FREELAND

& ASSOCIATE

# LABOUNTY SELF STORAGE CIVIL IMPROVEMENT PLANS

TRACT IN SW 1/4, NE 1/4, SECTION 33, TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M., WITHIN THE CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

#### **LEGEND** = FOUND BRASS MON = EXISTING OVERHEAD ELECTRIC LINES = FOUND CITY OF FERNDALE MONUMENT ● = SET 1/2" REBAR W/ PLASTIC CAP = FOUND REBAR AND CAP = EXISTING STORM DRAIN CATCH BASIN (TYPE I = EXISTING STORM DRAIN LINE ■ = PROPOSED STORM DRAIN CATCH BASIN = PROPOSED STORM DRAIN LINE (SOLID WALL) = PROPOSED STORM DRAIN MANHOLE (TYPE 2) = PROPOSED 54" STORM DRAIN STRUCTURE = EXISTING SANITARY SEWER MANHOLE

# **SHEET INDEX**

C1	<b>COVER SHEET</b>
00	EVICTING CONDITION

**EXISTING CONDITIONS** C2**OVERALL PHASING PLAN** 

**TEMPORARY EROSION & SEDIMENT** 

**CONTROL PLAN (EAST) TEMPORARY EROSION & SEDIMENT CONTROL PLAN (WEST)** 

**TEMPORARY EROSION & SEDIMENT** 

**CONTROL DETAILS & SWPPP GRADING & DRAINAGE (EAST)** 

**GRADING & DRAINAGE (WEST)** 

**UTILITY PLAN (EAST)** 

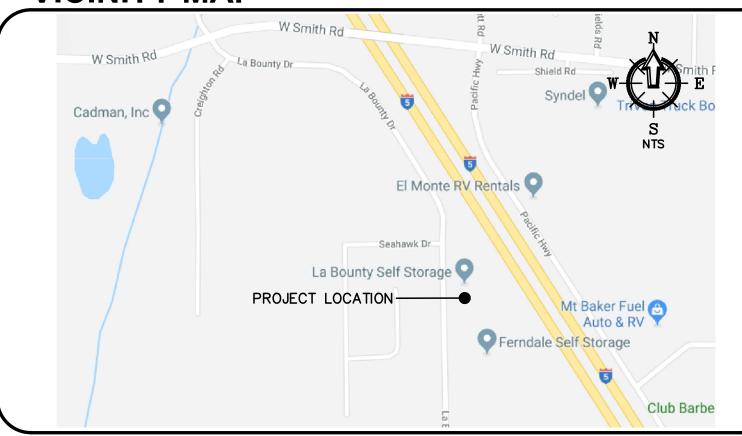
**UTILITY PLAN (WEST)** 

SITE DETAILS C11 **WATER DETAILS** 

WATER CROSSING DETAIL

PHASED PAVING PLAN

# **VICINITY MAP**



# PROJECT INFORMATION

#### **SURVEYOR OWNER'S REPRESENTATIVE** (360) 220-6545 boomarris@comcast.net

## **CIVIL ENGINEER** FREELAND & ASSOCIATES, INC.

J.P. SLAGLE, PE 220 W. CHAMPION ST., SUITE 200 BELLINGHAM, WA 98225 jpslagle@freelandengineering.com

# TAX PARCEL NO.

**GUTTER** 

INVERT

HIGH POINT

LINEAR FOOT

MONUMENT

ON CENTER

PERFORATED

POWER POLE

NUMBER

NIC

INVERT ELEVATION

LAND SURVEYOR

NOT IN CONTRACT

POINT OF CURVATURE

POINT OF INTERSECTION

POST INDICATOR VALVE

POUNDS PER SQUARE INCH

POINT OF BEGINNING

390233 276/419 0000 390233 293/360 0000

#### NORTHWEST SURVEYING & GPS, INC. JEROMY DEMEYER, PLS 407 5TH STREET LYNDEN, WA. 98264

(360) 354-1950 OFFICE jeromy@nwsurvey.com PERMITTING COORDINATOR

# AVT CONSULTING, LLC

ALI TAYSI FRANCINE ST LAURENT 1708 F STREET BELLINGHAM, WA 98225 (360) 527-9445

## **GENERAL NOTES**

= EXISTING FIRE HYDRAN1

IM[ = PROPOSED WATER VALVE

= PROPOSED FIRE HYDRANT

H = PROPOSED TEE OR CROSS

= EXISTING POWER/AND OR UTILITY POLE

= EXISTING TELEPHONE PEDESTAL

= PROPOSED FLOW DIRECTION ARROW

 $\square^{MB(1)}$  = EXISTING MAIL BOX

 $\frac{X}{XXXX}$  = DETAIL CALLOUT

#### **GENERAL REQUIREMENTS** BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF FERNDALE DEVELOPMENT

CONFLICT. THE MORE STRINGENT REQUIREMENT SHALL APPLY. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWS ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE THE TERMS OF ALL PERMITS.

STANDARDS AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. IN THE EVENT OF A

- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB-SURFACE CONDITIONS AND SOILS TYPES.
- 4. THE SURVEYOR 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 AS STAKED BY THE ENGINEER. ALL STRUCTURES AND GRADES WILL BE CLEARLY STAKED AND MARKED PRIOR TO CITY
- 5. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT
- 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.
- 7. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY A PRE-CONSTRUCTION MEETING MUST BE HELD 5. BETWEEN THE CONTRACTOR, OWNER, CITY ENGINEER AND PROJECT ENGINEER. (MINIMUM 3 DAYS PRIOR TO
- 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
- 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 FERNDALE DRAWING R-11.
- 13. ALL WORK MUST BE INSPECTED BY A REPRESENTATIVE OF THE CITY OF FERNDALE ENGINEERING DIVISION, AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS IN ACCORDANCE WITH SECTION 302 OF THE DEVELOPMENT STANDARDS.
- 14. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS
- 15. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION 2. AND PROVIDED IN CITY OF FERNDALE DATUM-VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.
- 16. METHOD OF SURVEY, SURVEY DATA, AND SURVEY EQUIPMENT UTILIZED TO CREATE THE BASE MAP/EXISTING CONDITIONS ARE NOTED ON SHEET C2 OF THIS PLAN SET.

#### GENERAL REQUIREMENTS CONTINUED

= PROPOSED CONTOUR (INDEX)

= PROPOSED CONTOUR (NORMAL)

PROPOSED ASPHALT PAVEMENT

= PROPOSED PAVEMENT REPAIR

= PROPOSED SPOT ELEV @ TOP OF FINISHED GRADE

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, 17. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CALL 1-800-424-5555 FOR UTILITY LOCATE 48 HOURS PRIOR TO WORK, CONTRACT TO HOLD. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL ADJACENT UTILITIES WHICH INCLUDE BUT ARE NOT LIMITED TO: WATER, SEWER, STORM SEWER POWER. TELEPHONE, CABLE TV, IRRIGATION, AND STREET LIGHTING. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISTURBED BY THE PROJECT UPON COMPLETION OF THE PROJECT.
  - A REVOCABLE ENCROACHMENT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING WORK IN THE PUBLIC
  - POT HOLING ALL EXISTING UTILITIES IS REQUIRED PRIOR TO CONSTRUCTION TO VERIFY DESIGN FEASIBILITY. THE CITY DOES NOT GUARANTEE AS BUILT INFORMATION IN THE CITY DATA BASE IS ACCURATE AND WILL NOT BE HELD RESPONSIBLE IF FIELD MODIFICATIONS AND/OR ADDITIONAL COSTS ARE REQUIRED BECAUSE POTHOLING WAS NOT DONE PRIOR TO DESIGN.
  - THE PROPOSED STORM POND & STORM WATER IMPROVEMENTS HAVE BEEN DESIGNED TO MEET OR EXCEED DOE STORM WATER REQUIREMENTS FOR THE ENTIRE CURRENT AND FUTURE DEVELOPMENT OF THE LABOUNTY SELF-STORAGE (HOME STORAGE) SITE INCLUDING POSSIBLE FUTURE LABOUNTY FRONTAGE IMPROVEMENTS. ANY FUTURE DEVELOPMENT PROPOSALS FOR THIS SITE WILL TRIGGER LABOUNTY FRONTAGE IMPROVEMENTS OR OTHER AS DETERMINED BY THE PUBLIC WORKS DIRECTOR.

- GRAVEL BASE AND GRAVEL BALLAST USED FOR TRENCH BACKFILL AND ROAD CONSTRUCTION MUST MEET CURRENT WSDOT REGULATIONS AND SPECIFICATIONS.
- BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF ITS
- THE CONTRACTOR OR PROPONENT SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. PRIOR IMPORTING OF MATERIAL FOR BASE AND CSTC THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

- 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.
- 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.
- EDGES OF EXISTING PAVEMENT. 5. ASPHALT CONCRETE PAVEMENT SHALL NOT BE PLACED NOR COMPACTED DURING HOURS OF DARKNESS.

ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL

SUBGRADE SHALL BE CERTIFIED IN WRITING BY THE ENGINEER PRIOR TO PAVING.

SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.

- TEST PRESSURE FOR WATERMAIN ACCEPTANCE SHALL BE 225 p.s.i. AT THE HIGHEST POINT ON THE WATER LINE AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. ALL PURIFICATION ACCEPTANCE TESTING SHALL BE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. THE PIPE WILL NOT PASS UNLESS A ZERO BACTERIA COUNT IS OBTAINED FOR TWO CONSECUTIVE TESTS 24 HOURS APART.
- ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF WSDOT
- ALL PIPES SHALL HAVE A MINIMUM COVER OF 3.0 FEET AND A MAXIMUM OF 3.5 FEET UNLESS OTHERWISE

ALL BACKFILL SHALL BE IMPORTED GRAVEL AND SHALL CONFORM TO SECTION 2-09 OF THE STANDARD

- 1. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER. IN ACCORDANCE WITH THE PROJECT
- MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM THE 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. 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 BASE.
- 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.
- 3. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- 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 PER WSDOT
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G. POWER, GAS, TELEPHONE, TELEVISION).

#### CITY OF FERNDALE NOTES

- 1. NO ADDITIONAL FRONTAGE IMPROVEMENTS OR IN LIEU FEES WILL BE REQUIRED FOR PHASE CONSTRUCTION. HOWEVER, ENGINEERS ESTIMATE AND IN LIEU FEES WILL BE REQUIRED FOR AND PRIOR TO FINAL CITY ACCEPTANCE/APPROVAL FOR PHASE 3 CONSTRUCTION.
- ALL CIVIL IMPROVEMENTS ASSOCIATED WITH THE PHASE 1 AND PHASE 2 APPROVED HOME STORAGE CIVIL PLANS TO MEET FERNDALE MUNICIPAL CODE 15.05.
- APPLICANT/OWNER WILL PROVIDE ANYTIME ACCESS TO BOTH THE CITY AND FIRE DISTRICT AS NEEDEL KEY OR CODE ACCESS TO THE SATISFACTION OF BOTH CITY AND FIRE DISTRICT TO PROVIDE SAID ACCESS WILL BE REQUIRED PRIOR TO CITY FINAL ACCEPTANCE OF THE PROJECT.

ENGINEER'S CERTIFICATION: "I HEREBY CERTIFY THAT THE IMPROVEMENTS OF LABOUNTY SELF STORAGE HAVE BEEN INSPECTED BY FREELAND & ASSOCIATES, INC. AND CONSTRUCTED IN GENERAL CONFORMANCE WITH THE PLANS APPROVED BY PUBLIC WORKS DIRECTOR FOR SAID DEVELOPMENT AND THE GENERAL SPECIFICATIONS ADOPTED BY THE CITY OF FERNDALE DEPARTMENT OF PUBLIC WORKS."

ABBREVIATIONS				
1'/1" AC AD AF#	ONE FOOT/ONE INCH ACRE ABSOLUTE VALUE OF THE ALGEBRAIC GRADE DIFFERENCE AUDITORS FILE NUMBER	K PT/POT PVC PVI	LENGTH OF VERTICAL CURVE PER PERCENT GRADE DIFFERENCE POINT OF TANGENCY POLYVINYL CHLORIDE POINT OF VERTICAL INFLECTION	
APPROX	APPROXIMATE	PWR	POWER	
ASB/AB	AS-BUILT	R	RADIUS	
ASPH	ASPHALT	R/C	REBAR WITH CAP	
BLDG	BUILDING BEST MANAGEMENT PRACTICE BOUNDARY	RCP	REINFORCED CONCRETE PIPE	
BMP		RET	RETAINING	
BNDRY		RIM	RIM	
BVCS	BEGINNING OF VERTICAL CURVE STATION	ROW RPP	RIGHT-OF-WAY REDUCED PRESSURE PRINCIPAL	
BVCE	BEGINNING OF VERTICAL CURVE	RR	RAILROAD	
	ELEVATION	S	SOUTH	
	COMPACT PARKING STALL	SAN	SANITARY	
CC	CURB CUT	SCH	SCHEDULE	
CB	CATCH BASIN	SD	STORM DRAIN	
CL	CENTERLINE	SDCB	STORM DRAIN CATCH BASIN	
CMP	CORRUGATED METAL PIPE CONTROL	SDCO	STORM DRAIN CLEANOUT	
CNTRL		SDMH	STORM DRAIN MAN HOLE	
CO	CLEANOUT CORNER CORRUGATED POLYETHYLENE PIPE	SERV	SERVICE	
COR		STND/STD	STANDARD	
CPP		SS	SANITARY SEWER	
CONC	CONCRETE CRUSHED SURFACING TOP COURSE CULVERT	SSCO	SANITARY SEWER CLEANOUT	
CSTC		SSMH	SANITARY SEWER MANHOLE	
CULV		ST	STREET	
Ø DEMO DI	DIAMETER DEMOLITION DUCTILE IRON	TBM TC	TEMPORARY BENCH MARK TOP OF CURB	
DWGS	DRAWINGS	TEL/TELE	TELEPHONE TEMPORARY EROSION & SEDIMENTATION CONTROL	
E	EAST	TESC		
EA EL/ELEV ENC	EACH ELEVATION REVOCABLE ENCROACHMENT PERMIT	TP TS TW	TOP OF PAVEMENT TOP OF SIDEWALK TOP OF WALL	
EP/EOP	EDGE OF PAVEMENT	TYP	TYPICAL	
ESMT	EASEMENT	UG	UNDERGROUND	
EVCS	END OF VERTICAL CURVE STATION	VC	VERTICAL CURVE	
EVCE	END OF VERTICAL CURVE ELEVATION	VEG	VEGETATION	
EX/EXIST	EXISTING	W	WEST	
FDC FFE/FF FG	FIRE DEPARTMENT CONNECTION FINISH FLOOR ELEVATION FINISH GRADE	WA W/IN WSDOT	WATER WITHIN WASHINGTON STATE DEPARTMENT	
FH FND	FIRE HYDRANT FOUND		OF TRANSPORTATION	

**APPROVED** CITY OF FERNDALE PUBLIC WORKS DEPARTMENT

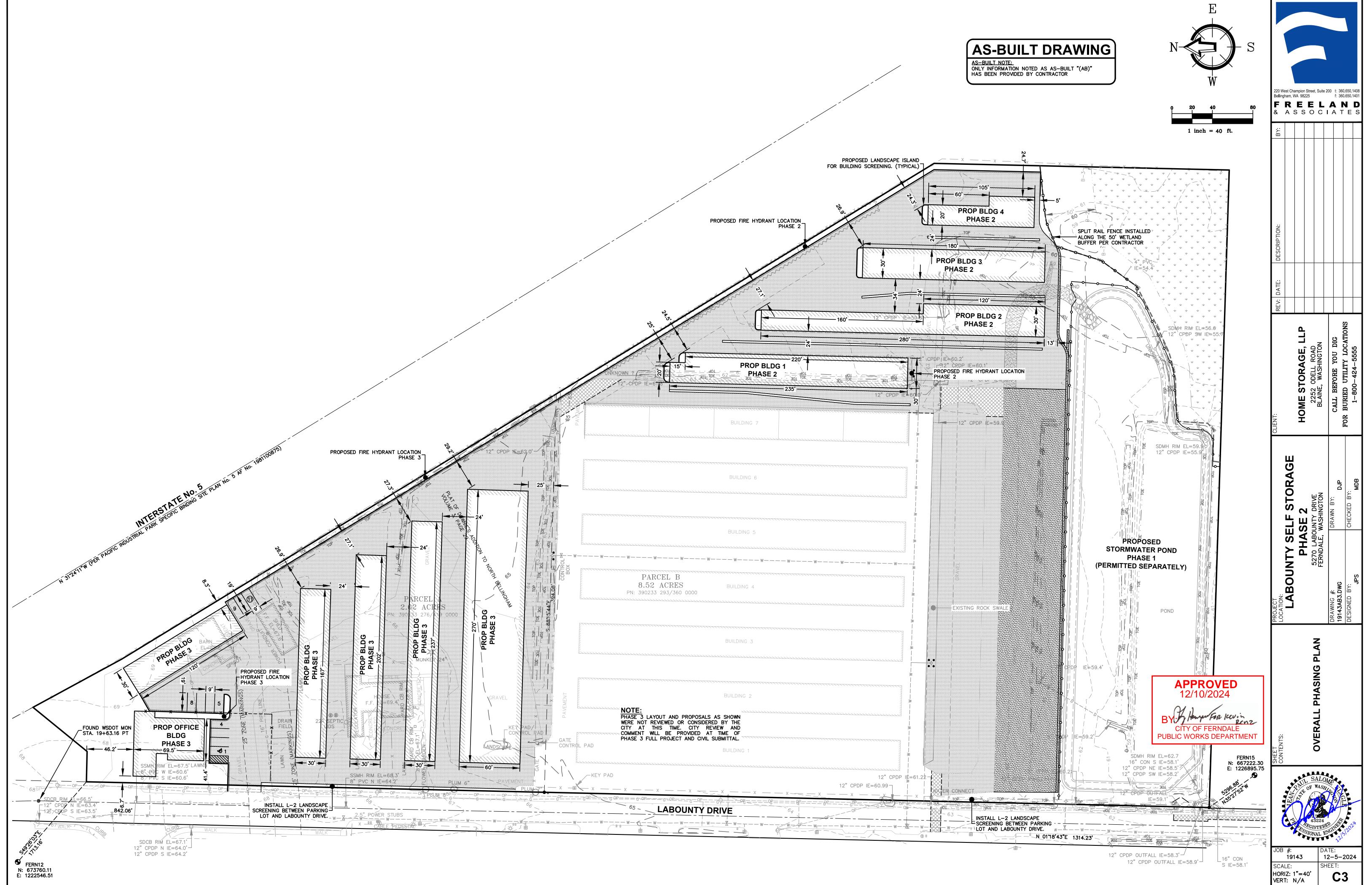
AS-BUILT DRAWING ONLY INFORMATION NOTED AS AS-BUILT "(AB)" HAS BEEN PROVIDED BY CONTRACTOR

12-5-2024

SCALE: HORIZ: N/A VERT: N/A

E SE

#### LAND DESCRIPTION **AS-BUILT DRAWING** THAT PORTION OF LOT 5, PLAT OF DOWNIES ADDITION TO NORTH BELLINGHAM, WASHINGTON, WHATCOM COUNTY, WASHINGTON, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 3 OF PLATS, PAGE 29, RECORDS OF WHATCOM COUNTY, AS-BUILT NOTE: ONLY INFORMATION NOTED AS AS-BUILT "(AB)" HAS BEEN PROVIDED BY CONTRACTOR WASHINGTON, AND A PORTION OF VACATED ALDER STREET ATTACHING THERETO BY OPERATION OF LAW, LYING SOUTHWESTERLY OF THE PRIMARY STATE HIGHWAY No. 1 (PACIFIC HIGHWAY); EXCEPT RIGHT—OF—WAY FOR LABOUNTY ROAD LYING ALONG THE WESTERLY LINE THEREOF AND EXCEPT COUNTY ROAD LYING ALONG THE NORTHERLY LINE THEREOF; AND ALSO EXCEPT THAT PORTION AS SET FORTH IN JUDGMENT AND DECREE OF APPROPRIATION ENTERED JULY 6, 1972 IN WHATCOM COUNTY SUPERIOR COURT CASE No. 45992, AS ITEM No. 1. 20 West Champion Street, Suite 200 t: 360.650.140 Bellingham, WA 98225 PARCEL B: FREELAND ASSOCIATES LOT 12, PLAT OF DOWNIE'S ADDITION TO NORTH BELLINGHAM, WASHINGTON, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 3 OF PLATS, PAGE 29, RECORDS OF WHATCOM COUNTY, WASHINGTON; EXCEPT THOSE PORTIONS DEEDED TO THE STATE OF WASHINGTON OCTOBER 20, 1954 AND NOVEMBER 15, 1971 1 inch = 40 ft.UNDER WHATCOM COUNTY AUDITOR'S FILE Nos. 783059 AND 1104866, RESPECTIVELY. SITUATE IN WHATCOM COUNTY, WASHINGTON. **SURVEYORS NOTES** THIS SURVEY WAS PERFORMED BY STANDARD FIELD TRAVERSE USING A LEICA TS12 TOTAL STATION AND CARLSON BRX5 GNSS RECEIVER BOTH WITH A CARLSON SURVEYOR PLUS COLLECTOR/FIELD COMPUTER IN JUNE OF 2019. 2. THIS SURVEY TIED INTO CONTROL POINTS FROM OUR PREVIOUS WORK WITHIN THE AREA AND LOT CORNERS AS SHOWN. 3. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND DOES NOT PURPORT TO SHOW ANY OR ALL EASEMENTS THAT A CURRENT TITLE REPORT MIGHT REVEAL. SEE UTILITY EASEMENT TO THE CITY OF FERNDALE PER AF No. 2080103464 AS CONSTRUCTED, NO LOCATION DESCRIBED. 4. VERTICAL DATUM = W.S.D.O.T. MONUMENT ID: 1420 (GP37005-31) EL =77.26' (NAVD 88). 5. CONTOUR INTERVALS ARE 1 FOOT. CONTOURS ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY. 6. NORTHWEST SURVEYING & GPS INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR UTILITIES NOT SHOWN HEREON. UNDERGROUND UTILITIES ARE KNOWN TO EXIST WITHIN THE AREA OF CONSTRUCTION. THE LOCATION OF EXISTING UTILITIES SHOWN ARE BASED UPON FIELD SURVEY AND VISUAL IDENTIFICATION. ALL EXISTING UTILITIES MAY NOT BE INDICATED WITHIN THE CONSTRUCTION DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ANY AND ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND TO ALERT THE ENGINEER AND OWNER PROMPTLY IN CASE OF CONFLICT. . • • • • • 12" CPDP IE=59.8"— · · · · · · · · SDMH RIM EL±56.€ \_ 12"`CPDP SW IE'=55: · • • 7-12" \CPDP | IE=60.2' CPDP IE=60.1 12" CPDP (E=59.9" BUILDING 7 コルピ SDMH RIM EL=59.9や 12" CPDP IE=55.9' ш BUILDING 6 BUILDING 5 ABOUNT PARCEL B 8.52 ACRES BUILDING 4 PN: 390233 293/360 0000 PARCEL A 2.62 ACRES EXISTING ROCK SWALE PN: 390233 276/419 0000 BUILDING 3 BUILDING 2 PUBLIC WORKS DEPARTMENT \_FOUND WSDOT MON / STA. 19+63.16 PT SDMH RIM EL=62.7 16" CON S IE=58.1'\_ FERN15 N: 667222.30 E: 1226895.75 SSMH RIM EL=67.5' LAWNS 8" PVC W IE=60.6' 8" PVC S IE=60.6' 12" CPDP NE IE=58.5' 12" CPDP IE = 60.21 ¬ 12" CPDP SW IE=58.2' SSMH RIM EL=68.3 12" CPDP IE=61.227 12" CPDP IE=60.14 7 8" PVC N IE=64.2" 12" CPDP OUTFALL LABOUNTY DRIVE N 0178'43"E 1314.23' SDCB RIM EL=67.1' 12" CPDP N IE=64.0' 12" CPDP S IE=64.2' 12" CPDP OUTFALL IE=58.3'— 12" CPDP OUTFALL IE=58.9'— 19143 12-5-2024 \_16" CON S IE=58.1' N: 673760.11 HORIZ: 1"=40' VERT: N/A E: 1222546.51



HORIZ: 1"=20' VERT: N/A

#### **CONSTRUCTION SCHEDULING NOTE**

CONTRACTOR SHALL MONITOR WEATHER CONDITIONS AND FORECASTS DURING CONSTRUCTION. THE AMOUNT OF SOIL THAT MAY BE EXPOSED AT ANY TIME DEPENDS ON THE CONTRACTOR'S AVAILABLE CREW, MATERIALS, AND EQUIPMENT. CONTRACTOR SHALL SCHEDULE WORK SO THAT ALL EXPOSED SOIL (INCLUDING TRENCHES AND STOCKPILES) CAN BE COMPLETELY COVERED AND STABILIZED PRIOR TO ANY SIGNIFICANT RAINFALL EVENT ON SITE.

#### **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 DURING

### **HAUL ROUTE**

CONTRACTOR SHALL PROVIDE A HAUL ROUTE PLAN TO THE CITY OF FERNDALE FOR APPROVAL AS NECESSARY.

#### NPDES NOTE

THIS PROJECT WILL DISTURB MORE THAN ONE ACRE OF SOIL AND WILL REQUIRE A NATIONAL DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT FROM WASHINGTON DOE. THE CONTRACTOR SHALL MEET THE REQUIREMENTS SET FORTH IN THE NPDES PERMIT.

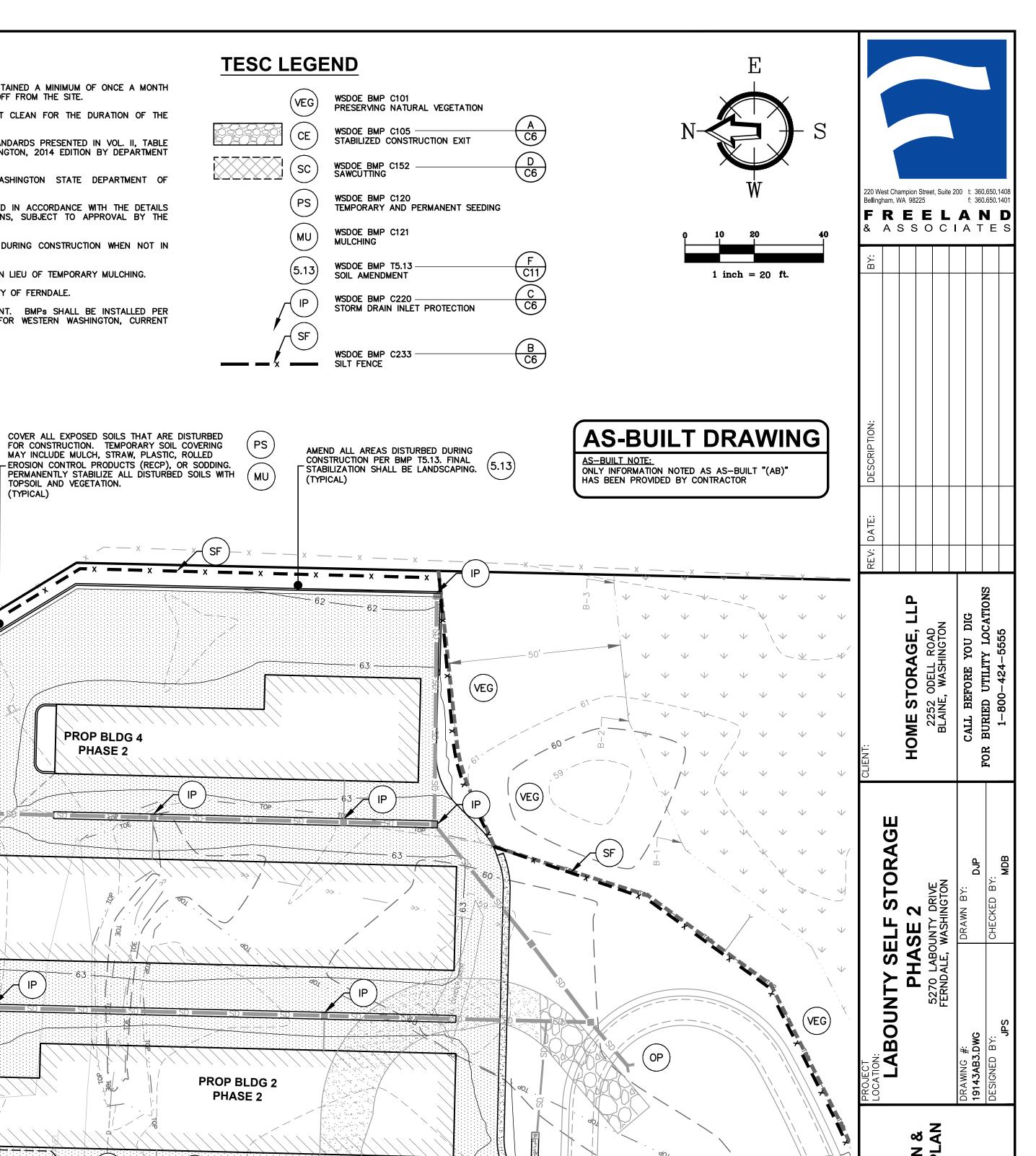
#### TEMPORARY EROSION/SEDIMENTATION CONTROL

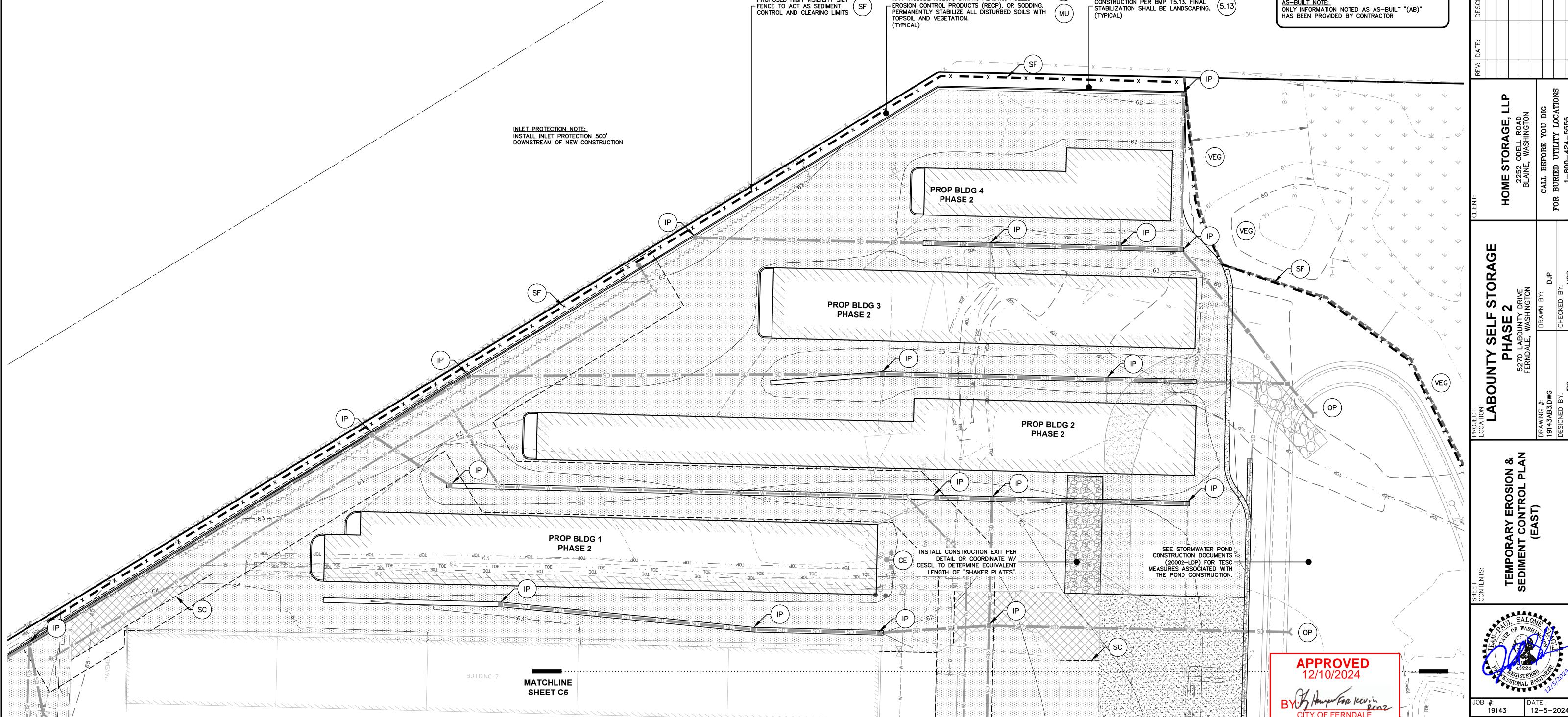
- 1. A COPY OF THE APPROVED TESC PLAN MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- APPROVAL OF THIS TEMPORARY EROSION & SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STRUCTURES, DRIVEWAYS OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, 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
- 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 CONSTRUCTION.
- 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 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
- 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.

- 9. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH 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
- 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 ECOLOGY.
- 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
- 15. NETS AND/OR EROSION CONTROL BLANKETS (BMP C122) MAY BE USED IN LIEU OF TEMPORARY MULCHING.
- CONSTRUCTION SCHEDULE- PENDING APPROVAL OF PLANS FROM THE CITY OF FERNDALE.

PROPOSED HIGH VISIBILITY SILT

16. 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





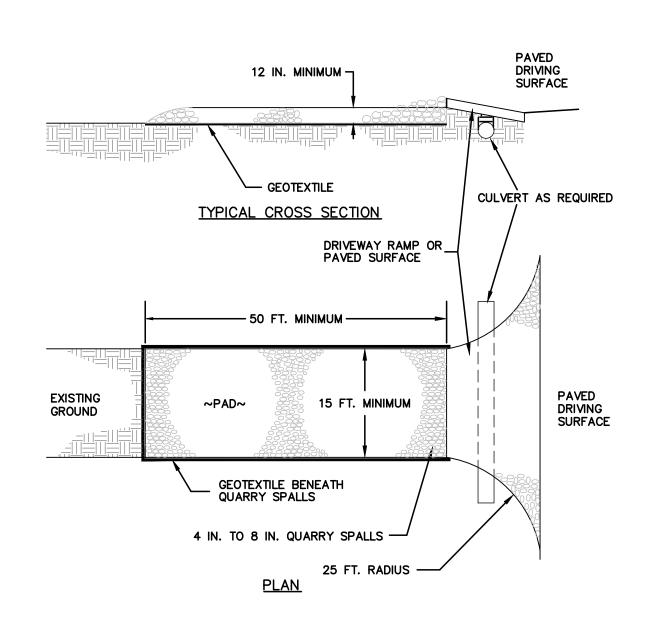
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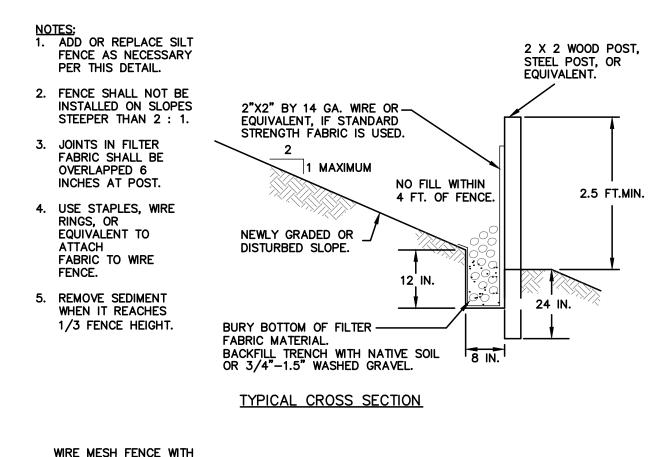
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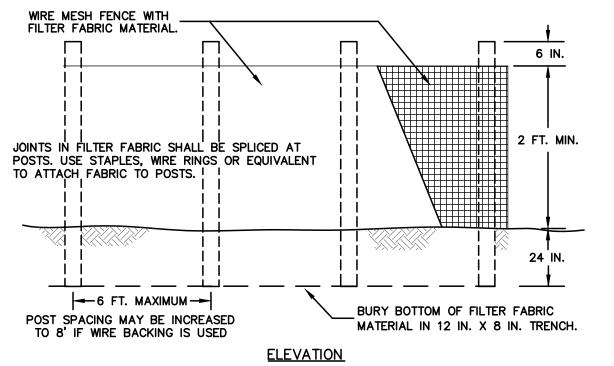


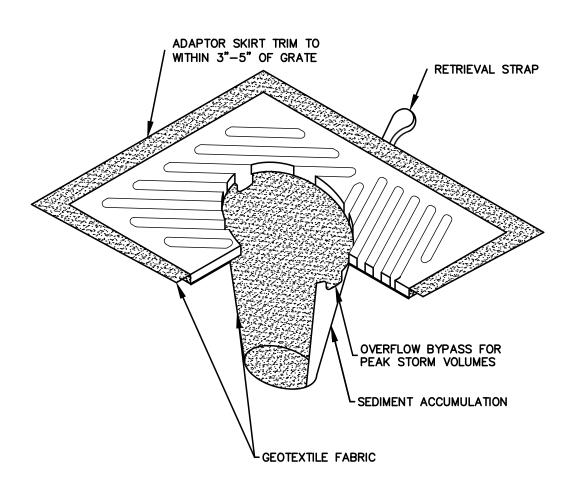
- 1. PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE CERTIFIED EROSION & SEDIMENTATION CONTROL LEAD.
- 2. PAD SHALL BE INSTALLED IN PLANTING STRIP AS APPROPRIATE.
- 3. PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE OR PER THE DIRECTION OF ENGINEER OF RECORD OR THE CESCL.
- 4. MINIMUM DIMENSIONS MAY BE MODIFIED AS REQUIRED BY SITE CONDITIONS UPON APPROVAL OF THE CITY OF FERNDALE.



CLEARING LIMITS WILL BE DELINIATED IN THE FIELD PRIOR TO CONSTRUCTION WITH SILT FENCE, OR THE BMPS







- 1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
- 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL
- 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.



#### 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

**Specifications** 

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

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

**SAWCUTTING & SURFACE POLLUTION** 

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #1 INCLUDE: BMP C101: PRESERVING NATURAL VEGETATION BMP C103: HIGH VISIBILITY PLASTIC OR METAL FENCE

#### **ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS**

ELEMENT #1: MARK CLEARING LIMITS

LISTED BELOW OR SIMILAR.

A SINGLE ENTRANCE POINT WILL BE INSTALLED FOR CONSTRUCTION ACCESS TO THE PROPOSED PROJECT AREA. EARTHWORK EQUIPMENT WILL REMAIN WITHIN THE DISTURBED AREA TO THE MAXIMUM EXTENT PRACTICABLE. CONSTRUCTION TRAFFIC THAT WILL ROUTINELY LEAVE THE SITE (E.G. WORK TRUCKS, PERSONAL VEHICLES) SHALL REMAIN ON PAVED OR GRAVEL SURFACES TO THE MAXIMUM EXTENT PRACTICABLE. PAVED ROADS & PARKING AREAS WILL BE CLEANED AT THE END OF EACH DAY. SEDIMENT TRANSPORTED TO ROADS FROM THE SITE WILL BE SWEPT AND DISPOSED OF AT A CONTROLLED SEDIMENT DISPOSAL AREA ON SITE OR REMOVED OFF SITE AND DISPOSED AT AN APPROVED FILL SITE. IF STREET WASHING IS NEEDED, IT WILL ONLY OCCUR AFTER SEDIMENT HAS BEEN REMOVED AS DESCRIBED. THE RESULTING WASH WASTEWATER WOULD THEN BE CONTROLLED BY PUMPING IT BACK ON SITE. ALL CONSTRUCTION ACCESS POINTS WILL BE RESTORED TO PRE-CONSTRUCTION OR PROPOSED CONDITIONS.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #2 INCLUDE:

BMP C105: STABILIZED CONSTRUCTION ENTRANCE BMP C107: PARKING AREA STABILIZATION

HOUSEKEEPING/MAINTENANCE BMP: DAILY STREET SWEEPING HOUSEKEEPING/MAINTENANCE BMP: BMP C140 DUST CONTROL

## **ELEMENT #3: CONTROL FLOW RATES**

MAINTAIN EXISTING VEGETATION TO THE MAXIMUM EXTENT PRACTICAL TO CONTROL FLOW RATES. THIS PROJECT INCLUDES CONSTRUCTION OF A STORM POND FOR FLOW CONTROL. POND SHALL BE INSTALLED AS EARLY AS POSSIBLE IN THE CONSTRUCTION SCHEDULE. CLEAN RUNOFF MAY BE CONVEYED DIRECTLY TO EXISTING DRAINAGE SYSTEMS. TURBID RUNOFF SHOULD BE COLLECTED AND DISPERSED ACROSS THE PROPERTY. TEMPORARY SEDIMENT TRAPS OR PONDS MAY BE DESIGNED, LOCATED, AND INSTALLED IF THE PROJECT ENGINEER DEEMS

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #3 INCLUDE: BMP C101: PRESERVING VEGETATION

## **ELEMENT #4: INSTALL SEDIMENT CONTROLS**

THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL AND EXISTING VEGETATION WILL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE. ELEMENT #1 OF THIS PLAN, INCLUDING IMPLEMENTING PRESERVING NATURAL VEGETATION, WILL HELP RETAIN SOME AREAS IN AN UNDISTURBED STATE. SILT FENCING WILL BE INSTALLED DOWNHILL FROM DISTURBED AREAS TO TRAP AND RETAIN SEDIMENT ON SITE. OTHER SEDIMENT CONTROLS, SUCH AS TEMPORARY SEDIMENT TRAPS, SUMPS, GRAVEL FILER BERMS, STRAW WATTLES, ETC. MAY BE INSTALLED IF WARRANTED AS CONDITIONS CHANGE ON SITE DURING CONSTRUCTION. THE

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #4 INCLUDE:

- BMP C233: SILT FENCE BMP C208: TRIANGULAR SILT DIKE
- BMP C209: OUTLET PROTECTION

POND MAY BE UTILIZED FOR SEDIMENT CONTROL IF NEEDED.

BMP C207: CHECK DAMS WSDOT - COMPOST BERM

#### **ELEMENT #5: STABILIZE SOILS**

IF CONSTRUCTION OCCURS IN THE DRY SEASON, (5/1 THROUGH 9/30) SOILS WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. IF CONSTRUCTION OCCURS IN THE WET SEASON (10/1 THROUGH 4/30) SOILS WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. WHEN ACTIVE GRADING IS IN PROGRESS, THE DEADLINE FOR SOIL STABILIZATION MAY BE EXTENDED UPON DETERMINING THAT THE LIKELIHOOD OF EROSION IMPACTS IS LOW BASED ON THE TYPE AND AMOUNT OF SOIL EXPOSED, SITE TOPOGRAPHY, POTENTIAL FOR DISCHARGE TO CRITICAL AREAS AND LAKES, AND OTHER FACTORS. IN ADDITION, WEATHER CONDITIONS WILL CONTINUALLY BE MONITORED, INCLUDING BEFORE HOLIDAYS AND WEEKENDS, FOR PURPOSES OF PREPARING THE SITE FOR PREDICTED WEATHER CONDITIONS. BMPS THAT ARE EFFECTIVE IN STABILIZING SOILS AND PROTECTING THEM FROM EXPOSURE TO RAIN AND WIND OR OTHER CLIMATIC CONDITIONS WILL BE IMPLEMENTED THROUGHOUT THE PROJECT. EVALUATION AND MONITORING OF BMP EFFECTIVENESS WILL OCCUR ON A DAILY BASIS. IN ADDITION, IN THE EVENT OF FORECASTED PRECIPITATION EVENTS, ADDITIONAL MEASURES TO STABILIZE SOILS WILL

BMPS THAT WILL BE CONSIDERED THROUGHOUT CONSTRUCTION INCLUDE BUT ARE NOT LIMITED TO TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED, AND DUST CONTROL.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #5 INCLUDE:

BMP C120: TEMPORARY AND PERMANENT SEEDING

- BMP C121: MULCHING
- BMP C122: NETS AND BLANKETS BMP C123: PLASTIC COVERING
- BMP C124: SODDING
- BMP C125: TOPSOILING BMP C130: SURFACE ROUGHENING BMP C140: DUST CONTROL

**ELEMENT #6: PROTECT SLOPES** CUT AND FILL SLOPES ARE DESIGNED AT SLOPES OF 2:1 OR FLATTER TO MINIMIZE EROSION. ALL SLOPES SHALL BE COMPACTED AND STABILIZED WITH VEGETATION, MULCH, OR OTHER APPLICABLE SOIL COVERING DURING CONSTRUCTION. NATIVE SOILS ON SITE ARE GLACIAL TILL WITH MODERATE SUSCEPTIBILITY TO EROSION. ALL CUT AND FILL SLOPES SHALL BE ROUGHENED WITH EQUIPMENT TRACKING. SLOPES SHOULD BE KEPT AS FLAT AS POSSIBLE DURING CONSTRUCTION. STRAW WATTLES, GRADIENT TERRACES, OR OTHER APPLICABLE BMPS SHOULD ALSO BE CONSIDERED TO MINIMIZE RUNOFF VELOCITIES ON SLOPES. UPSLOPE DRAINAGE SHOULD BE DIVERTED AWAY FROM SLOPES AS MUCH AS POSSIBLE DURING CONSTRUCTION. DIVERTED FLOWS SHALL BE DIRECTED TO THE NATURAL DRAINAGE LOCATION AT OR BEFORE THE PROPERTY BOUNDARY, DOWN SLOPE FLOWS SHALL BE COLLECTED IN PIPES, SLOPE DRAINS, OR PROTECTED CHANNELS. IF GROUNDWATER SEEPS ARE

OBSERVED IN CUT SLOPES, PROVIDE A STABILIZED DRAINAGE SYSTEM FOR THE SEEPS. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF UTILITY TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS. CHECK DAMS SHALL BE PLACED AT REGULAR INTERVALS WITHIN TRENCHES THAT ARE CUT DOWN A SLOPE. STABILIZE SOILS ON SLOPES AS SPECIFIED IN ELEMENT #5.

- BMP C120: TEMPORARY AND PERMANENT SEEDING
- BMP C121: MULCHING BMP C122: NETS AND BLANKETS
- BMP C123: PLASTIC COVERING BMP C130: SURFACE ROUGHENING BMP C235: STRAW WATTLES
- **ELEMENT #7: PROTECT DRAIN INLETS**

OPERABLE STORM DRAIN INLETS ON THE SITE AND WITHIN 500 FEET DOWNSTREAM OF THE CONSTRUCTION AREA ROADS WILL BE PROTECTED SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FILTRATION OR OTHER TREATMENT FOR SEDIMENT. STORM DRAIN INLET PROTECTION WILL BE USED TO DETERMINE THE MOST APPROPRIATE INLET PROTECTION DESIGN FOR THE SITE AND THE DOWNSTREAM AREA.

INLETS WILL BE INSPECTED WEEKLY AT A MINIMUM AND DAILY DURING STORM EVENTS. INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACED BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE. CONSTRUCTION ACCESS POINTS AND APPROACHES WILL BE MONITORED AND SWEPT TO MINIMIZE THE POTENTIAL OF SEDIMENT TRANSPORT. IF STREET WASHING OCCURS, THE WASH WASTEWATER WILL BE PUMPED BACK ON SITE.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #7 INCLUDE: BMP C220: STORM DRAIN INLET PROTECTION

**ELEMENT #8: STABILIZE CHANNELS AND OUTLETS** IF DEEMED NECESSARY DURING CONSTRUCTION, TEMPORARY DRAINAGE SWALES PROPOSED AS A PART OF THIS PROJECT SHALL BE DESIGNED, CONSTRUCTED, AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED FLOW VELOCITY OF A 2-YEAR, 24-HOUR FREQUENCY STORM.

OUTLETS OF ALL CONVEYANCE SYSTEMS WILL BE PROTECTED AND STABILIZED TO PREVENT EROSION OF OUTLETS AND SWALES. OUTLET PROTECTION WILL BE CONSIDERED FOR PURPOSES OF DESIGNING AND IMPLEMENTING THE MOST EFFECTIVE OUTLET PROTECTION APPROACH.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMPS CONSIDERED FOR ELEMENT #8 INCLUDE: BMP C202: CHANNEL LINING

## BMP C209: OUTLET PROTECTION

**ELEMENT #9: CONTROL POLLUTANTS** WASTE MATERIALS GENERATED ON SITE WILL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER; INCLUDING COVERING SOIL STOCKPILES. ROUTINE INSPECTIONS OF THE WASTE MATERIAL STORAGE AREAS WILL BE CONDUCTED TO MAKE SURE THAT LEAKS OR SPILLS DO NOT OCCUR. ANY LEAKAGE OR SPILLS WILL BE CLEANED UP IMMEDIATELY.

MAINTENANCE OF HEAVY EQUIPMENT INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, SOLVENT AND DE-GREASING CLEANING AND/OR OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF WILL BE CONDUCTED WITH SPILL PREVENTION MEASURES IN PLACE, INCLUDING CONDUCTING MAINTENANCE ON A TEMPORARY PAD THAT CAN BE USED TO CAPTURE LARGE SPILLS AND THE USE OF DRIP PANS. IN THE EVENT THAT EMERGENCY REPAIRS NEED TO BE PERFORMED AND CLIMATIC CONDITIONS MAY RESULT IN A PRECIPITATION EVENT PRIOR TO THE REPAIR BEING COMPLETED, THE REPAIR AREA, WHICH INCLUDES THE VEHICLE, WILL BE COVERED WITH TARPS OR OTHER PLASTIC SHEETING. DISCHARGES, SPILLS, OR LEAKS WILL BE CLEANED IMMEDIATELY. THE NOTIFICATION PROCEDURE OUTLINED IN THE PERMANENT SITE SWPPP IS AS FOLLOWS:

ALL SPILLS WILL BE REPORTED TO THE DEPARTMENT OF ECOLOGY, SPILL RESPONSE PROGRAM (425) 649-7000.

BMPS CONSIDERED FOR ELEMENT #9 INCLUDE: SPILL CLEANUP AND RESPONSE PRACTICES

#### **ELEMENT #10: CONTROL DE-WATERING**

NO DE-WATERING IS PROPOSED AS PART OF THIS PROJECT. IF NECESSARY, CLEAN, NON-TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO STATE SURFACE WATERS, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OF RECEIVING WATERS. THESE CLEAN WATERS SHOULD NOT BE ROUTED THROUGH A STORMWATER SEDIMENT POND.

HIGHLY TURBID OR CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER. OTHER DISPOSAL OPTIONS, DEPENDING ON SITE CONSTRAINTS, MAY INCLUDE:

- INFILTRATION TRANSPORT OFF SITE IN VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS,
- ON-SITE TREATMENT USING CHEMICAL TREATMENT OR OTHER SUITABLE TREATMENT TECHNOLOGIES, SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, OR
- USE OF A SEDIMENTATION BAG WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED. DEWATERING.

**ELEMENT #11: MAINTAIN BMPS** 

ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS WILL BE INSPECTED BY THE CESCL AT LEAST WEEKLY AND WITHIN 24 HOURS OF A DISCHARGE FROM THE SITE. BMPS SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH THE RELEVANT BMP IDENTIFIED IN ELEMENTS #1 THROUGH #10. TEMPORARY EROSION AND SEDIMENT CONTROLS IDENTIFIED ABOVE WILL BE INSPECTED DAILY DURING THE WET SEASON. NEEDED REPAIRS AND MAINTENANCE WILL OCCUR AS SOON AS PRACTICABLE OR, IN THE EVENT OF A FORECAST OF INCLEMENT WEATHER, REPAIRS AND MAINTENANCE WILL OCCUR IMMEDIATELY.

TEMPORARY EROSION AND SEDIMENT CONTROL BMPS WILL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. TRAPPED SEDIMENT WILL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL RESULTING FROM REMOVAL OF BMPS OR VEGETATION SHALL BE PERMANENTLY STABILIZED.

#### **ELEMENT #12: MANAGE THE PROJECT**

CONSTRUCTION
EXPOSED AREAS DURING THE CLEARING AND GRADING PROCESS WILL BE MULCHED AS PART OF THE CLEARING AND GRADING ACTIVITIES. CLEARING AND GRADING ACTIVITIES WILL OCCUR AFTER THE APPLICABLE PERMITS HAVE BEEN OBTAINED. REVEGETATION OF EXPOSED AREAS AND MAINTENANCE OF THAT VEGETATION WILL OCCUR AS PART OF THE PLANTING PHASE OF THE PROJECT TO BE INSTALLED AFTER SUB-GRADE ROAD BASE MATERIAL HAS BEEN INSTALLED AND PRIOR TO FINAL GRAVEL SURFACING.

#### SEASONAL WORK LIMITATIONS

FROM MAY 1 THROUGH SEPTEMBER 30, SOIL WILL NOT BE EXPOSED/UNWORKED FOR 7 DAYS. FROM OCTOBER 1 THROUGH APRIL 30, SOIL WILL NOT REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. IN ADDITION, WEATHER CONDITIONS WILL CONTINUALLY BE MONITORED INCLUDING BEFORE HOLIDAYS AND WEEKENDS FOR PURPOSES OF PREPARING THE SITE FOR PREDICTED WEATHER CONDITIONS. BMPS THAT ARE EFFECTIVE IN STABILIZING SOILS AND PROTECTING THEM FROM EXPOSURE TO RAIN AND WIND OR OTHER CLIMATIC CONDITIONS WILL BE IMPLEMENTED THROUGHOUT THE PROJECT. INSPECTION AND EVALUATION OF THE EFFECTIVENESS OF THE BMPS WILL OCCUR ON A DAILY BASIS. IN ADDITION, IN THE EVENT OF

## COORDINATION WITH UTILITIES AND OTHER CONTRACTORS THE STORMWATER MANAGEMENT REQUIREMENTS FOR ALL ASPECTS OF THE CONSTRUCTION PROJECT,

INCLUDING UTILITIES, WERE CONSIDERED IN PREPARING THE CONSTRUCTION SWPPP.

FORECASTED PRECIPITATION EVENTS, ADDITIONAL MEASURES TO STABILIZE SOILS WILL BE TAKEN.

#### <u>INSPECTION AND MONITORING</u>

AS PREVIOUSLY MENTIONED, ALL BMPS WILL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. IN THE EVENT THAT INSPECTION AND/OR MONITORING REVEALS THAT THE BMPS IDENTIFIED IN THIS CONSTRUCTION SWPPP ARE INADEQUATE, DUE TO THE ACTUAL DISCHARGE OF OR POTENTIAL TO DISCHARGE A SIGNIFICANT AMOUNT OF ANY POLLUTANT, THIS SWPPP SHALL BE MODIFIED, AS APPROPRIATE, IN A TIMELY MANNER.

MAINTENANCE OF THE CONSTRUCTION SWPPP
THE CONSTRUCTION SWPPP WILL BE RETAINED ON—SITE AND WILL BE UPDATED ON A REGULAR BASIS.

MODIFICATIONS TO THE CONSTRUCTION SWPPP WILL BE MADE WHENEVER THERE IS A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF ANY BMP.

**ELEMENT #13: PROTECT LOW IMPACT DEVELOPMENT** CLEARING LIMITS WILL BE CLEARLY MARKED PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES TO MAINTAIN EXISTING VEGETATION TO THE MAXIMUM EXTENT PRACTICAL. COMPACTED AREAS EXPOSED DUE TO STOCKPILE REMOVAL SHALL BE AMENDED PER BMP T5.13 AND PROTECTED FROM FURTHER COMPACTION.

WASHINGTON STATE DEPARTMENT OF ECOLOGY BMP'S CONSIDERED FOR ELEMENT #13 INCLUDE: BMP C101: PRESERVING NATURAL VEGETATION BMP T5.13: POST-CONSTRUCTION SOIL QUALITY AND DEPTH



**AS-BUILT DRAWING** 

19143 12-5-2024 SHEET: SCALE:

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STORMWATER POLLUTION PREVENTION PLAN



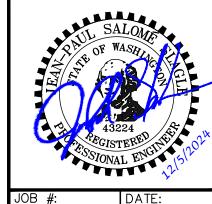
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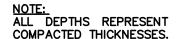
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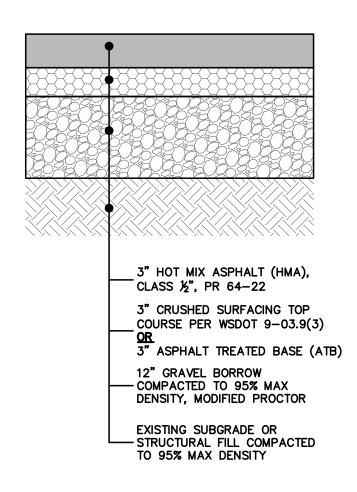
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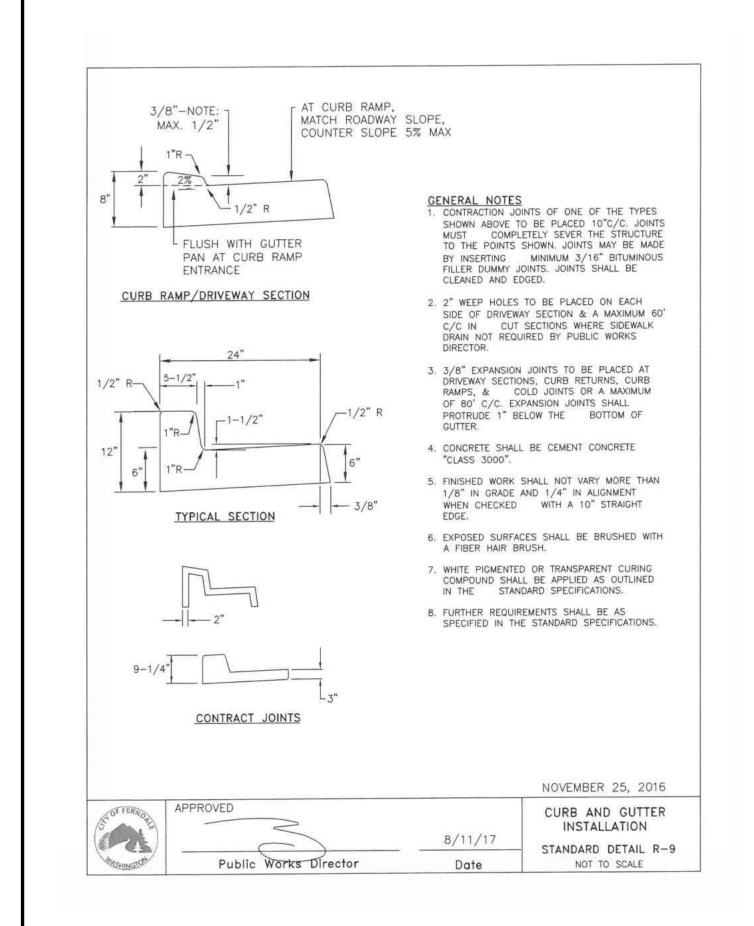
& ASSOCIATE

Bellingham, WA 98225

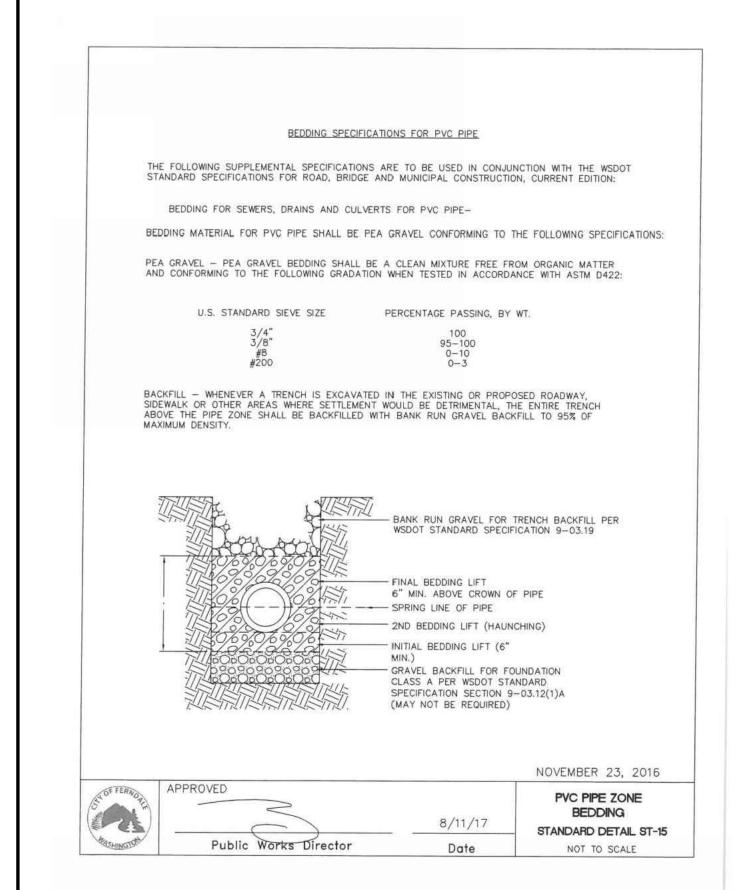








**CONCRETE CURB & GUTTER** 



C STORM PIPE BEDDING nts

NOTE: INSTALL CONCRETE V-GUTTER IN ASPHALT PAVEMENT WHERE GRADE IS LESS THAN 1%. 0.042' 7" CONCRETE GUTTER 12" GRAVEL BASE SUBGRADE -

D CONCRETE V-GUTTER

# **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 DEF MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIO ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STAND. NOT NEED TO BE AMENDED.

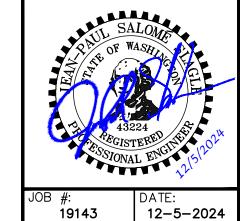
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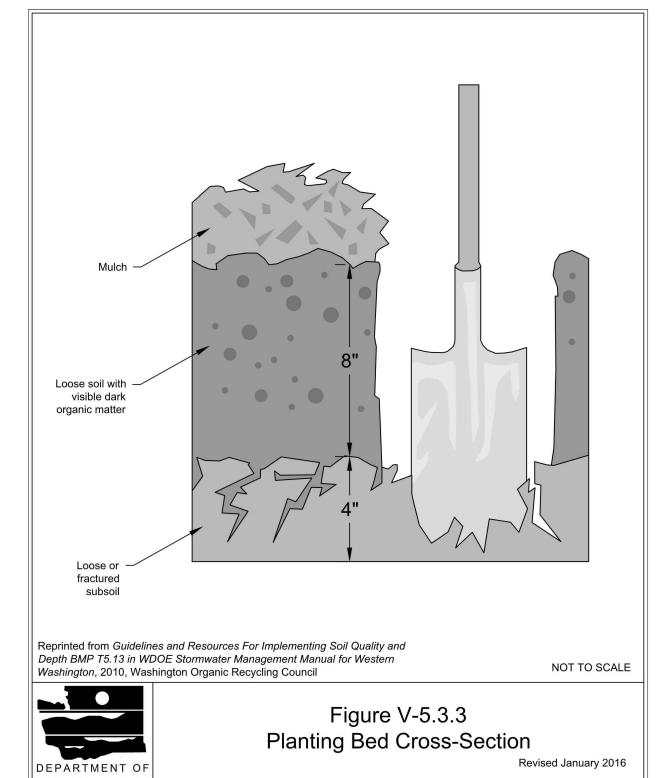
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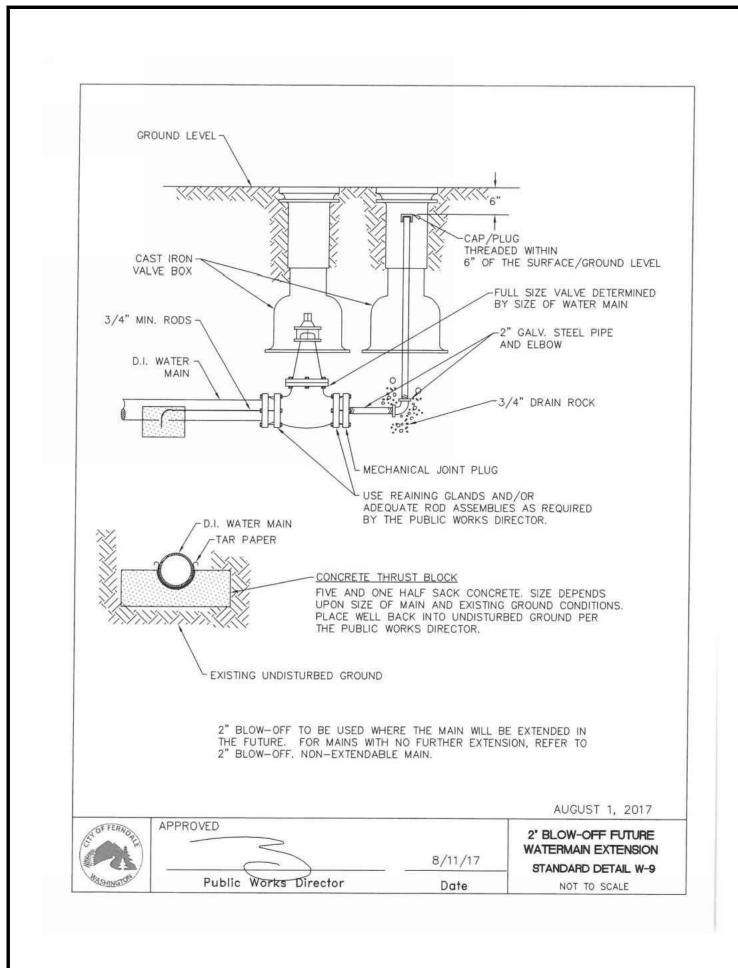
PIPE ALLOWANCES As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the WSDOT Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouls. PIPE MATERIAL The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with WSDOT Standard Specification 9-04.3. FRAME AND VANED GRATE ALL METAL PIPE CPSSP\* (WSDOT STD. SPEC. 9-05.20) The maximum depth from the finished grade to the lowest pipe invert shall be 5. SOLID WALL PVC (WSDOT STD. SPEC. 9-05.12(1)) The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up. PROFILE WALL PVC (WSDOT STD. SPEC. 9-05.12(2)) \* CORRUGATED POLYETHYLENE STORM SEWER PIPE The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper. The opening shall be measured at the top of the Precast Base Section. 7. All pickup holes shall be grouted full after the basin has been placed. NCREMENT (SPACED EQUALLY) RECTANGULAR ADJUSTMENT SECTION #3 BAR EACH CORNER -#3 BAR EACH CORNER #3 BAR HOOP EACH SIDE-#3 BAR HOOP -#3 BAR EACH WAY (SEE NOTE 1) PRECAST BASE SECTION ALTERNATIVE PRECAST BASE SECTION NOVEMBER 23, 2016 APPROVED CATCH BASIN TYPE 1 8/11/17 STANDARD DETAIL ST-1 Public Works Director NOT TO SCALE

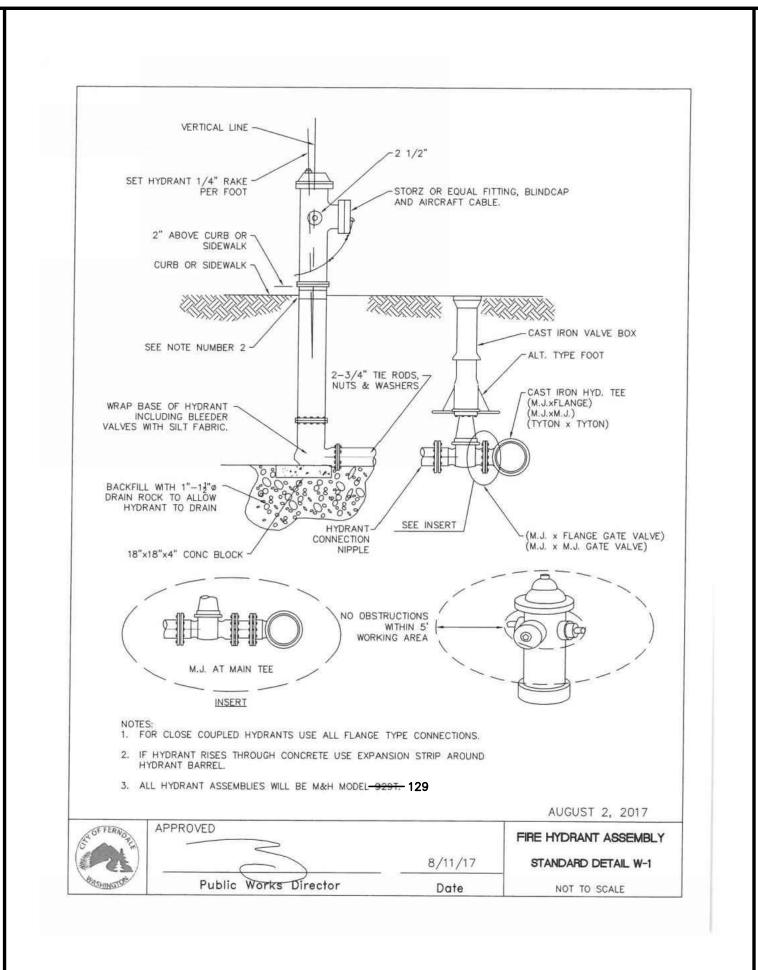
**AS-BUILT DRAWING** ONLY INFORMATION NOTED AS AS-BUILT "(AB)" HAS BEEN PROVIDED BY CONTRACTOR

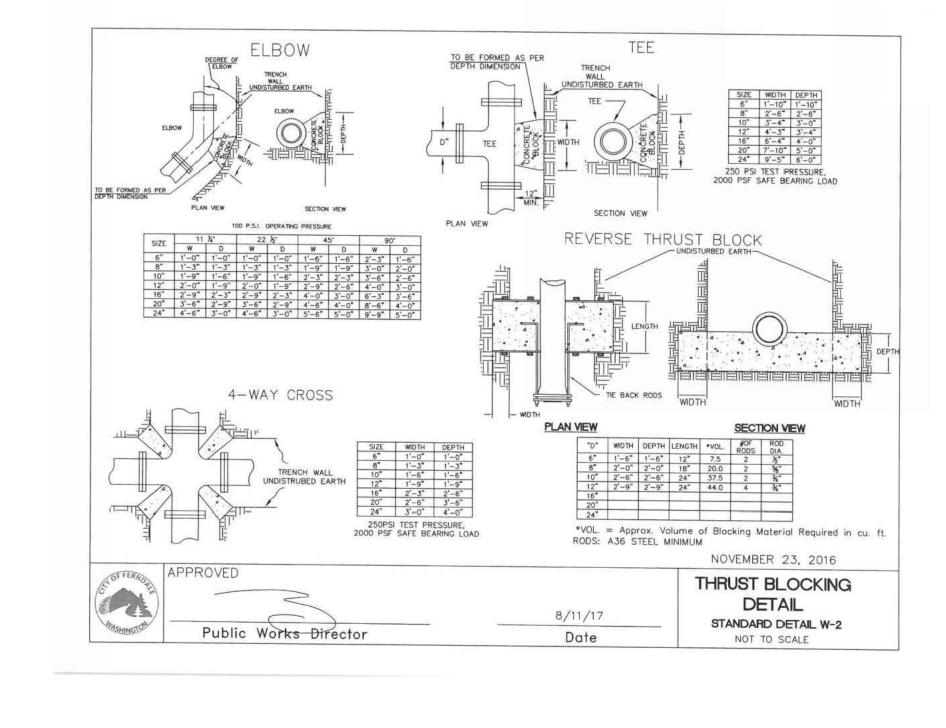


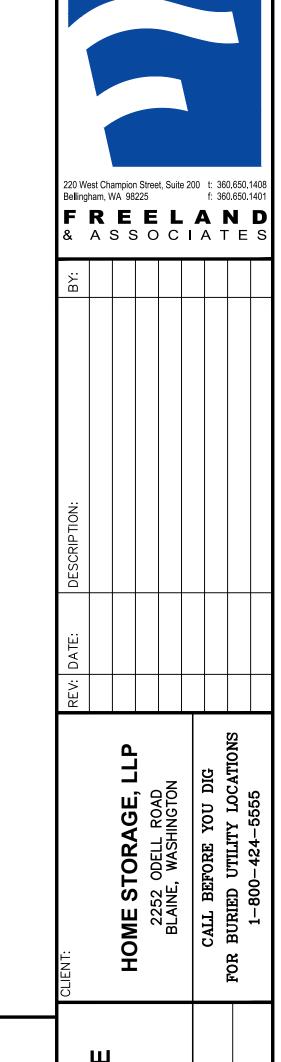
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F) SOIL AMENDMENTS - BMP T5.13









HORIZ: N/A VERT: N/A

C12

A 2" BLOW-OFF nts





