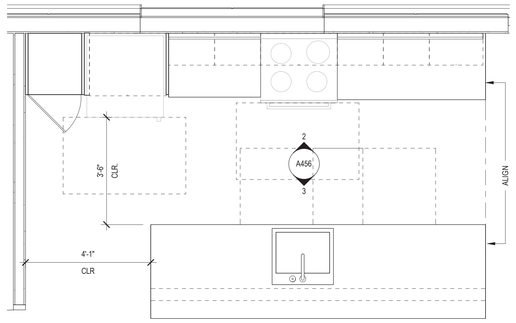
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS
& ELEVATIONS -
UNIT KITCHENS

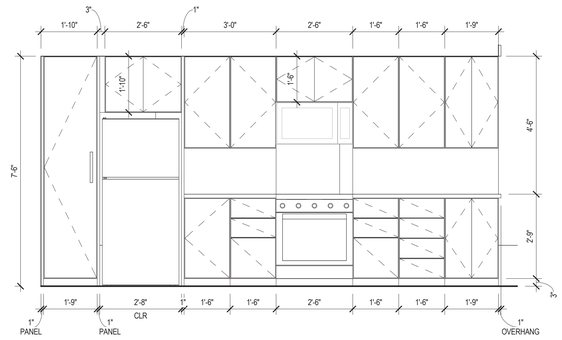
A455

2/2/2024 10:41:04 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01AA_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



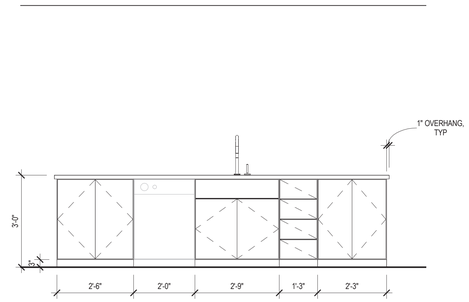
1 KITCHEN TYPE 07 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



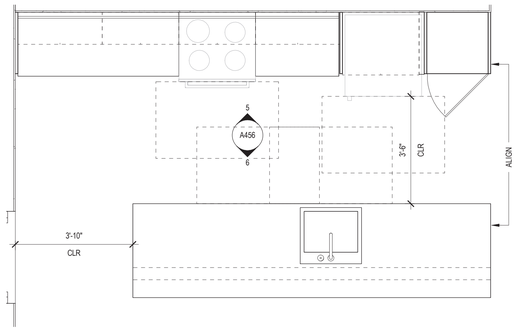
2 KITCHEN TYPE 07 - ELEVATION

SCALE: 1/2" = 1'-0"



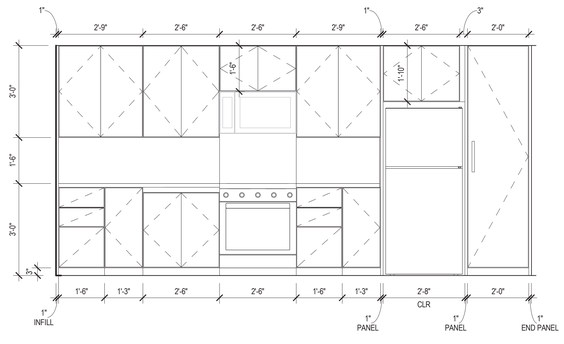
3 KITCHEN TYPE 07 - ELEVATION

SCALE: 1/2" = 1'-0"



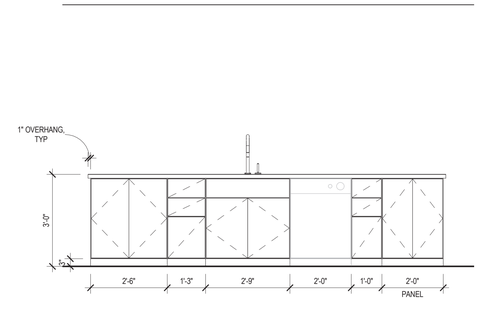
4 KITCHEN TYPE 08 - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



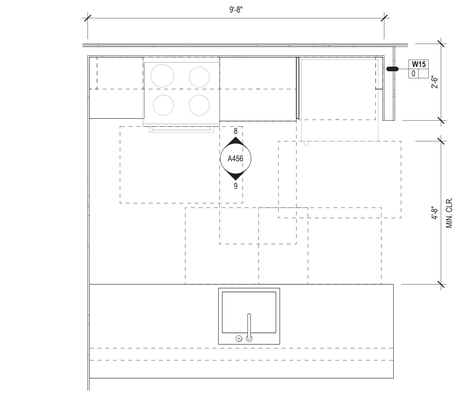
5 KITCHEN TYPE 08 - ELEVATION

SCALE: 1/2" = 1'-0"



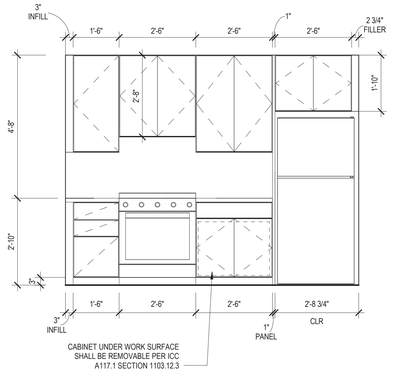
6 KITCHEN TYPE 08 - ELEVATION

SCALE: 1/2" = 1'-0"



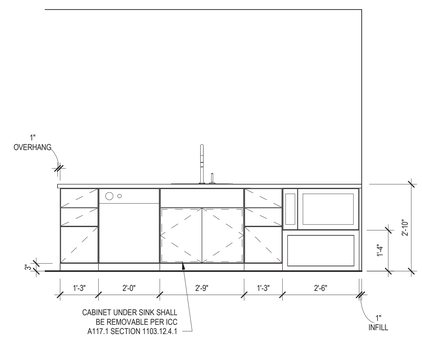
7 KITCHEN TYPE 09 (TYPE A) - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



8 KITCHEN TYPE 09 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"



9 KITCHEN TYPE 09 (TYPE A) - ELEVATION

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

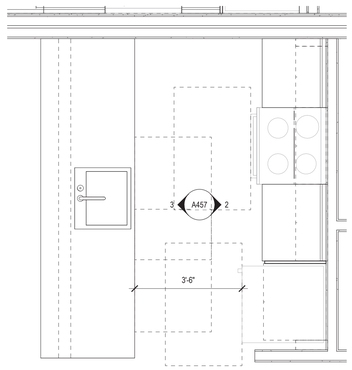
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS

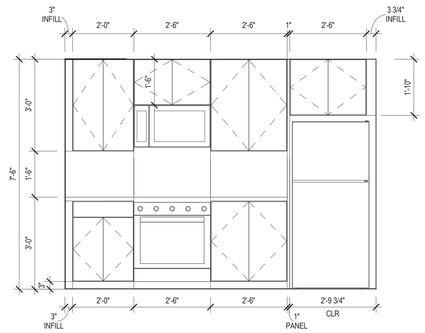
A456

2/2/2024 10:41:06 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



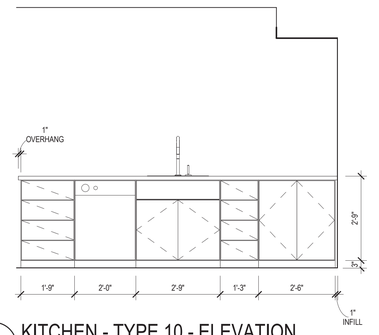
1 ENLARGED KITCHEN PLAN - TYPE 10

SCALE: 1/2" = 1'-0"



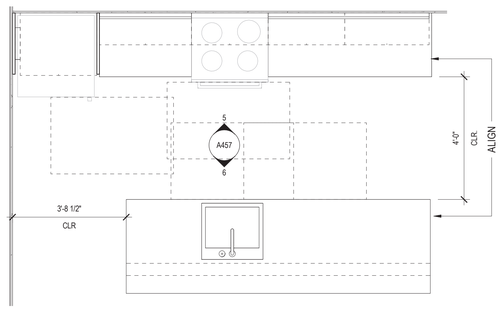
2 KITCHEN - TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"



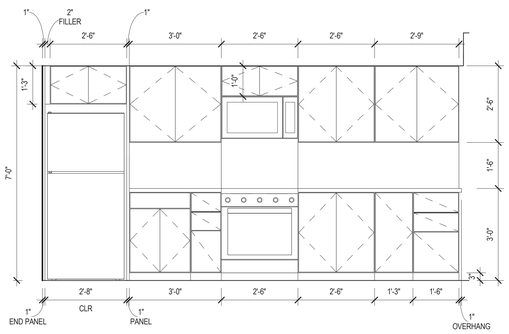
3 KITCHEN - TYPE 10 - ELEVATION

SCALE: 1/2" = 1'-0"



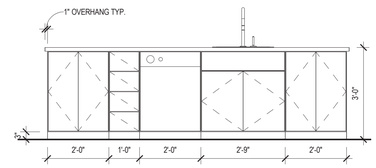
4 KITCHEN TYPE 11 SHORT - ENLARGED PLAN

SCALE: 1/2" = 1'-0"



5 KITCHEN TYPE 11 SHORT ELEVATION

SCALE: 1/2" = 1'-0"



6 KITCHEN TYPE 011 SHORT ELEVATION

SCALE: 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: Author
05/18/22

ENLARGED PLANS & ELEVATIONS - UNIT KITCHENS

A457

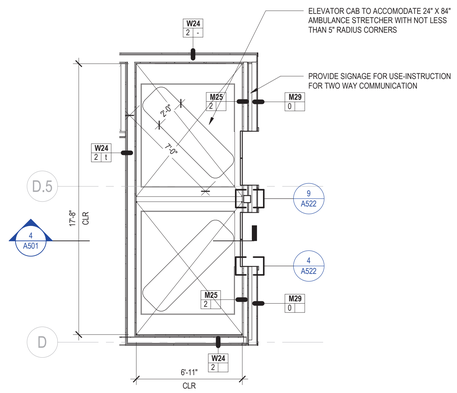
2/2/2024 10:41:07 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

STAIR & RAILING NOTES

STAIR WIDTH:	IBC 1011.2: ALL STAIRS SHALL BE MINIMUM 44-INCHES WIDE, EXCEPT STAIRS WITH AN OCCUPANT LOAD OF 50 OR LESS MAY BE 36-INCHES WIDE.
HANDRAIL PROJECTIONS	IBC 1014.8: A HANDRAIL MAY PROJECT INTO THE REQUIRED WIDTH 4.5-INCHES MAX.
TREADS/RISERS (ALL OTHER AREAS	IBC 1011.5.2: RISERS 4-INCH MIN. TO 7-INCH MAX.; TREADS 11-INCH MIN.
STAIR HANDRAILS	IBC 1014.2: STAIRWAYS SHALL HAVE HANDRAILS PROVIDED ONE ON EACH SIDE HEIGHT SHALL BE MEASURED ABOVE STAIR TREAD NOSING AND SHALL BE UNIFORM. HEIGHT MAY BE 34-INCHES TO 38-INCHES.
INTERMEDIATE HANDRAILS	IBC 1014.9: ALL PORTIONS OF STAIR WIDTH (AS REQUIRED FOR EGRESS CAPACITY) SHALL BE WITHIN 30-INCHES OF A HANDRAIL.
GUARDS	IBC 1015.2: SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, MEZZANINES, EQUCIPMENT PLATFORMS, STAIRWAYS, RAMPS, AND LANDINGS THAT ARE LOCATED MORE THAN 30-INCHES ABOVE THE FLOOR OR GRADE BELOW.
GLAZING	IBC 1015.2.1: WHERE GLASS IS USED TO PROVIDE A GUARD OR PORTION OF GUARD SYSTEM, THE GUARD SHALL COMPLY WITH IBC SECTION 2407.
GUARD HEIGHT	IBC 1015.3: NOT LESS THAN 42-INCHES; EXCEPT WITHIN DWELLING UNITS, WHERE THE GUARD'S TOP RAIL ALSO SERVES AS THE HANDRAIL, THEY SHALL BE BETWEEN 34-INCHES AND 38-INCHES.
GUARD OPENINGS	IBC 1015.4: OPEN GUARDS SHALL HAVE BALUSTERS OR ORNAMENTAL PATTERNS SUCH THAT A 4-INCH DIAMETER SPHERE CANNOT PASS THROUGH ANY OPENING UP TO 36-INCHES. FROM A HEIGHT OF 36 TO 42-INCHES ABOVE THE ADJACENT WALKING SURFACES, A SPHERE 4-3/8 INCHES IN DIAMETER SHALL NOT PASS. AT THE TRIANGULAR OPENINGS BETWEEN THE BOTTOM RAIL, AND TREAD/RISER INTERFACE, THE OPENING SHALL BE LIMITED SO THAT A 6-INCH DIAMETER SPHERE CANNOT PASS.
STAIRWAY IDENTIFICATION SIGNS:	IBC 1023.9: A SIGN SHALL BE PROVIDED AT EACH FLOOR LANDING IN AN INTERIOR EXIT STAIRWAY AND RAMP CONNECTING MORE THAN THREE STORIES DESIGNATING THE FLOOR LEVEL, THE TERMINUS OF THE TOP AND BOTTOM OF THE INTERIOR EXIT STAIRWAY AND RAMP AND THE IDENTIFICATION OF THE STAIRWAY OR RAMP. THE SIGNAGE SHALL ALSO STATE THE STORY OF, AND THE DIRECTION TO, THE EXIT DISCHARGE AND WHETHER THERE IS ROOF ACCESS FROM THE INTERIOR EXIT STAIRWAY AND RAMP FOR THE FIRE DEPARTMENT, AND WHETHER THE ROOF ACCESS IS ACCESSED BY ROOF HATCH. THE SIGN SHALL BE LOCATED 5 FEET ABOVE THE FLOOR LANDING IN A POSITION THAT IS READILY VISIBLE WHEN THE DOORS ARE IN THE OPEN AND CLOSED POSITIONS. IN ADDITION TO THE STAIRWAY IDENTIFICATION SIGN, A FLOOR-LEVEL SIGN IN VISUAL CHARACTERS, RAISED CHARACTERS AND BRAILLE COMPLYING WITH ICC A117.1 SHALL BE LOCATED AT EACH FLOOR-LEVEL LANDING ADJACENT TO THE DOOR LEADING FROM THE INTERIOR EXIT STAIRWAY AND RAMP INTO THE CORRIDOR TO IDENTIFY THE FLOOR-LEVEL.

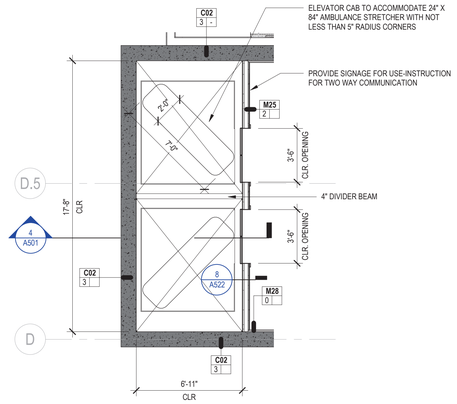
ELEVATOR NOTES

IBC 1009.2.1	ELEVATORS REQUIRED: IN BUILDINGS WHERE A REQUIRED ACCESSIBLE FLOOR IS FOUR OR MORE STORIES ABOVE OR BELOW A LEVEL OF EXIT DISCHARGE, NOT LESS THAN ONE REQUIRED ACCESSIBLE MEANS OF EGRESS SHALL BE AN ELEVATOR COMPLYING WITH SECTION 1009.4.
IBC 1009.4	ELEVATORS: IN ORDER TO BE CONSIDERED PART OF AN ACCESSIBLE MEANS OF EGRESS, AN ELEVATOR SHALL COMPLY WITH THE EMERGENCY OPERATION AND SIGNALING DEVICE REQUIREMENTS OF SECTION 2.27 OF ASME A17.1/CSA B44. AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE NATIONAL ELECTRICAL CODE (NFPA 70) FOR THE FOR OPERATION OF THE ELEVATOR, THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES. THE ELEVATOR SHALL BE ACCESSED FROM AN AREA OF REFUGE COMPLYING WITH SECTION 1009.6. EXCEPTION 2: AREAS OF REFUGE ARE NOT REQUIRED IN BUILDINGS AND FACILITIES EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2.
IBC 1009.8	TWO-WAY COMMUNICATION: A TWO-WAY COMMUNICATION SYSTEM COMPLYING WITH SECTIONS 1009.8.1 AND 1009.8.2 SHALL BE PROVIDED AT THE LANDING SERVING EACH ELEVATOR OR BANK OF ELEVATORS ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE LEVEL OF EXIT DISCHARGE.
IBC 1009.10	DIRECTIONAL SIGNAGE: DIRECTIONAL SIGNAGE INDICATING THE LOCATION OF ALL OTHER MEANS OF EGRESS AND WHICH OF THOSE ARE ACCESSIBLE MEANS OF EGRESS SHALL BE PROVIDED AT THE FOLLOWING: 1. AT EXITS SERVING A REQUIRED ACCESSIBLE SPACE BUT NOT PROVIDING AN APPROVED ACCESSIBLE MEANS OF EGRESS. 2. AT ELEVATOR LANDINGS.
ASME SECTIONS 2.7 & 2.8	PIPES, DUCTS, CONDUITS, AND EQUIPMENT NOT USED FOR THE OPERATION OF THE ELEVATORS ARE PROHIBITED IN MACHINE ROOM AND HOISTWAYS.
IBC 3020	MAINTAIN ALL REQUIRED WORKING CLEARANCES IN MACHINE ROOM.
ASME RULE 2.2.2	WATERPROOF AS NECESSARY TO PREVENT ENTRY OF GROUND WATER. SUMP PUMPS MAY BE INSTALLED FOR FLOOD CONTROL BUT NOT APPROVED TO MAINTAIN A DRY PIT.
ASME RULE 2.2.4	PROVIDE PIT LADDER.
ASME RULE 2.7.9.2	MACHINE ROOM TEMPERATURE AND HUMIDITY CONTROL.
ASME RULE 2.7.5.2	PROVIDE MACHINE ROOME VENTILATION.
ASME RULE 2.7.4	PROVIDE 7'-0" CLEAR HEADROOM IN MACHINE ROOM.
IBC CH. 11	ACCOMMODATE PEOPLE WITH DISABILITIES.
ASME SECTION 2.4 & 3.4	PROVIDE PROPER TOP CAR RUNBYS, CLEARANCES AND REFUGE SPACE.
ASME RULE 2.1.1.2 & 2.11.14	GROUT ALL MASONRY JAMBS AND HEADERS TO RETAIN FIRE RATING OF HOISTWAY. IN OTHER THAN MASONRY, PROVIDE LABELED ENTRANCE ASSEMBLIES INSTALLED AS TESTED.
ASME RULE 2.1.1.2 & 2.14.1.8	GLASS USED IN OR ON ELEVATOR HOISTWAYS AND CARS MUST BE LAMINATED AND MEET THE REQUIREMENTS OF ASME Z97.1.
IBC 107	PROVIDE CALCULATIONS AND DRAWINGS FOR APPROVAL OF THE STRESSES AS NOTED IN THE APPLICABLE RULES OF ASME SECTION 2.9.
ASME SECTION 2.6	PROVIDE CALCULATIONS FOR APPROVAL OF THE ABILITY OF THE PIT FLOOR AND STRUCTURE TO WITHSTAND THE ELEVATOR BUFFER ENGAGEMENT REACTIONS
ASME 2.27.1	PROVIDE MEANS OF TWO-WAY CONVERSATION BETWEEN EACH ELEVATOR AND A READILY ACCESSIBLE POINT (MAIN ELEVATOR LOBBY) OUTSIDE THE HOISTWAY.
ASME 2.27.1.1.2	THIS STRUCTURE IS CONSIDERED AS UNATTENDED, AND AN ADDITIONAL EMERGENCY SIGNALING DEVICE SHALL BE PROVIDED (PHONE TO ANSWERING SERVICE).
ASME 2.27.1.1.5	PROVIDE AN EMERGENCY POWER SUPPLY FOR THE DEVICES REQUIRED BY 2.27.1. THE SUPPLY SHALL BE CAPABLE OF OPERATING THE AUDIBLE DEVICE FOR AT LEAST ONE HOUR AND THE MEANS OF A TWO-WAY CONVERSATION FOR AT LEAST FOUR HOURS.
IBC 3003.3	ALL ELEVATORS SHALL BE EQUIPPED TO OPERATE WITH A STANDARDIZED FIRE SERVICE ELEVATOR KEY IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE.
IBC 3006.3	WHERE SECTION 3006.2 REQUIRES PROTECTION OF THE ELEVATOR HOISTWAY DOOR OPENING, THE PROTECTION SHALL BE PROVIDED BY ONE OF THE FOLLOWING: 4. THE ELEVATOR HOISTWAY SHALL BE PRESSURIZED IN ACCORDANCE WITH SECTIONS 909.6.3 AND 909.21. ELEVATOR HOISTWAYS ARE PRESSURIZED. EACH CONVEYANCE REQUIRES A SEPARATE PERMIT WITH DETAILED INSTALLATION PLANS AND SHALL BE INSTALLED BY A WASHINGTON STATE LICENSED CONTRACTOR.
COMPLY WITH ALL APPLICABLE CODES	



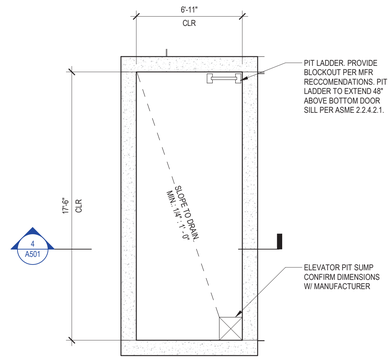
1 TYP. ELEVATOR LEVELS 2-6

SCALE: 1/4" = 1'-0"



2 ELEVATOR LEVEL 1

SCALE: 1/4" = 1'-0"

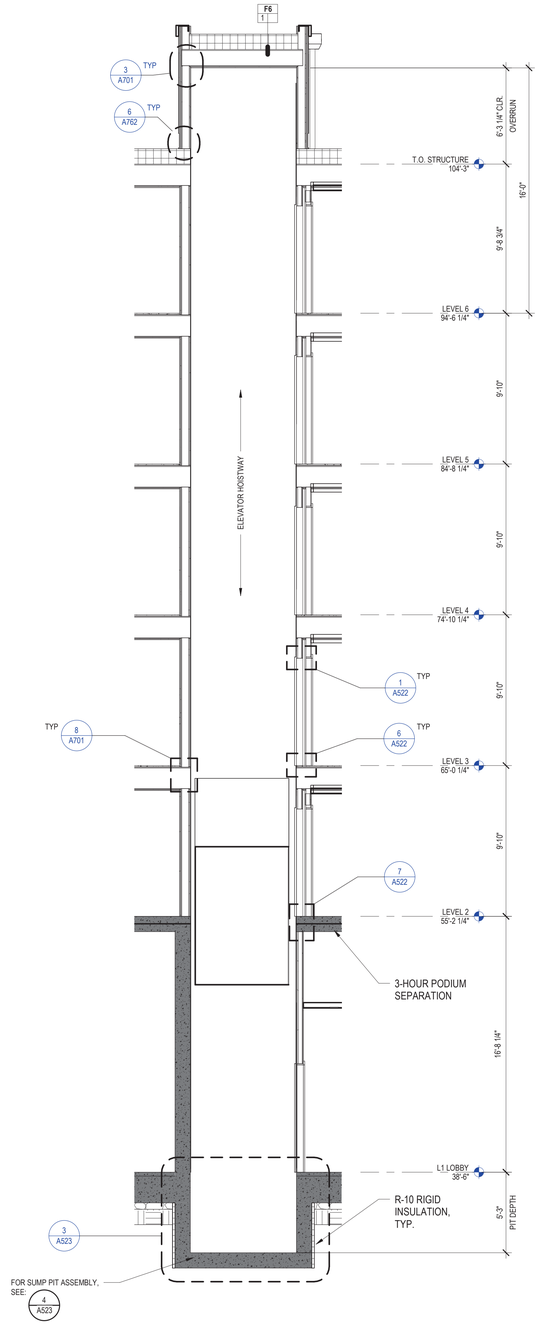


3 ELEVATOR PIT PLAN

SCALE: 1/4" = 1'-0"

ENLARGED EXIT PLANS GENERAL NOTES:

1. AT ALL EXPOSED CONCRETE WALLS, COVER, COAT, AND PAINT.
2. EXIT STAIRS AND ELEVATOR SHAFTS WILL BE PRESSURIZED IN ACCORDANCE WITH SECTION 909.6.3.
3. EXIT STAIRS AND ELEVATOR SHAFTS SHALL COMPLY WITH THE SPECIAL INSPECTION AND TEST REQUIREMENTS IN ACCORDANCE WITH SECTION 909.3.
4. REFER TO SHEETS A520 - A523 FOR ALL STAIR AND ELEVATOR DETAILS.



4 ELEVATOR SECTION

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

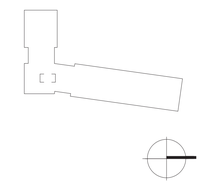
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

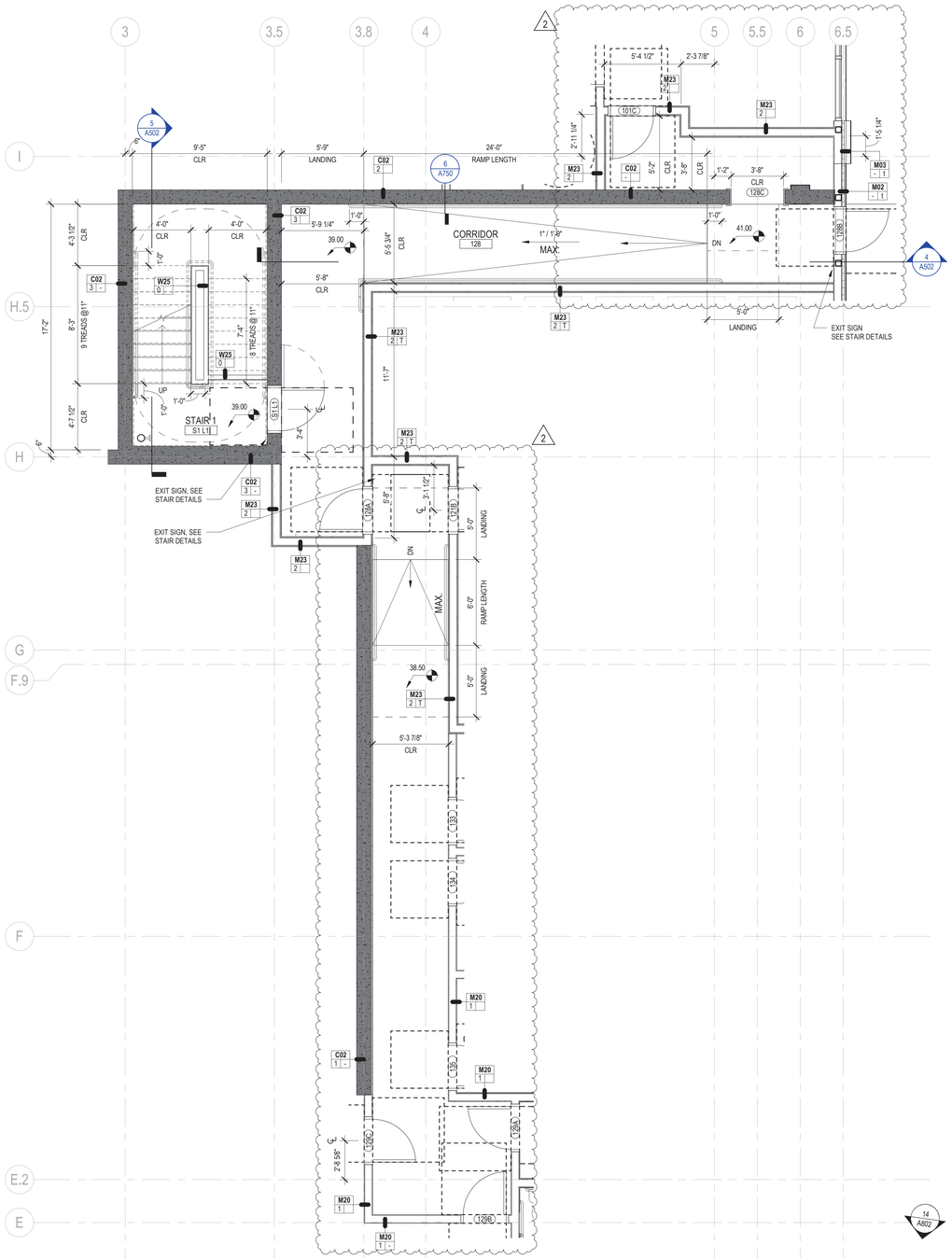
VERTICAL CIRCULATION - ELEVATOR

A501

2/2/2024 10:41:09 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

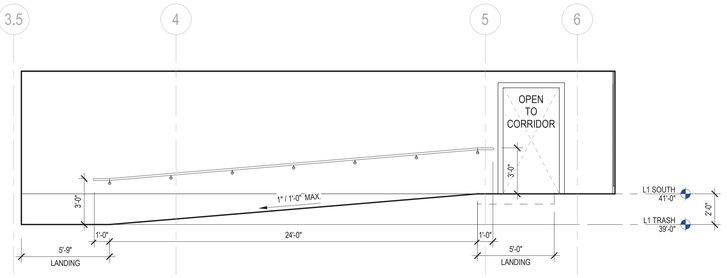
ENLARGED EXIT PLANS GENERAL NOTES:

1. AT ALL EXPOSED CONCRETE WALLS, COVER, COAT, AND PAINT.
2. EXIT STAIRS AND ELEVATOR SHAFTS WILL BE PRESSURIZED IN ACCORDANCE WITH SECTION 909.6.3.
3. EXIT STAIRS AND ELEVATOR SHAFTS SHALL COMPLY WITH THE SPECIAL INSPECTION AND TEST REQUIREMENTS IN ACCORDANCE WITH SECTION 909.3.
4. REFER TO SHEETS A520 - A523 FOR ALL STAIR AND ELEVATOR DETAILS.



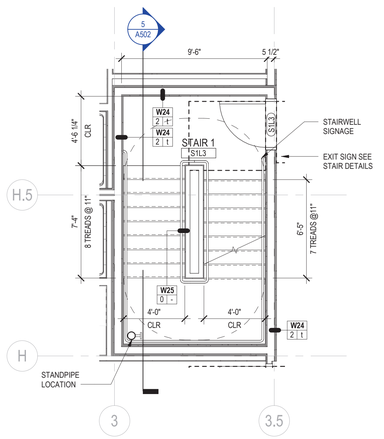
1 STAIR 1 - LEVEL 1

SCALE: 1/4" = 1'-0"



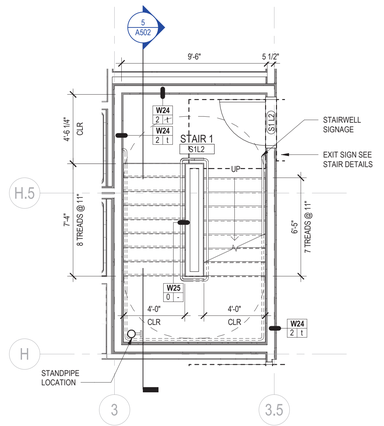
4 STAIR 1 - RAMP SECTION A

SCALE: 1/4" = 1'-0"



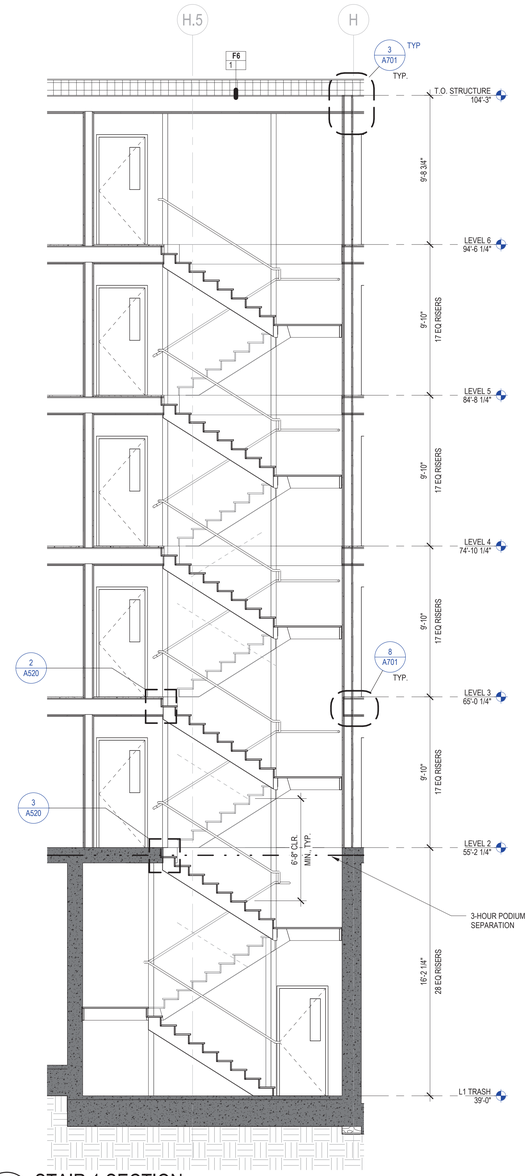
3 STAIR 1 - TYP LEVELS 3-6

SCALE: 1/4" = 1'-0"



2 STAIR 1 - LEVEL 2

SCALE: 1/4" = 1'-0"



5 STAIR 1 SECTION

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

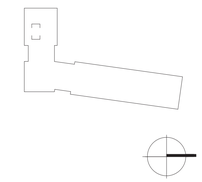
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2.Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

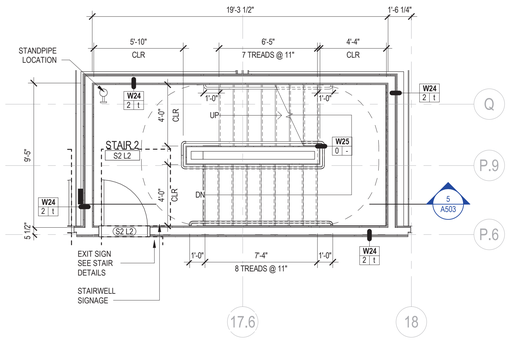
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

VERTICAL CIRCULATION - STAIR 1

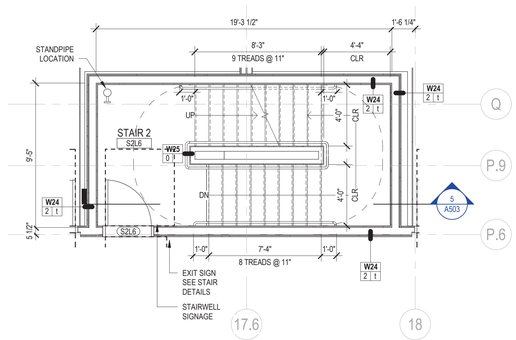
A502

2/2/2024 10:41:12 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



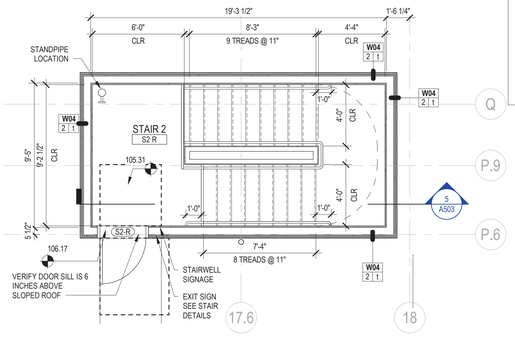
1 STAIR 2 - TYP LEVELS 2-5

SCALE: 1/4" = 1'-0"



2 STAIR 2 - LEVEL 6

SCALE: 1/4" = 1'-0"

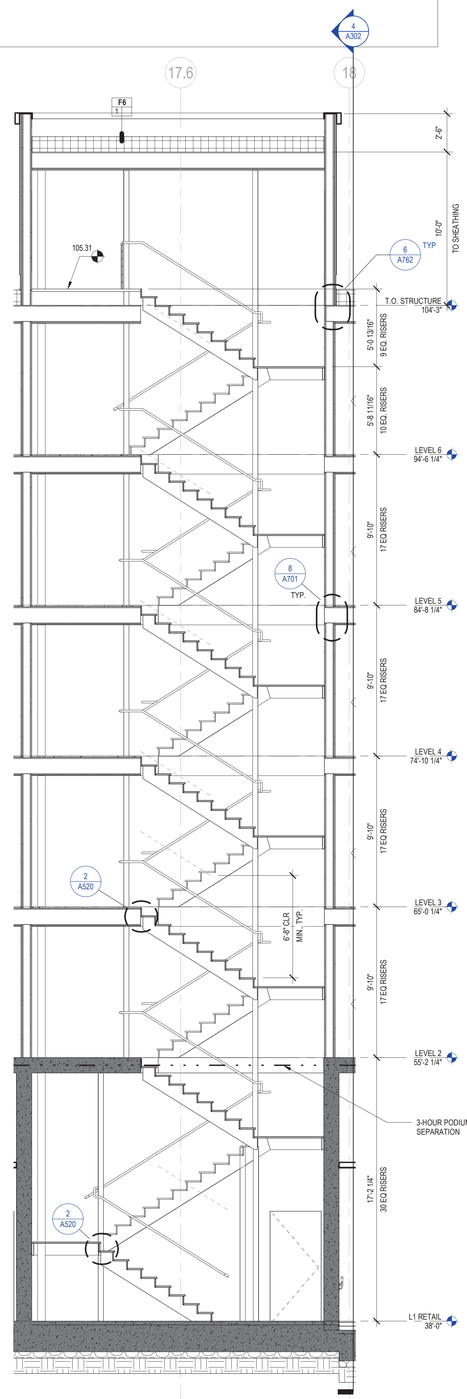


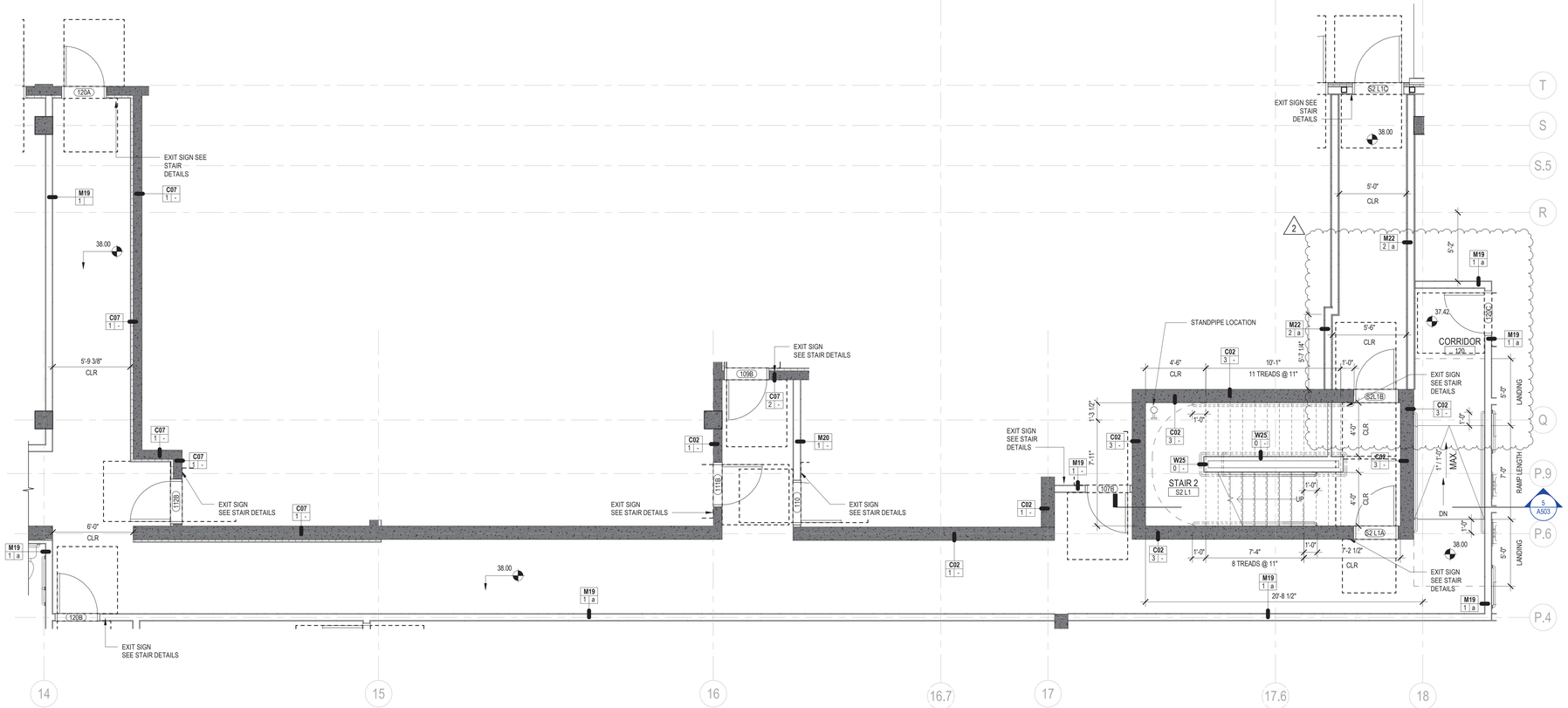
3 STAIR 2 - ROOF

SCALE: 1/4" = 1'-0"

ENLARGED EXIT PLANS GENERAL NOTES:

1. AT ALL EXPOSED CONCRETE WALLS, COVER, COAT, AND PAINT.
2. EXIT STAIRS AND ELEVATOR SHAFTS WILL BE PRESSURIZED IN ACCORDANCE WITH SECTION 909.6.3.
3. EXIT STAIRS AND ELEVATOR SHAFTS SHALL COMPLY WITH THE SPECIAL INSPECTION AND TEST REQUIREMENTS IN ACCORDANCE WITH SECTION 909.3.
4. REFER TO SHEETS A520 - A523 FOR ALL STAIR AND ELEVATOR DETAILS.





4 STAIR 2 - LEVEL 1

SCALE: 1/4" = 1'-0"

5 STAIR 2 SECTION

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

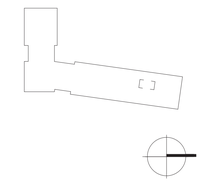
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

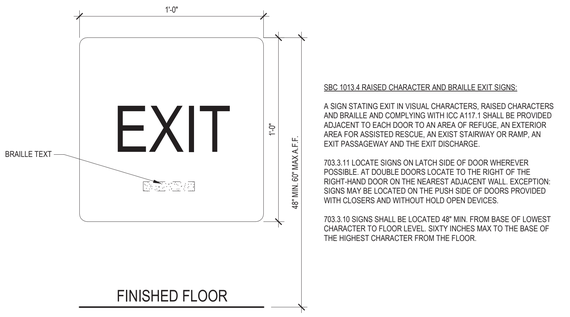
	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

VERTICAL CIRCULATION - STAIR 2

A503

2/2/2024 10:41:14 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



SBC 1013.4 RAISED CHARACTER AND BRAILLE EXIT SIGNS:

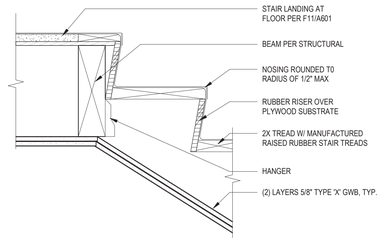
A SIGN STATING EXIT IN VISUAL CHARACTERS, RAISED CHARACTERS AND BRAILLE AND COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN AREA OF REFUGE, AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIST STAIRWAY OR RAMP, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE.

703.3.11 LOCATE SIGNS ON LATCH SIDE OF DOOR WHEREVER POSSIBLE. AT DOUBLE DOORS LOCATE TO THE RIGHT OF THE RIGHT-HAND DOOR ON THE NEAREST ADJACENT WALL. EXCEPTION: SIGNS MAY BE LOCATED ON THE PUSH SIDE OF DOORS PROVIDED WITH CLOSERS AND WITHOUT HOLD OPEN DEVICES.

703.3.10 SIGNS SHALL BE LOCATED 48" MIN. FROM BASE OF LOWEST CHARACTER TO FLOOR LEVEL. SIXTY INCHES MAX TO THE BASE OF THE HIGHEST CHARACTER FROM THE FLOOR.

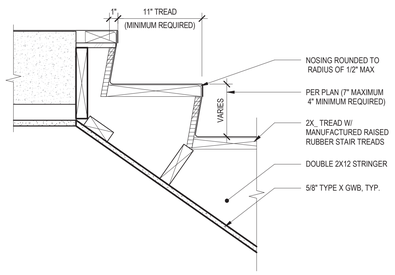
1 TACTILE EXIT SIGNAGE

SCALE: 3" = 1'-0"



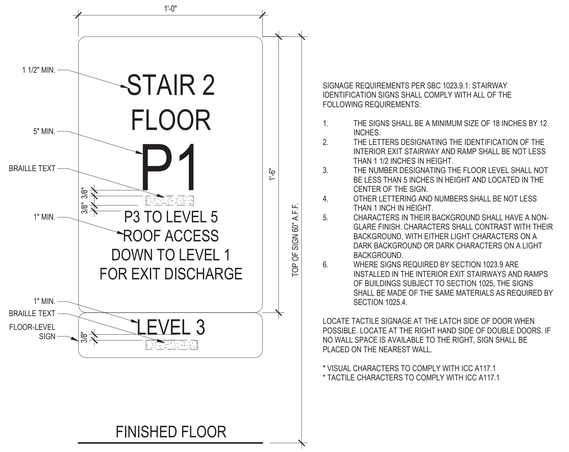
2 WOOD INTERIOR STAIR AT TOP LANDING

SCALE: 1 1/2" = 1'-0"



3 STAIR AT CONCRETE TOP LANDING

SCALE: 1 1/2" = 1'-0"



SIGNAGE REQUIREMENTS PER SBC 1023.9.1: STAIRWAY IDENTIFICATION SIGNS SHALL COMPLY WITH ALL OF THE FOLLOWING REQUIREMENTS:

1. THE SIGNS SHALL BE A MINIMUM SIZE OF 18 INCHES BY 12 INCHES.
2. THE LETTERS DESIGNATING THE IDENTIFICATION OF THE INTERIOR EXIT STAIRWAY AND RAMP SHALL BE NOT LESS THAN 1 1/2 INCHES IN HEIGHT.
3. THE NUMBER DESIGNATING THE FLOOR LEVEL SHALL NOT BE LESS THAN 5 INCHES IN HEIGHT AND LOCATED IN THE CENTER OF THE SIGN.
4. OTHER LETTERING AND NUMBERS SHALL BE NOT LESS THAN 1 INCH IN HEIGHT.
5. CHARACTERS IN THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND, WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.
6. WHERE SIGNS REQUIRED BY SECTION 1023.9 ARE INSTALLED IN THE INTERIOR EXIT STAIRWAYS AND RAMPS OF BUILDINGS SUBJECT TO SECTION 1025, THE SIGNS SHALL BE MADE OF THE SAME MATERIALS AS REQUIRED BY SECTION 1025.4

LOCATE TACTILE SIGNAGE AT THE LATCH SIDE OF DOOR WHEN POSSIBLE. LOCATE AT THE RIGHT HAND SIDE OF DOUBLE DOORS. IF NO WALL SPACE IS AVAILABLE TO THE RIGHT, SIGN SHALL BE PLACED ON THE NEAREST WALL.

* VISUAL CHARACTERS TO COMPLY WITH ICC A117.1
* TACTILE CHARACTERS TO COMPLY WITH ICC A117.1

5 STAIRWELL SIGNAGE

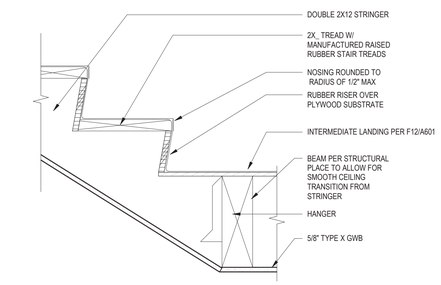
SCALE: 3" = 1'-0"

6 WOOD INTERIOR STAIR

SCALE: 1 1/2" = 1'-0"

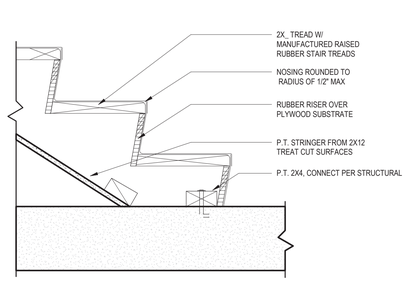
7 STAIR AT CONCRETE BOTTOM LANDING

SCALE: 1 1/2" = 1'-0"



10 WOOD STAIR AT BOTTOM LANDING

SCALE: 1 1/2" = 1'-0"



11 WOOD STAIR AT CONCRETE SLAB

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

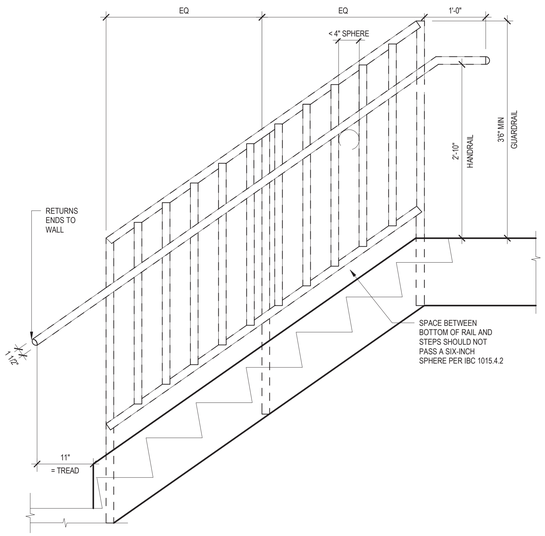
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

STAIR DETAILS

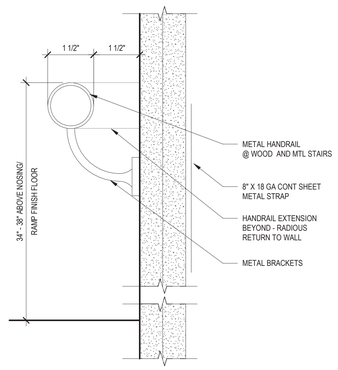
A520

2/2/2024 10:41:15 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



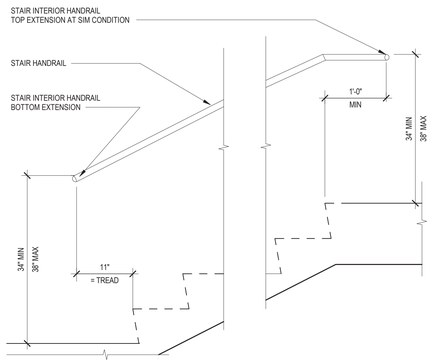
1 STAIR RAIL ARRANGEMENT - TYPICAL

SCALE: 1" = 1'-0"



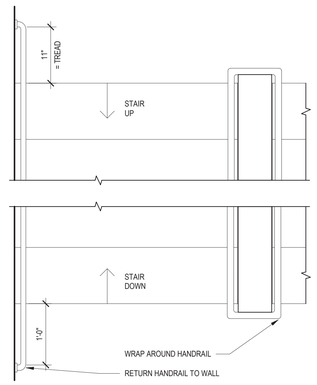
2 WALL MOUNTED HANDRAILS

SCALE: 6" = 1'-0"



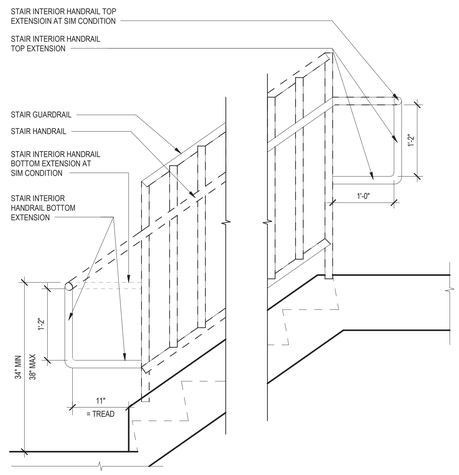
3 WALL-MOUNTED HANDRAIL EXTENSION AT GUARD RETURN SECT

SCALE: 1" = 1'-0"



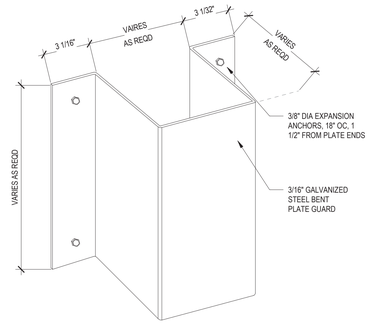
4 HANDRAIL EXTENSION AT WALL RETURN

SCALE: 1" = 1'-0"



5 HANDRAIL EXTENSION AT GUARD RETURN SECT

SCALE: 1" = 1'-0"



yhtfc STEEL PIPE GUARD

SCALE: 3" = 1'-0"

2/2/2024 10:41:16 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

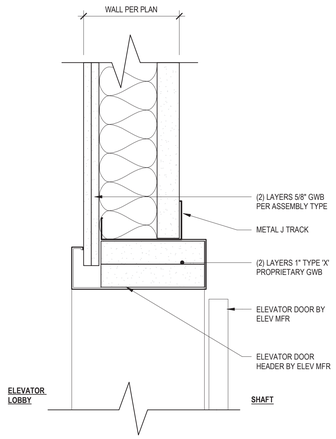
© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

STAIR DETAILS

A521

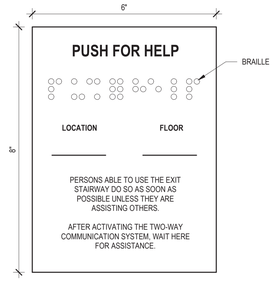


1 ELEVATOR DOOR HEAD

SCALE: 3" = 1'-0"

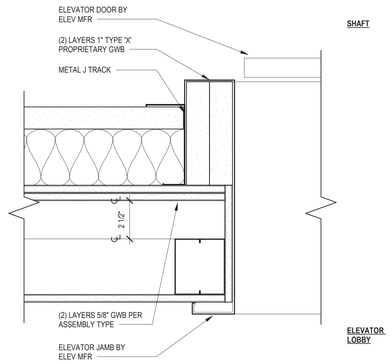
2 ELEVATOR EGRESS SIGNAGE

SCALE: 3" = 1'-0"



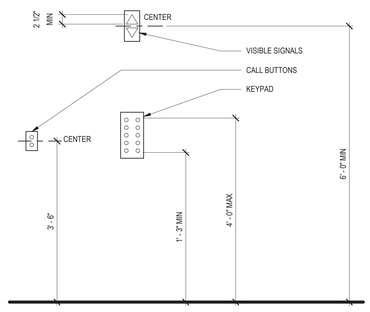
3 SIGN - TWO-WAY COMMUNICATION

SCALE: 6" = 1'-0"



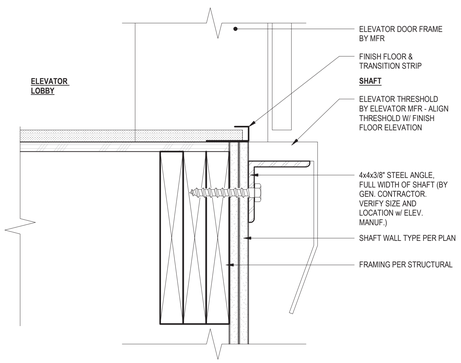
4 ELEVATOR DOOR JAMB

SCALE: 3" = 1'-0"



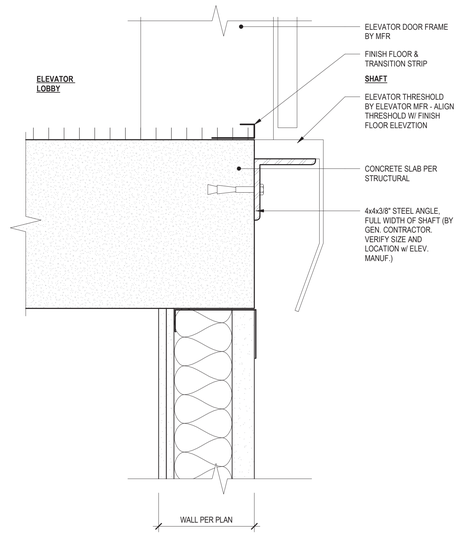
5 ELEVATOR CONTROLS AND SIGNALS

SCALE: 3/4" = 1'-0"



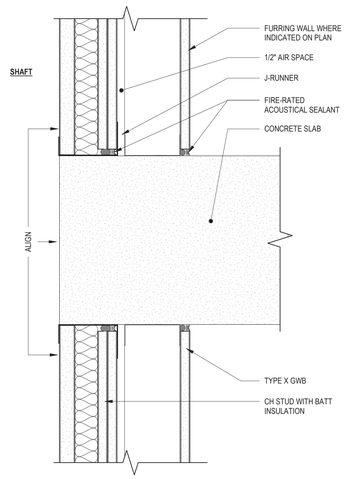
6 ELEVATOR SILL AT WOOD FLOOR

SCALE: 3" = 1'-0"



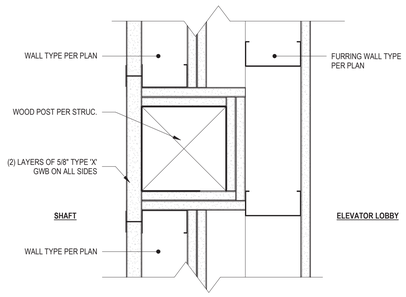
7 ELEVATOR SILL AT PT SLAB

SCALE: 3" = 1'-0"



8 SHAFT WALL AT PT SLAB

SCALE: 3" = 1'-0"



9 ELEVATOR SHAFT COLUMN PLAN DETAIL

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

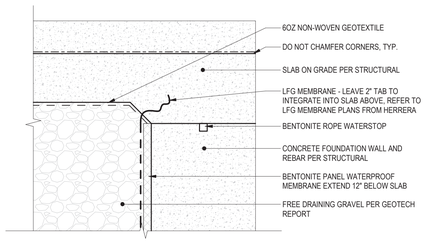
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ELEVATOR DETAILS

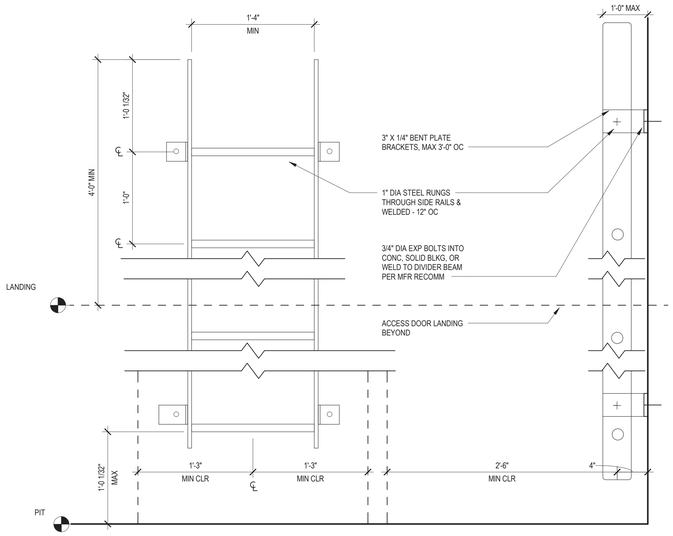
A522

2/2/2024 10:41:17 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



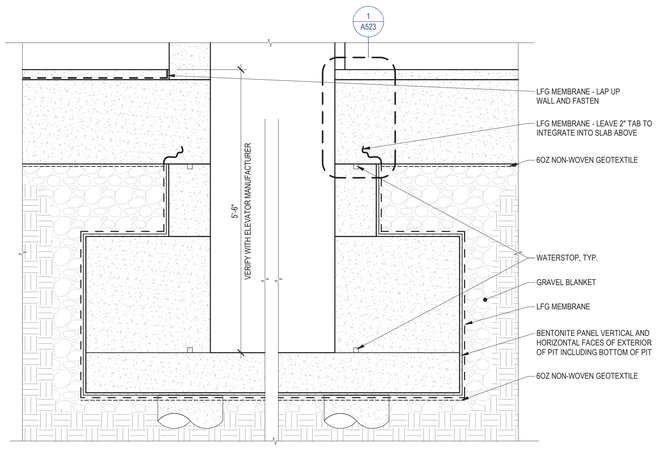
1 TOP OF ELEVATOR PIT - SECTION

SCALE: 1 1/2" = 1'-0"



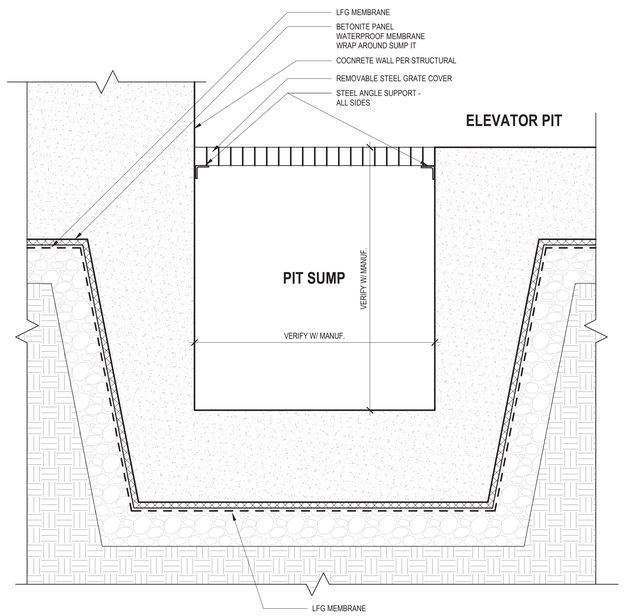
2 ELEVATOR PIT ACCESS LADDER

SCALE: 1 1/2" = 1'-0"



3 ELEVATOR PIT - SECTION

SCALE: 3/4" = 1'-0"



4 ELEVATOR SUMP PIT

SCALE: 1 1/2" = 1'-0"

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
2/2/2024 10:41:17 AM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

ELEVATOR DETAILS

A523

F1

SLAB ON GRADE

FIRE RATING: - HR

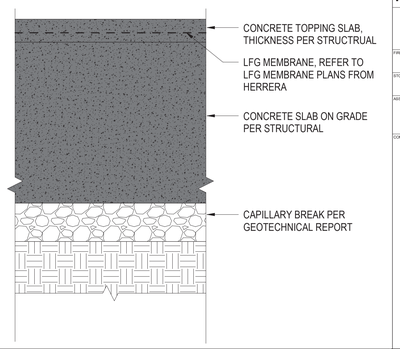
STC RATING:

ASSEMBLY LISTING: IBC TABLE 721.1.(3)

COMMENTS:

1 HR: 3 1/2" MIN. THICKNESS
2 HR: 5" MIN. THICKNESS
3 HR: 6 1/4" MIN. THICKNESS

REFER TO STRUCTURAL FOR MIN. REBAR COVERAGE PER IBC 722.2.3



F2

TYP. CONCRETE SLAB

FIRE RATING: 3 HR

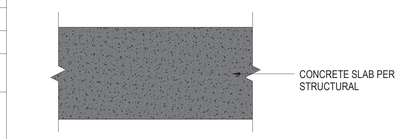
STC RATING:

ASSEMBLY LISTING: IBC TABLE 721.1. (3)

COMMENTS:

1 HR: 3 1/2" MIN. THICKNESS
2 HR: 5" MIN. THICKNESS
3 HR: 6 1/4" MIN. THICKNESS

REFER TO STRUCTURAL FOR MIN. REBAR COVERAGE PER IBC 722.2.3



F3

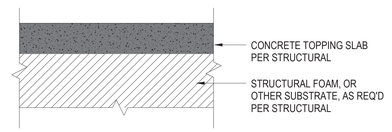
TOPPING SLAB

FIRE RATING: - HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS:



NOT USED

F5

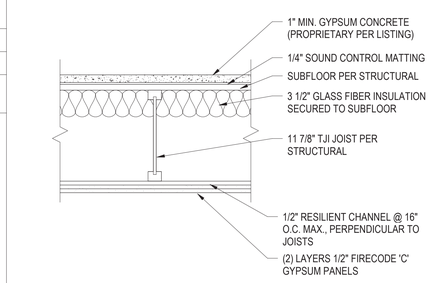
TYP. FLOOR

FIRE RATING: 1 HR

STC RATING: 60-64

ASSEMBLY LISTING: GA FC 5011

COMMENTS:



F6

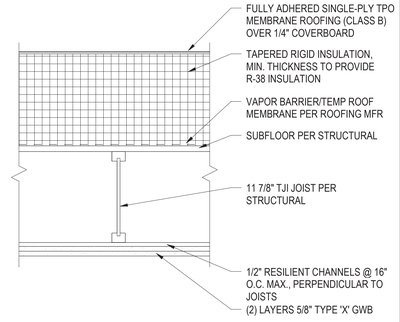
TYP. ROOF

FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA FC 5111

COMMENTS:



F7 (2)

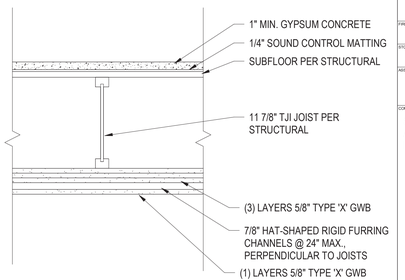
STAIR 3 CEILING

FIRE RATING: 2 HR

STC RATING:

ASSEMBLY LISTING: GA FC 5750

COMMENTS:



F8

AMENITY TERRACE FLOOR

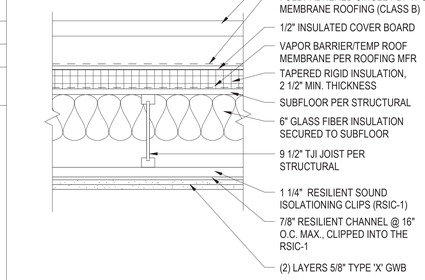
FIRE RATING: 1 HR

STC RATING: 60-61

ASSEMBLY LISTING: UL M532

COMMENTS:

STC RATING FOR THIS ASSEMBLY IS FROM TEST REFERENCE #E6968.08



F9

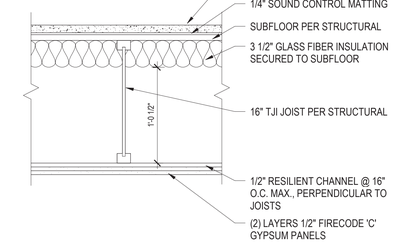
CORRIDOR FLOOR

FIRE RATING: 1 HR

STC RATING: 60-64

ASSEMBLY LISTING: GA FC 5011

COMMENTS:



F10

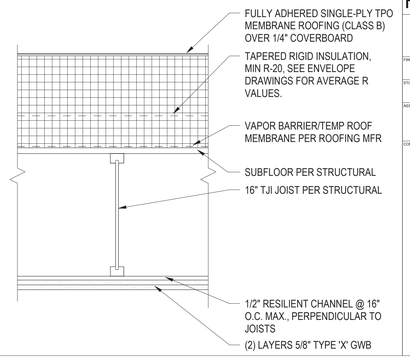
ROOF @ CORRIDOR

FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA FC 5111

COMMENTS:



F11

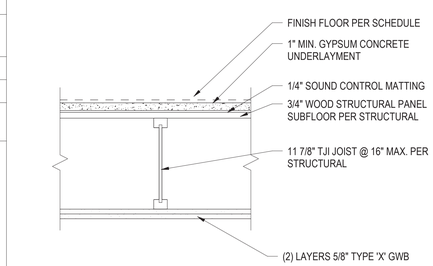
STAIR LANDING @ FLOOR

FIRE RATING: - HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS:



F12

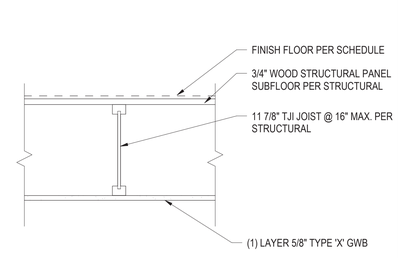
INTERMEDIATE STAIR LANDING

FIRE RATING: - HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS:



EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

HORIZONTAL ASSEMBLIES

A601

2/2/2024 10:41:18 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

C1

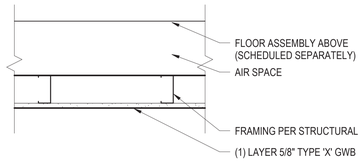
INTERIOR SUSPENDED GWB

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS



C4

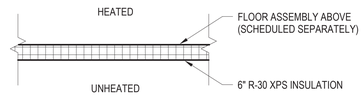
UNDERSLAB RIGID INSULATION

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS



C5

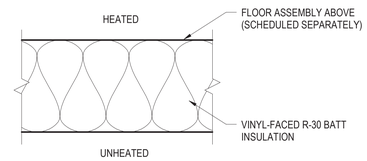
UNDERSLAB BATT INSULATION

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS



C6

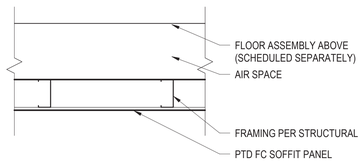
EXTERIOR FIBER CEMENT SOFFIT

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS



C7

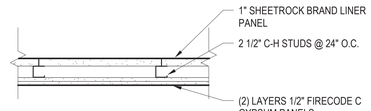
CEILINGS & STAIR SOFFIT

FIRE RATING
2 HR

STC RATING

ASSEMBLY LISTING
AER-09038

COMMENTS
PER USG FIRE-RESISTANT ASSEMBLIES CATALOG, SECTION D, HORIZONTAL MEMBRANES.



C8

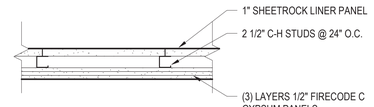
DUCT ENCLOSURE

FIRE RATING
2 HR

STC RATING

ASSEMBLY LISTING
WHI-495
PSH0154/0167

COMMENTS
PER USG FIRE-RESISTANT ASSEMBLIES CATALOG, SECTION D, HORIZONTAL MEMBRANES.



C9

EXTERIOR WOOD-LOOK SOFFIT

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS

R1

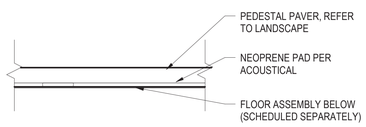
PEDESTAL PAVER

FIRE RATING
- HR

STC RATING

ASSEMBLY LISTING

COMMENTS
LEVEL 6 AMENITY DECK



EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

HORIZONTAL ASSEMBLIES

A602

2/2/2024 10:41:19 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

C02

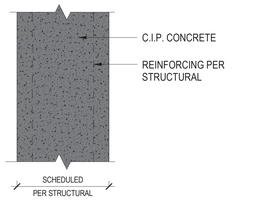
CONCRETE WALL

FIRE RATING: - HR

STC RATING:

ASSEMBLY LISTING: IBC TABLE 721.1(2) ITEM 4-1.1

COMMENTS: 6.2" MINIMUM THICKNESS FOR 3HR RATING.



C07 (2)

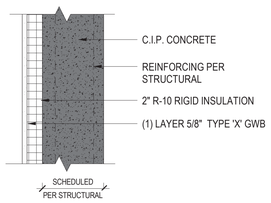
CONCRETE WALL EXTERIOR

FIRE RATING: - HR

STC RATING:

ASSEMBLY LISTING: IBC TABLE 721.1(2) ITEM 4-1.1

COMMENTS: 6.2" MINIMUM THICKNESS FOR 3HR RATING.



C05

CMU WALL

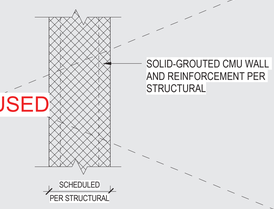
FIRE RATING: 3 HR

STC RATING:

ASSEMBLY LISTING: IBC TABLE 721.1(2); 3-1.1

COMMENTS: 8" NOMINAL CMU

NOT USED



C06

CMU WALL

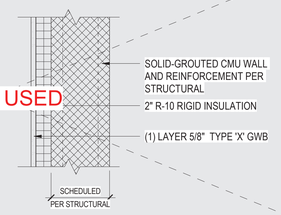
FIRE RATING: 3 HR

STC RATING:

ASSEMBLY LISTING: UL U914 (SIM)

COMMENTS:

NOT USED



(2)

M02

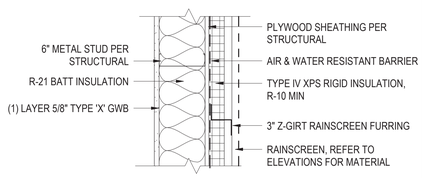
TYPE I-A EXTERIOR WALL

FIRE RATING: 1 HR

STC RATING:

ASSEMBLY LISTING: GA WP 8122

COMMENTS:



M03

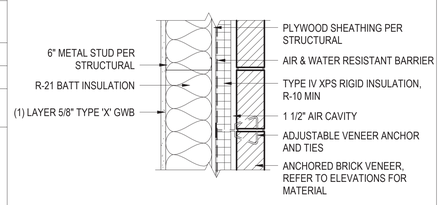
TYPE I-A EXTERIOR WALL

FIRE RATING: 1 HR

STC RATING:

ASSEMBLY LISTING: GA WP 8122

COMMENTS: FULL FACE BRICK VENEER



M10

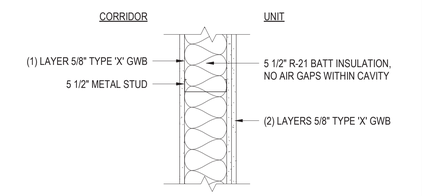
CORRIDOR WALL

FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 1052

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M11

CORRIDOR WALL - ACOUSTIC

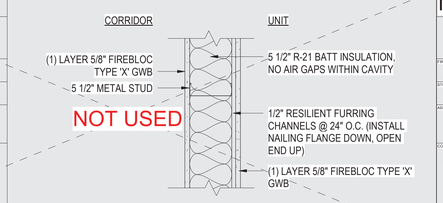
FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 1067

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



M15

TYP. INTERIOR PARTITION

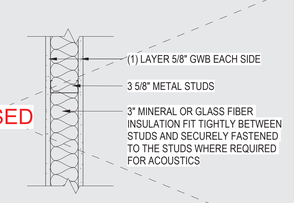
FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



M16

TYP. INTERIOR PARTITION

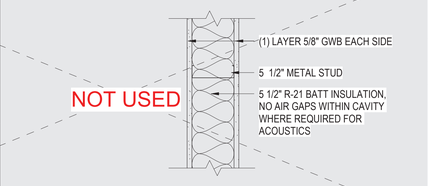
FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



M17

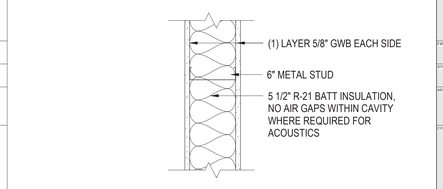
TYP. INTERIOR PARTITION

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M18

TYP. INTERIOR PARTITION

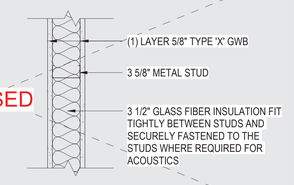
FIRE RATING: 1 HR

STC RATING: 45-49

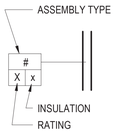
ASSEMBLY LISTING: GA WP 1072

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



WALL TYPE TAG:



INSULATION:

- NO INSULATION
- a ACCOUSTICAL INSULATION
- t THERMAL INSULATION

GENERAL NOTES:

1. ALL INSULATION SHALL HAVE MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 IN ACCORDANCE WITH IBC 720.2 (IBC 2018)
2. REFER TO SPECIFICATIONS FOR LOCATION, PROVISIONS FOR AND LIMITS OF DIFFERENT TYPES OF GWB SUCH AS CEMENTITIOUS TILE BACKER BOARD, MOISTURE AND MOLD RESISTANT GWB, FIRE-RATED GWB, ETC.

   USE MOISTURE OR MOLD RESISTANT GWB ON ALL PIPING UTILITY CHASES, UNCONDITIONED SPACES, PUBLIC RESTROOMS AND RESIDENTIAL BATHROOMS UNO.
3. REFER TO SPECIFICATIONS FOR STUD GAUGE AND SPACING.
4. FIRE RATING AND SOUND TRANSMISSION COEFFICIENTS ARE BASED UPON THE ASSEMBLIES SHOWN *WITHOUT* INSULATION, UNLESS NOTED OTHERWISE
5. REFER TO WALL DETAILS FOR TERMINATIONS, DEFLECTIONS, CONNECTIONS, PENETRATIONS AND INTERSECTIONS.
6. ACOUSTIC SEALANT SHALL CONFORM TO ASTM C919-02.
7. SEPARATE BACK TO BACK ELECTRICAL OR OTHER UTILITY BOXES BY AT LEAST ONE FULL STUD BAY IN SINGLE STUD WALLS AND TWO STUD BAYS IN STAGGERED STUD OR DOUBLE STUD WALL ASSEMBLIES UNO.
8. SEAL ALL DUCT, CONDUIT OR PIPING PENETRATIONS THROUGH ACOUSTICALLY RATED CONSTRUCTION TO PREVENT DIRECT CONTACT USING RESILIENT NON-HARDENING CAULK. USE FIRE-RATED ACOUSTICAL CAULK IN FIRE-RATED CONSTRUCTION.
9. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR VIBRATION ISOLATION REQUIREMENTS IN AREAS WHERE PLUMBING RUNS IN PROXIMITY TO NOISE-SENSITIVE SPACES.
10. STAGGER ALL JOINTS VERTICALLY AND HORIZONTALLY WHENEVER TWO OR MORE LAYERS OF GWB ARE SCHEDULED.
11. SECURE BATT INSULATION TO THE STRUCTURE AS REQUIRED TO PREVENT SAGGING OR DISPLACEMENT.
12. CONFORM TO TESTING AGENCY ASSEMBLY # NOTED FOR EACH RATED WALL TYPE.
13. STC RATINGS ARE BASED ON WALL INSULATION R-VALUES RANGING FROM R-11 TO R-15 U.N.O.
14. FILL IN ALL VOIDS WITH MATERIAL MATCHING FIRE RATING REQUIREMENTS OF THE WALL ASSEMBLY.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

MG2

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL TYPES

A610

2/2/2024 10:41:20 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

M19

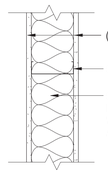
TYP. INTERIOR PARTITION

FIRE RATING: 1 HR

STC RATING: 45-49

ASSEMBLY LISTING: GA WP 1072

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M20

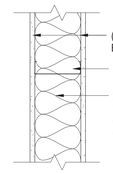
TYP. INTERIOR PARTITION

FIRE RATING: 1 HR

STC RATING: 45-49

ASSEMBLY LISTING: GA WP 1072

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M21

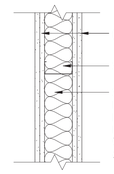
TYP. INTERIOR PARTITION

FIRE RATING: 2 HR

STC RATING: 55-59

ASSEMBLY LISTING: GA WP 1522

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M22

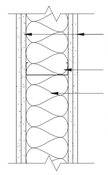
TYP. INTERIOR PARTITION

FIRE RATING: 2 HR

STC RATING: 55-59

ASSEMBLY LISTING: GA WP 1522

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



M23

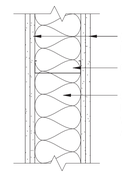
TYP. INTERIOR PARTITION

FIRE RATING: 2 HR

STC RATING: 55-59

ASSEMBLY LISTING: GA WP 1522

COMMENTS:



M24 (2)

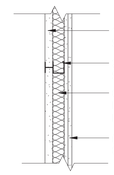
TYP. SHAFT PARTITION

FIRE RATING: 2 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 7051

COMMENTS: REFER TO GA WP 7051 LISTING FOR OTHER APPROVED PROPRIETARY SHAFT LINER AND GWB PRODUCTS FOR THIS ASSEMBLY.



M25 (2)

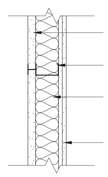
TYP. SHAFT PARTITION

FIRE RATING: 2 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 7051

COMMENTS: REFER TO GA WP 7051 LISTING FOR OTHER APPROVED PROPRIETARY SHAFT LINER AND GWB PRODUCTS FOR THIS ASSEMBLY.



M26

TYP. SHAFT PARTITION

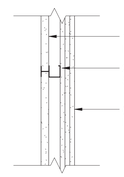
FIRE RATING: 3 HR

STC RATING: 45-49

ASSEMBLY LISTING: GA WP 7400

COMMENTS:

(2)



M27

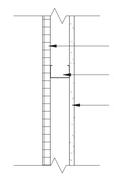
FURRED WALL

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: INTERIOR 2 1/2" METAL STUD FURRING



M28

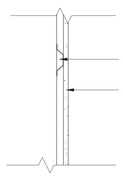
FURRED WALL

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: INTERIOR 7/8" HAT CHANNEL FURRING



M29

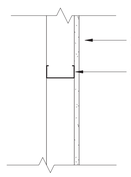
FURRED WALL

FIRE RATING: 0 HR

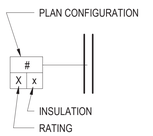
STC RATING:

ASSEMBLY LISTING:

COMMENTS:



WALL TYPE TAG:



INSULATION:

- \- NO INSULATION
- a ACCOUSTICAL INSULATION
- t THERMAL INSULATION

GENERAL NOTES

1. ALL INSULATION SHALL HAVE MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 IN ACCORDANCE WITH IBC 720.2 (IBC 2018)
2. REFER TO SPECIFICATIONS FOR LOCATION, PROVISIONS FOR AND LIMITS OF DIFFERENT TYPES OF GWB SUCH AS CEMENTITIOUS TILE BACKER BOARD, MOISTURE AND MOLD RESISTANT GWB, FIRE-RATED GWB, ETC.

   USE MOISTURE OR MOLD RESISTANT GWB ON ALL PIPING UTILITY CHASES, UNCONDITIONED SPACES, PUBLIC RESTROOMS, RESIDENTIAL BATHROOMS, AND KITCHEN WET WALLS.
3. REFER TO SPECIFICATIONS FOR STUD GAUGE AND SPACING.
4. FIRE RATING AND SOUND TRANSMISSION COEFFICIENTS ARE BASED UPON THE ASSEMBLIES SHOWN *WITHOUT* INSULATION, UNLESS NOTED OTHERWISE
5. REFER TO WALL DETAILS FOR TERMINATIONS, DEFLECTIONS, CONNECTIONS, PENETRATIONS AND INTERSECTIONS.
6. ACOUSTIC SEALANT SHALL CONFORM TO ASTM C919-02.
7. SEPARATE BACK TO BACK ELECTRICAL OR OTHER UTILITY BOXES BY AT LEAST ONE FULL STUD BAY IN SINGLE STUD WALLS AND TWO STUD BAYS IN STAGGERED STUD OR DOUBLE STUD WALL ASSEMBLIES U.N.O.
8. SEAL ALL DUCT, CONDUIT OR PIPING PENETRATIONS THROUGH ACOUSTICALLY RATED CONSTRUCTION TO PREVENT DIRECT CONTACT USING RESILIENT NON-HARDENING CAULK. USE FIRE-RATED ACOUSTICAL CAULK IN FIRE-RATED CONSTRUCTION.
9. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR VIBRATION ISOLATION REQUIREMENTS IN AREAS WHERE PLUMBING RUNS IN PROXIMITY TO NOISE-SENSITIVE SPACES.
10. STAGGER ALL JOINTS VERTICALLY AND HORIZONTALLY WHENEVER TWO OR MORE LAYERS OF GWB ARE SCHEDULED.
11. SECURE BATT INSULATION TO THE STRUCTURE AS REQUIRED TO PREVENT SAGGING OR DISPLACEMENT.
12. CONFORM TO TESTING AGENCY ASSEMBLY # NOTED FOR EACH RATED WALL TYPE.
13. STC RATINGS ARE BASED ON WALL INSULATION R-VALUES RANGING FROM R-11 TO R-15 U.N.O.
14. FILL IN ALL VOIDS WITH MATERIAL MATCHING FIRE RATING REQUIREMENTS OF THE WALL ASSEMBLY.
15. USE PLYWOOD ADJACENT TO SHEAR WALLS AS NEEDED TO MAINTAIN FLUSH WALL FINISH.
16. WHEN NOT SPECIFIED AS A COMPONENT OF A FIRE TESTED WALL OR PARTITION SYSTEM, MINERAL FIBER, GLASS FIBER, OR CELLULOSE FIBER INSULATION OF A THICKNESS NOT EXCEEDING THAT OF THE STUD DEPTH SHALL BE PERMITTED TO BE ADDED WITHIN THE STUD CAVITY.
17. GREATER STUD SIZES (DEPTHS) SHALL BE PERMITTED TO BE USED IN METAL- OR WOOD-STUD SYSTEMS. METAL STUDS OF A HEAVIER GAGE THAN THOSE TESTED SHALL BE PERMITTED.
18. ADDITIONAL LAYERS OF TYPE X OR REGULAR GYPSUM PANELS SHALL BE PERMITTED TO BE ADDED TO ANY SYSTEM.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL TYPES

A611

2/2/2024 10:41:21 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

W02

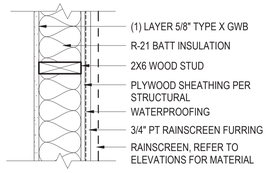
TYP. EXTERIOR WALL

FIRE RATING: 1 HR

STC RATING: 33

ASSEMBLY LISTING: UL U356 (2)

COMMENTS:



W03

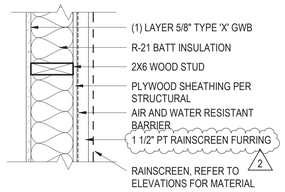
EXTERIOR WALL

FIRE RATING: 1 HR

STC RATING: 33

ASSEMBLY LISTING: UL U356 (2)

COMMENTS:



W04 (2)

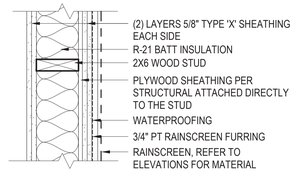
EXTERIOR WALL

FIRE RATING: 2 HR

STC RATING: 40-44

ASSEMBLY LISTING: GA WP 8418

COMMENTS: EXTERIOR WALL @ STAIR & ELEVATOR PENTHOUSE



W05

EXTERIOR WALL

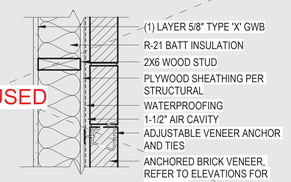
FIRE RATING: 1 HR

STC RATING: 33

ASSEMBLY LISTING: UL U356 (2)

COMMENTS: FULL FACE BRICK VENEER

NOT USED



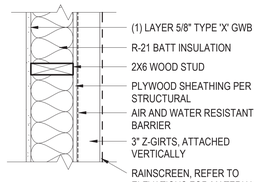
W06 (2)

FIRE RATING: 1 HR

STC RATING:

ASSEMBLY LISTING: UL U356

COMMENTS:



W09 (2)

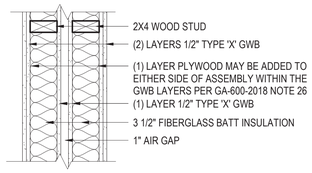
FIRE WALL

FIRE RATING: 2 HR

STC RATING: 55-59

ASSEMBLY LISTING: GA WP 4232

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W11

TYP. CORRIDOR WALL

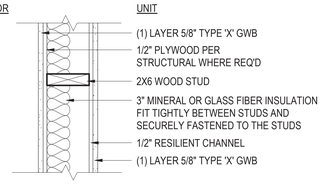
FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 3242

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

CORRIDOR UNIT



W12

CORRIDOR WALL

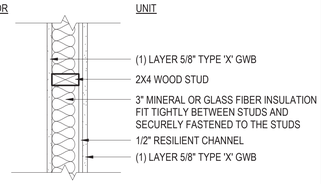
FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 3242

COMMENTS: 2X4 WOOD STUD @ UNIT ENTRIES; ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

CORRIDOR UNIT



W13

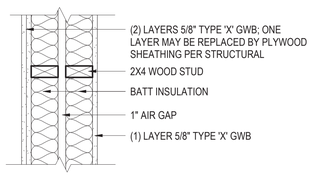
PARTY WALL

FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 3269 (2)

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W14

PARTY WALL

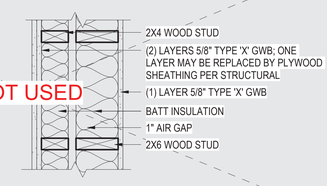
FIRE RATING: 1 HR

STC RATING: 50-54

ASSEMBLY LISTING: GA WP 3269

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



W15

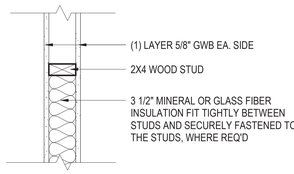
TYP. INTERIOR PARTITION

FIRE RATING: 0 HR

STC RATING: 36

ASSEMBLY LISTING: NGC 2008029

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W16

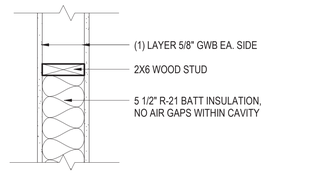
TYP. INTERIOR PARTITION

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W17

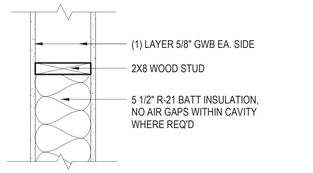
TYP. INTERIOR PARTITION

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W18

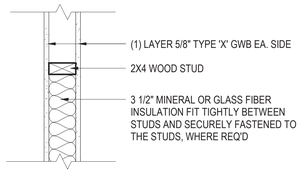
TYP. INTERIOR PARTITION

FIRE RATING: 1 HR

STC RATING: 33

ASSEMBLY LISTING: GA WP 3510

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W19

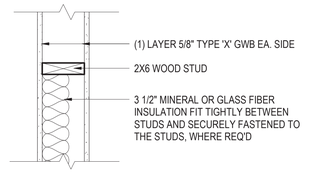
TYP. INTERIOR PARTITION

FIRE RATING: 1 HR

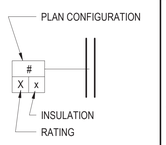
STC RATING: 45-49

ASSEMBLY LISTING: GA WP 3510

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



WALL TYPE TAG:



INSULATION:

- \- NO INSULATION
- a ACCOUSTICAL INSULATION
- t THERMAL INSULATION

GENERAL NOTES

1. ALL INSULATION SHALL HAVE MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 IN ACCORDANCE WITH IBC 720.2 (IBC 2018)
2. REFER TO SPECIFICATIONS FOR LOCATION, PROVISIONS FOR AND LIMITS OF DIFFERENT TYPES OF GWB SUCH AS CEMENTITIOUS TILE BACKER BOARD, MOISTURE AND MOLD RESISTANT GWB, FIRE-RATED GWB, ETC.

   USE MOISTURE OR MOLD RESISTANT GWB ON ALL PIPING UTILITY CHASES, UNCONDITIONED SPACES, PUBLIC RESTROOMS, RESIDENTIAL BATHROOMS, AND KITCHEN WET WALLS.
3. REFER TO SPECIFICATIONS FOR STUD GAUGE AND SPACING.
4. FIRE RATING AND SOUND TRANSMISSION COEFFICIENTS ARE BASED UPON THE ASSEMBLIES SHOWN *WITHOUT* INSULATION, UNLESS NOTED OTHERWISE
5. REFER TO WALL DETAILS FOR TERMINATIONS, DEFLECTIONS, CONNECTIONS, PENETRATIONS AND INTERSECTIONS.
6. ACOUSTIC SEALANT SHALL CONFORM TO ASTM C919-02.
7. SEPARATE BACK TO BACK ELECTRICAL OR OTHER UTILITY BOXES BY AT LEAST ONE FULL STUD BAY IN SINGLE STUD WALLS AND TWO STUD BAYS IN STAGGERED STUD OR DOUBLE STUD WALL ASSEMBLIES U.N.O.
8. SEAL ALL DUCT, CONDUIT OR PIPING PENETRATIONS THROUGH ACOUSTICALLY RATED CONSTRUCTION TO PREVENT DIRECT CONTACT USING RESILIENT NON-HARDENING CAULK. USE FIRE-RATED ACOUSTICAL CAULK IN FIRE-RATED CONSTRUCTION.
9. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR VIBRATION ISOLATION REQUIREMENTS IN AREAS WHERE PLUMBING RUNS IN PROXIMITY TO NOISE-SENSITIVE SPACES.
10. STAGGER ALL JOINTS VERTICALLY AND HORIZONTALLY WHENEVER TWO OR MORE LAYERS OF GWB ARE SCHEDULED.
11. SECURE BATT INSULATION TO THE STRUCTURE AS REQUIRED TO PREVENT SAGGING OR DISPLACEMENT.
12. CONFORM TO TESTING AGENCY ASSEMBLY # NOTED FOR EACH RATED WALL TYPE.
13. STC RATINGS ARE BASED ON WALL INSULATION R-VALUES RANGING FROM R-11 TO R-15 U.N.O.
14. FILL IN ALL VOIDS WITH MATERIAL MATCHING FIRE RATING REQUIREMENTS OF THE WALL ASSEMBLY.
15. USE PLYWOOD ADJACENT TO SHEAR WALLS AS NEEDED TO MAINTAIN FLUSH WALL FINISH.
16. WHEN NOT SPECIFIED AS A COMPONENT OF A FIRE TESTED WALL OR PARTITION SYSTEM, MINERAL FIBER, GLASS FIBER, OR CELLULOSE FIBER INSULATION OF A THICKNESS NOT EXCEEDING THAT OF THE STUD DEPTH SHALL BE PERMITTED TO BE ADDED WITHIN THE STUD CAVITY.
17. GREATER STUD SIZES (DEPTHS) SHALL BE PERMITTED TO BE USED IN METAL- OR WOOD-STUD SYSTEMS. METAL STUDS OF A HEAVIER GAGE THAN THOSE TESTED SHALL BE PERMITTED.
18. ADDITIONAL LAYERS OF TYPE X OR REGULAR GYPSUM PANELS SHALL BE PERMITTED TO BE ADDED TO ANY SYSTEM.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL TYPES

A612

2/2/2024 10:41:22 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

W20

TYP. INTERIOR PARTITION

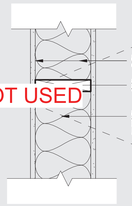
FIRE RATING: 1 HR

STC RATING: 45-49

ASSEMBLY LISTING: GA WP 3510

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



W21

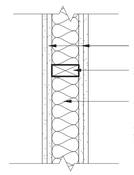
TYP. INTERIOR PARTITION

FIRE RATING: 2 HR

STC RATING: 40-44

ASSEMBLY LISTING: GA WP 4135

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR



W22

TYP. INTERIOR PARTITION

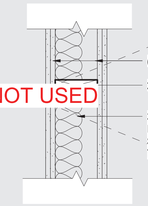
FIRE RATING: 2 HR

STC RATING: 40-44

ASSEMBLY LISTING: GA WP 4135

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



W23

TYP. INTERIOR PARTITION

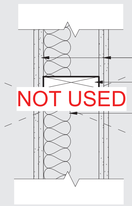
FIRE RATING: 2 HR

STC RATING: 40-44

ASSEMBLY LISTING: GA WP 4135

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

NOT USED



W24 (2)

STAIR WALL

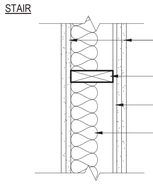
FIRE RATING: 2 HR

STC RATING: 55-59

ASSEMBLY LISTING: GA WP 3825

COMMENTS: ACOUSTIC SEALANT EACH SIDE @ CEILING & FINISH FLOOR

STAIR — UNIT/CORRIDOR



W25

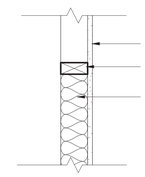
FURRED WALL

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS:



W26

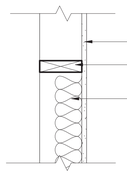
FURRED WALL

FIRE RATING: 0 HR

STC RATING:

ASSEMBLY LISTING:

COMMENTS:



W27

FURRED WALL

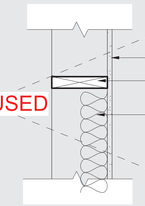
FIRE RATING: 0 HR

STC RATING:

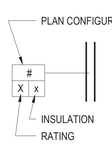
ASSEMBLY LISTING:

COMMENTS:

NOT USED



WALL TYPE TAG:



INSULATION:

- \- NO INSULATION
- a ACCOUSTICAL INSULATION
- t THERMAL INSULATION

GENERAL NOTES

1. ALL INSULATION SHALL HAVE MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 IN ACCORDANCE WITH IBC 720.2 (IBC 2018)
2. REFER TO SPECIFICATIONS FOR LOCATION, PROVISIONS FOR AND LIMITS OF DIFFERENT TYPES OF GWB SUCH AS CEMENTITIOUS TILE BACKER BOARD, MOISTURE AND MOLD RESISTANT GWB, FIRE-RATED GWB, ETC.

   USE MOISTURE OR MOLD RESISTANT GWB ON ALL PIPING UTILITY CHASES, UNCONDITIONED SPACES, PUBLIC RESTROOMS, RESIDENTIAL BATHROOMS, AND KITCHEN WET WALLS.
3. REFER TO SPECIFICATIONS FOR STUD GAUGE AND SPACING.
4. FIRE RATING AND SOUND TRANSMISSION COEFFICIENTS ARE BASED UPON THE ASSEMBLIES SHOWN *WITHOUT* INSULATION, UNLESS NOTED OTHERWISE
5. REFER TO WALL DETAILS FOR TERMINATIONS, DEFLECTIONS, CONNECTIONS, PENETRATIONS AND INTERSECTIONS.
6. ACOUSTIC SEALANT SHALL CONFORM TO ASTM C919-02.
7. SEPARATE BACK TO BACK ELECTRICAL OR OTHER UTILITY BOXES BY AT LEAST ONE FULL STUD BAY IN SINGLE STUD WALLS AND TWO STUD BAYS IN STAGGERED STUD OR DOUBLE STUD WALL ASSEMBLIES U.N.O.
8. SEAL ALL DUCT, CONDUIT OR PIPING PENETRATIONS THROUGH ACOUSTICALLY RATED CONSTRUCTION TO PREVENT DIRECT CONTACT USING RESILIENT NON-HARDENING CAULK. USE FIRE-RATED ACOUSTICAL CAULK IN FIRE-RATED CONSTRUCTION.
9. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR VIBRATION ISOLATION REQUIREMENTS IN AREAS WHERE PLUMBING RUNS IN PROXIMITY TO NOISE-SENSITIVE SPACES.
10. STAGGER ALL JOINTS VERTICALLY AND HORIZONTALLY WHENEVER TWO OR MORE LAYERS OF GWB ARE SCHEDULED.
11. SECURE BATT INSULATION TO THE STRUCTURE AS REQUIRED TO PREVENT SAGGING OR DISPLACEMENT.
12. CONFORM TO TESTING AGENCY ASSEMBLY # NOTED FOR EACH RATED WALL TYPE.
13. STC RATINGS ARE BASED ON WALL INSULATION R-VALUES RANGING FROM R-11 TO R-15 U.N.O.
14. FILL IN ALL VOIDS WITH MATERIAL MATCHING FIRE RATING REQUIREMENTS OF THE WALL ASSEMBLY.
15. USE PLYWOOD ADJACENT TO SHEAR WALLS AS NEEDED TO MAINTAIN FLUSH WALL FINISH.
16. WHEN NOT SPECIFIED AS A COMPONENT OF A FIRE TESTED WALL OR PARTITION SYSTEM, MINERAL FIBER, GLASS FIBER, OR CELLULOSE FIBER INSULATION OF A THICKNESS NOT EXCEEDING THAT OF THE STUD DEPTH SHALL BE PERMITTED TO BE ADDED WITHIN THE STUD CAVITY.
17. GREATER STUD SIZES (DEPTHS) SHALL BE PERMITTED TO BE USED IN METAL- OR WOOD-STUD SYSTEMS. METAL STUDS OF A HEAVIER GAGE THAN THOSE TESTED SHALL BE PERMITTED.
18. ADDITIONAL LAYERS OF TYPE X OR REGULAR GYPSUM PANELS SHALL BE PERMITTED TO BE ADDED TO ANY SYSTEM.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

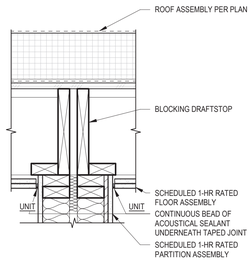
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WALL TYPES

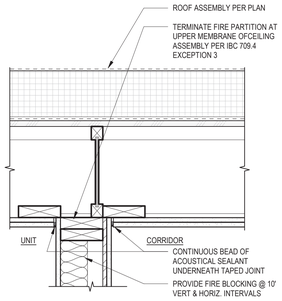
A613

2/2/2024 10:41:23 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



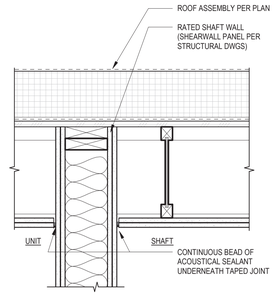
1 PARTY WALL @ ROOF

SCALE: 1 1/2" = 1'-0"



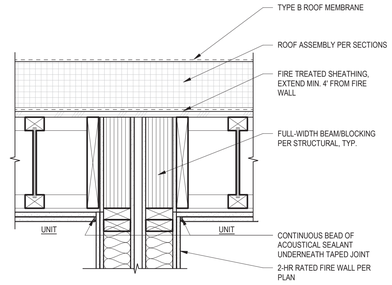
2 RATED CORRIDOR WALL @ ROOF

SCALE: 1 1/2" = 1'-0"



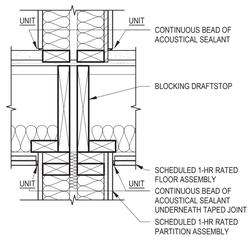
3 SHAFT WALL @ ROOF

SCALE: 1 1/2" = 1'-0"



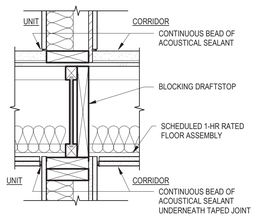
4 FIRE WALL @ ROOF

SCALE: 1 1/2" = 1'-0"



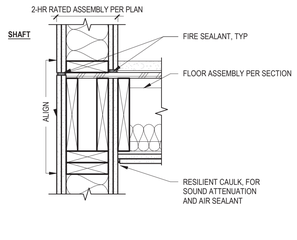
6 PARTY WALL @ 1-HR FLOOR

SCALE: 1 1/2" = 1'-0"



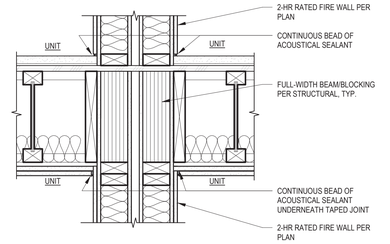
7 RATED CORRIDOR WALL @ 1-HR FLOOR

SCALE: 1 1/2" = 1'-0"



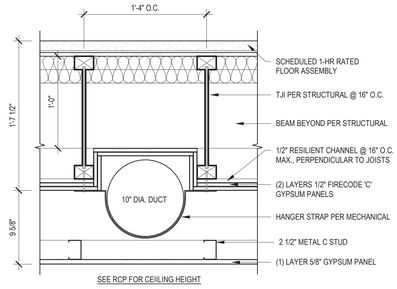
8 FIRE BARRIER - SHAFT @ FLOOR/CEILING

SCALE: 1 1/2" = 1'-0"



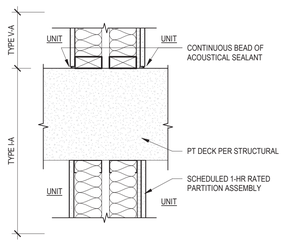
9 FIRE WALL @ FLOOR/CEILING

SCALE: 1 1/2" = 1'-0"



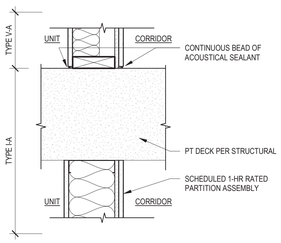
5 RATED CORRIDOR CEILING @ MECHANICAL SHAFT

SCALE: 1 1/2" = 1'-0"



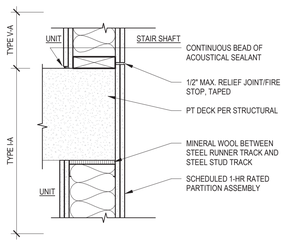
11 PARTY WALL @ TYPE I-A FLOOR

SCALE: 1 1/2" = 1'-0"



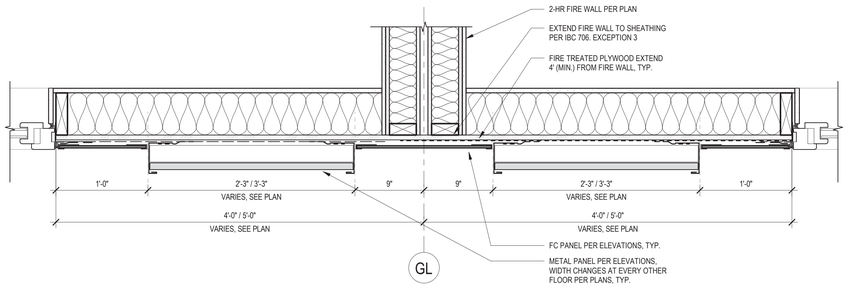
12 RATED CORRIDOR @ TYPE I-A FLOOR

SCALE: 1 1/2" = 1'-0"



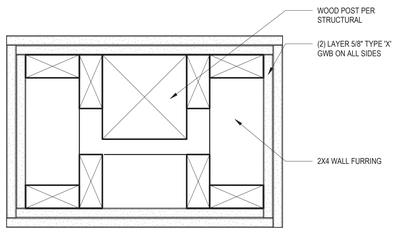
13 SHAFT WALL @ TYPE I-A FLOOR

SCALE: 1 1/2" = 1'-0"



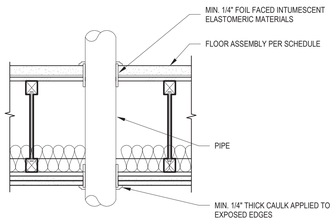
14 FIRE WALL @ EXTERIOR WALL

SCALE: 1 1/2" = 1'-0"



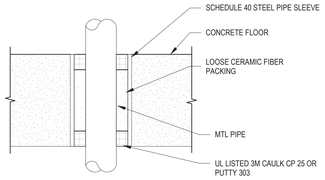
16 WOOD COLUMN ENCLOSURE

SCALE: 3" = 1'-0"



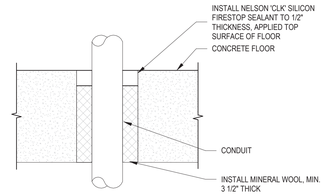
17 1 HOUR FLOOR PENETRATION FIRESTOP

SCALE: 1 1/2" = 1'-0"



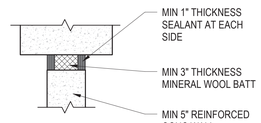
18 3 HOUR FLOOR PENETRATION

SCALE: 1 1/2" = 1'-0"



19 3 HOUR CONDUIT PENETRATION

SCALE: 1 1/2" = 1'-0"



20 3HR JOINT FIRESTOP DTL

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

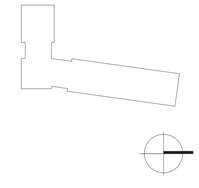
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

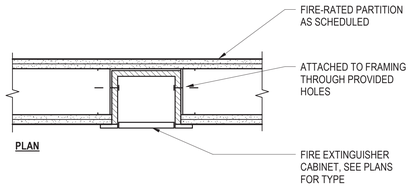
RATED ASSEMBLY DETAILS

A701

2/2/2024 10:41:24 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FEC SCHEDULE

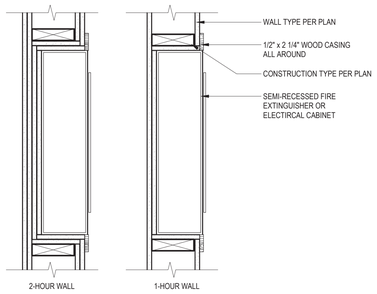
FEC-1	FULLY RECESSED STAINLESS STEEL CABINET
FEC-1R	FULLY RECESSED FIRE-RATED STAINLESS STEEL CABINET
FEC-2	SEMI-RECESSED STAINLESS STEEL CABINET
FEC-2R	SEMI-RECESSED FIRE-RATED STAINLESS STEEL CABINET
FEC-3	SURFACE MOUNTED STAINLESS STEEL CABINET



PLAN

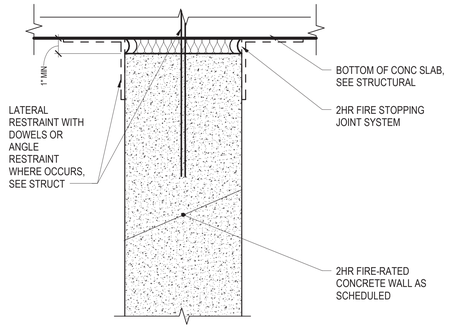
1 FEC SCHEDULE AND PLAN DETAIL

SCALE: 1 1/2" = 1'-0"



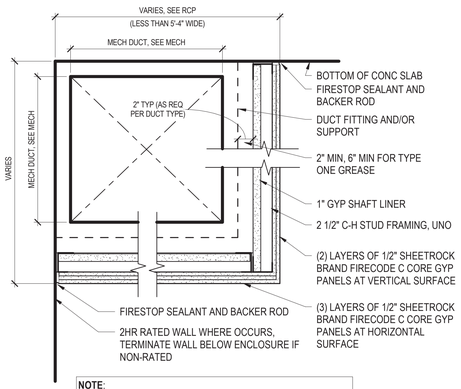
2 FIRE EXTINGUISHER CABINET - SECTION

SCALE: 1 1/2" = 1'-0"



3 2HR FIRE-RATED CONCRETE HEAD

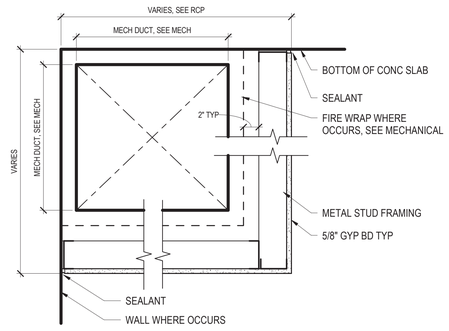
SCALE: 3" = 1'-0"



NOTE:
TAKEN FROM USG CATALOG SA926
-SEE AER 09038 FOR ADDITIONAL INFO
-SEE UL K504 & K506 FOR SPANS GREATER THAN 5'-4"

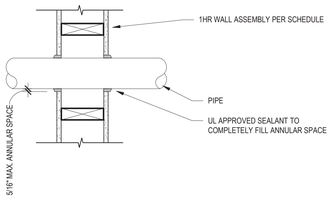
5 HORIZONTAL ENCLOSURE - 2HR FIRE RATED

SCALE: 1 1/2" = 1'-0"



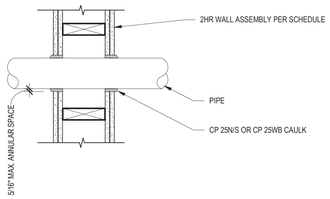
6 HORIZONTAL ENCLOSURE - NON-RATED

SCALE: 1 1/2" = 1'-0"



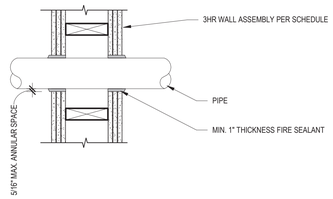
9 1 HOUR THRU PENETRATION FIRESTOP

SCALE: 1 1/2" = 1'-0"



10 2 HOUR THRU PENETRATION FIRESTOP

SCALE: 1 1/2" = 1'-0"



11 3 HOUR THRU PENETRATION FIRESTOP

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

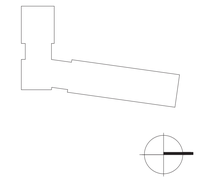
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

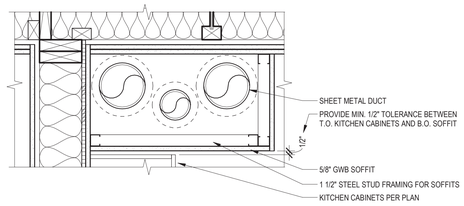
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

RATED ASSEMBLY DETAILS

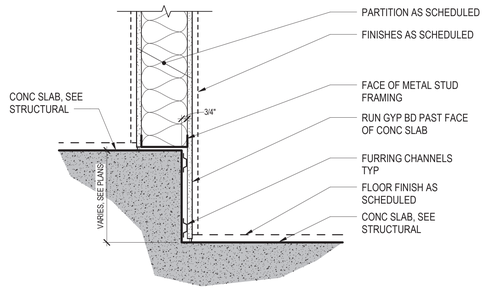
A702

2/2/2024 10:41:25 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



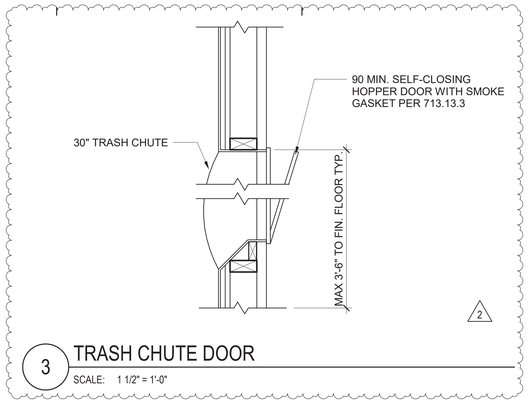
1 HORIZONTAL DUCT IN SOFFIT

SCALE: 1 1/2" = 1'-0"



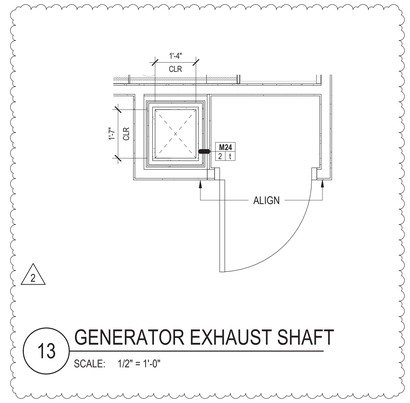
2 TYP PARTITION AT LEVEL CHANGE

SCALE: 1 1/2" = 1'-0"



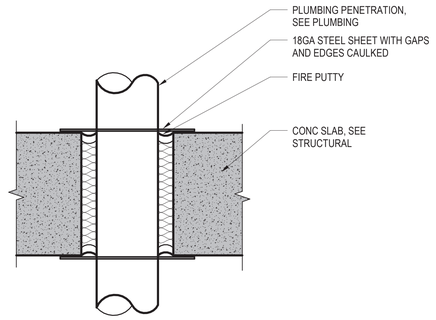
3 TRASH CHUTE DOOR

SCALE: 1 1/2" = 1'-0"

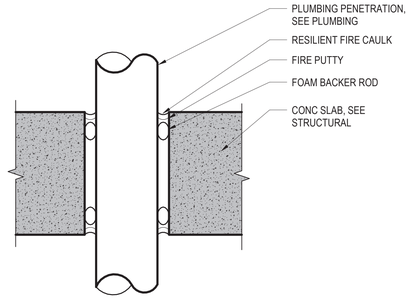


13 GENERATOR EXHAUST SHAFT

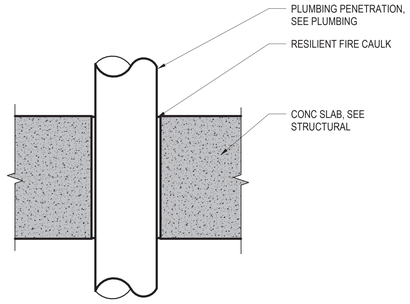
SCALE: 1/2" = 1'-0"



FOR PENETRATIONS GREATER THAN 3/4" SPACE ALL AROUND



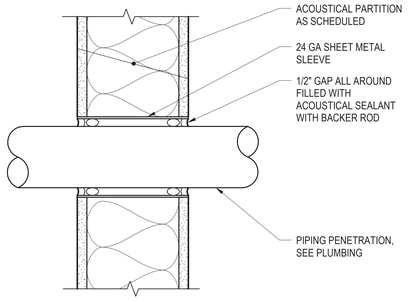
FOR PENETRATIONS WITH 1/4" TO 3/4" SPACE ALL AROUND



FOR PENETRATIONS WITH 1/4" OR LESS SPACE ALL AROUND

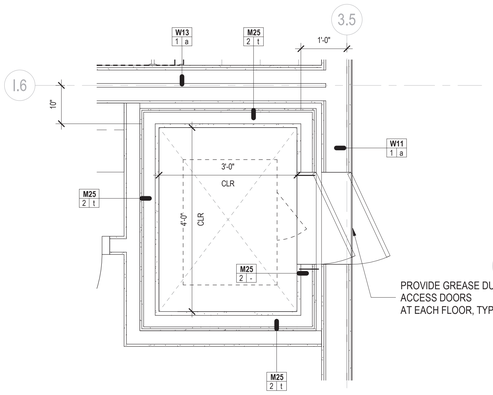
4 PLUMBING PENETRATION ISOLATION

SCALE: 3" = 1'-0"



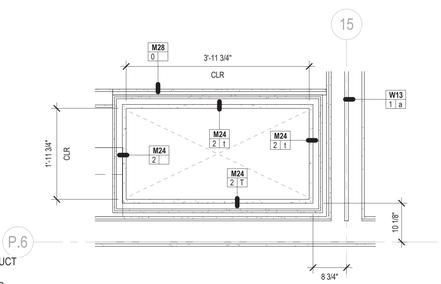
5 ACOUSTIC WALL PIPE PENETRATION

SCALE: 3" = 1'-0"



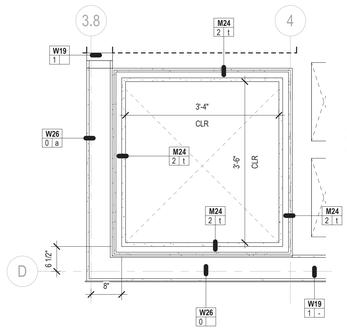
6 KITCHEN EXHAUST SHAFT

SCALE: 3/4" = 1'-0"



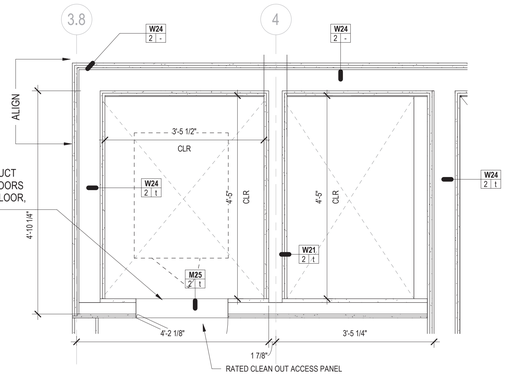
7 TRANSORMER EXHAUST SHAFT

SCALE: 3/4" = 1'-0"



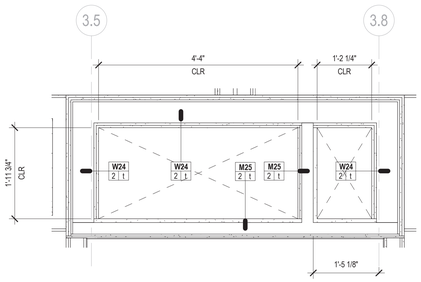
8 SOUTH EXHAUST SHAFT

SCALE: 3/4" = 1'-0"



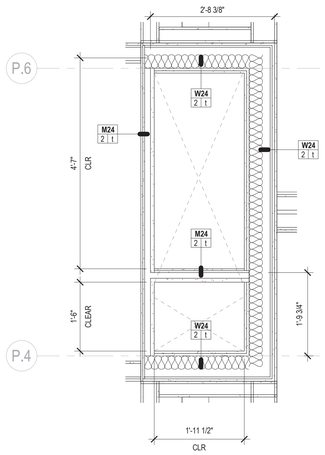
9 KITCHEN EXHAUST & MAKE-UP AIR SHAFTS

SCALE: 3/4" = 1'-0"



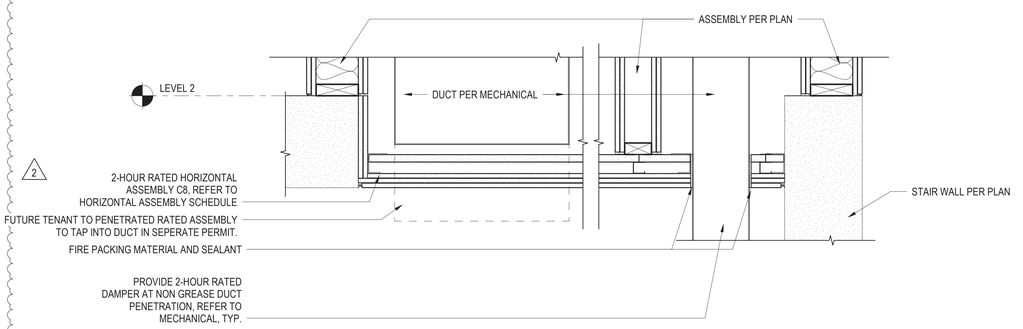
10 SOUTH CORRIDOR SHAFT

SCALE: 3/4" = 1'-0"



11 NORTH CORRIDOR SHAFT

SCALE: 3/4" = 1'-0"



12 LEVEL 1 DUCT SEPARATION

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/29/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

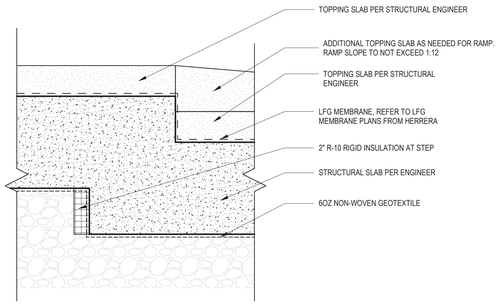
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

INTERIOR SHAFT AND PENETRATION DETAILS

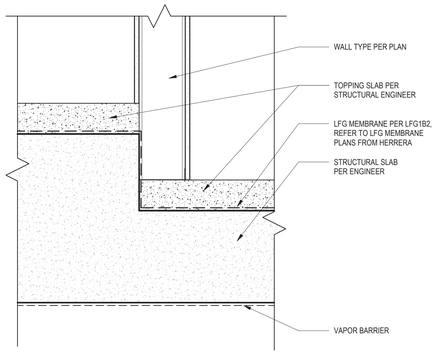
A703

2/28/2024 10:53:04 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



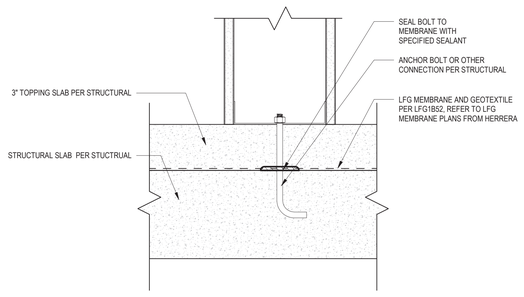
1 SLAB STEP @ RAMP

SCALE: 1 1/2" = 1'-0"



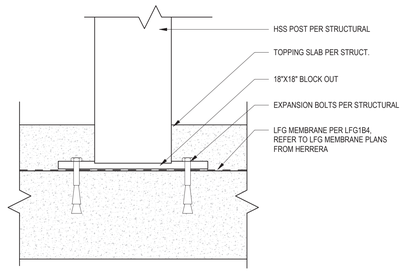
2 WALL STEP @ FRAMED WALL

SCALE: 1 1/2" = 1'-0"



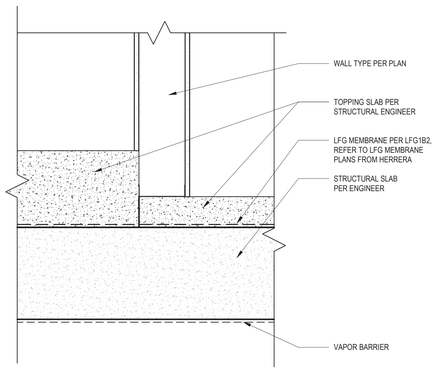
3 STRUCTURAL STUD WALL TO SLAB

SCALE: 3" = 1'-0"



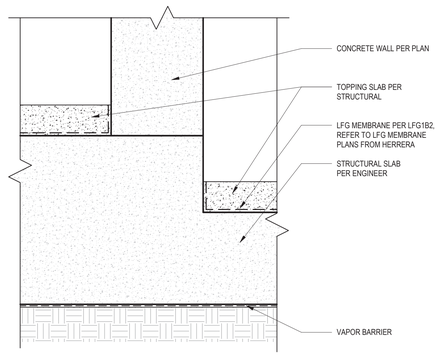
4 HSS POST TO SLAB

SCALE: 3" = 1'-0"



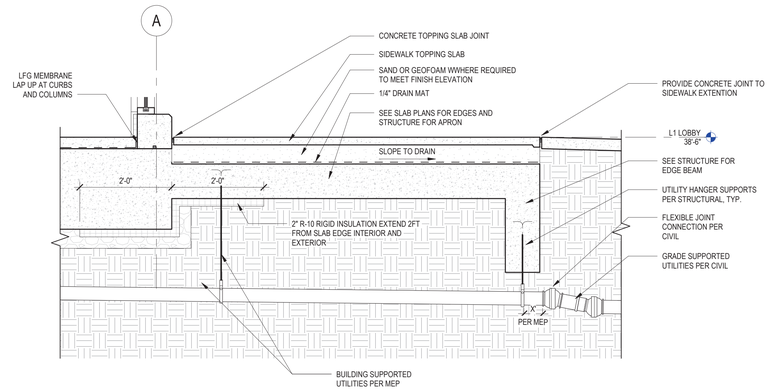
5 WALL @ LOBBY TOPPING SLAB STEP

SCALE: 1 1/2" = 1'-0"



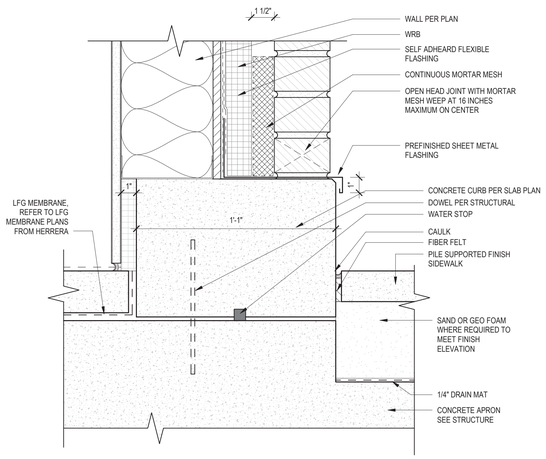
6 WALL STEP @ CONCRETE WALL

SCALE: 1 1/2" = 1'-0"



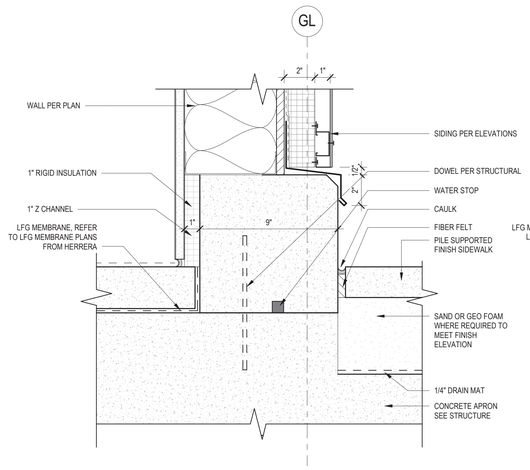
7 CONCRETE APRON

SCALE: 3/4" = 1'-0"



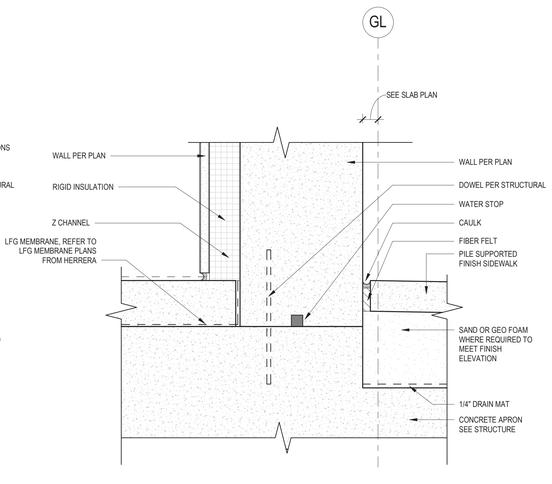
8 BRICK CURB

SCALE: 3" = 1'-0"



9 CURB AT FC & METAL PANEL

SCALE: 3" = 1'-0"



10 CONCRETE WALL @ SLAB ON GRADE

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

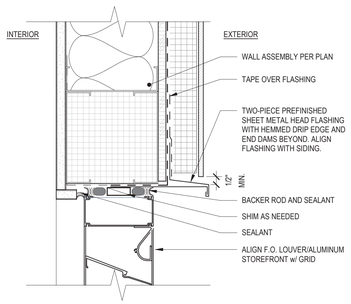
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

FOUNDATION & SLAB EDGE DETAILS

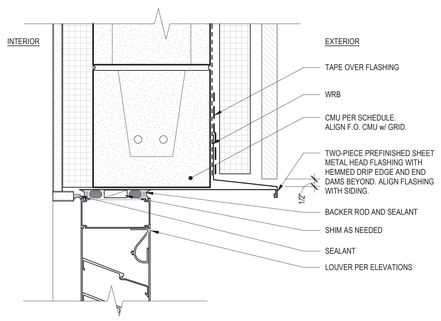
A750

2/2/2024 10:41:28 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



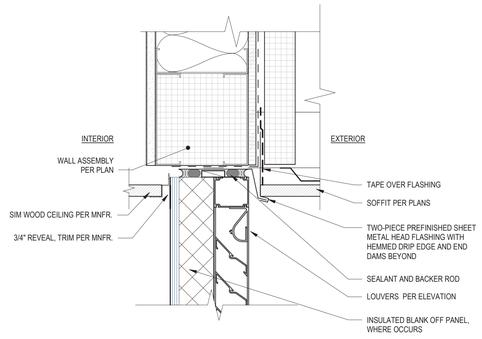
1 STOREFRONT HEAD AT FIBER CEMENT

SCALE: 3" = 1'-0"



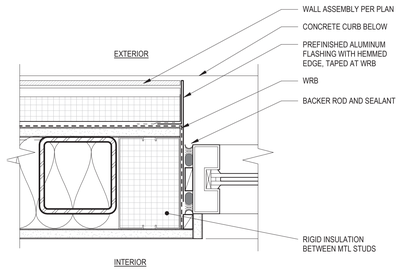
2 STOREFRONT HEAD AT CMU WITH METAL PANEL

SCALE: 3" = 1'-0"



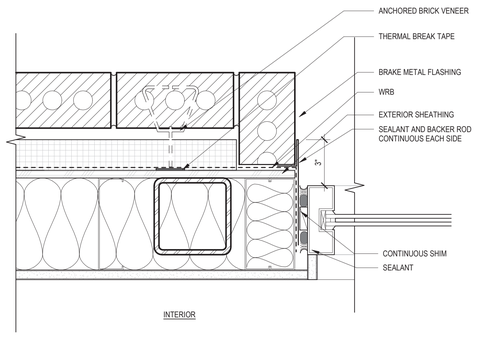
3 STOREFRONT HEAD AT LOBBY SOFFIT

SCALE: 3" = 1'-0"



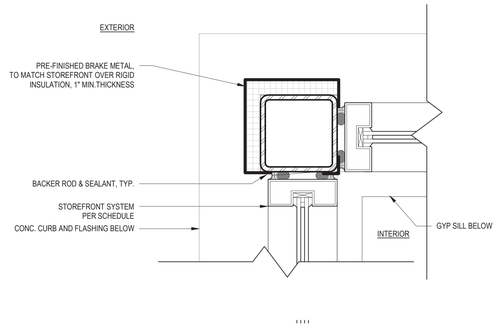
5 STOREFRONT JAMB AT FIBER CEMENT

SCALE: 3" = 1'-0"



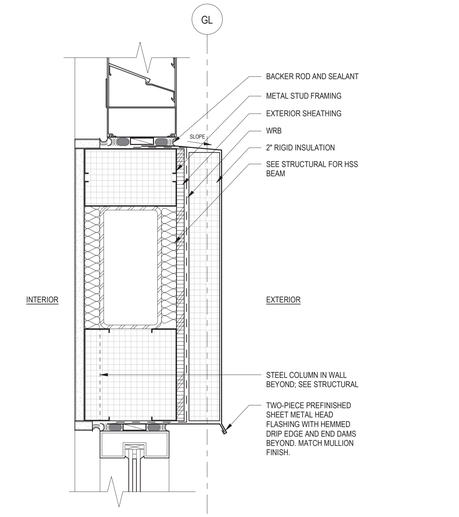
6 STOREFRONT JAMB AT BRICK

SCALE: 3" = 1'-0"



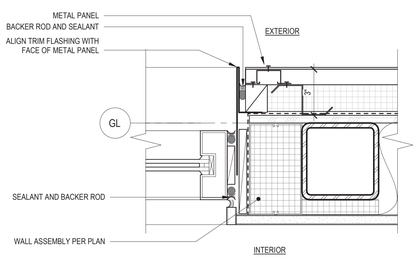
7 STOREFRONT CORNER

SCALE: 3" = 1'-0"



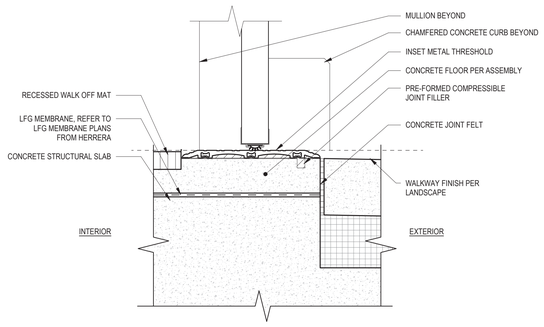
8 TYP. STOREFRONT HEAD / SILL AT BEAM

SCALE: 3" = 1'-0"



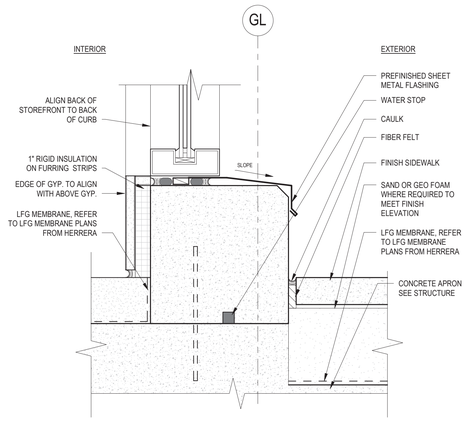
9 STOREFRONT JAMB AT METAL PANEL

SCALE: 3" = 1'-0"



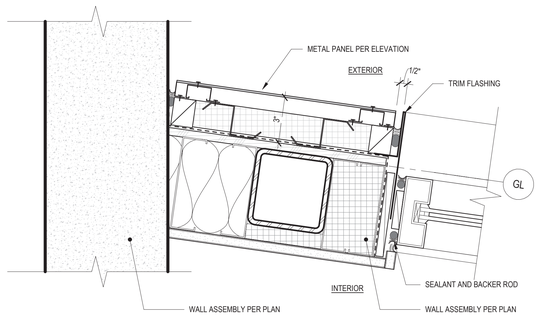
10 STOREFRONT DOOR SILL

SCALE: 3" = 1'-0"



11 STOREFRONT ON CURB

SCALE: 3" = 1'-0"



12 STOREFRONT JAMB AT METAL PANEL / CONCRETE

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

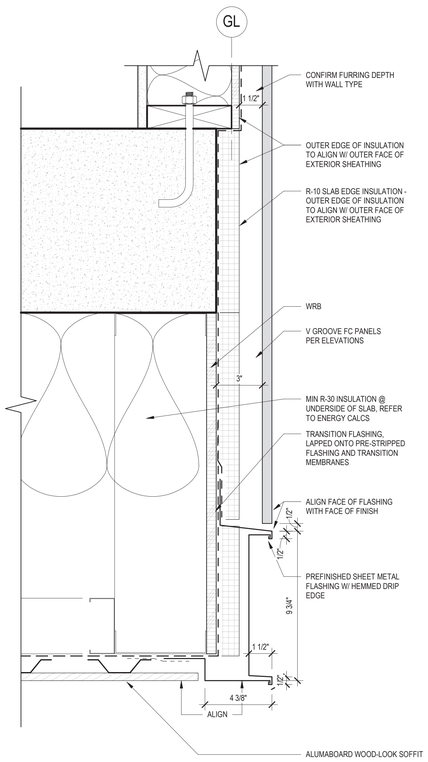
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

STOREFRONT DETAILS

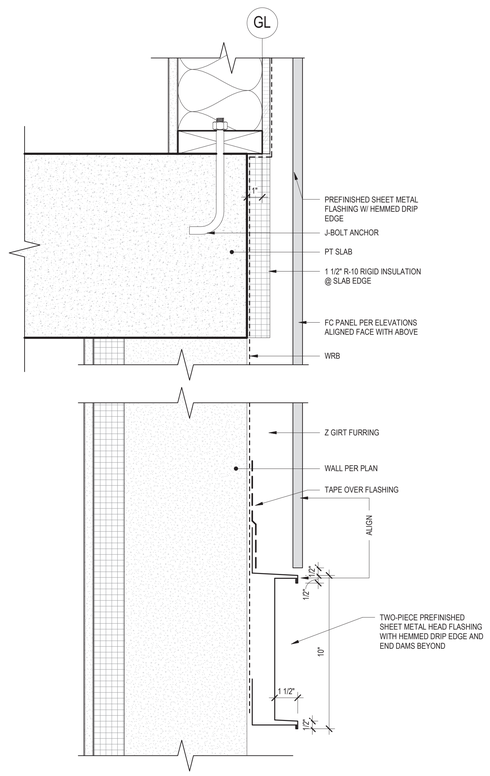
A751

2/2/2024 10:41:30 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



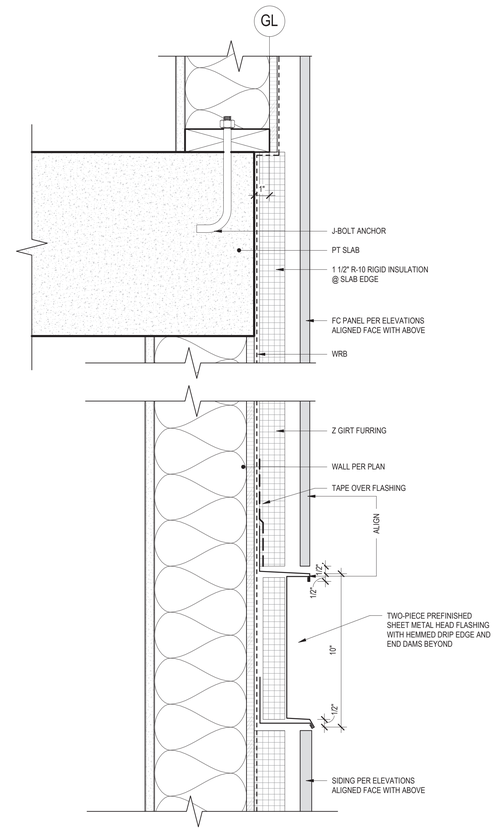
1 RESIDENTIAL SOFFIT TO SLAB

SCALE: 3" = 1'-0"



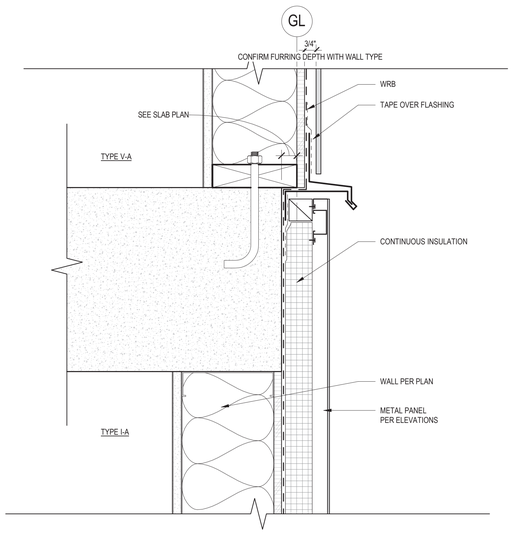
2 PT SLAB CONCRETE WALL TO FC PANEL

SCALE: 3" = 1'-0"



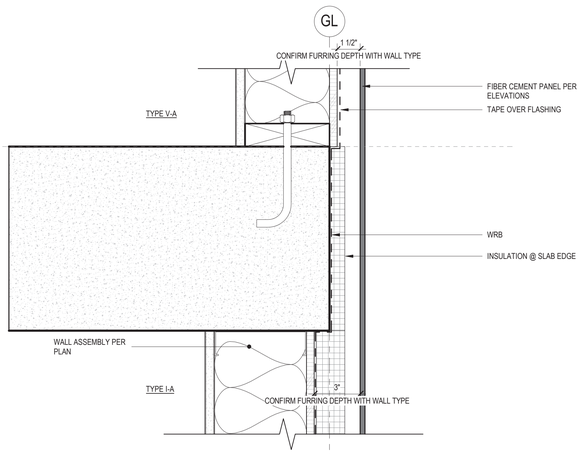
3 PT SLAB FC TO METAL PANEL @ CHANNEL

SCALE: 3" = 1'-0"



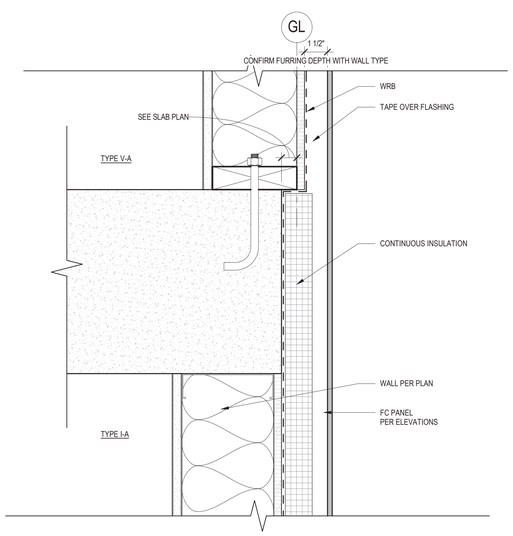
4 PT SLAB AT FIBER CEMENT TO METAL PANEL

SCALE: 3" = 1'-0"



5 PT SLAB AT FC PANEL GRID 21 AND L

SCALE: 3" = 1'-0"



6 PT SLAB AT FC PANEL

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

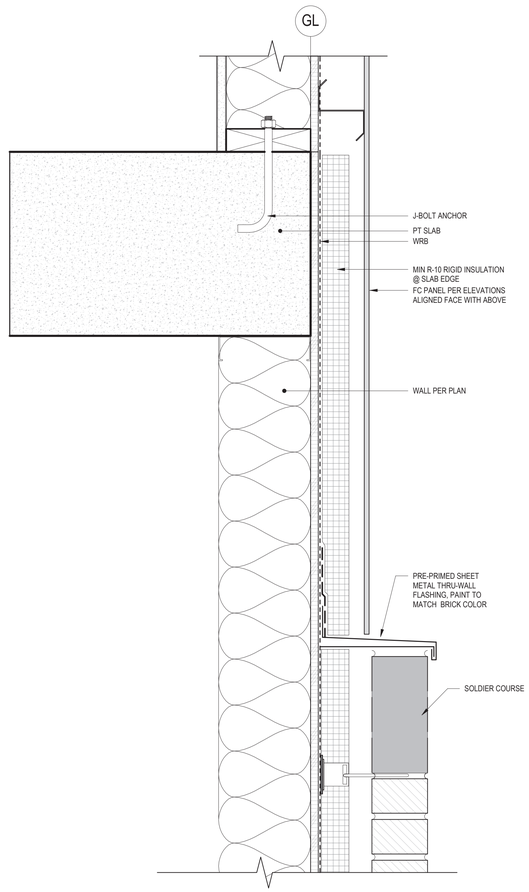
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

TRANSITION DETAILS

A752

2/2/2024 10:41:31 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



2 PT SLAB AT FC PANEL TO BRICK

SCALE: 3" = 1'-0"

2/2/2024 10:41:31 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

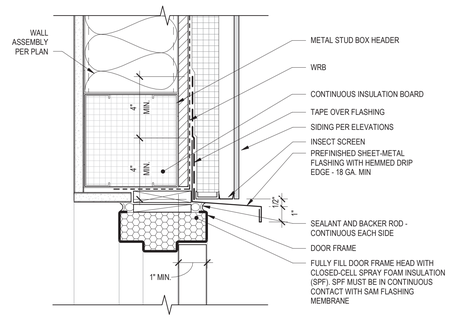
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: Author
12/05/22

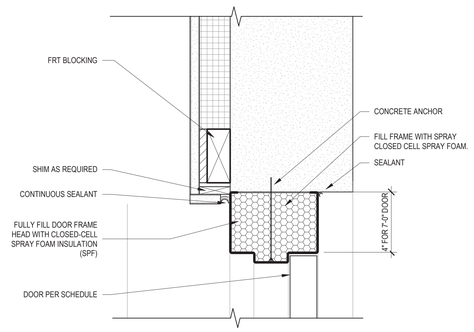
TRANSITION DETAILS

A753



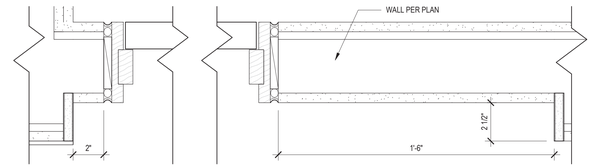
1 METAL DOOR HEAD AT FC

SCALE: 3" = 1'-0"



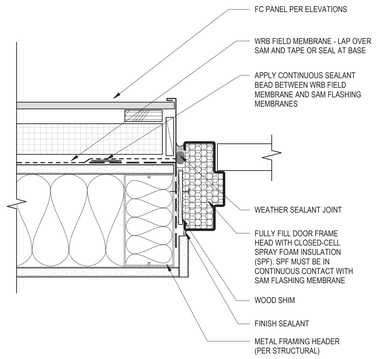
2 METAL DOOR HEAD AT CONCRETE

SCALE: 3" = 1'-0"



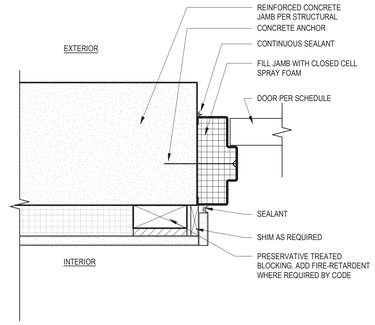
3 UNIT ENTRY DOOR INSET PLAN

SCALE: 3" = 1'-0"



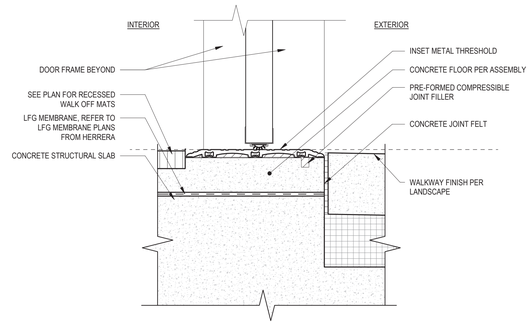
4 METAL DOOR JAMB AT FC

SCALE: 3" = 1'-0"



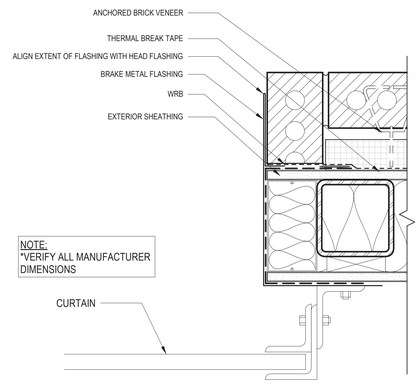
5 METAL DOOR JAMB AT CONCRETE WALL

SCALE: 3" = 1'-0"



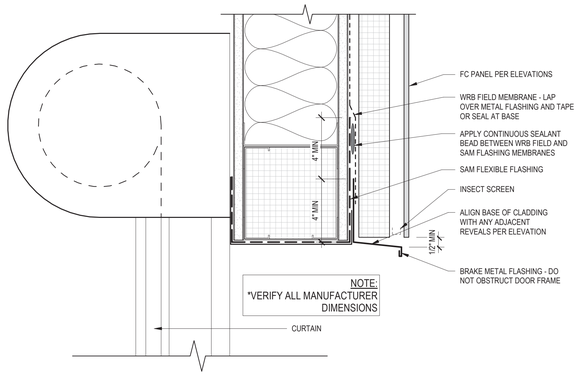
6 HOLLOW METAL DOOR SILL

SCALE: 3" = 1'-0"



7 ROLLING DOOR JAMB AT BRICK

SCALE: 3" = 1'-0"



9 ROLLING DOOR HEAD AT FC

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

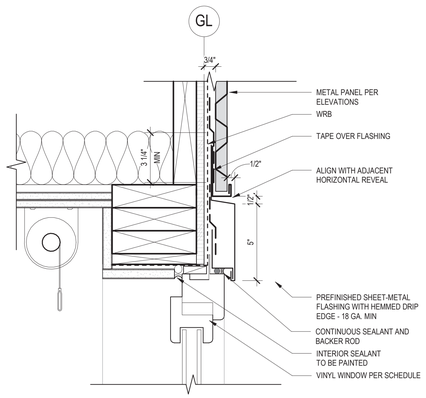
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

DOOR DETAILS

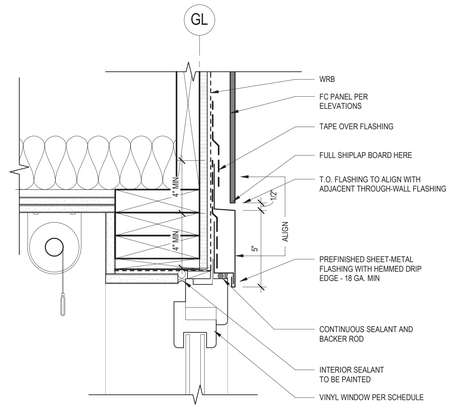
A754

2/2/2024 10:41:32 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



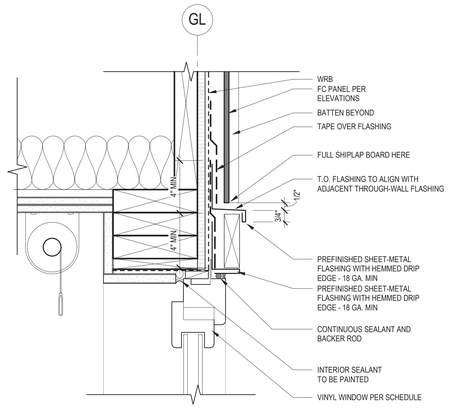
1 WINDOW HEAD AT METAL PANEL

SCALE: 3" = 1'-0"



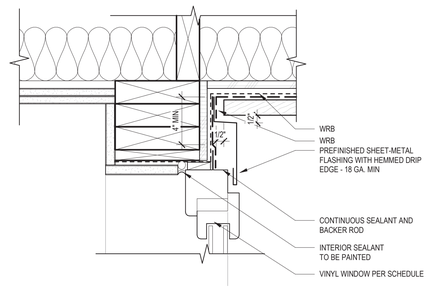
2 WINDOW HEAD AT FC PANEL

SCALE: 3" = 1'-0"



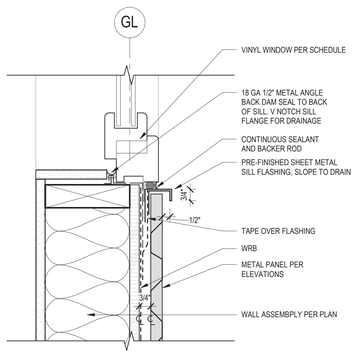
3 WINDOW HEAD AT FC BATTON

SCALE: 3" = 1'-0"



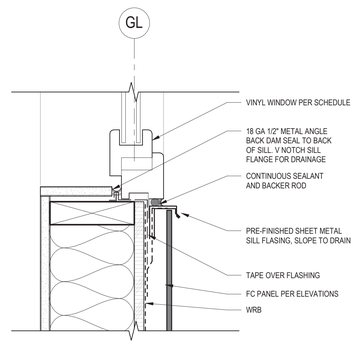
4 DOOR HEAD AT AMENITY DECK

SCALE: 3" = 1'-0"



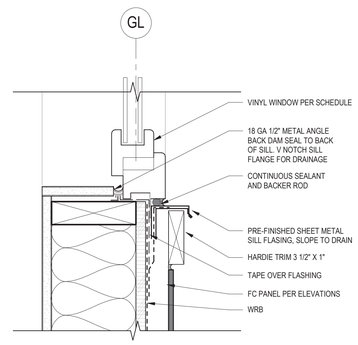
5 WINDOW SILL AT METAL PANEL

SCALE: 3" = 1'-0"



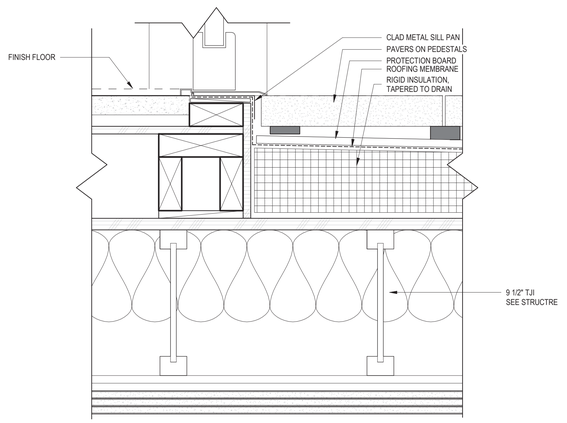
6 WINDOW SILL AT FC PANEL

SCALE: 3" = 1'-0"



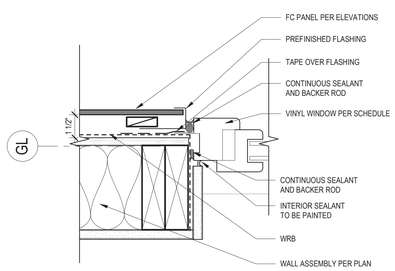
7 WINDOW SILL AT FC BATTON

SCALE: 3" = 1'-0"



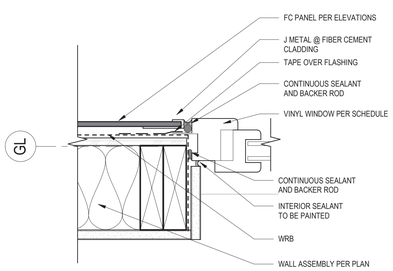
8 VINYL DOOR SILL @ AMENITY DECK

SCALE: 3" = 1'-0"



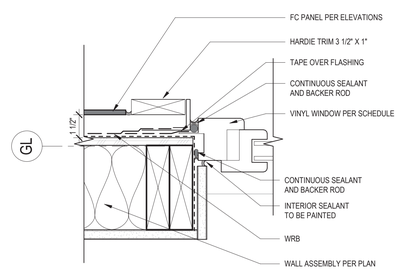
9 WINDOW JAMB AT FC PANEL 1.5" FURRING

SCALE: 3" = 1'-0"



10 WINDOW JAMB AT FC PANEL 3/4" FURRING

SCALE: 3" = 1'-0"



11 WINDOW JAMB AT FC BATTON

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

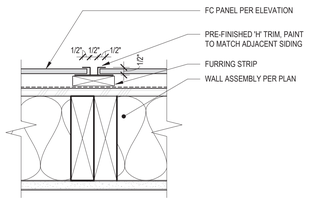
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

WINDOW DETAILS

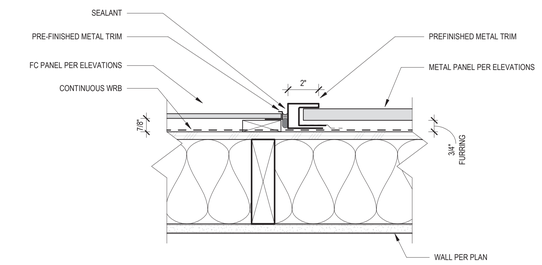
A755

2/2/2024 10:41:33 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



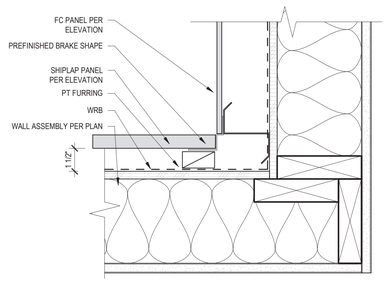
1 TYPICAL FC VERTICAL JOINT

SCALE: 3" = 1'-0"



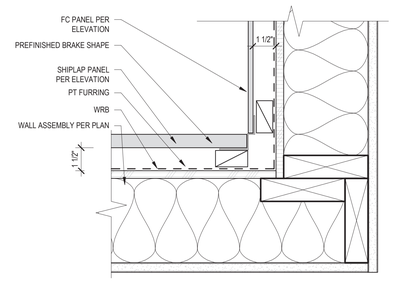
2 FIBER CEMENT TO METAL PANEL TRANSITION

SCALE: 3" = 1'-0"



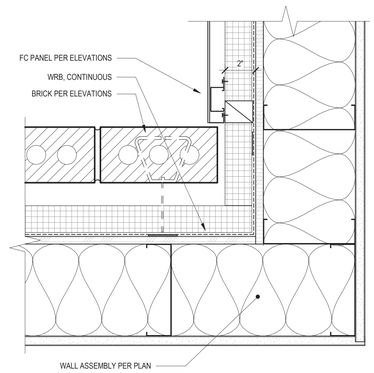
3 INSIDE CORNER @ SHIPLAP & FC

SCALE: 3" = 1'-0"



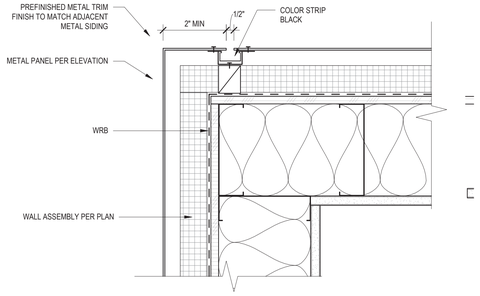
4 INSIDE CORNER @ SHIPLAP & BOARD N BATTEN

SCALE: 3" = 1'-0"



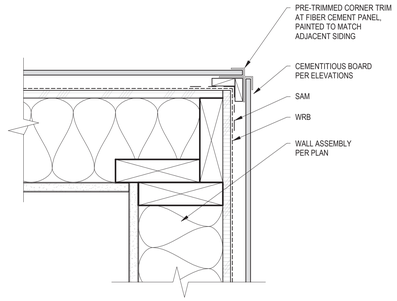
5 INSIDE CORNER @ BRICK & MP

SCALE: 3" = 1'-0"



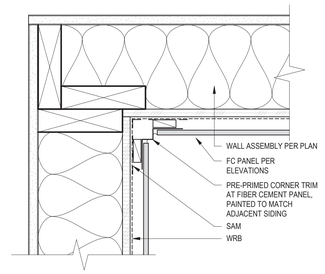
6 OUTSIDE CORNER @ METAL PANEL 02

SCALE: 3" = 1'-0"



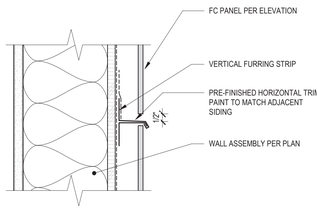
7 OUTSIDE CORNER @ FCS

SCALE: 3" = 1'-0"



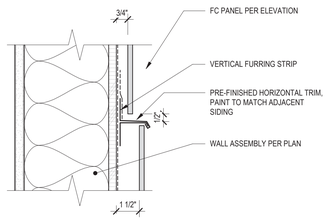
8 INSIDE CORNER @ FCS

SCALE: 3" = 1'-0"



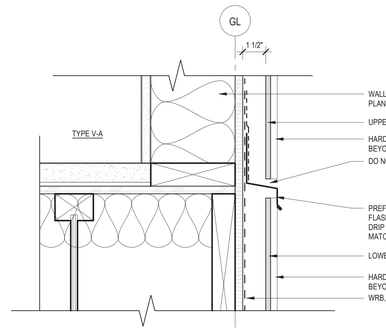
9 TYPICAL FC HORIZONTAL JOINT

SCALE: 3" = 1'-0"



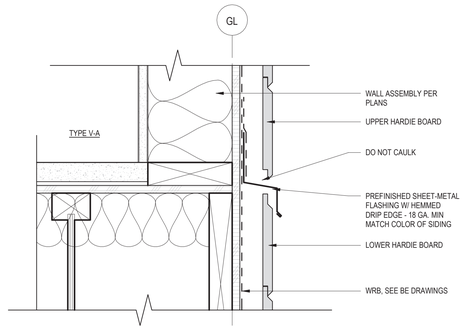
10 FC HORIZONTAL JOINT @ FURRING CHANGE

SCALE: 3" = 1'-0"



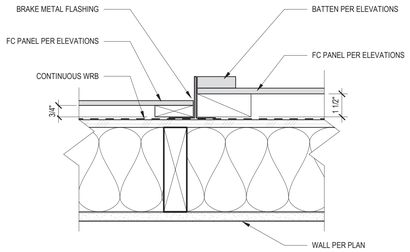
11 THRU WALL FLASHING @ BOARD AND BATTEN

SCALE: 3" = 1'-0"



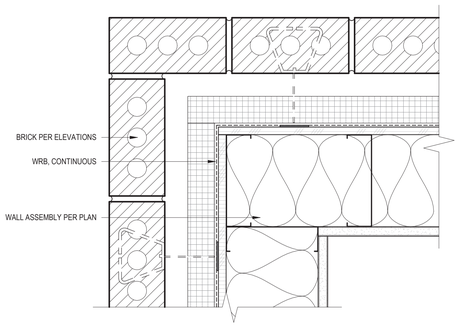
12 THRU WALL FLASHING @ V GROOVE

SCALE: 3" = 1'-0"



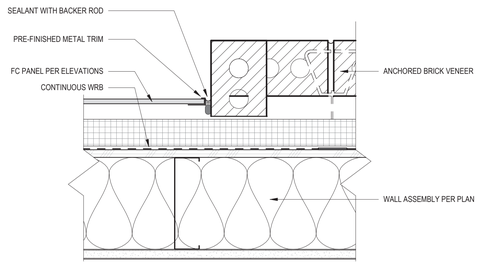
13 FC TO BOARD AND BATTEN TRANSITION

SCALE: 3" = 1'-0"



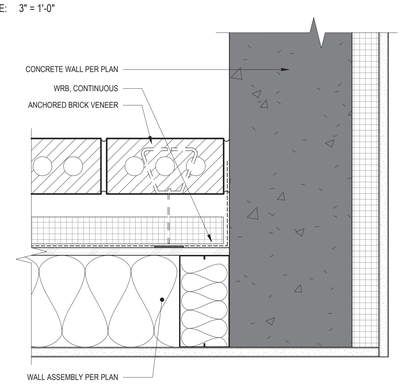
14 OUTSIDE CORNER @ BRICK

SCALE: 3" = 1'-0"



15 FIBER CEMENT TO BRICK TRANSITION

SCALE: 3" = 1'-0"



16 INSIDE CORNER @ BRICK & CONCRETE

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

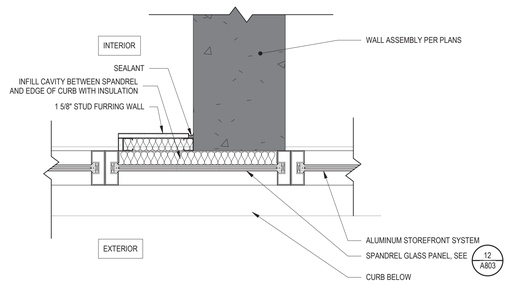
	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

WALL DETAILS

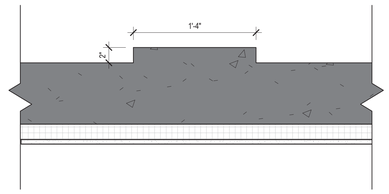
A756

2/2/2024 10:41:35 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



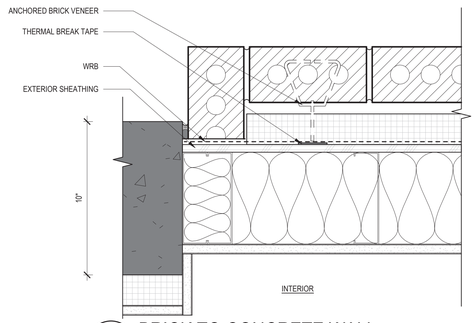
1 CONC WALL @ CURTAIN WALL

SCALE: 1 1/2" = 1'-0"



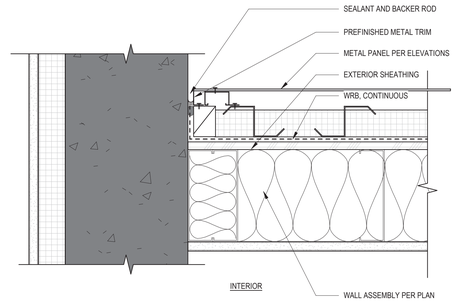
2 CONCRETE PILASTER

SCALE: 1 1/2" = 1'-0"



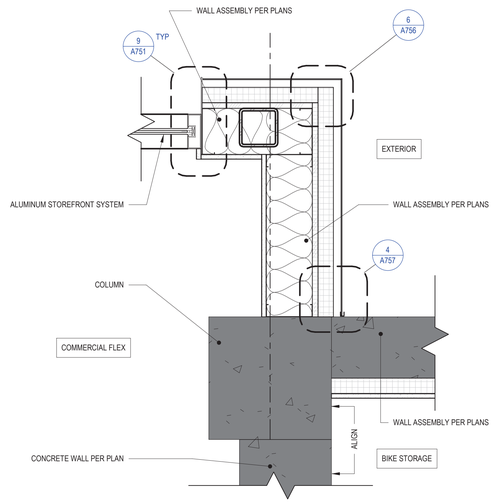
3 BRICK TO CONCRETE WALL

SCALE: 3" = 1'-0"



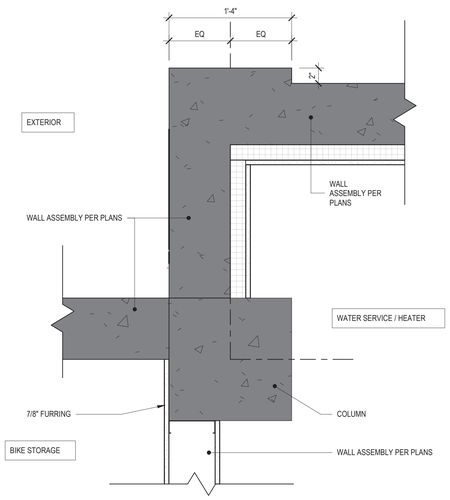
4 METAL PANEL TO CONCRETE WALL

SCALE: 3" = 1'-0"



5 CORNER DETAIL @ BIKE STORAGE

SCALE: 1 1/2" = 1'-0"



6 CORNER DETAIL @ WATER SERVICE

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

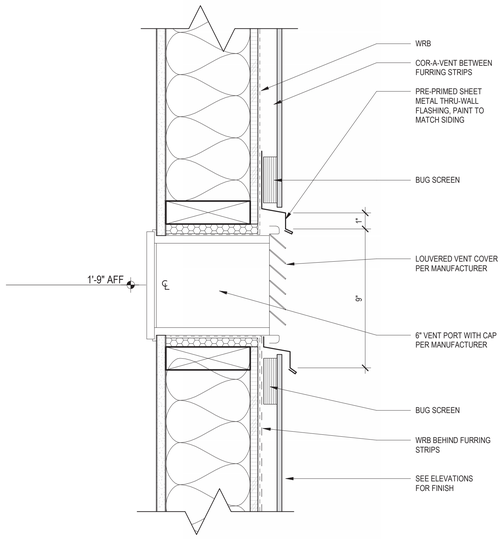
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, YY, CJ
04/07/22

WALL DETAILS

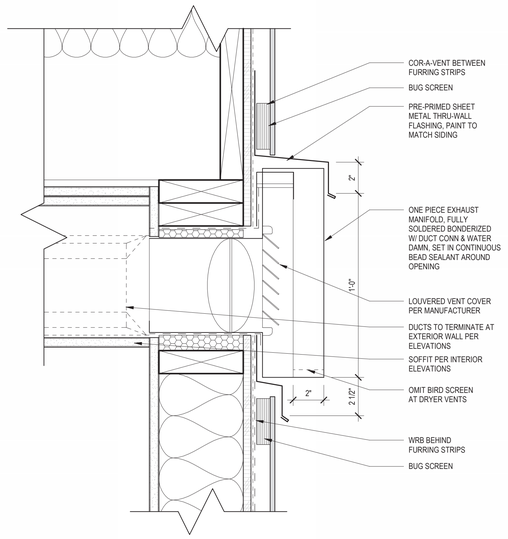
A757

2/2/2024 10:41:35 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



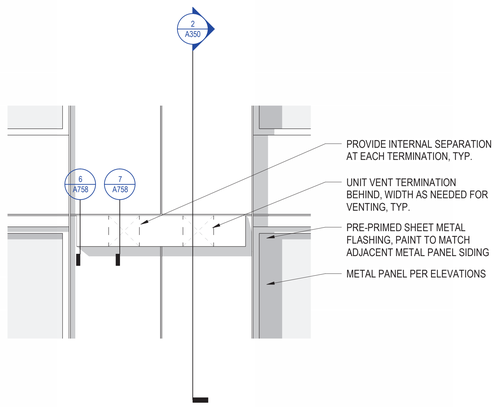
2 TYPICAL UNIT AC VENT

SCALE: 3" = 1'-0"



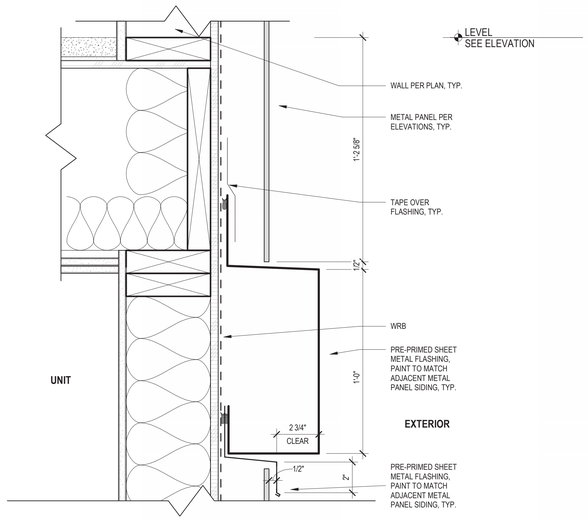
3 EXHAUST VENT SHROUD @ FC

SCALE: 3" = 1'-0"



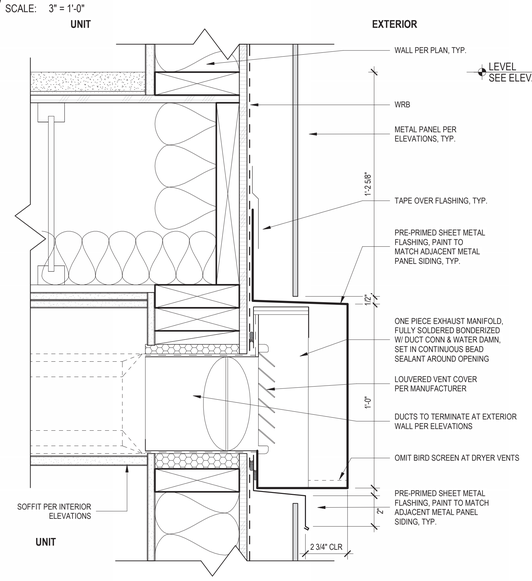
5 UNIT VENT @ METAL PANEL - ELEVATION

SCALE: 1/2" = 1'-0"



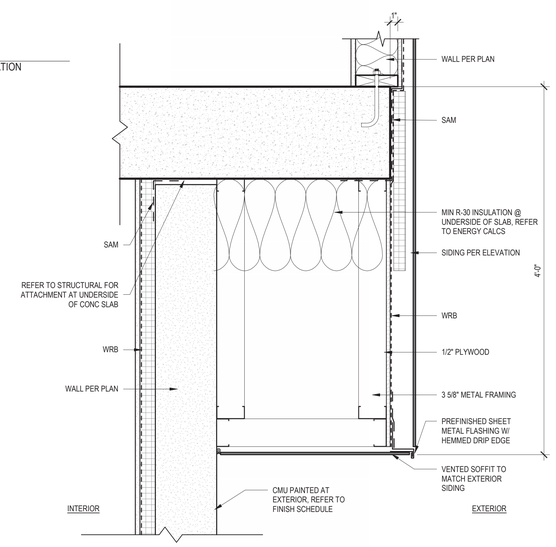
6 FC PANEL @ INTEGRATED VENT

SCALE: 3" = 1'-0"



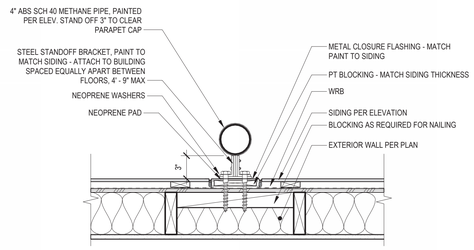
7 INTEGRATED VENT @ FC PANEL

SCALE: 3" = 1'-0"



8 EXTERIOR SOFFIT

SCALE: 1 1/2" = 1'-0"



9 METHANE PIPES - PLAN

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8070 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

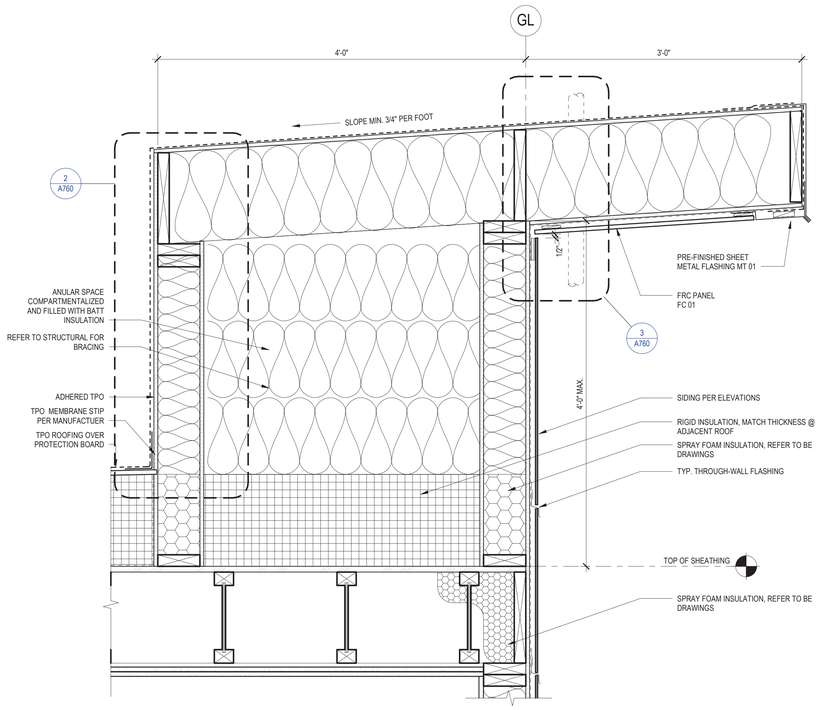
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

EXTERIOR DETAILS

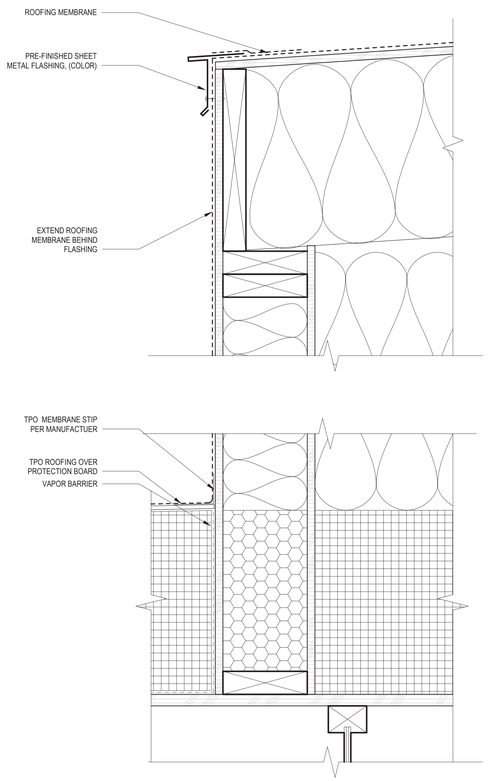
A758

2/2/2024 10:41:37 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



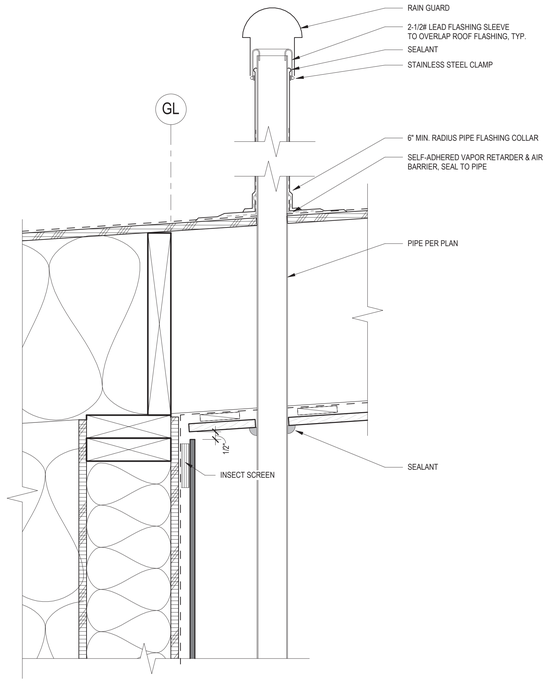
1 SLOPED ROOF EAVE

SCALE: 1 1/2" = 1'-0"



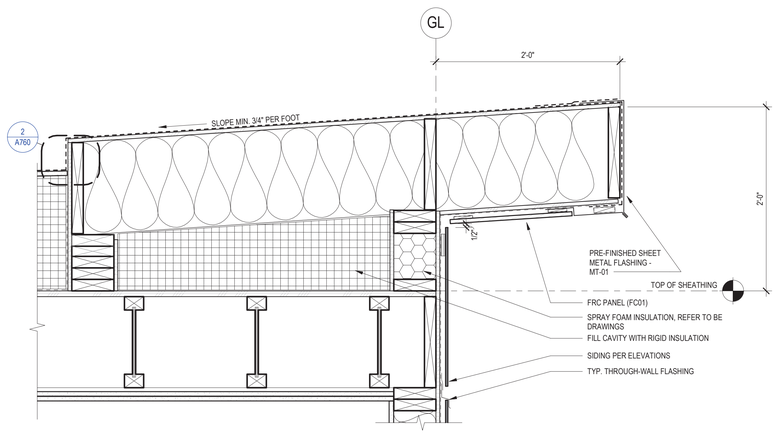
2 ROOF MEMBRANE DETAIL

SCALE: 3" = 1'-0"



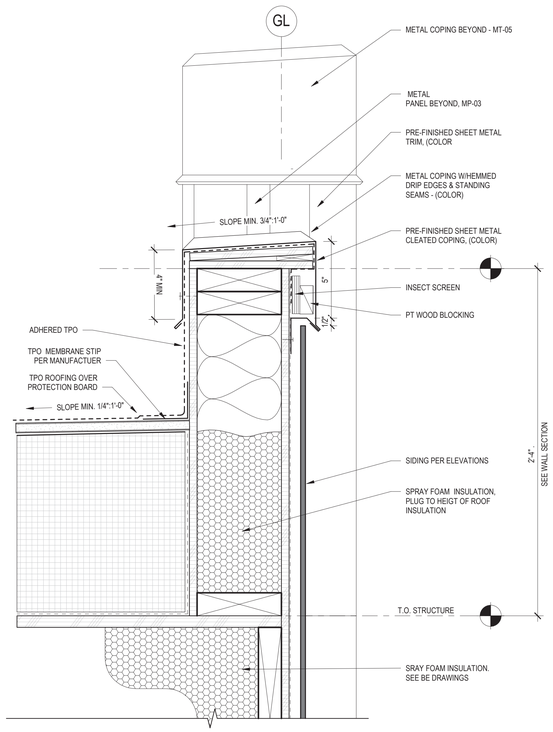
3 PIPE PENETRATION @ ROOF OVERHANG

SCALE: 3" = 1'-0"



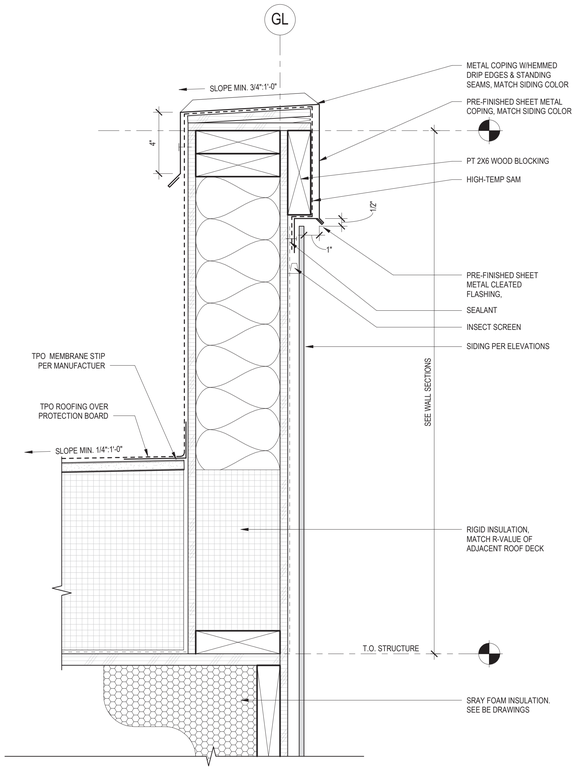
4 ROOF EAVE

SCALE: 1 1/2" = 1'-0"



5 LOW PARAPET @ FC PANEL

SCALE: 3" = 1'-0"



6 TYP PARAPET AT FIBER CEMENT PANEL

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8070 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

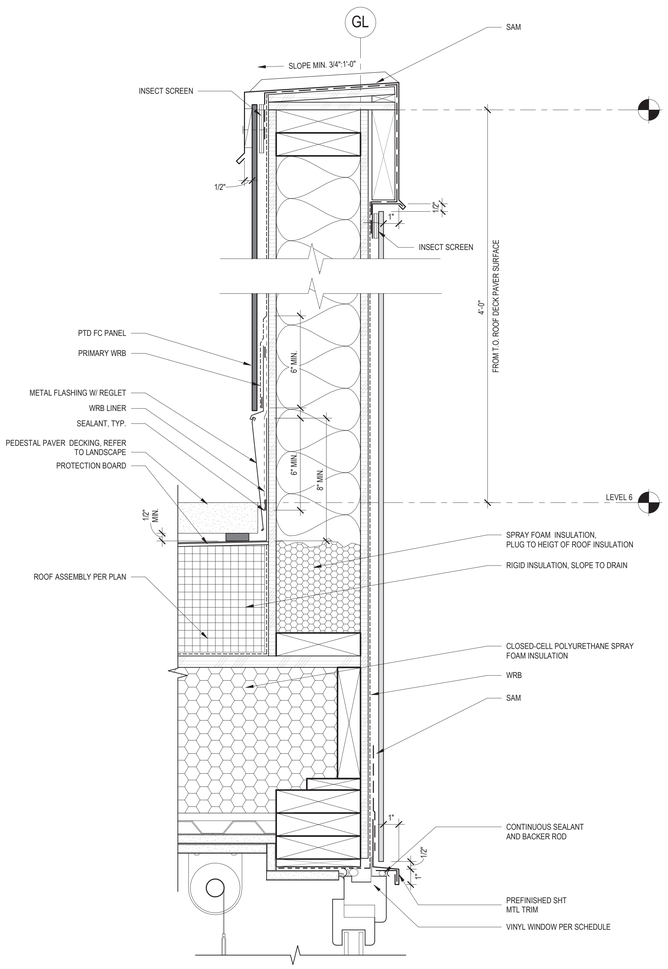
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:JG, MB, PD, RM
04/07/22

ROOF DETAILS

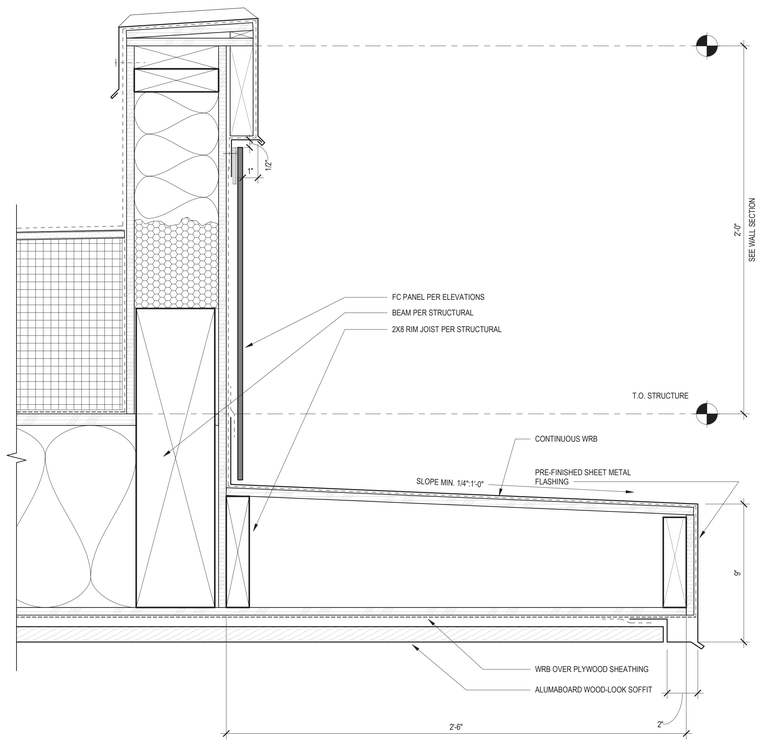
A760

2/2/2024 10:41:38 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



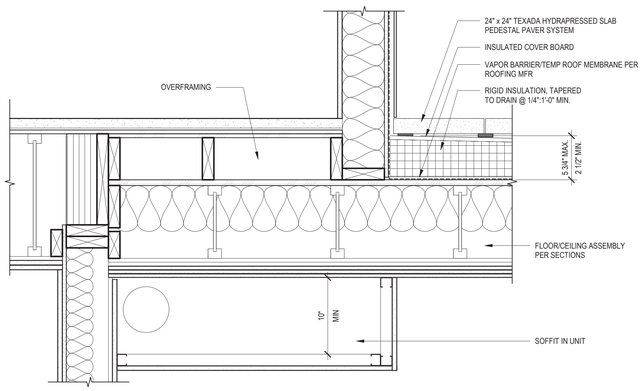
1 PARAPET @ L6 AMENITY DECK

SCALE: 3" = 1'-0"



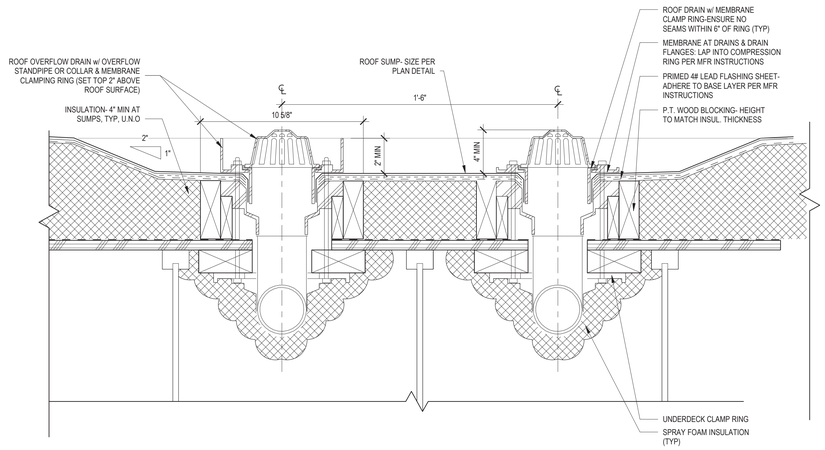
2 ROOF OVERHAN @ AMENITY

SCALE: 3" = 1'-0"



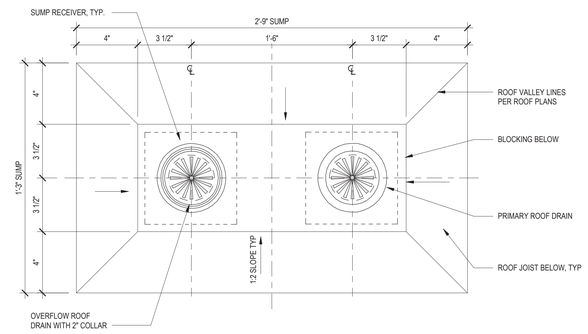
3 AMENITY DECK BELOW ENTRANCE

SCALE: 1 1/2" = 1'-0"



4 TYPICAL ROOF DRAIN

SCALE: 3" = 1'-0"



5 ROOF DRAIN - PLAN VIEW

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

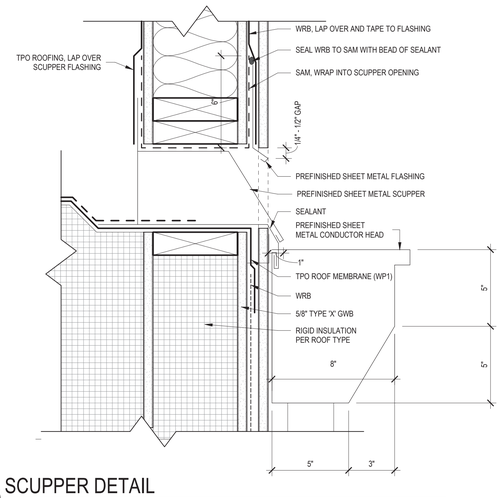
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

ROOF DETAILS

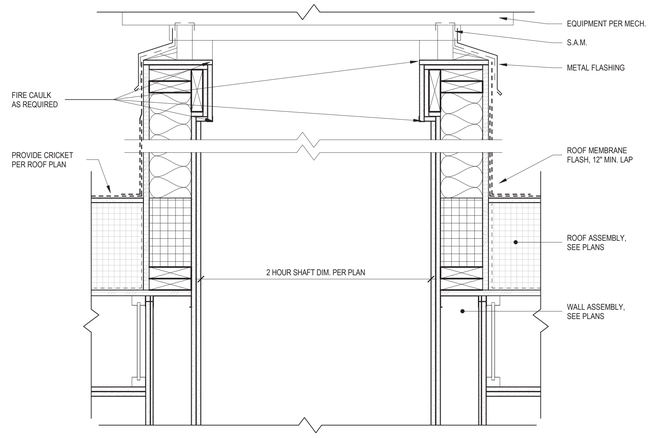
A761

2/2/2024 10:41:39 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



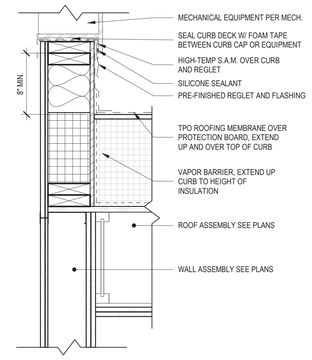
1 SCUPPER DETAIL

SCALE: 3" = 1'-0"



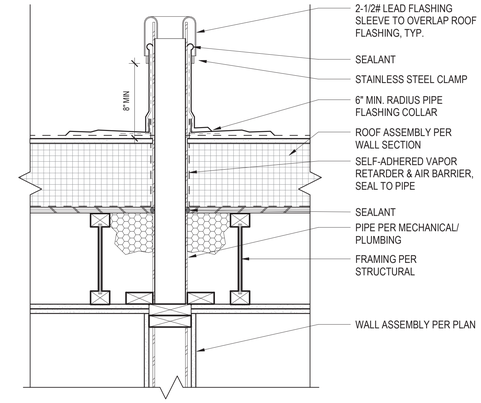
2 TRASH CHUTE ROOF DETAIL

SCALE: 1 1/2" = 1'-0"



3 2-HR MECHANICAL SHAFT @ ROOF

SCALE: 1 1/2" = 1'-0"



4 PIPE PENETRATION @ ROOF

SCALE: 1 1/2" = 1'-0"

5 EXHAUST DUCT @ ROOF

SCALE: 1 1/2" = 1'-0"

6 BASE OF WALL AT ROOF

SCALE: 1 1/2" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

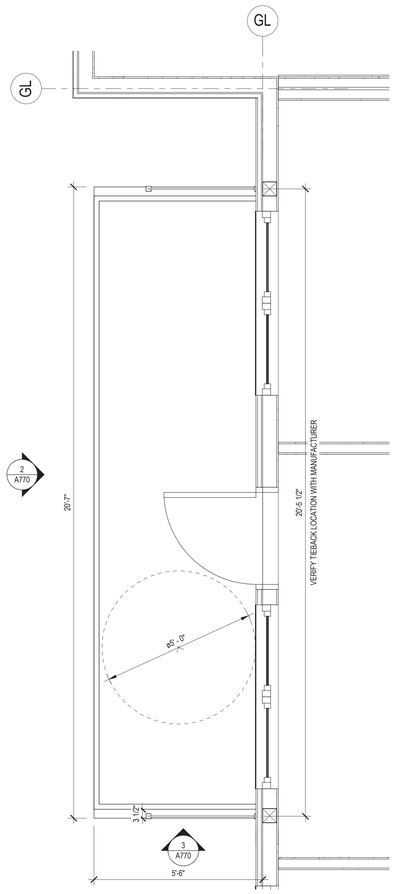
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:JG, MB, PD, RM
04/07/22

ROOF DETAILS

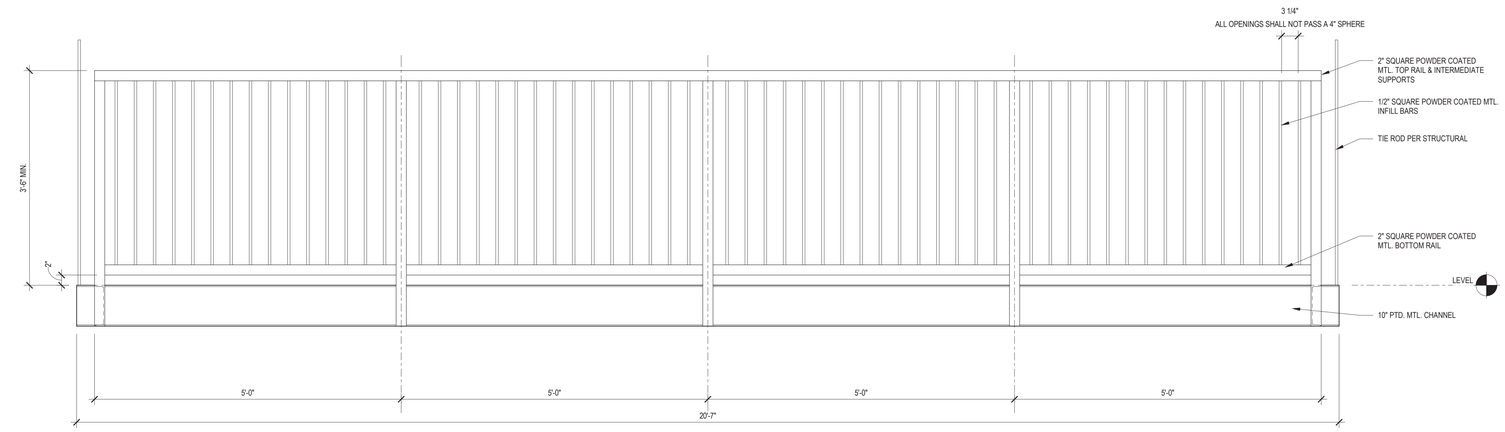
A762

2/2/2024 10:41:40 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



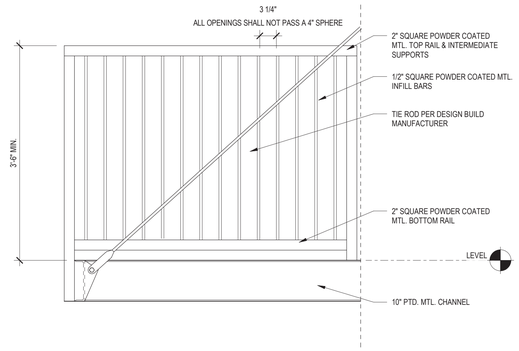
1 ENLARGED UNIT BALCONY PLAN

SCALE: 1/2" = 1'-0"



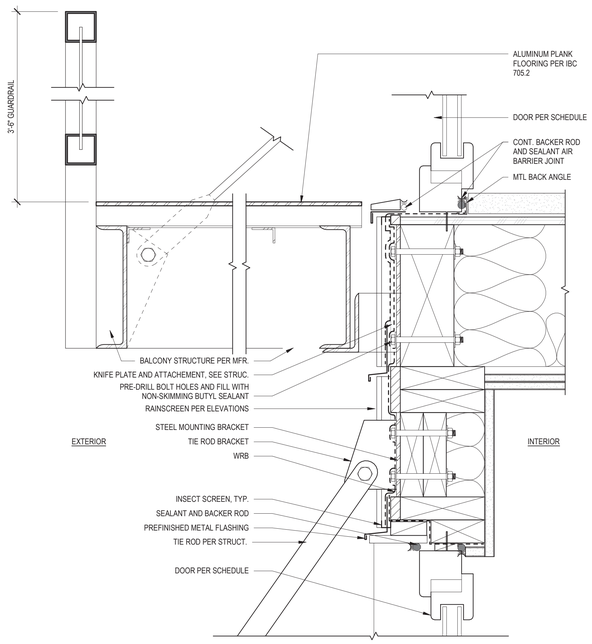
2 UNIT BALCONY FRONT ELEVATION

SCALE: 1" = 1'-0"



3 UNIT BALCONY SIDE ELEVATION

SCALE: 1" = 1'-0"



4 BALCONY WITH TIE ROD

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

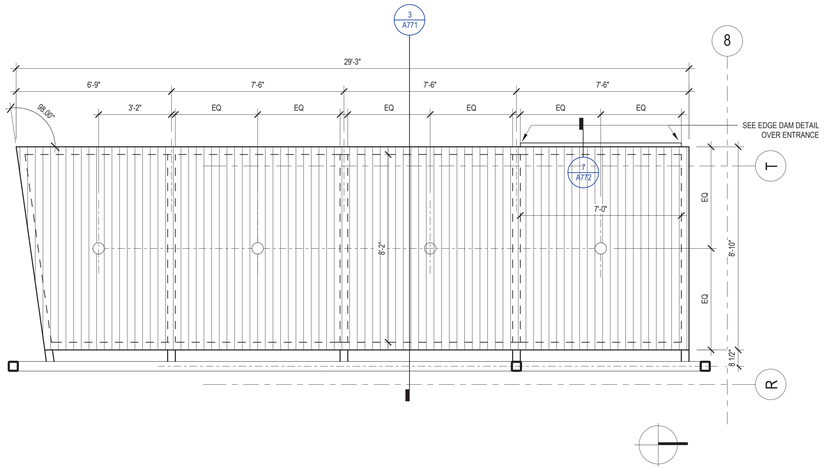
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

BALCONY & RAILING DETAILS

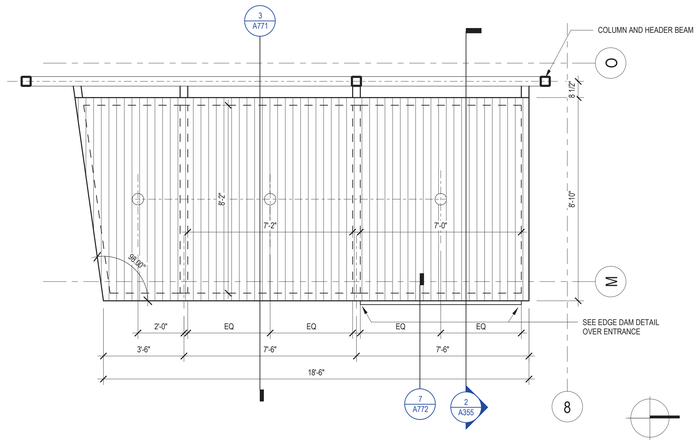
A770

2/2/2024 10:41:41 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2/21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



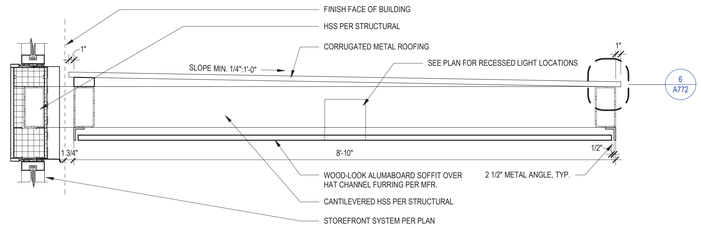
1 RESIDENTIAL CANOPY PLAN - WEST

SCALE: 3/8" = 1'-0"



2 RESIDENTIAL CANOPY PLAN - EAST

SCALE: 3/8" = 1'-0"



3 RESIDENTIAL CANOPY SECTION

SCALE: 1" = 1'-0"

GENERAL NOTES:
1. LEVEL 1 CANOPIES DO NOT INCLUDE COMBUSTIBLE MATERIALS AND THEREFORE DO NOT REQUIRE FIRE SPRINKLERS PER CODE SECTION 903.3.1.1.1 EXCEPTION 4

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

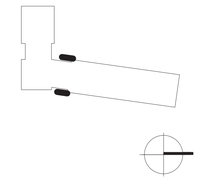
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8078 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

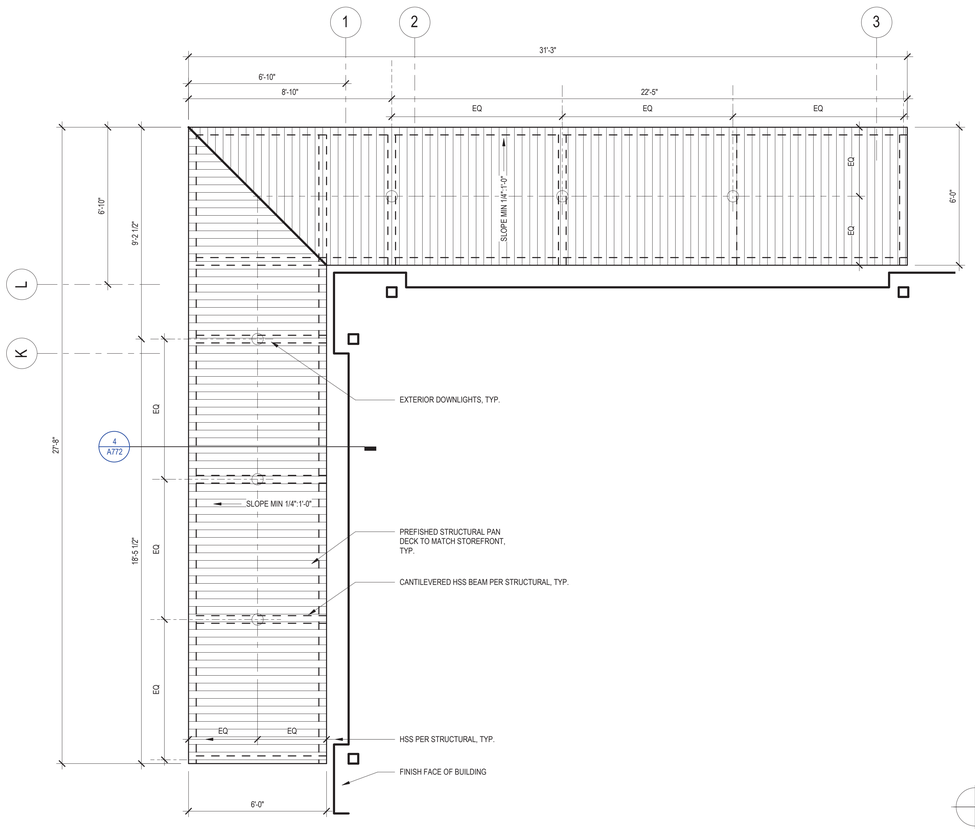
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:JG, MB, PD, RM
04/07/22

CANOPY DETAILS

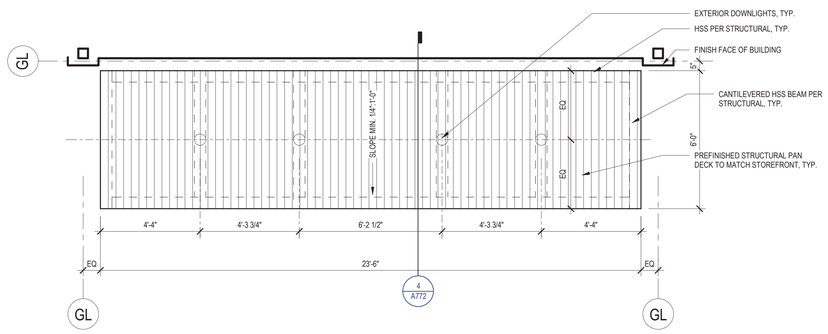
A771

2/2/2024 10:41:41 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



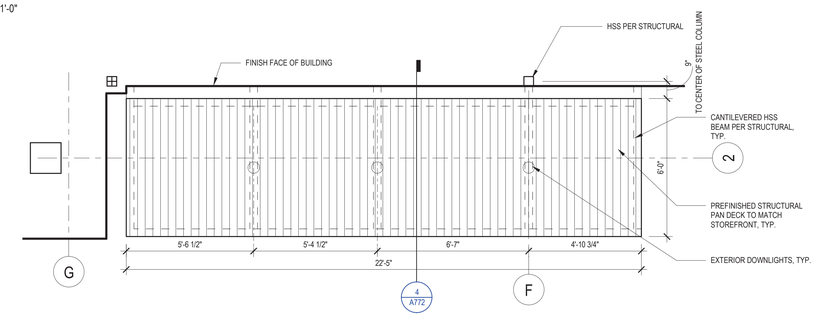
1 CORNER COMMERCIAL CANOPY PLAN

SCALE: 3/8" = 1'-0"



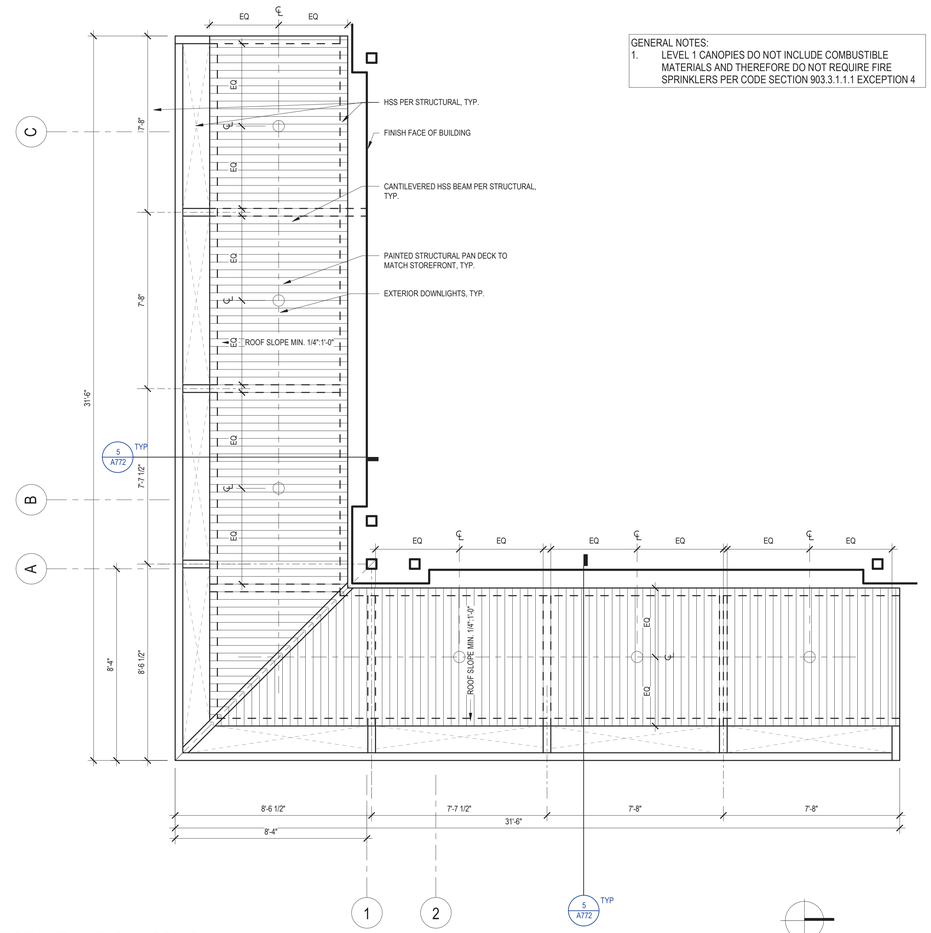
3 COMMERCIAL CANOPY PLAN

SCALE: 3/8" = 1'-0"



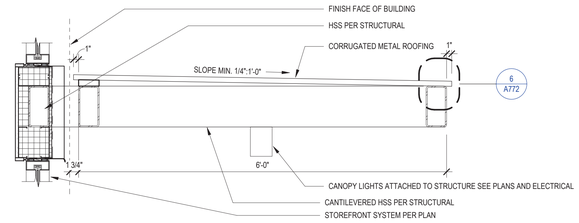
8 COMMERCIAL CANOPY SOUTH

SCALE: 3/8" = 1'-0"



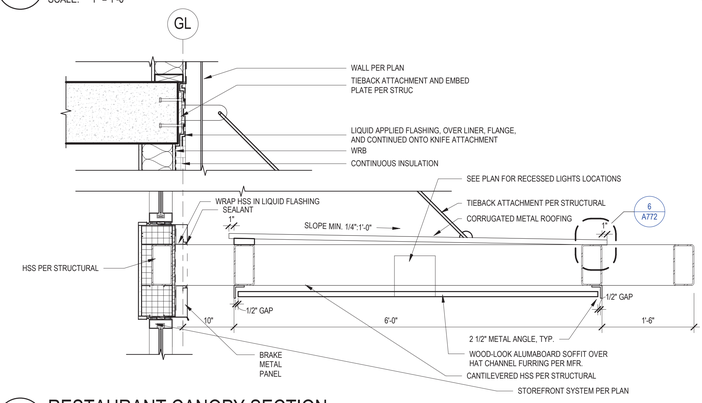
2 RESTAURANT CANOPY PLAN

SCALE: 3/8" = 1'-0"



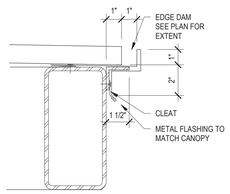
4 COMMERCIAL CANOPY SECTION

SCALE: 1" = 1'-0"



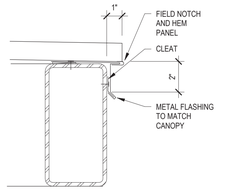
5 RESTAURANT CANOPY SECTION

SCALE: 1" = 1'-0"



7 CANOPY EDGE @ ENTRANCE

SCALE: 3" = 1'-0"



6 CANOPY EDGE

SCALE: 3" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

CANOPY DETAILS

A772

2/2/2024 10:41:42 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

WINDOW GENERAL NOTES

1. ALL VINYL WINDOWS ARE VN-01 U.N.O., TYPICAL. SEE ELEVATIONS ON SHEET A201.

2. VINYL WINDOWS:
U-VALUE: 0.26
SHGC = 0.35

REFER TO ENERGY COMPLIANCE CALCULATIONS FOR COMPLIANCE. ENERGY COMPLIANCE REPORT TAKES PRECEDENT FOR U-VALUE AND SHGC.

3. ALL WINDOWS ARE SHOWN FROM THE EXTERIOR.

4. CASEMENT WINDOWS TO MEET THE REQUIREMENTS FOR EMERGENCY ESCAPE & RESCUE OPENINGS (IBC 1029).

5. T = TEMPERED GLASS LITE
T* = TEMPERED GLASS IF ADJACENT TO DOOR PER IBC 2406.4.2

2

VINYL WINDOW GLAZING PANELS WITH EDGES BELOW 18", WITH EDGES ABOVE 36", ARE GREATER THAN 9SF, AND/OR WITHIN 36" OF WALKING SURFACES WILL REQUIRE TEMPERED GLASS.

6. IBC 2403.1: EACH PANE SHALL BEAR THE MANUFACTURER'S MARK DESIGNATING THE TYPE AND THICKNESS OF THE GLASS OR GLAZING MATERIAL. EACH PANE OF TEMPERED GLASS, EXCEPT TEMPERED SPANDREL GLASS, SHALL BE PERMANENTLY IDENTIFIED BY THE MANUFACTURER. THE IDENTIFICATION MARK SHALL BE ACID ETCHED, SAND BLASTED, CERMIC FIRED, LASER ETCHED, EMBOSSED OR OF A TYPE THAT, ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED. TEMPERED SPANDREL GLASS SHALL BE PROVIDED WITH A REMOVABLE PAPER MAKING BY THE MANUFACTURER.

7. IBC 2403.4: WHERE INTERIOR GLAZING IS INSTALLED ADJACENT TO A WALKING SURFACE, THE DIFFERENTIAL DEFLECTION OF TWO ADJACENT UNSUPPORTED EDGES SHALL NOT BE GREATER THAN THE THICKNESS OF THE PANELS WHEN A FORCE OF 50 POUNDS PER LINEAR FOOT IS APPLIED HORIZONTALLY TO ONE PANEL AT ANY POINT UP TO 42 INCHES ABOVE THE WALKING SURFACE.

8. IBC 2406.3: EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE MANUFACTURER OR INSTALLER AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, AS WELL AS THE INFORMATION SPECIFIED IN SECTION 2403.1. THE DESIGNATION SHALL BE ACID ETCHED SAND BLASED, CERAMIC FIRED, LASER ETCHED, EMBOSSED OR OF A TYPE THAT ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED.

9. IBC 2406.4.2: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION

10. ALL WINDOWS AND DOORS TO MEET REQUIRMENTS OF THE 2018 WASHINGTON STATE ENERGY CODE.

11. ALL WINDOWS WHOSE OPERABLE PART FALL BELOW 36" ABOVE FINISHED FLOOR SURFACE SHALL BE EQUIPPED WITH HARDWARE RESTRICTING THE OPENING TO A DIMENSION OF 4" AT IT'S WIDEST POINT, IN COMPLIANCE WITH IBC 1013.8 EXCEPTION 2.

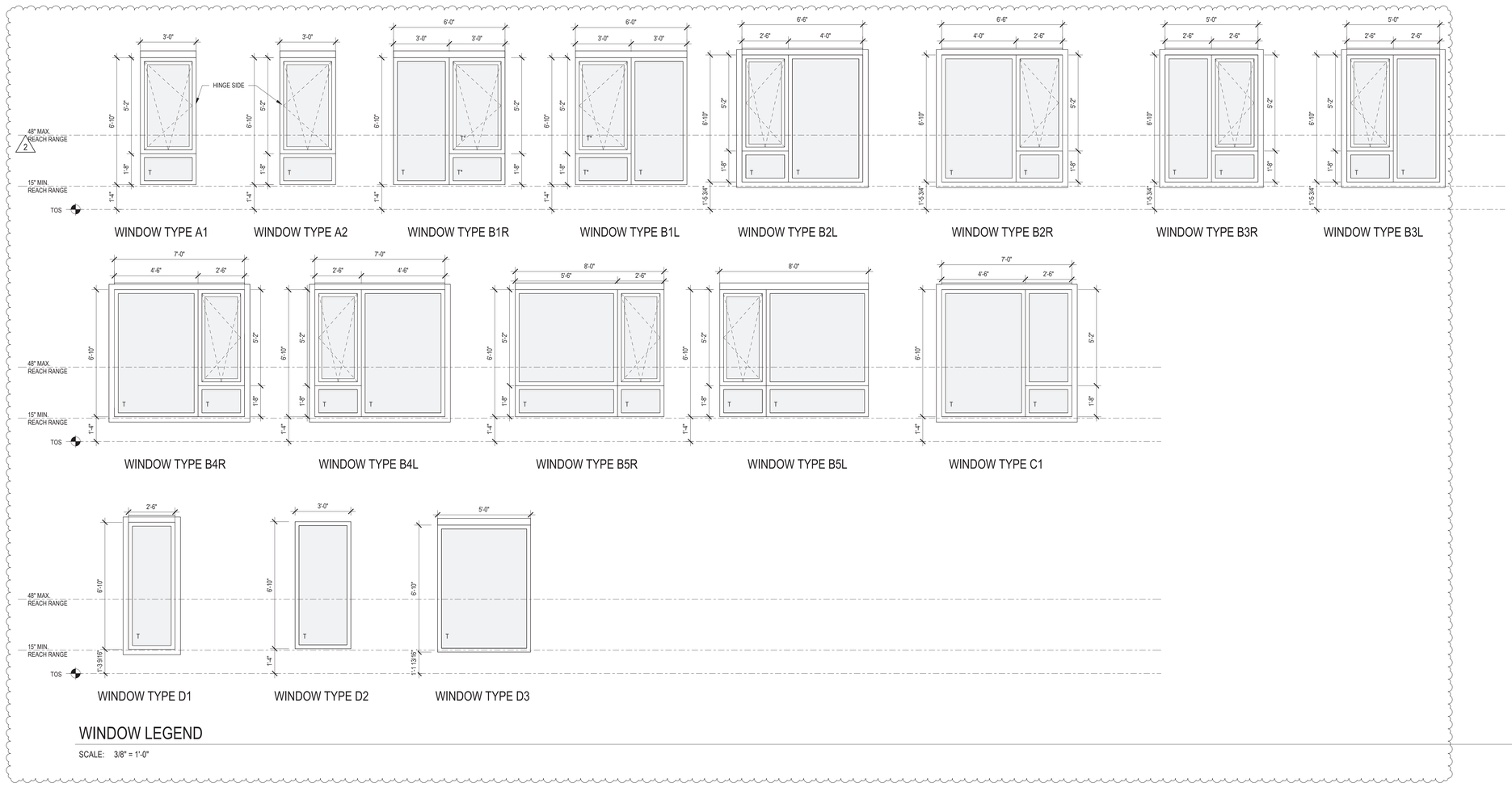
12. WINDOW ACCESSIBILITY IN TYPE 'A' UNITS (ICC/ ANSI A117.1-2009 SECTION 1003.1.3)

• IN TYPE 'A' UNITS, OPERABLE WINDOWS REQUIRED TO PROVIDE NATURAL VENTILATION SHALL COMPLY WITH SECTIONS 309.2 AND 309.3.
• OPERABLE WINDOWS REQUIRED TO PROVIDE AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL COMPLY WITH SECTION 309.2.
• OPERABLE WINDOWS SHALL COMPLY WITH SECTION 309 AS FOLLOWS:
• A 30" X 48" CLEAR FLOOR SPACE SHALL BE PROVIDED PER SECTION 305
• OPERABLE PARTS MUST BE IN THE REACH RANGE PER SECTION 308.
• OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.
• THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 POUNDS MAX
• CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" HIGH MAX. SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.

WINDOW GENERAL NOTE:
1. ALL WEST FACING RESIDENTIAL WINDOWS NEED A TO MEET A MIN 35-40 STC RATING PER SITE NOISE REPORT.
2. ALL RESIDENTIAL WINDOWS FACING THE PARKING LOT NEED TO MEET A MIN 33-35 STC RATING PER SITE NOISE REPORT.
3. ALL RESIDENTIAL WINDOWS NEED TO MEET A MINIMUM OF 28-30 STC RATING PER SITE NOISE REPORT.
4. WINDOW COUNTS SHALL BE VERIFIED BY THE CONCTRACTOR.

WINDOW SCHEDULE

TYPE MARK	SIZE WIDTH	SIZE HEIGHT	SIZE SILL HEIGHT	OPERATION	MANUFACTURER	HEAT TRANSFER COEFFICIENT (U)	SOLAR HEAT GAIN COEFFICIENT (SHGC)	QUANTITY	COMMENTS	AREA
A1	3'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	20		21 SF
A2	3'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	23		21 SF
B1L	6'-0"	6'-10"	<varies>	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	69	SILL HEIGHT1'4" UNO - 1' FOR UNIT 513	41 SF
B1R	6'-0"	6'-10"	<varies>	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	89	SILL HEIGHT1'4" UNO - 1' FOR UNIT 513	41 SF
B2L	6'-6"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	10		44 SF
B2R	6'-6"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	10		44 SF
B3L	5'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	20		34 SF
B3R	5'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	30		34 SF
B4L	7'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	25		48 SF
B4R	7'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	24		48 SF
B5L	8'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	41		55 SF
B5R	8'-0"	6'-10"	1'-4"	TILT TURN	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	66		55 SF
C1	7'-0"	6'-10"	1'-4"	FIXED	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	1		48 SF
D1	2'-6"	6'-10"	1'-4"	FIXED	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	20		17 SF
D2	3'-0"	6'-10"	1'-4"	FIXED	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	14		21 SF
D3	5'-0"	6'-10"	1'-4"	FIXED	ECO WINDOW - IGLO 5 CLASSIC	0.2600 BTU/(h·ft²·°F)	0.35	5		34 SF
								467		



WINDOW LEGEND

SCALE: 3/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

WINDOW SCHEDULE

A801

2/2/2024 10:41:44 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

STORERONT NOTES

1. STOREFRONT WINDOWS: ALL VERTICAL FENESTRATION SHALL COMPLY WITH THE FOLLOWING U-FACTOR:
   METAL FIXED = U-0.34
   METAL OPERABLE = U-0.36
   ENTRANCE DOORS = U-0.60
   ALL OTHER VERTICAL FENESTRATION (OPERABLE, FIXED, GLAZED DOORS) = U-0.26.
   THE SHGC OF ALL VERTICAL FENSTRATION SHALL BE LESS THAN OR EQUAL TO 0.35.

2. ALL WINDOWS SHOWN FROM THE EXTERIOR.

3. CONTRACTOR TO VERIFY ROUGH OPENING DIMENSIONS IN FIELD BEFORE ORDERING WINDOWS.

4. T = TEMPERED GLASS LITE.

5. IDENTIFICATION - IBC 2403.1
   EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION. THE MANUFACTURER OR INSTALLER AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES.

   THE DESIGNATION SHALL BE ACID ETCHED, SAND BLASTED, CERAMIC FIRED, LASER ETCHED, EMBOSSED OR OF A TYPE THAT ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED.

6. INTERIOR GLAZING - IBC 2304.4
   WHERE INTERIOR GLAZING IS INSTALLED ADJACENT TO A WALKING SURFACE, THE DIFFERENTIAL DEFLECTION OF TWO ADJACENT UNSUPPORTED EDGES SHALL BE NOT GREATER THAN THE THICKNESS OF THE PANELS WHEN A FORCE OF 50 POUNDS PER LINEAR FOOT IS APPLIED

   ALL WINDOWS AND DOORS TO MEET REQUIREMENTS OF THE 2018 WASHINGTON STATE ENERGY CODE, SEE ENERGY REPORT FOR ALL ENERGY CODE REQUIREMENTS.

7. WINDOW ACCESSIBILITY IN TYPE 'A' UNITS - ICCI ANSI A117.1-2003, 1003.13
   IN TYPE 'A' UNITS, WHERE OPERABLE WINDOWS ARE PROVIDED, AT LEAST ONE WINDOW IN EACH SLEEPING, LIVING, OR DINING SPACE SHALL HAVE OPERABLE PARTS COMPLYING WITH SECTION 1003.9. EACH REQUIRED OPERABLE WINDOW SHALL HAVE OPERABLE PARTS COMPLYING WITH SECTION 1003.9.

8. OPERABLE WINDOWS SHALL COMPLY WITH SECTION 309 AS FOLLOWS:
   A 30" X 48" CLEAR FLOOR SPACE SHALL BE PROVIDED PER SECTION 305, SEE SHEET G401-G404

9. OPERABLE PARTS MUST BE IN THE REACH RANGE PER SECTION 308, SEE DIAGRAMS ON G401-G404.

10. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST.

11. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 POUNDS MAX.

12. OPERABLE PARTS AFTER OPERATION TO RELEASE THE CONTROL DEVICE ALLOWING THE WINDOW TO FULLY OPEN SHALL NOT REDUCE THE MINIMUM NET CLEAR OPENING AREA OF THE WINDOW UNIT TO LESS THAN THE AREA REQUIRED BY IBC SECTION 1030.2.

13. ALL WINDOWS WHOSE OPERABLE PARTS FALL BELOW 36" ABOVE FINISHED FLOOR SURFACE SHALL BE EQUIPPED WITH HARDWARE RESTRICTING THE OPENING TO A DIMENSION OF 4" AT IT'S WIDEST POINT, IN COMPLIANCE WITH IBC 1015.4.

14. PER ANSI A117.1 - 2009, CHANGE IN LEVEL BETWEEN 1/4" & 1/4" HIGH MAX. SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.

15. THE NFRC LABEL CERTIFICATES FOR THE STOREFRONT GLAZING AND OTHER SITE-FABRICATED FENESTRATION ARE REQUIRED TO BE AVAILABLE TO THE INSPECTORS ON SITE BEFORE ANY PORTION OF THE FENESTRATION ASSEMBLY IS INSTALLED.

16. STOREFRONT MULLIONS WITHIN OVERALL STOREFRONT FRAME ARE DIMENSIONED TO CENTERLINE UON.

17. MULLIONS 10 FT OVER FEET HIGH MAY REQUIRE REINFORCING. REFER TO SPECS 084113-2.2-b, AND -2.3-A.-2-G.

18. ALLOW FOR FULL WIDTH METAL PANELS TO EXTEND TO THE EDGE OF THE OPENING AND MAINTEING ALIGNMENT WITH FULL HIEGHT OF FACADE.

19. CONTRACTOR TO VERIFY STOREFRONT SYSTEMS ARE SUFFICIANTLY REINFORCED FOR WIND LOADS. SEE WIND DESIGN DATA ON STRUCTURE DRAWINGS.

SAFETY GLAZING

HUMAN IMPACT LOADS - IBC 2406.1
INDIVIDUAL GLAZED AREAS, INCLUDING GLASS MIRRORS, IN HAZARDOUS LOCATIONS AS DEFINED IN SECTION 2406.4 SHALL COMPLY WITH SECTIONS 2406.1.1 THROUGH 2406.1.4

IDENTIFICATION OF SAFETY GLAZING - IBC 2406.3
EACH PANE OF SAFETY GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE IDENTIFIED BY A MNUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE MANUFACTURER OR INSTALLER AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES.

THE DESIGNATION SHALL BE ACID ETCHED, SAND BLASTED, CERAMIC FIRED, LASER ETCHED, EMBOSSED OR OF A TYPE THAT ONCE APPLIED, CANNOT BE REMOVED WITHOUT BEING DESTROYED.

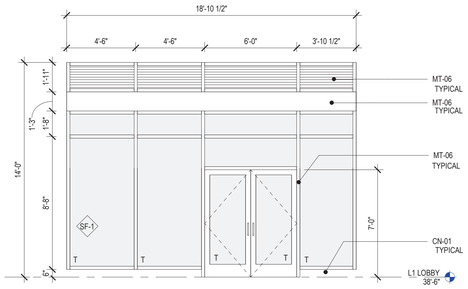
HAZARDOUS LOCATIONS - IBC 2406.4
THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS REQUIRING SAFETY GLAZING MATERIALS.

IBC 2406.4.1
GLAZING IN SWINGING DOORS, SLIDING AND BIFOLD DOORS

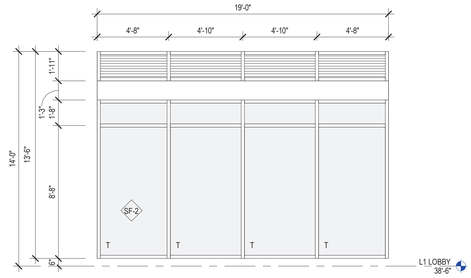
IBC 2406.4.2
GLAZING IN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS < 60" ABOVE THE WALKING SURFACE.

IBC 2406.4.3
GLAZING IN AN INDIVIDUAL OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
- EXPOSED AREA OF AN INDIVIDUAL PANE IS > 9SF
- BOTTOM EDGE IS < 18" ABOVE THE FLOOR
- TOP EDGE IS > 36" ABOVE THE FLOOR
- ONE OR MORE WALKING SURFACES WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING

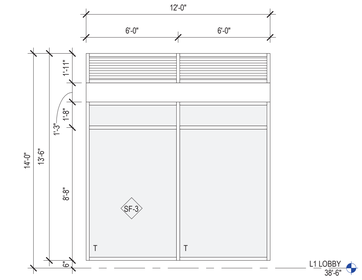
IBC 2406.4.6
GLAZING ADJACENT TO STAIRWAYS, LANDINGS & RAMPS WITHIN 36" HORIZONTALLY OF A WALKING SURFACE; WHEN THE EXPOSED SURFACE OF GLASS IS LESS THAN 60" ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.



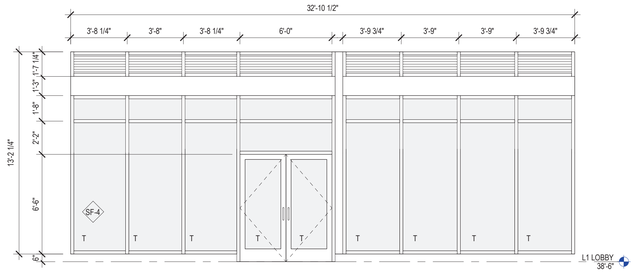
1 STOREFRONT 1
SCALE: 1/4" = 1'-0"



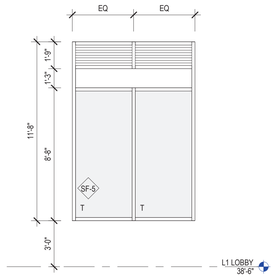
2 STOREFRONT 2
SCALE: 1/4" = 1'-0"



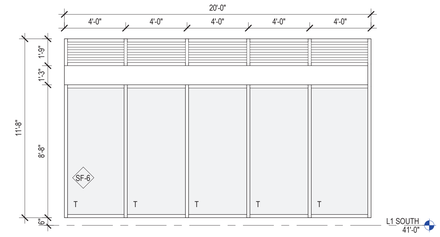
3 STOREFRONT 3
SCALE: 1/4" = 1'-0"



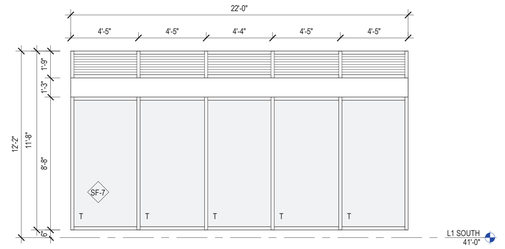
4 STOREFRONT 4
SCALE: 1/4" = 1'-0"



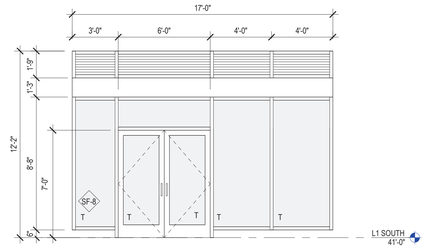
5 STOREFRONT 5
SCALE: 1/4" = 1'-0"



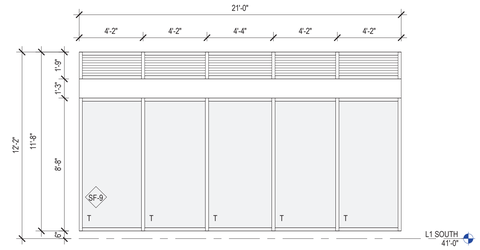
6 STOREFRONT 6
SCALE: 1/4" = 1'-0"



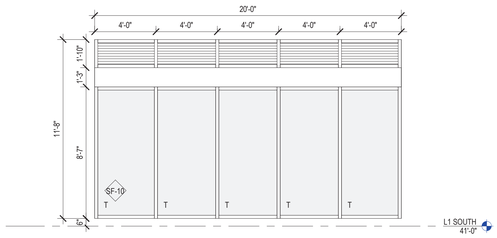
7 STOREFRONT 7
SCALE: 1/4" = 1'-0"



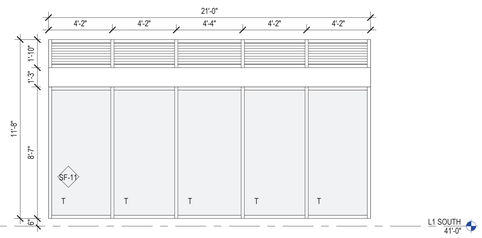
8 STOREFRONT 8
SCALE: 1/4" = 1'-0"



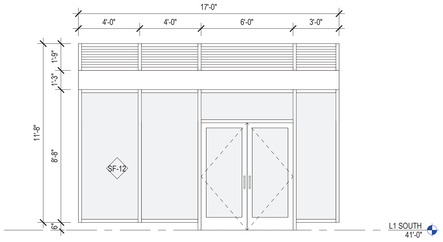
9 STOREFRONT 9
SCALE: 1/4" = 1'-0"



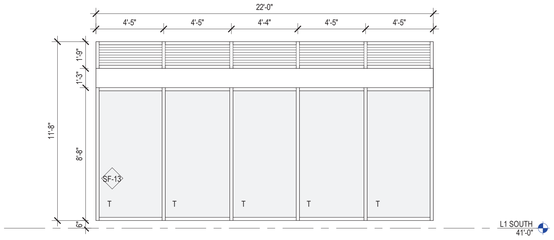
10 STOREFRONT 10
SCALE: 1/4" = 1'-0"



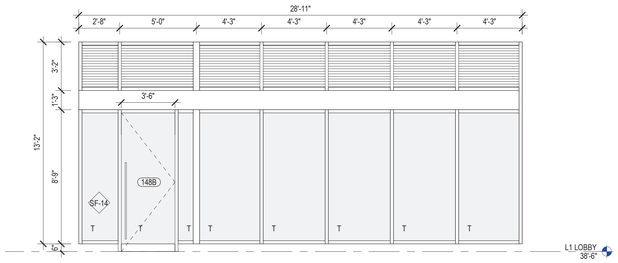
11 STOREFRONT 11
SCALE: 1/4" = 1'-0"



12 STOREFRONT 12
SCALE: 1/4" = 1'-0"



13 STOREFRONT 13
SCALE: 1/4" = 1'-0"



14 STOREFRONT 14
SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

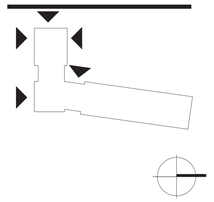
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT RUSSELL H. HAZZARD STATE OF WASHINGTON

02/02/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

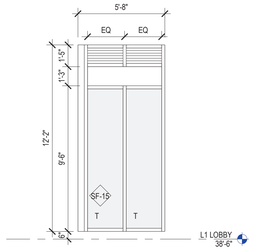
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

STOREFRONT SCHEDULES

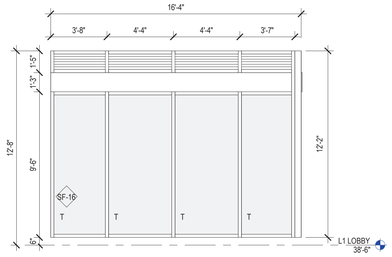
A802

2/2/2024 10:41:46 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



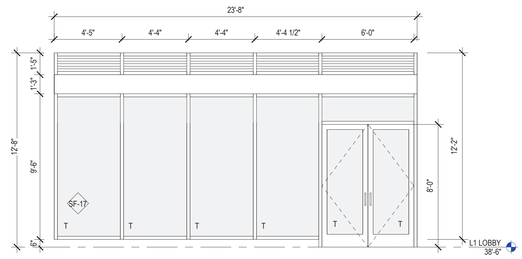
1 STOREFOTNT 15

SCALE: 1/4" = 1'-0"



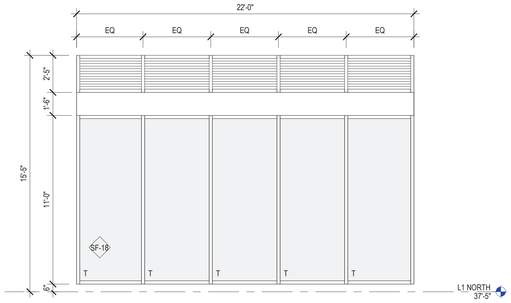
2 STOREFRONT 16

SCALE: 1/4" = 1'-0"



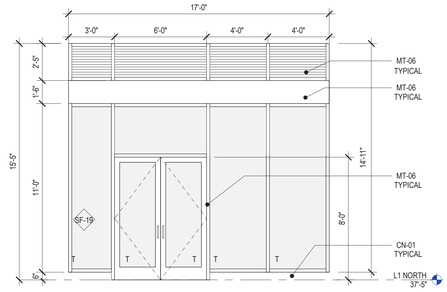
3 STOREFRONT 17

SCALE: 1/4" = 1'-0"



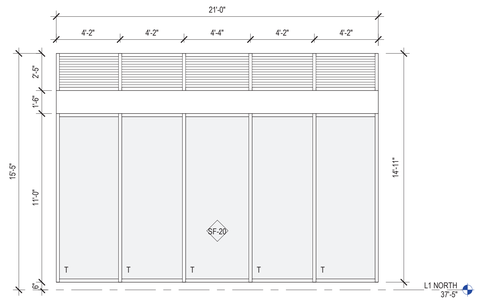
4 STOREFRONT 18

SCALE: 1/4" = 1'-0"



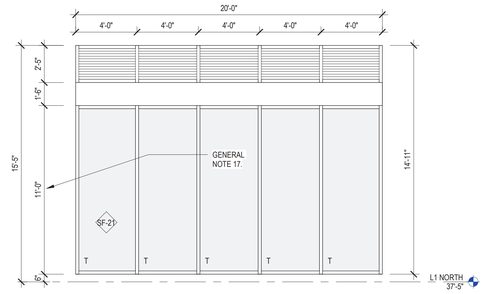
5 STOREFRONT 19

SCALE: 1/4" = 1'-0"



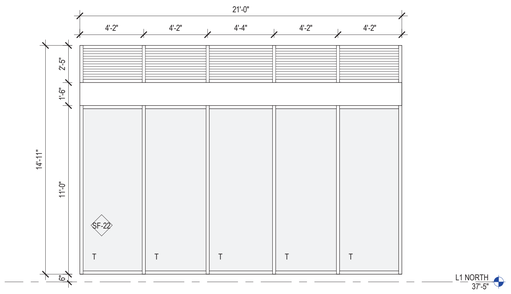
6 STOREFRONT 20

SCALE: 1/4" = 1'-0"



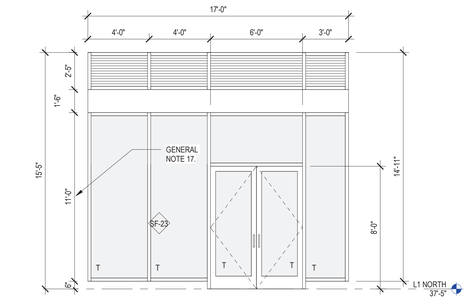
7 STOREFRONT 21

SCALE: 1/4" = 1'-0"



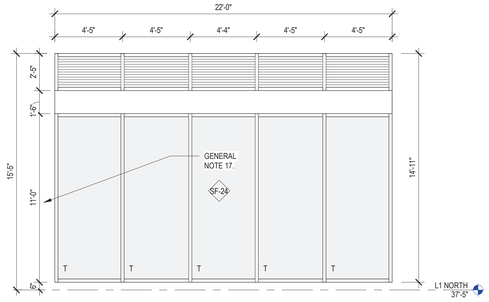
8 STOREFRONT 22

SCALE: 1/4" = 1'-0"



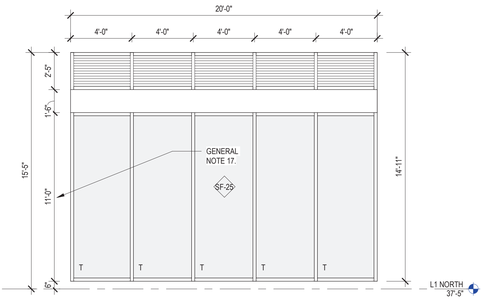
9 STOREFRONT 23

SCALE: 1/4" = 1'-0"



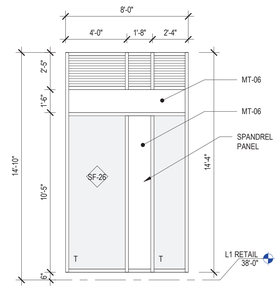
10 STOREFRONT 24

SCALE: 1/4" = 1'-0"



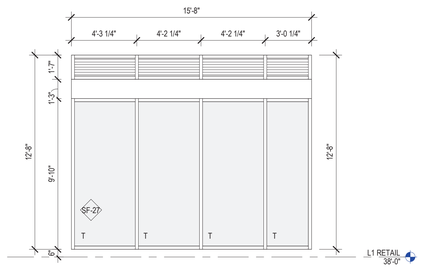
11 STOREFRONT 25

SCALE: 1/4" = 1'-0"



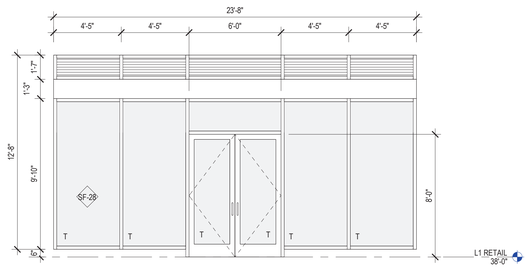
12 STOREFRONT 26

SCALE: 1/4" = 1'-0"



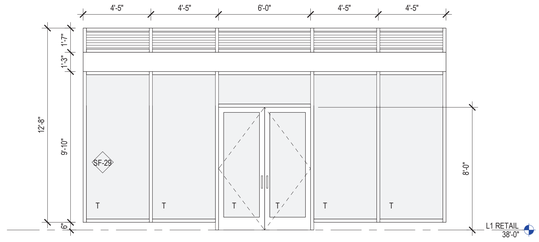
13 STOREFRONT 27

SCALE: 1/4" = 1'-0"



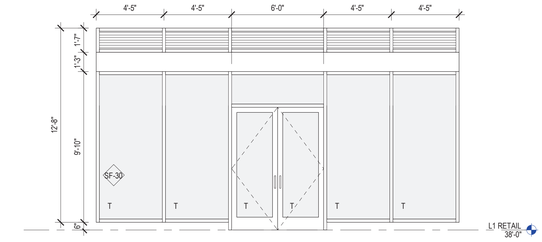
14 STOREFRONT 28

SCALE: 1/4" = 1'-0"



15 STOREFRONT 29

SCALE: 1/4" = 1'-0"



16 STOREFRONT 30

SCALE: 1/4" = 1'-0"

EVERETT
RIVERFRONT

3710 RIVERFRONT
BLVD, EVERETT, WA
98203

1101 Second Ave, Ste 100
Seattle, WA 98101

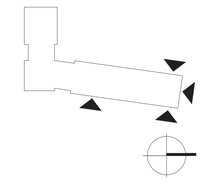
206 962 6500
MG2.com

MG2

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

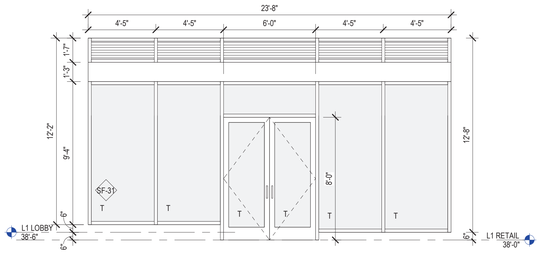
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

STOREFRONT
SCHEDULES

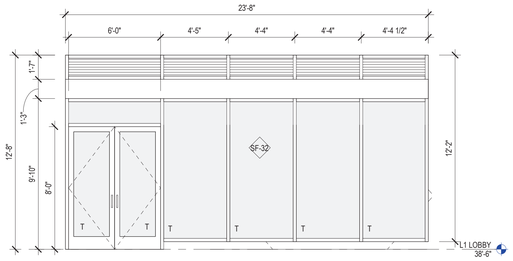
A803

2/2/2024 10:41:49 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



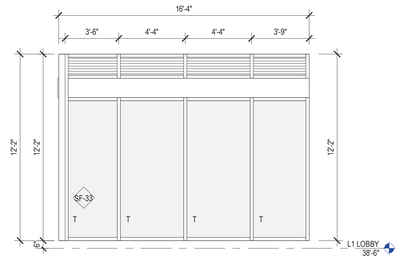
1 STOREFRONT 31

SCALE: 1/4" = 1'-0"



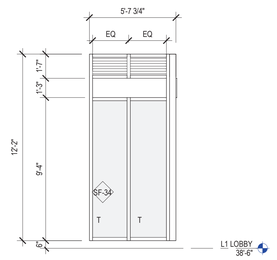
2 STOREFRONT 32

SCALE: 1/4" = 1'-0"



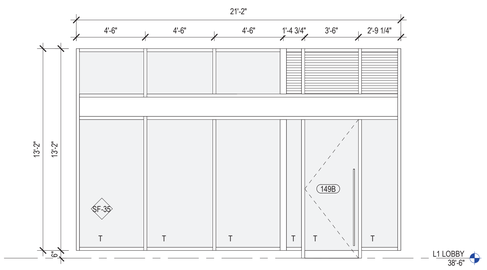
3 STOREFRONT 33

SCALE: 1/4" = 1'-0"



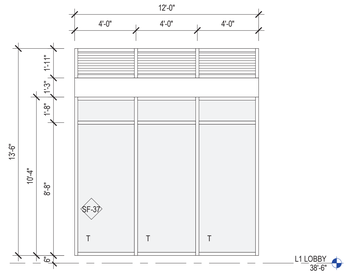
4 STOREFRONT 34

SCALE: 1/4" = 1'-0"



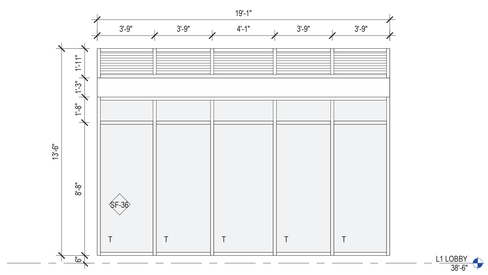
5 STOREFRONT 35

SCALE: 1/4" = 1'-0"



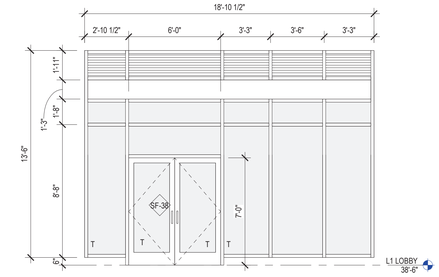
6 STOREFRONT 37

SCALE: 1/4" = 1'-0"



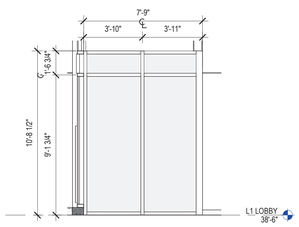
7 STOREFRONT 36

SCALE: 1/4" = 1'-0"



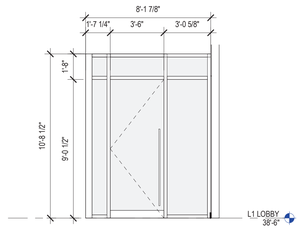
8 STOREFRONT 38

SCALE: 1/4" = 1'-0"



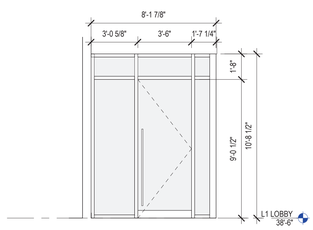
9 VESTIBULE ELEVATION SW

SCALE: 1/4" = 1'-0"



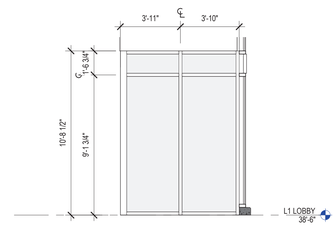
10 VESTIBULE ELEVATION W

SCALE: 1/4" = 1'-0"



11 VESTIBULE ELEVATION E

SCALE: 1/4" = 1'-0"



12 VESTIBULE ELEVATION SE

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

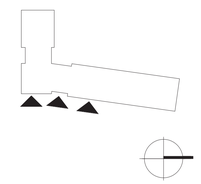
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

8079 REGISTERED ARCHITECT

RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

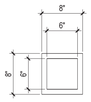
21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

STOREFRONT SCHEDULES

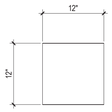
A804

2/2/2024 10:41:51 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

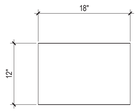
VENT LEGEND



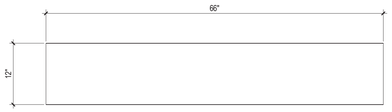
AC-1



V-1



V-2



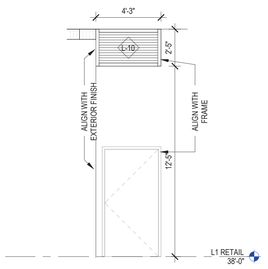
V-3

LOUVER NOTES

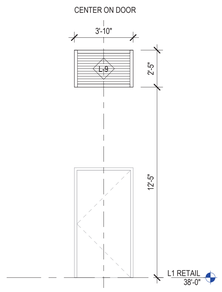
1. SEE SHEET A764 FOR LOUVER DETAILS.
2. SEE ELEVATIONS FOR LOUVER LOCATIONS.

RESIDENTIAL VENT / LOUVER SCHEDULE	
TYPE	DESCRIPTION
AC-1	6" X 6" AC PORT
V-1	24" X 12" VENT WITH SHROUD
V-2	18" X 12" VENT WITH SHROUD
V-3	96" X 12" VENT WITH SHROUD

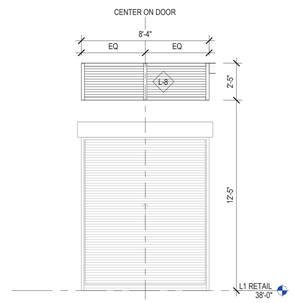
LOUVER LEGEND



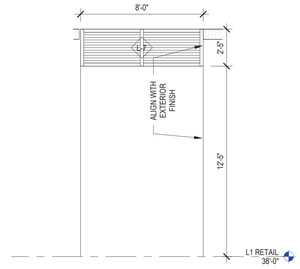
10 LOUVER 10
SCALE: 1/4" = 1'-0"



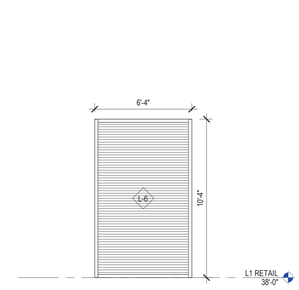
9 LOUVER 9
SCALE: 1/4" = 1'-0"



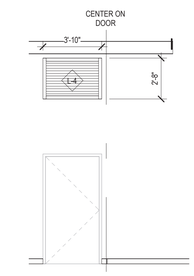
8 LOUVER 8
SCALE: 1/4" = 1'-0"



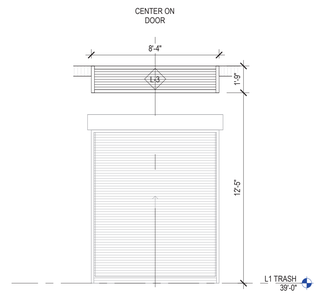
7 LOUVER 7
SCALE: 1/4" = 1'-0"



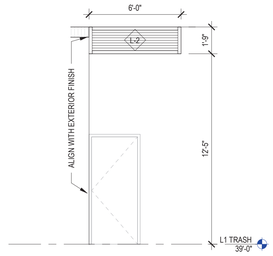
6 LOUVER 6
SCALE: 1/4" = 1'-0"



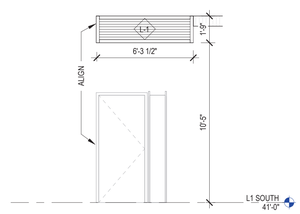
4 LOUVER 4
SCALE: 1/4" = 1'-0"



3 LOUVER 3
SCALE: 1/4" = 1'-0"



2 LOUVER 2
SCALE: 1/4" = 1'-0"



1 LOUVER 1
SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT
8079 REGISTERED ARCHITECT
RUSSELL H. HAZZARD
STATE OF WASHINGTON

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD, RM
04/07/22

LOUVER SCHEDULE

A805

2/2/2024 10:41:53 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. 60% NET FREE AREA MINIMUM.

2. OPENING PROTECTIVES (IBC 716)
   A. FIRE DOOR ASSEMBLIES AND SHUTTERS SHALL BE INSTALLED IN ACCORDANCE WITH IBC 716.5 AND NFPA 80.
   B. IBC 716.5.1: SIDE HINGED DOORS SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C. AFTER 5 MINUTES INTO THE NFPA 252 TEST, THE NEUTRAL PRESSURE LEVEL IN THE FURNACE SHALL BE ESTABLISHED AT 40 INCHES OR LESS ABOVE THE SILL.
   C. IBC 716.5.2: OTHER TYPES OF DOORS SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10B. THE PRESSURE IN THE FURNACE SHALL BE MAINTAINED AS NEARLY EQUAL TO THE ATMOSPHERIC PRESSURE AS POSSIBLE. ONCE ESTABLISHED, THE PRESSURE SHALL BE MAINTAINED DURING THE ENTIRE TEST PERIOD.
   D. IBC 716.5.7: FIRE DOOR ASSEMBLIES SHALL BE LABELED BY AN APPROVED AGENCY. THE LABELS SHALL COMPLY WITH NFPA 80, AND SHALL BE PERMANENTLY AFFIXED TO THE DOOR FRAME.
   E. IBC 716.5.9: FIRE DOORS SHALL BE SELF-CLOSING OR AUTOMATIC CLOSING. SIDE-HINGED SWINGING FIRE DOORS SHALL BE PROVIDED WITH AN ACTIVE LATCH BOLT THAT WILL SECURE THE DOOR WHEN IT IS CLOSED. IBC 716.5.9.3-SMOKE ACTIVATED DOORS:
      INSTALLED IN THE FOLLOWING LOCATIONS SHALL BE ATUOMATICCLOSING BY THE ACTUATION OF SMOKE DETECTORS INSTALLED IN ACCORDANCE WITH SECTION 907.2 OR BY LOSS OF POWER TO THE SMOKE DETECTORS OR HOLD OPEN DEVICES.
   F. IBC 716.5.7: FIRE DOORS ARE REQUIRED TO BE TESTED, LISTED AND LABELED BY A THIRD PARTY TESTING AGENCY. LABELS SHALL COMPLY WITH NFPA 80 AND SHALL BE PERMANENTLY AFFIXED TO THE DOOR OR FRAME.
   G. IBC 716.5.7.4: THE FRAMES OF FIRE DOORS SHALL BE LABELED SHOWING THE NAMES OF THE MANUFACTURER AND THIRD-PARTY INSPECTION AGENCY.

3. SMOKE BARRIERS & SMOKEPROOF ENCLOSURES (IBC 716.5.3) FIRE DOOR ASSEMBLIES REQUIRED TO HAVE A MINIMUM FIRE PROTECTION RATING OF 20 MINUTES WHERE LOCATED IN CORRIDOR WALLS SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C WITHOUT THE HOSE STREAM TEST. IF A 20 MINUTE FIRE DOOR ASSEMBLY CONTAINS GLAZING MATERIAL, THE GLAZING MATERIAL IN THE DOOR ITSELF SHALL HAVE A MINIMUM FIRE PROTECTION OF 20 MINUTES AND BE EXEMPT FROM THE HOSE STREAM TEST. GLAZING MATERIAL IN ANY OTHER PART OF THE DOOR ASSEMBLY, INCLUDING TRANSOM LITES AND SIDELITES, SHALL BE TESTED IN ACCORDANCE WITH NFPA 257, INCLUDING THE HOSE STREAM TEST. FIRE DOOR ASSEMBLIES SHALL ALSO MEET THE REQUIREMENTS FOR A SMOKEAND DRAFT-CONTROL DOOR ASSEMBLY TESTED IN ACCORDANCE WITH UL 1784 WITH AN ARTIFICIAL BOTTOM SEAL INSTALLED ACROSS THE FULL WIDTH OF THE BOTTOM OF DOOR ASSEMBLY. THE AIR LEAKAGE RATE OF THE DOOR ASSEMBLY SHALL NOT EXCEED 3.0 CFM PER SQUARE FOOT OF DOOR OPENING AT 0.10 INCH OF WATER FOR BOTH THE AMBIENT TEMPERATURE AND ELEVATED TEMPERATURE TESTS. LOUVERS SHALL BE PROHIBITED.

4. HEADROOM (IBC 1003.3.1) DOOR CLOSERS AND STOPS SHALL NOT REDUCE HEADROOM TO LESS THAN 78 INCHES.

5. MEANS OF EGRESS DOORS (IBC 1008.1)
   A. SHALL BE READILY DISTINGUISHABLE FROM THE ADJACENT CONSTRUCTION AND FINISHES SUCH THAT DOORS ARE EASILY RECOGNIZABLE AS DOORS.
   B. MINIMUM 32 INCHES CLEAR WIDTH
   C. EGRESS DOORS SHALL BE SIDE-HINGED OR PIVOTED SWINGING.
   D. DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS.
   E. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.
   F. DOOR HANDLES, PULLS, LATCHES LOCKS OR OTHER OPERATING DEVICES ON DOORS SHALL BE INSTALLED 34 INCHES MIN AND 48 INCHES MAX.

6. DOOR OPENING FORCE IBC 1008.1.3: FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE BUILDING OFFICIAL. THE MAXIMUM FORCE FOR PUSHING OPEN OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS:
   A. INTERIOR HINGED DOOR: 5.0 POUNDS
   B. SLIDING OR FOLDING DOORS: 5.0 POUNDS
   C. EXTERIOR HINGED, SLIDING, OR FOLDING DOOR: 10.0 POUNDS THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT HOLD THE DOOR IN A CLOSED POSITION.

7. AIR-BORNE SOUND (IBC 1207.2) DWELLING UNIT ENTRY DOORS SHALL HAVE AN STC RATING OF 28 MIN., AND SHALL HAVE PERIMETER SEALS.

8. ACCESSIBLE UNITS FOR LOCATIONS OF ACCESSIBLE UNITS, SEE FLOOR PLANS.

9. VISITOR OBSERVATION PORTS IN CORRIDORS & SMOKE BARRIERS (IBC 715.4.3 EXCEPTION 1) VIEWPORTS MUST NOT BE LARGER THAN 1 INCH IN DIAMETER & MUST HAVE AT LEAST AN 0.25-INCH-THICK GLASS DISC AND THE HOLDER IS OF METAL THAT WILL NOT MELT OUT WHERE SUBJECT TO TEMPERATURES OF 1,700 DEGREES F (927 DEGREES C).

10. MISC NOTES DOOR THRESHOLDS SHALL NOT EXCEED 1/2-INCH PER ANSI A-117.1, CONTRACTOR SHALL FIELD MEASURE ALL ROUGH OPENINGS AND CONFIRM DIMENSIONS PRIOR TO ORDERING DOORS.

11. AT LAUNDRY ROOM DOORS PROVIDE LOUVER TO ALLOW 100 SQ. INCHES MIN. OF OPEN AREA FOR VENTILATION, SEE MECH.

12. PANIC HARDWARE DOORS SERVING ROOMS OR SPACES WITH AN OCCUPANT LOAD OF 50 OR MORE IN A GROUP A OR E OCCUPANCY SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE.

13. REFER TO THE ENERGY CALCULATION REPORT FOR EXTERIOR DOOR U-FACTORS.

14. HUMAN IMPACT LOADS (IBC 2406.1)
    INDIVIDUAL GLAZED AREAS IN HAZARDOUS LOCATIONS AS DEFINED BY IBC 2406.4 SHALL COMPLY WITH SECTIONS 2406.1.1 THROUGH 2406.1.4
    GLAZING IN DOORS (IBC 2406.4.1)
    GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION.

15. REFERENCE SHEET A810 FOR DOOR TYPES.

16. REFERENCE SHEET A810 FOR FRAME TYPES.

17. REFERENCE SHEET A755 FOR DOOR HEAD, JAMB, AND THRESHOLD DETAILS, UNLESS OTHERWISE NOTED.

18. REFERENCE SHEET ID010 FOR FINISH LEGEND.

19. REFERENCE SPECIFICATION FOR INFORMATION ON DOOR HARDWARE GROUPS. DOOR HARDWARE MUST MEET CODE ACCESSIBILITY REQUIREMENTS.

20. MINIMUM REQUIRED CLEAR WIDTH AT DOORS FOR USER PASSAGE:
    TYPE 'A' UNITS: 32"
    TYPE 'B' UNITS: 31-3/4"

21. GLAZED DOORS AND GLAZED SIDELITES SHALL HAVE TEMPERED SAFETY GLASS PER SBC 716.5.8.

22. MAXIMUM DOOR THRESHOLD HEIGHT SHALL NOT EXCEED 1/2" ALONG AN ACCESSIBLE ROUTE OF TRAVEL PER ANSI A117.1, SECTION 303.

23. UNIT ENTRY DOORS TO BE LOCATED 4" MINIMUM FROM DOOR PANEL TO INSIDE FACE OF GYP.

24. BOTTOM OF VISION LITES SHALL BE LOCATED 43" MAXIMUM ABOVE THE FLOOR PER IBC 1101.2 AND ICC A117.1-09 SECTION 404.2.10

25. ALL EXTERIOR RESIDENTIAL DOORS FACING THE PARKING LOT NEED TO MEET A MINIMUM 33 STC RATING PER SITE NOISE REPORT

26. ALL EXTERIOR RESIDENTIAL DOORS NEED TO MEET A MINIMUM OF 29 STC RATING PER SITE NOISE REPORT

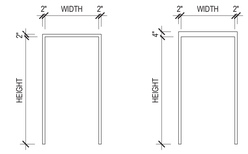
DOOR REMARKS

1. PROVIDE PANIC HARDWARE.
2. PROVIDE AUTOMATIC CLOSER.
3. PROVIDE PRIVACY LOCK.
4. PROVIDE 180 DEGREE MAGNETIC HOLD OPEN IN COMPLIANCE WITH IBC SECTION 716.2.6.4 AND NFPA 80.

SCHEDULE ABBREVIATIONS

AL	ALUMINUM
FR	FIRE RATED
GL-03	CLEAR LOW IRON TEMPERED CLASS
GL-09	CLEAR TEMPERED GLASS
GL-10	ETCHED GLASS
HC:WD	HOLLOW CORE WOOD
HM	HOLLOW METAL
MT	METAL
MT-1	MATTE BLACK POWDER COAT METAL
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
SC:WD	SOLID CORE WOOD
SF	STOREFRONT
T	TEMPERED GLASS
VIN	VINYL
SF	STOREFRONT

FRAME TYPES

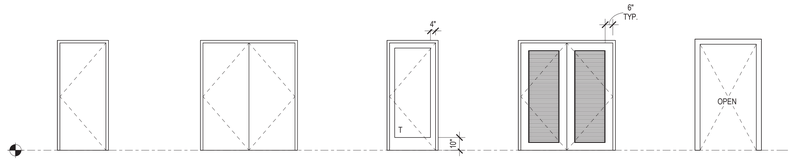


1 2

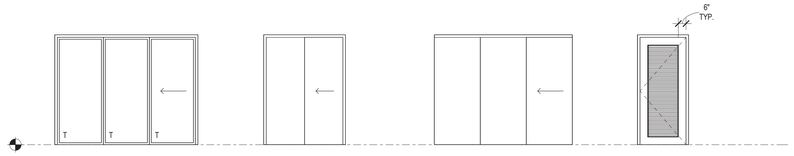
DOOR SCHEDULE - UNITS

DOOR #	DOORS WIDTH	DOORS HEIGHT	DOORS TYPE	DOORS MATERIAL	DOORS FINISH	FIRE RATING	HARDWARE GROUP	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	REMARKS	COUNT
U-1	2'-0"	7'-0"	A	SC:WD	PT	NR	32		WD	PT		15
U-2	2'-6"	7'-0"	A	SC:WD	PT	NR	32		WD	PT		35
U-3	3'-0"	7'-0"	A	SC:WD	PT	NR	33		WD	PT		377
U-4	5'-0"	7'-0"	B	SC:WD	PT	NR	32		WD	PT		16
U-5	4'-0"	7'-0"	H	SC:WD	PT	NR	31		WD	PT		27
U-6	5'-0"	7'-0"	H	SC:WD	PT	NR	31		WD	PT		31
U-7	6'-0"	7'-0"	H	SC:WD	PT	NR	31		WD	PT		132
U-8	4'-0"	7'-0"	L	SC:WD	PT	NR	35		WD	PT		24
U-9	3'-0"	7'-0"	M	SC:WD	PT	NR	34		WD	PT		281
U-10	3'-0"	6'-8"	A	SC:WD	PT	NR	33		WD	PT		4
U-11	5'-0"	6'-8"	B	SC:WD	PT	NR	32		WD	PT		1
U-12	3'-0"	6'-8"	M	SC:WD	PT	NR	34		WD	PT		2

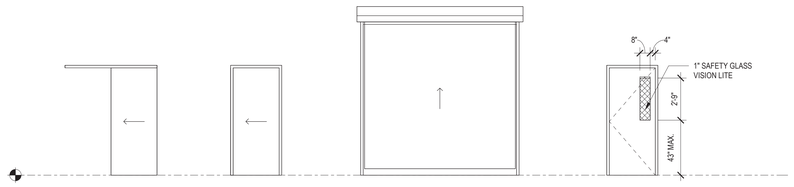
DOOR TYPES



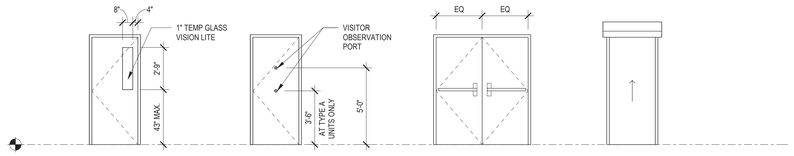
A SINGLE FLUSH
B DOUBLE FLUSH
D SINGLE GLASS DOOR
E DOUBLE FLUSH LOUVERED
F FRAMED OPENING



G 3-PANEL GLASS SLIDING DOOR
H 2-PANEL BI-PASS
J 3-PANEL BI-PASS
K SINGLE FLUSH LOUVERED



L BARN DOOR
M POCKET DOOR
N OVERHEAD COILING DOOR
O SINGLE FLUSH W/ 1/4 LITE AT EXIT STAIRS



P SINGLE FLUSH W/ 1/4 LITE
Q SINGLE FLUSH W/ OBSERVATION PORT
R DOUBLE EGRESS
S OVERHEAD ROLL-UP DOOR

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

DOOR SCHEDULE

A810

2/2/2024 10:41:55 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

DOOR SCHEDULE LEVEL 1-2

DOOR NO.	ROOM NAME	DOORS WIDTH	DOORS HEIGHT	DOORS TYPE	DOORS MATERIAL	DOORS FINISH	FIRE RATING	HARDWARE GROUP	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	REMARKS
L1 NORTH												
106A	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
106B	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
120C	CORRIDOR	3'-0"	7'-0"	A	HM	PT	60 MIN	23	1	HM	PT	1, 2
183	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
184	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
L1 RETAIL												
105A	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
105B	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
105C	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
105D	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
107A	MAINTENANCE	3'-6"	7'-0"	A	HM	PT	NR	5	1	HM	PT	1, 2
107B	MAINTENANCE	3'-0"	7'-0"	A	HM	PT	60 MIN	15	1	HM	PT	1, 2
107C	MAINTENANCE	8'-0"	10'-0"	N	MT	PT	NR	10	1	MT	PT	
108A	FIRE SPRINKLER	3'-0"	7'-0"	X	HM	PT	NR	5		HM	PT	1, 2
108B	FIRE SPRINKLER	3'-0"	7'-0"	A	HM	PT	60 MIN	15		HM	PT	
109A	GENERATOR	6'-0"	7'-0"	B	HM	PT	NR	19	1	HM	PT	1, 2
109B	GENERATOR	3'-0"	7'-0"	O	HM	PT	90 MIN	15	1	HM	PT	1, 2
110	MPOE ROOM	3'-0"	7'-0"	O	HM	PT	60 MIN	15	1	HM	PT	2
111A	ELECTRICAL	6'-0"	7'-0"	B	HM	PT	NR	19	1	HM	PT	1, 2
111B	ELECTRICAL	3'-0"	7'-0"	O	HM	PT	60 MIN	15	1	HM	PT	1, 2
112A	TRANSFORMER / USS	8'-0"	10'-0"	B	HM	PT	NR	19	1	HM	PT	1, 2
112B	TRANSFORMER / USS	3'-0"	7'-0"	O	HM	PT	60 MIN	15	1	HM	PT	1, 2
113A	WATER SERVICE / HEATER	6'-0"	7'-0"	B	HM	PT	NR	19	1	HM	PT	1, 2
113B	WATER SERVICE / HEATER	3'-0"	7'-0"	A	HM	PT	60 MIN	15		HM	PT	
114A	BIKE STORAGE	3'-6"	7'-0"	X	HM	PT	20 MIN	37		HM	PT	1, 2
114B	BIKE STORAGE	3'-0"	7'-0"	A	HM	PT	60 MIN	4		HM	PT	2
119	DOG WASH	3'-0"	7'-0"	X	HM	PT	NR	15		HM	PT	
120A	CORRIDOR	3'-0"	7'-0"	X	HM	PT	NR	1	1	HM	PT	1, 2
120B	CORRIDOR	3'-0"	7'-0"	O	HM	PT	60 MIN	23	1	HM	PT	1, 2
179	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
180	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
181	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
182	OFFICE	3'-0"	7'-0"	A	HM	PT	NR	12	1	HM	PT	2
S2 L1A	STAIR 2	3'-0"	7'-0"	O	HM	PT	180 MIN	13	1	HM	PT	1, 2
S2 L1C	STAIR 2	3'-6"	7'-0"	A	HM	PT	NR	1	1	HM	PT	1, 2
S2L1B	STAIR 2	3'-0"	7'-0"	O	HM	PT	180 MIN	22	1	HM	PT	1, 2
L1 LOBBY												
102A	COMMERCIAL FLEX	6'-0"	7'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
102B	COMMERCIAL FLEX	6'-0"	7'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
102C	COMMERCIAL FLEX	6'-0"	7'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
104A	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
104B	COMMERCIAL FLEX	6'-0"	8'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
129A	CORRIDOR	3'-0"	7'-0"	A	HM	PT	60 MIN	16		HM	PT	1, 2
129B	CORRIDOR	3'-0"	7'-0"	A	HM	PT	60 MIN	23		HM	PT	1, 2
129C	CORRIDOR	3'-0"	7'-0"	A	HM	PT	60 MIN	23		HM	PT	1, 2
133	RR	3'-0"	7'-0"	A	HM	PT	60 MIN	7	1	HM	PT	1, 2
134	RR	3'-0"	7'-0"	A	HM	PT	60 MIN	7	1	HM	PT	1, 2
135	RR	3'-0"	7'-0"	A	HM	PT	60 MIN	7	1	HM	PT	1, 2
143	PARCEL STORAGE	3'-0"	7'-0"	A	HM	PT	NR	6		HM	PT	2
144	PARCEL LOCKERS	4'-0"	7'-0"	JJ	-	-	NR	-		HM	PT	
145A	MAIL	5'-0"	9'-0"	II	-	-	NR	-		HM	PT	
145B	MAIL	5'-0"	9'-0"	II	-	-	NR	-		HM	PT	
148A	VESTIBULE	3'-6"	9'-0 1/2"	SF	SF		NR	9		SF		SEE STOREFRONT SCHEDULE
148B	VESTIBULE	3'-6"	9'-0 1/2"	SF	SF		NR	8		SF		SEE STOREFRONT SCHEDULE
149A	VESTIBULE	3'-6"	9'-0 1/2"	SF	SF		NR	9		SF		SEE STOREFRONT SCHEDULE
149B	VESTIBULE	3'-6"	9'-0 1/2"	SF	SF		NR	8		SF		SEE STOREFRONT SCHEDULE
151	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
152A	MOVE-IN	3'-6"	7'-0"	A	HM	PT	NR	1	1	HM	PT	1, 2
152B	MOVE-IN	3'-6"	7'-0"	O	HM	PT	NR	14		HM	PT	1, 2
175	OFFICE	3'-0"	7'-0"	A	HM	PT	NR	12	1	HM	PT	2
176	STORAGE	3'-0"	7'-0"	A	HM	PT	NR	12	1	HM	PT	2
177	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
178	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
L1 TRASH												
121A	TRASH ROOM	3'-0"	7'-0"	A	HM	PT	NR	36	1	HM	PT	1, 2
121B	TRASH ROOM	3'-0"	7'-0"	A	HM	PT	90 MIN	17		HM	PT	
121C	TRASH ROOM	8'-0"	10'-0"	N	MT	PT	NR	10		MT	PT	
128A	CORRIDOR	3'-0"	7'-0"	A	HM	PT	90 MIN	16		HM	PT	1, 2
S1 L1	STAIR 1	3'-0"	7'-0"	O	HM	PT	180 MIN	22	1	HM	PT	1, 2, 180 degree opening
L1 SOUTH												
101A	COMMERCIAL FLEX	6'-0"	7'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
101B	COMMERCIAL FLEX	6'-0"	7'-0"	SF	SF		NR	2		SF		SEE STOREFRONT SCHEDULE
101C	COMMERCIAL FLEX	3'-0"	7'-0"	O	HM	PT	90 MIN	23	1	HM	PT	1, 2
128B	CORRIDOR	3'-0"	7'-0"	A	HM	PT	NR	1	1	HM	PT	1, 2
128C	CORRIDOR	3'-8"	7'-0"	F	-	-	NR	-	1	HM	PT	
131	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
132	RR	3'-0"	7'-0"	A	HM	PT	NR	7	1	HM	PT	2
LEVEL 2												
201	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
202	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
203	C05 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
204	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
205	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
206	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
207	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
208	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
209	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
210	C03 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
211	D02 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
212	C04A (1-BDRM)	3'-0"	7'-0"	R	SC:WD	PT	20 MIN	24		WD	PT	2
213	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
214	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
215	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
216	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
217	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
218	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
219	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
220	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
221	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
222	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
223	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
224	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
225	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
226	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
227	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
228	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
229	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
230	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
231	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
232	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
233	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
234	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
236	CORRIDOR	6'-0"	7'-0"	R	HM	PT	90 MIN	25	1	HM	PT	1, 2, 4
237	UTILITY	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1, 2
239	TRASH	3'-0"	7'-0"	A	HM	PT	90 MIN	17	1	HM	PT	2
S1 L2	STAIR 1	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
S2 L2	STAIR 2	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2

DOOR SCHEDULE LEVEL 3-4

DOOR NO.	ROOM NAME	DOORS WIDTH	DOORS HEIGHT	DOORS TYPE	DOORS MATERIAL	DOORS FINISH	FIRE RATING	HARDWARE GROUP	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	REMARKS
LEVEL 3												
301	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
302	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
303	C05 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
304	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
305	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
306	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
307	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
307B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
308	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
309	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
310	C03 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
311	D02 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
312	C04A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
313	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
313B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
314	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
314B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
315	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
316	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
317	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
318	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
319	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
320	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
321	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
322	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
323	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
324	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
325	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
326	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
327	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
328	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
329	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
330	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
331	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
332	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
333	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
334	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
336	CORRIDOR	6'-0"	7'-0"	R	HM	PT	90 MIN	25	1	HM	PT	1, 2, 4
337	UTILITY	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1,2
339	TRASH	3'-0"	7'-0"	A	HM	PT	90 MIN	17	1	HM	PT	2
S1L3	STAIR 1	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
S2L3	STAIR 2	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
LEVEL 4												
401	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
402	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
403	C05 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
404	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
405	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
406	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
407	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
407B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
408	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
409	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
410	C03 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
411	D02 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
412	C04A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
413	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
413B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
414	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
414B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
415	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
416	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
417	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
418	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
419	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
420	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
421	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
422	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
423	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
424	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
425	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
426	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
427	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
428	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
429	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
430	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
431	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
432	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
433	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
434	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
436	LOBBY	6'-0"	7'-0"	R	HM	PT	90 MIN	25	1	HM	PT	1, 2, 4
437	UTILITY	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1,2
439	TRASH	3'-0"	7'-0"	A	HM	PT	90 MIN	17	1	HM	PT	2
S1L4	STAIR 1	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
S2L4	STAIR 2	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2

DOOR REMARKS

1. PROVIDE PANIC HARDWARE.
2. PROVIDE AUTOMATIC CLOSER.
3. PROVIDE PRIVACY LOCK.
4. PROVIDE 180 DEGREE MAGNETIC HOLD OPEN IN COMPLIANCE WITH IBC SECTION 716.2.6.4 AND NFPA 80.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB, PD
04/07/22

DOOR SCHEDULE

A811

2/2/2024 10:41:58 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

DOOR SCHEDULE LEVEL 5-6

DOOR NO.	ROOM NAME	DOORS WIDTH	DOORS HEIGHT	DOORS TYPE	DOORS MATERIAL	DOORS FINISH	FIRE RATING	HARDWARE GROUP	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	REMARKS
LEVEL 5												
501	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
502	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
503	C05 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
504	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
505	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
506	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
507	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
507B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
508	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
509	B03A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
510	C03 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
511	D02 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
512	C04A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
513	D05 (2-BDRM)	3'-0"	6'-8"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
513B	D05 (2-BDRM)	3'-0"	7'-8"	H-5	VIN	VIN	NR	30		VIN	VIN	
514	D04A (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
514B	D04A (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
515	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
516	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
517	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
518	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
519	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
520	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
521	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
522	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
523	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
524	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
525	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
526	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
527	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
528	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
529	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
530	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
531	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
532	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
533	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
534	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
536	LOBBY	6'-0"	7'-0"	R	HM	PT	90 MIN	25	1	HM	PT	1, 2, 4
537	UTILITY	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1,2
539	TRASH	3'-0"	7'-0"	A	HM	PT	90 MIN	17	1	HM	PT	2
S1L5	STAIR 1	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
S2L5	STAIR 2	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
LEVEL 6												
601	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
602	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
603	C05 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
604	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
605	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
606	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
607	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
607B	D01 (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
608	D01 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
609	B03A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
610	C03 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
611	D02 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
612	C04A (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
613	ROOF DECK	3'-0"	8'-0"	D	VIN	VIN	NR	27		VIN	VIN	
614	D04A (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
614B	D04A (2-BDRM)	3'-0"	8'-0"	D	VIN	VIN	NR	30		VIN	VIN	
615A	CORRIDOR	3'-0"	7'-0"	D	VIN	PT	20 MIN	24		VIN	PT	1, 2
615B	AMENITY	3'-0"	8'-0"	KK	VIN	VIN	NR	6		VIN	VIN	2
616	B02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
617	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
618	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
619	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
620	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
621	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
622	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
623	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
624	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
625	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
626	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
627	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
628	B01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
629	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
630	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
631	C01 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
632	C02 (1-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
633	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
634	D03 (2-BDRM)	3'-0"	7'-0"	Q	SC:WD	PT	20 MIN	24		WD	PT	2
636	CORRIDOR	6'-0"	7'-0"	R	HM	PT	90 MIN	25	1	HM	PT	1, 2, 4
637	TRASH	3'-0"	7'-0"	A	HM	PT	90 MIN	17	1	HM	PT	2
638	ELECTRICAL	3'-0"	7'-0"	A	HM	PT	90 MIN	15	1	HM	PT	
639	STORAGE	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1,3
640	ELEVATOR MACHINE	3'-0"	7'-0"	A	HM	PT	90 MIN		1	HM	PT	
643	UTILITY	3'-0"	7'-0"	A	HM	PT	20 MIN	15	1	HM	PT	1,2
644	RR	3'-0"	7'-0"	A	HM	PT	20 MIN	7	1	HM	PT	2, 3
S1L6	STAIR 1	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
S2L6	STAIR 2	3'-0"	7'-0"	O	HM	PT	90 MIN	22	1	HM	PT	1, 2
T.O. STRUCTURE												
S2-R	STAIR 2	3'-0"	6'-8"	A	HM	PT	90 MIN	29	1	HM	PT	

DOOR REMARKS

1. PROVIDE PANIC HARDWARE.
2. PROVIDE AUTOMATIC CLOSER.
3. PROVIDE PRIVACY LOCK.
4. PROVIDE 180 DEGREE MAGNETIC HOLD OPEN IN COMPLIANCE WITH IBC SECTION 716.2.6.4 AND NFPA 80.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

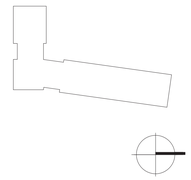
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

02/02/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

21-5905-01A
PM: ELI HARDI
DRAWN BY:JG, MB, PD
04/07/22

DOOR SCHEDULE

A812

2/2/2024 10:42:00 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

PT-04	PAINT			PAINT	PAINT (BENJAMIN MOORE)	MATCH FC-04		
PT-05	PAINT			PAINT	PAINT (BENJAMIN MOORE)	MATCH FC-05		
PT-06	PAINT FOR CANOPIES			PAINT	PAINT (BENJAMIN MOORE)	MATCH FC-01		
VN-01	VINYL WINDOWS			PVC	PREFINISHED	BLACK ULTI - MAT	DRUTEX, IGLO 5 CLASSIC	

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

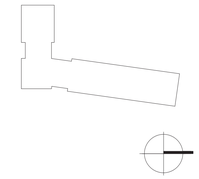
1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



RUSSELL H. HAZZARD, ARCHITECT

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

21-5905-01A
PM: ELI HARDI
DRAWN BY: JG, MB
04/07/22

EXTERIOR FINISH SCHEDULE

A821

2/2/2024 10:42:01 AM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

01000: GENERAL REQUIREMENTS

THE STRUCTURAL NOTES SUPPLEMENT THE PLANS AND SPECIFICATIONS. ANY DISCREPANCY FOUND BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, SITE CONDITIONS, AND ARCHITECTURAL PLANS SHALL BE REPORTED TO THE ARCHITECT WHO SHALL CORRECT THE DISCREPANCY IN WRITING. ANY WORK COMPLETED AFTER DISCOVERY OF THE DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK. REFER TO ARCHITECTURAL PLANS FOR OPENINGS, ARCHITECTURAL TREATMENTS, AND DIMENSIONS NOT SHOWN. CONSULT MECHANICAL PLANS FOR DUCTS AND PIPES ETC. NOT SHOWN.

THE CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT REQUIRED FOR TEMPORARY CONSTRUCTION LOADS AND FOR STRUCTURAL COMPONENTS AS REQUIRED DURING ERECTION. BACKFILL BEHIND WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE EXCAVATION, SHORING, AND OTHER WORK WITH ALL UTILITIES AND ADJACENT PROPERTIES. CALL THE UTILITY LOCATE SERVICE PRIOR TO ANY WORK AT 811.

01100: CODE REQUIREMENTS

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AS ADOPTED BY THE CITY OF EVERETT, WASHINGTON.

01200: DESIGN LOADS

FLOOR LIVE LOADS	UNIFORM	CONCENTRATED
FLOORS (UNIT AREAS)	40 PSF	–
CORRIDORS	100 PSF	–
DECKS (UNIT AREAS)	60 PSF	–
PARKING	40 PSF	–
EXIT FACILITIES	100 PSF	300 POUNDS
COMMON AREAS	100 PSF	–

ROOF LOADS	
ROOF (SNOW)	NOT APPLICABLE
ROOF (LIVE)	20 PSF
ROOFTOP SOLAR (DL ALLOWANCE)	25 PSF

ELEVATOR LOADS

CAR	R1 435 LBS;	Vx 1890 LBS	(PERPENDICULAR TO WALL)
	R2 75 LBS;	Vy 950 LBS	(PARALLEL TO WALL)
CWT.	R1 225 LBS;	Vx 1990 LBS	(PERPENDICULAR TO WALL)
	R2 20 LBS;	Vy 990 LBS	(PARALLEL TO WALL)

PIT
CAR RAIL 14120 LBS & 10120 LBS
CWT RAIL 2810 LBS & 6180 LBS, BUFFER 25520 LBS
BUFFER 16640 LBS & 16640 LBS

RAIL FORCES INCLUDE DOUBLING FOR IMPACT
RAIL FORCES AND BUFFER FORCES DO NOT ACT SIMULTANEOUSLY

SNOW LOAD DESIGN DATA:
Pg = 0 PSF, Ce = 0.9, Is = 1.0, Ct = 1.0.

WIND DESIGN DATA:

BASIC WIND SPEED:	110 MPH (3-SECOND GUST)
WIND IMPORTANCE FACTOR:	Iw = 1.0
WIND EXPOSURE:	EXPOSURE B
TOPOGRAPHIC FACTOR	Kt = 1.00
INTERNAL PRESSURE COEFFICIENT:	GCpi = +/– 0.18
COMPONENT/CLADDING WIND PRESSURE:	P(C) = 22 PSF

EARTHQUAKE DESIGN DATA:

SEISMIC IMPORTANCE FACTOR:	Ie = 1.0
SPECTRAL RESPONSE ACCELERATIONS:	Ss = 1.242 S1 = 0.440
SITE CLASS:	SITE CLASS D
SPECTRAL RESPONSE COEFFICIENTS	SDS = 0.831 SD1 = 0.546
SEISMIC DESIGN CATEGORY:	SEISMIC DESIGN CATEGORY D
LATERAL FORCE RESISTING SYSTEM:	
WOOD LEVELS	WOOD PANEL SHEARWALLS
CONCRETE LEVELS	SPECIAL REINFORCED CONC. SHEARWALLS

DESIGN BASE SHEAR:

WOOD SUPERSTRUCTURE	765 KIPS (LRFD)
CONCRETE BASE STRUCTURE	4246 KIPS (LRFD, WOOD + CONC.)

RESPONSE MODIFICATION FACTOR:

WOOD LEVELS	R = 6.5 (BEARING WALL SYSTEM)
CONCRETE LEVELS	R = 5.0 (BEARING WALL SYSTEM)

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

01300: GEOTECHNICAL INFORMATION

EARTHWORK AND FOUNDATIONS SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS. SEE THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY HWA GEOSCIENCES INC. (PROJECT NO. 2015-061-21 TASK 600-7) DATED 12/08/21.

FOUNDATIONS SHALL BE SUPPORTED ON 16" DIA. GROUT DRIVEN PILES.

DESIGN PARAMETERS ARE AS FOLLOWS:
SITE CLASS D

CONSTRUCTION OF PILES SHALL BE PERFORMED UNDER CONTINUOUS OBSERVATION OF THE GEOTECHNICAL ENGINEER. ACTUAL PILE TIP ELEVATIONS AND CAPACITIES SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE GEOTECHNICAL ENGINEER.

THE PILES SHALL BE INSTALLED BY A CONTRACTOR EXPERIENCED IN THE INSTALLATION OF GROUT DRIVEN PILES.

PILE GROUT SHALL BE A DESIGN MIX OF f'c=5000 PSI. REINFORCING BAR CAGES SHALL BE PLACED TO THE DEPTH WHILE THE GROUT IS STILL FLUID, SPACERS FOR REINFORCING BARS SHALL BE PROVIDED TO ENSURE CLEARANCES SHOWN ON THE DRAWINGS. TOLERANCES FOR CONCRETE PILE POSITION SHALL BE 3 INCHES IN ANY HORIZONTAL DIRECTION. SHAFT SHALL BE PLUMB PLUS OR MINUS 1/2 DEGREE.

01330: SUBMITTALS & SHOP DRAWINGS

SUBMITTALS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

1. CONTRACTORS STATEMENT OF RESPONSIBILITY
2. CONCRETE MIX DESIGN
3. REINFORCING STEEL PLACING AND FABRICATION DRAWINGS
4. POST-TENSIONING PLACING AND FABRICATION DRAWINGS
5. STUD RAIL FABRICATION & PLACING DRAWINGS
6. STRUCTURAL STEEL ERECTION AND FABRICATION
7. STRUCTURAL GLUED LAMINATED TIMBERS
8. STRUCTURAL COMPOSITE WOOD MEMBERS
9. PREFABRICATED WOOD I-JOIST
10. PRE-FABRICATIONED WOOD TRUSSES
11. CONTINUOUS ROD HOLDOWN SYSTEM. RE: S1.03
12. PRE-FABRICATED STAIR COMPONENTS, DECK/STAIR GUARD RAILS/HAND RAILS
13. STEEL/ALUMINUM BALCONIES/CANOPIES
14. ELEVATOR DESIGN DRAWINGS

IF SHOP DRAWINGS DIFFER FROM THE APPROVED DESIGN DRAWINGS, NEW DESIGN DRAWINGS BEARING THE SEAL AND SIGNATURE OF A LICENSED WASHINGTON STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.

A DEFERRED SUBMITTAL CONSISTING OF CALCULATIONS BEARING THE SEAL AND SIGNATURE OF A LICENSED WASHINGTON STRUCTURAL ENGINEER SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS FOR POST TENSION TENDONS, CONTINUOUS HOLDOWN ROD SYSTEM, PRE-FABRICATION WOOD TRUSSES, STEEL/ALUMINUM BALCONIES, RAILINGS, AND STAIRS. DOCUMENTS FOR EACH DEFERRED SUBMITTAL ITEM SHALL BE SUBMITTED TO THE THE ENGINEER OF RECORD WHO SHALL REVIEW DOCUMENTS TO CONFIRM THEY ARE IN GENERAL CONFORMANCE TO THE DESIGN.

ELEVATOR SUBMITTAL TO INCLUDE CALCULATIONS TO EVALUATE RAIL FORCE DUE TO THE WOOD SHRINKAGE OR PROVIDE CONNECTIONS THAT ALLOW FOR VERTICAL MOVEMENT.

01400: SPECIAL INSPECTIONS

THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT. IN ADDITION TO INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT, THE OWNER OR A REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS FOR ITEMS NOTED IN IBC SECTION 1704 WHICH ARE SUMMARIZED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S1.01.

THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON EMPLOYED BY AN APPROVED AGENCY. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH THEM TO THE BUILDING OFFICIAL AND THE ENGINEER OF RECORD ON A REGULAR BASIS. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND THE CORRECTION OF ANY DISCREPANCIES SHALL BE PROVIDED PRIOR TO COMPLETION OF BUILDING FINISHES. WHERE FABRICATION OF STRUCTURAL COMPONENTS AND ASSEMBLES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATED ITEMS SHALL BE REQUIRED EXCEPT WHERE THE FABRICATOR IS REGISTERED AND APPROVED TO DO SUCH WORK WITHOUT SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1704.2.2. PERIODIC INSPECTION ALLOWS INSPECTION AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS. CONTINUOUS SPECIAL INSPECTION REQUIRES THAT THE INSPECTOR BE ONSITE AT ALL TIMES THAT WORK REQUIRING SPECIAL INSPECTION IS PERFORMED.

01401: STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION SHALL BE REQUIRED. STRUCTURAL OBSERVATION SHALL BE THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR REQUIRED SPECIAL INSPECTION AS NOTED IN SECTION 01400 OR FOR INSPECTIONS REQUIRED BY THE LOCAL JURISDICTION. THE OWNER OR OWNER'S AGENT SHALL RETAIN A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS FOR THE FOLLOWING ITEMS ON SHEET S1.01, OR IF NOT SHOWN, SHALL BE AS FOLLOWS AND AS LISTED IN THE STRUCTURAL OBSERVATION SCHEDULE.

ITEM REQUIRING STRUCTURAL OBSERVATION	FREQUENCY
POST TENSION STEEL PLACEMENT	PRIOR TO CONCRETE PLACEMENT
WOOD STRUCTURAL PANELS	PERIODIC
GENERAL FRAMING	PERIODIC

THE REGISTERED DESIGN PROFESSIONAL SHALL KEEP RECORDS OF STRUCTURAL OBSERVATIONS AND FURNISH THEM TO THE BUILDING OFFICIAL AND THE OWNER ON A REGULAR BASIS. A FINAL DOCUMENT NOTING REQUIRED STRUCTURAL OBSERVATIONS SHALL BE COMPLETED AND THE CORRECTION OF ANY DISCREPANCIES SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

01402: CONTRACTORS RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS (SECTION 1400) SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

01700: EXECUTION REQUIREMENTS

INSTALLATION OF ALL STRUCTURAL COMPONENTS SHALL BE AS REQUIRED PER ALL LOCAL CODES.

01731: CUTTING AND PATCHING

SPECIAL PROCEDURES FOR CUTTING AND PATCHING SHALL BE VERIFIED WITH THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL TRADES SUCH THAT WORK COMPLIES WITH THE SPECIAL PROCEDURES. THE CONTRACTOR SHALL MAKE AN ALLOWANCE FOR ALL CUTTING AND PATCHING.

02000: SITE CONSTRUCTION

ALL SITE CONSTRUCTION SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS AS NOTED IN THE GEOTECHNICAL ENGINEERING REPORT (SEE SECTION 01300) AND IN SUBSEQUENT DIRECTIVES.

02300: BACKFILL AND COMPACTION

BACKFILL SHALL NOT BE PLACED UNTIL THE REMOVAL OF FORMWORK AND OF ANY DEBRIS. BACKFILL BEHIND ALL WALLS SHALL NOT BE PLACED UNTIL THE WALLS ARE PROPERLY SUPPORTED. ALL BACKFILL MATERIAL AND PLACEMENT PROCEDURES SHALL BE CONSISTENT WITH THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS.

03000: CONCRETE

CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE STANDARD ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

CEMENT AND CONCRETE SHALL CONFORM TO IBC SECTION 1903. ADMIXTURES SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SHALL COMPLY WITH ACI 318-14 SECTION 3.6. CONCRETE EXPOSED TO FREEZING AND THAWING SHALL HAVE AN AIR ENTRAINING ADMIXTURE CONFORMING TO IBC SECTION 1904.4.1 THE USE OF WATER SOLUBLE CHLORIDE ION SHALL NOT BE USED.

THE CONTRACTOR SHALL SUBMIT MIX DESIGNS TO ENGINEER OF RECORD FOR APPROVAL FOUR WEEKS PRIOR TO PLACING CONCRETE. MIX DESIGNS SHALL BE REVIEWED FOR CONFORMANCE TO IBC SECTIONS 1905 AND 1906.

CONCRETE MIX DESIGNS SHALL MEET THE FOLLOWING REQUIREMENTS:

28 DAY STRENGTH f'c (PSI)	MAX. W/C RATIO	SLUMP (INCHES)	AIR ENTRAINMENT (PERCENT)	SPECIAL INSPECTION REQUIRED	LOCATION AND APPLICATION
4000	0.50	5±1	0±1	YES	GRADE BEAMS
4000	0.45	4±1	5±1	YES	INTERIOR LEVEL 1 SLAB
4500	0.45	4±1	5±1	YES	EXTERIOR LEVEL 1 SLAB
4000	0.45	5±1	0±1	YES	INTERIOR WALLS
4000	0.45	4±1	0±1	YES	EXTERIOR WALLS
4000	0.39	5±1	0±1	YES	COLUMNS
5000	0.44	4±1	0±1	YES	INTERIOR ELEVATED SLABS
5000	0.35	4±1	5±1	YES	EXTERIOR ELEVATED SLABS
4000	0.45	4±1	0±1	YES	INTERIOR TOPPING SLABS
5000	0.40	4±1	5±1	YES	EXTERIOR TOPPING SLABS

ALL CONCRETE MIXES TO MEET FOLLOWING EXPOSURE CATEGORIES/CLASSES:

FREEZING AND THAWING	CLASS F1 TYP. EXT. SLAB CLASS F2, EXT. TOPPING SLAB CLASS F3
SULFATE	CLASS S0
CONTACT WITH WATER	CLASS W0
CORROSION PROTECTION	CLASS C1

ONE COMPRESSION TEST MINIMUM SHALL BE COMPILED FOR EVERY 150 CUBIC YARDS OR 5000 SQUARE FEET OF SURFACE AREA FOR EACH MIX DESIGN PLACED EACH DAY. A TEST SHALL BE THE AVERAGE STRENGTH OF TWO CYLINDERS MADE FROM THE SAME SAMPLE AND TESTED AT THE SPECIFIED AGE. ADDITIONAL CYLINDERS MAY BE MADE FOR INFORMATION REGARDING POST TENSIONING, FORM REMOVAL, STRENGTH DEVELOPMENT, OR OTHER PURPOSES. CONCRETE SHALL BE ACCEPTABLE IF:
1. NO TEST FALLS 500 PSI BELOW THE SPECIFIED STRENGTH
2. THE AVERAGE OF ALL SETS OF 3 CONSECUTIVE TESTS DOES NOT FALL BELOW THE SPECIFIED STRENGTH.

CONCRETE NOT MEETING THE ABOVE CRITERIA SHALL BE SUBJECT TO FURTHER TESTING AT NO ADDITIONAL EXPENSE TO THE OWNER.

PERMEABILITY TESTING FOR EXTERIOR LEVEL 1 CONCRETE SLAB. CONCRETE MIX TO HAVE A PERMEABILITY OF LESS THAN 1X10E-5 CM/SEC PER ASTM 5084. TESTING TO BE DONE BY HWA GEOSCIENCES INC. OR APPROVED OTHER.

RESHORING, WHERE REQUIRED, SHALL CONFORM TO ACI 301 SECTION 4.6.

CHAMFER ALL EXPOSED CORNERS PER THE ARCHITECTURAL PLANS OR 3/4 INCH IF NOT SPECIFIED BY THE ARCHITECT.

03100: REINFORCING STEEL

REINFORCING STEEL DETAILING, FABRICATION, AND PLACEMENT SHALL BE PER ACI 318-14. REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS:

ASTM A-615 DEFORMED BARS GRADE 40 (fy=40 KSI) FOR #3 BARS ONLY
ASTM A-615 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR #4 BARS AND LARGER
ASTM A-615 DEFORMED BARS GRADE 80 (fy=80 KSI) FOR BARS NOTED
ASTM A-706 DEFORMED BARS GRADE 60 (fy=60 KSI) FOR ALL WELDABLE BARS
ASTM A-185 SMOOTH BAR (fy=60 KSI) FOR WELDED WIRE FABRIC

THE ACTUAL YIELD STRENGTH OF ASTM A615 DEFORMED BARS BASED ON MILL TESTS SHALL NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI, AND THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL TENSILE STRENGTH IS NOT LESS THAN 1.25. MILL TEST CERTIFICATIONS SHALL BE SUBMITTED TO THE OWNERS SPECIAL INSPECTOR AND ARCHITECT PRIOR TO PLACING THE BARS.

REINFORCING FOR STRUCTURAL SLAB ON GRADE TO BE PER FOUNDATION PLANS. FOR TOPPING SLAB PROVIDE MASTERFIBER FIBER MESH AT AN APPLICATION RATE OF 1.5 LB/YD. PROVIDE LAP SPLICES PER THE LAP SPLICE SCHEDULE ON SHEET S6.01. REINFORCING STEEL AT ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS ELSE CORNER BARS SHALL BE PROVIDED.

CONCRETE CAST AGAINST EARTH	
ALL BAR SIZES	3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER	
#6 AND LARGER	2"
#5 AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER	
WALLS AND JOISTS	
#14 AND #18 BARS	1 1/2"
#11 BARS AND SMALLER	3/4"
SLABS AND JOISTS	
#14 AND #18 BARS	1 1/2"
#11 BARS AND SMALLER	1"
BEAMS, COLUMNS	
PRIMARY REINFORCEMENT	1 1/2"
TIES, STIRRUPS, AND SPIRALS	1 1/2"

REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE FIELD BENT EXCEPT AS NOTED IN THE DESIGN DRAWINGS. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD EXCEPT AS NOTED ON THE DESIGN DRAWINGS.

03200: CONCRETE REINFORCEMENT (STUD RAILS)

SHEAR REINFORCEMENT AT THE SLAB-COLUMN CONNECTION AS SHOWN ON THE DRAWINGS AND DETAILS, SHALL BE STUDRAILS AS MANUFACTURED BY DECON AND DETAILED IN ICC ESR-2494 (OR APPROVED EQUAL). THE COMPLETE AND FINISHED STUDRAIL SHALL BE ICC ES EVALUATED AND WELDING SHALL TAKE PLACE IN AN ICC ES AUDITED FACILITY. STUDRAILS SHALL CONFORM TO THE LATEST UPDATE OF THE ASTM A1044.

03201: CONCRETE WALL REINFORCING

PLACE TWO HORIZONTAL #5 BARS AT EACH FLOOR LEVEL OR TOP OF WALL ELEVATION. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT AT EACH WALL CORNER AND INTERSECTION. PROVIDE TWO VERTICAL #5 BARS AT EACH WALL CORNER AND INTERSECTION. AT ALL WALL OPENINGS PROVIDE TWO #5 BARS CONT., UNDER, AND AT THE SIDES OF THE OPENINGS. EXTEND THE HORIZONTAL BARS THE LAP SPLICE DISTANCE PAST THE OPENING OR EXTEND AS FAR AS POSSIBLE AND HOOK. PROVIDE ONE #5 BAR BY 4'-0" LONG DIAGONALLY AT EACH CORNER OF THE WALL OPENING. WALLS SHALL BE REINFORCED PER THE PLANS AND DETAILS OR IF NOT SHOWN SHALL BE AS FOLLOWS:

WALL THICKNESS	HORIZONTAL BARS	VERTICAL BARS	BAR LOCATION
6"	#4 AT 14" O.C.	#5 AT 18" O.C.	WALL CENTERLINE
8"	#4 AT 10" O.C.	#5 AT 16" O.C.	WALL CENTERLINE
10"	#4 AT 12" O.C.	#5 AT 12" O.C.	EACH FACE OF WALL
12"	#5 AT 12" O.C.	#5 AT 12" O.C.	EACH FACE OF WALL
14"	#5 AT 12" O.C.	#5 AT 12" O.C.	EACH FACE OF WALL

03371: SHOTCRETE (PNEUMATICALLY PLACED CONCRETE)

CONCRETE PLACED PNEUMATICALLY SHALL REQUIRE PRIOR APPROVAL FROM THE ENGINEER OF RECORD. PROVIDE NONCONTACT LAP SPLICES. OPERATORS OF PNEUMATIC PLACING DEVICES SHALL BE REQUIRED TO BE PREQUALIFIED TO COMPLETE THE WORK.

03381: UNBONDED POST TENSION TENDONS FOR PRESTRESSED CONCRETE

UNBONDED POST TENSION TENDONS SHALL BE STRESS RELIEVED OR LOW RELAXATION SEVEN WIRE STRAND CONFORMING TO ASTM A-416. TENDON PROPERTIES SHALL BE AS FOLLOWS:

1/2" DIAMETER SEVEN STRAND WIRE	0.153 SQ. INCHES AREA
ULTIMATE STRENGTH (fpu)	270 KSI (41.3 KIPS)
MAXIMUM TEMPORARY STRESS TO OVERCOME FRICTION	216 KSI (33.0 KIPS)
ANCHORING STRESS	189 KSI (28.9 KIPS)
EFFECTIVE DESIGN STRESS (fse)	175 KSI (26.8 KIPS)

TENDONS SHALL BE ENCASED IN SLIPPAGE SHEATHING CONSTRUCTED OF DURABLE WATERPROOF POLYETHYLENE PLASTIC TUBING (0.04 INCHES THICK MINIMUM) CAPABLE OF PREVENTING THE PENETRATION OF CEMENT PASTE AND SHALL CONTAIN A RUST INHIBITING GREASE COATING MEETING THE REQUIREMENTS OF THE POST TENSION INSTITUTE "SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS". SHOP DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED PER THE REQUIREMENTS OF SECTION 01330.

TENDONS SHALL BE PLACED WITH A VERTICAL TOLERANCE OF ± 1/4 INCH.

03382: CORROSION PROTECTION SYSTEM

TENDONS SHALL HAVE A FULLY ENCAPSULATED CORROSION PROTECTION SYSTEM (CPS) WHICH PROVIDES CONTINUOUS WATERTIGHT PROTECTION OF THE TENDON STRANDS FROM THE CONCRETE FROM ANCHOR TO ANCHOR AS MANUFACTURED BY GENERAL TECHNOLOGIES, INC. OR APPROVED EQUIVALENT. THE CORROSION PROTECTION SYSTEM SHALL MEET THE REQUIREMENTS OF POST TENSION INSTITUTE "SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS".

03383: TENDON ANCHORS

TENDONS ANCHORS SHALL BE FULLY ENCAPSULATED AND SHALL BE RECESSED 2 INCHES MINIMUM FROM THE EDGE OF SLAB. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS TO INSURE COMPLETE CONSOLIDATION OF CONCRETE AT TENDON ANCHORS. TENDONS AND ANCHORS SHALL BE SUPPLIED FORM THE SAME SOURCE AND SHALL BE COMPATIBLE.

03384: TENDON STRESSING

TENDON STRESSING SHALL NOT TAKE PLACE UNTIL CYLINDER TESTS INDICATE THAT THE CONCRETE HAS ATTAINED 3000 PSI COMPRESSIVE STRENGTH. TENSIONING SHALL BE DONE WITH A CALIBRATED HYDRAULIC RAM UNDER THE IMMEDIATE CONTROL OF A PERSON WITH EXPERIENCE IN TENDON STRESSING. MAXIMUM TENDON FORCE SHALL NOT EXCEED 33.0 KIPS (216 KSI). MAXIMUM TENDON ANCHOR SET FORCE SHALL NOT EXCEED 28.9 KIPS (189 KSI). MINIMUM TENDON FINAL EFFECTIVE FORCE SHALL NOT BE LESS THAN 26.8 KIPS (175 KSI).CONTINUOUS SPECIAL INSPECTION AND RECORDING OF ALL ELONGATIONS SHALL BE REQUIRED DURING ALL STRESSING OPERATIONS. THE OBSERVED ELONGATIONS SHALL BE WITHIN MINUS 5 PERCENT TO PLUS 7 PERCENT OF THE CALCULATED ELONGATIONS. IF ELONGATIONS EXCEED TOLERANCES STOP STRESSING PROCEDURE IMMEDIATELY AND NOTIFY THE ENGINEER OF RECORD. REPORT ALL TENDON ELONGATIONS TO THE ENGINEER OF RECORD AT THE COMPLETION OF THE TENDON STRESSING AND RECEIVE APPROVAL PRIOR TO TRIMMING TENDON ENDS.

TENDON TRIMMING AND PLACEMENT OF THE CORROSION PROTECTION SYSTEM GREASE CAPS SHALL BE COMPLETED WITHIN ONE DAY AFTER APPROVAL TO CUT AND CAP. TENDON BLOCKOUTS SHALL BE FILLED WITH AN APPROVED NONSHRINK GROUT.

03385: SLAB PENETRATIONS

PENETRATIONS INTO THE POST TENSIONED SLAB WITH DRIVEN FASTENERS OR DRILLED ANCHORS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD.

03900: CONTROL OF CRACKS IN CONCRETE

UNDER NORMAL CONDITIONS AND FOR CONVENTIONAL BUILDINGS REINFORCED CONCRETE AND POST TENSIONED CONCRETE DEVELOPS CRACKS. CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP, AND THE RESTRAINING EFFECTS OF WALLS AND OTHER STRUCTURAL ELEMENTS.

CRACKS FORMED ARE NORMALLY COSMETIC. CONCRETE MAINTAINS SERVICEABILITY AND STRENGTH REQUIREMENTS. WITH UNBONDED TENDONS IN POST TENSIONED CONCRETE IT IS POSSIBLE THAT A NUMBER OF HAIR CRACKS, WHICH NORMALLY SPREAD OVER A WIDE AREA, WILL INTEGRATE INTO A SINGLE CRACK THAT EXCEEDS .01 INCH IN WIDTH. MOST OF SUCH CRACKS DEVELOP WITHIN TWO YEARS OF CONCRETE PLACEMENT. CRACKS IN EXCESS OF .01 INCH MAY REQUIRE PRESSURE INJECTION EPOXY REPAIR.

SPECIAL EFFORT IS MADE TO REDUCE CRACK POTENTIAL BY INTRODUCING RELEASE AND CONTROL JOINTS TO ALLOW MOVEMENT OF THE CONCRETE. IT SHALL BE EMPHASIZED THAT IT IS NOT PRACTICAL TO TO PROVIDE TOTAL ARTICULATION AT CONCRETE JOINTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF CRACKS.

03930: CONCRETE REHABILITATION

CONTRACTOR SHALL MAKE AN ALLOWANCE TO PROVIDE FOR CONCRETE REHABILITATION INCLUDING, BUT NOT LIMITED TO, CONCRETE SACKING, PATCHING, REPAIR, SEALING, AND CRACK INJECTION. EXPOSED CONCRETE SHALL BE FINISHED PER ARCHITECTURAL DOCUMENTS.

04000: MASONRY STEEL REINFORCEMENT AND ACCESSORIES

METAL REINFORCEMENT AND ACCESSORIES SHALL MEET THE FOLLOWING REQUIREMENTS:

ASTM A-615	DEFORMED BARS GRADE 40 (fy=40 KSI) FOR #3 BARS ONLY
ASTM A-615	DEFORMED BARS GRADE 60 (fy=60 KSI) FOR #4 BARS AND LARGER
ASTM A-706	LOW-ALLOY DEFORMED BARS GRADE 60 (fy=60 KSI) FOR ALL WELDABLE BARS
ASTM A-951	JOINT REINFORCEMENT
ASTM A-496	DEFORMED REINFORCING WIRE
ASTM A-185	PLAIN STEEL WELDED WIRE FABRIC
ASTM A-36	STRUCTURAL STEEL ANCHORS, TIES AND ACCESSORIES
ASTM A-82	PLAIN STEEL WIRE
ASTM A-307 GRADE A	ANCHOR BOLTS

CORROSION PROTECTION FOR CARBON STEEL ACCESSORIES USED IN EXTERIOR WALL CONSTRUCTION:

ASTM A-153	CLASS B	JOINT REINFORCEMENT, WALL TIES, ANCHORS AND INSERTS. MINIMUM COATING OF 1.5 OUNCES PER SQUARE FOOT.
ASTM A-153	CLASS B	SHEET METAL TIES AND ANCHORS
ASTM A-123 OR ASTM A-153	CLASS B	STEEL PLATES AND BARS

CORROSION PROTECTION FOR CARBON STEEL ACCESSORIES USED IN EXTERIOR WALL CONSTRUCTION:

CMU			BMU		
UNIT	VERTICAL	HORIZONTAL	UNIT	VERTICAL	HORIZONTAL
5 5/8"	#5 AT 48" OC	(2) #4 AT 48" OC	5 1/2"	---	---
7 5/8"	#5 AT 48" OC	(2) #4 AT 48" OC	7 1/2"	#5 AT 48"OC	(2) #4 AT 48"OC
9 5/8"	---	---	9 1/2"	---	---

a. PROVIDE (1) #5 VERTICAL AT ALL CORNERS
b. PROVIDE (2) #5 VERTICAL WITHIN 16" OF EACH SIDE OF OPENINGS
c. PROVIDE (1) #5 VERTICAL WITHIN 8" OF EACH SIDE OF MOVEMENT JOINTS
d. PROVIDE (1) #5 VERTICAL WITHIN 8" OF THE ENDS OF WALLS
e. PROVIDE (2) #5 HORIZONTAL AT THE TOP AND BOTTOM OF ALL WALL OPENINGS THAT SHALL EXTEND NOT LESS THAN 24" NOR LESS THAN 40 BAR DIAMETERS PAST THE OPENING
f. PROVIDE (2) #5 HORIZONTAL CONTINUOUSLY IN BOND BEAM UNITS AT ALL FLOOR AND ROOF ELEVATIONS
g. PROVIDE (2) #4 HORIZONTAL CONTINUOUSLY IN BOND BEAM UNITS WITHIN 16" OF ALL TOP OF PARAPET ELEVATIONS

CENTER VERTICAL REINFORCEMENT IN WALL UNLESS NOTED OTHERWISE. PROVIDE DOWELS FROM THE FOUNDATION TO MATCH SIZE AND LOCATION OF VERTICAL REINFORCEMENT UNLESS NOTED OTHERWISE. ALL REINFORCEMENT SHALL BE IN PLACE PRIOR TO GROUT PLACEMENT. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REINFORCING AT CORNERS AND AT WALL INTERSECTIONS.

LAP ALL REINFORCING BARS A MINIMUM OF 48 BAR DIAMETERS NOR LESS THAN 18 INCHES WHERE MULTIPLE BARS ARE INSTALLED IN CELL OR COURSE STAGGER LAPS A MINIMUM OF 2'-0".

04100 : CONCRETE MASONRY

REINFORCED CONCRETE MASONRY SHALL CON

ABBREVIATIONS

&	AND	IN.	INCH(ES)
@	AT	INFO.	INFORMATION
'	FEET(FOOT)	INT.	INTERIOR
"	INCH (INCHES)		
#	POUND(S), NUMBER	JST.	JOIST
=	EQUAL(S)	JT.	JOINT
/	PER		
		K	KIPS(1000)
A.B.	ANCHOR BOLT		
ABV.	ABOVE	LAT.	LATERAL
ADD.	ADDITIONAL	LB.	POUND(S)
ADJ.	ADJACENT	L.B.	LAG BOLT(S)
ALUM.	ALUMINUM	LG.	LONG(ITUDINAL)
ALT.	ALTERNATE	LGTH.	LENGTH
APPRX.	APPROXIMATE(LY)	LGMF	LIGHT GAUGE METAL FRAMING
ARCH.	ARCHITECT(URAL)	LLH	LONG LEG HORIZONTAL
ASSY	ASSEMBLY	LLV	LONG LEG VERTICAL
B.	BOTTOM	LSH	LONG SLOTTED HOLE(S)
BEL.	BELOW	LT. WT.	LIGHT WEIGHT
BEN	BOUNDARY EDGE NAILING	L.W.	LIGHT WEIGHT
B.F.	BRACED FRAME		
BLDG.	BUILDING	MAS.	MASONRY
BLK.	BLOCK	MASN.	MASONRY
BLKG.	BLOCKING	MAT.	MATERIAL
BLW.	BELOW	MAX.	MAXIMUM
BM.	BEAM	M.B.	MACHINE BOLT
BMU	BRICK MASONRY UNIT	MBM	METAL BUILDING MANUFACTURER
BN	BOUNDARY NAILING	MECH.	MECHANICAL
BNDRY.	BOUNDARY	M.E.J.	MASONRY EXPANSION JOINT
B.O.	BOTTOM OF	MEZZ.	MEZZANINE
B.O.E.	BOTTOM OF EXCAVATION	MFR.	MANUFACTURER
B.O.F.	BOTTOM OF FOOTING	MIN.	MINIMUM
BRDG.	BRIDGE(ING)	MISC.	MISCELLANEOUS
BRG.	BEARING	M.O.	MASONRY OPENING
BTM.	BOTTOM	MTL.	METAL
BTWN.	BETWEEN		
		(N)	NEW
C	CAMBER	N/A	NOT APPLICABLE
CAMB.	CAMBER(ED)	N.L.B.	NON-LOAD BEARING
CANT.	CANTILEVER(ED)	NO.	NUMBER
CF	CUBIC FOOT	N.S.	NEAR SIDE
C.I.P.	CAST IN PLACE	N.T.S.	NOT TO SCALE
C.J.	CONSTRUCTION JOINT	N.W.C.	NORMAL WEIGHT CONCRETE
CL	CENTER LINE		
CLG.	CEILING	O.C.	ON CENTER
CLR.	CLEAR	O.D.	OUTSIDE DIAMETER
CMU	CONCRETE MASONRY UNIT	O.F.	OUTSIDE FACE
COL.	COLUMN	O.H.	OPPOSITE HAND
CONC.	CONCRETE	OPNG.	OPENING
CONN.	CONNECTION	OPP.	OPPOSITE
CONST.	CONSTRUCTION	ORNT.	ORIENTATE(ION)
CONT.	CONTINUOUS	OSB	ORIENTED STRAND BOARD
CTSK.	COUNTERSINK	O.W.J.	OPEN WEB JOIST
CTR.	CENTER(ED)	O.W.T.	OPEN WEB TRUSS
CVR	COVER VERTICAL REINF.		
CY	CUBIC YARD	PAF	POWDER ACTUATED FASTENER
		PAR.	PARALLEL
d	PENNY(NAILS)	P/C	PRECAST
DB	DROPPED BEAM	PEN	PANEL EDGE NAIL
DBA	DEFORMED BAR ANCHORS	PERP.	PERPENDICULAR
DBL.	DOUBLE	PL.	PLATE
DCW	DEMAND CRITICAL WELD	PL	PROPERTY LINE
DEPT.	DEPARTMENT	PLN	PLAN
DET.	DETAIL	PLMBG.	PLUMBING
DF	DOUGLAS FIR	PLYWD.	PLYWOOD
DIA.	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DIAG.	DIAGONAL	PSI	POUNDS PER SQUARE INCH
DIAPH.	DIAPHRAGM	P.T.	PRESERVATIVE TREATED
DIM.	DIMENSION	PT	POST TENSION(ED)
DN.	DOWN		
DO.	DITTO(REPEAT)	QTY.	QUANTITY
DP.	DEEP		
DS	DOWNSPOUT	R.	RADIUS
DWG.	DRAWING(S)	RAD.	RADIUS
DWL.	DOWEL(S)	RE:	REFERENCE
		REF.	REFERENCE
(E)	EXISTING	REINF.	REINFORCEMENT(ING)
EA.	EACH	REQ.	REQUIRED
E.E.	EACH END	R.F.	RIGID FRAME
E.F.	EACH FACE	R.O.	ROUGH OPENING
E.J.	EXPANSION JOINT	R.S.	ROUGH SAWN
EL.	ELEVATION	R.D.	ROOF DRAIN
ELEV.	ELEVATOR		
EMBD.	EMBED(MENT)	SCH.	SCHEDULE
EN	EDGE NAIL	SCL	STRUCTURAL COMPOSITE WOOD
ENG.	ENGINEER	SCHED.	SCHEDULE
EQ.	EQUAL	SHT.	SHEET
EQPT.	EQUIPMENT	SIM.	SIMILAR
E.W.	EACH WAY	S.J.	SHRINKAGE CONTROL JOINT
EXP.	EXPANSION	SKW	SKEW
EXST.	EXISTING	S.O.G.	SLAB ON GRADE
EXT.	EXTERIOR	SPC.	SPACE(S) (ING)
		SPEC.	SPECIFICATION(S)
FAB.	FABRICATION	SQ.	SQUARE
FB	FLUSH BEAM	STD.	STANDARD
FD	FLOOR DRAIN	STGR.	STAGGER
FDN.	FOUNDATION	STIFF.	STIFFENER(S)
F.F.	FINISH FLOOR	STIR.	STIRRUP(S)
FIN.	FINISH(ED)	STL.	STEEL
FLG.	FLANGE	STRUC.	STRUCTURAL
FLR.	FLOOR	STRUCT.	STRUCTURAL
FN	FIELD (FACE) NAIL	SUSP.	SUSPENDED(TION)
F.O.	FINISHED OPENING	SYMM.	SYMMETRICAL
F.O.C.	FACE OF CONCRETE		
F.O.M.	FACE OF MASONRY	T.	TOP
F.O.S.	FACE OF STUD	T.&B.	TOP AND BOTTOM
F.O.W.	FACE OF WALL	TEMP.	TEMPORARY
FRMG.	FRAME(ING)	T.&G.	TONGUE AND GROOVE
F.S.	FAR SIDE	THK.	THICK(NESS)
FSD	FORMED STEEL DECK	THRD.	THREADED
FT.	FEET(FOOT)	TN	TOE NAIL
FRTW	FIRE RETARDANT TREATED WOOD	T.O.S.	TOP OF SHEATHING(SLAB)
FTG.	FOOTING	T.O.W.	TOP OF WALL
		TRANSV.	TRANSVERSE
GA.	GAUGE	T.O.S..	TOP OF STEEL
GALV.	GALVANIZE(D)	TYP.	TYPICAL
GB.	GRADE BEAM		
GLB	GLUE LAMINATED BEAM	U.N.O.	UNLESS NOTED OTHERWISE
GRD.	GRADE	U/S	UNDERSIDE
GT	GIRDER TRUSS		
GWB	GYPSUM WALLBOARD	V.	VERTICAL
GYP.	GYPCRETE	VERT.	VERTICAL
		VIF	VERIFY IN FIELD
H.	HORIZONTAL		
HD	HOLDOWN	W.	WIDE(WIDTH)
H.D.G.	HOT DIPPED GALVANIZED	W/	WITH
HDR.	HEADER	W/O	WITHOUT
HGR.	HANGER	WD.	WOOD
HORZ.	HORIZONTAL	W.H.S.	WELDED HEADED STUDS
HORIZ.	HORIZONTAL	W.P.	WORK POINT
HR	HEADER	W.S.	WELDED STUD
H.S.B.	HIGH STRENGTH BOLT	WT.	WEIGHT
HT.	HEIGHT	W.W.F.	WELDED WIRE FABRIC
I.D.	INSIDE DIAMETER	X-STG	EXTRA STRONG
I.E.	INVERT ELEVATION	XX-STG	DOUBLE EXTRA STRONG
I.F.	INSIDE FACE		
		YD	YARD

SPECIAL INSPECTIONS, TESTING and STRUCTURAL OBSERVATION SCHEDULE

REQUIRED SPECIAL INSPECTIONS OF DRIVEN DEEP FOUNDATION ELEMENTS

RE: IBC 2018 TABLE 1705.7

	ELEMENT TYPE	CONTINUOUS	PERIODIC
1.	VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	X	-
2.	DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS AS REQUIRED	X	-
3.	INSPECT DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X	-
4.	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT	X	-
5.	FOR STEEL ELEMENTS, PERFORM ADDITIONAL SPECIAL INSPECTIONS PER IBC 1705.2	-	-
6.	FOR CONCRETE ELEMENTS AND CONCRETE FILLED ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS PER IBC 1705.3	-	-
7.	FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.	-	-

REQUIRED SPECIAL INSPECTIONS OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS

RE: IBC 2018 TABLE 1705.8

	ELEMENT TYPE	CONTINUOUS	PERIODIC
1.	INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X	-
2.	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE AND GROUT VOLUMES	X	-
3.	FOR CONCRETE ELEMENTS, PERFORM TEST AND ADDITIONAL SPECIAL INSPECTIONS PER IBC 1705.3	-	-

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

RE: IBC 2018 TABLE 1705.3

	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1.	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT.	-	X
2.	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 5b.	-	-
3.	INSPECTION OF ANCHORS CAST IN CONCRETE.	-	X
4.	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	-	X
	a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-
	b. MECHANICAL AND ADHESIVE ANCHORS NOT DEFINED IN 4a.	-	X
5.	VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF CONCRETE.	X	-
7.	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9.	INSPECTION OF PRESTRESSED CONCRETE:		
	a. APPLICATION OF PRESTRESSING FORCES.	X	-
	b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X	-
10.	ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11.	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENSONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X

IINSPECTIONS FOR WOOD CONSTRUCTION

RE: IBC 2018 SECTION 1705.5

		INSPECTIONS REQUIRED
1.		SPECIAL INSPECTIONS OF PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES SHALL BE IN ACCORDANCE WITH IBC 1704.2.5
2.		HIGH-LOAD DIAPHRAGMS (ALL DESIGNATED DIAPHRAGMS PER IBC 2306.2) SHALL BE INSTALLED ACCORDING TO THE PROVISIONS OF IBC 1704.2. THE FOLLOWING SHALL BE INSPECTED:
	a.	WOOD STRUCTURAL PANEL SHEATHING - CONFIRM GRADE AND THICKNESS PER APPROVED CONSTRUCTION DOCUMENTS
	b.	VERIFY SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES
	c.	VERIFY NAIL OR STAPLE DIAMETER AND LENGTH
	d.	VERIFY NUMBER OF FASTENER LINES AND THE SPACING BETWEEN EACH FASTENER LINE AND AT EDGE MARGINS
3.		FOR METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60FT OR MORE, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE TEMPORARY RESTRAINT/BRACING AND PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED ACCORDING TO THE APPROVED TRUSS SUBMITTAL PACKAGE
4.		SEISMIC RESISTING ELEMENTS: PERIODIC SPECIAL INSPECTION IS REQUIRED FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE SEISMIC FORCE-RESISTING SYSTEM - INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG-STRUTS, BRACES AND HOLDOWNS - EXCEPT THAT SUCH IS NOT REQUIRED WHERE THE SHEATHING FASTENER SPACING IS MORE THAN 4"OC.

REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB JOISTS AND JOIST GIRDERS

RE: IBC 2018 TABLE 1705.2.3

	INSPECTION TYPE	CONTINUOUS	PERIODIC
1.	INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS		
	a. END CONNECTIONS - WELDING OR BOLTED	-	X
	b. BRIDGING - HORIZONTAL OR DIAGONAL	-	
	b.i. STANDARD BRIDGING	-	X
	b.ii. BRIDGING THAT DIFFERES FROM THE SJI SPECIFICATIONS RE: 2207.1		X

MINIMUM VERIFICATION OF MASONRY CONSTRUCTION

	REQUIRED FOR QUALITY ASSURANCE			REFERENCE FOR CRITERIA
	LEVEL 1	LEVEL 2	LEVEL 3	TMS 602
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS	R	R	R	Art. 1.5
PRIOR TO CONSTRUCTION, VERIFICATION OF f' m AND f' AAC, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	NR	R	R	Art. 1.4B
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-COMSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	NR	R	R	Art. 1.5 & 1.6.3
DURING CONSTRUCTION, VERIFICATION OF f' m AND f' AAC FOR EVERY 5,000 SQ. FT. (465 SQ. M.)	NR	NR	R	Art. 1.4B
DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT , AND GROUT OTHER THAN SELF-COMSOLIDATING GROUT.	NR	NR	R	Art. 1.4B

(a) R = REQUIRED, NR = NOT REQUIRED

MINIMUM REQUIRED SPECIAL INSPECTIONS OF MASONRY CONSTRUCTION

	INSPECTION TASK	FREQUENCY (*)			REFERENCE FOR CRITERIA	
		LEVEL 1	LEVEL 2	LEVEL 3	TMS 402	TMS 602
1	AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE;					
	a. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P		Art. 2.1, 2.6A, & 2.6C
	b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		Art. 2.4B, & 2.4H
	c. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		Art. 3.4, & 3.5A
	d. PRESTRESSING TECHNIQUE	NR	P	P		Art. 3.6B
	e. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	NR	C1, P	C		Art. 2.1C.1
	f. SAMPLE PANEL CONSTRUCTION	NR	P	C		Art. 1.6D
2	PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE;					
	a. GROUT SPACE	NR	P	C		Art. 3.2D & 3.2F
	b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P	Sec. 10.8 & 10.9	Art. 2.4 & 3.6
	c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C	Sec. 6.1, 6.3.1, 6.3.6 & 6.3.7	Art. 3.2E & 3.4
	d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	NR	P	P		Art. 2.6B & 2.4G.1.b
3	VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION;					
	a. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	P	P		Art. 1.5
	b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P		Art. 3.3B
	c. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P		Art. 3.3F
	d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	P	C	Sec. 1.2.1(e), 6.2.1, & 6.3.1	
	e. WELDING OF REINFORCEMENT	NR	C	C	Sec. 6.1.6.1.2	
	f. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 DEGREE F (4.4 DEGREE C) OR HOT WEATHER (TEMPERATURE ABOVE 90 DEGREE F (32.2 DEGREE C))	NR	P	P		Art. 1.8C & 1.8D
	g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	NR	C	C		Art. 3.6B
	h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	NR	C	C		Art. 3.5 & 3.6C
	j. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	NR	C1, P	C		Art. 3.3B.9 & 3.3F.1.b
4	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND / OR PRISMS	NR	P	C		Art. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3, & 1.4B.4

(a) FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE LISTED TASK OR PERIODICALLY DURING THE LISTED TASK AS DEFINED IN THE TABLE.
NR = NOT REQUIRED, P = PERIODIC, C = CONTINUOUS

(b) REQUIRED FOR THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.

(c) REQUIRED AFTER THE FIRST 5000 SQUARE FEET (465 SQUARE METERS) OF AAC MASONRY.

MINIMUM REQUIREMENTS FOR INSPECTION OF STRUCTURAL STEEL BUILDINGS

RE: IBC 2018 AND AISC 360

SPECIAL INSPECTIONS AND NON-DESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 - CHAPTER N

STEEL INSPECTIONS

RE: IBC 2018 AND AISC 360

	INSPECTION TASKS	QC	QA
O=	OBSERVE ITEMS ON A RANDOM BASIS - OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS		
P=	PERFORM THESE TASKS FOR EACH CONNECTION, ELEMENT OR MEMBER		
QC=	QUALITY CONTROL INSPECTION TASKS SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.		
QA=	QUALITY ASSURANCE INSPECTION TASKS SHALL BE PERFORMED BY A SPECIAL INSPECTOR. RE: STRUCTURAL NOTES SECTION 01400.		
TABLE N5.4-1 INSPECTION TASKS PRIOR TO WELDING			
	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P
	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
	MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
	WELDER IDENTIFICATION SYSTEM	O	O
	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY); JOINT PREPARATION; DIMENSIONS (ALIGNMENT ROOT OPENING, ROOT FACE, BEVEL); CLEANLINESS (CONDITION OF STEEL SURFACES); TACKING (TACK WELD QUALITY AND LOCATION); BACKING TYPE AND FIT (IF APPLICABLE)	O	O
	CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
	FIT-UP OF FILLET WELDS: DIMENSIONS (ALIGNMENT, GAPS AT ROOT); CLEANLINESS (CONDITION OF STEEL SURFACE); TACKING (TACK WELD QUALITY AND LOCATION)	O	O
	CHECK WELDING EQUIPMENT	O	-
TABLE N5.4-2 INSPECTION TASKS DURING WELDING			
	USE OF QUALIFIED WELDERS	O	O
	CONTROL AND HANDLING OF WELDING CONSUMABLES: PACKAGING; EXPOSURE CONTROL	O	O
	NO WELDING OVER CRACKED TACK WELDS	O	O
	ENVIRONMENTAL CONDITIONS WIND SPEED WITHIN LIMITS; PRECIPITATION AND TEMPERATURE	O	O
	WPS FOLLOWED: SETTINGS ON WELDING EQUIPMENT; TRAVEL SPEED; SELECTED WELDING MATERIALS; SHIELDING GAS TYPE/FLOW RATE; PREHEAT APPLIED; INTERPASS TEMPERATURE MAINTAINED (MIN/MAX); PROPER POSITION (F, V, H, OH)	O	O
	WELDING TECHNIQUES: INTERPASS AND FINAL CLEANING; EACH PASS WITHIN PROFILE LIMITATIONS; EACH PASS MEETS QUALITY REQUIREMENTS	O	O
TABLE N5.4-3 INSPECTION TASKS AFTER WELDING			
	WELDS CLEANED	O	O
	SIZE, LENGTH AND LOCATION OF WELDS	P	P
	WELD SURFACE VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION; WELD/BASE-METAL FUSION; CRATER CROSS SECTION; WELD PROFILES; WELD SIZE; UNDERCUT; POROSITY	P	P
	ARC STRIKES	P	P
	k-AREA	P	P
	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
	REPAIR ACTIVITIES	P	P
	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
TABLE N5.6-1 INSPECTION TASKS PRIOR TO BOLTING			
	MANUFACTURERS CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O
TABLE N5.6-2 INSPECTION TASKS DURING BOLTING			
	FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
	FASTENER COMPONENT NOT TURNED BY WRENCH PREVENTED FROM ROTATING	O	O
	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPEC, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O
TABLE N5.6-3 INSPECTION TASKS AFTER BOLTING			
	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P
TABLE N6.1 INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT			
	PLACEMENT AND INSTALLATION OF STEEL DECK	P	P
	PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P
	DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	P	P

06071: PRESERVATIVE TREATED WOOD PRODUCTS

PRESERVATIVE TREATED WOOD SHALL BE REQUIRED FOR;

ALL WOOD THAT FORMS THE STRUCTURAL SUPPORT OF THE BUILDING, BALCONIES PORCHES, OR SIMILAR PERMANENT BUILDING APPURTUENCES THAT ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION AT THE SURFACE OR AT JOINTS BETWEEN MEMBERS.

ALL WOOD INSTALLED ABOVE GROUND AND RESTING ON AN EXTERIOR CONCRETE OR MASONRY FOUNDATION WALL LESS THAN 8 INCHES FROM EXPOSED EARTH.

POSTS OR COLUMNS SUPPORTING PERMANENT STRUCTURES AND SUPPORTED BY A CONCRETE SLAB OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH. EXCEPT;

1. IF LOCATED IN BASEMENTS ON A CONCRETE PIER OR METAL PEDESTAL 1 INCH ABOVE THE SLAB AND SEPARATED THEREFROM BY AN IMPERVIOUS MOISTURE BARRIER.
2. IF IN AN ENCLOSED CRAWL SPACE OR AN UNEXCAVATED AREA WITHIN THE BUILDING PERIPHERY AND SUPPORTED BY A CONCRETE PIER OR PEDESTAL MORE THAN 8 INCHES FROM EXPOSED GROUND AND SEPARATED THEREFROM BY AN IMPERVIOUS MOISTURE BARRIER.
3. SLEEPERS AND SILLS ON A CONCRETE SLAB ON GRADE THAT DOES NOT HAVE AN IMPERVIOUS MOISTURE BARRIER SEPARATION WITH EXPOSED EARTH.
4. LEDGERS AND FURRING ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR CONCRETE OR MASONRY WALLS BELOW GRADE.

PRESERVATIVE TREATMENT SHALL BE PER AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) SPECIFICATION U1 AND M4 OR APPLICABLE STANDARDS.

ALL FASTENERS (NAILS, BOLTS, ANCHOR BOLTS, PLATES, HANGERS, ETC.) IN CONTACT WITH TREATED LUMBER SHALL BE CORROSION RESISTANT G-185 HOT DIPPED GALVANIZED PER ASTM A153, A653 AND B695 CLASS 55 (MINIMUM) OR STAINLESS STEEL, TYPE 303, 304, 305 OR 316.

06100: ROUGH FRAMING

SAWN LUMBER SHALL CONFORM TO WEST COAST LUMBER INSPECTION BUREAU (WCLIB) "GRADING AND DRESSING RULES" NO. 17 LATEST EDITION. SAWN LUMBER SHALL BE S4S AND SURFACED DRIED, 19 PERCENT MAXIMUM MOISTURE CONTENT. PROTECT LUMBER FROM WEATHER AND PROVIDE FURTHER DRYING OF ASSEMBLED FRAMING TO MINIMIZE SHRINKAGE POTENTIAL. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED UNLESS NOTED OTHERWISE PER PLAN. LUMBER SPECIES, GRADE, AND PROPERTIES FOR EACH USE/LOCATION SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE PER PLAN/SCHEDULE:

USE/LOCATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI)	Fcp (PSI)	Fc (PSI)	E
WALL STUDS/BLOCKING							
2X, 3X 4" WIDE	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
2X, 3X 6" & WIDER	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
WALL PLATES							
2X4, 3X4	DOUGLAS FIR-LARCH	STUD	700	180	625	850	1.4E6
2X6, 3X6	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
JOISTS							
2X, 3X	HEM-FIR	NO. 2	850	150	405	1300	1.3E6
	SPRUCE-PINE-FIR	NO. 2	875	150	425	1150	1.4E6
	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
LEDGERS							
2X, 3X	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
4X	DOUGLAS FIR-LARCH	NO. 1	1000	180	625	1500	1.7E6
BEAMS AND POSTS							
4X	DOUGLAS FIR-LARCH	NO. 2	900	180	625	1350	1.6E6
6X	DOUGLAS FIR-LARCH	NO. 1	1200	170	625	1000	1.6E6

06101: STRUCTURAL FINGER JOINTED LUMBER

APPROVED STRUCTURAL FINGER JOINTED LUMBER SHALL BE PERMITTED TO BE USED INTERCHANGEABLY WITH SAWN LUMBER MEMBERS OF THE SAME SPECIES AND GRADE. STRUCTURAL FINGER JOINTED LUMBER SHALL BE GRADED UNDER AMERICAN LUMBER STANDARD COMMITTEE "PRODUCT STANDARD PS 20-05". LUMBER CLASSIFIED AS STUD USE ONLY SHALL BE LIMITED TO INTERIOR VERTICAL APPLICATIONS ONLY. LUMBER WITH CERTIFIED EXTERIOR JOINTS IS NOT RESTRICTED TO ANY TYPE OF LOADING.

06102: FRAMING NOTES

FRAMING CONNECTORS, ACCESSORIES, AND FASTENERS AS NOTED IN THE PLANS AND DETAILS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE. EQUIVALENT HARDWARE MAY BE USED WITH PRIOR APPROVAL BY ENGINEER OF RECORD. INSTALL ALL HARDWARE PER MANUFACTURERS' SPECIFICATIONS. WHERE STRAPS CONNECT TWO MEMBERS TOGETHER, PLACE HALF OF THE REQUIRED FASTENERS INTO EACH MEMBER. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. SEE SECTION 06071 FOR FASTENER REQUIREMENTS AT TREATED LUMBER. TYPICAL NAILING NOT SH

Shearwall Schedule - APA Rated Sheathing W/ Doug Fir Lumber

WALL TYPE	SHEATHING	PANEL EDGE NAILING	FIELD NAILING	2X BOTTOM PLATE NAILING		LTP4 RIM/BLK'G TO TOP PLATE CONN. SPACING	FRAMING @ ADJOINING PANEL EDGES	FOUNDATION SILL PLATE	ANCHOR BOLT SPACING	DETAIL
				ROWS	SPACING					
P6	15/32" SHT. ONE SIDE	6" O.C.	12" O.C.	(1)	4.5" O.C. STAGGERED	24" O.C. ONE SIDE	2x	2x	48" O.C.	4, 9, 14/S1.02
P4	15/32" SHT. ONE SIDE	4" O.C.	12" O.C.	(2)	6" O.C. STAGGERED	16" O.C. ONE SIDE	3x	2x	36" O.C.	4, 9, 14/S1.02
								3x	48" O.C.	
P3	15/32" SHT. ONE SIDE	3" O.C.	12" O.C.	(2)	4" O.C. STAGGERED	12" O.C. ONE SIDE	3x	2x	30" O.C.	4, 9, 14/S1.02
								3x	36" O.C.	
P2	15/32" SHT. ONE SIDE	2" O.C.	12" O.C.	(3)	6" O.C. STAGGERED	10" O.C. ONE SIDE	3x	2x	24" O.C.	5, 10, 15/S1.02
								3x	30" O.C.	
P2-T	19/32" SHT. ONE SIDE	2" O.C.	12" O.C.	(3)	5" O.C. STAGGERED	9" O.C. ONE SIDE	3x	2x	20" O.C.	5, 10, 15/S1.02
								3x	24" O.C.	

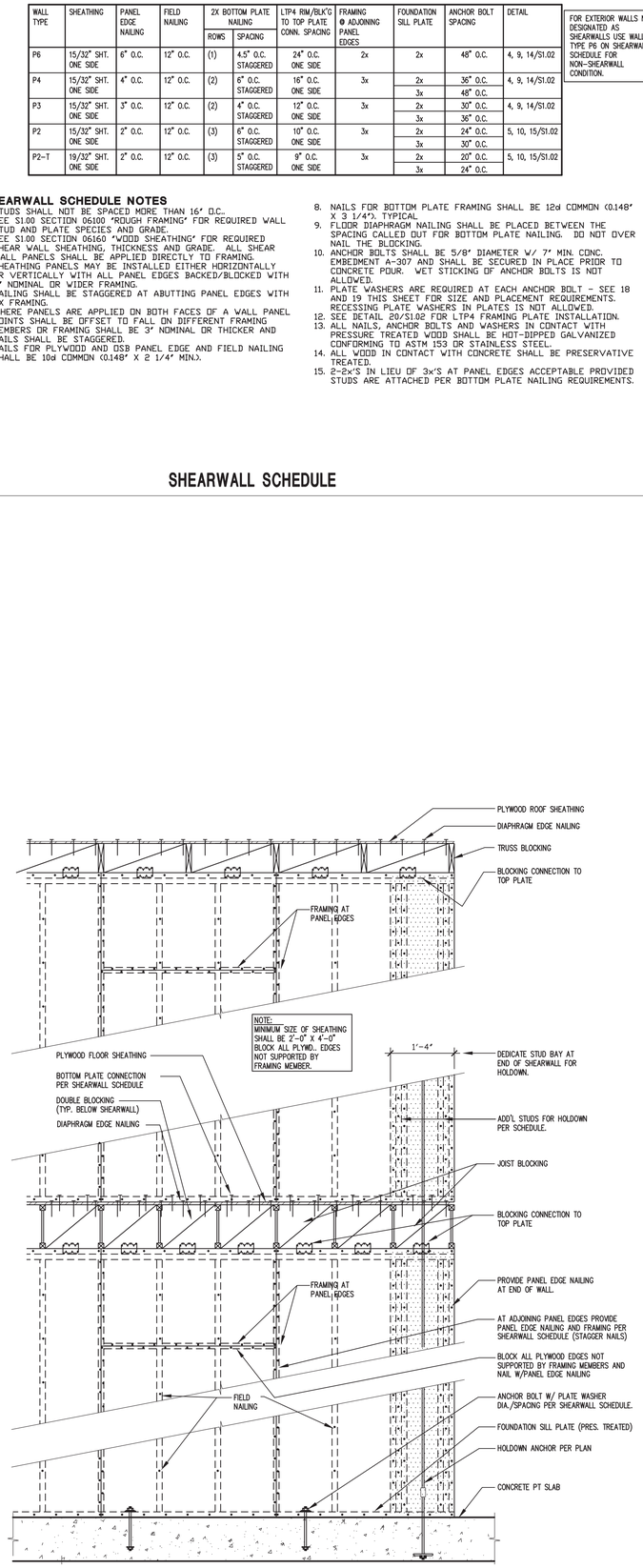
FOR EXTERIOR WALLS NOT DESIGNATED AS SHEARWALLS USE WALL TYPE P6 ON SHEARWALL SCHEDULE FOR NON-SHEARWALL CONDITION.

SHEARWALL SCHEDULE NOTES

1. STUDS SHALL NOT BE SPACED MORE THAN 16" O.C..
2. SEE S1.00 SECTION 06100 "ROUGH FRAMING" FOR REQUIRED WALL STUD AND PLATE SPECIES AND GRADE.
3. SEE S1.00 SECTION 06160 "WOOD SHEATHING" FOR REQUIRED SHEAR WALL SHEATHING, THICKNESS AND GRADE. ALL SHEAR WALL PANELS SHALL BE APPLIED DIRECTLY TO FRAMING.
4. SHEATHING PANELS MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY WITH ALL PANEL EDGES BACKED/BLOCKED WITH 2" NOMINAL OR WIDER FRAMING.
5. NAILING SHALL BE STAGGERED AT ABUTTING PANEL EDGES WITH 3X FRAMING.
6. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" NOMINAL OR THICKER AND NAILS SHALL BE STAGGERED.
7. NAILS FOR PLYWOOD AND OSB PANEL EDGE AND FIELD NAILING SHALL BE 10d COMMON (0.148" X 2 1/4" MIN.).
8. NAILS FOR BOTTOM PLATE FRAMING SHALL BE 12d COMMON (0.148" X 3 1/4"). TYPICAL.
9. FLOOR DIAPHRAGM NAILING SHALL BE PLACED BETWEEN THE SPACING CALLED OUT FOR BOTTOM PLATE NAILING. DO NOT OVER NAIL THE BLOCKING.
10. ANCHOR BOLTS SHALL BE 5/8" DIAMETER W/ 7" MIN. CONC. EMBEDMENT A-307 AND SHALL BE SECURED IN PLACE PRIOR TO CONCRETE POUR. WET STICKING OF ANCHOR BOLTS IS NOT ALLOWED.
11. PLATE WASHERS ARE REQUIRED AT EACH ANCHOR BOLT - SEE 18 AND 19 THIS SHEET FOR SIZE AND PLACEMENT REQUIREMENTS. RECESSING PLATE WASHERS IN PLATES IS NOT ALLOWED.
12. SEE DETAIL 20/S1.02 FOR LTP4 FRAMING PLATE INSTALLATION.
13. ALL NAILS, ANCHOR BOLTS AND WASHERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO ASTM 153 OR STAINLESS STEEL.
14. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE TREATED.
15. 2-2x'S IN LIEU OF 3x'S AT PANEL EDGES ACCEPTABLE PROVIDED STUDS ARE ATTACHED PER BOTTOM PLATE NAILING REQUIREMENTS.

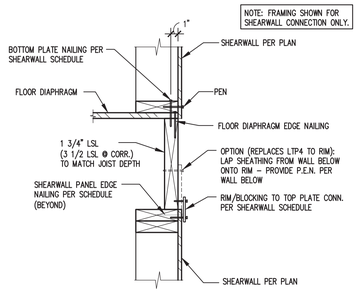
SCALE: NONE

6 **SHEARWALL SCHEDULE**



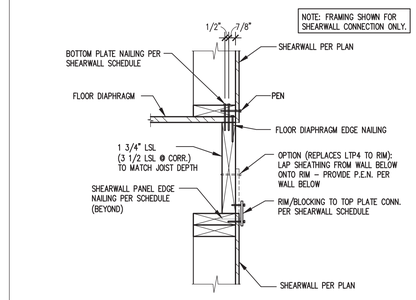
SCALE: NONE

16 **TYPICAL SHEARWALL NOMENCLATURE (ELEVATION)**



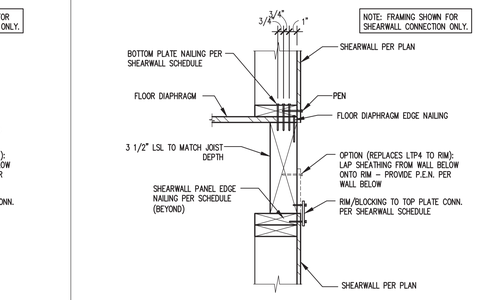
SCALE: NONE

3 **(1 ROW OF PLATE NAILING) TYP. EXT./CORR. WALL SHEAR CONNECTION**



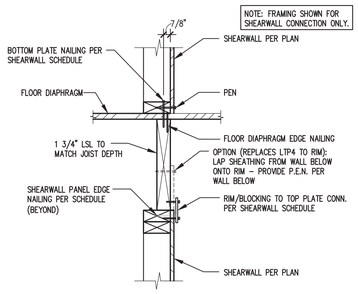
SCALE: NONE

4 **(2 ROWS OF PLATE NAILING) TYP. EXT./CORR. WALL SHEAR CONNECTION**



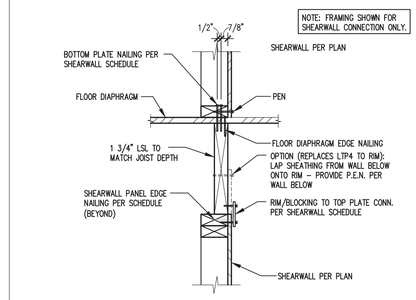
SCALE: NONE

5 **(3 ROWS OF PLATE NAILING) TYP. EXT./CORR. WALL SHEAR CONNECTION**



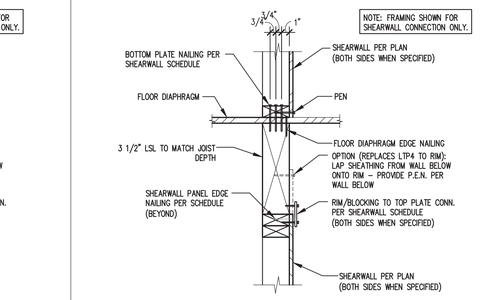
SCALE: NONE

8 **(1 ROW OF PLATE NAILING) TYP. INTERIOR WALL SHEAR CONNECTION**



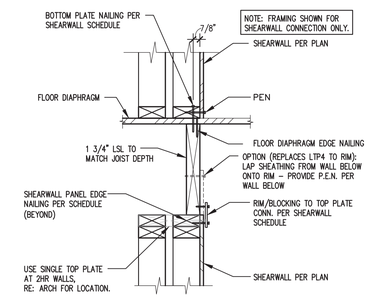
SCALE: NONE

9 **(2 ROWS OF PLATE NAILING) TYP. INTERIOR WALL SHEAR CONNECTION**



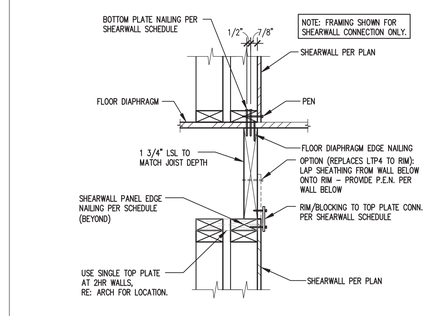
SCALE: NONE

10 **(3 ROWS OF PLATE NAILING) TYP. INTERIOR WALL SHEAR CONNECTION**



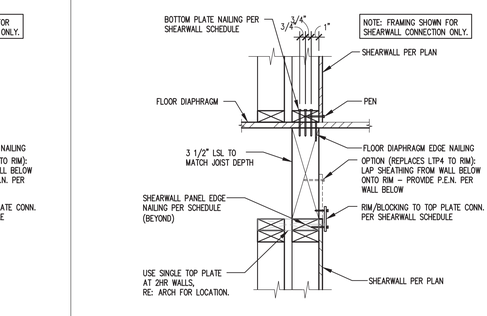
SCALE: NONE

13 **(1 ROW OF PLATE NAILING) TYP. PARTY WALL SHEAR CONNECTION**



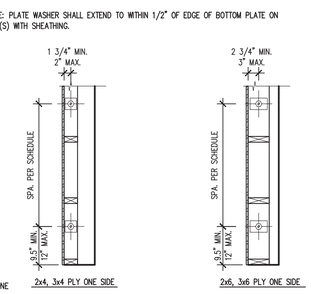
SCALE: NONE

14 **(2 ROWS OF PLATE NAILING) TYP. PARTY WALL SHEAR CONNECTION**



SCALE: NONE

15 **(3 ROWS OF PLATE NAILING) TYP. PARTY WALL SHEAR CONNECTION**



SCALE: NONE

18 **ANCHOR BOLT PLACEMENT DETAILS**

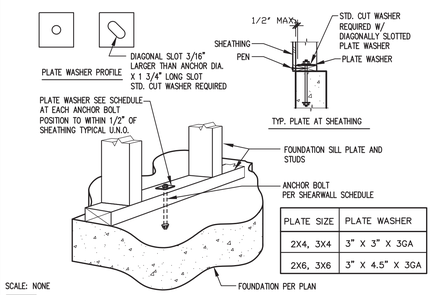
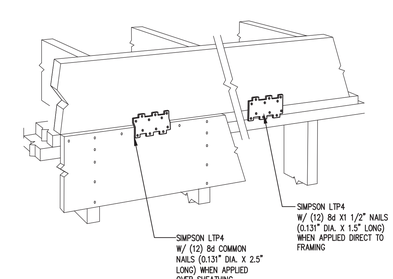


PLATE SIZE	PLATE WASHER
2X4, 3X4	3" X 3" X 3GA
2X6, 3X6	3" X 4.5" X 3GA

SCALE: NONE

19 **TYP. SHEARWALL ANCHOR BOLT TO CONC.**



SCALE: NONE

20 **TYPICAL SIMPSON LTP4**

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.0512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
1	COORDINATION	12/13/22
	BUILDING PERMIT CORRECTION #1	09/30/22

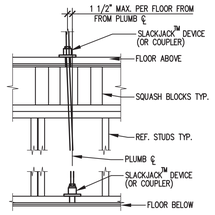
ENGR: SMK | C.A.D: SMK | PLOT: 02/6/23 | FILE: 1901C S100 | JOB #:

Shelter HOLDINGS

Shearwall Schedule and Details

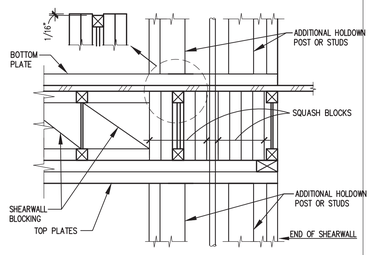
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S1.02



SCALE: NONE

1 ALLOWABLE ROD OFFSET

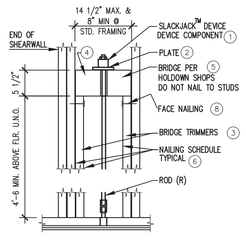


SQUASH BLOCK NOTES:

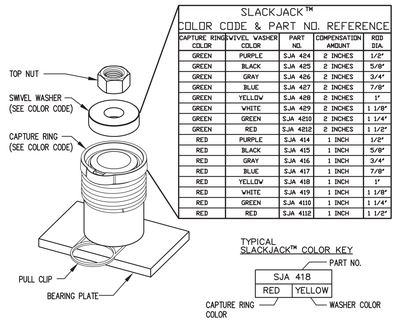
1. PROVIDE ENOUGH SOLID BLOCKING IN JOIST SPACE TO MATCH WIDTH OF ALL COMPRESSION STUDS OR POSTS OF THE WALL BELOW.
2. INSTALL WITH WOOD GRAIN IN VERTICAL DIRECTION.

SCALE: NONE

2 TYPICAL SQUASH BLOCK



TYPICAL BRIDGE INSTALLATION
SCALE: NONE



SLACKJACK™ COLOR CODE & PART NO. REFERENCE

CAPTURE RING COLOR	SWIVEL WASHER COLOR	PART NO.	COMPENSATION AMOUNT	ROD DIA.
GREEN	PURPLE	SJA 424	2 INCHES	1/2"
GREEN	BLACK	SJA 425	2 INCHES	5/8"
GREEN	GRAY	SJA 426	2 INCHES	3/4"
GREEN	BLUE	SJA 427	2 INCHES	7/8"
GREEN	YELLOW	SJA 428	2 INCHES	1"
GREEN	WHITE	SJA 429	2 INCHES	1 1/8"
GREEN	GREEN	SJA 4210	2 INCHES	1 1/4"
GREEN	RED	SJA 4212	2 INCHES	1 1/2"
RED	PURPLE	SJA 414	1 INCH	1/2"
RED	BLACK	SJA 415	1 INCH	5/8"
RED	GRAY	SJA 416	1 INCH	3/4"
RED	BLUE	SJA 417	1 INCH	7/8"
RED	YELLOW	SJA 418	1 INCH	1"
RED	WHITE	SJA 419	1 INCH	1 1/8"
RED	GREEN	SJA 4110	1 INCH	1 1/4"
RED	RED	SJA 4112	1 INCH	1 1/2"

TYPICAL SLACKJACK™ COLOR KEY

SCALE: NONE

7 SLACKJACK™ COLOR CODE TABLE

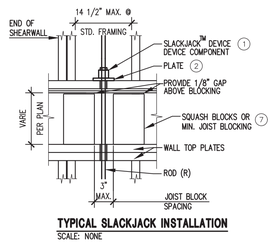
ROD SIZE	MIN. HOLE SIZE	MAX. HOLE SIZE
1/2" DIA.	1" DIA.	1 1/8" DIA.
5/8" DIA.	1" DIA.	1 1/8" DIA.
3/4" DIA.	1" DIA.	1 1/8" DIA.
7/8" DIA.	1 1/8" DIA.	1 1/4" DIA.
1" DIA.	1 1/4" DIA.	1 3/8" DIA.
1 1/8" DIA.	1 3/8" DIA.	1 1/2" DIA.
1 1/4" DIA.	1 1/2" DIA.	1 5/8" DIA.

DO NOT USE SILICON OR CAULKING IN HOLES FOR HOLDOWN RODS.

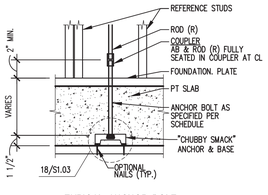
THROUGH TOP/BOTTOM PLATES AND BRIDGE

SCALE: NONE

8 ROD HOLE SCHEDULE



TYPICAL SLACKJACK INSTALLATION
SCALE: NONE



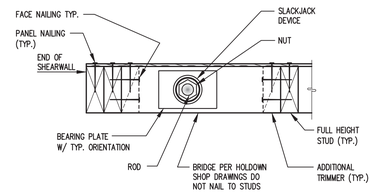
TYPICAL ANCHOR BOLT
SCALE: NONE

HOLDOWN DETAIL NOTES

1. THE SLACKJACK IS A FACTORY ASSEMBLED, PRELOADED COMPRESSION CONTROLLED SHRINKAGE COMPENSATION DEVICE REFERENCE ICC ESR-2848. SEE DETAIL 7 THIS SHEET FOR COMPONENTS.
2. ALL BEARING PLATES SHALL HAVE FULL BEARING CONTACT AREA ON WOOD MEMBERS.
3. BRIDGE SUPPORT STUDS AT THIS LEVEL SHALL BE SYMMETRICALLY PLACED AS SHOWN ON THE SHOP DRAWINGS.
4. TYPICAL COMPRESSION BRIDGE ACROSS COLLECTOR STUDS.
5. COMPRESSION BRIDGE MEMBER SHALL BE DOUG-FIR, CONSTRUCTION GRADE WITH MINIMUM 800 PSI ALLOWABLE BENDING STRESS. TIMBERSTRAND 1.5 LSL BEAM SUBSTITUTION IS ALLOWED.
6. ALL COLLECTOR STUD MEMBERS SHALL BE NAILED AS PER SHEARWALL EDGE NAILING SCHEDULE IN THE DRAWINGS.
7. SQUASH BLOCKS SHALL BE INSTALLED WITH WOOD GRAIN IN VERTICAL DIRECTION. SEE DETAIL 2 THIS SHEET.
8. FACE NAILING: BRIDGE SUPPORT STUDS SHALL HAVE SUPPLEMENTAL (2) 10d Ø 4" O.C. FACE NAILING IN ADDITION TO THE NAILING REQUIREMENTS OF THE SHEARWALL SCHEDULE. SEE DETAIL 12 THIS SHEET.

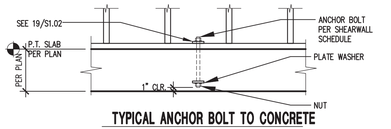
16 TYPICAL HOLDOWN DETAILS

REFER TO HOLDOWN SHOP DRAWINGS FOR TOTAL NUMBER OF TRIMMERS REQUIRED.

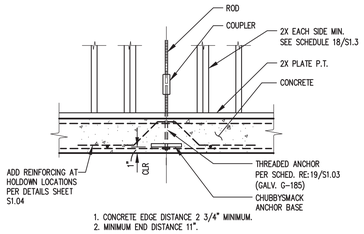


SCALE: NONE

12 BRIDGE TRIMMER NAILING DETAIL



TYPICAL ANCHOR BOLT TO CONCRETE

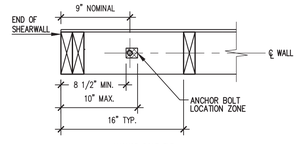


1. CONCRETE EDGE DISTANCE 2 3/4" MINIMUM.
2. MINIMUM END DISTANCE 11".

TYPICAL REINFORCING AT HOLDOWN

SCALE: 3/4" =1'-0"

17 TYPICAL ANCHORAGE TO CONCRETE



ANCHOR BOLT TYP.

ANCHOR BOLT NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WALL TYPE AND FRAMING LAYOUT BEFORE LOCATING ANCHOR BOLTS IN CONCRETE.
2. ALL DIMENSIONS ARE TYPICAL U.N.O.
3. ADDITIONAL COMPRESSION STUDS NOT SHOWN FOR CLARITY

SCALE: NONE

13 TYPICAL ANCHOR BOLT LOCATION PLAN

HOLDOWN LOADING AND POST SCHEDULE

FRAMING LEVEL	4A	4B	5A	5B	5C	5D
ADD'L. STUDS: AT 2X4 WALL			–	–	–	N.A.
ADD'L. STUDS: AT 2X6 WALL			–	–	–	–
LOAD LEVEL 6			2000	1500	1000	2000
ADD'L. STUDS: AT 2X4 WALL	–	–	–	–	–	N.A.
ADD'L. STUDS: AT 2X6 WALL	–	–	–	–	–	–
LOAD LEVEL 5	2000	1500	6500	4000	3000	6500
ADD'L. STUDS: AT 2X4 WALL	–	–	(1) 2X4	(1) 2X4	–	N.A.
ADD'L. STUDS: AT 2X6 WALL	–	–	–	–	–	–
LOAD LEVEL 4	6000	4000	11000	8500	6000	13500
ADD'L. STUDS: AT 2X4 WALL	(1) 2X4	–	(4) 2X4	(2) 2X4	(1) 2X4	N.A.
ADD'L. STUDS: AT 2X6 WALL	–	–	(1) 2X6	–	–	(2) 2X6
LOAD LEVEL 3	10000	7100	18000	13500	10000	21000
ADD'L. STUDS: AT 2X4 WALL	(3) 2X4	(1) 2X4	(6) 2X4	(4) 2X4	(3) 2X4	N.A.
ADD'L. STUDS: AT 2X6 WALL	–	–	(2) 2X6	(1) 2X6	–	(3) 2X6
LOAD LEVEL 2	14500	10500	24000	19000	14500	30500
ANCHOR BOLT	7/8" DIA.	3/4" DIA.	1 1/8" DIA.	1" DIA.	7/8" DIA.	1 1/4" DIA.
ADDITIONAL REINF. Ø LEVEL 2 PT SLAB PER EDGE CONDITION	5 S1.04, 6 S1.04	5 S1.04	4 S1.04, 5 S1.04, 6 S1.04	5 S1.04, 6 S1.04	5 S1.04, 6 S1.04	4 S1.04, 5 S1.04, 6 S1.04

17/S1.03

Holdown Notes

1. HOLDOWNS SHALL BE THE EARTHBOUND HOLDOWN SYSTEM BY EARTHBOUND CORPORATION. SHOP DRAWINGS BEARING THE SEAL AND SIGNATURE OF A WASHINGTON STATE PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR REVIEW.
2. HOLDOWN SYSTEM DESIGNER TO DETERMINE NUMBER OF SHRINKAGE DEVICES PER HOLDOWN RUN.
3. HOLDOWN DESIGN LOADS (ALLOWABLE) ARE AS INDICATED ABOVE IN POUNDS TENSION, ANCHOR ROD ONLY.
4. ANCHOR BOLT SHALL BE "CHUBBY SMACK" ANCHORS BY EARTHBOUND INC. ANCHORS ARE TO A307, F_{yu} = 60 KSI AND ACHIEVE LOADS INDICATED.
5. DOUBLE STUDS AT END AND A SINGLE STUD 16" FROM END ARE ASSUMED. SEE DETAIL 13 THIS SHEET.
6. NUMBER OF STUDS INDICATED ARE FOR COMPRESSION AND SHALL BE IN ADDITION TO THOSE INDICATED IN NOTE 5. STUD SPECIES AND GRADE TO MATCH SHEARWALL.
7. DO NOT NOTCH OR BORE HOLES THROUGH STUDS EITHER SIDE OF ROD HOLDOWN WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
8. SEE DETAIL 8 THIS SHEET FOR ROD HOLE SIZE THROUGH TOP AND BOTTOM PLATES.
9. SEE DETAIL 1 THIS SHEET FOR MAXIMUM HOLDOWN ROD OFFSET.
10. SEE DETAIL 13 THIS SHEET FOR TYPICAL HOLDOWN ANCHOR BOLT LOCATION AT END OF SHEARWALL.

Holdown Legend

- HOLDOWN DEVICE
- PLATE
- 4X6 BRIDGE
- HOLDOWN ROD
- COUPLER
- JOIST BLOCKING
- NUT/WASHER
- PLATE/NUT

19 HOLDOWN SCHEDULE

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
-	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SWK | CAD: SWK | PLOT: 02/16/23 | FILE: 1901D STOD | JOB #:

Shelter HOLDINGS

Holdown Schedule and Details

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

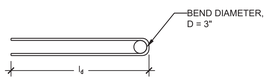
S1.03

CONCRETE STRENGTH (psi)	l_d (in)
5,000	21
L = (h + 1¾") + (l_d) + h/2	

HAIRPIN QUANTITY SCHEDULE

ANCHOR BOLT DIAMETER (IN)	NUMBER OF HAIRPINS
1 1/8" OR LESS	1
1 1/4"	2

FOR MULTIPLE HAIRPINS, SPACE 1 1/2" APART

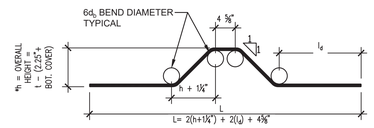


SCALE: NONE

1

HAIRPIN REINFORCMENT AT EDGES

CONCRETE STRENGTH (psi)	l_d (in.)
5,000	21
L = 2(h + 1 ¼") + 2(l_d) + 4 ⅜"	



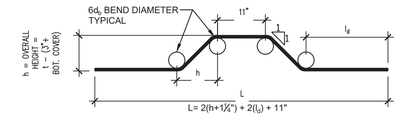
*NOTE:
WHEN LABELED AS PIECE 'A' AT EDGE,
h = t – (1.5" + BOT. COVER)

ELEVATION VIEW, OF PIECE 'A'

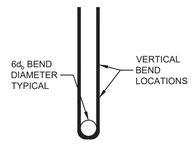
SCALE: NONE

2

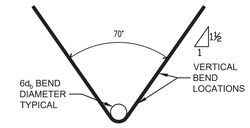
FULL LENGTH ANCHOR REINFORCMENT, PIECE A



ELEVATION VIEW, OF PIECES 'B' & 'C' PRIOR TO HORIZONTAL BENDS



PLAN VIEW, PIECE 'B'



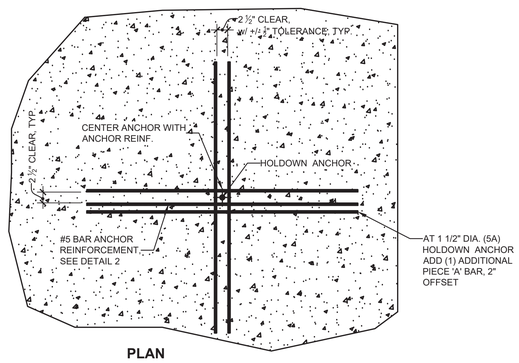
PLAN VIEW, PIECE 'C'

SCALE: NONE

3

ANCHOR REINFORCMENT AT EDGES, PIECES B & C

FLEXURAL REINFORCEMENT NOT SHOWN IN PLAN FOR CLARITY



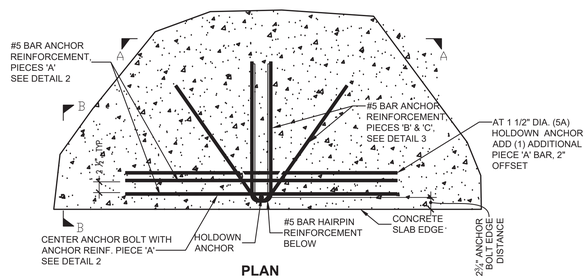
PLAN

SCALE: NONE

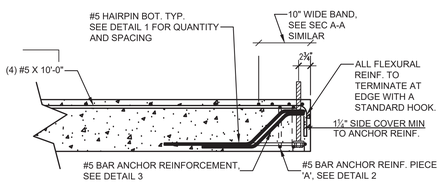
4

HOLDOWN ANCHOR AWAY FROM EDGE

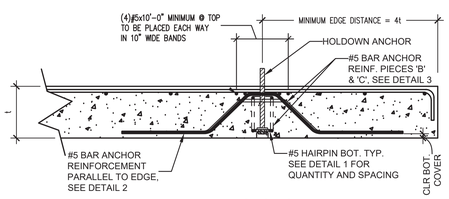
FLEXURAL REINFORCEMENT NOT SHOWN IN PLAN FOR CLARITY



PLAN



SECTION B-B



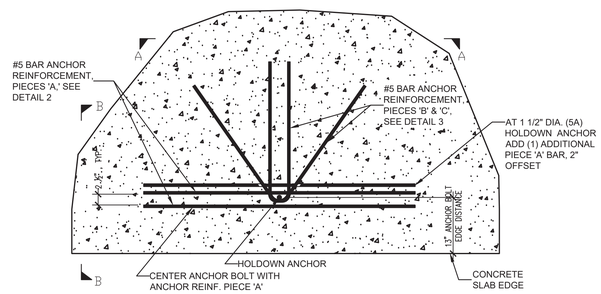
SECTION A-A

SCALE: NONE

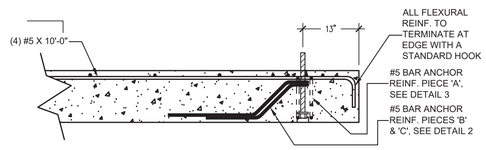
5

HOLDOWN NEAR EDGE

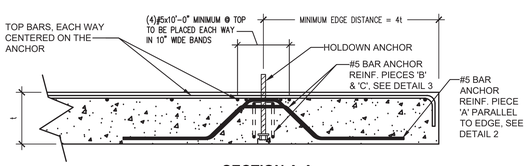
FLEXURAL REINFORCEMENT NOT SHOWN IN PLAN FOR CLARITY



PLAN



SECTION B-B

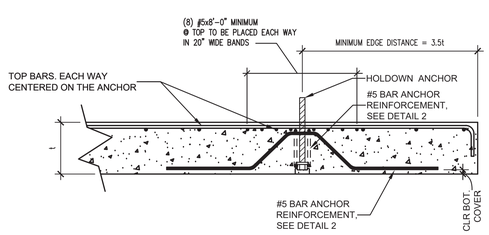


SECTION A-A

SCALE: NONE

6

HOLDOWN 13" FROM EDGE



SECTION A-A

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

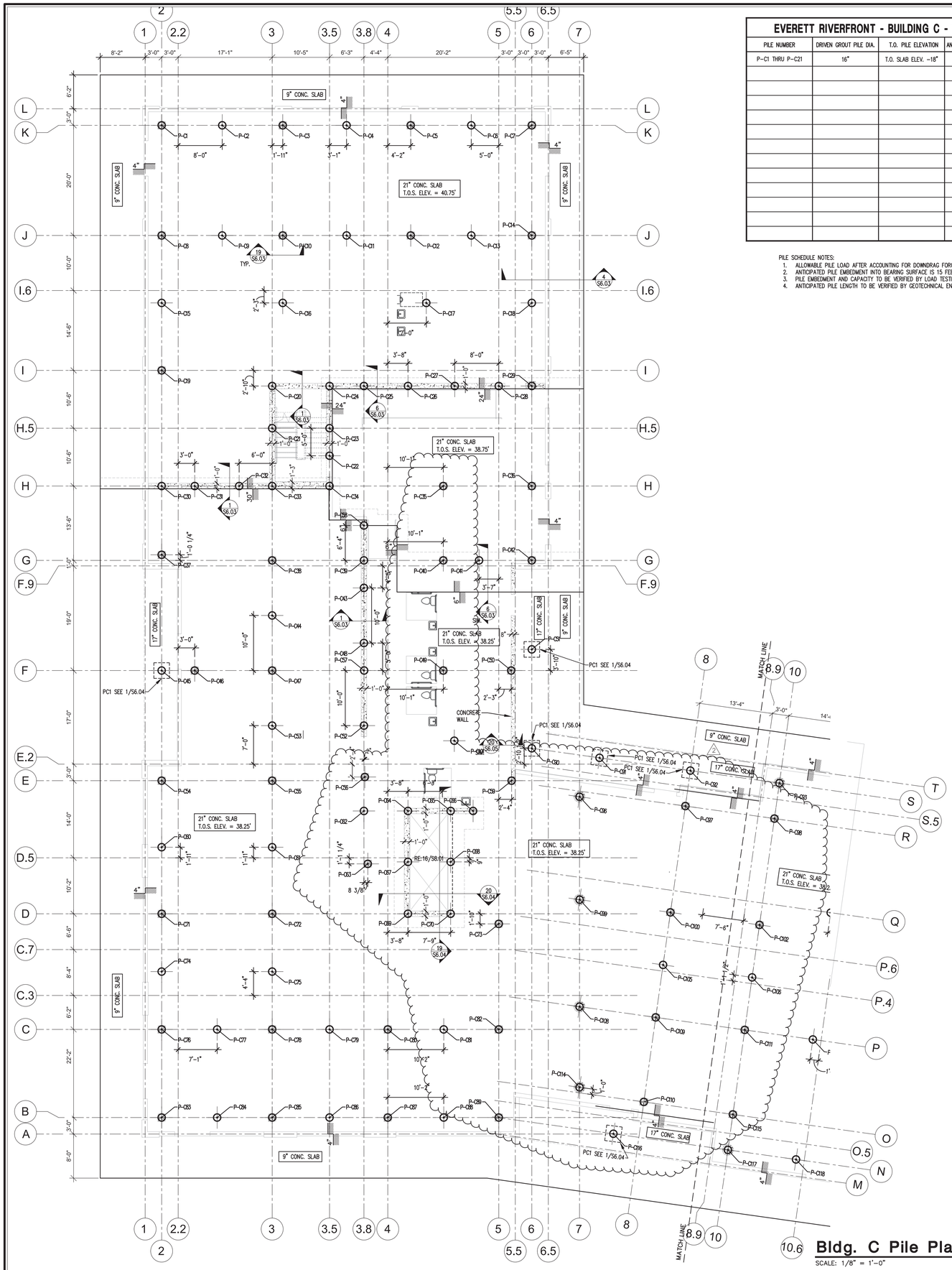
NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
-	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK CAD: SWK PLOT: 02/6/23	FILE: 19010 ST00
		JOB #:

Shelter HOLDINGS

Holdown Details

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S1.04



Bldg. C Pile Plan (South)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 40.75'

PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C1 THRU P-C21	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 38.75'

PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C22 THRU P-C29	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C35	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C36	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 38.25'

PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C30 THRU P-C34	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C37 THRU P-C44	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C45	16"	T.O. SLAB ELEV. -22'	SEE GEOTECH.	70'
P-C46 THRU P-C50	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C51	16"	T.O. SLAB ELEV. -22'	SEE GEOTECH.	70'
P-C52 THRU P-C63	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C64 THRU P-C70	16"	T.O. SLAB ELEV. -72'	SEE GEOTECH.	70'
P-C71 THRU P-C89	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C90 THRU P-C92	16"	T.O. SLAB ELEV. -22'	SEE GEOTECH.	70'
P-C93 THRU P-C115	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'
P-C116	16"	T.O. SLAB ELEV. -22'	SEE GEOTECH.	70'
P-C117 THRU P-C119	16"	T.O. SLAB ELEV. -18'	SEE GEOTECH.	70'

PILE SCHEDULE NOTES:
1. ALLOWABLE PILE LOAD AFTER ACCOUNTING FOR DOWNDRAG FORCES IS 255 KIPS FOR 16" DIAMETER.
2. ANTICIPATED PILE EMBEDMENT INTO BEARING SURFACE IS 15 FEET.
3. PILE EMBEDMENT AND CAPACITY TO BE VERIFIED BY LOAD TESTING PROGRAM.
4. ANTICIPATED PILE LENGTH TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

STRUCTURAL DIAPHRAGM NOTE:
THE 21" & 17" CONCRETE SLAB IS A STRUCTURAL DIAPHRAGM. SLAB SHALL NOT BE MODIFIED WITHOUT PERFORMING A STRUCTURAL EVALUATION TO DETERMINE THE IMPACTS TO THE LATERAL PERFORMANCE OF THE DIAPHRAGM, GRADE BEAMS, AND PILES.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR. SWK CAD SWK PLOT 02/6/23	FILE 19010 S200 JOB #

Shelter HOLDINGS

Building C Pile Plan (South)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S2.01C

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 38.25'

PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C30 THRU P-C34	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C37 THRU P-C44	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C45	16"	T.O. SLAB ELEV. -22"	SEE GEOTECH.	70'
P-C46 THRU P-C50	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C51	16"	T.O. SLAB ELEV. -22"	SEE GEOTECH.	70'
P-C52 THRU P-C63	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C64 THRU P-C70	16"	T.O. SLAB ELEV. -72"	SEE GEOTECH.	70'
P-C71 THRU P-C89	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C90 THRU P-C92	16"	T.O. SLAB ELEV. -22"	SEE GEOTECH.	70'
P-C93 THRU P-C115	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'
P-C116	16"	T.O. SLAB ELEV. -22"	SEE GEOTECH.	70'
P-C117 THRU P-C119	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 37.75'

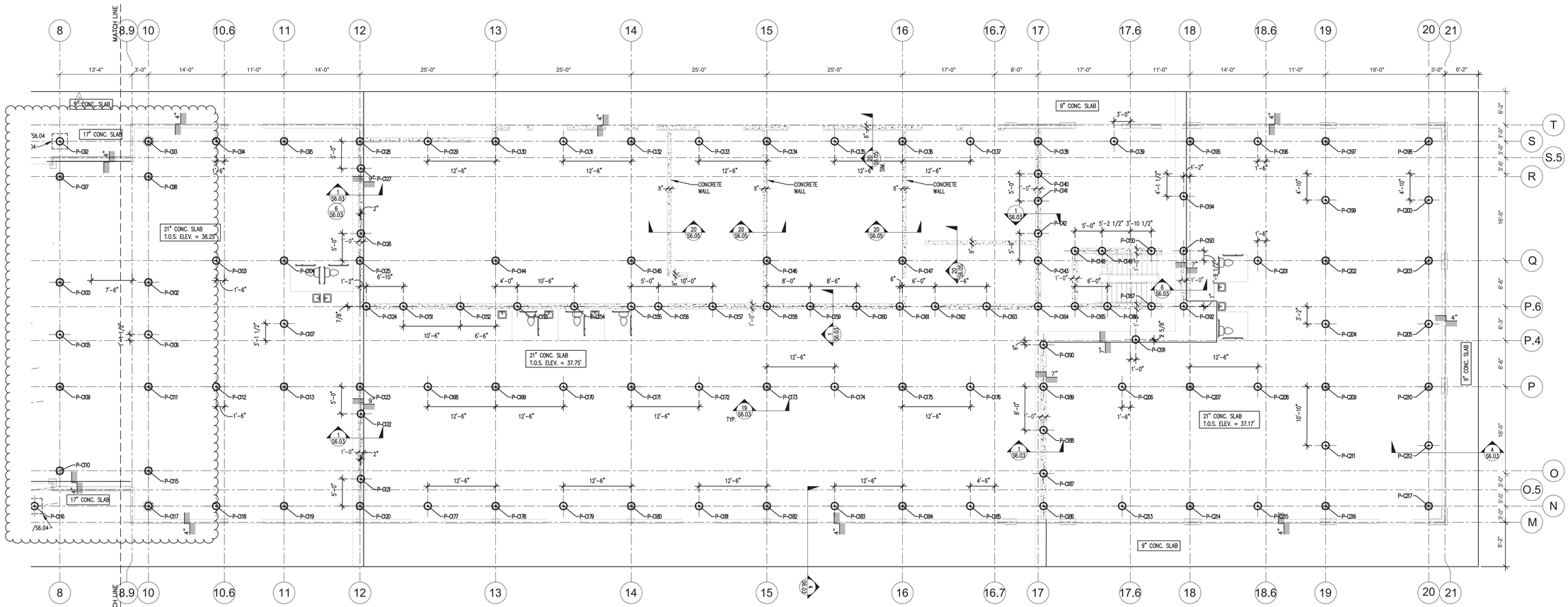
PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C120 THUR P-C185	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'

EVERETT RIVERFRONT - BUILDING C - T.O. SLAB ELEV. 37.17'

PILE NUMBER	DRIVEN GROUT PILE DIA.	T.O. PILE ELEVATION	ANTICIPATED SLEEVE DEPTH	ANTICIPATED PILE LENGTH
P-C186 THRU P-C217	16"	T.O. SLAB ELEV. -18"	SEE GEOTECH.	70'

STRUCTURAL DIAPHRAGM NOTE:
THE 21" & 17" CONCRETE SLAB IS A STRUCTURAL DIAPHRAGM. SLAB SHALL NOT BE MODIFIED WITHOUT PERFORMING A STRUCTURAL EVALUATION TO DETERMINE THE IMPACTS TO THE LATERAL PERFORMANCE OF THE DIAPHRAGM, GRADE BEAMS, AND PILES.

PILE SCHEDULE NOTES:
1. ALLOWABLE PILE LOAD AFTER ACCOUNTING FOR DOWNDRAG FORCES IS 255 KIPS FOR 16" DIAMETER.
2. ANTICIPATED PILE EMBEDMENT INTO BEARING SURFACE IS 15 FEET.
3. PILE EMBEDMENT AND CAPACITY TO BE VERIFIED BY LOAD TESTING PROGRAM.
4. ANTICIPATED PILE LENGTH TO BE VERIFIED BY GEOTECHNICAL ENGINEER.



Bldg. C Pile Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

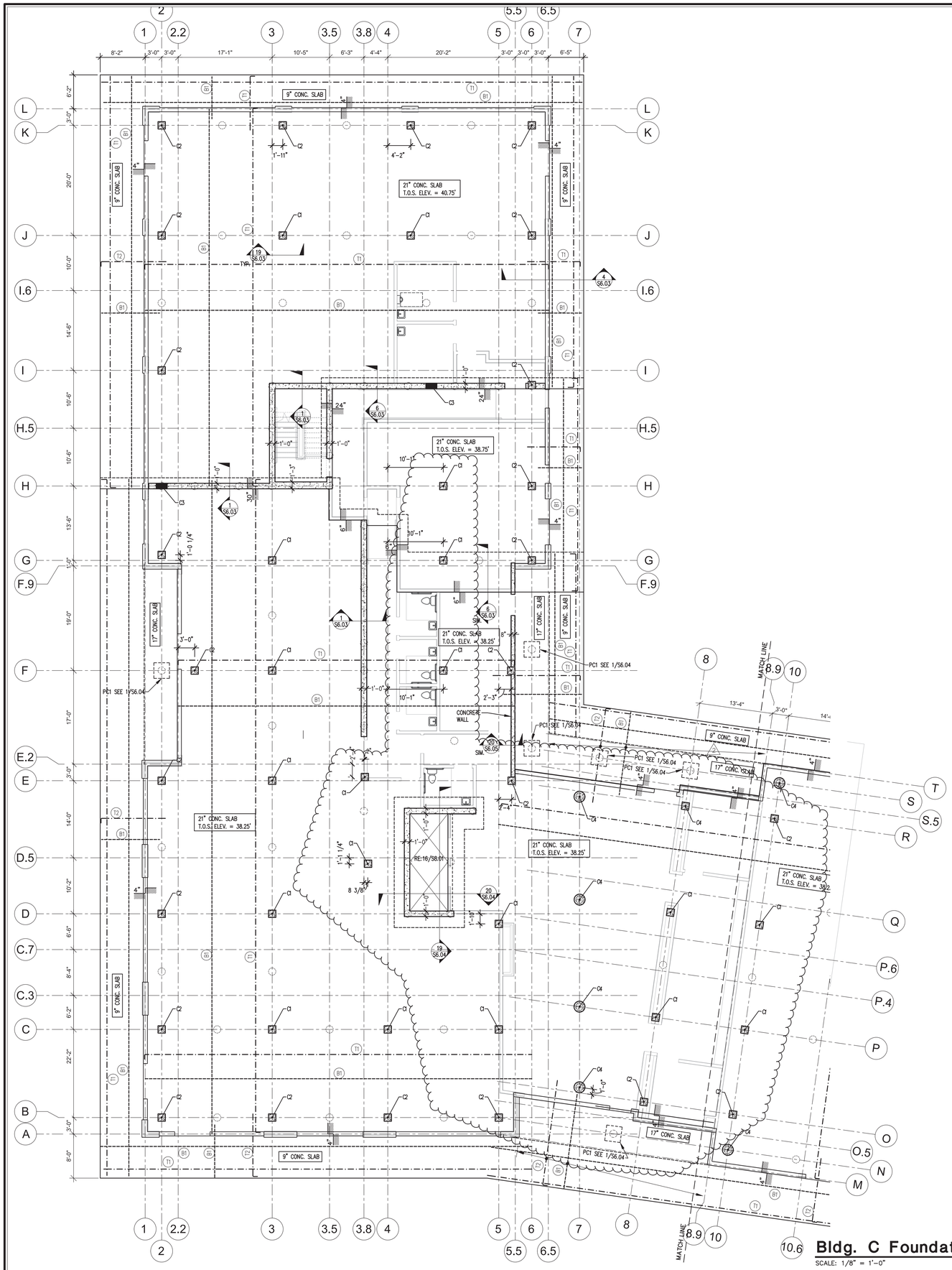
ENGR: SWK | CAD: SWK | PLOT: 02/6/23 | FILE: 19010 S200 | JOB #:

Shelter HOLDINGS

Building C Pile Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S2.02C



STRUCTURAL DIAPHRAGM NOTE:
THE 21" & 17" CONCRETE SLAB IS A STRUCTURAL DIAPHRAGM. SLAB SHALL NOT BE MODIFIED WITHOUT PERFORMING A STRUCTURAL EVALUATION TO DETERMINE THE IMPACTS TO THE LATERAL PERFORMANCE OF THE DIAPHRAGM, GRADE BEAMS, AND PILES.

Fdn. Reinforcing Keynotes

- (B1) #5 AT 12" O.C. BOT.
- (T1) #5 AT 12" O.C. TOP HOOK AT SLAB EDGE
- (T2) #6 AT 12" O.C. TOP HOOK AT SLAB EDGE

Bldg. C Foundation Plan (South)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK CAD: SWK PLOT: 02/16/23	JOB #: 19010 S200

Shelter HOLDINGS

Building C Foundation Plan (South)

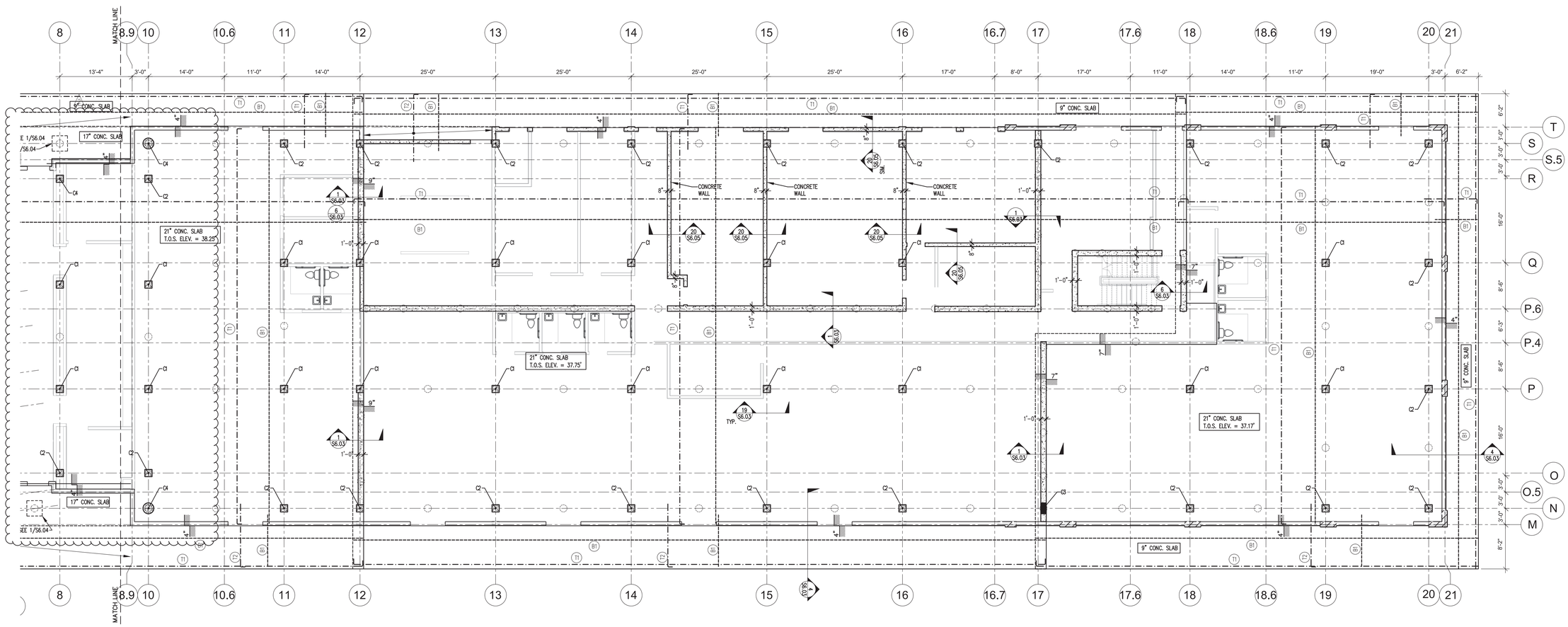
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S2.11C

STRUCTURAL DIAPHRAGM NOTE:
THE 21" & 17" CONCRETE SLAB IS A STRUCTURAL DIAPHRAGM. SLAB SHALL NOT BE MODIFIED WITHOUT PERFORMING A STRUCTURAL EVALUATION TO DETERMINE THE IMPACTS TO THE LATERAL PERFORMANCE OF THE DIAPHRAGM, GRADE BEAMS, AND PILES.

Fdn. Reinforcing Keynotes

- (B1) #5 AT 12" O.C. BOT.
- (T1) #5 AT 12" O.C. TOP HOOK AT SLAB EDGE
- (T2) #6 AT 12" O.C. TOP HOOK AT SLAB EDGE



Bldg. C Foundation Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Ste 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENVR: SNK CAD: SNK PLOT: 02/6/23 FILE: 19010 S200 JOB #:	

Shelter HOLDINGS

Building C Foundation Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S2.12C

Post Tension Slab Notes

1. ALL CONCRETE FOR POST TENSIONED SLABS TO BE f'c = 3000 PSI PRIOR TO STRESSING AND 5000 PSI @ 28 DAYS.
2. T = TOP
   B=BOTTOM MAT
   MD = MID DEPTH OF SLAB
3. TENDON ELEVATIONS INDICATED ARE MEASURED FROM BOTTOM OF SLAB TO C.G.S. OF 1/2" DIAMETER TENDON. NOTE: TENDON ELEVATIONS MARKED WITH AN ASTERISK (I.E. *17 3/4") ARE MEASURED FROM BOTTOM OF DROPPED SOFFIT TO C.G.S. OF 1/2" DIAMETER TENDON.
4. REBAR PARALLEL TO BANDED TENDONS SHALL BE AT TOP UPPER MAT. REBAR PERPENDICULAR TO BANDED TENDONS SHALL BE TOP BARS AT LOWER MAT.
5. DASHED LINES INDICATE WALLS BELOW THIS LEVEL, SOLID LINES INDICATE WALLS AT THIS LEVEL.
6. SLAB OPENINGS – SEE DETAILS 6–9, 11–12/S7.02
7. COLUMN PENETRATION – SEE DETAIL 19/S6.03
8. STRESSING END (2 & 4 / S7.01)
   ANCHOR END (1 & 3 / S7.01)
   ADDED TENDON ANCHOR (18 / S7.01)
9. PROVIDE MINIMUM OF (2) DISTRIBUTED TENDONS OVER CONCRETE COLUMNS.
10. CONCRETE ELEVATION LEGEND:
    - 36.0' — TOP OF CONCRETE ELEVATION
    - T.O.W. 34.5 — TOP OF CONCRETE WALL ELEVATION
    - C1 — CONCRETE COLUMN
11. 3" STEP IN SLAB; 3" STEP IN SOFFIT
12. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROPOSED SLAB PENETRATIONS OR OPENINGS NOT SHOWN ON THESE DRAWINGS PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ACCURATE PLANS ILLUSTRATING LOCATION AND SIZE OF ALL ITEMS TO BE EMBEDDED IN SLAB INCLUDING ELECTRICAL CONDUIT, PLUMBING, DRAINS, ETC..
14. STUDRAIL LEGEND – SEE DETAILS S7.03

SR–A/10/6/3.0/4.75/1–4"
- ONE 4" PENETRATION ALLOWED "NP" NO PENETRATIONS ALLOWED (12 / S7.03)
- SPACING BETWEEN RAILS
- FIRST SPACING So
- NUMBER OF STUDS PER RAIL
- QUANTITY OF STUDRAILS
- STUDRAIL CONFIGURATION TYPE (1 / S7.03)

Note: ALL SECTION CUTS ARE TYPICAL

Bldg. C Level 2 PT Slab Plan

SCALE: 1/8" = 1'–0"

REFERENCE

GRAPHIC SCALE
–8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.0512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK | CAD: SWK | PLOT: 02/6/23	FILE: 19010 S301
		JOB #:

Shelter HOLDINGS

Building C - Level 2 PT Plan (South)
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

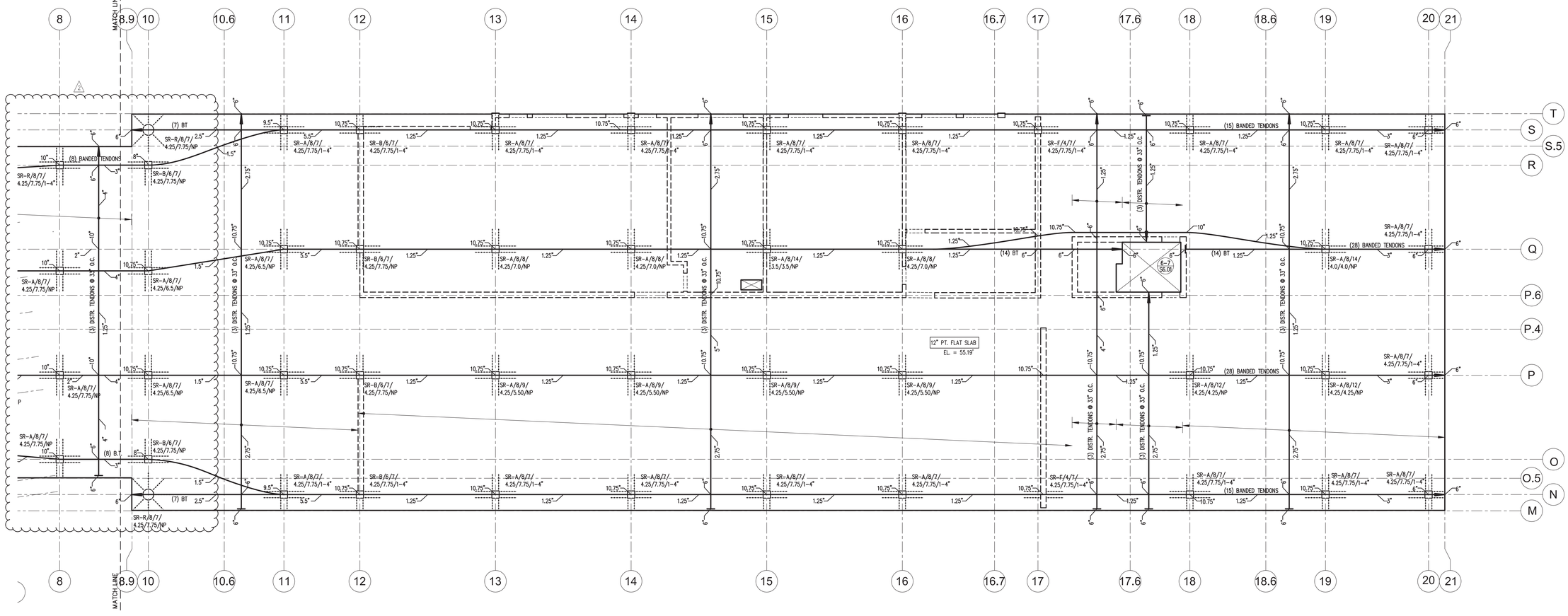
S3.11C

Post Tension Slab Notes

1. ALL CONCRETE FOR POST TENSIONED SLABS TO BE f'c = 3000 PSI PRIOR TO STRESSING AND 5000 PSI @ 28 DAYS.
2. T = TOP
   B=BOTTOM MAT
   MD = MID DEPTH OF SLAB
3. TENDON ELEVATIONS INDICATED ARE MEASURED FROM BOTTOM OF SLAB TO C.G.S. OF 1/2" DIAMETER TENDON. NOTE: TENDON ELEVATIONS MARKED WITH AN ASTERISK (I.E. *17 3/4") ARE MEASURED FROM BOTTOM OF DROPPED SOFFIT TO C.G.S. OF 1/2" DIAMETER TENDON.
4. REBAR PARALLEL TO BANDED TENDONS SHALL BE AT TOP UPPER MAT. REBAR PERPENDICULAR TO BANDED TENDONS SHALL BE TOP BARS AT LOWER MAT.
5. DASHED LINES INDICATE WALLS BELOW THIS LEVEL, SOLID LINES INDICATE WALLS AT THIS LEVEL.
6. SLAB OPENINGS – SEE DETAILS 6–9, 11–12/S7.02
7. COLUMN PENETRATION – SEE DETAIL 19/S6.03
8. STRESSING END (2 / S7.01)
   ANCHOR END (3 / S7.01)
   ADDED TENDON ANCHOR (18 / S7.01)
9. PROVIDE MINIMUM OF (2) DISTRIBUTED TENDONS OVER CONCRETE COLUMNS.
10. CONCRETE ELEVATION LEGEND:
    - 36.0 / T.O.W. 34.5 — TOP OF CONCRETE ELEVATION / TOP OF CONCRETE WALL ELEVATION
    - C1 — CONCRETE COLUMN
11. 3" STEP IN SLAB 3" STEP IN SOFFIT
12. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROPOSED SLAB PENETRATIONS OR OPENINGS NOT SHOWN ON THESE DRAWINGS PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ACCURATE PLANS ILLUSTRATING LOCATION AND SIZE OF ALL ITEMS TO BE EMBEDDED IN SLAB INCLUDING ELECTRICAL CONDUIT, PLUMBING, DRAINS, ETC..
14. STUDRAIL LEGEND – SEE DETAILS S7.03

    SR–A/10/6/3.0/4.75/1–4"
    - ONE 4" PENETRATION ALLOWED "NP" NO PENETRATIONS ALLOWED (12 / S7.03)
    - SPACING BETWEEN RAILS
    - FIRST SPACING So
    - NUMBER OF STUDS PER RAIL
    - QUANTITY OF STUDRAILS
    - STUDRAIL CONFIGURATION TYPE (1 / S7.03)

Note:
ALL SECTION CUTS ARE TYPICAL



Bldg. C Level 2 PT Slab Plan

SCALE: 1/8" = 1'–0"

REFERENCE

GRAPHIC SCALE
–8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.0512 (V) 206.285.0618 (F)

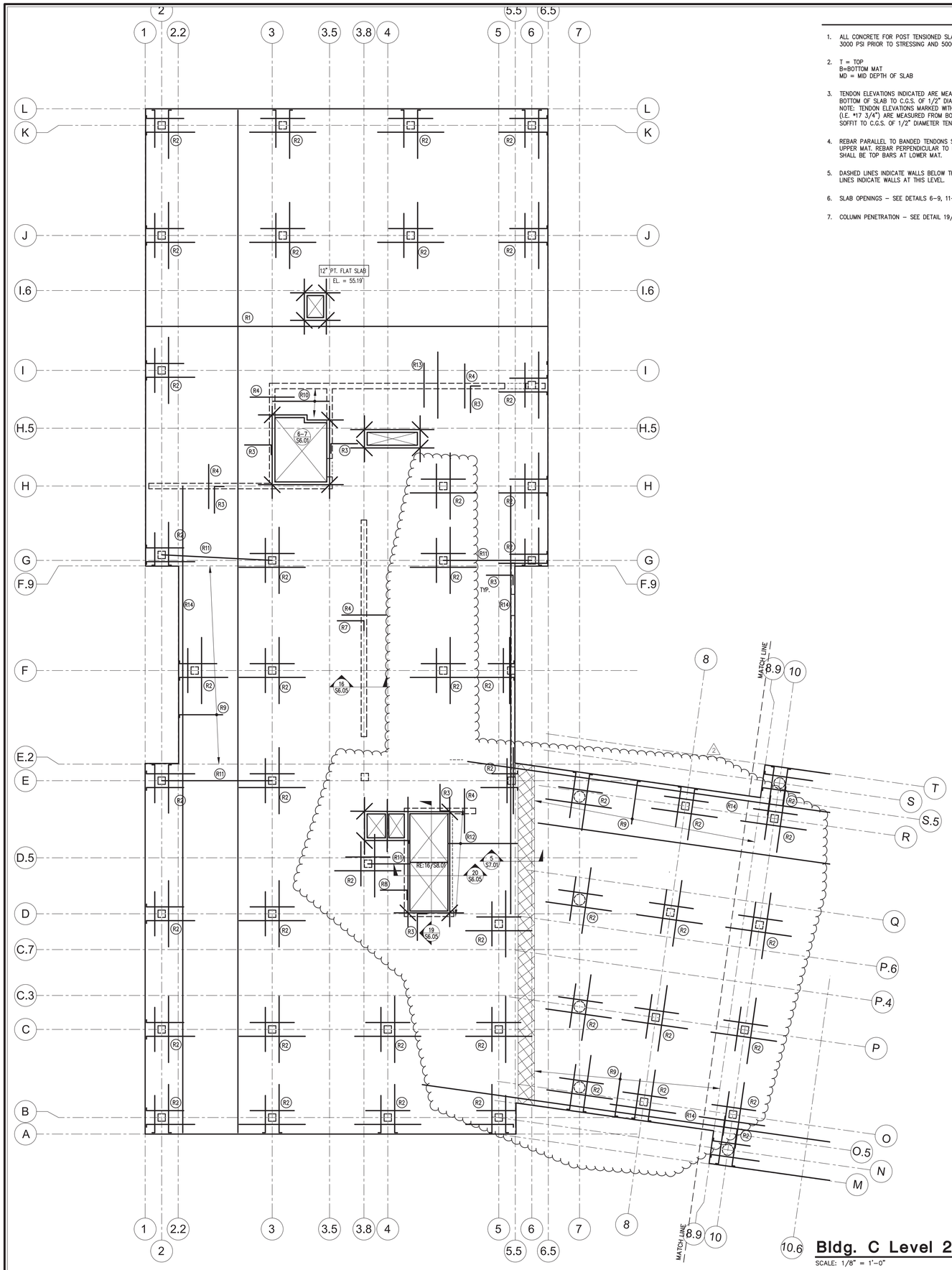
NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR. SWK CAD SWK PLOT 02/6/23	FILE 19010 S301
		JOB #

Shelter HOLDINGS

Building C - Level 2 PT Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S3.12C



Bldg. C Level 2 Reinf. Slab Plan

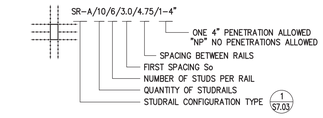
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

Post Tension Slab Notes

1. ALL CONCRETE FOR POST TENSIONED SLABS TO BE f'c = 3000 PSI PRIOR TO STRESSING AND 5000 PSI @ 28 DAYS.
2. T = TOP
   B=BOTTOM MAT
   MD = MID DEPTH OF SLAB
3. TENDON ELEVATIONS INDICATED ARE MEASURED FROM BOTTOM OF SLAB TO C.G.S. OF 1/2" DIAMETER TENDON. NOTE: TENDON ELEVATIONS MARKED WITH AN ASTERISK (I.E. *17 3/4") ARE MEASURED FROM BOTTOM OF DROPPED SOFFIT TO C.G.S. OF 1/2" DIAMETER TENDON.
4. REBAR PARALLEL TO BANDED TENDONS SHALL BE AT TOP UPPER MAT. REBAR PERPENDICULAR TO BANDED TENDONS SHALL BE TOP BARS AT LOWER MAT.
5. DASHED LINES INDICATE WALLS BELOW THIS LEVEL, SOLID LINES INDICATE WALLS AT THIS LEVEL.
6. SLAB OPENINGS – SEE DETAILS 6–9, 11–12/S7.02
7. COLUMN PENETRATION – SEE DETAIL 19/S6.03
8. STRESSING END — 2 / S7.01
   ANCHOR END — 1 / S7.01
   ADDED TENDON ANCHOR — 18 / S7.01
9. PROVIDE MINIMUM OF (2) DISTRIBUTED TENDONS OVER CONCRETE COLUMNS.
10. CONCRETE ELEVATION LEGEND:
    38.5 — TOP OF CONCRETE ELEVATION
    T.O.W. 34.5 — TOP OF CONCRETE WALL ELEVATION
    C1 — CONCRETE COLUMN
11. 3" STEP IN SLAB 3" STEP IN SOFFIT
12. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROPOSED SLAB PENETRATIONS OR OPENINGS NOT SHOWN ON THESE DRAWINGS PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ACCURATE PLANS ILLUSTRATING LOCATION AND SIZE OF ALL ITEMS TO BE EMBEDDED IN SLAB INCLUDING ELECTRICAL CONDUIT, PLUMBING, DRAINS, ETC..
14. STUDRAIL LEGEND – SEE DETAILS S7.03



Note:
ALL SECTION CUTS ARE TYPICAL

Reinforcing Keynotes

- (R1) #5 AT 24" O.C. BOTTOM EACH WAY
- (R2) (12) #5 X 12'-0" TOP EACH WAY & (4) #5 X 8'-0" BOTTOM EACH WAY HOOK TOP AND BOTTOM AT SLAB EDGE COLUMN REINFORCING, TYPICAL, U.N.O.
- (R3) #5 AT 12" O.C. T. TYPICAL AT ALL CONCRETE WALLS ALTERNATE HOOKS AT INTERIOR WALLS — 4'-0"
- (R4) #5 X 8'-0" AT 12" O.C. T. TYPICAL AT INTERIOR CONCRETE WALLS
- (R5) TYPICAL CORNER REINFORCING RE: 16/S7.02
- (R6) TYPICAL TRIM BARS AT REENTRANT CORNERS RE: 14/S7.02
- (R7) (2) #5 AT 12" O.C. T. ALTERNATE HOOKS AT INTERIOR WALLS — 4'-0"
- (R8) (2) #5 AT 8" O.C. T. ALTERNATE HOOKS AT INTERIOR WALLS — 4'-0"
- (R9) #5 X 12'-0" AT 12" O.C. T., AT CANTILEVERS HOOK AT SLAB EDGE
- (R10) #5 @ 12" O.C. B.
- (R11) (14) #6 @ 4" O.C. B. CENTER ON COLUMN
- (R12) ADD #5 @ 12" O.C. B.
- (R13) (12) #5 X 12'-0" T. & (4) #5 X 8'-0" B. HOOK AT SLAB EDGE
- (R14) (4) #6 CONT. @ 4" O.C. M.D. HOOK AT SLAB EDGE

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR. SMK | CAD. SMK | PLOT 02/6/23 | FILE 19010 S301
JOB #:

Shelter HOLDINGS

Building 1-C - Level 2 Reinforcement Plan

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S3.21C

Post Tension Slab Notes

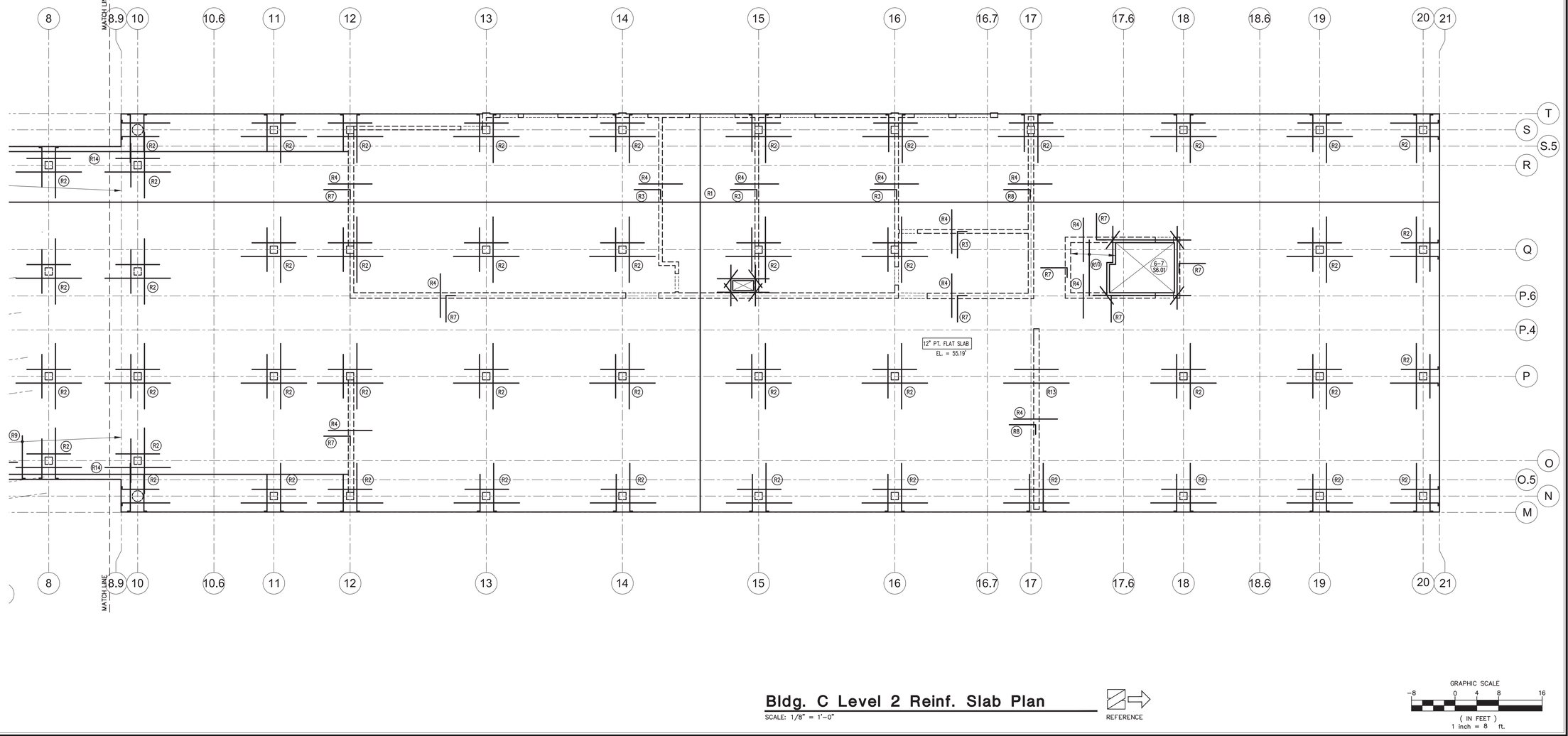
1. ALL CONCRETE FOR POST TENSIONED SLABS TO BE f'c = 3000 PSI PRIOR TO STRESSING AND 5000 PSI @ 28 DAYS.
2. T = TOP
   B=BOTTOM MAT
   MD = MID DEPTH OF SLAB
3. TENDON ELEVATIONS INDICATED ARE MEASURED FROM BOTTOM OF SLAB TO C.G.S. OF 1/2" DIAMETER TENDON.
   NOTE: TENDON ELEVATIONS MARKED WITH AN ASTERISK (I.E. *17 3/4") ARE MEASURED FROM BOTTOM OF DROPPED SOFFIT TO C.G.S. OF 1/2" DIAMETER TENDON.
4. REBAR PARALLEL TO BANDED TENDONS SHALL BE AT TOP UPPER MAT. REBAR PERPENDICULAR TO BANDED TENDONS SHALL BE TOP BARS AT LOWER MAT.
5. DASHED LINES INDICATE WALLS BELOW THIS LEVEL, SOLID LINES INDICATE WALLS AT THIS LEVEL.
6. SLAB OPENINGS – SEE DETAILS 6–9, 11–12/S7.02
7. COLUMN PENETRATION – SEE DETAIL 19/S6.03
8. STRESSING END — 2 / S7.01
   ANCHOR END — 3 / S7.01
   ADDED TENDON ANCHOR — 18 / S7.01
9. PROVIDE MINIMUM OF (2) DISTRIBUTED TENDONS OVER CONCRETE COLUMNS.
10. CONCRETE ELEVATION LEGEND:
    - 36.5 — TOP OF CONCRETE ELEVATION
    - T.O.W. 34.5 — TOP OF CONCRETE WALL ELEVATION
    - C1 — CONCRETE COLUMN
11. 3" STEP IN SLAB; 3" STEP IN SOFFIT
12. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROPOSED SLAB PENETRATIONS OR OPENINGS NOT SHOWN ON THESE DRAWINGS PRIOR TO CONSTRUCTION.
13. CONTRACTOR SHALL SUBMIT TO THE ENGINEER ACCURATE PLANS ILLUSTRATING LOCATION AND SIZE OF ALL ITEMS TO BE EMBEDDED IN SLAB INCLUDING ELECTRICAL CONDUIT, PLUMBING, DRAINS, ETC..
14. STUDRAIL LEGEND – SEE DETAILS S7.03

    SR–A/10/6/3.0/4.75/1–4"
    - ONE 4" PENETRATION ALLOWED "NP" NO PENETRATIONS ALLOWED — 1.2 / S7.03
    - SPACING BETWEEN RAILS
    - FIRST SPACING So
    - NUMBER OF STUDS PER RAIL
    - QUANTITY OF STUDRAILS
    - STUDRAIL CONFIGURATION TYPE — 1 / S7.03

Note: ALL SECTION CUTS ARE TYPICAL

Reinforcing Keynotes

- R1 #5 AT 24" O.C. BOTTOM EACH WAY
- R2 (12) #5 X 12'–0" TOP EACH WAY & (4) #5 X 8'–0" BOTTOM EACH WAY HOOK TOP AND BOTTOM AT SLAB EDGE COLUMN REINFORCING, TYPICAL, U.N.O.
- R3 #5 AT 12" O.C. T. TYPICAL AT ALL CONCRETE WALLS ALTERNATE HOOKS AT INTERIOR WALLS — 4'–0"
- R4 #5 X 8'–0" AT 12" O.C. T. TYPICAL AT INTERIOR CONCRETE WALLS
- R5 TYPICAL CORNER REINFORCING RE: 16/S7.02
- R6 TYPICAL TRIM BARS AT REENTRANT CORNERS RE: 14/S7.02
- R7 (2) #5 AT 12" O.C. T. ALTERNATE HOOKS AT INTERIOR WALLS — 4'–0"
- R8 (2) #5 AT 8" O.C. T. ALTERNATE HOOKS AT INTERIOR WALLS — 4'–0"
- R9 #5 X 12'–0" AT 12" O.C. T., AT CANTILEVERS HOOK AT SLAB EDGE
- R10 #5 @ 12" O.C. B.
- R11 (14) #6 @ 4" O.C. B. CENTER ON COLUMN
- R12 ADD #5 @ 12" O.C. B.
- R13 (12) #5 X 12'–0" T. & (4) #5 X 8'–0" B. HOOK AT SLAB EDGE
- R14 (4) #6 CONT. @ 4" O.C. M.D. HOOK AT SLAB EDGE



Bldg. C Level 2 Reinf. Slab Plan

SCALE: 1/8" = 1'–0"

REFERENCE

GRAPHIC SCALE
–8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

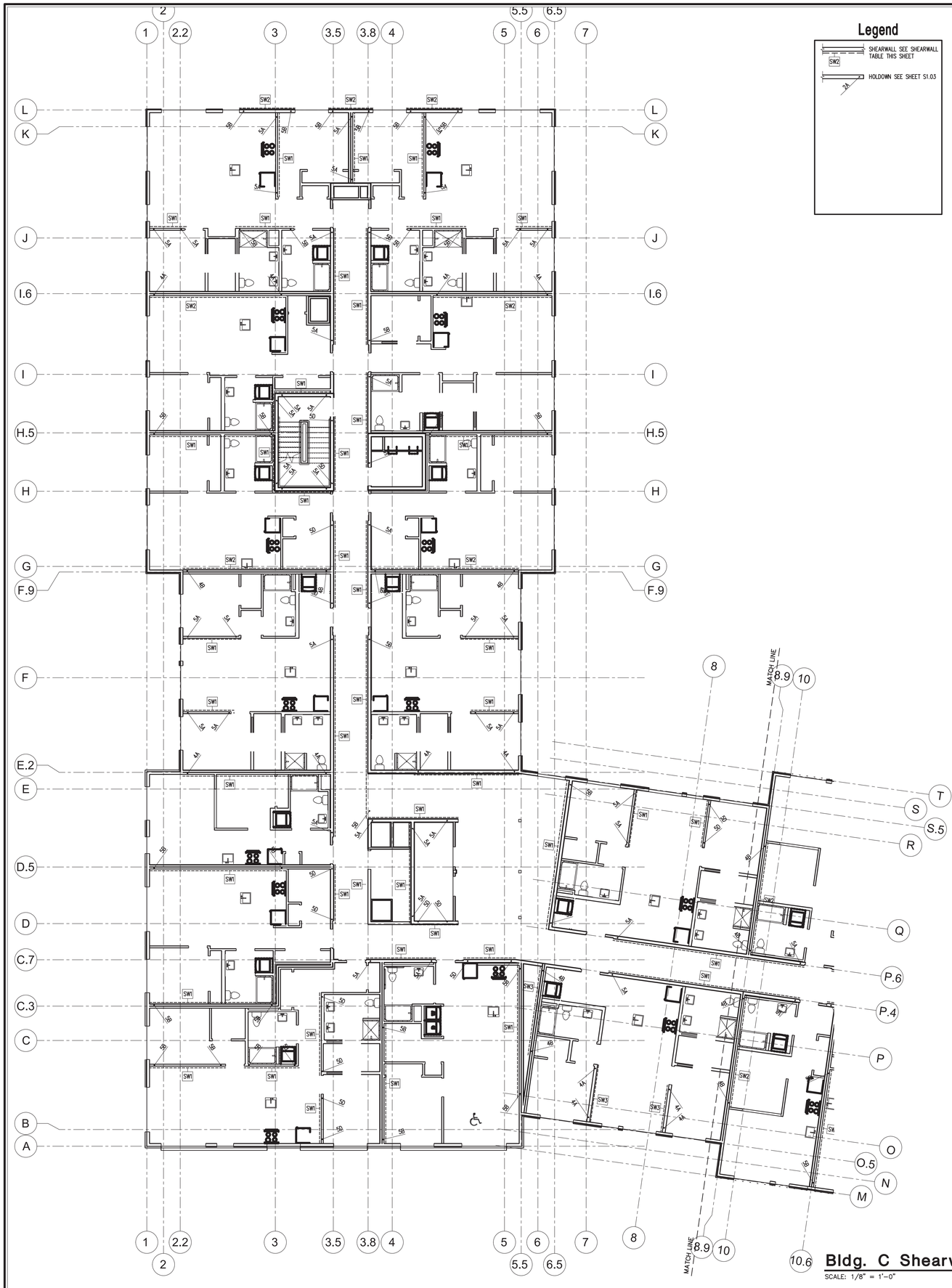
NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK CAD: SWK PLOT: 02/6/23 FILE: 19010 S301	JOB #:

Shelter HOLDINGS

Building 1-C - Level 2 Reinforcement Plan

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S3.22C



Legend

SW2 — SHEARWALL SEE SHEARWALL TABLE THIS SHEET

2X — HOLDOWN SEE SHEET S1.03

Shearwall Table

TYPE	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
SW1	P2	P2	P3	P4	P6
SW2	P3	P3	P4	P4	P6
SW3	P3	P3	P4	P4	--
SW4	P2-T	P2	P2	P4	P6

Shearwall/Holdown Plan Notes

1. ALL PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
2. FRAMING MEMBERS AND SHEATHING SHALL BE PER STRUCTURAL NOTES AS NOTED ON SHEET S1.01.
3. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. RE: SHEARWALL SCHEDULE ON SHEET S1.02.
4. PROVIDE BLOCKING ATOP SHEARWALLS PER SHEARWALL SCHEDULE SHEET S1.02.
5. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
6. ALL EXTERIOR WALLS SHALL BE SHEATHED W/PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL U.N.O.
7. SEE SHEET S1.02 FOR SHEARWALL SCHEDULE AND DETAILS.
8. SEE SHEET S1.03 & S1.04 FOR HOLDOWN SCHEDULE AND DETAILS.
9. SEE SHEARWALL SCHEDULE ON SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING, AND PLATE NAILING.
10. SEE HOLDOWN SCHEDULE ON SHEET S1.03 FOR ADDITIONAL STUDS.
11. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
12. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.

Bldg. C Shearwall & Holdown Plan (South)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Ste. 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
1	COORDINATION	12/13/22
	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SMK | CAD: SMK | PLOT: 02/6/23 | FILE: 19010 S309

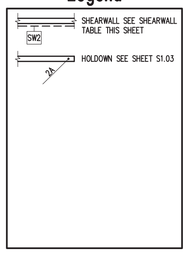
JOB #:

Shelter HOLDINGS

Building C Shearwall & Holdown Plan (South)
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S3.91C

Legend

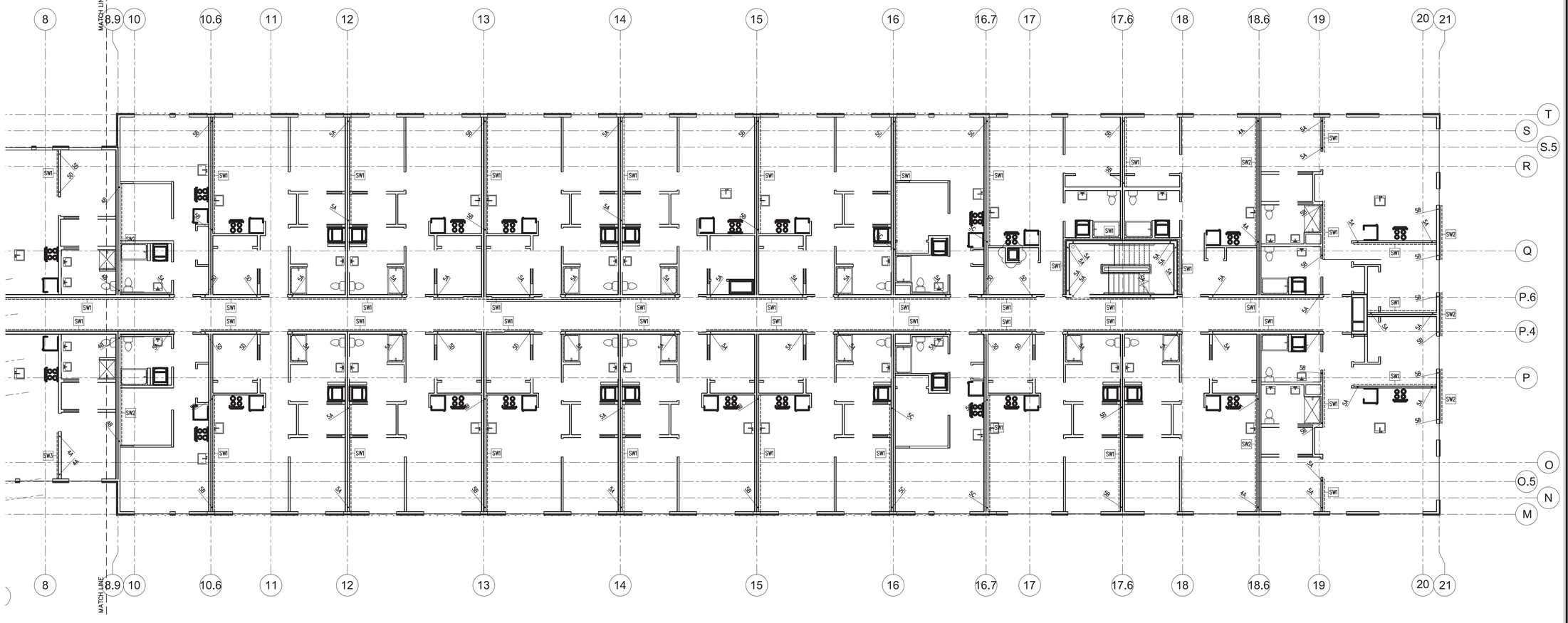


Shearwall Table

TYPE	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
SW1	P2	P2	P3	P4	P6
SW2	P3	P3	P4	P4	P6
SW3	P3	P3	P4	P4	--
SW4	P2-T	P2	P2	P4	P6

Shearwall/Holdown Plan Notes

1. ALL PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
2. FRAMING MEMBERS AND SHEATHING SHALL BE PER STRUCTURAL NOTES AS NOTED ON SHEET S1.01.
3. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. RE: SHEARWALL SCHEDULE ON SHEET S1.02.
4. PROVIDE BLOCKING ATOP SHEARWALLS PER SHEARWALL SCHEDULE SHEET S1.02.
5. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
6. ALL EXTERIOR WALLS SHALL BE SHEATHED W/PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL U.N.O.
7. SEE SHEET S1.02 FOR SHEARWALL SCHEDULE AND DETAILS.
8. SEE SHEET S1.03 & S1.04 FOR HOLDOWN SCHEDULE AND DETAILS.
9. SEE SHEARWALL SCHEDULE ON SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING, AND PLATE NAILING.
10. SEE HOLDOWN SCHEDULE ON SHEET S1.03 FOR ADDITIONAL STUDS.
11. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
12. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.



Bldg. C Shearwall & Holdown Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Ste. 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

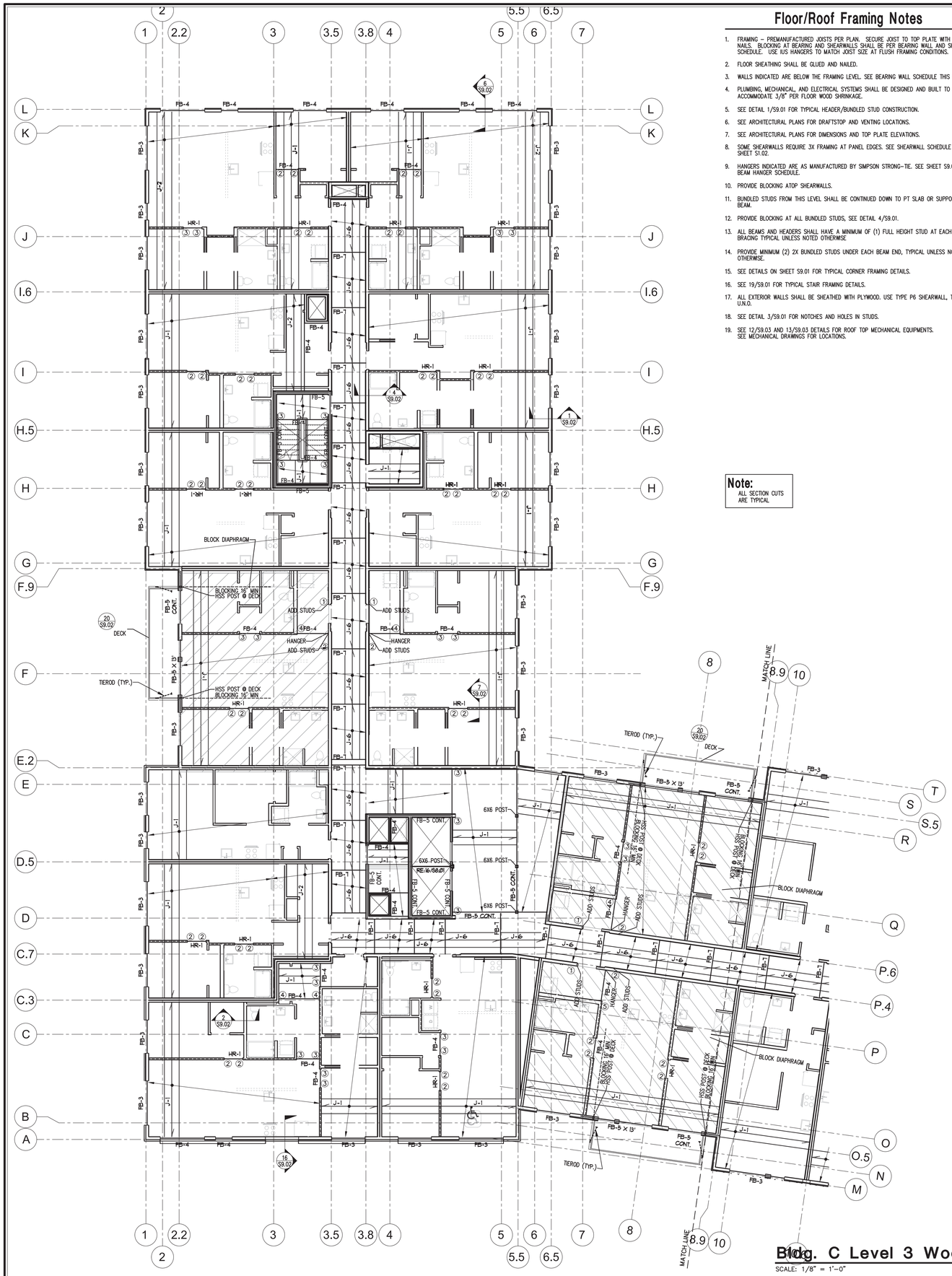
ENGR: SWK | CAD: SWK | PLOT: 02/6/23 | FILE: 19010 S309 | JOB #:

Shelter HOLDINGS

Building C Shearwall & Holdown Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S3.92C

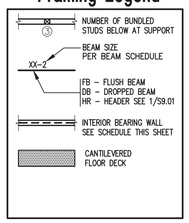


Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Bldg. C Level 3 Wood Framing Plan (South)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SNK | C.A.D: SNK | PLOT: 02/16/23 | FILE: 19010 S401 | JOB #:

Shelter HOLDINGS

Building C - Level 3 Wood Framing Plan (South)

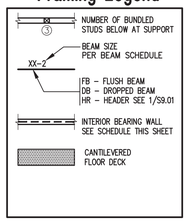
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.11C

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

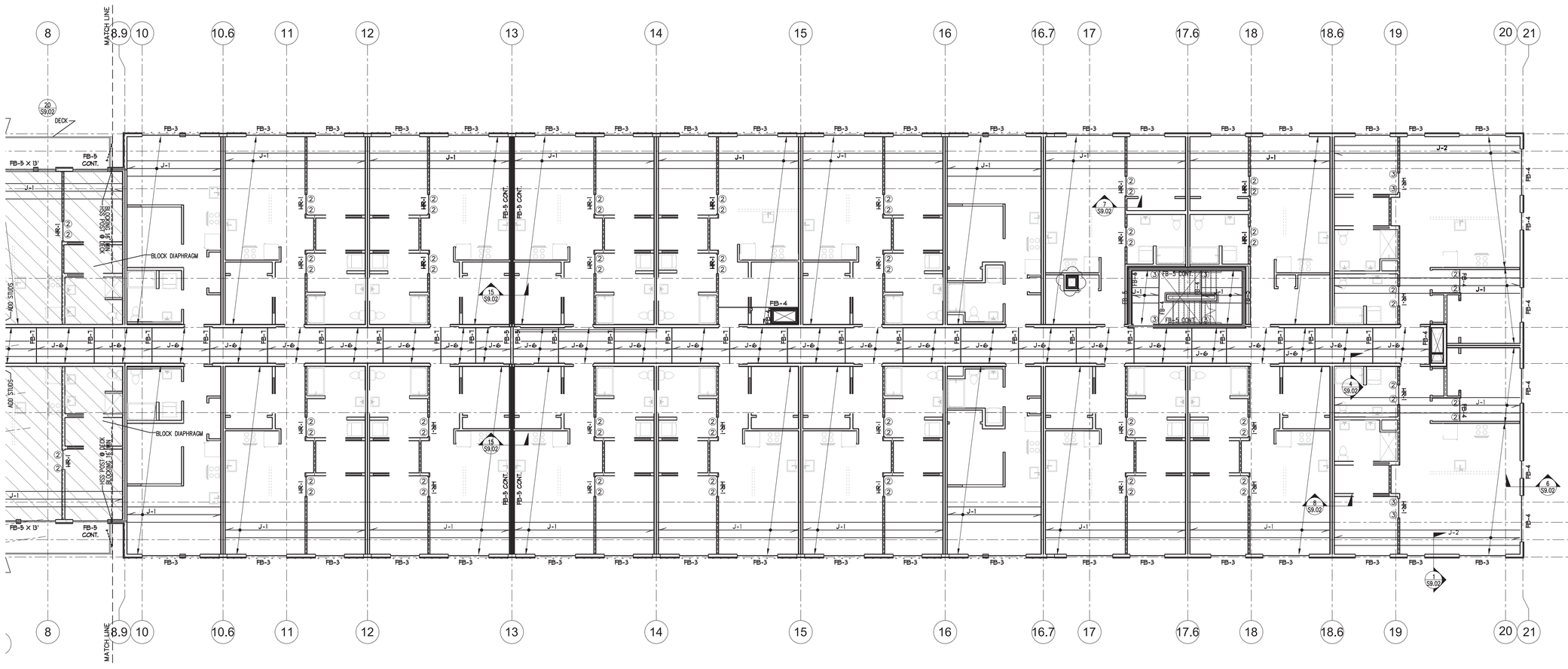
WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Note:
ALL SECTION CUTS ARE TYPICAL



Bldg. C Level 3 Wood Framing Plan (North)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

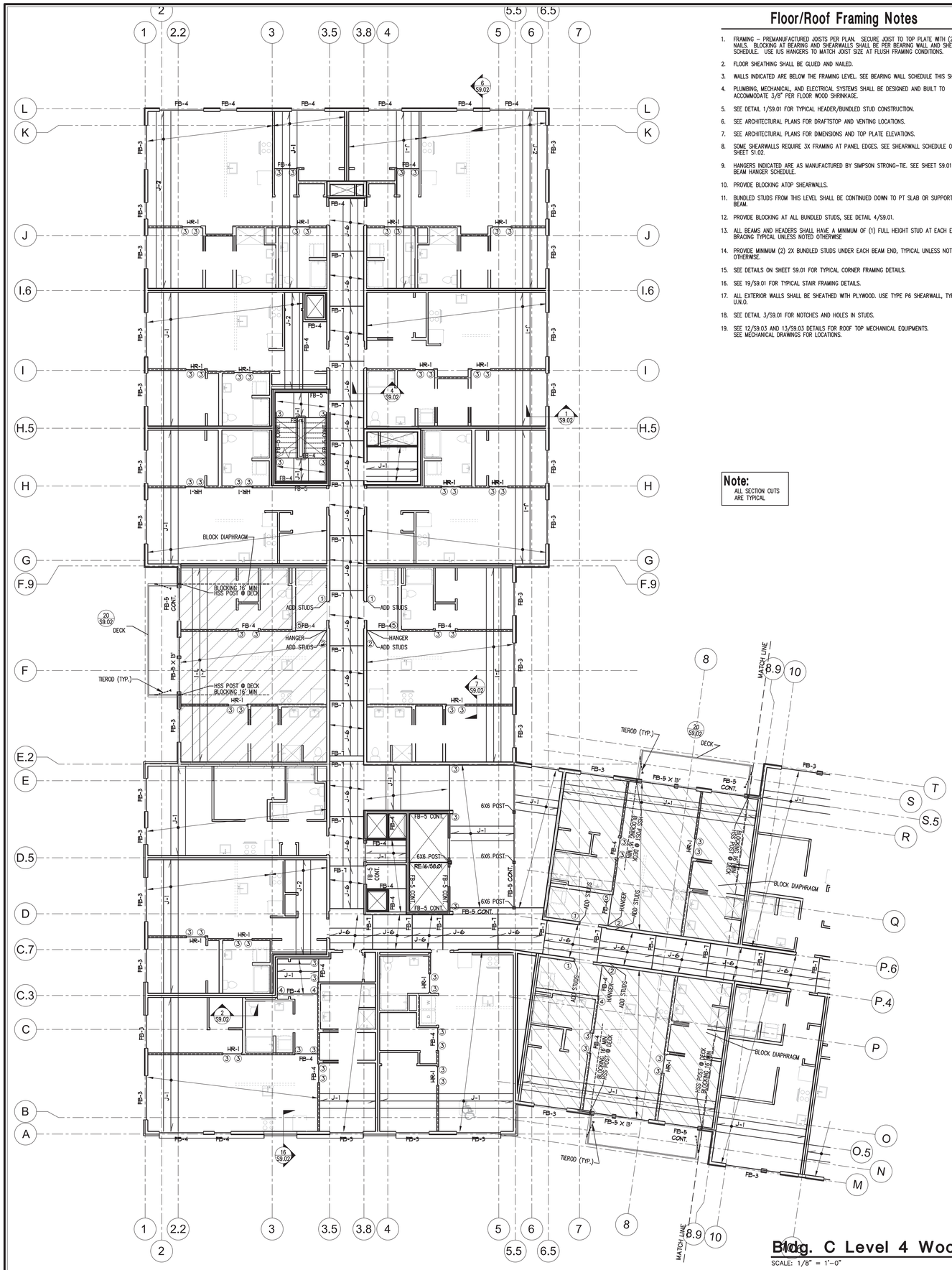
NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SNK CAD: SNK PLOT: 02/16/23	FILE: 19010 S401 JOB #:

Shelter HOLDINGS

Building C - Level 3 Wood Framing Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.12C

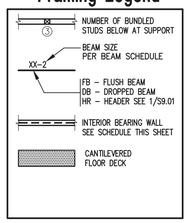


Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Bldg. C Level 4 Wood Framing Plan (South)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SNK CAD: SNK PLOT: 02/16/23	FILE: 19010 S402
		JOB #

Shelter HOLDINGS

Building C - Level 4 Wood Framing Plan (South)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

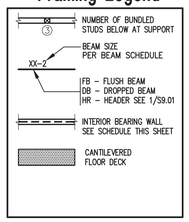
S4.21C

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWSE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWSE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

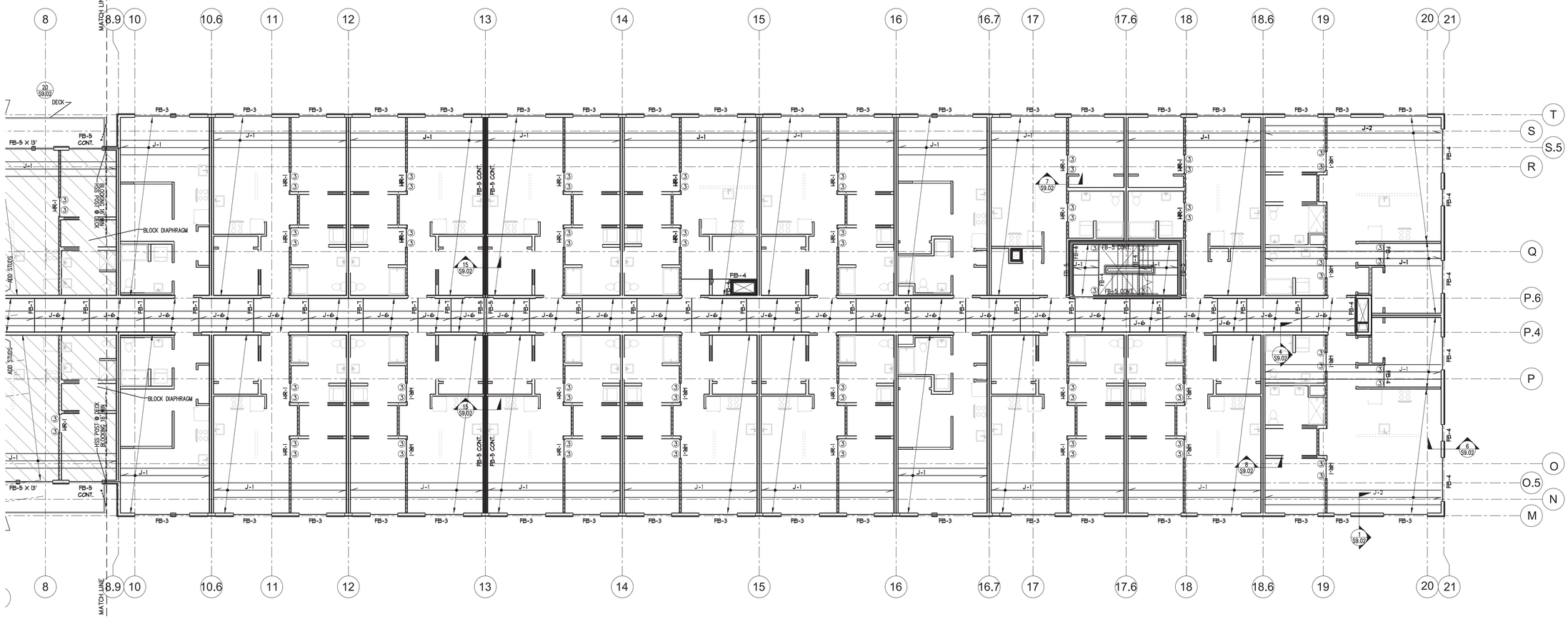
TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES
1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2



Bldg. C Level 4 Wood Framing Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

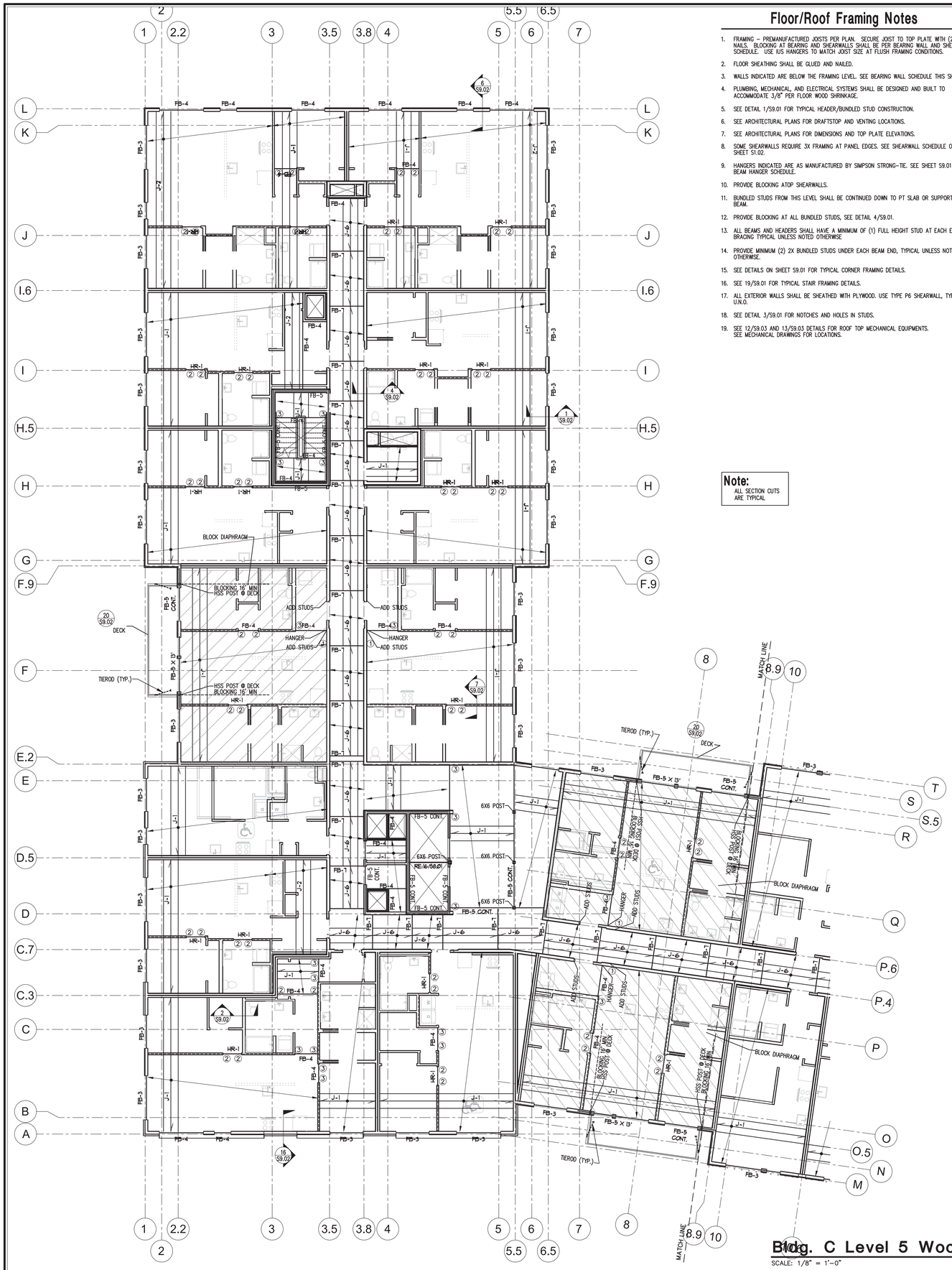
ENGR: SWK | C.A.D: SWK | PLOT: 02/6/23 | FILE: 19010 S402 | JOB #:

Shelter HOLDINGS

Building C - Level 4 Wood Framing Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.22C

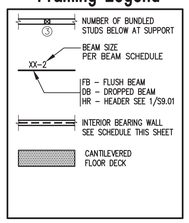


Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Bldg. C Level 5 Wood Framing Plan (South)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SNK | C.A.D: SNK | PLOT: 02/16/23 | FILE: 19010 S403 | JOB #:

Shelter HOLDINGS

Building C - Level 5 Wood Framing Plan (South)

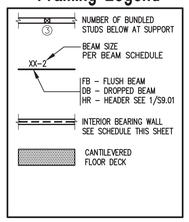
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.31C

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWSE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWSE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

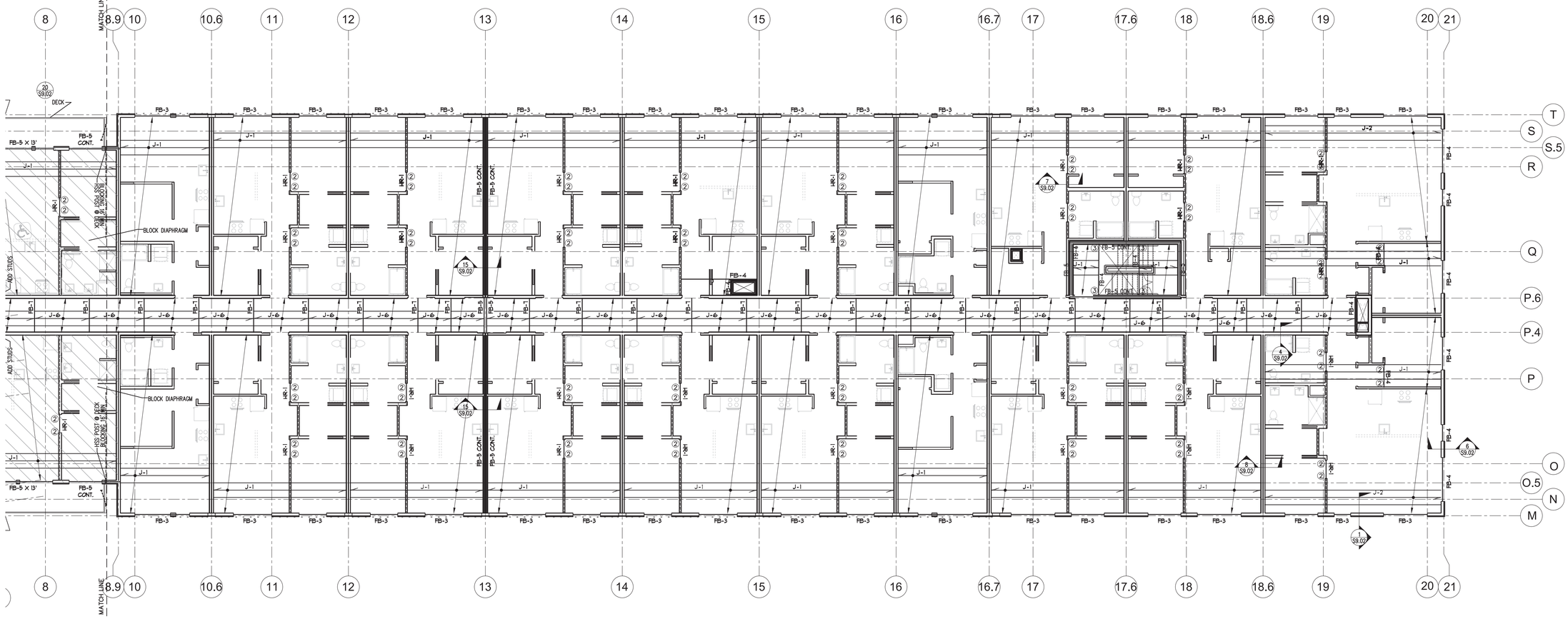
WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Note:
ALL SECTION CUTS ARE TYPICAL



Bldg. C Level 5 Wood Framing Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

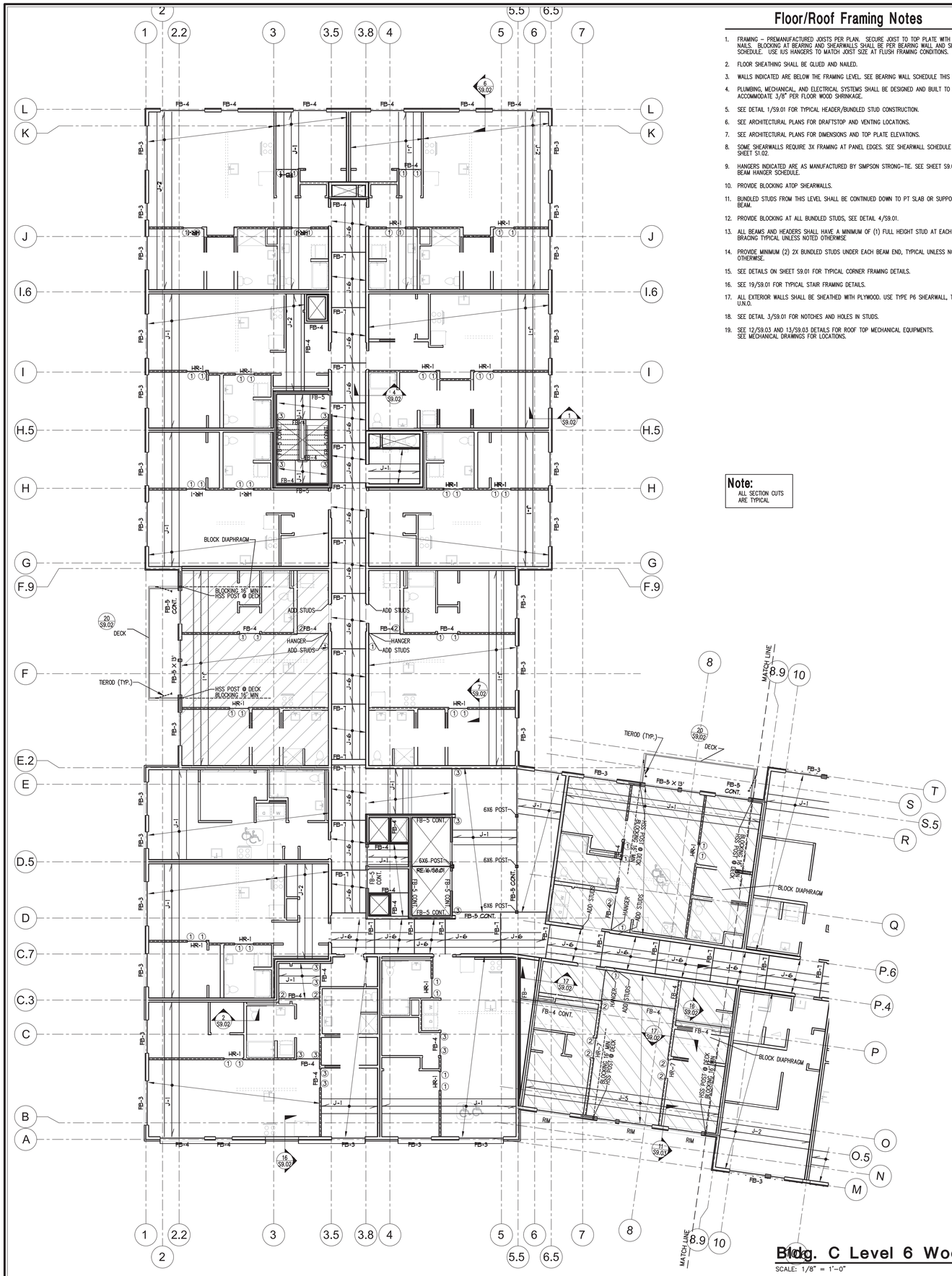
ENGR: SWK | C.A.D: SWK | PLOT: 02/6/23 | FILE: 19010 3403 | JOB #:

Shelter HOLDINGS

Building C - Level 5 Wood Framing Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.32C

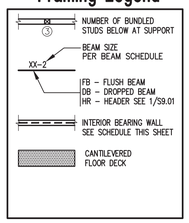


Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES
1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Bldg. C Level 6 Wood Framing Plan (South)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SMK | C.A.D: SMK | PLOT: 02/16/23 | FILE: 19010 S4041 | ADP #:

Shelter HOLDINGS

Building C - Level 6 Wood Framing Plan (South)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

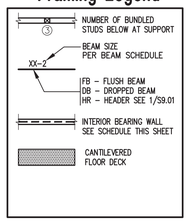
S4.41C

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWSE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWSE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

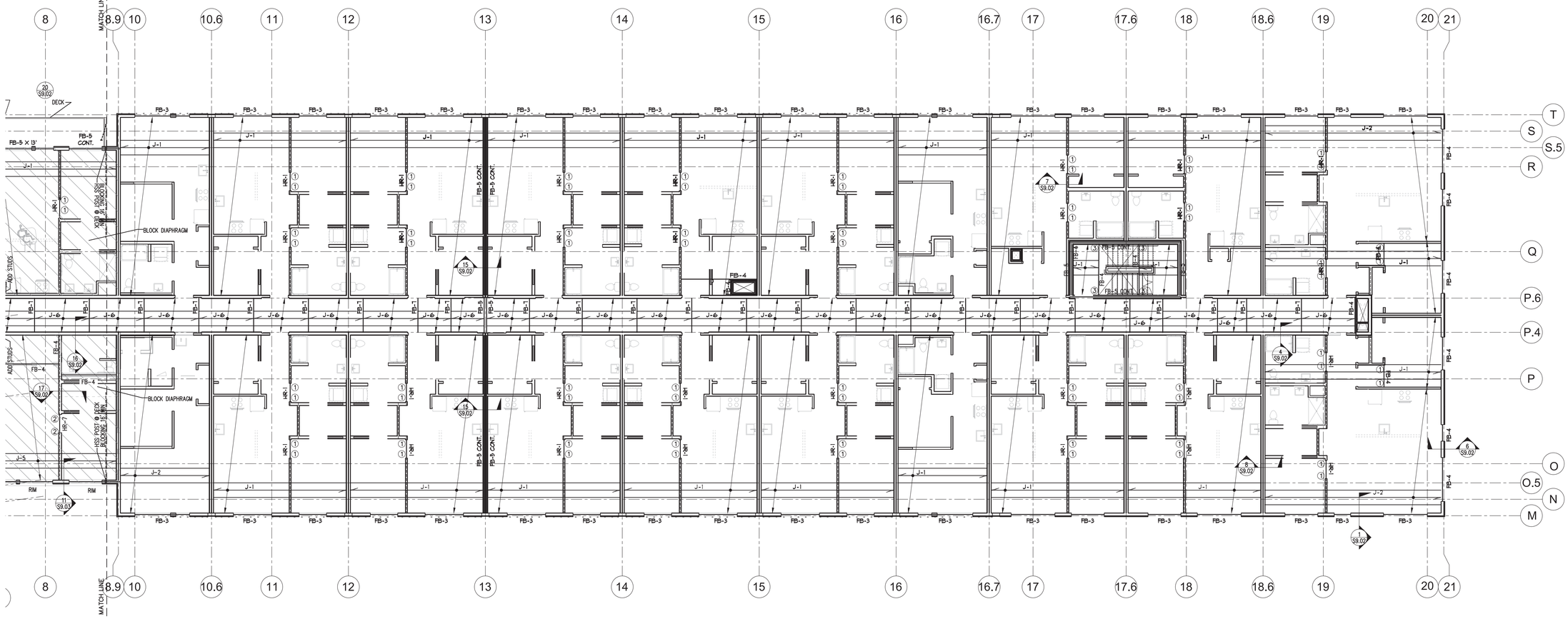
TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES
1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2



Bldg. C Level 6 Wood Framing Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SWK | C.A.D: SWK | PLOT: 02/6/23 | FILE: 19010 3404 | JOB #:

Building C - Level 6 Wood Framing Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

Shelter HOLDINGS

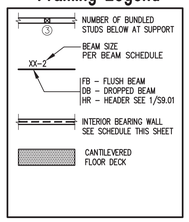
S4.42C

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWISE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWISE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Note:
ALL SECTION CUTS ARE TYPICAL

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

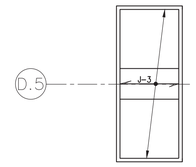
TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

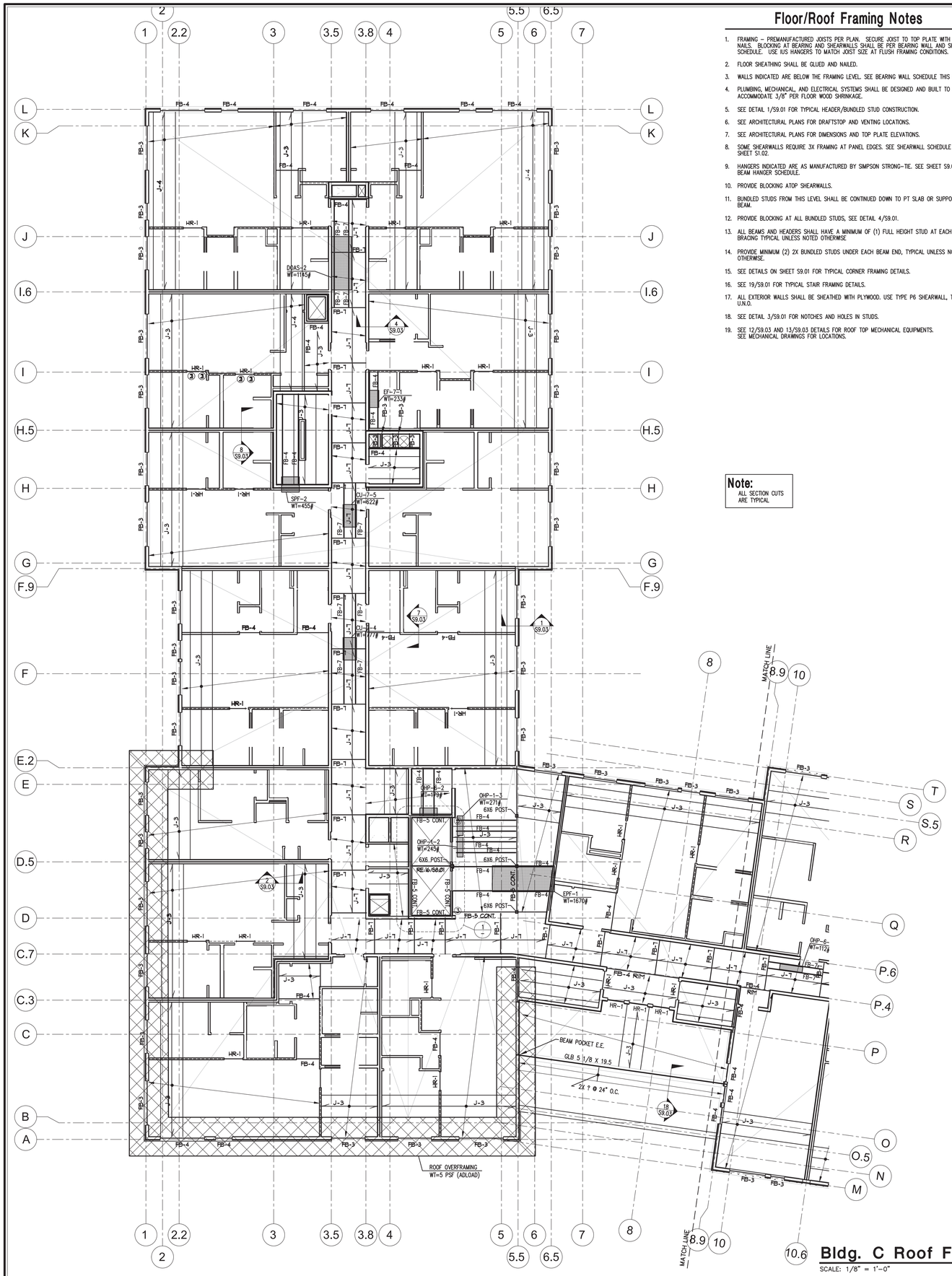
WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES
1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2



1 — **High Roof Elevator**
SCALE: 1/8" = 1'-0"



Bldg. C Roof Framing Plan (South)
SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
−8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

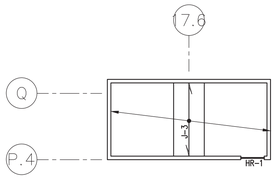
ENGR: SNK | C.A.D: SNK | PLOT: 02/16/23 | FILE: 19010 S465 ADR.e

Shelter HOLDINGS

Building C - Roof Framing Plan (South)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.51C



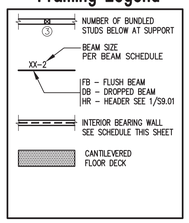
1 / — **High Roof Stair**

SCALE: 1/8" = 1'-0"

Floor/Roof Framing Notes

1. FRAMING – PREMANUFACTURED JOISTS PER PLAN. SECURE JOIST TO TOP PLATE WITH (2) 8d NAILS. BLOCKING AT BEARING AND SHEARWALLS SHALL BE PER BEARING WALL AND SHEARWALL SCHEDULE. USE IUS HANGERS TO MATCH JOIST SIZE AT FLUSH FRAMING CONDITIONS.
2. FLOOR SHEATHING SHALL BE GLUED AND NAILED.
3. WALLS INDICATED ARE BELOW THE FRAMING LEVEL. SEE BEARING WALL SCHEDULE THIS SHEET.
4. PLUMBING, MECHANICAL, AND ELECTRICAL SYSTEMS SHALL BE DESIGNED AND BUILT TO ACCOMMODATE 3/8" PER FLOOR WOOD SHRINKAGE.
5. SEE DETAIL 1/S9.01 FOR TYPICAL HEADER/BUNDLED STUD CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR DRAFTSTOP AND VENTING LOCATIONS.
7. SEE ARCHITECTURAL PLANS FOR DIMENSIONS AND TOP PLATE ELEVATIONS.
8. SOME SHEARWALLS REQUIRE 3X FRAMING AT PANEL EDGES. SEE SHEARWALL SCHEDULE ON SHEET S1.02.
9. HANGERS INDICATED ARE AS MANUFACTURED BY SIMPSON STRONG-TIE. SEE SHEET S9.01 FOR BEAM HANGER SCHEDULE.
10. PROVIDE BLOCKING ATOP SHEARWALLS.
11. BUNDLED STUDS FROM THIS LEVEL SHALL BE CONTINUED DOWN TO PT SLAB OR SUPPORTING BEAM.
12. PROVIDE BLOCKING AT ALL BUNDLED STUDS, SEE DETAIL 4/S9.01.
13. ALL BEAMS AND HEADERS SHALL HAVE A MINIMUM OF (1) FULL HEIGHT STUD AT EACH END FOR BRACING TYPICAL UNLESS NOTED OTHERWSE
14. PROVIDE MINIMUM (2) 2X BUNDLED STUDS UNDER EACH BEAM END, TYPICAL UNLESS NOTED OTHERWSE.
15. SEE DETAILS ON SHEET S9.01 FOR TYPICAL CORNER FRAMING DETAILS.
16. SEE 19/S9.01 FOR TYPICAL STAIR FRAMING DETAILS.
17. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH PLYWOOD. USE TYPE P6 SHEARWALL, TYPICAL, U.N.O.
18. SEE DETAIL 3/S9.01 FOR NOTCHES AND HOLES IN STUDS.
19. SEE 12/S9.03 AND 13/S9.03 DETAILS FOR ROOF TOP MECHANICAL EQUIPMENTS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

Framing Legend



Joist Schedule

MARK	JOIST
J-1	11 7/8" TJI 110 @ 16" O.C.
J-2	(2) 11 7/8" TJI 210 @ 16" O.C.
J-3	11 7/8" TJI 110 @ 24" O.C.
J-4	11 7/8" TJI 230 @ 24" O.C.
J-5	9 1/2" TJI 230 @ 12" O.C.
J-6	16" TJI 110 @ 16" O.C.
J-7	16" TJI 110 @ 24" O.C.

Wood Beam Schedule

TYPE	SIZE	HANGER
XX-1	4X8	HUS48
XX-2	6X10	HU610
XX-3	LSL 1 3/4 X 11 7/8	HU11
XX-4	PSL 3 1/2 X 11 7/8	HHUS410
XX-5	PSL 5 1/4 X 11 7/8	HHUS5.5/10
XX-6	PSL 7 X 11 7/8	HGU7.25-SDS
XX-7	LSL 3 1/2 X 7 1/4	HHUS48

Bearing Wall Stud Schedule

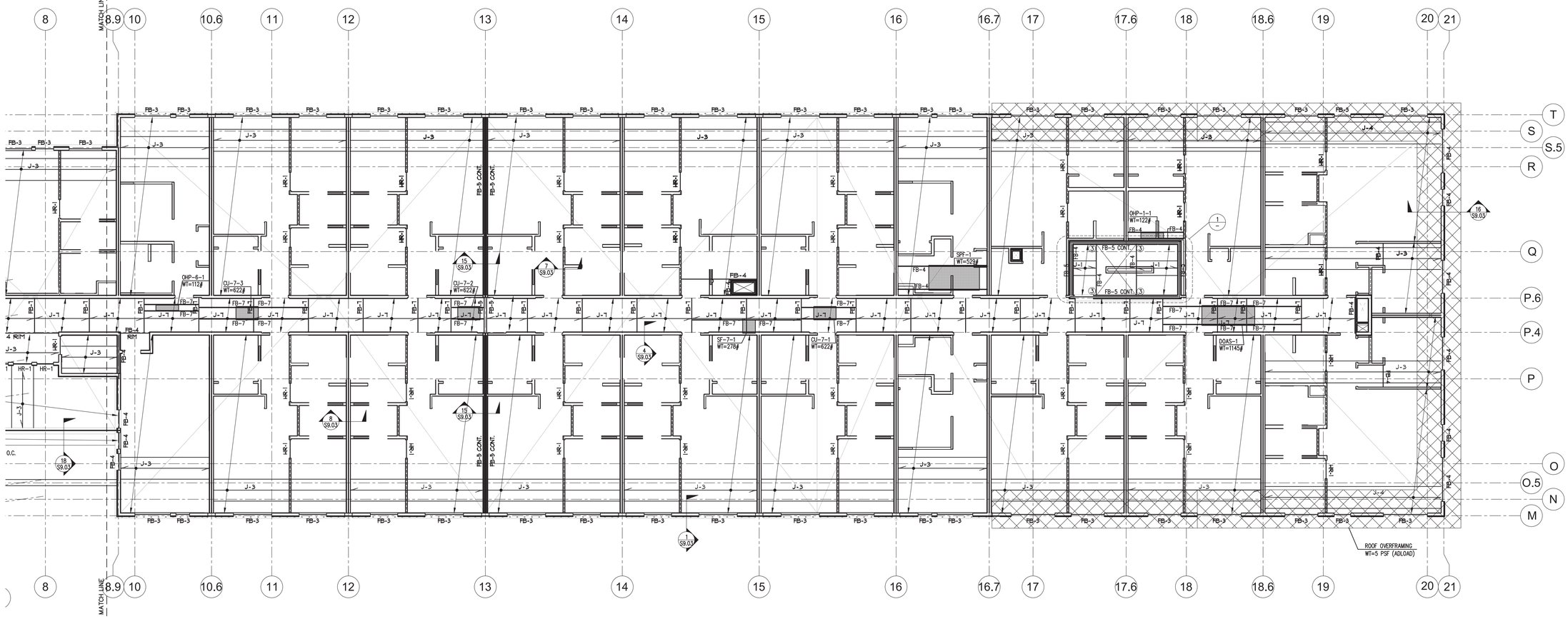
WALL TYPE	LEVEL	PLATE SIZE	STUD SIZE AND SPACING, U.N.O.	RIM/BLOCKING
EXTERIOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
CORRIDOR	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	3 1/2" LSL RIM
INTERIOR	LEVEL 6	2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	2X4 DF	(2) 2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 2	2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
INTERIOR @ 2-BR END UNITS AND UNDER ROOF DECK	LEVEL 6	DBL. 2X4 DF	2X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 5	DBL. 2X4 DF	3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 4	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	1 3/4" LSL BLK'G
	LEVEL 3	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
	LEVEL 2	DBL. 2X4 DF	(2) 3X4 @ 16" O.C. DF #2	(2) 1 3/4" LSL BLK'G
PARTY	LEVEL 6	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 5	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 4	DBL. 2X4 DF	DBL. 2X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 3	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
	LEVEL 2	DBL. 2X4 DF	DBL. 3X4 @ 16" O.C. DF #2	1 3/4" LSL RIM/BLK'G
STAIR / VENT ELEVATOR WALLS	LEVEL 6	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 5	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 4	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 3	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM
	LEVEL 2	2X6 DF	2X6 @ 16" O.C. DF #2	1 3/4" LSL RIM

BEARING WALL NOTES

1. SEE SHEARWALL SCHEDULE SHEET S1.02 FOR WALL SHEATHING, ADDITIONAL PLATE AND STUD REQUIREMENTS, BLOCKING AND PLATE NAILING. SEE SAWN LUMBER STRUCTURAL NOTES SHEET S1.01 FOR SPECIES AND GRADE OF WALL PLATES AND STUDS.
2. SECURE SILL PLATES TO CONCRETE W/ 5/8" DIA. A.B. W/ 7" EMBED INTO CONCRETE SLAB AT 48" TYPICALLY U.N.O. REFER TO SHEAR WALL AND HOLD-DOWN SCHEDULE FOR ADDITIONAL ANCHOR BOLT REQUIREMENTS. WHERE PRESERVATIVE TREATED WOOD IS USED, REFER TO NOTE SECTION 06071 FOR CORROSION PROTECTION REQUIREMENTS FOR CONNECTORS.
3. SEE DETAIL 2/S9.01 FOR TOP PLATE SPLICE. PROVIDE ADDITIONAL CONNECTORS AT SHEAR WALLS AS INDICATED ON THE PLANS.
4. ALL EXTERIOR WALLS, CORRIDOR WALLS, PARTY WALLS, STAIR WALLS, VENT WALLS, AND ELEVATOR WALLS ARE CONSIDERED BEARING. ONLY BEARING INTERIOR WALLS ARE INDICATED ON THE PLANS.

2

Note:
ALL SECTION CUTS ARE TYPICAL



Bldg. C Roof Framing Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
ENVR: SWK	C.A.D: SWK	PLOT: 02/6/23

FILE: 19010 3465
JOB #:

Shelter HOLDINGS

Building C - Roof Framing Plan (North)

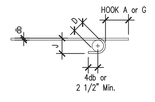
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S4.52C

BAR SIZE	f'c = 3000 psi			f'c = 4000 psi			f'c = 5000 psi		
	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE	Ld	OTHER BARS LAP SPLICE	TOP BARS LAP SPLICE
#3	16"	21"	28"	14"	18"	24"	13"	17"	22"
#4	22"	28"	37"	19"	25"	32"	17"	22"	29"
#5	27"	36"	46"	24"	31"	40"	21"	28"	36"
#6	33"	43"	56"	28"	37"	48"	25	33"	43"
#7	48"	62"	81"	42"	54"	70"	37"	48"	63"
#8	55"	71"	93"	47"	62"	80"	42"	55"	72"
#9	62"	80"	104"	53"	69"	90"	48"	62"	81"

1. TENSION LAP SPLICE SHOWN ABOVE ARE FOR CONCRETE COVER GREATER THAN OR EQUAL TO BAR DIAMETER AND CENTER TO CENTER SPACING GREATER THAN OR EQUAL TO TWO BAR DIAMETERS (SPACING AND COVER CASE 1). TENSION LAP SPLICE SHOWN ABOVE ARE CLASS B SPLICES.
2. "OTHER BARS" ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW THE BAR.
3. "TOP BARS" ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. COMPRESSION LAP SPLICES SHALL BE 30 BAR DIAMETERS MIN. U.N.O. ON THE DRAWINGS.
5. DEVELOPMENT LENGTH (Ld) IS "OTHER BARS", CLASS A.

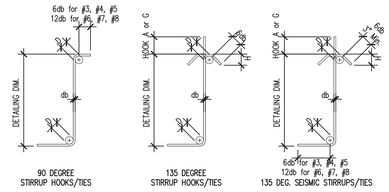
1 TYPICAL LAP SPLICE SCHEDULE



STANDARD 180 DEGREE HOOK
STANDARD 90 DEGREE HOOK
D = FINISHED INSIDE BEND DIAMETER

BAR SIZE	D	STANDARD 180 DEGREE HOOK			STANDARD 90 DEGREE HOOK		
		D	A OR G	J	BAR SIZE	D	A OR G
#3	6db	2 1/4"	5"	3"	#3	2 1/4"	6"
#4	6db	3"	6"	4"	#4	3"	8"
#5	6db	3 3/4"	7"	5"	#5	3 3/4"	10"
#6	6db	4 1/2"	8"	6"	#6	4 1/2"	1'-0"
#7	6db	5 1/4"	10"	7"	#7	5 1/4"	1'-2"
#8	6db	6"	11"	8"	#8	6"	1'-4"
#9	8db	9 1/2"	1'-3"	11 3/4"	#9	9 1/2"	1'-7"
#10	8db	10 3/4"	1'-5"	1'-1 1/4"	#10	10 3/4"	1'-10"
#11	8db	12"	1'-7"	1'-2 3/4"	#11	12"	2'-0"
#14	10db	18 1/4"	2'-3"	1'-9 3/4"	#14	18 1/4"	2'-7"
#18	10db	24"	3'-0"	2'-4 1/2"	#18	24"	3'-5"

2 TYPICAL HOOK DETAILS

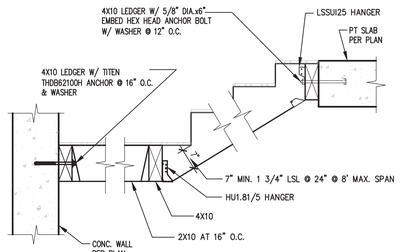


90 DEGREE STIRRUP HOOKS/TIES
135 DEGREE STIRRUP HOOKS/TIES
135 DEG. SEISMIC STIRRUPS/TIES

D = FINISHED INSIDE BEND DIAMETER

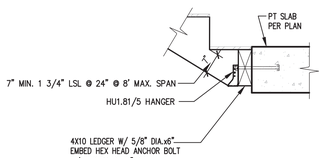
BAR SIZE	D	D	STIRRUP HOOKS/TIES		SEISMIC STIRRUP/TIE	
			90 DEG.	135 DEG.	135 DEG. SEISMIC HOOK	
			A OR G	A OR G	APPROX. H	A OR G	APPROX. H
#3	4db	1 1/2"	4"	4"	2 1/2"	4 1/4"	3"
#4	4db	2"	4 1/2"	4 1/2"	3"	4 1/2"	3"
#5	4db	2 1/2"	6"	5 1/2"	3 3/4"	5 1/2"	3 3/4"
#6	6db	4 1/2"	1'-0"	7 3/4"	4 1/2"	7 3/4"	4 1/2"
#7	6db	5 1/4"	1'-2"	9"	5 1/4"	9"	5 1/4"
#8	6db	6"	1'-4"	10 1/4"	6"	10 1/4"	6"

3 STIRRUP and TIE HOOK DETAILS



SCALE: 3/4" =1'-0"

6 TYP. STAIRS at CONCRETE LEVELS

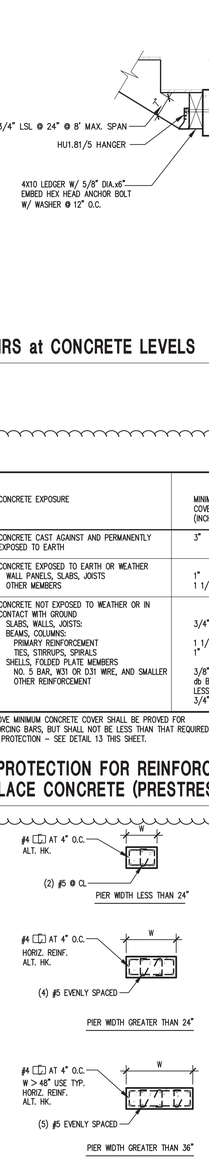


SCALE: 3/4" =1'-0"

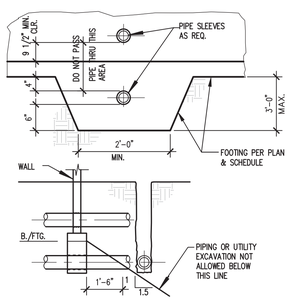
7 TYP. STAIRS at CONCRETE LEVELS

SCALE: NONE

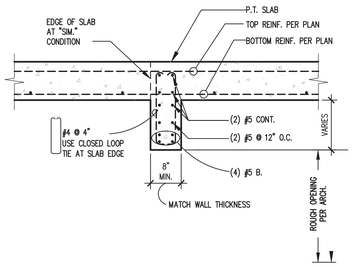
16 TYPICAL CONCRETE WALL OPENING REINFORCING



PIER PLAN

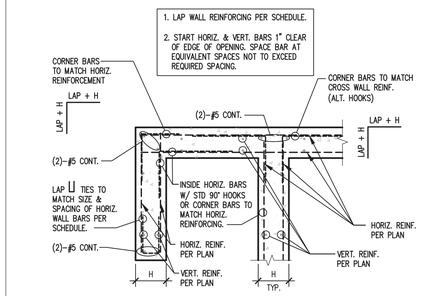


18 TYPICAL WALL PENETRATION DETAIL



SCALE: 3/4" =1'-0"

19 TYPICAL CONCRETE HEADER



SCALE: 3/4" =1'-0"

10 DOUBLE CURTAIN WALL REINFORCMENT PLACEMENT

ACI 318 7.7.1	CONCRETE EXPOSURE	MINIMUM COVER (INCHES)
(a)	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
(b)	CONCRETE EXPOSED TO EARTH OR WEATHER NO. 6 THROUGH NO. 18 BARS NO. 5 BARS AND SMALLER	 2" 1 1/2"
(c)	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALLS, JOISTS: NO. 14 AND NO. 18 BARS NO. 11 BARS AND SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS SHELLS, FOLDED PLATE MEMBERS NO. 6 BAR AND LARGER NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER	 1 1/2" 3/4" 1 1/2" 3/4" 1/2"

NOTES: THE ABOVE MINIMUM CONCRETE COVER SHALL BE PROVED FOR DEFORMED REINFORCING BARS, BUT SHALL NOT BE LESS THAN THAT REQUIRED TO PROVIDE FIRE PROTECTION – SEE DETAIL 13 THIS SHEET.

11 CONCRETE PROTECTION FOR REINFORCEMENT C.I.P. CONCRETE (NON-PRESTRESSED)

ACI 318 7.7.2	CONCRETE EXPOSURE	MINIMUM COVER (INCHES)
(a)	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
(b)	CONCRETE EXPOSED TO EARTH OR WEATHER WALL PANELS, SLABS, JOISTS OTHER MEMBERS	 1" 1 1/2"
(c)	CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALLS, JOISTS: BEAMS, COLUMNS: PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS SHELLS, FOLDED PLATE MEMBERS NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER OTHER REINFORCEMENT	 3/4" 1 1/2" 1" 3/8" db BUT NOT LESS THAN 3/4"

NOTES: THE ABOVE MINIMUM CONCRETE COVER SHALL BE PROVED FOR DEFORMED REINFORCING BARS, BUT SHALL NOT BE LESS THAN THAT REQUIRED TO PROVIDE FIRE PROTECTION – SEE DETAIL 13 THIS SHEET.

12 CONCRETE PROTECTION FOR REINFORCEMENT CAST-IN-PLACE CONCRETE (PRESTRESSED)

MINIMUM CONCRETE THICKNESS	REQUIRED FIRE PROTECTION RATING (RE: ARCH.)			
	4 HR	3 HR	2 HR	1 HR
MINIMUM WALL THICKNESS PER IBC TABLE 721.1(2)	7"	6.2"	5"	3.5"
MINIMUM SLAB THICKNESS PER IBC TABLE 721.1(3)	7"	6.2"	5"	3.5"

NOTES:
1. SILICEOUS AGGREGATE ASSUMED.

MINIMUM COVER TO SLAB REINFORCING STEEL PER IBC TABLE 721.1(3) FOOTNOTE b.	REQUIRED FIRE PROTECTION RATING (RE: ARCH.)			
	4 HR	3 HR	2 HR	1 HR
UNRESTRAINED (END SPANS)	1 5/8"	1 1/4"	1"	3/4"
RESTRAINED (INTERIOR SPANS)	3/4"	3/4"	3/4"	3/4"

NOTES:
1. SILICEOUS AGGREGATE ASSUMED.

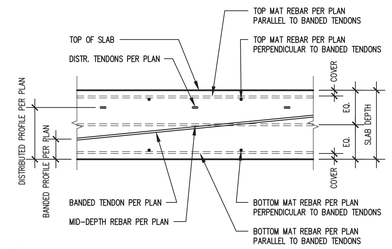
13 MINIMUM CONCRETE THICKNESS AND CONCRETE PROTECTION FOR REINFORCEMENT IN FIRE RATED CONCRETE WALLS AND SLABS

MINIMUM COVER TO POST TENSION TENDONS IN SLABS PER IBC TABLE 721.1(1)	REQUIRED FIRE PROTECTION RATING (RE: ARCH.)			
	4 HR	3 HR	2 HR	1 HR
UNRESTRAINED (END SPANS)	–	2.4"	1.8"	1.8"
RESTRAINED (INTERIOR SPANS)	1.5"	1.2"	0.9"	0.9"

NOTES:
1. THE ABOVE MINIMUM CONCRETE COVER TO TENDONS HAS BEEN INCREASED BY 20 PERCENT FOR SLABS WITH SILICEOUS AGGREGATE – IBC TABLE 720.1(1) FOOTNOTE f.
2. COVER TO THE PRESTRESSING STEEL SHALL BE INCREASED 1/2" AT ANCHORS.
3. MINIMUM COVER TO STEEL BEARING PLATES SHALL BE 1" IN BEAMS AND 3/4" IN SLABS.

MINIMUM COVER TO POST TENSION TENDONS IN BEAMS AND GRDERS 12" WIDE AND GREATER PER IBC TABLE 721.1(1)	REQUIRED FIRE PROTECTION RATING (RE: ARCH.)			
	4 HR	3 HR	2 HR	1 HR
UNRESTRAINED (END SPANS)	3"	2 1/2"	2"	1 1/2"
RESTRAINED (INTERIOR SPANS)	2"	1 3/4"	1 1/2"	1 1/2"

14 MINIMUM CONCRETE COVER FOR POST TENSION TENDONS IN FIRE RATED CONCRETE SLABS, BEAMS, AND GIRDERS



NOTES:
1. FOR NON-PRESTRESSED CONCRETE SLABS PROVIDE COVER TO REINFORCING BARS PER 11/S6.01 UNLESS GREATER COVER IS REQUIRED FOR FIRE PROTECTION PER 13/S6.01.
2. FOR PRESTRESSED CONCRETE SLABS PROVIDE COVER TO REINFORCING BARS PER 12/S6.01 UNLESS GREATER COVER IS REQUIRED FOR FIRE PROTECTION PER 13/S6.01.
3. FOR POST TENSION TENDONS PROVIDE COVER PER 14/S6.01.

SCALE: NONE

15 SLAB REINFORCEMENT PLACEMENT DETAILS

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.0512 (V) 206.285.0618 (F)

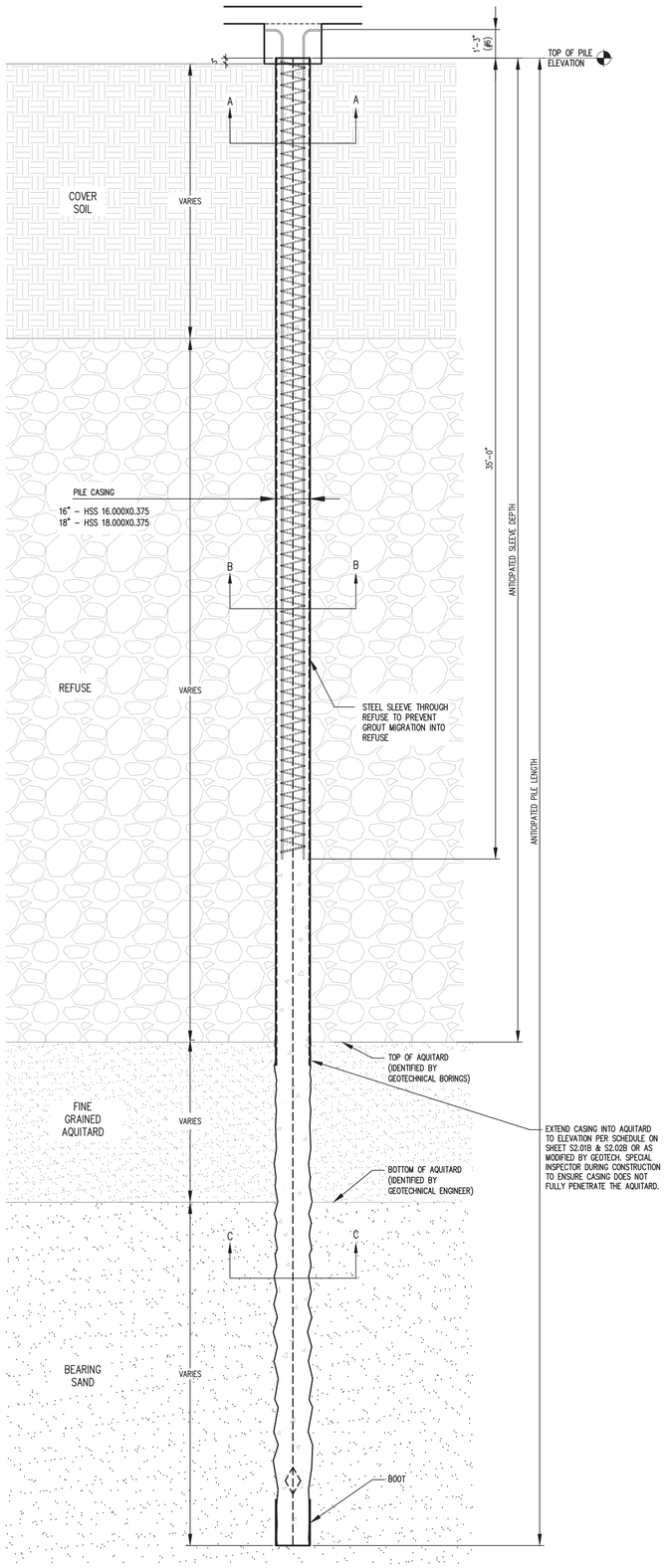
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR. SMK | C.A.D. SMK | PLOT 02/16/23 | FILE 19010 S601	JOB #

Shelter HOLDINGS

Concrete Details

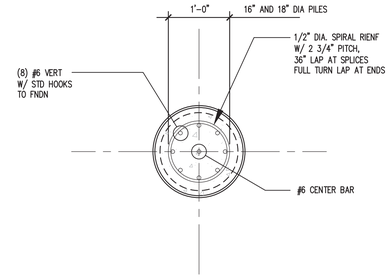
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S6.01

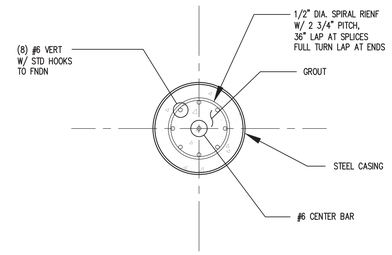


DETAIL 1
16" DIA BUILDING PILES

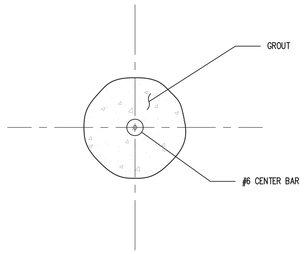
(NTS)



CROSS SECTION A–A



CROSS SECTION B–B



CROSS SECTION C–C

PILE NOTES:

PILE CAPACITY REQUIRED (ASD)

	AXIAL	BENDING
16" DIA BUILDING PILES	255 KIPS	135 FT–KIPS

GROUT STRENGTH:
16" DIA BUILDING PILES f'c = 5000 PSI

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
1	COORDINATION	12/13/22
	BUILDING PERMIT CORRECTION #1	09/30/22

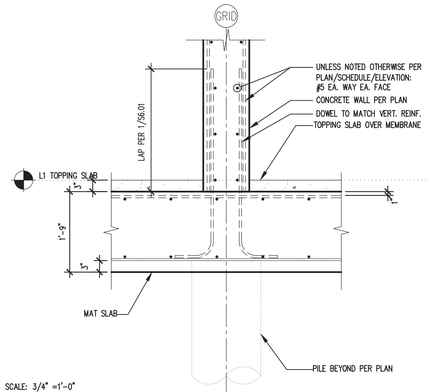
ENGR. SMK CAD SMK PLOT 02/16/23 FILE 19010 S601
JOB #:

Shelter HOLDINGS

Typical Pile Details

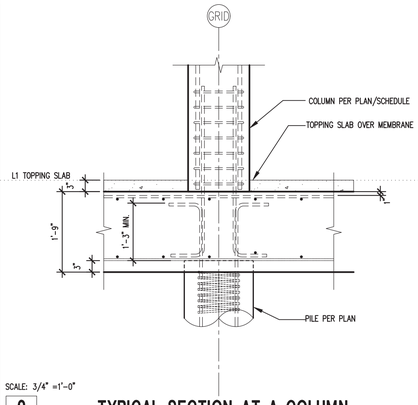
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S6.02



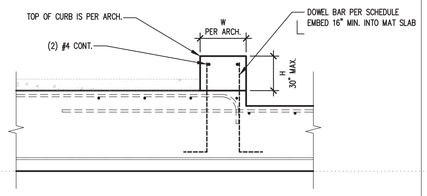
SCALE: 3/4" =1'-0"

1 TYPICAL SECTION AT A WALL



SCALE: 3/4" =1'-0"

2 TYPICAL SECTION AT A COLUMN

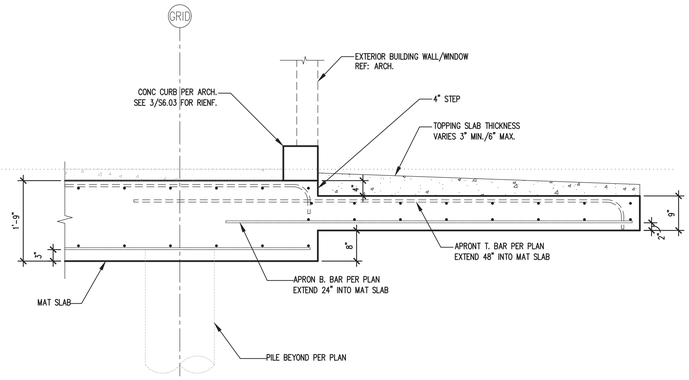


"W" WIDTH	"H" HEIGHT	DOWEL BAR SIZE AND SPACING
8"	LESS THAN 18"	(1) #4 @ 16" O.C. ALT. HK.
	19" TO 30"	(1) #4 @ 12" O.C. ALT. HK.
9"	LESS THAN 18"	(2) #4 @ 16" O.C. ALT. HK.
	19" TO 30"	(2) #4 @ 12" O.C. ALT. HK.
12"	LESS THAN 18"	(2) #4 @ 16" O.C. ALT. HK.
	19" TO 30"	(2) #4 @ 12" O.C. ALT. HK.

NOTE:
1. AT 8" WIDE CURB SINGLE DOWEL BAR TO BE AT CENTER OF CURB, NOT SHOWN.

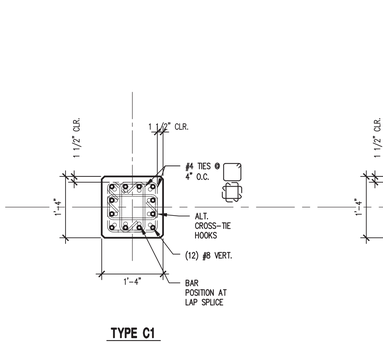
SCALE: 3/4" =1'-0"

3 TYPICAL CURB AT SLAB EDGE



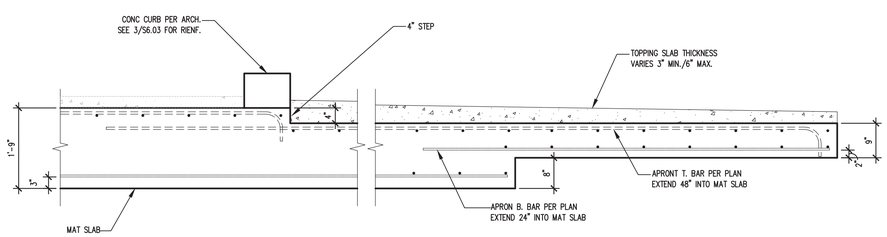
SCALE: 3/4" =1'-0"

4 TYPICAL APRON BEAM DETAIL



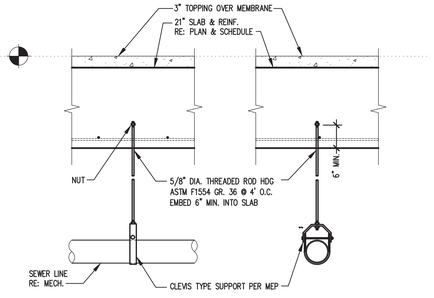
SCALE: 3/4" =1'-0"

6 TYPICAL STEP IN MAT SLAB



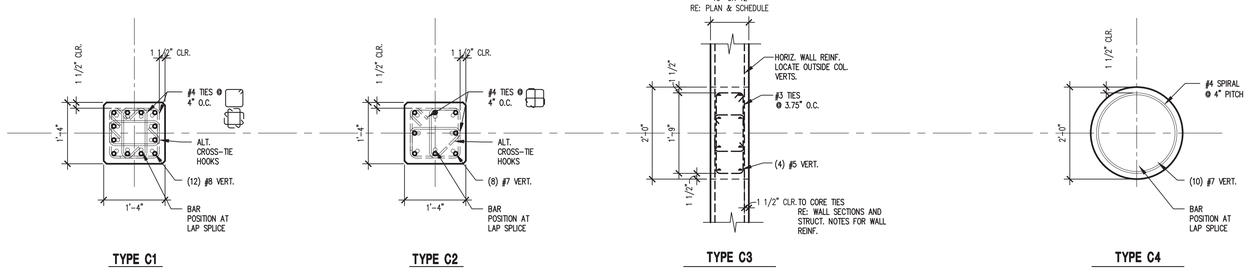
SCALE: 3/4" =1'-0"

7 SECTION AT VESTIBULE



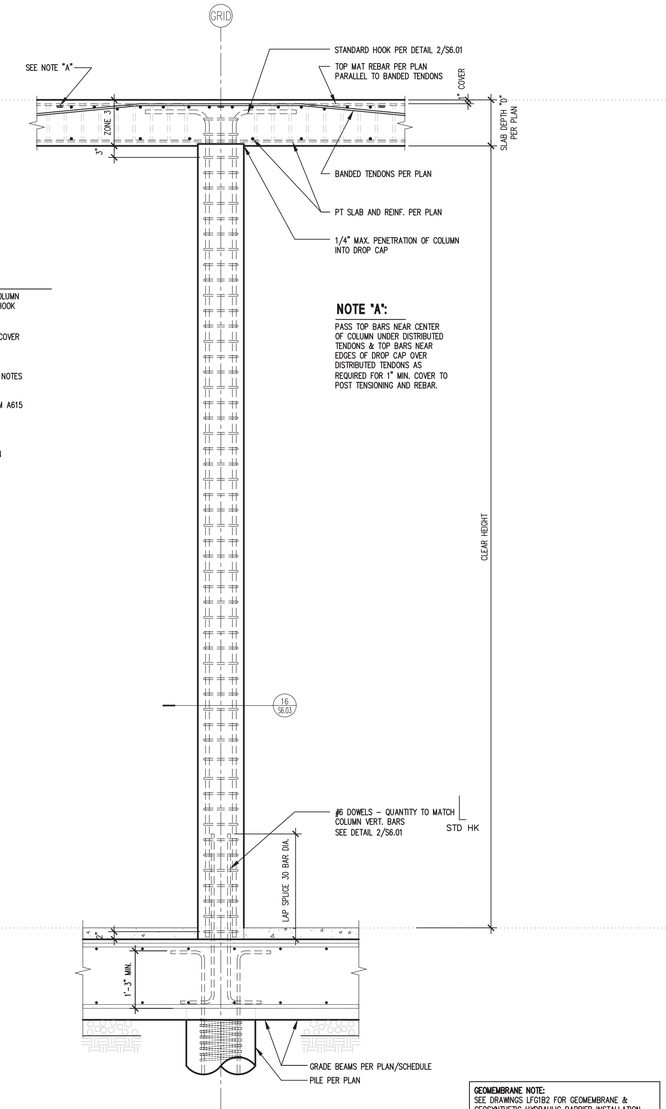
SCALE: 3/4" =1'-0"

11 TYPICAL DWV SUPPORT



SCALE: 3/4" =1'-0"

16 TYPICAL COLUMN TYPES



SCALE: 3/4" =1'-0"

19 TYPICAL COLUMN DETAIL (W/O DROP CAP)

COLUMN NOTES

1. TIES ARE TO BE PROVIDED THROUGH COLUMN LAP SPLICE LENGTH. TIES TO HAVE SEISMIC HOOK DETAILING PER 3/S6.00.
2. CONCRETE PROTECTION – 1 1/2" MIN. COVER TO TIES UNLESS NOTED OTHERWISE.
3. CONCRETE f'_c = 4000 PSI AT 28 DAYS UNLESS SPECIFIED OTHERWISE IN STRUCTURAL NOTES OR COLUMN SCHEDULE.
4. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60.
5. DETAIL IN ACCORDANCE W/ ACI 315.
6. FOOTING DOWELS SHALL MATCH COLUMN VERTICAL BARS TYP. U.N.O.

NOTE "A":

PASS TOP BARS NEAR CENTER OF COLUMN UNDER DISTRIBUTED TENDONS & TOP BARS NEAR EDGES OF DROP CAP OVER DISTRIBUTED TENDONS AS REQUIRED FOR 1" MIN. COVER TO POST TENSIONING AND REBAR.

GEOMEMBRANE NOTE:
SEE DRAWINGS LFG1B2 FOR GEOMEMBRANE & GEOSYNTHETIC HYDRAULIC BARRIER INSTALLATION REQUIREMENTS. TYPICAL FOR ALL DETAILS.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

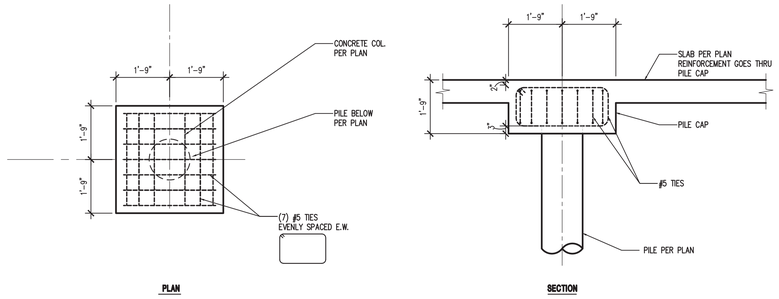
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK CAD: SWK PLOT: 02/6/23 FILE: 19010 S601 JOB #:	

Shelter HOLDINGS

Concrete Details

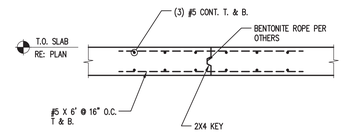
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S6.03



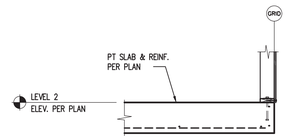
SCALE: 1/2" =1'-0"

1 PILE CAP "PC1"



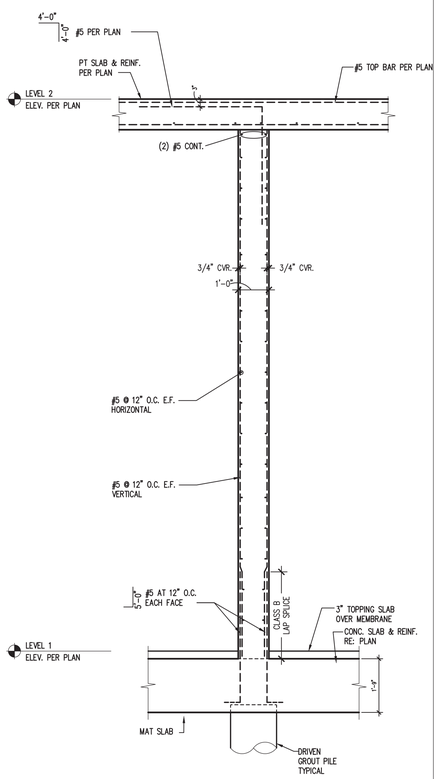
SCALE: 1/2" = 1'-0"

4 TYPICAL CONSTRUCTION JOINT



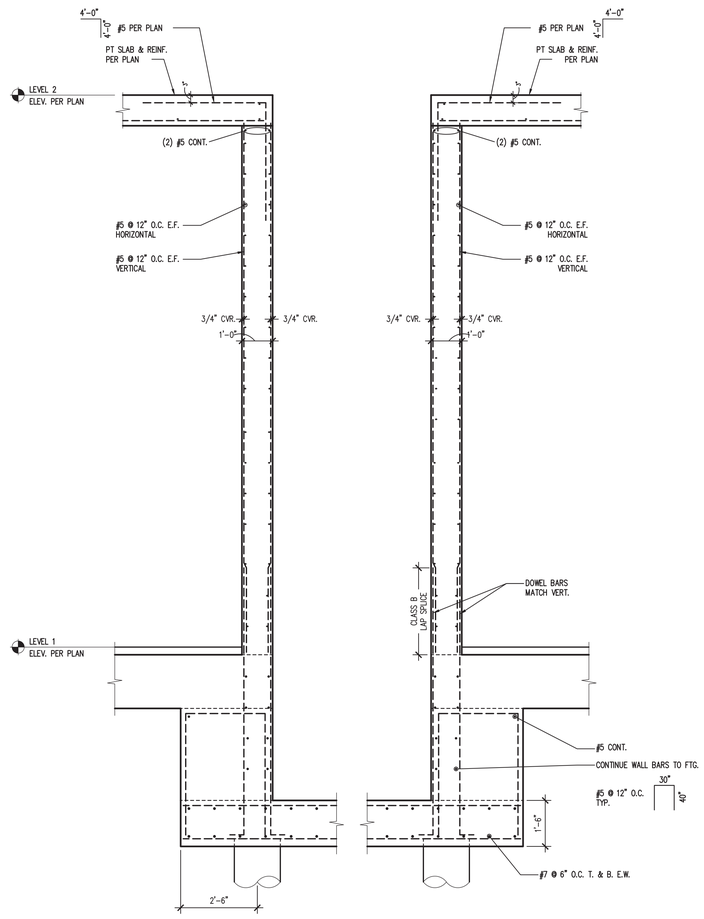
SCALE: 1/2" = 1'-0"

5 SECTION



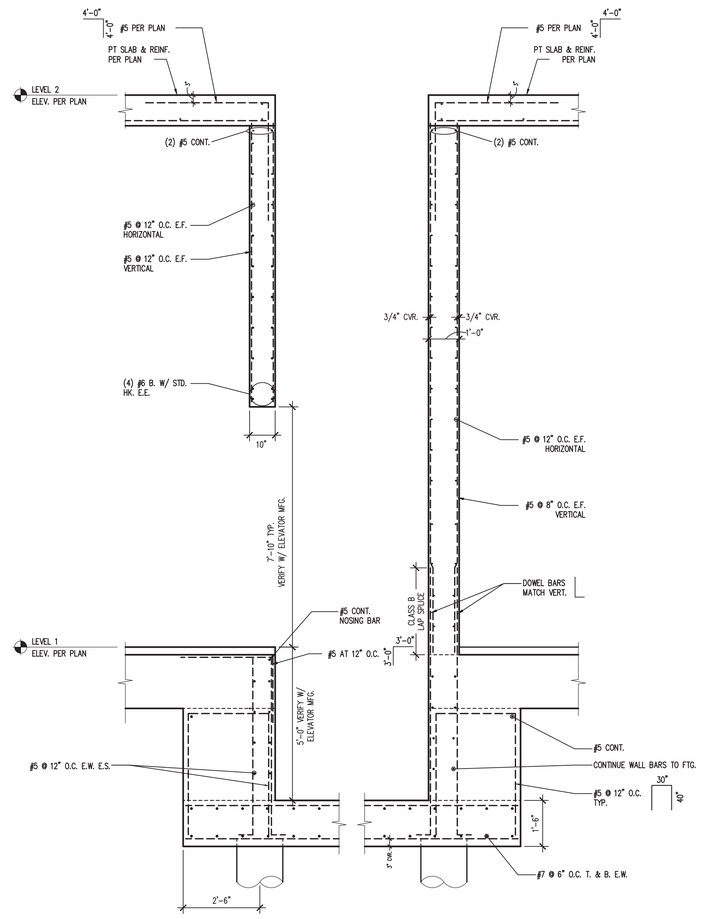
SCALE: 1/2" = 1'-0"

16 SECTION



SCALE: 1/2" = 1'-0"

17 SECTION



SCALE: 1/2" = 1'-0"

20 SECTION

GEOMEMBRANE NOTE:
SEE DRAWINGS LF01B2 FOR GEOMEMBRANE & GEOSYNTHETIC HYDRAULIC BARRIER INSTALLATION REQUIREMENTS. TYPICAL FOR ALL DETAILS.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

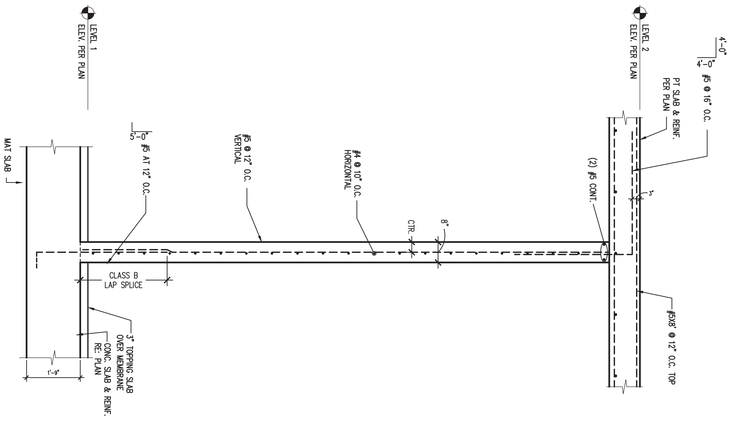
ENGR: SMK CAD: SMK PLOT: 02/6/23 FILE: 19010 -S601
JOB #:

Shelter HOLDINGS

Concrete Details

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S6.04



SCALE: 1/2" = 1'-0"

20 **8" CONCRETE WALL SECTION TYP.**

S6.05

CMU Details

Everett Riverfront

3710 Riverfront Boulevard

Everett, Washington

Shelter HOLDINGS

NO.	REVISION	DATE
2	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SWK | CAD: SWK | PLOT: 02/16/23 | FILE: 19010_S601

JOB #:

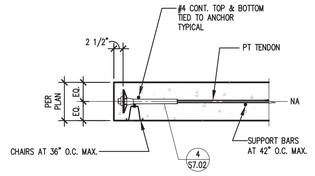
CRAIG P. ROSS — STATE OF WASHINGTON — 14840 — PROFESSIONAL ENGINEER — 01/30/24

CT ENGINEERING INC.

Structural Engineers

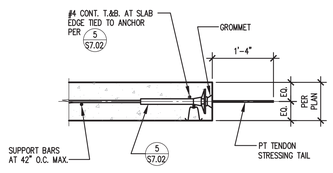
180 Nickerson Street Suite 302 Seattle, WA 98109

206.285.4512 (V) 206.285.0618 (F)



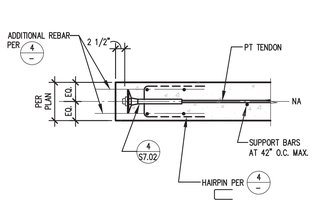
SCALE: 3/4" =1'-0"

1 DEAD END ANCHOR at DISTR. TENDONS



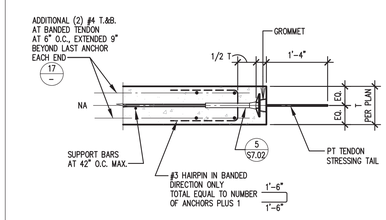
SCALE: 3/4" =1'-0"

2 STRESSING END ANCHOR at DISTR. TENDONS



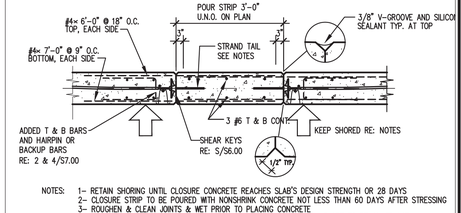
SCALE: 3/4" =1'-0"

3 DEAD END ANCHOR at TENDON BANDS



SCALE: 3/4" =1'-0"

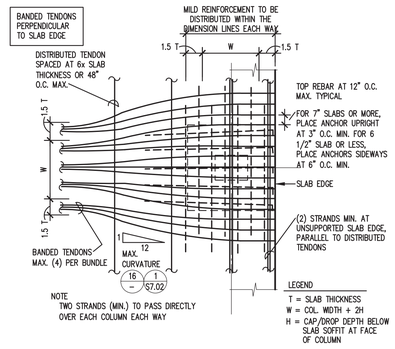
4 STRESSING END ANCHOR at TENDON BANDS



NOTES:
1- RETAIN SHORING UNTIL CLOSURE CONCRETE REACHES SLAB'S DESIGN STRENGTH OR 28 DAYS
2- CLOSURE STRIP TO BE POURED WITH NONSHRINK CONCRETE NOT LESS THAN 60 DAYS AFTER STRESSING
3- ROUGHEN & CLEAN JOINTS & WET PRIOR TO PLACING CONCRETE
4- ELIMINATE ACCIDENTAL MISALIGNMENT BETWEEN EDGE OF SLABS THAT ARE TO BE JOINED WITH A CLOSURE STRIP. USE MECHANICAL METHODS SUCH AS JACKING IF NECESSARY.
5- RAISE EDGE OF SLAB 1/4" @ CLOSURE TO ALLOW FOR SETTLEMENT.
6- PROVIDE WATERPROOFING MEMBRANE IF REQUIRED FOR WATER-TIGHTNESS
7- IF CLOSURE IS EXPOSED TO WEATHERING AND/OR MOISTURE USE GROMMETS; CUT STRESSED STRAND TAILS; PREPARE AND SEAL STRESSING POCKETS AS STIPULATED IN GENERAL NOTES; CAULK JOINT ALL AROUND.

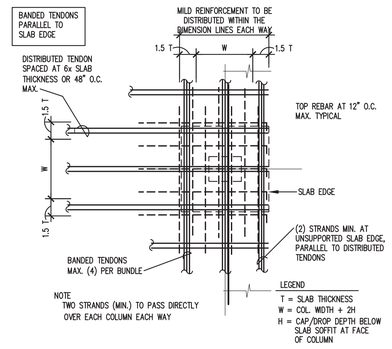
SCALE: NONE

5 CLOSURE STRIP



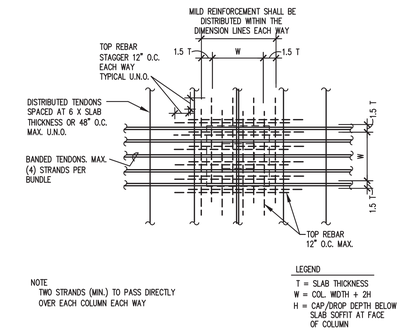
SCALE: 3/4" =1'-0"

6 TOP REINFORCEMENT at EXTERIOR COLUMNS



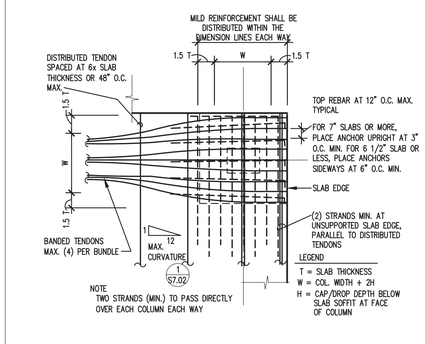
SCALE: 3/4" =1'-0"

7 TOP REINFORCEMENT at EXTERIOR COLUMNS



SCALE: 3/4" =1'-0"

8 TOP REINFORCMENT at INTERIOR COLUMNS

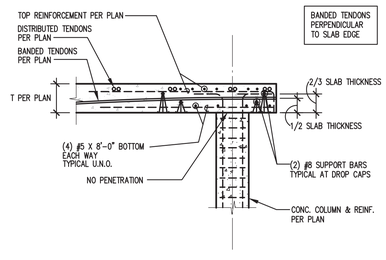


SCALE: 3/4" =1'-0"

9 TOP REINFORCEMENT at CORNER COLUMNS

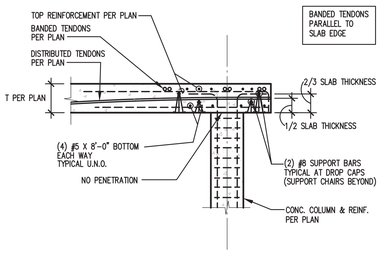
SCALE: 3/4" =1'-0"

10 NOT USED



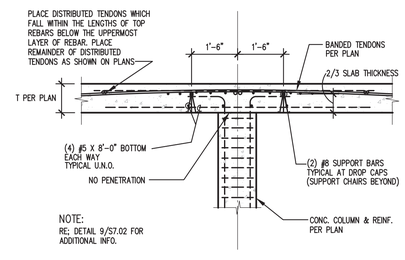
SCALE: 3/4" =1'-0"

11 TYPICAL EXTERIOR COLUMN SECTION



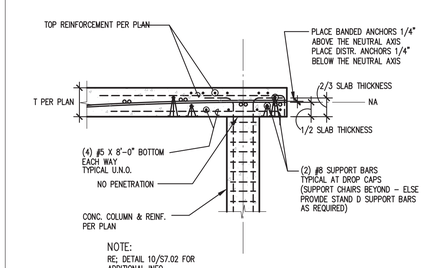
SCALE: 3/4" =1'-0"

12 TYPICAL EXTERIOR COLUMN SECTION



SCALE: 3/4" =1'-0"

13 TYPICAL INTERIOR COLUMN SECTION

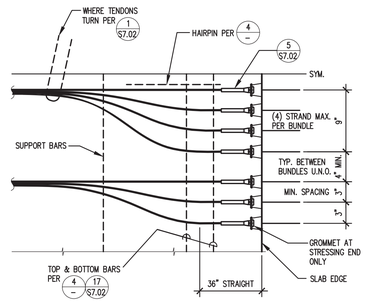


SCALE: 3/4" =1'-0"

14 SECTION at CORNER COLUMN

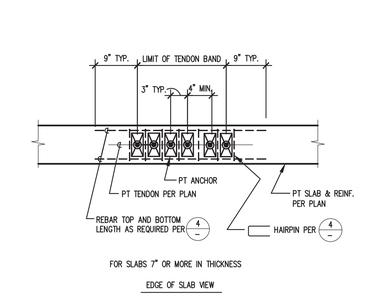
SCALE: 3/4" =1'-0"

15 NOT USED



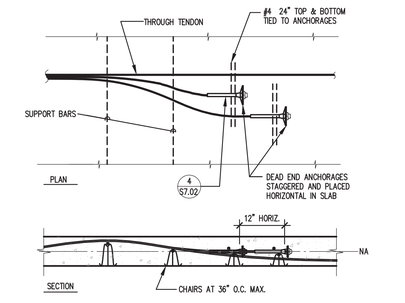
SCALE: 3/4" =1'-0"

16 FLARING OF BANED TENDONS at SLAB EDGE



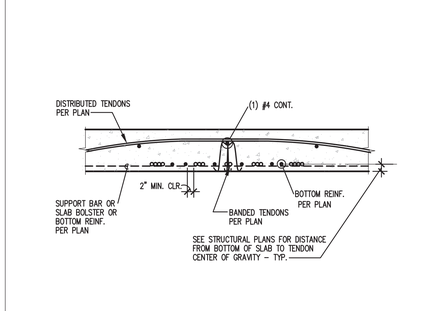
SCALE: 3/4" =1'-0"

17 REINF. OF TENDONS BAND at SLAB EDGE



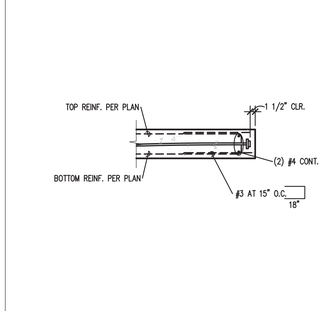
SCALE: 3/4" =1'-0"

18 PLACEMENT OF ADDED TENDONS



SCALE: 3/4" =1'-0"

19 SECTION - BANDED TENDONS at MIDSECTION



SCALE: 3/4" =1'-0"

20 TYPICAL CANTILEVER EDGE

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

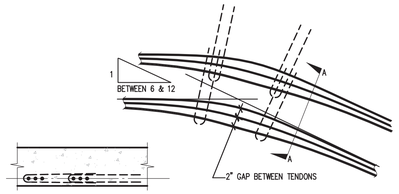
NO.	REVISION	DATE
4	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
3	COORDINATION	12/13/22
2	BUILDING PERMIT CORRECTION #1	09/30/22
1	BUILDING PERMIT	05/06/22

ENGR: SUK | CAD: SUK | PLOT: 02/6/23 | FILE: 1905D S7.01 | JOB #:

Shelter HOLDINGS

PT Details
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

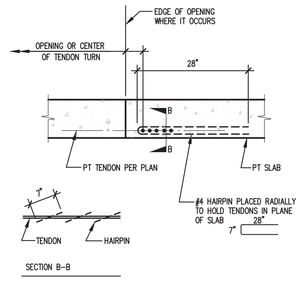
S7.01



NOTE: WHERE TENDON TURN IS GREATER THAN 1:12
1. KEEP TENDONS MIN. 2" APART AT TURN
2. PLACE HAIRPIN PER (2/–)
3. MAXIMUM TENDON CURVATURE SHALL BE LESS THAN 1:6

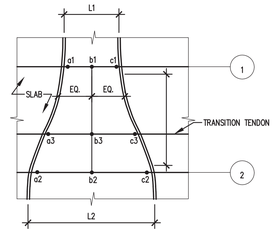
SCALE: 3/4" =1'-0"

1 PLACEMENT FOR TURNS GREATER THAN 1:12



SCALE: 3/4" =1'-0"

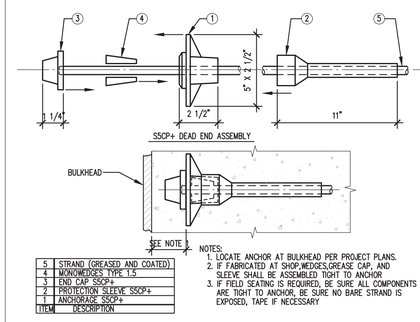
2 TYPICAL HAIRPIN at TENDON TURNS



NOTE:
THE SPAN OF THE TRANSITION TENDON CHANGES FROM L1 AT LINE 1 TO L2 AT LINE 2. PLACE TRANSITION TENDON WITH ITS CONTROL POINTS a3, b3 AND c3, EACH VARYING LINEARLY FROM 1 TO 2 BETWEEN THEIR RESPECTIVE VALUES AT 1 AND 2.

SCALE: 3/4" =1'-0"

3 PLACEMENT IN SPANS OF VARYING LENGTH

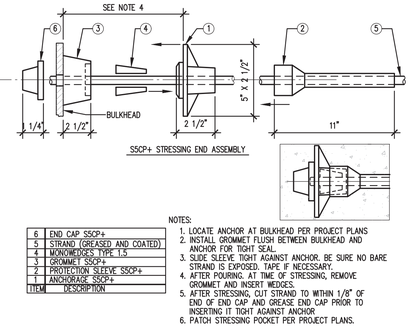


ITEM	DESCRIPTION
5	STRAND (GREASED AND COATED)
4	MONOWEDGES TYPE 1.5
3	END CAP SSCP+
2	PROTECTION SLEEVE SSCP+
1	ANCHORAGE SSCP+

NOTES:
1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. IF FABRICATED AT SHOP,WEDGES,GREASE CAP, AND SLEEVE SHALL BE ASSEMBLED TIGHT TO ANCHOR
3. IF FIELD SEATING IS REQUIRED, BE SURE ALL COMPONENTS ARE TIGHT TO ANCHOR, BE SURE NO BARE STRAND IS EXPOSED, TAPE IF NECESSARY

SCALE: 3/4" =1'-0"

4 ENCAPSULATED SYSTEM at DEAD END

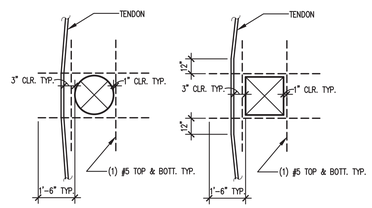


ITEM	DESCRIPTION
6	END CAP SSCP+
5	STRAND (GREASED AND COATED)
4	MONOWEDGES TYPE 1.5
3	GROMMET SSCP+
2	PROTECTION SLEEVE SSCP+
1	ANCHORAGE SSCP+

NOTES:
1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. INSTALL GROMMET FLUSH BETWEEN BULKHEAD AND ANCHOR FOR TIGHT SEAL.
3. SLIDE SLEEVE TIGHT AGAINST ANCHOR. BE SURE NO BARE STRAND IS EXPOSED. TAPE IF NECESSARY.
4. AFTER POURING, AT TIME OF STRESSING, REMOVE GROMMET AND INSERT WEDGES.
5. AFTER STRESSING, CUT STRAND TO WITHIN 1/8" OF END OF END CAP AND GREASE END CAP PRIOR TO INSERTING IT TIGHT AGAINST ANCHOR
6. PATCH STRESSING POCKET PER PROJECT PLANS.

SCALE: 3/4" =1'-0"

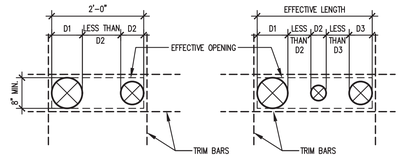
5 ENCAPSULATED SYSTEM at STRESSING END



REINFORCING FOR OPENINGS IN SLAB, 0'-10" TO 2'-0"
SINGLE OPENINGS OF SMALLER DIMENSION DO NOT REQUIRE TRIM BARS.
FOR OPENINGS OF LARGER DIMENSION AND MULTIPLE OPENINGS REFER TO (7/–) (8/–)

SCALE: 3/4" =1'-0"

6 TRIM BARS at SLAB OPENINGS



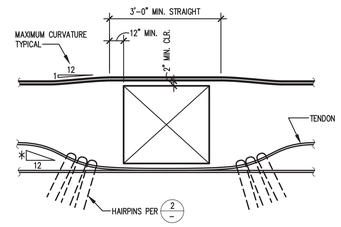
REINFORCING FOR MULTIPLE OPENINGS IN SLAB:

INSERTS IN WHICH CLEAR DISTANCE BETWEEN OPENINGS IS LESS THAN THE DIAMETER OF THE LARGER OF THE TWO ARE CONSIDERED TO FORM A COMBINED OPENING.

1. IF THE COMBINED OPENING IS LESS THAN 1'-0", NO TRIM BARS ARE REQUIRED.
2. IF THE COMBINED OPENING IS MORE THAN 1'-0", BUT LESS THAN 2'-0", PROVIDE (1) #5 T.&B. WITH 1'-0" EMBEDMENT PAST THE OPENING.
3. NO DIAGONAL BARS ARE REQUIRED.
3. IF COMBINED OPENING IS LARGER THAN 24" REFER TO (8/–)

SCALE: 3/4" =1'-0"

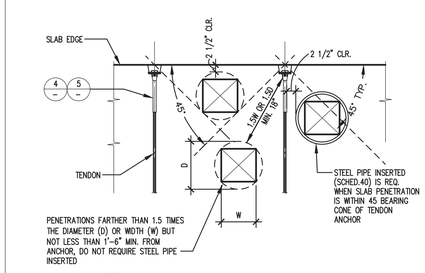
7 TRIM BARS at MULTIPLE SLAB OPENINGS



* WHERE TENDON CURVATURE EXCEEDS 1:12 SEE (1/–)

SCALE: 3/4" =1'-0"

8 PLACEMENT at OPENINGS 24" OR LARGER



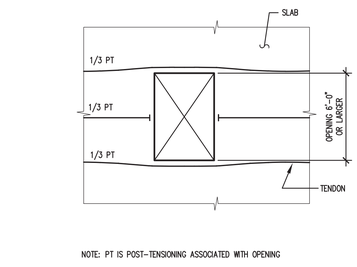
NOTE: PENETRATION WITH DIMENSIONS GREATER THAN 1'-0" REQUIRE TRIM REBAR PER (12/–)

SCALE: 3/4" =1'-0"

9 OPENINGS at TENDON ANCHORAGE

SCALE: 3/4" =1'-0"

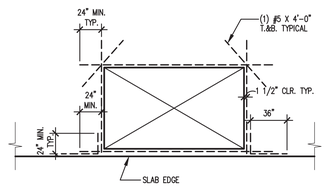
10 NOT USED



NOTE: PT IS POST-TENSIONING ASSOCIATED WITH OPENING

SCALE: 3/4" =1'-0"

11 ARRANGEMENT at OPENINGS 6'-0" OR LARGER

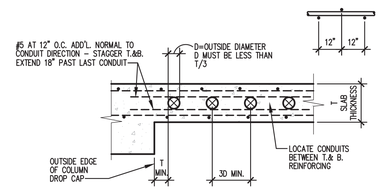


MAX. DIMENSION	REINFORCING
1'-0" TO 1'-6"	(1) #5 EACH SIDE
1'-6" TO 2'-6"	(1) #5 T.&B., EACH SIDE
2'-6" & LARGER	SEE PLAN

NOTES:
1. ALL OPENINGS LARGER THAN 1'-0" SHALL BE TRIMMED AS SHOWN
2. THESE BARS ARE IN ADDITION TO REBAR SHOWN ON PLANS
3. FOR MULTIPLE OPENINGS SEE (7/–)

SCALE: 3/4" =1'-0"

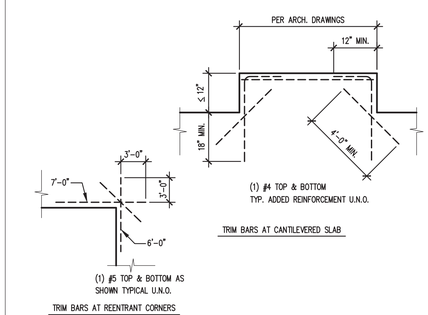
12 TRIM BARS FOR OPENINGS at SLAB EDGE



PIPES: GROUPS OF PLASTIC OR SHEET METAL ELECTRICAL CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDED THE FOLLOWING CRITERIA ARE MET:
1. DIAMETER DOES NOT EXCEED ONE THIRD OF THE SLAB THICKNESS. (DIAMETER REFERS TO OUTSIDE DIAMETER)
2. CENTER TO CENTER SPACING OF THE CONDUITS IS NOT LESS THAN THREE (3) TIMES THE DIAMETER OF THE LARGEST CONDUIT.
3. CONDUITS GREATER THAN OR EQUAL TO 1 1/2" DIAMETER SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB.
4. CONDUITS SMALLER THAN 1 1/2" DIAMETER MAY BE LOCATED AT AT ANY DEPTH OF THE SLAB PROVIDED MIN. COVER REQUIREMENTS ARE FOLLOWED.
5. CONDUITS MUST NOT INTERRUPT THE POST TENSIONING TENDONS..
6. COLUMN DROP CAP AREAS SHOULD BE AVOIDED.
7. ALUMINUM EMBEDMENTS ARE NOT PERMITTED.

SCALE: 3/4" =1'-0"

13 CONDUIT GROUPS EMBEDDED IN SLAB

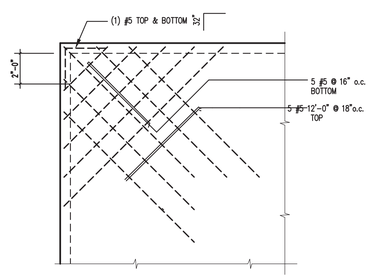


SCALE: 3/4" =1'-0"

14 TRIM BARS at REENTRANT CORNERS & CANT.

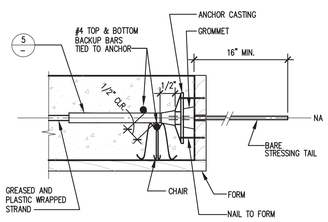
SCALE: 3/4" =1'-0"

15 NOT USED



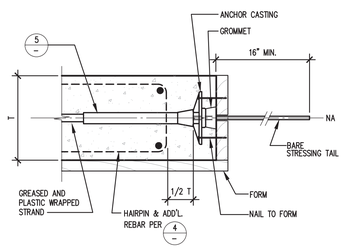
SCALE: 3/4" =1'-0"

16 TRIM BARS at SUPPORTED SLAB EDGES



SCALE: 3/4" =1'-0"

18 STRESSING END FOR DISTRIBUTED TENDONS



SCALE: 3/4" =1'-0"

19 STRESSING END FOR BANDED TENDONS

SCALE: 3/4" =1'-0"

20 NOT USED

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

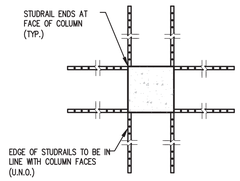
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR. SUK | C.A.D. SUK | PLOT 02/6/23 | FILE ISSUED S7.02 | JOB #:

Shelter HOLDINGS

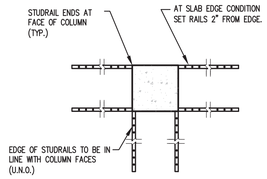
PT Details
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S7.02



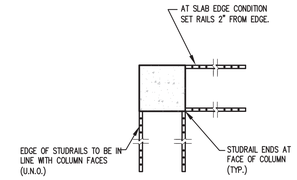
SCALE: NONE

1 STUDRAIL CONFIGURATION A (SR-A)



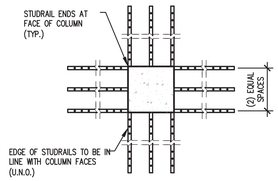
SCALE: NONE

2 STUDRAIL CONFIGURATION B (SR-B)



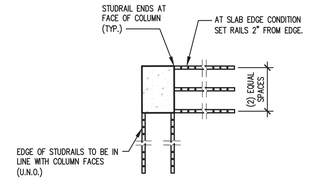
SCALE: NONE

3 STUDRAIL CONFIGURATION C (SR-C)



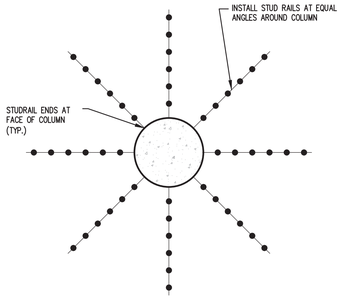
SCALE: 1/2" =1'-0"

4 STUDRAIL CONFIGURATION D (SR-D)



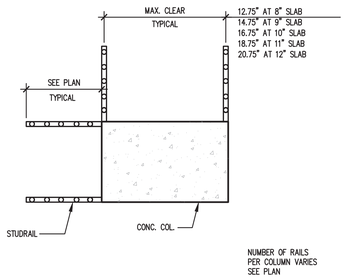
SCALE: 1/2" =1'-0"

5 STUDRAIL CONFIGURATION E (SR-E)



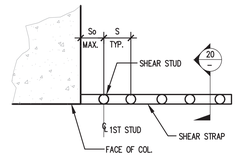
SCALE: NONE

6 STUDRAIL CONFIGURATION R (SR-R)



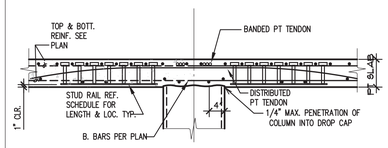
SCALE: 3/4" =1'-0"

7 STUDRAIL LOCATION TO COLUMN



SCALE: 3/4" =1'-0"

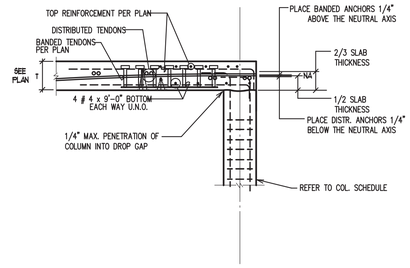
8 SHEAR STRAP DETAIL



NOTES:
1. A MIN. OF (2) TENDONS TO PASS DIRECTLY OVER COLUMN EACH WAY.
2. TOP BARS PARALLEL TO BANDED PT TENDONS TO BE PLACED AT THE UPPERMOST LAYER, U.N.O.

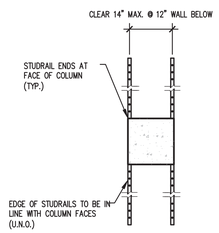
SCALE: 3/4" =1'-0"

9 SECTION



SCALE: 3/4" =1'-0"

10 SECTION

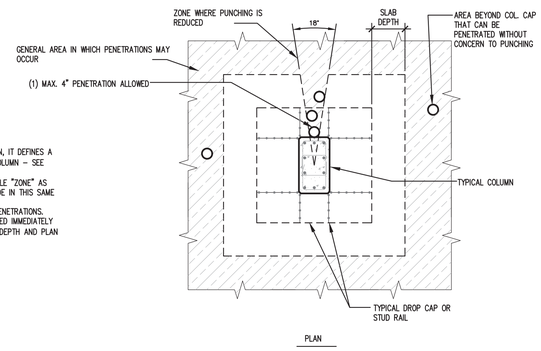


SCALE: NONE

11 STUDRAIL CONFIGURATION F (SR-F)

GENERAL NOTES ABOUT PENETRATIONS AT COLUMN CAPS:

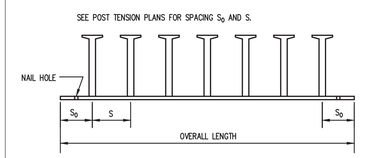
1. WHERE PENETRATIONS ARE MADE ADJACENT TO THE COLUMN, IT DEFINES A "ZONE" THAT REDUCES THE PUNCHING CAPACITY AT THE COLUMN – SEE ZONE DEFINED BY AN 18° ANGLE.
2. ADJACENT TO ANY COLUMN MAY BE PENETRATED IN A SINGLE "ZONE" AS SHOWN. NOTE THAT ADDITIONAL PENETRATIONS MAY BE MADE IN THIS SAME ZONE, SPACED FURTHER AWAY FROM THE COLUMN.
3. NO COLUMN CAP SHALL HAVE TWO OR MORE ZONES FOR PENETRATIONS. SHOULD THIS BE REQUIRED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY – AND PRIOR TO CONSTRUCTION. A LARGER COLUMN CAP (DEPTH AND PLAN AREA) WILL LIKELY BE SPECIFIED.



PLAN

SCALE: NONE

12 SINGLE PENETRATION at COLUMNS W/ STUDRAILS



SHEAR REINFORCEMENT (STUD RAILS)
SHEAR REINFORCEMENT AT THE SLAB COLUMN CONNECTION. AS SHOWN ON THE DRAWINGS AND DETAILS SHALL BE STUDRAILS AS MANUFACTURED BY DECON (ESR-2494). THE SHEAR STUDS USED IN FABRICATION SHALL BE LOW CARBON STEEL, ASTM A108 GRADES 1010 THROUGH 1020. THE STRENGTH AND DUCTILITY REQUIRMENTS ARE:

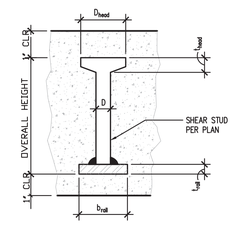
YIELD STRENGTH:	51,000 PSI MIN.
TENSILE STRENGTH	65,000 PSI MIN.
ELONGATION IN 2 IN.	20% MIN.
REDUCTION IN AREA	50% MIN.

THE RAIL USED IN STUD RAILS SHALL BE LOW CARBON STEEL TYPE 44W. THE STUDS ARE WELDED IN ACCORDANCE WITH AWS D1.1.

SCALE: NONE

19 STUDRAIL ELEVATION

D (IN)	SHANK AREA (IN²)	D_{head} (IN)	t_{head} (IN)	b_{rail} (IN)	t_{rail} (IN)
5/8"	0.307	1.98	0.35	1.75	5/16



20 SHEAR STUD TO RAIL CONNECTION

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

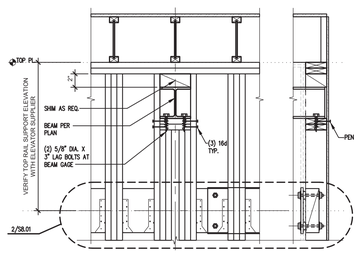
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SUK | CAD: SUK | PLOT: 02/16/23 | TITLE: ISSUED STSD | JOB #:

Shelter HOLDINGS

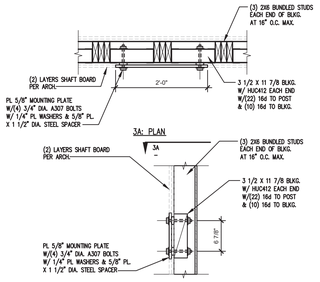
PT Details
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S7.03



SCALE: 1" = 1'-0"

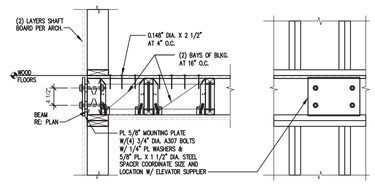
1 **DETAIL AT HOIST BEAM**



BETWEEN WALL STUDS

SCALE: 1" = 1'-0"

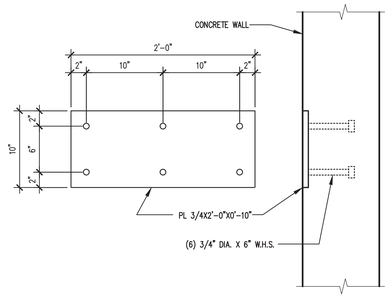
2 **SECTION AT GUIDE RAIL SUPPORT**



ELEVATED WOOD FLOORS

SCALE: 1" = 1'-0"

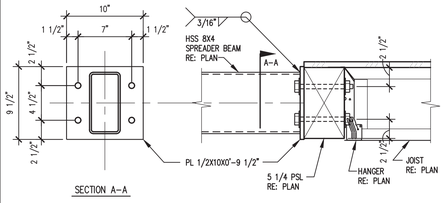
3 **GUIDE RAIL SUPPORT AT RIM BEAM**



RAIL BRACKET

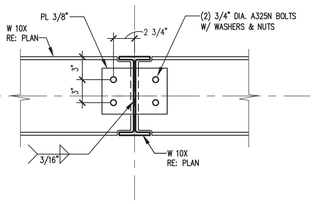
SCALE: 1 1/2" = 1'-0"

5 **SECTION**



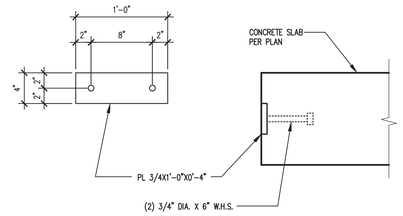
SCALE: 1 1/2" = 1'-0"

6 **SECTION**



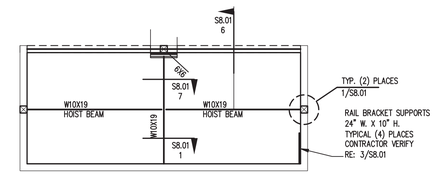
SCALE: 1 1/2" = 1'-0"

7 **SECTION**

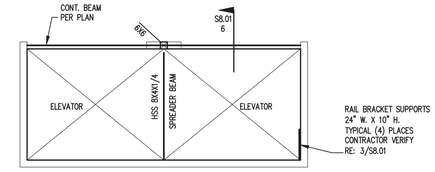


SCALE: 1 1/2" = 1'-0"

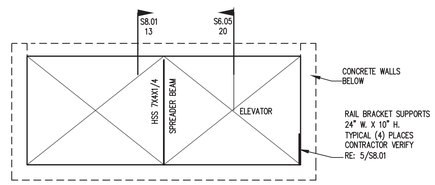
8 **EMBED FOR ELEVATOR SILL (PER MFG.)**



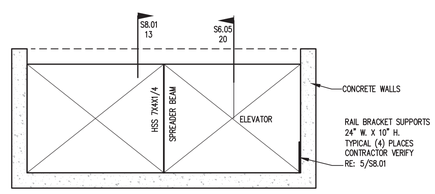
PENTHOUSE



LEVELS 3, 4, 5, 6, ROOF



LEVEL 2

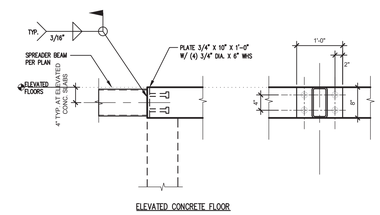


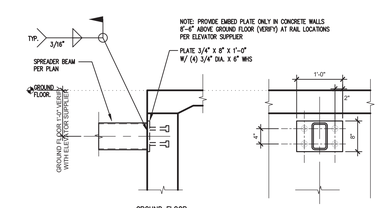
LEVEL 1

NOTE:
1. CONTRACTOR SHALL VERIFY ALL LOCATIONS OF SEPARATOR BEAMS WITH ELEVATOR SUPPLIER.
2. CONTRACTOR SHALL VERIFY ALL LOCATIONS, SIZE, ETC. OF ALL RAIL BRACKET SUPPORTS WITH ELEVATOR SUPPLIER.

SCALE: 1/4" = 1'-0"

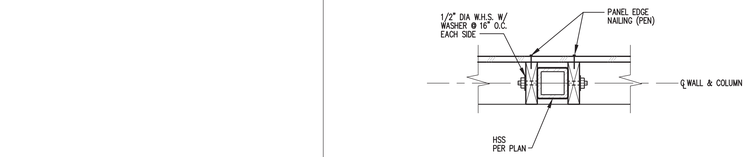
16 **ELEVATOR PLANS**





SCALE: 1" = 1'-0"

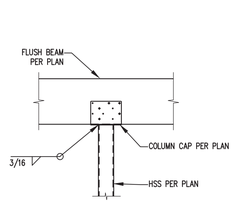
13 **SPREADER BEAM AT CONCRETE**



PLAN VIEW

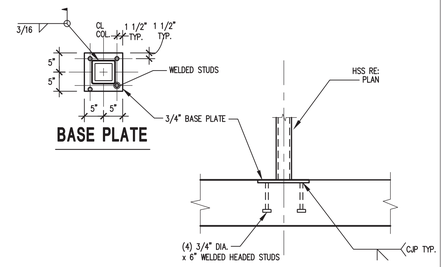
SCALE: 1 1/2" = 1'-0"

11 **STUDS TO STEEL HSS BEAM**



SCALE: 3/4" = 1'-0"

14 **HSS TO PSL FLUSH BEAM**



SCALE: 3/4" = 1'-0"

15 **HSS TO CONCRETE CONNECTION**

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
ENGR: SWK	CAD: SWK	PLOT: 02/6/23

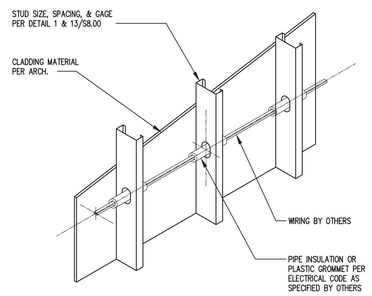
JOB #: 19010 3801

Shelter HOLDINGS

Elevator Details

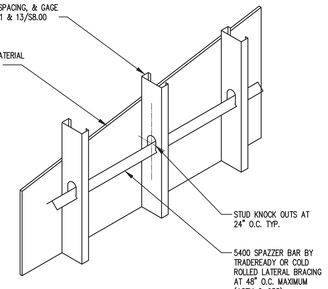
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S8.01



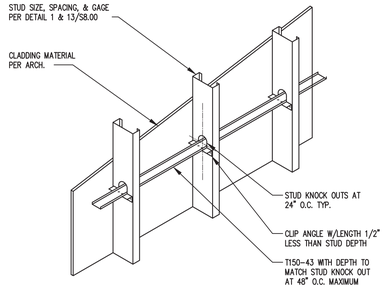
SCALE: 3/4" = 1'-0"

1 TYPICAL WIRING PENETRATION



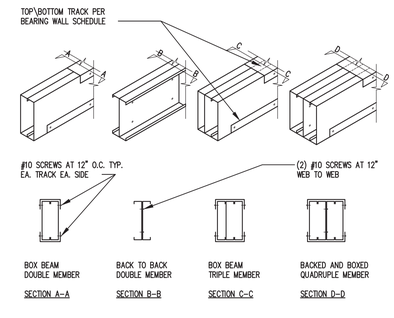
SCALE: 3/4" = 1'-0"

2 TYPICAL HORIAONTAL BRACING DETAIL



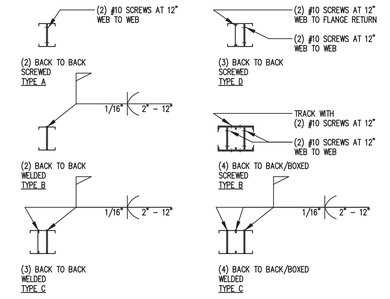
SCALE: 3/4" = 1'-0"

3 TYPICAL COLD ROLLED LATERAL BRACING



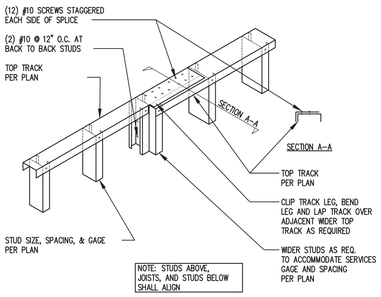
SCALE: 3/4" = 1'-0"

4 TYPICAL BUILT-UP JOIST/BEAM



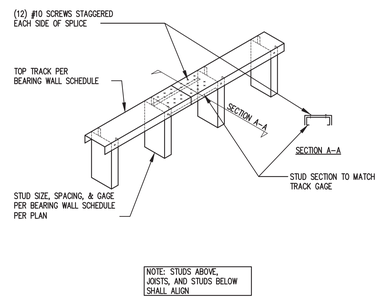
SCALE: 3/4" = 1'-0"

5 TYPICAL BUILT-UP STUD/POST



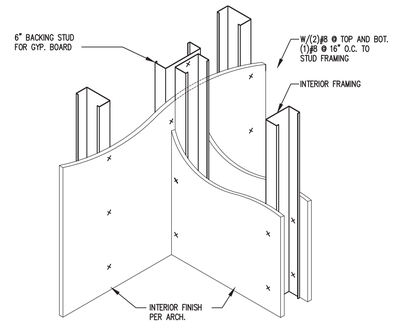
SCALE: 3/4" = 1'-0"

6 TYPICAL TOP PLATE TRANSITION SPLICE



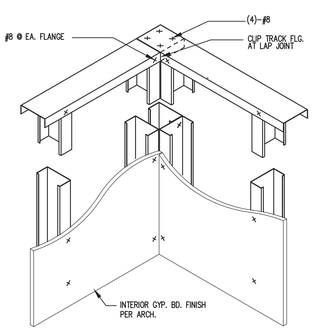
SCALE: 3/4" = 1'-0"

7 TYPICAL TOP PLATE SPILE



SCALE: 3/4" = 1'-0"

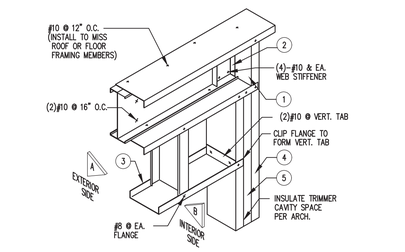
8 TYPICAL INTERIOR CORNER



SCALE: 3/4" = 1'-0"

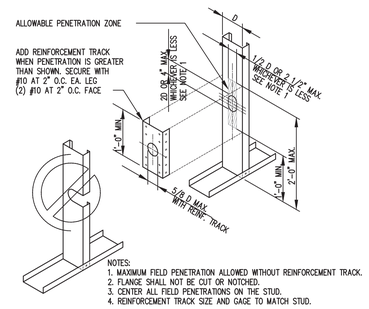
9 TYICAL EXTERIOR CORNER

HEADER TYPE	HEADER MATERIALS (1)	WEB STIFFENERS (2)	HEADER TRACK (3)	JAMB STUD (4)	TRIMMER STUD(S) (5)
HR-1	PER PLAN	TO MATCH JAMB	PER SCHED.	PER SCHED.	PER SCHED.
–	–	–	–	–	–



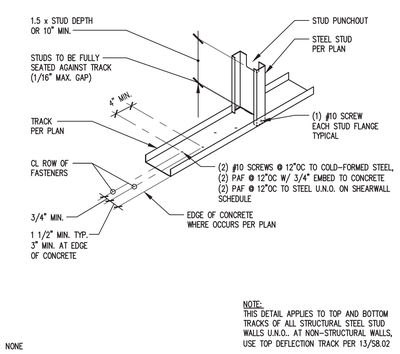
SCALE: 3/4" = 1'-0"

10 TYPICAL BUILT-UP HEADER



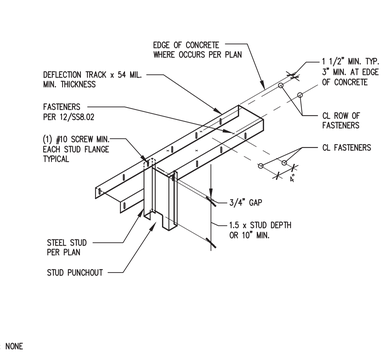
SCALE: 3/4" = 1'-0"

8 TYPICAL FIELD PENETRATION & REINFORCING



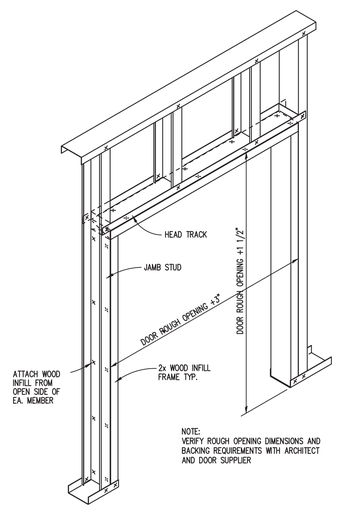
SCALE: NONE

12 TYPICAL TOP AND BOTTOM TRACK DETAIL



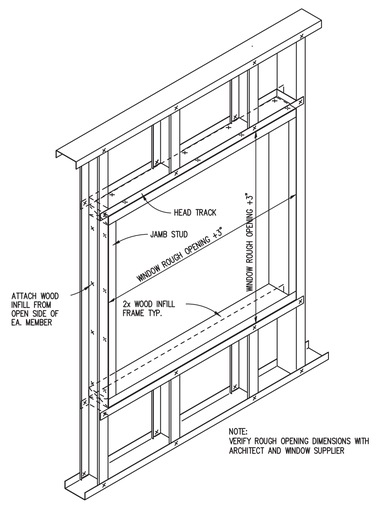
SCALE: NONE

13 TYPICAL NON-BEARING WALL TOP TRACK



SCALE: 3/4" = 1'-0"

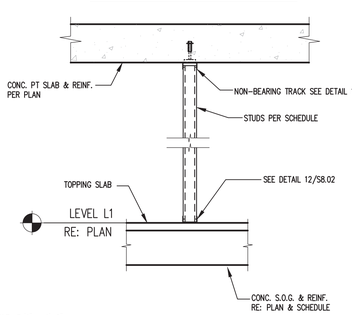
19 TYPICAL INTERIOR NON-LOAD BEARING DOOR AND WINDOW OPENING



SCALE: 3/4" = 1'-0"

16 NOT USED

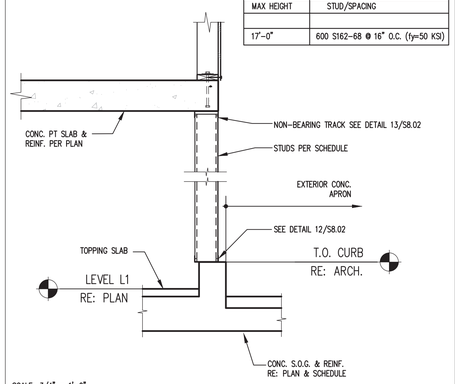
INTERIOR NON BEARING WALL SCHEDULE	
MAX HEIGHT	STUD/SPACING
17'-0"	350 S125-43 @ 16" O.C.
17'-0"	600 S125-30 @ 24" O.C.



SCALE: 3/4" = 1'-0"

17 TYPICAL INTERIOR TOP and BOTTOM TRACK

EXTERIOR NON BEARING WALL SCHEDULE	
MAX HEIGHT	STUD/SPACING
17'-0"	600 S162-68 @ 16" O.C. (fy=50 KSI)



SCALE: 3/4" = 1'-0"

18 TYPICAL EXTERIOR TOP and BOTTOM TRACK

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Suite 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
ENGR: SWK	C.A.D: SWK	PLOT: 02/6/23

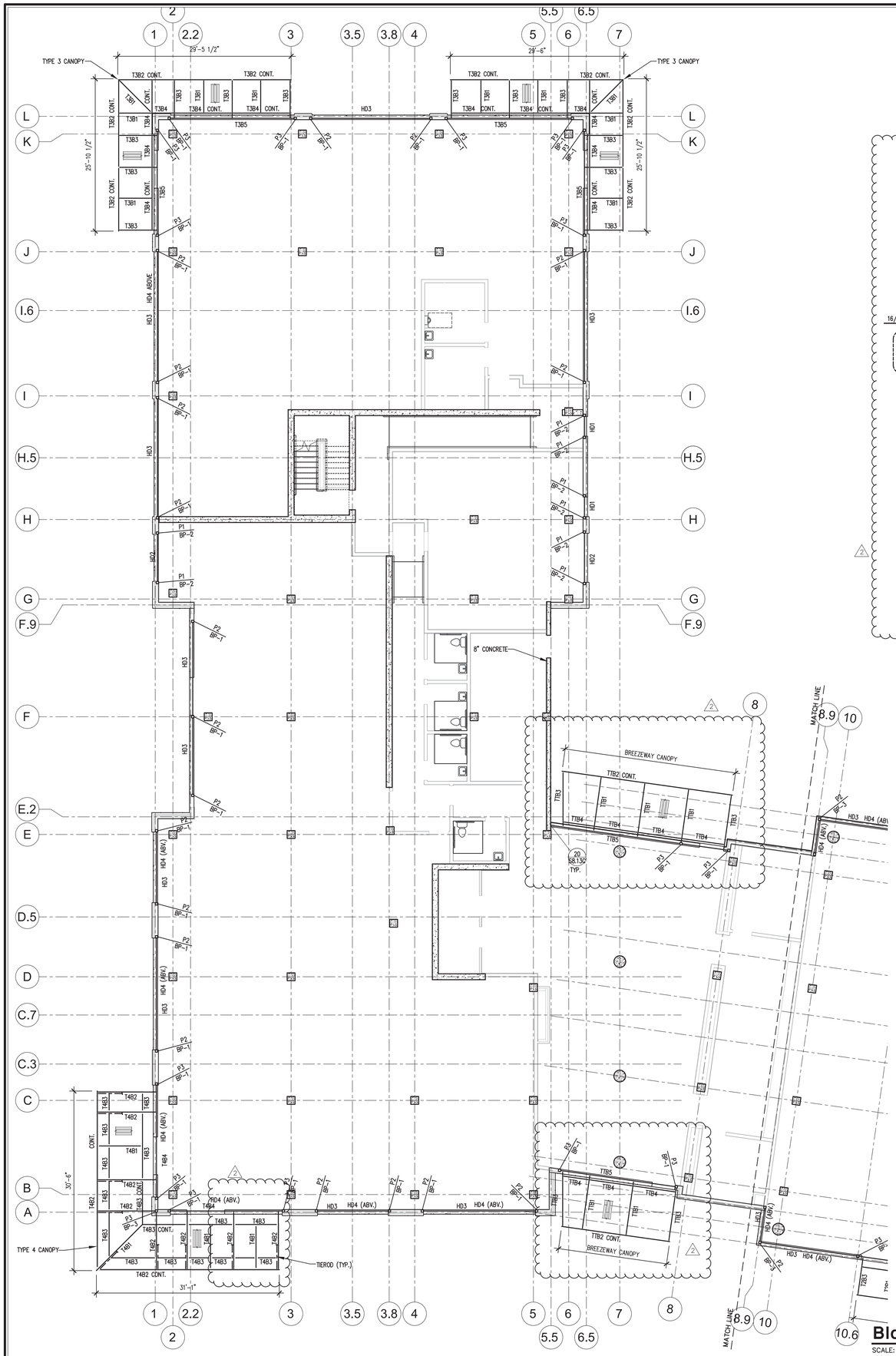
JOB #: 19010 S801

Shelter HOLDINGS

Steel Details

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S8.02



Steel Post Schedule

MARK	MEMBER	SUPPORT	REMARKS
P1	HSS 5X5X1/4	NON-CANOPY	
P2	HSS 5X5X3/8	NON-CANOPY	
P3	HSS 5X5X3/8	CANOPY	

Misc. Beam Schedule

MARK	MEMBER	POST	REMARKS
HD1	HSS 5X5X1/4	P1	
HD2	HSS 6X5X1/4	P1	
HD3	HSS 10X5X1/4	P2	
HD4	HSS 6X5X1/2	--	ABOVE

Breezeway Canopy Beam Schedule

MARK	MEMBER	DECK	REMARKS
TBB1	HSS 8X4X1/4	1 1/2" X 22 GAGE TYPE B	
TBB2	HSS 8X4X1/4		
TBB3	HSS 8X4X1/4		
TBB4	HSS 8X4X1/4		
TBB5	HSS 10X5X1/4		

Type 2 Canopy Beam Schedule

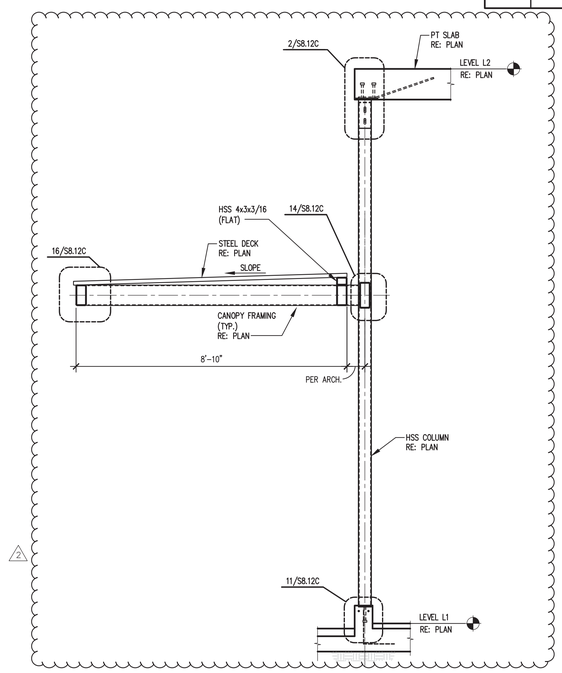
MARK	MEMBER	DECK	REMARKS
T2B1	HSS 8X4X1/4	1 1/2" X 22 GAGE TYPE B	
T2B2	HSS 8X4X1/4		
T2B3	HSS 8X4X3/8		
T2B4	HSS 10X5X1/4		
T2B5	HSS 10X5X1/4		
T2B6	HSS 6X5X1/4		ABOVE T3B5 (SEE PLAN)

Type 3 Canopy Beam Schedule

MARK	MEMBER	DECK	REMARKS
T3B1	HSS 8X4X1/4	1 1/2" X 22 GAGE TYPE B	
T3B2	HSS 8X4X1/4		
T3B3	HSS 8X4X3/8		
T3B4	HSS 10X5X1/4		
T3B5	HSS 10X5X1/4		
T3B6	HSS 6X5X1/4		ABOVE T3B5 (SEE PLAN)

Type 4 Canopy Beam Schedule

MARK	MEMBER	DECK	REMARKS
T4B1	HSS 7X4X1/4	1 1/2" X 22 GAGE TYPE B	
T4B2	HSS 7X4X1/4		
T4B3	HSS 7X4X1/4		
T4B4	HSS 10X5X1/4		



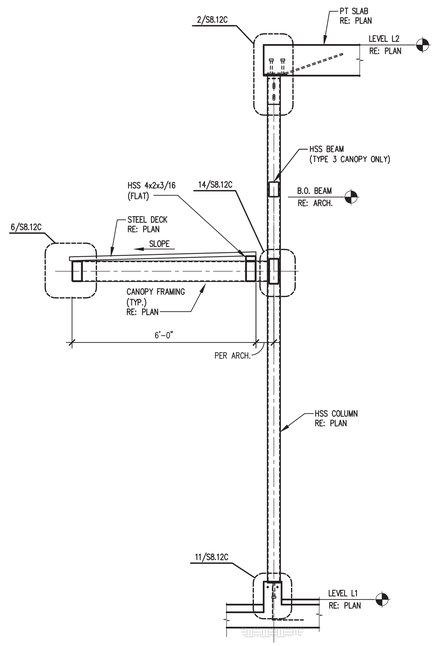
Breezeway Canopy Section

SCALE: 1/2" = 1'-0"

Note:
ALL SECTION CUTS ARE TYPICAL

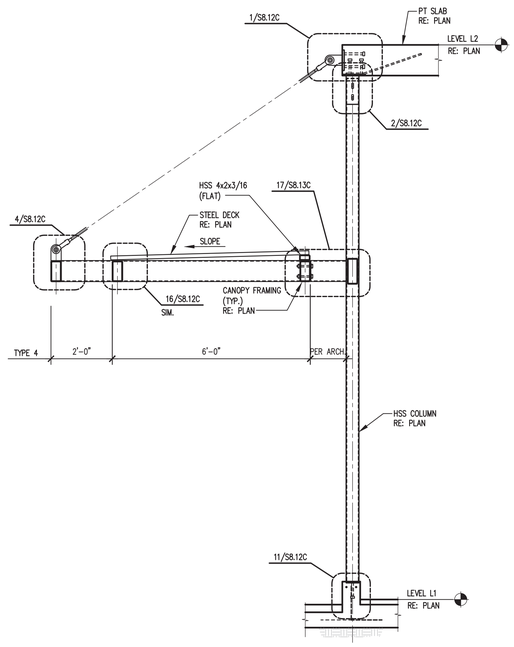
Canopy Framing Notes

1. ROOF DECK - 1 1/2" TYPE B DECKING (SEE CANOPY TYPE FOR GAGE.) FROM VERCO OR APPROVED EQUAL.
2. ROOF DECK ATTACHMENT SHALL BE (4) 1/2" DIA. PUDDLE WELDS AT SUPPORTS AND SIDELAP CONNECTION WITH VSC/PUNCHLOK AT 12" O.C..
3. VERIFY LOCATION, CANOPY TYPES AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS.



Type 2 & 3 Canopy Section

SCALE: 1/2" = 1'-0"



Type 4 Canopy Section

SCALE: 1/2" = 1'-0"

Bldg. C Canopy Framing & HSS Post Plan (South)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

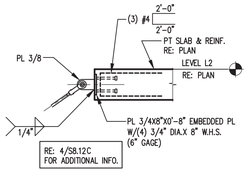
ENGR: SWK | C.A.D: SWK | PLOT: 02/6/23 | FILE: 19010 S8111 | JOB #:

Shelter HOLDINGS

Building C Canopy & HSS Post Plan (South)

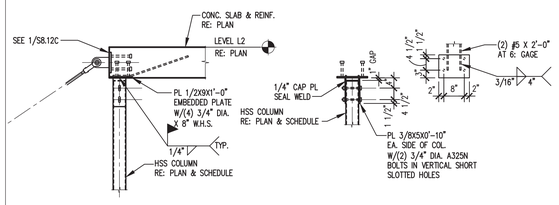
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S8.11C



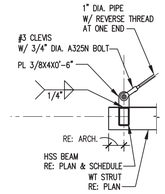
SCALE: 1/2" =1'-0"

1 DETAIL



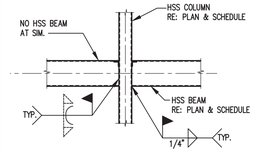
SCALE: 1/2" =1'-0"

2 DETAIL



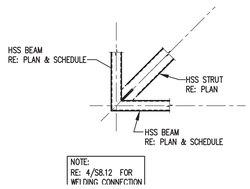
SCALE: 1/2" =1'-0"

4 DETAIL



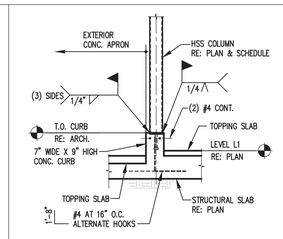
SCALE: 1/2" =1'-0"

7 DETAIL



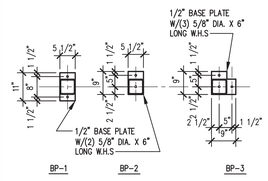
SCALE: 1/2" =1'-0"

9 DETAIL



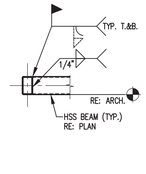
SCALE: 1/2" =1'-0"

11 SECTION



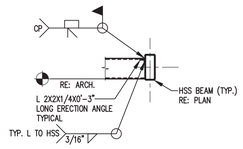
SCALE: 1/2" =1'-0"

12 BASE PLATES



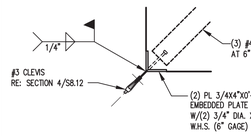
SCALE: 1/2" =1'-0"

13 SECTION



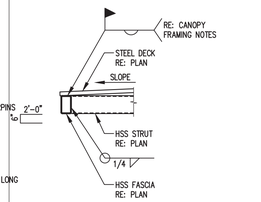
SCALE: 1/2" =1'-0"

14 SECTION



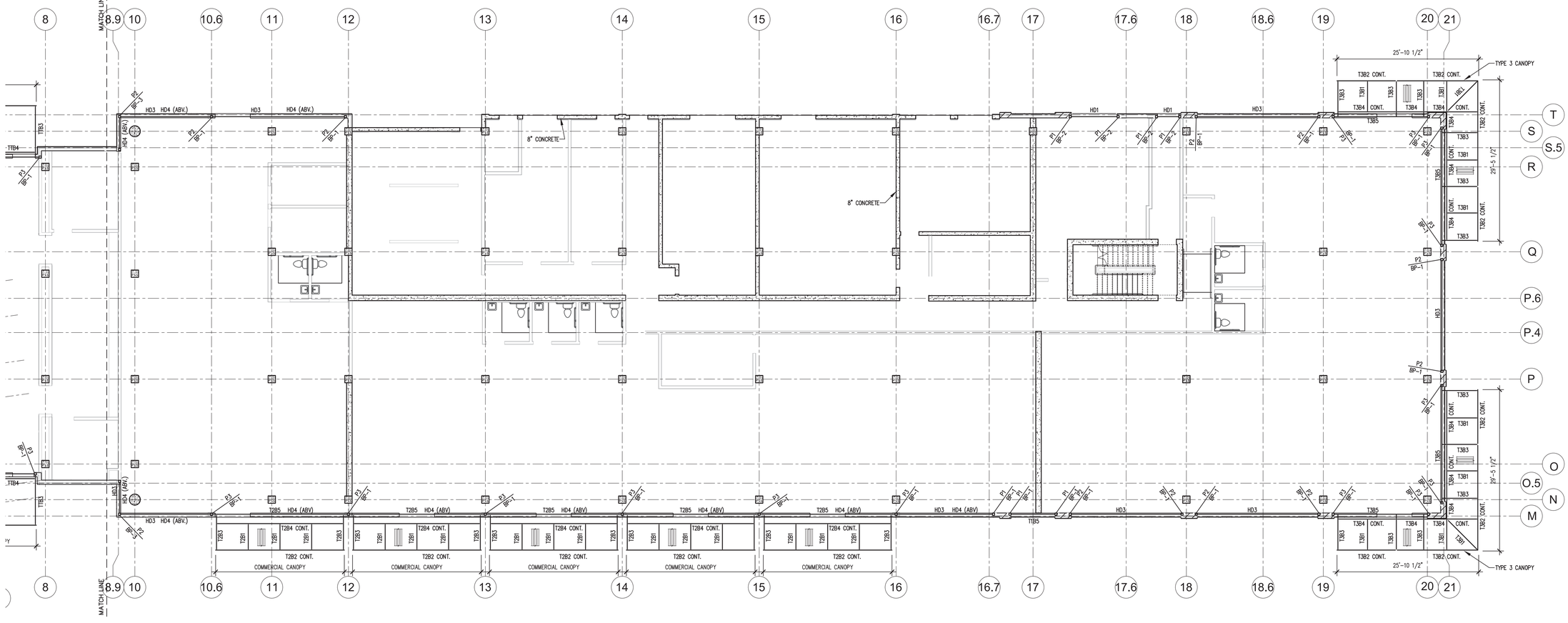
SCALE: 1/2" =1'-0"

15 SECTION



SCALE: 1/2" =1'-0"

16 SECTION



Bldg. C Canopy Framing & HSS Post Plan (North)

SCALE: 1/8" = 1'-0"

REFERENCE

GRAPHIC SCALE
-8 0 4 8 16
(IN FEET)
1 inch = 8 ft.

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

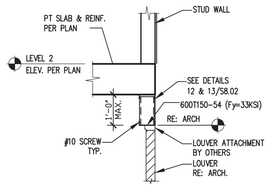
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK CAD: SWK PLOT: 02/16/23	FILE: 19010 S8R1
		JOB #:

Shelter HOLDINGS

Building C Canopy & HSS Post Plan (North)

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S8.12C



SCALE: 1/2" =1'-0"

16 TYPICAL LOUVER AT STOREFRONT

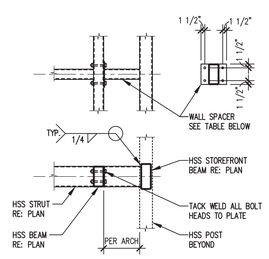


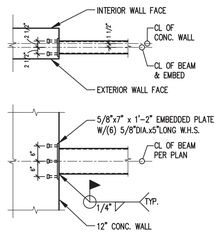
Table Schedule

CANOPY	SPACER PLATE	SPACER STRUT	BOLTS
TYPE 4	3/8x7 x 0'-10"	HSS 7x4x3/8	(4) 3/4"DIA. A325

SCALE: 1/2" =1'-0"

17 WALL SPACER AT TYPE 4 CANOPY STRUTS

2



SCALE: 1/2" =1'-0"

17 BEAM TO CONC. WALL CONN.

SCALE: 3/4" = 1'-0"

19 SECTION

SCALE: 3/4" = 1'-0"

20 SECTION

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street Ste. 302 Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22

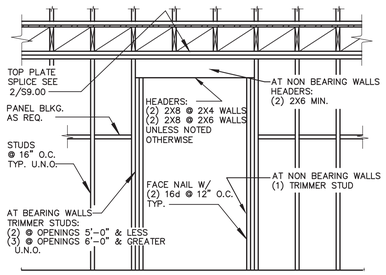
ENGR. SWK | CAD. SWK | PLOT 02/6/23 | FILE 19010 S811
JOB #:

Shelter HOLDINGS

Building C Canopy Details

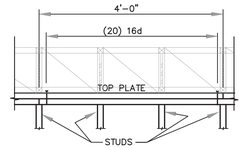
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S8.13C



SCALE: NONE

1 **TYP. HEADER at WALL**

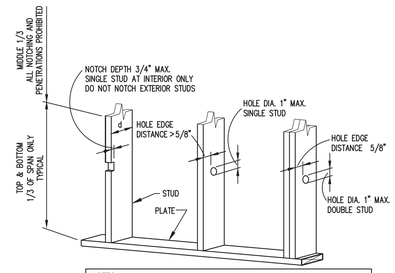


NOTE:

1. SPLICE & NAIL TOP PLATES AS SHOWN @ ALL EXTERIOR, PLUMBING, PARTY & SHEAR WALLS @ EA. FLOOR LEVEL AND AT ROOF.
2. PROVIDE (2) LSTA 36 STRAP W/ (26) 10d NAIL ONE EACH SIDE WHERE DRILLED HOLES EXCEED THE FOLLOWING:
   1" FOR 2X4
   3" FOR 2X6 WALL PLATES.
   CENTER ALL HOLES MIN. EDGE DIST. = 1 1/4"

SCALE: NONE

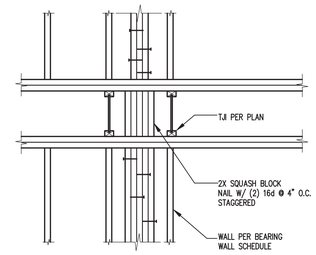
2 **TYPICAL TOP PLATE SPLICE**



NOTES:
1. d DENOTES STUD DEPTH (3 1/2" OR 5 1/2").
2. STUD NOTCHING AND BORING AT BUNDLED STUDS GREATER THAN (2), POST AND HOLDOWN STUDS SHALL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

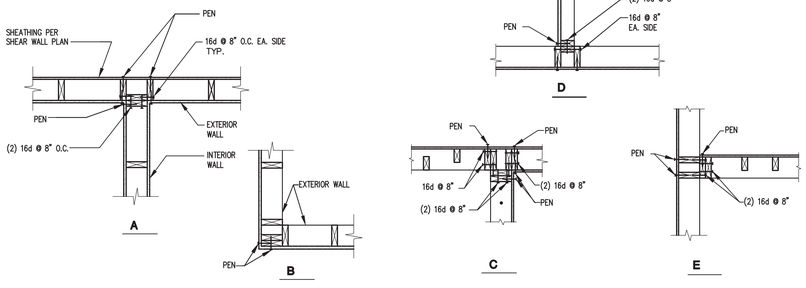
SCALE: NONE

3 **STUD NOTCHING and BORING LIMITS**



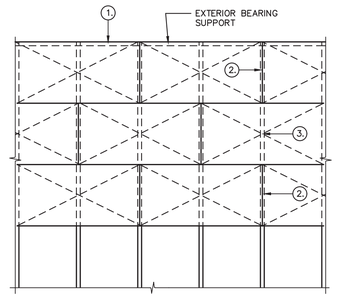
SCALE: NONE

4 **TYPICAL BLOCKING at BUNDLED STUDS**



SCALE: NONE

6 **PLAN**
TYP. CORNER STUD FRAMING



1. BOUNDARY NAILING AT ROOF PERIMETER, AT CONT. PANEL EDGES (B.N.)
2. EDGE NAILING (E.N.) AT ALL EDGES OF ALL PLYWOOD SHEETS AT SUPPORTS
3. INTERIOR FIELD NAILING (F.N.) 6" O.C. AT BEARING SUPPORTS
4. SEE PLANS FOR PLYWOOD THICKNESS & NAILING SCHEDULE
5. LONG DIMENSION OF PLYWOOD SHALL RUN ACROSS TRUSS SYSTEM FRAMING
6. MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8"
7. MINIMUM PLYWOOD SHEET SIZE 2'-0" X 4'-0"
8. NAILS SHALL NOT BE OVER DRIVEN

SCALE: NONE

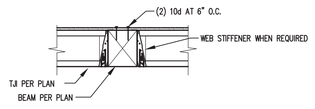
8 **ROOF/FLOOR SHEATHING LAYOUT**

NOTE: STRUCTURAL SHEARWALLS SHOWN ON THESE PLANS WILL REQUIRE ADDITIONAL FASTENERS.

CONNECTION	FASTENING (a)	LOCATION
1. JOIST TO SILL OR GIRDER	(3) 8d COMMON (3) 3" X 0.131" NAILS	TOENAIL TOENAIL
2. BRIDGING TO JOIST	(2) 8d COMMON (2) 3" X 0.131" NAILS	TOENAIL EA. END TOENAIL EA. END
3. 1X6 SUBFLOOR OR LESS TO JST.	(2) 8d COMMON	FACE NAIL
4. WIDER THAN 1X6 SUBFLOOR TO JST.	(3) 8d COMMON	FACE NAIL
5. 2" SUBFLOOR TO JST./GIRDER	(2) 16d COMMON	BLIND & FACE NAIL
6. SOLE PLATE TO JST. OR BLKG.	16d AT 16" O.C. 3" X 0.131" NAILS AT 8" O.C.	TYP. FACE NAIL TYP. FACE NAIL
7. TOP PLATE TO STUD	(2) 16d COMMON (3) 3" X 0.131" NAILS	END NAIL END NAIL
8. STUD TO SOLE PLATE	(4) 8d COMMON (4) 3" X 0.131" NAILS	TOENAIL TOENAIL
	(2) 16d COMMON (3) 3" X 0.131" NAILS	END NAIL END NAIL
9. DOUBLE STUDS	16d COMMON AT 24" O.C. 3" X 0.131" NAIL AT 8" O.C.	FACE NAIL FACE NAIL
10. DOUBLE TOP PLATES	16d COMMON AT 16" O.C. 3" X 0.131" NAIL AT 12" O.C.	TYP. FACE NAIL TYP. FACE NAIL
DOUBLE TOP PLATE SPLICE	(8) 16d COMMON (12) 3" X 0.131" NAILS	LAP SPLICE LAP SPLICE
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	(3) 8d COMMON (3) 3" X 0.131" NAILS	TOENAIL TOENAIL
12. RIM JOIST TO TOP PLATE	8d COMMON AT 6" O.C. 3" X 0.131" NAILS AT 6" O.C.	TOENAIL TOENAIL
13. TOP PLATES, LAPS AND INTERSECTIONS	(2) 16d COMMON (3) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
14. CONTINUOUS HEADER, TWO PIECES	16d COMMON AT 16" O.C.	ALONG EDGE
15. CEILING JOISTS TO PLATE	(3) 8d COMMON (3) 3" X 0.131" NAILS	TOENAIL TOENAIL
16. CONTINUOUS HEADER TO STUD	(4) 8d COMMON	TOENAIL
17. CEILING JOISTS, LAPS OVER PARTITIONS (TABLE 2308.10.4.1)	(3) 16d COMMON MIN. (4) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
18. CEILING JOISTS TO PARALLEL RAFTERS (TABLE 2308.10.4.1)	(3) 16d COMMON MIN. (4) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
19. RAFTER TO PLATE (SECTION 2308.10.1)	(3) 8d COMMON (3) 3" X 0.131" NAILS	TOENAIL TOENAIL
20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE	(2) 8d COMMON (2) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
21. 1"X8" SHEATHING TO EACH BEARING	(3) 8d COMMON	FACE NAIL
22. WIDER THAN 1"X8" SHEATHING TO EACH BEARING	(3) 8d COMMON	FACE NAIL
23. BUILT UP CORNER STUDS	16d COMMON 3" X 0.131" NAILS	24" O.C. 16" O.C.
24. BUILT UP GIRDER AND BEAMS	20d COMMON AT 32" O.C. 3" X 0.131" NAILS AT 24" O.C. STAGGERED	FACE NAIL TOP AND BOTTOM
	(2) 20d COMMON (3) 3" X 0.131" NAILS	FACE NAIL AT ENDS AND EA SPLICE
25. 2" PLANKS	16d COMMON	AT EACH BEARING
26. COLLAR TIE TO RAFTER	(3) 10d COMMON (4) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
27. JACK RAFTER TO HIP	(3) 10d COMMON (4) 3" X 0.131" NAILS	TOENAIL TOENAIL
	(2) 16d COMMON (3) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
28. ROOF RAFTER TO 2-BY RIDGE BEAM	(2) 16d COMMON (3) 3" X 0.131" NAILS	TOENAIL TOENAIL
	(2) 16d COMMON (3) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
29. JOIST TO BAND JOIST	(3) 16d COMMON (4) 3" X 0.131" NAILS	FACE NAIL FACE NAIL
30. LEDGER STRIP	(3) 16d COMMON (4) 3" X 0.131" NAILS	FACE NAIL AT EACH JOIST FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS TO FRAMING	SEE SHEARWALL SCHEDULE	SHEET S1.02
SUBFLOOR TO FRAMING	SEE STRUCTURAL NOTES	SECTION 06160

a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE NOTED OTHERWISE.
b. FASTENING SCHEDULE BASED ON IBC TABLE 2304.9.1 AND PROVIDES THE MINIMUM NAILING REQUIRED. WHEN SPECIFIED ELSEWHERE IN THESE PLANS PROVIDE NAILING AS SPECIFIED. SEE IBC FOR COMPLETE NAILING SCHEDULE.

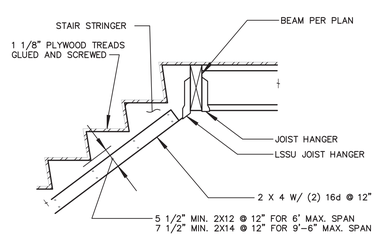
20 **FASTENING SCHEUDLE**



Simpson Strong-Tie Joist Hangers		
TJI SIZE	HANGER TYP	NAILING
11 7/8" TJI 110	IUS1.81/11.88	FACE (10) 10d ---
11 7/8" TJI 230	IUS2.37/11.88	FACE (10) 10d
(2) 11 7/8" TJI 210	MIU4.28/11	FACE (20) 16d JOIST (2) 10d X 1 1/2
9 1/2" TJI 230	IUS2.37/9.5	FACE (8) 10d ---

SCALE: NONE

11 **TYP. JOIST HANGER CONN. at WOOD BEAM**



SCALE: NONE

19 **TYPICAL STAIR FRAMING**

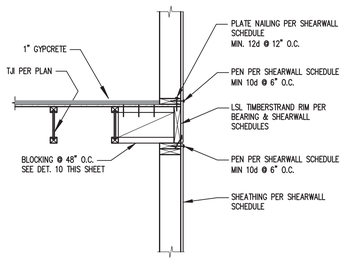
CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SWK C.A.D: SWK PLOT: 02/16/23	FILE: 19010 S901 JOB #:

Shelter HOLDINGS

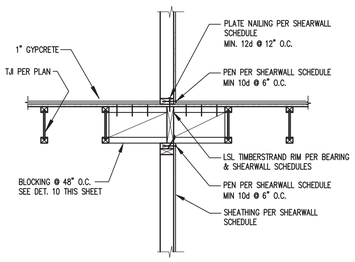
Wood Details
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S9.01



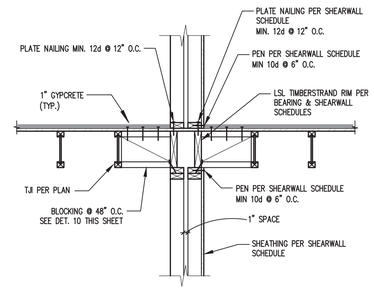
SCALE: 3/4" = 1'-0"

1 PARALLEL
TYP. EXTERIOR WALL TO FRAMING



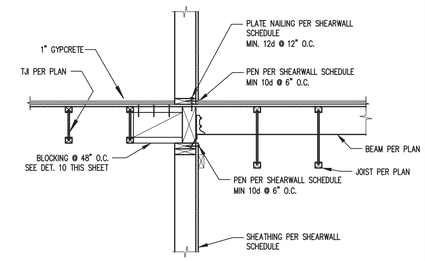
SCALE: 3/4" = 1'-0"

2 PARALLEL
TYP. INTERIOR WALL TO FRAMING



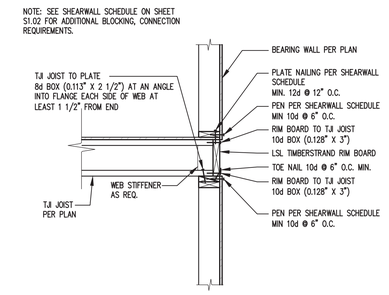
SCALE: 3/4" = 1'-0"

3 PARALLEL
TYPICAL PARTY WALL



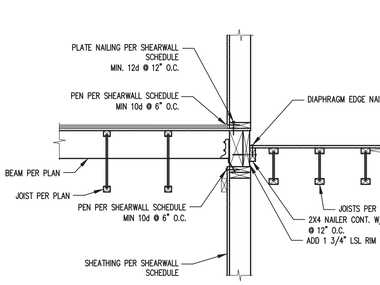
SCALE: 3/4" = 1'-0"

4 PARALLEL
TYP. CORRIDOR WALL TO FRAMING



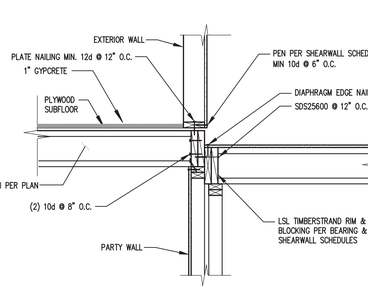
SCALE: 3/4" = 1'-0"

5 TYP. SECTION @ TJI SUPPORT



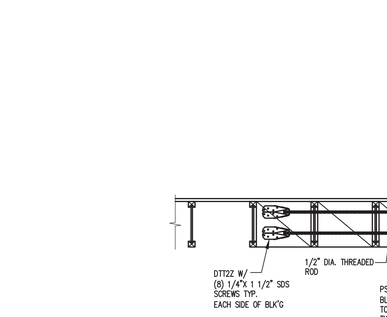
SCALE: 3/4" = 1'-0"

6 PERPENDICULAR
TYPICAL EXTERIOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

7 PERPENDICULAR
TYP. INTERIOR WALL TO FRAMING

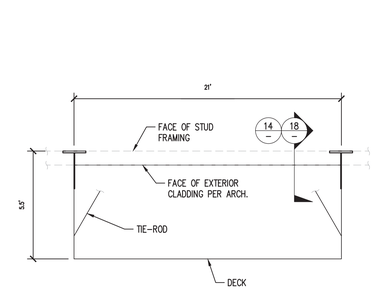


SCALE: 3/4" = 1'-0"

8 PERPENDICULAR
TYPICAL PARTY WALL

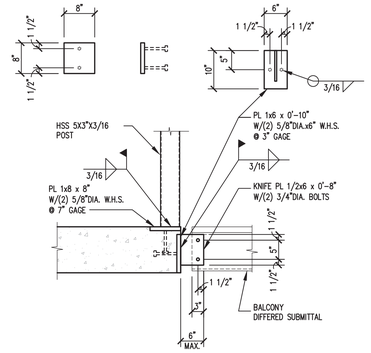
SCALE: 3/4" = 1'-0"

9 PERPENDICULAR
TYP. CORRIDOR WALL TO FRAMING



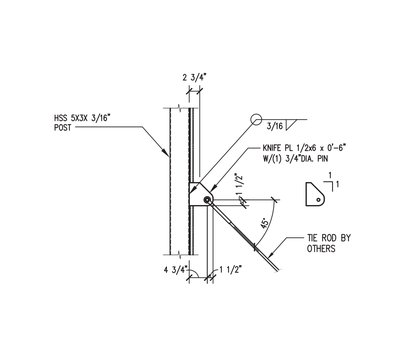
SCALE: 3/4" = 1'-0"

10 TYP. BLOCKING DETAIL



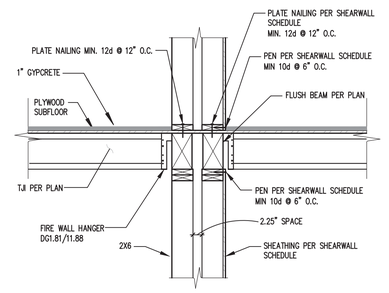
SCALE: 3/4" = 1'-0"

13 SECTION AT PODIUM SLAB



SCALE: 3/4" = 1'-0"

14 SECTION AT BRACE



SCALE: 3/4" = 1'-0"

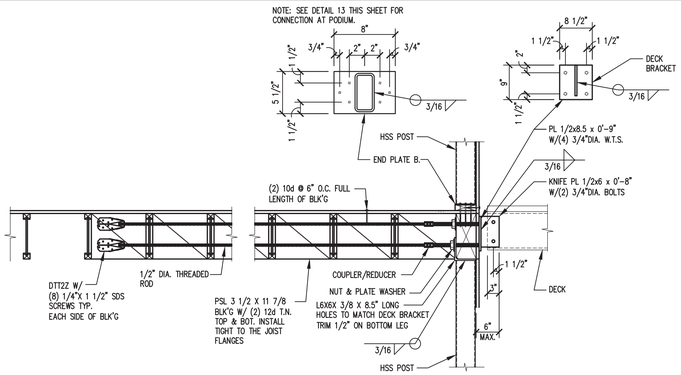
15 PERPENDICULAR
TYPICAL FIRE WALL

SCALE: 3/4" = 1'-0"

16 TYP. SECTION @ ROOF DECK

SCALE: 3/4" = 1'-0"

17 TYP. SECTION @ ROOF DECK



SCALE: 3/4" = 1'-0"

18 SECTION AT FLOOR (ROOF SIM.)

SCALE: NONE

20 TIE-ROD EACH END
DECK TYPICAL

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

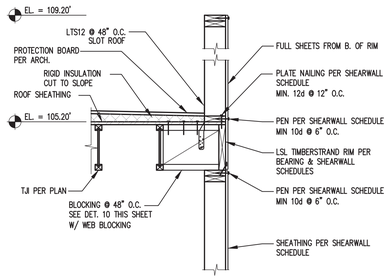
NO.	REVISION	DATE
1	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
3	BUILDING PERMIT CORRECTION #1	09/30/22

ENGR: SMK | C.A.D: SMK | PLOT: 02/6/23 | FILE: 19010 S901

Shelter HOLDINGS

Wood Details
Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S9.02

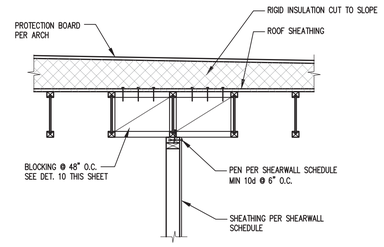


(NON-ACCESSABLE)

SCALE: 3/4" = 1'-0"

PARALLEL

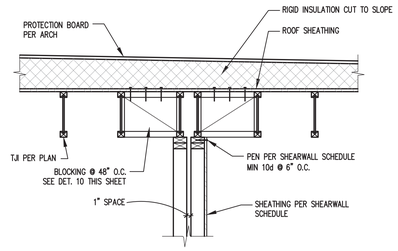
1 TYP. EXTERIOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

PARALLEL

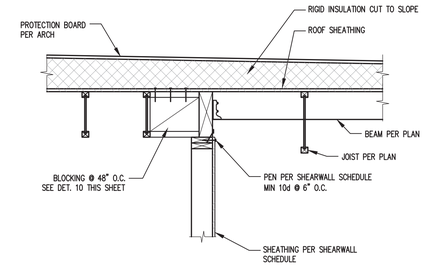
2 TYP. INTERIOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

PARALLEL

3 TYPICAL PARTY WALL

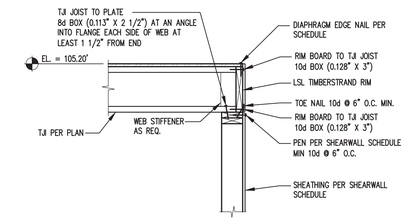


SCALE: 3/4" = 1'-0"

PARALLEL

4 TYP. CORRIDOR WALL TO FRAMING

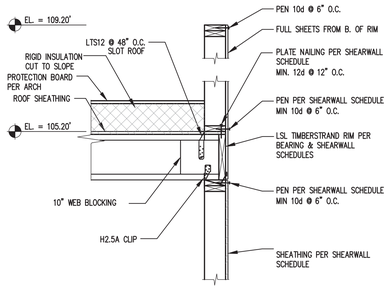
NOTE: SEE SHEARWALL SCHEDULE ON SHEET S1.02 FOR ADDITIONAL BLOCKING, CONNECTION REQUIREMENTS.



SCALE: 3/4" = 1'-0"

PARALLEL

5 TYP. ROOF SECTION @ TJI SUPPORT

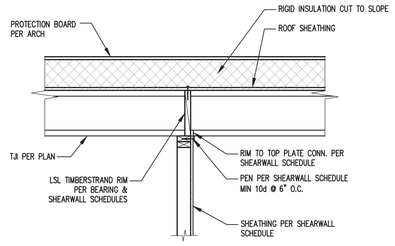


(NON-ACCESSABLE)

SCALE: 3/4" = 1'-0"

PERPENDICULAR

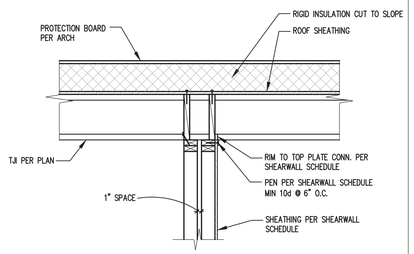
6 TYPICAL EXTERIOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

PERPENDICULAR

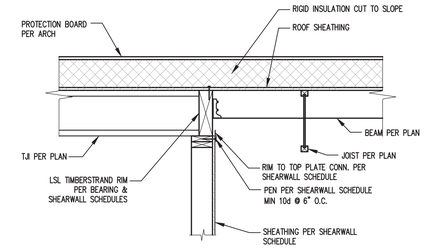
7 TYP. INTERIOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

PERPENDICULAR

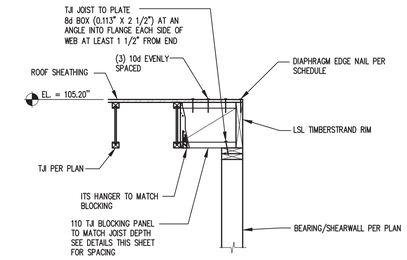
8 TYPICAL PARTY WALL



SCALE: 3/4" = 1'-0"

PERPENDICULAR

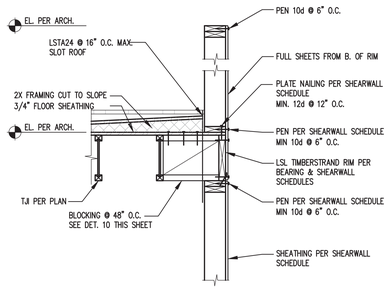
9 TYP. CORRIDOR WALL TO FRAMING



SCALE: 3/4" = 1'-0"

PERPENDICULAR

10 TYP. ROOF BLOCKING DETAIL

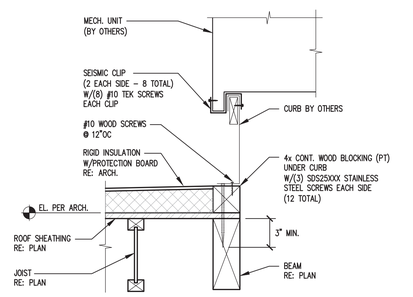


(ACCESSABLE)

SCALE: 3/4" = 1'-0"

PARALLEL

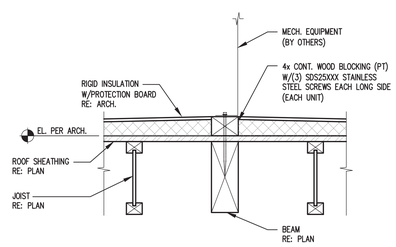
11 TYP. EXTERIOR WALL TO FRAMING



NOTE:
ALL SIDES OF HVAC SHALL BE SUPPORTED BY BEAMS.

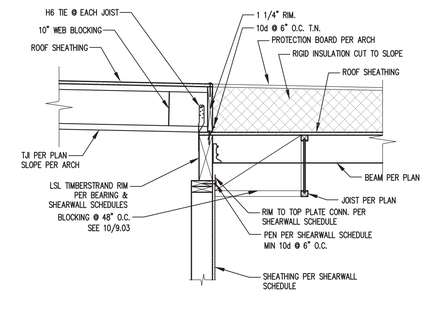
SCALE: 1 1/2" = 1'-0"

12 HVAC SUPPORT DETAIL



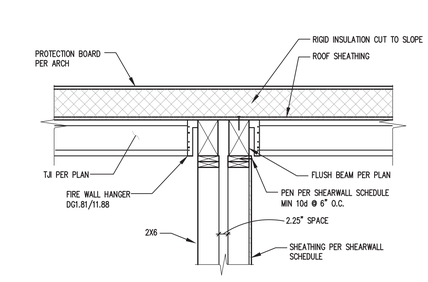
SCALE: 1 1/2" = 1'-0"

13 MECH. EQUIPMENT SUPPORT DETAIL



SCALE: 3/4" = 1'-0"

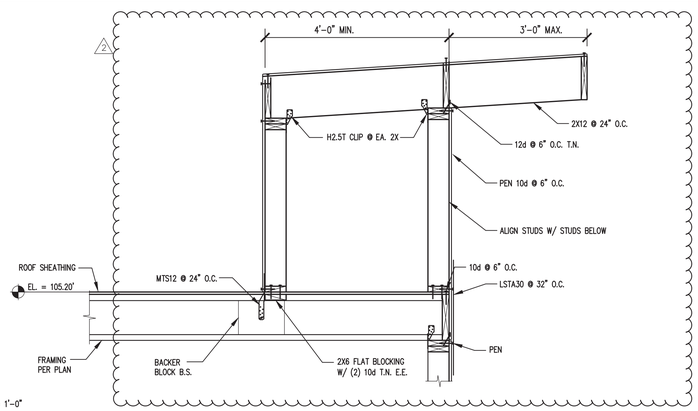
14 SECTION AT DECK ROOF



SCALE: 3/4" = 1'-0"

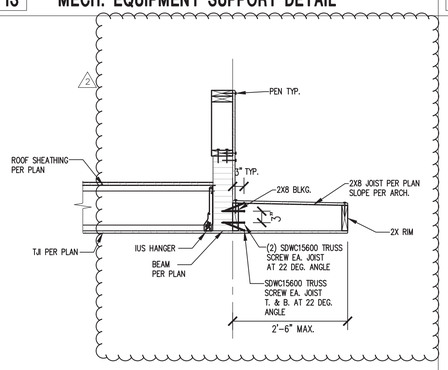
PERPENDICULAR

15 TYPICAL FIRE WALL



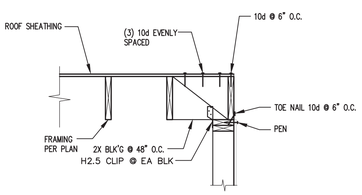
SCALE: 3/4" = 1'-0"

16 TYPICAL OVERHANG FRAMING



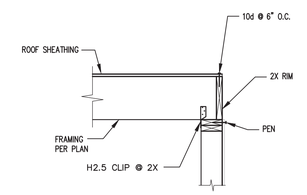
SCALE: 3/4" = 1'-0"

18 SECTION



SCALE: 3/4" = 1'-0"

19 TYPICAL STAIR/ELEVATOR ROOF FRAMING



SCALE: 3/4" = 1'-0"

20 TYPICAL STAIR/ELEVATOR ROOF FRAMING

CT ENGINEERING INC.
Structural Engineers
180 Nickerson Street, Suite 302, Seattle, WA 98109
206.285.4512 (V) 206.285.0618 (F)

NO.	REVISION	DATE
3	BLDG. PERMIT CORRECTION/REVISION #2	01/31/24
2	COORDINATION	12/13/22
1	BUILDING PERMIT CORRECTION #1	09/30/22
	ENGR: SMK C.A.D: SMK PLOT: 02/16/23	FILE: 19010 S903 ADD #:

Shelter HOLDINGS

Wood Details

Everett Riverfront
3710 Riverfront Boulevard
Everett, Washington

S9.03

GENERAL NOTES

I. Introduction

B.E.E. Consulting, LLC (BEE) has created building envelope concept design details for the **Everett Riverfront**. The Building Envelope drawings are intimately related to the materials specified in the project material specifications and building inspection. Details provided by BEE are only for use on the **Everett Riverfront**and are © copyrighted.

Each sheet in this set of Building Envelope drawings, bearing the BEE Titleblock and Logo in the upper right corner, was prepared by BEE and is accounted for in the drawing index on the title page. In its original form, this set was prepared for **Riverfront Commercial Investment, LLC** for a specific project.

The act of submitting for government approval of building permit, a set of drawings bearing the BEE titleblock and logo, which has been altered in any way by **Riverfront Commercial Investment, LLC**, by any third party, or for a project other than that which it was originally prepared by BEE without the prior written consent of BEE shall constitute consent by **Riverfront Commercial Investment, LLC** to defend, indemnify, and hold harmless BEE from and against any and all claims, suits, demands, liabilities, losses, and costs arising in whole or in part out of or in any way connected with the use of the such altered drawings by **Riverfront Commercial Investment, LLC** or any third party.

Such alterations shall include, but shall not be limited to, the addition or removal of individual sheets, the modifications of any graphic or textual information contained within a sheet prepared by BEE. The removal of this statement, and any construction inconsistent with that which has been shown by BEE in its original drawing set.

II. General

A. Water Penetration Resistance Field Testing

For all windows, doors, and skylights a mock setup will be water intrusion tested in field. Mock setup may be created in-situ or be free standing as best suits the needs of the project, provided it allows for the following parameters to be achieved.

At least one (1) window of each operational type will be tested to the Specified Field Test Pressure specified below, in accord with the current version of ASTM E1105. For windows and doors such as aluminum, wood clad aluminum, vinyl, or fiberglass windows and doors, Procedure B (cyclic) test will be used for 4 cycles each 5 minutes in duration, with a pressure reduced to 0 psf for one minute between cycles. For storefront and curtain wall assemblies, Procedure A (Uniform) test will be used for a single cycle of 15 minutes in duration. The initial test will be inclusive of both installation interface and window product. In the case of failure (defined as any water intrusion observed on the interior that is not in a drainage area), the representative sample will be expanded to three (3) specimens in order to obtain statistical confidence. In the case of failure during retest, the representative sample will be expanded to five (5) additional specimens. In the case of a failure during second retest, a meeting will be held with all parties concerned to determine necessary actions. In the case of failure, the responsible party will be held financially liable for the cost of retesting, and any related wall assembly or cladding deconstruction needed to obtain passing results. This test specification supersedes AAMA Voluntary Specification for Field Testing.

Regardless of AAMA deductions for field installed product, the minimum Water Resistance Field Test Pressure (during field test), as determined by the consultant, shall be:

- 6.0 psf for sliding doors
- 6.0 psf for storefronts
- 6.0 psf for swing doors
- 6.0 psf for windows

The above referenced test pressures should be placed on the purchase order prior to ordering the windows or doors.

Doors are to be installed and tested in a similar fashion as windows.

B. Louvers

Louvers through the building envelope shall be designed for exterior use in accord with wind and rain exposure conditions.

C. Sealant Performance Requirements

All sealants shall be validated and approved by the Sealant Waterproofing and Restoration Institute (SWRI).

Sealant and Self Adhesive Membrane (S.A.M.) combinations shall have documentation from the manufacturer that adhesion is acceptable prior to construction.

As part of the quality control procedures, sealant dependant installations require an adhesion test performed on site by the contractor.

D. Laboratory Test Reports

All windows and doors shall be pre-tested by the manufacturer to design conditions.

The associated test records and certifications shall be submitted to project team.

E. Contractor Responsibility

It shall be the specific duty and responsibility of each trade and supplier to examine all project drawings, details and specifications, and to provide and furnish proper equipment, hardware, fixtures, materials, etc., pertaining to their part of the work shown or listed in any part of these documents. Quality control, adverse material reactions, and compliance to industry standard workmanship are the responsibility of the contractor.

Any omissions or contradictions in these documents shall be called to the attention of BEE prior to submitting a bid. Bids received shall be considered to include all items shown and/or specified or scheduled for a complete project. The contractor shall note that the waterproofing details do not always reflect the Architectural details and are intended to supplement the architectural details not replace them.

Installers are to be certified by manufacturer's approved warranty requirements.

F. Material Warranty

Products shall be installed to comply with manufacturer's warranty requirements. All waterproofing material and installation warranties shall be transferable to new building ownership within the warranty's period.

Specified Membrane Roof Systems are designed to receive the 20 year No Dollar Limit (NDL) coverage for the roofing system itself. Warranty coverage apart from this (including, but not limited to overburden, plant establishment, and wind riders) should be considered in the procurement process, with manufacturer confirmation of system eligibility for enhanced coverage at the time of Submittal.

G. Material Submittals/Substitutions

All recommended materials may be exchanged for materials with equal performance specifications. All material substitutions and submittals must be submitted to and approved by the responsible members of the design team. Substitutions and submittals shall include, but are not limited to, product data sheets, intended locations for use, installer certifications as required, sample warranties, testing and or certification data as required.

H. Fasteners

All fasteners, including nuts and washers, in contact with preservative-treated wood shall be of hot-dipped zinc coated galvanized steel or stainless steel.

III. Construction

A. Inspection

Building Envelope inspection shall be performed by BEE Consulting throughout the duration of construction in conformance with RCW 64.55. The frequency of inspection is identified in the contract. Inspections will be performed on site. Inspections will be documented and recorded as deemed necessary by the Project Manager.

B. Dry-in Requirements

Prior to the end of each shift, the structure will be temporarily weather protected using industry recognized standards to prevent damage to existing work in place and the structure.

The General Contractor (GC) shall provide quality assurance procedures, facilitate inspections and coordinate testing and verification to maintain the material standards and enveloping practices as specified herein. This shall also include periodically documenting the moisture content by weight at a minimum of three (3) locations of framing, sheathing and gypsum. Additionally, the temperature and moisture content of concrete slabs shall be monitored and periodically documented to comply with any relative waterproofing installations that are to be conducted. Documented signs of excessive water or humidity are exhibited by, but not limited to:

Interior condensation on window. Warping, staining, or delamination of fiber cement, gypsum or wood based products (i.e. construction products that are absorptive). Organic growth (mold, fungi, mildew). Water intrusion/leaks and or damage.

Roofs need to be installed prior to construction drying and wet substrates/framing shall not be directly covered with roofing or other finish materials. Permanently installed HVAC equipment is not to be used for the purpose of construction drying. Any questions pertaining to the allowable moisture percentage of specific materials shall be referred to the most applicable edition of the building code.

IV. Building Envelope Materials

040900 Masonry Accessories

Vent Cells
Driwall Weep Vents
- Available from Keene Building Envelope Products

WeepVent
- Available from Mortar Net Solutions

Cell Vents
- Available from Mason Pro

071700 Bentonite Waterproofing

A. Bentonite Panel Systems
CETCO System
Note: Compression strength of insulation per CETCO recommendations.
- Available from CETCO

Bentonite Panel:	Voltex DS
Bentonite Mastic:	Bentoseal
Waterstop:	Waterstop RX-101, with WB-Adhesive (3"min. cover) Waterstop RX-102, with WB-Adhesive (2"min. cover)
Foundation Drain Mat:	Aquadrain 15x Aquadrain 100BD (used at base of wall)
Transition Membrane:	Envirosheet

Tremco Triple Waterproofing System (TWS)
- Available from Tremco

Bentonite Panel:	Paraseal LG
Liquid Membrane:	TREMproof 260
Bentonite Mastic:	Paramastic
Waterstop:	Superstop, with WB-Adhesive (3"min. cover)
Foundation Drain Mat:	TREMDrain 1000 TREMDrain Total Drain (Collector for Drain Mat)

B. Mechanical Pipe Seals
Link-Seal Modular Seals
- Available from GPT Industries

C. Protection Board
Note: Per Membrane Manufacturer recommendation.
CCW Protection Boards V (1/4" thick)
- Available from CETCO

GreenGuard PB4 (1/4" thick)
- Available from GreenGuard

071800 Traffic Coatings

Trash Room Membrane
FSS 45DC, w/ Nickel Oxide Granules- 80 mils minimum
- Available from VersaFlex

a) WBG 250 (Gloss Waterborne Urethane for UV Protection)
- Available from VersaFlex

b) WBS 252 (Semi Gloss Waterborne Urethane for UV Protection)
- Available from VersaFlex

MasterSeal Traffic 2500 Extra Heavy Duty
Note: Use TC295 top coat
- Available from BASF Master Builders Solutions

071900 Water Repellents

Notes: For use at exposed, vertical concrete at exterior building envelope.
All exposed, vertical concrete shall be treated.
All concrete cold joints at exposed concrete require waterstop.

Concrete & Concrete Block/Brick Sealer
Blok-Guard & Graffiti Control II (Silicone Sealer)
Note: - Do not use at post tension grout pockets.
- Two coats required.
- Available from Prosoco

Series 626 Dur a Pell GS
Note: Two coats required.
- Available from Tnemec

072119 Foamed-In-Place Insulation

A. Spray Foam Insulation
Notes: The applied spray foam must be installed by a certified installer.
A copy of the ICC-ES report for the product used must be provided on the job site for field inspector verification.
Spraytite 178 (polyurethane foam insulation)
Note: Minimum 2" thickness for vapor barrier
- Available from BASF

B. Air Barrier Foam
CF 812 (Low-Pressure Filler Foam)
- Available from Hilti

072500 Weather Resistant Barrier (W.R.B.)

A. Primary W.R.B./W.R.B. Liner
Note: Fastening of W.R.B. products to be per manufacturer recommendations.
WrapShield IT Integrated Tape
- Available from VaproShield

B. Primary W.R.B. SA/W.R.B. SA Liner
WrapShield SA Self-Adhered (W.R.B. SA)
Note: Primary W.R.B. at Steel and Concrete
- Available from VaproShield

C. Liquid Applied Flashing
VaproLiqui-Flash
- Available from VaproShield

D. W.R.B. Accessories
Screw Head Caps
VaproCaps
- Available from VaproShield

Quickflash Device
Quickflash Device
Note: Use @ Electrical Boxes & Pipe Penetrations
- Available from Quickflash Weatherproofing Products

Sill Pans
Note: 5/8" min. upstand, extending 1/2" min. above bottom edge of Window.

a) L-Angle
Note: For use with SAM and/or Liquid applied sill pans.
If window is fastened to L-angle then confirm with window manufacturer for guage and fastening requirements.
1/8" Anodized Aluminum L-angle
22ga L-angle

b) Metal Sill Pan
24ga Sheet Metal Sill Pan
Note: Sill Pan to be galvanized or bonderized and fully soldered.

Preformed Corners
Moistop Corner Shield
- Available from Henry Company

Shims
1/8" Plastic Horseshoe Shims
- Available from Atlas Supply

1/8" Grove Structural Shims
- Available from Grove Products

1/4" VaproShims SA
Note: Used behind Horizontal Furring
- Available from VaproShield

E. Furring Systems
Notes: Furring of all material types to be minimum of 3/4" deep & maintain 1/2" gaps at butt joints, floor plate level, and sill flanges.
All rainscreen cavities shall have approved closure accessories to prevent debris & insect entry.

Pressure Treated Wood 1x4

Metal Hat Channel

Perforated Horizontal Hat Channel
Note: SA shims required for Rainscreen drainage.

Metal Z-Girt

072600 Vapor Barriers/Retarders

A. LFG Membrane
Note: LFG membrane per environmental consultant (See sheet LFG1B3)

B. Interior Vapor Retarder
PVA Primer
Note: For non-vented roof, do not apply PVA Primer to the ceiling at roof level.

074600 Siding

Note: All rainscreen cavities need to have approved closure accessories to prevent debris & insect entry.
Fiber Cement Siding
Brick Veneer
Metal Panel Siding
Metal Standing Seam Siding
Exposed Concrete

075000 Roofing Membrane

Notes: All roofing shall slope positively to a drain with at least ¼" per linear foot slope. No water ponding is admissible.
All applicators must be approved by manufacturer.

A. Roofing Membrane
Firestone UltraPly TPO SA
Note: 12' wide, fully adhered, 60 mil minimum
- Available from Firestone

Sure-Weld TPO Membrane
Note: 12' wide, fully adhered, 60 mil minimum
- Available from Carlisle Syntec

B. Liquid Applied Roofing
Note: Use to detail curbs & penetrations.
LIQUISEAL Liquid Flashing
Note: For use with Carlisle Roofing Systems.
- Available from Carlisle Syntec

C. Roof Vapor Barrier
Note: Self-Adhesive Vapor Barrier per roofing manufacturer recommendation. Seal vapor barrier at all transitions and laps per manufacturer recommendation.

D. Protection Board
Note: Per Roofing Membrane Manufacturer recommendation.
CCW Protection Boards V (1/4" thick)
- Available from CETCO

GreenGuard PB4 (1/4" thick)
- Available from GreenGuard

E. Roofing Accessories

Sill Pans
Note: 5/8" min. upstand, extending 1/2" min. above bottom edge of Window.
To be roofing membrane coated per roofing manufacturer recommendation.

Roofing Membrane Coated Sill Pan
24ga Roofing Membrane Coated Sheet Metal Sill Pan

Roofing Membrane Coated Flashings
24ga Roofing Membrane Coated Metal Flashings

Rigid Insulation
Polyiso Irsulation per mfr.

076200 Sheet Metal Flashing and Trim

Flashings
Note: All Saddle Flashings and Sill Pans shall be fully soldered.
22ga Sheet Metal Coping, w/ Standing Seams
24ga Sheet Metal Head Flashings, w/ End Dams
24ga Sheet Metal Saddle Flashings
24ga Sheet Metal Through Wall Flashing, w/ 4" Bayonet Seams & End Dams
Note: Through Wall Flashings are required at every other floor & at each floor exceeding twenty feet.

076500 Self-Adhesive Membrane (S.A.M.)

Notes: All Self-Adhered Membrane (S.A.M.) types to be roller applied.
Prime substrates per manufacturer recommendation prior to installing SA.M.
Confirm compatibility between S.A.M. and other envelope products with manufacturer warranties.
Use approved primer when adhering to Concrete, Exterior Gypsum and Wood.

A. S.A.M. 1
Jiffy Seal BUTYL Ice & Water Guard HT
- Available from Protecto Wrap Company

Perm-A-Barrier Wall Flashing
- Available from GCP Applied Technologies

B. S.A.M. 2
3" VaproTape UV Black
- Available from VaproShield

C. S.A.M. Foil Faced
Protecto Seal 45 Butyl
- Available from Protecto Wrap Company

D. S.A.M. HT - High Temperature
Grace Ultra
Note: Not for use in conjunction with PVC materials.
- Available from GCP Applied Technologies

Jiffy Seal BUTYL Ice & Water Guard HT
- Available from Protecto Wrap Company

E. S.A.M. TWF
Textroflash Flashing
- Available from Hohmann & Barnard

079000 Joint Protection

A. Compressive Foam
Backerseal
- Available from Emseal

B. Neoprene Pad
TEX-NEO60
Note: 60 Duro Neoprene Sheet
- Available by Texcel

079200 Joint Sealants

A. Sealant 1
MasterSeal NP 150
- Available from BASF Master Builders Solutions

B. Sealant 2
Dowsil 758 Silicone
- Available from Dow Chemical Company

Pecora AVB Silicone
- Available from Pecora Corporation

C. Sealant 4
Dowsil 795 Silicone
- Available from Dow Chemical Company

Pecora 895 NST Silicone
- Available from Pecora Corporation

D. Sealant 5
Dowsil 758 Silicone
- Available from Dow Chemical Company

Pecora AVB Silicone
- Available from Pecora Corporation

E. Sealant 6
Sikaflex-2c SL
- Available from Sika

F. Sealant 7
SikaLastomer-511
- Available from Sika Corporation

BA-98
- Available from Pecora Corporation

081000 Doors and Frames

Flanged Thermally Broken Hollow Metal Doors
Note: Provide with welded flange.
Weather stripping/sweeps required at all exterior doors and door separating conditioned and unconditioned space.
- Available from Ceco Door

TBD

085000 Windows

A. Flanged:
TBD

B. Storefronts
TBD

089000 Louvers and Vents

24ga Metal Vents

220000 Plumbing

Note: Drains used shall be warrantable with Waterproofing System

Drains
Thunderbird Flanged Drain
- Available from Thunderbird Products

Zurn Cast Iron Floor Drain
- Available from Zurn Engineered Water Solutions

260000 Electrical

Conduit
Water-tight PVC Coated Flexible Metallic Conduit YF-707
- Available from Delikon

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

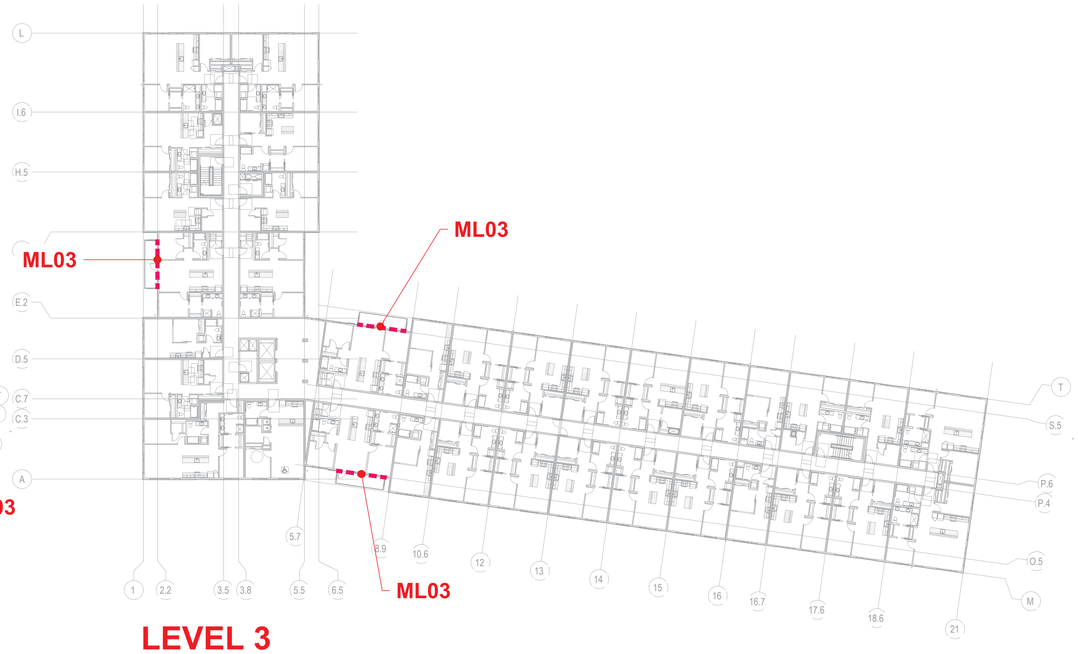
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

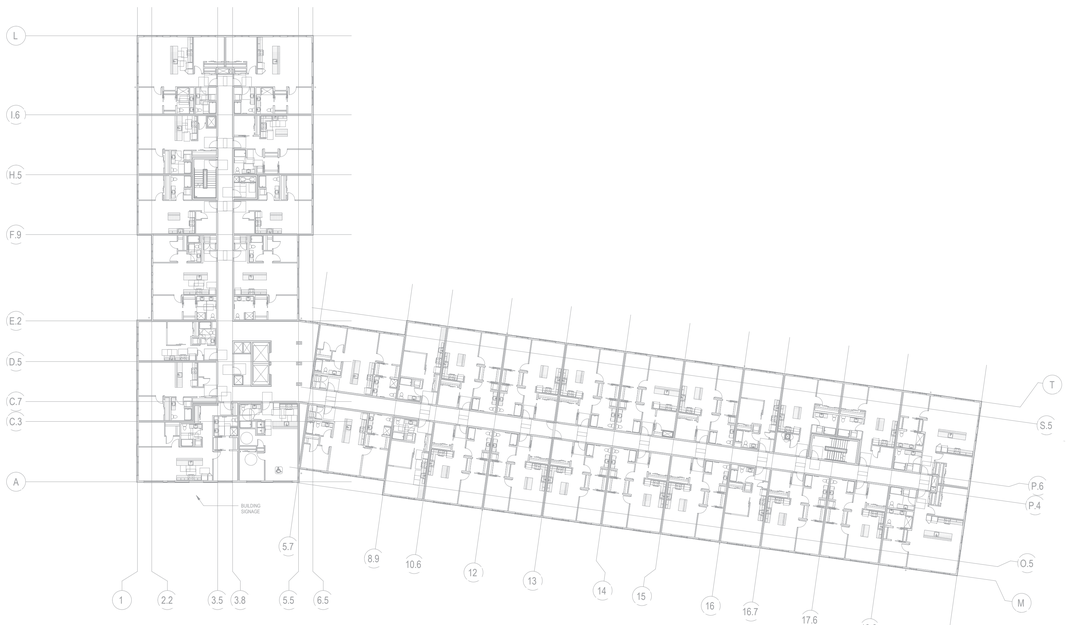
NOTES & SPECIFICATIONS

BE000

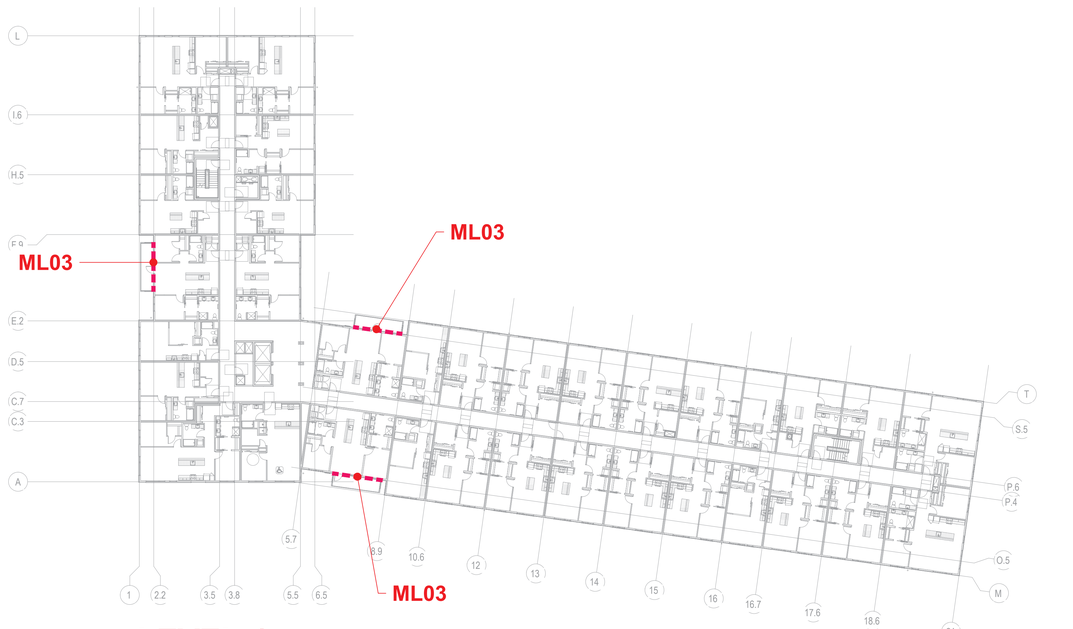
LEVEL 1



LEVEL 3



LEVEL 2



LEVEL 4

MATERIAL LOCATION KEY

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024, THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

ML01	BENTONITE PANEL SYSTEM	ML04	PROTECTED ROOFING MEMBRANE w/ PROTECTION BOARD AT PAVERS
ML02	TRASH ROOM MEMBRANE	ML05	ROOFING MEMBRANE
ML03	KNIFEPLATE ATTACHMENTS		

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

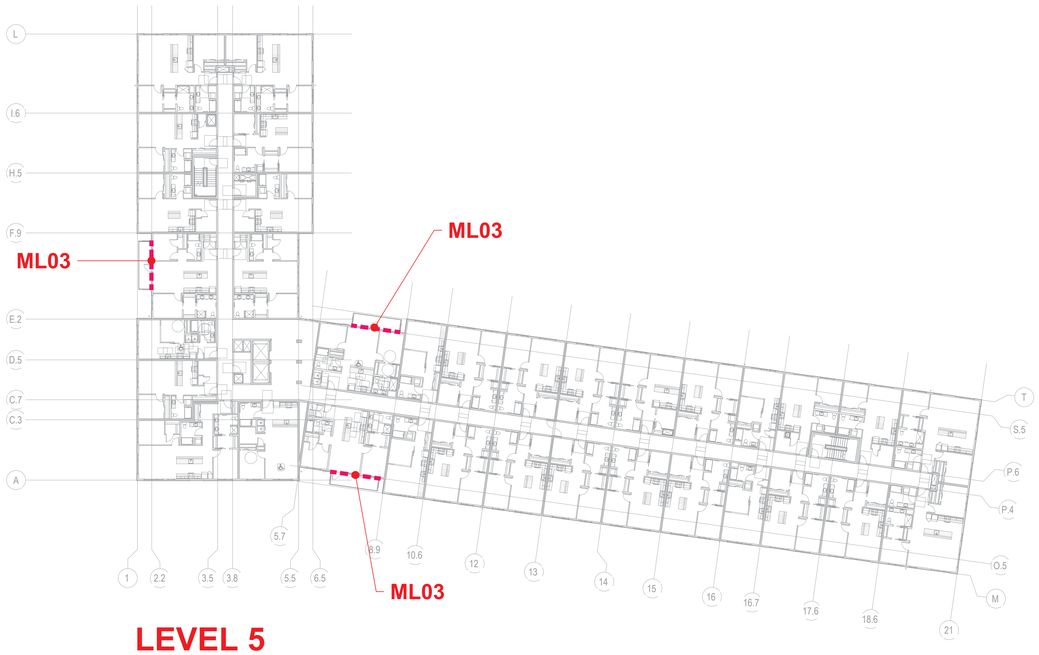
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.095.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

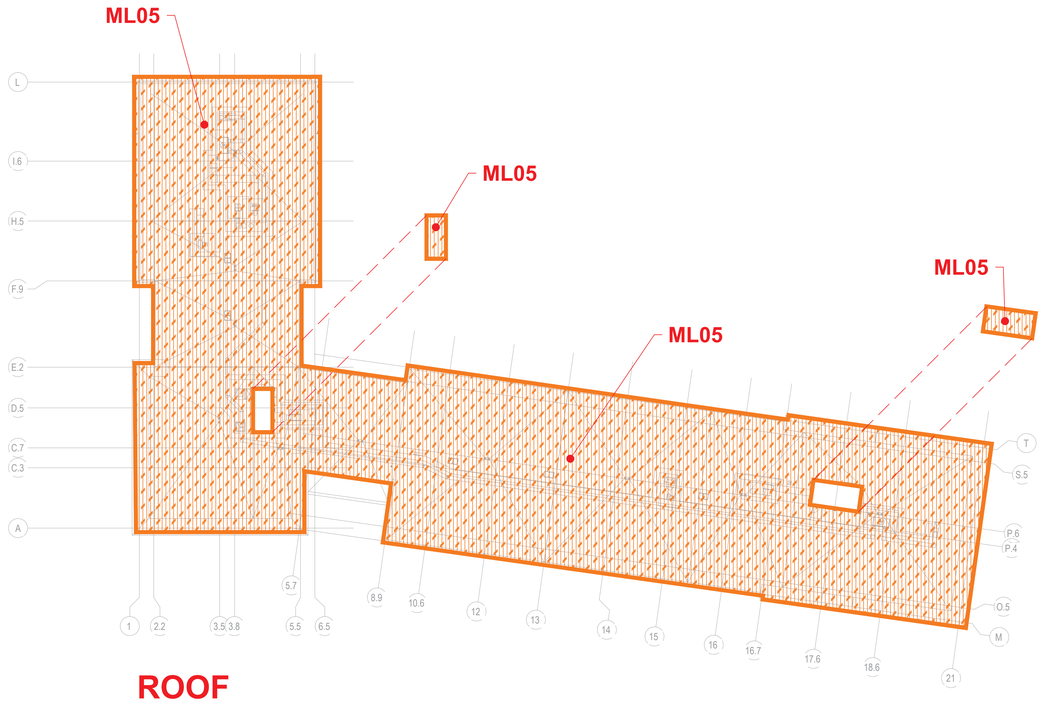
1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

MATERIAL LOCATION DIAGRAMS

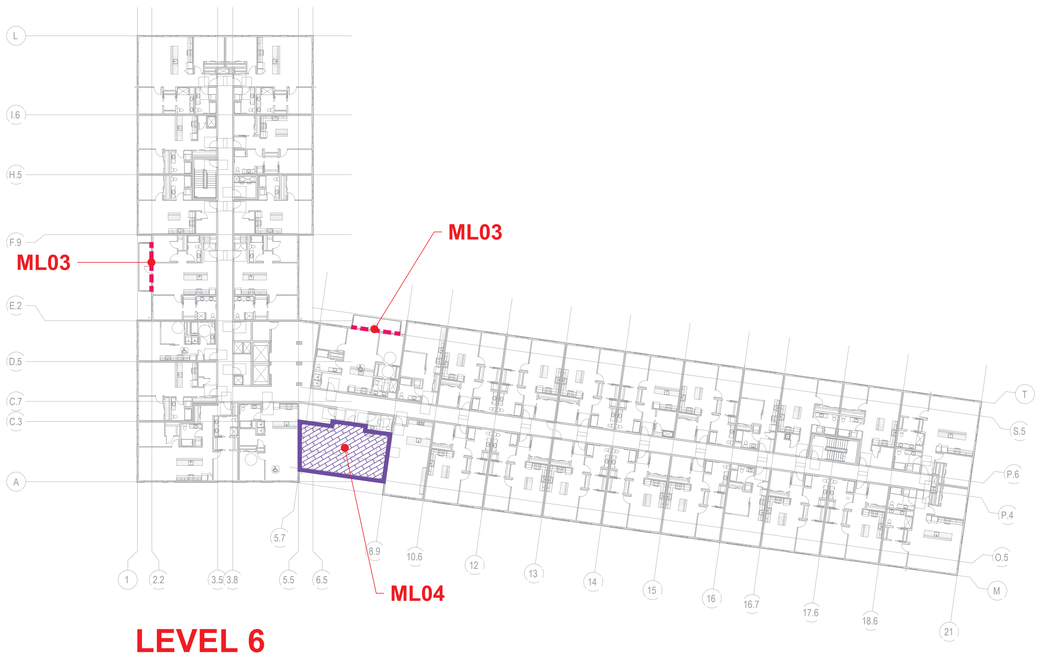
BE001



LEVEL 5



ROOF



LEVEL 6

MATERIAL LOCATION KEY

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024, THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

ML01	BENTONITE PANEL SYSTEM	ML04	PROTECTED ROOFING MEMBRANE w/ PROTECTION BOARD AT PAVERS
ML02	TRASH ROOM MEMBRANE	ML05	ROOFING MEMBRANE
ML03	KNIFEPLATE ATTACHMENTS		

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

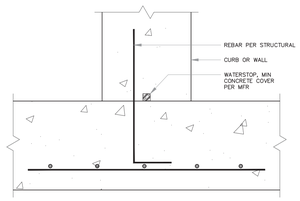
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

MATERIAL LOCATION DIAGRAMS

BE002

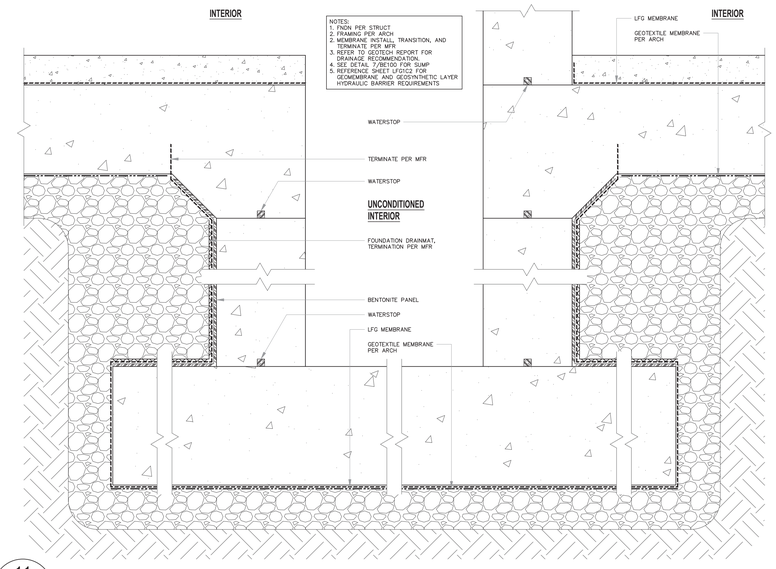
NOTES:
1. SUB-GRADE WATERSTOP REQUIRED AT EVERY COLD JOINT.
2. ABOVE GRADE WATERSTOP REQUIRED AT ALL EXPOSED COLD JOINTS.



1 / BE100 SECTION: TYPICAL CONCRETE COLD JOINT

SCALE: NTS
© COPYRIGHT BEE CONSULTING

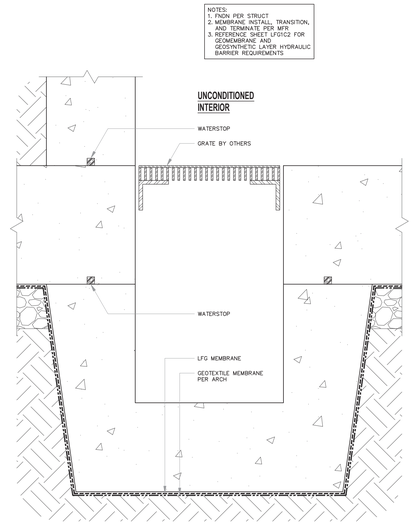
NOTES:
1. FNDN PER STRUCT.
2. FRAMING PER ARCH.
3. MEMBRANE INSTALL, TRANSITION, AND TERMINATE PER MFR.
4. REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION.
5. SEE DETAIL 7/BE100 FOR SUMP.
6. REFERENCE SHEET LFG1C2 FOR GEOMEMBRANE AND GEOSYNTHETIC LAYER HYDRAULIC BARRIER REQUIREMENTS



11 / BE100 SECTION: ELEVATOR PIT

SCALE: NTS
© COPYRIGHT BEE CONSULTING

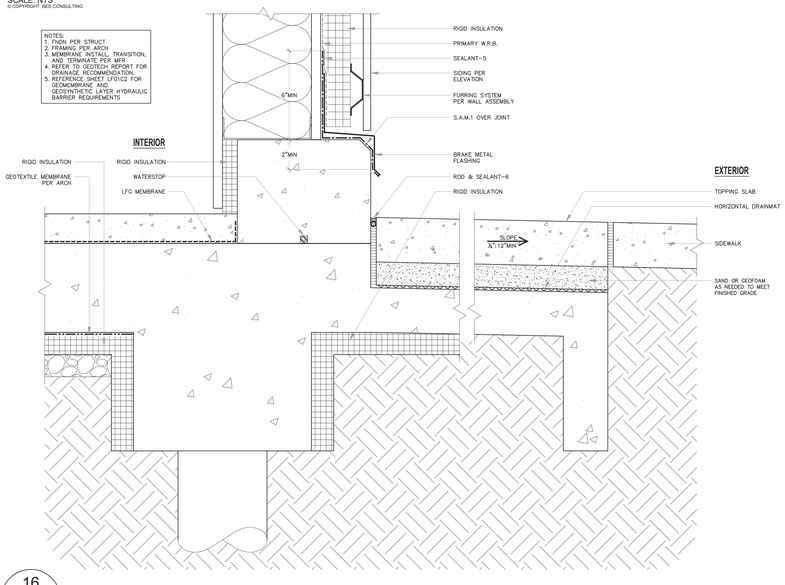
NOTES:
1. FNDN PER STRUCT.
2. MEMBRANE INSTALL, TRANSITION, AND TERMINATE PER MFR.
3. REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION.
4. REFERENCE SHEET LFG1C2 FOR GEOMEMBRANE AND GEOSYNTHETIC LAYER HYDRAULIC BARRIER REQUIREMENTS



13 / BE100 SECTION: ELEVATOR PIT SUMP

SCALE: NTS
© COPYRIGHT BEE CONSULTING

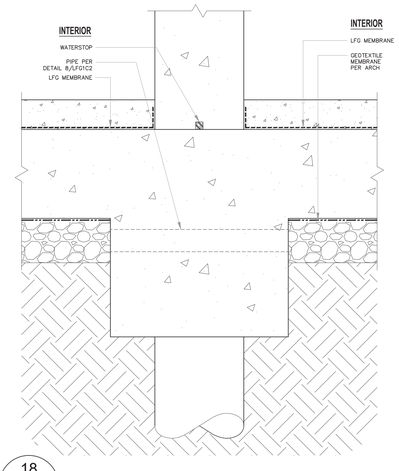
NOTES:
1. FNDN PER STRUCT.
2. FRAMING PER ARCH.
3. MEMBRANE INSTALL, TRANSITION, AND TERMINATE PER MFR.
4. REFER TO GEOTECH REPORT FOR DRAINAGE RECOMMENDATION.
5. REFERENCE SHEET LFG1C2 FOR GEOMEMBRANE AND GEOSYNTHETIC LAYER HYDRAULIC BARRIER REQUIREMENTS



16 / BE100 REF.ARCH 5/A750 SECTION: APRON SLAB AT BASE OF WALL & SIDEWALK

SCALE: NTS
© COPYRIGHT BEE CONSULTING

NOTES:
1. FNDN PER STRUCT.
2. MEMBRANE INSTALL, TRANSITION, AND TERMINATE PER MFR.
3. REFERENCE SHEET LFG1C2 FOR GEOMEMBRANE AND GEOSYNTHETIC LAYER HYDRAULIC BARRIER REQUIREMENTS



18 / BE100 SECTION: CONCRETE WALL TO FLOOR SLAB

SCALE: NTS
© COPYRIGHT BEE CONSULTING

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

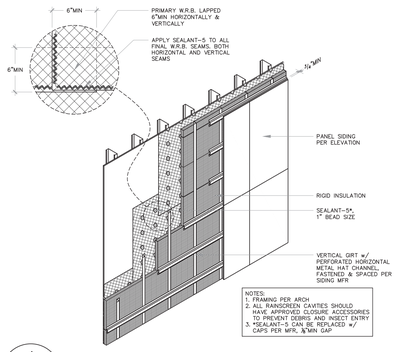
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

BELOW GRADE DETAILS

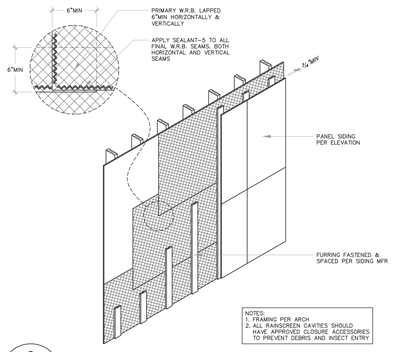
BE100



1 BE200 WALL ASSEMBLY: PANEL SIDING w/ RIGID INSULATION

SCALE: NTS

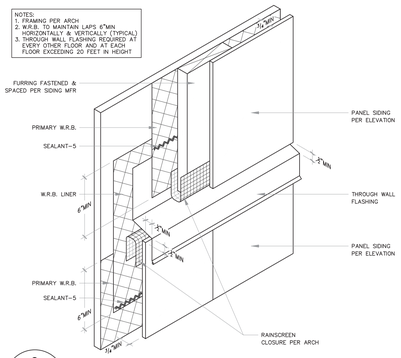
© COPYRIGHT BEE CONSULTING



2 BE200 WALL ASSEMBLY: PANEL SIDING

SCALE: NTS

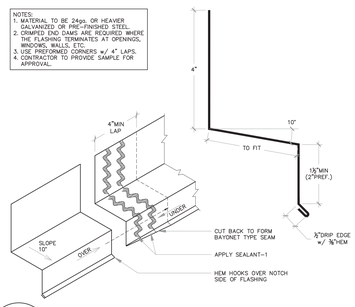
© COPYRIGHT BEE CONSULTING



3 BE200 ASSEMBLY: THROUGH WALL FLASHING AT PANEL SIDING

SCALE: NTS

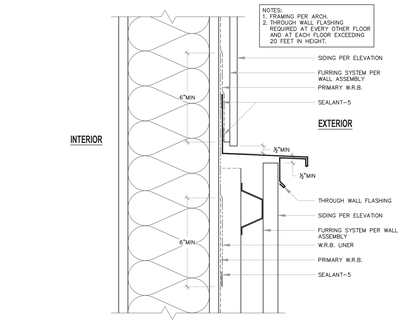
© COPYRIGHT BEE CONSULTING



4 BE200 PROFILE: THROUGH WALL FLASHING

SCALE: NTS

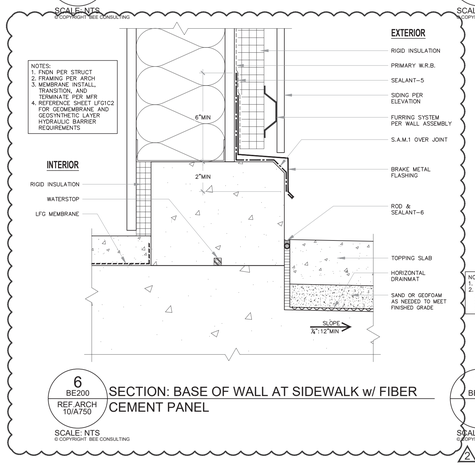
© COPYRIGHT BEE CONSULTING



5 BE200 SECTION: THROUGH WALL FLASHING w/ FIBER CEMENT PANEL AT OVERFRAME

SCALE: NTS

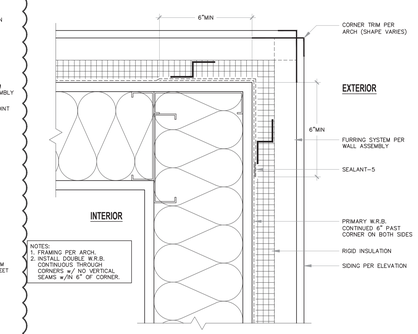
© COPYRIGHT BEE CONSULTING



6 BE200 REF: ARCH 10/A750 SECTION: BASE OF WALL AT SIDEWALK w/ FIBER CEMENT PANEL

SCALE: NTS

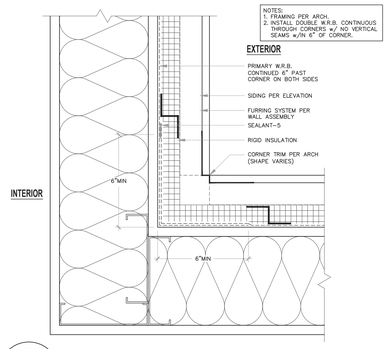
© COPYRIGHT BEE CONSULTING



7 BE200 PLAN: OUTSIDE CORNER w/ FIBER CEMENT PANEL & RIGID INSULATION

SCALE: NTS

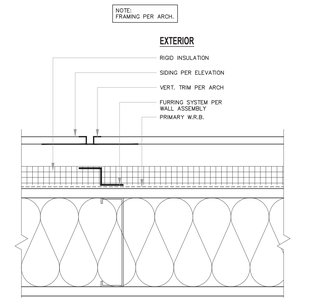
© COPYRIGHT BEE CONSULTING



8 BE200 PLAN: INSIDE CORNER w/ FIBER CEMENT PANEL & RIGID INSULATION

SCALE: NTS

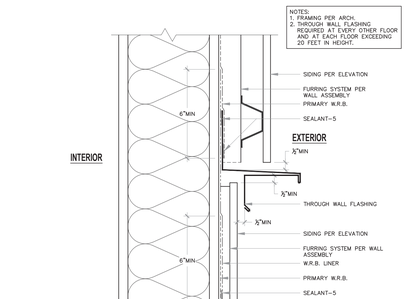
© COPYRIGHT BEE CONSULTING



9 BE200 PLAN: VERTICAL JOINT TRIM AT FIBER CEMENT PANEL w/ RIGID INSULATION

SCALE: NTS

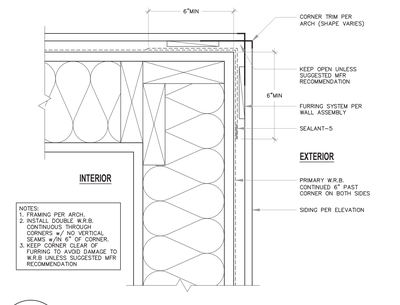
© COPYRIGHT BEE CONSULTING



10 BE200 SECTION: THROUGH WALL FLASHING w/ FIBER CEMENT PANEL AT OVERFRAME

SCALE: NTS

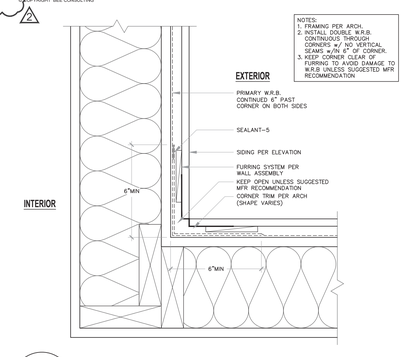
© COPYRIGHT BEE CONSULTING



11 BE200 PLAN: OUTSIDE CORNER w/ FIBER CEMENT PANEL

SCALE: NTS

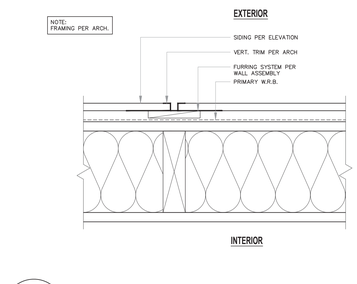
© COPYRIGHT BEE CONSULTING



12 BE200 PLAN: INSIDE CORNER w/ FIBER CEMENT PANEL

SCALE: NTS

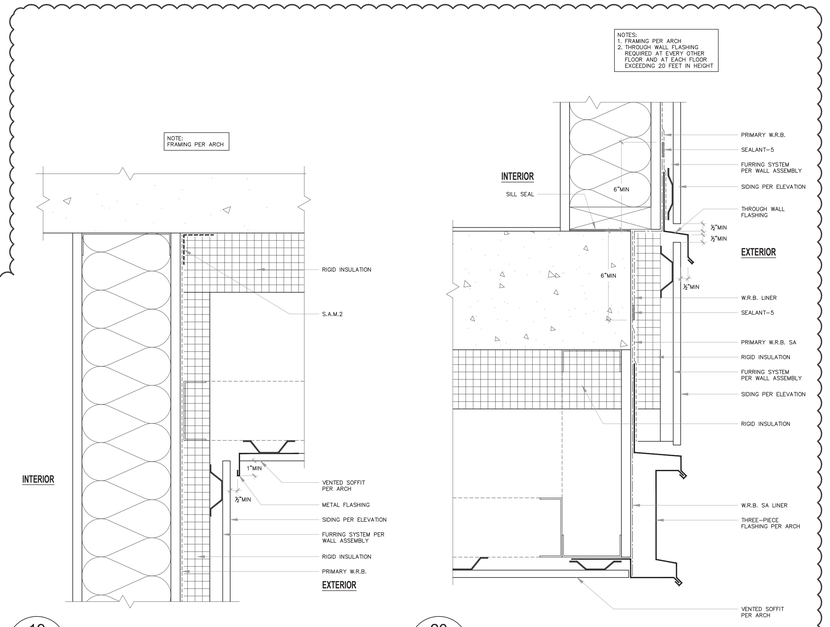
© COPYRIGHT BEE CONSULTING



13 BE200 PLAN: VERTICAL JOINT TRIM AT FIBER CEMENT PANEL

SCALE: NTS

© COPYRIGHT BEE CONSULTING



19 BE200 SECTION: INNER SOFFIT AT SLAB

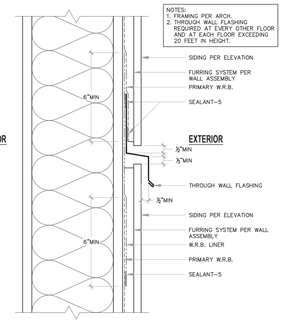
SCALE: NTS

© COPYRIGHT BEE CONSULTING

20 BE200 REF: ARCH 1/A753 SECTION: SLAB EDGE w/ FIBER CEMENT PANEL AT SOFFIT

SCALE: NTS

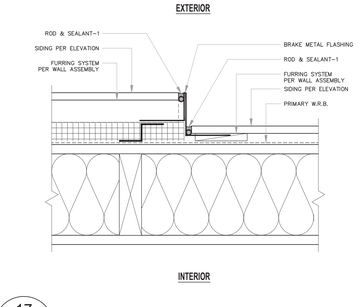
© COPYRIGHT BEE CONSULTING



18 BE200 SECTION: THROUGH WALL FLASHING w/ FIBER CEMENT PANEL

SCALE: NTS

© COPYRIGHT BEE CONSULTING



16 BE200 PLAN: VERTICAL JOINT AT OVERFRAME TRANSITION

SCALE: NTS

© COPYRIGHT BEE CONSULTING

17 BE200 PLAN: VERTICAL JOINT AT OVERFRAME TERMINATION

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

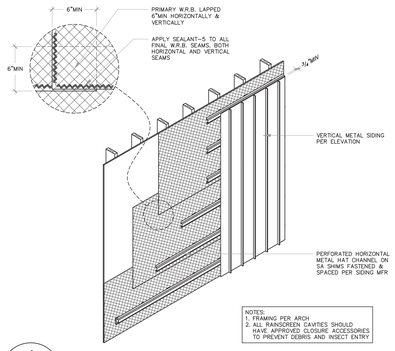
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.095.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WALL DETAILS

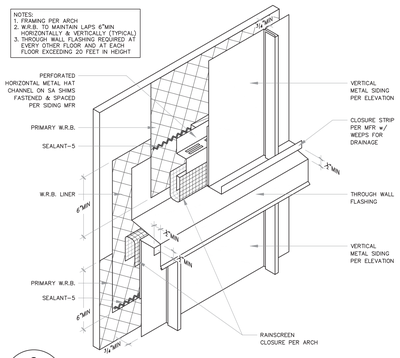
BE200



1 BE201 WALL ASSEMBLY: VERTICAL METAL SIDING

SCALE: NTS

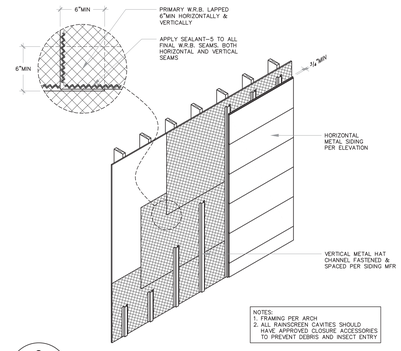
© COPYRIGHT BEE CONSULTING



2 BE201 ASSEMBLY: THROUGH WALL FLASHING AT VERTICAL METAL SIDING

SCALE: NTS

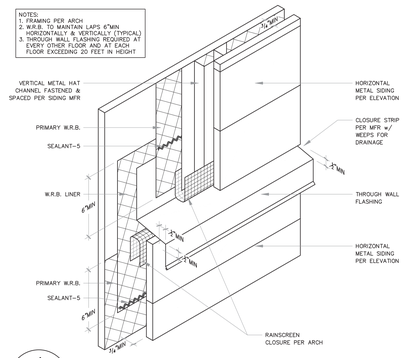
© COPYRIGHT BEE CONSULTING



3 BE201 WALL ASSEMBLY: HORIZONTAL METAL SIDING

SCALE: NTS

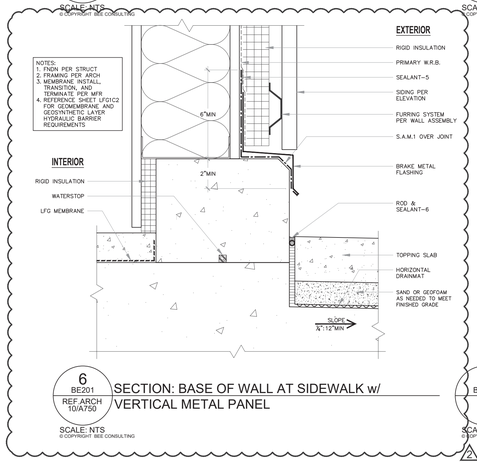
© COPYRIGHT BEE CONSULTING



4 BE201 ASSEMBLY: THROUGH WALL FLASHING AT HORIZONTAL METAL SIDING

SCALE: NTS

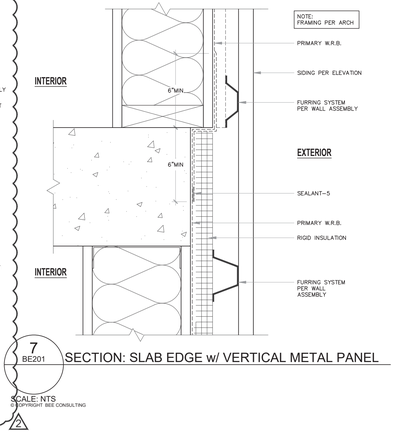
© COPYRIGHT BEE CONSULTING



6 BE201 REF: ARCH 10/A750 SECTION: BASE OF WALL AT SIDEWALK w/ VERTICAL METAL PANEL

SCALE: NTS

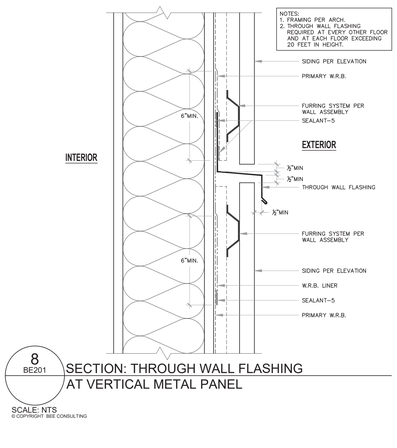
© COPYRIGHT BEE CONSULTING



7 BE201 SECTION: SLAB EDGE w/ VERTICAL METAL PANEL

SCALE: NTS

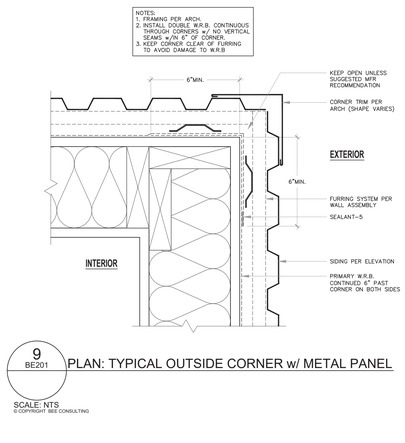
© COPYRIGHT BEE CONSULTING



8 BE201 SECTION: THROUGH WALL FLASHING AT VERTICAL METAL PANEL

SCALE: NTS

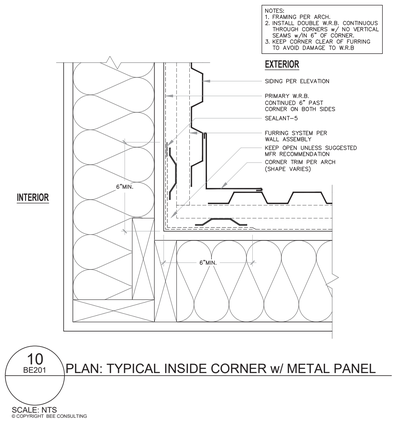
© COPYRIGHT BEE CONSULTING



9 BE201 PLAN: TYPICAL OUTSIDE CORNER w/ METAL PANEL

SCALE: NTS

© COPYRIGHT BEE CONSULTING



10 BE201 PLAN: TYPICAL INSIDE CORNER w/ METAL PANEL

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

JAMES C. FREELING STATE OF WASHINGTON 16788 REGISTERED PROFESSIONAL ENGINEER

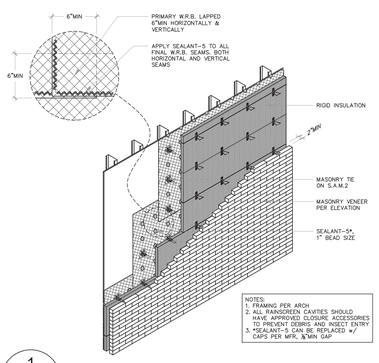
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WALL DETAILS

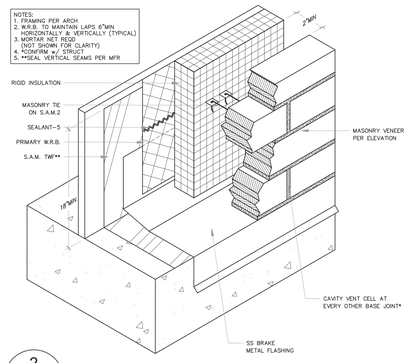
BE201



1 BE202 WALL ASSEMBLY: MASONRY VENEER w/ RIGID INSULATION

SCALE: NTS

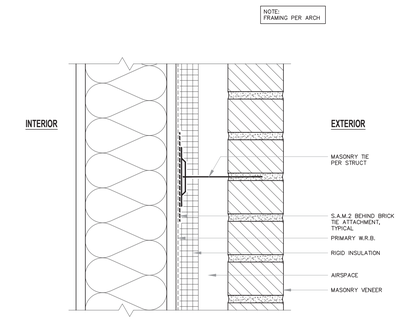
© COPYRIGHT BEE CONSULTING



2 BE202 ASSEMBLY: CONCRETE LEDGER AT MASONRY VENEER w/ RIGID INSULATION

SCALE: NTS

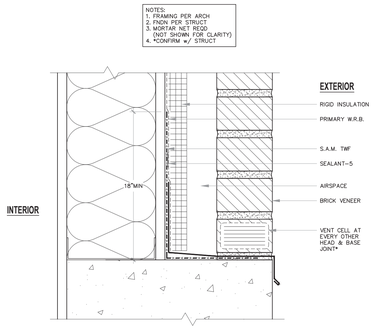
© COPYRIGHT BEE CONSULTING



6 BE202 SECTION: MASONRY TIE

SCALE: NTS

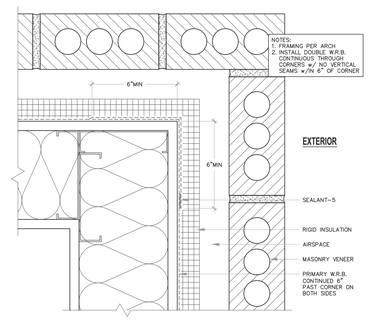
© COPYRIGHT BEE CONSULTING



7 BE202 SECTION: BASE OF WALL AT GRADE w/ MASONRY VENEER

SCALE: NTS

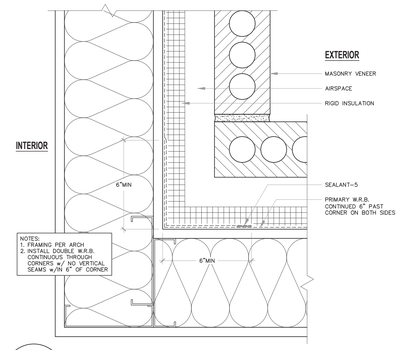
© COPYRIGHT BEE CONSULTING



8 BE202 PLAN: OUTSIDE CORNER AT BRICK

SCALE: NTS

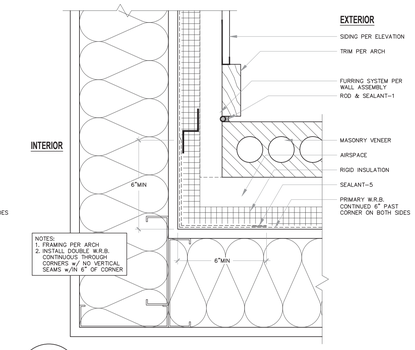
© COPYRIGHT BEE CONSULTING



9 BE202 PLAN: INSIDE CORNER AT BRICK

SCALE: NTS

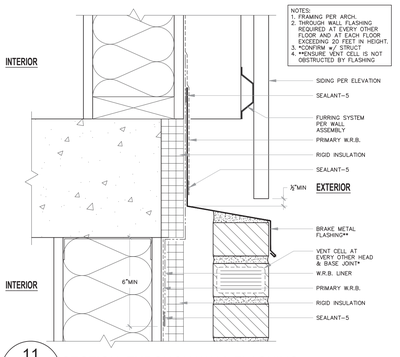
© COPYRIGHT BEE CONSULTING



10 BE202 PLAN: INSIDE CORNER AT BRICK

SCALE: NTS

© COPYRIGHT BEE CONSULTING



11 BE202 SECTION: THROUGH WALL FLASHING AT OVERFRAME w/ VERTICAL METAL PANEL & BRICK VENEER

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

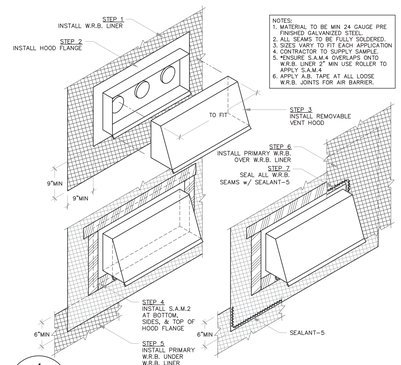
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WALL DETAILS

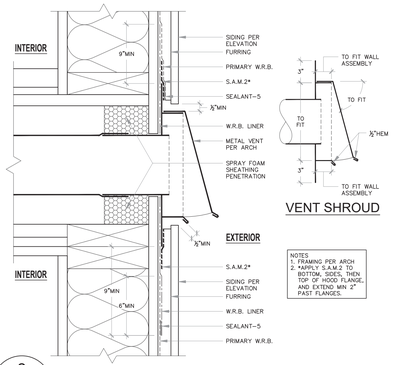
BE202



1 BE300 ASSEMBLY: REMOVABLE GANGED HOOD VENT

SCALE: NTS

© COPYRIGHT BEE CONSULTING

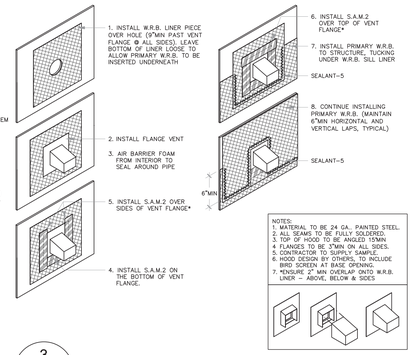


2 BE300 SECTION: REMOVABLE HOOD VENT

SCALE: NTS

© COPYRIGHT BEE CONSULTING

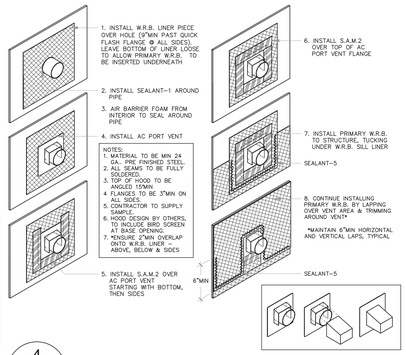
VENT SHROUD



3 BE300 ASSEMBLY: METAL AIR VENT

SCALE: NTS

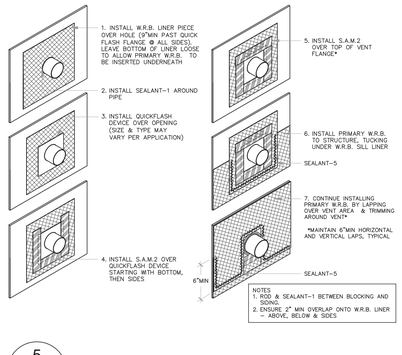
© COPYRIGHT BEE CONSULTING



4 BE300 ASSEMBLY: AC PORT PENETRATION

SCALE: NTS

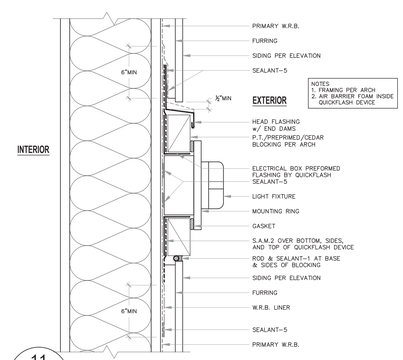
© COPYRIGHT BEE CONSULTING



5 BE300 ASSEMBLY: 3"-8" PIPE PENETRATION

SCALE: NTS

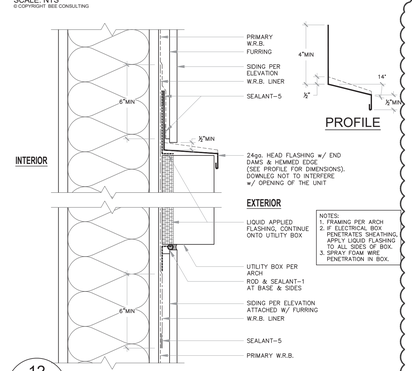
© COPYRIGHT BEE CONSULTING



6 BE300 ASSEMBLY: CONDUIT PIPE PENETRATION

SCALE: NTS

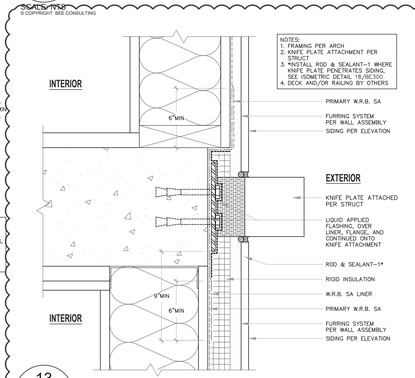
© COPYRIGHT BEE CONSULTING



7 BE300 ASSEMBLY: TYPICAL HOSE BIBB

SCALE: NTS

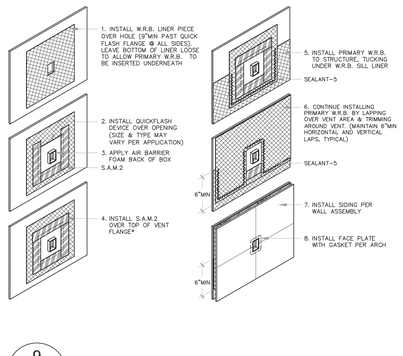
© COPYRIGHT BEE CONSULTING



8 BE300 ASSEMBLY: RAILING ATTACHMENT

SCALE: NTS

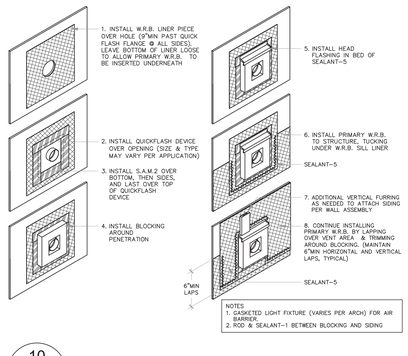
© COPYRIGHT BEE CONSULTING



9 BE300 ASSEMBLY: ELECT. WALL OUTLETS (ALARM PULL SIMILAR)

SCALE: NTS

© COPYRIGHT BEE CONSULTING



10 BE300 ASSEMBLY: ELECTRICAL WALL MOUNTED LIGHT

SCALE: NTS

© COPYRIGHT BEE CONSULTING

11 BE300 SECTION: ELECTRICAL WALL MOUNTED LIGHT

SCALE: NTS

© COPYRIGHT BEE CONSULTING

12 BE300 SECTION: UTILITY BOX

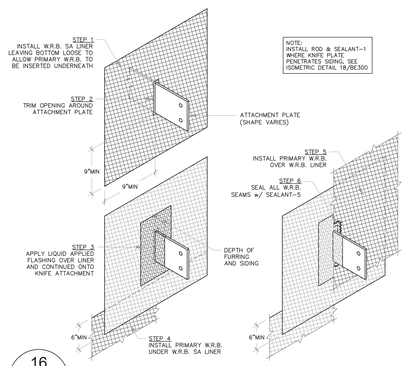
SCALE: NTS

© COPYRIGHT BEE CONSULTING

13 BE300 SECTION: KNIFE PLATE AT SLAB EDGE

SCALE: NTS

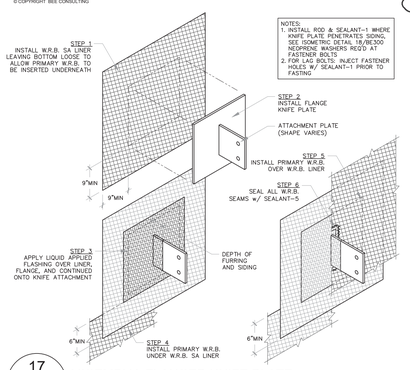
© COPYRIGHT BEE CONSULTING



16 BE300 ASSEMBLY: THROUGH WALL KNIFE PLATE

SCALE: NTS

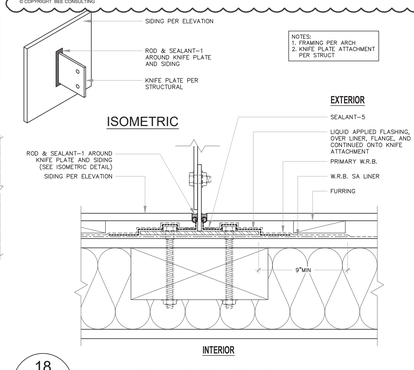
© COPYRIGHT BEE CONSULTING



17 BE300 ASSEMBLY: FLANGED KNIFE PLATE

SCALE: NTS

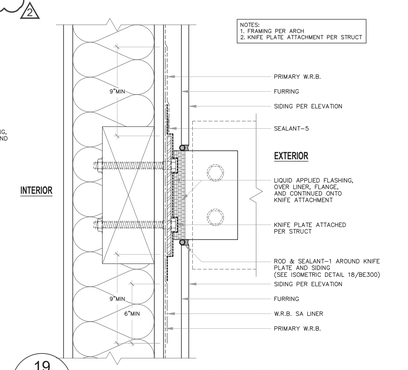
© COPYRIGHT BEE CONSULTING



18 BE300 PLAN: KNIFE PLATE PENETRATE SIDING

SCALE: NTS

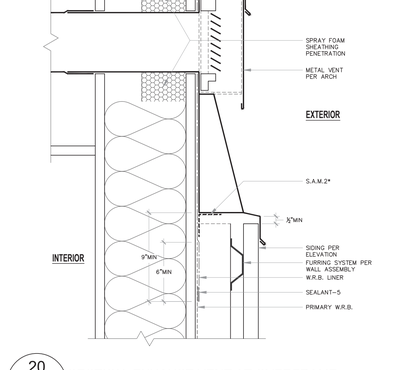
© COPYRIGHT BEE CONSULTING



19 BE300 SECTION: KNIFE PLATE PENETRATE SIDING

SCALE: NTS

© COPYRIGHT BEE CONSULTING



20 BE300 SECTION: EXHAUST VENT AT OVERFRAME

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

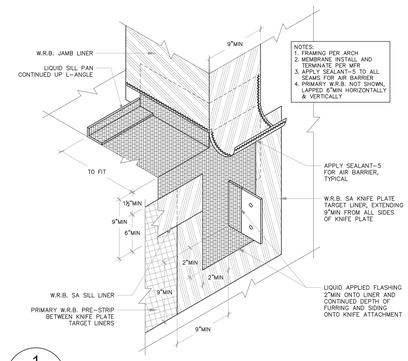
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

PENETRATION DETAILS

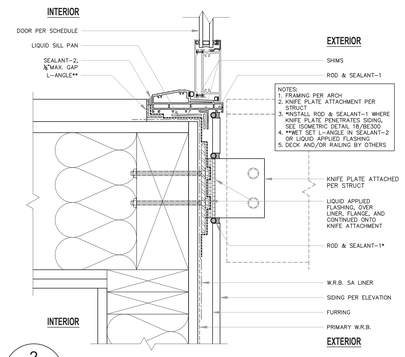
BE300



1 BE400 ISOMETRIC: KNIFE PLATES AT DOOR SILL & JAMB

SCALE: NTS

© COPYRIGHT BEE CONSULTING



2 BE400 SECTION: SWING DOOR SILL AT KNIFE PLATE

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

JAMES C. FREELING STATE OF WASHINGTON 16478 REGISTERED PROFESSIONAL ENGINEER

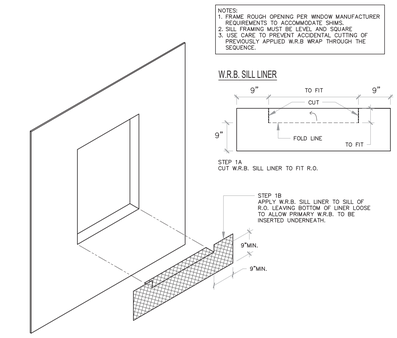
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

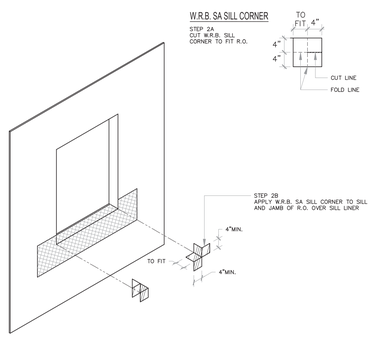
DECK & ABOVE GRADE DETAILS

BE400



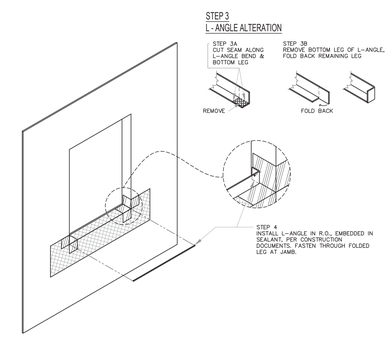
1.01 BE500 FLANGE WINDOW INSTALL
STEP 1

SCALE: NTS
© COPYRIGHT BEE CONSULTING



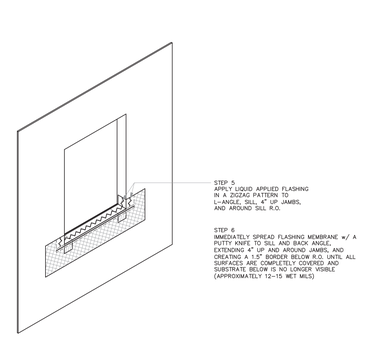
1.02 BE500 FLANGE WINDOW INSTALL
STEP 2

SCALE: NTS
© COPYRIGHT BEE CONSULTING



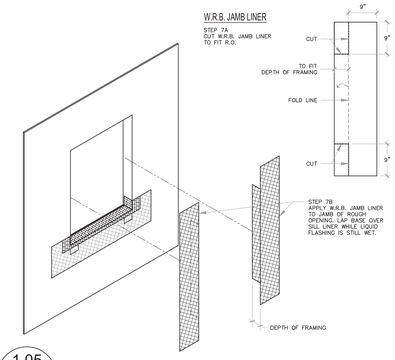
1.03 BE500 FLANGE WINDOW INSTALL
STEPS 3 & 4

SCALE: NTS
© COPYRIGHT BEE CONSULTING



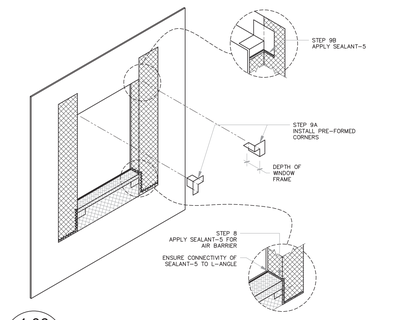
1.04 BE500 FLANGE WINDOW INSTALL
STEPS 5 & 6

SCALE: NTS
© COPYRIGHT BEE CONSULTING



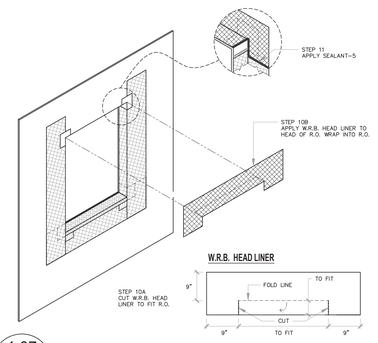
1.05 BE500 FLANGE WINDOW INSTALL
STEP 7

SCALE: NTS
© COPYRIGHT BEE CONSULTING



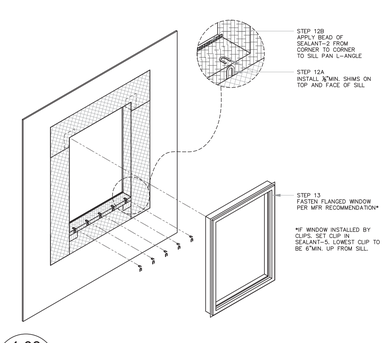
1.06 BE500 FLANGE WINDOW INSTALL
STEPS 8 & 9

SCALE: NTS
© COPYRIGHT BEE CONSULTING



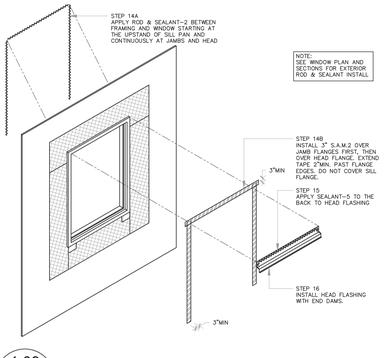
1.07 BE500 FLANGE WINDOW INSTALL
STEPS 10 & 11

SCALE: NTS
© COPYRIGHT BEE CONSULTING



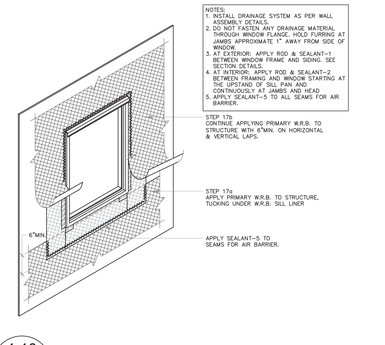
1.08 BE500 FLANGE WINDOW INSTALL
STEPS 12 & 13

SCALE: NTS
© COPYRIGHT BEE CONSULTING



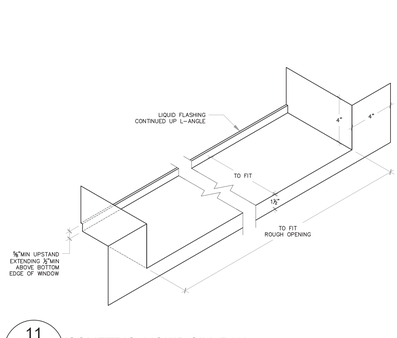
1.09 BE500 FLANGE WINDOW INSTALL w/ HEAD FLASHING
STEPS 14, 15, & 16

SCALE: NTS
© COPYRIGHT BEE CONSULTING



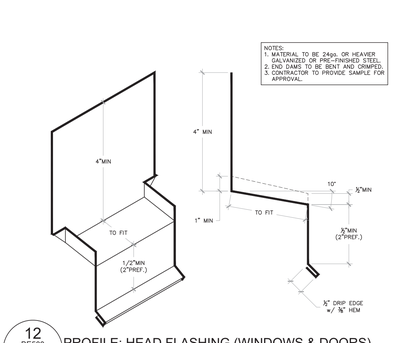
1.10 BE500 FLANGE WINDOW INSTALL w/ HEAD FLASHING
STEP 17

SCALE: NTS
© COPYRIGHT BEE CONSULTING



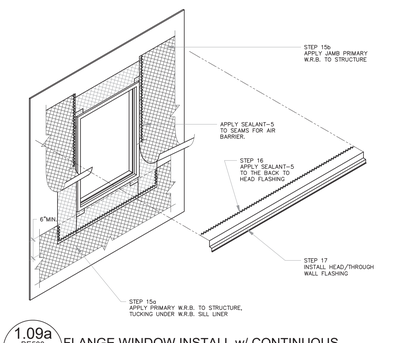
11 BE500 ISOMETRIC: LIQUID SILL PAN

SCALE: NTS
© COPYRIGHT BEE CONSULTING



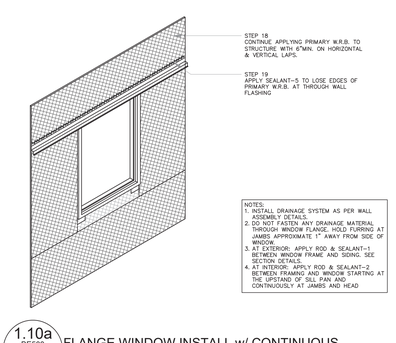
12 BE500 PROFILE: HEAD FLASHING (WINDOWS & DOORS)

SCALE: NTS
© COPYRIGHT BEE CONSULTING



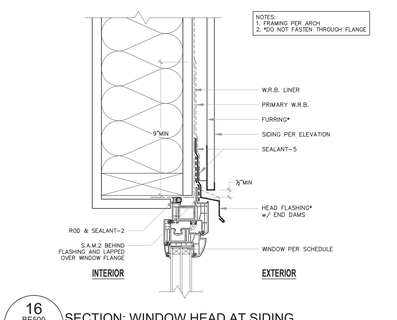
1.09a BE500 FLANGE WINDOW INSTALL w/ CONTINUOUS THROUGH WALL FLASHING STEPS 15, 16, & 17

SCALE: NTS
© COPYRIGHT BEE CONSULTING



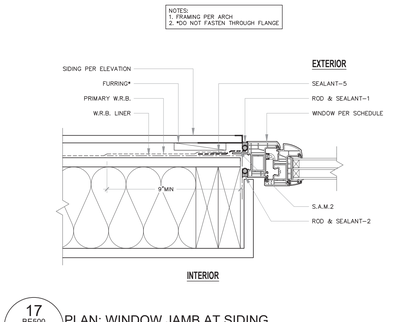
1.10a BE500 FLANGE WINDOW INSTALL w/ CONTINUOUS THROUGH WALL FLASHING STEPS 18 & 19

SCALE: NTS
© COPYRIGHT BEE CONSULTING



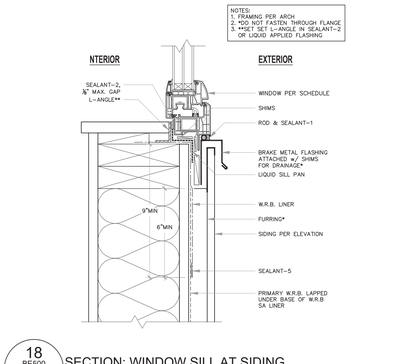
16 BE500 SECTION: WINDOW HEAD AT SIDING

SCALE: NTS
© COPYRIGHT BEE CONSULTING



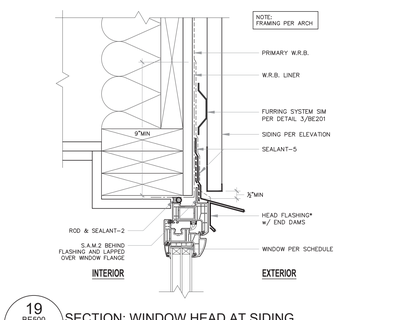
17 BE500 PLAN: WINDOW JAMB AT SIDING

SCALE: NTS
© COPYRIGHT BEE CONSULTING



18 BE500 SECTION: WINDOW SILL AT SIDING

SCALE: NTS
© COPYRIGHT BEE CONSULTING



19 BE500 SECTION: WINDOW HEAD AT SIDING

SCALE: NTS
© COPYRIGHT BEE CONSULTING

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

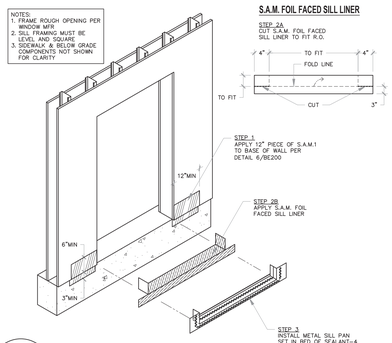
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WINDOW &
DOOR DETAILS

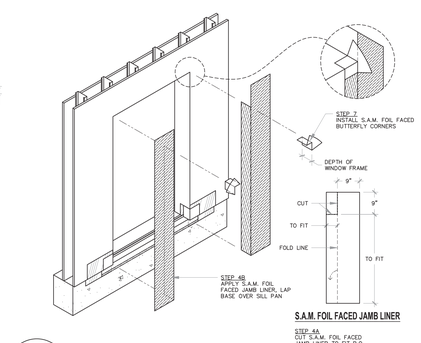
BE500



1.01 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

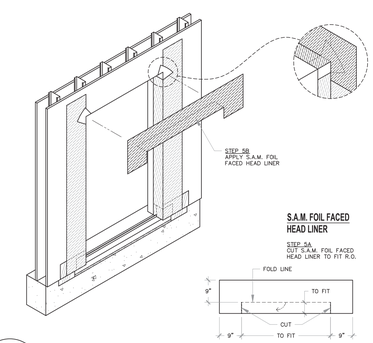
© COPYRIGHT BEE CONSULTING



1.02 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

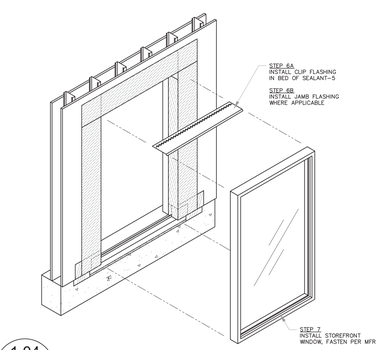
© COPYRIGHT BEE CONSULTING



1.03 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

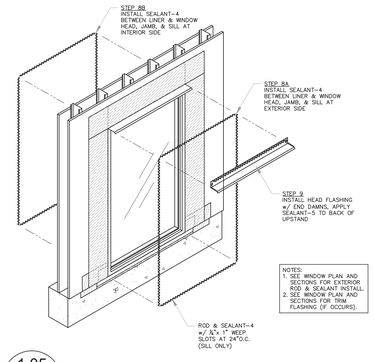
© COPYRIGHT BEE CONSULTING



1.04 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

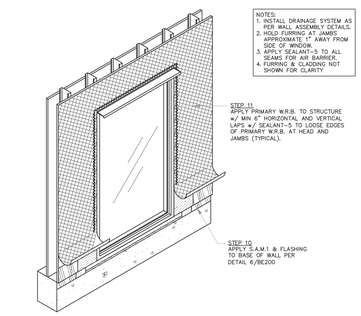
© COPYRIGHT BEE CONSULTING



1.05 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

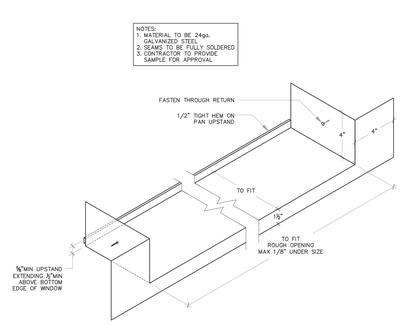
© COPYRIGHT BEE CONSULTING



1.06 BE501 ASSEMBLY: STOREFRONT WINDOW

SCALE: NTS

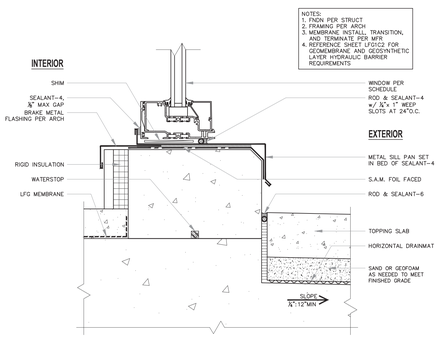
© COPYRIGHT BEE CONSULTING



7 BE501 ISOMETRIC: METAL SILL PAN

SCALE: NTS

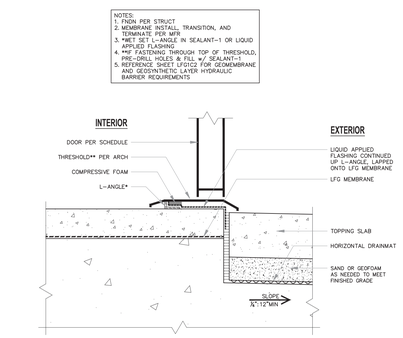
© COPYRIGHT BEE CONSULTING



9 BE501 REF ARCH 11/A751 SECTION: STOREFRONT WINDOW SILL

SCALE: NTS

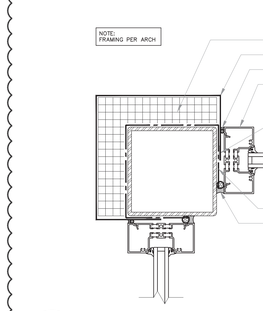
© COPYRIGHT BEE CONSULTING



10 BE501 REF ARCH 10/A751 SECTION: STOREFRONT DOOR THRESHOLD

SCALE: NTS

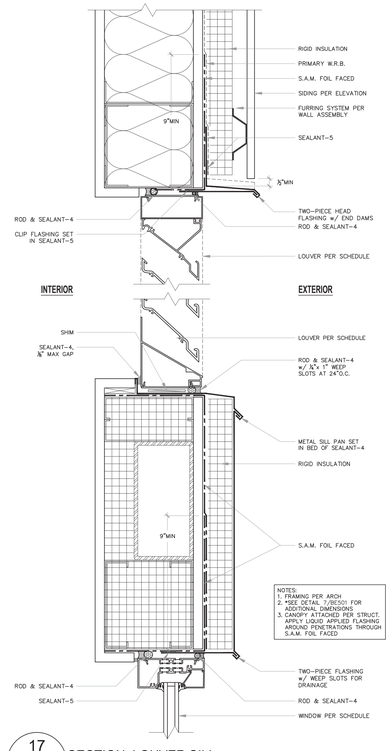
© COPYRIGHT BEE CONSULTING



11 BE501 REF ARCH 3/A752 PLAN: STOREFRONT WINDOW CORNER

SCALE: NTS

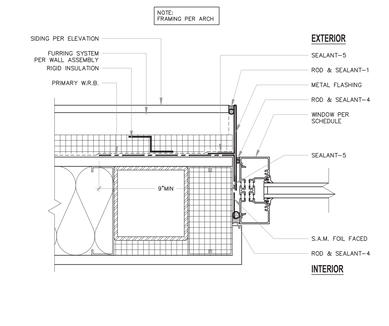
© COPYRIGHT BEE CONSULTING



17 BE501 REF ARCH 8/A751 4/A751 SECTION: LOUVER SILL & STOREFRONT HEAD TRANSOM

SCALE: NTS

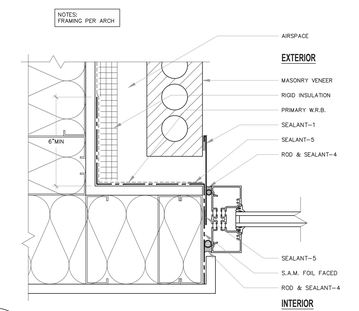
© COPYRIGHT BEE CONSULTING



13 BE501 REF ARCH 9/A751 5/A751 PLAN: STOREFRONT WINDOW JAMB w/ RIGID INSULATION AT SIDING

SCALE: NTS

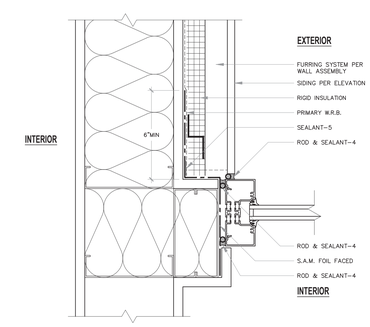
© COPYRIGHT BEE CONSULTING



14 BE501 REF ARCH 1/A752 PLAN: STOREFRONT WINDOW JAMB w/ RIGID INSULATION AT BRICK INSIDE CORNER

SCALE: NTS

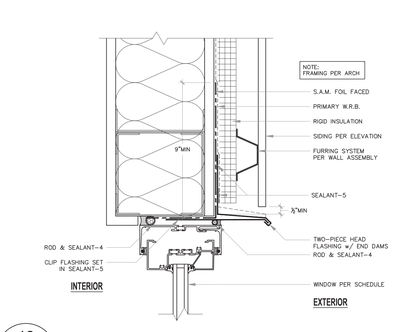
© COPYRIGHT BEE CONSULTING



15 BE501 PLAN: STOREFRONT WINDOW JAMB AT INSIDE CORNER

SCALE: NTS

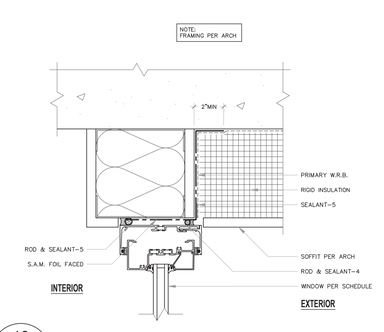
© COPYRIGHT BEE CONSULTING



18 BE501 SECTION: STOREFRONT WINDOW HEAD w/ RIGID INSULATION AT SIDING

SCALE: NTS

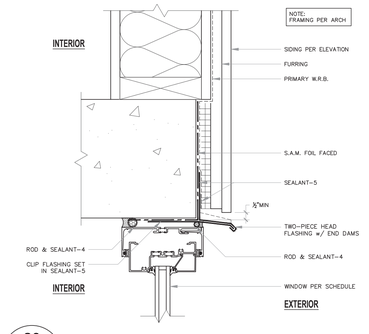
© COPYRIGHT BEE CONSULTING



19 BE501 SECTION: STOREFRONT WINDOW HEAD AT SOFFIT

SCALE: NTS

© COPYRIGHT BEE CONSULTING



20 BE501 SECTION: STOREFRONT WINDOW HEAD AT SLAB EDGE

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

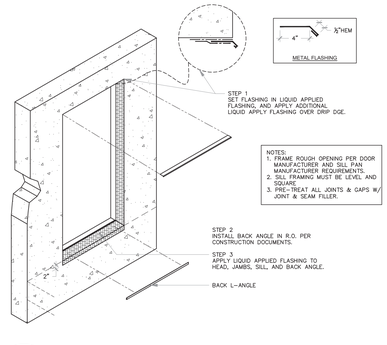
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WINDOW & DOOR DETAILS

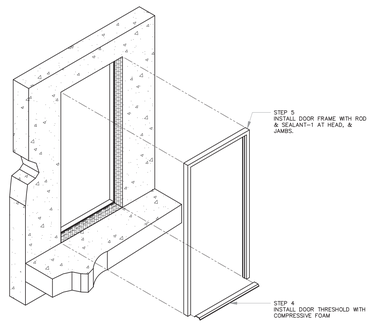
BE501



1.01 BE502 DOOR INSTALL STEPS 1, 2 & 3 (of 6)

SCALE: NTS

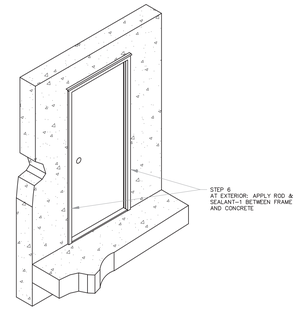
© COPYRIGHT BEE CONSULTING



1.02 BE502 DOOR INSTALL STEPS 4 & 5

SCALE: NTS

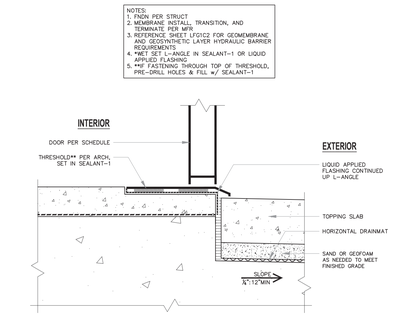
© COPYRIGHT BEE CONSULTING



1.03 BE502 DOOR INSTALL STEP 6

SCALE: NTS

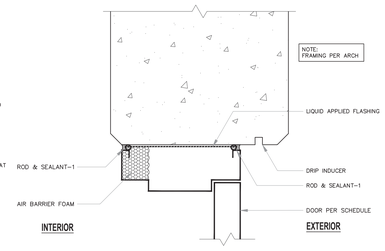
© COPYRIGHT BEE CONSULTING



6 BE502 SECTION: SWING DOOR THRESHOLD

SCALE: NTS

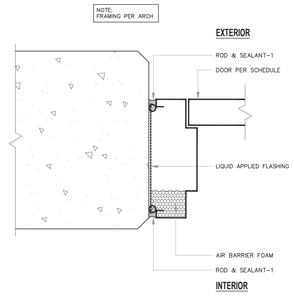
© COPYRIGHT BEE CONSULTING



7 BE502 SECTION: HM DOOR HEAD AT CONCRETE

SCALE: NTS

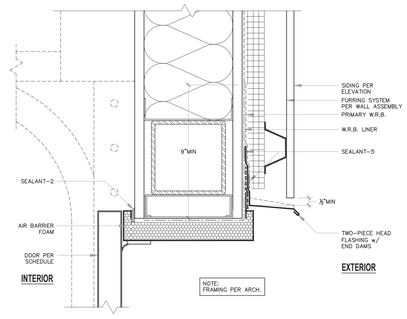
© COPYRIGHT BEE CONSULTING



8 BE502 PLAN: HM DOOR JAMB AT CONCRETE

SCALE: NTS

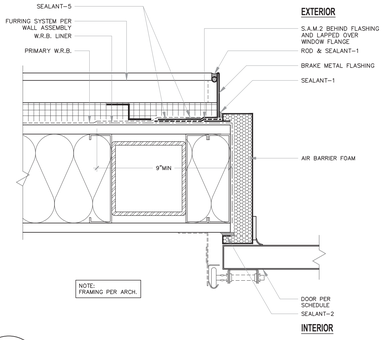
© COPYRIGHT BEE CONSULTING



9 BE502 SECTION: SECTIONAL DOOR HEAD

SCALE: NTS

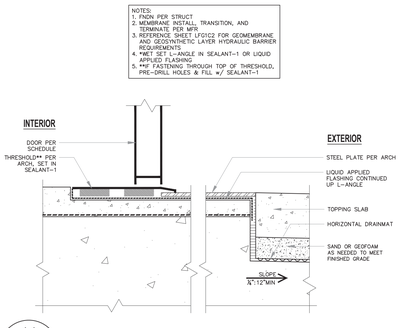
© COPYRIGHT BEE CONSULTING



10 BE502 PLAN: SECTIONAL DOOR JAMB

SCALE: NTS

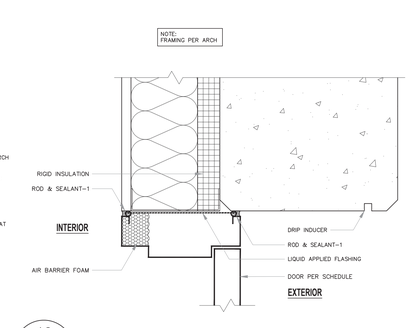
© COPYRIGHT BEE CONSULTING



11 BE502 SECTION: SWING DOOR THRESHOLD AT SETBACK

SCALE: NTS

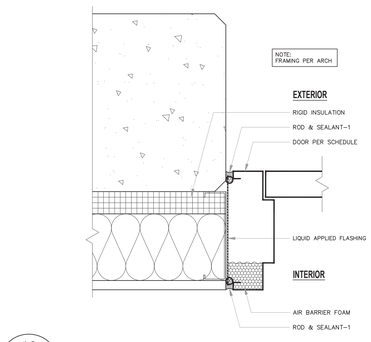
© COPYRIGHT BEE CONSULTING



12 BE502 SECTION: HM DOOR HEAD AT CONCRETE SETBACK

SCALE: NTS

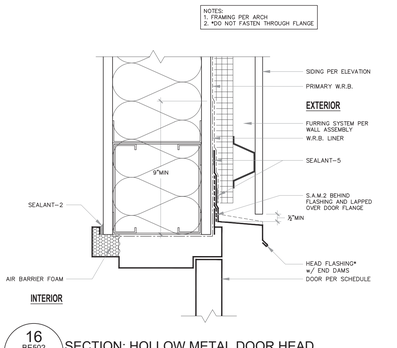
© COPYRIGHT BEE CONSULTING



13 BE502 PLAN: HM DOOR JAMB AT CONCRETE SETBACK

SCALE: NTS

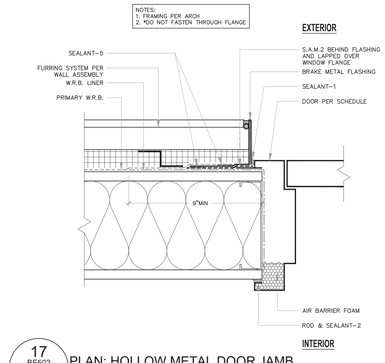
© COPYRIGHT BEE CONSULTING



16 BE502 SECTION: HOLLOW METAL DOOR HEAD AT FIBER CEMENT PANEL w/ RIGID INSULATION

SCALE: NTS

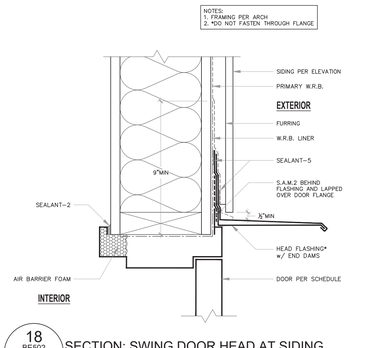
© COPYRIGHT BEE CONSULTING



17 BE502 PLAN: HOLLOW METAL DOOR JAMB AT FIBER CEMENT PANEL w/ RIGID INSULATION

SCALE: NTS

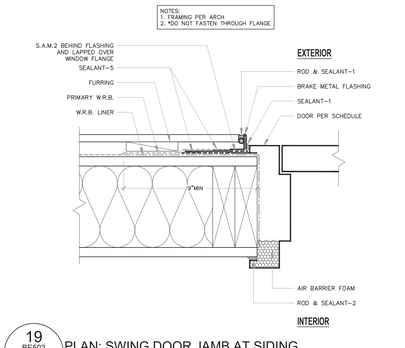
© COPYRIGHT BEE CONSULTING



18 BE502 SECTION: SWING DOOR HEAD AT SIDING

SCALE: NTS

© COPYRIGHT BEE CONSULTING



19 BE502 PLAN: SWING DOOR JAMB AT SIDING

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

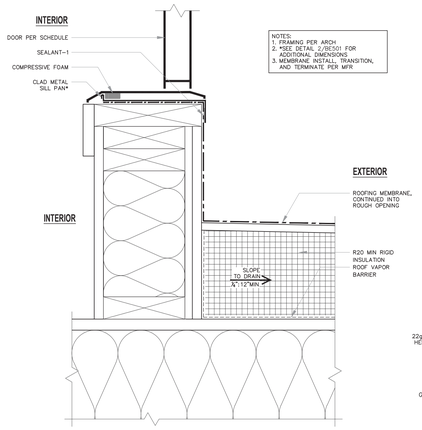
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

WINDOW &
DOOR DETAILS

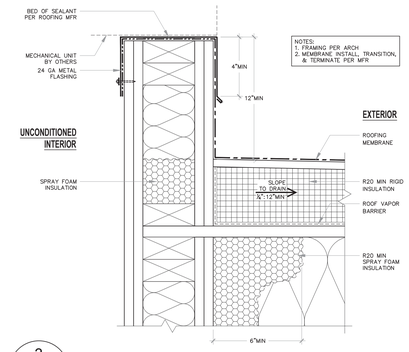
BE502



6 BE600 SECTION: SWING DOOR THRESHOLD AT ROOF

SCALE: NTS

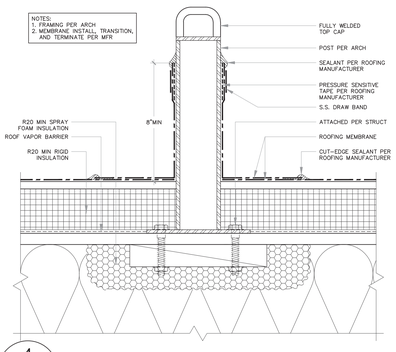
© COPYRIGHT BEE CONSULTING



3 BE600 SECTION: MECHANICAL CURB AT ROOF

SCALE: NTS

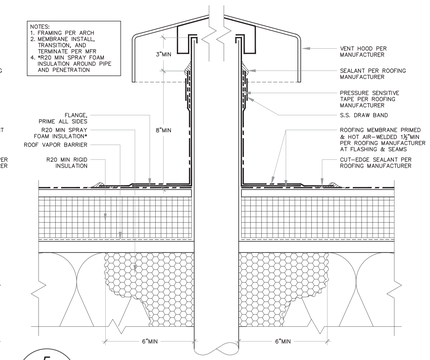
© COPYRIGHT BEE CONSULTING



4 BE600 SECTION: ATTACHMENT AT ROOF

SCALE: NTS

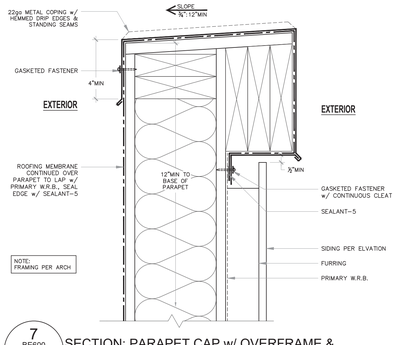
© COPYRIGHT BEE CONSULTING



5 BE600 SECTION: VENT PENETRATION AT ROOF

SCALE: NTS

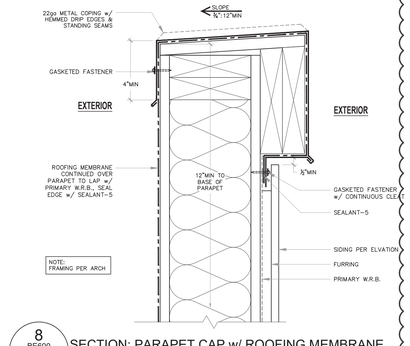
© COPYRIGHT BEE CONSULTING



7 BE600 SECTION: PARAPET CAP w/ OVERFRAME & ROOFING MEMBRANE

SCALE: NTS

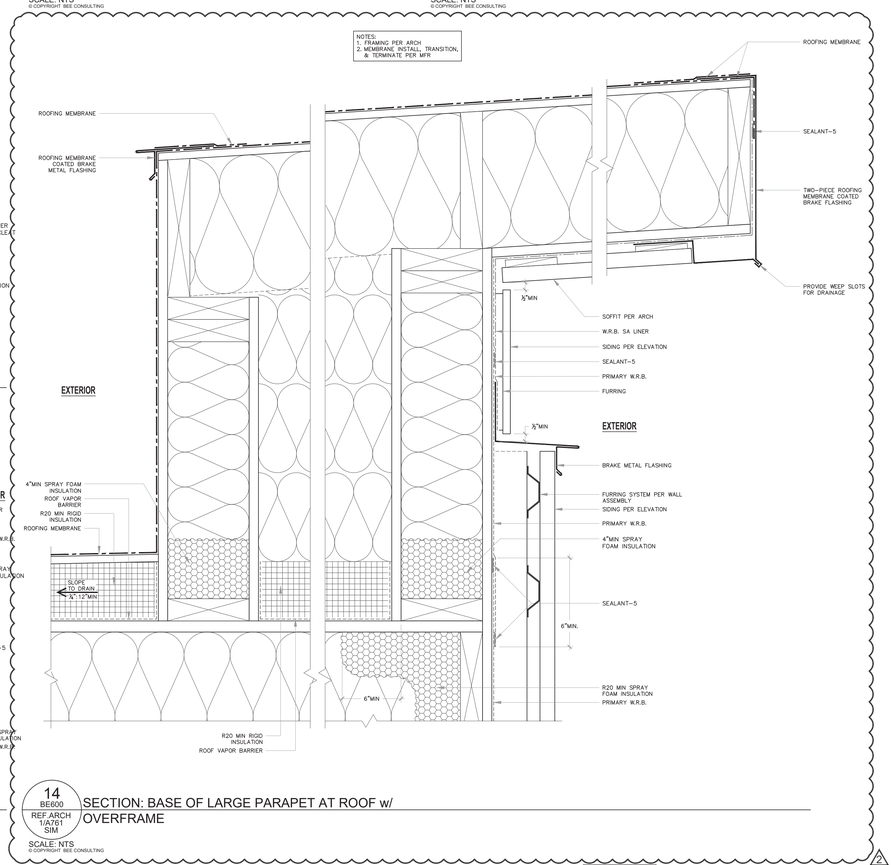
© COPYRIGHT BEE CONSULTING



8 BE600 SECTION: PARAPET CAP w/ ROOFING MEMBRANE

SCALE: NTS

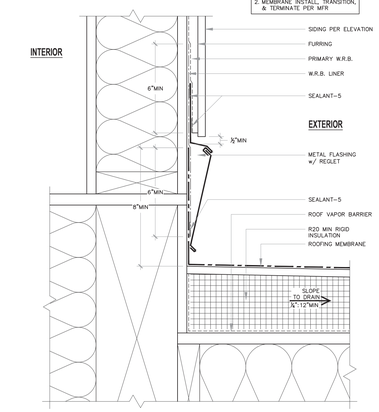
© COPYRIGHT BEE CONSULTING



14 BE600 REF ARCH 1/A761 SIM SECTION: BASE OF LARGE PARAPET AT ROOF w/ OVERFRAME

SCALE: NTS

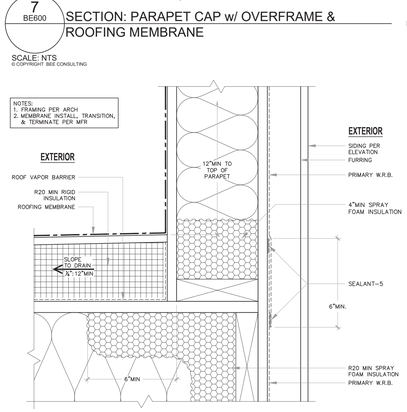
© COPYRIGHT BEE CONSULTING



11 BE600 SECTION: BASE OF WALL AT ROOF

SCALE: NTS

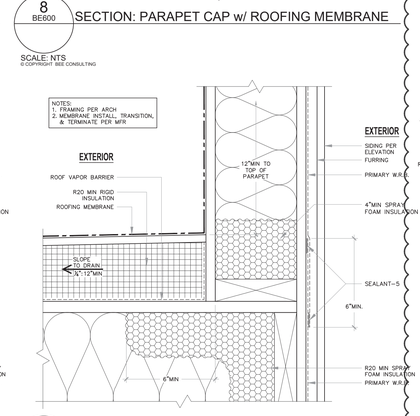
© COPYRIGHT BEE CONSULTING



12 BE600 SECTION: BASE OF PARAPET w/ OVERFRAME AT ROOF

SCALE: NTS

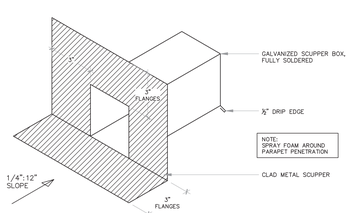
© COPYRIGHT BEE CONSULTING



13 BE600 SECTION: BASE OF PARAPET AT ROOF

SCALE: NTS

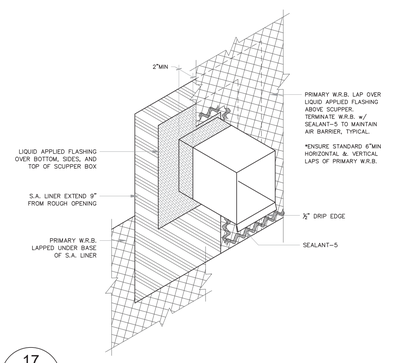
© COPYRIGHT BEE CONSULTING



16 BE600 ASSEMBLY: SCUPPER BOX AT ROOF

SCALE: NTS

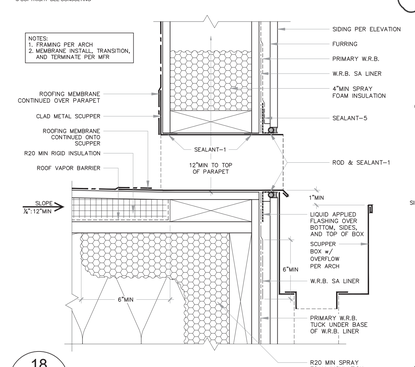
© COPYRIGHT BEE CONSULTING



17 BE600 ASSEMBLY: SCUPPER AT ROOF CURB

SCALE: NTS

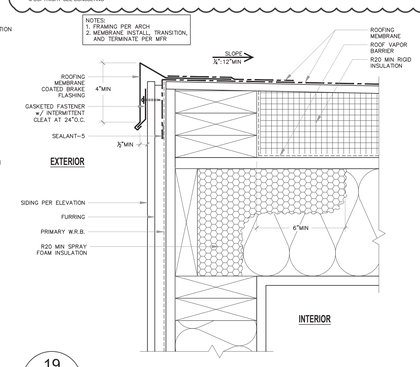
© COPYRIGHT BEE CONSULTING



18 BE600 SECTION: PARAPET w/ SCUPPER

SCALE: NTS

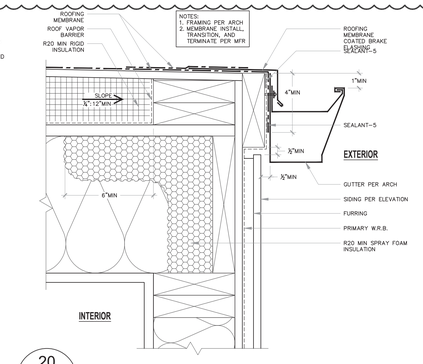
© COPYRIGHT BEE CONSULTING



19 BE600 SECTION: SHED ROOF EDGE

SCALE: NTS

© COPYRIGHT BEE CONSULTING



20 BE600 SECTION: SHED ROOF EDGE w/ GUTTER

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

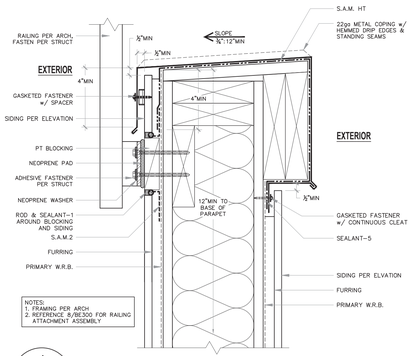
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

ROOF DETAILS

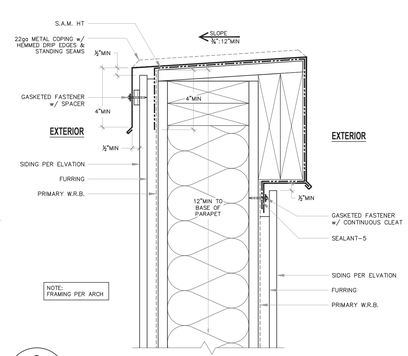
BE600



1 BE601 SECTION: PARAPET CAP w/ GUARDRAIL & SIDING

SCALE: NTS

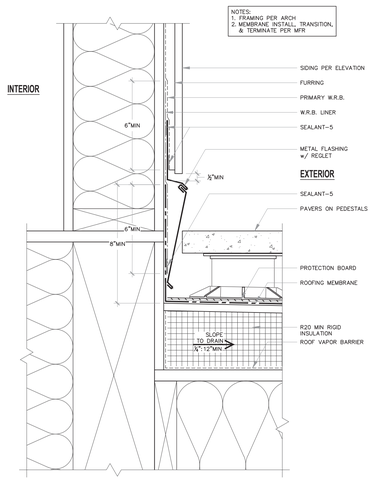
© COPYRIGHT BEE CONSULTING



2 BE601 SECTION: PARAPET CAP w/ SIDING

SCALE: NTS

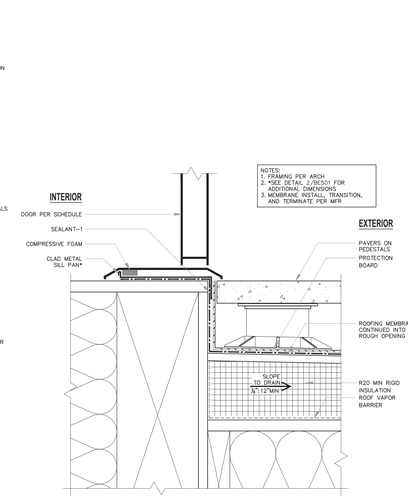
© COPYRIGHT BEE CONSULTING



11 BE601 SECTION: BASE OF WALL AT ROOF w/ PAVERS

SCALE: NTS

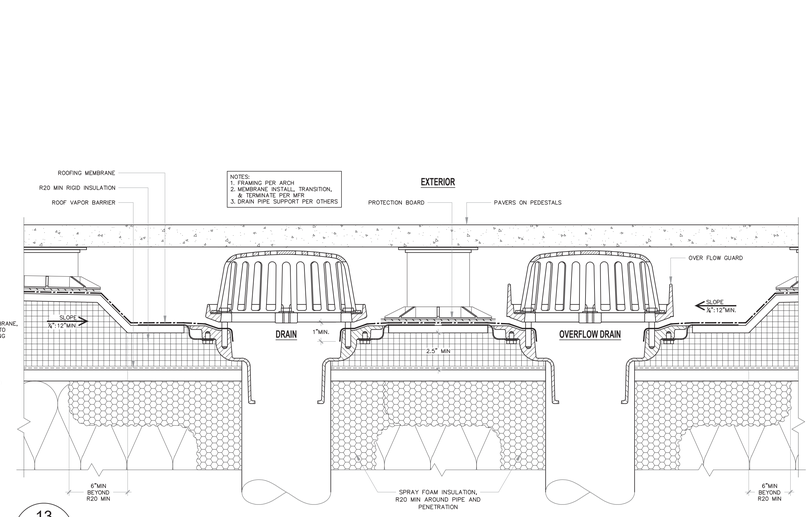
© COPYRIGHT BEE CONSULTING



12 BE601 SECTION: SWING DOOR THRESHOLD AT AMENITY DECK

SCALE: NTS

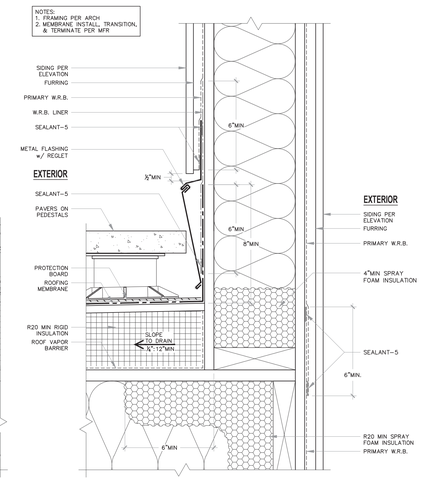
© COPYRIGHT BEE CONSULTING



13 BE601 SECTION: DRAIN w/ OVERFLOW AT AMENITY DECK

SCALE: NTS

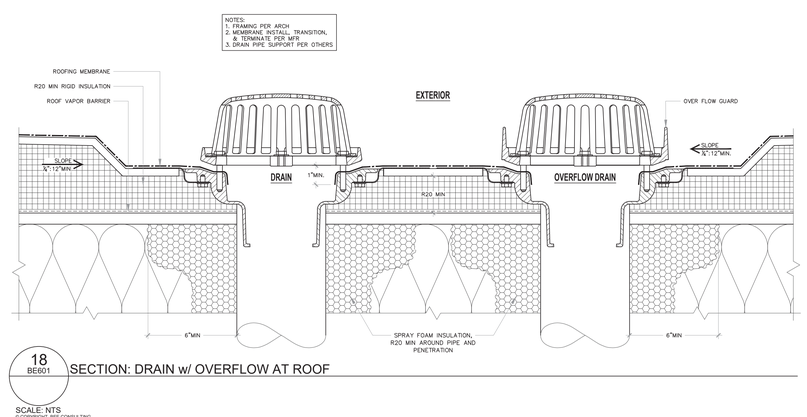
© COPYRIGHT BEE CONSULTING



15 BE601 SECTION: BASE OF PARAPET AT AMENITY DECK

SCALE: NTS

© COPYRIGHT BEE CONSULTING



18 BE601 SECTION: DRAIN w/ OVERFLOW AT ROOF

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

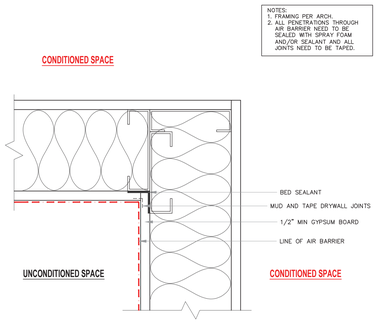
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.095.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

ROOF DETAILS

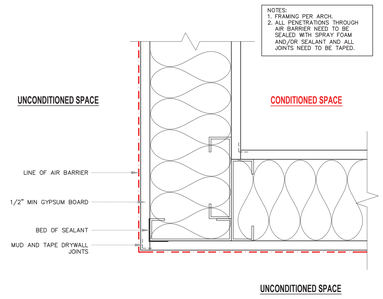
BE601



1 BE700 PLAN: FRAMED WALL @ INSIDE CORNER

SCALE: NTS

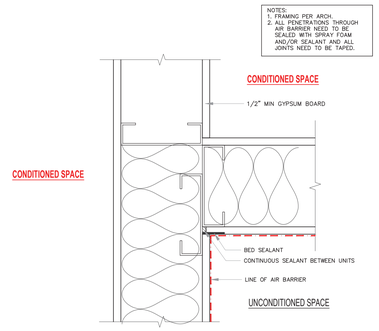
© COPYRIGHT BEE CONSULTING



2 BE700 PLAN: FRAMED WALL @ OUTSIDE CORNER

SCALE: NTS

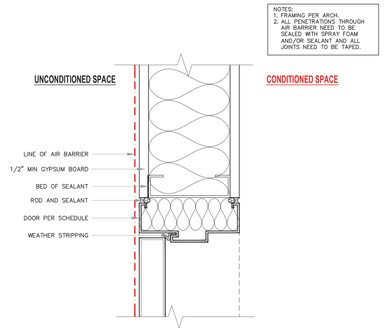
© COPYRIGHT BEE CONSULTING



3 BE700 PLAN: PARTYWALL @ SEMI-EXTERIOR WALL

SCALE: NTS

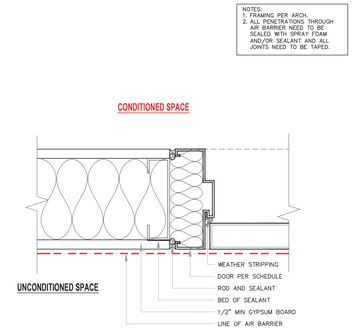
© COPYRIGHT BEE CONSULTING



4 BE700 SECTION: DOOR HEAD & JAMB@FRAMED WALL

SCALE: NTS

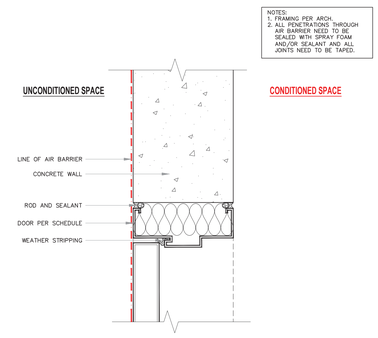
© COPYRIGHT BEE CONSULTING



5 BE700 PLAN: DOOR HEAD & JAMB@FRAMED WALL

SCALE: NTS

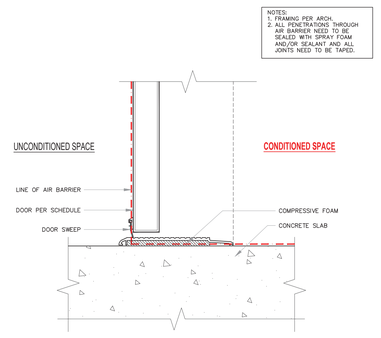
© COPYRIGHT BEE CONSULTING



6 BE700 SECTION: DOOR HEAD & JAMB@CONCRETE WALL

SCALE: NTS

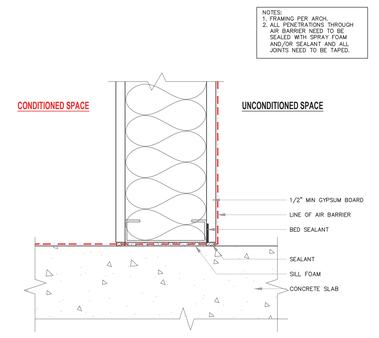
© COPYRIGHT BEE CONSULTING



7 BE700 SECTION: DOOR SILL @ CONCRETE SLAB

SCALE: NTS

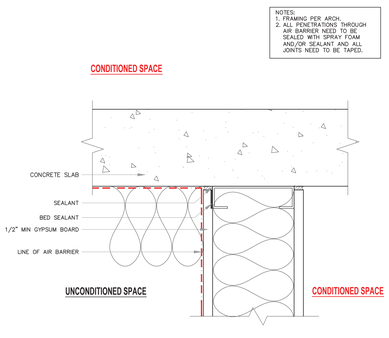
© COPYRIGHT BEE CONSULTING



8 BE700 SECTION: FRAMED WALL TO SLAB TRANSITION

SCALE: NTS

© COPYRIGHT BEE CONSULTING



9 BE700 SECTION: FRAMED WALL TO CONCRETE CEILING TRANSITION

SCALE: NTS

© COPYRIGHT BEE CONSULTING

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

JAMES C. FREELING STATE OF WASHINGTON 16478 REGISTERED PROFESSIONAL ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER SEMI-EXTERIOR DETAILS

BE700

2018 Washington State Energy Code, Commercial Provision.

A. Air leakage - thermal envelope (Mandatory).
The thermal envelope of buildings shall comply with Sections B through L.

B. Air barriers.
A continuous air barrier shall be provided throughout the building thermal envelope. The air barriers shall be permitted to be located on the inside or outside of the building envelope, located within the assemblies composing the envelope, or any combination thereof. The air barrier shall comply with Sections C and D.

C. Air barrier construction.
The continuous air barrier shall be constructed to comply with the following:
1. The air barrier shall be continuous for all assemblies that are the thermal envelope of the building and across the joints and assemblies.
2. Air barrier joints and seams shall be sealed, including sealing transitions in places and changes in materials. The joints and seals shall be securely installed in or on the joint for its entire length so as not to dislodge, loosen or otherwise impair its ability to resist positive and negative pressure from wind, stack effect and mechanical ventilation.
3. Penetrations of the air barrier shall be caulked, gasketed or otherwise sealed in a manner compatible with the construction materials and location. Joints and seals associated with penetrations shall be sealed in the same manner or taped or covered with moisture vapor-permeable wrapping material. Sealing materials shall be appropriate to the construction materials being sealed and shall be securely installed around the penetrations so as not to dislodge, loosen or otherwise impair the penetrations ability to resist positive and negative pressure from wind, stack effect, and mechanical ventilation. Sealing of concealed fire sprinklers, where required, shall be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.
4. Recessed lighting fixtures shall comply with Section J. Where similar objects are installed which penetrate the air barrier, provisions shall be made to maintain the integrity of the air barrier.
5. Construction documents shall contain a diagram showing the building's pressure boundary in plan(s) and section(s) and a calculation of the area of the pressure boundary to be considered in the test.

D. Building test.
The completed building shall be tested and the air leakage of the building envelope shall not exceed Max Allowed Air Leakage called out in Building Envelope Air Leakage Calculations Table at a pressure differential of 0.3 inches water gauge (2.0 L/s x m^2 at 75 Pa) at the upper 95 percent confidence interval in accordance with ASTM E 779 or an equivalent method approved by the code official. A report that includes the tested surface area, floor area, air by volume, stories above grade, and leakage rates shall be submitted to the building owner and the Code Official. If the tested rate exceeds that defined here by up to 0.15 cfm/ft^2, a visual inspection of the air barrier shall be conducted and any leaks noted shall be sealed to the extent practicable. An additional report identifying the corrective actions taken to seal air leaks shall be submitted to the building owner and the Code Official and any further requirement to meet the leakage air rate will be waived. If the tested rate exceeds 0.40 cfm/ft^2, corrective actions must be made and the test completed again. A test above 0.40 cfm/ft^2 will not be accepted.
1. Test shall be accomplished using either (1) both pressurization and depressurization or (2) pressurization alone, but not depressurization The test results shall be plotted against the correct P for pressurization in accordance with Section 9.4 of ASTM E779.
2. The test pressure range shall be from 25 Pa to 80 Pa per Section 8.10 of ASTM E779, but the upper limit shall not be less than 50 Pa, and the difference between the upper and lower limit shall not be less than 25 Pa.
3. If the pressure exponent n is less than 0.45 or greater than 0.85 per Section 9.6.4 of ASTM E779, the test shall be rerun with additional readings over a longer time interval.

E. Building test for mixed-use buildings.
Where a building is three or fewer stories above grade plane and contains both commercial and residential uses, the air barrier of the R-2 and R-3 occupancy areas of the building is permitted to be separately tested according to Section R402.4.1.2. Alternatively, it is permissible to test the air barrier of the entire building according to Section D, provided that the tested air leakage rate does not exceed the rate specified in Section D.

F. Rooms containing fuel-burning appliances.
Where combustion air is supplied through openings in an exterior wall to a room or space containing a space conditioning fuel-burning appliance, one of the following shall apply:
1. The room or space containing the appliance shall be located outside of the building thermal envelope.
2. The room or space containing the appliance shall be enclosed and isolated from conditioned spaces inside the building thermal envelope. Such rooms shall comply with all of the following:
2.1. The walls, floor and ceiling that separate the enclosed room or space from the conditioned spaces shall be insulated to be at least equivalent to the insulation requirement of below grade walls as specified in Table C402.1.3 or C402.1.4.
2.2. The walls, floors and ceiling that separate the enclosed room or space from conditioned spaces
shall be sealed in accordance with Section C.
2.3. The doors into the enclosed room or space shall be fully gasketed.
2.4. Water lines and ducts in the enclosed room or space shall be insulated in accordance with Section C403.
2.5. Where the air duct supplying combustion air to the enclosed room or space passes through conditioned space, the duct shall be insulated to an R-value of not less than R-8.
Exceptions:
Fireplaces and stoves complying with Sections 901 through 905 of the International Mechanical Code, and Section 2111.13 of the International Building Code. C402.5.4 Doors and access openings to shafts, chutes, stairways, and elevator lobbies. Doors and access openings from conditioned space to shafts, chutes, stairways and elevator lobbies shall be gasketed, weather stripped or sealed.

G. Doors and access openings to shafts, chutes, stairways, and elevator lobbies.
Doors and access openings from conditioned space to shafts, chutes, stairways and elevator lobbies shall be gasketed, weather stripped or sealed.

Exceptions:

1. Door openings required to comply with Section 716 of the International Building Code.
2. Doors and door openings required to comply with UL 1784 by the International Building Code.

I. Air intakes, exhaust openings, stairways and shafts.
Stairway enclosures, elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be provided with dampers in accordance with Section C403.7.9.

J. Loading dock weather seals.
Cargo door openings and loading dock door openings shall be equipped with weather seals that restrict infiltration and provide direct contact along the top and sides of vehicles that are parked in the doorway.

K. Vestibules.
All building entrances shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same The installation of one or more revolving doors in the building entrance shall not eliminate the requirement that a vestibule be provided on any doors adjacent to revolving doors. For the purposes of this section, "building entrances" shall include exit-only doors in buildings where separate doors for entering and exiting are provided.
Interior and exterior doors shall have a minimum distance between them of not less than 7 feet. The exterior envelope of conditioned vestibules shall comply with the requirements for a conditioned space. Either the interior or exterior envelope of unconditioned vestibules shall comply with the requirements for a conditioned space. The building lobby is not considered a vestibule.
Exception: Vestibules are not required for the following:
1. Doors not intended to be used as building entrances.
2. Unfinished ground-level space greater than 3,000 square feet (298 m^2) if a note is included on the permit documents at each exterior entrance to the space stating "Vestibule required at time of tenant build-out if entrance serves a space greater than 3,000 square feet in area".
3. Doors opening directly from a sleeping unit or dwelling unit.
4. Doors between a space smaller than 3,000 square feet (298 m^2) in area and the exterior of the building or the building entrance lobby, where those doors do not comprise one of the primary entrance paths to the remainder of the building. The space must be enclosed and separated without transfer air paths from the primary building entrance paths. If there are doors between the space and the primary entrance path then the doors shall be equipped with self-closing devices so the space acts as a vestibule for the primary building entrance.
5. Revolving doors.
6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.
7. In buildings less than three stories above grade or in spaces that do not directly connect with the building elevator lobby, doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air curtains and their controls shall comply with Section C408.2.3.
8. Building entrances in buildings that are less than four stories above grade and less than 10,000 square feet in area.
9. Elevator doors in parking garages provided that the elevators have an enclosed lobby at each level of the garage.
10. Entrances to semi-heated spaces.

L. Recessed lighting.
Recessed luminaires installed in the building thermal envelope shall be all of the following:
1. IC Rated.
2. Labeled as having an air leakage rate of not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential.
3. Sealed with a gasket or caulk between the housing and interior wall or ceiling covering.

M. Preparation of the Building
Contractor is responsible for sealing or otherwise effectively isolating all "intentional" holes in the test boundary.
Contractor will be liable for costs of removal of finishes and/or cladding required to provide corrections to the air barrier system.

N. Compliance documentation
All energy code compliance forms and calculations shall be delivered in one document to the building owner as part of the project record documents, manuals, or as a standalone document. This document shall include the specific energy code year utilized for compliance determination for each system, NFRC certificates for the installed windows, list of total area for each NFRC certificate, and the interior lighting power compliance path (building area, space-by-space) used to calculate the lighting power allowance.
For projects complying with Section C401.2 item 1, the documentation shall include:
1. The envelope insulation compliance path (prescriptive or component performance).
2. All required completed code compliance forms, and all required compliance calculations.
For projects complying with Section C401.2 item 2, the documentation shall include:
1. A list of all proposed envelope component types, areas and U-values.
2. A list of all lighting area types with areas, lighting power allowance, and installed lighting power density.
3. A list of each HVAC system modeled with the assigned and proposed system type.
4. Electronic copies of the baseline and proposed model input and output file. The input files shall be in a format suitable for rerunning the model and shall not consist solely of formatted reports of the inputs.

LEGEND

-AIR BARRIER & BUILDING THERMAL ENVELOPE

-CONDITIONED AND SEMI-HEATED SPACES

Whole Building

BUILDING ENVELOPE AIR LEAKAGE CALCULATIONS
Based on AutoCAD and PDF drawings provided by architect.

	Floor Perimeter ft	Level Height ft	Floor Area ft²	Exterior Floor area ft²	Exterior Ceiling Area ft²	Exterior Wall Area ft²	Thermal Envelope Area ft²	Thermal Envelope Volume ft³
Level 1	1,298	16.7	31,097	31,097	0	21,677	52,774	519,320
Level 2	1,120	9.8	33,231	2,134	0	10,976	13,110	325,664
Level 3	1,120	9.8	33,231	0	0	10,976	10,976	325,664
Level 4	1,120	9.8	33,231	0	0	10,976	10,976	325,664
Level 5	1,120	9.8	33,231	0	759	10,976	11,735	325,664
Level 6	1,167	9.7	32,472	0	32,104	11,320	43,424	314,978
Roof	116	11.0	368	0	368	1,276	1,644	4,048
Total Building	7,061	77	196,861	33,231	33,231	78,177	144,639	2,141,002

MAX ALLOWED AIR LEAKAGE OF BUILDING ENVELOPE

per AREA of Building Thermal Envelope at 75 Pa	0.25	cfm/ft² x	144,639	ft² =	**36,160**	**CFM**

AVE. GRADE	38.68'
T.O. ROOF DECK	104.18'

REDUCED AIR INFILTRATION IN ACCORDANCE WITH SECTION C406.11 CREDIT IS NOT APPLIED

BASED ON : 2024-0125 Everett Riverfront BLDG C Arch Progress

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER NOTES

BE800

LEVEL 1 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A101

LEVEL 2 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A102

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER DIAGRAMS

BE801

LEVEL 3 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A103

LEVEL 4 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A104

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER DIAGRAMS

BE802

LEVEL 5 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A105

LEVEL 6 FLOOR PLAN
SCALE: NTS
REFERENCE ARCH: A106

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

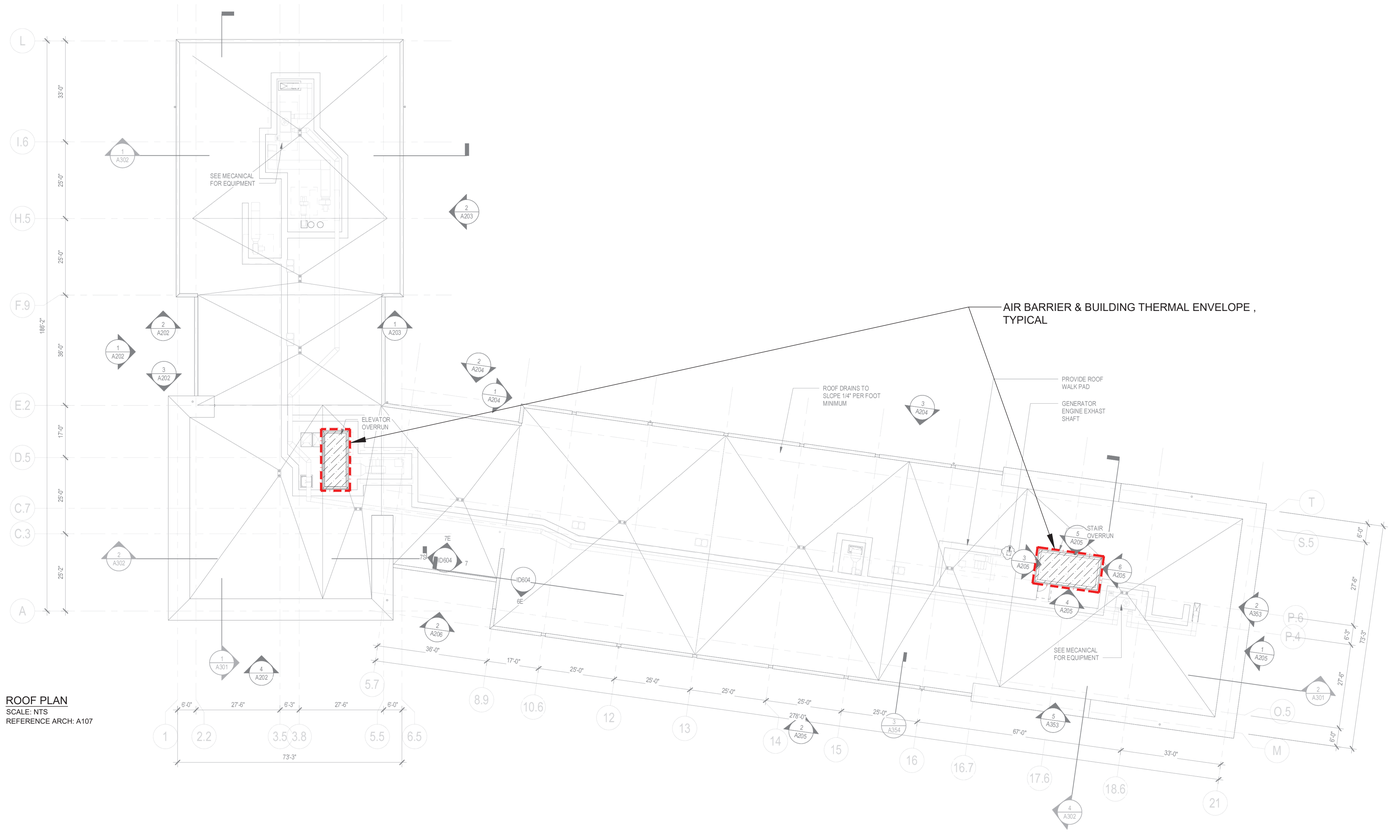
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

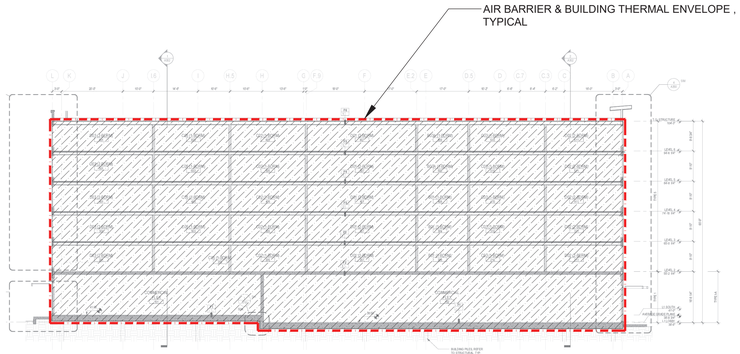
1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER
DIAGRAMS

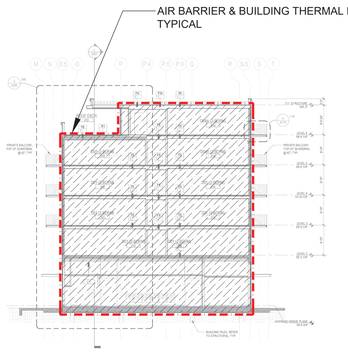
BE803



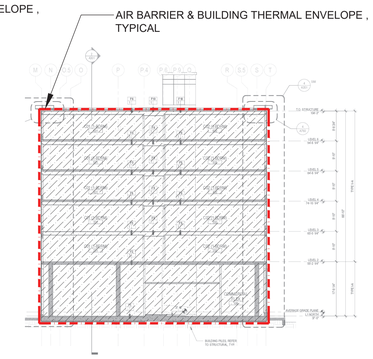
ROOF PLAN
SCALE: NTS
REFERENCE ARCH: A107



BUILDING SECTION 1 LOOKING NORTH
SCALE: NTS
REFERENCE ARCH: A301



BUILDNG SECTION 5 BREEZEWAY LOOKING SOUTH
SCALE: NTS
REFERENCE ARCH: A302



BUILDING SECTION 6 LOOKING SOUTH
SCALE: NTS
REFERENCE ARCH: A302

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

AIR BARRIER DIAGRAMS

BE804

2018 Washington State Energy Code, Commercial Provision.

1. **C301** Climate zone for energy compliance has been defined per Table C301.1.

2. **C303.1.1** Building thermal envelope insulation.
R-value indentification mark shall be applied by the manufacturer to each piece of building thermal envelope insulation 12 inches or greater in width. Alternately, the insulation installers shall provide a certification listing the type, manufacturer and R-value of insulation installed in each element of the building thermal envelope. For blown or sprayed polyurethane foam (SPF) insulation, the installed thickness of the areas covered and R-value of installed thickness shall be listed on the certification. For insulated siding, the R-value shall be labeled on the product's package and shall be listed on the certification the insulation installer shall sign, date and post the certification in a conspicuous location on the job site.
   Exception: for roof insulation installed above the deck, the R-value shall be labeled as required by the material standards specified in table 1508.2 of the International Building Code.

3. **C303.1.2** Insulation mark installation.
Insulating materials shall be installed such that the Manufacturer's R-value mark is readily observable upon inspection.

4. **C303.1.3** Fenestration product rating.
U-factors of fenestration shall be determined as Follows:
   1) For windows, doors and skylights, U-factor ratings shall be determined in accordance with NFRC 100.
   2) Where required for garage doors and rolling doors, U-factor ratings shall be determined in Accordance with either NFRC 100 or ANSI/DASMA 105.

   U-factors shall be determined by an accredited, independent laboratory, and labeled and certified by The manufacturer.

   Products lacking such a labeled U-factor shall be assigned a default U-factor from table C303.1.3(1), C303.1.3(2) or C303.1.3(4). The solar heat gain coefficient (SHGC) and visible transmittance (VT) of glazed Fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC or VT shall be assigned a default SHGC or VT from table C303.1.3(3).

5. **C401.2.1** The building will comply with the Total Building Performance path and requirements of Section C407.
Energy forms are located on BE901-BE902 drawings and provided to show that the proposed Total UA of the proposed building is no more than 20 percent higher than the Allowed Total UA as defined in Section C402.1.5. The proposed design is 0.2% higher than the Allowed UA which is within allowed limits.

6. **C403.4** HVAC system controls.
HVAC systems shall be provided with controls in accordance with sections C403.4.1 through C403.4.11 and shall be capable of and configured to implement all required control functions in this code.

7. **C404.9** Domestic hot water meters.
Each individual dwelling unit in a group R-2 occupancy with central service water heating systems shall be provided with a domestic hot water billing based on actual domestic hot water usage.

8. **C404.14** Commissioning.
Service water heating systems shall be commissioned in accordance with section C408.

9. **C405.7** Dwelling unit electrical energy consumption.
Each dwelling unit located in a Group R-2 building shall have a separate electrical meter. A utility tenant meter meets this requirement. See Section C409 for additional requirements for energy metering and energy consumption management.

10. **C408** System commissioning.
A building commissioning process led by a certified commissioning professional and functional testing requirements shall be completed for mechanical systems in section C403, service water heating systems in section C404, controlled receptacles and lighting systems in section C405, equipment, appliance and systems installed to comply with section C406 or C407; energy metering in section C409 and refrigeration in section C410.

11. **C409.2** Energy source metering.
Buildings shall have a meter at each energy source. For each energy supply source listed in Section C409.2.1 through C409.2.4, meters shall collect data for the whole building or for each separately metered portion of the building where not exempted by the exception to Section C409.1.
   Exceptions:
1. Energy source metering is not required where end use metering for an energy source accounts for all usage of that energy type within a building, and the data acquisition system accurately totals the energy delivered to the building or separately metered portion of the building.
2. Solid fuels such as coal, firewood or wood pellets that are delivered via mobile transportation do not require metering.

12. **C411** Solar readiness.
A solar zone shall be provided on non-residential buildings that are 20 stories or less in height above grade plane. The solar zone shall be located on the roof of the building or on another structure elsewhere on the site. The solar zone shall be in accordance with Sections C411.2 through C411.8 and the International Fire Code.

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

ENERGY CODE NOTES

BE900

ENVELOPE COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2020 NEEA. All rights reserved

Project & Applicant Information		
	Project Title	EVERETT RIVERFRONT BUILDING 1-C - 2018 WSEC
	Project Address	3710 Riverfront Blvd Everett, WA 98203
	Applicant Name	Earle Bartholmey
	Applicant Phone	425-678-1736
	Applicant Email	parle@bee-engineers.com

For Building Department Use: **Date: Jan 30, 2024**

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5305 or via email at cres.techsupport@commerceycodes.com

General Occupancy	Mixed Use - Commercial – Group A building over 3 stories	General Building Use Type(s)	Multifamily/Residential, Mixed Use	Building Cond. Floor Area	194,434
Project Scope	New Building	Space Conditioning Categories	Fully Conditioned	Project Cond. Floor Area	194,434
				Floors Above Grade	6
				Compliance Method	Compliance Method 1 - General
Envelope Project Description	Construction of a mixed-use apartment building in 5 floors of wood construction over 1 floor of non-combustible and concrete construction at the address: 3710 Riverfront Blvd, Everett WA 98203				

Envelope Compliance Scope and Method	Scope	Space Conditioning Category	Compliance Method	WWR/SRR per Category	UA Calculation Adjustment	Fenestration Alternates	Compliance Verification
	New Building	Fully Conditioned	Component performance	37.66% / 0%	None selected	High performance fenestration U-factor and SHGC per C402.4.1.1	DOES NOT COMPLY

Air Barrier Testing			
	Air barrier testing included in project scope	Air Barrier Comments	

Project Title:	EVERETT RIVERFRONT BUILDING 1-C - 2018 WSEC	Date:	Jan 30, 2024
Scope & Space Conditioning:	NEW BUILDING - FULLY CONDITIONED	Compliance Verification:	DOES NOT COMPLY

Window-to-wall Ratio	37.66%	Skylight-to-roof ratio	0%	Vertical Fenestration Alternate	High performance fenestration U-factor and SHGC per C402.4.1.1		

Opaque Envelope Assemblies

Roof/Ceiling	Location in Documents	Assembly ID	Assembly Location	Cavity	Insulation R-Values: Continuous (% penetration)	2nd Layer (NB Roof)	U-Factor	Net Area (SF)
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-41 (< 0.04%)		U-0.024	5,591
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-56 (< 0.04%)		U-0.017	2,385
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-33 (< 0.04%)		U-0.03	2,078
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-30 (< 0.04%)		U-0.032	730
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-26 (< 0.04%)		U-0.037	662
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-23 (< 0.04%)		U-0.043	124
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F8 / Roof	Exterior		R-12 (< 0.04%)		U-0.042	787
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.3			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-44 (< 0.04%)		U-0.022	8,680
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-47 (< 0.04%)		U-0.021	3,670
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-30 (< 0.04%)		U-0.02	6,809
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							
Insulation entirely above deck	A601	F6, F10 / Roof	Exterior		R-53 (< 0.04%)		U-0.019	1,017
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.5			
	Is this assembly exterior or interior?: Exterior							

Walls	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	Insulated Wall Furring	U-Factor	Net Area (SF)
Wood-framed and other - Group R	A612	W02-W04, W06 / Levels 2-6, Roof	Exterior	R-21	R-0 (< 0.04%)		U-0.056	36,580
	Which insulation code target does wall comply with? Wall Assembly U-factor				U-Factor Source: WSEC-Appendix A			
	U-Factor Source Description: Table A103.3.1(5)				Framing Depth: 2x6			
	Framing Spacing: 16 o.c.				Is this assembly exterior or interior?: Exterior			
Steel-framed - Commercial	A610	M02, M03 / Level 1	Exterior	R-21	R-10 (< 0.04%)		U-0.051	4,934
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.3.4.1(1)			
	Framing Depth: 2x6				Framing Spacing: 16 o.c.			
	Is this assembly exterior or interior?: Exterior							
Steel-framed - Group R	A610	M02, M03 / Level 1	Exterior	R-21	R-10 (< 0.04%)		U-0.051	1,086
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.3.4.1(1)			
	Framing Depth: 2x6				Framing Spacing: 16 o.c.			
	Is this assembly exterior or interior?: Exterior							
Steel-framed - Group R	A611	M20, M23 / Level 1	Interior partition	R-21	R-0 (< 0.04%)		U-0.106	2,388
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.3.4.1(1)			
	Framing Depth: 2x6				Framing Spacing: 16 o.c.			
	Is this assembly exterior or interior?: Interior partition							
Mass (precast concrete) - Commercial	A350-A355	Concrete curb / Level 1	Yes		R-5 (< 0.04%)	No	U-0.157	410
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			
Mass (precast concrete) - Commercial	A610	C02, C07 / Level 1	Wall is an interior partition		R-10 (< 0.04%)	No	U-0.088	412
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			
Mass (precast concrete) - Group R	A350-A355	Concrete curb / Level 1	Yes		R-5 (< 0.04%)	No	U-0.157	67
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			
Mass (precast concrete) - Group R	A610	C02, C07 / Level 1	Yes		R-10 (< 0.04%)	No	U-0.088	608
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			
Mass (precast concrete) - Group R	A501	Elevator pit	Wall is below grade		R-10 (< 0.04%)	No	U-0.08	234
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.3			
Mass (precast concrete) - Group R	A301	C02, C07 / Level 1	Wall is below grade		R-10 (< 0.04%)	No	U-0.08	69
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			
Mass (precast concrete) - Group R	A610	C02, C07 / Level 1	Wall is an interior partition		R-10 (< 0.04%)	No	U-0.088	2,570
	Does assembly include wall furring?: No				Framing Spacing:			
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A103.2.7.1(2)			

Floors and Edges	Location in Documents	Assembly ID	Assembly Location	Cavity	Continuous (% penetration)	U Factor	Net Area (SF)
Mass	A603, A602	F2+C8, F2+C5 / Level 2	Exterior		R-20 (< 0.04%)	U-0.031	4,038
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A105.1(1)		
	Is this assembly exterior or interior?: Exterior						
Mass	A101	Transformer / level 2	Interior partition		R-0 (< 0.04%)	U-0.326	588
	U-Factor Source: WSEC-Appendix A				U-Factor Source Description: Table A105.3		
	Is this assembly exterior or interior?: Interior partition						
Intermediate mass floor edge - Group R	A350-A355	Slab Edge / Level 2	Exterior		R-5 (< 0.04%)	U-0.157	1,121
	Wall Thickness Above/Below Floor: 8-inch				U-Factor Source: WSEC-Appendix A		
	U-Factor Source Description: Table A103.2.7.2				Is this assembly exterior or interior?: Exterior		

Slab -on-grade Floors	Location in Documents	Assembly ID	Assembly Location	Slab Edge	Under Slab	F Factor	Perimeter Length (LF)
Unheated slab	A601	F1 / Level 1	At grade level	R-5	R-10	F-0.54	1,122
	Slab Insulation Method: 2 ft horizontal (no slab-edge insulation)			F-Factor Source: WSEC-Appendix A			
	F-Factor Source Description: Table A106.1						

Fenestration & Opaque Door Assemblies

Opaque Doors	Location in Documents	Assembly ID	Assembly Location	Door Insulation	Insulation R-Values		U Factor	Rough Opening (SF)
Swinging	A810-A812	Opaque Doors: 107A, 120A, 120B, 152A, 52L1C	Exterior				U-0.37	117
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source: WSEC-Appendix A				
	U-Factor Source Description: Table A107.1(1)			Is this assembly exterior or interior?: Exterior				
	Is this a public entrance door?: No							
Swinging	A810	Opaque Doors: 106B, 109B, 110, 111B, 112B, 113B, 114B, 121B	Interior partition				U-0.37	168
	What percentage of this opaque door is glazing?: 50% or less			U-Factor Source: WSEC-Appendix A				
	U-Factor Source Description: Table A107.1(1)			Is this assembly exterior or interior?: Interior partition				
Roll-up	A810	Roll-up door: 107C	Exterior	R-4.75			U-0.34	80
	U-Factor Source: WSEC-Appendix A			U-Factor Source Description:				
	Is this assembly exterior or interior?: Exterior							

Vertical Fenestration	Location in Documents	Assembly ID	Assembly Location	Shading (PF)	Fenestration SHGC	Fenestration U-Factor	Rough Opening (SF)	
Fixed - Class AW or site built	A802, A803, A804	Metal Fixed: SF-1-SF-5, SF-7-SF11, SF-14-SF-19, SF-21-SF-38	Exterior		PF < 0.2	SHGC-0.35	U-0.34	5,665
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: NFRC Certified				
	Is this assembly exterior or interior?: Exterior							
Fixed - Class AW or site built	A802, A803, A804	Metal Fixed: SF-12, SF-13, SF-20-SF-22	Exterior		PF < 0.2	SHGC-0.35	U-0.34	1,429
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: NFRC Certified				
	Is this assembly exterior or interior?: Exterior							
All other fenestration types	A801	Non-Metal, operable: A1, A2, B1L, B1R, 1S2L, B2R, B1L, B3R, B4L, B4R, B5L, B5R	Exterior		PF < 0.2	SHGC-0.35	U-0.24	14,687
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: See A801				
	Is this assembly exterior or interior?: Exterior							
All other fenestration types	A801	Non-Metal, operable: A2, B1L, B1R, B5L, B5R	Exterior		PF < 0.2	SHGC-0.35	U-0.24	3,390
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: See A801				
	Is this assembly exterior or interior?: Exterior							
All other fenestration types	A810-A813	Non-Metal, doors: 613, 397B, 313B, 314B, 407B, 413B, 414B, 507B, 513B, 514B, 607B, 614B, 615B	Exterior		PF < 0.2	SHGC-0.35	U-0.24	311
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: See A810-A813				
	Is this assembly exterior or interior?: Exterior							
All other fenestration types	A801	Non-Metal, fixed: D1, D2, D3	Exterior		PF < 0.2	SHGC-0.32	U-0.24	802
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: See A801				
	Is this assembly exterior or interior?: Exterior							

Glazed Doors	Location in Documents	Assembly ID	Assembly Location	Shading (PF)	Fenestration SHGC	Fenestration U Factor	Rough Opening (SF)	
Swinging entrance door	A810-A813	Metal Entrance door: 102B, 102C, 104A, 104B, 105A, 105B, 105C, 105D, 106B	Exterior		PF < 0.2	SHGC-0.35	U-0.6	552
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: NFRC Certified				
	Is this assembly exterior or interior?: Exterior			Is this a public entrance door?: Yes				
	Door enclosed within a vestibule?: No vestibule							
Swinging entrance door	A810-A813	Metal Entrance door: 101A	Exterior		PF < 0.2	SHGC-0.35	U-0.6	42
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: NFRC Certified				
	Is this assembly exterior or interior?: Exterior			Is this a public entrance door?: Yes				
	Door enclosed within a vestibule?: No vestibule							
Swinging entrance door	A801-811	Metal Entrance door: 144B, 149B	Exterior		PF < 0.2	SHGC-0.35	U-0.60	64
	U-Factor & SHGC Source: NFRC Rating			U-Factor Source Description: NFRC Certified				
	Is this assembly exterior or interior?: Exterior			Is this a public entrance door?: Yes				
	Door enclosed within a vestibule?: Yes							

1

Project Title	EVERETT RIVERFRONT BUILDING 1-C - 2018 WSEC	Date	Jan 30, 2024
UA Calculation	NEW BUILDING - FULLY CONDITIONED		DOES NOT COMPLY

Opaque Envelope Assemblies

		PROPOSED			TARGET		
Roof/Ceiling	Assembly ID	Roof/Ceiling Assembly U-Factor	Net Area (SF)	U x A	Roof/Ceiling Assembly U-Factor	Net Area (SF)	U x A
Insulation entirely above deck	F6, F10 / Roof	0.024	5,591.0	134.2	0.027	5,591.0 (1)	151.0
Insulation entirely above deck	F6, F10 / Roof	0.027	2,385.0	62.2	0.027	2,385.0 (1)	62.2
Insulation entirely above deck	F6, F10 / Roof	0.03	2,078.0	62.3	0.027	2,078.0 (1)	56.1
Insulation entirely above deck	F6, F10 / Roof	0.032	730.0	23.4	0.027	730.0 (1)	19.7
Insulation entirely above deck	F6, F10 / Roof	0.037	662.0	24.5	0.027	662.0 (1)	17.9
Insulation entirely above deck	F6, F10 / Roof	0.042	124.0	5.2	0.027	124.0 (1)	3.3
Insulation entirely above deck	F8 / Roof	0.042	787.0	33.1	0.027	787.0 (1)	21.2
Insulation entirely above deck	F6, F10 / Roof	0.022	8,680.0	189.2	0.027	8,680.0 (1)	233.2
Insulation entirely above deck	F6, F10 / Roof	0.021	3,670.0	77.1	0.027	3,670.0 (1)	99.1
Insulation entirely above deck	F6, F10 / Roof	0.02	6,809.0	136.2	0.027	6,809.0 (1)	183.8
Insulation entirely above deck	F6, F10 / Roof	0.015	1,037.0	15.7	0.027	1,037.0 (1)	28.0

Walls	Assembly ID	Wall Assembly U-Factor	Net Area (SF)	U x A	Wall Assembly U-Factor	Net Area (SF)	U x A
Wood-framed and other - Group R	W02-W04, W06 / Levels 2-6, Roof	0.054	36,580.0	1,975.3	0.051	36,580.0 (1)	1,865.8
Steel-framed - Commercial	M02, M03 / Level 1	0.051	4,934.0	251.6	0.055	4,934.0 (1)	271.4
Steel-framed - Group R	M02, M03 / Level 1	0.051	1,086.0	55.4	0.055	1,086.0 (1)	59.7
Steel-framed - Group R	M20, M23 / Level 1	0.106	2,388.0	253.1	0.055	2,388.0 (1)	131.4
Mass (precast concrete) - Commercial	Concrete curb / Level 1	0.157	410.0	64.4	0.104	410.0 (1)	42.6
Mass (precast concrete) - Commercial	C02, C07 / Level 1	0.088	612.0	53.9	0.104	612.0 (1)	63.6
Mass (precast concrete) - Group R	Concrete curb / Level 1	0.157	47.0	7.4	0.078	47.0 (1)	3.7
Mass (precast concrete) - Group R	C02, C07 / Level 1	0.088	608.0	53.5	0.078	608.0 (1)	47.4
Mass (precast concrete) - Group R	Elevator pit	0.08	234.0	18.7	0.078	234.0 (1)	18.2
Mass (precast concrete) - Group R	C02, C07 / Level 1	0.08	69.0	5.5	0.078	69.0 (1)	5.4
Mass (precast concrete) - Group R	C02, C07 / Level 1	0.088	2,570.0	226.2	0.078	2,570.0 (1)	200.5

Floors and Edges	Assembly ID	Floor Assembly U-Factor	Net Area (SF)	U x A	Floor Assembly U-Factor	Net Area (SF)	U x A
Mass	F2+C8, F2+C5 / Level 2	0.031	4,037.9	125.2	0.031	4,037.9 (1)	125.2
Mass	Transformer / level 2	0.326	587.6	191.6	0.031	587.6 (1)	18.2
Intermediate mass floor edge - Group R	Slab Edge / Level 2	0.157	1,121.0	176.0	0.078	1,121.0 (1)	87.4

Slab-on-grade Floors	Assembly ID	F-Factor	Perimeter Length (LF)	U x A	F-Factor	Perimeter Length (LF)	U x A
Unheated slab	F1 / Level 1	0.54	1,121.5	605.6	0.54	1,121.5 (1)	605.6

Fenestration and Opaque Door Assemblies

		PROPOSED			TARGET		
Opaque Doors	Assembly ID	Door Assembly U-Factor	Rough Opening (SF)	U x A	Door Assembly U-Factor	Rough Opening (SF)	U x A
Swinging	Opaque Doors: 107A, 120A, 120B, 152A, 52L1C	0.37	117.0	43.3	0.37	117.0 (1)	43.3
Swinging	Opaque Doors: 106B, 109B, 110, 111B, 112B, 113B, 114B, 121B	0.37	168.0	62.2	0.37	168.0 (1)	62.2
Roll-up	Roll-up door: 107C	0.34	80.0	27.2	0.34	80.0 (1)	27.2

		PROPOSED			TARGET		
Vertical Fenestration	Assembly ID	Fenestration Assembly U-Factor	Rough Opening (SF)	U x A	Fenestration Assembly U-Factor	Rough Opening (SF)	U x A
Fixed - Class AW or site built	Metal Fixed: SF-1-SF-5, SF-7-SF11, SF-14-SF-19, SF-21-SF-38	0.34	5,665.0	1,926.1	0.34	5,665.0 (1)	1,926.1
Fixed - Class AW or site built	Metal Fixed: SF-12, SF-13, SF-20-SF-22	0.34	1,429.0	485.9	0.34	1,429.0 (1)	485.9
All other fenestration types	Non-Metal, operable: A1, A2, B1L, B1R, B2L, B2R, B3L, B3R, B4L, B4R, B5L, B5R	0.26	14,687.0	3,818.6	0.24	14,687.0 (1)	3,112.8
All other fenestration types	Non-Metal, operable: A2, B1L, B1R, B5L, B5R	0.26	3,390.0	881.4	0.28	3,390.0 (1)	949.2
All other fenestration types	Non-Metal, doors: 613, 397B, 313B, 314B, 407B, 413B, 414B, 507B, 513B, 514B, 607B, 614B, 615B	0.26	311.0	80.9	0.28	311.0 (1)	87.1
All other fenestration types	Non-Metal, fixed: D1, D2, D3	0.76	802.0	769.5	0.28	802.0 (1)	224.6

Glazed Doors	Assembly ID	Door Assembly U-Factor	Rough Opening (SF)	U x A	Door Assembly U-Factor	Rough Opening (SF)	U x A
Swinging entrance door	Metal Entrance door: 102B, 102C, 104A, 104B, 105A, 105B, 105C, 105D, 106B	0.6	552.0	331.2	0.60	552.0 (1)	331.2
Swinging entrance door	Metal Entrance door: 101A	0.6	42.0	25.2	0.60	42.0 (1)	25.2
Swinging entrance door	Metal Entrance door: 144B, 149B	0.60	64.0	38.4	0.60	64.0 (1)	38.4

	Proposed Area	Proposed UxA	Target Area	Target UxA
Project Totals	116,106	12,759	116,104	12,733

The building complies with the Total Building Performance path and requirements of Section C407. Energy forms located on BE901 drawing are provided to show that the proposed Total UA of the proposed building is no more than 20 percent higher than the Allowed Total UA as defined in Section C402.1.5.

The proposed design is **0.2%** higher than the Allowed UA which is within allowed limits.

Project Title	EVERETT RIVERFRONT BUILDING 1-C - 2018 WSEC	Date	Jan 30, 2024
SHGC x A Calculation	NEW BUILDING - FULLY CONDITIONED		COMPLIES

Fenestration and Opaque Door Assemblies

			PROPOSED			TARGET		
Glazed Doors	Assembly ID	PF	Glazed Door SHGC	Rough Opening (SF)	SHGC x A	Glazed Door SHGC	Rough Opening (SF)	SHGC x A
Swinging entrance door	Metal Entrance door: 102B, 102C, 104A, 104B, 105A, 105B, 105C, 105D, 106B	PF < 0.2	0.35	552.0	193.2	0.35	552.0 (1)	193.2
Swinging entrance door	Metal Entrance door: 144B, 149B	PF < 0.2	0.35	64.0	22.4	0.35	64.0 (1)	22.4
Swinging entrance door	Metal Entrance door: 101A	PF < 0.2	0.35	42.0	14.7	0.46	42.0 (1)	19.3

Vertical Fenestration	Assembly ID	PF	Fenestration SHGC	Rough Opening (SF)	SHGC x A	Fenestration SHGC	Rough Opening (SF)	SHGC x A
Fixed - Class AW or site built	Metal Fixed: SF-1-SF-5, SF-7-SF11, SF-14-SF-19, SF-21-SF-38	PF < 0.2	0.35	5,665.0	1,982.8	0.35	5,665.0 (1)	1,982.8
All other fenestration types	Non-Metal, operable: A1, A2, B1L, B1R, B2L, B2R, B3L, B3R, B4L, B4R, B5L, B5R	PF < 0.2	0.35	14,687.0	5,140.5	0.35	14,687.0 (1)	5,140.5
All other fenestration types	Non-Metal, doors: 613, 397B, 313B, 314B, 407B, 413B, 414B, 507B, 513B, 514B, 607B, 614B, 615B	PF < 0.2	0.35	311.0	108.9	0.35	311.0 (1)	108.9
All other fenestration types	Non-Metal, fixed: D1, D2, D3	PF < 0.2	0.32	802.0	256.6	0.35	802.0 (1)	280.7
Fixed - Class AW or site built	Metal Fixed: SF-11, SF-13, SF-20-SF-22	PF < 0.2	0.35	1,429.0	500.2	0.46	1,425.0 (1)	657.1
All other fenestration types	Non-Metal, operable: A2, B1L, B1R, B5L, B5R	PF < 0.2	0.35	3,390.0	1,186.5	0.46	3,390.0 (1)	1,559.4

	Proposed Area	Proposed SHGC x A	Target Area	Target SHGC x A
Project Totals	53,884	19,831	53,884	19,929

2

EVERETT RIVERFRONT BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

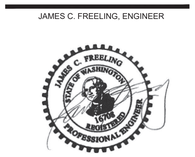
BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER



THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.095.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

BUILDING ENVELOPE ENERGY FORMS

BE901

Building Envelope Requirements List, pg 1 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

Project:
EVERETT RIVERFRONT BUILDING 1-C - 2018 WSEC
3710 Riverfront Blvd
Everett, WA 98203

Date: 2024-01-30

Applies	Code Section	Component	Compliance Information Required In Permit Documentation	Location in Documents	Building Department Notes
SCOPE					
NA	C103.1	Construction documents - General	For a tenant space (first build out) project, indicate if there is no envelope scope included in the project.		
NA	C103.1	Construction documents - General	For an alteration project, indicate if there is no envelope scope included in the project.		
NA	C402.1.1.1	Low energy spaces	Identify low energy spaces on plans, include calculations if applicable that demonstrate eligibility for envelope provisions exemption		
NA	C402.1.1.2	Semi-heated spaces	Identify semi-heated spaces on plans, include mechanical heating system type and calculations that demonstrate eligibility for wall insulation exemption		
NA	C402.1.1.3	Greenhouse spaces	Identify greenhouse spaces on plans; include non-opaque assembly information and mechanical heating system type if applicable, that demonstrates eligibility for envelope provisions exemption		
NA	C402.1.2	Equipment buildings	Provide building sf area, average wall and roof U-factor, installed electrical and mechanical equipment information and heating setpoint restriction, that demonstrates eligibility for envelope provisions exemption		
NA	C402.1.2.1	Standalone elevator hoistways	Provide building area, average wall and roof U-factor, installed mechanical equipment information and heating setpoint restriction, that demonstrates eligibility for envelope provisions exemption		
NA	C410.2	Walk-in cooler and freezer spaces	Identify walk-in cooler and freezer spaces on plans, including site assembled, site constructed and prefabricated units		
NA			Identify warehouse cooler and freezer spaces on plans		
YES	C101.4.1	Mixed residential & commercial building	Identify spaces with different occupancy requirements on plans	A101-A107	
NA	C503.2	Change of space conditioning alteration	Identify on plans existing unconditioned spaces changing to semi-heated or conditioned space, and existing semi-heated spaces changing to conditioned space; provide calculations for existing and final level of space conditioning		
NA	C505.1	Change of occupancy alteration	Identify on plans existing F, S and U occupancy spaces undergoing a change in occupancy and final occupancy type		

Building Envelope Requirements List, pg 2 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

NA			Group R spaces permitted before July 1, 2002 that are undergoing a change to a commercial occupancy shall be identified on plans		
NA			Commercial (non-Group R) occupancy spaces undergoing a change to Group R shall be identified on plans		
ENVELOPE PROVISIONS					
YES	C103.2 C103.6.3 C402.1.3 C402.1.4 C402.1.5	Compliance documentation	Indicate envelope thermal performance compliance path (prescriptive or component performance) and provide WSEC envelope compliance reports	BE800's	
YES			If complying via component performance, demonstrate that the Proposed Total UA is equal to or less than the Allowable Total UA	BE800's	
YES			If complying via total building performance, provide a list of all proposed envelope component types, areas and U-values	BE800's	
YES	C303.1.1 C303.1.2	Insulation identification	Indicate identification mark shall be applied to all insulation materials and insulation installed such that the mark is readily observable during inspection	A601, A602, A610 - A612, BE800's	
YES	C303.1.3 C402.4.3	Fenestration product rating	Indicate fenestration products shall be labeled with NFRC U-factor, SHGC, VT and leakage rating, or if products do not have an NFRC rating, indicate applicable Chapter 3 default values	A601-A603, BE900's	
YES NA	C303.1.1 C402.2.1	General insulation installation	Indicate installation methods, thicknesses, densities and clearances to achieve the intended R-value of all insulation materials Where two or more layers of rigid insulation will be used, indicate that edge joints between layers are staggered, or exception taken	A601, A602, A610 - A613, BE800's	
YES YES	C103.2 C402.2.1	Roof assembly insulation	Indicate R value(s) of cavity/continuous insulation on roof sections Indicate framing materials on roof sections	A601, BE800's A601, BE800's	
YES			Indicate method of framing for ceilings below vented attics and vaulted ceilings per A102.2 (std, adv)	A601, BE800's	
NA			Provide area weighted average U-factor calculation for insulation whose thickness varies by 1 inch or less		
NA			Indicate effective U-factors of tapered insulation entirely above deck per A102.2.6; include roof configuration and slope, maximum R-value at peak and minimum R-value at low point for all roof surfaces		
NA			Indicate R-values for thermal spacers and each insulation layer, and liner system (LS) method for metal building roofs		

Building Envelope Requirements List, pg 3 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

NA	C402.2.1.1	Skylight curb insulation	Indicate skylight curb insulation R-value on roof section; if not included in skylight NFRC rating		
NA	C402.2.1.2	Rooftop HVAC equipment curbs	Indicate rooftop HVAC equipment curb insulation R-value on roof section		
YES	C103.2 C402.2.3 C402.2.4 C303.2.1	Above/below grade wall insulation	Indicate R-value(s) of cavity/continuous insulation on wall sections	A610 – A613, BE800's	
YES			Indicate framing materials on wall sections	A610 – A613, BE800's	
YES			Indicate method of framing for wood construction per A103.2 (std, int, adv)	A610 – A613, BE800's	
YES			Indicate material density category, wall weight and heat capacity for qualifying mass walls	A610 – A613, BE800's	
YES			For qualifying ASTM C90 masonry walls, indicate loose fill core insulation material and percentage of cores filled including grouted cores, bond beams, vertical fills, headers and any other grouted cores	A610 – A613, BE800's	
YES			Indicate method of protection of exposed exterior basement/crawlspace wall insulation	A610 – A613, BE800's	
YES	C103.2 C402.4.4	Opaque doors	Indicate rated U-factor or R-value (non-swinging) on wall sections or in door schedules – applies to doors with less than 50% glazed area	A810-A812, BE800's	
NA	C402.4.4	Garage doors	Indicate rated U-factor for sectional and tilt-up garage doors on wall sections or in door schedules – applies to garage doors with less than 14% glazed area, all other garage doors shall comply as opaque doors		
YES	C402.2.5	Floor over outdoor or unconditioned space insulation	Indicate R-value(s) of cavity/continuous insulation on floor sections	A601, A602, BE800's	
YES			Indicate framing material on floor sections	A601, A602, BE800's	
YES			Indicate material density category and weight of qualifying mass floors	A601, A602, BE800's	
YES	C402.2.6 C303.2.1	Slab-on-grade floor insulation	Indicate R-value of continuous insulation on wall section or foundation detail	A601, A602, BE800's	
YES			Indicate insulation extends down vertically and/or horizontally the required distance from top of slab	A601, A602, BE800's	
YES			Indicate method of protection of exposed exterior slab edge insulation	A601, A602, BE800's	
NA			Indicate R-value of continuous insulation on wall section or foundation detail		
NA			Indicate insulation extends down vertically from top of slab and then horizontally under the entire slab		

Building Envelope Requirements List, pg 4 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

NA			Indicate method of protection of exposed exterior slab edge insulation		
NA	C402.2.8	Radiant heating system insulation	Indicate insulation R-value behind radiant panels, U-bend/headers and bottom surface of radiantly heated floors (other that heated slab-on-grade)		
YES	C402.4.1 C502.2.1	Vertical fenestration maximum area	Provide total gross sf area of all above grade wall elements and rough opening sf areas of all vertical fenestration elements in the building, for the prescriptive max allowed window-to-wall ratio (WWR) calculation in the WSEC envelope compliance reports; demonstrate compliance for each space conditioning category separately	BE900's	
NA	C402.4.1.1 C405.2.4.1 C502.2.1	Increased prescriptive maximum vertical fenestration area with daylight zones and controls	Provide calculations showing that not less that 50% of the total conditioned floor area is within a daylight zone; demonstrate compliance for each space conditioning category separately		
NA			Indicate in envelope plans that all lighting fixtures located within daylight zones shall be provided with daylight responsive controls per Section C405.2.4.1		
NA			Indicate that the VT of vertical fenestration is at least 1.1 times the rated SHGC or no less than VT-0.55, whichever is greater		
YES	C402.4.1.3 C502.2.1	Increased prescriptive maximum vertical fenestration area with high performance glazing	Indicate high performance U-factors and SHGC values in fenestration schedules	BE900's	
YES			Indicate if an area-weighted U-factor is used for multiple fenestration elements within the same fenestration category per Table C402.4; provide area-weighted U-factor calculation	BE900's	
NA	C402.1.5	Wall/vertical fenestration target area adjustment	Indicate if component performance with target area adjustment will be used to account for vertical fenestration area in excess of the prescriptive maximum allowed; include target area adjustment in WSEC envelope compliance reports		
NA	C402.4.1 C502.2.2	Skylight maximum area	Provide total gross sf area of roof, and rough opening sf area of all skylight elements in the building, for the prescriptive max allowed skylight-to-roof ratio (SRR) calculation in the WSEC envelope compliance reports; demonstrate compliance for each space conditioning category separately		
NA	C402.1.5.2	Roof/skylight target area adjustment	Indicate if component performance with target area adjustment will be used to account for skylight area in excess of the prescriptive maximum allowed; include target area adjustment in WSEC envelope compliance reports		

Building Envelope Requirements List, pg 5 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

YES	C402.4 C402.4.3.4 C303.1.3	U-factors, SHGC and VT for all fenestration assemblies	Indicate U-factors, SHGC and VT values in fenestration schedules	A801-A804, BE900's	
YES			Indicate if an area-weighted U-factor is used for multiple fenestration elements within the same fenestration category per Table C402.4; provide area-weighted U-factor calculation	BE900's	
YES			Indicate if values are NFRC or default; if default then specify frame type, glazing layers, gap width, low-e coatings, gas-fill	A801-A804, BE900's	
NA	C402.4.3	Permanent shading devices	For each group of windows with similar orientation and overhang or permanent projection geometry, provide projection factor calculations (Equation C4-6) for north and non north orientations		
NA	C402.4.2	Single story spaces requiring skylights	Provide list of enclosed, single story spaces that exceed 2,500 sf.; for each space identify the space use, floor area, floor to ceiling height, whether skylights are installed, and any exception taken		
NA			Provide calculations for percentage of conditioned floor area located within a toplit daylight zone; if exception is taken for spaces where the total floor area minus the sidelit zone area is less than 2,500 sf., include percentage of conditioned floor area located within a sidelit daylight zone in calculations		
NA			Provide calculations for percentage of skylight area in each space over 2,500 SF; OR		
NA			Provide calculations for skylight effective aperture (Equation C4-5) for each space over 2,500 SF		
NA			Indicate haze factor of skylight glazing material or diffuser		
NA	C410.2	Walk-in and warehouse cooler and freezer envelope	Indicate insulation R-value in cooler and freezer wall and ceiling assemblies		
NA			Indicate cooler and freezer door insulation R-value; indicate method of minimizing infiltration (strip doors, curtains, spring-hinged doors, etc); provide automatic door closure (or note exception taken)		
NA			For transparent reach-in doors and fixed windows, indicate number of glass panes (double or triple pane); identify whether the interstitial spaces between panes is filled with inert gas or if panes are heat-reflective treated glass		
ADDITIONAL EFFICIENCY CREDITS - ENHANCED ENVELOPE PERFORMANCE					

Building Envelope Requirements List, pg 6 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

NA	C406.10	Enhanced envelope performance	To comply with additional efficiency credit, demonstrate envelope thermal performance compliance via component performance; provide WSEC envelope compliance reports that demonstrate Proposed Total UA is 15% lower than the Allowable Total UA		
AIR LEAKAGE					
YES	C402.5.1.1	Air barrier construction and sealing	Identify location and provide diagram of continuous air barrier in plans and sections	BE800's	
YES			Provide details for all joints, transitions in materials, penetrations in air barrier and note method of sealing (caulked, gasketed, or other approved method)	BE800's	
NA	C402.5.3 C402.1.3 C402.1.4	Rooms containing fuel burning space conditioning appliances	For room(s) located within the conditioned space that contain non-direct vent fuel-burning appliances that require outdoor air for combustion, indicate method of isolation from the conditioned space; include sealing of walls, floor and ceiling of room, doorway gasketing and sealing around ductwork and piping penetrations		
NA			Indicate walls, floor and ceiling of the room envelope are insulated to the same level required for exterior envelope, and combustion air ductwork that passes thru conditioned space is insulated to at least R-8		
YES	C402.5.4	Doors and access openings to shafts, chutes, stairways and elevator lobbies	Indicate locations of all doors and access openings to shafts, chutes, stairways and elevator lobbies	A101-A107	
YES			Indicate method of sealing of these openings (gasketing, weatherstripping, other sealing method); or exception taken	A101-A107	
NA	C402.5.5 C403.7.8	Outdoor air intakes, exhausts and relief openings	Indicate locations of all stairway enclosure, elevator shaft and building pressurization relief openings, outside air intakes and exhaust openings		
NA			Note in envelope plans that all relief, outside air intake and exhaust openings shall be provided with dampers in accordance with Mechanical Section C403 7.8		
YES	C402.5.8	Recessed lighting in building envelope	Indicate method of sealing between light fixture housing and wall or ceiling	BE800's	
YES			Note in envelope plans that all recessed lighting fixtures shall be IC rated and have an air leakage rating not greater than 2 cfm per ASTM E283 test; include these requirements in lighting fixture schedules	BE800's	
NA	C402.5.6	Loading dock seals	Indicate weather seal at cargo and loading dock doors		

Building Envelope Requirements List, pg 7 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

YES	C402.5.7	Vestibules	Indicate locations and dimensions of vestibules for building entrances; also indicate vestibule information for exit-only doors in buildings where separate doors for entering and exiting are provided	A101	
NA			Indicate locations of all building entrances and exit-only doors provided with an air curtain in lieu of a vestibule		
YES			Indicate exception and criteria utilized for all building entrances and exit-only doors that do not have a vestibule or air curtain	BE800's	
YES			Indicate required performance for air curtains installed per Exception 7	BE800's	
NA			For unconditioned vestibules, indicate which envelope assembly (interior or exterior) complies with the requirements for a conditioned space		
YES	C103.2 C402.5.1.2C 402.5.1.2.1 R402.4.1.2	Building enclosure air leakage test	Indicate in project documents that building enclosure air leakage testing is required for WSEC compliance	BE800's	
YES			Provide area calculations that account for all six sides of the air barrier boundaries	BE800's	
NA			For commercial buildings, indicate that building enclosure air leakage testing shall be performed per ASTM C779 (or equivalent method approved by the code official) and the target leakage rate is 0.25 cfm/ft2 (1.5 L/s*m2) at 0.3 in. wg (75 Pa)		
YES			If the building is mixed residential / commercial and three stories or less above grade plane, indicate which building enclosure air leakage test procedure will be used for the Group R-2 / R-3 areas (Section R402.4.1.2 or C402.5.1.2); if per R402.4.1.2, indicate that the target leakage rate is 5 air changes per hour at 0.2 in. wg (50 Pa)	BE800's	
NA			Include the following requirements in project documents: (1) Submit building enclosure air leakage test reports to jurisdiction and owner; (2) If initial test result exceeds 0.25 cfm/ft2 (1.5 L/s*m2), indicate that inspection and all practical corrective actions be completed and documented in the air leakage test report; (3) If initial test result exceeds 0.40 cfm/ft2 (2.0 L/s*m2), indicate that corrective actions shall also include re-testing; (4) Indicate that corrective measures and retesting must be repeated until the test result is 0.40 cfm/ft2 (2.0 L/s*m2) or less; (4) Include air barrier test report in project close out documentation provided to building owner.		
ADDITIONAL EFFICIENCY CREDITS - REDUCED AIR INFILTRATION					

Building Envelope Requirements List, pg 8 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

NA	C406.9	Reduced air infiltration	To comply with additional efficiency credit, indicate in project documents that the building enclosure air leakage test results shall not exceed 0.17 cfm/ft2 at 0.3 in. wg (75 Pa), all documentation requirements per C103.2 and C402.5.1.2 apply		
ALTERATIONS					
NA	C503.1 C503.3.1	Roof alteration - insulation	For a roof alteration where existing ceiling cavities are exposed, indicate cavities are insulated to full depth at minimum nominal value of R-3.0 per inch		
NA			For a roof covering replacement where insulation is installed entirely above the roof deck, indicate insulation complies with requirements for new construction per Tables C402.1.3 or C402.1.4		
NA	C503.1	Wall and floor alteration - insulation	For a wall or floor alteration (floor over outdoor or unconditioned space) where existing envelope cavities are exposed, indicate cavities are insulated to full depth at minimum nominal value of R-3.0 per inch		
NA	C503.3.2	Addition of vertical fenestration	Where the addition of new vertical fenestration results in a window-to-wall ratio (WWR) exceeding the prescriptive maximum allowed per C402.4.1; demonstrate method of compliance (prescriptive vertical fenestration alternate, component performance with target area adjustment for the alteration area and existing-to-remain areas combined, or total building performance per C407); demonstrate for each space conditioning category separately		
NA	C503.3.3	Addition of skylights	Where the addition of new skylights results in a skylight-to-roof ratio (SRR) exceeding the prescriptive maximum allowed per C402.4.1; demonstrate method of compliance (component performance compliance with target area adjustment for the alteration area and existing-to-remain areas combined, or total building performance per C407); demonstrate for each space conditioning category separately		
NA	C103.2 C103.6.3 C503.2 C505.1	Change in space conditioning or occupancy compliance documentation	Indicate envelope alteration thermal performance compliance path (prescriptive or component performance with 1.0% allowance); provide WSEC envelope compliance reports		
NA	C103.2 C103.6.3 C503.2C 505.1	Change in space conditioning or occupancy compliance documentation	If complying via total building performance with 1.0% allowance, provide a list of all proposed envelope component types, areas and U-values		
PROJECT CLOSE OUT DOCUMENTATION					

Building Envelope Requirements List, pg 9 of 9

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 – Administered by ©2024 NEEA. All rights reserved

The following information is necessary to check a building permit application for compliance with the building envelope requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@wsenergycodes.com

YES	C103.6.3	Project close out documentation requirements	Indicate in plans that project close out documentation is required including applicable calculations, WSEC envelope compliance reports, and fenestration NFRC rating certificates	BE900's	
If "no" is selected for any question, provide explanation.					

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

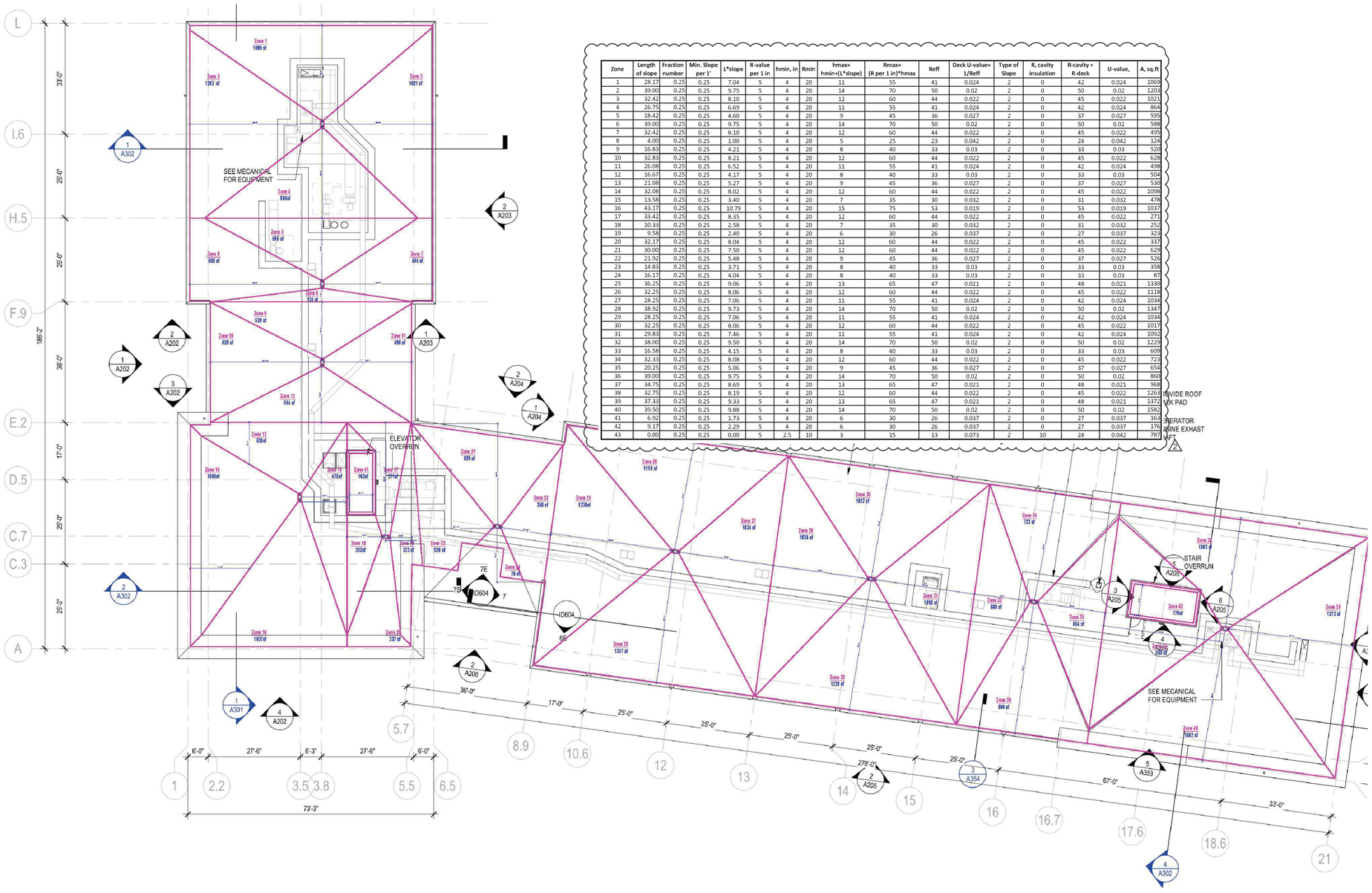
THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IS MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090.*

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

BUILDING ENVELOPE
ENERGY FORMS

BE902



Zone	Length of slope	Fraction number	Min. Slope per 1'	L*slope	R-value per 1 in	hmin, in	Rmin	hmax= hmin+(L*slope)	Rmax= (R per 1 in)*hmax	Reff	Deck U-value= 1/Reff	Type of Slope	R, cavity insulation	R-cavity + R-deck	U-value,	A, sq.ft
1	28.17	0.25	0.25	7.04	5	4	20	11	55	41	0.024	2	0	42	0.024	1069
2	39.00	0.25	0.25	9.75	5	4	20	14	70	50	0.02	2	0	50	0.02	1203
3	32.42	0.25	0.25	8.10	5	4	20	12	60	44	0.022	2	0	45	0.022	1021
4	26.75	0.25	0.25	6.69	5	4	20	11	55	41	0.024	2	0	42	0.024	864
5	18.42	0.25	0.25	4.60	5	4	20	9	45	36	0.027	2	0	37	0.027	595
6	39.00	0.25	0.25	9.75	5	4	20	14	70	50	0.02	2	0	50	0.02	588
7	32.42	0.25	0.25	8.10	5	4	20	12	60	44	0.022	2	0	45	0.022	495
8	4.00	0.25	0.25	1.00	5	4	20	5	25	23	0.042	2	0	24	0.042	124
9	16.83	0.25	0.25	4.21	5	4	20	8	40	33	0.03	2	0	33	0.03	520
10	32.83	0.25	0.25	8.21	5	4	20	12	60	44	0.022	2	0	45	0.022	628
11	26.08	0.25	0.25	6.52	5	4	20	11	55	41	0.024	2	0	42	0.024	498
12	16.67	0.25	0.25	4.17	5	4	20	8	40	33	0.03	2	0	33	0.03	504
13	21.08	0.25	0.25	5.27	5	4	20	9	45	36	0.027	2	0	37	0.027	530
14	32.08	0.25	0.25	8.02	5	4	20	12	60	44	0.022	2	0	45	0.022	1098
15	13.58	0.25	0.25	3.40	5	4	20	7	35	30	0.032	2	0	31	0.032	478
16	43.17	0.25	0.25	10.79	5	4	20	15	75	53	0.019	2	0	53	0.019	1037
17	33.42	0.25	0.25	8.35	5	4	20	12	60	44	0.022	2	0	45	0.022	271
18	10.33	0.25	0.25	2.58	5	4	20	7	35	30	0.032	2	0	31	0.032	252
19	9.58	0.25	0.25	2.40	5	4	20	6	30	26	0.037	2	0	27	0.037	323
20	32.17	0.25	0.25	8.04	5	4	20	12	60	44	0.022	2	0	45	0.022	337
21	30.00	0.25	0.25	7.50	5	4	20	12	60	44	0.022	2	0	45	0.022	629
22	21.92	0.25	0.25	5.48	5	4	20	9	45	36	0.027	2	0	37	0.027	526
23	14.83	0.25	0.25	3.71	5	4	20	8	40	33	0.03	2	0	33	0.03	358
24	16.17	0.25	0.25	4.04	5	4	20	8	40	33	0.03	2	0	33	0.03	87
25	36.25	0.25	0.25	9.06	5	4	20	13	65	47	0.021	2	0	48	0.021	1330
26	32.25	0.25	0.25	8.06	5	4	20	12	60	44	0.022	2	0	45	0.022	1118
27	28.25	0.25	0.25	7.06	5	4	20	11	55	41	0.024	2	0	42	0.024	1034
28	38.92	0.25	0.25	9.73	5	4	20	14	70	50	0.02	2	0	50	0.02	1347
29	28.25	0.25	0.25	7.06	5	4	20	11	55	41	0.024	2	0	42	0.024	1034
30	32.25	0.25	0.25	8.06	5	4	20	12	60	44	0.022	2	0	45	0.022	1017
31	29.83	0.25	0.25	7.46	5	4	20	11	55	41	0.024	2	0	42	0.024	1092
32	38.00	0.25	0.25	9.50	5	4	20	14	70	50	0.02	2	0	50	0.02	1229
33	16.58	0.25	0.25	4.15	5	4	20	8	40	33	0.03	2	0	33	0.03	609
34	32.33	0.25	0.25	8.08	5	4	20	12	60	44	0.022	2	0	45	0.022	723
35	20.25	0.25	0.25	5.06	5	4	20	9	45	36	0.027	2	0	37	0.027	654
36	39.00	0.25	0.25	9.75	5	4	20	14	70	50	0.02	2	0	50	0.02	860
37	34.75	0.25	0.25	8.69	5	4	20	13	65	47	0.021	2	0	48	0.021	968
38	32.75	0.25	0.25	8.19	5	4	20	12	60	44	0.022	2	0	45	0.022	1263
39	37.33	0.25	0.25	9.33	5	4	20	13	65	47	0.021	2	0	48	0.021	1372
40	39.50	0.25	0.25	9.88	5	4	20	14	70	50	0.02	2	0	50	0.02	1582
41	6.92	0.25	0.25	1.73	5	4	20	6	30	26	0.037	2	0	27	0.037	163
42	9.17	0.25	0.25	2.29	5	4	20	6	30	26	0.037	2	0	27	0.037	176
43	0.00	0.25	0.25	0.00	5	2.5	10	3	15	13	0.073	2	10	24	0.042	787

1 ROOF PLAN - OVERALL

PLAN VIEWS WERE TAKEN FROM ARCHITECTURAL SET DATED 01.25.2024 , THEY ARE DIAGRAMMATIC AND SHOULD NOT BE USED FOR MATERIAL TAKE-OFFS. FINAL BUILDING PLANS SHOULD BE VERIFIED.

EVERETT
RIVERFRONT
BUILDING 1-C
3710 Riverfront Blvd
Everett, WA 98203

BEE ENGINEERS
170 W DAYTON ST, SUITE 206
EDMONDS, WA 98020
PH: 425 672-3900
FAX: 425 712-8608

PERMIT

09/16/2022

KEY PLAN

JAMES C. FREELING, ENGINEER

THE UNDERSIGNED HAS PROVIDED BUILDING ENCLOSURE DOCUMENTS THAT IN MY PROFESSIONAL JUDGMENT ARE APPROPRIATE TO SATISFY THE REQUIREMENTS OF RCW 64.55.005 THROUGH 64.55.090."

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1903-1005
PM: DENIN DAZEY
DD: ERIC JONES
01/31/24

BUILDING ENVELOPE ENERGY FORMS

BE903

GENERAL NOTES

GENERAL NOTES - MECHANICAL

1. REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY).

2. ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED.

3. CODES: COMPLETE INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE PER THE APPLICABLE BUILDING, MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL AHJ.

4. PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL DUCTWORK, DAMPERS, EQUIPMENT, PIPING, ETC.
A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH STRUCTURAL.
B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND OTHER TRADES WORK.
C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL SYSTEM.
D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.

5. MECHANICAL CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITHIN THE STRUCTURE.

6. ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.

7. RATED PENETRATION: DUCT PENETRATIONS THROUGH RATED ENCLOSURES SHALL BE FIRE/SMOKE DAMPERED PER THE LATEST EDITION OF THE UNDERWRITERS LABORATORIES(UL) FIRE RESISTANCE WITH HOURLY RATINGS FOR THROUGH-PENETRATION FIRE STOPS SYSTEM VOLUME #2, OR SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S UL LISTINGS (3M OR EQUIVALENT). DETERMINE REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO BID.

8. EXHAUST OUTLETS: SOURCE-SPECIFIC FANS SHALL BE VENTED TO OUTDOORS WITH A MINIMUM 3' CLEARANCE BETWEEN VENT OUTLETS AND BUILDING OPENINGS, AND 10' MINIMUM BETWEEN VENT OUTLETS AND MECHANICAL AIR INTAKES.

9. ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP, ROOF CURB, ROOF DRAIN, AND VTR DETAILS.

10. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS.

11. PENETRATIONS: PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS.

12. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS.

13. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT.

14. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL LOAD.

15. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

COORDINATION REQUIREMENTS

1. PIPING: COORDINATE WITH STRUCTURAL FOR EXACT LOCATION OF ALL STRUCTURAL FRAMING AND FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL AND AT THE SITE PRIOR AND DURING THE CONSTRUCTION.

2. DUCTWORK: LOCATE AND COORDINATE THE EXACT LOCATION OF DUCTWORK WITH STRUCTURAL PLANS AND WITH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION OF ANY STRUCTURE OR EQUIPMENT. COORDINATE WITH FRAMING CONTRACTOR TO ASSURE JOIST SPACES LINE UP WHEN DUCTWORK MUST PASS THROUGH DIFFERENT JOIST SPACES.

3. ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL.

4. APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, ETC. CODES AND REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH HIS MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS REQUIRED TO MEET THESE REQUIREMENTS IN HIS BID.

5. FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL PIPING TO BE COORDINATED WITH OTHER TRADES.

6. FIREPLACES: COORDINATE WITH THE GENERAL CONTRACTOR TO DETERMINE GAS FIREPLACE FLUE AND COMBUSTION AIR DUCTWORK REQUIREMENTS PRIOR TO BIDDING.

PIPING NOTES

1. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.

2. REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.

3. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.

4. DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.

5. REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

6. CONDENSATE DRAIN: PROVIDE A P-TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.

INSULATION/LINING NOTES

1. ENERGY CODE: AS A MINIMUM, COMPLY WITH THICKNESSES AND TYPES LISTED IN ENERGY CODE ENFORCED BY AHJ.

2. EXTENT OF INTERNAL DUCT LINING:
A. GRILLE AND DIFFUSER BOXES AND BOOTS.
B. TRANSFER DUCTS.
C. THE FIRST 10 FEET OF SUPPLY AND RETURN DUCTWORK FROM THE AIR HANDLER.

3. EXTENT OF EXTERNAL DUCT INSULATION:
A. SUPPLY AND RETURN AIR IN UNCONDITIONED SPACES, MECHANICAL ROOMS, ELECTRICAL ROOMS, AND EQUIPMENT ROOMS NOT SPECIFIED TO BE INTERNALLY LINED.
B. SUPPLY AIR ABOVE CEILINGS OR EXPOSED NOT SPECIFIED TO BE INTERNALLY LINED.
C. OUTDOOR AIR INTAKE.

4. MISCELLANEOUS DUCT FITTINGS (CONICAL TAKEOFFS, ETC.): WRAP WITH INSULATION FOR CONDENSATION CONTROL.

PLAN NOTES

1. DUCTWORK SHALL BE METALLIC DUCTWORK

2. TEST AND BALANCE WORK SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY. PROVIDE (3) COPIES OF TEST AND BALANCE REPORT TO OWNER.

3. COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.

4. RESTROOM EXHAUST SHALL BE A MINIMUM OF 10' FROM ANY MECHANICAL OUTSIDE AIR INTAKES.

5. ROUTE DUCTWORK UNDERNEATH JOISTS UON.

6. TRANSITION DUCT UNDER BEAMS AND DUCTS. FIELD VERIFY AVAILABLE CEILING CAVITY DIMENSIONS.

7. COORDINATE MOUNTING HEIGHT OF DIFFUSERS WITH ARCHITECTURAL PLANS.

SHEET METAL NOTES

1. REFERENCE: SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, CURRENT EDITION.

2. CLEARANCE: COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.

3. ROUND ELBOWS AND OFFSETS: FULL RADIUS (R/D = 1.5), 5-PIECE SEGMENTED OR STAMPED. REFER TO SMACNA HVAC FIG 2-7, 3-3. DO NOT USE ANGLED OFFSET (TYPE 1). MITERED OFFSET (TYPE 2) MAY BE USED UP TO 30 DEGREE OFFSET ANGLE.

4. ROUND TEES AND LATERALS: CONICAL TEE PER SMACNA HVAC FIG 3-5; DO NOT USE STRAIGHT TEE; DO NOT USE CONICAL SADDLE TAP FOR EXPOSED DUCTWORK IN FINISHED SPACES. 90-DEGREE TEE WITH OVAL TO ROUND TAP, LATERAL, AND 45-DEGREE RECTANGULAR LEAD-IN PER SMACNA HVAC FIG 3-4.

5. RECTANGULAR ELBOWS AND OFFSETS: FULL RADIUS WHERE SPACE PERMITS, R/W = 1.5; OTHERWISE USE SQUARE CORNER ELBOW WITH TURNING VANES.

6. RECTANGULAR DIVIDED FLOW FITTINGS: USE GENERALLY, EXCEPT BRANCHES TO TERMINALS; SMACNA HVAC FIG 2-5, TYPES 1, 2, 4A, AND 4B. DO NOT USE TYPE 3.

7. TURNING VANES: H.E.P. MANUFACTURER OR APPROVED HIGH EFFICIENCY PROFILE AIRFOIL TYPE FOR RECTANGULAR SQUARE THROAT ELBOWS. ACOUSTICAL TYPE FOR RETURN AIR MITERED ELBOWS.

8. TAKEOFFS TO OPENINGS: CONICAL TYPE WITH VOLUME DAMPER FOR ROUND DUCT BRANCHES PER SMACNA HVAC FIG 2-6, MINIMUM INLET DIAMETER 2 INCHES LARGER THAN DUCT SIZE. 45 DEGREE ENTRY FITTING FOR RECTANGULAR DUCT BRANCHES PER SMACNA HVAC FIG 2-6.

9. FLEXIBLE CONNECTIONS: PROVIDE AT EACH DUCT CONNECTION TO FANS, PACKAGED HVAC EQUIPMENT, EXTERNALLY ISOLATED AIR HANDLING UNITS, FAN COIL UNITS, AND SIMILAR EQUIPMENT. EXCEPTION: EQUIPMENT IN CORRIDOR CEILING SPACES WHERE FIRE RATING IS REQUIRED.

HVAC NOTES

1. ATTACHMENTS: AIR DISTRIBUTION OUTLETS AND LOUVERS SHALL HAVE ALL REQUIRED ACCESSORIES AND ATTACHMENTS FOR A COMPLETE CONNECTION TO THE SPECIFIC TYPE OF STRUCTURE THAT THEY ARE BEING ATTACHED TO. THIS INCLUDES, BUT IS NOT LIMITED TO, EXTERIOR BRICKS, GWB WALLS, GWB CEILING, ETC.

2. SEISMIC: PROVIDE SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK PER SMACNA AND LOCAL REGULATIONS.

3. FILTER CLEARANCE: PROVIDE ADEQUATE CLEARANCE FOR CHANGING AIR FILTERS.

4. DUCTWORK AND PIPING OUTSIDE OF MECHANICAL ROOMS SHALL BE CONCEALED, COORDINATE WITH THE GENERAL CONTRACTOR TO FUR-OUT AS REQUIRED.

5. FIRE RATINGS: RATED FLOOR/CEILING JOINT SPACES HAVING DUCTWORK INSIDE THEM SHALL BE FIRE/SMOKE PROTECTED TO MAINTAIN THE 1-HOUR FLOOR/CEILING RATING PER LOCAL JURISDICTIONS. EXHAUST DUCTWORK PENETRATING THE 1-HOUR ROOF/CEILING OR FLOOR/CEILING ASSEMBLY SHALL HAVE ACCESSIBLE CEILING FIRE DAMPERS. ALTERNATIVELY, THE EXHAUST DUCTWORK SHALL BE ROUTED INSIDE A RATED SHAFT TO PROTECT THE CEILING/ROOF RATING PER THE LOCAL JURISDICTIONS.

6. FIRESTOP: PIPE, DUCT AND CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE AND SMOKE STOPPED PER CODE.

7. DUCTWORK: DUCTWORK SHALL BE SMOOTH SHEET METAL (CLASS-1). DUCTWORK THROUGH FIRE RATED STRUCTURE AND FLOOR SHALL BE MIN. 26 GA. STEEL. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 5'-0" UNLESS OTHERWISE NOTED ON DRAWINGS. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.

8. VOLUME DAMPERS: PROVIDE AN ACCESSIBLE MANUAL VOLUME DAMPER FOR EACH SUPPLY, RETURN, OSA AND EXHAUST OPENING, LOCATED AS FAR UPSTREAM AS POSSIBLE FROM THE OPENING. PROVIDE A MANUAL VOLUME DAMPER FOR BRANCH MAINS SERVING MORE THAN ONE OPENING. VOLUME DAMPERS IN NON-ACCESSIBLE CEILING SHALL HAVE A CONTROL ARM EXTENDED TO AN ACCESSIBLE LOCATION. PROVIDE "YOUNG" REGULATOR OR EQUAL, EXACT LOCATION OF CONTROL DEVICES VISIBLE IN FINISHED SPACES SHALL BE COORDINATED WITH THE ARCHITECT.

9. CORRIDOR THERMOSTAT: PROVIDE TAMPERPROOF THERMOSTATS IN CORRIDORS. DO NOT PROVIDE PLASTIC GUARDS TO MAKE THE THERMOSTATS TAMPERPROOF. PROVIDE BLANK SECURABLE THERMOSTAT COVERS.

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNIT PER HOUR
C	COMMON
CAP	CAPACITY
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING, COOLING
CO	CLEANOUT
COMB	COMBUSTION
CONT	CONTINUE, CONTROL
COP	COEFFICIENT OF PERFORMANCE
CWS	CHILLED/CONDENSER WATER SUPPLY
CWR	CHILLED/CONDENSER WATER RETURN
D	DIAMETER
DB	DRY BULB, DECIBEL
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
ELEC	ELECTRIC
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
EXT	EXTERIOR, EXTERNAL
F	FAHRENHEIT
FCU	FAN COIL UNIT
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE/SMOKE DAMPER
G	GAS
GAL	GALLONS
GPM	GALLONS PER MINUTE
GRD	GRILLES, REGISTERS, DIFFUSERS
GWB	GYPSUM WALLBOARD
HD	HEAD
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPU	HEAT PUMP UNIT
HRU	HEAT RECOVERY UNIT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HVU	HEATING & VENTILATION UNIT
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
ID	INDIRECT DRAIN, INSIDE DIAMETER
IN	INCH
KW	KILOWATT
L	LONG, LENGTH
LB	POUND
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MCA	MIN. CIRCUIT AMPACITY
MOCP	MAX. OVER CURRENT PROTECTION
MTD	MOUNTED
OSA	OUTDOOR AIR
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIMENSION OR DIAMETER
OPNG	OPENING
P	PUMP
PD	PRESSURE DROP, PUMPED DRAIN
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE IN GAUGE
RA	RETURN AIR
RD	ROOF DRAIN
REF	REFERENCE
RF	RELIEF FAN
RG	RETURN GRILLE
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SCH	SCHEDULE
SF	SUPPLY FAN, SQUARE FOOT
SENS	SENSIBLE
SG	SUPPLY GRILLE
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SO	SCREENED OPENING
SP	STATIC PRESSURE
SS	STAINLESS STEEL, SANITARY SEWER
SQ	SQUARE
TG	TRANSFER GRILLE
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VENT
VENT	VENTILATION, VENTILATOR
VTR	VENT THRU ROOF
W	WASTE, WATT, WIDE
WB	WET BULB (TEMPERATURE)

SYMBOLS

EQUIPMENT	
EF-1	TYPICAL EQUIPMENT DESIGNATION (EXHAUST FAN SHOWN)
DSD	DUCT SMOKE DETECTOR
T	ROOM THERMOSTAT OR TEMPERATURE TRANSMITTER
H	ROOM HUMIDISTAT OR HUMIDITY TRANSMITTER
CO	CARBON MONOXIDE SENSOR
SD	SMOKE DETECTOR
TERMINALS	
CD-12x12 400 OR CD-1 400	DIFFUSER/GRILLE TYPE, AND NUMBER OR SIZE DESIGN CFM (WHERE APPLICABLE)
	CEILING DIFFUSER (FLOW ARROWS SHOWN FOR NON SYMMETRICAL AIRFLOW)
	CEILING RETURN/EXHAUST GRILLE
	LINEAR DIFFUSER, CEILING OR WALL MOUNTED (FLOW ARROWS SHOWN FOR NON SYMMETRICAL AIRFLOW)
	WALL SUPPLY GRILLE (SG)
	WALL RETURN/EXHAUST GRILLE (RG, EG)
50	TRANSFER GRILLE (TG), DUCT CONNECTED, WALL MOUNTED W/ OPTIONAL CFM SHOWN
	TRANSFER GRILLE, CEILING MOUNTED WITH FULL-SIZED LINED DUCT CONNECTION
PIPING	
CD	CONDENSATE DRAINAGE
G	NATURAL GAS - STD. PRESSURE
MPG	NATURAL GAS - MEDIUM PRESSURE
	PIPE CAP
	PIPE PLUG
	UNION
	FLANGE
	GATE VALVE OR BALL VALVE
	BALL VALVE
	PRESSURE REDUCING VALVE (PRV)
	BREAK IN PIPING OR DUCTWORK
RL	RAIN LEADER (RL)
OL	OVERFLOW RAIN LEADER (OL)
	CHECK VALVE

DUCTWORK	
18x12	DUCT (1ST FIGURE = SIDE SHOWN, 2ND FIGURE = SIDE NOT SHOWN)
UP DOWN	DUCT SECTION, POSITIVE PRESSURE
UP DOWN	DUCT SECTION, NEGATIVE PRESSURE
UP DOWN	ROUND DUCT SECTION
UP UP UP	DUCT PENETRATION THRU FLOOR OR ROOF
	VOLUME DAMPER
FSD FSD	FIRE/SMOKE DAMPER (--< = HORIZ DUCT, --<> = VERT DUCT), 2-HR RATED, UON
FD FD	FIRE DAMPER (--< = HORIZ DUCT, --<> = VERT DUCT), 2-HR RATED, UON
	90° ELBOW, R/D OR R/W=1.5
	SQUARE CORNER ELBOW WITH TURNING VANES
	90° TAKE-OFF OR TEE
	90° CONICAL TAKE-OFF
	45° LATERAL TAKE-OFF
	TRANSITION OR REDUCER (FOT = FLAT ON TOP, FOB = FLAT ON BOTTOM)
	WYE FITTING
	90° RECTANGULAR TAKE-OFF WITH 45° TAPER
	90° DIVERGING RECTANGULAR TEE, EITHER RADIUS OR TURNING VANES
	PARALLEL FLOW BRANCH CONNECTION, EITHER RADIUS OR TURNING VANES
	FLEXIBLE DUCT
	ROUND DUCT INDICATOR

SHEET INDEX

DWG	DESCRIPTION	BUILDING PERMIT SET 03/25/22	BUILDING PERMIT RESUBMITTAL 09/16/22	PERMIT REVISIONS 2 01/31/24			
		INCLUDED IN SET					
M0.00	LEGEND, GENERAL NOTES, & DRAWING INDEX	X	X	X			
M0.01	PROJECT NOTES & TABLES	X	X	X			
M0.02	VENTILATION CALCULATIONS	X	X	X			
M0.03	MECHANICAL SCHEDULES	X	X	X			
M2.01N	LEVEL 1 FLOOR PLAN - NORTH	X	X	X			
M2.01S	LEVEL 1 FLOOR PLAN - SOUTH	X	X	X			
M2.02N	LEVEL 2 FLOOR PLAN - NORTH	X	X	X			
M2.02S	LEVEL 2 FLOOR PLAN - SOUTH	X	X	X			
M2.03N	LEVEL 3 FLOOR PLAN - NORTH	X	X	X			
M2.03S	LEVEL 3 FLOOR PLAN - SOUTH	X	X	X			
M2.04N	LEVEL 4 FLOOR PLAN - NORTH	X	X	X			
M2.04S	LEVEL 4 FLOOR PLAN - SOUTH	X	X	X			
M2.05N	LEVEL 5 FLOOR PLAN - NORTH	X	X	X			
M2.05S	LEVEL 5 FLOOR PLAN - SOUTH	X	X	X			
M2.06N	LEVEL 6 FLOOR PLAN - NORTH	X	X	X			
M2.06S	LEVEL 6 FLOOR PLAN - SOUTH	X	X	X			
M2.07N	ROOF PLAN - NORTH	X	X	X			
M2.07S	ROOF PLAN - SOUTH	X	X	X			
M3.00	ENLARGED HVAC UNIT PLAN - B01	X	X	X			
M3.01	ENLARGED HVAC UNIT PLAN - B02	X	X	X			
M3.02	ENLARGED HVAC UNIT PLAN - B03 TYPE A	X	X	X			
M3.03	ENLARGED HVAC UNIT PLAN - C01	X	X	X			
M3.04	ENLARGED HVAC UNIT PLAN - C02	X	X	X			
M3.05	ENLARGED HVAC UNIT PLAN - C03 TYPE A	X	X	X			
M3.06	ENLARGED HVAC UNIT PLAN - C05			X			
M3.07	ENLARGED HVAC UNIT PLAN - C04	X	X	X			
M3.08	ENLARGED HVAC UNIT PLAN - D01	X	X	X			
M3.09	ENLARGED HVAC UNIT PLAN - D02	X	X	X			
M3.10	ENLARGED HVAC UNIT PLAN - D03	X	X	X			
M3.11	ENLARGED HVAC UNIT PLAN - D04 TYPE A	X	X	X			
M3.12	ENLARGED HVAC PLAN - SOUTH BACK-OF-HOUSE SPACES	X	X	X			
M3.13	ENLARGED HVAC PLAN - SOUTH LOBBY	X	X	X			
M3.14	ENLARGED HVAC PLAN - CLUBROOM			X			
M4.00	MECHANICAL DETAILS	X	X	X			
M4.01	MECHANICAL DETAILS	X	X	X			
M5.00	VRF RISER DIAGRAM	X	X	X			
M7.00	WSEC FORMS	X	X	X			
M7.01	WSEC FORMS	X	X	X			
M7.02	WSEC FORMS	X	X	X			
M7.03	WSEC FORMS	X	X	X			
M7.04	WSEC FORMS	X	X	X			
M8.00	LOAD CALCULATIONS	X	X	X			
M8.01	LOAD CALCULATIONS	X	X	X			
M8.02	LOAD CALCULATIONS	X	X				

APPLICABLE CODES

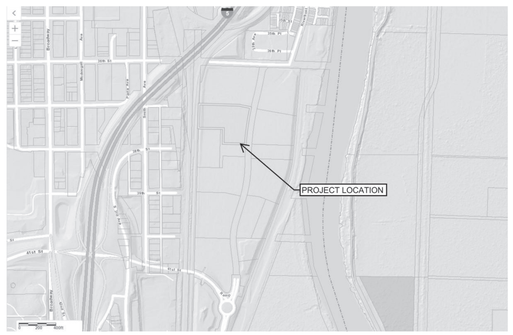
2018 WASHINGTON STATE BUILDING CODE
2018 WASHINGTON STATE FIRE CODE
2018 WASHINGTON STATE MECHANICAL CODE
2018 WASHINGTON STATE PLUMBING CODE
2018 WASHINGTON STATE ENERGY CODE - COMMERCIAL
2020 NATIONAL ELECTRIC CODE

CONTRACTOR SUBSTITUTIONS & REVISIONS

CONTRACTOR SUBSTITUTIONS & REVISIONS: PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

VICINITY MAP:



ACCESSOR'S PARCEL NO:
00576001800001

PROJECT DESCRIPTION:
SEVEN STORY MIXED-USE DEVELOPMENT. THE THIRD OF EIGHT MIXED-USE BUILDINGS FRONTING RIVERFRONT BOULEVARD. OTHER COMMERCIAL BUILDINGS TO BE DEVELOPED ON THIS SITE.

ADDRESS:
3710 RIVERFRONT BLVD
EVERETT, WA 98201

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2069643343
CONTACT: PETER ROCKSTEAD

REED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

COVER SHEET, LEGEND & DRAWING INDEX

M0.00

2/2/2024 3:05:03 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

SEQUENCE OF OPERATION

SPLIT SYSTEM & VRF HEAT PUMPS
UNOCCUPIED MODE:
SUPPLY FAN: OFF
HEAT PUMP HEATING: OFF
HEAT PUMP COOLING: OFF
NIGHT SETBACK: CYCLE TO MAINTAIN NIGHT SETBACK SETPOINT.
OCCUPIED MODE:
SUPPLY FAN: ON CONTINUOUSLY
HEAT PUMP HEATING: CYCLED IN SEQUENCE TO MAINTAIN HEATING SETPOINT.
HEAT PUMP COOLING: CYCLED IN SEQUENCE TO MAINTAIN COOLING SETPOINT.
LOW LIMIT: MIXED AIR LOW LIMIT, 55 F.

CORRIDOR VENTILATION UNITS: DOAS-1, DOAS-2
DESCRIPTION:
SINGLE ZONE ROOFTOP PACKAGE UNIT, HEAT PUMP HEATING & COOLING, OUTSIDE AIR AND EXHAUST WITH ENERGY RECOVERY WHEEL AND AIR ECONOMIZER.
OPERATION:
DOAS-1 AND DOAS-2 SHALL OPERATE CONTINUOUSLY 24/7. HEATING AND COOLING SHALL BE CYCLED IN SEQUENCE TO MAINTAIN TEMPERATURE SETPOINTS.

EXHAUST FANS:
TRASH ROOMS EXHAUST FAN: RUNS CONTINUOUSLY 24/7.

ENERGY RECOVERY VENTILATORS:
RESIDENTIAL:
RESIDENTIAL ERVS TO RUN CONTINUOUSLY 24/7 AT LOW SPEED. HIGH SPEED ACTIVATED BY 20/40/60-MINUTE TIMER SWITCH IN ANY BATHROOM. MANUAL ON/OFF CONTROLS PROVIDED TO TURN UNIT OFF DURING PERIODS OF POOR OUTDOOR AIR QUALITY.

L6 AMENITY:
ERV-6-1 TO RUN CONTINUOUSLY AT SPEED INDICATED IN SCHEDULE DURING OCCUPIED HOURS WITH MOTORIZED DAMPERS OPEN.
WHEN AMENITY SPACE IS NOT OCCUPIED, ERV TURNS OFF AND MOTORIZED DAMPERS CLOSE.

LEVEL 1:
ERV UNITS ON LEVEL 1 SHALL RUN CONTINUOUSLY 24/7 AT SPEED INDICATED IN SCHEDULE TO PROVIDE 1 AIR CHANGE PER HOUR OF CONTINUOUS VENTILATION.
UPON ACTIVATION OF METHANE ALARM SYSTEM AT 1,000 PPM OF METHANE, ANY INSTRUCTIONS FROM CONTROLS ARE TO BE OVERRIDDEN AND ALL LEVEL 1 ERV UNITS SHALL RUN AT MAXIMUM SPEED.

INCREASED-VENTILATION FANS: IVF-1-X
INCREASED VENTILATION FANS SHALL ACTIVATE AND RUN CONTINUOUSLY AT 'INCREASED' SPEED INDICATED IN SCHEDULE TO PROVIDE INCREASE IN VENTILATION AIRFLOW TO 2 AIR CHANGES PER HOUR UPON ACTIVATION OF METHANE ALARM SYSTEM AT 1,000 PPM OF METHANE.

SUPPLY FANS:
SUPPLY FANS SERVING LEVEL 1 SPACES: SF-X-X
FANS SHALL RUN CONTINUOUSLY 24/7 AT 'NORMAL' AIRFLOW RATE INDICATED IN SCHEDULE TO PROVIDE 1 AIR CHANGE PER HOUR OF CONTINUOUS VENTILATION.
FANS SHALL ACTIVATE AND RUN CONTINUOUSLY AT 'INCREASED' SPEED INDICATED IN SCHEDULE TO PROVIDE INCREASE IN VENTILATION AIRFLOW TO 2 AIR CHANGES PER HOUR UPON ACTIVATION OF METHANE ALARM SYSTEM AT 1,000 PPM OF METHANE.

WA STATE ENERGY CODE (2018)

1. WHERE USED TO CONTROL BOTH HEATING AND COOLING, HVAC THERMOSTATS SHALL BE SET TO MAINTAIN A MINIMUM DEADBAND OF 5°F IN AREAS SERVED AS REQUIRED PER WSEC C403.4.1.2, WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

2. MOTORIZED DAMPERS: PER WSEC C403.7.8 PROVIDE CLASS I MOTORIZED DAMPERS ON ALL OUTSIDE AIR INTAKES, EXHAUST OUTLETS, RELIEF OUTLETS AND STAIRWAY AND ELEVATOR HOISTWAY SHAFT VENTS, WHICH CLOSE AUTOMATICALLY WHEN THE SYSTEM IS OFF. RETURN AIR OPENINGS USED FOR AIRSIDE ECONOMIZER OPERATION SHALL BE EQUIPPED WITH MOTORIZED DAMPERS.

EXCEPTIONS:
GRAVITY DAMPERS IN GROUP R OCCUPANCIES ARE PERMITTED WHERE THE DESIGN OUTDOOR AIR INTAKE OR EXHAUST CAPACITY DOES NOT EXCEED 400 CFM.

2.1. PER WSEC C403.7.8.4, FOR ELEVATOR AND STAIR SHAFTS, PROVIDE MOTORIZED DAMPERS THAT ARE POWERED CLOSED AND FAIL OPEN IN THE RELAXED POSITION. (ELEVATOR AND STAIR SHAFT DAMPERS SHALL BE TIED TO THE FIRE ALARM SYSTEM).

3. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED PER REQUIREMENTS IN WSEC C403.10.2.

4. PER WSEC C403.10.3, ALL PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE C403.10.3.
4.1. FACTORY-INSTALLED PIPING WITHIN HVAC EQUIPMENT TESTED AND RATED IN ACCORDANCE WITH A TEST PROCEDURE REFERENCED BY WSEC.
4.2. FACTORY-INSTALLED PIPING WITHIN ROOM FAN-COILS AND UNIT VENTILATORS TESTED AND RATED ACCORDING TO AHRI 440 (EXCEPT THAT THE SAMPLING AND VARIATION PROVISIONS OF SECTION 6.5 SHALL NOT APPLY) AND 840, RESPECIVELY.
4.3. PIPING THAT CONVEYS FLUIDS THAT HAVE A DESIGN OPERATING TEMPERATURE RANGE BETWEEN 60°F AND 105°F.
4.4. PIPING THAT CONVEYS FLUIDS THAT HAVE NOT BEEN HEATED OR COOLED THROUGH THE USE OF FOSSIL FUELS OR ELECTRIC POWER.
4.5. STRAINERS, CONTROL VALVES, AND BALANCING VALVES ASSOCIATED WITH PIPING 1 INCH OR LESS IN DIAMETER
4.6. DIRECT BURIED PIPING THAT CONVEYS FLUIDS AT OR BELOW 60° F

5. PER TABLE C403.10.3 WSEC, ALL HEATING AND COOLING SYSTEM HOT WATER PIPING CONVEYING FLUID BELOW 140°F SHALL BE INSULATED AS FOLLOWS:
5.1. PIPE DIAMETERS 1" OR LESS: 1" THICKNESS.
5.2. PIPE DIAMETERS 1" TO 11/2": 1" THICKNESS.
5.3. PIPE DIAMETERS 11/2" OR GREATER: 11/2" THICKNESS.
5.4. INSULATION CONDUCTIVITY RANGE 0.21-0.28 BTU"IN/(H*FT2/°*F)

SMOKE CONTROL NOTES

1. THE SMOKE CONTROL SYSTEM WILL BE INSPECTED BY A THIRD PARTY AGENCY. CONTRACTOR IS TO SUPPORT ALL SMOKE CONTROL TESTING WITH THIS FIRM.

2. MECHANICAL CONTRACTOR TO RETAIN A NEBB CERTIFIED BALANCING FIRM EXPERIENCED IN SMOKE CONTROL SYSTEMS FOR BALANCING / FINAL BALANCING / ADJUSTMENTS TO MEET REQUIREMENTS AS LISTED BY CODE AND BY THE THIRD PARTY SMOKE CONTROL AGENCY. CERTIFIED BALANCING REPORTS OF THE SMOKE CONTROL SYSTEM ARE TO BE PROVIDED TO THE THIRD PARTY SMOKE CONTROL AGENCY. CONTRACTOR TO SUPPORT ALL TESTING AND INSPECTIONS WORK AS REQUIRED.

3. PER WSBC 1010.1.3, FIRE DOOR LATCHES SHALL RELEASE WHEN SUBJECTED TO 15-LBS FORCE. THE FIRE DOOR SHALL BE SET IN MOTION WHEN SUBJECTED TO A 30-LBS FORCE. THE DOOR SHALL SWING TO A FULL-OPEN POSITION WHEN SUBJECTED TO A 15-LBS FORCE.

4. SMOKE DETECTION SYSTEM CONTROL SHALL COMPLY WITH WSMC 606
4.1. PER WSMC 606.1, DUCT SMOKE DETECTOR SHALL COMPLY WITH UL 268A.
4.2. PER WSMC 606.1, OTHER SMOKE DETECTOR SHALL COMPLY WITH UL 268.
4.3. PER WSMC 606.2.1, SMOKE DETECTOR SHALL BE INSTALLED IN RETURN AIR SYSTEM WITH DESIGN CAPACITY GREATER THAN 2,000 CFM.
4.4. PER WSMC 606.2.2, WHERE MULTIPLE AIR-HANDLER SYSTEM SHARE COMMON DUCT OR PLENUM WITH COMBINED DESIGN CAPACITY GREATER THAN 2,000 CFM SHALL BE INSTALLED SMOKE DETECTOR IN RETURN AIR SYSTEM.

5. STAIR PRESSURIZATION AND ELEVATOR PRESSURIZATION SYSTEM SHALL COMPLY WITH WSBC 909.

6. PER WSBC 909.4.6, SMOKE CONTROL SYSTEM SHALL BE CAPABLE OF CONTINUED OPERATION AFTER DETECTION OF THE FIRE EVENT FOR PERIOD OF NOT LESS THAN EITHER 20 MINUTES OR 1.5 TIMES THE CALCULATED EGRESS TIME, WHICHEVER IS GREATER.

7. PER WSBC 909.10.2, DUCTS SHALL BE LEAK TESTED TO 1.5 TIMES THE MAXIMUM DESIGN PRESSURE IN ACCORDANCE TO INDUSTRY STANDARD. MEASURED LEAKAGE SHALL NOT EXCEED 5% OF DESIGN FLOW.

8. PER WSBC 909.10.5, BELT-DRIVEN FANS SHALL HAVE 1.5 TIMES THE NUMBER OF BELTS REQUIRED FOR THE DESIGN DUTY, WITH THE MINIMUM NUMBER OF BELTS BEING TWO.

9. PER WSBC 909.10.5, MOTORS DRIVING FANS SHALL NOT BE OPERATED BEYOND THEIR NAMEPLATE HP AND SHALL HAVE A MINIMUM SERVICE FACTOR OF 1.15.

10. PER WSBC 909.11, SMOKE CONTROL SYSTEM SHALL BE PROVIDED WITH STANDBY POWER PER WSBC 2702.

11. PER WSBC 909.11.1, STANDBY POWER SOURCE AND TRANSFER SWITCH ROOM SHALL BE VENTILATED DIRECTLY TO AND FROM THE EXTERIOR. THE INTENT OF THIS VENTILATION IS FOCUSED ON THE PROPER FUNCTION OF THE STANDBY POWER SOURCE IN TERMS OF ENGINE-DRIVEN GENERATORS HAVING APPROPRIATE COOLING AIR AND COMBUSTION AIR PER IBC CODE COMMENTARY.

12. PER WSBC 909.12, FIRE DETECTION AND SMOKE CONTROL SYSTEM SHALL COMPLY WITH UL 864 AND LISTED AS SMOKE CONTROL EQUIPMENT.

13. PER WSBC 909.16, THE FIREFIGHTER'S SMOKE CONTROL PANEL SHALL BE PROVIDED ADJACENT TO THE FIRE ALARM ANNUNCIATION AND CONTROL PANEL FOR MANUAL CONTROL OR OVERRIDE OF AUTOMATIC CONTROL FOR THE SMOKE CONTROL SYSTEM.

14. ACCEPTANCE TESTING PER WSBC 909.18 AND AS REQUIRED BY THIRD PARTY SMOKE CONTROL AGENCY.

15. SMOKEPROOF ENCLOSURES FOR MECHANICAL VENTILATION
15.1. PER WSBC 909.20.4.2, VESTIBULE VENTILATION SHALL SUPPLIED WITH NOT LESS THAN ONE AIR CHANGE PER MIN AND EXHAUST NOT LESS THAN 150% OF SUPPLY. SUPPLY SHALL BE BE WITHIN 6 INCHES. EXHAUST GRILL SHALL BE LOCATED AT THE TOP OF THE SMOKE TRAP BUT NOT MORE THAN 6 INCHES DOWN FROM THE TOP OF THE TRAP.
15.2. PER WSBC 909.20.4.4, STAIRWAY AND RAMP SHAFT SHALL BE PROVIDED WITH DAMPER RELIEF OPENING AND SUPPLIED WITH SUFFICIENT AIR TO MAINTAIN A MINIMUM POSITIVE PRESSURE OF 0.10 INCH OF WATER IN THE SHAFT RELATIVE TO THE VESTIBULE WITH ALL DOORS CLOSED. FAN SYSTEM SHALL BE EQUIPPED WITH VFD (BASIS OF DESIGN ABB ACH 580) TO BALANCE OR MODULATE THE AIRFLOW.
15.3. PER 909.20.6.2, PRESSURIZATION SYSTEM SHALL BE PROVIDED WITH STANDBY POWER IN ACCORDANCE WITH SECTION 2702.
15.4. PER 909.20.6.3, BEFORE MECHANICAL EQUIPMENT IN APPROVED, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF THE BUILDING OFFICIAL TO CONFIRM THAT THE SYSTEM IS OPERATING IN COMPLIANCE.

16. ELEVATOR HOISTWAY PRESSURIZATION
16.1. PER WSBC 909.21, MAINTAIN MINIMUM POSITIVE PRESSURE OF 0.10 INCH OF WATER AND NOT MORE THAN 0.25 INCHES OF WATER RELATIVE TO ADJACENT OCCUPIED SPACES ON ALL FLOORS EXCEPT THE FLOOR OF RECALL WHICH HAS ITS ELEVATOR DOORS OPEN. FAN SYSTEM SHALL BE EQUIPPED WITH VFD (BASIS OF DESIGN ABB ACH 580) TO BALANCE OR MODULATE THE AIRFLOW.
16.2. PER 909.21.5, PRESSURIZATION SYSTEM SHALL BE PROVIDED WITH STANDBY POWER IN ACCORDANCE WITH SECTION 2702.
16.3. MECHANICAL CONTRACTOR SHALL COORDINATE PENETRATION OF ELEVATOR PRESSURIZATION FAN IN THE FIELD TO ENSURE THE CONDITIONS OF THE SYSTEM INTO THE ELEVATOR HOISTWAY IS NOT OBSTRUCTED BY ELEVATOR STEEL, CANNOT BE OBSTRUCTED BY ELEVATOR CAR, AND DOES NOT DISCHARGE AIR DIRECTLY AT ELEVATOR DOORS.

17. STAIRWAY AND RAMP PRESSURIZATION
17.1. PER WSBC 909.20.5, BUILDING EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, VESTIBULE IS NOT REQUIRED, MAINTAIN MINIMUM POSITIVE PRESSURE OF 0.10 INCH OF WATER AND NOT MORE THAN 0.35 INCHES OF WATER. FAN SYSTEM SHALL BE EQUIPPED WITH VFD (BASIS OF DESIGN ABB ACH 580) TO BALANCE OR MODULATE THE AIRFLOW
17.2. PER 909.20.6.2, PRESSURIZATION SYSTEM SHALL BE PROVIDED WITH STANDBY POWER IN ACCORDANCE WITH SECTION 2702.
17.3. PER 909.20.6.3, BEFORE MECHANICAL EQUIPMENT IS APPROVED, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF THE BUILDING OFFICIAL TO CONFIRM THAT THE SYSTEM IS OPERATING IN COMPLIANCE.

18. SEQUENCE OF OPERATION
18.1. PRESSURIZATION FANS: ACTIVATED BY MANUAL CONTROLS AT FIREFIGHTER'S SMOKE CONTROL PANEL OR BY TRANSMISSION OF SIGNAL FROM SPRINKLER WATERFLOW SWITCH OR ALARM-INITIATING SMOKE DETECTOR (OTHER THAN RESIDENTIAL UNIT SMOKE DETECTOR, WHICH ACTIVATES LOCAL ALARM ONLY).

COMMISSIONING REQUIREMENTS - 2018 WSEC

BUILDING MECHANICAL SYSTEMS SHALL BE COMMISSIONED UNDER WSEC 2018 - SECTION C408

C408.1.1 COMMISSIONING IN CONSTRUCTION DOCUMENTS.
CONSTRUCTION DOCUMENTS SHALL CLEARLY INDICATE PROVISIONS FOR COMMISSIONING PROCESS. THE CONSTRUCTION DOCUMENTS SHALL MINIMALLY INCLUDE THE FOLLOWING:

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING THE COMMISSIONING PROCESS. AT A MINIMUM, THE COMMISSIONING PROCESS IS REQUIRED TO INCLUDE:
1.1. DEVELOPMENT AND EXECUTION OF THE COMMISSIONING PLAN, INCLUDING ALL SUBSECTIONS OF SECTION C408.1.2;
1.2. THE CERTIFIED COMMISSIONING PROFESSIONAL'S REVIEW OF THE BUILDING DOCUMENTATION AND CLOSE OUT SUBMITTALS IN ACCORDANCE WITH SECTION C103.6; AND
1.3. THE COMMISSIONING REPORT IN ACCORDANCE WITH SECTION C408.1.3.
2. ROLES, RESPONSIBILITIES, AND REQUIRED QUALIFICATIONS OF THE CERTIFIED COMMISSIONING PROFESSIONAL.
3. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES, OR SYSTEMS TO BE TESTED.

C408.1.2 COMMISSIONING PLAN. A COMMISSIONING PLAN SHALL BE DEVELOPED BY THE PROJECT'S CERTIFIED COMMISSIONING PROFESSIONAL AND SHALL OUTLINE THE ORGANIZATION, SCHEDULE, ALLOCATION OF RESOURCES, AND DOCUMENTATION REQUIREMENTS OF THE COMMISSIONING PROCESS.
1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES, SYSTEMS TESTING AND BALANCING, FUNCTIONAL PERFORMANCE TESTING, AND VERIFICATION OF THE BUILDING DOCUMENTATION REQUIREMENTS IN SECTION C103.6
2. ROLES AND RESPONSIBILITIES OF THE COMMISSIONING TEAM, INCLUDING THE NAME AND STATEMENT OF QUALIFICATIONS OF THE CERTIFIED COMMISSIONING PROFESSIONAL.
3. A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.

C408.1.3 FINAL COMMISSIONING REPORT. A COMMISSIONING REPORT SHALL BE COMPLETED AND CERTIFIED BY THE CERTIFIED COMMISSIONING PROFESSIONAL AND DELIVERED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL SERVICE WATER HEATING, CONTROLLED RECEPTACLE AND LIGHTING CONTROL SYSTEMS, ENERGY METERING, AND REFRIGERATION FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL RECORD THE ACTIVITIES AND RESULTS OF THE COMMISSIONING PROCESS AND BE DEVELOPED FROM THE FINAL COMMISSIONING PLAN WITH ALL OF ITS ATTACHED APPENDICES. THE REPORT SHALL INCLUDE:
1. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
2. DISPOSITION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.
3. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE, PROVIDED HEREIN FOR REPEATABILITY.
4. COMMISSIONING PLAN
5. TESTING, ADJUSTING AND BALANCING REPORT.

EXCEPTION: DEFERRED TESTS WHICH CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION DUE TO CLIMATIC CONDITIONS.

C408.1.4 COMMISSIONING PROCESS COMPLETION REQUIREMENTS. PRIOR TO THE FINAL MECHANICAL, PLUMBING AND ELECTRICAL INSPECTIONS OR OBTAINING A CERTIFICATE OF OCCUPANCY, THE CERTIFIED COMMISSIONING PROFESSIONAL SHALL PROVIDE EVIDENCE OF BUILDING COMMISSIONING IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION.

C408.1.4.1 COMMISSIONING COMPLIANCE. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C104.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED A LETTER OF TRANSMITTAL FROM THE BUILDING OWNER ACKNOWLEDGING THAT THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT HAS RECEIVED THE COMMISSIONING REPORT. COMPLETION OF COMMISSIONING COMPLIANCE CHECKLIST (FIGURE C408.1.4.1) IS DEEMED TO SATISFY THIS REQUIREMENT. PHASED ACCEPTANCE OF COMMISSIONING COMPLIANCE CHECKLIST FOR PORTIONS OF THE WORK SPECIFIC TO THE TRADE THAT IS BEING INSPECTED IS PERMISSIBLE WHERE ACCEPTED BY THE CODE OFFICIAL AND WHERE THE CERTIFIED COMMISSIONING PROFESSIONAL REMAINS RESPONSIBLE FOR COMPLETION OF THE COMMISSIONING PROCESS. IF THERE ARE UNRESOLVED DEFICIENCIES WHEN THE FINAL INSPECTION IS SCHEDULED, THE COMMISSIONING REPORT SHALL BE SUBMITTED AND SHALL DESCRIBE THE UNRESOLVED DEFICIENCIES.

C408.1.4.2 COPY OF REPORT. THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2 MECHANICAL SYSTEMS COMMISSIONING. MECHANICAL EQUIPMENT AND CONTROLS SUBJECT TO SECTION C403 SHALL BE INCLUDED IN THE COMMISSIONING PROCESS REQUIRED BY SECTION C408.1. THE COMMISSIONING PROCESS SHALL MINIMALLY INCLUDE ALL ENERGY CODE REQUIREMENTS FOR WHICH THE CODE STATES THAT EQUIPMENT OR CONTROLS SHALL "BE CAPABLE OF" OR "CONFIGURED TO" PERFORM SPECIFIC FUNCTIONS.

EXCEPTION: MECHANICAL SYSTEMS ARE EXEMPT FROM THE COMMISSIONING PROCESS WHERE THE INSTALLED TOTAL MECHANICAL EQUIPMENT CAPACITY IS LESS THAN 240,000 BTU/H COOLING CAPACITY AND LESS THAN 300,000 BTU/H HEATING CAPACITY.

C408.2.2 SYSTEMS ADJUSTING AND BALANCING. HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS. AIR FLOW RATES SHALL BE MEASURED AND ADJUSTED TO DELIVER FINAL FLOW RATES WITHIN THE TOLERANCES PROVIDED IN THE PROJECT SPECIFICATIONS. TEST AND BALANCE ACTIVITIES SHALL INCLUDE AIR SYSTEM BALANCING.

C408.2.2.1 AIR SYSTEMS BALANCING. EACH SUPPLY AIR OUTLET AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 OF THE INTERNATIONAL MECHANICAL CODE. DISCHARGE DAMPERS USED FOR AIR SYSTEM BALANCING ARE PROHIBITED ON CONSTANT VOLUME FANS AND VARIABLE VOLUME FANS WITH MOTORS 10 HP (18.6 KW) AND LARGER. AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES THEN, FOR FANS WITH SYSTEM POWER OF GREATER THAN 1 HP (0.74 KW), FAN SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS.

EXCEPTION: FANS WITH FAN MOTORS OF 1 HP (0.74 KW) OR LESS.

C408.2.2.2 HYDRONIC SYSTEMS BALANCING. HYDRONIC SYSTEMS ARE NOT USED IN THIS PROJECT.

C408.2.3 SYSTEM TESTING. FUNCTIONAL PERFORMANCE TESTING SHALL DEMONSTRATE THE COMPONENTS, SYSTEMS, AND SYSTEM-TO-SYSTEM INTERFACING RELATIONSHIPS ARE INSTALLED AND OPERATE IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS. TESTING SHALL INCLUDE THE SEQUENCE OF OPERATION, AND BE CONDUCTED UNDER FULL-LOAD, PART-LOAD AND THE FOLLOWING CONDITIONS:
1. ALL MODES AS DESCRIBED IN THE SEQUENCE OF OPERATION;
2. REDUNDANT OR AUTOMATIC BACK-UP MODE;
3. PERFORMANCE OF ALARMS; AND
4. MODE OF OPERATION UPON A LOSS OF POWER AND RESTORATION OF POWER.

ACOUSTICAL NOTES

THE FOLLOWING MEASURES SHALL BE TAKEN TO MINIMIZE NOISE TRANSMISSION FROM THE HVAC EQUIPMENT TO THE INTERIOR SPACES. CONTRACTOR SHALL CONFIRM ALL ACOUSTICAL REQUIREMENTS WITH ACOUSTICAL REPORT AND PROVIDE ADDITIONAL ACCESSORIES NOT SPECIFICALLY LISTED BELOW.

CELING-CONCEALED FAN COIL UNITS:
A) MOUNT ON SPRING ISOLATORS WITH A MINIMUM 1" DEFLECTION.
B) PROVIDE FLEX CONNECTOR BETWEEN UNIT AND AND DUCTWORK.
C) SUSPEND FAN COIL UNITS WITH THREADED ROD AND NEOPRENE GROMMET ISOLATORS.

INLINE EXHAUST FANS:
A) PROVIDE FLEX CONNECTOR BETWEEN FAN AND DUCTWORK.
B) SUSPEND INLINE FANS WITH THREADED ROD AND NEOPRENE GROMMET ISOLATORS.
C) ISOLATE DUCTWORK FROM THE ROOF WITH NEOPRENE PADS EQUIVALENT TO MASON W.
D) PROVIDE 1" DUCT LINER FOR THE DUCTWORK BETWEEN THE FAN AND THE VERTICAL SHAFT.

ROOFTOP FANS:
A) MOUNT FANS ON SPRING ISOLATORS WITH A MINIMUM 2" DEFLECTION.
B) PROVIDE FLEX CONNECTOR BETWEEN FAN AND DUCTWORK.
C) ISOLATE DUCTWORK FROM THE ROOF WITH 9" THICK NEOPRENE PADS EQUIVALENT TO MASON W.

OUTDOOR HEAT PUMP UNITS:
A) SUSPENDED CONDENSERS SHALL BE INSTALLED WITH 2" STATIC DEFLECTION SPRINGS.
B) PROVIDE ROOF MOUNT CONDENSERS WITH CONCRETE PADS MINIMUM 4" THICK AND EXTENDING 6" BEYOND FOOTPRINT OF CONDENSER ON ALL SIDES.

ROOFTOP AIR HANDLERS:
A) MOUNT UNITS ON SPRING ISOLATORS WITH A MINIMUM 2" STATIC DEFLECTION.
B) PROVIDE FLEX CONNECTOR BETWEEN UNIT AND DUCTWORK.
C) PROVIDE DUCT LINER IN LIEU OF WRAPPING SUPPLY DUCT ACROSS ROOF TO SATISFY ENERGY CODE FOR MINIMUM INSULATION.

COMMON SPACE ERVS:
A) MOUNT ON SPRING ISOLATORS WITH A MINIMUM 1" DEFLECTION.
B) PROVIDE FLEX CONNECTOR BETWEEN UNIT AND AND DUCTWORK.
C) SUSPEND FAN COIL UNITS WITH THREADED ROD AND NEOPRENE GROMMET ISOLATORS.

RESIDENTIAL ERVS:
A) MOUNT PER MANUFACTURER INSTALLATION INSTRUCTIONS IN BATHROOM.
B) PROVIDE FLEX DUCTWORK AT CONNECTION TO UNIT BEFORE CONNECTION TO HARD DUCTWORK.

WHOLE HOUSE VENTILATION

1. EACH DWELLING UNIT OR SLEEPING UNIT SHALL BE EQUIPPED WITH A WHOLE HOUSE MECHANICAL VENTILATION SYSTEM THAT COMPLIES WITH SECTIONS 403.4.1 THROUGH 403.4.6 OF THE 2018 WASHINGTON STATE MECHANICAL CODE. EACH DWELLING UNIT OR SLEEPING UNIT SHALL BE EQUIPPED WITH LOCAL EXHAUST COMPLYING WITH SECTION 403.4.7.

WHOLE HOUSE VENTILATION SYSTEM CONTROLS:

1. THE WHOLE HOUSE VENTILATION SYSTEM SHALL BE CONTROLLED WITH MANUAL SWITCHES, TIMERS OR OTHER MEANS THAT PROVIDE FOR AUTOMATIC OPERATION OF THE VENTILATION SYSTEM THAT HAVE READY ACCESS (WITHOUT REQUIRING THE REMOVAL OF PANELS OR OTHER OBSTRUCTIONS) FOR THE OCCUPANT.

2. THE WHOLE HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE OFF OF THE SYSTEM BY THE OCCUPANT DURING PERIODS OF POOR OUTDOOR AIR QUALITY. CONTROLS SHALL INCLUDE PERMANENT TEXT OR A SYMBOL INDICATING THEIR FUNCTION. PROVIDE PERMANENT LABELING TO INCLUDE TEXT SIMILAR TO THE FOLLOWING: LEAVE ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." MANUAL CONTROLS SHALL HAVE READY ACCESS (WITHOUT REQUIRING THE REMOVAL OF PANELS OR OTHER OBSTRUCTIONS) FOR THE OCCUPANT.
2.1. EXCEPTION: CENTRAL WHOLE HOUSE MECHANICAL SYSTEMS WITH SUPPLY AIR AND/OR EXHAUST SERVING MORE THAN ONE DWELLING OR SLEEPING UNIT ARE NOT REQUIRED TO HAVE MANUAL OVERRIDE OFF CONTROLS ACCESSIBLE BY THE OCCUPANT.

3. WHOLE HOUSE VENTILATION SYSTEMS SHALL BE CONFIGURED TO OPERATE CONTINUOUSLY EXCEPT WHERE INTERMITTENT OFF CONTROLS ARE PROVIDED IN ACCORDANCE WITH SECTION 403.4.6.5.

BALANCED WHOLE HOUSE VENTILATION SYSTEM

OUTSIDE AIR TO EACH RESIDENTIAL UNIT IS PROVIDED BY BALANCED WHOLE HOUSE VENTILATION SYSTEM WITH AN ENERGY RECOVERY OR HEAT RECOVERY VENTILATOR (ERV OR HRV) PER 2018 WSMC 403.4.4.1. THE ERV OR HRV SHELL HAVE A SENSIBLE HEAT RECOVERY EFFECTIVENESS AS PRESCRIBED IN SECTION C403.3.6 OF THE WASHINGTON STATE ENERGY CODE (60 PERCENT). THE WHOLE HOUSE VENTILATION SYSTEM SHALL OPERATE CONTINUOUSLY AT THE MINIMUM VENTILATION RATE DETERMINED IN ACCORDANCE WITH SECTION 403.4.2 UNLESS CONFIGURED FOR INTERMITTENT OPERATION IN ACCORDANCE WITH SECTION 403.4.6.5. THE VENTILATION SYSTEM SHALL PROVIDE DUCTED OUTDOOR VENTILATION AIR TO EACH HABITABLE SPACE WITHIN THE RESIDENTIAL UNIT. INTERIOR JOINING SPACES PROVIDED WITH A 30-CFM TRANSFER FAN OR A 25 SQUARE-FOOT PERMANENT OPENING IN ACCORDANCE WITH EXCEPTION 2 403.4.6 DO NOT REQUIRE DUCTED SUPPLY VENTILATION AIR DIRECTLY TO THE SPACE.

WHOLE HOUSE VENTILATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING:

1. BALANCED WHOLE HOUSE VENTILATION SYSTEM: A BALANCED WHOLE HOUSE VENTILATION SYSTEM SHALL INCLUDE BOTH SUPPLY AND EXHAUST. THE SUPPLY AND EXHAUST SHALL HAVE AIRFLOW THAT IS WITHIN 10 PERCENT OF EACH OTHER. THE TESTED AND BALANCED TOTAL MECHANICAL EXHAUST AIRFLOW RATE IS WITHIN 10 PERCENT OR 5 CFM, WHICHEVER IS GREATER, OF THE TOTAL MECHANICAL SUPPLY AIRFLOW RATE. INTERMITTENT DRYER EXHAUST, INTERMITTENT RANGE HOOD EXHAUST AND INTERMITTENT TOILET ROOM EXHAUST AIRFLOW RATES ABOVE THE RESIDENTIAL DWELLING OR SLEEPING UNIT MINIMUM VENTILATION RATE ARE EXEMPT FROM THE BALANCED AIRFLOW CALCULATION.

2. ALL FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 1.0 SONE AT DESIGN AIRFLOW AND STATIC PRESSURE CONDITIONS. DESIGN AND INSTALLATION OF THE SYSTEM OR EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

MECHANICAL OUTDOOR AIR INTAKES:

1. MECHANICAL OUTDOOR AIR INTAKES SHALL BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES, BUILDINGS ON THE SAME LOT, HAZARDOUS OR NOXIOUS CONTAMINANT SOURCES (SUCH AS VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS, UNLESS LOCATED MORE THAN 3 FEET BELOW OR 25 FEET ABOVE SUCH A CONTAMINANT SOURCE).

MECHANICAL EXHAUST OUTLETS:

1. MECHANICAL EXHAUST OUTLETS CONVEYING ENVIRONMENTAL AIR OTHER THAN GARAGE AND TRANSFORMER EXHAUST SHALL BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES AND OPERABLE OPENINGS INTO BUILDINGS, AND NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES. SUCH EXHAUST SHALL NOT BE CONSIDERED HAZARDOUS OR NOXIOUS.

FACTORY-BUILT INTAKE/EXHAUST COMBINATION TERMINATIONS
1. PER EXCEPTION 1 TO 2018 WSMC 401.4.3, FACTORY-BUILT COMMON TERMINATIONS SHALL BE ALLOWED. SUCH TERMINATIONS TO MAINTAIN 3 FOOT SEPARATION FROM OTHER FACTORY-BUILT COMMON TERMINATIONS, ANY OPERABLE OPENINGS, AND PROPERTY LINES. 10' CLEARANCE TO OTHER MECHANICAL AIR INTAKES.

FILTRATION
1. SUPPLY AIR PROVIDED TO HABITABLE DWELLING OR SLEEPING UNITS SHALL BE FILTERED TO AT LEAST MERV-8. FILTER SHALL BE PROVIDED WITH ACCESS FOR REGULAR MAINTENANCE AND REPLACEMENT.

SNOHOMISH COUNTY PUD STANDARDS FOR CUSTOMER OW

VENTILATION CALCULATIONS

ROOM	ROOM NO.	MECHANICAL UNIT(S)	AREA, SF (4)	FLOOR-TO-CEILING HEIGHT, FT	ROOM CATEGORY	ACTUAL OCCUPANTS	2018 WSMC - TABLE 403.3.1.1 (1)								ZONE AIR DISTRIBUTION EFFECTIVENESS (1)	1 ACH EQUIVALENT CFM (2)	2 ACH EQUIVALENT CFM (2)	WSMC CONTINUOUS OSA CFM REQUIRED	CONTINUOUS OSA CFM PROVIDED	ALARM OSA CFM PROVIDED (2)	ALARM CHANGE IN ACH (OSA)	CONTINUOUS EXH CFM REQUIRED	CONTINUOUS EXH CFM PROVIDED	ALARM EXH CFM PROVIDED (2)	ALARM CHANGE IN ACH (EXH)
							DEFAULT OCCUPANTS	DEFAULT PEOPLE PER 1,000 SF	OSA CFM / PERSON	OSA CFM / SF	EXH CFM / SF	OSA CFM (WSMC PERSON)	OSA CFM (WSMC AREA)	OSA CFM (WSMC TOTAL)	EXH CFM (WSMC TOTAL)										
COMMERCIAL FLEX	101	ERV-1-1	3,269	16.75	SALES	50	50	15	7.5	0.12	0	375	393	768	0	0.8	913	1825	960	960	1920	1.1	0	960	1920	1.1
RR	131	(1160 CFM CONTINUOUS)	104	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	0.8	29	58	0	100	200	3.4	63	100	200	3.4
RR	132	(2320 CFM ALARM)	118	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	0.8	33	66	0	100	200	3.0	63	100	200	3.0
		ERV-1-2																								
		(1605 CFM CONTINUOUS)																								
COMMERCIAL FLEX	102	(3210 CFM ALARM)	5,491	16.75	SALES	83	83	15	7.5	0.12	0	623	659	1282	0	0.8	1533	3066	1603	1605	3210	1.0	0	1605	3210	1.0
CORRIDOR	128		313	16.75	CORRIDOR (NON-GROUP R)	0	0	0	0	0.06	0	0	19	19	0	0.8	87	175	24	90	180	1.0	0	90	180	1.0
CORRIDOR	129		153	16.75	CORRIDOR (NON-GROUP R)	0	0	0	0	0.06	0	0	10	10	0	0.8	43	85	13	45	90	1.1	0	45	90	1.1
RR	133		53	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	15	30	0	50	100	3.4	50	50	100	3.4
RR	134		53	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	15	30	0	50	100	3.4	50	50	100	3.4
RR	135	ERV-1-3	53	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	15	30	0	50	100	3.4	50	50	100	3.4
MOVE-IN	152	(1115 CFM CONTINUOUS)	322	16.75	ENCLOSED LOADING DOCK	0	0	0	0	0	1.5	0	0	0	483	0.8	90	180	0	90	180	1.0	604	90	180	1.0
LOBBY	150	(2230 CFM ALARM)	1,797	16.75	MAIN ENTRY LOBBY	18	18	10	5	0.06	0	90	108	198	0	0.8	502	1003	248	505	1010	1.0	0	505	1010	1.0
RR	151		60	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	17	34	0	50	100	3.0	50	50	100	3.0
PARCEL STORAGE	148		172	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	21	21	0	0.8	48	96	27	50	100	1.0	0	50	100	1.0
MAIL	146		351	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	43	43	0	0.8	98	196	54	100	200	1.0	0	100	200	1.0
PARCEL LOCKERS	149		127	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	16	16	0	0.8	35	71	20	35	70	1.0	0	35	70	1.0
COMMERCIAL FLEX	104		2,614	16.75	SALES	40	40	15	7.5	0.12	0	300	314	614	0	0.8	730	1459	768	770	1540	1.1	0	770	1540	1.1
OFFICE	136	ERV-1-4	99	16.75	OFFICE SPACE	1	1	5	5	0.06	0	5	6	11	0	0.8	28	55	14	30	60	1.1	0	30	60	1.1
STORAGE	137	(935 CFM CONTINUOUS)	112	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	14	14	0	0.8	31	63	18	35	70	1.1	0	35	70	1.1
RR	138	(1870 CFM ALARM)	54	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	15	30	0	50	100	3.3	50	50	100	3.3
RR	139		53	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	15	30	0	50	100	3.4	50	50	100	3.4
COMMERCIAL FLEX	105		4,020	16.75	SALES	61	61	15	7.5	0.12	0	458	483	941	0	0.8	1122	2245	1177	1180	2360	1.1	0	1180	2360	1.1
RR	140	ERV-1-5	57	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	16	32	0	50	100	3.1	50	50	100	3.1
RR	141	(1375 CFM CONTINUOUS)	56	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	16	31	0	50	100	3.2	50	50	100	3.2
RR	142	(2750 CFM ALARM)	57	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	16	32	0	50	100	3.1	50	50	100	3.1
OFFICE	143		157	16.75	OFFICE SPACE	1	1	5	5	0.06	0	5	10	15	0	0.8	44	88	19	45	90	1.0	0	45	90	1.0
COMMERCIAL FLEX	106	ERV-1-6	3,971	16.75	SALES	60	60	15	7.5	0.12	0	450	477	927	0	0.8	1109	2217	1159	1160	2320	1.0	0	1160	2320	1.0
RR	144	(1260 CFM CONTINUOUS)	65	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	18	36	0	50	100	2.8	50	50	100	2.8
RR	145	(2520 CFM ALARM)	65	16.75	TOILET ROOM (PUBLIC)	0	0	0	0	0	50 CFM	0	0	0	50	1	18	36	0	50	100	2.8	50	50	100	2.8
BIKE STORAGE	114		687	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	83	83	0	0.8	192	384	104	195	390	1.0	0	195	390	1.0
DOG WASH	119		57	16.75	PET SHOP/ANIMAL AREA	1	1	10	7.5	0.18	0.9	8	11	19	52	0.8	16	32	24	25	50	1.6	65	25	50	1.6
WATER SERVICE HEATER	113		326	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	40	40	0	0.8	91	182	50	95	190	1.0	0	95	190	1.0
FIRE SPRINKLER	108	ERV-1-7	244	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	30	30	0	0.8	68	136	38	70	140	1.0	0	70	140	1.0
CORRIDOR	120	(1260 CFM CONTINUOUS)	1,127	16.75	CORRIDOR (NON-GROUP R)	0	0	0	0	0.06	0	0	68	68	0	0.8	315	629	85	315	630	1.0	0	315	630	1.0
ELECTRICAL	111	(2520 CFM ALARM)	799	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	96	96	0	0.8	223	446	120	225	450	1.0	0	225	450	1.0
GENERATOR	109		487	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	59	59	0	0.8	136	272	74	140	280	1.0	0	140	280	1.0
MPOE ROOM	110		197	16.75	RETAIL STORAGE	0	0	0	0	0.12	0	0	24	24	0	0.8	55	110	30	55	110	1.0	0	55	110	1.0
MAINTENANCE	107		492	16.75	OFFICE SPACE	3	3	5	5	0.06	0	15	30	45	0	0.8	137	275	57	140	280	1.0	0	140	280	1.0
TRASH ROOM	121		833	16.75	JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	833	0.8	233	465	0	1500	1750	1.1	1042	1500	1750	1.1
L2 TRASH		EF-7-1 (2250)	80		JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	80	0.8							100	150		
L3 TRASH		SF-1-6 (1750)	80		JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	80	0.8							100	150		
L4 TRASH		EF-1-1 (250)	80		JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	80	0.8							100	150		
L5 TRASH			80		JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	80	0.8							100	150		
L6 TRASH			80		JANITOR, TRASH, RECYCLING	0	0	0	0	0	1	0	0	0	80	0.8							100	150		
L2 CORRIDOR			3,570		CORRIDORS (GROUP R NON-WHF)	0	0	0	0	0.06	0	0	215	215	0	0.8			269	300			0	150		
L3 CORRIDOR		DOAS-1	3,570		CORRIDORS (GROUP R NON-WHF)	0	0	0	0	0.06	0	0	215	215	0	0.8			269	300			0	150		
L4 CORRIDOR		DOAS-2	3,570		CORRIDORS (GROUP R NON-WHF)	0	0	0	0	0.06	0	0	215	215	0	0.8			269	300			0	150		
L5 CORRIDOR			3,570		CORRIDORS (GROUP R NON-WHF)	0	0	0	0	0.06	0	0	215	215	0	0.8			269	300			0	150		
L6 CORRIDOR			3,570		CORRIDORS (GROUP R NON-WHF)	0	0	0	0	0.06	0	0	215	215	0	0.8			269	300			0	150		
AMENITY	615	ERV-6-1 (180)	632		MULTIPURPOSE ASSEMBLY	20	76	120	5	0.06	0	100	38	138	0	0.8			173	180			0	90		
LAST UPDATED:		**1/31/2024**													**TOTAL:**			**8204**	**11890**			**2887**	**11800**		

NOTES:
(1) VENTILATION RATES CALCULATED PER TABLE 403.3.1.1 AND ZONE AIR DISTRIBUTION EFFECTIVENESS FROM TABLE 403.3.1.1.1.2 IN THE 2018 WSMC.
(2) IN ADDITION TO CODE MINIMUM VENTILATION, LEVEL 1 SPACES REQUIRE 1 ACH CONTINUOUS VENTILATION FOR METHANE CONTROL. UPON METHANE DETECTION EXCEEDING 1,000 PPM INSIDE THE BUILDING, VENTILATION INCREASES TO 2 ACH. METHANE DETECTION SYSTEM DESIGNED BY METHANE ENGINEER.

△2

DWELLING UNIT WHOLE-HOUSE MECHANICAL VENTILATION RATES

UNIT TYPE	2018 WSMC TABLE 403.4.2			
	FLOOR AREA, FT ^{2}	NUMBER OF BEDROOMS	CFM REQUIRED (1)	CFM PROVIDED (2)
B01, B02, B03 TYPE A, C01, C02, C03 TYPE A, C04	500-1000	0-1	30	65
D01, D04 TYPE A	500-1000	2	35	65
D02, D03	1000-1500	2	40	65

NOTES: (1) MIN. OSA FOR OPERATING CONTINUOUSLY.
(2) ENERGY RECOVERY VENTILATOR OPERATES CONTINUOUSLY AT 65 CFM AND IS PROVIDED WITH CONTROLS FOR TEMPORARY BOOST TO 130 CFM.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

VENTILATION CALCULATIONS

M0.02

2/2/2024 3:05:04 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

ELECTRIC WALL HEATERS

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	HEATING		VOLTAGE	BASIS OF DESIGN (1)(2)
			ROOM LOAD, kW	CAPACITY, kW		
EH-1-1	STAIR 2	WALL-MOUNTED	1.9	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)
EH-1-2	STAIR 2 PASSAGE	WALL-MOUNTED	1.1	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
-	-	-	-	-	-	-
EH-1-4	CORRIDOR 120	WALL-MOUNTED	1.5	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-5	FIRE SPRINKLER	WALL-MOUNTED	0.9	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-6	WATER SERVICE/HEATER	WALL-MOUNTED	1.1	1.5	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-7	DOG WASH	WALL-MOUNTED	0.5	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-8	BIKE STORAGE 114	WALL-MOUNTED	2.3	2.5	208V/1P	CADET COM-PAK OR EQUIVALENT (4)
EH-1-9	RR	WALL-MOUNTED	0.25	0.5	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-10	RR	WALL-MOUNTED	0.25	0.5	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-11	RR	WALL-MOUNTED	0.25	0.5	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-12	RR	WALL-MOUNTED	0.25	0.5	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-13	MOVE-IN	WALL-MOUNTED	1.5	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-14	CORRIDOR 128	WALL-MOUNTED	1.8	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-15	STAIR 1	WALL-MOUNTED	1.9	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-RES-0.75	APARTMENT UNIT	WALL-MOUNTED	-	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1	APARTMENT UNIT	WALL-MOUNTED	-	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1.5	APARTMENT UNIT	WALL-MOUNTED	-	1.5	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-2	APARTMENT UNIT	WALL-MOUNTED	-	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)

NOTES:
(1) INSTALL UNITS AS SHOWN AND AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES. PROVIDE INTEGRAL THERMOSTAT UNLESS OTHERWISE NOTED.
(2) HEATERS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
(3) PROVIDE SURFACE-MOUNT WALL CAN AND MOUNT UNIT ON WALL.
(4) PROVIDE REMOTE THERMOSTAT WITH LOCKING COVER.
(5) PROVIDE LINE-VOLTAGE 7-DAY PROGRAMMABLE REMOTE THERMOSTAT.

PERMIT REVISIONS #2 CHANGES
- REMOVED 'IVF' AND MOST 'SF' FANS
- REPLACED LEVEL 1 ERVs WITH UNITS OF DIFFERENT SIZE AND QUANTITY
- ADDED & RESIZED SPLIT AND VRF HEAT PUMPS
- CHANGED QUANTITY AND SIZES OF ELECTRIC HEATERS

△2

ENERGY RECOVERY VENTILATORS

EQUIP NO.	SERVICE	FAN		ESP, IN. WG	FILTER	SENSIBLE EFFECTIVENESS %	ELECTRICAL			DIMENSIONS, INCHES			WEIGHT (LBS)	BASIS OF DESIGN (1)
		AIRFLOW, CFM					VOLTAGE	AMPS/ MCA	MOCP	L	W	H		
		CONTINUOUS	INCREASED (6)											
ERV-RES	APARTMENT UNIT	(3)	-	0.6	MERV-8	69.0%	120V/1P	1.1/-	-	25	23	10	41	ALDES INSPIRAIR E130-HF-N (2)(3)(4)(5)
ERV-RES-M	APARTMENT UNIT	(3)	-	0.6	MERV-8	69.0%	120V/1P	1.1/-	-	25	23	10	41	ALDES INSPIRAIR E130-HF-N-M (2)(3)(4)(5)
ERV-1-1	COMMERCIAL 101	1160	2320	0.5	MERV-8	77.5%	208V/3P	-/27.5	35	89	55	56	1000	ALDES PE30[i] (6)
ERV-1-2	COMMERCIAL 102	1605	3210	0.5	MERV-8	73.1%	208V/3P	-/27.5	35	89	55	56	1100	ALDES PE30[i] (6)
ERV-1-3	LOBBY, MOVE-IN, MAIL, PARCEL, RESTROOMS	1115	2230	0.5	MERV-8	77.5%	208V/3P	-/27.5	35	89	55	56	1000	ALDES PE30[i] (6)
ERV-1-4	COMMERCIAL 104	935	1870	0.5	MERV-8	64.1%	208V/1P	9.1/-	-	49	30	30	245	ALDES PE30[i] (6)
ERV-1-5	COMMERCIAL 105	1375	2750	0.5	MERV-8	75.0%	208V/3P	-/27.5	35	89	55	56	1000	ALDES PE30[i] (6)
ERV-1-6	COMMERCIAL 106	1260	2520	0.5	MERV-8	75.8%	208V/3P	-/27.5	35	89	55	56	1000	ALDES PE30[i] (6)
ERV-1-7	MEP ROOMS, MAINTENANCE, BIKE STORAGE	1260	2520	0.5	MERV-8	73.5%	208V/3P	-/27.5	35	89	55	56	1000	ALDES PE30[i] (6)
ERV-6-1	L6 AMENITY	180	-	0.4	STANDARD	88	208V/1P	2.0/-	15	26	22	10	44	GREENHECK SYNC-180SCE-S1

NOTES:
(1) ENERGY RECOVERY SYSTEM SHALL HAVE THE CAPABILITY TO PROVIDE A CHANGE IN THE ENTHALPY OF THE THE OUTDOOR AIR SUPPLY OF NOT LESS THAN 50 PERCENT OF THE DIFFERENCE BETWEEN THE OUTDOOR AIR AND RETURN AIR ENTHALPIES, AT DESIGN CONDITIONS.
(2) PROVIDE FACTORY OPTION MERV-8 FILTER FOR RESIDENTIAL ERV UNIT.
(3) PROVIDE TIMER SWITCH IN EACH BATHROOM OF DWELLING UNIT TO RAMP ERV UP FROM LOW SPEED TO FULL SPEED (ALDES #611228 OR EQUIVALENT). INSTALL PER ERV INSTALLATION MANUAL. ERV TO RUN AT LOW SPEED (65 CFM) CONTINUOUS AND TEMPORARILY RAMP UP TO HIGH SPEED (130CFM) WHEN ACTIVATED BY TIMER SWITCH.
(4) SEE WHOLE HOUSE VENTILATION CRITERIA TABLE, WHOLE HOUSE VENTILATION NOTES, OUTSIDE AIR NOTES, AND SEQUENCE OF OPERATION ON SHEET M0.01.
(5) ERV POWER TO BE HARD-WIRED. FLEX CORD PROHIBITED IN DROPPED CEILINGS PER NEC 400.12(5).
(6) METHANE MITIGATION: PROVIDE LEGALLY REQUIRED STANDBY POWER FOR ERV. ERV TO BE MONITORED BY METHANE ALARM SYSTEM FOR "RUNNING" CONDITION. ERV TO RAMP UP TO "INCREASED" AIRFLOW RATE UPON DETECTION OF METHANE IN ANY L1 SPACE ABOVE 1,000 PPM AND ACTIVATION OF METHANE ALARM. MOTORIZED DAMPERS NOT REQUIRED ON INTAKE AND EXHAUST LOUVERS PER WSEC C403.7.8.1 EXCEPTION 2.2.

FAN SCHEDULE

EQUIP NO.	EQUIPMENT LOCATION	AREA SERVED	MOUNTING / DISCHARGE	AIRFLOW, CFM		ESP, IN. WG	WEIGHT (LBS)	ELECTRICAL			OPERATION	SOUND POWER, DBA/SONES	EXTERNAL VFD NEEDED	BASIS OF DESIGN (1)(8)
				NORMAL OPERATION	INCREASED (3)			VOLTAGE	HP	BHP				
EF-1-1	L1 TRASH	L1 TRASH	INLINE	0	250	0.25	49	115V/1P	FHP	FHP	CONTINUOUS	47/4.4	-	GREENHECK SQ-90-VG (3)
EF-7-1	ROOF	L1-L7 TRASH ROOMS	UTILITY UPBLAST	2,250	2,250	0.75	233	208V/3P	3/4	0.6	CONTINUOUS	67/16.7	-	GREENHECK USF-16-B1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SF-1-1	L1 MAINTENANCE	L1 GENERATOR SUPPLY	INLINE	11,360	-	0.75	536	208V/3P	3	2.56	(6)	73/22	YES	GREENHECK AX-80-275-0621 (5)(6)
SF-1-2	L1 TRASH ROOM	L1 TRASH ROOM	INLINE	1,500	1,750	0.25	55	208V/1P	1/2	0.38	CONTINUOUS	65/13	-	GREENHECK SQ-120-VG (3)(5)
SF-7-1	ROOF	L1 TRANSFORMER COOLING	UTILITY HORIZ.	4800	-	1.5	278	208V/3P	5	3.61	(2)	86/50	YES	GREENHECK USF-16-B1 (2)
SF-7-2	ROOF	L1 TRANSFORMER SUPPLY	UTILITY HORIZ.	150	300	0.5	181	208V/3P	1/4	FHP	CONTINUOUS	66/15.6	YES	GREENHECK USF-04-B6 (3)(5)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SPF-1	ROOF	N STAIR PRESSURIZATION	UTILITY HORIZ.	8,000	8,000	1.0	529	208V/3P	3	2.47	(4)	72/23	YES	GREENHECK USF-27-B1 (3)(4)(5)(7)(9)(10)
SPF-2	ROOF	NE STAIR PRESSURIZATION	UTILITY HORIZ.	7,000	7,000	1.0	455	208V/3P	3	2.12	(4)	73/24	YES	GREENHECK USF-24-B1 (3)(4)(5)(7)(9)(10)
EPF-1	ROOF	ELEVATOR PRESSURIZATION	UTILITY HORIZ.	24,000	24,000	1.5	1670	208V/3P	20	17.18	(4)	89/62	YES	GREENHECK USF-33-B1 (3)(4)(5)(7)(9)(10)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
(1) MOUNT FAN ON VIBRATION ISOLATORS PER ACOUSTICAL NOTES ON SHEET M0.01.
(2) TRANSFORMER FAN RUNS CONTINUOUSLY 24/7 AT LOWEST SPEED ALLOWED BY VFD OR 2400 CFM, WHICHEVER IS LOWER, HIGH SPEED TO ACTIVATE ON CALL FROM METHANE DETECTOR SENSING 1,000 PPM AND FROM THERMOSTATS LOCATED IN TRANSFORMER ROOM. 4800 CFM HIGH SPEED TO BE ACTIVATED AT 70°F AND FAN TO TURN OFF AT 140°F PER PUD SPECIFICATIONS. INCLUDE MOTOR-MOUNTED POTENTIOMETER FOR BALANCING. FAN MUST BE AMCA TYPE A OR B SPARK RESISTANT.
(3) METHANE MITIGATION: PROVIDE LEGALLY REQUIRED STANDBY POWER FOR FAN. FAN TO BE MONITORED BY METHANE ALARM SYSTEM FOR "RUNNING" CONDITION. FAN TO RAMP UP TO "INCREASED" AIRFLOW RATE UPON DETECTION OF METHANE IN ANY L1 SPACE ABOVE 1,000 PPM AND ACTIVATION OF METHANE ALARM.
(4) PER 2018 WSBC 909.20.6. PROVIDE VFD (BASIS ABB ACH580) IN WEATHERPROOF ENCLOSURE NEARBY FAN AND PROVIDE LEGALLY REQUIRED STANDBY POWER. INTERLOCK WITH BUILDING FIRE ALARM SYSTEM (COORDINATE WITH PHASED OCCUPANCY OF BUILDING). PROVIDE TWO DUCT MOUNTED SMOKE DETECTORS, FIRST DETECTOR FOR FIRE ALARM SUPERVISORY ALARM AND SECOND DETECTOR FOR FAN SHUTOFF. IF FAN IS TURNED OFF BY DETECTOR ALARM AND IS MANUALLY TURNED ON AT FIREFIGHTER SMOKE CONTROL PANEL, FAN WILL IGNORE DETECTOR SHUTOFF AND TURN ON. PROVIDE DOUBLE BLADE INSULATED MOTORIZED DAMPER (BASIS GREENHECK VCD-23) AT OUTLET, FAIL OPEN, WITH LRSP AND OPEN/CLOSED INDICATOR SWITCHES WITH WIRING BY FIRE ALARM VENDOR FOR MONITORING OF OPEN/CLOSED POSITION. INTERLOCK MOTORIZED DAMPER TO OPEN WHEN FAN RUNS.
(5) PROVIDE LEGALLY REQUIRED STANDBY POWER.
(6) INTERLOCK WITH GENERATOR OPERATION.
(7) REFER TO SMOKE CONTROL NOTES ON SHEET M0.01. FINAL FAN SIZE SUBJECT TO APPROVAL BY SMOKE CONTROL CONTRACTOR.
(8) PROVIDE OUTLET GUARD ON FANS WITH UNPROTECTED INLET OR OUTLET GUARD ON FANS WITH UNPROTECTED OUTLETS.
(9) BELT-DRIVEN FANS SHALL HAVE 1.5 TIMES THE NUMBER OF BELTS REQUIRED FOR THE DESIGN DUTY, WITH THE MINIMUM NUMBER OF BELTS BEING TWO. IF NUMBER OF BELTS REQUIRED FOR DESIGN DUTY IS TWO, THREE BELTS SHALL BE PROVIDED, AND SO ON.
(10) PROVIDE WEATHER HOOD, INLET GUARD AND INLET HOOD.

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE - ERV & HEAT PUMP

EQUIP NO.	SERVICE	DISCHARGE	SUPPLY FAN				EXHAUST FAN				COOLING					HEATING				SENSIBLE RECOVERY EFFECTIVENESS %	ELECTRICAL			DIMENSIONS, INCHES			WEIGHT, LBS	SOUND POWER	BASIS OF DESIGN (2)(3)(4)(5)(6)
			AIRFLOW, CFM	ESP, IN WG (1)	MOTOR SIZE, HP	MOTOR BHP	AIRFLOW, CFM	ESP, IN WG (1)	MOTOR HP	MOTOR BHP	CAPACITY, MBH	TEMPERATURES EAT	TEMPERATURES LAT	EFFICIENCY SEER	EFFICIENCY EER	CAPACITY, MBH	TEMPERATURES EAT	TEMPERATURES LAT	EFFICIENCY COP @47°F	EFFICIENCY HSPF		VOLTAGE	MCA	MOCP	L	W	H			
DOAS-1	CORRIDOR VENTILATION	HORIZONTAL	750	1.8	2	0.63	750	1.39	1	0.33	34.51	77.0	48.0	17.5	12.2	30.70	65.0	78.4	5.06	8.7	72.4	208V/3P	28	35	116	44	51	1145	82	AAON RQ-003-8-H-K609-000 : GAJC-U0B-QKD-D0B-00EA001-00-00000C0VB
DOAS-2	CORRIDOR VENTILATION	HORIZONTAL	750	1.8	2	0.63	750	1.39	1	0.33	34.51	77.0	48.0	17.5	12.2	30.70	65.0	78.4	5.06	8.7	72.4	208V/3P	28	35	116	44	51	1145	82	AAON RQ-003-8-H-K609-000 : GAJC-U0B-QKD-D0B-00EA001-00-00000C0VB

NOTES:
(1) ESP IS EXTERNAL TO UNIT CASING; DOES NOT INCLUDE CASING, CLEAN FILTER, WET COIL, OR AUX HEAT LOSSES.
(2) REFRIGERANT SHALL BE R-410A.
(3) PROVIDE OUTSIDE AIR ECONOMIZER.
(4) UNIT SHALL INCLUDE THE FOLLOWING: SIGHT GLASS, MANUAL RESET HIGH PRESSURE SWITCHES & AUTO RESET LOW PRESSURE SWITCHES, 2 INCH MERV-8 PLEATED FILTERS, INTEGRAL NON-FUSED DISCONNECT SWITCH, AND DISCHARGE AIR TEMPERATURE CONTROL.
(5) CONNECT UNIT TO FIRE ALARM SYSTEM. UNIT TO DEACTIVATE UPON DETECTION OF SMOKE.
(6) PROVIDE 100% OSA AND EXHAUST.

SPLIT HEAT PUMP SCHEDULE - INDOOR UNIT

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	FAN			COOLING CAPACITY (BTU/H)	HEATING CAPACITY (BTU/H)	ELECTRICAL			DIMENSIONS, INCHES			SOUND PRESSURE, dBA	BASIS OF DESIGN (1)(2)(3)	CONNECTED OUTDOOR UNIT
			MAX AIRFLOW, CFM	MOTOR HP/W	ESP, IN. WG			VOLTAGE	MCA	MOCP	L	W	H			
IHP-1-1	MAINTENANCE OFFICE	WALL-MOUNTED DUCTLESS	385	-/-	-	12,000	18,000	(4)	(4)	(4)	10	36	12	48	MITSUBISHI PKA-A12LA1	OHP-1-1
IHP-1-2	MPOE	WALL-MOUNTED DUCTLESS	385	-/-	-	12,000	18,000	(4)	(4)	(4)	10	36	12	48	MITSUBISHI PKA-A12LA1	OHP-1-2
IHP-1-3	ELECTRICAL	WALL-MOUNTED DUCTLESS	385	-/-	-	12,000	18,000	(4)	(4)	(4)	10	36	12	48	MITSUBISHI PKA-A12LA1	OHP-1-3
IHP-1-4	L1 LOBBY	CEILING-CONCEALED DUCTED	1200	-/244	0.6	36,000	40,000	(4)	(4)	(4)	29	60	10	42	MITSUBISHI PEAD-A36AA7	OHP-1-4
IHP-1-5	L1 LOBBY	CEILING-CONCEALED DUCTED	1300	-/300	0.6	48,000	54,000	208V/1P	4.38	15	29	60	10	44	MITSUBISHI PEFY-P48NMAU-E4	OHP-1-5
IHP-6-1	L6 AMENITY	CEILING-CONCEALED DUCTED	600	-/85	0.6	18,000	22,000	(4)	(4)	(4)	29	40	10	37	MITSUBISHI PEAD-A18AA7	OHP-6-1
IHP-6-2	ELEVATOR MACHINE ROOM	WALL-MOUNTED DUCTLESS	775	-/56	-	24,000	28,000	(4)	(4)	(4)	12	47	15	45	MITSUBISHI PKA-A24KA7	OHP-6-2

NOTES:
(1) PROVIDE ELECTRICAL DISCONNECT SWITCH AND INDIVIDUAL THERMOSTAT FOR EACH UNIT.
(2) THERMOSTAT TO BE INITIALLY SET TO 68°F (ADJUSTABLE).
(3) PROVIDE INTEGRAL CONDENSATE PUMP KIT.
(4) INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.

SPLIT HEAT PUMP SCHEDULE - OUTDOOR UNIT

EQUIP NO.	SERVICE	NOMINCAL CAPACITY, TONS	COOLING		HEATING		ELECTRICAL			SOUND PRESSURE, dBA	WEIGHT, LBS	BASIS OF DESIGN (1)(2)(3)(4)(5)(6)	CONNECTED INDOOR UNITS
			CAPACITY, BTU/H	SEER/EER	CAPACITY, BTU/H	HSPF/COP @47°F	VOLTAGE	MCA	MOCP				
OHP-1-1	MAINTENANCE OFFICE	1.0	12,000	21.3/13.3	18,000	10.2/3.9	208V/1P	11.0	28	46	100	MITSUBISHI PUZ-A12NKA7	IHP-1-1
OHP-1-2	MPOE	1.0	12,000	21.3/13.3	18,000	10.2/3.9	208V/1P	11.0	28	46	100	MITSUBISHI PUZ-A12NKA7	IHP-1-2
OHP-1-2	ELECTRICAL	1.0	12,000	21.3/13.3	18,000	10.2/3.9	208V/1P	11.0	28	46	100	MITSUBISHI PUZ-A12NKA7	IHP-1-3
OHP-1-4	L1 LOBBY	3.0	36,000	19.1/12.0	40,000	9.9/4.62	208V/1P	25.0	31	53	245	MITSUBISHI PUZ-A36NKA7	IHP-1-4
OHP-1-5	L1 LOBBY	4.0	48,000	16.5/11.3	54,000	11.0/3.3	208V/1P	19.0	26	54	271	MITSUBISHI PUMY-P48NKMU3	IHP-1-5
OHP-6-1	L6 AMENITY	1.5	18,000	19.9/10.8	22,000	10.2/3.97	208V/1P	11.0	28	46	112	MITSUBISHI PUZ-A18NKA7	IHP-6-1
OHP-6-2	ELEVATOR MACHINE ROOM	2.0	24,000	21.4/12.2	28,000	11.0/4.35	208V/1P	19.0	26	48	179	MITSUBISHI PUZ-A24NHA7 (7)(8)	IHP-6-2

NOTES:
(1) ARI LISTED WITH ALL STANDARD FEATURES, INSTALLATION ACCESSORIES AND COMPRESSOR SHORT CYCLING PROTECTION. FILTER DRIVER, REFRIGERANT LINE FILTER, LIQUID SOLENOID VALVE, AND SAFETY PRESSURE SWITCHES. INSTALL REFRIGERANT TUBING AND LENGTH IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
(2) PROVIDE FACTORY OPTION ELECTRICAL DISCONNECT.
(3) ROUTING OF REFRIGERANT LINES FROM INDOOR TO OUTDOOR UNITS NOT SHOWN ON PLANS. CONTRACTOR TO FIELD COORDINATE ROUTING.
(4) ROUTE CONDENSATE TO APPROVED DRAIN.
(5) PROVIDE ALL REQUIRED ACCESSORIES FOR LOW-AMBIENT AND LONG-LINE APPLICATIONS.
(6) REFRIGERANT SHALL BE R-410A.
(7) PRIOR TO ORDERING, CONTRACTOR TO COORDINATE WITH ELEVATOR MANUFACTURER TO ENSURE UNIT CAN ADEQUATELY COOL THE ELEVATOR MACHINE ROOM.
(8) PROVIDE LEGALLY REQUIRED STANDBY POWER PER WSBC 3003.1.4 AND 3007.8.

VRF FAN COIL UNIT SCHEDULE

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	FAN		NOMINAL COOLING	NOMINAL HEATING	ELECTRICAL			DIMENSIONS, INCHES			SOUND PRESSURE (dBA)	BASIS OF DESIGN (1)(2)(3)(4)	CONNECTED BRANCH CONTROLLER UNIT
			AIRFLOW, CFM	MAX ESP, IN WG	CAPACITY, BTUH	CAPACITY, BTUH	VOLTAGE	MCA	MOCP	L	W	H			
FCU-1-1	COMMERCIAL 106	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-1
FCU-1-2	COMMERCIAL 106	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-1
FCU-1-3	COMMERCIAL 106	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-1
FCU-1-4	COMMERCIAL 105	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-2
FCU-1-5	COMMERCIAL 105	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-2
FCU-1-6	COMMERCIAL 105	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-2
FCU-1-7	COMMERCIAL 104	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-3
FCU-1-8	COMMERCIAL 104	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-3
FCU-1-9	COMMERCIAL 102	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-4
FCU-1-10	COMMERCIAL 102	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-4
FCU-1-11	COMMERCIAL 102	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-4
FCU-1-12	COMMERCIAL 102	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-4
FCU-1-13	COMMERCIAL 101	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-5
FCU-1-14	COMMERCIAL 101	HORIZONTAL	1300	0.6	48,000	54,000	208V/1P	4.38	15	29	60	10	44	MITSUBISHI PEFY-P48NMAU-E4	BC-1-5
FCU-1-15	COMMERCIAL 101	HORIZONTAL	1410	0.6	54,000	60,000	208V/1P	4.38	15	29	67	10	42	MITSUBISHI PEFY-P54NMAU-E4	BC-1-5

NOTES:
(1) INSTALL UNITS AS SHOWN AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES.
(2) CONTRACTOR TO FIELD COORDINATE ROUTING OF REFRIGERANT LINES.
(3) PROVIDE ACCESSORY CONDENSATE PUMP KIT.
(4) PROVIDE ELECTRICAL DISCONNECT SWITCH AND INDIVIDUAL PROGRAMMABLE THERMOSTAT FOR EACH INDOOR UNIT.

VRF OUTDOOR UNIT SCHEDULE

EQUIP NO.	SERVICE	TONS	COOLING		HEATING		REFRIGERANT CHARGE (LBS)	% NOMINAL CONNECTED CAPACITY	ELECTRICAL			SOUND PRESSURE LEVEL (dBA)	WEIGHT (LBS)	BASIS OF DESIGN (1)(2)(3)(4)(5)(6)
			CAPACITY, BTUH	IEER / EER	CAPACITY, BTUH	COP @47°F / @5°F			VOLTAGE	MCA	MOCP			
CU-7-1	L1 COMMERCIAL 106	14	168,000	23.4/11.2	188,000	3.3/24.7	23.75	97%	208V/3P	57.0	90	66.5	777	MITSUBISHI PURY-EP168TNU-A
CU-7-2	L1 COMMERCIAL 105	14	168,000	23.4/11.2	188,000	3.3/24.7	23.75	97%	208V/3P	57.0	90	66.5	777	MITSUBISHI PURY-EP168TNU-A
CU-7-3	L1 COMMERCIAL 104	10	120,000	25.0/12.6	135,000	3.71/25.3	17.625	90%	208V/3P	41.0	60	62.0	622	MITSUBISHI PURY-EP120TNU-A
CU-7-4	L1 COMMERCIAL 102	18	216,000	19.7/10.9	243,000	3.23/23.8	26.0625	100%	208V/3P	73.0	125	67.5	887	MITSUBISHI PURY-EP216TNU-A
CU-7-5	L1 COMMERCIAL 101	14	168,000	23.4/11.2	188,000	3.3/24.7	23.75	93%	208V/3P	57.0	90	66.5	777	MITSUBISHI PURY-EP168TNU-A

NOTES:
(1) INSTALL UNITS AS SHOWN AND AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES.
(2) ROUTING OF REFRIGERANT LINES FROM INDOOR TO OUTDOOR UNITS NOT SHOWN ON PLANS. CONTRACTOR TO FIELD COORDINATE ROUTING.
(3) MOUNT OUTDOOR UNIT ON VIBRATION ISOLATORS PER ACOUSTICAL NOTES ON SHEET M0.01.
(4) ARI LISTED WITH ALL STANDARD FEATURES, INSTALLATION ACCESSORIES AND COMPRESSOR SHORT CYCLING PROTECTION. FILTER DRIVER, REFRIGERANT LINE FILTER, LIQUID SOLENOID VALVE, AND SAFETY PRESSURE SWITCHES. INSTALL REFRIGERANT TUBING AND LENGTH IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
(5) REFRIGERANT SHALL BE R-410A.
(6) PROVIDE ALL REQUIRED ACCESSORIES FOR LOW-AMBIENT AND LONG-LINE APPLICATIONS.

MULTIPLE SPLIT VRF SYSTEM BRANCH CONTROLLER UNIT SCHEDULE

EQUIP NO.	SERVICE	NO. OF CONNECTED BRANCHES	CONNECTABLE CAPACITY (TONS)	ELECTRICAL			WEIGHT (LBS)	SOUND PRESSURE (dBA)	BASIS OF DESIGN (1)	CONNECTED HEAT PUMP OUTDOOR UNIT
				VOLTAGE	MCA	MOCP				
BC-1-1	(2)	3 OF 8	28	208V/1P	0.83	15	106	50	MITSUBISHI CMB-P108NU-JA1	CU-7-1
BC-1-2	(2)	3 OF 8	28	208V/1P	0.83	15	106	50	MITSUBISHI CMB-P108NU-JA1	CU-7-2
BC-1-3	(2)	2 OF 8	28	208V/1P	0.83	15	106	50	MITSUBISHI CMB-P108NU-JA1	CU-7-3
BC-1-4	(2)	4 OF 8	28	208V/1P	0.83	15	106	50	MITSUBISHI CMB-P108NU-JA1	CU-7-4
BC-1-5	(2)	3 OF 8	28	208V/1P	0.83	15	106	50	MITSUBISHI CMB-P108NU-JA1	CU-7-5

NOTES:
(1) ROUTING OF REFRIGERANT LINES FROM INDOOR TO OUTDOOR UNITS NOT SHOWN ON PLANS. CONTRACTOR TO FIELD COORDINATE ROUTING.
(2) SEE SHEET M5.00 FOR VRF RISER DIAGRAM.

DIFFUSER SCHEDULE

CALLOUT	DESCRIPTION	AIRFLOW RANGE, CFM	FACE SIZE, IN	BASIS OF DESIGN (1)
CD-1	CEILING SUPPLY DIFFUSER	0-350	12x12	TITUS TMS
CD-2	CEILING SUPPLY DIFFUSER	0-1000	24x24	TITUS TMS
RG-1	CEILING RETURN GRILLE	0-750	12x12	TITUS 350ZRL
RG-2	CEILING RETURN GRILLE	0-2125	24x24	TITUS 350ZRL
EG-1	SIDEWALL EXHAUST GRILLE	0-750	12x12	TITUS 350ZRL
EG-2	CEILING EXHAUST GRILLE	0-750	12x12	TITUS 350ZRL
E

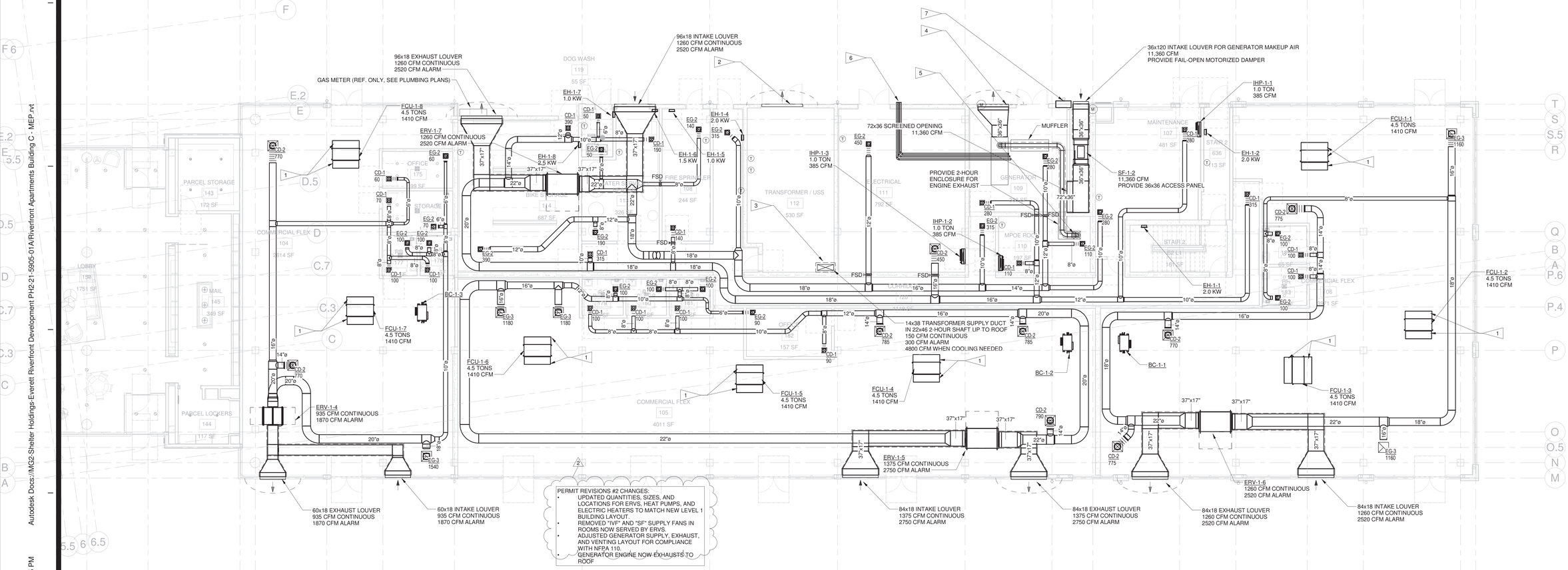
GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. FINAL AIR DISTRIBUTION LAYOUT TO BE COORDINATED WITH TENANT REQUIREMENTS.
2. PROVIDE 96x22 TRANSFORMER EXHAUST AIR OPENING (4,800 CFM) WITH LOUVER & WIRE MESH PER SNOHOMISH COUNTY PUD VAULT ROOM STANDARDS ON SHEET M0.01. EXHAUST OPENING MUST MAINTAIN THE FOLLOWING CLEARANCES PER WSMC 501.3.1:
   10 FEET FROM: PROPERTY LINES SEPARATING TWO LOTS; OPERABLE OPENINGS INTO BUILDINGS; AIR INTAKES.
   3 FEET HORIZONTALLY FROM (OR 10 FEET ABOVE OR BELOW) ADJOINING FINISHED SIDEWALK.
3. PROVIDE 14x44 TRANSFORMER SUPPLY AIR OPENING (4800 CFM) WITH METAL GRATINGS & WIRE MESH PER XFMR VAULT ROOM STANDARDS ON SHEET M0.01. SUPPLY AIR DUCT SHALL HAVE 3-HOUR FIRE RESISTANCE RATING AND SHALL NOT EXTEND MORE THAN 24 INCHES INTO VAULT.
4. GENERATOR VENTILATION: PROVIDE 72x120 EXHAUST LOUVER SIZED FOR 10,600 CFM (50% FREE AREA). CONNECT EXHAUST DUCT TO LOUVER AND GENERATOR RADIATOR PUSHER FAN PER MANUFACTURER'S INSTRUCTIONS. INSTALL LOUVER AT GROUND LEVEL TO ALLOW OPENING TO BE USED FOR GENERATOR INSTALLATION. BLANK OFF THE LOWER 24 INCHES OF THE LOUVER (**EXHAUST DUCT CONNECTING TO LOUVER WILL ONLY BE 72X96**) TO ALLOW BELLY TANK TO BE SHIFTED NORTH UNDERNEATH DUCT TOWARD EXTERIOR WALL, ALLOWING SPACE FOR PERSONNEL TO WALK BEHIND GENERATOR. PROVIDE FAIL-OPEN MOTORIZED DAMPER AT LOUVER TO BE POWERED CLOSED WHEN GENERATOR IS NOT ON.
5. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.
6. THREE (3) FUEL TANK VENTS FOR GENERATOR (REF. ONLY). CLEARANCES: 5 FEET FROM OPENINGS, 12 FEET FROM TAILPIPE EXHAUST, 12 FEET ABOVE ADJOINING GRADE, 15 FEET FROM FORCED-AIR INTAKES. ADDITIONAL CLEARANCES PER MANUFACTURER INSTRUCTIONS AND ASME BOILER & PRESSURE VESSEL CODE.
7. GENERATOR REMOTE FUEL FILL STATION (REF ONLY). MAINTAIN 5' CLEARANCE TO PROPERTY LINES, OPENINGS AND INTAKES.

2



PERMIT REVISIONS #2 CHANGES:
- UPDATED QUANTITIES, SIZES, AND LOCATIONS FOR ERVS, HEAT PUMPS, AND ELECTRIC HEATERS TO MATCH NEW LEVEL 1 BUILDING LAYOUT.
- REMOVED "IVF" AND "SF" SUPPLY FANS IN ROOMS NOW SERVED BY ERVS.
- ADJUSTED GENERATOR SUPPLY, EXHAUST, AND VENTING LAYOUT FOR COMPLIANCE WITH NFPA 110.
- GENERATOR ENGINE NOW EXHAUSTS TO ROOF

1 LEVEL 1 HVAC PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C
3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

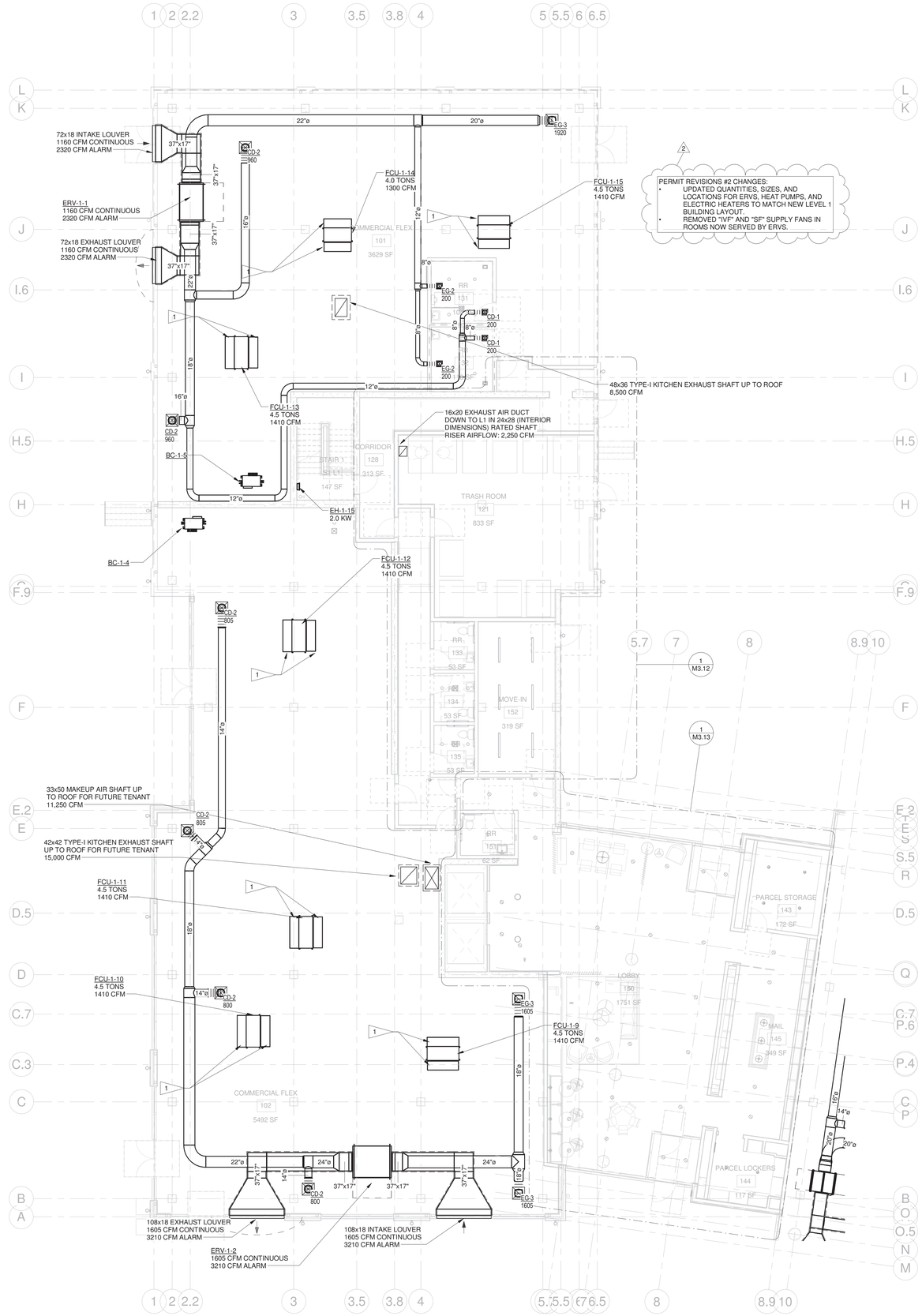
△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 1 HVAC
PLAN - NORTH

M2.01N

2/2/2024 3:05:05 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 LEVEL 1 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. FINAL AIR DISTRIBUTION LAYOUT TO BE COORDINATED WITH TENANT REQUIREMENTS.

2

PERMIT REVISIONS #2 CHANGES:
- UPDATED QUANTITIES, SIZES, AND LOCATIONS FOR ERVS, HEAT PUMPS, AND ELECTRIC HEATERS TO MATCH NEW LEVEL 1 BUILDING LAYOUT.
- REMOVED "IVF" AND "SF" SUPPLY FANS IN ROOMS NOW SERVED BY ERVS.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 1 HVAC PLAN - SOUTH

M2.01S

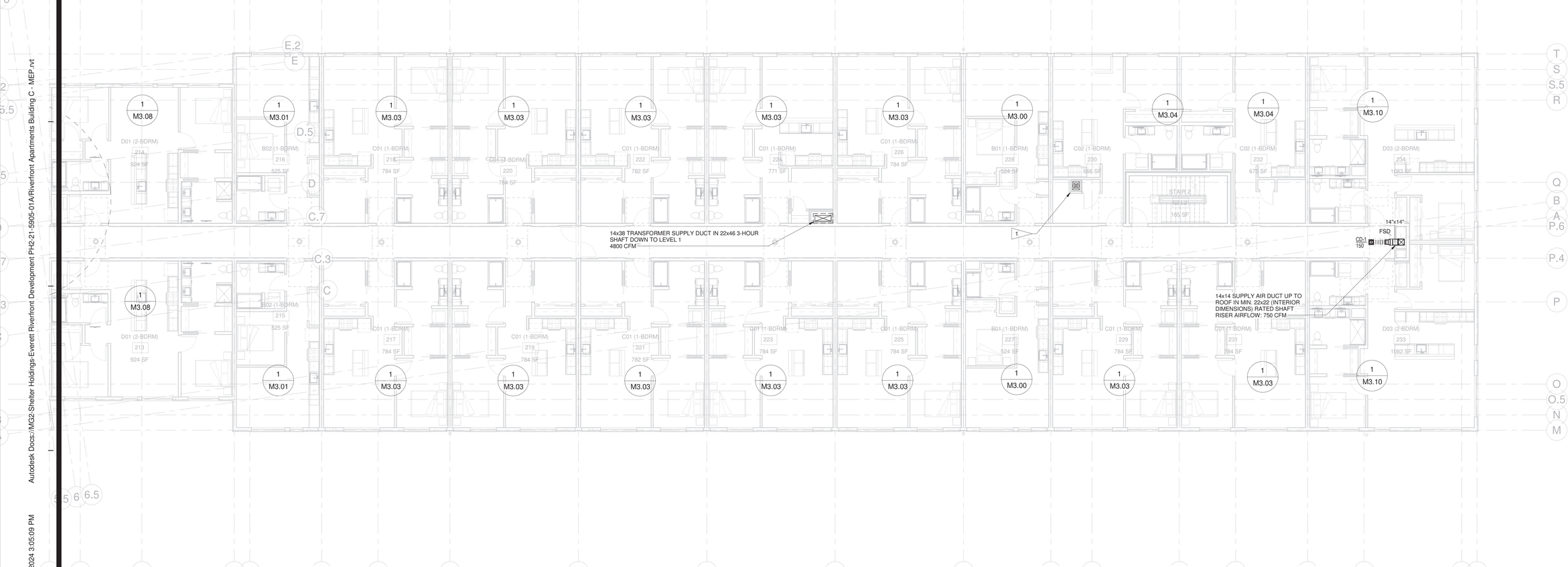
2/2/2024 3:05:08 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##>

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.



1 LEVEL 2 HVAC PLAN - NORTH
1/8" = 1'-0"

2/2/2024 3:05:09 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 2 HVAC PLAN - NORTH

M2.02N

1 LEVEL 2 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 2 HVAC
PLAN - SOUTH

M2.02S

2/2/2024 3:05:10 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES:

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.

1 LEVEL 3 HVAC PLAN - NORTH
1/8" = 1'-0"

2/2/2024 3:05:11 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 3 HVAC
PLAN - NORTH

M2.03N

1 LEVEL 3 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON STATE OF WASHINGTON 21768 REGISTERED PROFESSIONAL ENGINEER 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 3 HVAC
PLAN - SOUTH

M2.03S

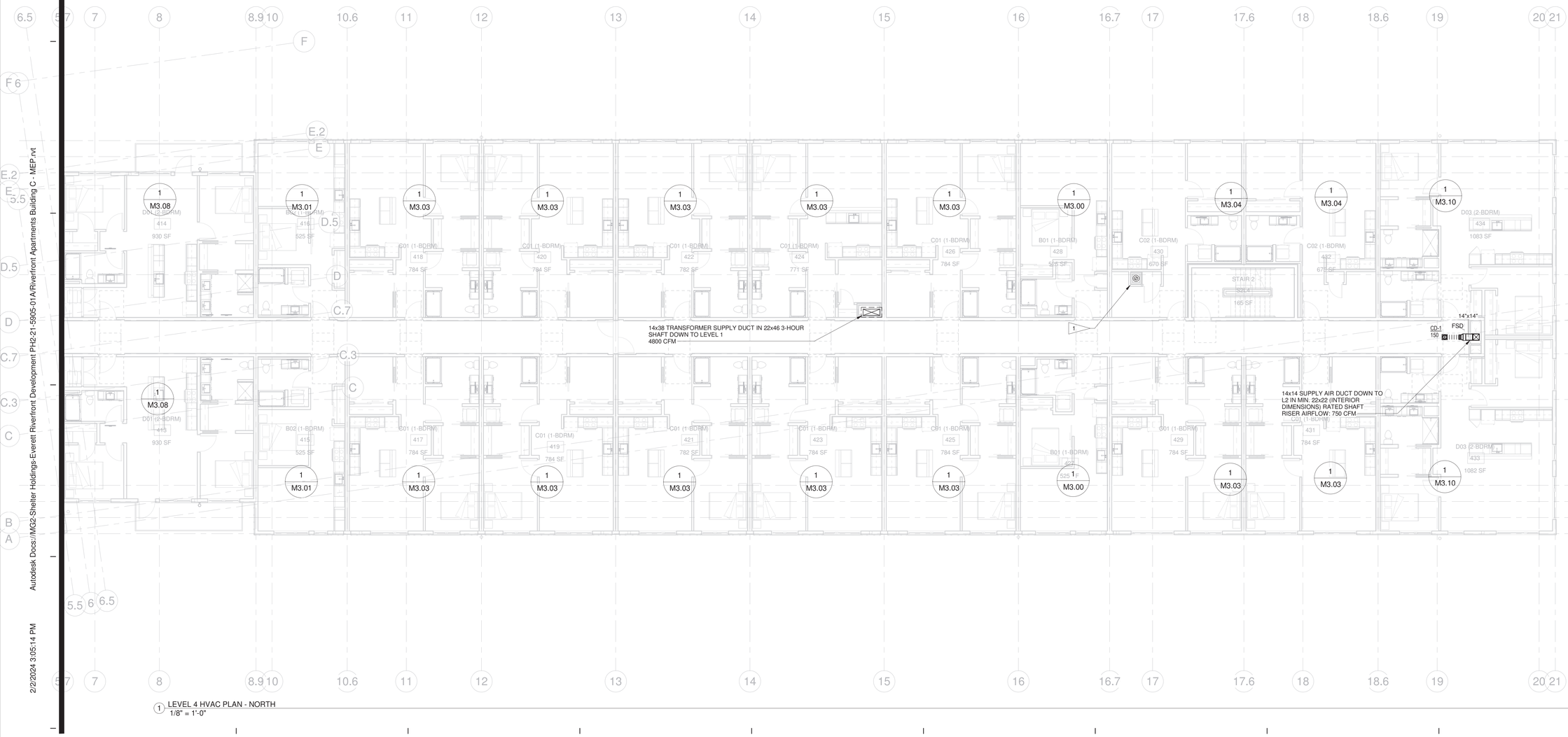
2/2/2024 3:05:12 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##>

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.



1 LEVEL 4 HVAC PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

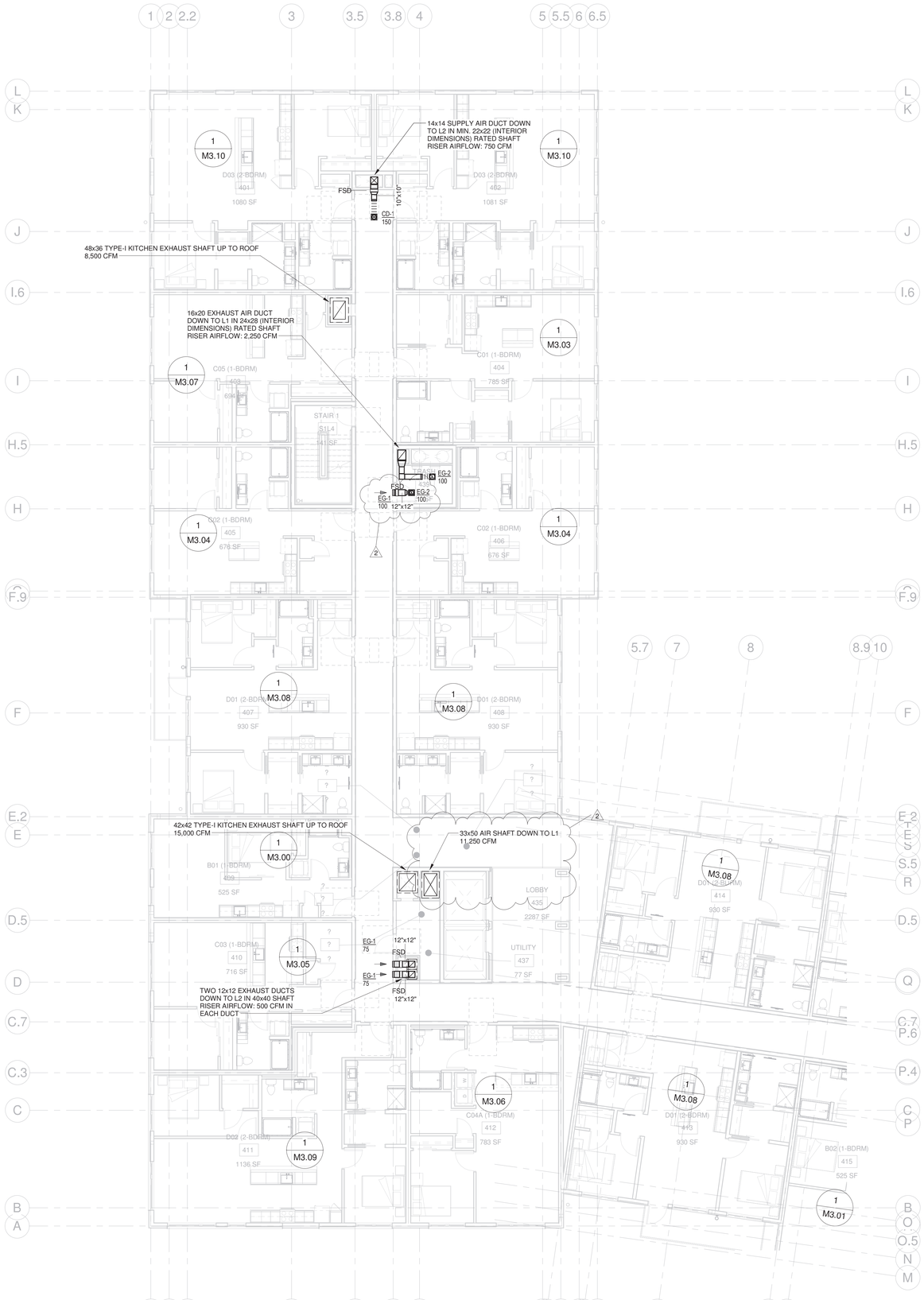
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 4 HVAC
PLAN - NORTH

M2.04N

2/2/2024 3:05:14 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 LEVEL 4 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 4 HVAC
PLAN - SOUTH

M2.04S

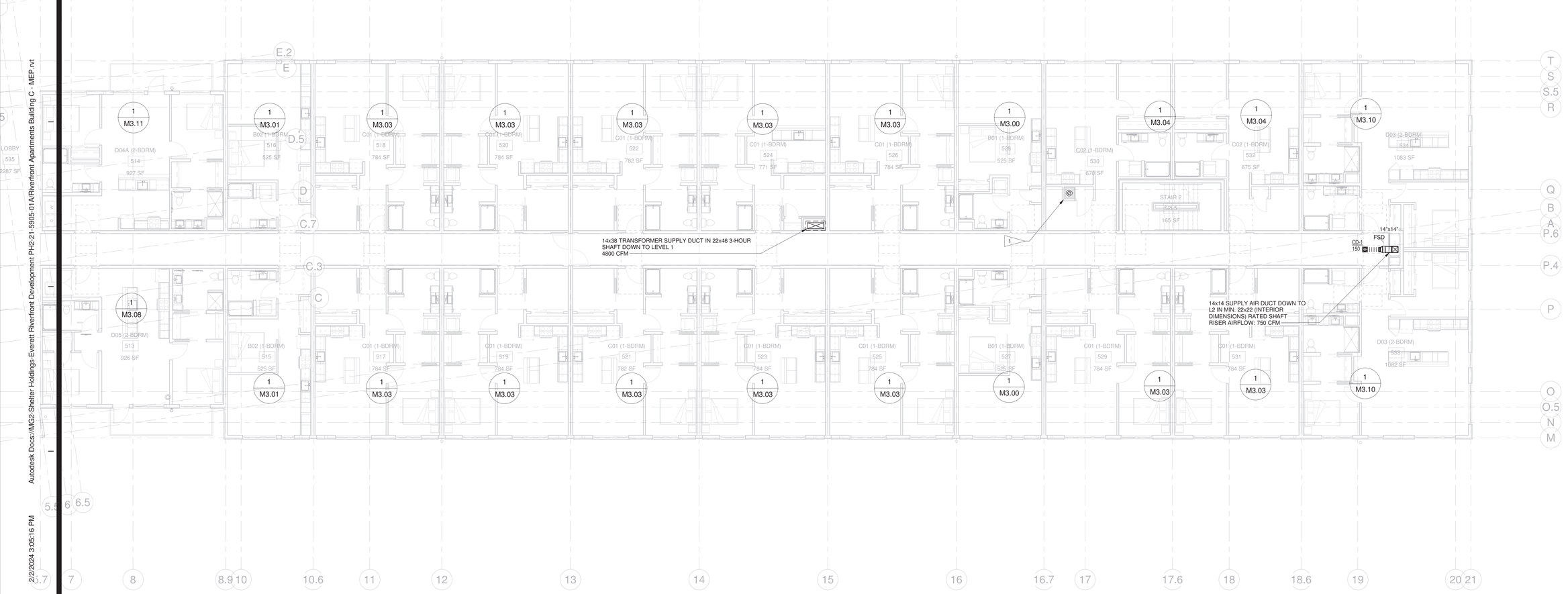
2/2/2024 3:05:15 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##>

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.



1 LEVEL 5 HVAC PLAN - NORTH
1/8" = 1'-0"

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt
2/2/2024 3:05:16 PM

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

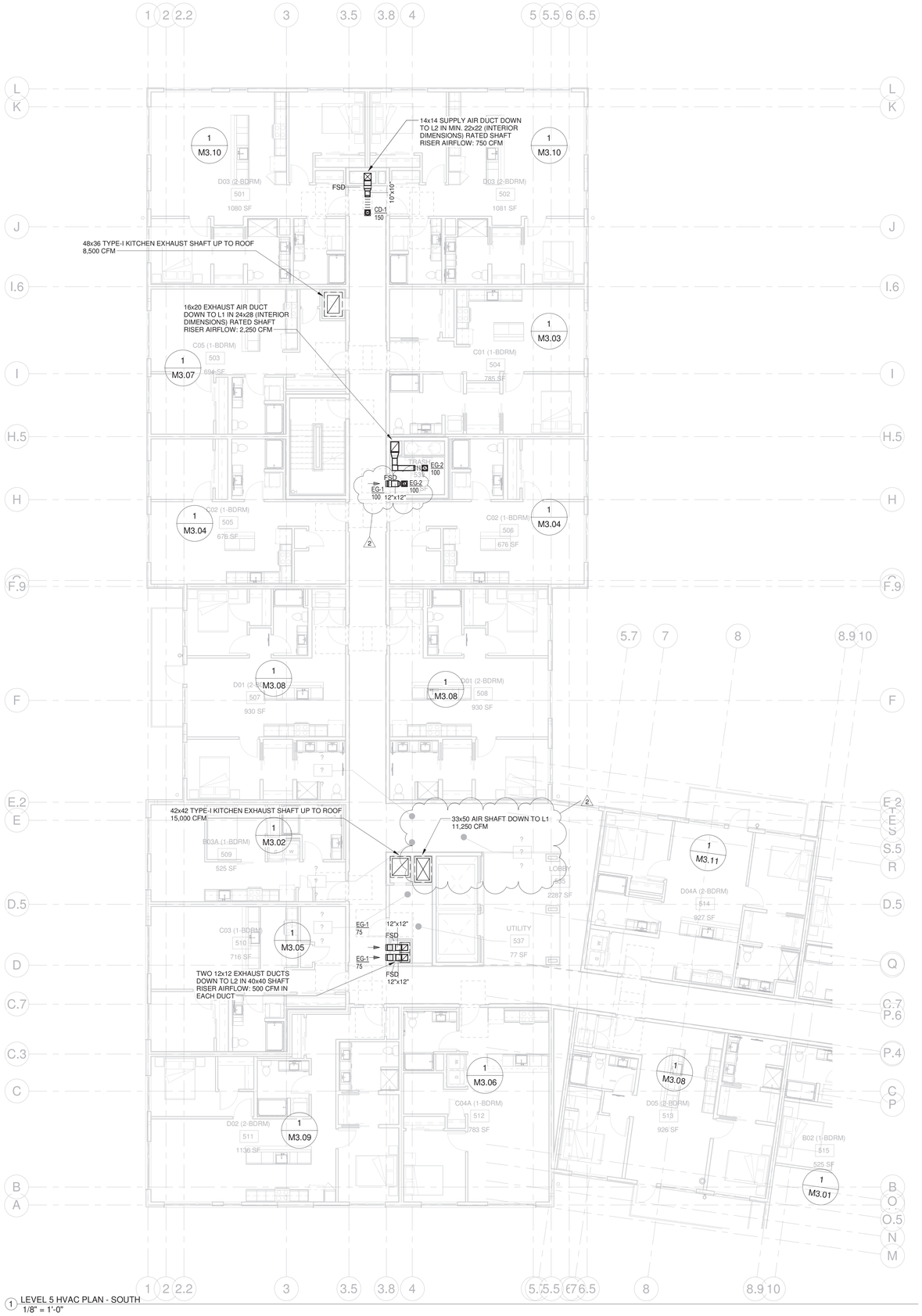
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 5 HVAC PLAN - NORTH

M2.05N



1 LEVEL 5 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 5 HVAC
PLAN - SOUTH

M2.05S

2/2/2024 3:05:17 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.

2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.

3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##>

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.

1 LEVEL 6 HVAC PLAN - NORTH
1/8" = 1'-0"

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt
2/2/2024 3:05:19 PM

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 6 HVAC
PLAN - NORTH

M2.06N

1 LEVEL 6 HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 6 HVAC
PLAN - SOUTH

M2.06S

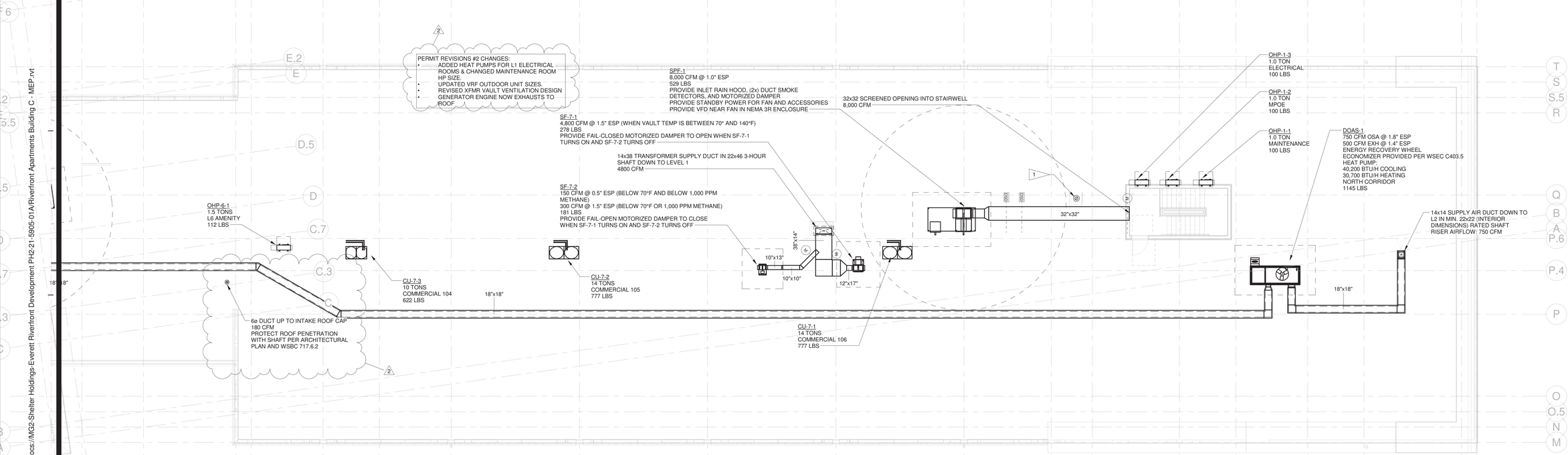
2/2/2024 3:05:20 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: ##

1. GENERATOR ENGINE EXHAUST: PROVIDE 8" SCHEDULE 40 BLACK STEEL TAILPIPE W/ 3" INSULATION ('EXTREME HEAT PROTECTION' HI-TEMP REMOVABLE OR EQUIVALENT). CONNECT TO ENGINE FLUE EXHAUST. TAILPIPE TERMINATION AT BUILDING EXTERIOR TO MAINTAIN 18 INCH CLEARANCE FROM COMBUSTIBLE MATERIALS PER NFPA 37 REQUIREMENTS. PROVIDE MUFFLER AND CONDENSATE DRAINAGE FOR PIPE. INSTALL PER MANUFACTURER'S INSTRUCTIONS. ROUTE PIPE TO TERMINATION ON ROOF IN 2-HOUR SHAFT ENCLOSURE. EXTEND FLUE AT LEAST 3' ABOVE ROOF. MAINTAIN 10' CLEARANCE FROM OPERABLE OPENINGS, AIR INTAKES, AND ADJOINING GRADE, 20' FROM PRESSURIZATION FAN INTAKES.



1 ROOF HVAC PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

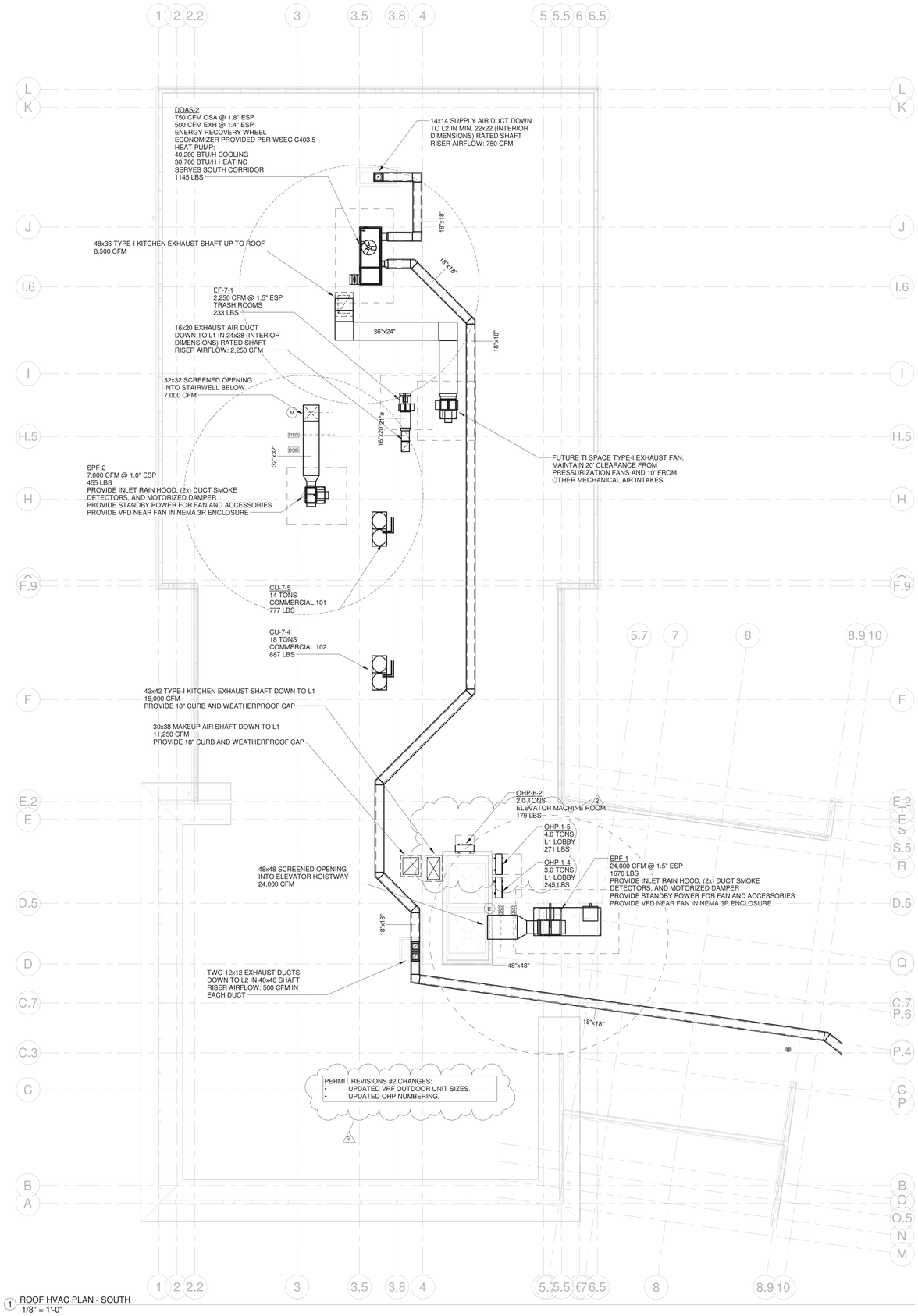
△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ROOF HVAC PLAN - NORTH

M2.07N

Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt
2/2/2024 3:05:21 PM



1 ROOF HVAC PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J ACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

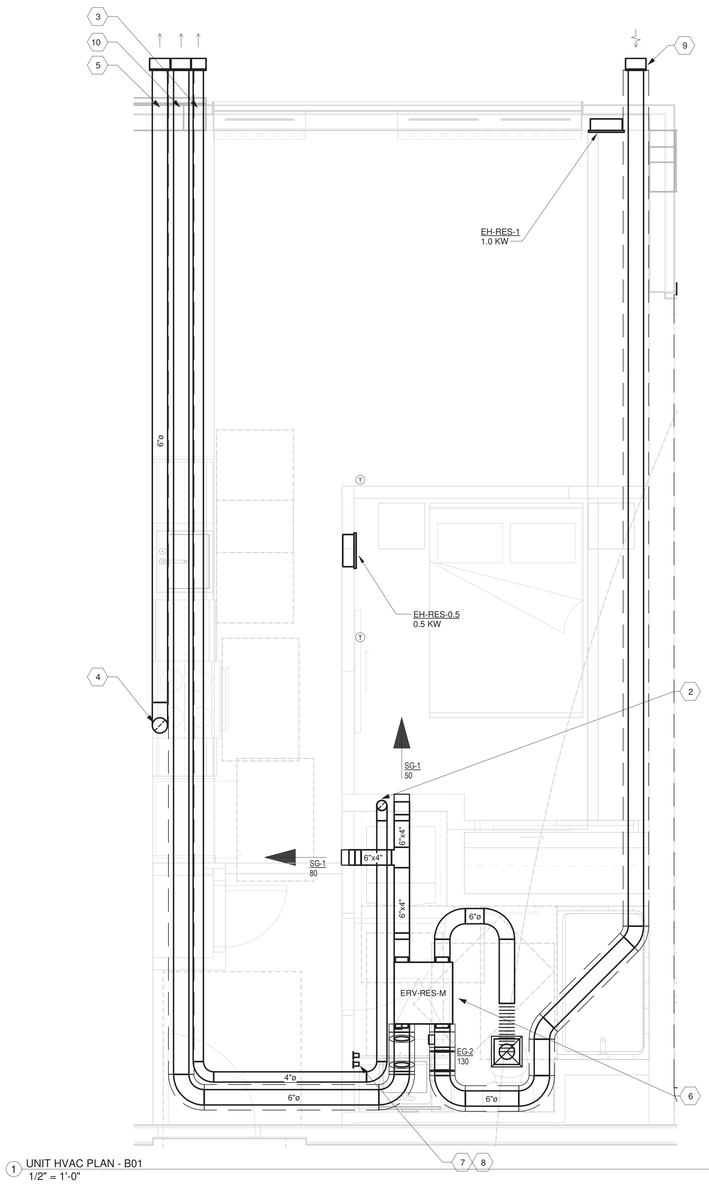
△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ROOF HVAC PLAN - SOUTH

M2.07S

2/2/2024 3:05:21 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - B01
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARIILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NOES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

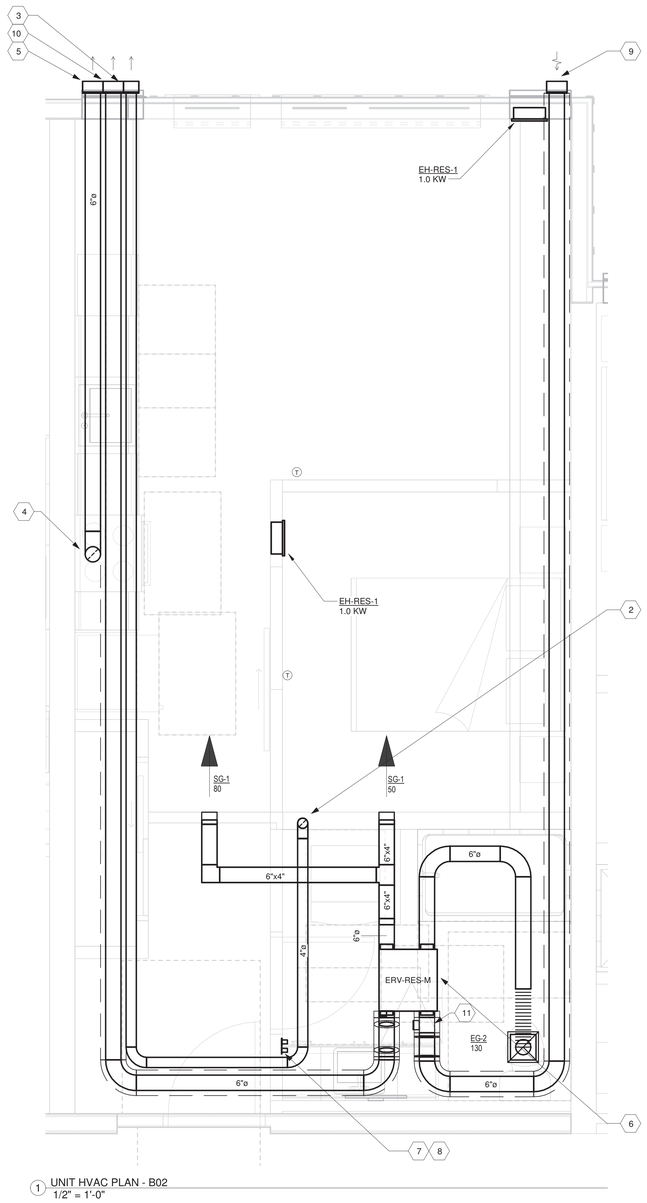
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - B01

M3.00

2/2/2024 3:05:22 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - B02
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

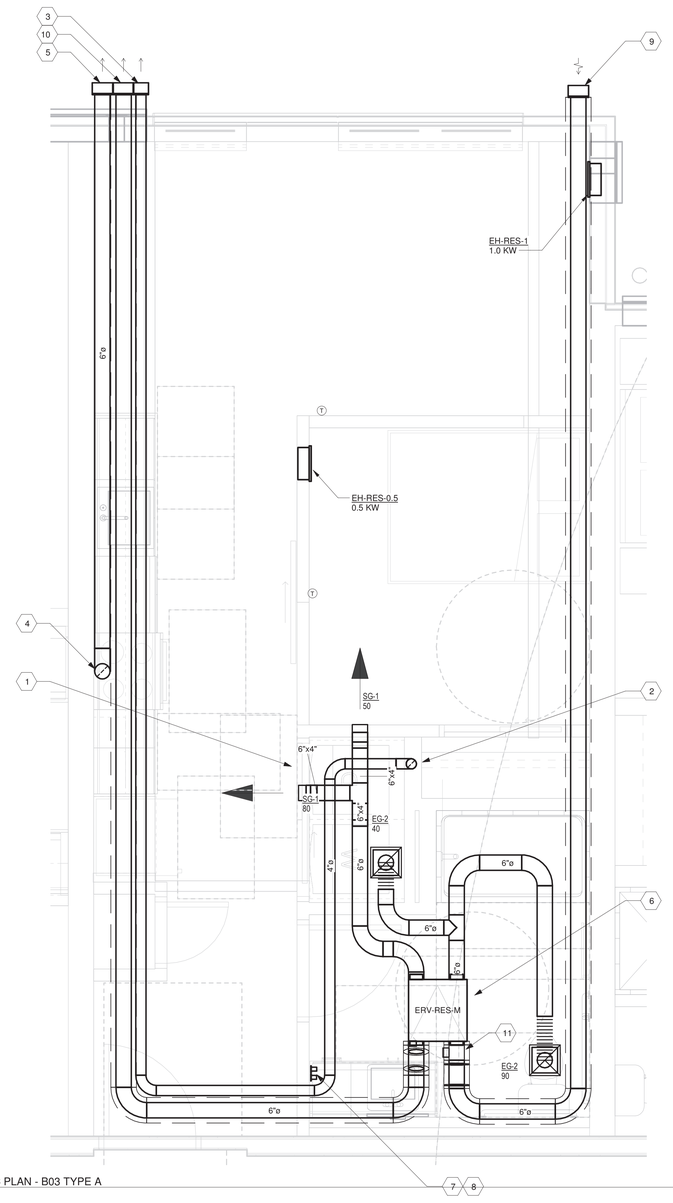
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - B02

M3.01

2/2/2024 3:05:22 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - B03 TYPE A
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

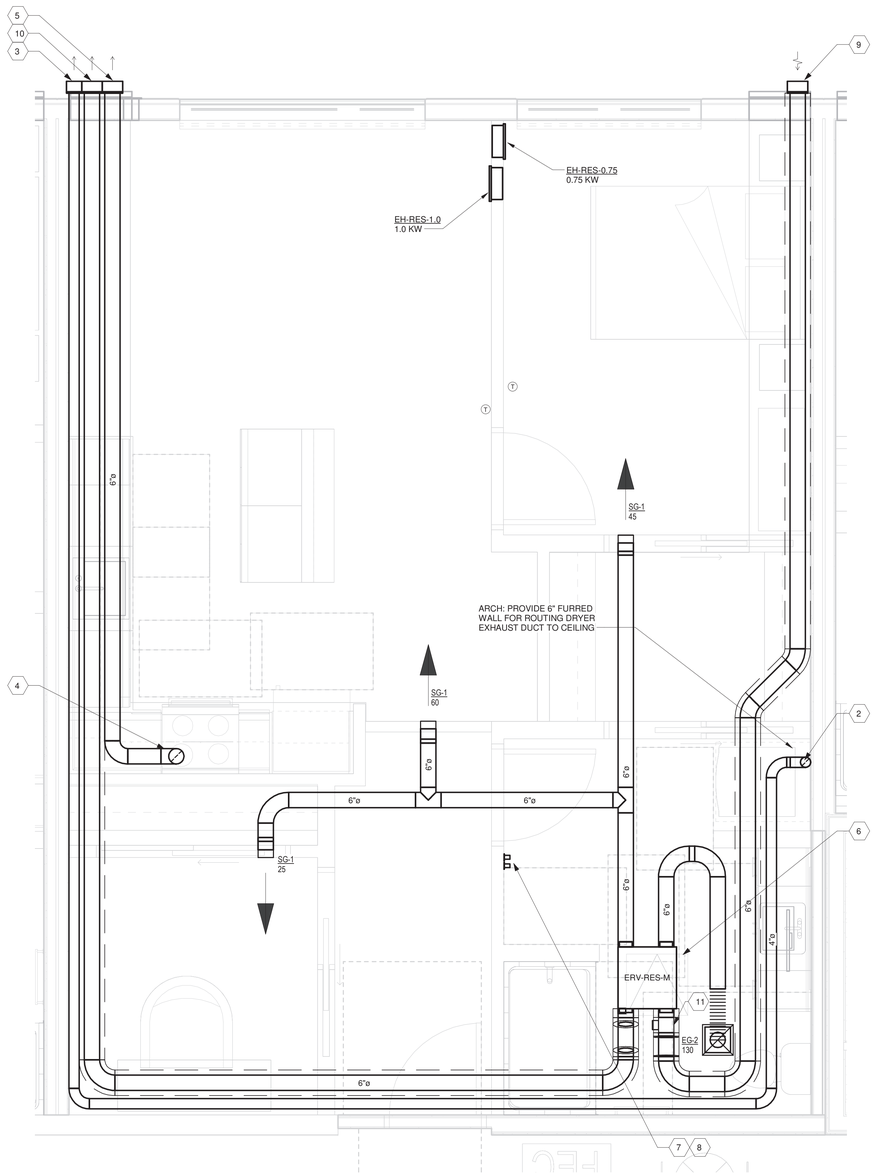
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - B03 TYPE A

M3.02

2/2/2024 3:05:23 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - C01
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

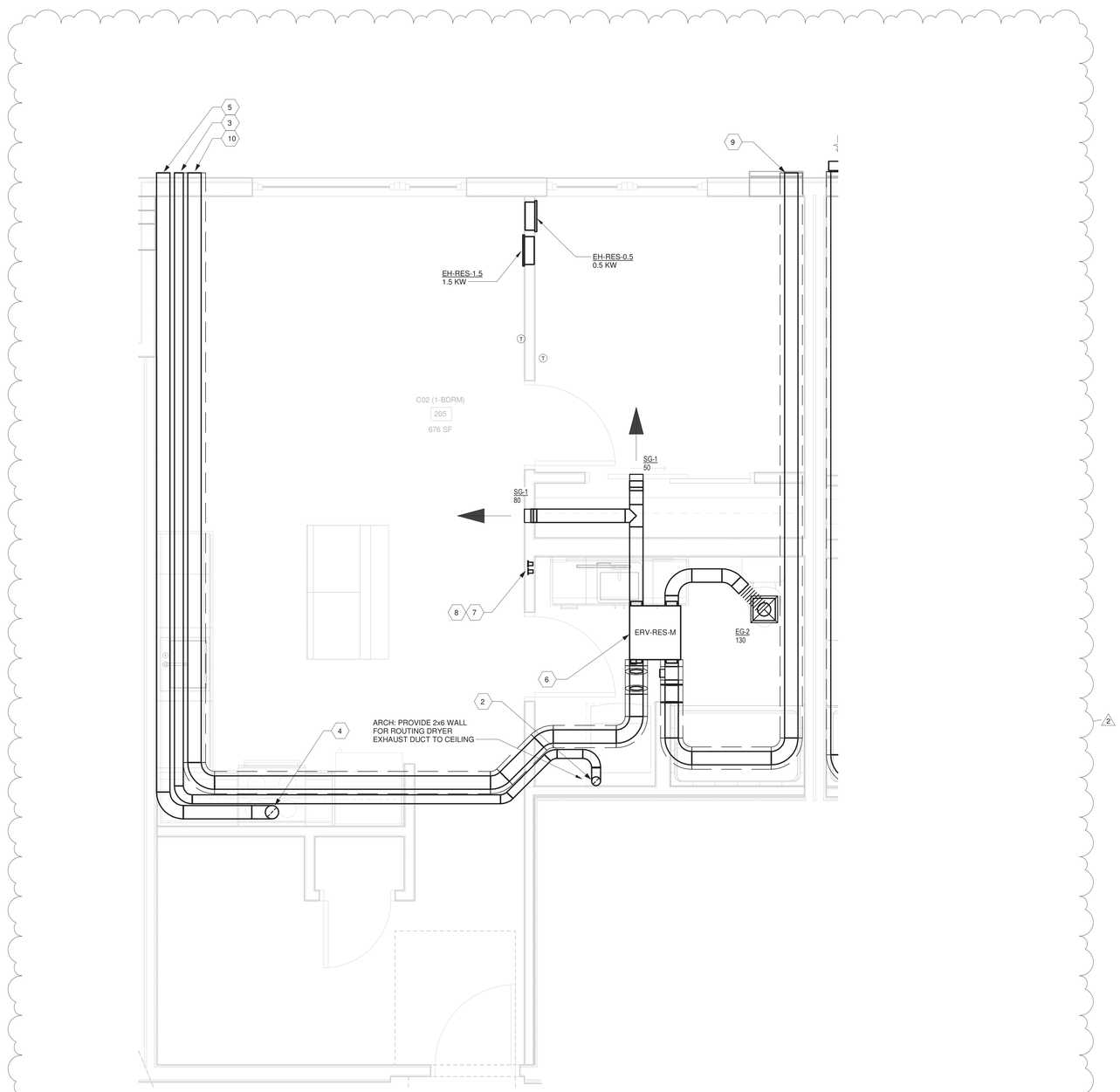
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - C01

M3.03

2/2/2024 3:05:24 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - C02
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARIILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

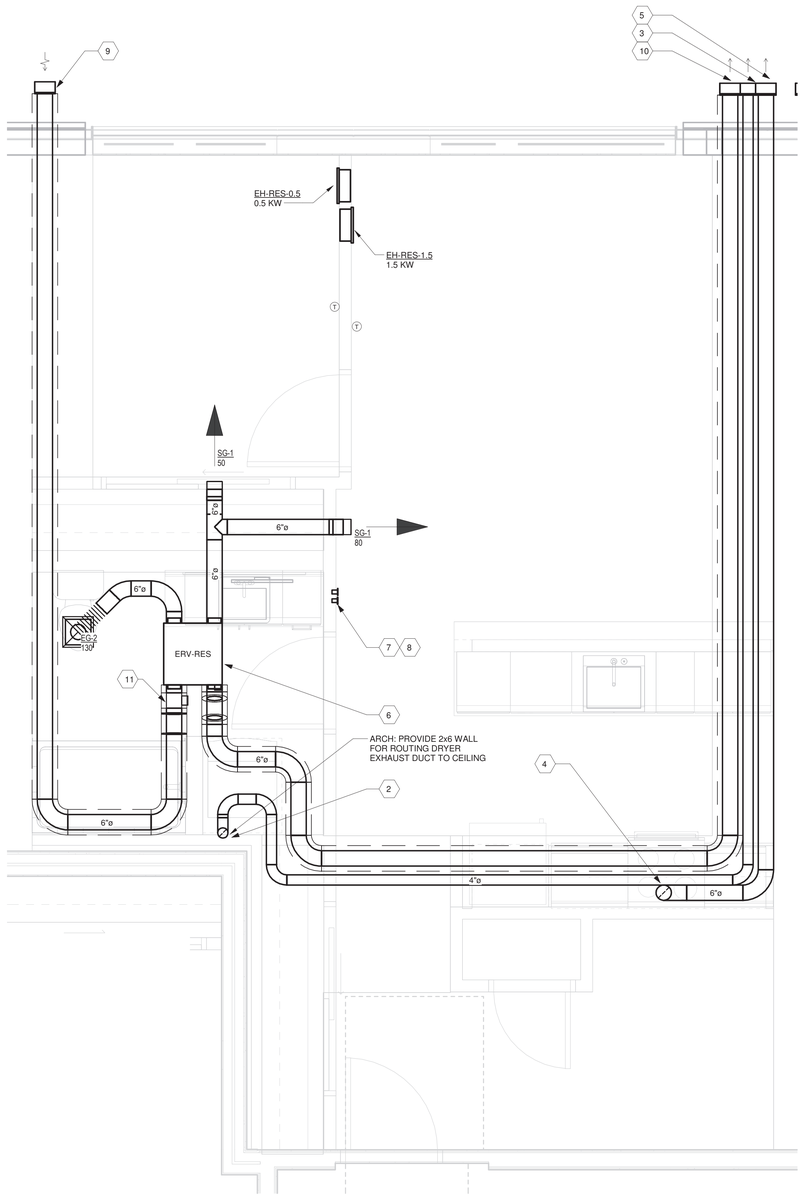
△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - C02

M3.04

2/2/2024 3:05:24 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - C03
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

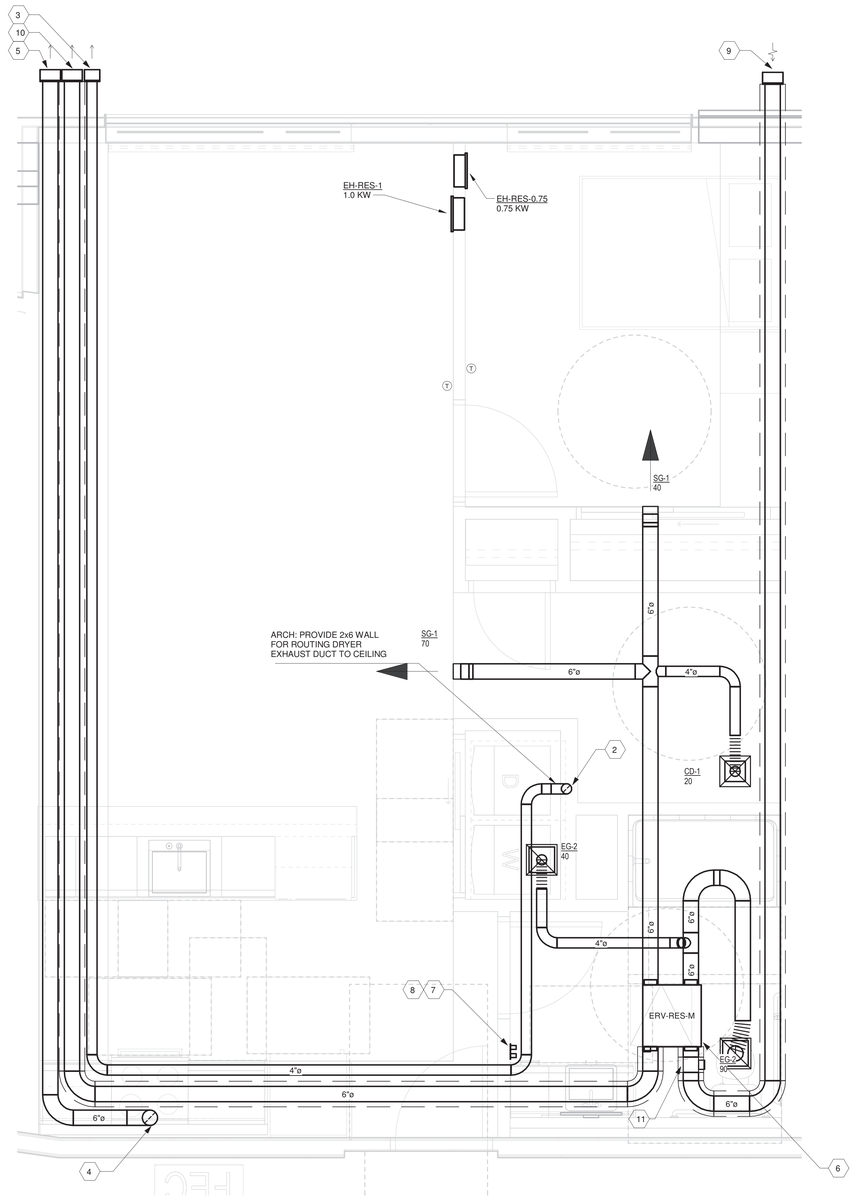
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - C03 TYPE A

M3.05

2/2/2024 3:05:25 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - C04 TYPE A
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARIILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

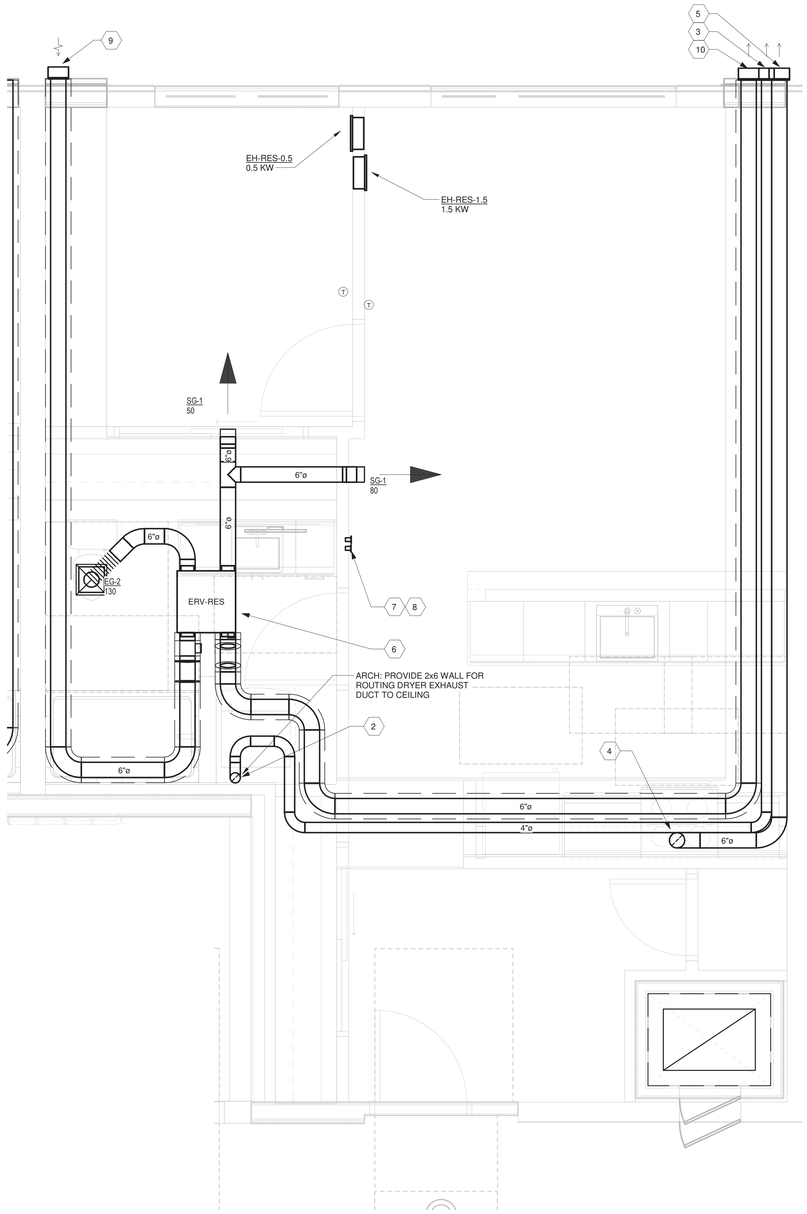
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT
HVAC PLAN - C04

M3.06

2/2/2024 3:05:26 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - C05
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

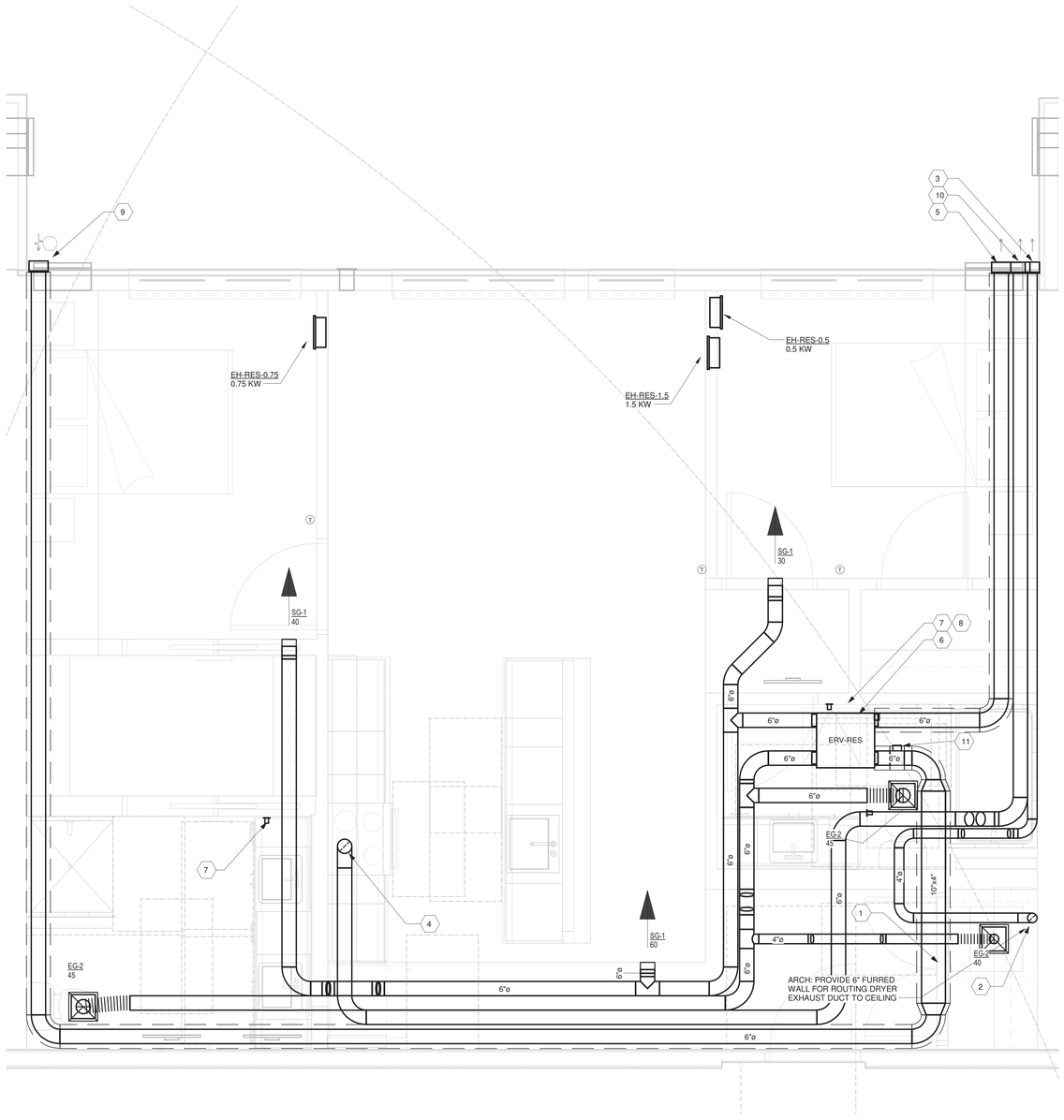
1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

2

ENLARGED UNIT HVAC PLAN - C05

M3.07

2/2/2024 3:05:26 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - D01
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

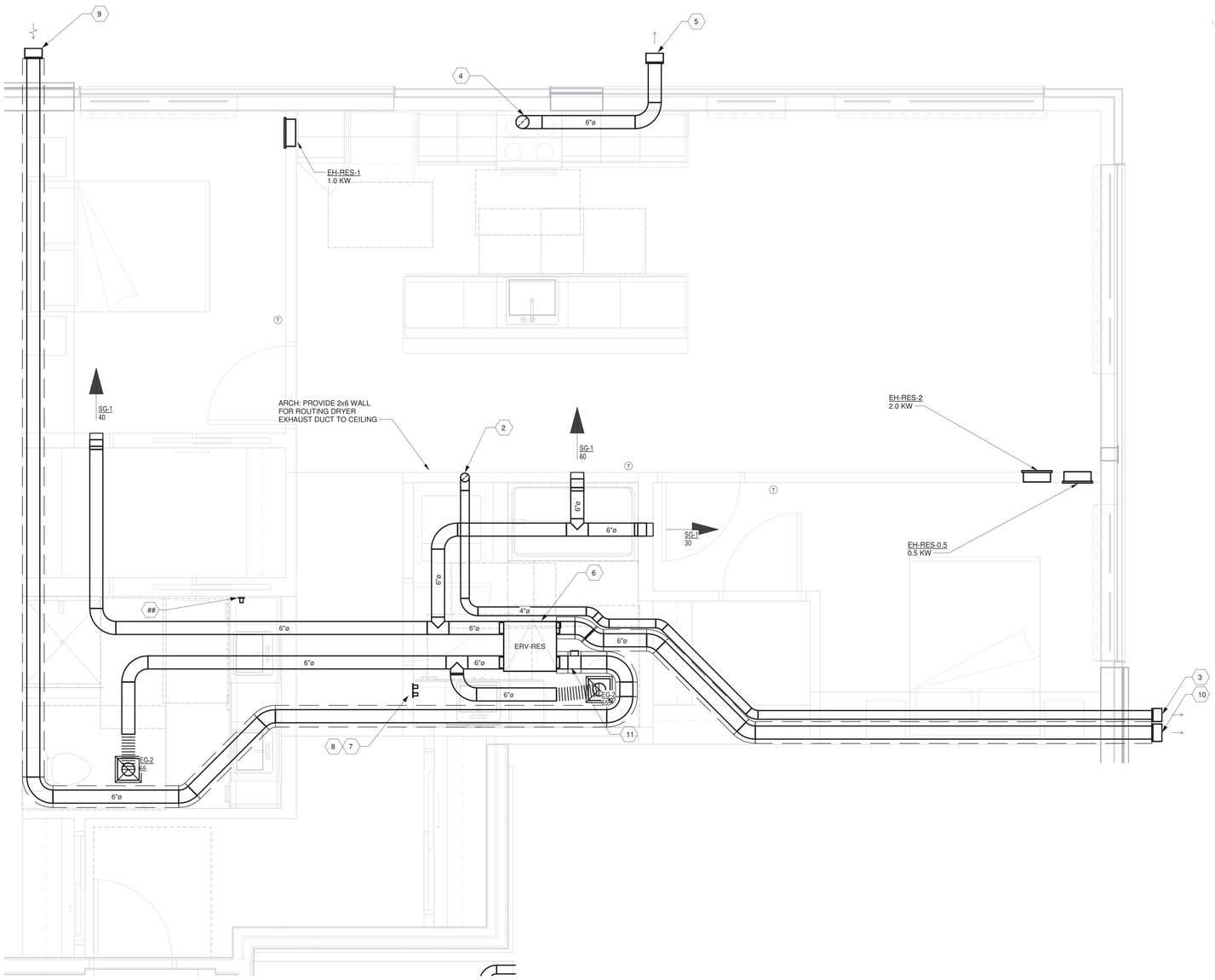
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - D01

M3.08

2/2/2024 3:05:27 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - D02
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

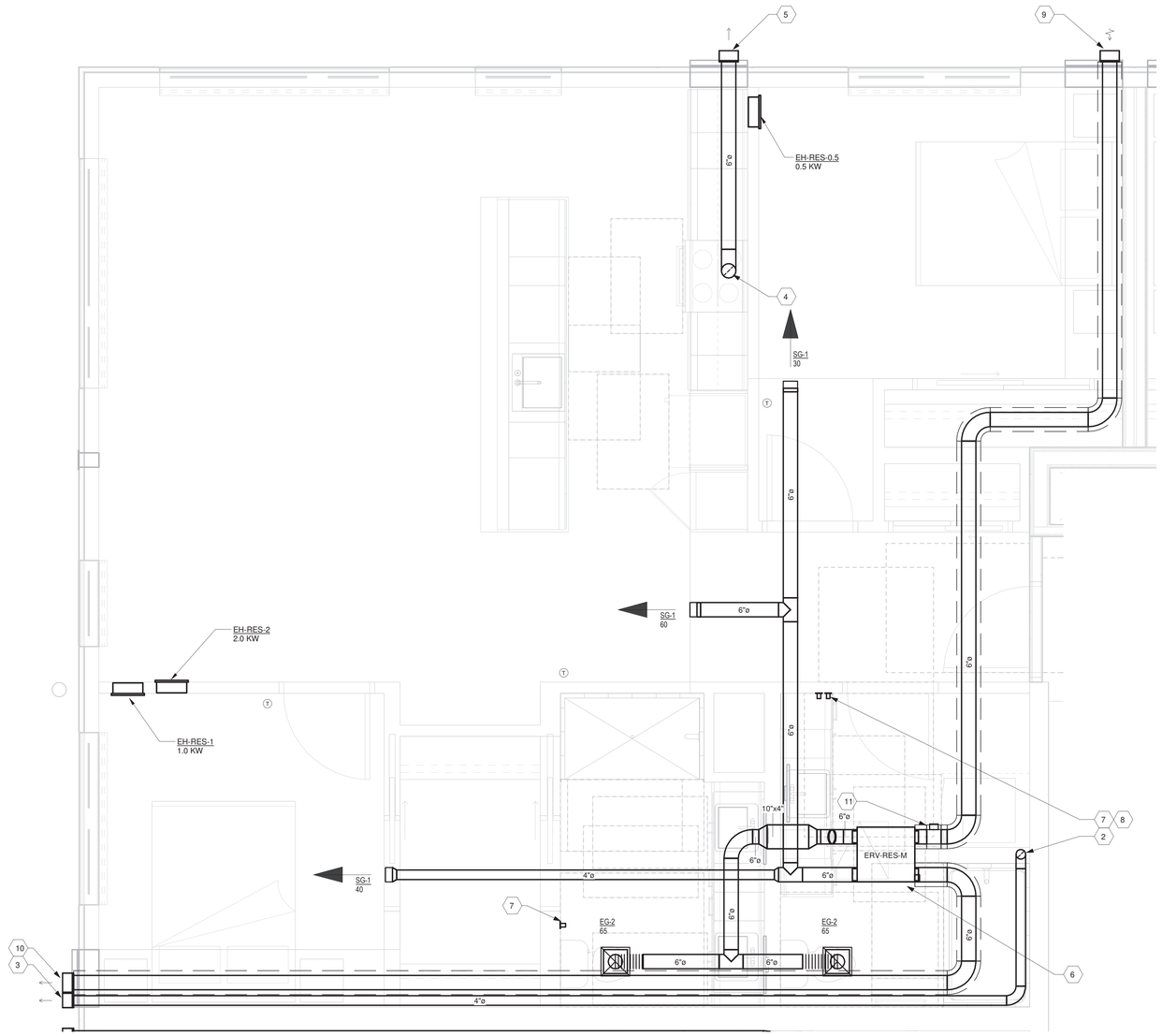
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - D02

M3.09

2/2/2024 3:05:28 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - D03
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARIILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

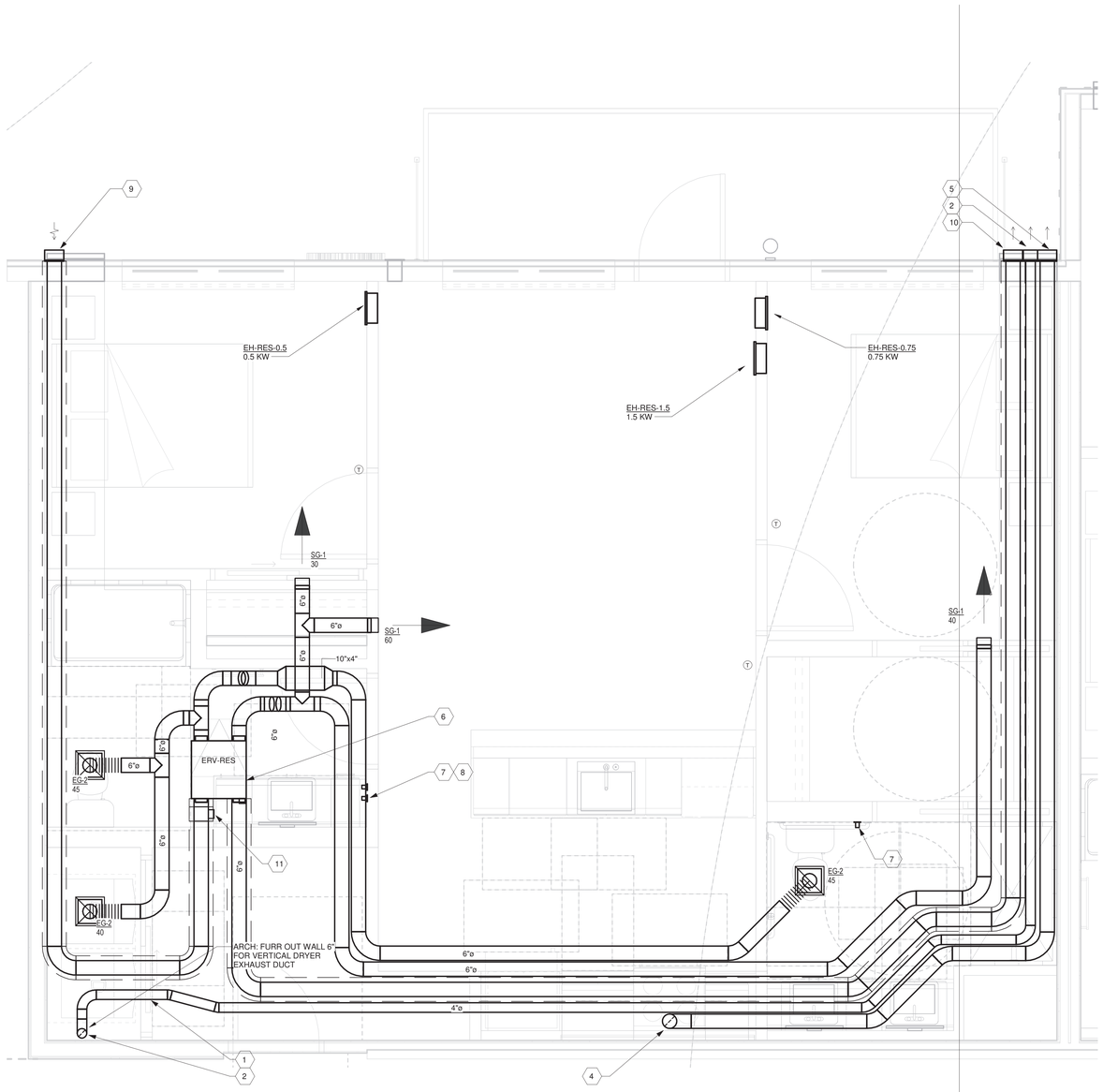
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - D03

M3.10

2/2/2024 3:05:29 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNIT HVAC PLAN - D04 TYPE A
1/2" = 1'-0"

GENERAL NOTES:

1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS, 10 FEET FROM MECHANICAL AIR INTAKES.
2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC 403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS LOCATED ON FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALLS, PROVIDE SURFACE-MOUNT WALL CAN.
5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET M0.00.

HEX NOTES: ##

1. LAUNDRY ROOMS OR CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER WSMC 504.6.
2. 4ø POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 504.8.4.1 FOR MAXIMUM ALLOWED LENGTH OF DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DRYER VENT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
3. 4ø DRYER EXHAUST VENT WALL CAP. PROVIDE BACKDRAFT DAMPER AT WALL CAP. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS.
4. 6ø POC TO DOMESTIC KITCHEN RANGE HOOD. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
5. 6ø DOMESTIC RANGE EXHAUST WALL CAP. PROVIDE BACKDRAFT DAMPER AND SCREEN AT WALL CAP.
6. RESIDENTIAL ENERGY RECOVERY VENTILATOR (ERV) FOR WHOLE HOUSE VENTILATION. INSTALL PER MANUFACTURER INSTRUCTIONS WITHIN DROPPED CEILING (UNIT IS 9-1/4" TALL). PROVIDE 24x24 ACCESS PANEL BELOW UNIT. PROVIDE FACTORY OPTION MERV-8 FILTERS. FOR MIRRORED APARTMENT UNITS, USE ERV-RES-M WHERE ERV-RES IS INDICATED ON NON-MIRRORED PLAN, OR USE ERV-RES WHERE ERV-RES-M IS INDICATED ON NON-MIRRORED PLAN.
7. PROVIDE TIMER SWITCH (ALDES #611228 OR EQUIVALENT) IN EACH BATHROOM. TIMER SWITCH TO TEMPORARIILY INCREASE ERV AIRFLOW FROM LOW SPEED (65 CFM) TO HIGH SPEED (130 CFM) FOR 20/40/60 MINUTES.
8. ELECTRICAL CONTRACTOR TO PROVIDE ON/OFF SWITCH IN MAIN BATHROOM, LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT: LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." SWITCH "ON" SHALL TURN ERV ON AND OPEN MOTORIZED INTAKE DAMPER, AND SWITCH "OFF" SHALL TURN ERV OFF AND CLOSE MOTORIZED INTAKE DAMPER.
9. MECHANICAL AIR INTAKE FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE R-8.0 INSULATION ON OUTSIDE AIR DUCT FROM TERMINATION UP TO ERV.
10. MECHANICAL EXHAUST TERMINATION FOR ERV (ALDES 22-026 OR EQUIVALENT). PROVIDE BACKDRAFT DAMPER (ALDES 99 025 OR EQUIVALENT) AT TERMINATION. PROVIDE MINIMUM R-8.0 INSULATION ON EXHAUST DUCT FROM TERMINATION UP TO ERV.
11. PROVIDE 120-VOLT MOTORIZED DAMPER (ALDES 23 041 NCES OR EQUIVALENT) NEAR ERV UNIT WHERE ACCESSIBLE BY ERV ACCESS PANEL. DAMPER TO BE OPEN WHEN ERV IS ON AND CLOSED WHEN ERV IS OFF.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2 Inc.

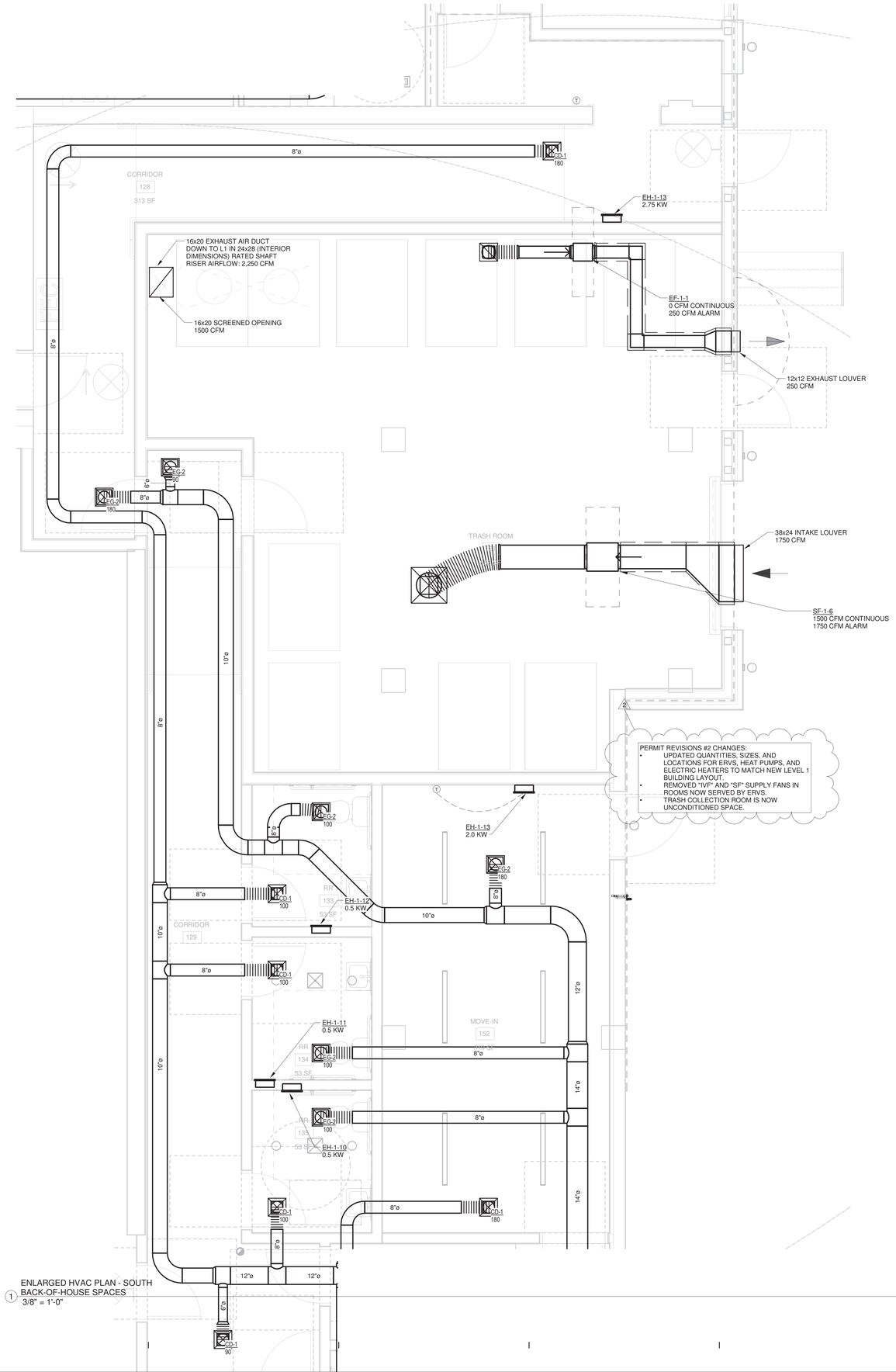
△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED UNIT HVAC PLAN - D04 TYPE A

M3.11

2/2/2024 3:05:29 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 ENLARGED HVAC PLAN - SOUTH BACK-OF-HOUSE SPACES
3/8" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

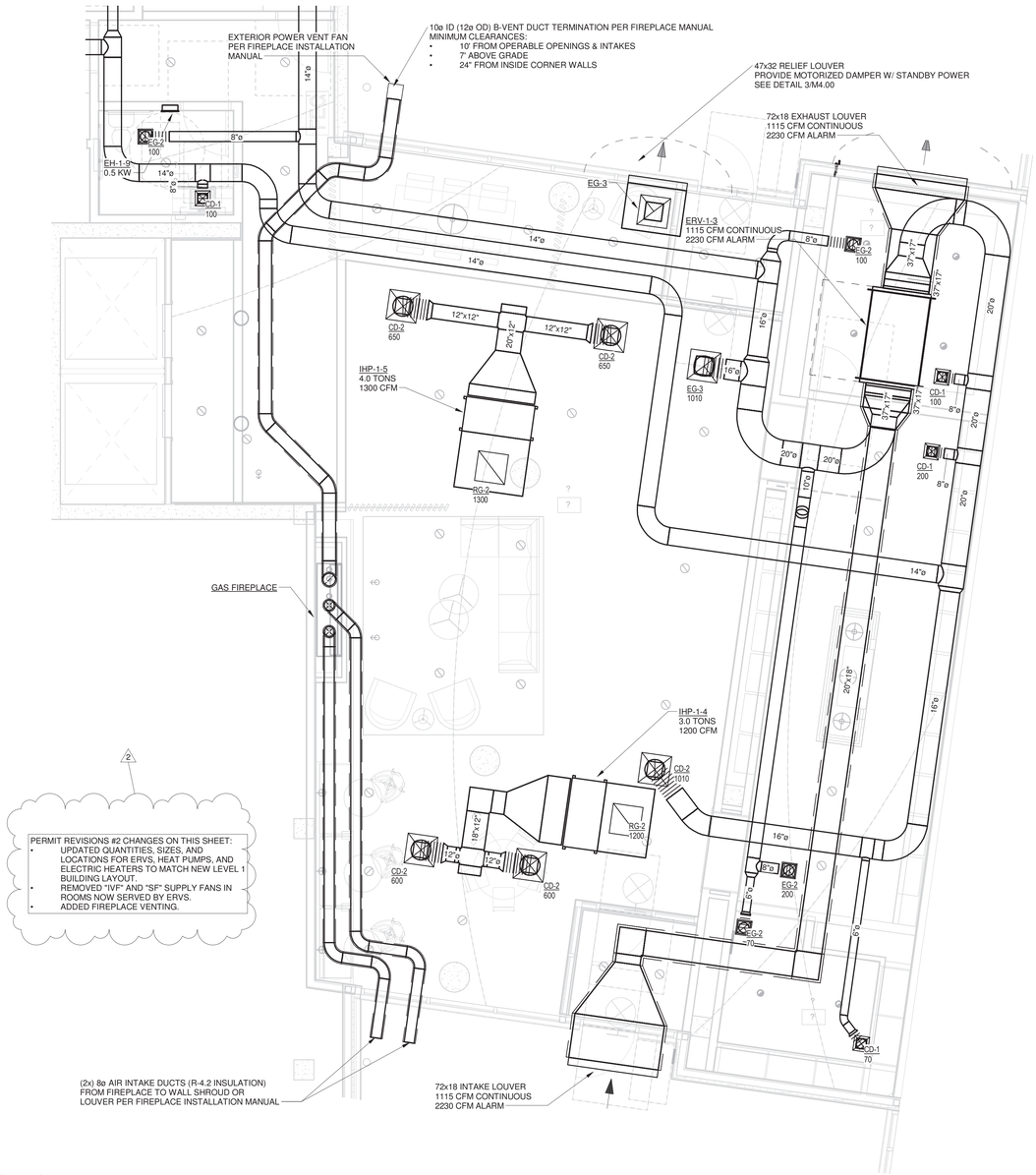
△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED HVAC PLAN - SOUTH BACK-OF-HOUSE SPACES

M3.12

2/2/2024 3:05:30 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 ENLARGED HVAC PLAN - SOUTH LOBBY
1/4" = 1'-0"

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <##>

1. NOT USED.

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED HVAC PLAN - SOUTH LOBBY

M3.13

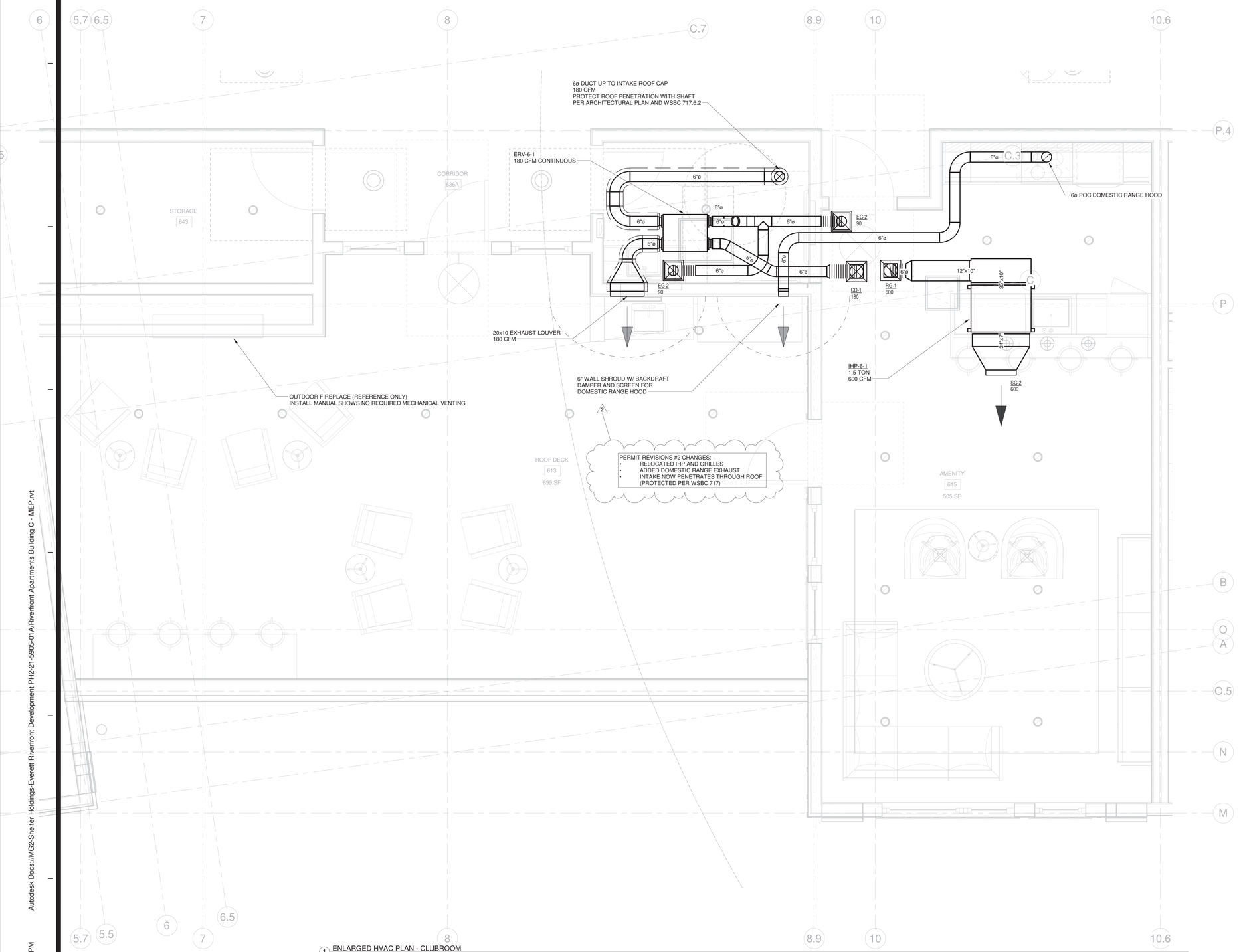
2/2/2024 3:05:32 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

1. EXHAUST OUTLETS TO BE LOCATED NOT LESS THAN 3 FEET FROM PROPERTY LINES & OPERABLE OPENINGS & NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKES.
2. MECHANICAL OUTDOOR AIR INTAKES TO BE LOCATED NOT LESS THAN 10 FEET FROM LOT LINES (UNLESS FRONTING STREET OR PUBLIC WAY); 10 FEET FROM EXHAUST OUTLETS; 10 FEET HORIZONTALLY FROM OR 25 FEET ABOVE VENTS, STREETS, ALLEYS, PARKING LOTS, LOADING DOCKS; NOT LESS THAN 3 FEET BELOW CONTAMINANT SOURCES WHERE SOURCES ARE LOCATED WITHIN 10 FEET OF THE OPENING.
3. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS OR OPPOSED-BLADE DAMPERS IN ALL DUCTED SYSTEMS FOR BALANCING PER HVAC NOTES ON SHEET M0.00.

FLAG NOTES: <## >

1. NOT USED.



1 ENLARGED HVAC PLAN - CLUBROOM
1/2" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

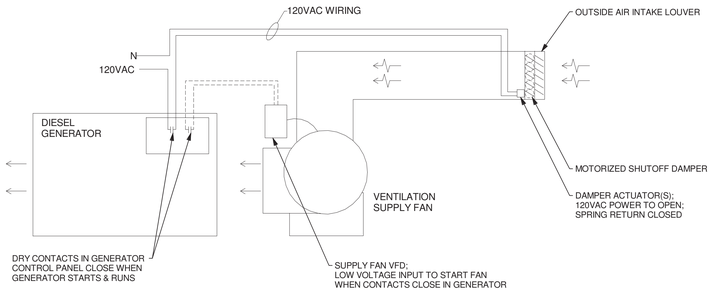
△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ENLARGED HVAC PLAN - CLUBROOM

M3.14

2/2/2024 3:05:33 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

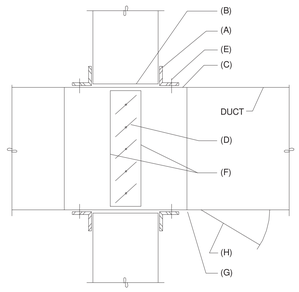


GENERATOR SUPPLY FAN * MOTORIZED DAMPER DIAGRAM

DETAIL

SCALE: NONE

7 / M4.00



NOTES:
(A) RETAINING ANGLES, LAP OPENING 1" MINIMUM AND COVER CORNERS OF OPENING.
(B) CLEARANCE BETWEEN WALL AND SLEEVE BOTH DIMENSIONS.
(C) STEEL SLEEVE.
(D) APPROVED COMBINATION FIRE/SMOKE DAMPER.
(E) SECURE RETAINING ANGLES TO SLEEVE ONLY.
(F) SECURE DAMPER TO SLEEVE.
(G) CONNECT DUCT TO SLEEVE WITH BREAK-AWAY CONNECTION (TYP).
(H) ACCESS DOOR, SIZE TO MEET AHJ REQUIREMENTS (6x6 MINIMUM).

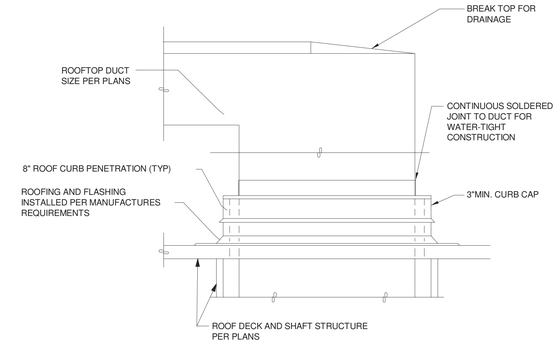
1. COMPLY WITH SMACNA FSRDIG AND MANUFACTURER'S INSTRUCTIONS.
2. DAMPER FREE AREA SHALL BE MINIMUM 90% OF AREA OF CONNECTING DUCT. INCREASE DAMPER SIZE AND PROVIDE TRANSITIONS TO CONNECTING DUCTS AS NECESSARY TO MEET THIS REQUIREMENT.

COMBINATION FIRE/SMOKE DAMPER INSTALLATION

DETAIL

SCALE: NONE

4 / M4.00

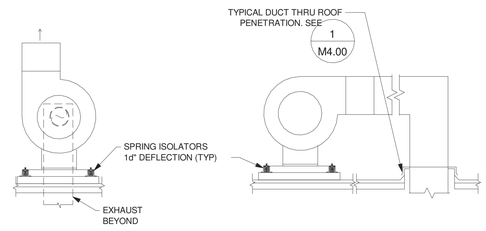


DUCT PENETRATION THROUGH ROOF

DETAIL

SCALE: NONE

1 / M4.00



EXHAUST

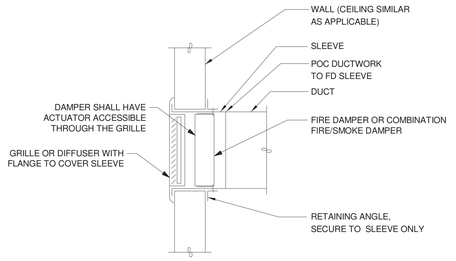
SUPPLY

UTILITY FAN MOUNTING

DETAIL

SCALE: NONE

8 / M4.00

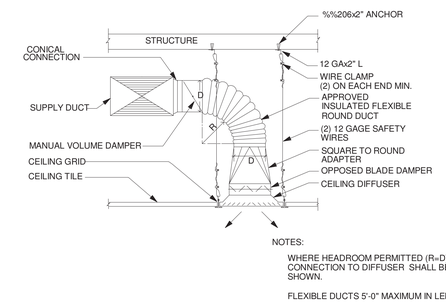


DAMPER INSTALLATION AT GRILLE OR DIFFUSER

DETAIL

SCALE: NONE

5 / M4.00



NOTES:

WHERE HEADROOM PERMITTED (R=D) CONNECTION TO DIFFUSER SHALL BE MADE AS SHOWN.

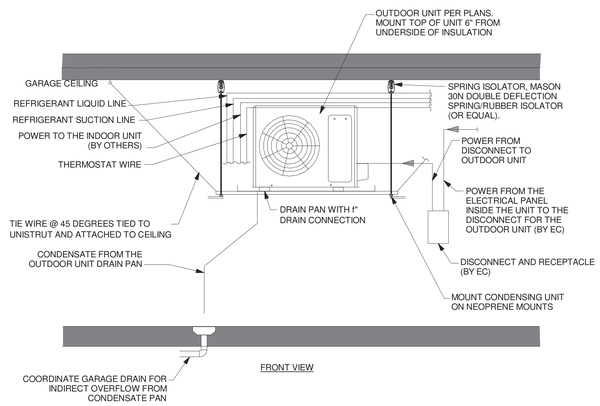
FLEXIBLE DUCTS 5'-0" MAXIMUM IN LENGTH, UON.

DIFFUSER CONNECTION

DETAIL

SCALE: NONE

2 / M4.00

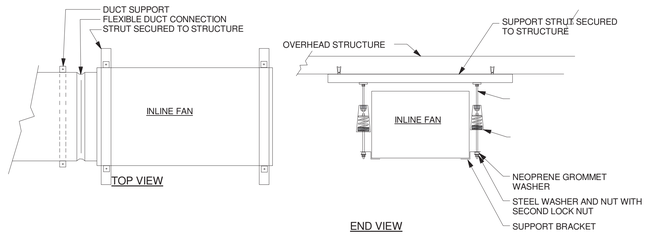


CONDENSING UNIT WALL INSTALLATION

DETAIL

SCALE: NONE

9 / M4.00



MECHANICAL UNIT SUPPORT REQUIREMENTS :

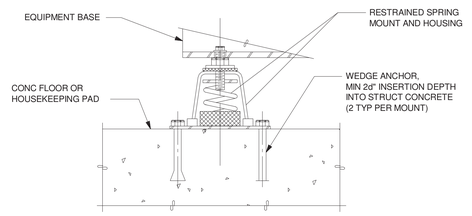
1. MECHANICAL UNITS TO BE SUPPORTED FROM STRUCTURE AS SHOWN AT ALL FOUR CORNERS.
2. PROVIDE RUBBER GROMMETS AT CORNER SUPPORTS AT UNIT.
3. PROVIDE MASON #30N COMBINATION DOUBLE DEFLECTION AND SPRING ISOLATORS SECURED TO STRUT SECTIONS. SUSPEND THREADED ROD FROM ISOLATOR.
4. PROVIDE FLEX CONNECTION BETWEEN UNIT AND DUCTWORK.
5. SUPPORT RODS AND ANCHORS TO BE PLACED SUCH THAT THE SUPPORTS TO NOT CONTACT THE MECHANICAL UNIT.
6. PROVIDE SECTION OF RUBBER HOSE TO ISOLATE THE COPPER CONDENSATE DRAIN. SECURE THE HOSE TO PIPE WITH HOSE CLAMPS.
7. PROVIDE FLEXIBLE HOSES FOR CONDENSER WATER (WHERE APPLICABLE).

HORIZONTAL FAN MOUNTING DETAIL

DETAIL

SCALE: NONE

6 / M4.00



SPRING ISOLATOR MOUNTING

DETAIL

SCALE: NONE

3 / M4.00

RIVERFRONT
APARTMENTS
BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON
ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

MECHANICAL
DETAILS

M4.00

2/2/2024 3:05:33 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

NOT USED

DETAIL

SCALE: NONE

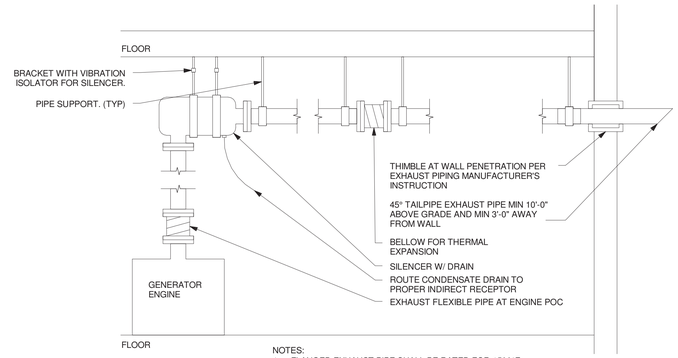
7 M4.01

NOT USED

DETAIL

SCALE: NONE

4 M4.01



NOTES:
1. FLANGED EXHAUST PIPE SHALL BE RATED FOR 1500°F.
2. ALL PIPING HAS 9" MIN CLEARANCE FROM COMBUSTIBLE MATERIAL.
3. KEEP EXHAUST PIPE AWAY FROM FUEL RELATED ITEMS.
4. PIPE SHALL SLOPE AWAY FROM ENGINE.
5. PIPE SIZE PER EXHAUST PIPING MANUFACTURER'S INSTRUCTION.
6. SWEEP ELBOW RADIUS SHALL BE 3 TIMES THE PIPE DIAMETER.

GENERATOR EXHAUST PIPING DETAIL

DETAIL

SCALE: NONE

1 M4.01

NOT USED

DETAIL

SCALE: NONE

8 M4.01

NOT USED

DETAIL

SCALE: NONE

5 M4.01

DWELLING UNIT VENTILATION WIRING DIAGRAM

DETAIL

SCALE: NONE

2 M4.01

NOT USED

DETAIL

SCALE: NONE

9 M4.01

NOT USED

DETAIL

SCALE: NONE

6 M4.01

NOT USED

DETAIL

SCALE: NONE

3 M4.01

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

MECHANICAL DETAILS

M4.01

2/2/2024 3:05:33 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

PERMIT REVISIONS #2 CHANGES:
- UPDATED VRF FAN COIL UNIT AND CONDENSER UNIT SIZING

2

CU-7-5
14 TONS

CU-7-4
18 TONS

CU-7-3
10 TONS

CU-7-2
14 TONS

CU-7-1
14 TONS

ROOF

LEVEL 6

LEVEL 5

LEVEL 4

LEVEL 3

FCU-1-12
4.5 TONS
COMMERCIAL 102

FCU-1-11
4.5 TONS
COMMERCIAL 102

FCU-1-10
4.5 TONS
COMMERCIAL 102

FCU-1-9
4.5 TONS
COMMERCIAL 102

BC-1-4

FCU-1-8
4.5 TONS
COMMERCIAL 104

FCU-1-7
4.5 TONS
COMMERCIAL 104

BC-1-3

FCU-1-3
4.5 TONS
COMMERCIAL 106

FCU-1-2
4.5 TONS
COMMERCIAL 106

FCU-1-1
4.5 TONS
COMMERCIAL 106

BC-1-1

BC-1-5

FCU-1-13
4.5 TONS
COMMERCIAL 101

FCU-1-14
4.0 TONS
COMMERCIAL 101

FCU-1-15
4.5 TONS
COMMERCIAL 101

BC-1-2

FCU-1-6
4.5 TONS
COMMERCIAL 105

FCU-1-5
4.5 TONS
COMMERCIAL 105

FCU-1-4
4.5 TONS
COMMERCIAL 105

LEVEL 2

LEVEL 1

VRF RISER DIAGRAM

SCALE: NONE

2/2/2024 3:05:33 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

RIVERFRONT
APARTMENTS
BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON
ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc

△	DATE	DESCRIPTION
2	10/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

VRF RISER
DIAGRAM

M5.00

	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 5(1) - Group R cooling unts <20,000 Btu/h		WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps		
IHP-1-3	L1 LOBBY & VESTIBULE	M2.01S	
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 5(2) - Group R cooling unts ≥ 20,000 < 54,000 Btu/h (Note equip location limitations)		WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps		
IHP-7-1	ELEVATOR MACHINE ROOM	M2.07S	
	System/Equip ID for a single or multiple items?: Single item		
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)		Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 5(2) - Group R cooling unts ≥ 20,000 < 54,000 Btu/h (Note equip location limitations)		WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency:		LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps		

Single Zone Equipment Category - Condensing Unit

Equipment Summary Information

System/Equip ID	Quantity of Items
CU-7-1	1
CU-7-21	
CU-7-4	
CU-7-5	
CU-7-3	

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	AEC Efficiency Multiplier	Econo Exception Multiplier (FL & PL)	Combined Efficiency Multiplier (AEC & Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
CU-7-3	Condensing unit, air cooled		120,000	1		0		NA		IEER	COMPLIES
CU-7-4	Condensing unit, air cooled		120,000	1		0		NA		IEER	COMPLIES
CU-7-5	Condensing unit, air cooled		120,000	1		0		NA		IEER	COMPLIES
CU-7-1	Condensing unit, air cooled		120,000	1		0		NA		IEER	COMPLIES
CU-7-2	Condensing unit, air cooled		120,000	1		0		NA		IEER	COMPLIES

Equipment Details

System/Equip ID	Area(s) Served	Location In Project Documents - Plan/Detail #
CU-7-1	L1 COMMERCIAL 106	M2.07N
	System/Equip ID for a single or multiple items?: Single item	
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(1)A - Unitary Air Conditioners & Condensing Units	
CU-7-2	L1 COMMERCIAL 105	M2.07N
	System/Equip ID for a single or multiple items?: Single item	
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(1)A - Unitary Air Conditioners & Condensing Units	
CU-7-4	L1 RESTAURANT 102	M2.07S
	System/Equip ID for a single or multiple items?: Single item	
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(1)A - Unitary Air Conditioners & Condensing Units	
CU-7-5	L1 COMMERCIAL 101	M2.07S
	System/Equip ID for a single or multiple items?: Single item	
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(1)A - Unitary Air Conditioners & Condensing Units	
CU-7-3	L1 COMMERCIAL 104	M2.07N
	System/Equip ID for a single or multiple items?: Single item	
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(1)A - Unitary Air Conditioners & Condensing Units	

Scope & Space Conditioning	NEW BUILDING - MULTIPLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES

Multiple Zone Air Systems Category - Heat pump, unitary

Air Systems Summary Information

System ID	Supply Airflow Control	Ventilation Standard	Ventilation CFM	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
DOAS-1	Constant volume	IMC Multiple Zones Ventilation	750	Integral		Yes per C403.5 Energy Recovery	72
DOAS-2	Constant volume	IMC Multiple Zones Ventilation	750	Integral		Yes per C403.5 Energy Recovery	72

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	AEC Efficiency Multiplier	Econo Exception Multiplier (FL & PL)	Combined Efficiency Multiplier (AEC & Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
DOAS-1	Heat pump, air cooled	Single package	34,510	1	0	1	17.5	SEER		IEER	COMPLIES
DOAS-2	Heat pump, air cooled	Single package	34,510	1	0	1	17.5	SEER		IEER	COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h)	AEC Efficiency Multiplier	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
DOAS-2	Heat pump, air cooled, heating	Single package	30,700	34,510	1	8.7	HSPF		COP	COMPLIES
DOAS-1	Heat pump, air cooled, heating	Single package	30,700	34,510	1	8.7	HSPF		COP	COMPLIES

Air Systems & Equipment Details

System ID	Area(s) Served	Location In Project Documents - Plan/Detail #
DOAS-1	CORRIDOR	M2.07N
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)	Economizer Compliance Method: Air-side economizer provided
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps	
	Proposed Low OSA Temp Efficiency:	LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps	
DOAS-2	CORRIDOR	M2.07S
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)	Economizer Compliance Method: Air-side economizer provided
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps	
	Proposed Low OSA Temp Efficiency:	LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps	

MECHANICAL COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2022 NEEA. All rights reserved

Project & Applicant Information	**Project Title**	Riverfront Apartments Building C - 2018 WSEC	For Building Department Use:	**Date: Feb 23, 2022**
	Project Address	3710 Riverfront Blvd Everett, WA 98203		
	Applicant Name	Arik Espineli		
	Applicant Phone	619-995-1758		
	Applicant Email	aespineli@robisonengineering.com		

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	Mixed Use - Commercial + Group R building over 3 stories	**General Building Use Type**	Multifamily/Residential, Mixed Use	**Building Cond. Floor Area**	198,174
General Project Types	New Building	**New Building or Addition**	Single Zone Systems & Equipment Multiple Zone Systems & Equipment	**Alteration**	**Project Cond. Floor Area** 198,174
		Mechanical Scope		**Mechanical Scope**	**Floors Above Grade** 6
					Compliance Method Compliance Method 1 - General
Mechanical Project Description	Full mechanical design plans for a new mixed-use residential/ commercial building in Everett, WA.				

	Project Type	**Mechanical Scope**	**Economizer Exception(s) Applied?**	**DOAS Ventilation Provided?**	**Higher Equipment Efficiency Option Applied?**	**Equipment Efficiency Compliance Verification**
Mechanical Compliance Scope and Method	New Building	Single Zone Systems & Equipment	Yes	Yes	NA	**COMPLIES**
	New Building	Multiple Zone Systems & Equipment	Yes	No	NA	**COMPLIES**
Additional Efficiency Credits Included (AEC)			**Dedicated outside air system (DOAS) option**			
Does building include occupancy classifications requiring DOAS?	No		**Does project include DOAS equipment?**			No
Based on project scope do TSPR requirements apply?	No		**Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?**			No

Scope & Space Conditioning	NEW BUILDING - SINGLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES

Single Zone Air Systems Category - Fan coil unit, hydronic & VRF

Air Systems Summary Information

System/Equip ID	Quantity of Items	Supply Airflow Control	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS
FCU-1-9, -1-10	2	Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-10
FCU-1-12		Constant volume	IMC Ventilation		Separate DOAS	ERV-1-11
FCU-1-4, -1-6	2	Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-5
FCU-1-11		Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-11
FCU-1-2, -1-3	2	Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-2
FCU-1-7, -1-8	2	Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-6
FCU-1-13, -1-14	2	Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-9
FCU-1-1		Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-3
FCU-1-5		Constant volume	IMC Ventilation	0	Separate DOAS	ERV-1-4

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	AEC Efficiency Multiplier	Econo Exception Multiplier (FL & PL)	Combined Efficiency Multiplier (AEC & Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
FCU-1-7, -1-8	Fan coils, hydronic & VRF, cooling	VRF	48,000	1		0					COMPLIES
FCU-1-13, -1-14	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-1	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-9, -1-10	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-2, -1-3	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-11	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-4, -1-6	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES
FCU-1-5	Fan coils, hydronic & VRF, cooling	VRF	48,000	1		0					COMPLIES
FCU-1-12	Fan coils, hydronic & VRF, cooling	VRF	36,000	1		0					COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h)	AEC Efficiency Multiplier	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
FCU-1-2, -1-3	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-5	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-7, -1-8	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-12	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-9, -1-10	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-4, -1-6	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-13, -1-14	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-1	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES
FCU-1-11	Fan coils, hydronic & VRF, heating	VRF			1					COMPLIES

Air Systems & Equipment Details

System/Equip ID	Area(s) Served	Location In Project Documents - Plan/Detail #
FCU-1-9, -1-10	L1 RESTAURANT 102	M2.01S
	System/Equip ID for a single or multiple items?: Multiple items w/ identical heating & cooling capacity	
	Cooling Capacity Source: CU-7-4	
	Heating Capacity Source: CU-7-4	
FCU-1-12	L1 COMMERCIAL 101	M2.01S
	System/Equip ID for a single or multiple items?: Single item	
	Cooling Capacity Source: CU-7-5	
	Heating Capacity Source: CU-7-5	
FCU-1-4, -1-6	L1 COMMERCIAL 105	M2.01N
	System/Equip ID for a single or multiple items?: Multiple items w/ identical heating & cooling capacity	
	Cooling Capacity Source: CU-7-2	
	Heating Capacity Source: CU-7-2	
FCU-1-11	L1 RESTAURANT 102	M2.01S
	System/Equip ID for a single or multiple items?: Single item	
	Cooling Capacity Source: CU-7-4	
	Heating Capacity Source: CU-7-4	
FCU-1-2, -1-3	L1 COMMERCIAL 106	M2.01N
	System/Equip ID for a single or multiple items?: Multiple items w/ identical heating & cooling capacity	
	Cooling Capacity Source: CU-7-1	
	Heating Capacity Source: CU-7-1	
FCU-1-7, -1-8	L1 COMMERCIAL 104	M2.01N
	System/Equip ID for a single or multiple items?: Multiple items w/ identical heating & cooling capacity	
	Cooling Capacity Source: CU-7-3	
	Heating Capacity Source: CU-7-3	
FCU-1-13, -1-14	L1 COMMERCIAL 101	M2.01S
	System/Equip ID for a single or multiple items?: Multiple items w/ identical heating & cooling capacity	
	Cooling Capacity Source: CU-7-5	
	Heating Capacity Source: CU-7-5	
FCU-1-1	L1 COMMERCIAL 106	M2.01N
	System/Equip ID for a single or multiple items?: Single item	
	Cooling Capacity Source: CU-7-1	
	Heating Capacity Source: CU-7-1	
FCU-1-5	L1 COMMERCIAL 105	M2.01N
	System/Equip ID for a single or multiple items?: Single item	
	Cooling Capacity Source: CU-7-2	
	Heating Capacity Source: CU-7-2	

Single Zone Air Systems Category - Heat pump, unitary, thru-wall, SDHV

Air Systems Summary Information

System/Equip ID	Quantity of Items	Supply Airflow Control	Ventilation Standard	Ventilation CFM (Total if Multiple Items)	Ventilation Air Source	Paired with DOAS	Ventilation energy recovery	Energy Recovery Efficiency (%)
IHP-1-2		Constant volume	IMC Ventilation		Separate DOAS	ERV-1-7	Not provided, not required	
IHP-1-1		Constant volume	IMC Ventilation		Separate DOAS	ERV-1-1	Not provided, not required	
IHP-6-1		Constant volume	IMC Ventilation		Separate DOAS	ERV-6-1	Not provided, not required	
IHP-1-3		Constant volume	IMC Ventilation		Separate DOAS	ERV-1-7	Not provided, not required	
IHP-7-1		Constant volume	Unoccupied, no ventilation requirement					

Air Systems & Equipment - Cooling

System/ Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity per item (Btu/h)	AEC Efficiency Multiplier	Econo Exception Multiplier (FL & PL)	Combined Efficiency Multiplier (AEC & Econo)	Proposed Cooling Efficiency	CE Units	Proposed Part Load Efficiency	PL Units	Efficiency Compliance Verification
IHP-1-3	Heat pump, air cooled	Split system	48,000	1	1.15	1.15	16.5	SEER		IEER	COMPLIES
IHP-1-1	Heat pump, air cooled	Split system	18,000	1	1.15	1.15	19.9	SEER		IEER	COMPLIES
IHP-7-1	Heat pump, air cooled	Split system	24,000	1	1.15	1.15	21.4	SEER		IEER	COMPLIES
IHP-1-2	Heat pump, air cooled	Split system	36,000	1	1.15	1.15	19.1	SEER		IEER	COMPLIES
IHP-6-1	Heat pump, air cooled	Split system	18,000	1	1.15	1.15	19.9	SEER		IEER	COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h)	AEC Efficiency Multiplier	Proposed Heat Pump Heating Efficiency	HPH Units	Proposed Low OSA Temp Efficiency	LTH Units	Efficiency Compliance Verification
IHP-1-2	Heat pump, air cooled, heating	Split system	40,000	36,000	1	9.9	HSPF		COP	COMPLIES
IHP-6-1	Heat pump, air cooled, heating	Split system	18,000	22,000	1	10.2	HSPF		COP	COMPLIES
IHP-1-1	Heat pump, air cooled, heating	Split system	22,000	18,000	1	10.2	HSPF		COP	COMPLIES
IHP-1-3	Heat pump, air cooled, heating	Split system	54,000	48,000	1	11.0	HSPF		COP	COMPLIES
IHP-7-1	Heat pump, air cooled, heating	Split system	28,000	24,000	1	11.0	HSPF		COP	COMPLIES

Air Systems & Equipment Details

System/Equip ID	Area(s) Served	Location In Project Documents - Plan/Detail #
IHP-1-2	L1 LOBBY/ CONCIERGE	M2.01S
	System/Equip ID for a single or multiple items?: Single item	
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)	Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 5(2) - Group R cooling unts ≥ 20,000 < 54,000 Btu/h (Note equip location limitations)	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency:	LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps	
IHP-1-1	MAINTENANCE OFFICE	M2.01N
	System/Equip ID for a single or multiple items?: Single item	
	Heating Section/Auxiliary Heating Type: Electric resistance (or None)	Economizer Compliance Method: Applying air-side economizer exception
	Air-side economizer exception applied: Exp 5(1) - Group R cooling unts <20,000 Btu/h	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(2) - Unitary and Applied Heat Pumps
	Proposed Low OSA Temp Efficiency:	LTH Units: COP
	WSEC Equip Efficiency Reference Table - Heating: Table C403.3.2(2) - Unitary and Applied Heat Pumps	
IHP-6-1	L6 AMENITY	M2.06N

RIVERFRONT APARTMENTS BUILDING C
3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

WSEC FORMS

M7.00

2/2/2024 3:05:34 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2\21-5905-01A Riverfront Apartments Building C - MEP.rvt

Mechanical Requirements List, pg 7 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

YES			If mechanically delivered, indicate that ventilation systems are configured to provide not more than 150% of, but at least the minimum required volume of outdoor air to each zone per IMC, ASHRAE 62.1 or other applicable code (WAC, OSHA, etc); or exception applied	M0.02		
			If delivered via natural ventilation, identify required elements per IMC including: minimum openable area to the outdoors or qualifying adjoining spaces; criteria for ensuring required ventilation is provided during all occupied hours of the year (including during inclement outdoor conditions)			
YES	C403.2.2.2	Exhaust	Indicate that exhaust systems are configured to provide not more than 150% of, but at least the minimum required volume from each zone per IMC, or other applicable code (WAC, OSHA, etc); or exception applied	M0.02		
YES	C403.4.2.4	Exhaust system off-hour controls	Refer to Requirements List section HVAC Controls for off-hour controls requirements for exhaust systems	M0.01		
YES	C403.3.6	Balanced ventilation for Group R-2 occupancy	For Group R-2 dwelling and sleeping units, indicate that each habitable space is provided with a balanced ventilation system; indicate system is provided with energy recovery with 60% sensible recovery effectiveness			
NA	C403.7.1	Demand controlled ventilation	Identify spaces > 500 sf with occupant load ≥ 25 people/1,000 sf per IMC; for each space indicate whether it is served by an HVAC system with total design ventilation air > 3,000 cfm, and / or the system has airside economizer or automatic modulating outdoor air damper; indicate controls are configured to provide demand controlled ventilation or provide supporting documentation for applied exception			
NA	C403.7.2	Occupancy sensors	For gyms, classrooms, auditoriums, conference rooms and other spaces with occupant load ≥ 25 people/1,000 sf per IMC, that have an area > 500 sf, indicate occupancy-based ventilation air control when space is unoccupied and method (closes outdoor air damper or shuts-off equipment); or alternate means provided to automatically reduce ventilation air when space is partially occupied; or exception applied			
YES	C403.7.3	Ventilation air heating control	For ventilation air systems that operate in conjunction with heating and cooling systems, indicate that ventilation air is tempered (via heating or heat recovery) to no greater than 60F when the space conditioning system is in cooling mode			

Mechanical Requirements List, pg 5 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

NA	C403.8.2	Motor nameplate hp	For all applicable HVAC systems with total fan motor nameplate hp > 5hp, indicate fan motors specified are the smallest available motor hp size greater than fan bhp, note exceptions applied			
YES	C405.8	Fractional hp fan motors	For all fractional hp fan motors (1/12 - 1 hp), indicate that motors comply with applicable WSEC efficiency tables; if motor type is not listed in an efficiency table, indicate whether fan has an electronically commutated motor, has motor rated efficiency of at least 70%, or exception applied			
NA	C403.8.3	Fan efficiency	For individual fans > 5hp, and multiple fans combined in series or parallel that operate as the functional equivalent of a single fan with a combined total motor hp > 5hp, indicate in equipment schedule that rated FEG for all applicable fans is ≥ 67, or exception applied; indicate these fans are sized so total efficiency is within 15% of the fan maximum total efficiency			
YES	C403.8.4	Group R occupancy exhaust fan efficacy	For all exhaust fans ≤ 400 cfm in Group R occupancies, indicate in equipment schedule the fan flow rate and efficacy (cfm/watt), or exception applied; refer to Table C403.8.4	M0.03		
NA	C403.2.3	Variable flow capacity - fans	For fan motors ≥ 7.5 hp, indicate method of variable flow control (VSD or equivalent method) in equipment schedule, or exception applied			
YES	C403.8.5.1	Fan airflow control	For DX air handling units with cooling capacity ≥ 42,000 Btu/h and evaporative and chilled water air handling units with fan ≥ 0.25 hp, indicate whether system is single zone or multiple zone and related control method (cooling capacity controlled in response to space temperature, space temperature is controlled by modulating supply airflow, or both)	M0.01		
YES			For mechanical cooling systems (includes DX and chilled water coils) that control cooling capacity in response to space temperature - Provide a minimum of two stages of fan control; indicate minimum fan speed is ≤ 66% of full speed drawing ≤ 40% of full speed fan power during periods of low cooling or ventilation only	M0.01		

Mechanical Requirements List, pg 3 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

	C403.3.5 C403.3.5.4	Dedicated outdoor air systems	For buildings with occupancies required to comply with the DOAS provisions per Table C403.3.5, identify on plans all occupancies in the building and indicate which occupied spaces are required to have ventilation air delivered by a DOAS; or exception applied			
NA			If natural ventilation exception is applied, identify these spaces on plans; indicate operable window area complies with IMC Section 402; provide documentation describing how required ventilation will be provided during all occupied hours, including during inclement weather			
NA			If high efficiency VAV exception is applied, identify these spaces on plans; refer to Single Zone VAV section for Groups A-1, A-2 and A-3 occupancy classifications, or Multiple Zone VAV for other than Groups A-1, A-2 and A-3 (per Table C403.3.5)			
NA			If compliance with the DOAS provisions is deemed to be impractical, provide documentation that demonstrates the alternate design strategy applied that achieves a comparable level of energy efficiency, as pre-approved by the AHJ			
NA			Refer to Requirements List section after Multiple-Zone Air Systems for High Efficiency Multiple-Zone VAV Systems exception to C403.3.5 DOAS			
NA			Refer to Requirements List section after High Efficiency Multiple-Zone Air Systems for High Efficiency Single-Zone VAV Systems exception to C403.3.5 DOAS			
YES	C403.3.5.1	DOAS energy recovery method and effectiveness	For all DOAS systems, indicate exhaust air ER method and basis of rated effectiveness (sensible or latent); indicate ≥ 60% sensible or ≥ 50% enthalpy ER effectiveness based on delta between outdoor air and return air enthalpies at design conditions; or exception applied	M0.03		
NA			If applying exception for DCV, identify occupant load in space and airflow control configured to reduce ventilation rate by ≥ 50% when occupancy is less than design occupancy			
YES	C403.3.5.1	DOAS fan power	For DOAS with total system fan hp < 5 hp, indicate total system fan power does not exceed 1 watt per cfm	M0.03		
NA			For DOAS with total system fan hp ≥ 5 hp, indicate total system fan power complies with fan power limitation per Section C403.8.1			

Mechanical Requirements List, pg 1 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

Project:
Riverfront Apartments Building C - 2018 WSEC
3710 Riverfront Blvd
Everett, WA 98203

Date: 2022-02-23

Applies	Code Section	Code Provision	Compliance Information Required In Permit Documentation	Location in Documents	Building Department Notes
SCOPE					
	C103.1	Construction documents - General	For a shell & core or tenant space (first build-out) project, indicate if there is no mechanical scope included in the project.		
	C103.1	Construction documents - General	For an alteration project, indicate if there is no mechanical scope included in the project.		
PERFORMANCE CRITERIA & SYSTEM DESIGN					
NA	C403.1	Exempt process equipment	Identify equipment used by manufacturing, industrial or commercial processes that are not for space conditioning or maintaining comfort and amenities for occupants; identify provisions applicable to this equipment per C403.1 exception		
	C403.1.1	HVAC total system performance ratio (TSPR)	For systems serving office, retail, library or education occupancies, provide a TSPR report that demonstrates the proposed design ratio is equal to or greater than the standard reference design ratio, or exception applied		
YES	C403.1.2	Calculation of heating and cooling loads	Provide load calculations performed per ASHRAE Std 183 or equivalent, using design parameters per C302 and Appendix C; include load adjustments to account for energy recovery	M8.00-M8.01	
NA	C403.1.3	Data centers	Provide documentation that demonstrates that data center systems comply with the maximum allowed Design MLC and Annualized MLC per ASHRAE 90.4 with 2018 WSEC adjustments per climate zone		
NO	C403.2.1 C403.4.2.2	Zone isolation	If there are HVAC zones that are intended to be occupied non-simultaneously, identify isolation zone areas on plans; if multiple zones intended to be occupied simultaneously will be combined into a single isolation zone, include on plans that the combined zone area does not exceed 25,000 sf and does not include more than one floor; or exception applied		
NO			Indicate locations of associated zone isolation dampers in HVAC distribution system		
NO			Refer to HVAC Controls section in Requirements List for applicable automatic setback and shutdown controls requirements		
EQUIPMENT SELECTION & PERFORMANCE					

Mechanical Requirements List, pg 8 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

NA	C403.7.4.2	Ventilation controls for Group R-1 guestrooms	Refer to Requirements List section HVAC Controls for Group R-1 temperature setback and set-up controls			
NA			Indicate method of ventilation and exhaust isolation for each guest room and automatic controls that are configured to turn off ventilation and exhaust airflow when each room is unoccupied			
YES	C403.8.4	Group R occupancy exhaust fan efficacy	Refer to Requirements List section Fans & Fan Controls			
	C403.7.5 C403.7.5.1	Enclosed loading dock ventilation	For enclosed loading docks, indicate ventilation / exhaust system method of activation (gas detection system for CO and NO2, or occupancy sensors), and control method (staged or modulating)			
	C403.7.5 C403.7.5.2	Enclosed parking garage ventilation	For enclosed parking garages, indicate ventilation / exhaust system activated by gas detection system for CO and NO2, and control method (staged or modulating); or exception applied			
NA	C403.7.6	Ventilation / exhaust systems energy recovery	For systems with design ventilation air > 5,000 cfm, or design supply air cfm and % ventilation air exceeding the values in Tables C403.7.6(1) or (2), indicate exhaust air energy recovery method; or exception applied with supporting calculations			
NA			For rooms served by multiple systems with aggegate design ventilation air > 5,000 cfm, or aggregate design supply air cfm and % ventilation air exceeding the values in Tables C403.7.6(1) or (2), indicate exhaust air energy recovery method; or exception applied with supporting calculations			
YES			Indicate energy recovery rated effectiveness that increases outdoor air enthalpy by ≥ 50% based on delta between outdoor air and return air enthalpies at design conditions	M0.03		
	C403.7.7.1.1 C403.7.7.1.2 C403.7.7.1.3	Kitchen exhaust hood system	Indicate on plans the type, duty, UL rating and exhaust airflow rate of each kitchen hood			
			Provide calculations that show a balanced accounting of total kitchen exhaust (include all hoods) with % of: supply air, transfer air from adjacent spaces, and make-up air			
			For hoods with make-up air drawn directly into the exhaust air cavity of each hood, indicate that replacement air does not exceed 10% of hood exhaust airflow rate			
			For kitchens with total hood exhaust exceeding 2,000 cfm, indicate that each hood is UL 710 rated and maximum exhaust airflow rate of each hood is per Table C403.7.7.1.2; or exception applied			

Mechanical Requirements List, pg 6 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

YES			For other mechanical cooling systems (includes DX and chilled water coils) that control space temperature by modulating airflow (in lieu of, or in addition to, controlling capacity in response to space temperature) - Provide fan controls for modulating supply airflow; indicate minimum fan speed is ≤ 50% of full speed drawing ≤ 30% of full speed fan power during periods of low cooling or ventilation only; or exception applied	M0.01		
ADDITIONAL EFFICIENCY PACKAGE OPTION, MORE EFFICIENT HVAC EQUIPMENT & FAN PERFORMANCE - MUST COMPLY WITH ALL 3 PROVISIONS TO BE ELIGIBLE						
	C406.2.1	HVAC system selection	To comply with this additional efficiency credit, provide calculations that demonstrate (based on heating and cooling output capacity) that 90% or more of all HVAC equipment serving conditioned floor areas have a corresponding WSEC listed efficiency; or exception applied			
	C406.2.2	Minimum equipment efficiency	In addition to system selection requirement, indicate that all associated heating and cooling equipment have a rated efficiency for all equipment performance criteria (heating, cooling, full load, part load) that is at least 15% better than the listed WSEC efficiency; include specific equipment exceptions applied			
			For systems required to provide a TSPR report per C403.1.1, demonstrate that the proposed design ratio is at minimum 10% higher than the standard reference design ratio			
			For projects complying via weighted average efficiency exception, include calculations that demonstrate the overall average better than code efficiency of all equipment performance criteria for all equipment is ≥ 15%; indicate that all equipment has at least 5% better than code efficiency			
			For systems serving low energy and semi-heated spaces, indicate that 90% or more of installed heating output capacity is provided by electric infrared or gas-fired radiant equipment for localized heating applications only			
	C406.2.3	Minimum fan efficiency grade	In addition to system selection and efficiency requirements, indicate rated FEG of all ≥ 1 hp (750 watt) stand alone supply, return and exhaust fans is ≥ 71; indicate these fans are sized so the fan efficiency at design conditions is within 10% of the maximum total or static efficiency			
VENTILATION, EXHAUST & ENERGY RECOVERY						
YES	C403.2.2.1	Ventilation	Indicate method of ventilation air delivery (natural or mechanical) for each zone			

Mechanical Requirements List, pg 4 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

YES	C403.3.5.2	Heating / cooling system controls with DOAS	Indicate systems and equipment associated with the delivery of zone level heating and cooling (fans, hydronic pumps, primary air dampers, etc) are configured to shut off, and central equipment is configured to turn down, when there is no call for heating or cooling in the zone they serve	M0.03		
NO			If applying Exception to heating / cooling fans used for air mixing in the space during deadband periods, include fan watts per cfm in equipment schedule			
YES	C403.3.5.3	Decoupled DOAS supply air	Indicate method of delivery of DOAS supply air to the occupied space (directly into space, downstream of terminal heating / cooling coils); or exception applied	M2.01		
YES	C403.6.1	Multiple zone DOAS	For DOAS serving multiple zones, indicate controls configured to reduce the volume of outdoor air in each zone independently when the zone is unoccupied; or exception applied	M0.03		
ADDITIONAL EFFICIENCY CREDITS - DEDICATED OUTSIDE AIR SYSTEMS (DOAS)						
NA	C406.6	DOAS	For building occupancies not subject to the requirements of Section C403.3.5, to comply with this additional efficiency credit, provide calculations that demonstrate 90% or more of the total floor area of all occupied, conditioned spaces are served by a DOAS per C403.3.5			
NA	C406.7	High performance DOAS - Energy recovery effectiveness and fan power	For all building occupancies, to comply with this additional efficiency credit, demonstrate compliance with C406.6			
NA			Indicate energy recovery sensible effectiveness of all DOAS is ≥ 80%			
NA			For each system, indicate that total system fan power does not exceed 0.5 watts per cfm			
FANS AND FAN CONTROLS						
YES	C403.8.1	Fan power limitation	For all HVAC fan systems that provide heating and / or cooling and all DOAS, provide system total nameplate hp in equipment schedules on project plans	M0.03		
NA			For all applicable HVAC systems with total fan motor nameplate hp > 5hp, verify fan system motor hp or bhp complies with fan power limits per equations in Table C403.8.1(1)			
YES			Terminal units installed in conjunction with a DOAS (hydronic heat pumps, VRF heat pumps, chilled/hot water terminal units, variable volume terminal units) shall be treated as independent air-handling units for purposes of fan power calculations			

Mechanical Requirements List, pg 2 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

YES	C403.3.1	Equipment and system sizing	Indicate that output capacities of heating and cooling equipment and systems are no greater than the smallest available equipment size that exceeds the calculated loads; note exceptions applied	M0.03		
YES	C403.3.2 C403.9.1	HVAC equipment performance requirements (efficiency)	Provide equipment schedules on plans and in WSEC mechanical equipment compliance reports; indicate equipment type, calculated loads, capacity, rated and WSEC minimum efficiencies for all heating and cooling equipment; include supply and ventilation air cfms and operating hours for all air systems; identify heating and cooling equipment that does not have a corresponding WSEC minimum efficiency (manufacturer rated)	M0.03		
YES	C405.8	Electric motor efficiency	List all motors ≥ 1/12 hp (that are not integral to a rated piece of equipment) in the mechanical or electrical equipment schedules on plans; indicate motor type and applicable efficiency table, hp, rpm, number of poles and rated efficiency, or exception applied	M0.03		
NO	C403.3.2	Gas and oil-fired forced air furnace and unit heaters	For forced air furnaces with capacity ≥ 225,000 Btu/h and all unit heaters, indicate in equipment schedule intermittent ignition or IID, flue or draft damper, and rated jacket loss			
YES	C403.3.2.4	Packaged electric heating / cooling equipment	Verify all packaged electric equipment with > 6,000 Btu/h cooling capacity and any amount of heating is a heat pump; include in equipment schedules	M0.03		
NO	C403.3.3	Hot gas bypass limitation for DX cooling equipment	For cooling equipment with hot gas bypass, provide either multiple step unloading or continuous capacity modulation; indicate bypass capacity per Table C403.3.3			
NO	C403.3.2.5	Humidification	For cooling systems with humidification equipment that are also required to have air economizer, indicate humidifier is adiabatic (direct evaporative or fog atomization), or exception applied			
	C403.3.2	Hydronic equipment	Refer to Requirements List section Hydronic Systems - Equipment Selection & Performance for selection criteria specific to chillers and boilers			
NO	C403.9	Heat rejection equipment	Refer to Requirements List section Heat Rejection Systems - Equipment Selection & Performance for selection criteria specific to cooling towers, dry coolers and condensers (air-cooled and evaporative)			
EQUIPMENT SELECTION & PERFORMANCE - DEDICATED OUTSIDE AIR SYSTEMS (DOAS)						

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

WSEC FORMS

M7.01

2/2/2024 3:05:34 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

Mechanical Requirements List, pg 15 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

	C403.5.4.1	Water economizer capacity	For eligible systems where water-side economizer may be provided in lieu of air economizer, indicate system is capable of 100% design cooling capacity at 50°F db / 45°F wb outdoor air temperatures; indicate if threshold for 100% design cooling capacity via economizer must be lowered to 45°F db / 40°F wb due to dehumidification requirements					
	C403.5.4.2	Water economizer maximum pressure drop	Indicate that the pressure drop across precooling coils and heat exchangers in water economizer systems do not exceed 15 feet (4572 mm)					
NA	C403.5.5	DX equipment economizer fault detection and diagnostics	For DX air handlers with economizer and cooling capacity ≥ 54,000 Btu/h, provide a fault detection and diagnostics (FDD) system to monitor economizer system operation and report faults					
HYDRONIC SYSTEMS - EQUIPMENT SELECTION & PERFORMANCE								
	C403.3.2.1	Maximum air cooled chiller capacity	For chilled water plants and buildings with > 500 tons of cooling capacity, indicate air-cooled chiller capacity is ≤ 5 100 tons, or exception applied					
	C403.6.7	Large capacity cooling systems	For buildings ≥ 300 tons of cooling capacity, indicate method of multi-stage or variable capacity control (VSD, multiple staged compressors, or max capacity of any single unit					
	C403.3.2.2	Non-standard water-cooled centrifugal chillers	For water-cooled centrifugal chillers not designed for operation at standard conditions, provide calculations documenting maximum full load and part load rated equipment performance requirements					
	C403.3.3	Hot gas bypass limitation for chillers	For cooling equipment with hot gas bypass, provide either multiple step unloading or continuous capacity modulation; indicate bypass capacity per Table C403.3.3					
	C403.4.3 C403.3.4	Large capacity boiler systems	For hydronic systems with only a single boiler that has > 500,000 Btu/h input capacity, indicate multi-stage or modulating burner					
			For boiler system (single or multiple) with > 1,000,000 Btu/h input capacity, indicate turndown ratio per Table C403.3.4 and method (multiple single input boilers, modulating boilers, or combination)					
	C403.2.3	Variable flow capacity - pumps	For pump motors ≥ 7.5 hp, indicate method of variable flow control (VSD or equivalent method) in equipment schedule, or exception applied					
HYDRONIC SYSTEMS - CONTROLS								
	C403.4.3	Boiler sequencing	Indicate automatic controls that sequence operation of multiple boilers					

Mechanical Requirements List, pg 13 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

YES	C403.10.1.1 C403.10.2	Duct construction	Indicate on plans that all ductwork is constructed and sealed per IMC	M0.01				
YES			For outdoor air ductwork, also indicate on plans that ductwork meets air leakage requirements per C402.5 and vapor retarder requirements per the IBC	M0.01				
YES	C403.10.2.1 C403.10.2.2 C403.10.2.3	Duct pressure classifications	Identify location of low, medium and high pressure ductwork on plans	M0.01				
NA	C403.10.2.3	High pressure duct leakage test	Indicate high pressure duct leakage testing requirements on plans; provide test results to jurisdiction when completed					
YES	C403.10.1.1 C403.10.1.2	Duct insulation	For outdoor air ductwork located within conditioned space (upstream or downstream of shutoff damper), identify climate zone and indicate ductwork insulation R-value per Table C403.10.1.1 on plans; or exception applied	M0.01				
YES			For supply and return air ductwork located within unconditioned space or outdoors, identify climate zone and indicate ductwork insulation R-value per Table C403.10.1.2 on plans; or exception applied	M0.01				
YES			For supply air ductwork located within conditioned space, identify on plans if design supply air temperature is < 55°F or > 105°F; indicate ductwork insulation R-value per Table C403.10.1.2 on plans; or exception applied	M0.01				
YES			For return and exhaust air ductwork located within conditioned space (upstream of the shutoff damper) and downstream of an energy recovery media, indicate ductwork insulation R-value per Table C403.10.1.2; or exception applied	M0.01				
YES			For exhaust and relief air ductwork located within conditioned space and downstream of the shutoff damper, indicate ductwork insulation R-value per Table C403.10.1.2; or exception applied	M0.01				
YES	C403.10.1.1 C402.1.3	Shaft and plenum insulation	For outdoor air shafts and plenums, indicate on plans that the R-value of insulation on these elements complies with Table C402.1.3 for steel-framed walls	M0.01				
PIPING								
	C403.10.3	Piping insulation	Indicate design temperature range of fluid conveyed in piping and thickness of insulation (in inches) on hydronic piping plans; or exception applied					
	C403.10.3.1	Protection of piping insulation	Indicate method of protection of pipe insulation from damage / degredation on hydronic piping plans					

Mechanical Requirements List, pg 11 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

	C403.4.1.6	Door switches for HVAC system thermostatic control	Where doors open to the outdoors from a conditioned space, indicate automatic controls configured to setback the HVAC system(s) when the door is open for > 5 minutes; indicate method of HVAC system setback control (turns off the HVAC system or resets the heating setpoint to 55°F and cooling setpoint to 85°F), or exception applied					
YES	C403.4.2 C403.4.2.1 C403.4.2.2	Automatic setback and shutdown	Indicate zone thermostatic controls configured with required automatic setback and manual override functions, setback temperatures, and control method (automatic time clock or 7 day programmable controls); note exceptions applied	M0.01				
YES	C403.4.2.3	Automatic (optimum) start and stop	Indicate all HVAC systems are provided with automatic start and stop controls; indicate start controls are configured to adjust the equipment start time as required to bring each area served up to design temperature just prior to scheduled occupancy; indicate stop controls are configured to reduce heating setpoint and increase cooling setpoint by at least 2°F prior to scheduled unoccupied periods	M0.01				
NA	C403.4.2.4	Exhaust system off-hour controls	For exhaust systems serving conditioned spaces in all occupancies other than Group R, indicate method of control and that controls are configured to turn exhaust systems on and off in concert with the ventilation air systems providing their make-up air, or exception applied					
NA	C403.4.2.5	Transfer and destratification fan system off-hour controls	For transfer fan or mixing fan systems serving conditioned spaces in all occupancies other than Group R, indicate method of control and that controls are configured to turn fans on and off in concert with the associated HVAC systems, or exception applied					
NA	C403.4.7	Combustion heating equipment	For combustion heating equipment other than boilers or radiant heaters with output capacity > 225,000 Btu/h, indicate modulating or staged combustion control					
NA	C403.4.7.1	Combustion decorative vented appliance, combustion fireplace and fire pit controls	Indicate controls that are configured to limit operation of combustion appliance, fireplace and fire pit to ≤ 1 hour without override; or that occupancy sensor controls are provided					

Mechanical Requirements List, pg 9 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

			For kitchens with total hood exhaust exceeding 2,000 cfm, indicate energy efficiency compliance method (demand ventilation, energy recovery, or transfer air that would otherwise be exhausted); or exception applied					
	C403.7.7.2	Laboratory exhaust systems energy recovery	For buildings with total lab exhaust > 5,000 cfm, indicate method of energy recovery used to pre-condition laboratory make-up air; energy recovery effectiveness (min 25°F increase in outside air temperature); or alternative method per exception (VAV exhaust, semi-conditioned makeup, or CERM calculation)					
NA	C403.7.7.3	Transfer air	For spaces where conditioned supply air is utilized as transfer air to balance mechanical exhaust, indicate basis of transfer airflow (supply required to meet loads, health/safety requirement, air that would normally be exhausted); or exception applied					
YES	C403.7.8.1 C403.7.8.3	Shutoff dampers for building isolation	Indicate locations of outdoor air intake, exhaust and relief outlet dampers on plans; indicate whether dampers are Class 1 motorized, or gravity and exception applied (include leakage rating, cfm/sf)					
YES			Indicate location of stairway and elevator hoistway shaft vent dampers on plans; verify dampers are Class 1 motorized; or exception applied					
YES	C403.7.8.2 C403.7.8.3	Shutoff dampers for return air	Indicate locations of return air dampers that are integral to airside economizer operation; verify dampers are motorized; indicate whether dampers are Class 1, or within packaged equipment eligible for leakage rating exception (include leakage rating, cfm/sf)					
YES	C403.7.8.4	Damper actuation	Indicate automatic controls configured to close outdoor air intake, exhaust and relief outlet dampers during unoccupied equipment operation; not including economizer cooling, night flush or IMC required outdoor air / exhaust	M0.01				
YES			Indicate method of activation of stairway and elevator hoistway shaft vent dampers (fire alarm or interruption of power)	M0.01				
	C404.11.4	Exhaust system energy recovery for heated indoor pools and permanent spas	For buildings with pools or spas with water surface area > 200 sf, indicate exhaust air energy recovery method and use of waste heat (preheat ventilation air, pool water or service hot water); or exception applied					
			Indicate energy recovery system has the rated effectiveness and is configured to decrease the exhaust air temperature at design conditions by ≥ 36°F					

Mechanical Requirements List, pg 16 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

	C403.4.3.2	Two-pipe changeover systems	Indicate changeover deadband is ≥ 15°F outdoor air temperature; indicate controls are configured so that heating / cooling modes are active for at minimum 4 hours before changeover and that the delta between heating / cooling supply temperatures at changeover point is					
	C403.4.1.5	Heating water temperature setback	For boilers that provide building heating via one- or two-pipe systems, indicate controls that provide heating water temperature setback based on outdoor temperature					
	C403.4.4	Hydronic system part load controls and supply-water temperature reset	For heating and chilled water systems with ≥ 300,000 Btu/h output capacity, indicate system controls are configured to automatically reset supply water temperature based upon demand; or exception applied					
			Indicate automatic pump flow controls are configured to reduce system flow rate by ≥ 50%, or the maximum allowed by the equipment manufacturer, based upon the heating or cooling loads; or decribe why not required					
			For hydronic systems with output capacity ≥ 300,000 Btu/h that serve heating water systems, chilled water systems and water-cooled unitary air conditioners, indicate that pumps are provided with a variable speed drive if one of the following conditions apply: 1) System pump motor hp is ≥ 2 hp and pumps are designed to operate continuously or per time schedule; 2) System pump motor hp is ≥ 7.5 hp and pumps are controlled by automatic DDC configured to only operate pumps when there is a call for zone heating or cooling					
			Where variable speed drives are required, indicate system is configured so that pump motor power is ≤ 30% of design wattage at 50% of design flow rate; indicate pump flow is controlled to maintain one control valve nearly wide open, or to maintain a minimum differential pressure; or exception applied					
	C403.4.6	Hydronic system variable pump flow control	For individual pumps required to have variable speed controls, indicate manner of pump speed control (differential pressure, static pressure setpoint, zone heating or cooling demand, or based on the relationship between variable speed controller fequency and power)					
	C403.4.5	Chiller / boiler plant pump isolation	Indicate controls are configured to automatically reduce overall plant flow and shut-off flow through individual chillers and boilers when not in use					

Mechanical Requirements List, pg 14 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

ECONOMIZERS								
YES	C403.5	Air economizer required	Identify all cooling systems requiring air economizer controls in equipment schedules on plans and in WSEC mechanical equipment compliance reports					
YES			Indicate all systems utilizing air economizer exceptions in WSEC mechanical equipment compliance report, including those with water-side economizer in lieu of air economizer; indicate on plans and in WSEC mechanical equipment compliance reports all eligible exception(s) taken and measures to comply with exception(s)					
NA	C403.4.1 C403.5.1	Integrated economizer operation - air and water	Indicate air and water-side economizers are configured for partial cooling operation even where additional mechanical cooling is required to meet the load					
NA			For DX air handlers with single or multiple stages of mechanical cooling; indicate controls are configured with air economizer as the first stage of cooling					
NA			Refer to Requirements List section HVAC Controls for additional requirements for DX air handlers					
NA	C403.5.2	Economizer heating system impact - air and water	Verify control method of HVAC systems with economizers does not increase building heating energy usage during normal operation					
NA	C403.5.3.1	Air economizer capacity	Indicate modulating outdoor air and return air dampers are configured to provide up to 100% outdoor air for cooling					
NA	C403.5.1 C403.5.3.2	Air economizer controls and integrated operation	Indicate that economizer controls are configured to provide partial economizer cooling when additional mechanical cooling is also required to meet the cooling load					
NA			Indicate that control of economizer dampers is not based only on mixed air temperature; or exception applied for systems with cooling capacity ≤ 65,000 Btu/h					
NA	C403.5.3.3	Air economizer high limit controls	Indicate high limit shut-off control method and required high limit per Table C403.5.3.3					
NA	C403.5.3.4	Relief of excess outdoor air	Refer to Requirements List section Ventilation, Exhaust & Energy Recovery					
NA			Indicate relief air outlets are sized and configured to relieve excess building air during air economizer operation to prevent building over-pressurization					
NA			Indicate relief air outlet are located to avoid recirculation into the building					

Mechanical Requirements List, pg 12 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

NA	C403.7.4.1	Temperature setpoint controls for Group R-1 guestrooms	For hotels / motels with over 50 guest rooms, indicate automatic controls for HVAC equipment serving guest rooms are configured to setback (heating) and set-up (cooling) temperature setpoint by at least 4°F when room is unoccupied, and adjust setpint to 60°F (heating) and 80°F (cooling) when room is unrented / vacated; indicate control method - activated by room entry, occupancy sensor or networked guestroom control system					
NA	C403.7.4.2	Ventilation controls for Group R-1 guestrooms	Refer to Requirements List section Ventilation, Exhaust & Energy Recovery					
YES	C403.4.9 C403.4.10	Thermostatic controls for Group R2 / R3 dwelling units and Group R2 sleeping units	For primary space conditioning systems, indicate 5-2 programmable thermostats capable of two setback periods per day; indicate each non-primary system is provided with at minimum an adjustable thermostat, or exception applied. For all thermostats indicate purpose (heating only, cooling only, or both) and required temperature range; indicate thermostats are configured for at minimum a 5°F deadband					
NA	C403.4.11.1 C403.4.11.2 C403.4.11.3	DDC system applications, controls and display	Provide central and zone level DDC controls as required based on system application, capacity or size thresholds and other qualification per Table C403.4.11.1					
NA			Identify all DDC system input / output control points in project documents					
NA			Indicate control capability includes monitoring zone and system level demand for fan pressure, pump pressure, heating and cooling; indicate capability to transfer demand information from zones to air / hydronic distribution system controllers, and to central plant systems and equipment controllers					
NA			Indicate system has the capability for trending and graphically displaying input / output points					
NA	C403.5.1	DX air handler variable cooling control(Located under Integrated Economizer Control)	For DX air handlers with cooling capacity ≥ 65,000 Btu/h, indicate number of cooling stages provided and method (multiple compressors and / or variable speed compressors); indicate minimum displacement (capacity reduction) as % of full load; indicate thermostats are configured with the same number of cooling stages and displacement					
NA			Indicate control method (cooling capacity controlled in response to space temperature, space temperature controlled by modulating supply airflow, or both)					
DUCTWORK, SHAFTS AND PLENUMS								

Mechanical Requirements List, pg 10 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

HVAC CONTROLS								
	C403.4.1	Thermostatic controls (thermostats and humidistats)	Indicate locations of thermostatic and humidity control devices and the zones they serve on plans, including perimeter system zones					
			Where adjacent (neighboring) zones are controlled by separate thermostats (including perimeter systems used to offset heat gain or loss), and are connected by permanent openings > 10% of either zone sf area, indicate controls configured to prevent adjacent zones from operating in conflicting modes (one in heat, other in cool); applies to adjacent perimeter zones, adjacent nonperimeter zones, and adjacent perimeter and nonperimeter zones					
			If applying Exception 2 to nonperimeter zones adjacent to perimeter zones, indicate that setpoints and deadband settings in these zones are coordinated so cooling in a nonperimeter zone does not occur until the temperature in that zone is 5°F higher than the adjacent perimeter zone temperature in heating					
			If applying Exception 3 for DOAS, indicate supply air temperature heating setpoint is ≤ 65°F and cooling setpoint is ≥ 72°F, or method of supply air temperature reset					
NA	C403.4.1.1	Heat pump supplementary heat	Indicate staged heating operation with compression as the first stage of heating and supplemental heating controlled with outdoor lock-out temperature set to 40°F or less					
	C403.4.1.2	Deadband	Indicate zone thermostatic controls configured with 5°F minimum deadband for systems that control both heating and cooling					
	C403.4.1.3	Setpoint overlap restriction (thermostats)	If separate heating and cooling thermostatic control devices are used to serve a zone, indicate locations of both thermostatic control devices and the zone they serve on plans					
			Indicate a limit switch, mechanical stop or DDC control with programming to prevent simultaneous heating and cooling					
	C403.4.1.4	Heated or cooled vestibules	Indicate thermostatic controls within heating or cooled vestibules with a heating setpoint ≤ 60°F and cooling setpoint ≥ 85°F; indicate controls are configured to turn off heating when outdoor temperature is > 45°F; or note exception applied					
NA	C403.4.1.4	Heated air curtains	Indicate controls are configured to turn off air curtain heating when outdoor temperature is > 45°F					

RIVERFRONT APARTMENTS BUILDING C
3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

WSEC FORMS

M7.02

2/2/2024 3:05:35 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

Mechanical Requirements List, pg 23 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

C403.12,Item 6	Controls for high occupant density spaces	For zones > 150 sf with high occupant density (≥ 25 people / 1000 sf), indicate DCV control that resets ventilation setpoint based on measured CO2; also indicate occupancy sensor control that automatically reduces minimum ventilation to zero and sets back room heating and cooling setpoints by ≥ 5°F when space in unoccupied	
C403.12, Item 7	High efficiency system option	Indicate which system performance option is applied - high efficiency DX cooling and heat pump or high efficiency gas heating; or heating coils served by a high efficiency heating water plant; or cooling coils served by high efficiency chilled water plant	
		If complying via high efficiency DX: Indicate full load and part load rated cooling efficiency exceeds WSEC listed efficiency by at least 15%; if heating is supplied by a gas-fired furnace, indicate thermal efficiency (Et) is ≥ 90%; if system is a heat pump, indicate heating efficiency (HSPF or COP) exceeds WSEC listed efficiency by at least 10%; control of cooling and heating coil output shall be configured with a minimum of 2-stages or modulating	
		If complying via high efficiency heating water plant: Indicate hydronic heating coils are served by a heating water system with either gas-fired boiler(s) with thermal efficiency (Et) ≥ 92%, air-to-water heat pumps, or heat recovery chillers; indicate hydronic heating coils are sized per a maximum 120°F entering water temperature during peak demand	
		If complying via high efficiency chilled water plant: Indicate cooling coils are served by chillers with rated IPLV efficiency that exceeds WSEC listed IPLV by at least 25% per Table C403.3.2(7) (note water-cooled IPLV is max, all others are min); indicate smallest chiller or compressor in plant is ≤ 20% of the total plant capacity, or provide thermal storage sized for ≥ 20% of total plant capacity	
C403.12, Item 8	Fault detection and diagnostics	Indicate DDC system includes automatic fault detection and diagnostics (FDD) configured to monitor operation and provide fault reporting of all required parameters for all HPVAV single-zone air systems	
EXTERIOR HEATING SYSTEMS			
C403.11.1	Heating outside a building	Indicate systems providing heating in non-enclosed outdoor occupied spaces are radiant systems	

Mechanical Requirements List, pg 21 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

C403.6.10,Item 8	Maximum allowable system brake horsepower	For each multiple-zone VAV system, provide calculations that verify total fan system bhp is ≤ 90% of the total allowable fan system bhp per Option 2 equation in Table C403.8.1.1	
C403.6.10,Item 9	Fan-powered terminal unit motor and control	Indicate all series and parallel fan-powered terminals have electronically commutated motors (ECM); indicate DDC control system is configured to vary air terminal fan speed as a function of the load; indicate fan speed during periods of low heating, low cooling, or ventilation-only mode is ≤ 66% of peak design air flow, or provide supporting documentation for applied exception	
C403.6.10, Item 10	Application of single duct and fan-powered terminal units	Indicate VAV terminal types on plans; verify fan-powered terminal units only serve perimeter zones with envelope loads and interior zones with high occupant density and DCV per C403.7.1; verify all other zones are served by single duct terminal units	
C403.6.10, Item 11	Fan-powered terminal unit primary air reset	Indicate DDC controls are configured to automatically reset the primary supply air cfm setpoint of all fan-powered terminal units to the minimum required to maintain ventilation during occupied heating or deadband mode, based upon the VAV air handling unit minimum ventilation air fraction	
C403.6.10,Item 12	Controls for high occupant density spaces	For zones > 150 sf with high occupant density (≥ 25 people / 1000 sf), indicate zone is served by a dedicated terminal unit with DCV control that resets terminal unit ventilation setpoint based on measured CO2; also indicate occupancy sensor control that automatically reduces minimum ventilation to zero and sets back room heating and cooling setpoints by ≥ 5°F when space in unoccupied	
C403.6.10, Item 13	Dedicated cooling systems serving data centers and server, electronic equipment and telecom spaces	For data centers and server, electronic equipment, telecom or similar spaces with design cooling loads > 5 W/sf, indicate spaces are served by dedicated cooling systems that are independent of the HPVAV systems serving the rest of building	
		Indicate dedicated cooling systems are configured for 100% air economizer operation and comply with all related economizer requirements per C403.5 (without economizer exceptions), or heat recovery per C403.5, Exception 9	
C403.6.10, Item 14	Central plant efficiency	Indicate whether systems are served by a high efficiency heating water plant, or a high efficiency chilled water plant	

Mechanical Requirements List, pg 19 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

NA	C403.6.1	Air systems serving multiple zones	Identify supply air systems serving multiple zones and the zones they serve on plans; indicate whether system is VAV and method of primary air control; or provide supporting documentation for applied exception to VAV
NA	C403.6.1	VAV air terminal primary supply airflow	Provide equipment schedules on plans that list all VAV air terminals and types (fan-powered series and parallel air terminals, single duct and dual duct air terminals, etc)
NA			For each air terminal include: maximum primary supply airflow rates during zone peak heating and zone peak cooling; maximum terminal airflow during reheating, recooling or mixing; minimum ventilation airflow rate, and the basis for these values; if IMC or ASHRAE 62.1 multiple zone equation is the basis for minimum flow rates, provide this calculation on plans
NA	C403.6.2	Single duct VAV terminal units	Indicate single duct terminal units are configured to reduce primary supply air before reheating or recooling
NA	C403.6.3	Dual duct systems - terminal units	For systems with separate warm air and cool air ducts, indicate terminal units are configured to reduce the flow from one duct to minimum before mixing with air from the other duct
NA	C403.6.8C403.6.9	VAV system static - pressure sensors and DDC set points	Indicate locations of duct static pressure sensors on plans; include at least one sensor per major duct branch; verify controller setpoint pressure at each sensor is ≤ 1.2 inch w.g.
NA			For systems with zone level DDC, indicate controls are configured to monitor zone damper positions and reset static pressure setpoint based on the zone requiring most pressure; include control logic that automatically detects and generates an alarm if any zone excessively drives reset logic, and allows building operators to exclude zones from reset logic
NA	C403.6.4	VAV system supply air reset	Indicate controls automatically reset supply air temperature in response to building loads or outdoor air temperature; or exception applied
NA	C403.6.5	Multiple-zone VAV system ventilation optimization controls	For systems with zone level DDC controls, indicate controls are configured to automatically reduce outdoor airflow in response to changes in system ventilation efficiency; or exception applied

Mechanical Requirements List, pg 17 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

C403.4.3.3.1	Water loop heat pump - temperature deadband	Indicate method of water loop temperture control (central plant equipment controls are configured to provide ≥ 20°F water supply temperature deadband between heat rejection and heat addition modes, or controls are configured for system loop temperature optimization	
C403.4.3.3.2	Water loop heat pump - heat rejection equipment	Indicate type of cooling tower (open- or closed-circuit) in equipment schedule; indicate whether the cooling tower is used directly in the heat pump loop or in conjunction with a separate heat exchanger; indicate method used to limit system heat loss when heat rejection is not needed	
C403.4.3.3.3	Water loop heat pump - isolation valves	For hydronic heat pump systems with total system power > 10 hp, indicate 2-way isolation valves on each heat pump and variable flow system control	
HEAT REJECTION SYSTEMS - EQUIPMENT SELECTION & PERFORMANCE			
C403.9.1.3	Centrifugal fan open-circuit cooling towers	For open-circuit centrifugal fan cooling towers with ≥ 1,100 gpm capacity, indicate cooling towers comply with efficiency requirements for axial fan open circuit cooling towers	
HEAT REJECTION & RECOVERY - CONTROLS			
C403.9.1.1C403.9.1.2	Fan speed control	For each fan powered by an individual motor or array of motors, with total connected fan power ≥ 5 hp (including motor service factor), indicate method of automatic fan speed control (adjusted based on leaving fluid temperature or condenser temperature / pressure of heat rejection device); verify fan selection provides ≤ 30% design wattage at 50% design airflow	
		For multiple-cell heat rejection equipment with VSD, indicate controls are configured to ramp all fans in unison (not staged on / off operation)	
C403.9.1.4	Cooling tower flow turndown	For open-circuit cooling towers configured with multiple- or variable-speed condenser water pumps, indicate system is designed so all cells can be run in parallel; indicate method of condenser pump turn down control	
C403.9.2.1	Heat recovery for service water heating	For buildings with 24-hour operation and > 1,500,000 Btu/h of heat rejection capacity and design service hot water load > 250,000 Btu/h, indicate condenser heat recovery to pre-heat service water; or exception applied. Provide calculations showing the amount of recovered heat that is utilized (60% of peak heat rejection load or pre-heat service water to 85°F).	

Mechanical Requirements List, pg 24 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

		Indicate occupancy sensing or timer switch controls configured to automatically shut off heating system when area served is unoccupied	
C403.11.2	Snow melt systems	Indicate automatic controls configured to shut off system when pavement temperature exceeds 50°F and no precipitation is falling, and when outdoor air temperature exceeds 40°F	
C403.11.3	Freeze protection system controls	Indicate automatic controls to shut off system when outdoor temperature exceeds 40°F, or conditions protect fluid from freezing	
HVAC EQUIPMENT ENERGY USE METERING			
C409.3.1	HVAC equipment energy use metering	For new buildings > 50,000 sf and building additions > 25,000 sf, verify energy use metering of all equipment used to provide space heating and cooling, dehumidification and ventilation will be provided per C409; indicate equipment eligible for exception	
DOCUMENTATION AND SYSTEM SPECIFIC REQUIREMENT TO SUPPORT COMMISSIONING (CX)			
C408.1	Scope of mechanical systems commissioning	For buildings with ≥ 240,000 Btu/h total output cooling capacity or ≥ 300,000 Btu/h total output heating capacity, indicate that all mechanical systems regardless of individual capacity are required to be commissioned; or provide building heating / cooling capacity calculation demonstrating eligibilty for exception	
		Indicate that all systems, equipment and controls for which the WSEC requires control functions and / or configuration to perform specific functions are included in the Cx scope	
C408.1.1 C408.1.4.1	Commissioning requirements in construction documents	Indicate in plans and specifications that Cx per C408 is required for all applicable mechanical systems	
		Include general summary that includes at minimum: narrative description of activities, responsibilities of the Cx team, schedule of activities including verification of project close out documentation per C103.6, and conflict of interest plan (if required)	
		Include in general summary that a Cx project report or Compliance Checklist (Figure C408.1.4.1) shall be completed by the Certified Cx Professional and provided to the owner prior to the final mechanical inspection.	

Mechanical Requirements List, pg 22 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

		If complying via high efficiency heating water plant: Indicate all VAV terminals have hydronic heating coils served by a heating water system with either gas-fired boiler(s) with thermal efficiency (Et) ≥ 92%, air-to-water heat pumps, or heat recovery chillers; indicate hydronic heating coils are sized per a maximum 120°F entering water temperature during peak demand	
		If complying via high efficiency chilled water plant: Indicate all VAV air handlers have cooling coils served by chillers with rated IPLV efficiency that exceeds WSEC listed IPLV by at least 25% per Table C403.3.2(7) (note water-cooled IPLV is max, all others are min); indicate smallest chiller or compressor in plant is ≤ 20% of the total plant capacity, or provide thermal storage sized for ≥ 20% of total plant capacity	
C403.6.10, Item 15	Fault detection and diagnostics	Indicate DDC system includes automatic fault detection and diagnostics (FDD) configured to monitor operation and provide fault reporting of all required parameters for all VAV air handlers and VAV air terminal units in the HPVAV system	
HIGH EFFICIENCY SINGLE-ZONE VAV SYSTEMS - EXCEPTION TO C403.3,5 DOAS, MUST COMPLY WITH ALL 8 PROVISIONS TO BE ELIGIBLE			
C403.12, Item 1	Air economizer	Indicate system is configured for 100% air economizer operation and complies with all related economizer requirements per C403.5 (without economizer exceptions)	
C403.12, Item 2	Direct digital controls (DDC)	Provide DDC controls for all components of system per C403.4.11 (regardless of system size); identify all DDC system input / output control points; indicate capability for trending and graphical display	
C403.12,Item 3	Outdoor airflow measurement and control	For systems with minimum required outdoor air ≥ 1,000 cfm, provide an airflow monitoring station that is configured to measure outdoor air intake under all load conditions; indicate controls that adjust outdoor air cfm via DCV per C403.7.1	
C403.12,Item 4	Maximum allowable system brake horsepower	For each single-zone VAV system, provide calculations that verify total fan system bhp is ≤ 90% of the total allowable fan system bhp per Option 2 equation in Table C403.8.1.1	
C403.12, Item 5	Supply airflow control	Provide controls that adjust supply airflow based on the heating and cooling loads; indicate control sequence that limits minimum fan speed to 30% of peak design airflow or required ventilation during unoccupied mode, whichever is less	

Mechanical Requirements List, pg 20 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

NA	C403.6.6	Parallel fan powered VAV air terminals	Indicate controls automatically activate or shut off the air terminal fan based on call for heating and / or ventilation; indicate controls are configured to activate the terminal fan as the first stage of heating prior to activating the heating coil; indicate control method of primary air during warmup or temperature setback mode
HIGH EFFICIENCY MULTIPLE-ZONE VAV SYSTEMS - EXCEPTION TO C403.3.5 DOAS, MUST COMPLY WITH ALL 15 PROVISIONS TO BE ELIGIBLE			
C403.6.10,Item 1	Minimum area served and zoning	Indicate that each high efficiency multiple-zone VAV systems serves an area ≥ 3,000 sf and includes ≥ 5 zones	
C403.6.10, Item 2	Air economizer	Indicate system is configured for 100% air economizer operation and complies with all related economizer requirements per C403.5 (without economizer exceptions)	
C403.6.10, Item 3	Direct digital controls (DDC)	Provide DDC controls for all components of system per C403.4.11 (regardless of system size); identify all DDC system input / output control points; indicate capability for trending and graphical display	
C403.6.10, Items 4 and 5	Supply and outdoor airflow measurement and control	For systems with minimum required outdoor air > 2,500 cfm, provide an airflow monitoring station that is configured to measure outdoor air intake under all load conditions; indicate control sequence that increases or reduces outdoor air cfm based on VAV terminal feedback of ventilation efficiency (per C403.6.5 without exceptions) or and DCV (per C403.7.1)	
		Provide a suppy airflow monitoring station that is configured to measure supply air delivered to VAV terminals under all load conditions	
C403.6.10,Item 6	Zone isolation and maximum area served	Verify maximum area served by a single VAV system is ≤ 50,000 sf, or one entire floor, whichever is greater; in addition if a system serves > 25,000 sf, that includes areas that are expected to be occupied non-simultaneously, indicate zone isolation controls per C403.2.1	
C403.6.10, Item 7	Interior / exterior zone design supply air temperature	Verify that VAV terminals serving interior cooling driven loads are sized per a design supply air temperature that is 5°F higher than VAV terminals serving exterior zones while in cooling mode	
C403.6.10, Item 8	Maximum air terminal inlet velocity and fan power	Identify all air terminals with minimum primary airflow setpoints > 50% of maximum setpoint in mechanical equipment schedule for these air terminals indicate inlet velocity does not exceed 900 fpm	

Mechanical Requirements List, pg 18 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

C403.9.2.2	Steam condensate systems heat recovery	For buildings with on-site steam heating systems, indicate condensate water heat recovery and use of recovered heat	
		For buildings that use off-site generated steam where condensate is not returned to the source, indicate on-site condensate water heat recovery	
C403.9.2.3	Refrigeration condenser heat recovery	For buildings with food service, meat or deli departments that have ≥ 500,000 Btu/h of remote refrigeration capacity for coolers / freezers, indicate condenser heat recovery and use of captured energy (service water heating, space heating, or dehumidification reheating)	
		For buildings with ≥ 40,000 sf conditioned floor area and ≥ 1,000,000 Btu/h of remote refrigeration capacity, indicate condenser heat recovery to pre-heat service water; indicate remaining recovered heat is applied to space heating or dehumidification reheating	
C403.9.2.4	Heat recovery for space heating	For buildings that operate > 70 hour per week, that are not served by a DOAS with energy recovery, and have > 1,500,000 Btu/h of heat rejection capacity and ≥ 0.45 cfm per sf of design minimum supply airflow with reheat, indicate condenser heat recovery is provided for space heating that complies with Sections C403.9.2.4.1 or C403.9.2.4.2 or C403.9.2.4.4	
C403.9.2.4.1 C403.9.2.4.4	Water to water heat recovery	Indicate that 90% or more of the total building space heating and ventilation air design loads are served by heat energy rejected from either a heat recovery chiller or the cooling loop of water to water heat pump equipment	
C403.9.2.4.2	Exhaust heat recovery	Indicate that waste heat is recovered from least 90% of the total building exhaust airflow such that leaving exhaust air temperature while in heat recovery mode is 55 deg F dry bulb; note exhaust air systems eligible for exception to this requirement	
C403.9.2.4.3	Process heat recovery	In spaces with 5 watts per sf year-round cooling loads from lights and equipment, indicate these spaces are served by water-cooled equipment configured for heat recovery	
		If these spaces are served by economizer (air or water), indicate automatic controls are configured to disable economizer operation while system is in heat recovery mode	
MULTIPLE ZONE AIR SYSTEMS			

RIVERFRONT APARTMENTS BUILDING C
3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

WSEC FORMS

M7.03

2/2/2024 3:05:36 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

Mechanical Requirements List, pg 25 of 25

2018 WSEC Requirements for Commercial Buildings including Group R2, R3 & R4 over 3 stories & all R1 -- Administered by ©2022 NEEA. All rights reserved
The following information is necessary to check a mechanical permit application for compliance with the mechanical systems and equipment requirements in the Washington State Energy Code, Commercial Provisions.
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

	C408.1.2.2	Functional performance testing criteria	Identify in plans and specifications the intended operation of all equipment and controls during all modes of operation, including interfacing between new and existing-to-remain systems		
	C408.2.2	Air system and hydronic system balancing	Indicate in plans that air and fluid flow rates shall be tested and balanced within the tolerances defined in the specifications; indicate systems shall be balanced in a manner to first minimize throttling losses, then adjusted to meet design flow conditions		
	C408.2.2.1	Air system balancing devices	Indicate devices that provide the capability to balance all supply air outlets, zone terminals and air handling equipment requiring system balancing		
	C408.2.2.2	Hydronic system balancing devices	Indicate devices that provide the capability to isolate, balance and measure flow across all hydronic equipment requiring system balancing including heating and cooling coils and pumps; or exception applied		
PROJECT CLOSE OUT DOCUMENTATION					
	C103.6	Documentation and project close out submittal requirements	Indicate in plans that project close out documentation and training of building operations personnel is required for all mechanical components, equipment and systems governed by this code; indicate close out documentation shall include: record documents, O&M manuals, applicable WSEC mechanical equipment compliance reports and calculations		

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

WSEC FORMS

M7.04

2/2/2024 3:05:36 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

PERMIT REVISIONS #2 CHANGES:
- UPDATED LOAD CALCULATIONS FOR L1 CHANGES

2

Room Information, Part 2

Values in italics have been changed from the default

Number	Lighting Load	Equipment Load		People		Glass Zone Type
		Sensible	Latent		Sensible btuh / Person	Latent btuh / Person	
101 COMMERCIAL FLEX	1.05 watts / ft² 13,900	0.25 watts / ft² 3,300	0	*61 people*	250	200	B
121 TRASH ROOM	0.6 watts / ft² 1,720	2 watts / ft² 5,730	0	*0 people*	250	200	C
128 CORRIDOR & RRs	0.6 watts / ft² 1,820		0	0	*0 people*	250	200	B
150 LOBBY, MAIL & PARCEL	1.5 watts / ft² 14,500	1 watts / ft² 9,670	0	50 ft² / person 56.7 people	250	200	C
152 MOVE IN ROOM	0.6 watts / ft² 679	2 watts / ft² 2,260	0	*0 people*	250	200	C
AMENITY (615)	0.6 watts / ft² 1,070	2 watts / ft² 3,580	0	50 ft² / person 10.5 people	250	200	C
B01 [1-BDR] (631)	0.5 watts / ft² 895	2 watts / ft² 3,580	0	2 people	250	200	C
B02 [1-BDR] (616)	0.5 watts / ft² 895	2 watts / ft² 3,580	0	2 people	250	200	C
B03 [1-BDR] (609)	0.5 watts / ft² 895	2 watts / ft² 3,580	0	2 people	250	200	C
BIKE STORAGE (114)	0.6 watts / ft² 1,440		0	0	*0 people*	250	200	B
C01 [1-BDR] (604)	0.5 watts / ft² 1,340	2 watts / ft² 5,350	0	2 people	250	200	C
C01 [1-BDR] (619)	0.5 watts / ft² 1,340	2 watts / ft² 5,350	0	2 people	250	200	C
C01 [1-BDR] (620)	0.5 watts / ft² 1,340	2 watts / ft² 5,350	0	2 people	250	200	C
C02 [1-BDR] (603)	0.5 watts / ft² 1,160	2 watts / ft² 4,650	0	2 people	250	200	C
C03 [1-BDR] (612)	0.5 watts / ft² 1,340	2 watts / ft² 5,360	0	2 people	250	200	C
COMMERCIAL FLEX (104)	1.05 watts / ft² 10,700	0.25 watts / ft² 2,540	0	*45 people*	250	200	B
COMMERCIAL FLEX (105)	1.05 watts / ft² 15,500	0.25 watts / ft² 3,700	0	*67 people*	250	200	B
COMMERCIAL FLEX (106)	1.05 watts / ft² 14,700	0.25 watts / ft² 3,490	0	*65 people*	250	200	B
CORRIDOR (120)	0.6 watts / ft² 2,540		0	0	*0 people*	250	200	B
D01 [2-BDR] (607)	0.5 watts / ft² 1,590	2 watts / ft² 6,350	0	3 people	250	200	C
D02 [2-BDR] (123)	0.5 watts / ft² 1,940	2 watts / ft² 7,760	0	3 people	250	200	B
D03 [2-BDR] (601)	0.5 watts / ft² 1,840	2 watts / ft² 7,380	0	3 people	250	200	B
D04 [2-BDR] (614)	0.5 watts / ft² 1,590	2 watts / ft² 6,350	0	3 people	250	200	C
DOG WASH (116)	2 watts / ft² 395	2 watts / ft² 395	0	40 ft² / person 1.5 people	250	200	C

Room Information, Part 2

Values in italics have been changed from the default

Number	Lighting Load	Equipment Load		People		Glass Zone Type
		Sensible	Latent		Sensible btuh / Person	Latent btuh / Person	
ELECTRICAL (111)	0.7 watts / ft² 1,910	2 watts / ft² 5,450	0	*0 people*	275	475	B
FIRE SPRINKLER (106)	0.7 watts / ft² 583	2 watts / ft² 1,670	0	*0 people*	275	475	B
GENERATOR (109)	0.7 watts / ft² 1,200	2 watts / ft² 3,430	0	*0 people*	275	475	B
L6 CORRIDOR	0.6 watts / ft² 7,320		0	0	*0 people*	250	200	B
MAINTENANCE (107)	0.6 watts / ft² 1,010		0	0	*0 people*	250	200	B
MPOE ROOM (110)	0.7 watts / ft² 472	2 watts / ft² 1,350	0	*0 people*	275	475	B
RESTAURANT (102)	0.6 watts / ft² 11,200	*0.5 watts / ft² 9,350*	0	*81 people*	275	275	B
STAIR 2	*3 watts / ft² 1,840*		0	0	0 people	250	200	*B*
WATER SERVICE / HEATER (113)	0.7 watts / ft² 774	2 watts / ft² 2,210	0	*0 people*	275	475	B

Cooling Load Details - System

(Btu/h / % Total)

(See "Cooling Load Details - Room" for lighting, equipment, and people loads)

Location	Peak	Roof	Wall	Glass	Ventilation		Infiltration	
					Sensible	Latent	Sensible	Latent
Zone Common (Non-Tempered OSA)	Excluded from cooling							
Zone Common (Tempered OSA)	July 12:00 p.m.	6,920 1%	17,100 2%	194,000 28%	34,100 5%	67,500 10%	14,800 2%	9,990 1%
Room 101 COMMERCIAL FLEX	July 5:00 p.m.	0 0%	2,460 2%	39,900 39%	3,750 4%	7,420 7%	1,960 2%	1,240 1%
Room 121 TRASH ROOM	July 3:00 p.m.	0 0%	2,010 8%	306 1%	4,850 19%	9,590 38%	497 2%	269 1%
Room 128 CORRIDOR & RRs	July 2:00 p.m.	0 0%	731 15%	0 0%	630 13%	1,250 25%	362 7%	205 4%
Room 150 LOBBY, MAIL & PARCEL	July 2:00 p.m.	0 0%	1,160 2%	7,980 12%	2,390 3%	4,730 7%	1,610 2%	908 1%
Room 152 MOVE IN ROOM	July 2:00 p.m.	0 0%	1,420 26%	0 0%	291 5%	576 10%	193 3%	109 2%
Room AMENITY (615)	July 2:00 p.m.	638 5%	138 1%	1,820 13%	510 4%	1,010 7%	227 2%	128 1%
Room BIKE STORAGE (114)	July 5:00 p.m.	0 0%	589 13%	0 0%	630 14%	1,250 28%	364 8%	230 5%
Room COMMERCIAL FLEX (104)	July 1:00 p.m.	0 0%	526 1%	12,200 21%	3,020 5%	5,980 10%	1,480 3%	953 2%
Room COMMERCIAL FLEX (105)	July 1:00 p.m.	0 0%	491 0%	49,300 43%	4,440 4%	8,800 8%	2,160 2%	1,390 1%
Room COMMERCIAL FLEX (106)	July 10:00 a.m.	0 0%	472 0%	47,700 44%	4,070 4%	8,060 7%	450 0%	1,310 1%
Room CORRIDOR (120)	July 5:00 p.m.	0 0%	516 8%	0 0%	1,020 15%	2,010 30%	344 5%	217 3%
Room DOG WASH (116)	July 8:00 p.m.	0 0%	305 15%	0 0%	81 4%	160 8%	11 1%	19 1%
Room ELECTRICAL (111)	July 5:00 p.m.	0 0%	736 7%	0 0%	727 7%	1,440 13%	405 4%	256 2%
Room FIRE SPRINKLER (106)	July 5:00 p.m.	0 0%	330 10%	0 0%	226 7%	448 13%	132 4%	83 2%
Room GENERATOR (109)	July 6:00 p.m.	0 0%	817 11%	0 0%	452 6%	896 12%	214 3%	166 2%
Room L6 CORRIDOR	July 6:00 p.m.	5,980 37%	50 0%	226 1%	869 5%	1,720 11%	123 1%	96 1%
Room MAINTENANCE (107)	July 6:00 p.m.	0 0%	588 18%	0 0%	452 14%	896 27%	206 6%	160 5%
Room MPOE ROOM (110)	July 3:00 p.m.	0 0%	0 0%	0 0%	178 7%	352 14%	118 5%	64 3%
Room RESTAURANT (102)	July 3:00 p.m.	0 0%	2,320 2%	34,700 28%	5,180 4%	10,300 8%	3,260 3%	1,760 1%
Room STAIR 2	July 5:00 p.m.	300 8%	1,030 26%	0 0%	0 0%	0 0%	506 13%	320 8%

Glass

Room Number	Area	Type	Facing Direction	Shaded
RESTAURANT (102)	714 ft²	Riverfront Storefront (ECO)	S	

Room Information, Part 1

Values in italics have been changed from the default

Number	Name	Area	Ceiling Height	Ventilation		Infiltration		Cooling Temperature	Heating Temperature	Relative Humidity
				Cooling	Heating	Cooling	Heating			
101 COMMERCIAL FLEX	Commercial-Low Bay	3,870 ft²	12'	*Direct / 1,160 CFM*	Same as cooling	1,160 CFM	0.25 AC / hour 194 CFM	Same as cooling	194 CFM	75° F	68° F	50%
121 TRASH ROOM	General	839 ft²	12'	*Direct / 1,500 CFM*	Same as cooling	1,500 CFM	0.25 AC / hour 42 CFM	Same as cooling	42 CFM	75° F	68° F	50%
128 CORRIDOR & RRs	Corridors	888 ft²	12'	*Direct / 195 CFM*	Same as cooling	195 CFM	0.17 CFM / ft² of wall 32 CFM	Same as cooling	32 CFM	75° F	68° F	50%
150 LOBBY, MAIL & PARCEL	Lobby-Main Entry	2,830 ft²	12'	*Direct / 740 CFM*	Same as cooling	740 CFM	0.25 AC / hour 142 CFM	Same as cooling	142 CFM	75° F	68° F	50%
152 MOVE IN ROOM	General	332 ft²	12'	*Direct / 90 CFM*	Same as cooling	90 CFM	0.25 AC / hour 17 CFM	Same as cooling	17 CFM	75° F	68° F	50%
AMENITY (615)	General	525 ft²	9'	15 CFM / person 158 CFM	Same as cooling	158 CFM	0.25 AC / hour 20 CFM	Same as cooling	20 CFM	75° F	68° F	50%
B01 [1-BDR] (631)	Dwelling Unit - [1-BDR 500-1000 SF]	525 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 20 CFM	Same as cooling	20 CFM	75° F	68° F	50%
B02 [1-BDR] (616)	Dwelling Unit - [1-BDR 500-1000 SF]	525 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 20 CFM	Same as cooling	20 CFM	75° F	68° F	50%
B03 [1-BDR] (609)	Dwelling Unit - [1-BDR 500-1000 SF]	525 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 20 CFM	Same as cooling	20 CFM	75° F	68° F	50%
BIKE STORAGE (114)	Storage	703 ft²	12'	*Direct / 195 CFM*	Same as cooling	195 CFM	0.25 AC / hour 36 CFM	Same as cooling	36 CFM	75° F	68° F	50%
C01 [1-BDR] (604)	Dwelling Unit - [1-BDR 500-1000 SF]	784 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 30 CFM	Same as cooling	30 CFM	75° F	68° F	50%
C01 [1-BDR] (619)	Dwelling Unit - [1-BDR 500-1000 SF]	784 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 30 CFM	Same as cooling	30 CFM	75° F	68° F	50%
C01 [1-BDR] (620)	Dwelling Unit - [1-BDR 500-1000 SF]	784 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 30 CFM	Same as cooling	30 CFM	75° F	68° F	50%
C02 [1-BDR] (603)	Dwelling Unit - [1-BDR 500-1000 SF]	681 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 26 CFM	Same as cooling	26 CFM	75° F	68° F	50%
C03 [1-BDR] (612)	Dwelling Unit - [1-BDR 500-1000 SF]	785 ft²	9'	Direct	30 CFM	Same as cooling	30 CFM	0.25 AC / hour 30 CFM	Same as cooling	30 CFM	75° F	68° F	50%
COMMERCIAL FLEX (104)	Commercial-Low Bay	2,980 ft²	12'	*Direct / 935 CFM*	Same as cooling	935 CFM	0.25 AC / hour 149 CFM	Same as cooling	149 CFM	75° F	68° F	50%

Room Information, Part 1

Values in italics have been changed from the default

Number	Name	Area	Ceiling Height	Ventilation		Infiltration		Cooling Temperature	Heating Temperature	Relative Humidity
				Cooling	Heating	Cooling	Heating			
COMMERCIAL FLEX (105)	Commercial-Low Bay	4,340 ft²	12'	*Direct / 1,380 CFM*	Same as cooling	1,380 CFM	0.25 AC / hour 217 CFM	Same as cooling	217 CFM	75° F	68° F	50%
COMMERCIAL FLEX (106)	Commercial-Low Bay	4,090 ft²	12'	*Direct / 1,260 CFM*	Same as cooling	1,260 CFM	0.25 AC / hour 205 CFM	Same as cooling	205 CFM	75° F	68° F	50%
CORRIDOR (120)	Corridors	1,240 ft²	12'	*Direct / 315 CFM*	Same as cooling	315 CFM	0.17 CFM / ft² of wall 34 CFM	Same as cooling	34 CFM	75° F	68° F	50%
D01 [2-BDR] (607)	Dwelling Unit - [2-BDR 500-1000 SF]	930 ft²	9'	Direct	35 CFM	Same as cooling	35 CFM	0.25 AC / hour 35 CFM	Same as cooling	35 CFM	75° F	68° F	50%
D02 [2-BDR] (123)	Dwelling Unit - [2-BDR 1001-1500 SF]	1,140 ft²	9'	Direct	40 CFM	Same as cooling	40 CFM	0.25 AC / hour 43 CFM	Same as cooling	43 CFM	75° F	68° F	50%
D03 [2-BDR] (601)	Dwelling Unit - [2-BDR 1001-1500 SF]	1,080 ft²	9'	Direct	40 CFM	Same as cooling	40 CFM	0.25 AC / hour 41 CFM	Same as cooling	41 CFM	75° F	68° F	50%
D04 [2-BDR] (614)	Dwelling Unit - [2-BDR 500-1000 SF]	930 ft²	9'	Direct	35 CFM	Same as cooling	35 CFM	0.25 AC / hour 35 CFM	Same as cooling	35 CFM	75° F	68° F	50%
DOG WASH (116)	Animal Area	58 ft²	12'	*Direct*	*25 CFM*	Same as cooling	25 CFM	0.25 AC / hour 3 CFM	Same as cooling	3 CFM	75° F	68° F	50%
ELECTRICAL (111)	Elec/Mech	799 ft²	12'	*Direct*	*225 CFM*	Same as cooling	225 CFM	0.25 AC / hour 40 CFM	Same as cooling	40 CFM	75° F	68° F	50%
FIRE SPRINKLER (106)	Elec/Mech	244 ft²	12'	*Direct*	*70 CFM*	Same as cooling	70 CFM	0.25 AC / hour 13 CFM	Same as cooling	13 CFM	75° F	68° F	50%
GENERATOR (109)	Elec/Mech	502 ft²	12'	*Direct*	*140 CFM*	Same as cooling	140 CFM	0.25 AC / hour 26 CFM	Same as cooling	26 CFM	75° F	68° F	50%
L6 CORRIDOR	Corridors	3,570 ft²	9'	0.075 CFM / ft²	269 CFM	Same as cooling	269 CFM	0.17 CFM / ft² of wall 15 CFM	Same as cooling	15 CFM	75° F	68° F	50%
MAINTENANCE (107)	Storage	492 ft²	12'	*Direct*	*140 CFM*	Same as cooling	140 CFM	0.25 AC / hour 25 CFM	Same as cooling	25 CFM	75° F	68° F	50%
MPOE ROOM (110)	Elec/Mech	197 ft²	12'	*Direct*	*55 CFM*	Same as cooling	55 CFM	0.25 AC / hour 10 CFM	Same as cooling	10 CFM	75° F	68° F	50%
RESTAURANT (102)	Dining	5,480 ft²	12'	*Direct*	*1,610 CFM*	Same as cooling	1,610 CFM	0.25 AC / hour 275 CFM	Same as cooling	275 CFM	75° F	68° F	50%
STAIR 2	Stairs	179 ft²	66'	*Direct*	*0 CFM*	Same as cooling	0 CFM	0.25 AC / hour 50 CFM	Same as cooling	50 CFM	75° F	68° F	50%
WATER SERVICE / HEATER (113)	Elec/Mech	324 ft²	12'	*Direct*	*95 CFM*	Same as cooling	95 CFM	0.25 AC / hour 17 CFM	Same as cooling	17 CFM	75° F	68° F	50%

Walls

Room Number	Length	Height	Area (Minus Doors and Glass)	Type	Facing Direction	On Perimeter
RESTAURANT (102)	13'-6"	18'	242 ft²	Riverfront Mass	W	
RESTAURANT (102)	37'	18'	241 ft²	Riverfront Mass	W	
RESTAURANT (102)	66'-4"	18'	1,190 ft²	Riverfront Mass	W	
RESTAURANT (102)	65'-5"	18'	422 ft²	Riverfront Mass	S	
RESTAURANT (102)	6'-2"	18'	110 ft²	Riverfront Mass	S	
RESTAURANT (102)	7'-10"	18'	140 ft²	Riverfront Mass	E	
RESTAURANT (102)	6'-3"	18'	113 ft²	Riverfront Mass	N	
STAIR 2	9'-5"	10'	94 ft²	Riverfront Wood	W	
STAIR 2	19'-1"	10'	169 ft²	Riverfront Wood	S	
STAIR 2	9'-5"	10'	94 ft²	Riverfront Wood	E	
STAIR 2	19'-1"	10'	190 ft²	Riverfront Wood	N	
WATER SERVICE / HEATER (113)	8'-6"	18'	110 ft²	Riverfront Mass	N	

Partitions

Location	Type	Area	Low Temperature	High Temperature	U-Value
Floor LEVEL 1	Horizontal	30,400 ft²	50° F	75° F	0.031

Door Types

Door Type	U-Value	ASHRAE Type	Color	Description
2015 WA Min - Nonswinging	0.34	2	Dark	2015 WA Minimum - Nonswinging (Roll-up or Sliding)
2018 WA Min - Swinging	0.37	2	Dark	2018 WA Minimum - Swinging (Foam insulated steel slab with metal edge in steel frame.) 2018 WSEC R303.1.3(2)
Metal Roll-Up	0.31	6	Dark	Metal, Roll-up

Doors

Room Number	Area	Type	Facing Direction
121 TRASH ROOM	90 ft²	Metal Roll-Up	E
128 CORRIDOR & RRs	21 ft²	2018 WA Min - Swinging	E
152 MOVE IN ROOM	21 ft²	2018 WA Min - Swinging	E
B01 [1-BDR] (631)	21 ft²	2018 WA Min - Swinging	S
BIKE STORAGE (114)	21 ft²	2018 WA Min - Swinging	N
C02 [1-BDR] (603)	21 ft²	2018 WA Min - Swinging	W
CORRIDOR (120)	21 ft²	2018 WA Min - Swinging	N
CORRIDOR (120)	21 ft²	2018 WA Min - Swinging	N
DOG WASH (116)	21 ft²	2018 WA Min - Swinging	N
ELECTRICAL (111)	42 ft²	2015 WA Min - Nonswinging	N
FIRE SPRINKLER (106)	21 ft²	2018 WA Min - Swinging	N
GENERATOR (109)	42 ft²	2018 WA Min - Swinging	N
MAINTENANCE (107)	21 ft²	2018 WA Min - Swinging	N
STAIR 2	21 ft²	2018 WA Min - Swinging	S
WATER SERVICE / HEATER (113)	42 ft²	2015 WA Min - Nonswinging	N

Glass Types

Glass Type	U-Value	SHGC	Description
2013 CA Min - Fixed	0.36	0.25	2013 CA Minimum - Fixed
Riverfront Glazed Door (ECO)	0.27	0.22	Riverfront Glazed Door with ECO Glazing
Riverfront Operable Window (ECO)	0.27	0.22	Riverfront Operable with ECO Glazing
Riverfront Storefront (ECO)	0.27	0.22	Riverfront Storefront with ECO Glazing

Glass

Room Number	Area	Type	Facing Direction	Shaded
101 COMMERCIAL FLEX	42 ft²	Riverfront Glazed Door (ECO)	W	
101 COMMERCIAL FLEX	586 ft²	Riverfront Storefront (ECO)	W	
101 COMMERCIAL FLEX	42 ft²	Riverfront Glazed Door (ECO)	E	
101 COMMERCIAL FLEX	378 ft²	Riverfront Storefront (ECO)	E	
101 COMMERCIAL FLEX	646 ft²	Riverfront Storefront (ECO)	N	
121 TRASH ROOM	21 ft²	Riverfront Glazed Door (ECO)	E	
150 LOBBY, MAIL & PARCEL	21 ft²	Riverfront Glazed Door (ECO)	S	
150 LOBBY, MAIL & PARCEL	190 ft²	Riverfront Storefront (ECO)	S	
150 LOBBY, MAIL & PARCEL	21 ft²	Riverfront Glazed Door (ECO)	N	
150 LOBBY, MAIL & PARCEL	197 ft²	Riverfront Storefront (ECO)	N	
AMENITY (615)	68 ft²	Riverfront Operable Window (ECO)	S	
B01 [1-BDR] (631)	41 ft²	Riverfront Operable Window (ECO)	S	
B02 [1-BDR] (616)	68 ft²	Riverfront Operable Window (ECO)	N	
B03 [1-BDR] (609)	68 ft²	Riverfront Operable Window (ECO)	W	
C01 [1-BDR] (604)	96 ft²	Riverfront Operable Window (ECO)	E	
C01 [1-BDR] (619)	96 ft²	Riverfront Operable Window (ECO)	S	
C01 [1-BDR] (620)	96 ft²	Riverfront Operable Window (ECO)	N	
C02 [1-BDR] (603)	62 ft²	Riverfront Operable Window (ECO)	W	
C03 [1-BDR] (612)	96 ft²	Riverfront Operable Window (ECO)	S	
COMMERCIAL FLEX (104)	380 ft²	Riverfront Storefront (ECO)	S	
COMMERCIAL FLEX (105)	126 ft²	Riverfront Glazed Door (ECO)	S	
COMMERCIAL FLEX (105)	1,420 ft²	Riverfront Storefront (ECO)	S	
COMMERCIAL FLEX (106)	42 ft²	Riverfront Glazed Door (ECO)	N	
COMMERCIAL FLEX (106)	500 ft²	Riverfront Storefront (ECO)	N	
COMMERCIAL FLEX (106)	42 ft²	Riverfront Glazed Door (ECO)	S	
COMMERCIAL FLEX (106)	730 ft²	Riverfront Storefront (ECO)	S	
COMMERCIAL FLEX (106)	776 ft²	Riverfront Storefront (ECO)	E	
D01 [2-BDR] (607)	137 ft²	Riverfront Operable Window (ECO)	W	
D02 [2-BDR] (123)	96 ft²	Riverfront Operable Window (ECO)	W	
D02 [2-BDR] (123)	117 ft²	Riverfront Operable Window (ECO)	S	
D03 [2-BDR] (601)	117 ft²	Riverfront Operable Window (ECO)	N	
D03 [2-BDR] (601)	117 ft²	Riverfront Operable Window (ECO)	W	
D04 [2-BDR] (614)	137 ft²	Riverfront Operable Window (ECO)	N	
L6 CORRIDOR	21 ft²	Riverfront Operable Window (ECO)	N	
RESTAURANT (102)	425 ft²	Riverfront Storefront (ECO)	W	
RESTAURANT (102)	42 ft²	Riverfront Glazed Door (ECO)	S	

Project Information

Project Name:	Riverfront Apartments BLDG C		
Project Location:	Everett (2017), WA		
Default Heating Temperature:	68° F	**Heating Safety Factor (Room):**	0%
		Heating Safety Factor (Ventilation):	0%
Default Cooling Temperature:	75° F	**Cooling Safety Factor (Room):**	0%
		Cooling Safety Factor (Ventilation):	0%
Default Relative Humidity:	50%	**Floor Slab Heat Loss Coefficient:**	0.54
Calculation Date:	January 25, 2024, 2:57 p.m.		

Design Conditions

OSA Low:	18° F	**Latitude:**	48° N
OSA Daily Range:	16° F	**Elevation:**	82'
	OSA High Dry Bulb	**OSA High Wet Bulb**	
July	86° F	68° F	

Roof Types

Roof Type	U-Value	ASHRAE Type	Color	Description
WSEC 2018	0.027	5	Dark	

Roofs

Location	Type	Area	
Room STAIR 2	WSEC 2018	(100% of Room)	179 ft²
Floor LEVEL 6	WSEC 2018		13,600 ft²

Wall Types

Wall Type	U-Value	ASHRAE Type	Color	Description
Riverfront Mass	0.078	9	Dark	WSEC Min - Mass Group R
Riverfront Wood	0.051	9	Dark	WSEC Min - Wood framed Group R

Walls

Room Number	Length	Height	Area (Minus Doors and Glass)	Type	Facing Direction	On Perimeter
101 COMMERCIAL FLEX	1'-8"	18'	30 ft²	Riverfront Mass	NW	
101 COMMERCIAL FLEX	65'-5"	18'	550 ft²	Riverfront Mass	W	
101 COMMERCIAL FLEX	1'-8"	18'	30 ft²	Riverfront Mass	SW	
101 COMMERCIAL FLEX	43'-6"	18'	363 ft²	Riverfront Mass	E	
101 COMMERCIAL FLEX	1'-10"	18'	34 ft²	Riverfront Mass	NE	
101 COMMERCIAL FLEX	69'-3"	18'	601 ft²	Riverfront Mass	N	
121 TRASH ROOM	5'-8"	18'	102 ft²	Riverfront Mass	S	
121 TRASH ROOM	12'-6"	18'	205 ft²	Riverfront Wood	E	
121 TRASH ROOM	13'	18'	144 ft²	Riverfront Mass	E	
121 TRASH ROOM	4'-7"	18'	83 ft²	Riverfront Mass	E	
128 CORRIDOR & RRs	10'-3"	18'	163 ft²	Riverfront Mass	E	
150 LOBBY, MAIL & PARCEL	2'-3"	18'	40 ft²	Riverfront Mass	W	
150 LOBBY, MAIL & PARCEL	1'-6"	18'	27 ft²	Riverfront Mass	W	
150 LOBBY, MAIL & PARCEL	22'-4"	18'	191 ft²	Riverfront Mass	S	

Walls

Room Number	Length	Height	Area (Minus Doors and Glass)	Type	Facing Direction	On Perimeter
150 LOBBY, MAIL & PARCEL	13'-10"	18'	249 ft²	Riverfront Mass	S	
150 LOBBY, MAIL & PARCEL	8'	18'	143 ft²	Riverfront Mass	E	
150 LOBBY, MAIL & PARCEL	31'-8"	18'	352 ft²	Riverfront Mass	N	
150 LOBBY, MAIL & PARCEL	13'-10"	18'	249 ft²	Riverfront Mass	N	
152 MOVE IN ROOM	25'-1"	18'	430 ft²	Riverfront Mass	E	
AMENITY (615)	24'-4"	9'-10"	240 ft²	Riverfront Wood	W	
AMENITY (615)	16'-2"	9'-10"	91 ft²	Riverfront Wood	S	
B01 [1-BDR] (631)	16'-2"	9'-10"	97 ft²	Riverfront Wood	S	
B02 [1-BDR] (616)	16'-2"	9'-10"	91 ft²	Riverfront Wood	N	
B02 [1-BDR] (616)	5'-4"	9'-10"	53 ft²	Riverfront Wood	W	
B03 [1-BDR] (609)	5'-6"	9'-10"	54 ft²	Riverfront Wood	N	
B03 [1-BDR] (609)	16'-2"	9'-10"	91 ft²	Riverfront Wood	W	
BIKE STORAGE (114)	23'-8"	18'	405 ft²	Riverfront Mass	N	
C01 [1-BDR] (604)	24'-2"	9'-10"	142 ft²	Riverfront Wood	E	
C01 [1-BDR] (619)	24'-2"	9'-10"	142 ft²	Riverfront Wood	S	
C01 [1-BDR] (620)	24'-2"	9'-10"	142 ft²	Riverfront Wood	N	
C02 [1-BDR] (603)	24'-2"	9'-10"	155 ft²	Riverfront Wood	W	
C03 [1-BDR] (612)	23'-10"	9'-10"	138 ft²	Riverfront Wood	S	
C03 [1-BDR] (612)	3'	9'-10"	29 ft²	Riverfront Wood	E	
C03 [1-BDR] (612)	1'-7"	9'-10"	16 ft²	Riverfront Wood	E	
COMMERCIAL FLEX (104)	41'-5"	18'	745 ft²	Riverfront Mass	N	
COMMERCIAL FLEX (104)	5'-3"	18'	95 ft²	Riverfront Mass	W	
COMMERCIAL FLEX (104)	5'-9"	18'	104 ft²	Riverfront Mass	W	
COMMERCIAL FLEX (104)	41'-8"	18'	371 ft²	Riverfront Mass	S	
COMMERCIAL FLEX (105)	1'-4"	18'	24 ft²	Riverfront Mass	S	
COMMERCIAL FLEX (105)	122'-5"	18'	662 ft²	Riverfront Mass	S	
COMMERCIAL FLEX (105)	1'-6"	18'	27 ft²	Riverfront Mass	E	
COMMERCIAL FLEX (106)	47'	18'	304 ft²	Riverfront Mass	N	
COMMERCIAL FLEX (106)	73'	18'	541 ft²	Riverfront Mass	S	
COMMERCIAL FLEX (106)	72'-2"	18'	523 ft²	Riverfront Mass	E	
CORRIDOR (120)	6'	18'	87 ft²	Riverfront Mass	N	
CORRIDOR (120)	5'	18'	69 ft²	Riverfront Mass	N	
D01 [2-BDR] (607)	35'-2"	9'-10"	209 ft²	Riverfront Wood	W	
D02 [2-BDR] (123)	24'-3"	9'-10"	143 ft²	Riverfront Wood	W	
D02 [2-BDR] (123)	41'-4"	9'-10"	289 ft²	Riverfront Wood	S	
D03 [2-BDR] (601)	35'-8"	9'-10"	234 ft²	Riverfront Wood	N	
D03 [2-BDR] (601)	32'-1"	9'-10"	198 ft²	Riverfront Wood	W	
D04 [2-BDR] (614)	35'-2"	9'-10"	209 ft²	Riverfront Wood	N	
DOG WASH (116)	6'-2"	18'	90 ft²	Riverfront Mass	N	
ELECTRICAL (111)	24'-8"	18'	402 ft²	Riverfront Mass	N	
FIRE SPRINKLER (106)	9'-5"	18'	149 ft²	Riverfront Mass	N	
GENERATOR (109)	24'-2"	18'	393 ft²	Riverfront Mass	N	

PERMIT REVISIONS #2 CHANGES:
- UPDATED LOAD CALCULATIONS FOR L1 CHANGES

2

Load Total Summary - Room
(Excludes Ventilation and Plenum Loads)

Location	Area	Cooling										Heating			
		CFM	Peak	btuh			Tons			ft²/ton	CFM/ton	CFM/ft²	CFM	btuh	kW	CFM/ft²
				Total	Sensible	Latent	Total	Sensible	Latent							
Room C01 [1-BDR] (604)	784 ft²	491	July 9:00 a.m.	11,400	10,800	592	0.9	0.9	0	828	518	0.63	231	4,980	1.5	0.3
Room C01 [1-BDR] (619)	784 ft²	508	July 2:00 p.m.	11,700	11,100	592	1	0.9	0	802	519	0.65	231	4,980	1.5	0.3
Room C01 [1-BDR] (620)	784 ft²	449	July 6:00 p.m.	10,500	9,870	592	0.9	0.8	0	900	515	0.57	231	4,980	1.5	0.3
Room C02 [1-BDR] (603)	681 ft²	497	July 5:00 p.m.	11,500	10,900	566	1	0.9	0	712	520	0.73	213	4,590	1.4	0.31
Room C03 [1-BDR] (612)	785 ft²	511	July 2:00 p.m.	11,800	11,200	592	1	0.9	0	797	519	0.65	242	5,210	1.5	0.31
Room D01 [2-BDR] (607)	930 ft²	756	July 5:00 p.m.	17,400	16,600	824	1.5	1.4	0.1	641	521	0.81	301	6,470	1.9	0.32
Room D02 [2-BDR] (123)	1,140 ft²	893	July 4:00 p.m.	20,500	19,600	875	1.7	1.6	0.1	666	523	0.79	446	9,600	2.8	0.39
Room D03 [2-BDR] (601)	1,080 ft²	869	July 5:00 p.m.	19,900	19,100	862	1.7	1.6	0.1	650	523	0.8	453	9,760	2.9	0.42
Room D04 [2-BDR] (614)	930 ft²	552	July 6:00 p.m.	13,000	12,100	824	1.1	1	0.1	862	511	0.59	301	6,470	1.9	0.32
Zone Tenant Improvement (Heat to 40, Tempered)		Excluded from cooling											Excluded from heating			

Load Total Summary - System
(Includes Ventilation and Plenum Loads)

Location	Area	Cooling										Heating			
		CFM	Peak	btuh			Tons			ft²/ton	CFM/ton	CFM/ft²	CFM	btuh	kW	CFM/ft²
				Total	Sensible	Latent	Total	Sensible	Latent							
Room RESTAURANT (102)	5,480 ft²	3,790	July 3:00 p.m.	123,000	88,300	34,300	10.2	7.4	2.9	536	371	0.69	2,270	71,300	20.9	0.41
Room STAIR 2	179 ft²	167	July 5:00 p.m.	3,990	3,670	320	0.3	0.3	0	539	502	0.93	295	6,360	1.9	1.65
Room WATER SERVICE / HEATER (113)	324 ft²	164	July 5:00 p.m.	4,620	3,910	716	0.4	0.3	0.1	841	426	0.51	115	3,800	1.1	0.36
Zone Dwelling Units	9,470 ft²	6,590	July 12:00 p.m.	156,000	146,000	10,400	13	12.2	0.9	727	506	0.7	6,590	73,200	21.5	0.7
Room B01 [1-BDR] (631)	525 ft²	335	July 2:00 p.m.	8,180	7,460	720	0.7	0.6	0.1	770	491	0.64	158	3,830	1.1	0.3
Room B02 [1-BDR] (616)	525 ft²	313	July 6:00 p.m.	7,690	6,970	720	0.6	0.6	0.1	819	489	0.6	170	4,070	1.2	0.32
Room B03 [1-BDR] (609)	525 ft²	413	July 5:00 p.m.	9,880	9,160	720	0.8	0.8	0.1	638	502	0.79	170	4,080	1.2	0.32
Room C01 [1-BDR] (604)	784 ft²	491	July 9:00 a.m.	11,700	10,900	784	1	0.9	0.1	808	506	0.63	231	5,400	1.6	0.3
Room C01 [1-BDR] (619)	784 ft²	508	July 2:00 p.m.	12,000	11,200	784	1	0.9	0.1	782	507	0.65	231	5,400	1.6	0.3
Room C01 [1-BDR] (620)	784 ft²	449	July 6:00 p.m.	10,700	9,960	784	0.9	0.8	0.1	876	501	0.57	231	5,400	1.6	0.3
Room C02 [1-BDR] (603)	681 ft²	497	July 5:00 p.m.	11,800	11,000	758	1	0.9	0.1	695	507	0.73	213	5,010	1.5	0.31
Room C03 [1-BDR] (612)	785 ft²	511	July 2:00 p.m.	12,100	11,300	784	1	0.9	0.1	778	507	0.65	242	5,630	1.7	0.31
Room D01 [2-BDR] (607)	930 ft²	756	July 5:00 p.m.	17,800	16,700	1,050	1.5	1.4	0.1	629	511	0.81	301	6,960	2	0.32
Room D02 [2-BDR] (123)	1,140 ft²	893	July 4:00 p.m.	20,900	19,700	1,130	1.7	1.6	0.1	654	514	0.79	446	10,200	3	0.39
Room D03 [2-BDR] (601)	1,080 ft²	869	July 5:00 p.m.	20,300	19,200	1,120	1.7	1.6	0.1	638	513	0.8	453	10,300	3	0.42
Room D04 [2-BDR] (614)	930 ft²	552	July 6:00 p.m.	13,300	12,200	1,050	1.1	1	0.1	840	498	0.59	301	6,960	2	0.32
Zone Tenant Improvement (Heat to 40, Tempered)		Excluded from cooling											Excluded from heating			

Load Total Summary - Room
(Excludes Ventilation and Plenum Loads)

Location	Area	Cooling										Heating			
		CFM	Peak	btuh			Tons			ft²/ton	CFM/ton	CFM/ft²	CFM	btuh	kW	CFM/ft²
				Total	Sensible	Latent	Total	Sensible	Latent							
Zone Common (Non-Tempered OSA)		Excluded from cooling											Excluded from heating			
Zone Common (Tempered OSA)	34,500 ft²	24,000	CV - Sum of Peaks	589,000	495,000	93,600	49.1	41.3	7.8	703	488	0.7	15,000	294,000	86.1	0.44
Room 101 COMMERCIAL FLEX	3,870 ft²	3,500	July 5:00 p.m.	90,200	76,800	13,400	7.5	6.4	1.1	514	465	0.91	2,170	46,700	13.7	0.56

Cooling Load Details - Room
(Btu/h / % of Total)

Location	Peak	Roof	Wall	Glass	Lighting	Equipment		People		Infiltration	
						Sensible	Latent	Sensible	Latent	Sensible	Latent
Room D03 [2-BDR] (601)	July 5:00 p.m.	1,810 9%	337 2%	6,550 33%	1,840 9%	7,380 37%	0 0%	750 4%	600 3%	415 2%	262 1%
Room D04 [2-BDR] (614)	July 6:00 p.m.	1,560 12%	160 1%	1,440 11%	1,590 12%	6,350 49%	0 0%	750 6%	600 5%	288 2%	224 2%
Zone Tenant Improvement (Heat to 40, Tempered)	Excluded from cooling										

Heating Load Details - System and Room
(Btu/h / % of System Total)

Location	Roof	Wall	Glass	Slab	Horizontal Partitions	Ventilation	Infiltration
Zone Common (Non-Tempered OSA)	Excluded from heating						
Zone Common (Tempered OSA)	5,780 1%	55,600 13%	100,000 23%	31,200 7%	17,000 4%	148,000 33%	84,100 19%
Room 101 COMMERCIAL FLEX	0 0%	6,270 10%	22,900 36%	4,950 8%	2,160 3%	16,200 26%	10,400 17%
Room 121 TRASH ROOM	0 0%	3,200 11%	284 1%	966 3%	468 2%	21,000 75%	2,260 8%
Room 128 CORRIDOR & RRs	0 0%	1,020 16%	0 0%	276 4%	496 8%	2,730 44%	1,720 28%
Room 150 LOBBY, MAIL & PARCEL	0 0%	4,880 15%	5,790 18%	2,520 8%	1,580 5%	10,400 32%	7,650 23%
Room 152 MOVE IN ROOM	0 0%	2,070 40%	0 0%	676 13%	185 4%	1,260 25%	915 18%
Room AMENITY (615)	709 10%	843 12%	918 13%	1,090 16%	0 0%	2,210 32%	1,080 16%
Room BIKE STORAGE (114)	0 0%	1,970 26%	0 0%	639 8%	392 5%	2,730 36%	1,940 25%
Room COMMERCIAL FLEX (104)	0 0%	5,130 15%	5,130 15%	1,420 4%	1,660 5%	13,100 38%	8,020 23%
Room COMMERCIAL FLEX (105)	0 0%	2,780 5%	20,800 35%	3,380 6%	2,420 4%	19,200 32%	11,700 19%
Room COMMERCIAL FLEX (106)	0 0%	5,340 8%	28,200 40%	5,190 7%	2,280 3%	17,600 25%	11,000 16%
Room CORRIDOR (120)	0 0%	1,390 16%	0 0%	297 3%	693 8%	4,410 51%	1,830 21%
Room DOG WASH (116)	0 0%	738 51%	0 0%	166 11%	32 2%	350 24%	162 11%
Room ELECTRICAL (111)	0 0%	2,280 26%	0 0%	666 8%	446 5%	3,150 36%	2,150 25%
Room FIRE SPRINKLER (106)	0 0%	969 32%	0 0%	255 8%	136 4%	980 32%	700 23%
Room GENERATOR (109)	0 0%	2,310 35%	0 0%	653 10%	280 4%	1,960 30%	1,400 21%
Room L6 CORRIDOR	4,830 48%	165 2%	284 3%	235 2%	0 0%	3,770 37%	808 8%
Room MAINTENANCE (107)	0 0%	1,750 30%	0 0%	556 9%	274 5%	1,960 33%	1,350 23%
Room MPOE ROOM (110)	0 0%	0 0%	0 0%	0 0%	110 8%	770 54%	538 38%
Room RESTAURANT (102)	0 0%	9,610 13%	15,900 22%	5,470 8%	3,060 4%	22,500 31%	14,800 21%
Room STAIR 2	242 4%	1,790 28%	0 0%	1,540 24%	100 2%	0 0%	2,690 42%
Room WATER SERVICE / HEATER (113)	0 0%	1,140 30%	0 0%	229 6%	181 5%	1,330 35%	915 24%
Zone Dwelling Units	12,800 17%	6,980 10%	18,100 25%	10,500 14%	0 0%	5,460 7%	19,400 26%
Room B01 [1-BDR] (631)	708 18%	636 17%	554 14%	437 11%	0 0%	420 11%	1,080 28%
Room B02 [1-BDR] (616)	708 17%	367 9%	918 23%	582 14%	0 0%	420 10%	1,080 26%
Room B03 [1-BDR] (609)	708 17%	370 9%	918 23%	585 14%	0 0%	420 10%	1,080 26%
Room C01 [1-BDR] (604)	1,060 20%	361 7%	1,300 24%	653 12%	0 0%	420 8%	1,620 30%
Room C01 [1-BDR] (619)	1,060 20%	361 7%	1,300 24%	653 12%	0 0%	420 8%	1,620 30%
Room C01 [1-BDR] (620)	1,060 20%	361 7%	1,300 24%	653 12%	0 0%	420 8%	1,620 30%
Room C02 [1-BDR] (603)	919 18%	783 16%	837 17%	653 13%	0 0%	420 8%	1,400 28%
Room C03 [1-BDR] (612)	1,060 19%	468 8%	1,300 23%	767 14%	0 0%	420 7%	1,620 29%
Room D01 [2-BDR] (607)	1,260 18%	533 8%	1,850 27%	950 14%	0 0%	490 7%	1,880 27%
Room D02 [2-BDR] (123)	1,530 15%	1,100 11%	2,880 28%	1,770 17%	0 0%	560 6%	2,320 23%
Room D03 [2-BDR] (601)	1,460 14%	1,100 11%	3,160 31%	1,830 18%	0 0%	560 5%	2,210 21%
Room D04 [2-BDR] (614)	1,260 18%	533 8%	1,850 27%	950 14%	0 0%	490 7%	1,880 27%

Cooling Load Details - System
(Btu/h / % Total)

(See "Cooling Load Details - Room" for lighting, equipment, and people loads)

Location	Peak	Roof	Wall	Glass	Ventilation		Infiltration	
					Sensible	Latent	Sensible	Latent
Room WATER SERVICE / HEATER (113)	July 5:00 p.m.	0 0%	440 10%	0 0%	307 7%	608 13%	172 4%	109 2%
Zone Dwelling Units	July 12:00 p.m.	13,500 9%	2,820 2%	37,100 24%	1,260 1%	2,490 2%	3,320 2%	2,300 1%
Room B01 [1-BDR] (631)	July 2:00 p.m.	638 8%	427 5%	1,090 13%	97 1%	192 2%	227 3%	128 2%
Room B02 [1-BDR] (616)	July 6:00 p.m.	878 11%	137 2%	714 9%	97 1%	192 2%	165 2%	128 2%
Room B03 [1-BDR] (609)	July 5:00 p.m.	878 9%	119 1%	2,880 29%	97 1%	192 2%	202 2%	128 1%
Room C01 [1-BDR] (604)	July 9:00 a.m.	64 1%	36 0%	3,490 30%	97 1%	192 2%	-12 0%	192 2%
Room C01 [1-BDR] (619)	July 2:00 p.m.	953 8%	101 1%	2,560 21%	97 1%	192 2%	340 3%	192 2%
Room C01 [1-BDR] (620)	July 6:00 p.m.	1,310 12%	108 1%	1,010 9%	97 1%	192 2%	247 2%	192 2%
Room C02 [1-BDR] (603)	July 5:00 p.m.	1,140 10%	562 5%	2,630 22%	97 1%	192 2%	263 2%	166 1%
Room C03 [1-BDR] (612)	July 2:00 p.m.	953 8%	175 1%	2,560 21%	97 1%	192 2%	340 3%	192 2%
Room D01 [2-BDR] (607)	July 5:00 p.m.	1,560 9%	192 1%	5,810 33%	113 1%	224 1%	354 2%	224 1%
Room D02 [2-BDR] (123)	July 4:00 p.m.	1,810 9%	471 2%	6,390 31%	129 1%	256 1%	487 2%	275 1%
Room D03 [2-BDR] (601)	July 5:00 p.m.	1,810 9%	337 2%	6,550 32%	129 1%	256 1%	415 2%	262 1%
Room D04 [2-BDR] (614)	July 6:00 p.m.	1,560 12%	160 1%	1,440 11%	113 1%	224 2%	288 2%	224 2%
Zone Tenant Improvement (Heat to 40, Tempered)	Excluded from cooling							

Cooling Load Details - Room
(Btu/h / % of Total)

Location	Peak	Roof	Wall	Glass	Lighting	Equipment		People		Infiltration	
						Sensible	Latent	Sensible	Latent	Sensible	Latent
Zone Common (Non-Tempered OSA)	Excluded from cooling										
Zone Common (Tempered OSA)	CV - Sum of Peaks	6,920 1%	17,100 3%	194,000 33%	105,000 18%	58,100 10%	0 0%	98,900 17%	83,600 14%	14,800 3%	9,990 2%
Room 101 COMMERCIAL FLEX	July 5:00 p.m.	0 0%	2,460 3%	39,900 44%	13,900 15%	3,300 4%	0 0%	15,300 17%	12,200 14%	1,960 2%	1,240 1%
Room 121 TRASH ROOM	July 3:00 p.m.	0 0%	2,010 19%	306 3%	1,720 16%	5,730 54%	0 0%	0 0%	0 0%	497 5%	269 3%
Room 128 CORRIDOR & RRs	July 2:00 p.m.	0 0%	731 23%	0 0%	1,820 58%	0 0%	0 0%	0 0%	0 0%	362 12%	205 7%
Room 150 LOBBY, MAIL & PARCEL	July 2:00 p.m.	0 0%	1,160 2%	7,980 13%	14,500 24%	9,670 16%	0 0%	14,200 23%	11,300 18%	1,610 3%	908 1%
Room 152 MOVE IN ROOM	July 2:00 p.m.	0 0%	1,420 30%	0 0%	679 15%	2,260 49%	0 0%	0 0%	0 0%	193 4%	109 2%
Room AMENITY (615)	July 2:00 p.m.	638 5%	138 1%	1,820 15%	1,070 9%	3,580 29%	0 0%	2,620 21%	2,100 17%	227 2%	128 1%
Room BIKE STORAGE (114)	July 5:00 p.m.	0 0%	589 22%	0 0%	1,440 55%	0 0%	0 0%	0 0%	0 0%	364 14%	230 9%
Room COMMERCIAL FLEX (104)	July 1:00 p.m.	0 0%	526 1%	12,200 25%	10,700 22%	2,540 5%	0 0%	11,300 23%	9,000 19%	1,480 3%	953 2%
Room COMMERCIAL	July 1:00 p.m.	0 0%	491 0%	49,300 48%	15,500 15%	3,700 4%	0 0%	16,800 16%	13,400 13%	2,160 2%	1,390 1%

Load Total Summary - Room
(Excludes Ventilation and Plenum Loads)

Location	Area	Cooling										Heating			
		CFM	Peak	btuh			Tons			ft²/ton	CFM/ton	CFM/ft²	CFM	btuh	kW	CFM/ft²
				Total	Sensible	Latent	Total	Sensible	Latent							
Room 121 TRASH ROOM	839 ft²	1,500	July 3:00 p.m.	10,500	10,300	269	0.9	0.9	0	957	1,710	1.79	1,500	7,180	2.1	1.79
Room 128 CORRIDOR & RRs	888 ft²	195	July 2:00 p.m.	3,120	2,910	205	0.3	0.2	0	3,420	751	0.22	195	3,520	1	0.22
Room 150 LOBBY, MAIL & PARCEL	2,830 ft²	2,240	July 2:00 p.m.	61,300	49,100	12,200	5.1	4.1	1	554	438	0.79	1,040	22,400	6.6	0.37
Room 152 MOVE IN ROOM	332 ft²	207	July 2:00 p.m.	4,660	4,550	109	0.4	0.4	0	854	533	0.62	178	3,840	1.1	0.54
Room AMENITY (615)	525 ft²	460	July 2:00 p.m.	12,300	10,100	2,230	1	0.8	0.2	511	448	0.88	216	4,640	1.4	0.41
Room BIKE STORAGE (114)	703 ft²	195	July 5:00 p.m.	2,620	2,390	230	0.2	0.2	0	3,220	892	0.28	229	4,940	1.5	0.33
Room COMMERCIAL FLEX (104)	2,980 ft²	1,760	July 1:00 p.m.	48,600	38,600	9,950	4.1	3.2	0.8	735	435	0.59	992	21,400	6.3	0.33
Room COMMERCIAL FLEX (105)	4,340 ft²	4,010	July 1:00 p.m.	103,000	88,000	14,800	8.6	7.3	1.2	506	468	0.93	1,910	41,100	12	0.44
Room COMMERCIAL FLEX (106)	4,090 ft²	3,780	July 10:00 a.m.	97,300	83,000	14,300	8.1	6.9	1.2	505	467	0.92	2,420	52,100	15.3	0.59
Room CORRIDOR (120)	1,240 ft²	315	July 5:00 p.m.	3,620	3,400	217	0.3	0.3	0	4,120	1,040	0.25	315	4,210	1.2	0.25
Room DOG WASH (116)	58 ft²	66	July 8:00 p.m.	1,770	1,470	308	0.1	0.1	0	391	446	1.14	51	1,100	0.3	0.88
Room ELECTRICAL (111)	799 ft²	387	July 5:00 p.m.	8,760	8,500	256	0.7	0.7	0	1,090	530	0.49	258	5,550	1.6	0.32
Room FIRE SPRINKLER (106)	244 ft²	123	July 5:00 p.m.	2,790	2,710	83	0.2	0.2	0	1,050	529	0.5	96	2,060	0.6	0.39
Room GENERATOR (109)	502 ft²	257	July 6:00 p.m.	5,830	5,660	166	0.5	0.5	0	1,030	529	0.51	216	4,640	1.4	0.43
Room L6 CORRIDOR	3,570 ft²	624	July 6:00 p.m.	13,800	13,700	96	1.2	1.1	0	3,110	543	0.18	293	6,320	1.9	0.08
Room MAINTENANCE (107)	492 ft²	140	July 6:00 p.m.	1,960	1,800	160	0.2	0.2	0	3,010	857	0.29	182	3,930	1.2	0.37
Room MPOE ROOM (110)	197 ft²	88	July 3:00 p.m.	2,000	1,940	64	0.2	0.2	0	1,180	528	0.45	55	649	0.2	0.28
Room RESTAURANT (102)	5,480 ft²	3,790	July 3:00 p.m.	107,000	83,200	24,000	8.9	6.9	2	613	424	0.69	2,270	48,900	14.3	0.41
Room STAIR 2	179 ft²	167	July 5:00 p.m.	3,990	3,670	320	0.3	0.3	0	539	502	0.93	295	6,360	1.9	1.65
Room WATER SERVICE / HEATER (113)	324 ft²	164	July 5:00 p.m.	3,710	3,600	109	0.3	0.3	0	1,050	531	0.51	115	2,470	0.7	0.36
Zone Dwelling Units	9,470 ft²	6,590	CV - Sum of Peaks	153,000	145,000	7,900	12.7	12.1	0.7	745	518	0.7	3,150	67,800	19.9	0.33
Room B01 [1-BDR] (631)	525 ft²	335	July 2:00 p.m.	7,890	7,360	528	0.7	0.6	0	798	509	0.64	158	3,410	1	0.3
Room B02 [1-BDR] (616)	525 ft²	313	July 6:00 p.m.	7,400	6,870	528	0.6	0.6	0	851	508	0.6	170	3,650	1.1	0.32
Room B03 [1-BDR] (609)	525 ft²	413	July 5:00 p.m.	9,590	9,060	528	0.8	0.8	0	657	517	0.79	170	3,660	1.1	0.32

Heating Load Details - System and Room
(Btu/h / % of System Total)

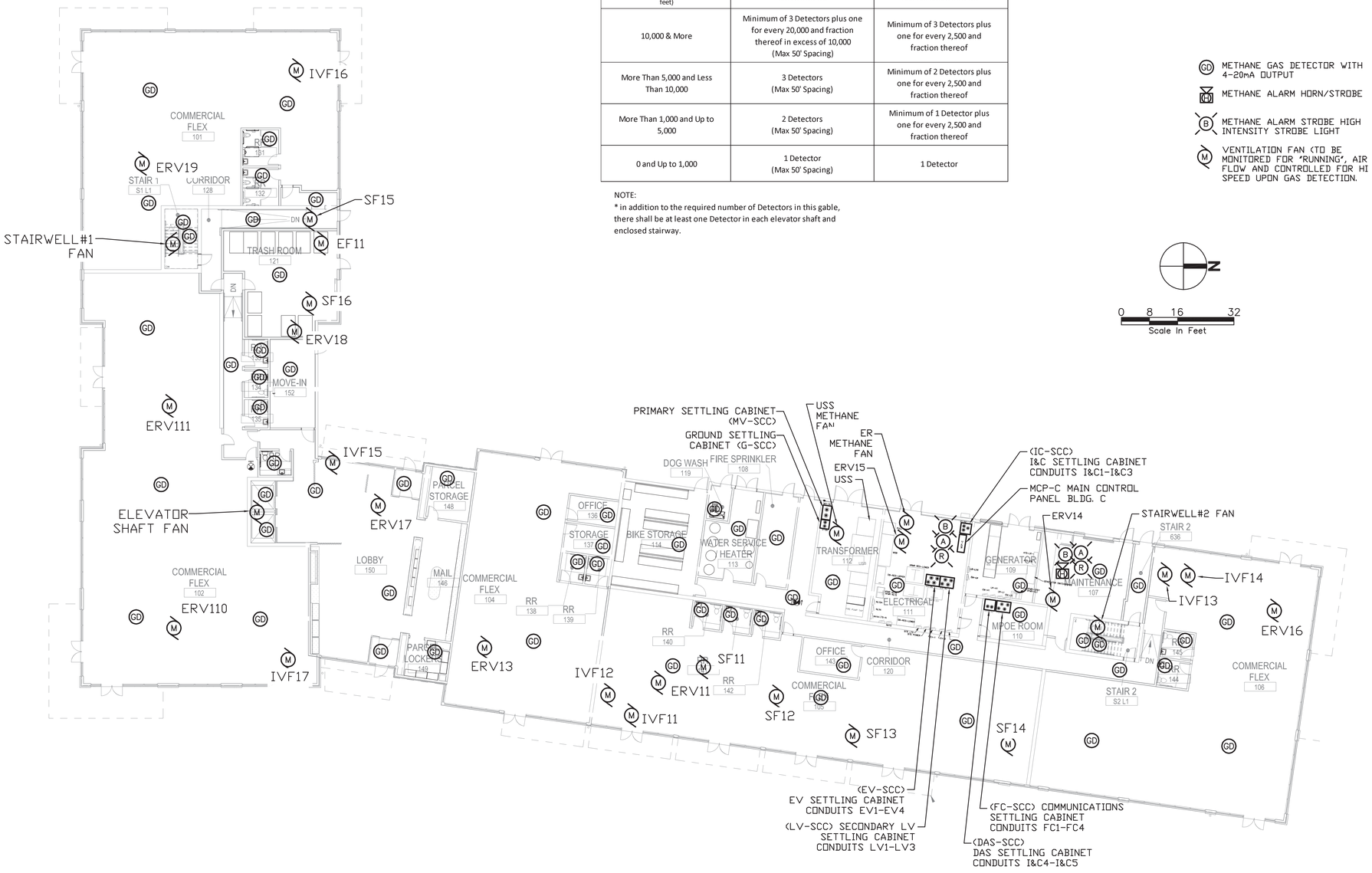
Location	Roof	Wall	Glass	Slab	Horizontal Partitions	Ventilation	Infiltration
Zone Tenant Improvement (Heat to 40, Tempered)	Excluded from heating						

Load Total Summary - System
(Includes Ventilation and Plenum Loads)

Location	Area	Cooling										Heating			
		CFM	Peak	btuh			Tons			ft²/ton	CFM/ton	CFM/ft²	CFM	btuh	kW	CFM/ft²
				Total	Sensible	Latent	Total	Sensible	Latent							
Zone Common (Non-Tempered OSA)		Excluded from cooling											Excluded from heating			
Zone Common (Tempered OSA)	34,500 ft²	24,200	July 12:00 p.m.	690,000	529,000	161,000	57.5	44.1	13.4	599	420	0.7	24,200	442,000	129	0.7
Room 101 COMMERCIAL FLEX	3,870 ft²	3,500	July 5:00 p.m.	101,000	80,500	20,900	8.5	6.7	1.7	458	414	0.91	2,170	62,900	18.4	0.56
Room 121 TRASH ROOM	839 ft²	1,500	July 3:00 p.m.	25,000	15,100	9,860	2.1	1.3	0.8	403	721	1.79	1,500	28,200	8.3	1.79
Room 128 CORRIDOR & RRs	888 ft²	195	July 2:00 p.m.	4,990	3,540	1,450	0.4	0.3	0.1	2,130	469	0.22	195	6,250	1.8	0.22
Room 150 LOBBY, MAIL & PARCEL	2,830 ft²	2,240	July 2:00 p.m.	68,500	51,500	17,000	5.7	4.3	1.4	497	392	0.79	1,040	32,800	9.6	0.37
Room 152 MOVE IN ROOM	332 ft²	207	July 2:00 p.m.	5,530	4,840	684	0.5	0.4	0.1	720	449	0.62	178	5,100	1.5	0.54
Room AMENITY (615)	525 ft²	460	July 2:00 p.m.	13,800	10,600	3,240	1.2	0.9	0.3	455	399	0.88	216	6,850	2	0.41
Room BIKE STORAGE (114)	703 ft²	195	July 5:00 p.m.	4,500	3,020	1,480	0.4	0.3	0.1	1,870	520	0.28	229	7,670	2.3	0.33
Room COMMERCIAL FLEX (104)	2,980 ft²	1,760	July 1:00 p.m.	57,600	41,600	15,900	4.8	3.5	1.3	620	367	0.59	992	34,500	10.1	0.33
Room COMMERCIAL FLEX (105)	4,340 ft²	4,010	July 1:00 p.m.	116,000	92,400	23,600	9.7	7.7	2	449	415	0.93	1,910	60,300	17.7	0.44
Room COMMERCIAL FLEX (106)	4,090 ft²	3,780	July 10:00 a.m.	109,000	87,100	22,400	9.1	7.3	1.9	449	415	0.92	2,420	69,700	20.4	0.59
Room CORRIDOR (120)	1,240 ft²	315	July 5:00 p.m.	6,650	4,420	2,230	0.6	0.4	0.2	2,240	568	0.25	315	8,620	2.5	0.25
Room DOG WASH (116)	58 ft²	66	July 8:00 p.m.	2,020	1,550	468	0.2	0.1	0	344	393	1.14	51	1,450	0.4	0.88
Room ELECTRICAL (111)	799 ft²	387	July 5:00 p.m.	10,900	9,230	1,700	0.9	0.8	0.1	877	425	0.49	258	8,700	2.6	0.32
Room FIRE SPRINKLER (106)	244 ft²	123	July 5:00 p.m.	3,470	2,940	531	0.3	0.2	0	845	426	0.5	96	3,040	0.9	0.39
Room GENERATOR (109)	502 ft²	257	July 6:00 p.m.	7,170	6,110	1,060	0.6	0.5	0.1	840	430	0.51	216	6,600	1.9	0.43
Room L6 CORRIDOR	3,570 ft²	624	July 6:00 p.m.	16,400	14,600	1,820	1.4	1.2	0.2	2,620	457	0.18	293	10,100	3	0.88
Room MAINTENANCE (107)	492 ft²	140	July 6:00 p.m.	3,310	2,250	1,060	0.3	0.2	0.1	1,780	508	0.29	182	5,890	1.7	0.37
Room MPOE ROOM (110)	197 ft²	88	July 3:00 p.m.	2,530	2,110	416	0.2	0.2	0	936	417	0.45	55	1,420	0.4	0.28

Cooling Load Details - Room
(Btu/h / % of Total)

Location	Peak	Roof	Wall	Glass	Lighting	Equipment		People		Infiltration	
						Sensible	Latent	Sensible	Latent	Sensible	Latent
FLEX (105)											
Room COMMERCIAL FLEX (106)	July 10:00 a.m.	0 0%	472 0%	47,700 49%	14,700 15%	3,490 4%	0 0%	16,300 17%	13,000 13%	450 0%	1,310 1%
Room CORRIDOR (120)	July 5:00 p.m.	0 0%	516 14%	0 0%	2,540 70%	0 0%	0 0%	0 0%	0 0%	344 10%	217 6%
Room DOG WASH (116)	July 8:00 p.m.	0 0%	305 17%	0 0%	395 22%	395 22%	0 0%	361 20%	289 16%	11 1%	19 1%
Room ELECTRICAL (111)	July 5:00 p.m.	0 0%	736 8%	0 0%	1,910 22%	5,450 62%	0 0%	0 0%	0 0%	405 5%	256 3%
Room FIRE SPRINKLER (106)	July 5:00 p.m.	0 0%	330 12%	0 0%	583 21%	1,670 60%	0 0%	0 0%	0 0%	132 5%	83 3%
Room GENERATOR (109)	July 6:00 p.m.	0 0%	817 14%	0 0%	1,200 21%	3,430 59%	0 0%	0 0%	0 0%	214 4%	166 3%
Room L6 CORRIDOR	July 6:00 p.m.	5,980 43%	50 0%	226 2%	7,320 53%	0 0%	0 0%	0 0%	0 0%	123 1%	96 1%
Room MAINTENANCE (107)	July 6:00 p.m.	0 0%	588 30%	0 0%	1,010 51%	0 0%	0 0%	0 0%	0 0%	206 10%	160 8%
Room MP



DETECTOR SPACING

ROOM FLOOR AREA OR CONCEALED SPACE AREA (square feet)	NUMBER OF DETECTORS: WITH HEATING, VENTILATION AND AIR CONDITIONING	NUMBER OF DETECTORS: WITHOUT HEATING, VENTILATION AND AIR CONDITIONING
10,000 & More	Minimum of 3 Detectors plus one for every 20,000 and fraction thereof in excess of 10,000 (Max 50' Spacing)	Minimum of 3 Detectors plus one for every 2,500 and fraction thereof
More Than 5,000 and Less Than 10,000	3 Detectors (Max 50' Spacing)	Minimum of 2 Detectors plus one for every 2,500 and fraction thereof
More Than 1,000 and Up to 5,000	2 Detectors (Max 50' Spacing)	Minimum of 1 Detector plus one for every 2,500 and fraction thereof
0 and Up to 1,000	1 Detector (Max 50' Spacing)	1 Detector

NOTE:
* in addition to the required number of Detectors in this gable, there shall be at least one Detector in each elevator shaft and enclosed stairway.

GENERAL NOTES:

1. MOUNT ALL LEVEL 1 DETECTORS AS CLOSE TO THE CENTER OF THE SPACE AS PRACTICAL, WITHIN 8" OF THE CEILING, AND NO CLOSER THAN 12" FROM ANY WALL.
2. STAIRWELLS SHALL BE PROVIDED WITH TWO DETECTORS; 1) SHALL BE INSTALLED ON THE CEILING OF THE STAIRWELL & 2) SHALL BE INSTALLED IN STAIRWELL SUPPLY FAN DUCT. SEE DETAILS OF STAIRWELL DETECTOR INSTALLATION FOR INSTALLATION AND WIRING.
3. ELEVATOR SHAFTS SHALL BE PROVIDED WITH TWO DETECTORS; 1) SHALL BE INSTALLED ON THE CEILING OF THE ELEVATOR SHAFT & 2) SHALL BE INSTALLED IN ELEVATOR SHAFT SUPPLY FAN DUCT. SEE DETAILS OF ELEVATOR SHAFT DETECTOR INSTALLATION FOR INSTALLATION AND WIRING.

(GD) METHANE GAS DETECTOR WITH 4-20mA OUTPUT

(H) METHANE ALARM HORN/STROBE

(B) METHANE ALARM STROBE HIGH INTENSITY STROBE LIGHT

(M) VENTILATION FAN (TO BE MONITORED FOR 'RUNNING', AIR FLOW AND CONTROLLED FOR HI SPEED UPON GAS DETECTION.

N

0 8 16 32
Scale In Feet

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

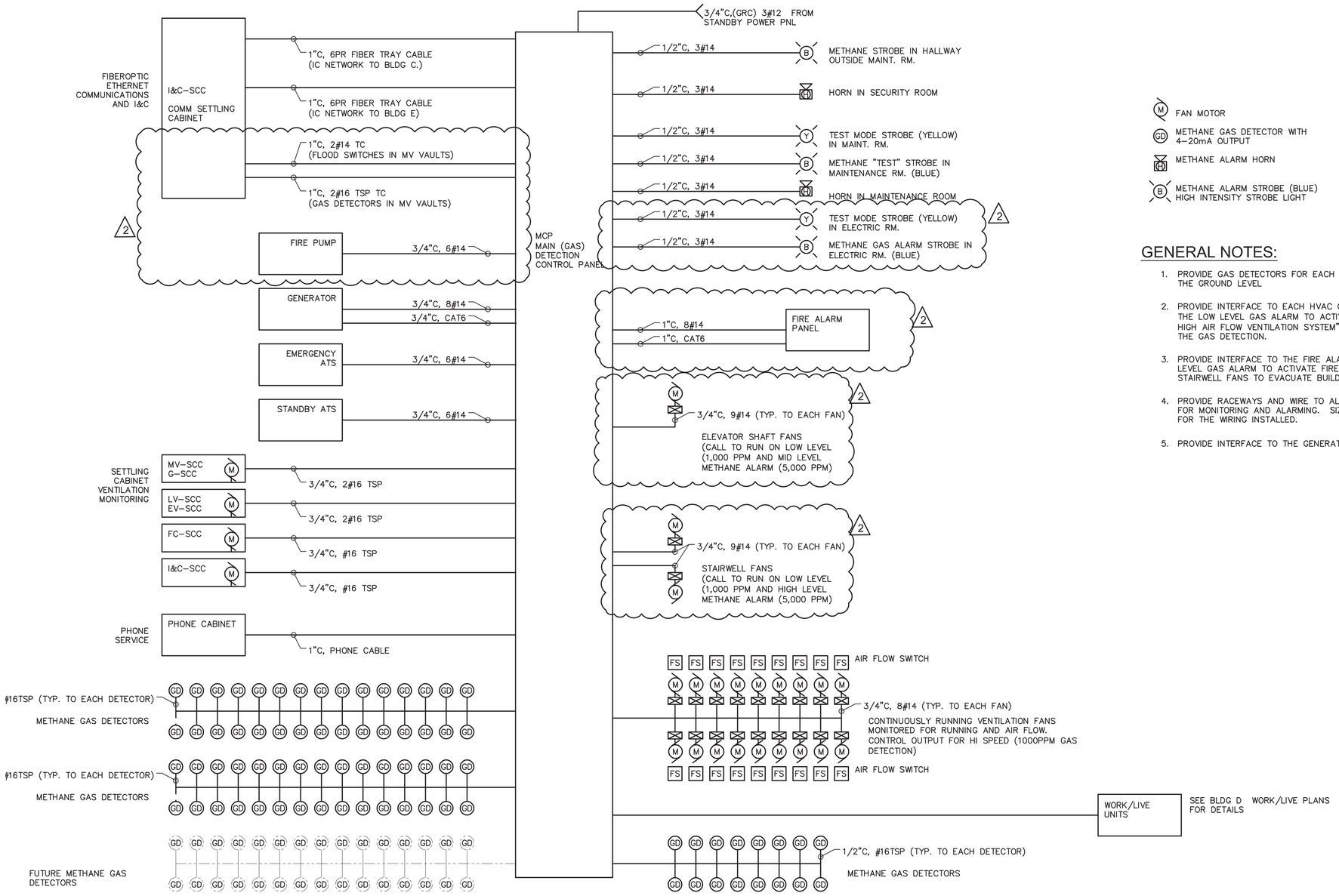
NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
BLDG C
LEVEL 1 GAS DETECTION PLAN

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC1

VINCENT M. FOLLETT STATE OF WASHINGTON 28947 REGISTERED PROFESSIONAL ENGINEER
01/31/2024



M FAN MOTOR

GD METHANE GAS DETECTOR WITH 4–20mA OUTPUT

METHANE ALARM HORN

B METHANE ALARM STROBE (BLUE) HIGH INTENSITY STROBE LIGHT

GENERAL NOTES:

1. PROVIDE GAS DETECTORS FOR EACH SEPARATE SPACE ON THE GROUND LEVEL
2. PROVIDE INTERFACE TO EACH HVAC CONTROL PANEL FOR THE LOW LEVEL GAS ALARM TO ACTIVATE THE "GAS ALARM HIGH AIR FLOW VENTILATION SYSTEM" FOR THE AREA OF THE GAS DETECTION.
3. PROVIDE INTERFACE TO THE FIRE ALARM PANEL FOR HIGH LEVEL GAS ALARM TO ACTIVATE FIRE ALARM SYSTEM AND STAIRWELL FANS TO EVACUATE BUILDING.
4. PROVIDE RACEWAYS AND WIRE TO ALL DEVICES AS SHOWN FOR MONITORING AND ALARMING. SIZE RACEWAYS PER NEC FOR THE WIRING INSTALLED.
5. PROVIDE INTERFACE TO THE GENERATOR AND ATS'S

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
BLDG C METHANE GAS DETECTION & ALARMING RISER DIAGRAM

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC2

MAIN (GAS) CONTROL PANEL (MCP–C)

BUILDING C

ENGINEER: HERRERA
ELECTRICAL ENGINEER: FOLLETT ENGINEERING
SYSTEM PROGRAMMER: QUALITY CONTROLS
ELECT. CONTRACTOR: –
PANEL SHOP: QUALITY CONTROLS

8" WIDE X 6" HIGH – MOUNT ON FRONT OF OUTER CABINET DOORS

PROJECT NAMEPLATE

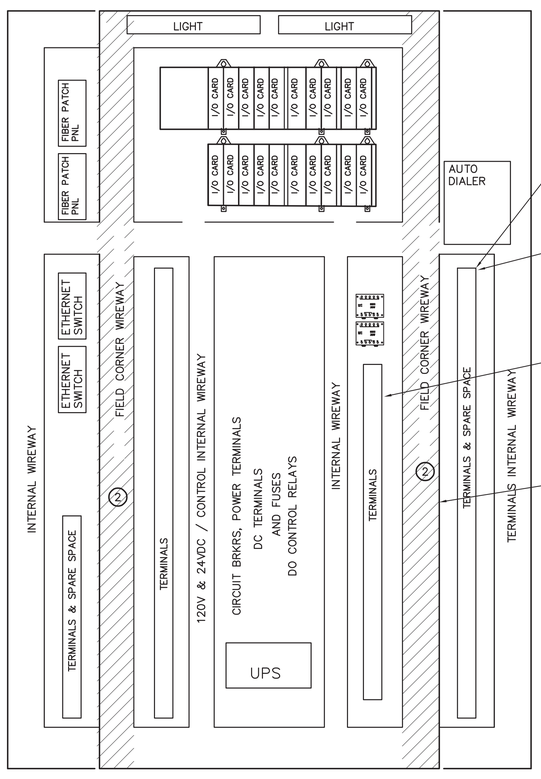
N.T.S.

GENERAL NOTES:

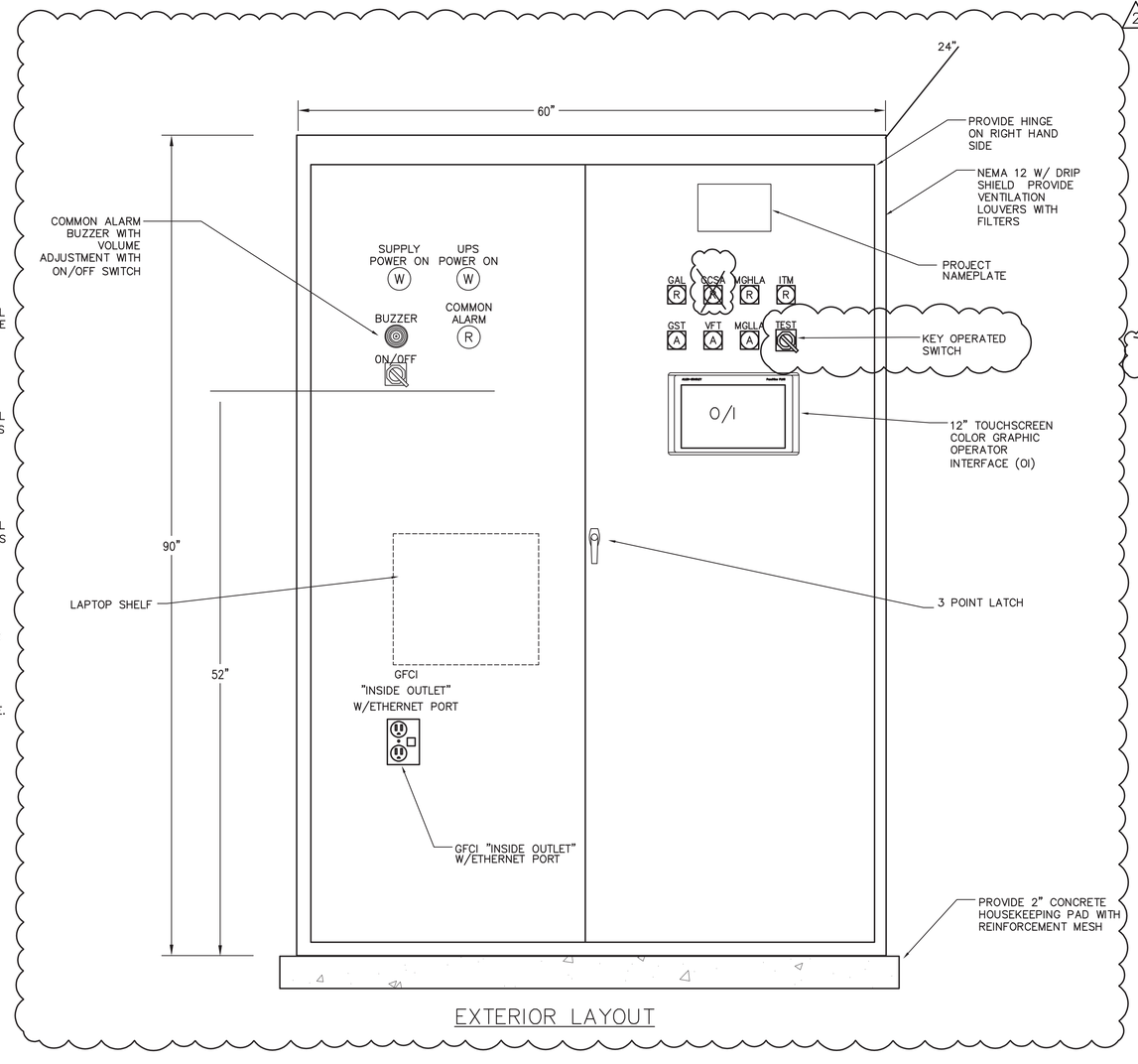
LAYOUT OF CONTROL PANEL IS GENERAL IN NATURE – SPECIFIC LAYOUT TO BE DETERMINED BY THE SYSTEM INTEGRATOR AND REVIEWED BY THE ENGINEER DURING THE SUBMITTAL PROCESS – SIZE OF THE CONTROL PANEL SHOWN IS INTENDED TO BE A MINIMUM SIZE. INTEGRATOR SHALL UPSIZE THE CABINET IF NECESSARY TO FIT THE REQUIRED COMPONENTS.

KEY NOTES:

1. NOT USED
2. PROVIDE ONLY CORNER WIRE WAYS – SEPARATE SIDE PAN AND BACKPAN WIREWAYS ARE NOT ACCEPTABLE.



INTERIOR LAYOUT



EXTERIOR LAYOUT

NAMEPLATE SCHEDULE & DEVICE DETAILS

TAG	DESCRIPTION
TEST	METHANE GAS SYSTEM (TEST/AUTO) MODE SWITCH
ITM	MG MONITORING SYSTEM IN TEST MODE
MGLLA	METHANE GAS LOW LEVEL WARNING
MGHLA	METHANE GAS HIGH LEVEL EVACUATION ALARM
~~GCSA~~	~~GAS CONDENSATE SYSTEM ALARM~~
VFT	VENT FAN TROUBLE
GST	EMER GENERATOR SYSTEM TROUBLE
GAL	EMER GENERATOR SYSTEM ALARM
R	RED INDICATION LIGHT
W	WHITE INDICATION LIGHT
G	GREEN INDICATION LIGHT
A	AMBER INDICATION LIGHT

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

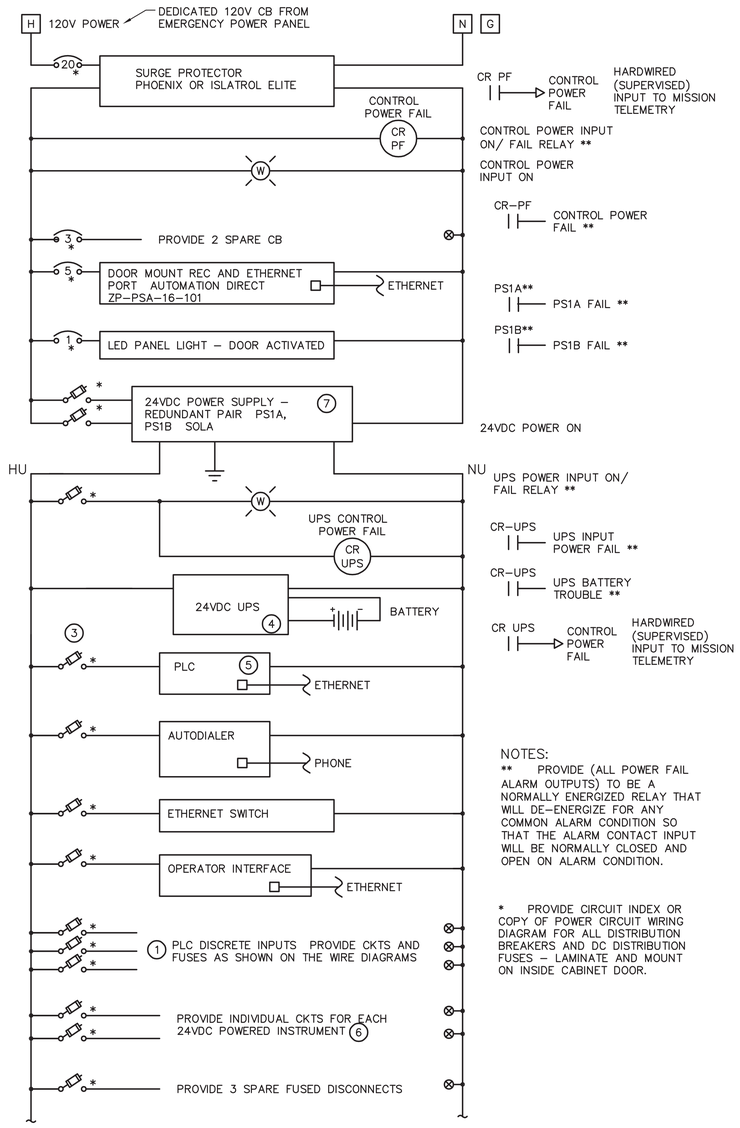
NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
BLDG C _ - MCP - MAIN (GAS) CONTROL PANEL DETAILS

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC3

BLDG. C – MCPC



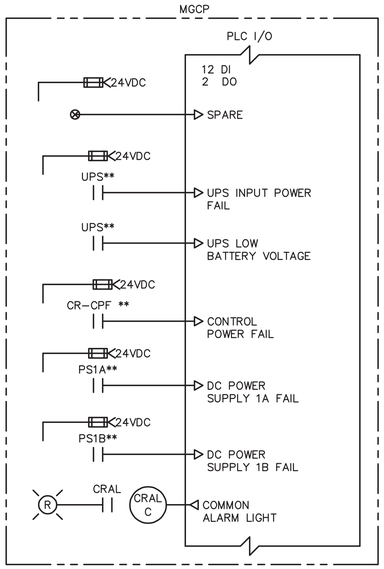
CONTROL POWER DISTRIBUTION

METHANE GAS CONTROL PANEL (MGCP)

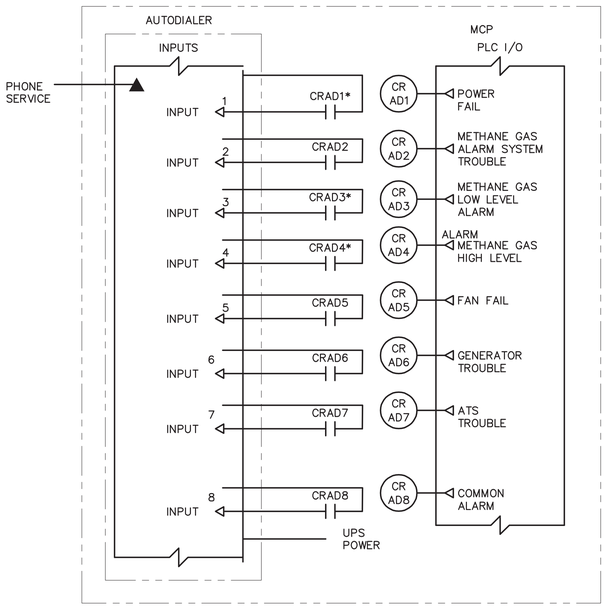
NOTES:

** PROVIDE (ALL POWER FAIL ALARM OUTPUTS) TO BE A NORMALLY ENERGIZED RELAY THAT WILL DE–ENERGIZE FOR ANY COMMON ALARM CONDITION SO THAT THE ALARM CONTACT INPUT WILL BE NORMALLY CLOSED AND OPEN ON ALARM CONDITION.

* PROVIDE CIRCUIT INDEX OR COPY OF POWER CIRCUIT WIRING DIAGRAM FOR ALL DISTRIBUTION BREAKERS AND DC DISTRIBUTION FUSES – LAMINATE AND MOUNT ON INSIDE CABINET DOOR.

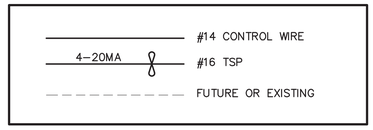


AUTODIALER



NOTES: PROVIDE 24PT. PHONE BASED AUTODIALER. (VERBATIM) WITH EHTERNET – CONFIGURE TO CALL ALARM FOR LOSS OF INPUT POWER.

* PROGRAM COMMON ALARM OUTPUT TO BE A NORMALLY ENERGIZED RELAY THAT WILL DE–ENERGIZE FOR ANY COMMON ALARM CONDITION SO THAT DIALER CONTACT INPUT WILL BE NORMALLY CLOSED AND OPEN ON ALARM CONDITION.



CONSTRUCTION NOTES:

1. PROVIDE ONE – 1 AMP FUSE FOR THE INPUTS ASSOCIATED WITH EACH INDIVIDUAL MOTOR LOAD AND ONE 1 AMP FUSE FOR EACH GROUP OF 4 PLC INPUTS. PROVIDE BLOWN FUSE INDICATORS ON ALL FUSES. PROVIDE ONE SPARE FUSE FOR EVERY 4 SPARE PLC INPUTS PLUS AN ADDITIONAL 2 SPARE 1 AMP FUSES.
2. PROVIDE ONE 50mA FUSE FOR EACH WIRED AND EACH SPARE ANALOG INPUT. WIRE ALL SPARE ANALOG INPUT TERMINALS FOR EITHER LOOP OR SEPARATELY POWERED INSTRUMENTS.
3. PROVIDE ONE APPROPRIATELY SIZED FUSE FOR EACH DC CIRCUIT PLUS 3 – 1 AMP SPARE FUSES.
4. DIN–RAIL MOUNTED UPS – SIZE FOR APPLICATION.
5. PROVIDE INPUT TO PLC FOR TROUBLE MONITORING, UPS AND POWER SUPPLIES – PROVIDE INTERPOSING RELAY IF NECESSARY.
6. PROVIDE ONE CIRCUIT FOR EACH INSTRUMENT – SIZE PER LOAD SERVED AND MANUFACTURERS REQUIREMENTS.
7. PROVIDE REDUNDANT PAIRS FOR EACH TYPE OF POWER SUPPLY W/ MONITORING FOR FAILURE TO THE PLC.

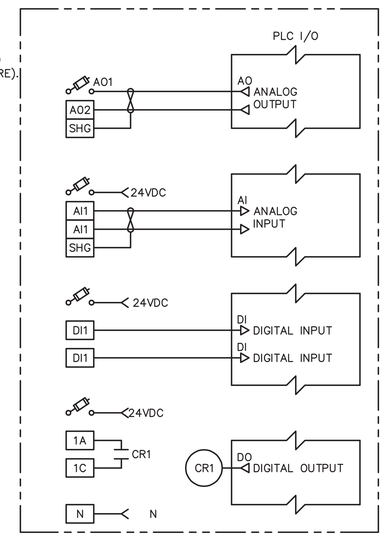
TYPICAL TERMINAL WIRING FOR PLC I/O CARDS – PROVIDE WIRING AND TERMINALS FOR ALL INSTALLED I/O ON CARDS (USED, SPARE, & FUTURE).

TYPICAL TERMINAL WIRING FOR ANALOG OUTPUTS – PROVIDE ONE SHIELD GROUNDING TERMINAL FOR EVERY TWO ANALOG OUTPUTS

TYPICAL TERMINAL WIRING FOR ANALOG INPUTS – PROVIDE ONE SHIELD TERMINAL FOR EVERY TWO ANALOG INPUTS. PROVIDE ONE 1A FUSED DISCONNECT FOR EACH ANALOG INPUT

TYPICAL TERMINAL WIRING FOR DIGITAL INPUTS – PROVIDE ONE FUSED TERMINAL FOR EVERY FOUR DIGITAL INPUTS

TYPICAL TERMINAL WIRING FOR DIGITAL OUTPUTS – PROVIDE ONE 2A FUSED TERMINAL AND ONE NEUTRAL TERMINAL FOR EVERY EIGHT DIGITAL OUTPUTS



MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425–765–6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 1
MAIN (GAS)
CONTROL
PANEL (MCP)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC4

BLDG. C

GAS MONITORING & ALARMING

GD METHANE GAS DETECTOR WITH 4–20mA OUTPUT

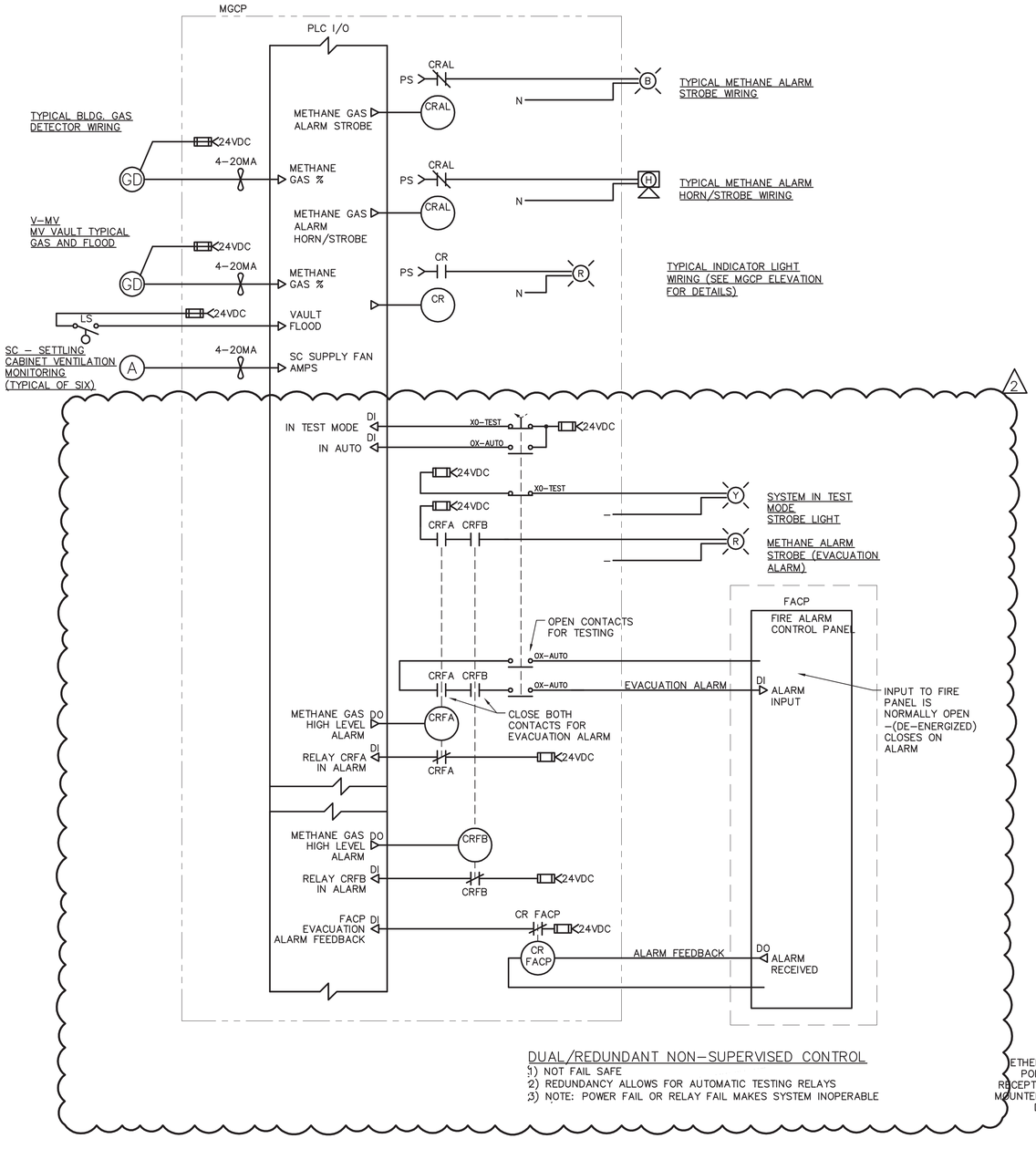
H METHANE ALARM HORN/STROBE

B METHANE ALARM STROBE HIGH INTENSITY STROBE LIGHT

#14 CONTROL WIRE

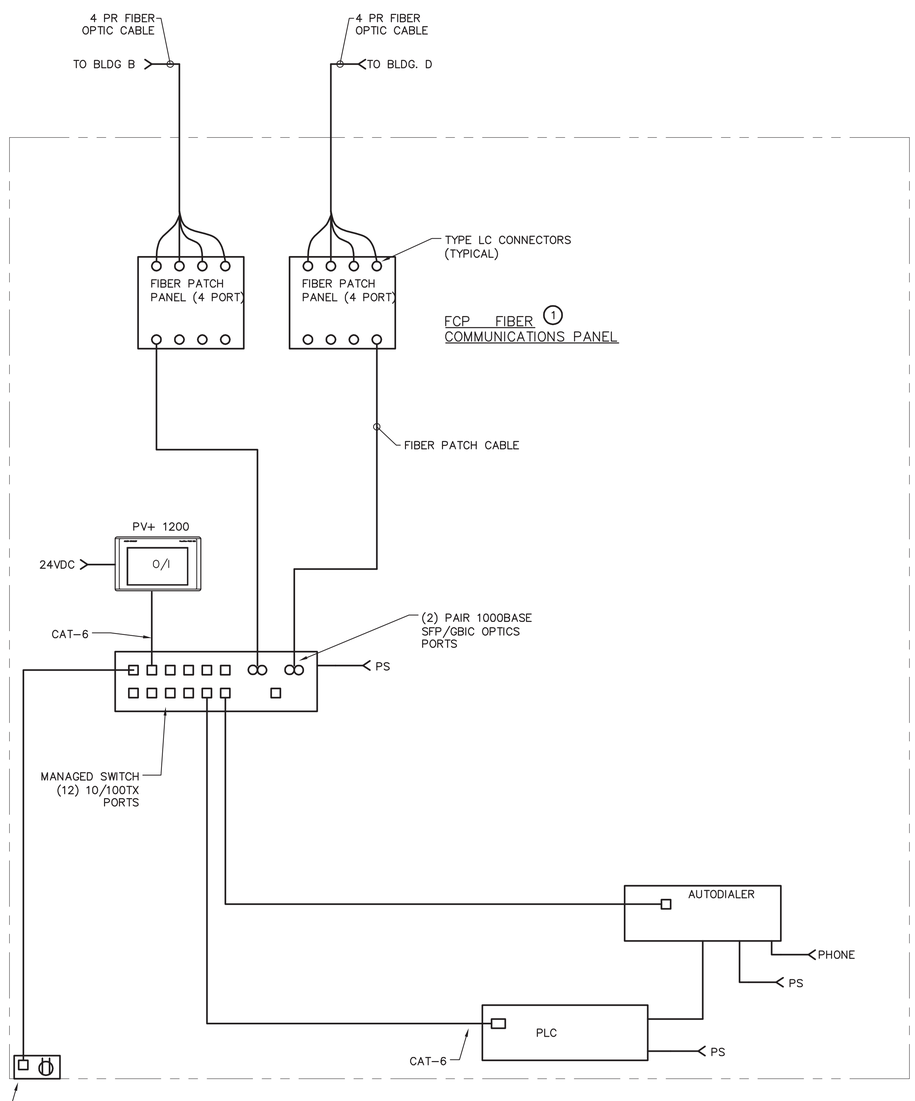
4–20MA #16 TSP

FUTURE OR EXISTING



DUAL/REDUNDANT NON–SUPERVISED CONTROL

1) NOT FAIL SAFE
2) REDUNDANCY ALLOWS FOR AUTOMATIC TESTING RELAYS
3) NOTE: POWER FAIL OR RELAY FAIL MAKES SYSTEM INOPERABLE



METHANE GAS DETECTION NETWORK

MCP – METHANE GAS CONTROL PANEL

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425–765–6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 2 (MCP)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX

SHEET NO.:
EFC5

VINCENT M. FOLLETT — STATE OF WASHINGTON — 28947 — REGISTERED PROFESSIONAL ENGINEER
01/31/2024

BLDG. C

VENTILATION MONITORING & CONTROL

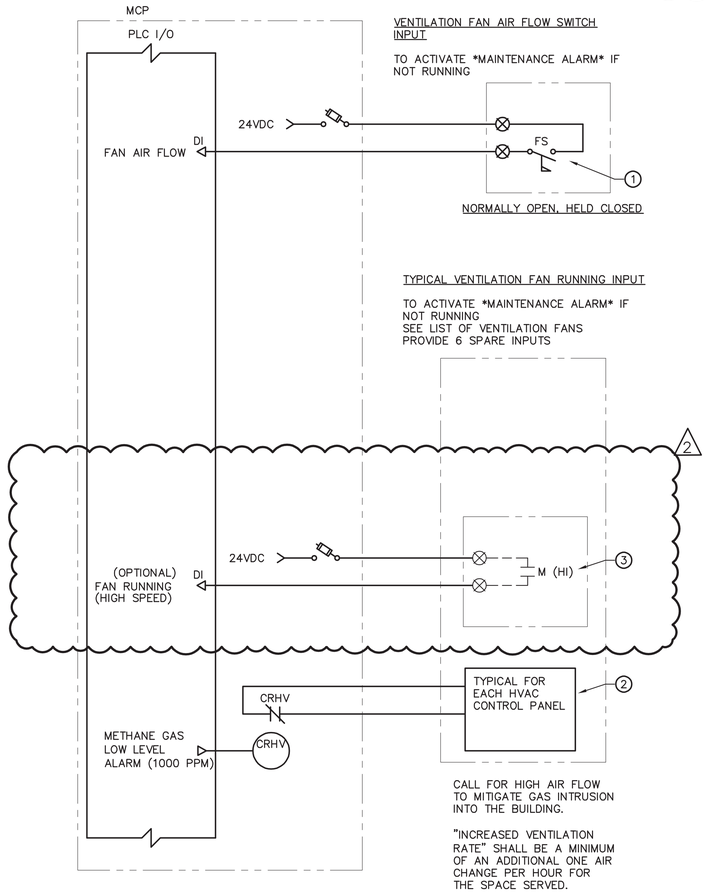
DESIGN CRITERIA

1. THE MINIMUM CONTINUOUS AIR FLOW FOR THE FIRST LEVEL VENTILATION SHALL BE 1 ACH (AIR CHANGE PER HOUR).
2. UPON DETECTION OF GAS FROM ANY DETECTOR IN THE VENTILATION EQUIPMENT ZONE, THE VENTILATION WILL BE INCREASED BY A MINIMUM OF 1 ACH.
3. THE AIR FLOW SWITCH SHALL CONTINUOUSLY MONITOR FOR AIR FLOW AT THE LOWER AIR FLOW RATE. UPON LOSS OF AIR FLOW DETECTION, A MAINTENANCE ALARM SHALL BE GENERATED BY THE MCP.

#14 CONTROL WIRE
4–20MA — #16 TSP
FUTURE OR EXISTING

KEY NOTES:

1. AIR FLOW SWITCHES SHALL BE AMERITROL, INC FX SERIES.
2. COORDINATE VENTILATION FAN AND ERV CONTROLS FOR HIGH SPEED INPUT (FOR INCREASED AIR FLOW) FROM THE CONTROL PANEL AND DRY CONTACT FOR RUNNING FEEDBACK.
3. COORDINATE RUN CONTACT FEEDBACK "DRY CONTACT" FOR HI SPEED FEEDBACK TO THE PLC. (INPUT NOT REQUIRED, PROVIDE ONLY IF AVAILABLE FROM MFR.)



FAN SCHEDULE - BLDG C - LEVEL 1

CALLOUT	QUANTITY	EQUIPMENT TYPE	AREA SERVED	UNIT LOCATION	CONTINUOUS		HIGH SPEED		
					AIR FLOW (CFM)	ACH (LOW SPEED)	AIR FLOW (CFM)	ACH (HIGH SPEED)	INCREASE IN ACH
ERV-1-1	1	ENERGY RECOVERY VENTILATOR	MAINTENANCE	MAINTENANCE	225	1.29	300	1.72	1.15
IVF-1-1	1	SUPPLY FAN		MAINTENANCE	0	0	125	0.72	
SF-1-1	1	SUPPLY FAN	FIRE SPRINKLER	MAINTENANCE	90	1.04	180	2.09	1.05
SF-1-3	1	SUPPLY FAN	ELECTRICAL	ELECTRICAL	225	1.01	450	2.02	1.01
			MPOE		50	1.18	100	2.36	1.18
SF-1-4	1	SUPPLY FAN	CORRIDOR	WATER SERVICE	60	1.03	120	2.06	1.03
			CORRIDOR		175	1.04	350	2.09	1.05
			WATER SERVICE		225	1.05	450	2.11	1.06
			BIKE STORAGE		225	1.06	450	2.14	1.08
ERV-1-2	1	ENERGY RECOVERY VENTILATOR	COMMERCIAL 106	COMMERCIAL 106	900	0.75	1200	1	1.25
ERV-1-3	1	ENERGY RECOVERY VENTILATOR		COMMERCIAL 106	450	0.38	600	0.5	
IVF-1-2	1	SUPPLY FAN		COMMERCIAL 106	0	0	1050	0.88	
ERV-1-4	1	ENERGY RECOVERY VENTILATOR	COMMERCIAL 105	COMMERCIAL 105	900	0.73	1200	0.97	1.3
ERV-1-5	1	ENERGY RECOVERY VENTILATOR		COMMERCIAL 105	450	0.36	600	0.49	
IVF-1-3	1	SUPPLY FAN		COMMERCIAL 105	0	0	1150	0.93	
ERV-1-6	1	ENERGY RECOVERY VENTILATOR	COMMERCIAL 104	COMMERCIAL 104	900	1.08	1200	1.43	1.31
IVF-1-4	1	SUPPLY FAN		COMMERCIAL 104	0	0	800	0.96	
ERV-1-7	1	ENERGY RECOVERY VENTILATOR	VESTIBULE	LOBBY	25	1.52	25	1.52	
			LOBBY & PARCEL LOCKERS		500	1.14	500	1.14	
			CONCIERGE		75	1.93	75	1.93	
IVF-1-5	1	SUPPLY FAN	VESTIBULE	CONCIERGE	0	0	25	1.52	1.52
			LOBBY & PARCEL LOCKERS		0	0	425	1	1
			CONCIERGE		0	0	50	1.28	1.28
ERV-1-8	1	ENERGY RECOVERY VENTILATOR	VESTIBULE	MOVE-IN	30	1.05	60	2.11	1.06
			RESTROOM		50	3.2	100	6.4	3.2
			DOG WASH		60	3.71	120	7.41	3.7
			PARCEL STORAGE		45	1.08	90	2.16	1.08
			MOVE-IN		115	1.23	230	2.45	1.22
SF-1-5	1	SUPPLY FAN	CORRIDOR	CORRIDOR	110	1.07	220	2.14	1.07
ERV-1-9	1	ENERGY RECOVERY VENTILATOR	COMMERCIAL 101	COMMERCIAL 101	1200	1.11	1200	1.11	1.06
IVF-1-6	1	SUPPLY FAN		COMMERCIAL 101	0	0	1200	1.06	
ERV-1-10	1	ENERGY RECOVERY VENTILATOR	RESTAURANT 102	RESTAURANT 102	1200	0.8	1200	0.8	1
ERV-1-11	1	ENERGY RECOVERY VENTILATOR		RESTAURANT 102	450	0.3	600	0.4	
IVF-1-7	1	SUPPLY FAN		RESTAURANT 102	0	0	1350	0.9	
EF-7-1	1	EXHAUST FAN	TRASH ROOM	ROOF	1500 TO L1 750 TO L2-L6	7.1	1500 TO L1 750 TO L2-L6	7.1	1.2
EF-1-1	1	EXHAUST FAN		TRASH ROOM	0	0	250	1.2	
SF-1-6	1	SUPPLY FAN		TRASH ROOM	1500	7.1	1750	8.3	

ACTIVATE HI SPEED AIR FLOW UPON GAS DETECTION IN THE AREA SERVED GREATER THAN 1000 PPM

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

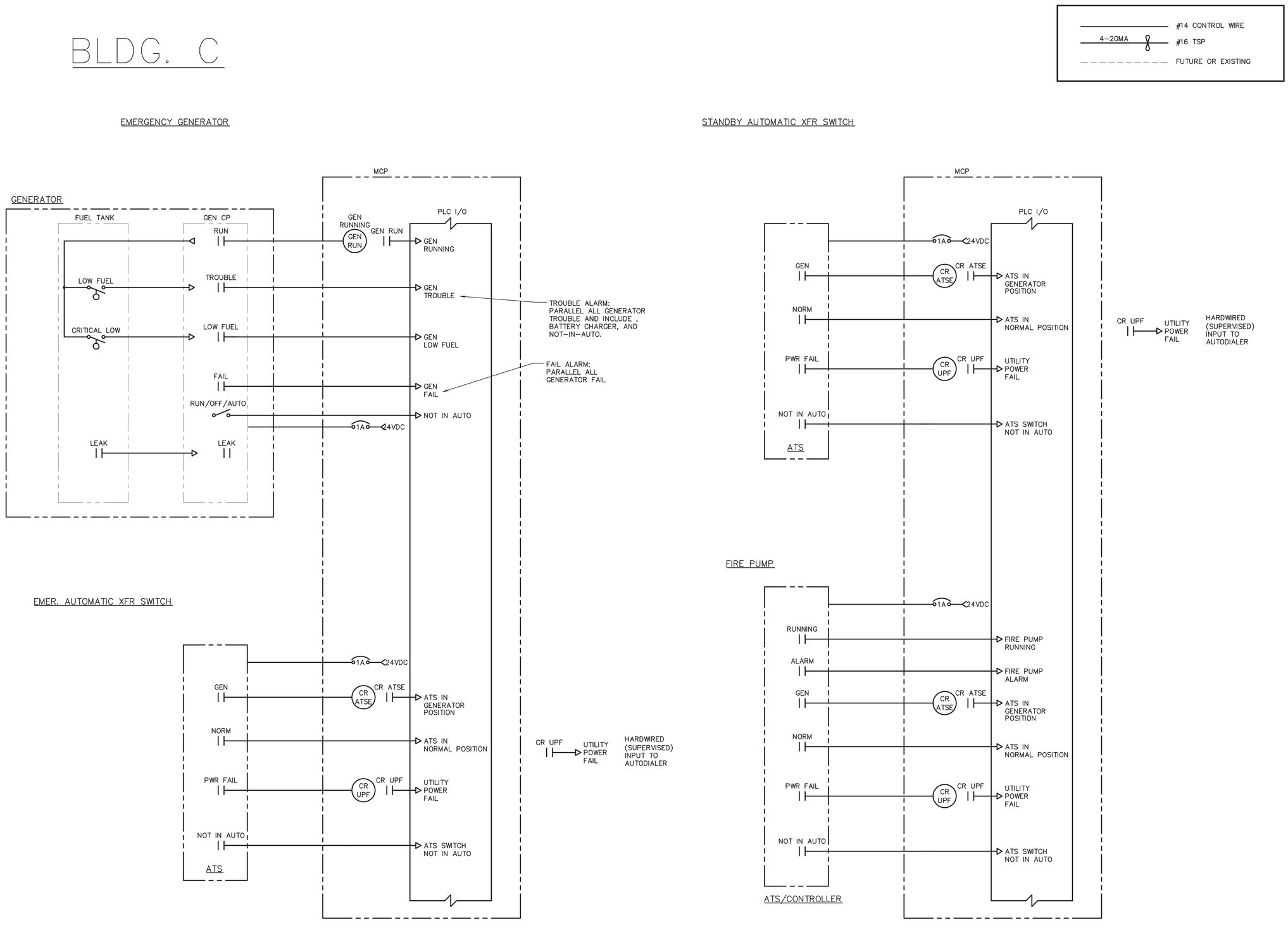
NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 3 (MCP)

PERMIT #
DRAWN VF/MP
CHECKED VF
ISSUE DATE 04/07/2022
JOB NO. XX
SHEET NO.:
EFC6

BLDG. C



MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425–765–6304

BUILDING PERMIT SET
12/30/2022

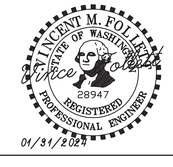
REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 4 (MCP)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.	EFC7A



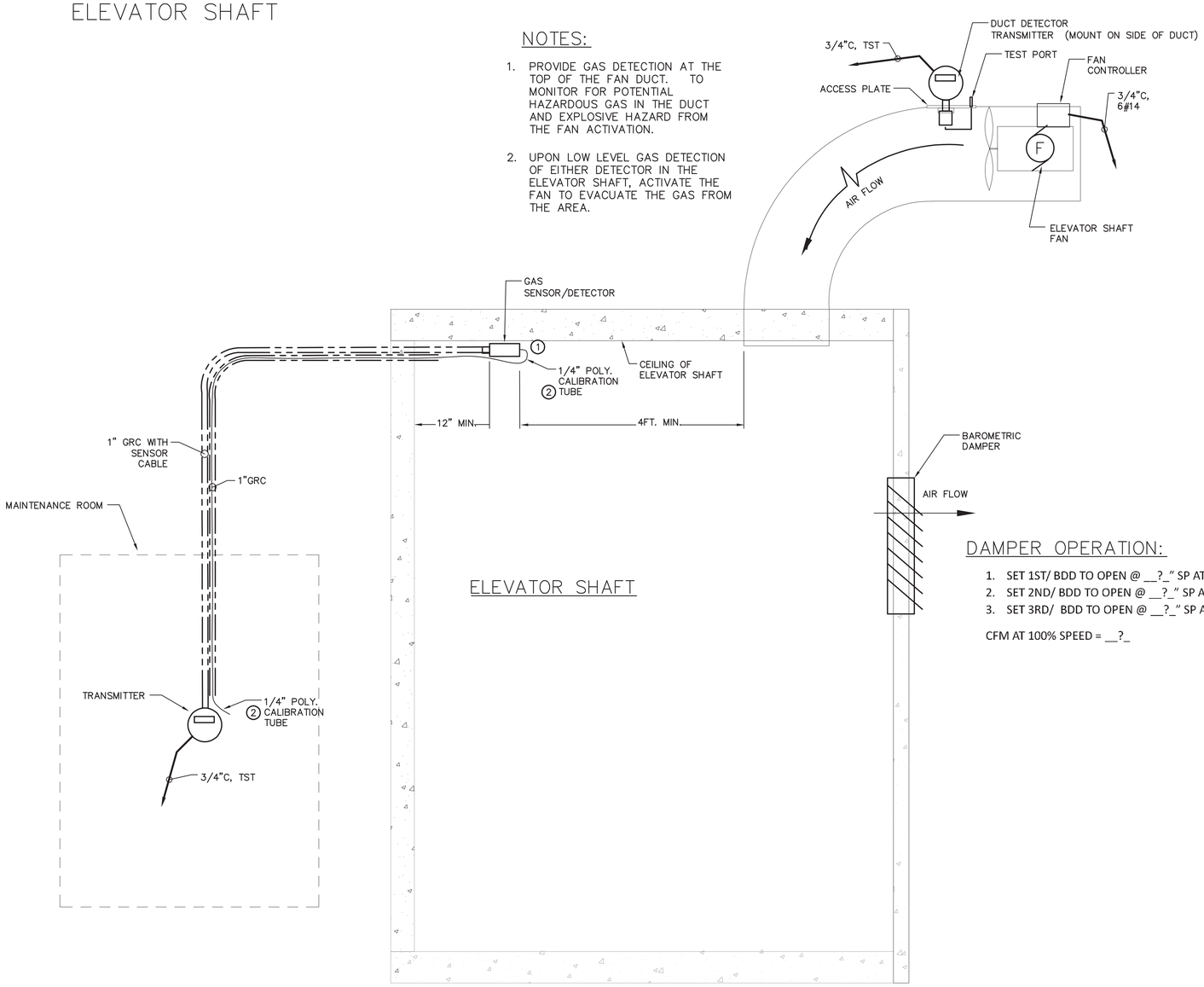
2

BLDG. C

ELEVATOR SHAFT

NOTES:

1. PROVIDE GAS DETECTION AT THE TOP OF THE FAN DUCT. TO MONITOR FOR POTENTIAL HAZARDOUS GAS IN THE DUCT AND EXPLOSIVE HAZARD FROM THE FAN ACTIVATION.
2. UPON LOW LEVEL GAS DETECTION OF EITHER DETECTOR IN THE ELEVATOR SHAFT, ACTIVATE THE FAN TO EVACUATE THE GAS FROM THE AREA.

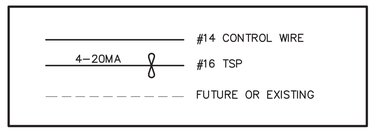


DAMPER OPERATION:

1. SET 1ST/ BDD TO OPEN @ __?_" SP AT 33% CFM.
2. SET 2ND/ BDD TO OPEN @ __?_" SP AT 33% CFM.
3. SET 3RD/ BDD TO OPEN @ __?_" SP AT 33% CFM

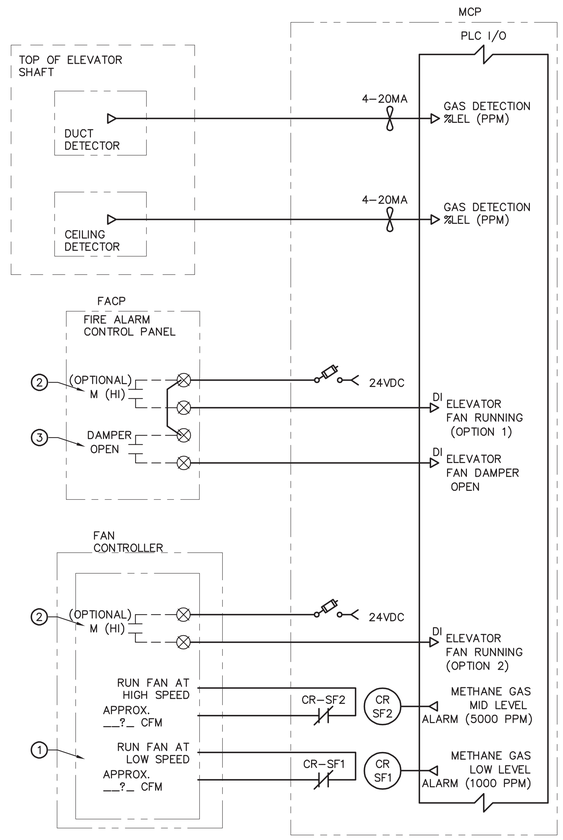
CFM AT 100% SPEED = __?_

BLDG C –ELEVATOR SHAFT DETECTORS



KEY NOTES:

1. COORDINATE VENTILATION FAN CONTROLS FOR SEPARATE LOW & HIGH SPEED INPUTS
2. COORDINATE RUN CONTACT FEEDBACK "DRY CONTACT" FOR FAN RUNNING FEEDBACK TO THE PLC. (PROVIDE DIRECTLY FROM FAN CONTROLLER IF AVAILABLE, IF NOT PROVIDE FROM FACP)
3. FAN RUNNING AND DAMPER OPEN SIGNALS MAY BE COMBINED IF NECESSARY TO ONE INPUT



TYPICAL ELEVATOR SHAFT FAN

ACTIVATE ALL ELEVATOR SHAFT FANS ON LOW LEVEL METHANE DETECTION (1,000 PPM) FROM ANY DETECTOR IN THE BUILDING.

ACTIVATE HIGH SPEED AT A MID LEVEL DETECTION (5,000 PPM) – FROM A ELEVATOR SHAFT DETECTOR FOR THE ASSOCIATED FAN IN THAT ELEVATOR SHAFT ONLY.

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 5 ELEVATOR FANS (MCP)

PERMIT #
DRAWN VF/MP
CHECKED VF
ISSUE DATE 04/07/2022
JOB NO. XX
SHEET NO.:
EFC7B

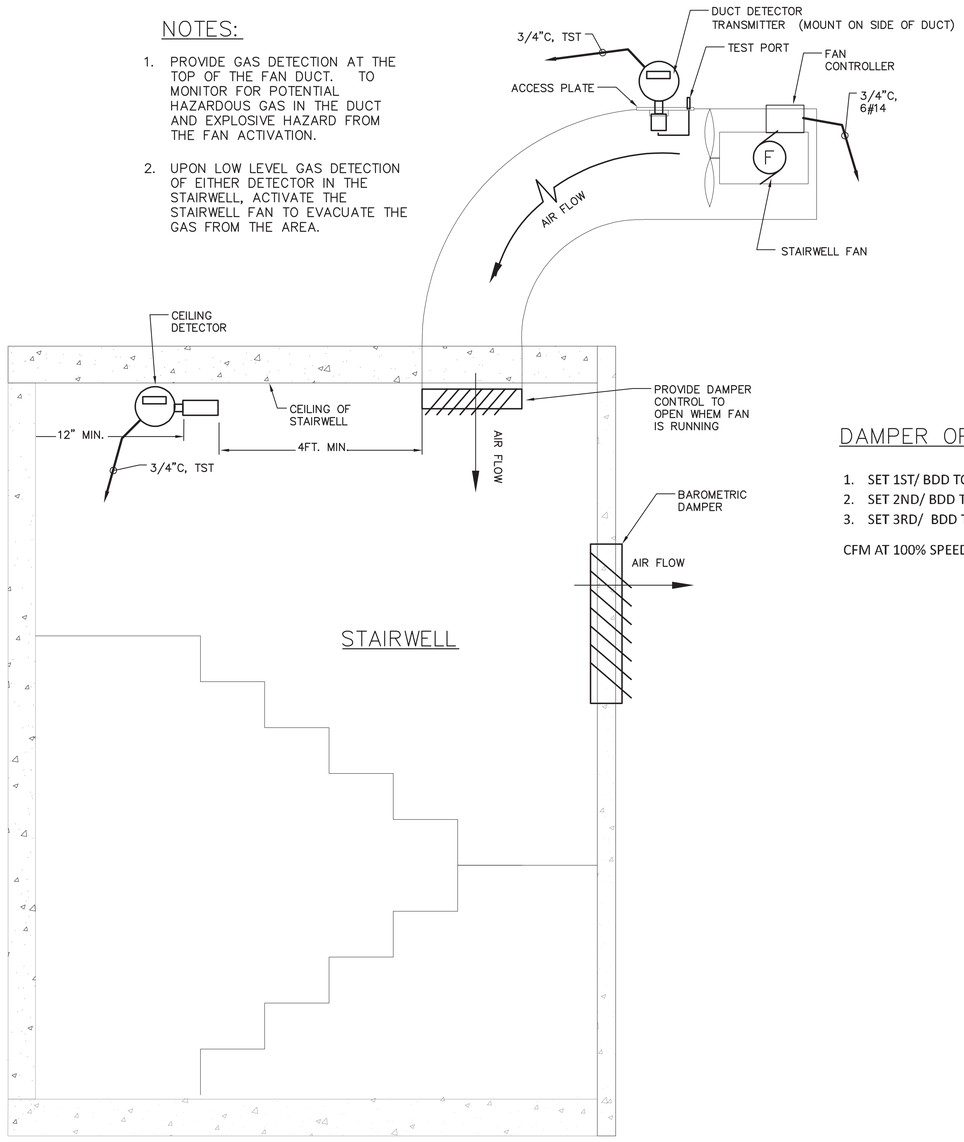
VINCENT M. FOLLETT STATE OF WASHINGTON 28947 REGISTERED PROFESSIONAL ENGINEER
01/31/2024

BLDG. C

STAIRWELLS

NOTES:

1. PROVIDE GAS DETECTION AT THE TOP OF THE FAN DUCT. TO MONITOR FOR POTENTIAL HAZARDOUS GAS IN THE DUCT AND EXPLOSIVE HAZARD FROM THE FAN ACTIVATION.
2. UPON LOW LEVEL GAS DETECTION OF EITHER DETECTOR IN THE STAIRWELL, ACTIVATE THE STAIRWELL FAN TO EVACUATE THE GAS FROM THE AREA.

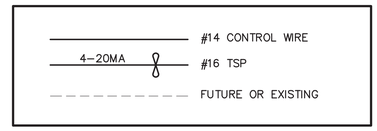


DAMPER OPERATION:

1. SET 1ST/ BDD TO OPEN @ __?_" SP AT 33% CFM.
2. SET 2ND/ BDD TO OPEN @ __?_" SP AT 33% CFM.
3. SET 3RD/ BDD TO OPEN @ __?_" SP AT 33% CFM

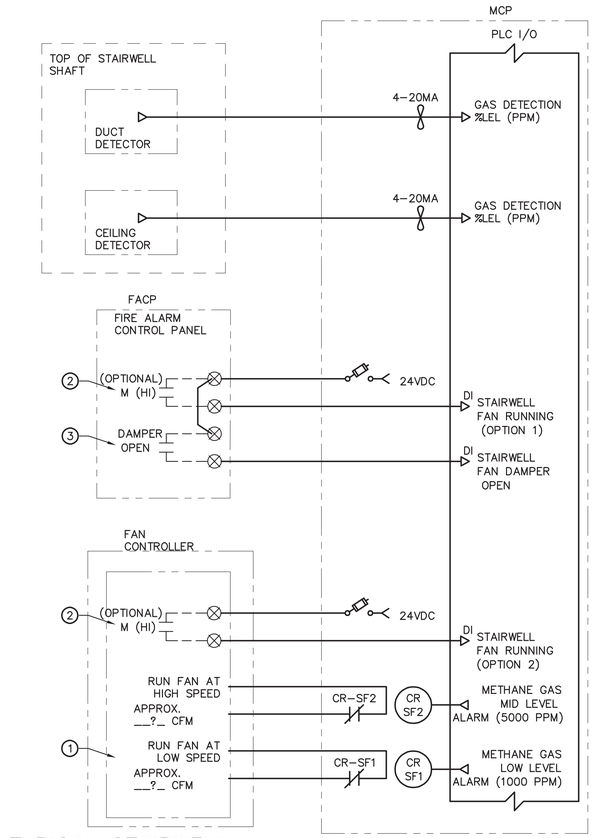
CFM AT 100% SPEED = __?_

BLDG C –STAIRWELL DETECTORS



KEY NOTES:

1. COORDINATE VENTILATION FAN CONTROLS FOR SEPARATE LOW & MID. SPEED INPUTS
2. COORDINATE RUN CONTACT FEEDBACK "DRY CONTACT" FOR FAN RUNNING FEEDBACK TO THE PLC. (PROVIDE DIRECTLY FROM FAN CONTROLLER IF AVAILABLE, IF NOT PROVIDE FROM FACP)
3. FAN RUNNING AND DAMPER OPEN SIGNALS MAY BE COMBINED IF NECESSARY TO ONE INPUT



TYPICAL STAIRWELL FAN CONTROL

ACTIVATE ALL STAIRWELL FANS ON LOW LEVEL METHANE DETECTION (1,000 PPM) FROM ANY DETECTOR IN THE BUILDING.

ACTIVATE MID SPEED AT A MID LEVEL DETECTION (5,000 PPM) – FROM A STAIRWELL DETECTOR FOR THE ASSOCIATED FAN IN THAT STAIRWELL ONLY.

ACTIVATE HIGH SPEED FOR A HIGH LEVEL METHANE DETECTION (10,000 PPM) THRU THE FIRE ALARM PANEL FOR BUILDING EVACUATION.

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
WIRE DIAGRAM 6 STAIRWELL FANS (MCP)

PERMIT #
DRAWN VF/MP
CHECKED VF
ISSUE DATE 04/07/2022
JOB NO. XX
SHEET NO.:
EFC7C

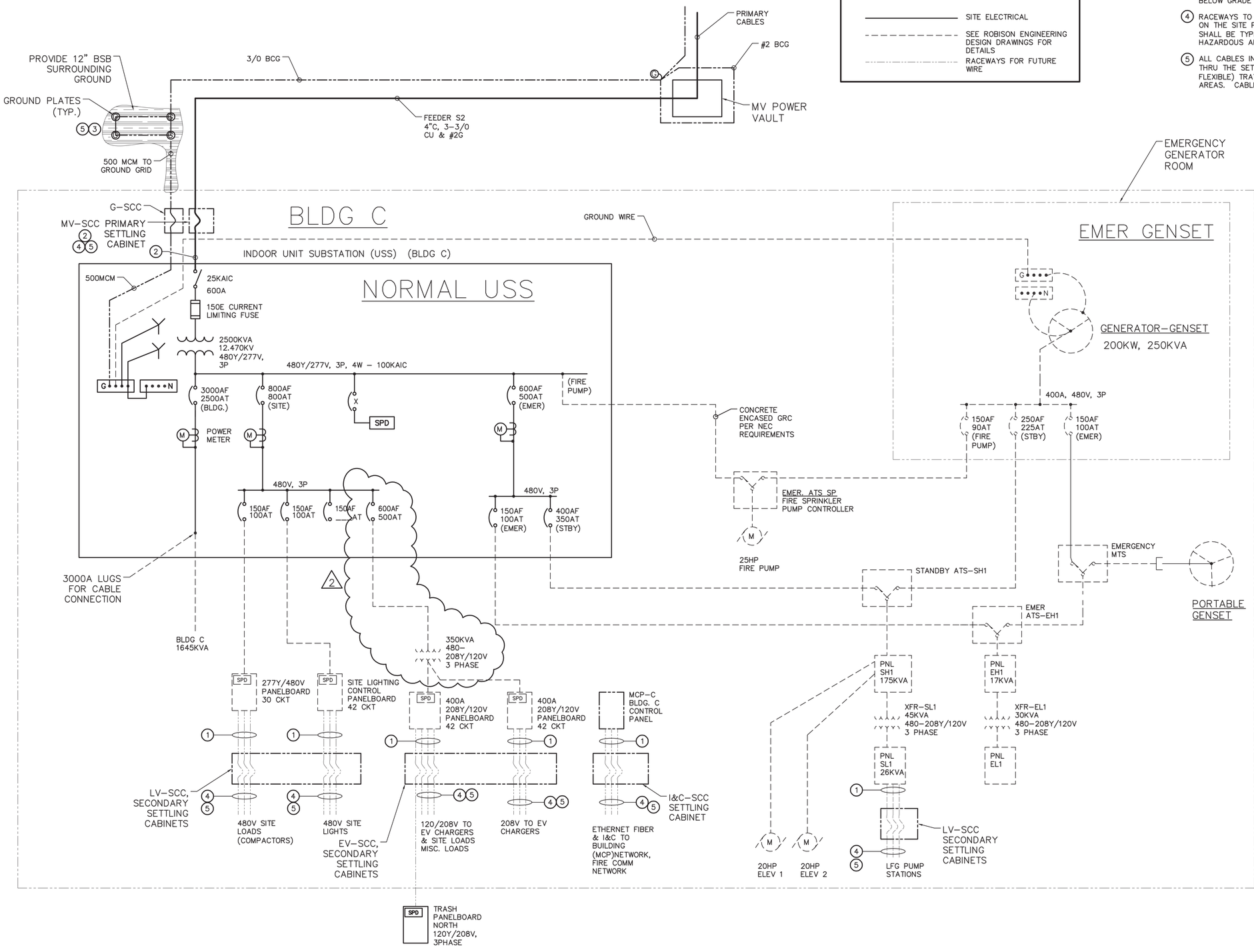
GENERAL NOTES:

1. ALL MAIN LINE UNDERGROUND RACEWAYS SHALL BE HDPE, EITHER PHYSICALLY SEPARATED FROM THE CLASS 1, DIV 2 (LANDFILL) WITH A 3' LAYER OF LPSB, OR LINER WRAPPED.
2. RACEWAYS UNDER THE BUILDING INCLUDING SWEEPS AND RISERS INTO THE SETTLING CABINETS SHALL BE PGRC.
3. RACEWAYS FROM THE LV VAULTS TO SITE LOADS SHALL BE LFMC

KEY NOTES:

1. PROVIDE CABLE TRAYS FROM PANELS TO THE SECONDARY SETTLING CABINET – PROVIDE LV/SECONDARY SETTLING CABINET FOR FUTURE CABLES. EV SETTLING CABINET FOR EV CHARGING STATION CABLES.
2. PROVIDE PRIMARY (MV) SETTLING CABINET AND RACEWAYS TO THE USS AND PRIMARY CABLES & GROUND WIRE TO THE PRIMARY DISCONNECT.
3. PLATES A MINIMUM OF 10' APART. 2X2 FT. COPPER GROUND PLATES INSTALLED IN THE LPSB LAYER WITH 12" BSB SURROUNDING THE PLATES AND GROUND WIRE, MINIMUM OF 40" BELOW GRADE
4. RACEWAYS TO SITE VAULTS – PROVIDE RACEWAYS AS SHOWN ON THE SITE PLAN FOR FUTURE WIRE BY OTHERS ALL CABLES SHALL BE TYPE TC AND RATED FOR INSTALLATION IN C1/D2 HAZARDOUS AREAS.
5. ALL CABLES INCLUDING THE GROUND CONDUCTOR THAT PASS THRU THE SETTLING CABINETS SHALL BE MULTI–STRAND (EXTRA FLEXIBLE) TRAY CABLES SUITABLE FOR USE IN CLASS 1, DIV 2 AREAS. CABLES SHALL BE CONTINUOUS WITH NO SPLICES.

SITE ELECTRICAL
SEE ROBISON ENGINEERING DESIGN DRAWINGS FOR DETAILS
RACEWAYS FOR FUTURE WIRE



MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425–765–6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

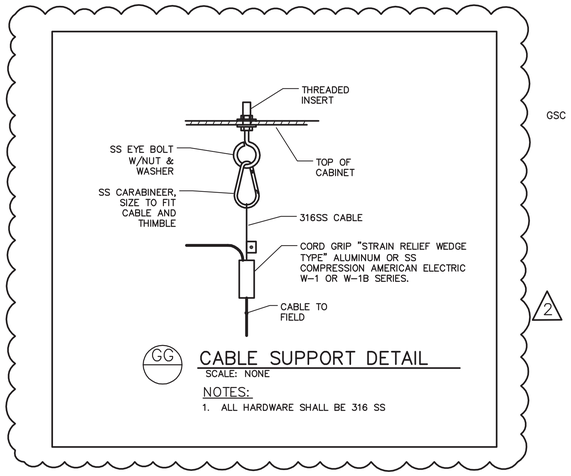
PHASE-BUILDING
2-C

TITLE
ONELINE DIAGRAM BLDG C. USS

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX

SHEET NO.:
EFC8

VINCENT M. FOLLETT — STATE OF WASHINGTON — 28947 — REGISTERED PROFESSIONAL ENGINEER
01/31/2024

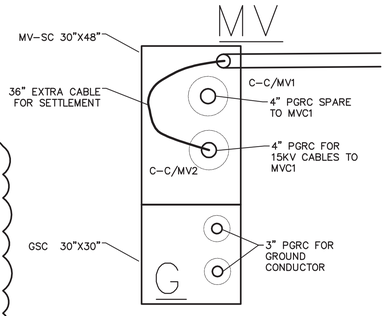


GG CABLE SUPPORT DETAIL

SCALE: NONE

NOTES:

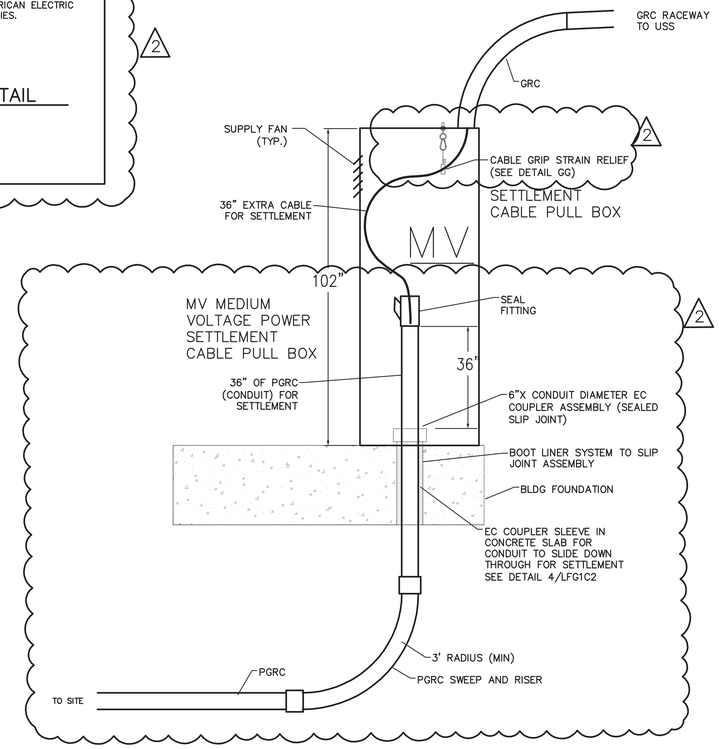
1. ALL HARDWARE SHALL BE 316 SS



PLAN VIEW
SETTLEMENT CABLE PULL BOX

NOTES:

1. CABINET SHALL BE NEMA 12 WITH FULL HEIGHT AND WIDTH DOORS, LOCAKABLE STAINLESS STEEL 3 POINT LATCH AND STAINLESS STEEL HINGES. PROVIDE VENTS AND SUPPLY FAN AS SHOWN. HOFFMAN OR EQUAL
2. ALL LV CABLES SHALL BE MULTI-CONDUCTOR TRAY CABLE, 600V, 90C WET/DRY, AND LISTED FOR USE IN CLASS 1, DIV 2 HAZARDOUS ENVIRONMENTS.
3. SUPPLY FAN SHALL BE CAPABLE OF PROVIDING A MINIMUM OF 50 CFM, AND SHALL BE MONITORED WITH 4-20MA AMP METER AND ALARMED FOR FAILURE.

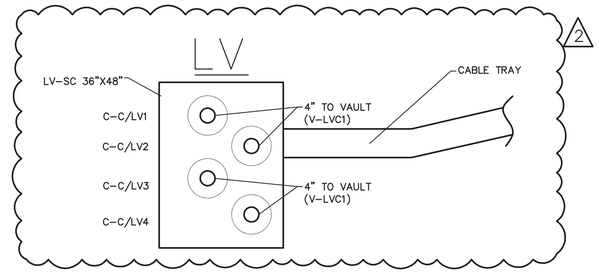


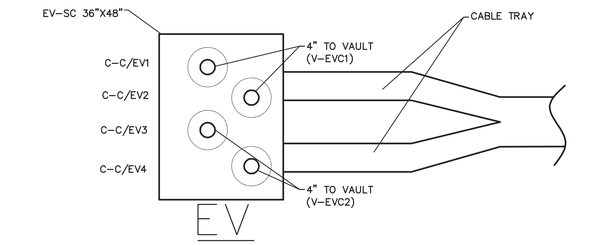
ELEVATION VIEW

PRIMARY SETTLING CABINET
MV/PRIMARY CABLES (12.47KV)

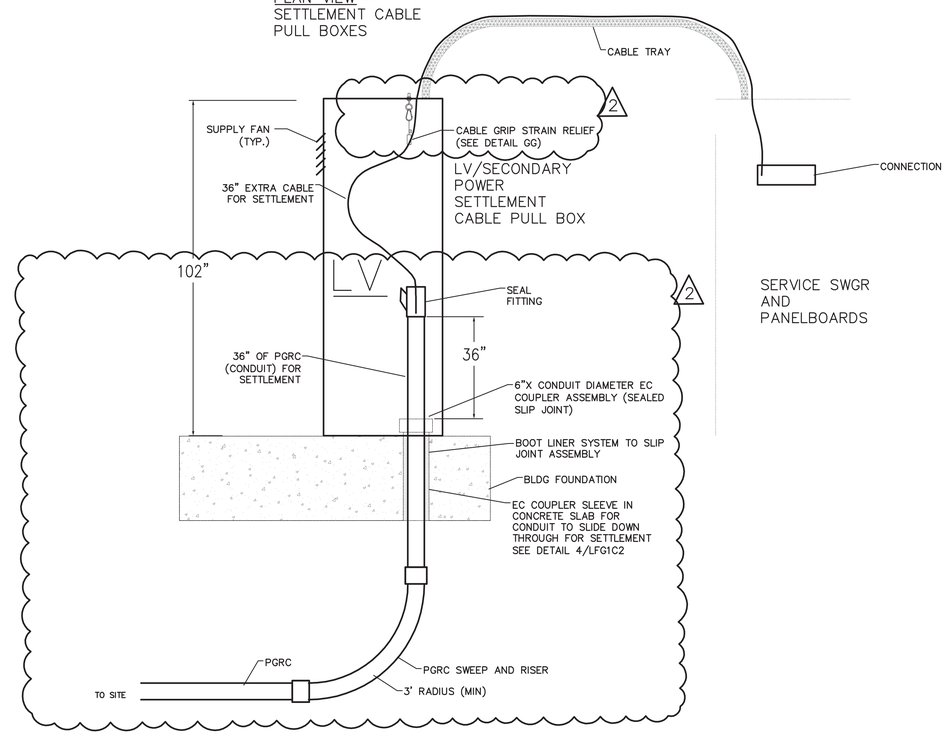
MV-SCC & G-SCC

SETTLEMENT CABLE PULL BOX





PLAN VIEW –
SETTLEMENT CABLE PULL BOXES



SERVICE SWGR AND PANELBOARDS

ELEVATION VIEW

LOW VOLTAGE (LV) SETTLING CABINET
LV/SECONDARY CABLES (480, 277, 208, 120V)

LV-SCC & EV-SCC

SETTLEMENT CABLE PULL BOX

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101
PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT
3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

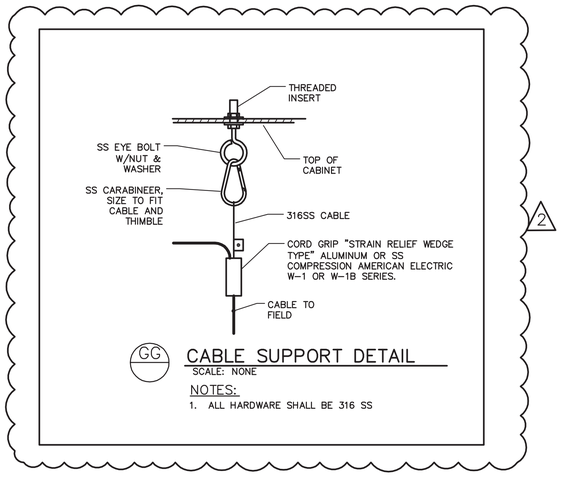
REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
SETTLING CABINETS DETAILS 1 (MV-LV)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC9

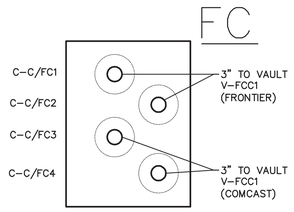


GG CABLE SUPPORT DETAIL

SCALE: NONE

NOTES:

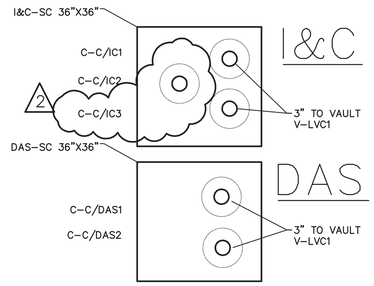
1. ALL HARDWARE SHALL BE 316 SS



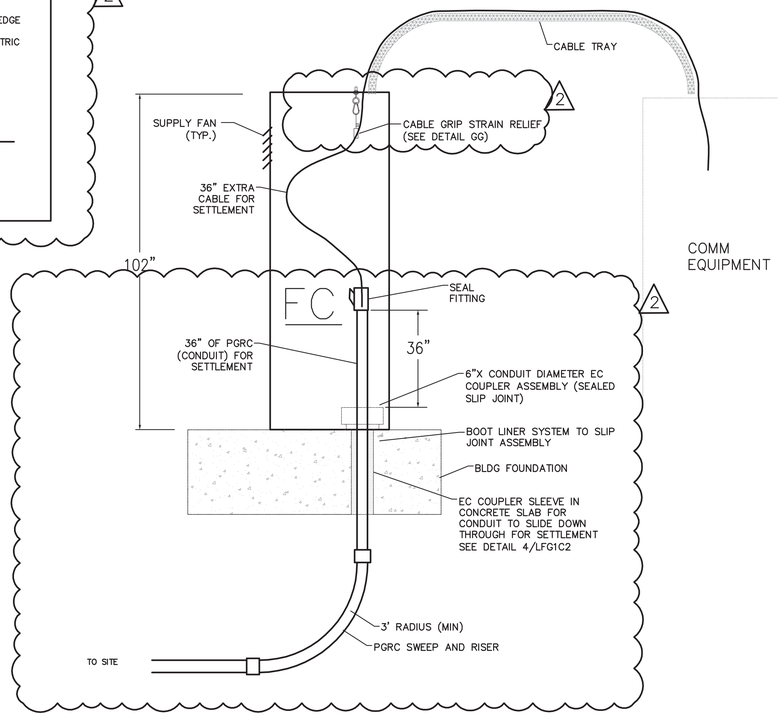
PLAN VIEW –
SETTLEMENT CABLE
PULL BOX
3'X4'

NOTES:

1. CABINET SHALL BE NEMA 12 WITH FULL HEIGHT AND WIDTH DOORS, LOCAKABLE STAINLESS STEEL 3 POINT LATCH AND STAINLESS STEEL HINGES. PROVIDE VENTS AND SUPPLY FAN AS SHOWN. HOFFMAN OR EQUAL
2. ALL LV CABLES SHALL BE MULTI-CONDUCTOR TRAY CABLE, 600V, 90C WET/DRY, AND LISTED FOR USE IN CLASS 1, DIV 2 HAZARDOUS ENVIRONMENTS.
3. SUPPLY FAN SHALL BE CAPABLE OF PROVIDING A MINIMUM OF 50 CFM, AND SHALL BE MONITORED WITH 4-20MA AMP METER AND ALARMED FOR FAILURE.



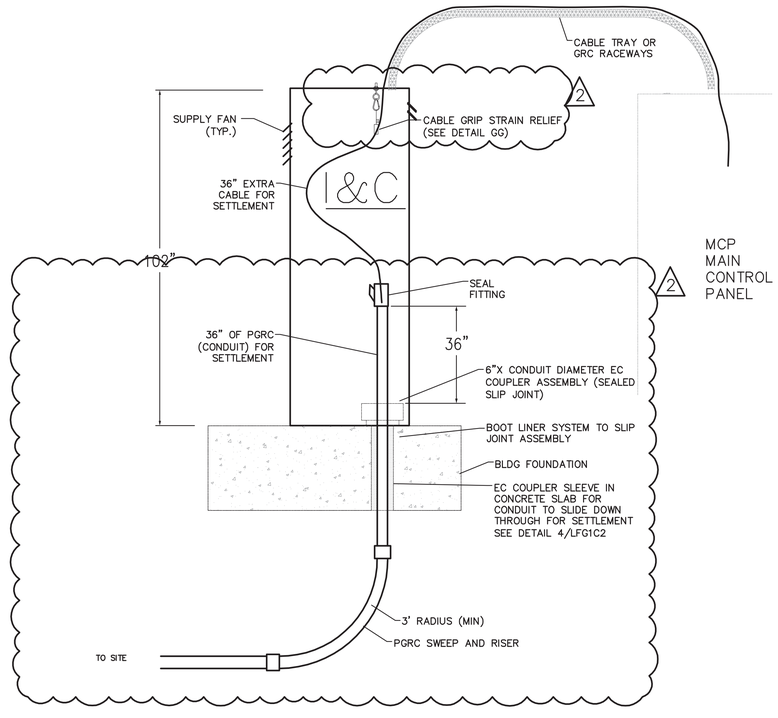
PLAN VIEW –
SETTLEMENT CABLE
PULL BOX



ELEVATION VIEW
FRONTIER & COMCAST COMMUNICATIONS

FC-SCC

SETTLEMENT CABLE PULL BOX



ELEVATION VIEW
I&C (FIBER COMM, 24VDC, CONTROL)

I&C-SCC DAS-SCC

SETTLEMENT CABLE PULL BOX

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

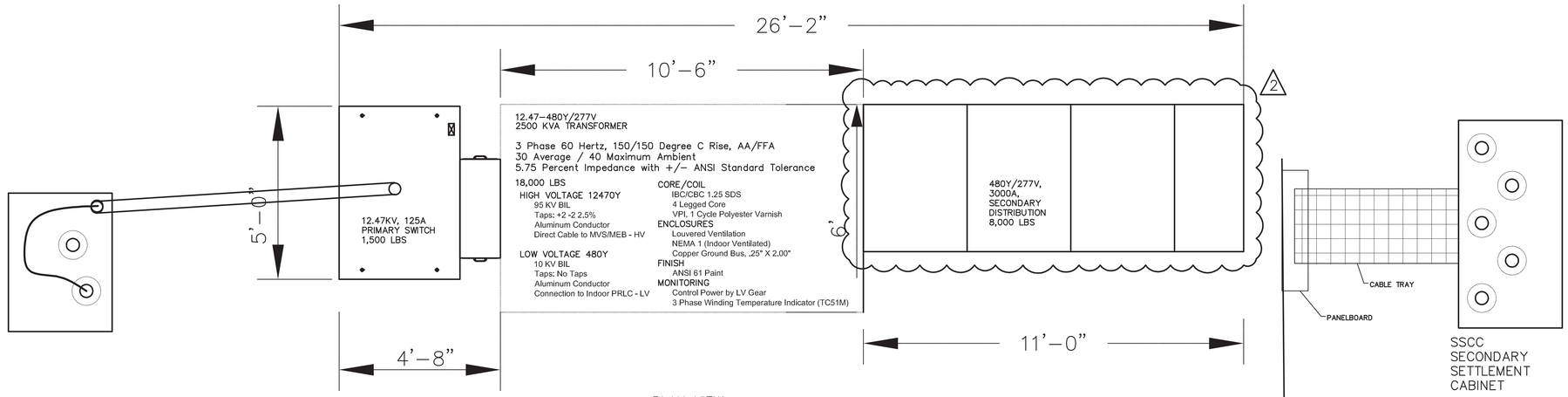
REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

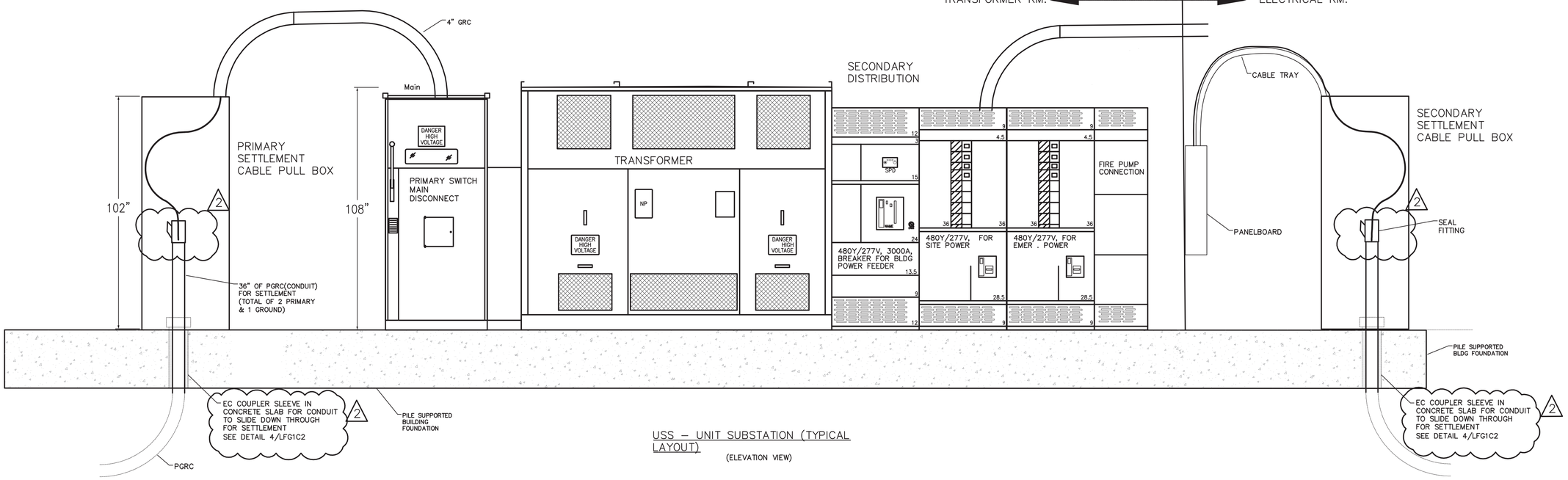
PHASE-BUILDING
2-C

TITLE
SETTLEMENT CABINETS DETAILS 2 (FC-IC-DAS)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC10



PLAN VIEW



USS – UNIT SUBSTATION (TYPICAL LAYOUT)

(ELEVATION VIEW)

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING

ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

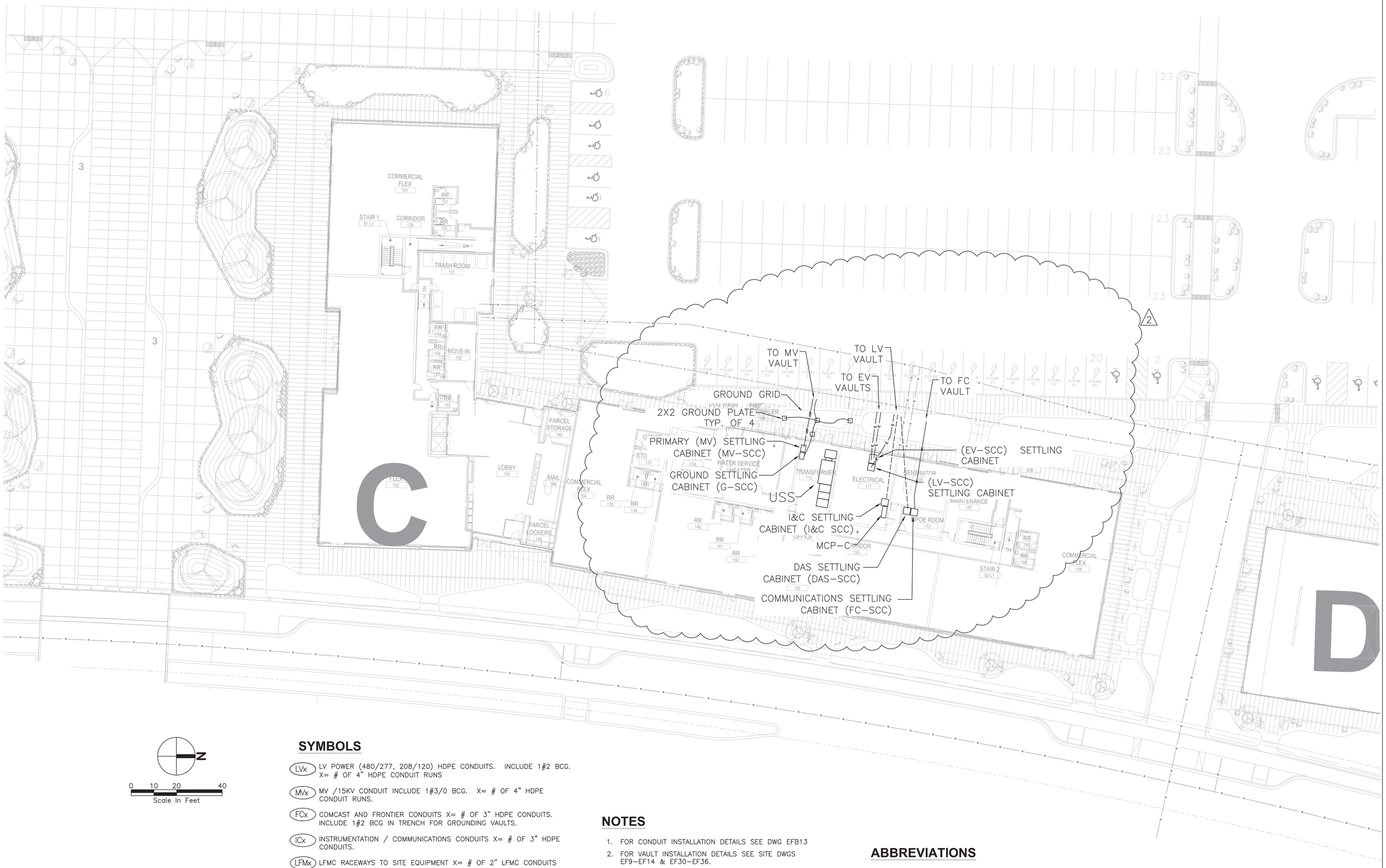
NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
BLDG C
UNIT SUB
STATION
(USS)

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX
SHEET NO.:	EFC11

VINCENT M. FOLLETT
STATE OF WASHINGTON
28947
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024



N

0 10 20 40

Scale In Feet

SYMBOLS

- (LVx) LV POWER (480/277, 208/120) HDPE CONDUITS. INCLUDE 1#2 BCG. X= # OF 4" HDPE CONDUIT RUNS
- (MVx) MV /15KV CONDUIT INCLUDE 1#3/0 BCG. X= # OF 4" HDPE CONDUIT RUNS.
- (FCx) COMCAST AND FRONTIER CONDUITS X= # OF 3" HDPE CONDUITS. INCLUDE 1#2 BCG IN TRENCH FOR GROUNDING VAULTS.
- (ICx) INSTRUMENTATION / COMMUNICATIONS CONDUITS X= # OF 3" HDPE CONDUITS.
- (LFMx) LFMC RACEWAYS TO SITE EQUIPMENT X= # OF 2" LFMC CONDUITS
- MV 12.47KV (MV (12.47KV POWER) VAULT WITH RACKS FOR MV
- LV LOW VOLTAGE (LV) POWER VAULT (277/480, 120/208) WITH SEPARATE CABLE RACKS FOR LV CABLES AND COMMS.
- 2 FC COMBINED (FRONTIER / COMCAST) VAULT WITH SEPARATE RACKS FOR EACH.
- EV EV VAULT, WATERTIGHT LID WITH CABLE RACKS
- EV CHARGING STATION CONNECTION IN GROUND BOX DUAL CHARGING STATION – (CHARGEPOINT CT4000 LEVEL 2)
- KO LFG PUMP STATION KNOCK OUT STATION
- PCP LFG PUMP STATION CONTROL PANEL

NOTES

1. FOR CONDUIT INSTALLATION DETAILS SEE DWG EFB13
2. FOR VAULT INSTALLATION DETAILS SEE SITE DWGS EF9–EF14 & EF30–EF36.
3. MINIMUM BENDING RADIUS FOR ALL RACEWAYS HORIZONTAL BENDS SHALL BE 12FT. MINIMUM FOR VERTICAL BENDS 3', UNLESS PRIOR AGREEMENT WITH THE ENGINEER & OWNER
4. PROVIDE LPSB BACKFILL OR BSB AS REQUIRED IN ALL TRENCHES
5. VAULT DIMENSIONS LISTED ARE THE MINIMUM INTERIOR DIMENSIONS.

ABBREVIATIONS

- (F) = FUTURE
- (E) = EXISTING
- UON = UNLESS OTHERWISE NOTED
- MV = MEDIUM VOLTAGE / PRIMARY / 12.47KV
- LV = LOW VOLTAGE / SECONDARY / 120, 208, 277, 480V
- LFMC = LIQUIDTIGHT FLEXIBLE METALIC CONDUIT (RATED FOR CLASS 1, DIV. 2) (AFC "LIQUID–TUFF")
- EVCB = ELECTRIC VEHICLE CONDUIT BOX
- BCG = BARE COPPER GROUND (3/0 FOR MAIN TRENCH, #2 FOR BRANCH TRENCH AND LOOPS)

VINCENT M. FOLLETT STATE OF WASHINGTON 28947 REGISTERED PROFESSIONAL ENGINEER

01/31/2024

MG2
1101 Second Ave, Suite 100
Seattle, WA 98101

PH: 206.962.6500
MG2.COM

Shelter HOLDINGS

EVERETT RIVERFRONT

3810 RIVERFRONT BLVD
EVERETT, WA 98203

FOLLETT ENGINEERING
ELECTRICAL ENGINEERING & CONSULTING
SEATTLE, WA 425-765-6304

BUILDING PERMIT SET
12/30/2022

REVISIONS / NOTES

NO	DATE	DESCRIPTION
1	9/16/22	PERMIT RESPONSE 01
2	01/31/24	PERMIT REVISIONS 02

PHASE-BUILDING
2-C

TITLE
BLDG. C
SITE PLAN

PERMIT #	
DRAWN	VF/MP
CHECKED	VF
ISSUE DATE	04/07/2022
JOB NO.	XX

SHEET NO.:
EFC12

GENERAL NOTES

GENERAL

1. PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE N.E.C., THE W.A.C. AND THE NATIONAL ELECTRICAL SAFETY CODE, LOCAL CODES, ORDINANCES AND REQUIREMENTS OF UTILITY COMPANIES FURNISHING SERVICES TO INSTALLATION.
2. PROVIDE ALL WORK AND ITEMS NECESSARY FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY CONDUIT, BOX, CONDUCTOR OR SIMILAR ITEMS FOR A COMPLETE INSTALLATION.
3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND DETERMINE CONDITIONS WHICH MAY AFFECT BID. ANY ITEMS NOT FULLY UNDERSTOOD SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
4. "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, OR MECHANICAL).
4. REFERENCE ARCHITECTURAL DRAWING FOR EXACT LOCATION OF DEVICES. QUESTIONS CONCERNING THE LOCATION OF DEVICES AND EQUIPMENT SHALL BE DIRECTED TO THE ARCHITECT. FAILURE TO COORDINATE REQUIREMENTS SHALL IN NO WAY RESULT IN ADDITIONAL COMPENSATION BEING PROVIDED TO THE CONTRACTOR.
5. WHEREVER THE WORD "PROVIDE" IS USED, IT MEANS, "FURNISH AND INSTALL COMPLETE AND READY FOR USE."
6. COORDINATE LOCATION OF ELECTRICAL WITH OTHER TRADES.
7. REFER TO EQUIPMENT DRAWINGS FOR MECHANICAL CHARACTERISTICS (SIZE, LOCATION, ETC.) OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED. COORDINATE INSTALLATION AND LOCATION OF ALL EQUIPMENT WITH MECHANICAL CONTRACTOR. VERIFY ALL FUSE RATINGS, WIRE SIZES AND DISCONNECT SIZES PRIOR TO INSTALLATION.
8. PROVIDE CONDUCTORS AND RACEWAYS PER 2020 NATIONAL ELECTRICAL CODE AND W.A.C..

MATERIALS AND METHODS

10. PROVIDE RACEWAY AND WIRING ROUTED CONCEALED WITHIN BUILDING STRUCTURE WHERE POSSIBLE. WHERE RACEWAY CANNOT BE CONCEALED, IT SHALL BE INSTALLED PER PROJECT MANAGER'S DIRECTION. ALL CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES HORIZONTAL OR PERPENDICULAR TO BUILDING COLUMNS AND ROOF LINES. CONDUITS SHALL BE GROUPED ON COMMON SUPPORTS WHEREVER POSSIBLE.
11. EXPOSED CONDUIT ROUTING: CONDUITS MAY BE ROUTED EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS ONLY. EXPOSED CONDUITS SHALL BE SECURED A MINIMUM OF 6" ABOVE FLOOR.
12. OUTDOOR EXPOSED CONDUIT ROUTING: CONDUITS ROUTED ON ROOF OR EXPOSED TO WEATHER SHALL BE GRC, PVC OR LIQUID-TIGHT FLEX. PROVIDE WATER-TIGHT CONNECTIONS AND FITTINGS.
13. CLEARANCES: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET.
14. CONNECTIONS: PROVIDE GRS, METALLIC FLEX, OR LIQUIDTITE FLEX CONDUITS FOR CONNECTIONS TO MOTORS OR MOTORIZED EQUIPMENT.
15. WIRING: PROVIDE MINIMUM #12 AWG WIRE SIZE. IF CONDUIT IS TO BE USED MINIMUM IS TO BE 1/2". FLEXIBLE CONDUIT AND FLEXIBLE CABLE IS PERMISSIBLE THROUGHOUT THE BUILDING.
16. WIRING: PROVIDE MINIMUM #10 AWG COPPER CONDUCTOR SIZE IN 120V BRANCH CIRCUIT RUNS OVER 75' IN LENGTH.
17. WIRING: POWER WIRING FOR BRANCH CIRCUITS SHALL BE COPPER, THWN/THHN, INSULATED FOR 600V. ALUMINUM CONDUCTORS PERMITTED FOR FEEDERS 100 AMPS OR LARGER. INCREASE WIRE AND CONDUIT SIZE TO EQUAL OR EXCEED DESIGNED COPPER RATING.
18. DISCONNECTS: PROVIDE DISCONNECTS, FUSED AND UNFUSED, SHOWN AND REQUIRED BY CODE FOR EQUIPMENT FURNISHED UNDER ELECTRICAL AND MECHANICAL SCOPES OF WORK. REFER TO COORDINATION MATRIX.
19. FUSES: PROVIDE FUSES PER EQUIPMENT NAMEPLATE UNLESS OTHERWISE INDICATED. FUSES SHALL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
20. SUPPORT: SUPPORT LIGHT FIXTURES FROM BUILDING STRUCTURE. DO NOT SUPPORT FIXTURES FROM SUSPENDED CEILING.
21. LABELS: ELECTRICAL PANEL, TIME SWITCH, DISCONNECT, STARTER, CONTACTOR, PULL BOX, ETC. ENCLOSURES SHALL BE PERMANENTLY LABELED TO IDENTIFY ITS DESIGNATION OR UNIT SERVED. ENCLOSURES FOR ARTICLE 700 SYSTEMS LARGER THAN 6"X6" SHALL HAVE A PERMANENT IDENTIFICATION PLATE THAT IS SUBSTANTIALLY ORANGE IN COLOR.
22. PAINTING: ELECTRICAL ENCLOSURES SHALL BE PAINTED ONLY AS REQUIRED BY ARCHITECT.
23. COVERPLATES: PROVIDE AS FOLLOWS. SUBMIT SAMPLE OF EACH FOR APPROVAL.
    a. MECHANICAL AND ELECTRICAL ROOMS: GALVANIZED STEEL
24. SITE ELECTRICAL

    TRENCHING: COORDINATE ALL TRENCHING WORK WITH OTHER UTILITY LOCATIONS AND DRAINAGE TRENCHES.
25. UNDERGROUND CONDUITS: PROVIDE PVC, SCHEDULE 40, 3/4" MINIMUM. PROVIDE GRC CONDUIT TRANSITION ELBOW WHEN TURNING UP TO ABOVE GRADE.
26. DIRECT-BURIED: CONDUIT FOR BRANCH CIRCUITS OUTSIDE BUILDINGS NOT BENEATH DRIVEWAYS OR PARKING AREAS SHALL BE DIRECTLY BURIED WITHOUT CONCRETE ENCASEMENT. THE DEPTH TO THE TOP OF BURIED CONDUITS SHALL BE 36". PROVIDE MARKER TAPE 12" BELOW GRADE.
27. BELOW SLAB: CONDUIT ROUTED BELOW ON-GRADE FLOOR SLABS SHALL BE INSTALLED PRIOR TO FLOOR SLAB POUR. ROUTE CONDUITS BELOW SLAB AS STRAIGHT AS POSSIBLE TO MINIMIZE BENDS.
28. ALL CONDUITS PENETRATING THE BUILDING ENVELOPE BELOW GRADE SHALL FOLLOW WATERPROOFING REQUIREMENTS IN THE ARCHITECURAL DRAWINGS.

NEUTRALS

29. AT CONTRACTORS OPTION, NEUTRALS MAY BE SHARED ON COMBINED HOMERUNS UNLESS THE CIRCUIT HAS A GFCI BREAKER, AN ISOLATED GROUND, OR IS FROM A PANEL WITH TVSS PROTECTION. ANY NEUTRAL DOWNSTREAM FROM A DIMMER SHALL BE DEDICATED TO THE DIMMED LOAD.
30. NEUTRAL WIRES SHOWN FOR TWO AND THREE POLE MECHANICAL AND KITCHEN EQUIPMENT MAY BE OMITTED UPON VERIFICATION THAT THEY ARE NOT REQUIRED EITHER FOR OPERATION OR CONTROL CIRCUITS PER MANUFACTURER'S SPECIFICATIONS.

LIGHTING

31. PROVIDE LIGHT FIXTURES WITH PROPER FITTING FLANGES, MOUNTING SUPPORTS, AND ACCESSORY ITEMS, UL LISTED FOR CONDITIONS OF USE.

LOW VOLTAGE LIGHTING

32. A. PROVIDE LOW VOLTAGE TRANSFORMERS IN NEARBY ACCESSIBLE CEILING SPACE.

    B. PROVIDE LOW VOLTAGE CONDUCTORS SIZED PER MANUFACTURER'S GUIDELINES TO MINIMIZE VOLTAGE DROP.

LIGHTING CONTROL

33. THE MAXIMUM LIGHTING POWER THAT MAY BE CONTROLLED FROM A SINGLE SWITCH OR AUTOMATIC CONTROL SHALL NOT EXCEED THAT WHICH IS PROVIDE BY A TWENTY AMPERE CIRCUIT LOADED TO NOT MORE THAN EIGHTY PERCENT. A MASTER CONTROL MAY BE INSTALLED PROVIDED THE INDIVIDUAL SWITCHES RETAIN THEIR CAPABILITY TO FUNCTION INDEPENDENTLY.
34. BATTERY BALLASTS & EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE DESIGNATED CIRCUIT.
35. EMERGENCY COMMUNICATION:
    a. PROVIDE A 2-WAY COMMUNICATION SYSTEM PER WASHINGTON STATE BUILDING CODE 1007.8.1
    b. PROVIDE EMERGENCY RADIO COVERAGE PER SEATTLE MUNICIPAL CODE SECTION 510. OWNER TO PROVIDE MAINTENANCE OF ALL COMMUNICATIONS SYSTEMS AS REQUIRED.
36. ACCESS PANELS: CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR OWN ACCESS PANELS FOR ACCESS TO THEIR EQUIPMENT. CONTRACTOR SHALL SUBMIT A FULL PLAN SHOWING LOCATIONS TO THE GC PRIOR TO INSTALLATION.
37. COMBINATION MOTOR-STARTERS

    THE CONTROL TRANSFORMERS IN ALL COMBINATION MOTOR-STARTERS SHALL HAVE 120 VOLT COILS.
38. FIRE PROTECTION

    OPENINGS IN FIRE RATED ASSEMBLIES FOR ELECTRICAL CONDUIT, BUS DUCT, AND OTHER EQUIPMENT SHALL BE SEALED WITH FIRE CAULK OR OTHER MATERIAL SUITABLE FOR MAINTAINING THE INTEGRITY OF THE FIRE RATING.
39. ADDITIONAL ADJUSTMENTS FOR CONDUITS EXPOSED TO SUNLIGHT ON OR ABOVE ROOFTOPS SHALL BE FACTORED PER 2020 NEC 310.15.
40. DIMENSIONS

    ALL MEASUREMENTS ARE FROM FACE OF METAL FRAMING TO CENTER OF THE BOX.

ADA REQUIREMENTS

1. RECEPTACLE OUTLETS SHALL BE LOCATED NOT LESS THAN 15 INCHES ABOVE THE FLOOR TO THE BOTTOM OF THE OPERABLE PART.
2. LIGHT SWITCHES SHALL BE INSTALLED WITH THE TOP OF THE OPERABLE PART TO BE WITHIN 34-48 INCHES OF THE FLOOR.

DESIGN/BUILD SYSTEMS

FIRE ALARM SYSTEM:
DESIGN AND PROVIDE COMPLETE, OPERATING, AND FULLY FUNCTIONAL FIRE DETECTION ALARM SYSTEM THAT MEETS ALL LOCAL CODES AND ORDINANCES. SUCCESSFUL SUB-CONTRACTOR SHALL SUBMIT FULL SET OF PLANS TO OWNER, INDICATING DEVICE LOCATIONS, WIRING, CONNECTIONS, AND SPECIAL MOUNTING DETAILS. REFER TO ELECTRICAL PLANS FOR MAIN EQUIPMENT LOCATIONS. SUBMIT PLANS AND OBTAIN PERMIT FROM LOCAL AHJ.

SECURITY CAMERAS:
DESIGN AND PROVIDE COMPLETE, OPERATING, AND FULLY FUNCTIONAL SECURITY CAMERA SYSTEM BASED ON OWNER'S REQUIREMENTS. PROVIDE CAMERAS AT ENTRY LOBBIES, ALL ELEVATOR LOBBIES, ALL COURTYARDS, ALL STAIRWELL LANDINGS, AND ALL WALKWAYS. CONTRACTOR TO PROVIDE CONDUIT TO ALL LOCATIONS. COORDINATE EXACT LOCATIONS OF ALL CAMERAS AND HEADEND EQUIPMENT.

OTHER SYSTEM:
THE FOLLOWING IS A RESPONSIBILITY LIST FOR WHO IS TO FURNISH, PERMIT, AND INSTALL THE FOLLOWING:

- PHONE/DATA WIRING TO APARTMENTS: CONTRACTOR
- FIRE ALARM SYSTEMS: CONTRACTOR
- LOW VOLTAGE LIGHTING CONTROLS: CONTRACTOR
- LOW VOLTAGE HVAC CONTROLS: CONTRACTOR (MECH)

TELEPHONE WIRING SYSTEM:
DESIGN AND PROVIDE COMPLETE, OPERATING, AND FULLY FUNCTIONAL TELEPHONE WIRING SYSTEM PER OWNER REQUIREMENTS. SEE PLANS FOR OUTLET LOCATIONS AND SERVICE ENTRANCE REQUIREMENTS. SUCCESSFUL SUB-CONTRACTOR IS RESPONSIBLE FOR ALL WIRING TERMINATIONS AT THE OUTLETS AND AT THE EQUIPMENT. COORDINATE TERMINATION TYPES WITH EQUIPMENT VENDOR. VERTICAL RISERS ARE TO BE IN RACEWAY, HORIZONTAL WIRING TO BE CABLE.

DATA WIRING SYSTEM:
DESIGN AND PROVIDE COMPLETE, OPERATING, AND FULLY FUNCTIONAL DATA WIRING SYSTEM PER OWNER REQUIREMENTS. SEE PLANS FOR OUTLET LOCATIONS AND SERVICE ENTRANCE REQUIREMENTS. SUCCESSFUL SUB-CONTRACTOR IS RESPONSIBLE FOR ALL WIRING TERMINATIONS AT THE OUTLETS AND AT THE EQUIPMENT. COORDINATE TERMINATION TYPES WITH EQUIPMENT VENDOR. VERTICAL RISERS ARE TO BE IN RACEWAY, HORIZONTAL WIRING TO BE CABLE.

MASTER TELEVISION DISTRIBUTION SYSTEM:
DESIGN AND PROVIDE COMPLETE, OPERATING, AND FULLY FUNCTIONAL SATELLITE AND CABLE TELEVISION DISTRIBUTION SYSTEM. SEE PLANS FOR OUTLET LOCATIONS AND SERVICE ENTRANCE REQUIREMENTS. SUCCESSFUL SUB-CONTRACTOR IS RESPONSIBLE FOR ALL WIRING & WIRING TERMINATIONS AT THE OUTLETS AND AT THE EQUIPMENT. COORDINATE TERMINATION TYPES WITH ACTIVE EQUIPMENT VENDOR. COORDINATE MAXIMUM WIRE LENGTH WITH ACTIVE EQUIPMENT SUPPLIER, VERIFY IT IS OF SUFFICIENT SIGNAL STRENGTH. VERTICAL RISERS ARE TO BE IN RACEWAY, HORIZONTAL WIRING TO BE CABLE.

LEGEND

GENERAL

LIGHT LINE INDICATES NON-ELECTRICAL OR BACKGROUND (THIS IS NOT CONTRACTUAL DEFINITION OF WORK)

HEAVY LINE INDICATES NEW WORK (THIS IS NOT CONTRACTUAL DEFINITION OF WORK)

DETAIL IDENTIFICATION

SYMBOL — NAME

1 — FLAG NOTE

△ — REVISION NOTE

REVISION DEFINITION, AREA ENCIRCLED CONTAINS DRAWING CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE

LIGHTING

L10, A 2-32 — FIXTURE IDENTIFICATION SYMBOL (TYPE A, (2) 32 WATT LAMPS SHOWN) SEE SCHEDULE SEE LUMINAIRE SCHEDULE FOR FIXTURE SYMBOLS

SWITCHES

- $a — SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT
- $OS — OCCUPANCY SENSOR SWITCH, PROXIMITY INFRARED
- $D — SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT "D" INDICATES WALLBOX DIMMER
- (S)OS — CEILING MOUNTED OCCUPANCY SENSOR
- (S)AL — CEILING MOUNTED AMBIENT LIGHT SENSOR
- (S)DT — WALL MOUNTED DUAL TECHNOLOGY OCCUPANT SENSOR
- $T — SWITCH, TIMER.
- $2 — SWITCH, TWO POLE.

RECEPTACLES

- SINGLE RECEPTACLE
- DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF
- DUPLEX RECEPTACLE: HALF-HOT/HALF CONTROLLED
- DUPLEX RECEPTACLE – ABOVE COUNTER
- GFCI — DUPLEX GFCI ABOVE COUNTER
- GFCI — DUPLEX GFCI
- +42" — DUPLEX RECEPTACLE, WITH HEIGHT ABOVE FINISHED FLOOR INDICATED
- DOUBLE DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF
- SPECIAL PURPOSE RECEPTACLE, AS NOTED

MISCELLANEOUS

- JUNCTION BOX: 4SQ MOUNTED
- JUNCTION BOX: 4SQ WALL MOUNTED
- JUNCTION BOX: 4SQ TRACK

SIGNAL/COMMUNICATION

- DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N.
- TELEPHONE/DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N.
- TV — TELEVISION OUTLET: WALL MOUNTED @ +18" AFF U.O.N.

POWER

- PANELBOARD
- WP — NON-FUSED DISCONNECT SWITCH (WP = NEMA 3R WHERE APPROPRIATE)
- FUSED DISCONNECT SWITCH
- MOTOR CONNECTION (EQUIPMENT NAME, HORSEPOWER, VOLTAGE, AND PHASE INDICATED)
- EQUIPMENT CONNECTION (EQUIPMENT NAME, LOAD, VOLTAGE, AND PHASE INDICATED)
- T — TRANSFORMER, DRY TYPE, SHOWN TO SCALE
- M — KW METER AND BASE
- VFD — VARIABLE FREQUENCY DRIVE

PART OF THE DESIGN/BUILD FIRE ALARM SYSTEM

- FACP — FIRE ALARM SYSTEM CONTROL PANEL
- P — FIRE ALARM SYSTEM PULL STATION
- FA — FIRE ALARM SYSTEM STROBE/SPEAKER
- SD — FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR AND SPEAKER.
- FA — FIRE ALARM COMBINATION PHOTOELECTRIC SMOKE DETECTOR, CARBON MONOXIDE DETECTOR, AND SPEAKER, GUESTROOM.
- CO — CARBON MONOXIDE DETECTOR.
- ELECTRO-MAGNETIC DOOR HOLDER

DRAWING INDEX

DWG	DESCRIPTION	BUILDING PERMIT SET 03/25/2022	PERMIT RESUBMITTAL 09/16/2022	COORDINATION SET 12/30/2022	PERMIT RESUBMITTAL 2 01/31/2024	
E0.00	LEGEND, GENERAL NOTES, DRAWING INDEX	X	X	X	X	
E0.01	GENERAL NOTES	X	X	X	X	
E0.10	EXTERIOR LIGHTING PLAN	X	X	X	X	
E0.11	EXTERIOR PHOTOMETRIC PLAN				X	
E1.01N	LEVEL 1 NORTH LIGHTING PLAN	X	X	X	X	
E1.01NP	LEVEL 1 NORTH PHOTOMETRIC PLAN	X	X	X	X	
E1.01S	LEVEL 1 SOUTH LIGHTING PLAN	X	X	X	X	
E1.01SP	LEVEL 1 SOUTH PHOTOMETRIC PLAN	X	X	X	X	
E1.02N	LEVEL 2 NORTH LIGHTING PLAN	X	X	X	X	
E1.02NP	LEVEL 2 NORTH PHOTOMETRIC PLAN	X	X	X	X	
E1.02S	LEVEL 2 SOUTH LIGHTING PLAN	X	X	X	X	
E1.02SP	LEVEL 2 SOUTH PHOTOMETRIC PLAN	X	X	X	X	
E1.03N	LEVEL 3 NORTH LIGHTING PLAN	X	X	X	X	
E1.03S	LEVEL 3 SOUTH LIGHTING PLAN	X	X	X	X	
E1.04N	LEVEL 4 NORTH LIGHTING PLAN	X	X	X	X	
E1.04S	LEVEL 4 SOUTH LIGHTING PLAN	X	X	X	X	
E1.05N	LEVEL 5 NORTH LIGHTING PLAN	X	X	X	X	
E1.05S	LEVEL 5 SOUTH LIGHTING PLAN	X	X	X	X	
E1.06N	LEVEL 6 NORTH LIGHTING PLAN	X	X	X	X	
E1.06S	LEVEL 6 SOUTH LIGHTING PLAN	X	X	X	X	
E1.50	LUMINAIRE SCHEDULE & LIGHTING NOTES	X	X	X	X	
E2.01N	LEVEL 1 NORTH POWER PLAN	X	X	X	X	
E2.01S	LEVEL 1 SOUTH POWER PLAN	X	X	X	X	
E2.02N	LEVEL 2 NORTH POWER PLAN	X	X	X	X	
E2.02S	LEVEL 2 SOUTH POWER PLAN	X	X	X	X	
E2.03N	LEVEL 3 NORTH POWER PLAN	X	X	X	X	
E2.03S	LEVEL 3 SOUTH POWER PLAN	X	X	X	X	
E2.04N	LEVEL 4 NORTH POWER PLAN	X	X	X	X	
E2.04S	LEVEL 4 SOUTH POWER PLAN	X	X	X	X	
E2.05N	LEVEL 5 NORTH POWER PLAN	X	X	X	X	
E2.05S	LEVEL 5 SOUTH POWER PLAN	X	X	X	X	
E2.06N	LEVEL 6 NORTH POWER PLAN	X	X	X	X	
E2.06S	LEVEL 6 SOUTH POWER PLAN	X	X	X	X	
E2.07N	ROOF NORTH POWER PLAN	X	X	X	X	
E2.07S	ROOF SOUTH POWER PLAN	X	X	X	X	
E3.00	ENLARGED POWER PLANS	X	X	X	X	
E3.01	ENLARGED POWER PLANS			X	X	
E4.00	UNIT PLAN NOTES	X	X	X	X	
E4.01	TYPICAL UNIT PLANS	X	X	X	X	
E4.02	TYPICAL UNIT PLANS	X	X	X	X	
E4.03	TYPICAL UNIT PLANS	X	X	X	X	
E5.00A	ELECTRICAL ONE-LINE	X	X	X	X	
E5.00B	ELECTRICAL ONE-LINE	X	X	X	X	
E5.01A	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01B	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01C	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01D	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01E	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01F	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01G	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.01H	ELECTRICAL PANEL SCHEDULES	X	X	X	X	
E5.02	FAULT CURRENT CALCULATIONS	X	X	X	X	
E7.00	ENERGY FORMS				X	

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.963.5343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2.Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2. Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

COVER SHEET, GENERAL NOTES & DRAWING INDEX

E0.00

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

ABBREVIATIONS

A	AMPERE	MIN	MINIMUM
AC	ALTERNATING CURRENT, ABOVE COUNTER	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	N	NEUTRAL
AIC	AMPS INTERRUPTING CAPACITY	NEC	NATIONAL ELECTRICAL CODE (NFPA-70)
AL	ALUMINUM		
AMP	AMPERE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AWG	AMERICAN WIRE GAUGE		
BKR	BREAKER	NTS	NOT TO SCALE
BLDG	BUILDING	PNL	PANEL
C	COIL or CONDUIT	POC	POINT OF CONNECTION
CKT	CIRCUIT	PT	POTENTIAL TRANSFORMER
CO	CONDUIT/RACEWAY ONLY	PVC	POLYVINYL CLORIDE
CT	CURRENT TRANSFORMER	PWR	POWER
Cu	COPPER	QTY	QUANTITY
CW	COOL WHITE	RECEPT	RECEPTACLE
D	DIMMER	REF	REFERENCE
DED	DEDICATED	RI	ROUGH-IN
EC	ELECTRICAL CONTRACTOR	RM	ROOM
EF	EXHAUST FAN	RO	RACEWAY ONLY
ELEC	ELECTRICAL	SHT	SHEET
EMT	ELECTRICAL METALLIC TUBING	SPEC	SPECIFICATIONS
EQUIP	EQUIPMENT	SW	SWITCH
EXIST	EXISTING	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FLUOR	FLUORESCENT	TYP	TYPICAL
GC	GENERAL CONRACTOR	UG	UNDERGROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UL	UNDERWRITERS LABORATORIES
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GRS	GALVANIZED RIGID STEEL	V	VOLTS
HID	HIGH INTENSITY DISCHARGE	W	WATTS
HP	HORSEPOWER	WW	WARM WHITE
IG	ISOLATED GROUND	WP	WEATHERPROOF
KCMIL	THOUSAND CIRCULAR MILLS	W/	WITH
KVA	KILOVOLT AMPERES	W/O	WITHOUT
KW	KILOWATT	XFMR	TRANSFORMER
LTG	LIGHTING	XFR	TRANSFER
LV	LOW VOLTAGE	Z	IMPEDANCE OR ZONE
MFR	MANUFACTURER		

APPLICABLE CODES

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

- 2020 NATIONAL ELECTRICAL CODE (NEC)
- 2018 WASHINGTON STATE ENERGY CODE (WSEC)
- 2018 INTERNATIONAL BUILDING CODE (IBC) & WASHINGTON STATE AMENDMENTS
- 2018 INTERNATIONAL FIRE CODE (IFC) & WASHINGTON STATE AMENDMENTS
- 2018 INTERNATIONAL MECHANICAL CODE (IMC) & WASHINGTON STATE AMENDMENTS
- 2018 UNIFORM PLUMBING CODE (UPC) & WASHINGTON STATE AMENDMENTS

CONTRACTOR SUBSTITUTIONS & REVISIONS

CONTRACTOR SUBSTITUTIONS & REVISIONS: PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

BASIS OF DESIGN/ SCOPE OF WORK

A. EVERETT RIVERFRONT BUILDING C IS A 6-STORY, MIXED-USE, 165 UNIT APARTMENT BUILDING IN EVERETT WASHINGTON. IT IS PART OF 4 SEPARATE MIXED-USE APARTMENTS AND IS BUILT OVER A LANDFILL WITH APPROXIMATELY EIGHT FEET OF SOIL COVERING. THE BUILDINGS ARE TO BE CONSTRUCTED ON PYLONS SO AS NOT TO BE AFFECTED BY THE 30 INCHES OF SETTLING EXPECTED IN THE FUTURE. ANY CONDUITS GOING UNDER THE SLAB SHALL ACCOUNT FOR THIS EXPECTED SETTLING AS WELL AS BE PROVIDED WITH SEALED GASKETS TO PREVENT METHANE FROM SEEPING UP THROUGH THE CONDUITS.

B. THE SITE WILL HAVE ITS OWN PRIVATE POWER DISTRIBUTION SYSTEM DESIGNED BY FOLLETT ENGINEERING. IT WILL HAVE TWO POINTS OF CONNECTION WITH THE LOCAL UTILITY, SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT (SNOPUD). THE SITE POWER DISTRIBUTION SYSTEM WILL BE DESIGNED BY A PRIVATE UTILITY ENGINEER, FOLLETT ENGINEERING. IT WILL BE DISTRIBUTED TO A 3,000KVA UNIT SUBSTATION LOCATED IN SIDE BUILDING B. THIS INCOMING ELECTRICAL ROOM WILL BE DIRECTLY ADJACENT TO THE MAIN ELECTRICAL ROOM.

C. POWER DISTRIBUTION OUTLINE

C.1. INCOMING 12.47KV SERVICE WILL ENTER THE ELECTRICAL ROOM THROUGH A SETTLING CABINET BEFORE ENTERING THE UNIT SUBSTATION (USS). THE UNIT SUBSTATION WILL CONTAIN A FUSED PRIMARY DISCONNECT SWITCH, A 3,000KVA, 12.47KV-TO-480V TRANSFORMER, AND TWO DISTRIBUTION SECTIONS (ONE FOR SITE POWER AND ONE FOR BUILDING POWER).

C.2. THE USS WILL FEED A 3000A, 480/277V SWITCHBOARD IN THE MAIN ELECTRICAL ROOM ON THE GROUND LEVEL. FROM THERE, THE SERVICE WILL BE TRANSFORMED DOWN TO (2) 208/120V DISTRIBUTION BOARDS THAT WILL SERVE THE DWELLING UNIT BUSWAY RISERS.

C.3. THE 165 DWELLING UNITS IN THE BUILDING WILL BE PRIVATELY METERED.

C.4. (1) 2,000A BUSWAY RISER AND (1) 1,600A BUSWAY RISER WILL SERVE THE RESIDENTIAL DISTRIBUTION PANELS ON LEVELS 2-6. THESE DISTRIBUTION PANELS AND THEIR ASSOCIATED DIGITAL METERS WILL BE LOCATED ON LEVEL 2 AND LEVEL 5, WITH TWO METERING HUBS ON EACH OF THOSE FLOORS IN THEIR ELECTRICAL ROOM.

C.5. THE CENTER OF THE BUILDING WILL HAVE (1) 480Y/277V RISER AND (1) 208Y/120V RISER, WITH ELECTRICAL PANELS LOCATED ON LEVELS 1,2 AND 5 IN THE ELECTRICAL ROOM.

C.6. ALL TRANSFORMERS WILL BE HOUSED IN THE MAIN LEVEL ELECTRICAL ROOM.

C.7. THE MAIN ELECTRICAL ROOM WILL BE SIZED TO ACCOMODATE A TRANSFORMER AND DISTRIBUTION PANEL TO SERVE THE REQUIRED 10% EV CHARGIN SPACES AND FUTURE 10% EV CHARGING SPACES.

C.8. INFRASTRUCTURE FOR FUTURE PV ARRAY ON ROOF: BUILDING C SHALL OUTFITTED WITH THE ELECTRICAL INFRASTRUCTURE NEEDED TO INSTALL A FUTURE SOLAR PV ARRAY ON THE ROOF TO MET THE WASHINGTON ENERGY CODE ON-SITE RENEWABLE ENERGY REQUIREMENT.

C.9. CONDUIT AND FEEDERS ARE TO BE ROUTED ABOVE GROUND WHENEVER POSSIBLE. LIMIT PENETRATION INTO THE GROUND.

C.10. EXTERIOR SITE& STREET LIGHTING: PANELS WILL INCLUDE CAPACITY TO POWER SITE LIGHTING ON OVERALL SHELTER SITE AFTER TEMPORARY POWER CONNECTION IS REMOVED.

D. EMERGENCY AND STANDBY LOADS WILL BE SERVED FROM A 200KW GENERATOR. THIS GENERATOR WILL BE LOCATED IN A SEPARATE GENERATOR ROOM NEXT TO THE MAIN ELECTRICAL ROOM. THE FOLLOWING LOADS WILL BE PLACED ON THE GENERATOR.

D.1. EMERGENCY (EM):
- D.1.1. EGRESS LIGHTING
- D.1.2. FIRE ALARM PANELS
- D.1.3. FIRE SMOKE DAMPERS
- D.1.4. HVAC CONTROLS
- D.1.5. FIRE COMMAND CENTER PANELS
- D.1.6. FIRE PUMP (25 HP) GENERATOR CONTROLS

D.2. STANDBY POWER(LR)
- D.2.1. IDF ROOM SECURITY/ PHONE SWITCHES
- D.2.2. BOTH ELEVATORS SHALL BE ON STANDBY POWER BUT SHALL BE SELECTABLE SUCH THAT ONLY ONE WILL OPERATE AT A GIVEN TIME WHILE THE GENERATOR IS RUNNING.
- D.2.3. ELEVATOR AND STAIRWELL PRESSURIZATION FANS.

E. DIGITAL METERING:

E.1. BASIS OF DESIGN IS E-GAUGE PRO. EACH UNIT IS CAPABLE OF MONITORING (15) 208V/1PH PANELS.

F. POWER REQUIREMENTS FOR DWELLING UNITS

F.1. 125A SERVICE TO EACH DWELLING UNIT

F.2. POWER DENSITY: 3W/SF FOR LIGHTING & RECEPTACLE CIRCUITS

F.3. UNITS TO HAVE ELECTRIC HEAT, ELECTRIC DRYERS, ELECTRIC RANGE COOKTOPS.

F.4. DWELLING UNIT TO HAVE A DEDICATED SWITCHED 20A RECEPTACLE FOR PORTABLE AC UNIT NEAR EXTERIOR WINDOW IN THE LIVING ROOM AND EACH BEDROOM.

F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
1/31/2024 3:32:33 PM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

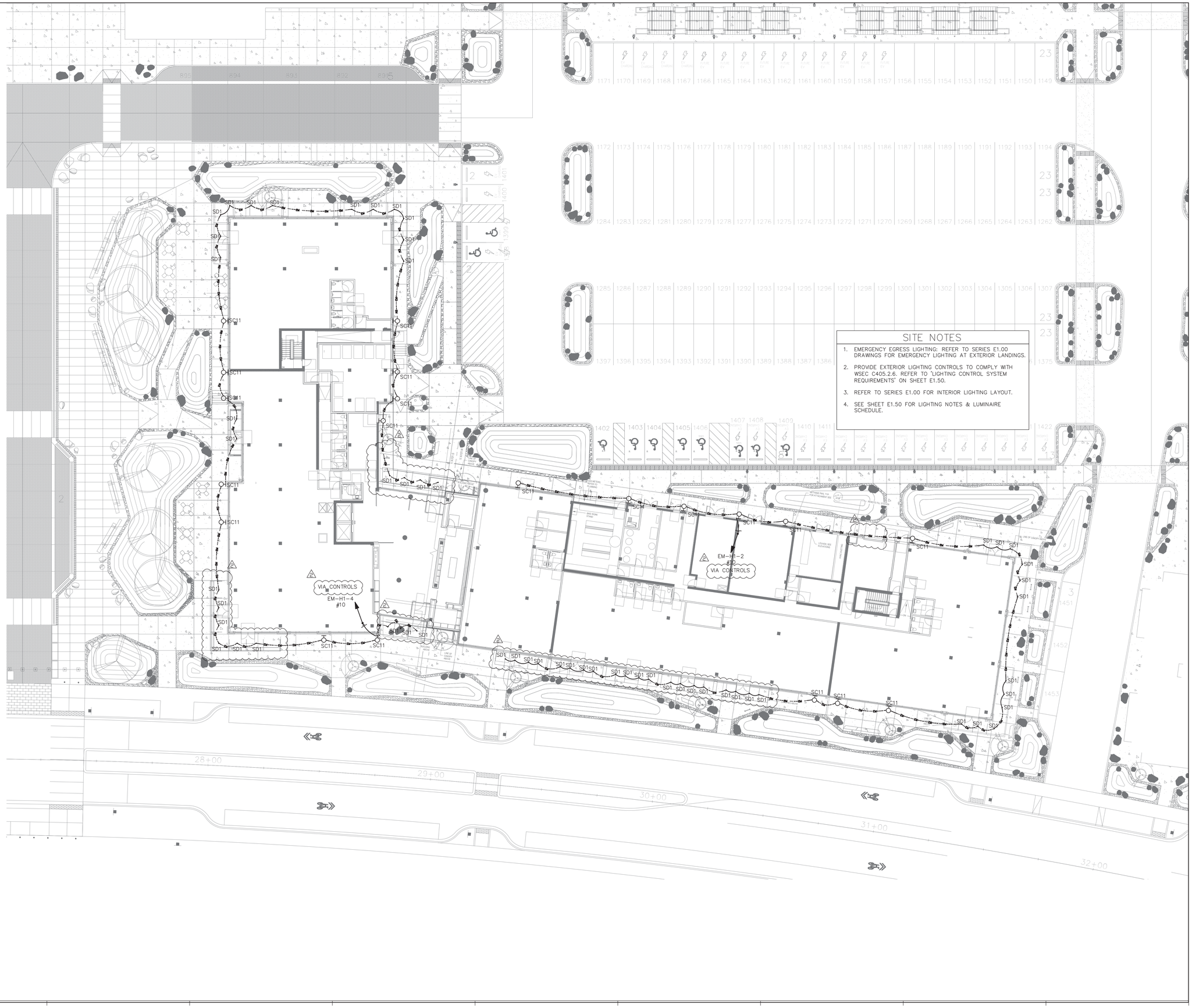
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/15/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

GENERAL NOTES

E0.01



SITE NOTES

1. EMERGENCY EGRESS LIGHTING: REFER TO SERIES E1.00 DRAWINGS FOR EMERGENCY LIGHTING AT EXTERIOR LANDINGS.
2. PROVIDE EXTERIOR LIGHTING CONTROLS TO COMPLY WITH WSEC C405.2.6. REFER TO 'LIGHTING CONTROL SYSTEM REQUIREMENTS' ON SHEET E1.50.
3. REFER TO SERIES E1.00 FOR INTERIOR LIGHTING LAYOUT.
4. SEE SHEET E1.50 FOR LIGHTING NOTES & LUMINAIRE SCHEDULE.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3543 TEL
CONTACT: MARK STEINKE

MARK V. STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

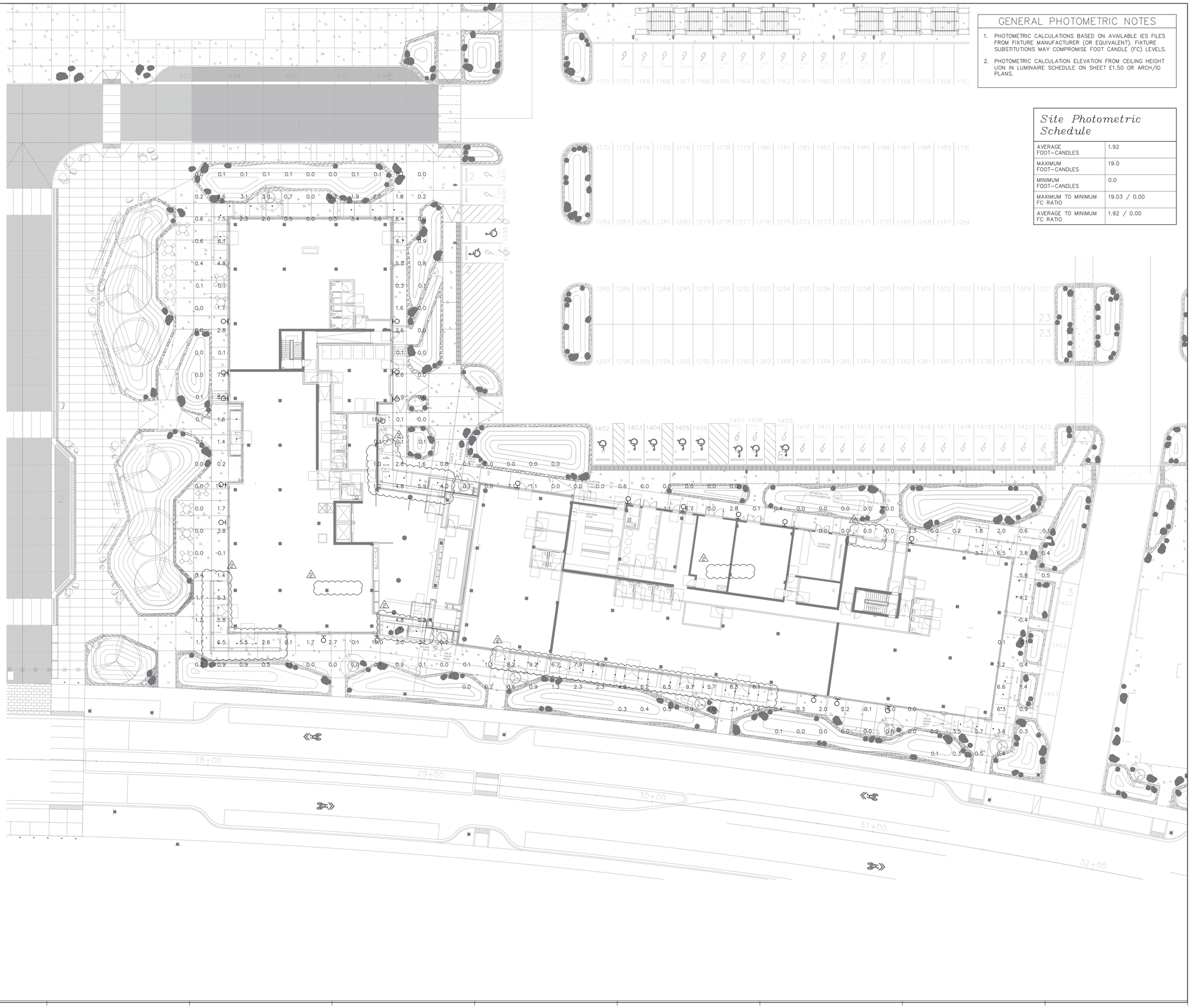
1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

EXTERIOR LIGHTING PLAN

E0.10

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

COPYRIGHT 2022, ROBISON ENGINEERING, INC.
JREDIT F:\1073-001 RIVERFRONT APARTMENTS – BUILDING C\DWG\E010 SITE LIGHTING.DWG 03-15-2022 16:10



GENERAL PHOTOMETRIC NOTES

1. PHOTOMETRIC CALCULATIONS BASED ON AVAILABLE IES FILES FROM FIXTURE MANUFACTURER (OR EQUIVALENT). FIXTURE SUBSTITUTIONS MAY COMPROMISE FOOT CANDLE (FC) LEVELS.
2. PHOTOMETRIC CALCULATION ELEVATION FROM CEILING HEIGHT UON IN LUMINAIRE SCHEDULE ON SHEET E1.50 OR ARCH/ID PLANS.

Site Photometric Schedule

AVERAGE FOOT–CANDLES	1.92
MAXIMUM FOOT–CANDLES	19.0
MINIMUM FOOT–CANDLES	0.0
MAXIMUM TO MINIMUM FC RATIO	19.03 / 0.00
AVERAGE TO MINIMUM FC RATIO	1.92 / 0.00

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
△2 01/31/24

EXTERIOR PHOTOMETRIC PLAN

E0.11

COPYRIGHT 2022, ROBISON ENGINEERING, INC.
JREDIT F:\1073-001 RIVERFRONT APARTMENTS – BUILDING C\DWG\E010 SITE LIGHTING.DWG 03-15-2022 16:10

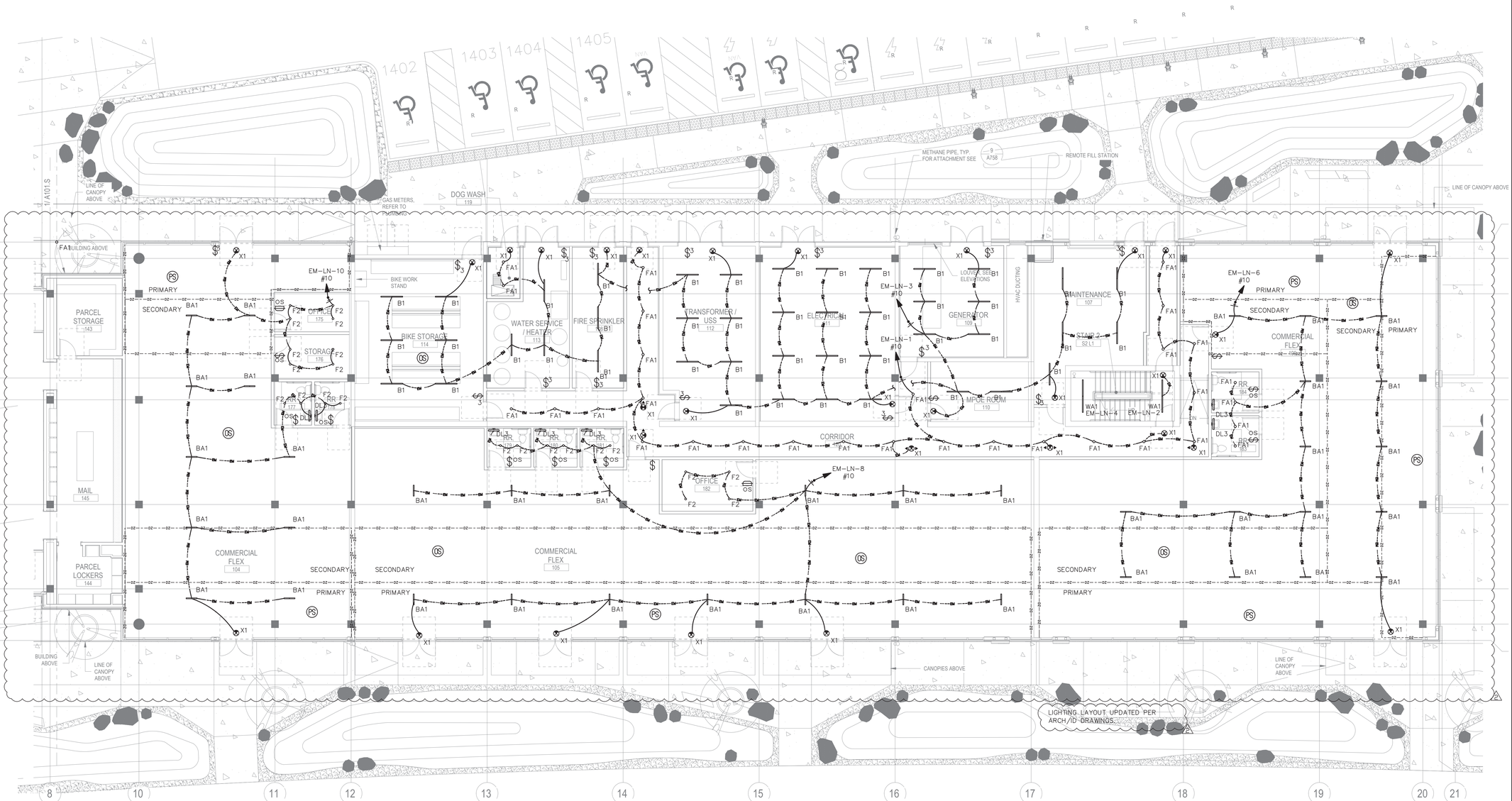
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



1 GROUND FLOOR NORTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/16/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 1 NORTH LIGHTING PLAN

E1.01N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL PHOTOMETRIC NOTES

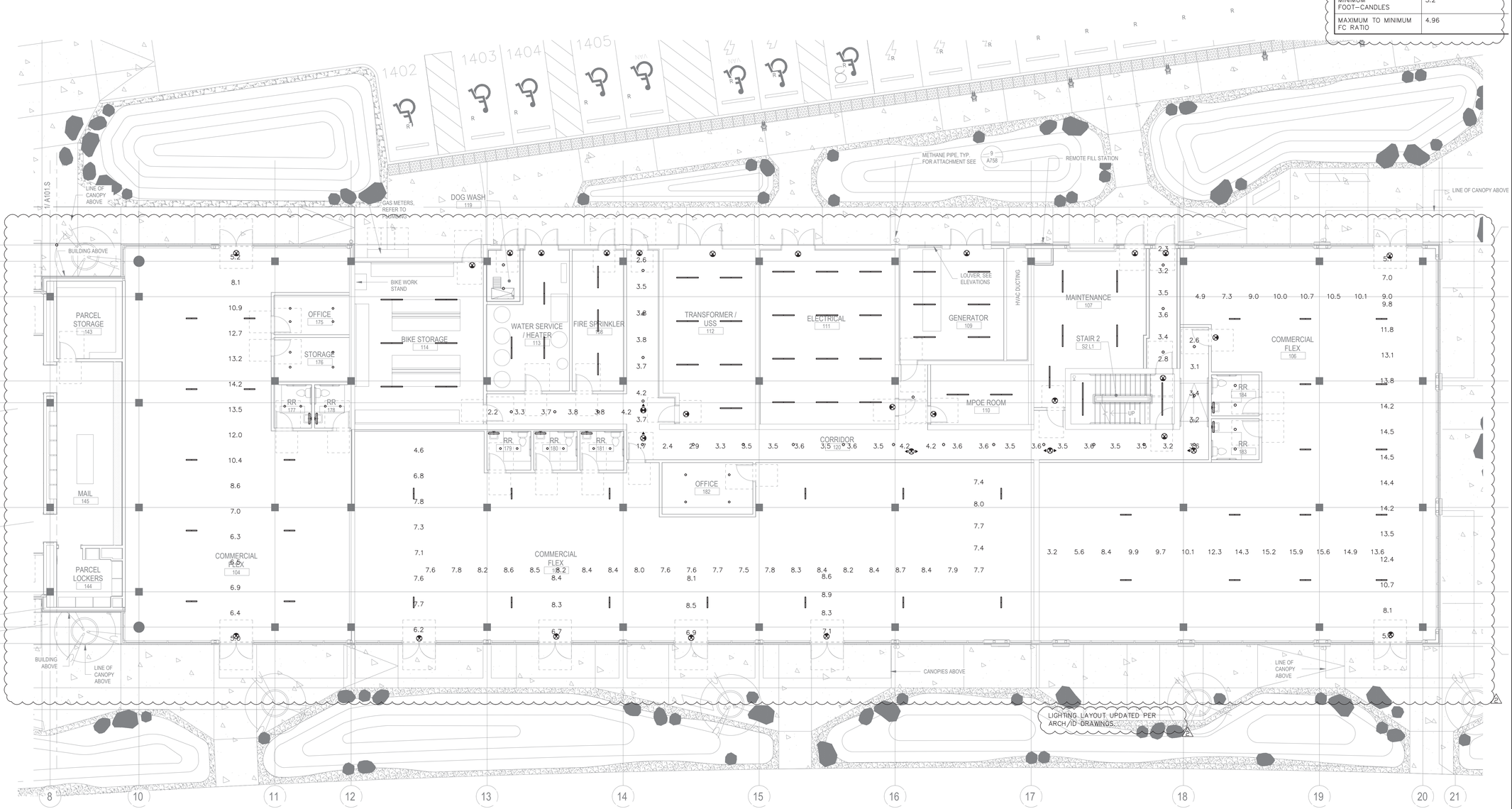
1. PHOTOMETRIC CALCULATIONS BASED ON AVAILABLE IES FILES FROM FIXTURE MANUFACTURER (OR EQUIVALENT). FIXTURE SUBSTITUTIONS MAY COMPROMISE FOOT CANDLE (FC) LEVELS.
2. PHOTOMETRIC CALCULATION ELEVATION FROM CEILING HEIGHT UON IN LUMINAIRE SCHEDULE ON SHEET E150 OR ARCH/ID PLANS.
3. EMERGENCY EGRESS PHOTOMETRIC CALCULATIONS BASED ON EMERGENCY LIGHTING ONLY. CALCULATION ELEVATION AFF.

Egress Photometric Schedule

AVERAGE FOOT–CANDLES	3.39
MAXIMUM FOOT–CANDLES	4.2
MINIMUM FOOT–CANDLES	1.7
MAXIMUM TO MINIMUM FC RATIO	2.45

Retail Emergency Egress Photometric Schedule

AVERAGE FOOT–CANDLES	9.20
MAXIMUM FOOT–CANDLES	15.9
MINIMUM FOOT–CANDLES	3.2
MAXIMUM TO MINIMUM FC RATIO	4.96



1 GROUND FLOOR NORTH - PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/19/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 1 NORTH PHOTOMETRIC PLAN

E1.01NP

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

SHEET FLAG NOTES

A. MOUNT PIT LIGHT SWITCH ADJACENT TO LADDER. USE ILLUMINATED HANDLE TYPE. DO NOT COMBINE CIRCUITS SERVING ELEVATOR, ELEVATOR PIT, OR ELEVATOR HOISTWAY WITH HOMERUNS FROM OTHER ROOMS/AREAS. (NEC 620.23-24)

A.A. Z1 FIXTURE TO BE MOUNTED BELOW ELEVATOR DOOR TO ILLUMINATE ELEVATOR PIT. FIXTURE MAY BE MOVED 2' IN EITHER DIRECTION TO AVOID MACHINERY.

1 GROUND FLOOR SOUTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK V. STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/18/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 1 SOUTH LIGHTING PLAN

E1.01S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL PHOTOMETRIC NOTES

1. PHOTOMETRIC CALCULATIONS BASED ON AVAILABLE IES FILES FROM FIXTURE MANUFACTURER (OR EQUIVALENT). FIXTURE SUBSTITUTIONS MAY COMPROMISE FOOT CANDLE (FC) LEVELS.
2. PHOTOMETRIC CALCULATION ELEVATION FROM CEILING HEIGHT UON IN LUMINAIRE SCHEDULE ON SHEET E150 OR ARCH/ID PLANS.
3. EMERGENCY EGRESS PHOTOMETRIC CALCULATIONS BASED ON EMERGENCY LIGHTING ONLY. CALCULATION ELEVATION AFF.

Egress Photometric Schedule

AVERAGE FOOT–CANDLES	7.94
MAXIMUM FOOT–CANDLES	13.8
MINIMUM FOOT–CANDLES	2.9
MAXIMUM TO MINIMUM FC RATIO	4.75

Retail Emergency Egress Photometric Schedule

AVERAGE FOOT–CANDLES	5.89
MAXIMUM FOOT–CANDLES	10.7
MINIMUM FOOT–CANDLES	1.0
MAXIMUM TO MINIMUM FC RATIO	10.64

1 LEVEL 1 SOUTH - PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	06/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 1 SOUTH PHOTOMETRIC PLAN

E1.01SP

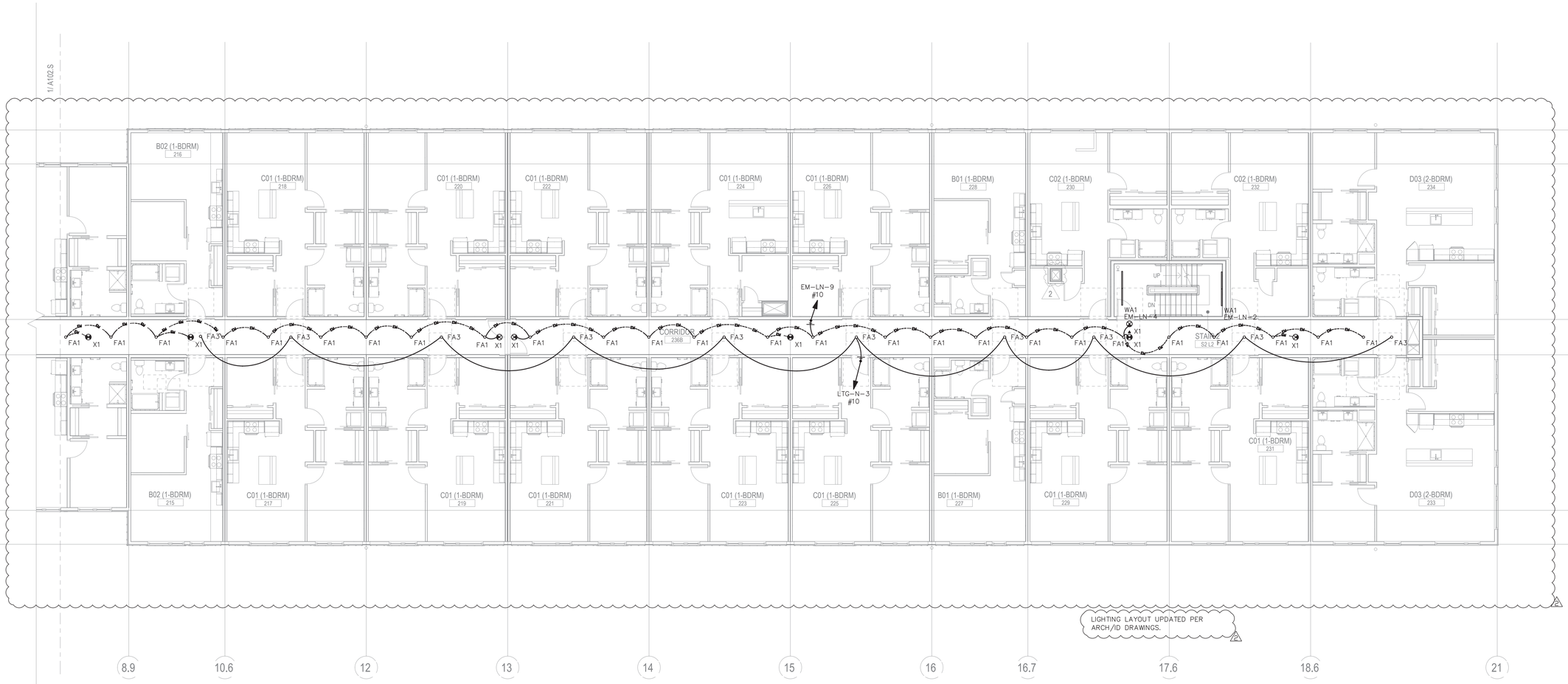
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



1 LEVEL 2 NORTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — EXPIRATION 01/31/2024 — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 NORTH LIGHTING PLAN

E1.02N

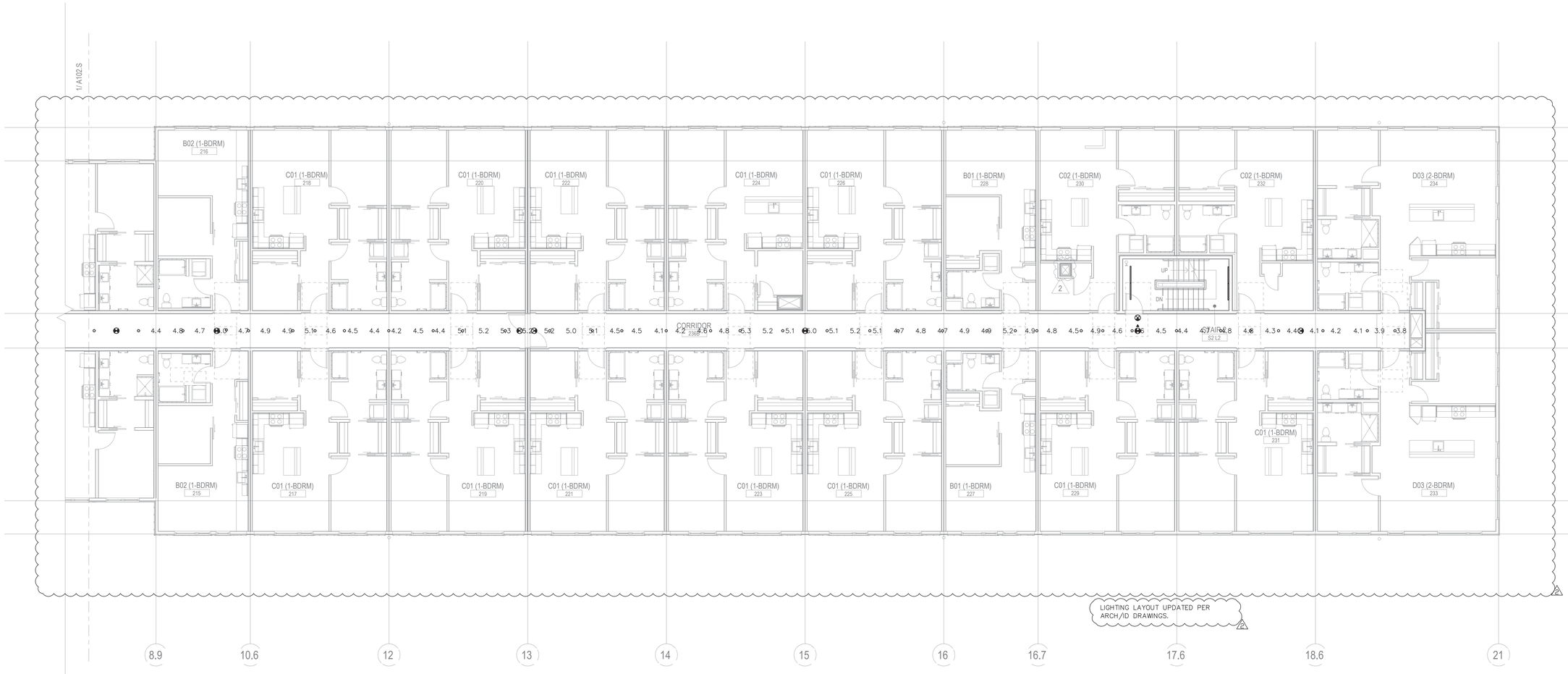
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL PHOTOMETRIC NOTES

1. PHOTOMETRIC CALCULATIONS BASED ON AVAILABLE IES FILES FROM FIXTURE MANUFACTURER (OR EQUIVALENT). FIXTURE SUBSTITUTIONS MAY COMPROMISE FOOT CANDLE (FC) LEVELS.
2. PHOTOMETRIC CALCULATION ELEVATION FROM CEILING HEIGHT UON IN LUMINAIRE SCHEDULE ON SHEET E150 OR ARCH/ID PLANS.
3. EMERGENCY EGRESS PHOTOMETRIC CALCULATIONS BASED ON EMERGENCY LIGHTING ONLY. CALCULATION ELEVATION AFF.

Egress Photometric Schedule

AVERAGE FOOT–CANDLES	4.72
MAXIMUM FOOT–CANDLES	5.3
MINIMUM FOOT–CANDLES	3.8
MAXIMUM TO MINIMUM FC RATIO	1.41
AVERAGE TO MINIMUM FC RATIO	1.26



1 LEVEL 2 NORTH - PHOTOMETRIC PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 NORTH PHOTOMETRIC PLAN

E1.02NP

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 2 SOUTH - LIGHTING PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/18/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 SOUTH LIGHTING PLAN

E1.02S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL PHOTOMETRIC NOTES

1. PHOTOMETRIC CALCULATIONS BASED ON AVAILABLE IES FILES FROM FIXTURE MANUFACTURER (OR EQUIVALENT). FIXTURE SUBSTITUTIONS MAY COMPROMISE FOOT CANDLE (FC) LEVELS.
2. PHOTOMETRIC CALCULATION ELEVATION FROM CEILING HEIGHT UON IN LUMINAIRE SCHEDULE ON SHEET E150 OR ARCH/ID PLANS.
3. EMERGENCY EGRESS PHOTOMETRIC CALCULATIONS BASED ON EMERGENCY LIGHTING ONLY. CALCULATION ELEVATION AFF.

A2

Egress Photometric Schedule

AVERAGE FOOT–CANDLES	5.24
MAXIMUM FOOT–CANDLES	14.4
MINIMUM FOOT–CANDLES	0.7
MAXIMUM TO MINIMUM FC RATIO	20.04
AVERAGE TO MINIMUM FC RATIO	7.29

Stair 1 Photometric Schedule

AVERAGE FOOT–CANDLES	11.74
MAXIMUM FOOT–CANDLES	13.1
MINIMUM FOOT–CANDLES	10.6
MAXIMUM TO MINIMUM FC RATIO	1.23
AVERAGE TO MINIMUM FC RATIO	1.10

Elevator Sill Photometric Schedule

AVERAGE FOOT–CANDLES	14.74
MAXIMUM FOOT–CANDLES	16.9
MINIMUM FOOT–CANDLES	12.3
MAXIMUM TO MINIMUM FC RATIO	1.38
AVERAGE TO MINIMUM FC RATIO	1.20

Stair 1 Photometric Schedule

AVERAGE FOOT–CANDLES	10.38
MAXIMUM FOOT–CANDLES	11.1
MINIMUM FOOT–CANDLES	9.6
MAXIMUM TO MINIMUM FC RATIO	1.16
AVERAGE TO MINIMUM FC RATIO	1.08

1 LEVEL 2 SOUTH - PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK V. STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 SOUTH PHOTOMETRIC PLAN

E1.02SP

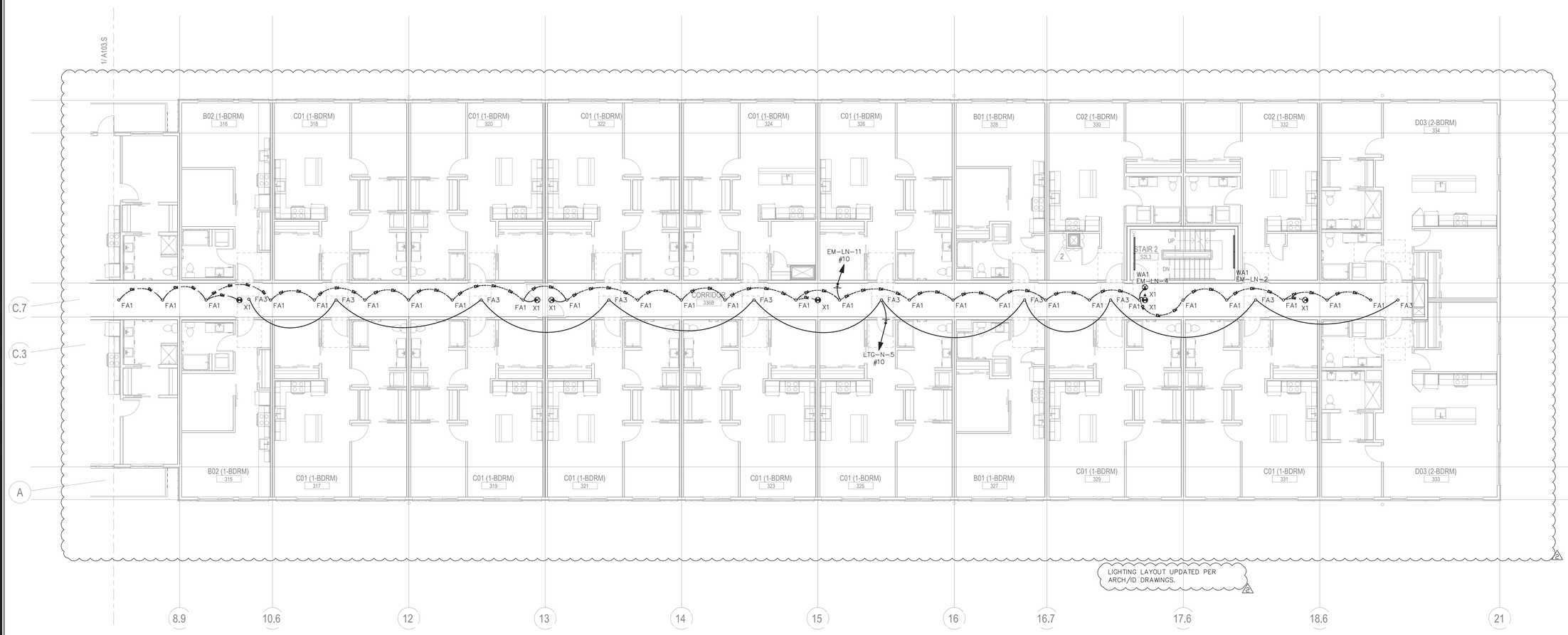
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



1 LEVEL 3 NORTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/18/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 3 NORTH LIGHTING PLAN

E1.03N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1 LEVEL 3 SOUTH - LIGHTING PLAN

SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 3 SOUTH LIGHTING PLAN

E1.03S

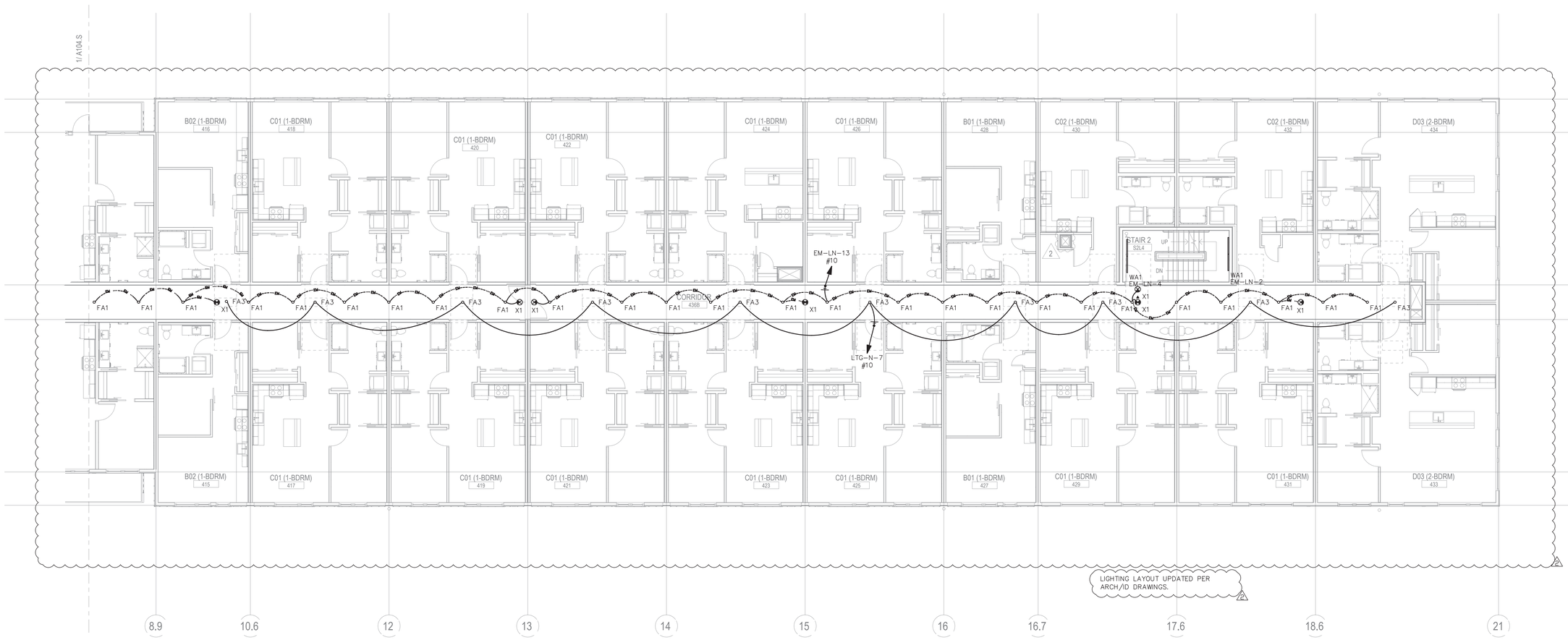
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



1 LEVEL 4 NORTH - LIGHTING PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — EXPIRATION 01/31/2024 — REGISTERED PROFESSIONAL ENGINEER

01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 4 NORTH LIGHTING PLAN

E1.04N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM–LN AND EM–LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN addition TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

1 LEVEL 4 SOUTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	06/19/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 4 SOUTH LIGHTING PLAN

E1.04S

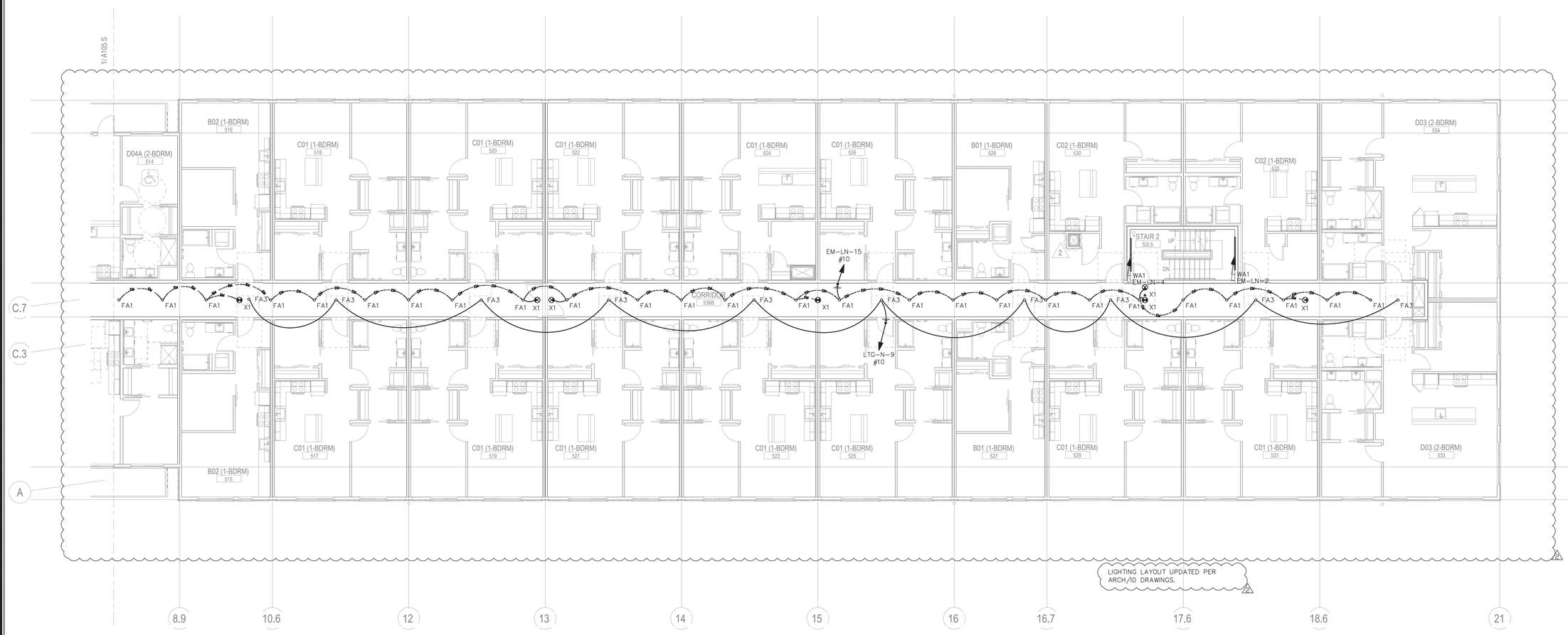
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



1 LEVEL 5 NORTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE EXPIRATION 01/31/2024 REGISTERED PROFESSIONAL ENGINEER

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/18/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 5 NORTH LIGHTING PLAN

E1.05N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN addition TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

1 LEVEL 5 SOUTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	06/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 5 SOUTH LIGHTING PLAN

E1.05S

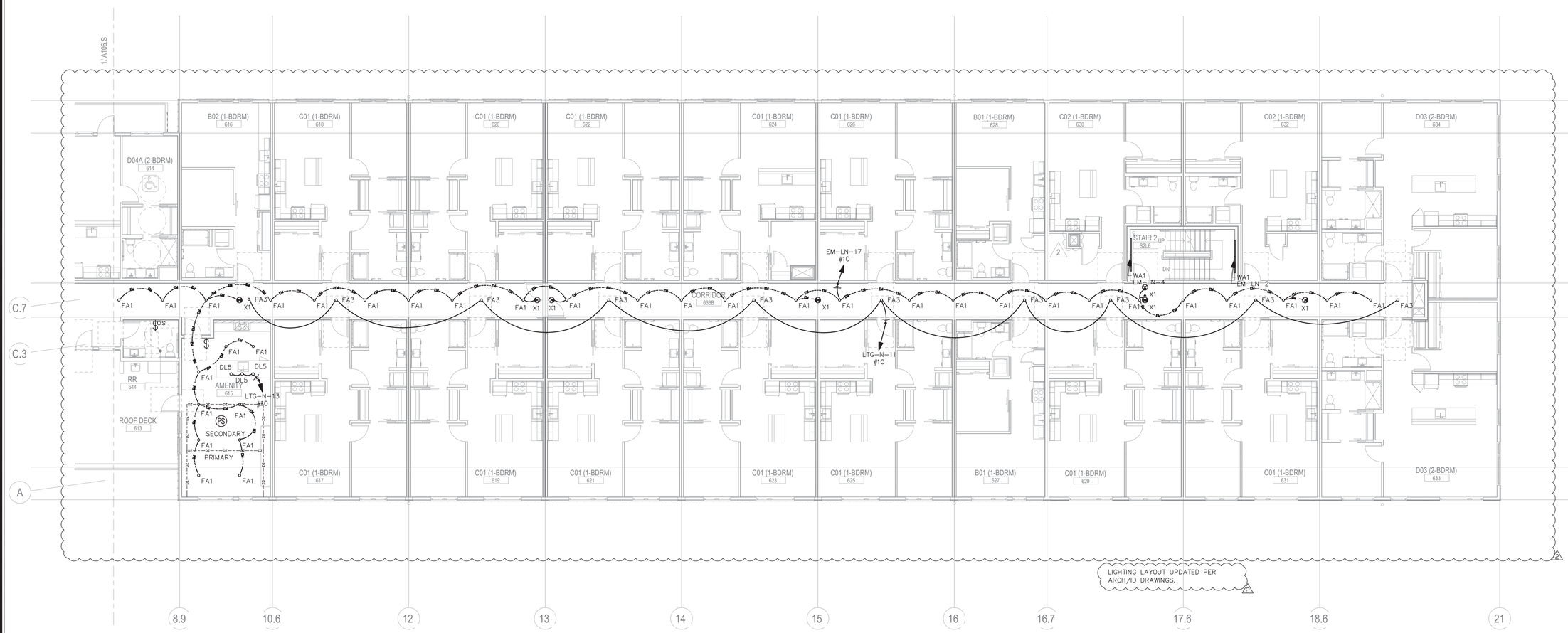
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)



LIGHTING LAYOUT UPDATED PER ARCH/ID DRAWINGS. 2

1 LEVEL 6 NORTH - LIGHTING PLAN

SCALE: 1/8" = 1'-0"

N

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 6 NORTH LIGHTING PLAN

E1.06N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EM-LN AND EM-LS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.
2. REFER TO SERIES E4.00 DRAWINGS FOR TYPICAL GUEST ROOM PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

FLAG NOTES

1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL SHALL HAVE INTEGRAL OCCUPANCY SENSOR WHICH REDUCES LIGHTING POWER OF FIXTURE(S) BY 50% WHEN SPACE IS VACANT. (TYP)
2. EXIT SIGNS: PROVIDE UNSWITCHED HOT. IN ADDITION TO STANDARD HIGH LEVEL EXIT SIGNS, PROVIDE LOW LEVEL EXIT SIGNS IN ALL INTERIOR CORRIDORS OF GROUP R, DIVISION I OCCUPANCIES AS INDICATED ON PLAN (IBC 1013.2). (TYP)

1 LEVEL 6 SOUTH - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/18/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 6 SOUTH LIGHTING PLAN

E1.06S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CI\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL LIGHTING NOTES

1. LIGHTING CONTROLS SHALL BE INSTALLED WHICH MEET ALL REQUIREMENTS OF LOCAL ENERGY CODES.
2. EMERGENCY LIGHT FIXTURES: IN ADDITION TO SWITCH-LEG, PROVIDE UNSWITCHED HOT TO SERVE INTERNAL BATTERY AND CHARGER.
3. LOCATIONS OF OCCUPANCY SENSORS, PHOTO SENSORS, DIMMERS, AND SWITCHES ARE DIAGRAMMATIC. CONTRACTOR TO COORDINATE QUANTITIES AND OPTIMAL LOCATIONS WITH LIGHTING CONTROL MANUFACTURER AND ARCH/OWNER.
4. AUTOMATIC LIGHTING SHUT-OFF CONTROLS SHALL BE PROVIDED BY LOCAL OCCUPANCY SENSORS UNLESS OTHERWISE NOTED. PUBLIC SPACES ARE ACTIVE 24/7 AND THEREFORE EXEMPT FROM AUTOMATIC LIGHTING SHUT-OFF REQUIREMENTS FOR SECURITY. (WSEC C405.2)
5. DAYLIGHT ZONES ARE SHOWN ON PLANS AS DEFINED BY WASHINGTON STATE ENERGY CODE (WSEC) C405.2.4.2. SIDELIGHT DAYLIGHT ZONES ARE REFERRED TO AS 'PRIMARY' AND 'SECONDARY' ON PLANS AND DENOTED BY DASHED LINES.
6. FOR CUSTOM FF&E FIXTURES, IT IS THE MANUFACTURER'S RESPONSIBILITY TO FURNISH PRODUCTS WHICH ARE COMPLIANT WITH ALL REQUIREMENTS OF LOCAL ENERGY CODES, AS WELL AS MATCH THE ELECTRICAL SPECIFICATIONS PROVIDED IN THE LUMINAIRE SCHEDULES. PROVIDE SUBMITTAL SHOP DRAWINGS WITHIN 30 DAYS OF RECEIVING FIXTURE ORDER. SUBMITTALS SHALL CLEARLY INDICATE LAMPING AND MAXIMUM WATTAGE RATING OF LAMP SOCKETS. NON-COMPLIANT FIXTURES REJECTED BY ELECTRICAL INSPECTOR SHALL BE RETURNED TO THE MANUFACTURER FOR REWORKING AND/OR RE-LABELING.
7. ALL FIXTURES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE TO ORDER ALL NECESSARY HARDWARE, ELECTRICAL CABLE, TIMERS, TRANSFORMERS, ETC., AS REQUIRED FOR COMPLETION OF INSTALLATION OF A FULLY FUNCTIONING SYSTEM.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPPING ALL FIXTURES WITH THE EXACT LAMPS SPECIFIED IN THE FIXTURE SCHEDULE.
10. WHERE FIXTURES REQUIRE REMOTE TRANSFORMERS OR BALLASTS, THE CONTRACTOR SHALL DETERMINE LOCATIONS AS REQUIRED FOR EVEN LOAD DISTRIBUTION, SERVICE ACCESS, AND VENTILATION.
11. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL ENGINEER FOR EXACT LOCATIONS OF TIMERS AND/OR PHOTO CELLS, IF ANY.
12. WHERE APPLICABLE, THE CONTRACTOR SHALL AIM AND ADJUST LIGHTING FIXTURES AS DIRECTED BY THE LIGHTING DESIGNER UPON COMPLETION OF THE INSTALLATION.
13. EMERGENCY EGRESS LIGHTING: UPON LOSS OF NORMAL POWER SUPPLY, GENERATOR SHALL START AND LIGHTING FOR EGRESS PATHS AND ROOMS AND SPACES REQUIRED TO HAVE ILLUMINATION SHALL TRANSFER TO THE EMERGENCY POWER SUPPLY. THESE CIRCUITS ARE SUPPLIED BY PANELS EMLN AND EMLS. HOMERUNS INDICATE PANELS WITH EMERGENCY SOURCE.

SPECIAL NOTE TO THE CONTRACTOR:

1. FIXTURE SUBMITTALS THAT DO NOT INCLUDE LAMP SPECIFICATIONS WILL BE CONSIDERED INCOMPLETE AND WILL NOT BE REVIEWED.

LIGHTING CONTROL SYSTEM REQUIREMENTS

1. CONTRACTOR TO PROVIDE A FULLY OPERATIONAL LIGHTING CONTROL SYSTEM.
2. CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF DIMMING AND CONTROL MODULES WITH FIXTURE TYPES PRIOR TO INSTALLATION.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH A LIGHTING CONTROLS VENDOR TO OBTAIN LIGHTING CONTROL SYSTEM PACKAGE COMPLETE WITH DEVICES, WIRING DIAGRAMS, ANNOTATED PLANS INDICATING WHICH DEVICE TO BE USED IN EACH LOCATION, CONNECTION REQUIREMENTS, SET UP INSTRUCTIONS, COMMISSIONING AND CHECK-OUT FOLLOWING COMPLETION. PROVIDE ALL LOW VOLTAGE WIRING AS REQUIRED FOR CONTROL DEVICE INTERCONNECTIONS.
4. INSTALLER QUALIFICATIONS: TECHNICIAN INSTALLING AND WIRING THE LIGHTING CONTROL SYSTEM SHALL HAVE INSTALLED THIS SAME SYSTEM AT LEAST ONCE PREVIOUSLY. TECHNICIAN SHALL HAVE RECEIVED TRAINING BY FACTORY REPRESENTATIVE ON THE SYSTEM BEING INSTALLED.
5. PROVIDE LIGHTING CONTROL SYSTEM TO PERFORM THE FUNCTIONS DESCRIBED BELOW:
   - 5.1. PROVIDE MULTI-SCENE DIMMING SCHEDULING AND CONTROL. INSTALLER TO COORDINATE SCENE CONFIGURATIONS WITH BRAND AND PROPERTY MANAGER.
     - 5.1.1. PROVIDE KEYPAD CONTROLS STATIONS FOR SELECTING LIGHTING SCENES AND FOR MANUAL ON/OFF AND MULTI-LEVEL LIGHTING CONTROL. REFER TO PLANS FOR KEYPAD LOCATIONS.
   - 5.2. LIGHTING CONTROL SCHEDULE: PROVIDE SEPARATE SWITCHING AND DIMMING CONTROL FOR LIGHTING ZONES AS INDICATED.
   - 5.3. AUTOMATIC LIGHTING CONTROLS:
     - 5.3.1. UNLESS OTHERWISE NOTED ON PLANS, OCCUPANCY SENSORS SHALL AUTOMATICALLY TURN OFF ALL CONNECTED LIGHTING WITHIN 20 MINUTES OF SPACE BEING UNOCCUPIED. OCCUPANCY SENSORS SHALL EITHER BE MANUAL ON OR SHALL BE CONTROLLED TO AUTOMATICALLY TURN THE LIGHTING ON TO NOT MORE THAN 50 PERCENT POWER EXCEPT WHERE MANUAL ON WOULD ENDANGER THE SAFETY OR SECURITY OF THE ROOM OR BUILDING OCCUPANTS. (C405.2.1.1)
     - 5.3.2. MULTI-ZONE PHOTO-SENSORS SHALL PROVIDE SEPARATE CONTROL FOR LUMINAIRES IN EACH TYPE OF DAYLIGHT ZONE. (C405.2.4.1)
     - 5.3.3. EXTERIOR LIGHTING CONTROLS SHALL AUTOMATICALLY TURN OFF ALL EXTERIOR LIGHTING AS A FUNCTION OF AVAILABLE DAYLIGHT. BUILDING FACADE AND LANDSCAPE LIGHTING SHALL HAVE CONTROLS THAT AUTOMATICALLY SHUT OFF THE LIGHTING FOR A MINIMUM OF 6 HOURS PER NIGHT OR NOT LATER THAN ONE HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING, WHICHEVER IS LESS. OTHER LIGHTING SHALL HAVE CONTROLS CONFIGURED TO AUTOMATICALLY REDUCE THE CONNECTED LIGHTING POWER BY AT LEAST 30 PERCENT FROM NO LATER THAN 12 MIDNIGHT TO 6 AM OR FROM ON HOUR AFTER BUSINESS CLOSING TO ONE HOUR BEFORE BUSINESS OPENING OR DURING ANY PERIOD WHEN NO ACTIVITY HAS BEEN DETECTED FOR A TIME OF NO LONGER THAN 15 MINUTES. (C405.2.6)
6. MEANS OF EGRESS ILLUMINATION: AT ANY TIME THE BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOTCANDLE AT FLOOR LEVEL. (IBC 1008.2.1)
7. DURING EMERGENCY CONDITIONS EMERGENCY LIGHTING CIRCUITS SHALL BYPASS ALL LIGHTING CONTROLS IN ORDER TO ENERGIZE ALL CONNECTED LUMINAIRES AT FULL CAPACITY. PROVIDE UL924 RELAYS AS REQUIRED TO BYPASS AREA CONTROLS.
   - 7.1. EMERGENCY PATHWAY EGRESS LIGHTING: ILLUMINATION PROVIDED ALONG THE EGRESS PATH AT FLOOR LEVEL SHALL AVERAGE AT LEAST 1 FOOT CANDLE. (IBC 1008.3.5)
   - 7.2. EMERGENCY LIGHTING SHALL BE SUPPLIED BY: ALL COMMON AREA LIGHTING CIRCUITS ARE POWERED FROM THE EMERGENCY GENERATOR SYSTEM AND SHALL BE ILLUMINATED AT FULL POWER FOR A MINIMUM OF 90 MINUTES. THIS INCLUDES ALL EXTERIOR LIGHTING SHOWN ON THE E010 SITE LIGHTING PLAN.

EXIT SIGN NOTES

DURING CONSTRUCTION UPON COMPLETION OF A TYPICAL FLOOR FRAMING AND BEFORE WALL COVER, ELECTRICAL CONTRACTOR SHALL WALK THE EGRESS PATHS WITH THE LOCAL INSPECTOR (AHJ) TO CONFIRM THAT ALL THE EXIT SIGNS ARE LOCATED PER THE AHJ'S SATISFACTION AND IDENTIFY ANY ADDITIONAL EXIT SIGNS THAT THE AHJ WISHES TO BE INSTALLED (IBC 1013.1). CONTRACTOR SHALL PROVIDE UP TO 10% ADDITIONAL EXIT SIGNS AT NO ADDITIONAL COST.
EXIT SIGNS SHALL BE PROVIDED WITH A MINIMUM 90-MINUTE UNINTERRUPTED POWER SUPPLY.

LIGHTING CONTROLS LEGEND

SYMBOL	CONTROL TYPE	CONTROL FUNCTION
$ a $ $ k $	TOGGLE SWITCH	MANUAL ON/OFF LIGHTING CONTROL. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH SWITCH (WSEC C405.2.3). SUBSCRIPT 'k' INDICATES TAMPER RESISTANT KEYED SWITCH FOR USE BY AUTHORIZED PERSONNEL ONLY.
a	DIMMER SWITCH	MANUAL MULTI-LEVEL LIGHTING CONTROL. SWITCH SHALL ALSO HAVE MANUAL ON/OFF FUNCTIONALITY. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH DIMMER. (C405.2.3)
vs vs os os $	TOGGLE/DIMMER SWITCH WITH OCCUPANCY SENSOR	SWITCHES LABELED 'os' OR 'vs' SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C405.2.1.1)
CS-01	CONTROL STATION; SEE LIGHTING CONTROL ZONE TABLE ON PLANS.	MANUAL LOCAL LIGHTING CONTROL (C405.2.1.1). CONTROL STATION SHALL HAVE CAPACITY TO CONTROL MULTIPLE ZONES AND MULTIPLE SCENES AS NEEDED. SUBSCRIPT CORRESPONDS TO 'LIGHTING CONTROLS' TABLE ON PLANS.
OS	SURFACE MOUNTED OCCUPANCY SENSOR	AUTOMATIC LIGHTING CONTROL SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C404.2.1.1)
ax PS	MULTIZONE PHOTOSENSOR	AUTOMATIC LIGHTING CONTROL SHALL AUTOMATICALLY ADJUST THE LIGHT OUTPUT OF ALL CONNECTED LUMINAIRES BASED ON THE DAYLIGHT LEVEL IN THE PRIMARY AND SECONDARY ZONES (C405.2.4). SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY ZONE; 'x' INDICATES MULTIPLE ZONE CONTROL.

GENERAL LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	MOUNTING	DESCRIPTION	MODEL	VOLTAGE	TYPE	CRI / CCT	LAMPING	WATTAGE
B1	▬	SURFACE	4" NARROW WRAP - BOH	DAY-BRITE CFI: FSW44OL835 UNV DIM	120	0-10V DIMMING	80 / 3500K	(1) 29.2W LED	29.2
BA1	▬	SURFACE	SURFACE OR SUSPENDED LED STRIPLIGHT	LITHONIA CLX L24 4500LM HEF SBLW RDL 120 GZ10 35K 80CRI WH	120	ELV DIMMING		(1) 34.8W LED 3500K	34.8
F2	○	RECESSED	4" DOWNLIGHT	DMF: M4NCRS / DRD2M10930WF [FINISH] O / M4TRS[FINISH]	120	0-10V DIMMING	90 / 3000K	(1) 12.5W LED	12.5
FA1	○	SURFACE	5" SURFACE MOUNT DOWNLIGHT	JUNO: JSF 5IN 07LM 30K 90CRI MVOLT ZT FRPC WH	120	0-10V DIMMING	90 / 3000K	(1) 10W LED	10
FA3	○	SURFACE	SURFACE MOUNT LED CYLINDER DOWNLIGHT	KUZCO: FM 10205-[FINISH]	120	ELV DIMMING	90 / 3000K	(1) 15W LED 3000K	15
WA1	▬	WALL	4' STAIRWELL STRIP - INTEGRAL OCCUPANCY SENSOR	LITHONIA: WL4 40L EZ1 LP835 NES7 EL7L	120	ELV DIMMING	CRI / 3500K	(1) 39.5W LED	39.5
X1	⊗	SURFACE	EXIT SIGN - HATCH INDICATES LIT FACE	LSI: EMS LB SERIES (OR EQUAL)	MULTIPLE	EM	EM / EM	(1) 5W EM	5
Z1	⊙	SURFACE	ELEVATOR PIT/OVERHEAD MACHINE JELLY JAR	SPECTRUM LIGHTING: WJ1GV27L35KDS10XFJ1 WLKA	120	0-10V DIMMING		(1) 18W LED	18

NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.
2. LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER.
3. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE INSTALLATION.

EXTERIOR LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	MOUNTING	DESCRIPTION	MODEL	VOLTAGE	TYPE	CRI / CCT	LAMPING	WATTAGE
SA2	⊢○	WALL	EXTERIOR WALL MOUNT LED WALLPACK WITH TYPE II OPTICS	EATON	120	ELECTRONIC		(1) 26W LED 3000K	26
SC1	⊢○	SURFACE	EXTERIOR WALL MOUNT LED SCONCE	BEGA: 24596	120	0-10V DIMMING	80 / 3000K	(1) 15.8W LED 3000K	19.3
SC11	⊢○	SURFACE	EXTERIOR WALL MOUNT LED SCONCE	BEGA: 24596	277	0-10V	80 / 3000K	(1) 15.8W LED 3000K	15.8
SD1	○	SURFACE	EXTERIOR SURFACE MOUNT LED DOWNLIGHT	USAI: BLRD5 12C3 30KH 25 S WH SJ UNV-D2	277	0-10V DIMMING	80 / 3000K	(1) 12W LED	12

NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.
2. LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER.
3. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE INSTALLATION.

DECORATIVE LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	MOUNTING	DESCRIPTION	MODEL	VOLTAGE	TYPE	CRI / CCT	LAMPING	WATTAGE
DL1	◯	SURFACE	DECORATIVE PENDANT	VISUAL COMFORT & CO.: 700 TD HNE13 [FINISH] -LED930	120	ELV DIMMING	90 / 3000K	(1) 33.9W LED	33.9
DL2	⊙	SURFACE	DECORATIVE SCONCE	ESTILUZ: A-3720 LED [FINISH]	120	TRIAC DIMMING	80 / 2700K	(1) 10W LED	10
DL3	▯	SURFACE	DECORATIVE SCONCE - RESTROOMS	MITZI: H373101-OB	120	TBD DIMMING	TBD / 3000K	(1) 6W E26	6
DL4	○	SURFACE	DECORATIVE PENDANT	VIBIA: PLUSMINUS 6220 37/ 2F	120	1-10V DIMMING	90 / 3000K	(1) 7.9W LED	7.9
DL5	○	SURFACE	DECORATIVE PENDANT	SONNEMAN: FRISO 3101.25	120	TRIAC DIMMING	90 / 3000K	(1) 10W LED	10
DL6	◯	SURFACE	DECORATIVE FLUSH MOUNT	AFX: RVF162600L30D1WHBK	120	0-10V DIMMING	90 / 3000K	(1) 31W LED	31
LWW1	⊢⊙⊣	RECESSED	RECESSED WALLWASHING LIGHT	DIODELED: DI 24V BLBSC1 30 XX [CHANNEL] [MOUNTING] ELV	MULTIPLE	ELV DIMMING	FIXTURE TO BE WET-RATED	(1) 1.46W /FT	1.46
RD1	◆	RECESSED	RECESSED WALL WASH	DMF LIGHTING: M4NCRN MD 07 9 30 GA O / M4TRL [FINISH]	120	0-10V	90 / 3000K	(1) 9.5W LED	9.5

NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.
2. LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER.
3. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE INSTALLATION.

UNIT LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	MOUNTING	DESCRIPTION	MODEL	VOLTAGE	TYPE	CRI / CCT	LAMPING	WATTAGE
U1	○	CEILING	6" SURFACE LIGHT		120	ELECTRONIC		(1) 15W	15
U2	○	CEILING	6" SURFACE LIGHT		120	ELECTRONIC		(1) 15W	15
U3	▯	CEILING	VANITY MIRROR LIGHT		120	ELECTRONIC		(1) 16W	16

NOTES:
1. CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.
2. LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER.
3. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE INSTALLATION.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE, STATE OF WASHINGTON, 21600, REGISTERED PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

PERMIT REVISIONS 2

01/31/2024

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LUMINAIRE SCHEDULE & LIGHTING NOTES

E1.50

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

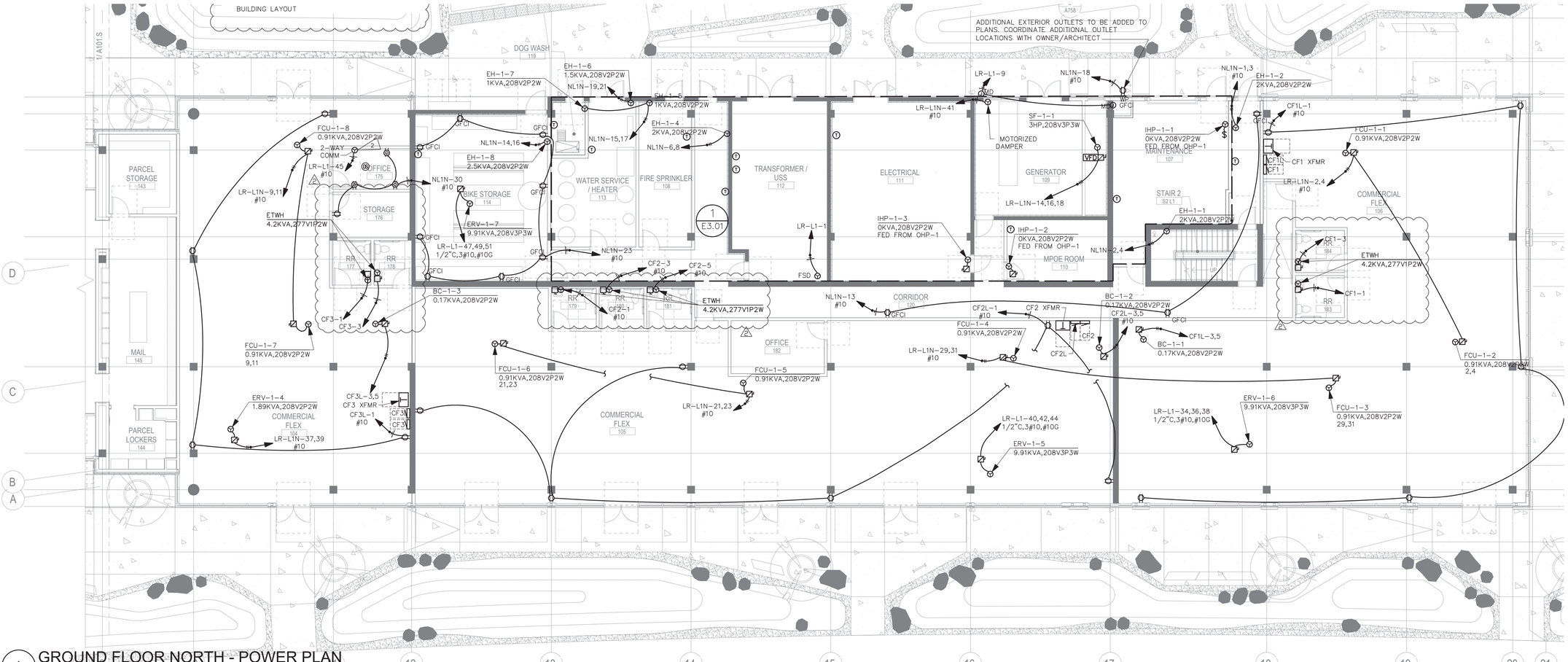
1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

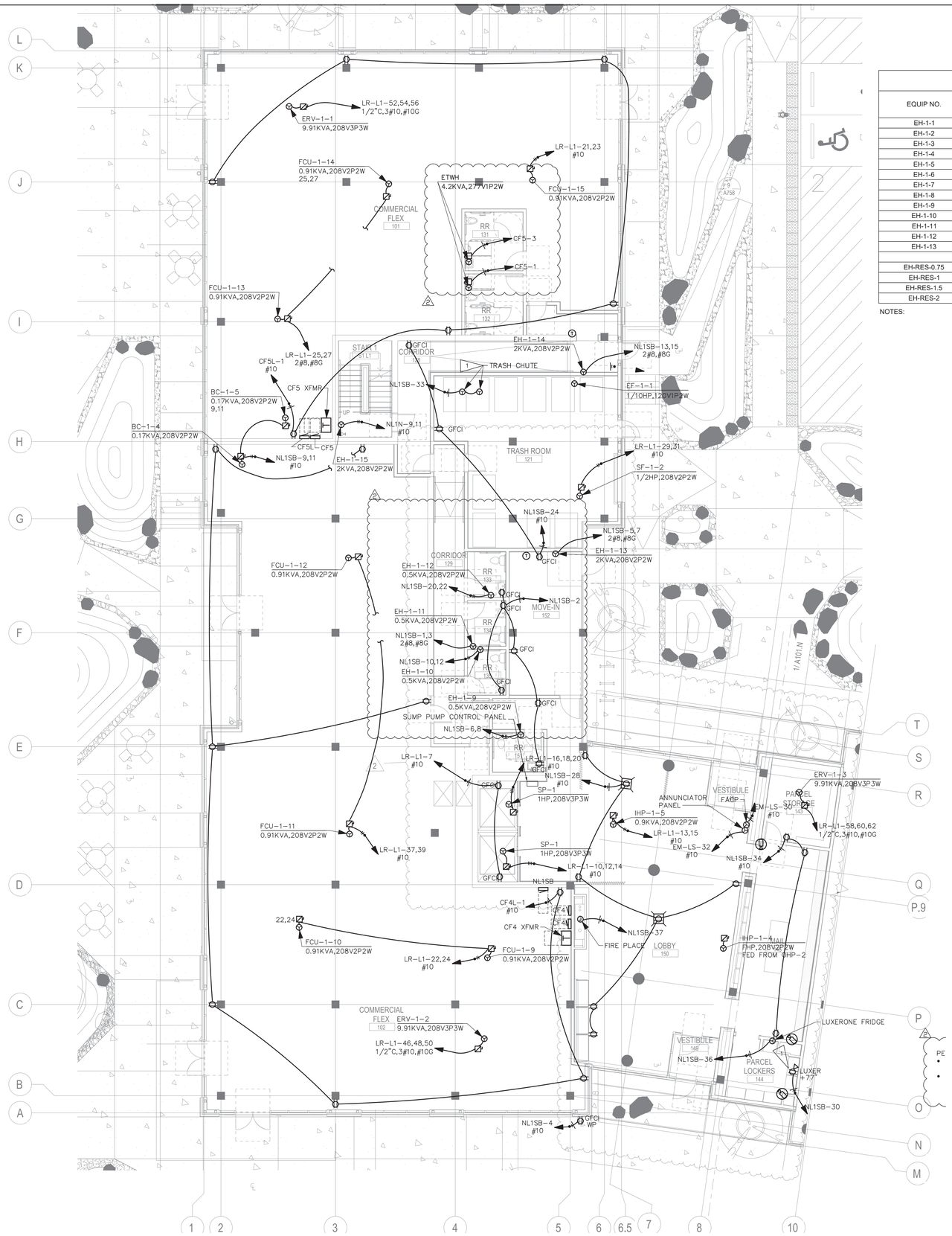
2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

ELECTRIC HEATERS

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	HEATING ROOM LOAD, kW	HEATING CAPACITY, kW	VOLTAGE	BASIS OF DESIGN (1)(2)
EH-1-1	STAIR 2	WALL-MOUNTED	1.9	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-2	FIRE SPRINKLER 108	CLG-HUNG UNIT HEATER	3.5	4.0	208V/1P	KING KBP OR EQUIVALENT
EH-1-3	ELECTRICAL 111	CLG-HUNG UNIT HEATER	5.4	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-4	MPOE 110	WALL-MOUNTED	1.0	1.125	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-5	CORRIDOR 120	WALL-MOUNTED	2.8	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (4)
EH-1-6	CORRIDOR 120	WALL-MOUNTED	1.5	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (4)
EH-1-7	WATER SERVICE/HEATER 113	CLG-HUNG UNIT HEATER	5.5	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-8	BIKE STORAGE 114	CLG-HUNG UNIT HEATER	5.2	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-9	STAIR 3	WALL-MOUNTED	1.0	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-10	DOG WASH 118	WALL-MOUNTED	0.5	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT (4)
EH-1-11	MOVE-IN 117	WALL-MOUNTED	2.4	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (3)(4)
EH-1-12	STAIR 1	WALL-MOUNTED	1.0	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-13	CORRIDOR 119	WALL-MOUNTED	2.7	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (4)
EH-RES-0.75	APARTMENT UNIT	WALL-MOUNTED	-	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1	APARTMENT UNIT	WALL-MOUNTED	-	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1.5	APARTMENT UNIT	WALL-MOUNTED	-	1.5	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-2	APARTMENT UNIT	WALL-MOUNTED	-	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)

NOTES:
(1) INSTALL UNITS AS SHOWN AND AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES. PROVIDE INTEGRAL THERMOSTAT UNLESS OTHERWISE NOTED.
(2) HEATERS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
(3) PROVIDE SURFACE-MOUNT WALL CAN AND MOUNT UNIT ON WALL.
(4) PROVIDE REMOTE THERMOSTAT WITH LOCKING COVER.
(5) PROVIDE 7-DAY PROGRAMMABLE REMOTE THERMOSTAT.


BUILDING LAYOUT
1/A101.S
DOG WASH 119
EH-1-7 1KVA,208V2P2W
EH-1-6 1.5KVA,208V2P2W
NL1N-19,21
EH-1-5 1KVA,208V2P2W
EH-1-4 2KVA,208V2P2W
NL1N-15,17
NL1N-6,8
NL1N-14,16
FCU-1-8 0.91KVA,208V2P2W
2-WAY COMM
LR-L1-45 #10
OFFICE 175
EH-1-8 2.5KVA,208V2P2W
NL1N-30 #10
BIKE STORAGE 114
ERV-1-7 9.91KVA,208V3P3W
LR-L1N-9,11 #10
ETWH 4.2KVA,277V1P2W
STORAGE 176
RR 177
RR 178
LR-L1-47,49,51 1/2"C,3#10,#10G
BC-1-3 0.17KVA,208V2P2W
CF3-1
CF3-3
FCU-1-7 0.91KVA,208V2P2W 9,11
PARCEL STORAGE 143
MAIL 145
PARCEL LOCKERS 144
ERV-1-4 1.89KVA,208V2P2W
LR-L1N-37,39 #10
CF3L-3,5
CF3 XFMR
CF3L-1 #10
CF3
COMMERCIAL FLEX 104
WATER SERVICE / HEATER 113
FIRE SPRINKLER 108
TRANSFORMER / USS 112
1 E3.01
NL1N-23 #10
CF2-3 #10
CF2-5 #10
CF2-1 #10
RR 179
RR 180
RR 181
ETWH 4.2KVA,277V1P2W
OFFICE 182
FCU-1-6 0.91KVA,208V2P2W 21,23
FCU-1-5 0.91KVA,208V2P2W
LR-L1N-21,23 #10
COMMERCIAL FLEX 105
ELECTRICAL 111
LR-L1-1
FSD
IHP-1-3 0KVA,208V2P2W FED FROM OHP-1
MPOE ROOM 110
IHP-1-2 0KVA,208V2P2W FED FROM OHP-1
NL1N-13 #10
CORRIDOR 120
CF2L-1 #10
CF2 XFMR
CF2
CF2L
FCU-1-4 0.91KVA,208V2P2W
LR-L1N-29,31 #10
ADDITIONAL EXTERIOR OUTLETS TO BE ADDED TO PLANS. COORDINATE ADDITIONAL OUTLET LOCATIONS WITH OWNER/ARCHITECT
LR-L1-9
NL1N-18 #10
LR-L1N-41 #10
SF-1-1 3HP,208V3P3W
MOTORIZED DAMPER
GENERATOR 109
VFD
LR-L1N-14,16,18
NL1N-2,4
BC-1-2 0.17KVA,208V2P2W
CF2L-3,5 #10
BC-1-1 0.17KVA,208V2P2W
CF1L-3,5
LR-L1-40,42,44 1/2"C,3#10,#10G
ERV-1-5 9.91KVA,208V3P3W
LR-L1-34,36,38 1/2"C,3#10,#10G
ERV-1-6 9.91KVA,208V3P3W
FCU-1-3 0.91KVA,208V2P2W 29,31
MAINTENANCE 107
IHP-1-1 0KVA,208V2P2W FED FROM OHP-1
NL1N-1,3 #10
EH-1-2 2KVA,208V2P2W
CF1L-1 #10
FCU-1-1 0.91KVA,208V2P2W
CF1L
CF1
CF1 XFMR
LR-L1N-2,4 #10
COMMERCIAL FLEX 106
STAIR 2 S2.L1
EH-1-1 2KVA,208V2P2V
CF1-3
RR 184
ETWH 4.2KVA,277V1P2W
CF1-1
RR 183
FCU-1-2 0.91KVA,208V2P2W 2,4
A758
A759
A760
A761
A762
A763
A764
A765
A766
A767
A768
A769
A770
A771
A772
A773
A774
A775
A776
A777
A778
A779
A780
A781
A782
A783
A784
A785
A786
A787
A788
A789
A790
A791
A792
A793
A794
A795
A796
A797



ELECTRIC HEATERS						
EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	HEATING		VOLTAGE	BASIS OF DESIGN (1)(2)
			ROOM LOAD, kW	CAPACITY, kW		
EH-1-1	STAIR 2	WALL-MOUNTED	1.9	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-2	FIRE SPRINKLER 108	CLG-HUNG UNIT HEATER	3.5	4.0	208V/1P	KING KBP OR EQUIVALENT
EH-1-3	ELECTRICAL 111	CLG-HUNG UNIT HEATER	5.4	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-4	MPOE 110	WALL-MOUNTED	1.0	1.125	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-5	CORRIDOR 120	WALL-MOUNTED	2.8	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (4)
EH-1-6	CORRIDOR 120	WALL-MOUNTED	1.5	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (4)
EH-1-7	WATER SERVICE/HEATER 113	CLG-HUNG UNIT HEATER	5.5	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-8	BIKE STORAGE 114	CLG-HUNG UNIT HEATER	5.2	5.7	208V/1P	KING KBP OR EQUIVALENT
EH-1-9	STAIR 3	WALL-MOUNTED	1.0	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (3)(4)
EH-1-10	DOG WASH 118	WALL-MOUNTED	0.5	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT (4)
EH-1-11	MOVE-IN 117	WALL-MOUNTED	2.4	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (3)(4)
EH-1-12	STAIR 1	WALL-MOUNTED	1.0	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1-13	CORRIDOR 119	WALL-MOUNTED	2.7	3.0	208V/1P	CADET COM-PAK TWIN OR EQUIVALENT (4)
EH-RES-0.75	APARTMENT UNIT	WALL-MOUNTED	-	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1	APARTMENT UNIT	WALL-MOUNTED	-	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-1.5	APARTMENT UNIT	WALL-MOUNTED	-	1.5	208V/1P	CADET COM-PAK OR EQUIVALENT (5)
EH-RES-2	APARTMENT UNIT	WALL-MOUNTED	-	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT (5)

NOTES:
(1) INSTALL UNITS AS SHOWN AND AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES. PROVIDE INTEGRAL THERMOSTAT UNLESS OTHERWISE NOTED.
(2) HEATERS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
(3) PROVIDE SURFACE-MOUNT WALL CAN AND MOUNT UNIT ON WALL.
(4) PROVIDE REMOTE THERMOSTAT WITH LOCKING COVER.
(5) PROVIDE 7-DAY PROGRAMMABLE REMOTE THERMOSTAT.

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.
2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

1 GROUND FLOOR SOUTH - POWER PLAN
SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 1 SOUTH POWER PLAN

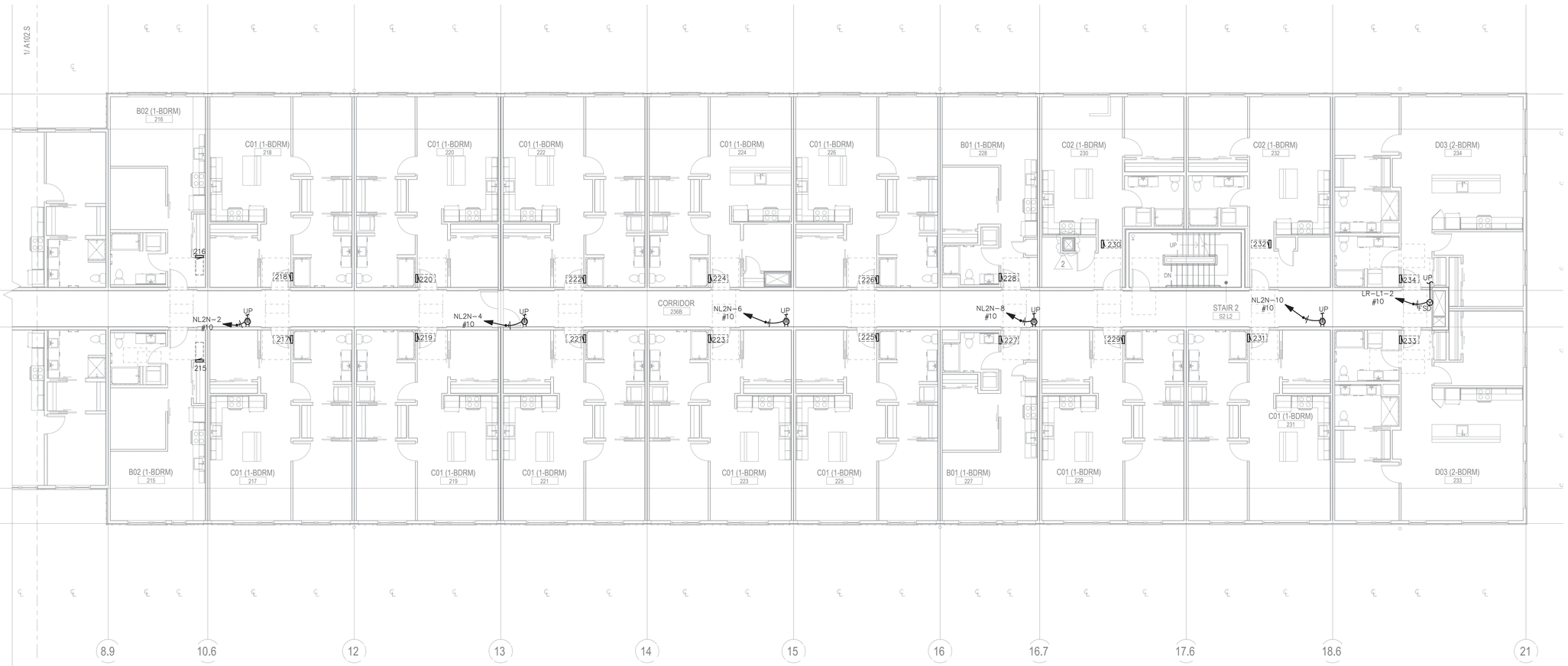
E2.01S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CI\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 LEVEL 2 NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/31/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 NORTH POWER PLAN

E2.02N

1 LEVEL 2 SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.964.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2 Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 2 SOUTH
POWER PLAN

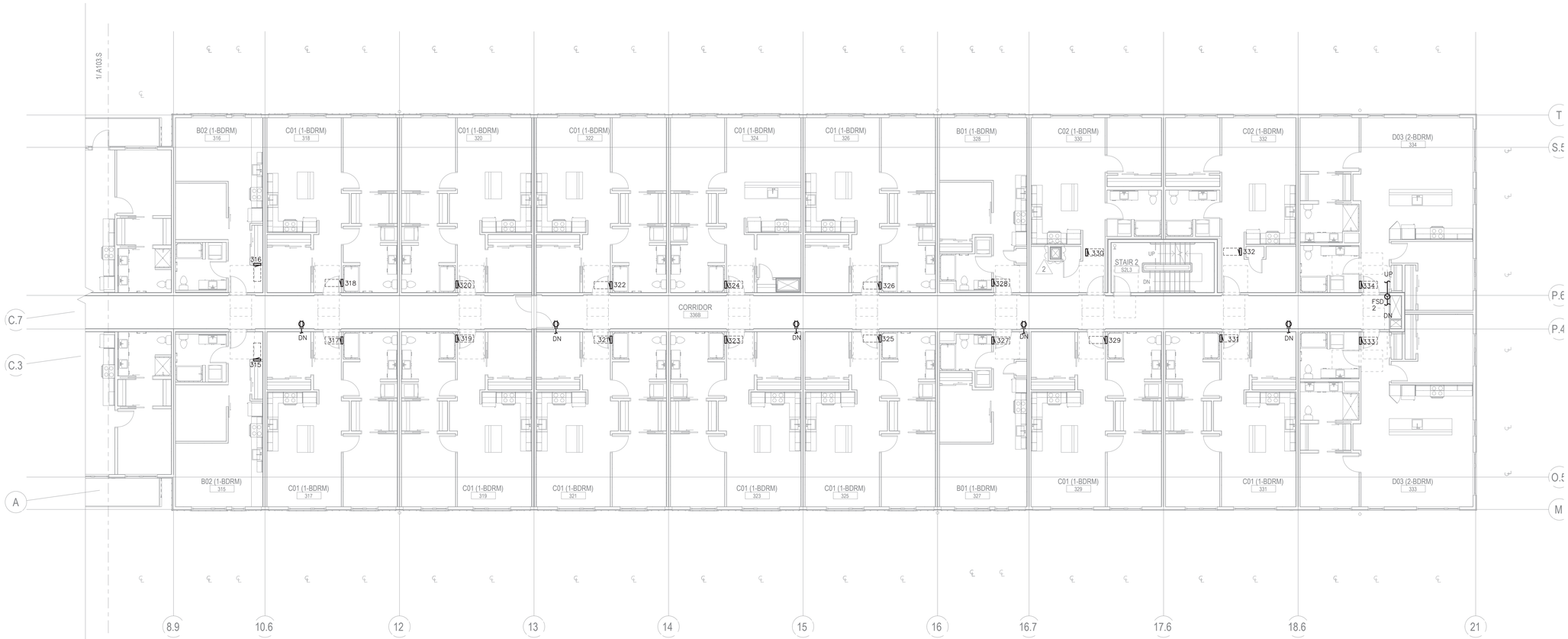
E2.02S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 LEVEL 3 NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

1/31/2024 3:32:33 PM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/15/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 3 NORTH POWER PLAN

E2.03N

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

1 LEVEL 3 SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

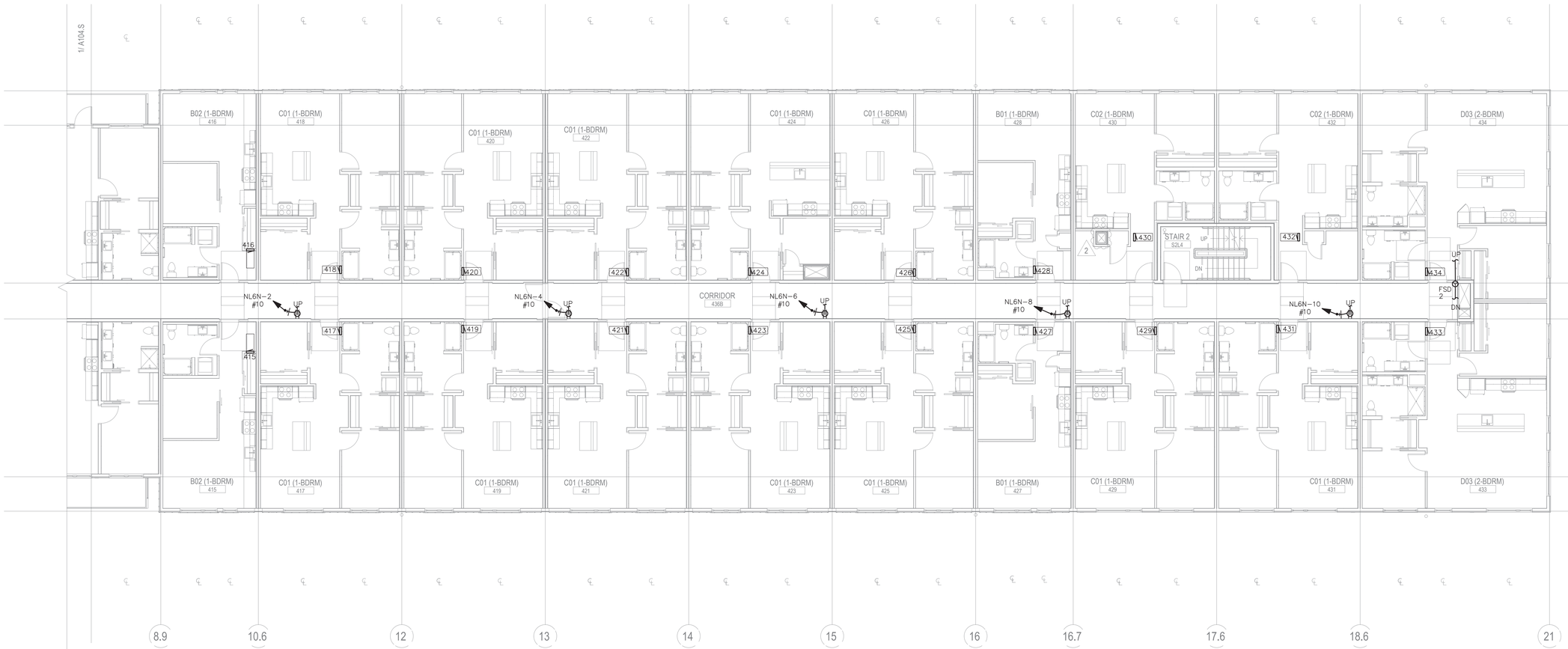
LEVEL 3 SOUTH POWER PLAN

E2.03S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CD\dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.
2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 LEVEL 4 NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.963.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE SCOTT ROBISON REGISTERED PROFESSIONAL ENGINEER 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/16/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 4 NORTH POWER PLAN

E2.04N

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

1 LEVEL 4 SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3443 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2 Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 4 SOUTH
POWER PLAN

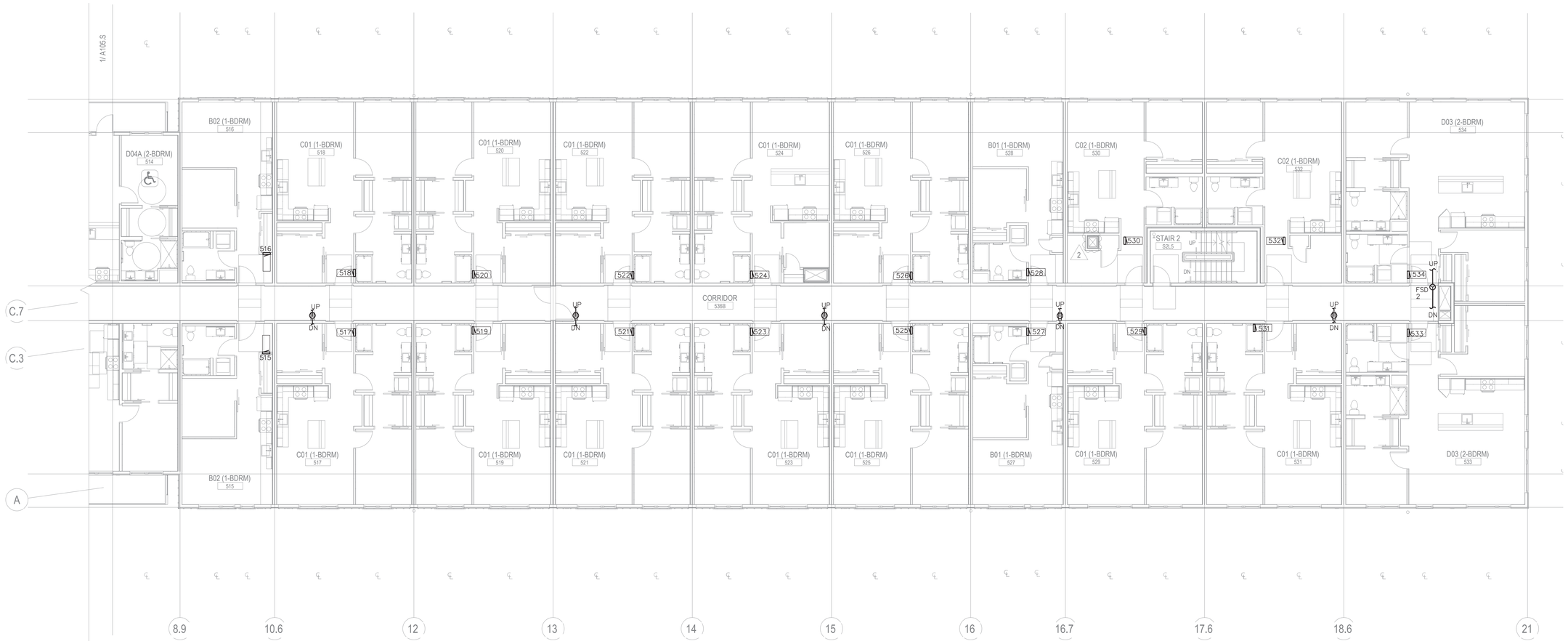
E2.04S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CD\wg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 LEVEL 5 NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CD\wg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19801 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.964.5343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/17/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 5 NORTH POWER PLAN

E2.05N

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

1 LEVEL 5 SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 5 SOUTH
POWER PLAN

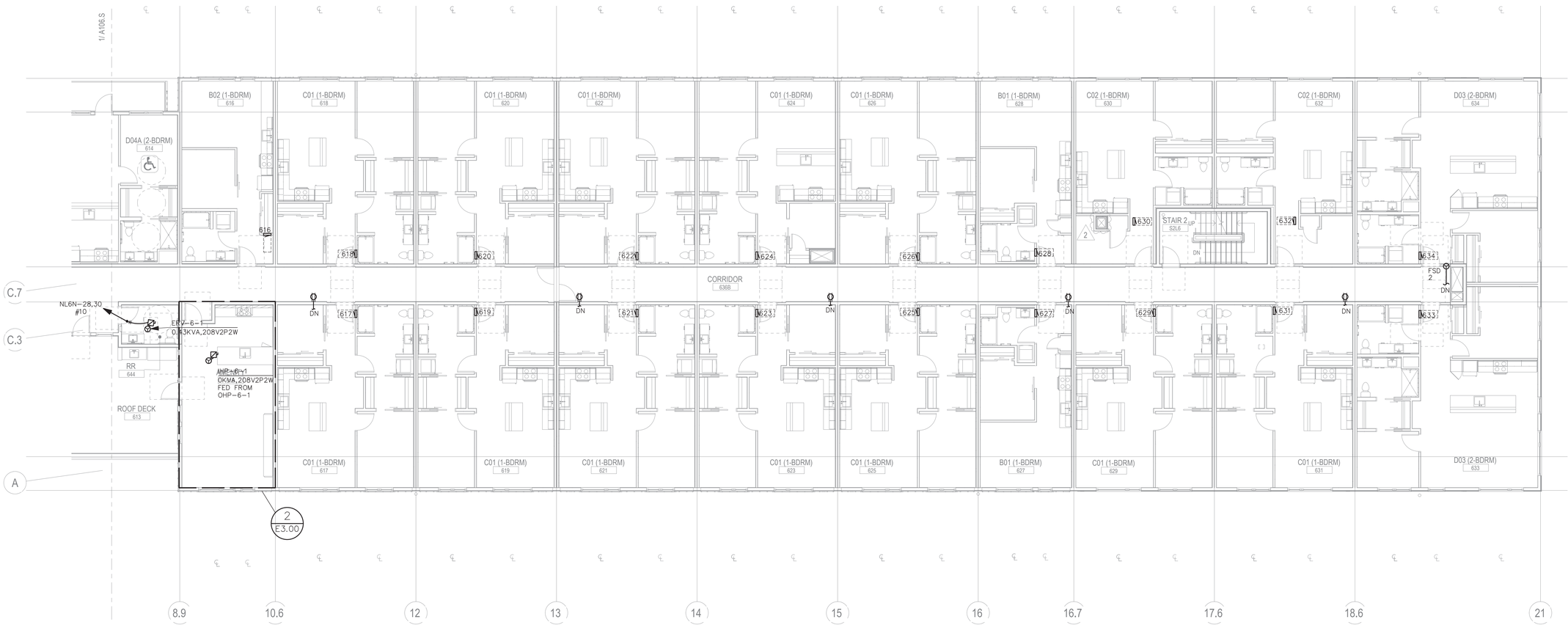
E2.05S

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 LEVEL 6 NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 6 NORTH POWER PLAN

E2.06N

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

1 2.2

1 LEVEL 6 SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2.Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2. Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

LEVEL 6 SOUTH POWER PLAN

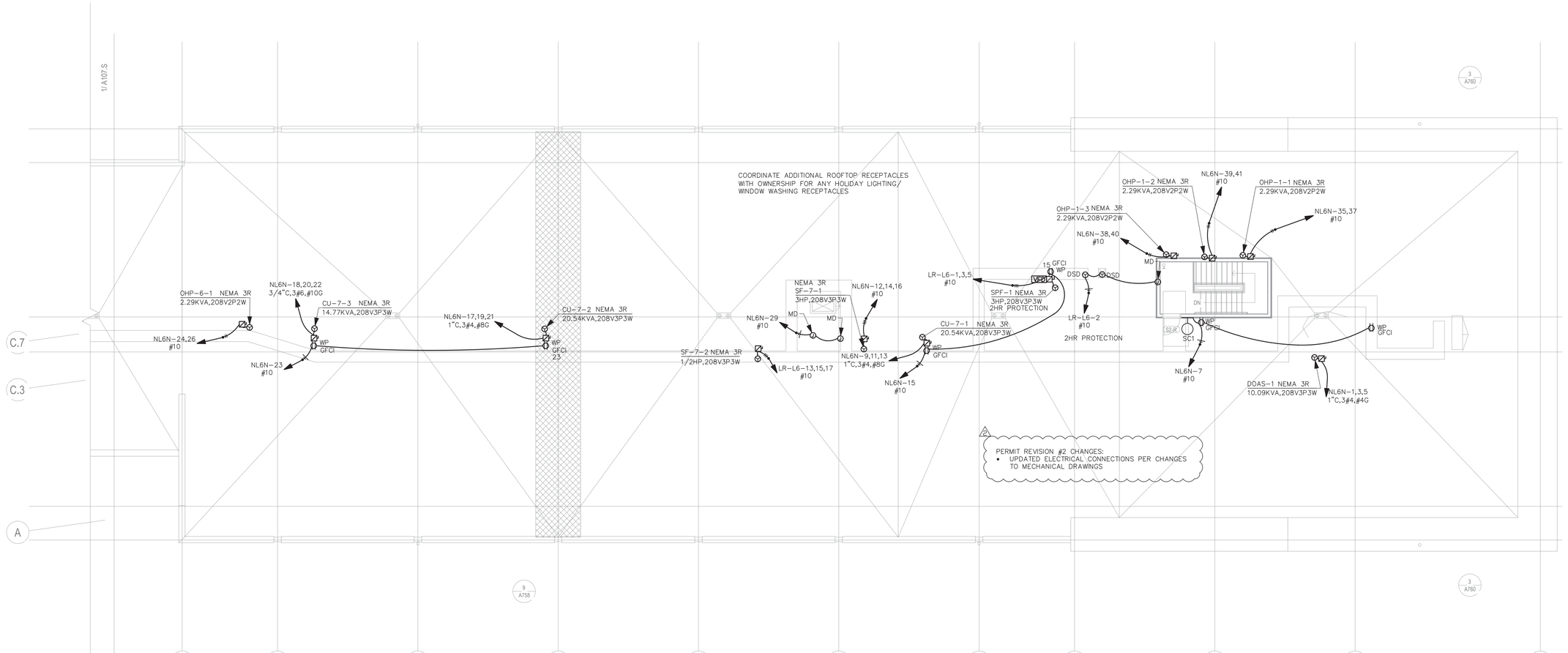
E2.06S

COPYRIGHT 2022, ROBISON ENGINEERING, INC.
CHUEY: F:\1073-001 RIVERFRONT APARTMENTS - BUILDING C\DWG\E200 POWERLDWG 03-16-2022 17:21

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.
2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.



1 ROOF NORTH - POWER PLAN

SCALE: 1/8" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

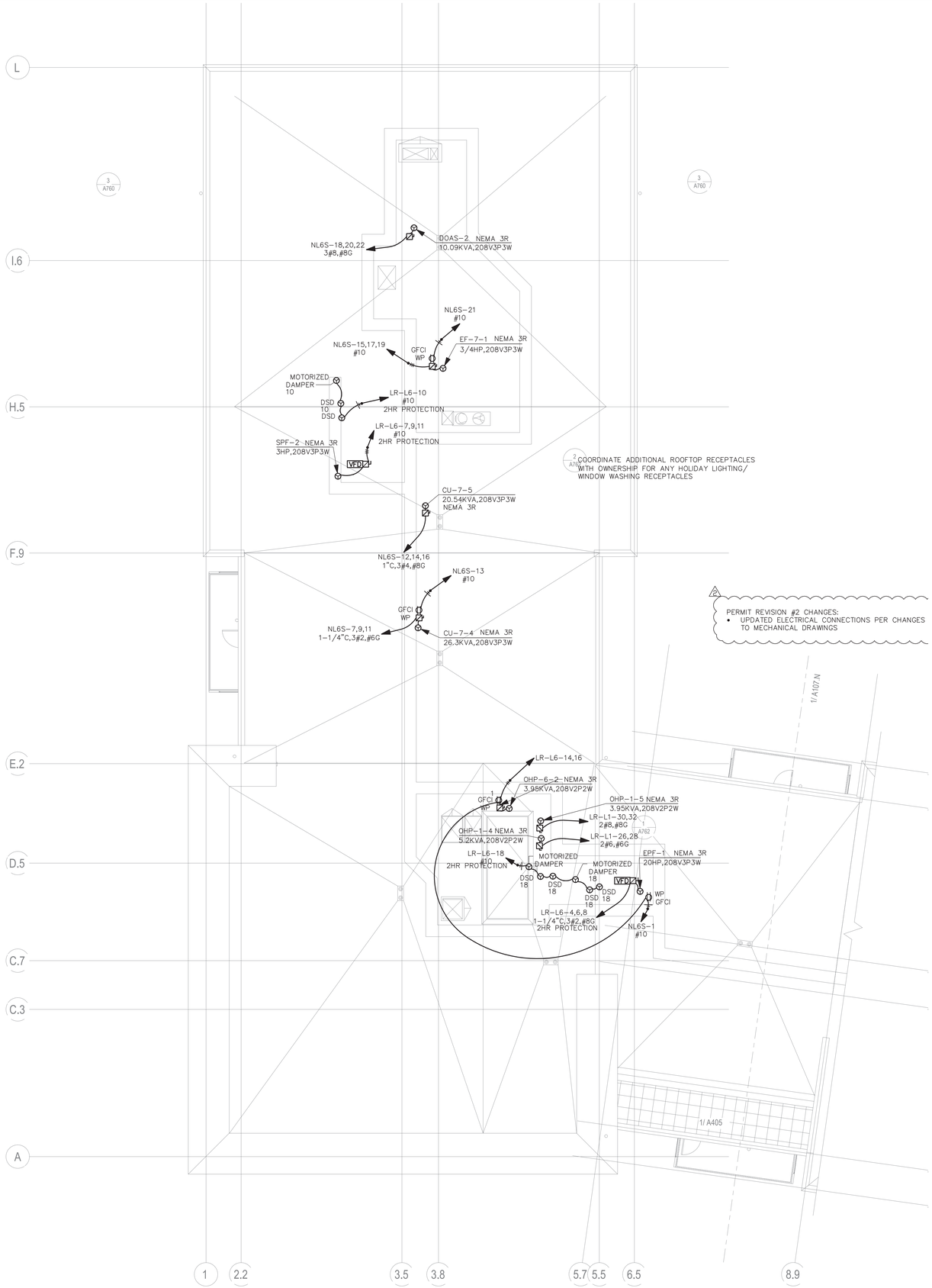
ROOF NORTH POWER PLAN

E2.07N

COPYRIGHT 2022, ROBISON ENGINEERING, INC.

WIREWAY F:\1073-001 RIVERFRONT APARTMENTS – BUILDING C\DWG\E300 POWER.DWG 01-14-2022 13:32

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Downloadv_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



1 ROOF SOUTH - POWER PLAN

SCALE: 1/8" = 1'-0"

FLAG NOTES

1. PROVIDE CONDUIT, WIRE, AND TERMINATIONS FOR CONNECTION TO TRASH CHUTE LOW VOLTAGE SYSTEM WITH INTERLOCKING SWITCHES AND CONTROLS. COORDINATE WITH VENDOR AS TO WHAT IS REQUIRED. SEE SHEET E6.00 DETAIL 2, FOR TYPICAL DIAGRAM OF CHUTE INTERLOCK.

2. PROVIDE A 2-WAY COMMUNICATION CALL STATION (CORNELL RESCUE ASSISTANCE SYSTEM SERIES 4200 AUDIO/VISUAL) THAT CONNECTS DIRECTLY BETWEEN EACH REQUIRED LOCATION AND A CENTRAL CONTROL POINT LOCATION APPROVED BY THE FIRE DEPT. WHERE THE CENTRAL CONTROL POINT IS NOT CONSTANTLY ATTENDED, A TWO-WAY COMMUNICATION SYSTEM SHALL HAVE A TIMED AUTOMATIC TELEPHONE DIAL-OUT CAPABILITY TO AN APPROVED MONITORING LOCATION. THE TWO WAY COMMUNICATION SHALL INCLUDE BOTH AUDIBLE AND VISIBLE SIGNALS. CALL STATIONS SHALL BE ON EACH ACCESSIBLE FLOOR THAT IS ONE OR MORE STORIES ABOVE OR BELOW THE STORY OF EXIT DISCHARGE PER IBC 1007.8, COMPLYING WITH IBC 1007.8.1 & IBC 1007.8.2. COORDINATE EXACT LOCATION WITH ARCHITECTURAL. SEE SHEET E6.02 DETAIL 1.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2 Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

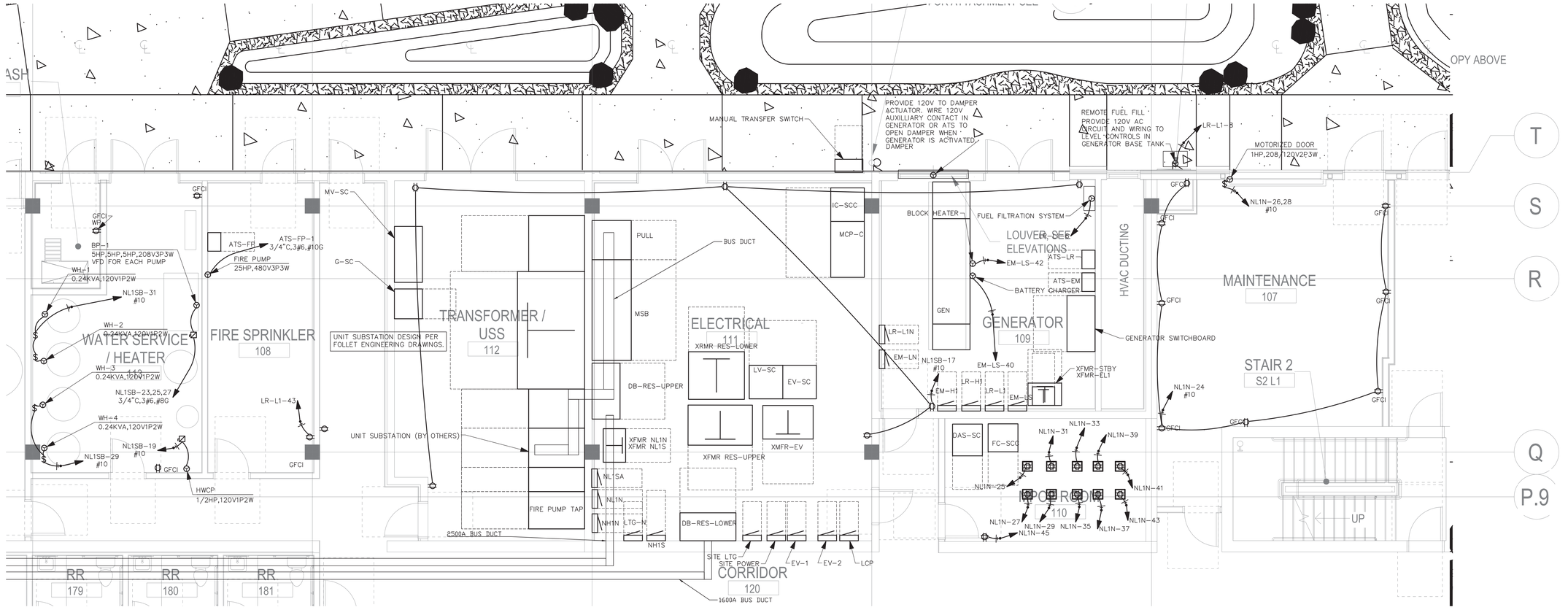
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ROOF SOUTH POWER PLAN

E2.07S

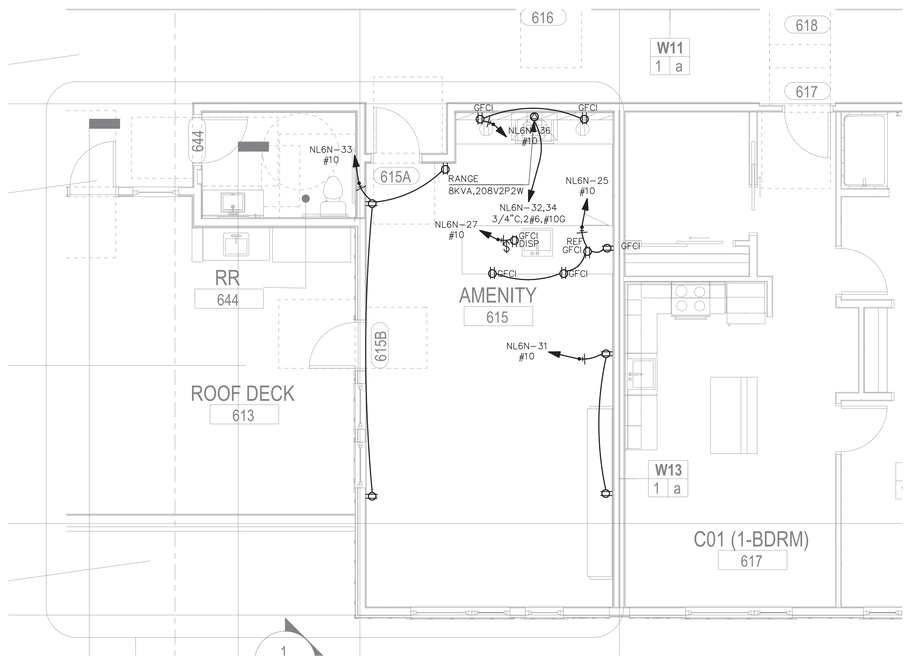
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



LEVEL 1

1 E3.00 ELECTRICAL ROOM

SCALE: 1" = 4'-0"



LEVEL 6

2 E3.00 AMENITY ROOM

SCALE: 1" = 4'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

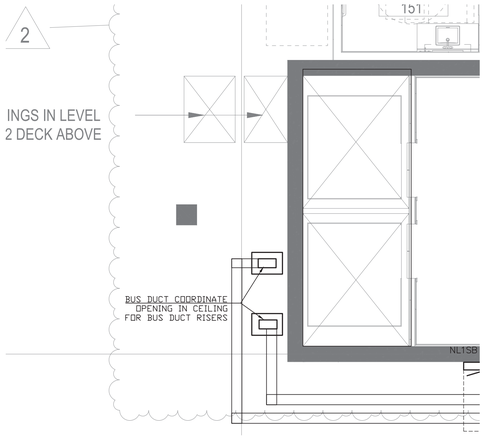
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ENLARGED POWER PLANS

E3.00

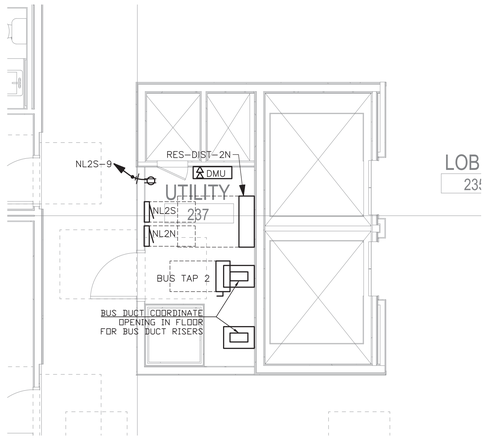
1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



LEVEL 1

1 E3.01 BUS DUCT RISER LOCATION

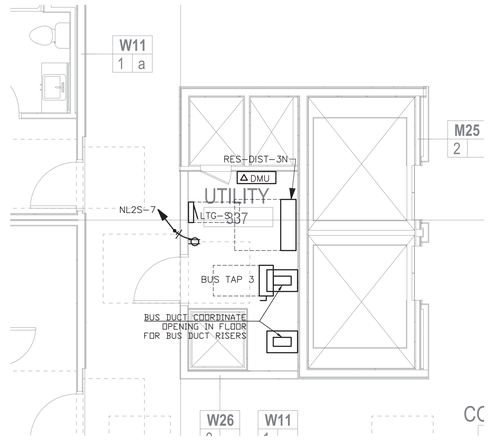
SCALE: 1" = 4'-0"



LEVEL 2

2 E3.01 ELECTRICAL ROOM

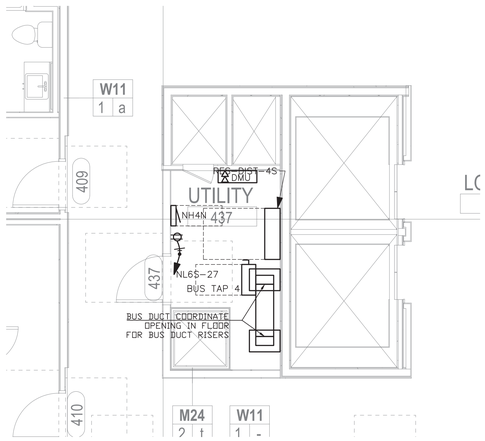
SCALE: 1" = 4'-0"



LEVEL 3

3 E3.01 ELECTRICAL ROOM

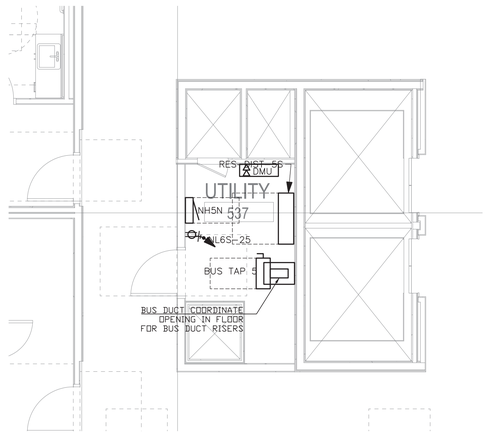
SCALE: 1" = 4'-0"



LEVEL 4

4 E3.01 ELECTRICAL ROOM

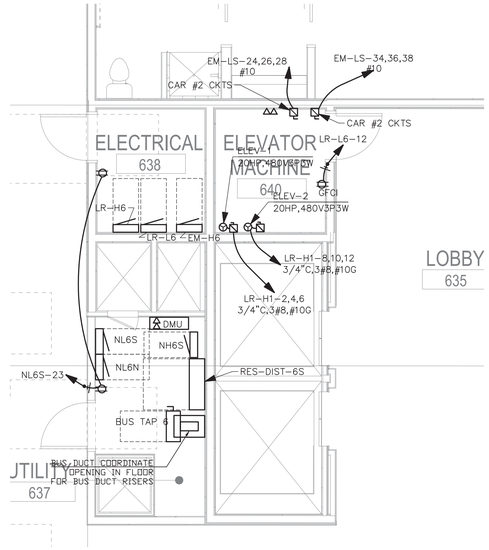
SCALE: 1" = 4'-0"



LEVEL 5

5 E3.01 ELECTRICAL ROOM

SCALE: 1" = 4'-0"



LEVEL 6

6 E3.01 ELECTRIC ROOM AND ELEVATOR MACHINE ROOM

SCALE: 1" = 4'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.8343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/19/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

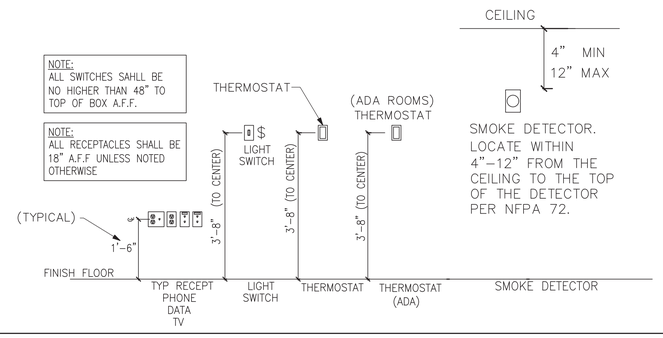
1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ENLARGED POWER PLANS

E3.01

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CIDwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

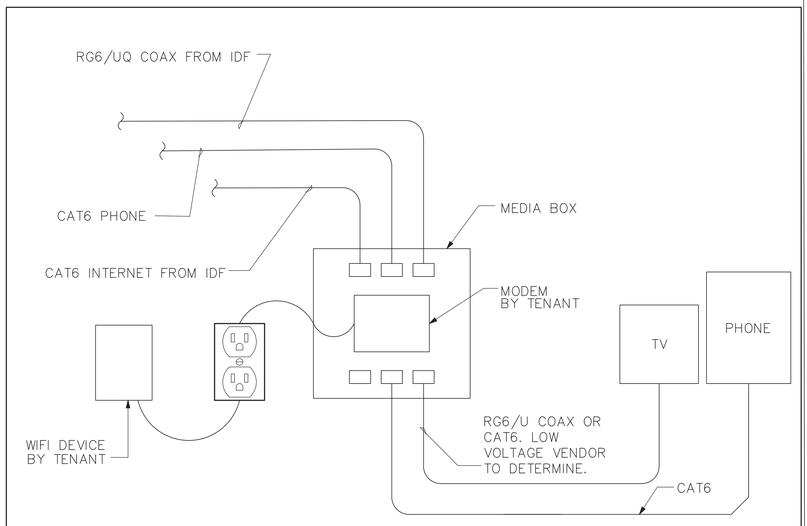
TYPICAL MOUNTING HEIGHTS FOR ELECTRICAL



APARTMENT ELECTRICAL DEVICE SCHEDULE

SYMBOL	DEVICE	NOTES
	RECEPTACLE, SIMPLEX	PROVIDE WHERE INDICATED.
	RECEPTACLE, DUPLEX, FLOOR MOUNT	PROVIDE WHERE INDICATED.
	RECEPTACLE, DUPLEX	PROVIDE WHERE INDICATED.
	RECEPTACLE, LOWER HALF SWITCHED	PROVIDE WHERE INDICATED.
TV	RECEPTACLE, QUAD + TELEVISION CABLE OUTLET	PROVIDE WHERE INDICATED.
	RECEPTACLE, QUAD	PROVIDE WHERE INDICATED.
▼	TELEPHONE WALL OUTLET	REFER TO LOW VOLTAGE PLANS
▽	COMM/DATA WALL OUTLET	REFER TO LOW VOLTAGE PLANS
TV	TELEVISION CABLE OUTLET	REFER TO LOW VOLTAGE PLANS
$	WALL SWITCH	PROVIDE WHERE INDICATED.
$VS	WALL SWITCH VACANCY SENSOR	PROVIDE WHERE INDICATED.
	WALL SWITCH DIMMER	PROVIDE WHERE INDICATED.
$AT	SWITCH ASTRONOMICAL TIME CLOCK CONTROL	PROVIDE WHERE INDICATED.
	LIGHT FIXTURE, WALL MOUNTED SCONCE	PROVIDE ROUGH IN WHERE INDICATED REFER TO LUMINAIRE SCHEDULE
	LIGHT FIXTURE, CEILING MOUNTED	PROVIDE ROUGH IN WHERE INDICATED REFER TO LUMINAIRE SCHEDULE
	PENDANT LIGHT FIXTURE, CEILING MOUNTED	PROVIDE ROUGH IN WHERE INDICATED REFER TO LUMINAIRE SCHEDULE
	LIGHT FIXTURE, WALL MOUNTED	PROVIDE ROUGH IN WHERE INDICATED REFER TO LUMINAIRE SCHEDULE
EF	FAN, CEILING MOUNTED.	FURNISHED & INSTALLED BY MECH, WIRED BY ELECTRICAL CONTRACTOR
T	THERMOSTAT	FURNISHED & INSTALLED BY ELEC
SD	SMOKE DETECTOR & CARBON MONOXIDE DETECTOR	PART OF DESIGN/BUILD FIRE ALARM SYSTEM. SMOKE/CO DETECTORS TO BE WIRED TO FIRE ALARM SYSTEM.
DB	DOOR BELL BUTTON	PROVIDE WHERE INDICATED.
DBC	DOOR BELL CHIMES	PROVIDE WHERE INDICATED.
DBT	DOOR BELL TRANSFORMER	PROVIDE WHERE INDICATED.
MB	MULTIMEDIA BOX	PROVIDE WHERE INDICATED.
FCU	FAN COIL UNIT	FURNISHED & INSTALLED BY MECH (ELECTRICAL PROVIDE POWER TO THE UNIT PER NEC)
PC	PHOTOCELL	EXTERIOR WEATHERPROOF PHOTOCELL CONTROL FOR DUSK TO DAWN OPERATION
EWH	ELECTRIC WALL HEATER	FURNISHED & INSTALLED BY ELEC

NOTE: NOT ALL ITEMS USED ON PROJECT.



WIRING DIAGRAM FOR MEDIA BOX

ACCESSIBILITY NOTES:

1. ALL SWITCHES AND CONTROLS – 15" MIN; 48" MAX TO CONTROL.
2. GENERAL OUTLETS MIN 18" AFF.
3. ALL SWITCHES/CONTROLS ABOVE COUNTERTOPS 48" MAX.
4. ELECTRICAL SUB–PANELS IN UNITS MUST COMPLY WITH ABOVE REACH RANGES.
5. SWITCHES FOR EXHAUST HOODS AND GARBAGE DISPOSALS MUST COMPLY WITH ABOVE REACH RANGES. INSTALL SWITCHES ON FACE OF CABINETS IF REQUIRED TO COMPLY.

APARTMENT NOTES:

1. ALL ELECTRICAL WORK SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES.
2. DEVICE BOXES ON OPPOSITE SIDES OF DEMISING WALLS SHALL BE IN SEPARATE STUD BAYS. PROVIDE BACKING EQUIVALENT TO LOWRY'S OUTLET BOX PADS. CONDUIT FROM ONE UNIT SHALL NOT PASS THROUGH STUDS OF A SHARED WALL(DOUBLE STUDS) FROM AN ADJACENT UNIT(BRIDGING).
3. PROVIDE ARC–FAULT PROTECTION, TAMPER PROOF AND GFCI RECEPTACLES AS REQUIRED BY CODE AND LOCAL AHJ. ARC–FAULT PROTECTION MUST BE PROVIDED FOR CIRCUITS IN THE AREAS LISTED IN NEC 210.12(A).
4. SPLIT WIRED RECEPTACLES SHALL HAVE LOWER OUTLET SWITCHED, UPPER OUTLET SHALL BE NON–SWITCHED.
5. PROVIDE SUFFICIENT DUPLEX RECEPTACLES TO MEET NEC 210.52.
6. THERMOSTAT JUNCTION BOX AND CONTROL CONDUIT TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. THERMOSTATS SHALL NOT INTERFERE WITH DOOR SWINGS.
8. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS FOR KITCHEN APPLIANCES. COORDINATE ALL J–BOX LOCATIONS WITH APPLIANCE INSTALLATION INSTRUCTIONS PRIOR TO ROUGH–IN.
9. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CORD AND PLUG ASSEMBLY FOR EACH DISPOSER.
10. PROVIDE A DEDICATED 20 AMP CIRCUIT TO EACH UNIT BATHROOM RECEPTACLE. BATHROOM LIGHTS, FAN TO BE ON SAME CIRCUIT PER 210.11(C)(3) EXCEPTION.
11. HOME RUNS AND LOOPS CONNECTING LIGHT FIXTURES, WIRING DEVICES, AND HVAC EQUIPMENT ON PLANS INDICATE CIRCUITING SCHEME. SEE TYPICAL PANEL SCHEDULES FOR ACTUAL CIRCUIT NUMBERS FOR TYPICAL APARTMENT.
12. LOWER CASE LETTERS SHOWN NEXT TO LIGHT SWITCHES, LIGHT FIXTURES, AND SPLIT WIRED RECEPTACLES INDICATE CONTROL SCHEME. I.E.: SWITCH 'a' CONTROLS RECEPTACLE 'a', SWITCH 'b' CONTROLS LIGHT 'b', ETC.
13. LIGHTS WITHIN 3' HORIZONTAL OF SHOWER OR TUB TO BE WET LOCATION RATED AND HAVE FULLY ENCLOSED TRIMS. PROVIDE GFCI PROTECTION IF THE LUMINAIRE INSTALLATION MANUAL STATES IT IS REQUIRED.
14. PROVIDE SMOKE DETECTORS AND CO ALARMS AS REQUIRED. DETECTORS AND ALARMS TO BE HARDWIRED AND PROVIDED WITH BATTERY BACKUP.
15. ELECTRICAL CONTRACTOR SHALL INSTALL RECEPTACLES AND TV, DATA/PHONE OUTLETS UNDER COMMON COVER PLATE WHERE POSSIBLE. PROVIDE AND INSTALL DIVIDERS AS REQUIRED FOR CABLE/POWER SEPARATION.
16. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LAYOUTS OF ALL DEVICES.
17. ALL WALL PENETRATIONS SHALL BE CAULKED WITH APPROVED MATERIAL TO MAINTAIN THE FIRE RATING OF ALL WALLS AND FLOORS.
18. ALL CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES HORIZONTAL OR PERPENDICULAR TO BUILDING COLUMNS AND ROOF LINES. CONDUITS SHALL BE GROUPED ON COMMON SUPPORTS WHEREVER POSSIBLE.
19. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT.
20. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FUSE RATING WIRE SIZES AND DISCONNECT SIZES WITH EQUIPMENT SERVED ON THE JOB PRIOR TO INSTALLATION.
21. SEE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR ADDITIONAL DETAILS AND CASEWORK DIMENSIONS.
22. DEVICE LOCATIONS IN 1ST DWELLING/RESIDENT UNIT SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO ROUGH–IN OF REMAINING UNITS
23. CONFIRM FINAL LOCATION OF HEATERS AND THERMOSTATS IN FIELD PRIOR TO ROUGH–IN

ELECTRIC HEATERS

EQUIP NO.	SERVICE	MOUNTING/ DISCHARGE	HEATING ROOM LOAD, kW	HEATING CAPACITY, kW	VOLTAGE	BASIS OF DESIGN (1)(2)
EH-0.50	APARTMENT UNIT	WALL-MOUNTED		0.50	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-0.75	APARTMENT UNIT	WALL-MOUNTED	-	0.75	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1	APARTMENT UNIT	WALL-MOUNTED	-	1.0	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-1.5	APARTMENT UNIT	WALL-MOUNTED	-	1.5	208V/1P	CADET COM-PAK OR EQUIVALENT
EH-2	APARTMENT UNIT	WALL-MOUNTED	-	2.0	208V/1P	CADET COM-PAK OR EQUIVALENT
NOTES:	(1) INSTALL UNITS AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES.					
	(2) HEATERS AND THERMOSTATS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.					
	(3) PROVIDE 7-DAY PROGRAMMABLE REMOTE THERMOSTAT.					

ERV NOTES:

1. ENERGY RECOVERY VENTILATOR (ERV) WITH MOTORIZED DAMPER. ABOVE BATHROOM CEILING, PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. FOR DWELLING UNITS WITH MORE THAN ONE BATHROOM, COORDINATE LOCATION OF ERV WITH MECHANICAL CONTRACTOR.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE ON/OFF SWITCH AND LABEL (CALLED STANDBY SWITCH ON THE DRAWINGS) IN THE MAIN BATHROOM TO ALLOW OCCUPANT TO POWER ON/OFF THE ERV AND ASSOCIATED MOTORIZED DAMPER. THE SWITCH MUST BE LABELED WITH THE FOLLOWING OR EQUIVALENT TEXT "LEAVE VENTILATION ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR. " THE SWITCH ON POSITION POWERS ON THE ERV AND OPENS MOTORIZED DAMPER. THE SWITCH IN THE OFF POSITION POWERS OFF THE ERV AND CLOSES THE MOTORIZED DAMPER.
3. 20/40/60 MINUTE TIMER SWITCH FOR ERV (ONE TIMER SWITCH IN EACH BATHROOM). ACTIVATION OF TIMER SWITCH SHALL TEMPORARILY INCREASE THE SPEED OF ERV FROM LOW TO HIGH SPEED. TIMER SWITCHES AND ASSOCIATED LOW–VOLTAGE CONTROL WIRING PROVIDED BY MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR TO PROVIDE POWER AND ALL ASSOCIATED MATERIALS AND WIRING TO CONNECT THE TIMER TO ERV.

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

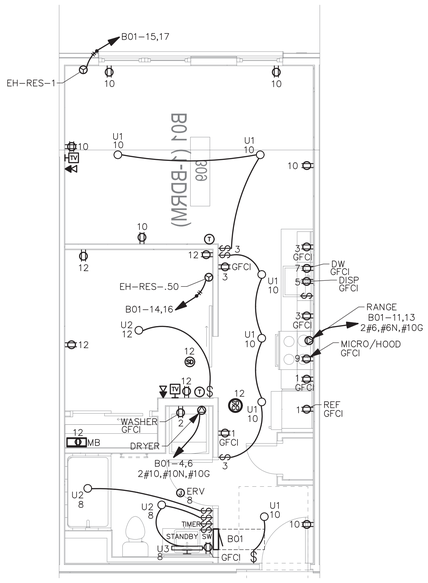
△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

UNIT PLAN NOTES

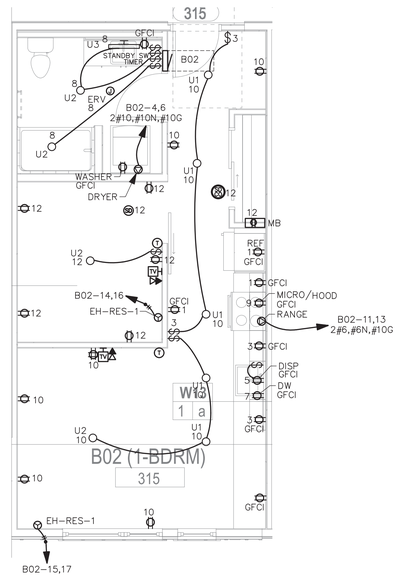
E4.00

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



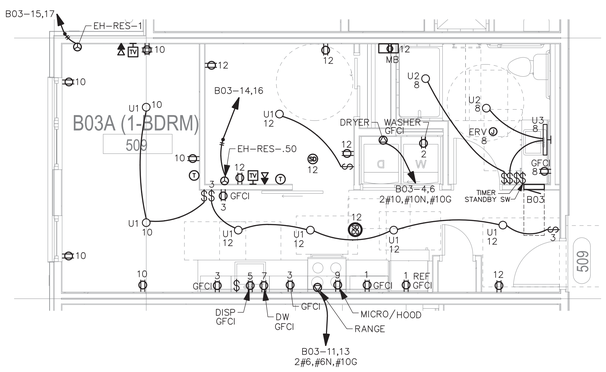
1 E4.01 **UNIT PLAN - B01**

SCALE: 1/4" = 1'-0"



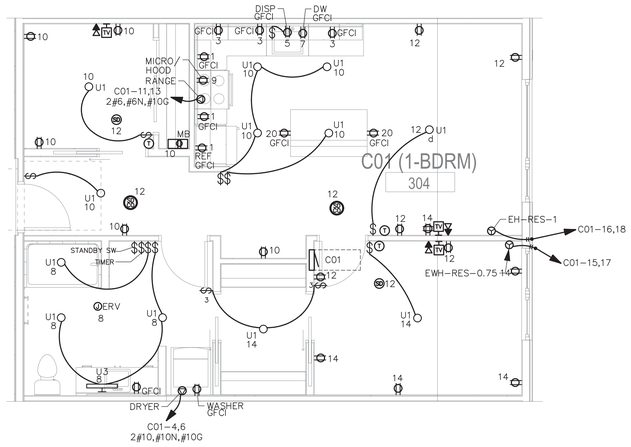
2 E4.01 **UNIT PLAN - B02**

SCALE: 1/4" = 1'-0"



3 E4.01 **UNIT PLAN - B03 TYPE A**

SCALE: 1/4" = 1'-0"



4 E4.01 **UNIT PLAN - C01**

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK V. STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

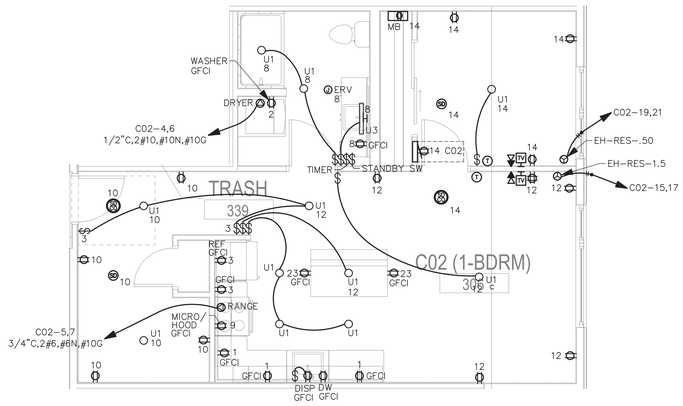
△	DATE	DESCRIPTION
1	01/16/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

TYPICAL UNIT PLANS

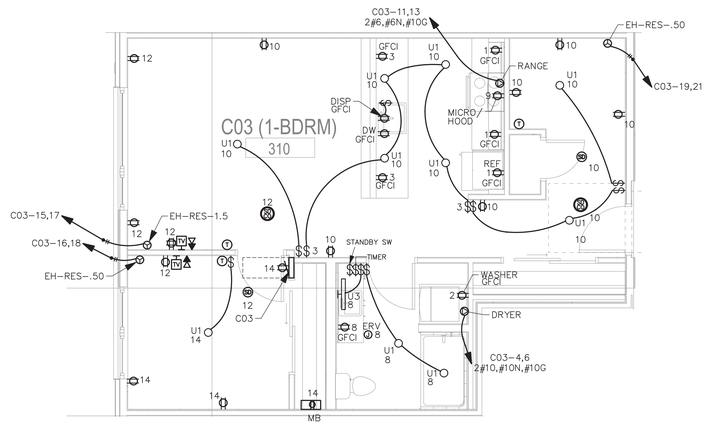
E4.01

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



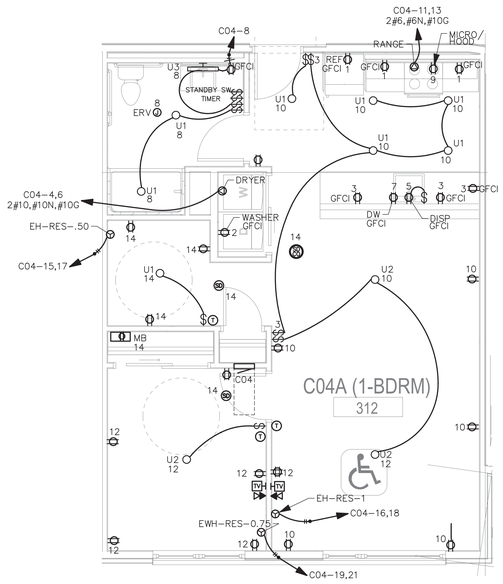
1 E4.02 **UNIT PLAN - C02 TYPE A**

SCALE: 1/4" = 1'-0"



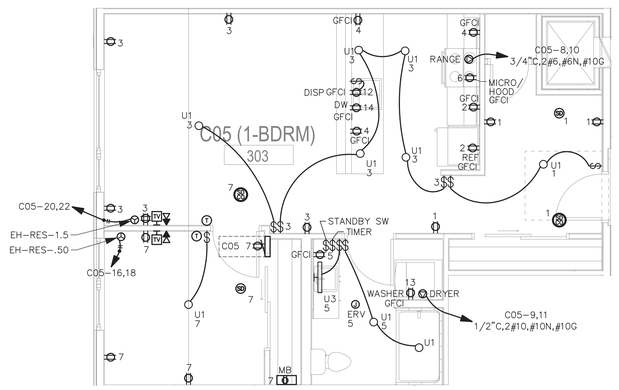
2 E4.02 **UNIT PLAN - C03**

SCALE: 1/4" = 1'-0"



3 E4.02 **UNIT PLAN - 304 TYPE A**

SCALE: 1/4" = 1'-0"



4 E4.02 **UNIT PLAN - C05**

SCALE: 1/4" = 1'-0"

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

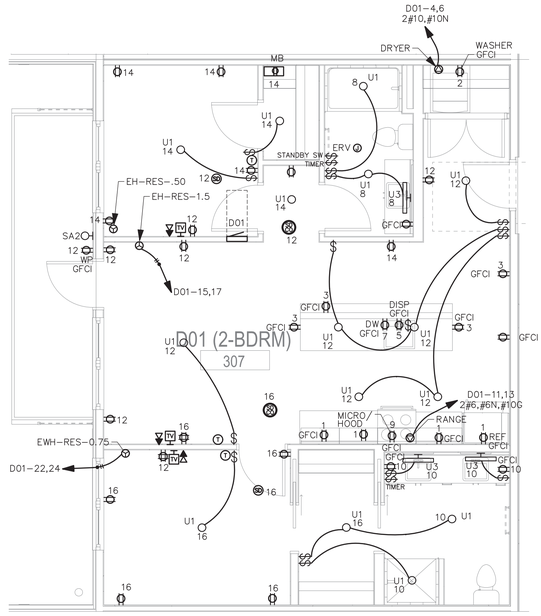
△	DATE	DESCRIPTION
1	08/16/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

TYPICAL UNIT PLANS

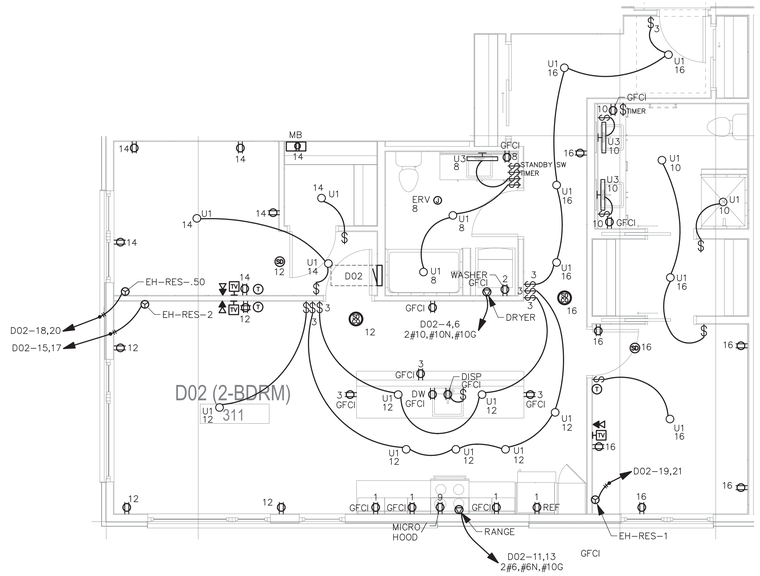
E4.02

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt



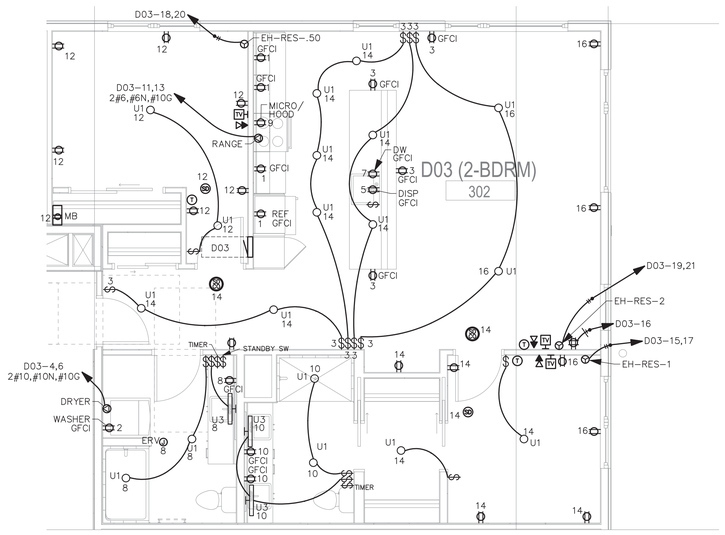
1 E4.03 **UNIT PLAN - D01**

SCALE: 1/4" = 1'-0"



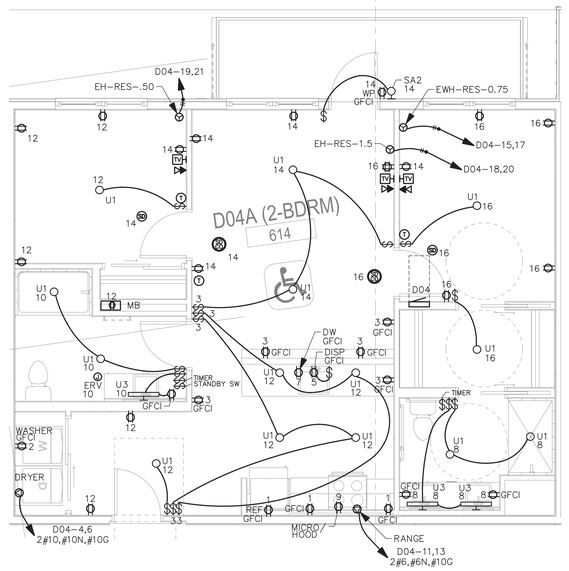
2 E4.03 **UNIT PLAN - D02**

SCALE: 1/4" = 1'-0"



3 E4.03 **UNIT PLAN - D03**

SCALE: 1/4" = 1'-0"



4 E4.03 **UNIT PLAN - D04A**

SCALE: 1/4" = 1'-0"

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
2063643343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/16/24	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

TYPICAL UNIT PLANS

E4.03

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CIDwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

COORDINATION AND ARC FLASH STUDIES:

IMMEDIATELY UPON SELECTION OF ACTUAL EQUIPMENT BEING PROVIDED FOR THE PROJECT, THE ELECTRICAL CONTRACTOR SHALL PERFORM AN ARC FLASH ANALYSIS AND COORDINATION STUDY BASED ON ACTUAL EQUIPMENT TO BE PROVIDED, CONDUCTOR TYPES/SIZES/LENGTHS, ETC. COORDINATION SHALL BE CONFIRMED BASED ON FAULT NUMBERS SHOWN ON THIS DRAWING.

STUDIES SUBMITTED SHALL BE STAMPED BY A PROFESSIONAL ELECTRICAL ENGINEER HOLDING A CURRENT LICENSE FROM THE STATE OF WA.

PRELIMINARY ARC FLASH AND COORDINATION STUDIES ARE TO BE SUBMITTED WITH THE SUBMITTALS FOR THE PROTECTIVE DEVICES, PANELBOARDS, SWITCHBOARDS, AND OTHER ELECTRICAL EQPT.

THE ELECTRICAL CONTRACTOR SHALL SUBMIT THE STAMPED AND SIGNED ARC FLASH AND COORDINATION STUDY TO THE AHJ AS REQUIRED.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT LABELS INDICATING ARC FLASH HAZARD RISK CATEGORIES ON ALL DISTRIBUTION POINTS (SWITCHBOARDS, PANELBOARDS, VFDS, DISCONNECT SWITCHES, ETC). LABELS SHALL COMPLY WITH NFPA 70E.

REQUIRED ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – WAC 427:

- WHERE PARKING IS PROVIDED, TEN PERCENT OF PARKING SPACES SHALL BE PROVIDED WITH ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- ELECTRICAL ROOM(S) SERVING PARKING AREAS SHALL BE DESIGNED TO ACCOMMODATE THE ELECTRICAL EQUIPMENT AND DISTRIBUTION REQUIRED TO SERVE A MINIMUM OF 20 PERCENT OF THE TOTAL PARKING SPACES WITH 208/240 V 40–AMP ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- MINIMUM ONE ACCESSIBLE PARKING SPACE SHALL BE SERVED BY ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- TOTAL NUMBER OF PARKING SPACES = **268; 268 x 0.10 = 27 EV CHARGING SPACES.**

  TOTAL NUMBER OF PARKING SPACES = 268; 268 x 0.2 = CAPACITY FOR 54 EV CHARGERS
  27 DUAL CHARGERS x 208V x 40A = 224 KVA = 624 A 3 PHASE POWER @ 120/208V

  PER WAC 427, ELECTRICAL INFRASTRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN 624 AMPS OF ELECTRICAL LOAD FOR EV CHARGERS.

SHEET NOTES:

A. SEE LOAD CALCULATIONS AS SHOWN IN SCHEDULES. OPTIONAL DWELLING UNIT CALCULATIONS ARE USED.

B. SEE PANEL SCHEDULES SHEETS E5.01.

C. SEE UNIT PANEL SCHEDULES SHEETS E4.02.

D. SEE FEEDER SCHEDULE SHEET E5.00.

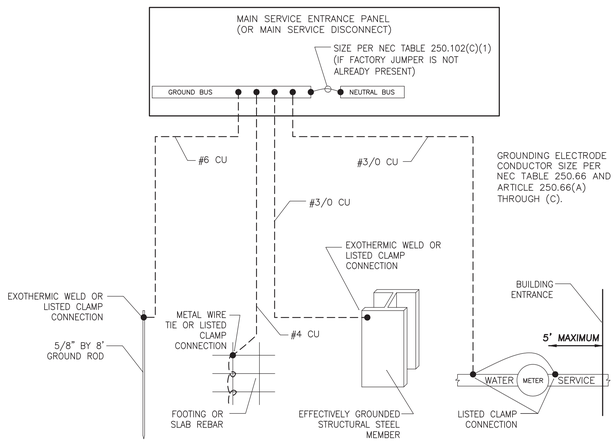
E. CONTRACTOR TO OBTAIN APPROVAL OF ALL SERVICE EQUIPMENT PRIOR TO ORDERING. FAULT VALUES SHOWN ARE ASSUMED, AND NOT ACTUAL. ACTUAL FAULT VALUES TO BE OBTAINED FROM FOLLETT ENGINEERING PRIOR TO ORDERING.

F. DISTRIBUTION SYSTEM AS DESIGNED IS FULLY RATED. CONTRACTOR WILL BE RESPONSIBLE FOR ENGINEERING IF SERIES RATED SYSTEMS ARE SUBMITTED, THE SUBMITTED SYSTEM SHALL MEET NEC 240.86(B) REQUIREMENTS FOR TESTED COMBINATIONS, AND SHALL NOT BE USED IF MOTOR CONTRIBUTION EXCEEDS LIMITS PER 240.86(C). NEC 110.22 MARKING REQUIREMENTS MUST BE MET.

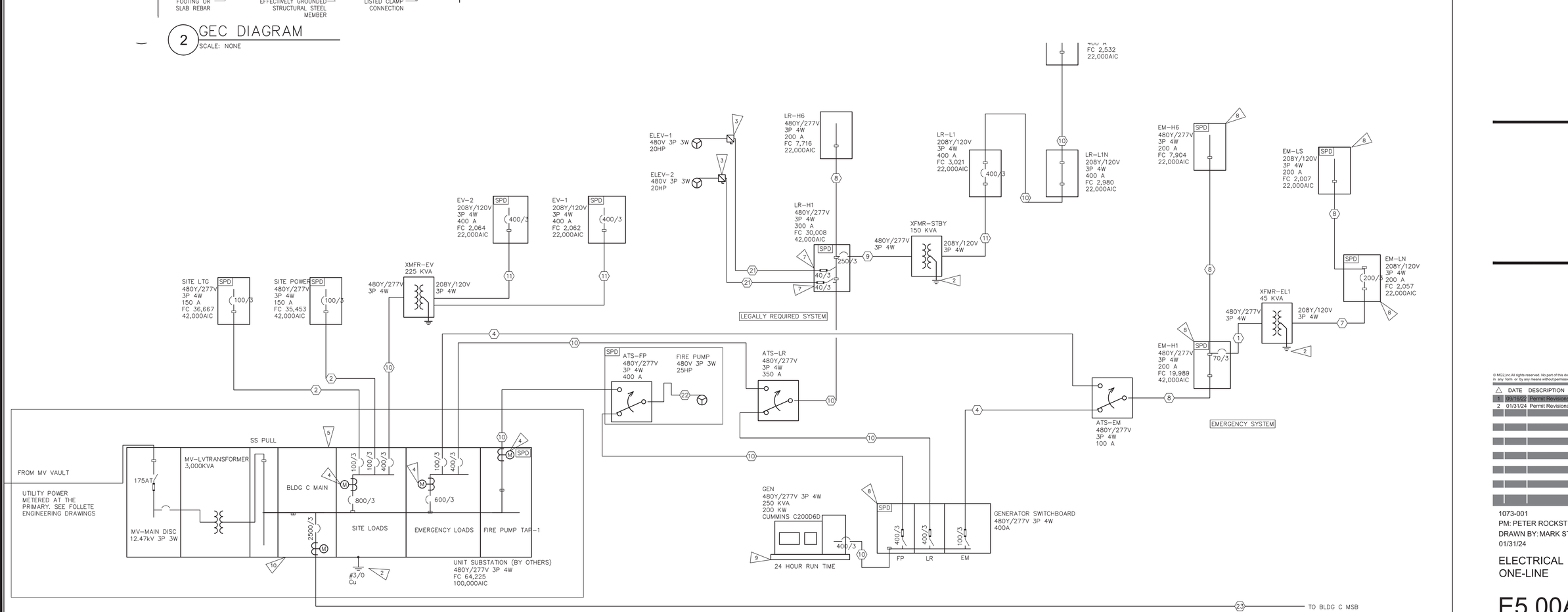
G. E–GAUGE PRO DIGITAL METERING UNITS SHALL BE USED AS BASIS OF DESIGN FOR METERING PURPOSES. THIS APPLIES TO ALL METERS AND CALLOUTS FOR DIGITAL METERING UNITS ON ONE–LINE. SNOPUD WILL METER AT THE SITE INCOMING POINT OF CONNECTION.

FLAG NOTES: (FOR E5.00 & E5.01)

1. CONTRACTOR TO PROVIDE FULLY FUNCTIONING ERRC SYSTEM IF REQUIRED BY CITY FIRE DEPT. PROVIDE 2" RACEWAY WITH ACCESSIBLE J–BOX AND STUB RACEWAY TO ACCESS POINTS ON EACH FLOOR. PROVIDE ACCESS DOORS AS REQUIRED BY SYSTEM DESIGN. ERRC SYSTEM BOXES AND CONDUITS SHALL BE INSTALLED IN A 2 HOUR RATED ENCLOSURE, OR BE A TWO LISTED CABLE AND SYSTEM. THE ERRCS ROOM SHALL BE CONSTRUCTED FOR 2 HOUR RATING. THE ERRC SYSTEM SHALL HAVE A 24 HOUR BATTERY BACK–UP.
2. SEE SYSTEM GROUNDING AND BONDING DETAIL THIS SHEET. SYSTEM GROUNDING SIZED PER N.E.C. 250
3. PROVIDE BUSSMAN POWER MODULE SWITCH ELEVATOR DISCONNECT OR EQUIVALENT UNIT, LOCKABLE OPEN, WITH SHUNT TRIP CAPABILITES AND CLASS J FUSES. LOCATE IN ELEVATOR MACHINE ROOM.
4. DIGITAL METERING UNITS E GAUGE PRO USED FOR PRIVATE METERING SYSTEM. .
5. PROVIDE SEPARATE ENCLOSURE OR BARRIERS BETWEEN EACH SERVICE DISCONNECT AS REQUIRED BY 230.71(B).
6. PROVIDE A LISTED SURGE PROTECTIVE DEVICE FOR DWELLING UNITS AS REQUIRED BY 230.67. CONTRACTOR TO CONFIRM LOCATION SHOWN INTEGRAL TO METER CENTER DISTRIBUTION IS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. OBTAIN PRICING FOR OPTION TO HAVE SPDs LOCATED IN UNIT PANELS.
7. COORDINATE FUSE SIZES FOR ELEVATOR, CONFIRM FUSE SIZE AND TYPE REQUIRED BY VENDOR.
8. A LISTED SURGE PROTECTIVE DEVICE SHALL BE PROVIDED FOR ALL EMERGENCY SYSTEMS PANELBOARDS PER NEC 700.8.
9. GENERATOR IS NOT A SEPARATELY DERIVED SYSTEM. PROVIDE EQUIPMENT GROUNDING AS REQUIRED BY 250.122.
10. PROVIDE ARC ENERGY REDUCTION: ENERGY REDUCING MAINTENANCE SWITCH PER NEC 240.87(B)(3).
11. PROVIDE FIRE RATING/SURVIVABILITY OF RISERS, FEEDERS AND BRANCH CIRCUITS TO THE LEVEL REQUIRED BY CODE FOR EACH SYSTEM.



2 GEC DIAGRAM
SCALE: NONE



1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT
RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON
ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/15/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL
ONE-LINE

E5.00A

COORDINATION AND ARC FLASH STUDIES:

IMMEDIATELY UPON SELECTION OF ACTUAL EQUIPMENT BEING PROVIDED FOR THE PROJECT, THE ELECTRICAL CONTRACTOR SHALL PERFORM AN ARC FLASH ANALYSIS AND COORDINATION STUDY BASED ON ACTUAL EQUIPMENT TO BE PROVIDED, CONDUCTOR TYPES/SIZES/LENGTHS, ETC. COORDINATION SHALL BE CONFIRMED BASED ON FAULT NUMBERS SHOWN ON THIS DRAWING.

STUDIES SUBMITTED SHALL BE STAMPED BY A PROFESSIONAL ELECTRICAL ENGINEER HOLDING A CURRENT LICENSE FROM THE STATE OF WA.

PRELIMINARY ARC FLASH AND COORDINATION STUDIES ARE TO BE SUBMITTED WITH THE SUBMITTALS FOR THE PROTECTIVE DEVICES, PANELBOARDS, SWITCHBOARDS, AND OTHER ELECTRICAL EQPT.

THE ELECTRICAL CONTRACTOR SHALL SUBMIT THE STAMPED AND SIGNED ARC FLASH AND COORDINATION STUDY TO THE AHJ AS REQUIRED.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT LABELS INDICATING ARC FLASH HAZARD RISK CATEGORIES ON ALL DISTRIBUTION POINTS (SWITCHBOARDS, PANELBOARDS, VFDS, DISCONNECT SWITCHES, ETC). LABELS SHALL COMPLY WITH NFPA 70E.

REQUIRED ELECTRIC VEHICLE CHARGING INFRASTRUCTURE – WAC 427:

- WHERE PARKING IS PROVIDED, TEN PERCENT OF PARKING SPACES SHALL BE PROVIDED WITH ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- ELECTRICAL ROOM(S) SERVING PARKING AREAS SHALL BE DESIGNED TO ACCOMMODATE THE ELECTRICAL EQUIPMENT AND DISTRIBUTION REQUIRED TO SERVE A MINIMUM OF 20 PERCENT OF THE TOTAL PARKING SPACES WITH 208/240 V 40–AMP ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- MINIMUM ONE ACCESSIBLE PARKING SPACE SHALL BE SERVED BY ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- TOTAL NUMBER OF PARKING SPACES = 268; 268 x 0.10 = 27 EV CHARGING SPACES.

TOTAL NUMBER OF PARKING SPACES = 268; 268 x 0.2 = CAPACITY FOR 54 EV CHARGERS
27 DUAL CHARGERS x 208V x 40A = 224 KVA = 624 A 3 PHASE POWER @ 120/208V

PER WAC 427, ELECTRICAL INFRASTRUCTURE SHALL BE DESIGNED TO ACCOMMODATE AN 624 AMPS OF ELECTRICAL LOAD FOR EV CHARGERS.

SHEET NOTES:

A. SEE LOAD CALCULATIONS AS SHOWN IN SCHEDULES. OPTIONAL DWELLING UNIT CALCULATIONS ARE USED.

B. SEE PANEL SCHEDULES SHEETS E5.01.

C. SEE UNIT PANEL SCHEDULES SHEETS E4.02.

D. SEE FEEDER SCHEDULE SHEET E5.00.

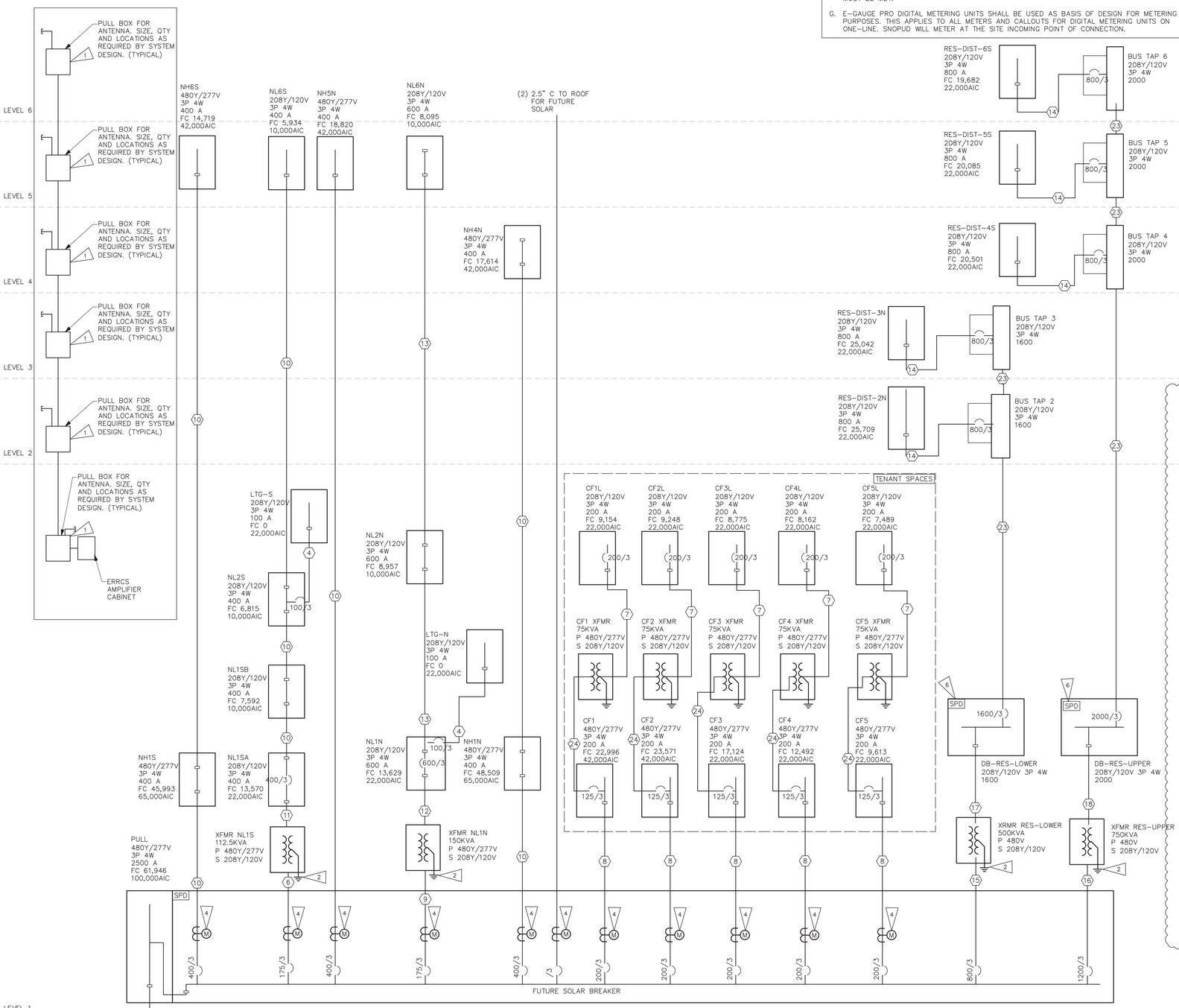
E. CONTRACTOR TO OBTAIN APPROVAL OF ALL SERVICE EQUIPMENT PRIOR TO ORDERING. FAULT VALUES SHOWN ARE ASSUMED, AND NOT ACTUAL. ACTUAL FAULT VALUES TO BE OBTAINED FROM FOLLETT ENGINEERING PRIOR TO ORDERING.

F. DISTRIBUTION SYSTEM AS DESIGNED IS FULLY RATED. CONTRACTOR WILL BE RESPONSIBLE FOR ENGINEERING IF SERIES RATED SYSTEMS ARE SUBMITTED, THE SUBMITTED SYSTEM SHALL MEET NEC 240.86(B) REQUIREMENTS FOR TESTED COMBINATIONS, AND SHALL NOT BE USED IF MOTOR CONTRIBUTION EXCEEDS LIMITS PER 240.86(C). NEC 110.22 MARKING REQUIREMENTS MUST BE MET.

G. E–GAUGE PRO DIGITAL METERING UNITS SHALL BE USED AS BASIS OF DESIGN FOR METERING PURPOSES. THIS APPLIES TO ALL METERS AND CALLOUTS FOR DIGITAL METERING UNITS ON ONE–LINE. SNOPUD WILL METER AT THE SITE INCOMING POINT OF CONNECTION.

FLAG NOTES: (FOR E5.00 & E5.01)

1. CONTRACTOR TO PROVIDE FULLY FUNCTIONING ERRC SYSTEM IF REQUIRED BY CITY FIRE DEPT. PROVIDE 2" RACEWAY WITH ACCESSIBLE J–BOX AND STUB RACEWAY TO ACCESS POINTS ON EACH FLOOR. PROVIDE ACCESS DOORS AS REQUIRED BY SYSTEM DESIGN. ERRC SYSTEM BOXES AND CONDUITS SHALL BE INSTALLED IN A 2 HOUR RATED ENCLOSURE, OR BE A TWO LISTED CABLE AND SYSTEM. THE ERRCS ROOM SHALL BE CONSTRUCTED FOR 2 HOUR RATING. THE ERRC SYSTEM SHALL HAVE A 24 HOUR BATTERY BACK–UP.
2. SEE SYSTEM GROUNDING AND BONDING DETAIL THIS SHEET. SYSTEM GROUNDING SIZED PER N.E.C. 250
3. PROVIDE BUSSMAN POWER MODULE SWITCH ELEVATOR DISCONNECT OR EQUIVALENT UNIT, LOCKABLE OPEN, WITH SHUNT TRIP CAPABILITES AND CLASS J FUSES. LOCATE IN ELEVATOR MACHINE ROOM.
4. DIGITAL METERING UNITS E GAUGE PRO USED FOR PRIVATE METERING SYSTEM. .
5. PROVIDE SEPARATE ENCLOSURE OR BARRIERS BETWEEN EACH SERVICE DISCONNECT AS REQUIRED BY 230.71(B).
6. PROVIDE A LISTED SURGE PROTECTIVE DEVICE FOR DWELLING UNITS AS REQUIRED BY 230.67. CONTRACTOR TO CONFIRM LOCATION SHOWN INTEGRAL TO METER CENTER DISTRIBUTION IS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. OBTAIN PRICING FOR OPTION TO HAVE SPDs LOCATED IN UNIT PANELS.
7. COORDINATE FUSE SIZES FOR ELEVATOR, CONFIRM FUSE SIZE AND TYPE REQUIRED BY VENDOR.
8. A LISTED SURGE PROTECTIVE DEVICE SHALL BE PROVIDED FOR ALL EMERGENCY SYSTEMS PANELBOARDS PER NEC 700.8.
9. GENERATOR IS NOT A SEPARATELY DERIVED SYSTEM. PROVIDE EQUIPMENT GROUNDING AS REQUIRED BY 250.122.
10. PROVIDE ARC ENERGY REDUCTION: ENERGY REDUCING MAINTENANCE SWITCH PER NEC 240.87(B)(3).
11. PROVIDE FIRE RATING/SURVIVABILITY OF RISERS, FEEDERS AND BRANCH CIRCUITS TO THE LEVEL REQUIRED BY CODE FOR EACH SYSTEM.



GENERAL FEEDER SCHEDULE

ID	FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
1	70	1–1/4"C,3#4,#4N,#8G	XFMR–EL1
2	100	1–1/2"C,3#1,#1N,#8G	SITE LTG, SITE POWER
3	100	1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G	2B–X, B01, B02, B03, C01, C02, C03, C05, D01, D02, D03, D04
4	100	1–1/2"C,3#1/0 AL,#1/0 AL N,#6 AL G	ATS–EM, ATS–EM
5	125	1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G	C04
6	175	2–1/2"C,3#4/0 AL,#4/0 AL N,#4 AL G	XFMR NL1N, XFMR NL1S
7	200	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#2 AL G	CF1L, CF2L, CF3L, CF4L, CF5L, EM–LN
8	200	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G	CF1, CF2, CF3, CF4, CF5, EM–H1, EM–H6, EM–LS, LR–H6
9	250	3"C,3#350kcmil AL,#350kcmil AL N,#2 AL G	XFMR–STBY
10	400	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G	ATS–FP, ATS–FP, ATS–LR, ATS–LR, GENERATOR SWITCHBOARD, LR–H1, LR–L1N, LR–L6, NH1N, NH1S, NH4N, NH5N, NH6S, NL1SB, NL2S, NL6S, XMFR–EV
11	400	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0 AL G	EV–1, EV–2, LR–L1, NL1SA
12	600	(2)3–1/2"C,3#500kcmil AL,#500kcmil AL N,#4/0 AL G	NL1N
13	600	(2)3–1/2"C,3#500kcmil AL,#500kcmil AL N,#2/0 AL G	NL2N, NL6N
14	800	(3)3"C,3#400kcmil AL,#400kcmil AL N,#3/0 AL G	RES–DIST–2N, RES–DIST–3N, RES–DIST–4S, RES–DIST–5S, RES–DIST–6S
15	800	(3)3"C,3#400kcmil AL,#3/0 AL G	XRMR RES–LOWER
16	1200	(4)3"C,3#500kcmil AL,#250kcmil AL G	XFMR RES–UPPER
17	1600	1/2"C,3#1600A BUS,#1600A BUS N,#1600A BUS G	DB–RES–LOWER
18	2000	3#2000A AL BUS,#2000A AL BUS N,#2000A AL BUS G	DB–RES–UPPER
20	2500	(8)4"C,3#600kcmil AL,#600kcmil AL N,#600kcmil AL G	BLDG C MAIN
21	40	3/4"C,3#8,#10G	ELEV–1, ELEV–2
22	50	3/4"C,3#6,#10G	FIRE PUMP
23	2500	3#2500A AL BUS,#2500A AL BUS N,#2500A AL BUS G	BUS TAP 2, BUS TAP 3, BUS TAP 4, BUS TAP 5, BUS TAP 6, PULL
24	125	2"C,3#2/0 AL,#2/0 AL N,#4 AL G	CF1 XFMR, CF2 XFMR, CF3 XFMR, CF4 XFMR, CF5 XFMR

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE

1 ELECTRICAL ONE LINE
NOT TO SCALE

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL ONE-LINE

E5.00B

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.5343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

MV–MAIN DISC

ROOM
MOUNTING **FLOOR**
FED FROM **MV–SC**
NOTE

VOLTS **12.47kV 3P 3W**
BUS AMPS **175**
NEUTRAL **NONE**

AIC **22,000**
MAIN BKR **175**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	175/3	XFMR MV–LV	1,370	2,010	1,870	N/A
		TOTAL CONNECTED KVA BY PHASE	1,370	2,010	1,870	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA			KVA
LIGHTING AND RECEPTACLES	436	145,205 SF (3 VA/SF)	CONNECTED LOAD	4,320
SMALL–APPLIANCE	504		DWELLING UNITS	168
LAUNDRY	252		DEMAND FACTOR	(23%)
APPLIANCES	1,370		CALCULATED LOAD	994
ELECTRIC COOKING	1,340			
HEATING	411	(100%)		

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	29.2	36.5	(125%)	CONTINUOUS	166	208	(125%)
LARGEST MOTOR	28.3	7.07	(25%)	NONCONTINUOUS	17.6	17.6	(100%)
MOTORS	243	243	(100%)	HEATING	218	218	(100%)
RECEPTACLES	50.3	30.2	(50%>10)	COOLING	160	0	(0%)
				TOTAL HOUSE LOAD		760	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	994	TOTAL LOAD	1,750
TOTAL HOUSE LOAD	760	BALANCED 3–PHASE LOAD	81.2 A

MV–LV

ROOM
FED FROM **MV–MAIN DISC**
NOTE

PRIMARY VOLTS **12.47kV 3P 3W**
SECONDARY VOLTS **480Y/277V 3P 4W**

AIC **---**
KVA **3,000**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	2500/3	SWITCHBOARD SS PULL	1,500	2,510	1,240	N/A
		TOTAL CONNECTED KVA BY PHASE	1,500	2,510	1,240	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA			KVA
LIGHTING AND RECEPTACLES	436	145,205 SF (3 VA/SF)	CONNECTED LOAD	4,320
SMALL–APPLIANCE	504		DWELLING UNITS	168
LAUNDRY	252		DEMAND FACTOR	(23%)
APPLIANCES	1,370		CALCULATED LOAD	994
ELECTRIC COOKING	1,340			
HEATING	411	(100%)		

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	29.2	36.5	(125%)	CONTINUOUS	166	208	(125%)
LARGEST MOTOR	28.3	7.07	(25%)	NONCONTINUOUS	17.6	17.6	(100%)
MOTORS	243	243	(100%)	HEATING	218	218	(100%)
RECEPTACLES	50.3	30.2	(50%>10)	COOLING	160	0	(0%)
				TOTAL HOUSE LOAD		760	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	994	TOTAL LOAD	1,750
TOTAL HOUSE LOAD	760	BALANCED 3–PHASE LOAD	2,110 A

SS PULL

ROOM
MOUNTING **FLOOR**
FED FROM **MV–LV**
NOTE

VOLTS **480Y/277V 3P 4W**
BUS AMPS **2500**
NEUTRAL **100%**

AIC **100,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	2500/3	SWITCHBOARD UNIT SUBSTATION (BY OTHERS)	1,340	2,360	1,100	N/A
2	–/3	SWITCHBOARD FIRE PUMP TAP	9.42	9.42	9.42	N/A
3	2500/3	SWITCHBOARD BLDG C MAIN	0	0	0	(8)4"C,3#600kcmil AL,#600kcmil AL N,#600kcmil AL G
4	800/3	SWITCHBOARD SITE LOADS	86.6	75.4	72.1	N/A
5	600/3	SWITCHBOARD EMERGENCY LOADS	65.6	66.1	60	N/A
		TOTAL CONNECTED KVA BY PHASE	1,500	2,510	1,240	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA			KVA
LIGHTING AND RECEPTACLES	436	145,205 SF (3 VA/SF)	CONNECTED LOAD	4,320
SMALL–APPLIANCE	504		DWELLING UNITS	168
LAUNDRY	252		DEMAND FACTOR	(23%)
APPLIANCES	1,370		CALCULATED LOAD	994
ELECTRIC COOKING	1,340			
HEATING	411	(100%)		

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	29.2	36.5	(125%)	CONTINUOUS	166	208	(125%)
LARGEST MOTOR	28.3	7.07	(25%)	NONCONTINUOUS	17.6	17.6	(100%)
MOTORS	243	243	(100%)	HEATING	218	218	(100%)
RECEPTACLES	50.3	30.2	(50%>10)	COOLING	160	0	(0%)
				TOTAL HOUSE LOAD		760	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	994	TOTAL LOAD	1,750
TOTAL HOUSE LOAD	760	BALANCED 3–PHASE LOAD	2,110 A

GEN

ROOM
NOTE **24 HOUR RUN TIME**

VOLTS **480Y/277V 3P 4W**

KVA **250**
KW **200**
PF **0.8**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	SWITCHBOARD GENERATOR SWITCHBOARD	75	75.6	69.4	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
2	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	75	75.6	69.4	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	11.3	14.2	(125%)	RECEPTACLES	2.08	2.08	(50%>10)
APPLIANCE	0.3	0.3	(100%)	CONTINUOUS	2.45	3.06	(125%)
LARGEST MOTOR	28.3	7.07	(25%)	NONCONTINUOUS	2.53	2.53	(100%)
MOTORS	173	173	(100%)	HEATING	27.7	27.7	(100%)
				COOLING	27.6	0	(0%)
				TOTAL LOAD		230	
				BALANCED 3–PHASE LOAD		276 A	

MSB

ROOM
MOUNTING **FLOOR**
FED FROM **PULL**
NOTE

VOLTS **480Y/277V 3P 4W**
BUS AMPS **3000**
NEUTRAL **100%**

AIC **100,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	PANEL NH1S	0	0	0	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
2	175/3	XFMR XFMR NL1S	37.3	35.1	34.1	2–1/2"C,3#4/0 AL,#4/0 AL N,#4 AL G
3	250/3	XFMR XFMR NL1N	42.4	42.2	36.9	3"C,3#350kcmil AL,#350kcmil AL N,#2 AL G
4	400/3	PANEL NH5N	0	0	0	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
5	400/3	PANEL NH1N	0	0	0	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
6	200/3	PANEL FUTURE PV	0	0	0	N/A
7	200/3	PANEL CF1	5.1	4.29	0.086	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
8	200/3	PANEL CF2	5.28	4.29	4.29	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
9	200/3	PANEL CF3	4.92	4.29	0.086	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
10	200/3	PANEL CF4	1.44	0	0	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
11	200/3	PANEL CF5	5.28	4.2	0	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
12	–/3	SPACE	0	0	0	
13	1200/3	XFMR XFMR RES–UPPER	738	1,350	609	(4)3"C,3#500kcmil AL,#250kcmil AL G
14	800/3	XFMR XRMR RES–LOWER	502	916	414	(3)3"C,3#400kcmil AL,#3/0 AL G
15	–/3	SPACE	0	0	0	
16	–/3	SPACE	0	0	0	
17	–/3	SPACE	0	0	0	
18	–/3	SPACE	0	0	0	
19	–/3	SPACE	0	0	0	
20	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	1,340	2,360	1,100	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA			KVA
LIGHTING AND RECEPTACLES	436	145,205 SF (3 VA/SF)	CONNECTED LOAD	4,320
SMALL–APPLIANCE	504		DWELLING UNITS	168
LAUNDRY	252		DEMAND FACTOR	(23%)
APPLIANCES	1,370		CALCULATED LOAD	994
ELECTRIC COOKING	1,340			
HEATING	411	(100%)		

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.87	2.34	(125%)	CONTINUOUS	5.32	6.65	(125%)
LARGEST MOTOR	26.3	6.57	(25%)	NONCONTINUOUS	11.4	11.4	(100%)
MOTORS	23.5	23.5	(100%)	HEATING	191	191	(100%)
RECEPTACLES	38.6	24.3	(50%>10)	COOLING	133	0	(0%)
				TOTAL HOUSE LOAD		265	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	994	TOTAL LOAD	1,260
TOTAL HOUSE LOAD	265	BALANCED 3–PHASE LOAD	1,510 A

FIRE PUMP TAP

ROOM
MOUNTING **FLOOR**
FED FROM **SS PULL**
NOTE

VOLTS **480Y/277V 3P 4W**
BUS AMPS **3000**
NEUTRAL **100%**

AIC **100,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	TRANSFER SWITCH ATS–FP	9.42	9.42	9.42	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	9.42	9.42	9.42	

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	28.3	7.07	(25%)	TOTAL LOAD	35.3
MOTORS	28.3	28.3	(100%)	BALANCED 3–PHASE LOAD	42.5 A

GENERATOR SWITCHBOARD

ROOM
FED FROM **GEN**
NOTE

VOLTS **480Y/277V 3P 4W**
BUS AMPS **400**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	TRANSFER SWITCH ATS–FP	9.42	9.42	9.42	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
2	100/3	TRANSFER SWITCH ATS–EM	4.14	5.46	4.26	1–1/2"C,3#1/0 AL,#1/0 AL N,#6 AL G
3	400/3	TRANSFER SWITCH ATS–LR	61.4	60.7	55.8	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	75	75.6	69.4	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	11.3	14.2	(125%)	RECEPTACLES	2.08	2.08	(50%>10)
APPLIANCE	0.3	0.3	(100%)	CONTINUOUS	2.45	3.06	(125%)
LARGEST MOTOR	28.3	7.07	(25%)	NONCONTINUOUS	2.53	2.53	(100%)
MOTORS	173	173	(100%)	HEATING	27.7	27.7	(100%)
				COOLING	27.6	0	(0%)
				TOTAL LOAD		230	
				BALANCED 3–PHASE LOAD		276 A	

ATS–FP

ROOM
MOUNTING **FLUSH**
FED FROM **GENERATOR SWITCHBOARD FIRE PUMP TAP**
NOTE

VOLTS **480Y/277V 3P 4W**
SIZE **400**

AIC **65,000**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	50/3	FIRE PUMP	9.42	9.42	9.42	3/4"C,3#6,#10G
		TOTAL CONNECTED KVA BY PHASE	9.42	9.42	9.42	

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	28.3	7.07	(25%)	TOTAL LOAD	35.3
MOTORS	28.3	28.3	(100%)	BALANCED 3–PHASE LOAD	42.5 A

ATS–EM

ROOM
MOUNTING **FLUSH**
FED FROM **GENERATOR SWITCHBOARD EMERGENCY LOADS**
NOTE

VOLTS **480Y/277V 3P 4W**
SIZE **100**

AIC **42,000**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	PANEL EM–H1	4.14	5.46	4.26	2–1/2"C,3#250kcmil AL,#250kcmil AL N,#4 AL G
		TOTAL CONNECTED KVA BY PHASE	4.14	5.46	4.26	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	11.3	14.2	(125%)	RECEPTACLES	1.36	1.36	(50%>10)
LARGEST MOTOR	0.4	0.1	(25%)	CONTINUOUS	0.36	0.45	(125%)
				COOLING	0.8	0.8	(100%)
				TOTAL LOAD		16.9	
				BALANCED 3–PHASE LOAD		20.3 A	

ATS–LR

ROOM
MOUNTING **FLOOR**
FED FROM **GENERATOR SWITCHBOARD EMERGENCY LOADS**
NOTE

VOLTS **480Y/277V 3P 4W**
SIZE **350**

AIC **65,000**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	PANEL LR–H1	61.4	60.7	55.8	(2)2–1/2"C,3#250kcmil AL,#250kcmil AL N,#1 AL G
		TOTAL CONNECTED KVA BY PHASE	61.4	60.7	55.8	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.3	0.3	(100%)	CONTINUOUS	2.09	2.61	(125%)
LARGEST MOTOR	22.4	5.61	(25%)	NONCONTINUOUS	2.53	2.53	(100%)
MOTORS	145	145	(100%)	HEATING	27.7	27.7	(100%)
RECEPTACLES	0.72	0.72	(50%>10)	COOLING	26.8	0	(0%)
				TOTAL LOAD		184	
				BALANCED 3–PHASE LOAD		221 A	

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5805-01A_Everett Riverfront BLD-C_R22.rvt

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01A

EM-H1

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 42,000
MOUNTING SURFACE | BUS AMPS 200 | MAIN BKR MLO
FED FROM ATS-EM | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	70/3	12.4	XFMR XFMR-EL1	a	2	20/1	0.517	LIGHTING
3	|			b	4	20/1	0.549	LIGHTING
5	|			c	6	20/1	0.406	LIGHTING
7	-/1	0	SPACE	a	8	-/1	0	SPACE
			LUG LOAD: 0 KVA PANEL EM-H6					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	11.3	14.2	(125%)	RECEPTACLES	1.36	1.36	(50%>10)
LARGEST MOTOR	0.4	0.1	(25%)	CONTINUOUS	0.36	0.45	(125%)
				COOLING	0.8	0.8	(100%)
				TOTAL LOAD		16.9	
				BALANCED 3-PHASE LOAD		20.3 A	
				PHASE A		89.5%	
				PHASE B		118%	
				PHASE C		92.2%	

EM-H6

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 200 | MAIN BKR MLO
FED FROM EM-H1 | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
				TOTAL LOAD	0
				BALANCED 3-PHASE LOAD	0 A
				PHASE A	0.00%
				PHASE B	0.00%
				PHASE C	0.00%

EM-LN

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 200 | MAIN BKR 200
FED FROM XFMR-EL1 | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.25	L1 CORRIDOR LIGHTING	a	2	20/1	0.237	N STAIR 2 LIGHTING
3	20/1	1.3	L1 BOH LIGHTING	b	4	20/1	0.237	S STAIR 2 LIGHTING
5	-/1	0	SPACE	c	6	20/1	0.562	RETAIL LIGHTING
7	-/1	0	SPACE	a	8	20/1	0.625	RETAIL LIGHTING
9	20/1	0.26	L2 LIGHTING	b	10	20/1	0.53	RETAIL LIGHTING
11	20/1	0.26	LIGHTING	c	12	-/1	0	SPACE
13	20/1	0.26	LIGHTING	a	14	-/1	0	L3
15	20/1	0.26	LIGHTING	b	16	-/1	0	SPACE
17	20/1	0.35	LIGHTING	c	18	-/1	0	SPACE
19	-/1	0	L1 BOH	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/3	0	SPACE
39	-/1	0	SPACE	b	40	|		
41	-/1	0	SPACE	c	42	|		
			LUG LOAD: 7.25 KVA PANEL EM-LS					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	9.87	12.3	(125%)	RECEPTACLES	1.36	1.36	(50%>10)
LARGEST MOTOR	0.4	0.1	(25%)	CONTINUOUS	0.36	0.45	(125%)
				COOLING	0.8	0.8	(100%)
				TOTAL LOAD		15	
				BALANCED 3-PHASE LOAD		41.8 A	
				PHASE A		87.6%	
				PHASE B		119%	
				PHASE C		93.3%	

EM-LS

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 200 | MAIN BKR MLO
FED FROM EM-LN | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	20/1	0.237	W STAIR 1 LIGHTING
3	20/1	0.384	L1 LIGHTING	b	4	20/1	0.237	E STAIR 1 LIGHTING
5	20/1	0.651	LOBBY LIGHTING	c	6	20/1	0.41	RETAIL LIGHTING
7	20/1	0.216	LIGHTING	a	8	20/1	0.323	RETAIL LIGHTING
9	20/1	0.36	L2 LIGHTING	b	10	-/1	0	SPACE
11	20/1	0.36	L3 LIGHTING	c	12	-/1	0	SPACE
13	20/1	0.36	L4 LIGHTING	a	14	-/1	0	SPACE
15	20/1	0.36	L5 LIGHTING	b	16	-/1	0	SPACE
17	20/1	0.779	L6	c	18	-/1	0	SPACE
19	20/1	0.029	EMR LIGHTING	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	20/1	0.4	CAR LIGHT
25	-/1	0	SPACE	a	26	20/1	0.18	CAR REC
27	-/1	0	SPACE	b	28	20/1	0.4	CAR VENT
29	-/1	0	SPACE	c	30	20/1	0.5	FACP
31	-/1	0	SPACE	a	32	20/1	0.5	ANNUNCIATOR PANEL
33	-/1	0	SPACE	b	34	20/1	0.4	CAR LIGHT
35	-/1	0	SPACE	c	36	20/1	0.18	CAR REC
37	-/1	0	SPACE	a	38	20/1	0.4	CAR VENT
39	-/1	0	SPACE	b	40	20/1	0.18	BATTERY CHARGER
41	-/1	0	ROOF DECK	c	42	20/1	0.18	BLOCK HEATER

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	4.73	5.91	(125%)	RECEPTACLES	1.36	1.36	(50%>10)
LARGEST MOTOR	0.4	0.1	(25%)	CONTINUOUS	0.36	0.45	(125%)
				COOLING	0.8	0.8	(100%)
				TOTAL LOAD		8.62	
				BALANCED 3-PHASE LOAD		23.9 A	
				PHASE A		92.9%	
				PHASE B		96.1%	
				PHASE C		111%	

XFMR-EL1

ROOM | PRIMARY VOLTS 480Y/277V 3P 4W | AIC ---
FED FROM EM-H1 | SECONDARY VOLTS 208Y/120V 3P 4W | KVA 45
NOTE

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	-/3	PANEL EM-LN	3.62	4.91	3.85	2-1/2"C,3#250kcmil AL,#250kcmil AL N,#2 AL G
		TOTAL CONNECTED KVA BY PHASE	3.62	4.91	3.85	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	9.87	12.3	(125%)	RECEPTACLES	1.36	1.36	(50%>10)
LARGEST MOTOR	0.4	0.1	(25%)	CONTINUOUS	0.36	0.45	(125%)
				COOLING	0.8	0.8	(100%)
				TOTAL LOAD		15	
				BALANCED 3-PHASE LOAD		41.8 A	

XFMR-STBY

ROOM | PRIMARY VOLTS 480Y/277V 3P 4W | AIC ----
FED FROM LR-H1 | SECONDARY VOLTS 208Y/120V 3P 4W | KVA 150
NOTE

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	-/3	PANEL LR-L1	46.5	45.7	40.8	(2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0 AL G
		TOTAL CONNECTED KVA BY PHASE	46.5	45.7	40.8	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.3	0.3	(100%)	CONTINUOUS	2.09	2.61	(125%)
LARGEST MOTOR	22.4	5.61	(25%)	NONCONTINUOUS	2.53	2.53	(100%)
MOTORS	99.7	99.7	(100%)	HEATING	27.7	27.7	(100%)
RECEPTACLES	0.72	0.72	(50%>10)	COOLING	26.8	0	(0%)
				TOTAL LOAD		139	
				BALANCED 3-PHASE LOAD		386 A	

LR-L1N

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM LR-L1 | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/2	0	SPACE	a	2	15/2	1.82	FCU-1-1, FCU-1-2
3	|			b	4	|		
5	-/2	0	SPACE	c	6	-/2	0	SPACE
7	|			a	8	|		
9	15/2	1.82	FCU-1-7, FCU-1-8	b	10	-/2	0	SPACE
11	|			c	12	|		
13	-/2	0	SPACE	a	14	20/3	3.99	SF-1-1
15	|			b	16	|		
17	-/2	0	SPACE	c	18	|		
19	|			a	20	-/1	0	SPACE
21	15/2	1.82	FCU-1-5, FCU-1-6	b	22	-/1	0	SPACE
23	|			c	24	-/1	0	SPACE
25	-/2	0	SPACE	a	26	-/1	0	SPACE
27	|			b	28	-/1	0	SPACE
29	15/2	1.82	FCU-1-3, FCU-1-4	c	30	-/1	0	SPACE
31	|			a	32	-/1	0	SPACE
33	-/2	0	SPACE	b	34	-/1	0	SPACE
35	|			c	36	-/1	0	SPACE
37	15/2	1.89	ERV-1-4	a	38	-/1	0	SPACE
39	|			b	40	-/1	0	SPACE
41	20/1	0.05	DAMPER	c	42	-/1	0	SPACE
43	-/1	0	SPACE	a	44	-/1	0	SPACE
45	-/1	0	SPACE	b	46	-/1	0	SPACE
47	-/1	0	SPACE	c	48	-/1	0	SPACE
49	-/1	0	SPACE	a	50	-/1	0	SPACE
51	-/1	0	SPACE	b	52	-/1	0	SPACE
53	-/1	0	SPACE	c	54	-/1	0	SPACE
55	-/1	0	SPACE	a	56	-/1	0	SPACE
57	-/1	0	SPACE	b	58	-/1	0	SPACE
59	-/1	0	SPACE	c	60	-/1	0	SPACE
61	-/1	0	SPACE	a	62	-/1	0	SPACE
63	-/1	0	SPACE	b	64	-/1	0	SPACE
65	-/1	0	SPACE	c	66	-/1	0	SPACE
			LUG LOAD: 36.1 KVA PANEL LR-L6					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.1	0.1	(100%)	RECEPTACLES	0.18	0.18	(50%>10)
LARGEST MOTOR	22.4	5.61	(25%)	CONTINUOUS	0.915	1.14	(125%)
MOTORS	36.3	36.3	(100%)	NONCONTINUOUS	0.6	0.6	(100%)
				HEATING	11.2	11.2	(100%)
				COOLING	11.2	0	(0%)
				TOTAL LOAD		55.2	
				BALANCED 3-PHASE LOAD		153 A	
				PHASE A		102%	
				PHASE B		107%	
				PHASE C		91.3%	

LR-H1

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 42,000
MOUNTING SURFACE | BUS AMPS 300 | MAIN BKR MLO
FED FROM ATS-LR | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	250/3	133	XFMR XFMR-STBY	a	2	40/3	22.4	ELEV-1
3	|			b	4	|		
5	|			c	6	|		
7	-/1	0	SPACE	a	8	40/3	22.4	ELEV-2
9	-/1	0	SPACE	b	10	|		
11	-/1	0	SPACE	c	12	|		
			LUG LOAD: 0 KVA PANEL LR-H6					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.3	0.3	(100%)	RECEPTACLES	0.72	0.72	(50%>10)
LARGEST MOTOR	22.4	5.61	(25%)	CONTINUOUS	2.09	2.61	(125%)
MOTORS	145	145	(100%)	NONCONTINUOUS	2.53	2.53	(100%)
				HEATING	27.7	27.7	(100%)
				COOLING	26.8	0	(0%)
				TOTAL LOAD		184	
				BALANCED 3-PHASE LOAD		221 A	
				PHASE A		104%	
				PHASE B		102%	
				PHASE C		94%	

LR-L1

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR 400
FED FROM XFMR-STBY | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.05	FSD	a	2	20/1	0.25	FSD
3	20/1	0.25	FSD	b	4	20/1	0.25	FSD
5	20/1	0.25	FSD	c	6	20/1	0.18	FUEL FILTRATION SYSTEM
7	20/1	0.36	BATH RM, RECEPTACLE	a	8	20/1	0.5	REMOTE FUEL FILL
9	20/1	0.2	MOTOR DAMPER	b	10	20/3	1.75	SP-1
11	-/1	0	SPACE	c	12	|		
13	15/2	0.905	IHP-1-5	a	14	|		
15	|			b	16	20/3	1.75	SP-1
17	-/2	0	SPACE	c	18	|		
19	|			a	20	|		
21	15/2	0.911	FCU-1-15	b	22	15/2	1.82	FCU-1-9, FCU-1-10
23	|			c	24	|		
25	15/2	1.82	FCU-1-13, FCU-1-14	a	26	30/2	5.2	OHP-1-4
27	|			b	28	|		
29	20/2	1.18	SF-1-2	c	30	25/2	3.95	OHP-1-5
31	|			a	32	|		
33	-/2	0	SPACE	b	34	35/3	9.91	ERV-1-6
35	|			c	36	|		
37	15/2	1.82	FCU-1-11, FCU-1-12	a	38	|		
39	|			b	40	35/3	9.91	ERV-1-5
41	20/1	0.42	EF-1-1	c	42	|		
43	20/1	0.18	RECEPTACLE	a	44	|		
45	20/1	0.2	2-WAY COMM	b	46	35/3	9.91	ERV-1-2
47	35/3	9.91	ERV-1-7	c	48	|		
49	|			a	50	|		
51	|			b	52	35/3	9.91	ERV-1-1
53	-/1	0	SPACE	c	54	|		
55	-/1	0	SPACE	a	56	|		
57	-/1	0	SPACE	b	58	35/3	9.91	ERV-1-3
59	-/1	0	SPACE	c	60	|		
61	-/1	0	SPACE	a	62	|		
63	-/1	0	SPACE	b	64	-/1	0	SPACE
65	-/1	0	SPACE	c	66	-/1	0	SPACE
			LUG LOAD: 49.3 KVA PANEL LR-L1N					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.3	0.3	(100%)	RECEPTACLES	0.72	0.72	(50%>10)
LARGEST MOTOR	22.4	5.61	(25%)	CONTINUOUS	2.09	2.61	(125%)
MOTORS	99.7	99.7	(100%)	NONCONTINUOUS	2.53	2.53	(100%)
				HEATING	27.7	27.7	(100%)
				COOLING	26.8	0	(0%)
				TOTAL LOAD		139	
				BALANCED 3-PHASE LOAD		386 A	
				PHASE A		105%	
				PHASE B		103%	
				PHASE C		91.3%	

LR-H6

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 200 | MAIN BKR MLO
FED FROM LR-H1 | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
				TOTAL LOAD	0
				BALANCED 3-PHASE LOAD	0 A
				PHASE A	0.00%
				PHASE B	0.00%
				PHASE C	0.00%

LR-L6

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM LR-L1N | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	15/3	3.99	SPF-1	a	2	20/1	0.2	DSD, MOTOR DAMPER
3	|			b	4	80/3	22.4	EPF-1
5	|			c	6	|		
7	15/3	3.99	SPF-2	a	8	|		
9	|			b	10	20/1	0.15	DAMPER, DSD
11	|			c	12	20/1	0.18	BATH RM
13	20/3	0.915	SF-7-2	a	14	25/2	3.95	OHP-6-2
15	|			b	16	|		
17	|			c	18	20/1	0.3	DAMPER, DSD

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
APPLIANCE	0.1	0.1	(100%)	RECEPTACLES	0.18	0.18	(50%>10)
LARGEST MOTOR	22.4	5.61	(25%)	CONTINUOUS	0.915	1.14	(125%)
MOTORS	30.4	30.4	(100%)	NONCONTINUOUS	0.55	0.55	(100%)
				HEATING	3.95	3.95	(100%)
				COOLING	3.95	0	(0%)
				TOTAL LOAD		42	
				BALANCED 3-PHASE LOAD		116 A	
				PHASE A		105%	
				PHASE B		105%	
				PHASE C		90.5%	

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.8313 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01B

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CIDwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

Panel: EV-1 | ROOM | MOUNTING: FLUSH | FED FROM: XMFR-EV | NOTE | VOLTS: 208Y/120V 3P 4W | BUS AMPS: 400 | NEUTRAL: 100% | AIC: 22,000 | MAIN BKR: 400 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	40/2	6.6	DUAL EV CHARGER	a	2	40/2	6.6	DUAL EV CHARGER
3	|			b	4	|		
5	40/2	6.6	DUAL EV CHARGER	c	6	40/2	6.6	DUAL EV CHARGER
7	|			a	8	|		
9	40/2	6.6	DUAL EV CHARGER	b	10	40/2	6.6	DUAL EV CHARGER
11	|			c	12	|		
13	40/2	6.6	DUAL EV CHARGER	a	14	40/2	6.6	DUAL EV CHARGER
15	|			b	16	|		
17	40/2	6.6	DUAL EV CHARGER	c	18	40/2	6.6	DUAL EV CHARGER
19	|			a	20	|		
21	20/1	1.2	PLAZA LOADS	b	22	20/1	1.2	SITE PLUG LOADS
23	20/1	1.2	PLAZA LOADS	c	24	20/1	1.2	SITE PLUG LOADS
25	20/1	1.2	PLAZA LOADS	a	26	40/2	6.6	DUAL EV CHARGER
27	20/1	1.2	PLAZA LOADS	b	28	|		
29	20/1	1.2	PLAZA LOADS	c	30	40/2	6.6	DUAL EV CHARGER
31	20/1	1.2	PLAZA LOADS	a	32	|		
33	20/1	1.8	IRRIGATION CONTROLLER	b	34	-/1	0	SPACE
35	20/1	1.8	IRRIGATION CONTROLLER	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
RECEPTACLES	9.6	9.6	(50%>10)	CONTINUOUS	79.2	99	(125%)
				NONCONTINUOUS	3.6	3.6	(100%)
				TOTAL LOAD		112	
				BALANCED 3-PHASE LOAD		311 A	
				PHASE A		114%	
				PHASE B		93.2%	
				PHASE C		93.2%	

Panel: EV-2 | ROOM | MOUNTING: FLUSH | FED FROM: XMFR-EV | NOTE | VOLTS: 208Y/120V 3P 4W | BUS AMPS: 400 | NEUTRAL: 100% | AIC: 22,000 | MAIN BKR: 400 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	40/2	6.6	DUAL EV CHARGER	a	2	40/2	6.6	DUAL EV CHARGER
3	|			b	4	|		
5	40/2	6.6	DUAL EV CHARGER	c	6	40/2	6.6	DUAL EV CHARGER
7	|			a	8	|		
9	40/2	6.6	DUAL EV CHARGER	b	10	40/2	6.6	DUAL EV CHARGER
11	|			c	12	|		
13	40/2	6.6	DUAL EV CHARGER	a	14	40/2	6.6	DUAL EV CHARGER
15	|			b	16	|		
17	40/2	6.6	DUAL EV CHARGER	c	18	-/1	0	SPACE
19	|			a	20	-/1	0	SPACE
21	40/2	6.6	DUAL EV CHARGER	b	22	-/1	0	SPACE
23	|			c	24	-/1	0	SPACE
25	40/2	6.6	DUAL EV CHARGER	a	26	-/1	0	SPACE
27	|			b	28	-/1	0	SPACE
29	40/2	6.6	DUAL EV CHARGER	c	30	-/1	0	SPACE
31	|			a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
CONTINUOUS	79.2	99	(125%)	TOTAL LOAD	99
				BALANCED 3-PHASE LOAD	275 A
				PHASE A	112%
				PHASE B	101%
				PHASE C	87.3%

Panel: SITE LTG | ROOM | MOUNTING: FLUSH | FED FROM: SITE LOADS | NOTE | VOLTS: 480Y/277V 3P 4W | BUS AMPS: 150 | NEUTRAL: 100% | AIC: 42,000 | MAIN BKR: 100 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	40/1	1	PARKING LOT LIGHTING	a	2	40/1	1	PARKING LOT LIGHTING
3	40/1	1	PARKING LOT LIGHTING	b	4	40/1	1	PARKING LOT LIGHTING
5	40/1	1	PARKING LOT LIGHTING	c	6	40/1	1	PARKING LOT LIGHTING
7	40/1	1	PARKING LOT LIGHTING	a	8	40/1	1	PARKING LOT LIGHTING
9	40/1	1	PARKING LOT LIGHTING	b	10	40/1	1	PARKING LOT LIGHTING
11	40/1	1	PARKING LOT LIGHTING	c	12	40/1	1	PARKING LOT LIGHTING
13	40/1	1	PARKING LOT LIGHTING	a	14	40/1	1	PARKING LOT LIGHTING
15	40/1	1	PARKING LOT LIGHTING	b	16	-/1	0	SPACE
17	40/1	1	PARKING LOT LIGHTING	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	16	20	(125%)	TOTAL LOAD	20
				BALANCED 3-PHASE LOAD	24.1 A
				PHASE A	113%
				PHASE B	93.8%
				PHASE C	93.8%

PARKING AND SITE LIGHTING CIRCUITS SHOWN FOR REFERENCE ONLY. PROVIDED BY OTHERS

Panel: SITE PWR | ROOM | MOUNTING: FLUSH | FED FROM: SITE LOADS | NOTE | VOLTS: 480Y/277V 3P 4W | BUS AMPS: 150 | NEUTRAL: 100% | AIC: 42,000 | MAIN BKR: 100 | LUGS: STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/3	11.6	NORTH TRASH COMPACTOR 1	a	2	20/3	11.6	SOUTH TRASH COMPACTOR 1
3	|			b	4	|		
5	|			c	6	|		
7	20/3	11.6	NORTH TRASH COMPACTOR 2	a	8	20/3	11.6	SOUTH TRASH COMPACTOR 2
9	|			b	10	|		
11	|			c	12	|		
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	11.6	2.91	(25%)	MOTORS	46.6	46.6	(100%)
				TOTAL LOAD		49.5	
				BALANCED 3-PHASE LOAD		59.5 A	
				PHASE A		100%	
				PHASE B		100%	
				PHASE C		100%	

TRASH COMPACTORS LOCATED ON SITE. INSTALLATION BY OTHERS.

XFMR NL1N

ROOM | FED FROM: MSB | NOTE | PRIMARY VOLTS: 480Y/277V 3P 4W | SECONDARY VOLTS: 208Y/120V 3P 4W | AIC: ---- | KVA: 150

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	600/3	PANEL NL1N	42.4	42.2	36.9	(2)3-1/2"C,3#500kcmil AL,#500kcmil AL N,#4/0 AL G
		TOTAL CONNECTED KVA BY PHASE	42.4	42.2	36.9	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA		KVA
APPLIANCES	0.2	CONNECTED LOAD	0.2
		DWELLING UNITS	0
		DEMAND FACTOR	(68%)
		CALCULATED LOAD	0.135

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.799	0.999	(125%)	CONTINUOUS	3.99	4.99	(125%)
LARGEST MOTOR	20.5	5.13	(25%)	NONCONTINUOUS	8.5	8.5	(100%)
MOTORS	3.35	3.35	(100%)	HEATING	89.1	89.1	(100%)
RECEPTACLES	15.7	12.8	(50%>10)	COOLING	75.1	0	(0%)
				TOTAL HOUSE LOAD		125	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	0.135	TOTAL LOAD	125
TOTAL HOUSE LOAD	125	BALANCED 3-PHASE LOAD	347 A

XMFR-EV

ROOM | FED FROM: SITE LOADS | NOTE | PRIMARY VOLTS: 480Y/277V 3P 4W | SECONDARY VOLTS: 208Y/120V 3P 4W | AIC: --- | KVA: 225

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	-/3	PANEL EV-2	29.7	26.4	23.1	(2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0 AL G
2	-/3	PANEL EV-1	35.4	28.5	28.5	(2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0 AL G
		TOTAL CONNECTED KVA BY PHASE	65.1	54.9	51.6	

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
RECEPTACLES	9.6	9.6	(50%>10)	CONTINUOUS	158	198	(125%)
				NONCONTINUOUS	3.6	3.6	(100%)
				TOTAL LOAD		211	
				BALANCED 3-PHASE LOAD		586 A	

XFMR NL1S

ROOM | FED FROM: MSB | NOTE | PRIMARY VOLTS: 480Y/277V 3P 4W | SECONDARY VOLTS: 208Y/120V 3P 4W | AIC: --- | KVA: 112.5

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	400/3	PANEL NL1SA	37.3	35.1	34.1	(2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0 AL G
		TOTAL CONNECTED KVA BY PHASE	37.3	35.1	34.1	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

DWELLING UNIT LOADS

	KVA		KVA
		CONNECTED LOAD	0
		DWELLING UNITS	0
		DEMAND FACTOR	(N/A)
		CALCULATED LOAD	0

HOUSE LOADS

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.07	1.34	(125%)	CONTINUOUS	1.33	1.66	(125%)
LARGEST MOTOR	26.3	6.57	(25%)	NONCONTINUOUS	2.92	2.92	(100%)
MOTORS	20.1	20.1	(100%)	HEATING	63.3	63.3	(100%)
RECEPTACLES	17.7	13.9	(50%>10)	COOLING	57.3	0	(0%)
				TOTAL HOUSE LOAD		110	

TOTAL LOAD

	KVA		KVA
TOTAL DWELLING UNIT LOAD	0	TOTAL LOAD	110
TOTAL HOUSE LOAD	110	BALANCED 3-PHASE LOAD	305 A

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

MG2

PERMIT REVISIONS 2

01/31/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01C

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building CIDwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

NL1N

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 22,000
MOUNTING SURFACE | BUS AMPS 600 | MAIN BKR 600
FED FROM XFMR NL1N | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/2	2	EH-1-2	a	2	20/2	2	EH-1-1
3	|			b	4	|		
5	-/1	0	SPACE	c	6	20/2	2	EH-1-4
7	-/1	0	SPACE	a	8	|		
9	20/2	2	EH-1-15	b	10	-/2	0	SPACE
11	|			c	12	|		
13	20/1	0.54	RECEPTACLE	a	14	20/2	2.5	EH-1-8
15	20/2	2	EH-1-5, EH-1-7	b	16	|		
17	|			c	18	20/1	0.18	RECEPTACLE
19	20/2	1.5	EH-1-6	a	20	-/2	0	SPACE
21	|			b	22	|		
23	20/1	1.44	RECEPTACLE	c	24	20/1	1.44	RECEPTACLE
25	20/1	0.36	RECEPTACLE	a	26	20/2	1.92	MOTORIZED DOOR
27	20/1	0.36	RECEPTACLE	b	28	|		
29	20/1	0.36	RECEPTACLE	c	30	20/1	0.72	RECEPTACLE
31	20/1	0.36	RECEPTACLE	a	32	100/3	0.78	PANEL LTG-N
33	20/1	0.36	RECEPTACLE	b	34	|		
35	20/1	0.36	RECEPTACLE	c	36	|		
37	20/1	0.36	RECEPTACLE	a	38	-/1	0	SPACE
39	20/1	0.36	RECEPTACLE	b	40	-/1	0	SPACE
41	20/1	0.36	RECEPTACLE	c	42	-/1	0	SPACE
43	20/1	0.36	RECEPTACLE	a	44	-/1	0	SPACE
45	20/1	0.36	RECEPTACLE	b	46	-/1	0	SPACE
47	-/1	0	SPACE	c	48	-/1	0	SPACE
49	-/1	0	SPACE	a	50	-/1	0	SPACE
51	-/1	0	SPACE	b	52	-/1	0	SPACE
53	-/1	0	SPACE	c	54	-/1	0	SPACE
55	-/1	0	SPACE	a	56	-/1	0	SPACE
57	-/1	0	SPACE	b	58	-/1	0	SPACE
59	-/1	0	SPACE	c	60	-/1	0	SPACE
61	-/1	0	SPACE	a	62	-/1	0	SPACE
63	-/1	0	SPACE	b	64	-/1	0	SPACE
65	-/1	0	SPACE	c	66	-/1	0	SPACE
			LUG LOAD: 96.6 KVA PANEL NL2N					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.799	0.999	(125%)	RECEPTACLES	15.7	12.8	(50%>10)
APPLIANCE	0.2	0.2	(100%)	CONTINUOUS	3.99	4.99	(125%)
LARGEST MOTOR	20.5	5.13	(25%)	NONCONTINUOUS	8.5	8.5	(100%)
MOTORS	3.35	3.35	(100%)	HEATING	89.1	89.1	(100%)
				COOLING	75.1	0	(0%)
				TOTAL LOAD		125	
				BALANCED 3-PHASE LOAD		347 A	
				PHASE A		105%	
				PHASE B		104%	
				PHASE C		90.9%	

NL6N

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 600 | MAIN BKR MLO
FED FROM NL2N | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	35/3	10.1	DOAS-1	a	2	20/1	0.54	RECEPTACLE
3	|			b	4	20/1	0.54	RECEPTACLE
5	|			c	6	20/1	0.54	RECEPTACLE
7	20/1	0.379	LIGHTING, RECEPTACLE	a	8	20/1	0.54	RECEPTACLE
9	90/3	20.5	CU-7-1	b	10	20/1	0.54	RECEPTACLE
11	|			c	12	20/3	3.99	SF-7-1
13	|			a	14	|		
15	20/1	0.36	RECEPTACLE	b	16	|		
17	90/3	20.5	CU-7-2	c	18	60/3	14.8	CU-7-3
19	|			a	20	|		
21	|			b	22	|		
23	20/1	0.36	RECEPTACLE	c	24	25/2	2.29	OHP-6-1
25	20/1	1.04	RECEPTACLE, REFRIGERATOR	a	26	|		
27	20/1	1	DISPOSAL	b	28	15/2	0.426	ERV-6-1
29	20/1	0.2	MOTOR DAMPER	c	30	|		
31	20/1	0.36	RECEPTACLE	a	32	40/2	8	RANGE
33	20/1	0.54	RECEPTACLE	b	34	|		
35	25/2	2.29	OHP-1-1	c	36	20/1	0.36	RECEPTACLE
37	|			a	38	25/2	2.29	OHP-1-3
39	25/2	2.29	OHP-1-2	b	40	|		
41	|			c	42	-/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.019	0.024	(125%)	RECEPTACLES	5.58	5.58	(50%>10)
APPLIANCE	0.2	0.2	(100%)	CONTINUOUS	3.99	4.99	(125%)
LARGEST MOTOR	20.5	5.13	(25%)	NONCONTINUOUS	8.5	8.5	(100%)
MOTORS	1.43	1.43	(100%)	HEATING	75.1	75.1	(100%)
				COOLING	75.1	0	(0%)
				TOTAL LOAD		101	
				BALANCED 3-PHASE LOAD		280 A	
				PHASE A		106%	
				PHASE B		104%	
				PHASE C		89.8%	

NH4N

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 42,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM NH1N | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE
9	-/1	0	SPACE	b	10	-/1	0	SPACE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA	
TOTAL LOAD			0
BALANCED 3-PHASE LOAD			0 A
PHASE A			0.00%
PHASE B			0.00%
PHASE C			0.00%

NL1SB

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM NL1SA | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/2	0.5	EH-1-11	a	2	20/1	0.9	BATH RM, RECEPTACLE
3	|			b	4	20/1	0.18	RECEPTACLE
5	20/2	2	EH-1-13	c	6	20/2	0.5	EH-1-9
7	|			a	8	|		
9	15/2	0.345	BC-1-4, BC-1-5	b	10	20/2	0.5	EH-1-10
11	|			c	12	|		
13	20/2	2	EH-1-14	a	14	-/3	0	SPACE
15	|			b	16	|		
17	20/1	0.9	RECEPTACLE	c	18	|		
19	20/1	1.18	HWCP	a	20	20/2	0.5	EH-1-12
21	-/1	0	SPACE	b	22	|		
23	70/3	19	BP-1	c	24	20/1	0.54	RECEPTACLE
25	|			a	26	-/1	0	SPACE
27	|			b	28	20/1	1.26	RECEPTACLE
29	15/1	0.48	WH-3, WH-4	c	30	20/1	0.5	LUXER
31	15/1	0.48	WH-1, WH-2	a	32	20/1	0.18	BATH RM
33	20/1	0.36	TRASH CHUTE	b	34	20/1	0.54	RECEPTACLE
35	20/1	0.9	RECEPTACLE	c	36	20/1	0.5	LUXERONE FRIDGE
37	20/1	0.8	FIRE PLACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE
43	-/1	0	SPACE	a	44	-/1	0	SPACE
45	-/1	0	SPACE	b	46	-/1	0	SPACE
47	-/1	0	SPACE	c	48	-/1	0	SPACE
49	-/1	0	SPACE	a	50	-/1	0	SPACE
51	-/1	0	SPACE	b	52	-/1	0	SPACE
53	-/1	0	SPACE	c	54	-/1	0	SPACE
55	-/1	0	SPACE	a	56	-/1	0	SPACE
57	-/1	0	SPACE	b	58	-/1	0	SPACE
59	-/1	0	SPACE	c	60	-/1	0	SPACE
61	-/1	0	SPACE	a	62	-/1	0	SPACE
63	-/1	0	SPACE	b	64	-/1	0	SPACE
65	-/1	0	SPACE	c	66	-/1	0	SPACE
			LUG LOAD: 71.5 KVA PANEL NL2S					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.07	1.34	(125%)	RECEPTACLES	17.7	13.9	(50%>10)
LARGEST MOTOR	26.3	6.57	(25%)	CONTINUOUS	1.33	1.66	(125%)
MOTORS	20.1	20.1	(100%)	NONCONTINUOUS	2.92	2.92	(100%)
				HEATING	63.3	63.3	(100%)
				COOLING	57.3	0	(0%)
				TOTAL LOAD		110	
				BALANCED 3-PHASE LOAD		305 A	
				PHASE A		105%	
				PHASE B		98.9%	
				PHASE C		96%	

NL6S

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM NL2S | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.36	RECEPTACLE	a	2	20/1	0.54	RECEPTACLE
3	20/1	1.08	RECEPTACLE	b	4	20/1	0.54	RECEPTACLE
5	20/1	0.54	RECEPTACLE	c	6	20/1	0.54	RECEPTACLE
7	125/3	26.3	CU-7-4	a	8	20/1	0.54	RECEPTACLE
9	|			b	10	20/1	0.54	RECEPTACLE
11	|			c	12	90/3	20.5	CU-7-5
13	20/1	0.18	RECEPTACLE	a	14	|		
15	15/3	1.33	EF-7-1	b	16	|		
17	|			c	18	35/3	10.1	DOAS-2
19	|			a	20	|		
21	20/1	0.18	RECEPTACLE	b	22	|		
23	20/1	0.18	RECEPTACLE	c	24	20/1	0.36	RECEPTACLE
25	20/1	0.18	RECEPTACLE	a	26	20/1	1.08	RECEPTACLE
27	20/1	0.18	RECEPTACLE	b	28	20/1	0.8	FIRE PLACE IGNITER
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	26.3	6.57	(25%)	CONTINUOUS	1.33	1.66	(125%)
RECEPTACLES	7.02	7.02	(50%>10)	NONCONTINUOUS	0.8	0.8	(100%)
				HEATING	56.9	56.9	(100%)
				COOLING	56.9	0	(0%)
				TOTAL LOAD		73	
				BALANCED 3-PHASE LOAD		203 A	
				PHASE A		101%	
				PHASE B		103%	
				PHASE C		95.5%	

NH5N

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 42,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM MSB | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE
9	-/1	0	SPACE	b	10	-/1	0	SPACE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA	
TOTAL LOAD			0
BALANCED 3-PHASE LOAD			0 A
PHASE A			0.00%
PHASE B			0.00%
PHASE C			0.00%

NL2N

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 600 | MAIN BKR MLO
FED FROM NL1N | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	20/1	0.36	RECEPTACLE
3	-/1	0	SPACE	b	4	20/1	0.36	RECEPTACLE
5	-/1	0	SPACE	c	6	20/1	0.36	RECEPTACLE
7	-/1	0	SPACE	a	8	20/1	0.36	RECEPTACLE
9	-/1	0	SPACE	b	10	20/1	0.36	RECEPTACLE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE
			LUG LOAD: 94.8 KVA PANEL NL6N					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.019	0.024	(125%)	RECEPTACLES	7.38	7.38	(50%>10)
APPLIANCE	0.2	0.2	(100%)	CONTINUOUS	3.99	4.99	(125%)
LARGEST MOTOR	20.5	5.13	(25%)	NONCONTINUOUS	8.5	8.5	(100%)
MOTORS	1.43	1.43	(100%)	HEATING	75.1	75.1	(100%)
				COOLING	75.1	0	(0%)
				TOTAL LOAD		103	
				BALANCED 3-PHASE LOAD		285 A	
				PHASE A		107%	
				PHASE B		104%	
				PHASE C		89.3%	

NH1N

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 65,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM MSB | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE
9	-/1	0	SPACE	b	10	-/1	0	SPACE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE
			LUG LOAD: 0 KVA PANEL NH4N					

	CONN KVA	CALC KVA	
TOTAL LOAD			0
BALANCED 3-PHASE LOAD			0 A
PHASE A			0.00%
PHASE B			0.00%
PHASE C			0.00%

NH6S

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 42,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM NH1S | NEUTRAL 100% | LUGS STANDARD
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE
9	-/1	0	SPACE	b	10	-/1	0	SPACE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE

	CONN KVA	CALC KVA	
TOTAL LOAD			0
BALANCED 3-PHASE LOAD			0 A
PHASE A			0.00%
PHASE B			0.00%
PHASE C			0.00%

NL2S

Panel | ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM NL1SB | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.08	RECEPTACLE	a	2	20/1	0.36	RECEPTACLE
3	20/1	0.54	RECEPTACLE	b	4	20/1	0.36	RECEPTACLE
5	20/1	0.54	RECEPTACLE	c	6	20/1	0.36	RECEPTACLE
7	20/1	0.18	RECEPTACLE	a	8	20/1	0.36	RECEPTACLE
9	20/1	0.18	RECEPTACLE	b	10	20/1	0.36	RECEPTACLE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE
			LUG LOAD: 66.1 KVA PANEL NL6S					

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.07	1.34	(125%)	CONTINUOUS	1.33	1.66	(125%)
LARGEST MOTOR	26.3	6.57	(25%)	NONCONTINUOUS	0.8	0.8	(100%)
RECEPTACLES	11.3	10.7	(50%>10)	HEATING	56.9	56.9	(100%)
				COOLING	56.9	0	(0%)
				TOTAL LOAD		78	
				BALANCED 3-PHASE LOAD		216 A	
				PHASE A		104%	
				PHASE B		103%	
				PHASE C		93.5%	

NH1S

Panel | ROOM | VOLTS 480Y/277V 3P 4W | AIC 65,000
MOUNTING SURFACE | BUS AMPS 400 | MAIN BKR MLO
FED FROM MSB | NEUTRAL 100% | LUGS FEEDTHRU
NOTE

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	-/1	0	SPACE	a	2	-/1	0	SPACE
3	-/1	0	SPACE	b	4	-/1	0	SPACE
5	-/1	0	SPACE	c	6	-/1	0	SPACE
7	-/1	0	SPACE	a	8	-/1	0	SPACE
9	-/1	0	SPACE	b	10	-/1	0	SPACE
11	-/1	0	SPACE	c	12	-/1	0	SPACE
13	-/1	0	SPACE	a	14	-/1	0	SPACE
15	-/1	0	SPACE	b	16	-/1	0	SPACE
17	-/1	0	SPACE	c	18	-/1	0	SPACE
19	-/1	0	SPACE	a	20	-/1	0	SPACE
21	-/1	0	SPACE	b	22	-/1	0	SPACE
23	-/1	0	SPACE	c	24	-/1	0	SPACE
25	-/1	0	SPACE	a	26	-/1	0	SPACE
27	-/1	0	SPACE	b	28	-/1	0	SPACE
29	-/1	0	SPACE	c	30	-/1	0	SPACE
31	-/1	0	SPACE	a	32	-/1	0	SPACE
33	-/1	0	SPACE	b	34	-/1	0	SPACE
35	-/1	0	SPACE	c	36	-/1	0	SPACE
37	-/1	0	SPACE	a	38	-/1	0	SPACE
39	-/1	0	SPACE	b	40	-/1	0	SPACE
41	-/1	0	SPACE	c	42	-/1	0	SPACE
			LUG LOAD: 0 KVA PANEL NH6S					

	CONN KVA	CALC KVA	
TOTAL LOAD			0
BALANCED 3-PHASE LOAD			0 A
PHASE A			0.00%
PHASE B			0.00%
PHASE C			0.00%

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL

XRMR RES–LOWER

ROOM
FED FROM **MSB**
NOTE

PRIMARY VOLTS **480V 3P 3W**
SECONDARY VOLTS **208Y/120V 3P 4W**
AIC **---**
KVA **500**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	SWITCHBOARD DB–RES–LOWER	1,000	829	0	1/2"C,3#1600A BUS,#1600A BUS N,#1600A BUS G
		TOTAL CONNECTED KVA BY PHASE	1,000	829	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	176	58,710 SF (3 VA/SF)	CONNECTED LOAD	1,750
SMALL–APPLIANCE	204		DWELLING UNITS	68
LAUNDRY	102		DEMAND FACTOR	(23%)
APPLIANCES	556		CALCULATED LOAD	402
ELECTRIC COOKING	544		BALANCED 3–PHASE LOAD	1,120 A
HEATING	167	(100%)		

DB–RES–LOWER

ROOM
MOUNTING **FLUSH**
FED FROM **XRMR RES–LOWER**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **1600**
NEUTRAL **100%**
AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	1600/3	SWITCHBOARD BUS TAP 2	1,000	829	0	3#2500A AL BUS,#2500A AL BUS N,#2500A AL BUS G
2	–/3	SPACE	0	0	0	
3	–/3	SPACE	0	0	0	
4	–/3	SPACE	0	0	0	
5	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	1,000	829	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	176	58,710 SF (3 VA/SF)	CONNECTED LOAD	1,750
SMALL–APPLIANCE	204		DWELLING UNITS	68
LAUNDRY	102		DEMAND FACTOR	(23%)
APPLIANCES	556		CALCULATED LOAD	402
ELECTRIC COOKING	544		BALANCED 3–PHASE LOAD	1,120 A
HEATING	167	(100%)		

RES–DIST–3N

ROOM
MOUNTING **FLUSH**
FED FROM **BUS TAP 3**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**
AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	100/2	PANEL 301	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
2	100/2	PANEL 302	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
3	100/2	PANEL 303	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
4	100/2	PANEL 304	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
5	100/2	PANEL 305	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
6	100/2	PANEL 306	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
7	100/2	PANEL 307	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
8	100/2	PANEL 308	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
9	100/2	PANEL 309	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
10	100/2	PANEL 310	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
11	100/2	PANEL 311	15	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
12	125/2	PANEL 312	14.9	12		1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G
13	100/2	PANEL 313	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
14	100/2	PANEL 314	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
15	100/2	PANEL 315	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
16	100/2	PANEL 316	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
17	100/2	PANEL 317	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
18	100/2	PANEL 318	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
19	100/2	PANEL 319	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
20	100/2	PANEL 320	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
21	100/2	PANEL 321	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
22	100/2	PANEL 322	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
23	100/2	PANEL 323	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
24	100/2	PANEL 324	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
25	100/2	PANEL 325	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
26	100/2	PANEL 326	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
27	100/2	PANEL 327	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
28	100/2	PANEL 328	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
29	100/2	PANEL 329	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
30	100/2	PANEL 330	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
31	100/2	PANEL 331	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
32	100/2	PANEL 332	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
33	100/2	PANEL 333	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
34	100/2	PANEL 334	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
35	20/3	DIGITAL METER UNIT	0	0	0	–
36	–/3	SPACE	0	0	0	
37	–/3	SPACE	0	0	0	
38	–/3	SPACE	0	0	0	
39	–/3	SPACE	0	0	0	
40	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	502	414	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	88.1	29,355 SF (3 VA/SF)	CONNECTED LOAD	874
SMALL–APPLIANCE	102		DWELLING UNITS	34
LAUNDRY	51		DEMAND FACTOR	(30%)
APPLIANCES	278		CALCULATED LOAD	262
ELECTRIC COOKING	272		BALANCED 3–PHASE LOAD	728 A
HEATING	83.3	(100%)		

RES–DIST–2N

ROOM
MOUNTING **FLUSH**
FED FROM **BUS TAP 2**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**
AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	FEEDER RACEWAY AND CONDUCTORS
1	100/2	PANEL 201	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
2	100/2	PANEL 202	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
3	100/2	PANEL 203	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
4	100/2	PANEL 204	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
5	100/2	PANEL 205	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
6	100/2	PANEL 206	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
7	100/2	PANEL 207	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
8	100/2	PANEL 208	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
9	100/2	PANEL 209	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
10	100/2	PANEL 210	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
11	100/2	PANEL 211	15	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
12	125/2	PANEL 212	14.9	12		1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G
13	100/2	PANEL 213	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
14	100/2	PANEL 214	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
15	100/2	PANEL 215	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
16	100/2	PANEL 216	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
17	100/2	PANEL 217	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
18	100/2	PANEL 218	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
19	100/2	PANEL 219	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
20	100/2	PANEL 220	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
21	100/2	PANEL 221	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
22	100/2	PANEL 222	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
23	100/2	PANEL 223	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
24	100/2	PANEL 224	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
25	100/2	PANEL 225	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
26	100/2	PANEL 226	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
27	100/2	PANEL 227	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
28	100/2	PANEL 228	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
29	100/2	PANEL 229	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
30	100/2	PANEL 230	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
31	100/2	PANEL 231	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
32	100/2	PANEL 232	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
33	100/2	PANEL 233	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
34	100/2	PANEL 234	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
35	20/3	DIGITAL METER UNIT	0	0	0	–
36	–/2	SPACE	0	0		
37	–/2	SPACE	0	0		
38	–/2	SPACE	0	0		
39	–/2	SPACE	0	0		
40	–/2	SPACE	0	0		
		TOTAL CONNECTED KVA BY PHASE	502	414	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	88.1	29,355 SF (3 VA/SF)	CONNECTED LOAD	874
SMALL–APPLIANCE	102		DWELLING UNITS	34
LAUNDRY	51		DEMAND FACTOR	(30%)
APPLIANCES	278		CALCULATED LOAD	262
ELECTRIC COOKING	272		BALANCED 3–PHASE LOAD	728 A
HEATING	83.3	(100%)		

Panel LTG–N

ROOM
MOUNTING **SURFACE**
FED FROM **NL1N**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **100**
NEUTRAL **100%**
AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	–/1	0	RESERVED	a	2	–/1	0	SPACE
3	20/1	0.15	L2 LIGHTING	b	4	–/1	0	SPACE
5	20/1	0.15	L3 LIGHTING	c	6	–/1	0	SPACE
7	20/1	0.15	L4 LIGHTING	a	8	–/1	0	SPACE
9	20/1	0.15	L5 LIGHTING	b	10	–/1	0	SPACE
11	20/1	0.15	L6 LIGHTING	c	12	–/1	0	SPACE
13	20/1	0.03	L6 AMENITY LIGHTING	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	0.78	0.975	(125%)	TOTAL LOAD	0.975
				BALANCED 3–PHASE LOAD	2.71 A
				PHASE A	69.2%
				PHASE B	115%
				PHASE C	115%

Panel LTG–S

ROOM
MOUNTING **SURFACE**
FED FROM **NL2S**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **100**
NEUTRAL **100%**
AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.236	LOBBY LIGHTING	a	2	–/1	0	SPACE
3	20/1	0.168	L2 LIGHTING	b	4	–/1	0	SPACE
5	20/1	0.168	LIGHTING	c	6	–/1	0	SPACE
7	20/1	0.168	LIGHTING	a	8	–/1	0	SPACE
9	20/1	0.168	LIGHTING	b	10	–/1	0	SPACE
11	20/1	0.168	LIGHTING	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.07	1.34	(125%)	TOTAL LOAD	1.34
				BALANCED 3–PHASE LOAD	3.72 A
				PHASE A	113%
				PHASE B	93.6%
				PHASE C	93.6%

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01E

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5805-01A_Everett Riverfront BLD-C_R22.rvt

DB–RES–UPPER

ROOM
MOUNTING **FLUSH**
FED FROM **XFMR RES–UPPER**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **2000**
NEUTRAL **100%**

AIC **42,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	2000/3	SWITCHBOARD BUS TAP 4	1,480	1,220	0	3#2500A AL BUS,#2500A AL BUS N,#2500A AL BUS G
2	–/3	SPACE	0	0	0	
3	–/3	SPACE	0	0	0	
4	–/3	SPACE	0	0	0	
5	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	1,480	1,220	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	259	86,495 SF (3 VA/SF)	CONNECTED LOAD	2,570
SMALL–APPLIANCE	300		DWELLING UNITS	100
LAUNDRY	150		DEMAND FACTOR	(23%)
APPLIANCES	818		CALCULATED LOAD	592
ELECTRIC COOKING	800		BALANCED 3–PHASE LOAD	1,640 A
HEATING	245	(100%)		

XFMR RES–UPPER

ROOM
FED FROM **MSB**
NOTE

PRIMARY VOLTS **480V 3P 3W**
SECONDARY VOLTS **208Y/120V 3P 4W**

AIC **---**
KVA **750**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	–/3	SWITCHBOARD DB–RES–UPPER	1,480	1,220	0	3#2000A AL BUS,#2000A AL BUS N,#2000A AL BUS G
		TOTAL CONNECTED KVA BY PHASE	1,480	1,220	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	259	86,495 SF (3 VA/SF)	CONNECTED LOAD	2,570
SMALL–APPLIANCE	300		DWELLING UNITS	100
LAUNDRY	150		DEMAND FACTOR	(23%)
APPLIANCES	818		CALCULATED LOAD	592
ELECTRIC COOKING	800		BALANCED 3–PHASE LOAD	1,640 A
HEATING	245	(100%)		

RES–DIST–5S

ROOM
MOUNTING **FLUSH**
FED FROM **BUS TAP 5**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	100/2	PANEL 501	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
2	100/2	PANEL 502	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
3	100/2	PANEL 503	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
4	100/2	PANEL 504	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
5	100/2	PANEL 505	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
6	100/2	PANEL 506	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
7	100/2	PANEL 507	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
8	100/2	PANEL 508	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
9	100/2	PANEL 509	13.6	11.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
10	100/2	PANEL 510	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
11	100/2	PANEL 511	15	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
12	125/2	PANEL 512	14.9	12		1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G
13	100/2	PANEL 513	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
14	100/2	PANEL 514	14.7	13.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
15	100/2	PANEL 515	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
16	100/2	PANEL 516	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
17	100/2	PANEL 517	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
18	100/2	PANEL 518	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
19	100/2	PANEL 519	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
20	100/2	PANEL 520	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
21	100/2	PANEL 521	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
22	100/2	PANEL 522	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
23	100/2	PANEL 523	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
24	100/2	PANEL 524	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
25	100/2	PANEL 525	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
26	100/2	PANEL 526	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
27	100/2	PANEL 527	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
28	100/2	PANEL 528	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
29	100/2	PANEL 529	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
30	100/2	PANEL 530	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
31	100/2	PANEL 531	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
32	100/2	PANEL 532	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
33	100/2	PANEL 533	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
34	100/2	PANEL 534	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
35	20/3	DIGITAL METER UNIT	0	0	0	–
36	–/3	SPACE	0	0	0	
37	–/3	SPACE	0	0	0	
38	–/3	SPACE	0	0	0	
39	–/3	SPACE	0	0	0	
40	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	501	414	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	88.1	29,365 SF (3 VA/SF)	CONNECTED LOAD	874
SMALL–APPLIANCE	102		DWELLING UNITS	34
LAUNDRY	51		DEMAND FACTOR	(30%)
APPLIANCES	278		CALCULATED LOAD	262
ELECTRIC COOKING	272		BALANCED 3–PHASE LOAD	728 A
HEATING	83.3	(100%)		

RES–DIST–4S

ROOM
MOUNTING **FLUSH**
FED FROM **BUS TAP 4**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	100/2	PANEL 401	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
2	100/2	PANEL 402	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
3	100/2	PANEL 403	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
4	100/2	PANEL 404	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
5	100/2	PANEL 405	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
6	100/2	PANEL 406	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
7	100/2	PANEL 407	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
8	100/2	PANEL 408	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
9	100/2	PANEL 409	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
10	100/2	PANEL 410	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
11	100/2	PANEL 411	15	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
12	125/2	PANEL 412	14.9	12		1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G
13	100/2	PANEL 413	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
14	100/2	PANEL 414	14.9	13.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
15	100/2	PANEL 415	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
16	100/2	PANEL 416	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
17	100/2	PANEL 417	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
18	100/2	PANEL 418	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
19	100/2	PANEL 419	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
20	100/2	PANEL 420	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
21	100/2	PANEL 421	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
22	100/2	PANEL 422	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
23	100/2	PANEL 423	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
24	100/2	PANEL 424	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
25	100/2	PANEL 425	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
26	100/2	PANEL 426	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
27	100/2	PANEL 427	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
28	100/2	PANEL 428	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
29	100/2	PANEL 429	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
30	100/2	PANEL 430	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
31	100/2	PANEL 431	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
32	100/2	PANEL 432	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
33	100/2	PANEL 433	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
34	100/2	PANEL 434	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
35	20/3	DIGITAL METER UNIT	0	0	0	–
36	–/3	SPACE	0	0	0	
37	–/3	SPACE	0	0	0	
38	–/3	SPACE	0	0	0	
39	–/3	SPACE	0	0	0	
40	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	502	414	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	88.1	29,355 SF (3 VA/SF)	CONNECTED LOAD	874
SMALL–APPLIANCE	102		DWELLING UNITS	34
LAUNDRY	51		DEMAND FACTOR	(30%)
APPLIANCES	278		CALCULATED LOAD	262
ELECTRIC COOKING	272		BALANCED 3–PHASE LOAD	728 A
HEATING	83.3	(100%)		

RES–DIST–6S

ROOM
MOUNTING **FLUSH**
FED FROM **BUS TAP 6**
NOTE

VOLTS **208Y/120V 3P 4W**
BUS AMPS **800**
NEUTRAL **100%**

AIC **22,000**
MAIN BKR **MLO**
LUGS **STANDARD**

CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	FEEDER RACEWAY AND CONDUCTORS
1	100/2	PANEL 601	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
2	100/2	PANEL 602	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
3	100/2	PANEL 603	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
4	100/2	PANEL 604	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
5	100/2	PANEL 605	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
6	100/2	PANEL 606	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
7	100/2	PANEL 607	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
8	100/2	PANEL 608	14.8	13.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
9	100/2	PANEL 609	13.6	11.6		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
10	100/2	PANEL 610	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
11	100/2	PANEL 611	15	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
12	125/2	PANEL 612	14.9	12		1–1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G
13	100/2	PANEL 614	14.7	13.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
14	100/2	PANEL 616	13.9	11.7		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
15	100/2	PANEL 617	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
16	100/2	PANEL 618	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
17	100/2	PANEL 619	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
18	100/2	PANEL 620	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
19	100/2	PANEL 621	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
20	100/2	PANEL 622	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
21	100/2	PANEL 623	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
22	100/2	PANEL 624	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
23	100/2	PANEL 625	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
24	100/2	PANEL 626	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
25	100/2	PANEL 627	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
26	100/2	PANEL 628	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
27	100/2	PANEL 629	14.7	11.5		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
28	100/2	PANEL 630	15.1	12		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
29	100/2	PANEL 631	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
30	100/2	PANEL 632	13.8	11.4		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
31	100/2	PANEL 633	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
32	100/2	PANEL 634	15.1	13.8		1–1/2"C,2#1/0 AL,#1/0 AL N,#6 AL G
33	20/3	DIGITAL METER UNIT	0	0	0	–
34	–/3	SPACE	0	0	0	
35	–/3	SPACE	0	0	0	
36	–/3	SPACE	0	0	0	
37	–/3	SPACE	0	0	0	
38	–/3	SPACE	0	0	0	
39	–/3	SPACE	0	0	0	
40	–/3	SPACE	0	0	0	
		TOTAL CONNECTED KVA BY PHASE	472	389	0	

OPTIONAL MULTIFAMILY DWELLING CALCULATION (NEC 220.84)

	KVA			KVA
LIGHTING AND RECEPTACLES	83.3	27,775 SF (3 VA/SF)	CONNECTED LOAD	823
SMALL–APPLIANCE	96		DWELLING UNITS	32
LAUNDRY	48		DEMAND FACTOR	(31%)
APPLIANCES	262		CALCULATED LOAD	255
ELECTRIC COOKING	256		BALANCED 3–PHASE LOAD	708 A
HEATING	78.3	(100%)		

F:\1073-001 Riverfront Apartments - Building CIDwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt
1/31/2024 3:32:33 PM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01F

B01

Panel B01 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.35	AFCI LIGHTING, RECEPTACLE
11	50/2	8	GFCI RANGE	b	12	20/1	1.05	AFCI LIGHTING, MEDIA BOX, RECEPTACLE, SD
13	|			a	14	20/2	0.75	EWH-0.50
15	20/2	1	EH-1	b	16	|		
17	|			a	18	-/1	0	SPACE
19	-/1	0	SPACE	b	20	-/1	0	SPACE
21	-/1	0	SPACE	a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	1.73	575 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	12.4	4.96	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.14	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.1	
ELECTRIC COOKING	8		BALANCED LOAD		77.4 A	
TOTAL GENERAL LOAD	22.4		PHASE A		109%	
			PHASE B		91.3%	

B02

Panel B02 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.35	AFCI LIGHTING, RECEPTACLE
11	50/2	8	GFCI RANGE	b	12	20/1	1.23	AFCI LIGHTING, MEDIA BOX, RECEPTACLE, SD
13	|			a	14	20/2	1	EH-1
15	20/2	1	EH-1	b	16	|		
17	|			a	18	-/1	0	SPACE
19	-/1	0	SPACE	b	20	-/1	0	SPACE
21	-/1	0	SPACE	a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	1.74	580 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	12.4	4.97	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.3	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.3	
ELECTRIC COOKING	8		BALANCED LOAD		78.2 A	
TOTAL GENERAL LOAD	22.4		PHASE A		108%	
			PHASE B		92%	

B03

Panel B03 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.11	AFCI LIGHTING, RECEPTACLE
11	50/2	8	GFCI RANGE	b	12	20/1	1.29	AFCI LIGHTING, MEDIA BOX, RECEPTACLE, SD
13	|			a	14	20/2	0.75	EWH-0.50
15	20/2	1	EH-1	b	16	|		
17	|			a	18	-/1	0	SPACE
19	-/1	0	SPACE	b	20	-/1	0	SPACE
21	-/1	0	SPACE	a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	1.8	600 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	12.5	4.99	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.14	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.1	
ELECTRIC COOKING	8		BALANCED LOAD		77.5 A	
TOTAL GENERAL LOAD	22.5		PHASE A		107%	
			PHASE B		93%	

C01

Panel C01 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.371	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.17	AFCI LIGHTING, MEDIA BOX, RECEPTACLE
11	50/2	8	GFCI RANGE	b	12	20/1	1.18	AFCI LIGHTING, RECEPTACLE, SD
13	|			a	14	20/1	1.11	AFCI LIGHTING, RECEPTACLE
15	20/2	0.75	EWH-0.75	b	16	20/2	1	EH-1
17	|			a	18	|		
19	-/1	0	SPACE	b	20	20/1	0	AFCI SMALL APPLIANCE
21	-/1	0	SPACE	a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.55	850 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13.2	5.29	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.14	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.4	
ELECTRIC COOKING	8		BALANCED LOAD		79 A	
TOTAL GENERAL LOAD	23.2		PHASE A		111%	
			PHASE B		88.9%	

C02

Panel C02 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	SMALL APPLIANCE	a	2	20/1	1.5	WASHER
3	20/1	1.5	SMALL APPLIANCE	b	4	30/2	4.98	DRYER
5	50/2	8	RANGE	a	6	|		
7	|			b	8	20/1	0.356	BATH RM, ERV, LIGHTING
9	20/1	1.4	MICRO/HOOD	a	10	20/1	0.88	LIGHTING, RECEPTACLE, SD
11	20/1	0.7	DISPOSAL	b	12	20/1	1.13	LIGHTING, RECEPTACLE
13	20/1	1.1	DISHWASHER	a	14	20/1	1.05	LIGHTING, MEDIA BOX, RECEPTACLE, SD
15	20/2	1.5	EH-1.5	b	16	-/1	0	SPACE
17	|			a	18	-/1	0	SPACE
19	20/2	0.75	EWH-0.50	b	20	-/1	0	SPACE
21	|			a	22	-/1	0	SPACE
23	20/1	1.5	SMALL APPLIANCE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.55	850 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	4.5		OVER 10 KVA	14.7	5.89	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.46	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		17.4	
ELECTRIC COOKING	8		BALANCED LOAD		83.4 A	
TOTAL GENERAL LOAD	24.7		PHASE A		107%	
			PHASE B		92.7%	

C03

Panel C03 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.32	AFCI LIGHTING, RECEPTACLE, SD
11	50/2	8	GFCI RANGE	b	12	20/1	1.03	AFCI RECEPTACLE, SD
13	|			a	14	20/1	0.735	AFCI LIGHTING, MEDIA BOX, RECEPTACLE
15	20/2	1.5	EH-1.5	b	16	20/2	0.75	EWH-0.50
17	|			a	18	|		
19	20/2	0.75	EWH-0.50	b	20	-/1	0	SPACE
21	|			a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.31	770 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13	5.2	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.95	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		17.1	
ELECTRIC COOKING	8		BALANCED LOAD		82.4 A	
TOTAL GENERAL LOAD	23		PHASE A		110%	
			PHASE B		89.6%	

C04

Panel C04 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 125 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	1.17	AFCI LIGHTING, RECEPTACLE
11	50/2	8	GFCI RANGE	b	12	20/1	1.29	AFCI LIGHTING, RECEPTACLE
13	|			a	14	20/1	0.915	AFCI LIGHTING, MEDIA BOX, RECEPTACLE, SD
15	20/2	0.75	EWH-0.50	b	16	20/2	1	EH-1
17	|			a	18	|		
19	20/2	0.75	EWH-0.75	b	20	-/1	0	SPACE
21	|			a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.54	845 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13.2	5.29	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.63	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.9	
ELECTRIC COOKING	8		BALANCED LOAD		81.3 A	
TOTAL GENERAL LOAD	23.2		PHASE A		110%	
			PHASE B		90.2%	

C05

Panel C05 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.685	LIGHTING, RECEPTACLE, SD	a	2	20/1	1.5	SMALL APPLIANCE
3	20/1	1.16	LIGHTING, RECEPTACLE	b	4	20/1	1.5	SMALL APPLIANCE
5	20/1	0.356	BATH RM, ERV, LIGHTING	a	6	20/1	1.4	MICRO/HOOD
7	20/1	1.05	LIGHTING, MEDIA BOX, RECEPTACLE, SD	b	8	50/2	8	RANGE
9	30/2	4.98	DRYER	a	10	|		
11	|			b	12	20/1	0.7	DISPOSAL
13	20/1	1.5	WASHER	a	14	20/1	1.1	DISHWASHER
15	-/1	0	SPACE	b	16	20/2	0.75	EWH-0.50
17	-/1	0	SPACE	a	18	|		
19	-/1	0	SPACE	b	20	20/2	1.5	EH-1.5
21	-/1	0	SPACE	a	22	|		
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.55	850 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13.2	5.29	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.46	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		16.8	
ELECTRIC COOKING	8		BALANCED LOAD		80.6 A	
TOTAL GENERAL LOAD	23.2		PHASE A		107%	
			PHASE B		92.6%	

D01

Panel D01 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.226	AFCI BATH RM, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	0.552	AFCI BATH RM, ERV, LIGHTING
11	50/2	8	GFCI RANGE	b	12	20/1	1.66	AFCI LIGHTING, RECEPTACLE, SD
13	|			a	14	20/1	1.31	AFCI LIGHTING, MEDIA BOX, RECEPTACLE
15	20/2	1.5	EH-1.5	b	16	20/1	1.24	AFCI LIGHTING, RECEPTACLE, SD
17	|			a	18	20/2	0.75	EWH-0.50
19	-/1	0	SPACE	b	20	|		
21	-/1	0	SPACE	a	22	20/2	0.75	EWH-0.75
23	-/1	0	SPACE	b	24	|		

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	3.03	1,010 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13.7	5.48	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.95	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		17.4	
ELECTRIC COOKING	8		BALANCED LOAD		83.8 A	
TOTAL GENERAL LOAD	23.7		PHASE A		104%	
			PHASE B		96.1%	

D02

Panel D02 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	0.422	AFCI BATH RM, LIGHTING
11	50/2	8	GFCI RANGE	b	12	20/1	1.14	AFCI LIGHTING, RECEPTACLE, SD
13	|			a	14	20/1	1.13	AFCI LIGHTING, MEDIA BOX, RECEPTACLE
15	20/2	2	EH-2	b	16	20/1	1.3	AFCI LIGHTING, RECEPTACLE, SD
17	|			a	18	20/2	0.75	EWH-0.50
19	20/2	1	EH-1	b	20	|		
21	|			a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	3.56	1,185 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	14.2	5.69	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		2.44	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		18.1	
ELECTRIC COOKING	8		BALANCED LOAD		87.2 A	
TOTAL GENERAL LOAD	24.2		PHASE A		104%	
			PHASE B		96.1%	

D03

Panel D03 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	0.422	AFCI BATH RM, LIGHTING
11	50/2	8	GFCI RANGE	b	12	20/1	1.34	AFCI LIGHTING, MEDIA BOX, RECEPTACLE, SD
13	|			a	14	20/1	1.26	AFCI LIGHTING, RECEPTACLE, SD
15	20/2	1	EH-1	b	16	20/1	1.11	AFCI LIGHTING, RECEPTACLE
17	|			a	18	20/2	0.75	EWH-0.50
19	20/2	2	EH-2	b	20	|		
21	|			a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	3.57	1,190 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	14.3	5.7	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		2.44	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		18.1	
ELECTRIC COOKING	8		BALANCED LOAD		87.2 A	
TOTAL GENERAL LOAD	24.3		PHASE A		104%	
			PHASE B		95.7%	

D04

Panel D04 | ROOM | MOUNTING FLUSH | FED FROM | NOTE | VOLTS 208/120V 2P 3W | BUS AMPS 100 | NEUTRAL 100% | AIC 22,000 | MAIN BKR MLO | LUGS STANDARD

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.5	AFCI SMALL APPLIANCE	a	2	20/1	1.5	AFCI WASHER
3	20/1	1.5	AFCI SMALL APPLIANCE	b	4	30/2	4.98	GFCI DRYER
5	20/1	0.7	AFCI DISPOSAL	a	6	|		
7	20/1	1.1	AFCI DISHWASHER	b	8	20/1	0.422	AFCI BATH RM, LIGHTING
9	20/1	1.4	AFCI MICRO/HOOD	a	10	20/1	0.356	AFCI BATH RM, ERV, LIGHTING
11	50/2	8	GFCI RANGE	b	12	20/1	1.17	AFCI LIGHTING, MEDIA BOX, RECEPTACLE
13	|			a	14	20/1	1.27	AFCI LIGHTING, RECEPTACLE, SD
15	20/2	0.75	EWH-0.75	b	16	20/1	1.24	AFCI LIGHTING, RECEPTACLE, SD
17	|			a	18	20/2	1.5	EH-1.5
19	20/2	0.75	EWH-0.50	b	20	|		
21	|			a	22	-/1	0	SPACE
23	-/1	0	SPACE	b	24	-/1	0	SPACE

OPTIONAL DWELLING UNIT CALCULATION (NEC 220.82)

	CONN KVA			CONN KVA	CALC KVA	
LIGHTING AND RECEPTACLES	2.99	995 SF (3 VA/SF)	GENERAL LOAD UP TO 10 KVA	10	10	(100%)
SMALL-APPLIANCE	3		OVER 10 KVA	13.7	5.47	(40%)
LAUNDRY	1.5		MAX HEATING OR COOLING		1.95	(220.82(C)(4))
APPLIANCES	8.18		TOTAL LOAD		17.4	
ELECTRIC COOKING	8		BALANCED LOAD		83.7 A	
TOTAL GENERAL LOAD	23.7		PHASE A		104%	
			PHASE B		95.9%	

F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5805-01A_Everett Riverfront BLD-C_R22.rvt
1/31/2024 3:32:33 PM

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.963.5343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01G

CF4

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **MSB** | NOTE | VOLTS **480Y/277V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **MLO** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	–/1	0	SPACE	a	2	–/1	0	SPACE
3	–/1	0	SPACE	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	125/3	1.44	XFMR CF4 XFMR
39	–/1	0	SPACE	b	40	|		
41	–/1	0	SPACE	c	42	|		

	CONN KVA	CALC KVA			CALC KVA
RECEPTACLES	1.44	1.44	(50%>10)	TOTAL LOAD	1.44
				BALANCED 3–PHASE LOAD	1.73 A
				PHASE A	300%
				PHASE B	0%
				PHASE C	0%

CF3

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **MSB** | NOTE | VOLTS **480Y/277V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **MLO** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	4.2	ETWH	a	2	–/1	0	SPACE
3	20/1	4.2	ETWH	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	125/3	0.893	XFMR CF3 XFMR
39	–/1	0	SPACE	b	40	|		
41	–/1	0	SPACE	c	42	|		

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	0.72	0.72	(50%>10)
				HEATING	8.57	8.57	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		9.34	
				BALANCED 3–PHASE LOAD		11.2 A	
				PHASE A		159%	
				PHASE B		138%	
				PHASE C		3.21%	

CF2

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **MSB** | NOTE | VOLTS **480Y/277V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **42,000** | MAIN BKR **MLO** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	4.2	ETWH	a	2	–/1	0	SPACE
3	20/1	4.2	ETWH	b	4	–/1	0	SPACE
5	20/1	4.2	ETWH	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	125/3	1.25	XFMR CF2 XFMR
39	–/1	0	SPACE	b	40	|		
41	–/1	0	SPACE	c	42	|		

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	1.08	1.08	(50%>10)
				HEATING	12.8	12.8	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		13.9	
				BALANCED 3–PHASE LOAD		16.7 A	
				PHASE A		114%	
				PHASE B		92.8%	
				PHASE C		92.8%	

CF1

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **MSB** | NOTE | VOLTS **480Y/277V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **42,000** | MAIN BKR **MLO** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	4.2	ETWH	a	2	–/1	0	SPACE
3	20/1	4.2	ETWH	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	125/3	1.07	XFMR CF1 XFMR
39	–/1	0	SPACE	b	40	|		
41	–/1	0	SPACE	c	42	|		

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	0.9	0.9	(50%>10)
				HEATING	8.57	8.57	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		9.52	
				BALANCED 3–PHASE LOAD		11.4 A	
				PHASE A		161%	
				PHASE B		136%	
				PHASE C		3.15%	

CF4L

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **CF4 XFMR** | NOTE | VOLTS **208Y/120V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **200** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.44	RECEPTACLE	a	2	–/1	0	SPACE
3	–/1	0	SPACE	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
RECEPTACLES	1.44	1.44	(50%>10)	TOTAL LOAD	1.44
				BALANCED 3–PHASE LOAD	4 A
				PHASE A	300%
				PHASE B	0%
				PHASE C	0%

CF3L

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **CF3 XFMR** | NOTE | VOLTS **208Y/120V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **200** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.72	RECEPTACLE	a	2	–/1	0	SPACE
3	15/2	0.173	BC–1–3	b	4	–/1	0	SPACE
5	|			c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	0.72	0.72	(50%>10)
				HEATING	0.173	0.173	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		0.936	
				BALANCED 3–PHASE LOAD		2.6 A	
				PHASE A		235%	
				PHASE B		32.5%	
				PHASE C		32.5%	

CF2L

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **CF2 XFMR** | NOTE | VOLTS **208Y/120V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **200** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.08	RECEPTACLE	a	2	–/1	0	SPACE
3	15/2	0.173	BC–1–2	b	4	–/1	0	SPACE
5	|			c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	1.08	1.08	(50%>10)
				HEATING	0.173	0.173	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		1.3	
				BALANCED 3–PHASE LOAD		3.6 A	
				PHASE A		253%	
				PHASE B		23.4%	
				PHASE C		23.4%	

CF1L

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **CF1 XFMR** | NOTE | VOLTS **208Y/120V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **200** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.9	RECEPTACLE	a	2	–/1	0	SPACE
3	15/2	0.173	BC–1–1	b	4	–/1	0	SPACE
5	|			c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LARGEST MOTOR	0.173	0.043	(25%)	RECEPTACLES	0.9	0.9	(50%>10)
				HEATING	0.173	0.173	(100%)
				COOLING	0.173	0	(0%)
				TOTAL LOAD		1.12	
				BALANCED 3–PHASE LOAD		3.1 A	
				PHASE A		246%	
				PHASE B		27.2%	
				PHASE C		27.2%	

CF5L

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **CF5 XFMR** | NOTE | VOLTS **208Y/120V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **200** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	1.08	RECEPTACLE	a	2	–/1	0	SPACE
3	–/1	0	SPACE	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	–/1	0	SPACE
39	–/1	0	SPACE	b	40	–/1	0	SPACE
41	–/1	0	SPACE	c	42	–/1	0	SPACE

	CONN KVA	CALC KVA			CALC KVA
RECEPTACLES	1.08	1.08	(50%>10)	TOTAL LOAD	1.08
				BALANCED 3–PHASE LOAD	3 A
				PHASE A	300%
				PHASE B	0%
				PHASE C	0%

CF5

Panel | ROOM | MOUNTING **FLUSH** | FED FROM **MSB** | NOTE | VOLTS **480Y/277V 3P 4W** | BUS AMPS **200** | NEUTRAL **100%** | AIC **22,000** | MAIN BKR **MLO** | LUGS **STANDARD**

CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION		CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	4.2	ETWH	a	2	–/1	0	SPACE
3	20/1	4.2	ETWH	b	4	–/1	0	SPACE
5	–/1	0	SPACE	c	6	–/1	0	SPACE
7	–/1	0	SPACE	a	8	–/1	0	SPACE
9	–/1	0	SPACE	b	10	–/1	0	SPACE
11	–/1	0	SPACE	c	12	–/1	0	SPACE
13	–/1	0	SPACE	a	14	–/1	0	SPACE
15	–/1	0	SPACE	b	16	–/1	0	SPACE
17	–/1	0	SPACE	c	18	–/1	0	SPACE
19	–/1	0	SPACE	a	20	–/1	0	SPACE
21	–/1	0	SPACE	b	22	–/1	0	SPACE
23	–/1	0	SPACE	c	24	–/1	0	SPACE
25	–/1	0	SPACE	a	26	–/1	0	SPACE
27	–/1	0	SPACE	b	28	–/1	0	SPACE
29	–/1	0	SPACE	c	30	–/1	0	SPACE
31	–/1	0	SPACE	a	32	–/1	0	SPACE
33	–/1	0	SPACE	b	34	–/1	0	SPACE
35	–/1	0	SPACE	c	36	–/1	0	SPACE
37	–/1	0	SPACE	a	38	125/3	1.08	XFMR CF5 XFMR
39	–/1	0	SPACE	b	40	|		
41	–/1	0	SPACE	c	42	|		

	CONN KVA	CALC KVA			CALC KVA
RECEPTACLES	1.08	1.08	(50%>10)	TOTAL LOAD	9.48
HEATING	8.4	8.4	(100%)	BALANCED 3–PHASE LOAD	11.4 A
				PHASE A	167%
				PHASE B	133%
				PHASE C	0%

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.363.3343 TEL
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

ELECTRICAL PANEL SCHEDULES

E5.01H

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5805-01A_Everett Riverfront BLD-C_R22.rvt

FAULT CURRENT SCHEDULE

DEVICE	FAULT	AIC RATING	L-N VOLTS	FED FROM		FEEDER		TOTAL MOTOR
				DEVICE	FAULT	SIZE	LENGTH	FAULT
GEN	35,714		277V					714
GENERATOR SWITCHBOARD	32,940	42,000	277V	GEN	35,000	(2)#250kcmil AL	21'	716
ATS-EM	22,846	42,000	277V	GENERATOR SWITCHBOARD / EMERGENCY LOADS	32,224 / 62,745	#1/0 AL-1	37' / 47'	124
EM-H1	20,071	42,000	277V	ATS-EM	22,722	#250kcmil AL	18'	95
EM-H6	7,918	22,000	277V	EM-H1	19,976	#250kcmil AL	225'	13
XFMR-EL1	2,096	---	120V	EM-H1	19,976	#4	21'	9
EM-LN	2,053	22,000	120V	XFMR-EL1	2,087	#250kcmil AL	22'	9
EM-LS	1,996	22,000	120V	EM-LN	2,044	#250kcmil AL	30'	9
ATS-FP	37,129	65,000	277V	GENERATOR SWITCHBOARD / FIRE PUMP TAP	32,224 / 62,745	(2)#250kcmil AL	21' / 77'	522
ATS-LR	43,789	65,000	277V	GENERATOR SWITCHBOARD / EMERGENCY LOADS	32,224 / 62,745	(2)#250kcmil AL	32' / 53'	955
LR-H1	37,937	42,000	277V	ATS-LR	42,834	(2)#250kcmil AL	22'	847
LR-H6	8,409	22,000	277V	LR-H1	37,090	#250kcmil AL	278'	39
XFMR-STBY	3,039	----	120V	LR-H1	37,090	#350kcmil AL	19'	952
LR-L1	3,026	22,000	120V	XFMR-STBY	2,087	(2)#250kcmil AL	17'	956
LR-L1N	2,998	22,000	120V	LR-L1	2,070	(2)#250kcmil AL	22'	951
LR-L6	2,546	22,000	120V	LR-L1N	2,047	(2)#250kcmil AL	278'	778
SS PULL	64,230	100,000	277V	MV-LV	62,745		14'	1,485
BLDG C MAIN	63,100	100,000	277V	SS PULL	62,745	(8)#600kcmil AL	13'	1,428
EMERGENCY LOADS	64,226	100,000	277V	SS PULL	62,745		16'	1,481
FIRE PUMP TAP	64,225	100,000	277V	SS PULL	62,745		19'	1,480
SITE LOADS	64,225	100,000	277V	SS PULL	62,745		16'	1,480
SITE LTG	36,667	42,000	277V	SITE LOADS	62,745	#1	29'	399
SITE POWER	35,454	42,000	277V	SITE LOADS	62,745	#1	31'	533
XMFR-EV	2,087	---	120V	SITE LOADS	62,745	(2)#250kcmil AL	38'	
EV-1	2,062	22,000	120V	XMFR-EV	2,087	(2)#250kcmil AL	24'	
EV-2	2,064	22,000	120V	XMFR-EV	2,087	(2)#250kcmil AL	23'	
UNIT SUBSTATION (BY OTHERS)	64,228	100,000	277V	SS PULL	62,745		19'	1,483
PULL	61,947	100,000	277V	UNIT SUBSTATION (BY OTHERS)	62,745	#2500A AL BUS	38'	1,413
MSB	61,947	100,000	277V	PULL	60,534		14'	1,413
CF1	22,630	42,000	277V	MSB	60,534	#250kcmil AL	94'	151
CF2	23,723	42,000	277V	MSB	60,534	#250kcmil AL	88'	167
CF3	17,912	22,000	277V	MSB	60,534	#250kcmil AL	129'	90
CF4	12,529	22,000	277V	MSB	60,534	#250kcmil AL	201'	41
CF5	9,603	22,000	277V	MSB	60,534	#250kcmil AL	273'	23
NH1N	48,261	65,000	277V	MSB	60,534	(2)#250kcmil AL	33'	816
NH4N	17,797	42,000	277V	NH1N	47,445	(2)#250kcmil AL	197'	85
NH1S	45,994	65,000	277V	MSB	60,534	(2)#250kcmil AL	40'	732
NH6S	14,406	42,000	277V	NH1S	45,262	(2)#250kcmil AL	260'	53
NH5N	19,146	42,000	277V	MSB	60,534	(2)#250kcmil AL	210'	99
XFMR NL1N	14,230	----	120V	MSB	60,534	#4/0 AL	26'	661
NL1N	13,662	22,000	120V	XFMR NL1N	13,569	(2)#500kcmil AL	16'	660
NL2N	8,968	10,000	120V	NL1N	13,002	(2)#500kcmil AL	198'	657
NL6N	8,662	10,000	120V	NL2N	8,311	(2)#500kcmil AL	20'	657
XFMR NL1S	14,283	---	120V	MSB	60,534	#4/0 AL	26'	714
NL1SA	13,597	22,000	120V	XFMR NL1S	13,569	(2)#250kcmil AL	14'	713
NL1SB	6,919	10,000	120V	NL1SA	12,884	(2)#250kcmil AL	222'	727
NL2S	6,145	10,000	120V	NL1SB	6,192	(2)#250kcmil AL	49'	657
NL6S	5,325	10,000	120V	NL2S	5,488	(2)#250kcmil AL	71'	623
XFMR RES-UPPER	28,349	---	120V	MSB	60,534	(4)#500kcmil AL	37'	131
DB-RES-UPPER	27,296	42,000	120V	XFMR RES-UPPER	28,218	#2000A AL BUS	28'	121
BUS TAP 4	21,163	100,000	120V	DB-RES-UPPER	27,175	#2500A AL BUS	238'	68
BUS TAP 5	20,724	100,000	120V	BUS TAP 4	21,095	#2500A AL BUS	20'	64
BUS TAP 6	20,299	100,000	120V	BUS TAP 5	20,660	#2500A AL BUS	20'	62

FAULT CURRENT SCHEDULE (CONT.)

DEVICE	FAULT	AIC RATING	L-N VOLTS	FED FROM		FEEDER		TOTAL MOTOR
				DEVICE	FAULT	SIZE	LENGTH	FAULT
RES-DIST-6S	19,603	22,000	120V	BUS TAP 6	20,237	(3)#400kcmil AL	110'	57
RES-DIST-5S	20,004	22,000	120V	BUS TAP 5	20,660	(3)#400kcmil AL	110'	60
RES-DIST-4S	20,417	22,000	120V	BUS TAP 4	21,095	(3)#400kcmil AL	110'	63
XRMR RES-LOWER	38,741	---	120V	MSB	60,534	(3)#400kcmil AL	131'	244
DB-RES-LOWER	36,175	42,000	120V	XRMR RES-LOWER	38,497	#1600A BUS	23'	212
BUS TAP 2	26,787	100,000	120V	DB-RES-LOWER	35,963	#2500A AL BUS	214'	107
BUS TAP 3	26,070	100,000	120V	BUS TAP 2	26,680	#2500A AL BUS	20'	101
RES-DIST-3N	24,926	***22,000***	120V	BUS TAP 3	25,969	(3)#400kcmil AL	110'	92
RES-DIST-2N	25,588	***22,000***	120V	BUS TAP 2	26,680	(3)#400kcmil AL	110'	97

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.964.3343 tb.
CONTACT: MARK STEINKE

MARK V. STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/15/23	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

FAULT CALCULATIONS

E5.02

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

LIGHTING COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2024 NEEA, All rights reserved

Project & Applicant Information			For Building Department Use: Date: Feb 06, 2024
	Project Title	Riverfront - Building C - 2018 WSEC	
	Project Address	3710 Riverfront BLVD Everett, WA 98203	
	Applicant Name	Michelle Rockstead	
	Applicant Phone	206-343-3343	
	Applicant Email	mrockstead@robisonengineering.com	

For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com

General Occupancy	Mixed Use - Commercial + Group R building over 3 stories		General Building Use Type		Multifamily/Residential, Mixed Use	Building Cond. Floor Area	195,911
General Project Types	New Building	New Building or Addition Lighting Scope	Interior Lighting Exterior Lighting	Alteration Lighting Scope		Project Cond. Floor Area	195,911
						Floors Above Grade	6
						Compliance Method	Compliance Method 1 - General
Lighting Project Description							

Lighting Compliance Scope and Method	Project Type	Interior / Exterior (Interior includes both interior & parking)	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	New Building	Interior Lighting		Space by space	No Calculation Adjustments selected	COMPLIES
	New Building	Exterior Lighting			Not applicable to exterior	COMPLIES

Project Title	Riverfront - Building C - 2018 WSEC	Date	Feb 06, 2024
Lighting Power Calculation	NEW BUILDING - INTERIOR LIGHTING	Compliance Verification	COMPLIES
Compliance Method	Space by space	LPA Calculation Adjustment	none

Interior Lighting Power Allowance - Space by Space

General Space Type	Specific Space Type	Gross Interior Area (SF)	LPA (Watts/SF)	Total Watts Allowed (SF x LPA x 1)	Total Proposed Watts (LPD = Display LPD)	Compliance Status
Corridors	General	18,395	0.41	7,542		
Electrical/mechanical		3,318	0.43	1,427		
Lobby	General	1,314	0.84	1,272		
Lobby	Elevator	335	0.65	218		
Office	Enclosed less than 250 sf	256	0.74	189		
Restroom	General	942	0.63	594		
Stairwell	General	1,962	0.49	961		
Storage room	General	22,228	0.38	8,447		
Storage room	Less than 50 sf	646	0.51	330		
Storage room	50-100 sf	646	0.38	246		
			Proposed Total LPD		10,028	
	Totals			21,224	10,028	COMPLIES

Proposed Lighting Power Density

Fixture Type	Fixture ID	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures						

Decorative	DL1	5	34			170
Decorative	DL2	3	10			30
Decorative	DL4	1	8			8
Decorative	DL5	3	10			30
Decorative	DL6	10	31			310
Decorative	RD1	28	10			266
Horizontal surface-mount	B1	67	29			
Horizontal surface-mount	BA1	55	35			1,914
Horizontal surface-mount	FA1	320	10			3,200
Horizontal surface-mount	FA3	90	15			1,350
Horizontal surface-mount	WA1	24	40			948
Recessed downlight	F2	62	13			775
Wall-mounted	DL3	14	6			84
Linear Fixture per LF						
LED strip	LWW1			59	16	944
					Proposed Total LPD	10,028

Project Title	Riverfront - Building C - 2018 WSEC	Date	Feb 06, 2024
Proposed Fixtures Details	NEW BUILDING - INTERIOR LIGHTING		

Fixture Type/Application	Fixture ID	Location in Documents	Lamp Type	New or Existing-to-Remain
Individual Fixtures				
Decorative	DL1	E1.01 - E1.06S	LED	New
	Fixture Description: DECORATIVE PENDANT			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Decorative	DL2	E1.01 - E1.06S	LED	New
	Fixture Description: DECORATIVE SCONCE			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Decorative	DL4	E1.01 - E1.06S	LED	New
	Fixture Description: DECORATIVE PENDANT			Are these fixtures located within a daylight zone?: Yes, applying exception for controls
	Daylight sensing controls exception applied:			Do these fixtures require specific application lighting controls?: None required
Decorative	DL5	E1.01 - E1.06S	LED	New
	Fixture Description: DECORATIVE PENDANT			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Decorative	DL6	E1.01 - E1.06S	LED	New
	Fixture Description: DECORATIVE FLUSH MOUNT			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Decorative	RD1	E1.01 - E1.06S	LED	New
	Fixture Description: RECESSED WALL WASH			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required			
Horizontal surface-mount	B1	E1.01 - E1.06S	LED	New
	Fixture Description: 4' WRAP			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Dimming method:
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1			
Horizontal surface-mount	BA1	E1.01 - E1.06S	LED	New
	Fixture Description: SURFACE OR SUSPENDED LED STRIPLIGHT			Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)			Dimming method:
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1			
Horizontal surface-mount	FA1	E1.01 - E1.06S	LED	New
	Fixture Description: 5" SURFACE MOUNT DOWNLIGHT			Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1			
Horizontal surface-mount	FA3	E1.01 - E1.06S	LED	New

	Fixture Description: SURFACE MOUNT LED CYLINDER		Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required		
Horizontal surface-mount	WA1	E1.01 - E1.06S	LED
	Fixture Description: 4' STAIRWELL STRIP		Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1		
Recessed downlight	F2	E1.01 - E1.06S	LED
	Fixture Description: 4" DOWNLIGHT		Are these fixtures located within a daylight zone?: Yes, controls provided
	Daylight zone location(s): Sidelit daylight zones (primary and/or secondary)		Dimming method:
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1		
Wall-mounted	DL3	E1.01 - E1.06S	LED
	Fixture Description: DECORATIVE SCONCE		Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: Exit access & egress lighting per IBC Section 1006.1		
Linear Fixture per LF			
LED strip	LWW1	E1.01 - E1.06S	LED
	Fixture Description: RECESSED WALLWASHING LIGHT		Are these fixtures located within a daylight zone?: No
	Do these fixtures require specific application lighting controls?: None required		

Project Title	Riverfront - Building C - 2018 WSEC	Date	Feb 06, 2024
Lighting Power Calculation	NEW BUILDING - EXTERIOR LIGHTING	Compliance Verification	COMPLIES
Exterior Lighting Zone	ZONE 2	Base Site Allowance	400

Exterior Tradable Lighting Powe Allowance

Exterior Surface	Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	Linear Feet (LF)	LPA (Watts/LF)	Total Watts Allowed (LPA x SF) or (LPA x LF)	Total Proposed Watts	Compliance Status
Building grounds	Walkways < 10 feet wide			422	0.50	211		
Building grounds	Walkways 10 feet and wider	2,913	0.10			291		
Building entrances and exits	Entry canopies	2,902	0.25			726		
					Base Site Allowance	400		
					Totals	1,628	936	COMPLIES

Proposed Tradable Lighting Power Density

Fixture Type	Fixture ID	Exterior Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures							
Wall-mounted	SC11	Building grounds - Walkways 10 feet and wider	7	16			111
Wall-mounted	SC11	Building grounds - Walkways < 10 feet wide	13	16			205
Other fixture type	FA1	Building grounds - Walkways 10 feet and wider	6	10			60
Other fixture type	SD1	Building entrances and exits - Entry canopies	59	10			561
						Proposed Total LPD	937

EVERETT RIVERFRONT

3710 RIVERFRONT BLVD, EVERETT, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 301
LYNNWOOD, WA 98036
(P)(360)435-9170
CONTACT: MARK STEINKE

MARK STEINKE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01/31/2024

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	Permit Revisions 1
2	01/31/24	Permit Revisions 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: MARK STEINKE
01/31/24

E7.00

1/31/2024 3:32:33 PM F:\1073-001 Riverfront Apartments - Building C\Dwg\Backgrounds\24-0131 Revit Download\A_21-5905-01A_Everett Riverfront BLD-C_R22.rvt

GENERAL NOTES

1. REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY).
2. ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED.
3. CODES: COMPLETE INSTALLATION OF THE PLUMBING SYSTEM SHALL BE PER THE APPLICABLE BUILDING, MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL AHJ.
4. PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL EQUIPMENT, PIPING, ETC.
   A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH STRUCTURAL.
   B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND OTHER TRADES WORK.
   C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL SYSTEM.
   D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
5. PLUMBING CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL PLUMBING EQUIPMENT WITHIN THE STRUCTURE.
6. ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.
7. ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP, ROOF CURB, ROOF DRAIN, OVERFLOW DRAINS AND VTR DETAILS.
8. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS.
9. PENETRATIONS: PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS.
10. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS.
11. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT.
12. CABLE TRAYS: PIPING INSTALLED ADJACENT TO ELECTRICAL CABLE TRAYS SHALL ALLOW MINIMUM ACCESS OF 6" ABOVE AND TO THE SIDE OF CABLE TRAYS.
13. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL LOAD.
14. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

COORDINATION REQUIREMENTS

1. IRRIGATION SYSTEM: COORDINATE IRRIGATION WATER DEMAND, MINIMUM WATER PRESSURE REQUIREMENTS & CONTROL CABINET LOCATIONS WITH IRRIGATION CONTRACTOR.
2. GAS: CONTRACTOR/GAS COMPANY SHALL FINALIZE GAS METER AND GAS SERVICE LOCATIONS. INSTALL SEISMIC GAS SHUT OFF VALVE PER GAS COMPANY REGULATIONS.
3. UTILITIES: COORDINATE WITH SITE UTILITY CONTRACTOR AND CIVIL DRAWINGS FOR UTILITY CONNECTIONS AND EXTENSIONS.
4. ROOF DRAINAGE: COORDINATE WITH GENERAL CONTRACTOR FOR ROOF DRAIN AND OVERFLOWS, SCUPPER DRAINS, AND CONDENSATE DRAINS.
5. PLUMBING FIXTURES & EQUIPMENT: COORDINATE EXACT LOCATION OF ALL PLUMBING FIXTURES & EQUIPMENT WITH ARCHITECTURAL AND OTHER TRADES DOCUMENTS.
6. PIPING: COORDINATE EXACT LOCATION OF ALL STRUCTURAL FRAMING & FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL ENGINEER AT THE SITE PRIOR TO AND DURING THE CONSTRUCTION. COORDINATE UNDER GRADE PIPING & FOUNDATION DRAINAGE PIPING WITH CIVIL ENGINEER.
7. ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL.
8. APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS REQUIRED TO MEET THE BID DOCUMENTS.
9. FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL PIPING TO BE COORDINATED WITH OTHER TRADES.
10. PRIOR TO PIPING INSTALLATION: PLUMBING CONTRACTOR TO COORDINATE PIPING LAYOUT WITH ALL OTHER TRADES.
11. ACCESS: COORDINATE ALL ACCESS LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT TO ENSURE ALL REQUIRED ACCESS HATCHES, ACCESS PANELS & ACCESS COVERS ARE PROVIDED.
12. PROVIDE WATER TIGHT SEALS FOR ANY PIPING PENETRATING THE EXTERIOR FOUNDATION WALLS OR SLABS. SEALS ON PENETRATIONS THROUGH FOUNDATION SLAB MUST BE PROPERLY BOOTED PER SHEET LFG1C2.
13. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT IMMEDIATELY.
14. PROVIDE FIRE PROOFING FOR ALL PIPING PENETRATING FIRE BARRIER WALLS OR FLOOR SLABS.

DISINFECTION OF POTABLE WATER SYSTEM REQUIREMENTS

1. NEW OR REPAIRED POTABLE WATER SUPPLY SYSTEMS SHALL BE DISINFECTED PRIOR TO USE.
2. INITIAL COLIFORM SAMPLE IS REQUIRED PRIOR TO ADMINISTERING WATER-CHLORINE SOLUTION.
3. SECTION 609.9 ITEMS #2 OR #3 CAN BE USED PRECEDED BY AND FOLLOWED BY ITEM #1.
   3.1. NOTE FILL PORT TO ADD CHLORINE MUST BE WHERE WATER SUPPLY ENTERS BUILDING AND A FLOW METER TO MEASURE SOLUTION.
4. AFTER WATEROCHLORINE SOLUTION IS INCORPORATED INTO THE NEW OR REPAIRED WATER SUPPLY SYSTEM A 48 HOUR WAITING PERIOD MUST BE OBSERVED PRIOR TO BACTERIOLOGICAL TEST.
5. BACTERIOLOGICAL TEST SHALL BE CONDUCTED BY A LABORATORY CERTIFIED FOR DRINKING WATER IN WASHINGTON STATE AFFIRMING WATER QUALITY CONTAINS NO COLIFORM BY SAMPLE TESTING THE FURTHEST FIXTURE FROM PUBLIC WATER SOURCE AND NOT LESS THAN TWO OTHER LOCATIONS PART OF THE WATER SUPPLY SYSTEM.
6. CHLORINE LEVEL IN THE NEW OR REPAIRED WATER SUPPLY SYSTEM SHALL NOT BE LESS THAN THE MEAN AVERAGE OF THE AREA IN RELATIONSHIP FROM THE WATER PURVEYOR SOURCE.
7. WARNING: IN CASE A WATER SOFTENER IS PART OF THE COLD WATER SYSTEM, CONTRACTOR TO ENSURE THE WATER SOFTENER IS CONNECTED AND OPERATIONAL BEFORE STARTING THE DISINFECTION PROCESS. FAILURE TO FOLLOW THE INSTRUCTIONS WILL VOID THE WATER HEATER OR HEAT PUMP WARRANTY.

SYMBOLS

GENERAL

- ARCHITECTURAL BACKGROUND (THIN LINE)
- NEW PIPING (HEAVY LINE)
- EXISTING PIPING (THIN LINE)
- EXISTING WORK TO BE REMOVED
- MATCHLINE OR PROPERTY LINE
- CONNECTION TO EXISTING

SECTION IDENTIFICATION

- INDICATES DIRECTION OF CUTTING PLANE
- LETTER INDICATES SECTION (NO. INDICATES DETAIL)
- SHEET NUMBER WHERE SECTION IS DRAWN
- SHEET NUMBER WHERE SECTION IS TAKEN

DETAIL IDENTIFICATION

- DETAIL NUMBER
- DRAWING/SHEET NUMBER

EQUIPMENT

- TYPICAL EQUIPMENT DESIGNATION

PIPING

- WASTE BELOW GRADE
- WASTE ABOVE GRADE
- PUMPED WASTE
- INDIRECT WASTE
- SANITARY SEWER BELOW GRADE
- SANITARY SEWER ABOVE GRADE
- PUMPED SANITARY SEWER
- VENT
- STORM DRAIN
- OVERFLOW STORM DRAIN
- PUMPED STORM DRAIN
- CONDENSATE DRAIN
- PUMPED CONDENSATE DRAIN
- COLD WATER (CW)
- HOT WATER (HW), POTABLE, 120°F
- HOT WATER, POTABLE, TEMPERATURE OTHER THAN 120°F
- HOT WATER CIRCULATING (HWC), POTABLE, 120°F
- HOT WATER CIRCULATING, POTABLE, TEMPERATURE OTHER THAN 120°F
- FUEL OIL FILL
- FUEL OIL SUPPLY
- FUEL OIL RETURN
- FUEL OIL VENT
- RELIEF VENT
- LOW PRESSURE NATURAL GAS
- MEDIUM PRESSURE NATURAL GAS
- IRRIGATION (NON POTABLE)
- FIRE MAIN

PIPE SYMBOLS

- TOP PIPE CONNECTION
- BOTTOM PIPE CONNECTION
- PIPE TURNING UP
- PIPE TURNING DOWN/DROP
- PIPE CAP
- PIPE PLUG
- UNION
- FLANGE
- WYE STRAINER
- WYE STRAINER WITH CAPPED HOSE END BLOWDOWN VALVE
- BALL VALVE
- BALL VALVE
- GLOBE VALVE
- CHECK VALVE
- BALANCING OR PLUG VALVE
- BUTTERFLY VALVE
- FLEXIBLE CONNECTION IN PIPING
- PRESSURE REDUCING VALVE (PRV)
- AUTOMATIC CONTROL VALVE, 2-WAY
- AUTOMATIC CONTROL VALVE, 3-WAY
- RELIEF VALVE
- BALANCING/METERING VALVE
- REDUCER

- DIRECTION OF FLOW
- PIPE ANCHOR
- PIPE ALIGNMENT GUIDE
- PIPE SUPPORT
- VALVE STATION OR ASSEMBLY
- INDIRECT DRAIN, PIPE TO DRAIN
- POINT OF CONNECTION
- ROOF DRAIN, OVERFLOW DRAIN
- FLOOR DRAIN
- HOSE BIBB
- BREAK IN PIPING OR DUCTWORK
- GAS METER
- INLINE WATER METER
- PUMP
- PRESSURE GAUGE
- THERMOMETER
- PRESSURE/TEMPERATURE TEST PORT
- REDUCED PRESSURE BACKFLOW PREVENTER
- DOUBLE CHECK VALVE ASSEMBLY
- CATCH BASIN – SAND/OIL INTERCEPTOR
- TRENCH DRAIN
- EMERGENCY GAS SHUT-OFF VALVE
- SEISMIC GAS SHUT-OFF VALVE
- WASHER BOX
- GREASE INTERCEPTOR

ABBREVIATIONS

ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BOH	BACK OF HOUSE
BP	BOOSTER PUMP
BT	BATHTUB
BTUH	BRITISH THERMAL UNIT PER HOUR
BV	BALANCING VALVE
C	COMMON
CAP	CAPACITY
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CFF	CAPPED FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CLG	CEILING, COOLING
CLW	CLOTHES WASHER
CO	CLEANOUTS
COMB	COMBUSTION
CONT	CONTINUE, CONTROL
CONTR	CONTRACTOR
COTG	CLEANOUTS TO GRADE
CP	CIRCULATING PUMP
CV	CHECK VALVE
CW	COLD WATER
D	DIAMETER
DB	DRY BULB, DECIBEL
DF	DRINKING FOUNTAIN
DFU	DRAIN FIXTURE UNITS
DI	DUCTILE IRON
DIM	DIMENSION
DN	DOWN
DS	DOWN SPOUT
DWG	DRAWING
(E)	EXISTING
EFF	EFFICIENCY
ELEC	ELECTRIC
EQUIV	EQUIVALENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXT	EXTERIOR, EXTERNAL
F	FAHRENHEIT
FCO	FLOOR CLEANOUTS
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FT	FEET
FU	FIXTURE UNITS
G	GAS (LOW PRESSURE)
GAL	GALLONS
GD	GARAGE DRAIN
GM	GAS METER
GPG	GRAINS PER GALLON
GPM	GALLONS PER MINUTE
GV	GATE VALVE
GWB	GYPSUM WALLBOARD
GWH	GAS WATER HEATER
HB	HOSE BIBB
HD	HEAD
HDR	HUB DRAIN
HEDV	HOSE END DRAIN VALVE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPCW	HIGH PRESSURE COLD WATER
HW	HOT WATER
HWC	HOT WATER RE-CIRCULATION
HWCP	HOT WATER CIRCULATION PUMP
HWR	HOT WATER RETURN
HWST	HOT WATER STORAGE TANK
HX	HEAT EXCHANGER
ICW	INDUSTRIAL COLD WATER
ID	INDIRECT DRAIN, INSIDE DIAMETER
IE	INVERT ELEVATION
IHW	INDUSTRIAL HOT WATER
IN	INCH
KS	KITCHEN SINK
KW	KILOWATT
L	LONG, LENGTH
LAV	LAVATORY
LB	POUND
M	WATER METER
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MCA	MIN. CIRCUIT AMPACITY
MOCP	MAX. OVER CURRENT PROTECTION
MPG	MEDIUM PRESSURE GAS
MTD	MOUNTED
(N)	NEW
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OD	OUTSIDE DIMENSION/DIAMETER
OPD	OVERFLOW DRAIN/DECK DRAIN
OPNG	OVER PRESSURE DEVICE
P	OPENING
PD	PUMP
POC	PRESSURE DROP, PLANTER DRAIN
PRV	POINT OF CONNECTION
PS	PRESSURE REDUCING VALVE
PSIG	PRESSURE RELIEF VALVE
	PUMPED STORM DRAINAGE
	POUNDS PER SQUARE INCH GAUGE
PSD	PUMPED STORM DRAINAGE
PSS	PUMPED SANITARY SEWER
PSW	PUMPED SANITARY WASTE
PW	PUMPED WASTE
RD	ROOF DRAIN
REF	REFERENCE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
S	SINK
SCH	SCHEDULE
SCW	SOFTENED COLD WATER
SD	STORM DRAIN
SEP	SEWAGE EJECTOR PUMP
SF	SQUARE FOOT
SGSV	SEISMIC GAS SHUT-OFF VALVE
SH	SHOWER
SO	STORM OVERFLOW
SP	STATIC PRESSURE/SUMP PUMP
SR	SUDS RELIEF
SS	STAINLESS STEEL/SANITARY SEWER
SSS	SIDE SANITARY SEWER
STD	STANDARD
SQ	SQUARE
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE, WATT, WIDE
WC	WATER CLOSET
WCO	WALL CLEANOUTS
WHD	WALL HYDRANT
WM	WASHING MACHINE
WSFU	WATER SUPPLY FIXTURE UNITS

PRE-CONSTRUCTION MEETING NOTES

CONTRACTORS SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE ENGINEER FOR THE PURPOSE OF REVIEWING THE WORK PRIOR TO ORDERING ANY EQUIPMENT OR PERFORMING ANY WORK. THE MEETING SHALL BE LOCATED AT THE PROJECT SITE ON A DATE AND TIME TO BE MUTUALLY AGREED. THE MEETING WILL BE A WORKING SESSION. THE MEETING WILL BE FACILITATED BY THE ENGINEER AND THE AGENDA WILL INCLUDE A DETAILED REVIEW OF THE PLANS AND SPECIFICATIONS, CROSS CHECK WITH OTHER TRADES FOR COORDINATION ISSUES, REVIEW OF PROPOSED PRODUCTS, REVIEW OF PLANNED MEANS AND METHODS,AND ON-SITE INVESTIGATION OF FIELD CONDITIONS RELATIVE TO EXISTING CONDITIONS THAT COULD AFFECT THE WORK. PERSONS ATTENDING THE MEETING SHALL BE KNOWLEDGEABLE OF THE PROJECT AND SHALL BE THE SPECIFIC PERSONS INTENDED TO CONTINUE WITH THE PROJECT THROUGH TO COMPLETION. IF REQUIRED, REVISED PLANS WILL BE ISSUED THROUGH OFFICIAL CHANNELS. CHANGES IN THE BID PRICE WILL BE DISCUSSED, BUT NO CHANGE ORDERS WILL BE ISSUED UNLESS PROCESSED THOUGH OFFICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT THE ENGINEER HAS NO AUTHORITY TO ISSUE CHANGE ORDERS.

THE FOLLOWING TRADES SHALL BE REPRESENTED FOR THE MINIMUM TIME INDICATED:

MECHANICAL SHEET METAL	4 HOURS
PLUMBING/PIPING	4 HOURS
ELECTRICAL	4 HOURS
SPRINKLER	2 HOURS
GENERAL CONTRACTOR	ALL SESSIONS

CONTRACTOR SUBSTITUTIONS & REVISIONS

PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

APPLICABLE CODES

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

- 2018 INTERNATIONAL BUILDING CODE (IBC) & WASHINGTON STATE AMENDMENTS
- 2018 INTERNATIONAL MECHANICAL CODE (IMC) & WASHINGTON STATE AMENDMENTS
- 2018 UNIFORM PLUMBING CODE (UPC) & WASHINGTON STATE AMENDMENTS
- 2018 WASHINGTON STATE ENERGY CODE (WSEC)

NOTE TO CONTRACTOR

DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

DRAWING INDEX

DWG	DESCRIPTION	BUILDING PERMIT SET 02/25/2022	PROGRESS SET 03/11/2022	PERMIT SET 05/25/2022	PERMIT REVISIONS 2 01/31/2024		
P0.00	LEGEND, GENERAL NOTES, AND DRAWING INDEX	x	x	x	x		
P0.01	PLUMBING NOTES AND TABLES	x	x	x	x		
P0.02	PLUMBING CALCULATIONS	x	x	x	x		
P0.03	PLUMBING SCHEDULES	x	x	x	x		
P0.04	PLUMBING SCHEDULES				x		
P2.00N	UNDERSLAB PLUMBING PLAN – NORTH	x	x	x	x		
P2.00S	UNDERSLAB PLUMBING PLAN – SOUTH	x	x	x	x		
P2.01N	LEVEL 1 PLUMBING PLAN – NORTH	x	x	x	x		
P2.01S	LEVEL 1 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.02N	LEVEL 2 PLUMBING PLAN – NORTH	x	x	x	x		
P2.02S	LEVEL 2 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.03N	LEVEL 3 PLUMBING PLAN – NORTH	x	x	x	x		
P2.03S	LEVEL 3 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.04N	LEVEL 4 PLUMBING PLAN – NORTH	x	x	x	x		
P2.04S	LEVEL 4 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.05N	LEVEL 5 PLUMBING PLAN – NORTH	x	x	x	x		
P2.05S	LEVEL 5 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.06N	LEVEL 6 PLUMBING PLAN – NORTH	x	x	x	x		
P2.06S	LEVEL 6 PLUMBING PLAN – SOUTH	x	x	x	x		
P2.07N	ROOF PLUMBING PLAN – NORTH	x	x	x	x		
P2.07S	ROOF PLUMBING PLAN – SOUTH	x	x	x	x		
P4.00	WASTE & VENT RISER DIAGRAMS	x	x	x	x		
P4.01	WASTE & VENT RISER DIAGRAMS	x	x	x	x		
P4.02	WASTE & VENT RISER DIAGRAMS	x	x	x	x		
P4.03	WASTE & VENT RISER DIAGRAMS	x	x	x	x		
P4.04	WASTE & VENT RISER DIAGRAMS	x	x	x	x		
P5.00	SUPPLY RISER DIAGRAMS	x	x	x	x		
P5.01	GAS RISER DIAGRAM				x		
P6.00	ENLARGED PLANS			x	x		
P7.00	DETAILS	x	x	x	x		
P7.01	DETAILS	x	x	x	x		
P7.02	DETAILS	x	x	x	x		
P7.03	DETAILS				x		

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19412 40TH AVE W, SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

ED JACKSON OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	04/19/24	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

LEGEND, GENERAL NOTES, AND DRAWING INDEX

P0.00

PLUMBING TABLES

PIPE MATERIALS

PIPE TYPE	MATERIAL	JOINT	NOTES
UNDERGROUND WATER SERVICE ENTRANCE PIPING	COPPER, TYPE K.	SOLDERED	2
ABOVE GROUND WATER PIPING	COPPER, TYPE L.	SOLDERED	4
ABOVE GROUND WATER PIPING – WITHIN APARTMENT UNITS	PEX	EXPANSION FITTINGS	4
UNDERGROUND WASTE AND VENT PIPING	SCHEDULE 80 SOLID CORE PVC	SOLVENT CEMENT	1,5
ABOVE GROUND WASTE AND VENT PIPING	SCHEDULE 40 SOLID CORE PVC	SOLVENT CEMENT	1
UNDERGROUND STORM PIPING	SCHEDULE 80 SOLID CORE PVC	SOLVENT CEMENT	5
ABOVE GROUND STORM PIPING	SCHEDULE 40 SOLID CORE PVC	SOLVENT CEMENT	
CONDENSATE DRAIN PIPING	COPPER, TYPE M.	SOLDERED	3
NATURAL GAS PIPING	STEEL PIPE, ASTM A 53; TYPE E OR S; GRADE B; SCHEDULE 40	THREADED, WELDED, OR GROOVED COUPLING	
DIESEL FUEL PIPING	UL 1369 DOUBLE–WALL STAINLESS STEEL	PER MANUFACTURER	
DIESEL FUEL TANK VENT PIPING	CARBON STEEL, SCHEDULE 40	WELDED	

NOTES:

1. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
2. PLASTIC WRAP UNDERGROUND WATER SUPPLY PIPING TO PREVENT CORROSION.
3. CPVC IS ACCEPTABLE FOR CONDENSATE PIPING IN LIEU OF COPPER IF APPROVED BY AHJ.
4. PROVIDE THERMAL EXPANSION LOOPS FOR ALL WATER PIPING PER MANUFACTURER REQUIREMENTS.
5. UNDERGROUND PIPING SHALL BE SUSPENDED BELOW THE BUILDING SLAB PER DETAIL 1/P7.03.

PIPE INSULATION SCHEDULE

SERVICE	OPTION 1		OPTION 2		VAPOR RETARDER REQUIRED	NOTES
	MATERIAL	THICKNESS	MATERIAL	THICKNESS		
DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, STORM DRAIN (IN CONDITIONED SPACE)	MINERAL–FIBER WITH JACKET	ALL SIZES: ½"	PVC/NBR	ALL SIZES: ⅜"	YES	12,13
DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, WASTE (OUTSIDE THE CONDITIONED SPACE)	MINERAL–FIBER WITH JACKET	(R–3) ½" PIPE: ½" ALL OTHER SIZES: 1"	PVC/NBR	(R–3) ½" PIPE: ½" ALL OTHER SIZES: ¾"	YES	7,8,10
ROOF DRAIN BODIES	MINERAL–FIBER OR CELLULAR GLASS WITH JACKET	1"	PVC/NBR	1"	YES	12
DOMESTIC HOT WATER AND RECIRCULATED HOT WATER (RESIDENTIAL)	MINERAL–FIBER WITH JACKET	(R–3) ½" PIPE: ½" ALL OTHER SIZES: 1"	PVC/NBR	(R–3) ½" PIPE: ½" ALL OTHER SIZES: ¾"	NO	2,10
DOMESTIC HOT WATER AND RECIRCULATED HOT WATER (NONRESIDENTIAL)	MINERAL–FIBER WITH JACKET	½"–1¼" PIPE: 1" 1½"–4" PIPE:1.5"	PVC/NBR	½"–1¼" PIPE: 1" 1½"–4" PIPE:1.5"	NO	3,9
EXPOSED SANITARY DRAINS AND DOMESTIC WATER SUPPLIES AND STOPS FOR ADA FIXTURES.	TRUEBRO LAV–GUARD	N/A	N/A	N/A	NO	11

NOTES:

1. PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE PERMITTED.
2. PER 2018 WSEC SECTION R403.5.3 (RESIDENTIAL) INSULATION FOR HOT WATER PIPE SHALL HAVE A MINIMUM R–VALUE OF R–3.
3. PIPING FROM WATER HEATER TO THE TERMINATION OF HEATED WATER SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.9.
4. ON BOTH THE INLET AND OUTLET PIPING OF A STORAGE HOT WATER HEATER, THE FIRST 8 FEET OF PIPING OR PIPING FROM WATER HEATER TO HEAT TRAP SHALL BE INSULATED.
5. HEAT TRACED PIPING SHALL BE INSULATED IN THE SAME MANNER AS NON HEAT TRACED PIPING OR PER THE HEAT TRACE MANUFACTURER'S INSTRUCTIONS.
6. TUBULAR PIPING INSULATION SHALL NOT BE REQUIRED FOR THE FOLLOWING:
   - 6.1. THE TUBING FROM THE CONNECTION AT THE TERMINATION OF THE FIXTURE SUPPLY PIPING TO A PLUMBING FIXTURE OR PLUMBING APPLIANCE.
   - 6.2. VALVES, PUMPS, STRAINERS, AND THREADED UNIONS IN PIPING THAT IS 1 INCH OR LESS IN NOMINAL DIAMETER.
   - 6.3. PIPING FROM USER–CONTROLLED SHOWER AND BATH MIXING VALVES TO THE WATER OUTLETS.
   - 6.4. COLD WATER PIPING OF A DEMAND RECIRCULATION WATER SYSTEM.
   - 6.5. TUBING FROM A HOT DRINKING–WATER HEATING UNIT TO THE WATER OUTLET.
   - 6.6. PIPING AT LOCATIONS WHERE A VERTICAL SUPPORT OF THE PIPING IS INSTALLED.
   - 6.7. PIPING SURROUNDED BY BUILDING INSULATION WITH A THERMAL RESISTANCE (R–VALUE) OF NOT LESS THAN R–3.
   - 6.8. HOT WATER PIPING THAT IS PART OF THE FINAL PIPE RUN TO THE PLUMBING FIXTURE AND IS NOT PART OF THE HEATED–WATER CIRCULATION SYSTEM CIRCULATION PATH IS NOT REQUIRED TO MEET THE MINIMUM INSULATION REQUIREMENTS OF C404.6.
7. PER 2018 UPC SECTION 312.6 NO WATER, SOIL, OR WASTE PIPE SHALL BE INSTALLED OR PERMITTED OUTSIDE OF A BUILDING, IN ATTICS OR CRAWL SPACES, OR IN AN EXTERIOR WALL UNLESS, WHERE NECESSARY, ADEQUATE PROVISION IS MADE TO PROTECT SUCH PIPE FROM FREEZING. ALL HOT AND COLD WATER PIPES OUTSIDE THE CONDITIONED SPACE SHALL BE PROVIDED WITH INSULATION WITH A MINIMUM R–VALUE OF R–3.
8. HEAT TRACING SHALL BE PROVIDED FOR COLD WATER AND IRRIGATION WATER IN UNCONDITIONED SPACES. CONTACT ENGINEERING IF NECESSARY. PER 2018 WSEC SECTION C403.12.3 FREEZE PROTECTION SYSTEMS, SUCH AS HEAT TRACING OF OUTDOOR PIPING, SHALL INCLUDE AUTOMATIC CONTROLS CONFIGURED TO SHUT OFF THE SYSTEMS WHEN OUTDOOR AIR TEMPERATURES ARE ABOVE 40°F.
9. PER 2018 WSEC TABLE C403.2.9 INSULATION FOR HOT WATER AND HOT WATER RECIRCULATION SHALL HAVE A THERMAL CONDUCTIVITY OF 0.21–0.28 (BTU.IN/H.FT².°F) AT OPERATING TEMPERATURE.
10. INSULATION R–VALUE SHALL MEET THE MINIMUM REQUIREMENT. THICKNESS IS BASED ON GRAINGER SAMPLE DATA FOR K–FLEX(PVC/NBR) AND OWENS CORNING(FIBER GLASS).
11. ALL ADA P–TRAPS, HOT WATER SUPPLY TUBING, AND SHUT–OFF COCKS SHALL BE PROTECTED WITH APPROVED COVERS TO PREVENT SCALDING.
12. REQUIRED BY ENGINEERING BASED ON BEST PRACTICE.
13. INSULATION IS NOT REQUIRED ON PLASTIC COLD WATER PIPING.

HANGER SPACING FOR WATER PIPING

ALL SUSPENDED WATER SUPPLY PIPE SHALL BE SUPPORTED AS FOLLOWS PER 2018 UPC TABLE 313.3:

	MAX. HORIZONTAL SPACING	MAX. VERTICAL SPACING
COPPER PIPE ≤1½"	6 FT.	10 FT.
COPPER PIPE >2"	10 FT.	10 FT.
COPPER TUBING ≤1½"	6 FT.	10 FT.
COPPER TUBING >2"	10 FT.	10 FT.
CPVC ≤ 1"	3 FT.	10 FT.
CPVC > 1¼"	4 FT.	10 FT.

HANGER SPACING FOR WASTE AND VENT PIPING

ALL SUSPENDED SANITARY AND VENT PIPE SHALL BE SUPPORTED AS FOLLOWS PER 2018 UPC TABLE 313.3:

	MAX. HORIZ. SPACING	MAX. VERT. SPACING
ABS	4 FT.	10 FT.
PVC (TYPE DWV)	4 FT.	10 FT.
CAST–IRON HUBLESS*	EVERY OTHER JOINT	15 FT.

*CAST–IRON OVER 4' SHALL BE SUPPORTED AT EVERY JOINT

PLUMBING FIXTURE FLOW RATES PER WAC 51-56-0400

FIXTURE TYPE	MAXIMUM FLOW RATE	NOTES
SHOWERHEADS	1.8 GPM @ 80 PSI	
LAVATORY FAUCETS, RESIDENTIAL	1.2 GPM @ 60 PSI	1
LAVATORY FAUCETS, NON–RESIDENTIAL	0.5 GPM @ 60 PSI	2
KITCHEN FAUCETS	1.8 GPM @ 60 PSI	3
GRAVITY TANK–TYPE WATER CLOSETS	1.28 GALLONS/FLUSH	4
FLUSHOMETER TANK WATER CLOSETS	1.28 GALLONS/FLUSH	4
FLUSHOMETER VALVE WATER CLOSETS	1.28 GALLONS/FLUSH	4
ELECTROMECHANICAL HYDRAULIC WATER CLOSETS	1.28 GALLONS/FLUSH	4
WALL–MOUNTED URINALS	0.125 GALLONS/FLUSH	
FLOOR–MOUNTED URINALS	0.5 GALLONS/FLUSH	

NOTES:

1. LAVATORY FAUCETS SHALL NOT HAVE A FLOW RATE LESS THAN 0.8 GPM AT 20 PSI.
2. WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS RATED AT 0.35 GPM OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.
3. KITCHEN FAUCETS MAY TEMPORARILY INCREASE FLOW ABOVE THE MAXIMUM RATE, BUT NOT ABOVE 2.2 GPM @ 60 PSI AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GPM @ 60 PSI.
4. INCLUDES SINGLE AND DUAL FLUSH WATER CLOSETS WITH AN EFFECTIVE FLUSH OF 1.28 GALLONS OR LESS. SINGLE FLUSH TOILETS – THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.28 GALLONS. THE EFFECTIVE FLUSH VOLUME IS THE AVERAGE FLUSH VOLUME WHEN TESTED IN ACCORDANCE WITH ASME A112.19.2 DUAL FLUSH TOILETS – THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.28 GALLONS. THE EFFECTIVE FLUSH VOLUME IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH. FLUSH VOLUMES WILL BE TESTED IN ACCORDANCE WITH ASME A112.19.2 AND ASME A112.19.14.

PLUMBING NOTES

1. CONNECTIONS: PROVIDE PLUMBING FIXTURE CONNECTIONS TO BUILDING WASTE, VENT, COLD WATER, AND HOT WATER SYSTEM IN ACCORDANCE WITH DRAWINGS, MANUFACTURER'S RECOMMENDATIONS, AND LOCAL CODES. CONNECT TO EACH FIXTURE, EQUIPMENT, ETC. WITH ALL ACCESSORIES, VALVES, VACUUM BREAKERS, REGULATORS, UNIONS, ETC. AS REQUIRED AND AS RECOMMENDED BY THE MANUFACTURERS. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE ON PLANS.
2. HOT AND COLD: WATER PIPING CONNECTION TO EACH FIXTURE SHALL BE COLD WATER ON THE RIGHT HAND SIDE AND HOT WATER ON THE LEFT HAND SIDE.
3. HOT WATER: NON–CIRCULATING HOT WATER PIPE SHALL NOT EXCEED 10' UNLESS OTHERWISE SHOWN ON DRAWINGS.
4. VENT STACKS: COORDINATE VENT STACK WITH HVAC EQUIPMENT TO MAINTAIN MINIMUM 10' CLEARANCE FROM OUTSIDE AIR INTAKES.
5. CLEANOUTS: PROVIDE CLEANOUTS PER CURRENT UPC AND AS REQUIRED BY LOCAL JURISDICTIONS. CLEANOUTS SHALL BE LOCATED IN WALLS/FLOORS WHERE THEY ARE NOT HIGHLY VISIBLE. FLOOR CLEANOUTS IN CARPETED AREAS TO BE FITTED WITH CARPET INSERTS. LOCATIONS SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL. NOTE: NOT ALL CLEANOUTS ARE SHOWN ON THE PLUMBING DRAWINGS.
6. SUDS RELIEF: PROVIDE SUDS RELIEF IN ACCORDANCE WITH 2018 UPC SECTION 711.0, STATE AND LOCAL CODES.
7. SHUT–OFFS: PROVIDE 1/4 TURN BALL VALVE ANGLE STOP SHUT–OFF VALVES AND BRAIDED STAINLESS STEEL FLEX CONNECTORS AT HOT AND COLD WATER SUPPLY TO EACH FIXTURE. EXCEPTION: PROVIDE SCREWDRIVER STOPS AT BATH/SHOWERS.
8. TUB SPOUTS SHALL BE THREADED (NO PUSH–ON FITTINGS).
9. TRAP ARMS: PROVIDE TRAP ARMS SUCH THAT THE MAXIMUM LENGTH WILL NOT EXCEED CODE REQUIREMENTS.
10. ADA INSULATION: AT PLUMBING PIPING EXPOSED UNDER LAVATORIES, INSULATE THE EXPOSED PIPING AND TRAPS WITH PRODUCT SPECIFICALLY DESIGNED FOR THIS APPLICATION MEETING ADA REQUIREMENTS. PROVIDE HANDI–LAV GUARD OR EQUIVALENT. OFFSET P–TRAPS TO CLEAR WHEELCHAIR ACCESS.
11. GAS EQUIPMENT: GAS EQUIPMENT SHALL BE INSTALLED PER EQUIPMENT LISTINGS, APPLICABLE IFGC, UPC, LOCAL CODES & NFPA STANDARDS.
12. GAS CONNECTIONS: INSTALL FLEXIBLE QUICK DISCONNECT ASSEMBLIES FOR ALL GAS FIRED KITCHEN EQUIPMENT PER APPLICABLE IFGC, UPC, LOCAL CODES & NFPA STANDARDS. PROVIDE LOCKABLE GAS SHUT–OFF VALVES FOR FIREPLACES & BBQS IN UNATTENDED PUBLIC LOCATIONS IN THE BUILDING.
13. GAS PIPING CONNECTIONS TO WATER HEATERS, BOILERS AND FURNACES SHALL HAVE DIRT LEGS AND UNIONS PROVIDED ON APPLIANCE SIDE OF SHUTOFF VALVE.
14. GAS PIPING INSTALLATION: STEEL OR MALLEABLE IRON FUEL LINES 2" OR SMALLER SHALL BE ASSEMBLED USING THREAD SEALANT SUITABLE FOR NATURAL GAS. GAS PIPING LARGER THAN 2" SHALL HAVE WELDED FITTINGS.
15. GAS PIPING UNDERGROUND: WHERE INSTALLED BELOW GRADE THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED IN A PROTECTIVE PIPE SLEEVE. THE ANNULAR SPACE BETWEEN THE GAS PIPING AND THE SLEEVE SHALL BE SEALED.
16. GAS PIPING ABOVE GROUND: WHERE PASSING THROUGH AN OUTSIDE WALL, GAS PIPING SHALL BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS ENCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED.
17. GAS PIPE SUPPORT: FUEL LINES SHALL BE SUPPORTED OR STRAPPED, AND SHALL BE PLUMB AND SQUARE.
18. GAS PIPING ON ROOFTOPS SHALL BE SUPPORTED AND ANCHORED TO THE ROOF.
19. GAS PIPING SHALL NOT BE BURIED UNDER A BUILDING, SLAB OR OTHER STRUCTURE.
20. GAS PIPING PROTECTIVE COATING: PAINT ALL EXTERIOR EXPOSED GAS PIPING WITH TWO COATS OF RUST INHIBITIVE PAINT. COLOR: GRAY.
21. WATER HAMMER ARRESTORS: PROVIDE AT THE END OF HOT AND COLD WATER LINES SERVING TWO OR MORE FIXTURES; SIZE IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE (PDI) REQUIREMENTS. WATER HAMMER ARRESTORS ARE REQUIRED FOR QUICK CLOSING VALVES, SUCH AS LAUNDRY WASHERS, FLUSH VALVES (PUBLIC TOILETS), ETC.
22. TRAP PRIMERS AS SPECIFIED: PROVIDE TRAP PRIMERS AND PIPING FOR FLOOR DRAINS, FLOOR SINKS, AREA DRAINS & HUB DRAINS. ARRANGE PIPING TO ACHIEVE EQUAL FLOW TO EACH DRAIN AND FLOOR SINK FOR TRAP PRIMERS SERVING MULTIPLE DRAINS AND FLOOR SINKS. COORDINATE EXACT LOCATIONS WITH ARCHITECT & ELECTRICAL ENGINEER.
23. P–TRAPS: ALL EXPOSED P–TRAPS SHALL BE CHROME–PLATED BRASS. P–TRAPS SERVING HANDICAPPED COUNTER TOP LAVATORIES SHALL BE INSULATED.
24. THROUGHOUT THE PROJECT PROVIDE BALL VALVES. GATE VALVES SHALL NOT BE USED. NO EXCEPTIONS.
25. HOT WATER RECIRCULATING BALANCING VALVES SHOULD BE BELL & GOSSETT CIRCUIT SETTER (WATTS OR EQUAL) WITH INTEGRAL READOUT PORTS, ADJUSTMENT KNOB, DRAIN CONNECTION, AND POSITIVE SHUTOFF.
26. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
27. REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.
28. VALVE TAGS: PROVIDE VALVE TAGS PER SPECIFICATIONS TO IDENTIFY VALVE AND THE AREA IT SERVES.
29. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.
30. ALL TEMPERATURE MIXING VALVES SHALL COMPLY WITH ASSE–1070 SAFETY STANDARDS.
31. PROVIDE PIPE MARKER WITH DIRECTION OF FLOW. LABEL "NON–POTABLE WATER DO NOT DRINK" CLEARLY ON NON–POTABLE WATER PIPING.
32. PROVIDE EXPANSION LOOPS/EXPANSION JOINTS IN PIPING PER 2018 UPC TABLE 313.3 AND MANUFACTURER INSTALLATION INSTRUCTIONS.
33. PROVIDE APPROVED PIPE HANGERS & PIPE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND 2018 UPC TABLES 313.3 & 313.6. SUBMIT FOR APPROVAL.
34. DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.
35. REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
36. CONDENSATE DRAIN: PROVIDE A P–TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.
37. PIPING & EQUIPMENT SUPPORTS/HANGERS & SEISMIC RESTRAINTS TO BE DESIGNED BY DESIGN BUILT CONTRACTOR.
38. IF NEEDED, PROVIDE VACUUM BREAKERS AT ALL HOSE BIBBS.
39. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS IN ACCORDANCE WITH 2018 UPC 1007.0.
40. INSULATION MATERIAL SHALL MEET CITY OF EVERETT QUALITY STANDARDS.
41. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE 2018 WASHINGTON STATE ENERGY CODE.
42. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH 2018 UPC 701.0 AND 903.0.
43. ALL SANITARY SYSTEM MATERIAL SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
44. ALL STORAGE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVICE DESIGNED FOR INTERMITTENT OPERATION FOR THERMAL EXPANSION CONTROL PER 2018 UPC 608.3.
45. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENTS DUE TO SEISMIC MOTION PER 2018 UPC 507.2.
46. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH 2018 IMC 602.2.1.
47. HVAC EQUIPMENT AND WATER HEATERS SHALL COMPLY WITH 2018 IMC CHAPTER 3.
48. BOILERS SHALL COMPLY WITH ALL THE REQUIREMENTS OF 2018 IMC CHAPTER 10.
49. PROVIDE EXPANSION TANKS FOR BOILERS PER 2018 IMC SECTION 1009.0.
50. SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER 2018 UPC 408.0.
51. PLUMBING FIXTURES AND FITTINGS SHALL COMPLY WITH CITY OF EVERETT WATER CONSERVATION STANDARDS.
52. CONTRACTOR SHALL PROVIDE FIRESTOPPING AT PENETRATIONS AS NECESSARY TO RETAIN THE FIRE RATING OF ALL ASSEMBLIES. ALL WORK SHALL BE IN COMPLIANCE WITH CODE REQUIREMENTS FOR THE BUILDING CONSTRUCTION TYPE.
53. ALL GARAGE DRAINS, TRASH ROOMS DRAINS & GARAGE TRENCH DRAINS SHALL BE TAKEN TO SAND/OIL INTERCEPTOR(S) BEFORE CONNECTING TO THE SANITARY SEWER SYSTEM.
54. PLUMBING CONTRACTOR SHALL PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS OR OTHER APPROVED BACKFLOW PREVENTION DEVICE WHERE REQUIRED BY HEALTH AUTHORITIES, FOOD SERVICE DRAWINGS, APPLIANCE MANUFACTURER INSTRUCTIONS AND BY CODE.

    PROVIDE REQUIRED & PROPER BACK FLOW PREVENTERS AS SPECIFIED FOR THE APPLIANCES INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
    - a. ICE MACHINES AND ICE MAKERS
    - b. CARBONATED BEVERAGE DISPENSING SYSTEMS
    - c. COFFEE BREWERS
    - d. ESPRESSO MACHINES
    - e. WATER FILTERS
    - f. STEAM OR HOT WATER BOILERS
    - g. IRRIGATION SYSTEM
    - h. FIRE PROTECTION SYSTEM
    - i. CHEMICAL TREATMENT SYSTEM
    - j. SOAP/CHEMICAL DISPENSER SYSTEM
    - k. COMMERCIAL WASHER

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
15963 48TH AVE W, SUITE 902
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

ED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/18/23	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

PLUMBING NOTES AND TABLES

P0.01

PLUMBING CALCULATIONS

WATER SUPPLY PRESSURE CALCULATIONS ARE BASED ON 2018 UPC APPENDIX A		
FROM STREET TO BOOSTER PUMP		
STREET PRESSURE, PSI		**64**
FROM FLOW TEST REPORT DATED 3/8/2022		
MINIMUM STREET PRESSURE, PSI		**59**
ASSUME A RANGE OF +/- 5 PSI		
EQUIPMENT LOSSES, PSI		
WATER METER LOSS		**5.0**
BACKFLOW PREVENTER LOSS		**10.0**
6" RPBP AT 428 GPM		
SITE SERVICE LINE (ESTIMATE)		
PIPING SYSTEM LENGTH, FEET	100	
FITTING ALLOWANCE, FEET	50	
FROM STREET TO BOOSTER PUMP		
ZONE FRICTION LOSS FACTOR, PSI/100'	**1.0**	
TOTAL ZONE FRICTION LOSS, PSI		**1.5**
MINIMUM PRESSURE AT BOOSTER PUMP INLET, PSI		**42.5**
FROM BOOSTER PUMP TO FURTHEST APARTMENT		
MINIMUM PRESSURE AT BOOSTER PUMP INLET, PSI		**42.5**
BOOSTER PUMP PRESSURE GAIN, PSI		**37.5**
BOOSTER PUMP DISCHARGE PRESSURE, PSI		**80.0**
EQUIPMENT LOSSES, PSI		
THERMOSTATIC MIXING VALVE LOSS		**5.0**
STATIC HEAD, PSI		
TOTAL ELEVATION GAIN, FT	66	**28.6**
PIPING UP TO LEVEL 6		
PIPING FRICTION LOSSES		
PIPING SYSTEM LENGTH, FEET	500	
FITTING ALLOWANCE, FEET	125	
FROM BOOSTER PUMP TO FURTHEST APARTMENT		
ZONE FRICTION LOSS FACTOR, PSI/100'	**2.0**	
TOTAL ZONE FRICTION LOSS, PSI		**12.5**
MINIMUM PRESSURE AT FURTHEST APARTMENT, PSI		**33.9**
TO FURTHEST FIXTURE WITHIN APARTMENT		
MINIMUM PRESSURE AT FURTHEST APARTMENT, PSI		**33.9**
EQUIPMENT LOSSES, PSI		
WATER SUBMETER PRESSURE LOSS, PSI		**5.0**
PIPING FRICTION LOSSES		
PIPING SYSTEM LENGTH, FEET	30	
FITTING ALLOWANCE, FEET	10	
FROM RISER TO FURTHEST FIXTURE		
ZONE FRICTION LOSS FACTOR, PSI/100'	**14.0**	
TOTAL ZONE FRICTION LOSS, PSI		**5.6**
MINIMUM PRESSURE AT FURTHEST FIXTURE, PSI		**23.3**

FIXTURE UNIT CALCULATIONS

CALCULATIONS ARE BASED ON 2018 UPC TABLES A103.1, 702.1, AND 703.2.

PRIVATE UNIT FIXTURES

FIXTURE	FIXTURE UNITS											TOTAL QTY	TOTAL FIXTURE UNITS			
	TOTAL	CW	HW	W/V	1	2	3	4	5	6	R	OF FIXTURES	SERVICE	CW ONLY	HW ONLY	W/V ONLY
LAVATORY	1	0.75	0.75	1		52	52	52	52	48		256	256	192	192	256
WATER CLOSET (TANK)	2.5	2.5	0	3		43	43	43	43	40		212	530	530	0	636
SHOWER	2	1.5	1.5	2		9	9	9	9	8		44	88	66	66	88
BATHTUB	4	3	3	2		34	34	34	34	32		168	672	504	504	336
KITCHEN SINK	1.5	1.125	1.125	2		34	34	34	34	32		168	252	189	189	336
DISHWASHER	1.5	0	1.5	0		34	34	34	34	32		168	252	0	252	0
CLOTHES WASHER	4	3	3	3		34	34	34	34	32		168	672	504	504	504
													2722	1985	1707	2156

PUBLIC SPACE FIXTURES

FIXTURE	FIXTURE UNITS											TOTAL QTY	TOTAL FIXTURE UNITS			
	TOTAL	CW	HW	W/V	1	2	3	4	5	6	R	OF FIXTURES	SERVICE	CW ONLY	HW ONLY	W/V ONLY
LAVATORY (PUBLIC)	1	0.75	0.75	1	12					1		13	13	9.75	9.75	13
WATER CLOSET (FLUSH TANK)	2.5	2.5	0	4	13					1		14	35	35	0	56
KITCHEN SINK	1.5	1.125	1.125	2						2		2	3	2.25	2.25	4
2" FLOOR DRAIN	0	0	0	2	3						4	7	0	0	0	14
3" FLOOR DRAIN	0	0	0	6	1							1	0	0	0	6
4" FLOOR SINK	0	0	0	8	2							2	0	0	0	16
4" HUB DRAIN	0	0	0	8	3							3	0	0	0	24
HOSE BIBB	2.5/1	2.5/1	0	0	12						2	14	15.5	15.5	0	0
HOT WATER HOSE BIBB	2.5/1	0	2.5/1	0	1							1	2.5	0	2.5	0
ELEVATOR PUMP DISCHARGE	0	0	0	100	2							2	0	0	0	200
COMMERCIAL SPACE 101	60	60	0	60	1							1	60	60	0	60
RESTAURANT 102	60	60	0	60	1							1	60	60	0	60
COMMERCIAL SPACE 104	60	60	0	60	1							1	60	60	0	60
COMMERCIAL SPACE 105	60	60	0	60	1							1	60	60	0	60
COMMERCIAL SPACE 106	60	60	0	60	1							1	60	60	0	60
													369	362.5	14.5	633

	TOTAL	CW	HW	W/V
TOTAL FIXTURE UNITS:	3091	2347.5	1721.5	2789
PEAK FLOW:	428 GPM			
	WATER	SEWER		
REQUIRED SERVICE SIZE IN BUILDING:	6"	(2) 6"		

COPPER PIPE SIZING AT 2 PSI/100' WITH HUNTER'S CURVE - FLUSH TANK

PIPE SIZE	51° COLD WATER			120° HOT WATER			110° RECIRCULATED HOT WATER	
	WATER SUPPLY FIXTURE UNITS	GPM FLOW	VELOCITY, FT/S	WATER SUPPLY FIXTURE UNITS	GPM FLOW	VELOCITY, FT/S	GPM FLOW	VELOCITY, FT/S
½"	1.0	1.4	2.0	0.6	1.6	2.2	1.5	2.0
¾"	4.0	3.9	2.6	4.7	4.4	2.9	3.0	2.0
1"	10.0	8.0	3.1	11.9	9.0	3.5	5.1	2.0
1 ¼"	20.2	14.1	3.6	22.9	15.7	4.0	7.8	2.0
1 ½"	35.1	22.5	4.1	40.1	25.1	4.5	11.1	2.0
2"	113.7	47.4	4.9	116.9	48.2	5.0	19.3	2.0
2 ½"	298.8	84.8	5.7	246.9	74.4	5.0	29.7	2.0
3"	563.2	136.4	6.4	405.8	106.2	5.0	42.5	2.0
4"	1711.3	295.4	7.8	872.0	189.5	5.0	75.8	2.0
6"	6381.3	669.1	8.0	2847.0	418.2	5.0	167.3	2.0

PEX PIPE SIZING AT 14 PSI/100' WITH HUNTER'S CURVE - FLUSH TANK

PIPE SIZE	51° COLD WATER			120° HOT WATER			110° RECIRCULATED HOT WATER	
	WATER SUPPLY FIXTURE UNITS	GPM FLOW	VELOCITY, FT/S	WATER SUPPLY FIXTURE UNITS	GPM FLOW	VELOCITY, FT/S	GPM FLOW	VELOCITY, FT/S
½"	3.0	3.0	5.5	1.8	2.8	5.0	1.1	2.0
¾"	9.4	7.7	7.0	6.5	5.5	5.0	2.2	2.0
1"	20.9	14.6	8.0	12.1	9.1	5.0	3.6	2.0
1 ¼"	33.5	21.8	8.0	19.2	13.6	5.0	5.4	2.0
1 ½"	53.3	30.3	8.0	28.2	18.9	5.0	7.6	2.0
2"	134.8	52.0	8.0	58.7	32.5	5.0	13.0	2.0
2 ½"	270.6	79.1	8.0	122.3	49.5	5.0	19.8	2.0
3"	439.0	112.8	8.0	227.5	70.5	5.0	28.2	2.0

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19802 48TH AVE W., SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

ED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/19/24	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

PLUMBING CALCULATIONS

P0.02

PLUMBING SCHEDULES

BACKWATER VALVE

EQUIP NO.	SERVICE	MATERIAL	VALVE SIZE	BASIS OF DESIGN	NOTES
BWV-1	LEVEL 1 DRAINAGE	CAST IRON	4"	ZURN Z1090	1

NOTES:
1. PROVIDE ACCESS COVER FOR VALVE MAINTENANCE.

SEISMIC GAS SHUT-OFF VALVE

EQUIP NO.	SERVICE	SIZE	MAX PRESSURE	LENGTH	HEIGHT	WIDTH	ORIENTATION	BASIS OF DESIGN	NOTES
SGSV-1	GAS SERVICE LINE	1¼"	60 PSI	5-1/4"	5"	3-7/8"	HORIZONTAL	PACIFIC SEISMIC PRODUCTS MODEL 312	1

NOTES:
1. VALVE SHALL BE MOUNTED RIGIDLY TO BUILDING EXTERIOR.

GAS PRESSURE REGULATOR

EQUIP NO.	SERVICE	MAX INLET PRESSURE	MIN INLET PRESSURE	OUTLET PRESSURE	MAX CAPACITY (MBH)	MAX INDIVIDUAL LOAD (MBH)	ORIFICE SIZE	BASIS OF DESIGN	NOTES
GPRV-1	WATER HEATERS	2 PSI	1 PSI	7"WC	2250	2250	2"	MAXITROL 325-9L	1,2
GPRV-2	AMENITY FIREPLACES & BBQ	2 PSI	1 PSI	7"WC	250	140	½"	MAXITROL 325-3L	1,2

NOTES:
1. PROVIDE APPROVED VENT LIMITING DEVICE OR VENT TO EXTERIOR SIZED TO MATCH VENT CONNECTION ON REGULATOR. VENTS ARE NOT SHOWN ON THE PLANS.
2. STEPDOWN REGULATORS MUST BE AT 4 FEET AFF.

GRAVITY GREASE INTERCEPTOR

EQUIP NO.	SERVICE	FIXTURE UNIT LOAD (DFU)	INTERCEPTOR VOLUME (GAL)	BASIS OF DESIGN	NOTES
GI-1	COMMERCIAL SPACES	275	2,500	JENSEN PRECAST JZ2500G	1,2

NOTES:
1. PROVIDE TRAFFIC RATED COVER.
2. PROVIDE SAMPLE BOX DOWNSTREAM OF GREASE INTERCEPTOR. JENSEN PRECAST 2432Z-1 OR EQUIVALENT.

SUMP PUMP

EQUIP NO.	SERVICE	NO. OF PUMPS	FLOW PER PUMP (GPM)	HEAD PER PUMP (FEET)	PUMP RPM	ELECTRICAL (PER PUMP)		SUMP PIT		BASIS OF DESIGN	NOTES
						VOLTAGE	HP	SIZE	DEPTH		
SP-1	ELEVATOR PIT DRAINAGE	1	50	25	1,750	208V/3P/5.5FLA	1	24"X24"	36"	WEIL 1413	1,2,3,4

NOTES:
1. SUMP SIZES ARE INSIDE CLEAR DIMENSIONS.
2. PROVIDE UL LISTED SIMPLEX AUTOMATIC PUMP CONTROL PANEL, MAGNETIC STARTER, LOW LEVEL AND HIGH LEVEL CONTROL SWITCHES, HAND-OFF-AUTO SWITCH, PUMP RUN LIGHT, TOP-MOUNTED FLASHING RED ALARM LIGHT, PULSATING ALARM HORN, SILENCE SWITCH, NEMA 1 ENCLOSURE. WEIL 8177 OR EQUIVALENT.
3. PROVIDE WITH OIL SENSOR AND OPEN GRATE SUMP LID.
4. SEE SUMP DETAIL 8/P7.02.

REDUCED PRESSURE BACKFLOW ASSEMBLY

EQUIP NO.	SERVICE	INLET/OUTLET SIZE	BASIS OF DESIGN	NOTES
RPBP-1	DOMESTIC WATER SERVICE	6"	ZURN WILKINS 375	1

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
2. PROVIDE A DRAIN TO THE NEAREST FLOOR SINK OR OTHER APPROVED WASTE RECEPTOR.

PACKAGED BOOSTER PUMP

EQUIP NO.	SERVICE	TYPE	FLOW PER PUMP (GPM)	TOTAL FLOW (GPM)	SUCTION PRESSURE (PSI)	DISCHARGE PRESSURE (PSI)	MOTOR HP (PER PUMP)	ELECTRICAL	WEIGHT (LBS)	BASIS OF DESIGN	NOTES
BP-1	DOMESTIC WATER	TRIPLEX	143	428	42	80	5	208V/3P/41.1FLA	1,840	FLOWTHERM FMV 3.1-9LH	1,2,3,4,5

NOTES:
1. SINGLE POINT POWER CONNECTION.
2. PROVIDE ALL REQUIRED VALVES, PIPING, CONTROLS, ETC. FOR A COMPLETE SYSTEM.
3. PROVIDE VFD'S FOR EACH PUMP.
4. ALL CLEAR WATER PUMPS OVER 2 HORSEPOWER SHALL COMPLY WITH US DEPARTMENT OF ENERGY (DOE) PUMP EFFICIENCY REQUIREMENTS. APPLICABLE PUMPS SHALL BEAR A PUMP EFFICIENCY INDEX (PEI) LABEL.
5. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS AND STATE AND LOCAL AHJ REQUIREMENTS.

DOMESTIC WATER HEATERS

EQUIP NO.	SERVICE	HEAT EXCHANGER				STORAGE (GAL)	INLET/OUTLET CONNECTION	COMMON PIPING	GAS CONNECTION	OPERATING WEIGHT (LBS)	ELECTRICAL	BASIS OF DESIGN	NOTES
		FUEL SOURCE	INPUT (MBH)	THERMAL EFFICIENCY	RECOVERY AT 100°F TR (GPH)								
WH-1,2,3,4	DOMESTIC HOT WATER	NAT. GAS	499	94%	568	119	1½"	6"	1"	2,128	120V/1P/15A	BRADFORD WHITE EF-120T-500-3N	1-5

NOTES:
1. PROVIDE CONDENSATE NEUTRALIZER. VENT PER MANUFACTURER'S INSTRUCTIONS.
2. UNITS SHALL BE CERTIFIED IN THE AIR QUALITY MANAGEMENT DISTRICT HAVING JURISDICTION.
3. FACTORY AUTHORIZED START-UP AND OWNERS TRAINING REQUIRED. OWNER, ENGINEER, AND CONTRACTOR TO RECEIVE A COPY OF START UP REPORT.
4. FOR WATER HEATER PIPING SEE DETAIL 1/P7.02.
5. PROVIDE COMMON VENTING KIT. △2

EXPANSION TANKS

EQUIP NO.	SERVICE	CAPACITY (GAL)	TANK SIZE		OPERATING WEIGHT (LBS)	BASIS OF DESIGN	NOTES
			DIAMETER (INCHES)	HEIGHT (INCHES)			
ET-1	DOMESTIC HOT WATER	35	20	37	400	WESSELS TXA-130	1
ET-2	HYDROPNEUMATIC TANK	127.9	30	65	1,678	WESSELS FXA-500	1
ET-3	POINT-OF-USE WATER HEATER	–	3	4	5	AMTROL ST-1	1

△2

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.

MASTER THERMOSTATIC MIXING VALVE

EQUIP NO.	SERVICE	SETPOINT	DESIGN FLOW (GPM)	MAX FLOW (GPM)	PRESSURE DROP (PSI)	ELECTRICAL	BASIS OF DESIGN	NOTES
TMV-1	DOMESTIC HOT WATER (120°F)	120°F	60.5	91.3	5	N/A	LAWLER 804 PI MS	1

NOTES:
1. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTALLATION REQUIREMENTS, INCLUDING ISOLATION VALVES AT BOTH INLETS AND AT OUTLET, AND STRAINERS AND CHECK VALVES AT BOTH INLETS.

HOT WATER CIRCULATION PUMP

EQUIP NO.	SERVICE	TYPE	FLOW, GPM	HEAD, FT	PUMP RPM	PRESSURE RATING, PSI	ELECTRICAL		WEIGHT, LBS	BASIS OF DESIGN	NOTES
							VOLTAGE	HP			
HWCP-1	DOMESTIC HOT WATER LOOP (120°F)	INLINE	17	20	VARIABLE	175	120V/1P	½	29	BELL & GOSSETT ECOCIRC XL N 55-45	1,2

NOTES:
1. STAINLESS STEEL, SUITABLE FOR POTABLE WATER APPLICATION.
2. ALL DOMESTIC WATER EQUIPMENT SHALL BE NSF-61 LISTED.

ELECTRIC WATER HEATER

EQUIP TAG.	DECRIPTION	LOCATION	SERVICE	PERFORMANCE		SET POINT	INPUT	SUPPLY INLET/OUTLET CONNECTION	OPERATING WEIGHT, LBS	ELECTRICAL	BASIS OF DESIGN	NOTES
				GPM RECOVERY	STORAGE CAPACITY (GAL)							
EWH-1	TANKLESS WATER HEATER	TI RESTROOMS	LAVATORY POINT OF USE WATER HEATER	0.4 @ 71°F TR	N/A	110°F	4.15 KW	½"	5	277V/1P	CHRONOMITE SR-15L/277	1

△2

NOTES:
1. INSTALL ACCORDING TO MANUFACTURER REQUIREMENTS.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/08/24	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

PLUMBING SCHEDULES

P0.03

PLUMBING SCHEDULES

PLUMBING FIXTURE SCHEDULE

PLUMBING PLAN MARK	SERVICE	SERVICE SIZE				FLOW RATE	FIXTURE TYPE	FINISH	BASIS OF DESIGN	NOTES (1-6)
		CW	HW	W	V					
APARTMENT UNITS										
WC-1	ALL UNITS	1/2"	-	3"	2"	1.28 GPF	WATER CLOSET (FLUSH TANK)	WHITE	GERBER WS21112/MAXWELL	
							SEAT	WHITE	BEMIS 1500EC	
LV-1	ALL UNITS	1/2"	1/2"	2"	1-1/2"	1.2 GPM	LAVATORY	WHITE	GERBER 12-770-F	
							FAUCET	BRUSH NICKEL	DELTA P191102LF/PRECEPT	
SH-1	ALL UNITS	1/2"	1/2"	2"	1-1/2"	1.5 GPM	SHOWER ENCLOSURE	WHITE	AQUATIC 1603DTS	60"X36"
							CONTROLS + VALVE TRIM	BRUSH NICKEL	CMI CASMIR #192-6486-BN	
BT-1	ALL UNITS	1/2"	1/2"	2"	1-1/2"	1.75 GPM	TUB/SHOWER ENCLOSURE	WHITE	KOHLER STERLING 71101122-0	60"X36"
							ROUGH-IN VALVE	BRUSH NICKEL	DELTA R10000-UNWS	
							TUB/SHOWER TRIM	BRUSH NICKEL	DELTA PTT188792/PRECEPT	
KS-1	ALL UNITS	1/2"	1/2"	2"	1-1/2"	1.5 GPM	KITCHEN SINK	STAINLESS	ELKAY ELUHAD281655PD	
							FAUCET	BRUSH NICKEL	DELTA P188152LF/PRECEPT	
WB-1	ALL UNITS	1/2"	1/2"	2"	1-1/2"	---	WASHER BOX	WHITE	SIOUX CHIEF 696 SERIES	
PUBLIC & BACK OF HOUSE SPACES										
LV-2	PUBLIC RESTROOMS	1/2"	1/2"	2"	1-1/2"	0.5 GPM	LAVATORY	WHITE	KOHLER K-2362-4	
							FAUCET	BRUSH NICKEL	DELTA 811DPA90/ 810 DPA	
WC-2	PUBLIC RESTROOMS	1/2"	-	3"	2"	1.6 GPF	WATER CLOSET (FLUSH VALVE)	WHITE	GERBER SE-21-112/MAXWELL SE	
							SEAT	WHITE	BEMIS 1500EC 000	
UR-1	PUBLIC RESTROOMS	3/4"	-	2"	1-1/2"	1.0 GPF	URINAL	WHITE	AMERICAN STANDARD 6590001.020	
							FLUSH VALVE	CHROME	SLOAN REGAL 186	
SK-1	AMENITY	1/2"	1/2"	2"	2"	1.8 GPM	SINK	STAINLESS	ELKAY ELUHAD281655PD	
							FAUCET	BRUSH NICKEL	DELTA 9649T-DST	
SK-2	AMENITY	1/2"	1/2"	2"	2"	1.5 GPM	SINK	STAINLESS	ELKAY ECTRU17169W	PROVIDE SINK COVER
							FAUCET	BRUSH NICKEL	DELTA P188152LF/PRCEPT	
DW-1	DOG WASH	3/4"	3/4"	2"	2"	--	DOG WASH TUB	STAINLESS	FLYING PIG GROOMING FP701	
							FAUCET	STAINLESS	FLYING PIG GROOMING FACUET PACKAGE	
HB-1	PER PLANS	3/4"	-	-	-	--	WALL HYDRANT	BRASS	WOODFORD 17CP-6-MH	
HB-2	TRASH ROOM	3/4"	3/4"	-	-	--	MXIING HYDRANT	N/A	WOODFORD MODEL 22	
RH-1	PER PLANS	3/4"	-	-	-	--	ROOF HYDRANT	N/A	WOODFROD RHY-2	

NOTES:
1 CONTRACTOR SHALL CONFIRM MAKE, MODEL, AND FINISH OF ALL FIXTURES WITH OWNER, ARCHITECT, AND INTERIOR DESIGNER PRIOR TO ORDERING.
2 PROVIDE 1/4-TURN BALL VALVE ANGLE STOPS WITH BRAIDED STAINLESS STEEL FLEX CONNECTORS AT HOT AND COLD WATER SUPPLY TO EACH FIXTURE EXCEPT SHOWERS AND BATHS. PROVIDE SCREWDRIVER STOPS AT SHOWERS AND BATHS.
3 PROVIDE RED/HOT AND BLUE/COLD INDICATORS AT ALL FIXTURES.
4 REFER TO ARCH PLANS FOR MOUNTING HEIGHT
5 ALL EXPOSED P-TRAPS SHALL BE CHROME-PLATED BRASS
6 PROVIDE WATER HAMMER ARRESTOR FOR CLOTHES WASHERS, DISHWASHER, & OTHER QUICK CLOSING VALVES. PROVIDE ACCESS PANELS.

DRAIN SCHEDULE

PLUMBING PLAN MARK	SERVICE	SERVICE SIZE				FLOW RATE	FIXTURE TYPE	FINISH	BASIS OF DESIGN	NOTES (1-3)
		GW	OW	W	V					
FS-1	PER PLANS	-	-	PER PLANS		N/A	FLOOR SINK	NICKEL BRONZE	JAY R SMITH 3140Y	
FCO	PER PLANS	-	-	PER PLANS		N/A	FLOOR CLEANOUT	TBD	JAY R SMITH 4020	
WCO	PER PLANS	-	-	PER PLANS		N/A	WALL CLEANOUT	TBD	JAY R SMITH 4402	
FD-1	PER PLANS	-	-	PER PLANS		N/A	FLOOR DRAIN	NICKEL BRONZE	JAY R SMITH 2006	
HD-1	PER PLANS	-	-	PER PLANS		N/A	HUB DRAIN	STAINLESS STEEL	JAY R SMITH 9654	
RC-1	CONDENSATE			PER PLANS		N/A	ROOF-CEPTOR INDIRECT DRAIN	STAINLESS STEEL	JAY R SMITH 3960	
RD-1	STORM DRAINAGE/ OVERFLOW	-	-	PER PLANS		N/A	COMBINED ROOF/OVERFLOW DRAIN	NICKEL BRONZE	JAY R SMITH 1850	
AD-1	STORM DRAINAGE	-	-	PER PLANS		N/A	AREA DRAIN	NICKEL BRONZE	JAY R SMITH 1410	

NOTES:
1 CONTRACTOR SHALL CONFIRM MAKE, MODEL, AND FINISH OF ALL FIXTURES WITH OWNER, ARCHITECT, AND INTERIOR DESIGNER PRIOR TO ORDERING.
2 PROVIDE & INSTALL TRAP PRIMER FOR DRAIN WHERE REQUIRED BY CODE OR AHS.
3 ALL EXPOSED P-TRAPS SHALL BE CHROME-PLATED BRASS.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	01/19/24	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

PLUMBING SCHEDULES

P0.04

FLAG NOTES:

1. PROVIDE 2'X2'X2' DRY SUMP AT TRANSFOMER ROOM.

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

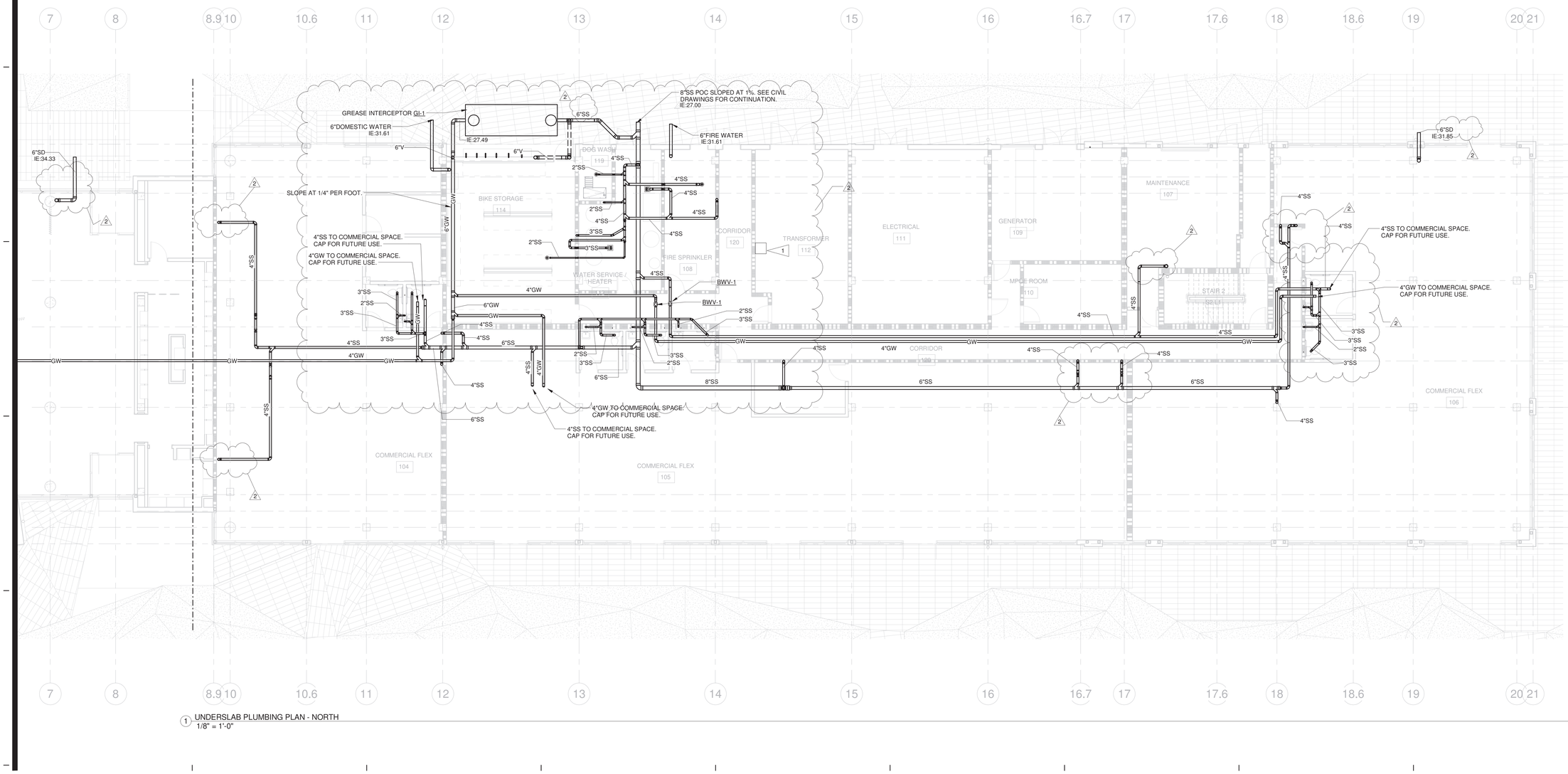
1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

5. FOR PIPE SLAB PENETRATION DETAILS REFER TO DETAILS 2 AND 3 ON SHEET LFG1C2.
6. EXCAVATION FOR GI MAY EXPOSE REFUSE. WHERE EXCAVATION INTO REFUSE IS REQUIRED, FOLLOW THE SPECIFICATIONS AND RELOCATION AREA IDENTIFIED IN THE EVERETT RIVERFRONT BOULEVARD PROJECT DOCUMENTS.
7. CONNECT UTILITY PIPING TO FLEXIBLE CONNECTION. REFER TO CIVIL DRAWINGS FOR SPECIFICATIONS AND SEE DETAIL 5 ON SHEET A750.
8. FOR PIPING HUNG BELOW FOUNDATION SLAB, REFER TO DETAIL 1 ON SHEET P7.03.



1 UNDERSLAB PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

KEY PLAN

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc

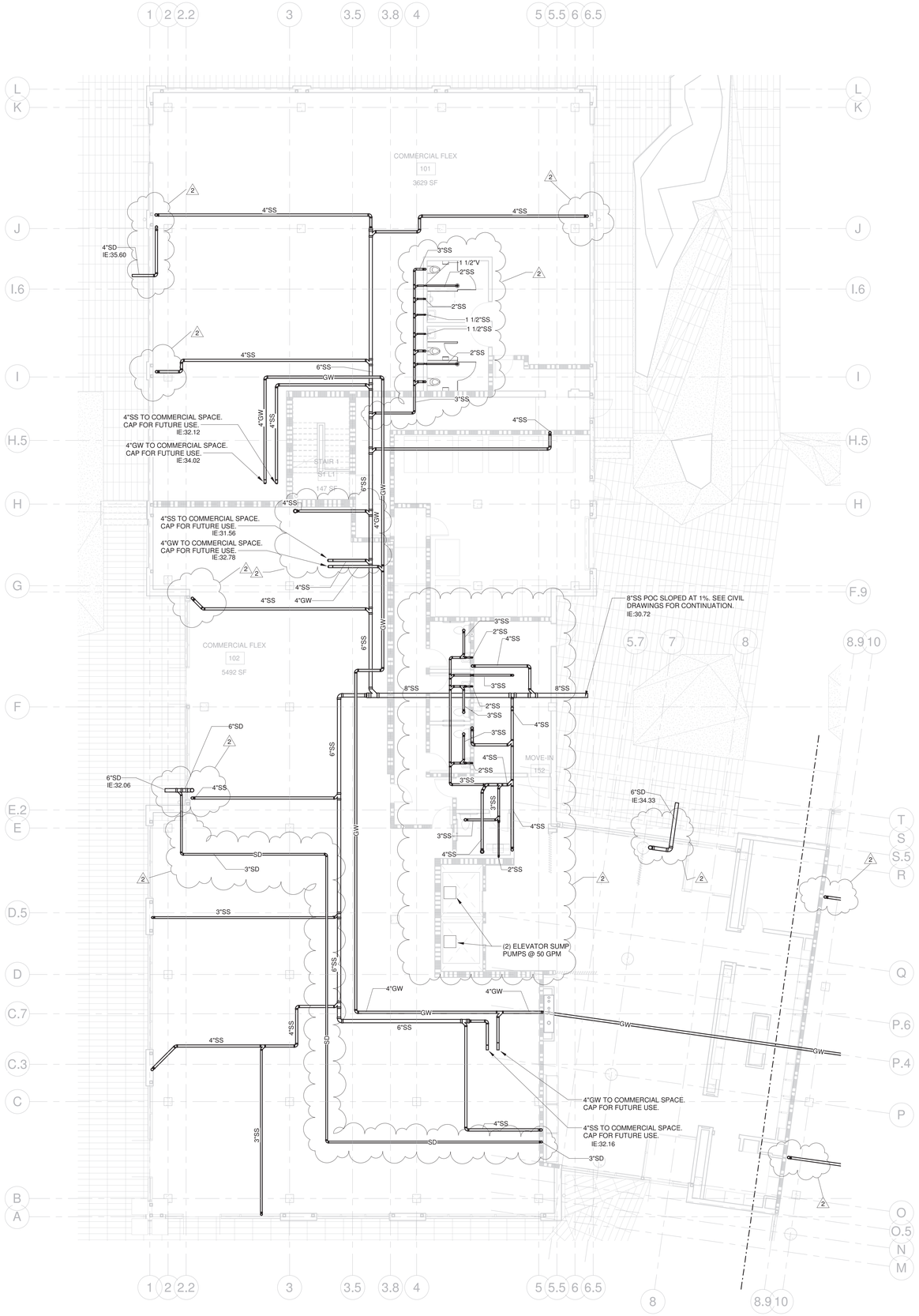
	△	DATE	DESCRIPTION
1		09/16/22	REVISION 1
2		01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

UNDERSLAB PLUMBING PLAN - NORTH

P2.00N

2/2/2024 1:31:19 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 UNDERSLAB PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

5. FOR PIPE SLAB PENETRATION DETAILS REFER TO DETAILS 2 AND 3 ON SHEET LFG1C2.
6. EXCAVATION FOR GI MAY EXPOSE REFUSE. WHERE EXCAVATION INTO REFUSE IS REQUIRED, FOLLOW THE SPECIFICATIONS AND RELOCATION AREA IDENTIFIED IN THE EVERETT RIVERFRONT BOULEVARD PROJECT DOCUMENTS.
7. CONNECT UTILITY PIPING TO FLEXIBLE CONNECTION. REFER TO CIVIL DRAWINGS FOR SPECIFICATIONS AND SEE DETAIL 5 ON SHEET A750.
8. FOR PIPING HUNG BELOW FOUNDATION SLAB, REFER TO DETAIL 1 ON SHEET P7.03.

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

UNDERSLAB PLUMBING PLAN - SOUTH

P2.00S

2/2/2024 1:31:21 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

FLAG NOTES:

1. PROVIDE POINT-OF-USE TANKLESS WATER HEATER AND EXPANSION TANK AT LAVATORY. SEE DETAIL 2, P7.03.
2. 4" VENT STUB-OUT TO COMMERCIAL SPACE. CAP FOR FUTURE USE.
3. DISCHARGE CONDENSATE TO LAVATORY TAILPIECE.
4. PROVIDE 2'X2'X2' DRY SUMP AT TRANSFOMER ROOM.
5. THREE (3) FUEL TANK VENTS FOR GENERATOR . CLEARANCES: 5 FEET FROM OPENINGS, 12 FEET FROM TAILPIPE EXHAUST, 12 FEET ABOVE ADJOINING GRADE. 15 FEET FROM FORCED-AIR INTAKES. ADDITIONAL CLEARANCES PER MANUFACTURER INSTRUCTIONS AND ASME BOILER & PRESSURE VESSEL CODE. SEE DETAIL 3, P7.03.
6. GENERATOR REMOTE FUEL FILL STATION (. MAINTAIN 5' CLEARANCE TO PROPERTY LINES, OPENINGS AND INTAKES.
7. 2"CW TO COMMERCIAL SPACE. PROVIDE SHUTOFF VALVE AND CAP FOR FUTURE USE.
8. 1 1/4" MPG TO COMMERCIAL SPACE. PROVIDE SHUTOFF VALVE AND CAP FOR FUTURE USE .

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

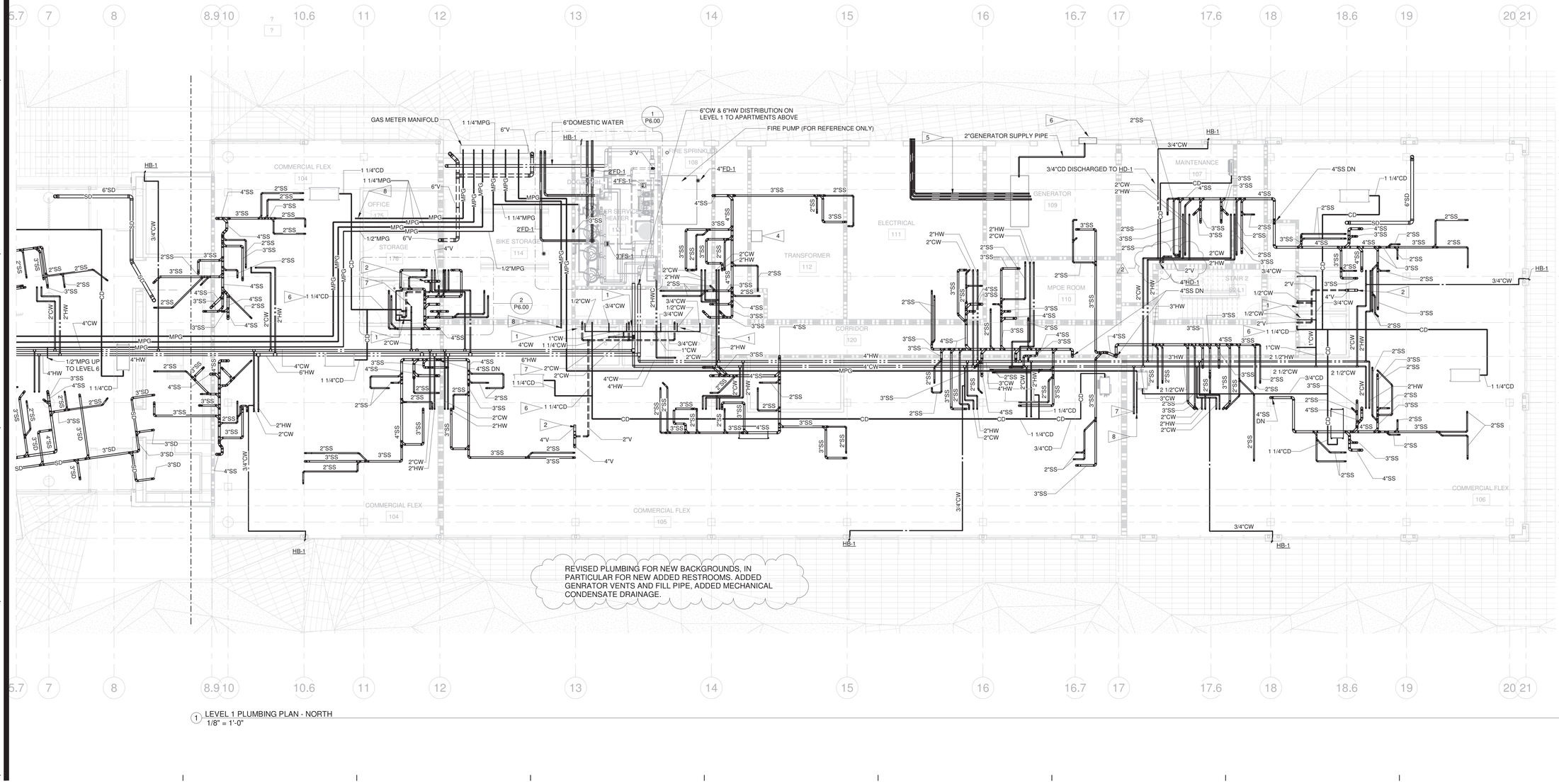
(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF



REVISED PLUMBING FOR NEW BACKGROUNDS, IN PARTICULAR FOR NEW ADDED RESTROOMS. ADDED GENRATOR VENTS AND FILL PIPE, ADDED MECHANICAL CONDENSATE DRAINAGE.

1 LEVEL 1 PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

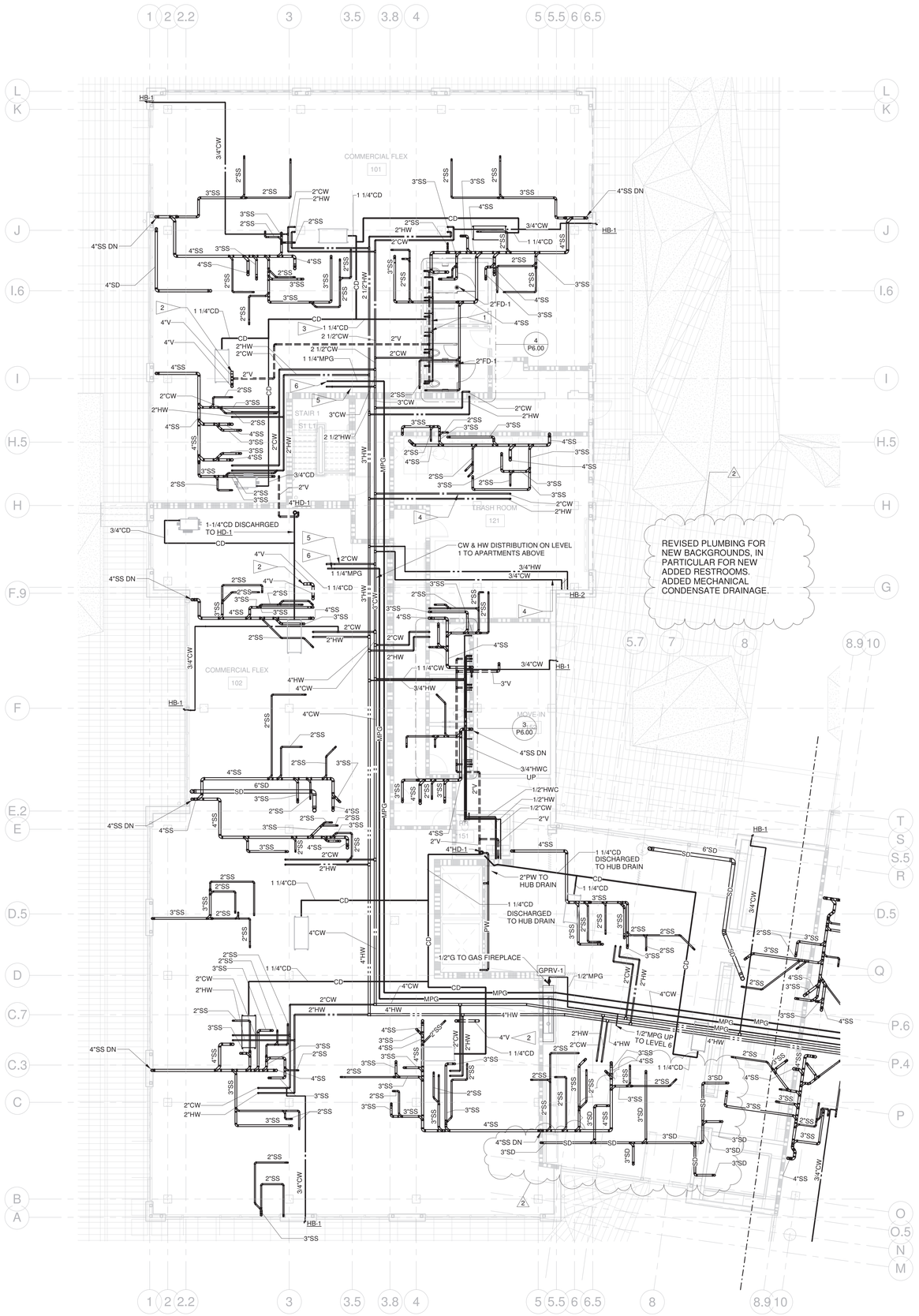
△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 1 PLUMBING PLAN - NORTH

P2.01N

2/2/2024 1:31:24 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 LEVEL 1 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W#) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S#) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. PROVIDE POINT-OF-USE TANKLESS WATER HEATER AND EXPANSION TANK AT LAVATORY. SEE DETAIL 2, P7.03.
2. 4" VENT STUB-OUT TO COMMERCIAL SPACE. CAP FOR FUTURE USE.
3. DISCHARGE CONDENSATE TO LAVATORY TAILPIECE.
4. PROVIDE HEAT TRACE FOR COLD WATER SUPPLY LINES IN TRASH ROOM.
5. 2"CW TO COMMERCIAL SPACE. PROVIDE SHUTOFF VALVE AND CAP FOR FUTURE USE.
6. 1 1/4" MPG TO COMMERCIAL SPACE. PROVIDE SHUTOFF VALVE AND CAP FOR FUTURE USE .

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 1 PLUMBING PLAN - SOUTH

P2.01S

2/2/2024 1:31:26 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development P\H2-21-5905-01A-Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W/P) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S/P) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

1 LEVEL 2 PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 2 PLUMBING PLAN - NORTH

P2.02N

2/2/2024 1:31:29 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

1 LEVEL 2 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 2 PLUMBING PLAN - SOUTH

P2.02S

2/2/2024 1:31:32 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W 1) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S 1) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

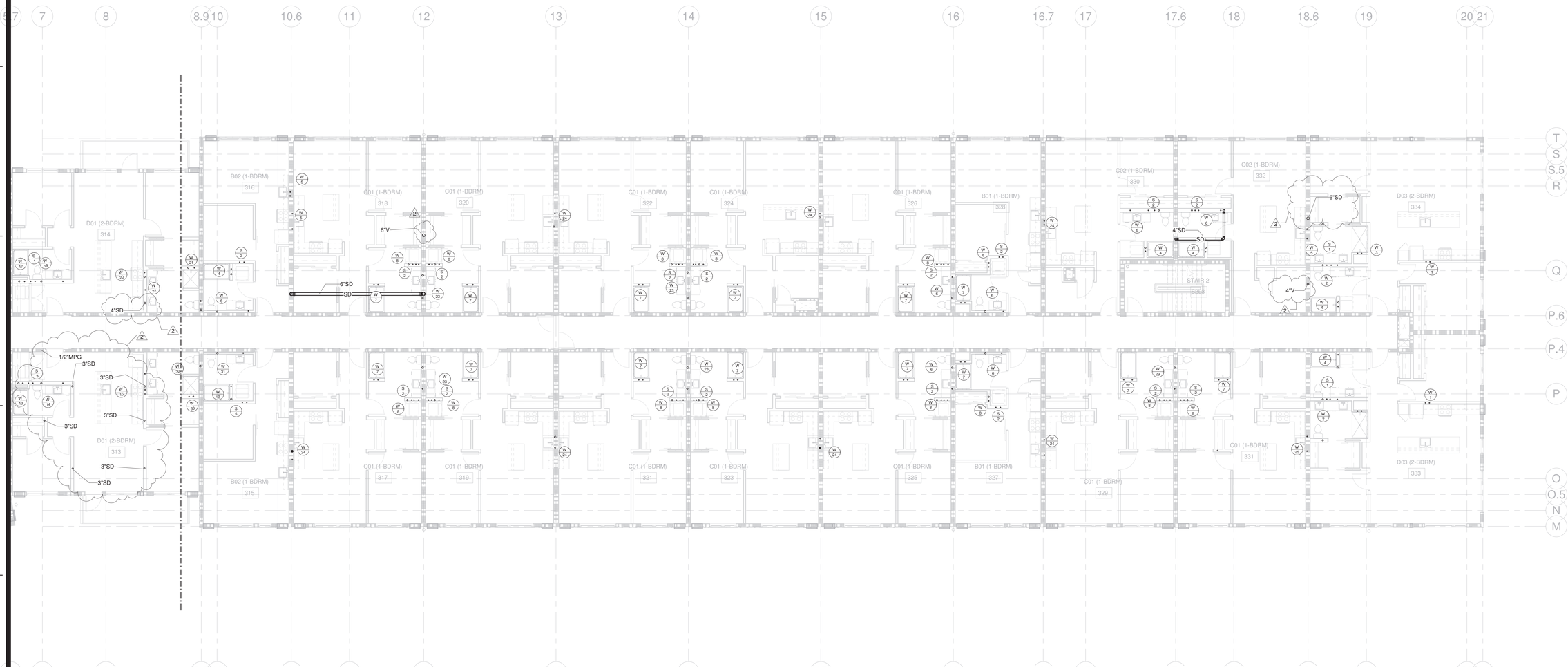
PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.



1 LEVEL 3 PLUMBING PLAN - NORTH
1/8" = 1'-0"

2/2/2024 1:31:36 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2. Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 3 PLUMBING PLAN - NORTH

P2.03N

1 LEVEL 3 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C
3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 3 PLUMBING PLAN - SOUTH

P2.03S

2/2/2024 1:31:37 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W#) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S#) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

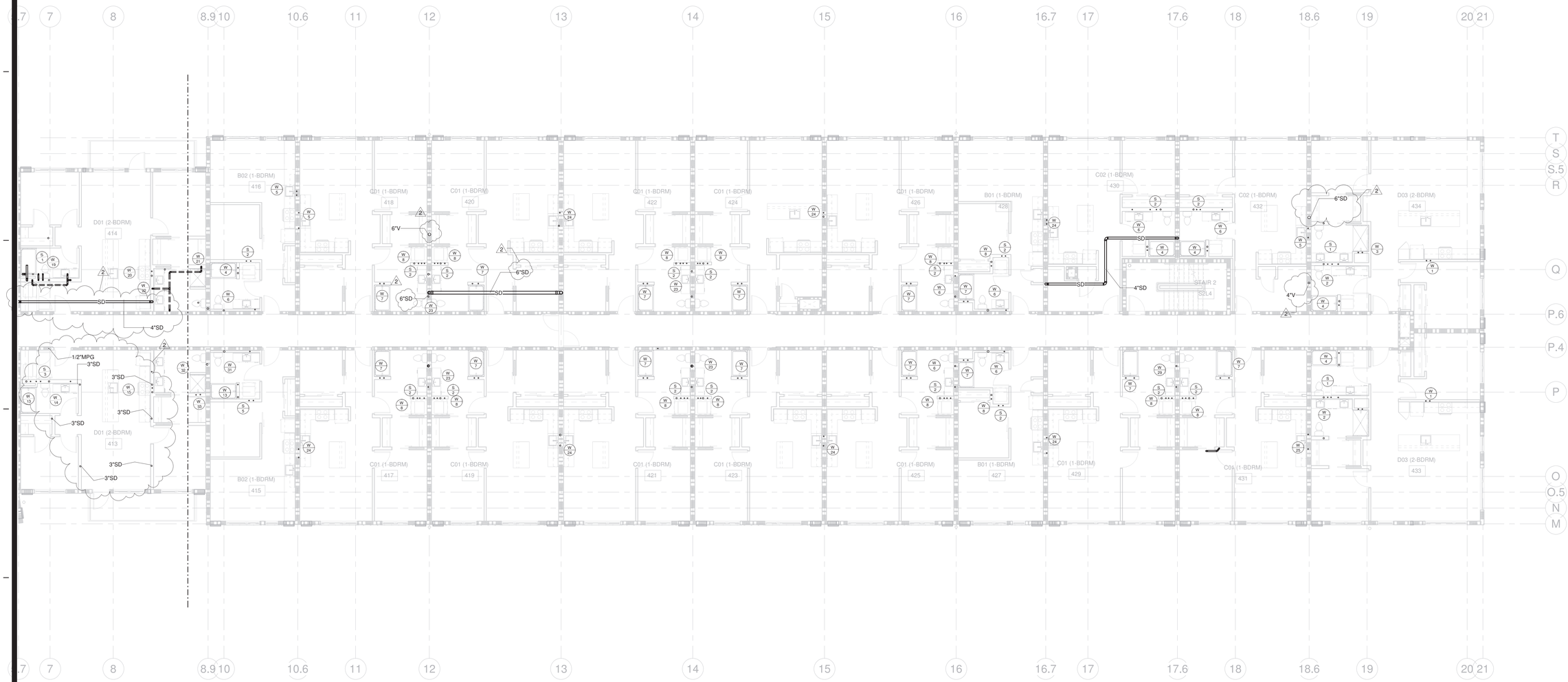
PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.



1 LEVEL 4 PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 4 PLUMBING PLAN - NORTH

P2.04N

2/2/2024 1:31:40 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

1 LEVEL 4 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 4 PLUMBING PLAN - SOUTH

P2.04S

2/2/2024 1:31:44 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W 0) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S 0) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

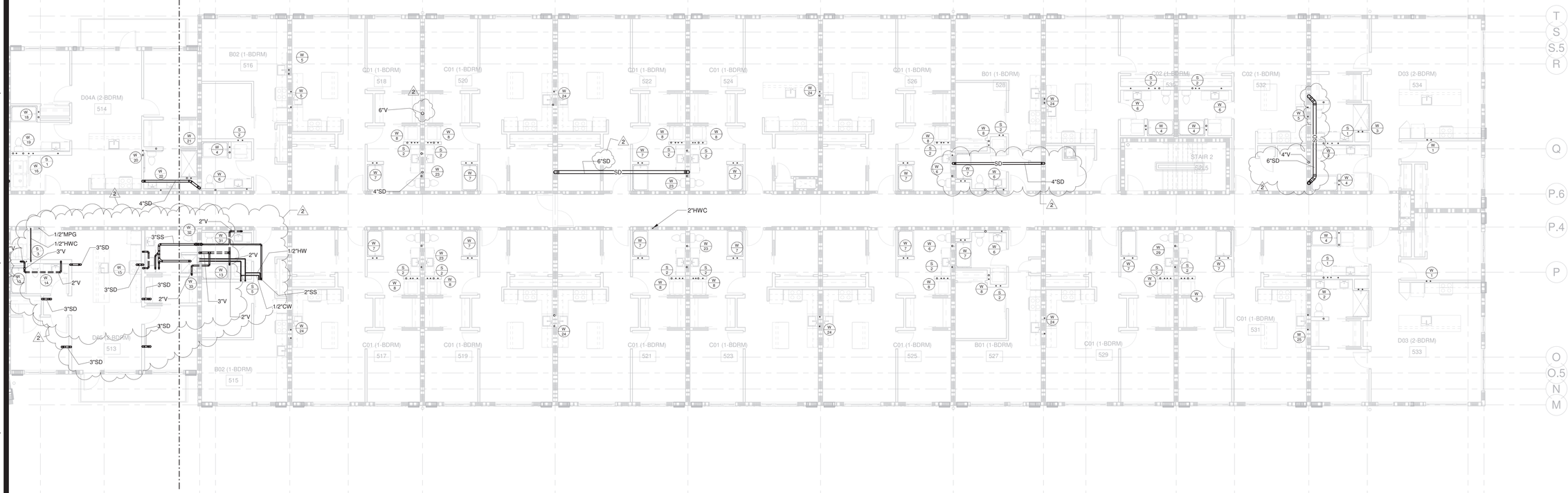
PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.



1 LEVEL 5 PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 5 PLUMBING PLAN - NORTH

P2.05N

2/2/2024 1:31:48 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2:21-5905-01A/Riverfront Apartments Building C - MEP.rvt

1 LEVEL 5 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 5 PLUMBING PLAN - SOUTH

P2.05S

2/2/2024 1:31:51 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

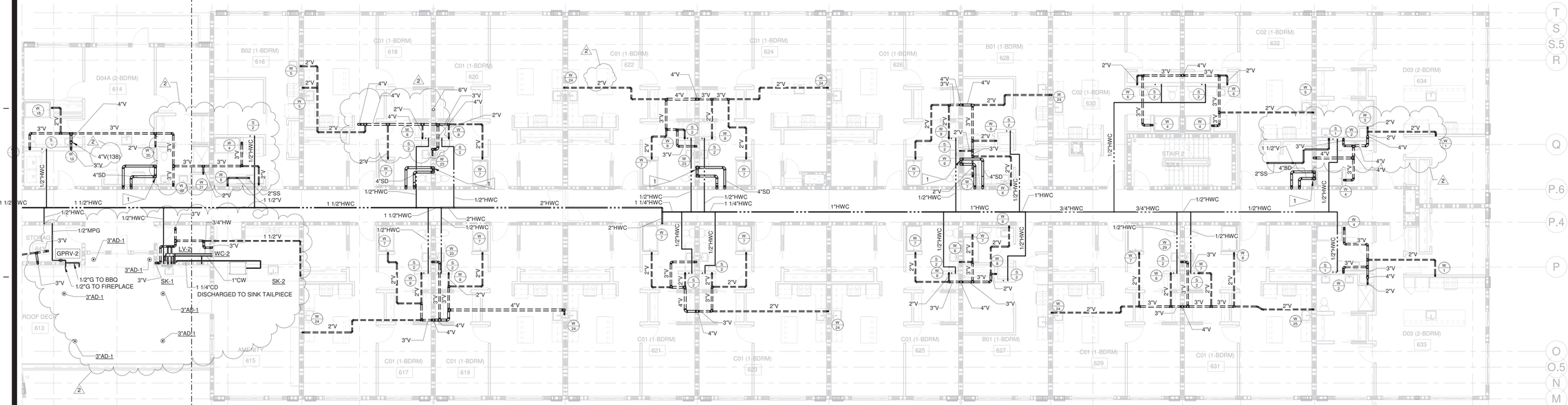
4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. COMBINE STORM DRAIN AND OVERFLOW DRAIN AT A VERTICAL PIPE WITH A 'WYE' FITTING. COMBINED STORM PIPING SHALL BE SIZED AT TWICE THE RAINFALL RATE.

2



1 LEVEL 6 PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 6 PLUMBING PLAN - NORTH

P2.06N

2/2/2024 1:31:56 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

1 LEVEL 6 PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W #) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S #) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. COMBINE STORM DRAIN AND OVERFLOW DRAIN AT A VERTICAL PIPE WITH A 'WYE' FITTING. COMBINED STORM PIPING SHALL BE SIZED AT TWICE THE RAINFALL RATE.

2

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

LEVEL 6 PLUMBING PLAN - SOUTH

P2.06S

2/2/2024 1:32:01 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES:

(W#) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S#) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

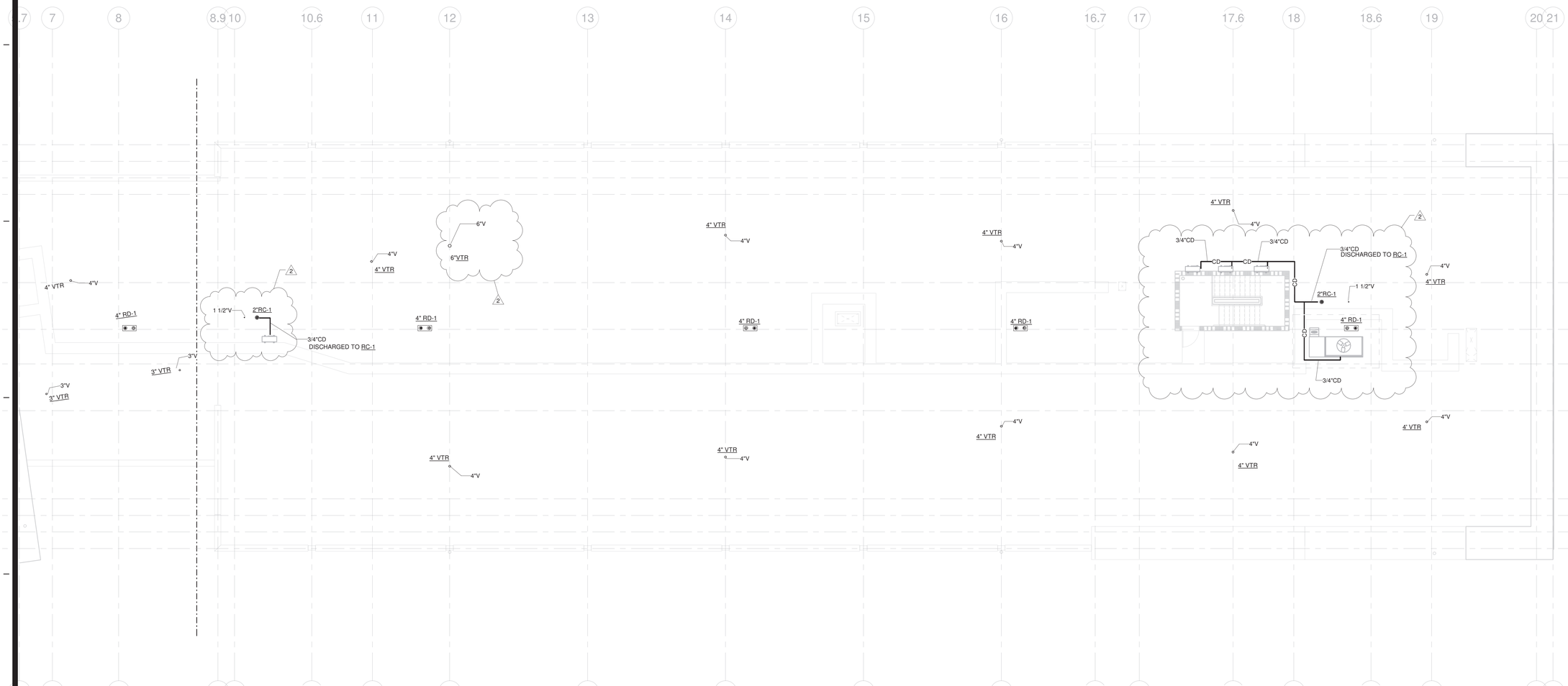
PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.



1 ROOF PLUMBING PLAN - NORTH
1/8" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

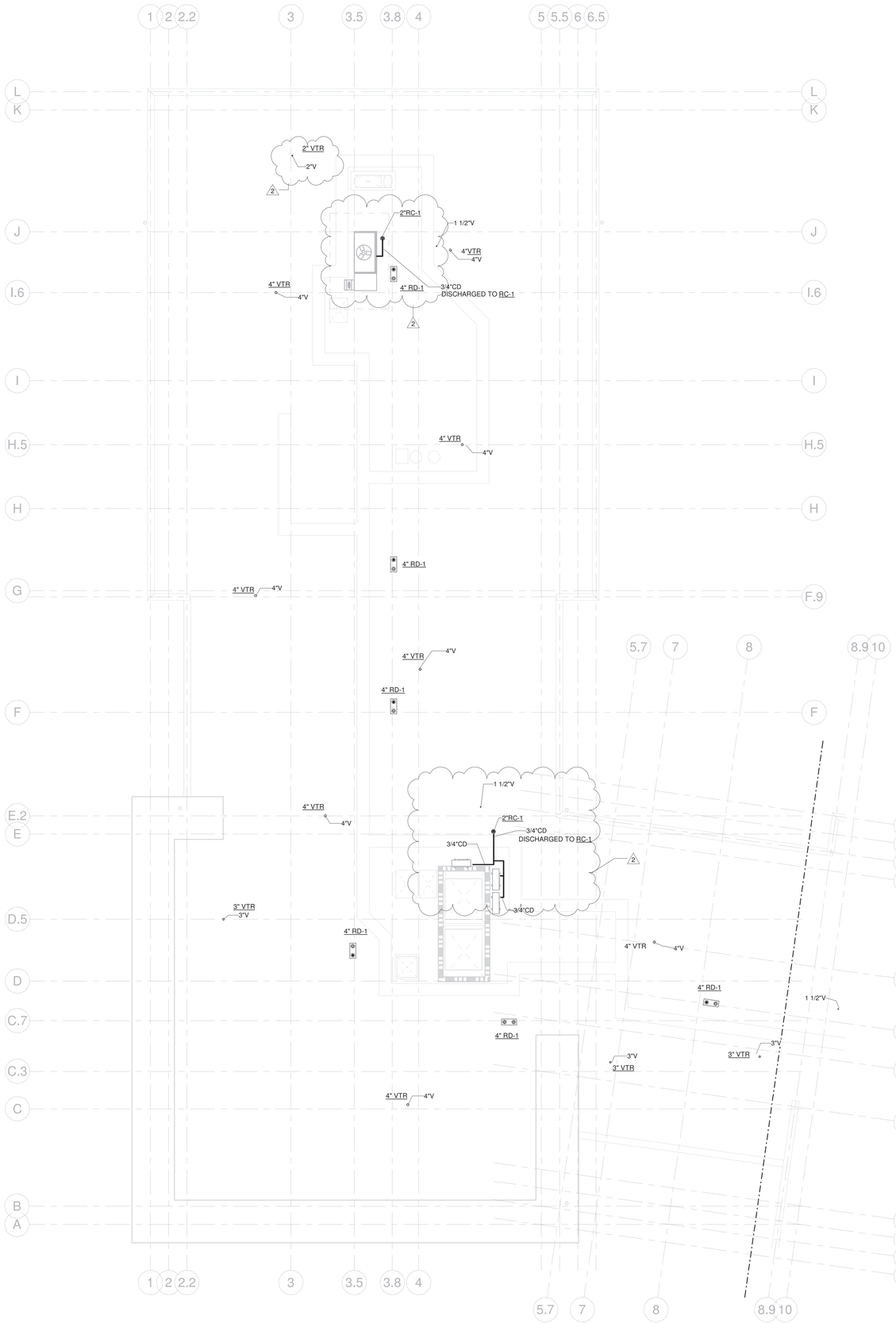
△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ROOF PLUMBING PLAN - NORTH

P2.07N

2/2/2024 1:32:02 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt



1 ROOF PLUMBING PLAN - SOUTH
1/8" = 1'-0"

GENERAL NOTES:

(W-#) = WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P4 SERIES FOR RISER DIAGRAMS.

(S-#) = SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC. SEE DETAIL 7/P7.00.
2. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.02.
3. WASTE & VENT PIPE SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1-1/2"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

4. STORM DRAIN SIZING: STORM DRAINAGE PIPING IS SIZED PER 2018 UPC FOR 1" PER HOUR RAINFALL RATE AT 1/8" PER FOOT SLOPE.

PIPE SIZE	VERTICAL	HORIZONTAL
3"	8,800 SF	3,288 SF
4"	18,400 SF	7,520 SF
6"	54,000 SF	21,400 SF
8"	116,000 SF	46,000 SF
10"	---	82,800 SF

FLAG NOTES:

1. NOT USED.

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/24

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

ROOF PLUMBING PLAN - SOUTH

P2.07S

2/2/2024 1:32:03 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2018 UPC 1007.1. SEE DETAIL 7/P7.00.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2015 SPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W., SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

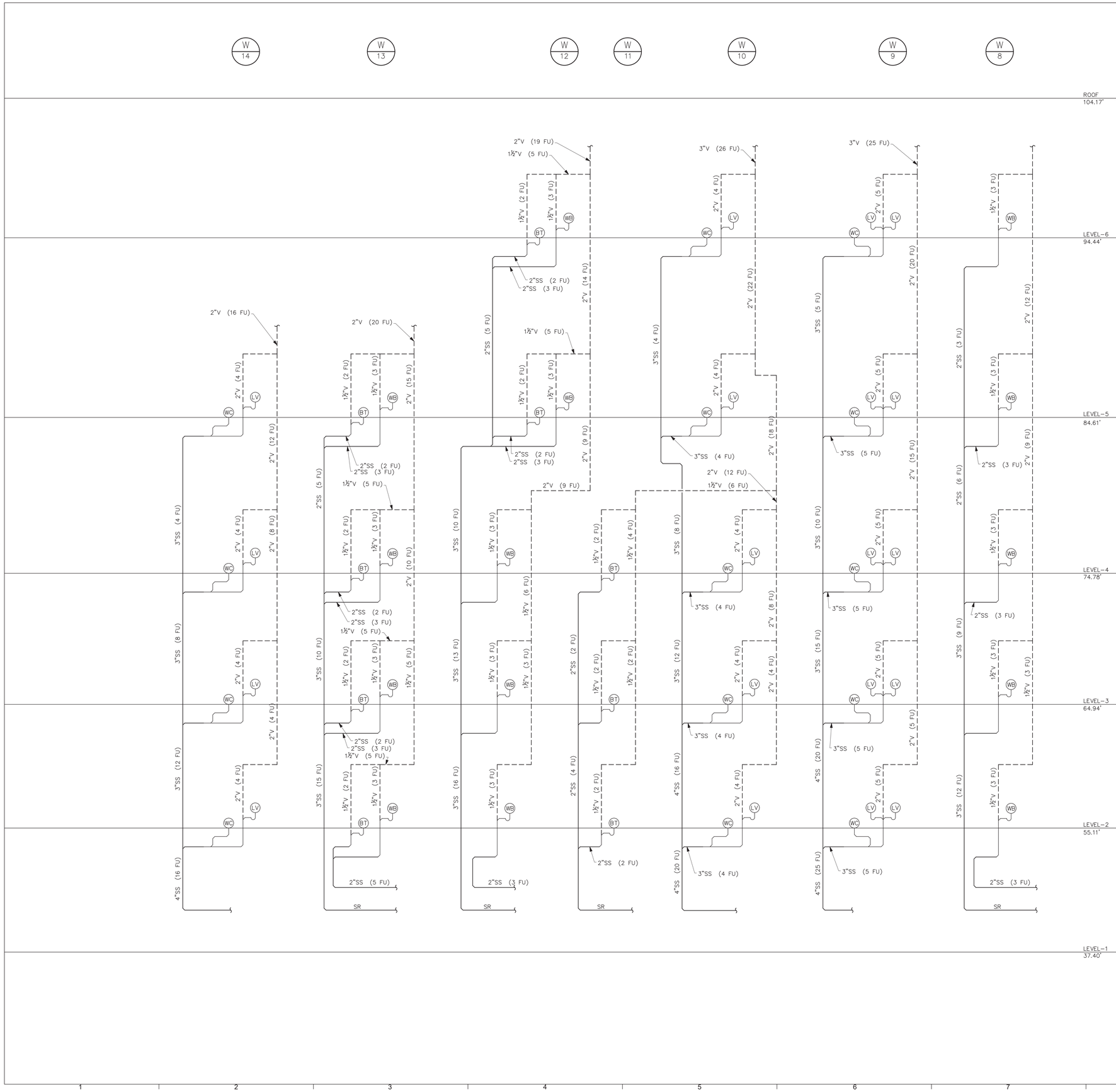
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

WASTE & VENT RISER DIAGRAMS

P4.00



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2018 UPC 1007.1. SEE DETAIL 7/P7.00.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2015 SPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19801 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

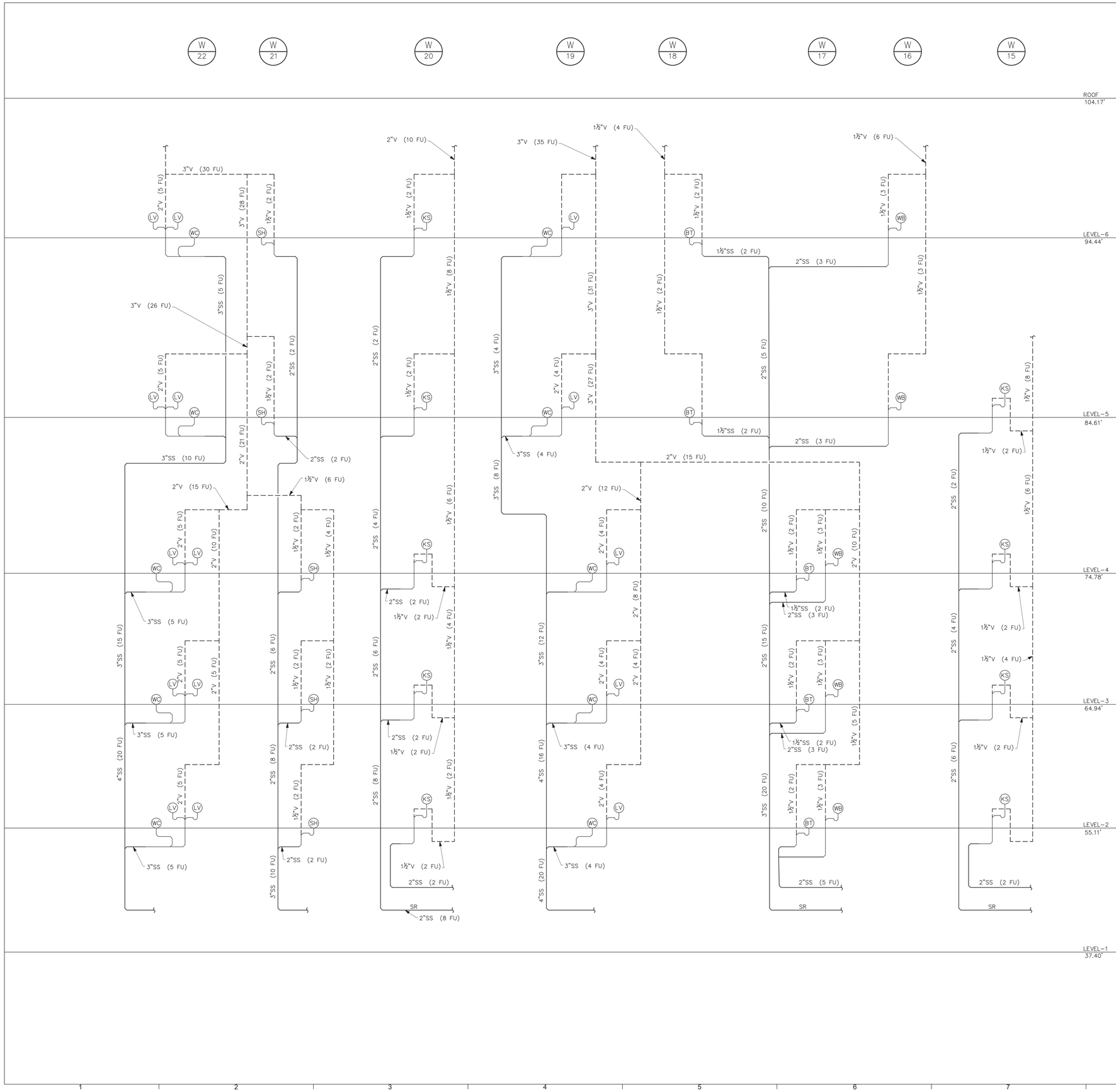
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

WASTE & VENT RISER DIAGRAMS

P4.01



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2018 UPC 1007.1. SEE DETAIL 7/P7.00.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2015 SPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19801 40TH AVE W, SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

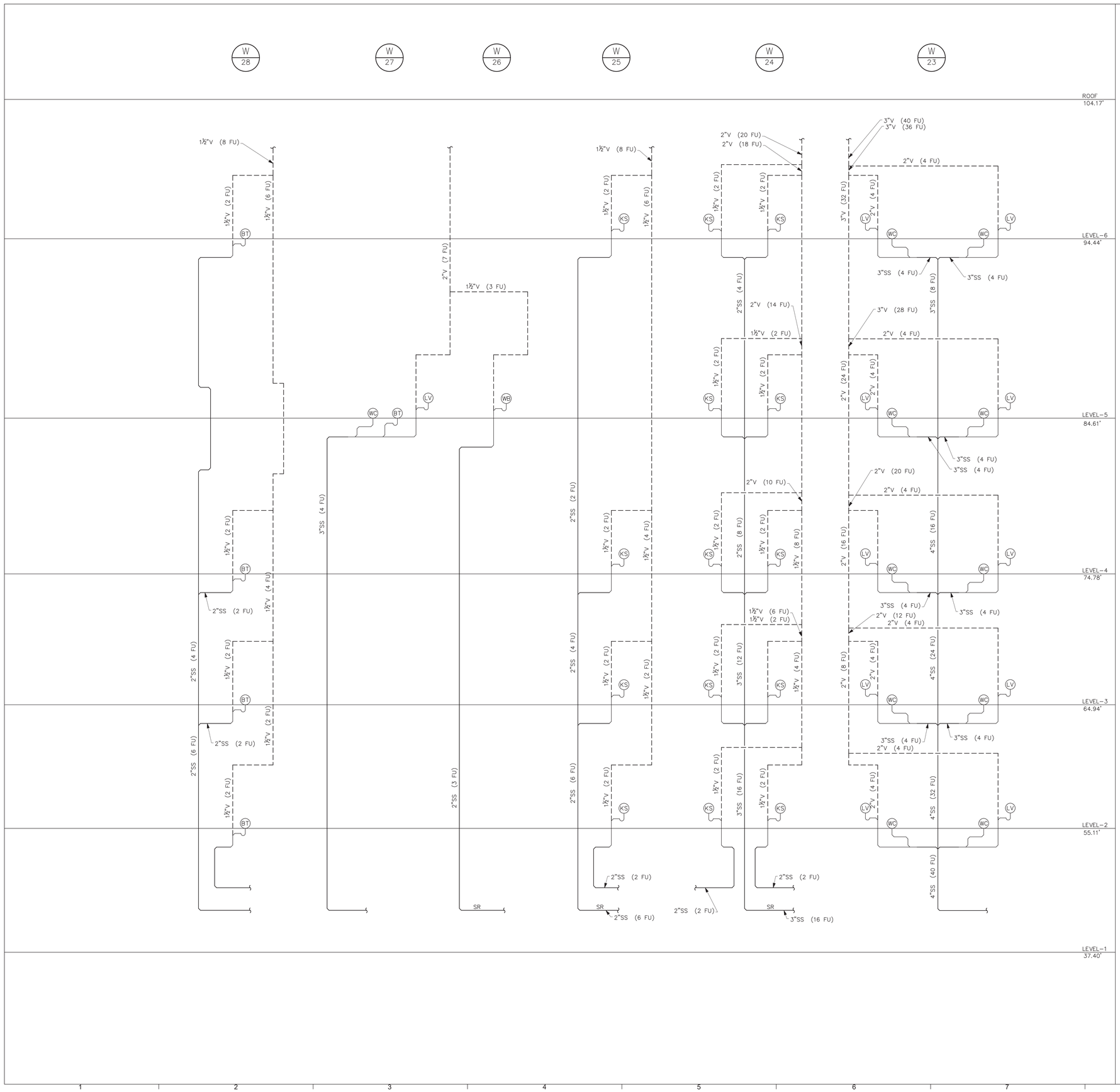
© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2 Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

WASTE & VENT RISER DIAGRAMS

P4.02



GENERAL NOTES

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2018 UPC 1007.1. SEE DETAIL 7/P7.00.
2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2015 SPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

PIPE SIZE	VERTICAL	HORIZONTAL	VENT
1½"	2 DFU	1 DFU	8 DFU
2"	16 DFU	8 DFU	24 DFU
3"	48 DFU	35 DFU	84 DFU
4"	256 DFU	172 DFU	256 DFU
6"	1,380 DFU	576 DFU	1,380 DFU
8"	3,600 DFU	2,112 DFU	3,600 DFU

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

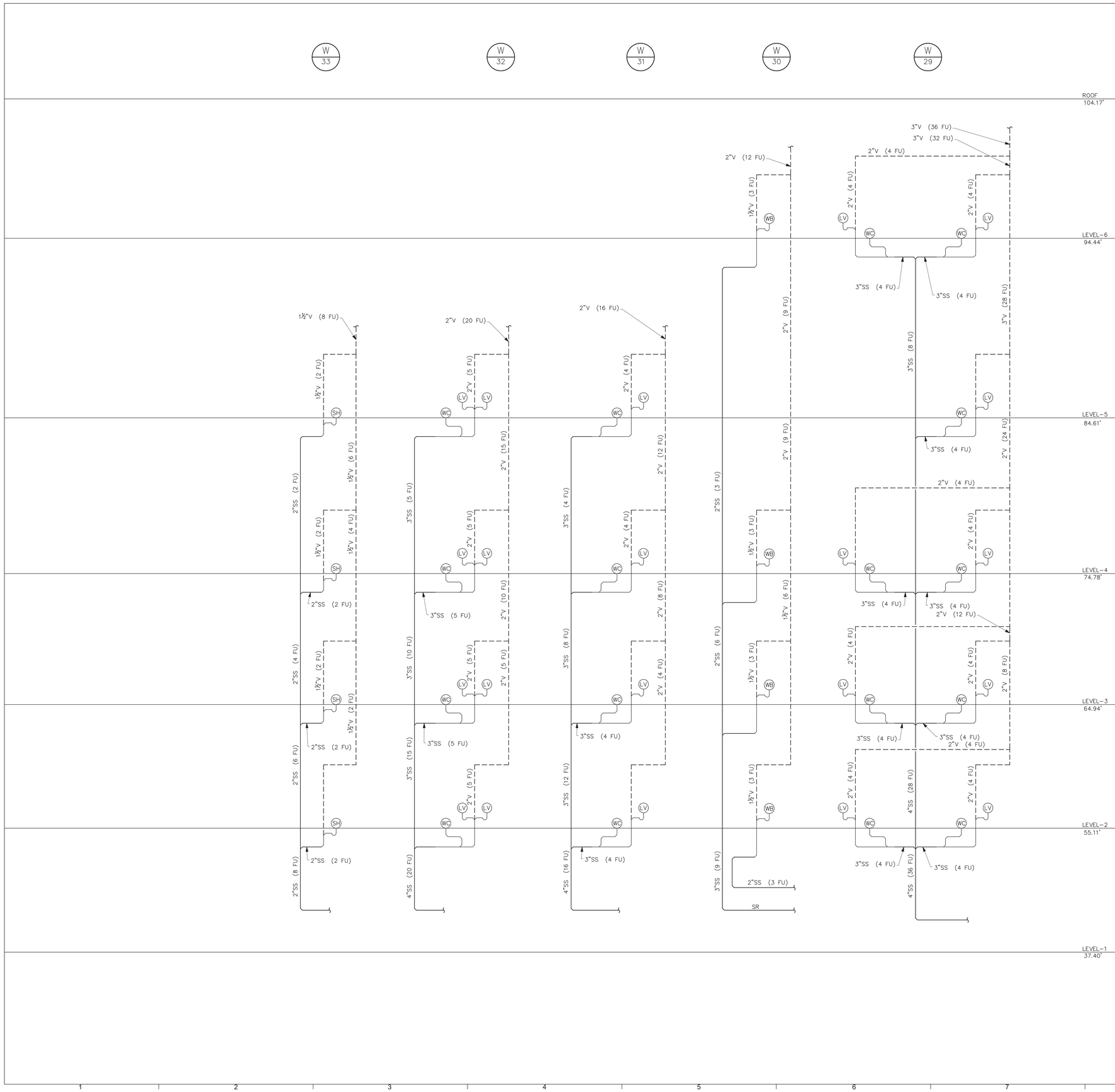
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

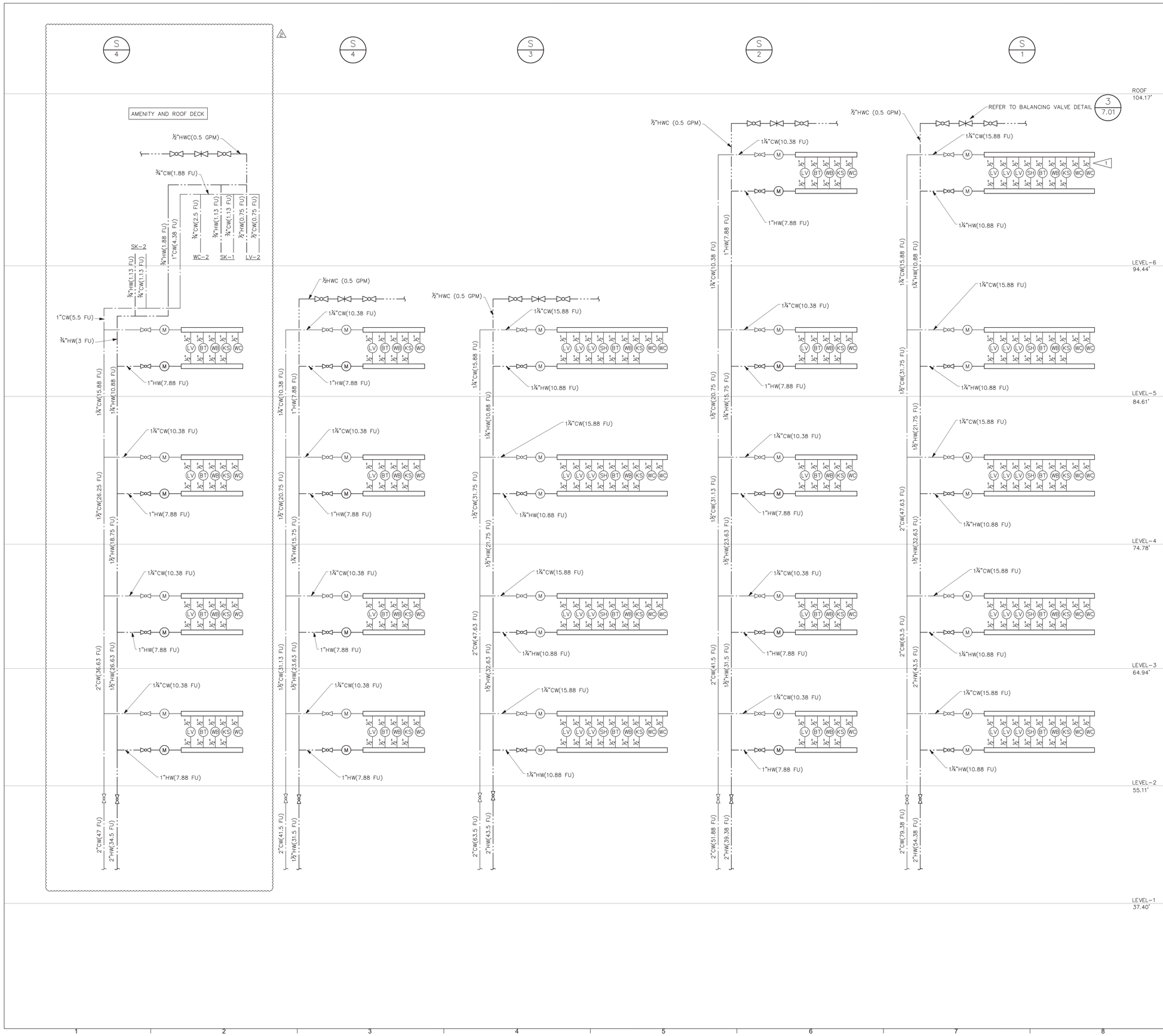
△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

WASTE & VENT RISER DIAGRAMS

P4.03


W 33
W 32
W 31
W 30
W 29
ROOF 104.17'
LEVEL-6 94.44'
LEVEL-5 84.61'
LEVEL-4 74.78'
LEVEL-3 64.94'
LEVEL-2 55.11'
LEVEL-1 37.40'
1½"V (8 FU)
2"V (20 FU)
2"V (16 FU)
2"V (12 FU)
3"V (36 FU)
3"V (32 FU)
2"V (4 FU)
1½"V (2 FU)
2"V (5 FU)
2"V (4 FU)
1½"V (3 FU)
2"V (4 FU)
2"V (4 FU)
2"SS (2 FU)
1½"V (6 FU)
3"SS (5 FU)
2"V (15 FU)
3"SS (4 FU)
2"V (12 FU)
2"SS (3 FU)
2"V (9 FU)
3"SS (4 FU)
3"SS (8 FU)
3"V (28 FU)
1½"V (2 FU)
1½"V (4 FU)
2"V (5 FU)
2"V (5 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"SS (2 FU)
3"SS (5 FU)
2"V (10 FU)
3"SS (4 FU)
2"V (8 FU)
1½"V (3 FU)
2"V (6 FU)
3"SS (4 FU)
2"V (12 FU)
1½"V (2 FU)
2"V (5 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (6 FU)
2"SS (4 FU)
3"SS (10 FU)
3"SS (8 FU)
1½"V (3 FU)
2"SS (6 FU)
3"SS (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (5 FU)
2"V (5 FU)
2"V (4 FU)
2"V (4 FU)
2"V (6 FU)
2"SS (2 FU)
3"SS (5 FU)
3"SS (4 FU)
3"SS (4 FU)
2"V (4 FU)
2"SS (6 FU)
3"SS (15 FU)
3"SS (12 FU)
1½"V (3 FU)
2"SS (8 FU)
2"V (5 FU)
2"V (5 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"V (4 FU)
2"SS (2 FU)
4"SS (20 FU)
3"SS (16 FU)
3"SS (9 FU)
4"SS (28 FU)
4"SS (36 FU)
2"SS (3 FU)
SR
3"SS (4 FU)
3"SS (4 FU)
3"SS (4 FU)



GENERAL NOTES

S 1 = SUPPLY RISER IDENTIFICATION

FLAG NOTES: #

1. ½" STUBOUTS TO EACH FIXTURE (TYPICAL)

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
13963 40TH AVE W, SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

MG2

PERMIT
REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/18/23	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

SUPPLY RISER DIAGRAMS

P5.00

MEDIUM PRESSURE GAS SIZING CHART (SCH.40 METALLIC PIPING)

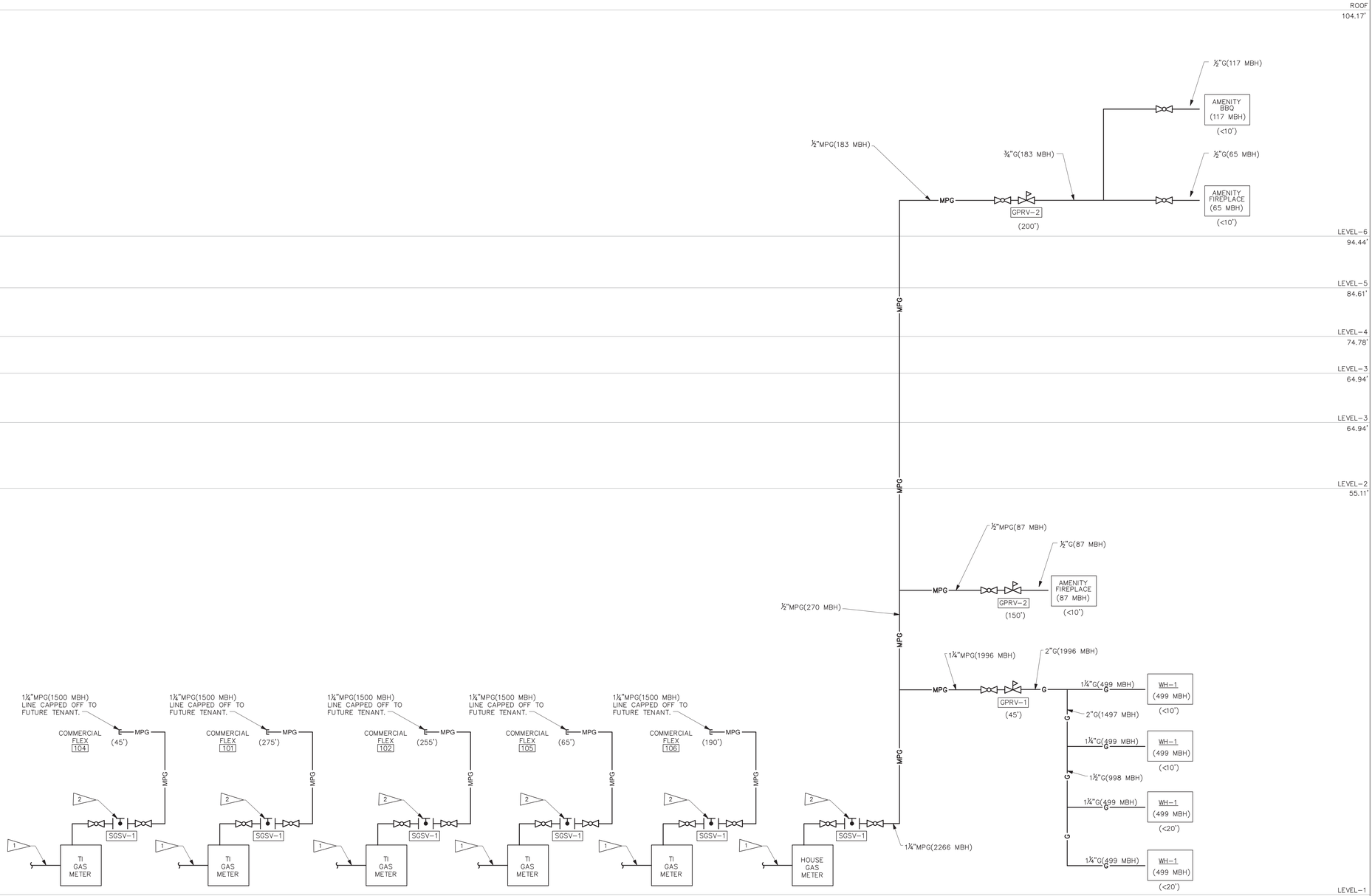
MPG GAS PIPING UP TO REGULATOR IS SIZED USING 2.0 PSI INLET PRESSURE, 1.0 PSI PRESSURE DROP.

MAX DISTANCE:	200'	300'
PIPE SIZE:	MAX CFH/MBH:	MAX CFH/MBH:
½"	318	253
¾"	642	528
1"	1170	945
1¼"	2,410	1,940
1½"	3,610	2,910
2"	6,960	5,600
2½"	11,100	8,920
3"	19,600	15,800
4"	40,000	32,200

LOW PRESSURE GAS SIIZNG CHART (SCHEDULE 40 - METALLIC PIPING)

LOW PRESSURE GAS PIPING AFTER THE REGULATOR IS SIZED USING LESS THAN 2 PSI INLET PRESSURE, 0.5" W.C PRESSURE DROP.

MAX DISTANCE:	10'	20'
PIPE SIZE:	MAX CFH/MBH:	MAX CFH/MBH:
½"	172	118
¾"	360	247
1"	678	466
1¼"	1,390	957
1½"	2,090	1430
2"	4,020	2760



GENERAL NOTES

= 2 PSI VENTLESS GAS PRESSURE REGULATOR. SET OUTLET AT 7"W.C. UNLESS NOTED OTHERWISE.

1. PROVIDE 2 PSI HOUSE AND AMENITIES GAS SERVICE TO THE BUILDING, INSTALL GPRV WHERE SHOWN ON THE DWGS.
2. DISTANCES FROM REGULATORS TO MOST REMOTE APPLIANCES ARE LABELED ON THE RISER DIAGRAM. GAS PIPING IS SIZED PER 2018 IFGC, TABLES 402.4(2) AND 402.4(5).
3. PROVIDE CONNECTION TO EACH PIECE OF EQUIPMENT WITH UNION, GAS COCK(TYP), AND SEDIMENT TRAP INSTALLED AS CLOSE AS POSSIBLE TO THE APPLIANCE. EXCEPTIONS: APPLIANCES WITH AN INTERNAL SEDIMENT TRAP, RANGES, AND GAS FIREPLACES.
4. CONTRACTOR SHALL OBTAIN VERIFICATION FROM LOCAL UTILITY PRIOR TO CONSTRUCTION THAT 2.0 PSI GAS SERVICE IS AVAILABLE. NOTIFY ENGINEER IMMEDIATELY IF 2.0 PSI GAS SERVICE IS NOT AVAILABLE.
5. ALL REGULATORS MUST BE ACCESSIBLE.

FLAG NOTES:

1. GAS SERVICE TO METERS TO BE PROVIDED BY PSE. GAS LINES AFTER METER WILL BE BY OWNER.
2. SEISMIC GAS SHUT–OFF VALVE SHALL BE MOUNTED RIGIDLY TO THE EXTERIOR OF THE BUILDING OR STRUCTURE (TYP. AS SHOWN)

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

ED JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

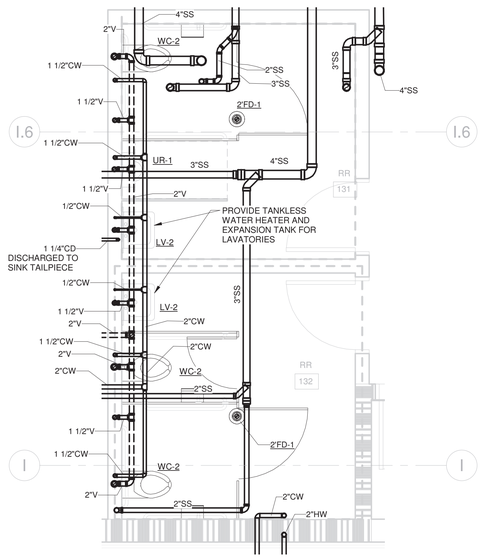
© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

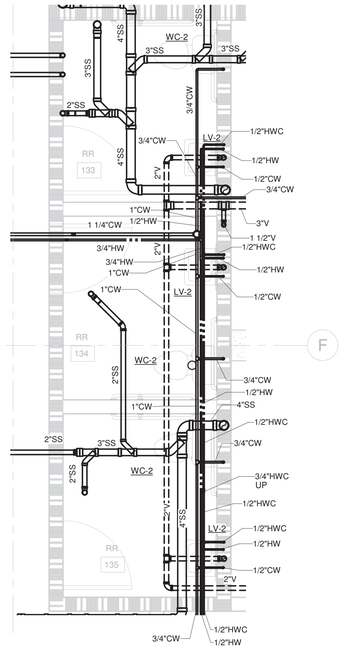
1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024 △2

GAS RISER DIAGRAMS

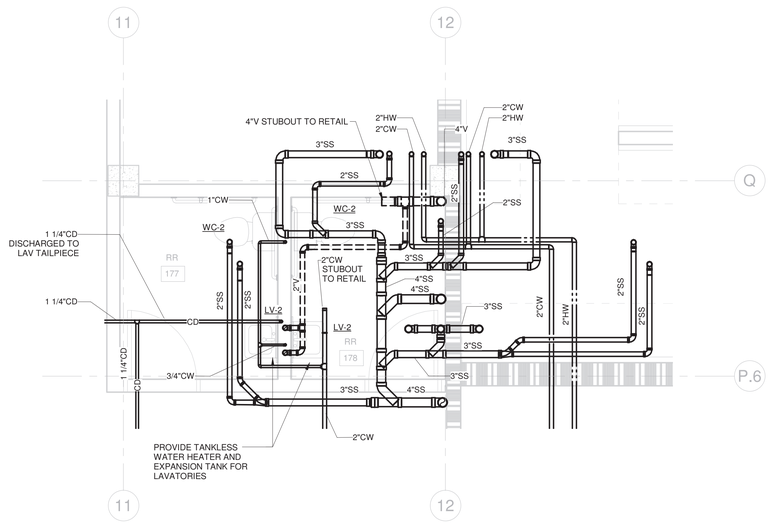
P5.01



4 ENLARGED RR 131,132
3/8" = 1'-0"

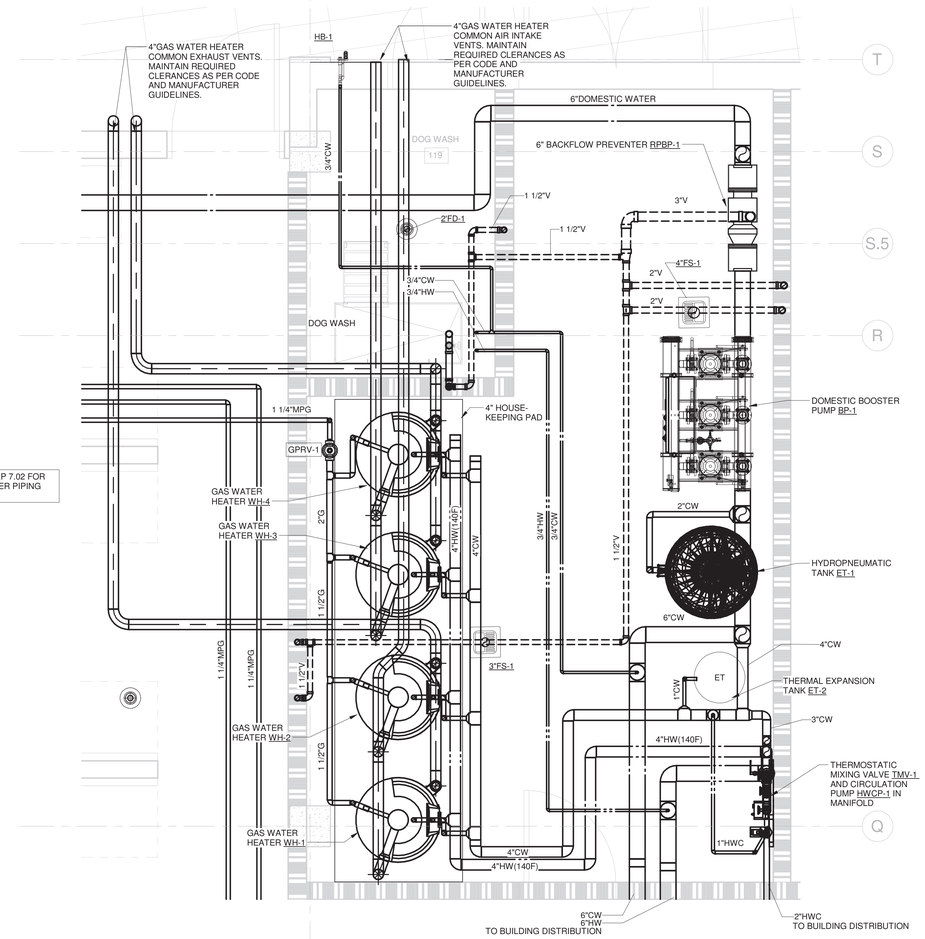


3 ENLARGED RR 133-135
3/8" = 1'-0"



2 ENLARGED RR 177,178
3/8" = 1'-0"

SEE DETAIL 1,P 7.02 FOR WATER HEATER PIPING DETAIL



1 MECHANICAL ROOM ENLARGED
1/2" = 1'-0"

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
TEL: 2063643343
CONTACT: PETER ROCKSTEAD

REED J JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/24

© MG2 Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

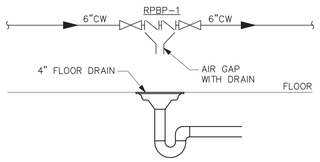
△	DATE	DESCRIPTION
2	01/31/24	REVISION 2

1073-001
PM: PETER ROCKSTEAD
DRAWN BY: PETER ROCKSTEAD
01/31/2024

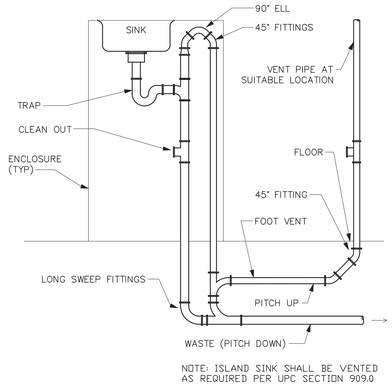
ENLARGED PLANS

P6.00

2/2/2024 1:26:23 PM Autodesk Docs://MG2-Shelter Holdings-Everett Riverfront Development PH2-21-5905-01A/Riverfront Apartments Building C - MEP.rvt

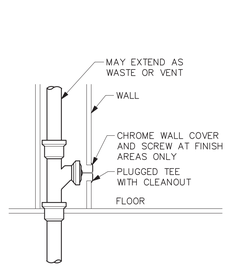


DOMESTIC BACKFLOW PREVENTER
DETAIL
SCALE: NONE
10

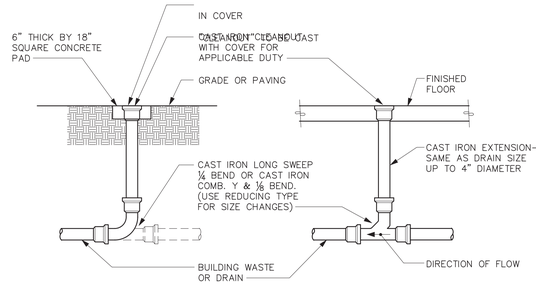


NOTE: ISLAND SINK SHALL BE VENTED AS REQUIRED PER UPC SECTION 909.0

DETAIL
ISLAND SINK
SCALE: NONE
9



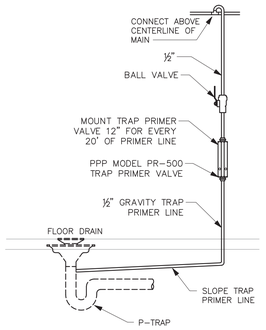
INTERIOR WALL CLEANOUT (WCO)



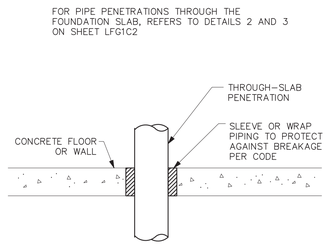
EXTERIOR CLEANOUT TO GRADE (COTG)
(LIGHT TRAFFIC AREA)

INTERIOR FLOOR CLEANOUT (FCO)

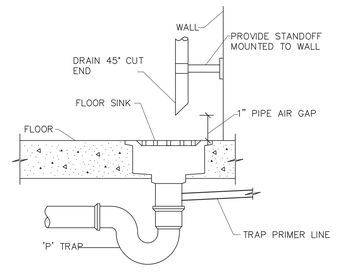
CLEANOUTS
DETAIL
SCALE: NONE
8



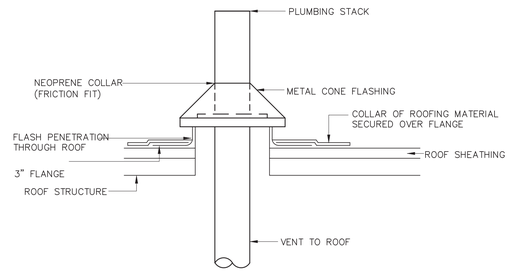
TRAP PRIMER
DETAIL
SCALE: NONE
7



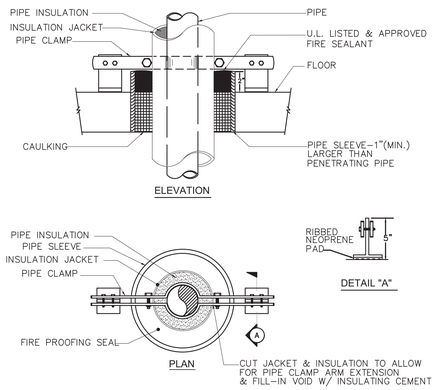
PIPE SLAB PENETRATION
DETAIL
SCALE: NONE
6



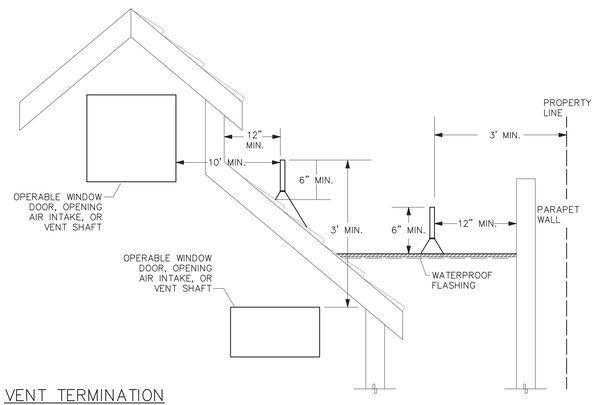
INDIRECT DRAIN TO FLOOR SINK
DETAIL
SCALE: NONE
5



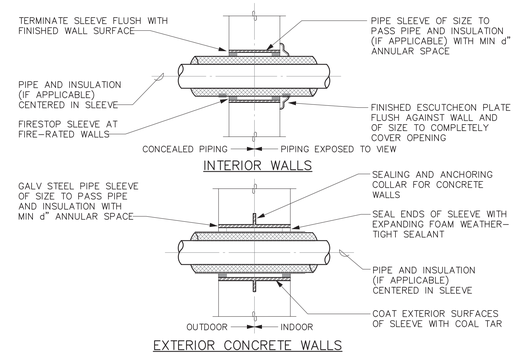
VENT THROUGH ROOF
DETAIL
SCALE: NONE
4



RISER PIPE SUPPORT
DETAIL
SCALE: NONE
3



VENT TERMINATION
DETAIL
SCALE: NONE
2



PIPE SLEEVES THROUGH WALLS
DETAIL
SCALE: NONE
1

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
13462 47TH AVE W, SUITE 202
LYNNWOOD, WA 98036
206.364.3343 tel
CONTACT: PETER ROCKSTEAD

E.D. JACKSON
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

Stamping Architect

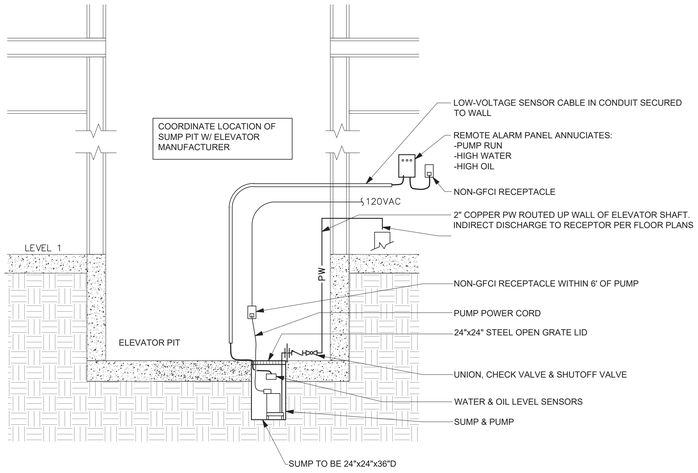
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

DETAILS

P7.00



ASME A17.1 REQUIREMENTS:

1. SUMP PUMP OUTLET PIPING MUST MINIMUM 2-INCH COPPER PIPE LABELED "NON-POTABLE WATER".
2. SUMP PUMP OUTLET PIPING SHALL DRAIN INTO A HUB DRAIN TO CONTAIN SPLASHING.
3. A 3/16" DIAMETER HOLE SHALL BE DRILLED INTO THE DISCHARGE PIPE, WITHIN THE SUMP, TO ALLOW AIR BLEED-OFF.
4. THE SUMP PUMP POWER CORD IS LIMITED TO 6-FEET IN LENGTH AND MUST BE PLUGGED-INTO A NON-GFCI OUTLET.
5. LOW-VOLTAGE SENSOR CABLE SHALL BE ROUTED IN CONDUIT SECURED TO WALL. MINIMIZE EXPOSED CABLE FROM CONDUIT TO SUMP.

ELEVATOR PIT DETAIL

DETAIL 6

SCALE: NONE

EQUIPMENT SCHEDULE

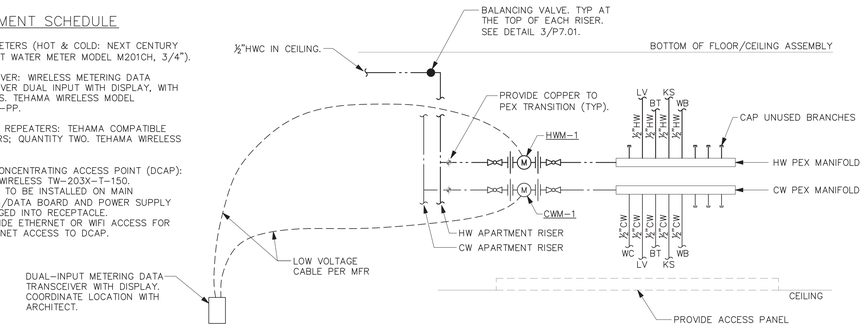
WATER METERS (HOT & COLD: NEXT CENTURY MULTI-JET WATER METER MODEL M201CH, 3/4").

TRANSCEIVER: WIRELESS METERING DATA TRANSCEIVER DUAL INPUT WITH DISPLAY, WITH BATTERIES, TEHAMA WIRELESS MODEL TW-165A-PP.

WIRELESS REPEATERS: TEHAMA COMPATIBLE REPEATERS; QUANTITY TWO. TEHAMA WIRELESS TW-191X.

UDATA CONCENTRATING ACCESS POINT (DCAP): TEHAMA WIRELESS TW-203X-T-150.

- DCAP TO BE INSTALLED ON MAIN COMM./DATA BOARD AND POWER SUPPLY PLUGGED INTO RECEPTACLE.
- PROVIDE ETHERNET OR WIFI ACCESS FOR INTERNET ACCESS TO DCAP.



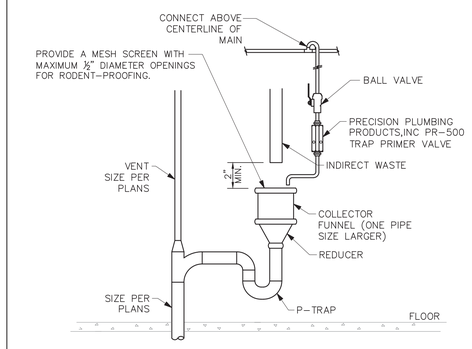
NOTES:

1. PROVIDE HOT AND COLD WATER METER AND REMOTE TRANSCEIVER FOR EACH APARTMENT.
2. SECURE METER TO FLOOR/CEILING ASSEMBLY.
3. REFER TO P5 SERIES FOR PIPE SIZES.
4. TRANSITION TO PEX PIPING WITHIN EACH UNIT.

UNIT SUBMETER AND PEX MANIFOLD

DETAIL 7

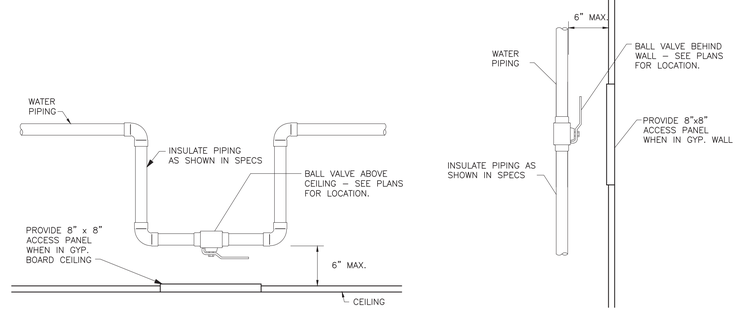
SCALE: NONE



HUB DRAIN

DETAIL 5

SCALE: NONE

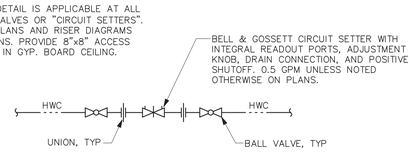


TYPICAL VALVE PLACEMENT

DETAIL 4

SCALE: NONE

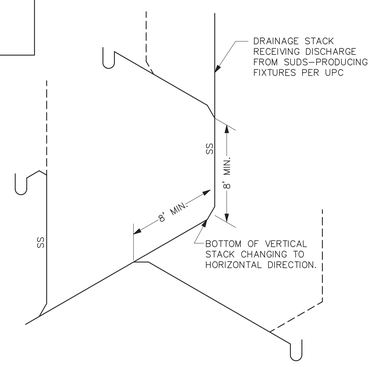
NOTE: THIS DETAIL IS APPLICABLE AT ALL BALANCING VALVES OR "CIRCUIT SETTERS". SEE FLOOR PLANS AND RISER DIAGRAMS FOR LOCATIONS. PROVIDE 8"x8" ACCESS PANEL WHEN IN GYP. BOARD CEILING.



HOT WATER RECIRCULATION BALANCING VALVE ASSEMBLY

DETAIL 3

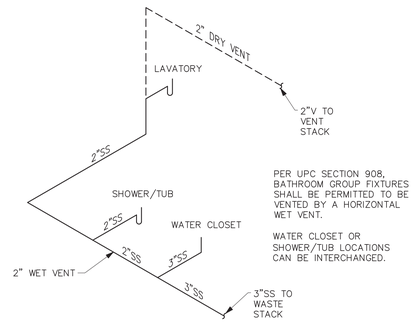
SCALE: NONE



SUDS RELIEF

DETAIL 2

SCALE: NONE



PER UPC SECTION 908, BATHROOM GROUP FIXTURES SHALL BE PERMITTED TO BE VENTED BY A HORIZONTAL WET VENT.

WATER CLOSET OR SHOWER/TUB LOCATIONS CAN BE INTERCHANGED.

BATHROOM WET VENTING

DETAIL 1

SCALE: NONE

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

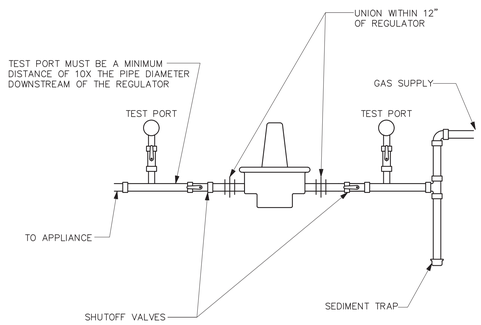
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/15/23	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

DETAILS

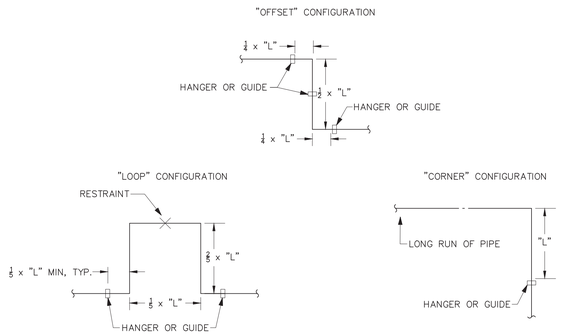
P7.01



GAS PRESSURE REGULATOR

DETAIL 4

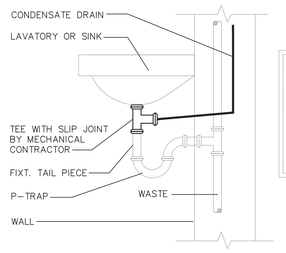
SCALE: NONE



EXPANSION LOOP CONFIGURATIONS

DETAIL 3

SCALE: NONE



NOTE:

PER 2018 UPC SECTION 814.6 WHERE CONDENSATE WASTE FROM AIR CONDITIONING COILS DISCHARGES BY DIRECT CONNECTION TO A LAVATORY TAILPIECE OR TO AN APPROVED ACCESSIBLE INLET ON A BATHTUB OVERFLOW, THE CONNECTION SHALL BE LOCATED IN THE AREA CONTROLLED BY THE SAME PERSON CONTROLLING THE AIR CONDITIONED SPACE.

CONDENSATE TERMINATION TO LAVATORY

DETAIL 2

SCALE: NONE

SHEET NOTES

1. GAS PRESSURE REGULATOR, SET TO 7" WC.
2. EMERGENCY GAS SHUT-OFF VALVE (LOCATE AT AN ACCESSIBLE LOCATION NEAR EXIT DOOR).

GENERAL NOTES

A. PIPE LENGTH & NUMBER OF FITTINGS TO INDIVIDUAL HEATERS SHALL BE EQUAL FOR A COMPLETE MANIFOLDED SELF-BALANCED PIPING.

B. RELIEF DRAIN PIPING SHALL BE UNDIMINISHED IN SIZE (SAME AS OUTLET), SHALL TERMINATE AT 3" ABOVE FLOOR SINK, AND SHALL COMPLY WITH 2018 UPC.

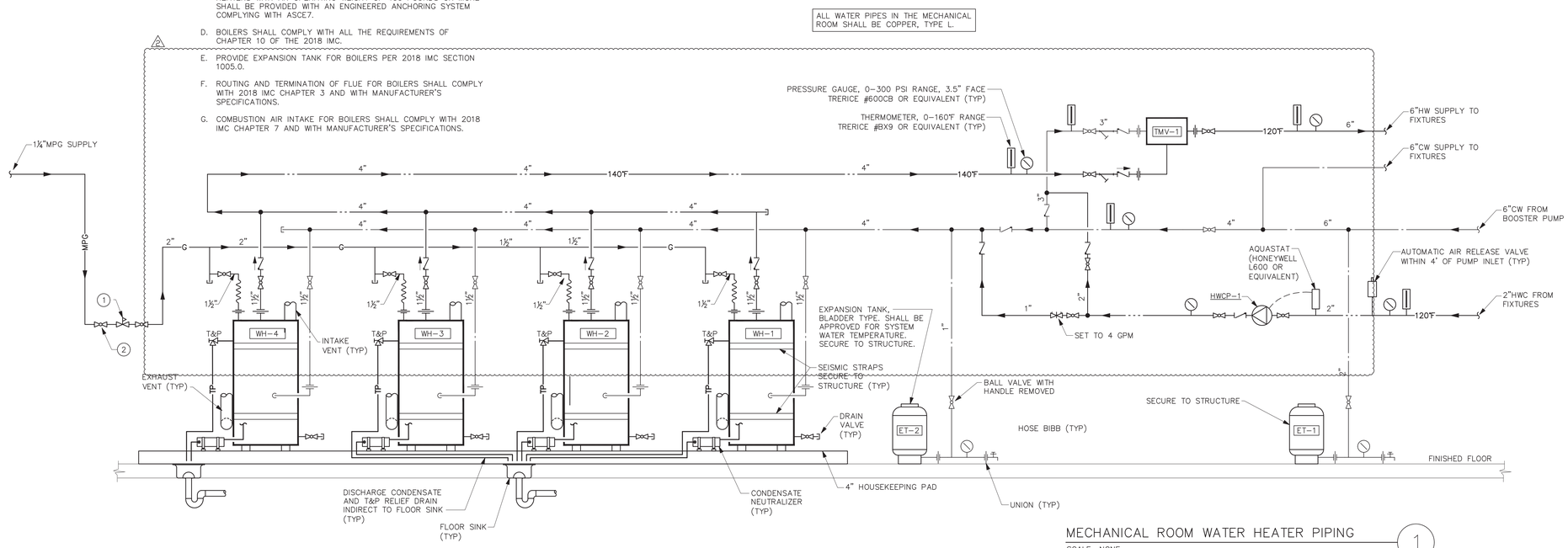
C. ANCHOR AND STRAP WATER HEATERS AND EXPANSION TANK TO RESIST HORIZONTAL DISPLACEMENT OF EARTHQUAKES PER CODE (COORDINATE WITH STRUCTURAL). THE SEISMIC STRAPS SHALL BE AT POINTS WITHIN THE UPPER 1/3 AND LOWER 1/3 OF THE WATER HEATER. A MINIMUM DISTANCE OF 4" SHALL BE MAINTAINED BETWEEN THE CONTROLS AND THE STRAP. WATER HEATERS WITH AN OPERATING WEIGHT OF 400 POUNDS OR MORE SHALL BE PROVIDED WITH AN ENGINEERED ANCHORING SYSTEM COMPLYING WITH ASCE7.

D. BOILERS SHALL COMPLY WITH ALL THE REQUIREMENTS OF CHAPTER 10 OF THE 2018 IMC.

E. PROVIDE EXPANSION TANK FOR BOILERS PER 2018 IMC SECTION 1005.0.

F. ROUTING AND TERMINATION OF FLUE FOR BOILERS SHALL COMPLY WITH 2018 IMC CHAPTER 3 AND WITH MANUFACTURER'S SPECIFICATIONS.

G. COMBUSTION AIR INTAKE FOR BOILERS SHALL COMPLY WITH 2018 IMC CHAPTER 7 AND WITH MANUFACTURER'S SPECIFICATIONS.



MECHANICAL ROOM WATER HEATER PIPING

SCALE: NONE

1

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19401 40TH AVE W, SUITE 302
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON STATE OF WASHINGTON REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT REVISIONS 2

01/31/2024

Stamping Architect

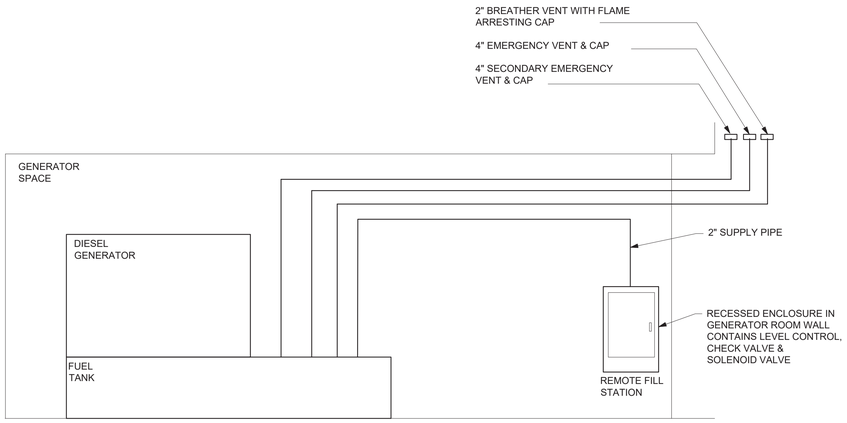
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	08/16/23	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

DETAILS

P7.02



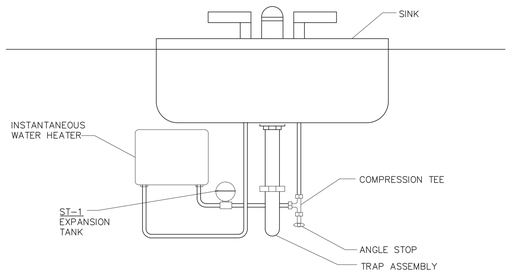
PLUMBING CONTRACTOR WORK:
1. FURNISH AND INSTALL U.L. LISTED REMOTE FILL STATION WITH ELECTRONIC MONITORING ADJACENT TO FILL PORT AND ASSOCIATED PIPING AND CONNECTIONS.
2. BASIS OF DESIGN: MASCOTT EQUIPMENT OR EQUIVALENT WITH OVERFILL PROTECTION CONTROLS
3. FILL STATION TO BE RECESSED IN WALL AS INDICATED ON PLANS.
4. OVERFILL PROTECTION: ALARM TO SOUND AT REMOTE FILL STATION WHEN THE FUEL LEVEL RISES TO 90% AND 95% TANK CAPACITY.
5. ELECTRIC SOLENOID VALVE ON SUPPLY LINE PIPE TO CLOSE UPON RISE TO 95% LEVEL ALARM.

ELECTRICAL CONTRACTOR WORK:
1. PROVIDE DEDICATED 120V EMERGENCY POWER CIRCUIT
2. PROVIDE CONDUIT WIRE & TERMINATIONS FROM CONTROL PANEL TO FUEL LEVEL MONITORING
3. PROVIDE 120VAC POWER TO FUEL POLISHER.

MATERIAL & INSTALLATION REQUIREMENTS:
1. VENT PIPING: WELDED BLACK STEEL.
2. FUEL FILL PIPING (ABOVE GROUND): UL 1369 DOUBLE-WALL STAINLESS-STEEL
3. MINIMIZE THREADED CONNECTIONS
4. SLOPE: SUPPLY PIPE SHALL SLOPE 1" FOR 10' OF RUN.
5. PROTECTION: FUEL PIPING NOT INSIDE GENERATOR ROOM SHALL BE ROUTED IN 2-HOUR RATED ENCLOSURE.

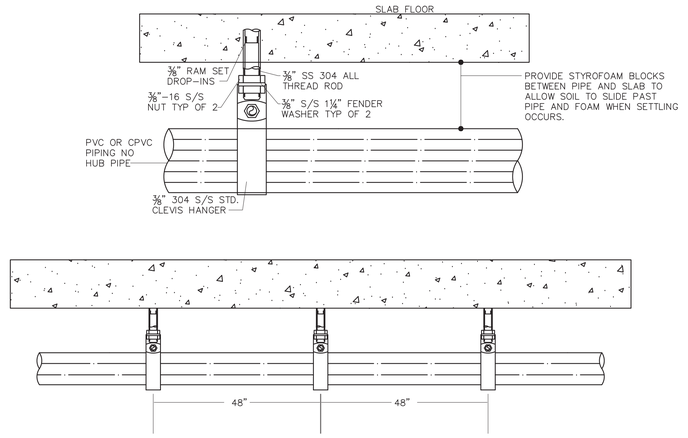
CLEARANCE REQUIREMENTS:
1. VENT PIPING:
   a. MINIMUM 12' ABOVE FINISHED GRADE
   b. MINIMUM 5' FROM ANY BUILDING OPENINGS
   c. MINIMUM 10' FROM ANY INTAKE LOUVERS
   d. MINIMUM 12' FROM ENGINE EXHAUST OUTLET
2. FUEL FILL PORT:
   a. LOCATE OUTSIDE BUILDING WITHIN REACH OF FILL HOSE FROM TRUCK
   b. MINIMUM 5' FROM BUILDING OPENINGS
   c. LOCATE AWAY FROM SOURCES OF IGNITION
   d. MINIMUM 10' FROM PROPERTY LINES

GENERATOR FILL STATION AND VENT
SCALE: NONE
3



NOTE:
1. MOUNT WATER HEATER BELOW LAVATORY SECURED TO STUDS. MOUNT PER MANUFACTURERS RECOMMENDATION.
2. THIS UNIT REQUIRES NO TEMPERATURE OR PRESSURE RELIEF LINE.

POINT-OF-USE TANKLESS WATER HEATER
SCALE: NONE
2



UNDERSLAB PIPE SUPPORT (PVC)
SCALE: NONE
1

RIVERFRONT APARTMENTS BUILDING C

3710 Riverfront Blvd
Everett, WA 98203

ROBISON ENGINEERING, INC
19802 40TH AVE W., SUITE 202
LYNNWOOD, WA 98036
206.364.3343 TEL
CONTACT: PETER ROCKSTEAD

E.D. JACKSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
01-31-24

1101 Second Ave, Ste 100
Seattle, WA 98101

206 962 6500
MG2.com

PERMIT
REVISIONS 2

01/31/2024

Stamping Architect

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
1	09/16/22	REVISION 1
2	01/31/24	REVISION 2

1073-001
PM: Peter Rockstead
DRAWN BY: MLT
01/31/2024

DETAILS

P7.03

© 2019 Herrera Environmental Consultants, Inc. All rights reserved.

Jan 31, 2024 - 8:11am cmarston I:\herrera.local\hercnet\seattle\proj\Y2015\15-06075-008\CAD\Sheet\BLDG_C.dwg

REMOVE EXISTING 6" CAP AND CONNECT TO EXISTING 6" HDPE LATERAL

PERFORATIONS ARE NOT TO BE WITHIN 2' OF EDGE OF BUILDING SLAB, TYP

SEE DETAILS 5 AND 6 ON SHEET LFG1C2 FOR TRANSITION BETWEEN PILE SUPPORTED STRUCTURE AND SITE

FUTURE EV

MATCHLINE - SEE BELOW

MATCHLINE - SEE INSET

9" CONC. SLAB

17" CONC. SLAB

21" CONC. SLAB T.O.S. ELEV. = 39.75'

21" CONC. SLAB T.O.S. ELEV. = 38.25'

21" CONC. SLAB T.O.S. ELEV. = 37.75'

21" CONC. SLAB T.O.S. ELEV. = 37.17'

20+00

21+00

A LFG1C2

2'

PRIVATE

PUBLIC

6" DIA HDPE PERF PIPE, TYP

4" DIA VENT PIPE, TYP

6" DIA HDPE PIPE, TYP

EXISTING RIVERFRONT BLVD 8" HDPE LFG HEADER

REMOVE EXISTING 6" CAP AND CONNECT TO EXISTING 6" HDPE LATERAL

PERFORATIONS ARE NOT TO BE WITHIN 2' OF EDGE OF BUILDING SLAB, TYP

LFG PIPING KEY

- LFG LATERAL
- LFG COLLECTOR
- LFG VENT STACK
- PIPE END CAP
- EXTENTS OF COMPOSITE LINER SYSTEM

NOTE:

THE WORK TO BE PERFORMED IS IN AN AREA LOCATED OVER THE CLOSED EVERETT LANDFILL. REFUSE, LEACHATE, AND LANDFILL GAS MAY BE PRESENT AND POSE A SAFETY AND HEALTH HAZARD. IN ADDITION, PETROLEUM AND/OR METALS-CONTAMINATED SOILS AND GROUNDWATER MAY BE ENCOUNTERED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACTOR'S HEALTH AND SAFETY PLAN.

10 0 10 20
SCALE IN FEET

ONE INCH
AT FULL SIZE. IF NOT ONE INCH SCALE ACCORDINGLY

811 Know what's below. Call before you dig.

EVERETT RIVERFRONT BUILDING C

3710 RIVERFRONT BLVD
EVERETT, WA 98203

HERRERA
2200 6th AVE
Suite 1100
Seattle, WA 98121
http://www.herrerainc.com

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com
MG2

PERMIT

09/16/2022

KEY PLAN

TYSON M. WRIGHT, PE

TYSON M. WRIGHT
STATE OF WASHINGTON
44408
REGISTERED PROFESSIONAL ENGINEER
01/31/2024

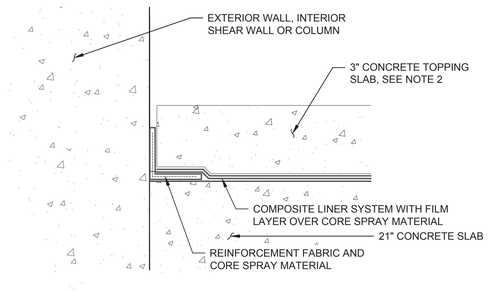
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

	DATE	DESCRIPTION
2	01/31/24	PERMIT REVISION 2

15-06075-008
PM: TYSON M WRIGHT
DRAWN BY: CPM
12/14/22

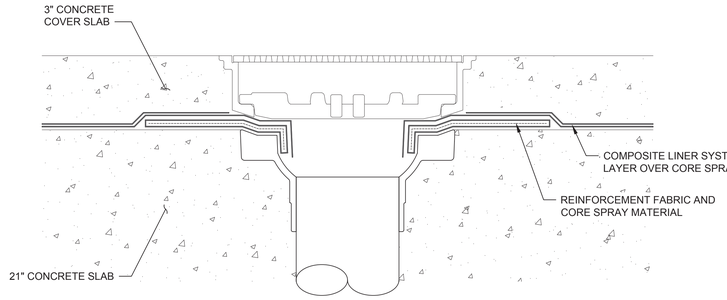
BUILDING 1-C SUBGRADE LFG PLAN

LFG1C1



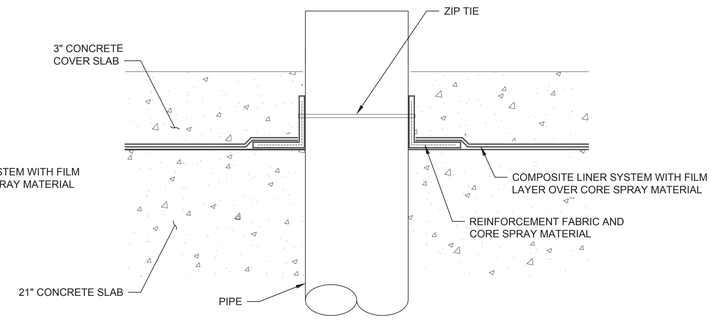
DETAIL - VERTICAL LINER SEAL 1 -

SCALE: NTS



DETAIL - DRAIN ASSEMBLY BOOT 2 -

SCALE: NTS

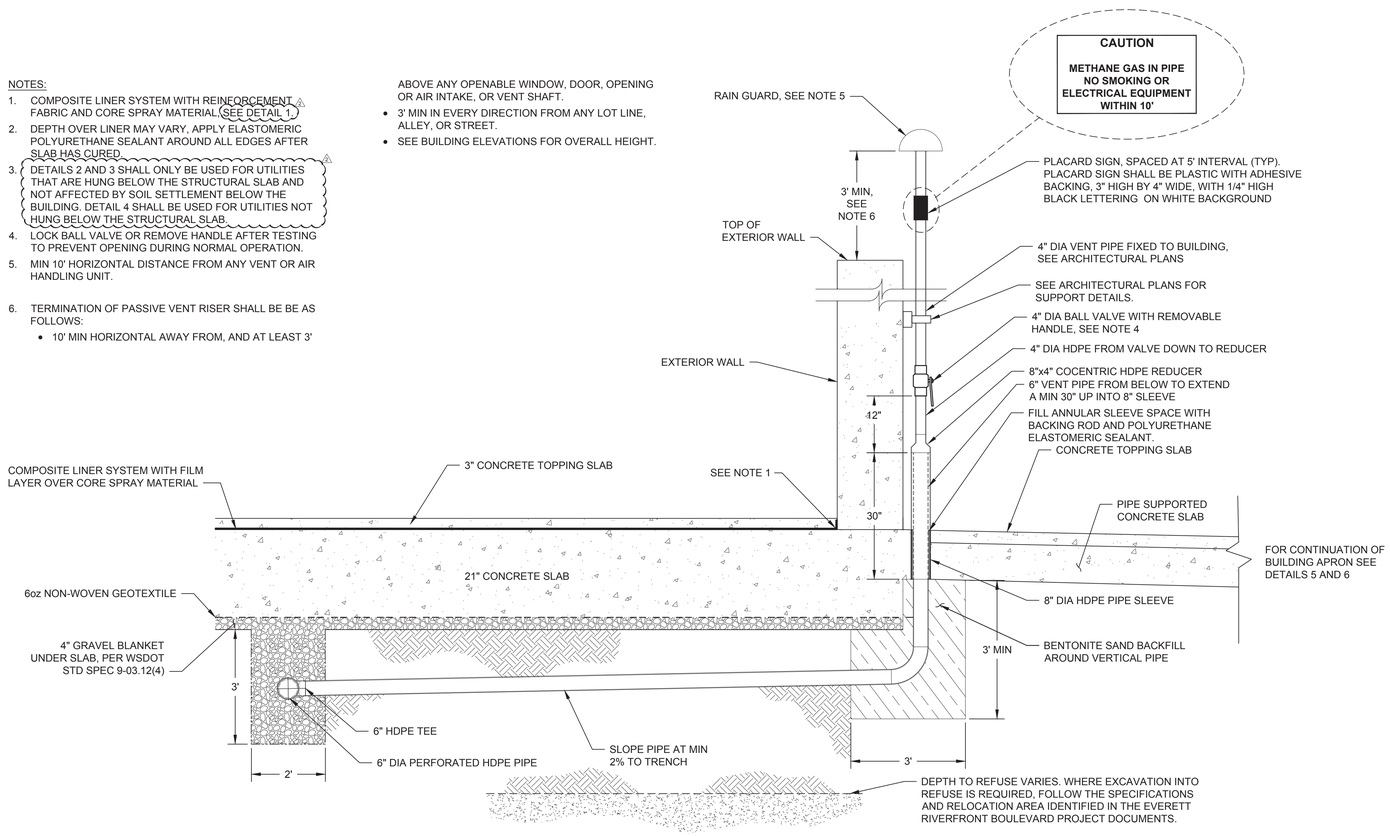


DETAIL - VERTICAL PIPE BOOT 3 -

SCALE: NTS

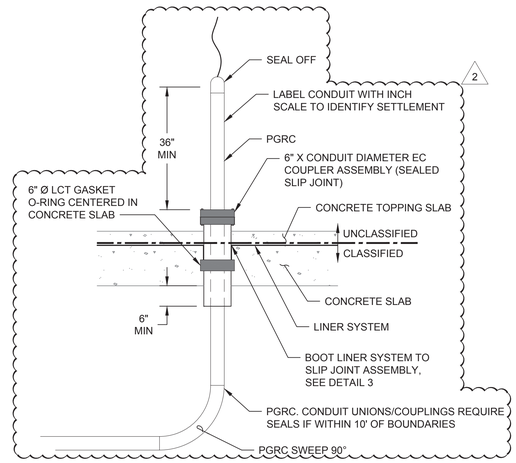
NOTES:

1. COMPOSITE LINER SYSTEM WITH REINFORCEMENT FABRIC AND CORE SPRAY MATERIAL (SEE DETAIL 1.) △1
2. DEPTH OVER LINER MAY VARY, APPLY ELASTOMERIC POLYURETHANE SEALANT AROUND ALL EDGES AFTER SLAB HAS CURED
3. DETAILS 2 AND 3 SHALL ONLY BE USED FOR UTILITIES THAT ARE HUNG BELOW THE STRUCTURAL SLAB AND NOT AFFECTED BY SOIL SETTLEMENT BELOW THE BUILDING. DETAIL 4 SHALL BE USED FOR UTILITIES NOT HUNG BELOW THE STRUCTURAL SLAB. △1
4. LOCK BALL VALVE OR REMOVE HANDLE AFTER TESTING TO PREVENT OPENING DURING NORMAL OPERATION.
5. MIN 10' HORIZONTAL DISTANCE FROM ANY VENT OR AIR HANDLING UNIT.
6. TERMINATION OF PASSIVE VENT RISER SHALL BE BE AS FOLLOWS:
   - 10' MIN HORIZONTAL AWAY FROM, AND AT LEAST 3' ABOVE ANY OPENABLE WINDOW, DOOR, OPENING OR AIR INTAKE, OR VENT SHAFT.
   - 3' MIN IN EVERY DIRECTION FROM ANY LOT LINE, ALLEY, OR STREET.
   - SEE BUILDING ELEVATIONS FOR OVERALL HEIGHT.



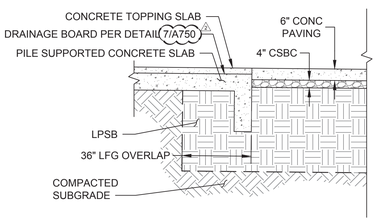
SECTION - TYPICAL PIPE TRENCH, VENT, AND LATERAL A LFG1D1

SCALE: NTS



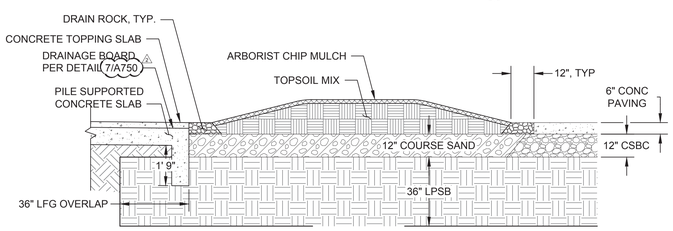
DETAIL - VERTICAL SLEEVE FLOOR PENETRATION 4 -

SCALE: NTS



DETAIL - SITE PAVING TO BUILDING 5 -

SCALE: NTS



DETAIL - SITE LANDSCAPING TO BUILDING INTERFACE 6 -

SCALE: NTS

© 2019 Herrera Environmental Consultants, Inc. All rights reserved.

Feb 09, 2024 - 11:55am cmanton I:\herrera boat\home\seattle\proj\Y2015\15-06075-008\CAD\Sheet\BLDGS\LFG1D-DET.dwg

EVERETT RIVERFRONT BUILDING C

3710 RIVERFRONT BLVD
EVERETT, WA 98203

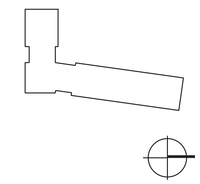
HERRERA
2200 6th AVE
Suite 1100
Seattle, WA 98121
http://www.herrerainc.com

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



TYSON M. WRIGHT, PE

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	PERMIT REVISION 2

15-06075-008
PM: TYSON M WRIGHT
DRAWN BY: CPM
12/14/22

LFG STANDARD DETAILS

LFG1C2

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

811 Know what's below. Call before you dig.

NOTE: FOR SPECIFICATIONS NOT INCLUDED ON THESE PLANS, REFER TO THE EVERETT RIVERFRONT BOULEVARD PROJECT DOCUMENTS.

CSI SPECIFICATION SECTIONS

02 56 16 - GAS CONTAINMENT

02 56 19.13 - FLUID APPLIED GAS BARRIER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS, AND DIVISION 1 SPECIFICATION SECTION, APPLY TO THIS SECTION.

1.2 SECTION INCLUDES

A. THE INSTALLATION OF MATERIALS DESIGNED TO PROVIDE VAPOR INTRUSION PROTECTION WHEN INSTALLED PER PROJECT SPECIFICATION, THIS SECTION COVERS THE METHANE MITIGATION AND VAPOR INTRUSION MEMBRANE, ALONG WITH THE FOLLOWING:

1. SURFACE PREPARATION AND SUBSTRATE TREATMENT
2. AUXILIARY MATERIALS
3. PREFABRICATED DRAINAGE MAT (IF APPLICABLE)
4. FOUNDATION DRAIN (IF APPLICABLE)

1.3 RELATED SECTIONS

A. EARTHWORK AND CONCRETE

1.4 PERFORMANCE REQUIREMENTS

A. GENERAL: PROVIDE A VAPOR MITIGATION SYSTEM THAT PREVENTS THE PASSAGE OF METHANE GAS, CONTAMINANT VAPORS INCLUDING CHLORINATED SOLVENTS AND PETROLEUM HYDROCARBONS, AND COMPLIES WITH THE PHYSICAL REQUIREMENTS AS DEMONSTRATED BY TESTING PERFORMED BY AN INDEPENDENT TESTING AGENCY.

1.5 SUBMITTALS

A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRINTED TECHNICAL DATA, TESTED PHYSICAL AND PERFORMANCE PROPERTIES, INSTRUCTIONS FOR EVALUATING, PREPARING, AND TREATING SUBSTRATES, AND INSTALLATION INSTRUCTIONS.

B. SHOP DRAWINGS: PROJECT SPECIFIC DRAWINGS SHOWING LOCATIONS AND EXTENT OF VAPOR INTRUSION BARRIER SYSTEM, DETAILS FOR OVERLAPS, PENETRATIONS, TRANSITIONS, AND TERMINATION CONDITIONS.

C. MANUFACTURER CERTIFICATION AND APPROVAL DOCUMENTS: SUBMIT CERTIFICATES OF CONFORMANCE AND ANALYSIS FOR ALL MATERIAL SHIPPED TO THE JOBSITE THAT ASSURES THAT MANUFACTURER'S PRODUCT IS OF HIGHEST QUALITY AND CONFORMS TO MANUFACTURER'S PRODUCT AND PERFORMANCE REQUIREMENTS.

D. ASSURANCE WARRANTY: SUBMIT MANUFACTURER PRODUCT ASSURANCE WARRANTY THAT THE SYSTEM AND MATERIAL IS PER MANUFACTURER'S PUBLISHED SPECIFICATIONS.

E. APPLICATOR CERTIFICATION: SUBMIT WRITTEN CONFIRMATION AT THE TIME OF BID THAT APPLICATOR IS CURRENTLY APPROVED BY THE MEMBRANE MANUFACTURER.

1.6 QUALITY ASSURANCE

D. CONTRACTOR QUALIFICATIONS: INSTALLATION CONTRACTOR SHALL BE AN AUTHORIZED APPLICATOR RECOGNIZED BY THE MANUFACTURER WHO IS TRAINED TO PERFORM WORK THAT IS IN ACCORDANCE WITH MANUFACTURER STANDARDS AND POLICIES.

1. INSTALLATION CONTRACTOR SHALL HAVE PREVIOUSLY INSTALLED A MINIMUM OF 5,000,000 SQUARE FEET OF A SIMILAR COMPOSITE LINER SYSTEM WITHIN THE LAST FIVE (5) YEARS, WITH A MINIMUM OF 200,000 SQUARE FEET IN A SINGLE INSTALLATION.

(a) THE SUPERINTENDENT ASSIGNED TO THE INSTALLATION SHALL HAVE SATISFACTORILY INSTALLED 2,000,000 SQUARE FEET OF A COMPOSITE LINER SYSTEM WITHIN THE PAST THREE (3) YEARS.

(b) THE COMPOSITE LINER SYSTEM INSTALLATION COMPANY SHALL, AT THEIR OWN EXPENSE, PROVIDE A TECHNICAL REPRESENTATIVE OF THE GEOMEMBRANE FABRICATOR AT THE JOB SITE TO ENSURE COMPLIANCE WITH THE MANUFACTURER'S DIRECTIONS FOR HANDLING AND INSTALLING THE SYSTEM. THE TECHNICAL REPRESENTATIVE MUST BE PRESENT WHEN THE SYSTEM INSTALLATION IS STARTED AND WHENEVER THE SYSTEM IS INSTALLED, UNLESS THIS REQUIREMENT IS WAIVED BY THE ENGINEER. THE TECHNICAL REPRESENTATIVE SHALL OBSERVE THE WORK, REPORT UNSATISFACTORY CONDITIONS, AND MAKE RECOMMENDATIONS FOR IMPROVEMENT IN PROCEDURES TO THE CONTRACTOR.

E. MANUFACTURER QUALIFICATION: OBTAIN VAPOR INTRUSION BARRIER MATERIALS AND SYSTEM COMPONENTS FROM A SINGLE MANUFACTURER SOURCE. MANUFACTURER MUST HAVE 20 YEARS OF EXPERIENCE IN THE MANUFACTURE OF VAPOR INTRUSION BARRIER SYSTEMS.

F. THIRD PARTY INSPECTION AND QUALIFICATIONS: INDEPENDENT INSPECTION OF THE COMPOSITE SYSTEM INSTALLATION IS REQUIRED. PRESENCE OF APPROVED THIRD PARTY INSPECTOR IS REQUIRED FOR POLYMER ASPHALT INSTALLATION AND SMOKE TESTING AT A MINIMUM. ADDITIONAL INSPECTIONS BY THIRD PARTY INSPECTOR MAY BE REQUIRED BASED ON PROJECT CONDITIONS AND DESIRED WARRANTY COVERAGE, OR AS REQUIRED BASED ON LOCAL BUILDING CODE/GOVERNMENT AGENCY JURISDICTION. LINER SYSTEM CQA FIELD INSPECTOR SHALL PERFORM THIRD PARTY INSPECTION AND SHALL BE APPROVED BY PROJECT MANAGERS BASED ON RELEVANT EXPERIENCE. INSPECTION REPORTS SHALL BE SUBMITTED DIRECTLY TO THE COMPOSITE VAPOR INTRUSION BARRIER MANUFACTURER AND MADE AVAILABLE TO OTHER PARTIES PER THE OWNER'S DIRECTION.

G. PRE-CONSTRUCTION MEETING: A MEETING SHALL BE HELD PRIOR TO APPLICATION OF THE COMPOSITE LINER SYSTEM TO ASSURE PROPER SUBSTRATE PREPARATION, CONFIRM INSTALLATION CONDITIONS, AND ANY ADDITIONAL PROJECT SPECIFIC REQUIREMENTS. ATTENDEES OF THE MEETING SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. MANUFACTURER AUTHORIZED APPLICATOR
2. THIRD PARTY INSPECTOR / LINER SYSTEM CQA FIELD INSPECTOR
3. GENERAL CONTRACTOR
4. OWNER'S REPRESENTATIVE
5. ARCHITECT AND ENGINEER
6. CONCRETE/SHOTCRETE CONTRACTOR
7. REBAR CONTRACTOR
8. ALL APPROPRIATE RELATED TRADES

E. FIELD SAMPLE: APPLY COMPOSITE LINER SYSTEM FIELD SAMPLE TO 100 FT^2 (9.3 M^2) OF EACH ASSEMBLY TO DEMONSTRATE PROPER APPLICATION TECHNIQUES AND STANDARD OF WORKMANSHIP.

1. NOTIFY COMPOSITE LINER SYSTEM MANUFACTURER REPRESENTATIVE, ENGINEER, CERTIFIED INSPECTOR, AND OTHER APPROPRIATE PARTIES ONE WEEK IN ADVANCE OF THE DATES AND TIMES WHEN FIELD SAMPLE WILL BE PREPARED.
2. IF ENGINEER AND CERTIFIED INSPECTOR DETERMINES THAT FIELD SAMPLE DOES NOT MEET REQUIREMENTS; REAPPLY COMPOSITE LINER SYSTEM UNTIL FIELD SAMPLE IS APPROVED.
3. RETAIN AND MAINTAIN APPROVED FIELD SAMPLE DURING CONSTRUCTION IN AN UNDISTURBED CONDITION AS A STANDARD FOR JUDGING THE COMPLETED COMPOSITE LINER SYSTEM. AN UNDAMAGED FIELD SAMPLE MAY BECOME PART OF THE COMPLETED WORK.

1.7 DELIVERY, STORAGE AND HANDLING

A. DELIVERY: DELIVER MATERIALS TO SITE LABELED WITH MANUFACTURER'S NAME, PRODUCT BRAND NAME, MATERIAL TYPE, AND DATE OF MANUFACTURE. UPON THE ARRIVAL OF MATERIALS TO THE JOBSITE, INSPECT MATERIALS TO CONFIRM MATERIAL HAS NOT BEEN DAMAGED DURING TRANSIT.

B. STORAGE: PROPER STORAGE OF ONSITE MATERIALS IS THE RESPONSIBILITY OF THE CERTIFIED APPLICATOR. CONSULT PRODUCT DATA SHEETS TO CONFIRM STORAGE REQUIREMENTS. STORAGE AREA SHALL BE CLEAN, DRY, AND PROTECTED FROM THE ELEMENTS. IF AMBIENT AIR TEMPERATURES ARE EXPECTED TO FALL BELOW 40F, PRECAUTIONS WILL NEED TO BE TAKEN TO PROTECT ANY EMULSION PRODUCT FROM NEAR FREEZING TEMPERATURES. PROTECT STORED MATERIALS FROM DIRECT SUNLIGHT.

C. DISPOSAL: REMOVE AND REPLACE ANY MATERIAL THAT CANNOT BE PROPERLY APPLIED IN ACCORDANCE WITH LOCAL REGULATIONS AND SPECIFICATION SECTION 01 74 19.

1.8 PROJECT CONDITIONS

A. SUBSTRATE REVIEW: SUBSTRATES SHALL BE REVIEWED AND ACCEPTED BY THE CERTIFIED APPLICATOR AND INDEPENDENT INSPECTOR PRIOR TO APPLICATION.

B. PENETRATIONS: ALL PLUMBING, ELECTRICAL, MECHANICAL, AND STRUCTURAL ITEMS TO BE PASSING THROUGH THE COMPOSITE MEMBRANE SYSTEM SHALL BE PROPERLY SPACED, POSITIVELY SECURED IN THEIR PROPER POSITIONS, AND APPROPRIATELY PROTECTED PRIOR TO SYSTEM APPLICATION AND THROUGHOUT THE CONSTRUCTION PHASE. BRAIDED GROUNDING RODS ARE NOT ALLOWED TO PASS THROUGH THE COMPOSITE LINER SYSTEM.

C. REINFORCEMENT STEEL AND CONCRETE FORMS: COMPOSITE LINER SYSTEM SHALL BE INSTALLED BEFORE PLACEMENT OF REINFORCING STEEL. WHEN PENETRATIONS POST SYSTEM INSTALLATION OCCURS, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE COMPOSITE LINER SYSTEM APPLICATOR TO IMMEDIATELY MAKE REPAIRS PRIOR TO THE PLACEMENT OF OVERBURDEN, THIS INCLUDES THE USE OF SOLID PLASTIC "VAPORSTAKES" USED TO SECURE CONCRETE FORMS.

D. CLEARANCE: MINIMUM CLEARANCE OF 24 INCHES IS REQUIRED FOR APPLICATION OF SPRAY APPLIED POLYMER MODIFIED ASPHALT. FOR AREAS WITH LESS THAN 24-INCH CLEARANCE, THE PRODUCT MAY BE APPLIED BY HAND.

E. OVERSPRAY: PROTECT ALL ADJACENT AREAS NOT RECEIVING THE CORE SPRAY MATERIAL APPLICATION. MASKING IS NECESSARY TO PREVENT UNWANTED OVERSPRAY FROM ADHERING TO, OR STAINING, AREAS NOT RECEIVING APPLICATION. ONCE A COMPOSITE LINER SYSTEM ADHERES TO A SURFACE IT IS EXTREMELY DIFFICULT TO REMOVE.

F. WEATHER LIMITATIONS: PERFORM WORK ONLY WHEN EXISTING AND FORECAST WEATHER CONDITIONS ARE WITHIN MANUFACTURER'S RECOMMENDATIONS.

1. SPRAY APPLIED POLYMER MODIFIED ASPHALT MEMBRANE: MINIMUM AMBIENT TEMPERATURE SHOULD BE 40F (7C) AND RISING. FOR APPLICATIONS TEMPERATURES BELOW 38F, BUT GREATER THAN +19°F/-7°C, SPECIAL EQUIPMENT AND MATERIAL HANDLING IS REQUIRED. SUBSTRATE SHALL BE CLEAN AND FREE FROM STANDING MOISTURE.
2. MANUFACTURER APPROVED APPLICATORS RESERVE THE RIGHT NOT TO INSTALL PRODUCT WHEN APPLICATION CONDITIONS MIGHT BE WITHIN MANUFACTURES ACCEPTANCE, BUT AMBIENT CONDITIONS MAY LIMIT A SUCCESSFUL APPLICATION.

1.9 WARRANTY

A. THE INSTALLATION CONTRACTOR OF THE COMPOSITE LINER SYSTEM TO BE USED IN THE WORK SHALL WARRANT WORKMANSHIP TO BE FREE OF DEFECTS ON A NON-PRORATA BASIS FOR ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK. THIS WARRANTY SHALL INCLUDE, BUT NOT BE LIMITED TO, WARRANTY WORK REQUIRED BY THE OWNER AT CONTRACTOR'S SOLE EXPENSE.

1. THE MANUFACTURER SHALL PROVIDE A 20-YEAR, INDUSTRY STANDARD, WARRANTY. ALL WARRANTIES SHALL BE VALID FOR TEMPERATURES RANGING FROM MINUS (-) 20 DEGF TO PLUS (+) 110 DEGF.
2. SHOULD A DEFECT OR FAILURE OCCUR WITHIN THE AFORESAID PERIODS, THE CONTRACTOR SHALL BEAR ALL COSTS FOR REPAIR AND/OR REPLACEMENT OF THE COMPOSITE LINER SYSTEM AND SHALL IN ADDITION BEAR ALL COSTS FOR THE EXCAVATION OF ANY COVER, BACKFILL DEWATERING & PUMPING OR SLUDGE REMOVAL THAT IS REQUIRED TO BE REMOVED IN ORDER TO REPAIR AND/OR REPLACE THE COMPOSITE LINER SYSTEM. ALL MATERIALS REMOVED TO ALLOW REPAIRS TO BE MADE SHALL BE REINSTALLED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. ACCEPTABLE MANUFACTURERS: EPRO SERVICES, INC. (EPRO), P.O. BOX 347; DERBY, KS 67037; TEL: (800) 882-1896; WWW.EPROINC.COM; OR APPROVED EQUAL.

2.2 ABOVE SLAB VAPOR INTRUSION BARRIER MATERIALS

A. THE PHYSICAL PROPERTIES LISTED IN THIS SECTION REFLECT TESTING ON THE ENTIRE ABOVE SLAB COMPOSITE SYSTEM. PHYSICAL PROPERTIES OF THE INDIVIDUAL SYSTEM COMPOSITE CAN BE FOUND IN SPECIFICATION SECTIONS 2.3 AND 2.4.

1. VAPOR INTRUSION BARRIER SHALL CONSIST OF A 30 MIL LAYER OF POLYMER MODIFIED ASPHALTIC MEMBRANE AND AN 11 MIL HDPE GEOMEMBRANE. THE VAPOR INTRUSION BARRIER SHALL BE APPROPRIATE FOR MOISTURE PROTECTION ON SITES THAT MAY ALSO CONTAIN METHANE GAS, CONTAMINATED SOIL, OR CONTAMINATED GROUNDWATER.

PROPERTIES	TEST METHOD	VALUE
TENSILE STRENGTH	ASTM E154 (ATSM D882)	55 lbf/in (45 lbf/in min)
ELONGATION	ASTM D882	600
ADHESION TO CONCRETE & MASONRY (MIN 1 lbf/in IS PASSING)	ASTM C836 AND C704	11 lbf/in
PUNCTURE RESISTANCE	ASTM D1709	2,400 grams (Dart)
METHANE TRANSMISSION RATE	ASTM D14334	0
WATER VAPOR TRANSMISSION	ASTM E96	0.020 perms
PCE DIFFUSION RATE	GEOKINETICS	1.16 x 10^{-17} m^2/sec
BENZENE DIFFUSION RATE	GEOKINETICS	2.31 x 10^{-18} m^2/sec
VAPOR BARRIER CLASSIFICATION	ASTM E1745	A, B & C

2.3 INDIVIDUAL ABOVE SLAB VAPOR INTRUSION BARRIER MATERIALS

A. POLYMER MODIFIED ASPHALT

1. *POLYMER MODIFIED ASPHALT SHALL BE* A NON-HAZARDOUS, LOW-VISCOSITY, WATER-BASED, ANIONIC ASPHALT EMULSION MODIFIED WITH A BLEND OF SYNTHETIC POLYMERIZED RUBBERS AND ADDITIVES. *POLYMER MODIFIED ASPHALT SHALL BE* HIGHLY STABLE DURING TRANSIT AND WHEN PROPERLY STORED. POLYMER MODIFIED ASPHALT SHALL BECOME HIGHLY REACTIVE DURING SPRAY APPLICATION TO FORM A RAPIDLY CURED MEMBRANE WITH EXCEPTIONAL BONDING, ELONGATION, AND HYDROPHOBIC CHARACTERISTICS.

PROPERTIES	TEST METHOD	VALUE
COLOR		BROWN TO BLACK
SOLVENT CONTENT		NO SOLVENTS
SHELF LIFE		6 MONTHS
TENSILE STRENGTH	ASTM 412	32 psi
ELONGATION	ASTM 412	4140%
RESISTANCE TO DECAY (<10% PASSING)	ASTM E154 SECTION 13	4% PERM LOS
ACCELERATED AGING (NO REDUCTION IN TENSION AND ELONGATION OF AGED SAMPLES)	ASTM G23	NO EFFECT
HYDROSTATIC WATER PRESSURE	ASTM D751	26 psi
WATER VAPOR TRANSMISSION (<1 PASSING)	ASTM E96 (US PERMS)	0.21
METHANE TRANSMISSION RATE	ASTM D1434	0
ADHESION TO CONCRETE & MASONRY (MIN 1 lbf/inch IS PASSING)	ASTM C836 & C704	11 lbf/inch
ADHESION TO HDPE	ASTM C836	28.363 lbf/inch
ADHESION TO POLYPROPYLENE FABRIC	ASTM C836	31.19 lbf/inch
HARDNESS (50 MIN PASSING)	ASTM C836	80
CRACK BRIDGING (NO RUPTURE, CRACKING, SEPARATION IS PASSING)	ASTM C836	NO CRACKING

2. *POLYMER MODIFIED ASPHALT TO BE HAND APPLIED WHEN A 24-INCH CLEARANCE IS NOT AVAILABLE SHALL BE A* SINGLE COMPONENT, MEDIUM VISCOSITY, WATER-BASED, POLYMER-MODIFIED ANIONIC ASPHALT EMULSION, WHICH EXHIBITS EXCEPTIONAL BONDING, ELONGATION AND HYDROPHOBIC CHARACTERISTICS.

PROPERTIES	TEST METHOD	VALUE
COLOR		BROWN TO BLACK
SOLVENT CONTENT		NO SOLVENTS
SHELF LIFE		6 MONTHS
TENSILE STRENGTH	ASTM 412	32 psi
ELONGATION	ASTM 412	3860%
RESISTANCE TO DECAY (<10% PASSING)	ASTM E154 SECTION 13	9% PERM LOS
ACCELERATED AGING (NO REDUCTION IN TENSION AND ELONGATION OF AGED SAMPLES)	ASTM G23	NO EFFECT
HYDROSTATIC WATER PRESSURE	ASTM D751	28 psi
ADHESION TO CONCRETE AND MASONRY (MIN 1 lbf/in IS PASSING	ASTM C836 & C704	7 lbf/in
WATER VAPOR TRANSMISSION (<1 PASSING)	ASTM E96 (US PERMS)	0.17
METHANE TRANSMISSION RATE	ASTM D1434	0
HARDNESS (50 MIN PASSING)	ASTM C836	85
CRACK BRIDGING (NO RUPTURE, CRACKING, SEPARATION IS PASSING)	ASTM C836	NO CRACKING

B. FILM GEOCOMPOSITE PROTECTION COURSE

1. THE ABOVE SLAB GEOCOMPOSITE PROTECTION COURSE SHEET SHALL BE COMPRISED OF AN 11 MIL HDPE FILM. THE FILM SHALL BE CROSS LAMINATED TO CREATE RIDGES THAT ENHANCE THE BOND BETWEEN THE FILM SHEET AND THE POLYMER MODIFIED ASPHALT.

PROPERTIES	TEST METHOD	VALUE	MIN SPEC VALUE
MATERIAL		HDPE	
COLOR		GREEN	
THICKNESS		11 mil (+/- 10%)	(+/- 10%)
TENSILE STRENGTH	ATSME E154 (ATSM D882)	55 lbf/in (45 lbf/in MIN)	MIN 45 lbf/in
PUNCTURE RESISTANCE	ATSM D1709	2,400 grams (Dart)	MIN 2250
ELONGATION	ASTM D882	600	MIN 500
WEIGHT (GSM)	INTERNAL	239.5	(+/- 10%)
WIDTH	INTERNAL	153	EQUAL TO. OR GREATER THAN 153

2.4 INDIVIDUAL BELOW SLAB VAPOR INTRUSION BARRIER MATERIALS

A. BASE SHEET

1. BASE SHEET SHALL BE A STURDY AND VERSITILE BASE COURSE MADE FROM THE LAMINATION OF HDPE FILM AND NONWOVEN POLYPROPYLENE GEOTEXTILE FABRIC.

PROPERTIES	TEST METHOD	VALUE
FILM MATERIAL		HDPE
FILM COLOR		GRAY
FABRIC MATERIAL		NON-WOVEN POLYPROPELENE
FABRIC COLOR		WHITE
FILM THICKNESS		5 mil
COMPOSITE THICKNESS		18 mil
TENSILE @ ULT	ASTM D882	TD 32.0 lbs/in
		MD 37.3 lbs/in
ELONGATION @ ULT	ASTM D882	TD 65.3%
		MD 51.0%
DART IMPACT	ASTM D1709	METHOD A >1070 grams
		METHOD B 894 grams
MODULUS	ASTM D882	TD 270.6 lbs/in
		MD 295.5 lbs/in
ELMENDORF TEAR	ASTM D1922	TD 5,140 grams
		MD 5,260 grams
PUNCTURE-PROP TEAR	ASTM D2582	TD 13,250 grams SLED: 1-lb
		MD 11,290 grams SLED: 1-lb
BEACH PUNCTURE TEAR	ASTM D751	TD 165 in-lbs
		MD 160 in-lbs
WATER PERMEANCE	ASTM E96	0.11 perms (US)

B. POLYMER MODIFIED ASHPHALT

1. POLYMER MODIFIED ASPHALT INSTALLED FOR BELOW SLAB SYSTEM SHALL BE IN ACCORDANCE WITH THE PROPERTIES DESCRIBED IN SECTION 2.3 A.

C. BENTONITE GEOCOMPOSITE PROTECTION COURSE

1. THE BELOW SLAB GEOCOMPOSITE PROTECTION COURSE SHALL BE AN EXTREMELY DURABLE, HIGH STRENGTH PROTECTION COURSE COMPRISED OF THREE DISTINCT LAYERS, AN HDPE FILM, A NONWOVEN POLYPROPYLENE GEOTEXTILE FABRIC, AND A CHEMICALLY BONDED LAYER OF SODIUM MONTMORILLONITE BENTONITE.

PROPERTIES	TEST METHOD	VALUE
FILM MATERIAL		HDPE
FILM COLOR		GRAY
FABRIC MATERIAL		NON-WOVEN POLYPROPELENE
FABRIC COLOR		WHITE
TENSILE STRENGTH: MEMBRANE (psi)	ASTM D882	6,100 psi (42MPA)
% ELONGATION AT BREAK	ATSM D882	100%
BENTONITE		SODIUM MONTMARONLONITE (>90%)
OVERALL WEIGHT		0.6 PER sq ft (2.44 kg/m^2)
RESISTANCE	ASTM D751 PROCEDURE A	174 ft (52.9 m) OF WATER
CRACK BRIDGING		1.8" (0.032 cm) CRACK
WATER VAPOR PERMEABILITY	ASTM E96	0.53 X 10^{-3} cm/sec

2.5 AUXILIARY MATERIALS

A. GENERAL: ALL ACCESSORY PRODUCTS SHALL BE PROVIDED BY THE COMPOSITE LINER SYSTEM MANUFACTURER. AUXILIARY PRODUCTS USED IN LIEU OF, OR IN ADDITION TO, THE MANUFACTURES PRODUCTS MUST BE APPROVED IN WRITING BY THE MANUFACTURER PRIOR TO INSTALLATION.

B. REINFORCEMENT FABRIC: MANUFACTURER'S POLYESTER FABRIC.

C. DETAILING MATERIAL: A ROLLER APPLIED, WATER BASED, HIGH VISCOSITY, POLYMER MODIFIED ASPHALTIC MATERIAL.

D. BACKER ROD: CLOSED CELL POLYETHYLENE FOAM

E. TERMINATION BAR: *E.TERM HD*, OR APPROVED ALTERNATE

PART 3 - EXECUTION

3.1 EXAMINATION

A. COMPLY WITH PROJECT DOCUMENTS, MANUFACTURER'S PRODUCT INFORMATION, INCLUDING PRODUCT APPLICATION AND INSTALLATION GUIDELINES, PRE-JOB PUNCH LIST, AS WELL AS, MANUFACTURER'S SHIPPING AND STORAGE RECOMMENDATIONS.

3.1.2 SURFACE PREPARATION

A. THE GENERAL CONTRACTOR SHALL ENGAGE THE CERTIFIED INSTALLATION CONTRACTOR AND CERTIFIED INSPECTOR TO ENSURE SURFACES ARE PREPARED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNLESS, EXPLICITLY STATED IN THE CONTRACT DOCUMENTS, THE INSTALLATION CONTRACTOR IS NOT RESPONSIBLE FOR SURFACE PREPARATION.

B. EXAMINE ALL SUBSTRATES, AREAS, AND CONDITIONS UNDER WHICH THE COMPOSITE LINER SYSTEM WILL BE INSTALLED, APPLICATOR AND INSPECTOR MUST BE PRESENT. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACE PREPARATION REQUIREMENTS HAVE BEEN MET. IF CONDITIONS EXIST THAT ARE NOT ADDRESSED IN THIS SECTION, NOTIFY INSPECTOR AND CONTACT THE MANUFACTURER FOR ADDITIONAL CLARIFICATION.

C. SOIL AND SAND SUBSTRATES: NATIVE SOIL AND SAND SUBSTRATES SHALL BE UNIFORMLY COMPACTED TO MEET STRUCTURAL AND BUILDING CODE REQUIREMENTS. ALL SURFACES SHALL BE FREE FROM PROTRUSIONS AND DEBRIS THAT MAY COMPROMISE THE MEMBRANE SYSTEM. FREE STANDING WATER MUST BE REMOVED PRIOR TO APPLICATION.

D. AGGREGATE SUBSTRATES: AGGREGATE SUBSTRATES SHALL BE COMPACTED TO MEET STRUCTURAL AND BUILDING CODE REQUIREMENTS AND THEN ROLLED FLAT TO PROVIDE A UNIFORM SUBSTRATE. ¾ INCH MINUS AGGREGATE WITH NO MORE THAN ONE FRACTURED FACE IS RECOMMENDED, BUT OTHER AGGREGATES SUBSTRATES MAY BE APPROVED BY THE MANUFACTURER PROVIDED THEY DO NOT CREATE SHARP ANGULAR PROTRUSIONS THAT MAY COMPROMISE THE COMPOSITE LINER SYSTEM WITH HDPE GEOMEMBRANE AND ADHESION LAYERS.

E. WORKING SLAB: MUD SLAB, RAT SLAB, OR OTHER CONCRETE WORKING SLAB SHALL HAVE A UNIFORM PLANE WITH A LIGHT BROOM OR LIGHT TROWEL FINISH.

F. CONCRETE SURFACES: CLEAN AND PREPARE CONCRETE SURFACE TO MANUFACTURER'S RECOMMENDATIONS. IN GENERAL, ONLY APPLY THE POLYMER MODIFIED ASPHALT MATERIAL TO DRY, CLEAN AND UNIFORM CONCRETE SUBSTRATES WITH A LIGHT TROWEL, LIGHT BROOM, OR EQUIVALENT FINISH.

G. CAST-IN-PLACE OR SHOTCRETE WALLS: APPLICATION TO GREEN CONCRETE IS ACCEPTABLE PROVIDED THE SUBSTRATE IS PREPARED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND PUBLISHED INSTRUCTIONS.

1. PROVIDE CLEAN, DUST-FREE, AND DRY SUBSTRATE FOR VAPOR INTRUSION BARRIER APPLICATION.
2. SURFACES SHALL BE POWER WASHED TO REMOVE GREASE, OIL, FORM RELEASE AGENTS, OR ANY OTHER PENETRATING CONTAMINANTS FROM THE CONCRETE.
3. REMOVE ALL FINS, RIDGES, AND OTHER PROTRUSIONS.
4. FILL HONEYCOMB, AGGREGATE POCKETS, TIE HOLES, AND OTHER VOIDS WITH HYDRAULIC CEMENT, OR RAPID-SET GROUT.

3.2 VAPOR INTRUSION BARRIER INSTALLATION

A. GENERAL: THE UNDERSLAB VAPOR INTRUSION SYSTEM SHALL BE INSTALLED UNDER STRICT ACCORDANCE WITH THE MANUFACTURER'S GUIDELINE AND PROJECT SPECIFICATIONS.

3.2.2 BASE COURSE - BASE SHEET

A. WHENEVER POSSIBLE ROLL OUT *BASE SHEET* IN THE SAME DIRECTION OVER THE SUBSTRATE. WHEN MULTIPLE POURS WILL OCCUR, EXTEND THE *BASE SHEET* A MINIMUM OF 2 FEET PAST THE POUR JOINT.

B. OVERLAP *BASE SHEET* A MINIMUM OF 6 INCHES.

C. AT THE SEAM OVERLAP, PEEL BACK THE TOP LAYER OF *BASE SHEET* AND APPLY 80 MILS INTO THE OVERLAPPING SEAM, MAKING CERTAIN TO APPLY *POLYMER MODIFIED ASPHALT* TO BOTH THE TOP OF THE BOTTOM SHEET AND THE BOTTOM OF THE TOP SHEET. EMBED THE TOP SHEET INTO THE BOTTOM SHEET.

D. VISUALLY VERIFY THERE ARE NO GAPS/FISH-MOUTHS IN SEAMS.

3.2.3 TERMINATION SEQUENCE

A. SYSTEM TERMINATION: THE TERMINATION PROCESS IS APPROPRIATE FOR TERMINATING THE MEMBRANE ONTO EXTERIOR FOOTINGS, PILE CAPS, INTERIOR FOOTINGS AND GRADE BEAMS. WHEN TERMINATING THE MEMBRANE TO STEM WALLS OR VERTICAL SURFACES THE SAME PROCESS SHOULD BE USED.

1. CONCRETE SURFACES THAT ARE NOT A LIGHT TROWEL, LIGHT BROOM OR EQUIVALENT FINISH, WILL NEED TO BE REPAIRED.
2. TERMINATIONS ON HORIZONTAL AND VERTICAL SURFACES SHOULD EXTEND 6" ONTO THE TERMINATION SURFACE. JOB SPECIFIC CONDITIONS MAY PREVENT A 6" TERMINATION. IF THESE CONDITIONS EXIST, DETAILS MUST BE SUBMITTED AND APPROVED BY THE ENGINEER OR RECOMMENDED BY THE MANUFACTURER PRIOR TO APPLICATION.
3. APPLY 60 MILS OF *POLYMER MODIFIED ASPHALT* TO THE TERMINATING SURFACE. FOR THE BELOW SLAB SYSTEM, EMBED THE *BASE SHEET* LAYER BY PRESSING IT FIRMLY INTO THE *POLYMER MODIFIED ASPHALT* LAYER.
4. FOR THE BELOW SLAB SYSTEM, APPLY 80 MILS OF *POLYMER MODIFIED ASPHALT* TO THE *BASE SHEET* LAYER.
5. APPLY THE *GEOCOMPOSITE PROTECTION COURSE* LAYER AND APPLY A FINAL 30 MIL SEAL OF THE *POLYMER MODIFIED ASPHALT* LAYER OVER THE EDGE OF THE TERMINATION. *POLYMER MODIFIED ASPHALT* SEAL SHALL BE 30 MILS FOR THE ABOVE SLAB SYSTEM AND 80 MILS FR THE BELOW SLAB SYSTEM. FOR FURTHER CLARIFICATION, REFER TO THE TERMINATION DETAIL PROVIDED BY MANUFACTURER.

3.2.4 SEALING OF PENETRATIONS

A. SEALING OF STANDARD PIPE PENETRATIONS: PREPARE MEMBRANE PENETRATIONS SO THEY ARE FREE OF ANY MATERIAL THAT WILL INHIBIT A DIRECT BOND TO THE PENETRATION SURFACE: FOAM, INSULATION, PROTECTIVE COATINGS, ETC.

1. TRIM *BASE SHEET* TO WITHIN 1/8 INCH OF THE PENETRATION IN THE CASE OF THE BELOW SLAB SYSTEM.
2. FOR BOTH THE ABOVE SLAB AND BELOW SLAB SYSTEMS, APPLY *DETAILING MATERIAL* 3 INCHES HORIZONTALLY AND 3 INCHES VERTICALLY AROUND THE BASE OF THE PENETRATION.
3. EMBED REINFORCEMENT FABRIC 3 INCHES HORIZONTALLY AND 3 INCHES VERTICALLY AROUND THE BASE OF THE PENETRATION.
4. APPLY A SECOND LAYER OF *DETAILING MATERIAL* TO REINFORCEMENT FABRIC UNTIL THE REINFORCEMENT FABRIC IS FULLY SATURATED. SECURE REINFORCEMENT FABRIC TO PENETRATION WITH A CABLE TIE, FOR FURTHER CLARIFICATION, REFER TO THE TERMINATION DETAIL PROVIDED BY MANUFACTURER.

3.2.5 POLYMER MODIFED ASPHALT MEMBRANE

A. MASK OFF ADJOINING SURFACES WHERE UNWANTED POLYMER MODIFIED ASPHALT MEMBRANE MAY BE EXPOSED ON FINISHED SURFACES OR IMPACT OTHER CONSTRUCTION TRADES.

B. COMMENCE APPLICATION OF POLYMER MODIFIED ASPHALT WHEN AMBIENT AIR TEMPERATURES ARE WITHIN MANUFACTURER RECOMMENDATIONS.

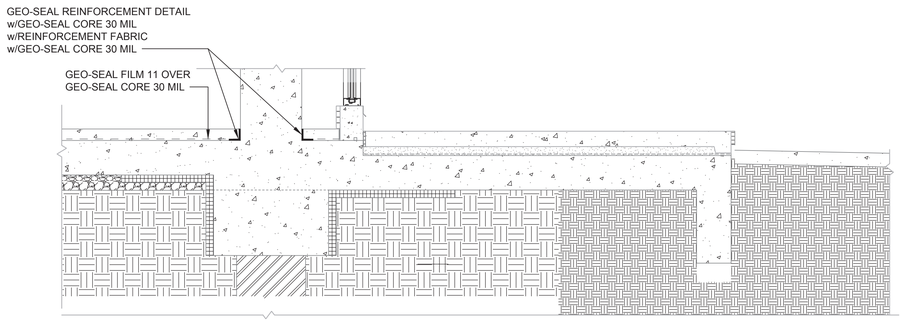
C. SURFACES THAT WILL RECEIVE THE MEMBRANE MUST BE CLEAN AND FREE FROM STANDING MOISTURE.

D. START INSTALLING *POLYMER MODIFIED ASPHALT* IN PRESENCE OF APPROVED 3RD PARTY INSPECTOR OR REQUIRED CITY INSPECTOR.

E. APPLY ONE APPLICATION OF *POLYMER MODIFIED ASPHALT* MEMBRANE IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS IN ORDER TO OBTAIN A SEAMLESS MEMBRANE WITH A MINIMUM DRY FILM THICKNESS OF 30 MILS (1.5 MM) FOR THE ABOVE SLAB SYSTEM AND 80 MILS (4 MM) FOR THE BELOW SLAB SYSTEM.

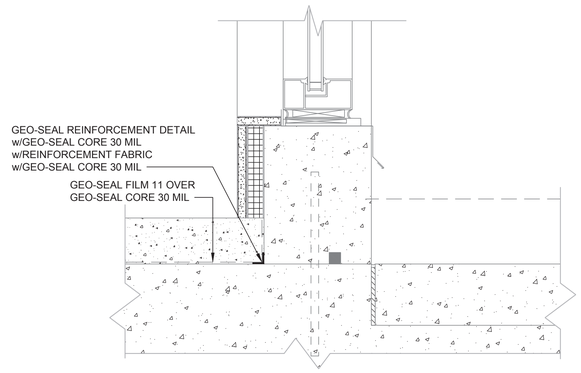
F. APPLY *POLYMER MODIFIED ASPHALT AND DETAILING MATERIAL* IN AND AROUND PENETRATIONS AND CAVITIES TO ENSURE THE FORMATION OF MONOLITHIC SEAL AROUND ALL PENETRATIONS.

G. APPLY *POLYMER MODIFIED ASPHALT AND DETAILING MATERIAL* TO PREPARED WALL TERMINATIONS AND VERTICAL SURFACES TO HEIGHTS INDICATED ACCORDING TO MANUFACTURER'S RECOMM



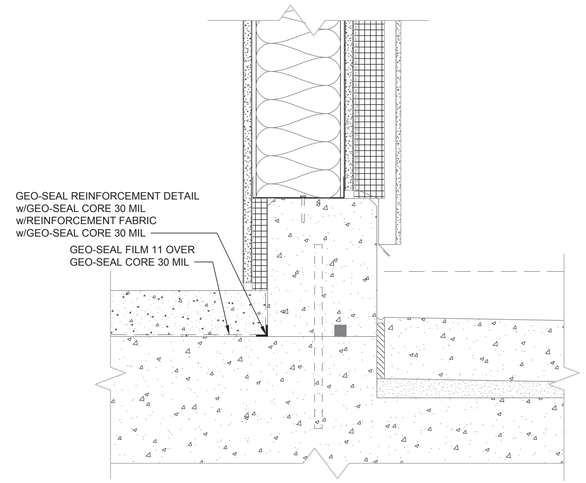
SECTION - CONCRETE APRON 1

SCALE: NTS



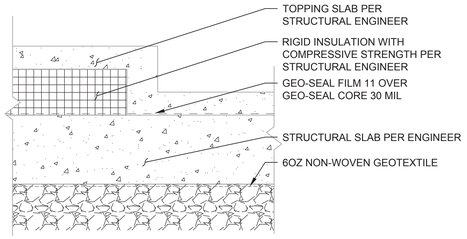
SECTION - STORE FRONT AT CURB 2

SCALE: NTS



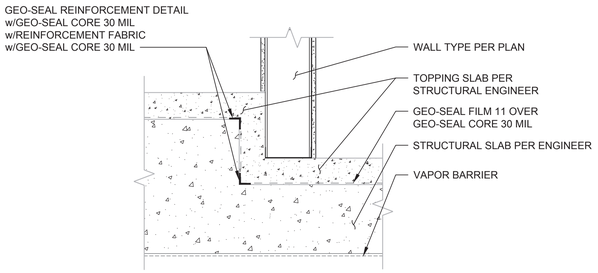
SECTION - EXTERIOR METAL STUD WALL AT CURB 6

SCALE: NTS



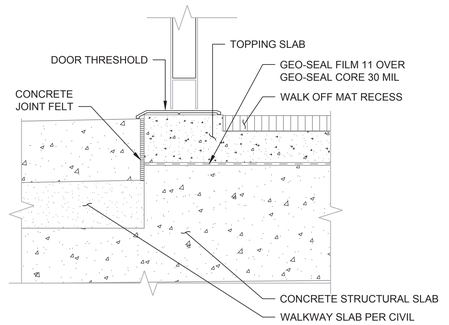
SECTION - SLAB STEP 3

SCALE: NTS



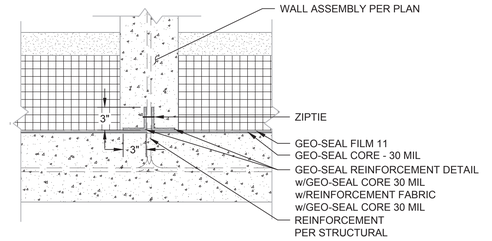
SECTION - WALL AT SLAB STEP 4

SCALE: NTS



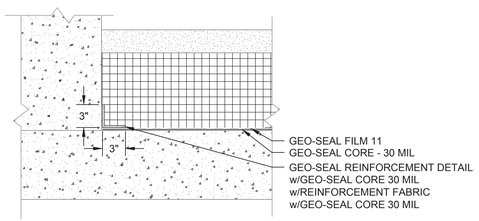
SECTION - CONCRETE DOOR SILL 5

SCALE: NTS



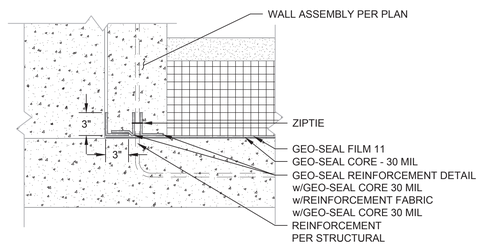
SECTION - WALL ASSEMBLY WITH REBAR LINER PENETRATION 7

SCALE: NTS



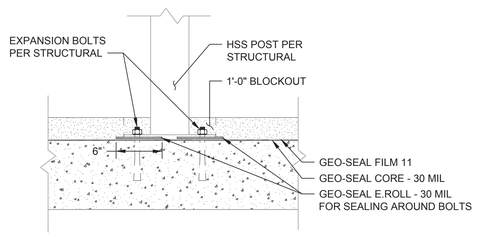
SECTION - LINER SEAL TO CONCRETE WALL 8

SCALE: NTS



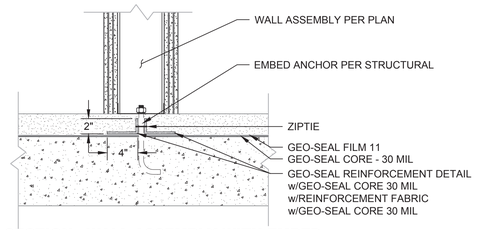
SECTION - LINER SEAL TO WALL ASSEMBLY 9

SCALE: NTS



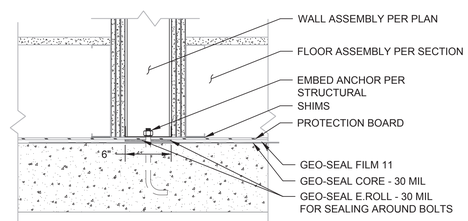
SECTION - HSS POST LINER PENETRATION 10

SCALE: NTS



SECTION - WALL ASSEMBLY WITH EMBED ANCHOR LINER PENETRATION 1 11

SCALE: NTS



SECTION - WALL ASSEMBLY WITH EMBED ANCHOR LINER PENETRATION 2 12

SCALE: NTS

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

811 Know what's below. Call before you dig.

© 2019 Herrera Environmental Consultants, Inc. All rights reserved.

Jun 31, 2024 - 8:11am omanton I:\herrera.local\hercwf\seattle\proj\15\15-06075-008\CAD\Sheet\BLD\06-DET.dwg

EVERETT
RIVERFRONT
BUILDING C

3710 RIVERFRONT
BLVD
EVERETT, WA 98203

HERRERA
2200 6th AVE
Suite 1100
Seattle, WA 98121
http://www.herrerainc.com

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN

TYSON M. WRIGHT, PE

01/31/2024

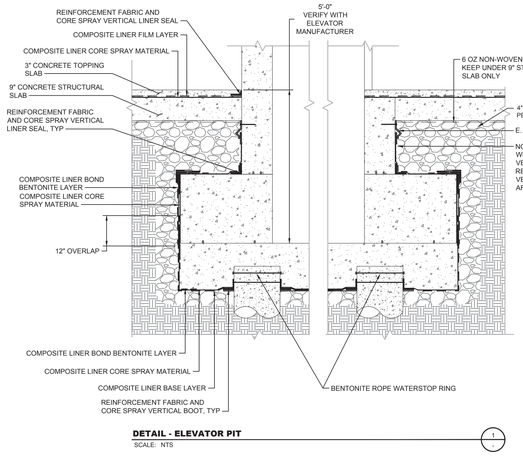
© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	PERMIT REVISION 2

15-06075-008
PM: TYSON M WRIGHT
DRAWN BY: CPM
12/14/22

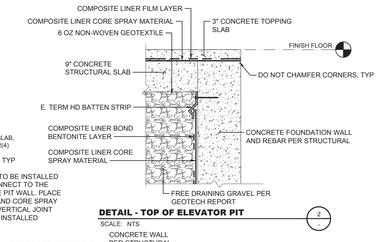
LINER
PENETRATION
DETAILS

LFG1C4



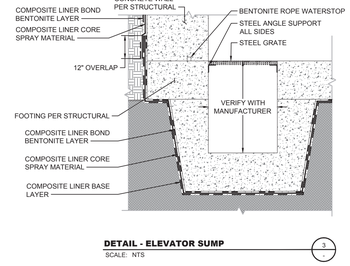
DETAIL - ELEVATOR PIT 1

SCALE: NTS



DETAIL - TOP OF ELEVATOR PIT 2

SCALE: NTS



DETAIL - ELEVATOR SUMP 3

SCALE: NTS

© 2019 Herrera Environmental Consultants, Inc. All rights reserved.

Jan 31, 2024 - 8:11am cmanton I:\herrera boat\home\seattle\proj\Y2015\15-06075-008\CAD\Sheet\BLDGS\DET.dwg

EVERETT RIVERFRONT BUILDING C

3710 RIVERFRONT BLVD
EVERETT, WA 98203

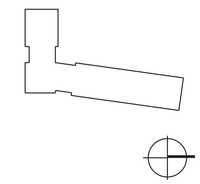
HERRERA
2200 6th AVE
Suite 1100
Seattle, WA 98121
http://www.herrerainc.com

1101 Second Ave, Ste 100
Seattle, WA 98101
206 962 6500
MG2.com

PERMIT

09/16/2022

KEY PLAN



TYSON M. WRIGHT, PE

TYSON M. WRIGHT
STATE OF WASHINGTON
44408
REGISTERED
PROFESSIONAL ENGINEER
01/31/2024

© MG2,Inc.All rights reserved. No part of this document may be reproduced in any form or by any means without permission in writing from MG2, Inc.

△	DATE	DESCRIPTION
2	01/31/24	PERMIT REVISION 2

15-06075-008
PM: TYSON M WRIGHT
DRAWN BY: CPM
12/14/22

ELEVATOR PIT DETAILS

LFG1C5

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

811 Know what's below. Call before you dig.

GEOTECHNICAL REPORT
Everett Riverfront Development

Phase II

Everett, Washington

HWA Project No. 2015-061-21

Prepared for
Shelter Holdings

December 8, 2021

HWA GeoSciences Inc.
DBE/MWBE

Geotechnical Engineering
Pavement Engineering
Geoenvironmental
Hydrogeology
Inspection & Testing

HWA GeoSciences Inc.
DBE/MWBE

December 8, 2021
HWA Project No. 2015-061-21

Shelter Holdings
11624 SE 5th Street, Suite 210
Bellevue, Washington 98005

Attention: Mr. Eric Evans

SUBJECT: GEOTECHNICAL ENGINEERING REPORT
EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
Everett, Washington

Dear Mr. Evans:

As requested, HWA GeoSciences Inc. (HWA) has completed a geotechnical engineering study in support of the design of Phase 2 of the Riverfront Development, in Everett, Washington. Results of our investigation and geotechnical recommendations pertinent to the proposed improvements are provided in the accompanying geotechnical report.

We appreciate the opportunity to provide geotechnical services on this project.

Sincerely,

HWA GEOSCIENCES INC.

Michael S. Place, P.E.
Senior Geotechnical Engineer

Table of Contents

1.0 INTRODUCTION 1
1.1 General 1
1.2 Project Description 1
2.0 FIELD AND LABORATORY INVESTIGATION 2
2.1 Previous Investigations and Geotechnical Information 2
2.2 Field Investigations 2
2.3 Previous Refraction Microtrmor (ReMi) Survey 3
2.4 Laboratory Testing 3
3.0 GENERAL SITE CONDITIONS 3
3.1 Site Topography and History 3
3.2 General Geologic Conditions 4
3.3 Subsurface Conditions 4
3.4 Groundwater 6
4.0 CONCLUSIONS AND RECOMMENDATIONS 6
4.1 General 6
4.2 Seismic Design Considerations 7
4.2.1 Seismic Design Parameters 7
4.2.2 Liquefaction Hazard 8
4.2.3 Liquefaction Induced Settlement 9
4.2.4 Near Fault Hazards 10
4.2.5 Ground Rupture 10
4.2.6 Lateral Spread 10
4.3 Anticipated Consolidation Settlement 11
4.3.1 Secondary and Biodegradation Settlement 11
4.3.2 Anticipated Settlement Magnitudes 12
4.3.3 Impacts of Anticipated Settlements and Associated Design Considerations 12
4.4 Pile Foundations 14
4.4.1 Background for Pile Type Determination 14
4.4.2 Pile Foundation 15
4.4.3 Vertical Pile Capacities 16
4.4.4 Pile Lateral Capacities 17
4.4.5 Pile Testing 17
4.4.6 Pile Group Affects 17
4.5 Foundation Drainage 18
4.6 Utilities 18
4.6.1 Non-Grade Sensitive Utilities 18
4.6.2 Flexible Connections 18
4.6.3 Sewer and Storm Drain 19
4.6.4 Electrical Line 19
4.6.5 Utility Excavation Considerations 19

4.6.6 Utility Foundation Recommendations....20
4.6.7 Pipe Bedding....21
4.6.8 Trench Backfill Placement and Compaction....21
4.6.9 Utility Line Transitions....21
4.7 ONSITE ROADS AND PAVEMENTS....22
4.7.1 Permanent Roads and Pavements....22
4.7.2 Temporary Access Roads, Laydown Yards and Trailer Pad....24
4.8 PERMANENT RETAINING WALLS....24
4.9 ILLUMINATION FOUNDATIONS....25
4.10 STORMWATER MANAGEMENT....25
4.11 LANDFILL GAS....26
4.11.1 Low Permeability Soil Barrier (LPSB)....26
4.11.2 Excavations through Existing LPSB....27
4.11.3 Bentonite Sand Backfill....27
4.11.3 Gas Barrier Above Shallow Improvements....27
4.12 GENERAL EARTHWORK....28
4.12.1 Structural Fill....28
4.12.2 Compaction....28
4.12.3 Wet Weather Earthwork....28
4.12.4 Excavations and Slopes....29
4.13 FUTURE WORK....30
5.0 CONDITIONS AND LIMITATIONS....30
6.0 REFERENCES....32

LIST OF FIGURES (FOLLOWING TEXT)

Figure 1 Vicinity Map
Figure 2 Site and Exploration Plan
Figure 3A Geologic Cross Section A-A'
Figure 3B Geologic Cross Section C-C'
Figure 4 Driven Grout Pile with Sleeve Through Refuse

APPENDICES

Appendix A: Field Investigation

Figure A-1 Legend of Terms and Symbols
Figures A-2 to A-7 Logs of Boreholes BH-51 through BH-56

Appendix B: Previous Exploration by HWA and Others

Appendix C: Laboratory Investigation

Figures B-5 to B-14 Particle-Size Analysis
Figures B-15 to B-18 Liquid Limit, Plastic Limit and Plasticity Index
Figures B-25 to B-40 Direct Shear Tests

Appendix D: Driven Grout Pile Sleeve Length Requirements

GEOTECHNICAL ENGINEERING REPORT
EVERETT RIVERFRONT DEVELOPMENT
PHASE II
EVERETT, WASHINGTON

1.0 INTRODUCTION

1.1 GENERAL

This report presents the results of the geotechnical engineering investigation performed by HWA GeoSciences Inc. (HWA) in support of design and construction of proposed new buildings located in the Phase 2 are of the Riverfront Development in Everett, Washington. It is our understanding that site improvements will consist of two new multistory buildings and associated surface parking areas, with the southern building L-shaped (Building C) and the northern building rectangular (Building D). These new buildings are a part of the Phase 2 Development Plan by Shelter Holdings, which proposes to construct a total of two new multistory mixed-use commercial/residential buildings. The proposed buildings will be constructed across the Everett Landfill site as shown in the Vicinity Map, Figure 1. The proposed geometry of the current Phase 2 development work detailed in this report is shown on the Site and Exploration Plan, Figure 2.

The purpose of our investigation was to evaluate the subsurface conditions in and around the footprint of the development area, perform geotechnical engineering analyses, and provide geotechnical recommendations in support of the design of the buildings, parking areas and utility lines.

1.2 PROJECT DESCRIPTION

It is our understanding that Shelter Holdings is planning to continue to develop the old Everett Landfill site with their multi-phased development plan. HWA's work for Phase 2 included explorations for two mixed-use buildings designated Buildings C and D. The approximate layout and proposed grading of the site is shown in Figure 2. We understand that development of the remainder of the site outside of the Phase 2 area will occur in future phases.

Thick and highly variable deposits of landfill refuse and compressible alluvial soils underlie the proposed Phase 2 area, as shown in cross-sections on Figures 3 and 4. These soils were previously surcharged to reduce anticipated settlement across the site. However, long-term secondary settlements are expected to occur over the design life of the development. The anticipated settlements are expected to have a significant impact on the proposed development. Anticipated settlement magnitudes will need to be considered in the design of all proposed improvements.

2.0 FIELD AND LABORATORY INVESTIGATION

2.1 PREVIOUS INVESTIGATIONS AND GEOTECHNICAL INFORMATION

HWA reviewed all readily available geotechnical information for the Phase 2 project site. This included a review of HWA's project library and a review of geotechnical reports completed by others in support of previous proposed developments at the site. It should be noted that many of borings conducted prior to our recent investigation were drilled prior to recent grading activities. Therefore, the ground surface elevations and soil unit contacts shown in these borings are no longer accurate.

HWA reviewed an existing geotechnical report from GeoEngineers (2008). This report was generated in support of a previously planned development of the site. In this effort, GeoEngineers completed multiple borings; only information from two of these explorations were used, GEI-17 and GEI-8, were used in generating this report. The locations and designation of these borings are shown in the Site and Exploration Plan, Figure 2. The boring log is provided in Appendix B. It should be noted that borings from the GeoEngineers report were made prior to preloading and subsequent grading of the site. Therefore, the position of the geologic contacts shown on this boring log have changed due to surcharging of the site.

HWA utilized fifteen geotechnical borings, designated BH-6 through BH-15 and BH-17 through 20, BH17 through BH-20 and BH-22, that were drilled as part of our 2017 Project Evergreen site investigation (HWA, 2017). Their approximate locations are shown on the Site and Exploration Plan, Figure 2 and the boring logs are provided in Appendix B.

2.2 FIELD INVESTIGATIONS

HWA's fieldwork consisted of a subsurface exploration program that included six (6) borings designated BH-51 through BH-56. The approximate locations of these borings are shown on the Site and Exploration Plan, Figure 2. Exploration locations were surveyed and staked in the field prior to drilling. These subsurface explorations were performed to determine the character and extent of fill and refuse on the site, to characterize alluvial deposits below the refuse and determine depths to dense to very dense glacially consolidated deposits.

Borehole drilling was conducted from November 1 to November 3, 2021, by Holocene Drilling, Inc. of Puyallup, Washington under subcontract to Shelter Holdings. Drilling equipment was selected based on site access conditions and consisted of one track-mounted drill rig. The boreholes were advanced to depths ranging from about 71½ to 81½ feet below the existing ground surface (bgs). Hollow stem auger drilling techniques were used from the ground surface to the base of the refuse. Below the base of the refuse, each boring was switched to mud rotary drilling techniques. Each of the explorations were advanced under full-time HWA supervision and were logged by a geotechnical engineer. Soil samples were classified in the field during the investigation. Other pertinent information including sample depths, stratigraphy, soil engineering characteristics and groundwater occurrence was recorded.

Drilling spoils were collected in metal 55-gallon drums for future disposal in a designated refuse disposal area within the Everett Riverfront Development site.

Representative soil samples were obtained from the explorations and taken to our laboratory for further examination and geotechnical testing. Field exploration methods are described in detail and logs of the explorations are presented in Appendix A.

2.3 PREVIOUS REFRACTION MICROTRMOR (REMI) SURVEY

As part of our Phase I HWA also performed Refraction Microtremor (ReMi) testing at the site. This analysis is summarized in our original Phase 1 report. Based on the data, the approximate average shear wave velocity for the soil profile in the upper 100 feet is about 740 feet per second. It should be noted that the ReMi survey was completed outside of the Phase 2 development area but inside the limits of the landfill. However, we believe that the average shear wave velocities obtained from the ReMi survey are representative of the Phase 2 development area.

2.4 LABORATORY TESTING

Laboratory tests were conducted on selected samples obtained from the explorations to characterize relevant engineering and index properties of the soils encountered. Laboratory tests included in-situ moisture content, grain size distribution, and Atterberg Limits. The tests were conducted in general accordance with appropriate American Society of Testing and Materials (ASTM) standards. The test results and a discussion of laboratory test methodology are presented in Appendix B, or displayed on the exploration logs in Appendix A, as appropriate.

3.0 GENERAL SITE CONDITIONS

3.1 SITE TOPOGRAPHY AND HISTORY

The Riverfront Development site is located within the limits of the Old Everett Landfill and is bounded on the west by the Burlington Northern Santa Fe Railway (BNSF) rail lines, on the north by 36th Street and on the east by the Lowell Riverfront Trail, and the Snohomish River. For over 50 years the Old Everett Landfill accepted municipal solid waste until its eventual closing in 1975. The site remained relatively dormant from 1975 to 2008 at which time the site started to be prepared for development. From 2008 to 2012 the site underwent several phases of surcharging meant to consolidate the underlying refuse and alluvial deposits. After completion of surcharging, the site was graded to its current configuration and the upper 18 inches of soil, across portions of the site, was cement-treated to develop an all-weather construction surface. Additional fill was placed over the cement treated soil in 2018. Most of the site is currently relatively flat with a slight slope to the east. The eastern edge of the site slopes downward at a 2 to 1 slope to the edge of the landfill. The Phase 2 buildings, Buildings C and D, are located west of Riverfront Boulevard within the northwest quadrant of the Riverfront Development site.

3.2 General Geologic Conditions

The geology of the Puget Sound region includes a thick sequence of over-consolidated glacial and unconsolidated non-glacial soils overlying bedrock. Glacial deposits were formed by ice originating in the mountains of British Columbia (Cordilleran Ice Sheet) and from alpine glaciers which descended from the Olympic and Cascade Mountains. These ice sheets invaded the Puget Lowland at least four times during the early to late Pleistocene Epoch (approximately 2.4 million to 10,000 years before present). The southern extent of these glacial advances was near Tenino, Washington. During periods between these glacial advances and after the last glaciation, portions of the Puget Lowland filled with alluvial sediments deposited by rivers draining the western slopes of the Cascades and the eastern slopes of the Olympics. The most recent glacial advance, the Fraser Glaciation, included the Vashon Stade, during which the Puget Lobe of the Cordilleran Ice Sheet advanced and retreated through the Puget Sound Basin. Existing topography, surficial geology and hydrogeology in the project area are heavily influenced by the advance and retreat of the Vashon Ice Sheet.

Surficial geological information for the site area was obtained partly from the published geological map, Geologic Map of the Everett Quadrangle (Minard, 1985). The map indicates that the site is generally underlain by younger alluvium (Holocene). Younger alluvium deposits consist of unconsolidated, stratified, clay, silt, and very fine to fine sand with abundant organic material. Medium to coarse sand and gravel underlie much of the fine-grained floodplain sediment. Glacial till, advance outwash, and transitional beds are mapped west of the site in the upland area and underlie the alluvial deposits. These underlying glacial and interglacial deposits were overconsolidated by the weight of over 3,000 feet of ice during the Vashon Stade.

3.3 Subsurface Conditions

The current and previous soil investigations at the project site have encountered five general material types: fill, refuse, alluvium, advance outwash, and pre-Vashon alluvium, as summarized in the following sub-sections. The entire site contains surficial fill soil, placed as a cap over the refuse and regraded during preloading and recent grading activities.

At depth, dense to very dense advance outwash and/or pre-Vashon alluvium were encountered in each boring drilled for this study. These deposits will form the bearing layer for deep foundations.

Two geologic cross-sections through the project site, presented in Figures 3A through 3B, are based on current and previous exploration logs. It is to be noted that, due to the interpretive nature of cross-sections, only the exploration logs should be relied upon for subsurface detail at particular locations.

Fill Soil: A fill cap was encountered in all borings for this study and previous studies within the landfill limits. This soil typically consisted of gravelly, silty sand (Unified Soil Classification SM), and ranged in thickness from approximately 4.5 to 10 feet. It consisted of three primary types as follows:

Preload Fill: Approximately 15 to 20 feet of fill material generally meeting the gradation requirements of WSDOT Common Borrow was imported and placed across the majority of this section of the landfill site. This material was imported in the summer of 2018 from the 3-Acre Park preload and the preload at the Simpson site. This material was previously tested by HWA for use as Low Permeability Soil Barrier (LPSB) and was found to meet the requirements for LPSB as described in Section 4.1.1 of this report.

Landfill Cap: Fill placed upon closure of the landfill, was encountered throughout the site. The fill typically consisted of gravelly, silty sand, and sandy silt. Blowcounts (SPT N-values) obtained in this fill ranged from 15 to 62 blows per foot (bpf). In general, the fill was medium dense to very dense, with occasional large gravel and cobbles resulting in high blow counts. In most areas the Landfill Cap material was indistinguishable from the Preload Fill.

Surcharge Fill and Landfill Fill Cap: Fill placed upon closure of the landfill, during surcharging and prior to 2016 was encountered throughout the site. In select areas, the upper two feet of this material was cement-treated to form an all-weather working surface. The fill typically consisted of gravelly, silty sand, with clean sand and sandy silt encountered in a couple of borings. Blowcounts obtained in this fill ranged from 12 to in excess of 50 bpf. In general, the fill was loose to dense, with cement-treated soil and scattered cobbles and concrete rubble resulting in high blow counts.

Refuse: Refuse (municipal solid waste) was encountered in each of the explorations within the Phase 2 area. The refuse was observed to consist of household waste with glass, assorted metal, plastic, construction debris, porcelain, paper, etc. The refuse sampled in the area explored consisted of blackened silty sand to sandy silt with blackened to charcoalized wood and scattered non-burnable waste including glass, metal, and porcelain. The refuse thickness in the proposed Phase 2 area varied from approximately 20 to 36.0 feet and extended to from depths at shallow as about 4 feet to depths as great as about 41 feet bgs. Blowcounts within the refuse were highly variable, which is indicative of the variable nature of refuse materials. Higher reported N-values within the refuse materials are likely due to the types of materials the sampler is driving through and may not be an indication of greater density of a particular area of the refuse.

Alluvium: Alluvium was encountered in each of the explorations within the Phase 2 area. The alluvium consisted of soft to stiff, organic silt, peat, and loose to medium dense sand. The presence and thickness of these sub-units varied throughout the site. The overall thickness of alluvium ranged from approximately 5 feet to 12 feet. Heaving sands were encountered below the peat and organic silt in some of the explorations and blow counts noted from the heave are very likely understated.

Advance Outwash: Advance outwash was encountered in each of the explorations within the Phase 2 area at depth. These soil materials were dense to very dense sands, generally consisting of massive to stratified clean to silty sand (classified as SP SP-SM, and SM based on the Unified Soil Classification System, USCS). The upper sands were interpreted as advance outwash, consisting of glaciofluvial sediment deposited by glacial meltwater as the Puget Lobe advanced

into the Puget Lowland. It was subsequently overridden by the advancing ice, causing over-consolidation to a very dense condition. Layers of hard silt with dark brown organics were encountered between sand layers. Due to the organic content, these are interpreted as pre-Vashon alluvium. Underlying and interbedded sand layers can be either alluvium of similar age, or older glacial outwash deposits. These could not be clearly differentiated from either the advance outwash or pre-Vashon alluvium soils based on color, grain size and density alone. Blowcounts in the advance outwash soils ranged from 32 bpf to 50 blows per 5 inches, which is consistent with dense to very dense coarse-grained soils. Likewise, the pre-Vashon alluvium intercalated with the advance outwash had blowcounts ranging from 35 bpf to 50 blows per 6 inches.

The subsurface profile described above is a generalized interpretation provided to highlight the major subsurface stratification features and material characteristics. The boring logs and laboratory test data in Appendices A, B and C should be reviewed for more specific information. This record includes soil description, stratifications, penetration resistances, location of samples, and laboratory test data. The stratifications shown on the boring logs represent the conditions only at each of the exploration locations. The stratifications indicated on the boring logs represent the approximate boundary between subsurface materials. The actual transitions may be gradual. Subsurface soils and conditions may vary across relatively short distances at the site and may become apparent with additional explorations or excavation. If soil conditions are found to be different than those described herein, HWA should be allowed to reevaluate our recommendations, if necessary.

3.4 GROUNDWATER

Groundwater was observed in each of our borings during drilling. While perched water was present in several of the borings, true groundwater was typically encountered within the refuse and sometimes within the alluvium. However, once drilling advanced through the refuse and alluvium and into the underlying glacial material, groundwater rose to stable depths ranging between 16 to 23 feet bgs. These levels are shown on the logs; however, it should be noted that these are not stabilized water levels as would be observed in a well. Actual groundwater levels are typically higher than those observed on sampling rods during drilling. Based on our experience, groundwater elevations are anticipated to vary seasonally and in response to significant precipitation events.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

The proposed Phase 2 Building C and Building D footprints are underlain by a series of compressible materials consisting of landfill refuse and soft alluvial peats. These soils have been surcharged to reduce the anticipated settlement across the site but are still expected to undergo

significant settlement over the design life of the proposed site improvements. Our analyses suggest that settlements will generally increase in magnitude from west to east and from north to south and will be differential in nature and magnitude. As a result of the anticipated settlements, the buildings in the Phase 2 site will need to be pile supported.

4.2 SEISMIC DESIGN CONSIDERATIONS

4.2.1 Seismic Design Parameters

The contribution of potential earthquake-induced ground motion from known sources is included in the probabilistic ground motion maps developed by the USGS. Design data seismic site characterization and design recommendations based on USGS mapping and analysis are implemented in the 2018 International Building Code (IBC). As part of this code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site.

As part of the procedure to evaluate seismic forces, the 2018 IBC requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile 100 feet below the proposed foundation. As a result, the Site Class to be determined in accordance with Section 20.3 and the corresponding values of F_a and F_v determined from Tables 11.4-1 and 11.4-2 of ASCE 7-16. Based on the shear wave velocity measurements obtained from our previous ReMi analysis, the site class classifies as a site class "D." However, in Section 11.4.8 of ASCE 7-16, it is stated that a site specific ground motions hazard analysis is required on sites with three additional conditions.

1. Seismically isolated structures and structures with dampening systems on site with S_1 greater than or equal to 0.6.
2. Structures on Site Class E sites with S_s greater than or equal to 1.0.
3. Structures on Site Class D and E sites with S_1 greater than or equal to 0.2.

Condition 1 should be determined by the project structural engineer, but is assumed to not apply to the proposed site improvements. Conditions 2 and 3 would necessitate performing a site specific ground motions hazard analysis on this site; however, three exceptions are provided, in section 11.4.8 of ASCE 7-16, to determine seismic design parameters without performing a site specific ground motions hazard analysis. These exceptions are:

1. Structures on site Class E site with S_S greater than or equal to 1.0, provided the site coefficient F_a is taken to be equal to that of Site Class C.
2. Structures of Site Class D sites with S_1 greater than or equal to 0.2, provided the value of the seismic response coefficient (Cs) is determined by Eq 12.8-2 of ASCE 7-16 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 of ASCE 7-16 for $T_L \geq T > 1.5T_s$, or Equation 12.8-4 of ASCE 7-16 for $T > T_L$.
3. Structures on Site Class E sites with S_1 greater than or equal to 0.2, provided that T is less than or equal to T_s and the equivalent static force procedure is used for design.

Please note that unless a site specific ground motions hazard analysis is performed, the requirements in exception 2, listed above, will need to be followed.

Should the information used as a basis for this design be incorrect, HWA should be notified to provide appropriate recommendations. The probabilistic ground acceleration values (S_S, S_1, and PGA) were obtained from the Applied Technology Council Seismic Hazard Maps website and site coefficients for the general site area are based on the site soil conditions and were calculated based on the requirements in section Chapter 11 of ASCE 7-16 and Section 1613 of the 2018 IBC. The risk targeted seismic values and coefficient are presented in Table 1.

Table 1: Ground Motion Values, Site Class D*

Period (sec)	Mapped MCE Spectral Response Acceleration (g)		Site Coefficients		Adjusted MCE Spectral Response Acceleration (g)		Design Spectral Response Acceleration (g)	
0.0	PGA	0.534	F_{PGA}	1.100	PGA_m	0.587	-	-
0.2	S_s	1.242	F_a	1.003	S_{Ms}	1.246	S_{Ds}	0.831
1.0	S_1	0.440	F_v	1.86	S_{M1}	0.818	S_{D1}	0.546

Transition Point	Period (sec)
T_0	0.131
T_S	0.657
T_L	6

Notes: **2% Probability of Exceedance in 50 years for Latitude 47.9687° and Longitude -122.1926°*
PGA = Peak ground acceleration
F_{PGA} = PGA site coefficient
PGA_M = Maximum considered earthquake geometric mean peak ground acceleration adjusted for Site Class effects
S_S = Short period (0.2 second) Mapped Spectral Acceleration
S_1 = 1.0 second period Mapped Spectral Acceleration
S_{MS} = Spectral Response adjusted for site class effects for short period = $F_a \cdot S_S$
S_{M1} = Spectral Response adjusted for site class effects for 1-second period = $F_V \cdot S1$
S_{DS} = Design Spectral Response Acceleration for short period =2/3 • SMS
S_{D1} = Design Spectral Response Acceleration for 1-second period =2/3 • SM1
F_a = Short Period Site Coefficients
F_v = Long Period Site Coefficients
$T_0 = 0.2 \cdot S_{D1}/S_{DS}$
$T_S = S_{D1}/S_{DS}$
T_L = Long Period Transition period

Based on Tables 11.6-1 and 11.6-2 (of ASCE 7-16), the Seismic Design Category for the site is "D".

4.2.2 Liquefaction Hazard

Liquefaction is a temporary loss of soil shear strength due to earthquake shaking. Loose, saturated, cohesionless soils are highly susceptible to earthquake-induced liquefaction. Research also indicates that certain silts and low-plasticity clays are also susceptible. Primary factors controlling the development of liquefaction include the intensity and duration of strong ground motions, the characteristics of subsurface soils, in-situ stress conditions and the depth to ground water. To evaluate the liquefaction susceptibility of the soils along the project alignment, the

simplified procedure originally developed by Seed and Idriss (1971) and updated by Youd et al (2001) and Andrus and Stokoe (2010), was used.

For this site, the PGAM was used to evaluate liquefaction is 0.590 g. The analyses indicate that three zones of loose, saturated sands in BH-53, BH-55, and BH-56 are expected to liquefy during the design level event. Where present, the predicted liquefaction zone was noted immediately below the peat soils, for unit thicknesses of less than 5 feet, at depths varying from approximately 40 to 55 feet bgs. It should be noted that in each exploration where liquefaction was noted heave was noted in the boring immediately prior to the testing and as a result the blow counts reported are likely understated and the actual susceptibility to liquefaction in these soils may be significantly less than calculated (i.e. have a lower likelihood of liquefaction than predicted).

The impacts to the site that could occur because of liquefaction are liquefaction induced settlement, which can significantly increase the down-drag loads on deep foundations, and liquefaction induced slope instability, including flow sliding and lateral spreading. These liquefiable soils at BH-53, BH-55, and BH-56 are within the limits of the proposed Building C and Building D locations, and thus where piles are anticipated to be needed.

Liquefaction within the refuse has been ruled out. HWA does not believe that liquefaction will occur within the refuse for several reasons. First, while groundwater was noted within the refuse, it was highly variable and groundwater observed at shallower depths is likely due to perched groundwater systems. As a result, the thickness of the saturated portions of the refuse are likely less significant than noted in the boring logs. Second, the material makeup of the refuse is not considered to be conducive to allowing for the buildup of hydrostatic pressures high enough to mobilize the larger waste materials scattered throughout the refuse layer. If a large enough area of appropriately sized soil participles and extremely low amount of larger refuse material existed within the refuse layer, some limited amount of liquefaction could occur. However, HWA has no evidence of such conditions existing within the refuse, and HWA does not believe such conditions to be likely. Additionally, due to the high predicted settlements within the refuse, it is unlikely that liquefaction induced settlement will be distinguishable from settlements due to static forces and biodegradation.

4.2.3 Liquefaction Induced Settlement

Loose sand deposits tend to densify when they are subject to earthquake shaking. For saturated sand deposits, excess pore water pressure builds up during the earthquake excitation, leading to loss of strength or liquefaction. After the shaking stops, excess pore water pressures dissipate toward a zone where water pressure is relatively lower, usually the ground surface. The dissipation is accompanied by a reconsolidation of the loose sand (Ishihara and Yoshimine, 1992). The reconsolidation is manifested at the ground surface as vertical settlement, usually termed as liquefaction-induced settlement or seismic settlement. Where piles are installed, this also results in additional loading on the piles because of the settlement of the materials above the

liquefied materials exert a frictional force along the pile causing what is commonly called down-drag.

The potential for liquefaction-induced settlement was evaluated where liquefaction was predicted. The methodologies used were developed by Ishihara and Yoshimine (1992) and Yoshimine et al (2006) and are generally based on the relationship between cyclic stress ratio, corrected SPT blow counts, and volumetric strain. Using these methods, we calculated that no liquefaction induced settlements will occur in borings BH-51, BH-52, and BH-54. However, settlements of up to 0.6, 1.5, and 1.2 inches are possible in borings BH-53, BH-55, and BH-56, respectively, during the design earthquake. It should be noted that, this settlement is predicted to occur at depths of 40 to 55 feet below existing site grades and based on Ishihara (1985) manifestations to the surface resultant from these settlements are not predicted to. Additionally, as stated above areas where liquefaction was predicted are within areas where blow counts were very likely understated and thus these liquefaction values are likely overstated. These minimal layers of predicted liquefaction are not anticipated to affect the buildings or the building piles

4.2.4 Near Fault Hazards

The site is located 5 miles from the northernmost fault in the Southern Whidbey Island Fault Zone. The Southern Whidbey Island Fault Zone consists of late Quaternary Reverse Faults with slip rates on the order of 0.2 to 1 mm per year. Due to the sites proximity to these active faults, the site is likely to experience large accelerations as a result of the design earthquake. The large ground motions are included in the design parameters and therefore will be incorporated into the design. Near fault ground motions also have the potential to exhibit forward directivity, which results in a strong pulse of acceleration at longer structural periods. Provided the site structures have a structural period less than about ½ second, forward directivity should not be a concern; however, if buildings are determined to have structural periods in excess of ½ second it may require further evaluation.

4.2.5 Ground Rupture

Ground rupture can occur when a fault extends up to the ground surface. Based on a review of the United States Geological Survey Fault Database, the closest fault to the site is the northernmost fault in the Southern Whidbey Island Fault Zone, which is approximately 5 miles southeast of the site. As a result, HWA believes that site has a low potential for ground rupture.

4.2.6 Lateral Spread

Lateral spreading involves lateral displacement of large, surficial blocks of soil as a result of liquefaction of a saturated subsurface layer. Displacement occurs in response to the combination of gravitational forces and inertial forces generated by an earthquake. Lateral spreading can develop in gentle slopes and move toward a free face such as a river channel. Differential internal movements within the spreading mass usually creates such features as fissures, scarps, and grabens. Lateral displacement may range from a few inches up to several feet, depending on

the soil conditions, geometry of adjacent slopes and the magnitude and duration of the seismic loading at the site. Differential vertical movements, or ground settlements may range up to about half the horizontal movement. When lateral spreading occurs it commonly disrupts foundations of buildings built on or across the failure surfaces and severs utilities in the failure mass.

As discussed in our Addendum to our Phase 1 geotechnical report for this site dated May 13, 2019, while the risk of lateral spreading is currently predicted to occur elsewhere on the Everett Landfill site, particularly where close to the Snohomish River, lateral spreading is not predicted to extend into the Phase 2 site area and is not a design consideration.

4.3 ANTICIPATED CONSOLIDATION SETTLEMENT

The refuse, peat and organic silt underlying the Riverfront Development site are highly compressible. Although the site has been previously surcharged, additional settlement is expected to occur over the design life of the proposed development area. These settlements will occur due to several mechanisms including long term secondary compression and biodegradation. A more detailed description of each of these mechanisms is provided below.

4.3.1 Secondary and Biodegradation Settlement

Secondary compression is associated with structural deformation within the soil as the result of applied load. In mineral soils the secondary compression is relatively small in comparison to the primary consolidation. However, secondary compression in organic soil and refuse is much larger than in mineral soil, due to the potential for cellular deformation within the organic material/refuse. Secondary compression continues for many years after the application of load.

Biodegradation occurs as organic materials within the refuse and organic soil decompose. The rate and magnitude of biodegradation is independent of applied load and depends on several factors including groundwater level and the nature and amount of organic material present. For the landfill refuse, the magnitude of biodegradation is expected to vary widely and be dependent on the composition of the waste stream as it was placed. As both secondary compression and biodegradation occur slowly over time, it is generally very difficult, if not impossible to distinguish the individual components of each mechanism.

Modified secondary compression indices for the refuse were determined through back calculations of observed settlements at settlement plates and settlement instruments across the landfill. As observed long-term settlement readings across the site were a result of a combination of both secondary settlement and biodegradation, HWA has based our calculations on modified secondary settlement indexes which accounts for both mechanisms. Therefore, specific biodegradation settlement calculations of the refuse were not performed.

Secondary settlement indexes for the alluvial soils were determined based on the results of consolidation testing completed on relatively undisturbed Shelby tube samples and through back calculations of observed settlements at settlement plates and settlement instruments across the landfill.

The secondary settlement can be estimated using the following equation:

$$\Delta H = C\alpha e * H * \log(\Delta t)$$

- ΔH is the long-term or secondary settlement.
- $C\alpha e$ is the modified secondary compression index.
- Δt is the time over which the long-term settlement occurs in years (the design life of the facility).
- H is the initial thickness of the compressible layer.

4.3.2 Anticipated Settlement Magnitudes

Long-term settlement magnitudes were estimated at boring locations within the proposed Phase 2 site. HWA estimates that total settlement magnitudes, over a design life of 50 years, be as high as 30 inches within this area. Given the nature of the refuse, settlement magnitudes could vary over short distances and could exceed our estimates in some areas. Based on our borings, HWA anticipates that the greatest settlement will occur on the northeast portion of the site. .

4.3.3 Impacts of Anticipated Settlements and Associated Design Considerations

The differential nature of the anticipated settlements across the proposed Phase 2 site will impact several aspects of the development and the associated maintenance cycles. These impacts are discussed below.

Due to the anticipated long-term settlement across the Phase 2 site, all proposed structures should be supported on pile foundations bearing in the dense to very dense sandy soils observed below the refuse and alluvial soils across the site. Additional recommendations associated with pile foundations are provided in Section 4.4 below.

As the proposed buildings will be supported on pile foundations, bearing below the compressible soils, these structures are expected to experience only minor settlement (less than 1 inch) over time. Therefore, we expect that large differential settlement will occur between pile supported structures and adjacent grade supported improvements. To minimize the impact of these differential settlements on the operation of the proposed buildings, we recommend that building perimeter sidewalks and frontage walkways be structurally supported by the pile supported buildings. This will prevent anticipated long-term settlements from causing doorway and ADA access issues over time.

As the proposed parking lot and drive lanes are anticipated to be grade supported and are anticipated to settle significantly over time, transition zones between the pavements and pile supported buildings and walkways will be required. These transition zones could experience as much as 30 inches of differential settlement between the pavement and the edge of the pile supported walkways. As a result, we expect that the total settlements observed in these areas will manifest as differential settlement relative to immediately adjacent pile supported structures. This settlement will occur slowly over time and will result in the development of abrupt vertical

drops at the outside edge of the pile supported structures. We recommend that the design team develop a surface treatment plan for these transition areas that allows for easy and cost-effective periodic regrading. Landscape and planter areas may be the most cost-effective surface treatment for the settlement transition areas. If hardscape areas are proposed to extend past the limits of the pile supported walkways, increased maintenance cycle should be considered to avoid the development of abrupt tripping hazards at the transition from pile supported hardscape to grade supported hardscape.

We understand that active gas collection systems will be required below the proposed buildings and across the roadway and parking areas. These gas collection systems should be designed to accommodate the anticipated long-term settlements. This includes proposed gas barriers and gas collection piping. We recommend that proposed gas barrier systems be flexible and capable of maintaining functionality under the anticipated settlement magnitudes. Design of the gas barrier system, at transition points from pile supported to grade supported area, should consider the anticipated differential settlements at these areas.

Settlements that occur within the footprint of proposed buildings are expected to result in the development of a void space as the subgrade soils settle away from the underside of the buildings. We recommend that the buildings and associated systems be designed in anticipation of the development of these void spaces and site maintenance be conducted to avoid these void spaces being exposed.

Drive lanes and parking areas will be constructed around the proposed Buildings C and D. The parking areas are anticipated to be paved with hot mix asphalt. Settlements within the parking area are expected to be differential in nature and highly variable from location to location. These differential settlements could result in the development of large or isolated depressions within the parking area. The development of depressions within the parking lot could result in the ponding of stormwater during periods of wet weather and premature pavement distress. Without pile supporting the parking areas it is not practical to mitigate the occurrence of differential settlements within these areas. Therefore, we recommend an increased maintenance frequency be assumed for the parking lot areas.

All utilities transitioning from grade supported to the pile supported building will be subject to large differential settlement. These settlement magnitudes are expected to be large enough to result in failure of utilities entering the buildings. Therefore, we recommend that all utilities be designed with flexible connections capable of tolerating the anticipated differential settlements and anticipated associated elongation.

The sanitary sewer systems supporting the Phase II buildings are expected to experience significant differential settlement across the phase II site. If large enough fall heights of the sewer line cannot be achieved for grade supported sewer lines, significant sags in the sewer system may occur. These sags would impede the functionality of the system and require frequent maintenance. If the sanitary sewer system cannot be designed with adequate fall to

prevent the development of such sags in the sewer line, a pile supported sewer line should be considered.

Anticipated settlement across the Phase II site may result in future undesirable stormwater flow paths. This may require the installation of additional catch basin structures as areas of unfavorable stormwater flow are identified.

4.4 PILE FOUNDATIONS

Due to the thickness of the refuse layer and the highly compressible nature of these materials, HWA recommends that the proposed Buildings C and D be pile supported. This section describes the pile types of piles that may be utilized and the requirements for each pile type.

4.4.1 Background for Pile Type Determination

The consent decree for the site provides requirements for future development of the landfill property. Per the requirements of the Ecology Cleanup Action Plan, a Shallow Aquifer Characterization study was completed (HWA, 2005). This study defined a Pile Restriction Zone across large portions of the landfill site and set restrictions for pile foundations installed within this zone. The criteria used in determining the need for the pile restriction zone were based on the presence of an aquitard below the refuse, the presence of water in the refuse and the presence of contamination in encountered groundwater. The proposed Phase 2 buildings are currently within the mapped pile restriction zone and HWA did note the presence of an aquitard below the refuse and groundwater within the refuse.

The Shallow Aquifer Characterization report states with respect to the Pile Restriction Zone that *"Deep foundation systems in these areas should be restricted to augercast piles or other equivalent piling types that minimize the potential to create new groundwater flowpaths parallel to the pile. The rationale for using augercast piles instead of driven piles is that the likelihood of creating a hydraulic connection between the shallow and deep aquifer is higher with the use of driven piles. Driven pile systems employing some form of external grouting would also decrease the potential for cross-connection of shallow and deep zones." (HWA, 2005)*. Therefore, deep foundations systems installed within the Pile Restriction Zone are required to consist of augercast piles or an equivalent piling system that minimize the potential to create new groundwater flowpaths between the shallow and deep aquifer.

Our explorations suggest that the refuse across the site is highly variable in composition and relatively porous. During our 2017 drilling operation, loss of drilling fluid into the refuse was documented at several boring locations across the site. This observed migration of drilling fluid suggests that grout from construction of augercast piles has a high potential for migration into the refuse layer if this foundation system is used. Given the variability in the composition of the refuse, it is impossible to estimate the volume, geometry and depth of potential grout migration. From a construction cost prospective, grout migration potential for augercast piles could be addressed through construction contingencies. However, from a design perspective, grout

migration can influence down-drag and affect localized pile capacity, representing a significant design concern.

As a result of the concerns associated with augercast piles HWA generated a memo (HWA, 2018) outlining an alternative pile type to be used within the Pile Restriction Zone that meet the intent of the Consent Decree. The Washington State Department of Ecology reviewed the proposed pile type and approved to the use of driven grout piles with steel sleeves through the refuse within the pile restriction zone.

4.4.2 Pile Foundation

For the Riverfront Development, HWA proposes the use of driven grout pile with a steel sleeve through the refuse. Driven grout piles are installed using a mandrel that is placed in a "boot." The mandrel is then charged with fluid grout. At this point the driving commences. Once bearing is achieved, grout is injected under pressure as the mandrel is extracted. The design of the mandrel keeps soil from entering the grout column. Upon completion, a grout pile is very similar to an augercast pile is created. For use at this site, we recommend that the driven grout pile installation process be modified to include installation of a steel sleeve through the refuse. The sleeve should terminate at or just past the base of the refuse and be used to minimize grout migration into the refuse. Steel sleeves would be driven with a boot at each location to the base of the refuse. Once the sleeve is in place the mandrel would be installed through the center of the sleeve and pile driving would continue.

Much like augercast piles, driven grout piles would likely fail under down-drag loads if not sleeved through the refuse. The length of sleeves for Buildings C and D were determined based on the depth of the base of the refuse, observed in the geotechnical borings. Recommendations for driven grout pile sleeve lengths are provided in Appendix C. Below the sleeved portion of the pile the driven grout pile system should have the same soil to grout interface as an augercast pile system. This grout-to-soil interface will minimize the potential to create new groundwater flowpaths between the shallow and deep aquifer, as required within the pile restriction zone. A schematic representation of the pile geometry and the steps involved in the use of a driven grout pile system, with a sleeve through the refuse, is shown on Figure 4.

The refuse layer is expected to possess abundant obstructions that could impact installation of driven grout piles. Encountering obstructions during driving could result in damage to the driven grout pile sleeves. Sleeve damage or deformation could hinder the contractor's ability complete installation of the pile. Therefore, we recommend that the sleeve wall thickness be great enough to allow for installation through the refuse without damage. We understand the sleeve wall thickness will be determined by the pile driving contractor based on their experience in similar driving conditions. Past pile driving projects on the landfill have used piles with ½-inch, grade 50, walls thickness with minimal damage during driving.

4.4.3 Vertical Pile Capacities

Pile capacities are determined based on two primary factors, the soil interaction with the base of the pile (end bearing) and the friction from the interaction of the soil with the sides of the pile (skin friction). The combination of these two factors is the ultimate total pile capacity. Due to the presence of large amounts of refuse and organic rich soils below the proposed structures much of the upper section of each pile can be considered unreliable for providing positive skin frictional resistance and as such was ignored in the pile capacity calculations. Additionally, these same materials are highly compressible and prone to significant settlements which can pull downward on the pile exerting a negative skin frictional component (down-drag). To provide adequate support, each pile will need to be embedded into the dense materials that exist below the compressible materials. Due to the varied depths of the compressible materials, pile depths and down-drag components will vary depending upon the pile's location within the landfill.

The following tables show the ultimate total pile capacities, down-drag components, uplift capacities and allowable pile capacities utilizing a factor of safety of 2 for the skin friction and end bearing capacities for the proposed building. Table 2 show anticipated depths to bearing and ranges for anticipated pile depths and embedment. Note that these values are based on our calculation and the previous CAP-WAP and PDA testing conducted on piles during the Phase I installation work and are valid assuming the same equipment is utilized for the installation of the Phase II building pile (Vulcan 512 Single-Action Air Hammer for 16 inch and 18 inch piles). If different equipment or different pile diameters will be utilized alternate capacities will be to be estimated to assess preliminary pile capacities. Please note that the summary pile information in the following table are estimates and actual depths and embedment lengths will be dependent on field actual field conditions.

Table 2: Pile Capacity Summary Table for Phase 2 Buildings

Pile Type	Ultimate Capacity (kip)	Down-drag (kip)	Allowable Capacity (kip)	Allowable Uplift Capacity (kips)	Anticipated Pile Depth (feet)	Anticipated Depth to Bearing (feet)	Anticipated Pile Embedment Into Bearing (feet)
18-inch Driven Grout (conventional)	620	60	280	45	50-75	40-55	10-20
16-inch Driven Grout (conventional)	560	50	2550	40	50-75	40-55	10-20

Notes: 1. Pile capacities listed above are based on piles being driven to refusal and a minimum embedment of 10 feet into bearing soil.
2. Ultimate capacities are based on anticipated maximum pile type and material capacities but ultimate loads but were confirmed to reach the anticipated maximum pile type capacities.

4.4.4 Pile Lateral Capacities

Piles from the proposed building location were also analyzed for lateral capacity using the Ensoft software LPile version 2018.10.07. Our analysis was based on an embedment depth of at least 10 feet into the bearing sandy soils on the site and was conducted for each proposed soil condition across the building pad. Pile deflections in each case were analyzed for maximum deflections of ½ inch and 1 inch. The results obtained from the analyses were nearly identical and did not vary significantly between boring locations or based on increased pile length extending more than the minimum 10-foot embedment. The results from the soil profile with the poorest soil conditions in the proposed building footprint were used for this report. A fixed head condition was utilized for our design. A summary of lateral pile capacities for each pile diameter are listed in Table 3 below.

Table 3: Lateral Pile Capacity Summary

Pile Diameter (inches)	Calculated load to produce 1/2 inch of deflection (kip)	Calculated load to produce 1 inch of deflection (kip)	Calculated Depth to Maximum Bending Moment (Feet)
16-inch Driven Grout	21	42	7.8
18-inch Driven Grout	29	45	8.4

Please note that the above parameters are meant for use in determining the preferred pile type. Actual loading conditions should be reviewed and analyzed once specific pile dimensions, and materials to be used in the pile are determined. The lateral capacities in Table 3 are based on grouted concrete piles with a grout strength of 4,000 psi.

4.4.5 Pile Testing

Pile load testing was performed during the Phase 1 work and was used in the calculated capacities for pile state in this report. Provided the same equipment is utilized in the Phase I portion of this project is utilized in the Phase II piles and provided suitable embedment (as determined by HWA) can be obtained pile load testing will not be required. However if different equipment is utilized, or HWA determines that proper embedment is not obtained on the piles, pile testing will be required. Test pile vertical load testing should consist of PDA and CAPWAP analysis and at least one test should be performed for each pile conditions being evaluated (i.e. 16 inch and/or 18 inch piles).

HWA should be allowed to view the installation of any test pile and should be provided the results of the pile load test for review to compare to predicted pile capacities and determine is the allowable pile capacities need to be adjusted, prior to construction.

4.4.6 Pile Group Affects

The pile capacities listed in Tables 2 and 3 are based on piles driven at least 3 pile diameters apart (center to center) to avoid group effects that can lead to a reduction in pile capacities. Axial capacities for piles spaced at 2 pile diameters should be reduced by 1/3 for group effects.

The reduction may be interpolated linearly between 2 and 3 pile diameters. However, any piles spaced closer than 2 pile diameters are generally not recommended; and will have to be analyzed by the Geotechnical Engineer on a case-by-case basis.

4.5 FOUNDATION DRAINAGE

We recommend footing drains be placed around the exterior of the building foundation to reduce the potential for lateral migration of moisture into the building envelope. We recommend that roof drains be connected to a tight-line pipe leading to storm drain facilities. Pavement surfaces and open space areas should be sloped such that surface water runoff is collected and routed to suitable discharge points. We also recommend that ground surfaces adjacent to buildings be sloped to facilitate positive drainage away from the buildings. Due to anticipated settlements, we expect regrading will be required to achieve positive drainage away from the building over time.

4.6 UTILITIES

We expect that the Riverfront development will require the construction of numerous subsurface utility systems. Due to the anticipated differential settlement along across the Phase 2 site, we recommend that all subsurface utilities be constructed using fused HDPE piping or similar approved flexible materials. Specific recommendations associated with each utility type are provided below.

4.6.1 Non-Grade Sensitive Utilities

Non-grade sensitive utilities such as electrical, methane collection, communication, gas and water can be installed as grade supported utilities. The utilities are expected to settle with the surrounding site. All of these utilities and their associated conduits should be constructed using materials capable of handling the predicted site settlement, such as fused HDPE piping. Utilities such as power and communication should be installed with sufficient wire slack to allow for the settlement and associated elongation of the conductor wire as the ground settles. This may require that additional wire be looped in pull boxes to allow for the anticipated elongation. Utility piping and conduits should be designed with sufficient pipe penetration into manholes and pull boxes such that they do not pull out as the ground settles.

4.6.2 Flexible Connections

Flexible connections capable of tolerating large differential settlements over short distances will be required at all points where utilities transition from grade-supported to pile-supported. Flexible connections should be designed to tolerate both rotation and elongation associated with the anticipated settlements. Based on the potential variability of within the refuse, utilities could experience deflections associated with up to 30 inches of settlement and 30 inches of elongation at the transition points from grade supported to pile supported. Therefore, flexible utility connections designed to tolerate predicted rotation and elongation should be used at all points that utilities transition from grade-supported to pile-supported.

Flexible connections capable of withstanding deflections and elongation associated with less than the predicated settlements (up to 30 inches in some locations) could be used. However, the design life of the connection would be reduced, the potential for connection failure would increase, and required maintenance of the connections would increase. If flexible connections capable of tolerating less than the predicted differential settlement and the associated elongation are used, we recommend that the connections be constructed with access vaults to allow for easy access and replacement when needed. We also recommend that the connection conditions be monitored to allow for identification of potential connection distress prior to failure. No non-accessible utility transitions from grade supported to pile supported should be made with flexible connections capable of withstanding less than the rotation associated with predicted settlements and associated elongation.

4.6.3 Sewer and Storm Drain

We expect that the sewer and storm drain system for the Phase 2 site will be constructed conventionally as a grade supported system. Therefore, these systems are expected to undergo the same differential settlements as the site settles. We recommend that the sewer and storm drain system be designed with sufficient fall such that the systems will function after the maximum predicted settlements occur. With respect to the storm system, we expect that site settlements may change the surface flow characteristics of stormwater, resulting in undesirable ponding or flows across the site. Therefore, additional stormwater inlet structure may need to be installed as the site settlements develop. The location of these additional inlets should be determined based on the observed site settlement over time.

4.6.4 Electrical Line

The proposed electric utility lines to be installed on the site, at the request of the Public Utilities District (PUD) require the electric utility line to be wrapped in geosynthetic plastic to prevent the migration of landfill gas around the electrical line and through the bedding. HWA recommends that the pipe bedding within the geosynthetic plastic consist of pea gravel or clean sand fill that remains flowable after placement. This will better allow for the soils around the pipe to deform after site settlements occur and help to mitigate the pressures on the pipe that can result from the expected settlements.

4.6.5 Utility Excavation Considerations

The near surface soils across the Phase 2 site consist of varying amounts of fill soils over refuse. The fill soils consist of silty sands with varying densities. We anticipate that Landfill Refuse exists below the fill at all locations within the proposed Phase 2 site. Excavations through each of these material types may result in specific construction challenges. These challenges are addressed below.

Common Borrow Fill soils

The near surface fill soils consist of predominantly glacial till derived fill of variable density. Given the high fines content of this material, it is considered highly moisture sensitive and will degrade under construction equipment during periods of wet weather. If work is to be conducted outside of the dry season, the near surface fill soils should be expected to degrade under construction traffic associated with the utility installation. If not mitigated, this degradation will likely impede construction progress and reduce the integrity of the road subbase. To mitigate this potential, we recommend that the contractor be prepared to place a non-moisture sensitive material, such as crushed rock, to provide a working surface along the proposed work areas. The thickness of this non-moisture sensitive material should be determined in the field based on needs at the time of the site work. We expect that standard trench boxes will be a sufficient means of temporary shoring for the utility installations.

Refuse

Where refuse is encountered within utility excavations handling, stockpiling and disposal of the refuse shall be completed per the requirements of the Consent Decree and the approved Health and Safety Plan. HWA recommends that a Mirafi® 500X (or equivalent) separator fabric be placed at the base of any trench extending into the refuse material.

4.6.6 Utility Foundation Recommendations

Proposed utility laterals may be founded within the near surface fill soils or within the underlying refuse where the refuse is close to the ground surface. Specific foundation recommendations are provided below for both conditions.

Utilities Founded in Fill

The near surface fill soils will provide suitable support for the new utilities and associated manholes, if they are properly excavated and prepared.

Where the fill soils are competent and do not require over-excavation, bedding material should be placed directly on the undisturbed fill soils. Trench bottoms should be free of debris and standing water. If subgrade soils are disturbed, the disturbed material should be removed down to undisturbed soil and replaced with properly placed and compacted bedding material. To minimize trench subgrade disturbance during excavation, the contractor should consider the use of an excavator with a smooth-edged bucket rather than a toothed bucket.

Utilities Founded within Refuse

Refuse encountered at the pipe invert elevation during excavation should be over-excavated to a depth of at least 6 inches below the base of the proposed pipe bedding. Over-excavation should extend the full width of the trench. Over excavated areas should be prepared by placing Mirafi® 500X (or equivalent) separator fabric over the exposed refuse and should be backfilled with foundation aggregate. The foundation material should be compacted to the extent possible prior to placing the pipe zone bedding.

4.6.7 Pipe Bedding

Pipe bedding should be provided to create a firm uniform cradle for support of the pipes. A minimum 12-inch thickness of bedding material beneath the pipe should be provided. Prior to installation of the pipe, the pipe bedding should be shaped to fit the lower part of the pipe exterior with reasonable closeness to provide uniform support along the pipe. Pipe bedding material should be used as pipe zone backfill and placed in layers and tamped around the pipes to obtain complete contact. To protect the pipe, bedding material should extend at least 12 inches above the top of the pipe. Pipe bedding materials should have a maximum aggregate size of 5/8 inch and less than 5 percent fines.

4.6.8 Trench Backfill Placement and Compaction

Proper placement and compaction of the trench backfill is extremely important to limit future settlement of the ground surface along the trench. Trench backfill should be uniformly moisture conditioned to within about 2 percent of optimum moisture content prior to placement in the trench. Properly prepared backfill, greater than 2 feet above the pipe bedding, should be placed in uniform loose lifts not to exceed 12 inches and densely compacted in a systematic manner using appropriately sized compaction equipment to achieve at least 95 percent of the maximum dry density as determined using ASTM D 1557 (Modified Proctor). Smaller loose lifts may be necessary to achieve compaction where less suitable materials are used, or when hand held compaction equipment such as jumping jacks, hoe-packs or plate compactors are used.

The contractor should develop compaction methods that consistently produce adequate compaction levels. Observation and testing of trench backfill placement by a representative of the HWA is recommended to help the contractor achieve proper backfill preparation and uniform moisture conditioning, loose lift thickness control and application of appropriate compaction effort.

During placement of the initial lifts, the trench backfill material should not be bulldozed into the trench or dropped directly on the pipe. Furthermore, heavy vibratory equipment should not be permitted to operate directly over the pipe until a minimum of 2 feet of backfill has been placed over the pipe bedding to an in-place density of at least 90 percent of the maximum dry density as determined using ASTM D 1557.

4.6.9 Utility Line Transitions

In areas where lines are to be pile supported or attached to pile supported structures, they should be bedded in pea gravel to allow for the material to flow around the pipe when settlements of the surrounding soils occur. In areas where utility lines go horizontally from grade supported to pile supported, the pea gravel bedding should extend at least 20 feet into the grade supported area from the beginning of the pile supported area and the pea gravel should be placed to at least 15 inches above the utility line. If utilities go are designed to go from grade supported to pile supported vertically and are designed to handle the differential settlement and elongation the use of pea gravel bedding will not be needed.

4.7 ONSITE ROADS AND PAVEMENTS

4.7.1 Permanent Roads and Pavements

It is our understanding that the Phase 2 site will include the construction of paved parking lot and delivery truck routes. HWA has developed recommended pavement sections for both parking areas and delivery truck routs. To facilitate the pavement design, the following estimated pavement subgrade parameters were used based on the laboratory analyses and experience in the general area of the project site with similar subgrade soils:

- Estimated Native Silty Sands Subgrade California Bearing Ratio (CBR) – 4
- Estimated Native Silty Sands Subgrade Resilient Modulus (MR) – 5,000 psi
- Reliability = 90%
- Standard Deviation = 0.5
- Initial Serviceability Index = 4.2
- Terminal Serviceability Index = 2.0
- Estimated Traffic Volumes
  - Light-Duty – 10,000 ESALs (Parking Areas)
  - Heavy-Duty – 970,900 ESALs (Delivery Routes and fire lanes)

The CBR value should be verified by formal laboratory testing and specific traffic frequencies and axle loading determined prior to pavement design acceptance. In accepting the following pavement designs based on the correlated CBR value, Shelter holdings must then accept a greater risk of over-design or pavement failure and/or higher maintenance costs, compared to an engineered design.

Table 4: Flexible Pavement Recommendations

	Pavement Loading Conditions	Assumed ESAL	Recommended Pavement Section
Hot-Mix Asphalt (HMA) Pavement	Light-Duty (Parking Areas)	10,000	2½ inches HMA over 4 inches Class II Aggregate Base
	Heavy Duty (Delivery Routes)	970,900	3 inches HMA over 5 inches of ATB, 12 inches Class II Aggregate Base
Rigid Concrete Pavement	Light-Duty (Parking Areas	10,000	6 inches of Concrete over 4 inches of Class II Aggregate Base
	Heavy Duty (Delivery Routes)	970,900	8 inches of Concrete over 4 inches of Class II Aggregate Base

The recommended pavement sections in Table 4 are based on the AASHTO design methods for flexible and rigid pavement design, and a design life of 20 years. The light duty pavement section is anticipated to be used in Parking Areas and the heavy-duty pavement section is anticipated in Delivery Truck Routes.

The "Light Duty" flexible pavement section is recommended for areas of passenger vehicle parking areas, and the "Heavy Duty" flexible pavement section is recommended for areas of delivery truck routes and turning areas. Periodic maintenance should be expected and performed on all pavements during the service life.

Concrete pavement design parameters include a 28-day mean modulus of rupture of 600 pounds per square inch (psi) and a 28-day mean modulus of elasticity of approximately 3,600,000 psi. The concrete mix design should consist of a normal weight concrete with a minimum 28-day compressive strength of 4,000 psi when tested in accordance to ASTM C39. The concrete should contain an air entraining admixture to resist the effects of freezing and thawing. The design of joints, joint spacing, doweling and steel/wire mesh reinforcement was not included in HWA's Scope-of-Services, but should conform to the applicable local or Washington State Department of Transportation (WSDOT) requirements.

All pavement materials and construction procedures should conform to WSDOT, or other local requirements, as appropriate.

Pavements may be placed after the subgrade has been properly prepared as outlined in this report. The recommended pavement sections were designed based on them being founded on firm subgrade conditions, i.e. undisturbed soil or structural fill, and that the pavement will be constructed during the dry summer months. Proof-rolling using a fully loaded tandem-axle dump truck should be used to evaluate pavement subgrade. Soft areas, those with ruts or deflections or greater than 1 inch disclosed by proof-rolling, will require over-excavation and replacement with properly compacted structural fill. Some contingencies should be provided by the Contractor for the repair of any soft areas.

Permanent, properly installed drainage is an essential aspect of pavement design and construction. All paved areas should have positive drainage to prevent ponding of surface water and saturation of the base course. This is particularly important in cut sections or at low points within the paved areas, such as around stormwater catch basins.

Vehicle traffic or the loading of partially constructed pavement sections will likely cause premature pavement failure. All vehicle traffic or pavement loading should be restricted until the pavement section has been completely constructed, or the partial pavement section must be designed for this purpose, particularly if construction traffic will use the partial pavement.

Due to the fact that the proposed pavement areas on the site are to be constructed across the landfill at grade and unsupported by piles the pavements are likely to experience significant settlements. These settlements will be variable across the site and could result in the development of low areas and premature pavement distress. A robust pavement maintenance program should be assumed for all pavement across the site. Additionally, HWA understands that pavements are not planned to be used as a gas barrier on this site. As a result, other types of barriers will need to be implemented below the pavements, such as a low permeability soil barrier (LPSB).

4.7.2 Temporary Access Roads, Laydown Yards and Trailer Pad.

To allow for site construction to occur, temporary roadways, laydown yards and trailer pads will need to be constructed. The near surface onsite soils were observed to have high silt contents and as a result are considered moisture sensitive. Therefore, protective cover of these temporary improvements is recommended. Prior to construction of these temporary improvements, the subgrade soils should be compacted to a firm and unyielding state, as determined by HWA, and then proof rolled using a tandem axel dump truck, or other HWA approved equipment, under the observation of HWA personnel. Soft spots observed should be excavated to firm soil conditions or to a maximum depth of 24 inches have Mirafi® 500X geotextile fabric (or equivalent), placed at the base of the excavation and then backfilled with structural fill. Upon completion of repairs proof rolls should be performed in repaired areas. A minimum of 12 inches of crushed rock, approved by HWA, should be placed above the prepared subgrades above a layer of Mirafi® 500X geotextile fabric (or equivalent) unless previous soft spot repair already necessitated the earlier use of the geotextile. All fill placed in this process should conform to the requirements in Section 4.12.1 of this report should be compacted in accordance with Section 4.12.2 of this report.

4.8 PERMANENT RETAINING WALLS

We do not expect that retaining walls will be required for the Phase 2 site. However, in the event that walls do become required, the following design recommendations should be used.

Design lateral earth pressures against retaining walls or other embedded structures depend on the drainage condition provided behind the wall, the geometry of the backfill slope, and the type of construction, i.e., the ability of the wall to yield. The two possible conditions regarding the ability of the wall to yield include the active and at-rest earth pressure cases. The active earth pressure case is applicable to a wall that is capable of yielding slightly away from the backfill by either sliding or rotating about its base. A conventional cantilever retaining wall is an example of a wall that can develop the active earth pressure case by yielding. The at-rest earth pressure case is applicable to a wall that is considered to be relatively rigid and laterally supported at the top and bottom and therefore is unable to yield.

We recommend that permanent drainage be provided behind retaining walls. In the event that any other embedded structures, such as utility vaults, are designed to be watertight, it should be assumed that the water table may rise to the ground surface at some time during the design life of the development and the resultant hydrostatic pressures should be included into the design of the walls.

Walls that are allowed to yield by tilting about their base should be designed using a lateral earth pressure based on an equivalent fluid having a unit weight of 35 pounds per cubic foot (pcf) for near horizontal backfill (less than 5 degrees). Non-yielding walls should be designed using a lateral earth pressure based on an equivalent fluid having a unit weight of 55 pcf for near

horizontal backfill (less than 5 degrees). The pressures listed above are ultimate pressures and do not include factors of safety, nor do they include hydrostatic pressures.

To account for seismic loading, the earth pressures should be considered to act on the wall as a uniform rectangular and should be added to the static earth pressures provided. For walls over 4 feet in height lateral seismic pressures may need to be included. Lateral seismic pressure can be assumed to act as a uniform pressure calculated using the equation 19.6*H pounds per square foot, where H is the exposed height of the wall. Over-compaction of the backfill behind walls should be avoided. We recommend that backfill be compacted to 95% of the maximum dry density (ASTM D 1557); however, heavy compactors and large pieces of construction equipment should not operate within 5 feet of any embedded wall to avoid the buildup of excessive lateral pressures. Compaction close to the walls should be accomplished using hand-operated compaction equipment.

If walls are place outside of the proposed pile supported structures, horizontal forces can be resisted partially or completely by frictional forces developed between the base of the wall footings and the underlying soils. The total shearing resistance between the foundation footprint and the soil should be taken as the normal force (i.e., the sum of all vertical forces, and dead loads, times the coefficient of friction between the soil and the base of the footing). HWA recommends utilizing an ultimate coefficient of friction value of 0.25 for design. If additional lateral resistance is required, ultimate passive earth pressures against embedded footings or walls that are at least 12 inches below external grades can be computed using a pressure based on an equivalent fluid with a unit weight of 250 pounds per cubic foot (pcf). This value is based on the fill being used around footings will be placed as engineered fill, and includes a reduction factor of 1.5. Walls should be designed accounting for minimum factors of safety of 1.5 for static conditions and 1.1 for seismic conditions.

4.9 ILLUMINATION FOUNDATIONS

We expect that parking lot illumination and associated illumination foundations will be constructed per the City of Everett Standard Plans. These plans require a 4-foot deep and 3-foot wide foundation to support the proposed illumination poles. We expect that the existing near surface soils will provide adequate lateral support for the proposed illumination foundations, provided areas of fill thinner than 4 feet are not encountered. However, it should be noted that grade supported illumination foundations will settle with the surrounding parking lot over time.

4.10 STORMWATER MANAGEMENT

Due to the Phase 2 site being within the limits of a closed landfill, on-site infiltration of storm water is not an acceptable means of storm water management. Therefore, storm water collection, treatment and discharge to a suitable outlet will be required.

4.11 LANDFILL GAS

The refuse across the site is expected to continue to generate landfill gasses throughout the design life of the development. Landfill gas collection will likely be required within the footprint of the proposed buildings and across the site. In addition to collection and disposal of landfill gas, measures should be implemented to prevent landfill gas from migrating along utility trench backfill and utilidors, and into manhole and vault structures. These measures could include placement of low permeability trench backfill at specific locations and around manholes structures to prevent gas migration. Due to the anticipated low rate of flow through the more recently placed landfill cap materials, it may be necessary to install gas collections systems below these cap fill soils or extend vertical pipes below the cap fill materials, at regular intervals to facilitate gas removal. Further evaluations with respect to gas migration along utility trenches and gas collection in general is being completed by Herrera.

4.11.1 Low Permeability Soil Barrier (LPSB)

It is our understanding that low permeability soil barrier (LPSB) is to be used as one of many tools to prevent migration of landfill gas to the surface within the Phase 2 site. Past projects within the landfill site have used LPSB material as a means of stopping the migration of landfill gas to the ground surface. A minimum thickness of 3 feet of LPSB has been used as a gas barrier in the past to reduce the potential for differential strain-induced tension cracks to penetrate through the entire layer depth. Historically, LPSB import sources have been identified and tested to ensure that they meet the gradation and permeability requirements to for the site. Generally, glacial till sources, meeting the gradation specifications shown below, have met the permeability requirements for LPSB ($1x10^{-5}$ cm/sec).

Sieve Size	Percent Passing
3 – inch	100
1 1/2 – inch	75-100
U.S. No. 4	45-75
U.S. No. 200	12-45

All percentages are by weight.

HWA has previously collected sample of the onsite landfill cap soil and till fill stockpiles around the site. Based on our testing of these onsite soils they have been found to meet the requirements of LPSB. Additional permeability testing is not considered to be necessary at this point, but grainsize and proctor analysis tests will be required for these materials to confirm that they are consistent with previously approved materials. However, if additional LPSB materials are required and are to be imported from an offsite source additional index testing, including permeability testing, will be required to confirm suitability for use as LPSB.

Due to the high moisture sensitivity of LPSB, placement and compaction should only be attempted during the dry times of year. Other types of gas barrier should be installed in areas requiring construction outside of the dry summer months.

4.11.2 Excavations through Existing LPSB

It is our understanding that the proposed development may require excavations or trenching that will extend through existing layers of LPSB that were placed as a landfill gas barrier during past projects. All excavations and/or trenching that extends through existing layers of LPSB should be backfilled in such a way to re-establish the continuity and functionality of the original LPSB layer. This will require that LPSB be placed and compacted at depths to match, to the extent feasible, the elevations of LPSB observed in the sidewall of the trench and/or excavation. LPSB placed in trench and/or excavations should consist of a minimum thickness of 3-feet. If more than 3 feet of existing LPSB in observed in the sidewalls of excavations, placement of more than 3 feet of LPSB back into the trench is not required.

4.11.3 Bentonite Sand Backfill

Bentonite Sand Backfill (BSB) is a contractor manufactured mixture of sand and bentonite that can be placed in areas not accessible by compaction equipment and achieve an in-place permeability of less than $1x10^{-5}$ cm/sec. BSB is generally used strategically to prevent gas migration along pipe bedding for utilities transitioning through LPSB, as trench damns, and around manhole/catch basins.

Like other gas barrier systems, BSB has a detailed acceptance and mix design procedure. This procedure involves combining a particular sand source and bentonite material then running permeability tests on various mix ratios of the sand and bentonite. Based on the results of these tests, a mix design that will achieve the desired permeability of less than $1x10^{-5}$ cm/sec can be recommended.

Once the mix design is provided to the contractor, they order the raw materials and develop a plan to generate the mix in the volumes required by the contract documents. This process is reviewed by the design team and generally involves mixing on site with a pug mill of bulk mixing within a constructed enclosure. Once the material is mixed, it must be protected from the elements to ensure that it does not take on excess moisture.

The creation of BSB is time consuming and costly. Therefore, it should only be used where required to achieve the desired gas barrier.

4.11.4 Gas Barrier Above Shallow Improvements

In some areas of the site pipe or other structure may be less than 3 feet from the surface and immediately around pipes LPSB is not always suitable for pipe bedding. In such areas pipes may be bedded or encased in BSB materials and then the remaining portion of the trench backfilled with LPSB. Provided at least 3 feet of the combination of BSB and LPSB exists a suitable gas barrier will be created.

4.12 GENERAL EARTHWORK

4.12.1 Structural Fill

Structural fill will be required in various location around the site. Structural fill may consist of either existing onsite soils or imported soil and should be approved by the project geotechnical engineer prior to use.

Onsite soils may be considered for reuse provided they can be suitably compacted to meet the compaction requirements for the areas they are being used. They should also be free of refuse and debris, particles larger than 4 inches in diameter, and significant organic materials. Organic content of structural fill soils should not exceed 3 percent. Due to the higher fines content (portion passing the U.S. Standard No. 200 sieve) of many of the onsite soils, they may be difficult if not impossible to compact during wetter times of year. As such special care should be taken to maintain the proper moisture content of these materials if they are to be used as structural fill.

If imported soil is to be used as structural fill it should be free of refuse, debris and significant organic materials, and particles larger than 2 inches in diameter. It should also have a plasticity index of less than 10, be free of organic material and have a fines content of less than 10 percent, unless otherwise approved by HWA.

4.12.2 Compaction

Structural fill soils should be placed in level lifts be moisture conditioned to near the material optimum moisture content and be compacted to at least 95 percent of ASTM D 1557 (Modified Proctor). However, fill placed at depths of greater than 3 feet below finish grade or within 5 feet of the top of retaining walls may use the minimum compaction requirement of 90 percent of ASTM D 1557. Structural fill should be placed in lifts no thicker than 12 inches. Depending upon the type of material and compaction equipment used thinner lifts may be necessary to achieve proper compaction. A suitable number of density tests, as determined by the geotechnical engineer, should be performed on the structural fill to verify compaction.

4.12.3 Wet Weather Earthwork

The Phase 2 site is underlain by near surface soils that are highly moisture sensitive. Construction traffic during periods of wet weather is expected to cause significant deterioration of the existing subgrade soils. Subgrade deterioration could impede construction activities and require importation of crushed rock to provide a working surface. We recommend that, to the maximum extent possible, construction grading and other site earthwork take place during the dry summer months. Planned construction actives outside of the dry summer months should assume the need to import non-moisture sensitive materials, such as crushed rock, to provide a stable working surface. Additionally, the Contractor must employ construction equipment and procedures that prevent disturbance and softening of the subgrade soils. The use of excavation equipment equipped with smooth-edged buckets for excavation with the concurrent placement of

granular work pads tends to minimize the potential for subgrade disturbance. Additionally, proper grading and compaction of surface soil can help support proper drainage limiting hydration of surface soils. Covering stockpiles with plastic to limit the over hydration of soil should also be considered.

It has been our experience that during warm, dry weather, the moisture content of the upper few feet of soil will decrease; however, below the upper few feet the moisture content of the soil tends to remain relatively unchanged and is often well above the optimum moisture content for compaction.

4.12.4 Excavations and Slopes

Excavations should be made in accordance with applicable Federal and State Occupational Safety and Health Administration regulations. Utility trenches in the near surface sand soils at the site will need to be sloped or shored from the ground surface due to the potential for caving. Actual inclinations will ultimately depend on the soil conditions encountered during earthwork. While we may provide certain approaches for trench and slope excavations, the contractor should be responsible for selecting the excavation technique, monitoring the trench and slope excavations for safety, and providing shoring, as required, to protect personnel and adjacent improvements. The information provided below is for use by the owner and engineer and should not be interpreted to mean that HWA is assuming responsibility for the contractor's actions or site safety. The near surface soils HWA encountered within the upper 10 feet of the site should be classified as Type C soil according to the most recent OSHA regulations and cut at no steeper than 1½H:1V. If excavations are anticipated to extend below an encountered groundwater table and/or groundwater flow exceeds anticipated levels, HWA should be notified and allowed to evaluate this classification. In our opinion, excavations should be safely sloped or shored. The contractor should be aware that excavation and shoring should conform to the requirements specified in the applicable local, state, and federal safety regulations, such as OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. We understand that such regulations are being strictly enforced, and if not followed, the contractor may be liable for substantial penalties.

Excavation and construction operations may expose the on-site soils to inclement weather conditions. The stability of exposed soils may deteriorate due to a change in moisture content or the action of heavy or repeated construction traffic. Accordingly, foundation and pavement area excavations must be protected from the elements and from the action of repetitive or heavy construction loadings. In addition, it is recommended that surcharge loads due to construction traffic, material laydown, excavation spoils, etc., not be allowed within a horizontal distance of H/2 from the top of the cut, where H is the height of the cut.

Fill placed on slopes with inclinations greater than 4 horizontal to 1 vertical (4H:1V) should be keyed in at that base, brought up in lifts, and have the slopes overbuilt with material that can be cut to final grade the upon completion of slope construction. No permanent cut or fill soil slopes should exceed 2H:1V unless they have been designed and/or signed off by a licensed engineer.

4.13 FUTURE WORK

It is our understanding that HWA will be providing construction quality control to the geotechnical aspects of the Phase 2 site. This will include compaction testing, CESCL monitoring and reporting, pile driving observation, utility installation monitoring, pavement subgrade verification, pavement compaction testing, and summary reporting to the City and the Washington State Department of Ecology.

5.0 CONDITIONS AND LIMITATIONS

We have prepared this report for Shelter Holdings their client and agents for use in design and construction of the proposed Phase 2 area of the Everett Riverfront. The conclusions and interpretations presented in this report should not be construed as a warranty of the subsurface conditions. Experience has shown that soil and ground water conditions can vary significantly over small distances. Inconsistent conditions can occur between explorations and may not be detected by a geotechnical study of this scope and nature. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary.

We recommend HWA be retained to review the plans and specifications to verify that our recommendations have been interpreted and implemented as intended. Sufficient geotechnical monitoring, testing, and consultation should be provided by HWA during construction to confirm the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, HWA executed these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology in the area at the time the report was prepared. No warranty, express or implied, is made.

HWA does not practice or consult in the field of safety engineering. We do not direct the contractor's operations and cannot be responsible for the safety of personnel other than our own on the site. As such, the safety of others is the responsibility of the contractor. The contractor should notify the owner if any of the recommended actions presented herein are considered unsafe.

December 8, 2021
HWA Project No. 2015-061-21

We appreciate the opportunity to provide geotechnical services on this project. Should you have any questions or comments, or if we may be of further service, please do not hesitate to call.

Sincerely,

HWA GEOSCIENCES INC.

Michael S. Place, P.E.

Senior Geotechnical Engineer

6.0 REFERENCES

Anderson, E.O. et al 2004. *Field Monitoring of the Compressibility of Municipal Soils Waste and Soft Alluvium, Proceedings*, Fifth International Conference on Case Histories in Geotechnical Engineering, New York, NY, April 13-17, 2004.

Andrus, D.A. and Stokoe, K.H., 2000, *Liquefaction Resistance of Soils from Shear Wave Velocity*, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 126, No. 11, pp. 1015-1025.

ASCE 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures

Huat, B.B.K., 2006, *Deformation and Shear Strength Characteristics of Some Tropical Peat and Organic Soils*, Pertanika J. Sci & Technology, Volume 14 (1&2) pp. 61-74.

HWA GeoSciences, Inc., 2012, *Final Geotechnical Report, Public Amenities, Riverfront Development*, Everett, Washington, HWA Project No. 2007-087-21.

HWA GeoSciences, Inc., 2012, *Geotechnical Report, Riverfront Development, Group 3 – Public Amenities, Railroad Corridor Trail & Enhanced Drainage Channel*, Everett, Washington, HWA Project No. 2007-087-21.

Idriss, I.M., and Boulanger, R.W., 2007, *Residual Shear Strength of Liquefied Soils*, Proceedings of the 27th USSD Annual Meeting and Conference, Modernization and Optimization of Existing Dams and Reservoirs.

International Code Council (ICC), 2018, International Building Code.

Ishihara, K. and Yoshimine, M., 1992, *Evaluation of Settlements in Sand Deposits Following Liquefaction During Earthquakes*, Soils and Foundations, 32(1), pp. 173-188.

Kramer, S.L., 2008, *Evaluation of Liquefaction Hazards in Washington State*, Washington State Department of Transportation, Report WA-RD.

Minard, J.P., 1985. *Geologic Map of the Everett 7.5 – Minute Quadrangle, Snohomish County, Washington*. USGS.

Olson, S.M. and Stark, T.D., 2002. *Liquefied Strength Ratio from Liquefied Flow Failure Case Histories*, Canadian Geotechnical Journal, Vol. 39, June, pp. 629-647.

Qian X. et al, 2002. *Geotechnical Aspects of Landfill Design and Construction*, Prentice Hall.

Reese et al, 2004, Technical Manual for Lpile version 5.0. Ensoft, Inc.

Seed, H.B., and Idriss, IM, 1971, *Simplified Procedure for Evaluating Soil Liquefaction Potential*, Journal of Soil Mechanics Foundation Division, ASCE, Vol 97, No. SM9, pp. 1249-1273.

Stark, T. D., N. Huvaj-Sarihan, 2009, *Shear Strength of Municipal Solid Waste for Stability Analyses*, Environmental Geology, Volume 57, pp. 1911-1923.

U.S. Navy, 1982, Soil Mechanics, NAVFAC Design Manual 7.1, Naval Facilities Engineering Command, Arlington, VA.

Washington Administrative Code (WAC), 2017, 296-155.

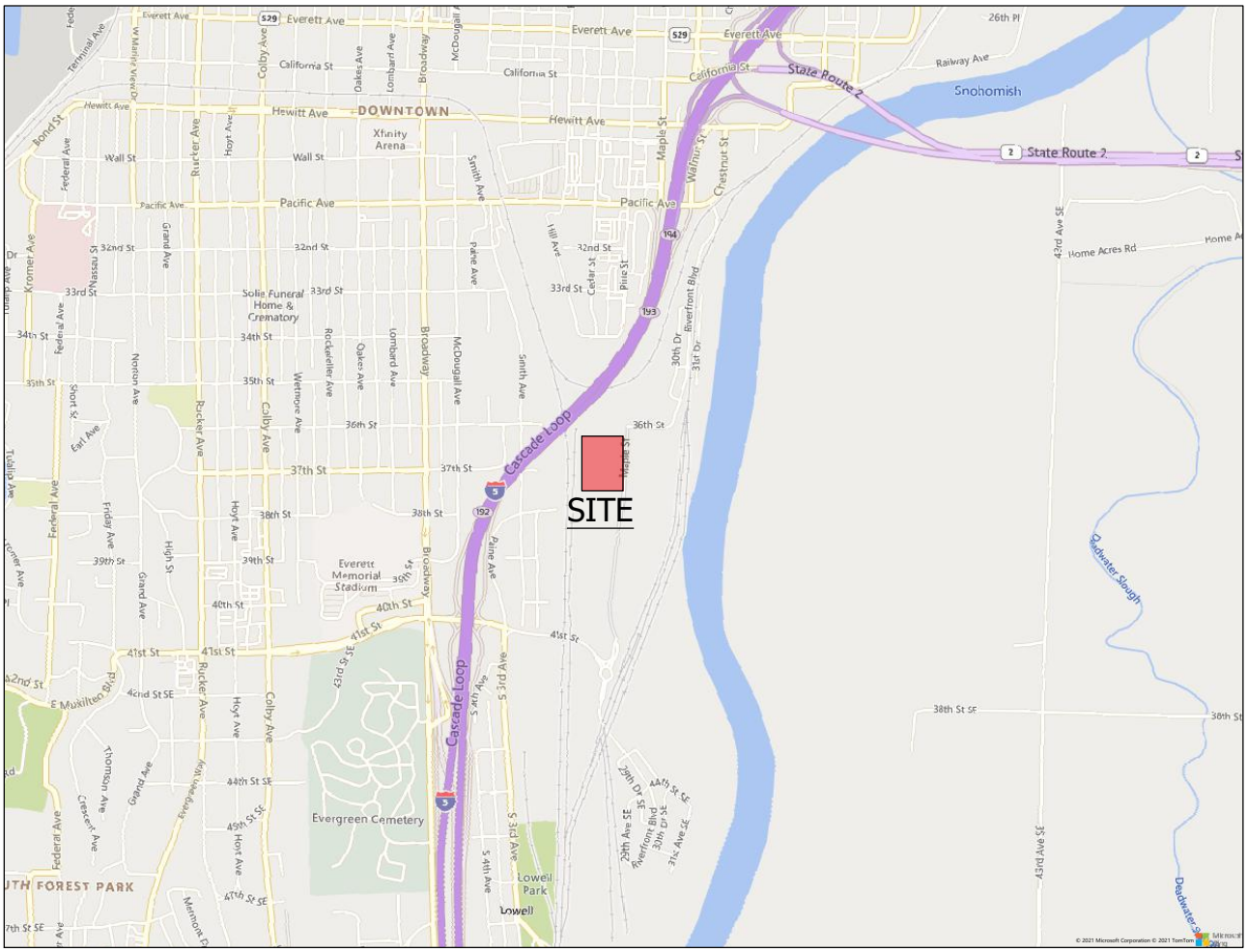
Yoshimine, M., H. Nishizaki, K. Amano, and Y. Hosono, 2006, *Flow Deformation of Liquefied Sand Under Constant Shear Load and its Application to Analysis of Flow Slide of Infinite Slope*, Soil Dynamics and Earthquake Engineering, 26(2-4), pp. 253-264.

Youd, TL, et al., 2001, *Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and NCEER/NSF Workshop on Evaluations of Liquefaction Resistance of Soils*. Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 127, No. 10, pp. 817-833.

SITE MAP

0 200' 400' 600' 800'

SCALE: 1" = 400'



VICINITY MAP

0 1000' 2000' 3000' 4000'

SCALE: 1" = 2000'

GeoSciences Inc.
DBE/MWBE

SITE AND VICINITY MAP

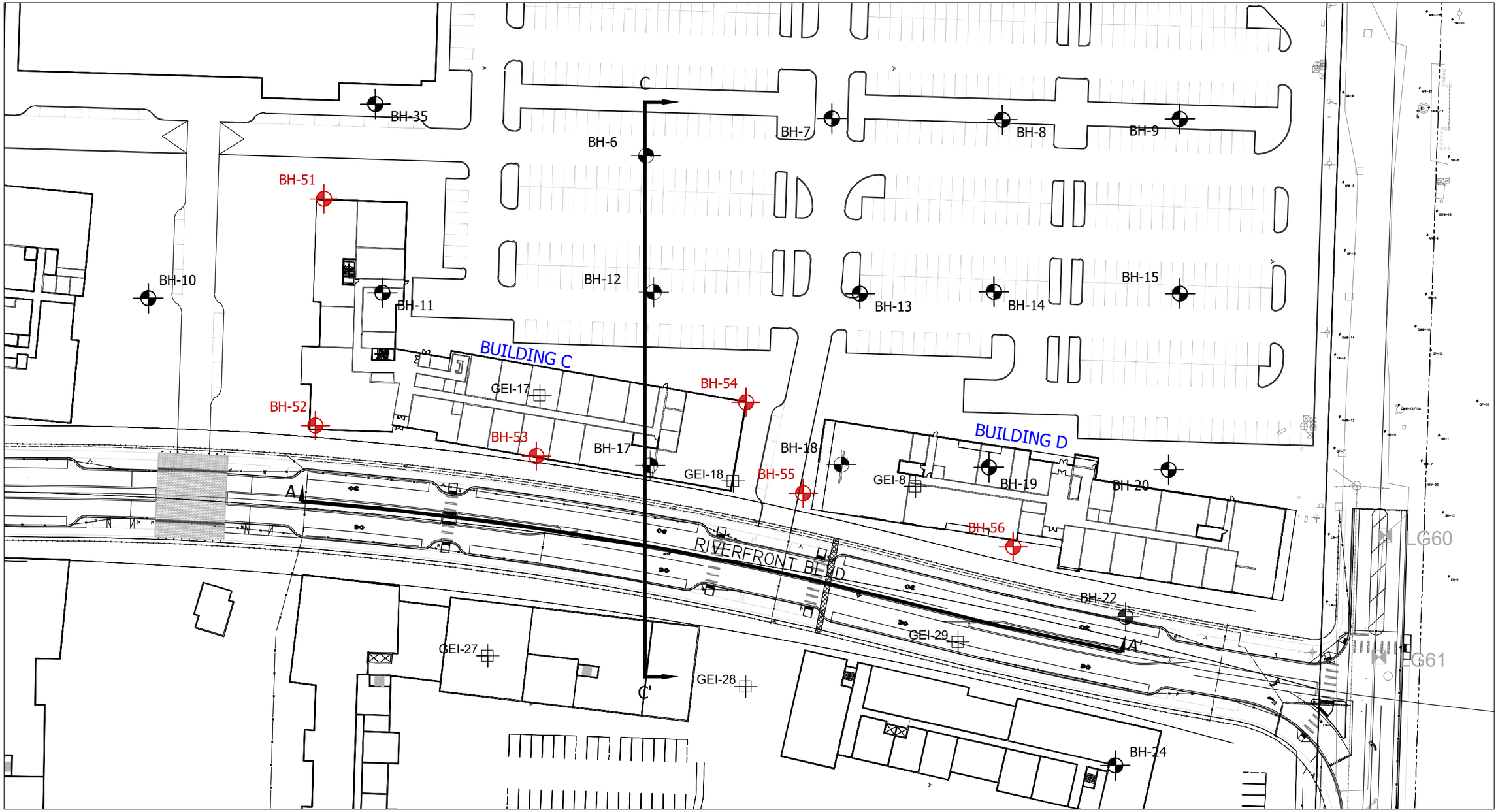
GEOTECHNICAL ENGINEERING REPORT
PHASE 2
EVERETT, WASHINGTON

FIGURE NO.: 1

DRAWN BY: CF
CHECK BY: AO/MSP

PROJECT # 2015-061-21

C:\USERS\CFRY\DESKTOP\2015-061-21 EVERETT RIVERFRONT\CAD (FIG 2)\2015-061 T600 EVERETT RIVERFRONT.DWG <1> Plotted: 12/6/2021 2:06 PM



RIVERFRONT BOULEVARD
Scale: 1" = 80'-0"

EXPLORATION LEGEND

BH-51 BOREHOLE DESIGNATION AND APPROX. LOCATION (HWA, 2021)

BH-35 BOREHOLE DESIGNATION AND APPROX. LOCATION (HWA, 2017)

GEI-30 BOREHOLE DESIGNATION AND APPROX. LOCATION (GEOENGINEERS, 2008)

A A' GEOLOGIC CROSS SECTION

N

0 40 80 120 160

SCALE: 1" = 80'

BASE MAP PROVIDED BY: PERTEET 03.06.2020

HWA GEOSCIENCES INC. DBE/MWBE

GEOTECHNICAL ENGINEERING REPORT
PHASE 2
EVERETT, WASHINGTON

SITE & EXPLORATION PLAN

DRAWN BY:	FIGURE NO.:
CF	2
CHECK BY:	PROJECT NO.:
AO/MSP	2015-061-21

C:\USERS\CFRY\DESKTOP\2015-061-21 EVERETT RIVERFRONT\CAD (FIG 2)\2015-061 T600 EVERETT RIVERFRONT.DWG <2> Plotted: 12/7/2021 12:48 PM

NOTES

- The subsurface conditions shown are based on widely spaced borings and should be considered approximate. Further, the contact lines shown between units are interpretive in nature and may vary laterally or vertically over relatively short distances on site.
- Geologic contacts associated with geoengineers borings have been updated to reflect preload settlement based on nearby settlement plate readings.

SYMBOL LEGEND

BH-35 — BORING DESIGNATION (HWA - 2017)

GEI-30 — BORING DESIGNATION (GEI - 2008)

BH-50 — BORING DESIGNATION (HWA - 2021)

ZONE SUSCEPTIBLE TO LIQUEFACTION

BORE LEGEND

BH-11 — BOREHOLE DESIGNATION

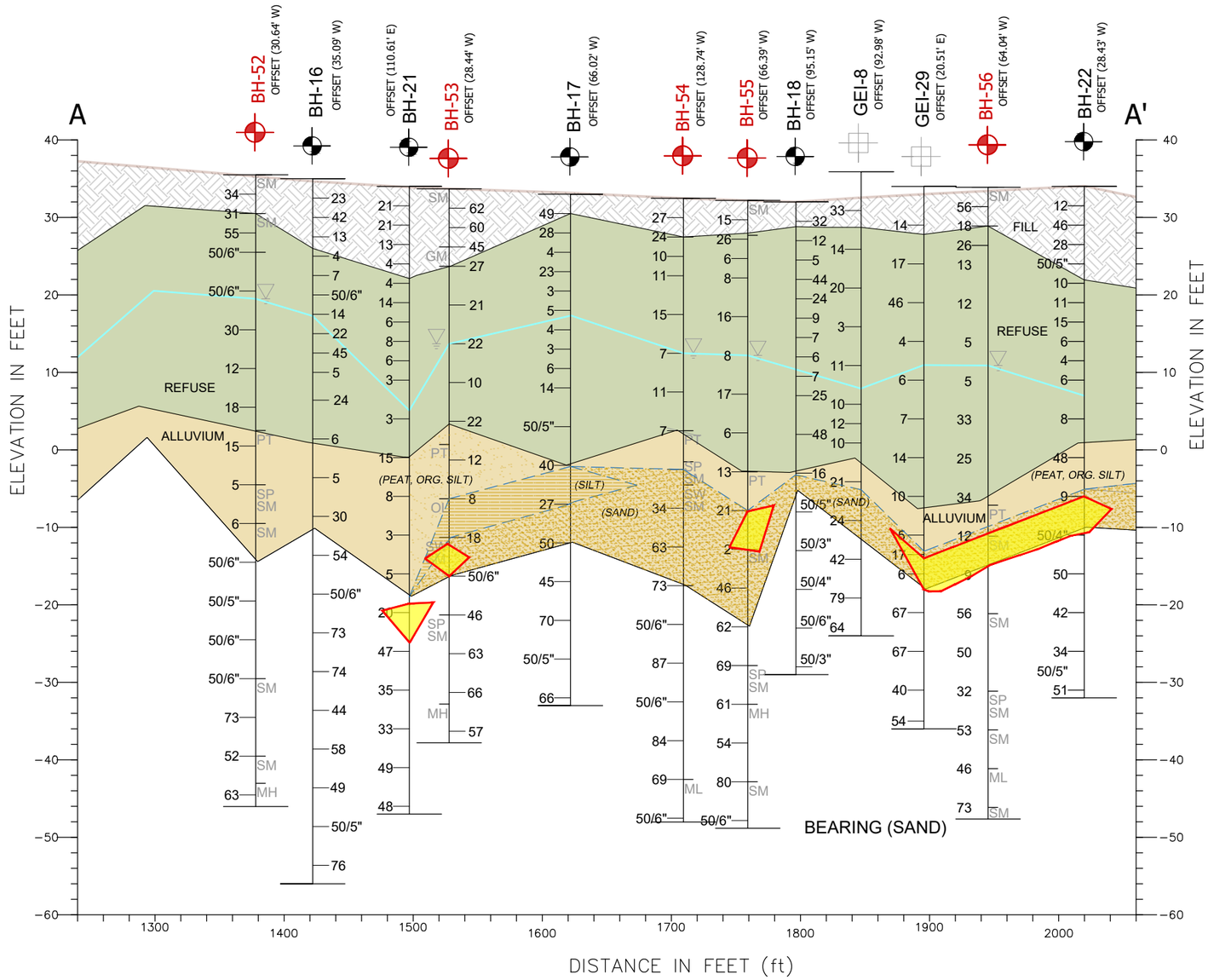
SM — USCS SOIL CLASS

6 — BLOW COUNT "N-VALUE "

WATER LEVEL AT TIME OF DRILLING

29 — INFERRED GEOLOGIC CONTACT

35 — BOTTOM OF BORING



GeoSciences Inc. DBE/MWBE

GEOTECHNICAL ENGINEERING REPORT
PHASE 2
EVERETT, WASHINGTON

LIQUEFIABLE SOIL
SECTION A-A'

DRAWN BY:	FIGURE NO.:
CF	3A
CHECK BY:	PROJECT NO.:
AO/MSP	2015-061-21

NOTES

- The subsurface conditions shown are based on widely spaced borings and should be considered approximate. Further, the contact lines shown between units are interpretive in nature and may vary laterally or vertically over relatively short distances on site.
- Geologic contacts associated with geoengineers borings have been updated to reflect preload settlement based on nearby settlement plate readings.

SYMBOL LEGEND

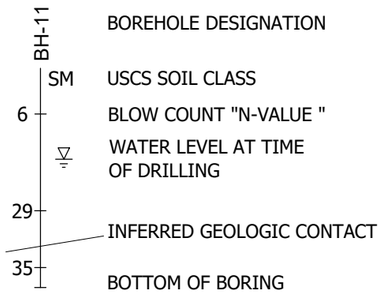
ZONE SUSCEPTIBLE TO LIQUEFACTION

BH-35 BORING DESIGNATION (HWA -2017)

GEI-30 BORING DESIGNATION (GEOENGINEERS, 2008)

BH-50 BORING DESIGNATION (HWA - 2021)

BORE LEGEND



BOREHOLE DESIGNATION

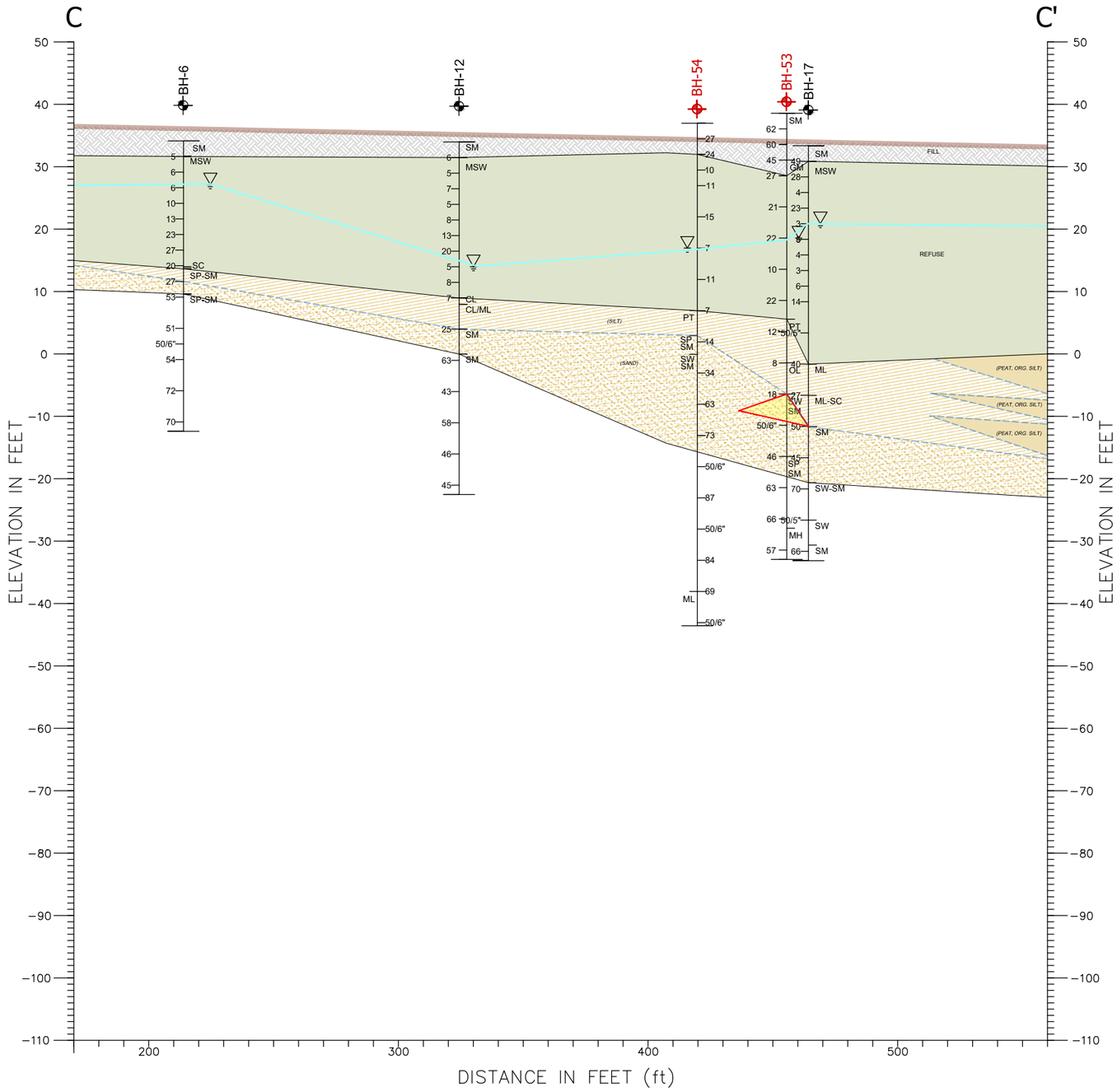
USCS SOIL CLASS

BLOW COUNT "N-VALUE "

WATER LEVEL AT TIME OF DRILLING

INFERRED GEOLOGIC CONTACT

BOTTOM OF BORING



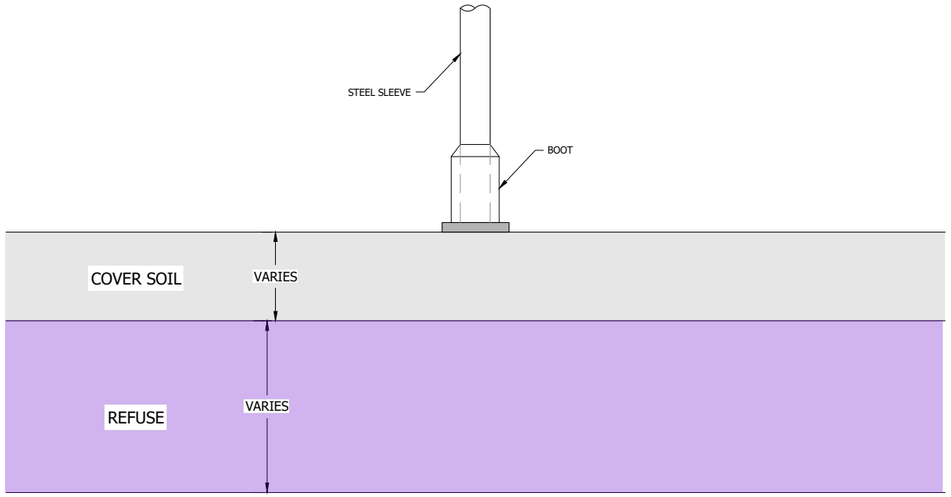
GeoSciences Inc. DBE/MWBE

GEOTECHNICAL ENGINEERING REPORT
PHASE 2
EVERETT, WASHINGTON

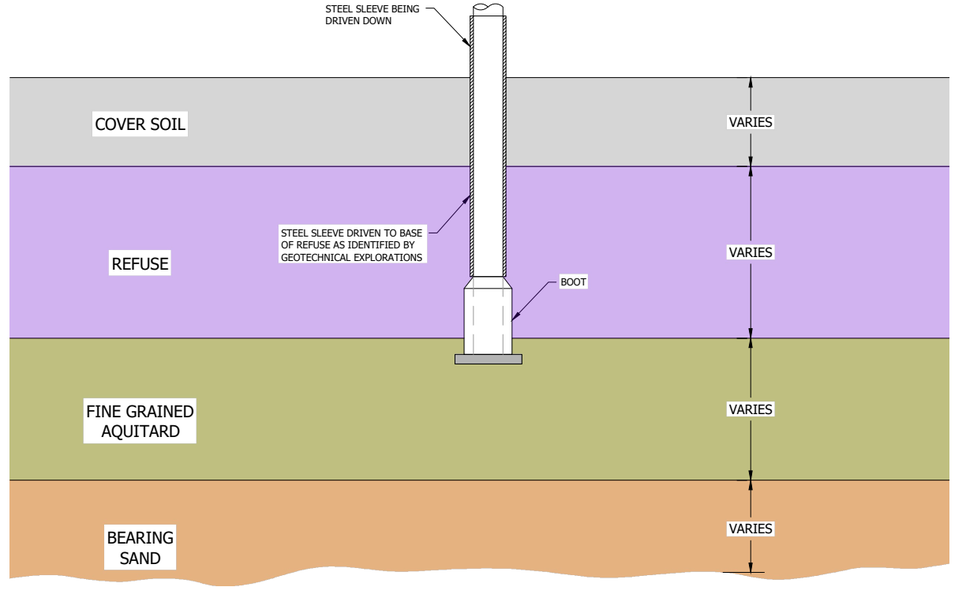
LIQUEFIABLE SOIL
SECTION C-C'

DRAWN BY:	FIGURE NO.:
CF	3B
CHECK BY:	PROJECT NO.:
AO	2015-061-21

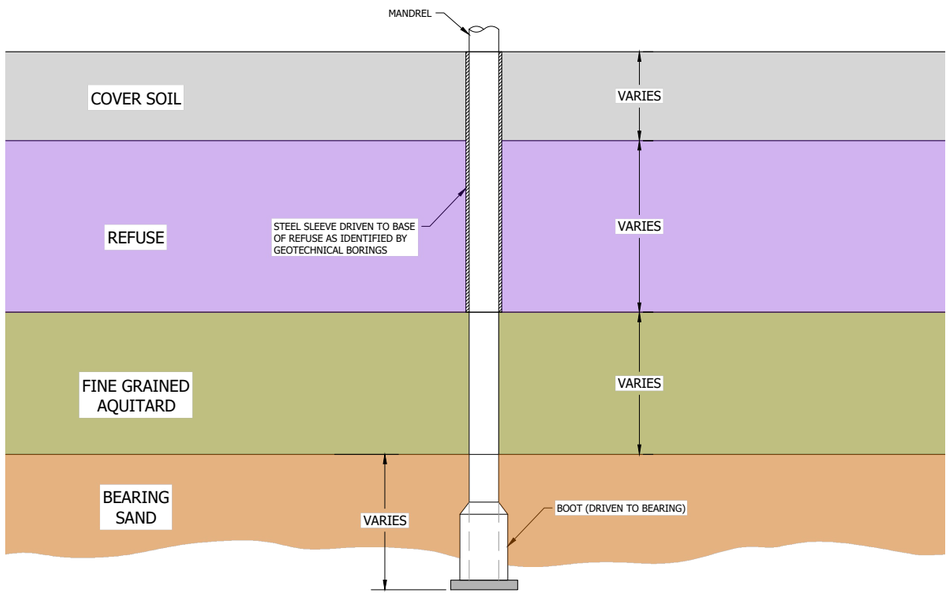
STEP 1: SET UP



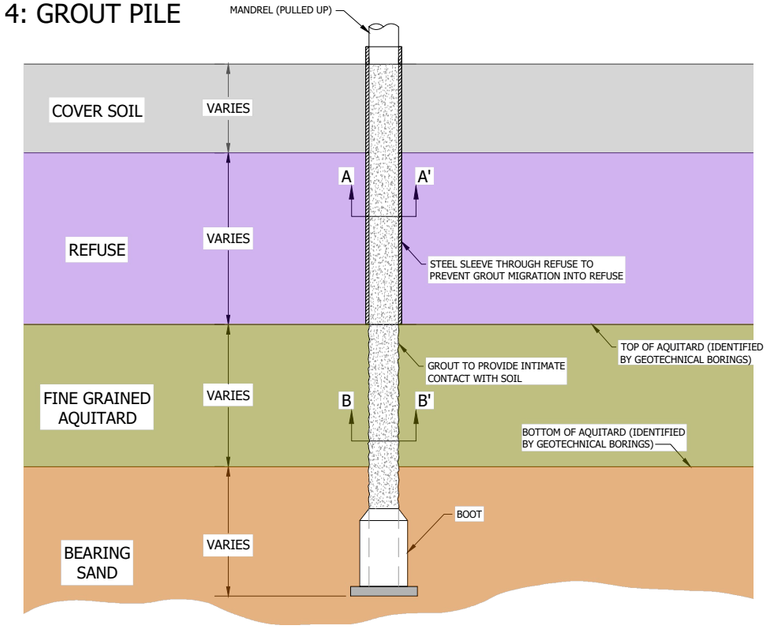
STEP 2: DRIVE STEEL SLEEVE

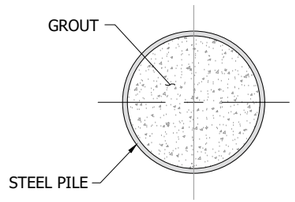


STEP 3: DRIVE MANDREL

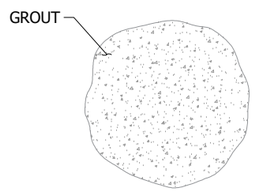


STEP 4: GROUT PILE





CROSS SECTION A-A'



CROSS SECTION B-B'

HWA GeoSciences Inc.

GEOTECHNICAL ENGINEERING REPORT
PHASE 2
EVERETT, WASHINGTON

DRIVEN GROUT PILE WITH SLEEVE THROUGH REFUSE

DRAWN BY	BFM
CHECK BY	MSP
DATE:	12.8.2021
FIGURE #	4
PROJECT #	2015-061-21

APPENDIX A

FIELD INVESTIGATION

APPENDIX A
FIELD INVESTIGATION

The subsurface exploration program consisted of 6 boreholes, drilled to depths ranging from about 71½ to 81½ feet below the existing ground surface. Under subcontract to Shelter Holdings, Holocene Drilling, Inc. of Puyallup, Washington, drilled the borings from November 1, 2021, to November 3, 2021. The borings were drilled using a track-mounted Diedrich D-50 Turbo tracked drill rig.

All 6 subsurface explorations conducted for the proposed Phase II site area were joint hollow stem auger and mud rotary borings. The rigs were deployed onsite, equipped with eight-inch outer diameter hollow stem augers and 4½-inch diameter tri-cone bits for mud rotary. Each boring used the hollow stem auger technique down past the bottom of the refuse, then switched over to mud rotary for the rest of the boring. The switchover depth generally varied from approximately 40 to 50 feet below the existing ground surface across the site.

Exploration locations were surveyed and staked in the field prior to drilling. The approximate exploration locations are shown on the Site and Exploration Plan, Figure 2.

Each of the explorations was completed under the full-time observation of an HWA engineering or environmental geologist. HWA personnel recorded pertinent information including soil sample depths, stratigraphy, soil engineering characteristics and groundwater occurrence as the explorations were drilled. Soils were classified in general accordance with the classification system described in Figure A-1, which also provides a key to the exploration log symbols. Soil layers containing refuse are left blank in the left-hand column for soil symbols because of the wide variety of conditions in the refuse. The summary logs of boreholes are presented on Figures A-2 through A-7. The stratigraphic contacts shown on the individual logs represent the approximate boundaries between soil types. The actual transitions may be more gradual.

Where possible, intact soil samples were obtained using Shelby tubes. Shelby tubes were advanced into soft soils by drill rig hydraulics.

Standard Penetration Test (SPT) samples were obtained by driving a two-inch split spoon sampler at the end of drilling rods (threaded heavy steel pipe). The SPT sample rods were driven with a 140-lb hammer with a 30-inch drop, at 2½-foot intervals from 2½ feet bgs to 10 feet bgs and at 5-foot intervals after that. Soil samples were collected in sample bags and catalogued. SPT's were conducted using a 2-inch samples and no California Modified Samplers were used.

Soil boring cuttings were placed in steel 55-gallon drums. These were sealed and set near the boring locations for future disposal in a refuse disposal area on the Everett Riverfront Development area. Disposal will be arranged by Shelter Holdings.

Upon completion, each borehole was abandoned in accordance with Department of Ecology requirements. Bentonite grout was mixed and pumped into each boring. Typically, the grout settled several feet, such that on a subsequent day each borehole was topped off to the ground surface with bentonite chips.

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

USCS SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS	
Coarse Grained Soils (More than 50% Retained on No. 200 Sieve)	Gravel and Gravelly Soils, More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravel (Little to no Fines)	GW	Well-graded GRAVEL
			GP	Poorly-graded GRAVEL
		Gravel with Fines (Appreciable Amount of Fines)	GM	Silty GRAVEL
			GC	Clayey GRAVEL
	Sand and Sandy Soils, 50% or More of Coarse Fraction Passing No. 4 Sieve	Clean Sand (Little to no Fines)	SW	Well-graded SAND
			SP	Poorly-graded SAND
		Sand with Fines (Appreciable Amount of Fines)	SM	Silty SAND
			SC	Clayey SAND
Fine Grained Soils (50% or More Passing the No. 200 Sieve)	Non-Plastic or Low to Moderate Plasticity Silts and Clays	Liquid Limit Less than 50%	ML	SILT
			CL	Lean CLAY
			OL	Organic SILT/Organic CLAY
	High Plasticity Silts and Clays	Liquid Limit 50% or More	MH	Elastic SILT
			CH	Fat CLAY
			OH	Organic SILT/Organic CLAY
Highly Organic Soils			PT	PEAT

TEST SYMBOLS

%F	Percent Fines
AL	Atterberg Limits: PL = Plastic Limit, LL = Liquid Limit
CBR	California Bearing Ratio
CN	Consolidation
DD	Dry Density (pcf)
DS	Direct Shear
GS	Grain Size Distribution
K	Permeability
MD	Moisture/Density Relationship (Proctor)
MR	Resilient Modulus
PID	Photoionization Device Reading
PP	Pocket Penetrometer, Approx. Compressive Strength (tsf)
SG	Specific Gravity
TC	Triaxial Compression
TV	Torvane, Approx. Shear Strength (tsf)
UC	Unconfined Compression

SAMPLE TYPE SYMBOLS

- 2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop)
- Shelby Tube
- 3-1/4" OD Split Spoon with Brass Rings
- Small Bag Sample
- Large Bag (Bulk) Sample
- Core Run
- Non-standard Penetration Test (3.0" OD split spoon)

GROUNDWATER SYMBOLS

- Groundwater Level (measured at time of drilling)
- Groundwater Level (measured in well or open hole after water level stabilized)

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS
< 5%	Clean
5 - 12%	Slightly (Clayey, Silty, Sandy)
12 - 30%	Clayey, Silty, Sandy, Gravelly
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)
Components are arranged in order of increasing quantities.	

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation.
Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually soil is below water table.

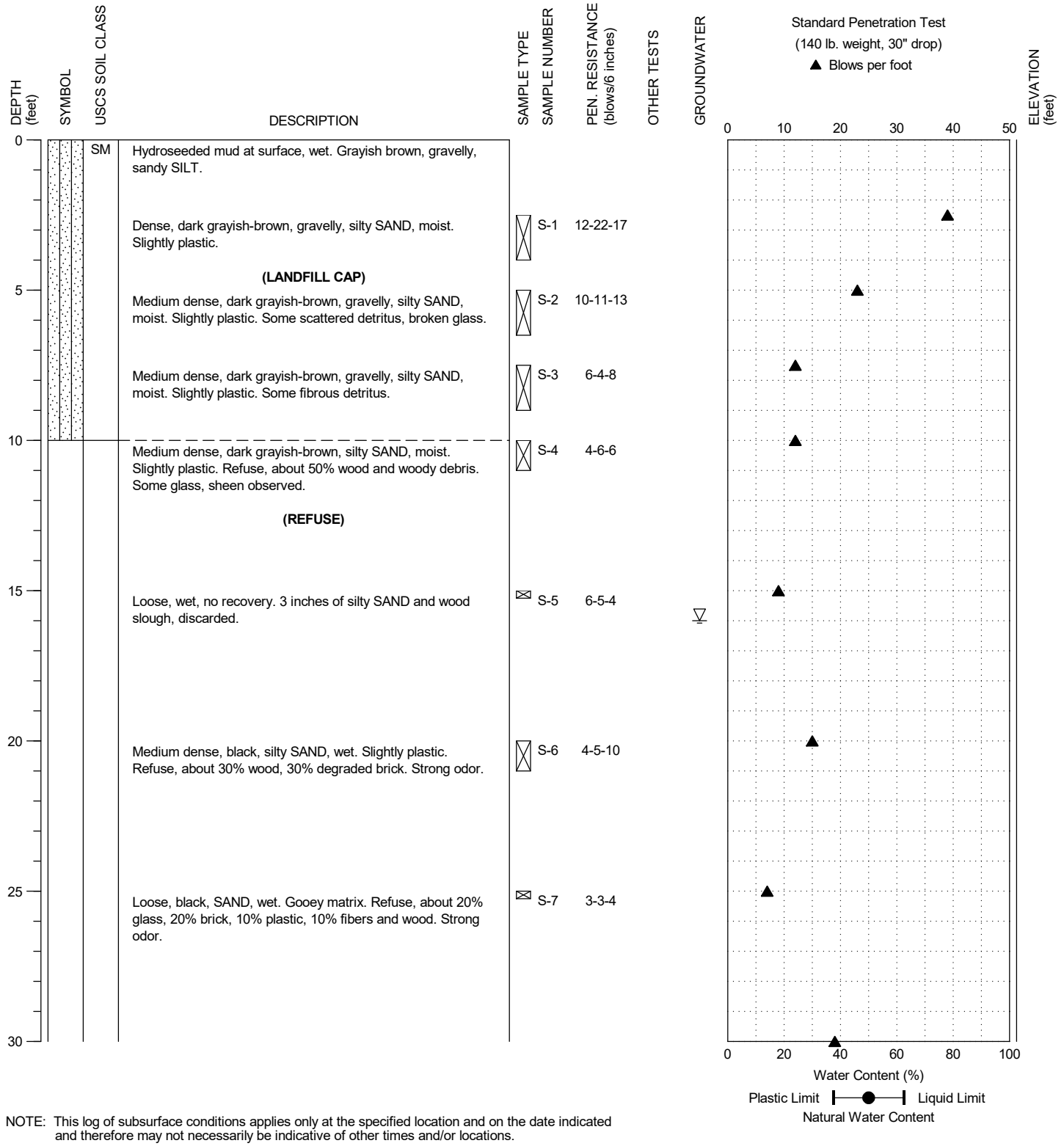
HWA GEOSCIENCES INC.

LEGEND OF TERMS AND SYMBOLS USED ON EXPLORATION LOGS

FIGURE: A-1

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

BORING:
BH-51

PROJECT NO.: 2015-061

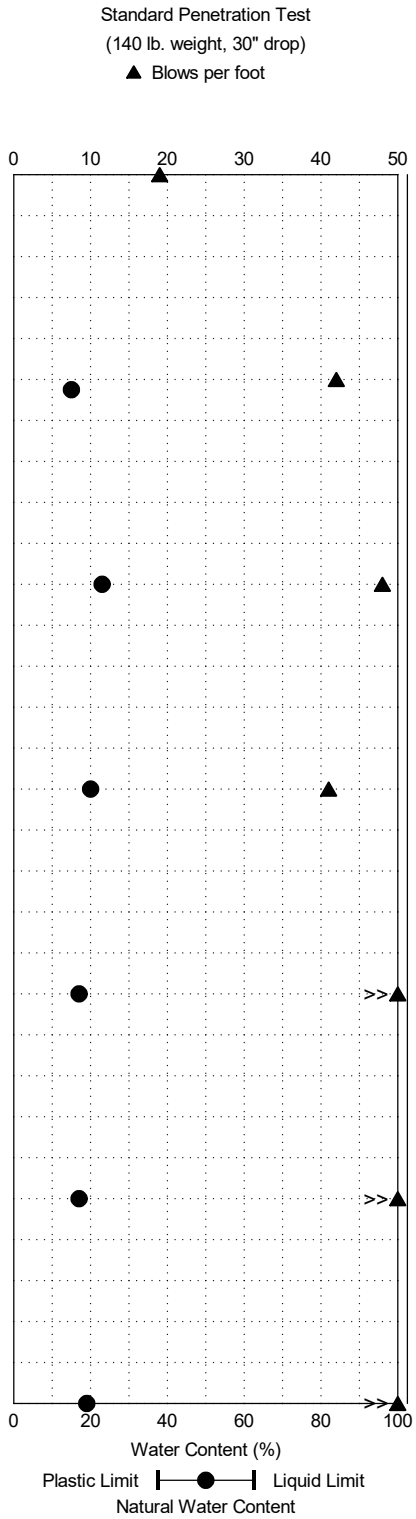
FIGURE: A-2

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30		SM	2 inches of wet refuse at top of 30-foot sample, about 70% wood fibers, 10% plastic. Abrupt transition.	S-8a S-8b	3-7-12	
			Medium dense, dark bluish-gray, thinly bedded silty SAND, moist. with organics.			
			(ALLUVIUM)			
35		SM	Dense. Upper 3 inches gray, silty, medium SAND, wet. Lower 15 inches olive brown, slightly gravelly, silty, medium SAND, moist. Dilatant. Abrupt transition.	S-9a S-9b	14-18-24	GS
			(ADVANCE OUTWASH)			
40		SP SM	Dense, olive-brown, slightly silty, poorly-graded medium SAND, wet. Dilatant.	S-10	8-24-24	
			Switch to mud rotary.			
45			ome scattered subangular/subrounded coarse sand. Finer sections are siltier than coarser sections.	S-11	16-20-21	GS
50				S-12	24-26-30	
55		SM	Very dense, moist. Upper 12 inches olive-brown, silty, medium SAND. Scattered subrounded coarse sand and gravel. Lower 6 inches oxidized olive brown, slightly silty to silty, thinly bedded fine sand. Oxidation in thin bands within bedding. Abrupt transition.	S-13a S-13b	24-35-33	
60						

GROUNDWATER



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

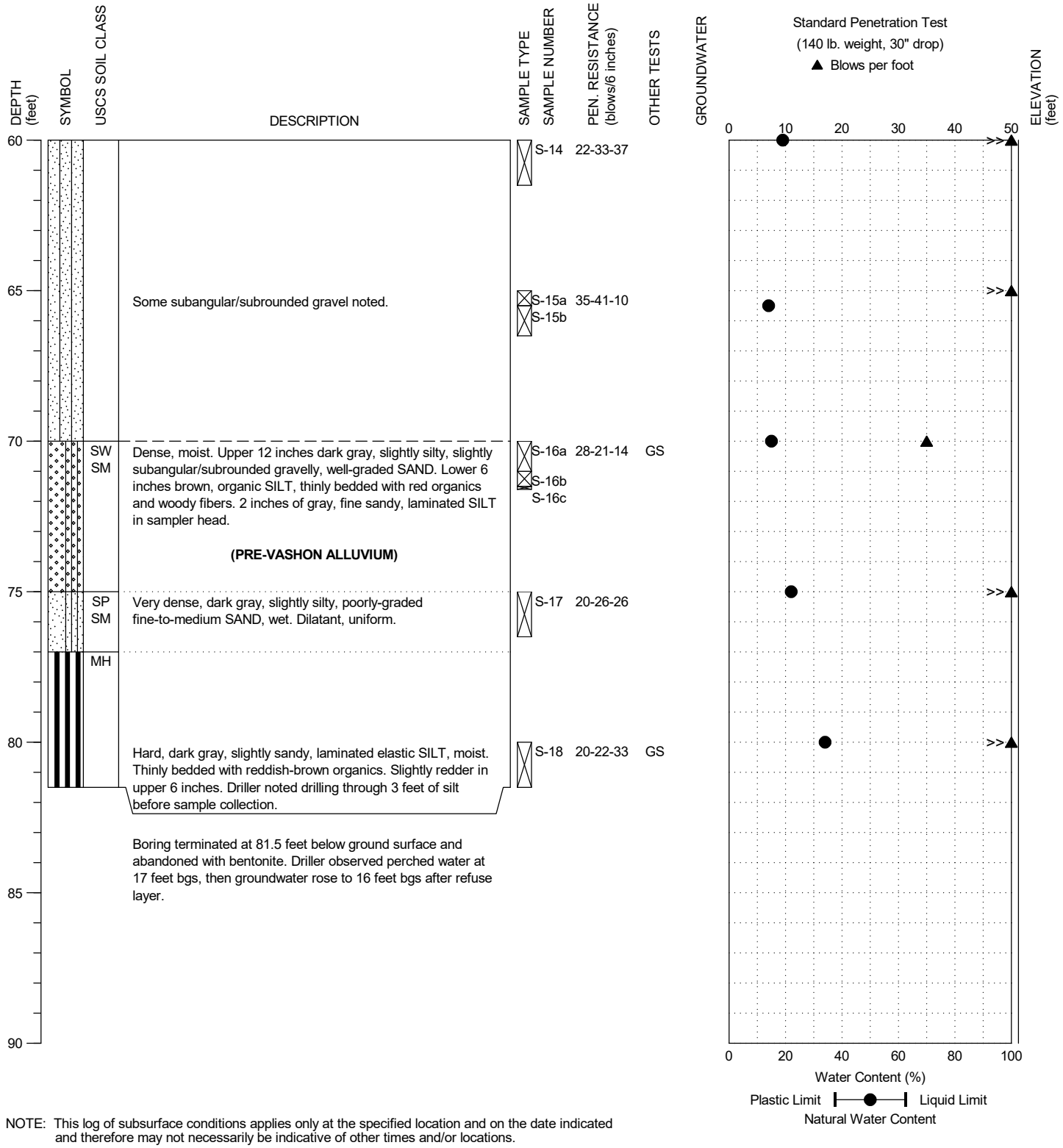
BORING:
BH-51

PROJECT NO.: 2015-061

FIGURE: A-2

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

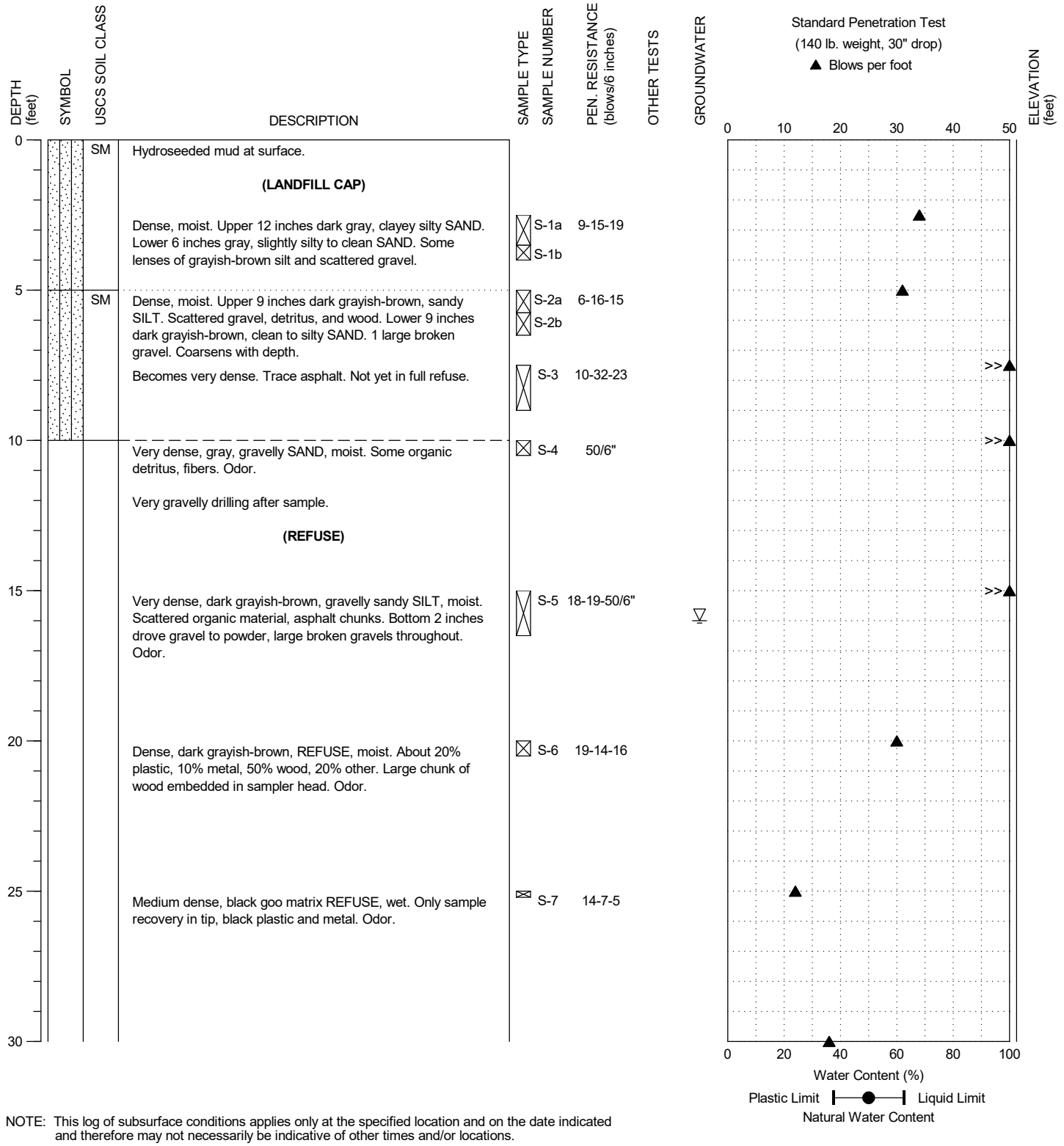
BORING:
BH-51

PROJECT NO.: 2015-061

FIGURE: A-2

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

BORING:
BH-52

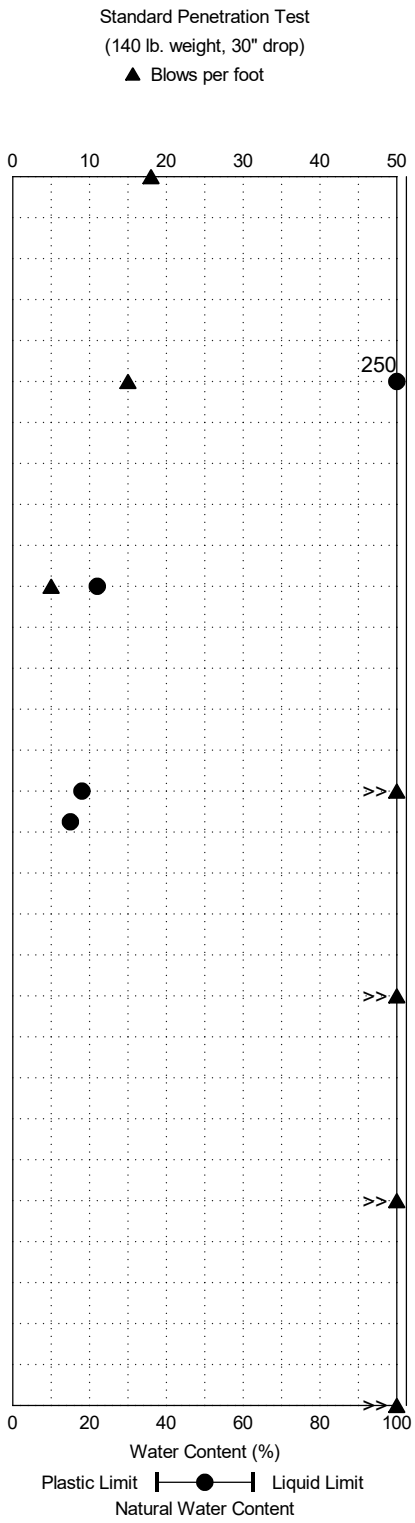
PROJECT NO.: 2015-061

FIGURE: A-3

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Medium dense, black goo matrix silty SAND, wet. Refuse, about 10% broken glass, 20% woody debris, 5% plastic. Odor.	☒	S-8	15-9-9	
		PT					
35			Stiff, very dark brown, PEAT, moist. 6 inches of black goo slough at top. Odor.	☒	S-9	3-6-9	
			(ALLUVIUM)				
40		SP SM	Loose, dark olive-gray, poorly-graded SAND, wet. 1 inch of soft red peat at top. 6 inches of black goo silty, gravelly slough. Driller noted a couple feet of heave. Blow counts likley unrepresentatively low.	☒	S-10	8-4-1	%F
45		SM	Very dense, wet. Upper 9 inches olive-brown, slightly silty to silty, poorly-graded medium SAND. 1 inch lens of subrounded coarse sand at bottom of section. Lower 9 inches olive-brown, silty fine SAND. Thinly bedded and oxidized in bands. Switch to mud rotary.	☒	S-11a	20-28-33	
				☒	S-11b		GS
			(ADVANCE OUTWASH)				
50			Very dense, olive brown, silty, clayey SAND, wet. Some gravel slough, collected.	☒	S-12	50/6"	
55			no recovery.		S-13	50/5"	
60							



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

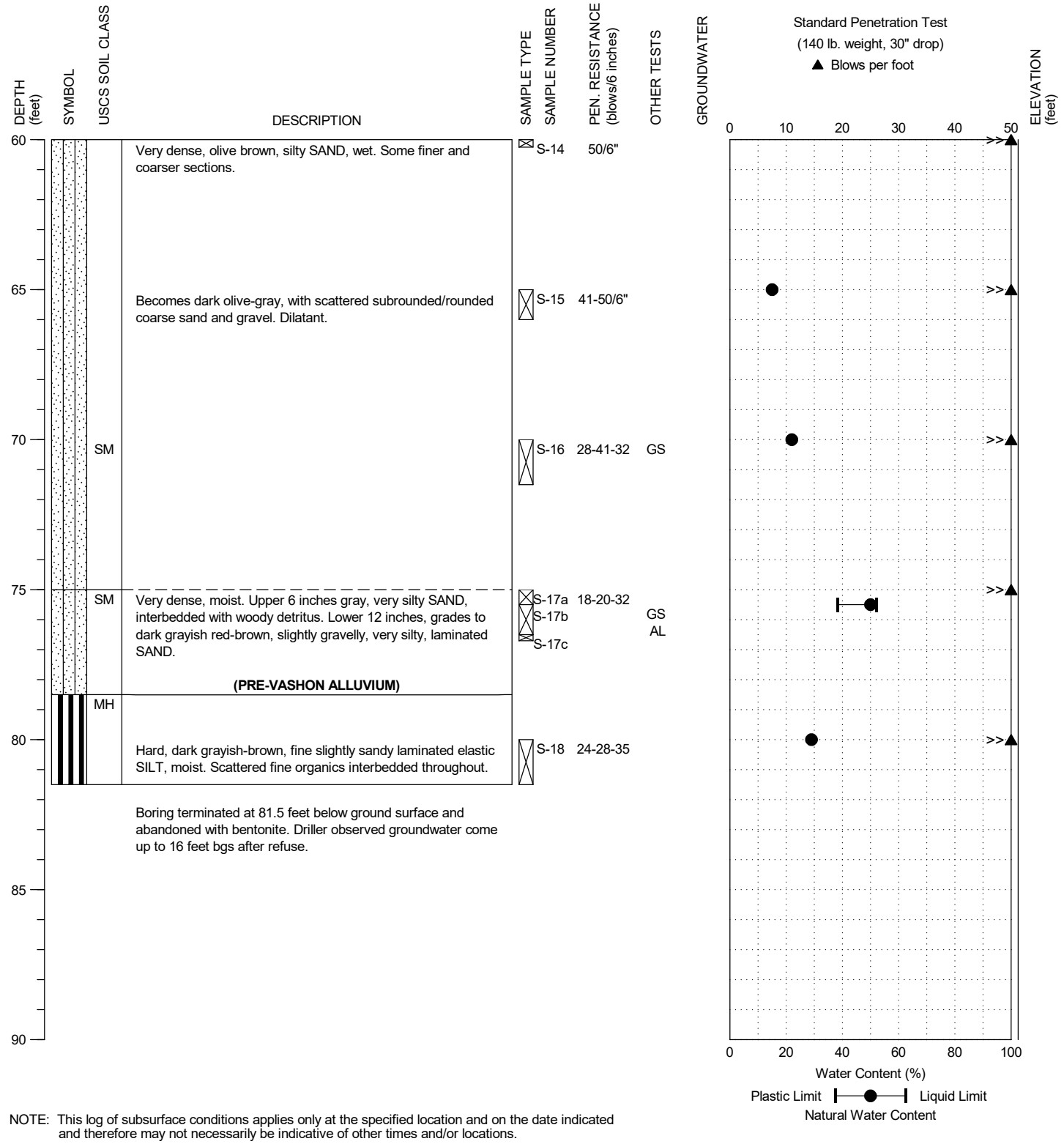
BORING:
BH-52

PROJECT NO.: 2015-061

FIGURE: A-3

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/1/2021
DATE COMPLETED: 11/1/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

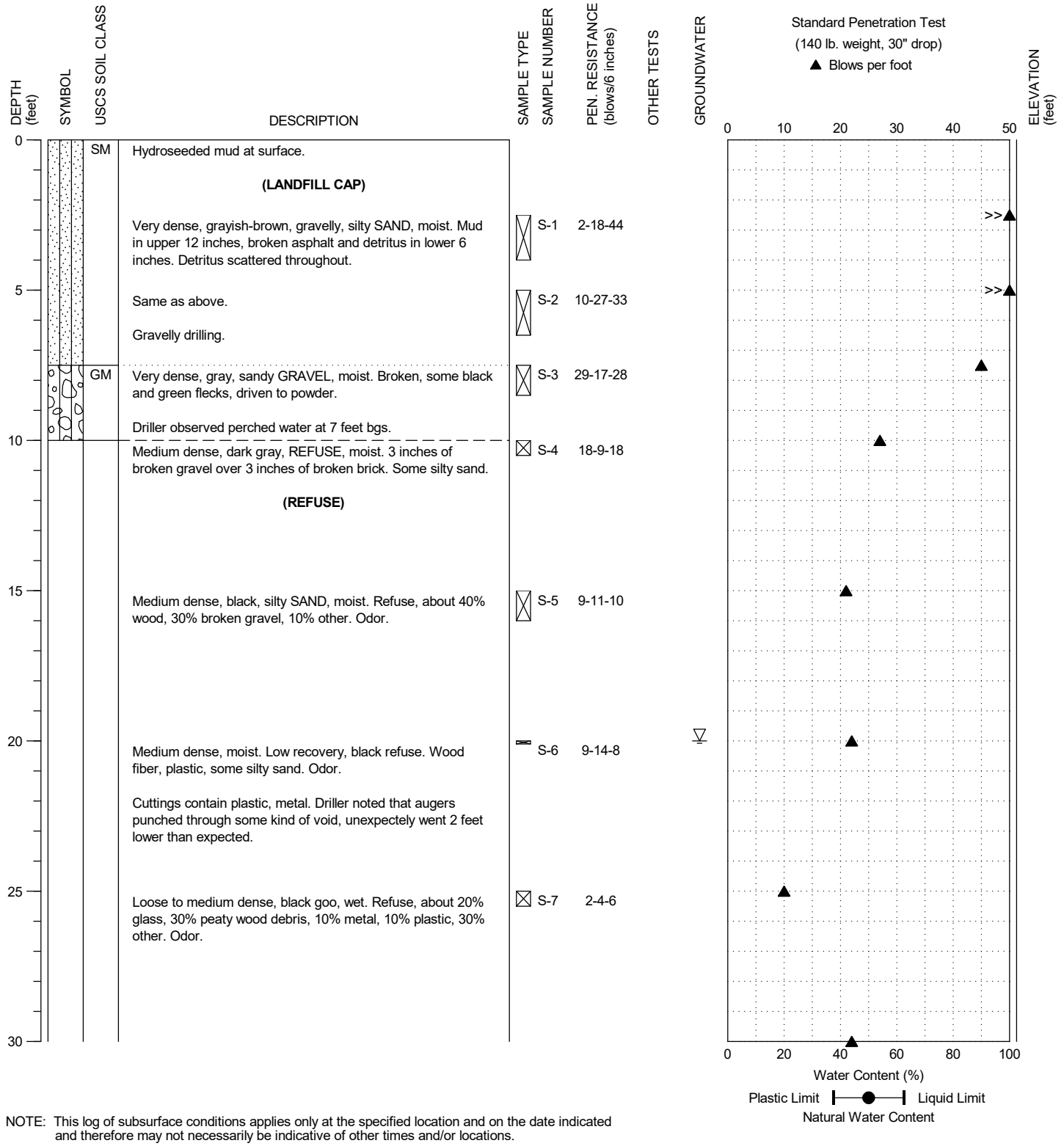
BORING:
BH-52

PROJECT NO.: 2015-061

FIGURE: A-3

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/2/2021
DATE COMPLETED: 11/2/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

BORING:
BH-53

PROJECT NO.: 2015-061

FIGURE: A-4

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

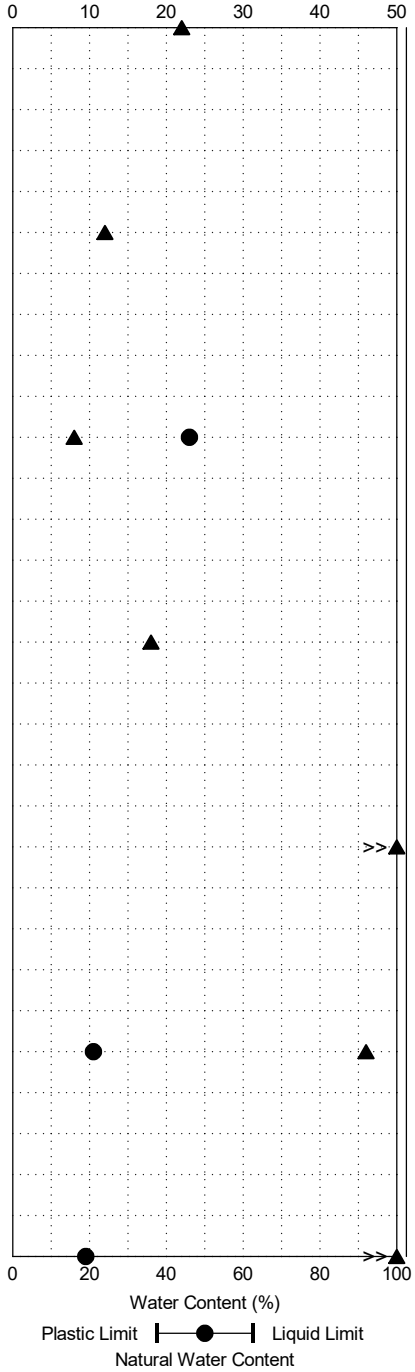
DATE STARTED: 11/2/2021
DATE COMPLETED: 11/2/2021
LOGGED BY: A. Ong

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Medium dense, black goo, wet. Refuse, about 90% wood fibers and peat, 10% metal with wire and nails.	S-8	10-10-12	
		PT				
35			Medium dense, dark reddish-brown, peaty WOOD in black goo matrix, wet. 1 inch of lean CLAY with wood embedded in sampler head, moist. Driller encountered water at 35 feet bgs. **(ALLUVIUM)**	S-9a S-9b	3-4-8	
40		OL	Loose, oxidized very dark grayish-brown, slightly gravelly, fine-to-medium sandy, organic SILT, wet. Black goo all over. 2 inches of clayey woody organic SILT at top, mixed with slough. Piece of wood wedged in sampler tip. Switch to mud rotary. Driller noted at 40 feet, drilled through 4 feet of heave, groundwater rose to 20 feet bgs.	S-10	6-2-6	
45		SM	Medium dense, gray, slightly silty to clean, medium SAND, wet. Some scattered subrounded gravel. Driller noted heave. Blow counts likley unrepresentatively low.	S-11	3-10-8	
50			Very dense, gray, silty medium SAND, wet. Low recovery. **(ADVANCE OUTWASH)**	S-12	50/6"	
55		SW SM	Dense, dark gray, slightly silty to silty, well-graded fine-to-medium SAND, wet. Some thin bedding in fine sand portions. Micaceous. Dilatant.	S-13	24-22-24	GS
60						

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

ELEVATION (feet)



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

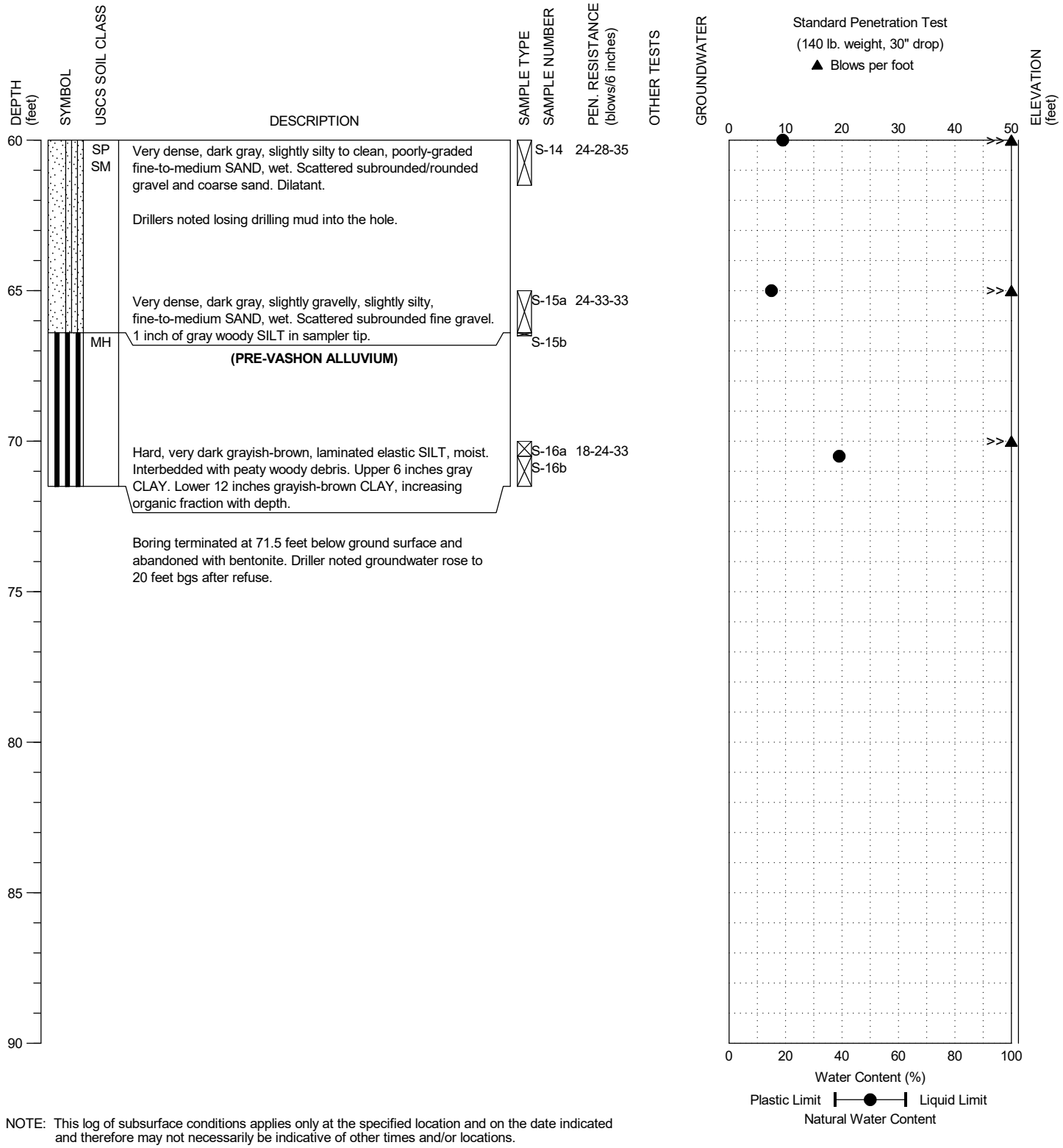
BORING:
BH-53

PROJECT NO.: 2015-061

FIGURE: A-4

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/2/2021
DATE COMPLETED: 11/2/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

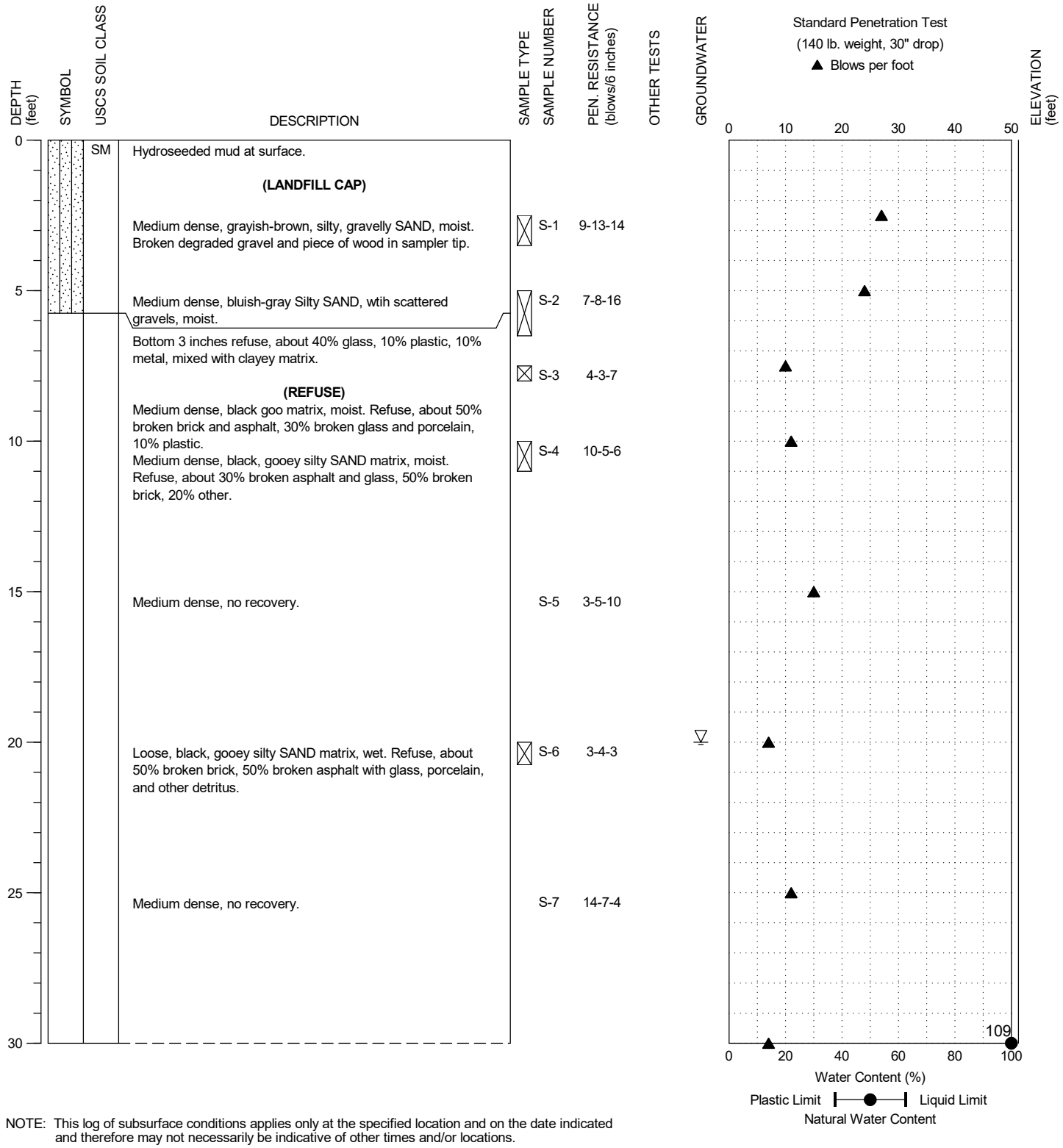
BORING:
BH-53

PROJECT NO.: 2015-061

FIGURE: A-4

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/2/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

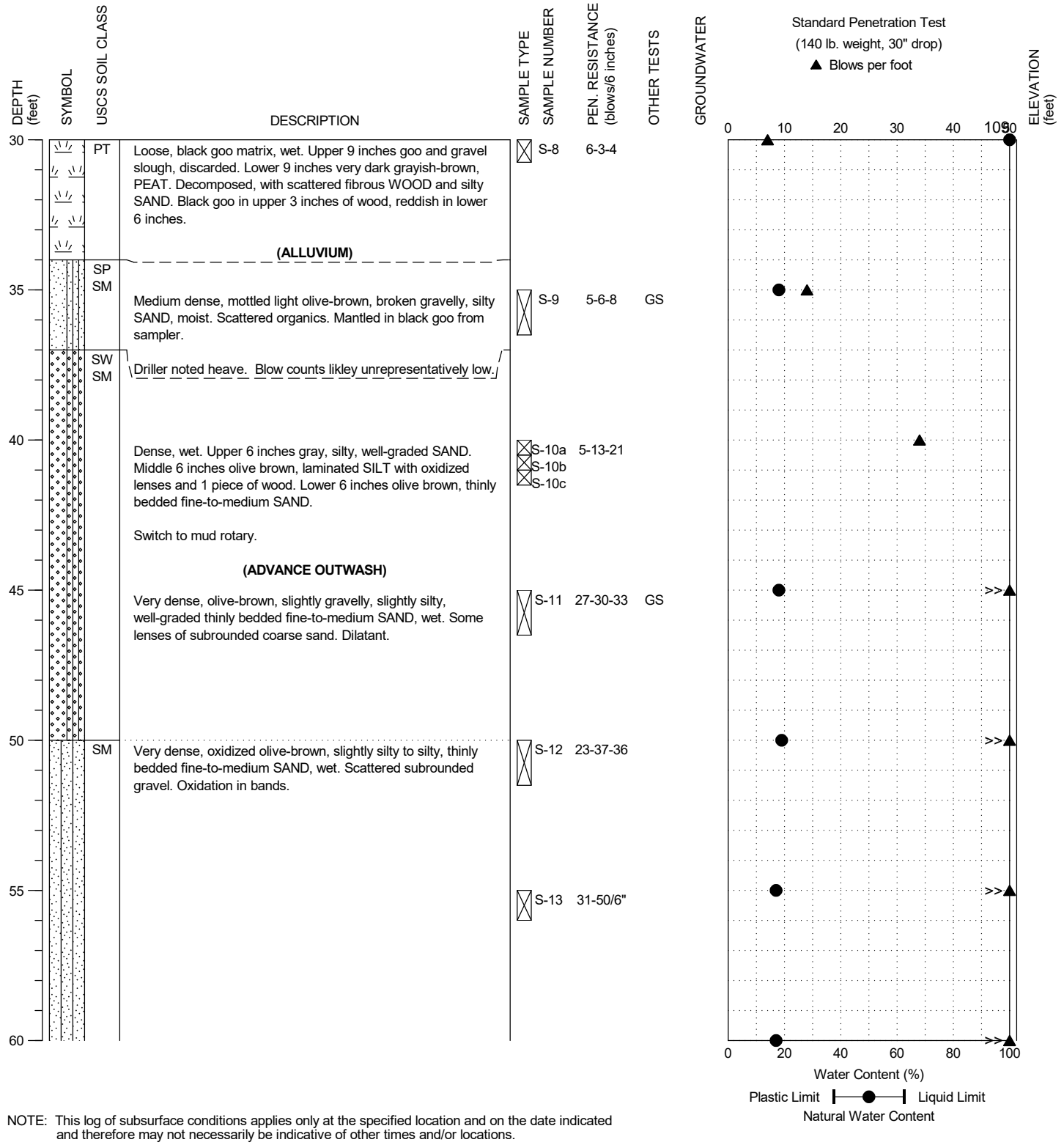
BORING:
BH-54

PROJECT NO.: 2015-061

FIGURE: A-5

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/2/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

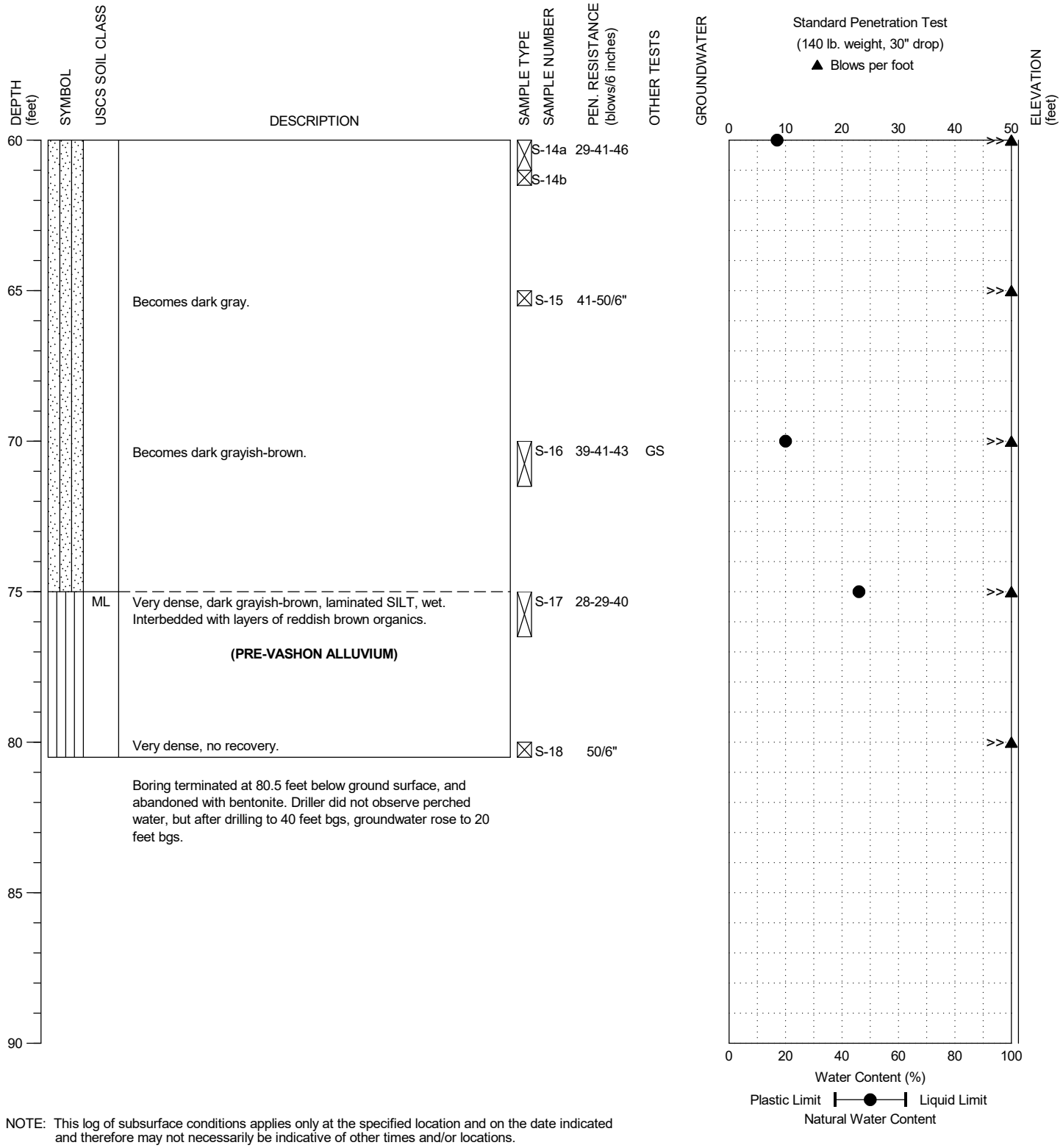
BORING:
BH-54

PROJECT NO.: 2015-061

FIGURE: A-5

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/2/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



Boring terminated at 80.5 feet below ground surface, and abandoned with bentonite. Driller did not observe perched water, but after drilling to 40 feet bgs, groundwater rose to 20 feet bgs.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

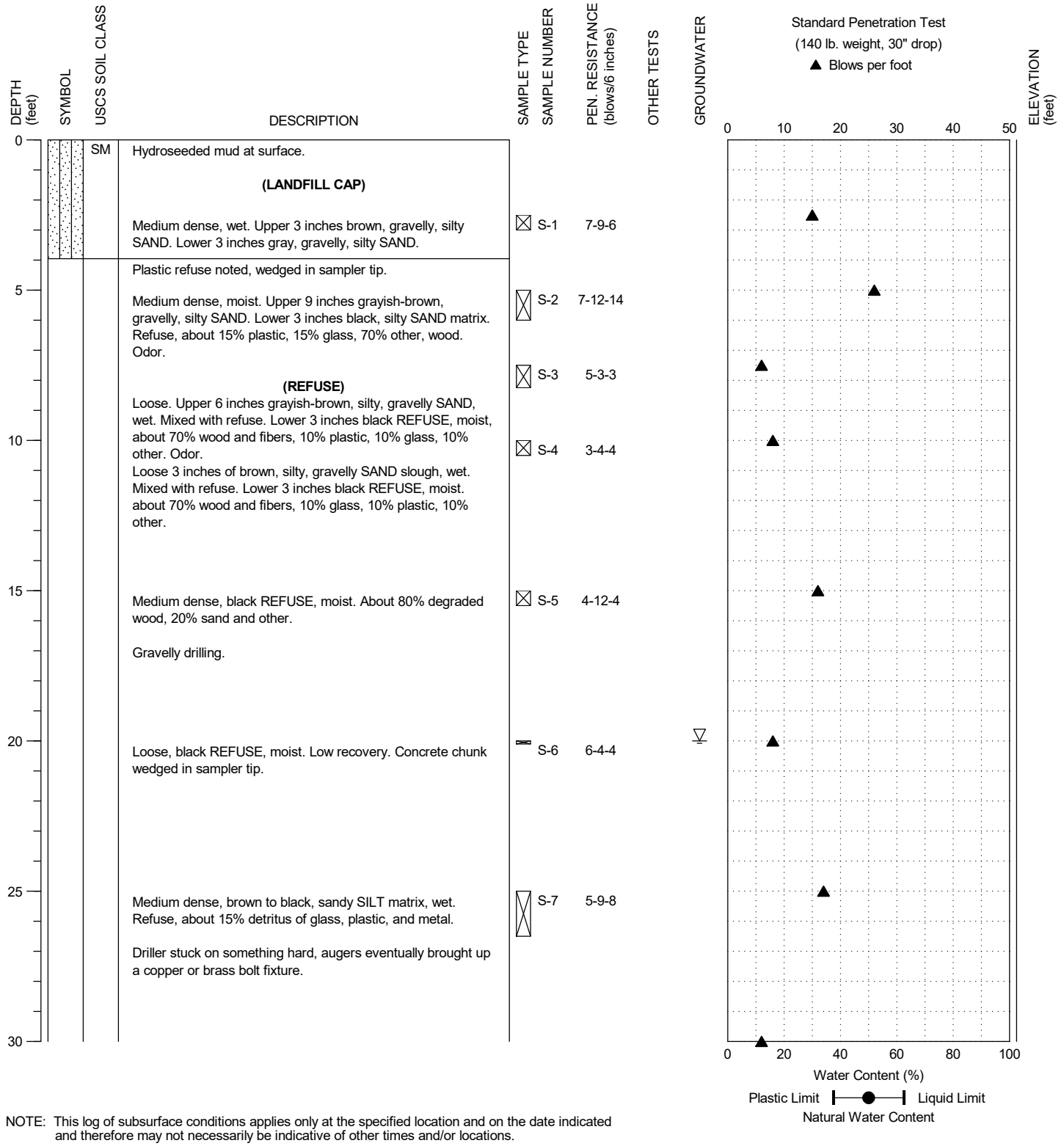
BORING:
BH-54

PROJECT NO.: 2015-061

FIGURE: A-5

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

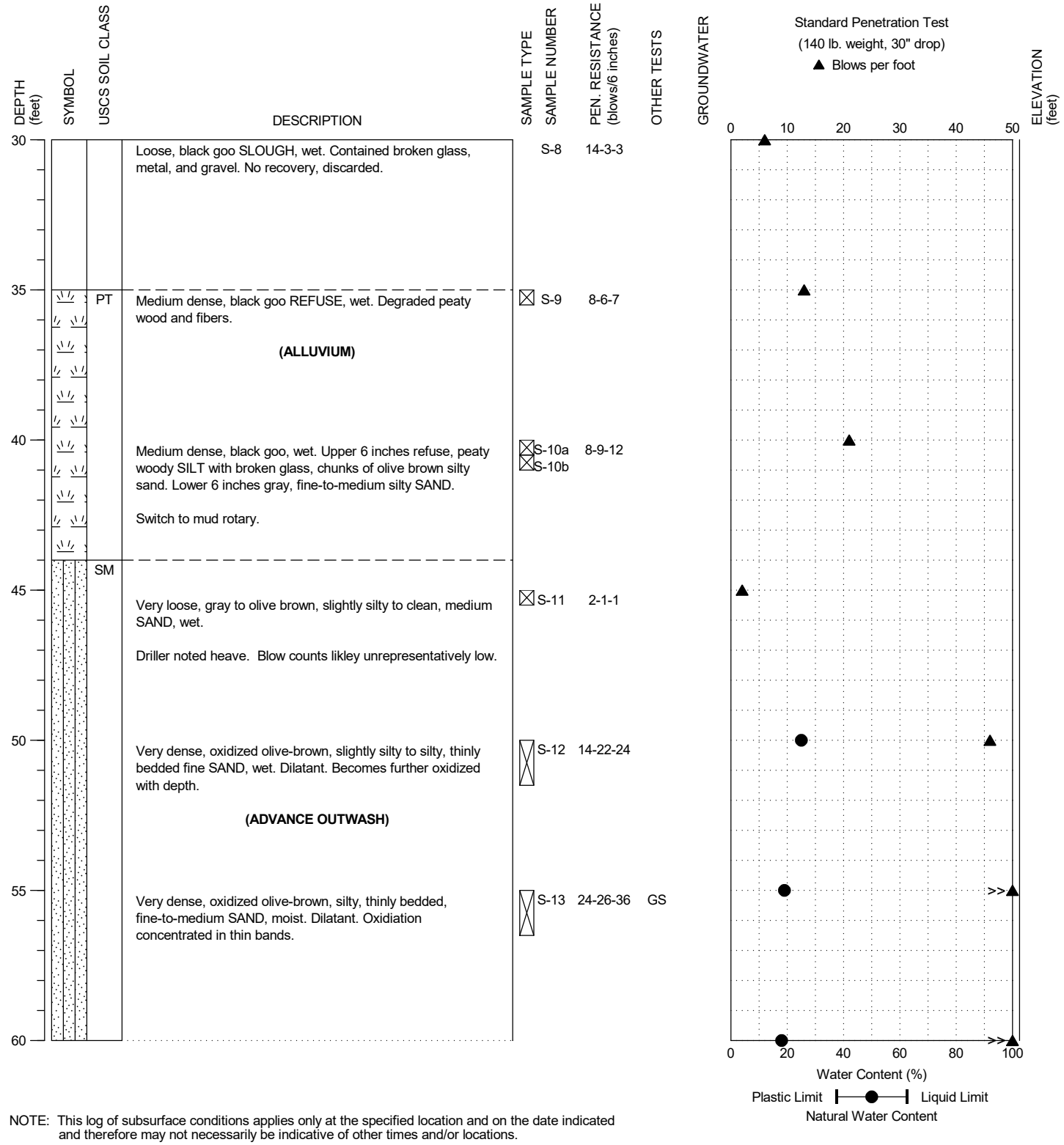
BORING:
BH-55

PROJECT NO.: 2015-061

FIGURE: A-6

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

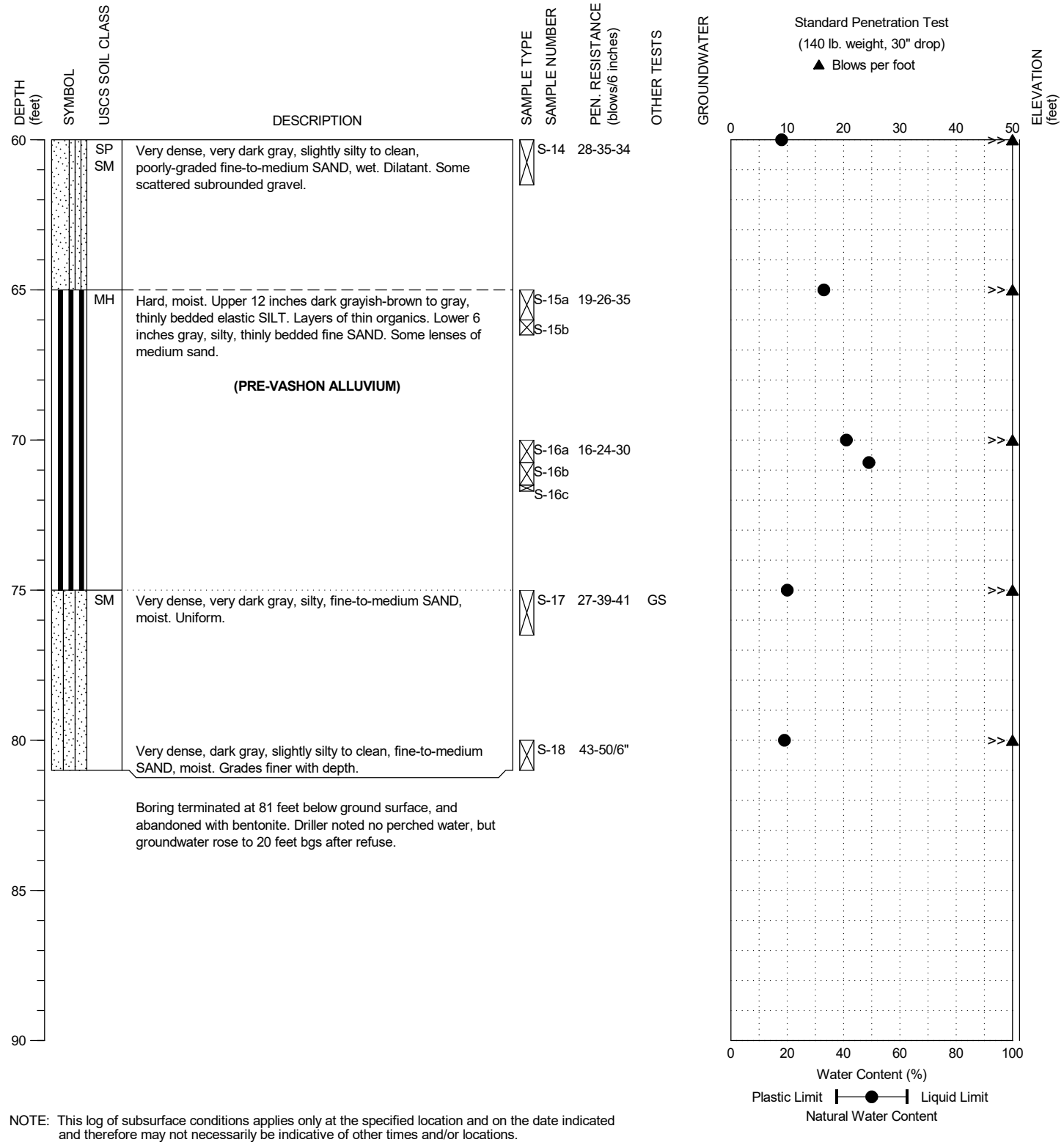
BORING:
BH-55

PROJECT NO.: 2015-061

FIGURE: A-6

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

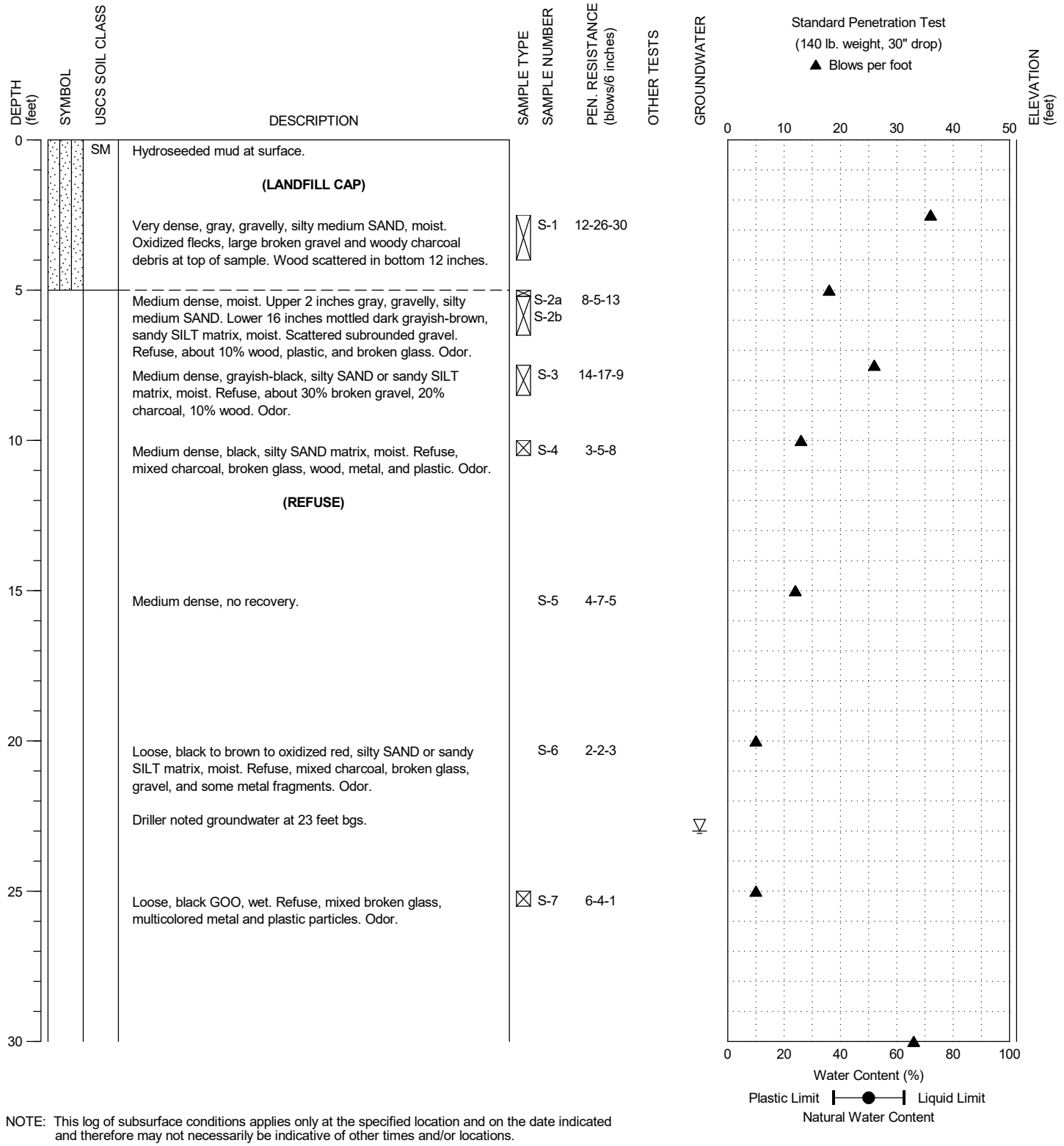
BORING:
BH-55

PROJECT NO.: 2015-061

FIGURE: A-6

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

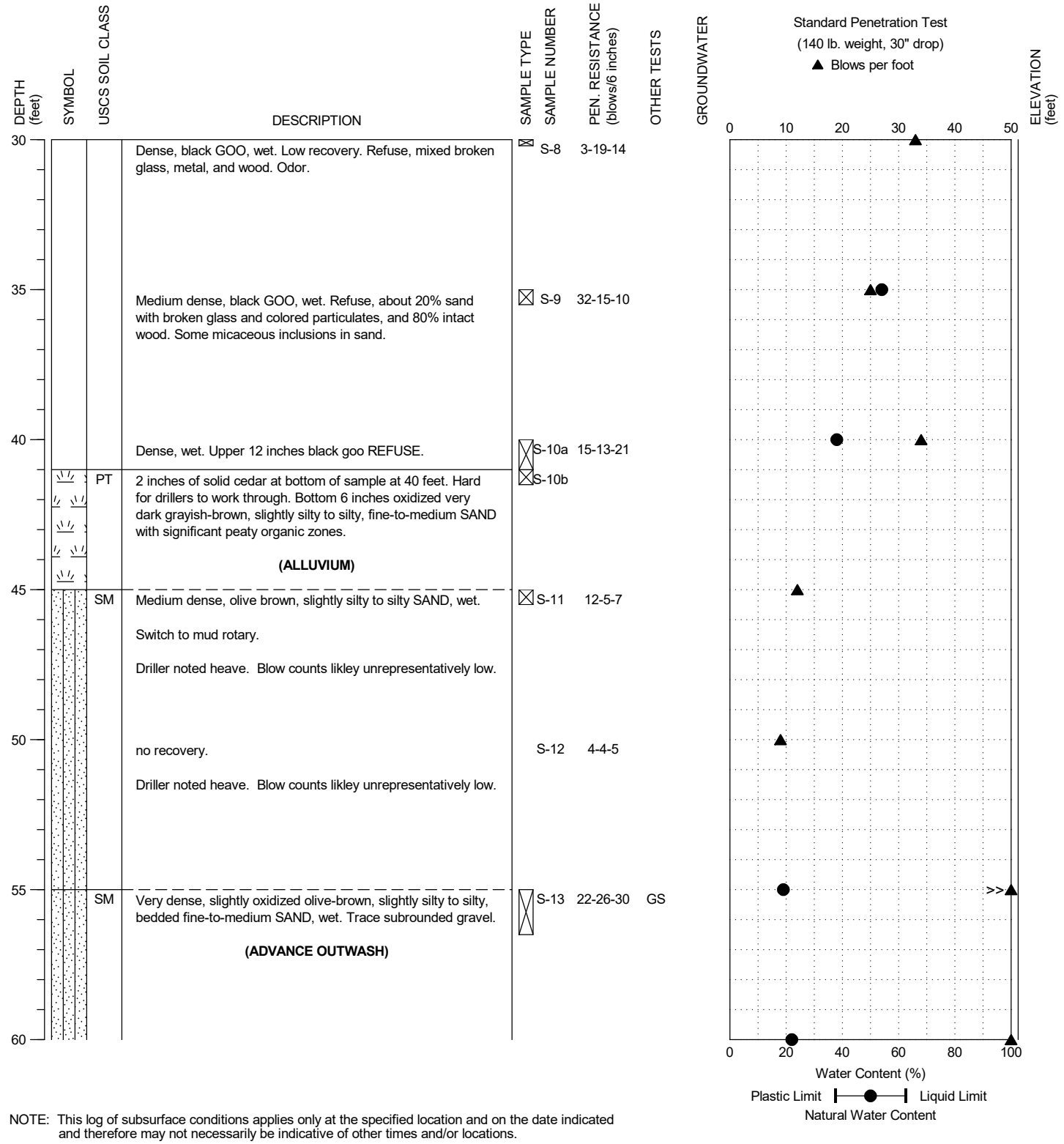
BORING:
BH-56

PROJECT NO.: 2015-061

FIGURE: A-7

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

BORING:
BH-56

PROJECT NO.: 2015-061

FIGURE: A-7

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Dietrich D-50 Turbo, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

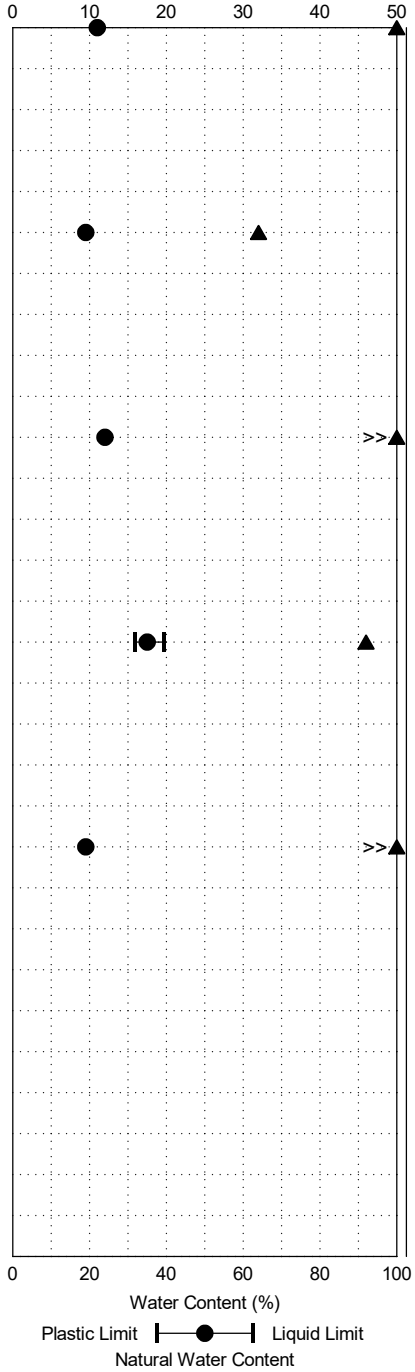
DATE STARTED: 11/3/2021
DATE COMPLETED: 11/3/2021
LOGGED BY: A. Ong

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
60			Dense, wet. Same as above.	S-14a S-14b	24-19-31	
65		SP SM	Medium dense, wet. Upper 12 inches dark gray, slightly silty, poorly graded fine-to-medium SAND. Some coarse sand. Lower 6 inches grayish-brown, laminated SILT interbedded with organics. Abrupt transition. **(PRE-VASHON ALLUVIUM)**	S-15a S-15b	18-17-15	
70		SM	Very dense, dark gray, silty, thinly bedded fine SAND, wet. Dilatant. Large piece of broken wood at top of sample. Some medium sand towards the bottom of sample.	S-16	24-29-24	GS
75		ML	Dense, moist. Upper 8 inches dark grayish-brown, sandy, laminated SILT. Interbedded with organics. Middle 6 inches gray, very silty, laminated fine SAND. Lower 4 inches gray, silty fine-to-medium SAND.	S-17a S-17b S-17c	12-17-29	%F AL
80		SM	Very dense, dark gray, slightly silty to clean, fine-to-medium SAND, wet.	S-18	27-37-36	
85			Boring terminated at 81.5 feet below ground surface, and abandoned with bentonite. Driller noted consistent groundwater around 23 feet bgs.			
90						

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

ELEVATION (feet)



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
RIVERFRONT BOULEVARD
EVERETT, WASHINGTON

BORING:
BH-56

PROJECT NO.: 2015-061

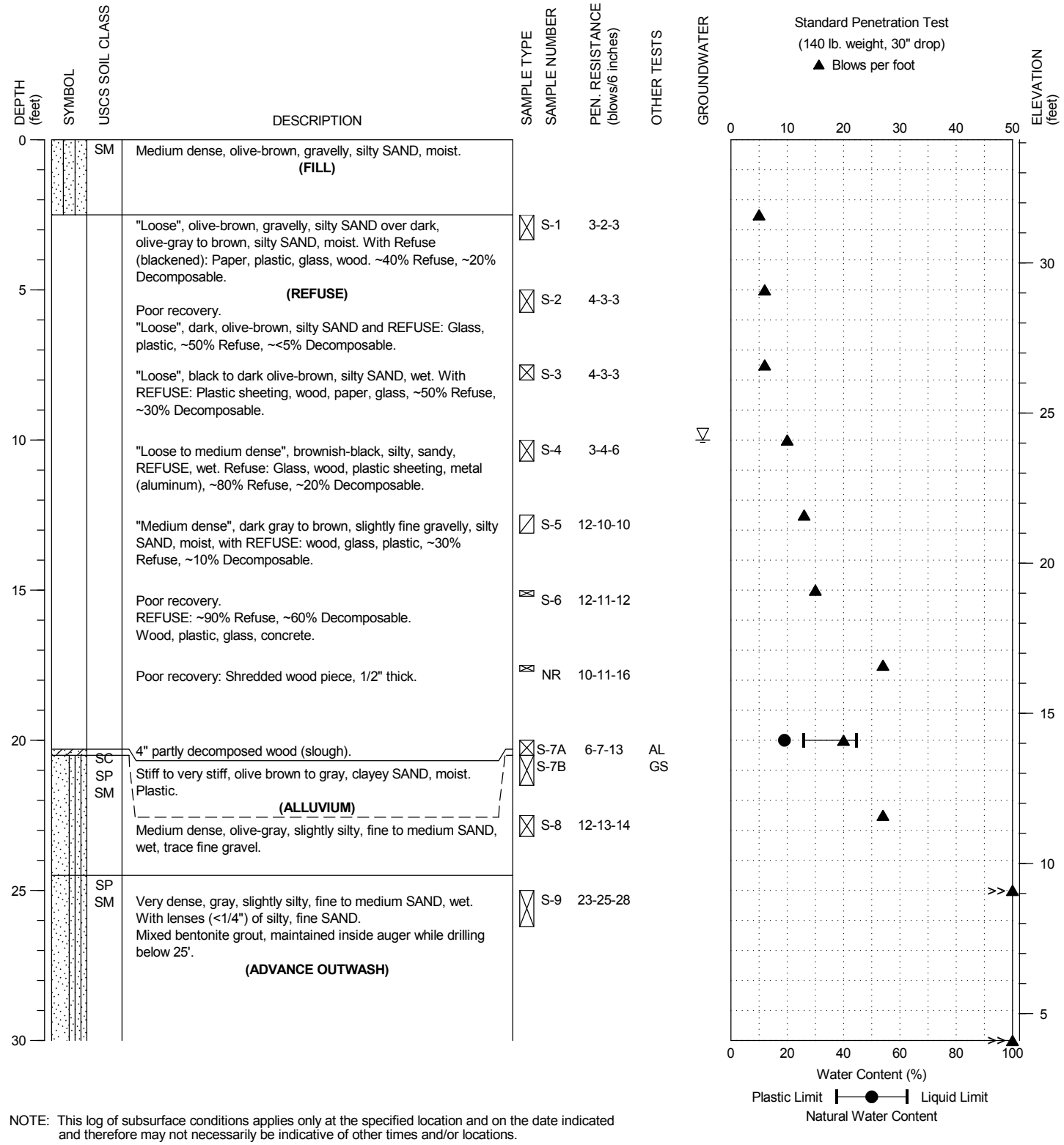
FIGURE: A-7

APPENDIX B

PREVIOUS EXPLORATIONS BY HWA AND OTHERS

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 34.1 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH- 6

PROJECT NO.: 2015-061

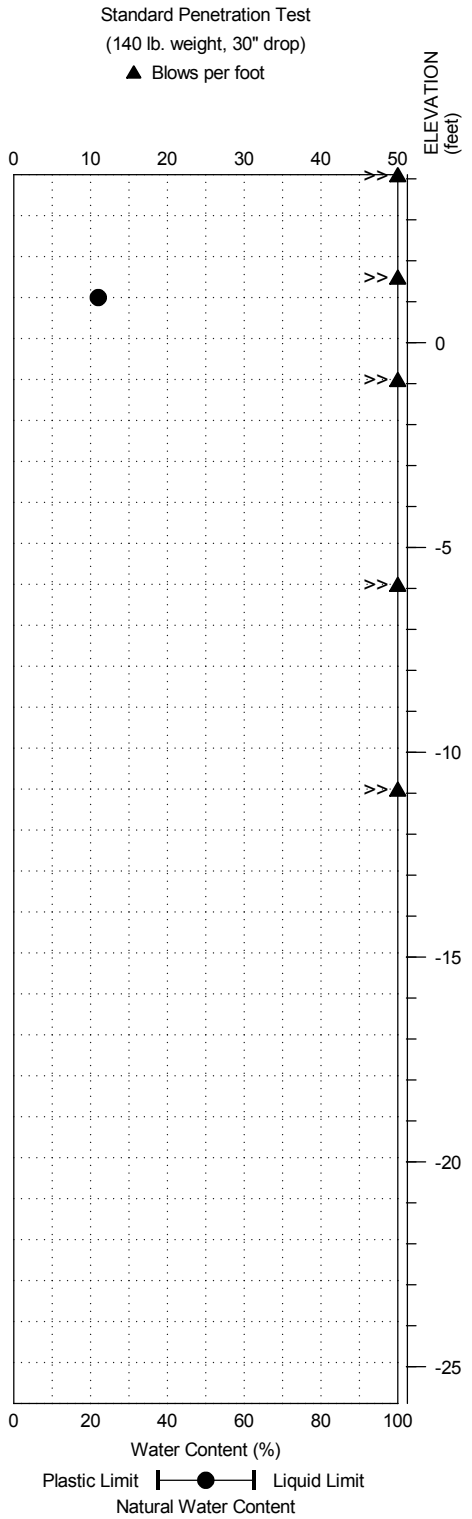
FIGURE: C-7

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 34.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Very dense, bluish-gray to 30.25' then light brownish-gray to bluish-brown, slightly silty, fine to medium and fine to coarse SAND, wet. Trace fine gravel. Stratified, ~2-3" beds.		S-10	12-21-30	
			Very dense, gray, slightly silty, fine to medium SAND, wet.		S-11A S-11B	32-50/6"	GS UW DS
35			(Same)		S-12	20-22-32	
40			Very dense, gray, slightly silty, fine to medium to fine to coarse SAND, wet. Scattered fine gravel. Vaguely stratified.		S-13	20-34-38	
45			Very dense, gray, clean to slightly silty, fine to medium to fine to coarse SAND, wet. 1" lens, fine, gravelly at 46'.		S-14	20-34-36	
50			Borehole terminated at 46.5' below ground surface (bgs). Groundwater encountered at ~7' bgs during drilling. Borehole abandoned with bentonite grout, chips in upper 2'.				
55							
60							

GROUNDWATER



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH- 6

PROJECT NO.: 2015-061

FIGURE: C-7

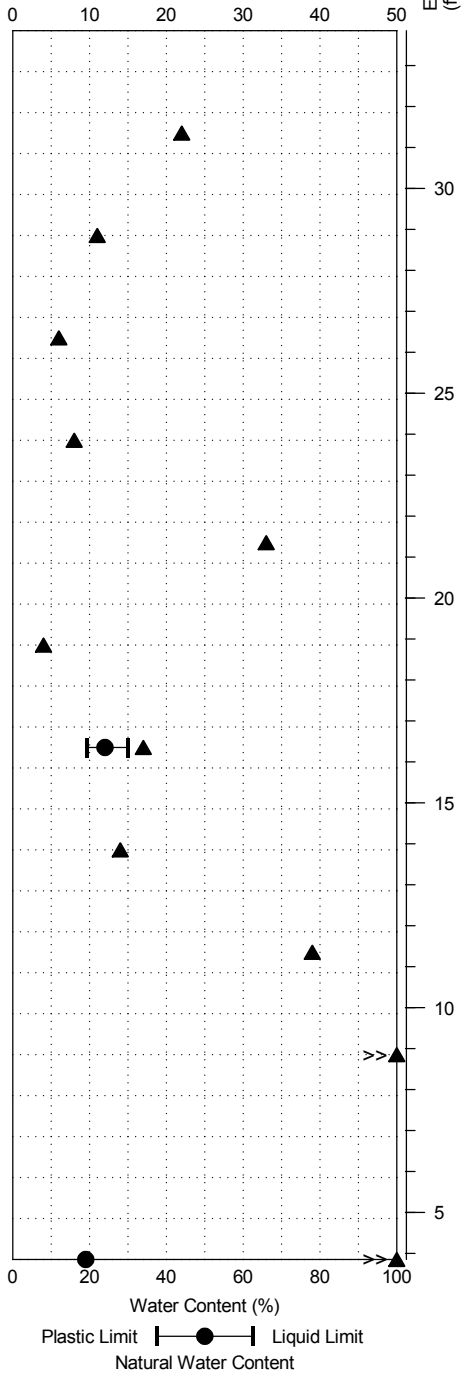
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 33.9 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	1.5' of silty SAND soil cover. **(FILL)**				
			Thin cuttings become dark gray with Refuse. Medium dense, brown to olive-gray, gravelly, silty SAND, moist. Trace asphalt, <5% Refuse, 0% Decomposable.		S-1	6-9-13	
5			"Medium dense", olive-gray, gravelly, silty SAND, moist, with paper. ~15% Refuse, ~15% Decomposable. **(REFUSE)**		S-2	4-5-6	
			No recovery.		NR	3-3-3	
10			Poor recovery. REFUSE with silty sand: Black foam rubber, paper, aluminum can fragments. ~80% Refuse, ~30% Decomposable.		S-3	3-3-5	
			Brown, angular rock (stuck in tip). Poor recovery. REFUSE: Paper, aluminum can piece; brown, silty SAND, wet, ~70% Refuse, ~30% Decomposable.		S-4	27-32-19	
15			"Loose", black, silty, sandy, REFUSE, wet. Refuse = blackened wood, aluminum, 50% Refuse, 50% Decomposable, slight creosote sheen.		S-5	2-2-2	
		ML	Stiff, bluish-gray, SILT in tip.				
		CL	Stiff, olive-gray, slightly sandy CLAY, moist. Becomes brown below ~18 ft. Black slurry coating, no odor. **(ALLUVIUM)**		S-6	7-8-9	AL
20		SM	Medium dense, olive-gray to brown, silty, fine to coarse and fine to medium, SAND, wet.		S-7	3-5-9	
		SP	Dense, gray, clean, slightly fine gravelly, fine to coarse, fine to medium, SAND, wet. Slightly silty below ~23.5'. **(ADVANCE OUTWASH)**		S-8	3-12-27	
25		SP SM	Very dense, olive-gray to gray, with 1" olive-brown, slightly silty, fine to coarse, SAND, wet. With scattered gravel, to 26'. Below 26': Gray, slightly silty, fine to medium SAND, wet. Rust-banded brown is silty, fine to medium SAND.		S-9	12-25-26	
30							

GROUNDWATER ▽

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH- 7

PROJECT NO.: 2015-061 FIGURE: C-8

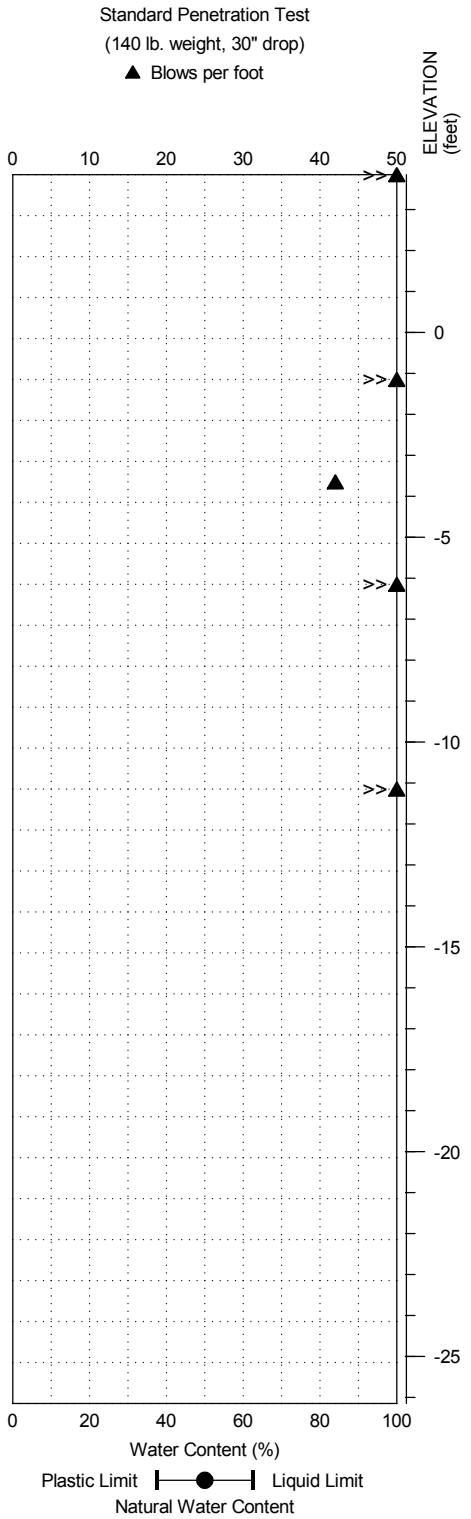
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 33.9 ± feet

DEPTH (feet)	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)
30	Very dense, bluish-gray over rust-banded brown (3" each) then olive-brown, slightly silty, fine to medium to fine to coarse SAND, wet. Rust-banded brown is silty, fine to medium SAND.		S-10	12-28-35
35	Very dense, olive-gray, with some rust-banding, slightly silty, fine to medium SAND, wet. Fine to coarse below 36'.		S-11	18-36-39
	Very dense, olive-gray, clean to slightly silty, fine to medium SAND, wet. Trace fine gravel in tip.		S-12A S-21B	20-29-35
40	Very dense, olive-gray, slightly silty, stratified, slightly fine gravelly, fine to medium SAND, wet. Beds ~1-3" thick.		S-13	18-36-39
45	Very dense, gray, clean to slightly silty, fine to medium SAND, wet.		S-14	21-32-37
50	Borehole terminated at 46.5' below ground surface (bgs). Groundwater encountered below ~7' bgs during drilling. Borehole abandoned with bentonite grout, 2 batches x 40-45 gallons.			
55				
60				

OTHER TESTS

GROUNDWATER



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

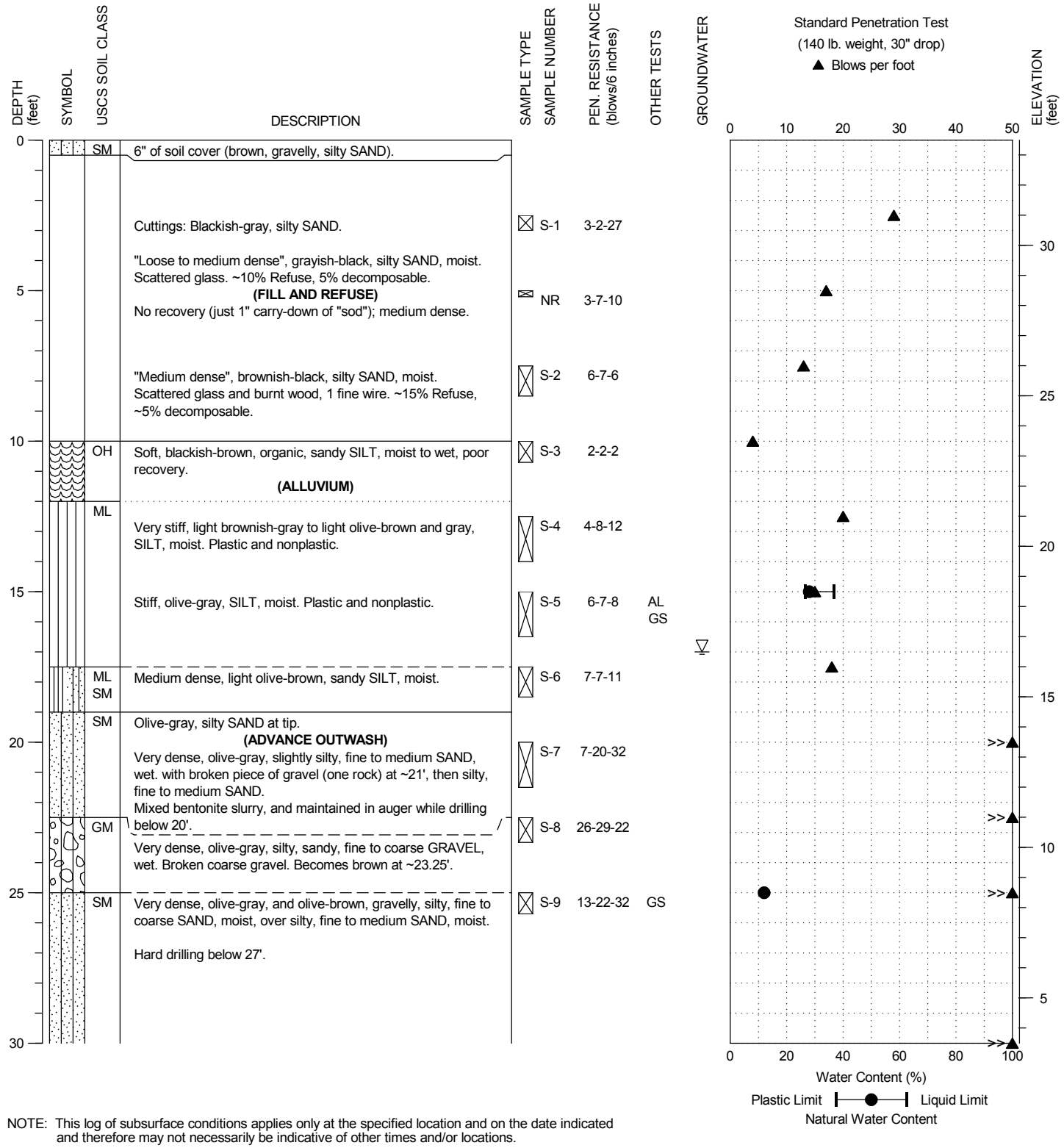
BORING:
BH- 7

PROJECT NO.: 2015-061

FIGURE: C-8

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 33.5 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH- 8

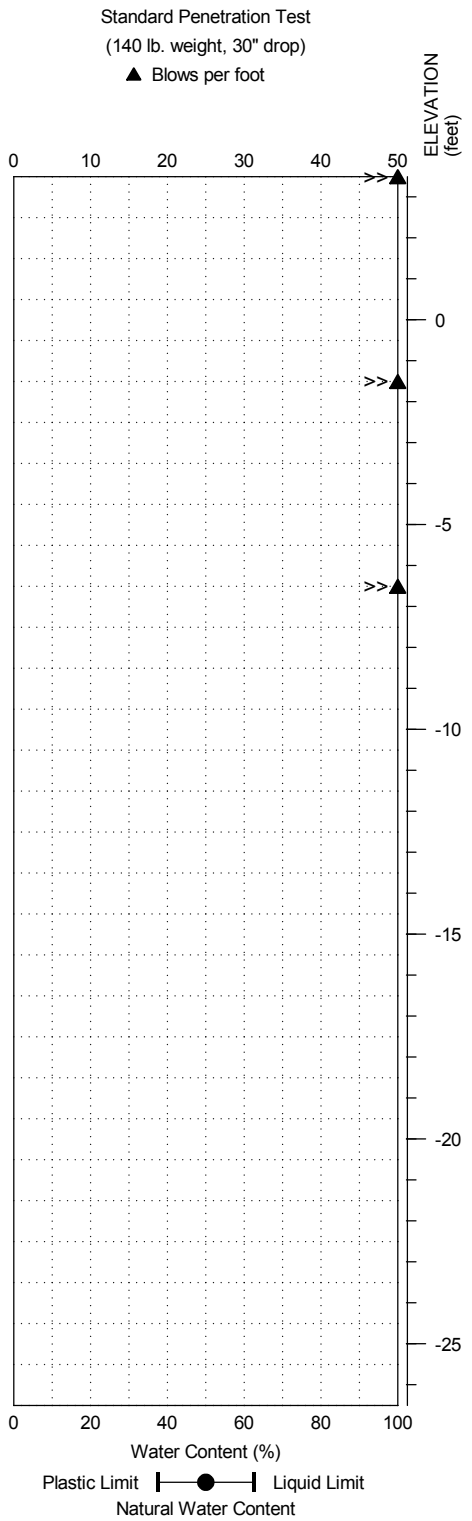
PROJECT NO.: 2015-061

FIGURE: C-9

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 33.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30			Poor recovery. Very dense, light-brown, gravelly, silty, fine to medium SAND, wet.	⊠	S-10	50/5"		
35			Drove rock with SPT. Switched to California Sampler. Hammer bouncing on rock. No recovery. Drilled out large rock.	▬	NR	50/1"		
40		SP SM	Very dense, olive-brown, with fine rust banding, clean to slightly silty, fine to medium to fine to coarse SAND, wet. Trace fine gravel. Stratified; lies from ~1-3" thick.	⊠	S-11	7-12-40		
45			Borehole terminated at 41.5' below ground surface (bgs). Groundwater encountered at ~17' bgs during drilling. Borehole abandoned with bentonite slurry; 80-90 gallons total including slurry in auger during drilling.					
50								
55								
60								



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

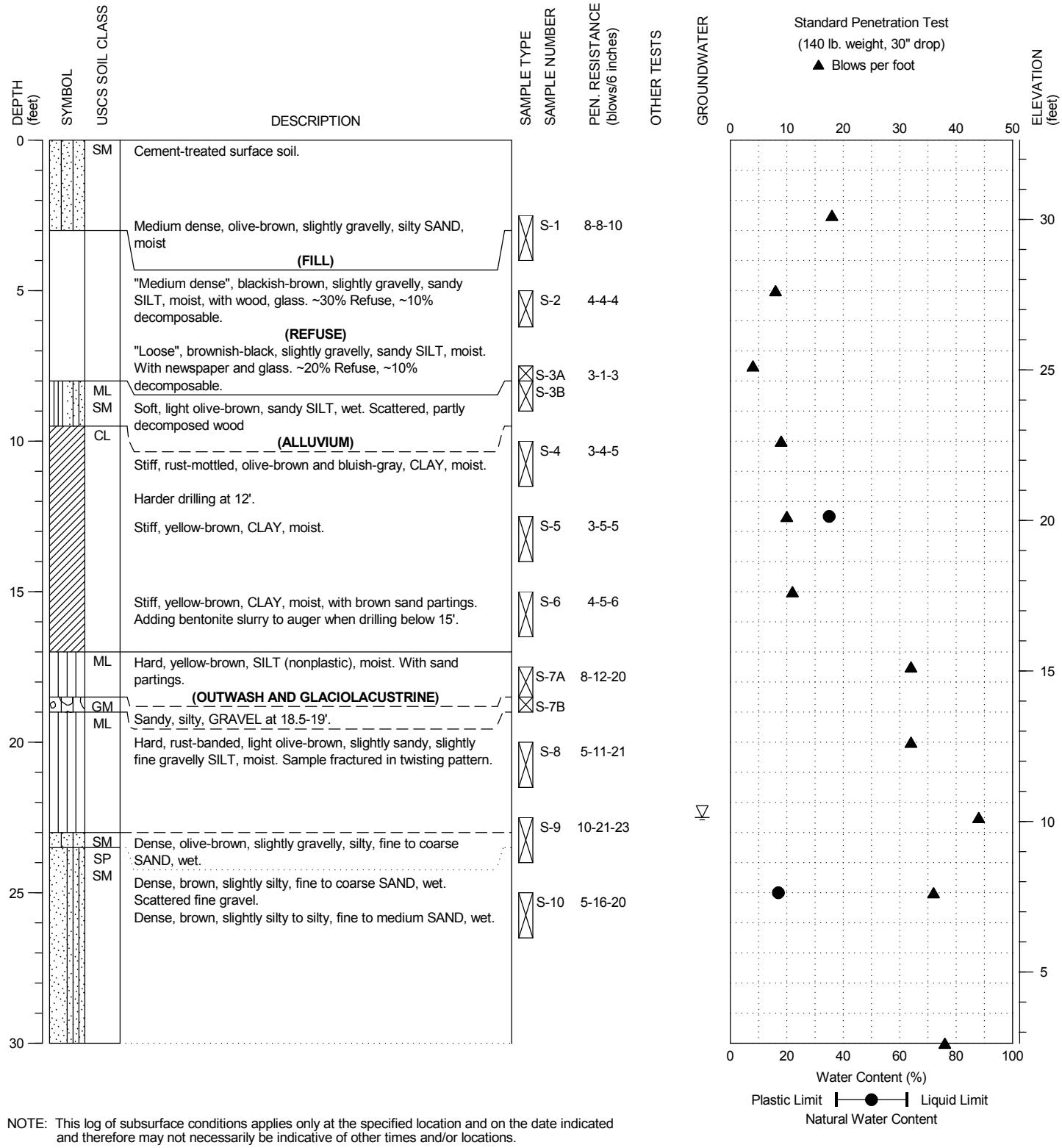
BORING:
BH- 8

PROJECT NO.: 2015-061

FIGURE: C-9

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 32.6 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

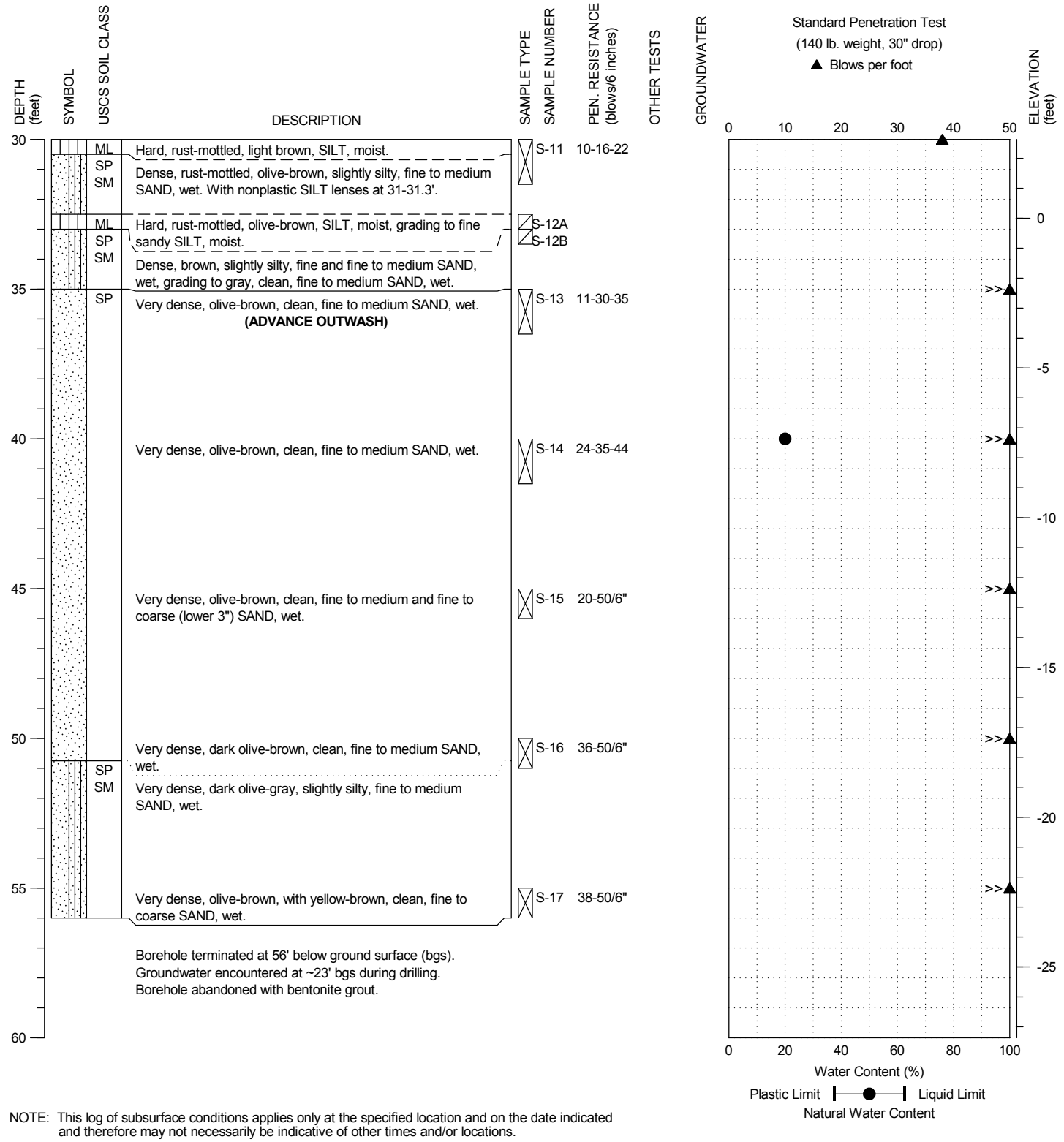
BORING:
BH- 9

PROJECT NO.: 2015-061

FIGURE: C-10

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 32.6 ± feet



Borehole terminated at 56' below ground surface (bgs).
Groundwater encountered at ~23' bgs during drilling.
Borehole abandoned with bentonite grout.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

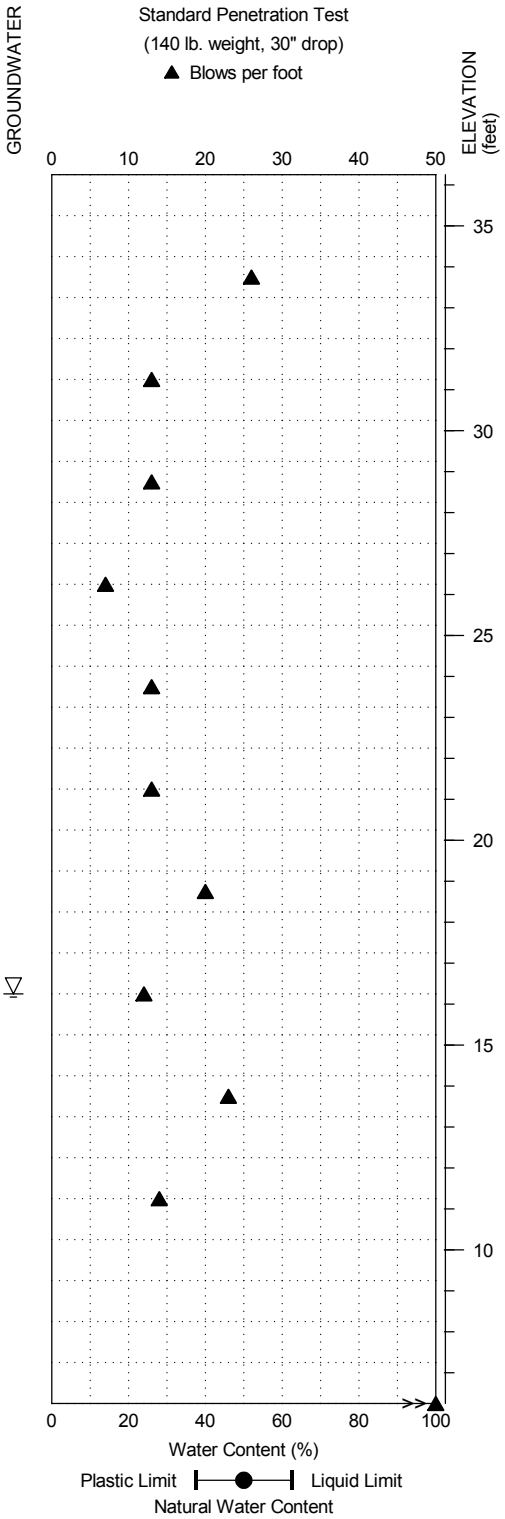
BORING:
BH- 9

PROJECT NO.: 2015-061 FIGURE: C-10

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 36.3 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0		SM	Cement-treated soil.					
			Medium dense, olive-brown, gray and bluish-gray, sandy SILT, moist. 1 piece of plastic sheeting. **(FILL)**		S-1	8-12-14		
5			Brownish-black, silty SAND with REFUSE, moist. ~30% Refuse (plastic, burnt wood), ~10% Decomposable. **(REFUSE)**		S-2	20-7-6		
			"Medium dense", grayish-brown, silty SAND, moist, and REFUSE (plastic sheeting, fabric, glass). ~40% Refuse, ~10% Decomposable.		S-3	3-4-9		
			"Medium dense", REFUSE, with olive-brown, silty SAND, moist. paper (1" thick), plastic, fabric, glass, wood, aluminum sheeting. ~80% Refuse, ~50% Decomposable.					
10			Poor recovery.		S-4	5-3-4		
			"Medium dense", REFUSE: Paper, plastic, glass, fabric. Trace silty SAND, ~95% Refuse, ~40-45% Decomposable.		S-5	10-7-6		
15			Poor recovery; drove wood. ~90% REFUSE: Wood, glass, plastic. ~10% dark brown, sandy SILT, moist. ~70% Decomposable.		S-6	9-6-7		
			"Medium dense", REFUSE with brown and gray-brown soil (sandy SILT), ~95% Refuse (wood, plastic, glass, metal), ~40% Decomposable. Gray, silty SAND at tip (<1/2" thick).		S-7	6-10-20		
20			"Medium dense", olive-brown and grayish dark brown, slightly gravelly, silty SAND, moist, with wood and burnt wood. ~25% Refuse, ~25% Decomposable. Black-coated (wet), REFUSE: Paper, plastic, glass. ~100% Refuse, ~30% Decomposable.		S-8	3-4-8		▽
			"Medium dense", black grading to dark brown, burnt wood in sandy SILT grading to silty SAND, moist, wood in lower 4". ~40% Refuse, ~40% Decomposable.		S-9	7-10-13		
25			"Medium dense", black and dark brownish gray, blackened wood, sandy SILT, metal, wood fragments, wet. ~80% refuse, ~70% Decomposable.		S-10	5-6-8		
30								



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-10

PROJECT NO.: 2015-061

FIGURE: C-11

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 36.3 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			WOOD, wet. Partly decomposed in top 4".		S-11	14-23-46	
35			"Medium dense", REFUSE: Wood, plastic, fabric. ~95% Refuse, ~50% Decomposable.		S-12	14-36-20	
40		SM	Very dense, yellow-brown and light yellow-brown, silty, fine to medium SAND, wet. **(ADVANCE OUTWASH)**		S-13	10-26-46	
45			4" hard, rust-banded, brown, SILT (Plastic), moist. Very dense, brown with a rust band, slightly silty, fine to medium SAND, moist. Silty, fine to medium SAND below 46.25'.		S-14	10-23-32	
		SP SM	Wood pushed into upper portion. Very dense, yellow-brown, clean to slightly silty, slightly fine gravelly and coarse sandy, fine to medium SAND, moist to wet.				
50			Very dense, yellow-brown, slightly silty, slightly fine to medium and fine to coarse SAND, wet.		S-16	26-31-34	
					S-15A	14-36-50/5"	
					S-15B		UW DS
55			Very dense, dark gray, slightly silty, fine to medium SAND, wet, with fine lenses, with coarse SAND, finely stratified.		S-17	21-32-38	
60							

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

ELEVATION (feet)
5 0 -5 -10 -15 -20

0 20 40 60 80 100
Water Content (%)
Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-10

PROJECT NO.: 2015-061 FIGURE: C-11

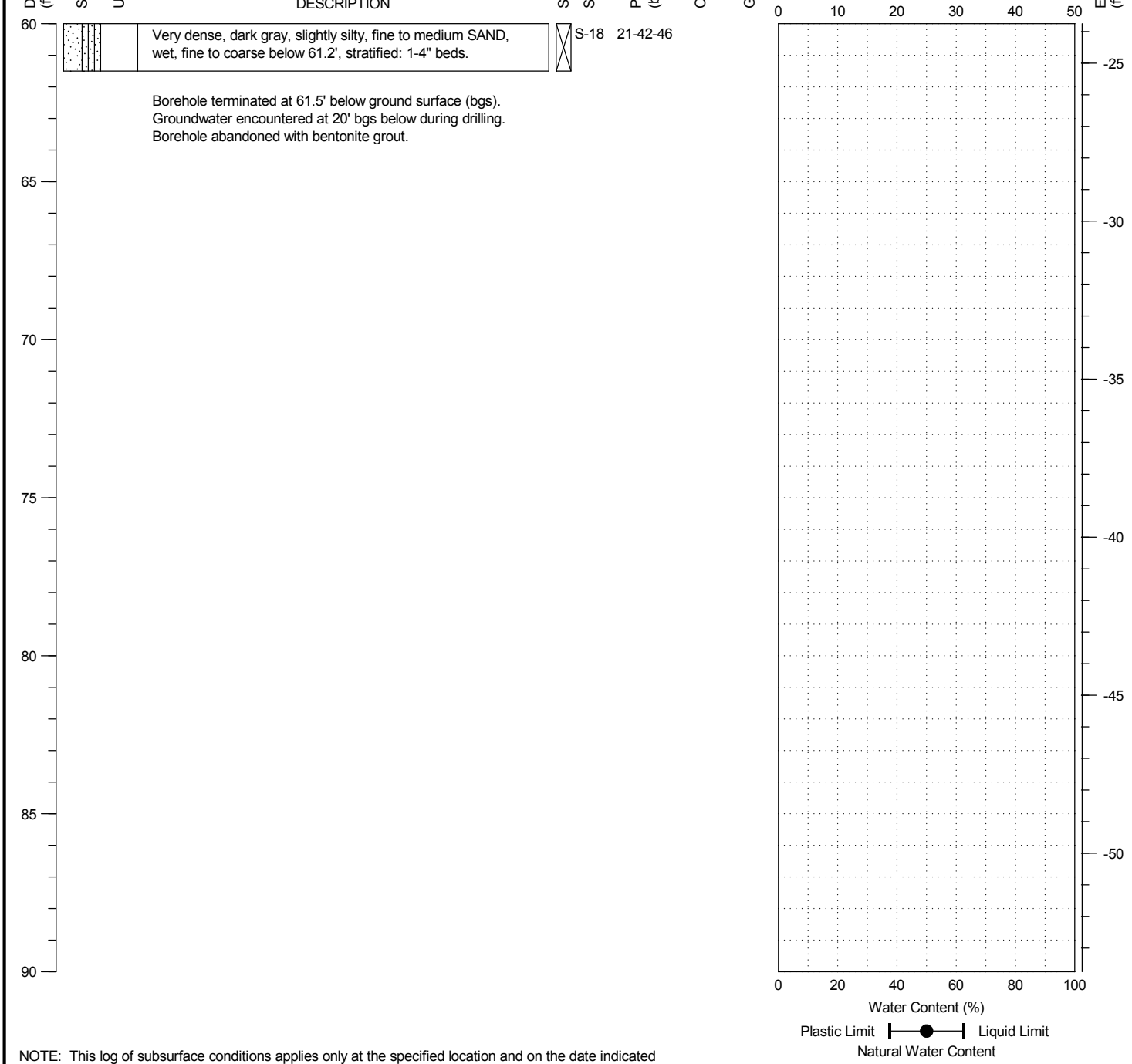
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 36.3 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
60			Very dense, dark gray, slightly silty, fine to medium SAND, wet, fine to coarse below 61.2', stratified: 1-4" beds.		S-18	21-42-46		

Borehole terminated at 61.5' below ground surface (bgs).
Groundwater encountered at 20' bgs below during drilling.
Borehole abandoned with bentonite grout.

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

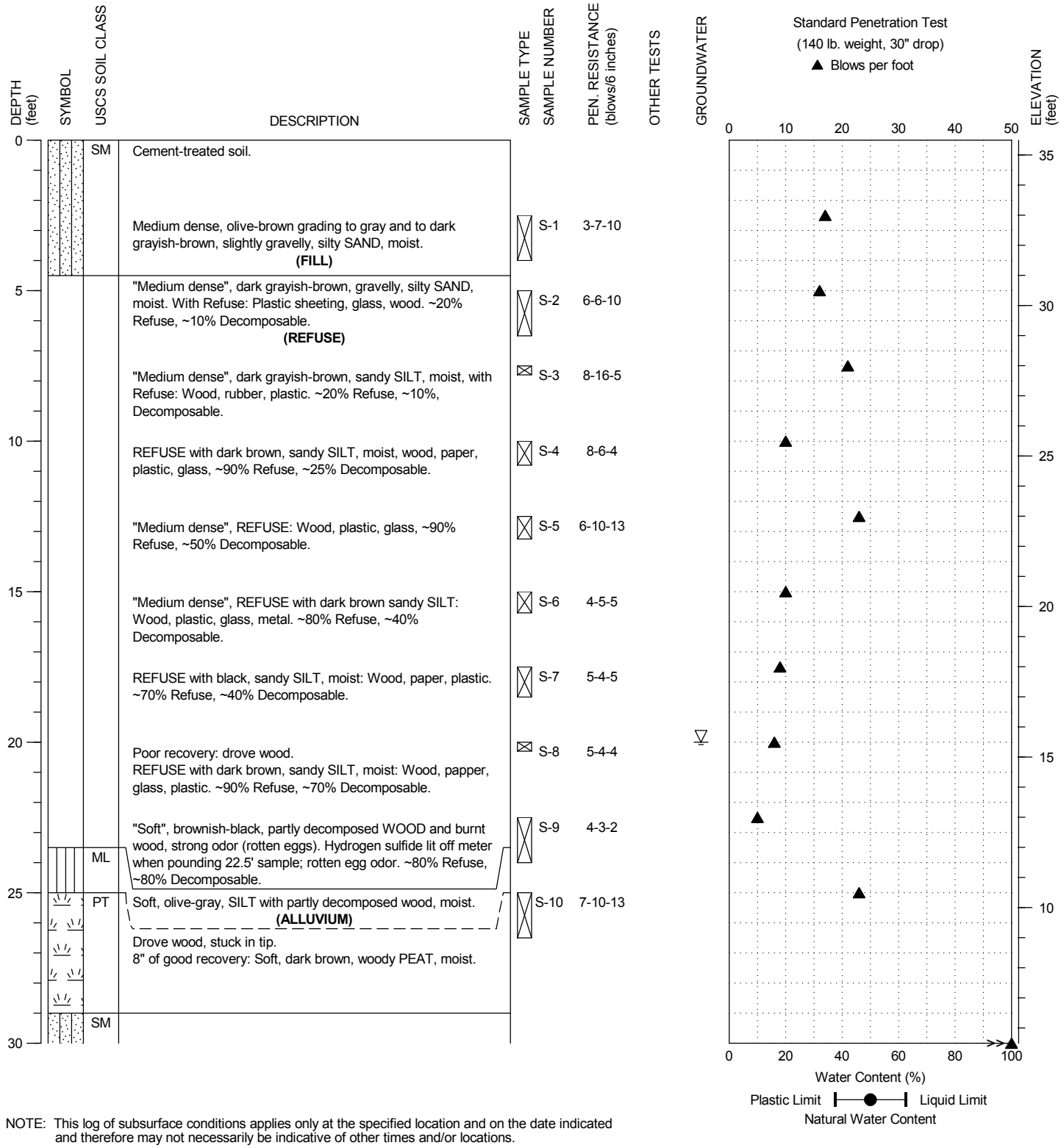
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-10

PROJECT NO.: 2015-061 FIGURE: C-11

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 35.5 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-11

PROJECT NO.: 2015-061

FIGURE: C-12

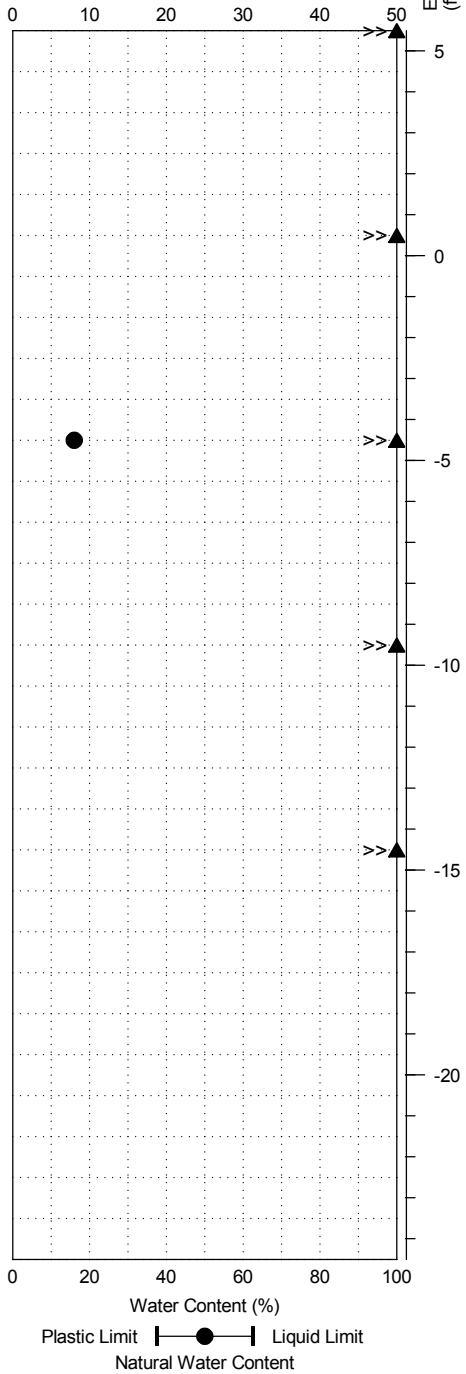
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 35.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Very dense, yellow-brown with rust-banding grading to olive-brown, slightly silty to silty, slightly fine gravelly, fine to medium and fine to coarse SAND, wet.		S-11	12-25-27	
			Mixed bentonite slurry and put inside auger before drilling below 30'.				
			(ADVANCE OUTWASH)				
35		SP SM	Very dense, yellow-brown, slightly silty grading to clean, fine to medium SAND, wet. Lens of fine gravel at 36.5'.		S-12	10-24-29	
40			Very dense, yellow-brown, slightly gravelly, silty grading to clean, fine to medium SAND, wet.		S-13	18-24-30	GS
		SP	Rust-banded, yellow-brown, clean, fine to medium SAND grading to silty, fine SAND, wet.				
45		SP SM	Very dense, light olive-brown, clean to slightly slity, fine to coarse SAND, wet. Scattered fine gravel, </= 1/4".		S-14	22-30-34	
50		SM	Very dense, reddish-brown, silty, fine SAND, wet, grading to dark, yellow-brown, slightly silty, fine to medium SAND, wet. Olive-brown at lower 2". Lens with fine gravel at 50.9'.		S-15	18-25-48	
			Borehole terminated at 51.5' below ground surface (bgs). Groundwater encountered below 20' bgs during drilling. Borehole abandoned with bentonite grout.				
55							
60							

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

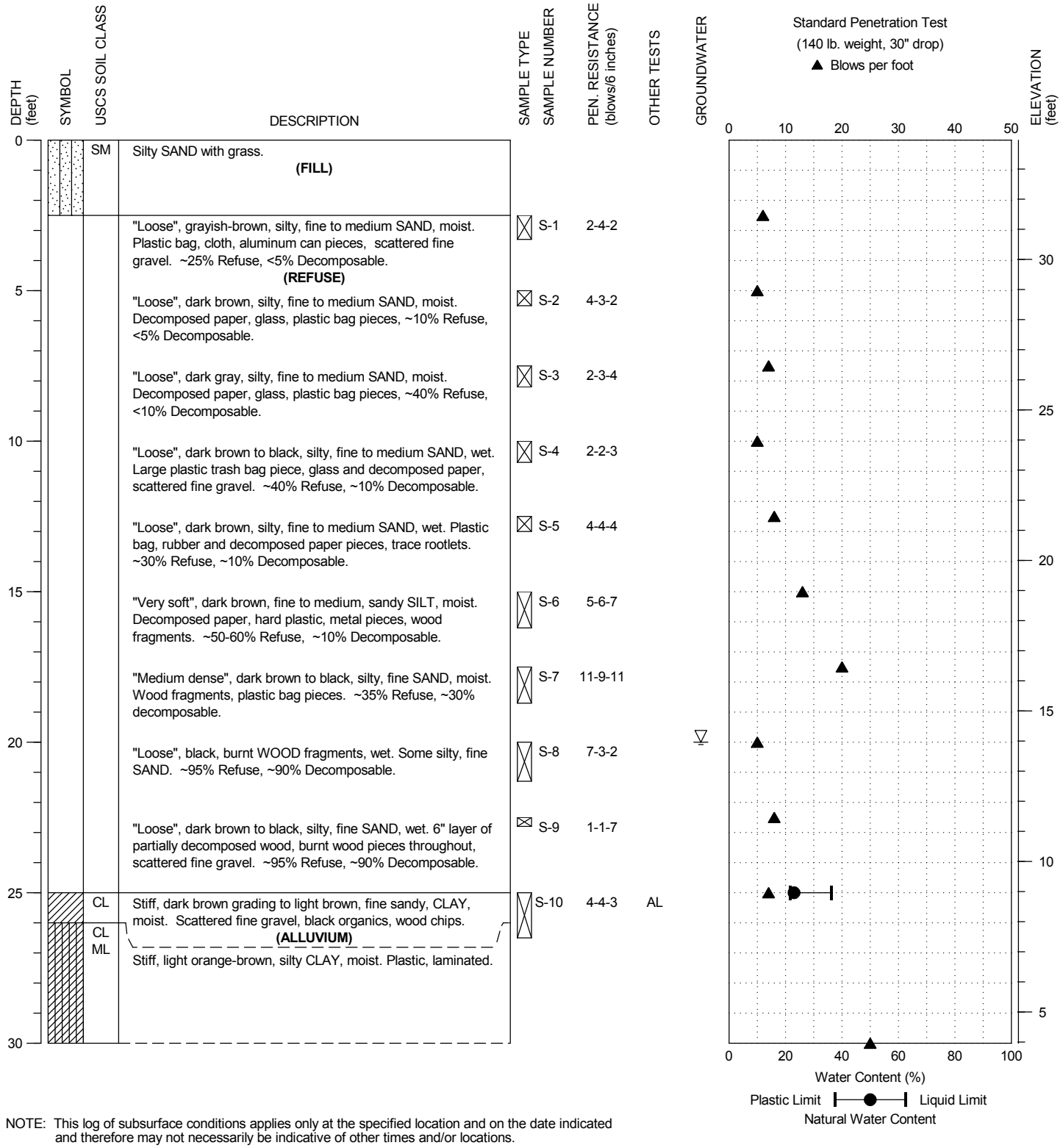
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-11

PROJECT NO.: 2015-061 FIGURE: C-12

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/2/2017
DATE COMPLETED: 6/2/2017
LOGGED BY: A. York
SURFACE ELEVATION: 34.0 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-12

PROJECT NO.: 2015-061 FIGURE: C-13

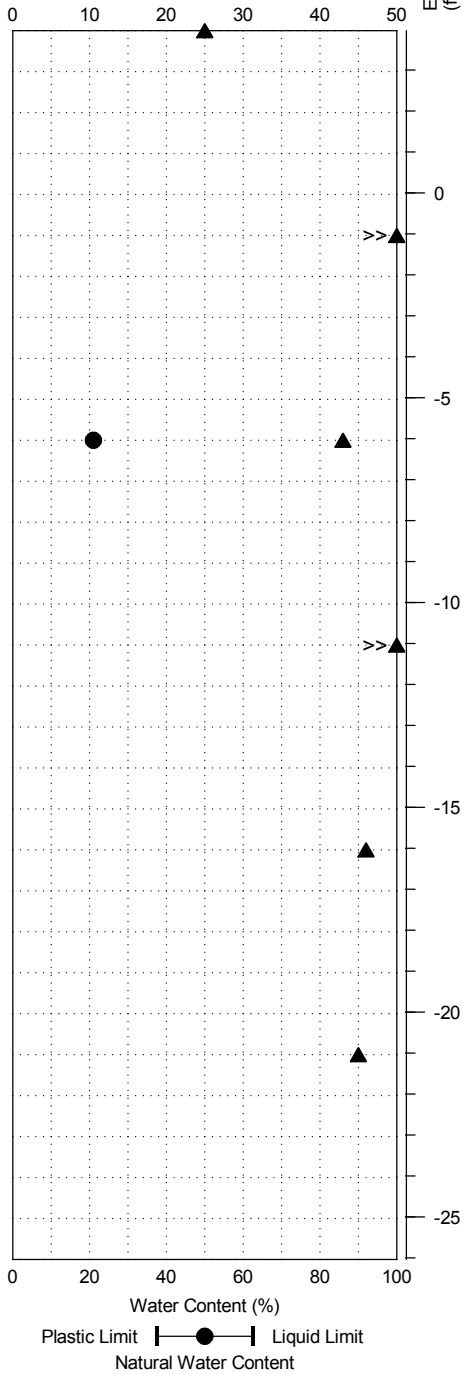
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/2/2017
DATE COMPLETED: 6/2/2017
LOGGED BY: A. York
SURFACE ELEVATION: 34.0 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30		SM	Medium dense, orange to olive-brown, silty, fine to medium SAND, moist. Layers of iron oxide staining, fine, sandy silt, scattered fine to medium gravel, some wood fragments.		S-11	8-11-14	
35		SM	Very dense, light orange to olive-brown, silty, fine to medium gravelly, fine to coarse SAND, moist to wet. Small lens (1-2") of SILT 35.1'. **(ADVANCE OUTWASH)**		S-12	7-24-39	
40			Dense, olive-brown, silty, fine to medium SAND, wet. Iron oxide bands in lower 6", grades to silty, fine SAND in lower 4".		S-13	12-21-22	GS
45			Very dense, light olive-brown, silty, fine to medium SAND, wet. Scattered fine gravel, iron oxide bands in lower 4".		S-14	12-20-38	
50			Dense, olive-gray, silty, fine to coarse SAND, wet. Scattered fine gravel.		S-15	14-19-27	
55			Dense, light olive-brown, silty, fine to coarse SAND, wet. Scattered fine gravel.		S-16	13-20-25	
60			Borehole terminated at 56.5' below ground surface (bgs). Groundwater encountered at ~20' bgs during drilling. Borehole abandoned with bentonite grout.				

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

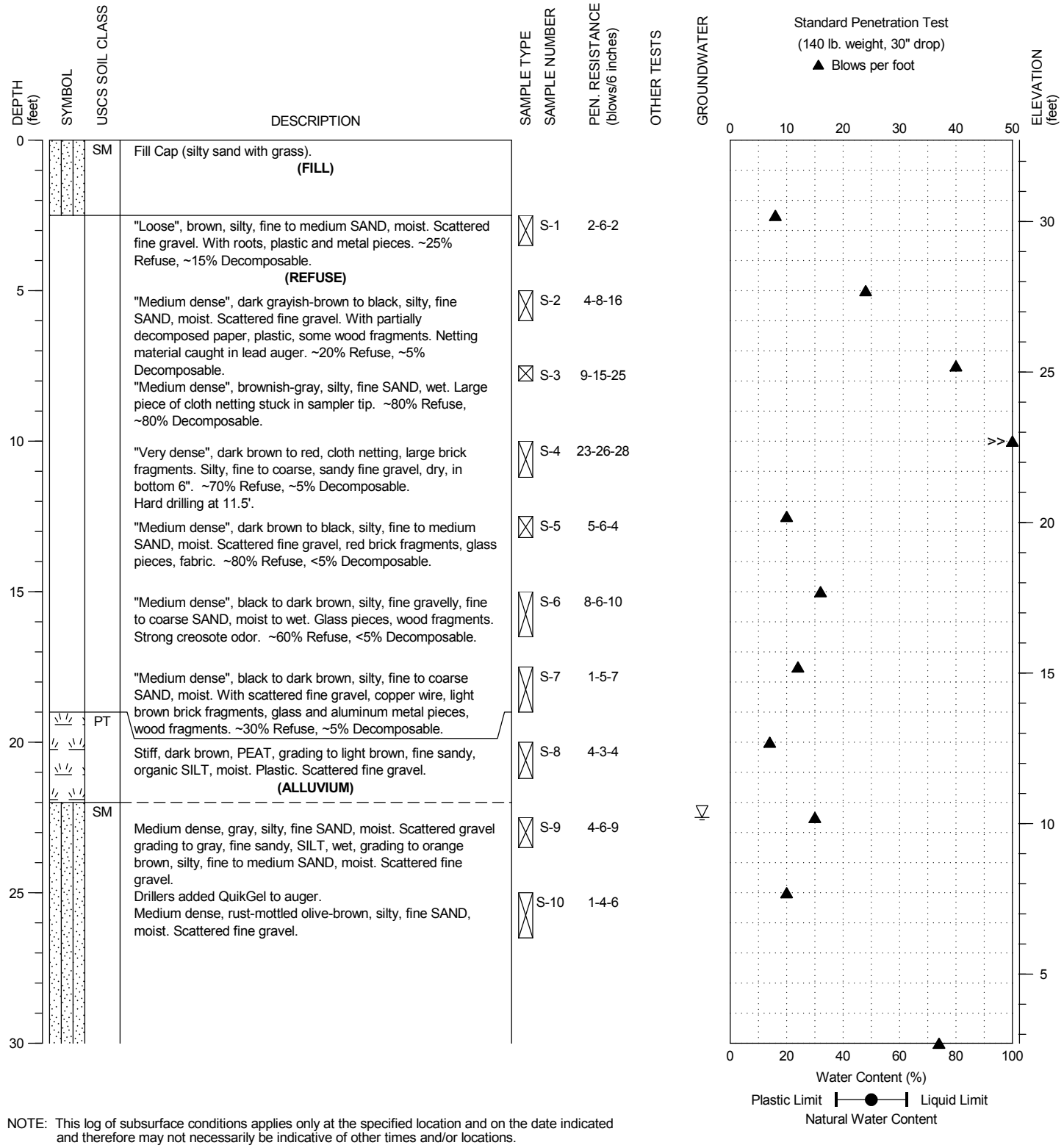
BORING:
BH-12

PROJECT NO.: 2015-061

FIGURE: C-13

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/2/2017
DATE COMPLETED: 6/2/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.7 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-13

PROJECT NO.: 2015-061

FIGURE: C-14

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/2/2017
DATE COMPLETED: 6/2/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.7 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Dense, light olive-brown, rust mottling, silty, fine SAND, wet. Scattered coarse sand. Stratified layers of orange, silty, fine to medium sand.		S-11	15-18-19	
35			Medium dense, olive-gray, silty, fine SAND grading to fine to medium SAND, wet. Stratified layers of rust-mottled, olive-gray, fine to medium SAND.		S-12	7-9-16	
40		SM	Very dense, olive-gray, silty, fine to medium SAND, wet. Trace fine gravel, scattered coarse sand, red bands of iron oxidation. **(ADVANCE OUTWASH)**		S-13	17-22-28	
45			Very dense, olive-brown, silty, fine to coarse SAND, wet. Olive-gray, silty, fine sand in sampler tip.		S-14	16-26-27	
50		SP SM	Very dense, olive-brown, silty, fine to medium SAND grading to fine SAND, wet. Red bands of iron oxide.		S-15	17-27-33	
55			Dense, olive-brown, slightly silty, fine to coarse SAND, wet.		S-16A S-16B S-16C	13-30-50/6"	
60		SP					

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

ELEVATION (feet)
0
-5
-10
-15
-20
-25

>>
>>
>>

0 20 40 60 80 100
Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-13

PROJECT NO.: 2015-061 FIGURE: C-14

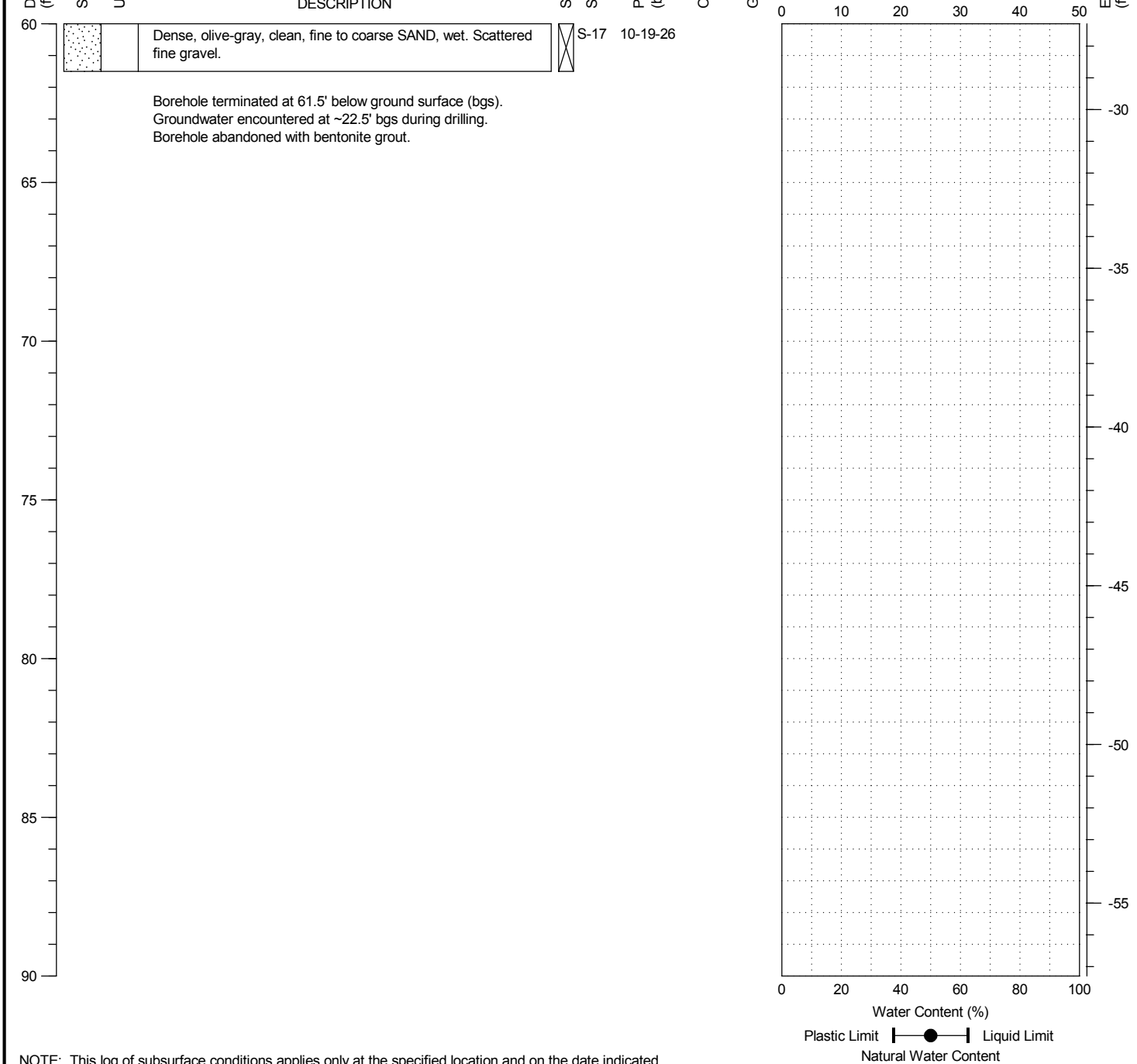
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/2/2017
DATE COMPLETED: 6/2/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.7 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
60			Dense, olive-gray, clean, fine to coarse SAND, wet. Scattered fine gravel.		S-17	10-19-26		

Borehole terminated at 61.5' below ground surface (bgs).
Groundwater encountered at ~22.5' bgs during drilling.
Borehole abandoned with bentonite grout.

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-13

PROJECT NO.: 2015-061

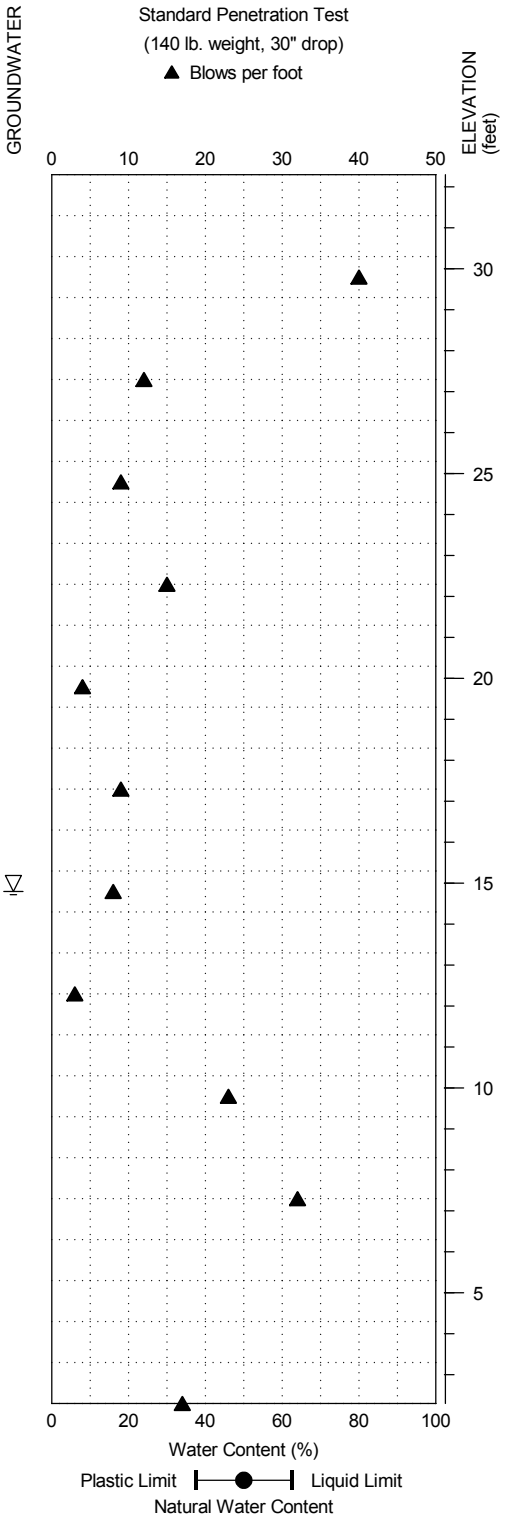
FIGURE: C-14

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/7/2017
DATE COMPLETED: 6/7/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.3 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Silty SAND soil cap. **(FILL)**				
			"Dense", dark brown, silty, fine to medium SAND, moist. Scattered fine gravel, wood fragments. ~10% Refuse, <5% Decomposable. **(REFUSE)**	☒	S-1	20-27-13	
5			"Stiff", dark brown, fine sandy SILT, moist. Scattered fine gravel, wood fragments, glass pieces. ~10% Refuse, <5% Decomposable.	☒	S-2	16-6-6	
			"Loose", dark brown, silty, fine sandy SAND, moist. Scattered fine gravel, red brick fragments and cinders. ~50% Refuse, <5% Decomposable.	☒	S-3	16-5-4	
10			"Medium dense", dark grayish-brown, fine SAND, moist. Scattered fine gravel, glass and metal pieces. ~10% Refuse, <5% Decomposable.	☒	S-4	6-7-8	
			"Loose", dark brown to reddish brown, silty, fine gravelly, fine to coarse SAND, moist. With glass pieces, cinders, and wood fragments. ~40% Refuse, <5% Decomposable.	☒	S-5	2-2-2	
15			"Loose", reddish brown, fine to coarse SAND composed of red brick fragments and fine cinder, grading to a dark brownish black, silty, fine to medium SAND, moist. With scattered fine gravel, wood fragments and red brick fragments, ceramic, and glass. ~40% Refuse, <5% Decomposable.	☒	S-6	3-4-5	
			"Loose", dark brown to black, silty, fine to medium SAND, wet. Consists of charcoal with cinders and glass pieces. ~50% Refuse, 30% Decomposable.	☒	S-7	1-3-5	
20			"Loose", black grading to dark brown, silty, fine to medium SAND, wet. Scattered fine gravel, charcoal, wood, glass and metal pieces. ~60% Refuse, ~30% Decomposable.	☒	S-8	1-2-1	
		ML	Hard, light olive-brown with rust mottling, clayey SILT, moist. Grading to a fine sandy SILT **(ALLUVIUM)**	☒	S-9	6-10-13	
25		SM	Dense, light olive brown with rust mottling, silty, fine SAND, moist. Scattered fine gravel.	☒	S-10	9-13-19	
			Drillers switched over to Mud Rotary.				
30							

GROUNDWATER ▽



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

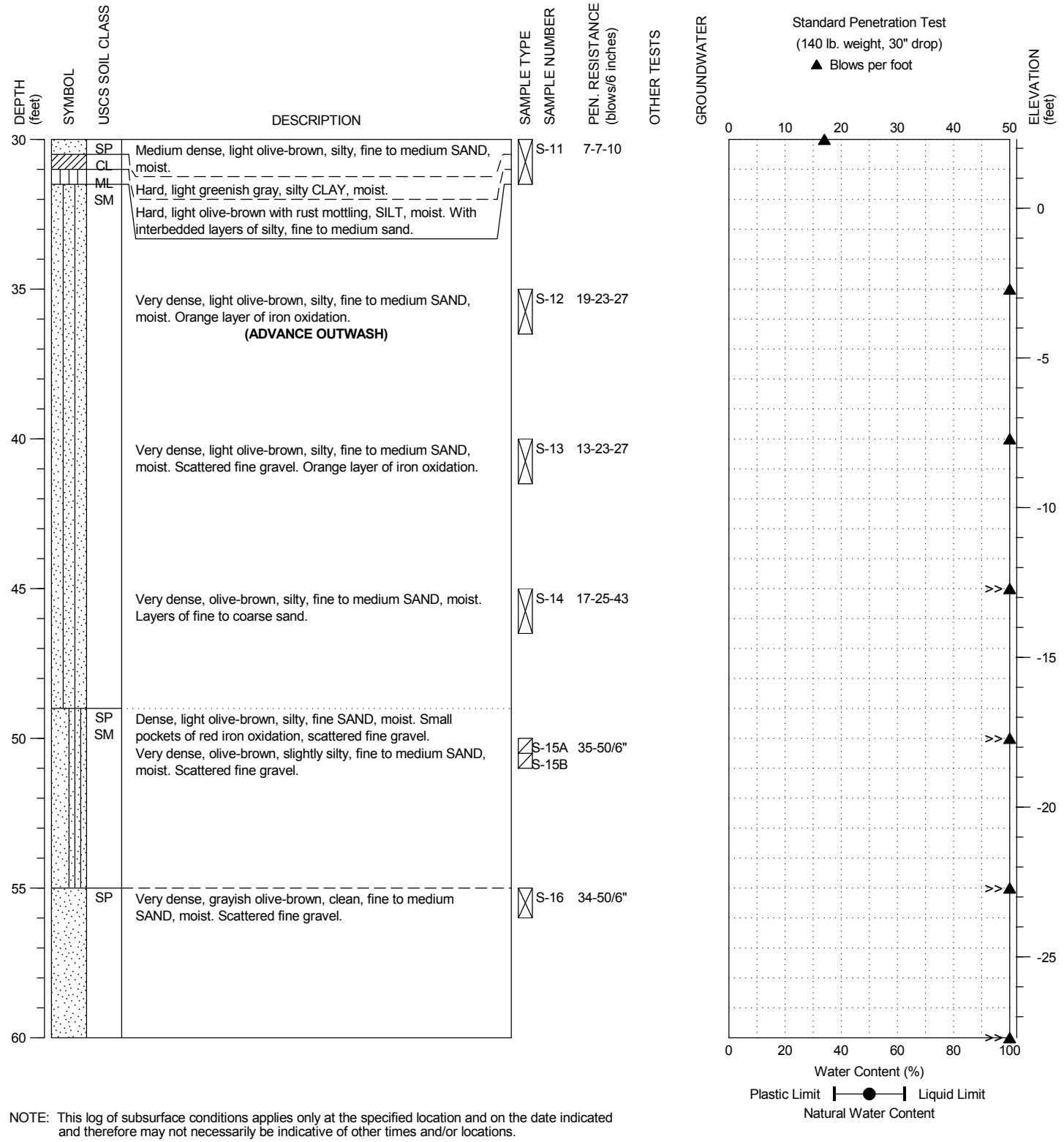
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-14

PROJECT NO.: 2015-061 FIGURE: C-15

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/7/2017
DATE COMPLETED: 6/7/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.3 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-14

PROJECT NO.: 2015-061 FIGURE: C-15

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA & Mud Rotary
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/7/2017
DATE COMPLETED: 6/7/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.3 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
60		SP	Very dense, olive-gray, silty, fine SAND grading to clean, fine to medium SAND, wet. Scattered fine gravel.		S-17	26-27-32	
		ML	Hard, olive-gray, SILT, moist. Nonplastic.				
		SP SM	Very dense, dark olive-gray, slightly silty, fine to medium SAND, moist.		S-18	33-21-37	
70		ML	Hard, dark brownish gray, SILT, moist. Interbedded with dark brown to black organics. **(PRE-VASHON ALLUVIUM)**		S-19A S-19B S-19C	32-35-50/5"	DS
		SP SM	Very dense, dark olive-gray, slightly silty, fine to medium SAND, moist.		S-20	25-34-38	
75			Borehole terminated at 76.5' below ground surface (bgs). Groundwater encountered at ~17.5' bgs during drilling. Borehole abandoned with bentonite grout.				
80							
85							
90							

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

ELEVATION (feet)
-30 -35 -40 -45 -50 -55

0 20 40 60 80 100
Water Content (%)
Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

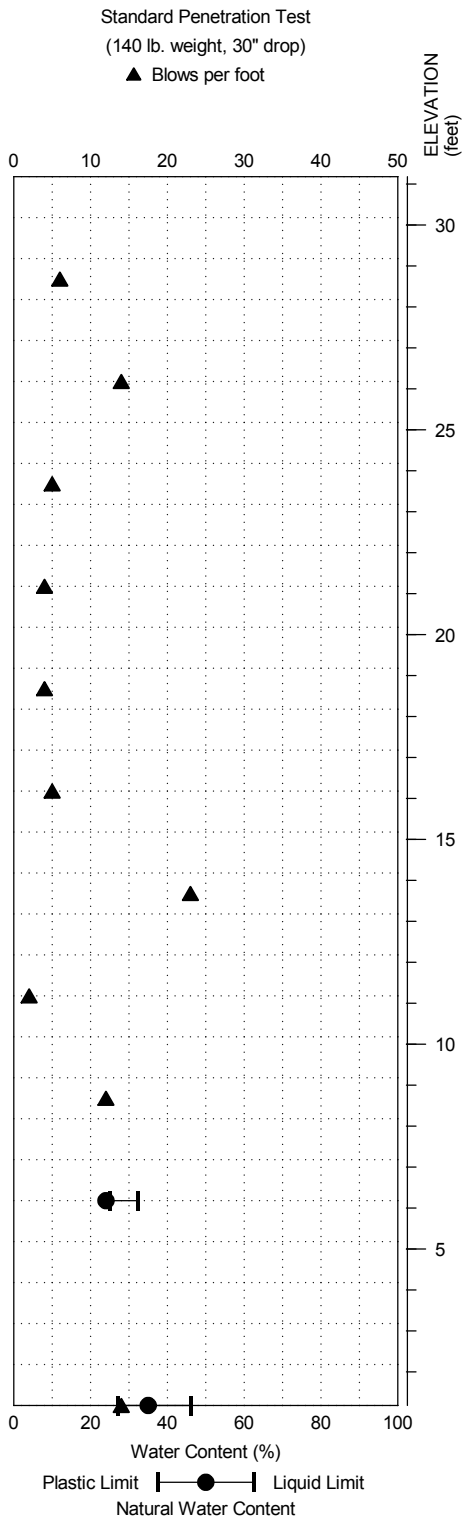
BORING:
BH-14

PROJECT NO.: 2015-061 FIGURE: C-15

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: A. York
SURFACE ELEVATION: 31.2 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Silty, gravelly SAND. **(FILL)**				
			Loose, brown grading to black, silty, fine SAND, moist, scattered fine gravel and rootlets.		S-1	5-3-3	
5			Loose, brown olive-gray, silty, fine to coarse SAND, moist, grading to silty, fine gravelly, fine to coarse SAND.		S-2	2-8-6	
			"Loose", dark brown, silty, fine to coarse SAND, wet, glass and brick pieces, ~30% Refuse, <5% Decomposable. **(REFUSE)**		S-3	2-3-2	
10			"Soft", dark grayish, greenish brown, SILT, moist. Plastic. Some rootlets, blue glass in bottom of sample. ~10% Refuse, <5% Decomposable.		S-4	2-1-3	
			No recovery: Some sample in tip shows brown, silty, fine to coarse SAND.		NR	2-2-2	
15			"Loose", red to light brown, brick fragments in top 2", cinder and glass pieces, some soil, light brown, SAND. ~95% Refuse, <5% Decomposable.		S-5	2-3-2	
			"Medium dense", light orange-brown, gravelly cinder pieces, dry, scattered fine gravel, some silty, fine to medium SAND. ~90% Refuse, <5% Decomposable.		S-6	13-19-4	
20		ML	Soft, brown, fine sandy, SILT, wet. Plastic. Some black mottling. **(ALLUVIUM)**		S-7	2-1-1	
			Very stiff, light grayish brown with orange mottling, SILT, moist. Nonplastic.		S-8	5-5-7	
25			Very stiff, light olive brown, SILT, moist. With scattered organics.		S-9	Push	DS AL
30							



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-15

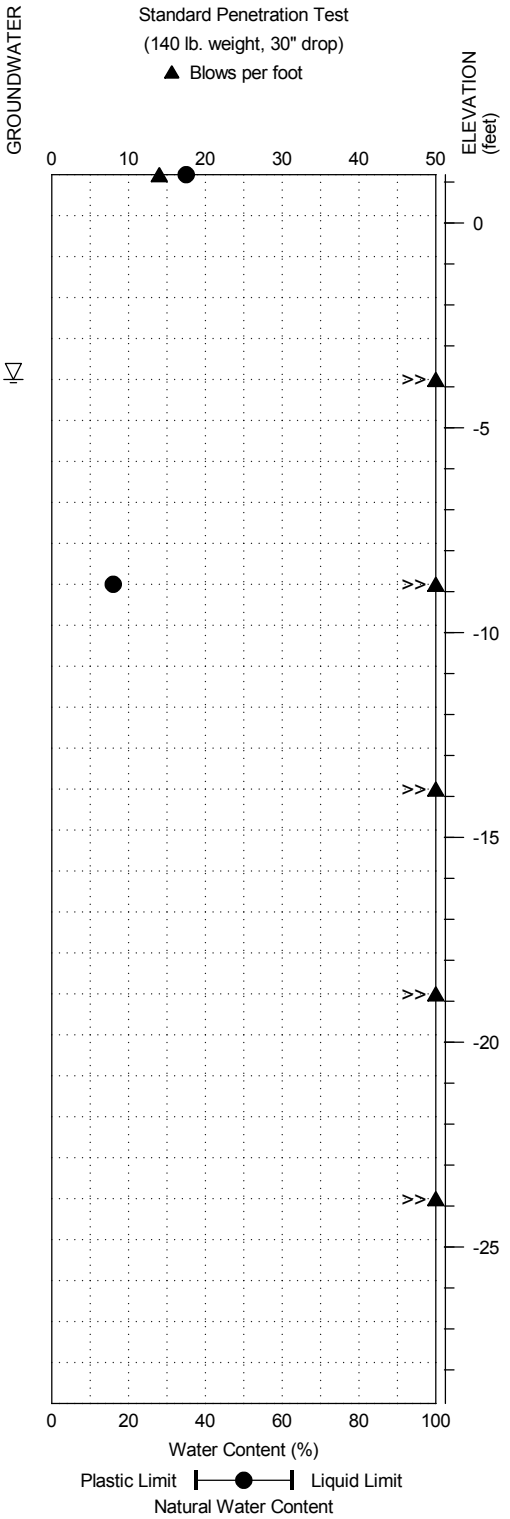
PROJECT NO.: 2015-061 FIGURE: C-16

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: A. York
SURFACE ELEVATION: 31.2 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30		ML	Very stiff, light olive-brown with gray and orange mottling, SILT, moist. Moderately plastic.		S-10	3-5-9	AL
35		SP SM	Very dense, olive-brown, silty, fine to medium, grading to fine to coarse SAND, wet. Some fine gravel in bottom 6". **(ADVANCE OUTWASH)**		S-11	32-50/5"	
40			Very dense, olive-brown, slightly silty, fine to coarse SAND, wet. Drillers used QuikGel grout.		S-12	9-28-36	GS
45		SM	Very dense, olive-brown, slightly silty, fine to medium SAND, wet, with some lenses of silty, fine SAND.		S-13	22-24-33	
50			Very dense, orange-brown, silty, fine to medium SAND, wet.		S-14	9-31-50/5"	
55			Very dense, orange-brown, silty, fine to medium SAND, wet, olive-gray lens at 56.2-56.4', grades to fine to coarse SAND.		S-15	10-38-35	
60			Borehole terminated at 56.5' below ground surface (bgs). Groundwater encountered at 35' bgs during drilling. Borehole abandoned with bentonite grout.				

GROUNDWATER



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-15

PAGE: 2 of 2

PROJECT NO.: 2015-061 FIGURE: C-16

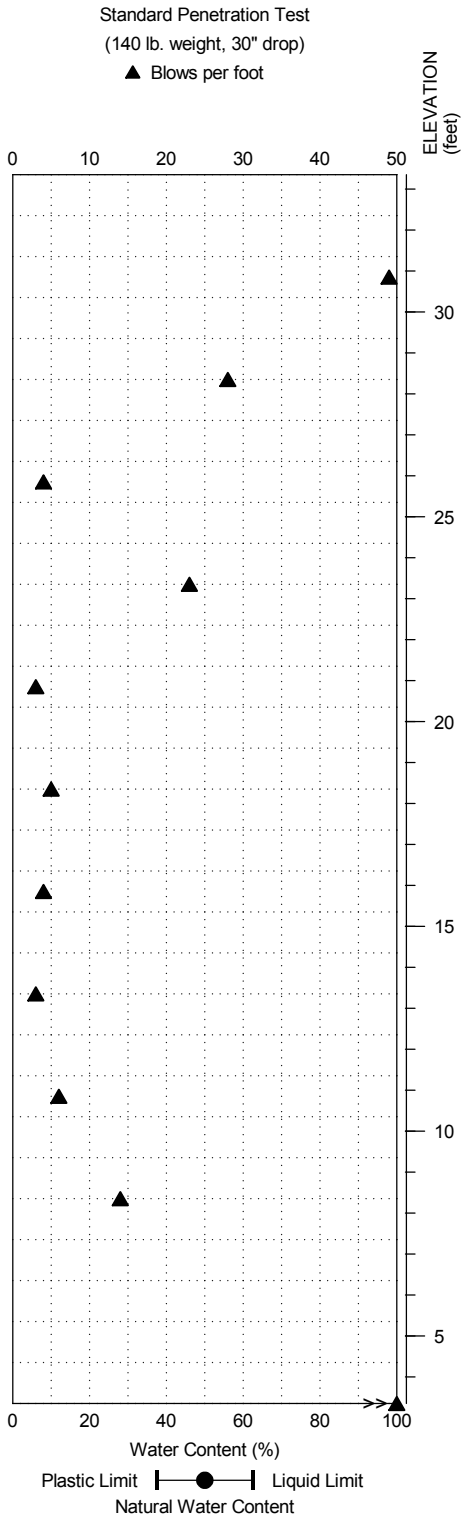
BORING-DSM 2015-061.GPJ 12/11/18

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Medium dense, olive brown, fine to coarse gravelly, silty, fine to coarse SAND, moist. **(FILL)**				
			"Dense", light brown to dark brown, silty, fine to medium SAND, moist. Wood fragments. ~10% Refuse, ~10% Decomposable. **(REFUSE)**		S-1	12-24-25	
5			"Medium dense", black to dark brown, asphalt with silty, fine to medium SAND, moist. Brick fragments, glass, hard plastic pieces, scattered fine to coarse gravel. ~20% Refuse, <5% Decomposable.		S-2	9-11-17	
			"Loose", reddish-black, silty, fine to coarse SAND, moist. Red brick fragments, glass pieces, fine grains of cinders, metal wire piece (1"). ~40% Refuse, <5% Decomposable.		S-3	1-1-3	
10			"Medium dense", dark red to black, red brick and cinder grains, with silty, fine to coarse SAND, moist. Scattered fine to medium gravel, glass pieces. ~50% Refuse, <5% Decomposable.		S-4	2-8-15	
			"Loose", dark brown to black, silty, fine to coarse SAND, wet. Fine to coarse grains of cinder and red brick, hard plastic pieces, scattered fine medium gravel. ~80% Refuse, <5% Decomposable.		S-5	1-1-2	
15			"Loose", dark brown to black, silty, fine to coarse SAND, moist to wet. Red brick fragments, glass pieces, burnt wood fragments. ~80% Refuse, <5% Decomposable.		S-6	2-1-4	
			"Loose", dark brown to black, silty, fine to coarse SAND, wet. Glass pieces. ~20% Refuse, <5% Decomposable.		S-7	3-2-2	
20			"Loose", dark brown to black, silty, fine to coarse SAND, wet. Metal and glass pieces, scattered fine to coarse gravel. ~20% Refuse, <5% Decomposable.		S-8	2-1-2	
			"Loose", black, silty, fine to coarse sandy, fine GRAVEL, wet. Glass pieces. ~30% Refuse, <5% Decomposable.		S-9	2-1-5	
25			"Medium dense", black, silty, fine gravelly, fine to coarse SAND, wet. Wood fragments, glass. 3" layer of olive-gray, silty fine to medium SAND, scattered fine gravel at 25.4'. ~40% Refuse, 10% Decomposable.		S-10	5-7-7	
30							

GROUNDWATER ▽



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-17

PROJECT NO.: 2015-061 FIGURE: C-18

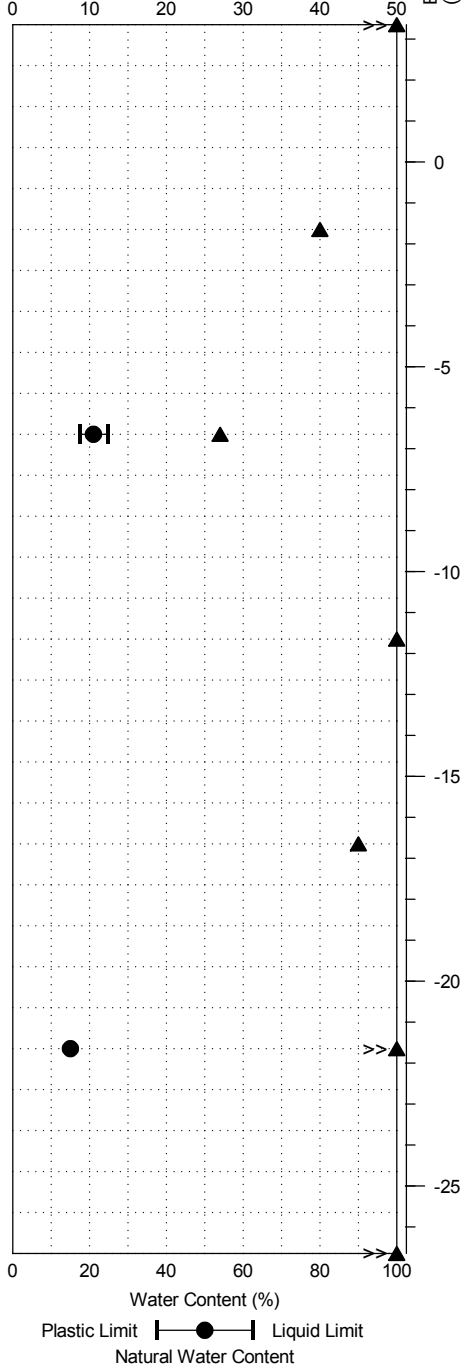
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			"Hard", black, WOOD fragments with silty, fine to coarse SAND, wet. Scattered fine gravel. ~50% Refuse, ~50% Decomposable.	☒	S-11	4-25-50/5"	
			Driller injected QuikGel into auger at 35'.				
35		ML	Hard, dark brown-coated, partially decomposed WOOD with some dark brown SILT above the wood, ~90% decomposable. **(ALLUVIUM)**	☒	S-12	17-17-23	
			Very hard drilling at 37'-40'.				
40		ML SC	Slough contains mixture of wood fragments and SILT. Very stiff, olive-brown with rust mottling, clayey SILT, moist. Grades to olive-brown, clayey, fine to medium SAND, moist. Scattered fine gravel.	☒	S-13	11-13-14	AL GS
45		SM	Very dense, light orange olive-brown, silty, fine to coarse SAND, wet. Scattered fine gravel. **(ADVANCE OUTWASH)**	☒	S-14	17-22-28	
50			Dense, light orange olive-brown, silty, fine to medium SAND, wet.	☒	S-15	12-21-24	
55		SW SM	Very dense, olive-brown, slightly silty, fine to medium SAND, wet. Trace fine gravel.	☒	S-16	20-30-40	GS
60							

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-17

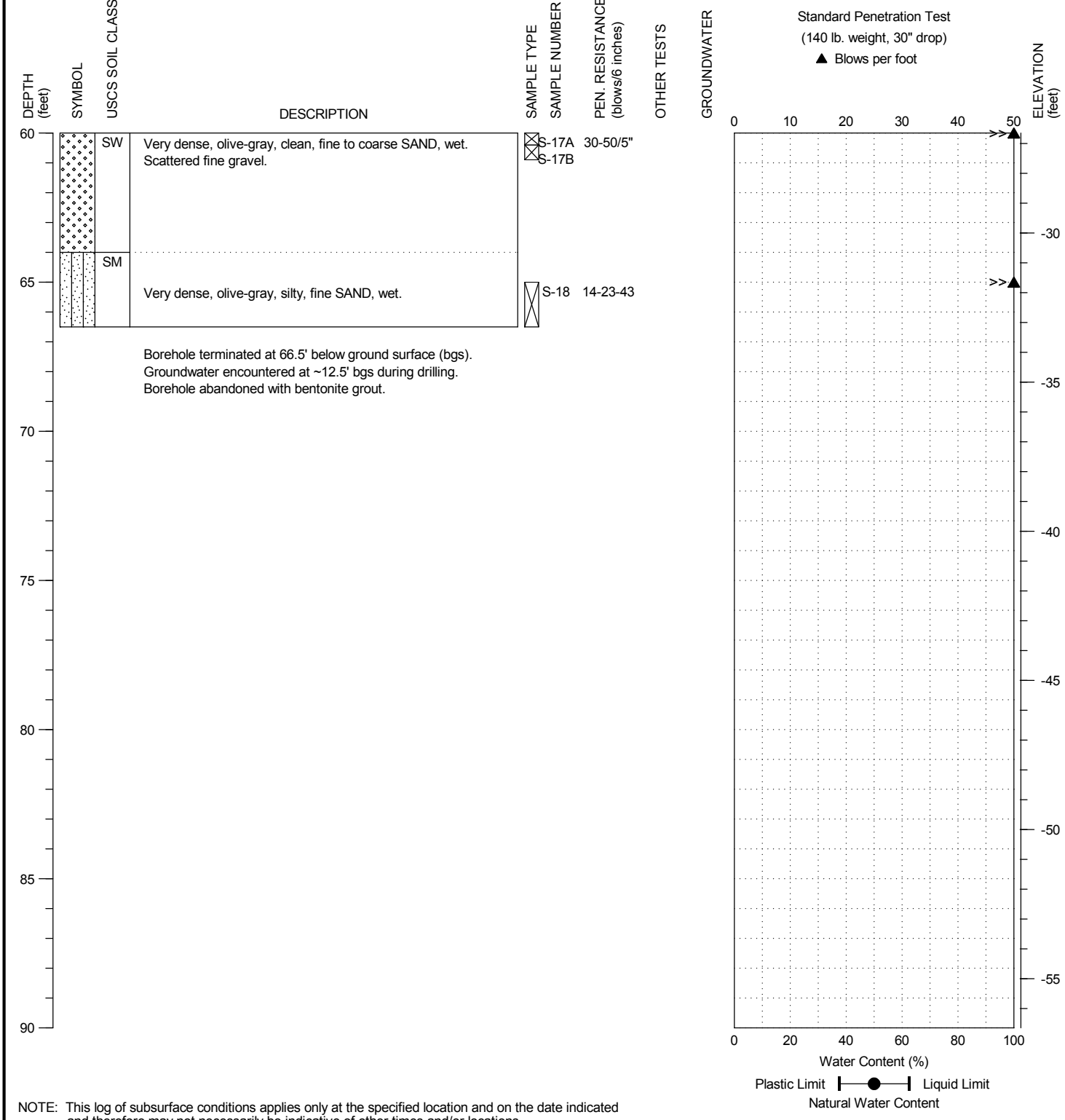
PROJECT NO.: 2015-061 FIGURE: C-18

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
60		SW	Very dense, olive-gray, clean, fine to coarse SAND, wet. Scattered fine gravel.		S-17A S-17B	30-50/5"		
65		SM	Very dense, olive-gray, silty, fine SAND, wet.		S-18	14-23-43		

Borehole terminated at 66.5' below ground surface (bgs).
Groundwater encountered at ~12.5' bgs during drilling.
Borehole abandoned with bentonite grout.



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

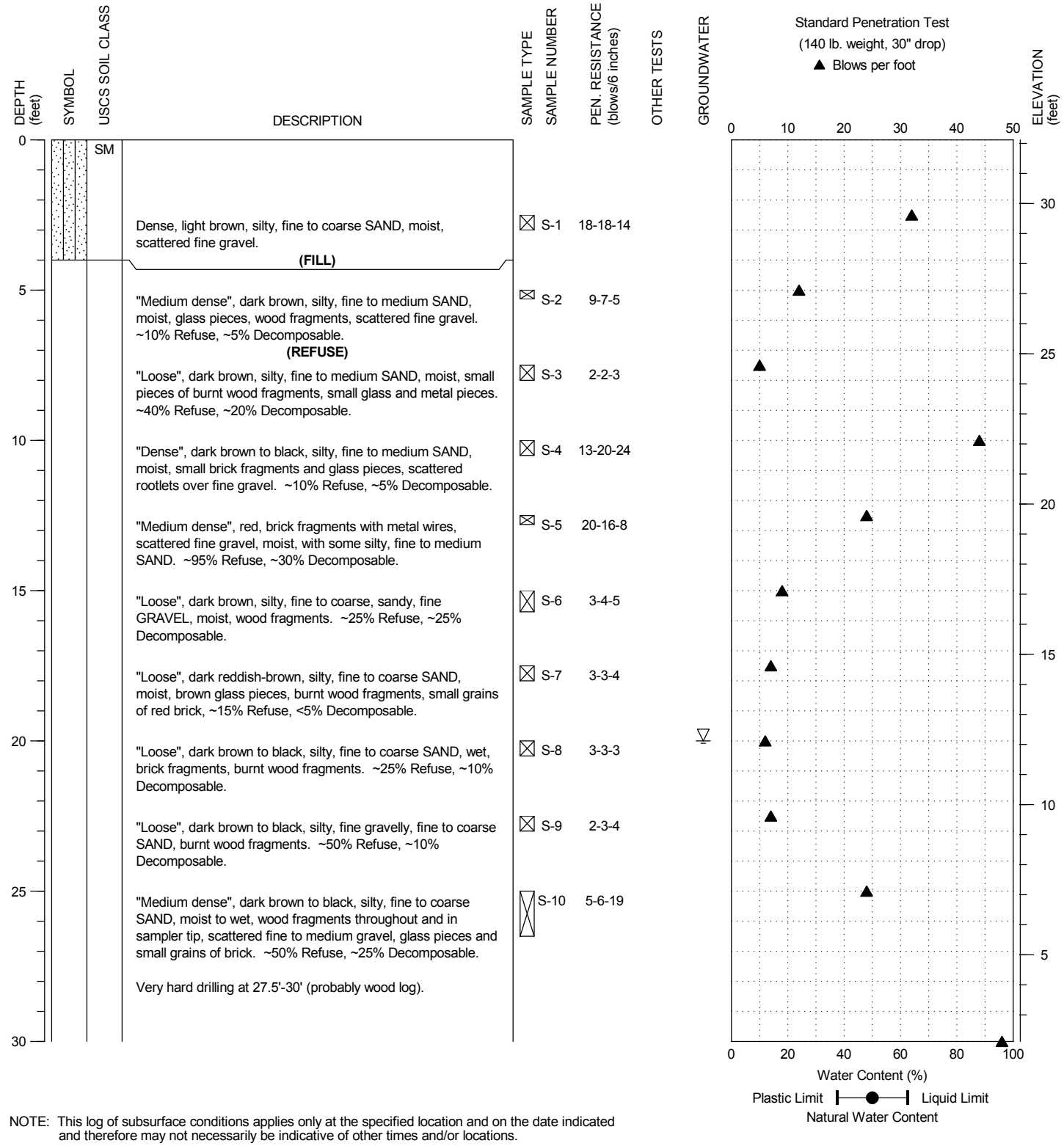
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-17

PROJECT NO.: 2015-061 FIGURE: C-18

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.1 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-18

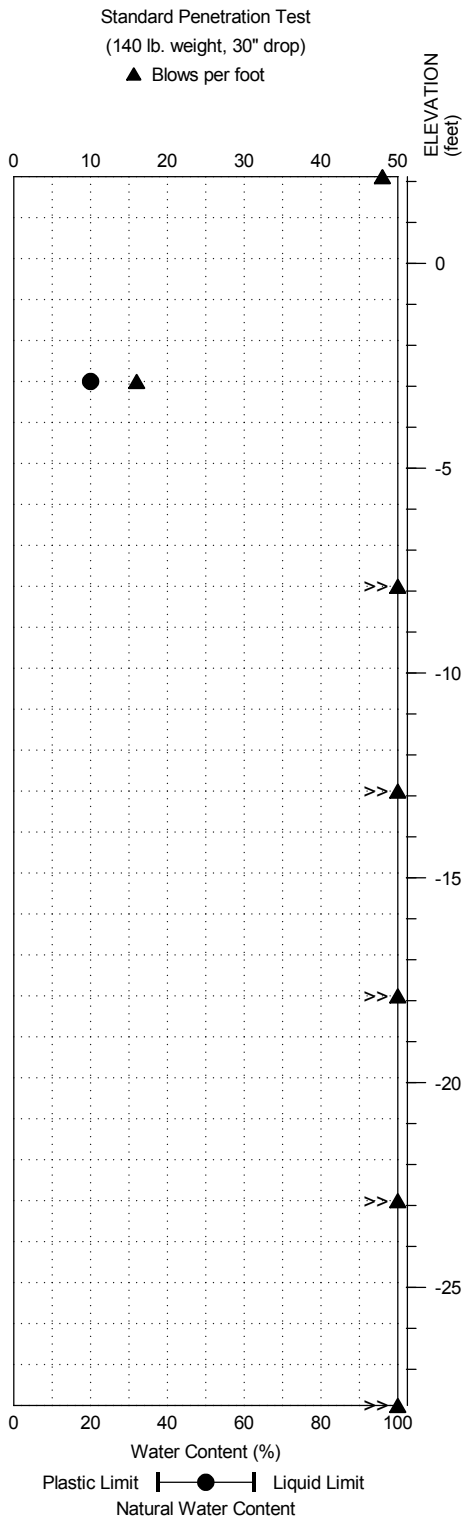
PROJECT NO.: 2015-061

FIGURE: C-19

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30			"Dense", dark brown-coated, undecomposed WOOD, dry. 100% Refuse, 100% Decomposable.		S-11	13-20-28		
			Hard drilling continues from 31.5'-35'.					
35		ML	Medium dense, brownish-gray, silty, fine to medium SAND,		S-12	4-7-9		
		SM	grading to very stiff, light gray with rust mottling, SILT, moist. **(ALLUVIUM)**					
			@ 37.5 feet: Shelby Tube sample attempted; Too firm to push, no recovery.		NR	Push		
		SM						
40			~5" of slough (light olive-brown, silty, fine to medium SAND). Very dense, light olive-brown, silty, fine to coarse SAND, wet. **(ADVANCE OUTWASH)**		S-13	50/5"		
45			Driller using QuikGel in borehole. Very dense, light olive-brown, silty, fine gravelly, fine to medium SAND, wet.		S-14	20-50/3"		
50			Very dense, light olive-brown, silty, fine to coarse SAND, wet, scattered fine gravel.		S-15	20-50/4"		
55			Very dense, light olive-brown, silty, fine to coarse SAND, wet.		S-16A S-16B	21-50/6"		
60								



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-18

PROJECT NO.: 2015-061

FIGURE: C-19

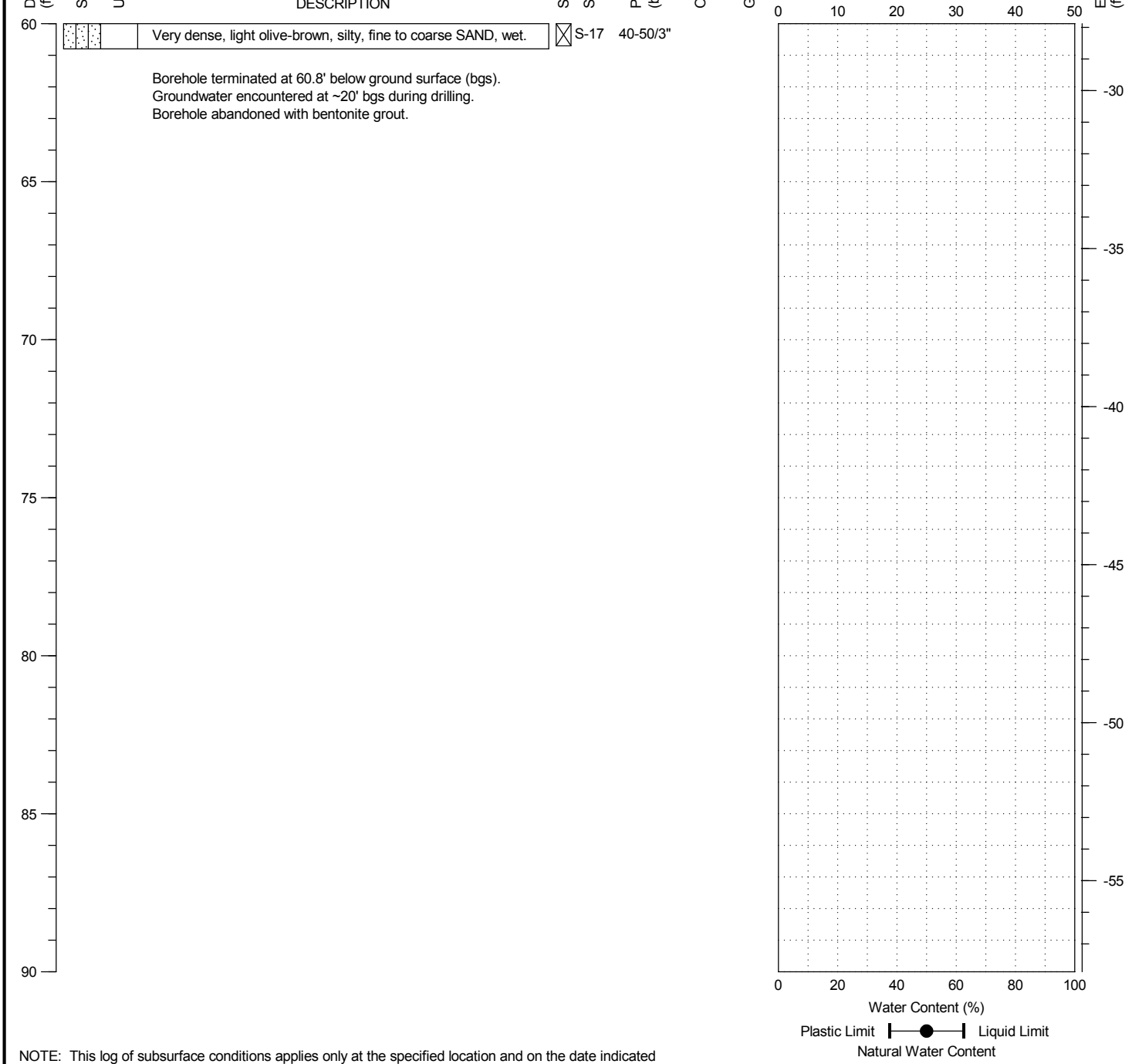
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 32.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
60			Very dense, light olive-brown, silty, fine to coarse SAND, wet.		S-17	40-50/3"		

Borehole terminated at 60.8' below ground surface (bgs).
Groundwater encountered at ~20' bgs during drilling.
Borehole abandoned with bentonite grout.

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-18

PROJECT NO.: 2015-061

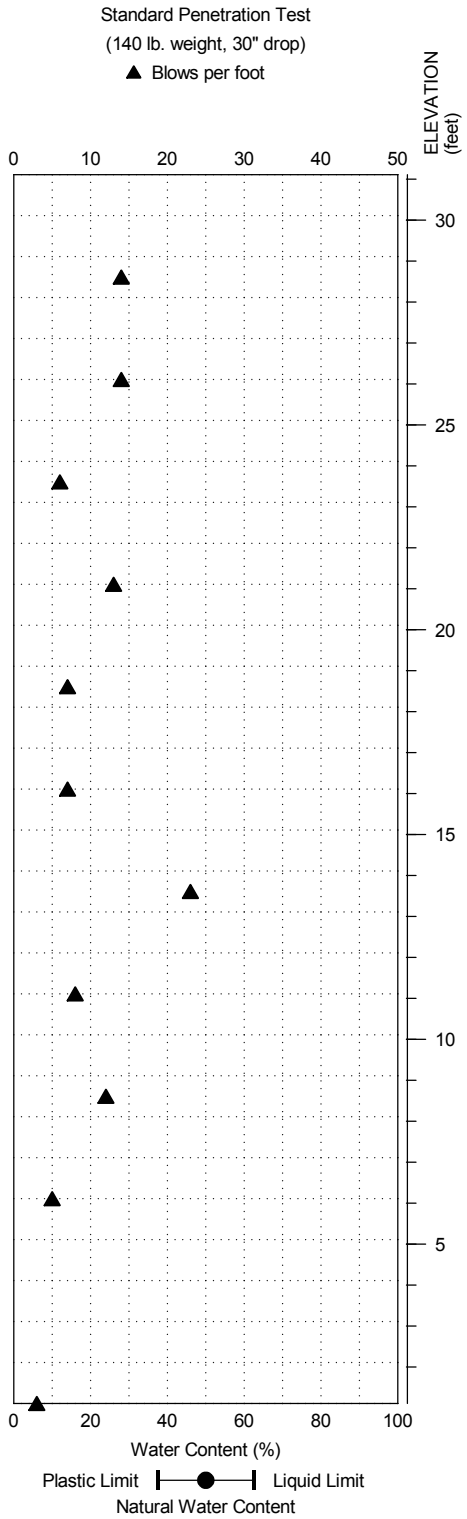
FIGURE: C-19

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 31.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Medium dense, dark brown, silty, fine to medium SAND, moist, scattered fine to medium gravel. **(FILL)**	☒	S-1	5-6-8	
5			Medium dense, dark brown, silty, fine to medium gravelly, fine to medium SAND, moist, small rootlets, <1% Decomposable.	☒	S-2	6-7-7	
			"Loose", black, silty, fine to medium SAND, moist, glass pieces and mostly decomposed paper. ~20% Refuse, ~10% Decomposable. **(REFUSE)**	☒	S-3	2-3-3	
10			"Medium dense", black, silty, fine to coarse SAND with REFUSE, moist. Pieces of glass, decomposed paper and metal, wood fragments. ~40% Refuse, ~5% Decomposable.	☒	S-4	4-7-6	
			"Loose", orange-brown to black, silty, fine gravelly, fine to coarse SAND, dry, pieces of cinder. ~10% Refuse, <5% Decomposable.	☒	S-5	3-3-4	
15			"Loose", reddish-brown, fine, sandy SILT to silty fine to medium SAND, moist, pieces of glass, metal wire, scattered fine gravel. ~10% Refuse, <5% Decomposable.	☒	S-6	3-3-4	
			"Medium dense", dark brown to black, silty, fine to coarse SAND, moist, pieces of glass, scattered fine gravel. ~10% Refuse, <5% Decomposable.	☒	S-7	6-9-14	
20			"Loose", dark brown to brownish red, silty, fine to coarse, sandy, fine GRAVEL, wet. Crushed cinder in bottom 3". ~10% Refuse, <5% Decomposable.	☒	S-8	3-4-4	
			"Medium dense", black, silty, fine to coarse, sandy, fine GRAVEL, wet. Large piece of cinders, ceramic and glass pieces, copper wiring. ~20% Refuse, <5% Decomposable.	☒	S-9	10-7-5	
25			"Loose", dark brown, silty, fine to coarse SAND, wet. Small grains of cinders, pieces of glass, wood fragments. ~20% Refuse, <5% Decomposable.	☒	S-10	2-2-3	
30		PT					

GROUNDWATER ▽



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-19

PROJECT NO.: 2015-061

FIGURE: C-20

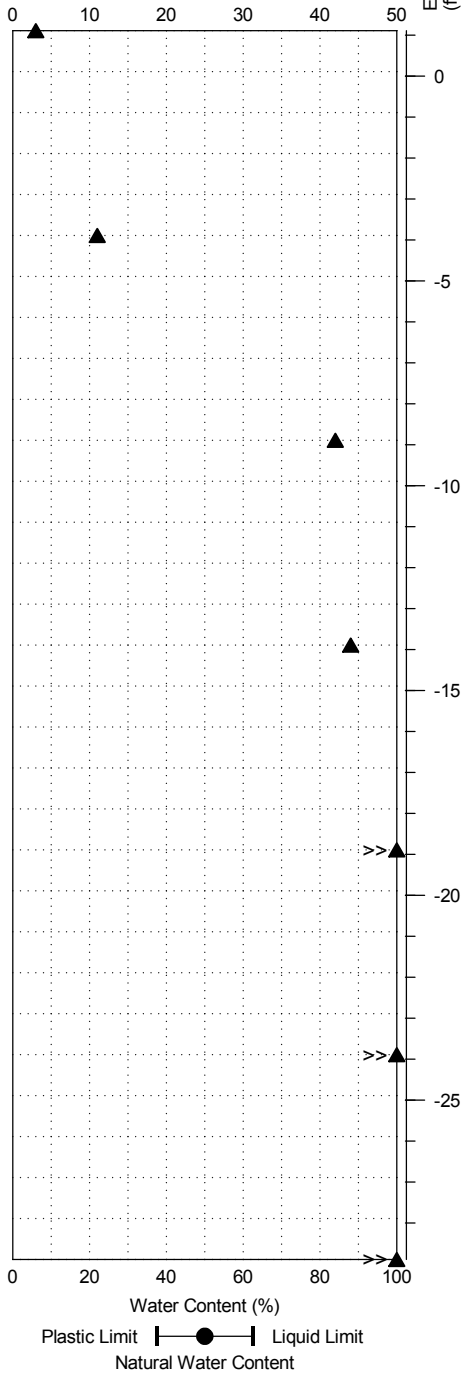
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 31.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			Soft, dark brown, PEAT, moist, with wood chips and rootlets, grading to dark brownish-gray, organic SILT, plastic. **(ALLUVIUM)**		S-11	1-1-2	
35		SM	Medium dense, olive-brown, silty, fine to medium SAND, wet, trace fine gravel.		S-12	2-5-6	
40		SP SM	Driller added QuikGel to auger. Dense, olive-brown, slightly silty, fine to coarse SAND, wet, grading to silty, fine to medium SAND, scattered fine gravel. **(ADVANCE OUTWASH)**		S-13	9-14-28	
45		SM	Dense, olive-brown, silty, fine to medium SAND, moist, small layers (1mm) of iron oxide.		S-14	9-19-25	
50			Very dense, olive-brown, silty, fine to coarse SAND, wet, grading to brownish dark red, silty, fine SAND with heavy iron oxide staining, grading to silty, fine to medium SAND.		S-15	11-24-35	
55		SP SM	Very dense, olive-gray, slightly silty, fine to medium SAND, moist.		S-16	13-24-34	
60		ML	Hard, olive-brown, SILT, moist. Laminated, nonplastic. **(PRE-VASHON ALLUVIUM)**				

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

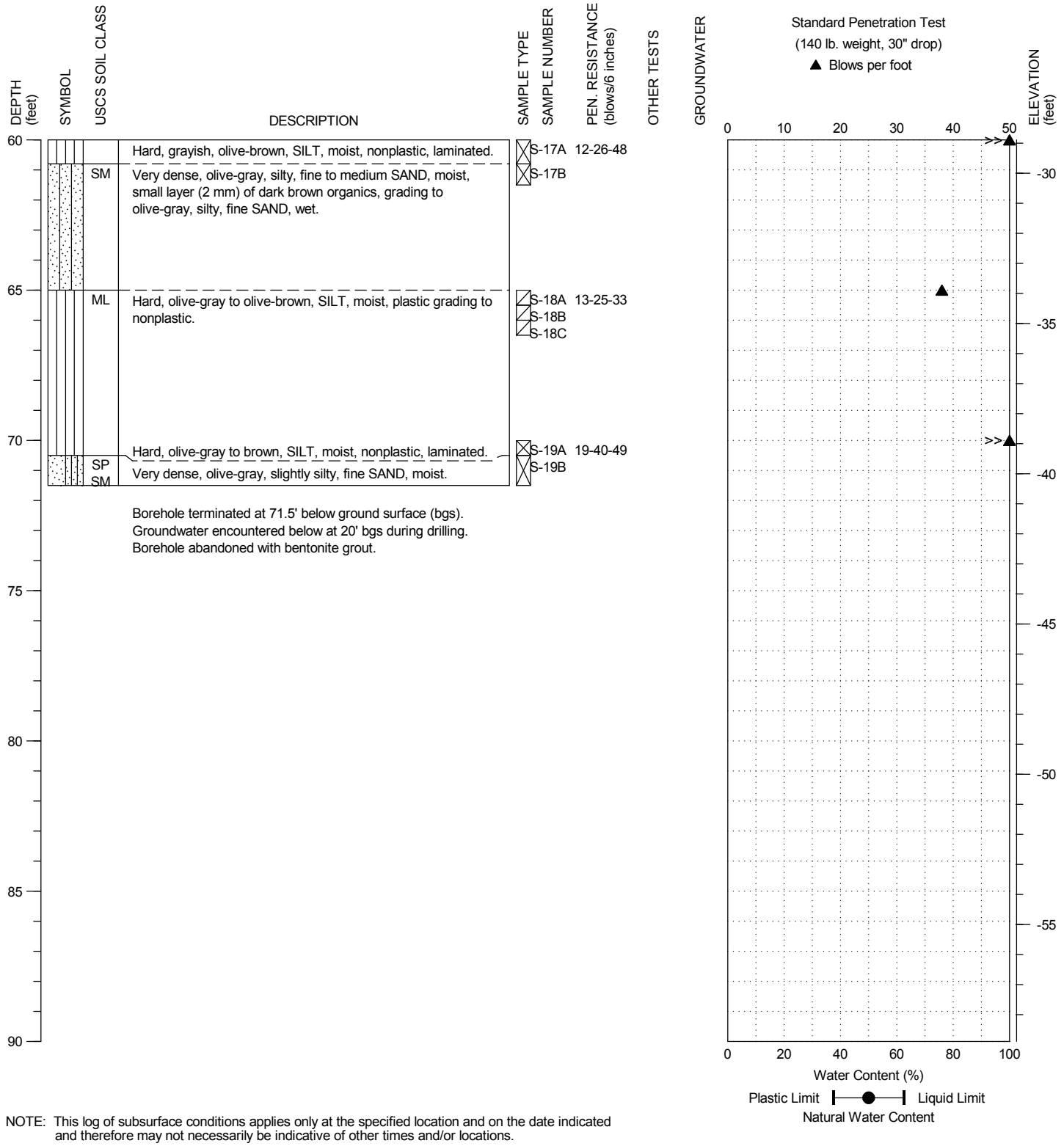
BORING:
BH-19

PROJECT NO.: 2015-061

FIGURE: C-20

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: A. York
SURFACE ELEVATION: 31.1 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-19

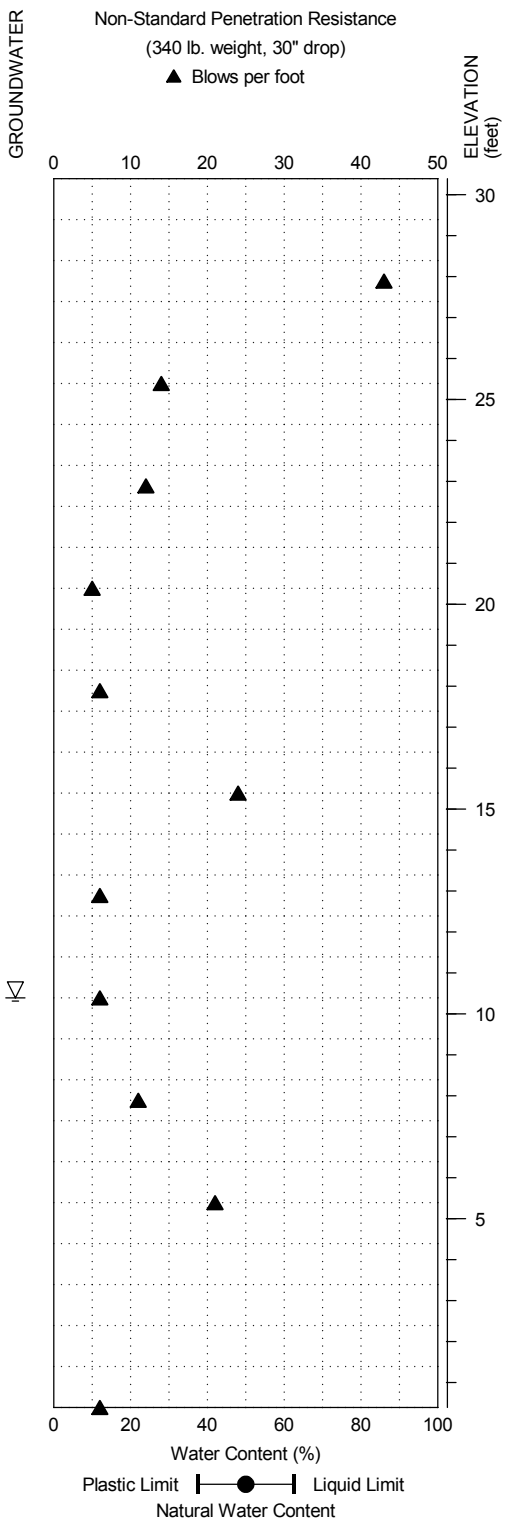
PROJECT NO.: 2015-061

FIGURE: C-20

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer; CA w/ 340 lb. Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Dense, dark gray to dark brown to black, silty, fine gravelly, fine to coarse SAND, dry. Pieces of asphalt. **(FILL)**		S-1	14-21-22	
5			"Medium dense", olive-gray to dark brown, silty, fine to medium SAND, moist. Wood from 6.2' to 6.4'. Scattered fine to medium gravel. ~40% Refuse, ~30% Decomposable. **(REFUSE)**		S-2	5-8-6	
			"Medium dense", olive-brown to black, silty, fine to medium SAND, wet. Scattered fine to medium gravel, wood fragments, plastic and glass pieces. ~15% Refuse, ~5% Decomposable. **140-lb hammer broke down. Switched over to 340-lb hammer and California sampler.**		S-3	5-8-7	
10			"Loose", black, silty, fine to coarse SAND, wet. Wood fragments, glass, metal, and paper pieces. ~50% Refuse, ~10% Decomposable.		S-4	1-2-1	
			"Loose", dark brown to black, silty, fine to coarse SAND, wet. Partially decomposed paper, glass and ceramic pieces. ~50% Refuse, ~10% Decomposable.		S-5	3-2-2	
15			"Medium dense", dark brown to black, silty, fine to medium SAND, moist. Large wood fragments and aluminum can, glass, ceramic and metal wire pieces. ~50% Refuse, ~25% Decomposable.		S-6	5-7-8	
			"Loose", brown to gray, silty, fine to medium SAND, moist. Scattered fine to medium gravel. Wood fragments in upper 4". ~50% Refuse, ~50% Decomposable.		S-7	3-2-2	
20			"Loose", dark brown to black, silty, fine to medium SAND, wet. Aluminum can, glass pieces. ~15% Refuse, ~25% Decomposable.		S-8	2-2-2	
			"Loose", dark brown, silty, fine to coarse SAND, wet. Glass and ceramic pieces. ~20% Refuse, ~25% Decomposable.		S-9	1-2-5	
25		PT	Stiff, dark brown to black, silty, fine to medium SAND, wet. Dark brown PEAT with wood fragments in tip of sampler. **(ALLUVIUM)**		S-10	4-7-6	
			Driller added QuikGel in auger.				
30							



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

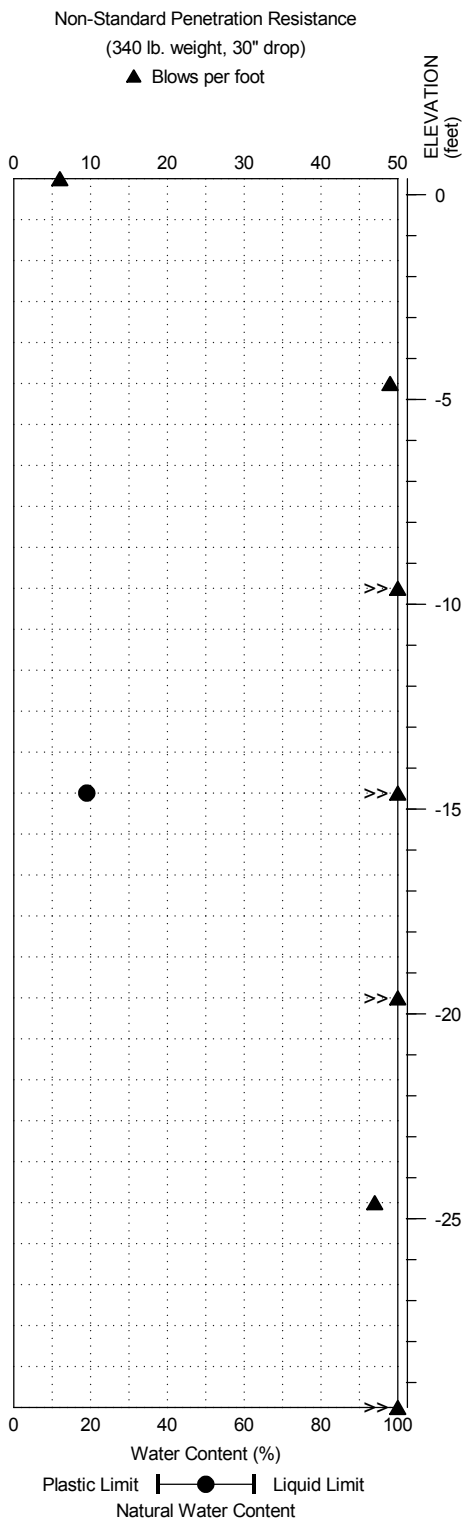
BORING:
BH-20

PROJECT NO.: 2015-061 FIGURE: C-21

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer; CA w/ 340 lb. Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30			Soft, dark brown, PEAT, moist.		S-11	2-2-2		
		ML SM	Soft, light olive-brown, fine to medium sandy, SILT, wet. Plastic.					
		SM						
35			Dense, olive-brown with rust mottling, silty, fine SAND, wet. Stratified layers of fine to coarse sand. **(ADVANCE OUTWASH)**		S-12	9-14-17		
		SP SM						
40			Very dense, light olive-brown, slightly silty, fine gravelly, fine to coarse SAND, wet.		S-13	9-19-28		
45			Very dense, light olive-brown, slightly silty, fine to medium SAND, wet. Grading to olive-brown with rust mottling, slightly silty, fine gravelly, fine to coarse SAND, wet.		S-14	9-16-19		
50			Very dense, light olive-brown, slightly silty, fine to coarse SAND, wet. Grading to fine to medium SAND, moist. Scattered fine gravel.		S-15	11-17-20		
55		SP	Dense, olive-gray, clean, fine to coarse SAND, wet.		S-16A	4-11-19		
		ML SM	Hard, olive-gray, SILT, moist. Nonplastic. Laminated. **(PRE-VASHON ALLUVIUM)**		S-16B			
60								



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

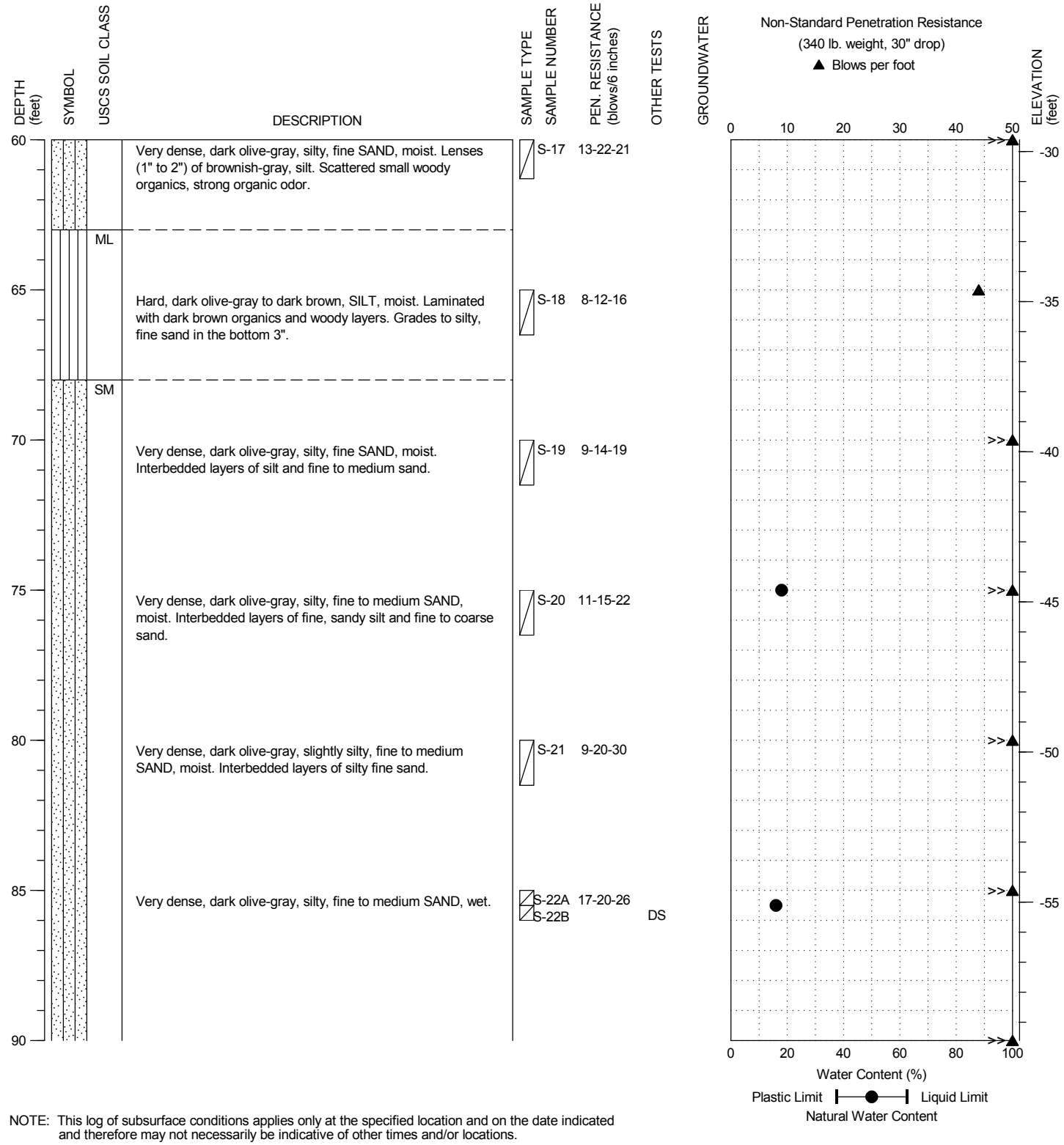
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-20

PROJECT NO.: 2015-061 FIGURE: C-21

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer; CA w/ 340 lb. Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.4 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-20

PROJECT NO.: 2015-061

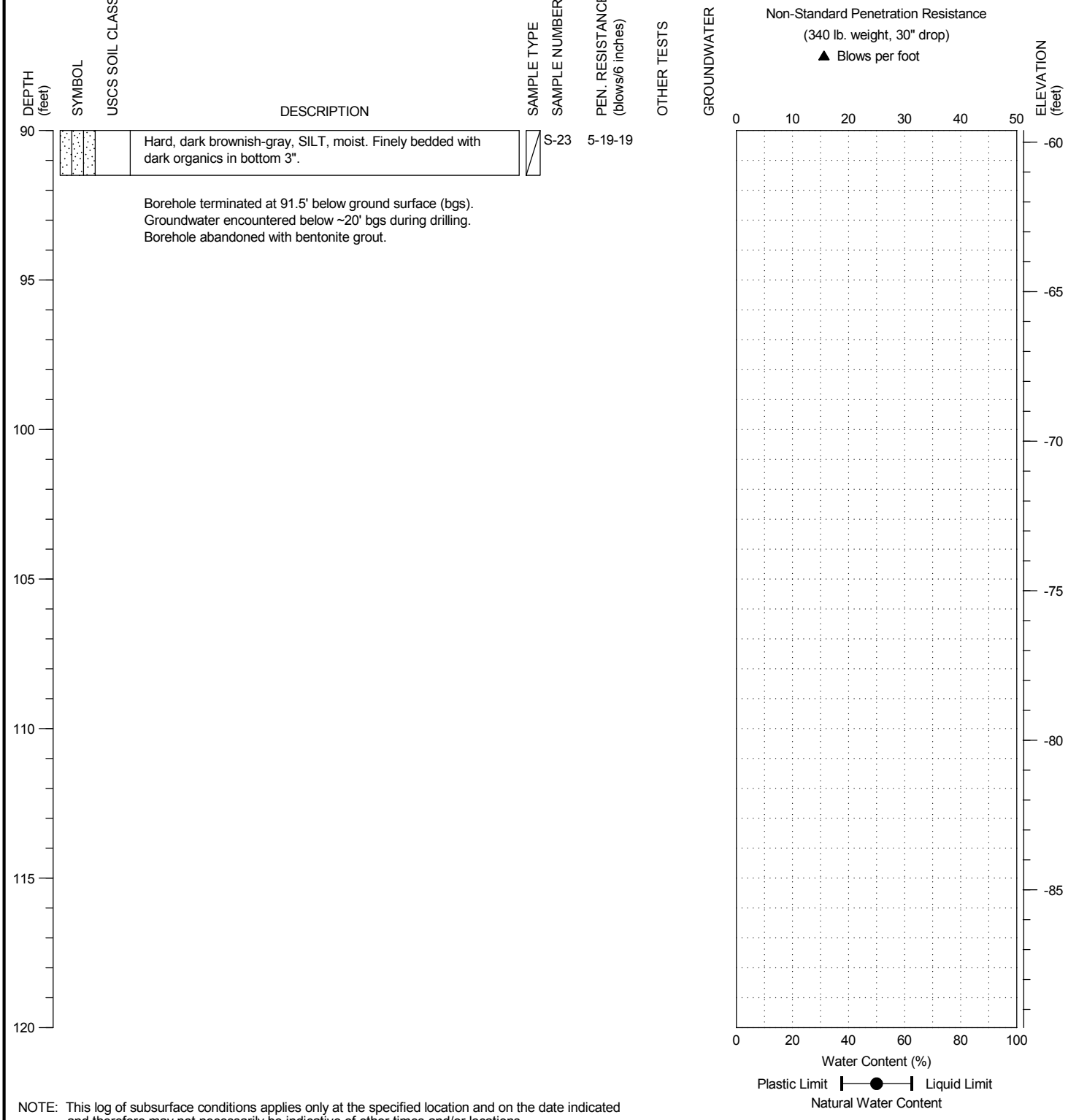
FIGURE: C-21

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer; CA w/ 340 lb. Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/31/2017
DATE COMPLETED: 5/31/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.4 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
90			Hard, dark brownish-gray, SILT, moist. Finely bedded with dark organics in bottom 3".		S-23	5-19-19		

Borehole terminated at 91.5' below ground surface (bgs).
Groundwater encountered below ~20' bgs during drilling.
Borehole abandoned with bentonite grout.



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-20

PROJECT NO.: 2015-061 FIGURE: C-21

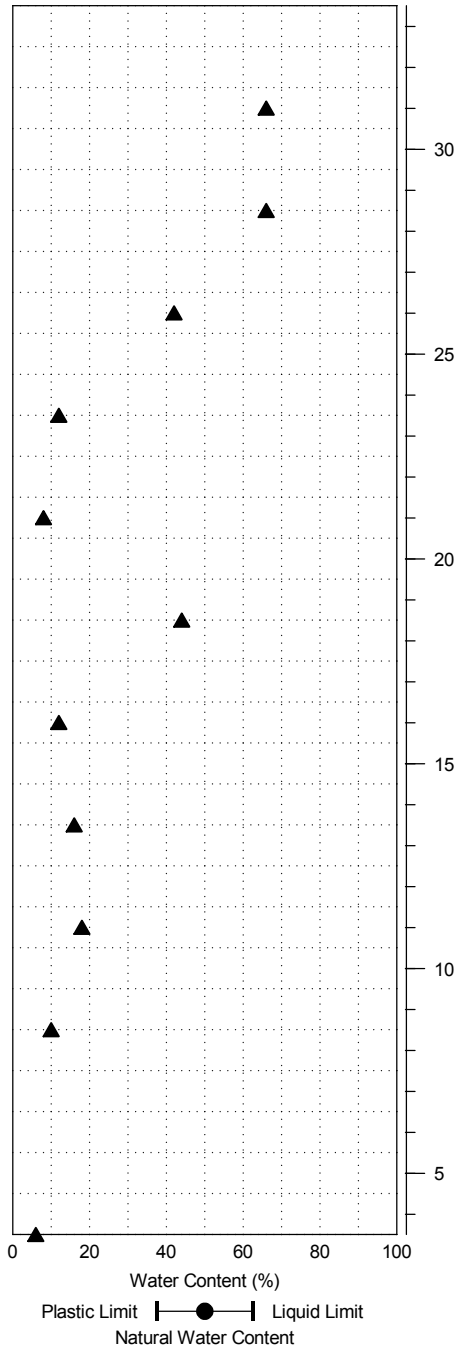
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: California w/ 340-lb Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/24/2017
DATE COMPLETED: 5/24/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Hard, silty sand (Cap).				
			Dense, olive-brown, silty, fine SAND, moist. Scattered fine to coarse gravel. **(FILL)**		S-1	5-10-11	
5			Dense, grayish-brown to olive-brown, silty, fine SAND, moist. Scattered fine to coarse gravel.		S-2	7-10-11	
		SP	Medium dense, dark gray, clean, fine to medium SAND, moist, scattered fine gravel, large 3" rock in sampler tip.		S-3	5-6-7	
10			Loose, dark gray, clean, fine to medium SAND, moist, scattered coarse gravel.		S-4	2-2-2	
			"Loose", black, wood fragments, glass and plastic pieces, some soil (SILT). ~95% Refuse, ~10% Decomposable. **(REFUSE)**		S-5	1-1-3	
15			"Medium dense", dark brown to black, medium sandy SILT, moist, plastic bagging, bottle cap, rubber wires, glass, large 4" metal piece, wood fragments. ~40% Refuse, ~10% Decomposable.		S-6	2-8-6	
			Top 4" partially decomposed wood fragments. "Loose", dark brown to black, silty, fine SAND, moist, glass, newspaper, plastic, metal washer, scattered fine to coarse gravel. ~20% Refuse, ~5% Decomposable.		S-7	2-2-4	
20			"Loose", dark brown to black, WOOD fragments, some silty, fine sand, plastic bags and glass pieces. ~95% Refuse, ~80% Decomposable.		S-8	2-4-4	
			Top 8", dark brown, WOOD fragments over "loose", black, silty, fine gravelly, fine to coarse SAND, moist. Copper wires, steel and plastic pieces, large wood fragment in sampler tip. ~95% Refuse, ~75% Decomposable.		S-9	3-3-3	
25			"Loose", black, silty, fine to coarse SAND, wet. Copper wire and glass pieces, large gravel piece in sampler tip. ~35% Refuse, ~10% Decomposable.		S-10	2-2-1	
30							

GROUNDWATER

Non-Standard Penetration Resistance
(340 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-21

PROJECT NO.: 2015-061

FIGURE: C-22

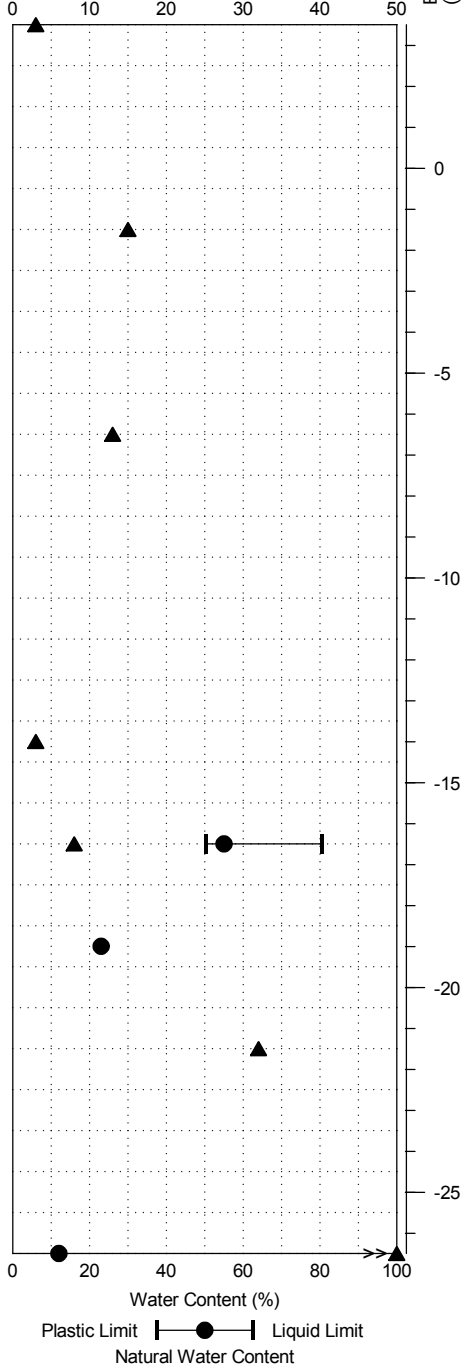
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: California w/ 340-lb Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/24/2017
DATE COMPLETED: 5/24/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			"Loose", black, REFUSE, wet. Paper and newspaper pieces, plastic, glass, and metal wire pieces, with silty, fine to coarse SAND. ~80% Refuse, <5% Decomposable.	S-11	1-1-2	
35		PT	No recovery. Plastic pieces on tip of sampler (carry-down). **(ALLUVIUM)**	NR	4-5-10	
40			Stiff, dark brown, PEAT, moist, scattered rootlets and small wood chips.	S-12	5-4-4	
45		OH	No recovery from Shelby tube.	NR	Push	
			Soft, olive-gray, organic SILT, moist. 1/2" diameter x 3" long wood branch in sample, scattered rootlets and wood chips.	S-13	1-1-2	
50			Medium stiff, grayish brown, organic SILT, moist, with interbedded 1 mm layers of organics, finely laminated, scattered small wood chips.	S-14	2-2-3	AL
		SW SM	Poor recovery, Shelby Tube crushed, sand in bottom of tube. Medium dense, brown, slightly silty, fine to coarse SAND, wet. Scattered organics in gravel.	S-15	Push	GS DS OC
55			Dense, olive-brown, silty, fine to medium SAND, wet. **(ADVANCE OUTWASH)**	S-16A / S-16B	8-6-14	
60		SP				

GROUNDWATER

Non-Standard Penetration Resistance
(340 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

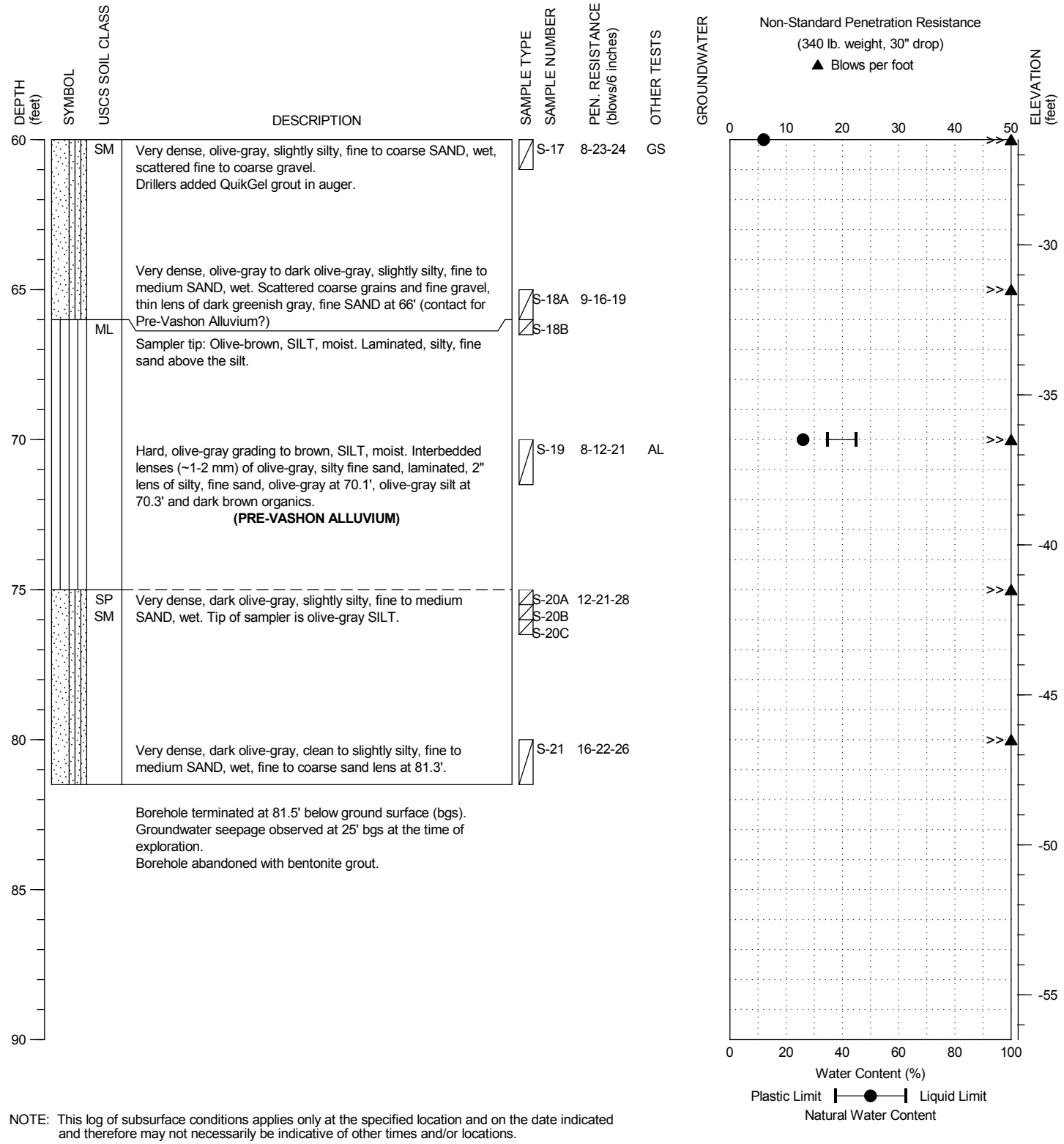
BORING:
BH-21

PROJECT NO.: 2015-061

FIGURE: C-22

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: California w/ 340-lb Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/24/2017
DATE COMPLETED: 5/24/2017
LOGGED BY: A. York
SURFACE ELEVATION: 33.5 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-21

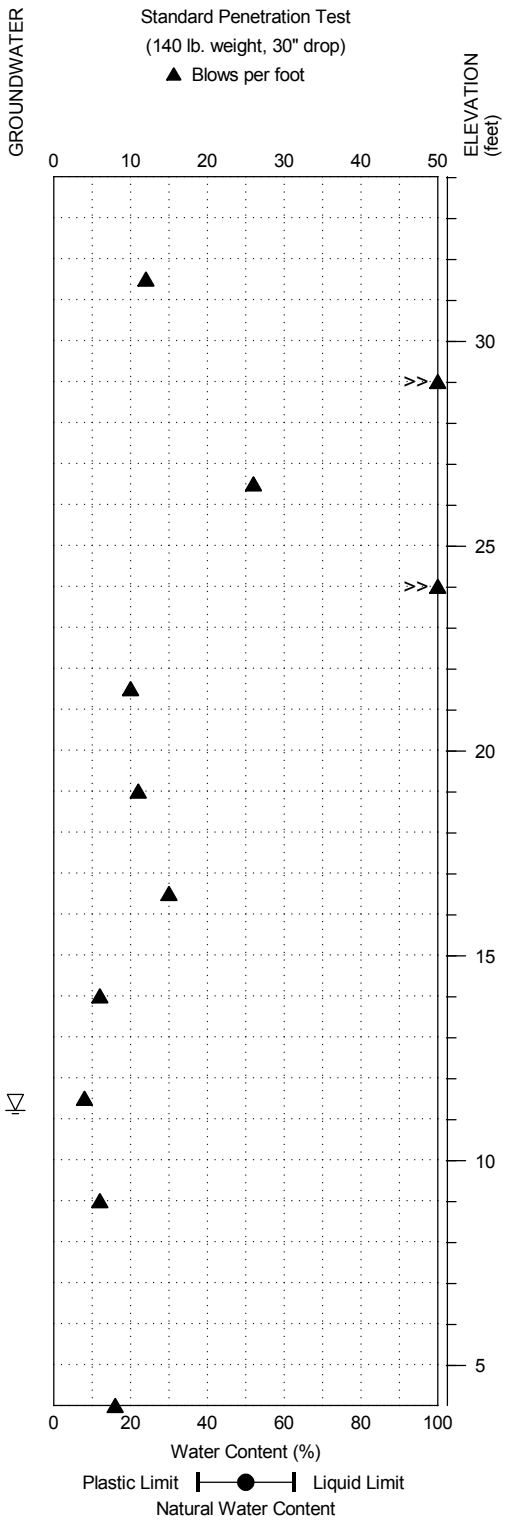
PROJECT NO.: 2015-061

FIGURE: C-22

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/19/2017
DATE COMPLETED: 5/19/2017
LOGGED BY: A. York
SURFACE ELEVATION: 34.0 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Fill cap.				
			Medium dense, olive-brown, silty, fine to medium SAND, moist. scattered fine gravel. **(FILL)**		S-1	3-5-7	
5		SM	Very dense, gray to brown, silty SAND, grading to silty, fine to medium gravelly, fine to coarse SAND, moist **(CEMENT-TREATED FILL)**		S-2	12-16-30	
		SM	Medium dense, dark brown, silty fine to medium SAND, grading to fine to medium gravelly, fine to coarse SAND, moist. **(FILL)**		S-3	6-12-14	
10			Very dense, dark brown, fine to medium gravelly, silty, fine to coarse SAND, moist. Trace rootlets (<1%).		S-4	12-50/5"	
			"Medium dense", dark brown to black, silty, fine to coarse SAND, moist. Brick fragments, wood fragments, fine to medium gravel. ~20% Refuse, ~10% Decomposable. **(REFUSE)**		S-5	10-5-5	
15			"Medium dense", brown grading to olive-gray, silty SAND, wet. Scattered fine to medium gravel, rootlets <1%, brick fragments, olive-gray SILT in bottom 6", non-plastic. <10% Refuse, <5% Decomposable.		S-6	10-5-6	
			"Medium dense", dark brown to black, silty, fine to medium SAND and wood fragments, moist. ~70% Refuse, ~50% Decomposable.		S-7	5-6-9	
20			"Loose", dark brown to black, fine to medium gravelly, silty, fine to coarse SAND, wet. Glass, ceramic and plastic pieces. ~20% Refuse, <1% Decomposable.		S-8	3-3-3	
			"Loose", dark brown, fine gravelly, silty, fine to coarse SAND, wet. Glass pieces and cinder. ~30% Refuse, <1% Decomposable.		S-9	2-2-2	
25			"Loose", dark brown, silty fine to coarse SAND, wet. Abundant glass pieces, ceramic, plastic pieces and scattered fine gravel. ~30% Refuse, <1% Decomposable.		S-10	3-3-3	
30							



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

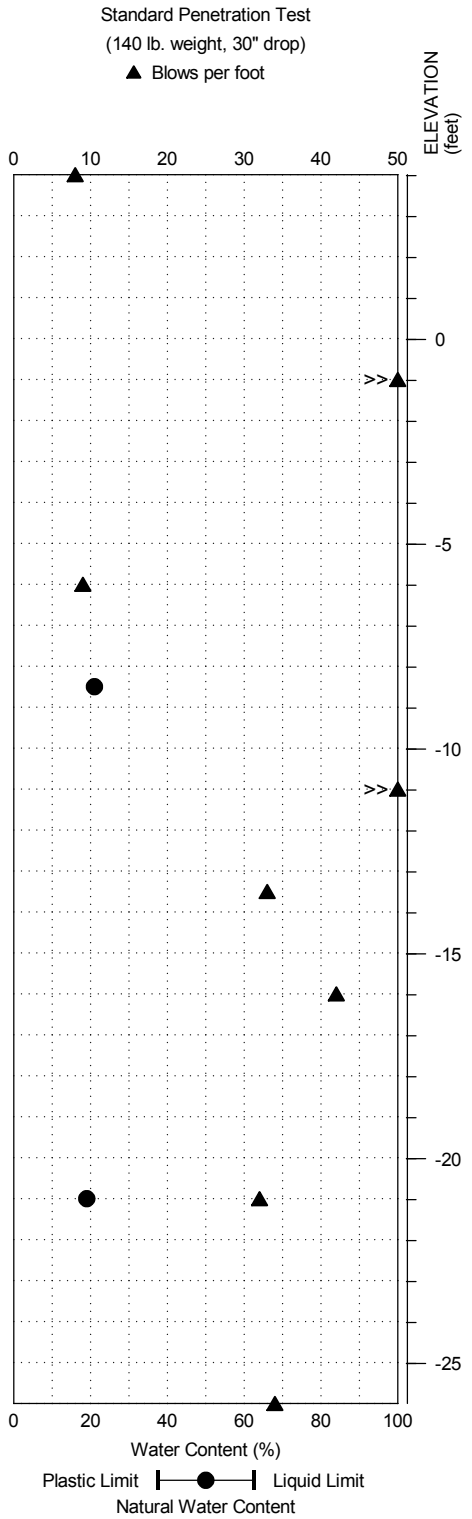
BORING:
BH-22

PROJECT NO.: 2015-061 FIGURE: C-23

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/19/2017
DATE COMPLETED: 5/19/2017
LOGGED BY: A. York
SURFACE ELEVATION: 34.0 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			"Loose", dark brown, silty fine to coarse SAND, wet, abundant glass pieces, cinders, scattered fine gravel and creosote staining and odor. ~30% Refuse, <1% Decomposable.		S-11	7-5-3	
		PT	Medium stiff, dark brown, PEAT, moist. 4" slough (black, silty, fine to coarse SAND, wet) - creosote stained. Blow counts overstated; drove obstruction from Refuse? **(ALLUVIUM)**		S-12	18-22-34	
35		SP	Loose, gray, clean, fine to medium grading to fine to coarse SAND, wet. Driller estimates 6" heave in borehole. QuikGel injected into auger.		S-13	3-4-5	
		SW SM	Loose, grayish brown, slightly silty, fine to coarse SAND, wet. Trace fine gravel. 1-inch lens of organic SILT.		S-14	Push	GS
40		SP	Very dense, gray, clean, fine to medium grading to fine to coarse SAND, wet. **(ADVANCE OUTWASH)**		S-15	3-9-50/4"	
			Very dense, gray, clean, fine to coarse SAND, wet.		S-16A S-16B	12-18-32	
45			Dense, gray, clean, fine to medium grading to fine SAND (bottom 6"), wet. Scattered fine gravel in middle (50.5'-50.8').		S-17	12-19-23	
50			Dense, gray, clean, fine to medium SAND, wet. Slightly silty in bottom 6".		S-18	12-12-20	
55							
60							



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-22

PROJECT NO.: 2015-061 FIGURE: C-23

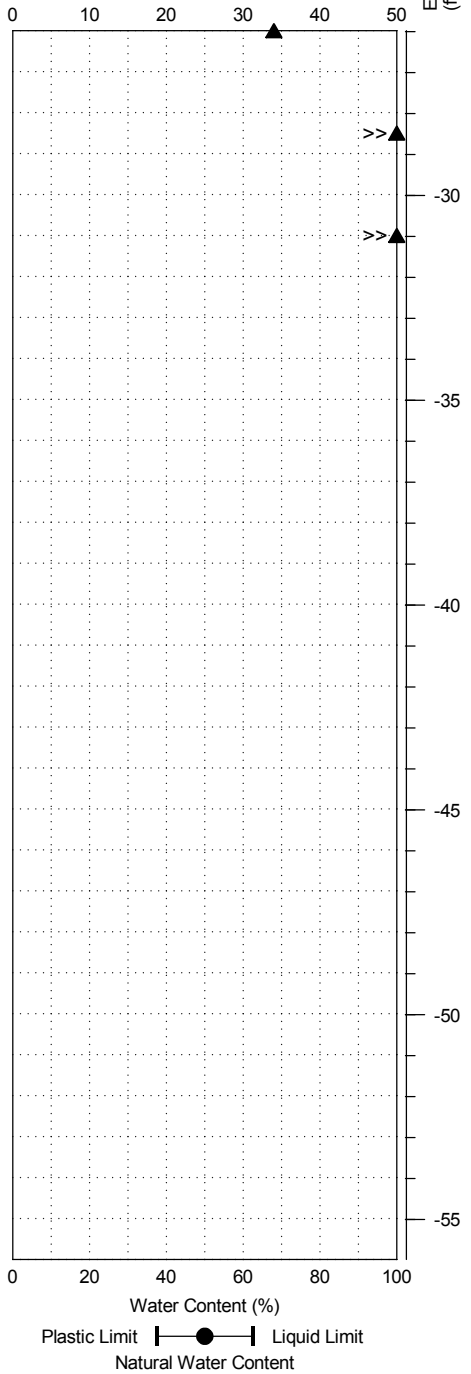
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/19/2017
DATE COMPLETED: 5/19/2017
LOGGED BY: A. York
SURFACE ELEVATION: 34.0 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
60			Dense, gray, clean to slightly silty, fine to medium SAND, wet. Slightly silty lenses with fine SAND at 60.8'-61' and 61.3'-61.5'.		S-19	9-11-23	
		ML	Very dense, olive-gray, SILT, moist, massive. **(PRE-VASHON ALLUVIUM)**		S-20A S-20B S-20C	13-43-50/5"	
65			Hard, brown grading to olive-brown, SILT, moist, scattered fine gravel, silty fine to medium SAND lens at 65.8'-66'.		S-21	12-18-33	
			Borehole terminated at 66.5' below ground surface (bgs). Groundwater encountered below ~22.5' bgs during drilling. Borehole abandoned with ~80 gallons of grout.				
70							
75							
80							
85							
90							

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



ELEVATION (feet)

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-22

PAGE: 3 of 3

PROJECT NO.: 2015-061

FIGURE: C-23

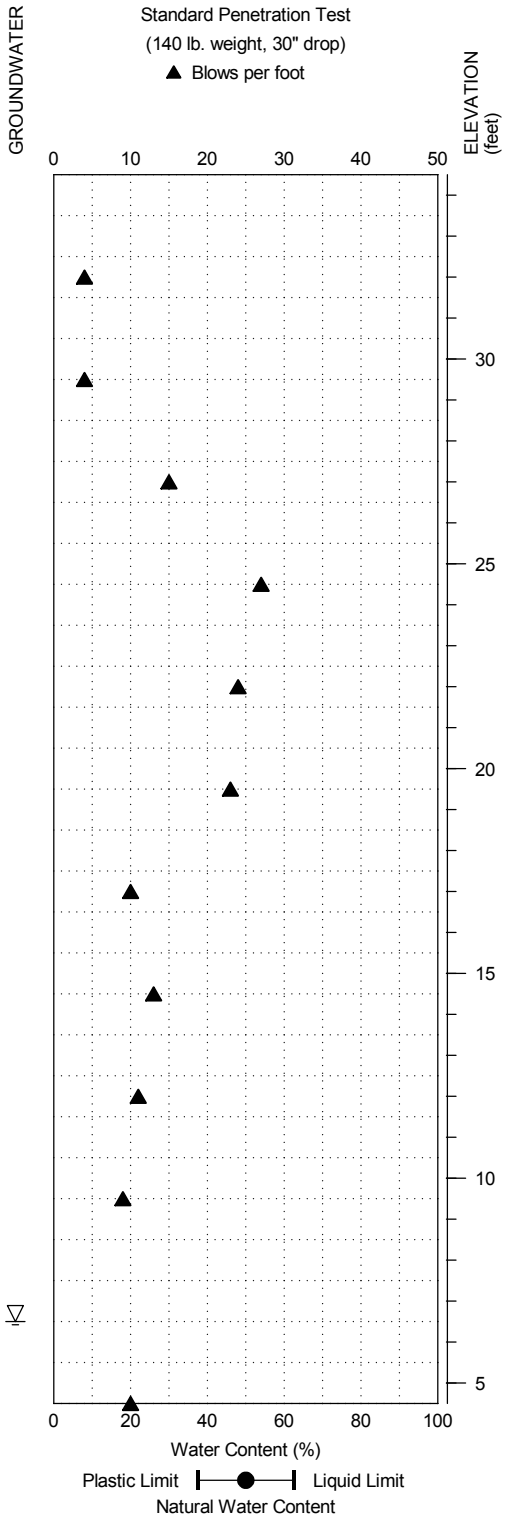
BORING-DSM 2015-061.GPJ 12/11/18

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/18/2017
DATE COMPLETED: 5/18/2017
LOGGED BY: A. York/B. Thurber
SURFACE ELEVATION: 34.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
0		SM	Loose, olive gray, gravelly, silty SAND, moist. **(LOOSE 2016 FILL)**				
		SM	Loose, dark gray, silty, fine to medium SAND, wet. Trace fine gravel. **(FILL)**		S-1	1-2-2	
5			Loose, dark gray, silty, fine to medium SAND, wet. Fine to medium gravel.		S-2	1-2-2	
			"Medium dense", dark gray, grading to dark brown, silty, fine SAND, grading to silty, fine to coarse SAND, moist. Trace fine to medium gravel, wood fragments in lower 6". ~10% Refuse, ~10% Decomposable. **(REFUSE)**		S-3	3-6-9	
10			"Medium dense", dark brown, silty, fine to coarse SAND, moist. Large (2-3") partially decomposed wood fragment in bottom of sample and in sampler tip. ~50% Refuse, ~50% Decomposable.		S-4	12-13-14	
			"Medium dense", dark brown, silty, fine to coarse SAND, moist. Slight creosote odor, fire brick in bottom 3", metal piece in tip of sampler and wood fragments in upper 2". ~70% Refuse, ~30% Decomposable.		S-5	8-12-12	
15			"Medium dense", olive-gray with some light brown, silty, fine SAND, moist. Trace fine to medium gravel, woody fragments in top 6". ~20% Refuse, ~20% Decomposable.		S-6	12-11-12	
			"Medium dense", dark brown, silty fine to medium SAND, moist. Glass pieces and wood fragments, metal bolt. ~50% Refuse, ~25% Decomposable.		S-7	5-2-8	
20			"Medium dense", dark brown, silty fine to medium SAND, moist. Red brick and fire brick fragments, glass pieces, wood fibers, trace fine gravel. ~50% Refuse, ~5% Decomposable.		S-8	4-5-8	
			"Medium dense", dark brown to black, silty fine SAND (slag sand?), wet. With fire brick or cinder pieces, glass, and trace fine to coarse gravel. ~50% Refuse, <5% Decomposable.		S-9	2-6-5	
25			"Loose", dark brown to black, silty fine to medium SAND, wet. With paper fibers and glass, woody fibers in tip of sampler, creosote sheen on water. ~50% Refuse, <5% Decomposable.		S-10	2-4-5	
			Driller noticed water at 28'.				
30							

GROUNDWATER ▽



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

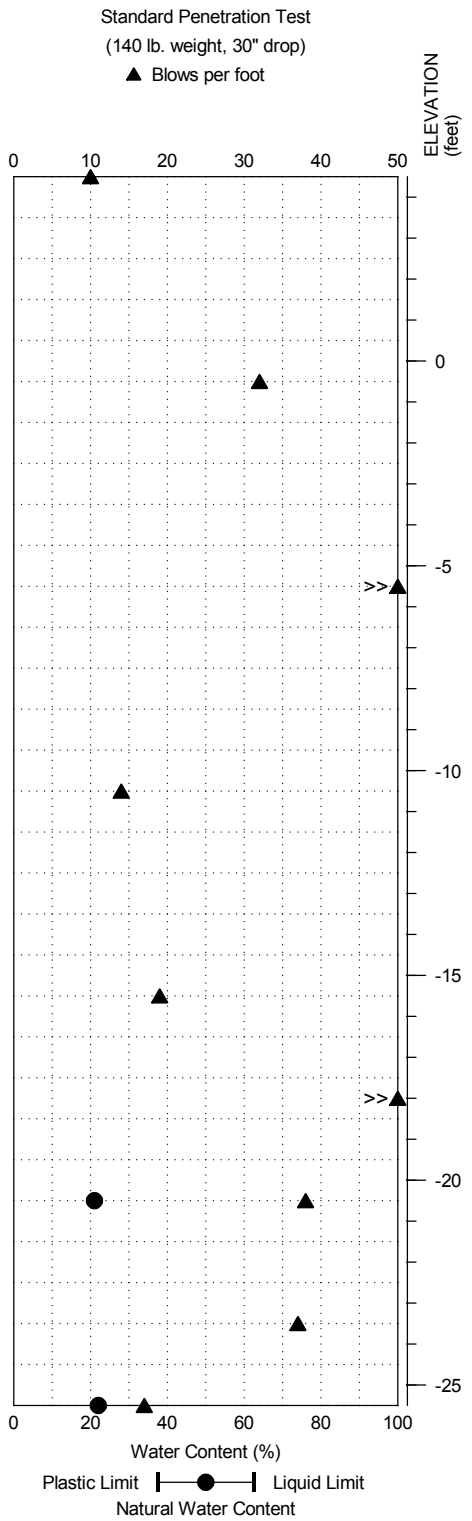
BORING:
BH-24

PROJECT NO.: 2015-061 FIGURE: C-25

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/18/2017
DATE COMPLETED: 5/18/2017
LOGGED BY: A. York/B. Thurber
SURFACE ELEVATION: 34.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30			"Medium dense", dark brown to black, silty, fine to coarse SAND, wet. Ceramic and glass pieces, small brick pieces, metal fragment, trace fine gravel. ~80% Refuse, <5% Decomposable.		S-11	2-5-5	
35			"Dense", dark brown, silty fine to coarse SAND, wet. Glass, brick, and ceramic pieces, nail and metal wire, trace fine gravel. ~80% Refuse, <5% Decomposable.		S-12	12-15-17	
40			Poor recovery. Slough in sampler - dark brown, slaggy SAND, with broken glass and brick fragments. ~80% Refuse, <5% Decomposable. Hard drilling at 41'.		S-13	50/4"	
45		PT	Stiff, dark brown, alluvial PEAT, moist. With interbedded alluvial silt, wood fragments (50%/50% organic peat/alluvial silt), LEL meter detecting gas (~14% of LEL). **(ALLUVIUM)**		S-14	5-6-8	
			No recovery. Bottom of shelby tube squashed shut.		NR	Push	
50			Very stiff, dark brown, PEAT, moist. With interbedded silt, 2" partially decomposed wood layer at 50.5'.		S-15	5-8-11	
		SP	Attempted to push shelby tube, too dense - no recovery. Re-attempted to sample at 52.5' with ring sampler in CA - no recovery. Driller started using QuikGel mixture in auger.		NR	50/4"	
55			Dense, dark gray, clean, fine grading to fine to medium SAND, wet. **(ADVANCE OUTWASH)** **3' of heave, driller washed out from auger.** **3 batches of QuikGel lost in formation when auger at 57.5' (120-135 gal). Heave washout water (200 gal) also disappeared.**		S-16	9-15-23	GS
		OH			S-17a S-17b	13-23-34	
60		SP	Very dense, dark gray, clean, fine to coarse SAND, wet.				



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-24

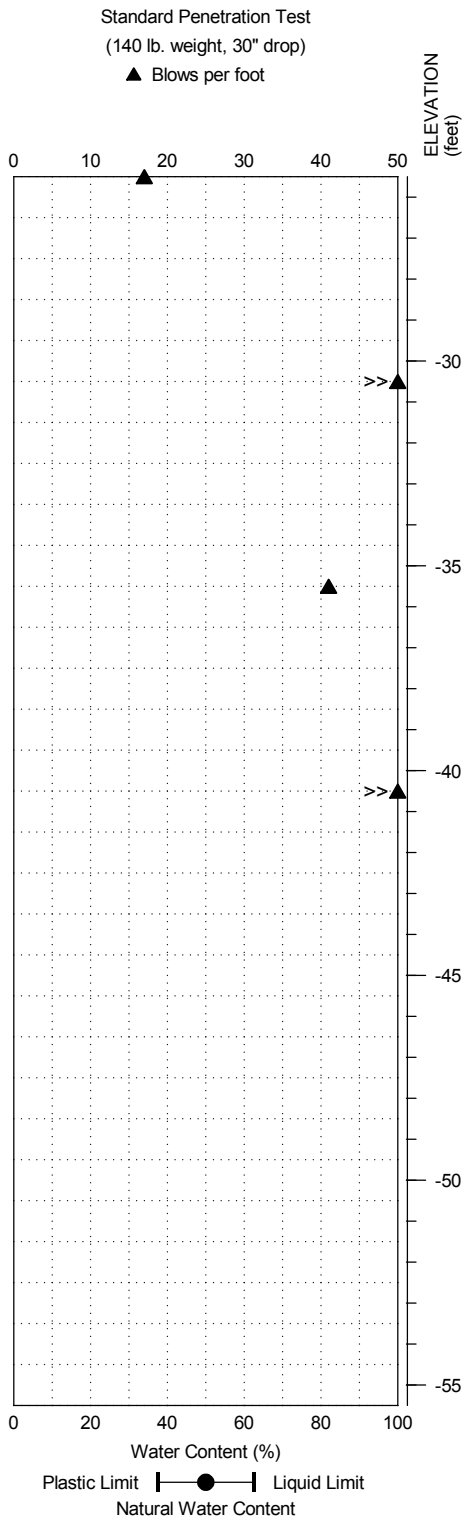
PROJECT NO.: 2015-061

FIGURE: C-25

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/18/2017
DATE COMPLETED: 5/18/2017
LOGGED BY: A. York/B. Thurber
SURFACE ELEVATION: 34.5 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
60			Heave in top 12".					
			Stiff, brown, organic SILT, moist.		S-18	5-8-9	GS	
			(PRE-VASHON ALLUVIUM)					
			Medium dense, gray, clean, fine to medium SAND, wet. Driller notes heaving sands, SPT values likely not true, ~8" of heave. Still losing Quik grout down the borehole.					
65		SM	Very dense, gray, silty, fine to coarse SAND, with fine gravel, wet. Small lenses of silt (~1") at 66'.		S-19	9-22-36		
70		ML	Dense, olive-brown, SILT, with interbedded fine sand and rootlets, moist.		S-20	12-18-23		
		SM	Dense, olive-gray, silty, fine to medium SAND, wet.					
		SM						
75			Very dense, olive-gray, silty, fine to medium SAND, wet. Fine gravel in upper 2-3".		S-21	8-24-40		
80			Borehole terminated st 76.5' below ground surface (bgs). Groundwater observed at ~28' bgs below ground surface during drilling. **3 batches of QuikGel lost in formation when auger at 57.5' bgs (~120-135 gal). Heave washout water (200 gal) also disappeared.** 2.5 barrels (~130 gal) of extra thick grout used to abandon the borehole.					
85								
90								



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

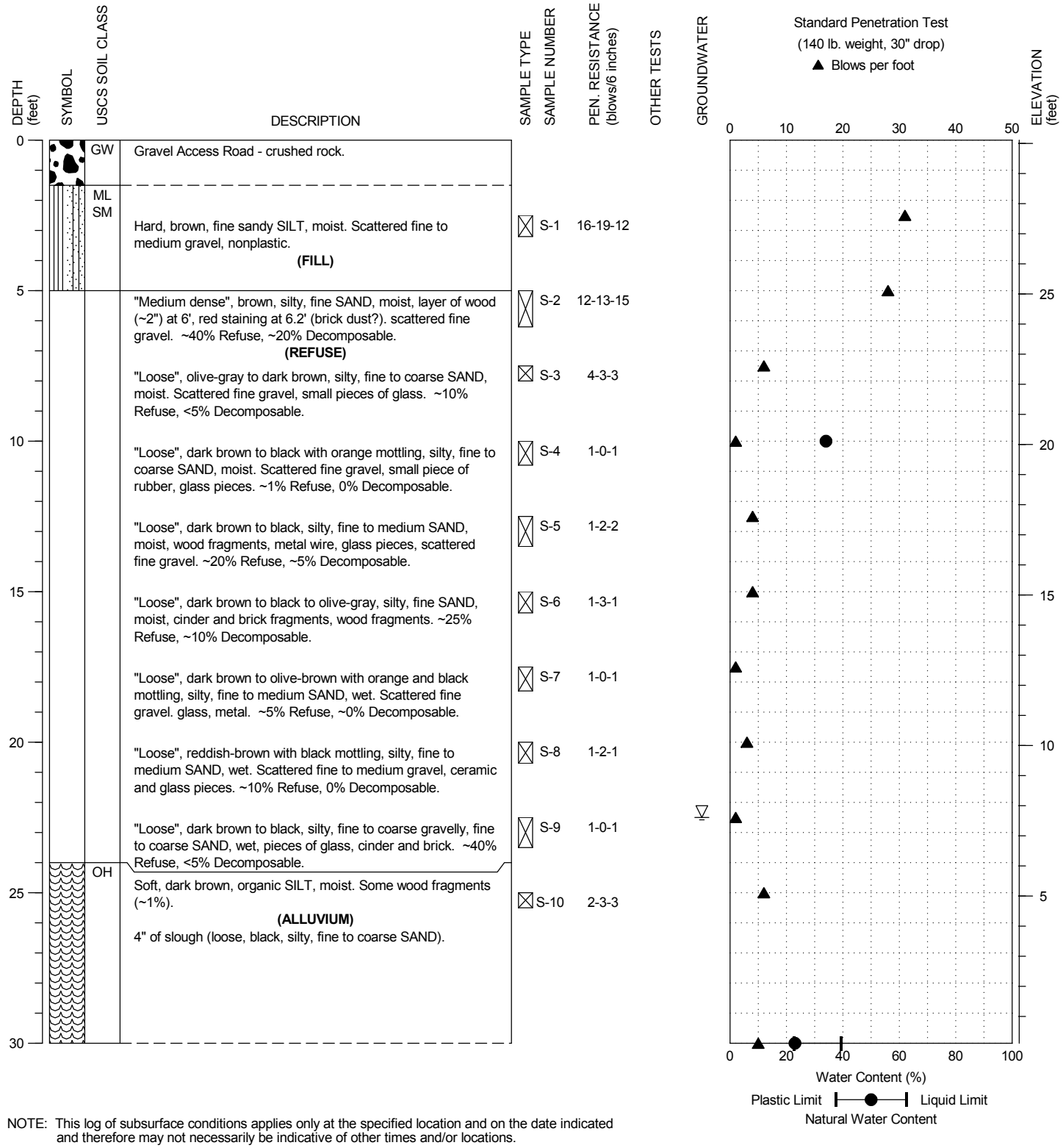
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-24

PROJECT NO.: 2015-061 FIGURE: C-25

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.1 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-33

PROJECT NO.: 2015-061 FIGURE: C-34

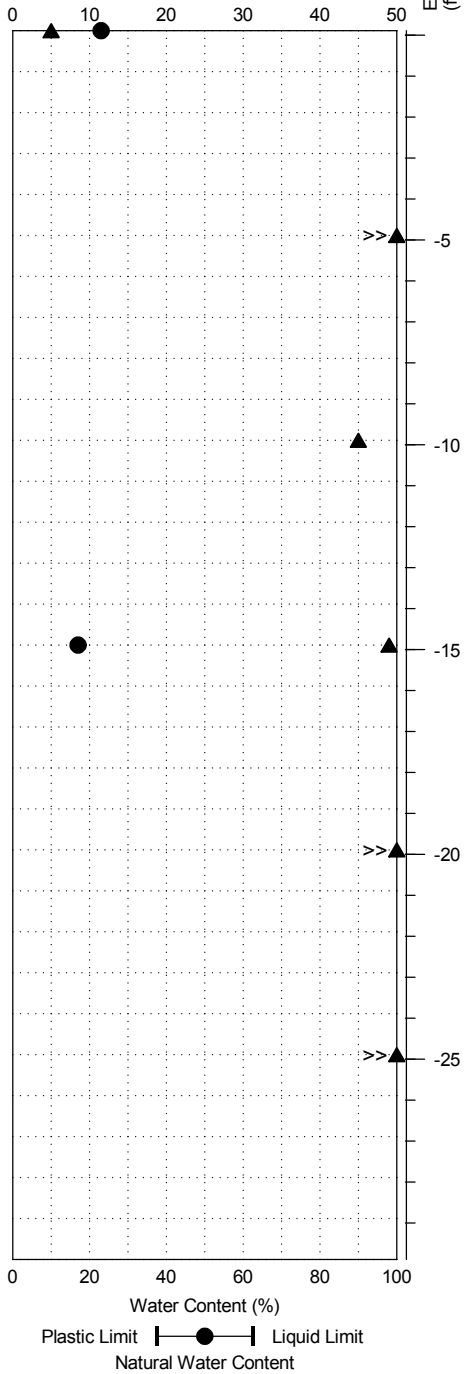
DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: Mobile B-58 Truck Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 5/30/2017
DATE COMPLETED: 5/30/2017
LOGGED BY: A. York
SURFACE ELEVATION: 30.1 ± feet

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS
30		CL	Soft, bluish-gray, CLAY, moist. Plastic. Scattered burnt wood fragments (<1% Decomposable).		S-11	3-2-3	AL
35		ML	Hard, light brown with gray mottling, clayey SILT, moist, grading to orange-brown, fine sandy SILT, moist. Scattered fine to medium gravel, with silty, fine to medium SAND in bottom 3". **(GLACIOLACUSTRINE)**		S-12	6-24-27	
40		SP SM	Dense, light olive-brown, silty, fine to medium SAND, wet. Scattered fine gravel. **(ADVANCE OUTWASH)**		S-13	11-21-24	
45			Dense, light olive-brown to orange-brown, silty, fine to medium SAND, wet.		S-14	17-23-26	
50			Very dense, light olive-brown, silty, fine to medium SAND, wet.		S-15	16-39-50/6"	
55			Very dense, olive-gray, slightly silty, fine to medium SAND, wet.		S-16	11-22-29	
60			Borehole terminated at 56.6' below ground surface (bgs). Groundwater encountered at 22.5' bgs during drilling. Borehole abandoned with bentonite grout.				

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-33

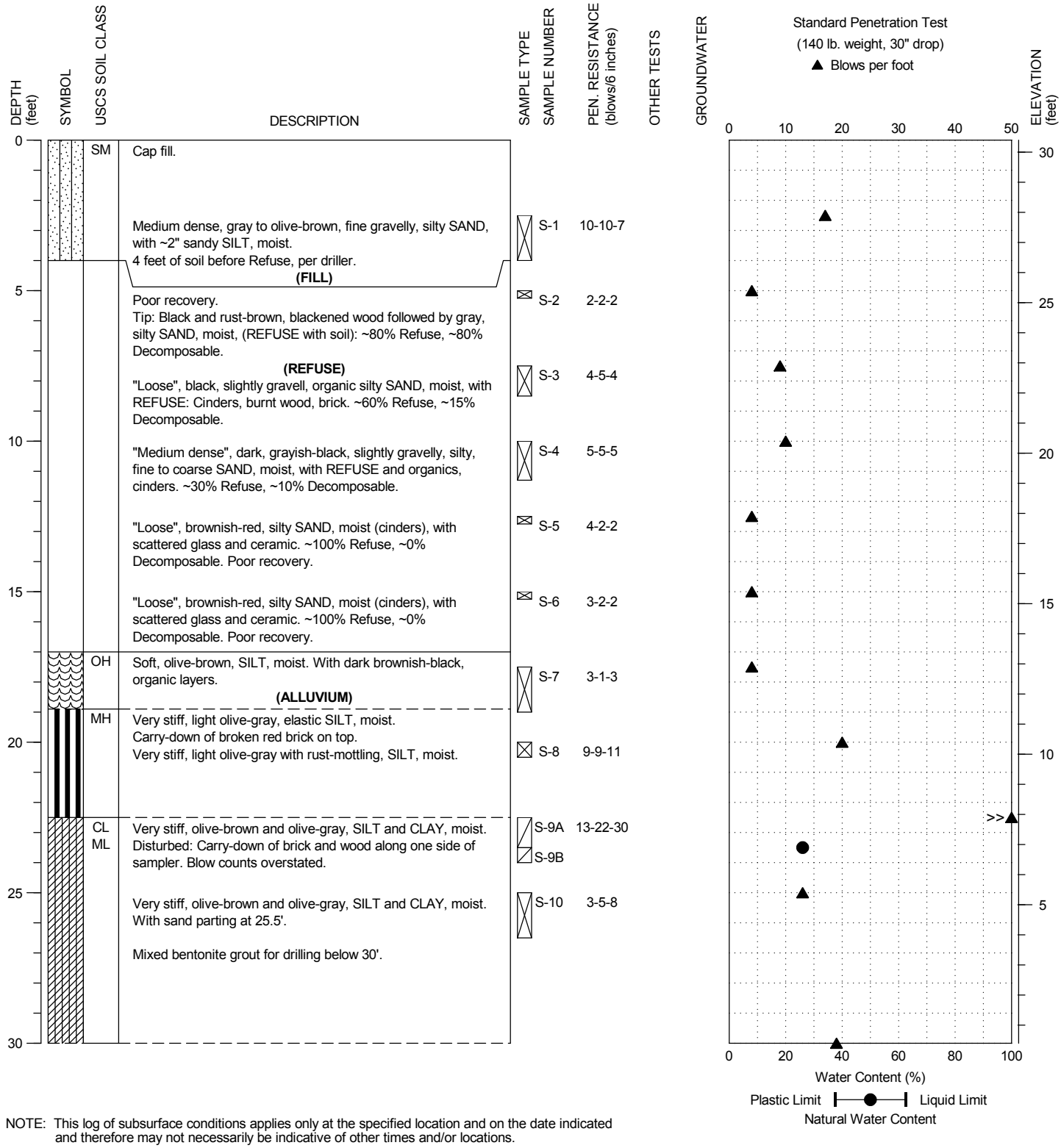
PAGE: 2 of 2

PROJECT NO.: 2015-061 FIGURE: C-34

BORING-DSM 2015-061.GPJ 12/11/18

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 30.4 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

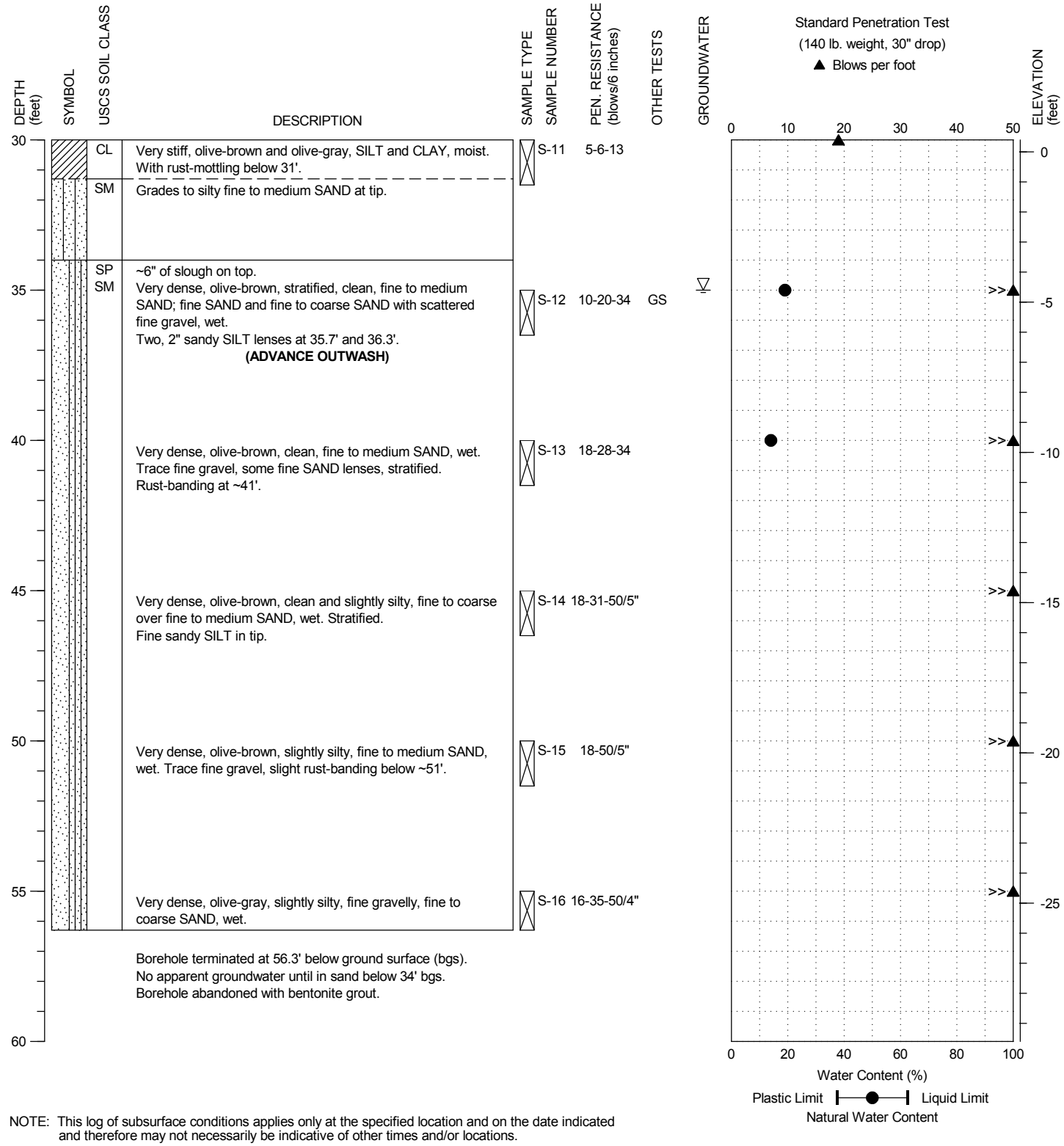
PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-34

PROJECT NO.: 2015-061 FIGURE: C-35

DRILLING COMPANY: Holocene Drilling
DRILLING METHOD: CME 850 Tracked Rig, HSA
SAMPLING METHOD: SPT with Autohammer
LOCATION: See Figure 2

DATE STARTED: 6/1/2017
DATE COMPLETED: 6/1/2017
LOGGED BY: B. Thurber
SURFACE ELEVATION: 30.4 ± feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

PROJECT EVERGREEN
36th ST & RIVERSIDE DRIVE
EVERETT, WASHINGTON

BORING:
BH-34

PROJECT NO.: 2015-061 FIGURE: C-35

DRAFT

Date(s) Drilled	01/23/08	Logged By	CMK	Checked By	DCO
Drilling Contractor	Boart Longyear/Holt Drilling	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT, Shelby
Auger Data	6-inch ID, 10-inch OD	Hammer Data	140 lb hammer/30 in drop automatic	Drilling Equipment	Mobile B-59 Truck Rig
Total Depth (ft)	59.5	Surface Elevation (ft)	36.5	Groundwater Elevation (ft)	8.5
Vertical Datum	NAVD 88	Datum/ System	NAD 83	Easting(x): Northing(y):	1307538.075 356446.7259

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	Blows/foot	Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
35	0						SOD	3 inches sod mat			
							SM	Dark brown silty fine to medium sand with occasional gravel (medium dense, moist) (fill)			
		12	33	1							
30	5						MSW	Refuse (wood fragments, metal, glass, brick, plaster, intermixed with dark brown/black silty fine to medium sand)			
		9	14	2							
25	10										
		7	20	3							
20	15										
		8	3	4							
15	20										
		8	11	5							
10	25				▼		PT	Dark brown peat, fiberous chips (stiff, wet) (wood waste?)			
		12	10	6							
5	30										
		1	12	7							
0	35	18	10	8							
		20		9							Vibrating wire piezometer installed at Elevation -0.1 feet
-5	40	10	21	10				Becomes very stiff	209		
							OL	Gray organic silt with sand (very stiff, moist to wet)			

Note: See Figure A-1 for explanation of symbols.

LOG OF BORING GEI- 8

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-9
Sheet 1 of 2

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

Elevation feet / Depth feet	Interval Recovered (in)	Blows/foot	Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
40 / -5	18	24	11a, 11b			SP-SM	(alluvial deposits?) Gray and brown fine to medium sand with silt (dense, wet) (transitional deposits)	19		%F=8
45 / -10	18	42	12			SM	Gray silty fine to coarse sand (very dense, wet)	16		%F=14
50 / -15	16	79	13			SP	Gray fine to medium sand with trace silt (very dense, wet)			
55 / -20	16	64	14							
60 / -25	11	50/5"	15				Sondex settlement system and vibrating wire piezometer installed upon completion			
65 / -30										
70 / -35										
75 / -40										
80 / -45										
85 / -50										

LOG OF BORING GEI- 8 (continued)

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-9
Sheet 2 of 2

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

DRAFT

Date(s) Drilled	11/15/07	Logged By	CMK	Checked By	DCO
Drilling Contractor	Boart Longyear/Holt Drilling	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT
Auger Data	4-inch ID, 8-inch OD	Hammer Data	140 lb hammer/30 in drop automatic	Drilling Equipment	Mobile B-59 Truck Rig
Total Depth (ft)	89	Surface Elevation (ft)	35.7	Groundwater Elevation (ft)	19.7
Vertical Datum	NAVD 88	Datum/ System	NAD 83	Easting(x): Northing(y):	1307464.621 356143.2087

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	Blows/foot	Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
35	0						SOD	0 to 3 inches sod			
		16	20	1			SM	Brown/black silty fine to coarse sand with gravel and organic matter (medium dense, moist to wet)			
30	5						MSW	Refuse (paper, plastic, cloth tile, glass, metal) intermixed with gray silty fine to coarse sand with occasional gravel			
		16	7	2							
25	10										
		6	6	3							
20	15				▼						
		8	5	4							
15	20										
		8	48	5							
10	25										
		4	2	6				Contains increasing wood content (chips, timber)			
5	30										
		8	15	7							
0	35						SP-SM	Gray/black fine to coarse sand with silt (medium dense, wet) (transitional deposits)			
		18	20	8							4 feet heave Drill mud added to hole
	40										

Note: See Figure A-1 for explanation of symbols.

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-17

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-18
Sheet 1 of 2

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	SAMPLES: Blows/foot	SAMPLES: Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
-5	40	16	24	9					27		%F=6
		18	58	10				Grades to very dense			
-10	45										Water added to hole
		11	19	11							1 foot heave Blowcount not representative
-15	50	17	53	12							
		13	58	13							
-20	55										
		16	71	14							
-25	60										
		16	70	15							
-30	65										
		16	42	16a			OH	Brown gray organic clay (hard, moist)	33		
				16b					27		AL
-35	70						SP-SM	Gray fine to medium sand with silt (very dense, wet)			
		18	52	17					20		%F=12
-40	75										
		18	73	18			ML	Gray silt with fine sand (hard, moist)			
-45	80						SP	Gray fine sand (dense, wet)			
		18	37	19							
-50	85						SP-SM	Gray fine to medium sand with silt (very dense, wet)			
		16	83/11.5"	20							

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-17 (continued)

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-18
Sheet 2 of 2

DRAFT

Date(s) Drilled	11/15/07	Logged By	CMK	Checked By	DCO
Drilling Contractor	Boart Longyear/Holt Drilling	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT
Auger Data	4-inch ID, 8-inch OD	Hammer Data	140 lb hammer/30 in drop automatic	Drilling Equipment	Mobile B-59 Truck Rig
Total Depth (ft)	89	Surface Elevation (ft)	35.7	Groundwater Elevation (ft)	19.7
Vertical Datum	NAVD 88	Datum/ System	NAD 83	Easting(x): Northing(y):	1307464.621 356143.2087

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	Blows/foot	Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
35	0						SOD	0 to 3 inches sod			
		16	20	1			SM	Brown/black silty fine to coarse sand with gravel and organic matter (medium dense, moist to wet)			
30	5						MSW	Refuse (paper, plastic, cloth tile, glass, metal) intermixed with gray silty fine to coarse sand with occasional gravel			
		16	7	2							
25	10										
		6	6	3							
20	15				▼						
		8	5	4							
15	20										
		8	48	5							
10	25										
		4	2	6				Contains increasing wood content (chips, timber)			
5	30										
		8	15	7							
0	35						SP-SM	Gray/black fine to coarse sand with silt (medium dense, wet) (transitional deposits)			
		18	20	8							4 feet heave Drill mud added to hole
	40										

Note: See Figure A-1 for explanation of symbols.

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-17

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-18
Sheet 1 of 2

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	SAMPLES: Blows/foot	SAMPLES: Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
-5	40	16	24	9					27		%F=6
		18	58	10				Grades to very dense			
-10	45										Water added to hole
		11	19	11							1 foot heave Blowcount not representative
-15	50	17	53	12							
		13	58	13							
-20	55										
		16	71	14							
-25	60										
		16	70	15							
-30	65										
		16	42	16a			OH	Brown gray organic clay (hard, moist)	33		
				16b					27		AL
-35	70						SP-SM	Gray fine to medium sand with silt (very dense, wet)			
		18	52	17					20		%F=12
-40	75										
		18	73	18			ML	Gray silt with fine sand (hard, moist)			
-45	80						SP	Gray fine sand (dense, wet)			
		18	37	19							
-50	85						SP-SM	Gray fine to medium sand with silt (very dense, wet)			
		16	83/11.5"	20							

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-17 (continued)

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-18
Sheet 2 of 2

DRAFT

Date(s) Drilled	12/04/07	Logged By	SH	Checked By	DCO
Drilling Contractor	Boart Longyear/Holt Drilling	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT
Auger Data	4-inch ID, 8-inch OD	Hammer Data	140 lb hammer/30 in drop automatic	Drilling Equipment	Mobile B-59 Truck Rig
Total Depth (ft)	75	Surface Elevation (ft)	36.0	Groundwater Elevation (ft)	33
Vertical Datum	NAVD 88	Datum/ System	NAD 83	Easting(x): Northing(y):	1307533.733 356299.3945

Elevation feet	Depth feet	SAMPLES: Interval	Recovered (in)	Blows/foot	Sub-Sample Sample Number	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
35	0							SM	2 to 3 inches root mass Dark gray silty fine to medium sand with trace organic matter (loose, moist) (fill)			
			2	8	1			MSW	Refuse (black organic silt, glass fragments, decayed wood, plastic, and brick)			
30	5											
			3	3	2							
25	10											
			2	5	3							
20	15											
			8	10	4							
15	20											
			16	12	5							
10	25											
			14	16	6							
5	30											
			15	9	7			PT	Brown peat with partially decayed wood chips (medium stiff to stiff, wet) (alluvial deposits)	199		
0	35											
			15	5	8							
-5	40											

Note: See Figure A-1 for explanation of symbols.

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002008.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-18

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-19
Sheet 1 of 2

Depth feet	Elevation feet	Interval Recovered (in)	Blows/foot	Sub-Sample Sample Number	Group Symbol	MATERIAL DESCRIPTION	Moisture Content %	Dry Unit Weight, lbs/ft³	OTHER TESTS AND NOTES
40	-5	18	P	9	OL	Gray organic silt (medium stiff, moist)			
45	-10	18	14	10	SM	Gray silty fine sand (medium dense, wet)			
50	-15	15	12	11	SP	Brown and gray fine to medium sand (medium dense, wet)			
55	-20	18	22	12					Water added to hole
60	-25	18	47	13	SP	Brown and gray fine to medium sand (dense to very dense, wet) (transitional deposits)			
65	-30	18	57	14					
70	-35	0	50	15					
75	-40	15	53	16					
80	-45								
85	-50								

SAMPLES

Water Level

Graphic Log

V6_GTBORING W:\EVERETT\PROJECTS\6191002\08\FINAL\6191002O8.GPJ GEIV6_1.GDT 7/23/08

LOG OF BORING GEI-18 (continued)

GeoEngineers

Project: Everett Riverfront Redevelopment Project
Project Location: Everett, Washington
Project Number: 6191-002-08

Figure A-19
Sheet 2 of 2

APPENDIX C

LABORATORY INVESTIGATION

APPENDIX C
LABORATORY INVESTIGATION

Representative soil samples obtained from the boreholes were returned to HWA's laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering properties of the on-site materials. The laboratory testing program was performed in general accordance with appropriate ASTM Standards as outlined below. Summary Material Properties are presented in Figure B-1 through B-3.

MOISTURE CONTENT Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105^0 C). The test results are summarized on the logs in Appendix A and Figures B-1 through B-3. The results are percent by weight of dry soil.

PARTICLE SIZE ANALYSIS OF SOILS: Selected samples were tested to determine the particle distribution of material in general accordance with ASTM D422. The results are summarized on the attached Grain Size Distribution reports, Figures B-4 through B-9, which also provide information regarding the classification of the sample and the moisture content at the time of testing.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): Selected samples were tested using method ASTM D 4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index reports, Figure B-10

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
BH-51,S-9b	35.3	36.5	15.3						7.9	72.7	19.4	SM	Olive-brown, silty SAND
BH-51,S-10	40.0	41.5	22.7									SP-SM	Olive-brown, poorly graded SAND with silt
BH-51,S-11	45.0	46.5	19.7						3.1	87.5	9.4	SP-SM	Olive-brown, poorly graded SAND with silt
BH-51,S-12	50.0	51.0	16.9									SP-SM	Olive, poorly graded SAND with silt
BH-51,S-13a	55.0	56.0	17.1									SM	Olive-brown, silty SAND
BH-51,S-14	60.0	61.5	19.0									SM	Olive, silty SAND
BH-51,S-15b	65.5	66.5	14.0									SM	Olive-gray, silty SAND with gravel
BH-51,S-16a	70.0	71.0	15.4						9.4	81.8	8.8	SW-SM	Dark gray, well-graded SAND with silt
BH-51,S-17	75.0	76.5	21.9									SP-SM	Dark gray, poorly graded SAND with silt
BH-51,S-18	80.0	81.5	34.0							8.9	91.1	MH	Dark gray, elastic SILT
BH-52,S-9	35.0	36.5	250.4									PT	Very dark brown, PEAT
BH-52,S-10	40.0	40.5	21.9								7.6	SP-SM	Dark olive-gray, poorly graded SAND with silt and gravel
BH-52,S-11a	45.0	45.8	18.3									SP-SM	Olive-brown, poorly graded SAND with silt
BH-52,S-11b	45.8	46.5	15.3						2.8	84.8	12.4	SM	Olive-brown, silty SAND
BH-52,S-15	65.0	77.0	14.9									SM	Dark olive-gray, silty SAND with gravel
BH-52,S-16	70.0	71.5	22.2						0.1	82.5	17.4	SM	Dark gray, silty SAND
BH-52,S-17b	75.5	76.5	50.2			52	38	14	8.9	47.7	43.3	SM	Dark grayish-brown, silty SAND with organics
BH-52,S-18	80.0	81.5	28.7									ML	Dark grayish-brown, SILT
BH-53,S-10	40.0	41.5	46.0									OL	Very dark grayish-brown, sandy organic SILT with gravel
BH-53,S-13	55.0	56.5	20.6						0.6	87.4	12.0	SW-SM	Dark gray, well-graded SAND with silt

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

SUMMARY OF
MATERIAL PROPERTIES

PROJECT NO.: 2015-061 FIGURE: B-1

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
BH-53,S-14	60.0	61.5	18.7									SP-SM	Dark gray, poorly graded SAND with silt
BH-53,S-15a	65.0	66.4	14.7									SP-SM	Dark gray, poorly graded SAND with silt and gravel
BH-53,S-16b	70.5	71.5	38.9									MH	Very dark grayish-brown, elastic SILT
BH-54,S-8	30.0	39.0	109.1									PT	Very dark grayish-brown, PEAT
BH-54,S-9	35.0	36.5	17.8						16.7	61.6	21.7	SM	Light olive-brown, silty SAND with gravel
BH-54,S-11	45.0	46.5	17.8						8.0	80.6	11.4	SW-SM	Olive-brown, well-graded SAND with silt
BH-54,S-12	50.0	51.5	19.3									SM	Olive-brown, silty SAND
BH-54,S-13	55.0	56.0	17.3									SM	Olive-brown, silty SAND
BH-54,S-14a	60.0	61.0	17.5									SM	Olive-brown, silty SAND
BH-54,S-16	70.0	71.5	20.3						0.0	85.6	14.4	SM	Dark grayish-brown, silty SAND
BH-54,S-17	75.0	76.5	45.5									ML	Dark grayish-brown, SILT
BH-55,S-12	50.0	51.5	24.8									SM	Olive-brown, silty SAND
BH-55,S-13	55.0	56.5	19.2						0.6	86.7	12.6	SM	Olive-brown, silty SAND
BH-55,S-14	60.0	61.5	17.6									SP-SM	Very dark gray, poorly graded SAND with silt
BH-55,S-15a	65.0	66.0	32.9									ML	Dark grayish-brown, SILT with sand
BH-55,S-16a	70.0	70.8	40.6									MH	Very dark grayish-brown, elastic SILT
BH-55,S-16b	70.8	71.5	49.2									MH	Very dark grayish-brown, elastic SILT
BH-55,S-17	75.0	76.5	20.3							83.0	17.0	SM	Very dark gray, silty SAND
BH-55,S-18	80.0	81.0	19.4									SM	Dark gray, silty SAND
BH-56,S-9	35.0	35.5	54.3									SM	Very dark grayish-brown, silty SAND with organics

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
BH-56,S-10a	40.0	41.0	37.9									SM	Very dark grayish-brown, silty SAND with organics
BH-56,S-13	55.0	56.5	19.1						0.8	86.8	12.4	SM	Olive-brown, silty SAND
BH-56,S-14a	60.0	61.3	21.7									SM	Brown, silty SAND
BH-56,S-15a	65.0	66.0	19.2									SP-SM	Dark gray, poorly graded SAND with silt
BH-56,S-16	70.0	71.5	24.0						0.1	82.2	17.7	SM	Dark gray, silty SAND
BH-56,S-17a	75.0	75.7	34.9			39	32	7			78.3	ML	Dark grayish-brown, SILT with sand
BH-56,S-18	80.0	81.5	18.8									SM	Dark gray, silty SAND

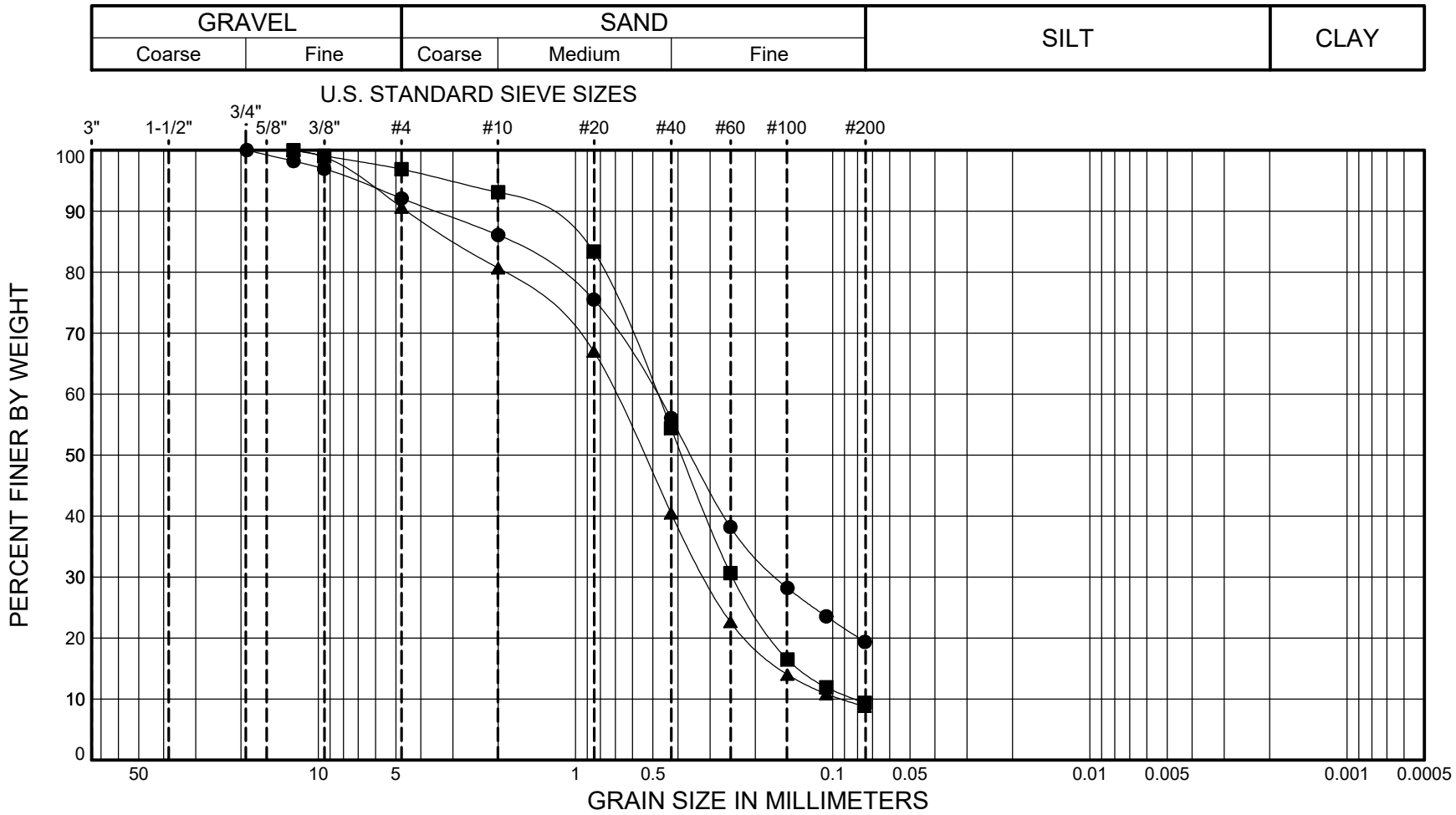
Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

SUMMARY OF
MATERIAL PROPERTIES

PROJECT NO.: 2015-061 FIGURE: B-3



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-51	S-9b	35.3 - 36.5	(SM) Olive-brown, silty SAND	15				7.9	72.7	19.4
■	BH-51	S-11	45.0 - 46.5	(SP-SM) Olive-brown, poorly graded SAND with silt	20				3.1	87.5	9.4
▲	BH-51	S-16a	70.0 - 71.0	(SW-SM) Dark gray, well-graded SAND with silt	15				9.4	81.8	8.8

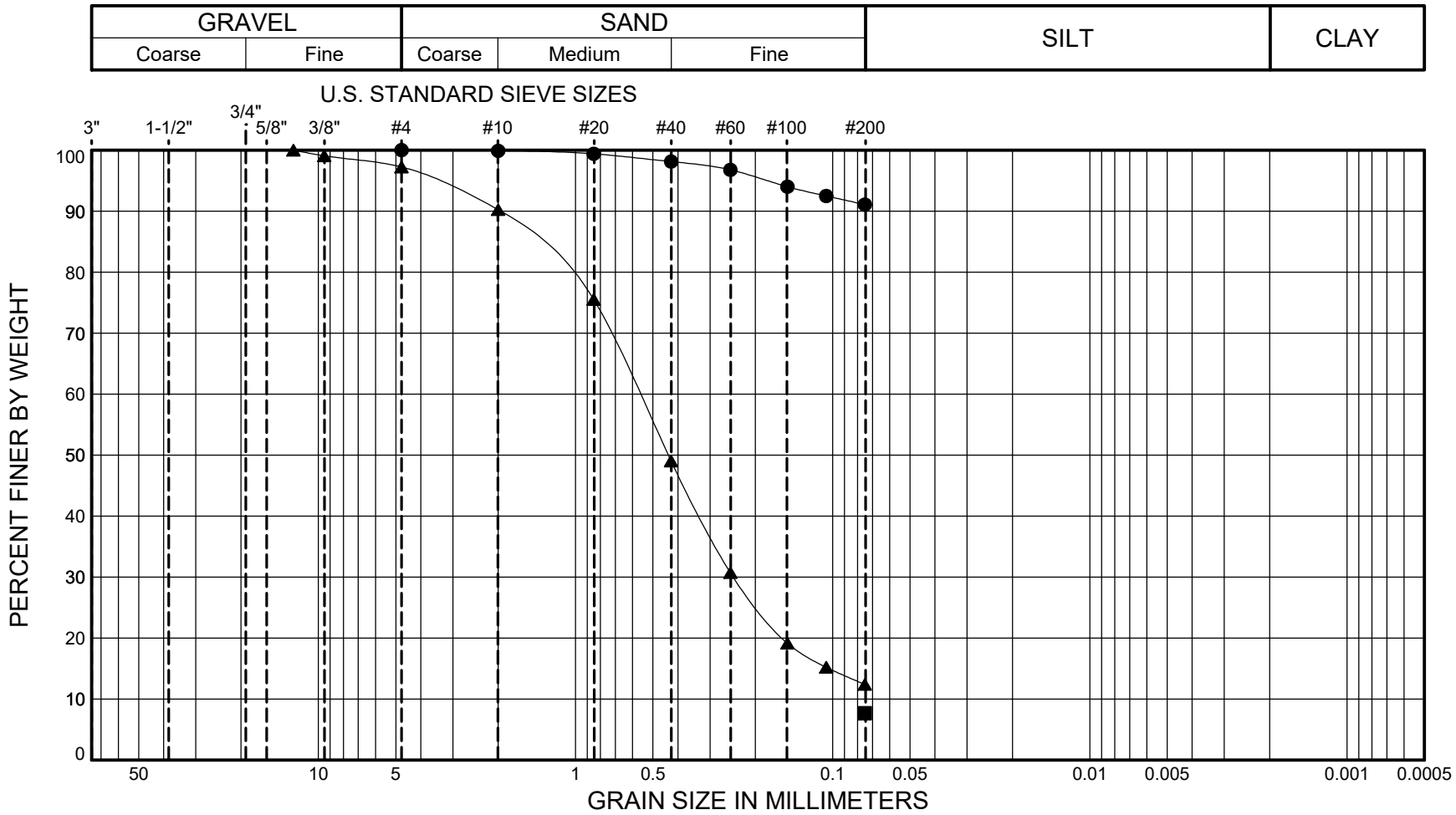
HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-4

HWAGRSZ 2015-061.GPJ 11/16/21



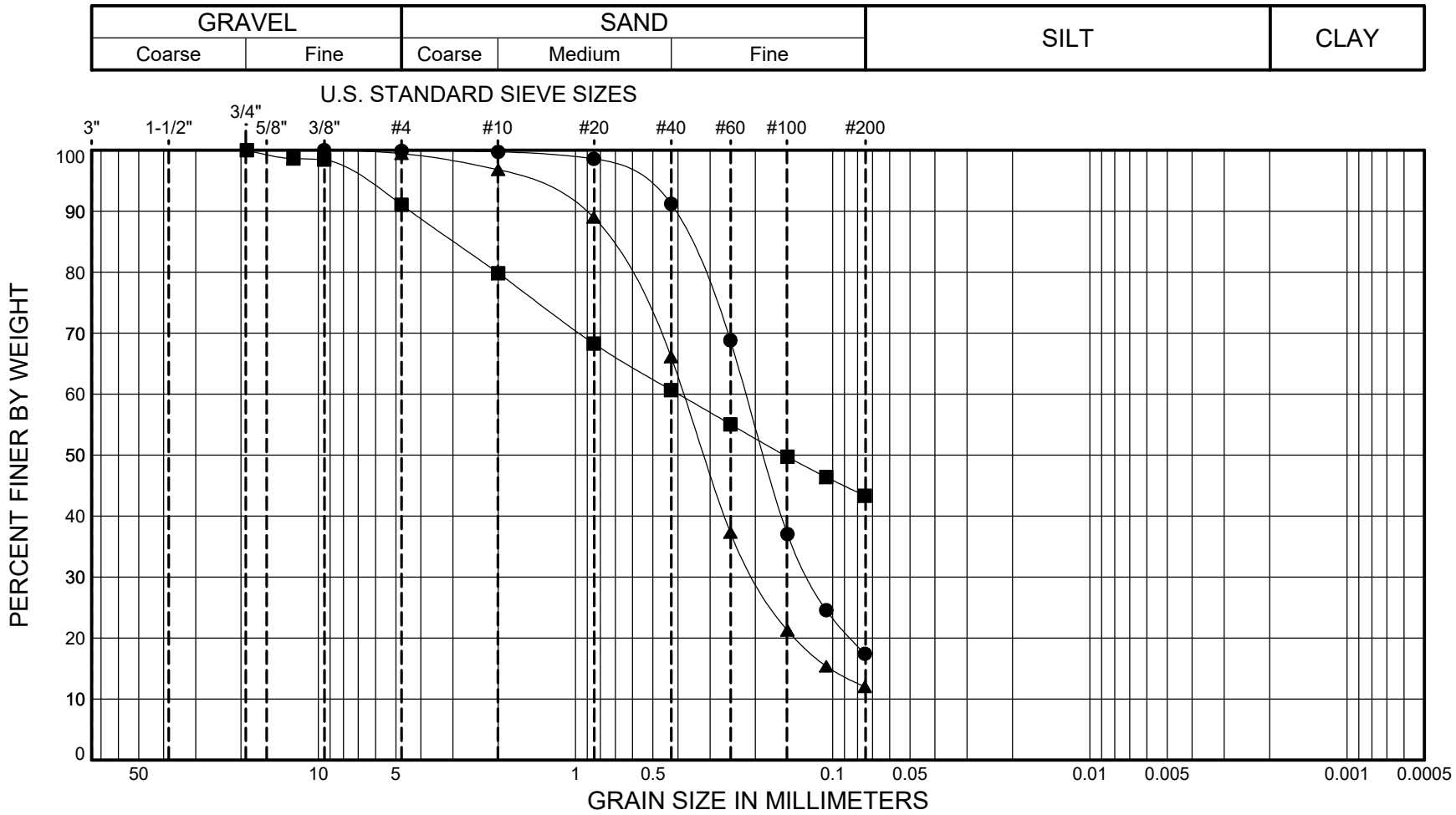
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-51	S-18	80.0 - 81.5	(MH) Dark gray, elastic SILT	34					8.9	91.1
■	BH-52	S-10	40.0 - 40.5	(SP-SM) Dark olive-gray, poorly graded SAND with silt and gravel	22						7.6
▲	BH-52	S-11b	45.8 - 46.5	(SM) Olive-brown, silty SAND	15				2.8	84.8	12.4

HWA GEOSCIENCES INC.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-5



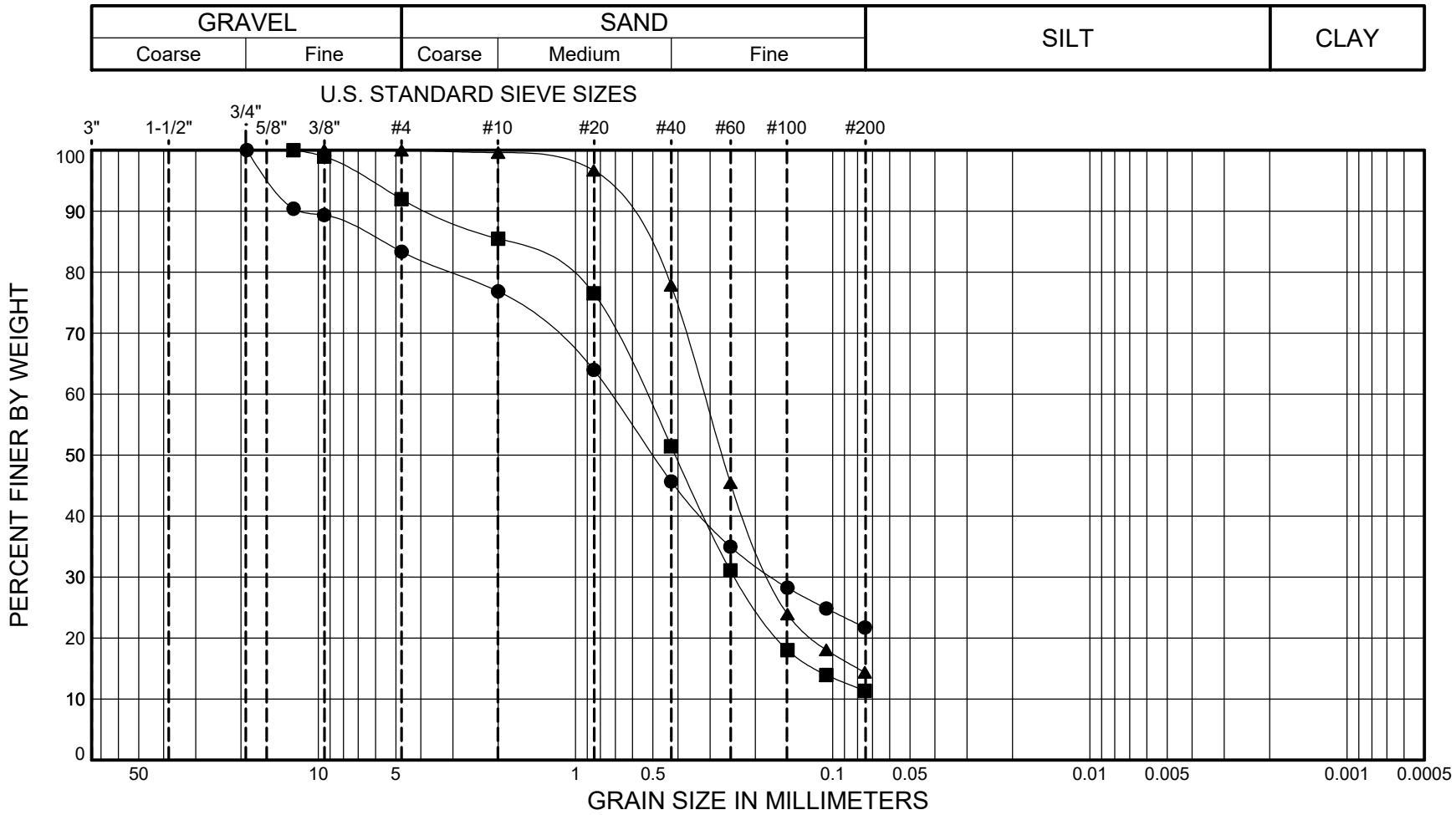
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-52	S-16	70.0 - 71.5	(SM) Dark gray, silty SAND	22				0.1	82.5	17.4
■	BH-52	S-17b	75.5 - 76.5	(SM) Dark grayish-brown, silty SAND with organics	50	52	38	14	8.9	47.7	43.3
▲	BH-53	S-13	55.0 - 56.5	(SW-SM) Dark gray, well-graded SAND with silt	21				0.6	87.4	12.0

HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-6



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-54	S-9	35.0 - 36.5	(SM) Light olive-brown, silty SAND with gravel	18				16.7	61.6	21.7
■	BH-54	S-11	45.0 - 46.5	(SW-SM) Olive-brown, well-graded SAND with silt	18				8.0	80.6	11.4
▲	BH-54	S-16	70.0 - 71.5	(SM) Dark grayish-brown, silty SAND	20				0.0	85.6	14.4

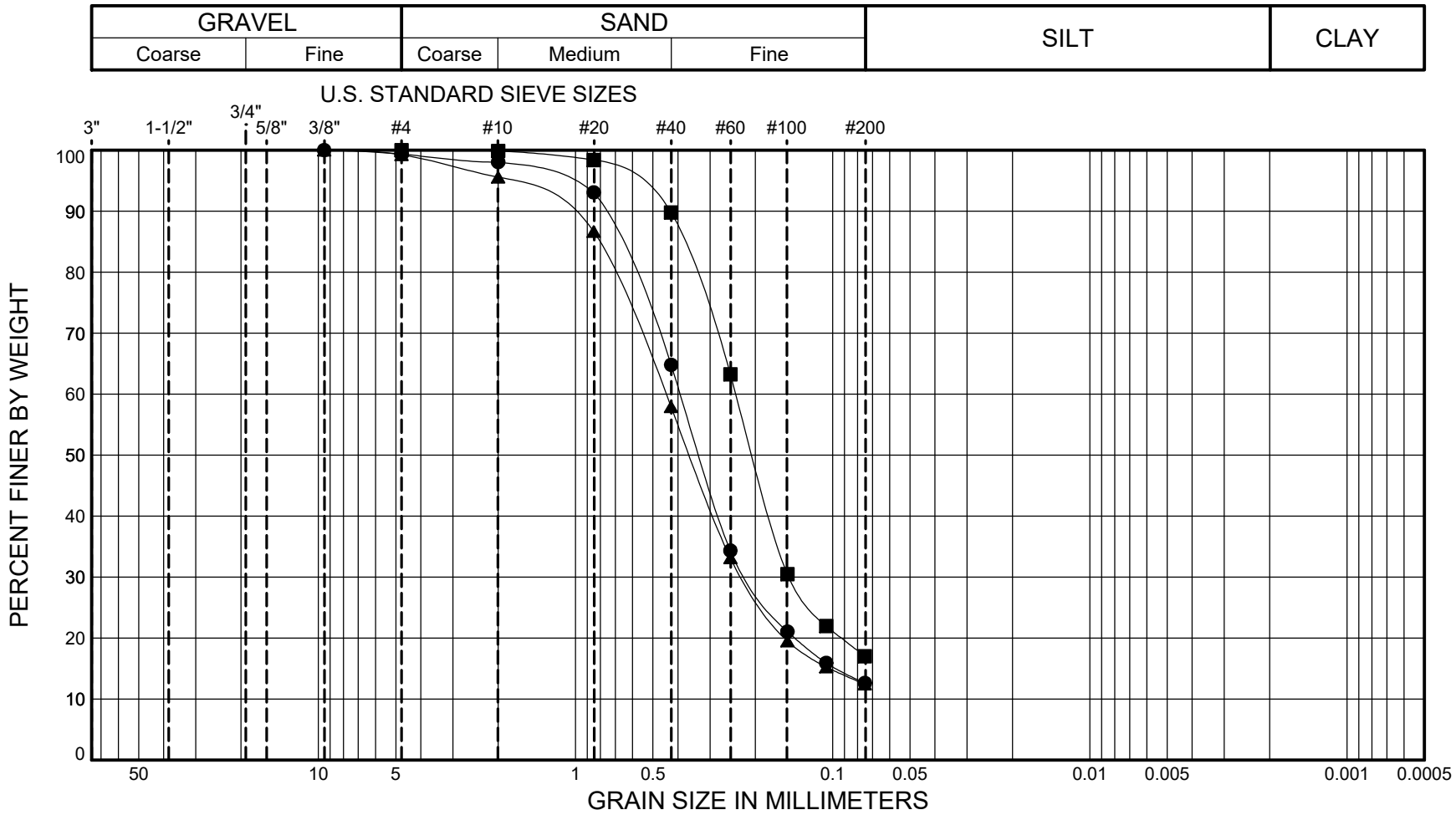
HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-7

HWAGRSZ 2015-061.GPJ 11/16/21



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-55	S-13	55.0 - 56.5	(SM) Olive-brown, silty SAND	19				0.6	86.7	12.6
■	BH-55	S-17	75.0 - 76.5	(SM) Very dark gray, silty SAND	20					83.0	17.0
▲	BH-56	S-13	55.0 - 56.5	(SM) Olive-brown, silty SAND	19				0.8	86.8	12.4

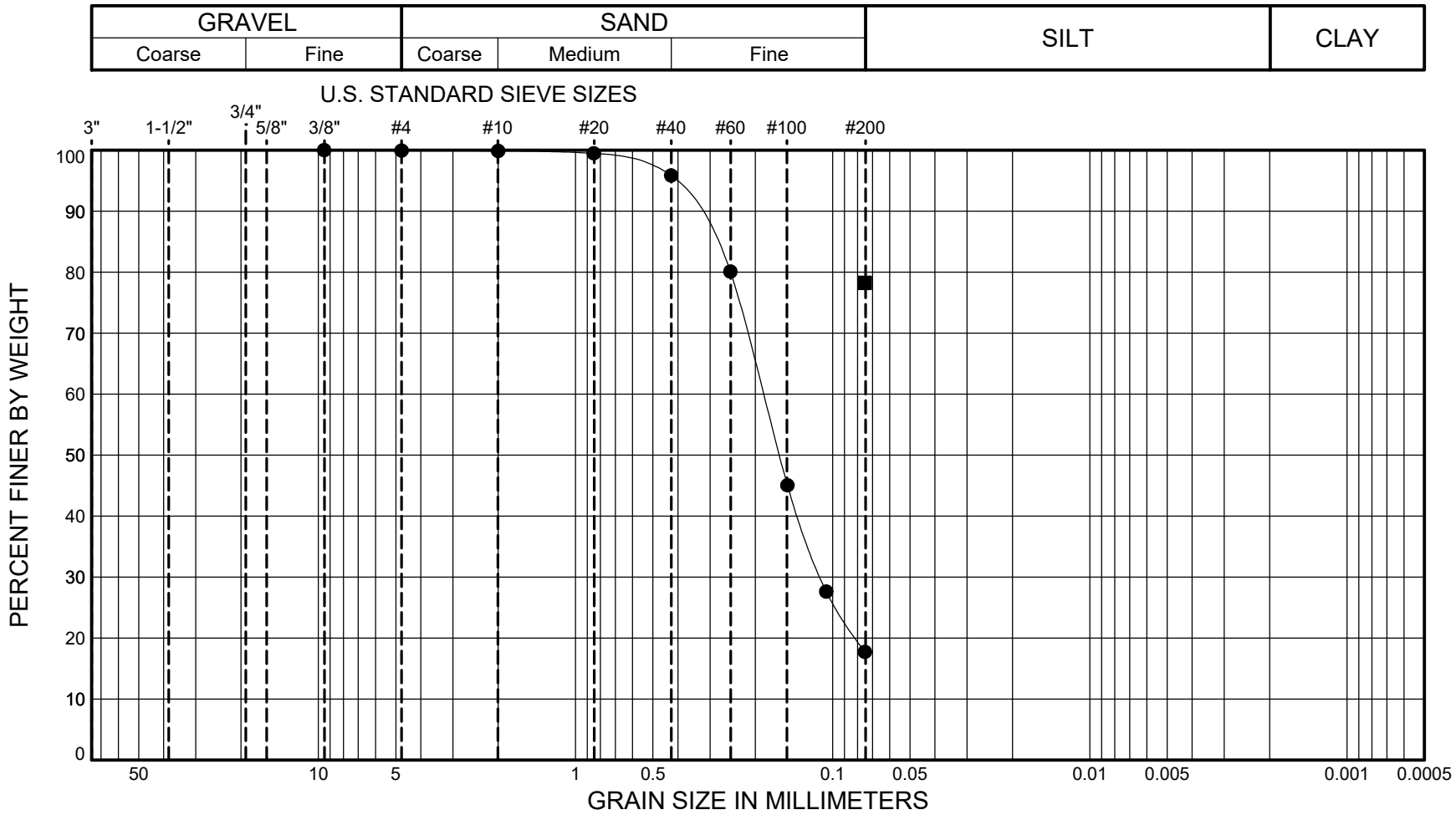
HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-8

HWAGRSZ 2015-061.GPJ 11/16/21



SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	BH-56	S-16	70.0 - 71.5	(SM) Dark gray, silty SAND	24				0.1	82.2	17.7
■	BH-56	S-17a	75.0 - 75.7	(ML) Dark grayish-brown, SILT with sand	35	39	32	7			78.3

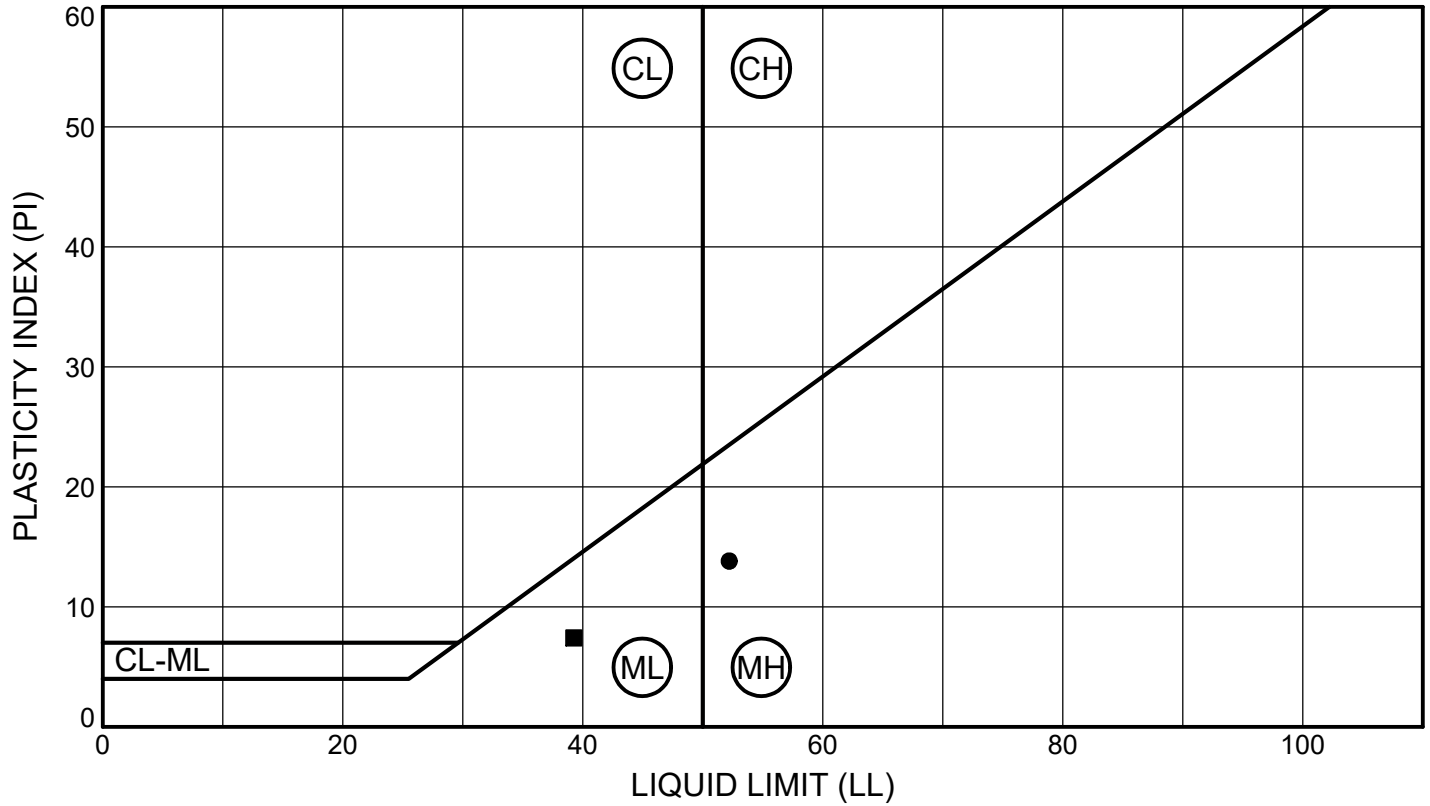
HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2015-061 FIGURE: B-9

HWAGRSZ 2015-061.GPJ 11/16/21



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	BH-52	S-17b	75.5 - 76.5	(SM) Dark grayish-brown, silty SAND with organics	50	52	38	14	43.3
■	BH-56	S-17a	75.0 - 75.7	(ML) Dark grayish-brown, SILT with sand	35	39	32	7	78.3

HWA GeoSciences Inc.

EVERETT RIVERFRONT DEVELOPMENT
PHASE 2
EVERETT, WASHINGTON

LIQUID LIMIT, PLASTIC LIMIT AND
PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

PROJECT NO.: 2015-061 FIGURE: B-10

HWAATTB 2015-061.GPJ 11/16/21

APPENDIX D

DRIVEN GROUT PILE SLEEVE LENGTH REQUIREMENTS

Pile Sleave Lengths Everett Riverfront Development Phase 2

Building C

North of SW Corner (feet)	0-20	20-40	40-60	60-80	80-100	100-120	120-140	140-160	16-180
320-340	x	x	x	x	34	35	36	37	38
280-320	x	x	x	x	35	36	37	37	37
240-280	x	x	x	x	36	37	37	37	37
200-240	x	x	x	x	37	37	37	37	36
160-200	x	x	x	x	37	37	37	36	36
120-160	x	x	x	x	37	37	36	36	35
80-120	x	x	x	x	36	36	36	35	35
40-80	32	32	33	34	35	35	35	35	35
0-40	32	32	33	33	34	34	34	35	35

East of SW Corner (feet)

Building D

North of SW Corner (feet)	0-20	20-40	40-60	60-80
380-390	30	32	35	37
340-380	30	33	36	38
320-340	31	34	37	40
280-320	31	34	38	41
240-280	32	35	39	42
200-240	33	37	40	43
160-200	34	37	40	42
120-160	35	38	39	41
80-120	36	37	38	40
40-80	37	37	38	39
0-40	38	38	38	38

East of SW Corner (feet)

Note: These values are preliminary and should be revised by HWA once pile designs showing gridlines where actual piles are to be placed are completed.