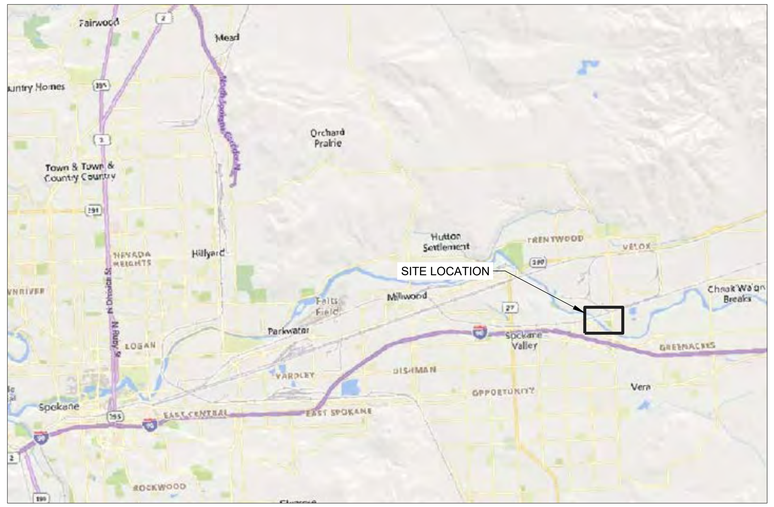
APPENDIX C

As-Built Drawings

ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON



VICINITY MAP
SCALE 1" = 8000'

SITE LOCATION MAP
SCALE 1" = 400'

DRAWING LIST	
SHEET NUMBER	SHEET TITLE
010	COVER SHEET
020	GENERAL NOTES AND SPECIFICATIONS (1 OF 3)
021	GENERAL NOTES AND SPECIFICATIONS (2 OF 3)
022	GENERAL NOTES AND SPECIFICATIONS (3 OF 3)
030	SITE OVERVIEW - PRE REMEDIATION
031	SITE OVERVIEW - POST REMEDIATION
040	SURVEY MONUMENTATION AND CONTROL
050	EROSION AND SEDIMENT CONTROL PLAN
051	EROSION AND SEDIMENT CONTROL DETAILS
060	ACCESS ROAD AND STAGING AREA PLAN
061	ACCESS ROAD DETAILS
070	MONITORING WELL DECOMMISSIONING
100	DROSS STOCKPILE REMOVAL PLAN
110	SUBGRADE PLAN (1 OF 2)
111	SUBGRADE PLAN (2 OF 2)
115	DROSS STOCKPILE REMOVAL SECTIONS
120	ECOLOGICAL CAP AND CONTAINMENT BERM PLAN (1 OF 2)
121	ECOLOGICAL CAP AND CONTAINMENT BERM PLAN (2 OF 2)
130	ECOLOGICAL CAP AND CONTAINMENT BERM DETAILS (1 OF 2)
131	ECOLOGICAL CAP AND CONTAINMENT BERM DETAILS (2 OF 2)
132	ECOLOGY BLOCK DIVERSION WALL SECTION AND DETAIL
200	OFF-PILE AREAS SOIL REMOVAL PLAN (1 OF 3)
201	OFF-PILE AREAS SOIL REMOVAL PLAN (2 OF 3)
202	OFF-PILE AREAS SOIL REMOVAL PLAN (3 OF 3)
210	OFF-PILE AREAS SOIL REMOVAL SECTIONS (1 OF 2)
211	OFF-PILE AREAS SOIL REMOVAL SECTIONS (2 OF 2)
215	OFF-PILE AREAS SOIL REMOVAL DETAILS
220	OFF-PILE AREAS FINAL GRADING PLAN (1 OF 3)
221	OFF-PILE AREAS FINAL GRADING PLAN (2 OF 3)
222	OFF-PILE AREAS FINAL GRADING PLAN (3 OF 3)
400	SURFACE WATER MANAGEMENT PLAN (1 OF 2)
401	SURFACE WATER MANAGEMENT PLAN (2 OF 2)
410	SURFACE WATER MANAGEMENT DETAILS
500	FENCING PLAN (1 OF 2)
501	FENCING PLAN (2 OF 2)
510	FENCING DETAILS

3

3

3

AS-BUILT

0 8000 16000
1" = 8000' FEET

0 400 800
1" = 400' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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SEAL

VANESSA M. NANGARROW
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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
COVER SHEET

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	1 of 39	010

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in

UTILITIES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND PROTECTING ALL UTILITIES, BOTH ABOVE AND BELOW GROUND, DURING THE WORK.

B. CONTRACTOR SHALL ARRANGE FOR PUBLIC UTILITY LOCATES. CONTRACTOR SHALL ALSO ARRANGE FOR PRIVATE LOCATE SERVICES IN ALL GROUND DISTRUBANCEAREAS NOT COVERED BY PUBLIC LOCATES.

C. THE OWNER WILL OBTAIN PERMITS FROM BPA, AVISTA, AND INLAND POWER. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH ALL PERMIT CONDITIONS. NOTHING IN THESE PERMITS SHALL RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR IDENTIFYING AND PROTECTING UTILITIES AND COMPLYING WITH ALL OTHER REQUIREMENTS OF THIS ARTICLE.

D. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE CONDITIONS ESTABLISHED BY THE ELECTRICAL UTILITY PROVIDERS FOR WORK UNDER AND ADJACENT TO THEIR POWER LINES, BOTH OVERHEAD AND UNDERGROUND, INCLUDING SOIL REMOVAL AND REPLACEMENT. COSTS FOR SPECIALIST PERSONNEL REQUIRED OR PROVIDED BY THE UTILITY COMPANIES SHALL BE INCLUDED IN THE CONTRACTOR'S PRICES. REDUCED OUTPUT RESULTING FROM UTILITY REQUIREMENTS SHALL BE FACTORED INTO CONTRACTOR'S UNIT RATES FOR WORK IN THESE AREAS.

E. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE OWNER AND UTILITY PROVIDER WILL DETERMINE THE EXTENT OF DAMAGE AND THE NEED FOR REPAIR OR REPLACEMENT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL PENALTIES, FEES, AND OTHER COSTS ASSESSED BY THE UTILITY PROVIDER OR AUTHORITY HAVING JURISDICTION (AHJ) THAT ARE RELATED TO UTILITY DAMAGE.

CONTRACTOR HEALTH AND SAFETY

A. ALL CONTRACTOR PERSONNEL INVOLVED IN ACTIVITIES THAT COULD POTENTIALLY CAUSE THEM TO COME IN CONTACT WITH CONTAMINATED MATERIALS SHALL BE 40-HOUR TRAINED IN ACCORDANCE WITH OSHA 1910.120 HAZARDOUS WASTE OPERATIONS.

B. SUBMIT FOR APPROVAL A SITE-SPECIFIC HEALTH AND SAFETY PLAN.

C. NO CONTRACTOR PERSONNEL SHALL WORK WITHIN 25 FEET OF THE CLOSEST RAILROAD TRACK UNLESS THEY HAVE SUCCESSFULLY COMPLETED UNION PACIFIC RAILROAD SAFETY TRAINING. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF SUCH TRAINING WILL BE REQUIRED AND SUBMIT DOCUMENTATION OF COMPLETED TRAINING.

PUBLIC SAFETY

A. INSTALL BARRICADES, SAFETY FENCING, SIGNAGE, AND OTHER FEATURES TO PREVENT INADVERTENT ACCESS BY MEMBERS OF THE PUBLIC TO THE WORK AREA.

B. CHAIN LINK FENCING

1. INSTALL TEMPORARY CHAIN LINK FENCING TO EXCLUDE THE GENERAL PUBLIC FROM THE WORK AREA AND STAGING \ LAYDOWN AREA(S).
2. TEMPORARY CHAIN LINK FENCING SHALL BE A MINIMUM OF 6 FEET HIGH.
3. INSTALL GATES WITH SIZE AND LOCATION AS NECESSARY, SUBJECT TO THE REQUIREMENTS OF THE TRAFFIC CONTROL PLAN AND THE APPROVAL OF THE CONSTRUCTION MANAGER.
4. MATERIALS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF WSDOT 9-16.1 “CHAIN LINK FENCE AND GATES”.
5. FENCE POSTS MAY BE DRIVEN INTO THE GROUND OR WELDED TO HORIZONTAL TUBULAR FEET OR SIMILAR METHOD OF SUPPORT.

C. SAFETY FENCE

1. SAFETY FENCE SHALL BE HIGH-VISIBILITY FENCING CONFORMING TO THE REQUIREMENTS OF WSDOT 8-01.3(9)A1 “HIGH VISIBILITY FENCING”.
2. INSTALL SAFETY FENCING AROUND EXCAVATIONS, AT THE TOP OF SLOPES, AND IN ANY OTHER LOCATIONS AS NECESSARY TO EXCLUDE PERSONNEL FROM DANGEROUS SITUATIONS, OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

D. BARRICADES

PER WSDOT 1-10.3(3)D “BARRICADES” AND 9-35.6 “BARRICADES”.

E. SIGNAGE

1. ATTACH OSHA DANGER SIGNS TO OUTSIDE OF TEMPORARY CHAIN LINK FENCE AT MAXIMUM 100-FOOT INTERVALS.
2. DANGER SIGNS SHALL BE STANDARD PRODUCTS, ALUMINUM, NOMINAL 18 INCHES BY 24 INCHES IN DIMENSION, WITH CLEAR LETTERING THAT SAYS “DANGER - CONSTRUCTION AREA - KEEP OUT” OR SIMILAR MESSAGE.

TRAFFIC CONTROL

A. PRIOR TO BEGINNING WORK, SUBMIT TRAFFIC CONTROL PLAN FOR APPROVAL BY JURISDICTIONAL AUTHORITY. CONSTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR HAULING OF SOIL AND DEBRIS, MOVING OF OVERSIZE EQUIPMENT, AND OTHER REGULATED ACTIVITIES.

B. TRAFFIC CONTROL PLAN SHALL ADDRESS TRUCKS ENTERING AND LEAVING SITE AND SHALL COMPLY WITH ALL CITY, COUNTY, AND STATE REQUIREMENTS.

C. SUBMIT COPY OF APPROVED TRAFFIC CONTROL PLAN AND PERMIT(S) TO CONSTRUCTION MANAGER FOR INFORMATION.

SURVEYING

A GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE ALL SURVEYING REQUIRED FOR THE PROJECT, INCLUDING BUT NOT LIMITED TO MONUMENTATION, STAKING, LAYOUT, AND ALL OTHER NECESSARY ACTIVITIES AS REQUIRED DURING CONSTRUCTION TO CONTROL THEIR ACTIVITIES, TO ACHIEVE LINES AND GRADES, AND OTHERWISE COMPLETE THE WORK AS SHOWN ON THE DRAWINGS.
2. ALL SURVEYING ACTIVITIES SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF WASHINGTON.
3. “SURVEY POINT” AS DEFINED IN THIS SECTION MEANS DETERMINATION OF NORTHING, EASTING, AND ELEVATION AT THE SUBJECT POINT.
4. PROVIDE ELECTRONIC FILES IN AUTOCAD 2019 OR HIGHER VERSION AND, IF REQUESTED, HARD COPY TO THE CONSTRUCTION MANAGER.
5. DATA SHALL INCLUDE AS A MINIMUM THE DATE OF THE SURVEY, PERSONNEL PERFORMING THE SURVEY, EQUIPMENT USED, A UNIQUE IDENTIFIER FOR EACH SURVEY POINT, AND THE X, Y, AND Z COORDINATES OF THAT POINT IN THE PROJECT COORDINATE SYSTEM.
6. FINAL DETERMINATION OF THE ACCEPTABILITY OF THE CONTRACTOR'S SURVEY DATA SHALL BE MADE BY THE CONSTRUCTION MANAGER.

B. REFERENCE DATUM

SURVEY POINTS SHALL BE REFERENCED TO THE SAME HORIZONTAL DATUM AND VERTICAL DATUM AS SHOWN ON THE DRAWINGS FOR THIS PROJECT.

C. EQUIPMENT

THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT, SUPPLIES, AND SUPPORTING MATERIAL REQUIRED FOR SURVEY ACTIVITIES. SUCH EQUIPMENT SHALL BE STANDARD COMMERCIALLY AVAILABLE EQUIPMENT SUITABLE FOR THE INTENDED PURPOSE OF THIS SECTION.

D. ACCURACY

1. ALL SURVEYING ACTIVITIES SHALL BE PERFORMED USING METHODS AND EQUIPMENT WITH SUFFICIENT ACCURACY TO MEASURE TO THE TOLERANCES LISTED IN THESE SPECIFICATIONS.
2. UNLESS OTHERWISE SPECIFIED OR INDICATED, THE MINIMUM REQUIRED ACCURACY FOR BOTH VERTICAL AND HORIZONTAL MEASUREMENTS SHALL BE ± 0.1 FOOT.

E. CONTROL

1. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL VERIFY THE LOCATIONS, CONDITION, AND ACCURACY OF EXISTING MONUMENTS AND ESTABLISH ANY OTHER REFERENCE POINTS OR MONUMENTS THAT MAY BE REQUIRED.
2. LOCATIONS OF EXISTING SURVEY MONUMENTS ARE SHOWN ON THE DRAWINGS.

F. SURVEY FOR MEASUREMENT

1. SURVEY POINTS TO MEASURE AREA SHALL BE AT INTERVALS OF 50-FEET OR LESS AROUND THE PERIMETER OF THE SUBJECT AREA.
2. SURVEY FOR LINEAR FOOT MEASUREMENTS SHALL BE AT INTERVALS OF 50-FEET OR LESS ALONG THE CENTERLINE OF THE SUBJECT FEATURE.
3. WHEN “BEFORE” AND “AFTER” SURVEYS ARE PERFORMED FOR THICKNESS MEASUREMENT, POINTS AT THE SAME HORIZONTAL COORDINATES SHALL BE USED FOR MEASUREMENT, UNLESS APPROVED OTHERWISE IN ADVANCE BY THE CONSTRUCTION MANAGER. THE GRID SPACING FOR SUCH MEASUREMENT SHALL BE 25 FEET, UNLESS APPROVED OR DIRECTED OTHERWISE BY THE CONSTRUCTION MANAGER.
4. WHERE THE MEASUREMENT METHOD IS BY TAPING, THE CONTRACTOR SHALL PERFORM THE MEASUREMENT WITH A HIGH-QUALITY SURVEYOR'S TAPE.
5. THE CONTRACTOR SHALL SURVEY THE LOCATIONS OF ANY “POTHOLES” OR OTHER FEATURES USED FOR MEASUREMENT, AS DIRECTED BY THE CONSTRUCTION MANAGER.

G. AS-BUILT DRAWINGS

AT THE END OF THE PROJECT, PROVIDE AS-BUILT DRAWINGS SHOWING, AT A MINIMUM, LATERAL EXTENT AND DEPTH OF SOIL REMOVAL, FINAL REGRADED SURFACES, EXTENT OF ECOLOGICAL CAP, CENTER LINES OF SURFACE WATER DITCHES, INSTALLED FENCING, AND INFORMATION ON OTHER FEATURES CONSTRUCTED OR MODIFIED DURING THE WORK.

TEMPORARY FACILITIES

A. GENERAL

1. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY FACILITIES AND UTILITIES DESCRIBED IN THIS SECTION AND AS REQUIRED TO FULLY SUPPORT ALL WORK ACTIVITIES AND COMPLY WITH THE HEALTH AND SAFETY AND ENVIRONMENTAL PROTECTION REQUIREMENTS DESCRIBED IN THESE SPECIFICATIONS AND AS REQUIRED BY APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
2. TEMPORARY BUILDINGS, STORAGE FACILITIES, AND MAINTENANCE AND FUELING AREAS SHALL BE READY FOR USE PRIOR TO THE ASSOCIATED PHASE OF THE SITE WORK.
3. ANY LOCAL PERMITS REQUIRED FOR INSTALLATION AND/OR OPERATIONS SHALL BE OBTAINED BY THE CONTRACTOR. COPIES OF ALL PERMITS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.
4. ALL TEMPORARY FACILITIES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, REGULATIONS, AND ORDINANCES.

B. ELECTRICAL SERVICE

1. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL ELECTRICAL SERVICE PROVIDER FOR SERVICE LINES AND CONNECTION.
2. ANY OVERHEAD POWER WIRES RUN SHALL HAVE AT LEAST 14 FEET OF GROUND CLEARANCE AT THE LOW POINT OF THE WIRE BEING RUN BETWEEN THE POWER POLES AND/OR A STRUCTURE.
3. IF ON-SITE POWER GENERATION (E.G., DIESEL GENERATORS) IS USED, EQUIPMENT SHALL COMPLY WITH CURRENT U.S. EPA, ECOLOGY, AND CITY \ COUNTY PERMITTING AND OPERATIONAL REQUIREMENTS FOR SUCH UNITS, IN PARTICULAR THE CORRECT ENGINE TIER AND FUEL (E.G., ULTRA-LOW SULFUR DIESEL FUEL) ALLOWED FOR THE SITE AREA. GENERATORS SHALL BE EQUIPPED WITH SUITABLE NOISE AND EXHAUST LIMITING DEVICES AND LOCATED SO AS TO PREVENT NOISE OR EXHAUST DISTURBANCE TO ANY PERSONNEL WORKING IN THE FACILITIES AREA AND COMPLY WITH APPLICABLE NOISE LIMITS AT THE PROPERTY BOUNDARY.
4. THE CONTRACTOR SHALL PROVIDE GFI-PROTECTED POWER OUTLETS FOR WORK OPERATIONS, WITH BRANCH WIRING AND DISTRIBUTION BOXES LOCATED AS REQUIRED.
5. FLEXIBLE POWER CORDS SHALL BE SUPPLIED AS REQUIRED AND SIZED (WIRE GAUGE) TO CARRY THE LOADS FOR THE EQUIPMENT BEING USED. ALL SUCH CORDS SHALL BE DISCONNECTED WHEN NOT IN USE.
6. THE CONTRACTOR SHALL PAY THE ELECTRICAL UTILITY COMPANY DIRECTLY FOR ALL POWER USAGE ASSOCIATED WITH THE WORK.

C. TEMPORARY LIGHTING

1. PROVIDE TEMPORARY LIGHTING AS NECESSARY TO PERFORM ALL WORK ACTIVITIES SAFELY AND AS INTENDED.
2. THE CONTRACTOR SHALL PROVIDE BRANCH WIRING FROM A DESIGNATED POWER SOURCE TO DISTRIBUTION BOXES WITH LIGHTING CONDUCTORS, PIGTAILS AND LAMPS, AS NECESSARY.
3. THE CONTRACTOR SHALL MAINTAIN LIGHTING AND PROVIDE ROUTINE REPAIRS.

D. WATER

1. NON-POTABLE WATER
   a. THE CONTRACTOR SHALL IDENTIFY A SUITABLE WATER SOURCE. 3
   b. MAINTAIN A SUFFICIENT QUANTITY OF NON-POTABLE WATER ON-SITE TO SATISFY FIRE PROTECTION REQUIREMENTS. THE CONTRACTOR SHALL COMPLY WITH LOCAL ORDINANCES REGARDING FIRE PROTECTION SERVICE.
   c. THE CONTRACTOR SHALL NEGOTIATE COSTS WITH THE WATER PROVIDER DIRECTLY FOR ALL WATER USAGE ASSOCIATED WITH THE WORK. 3
2. POTABLE WATER
   a. PROVIDE POTABLE WATER FROM OFF-SITE SOURCES FOR DRINKING, HANDWASHING, SHOWERS, AND SIMILAR USES PER REGULATORY REQUIREMENTS.
   b. FOR DRINKING, PROVIDE POTABLE BOTTLED WATER FROM A COMMERCIAL SOURCE NORMALLY ENGAGED IN PROVIDING SUCH WATER. WATER STATIONS SHALL BE PROVIDED AT A MINIMUM IN EACH TRAILER AND AT STRATEGIC LOCATIONS AROUND THE SITE, CONSISTENT WITH HEALTH AND SAFETY REQUIREMENTS.
   c. CONTRACTOR SHALL IDENTIFY AND OBTAIN AND PAY FOR ALL NECESSARY APPROVALS AND PERMITS FOR POTABLE WATER OBTAINED FROM PUBLIC WATER SUPPLIES.

E. SANITARY FACILITIES

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN REQUIRED TEMPORARY TOILET FACILITIES AND WASH STATIONS PER STATE AND LOCAL REGULATIONS/ORDINANCES.
2. SEPARATE TOILET FACILITIES SHALL BE PROVIDED FOR MEN AND WOMEN AND SHALL BE CLEARLY MARKED AS SUCH.
3. THE CONTRACTOR SHALL CLEAN, EMPTY, SUPPLY, AND MAINTAIN ALL PORTABLE TOILET FACILITIES AS REQUIRED TO KEEP THEM IN A FUNCTIONAL AND SANITARY CONDITION, BUT IN NO CASE AT INTERVALS GREATER THAN ONCE PER WEEK, UNLESS APPROVED OTHERWISE BY THE CONSTRUCTION MANAGER.

F. TEMPORARY BUILDINGS

1. PROVIDE PORTABLE OR MOBILE BUILDINGS INCLUDING A CONTRACTOR OFFICE, A CONSTRUCTION MANAGER TRAILER, AND ANY OTHER TRAILERS NEEDED BY CONTRACTOR FOR THE WORK.
2. THE CONSTRUCTION MANAGER TRAILER SHALL BE A MINIMUM OF 10 FT BY 40 FT IN DIMENSION AND SHALL HAVE TWO 10-FT BY 10-FT OFFICES AND ONE 10-FT BY 20-FT LABORATORY AND EQUIPMENT AREA.
3. TEMPORARY BUILDINGS SHALL HAVE STEPS AND LANDINGS AT ENTRANCE DOORS. PROVIDE BOOT CLEANING STATIONS AND DOORMATS AT EACH BUILDING ENTRANCE.
4. CONDITION, APPEARANCE, AND FINAL LOCATION OF TEMPORARY BUILDINGS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE CONSTRUCTION MANAGER AND SHALL BE IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AND ORDINANCES.
5. THE TEMPORARY BUILDINGS SHALL BE OF SOUND CONSTRUCTION, WEATHER-TIGHT, AND EQUIPPED WITH CLIMATE-CONTROL UNITS (HEAT AND AIR CONDITIONING).
6. TEMPERATURE TRANSMISSION RESISTANCE OF THE BUILDING WALLS, CEILING, FLOORS, AND ROOF SHALL BE COMPATIBLE WITH OCCUPANCY AND STORAGE REQUIREMENTS.
7. EACH BUILDING SHALL BE EQUIPPED WITH A FIRE EXTINGUISHER AND FIRST AID KIT.
8. BUILDING SPACES SHALL HAVE ADEQUATE INTERIOR LIGHTING AND EXTERIOR LIGHTING AT THE ENTRANCES.
9. PROVIDE AT A MINIMUM DESKS, CHAIRS, AND FILING CABINETS IN EACH INTERNAL AREA OF EACH TEMPORARY BUILDING, TOGETHER WITH OTHER FURNISHINGS AND EQUIPMENT AS NECESSARY TO SUPPORT THE WORK.
10. TEMPORARY BUILDINGS SHALL BE ESTABLISHED AND FULLY OPERATIONAL WITHIN ONE WEEK OF CONTRACTOR MOBILIZATION TO THE SITE.

G. COMMUNICATIONS

1. THE CONTRACTOR SHALL PROVIDE TELEPHONE SERVICE, INTERNET AND EMAIL SERVICE, AND OTHER COMMUNICATION SERVICES AT THE SITE AS NECESSARY TO SUPPORT HIS OPERATIONS.
2. THE CONTRACTOR SHALL PROVIDE RADIOS OR OTHER APPROVED DEVICES FOR COMMUNICATIONS BETWEEN OPERATORS, DRIVERS, FOREMEN, AND OTHER ON-SITE PERSONNEL DURING THE PROJECT TO ENSURE ADEQUATE COORDINATION AND SAFE WORKING CONDITIONS. PROVIDE TWO RADIOS TO CONSTRUCTION MANAGER AND SAMPLING PERSONNEL, RESPECTIVELY.
3. THE CONTRACTOR SHALL ARRANGE FOR COMMUNICATION SERVICES AND PAY THE PROVIDER(S) DIRECTLY, INCLUDING BUT NOT LIMITED TO HOOKUPS, WIRING, PHONE DROPS, MODIFICATIONS, USAGE FEES, MAINTENANCE, AND FINAL REMOVAL OF THE COMMUNICATIONS SYSTEMS.

H. STORAGE FACILITIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF HIS EQUIPMENT AND MATERIAL ON SITE. THE CONTRACTOR SHALL PROVIDE SECURED STORAGE SPACE AS NECESSARY AND SHALL PROVIDE ANY OTHER SECURITY MEASURES NECESSARY TO PREVENT UNAUTHORIZED ACCESS, VANDALISM, THEFT, WEATHER DAMAGE, AND OTHER ADVERSE SITUATIONS.
2. PROVIDE SECURE, LOCKABLE STORAGE FACILITIES AS NECESSARY FOR TOOLS, MATERIALS, EQUIPMENT, SUPPLIES, AND THE LIKE. STORAGE FACILITIES SHALL COMPLY WITH ALL APPLICABLE REGULATORY AND SAFETY REQUIREMENTS.
3. STORAGE FACILITIES MAY BE LOCATED AS CONVENIENT WITHIN THE AREAS SHOWN ON THE DRAWINGS, SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER.

I. FUELING AND MAINTENANCE AREAS

1. FUELING AND MAINTENANCE FACILITIES SHALL BE DESIGNED, EQUIPPED, AND OPERATED IN ACCORDANCE WITH THE PROVISIONS OF CONTRACTOR'S APPROVED SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN AND THE SITE CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
2. PROVIDE APPROPRIATE FIRE EXTINGUISHERS AT THE FUELING AND MAINTENANCE AREAS AND ANY LOCATIONS WHERE FUELING, WELDING, TORCH CUTTING, OR OTHER SIMILAR ACTIVITIES WILL BE PERFORMED.
3. ENSURE THAT ALL WELDING, OXYGEN, ACETYLENE, AND OTHER GAS BOTTLES ARE STORED UPRIGHT AND SECURED AT ALL TIMES TO PREVENT TIPPING OR FALLING OVER, ESPECIALLY WHEN BEING USED.
4. STORE ALL MATERIALS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS AND BEST INDUSTRY PRACTICES.

J. CONTRACTOR PARKING AREA

1. THE CONTRACTOR SHALL USE THE DESIGNATED PARKING AREA FOR HIS PERSONNEL AT THE LOCATION SHOWN ON THE DRAWINGS. CONTRACTOR PERSONNEL SHALL PARK ONLY IN THIS DESIGNATED AREA.
2. NO OVERNIGHT PARKING SHALL BE ALLOWED IN THE PARKING LOT.

K. ACCESS ROADS

1. THROUGHOUT THE DURATION OF THE PROJECT, MAINTAIN ACCESS FOR UTILITY PROVIDERS TO REACH THEIR UTILITIES THAT CROSS THROUGH THE PENTZER AND WSDOT PROPERTIES IN CASE OF EMERGENCY. 3
2. RESTORE ACCESS ROADS TO AT LEAST THE SERVICE LEVEL PRIOR TO THE PROJECT.
3. RESTORE ACCESS ROADS TO UTILITY FEATURES AS REQUIRED BY THE UTILITY PROVIDER.

L. MAINTENANCE AND CLEANING

1. THE CONTRACTOR SHALL PERFORM WEEKLY CLEANING AND MAINTENANCE FOR ALL BUILDINGS, TRAILERS, AND STORAGE SHEDS.
2. MAINTAIN APPROACH WALKS FREE OF MUD, SNOW AND ICE, WATER, AND DEBRIS.
3. THE CONTRACTOR SHALL PROVIDE PORTABLE DUMPSTERS FOR DISPOSAL OF OFFICE WASTE, GARBAGE, AND OTHER MUNICIPAL-TYPE WASTES. BOXES SHALL HAVE HEAVY LIDS FOR COMPLETE CLOSURE AND SHALL BE LOCKABLE IF NECESSARY TO PREVENT ACCESS BY WILDLIFE.
4. DUMPSTERS SHALL BE PERIODICALLY EMPTIED AT A MINIMUM FREQUENCY OF ONCE PER WEEK OR WHEN THEY REACH CAPACITY. WASTE SHALL BE DISPOSED OF IN A PERMITTED LANDFILL.
5. COMBUSTIBLE DEBRIS AND MATERIALS SHALL BE MANAGED IN SUCH A MANNER AS TO PREVENT ACCIDENTAL COMBUSTION. ACCUMULATIONS OF SUCH MATERIALS WILL NOT BE ALLOWED AT ANY TIME OR LOCATION DURING THE PROJECT.

L. REMOVAL

UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE TEMPORARY FACILITIES, SUPPORTS/FOUNDATIONS, TEMPORARY FENCING, AND ALL EQUIPMENT, MATERIALS, AND DEBRIS FROM THE SITE. UTILITY SERVICES SHALL BE TERMINATED IN A SAFE MANNER CONSISTENT WITH UTILITY PROVIDER AND CODE REQUIREMENTS.

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SEAL

VANESSA M. NANGARROW — STATE OF WASHINGTON — 47008 — REGISTERED PROFESSIONAL ENGINEER

9/28/23

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
GENERAL NOTES AND SPECIFICATIONS (1 OF 3)

PROJECT NO.	PHASE	REV.	2 of 39	SHEET
19119180	1000B	3		020

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0 1 in

Path: \golder.gds\comp\exdata\office\Redmond\gaomatics\Union\PacificRailroad\Trentwood\W09_PROJECTS\19119180\1000B\02_PRODUCTION\DWGS\ | File Name: 19119180_1000B_002.dwg | Last Edited By: kdapolito Date: 2023-09-28 Time:10:13:54 AM | Printed By: KDaPolito Date: 2023-09-28 Time:3:17:45 PM

EROSION AND SEDIMENT CONTROL (ESC)

A. GENERAL

1. THE CONTRACTOR SHALL PREVENT SEDIMENT ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM LEAVING THE WORK AREA.
2. PRIOR TO BEGINNING ANY GROUND-DISTURBING ACTIVITIES, SUBMIT A TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLAN FOR APPROVAL. THE TESC PLAN SHALL DESCRIBE IN DETAIL THE MATERIALS, LOCATION, AND OPERATION \ MAINTENANCE OF ALL CONTROL MEASURES PROPOSED TO ACHIEVE THE REQUIREMENTS OF THIS SECTION.
3. THE CONTRACTOR MAY ELECT TO USE OTHER BEST MANAGEMENT PRACTICES (BMPS) NOT LISTED IN THESE SPECIFICATIONS, FOR EXAMPLE STRAW WATTLES OR PLASTIC SHEETING, IF APPROPRIATE FOR HIS OPERATIONS. DESCRIBE ALL SUCH BMPS IN THE TESC PLAN.
4. FAILURE TO LIST A PARTICULAR EROSION CONTROL METHOD OR REQUIREMENT IN THESE SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
5. ALSO COMPLY WITH ALL PERTINENT REQUIREMENTS OF THE CONSTRUCTION STORMWATER GENERAL PERMIT \ SWPPP.

B. SILT FENCE

1. SILT FENCE MATERIAL SHALL CONFORM TO WSDOT 9-33.1 "GEOSYNTHETIC MATERIAL REQUIREMENTS" INCLUDING TABLE 6 "GEOTEXTILE FOR TEMPORARY SILT FENCE".
2. INSTALL SILT FENCE IN ACCORDANCE WITH WSDOT 8-01.3(9)A2 "SILT FENCE". USE BACKUP SUPPORT WHERE NEEDED OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

C. STRAW BALES OR WATTLES

1. STRAW BALES SHALL BE WEED-FREE IN ACCORDANCE WITH WSDOT 9-14.5(1) "STRAW".
2. STRAW WATTLES SHALL CONFORM TO WSDOT 9-14.6(5) "WATTLES".
3. INSTALL WATTLES IN ACCORDANCE WITH WSDOT 8-01.3(10) "WATTLES".

D. TRUCK WASH SYSTEM

1. PROVIDE WASH SYSTEM TO REMOVE ALL SOIL FROM WHEELS AND UNDERSIDE OF TRUCKS LEAVING THE SITE AND USING PUBLIC HIGHWAYS.
2. INSTALL WASH SYSTEM AT LOCATION SHOWN ON THE DRAWINGS.
3. WASH SYSTEM SHALL COLLECT ALL WASH WATER TO PREVENT INFILTRATION INTO GROUND.
4. WASH SYSTEM SHALL BE MANUFACTURED UNIT DESIGNED SPECIFICALLY FOR INTENDED PURPOSE. ACCEPTABLE PRODUCTS INCLUDE MOBYDICK CONLINE KIT FLEX 800 B, NEPTUNE MAXIMUS SERIES, OR APPROVED EQUAL.
5. CONTRACTOR SHALL PROVIDE WATER, POWER, AND OTHER UTILITIES FOR WASH SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS FOR "TEMPORARY FACILITIES" IN THESE SPECIFICATIONS.
6. TRANSPORT AND DISPOSE OF WASH WATER IN PERMITTED LIQUID DISPOSAL FACILITIY.
7. TRANSPORT AND DISPOSE OF CONTAMINATED SEDIMENT AT GRAHAM ROAD LANDFILL.

E. STREET CLEANING

IF UNAVOIDABLE TRACK-OUT OR OFF-SITE SEDIMENT RELEASE OCCURS, CLEAN STREETS AS SOON AS PRACTICABLE IN ACCORDANCE WITH WSDOT 8-01.3(8) "STREET CLEANING".

CLEARING

A. CHIP AND STOCKPILE CLEARED MATERIAL ON SITE FOR USE AS SOIL AMENDMENT IN UPPER 6 INCHES OF CLEAN SOIL BACKFILL IN OFF-PROPERTY AREAS. HOWEVER, NOXIOUS WEEDS SHALL BE DISPOSED OF OFF-SITE IN AN APPROPRIATE PERMITTED FACILITY AND IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS AND REQUIREMENTS.

EARTH MATERIALS

A. GENERAL REQUIREMENTS

1. EARTH MATERIALS SHALL BE CLEAN INORGANIC SOIL MATERIAL FREE OF RUBBISH, DEBRIS, ORGANIC MATERIAL, ICE, FROZEN SOIL, OR OTHER DELETERIOUS MATERIAL.
2. EARTH MATERIAL SHALL BE FREE OF CHEMICAL CONTAMINANTS ABOVE MTCA UNRESTRICTED USE LEVELS FOR THIS SITE.
3. SUBMIT FOR APPROVAL INFORMATION ON PROPOSED EARTH MATERIALS, INCLUDING BUT NOT LIMITED TO SOURCE, TYPE OF MATERIAL, AND TEST DATA TO DEMONSTRATE COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION.
4. ALL LOADS OF EARTH MATERIALS, INCLUDING CONTAMINATED SOILS, SHALL BE COVERED WHEN HAULING ON PUBLIC HIGHWAYS.
5. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS OF ALL ON-SITE INTERIM STOCKPILES TO CONSTRUCTION MANAGER FOR APPROVAL PRIOR USE.

B. EXCAVATION

1. EXCAVATE CONTAMINATED SOILS TO THE MINIMUM EXTENTS SHOWN ON THE DRAWINGS.
2. THE ACTUAL EXTENT OF SOIL REMOVAL WILL BE DETERMINED IN THE FIELD BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL SEQUENCE HIS SOIL REMOVAL ACTIVITIES TO ACCOMMODATE THE REQUIRED SAMPLING AND TESTING ACTIVITIES. NO ADDITIONAL COST OR SCHEDULE INCREASES WILL BE ALLOWED FROM THE FAILURE OF THE CONTRACTOR TO SEQUENCE HIS ACTIVITIES APPROPRIATELY.
3. DISPOSE OF MATERIAL FROM THE DROSS STOCKPILE AT THE GRAHAM ROAD LANDFILL.
4. SOILS REMOVED FROM AREAS OUTSIDE OF THE DROSS STOCKPILE MAY BE USED AS BACKFILL TO REACH SUBGRADE ELEVATIONS REQUIRED ON THE UPRR PROPERTY IF THEY ARE IMPACTED BELOW AGREED-UPON LEVELS, AS APPROVED \ DIRECTED BY THE CONSTRUCTION MANAGER. AFTER SUBGRADE ELEVATIONS ARE ACHIEVED ON THE UPRR PROPERTY, REMAINING SOILS SHALL BE SCREENED TO REMOVE ALL MATERIAL GREATER THAN 6 INCHES IN DIMENSION. MATERIAL RETAINED ON THE SCREEN SHALL BE STOCKPILED AT A LOCATION AS SHOWN ON THE DRAWINGS OR AS APPROVED \ DIRECTED BY THE CONSTRUCTION MANAGER FOR LATER USE AS BACKFILL. MATERIAL PASSING THE SCREEN SHALL BE DISPOSED OF AT THE GRAHAM ROAD LANDFILL.
5. IT IS NOT ANTICIPATED THAT REMOVAL OF IMPACTED MATERIAL ALONG THE NORTH SIDE OF THE DROSS STOCKPILE WILL BE CLOSE ENOUGH TO THE UPRR TRACKS OR DEEP ENOUGH THAT SHORING WILL BE REQUIRED. HOWEVER, IF DURING REMEDIATION IT IS DETERMINED THAT SHORING IS REQUIRED, BASED ON THE CRITERIA CONTAINED IN THE UPRR GUIDELINES FOR TEMPORARY SHORING, DATED OCTOBER 25, 2004 (THE GUIDELINES), THEN THE CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED IN THE STATE OF WASHINGTON, TO PREPARE A SHORING DESIGN IN ACCORDANCE WITH THE GUIDELINES. THE SHORING DESIGN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY UPRR PRIOR TO CONSTRUCTION.

C. BACKFILL

1. BACKFILL FROM OFFSITE SOURCES SHALL BE NON-PLASTIC SOIL AS DETERMINED BY ASTM D4318 "STANDARD TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS", SHALL HAVE A MAXIMUM PARTICLE SIZE OF 6 INCHES, AND SHALL HAVE NO MORE THAN 15% BY DRY WEIGHT OF MATERIAL PASSING THE U.S. NO. 200 SIEVE.
2. PLACE BACKFILL IN MAXIMUM 12-INCH-THICK LOOSE LIFTS AND COMPACT WITH AT LEAST 4 PASSES OF A SMOOTH DRUM VIBRATORY ROLLER WITH A MINIMUM STATIC WEIGHT OF 15,000 LBS SUCH AS A CAT CS44, IR SD-70, OR SIMILAR APPROVED EQUIVALENT TO ACHIEVE A FIRM AND UNYIELDING SURFACE.

D. ECOLOGICAL CAP GRAVEL

1. GRAVEL FOR THE ECOLOGICAL CAP SHALL BE ANGULAR TO SUBANGULAR, SOUND, HARD, DURABLE NATURAL ROCK CONFORMING TO THE REQUIREMENTS OF WSDOT 9-03.9(2) "PERMEABLE BALLAST".
2. PREPARE SUBGRADE BY ROLLING WITH A MINIMUM OF 4 PASSES OF A SMOOTH DRUM VIBRATORY ROLLER WITH A MINIMUM STATIC WEIGHT OF 15,000 LBS SUCH AS A CAT CS44, IR SD-70, OR SIMILAR APPROVED EQUIVALENT TO ACHIEVE A FIRM AND UNYIELDING SURFACE. SURFACE SHALL BE SMOOTH, FLAT, AND FREE OF RUTS AND PROTRUSIONS GREATER THAN 0.5 INCHES. CONTRACTOR SHALL PROTECT SURFACE AND REPAIR AS NECESSARY TO MEET THE REQUIREMENTS OF THIS SECTION PRIOR TO PLACING OVERLYING MATERIALS.
3. PLACE ECOLOGICAL CAP GRAVEL IN A SINGLE LIFT, USING METHODS THAT WILL NOT STRETCH, DISPLACE, OR DAMAGE THE UNDERLYING GEOTEXTILE.

E. ARMOR ROCK

ARMOR ROCK SHALL BE SOUND, HARD, DURABLE NATURAL ROCK CONFORMING TO THE REQUIREMENTS OF WSDOT 9-13.1(5) "QUARRY SPALLS", INCLUDING THE REQUIREMENTS OF WSDOT 9-13.1(1) "GENERAL".

F. BPA ROAD GRAVEL

[TBD]

G. POWER POLE BACKFILL GRAVEL

[TBD]

H. DUST CONTROL

1. PREVENT NUISANCE DUST DURING EXCAVATION AND FILLING OPERATIONS.
2. ONLY WATER SHALL BE USED FOR DUST CONTROL. NON-POTABLE WATER WILL BE ACCEPTABLE.
3. THE CONSTRUCTION MANAGER MAY DIRECT THE CONTRACTOR TO INCREASE DUST CONTROL ACTIVITIES IF IN HIS\HER OPINION EXCESSIVE DUST IS BEING GENERATED.

GEOTEXTILE

A. GEOTEXTILE SHALL BE NON-WOVEN NEEDLEPUNCHED POLYPROPYLENE MATERIAL CONFORMING TO THE REQUIREMENTS OF GRI GT13(A) "TEST METHODS AND PROPERTIES FOR GEOTEXTILES USED AS SEPARATION BETWEEN SUBGRADE SOIL AND AGGREGATE", TABLE 1(A) - "GEOTEXTILE PROPERTIES CLASS 1 (HIGH SURVIVABILITY)".

B. SUBMIT FOR APPROVAL INFORMATION ON PROPOSED GEOTEXTILE MATERIAL, INCLUDING BUT NOT LIMITED TO MANUFACTURER, STANDARD PROPERTIES SHEET, AND TEST DATA TO DEMONSTRATE COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION.

C. OVERLAP GEOTEXTILE PANELS AS RECOMMENDED BY THE MANUFACTURER.

D. GEOTEXTILES SHALL BE CONTINUOUSLY SEWN (I.E., SPOT SEWING IS NOT ALLOWED). ALTERNATIVELY, SINGLE OR DOUBLE WEDGE FUSION WELDING WILL BE ACCEPTABLE. LEISTER WELDING (SPOT OR CONTINUOUS) WILL NOT BE ACCEPTED AS A SEAMING METHOD. ALL SEWING SHALL BE DONE USING A SEWING MACHINE WHICH CREATES A CHAIN STITCH. WHEN ENTERING AND EXITING A SEAM, THE STITCHES SHALL BE OVERLAPPED TO PREVENT UNRAVELING.

VEHICLE ACCESS GATE

A. FABRICATE AND INSTALL VEHICLE ACCESS GATE AS SHOWN ON THE DRAWINGS.
B. PAINT VEHICLE ACCESS GATE WITH OSHA SAFETY YELLOW PAINT SUITABLE FOR OUTDOOR EXPOSURE.
C. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE GATE DESIGN IF IT USES STANDARD COMMERCIAL DESIGN AND WILL PROVIDE EQUIVALENT PERFORMANCE AND DURABILITY.

PERMANENT SECURITY FENCE

A. FENCE AND GATES SHALL CONFORM TO THE REQUIREMENTS OF WSDOT 9-16.1 EXCEPT AS NOTED IN THIS SECTION.
B. POSTS SHALL BE GRADE 1.
C. STEEL PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A53 AND SHALL BE HOT-DIPPED GALVANIZED INSIDE AND OUT.
D. USE SEAMLESS PIPE ONLY.
E. CHAIN LINK FENCE FABRIC SHALL BE 9 GAUGE STEEL, 2-INCH MESH, GALVANIZED CLASS 1 (1.2 OZ/SF) AND SHALL SATISFY ALL OTHER REQUIREMENTS OF THE CLFMI *PRODUCT MANUAL*.
F. BARBED WIRE SHALL CONSIST OF TWO STRANDS OF TWISTED WIRE WITH 4-POINT BARBS AT 5-INCH SPACING. BARBS SHALL BE 14 GAUGE AND SHALL BE GALVANIZED AT A MINIMUM OF 0.65 OZ/SF AND OF SUFFICIENT STRENGTH TO WITHSTAND WITHOUT FAILURE, 250 POUNDS DOWNWARD PULL. LINE WIRE SHALL BE 12-1/2 GAUGE AND SHALL BE GALVANIZED AT A MINIMUM OF 0.8 OZ/SF. BARBED WIRE SUPPORT ARMS SHALL CONFORM TO THE REQUIREMENTS OF THE CLFMI *PRODUCT MANUAL* AND SHALL BE INCLINED OUTWARD AT APPROXIMATELY 45 DEGREES FROM THE ENCLOSED AREA. BARBED WIRE SHALL BE DISCONTINUED BETWEEN THE GATE FRAME AND GATE POST.
G. STEEL PLATES, SHAPES, AND BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
H. HOT DIP GALVANIZE ALL STEEL COMPONENTS AND FABRICATIONS AND IN ACCORDANCE WITH ASTM A123, 2.3 OZ PER SQUARE FOOT MINIMUM.
I. ELECTRODES FOR WELDING SHALL MEET AWS SPECIFICATIONS FOR THE METAL ALLOY WELDED. USE E70XX UNLESS NOTED OTHERWISE.
J. GALVANIZING SOLDER SHALL BE GAL-VIZ MANUFACTURED BY HARRIS WELCO OR APPROVED EQUAL.
K. ALL OTHER CHAIN LINK FENCE MATERIALS AND HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF WSDOT 9-16.1 OR, IF NOT SPECIFIED, THE REQUIREMENTS OF THE CLFMI *PRODUCT MANUAL* UNLESS INDICATED OTHERWISE IN THESE SPECIFICATIONS OR ON THE DRAWINGS.
L. CONCRETE SHALL AT A MINIMUM CONFORM TO THE REQUIREMENTS OF WSDOT CLASS 3000 CONCRETE.
M. CONSTRUCT SECURITY FENCE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF WSDOT 8 12.3(1) AND THE CLFMI PRODUCT MANUAL, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
N. INSTALL CHAIN LINK FENCE IN ACCORDANCE WITH ASTM F567.
O. DO NOT INSTALL FENCE OR GATES UNTIL FINAL SITE GRADING HAS BEEN PERFORMED AND APPROVED BY THE CONSTRUCTION MANAGER.
P. PLACE CONCRETE AROUND POSTS IN A SINGLE PLACEMENT AND TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL ALIGNMENT AND DEPTH OF SET. CROWN TOP OF POST FOOTINGS TO SHED WATER OFF CONCRETE, AWAY FROM POST.
Q. SET KEEPERS, STOPS, SLEEVES, AND OTHER ACCESSORIES INTO CONCRETE.
R. INSTALL BRACES SO THAT POSTS ARE PLUMB WHEN DIAGONAL RODS ARE UNDER PROPER TENSION.
S. INSTALL TENSION WIRES BEFORE STRETCHING FABRIC. TIE WIRES TO EACH POST WITH TIES OR CLIPS.
T. AFTER THE ERECTION AND INSTALLATION ARE COMPLETE, REPAIR ALL DAMAGED GALVANIZED SURFACES ACCORDING TO ASTM A153, USING "HOT STICK" GALVANIZING SOLDER, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

LOCKS

A. PROVIDE HIGH-STRENGTH HARDENED STEEL PADLOCKS AND CHAINS FOR ALL VEHICLE ACCESS AND MAINTENANCE GATES.
B. THE LOCKS FOR EACH TYPE OF GATE (VEHICLE ACCESS AND MAINTENANCE GATES) SHALL BE KEYED THE SAME, BUT THE LOCKS FOR VEHICLE ACCESS GATES SHALL BE KEYED DIFFERENTLY FROM THOSE FOR MAINTENANCE GATES.
C. PROVIDE 3 SETS OF KEYS OF EACH TYPE TO THE CONSTRUCTION MANAGER.

RESEEDING

A. THE UPPER 6 INCHES OF SOIL IN THE OFF-PROPERTY AREAS TO BE RESEEDED SHALL HAVE A MINIMUM ORGANIC MATERIAL CONTENT OF 5% AS DETERMINED BY ASTM D2974. THIS MAY BE ACCOMPLISHED BY IMPORTING TOPSOIL, AMENDING BACKFILL SOIL, OR OTHER APPROVED METHOD. IF IMPORTED TOPSOIL THAT HAS ORGANIC CONTENT OF AT LEAST 10% PER ASTM D2974 IS USED, THE MINIMUM THICKNESS OF THE TOPSOIL LAYER CAN BE REDUCED TO 3 INCHES.
B. RESEED DISTURBED AREAS WITH DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR EASTERN WASHINGTON (SMMEW) TABLE 7.7 SEED MIX A USING THE INDICATED SEEDING RATES. NOTE THAT SEEDING RATES SHALL BE DOUBLED IF HYDROSEEDING OR BROADCAST METHODS ARE USED.
C. PERFORM RESEEDING IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ECOLOGY SMMEW BMP C120E, IN PARTICULAR ALLOWABLE SEEDING TIME WINDOWS AND HYDROSEEDING METHODS.
D. RESEED ANY SEEDED AREAS THAT FAIL TO ESTABLISH ≥ 50% COVER AS DETERMINED BY VISUAL INSPECTION BY THE OWNER AFTER 3 MONTHS OF ACTIVE GROWTH FOLLOWING GERMINATION DURING THE INITIAL GROWING SEASON.
E. DO NOT RESEED ECOLOGICAL CAP AREA, DRAINAGE DITCHES, ACCESS ROADS, OR OTHER AREAS WHERE RESEEDING WOULD BE DETRIMENTAL TO THE FUNCTION OF THE AREA.

MONITORING WELL DECOMMISSIONING

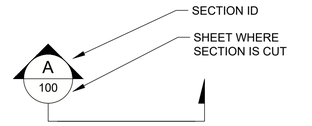
A. DECOMISSION MONITORING WELLS AT LOCATIONS SHOWN ON THE DRAWINGS.
B. DECOMMISSION WELLS IN ACCORDANCE WITH WAC 173-160-381.
C. DECOMMISSIONING SHALL BE PERFORMED BY A QUALIFIED WELL CONTRACTOR LICENSED IN ACCORDANCE WITH WAC 173-162.
D. REMOVE AND DISPOSE OF BOLLARDS, CONCRETE PADS, WELL CASING, AND OTHER STRUCTURES AND RESTORE THE GROUND SURFACE TO CONDITIONS TO MATCH THE SURROUNDING GROUND SURFACE.

CITY OF SPOKANE VALLEY GENERAL CONSTRUCTION NOTES PER SVSS APPENDIX 4A

A. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE CITY OF SPOKANE VALLEY STREET STANDARDS, SPOKANE REGIONAL STORMWATER MANUAL AND ALL OTHER GOVERNING AGENCY'S STANDARDS.
B. PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 1-800-424-5555 BEFORE YOU DIG.
C. LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.
D. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE ACCEPTED STREET AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
E. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE APPLICANT'S ENGINEER AND ONSITE INSPECTOR.
F. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THE INFILTRATION CAPACITY OF STORMWATER FACILITIES (E.G., LINE THE FACILITY WITH FILTER FABRIC, OVER-EXCAVATE UPON COMPLETION OF THE INFRASTRUCTURE, ETC.)
G. WHERE DIRECTED BY THE CITY OF SPOKANE VALLEY, THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL DEVICES, THE PLACEMENT AND TYPE OF WHICH SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
H. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH AND CONTACT ALL APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
I. ALL PAVEMENT CUTS TO CONNECT UTILITIES SHALL BE REPAIRED IN CONFORMANCE WITH THE REGIONAL PAVEMENT CUT POLICY.
J. ALL SURVEY MONUMENTS SHALL BE PROTECTED DURING CONSTRUCTION BY OR UNDER THE DIRECTION OF A LICENSED SURVEYOR AS REQUIRED BY STATE LAW. ANY DISTURBED OR DAMAGED MONUMENTS SHALL BE REPLACED BY OR UNDER THE DIRECTION OF A LICENSED SURVEYOR PRIOR TO CERTIFICATION /FINAL PLAT AND/OR RELEASE OF SURETY. THE CONTRACTOR IS RESPONSIBLE FOR THE FILING OF PERMITS FOR MONUMENT REMOVAL AND REPLACEMENT WITH THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES, AS REQUIRED BY WAC-120-070.
K. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND ACQUIRING ELECTRICAL INSPECTIONS REQUIRED BY THE STATE.
L. CONTRACTOR IS RESPONSIBLE TO VERIFY THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO INITIATING CONSTRUCTION.
M. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL HAVE A CURRENT CITY OF SPOKANE VALLEY BUSINESS LICENSE.
N. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE LICENSED BY THE STATE OF WASHINGTON AND BONDED TO DO WORK IN THE PUBLIC RIGHT-OF-WAY.
O. NO WORK ON THIS PROJECT SHALL COMMENCE UNTIL A CITY OF SPOKANE VALLEY RIGHT-OF-WAY PERMIT HAS BEEN ISSUED.
P. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES, PUBLIC OR PRIVATE, AT ALL TIMES DURING CONSTRUCTION.
Q. CONTRACTORS SHALL CONTROL DUST IN ACCORDANCE WITH REGULATIONS OF LOCAL AIR POLLUTION CONTROL AUTHORITY.
R. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION RELATED DEBRIS TO AN APPROVED WASTE DISPOSAL SITE.
S. FIRE HYDRANTS SHALL BE INSTALLED AND FUNCTIONING PRIOR TO THE CONSTRUCTION OF ANY STRUCTURES.
T. CONTRACTOR SHALL MAINTAIN FIRE APPARATUS ACCESS STREETS DURING CONSTRUCTION.
U. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ON-SITE INSPECTOR ONE BUSINESS DAY BEFORE ANY CONSTRUCTION OR PRODUCT PLACEMENT TAKES PLACE THAT REQUIRES TESTING OR OBSERVATION (REFER TO APPENDIX 9A- MINIMUM MATERIAL TESTING FREQUENCIES). THE ON-SITE INSPECTOR WILL DETERMINE THE TIME REQUIRED TO SATISFACTORILY ACHIEVE THE NECESSARY TESTING, OBSERVATION AND DOCUMENTATION. THE ON-SITE INSPECTOR WILL BE REQUIRED TO BE ON SITE 100% OF THE TIME DURING HMA PLACEMENT, DRYWELL PLACEMENT, AND TRENCH WORK.

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE



AS-BUILT

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

VANESSA M. NANCARROW — STATE OF WASHINGTON — 47008 — REGISTERED PROFESSIONAL ENGINEER

9/28/23

CLIENT
UNION PACIFIC RAILROAD CO.

CONSULTANT
wsp

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
GENERAL NOTES AND SPECIFICATIONS (2 OF 3)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	3 of 39 021

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in

SRSM ESC STANDARD PLAN NOTES PER SRSM APPENDIX 9A

A. THE FOLLOWING ESC STANDARD PLAN NOTES ORIGINATE FROM SECTION 9.4.3. THESE NOTES ARE AN OVERALL SET; USE ONLY WHAT APPLIES TO THE GIVEN PROJECT.

1. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED IN ORDER TO BEST MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION CONTROL PROBLEMS:
   (a) CLEAR AND GRUB SUFFICIENTLY FOR INSTALLATION OF TEMPORARY ESC BMPS;
   (b) INSTALL TEMPORARY ESC BMPS, CONSTRUCTING SEDIMENT TRAPPING BMPS AS ONE OF THE FIRST STEPS PRIOR TO GRADING;
   (c) CLEAR, GRUB AND ROUGH GRADE FOR ROADS, TEMPORARY ACCESS POINTS AND UTILITY LOCATIONS;
   (d) STABILIZE ROADWAY APPROACHES AND TEMPORARY ACCESS POINTS WITH THE APPROPRIATE CONSTRUCTION ENTRY BMP;
   (e) CLEAR, GRUB AND GRADE INDIVIDUAL LOTS OR GROUPS OF LOTS;
   (f) TEMPORARILY STABILIZE, THROUGH RE-VEGETATION OR OTHER APPROPRIATE BMPS, LOTS OR GROUPS OF LOTS IN SITUATIONS WHERE SUBSTANTIAL CUT OR FILL SLOPES ARE A RESULT OF THE SITE GRADING;
   (g) CONSTRUCT ROADS, BUILDINGS, PERMANENT STORMWATER FACILITIES (I.E. INLETS, PONDS, UIC FACILITIES, ETC.);
   (h) PROTECT ALL PERMANENT STORMWATER FACILITIES UTILIZING THE APPROPRIATE BMPS;
   (i) INSTALL PERMANENT ESC CONTROLS, WHEN APPLICABLE; AND,
   (j) REMOVE TEMPORARY ESC CONTROLS WHEN:
      i. PERMANENT ESC CONTROLS, WHEN APPLICABLE, HAVE BEEN COMPLETELY INSTALLED;
      ii. ALL LAND-DISTURBING ACTIVITIES THAT HAVE THE POTENTIAL TO CAUSE EROSION OR SEDIMENTATION PROBLEMS HAVE CEASED; AND,
      iii. VEGETATION HAD BEEN ESTABLISHED IN THE AREAS NOTED AS REQUIRING VEGETATION ON THE ACCEPTED ESC PLAN ON FILE WITH THE LOCAL JURISDICTION.
2. INSPECT ALL ROADWAYS, AT THE END OF EACH DAY, ADJACENT TO THE CONSTRUCTION ACCESS ROUTE. IF IT IS EVIDENT THAT SEDIMENT HAS BEEN TRACKED OFF SITE AND/OR BEYOND THE ROADWAY APPROACH, CLEANING IS REQUIRED.
3. IF SEDIMENT REMOVAL IS NECESSARY PRIOR TO STREET WASHING, IT SHALL BE REMOVED BY SHOVELING OR PICKUP SWEEPING AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
4. IF STREET WASHING IS REQUIRED TO CLEAN SEDIMENT TRACKED OFF SITE, ONCE SEDIMENT HAS BEEN REMOVED, STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE OR OTHERWISE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
5. RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
6. RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICAL.
7. INSPECT SEDIMENT CONTROL BMPS WEEKLY AT A MINIMUM, DAILY DURING A STORM EVENT, AND AFTER ANY DISCHARGE FROM THE SITE (STORMWATER OR NON-STORMWATER). THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE SITE IS STABILIZED AND INACTIVE.
8. CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY IN ACCORDANCE WITH THE STATE AND/OR LOCAL AIR QUALITY CONTROL AUTHORITIES WITH JURISDICTION OVER THE PROJECT AREA.
9. STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES), WHETHER AT FINAL GRADE OR NOT, WITHIN 10 DAYS DURING THE REGIONAL DRY SEASON (JULY 1 THROUGH SEPTEMBER 30) AND WITHIN 5 DAYS DURING THE REGIONAL WET SEASON (OCTOBER 1 THROUGH JUNE 30). SOILS MUST BE STABILIZED AT THE END OF A SHIFT BEFORE A HOLIDAY WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. THIS TIME LIMIT MAY ONLY BE ADJUSTED BY A LOCAL JURISDICTION WITH A "QUALIFIED LOCAL PROGRAM," IF IT CAN BE DEMONSTRATED THAT THE RECENT PRECIPITATION JUSTIFIES A DIFFERENT STANDARD AND MEETS THE REQUIREMENTS SET FOURTH IN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
10. PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT FACILITIES ARE OPERABLE.
11. KEEP ROADS ADJACENT TO INLETS CLEAN.
12. INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS.
13. CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHALL BE OPERATIONAL BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
14. STOCKPILE MATERIALS (SUCH AS TOPSOIL) ON SITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
15. COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCT, AND NON-INERT WASTES PRESENT ON SITE FROM VANDALISM (SEE CHAPTER 173-304 WAC FOR THE DEFINITION OF INERT WASTE), USE SECONDARY CONTAINMENT FOR ON-SITE FUELING TANKS.
16. CONDUCT MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM REPAIRS, SOLVENT AND DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CLEAN ALL CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. IF RAINING OVER EQUIPMENT OR VEHICLE, PERFORM EMERGENCY REPAIRS ON SITE USING TEMPORARY PLASTIC BENEATH THE VEHICLE.
17. CONDUCT APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES. AMEND MANUFACTURER'S RECOMMENDED APPLICATION RATES AND PROCEDURES TO MEET THIS REQUIREMENT, IF NECESSARY.
18. INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING STORM EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMPS. NOTE THAT INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACE BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
19. REMOVE TEMPORARY ESC BMPS WITHIN 30 DAYS AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREAS THAT ARE DISTURBED DURING THE REMOVAL PROCESS.

ADDITIONAL ESC NOTE

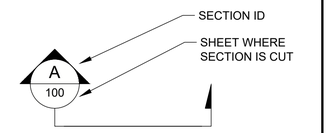
A. A SITE LOG SHALL BE COMPLETED WITH THE PROJECT PER SVSS 5.4. INSPECTIONS FOR SITES ONE ACRE OR MORE ARE REQUIRED TO BE CONDUCTED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL). SEE SVSS APPENDIX 9-D FOR INSPECTION REQUIREMENTS.

REFERENCE(S)

1. PRE-REMEDIATION ORTHOPHOTO PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/8/2021. POST REMEDIATION ORTHOPHOTO PROVIDED BY JOHNSON SURVEYING NW, DATED 7/17/2023.
2. TOPOGRAPHIC CONTOURS PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/8/2021.
3. PROPERTY BOUNDARIES PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/18/2021.
4. SITE FEATURES DIGITIZED FROM ORTHOPHOTO PROVIDED BY MID-MOUNTAIN SURVEYORS, INC. DATED 3/8/2021.
5. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
6. VERTICAL DATUM: NAVD88.
7. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), VERSIONS CURRENT AT TIME OF BID.
8. GEOSYNTHETIC RESEARCH INSTITUTE (GRI), VERSIONS CURRENT AT TIME OF BID.
9. WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 2020 VERSION.

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE



AS-BUILT

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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VANESSA M. NANGARROW — STATE OF WASHINGTON — 47008 — REGISTERED PROFESSIONAL ENGINEER

9/28/23

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
GENERAL NOTES AND SPECIFICATIONS (3 OF 3)

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	4 of 39	022

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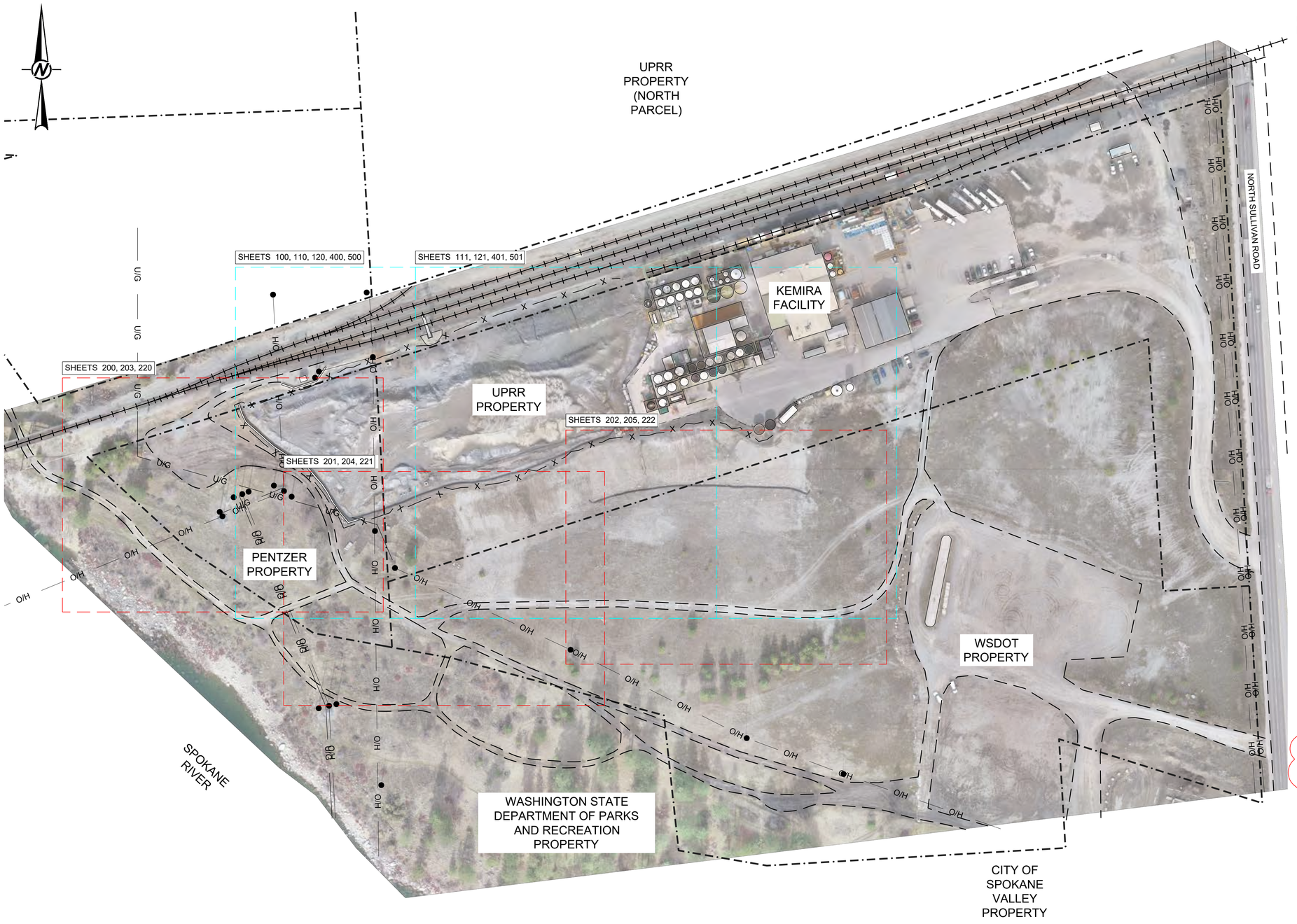

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
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- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE

REFERENCE(S)

1. PRE-REMEDIATION ORTHOPHOTO PROVIDED BY MID-MOUNTAIN SURVEYORS, INC, DATED 3/2/2021.

3

AS-BUILT

0 150 300
1" = 150' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SITE OVERVIEW - PRE REMEDIATION

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	030

5 of 39

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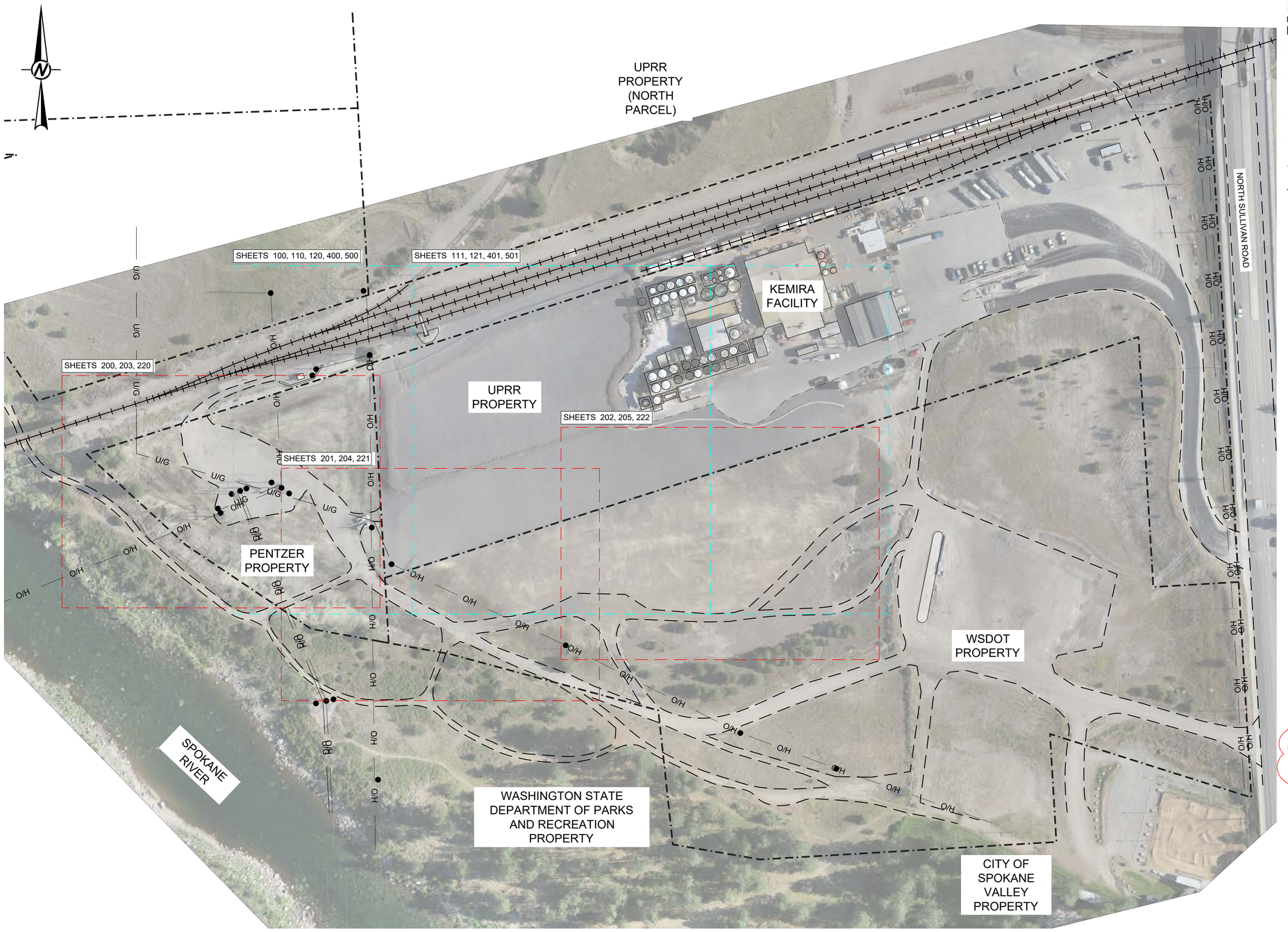

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE

REFERENCE(S)

1. POST-REMEDIATION ORTHOPHOTO PROVIDED BY JOHNSON SURVEYING NW, DATED, 7/17/2023.

3

AS-BUILT

0 150 300
1" = 150' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SITE OVERVIEW - POST REMEDIATION

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	031

6 of 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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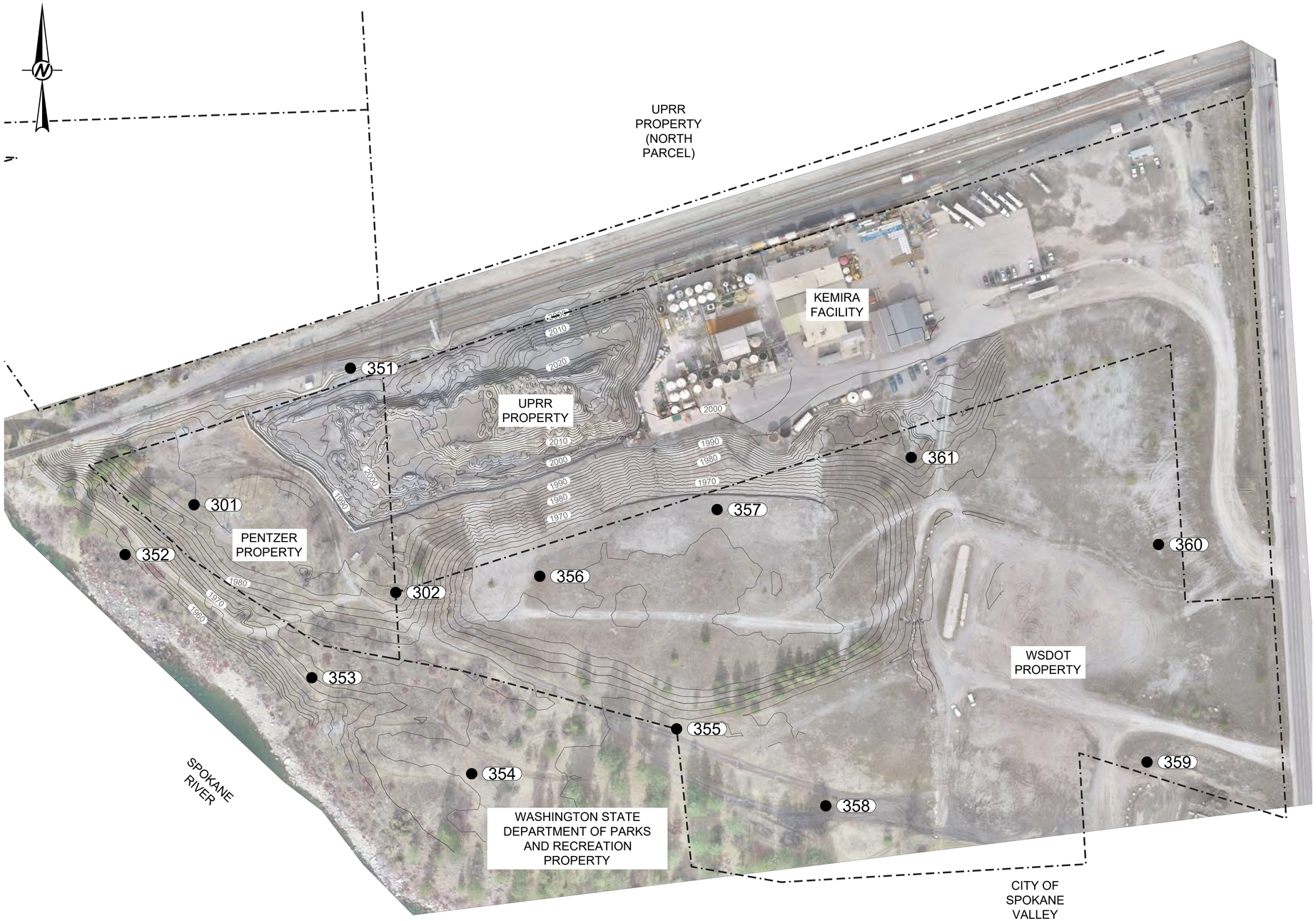

LEGEND

- PROPERTY BOUNDARY
- 301 MID-MOUNTAIN SURVEYORS CONTROL POINTS
- MAJOR CONTOUR INTERVAL (10FT)
- MINOR CONTOUR INTERVAL (2FT)

REFERENCE(S)

1. BASE MAP PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/8/2021.
2. TOPOGRAPHIC CONTOURS PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/8/2021.
3. PROPERTY BOUNDARIES PROVIDED BY MID-MOUNTAIN SURVEYORS, INC., DATED 3/18/2021.
4. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
5. VERTICAL DATUM: NAVD88.
6. POINT NO. 304 IS LOCATED OUTSIDE OF AREA EXTENTS SHOWN.

CONTROL POINT TABLE

POINT NO.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)	POINT DESCRIPTION
301	268111.18	2534360.51	1985.98	5/8" rebar 'GPS CONTROL'
302	267981.45	2534659.03	1985.65	5/8" rebar
304	270345.04	2541232.43	2005.20	WSDOT 'FLORA' ID8479
351	268313.14	2534591.86	1995.11	6" mag. Nail
352	268037.50	2534258.53	1956.95	6" mag. Nail
353	267855.45	2534534.78	1969.85	6" mag. Nail
354	267713.43	2534771.26	1972.23	6" mag. Nail
355	267779.79	2535074.44	1975.19	5/8" rebar
356	268005.48	2534872.03	1963.87	6" mag. Nail
357	268104.08	2535134.36	1963.00	6" mag. Nail
358	267665.96	2535295.20	1975.48	6" mag. Nail
359	267730.68	2535770.47	1979.52	6" mag. Nail
360	268052.45	2535787.44	1976.42	6" mag. Nail
361	268181.13	2535421.63	1987.57	6" mag. Nail

AS-BUILT

0 80 160
1" = 80'
FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SURVEY MONUMENTATION AND CONTROL

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	7 of 39 040

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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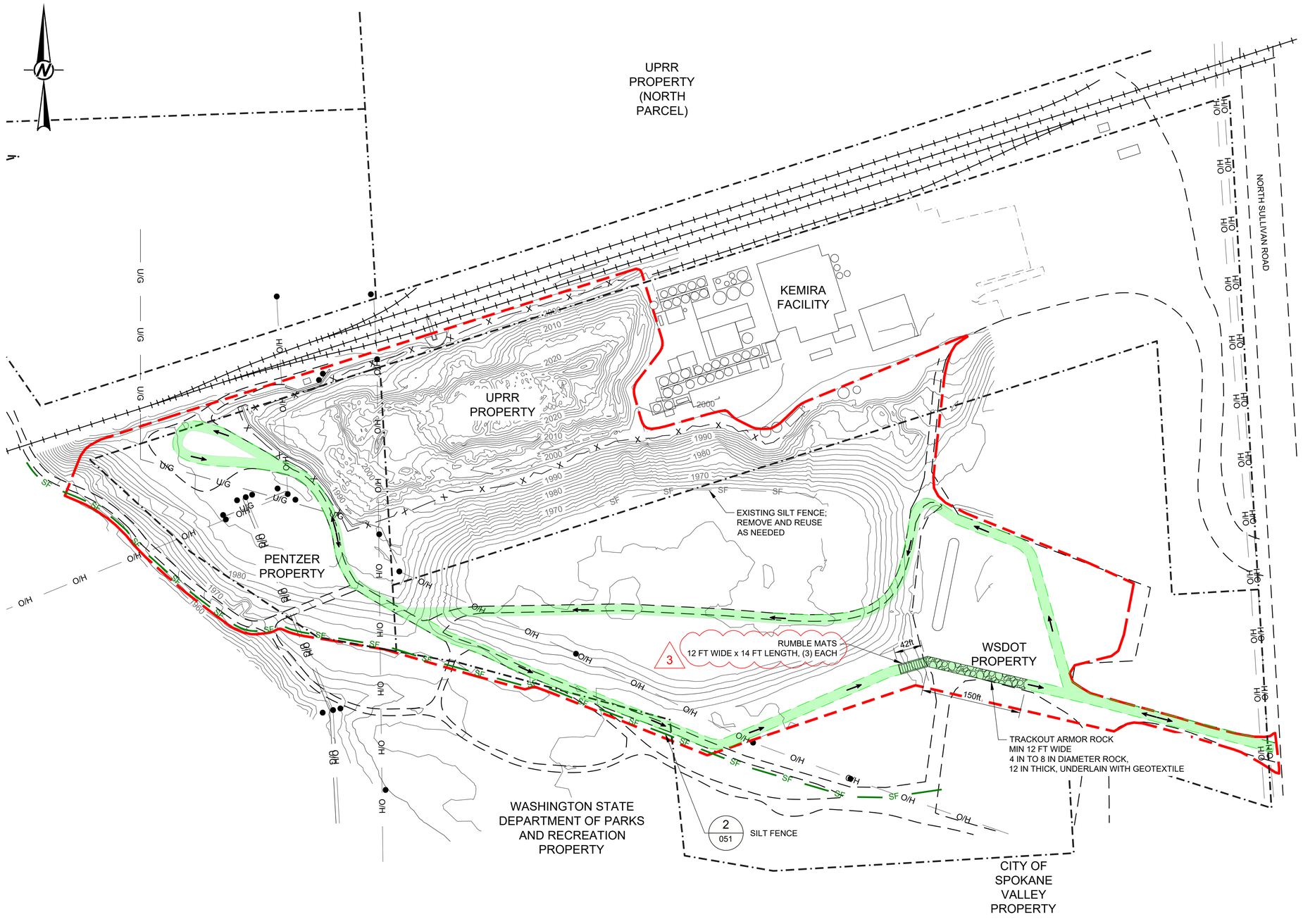

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE
- SF — EXISTING SILT FENCE
- SF — PROPOSED SILT FENCE
- LIMIT OF DISTURBANCE
- RUMBLE MATS
- TRACKOUT ARMOR ROCK
- CONTRACTOR PROPOSED TRUCK ACCESS
- TRAFFIC DIRECTION

NOTE(S)

1. WHERE EROSION AND SEDIMENT CONTROL MEASURES ARE NOT SHOWN ON THE DRAWINGS, THEY SHALL BE INSTALLED AS NEEDED OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
3. AS NEEDED OR DIRECTED, INSTALL STRAW BALE BARRIERS TO PREVENT SEDIMENT FROM MIGRATING OUTSIDE OF THE WORK AREA LIMITS. SEE DETAIL 1, SHEET 051.
4. AS NEEDED OR DIRECTED, INSTALL SILT FENCE TO PREVENT SEDIMENT FROM MIGRATING OUTSIDE OF THE WORK AREA LIMITS. SEE DETAIL 2, SHEET 051.

AS-BUILT

0 80 160
1" = 80'
FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	8 of 39	050

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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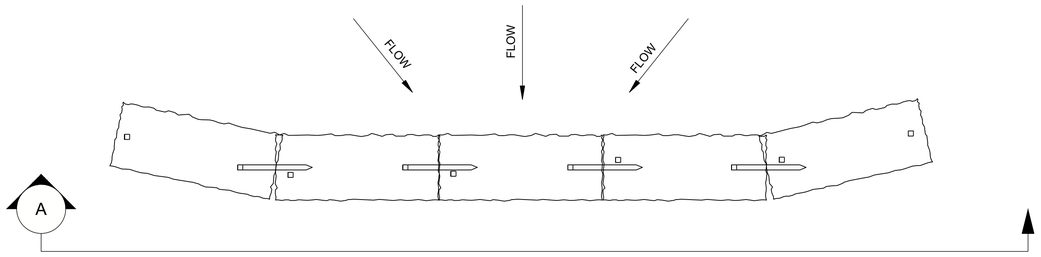
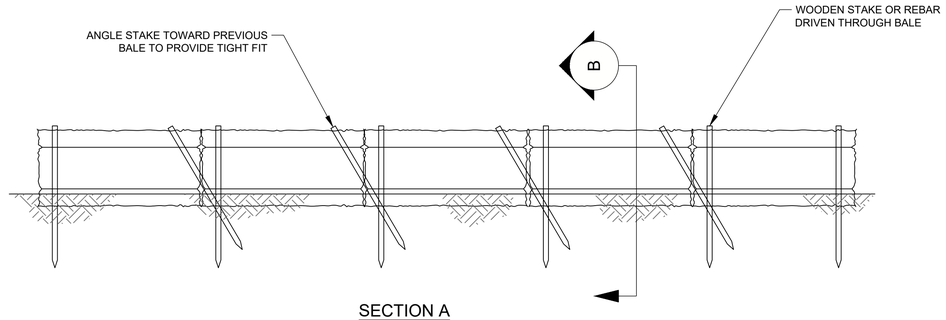
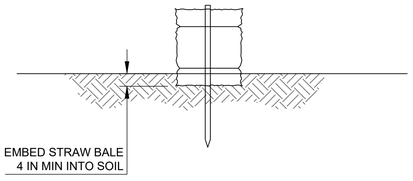


PLAN



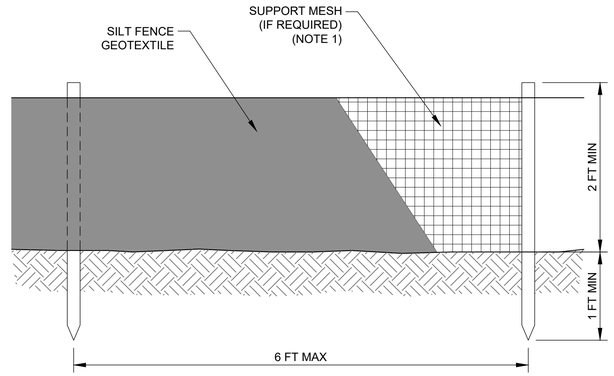
SECTION A

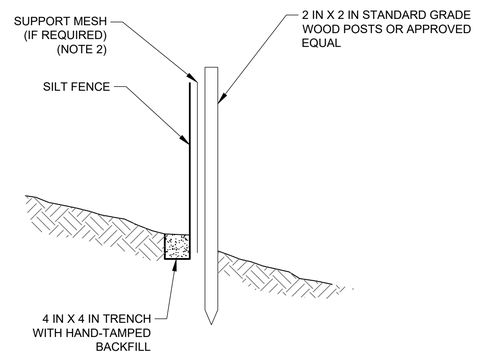


SECTION B

NOTES:
1. STRAW BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING.
2. KEY IN BALES TO PREVENT EROSION OR FLOW UNDER BALES.
3. NUMBER OF BALES IN EACH BARRIER TO BE DETERMINED BY THE CONSTRUCTION MANAGER.

SCALE N.T.S. 1 - STRAW BALE BARRIER





NOTES:
1. SUPPORT MESH SHALL BE REQUIRED IF SPACING BETWEEN POSTS IS INCREASED OR IF IN THE OPINION OF THE CONSTRUCTION MANAGER, THE SILT FENCE IS NOT ADEQUATELY SUPPORTED TO FUNCTION AS INTENDED.
2. EXTEND SUPPORT MESH AT LEAST 3 INCHES INTO TRENCH.

SCALE N.T.S. 2 - SILT FENCE

AS-BUILT

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
EROSION AND SEDIMENT CONTROL DETAILS

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	9 of 39 051

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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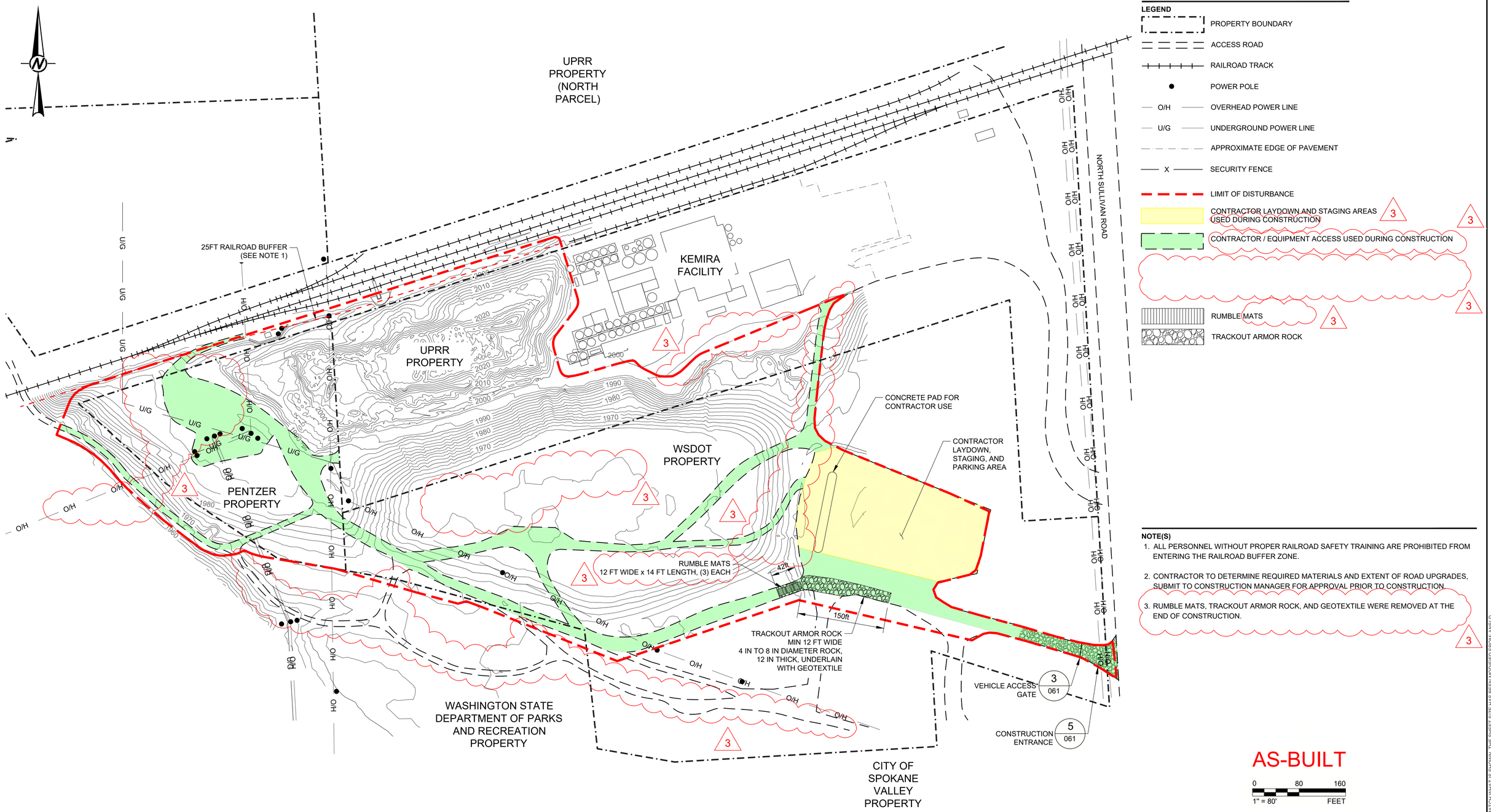

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE
- LIMIT OF DISTURBANCE
- CONTRACTOR LAYDOWN AND STAGING AREAS USED DURING CONSTRUCTION
- CONTRACTOR / EQUIPMENT ACCESS USED DURING CONSTRUCTION
- RUMBLE MATS
- TRACKOUT ARMOR ROCK

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. CONTRACTOR TO DETERMINE REQUIRED MATERIALS AND EXTENT OF ROAD UPGRADES, SUBMIT TO CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. RUMBLE MATS, TRACKOUT ARMOR ROCK, AND GEOTEXTILE WERE REMOVED AT THE END OF CONSTRUCTION.

AS-BUILT

0 80 160
1" = 80' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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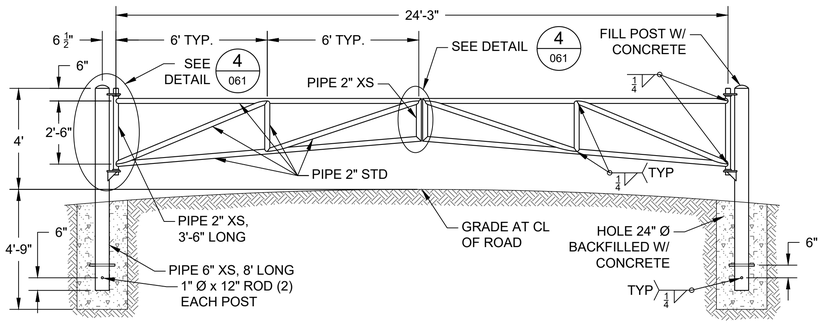
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ACCESS ROAD AND STAGING AREA PLAN

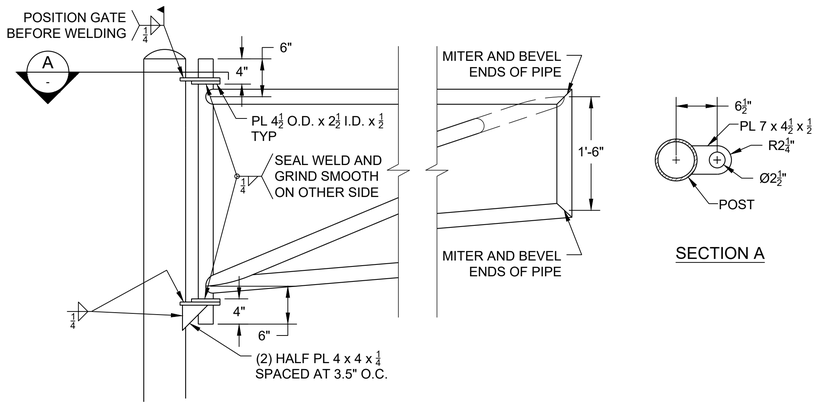
PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	10 of 39	060

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in



SCALE 1" = 3' 3/- VEHICLE ACCESS GATE



SECTION A

SCALE 1" = 1' 4/- VEHICLE ACCESS GATE DETAILS

NOTE:
1. OR AS DIRECTED BY THE CONSTRUCTION MANAGER.

SCALE N.T.S. 5/- CONSTRUCTION ENTRANCE

AS-BUILT

0 1 2
1" = 1' FEET

0 3 6
1" = 3' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

VANESSA M. NANCARROW STATE OF WASHINGTON 47008 REGISTERED PROFESSIONAL ENGINEER

9/28/23

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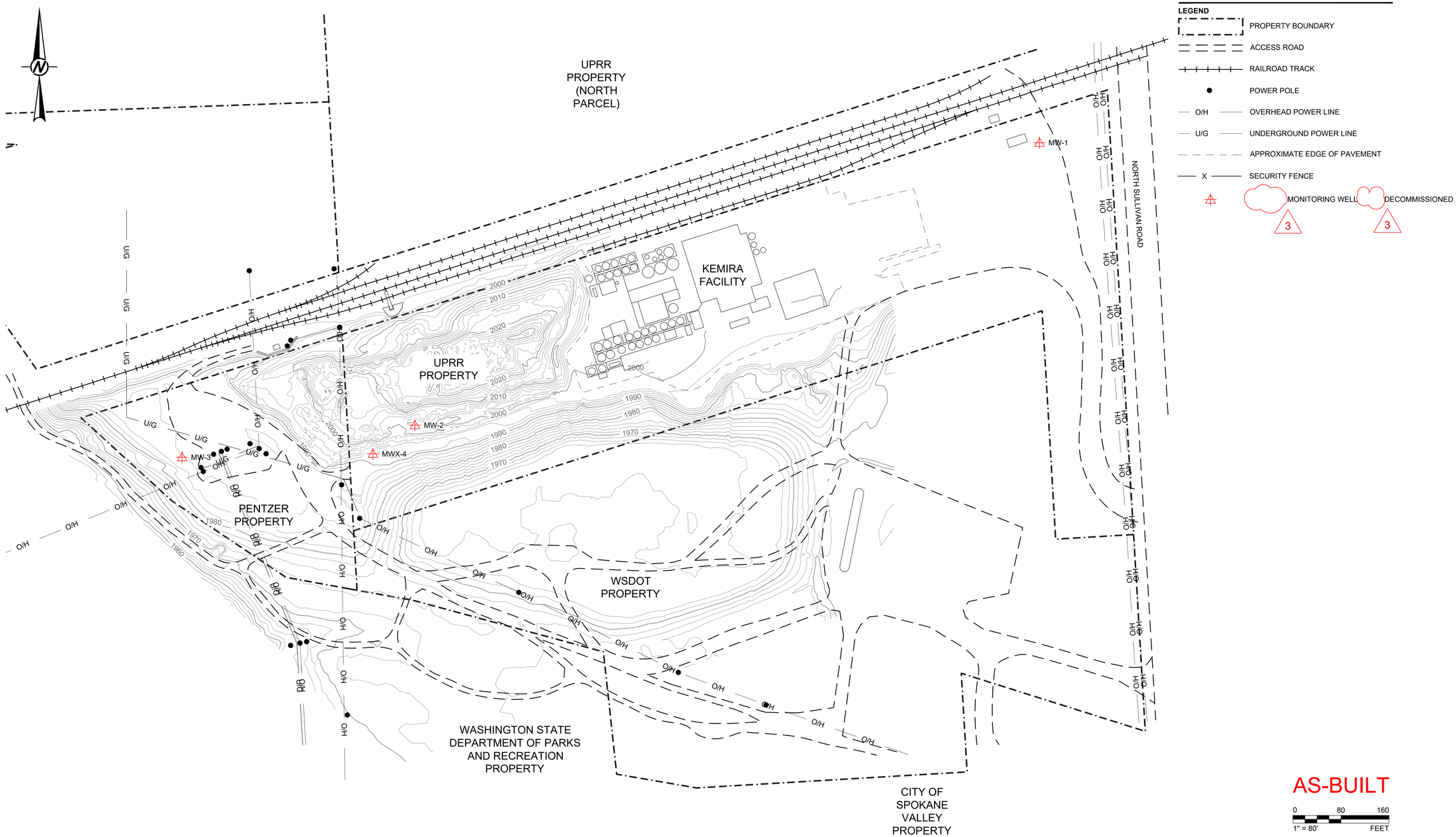
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ACCESS ROAD DETAILS

PROJECT NO.	PHASE	REV.	11 of 39	SHEET
19119180	1000B	3		061

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in



AS-BUILT

0 80 160
1" = 80' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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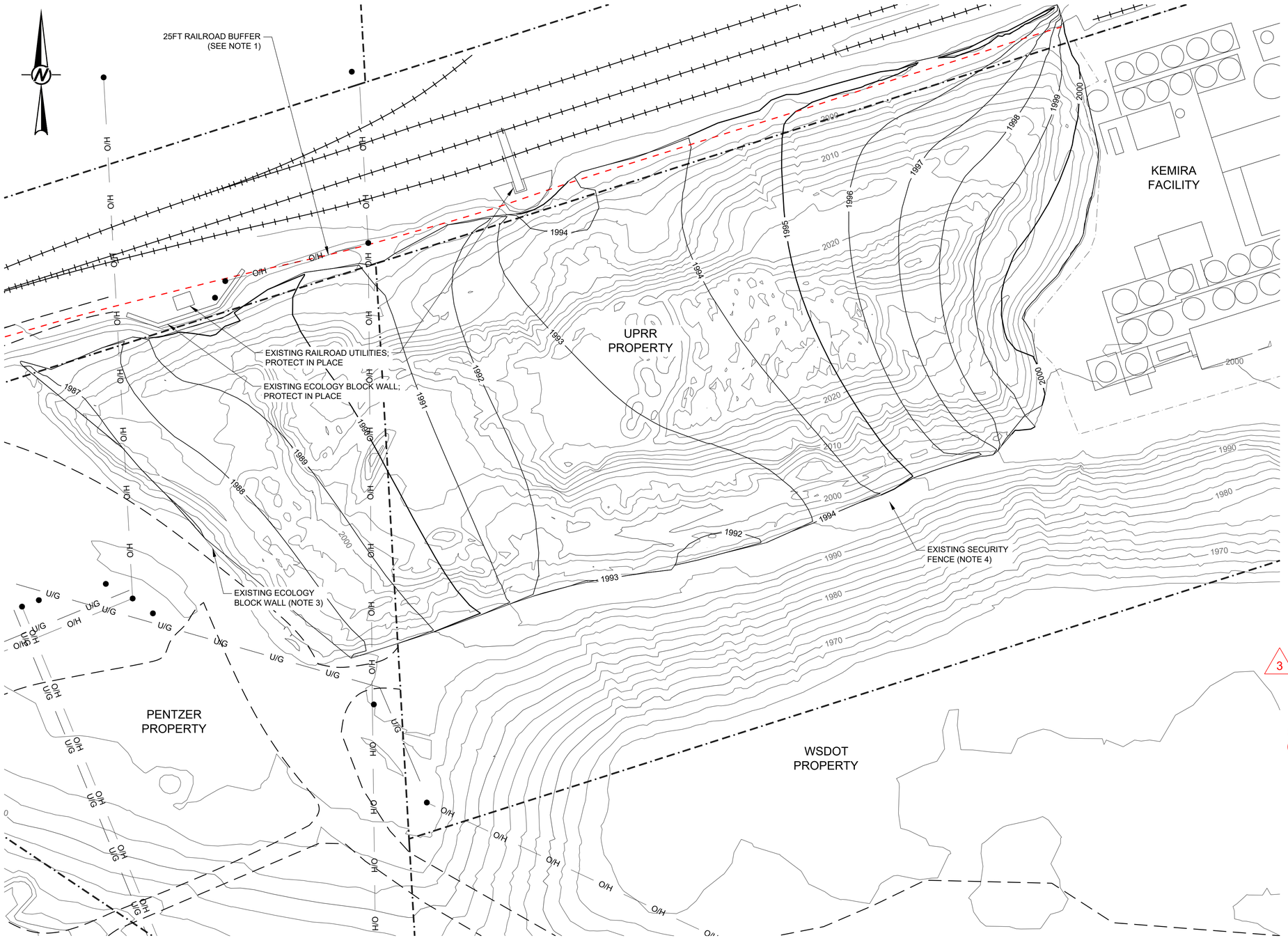
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
MONITORING WELL DECOMMISSIONING

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	12 of 39 070

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- X — SECURITY FENCE
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- ASSUMED STOCKPILE SUBGRADE MAJOR CONTOUR (5-FT INTERVAL) (NOTE 2)
- ASSUMED STOCKPILE SUBGRADE MINOR CONTOUR (1-FT INTERVAL) (NOTE 2)

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. ACTUAL DEPTH OF REMOVAL BELOW DROSS STOCKPILE TO BE DETERMINED IN THE FIELD BY CONFIRMATORY TESTING PERFORMED BY THE CONSTRUCTION MANAGER.
3. REMOVED AND USED FOR VARIOUS PURPOSES AROUND THE SITE.
4. RENTED FENCE RETURNED TO THE RENTAL COMPANY.
5. ACTUAL ELEVATIONS OF STOCKPILE SUBGRADE SURFACE WERE NOT SURVEYED DURING CONSTRUCTION. CONTOURS SHOWN ON THIS SHEET REPRESENT THE ASSUMED STOCKPILE SUBGRADE SURFACE FROM THE DESIGN.

AS-BUILT

0 30 60
1" = 30' FEET

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3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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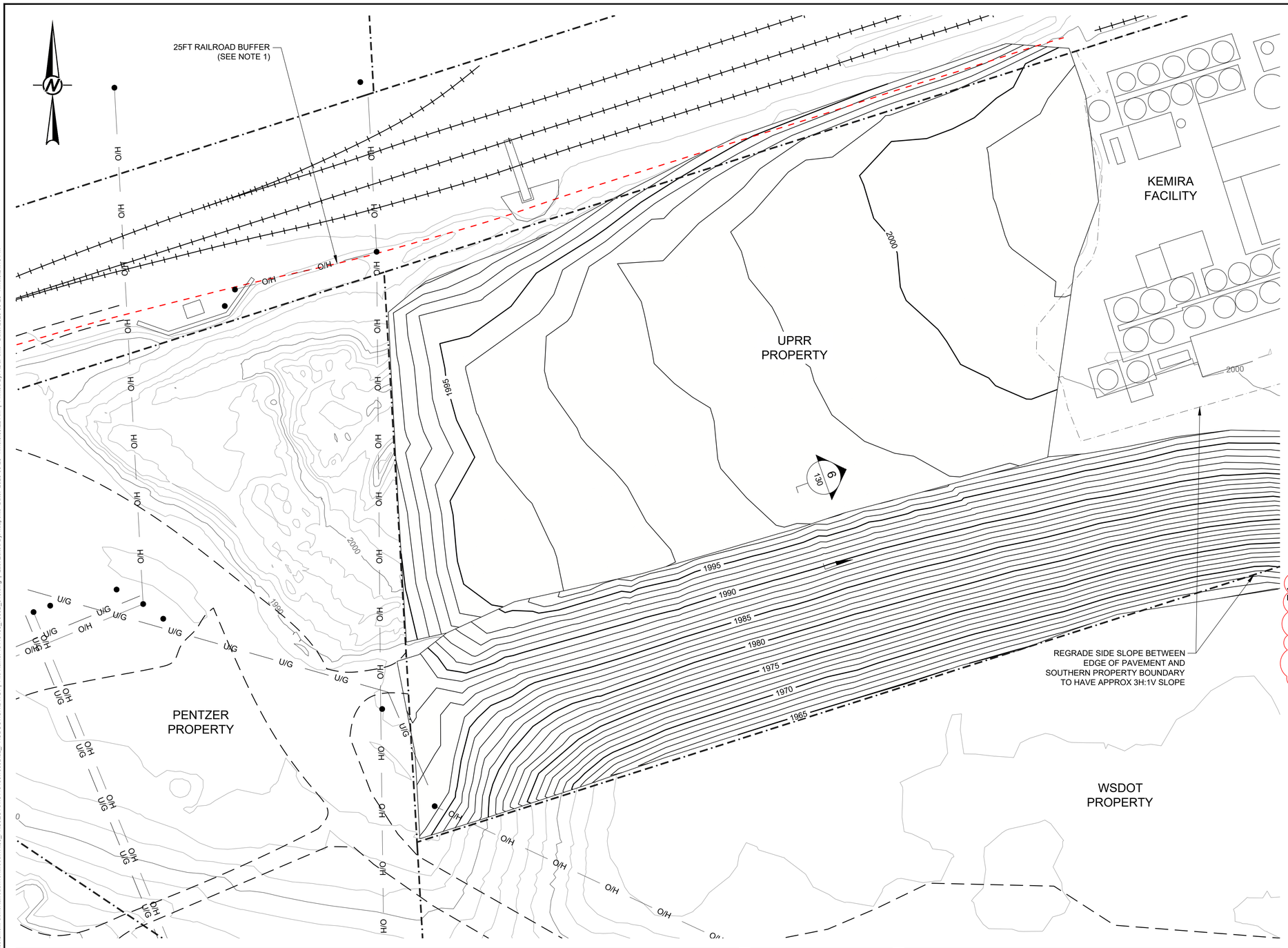
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
DROSS STOCKPILE REMOVAL PLAN

PROJECT NO.	PHASE	REV.	13 of 39	SHEET
19119180	1000B	3		100



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- ECOLOGICAL CAP SUBGRADE MAJOR CONTOUR (5-FT INTERVAL)
- ECOLOGICAL CAP SUBGRADE MINOR CONTOUR (1-FT INTERVAL)

3

REFERENCE(S)

1. ECOLOGICAL CAP SUBGRADE TOPOGRAPHY PROVIDED BY JOHNSON SURVEYING NW ON JUNE 21, 2023.
2. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
3. VERTICAL DATUM: NAVD88.

3

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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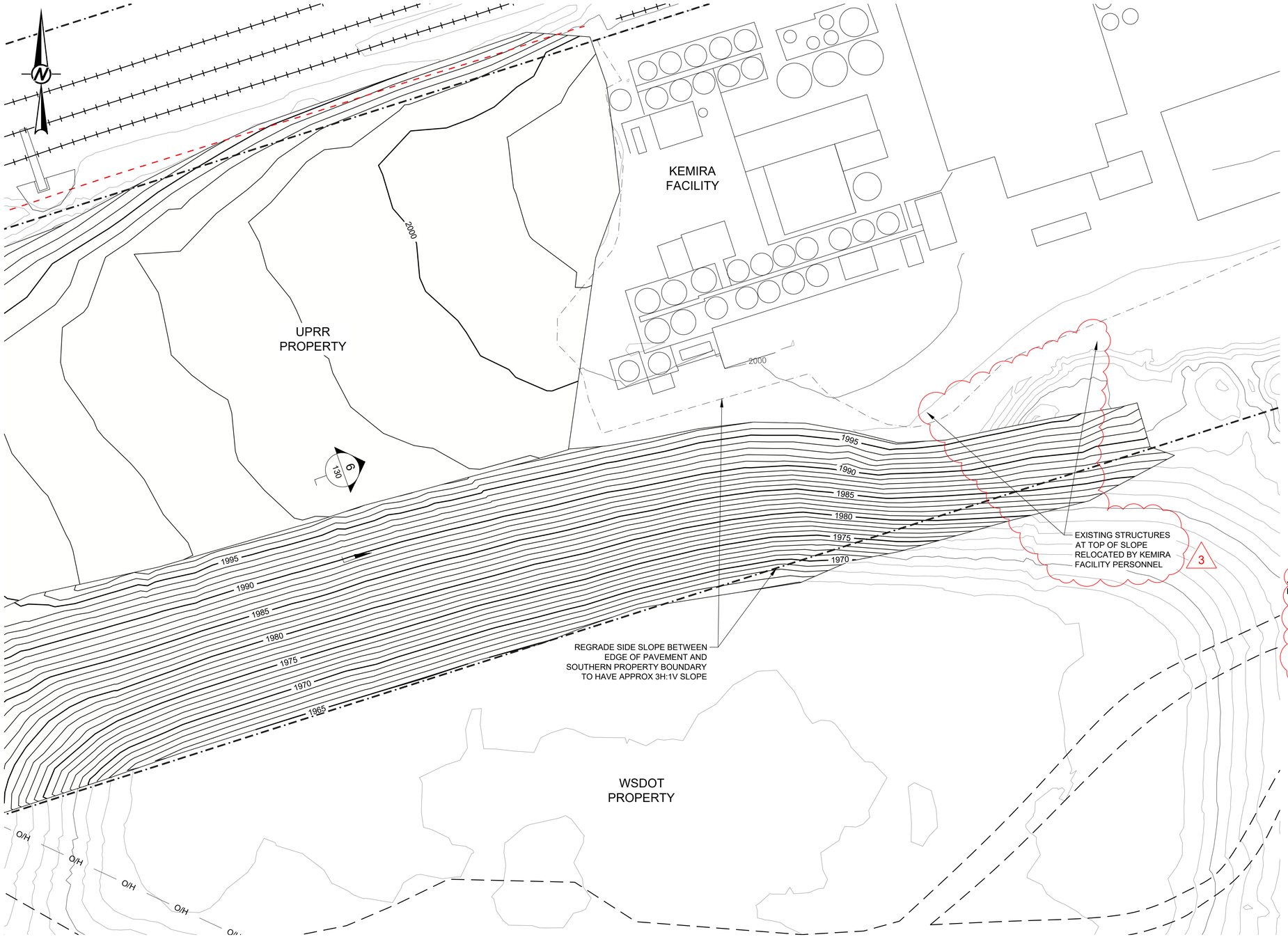
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SUBGRADE PLAN (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	14 of 39 110

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- ECOLOGICAL CAP SUBGRADE MAJOR CONTOUR (5-FT INTERVAL)
- ECOLOGICAL CAP SUBGRADE MINOR CONTOUR (1-FT INTERVAL)

3

REFERENCE(S)

1. ECOLOGICAL CAP SUBGRADE TOPOGRAPHY PROVIDED BY JOHNSON SURVEYING NW ON JUNE 21, 2023.
2. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
3. VERTICAL DATUM: NAVD88.

3

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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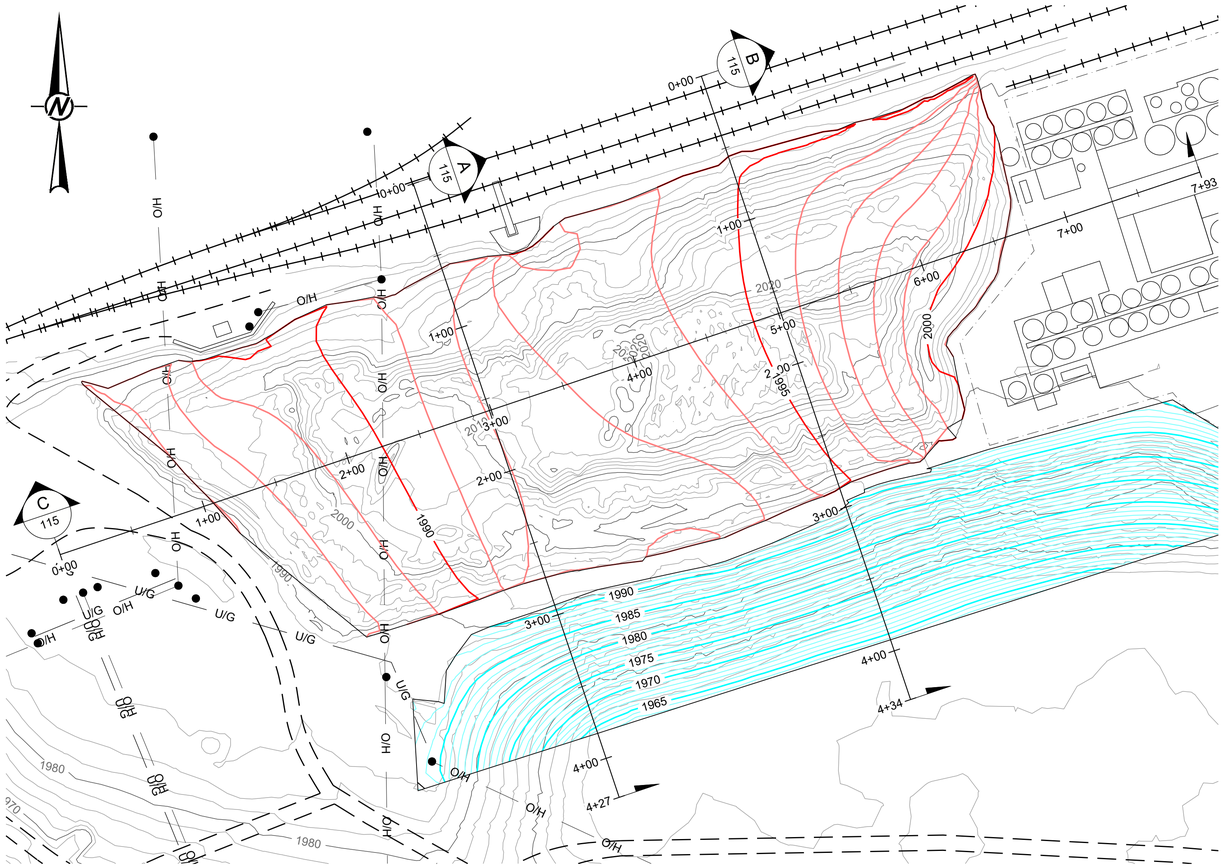
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

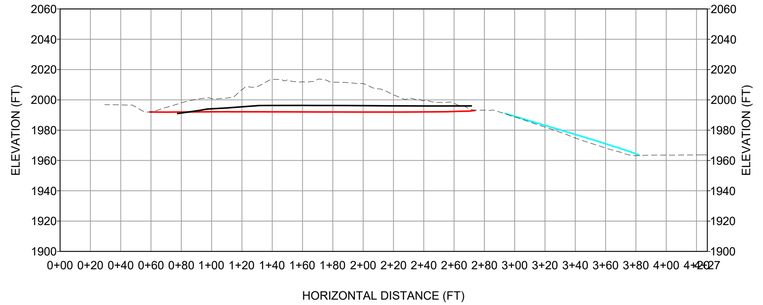
TITLE
SUBGRADE PLAN (2 OF 2)

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	15 of 39	111

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

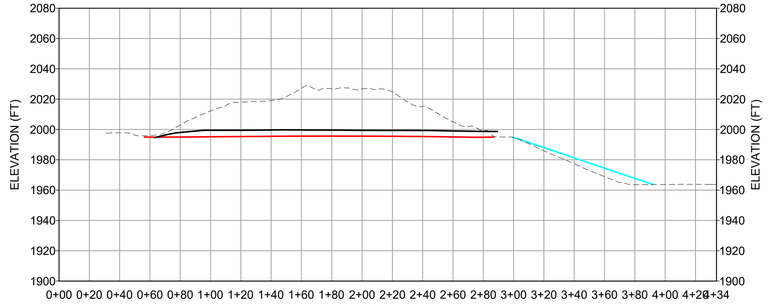
0 1in





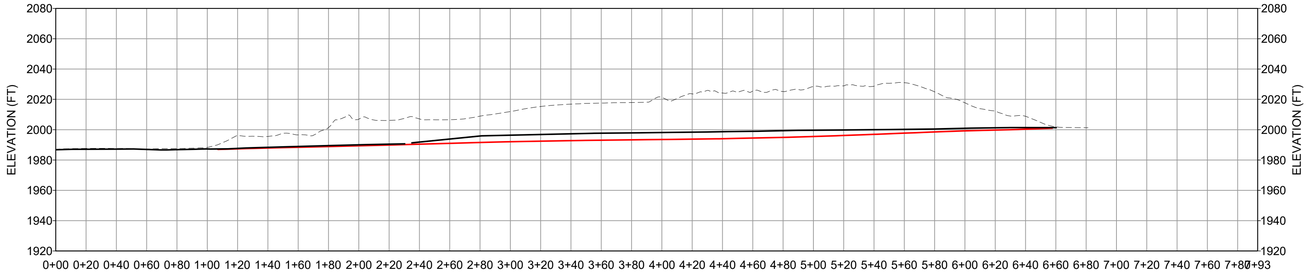
SCALE 1" = 50'
VERT. SCALE 1:1

A 115 DROSS STOCKPILE NW-SE SECTION



SCALE 1" = 50'
VERT. SCALE 1:1

B 115 DROSS STOCKPILE NW-SE SECTION



SCALE 1" = 50'
VERT. SCALE 1:1

C 115 DROSS STOCKPILE SW-NE SECTION

NOTE(S)

1. ACTUAL ELEVATIONS OF STOCKPILE SUBGRADE SURFACE WERE NOT SURVEYED DURING CONSTRUCTION. CONTOURS SHOWN ON THIS REPRESENT THE ASSUMED STOCKPILE SUBGRADE SURFACE FROM THE DESIGN. 3

LEGEND

- EXISTING GROUND SURFACE (MID MOUNTAIN SURVEY 2021)
- DROSS STOCKPILE AREA ASSUMED NATIVE SOIL SUBGRADE SURFACE 3
- DROSS STOCKPILE CAP SUBGRADE (JOHNSON SURVEYING NW SURVEY 2023) 3
- EXCAVATION \ FILL FOR CAP SUBGRADE 3

AS-BUILT

0 50 100
1" = 50' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

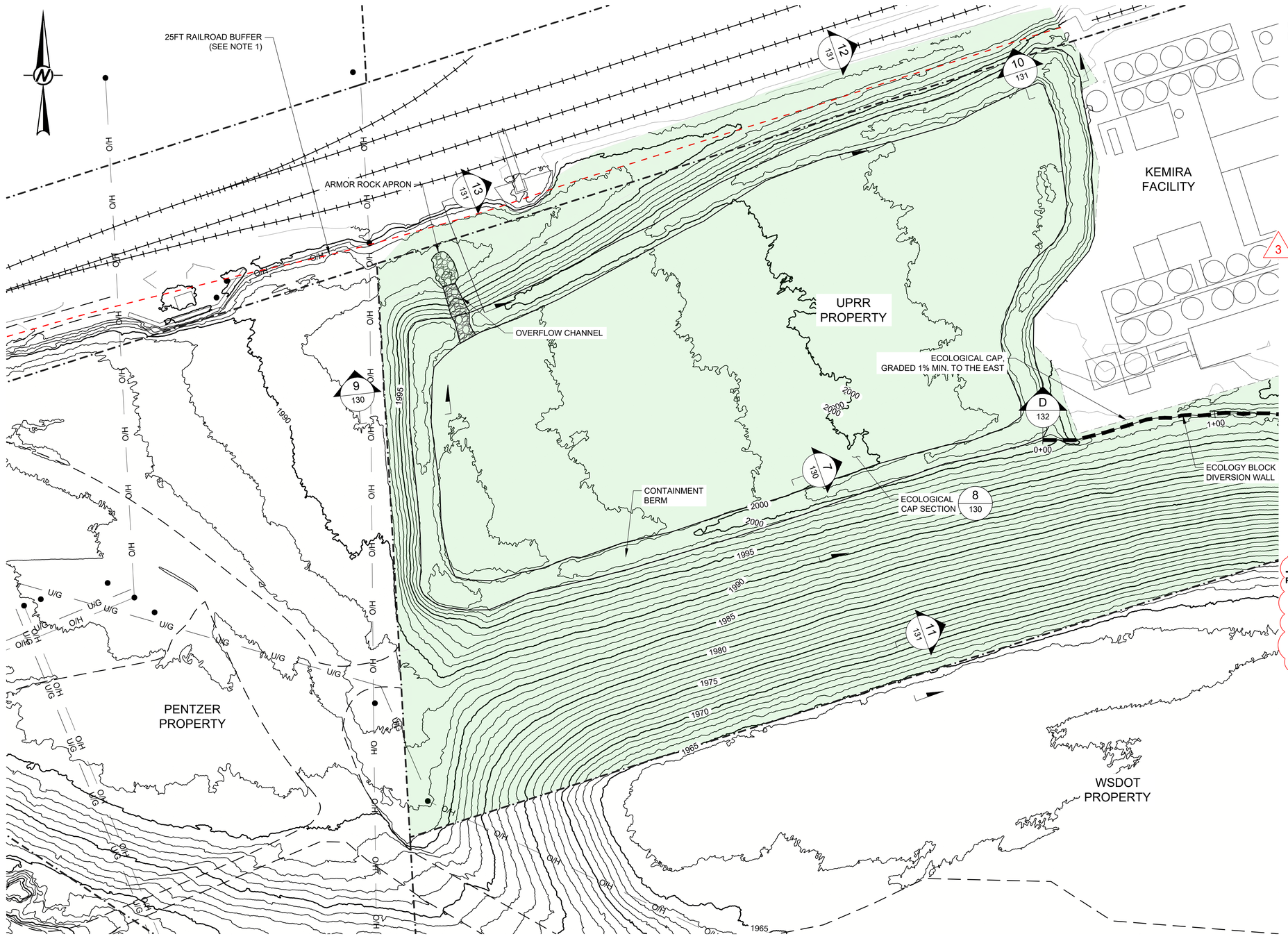
TITLE
DROSS STOCKPILE REMOVAL SECTIONS

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	115

16 of 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- FINAL MAJOR CONTOUR (5-FT INTERVAL)
- FINAL MINOR CONTOUR (1-FT INTERVAL)
- ECOLOGICAL CAP
- ARMOR ROCK
- ECOLOGY BLOCK DIVERSION WALL

REFERENCE(S)

1. TOPOGRAPHIC CONTOURS PROVIDED BY JOHNSON SURVEYING NW, DATED JULY 17, 2023 AND CLIPPED TO ESTIMATED LIMIT OF DISTURBANCE.
2. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
3. VERTICAL DATUM: NAVD88.

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. THE INTENT OF THE ECOLOGY BLOCK DIVERSION WALL IS TO MINIMIZE SURFACE WATER FLOW ONTO ECOLOGICAL CAP AREA.

AS-BUILT

0 30 60
1" = 30'
FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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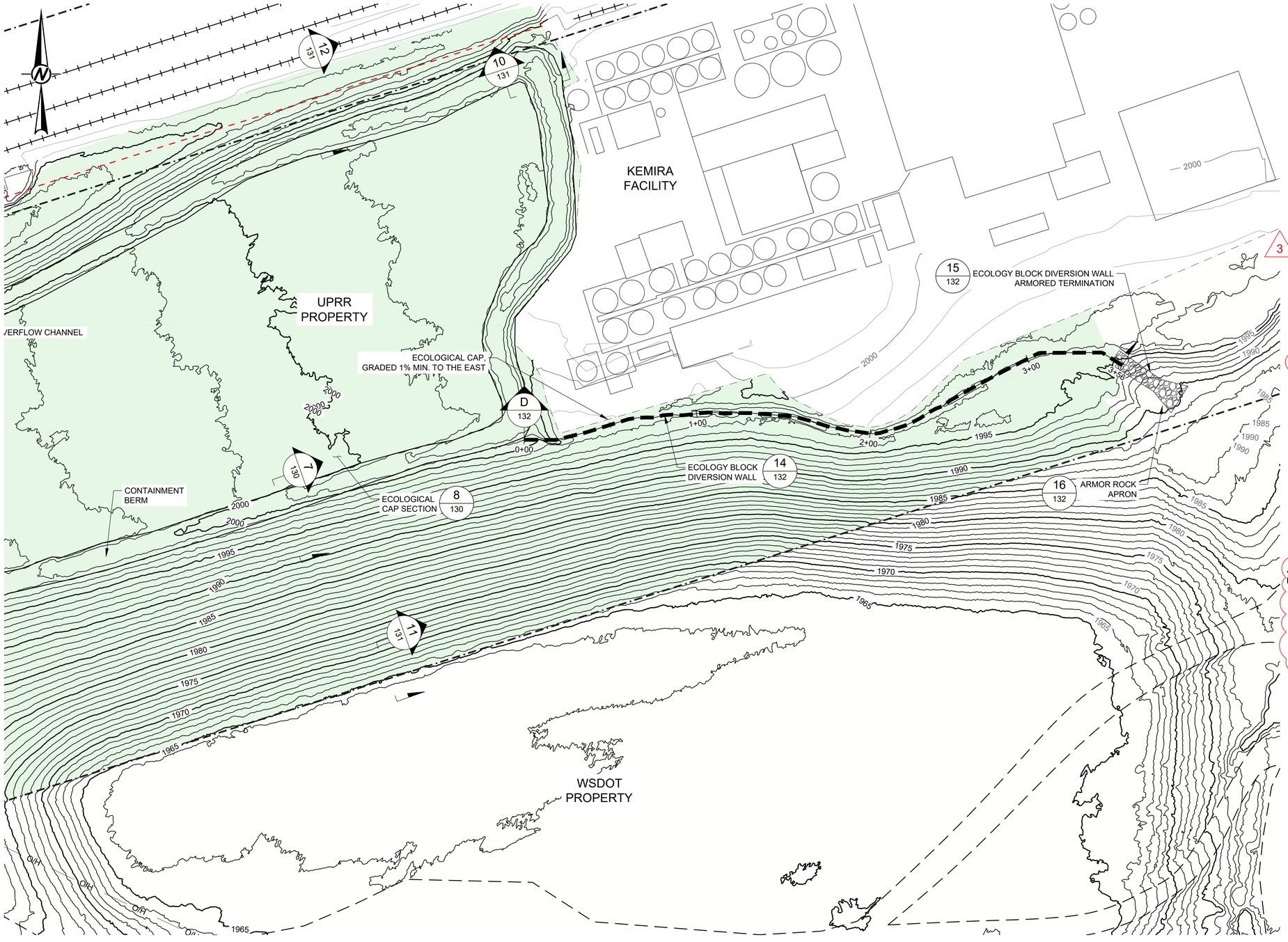
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM PLAN (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	17 of 39 — 120

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- FINAL MAJOR CONTOUR (5-FT INTERVAL)
- FINAL MINOR CONTOUR (1-FT INTERVAL)
- ECOLOGICAL CAP
- ARMOR ROCK
- ECOLOGY BLOCK DIVERSION WALL

REFERENCE(S)

1. TOPOGRAPHIC CONTOURS PROVIDED BY JOHNSON SURVEYING NW, DATED JULY 17, 2023 AND CLIPPED TO ESTIMATED LIMIT OF DISTURBANCE.
2. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE (2011), NORTH ZONE, US FOOT.
3. VERTICAL DATUM: NAVD88.

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. THE INTENT OF THE ECOLOGY BLOCK DIVERSION WALL IS TO MINIMIZE SURFACE WATER FLOW ONTO ECOLOGICAL CAP AREA.

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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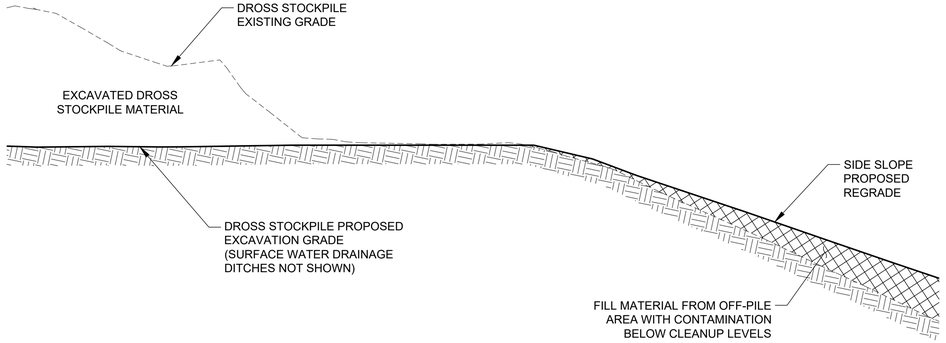
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM PLAN (2 OF 2)

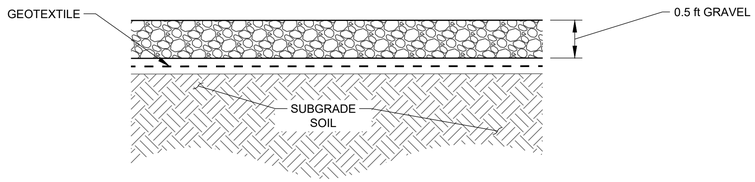
PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	18 of 39 121

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

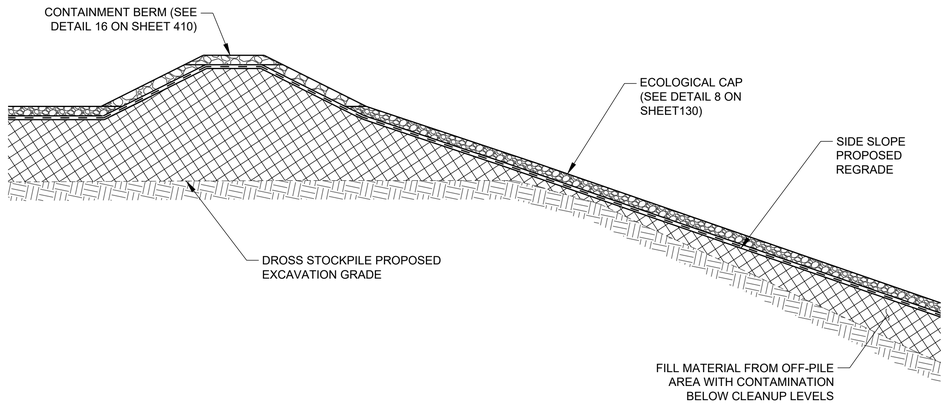
0 1in



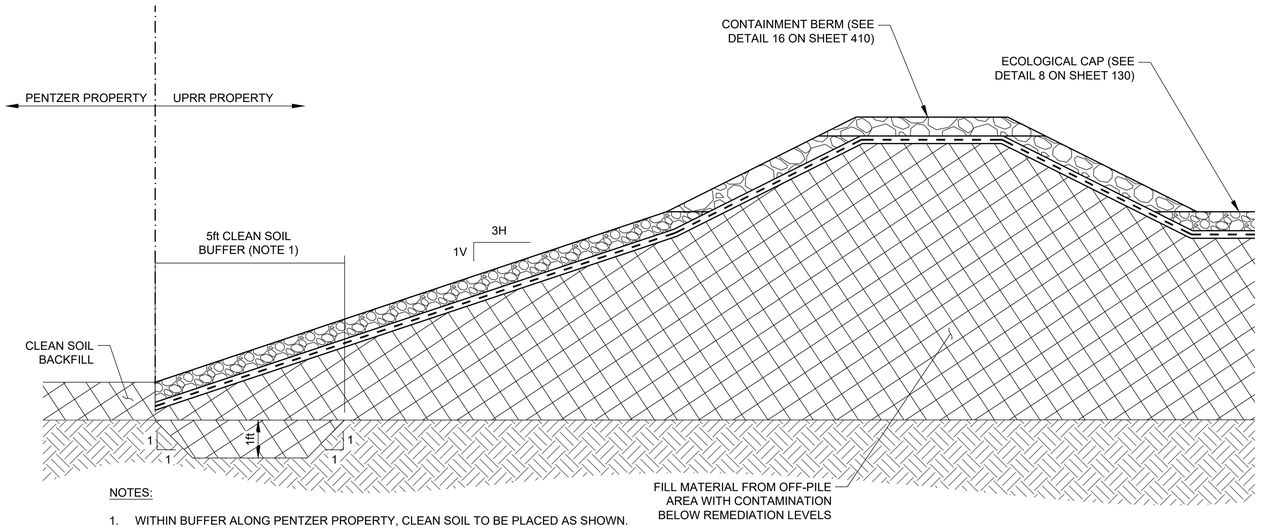
SCALE 1" = 4' 6 - DROSS STOCKPILE AND SIDE SLOPE REGRADE EXCAVATION TIE-IN



SCALE 1" = 1' 8 - ECOLOGICAL CAP SECTION



SCALE 1" = 4' 7 - DROSS STOCKPILE AND SIDE SLOPE REGRADE FINAL GRADE TIE-IN



NOTES:

1. WITHIN BUFFER ALONG PENTZER PROPERTY, CLEAN SOIL TO BE PLACED AS SHOWN.

SCALE 1" = 2' 9 - ECOLOGICAL CAP TERMINATION - WEST

AS-BUILT

0 1 2
1" = 1' FEET

0 2 4
1" = 2' FEET

0 4 8
1" = 4' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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PROJECT
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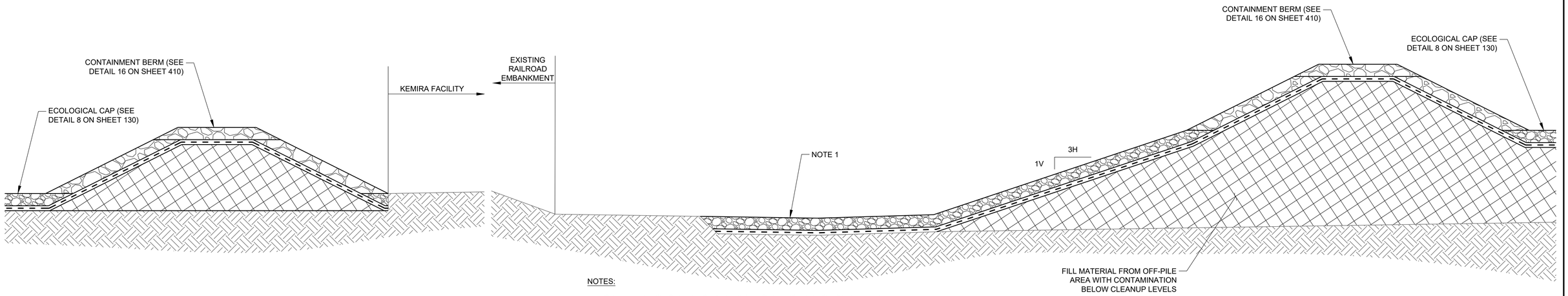
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM DETAILS (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	19 of 39 130

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in

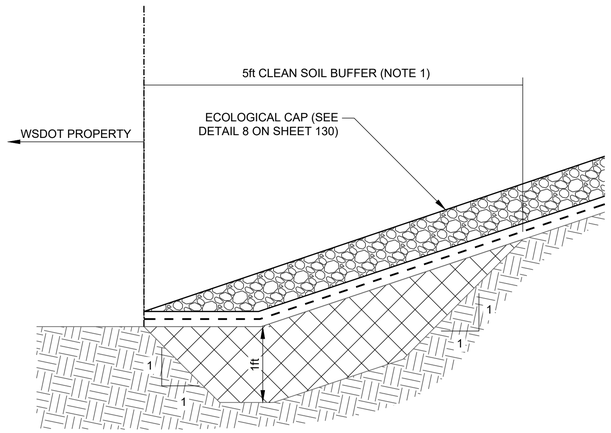


NOTES:

1. GRAVEL LINING TO BE PLACED IN EXISTING RAILROAD DITCH ONLY WHERE EXCAVATION OCCURS TO REMOVE CONTAMINATED MATERIAL AND THE DITCH LINING NEEDS TO BE REESTABLISHED.

SCALE 1" = 2' 10 - ECOLOGICAL CAP TERMINATION - EAST

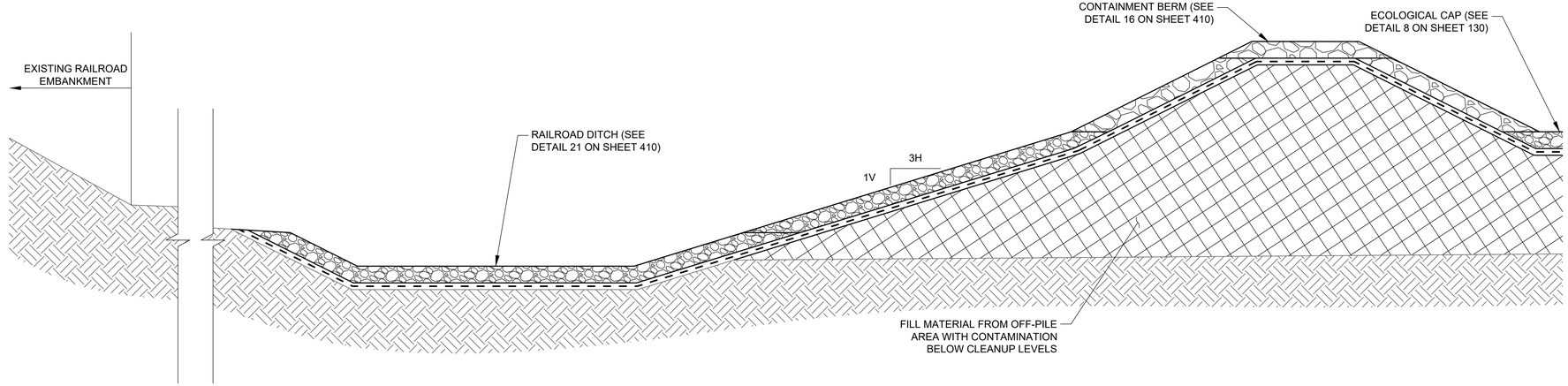
SCALE 1" = 2' 12 - ECOLOGICAL CAP TERMINATION - NORTH WITH EXISTING RAILROAD DITCH



NOTES:

1. WITHIN BUFFER ALONG WSDOT PROPERTY, CLEAN SOIL TO BE PLACED AS SHOWN.

SCALE 1" = 1' 11 - ECOLOGICAL CAP TERMINATION - SOUTH



SCALE 1" = 2' 13 - ECOLOGICAL CAP TERMINATION - NORTH WITH REGRADED RAILROAD DITCH

AS-BUILT

0 1 2
1" = 1' FEET

0 2 4
1" = 2' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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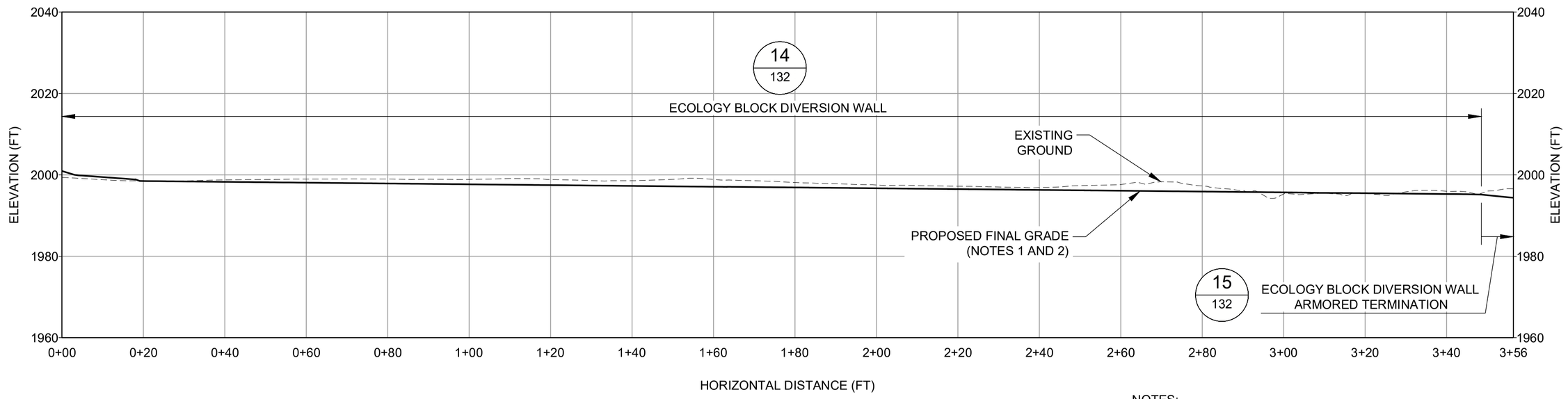
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM DETAILS (2 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	131

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

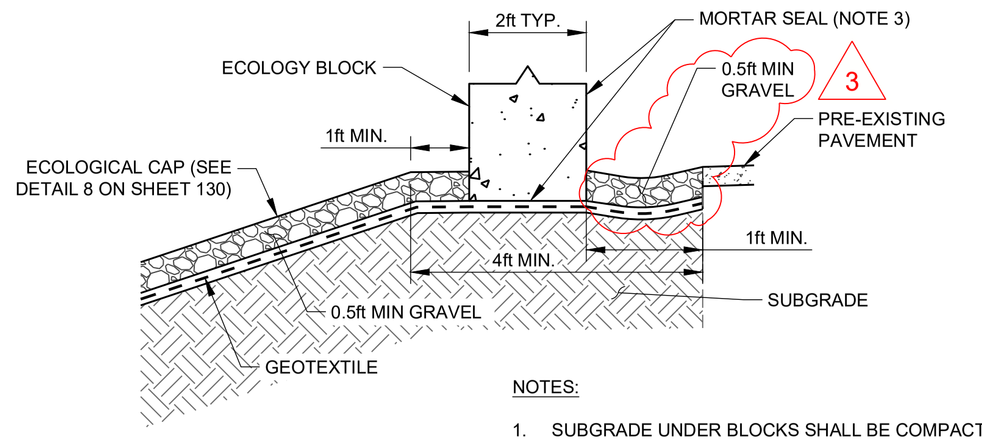
0 1 in



SCALE 1" = 20' VERT. SCALE 1:1 — D 121 — ECOLOGY BLOCK DIVERSION WALL PROFILE

NOTES:

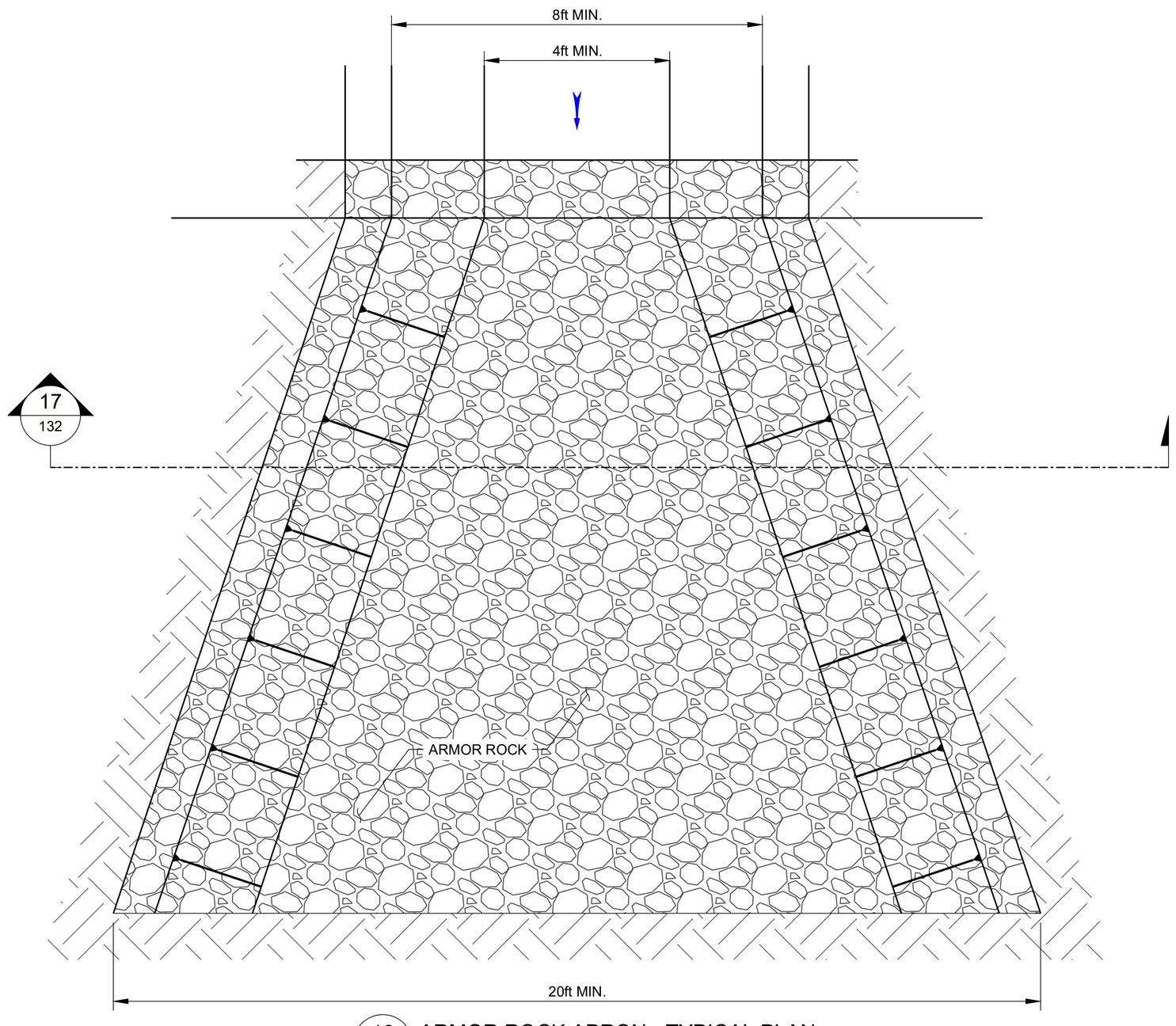
1. PROPOSED FINAL GRADE SURFACE REPRESENTS THE TOP SURFACE OF THE ECOLOGICAL CAP.
2. 1% MIN TO THE EAST.



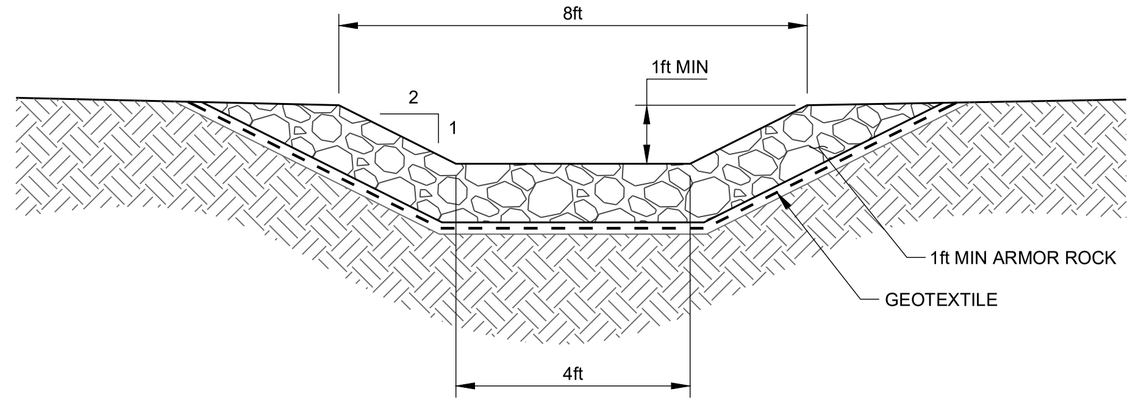
NOTES:

1. SUBGRADE UNDER BLOCKS SHALL BE COMPACTED TO A SMOOTH, FLAT, AND FIRM CONDITION.
2. PLACE BLOCKS TIGHTLY BUTTED END-TO-END.
3. MORTAR SEAL GAPS BETWEEN BLOCKS AND/OR GROUND SURFACE. SUBMIT INFORMATION ON PROPOSED MORTAR MATERIAL FOR APPROVAL PRIOR TO USE.

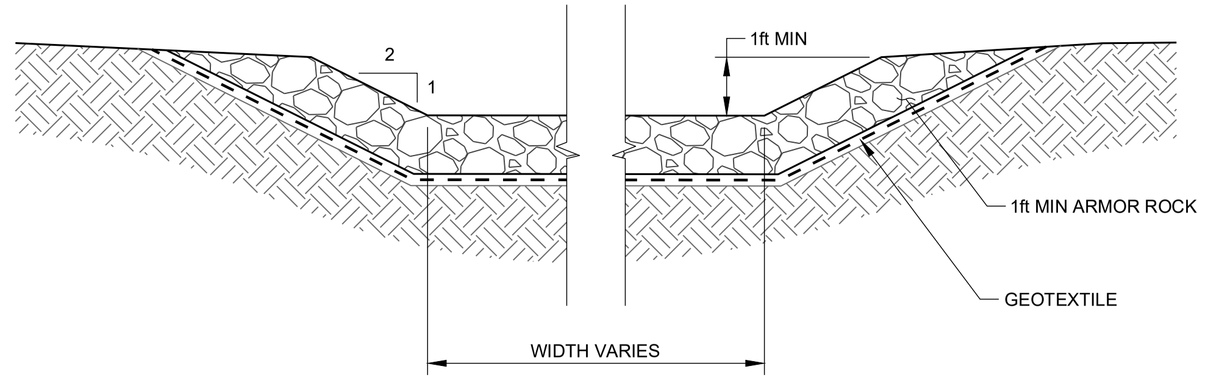
SCALE 1" = 2' — 14 121 — ECOLOGY BLOCK DIVERSION WALL



SCALE 1" = 2' — 16 121 — ARMOR ROCK APRON - TYPICAL PLAN



SCALE 1" = 2' — 15 121 — ECOLOGY BLOCK DIVERSION WALL ARMORED TERMINATION



SCALE 1" = 2' — 17 121 — ARMOR ROCK APRON - TYPICAL SECTION

AS-BUILT

0 2 4
1" = 2' FEET

0 20 40
1" = 20' FEET

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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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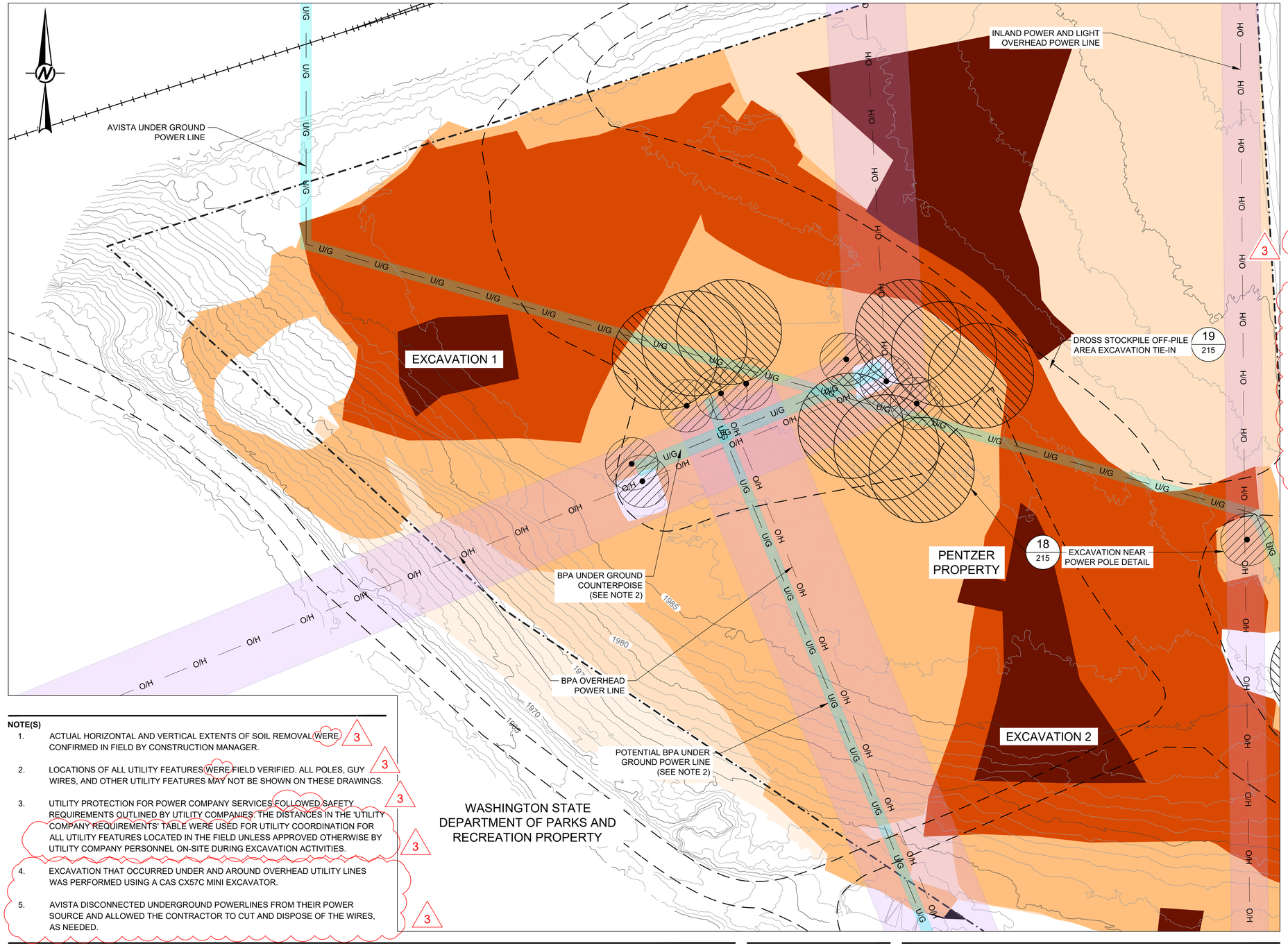
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGY BLOCK DIVERSION WALL SECTION AND DETAIL

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	132

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- UTILITY COORDINATION ZONE - POWER POLE (NOTE 2 AND 3)
- UTILITY COORDINATION ZONE - POWER POLE ANCHOR (NOTE 2 AND 3)
- UTILITY COORDINATION ZONE - OVERHEAD POWER LINE (NOTE 2 AND 3)
- UTILITY COORDINATION ZONE - UNDERGROUND POWER LINE (NOTE 2 AND 3)
- EXCAVATION TO <0.1FT BELOW GRADE (NOTE 1)
- EXCAVATION TO APPROXIMATELY 1FT BELOW GRADE (NOTE 1)
- EXCAVATION TO APPROXIMATELY 1.5FT BELOW GRADE (NOTE 1)
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- EXCAVATION TO APPROXIMATELY 6FT BELOW GRADE (NOTE 1)
- EXCAVATION TO APPROXIMATELY 8FT BELOW GRADE (NOTE 1)

UTILITY COMPANY REQUIREMENTS

UTILITY	UTILITY COORDINATION ZONE
BONNEVILLE POWER ADMINISTRATION (BPA)	
OVERHEAD POWERLINES	SEE NOTE 4
UNDERGROUND POWERLINES	20-FT
POWER POLES	20-FT
POWER POLE ANCHORS	20-FT
UNDERGROUND COUNTERPOISE	20-FT
AVISTA CORPORATION	
OVERHEAD POWERLINES	SEE NOTE 4
UNDERGROUND POWERLINES	SEE NOTE 5
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT
INLAND POWER AND LIGHT COMPANY	
OVERHEAD POWERLINES	SEE NOTE 4
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT

NOTE(S)

1. ACTUAL HORIZONTAL AND VERTICAL EXTENTS OF SOIL REMOVAL WERE CONFIRMED IN FIELD BY CONSTRUCTION MANAGER.
2. LOCATIONS OF ALL UTILITY FEATURES WERE FIELD VERIFIED. ALL POLES, GUY WIRES, AND OTHER UTILITY FEATURES MAY NOT BE SHOWN ON THESE DRAWINGS.
3. UTILITY PROTECTION FOR POWER COMPANY SERVICES FOLLOWED SAFETY REQUIREMENTS OUTLINED BY UTILITY COMPANIES. THE DISTANCES IN THE 'UTILITY COMPANY REQUIREMENTS' TABLE WERE USED FOR UTILITY COORDINATION FOR ALL UTILITY FEATURES LOCATED IN THE FIELD UNLESS APPROVED OTHERWISE BY UTILITY COMPANY PERSONNEL ON-SITE DURING EXCAVATION ACTIVITIES.
4. EXCAVATION THAT OCCURRED UNDER AND AROUND OVERHEAD UTILITY LINES WAS PERFORMED USING A CAS CX57C MINI EXCAVATOR.
5. AVISTA DISCONNECTED UNDERGROUND POWERLINES FROM THEIR POWER SOURCE AND ALLOWED THE CONTRACTOR TO CUT AND DISPOSE OF THE WIRES, AS NEEDED.

AS-BUILT

0 20 40
1" = 20' FEET

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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS SOIL REMOVAL PLAN (1 OF 3)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	200

22 of 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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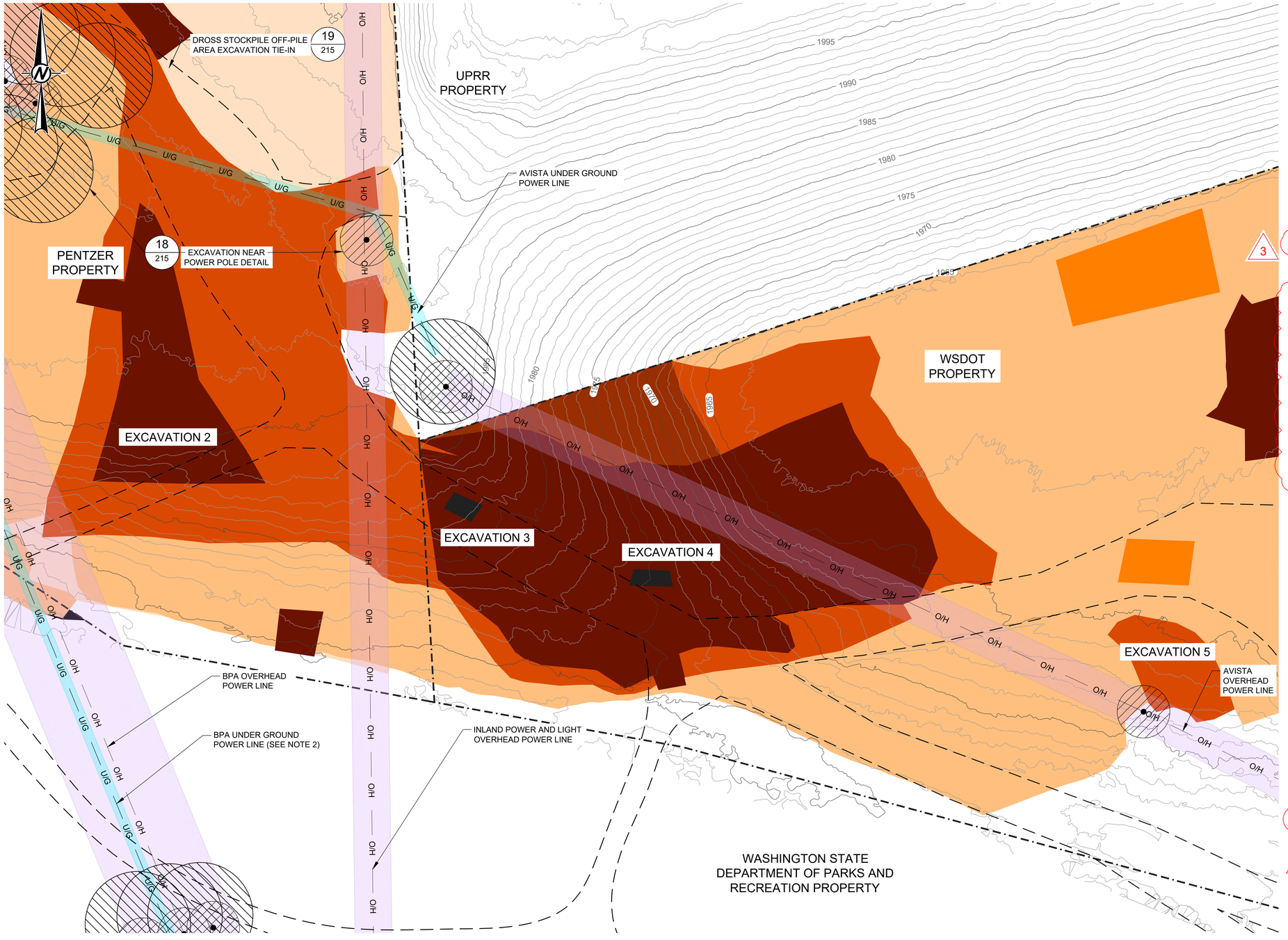

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
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- EXCAVATION TO APPROXIMATELY 6FT BELOW GRADE (NOTE 1)
- EXCAVATION TO APPROXIMATELY 8FT BELOW GRADE (NOTE 1)

3

3

UTILITY COMPANY REQUIREMENTS

UTILITY	UTILITY COORDINATION ZONE
BONNEVILLE POWER ADMINISTRATION (BPA)	
OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
UNDERGROUND POWERLINES	20-FT
POWER POLES	20-FT
POWER POLE ANCHORS	20-FT
UNDERGROUND COUNTERPOISE	20-FT
AVISTA CORPORATION	
OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
UNDERGROUND POWERLINES	SEE NOTE 5 ON SHEET 200
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT
INLAND POWER AND LIGHT COMPANY	
OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT

3

NOTE(S)

1. SEE NOTES 1-5 ON SHEET 200.

3

AS-BUILT

0 20 40
1" = 20' FEET

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS SOIL REMOVAL PLAN (2 OF 3)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	201

23 of 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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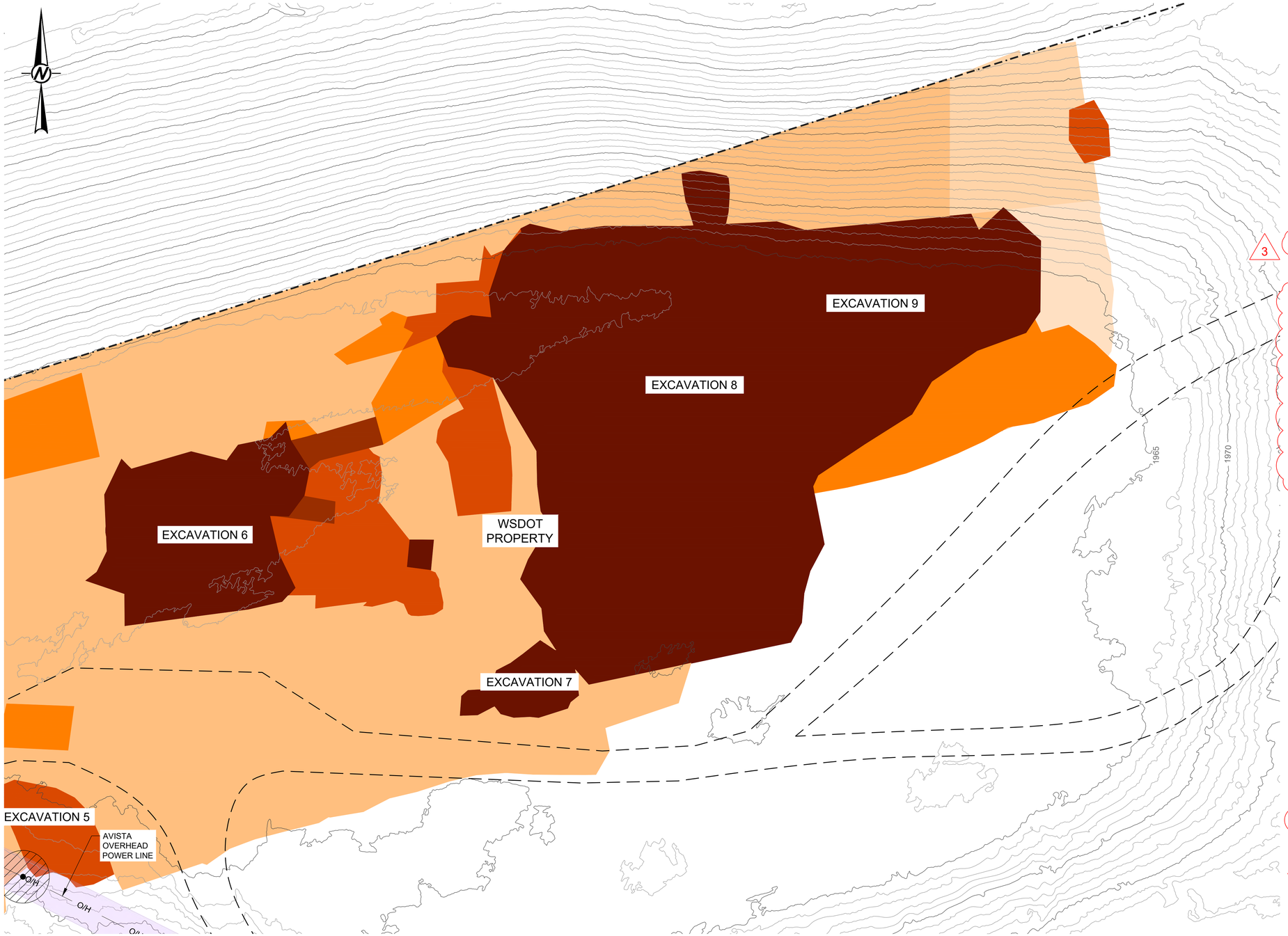

LEGEND

- PROPERTY BOUNDARY
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3

3

UTILITY COMPANY REQUIREMENTS

UTILITY	UTILITY COORDINATION ZONE
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OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
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POWER POLES	20-FT
POWER POLE ANCHORS	20-FT
UNDERGROUND COUNTERPOISE	20-FT
AVISTA CORPORATION	
OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
UNDERGROUND POWERLINES	SEE NOTE 5 ON SHEET 200
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT
INLAND POWER AND LIGHT COMPANY	
OVERHEAD POWERLINES	SEE NOTE 4 ON SHEET 200
POWER POLES	10-FT
POWER POLE ANCHORS	10-FT

3

NOTE(S)

1. SEE NOTES 1-5 ON SHEET 200.

3

AS-BUILT

0 20 40
1" = 20' FEET

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS SOIL REMOVAL PLAN (3 OF 3)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	24 of 39 202

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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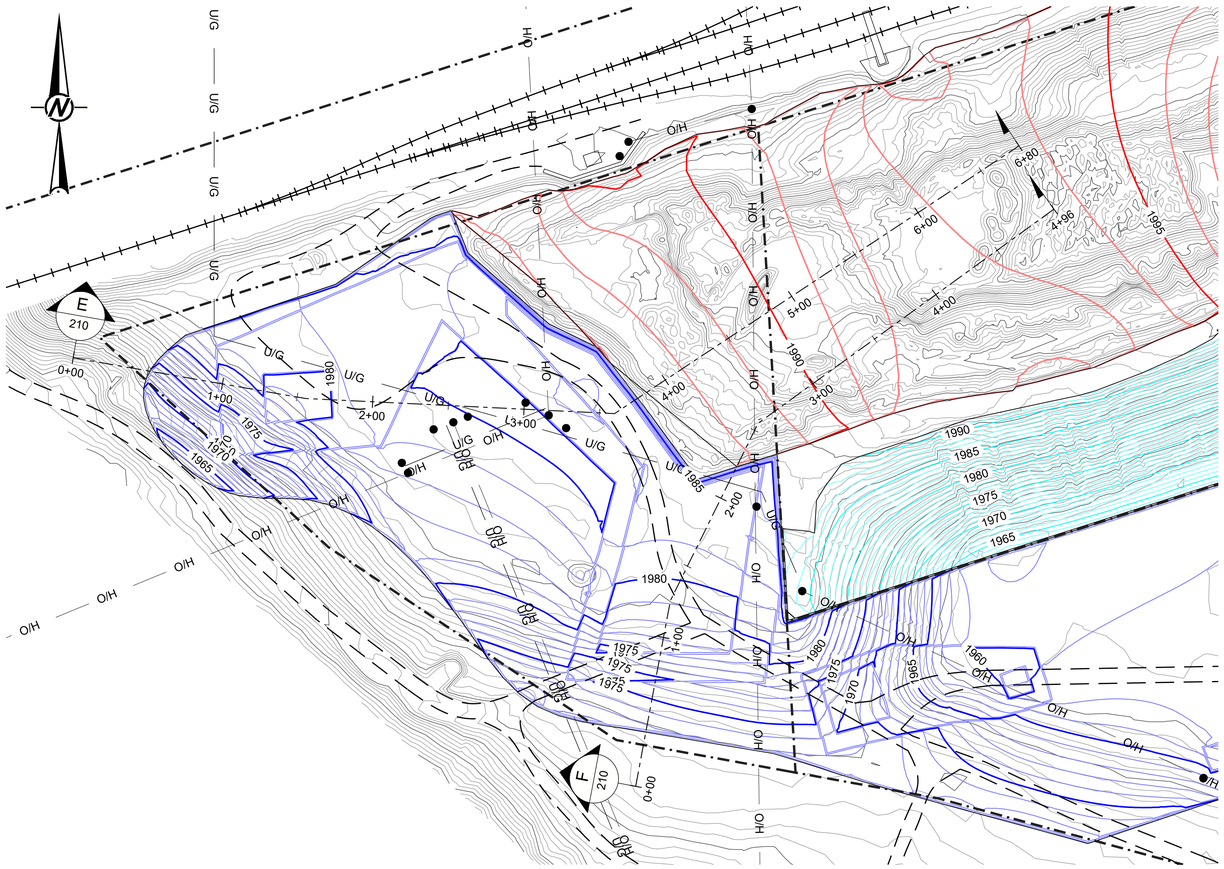
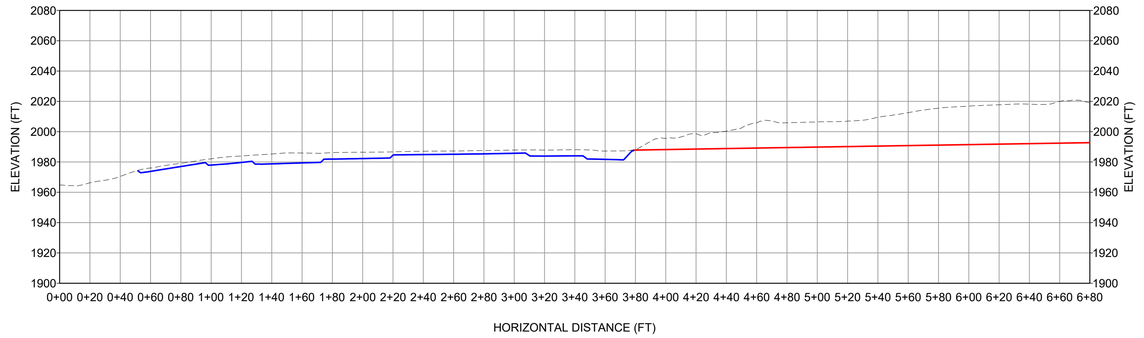
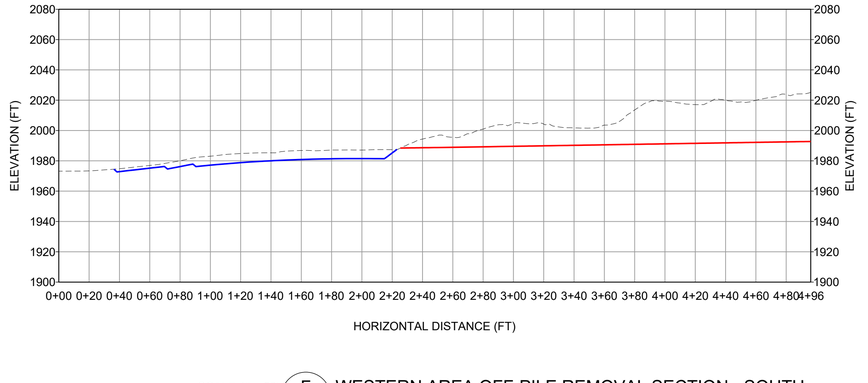




SCALE 1" = 50'
VERT. SCALE 1:1

E 210 WESTERN AREA OFF-PILE REMOVAL SECTION - NORTH



SCALE 1" = 50'
VERT. SCALE 1:1

F 210 WESTERN AREA OFF-PILE REMOVAL SECTION - SOUTH

LEGEND

- EXISTING GROUND SURFACE (MID MOUNTAIN SURVEY 2021)
- DROSS STOCKPILE ASSUMED SUBGRADE SURFACE
- OFF-PILE AREAS ESTIMATED SUBGRADE SURFACE

3

NOTE(S)

1. ACTUAL ELEVATIONS OF STOCKPILE SUBGRADE SURFACE AND OFF-PILE AREA EXCAVATIONS WERE NOT SURVEYED DURING CONSTRUCTION. CONTOURS AND PROFILES SHOWN ON THIS SHEET REPRESENT THE ESTIMATED SUBGRADE SURFACES FROM THE DESIGN.

3

AS-BUILT

0 50 100
1" = 50' FEET

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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
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REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS SOIL REMOVAL SECTIONS (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	28 of 39 — 210

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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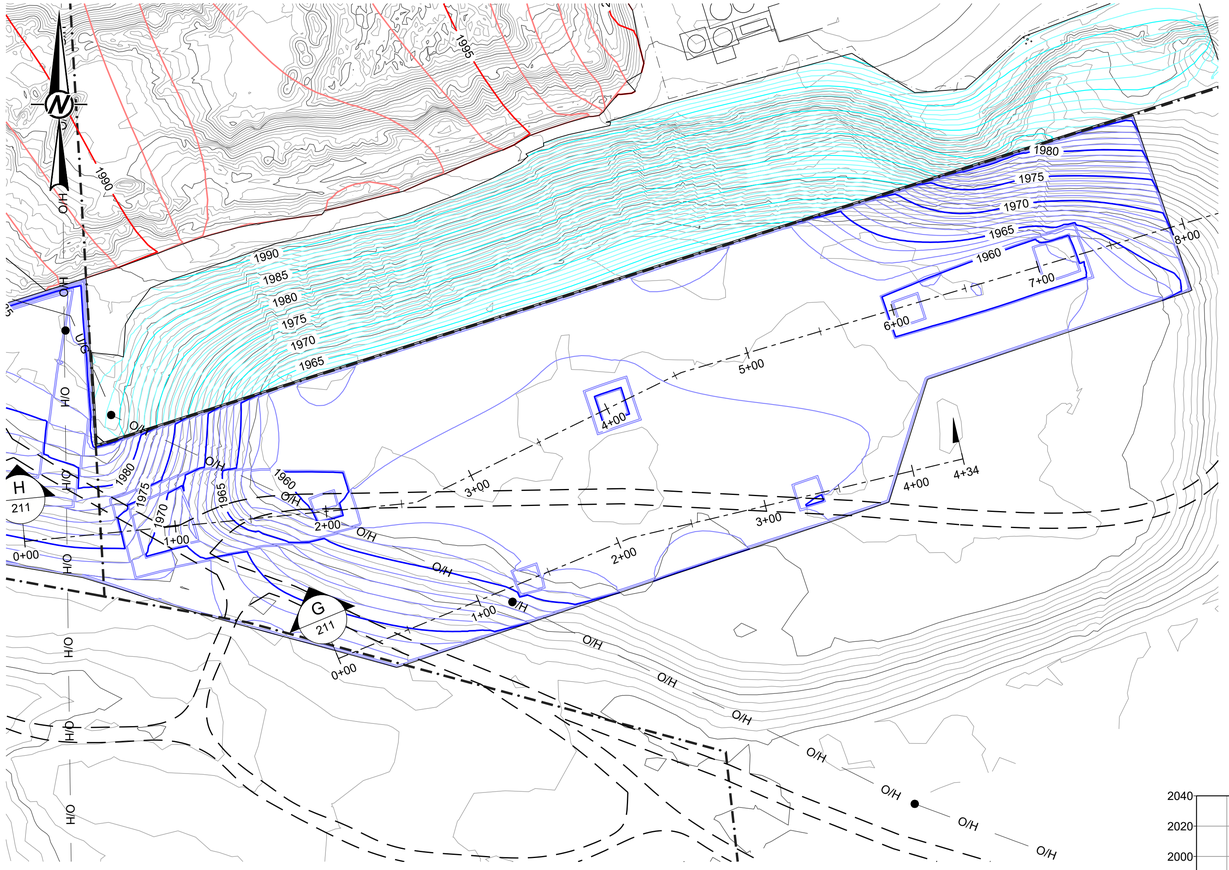
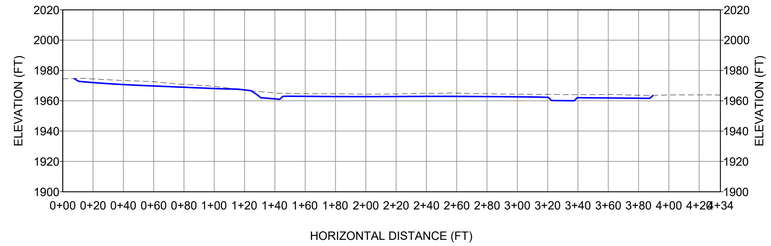
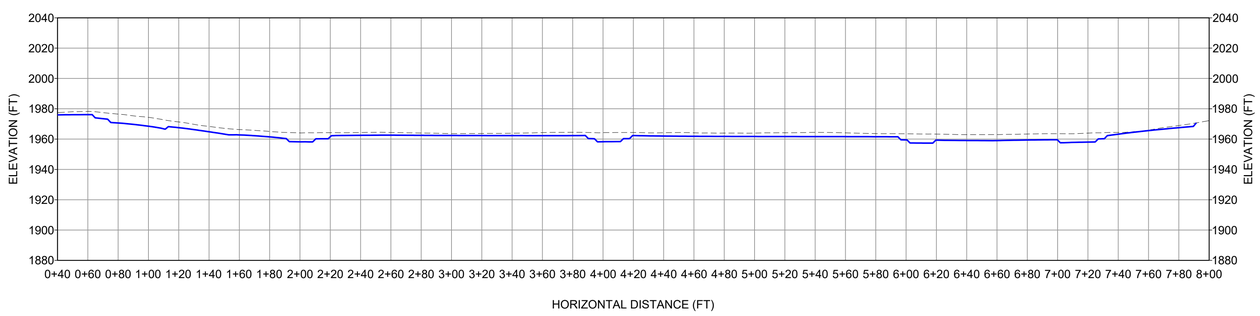




SCALE 1" = 50' / VERT. SCALE 1:1 — G / 211 — SOUTHERN AREA OFF-PILE REMOVAL SECTION - SOUTH



SCALE 1" = 50' / VERT. SCALE 1:1 — H / 211 — SOUTHERN AREA OFF-PILE REMOVAL SECTION - NORTH

LEGEND

- EXISTING GROUND SURFACE (MID MOUNTAIN SURVEY 2021)
- OFF-PILE AREAS ESTIMATED SUBGRADE SURFACE
- EXCAVATION \ FILL FOR CAP SUBGRADE

3

NOTE(S)

1. ACTUAL ELEVATIONS OF STOCKPILE SUBGRADE SURFACE AND OFF-PILE AREA EXCAVATIONS WERE NOT SURVEYED DURING CONSTRUCTION. CONTOURS AND PROFILES SHOWN ON THIS SHEET REPRESENT THE ESTIMATED SUBGRADE SURFACES FROM THE DESIGN.

3

AS-BUILT

0 50 100
1" = 50' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

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9/28/23

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

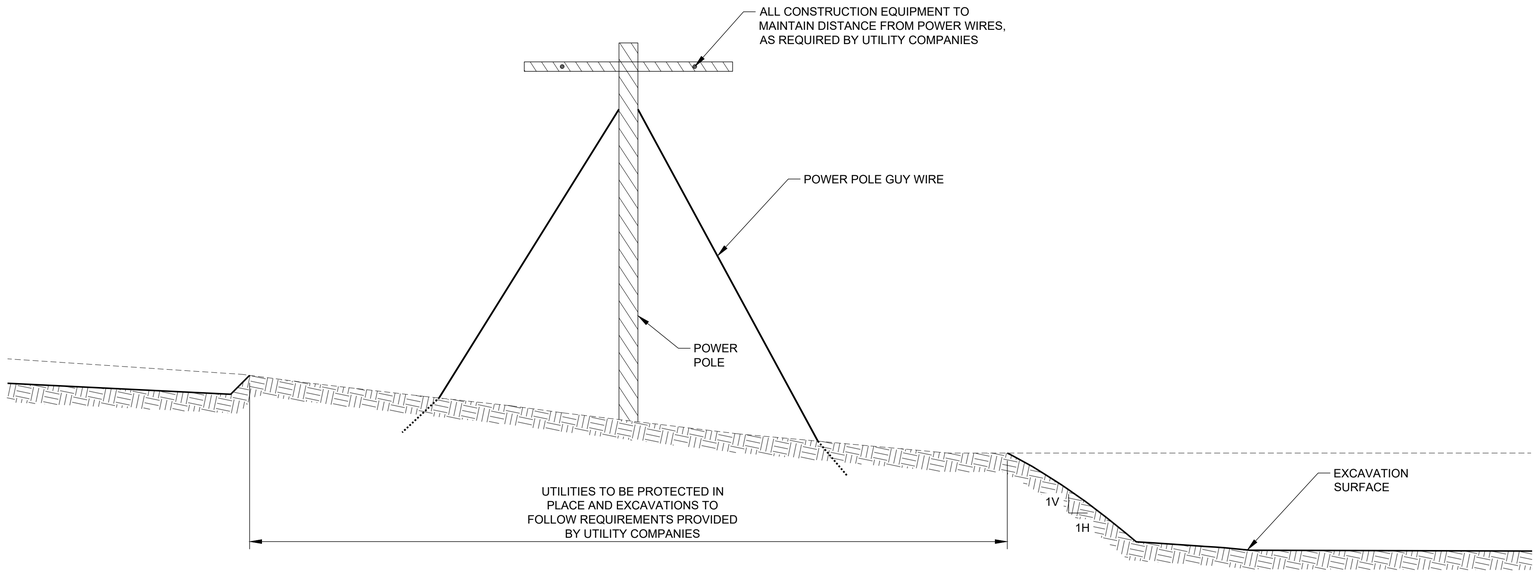
TITLE
OFF-PILE AREAS SOIL REMOVAL SECTIONS (2 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	29 of 39 / 211

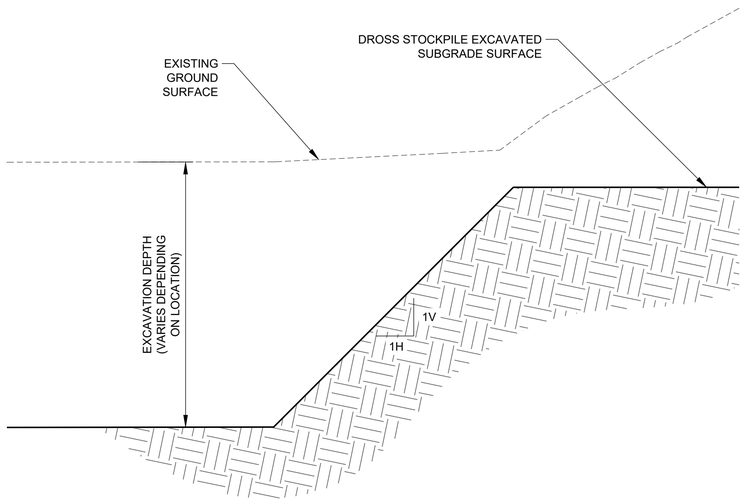
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in

Path: \\golder.gds\complexdata\office\Redmond\geomatics\UnionPacificRailroad\Trentwood\WA99_PROJECTS\19119180\1000B\02_PRODUCTION\DWG\ | File Name: 19119180_1000B_012.dwg | Last Edited By: kdapolito Date: 2023-09-25 Time:1:55:08 PM | Printed By: KDaPolito Date: 2023-09-28 Time:3:28:37 PM



SCALE 1" = 4' 18 - EXCAVATION NEAR POWER POLE



SCALE 1" = 2' 19 - DROSS STOCKPILE OFF-PILE AREA EXCAVATION TIE-IN

AS-BUILT

0 2 4
1" = 2' FEET

0 4 8
1" = 4' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

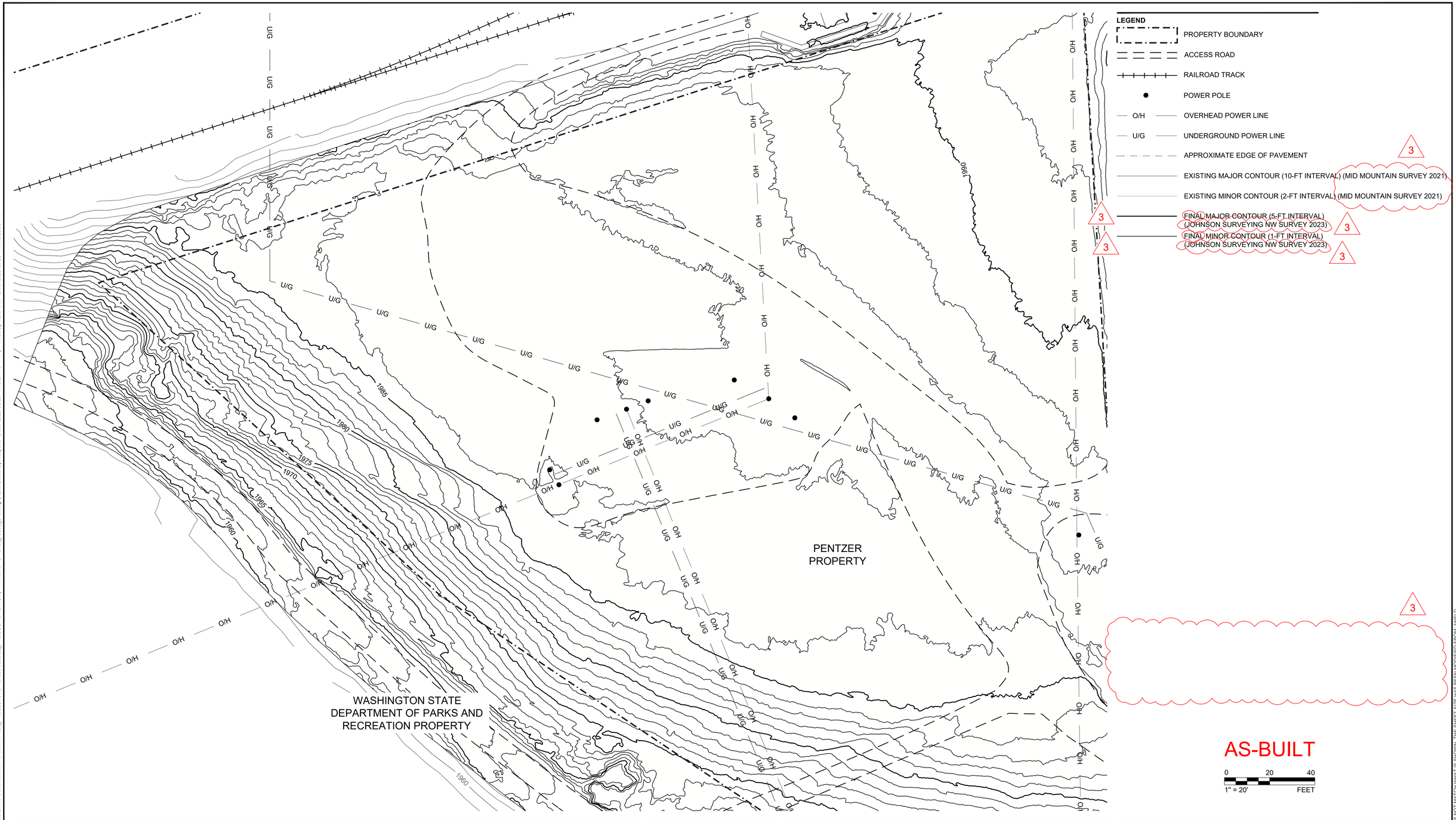
TITLE
OFF-PILE AREAS SOIL REMOVAL DETAILS

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	215

30 of 39

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in



AS-BUILT

0 20 40
1" = 20' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
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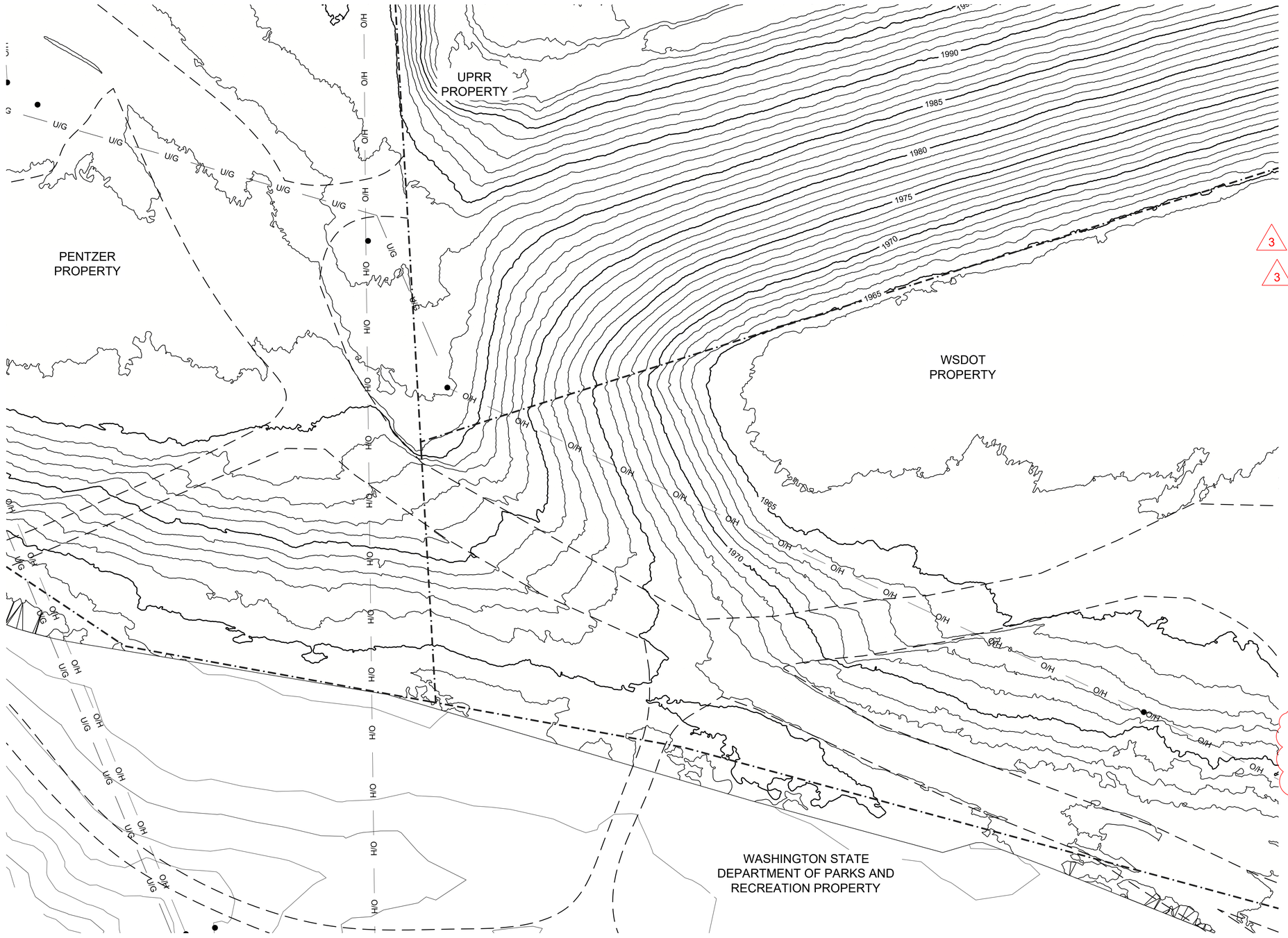
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS FINAL GRADING PLAN (1 OF 3)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	31 of 39 220

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- FINAL MAJOR CONTOUR (5-FT INTERVAL) (JOHNSON SURVEYING NW SURVEY 2023)
- FINAL MINOR CONTOUR (1-FT INTERVAL) (JOHNSON SURVEYING NW SURVEY 2023)

3

AS-BUILT

0 20 40
1" = 20' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
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REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS FINAL GRADING PLAN (2 OF 3)

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	32 of 39	221

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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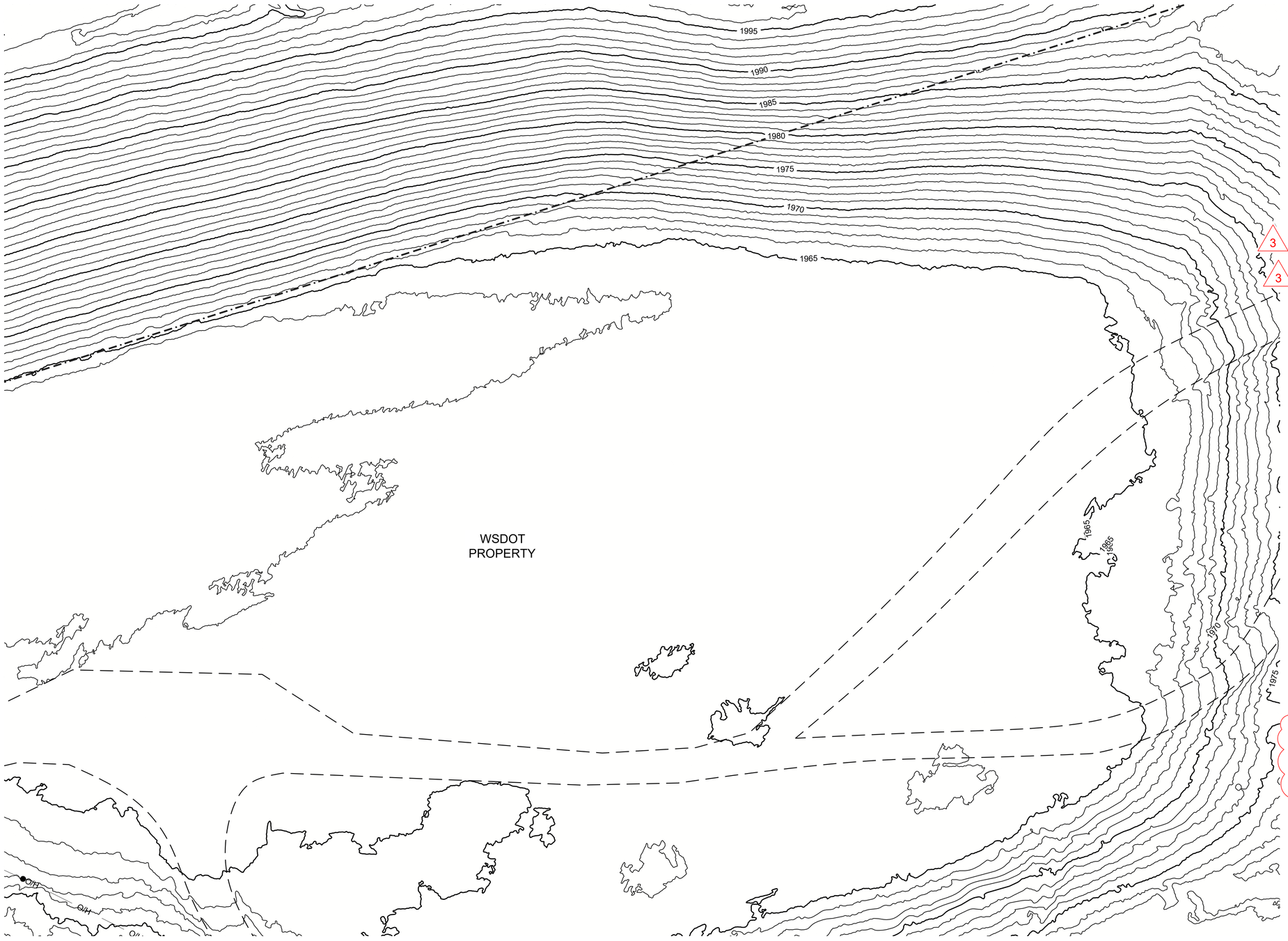

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (10-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- EXISTING MINOR CONTOUR (2-FT INTERVAL) (MID MOUNTAIN SURVEY 2021)
- FINAL MAJOR CONTOUR (5-FT INTERVAL) (JOHNSON SURVEYING NW SURVEY 2023)
- FINAL MINOR CONTOUR (1-FT INTERVAL) (JOHNSON SURVEYING NW SURVEY 2023)

3

AS-BUILT

0 20 40
1" = 20'
FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
OFF-PILE AREAS FINAL GRADING PLAN (3 OF 3)

PROJECT NO.	PHASE	REV.	33 of 39	SHEET
19119180	1000B	3		222

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

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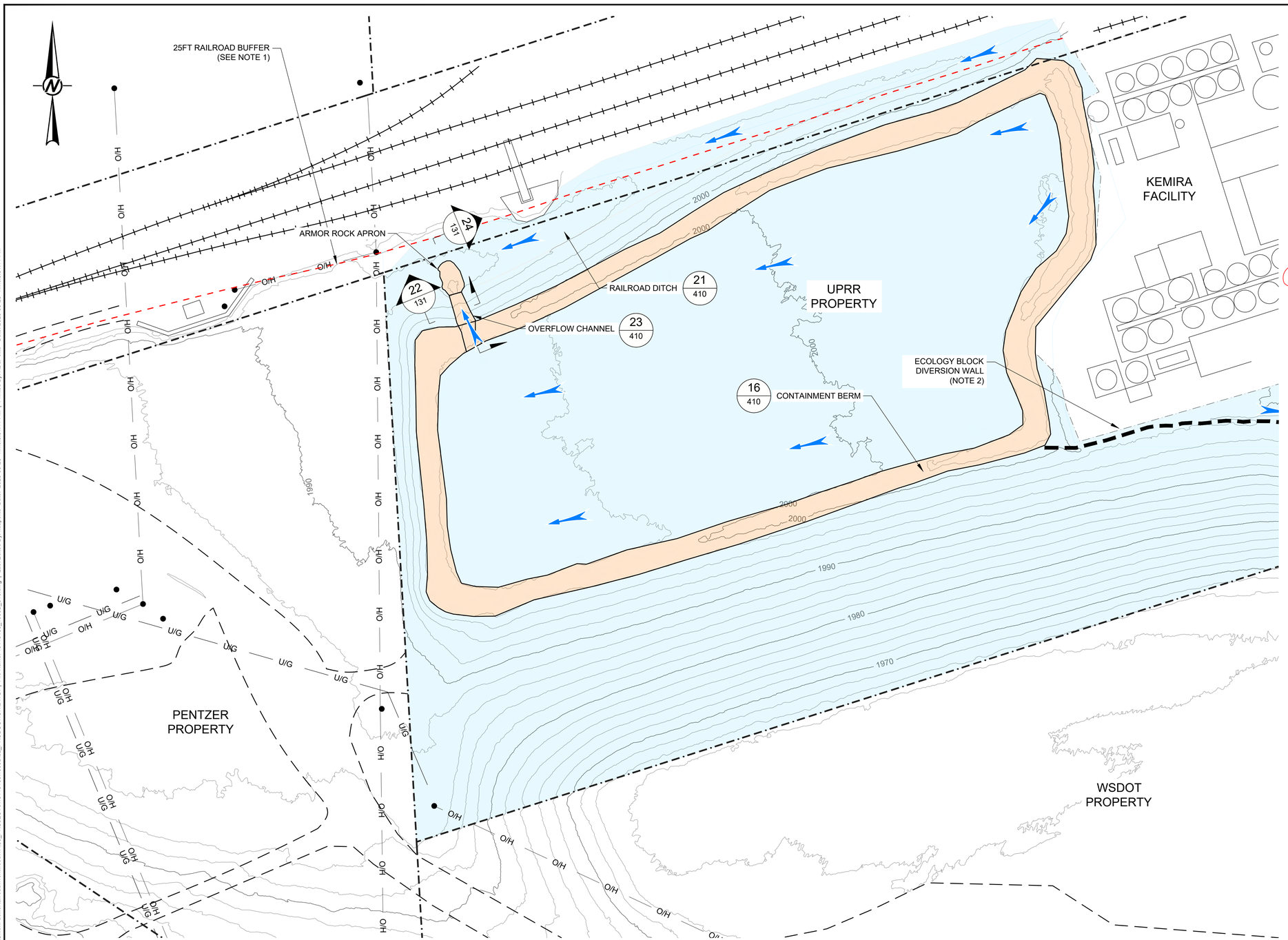

LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- GRAVEL COVER
- ARMOR ROCK COVER
- ECOLOGY BLOCK DIVERSION WALL
- 3
- FLOW DIRECTION

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. SURFACE WATER RUNOFF IS NOT ALLOWED TO FLOW ONTO ECOLOGICAL CAP AREA.

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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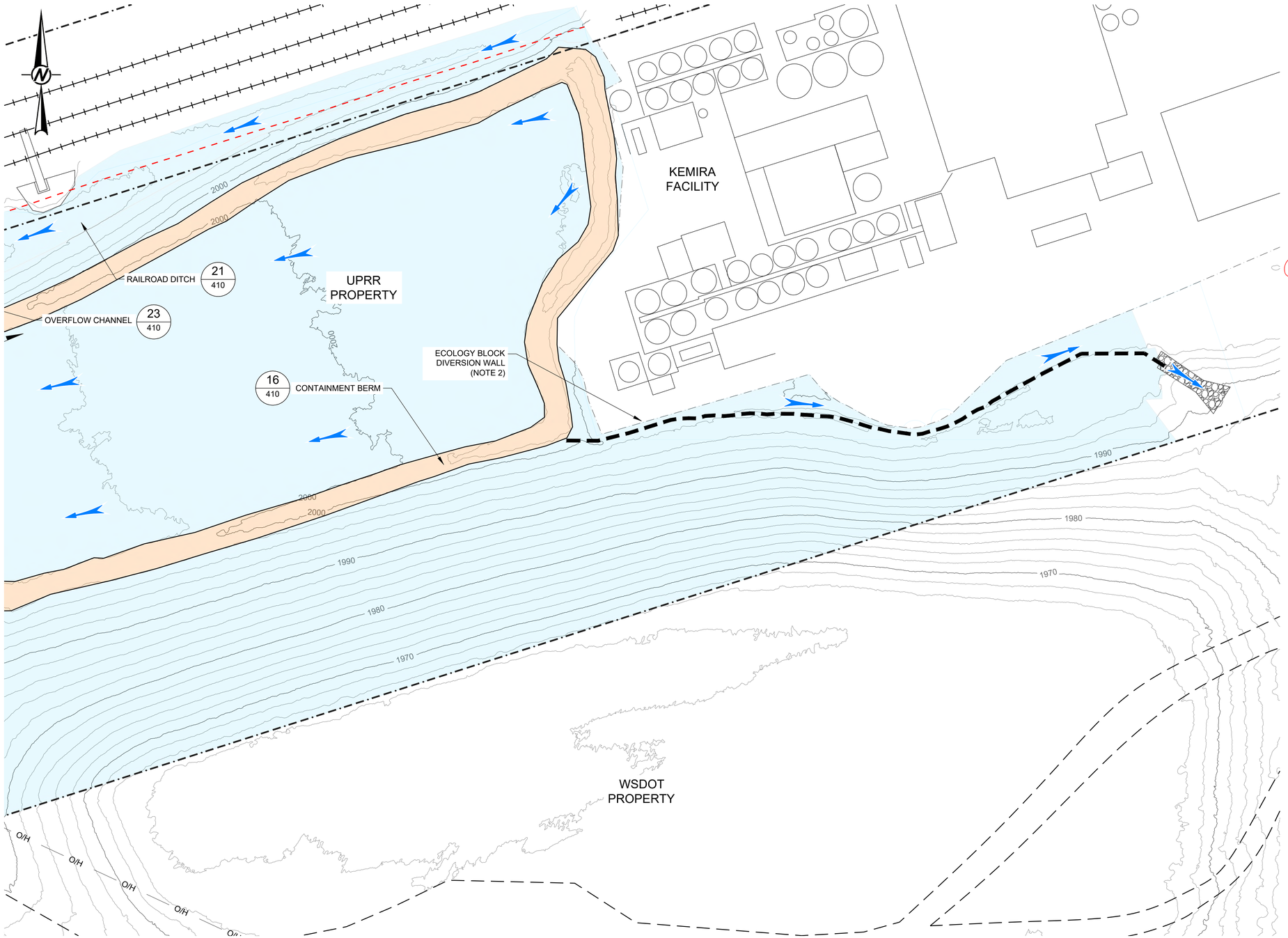
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SURFACE WATER MANAGEMENT PLAN (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	34 of 39 — 400

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. SURFACE WATER RUNOFF IS NOT ALLOWED TO FLOW ONTO ECOLOGICAL CAP AREA.

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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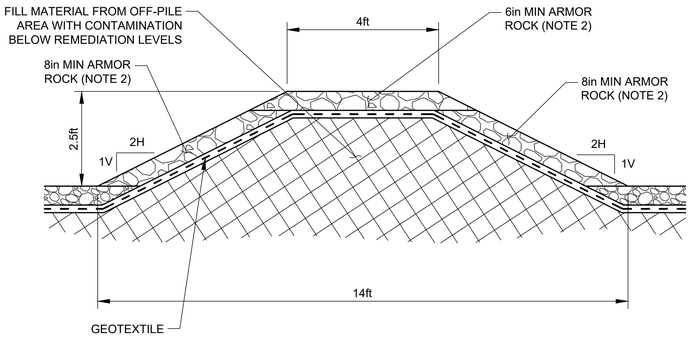
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

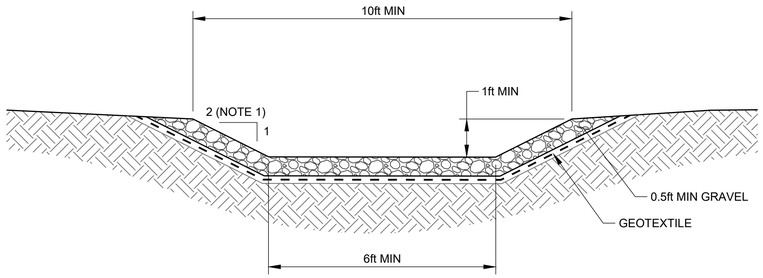
TITLE
SURFACE WATER MANAGEMENT PLAN (2 OF 2)

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	35 of 39	401

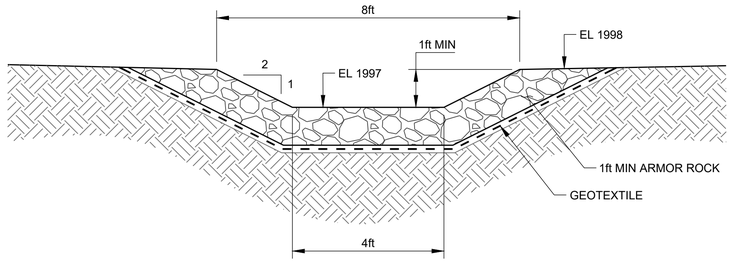
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



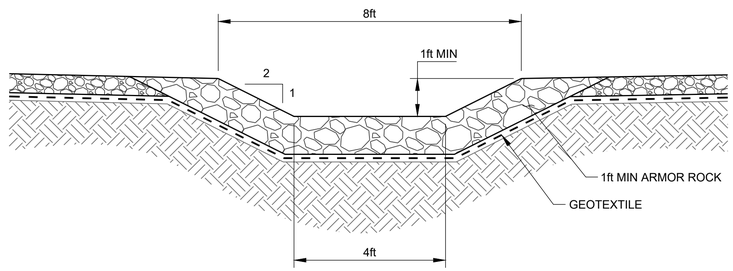
SCALE 1" = 2' 16 - CONTAINMENT BERM



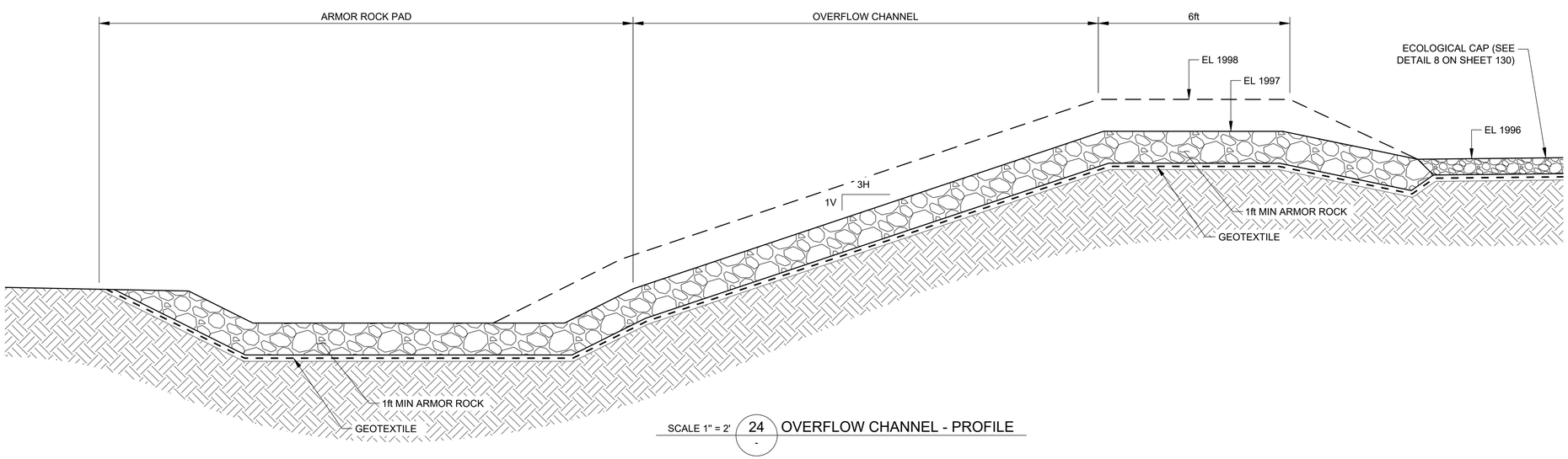
SCALE 1" = 2' 21 - RAILROAD DITCH



SCALE 1" = 2' 22 - OVERFLOW OUTLET



SCALE 1" = 2' 23 - OVERFLOW CHANNEL - SECTION



SCALE 1" = 2' 24 - OVERFLOW CHANNEL - PROFILE

NOTE(S)

1. OR LESS STEEP.
2. ARMOR ROCK FOR THIS FOR THIS APPLICATION SHALL CONSIST OF 2- TO 4-INCH QUARRY SPALLS.

AS-BUILT

0 2 4
1" = 2' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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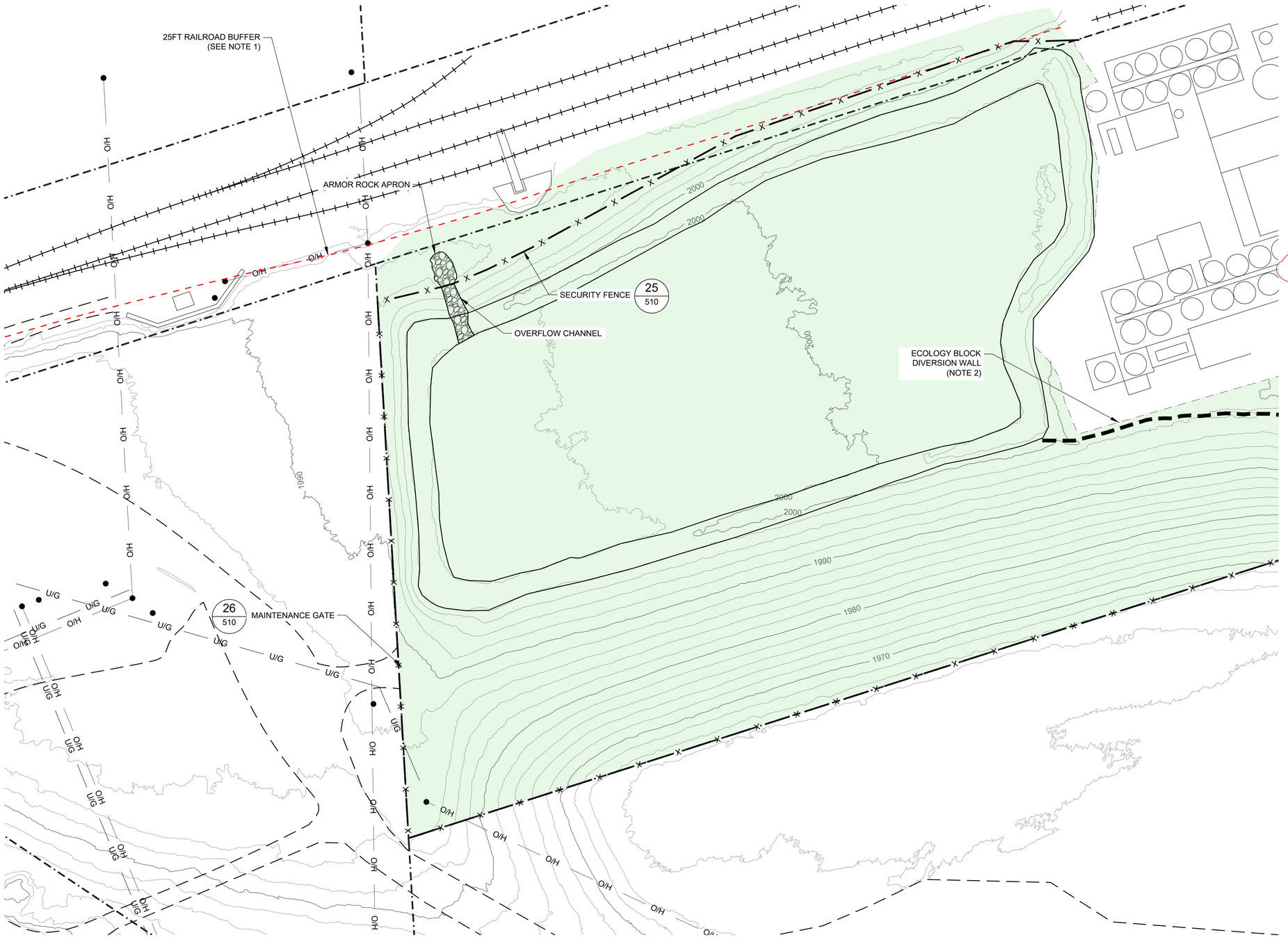
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
SURFACE WATER MANAGEMENT DETAILS

PROJECT NO.	PHASE	REV.	36 of 39	SHEET
19119180	1000B	3		410

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- ECOLOGICAL CAP
- ECOLOGY BLOCK DIVERSION WALL
- X — SECURITY FENCE

3
3

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. SURFACE WATER RUNOFF IS NOT ALLOWED TO FLOW ONTO ECOLOGICAL CAP AREA.

AS-BUILT

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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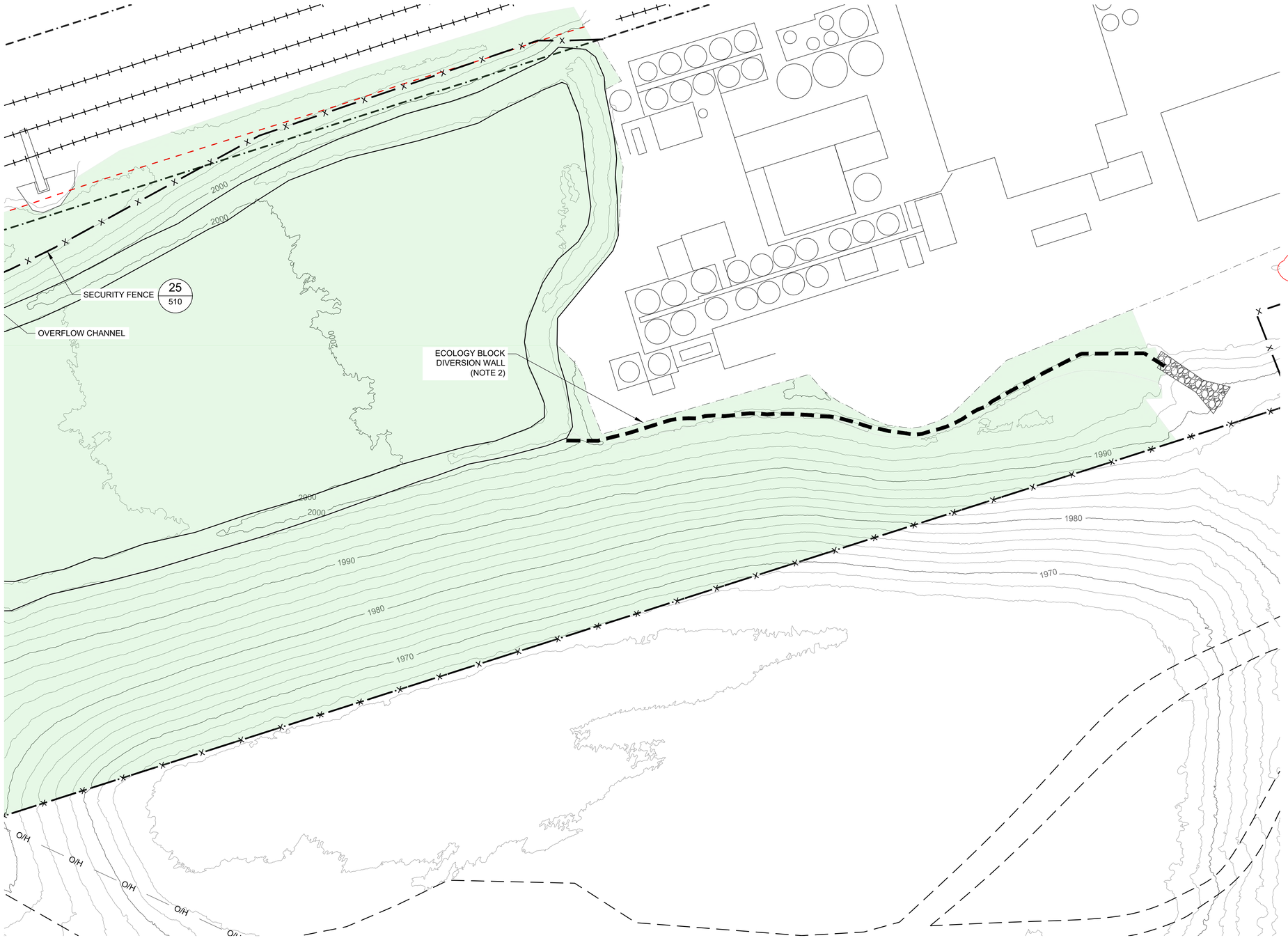
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
FENCING PLAN (1 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	3	37 of 39 / 500

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI D

0 1in



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- ECOLOGICAL CAP
- ECOLOGY BLOCK DIVERSION WALL
- X — SECURITY FENCE

NOTE(S)

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AS-BUILT

0 30 60
1" = 30'
FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

VANESSA M. NANCARROW
STATE OF WASHINGTON
47008
REGISTERED
PROFESSIONAL ENGINEER

9/28/23

CLIENT
UNION PACIFIC RAILROAD CO.

CONSULTANT

REDMOND
18300 NE UNION HILL RD, SUITE 200
REDMOND, WA
USA
[+1] (425) 883 0777
www.golder.com

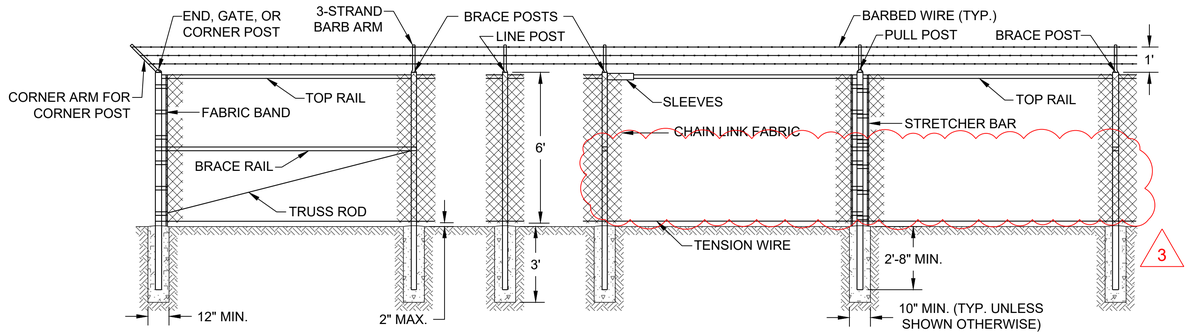
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
FENCING PLAN (2 OF 2)

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	38 of 39	501

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D

0 1 in



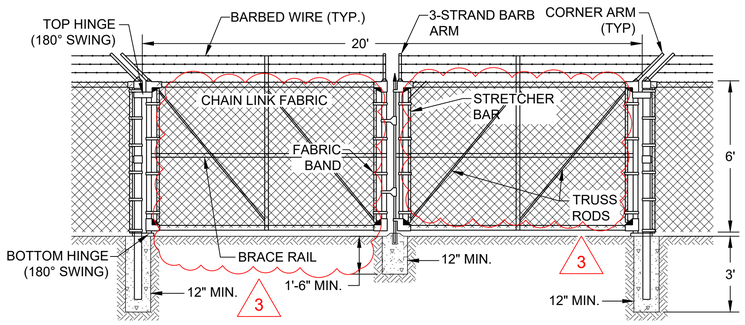
SCALE N.T.S. 25 - SECURITY FENCE TYPICAL DETAIL

NOTES:

1. ALL POSTS SHALL BE SPACED AT 10' MAXIMUM INTERVALS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
2. TENSION WIRES SHALL BE PLACED WITHIN THE LIMITS OF THE FIRST FULL FABRIC WEAVE.
3. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.
4. BARB ARMS SHALL BE INCLINED AT APPROXIMATELY 45° FROM VERTICAL TOWARD THE OUTSIDE OF THE ENCLOSED AREA.

SECURITY FENCE POST AND RAIL SCHEDULE

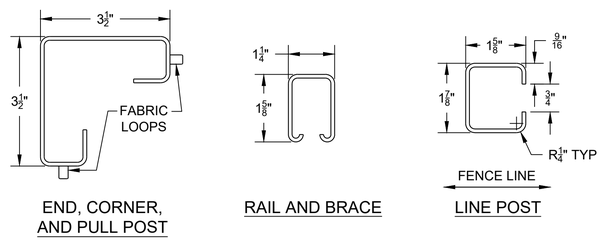
		BRACE RAIL & TOP RAIL	LINE POST & BRACE POST	END, CORNER, & PULL POST	GATE POST
ROUND	I.D. PIPE (IN)	$1\frac{1}{4}$	2	$2\frac{1}{2}$	$3\frac{1}{2}$
	WEIGHT (LB/FT)	2.27	3.65	5.79	9.1
H-COLUMN	SIZE (IN)	$1\frac{1}{4} \times 1\frac{5}{8}$	$2\frac{1}{4}$	N/A	N/A
	WEIGHT (LB/FT)	1.35	4.0	N/A	N/A
ROLL FORMED	SIZE (IN)	$1\frac{5}{8} \times 1\frac{1}{4}$	$1\frac{5}{8} \times 1\frac{5}{8}$	$3\frac{1}{2} \times 3\frac{1}{2}$	N/A
SEE DETL 22/510	WEIGHT (LB/FT)	1.35	2.34	5.14	N/A



SCALE N.T.S. 26 - MAINTENANCE GATE

NOTES:

1. BARBED WIRE SHALL BE DISCONTINUED BETWEEN GATE FRAME AND GATE POST.
2. BARB ARMS SHALL BE INCLINED AT APPROXIMATELY 45° FROM VERTICAL TOWARD THE OUTSIDE OF THE ENCLOSED AREA.



SCALE N.T.S. 27 - ROLL-FORMED SECTIONS FOR SECURITY FENCE

AS-BUILT

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
3	2023-09-28	AS-BUILT	VMN	REDMOND	FSS	TJN
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1	2022-10-12	GRADING PERMIT	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

VANESSA M. NANGARROW — STATE OF WASHINGTON — 47008 — REGISTERED PROFESSIONAL ENGINEER

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TITLE
FENCING DETAILS

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	3	39 of 39	510

APPENDIX D

Engineering Design Changes

GOLDER
MEMBER OF WSP

ENGINEERING CHANGE NOTICE

Date: 10/14/2022	**ECN No.:** **001**
Project: Aluminum Recycling Trentwood Site – Dross Removal Project	**Project No.:** 19119180
Engineering Change Notice Name: Truck Wash System Alternative	**Contract No.:**

Project Feature: Stabilized Construction Entrance/Exit with Corrugated Steel Plates and Sediment Pond

Affected Documents: Specs on Drawing 021, Erosion and Sediment Control, Section D and Drawings 060 and 061 – Truck Wash Station callout and Construction Entrance Detail

Description of Change: Rather than a truck wash station, GrayMar requests to use a stabilized construction entrance/exit with corrugated steel plates and a sediment trapping device, per the attached document provided by GrayMar that describes the proposed alternative approach. Additional as-built information (as of 10/11/2022) was also provided by GrayMar (see attached). This would be supplemented with street sweeping at the end of each day at a minimum, and more frequently if necessary to minimize track-out of sediment onto Sullivan Road.

This alternative approach is acceptable for the justification reasons provided below, provided that the following conditions are met:

1) Provide two 300-gallon tanks of water with the ability to pressurize in the event that a truck washing option is needed. Provide spray wands, nozzles, and other ancillary equipment as required.

2) UPRR is concerned about the potential need (and associated cost) of more street sweeping if the alternative system is less effective than the truck wash. To address UPRR's concerns of additional associated costs from the alternative system, GrayMar has agreed to cap the total cost of sweeping, if necessary, at the proposed quantity in the bid (i.e., if more than 240 hours is required to sweep Sullivan Road, GrayMar will not invoice for any additional hours over 240 hours.

Justification for Change: Per the attached document, rather than a truck wash station, GrayMar requests to use a stabilized construction entrance/exit with corrugated steel plates for the following reasons:

1) The proposed time frame for project activities will progress into the winter months of 2022/2023. The wheel wash systems use a considerable amount of water presenting freezing issues with the wheel wash equipment components as well as potential ice buildup (on the track out egress and surrounding area) after the wheel wash system which can cause potentially dangerous conditions to the on-site personnel, visitors, contractors and public. GrayMar believes in providing the most economical and safe approach to every project we are involved with. The BMP C105 Stabilized Construction Entrance/Exit is in their opinion the safest approach to track out concerns with the project referenced above.

2) The manufactured wheel wash systems called out in the general notes of the specifications are very specialized and do not have replacement parts readily available in the event of a system shutdown or breakdown. In addition, since these systems are so specialized, certified mechanics trained on these systems also have limited availability to make any necessary modifications, adjustments and repairs. The specified manufactured wash systems have a significant potential to negatively impact project scheduled timelines, productivity and performance. One of the systems detailed in the General Notes of the specifications, "Neptune Automated System", is no longer manufactured, therefore leaving the Moby Dick custom-built system as one of the few limited options.

3) In accordance with WADOT SWMM Volume II equivalent: BMP C106 Wheel Wash (Per WSDOT Chapter 5 Section 5-1.1.44 Page 5-66 as well as EPA-832-F-21028FF, Dec 2021 "Construction Track-out Controls", the wheel wash station is only required if the stabilized entrance/exit means and methods prove to be ineffective. GrayMar offers the system shown on the attached document that upon implementation they consider sufficient to prevent excessive track out from the site. GrayMar will utilize

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ENGINEERING CHANGE NOTICE

BMP C105 Stabilized Construction Entrance/Exit design referenced in the Washington State DOT Temporary Erosion and Sediment Control Manual to implement this alternative.

☐ Significant Design Change – Regulatory approval of this ECN is required prior to construction

☑ Non-significant Design Change – No regulatory approval is required

Prepared by: Vanessa Nancarrow

Approvals:

Golder Design Engineer:	Vanessa Nancarrow	Date:	10/14/2022
Golder Project Manager:		Date:	10/14/2022
Golder Construction Manager:	Lester O. Rubstello	Date:	10/14/2022
UPRR Project Manager:	John DeJong	Date:	10-17-22
Ecology Project Manager:	N/A	Date:	N/A

Distribution:

☑	John DeJong	UPRR PM	☑	Michael Gray	GrayMar
☑	Ted Norton	Golder PM	☑	Kelly Ottmar	GrayMar
☑	Lester Rubstello	Golder CM			
☑	Vanessa Nancarrow	Golder Design Engineer			
☑	Frank Shuri	Golder Design Engineer			

LEGEND

- Truck Route (Proposed)
- Truck Traffic Direction
- Rumble/Shaker Plates (12' W x 14' L (3) Each
- Trackout Armor Rock 4"- 8" in Diameter, 12" deep
  Geofabric to be used under trackout
- Sediment Trapping Device and run off path for washing if required. to include pump and 275 gal totes. Ponding contained within rock for ease of vacuum recovery

GRAYMAR ENVIRONMENTAL

Name: VEHICLE TRACKOUT/TRUCK WASH MODIFICATION	Drawing: 801506	Project: 0000416	Drawn: Steve Sitton	Notes:	GRAYMAR ENVIRONMENTAL 601 S PIONEER WAY STE F #218 MOSES LAKE, WA 98837
Cat:	Scale: NOT TO SCALE	Date: 10/11/2022	Rev: 5		

September 28, 2022

Memo To: Ted Norton

From: Michael S. Gray

Re: Stabilized Truck Entrance per WA State DOT Temporary Erosion and Sediment Requirements

The intent of this communication is to request an alternative approach using a Vehicle Track-Out Pad Design in lieu of the truck wash system listed in the General Notes and Specification (2 of 2) Section D. The proposed Vehicle Track-Out Pad design is in accordance with Best Management Practices as provided in the Washington State Temporary Erosion and Sediment Control Manual M 3109.02 2019 with reference to BMP C105 Stabilized Construction Entrance/Exit (See Attached Section 5-1.1.34 Pages 5-49 and 5-50). The GrayMar management team has safely and successfully performed hundreds of large excavation projects requiring high volumes of truck transportation and offers this proven alternative means and methods in accordance with WA stated BMP's.

GrayMar understands the importance of following specifications for this project and offers this alternative approach for the following reasons:

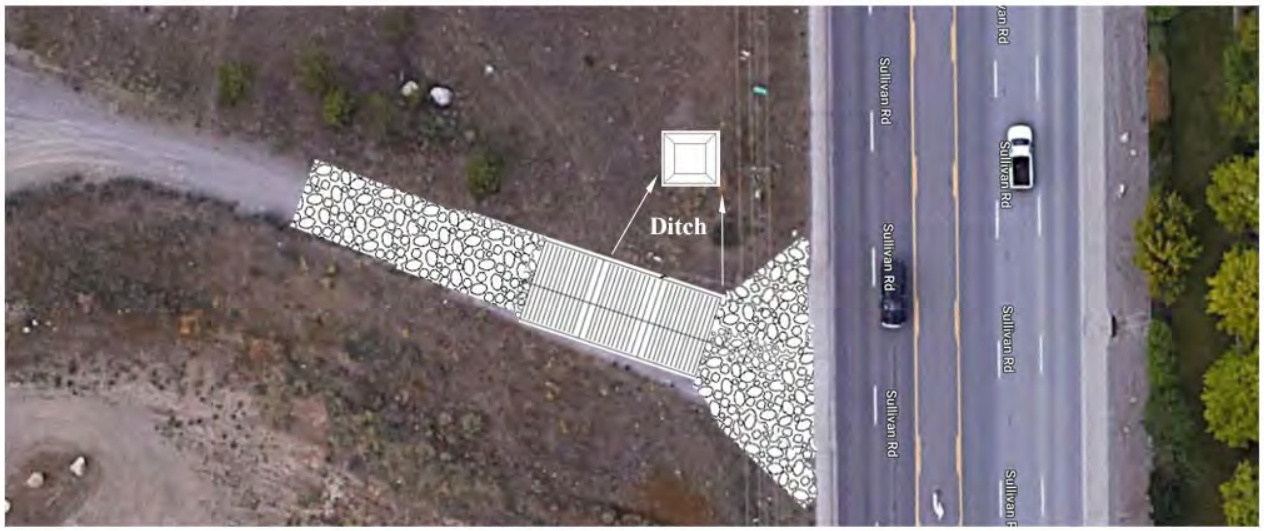
1. The proposed time frame for project activities will progress into the winter months of 2022/2023. The wheel wash systems use a considerable amount of water presenting freezing issues with the wheel wash equipment components as well as potential ice buildup (on the track out egress and surrounding area) after the wheel wash system which can cause potentially dangerous conditions to the on-site personnel, visitors, contractors and public. GrayMar believes in providing the most economical and safe approach to every project we are involved with. The BMP C105 Stabilized Construction Entrance/Exit is in our opinion the safest approach to track out concerns with the project referenced above.

2. The manufactured wheel wash systems called out in the general notes of the specifications are very specialized and do not have replacement parts readily available in the event of a system shutdown or breakdown. In addition, since these systems are so specialized, certified mechanics trained on these systems also have limited availability to make any necessary modifications, adjustments and repairs. The specified manufactured wash systems have a significant potential to negatively impact project scheduled timelines, productivity and performance. Please note that one of the systems detailed in the General Notes of the specifications "Neptune Automated System" is no longer manufactured therefore leaving the Moby Dick custom-built system as one of the few limited options.

3. In accordance with WADOT **SWMM Volume II equivalent: BMP C106 Wheel Wash (Per WSDOT Chapter 5 Section 5-1.1.44 Page 5-66- (See Attached Appendix A) as well as EPA-832-F-21028FF, Dec**

2021 "Construction Track-out Controls" (See attached Appendix B), the wheel wash station is only required if the stabilized entrance/exit means, and methods prove to be ineffective.

GrayMar offers the following controls that upon implementation will be more than sufficient to prevent excessive track out from the site. GrayMar will utilize BMP C105 Stabilized Construction Entrance/Exit design referenced in the Washington State DOT Temporary Erosion and Sediment Control Manual in accordance with the following details (See Figure 1):

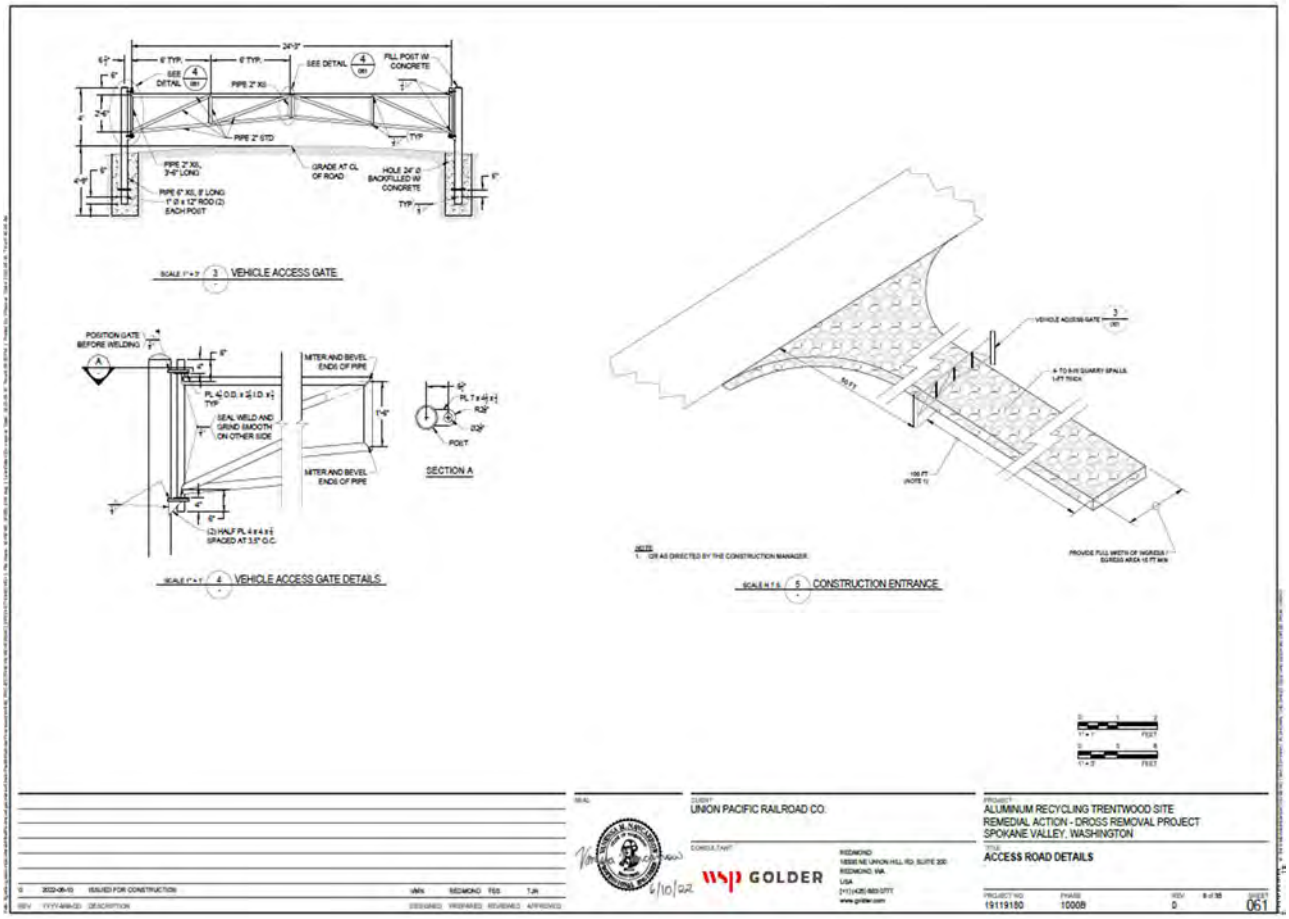


Traditional Steel Track Out Plates.

Track Out Plates (shaker plates, rumble plates, rumble grates)-- Traditional Design

8' x 10' Steel Plate based units.

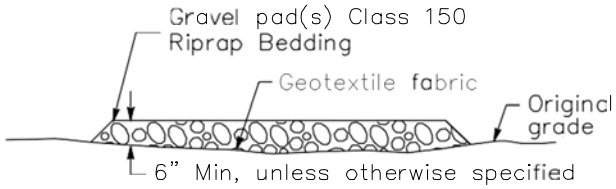
2" x ¼" Angle Iron



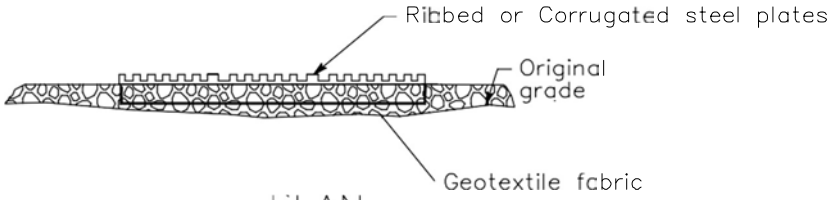
SWMM Volume II equivalent: BMP C105 Stabilized Construction Entrance/Exit (Per WSDOT Chapter 5 Section 5-1.1.34 Page 5-49)

Stabilized construction entrances are used to stabilize entrance and exit areas to reduce the amount of sediment track-out onto roadways that may generate a turbid discharge. Paved areas and steel rumble plates can be used in conjunction with this BMP. Care must be used when placing rumble plates because they are impervious and fill with sediment (i.e., can create a turbid discharge if placed adjacent to drainage areas). Manage construction traffic with signage or fencing to minimize track-out locations and unintended exit points (e.g., restrict use of access points for exit or entrance only). Limit planned access points. Include extra materials in the contract for large projects or projects with a lot of grading and hauling activity to maintain the entrance/exit areas. Source control (preventing track-out) is the goal, because relying on street sweeping is not a substitute for a stabilized construction entrance. If sediment is tracked offsite, street sweeping is required at a minimum at the end of each day, and more frequently if necessary to prevent turbid discharges.

Figure "1" Specifications for Entrance/Exit Using 3"- 6" Washed Rock with Corrugated Plates

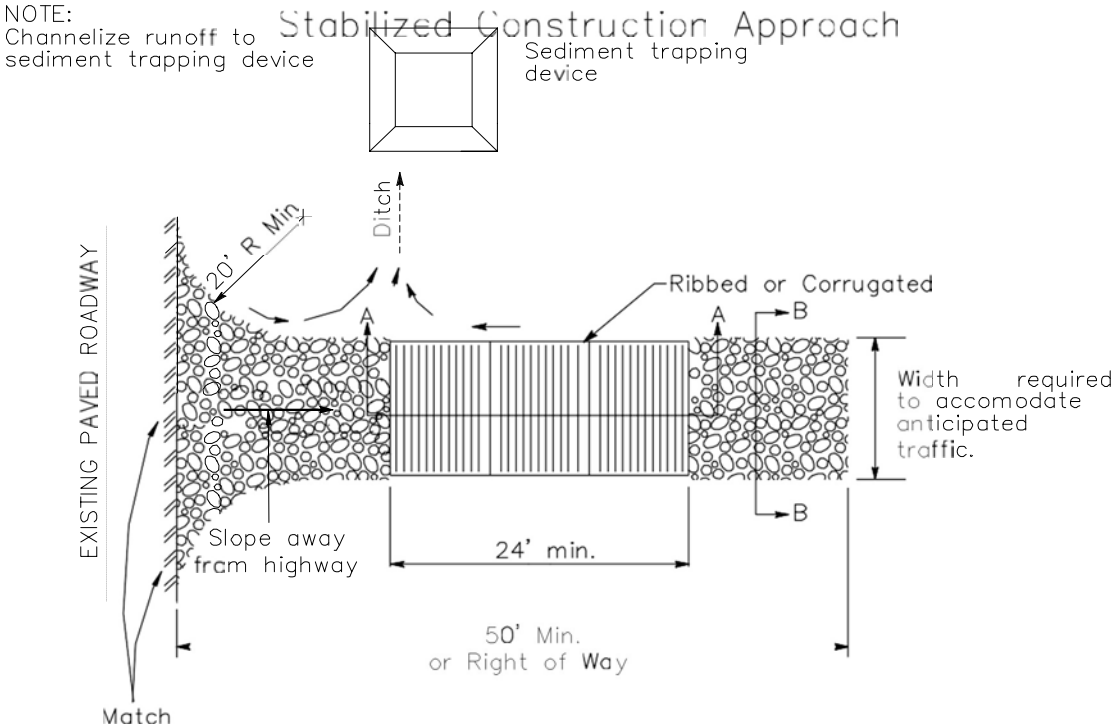


SECTION B–B
NTS



Existing Grade

PLAN
NTS



GrayMar will also utilize a street sweeper system to maintain the street daily after shift.

Appendix "A" Washington State Department of Transportation

Temporary Erosion and Sediment Control Manual (M 3109.02)

May 2019

Washington State
Department of Transportation

Temporary Erosion and Sediment Control Manual

M 3109.02

May 2019

Engineering and Regional Operations

Development Division, Design Office

Americans with Disabilities Act (ADA) Information

Title VI Notice to Public It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at 360-705-7090.

Americans with Disabilities Act (ADA) Information This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

To get the latest information on individual WSDOT publications, sign up for email updates at:
www.wsdot.wa.gov/publications/manuals

Foreword

The *Temporary Erosion and Sediment Control Manual* (TESCM) replaces Chapter 6 and Appendix 6A of the Washington State Department of Transportation (WSDOT) *Highway Runoff Manual*. It outlines WSDOT's policies for preventing erosion related impacts to waters of the state during construction.

The TESCM is intended for use during the design, permitting, and construction phases of transportation construction projects. It covers:

- Applying for, transferring and terminating Permit coverage
- Temporary erosion and sediment control (TESC) plan design and implementation
- TESC best management practice (BMP) application and installation
- Spill prevention, control and countermeasure (SPCC) plans
- Discharge sampling, site inspections and reporting
- Site management and documentation
- Compliance related issues

For further information, visit WSDOT's Erosion Control Policies & Procedures webpage.

/s/ Steve Roark

Steve Roark, P.E.
Director, Development Division
State Design Engineer

Contents

Figures

Tables

Additional Information

- Place sod on soil areas where roots can penetrate and keep the sod healthy. Any sod that either does not attach to the soil or dies must be removed, because water can flow under the dead sod mats and create unseen erosion issues.
- Note that sod provides instant soil coverage, and permanent stabilization should be achieved if the roots successfully attach to the soil.
- In swales, place sod strips perpendicular to the flow of water to increase the ability to resist shear stress.
- Stagger sod strips to produce a more stable soil cover.

Design, Installation and Maintenance

- Ongoing care such as irrigation may be required to ensure sod establishment.
- Inspect regularly to ensure sod remains healthy and erosion does not develop.
- If the sod is unhealthy, the cause shall be determined and appropriate action taken to reestablish a healthy groundcover.

5-1.1.34 Stabilized Construction Entrances

Standard Specification

8-01.3(7) – Stabilized Construction Entrance

Standard Plan

I-80.10 – Miscellaneous Erosion Control Details

SWMM Volume II equivalent: BMP C105 Stabilized Construction Entrance/Exit

Function

Stabilized construction entrances are used to stabilize entrance and exit areas to reduce the amount of sediment track-out onto roadways that may generate a turbid discharge.

Additional Information

- Paved areas and steel rumble plates can be used in conjunction with this BMP. Care must be used when placing rumble plates because they are impervious and fill with sediment (i.e., can create a turbid discharge if placed adjacent to drainage areas).
- Manage construction traffic with signage or fencing to minimize track-out locations and unintended exit points (e.g., restrict use of access points for exit or entrance only).
- Limit planned access points.
- Include extra materials in the contract for large projects or projects with a lot of grading and hauling activity to maintain the entrance/exit areas.
- Source control (preventing track-out) is the goal, because relying on street sweeping is not a substitute for a stabilized construction entrance. If sediment is tracked offsite, street sweeping is required at a minimum at the end of each day, and more frequently if necessary to prevent turbid discharges. However, most street sweeping equipment does not remove fine sediments from the roadway; therefore, a rain event can still cause a turbid discharge. High-efficiency sweepers remove sediment track-out and prevent fugitive dust more effectively than standard broom sweepers. High-efficiency sweepers use water and brooms to clean the roadway, vacuums to remove the sediment and wash water, and a filter to minimize fugitive dust. Verify the performance of contractor equipment during construction to ensure effective sediment removal and containment.
- Street washing may only be used after sweeping to remove the fine sediments. Street wash wastewater cannot be discharged to surface waters of the state.

Design, Installation and Maintenance

- Where possible, stabilized entrances should be constructed on a firm compacted subgrade.
- Inspect all exit points regularly to ensure sediment track-out is being prevented.
- If a stabilized construction entrance/exit fails to prevent sediment track-out or transport, the stabilization methods must be maintained or enhanced (e.g., rock cleaned or added, stabilized entrance lengthened).
- If sediment is tracked offsite, effective street sweeping must occur at the end of each day, or more frequently as needed (e.g., during wet weather) to prevent a turbid discharge.
- A tire wash facility may be required if BMPs are not preventing sediment track-out.

5-1.1.44 Tire Wash

Standard Specification

8-01.3(7) – Stabilized Construction Entrance

SWMM Volume II equivalent: BMP C106 Wheel Wash

Function

When a stabilized construction entrance does not prevent sediment from being tracked onto offsite, a tire wash will prevent sediment track-out.

Additional Information

- A tire wash is required if sediment track-out cannot be prevented with a stabilized entrance.
- Effective function requires participation by and communication with vehicle drivers to ensure all vehicles leaving the site pass through the tire wash at a slow enough speed to fully remove sediment.
- Washwater shall be discharged to a separate onsite treatment system, such as closed-loop recirculation or upland application, or discharged to a sanitary sewer if permitted by local jurisdiction.
- Local jurisdictions may require a tire wash as a permit condition.

Design, Installation and Maintenance

Effective tire washes will include the following features:

- Stabilized approach (paved, permeable ballast pad, or rumble plates) that is maintained clear of excess soil.
- Appropriately sized wash deck based on soil type (minimum of one complete tire revolution; more revolutions will be required for more cohesive soil types).
- Multiple angled spray patterns (must reach all tires and undercarriage).
- High-volume, moderate-pressure spray.
- Rinse water maintained at reasonable clarity.
- Collection of overspray and drip out.
- Stabilized egress (paved, permeable ballast pad, or rumble plates) that is maintained clear of excess soil.

Appendix “B” EPA Construction Track-Out Controls

GRAYMAR ENVIRONMENTAL

Stormwater Best Management Practice

Construction Track-Out Controls

Minimum Measure: Construction Site Stormwater Runoff Control
Subcategory: Sediment Control

Description

Construction track-out controls minimize the amount of sediment leaving or being tracked out from the construction site as dirt, mud or other sediment attached to vehicles. Stabilization measures, vehicle wash stations and sediment collection devices are all common track-out controls.

Installing a pad of gravel over filter cloth where construction traffic leaves a site can help stabilize sediment at a construction entrance/exit. As a vehicle drives over the pad, the pad removes mud and sediment from the wheels and reduces soil transport off the site. The filter cloth separates the gravel from the soil below. It also reduces rutting by vehicle tires.

In addition to using a gravel pad, construction staff can install a vehicle washing station at the site entrance/exit. Using washing stations routinely can remove a lot of sediment from vehicles before they leave the site. Construction staff should divert wash water from vehicle washing stations into a sediment trap that will handle sediment from vehicles properly and keep it on-site.

Several other types of track-out controls, such as shaker racks (also called exit grids, rumble strips or cattle guards) and other similar proprietary devices, can help knock mud and dirt off vehicle tires. Shaker racks work by removing mud or soil from vehicle tires through bouncing or shaking action as the vehicle drives over the rack.

Applicability

Construction staff should install track-out controls anywhere construction traffic leaves or enters a construction site. Track-out controls can also provide benefits from a public relations point of view, as the site entrance/exit is often the most noticeable part of a construction site and can show community members that controls are in place to minimize sediment being tracked onto nearby streets and neighboring areas. Minimizing sediment on roads can improve both the appearance and the public perception of the construction project as well as limit the occurrence of complaints about the site. Additionally, a stabilized construction entrance/exit is generally a requirement of any construction permit, though design engineers should contact local authorities for specific requirements and design specifications.

A construction entrance stabilized with gravel over filter cloth reduces the amount of sediment transported off site.
Photo Credit: PG Environmental for USEPA

Siting and Design Considerations

Before considering track-out controls, design engineers should consider the locations of construction site entrances/exits. Where possible, they should place site entrances/exits in well-drained areas, away from streams or wetlands, and in a place where construction staff can easily conduct regular maintenance. If including wash areas, design engineers should account for adjacent, downstream areas on-site that can collect and treat wash water (e.g., using a sediment basin or similar temporary treatment practice).

Design engineers should follow local design and installation details for all construction entrances/exits. Some common design practices include the following (Caltrans, 2017; MPCA, 2019):

- Stabilize all entrances/exits to a site before land disturbance begins.
- Make sure the stabilized site entrances/exits are long and wide enough to allow the largest construction vehicle to fit with room to spare. If many vehicles will use an entrance/exit in any one day, make the site entrance/exit wide enough for two vehicles to pass at the same time with room on either side.
- If a site entrance/exit leads to a paved road, make the end of the entrance/exit flared so that long vehicles do not leave the stabilized area when they turn onto or off the road.
- Grade the exit pad so that sediment-laden stormwater does not flow onto streets or into storm drains.
- Install non-woven geotextile on graded soil to support the exit pad and spread rock evenly over the geotextile.
- Make sure the stone and gravel used to stabilize the construction site entrance/exit is large enough that vehicles do not carry it off-site.
- Avoid using sharp-edged stones, which can puncture tires.
- Install stone or gravel at a depth of at least 6 inches for the entire length and width of the stabilized construction entrance/exit. If the design uses shaker racks, make sure they are wide enough to fit the widest vehicles and long enough to allow enough shaking time. Make sure there is enough storage beneath the rack—at least 4 inches is typical.
- If a construction site entrance/exit crosses a stream, swale or other depression, provide a bridge or culvert to prevent erosion from unprotected banks.

Operational practices can also help limit sediment track-out. To limit overloading track-out controls, construction staff should avoid vehicle traffic on exposed, muddy areas of the site where possible. They should also limit traffic onto and off the site by parking vehicles on the street if possible.

Limitations

Although stabilizing a construction entrance/exit reduces the amount of sediment leaving a site, vehicle tires might still deposit some soil onto paved surfaces. To further reduce the chance of these sediments polluting stormwater, construction staff should sweep the paved area adjacent to the stabilized site entrance/exit as needed. Times of wet weather will likely call for increased sweeping and maintenance. For sites that use wash stations, a reliable water source might not be initially available and trucks might have to bring water to the site at an additional cost. Using a recapture and treatment system can help reduce the cost of water imports.

Maintenance Considerations

Construction staff maintain track-out controls in compliance with applicable permits and local regulations, generally until they have fully stabilized the rest of the construction site. Below are some steps they can follow.

- Add stone and gravel periodically to each stabilized construction site entrance/exit.
- Remove mud and dirt clods to keep the stabilized pad relatively clean.
- Immediately sweep up or vacuum soil and dirt clods tracked off-site for proper disposal.
- Make sure not to hose or sweep tracked-out sediment into any stormwater conveyance or storm drain inlet, or directly into any creek, stream or other waterway.
- Periodically remove sediment from wash rack sediment traps to make sure they keep working.

Effectiveness

The effectiveness of track-out controls is highly variable and depends on their design, use and maintenance. Sediment removal rates can range from less than 30 percent up to 60 percent for gravel pads and shaker racks. Wheel washing racks, when properly installed, can remove 75 percent or more of sediment (MPCA, 2019).

In some cases, such as areas with high clay content or persistent rain, stabilizing the site entrances/exits might not be very effective without routine use of a wash rack. Track-out controls are only effective when site rules require vehicles to use them and physical constrictions force traffic through the controls. This can be problematic for sites with multiple entrances/exits and high vehicle traffic.

GOLDER
MEMBER OF WSP

ENGINEERING CHANGE NOTICE

Date: 4/21/2023	**ECN No.:** **002**
Project: Aluminum Recycling Trentwood Site – Dross Removal Project	**Project No.:** 19119180
Engineering Change Notice Name: Containment Berm Redesign	**Contract No.:**

Project Feature: Containment Berm

Affected Documents: Drawings 120 and 121 – Ecological Cap and Containment Berm final grading surface at top of containment berm; Drawing 130 – Detail 7: *Dross Stockpile and Side Slope Regrade Final Grade Tie-In,* Detail 9: *Ecological Cap Termination – West*; Drawing 131 – Detail 10: *Ecological Cap Termination – East*, Detail 12: *Ecological Cap Termination – North with Existing Railroad Ditch*, Detail 13: *Ecological Cap Termination – North with Regraded Railroad Ditch*; Drawing 400 – Surface Water Management Plan final grading surface at top of containment berm; Drawings 500 and 501 – Ecological Cap and Containment Berm final grading surface at top of containment berm. Any other drawings showing this section.

Description of Change: Union Pacific Railroad (UPRR) requests to use fill material excavated from off-pile areas with contamination below remediation levels, rather than imported fill material, for constructing the containment berm in the ecological cap area on the UPRR property. The containment berm was originally designed as a separate surface water feature to be constructed on top of the ecological cap. However, to accommodate this request, the containment berm design has been revised to incorporate the main fill section of the berm below the ecological cap per the attached drawing. In addition, armor rock for this application shall consist of 2- to 4-inch quarry spalls.

Justification for Change: UPRR requests to use fill material excavated from off-pile areas with contamination below remediation levels, rather than imported fill material, for constructing the containment berm in the ecological cap area on the UPRR property for the following reasons:

1) A greater extent of soil removal was required from the WSDOT and Pentzer properties than was originally estimated, leading to the generation of additional off-pile material with contamination below remediation levels. Repurposing this excess material to construct the containment berm will reduce the amount of fill placed in the ecological cap subgrade, and will thereby reduce the final ecological cap elevation, making the ecological cap area more useable in the future.
2) This change will eliminate the soil key in the original containment berm design, making construction more straightforward.
3) This will decrease the quantities of imported fill, geotextile, and gravel materials that were included in the original containment berm design, thereby conserving resources.

☐ Significant Design Change – Regulatory approval of this ECN is required prior to construction

☑ Non-significant Design Change – No regulatory approval is required

Prepared by: Vanessa Nancarrow

Approvals:

Golder Design Engineer: ..... Date: .....

Golder Project Manager: ..... Date: .....

Golder Construction Manager: ..... Date: .....

UPRR Project Manager: ..... Date: .....

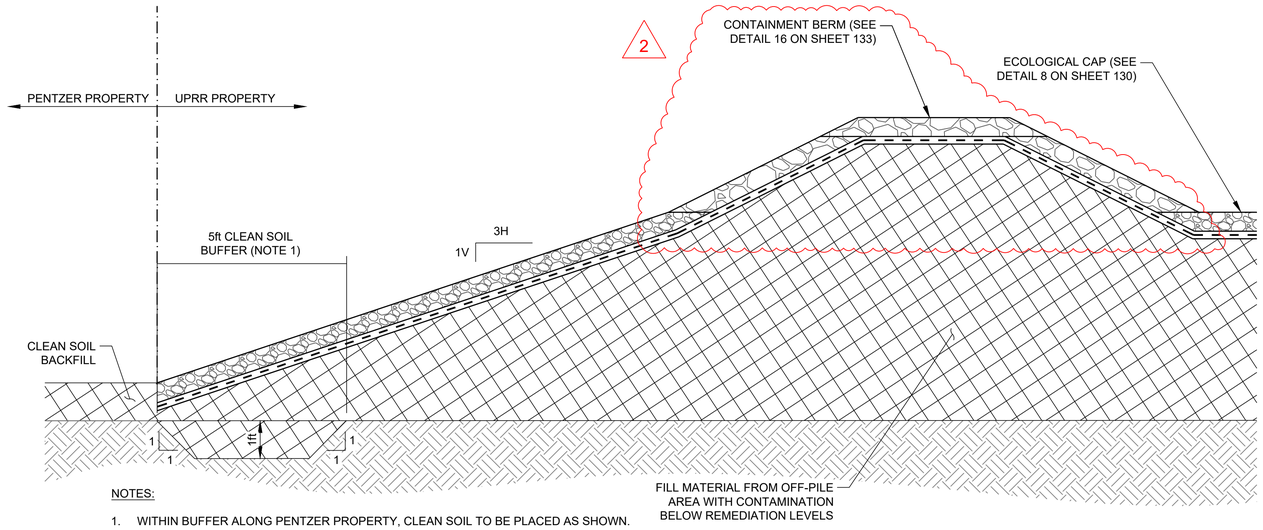
GOLDER
MEMBER OF WSP

ENGINEERING CHANGE NOTICE

Ecology Project Manager: N/A Date: N/A

Distribution:

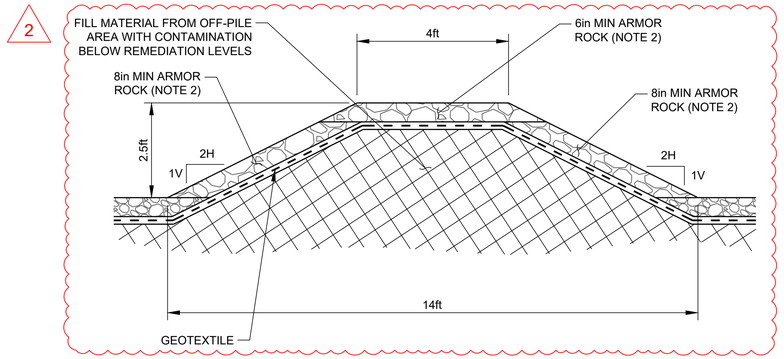
☑ John DeJong	UPRR PM	☑ Michael Gray	GrayMar
☑ Ted Norton	Golder PM	☑ Kelly Ottmar	GrayMar
☑ Kate DaPolito	Golder CM		
☑ Vanessa Nancarrow	Golder Design Engineer		
☑ Frank Shuri	Golder Design Engineer		



NOTES:

1. WITHIN BUFFER ALONG PENTZER PROPERTY, CLEAN SOIL TO BE PLACED AS SHOWN.

SCALE 1" = 2' — 9 - — ECOLOGICAL CAP TERMINATION - WEST



SCALE 1" = 2' — 16 - — CONTAINMENT BERM

NOTE(S)

2

1. DESIGN UPDATES SHOWN ON THIS DRAWING APPLY TO ALL APPLICABLE DRAWINGS IN DRAWING SET REVISION 0, "ISSUED FOR CONSTRUCTION," DATED 6-10-2022.
2. ARMOR ROCK FOR THIS FOR THIS APPLICATION SHALL CONSIST OF 2- TO 4-INCH QUARRY SPALLS.

0 2 4
1" = 2' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
2	2023-04-21	CONTAINMENT BERM REDESIGN	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

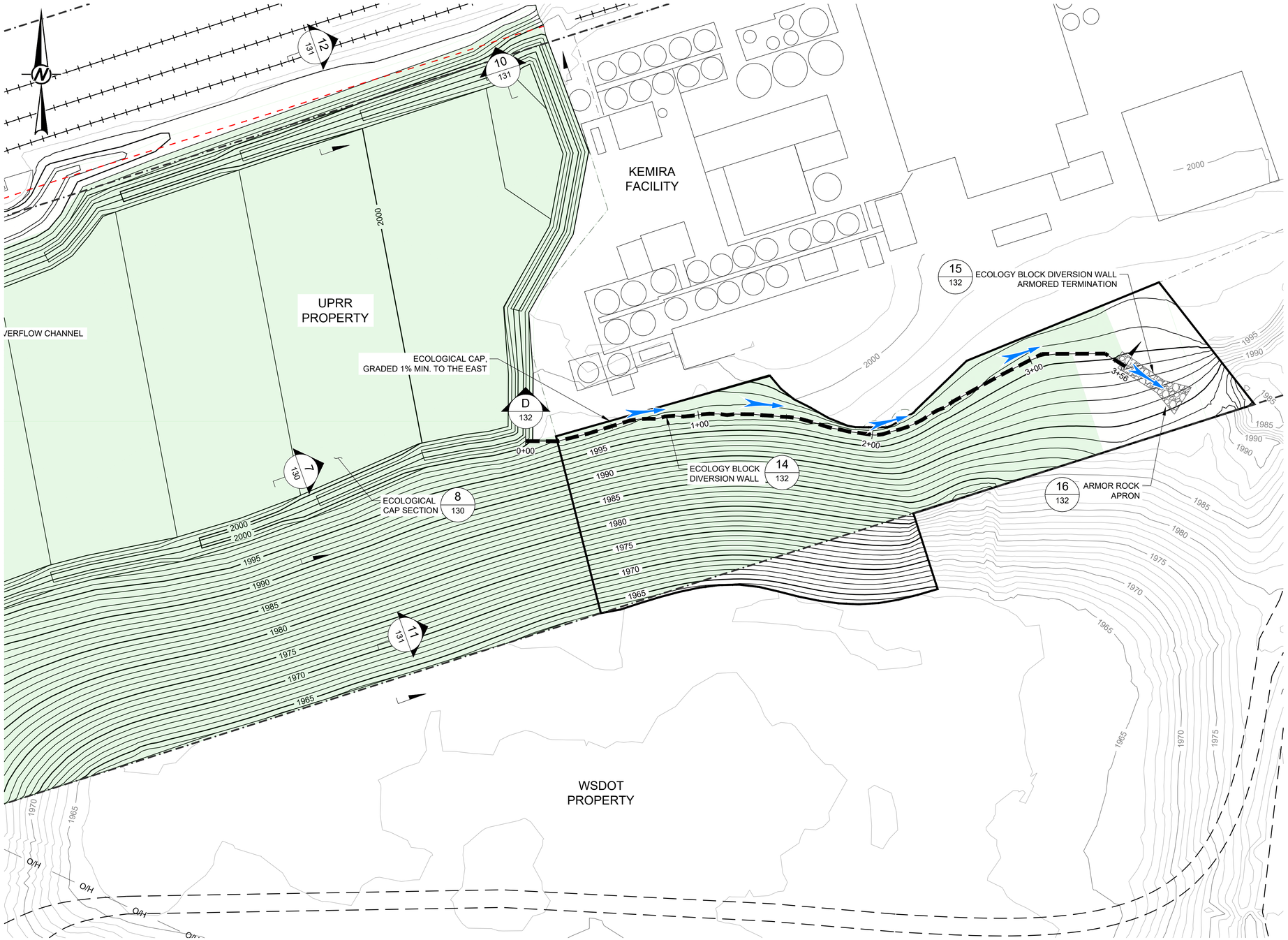
CLIENT
UNION PACIFIC RAILROAD CO.

CONSULTANT
wsp
REDMOND
18300 NE UNION HILL RD, SUITE 200
REDMOND, WA
USA
[+1] (425) 883 0777
www.golder.com

PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM DETAILS

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	2	20 of 37	133



LEGEND

- PROPERTY BOUNDARY
- ACCESS ROAD
- RAILROAD TRACK
- POWER POLE
- O/H — OVERHEAD POWER LINE
- U/G — UNDERGROUND POWER LINE
- APPROXIMATE EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR (5-FT INTERVAL)
- EXISTING MINOR CONTOUR (1-FT INTERVAL)
- PROPOSED MAJOR CONTOUR (5-FT INTERVAL)
- PROPOSED MINOR CONTOUR (1-FT INTERVAL)
- ECOLOGICAL CAP
- ARMOR ROCK
- ECOLOGY BLOCK DIVERSION WALL
- EXTENTS OF GRADING RE-DESIGN
- SURFACE WATER FLOW DIRECTION

NOTE(S)

1. ALL PERSONNEL WITHOUT PROPER RAILROAD SAFETY TRAINING ARE PROHIBITED FROM ENTERING THE RAILROAD BUFFER ZONE.
2. THE INTENT OF THE ECOLOGY BLOCK DIVERSION WALL IS TO MINIMIZE SURFACE WATER FLOW ONTO ECOLOGICAL CAP AREA.
3. UPDATES TO THE DESIGN, AS PRESENTED IN THIS DRAWING, APPLY TO ALL OTHER AFFECTED DRAWINGS IN THE DESIGN PACKAGE.

0 30 60
1" = 30' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

SEAL

VANESSA M. NANCARROW — STATE OF WASHINGTON — 47008 — REGISTERED PROFESSIONAL ENGINEER

3/7/23

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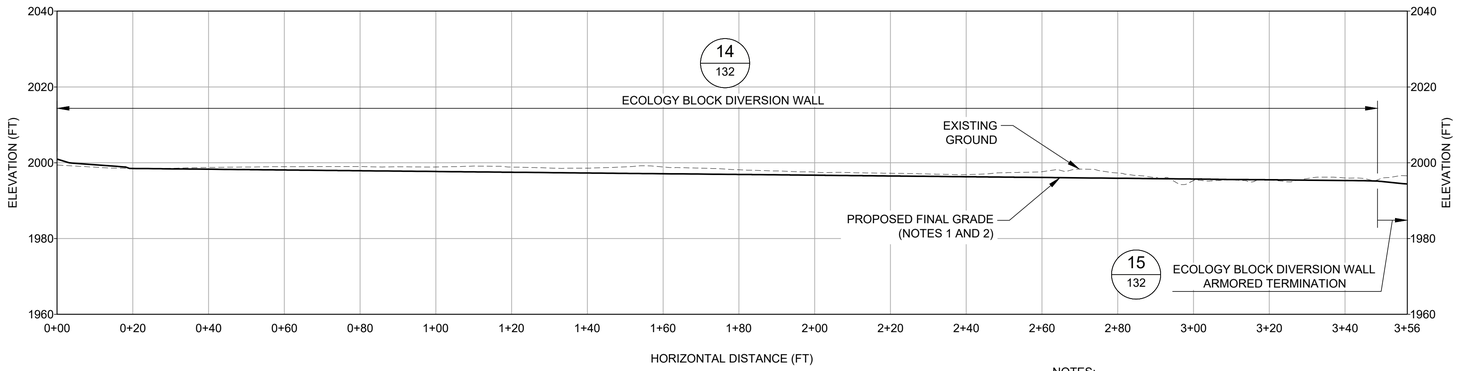
PROJECT
ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGICAL CAP AND CONTAINMENT BERM PLAN (2 OF 2)

PROJECT NO.	PHASE	REV.	SHEET
19119180	1000B	1	16 of 36 / 121

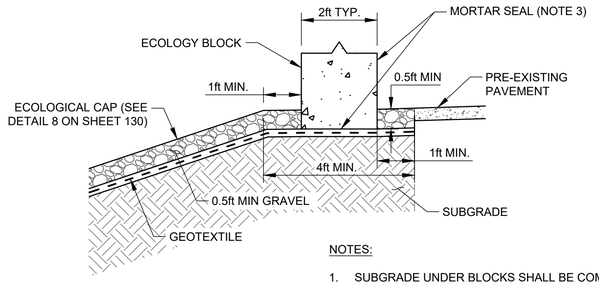
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI D



SCALE 1" = 20' / VERT. SCALE 1:1 — D 121 — ECOLOGY BLOCK DIVERSION WALL PROFILE

NOTES:

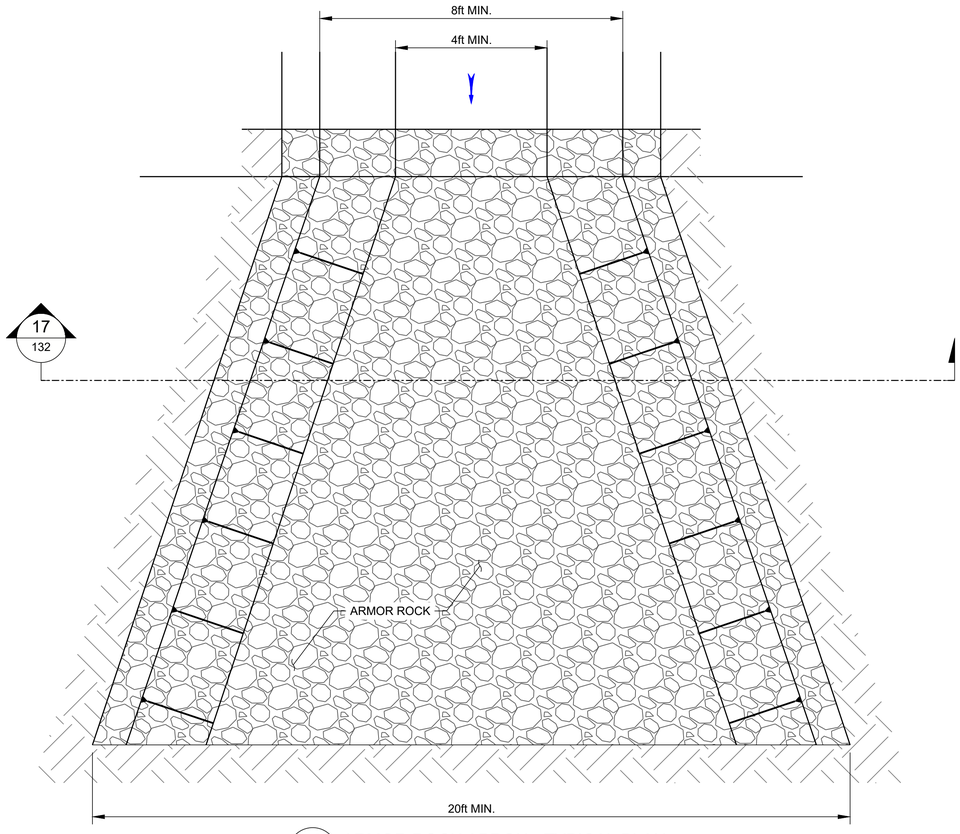
1. PROPOSED FINAL GRADE SURFACE REPRESENTS THE TOP SURFACE OF THE ECOLOGICAL CAP.
2. 1% MIN TO THE EAST.



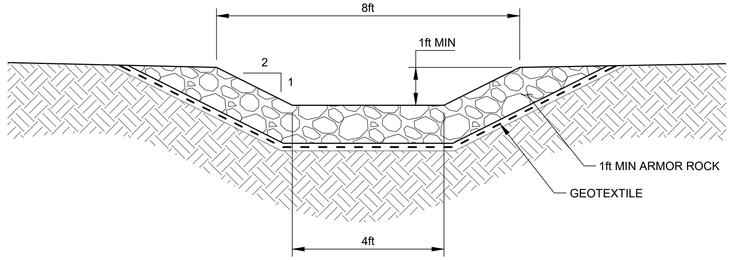
NOTES:

1. SUBGRADE UNDER BLOCKS SHALL BE COMPACTED TO A SMOOTH, FLAT, AND FIRM CONDITION.
2. PLACE BLOCKS TIGHTLY BUTTED END-TO-END.
3. MORTAR SEAL GAPS BETWEEN BLOCKS AND/OR GROUND SURFACE. SUBMIT INFORMATION ON PROPOSED MORTAR MATERIAL FOR APPROVAL PRIOR TO USE.

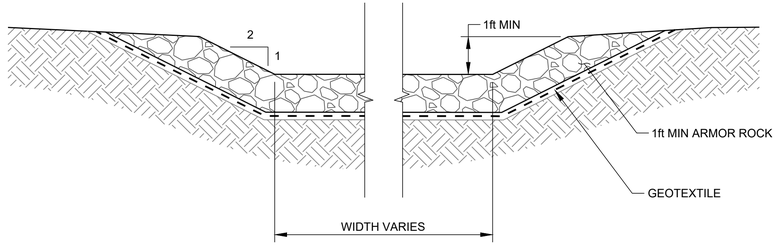
SCALE 1" = 2' — 14 121 — ECOLOGY BLOCK DIVERSION WALL



SCALE 1" = 2' — 16 121 — ARMOR ROCK APRON - TYPICAL PLAN



SCALE 1" = 2' — 15 121 — ECOLOGY BLOCK DIVERSION WALL ARMORED TERMINATION



SCALE 1" = 2' — 17 121 — ARMOR ROCK APRON - TYPICAL SECTION

0 2 4
1" = 2' FEET

0 20 40
1" = 20' FEET

REV.	YYYY-MM-DD	DESCRIPTION	DESIGNED	PREPARED	REVIEWED	APPROVED
1	2023-03-07	KEMIRA BERM DESIGN	VMN	REDMOND	FSS	TJN
0	2022-06-10	ISSUED FOR CONSTRUCTION	VMN	REDMOND	FSS	TJN

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ALUMINUM RECYCLING TRENTWOOD SITE
REMEDIAL ACTION - DROSS REMOVAL PROJECT
SPOKANE VALLEY, WASHINGTON

TITLE
ECOLOGY BLOCK DIVERSION WALL SECTION AND DETAIL

PROJECT NO.	PHASE	REV.		SHEET
19119180	1000B	1	19 of 36	132