ZipperGeo
Geoprofessional Consultants

October 25, 2022

Washington Department of Ecology – Central Regional Office
Toxics Cleanup Program
1250 West Alder Street
Union Gap, Washington 98903

Attention: Mr. Frank Winslow, LHG

Subject: **Work Plan - Updated Remedial Investigation, Focused Feasibility Study, and Cleanup Action Plan (RI-FFS-CAP)**
Affinity at Everett - Former Diversified Industries Property
2915 36th Street
Everett, Washington
ZGA Project No. 2610.20

Dear Mr. Winslow:

Zipper Geo Associates, LLC (ZGA) is pleased to present this Work Plan to complete an Updated Remedial Investigation, Feasibility Study, and Cleanup Action Plan (RI-FS-CAP) for the former Diversified Industries Property located at 2915 36th Street in Everett, Washington (Property). It is our desire to attain a "No Further Action (NFA) Likely" determination from the Washington State Department of Ecology (Ecology) within the next calendar year, and ultimately attain an NFA determination after the planned redevelopment is complete. Toward that end, ZGA has provided the following work plan for your consideration.

This Work Plan is intended to be used only in conjunction with the following ZGA-produced document: *Site Background Summary - Affinity at Everett - Former Diversified Industries Property - 2915 36th Street - Everett, Washington - ZGA Project No. 2610.20* dated August 18, 2022 (to be provided under separate cover).

PROPERTY DESCRIPTION

The Property consists of Snohomish County tax parcel Nos. 00576000200000, 29052900102300, and 01162800099500, which together cover a reported 4.27 acres. The property is currently vacant, secured by a perimeter fence, and is mostly covered by short grasses. The property currently includes numerous segmental concrete manhole cylinders, which are used to access the seven existing groundwater monitoring wells and a sewer line manhole. Otherwise, no above-ground structures are present. The seven manhole cylinders or "vaults" were presumably placed as a means to preserve the seven monitoring wells during recent (2016-2017) placement of a significant amount of fill on the property.

The property is bordered to the north by recently constructed apartment buildings (east) and a Burlington Northern railroad easement (west); to the west by a vacant and undeveloped parcel (former GTS Drywall Site); to the east by Riverfront Boulevard, beyond which lies a vacant parcel owned by the City of Everett; and to the south by Riverfront Boulevard, beyond which lies the Everett Landfill. The Property slopes down gently toward the east, with a low drainage collection area located on the southwest corner of the Property. The property is located about 500 feet to the west of the Snohomish River.

The Property is part of the Everett (Snohomish River) "Riverfront" re-development area which includes approximately 200 acres of planned mixed-use development that also includes the west-adjacent GTS Drywall Site and the south-adjacent Everett Landfill.

PROPERTY CONDITIONS

Previous environmental assessment work completed on the Subject Property by others has included advancing seven push probe borings, eight test pit excavations, seventeen hollow stem auger soil borings, twelve of which were completed as resource protection groundwater monitoring wells, and three landfill gas probes. All but seven of the groundwater monitoring wells and all of the landfill gas probes could not be located by ZGA on the Property.

Soil

Import fill from unknown source(s) was placed on the property beginning in 2016. According to grading plans obtained from the City of Everett, up to eight feet of fill was to be placed on the western portion of the Subject Property. However, based upon ZGAs recent observation of manhole segments installed prior to filling to protect monitoring wells, about 4 to 8 feet of recent fill from an unknown source has been placed on the eastern portion of the Subject Property. These recently placed fill soils were not present when the known soil borings and test pits were advanced. The upper, recently placed fill soils from an unknown source are underlain older fill soils consisting of silty sand to sandy silt. These soils are locally variably laden with anthropogenic debris, including asphalt, concrete, brick, wood, wire, glass, and porcelain on the southern portion of the Subject Property. The upper fill soils extend from depths of about 12 feet to greater than 25 feet below the current ground surface. These fill soils are underlain by native silts and sands interbedded with peat, interpreted to be alluvial and slack water deposits. Deeper soil borings completed on the south-adjacent landfill property encountered very dense glacial advance sands underlying the refuse that extended to the full depth explored of up to 50 feet below ground surface (bgs).

Analytical testing of soil on the Subject Property identified the following locations with contaminant concentrations in excess of Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels:

- Soil samples EB-2 16-20, P1-S2, and TP-3-5' exhibited a diesel and oil-range petroleum hydrocarbons (DRPH + ORPH) concentrations in excess of the Ecology Model Toxics Control Act (MTCA) Method A cleanup level of 2,000 milligrams per kilogram (mg/kg).

- Soil samples SB-1-19, SB-11-8, SB-12-15, MW-7-5, MW-7-10, EP-4-2, EP-5-4, EB-2-10.0-11.5, and EB-3 S-2 6-8, exhibited a carcinogenic polycyclic aromatic hydrocarbon toxicity equivalency equivalent quotient (cPAH - TEQ) concentrations in excess of the MTCA Method A cleanup level of 0.1 mg/kg.

- Soil samples EP-1-10, EP-2-3, EP-3-3, EP-6-7, EB-1-9, EB-1-16, EB-2-15-20, P1-S2, P2-S4, P4-S3, P6-S2, TP-1-1, TP-1-12, TP-1-15, TP-2-10, TP-2-12, TP-3-3, TP-3-9, TP-3-13, SB-1-19, SB-11-8, SB-12-15, MW-7-5, and MW-7-10 exhibited metals concentrations (arsenic, lead, and/or cadmium) in excess of respective MTCA Method A cleanup levels.

Groundwater

ZGA measured near surface groundwater levels in existing monitoring wells MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, and MW-12 on July 30, 2022. Groundwater depths ranged from about 12 feet to 17 feet below existing ground surface. Past assessments by HWA Geosciences (HWA) indicated a near surface groundwater migration direction consistently toward the south to southeast south. Past work by HWA suggested that this near surface water-bearing zone resides above the underlying silt and peat-rich deposits, which may form an aquitard to vertical groundwater flow. Deeper wells completed on the south-adjacent Everett Landfill encountered an underlying aquifer within the glacial sand deposits.

Analytical testing of groundwater on the Subject Property identified the following locations with contaminant concentrations in excess of Ecology MTCA Method A cleanup levels:

- Reconnaissance groundwater samples collected from push probe borings P3, P4, and P6 exhibited ORPH concentrations in excess of the MTCA Method A cleanup level of 500 micrograms per liter (µg/L).

- Reconnaissance groundwater samples collected from push probe borings P1 through P6 and EB-1 through EB-5 exhibited dissolved arsenic concentrations in excess of the MTCA Method A cleanup level of 5 µg/L.

- Groundwater samples collected from monitoring wells MW-1, MW-2, MW-2R, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, and MW-12 exhibited dissolved arsenic concentrations in excess of the MTCA Method A cleanup level of 5 µg/L.

Landfill Gas

The Subject Property is located to the north of and across 36th Street from the Everett Landfill. ZGA reviewed reports of landfill gas monitoring for the landfill. Three former landfill gas probes (LG-44, LG-45, and LG-46 installed on the subject property) located on the Subject Property were previously monitored for the Everett Landfill. Past monitoring results showed that each of these probes exhibited elevated concentrations of methane before and after the construction of the two northern gas extraction

trenches at the Everett Landfill. However, methane concentrations from probes located along 36th Street decreased to near zero after installation of the extraction trenches. Herrera Consultants (2021) suggested that the methane was due to installation of the probes on the Diversified Property into Peat-rich strata, organic-rich fill soil or other non-landfill sources. The probes on the Subject Property were destroyed by 2016-2017 from recent filling and regrading. It is ZGA's understanding that the landfill gas extraction system remains operational today.

SUMMARY OF DATA GAPS

This section provides an evaluation of nature and extent of contaminants in soil, near surface groundwater, and soil-gas, and a summary of data gaps that we recommend be addressed. The data gaps are discussed below for chemicals of concern in these three types of media.

Soil

Past analytical testing has shown an isolated occurrence of DRPH and ORPH, which is limited to the area of soil borings EB-2 and P1, and test pit TP-3. These impacted soils range in depth from about 5 feet to 20 feet bgs. Also, elevated concentrations of cPAH-TEQs are present sporadically at several areas tested at depths ranging from about 5 feet to 20 feet bgs, and are likely more extensive as only limited numbers of samples were analyzed for cPAHs. However, elevated concentrations of arsenic, cadmium, and lead are present throughout the anthropogenic fill soils variably throughout the southern half of the property. The lateral extent of metals-impacted soil has not been conclusively defined to the south, east, or west of and may extend beyond the boundaries of the Subject Property. The scope of services presented herein includes the advancement of soil borings and test pits to evaluate these data gaps.

Groundwater

Groundwater with elevated concentrations of arsenic in excess of the MTCA Method A cleanup level has been encountered in push probe borings P3 through P6, EB-1 through EB-5, and Monitoring wells MW-2, MW-3 through MW-9, MW-11, and MW-12. The highest concentrations of dissolved arsenic were from the borings and wells located along the southern property boundary. The lateral extent of arsenic-impacted groundwater has NOT been conclusively defined to the south and east and may extend beyond the boundaries of the Property. The scope of services presented herein includes the installation of dedicated monitoring wells and sampling of the existing monitoring wells to begin to evaluate these data gaps.**

** Please see the paragraph near the top of page 8 of this document entitled (***"Note"***).

Landfill Gas

Past screening for landfill gases on the Subject Property indicated elevated levels of methane. The gas probes located on the Subject Property were decommissioned based on site grading and filling activities. Gas probes located between the Everett Landfill and the Subject Property have not shown elevated concentrations of methane since 2004/2005, when the landfill gas mitigation system including extraction

trenches was installed and began operation. Therefore, the source or sources of methane in the former Subject Property is unclear. Supplemental landfill gas screening will be necessary to design acceptable engineering controls to mitigate human health risk for the future residential development. The scope of services presented herein includes the installation of dedicated soil gas probes.

SCOPE OF SERVICES

ZGA has prepared the following Work Plan to address the previously cited data gaps and to formulate remedial action alternatives including the use of engineering and institutional controls to provide future protections for the development as proposed, human health, and the environment. Our scope of services also takes into account the site characterization data presented in HWA's *Remedial Investigation-Feasibility Study-Cleanup Action Plan* (RI-FS-CAP) report dated July 30, 2014. The Washington State Department of Ecology (Ecology) issued a *No Further Action Likely* determination in the form of an Opinion Letter dated September 2, 2014.

We propose to complete a subsurface investigation program that consists of the collection and analysis of additional soil and groundwater samples to better evaluate the nature and extent of petroleum hydrocarbons, cPAHs, and metals in soil and groundwater beneath the subject Property. Landfill gas will also be evaluated with the installation of soil gas probes on the subject Property. This data will be tabulated with previous usable data generated by others and incorporated into a *Remedial Investigation-Focused Feasibility Study-Cleanup Action Plan Addendum Report (RI-FFS-CAP Addendum)* that will be submitted to Inland Group and Ecology's Expedited Voluntary Cleanup Program (VCP) with a request for an Opinion Letter and a "No Further Action" Likely" determination. Specific tasks are described below.

Task 1. Pre-Mobilization Tasks

Prior to mobilizing for the subsurface investigation, ZGA will complete the following tasks:

- Mark the boring and test pit locations and request a one-call utility locate. ZGA will contact the Underground Utilities Location Service with regard to our proposed exploration locations. We will also contract with a private utility locating company to locate and mark underground utilities at our proposed boring locations using conductible tracing and ground penetrating radar techniques.
- Complete a site-specific Health and Safety Plan (HASP) to satisfy 29 CFR 1910.120 and Chapter 173-340-810 WAC.
- Coordinate with the analytical laboratory, drilling and excavation subcontractors, ESNW, and Inland Group.

Task 2. Subsurface Investigation

This phase of the investigation consists of advancing hollow stem auger borings to be completed as groundwater monitoring wells, advancing direct push soil borings to be completed as landfill gas probes, and advancing backhoe excavated test pits, as described below. The on-Property soil borings and test pits

will be completed in unison with the project geotechnical engineering subsurface investigation to be completed by Environmental Solutions Northwest (ESNW).

Task 2A – HSA Soil Borings/Monitoring Wells

A ZGA experienced engineer or geologist will observe the advancement of seven borings using a truck-mounted hollow-stem auger drill rig employing the standard penetration test procedure (SPT) as defined by ASTM D 1586 to retrieve the soil samples. The explorations will be completed by a Washington State-licensed Resource Protection well driller under subcontract to ESNW. The borings will be advanced using a track or truck-mounted drill rig to depths of approximately 25 feet bgs. The borings will be completed as dedicated groundwater monitoring wells in accordance with Chapter 173-160 WAC, *Minimum Standards for Construction and Maintenance of Wells*.

Soil samples will be collected at 2½-foot to 5-foot intervals from each of the explorations. Borings will be logged by an experienced geologist or engineer from ZGA in general accordance with ASTM D2487, 2000, "*Standard Practice for Classification of Soils for Engineering Purposes, United Soils Classification System (USCS)".* Soil will be observed to document subsurface conditions and visual or olfactory indications of impacts. Samples will be field screened with a photoionization detector (PID) to qualitatively evaluate the presence of organic vapors utilizing the "headspace method."

Selected soil samples will be submitted for laboratory analysis from each of the borings. Those intervals not selected for analysis will be held at the laboratory pending initial results. If no elevated PID reading is observed, the samples will be collected from the interval of most probable environmental impact as determined in the field by the sampling professional. In addition, some soils may be collected from intervals in which no impacts are observed in the field, for the purpose of illustrating the absence of contaminants of concern.

Soil samples will be immediately placed into an ice chest containing either an ice substitute or ice until delivery to a State of Washington accredited analytical laboratory in strict accordance with industry standard chain-of-custody protocol. The samples will be either hand delivered or transferred to the analytical laboratory by courier. ZGA will collect up to four soil samples from each boring to be submitted for analytical testing for a total of twenty (20) samples. All soil samples will be analyzed by the laboratory using the analytical methods described in Task 3 below.

Each of the seven proposed HSA borings will be completed as dedicated groundwater monitoring wells. Monitoring wells will be constructed of 2-inch ID schedule 40 flush threaded PVC. Each well will be screened from depths of 10 to 25-feet depths with .010 or .020-inch machine slotted screen constructed with No. 10-20 or No. 8-12 silica sand placed within the borehole annulus to approximately 2 feet above the screened interval. Monitoring well construction will be in strict accordance with Chapter 173-160 WAC, *Minimum Standards for Construction and Maintenance of Wells* including completion of required *Notice of Intent* to Construct and post installation monitoring well log submittals to the Washington State Department of Ecology (Ecology) Well Drilling Section.

Groundwater monitoring wells will be developed a minimum of 72 hours before sampling. Prior to development and sampling, the wells will be gauged to determine static groundwater levels. Well development will be undertaken to allow the wells to communicate effectively with the surrounding formation and decrease turbidity during sampling events. Well development of each well will consist of surging and hand bailing or through surging and the use of a downhole bladder pump or electric submersible pump until turbidity has stabilized. ZGA will similarly redevelop the existing groundwater monitoring wells. Development and sampling of the existing seven wells will be completed by a two-person crew for monitoring well "manhole" vault entry, egress, safety, and evaluation of the potential for a confined space environment.

Soil cuttings and decontamination/well development water generated during advancement of the borings will be contained in labeled 55-gallon steel drums and stored on the Property pending analytical results and ultimately be transported to and disposed of at an appropriate facility.

We understand that Environmental Solutions Northwest (ESNW) will complete a geotechnical evaluation of the Property, which will include the advancement of three additional borings, also utilizing the truck-mounted hollow-stem auger drill rig, to depths on the order of 100 feet bgs. ZGA will observe and log these borings to document subsurface conditions and visual or olfactory indications of impacts. Samples will be field screened with a photoionization detector (PID) to qualitatively evaluate the presence of organic vapors utilizing the "headspace method." ZGA may collect select soil samples for analytical laboratory testing from these "geotechnical" borings.

The proposed locations of these explorations are presented in Figure 1, *Proposed Groundwater Monitoring Wells, Gas Probes, and Test Pits*. Rational for each of the borings/wells follows:

- **Boring/well MW-101**: Boring/well MW-1 will assess the vertical extent of soil impacts and groundwater impacts in the area of former well MW-4, as well as evaluating impacts from potential upgradient contaminant sources.
- **Boring/well MW-102**: Boring/well MW-102 will provide soil and groundwater quality results in the vicinity of former wells MW-1 and MW-1R, as well as evaluating impacts from potential upgradient contaminant sources.
- **Boring/well MW-103**: Boring/well MW-103 will provide soil and groundwater data in the vicinity of former wells and borings P-2 and EB-1 and provide such results near the downgradient Property line.
- **Boring/well MW-104**: Boring/well MW-104 will provide soil and groundwater data near former well MW-3.
- **Boring/Well MW-105**: Boring/well MW-105 will provide soil and groundwater data on the central portion of the property.
- **Boring/Well MW-106**: Boring/well MW-106 will located on the eastern portion of the Subject Property to evaluate the extent of arsenic groundwater impacts previously identified in well MW-5.

- **Boring/Well MW-107**: Boring/well MW-107 will located on the eastern portion of the Subject Property to evaluate the extent of arsenic groundwater impacts previously identified in well MW-10 and MW-12.

A Washington State-Licensed Surveying company will survey the well heads of both the new and existing well. Each of the well heads should be surveyed relative to NAVD 1988. This data will be used to establish shallow groundwater elevations at each well location as well as the direction of groundwater flow and relative gradient.

**** Note: As discussed with Ecology, ZGA had planned to complete the Ecology suggested (two) additional soil borings/monitoring well installations to the east of the Subject Property to assess the downgradient extent of groundwater impacts between the site and the Snohomish river. However, an email received by ZGA from Mr. Paul McKee (Real Property Manager, City of Everett) received on August 10, 2022, stated in relevant part:**

"The city respectfully declines ZipperGeo's request to install monitoring wells on parcel 29052900402000 or in the right-of-way adjacent thereto."

Task 2B – Landfill Gas Probes

ZGA will observe advancement of four push probe borings and installation of four landfill gas probes to a total depth of approximately 10 feet bgs. The gas probes will be installed with a direct push drill rig under subcontract to ESNW. Each boring will be completed with 1-inch ID PVC flush threaded PVC casing including a 2-foot-long, 0.020-inch machine slotted screened section. The upper portion of the gas probes will include an 8-foot section of blank schedule 40 PVC. The probe will be completed with 3 feet of No. 8-12 silica sand surrounding the screened section, overlain by approximately 7 feet of hydrated bentonite, which, in turn, will be overlain by concrete that secures a ground surface-flush monument. After completion each gas probe will be fitted with a surface cap with a port/petcock to allow for landfill gas screening. ZGA will then screen each well with a four-gas meter.

Task 2C. Test Pit Excavations

ZGA will observe, screen, log, and sample up to eight trackhoe excavated test pits across the Subject Property. The test pits will be excavated by an earthwork contractor under subcontract to ESNW. Each test pit will be excavated to a depth of 15 feet or more bgs. ZGA will continuously log soil conditions throughout each test pit, and screen soil samples for signs of contaminant impacts as was described for soil borings. ZGA will collect up to three soil samples from each excavation to be submitted for analytical testing for a total of twenty-four (24) samples. Care will be taken to collect samples from the center of the backhoe bucket to reduce the risk of cross contamination. All soil samples will be analyzed by the laboratory using the analytical methods described in Task 3 below.

Task 2D - Groundwater Sampling

Groundwater samples will be collected using low-flow purge and sample technique via a peristaltic pump utilizing dedicated silicone and polyethylene tubing. Wells will be purged prior to sampling until consistent values (Less than 10% variance) are obtained via a Horiba multimeter equipped with a flow-through cell for pH, turbidity, temperature, conductivity, and dissolved oxygen content over at least three 5-minute intervals or until a minimum of three casing volumes is purged. Each groundwater sample container will be labeled with our firm and project number, specific sample identification, date and time collected. Groundwater samples will be directed into appropriate glassware provided by the laboratory and immediately placed into a cooler containing ice or ice substitute. Samples will be delivered to a Washington State-accredited analytical laboratory in strict accordance with industry standard chain-of-custody protocols. In total, fourteen (14) groundwater samples (seven new wells, seven existing wells, and one quality assurance duplicate sample) will be analyzed by the laboratory using the analytical methods described in Task 3 below.

Task 3. Analytical Laboratory Testing

The following scope of analytical laboratory testing of on-site soil and groundwater is proposed. We intend to subcontract Friedman & Bruya, Inc. (F&B) of Seattle, Washington for the analyses discussed below.

Soil

A total of 50 soil samples collected from the soil borings and test pits will be submitted to Friedman & Bruya, Inc. (BI) analytical laboratory for analytical testing. Each soil sample will be analyzed for the following compounds:

- DRPH and ORPH by Northwest Method NWTPH-Dx; and,
- MTCA 5 metals (arsenic, lead, cadmium, chromium, and mercury) by EPA Method 6020B.

In addition, one sample from each test pit and boring (fifteen total) will be analyzed for:

- Volatile Organic Compounds (VOCs) by EPA Method 8260D; and,
- MTCA low level cPAHs by EPA Method 8270E SIM.

Groundwater

Groundwater samples collected from each of the seven new (MW-101 to MW-107) and seven existing (MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, and MW-12) groundwater monitoring wells will be analyzed for the following potential chemicals of concern for one groundwater monitoring event:

- DRPH and ORPH by Northwest Method NWTPH-Dx;
- DRPH and ORPH by Northwest Method NWTPH-Dx with the sample extracts passed through a silica gel column prior to analysis;
- Volatile Organic Compounds (VOCs) by EPA Method 8260D;
- MTCA low level cPAHs by EPA Method 8270E SIM; and,
- Dissolved arsenic, lead, and cadmium by EPA Method 6020B.

In addition to the fourteen groundwater samples, one duplicate groundwater sample will be collected and analyzed for quality assurance.

Task 4. Data Review, Interpretation, Tabulation, Graphics, EIM Submittal

This task will include data review, tabulation, graphics. Specifically, this will include:

- QA/QC review of analytical data and tabulation.
- Drafting of soil boring and monitoring well logs.
- Revising existing figures and drafting additional CAD figures, including groundwater contour maps, incorporating the newly obtained data.
- Input of new and existing analytical data into Ecology's Environmental Information Management (EIM) data retrieval system.

Task 5. Updated RI-FS-CAP Report and Ecology Process

ZGA will prepare an RI-FS-CAP addendum report for submittal to Ecology under the expedited VCP. This document will be completed in accordance with the requirements cited in the current version of MTCA, specifically Chapters 173-340-350 through 173-340-380 and 173-340-390 WAC. The RI report will be comprehensive in regard to both the conceptual site model and the cleanup alternatives that may be available to address the on- and off-Property contamination**.** The report will summarize the historical information regarding the Property and the results of previous investigations and will also include a conceptual site model that clearly defines the hydrology, geology, and chemical characteristics of the Property both vertically and laterally and identifies potential exposure pathways.

The FS portion of the report will provide an evaluation of the most technically implementable and cost-effective remedial alternatives for the Property. The FFS will incorporate the information developed during the RI and provide comparative evaluations of potential cleanup scenarios.

The CAP portion of the report will describe the selected cleanup action in detail in accordance with the requirements detailed in MTCA.

As required by Ecology, ZGA will input all analytical data from all available reports (circa 2005 and more recent) into Ecology's Environmental Information Management (EIM) data retrieval system. The monitoring data will be uploaded electronically through the EIM system.

Task 6. Expedited VCP Submittal and Engagement

These tasks include completing submittal forms for entry into Ecology's Expedited VCP and subsequent dialogue.

Task 7. Communication and Project Management

These tasks include communication with various members of the project team and Ecology, attending meetings, interim submittals, project administration, project management, and scheduling throughout the duration of Tasks 1 through 6 for a period of approximately 3 months.

Assumptions, Conditions, and Additional Considerations

This Work Plan was prepared based on the following assumptions, in addition to those stated above:

- Analytical Quality Assurance/ Quality Control (QA/QC) for soil, surface water, groundwater, and soil gas samples will be in accordance with EPA SW 846 *Test Methods for Evaluating Solid Waste* and be performed by the subcontract testing laboratory.
- During groundwater sample collection, the water level indicator sensor probe and cable will be flushed with a potable water/non-phosphate detergent solution, then flushed with distilled water prior to and between each water level measurement. Use of the peristaltic pump will employ dedicated polyethylene tubing for each well sampled.
- ZGA's services will be performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographic area during the same period. ZGA does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. No warranty for our services is express or implied.
- ZGA accepts no responsibility or liability to any person or organization for any claim, for loss or damage (including attorney's fees) caused, or believed to be caused, directly or indirectly by: conditions not revealed by the laboratory analyses performed; failure to perform other chemical analyses or utilize different test methods or equipment; or failure to locate or install additional sample points, test pits, soil borings, or monitoring wells.
- Data presented resulting from these services will be based upon information derived from the services performed under this scope work, and such information is subject to change over time.
- There are a number of unknown variables associated with environmental investigations. This Work Plan should therefore be considered a dynamic document to some degree, modification to which could be recommended by ZGA in response to the results of the conditions encountered in the field and the data obtained.
- The behavior of subsurface contaminants is a complex phenomenon involving geochemistry, hydrogeology, and the geotechnical sciences. ZGA's conclusions regarding subsurface contamination will be based solely upon information cited in the reports.

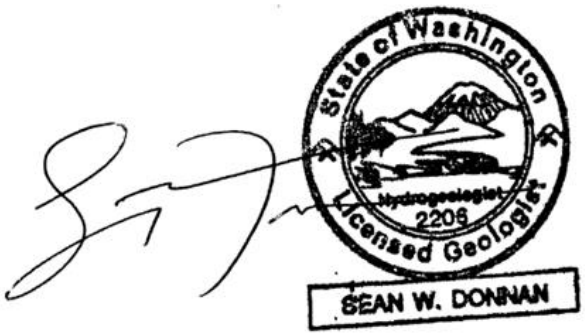
CLOSING

We appreciate the opportunity to present this Work Plan for your review and comment. If you have any questions or comments, please contact the undersigned at (425) 582-9928.

Respectfully submitted,
Zipper Geo Associates, LLC

Kaelin R. Newman, L.G.
Project Geologist

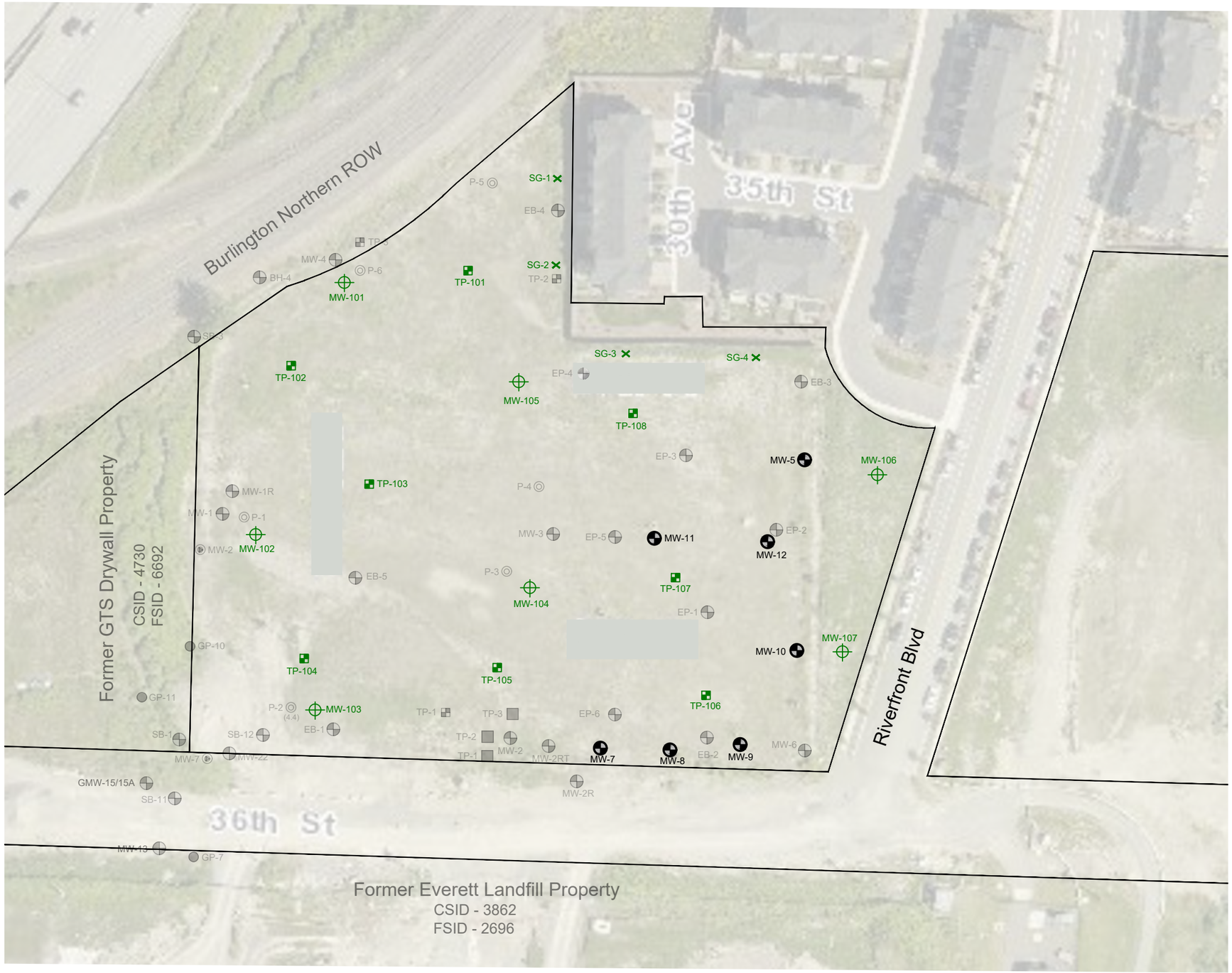
Charles C. Cacek, L.E.G.
Associate Geologist



Sean W. Donnan, P.G., L.E.G., L.Hg.
Principal

Enclosure: Figure 1 – *Proposed Groundwater Monitoring Wells, Gas Probes, and Test Pits*

FIGURE



LEGEND

	Property Boundary
MW-107	Proposed Groundwater Monitoring Wells
SG-4	Proposed Gas Probes
TP-108	Proposed Test Pits
MW-25	Active Monitoring Wells
LG59	Active Gas Probes
P-6	Direct Push Borings (Shannon and Wilson)
TP-1	Test Pits (Associated Earth Sciences, Inc.)
EP/EB-1	Wells/Borings (Associated Earth Sciences, Inc.)
SB-10	Soil Borings (GeoEngineers)
MW-1	Monitoring Wells (GeoEngineers)
GMW-13	Monitoring Wells (HWA)
GP-8	Direct Push Borings (HWA)
TP-3	Test Pits (HWA)
B-107	Borings (HWA)
BH-5	Borings (HWA)
SA-30	Borings/Wells (HWA)

ACRONYMS

HWA:	HWA Geosciences, Inc.
CSID:	Cleanup Site Identification
FSID:	Facility Site Identification

80 0 40 80
SCALE IN FEET

REFERENCE: (1) Site and Exploration Plan from the Remedial Investigation Feasibility Study Cleanup Action Plan (RI FS CAP), prepared by HWA Geosciences Inc. and dated October 4, 2017.

Affinity at Everett
2915 36th Street South
Everett, Washington

PROPOSED
GROUNDWATER MONITORING WELLS,
GAS PROBES, AND TEST PITS

DATE: OCTOBER 2022 Job No. 2610

Zipper Geo Associates, LLC
19019 36th Ave. W.,Suite E
Lynnwood, WA

FIGURE 1
SHT. 1 of 1