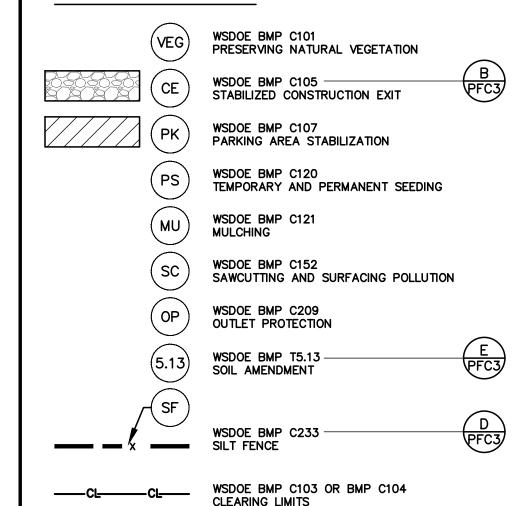


SURVEY MONUMENT NOTE:
CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LOCATE
AND PROTECT ALL EXISTING SURVEY MONUMENTS, WHICH INCLUDED PROPERTY CORNERS DURING CONSTRUCTION. ALL SURVEY MONUMENTS THAT MAY BE DISTURBED BY CONSTRUCTION SHALL BE IDENTIFIED AND REPLACED IN ACCORDANCE WITH RECOGNIZED SURVEYING PRACTICES BY A WASHINGTON STATE LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR.

# **TESC CONTRACTOR RESPONSIBILITY**

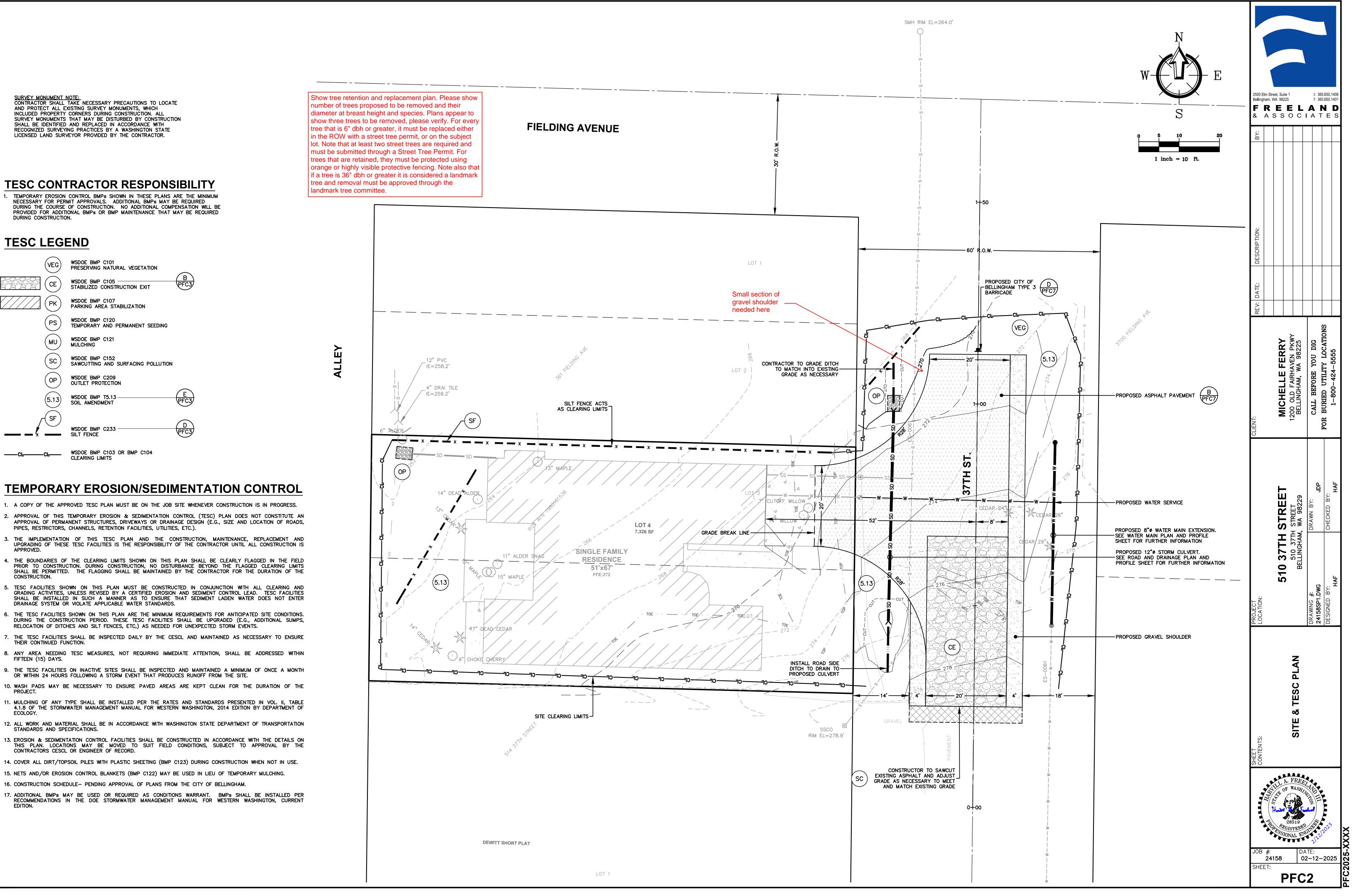
TEMPORARY EROSION CONTROL BMPs SHOWN IN THESE PLANS ARE THE MINIMUM NECESSARY FOR PERMIT APPROVALS. ADDITIONAL BMPs MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ADDITIONAL BMPs OR BMP MAINTENANCE THAT MAY BE REQUIRED

## **TESC LEGEND**



# TEMPORARY EROSION/SEDIMENTATION CONTROL

- 1. A COPY OF THE APPROVED TESC PLAN MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 2. APPROVAL OF THIS TEMPORARY EROSION & SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STRUCTURES, DRIVEWAYS OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- 3. THE IMPLEMENTATION OF THIS TESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS
- 4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING CONSTRUCTION, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE
- 5. TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, UNLESS REVISED BY A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD. TESC FACILITIES SHALL BE INSTALLED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
- 6. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD. THESE TESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC,) AS NEEDED FOR UNEXPECTED STORM EVENTS.
- 7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CESCL AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.
- 8. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
- OR WITHIN 24 HOURS FOLLOWING A STORM EVENT THAT PRODUCES RUNOFF FROM THE SITE.
- 10. WASH PADS MAY BE NECESSARY TO ENSURE PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE
- 11. MULCHING OF ANY TYPE SHALL BE INSTALLED PER THE RATES AND STANDARDS PRESENTED IN VOL. II, TABLE 4.1.8 OF THE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, 2014 EDITION BY DEPARTMENT OF
- 12. ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
- 13. EROSION & SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THIS PLAN. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE CONTRACTORS CESCL OR ENGINEER OF RECORD.
- 14. COVER ALL DIRT/TOPSOIL PILES WITH PLASTIC SHEETING (BMP C123) DURING CONSTRUCTION WHEN NOT IN USE.
- 15. NETS AND/OR EROSION CONTROL BLANKETS (BMP C122) MAY BE USED IN LIEU OF TEMPORARY MULCHING.
- 16. CONSTRUCTION SCHEDULE- PENDING APPROVAL OF PLANS FROM THE CITY OF BELLINGHAM.
- 17. ADDITIONAL BMPs MAY BE USED OR REQUIRED AS CONDITIONS WARRANT. BMPs SHALL BE INSTALLED PER RECOMMENDATIONS IN THE DOE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, CURRENT



ELEMENT 1: <u>PRESERVE VEGETATION/MARK CLEARING LIMITS:</u>
a. PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRADING, ALL CLEARING LIMITS, SENSITIVE AREAS AND THEIR BUFFERS, AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA SHOULD BE CLEARLY MARKED, BOTH IN THE FIELD AND ON THE PLANS, TO PREVENT DAMAGE AND OFF-SITE IMPACTS. PLASTIC, METAL, OR STAKE WIRE FENCE MAY BE USED TO MARK THE CLEARING LIMITS RETAIN THE DUFF LAYER, NATIVE TOP SOIL, AND NATURAL VEGETATION IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.

ELEMENT 2: <u>ESTABLISH CONSTRUCTION ACCESS</u>:

a. CONSTRUCTION VEHICLES WILL ACCESS THE SITE FROM 37TH STREET.

- b. A TYPICAL CONSTRUCTION ENTRANCE HAS BEEN SPECIFIED. CONTRACTOR TO UTILIZE EXISTING STREET. IF CONTRACTOR NOTICES SEDIMENT LEAVING THE SITE A CONSTRUCTION ENTRANCE SHALL BE INSTALLED PER COB DETAIL EC-605 OR AN EQUIVALENT LENGTH OF SHAKER PLATES.
- c. WHEEL WASHES OR TIRE BATHS DO NOT APPEAR TO BE NECESSARY IF A STABILIZED PARKING AREA IS PROVIDED ON SITE. IF DEEMED NECESSARY DURING CONSTRUCTION, TIRE BATHS OR WHEEL WASHES WILL BE d. ANY SEDIMENT THAT IS TRACKED OR OTHERWISE DEPOSITED ONTO PAVED SURFACES SHALL BE THOROUGHLY
- CLEANED AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM PAVED AREAS BY SHOVELING OR VACUUM SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. e. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THE MANNER DESCRIBED IN PART

d) ABOVE.

ELEMENT 3: <u>CONTROL FLOW RATES:</u>
a. STORMWATER FLOW CONTROL IS NOT REQUIRED FOR THIS PROJECT. THE RISK OF STORMWATER LEAVING THE SITE IS LOW SINCE THE CONSTRUCTION IS MINIMAL. TEMPORARY STORAGE DEPRESSIONS OR SEDIMENT TRAPS MAY BE CONSTRUCTED IF STORMWATER RUNOFF FLOWS ARE OBSERVED DURING CONSTRUCTION. IN ADDITION, MATERIAL FROM ALL EXCAVATIONS AND TRENCHES SHALL BE LOCATED ON THE UPHILL SIDE OF THE EXCAVATED AREAS AS MUCH AS SAFELY POSSIBLE. THE CONTRACTOR OR, IF USED ON SITE, THE CERTIFIED EROSION AND SEDIMENTATION CONTROL LEAD (CESCL) WILL BE RESPONSIBLE TO DETERMINE IF TEMPORARY STORMWATER STORAGE IS REQUIRED DURING CONSTRUCTION. b. NO CONVEYANCE ISSUES WERE FOUND DOWNSTREAM OF THE PROJECT.

ELEMENT 4: INSTALL SEDIMENT CONTROLS:

a. CONTRACTOR SHALL STOCKPILE EXISTING TOPSOIL AND REDISTRIBUTE TO LANDSCAPED AREAS AS MUCH AS PRACTICABLE. NATIVE TOPSOIL AND NATURAL VEGETATION SHALL BE PRESERVED TO THE GREATEST EXTENT PRACTICABLE DURING CONSTRUCTION. b. A TEMPORARY SEDIMENT POND DOES NOT APPEAR TO BE NECESSARY DURING CONSTRUCTION. THE RISK OF

STORMWATER LEAVING THE SITE IS LOW SINCE MOST OF THE SITE IS FLAT. THE CONTRACTOR MAY USE ANY OTHER APPLICABLE SEDIMENT CONTROLS, SUCH AS SEDIMENT TRAPS OR POND, AS NECESSARY FOR SITE CONDITIONS DURING CONSTRUCTION.

- a. EXISTING VEGETATION SHALL BE RETAINED AS MUCH AND AS LONG AS POSSIBLE. ALL AREAS OF EXPOSED SOIL WITHIN THE WORK LIMITS SHALL BE STABILIZED BY APPLICATION OF BMPs (IDENTIFIED BELOW) THAT PROTECT SOIL FROM THE EROSIVE FORCES OF RAINDROP IMPACTS. FLOWING WATER. AND WIND EROSION. REFER TO THE TIMING REQUIREMENTS IDENTIFIED BELOW. SOIL PILES SHOULD BE COVERED WITH PLASTIC OR ROLLED EROSION CONTROL PRODUCTS WHEN NOT IN USE. b. BETWEEN OCTOBER 1 AND APRIL 30, NO SOIL SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN TWO
- DAYS. FROM MAY 1 THROUGH SEPTEMBER 30, NO SOIL SHALL REMAIN EXPOSED AND UNWORKED FOR MORE c. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY OR PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, SOIL APPLICATION OF POLYACRYLAMIDE (PAM), EARLY APPLICATION OF GRAVEL
- BASE ON AREAS TO BE PAVED, AND DUST CONTROL. d. SOIL STABILIZATION MEASURES SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR. SITE CONDITIONS. ESTIMATED DURATION OF USE, AND POTENTIAL WATER QUALITY IMPACTS THAT STABILIZATION AGENTS MAY
- HAVE ON DOWNSTREAM WATERS OR GROUNDWATER. e. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. AS RECOMMENDED IN ELEMENT 4, EXCAVATED SOIL MATERIAL SHOULD BE PLACED UPHILL FROM THE EXCAVATED
- f. PROPOSED WORK IS LINEAR AND WILL BE UNDER THE CONTROL OF ONE GENERAL CONTRACTOR.
- g. AT THE DISCRETION OF CITY OF BELLINGHAM PUBLIC WORKS DIRECTOR, SITES THAT ARE UNABLE TO MAINTAIN ADEQUATE WATER QUALITY IN THEIR STORMWATER DISCHARGES MAY BE REQUIRED TO PROVIDE SOIL STABILIZATION TO ALL EXPOSED SOIL AREAS REGARDLESS OF THE WORKING STATUS OF THE AREA. UPON WRITTEN NOTIFICATION, THE PROPERTY OWNER SHALL PROVIDE FULL STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 24 HOURS.
- h. CONTRACTOR TO MINIMIZE SOIL COMPACTION AND TO MAXIMUM EXTENT PRESERVE TOPSOIL

ELEMENT 6: <u>PROTECT SLOPES:</u>
CUT AND FILL SLOPES ARE ANTICIPATED AS PART OF THIS PROJECT. THEREFORE, SUBSECTIONS OF ELEMENT 6 (AS IDENTIFIED IN BELLINGHAM MUNICIPAL CODE 15.42.060.F.2.e) HAVE BEEN APPLIED TO THIS PROJECT.

ELEMENT 7: <u>PROTECT DRAIN INLETS:</u>
a. ALL EXISTING AND PROPOSED CATCH BASINS THAT MAY RECEIVE RUNOFF FROM THE SITE, EITHER DURING OR

PROVIDED BEFORE THE STORM DRAIN DISCHARGES TO WATERS OF THE STATE.

SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION.

AFTER CONSTRUCTION, SHALL BE PROTECTED WITH CATCH BASIN FILTRATION INSERTS. CATCH BASINS THAT REQUIRE PROTECTION ARE IDENTIFIED IN THE TEMPORARY EROSION CONTROL PLAN DRAWING WITHIN THE CIVIL b. ALL APPROACH ROADS SHALL BE KEPT CLEAN AND ALL SEDIMENT AND STREET WASH WATER SHALL NOT BE ALLOWED TO ENTER STORM DRAINS WITHOUT PRIOR AND ADEQUATE TREATMENT UNLESS TREATMENT IS

ELEMENT 8: <u>STABILIZE CHANNELS AND OUTLETS:</u>
a. IF ANY TEMPORARY DRAINAGE CHANNELS ARE USED DURING CONSTRUCTION, THE CHANNELS SHALL BE DESIGNED AND BUILT TO PREVENT EROSION FROM THE EXPECTED VELOCITY FLOW FROM A 2-YEAR, 24-HOUR

STORM EVENT FOR THE DEVELOPED CONDITION. . AN EXISTING STABILIZED STORM DRAIN SYSTEM OPERATED BY THE CITY OF BELLINGHAM IS PRESENT AND SHALL BE PROTECTED FROM ANY CONVEYANCE OF STORMWATER RUNOFF IN CHANNELS. NO ADDITIONAL CHANNEL STABILIZATION IS REQUIRED OR PROPOSED FOR THIS PROJECT.

ELEMENT 9: <u>CONTROL POLLUTANTS</u>;
a. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT CONTAMINATE STORMWATER.

b. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND NON-INERT WASTES PRESENT ON THE SITE. c. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT.

EMERGENCY REPAIRS MAY BE PERFORMED ON-SITE USING TEMPORARY PLASTIC PLACED BENEATH AND, IF RAINING, OVER THE VEHICLE. d. WHEEL WASH, OR TIRE BATH WASTEWATER, SHALL BE DISCHARGED TO A SEPARATE ON-SITE TREATMENT SYSTEM OR TO THE SANITARY SEWER.

. AGRICULTURAL CHEMICALS WILL NOT BE APPLIED AT THIS SITE WASHOUT OF CONCRETE TRUCKS WILL ONLY BE ALLOWED WITHIN SPECIALLY CONSTRUCTED WASHOUT AREAS OR FORMED AREAS AWAITING INSTALLATION OF CONCRETE. IF SITE CONDITIONS PREVENT WASHOUT INTO INTO CONTAINED AREAS OR FORMED AREAS, THEN ANY UNUSED CONCRETE IN THE TRUCK SHALL BE RETURNED TO THE BATCH PLANT FOR RECYCLING. HAND TOOLS, INCLUDING SCREEDS, SHOVELS, RAKES, FLOATS, OR TROWELS SHALL BE WASHED OFF ONLY INTO THE CONTAINED AREAS OR FORMED AREAS AWAITING INSTALLATION OF CONCRETE.

ELEMENT 10: <u>CONTROL DE-WATERING</u>;
a. NO DEWATERING IS PROPOSED AT THIS TIME. IF DEWATERING IS REQUIRED DISCHARGE TO CHANNELS THAT ARE STABILIZED, AS SPECIFIED IN ELEMENT NO. 8.

b. CLEAN, NONTURBID DEWATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO STATE SURFACE WATERS, AS SPECIFIED IN ELEMENT NO. 8, PROVIDED THE DEWATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF THE RECEIVING WATERS. THESE CLEAN WATERS SHOULD NOT BE ROUTED THROUGH SEDIMENT PONDS WITH STORMWATER. c. HIGHLY TURBID OR OTHERWISE CONTAMINATED DEWATERING WATER, SUCH AS FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM, SHALL BE

HANDLED SEPARATELY FROM STORMWATER AT THE SITE.

d. OTHER DISPOSAL OPTIONS, DEPENDING ON SITE CONSTRAINTS, MAY INCLUDE, BY WAY OF EXAMPLE: (1) INFILTRATION, (2) TRANSPORT OFF SITE IN VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS, (3) ON-SITE TREATMENT USING ECOLOGY APPROVED CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES, (4) SANITARY OR COMBINED SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, OR THERE IS NO OTHER OPTION, (5) USE OF A SEDIMENTATION BAG THAT DISCHARGES TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED

STORMWATER POLLUTION PROTECTION PLAN

ELEMENT 11: <u>MAINTAIN BMPS:</u>
a. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH BMP SPECIFICATIONS.

b. SEDIMENT CONTROL BMPS SHALL BE INSPECTED WEEKLY OR AFTER A RUNOFF-PRODUCING STORM EVENT DURING THE DRY SEASON AND DAILY DURING THE WET SEASON. c. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL OF BMPS OR VEGETATION SHALL BE PERMANENTLY STABILIZED.

ELEMENT 12: MANAGE THE PROJECT:

a. THE PROPOSED IMPROVEMENTS WILL BE BUILT IN A SINGLE PHASE. NO FURTHER DEVELOPMENT IS PROPOSED AT THIS TIME.

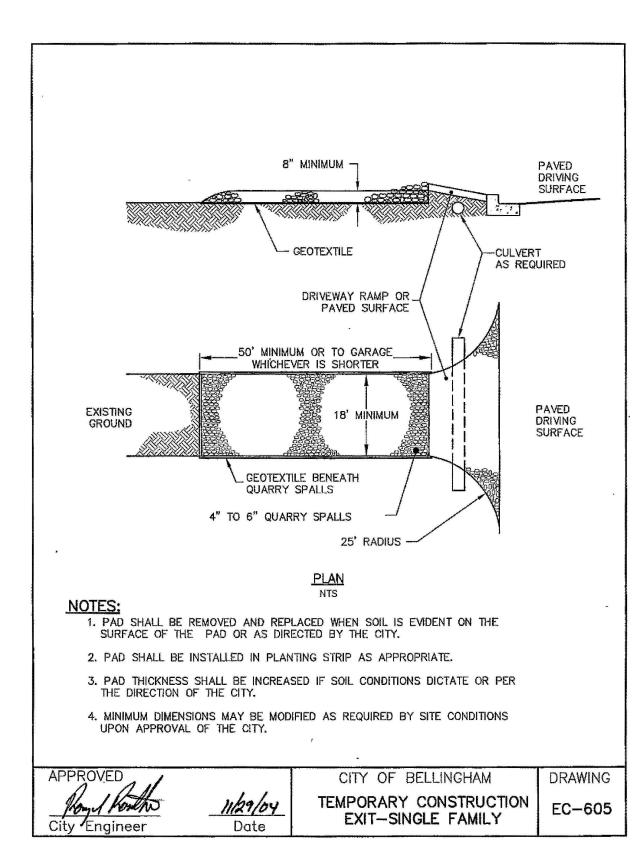
b. DISTURBED AREAS WILL BE REVEGETATED WITH TREES, SHRUBS, AND GROUND COVER SPECIES. c. ALL UTILITIES SHALL BE TAKEN INTO ACCOUNT WHEN MODIFYING THE SWPPP.

d. ALL BMPs SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. e. THIS PROJECT WILL NOT DISTURB MORE THAN ONE ACRE OF SOIL. A CERTIFIED EROSION AND SEDIMENTATION CONTROL LEAD (CESCL) IS NOT REQUIRED TO MONITOR AND INSPECT BMPS THAT WILL NOT BE USED DURING

WHENEVER INSPECTION AND/OR MONITORING REVEALS THAT THE BMPs IDENTIFIED IN THE CONSTRUCTION SWPPP ARE INADEQUATE, DUE TO ACTUAL DISCHARGE OF OR POTENTIAL TO DISCHARGE A SIGNIFICANT AMOUNT OF ANY POLLUTANT, THE SWPPP SHALL BE MODIFIED AS APPROPRIATE, IN A TIMELY MANNER.

q. THIS CONSTRUCTION SWPPP SHALL BE RETAINED ON-SITE. THIS SWPPP SHALL BE MODIFIED WHENEVER THERE IS A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF ANY BMP.

ELEMENT 13: <u>LOW IMPACT DEVELOPMENT:</u>
a. BMP T5.13 IS PROPOSED FOR THIS PROJECT. PROTECT COMPLETED LAWN AND LANDSCAPE AREAS FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT.





BMP C152: Sawcutting and Surfacing Pollution Prevention

Sawcutting and surfacing operations generate slurry and process water that contains fine particles and high pH (concrete cutting), both of which can violate the water quality standards in the receiving water. Concrete spillage or concrete discharge to surface waters of the State is prohibited. Use this BMP to minimize and eliminate process water and slurry created through sawcutting or surfacing from entering waters of the State.

Conditions of Use Utilize these management practices anytime sawcutting or surfacing operations take place. Sawcutting and surfacing operations include, but are not limited to, the following:

- Sawing
- Coring
- Grinding Roughening
- Hydro-demolition Bridge and road surfacing

Design and

Specifications

 Vacuum slurry and cuttings during cutting and surfacing operations. Slurry and cuttings shall not remain on permanent concrete or asphalt pavement overnight.

 Slurry and cuttings shall not drain to any natural or constructed drainage conveyance including stormwater systems. This may require temporarily blocking catch basins.

 Dispose of collected slurry and cuttings in a manner that does not violate ground water or surface water quality standards.

· Do not allow process water generated during hydro-demolition, surface roughening or similar operations to drain to any natural or constructed drainage conveyance including stormwater systems. Dispose process water in a manner that does not violate ground water or surface water quality standards.

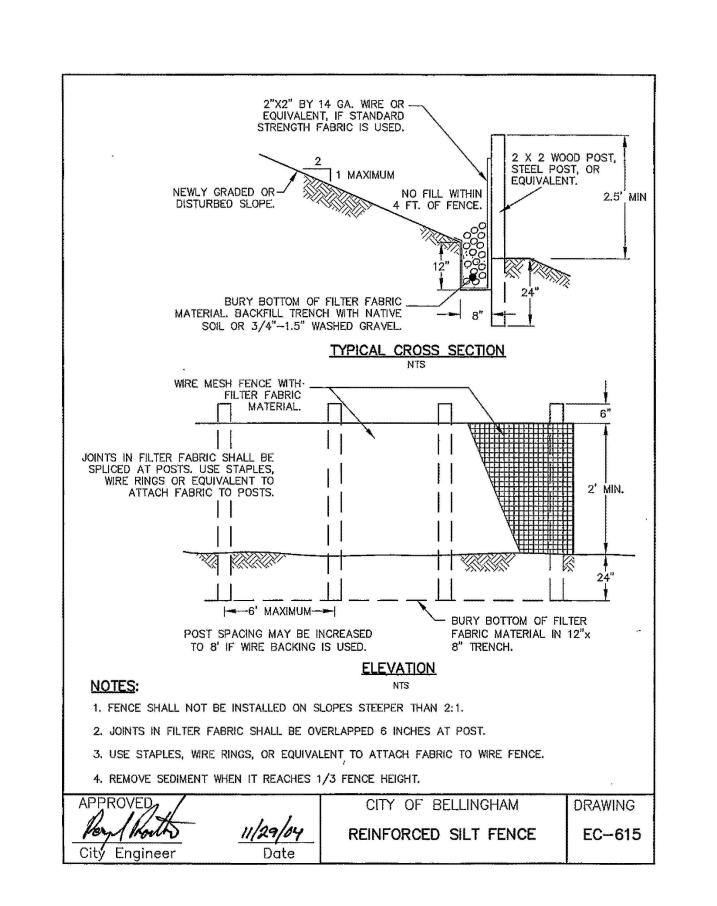
 Handle and dispose cleaning waste material and demolition debris in a manner that does not cause contamination of water. Dispose of sweeping material from a pick-up sweeper at an appropriate disposal

Continually monitor operations to determine whether slurry, cuttings, or process water could enter waters of the state. If inspections show that a violation of water quality standards could occur, stop operations and immediately implement preventive measures such as berms, barriers, secondary containment, and vacuum trucks.

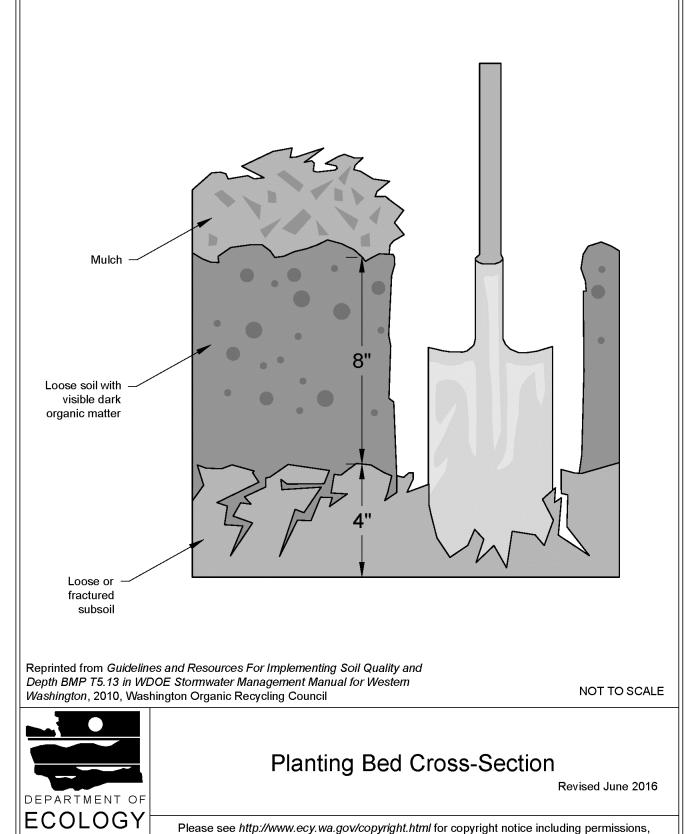
Volume II - Construction Stormwater Pollution Prevention - August 2012

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C SAWCUTTING & SURFACE POLLUTION nts







limitation of liability, and disclaimer.

State of Washington

## **GENERAL NOTES**

ESTABLISHING A MINIMUM SOIL QUALITY AND DEPTH IS NOT THE SAME AS PRESERVATION OF NATURALLY OCCURRING SOIL AND VEGETATION. HOWEVER, ESTABLISHING A MINIMUM SOIL QUALITY AND DEPTH WILL PROVIDE IMPROVED ON-SITE MANAGEMENT OF STORMWATER FLOW AND WATER QUALITY. SOIL ORGANIC MATTER CAN BE ATTAINED THROUGH NUMEROUS MATERIALS SUCH AS COMPOST. COMPOSTED WOODY MATERIAL, BIOSOLIDS, AND FOREST PRODUCT RESIDUALS. IT IS IMPORTANT THAT THE MATERIALS USED TO MEET THE SOIL QUALITY AND DEPTH BMP BE APPROPRIATE AND BENEFICIAL TO THE PLANT COVER TO BE ESTABLISHED. LIKEWISE, IT IS IMPORTANT THAT IMPORTED TOPSOILS IMPROVE SOIL CONDITIONS AND DO NOT HAVE AN EXCESSIVE PERCENT OF CLAY FINES. THIS BMP CAN BE CONSIDERED INFEASIBLE ON TILL SOIL SLOPES GREATER THAN 33 PERCENT.

## DESIGN GUIDELINES

SOIL RETENTION: RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

SOIL QUALITY: ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.

2.MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL 3.USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:

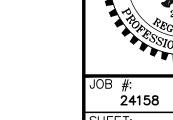
a.THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATION BELOW 25:1. THE CARBON TO NITROGEN RATION MAY BE AS HIGH 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.

b.CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIALS MEETING (A.) ABOVE: OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND MEETING THE CONTAMINANT STANDARDS OF GRADE A COMPOST. THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW: 1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.

2.AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT. 3.STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED

TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE—APPROVED" RATE OR AT A CUSTOM CALCULATED RATE. 4.IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS. MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.



Bellingham, WA 98225

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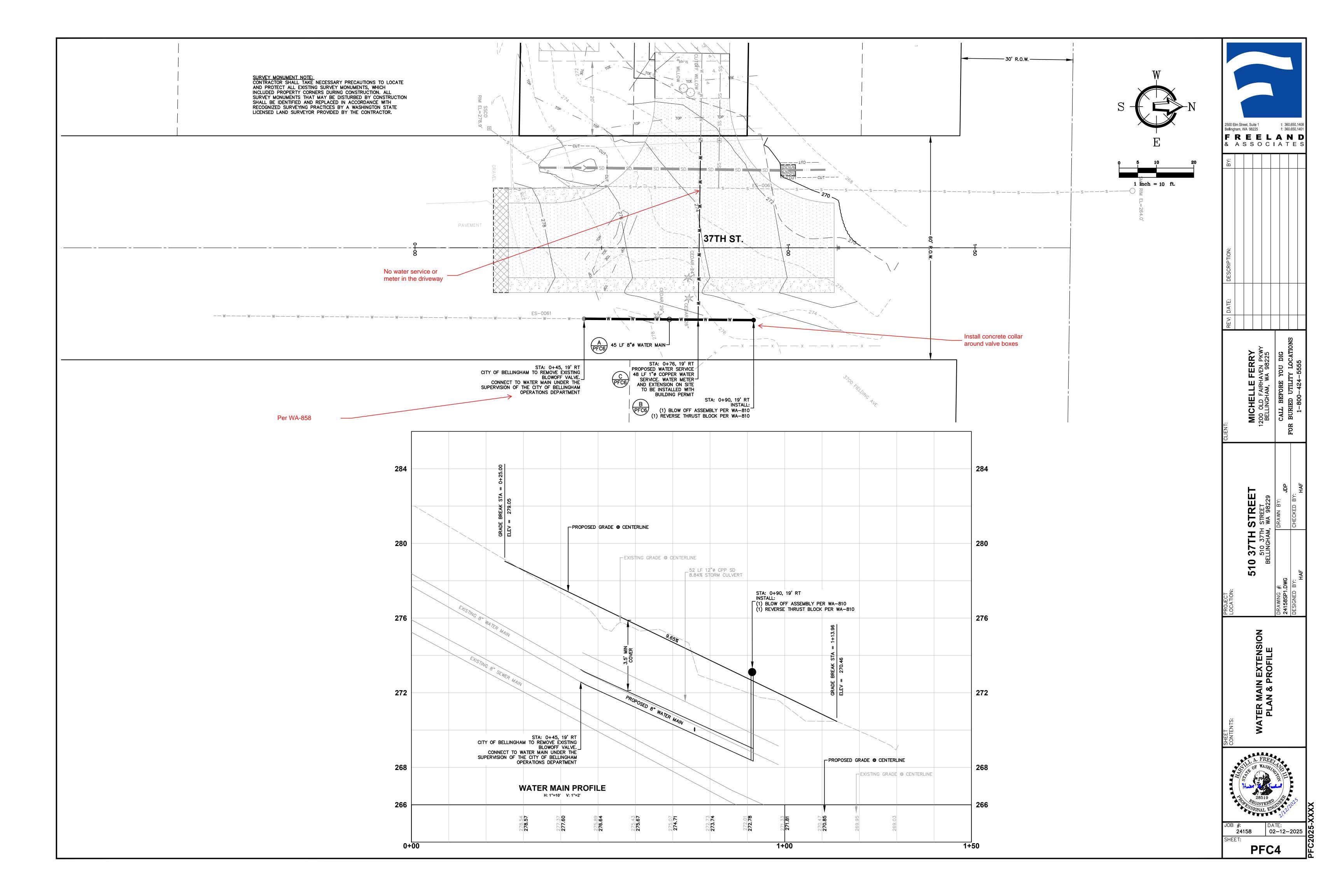
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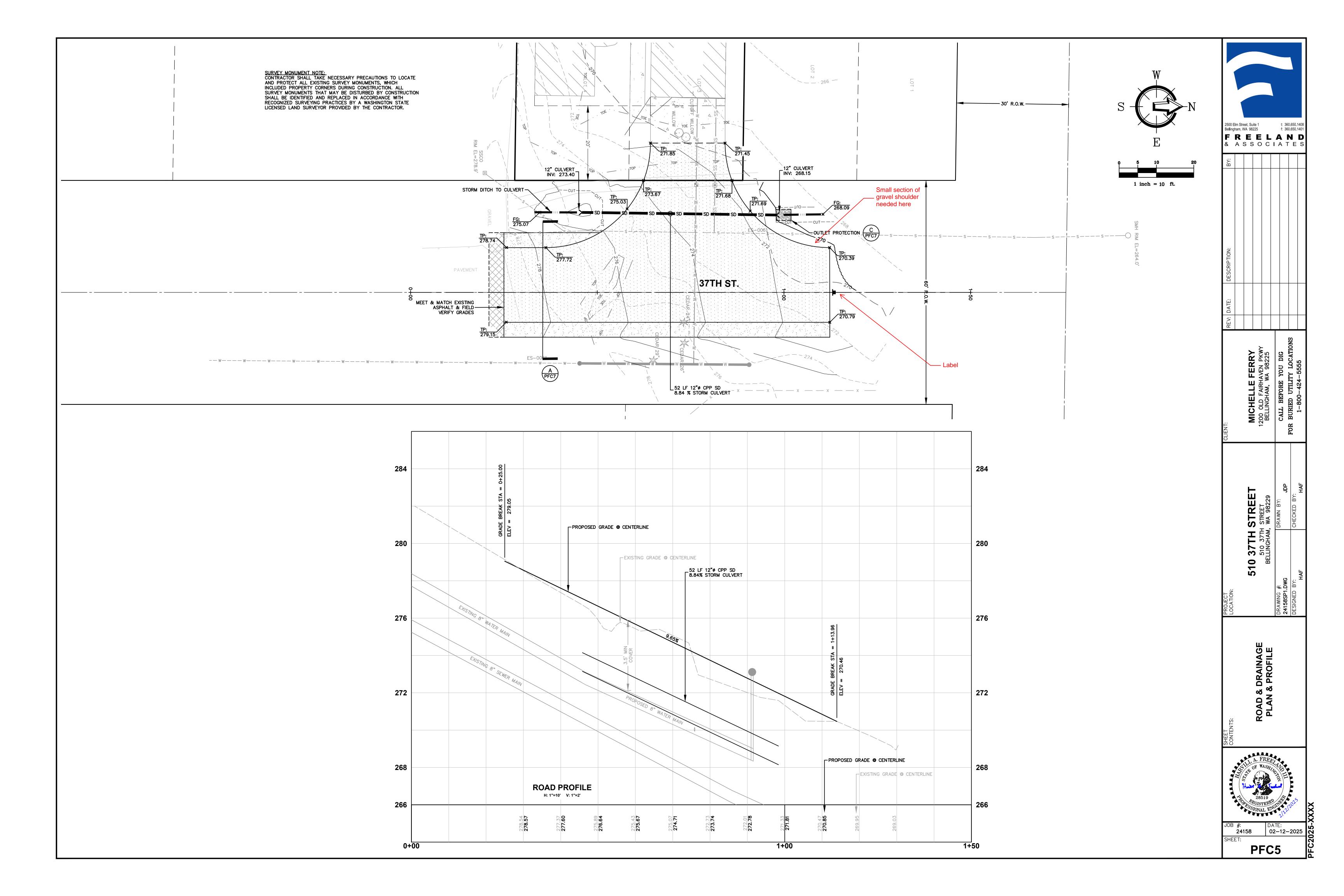
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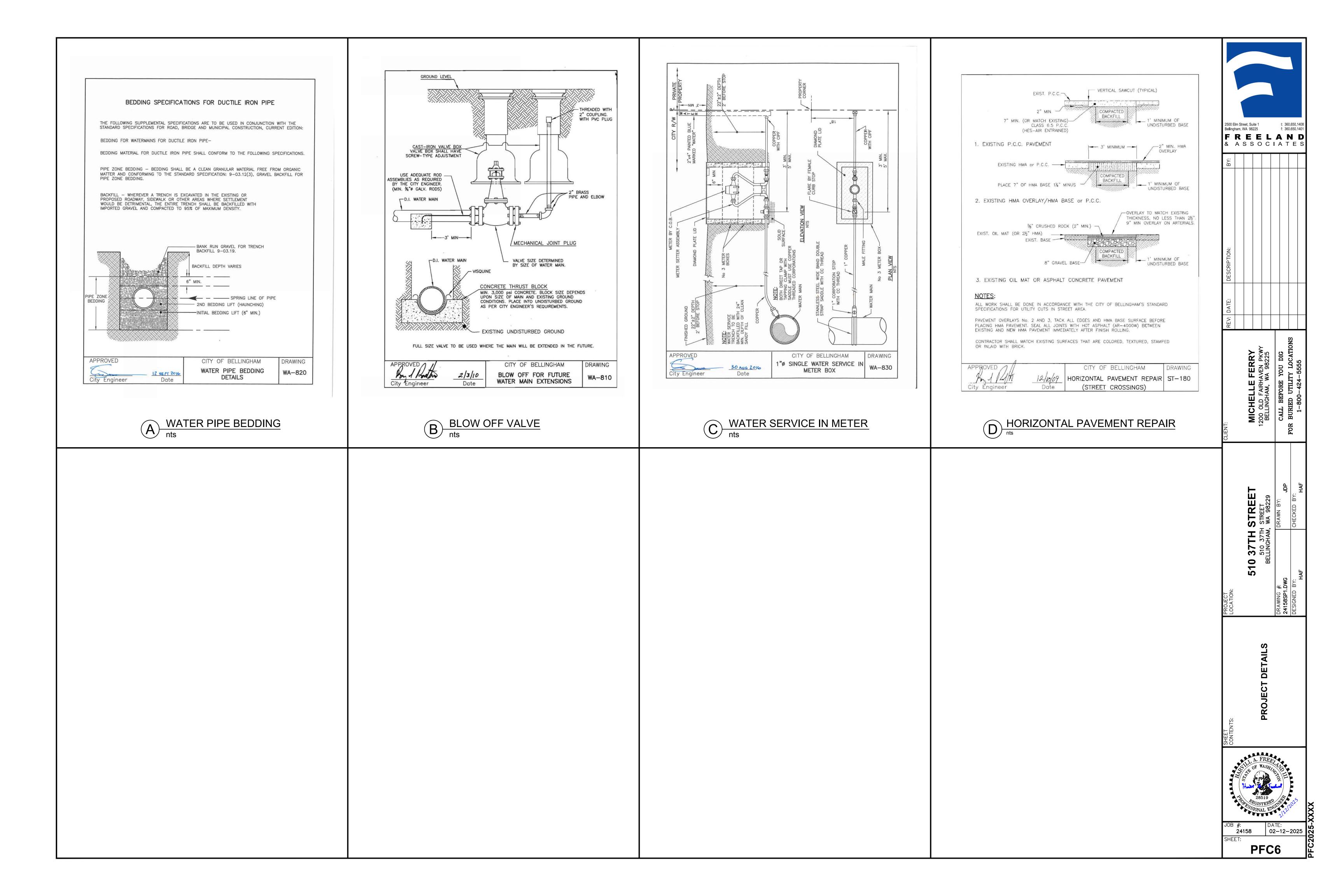
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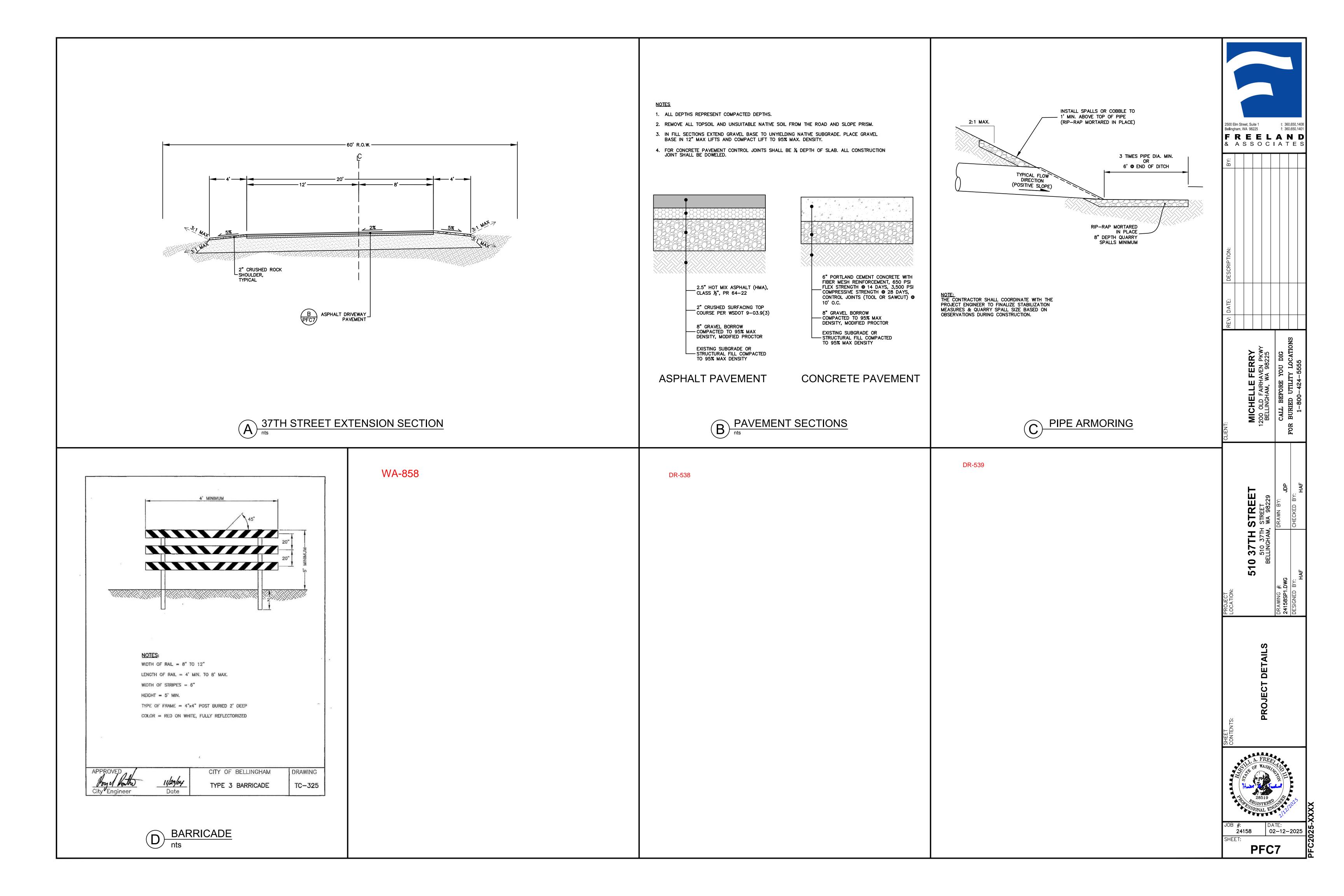
SOIL AMENDMENTS - BMP T5.13

02-12-2025









# **CITY OF BELLINGHAM - GENERAL NOTES**

### **CITY OF BELLINGHAM GENERAL REQUIREMENTS**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF BELLINGHAM DEVELOPMENT STANDARDS AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF BELLINGHAM.
   THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB—SURFACE CONDITIONS AND
- 3. THE CONTRACTOR SHALL LAY OUT AND SET ANY CONSTRUCTION STAKES AND MARKS NEEDED TO ESTABLISH THE LINES, GRADES, SLOPES OR CROSS—SECTIONS AS SHOWN ON THE PLANS OR
- TO ESTABLISH THE LINES, GRADES, SLOPES OR CROSS—SECTIONS AS SHOWN ON THE PLANS AS STAKED BY THE ENGINEER.
- THROUGHOUT THE WORK, THE CONTRACTOR SHALL COMPLY WITH ALL PERMITS.
   THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK.
- 6. WHEN THE CONTRACTOR CONSIDERS THE WORK PHYSICALLY COMPLETE AND READY FOR FINAL INSPECTION, THE CONTRACTOR SHALL REQUEST THAT CITY INSPECTOR SCHEDULE A FINAL INSPECTION. THE INSPECTOR WILL MAKE A FINAL INSPECTION AND NOTIFY THE CONTRACTOR IN WRITING OF ALL PARTICULARS IN WHICH THE FINAL INSPECTION REVEALS THE WORK INCOMPLETE OR UNACCEPTABLE. THE CONTRACTOR SHALL IMMEDIATELY TAKE SUCH CORRECTIVE MEASURES AS ARE NECESSARY TO REMEDY THE LISTED DEFICIENCIES.
- AS ARE NECESSARY TO REMEDY THE LISTED DEFICIENCIES.

  7. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY BEGINS, A PRE—CONSTRUCTION MEETING
- MUST BE HELD BETWEEN THE CONTRACTOR, OWNER, CITY ENGINEER AND PROJECT ENGINEER.

  8. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT
- STANDARD SPECIFICATIONS 1-07.23-PUBLIC CONVENIENCE AND SAFETY,

  10. PROOF OF LIABILITY INSURANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO THE PRE-
- CONSTRUCTION MEETING.

  11. NO WORK SHALL OCCUR BETWEEN 7:00 PM & 7:00 AM.
- 12. ALL HARD SURFACED PAVEMENTS MUST BE REPAIRED AT THE CLOSE OF EACH WORK DAY. THE REPAIRS CAN BE TEMPORARY WITH ASPHALT COLD MIX OR PERMANENT WITH HOT MIX ASPHALT OR CONCRETE. ALL REPAIRS SHALL BE ACCORDING TO CITY OF BELLINGHAM SPECIFICATION
- 13. ALL WORK MUST BE INSPECTED BY A REPRESENTATIVE OF THE CITY OF BELLINGHAM ENGINEERING DIVISION, AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS.
- 14. UPON COMPLETION OF THE PROJECT A CERTIFIED AS—BUILT PRINT SHALL BE PROVIDED TO THE CITY. AS—BUILTS SHALL BE ACCORDING TO CITY OF BELLINGHAM SPECIFICATION WA—897 AND SS—790.

### **TEMPORARY EROSION & SEDIMENTATION CONTROL**

1. THE CONTRACTOR SHALL PROVIDE A CERTIFIED EROSION AND SEDIMENTATION CONTROL LEAD

### **EARTHWORK**

- 1. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
- 2. THE CONTRACTOR SHALL RAZE, REMOVE AND DISPOSE OF ALL BUILDING AND FOUNDATIONS,
  STRUCTURES, FENCES AND OTHER OBSTRUCTIONS THAT LIE WHOLLY OR PARTIALLY WITHIN THE
  PROJECT LIMITS.

  (REVISED
  4. ALL BACK
  PROJECT LIMITS.
- 3. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS—SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
- 4. MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.
- 5. UNSUITABLE MATERIAL NOT FIT FOR A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.

#### PAVING

- 1. WHERE SHOWN ON THE PLANS, PAVEMENT MARKINGS SHALL BE OBLITERATED UNTIL BLEMISHES CAUSED BY THE PAVEMENT MARKING REMOVAL CONFORM TO THE COLORATION OF THE ADJACENT
- PAVEMENT.

  2. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
- 3. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
- 4. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT.
- 5. ASPHALT CONCRETE PAVEMENT SHALL NOT BE PLACED NOR COMPACTED DURING HOURS OF DARKNESS.
- 6. SUBGRADE SHALL BE CERTIFIED BY THE LICENSED DESIGN ENGINEER PRIOR TO PAVING. WITH A SIGNED SUBGRADE CERTIFICATION LETTER TO THE CITY.

#### **BASES**

- 1. GRAVEL BASES AND BALLAST MAXIMUM PARTICLE SIZE PASSING THE U.S. NO. 200 SIEVE SHALL NOT EXCEED 5%.
- 2. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY.

## **WATER MAINS**

- 1. ALL WATERMAIN PIPE SHALL BE DUCTILE IRON, THICKNESS CLASS 50, WITH CEMENT LINING ACCORDING TO A.W.W.A. STANDARD H3-71, C151-71 AND CEMENT LINING C104-71.
- 2. TEST PRESSURE FOR WATERMAIN ACCEPTANCE SHALL BE 200 p.s.i. AT THE HIGHEST POINT ON THE WATER LINE AND SHALL BE DONE ACCORDING TO CITY OF BELLINGHAM REQUIREMENTS. ALL

- PURIFICATION ACCEPTANCE TESTING SHALL BE ACCORDING TO CITY OF BELLINGHAM REQUIREMENTS. THE PIPE WILL NOT PASS UNLESS A ZERO BACTERIA COUNT IS OBTAINED FOR
- 3. ALL FIRE HYDRANTS SHALL BE ACCORDING TO CITY OF BELLINGHAM STANDARD PLAN WA-802. (REVISED 12/99 TO INCLUDE THE STORZ ADAPTER AND CAP)
- 4. ALL BACKFILL SHALL BE IMPORTED GRAVEL AND SHALL CONFORM TO SECTION 2-09 OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
- 5. ALL PIPE SHALL HAVE A MINIMUM COVER OF 3.5 FEET.
- 6. CONNECTION TO EXISTING CITY WATER SYSTEM SHALL BE PAID FOR IN ADVANCE BY A DEPOSIT AND SHALL BE COMPLETED BY THE CITY OF BELLINGHAM.
- 7. ALL VALVES SHALL BE GATE TYPE VALVES AND SHALL HAVE SCREW TYPE CAST IRON VALVE BOXES. SHORT VALVES SHALL BE SUITABLE FOR A NONSHOCK SHUTOFF PRESSURE OF 130 p.s.i. RUBBER SEATED OR DOUBLE—DISC PARALLEL SEAT VALVES AND SUITABLE FOR DIRECT BURIAL. VALVES 10" AND SMALLER SHALL BE IRON BODY FULL BRONZE MOUNTED, DOUBLE—DISC PARALLEL SEAT VALVES AND SUITABLE FOR INSTALLATION WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NONRISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2" SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS & SHALL BE AWWA APPROVED.
- 8. ALL BLOW OFFS SHALL BE ACCORDING TO CITY SPECIFICATION WA-810.

TWO CONSECUTIVE TESTS 24 HOURS APART.

9. FIRE HYDRANTS SHALL BE INSTALLED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT.

10. CONTRACTOR SHALL VERIFY DEPTH OF EXISTING MAIN AT CONNECTION.

## STORM DRAINAGE

- 1. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT 7-08. THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING
- 2. CORRUGATED POLYETHYLENE DRAIN PIPE, SMOOTH INTERIOR, 12" THROUGH 36" DIAMETER MAXIMUM, SHALL MEET THE MINIMUM REQUIREMENTS OF AASHTO M294 TYPE S.
- 3. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
- 4. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- 5. ALL CATCH BASIN GRATES SHALL BE THRU CURB INLET TYPE WITH VERTICAL CURB.
- 6. ALL STORM DRAIN PIPES REQUIRE 2 FOOT OF COVER OR CDF PER DETAIL DR-539.
- 7. STORM DRAIN CATCH BASINS ALLOWED ONLY TO A DEPTH OF 5 FEET. MANHOLES REQUIRED OVER 5' OF DEPTH PER WSDOT STADARD PLAN B-10.20-01.

- 8. ALL DRIVEWAY CULVERTS LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH. CULVERTS SHALL HAVE BEVELED END SECTIONS TO MATCH THE SIDE SLOPE.
- 9. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT AND MUST MEET THE FOLLOWING SPECIFICATIONS: 5"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 2" ROCK/10%-20% PASSING. ALL RIPRAP AT PIPE ENDS SHALL BE MORTARED.
- 10. ALL STORMWATER PIPE WITH LESS THAN 18" SEPARATION FROM WATER MAINS SHALL BE C909 PVC OR EQUAL.



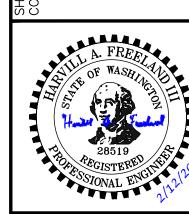
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MICHELLE FERRY
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JDP

LLINGHAM L NOTES

SHEET CONTENTS:



JOB #: DATE: 02-12-2025
SHEET: PFC8

CITY OF BELLINGHAM GENERAL NOTES nts