

A PORTION OF GOV'T LOT 4 (SW 1/4, SW 1/4), SECTION 18, TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M., WITHIN THE CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

 = FOUND BRASS MON
 = FOUND CITY OF FERRIDALE MONUMENT
 = FOUND SECTION CORNER
 = FOUND SECTION QUARTER CORNER
 = FOUND REBAR AND CAP
 = EXISTING STORM DRAIN CATCH BASIN (TYPE I)
 = PROPOSED STORM DRAIN SERVICE
 = PROPOSED STORM DRAIN CLEANOUT
 = PROPOSED STORM DRAIN CATCH BASIN
 = EXISTING SANITARY SEWER MANHOLE
 = PROPOSED SEWER CLEANOUT
 = EXISTING WATER METER BOX
 = PROPOSED WATER METER BOX
 = EXISTING POWER/AND OR UTILITY POLE
 = EXISTING MAIL BOX
 = EXISTING TELEPHONE PEDESTAL
 = EXISTING TREES
 = DETAIL CALLOUT

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS OF
TRAVIS FOX SHORT PLAT 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."

BY: [Signature] DATE: 11-6-19

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

C1	COVER SHEET
C2	EXISTING CONDITIONS
C3	TEMPORARY EROSION & SEDIMENT CONTROL PLAN
C4	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS & NOTES
C5	SITE & UTILITY PLAN
C6	PRIVATE DRIVEWAY PROFILE
C7	THORNTON ROAD WIDENING PLAN & PROFILE
C8	PAVING DETAILS
C9	PAVING DETAILS
C10	STORMWATER DETAILS
C11	WATER & SANITARY SEWER DETAILS

Map of the project location in the City of San Antonio, Texas. The map shows the intersection of Highway 1604 and Highway 1605. A black dot marks the project location at the intersection. A north arrow is in the top right corner, and a scale bar is in the bottom right corner.

OWNER

TRAVIS FOX
3412 CRESTLINE PLACE
BELLINGHAM, WA 98226
(360) 303-9788
travisfox@windermere.com

FREELAND & ASSOCIATES, INC.
J.P. SLAGLE, PE
220 W. CHAMPION ST., SUITE 200
BELLINGHAM, WA 98225
(360) 650-1408
jpslagle@freelandengineering.com

390218 103103 0000

SURVEYOR

NORTHWEST SURVEYING & GPS, INC.
JEROMY DEMEYER, PLS
407 5TH STREET
LYNDEN, WA. 98264
(360) 354-1950 OFFICE
jeromy@nwsurvey.com

GENERAL REQUIREMENTS

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF FERNDALE DEVELOPMENT STANDARDS AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. IN THE EVENT OF A CONFLICT, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
2. 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 TERMS OF ALL PERMITS.
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.
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 IMMEDIATELY AFTER CONSTRUCTION.
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 BETWEEN THE CONTRACTOR, OWNER, CITY ENGINEER AND PROJECT ENGINEER. (MINIMUM 3 DAYS PRIOR TO STARTING WORK)
8. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
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, SHALL APPLY.
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 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 DEPARTMENT.
15. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION 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

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 THE CITY OR TO THE UTILITY COMPANIES. THE CITY HAS 48 HOURS FOR UTILITY LOCATIONS. 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, TELEPHONE, CABLE TV, IRRIGATION, AND STREET LIGHTING. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISTURBED BY THE PROJECT UPON COMPLETION OF THE PROJECT.
18. A REVOCABLE ENCROACHMENT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING WORK IN THE PUBLIC RIGHT-OF-WAY.
19. POT HOLE 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 RESPONSIBLE IF FIELD MODIFICATIONS AND/OR ADDITIONAL COSTS ARE REQUIRED BECAUSE POTHOLES WAS NOT DONE PRIOR TO DESIGN.

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.
3. THE CONTRACTOR OR PROPONENT SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CSTC THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.
4. SEE SHEET C7 FOR PERMEABLE PAVEMENT SPECIFICATIONS.

PAVEMENTS

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 IN WRITING BY THE ENGINEER PRIOR TO PAVING.
7. SEE SHEET C7 FOR PERMEABLE PAVEMENT SPECIFICATIONS

WATER MAINS

1. 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.
2. 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 STANDARD SPECIFICATIONS.
3. ALL BACKFILL SHALL BE IMPORTED GRAVEL AND SHALL CONFORM TO SECTION 2-09 OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
4. ALL PIPE SHALL HAVE A MINIMUM COVER OF 3.0 FEET.

EARTHWORK

1. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
2. 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 GEOTECHNICAL ENGINEERING STUDY.
3. MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.
4. THE UNSUITABLE MATERIAL NOT FIT FOR A SUB-GRADE BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.

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 TRENCH IS SUBSTANTIALLY EVEN AND THE PIPE LIES ON A FLAT BEDDING BASE.
2. 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". 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
5. 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).

SANITARY SEWER SPECIFICATIONS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION AND THE CITY OF FERNDALE DEVELOPMENT STANDARDS SECTION 5 AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.
2. FOUR INCH THROUGH TWELVE-INCH PIPE SHALL BE PVC PIPE CONFORMING TO ASTM D-3034, SDR-35 OR EQUAL. PIPE JOINTS SHALL BE MADE WITH FLEXIBLE GASKETS CONFORMING TO THE REQUIREMENTS OF SECTION 7-17.36 (2)E OF THE STANDARD SPECIFICATIONS.
3. TRENCH EXCAVATION SHALL BE ACCORDING TO SECTION 7-08.3(1) OF THE STANDARD SPECIFICATIONS.
4. THE BEDDING SHALL BE PEA GRAVEL PER SS-1.
5. PIPE LAYING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(2)B OF THE STANDARD SPECIFICATIONS.
6. ALL SIDE SEWERS SHALL BE CONSTRUCTED ACCORDING TO THE CITY OF FERNDALE STANDARD PLAN SS-6 THROUGH SS-8.
7. ALL TRENCH BACKFILL UNDER EXISTING OR FUTURE PAVING SHALL BE BANK RUN GRAVEL, CLASS "B" AND SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
8. ALL SEWER PIPE WILL BE PRESSURE TESTED AND WILL SCANNED BY MEANS OF A TV CAMERA PRIOR TO ACCEPTANCE BY THE CITY OF FERNDALE.
9. ALL MANHOLES WILL BE ACCORDING TO THE CITY OF FERNDALE STANDARD PLAN NO. SS-2. THROUGH SS-4 AND WSDOT MH TYPE I STANDARD PLAN B-15.20.01.
10. ALL CLEANOUTS SHALL BE ACCORDING TO CITY OF FERNDALE STANDARD PLAN NO. SS-5.
11. 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.
12. ALL WORK MUST BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE CITY OF FERNDALE. PUBLIC WORKS, AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS. 13. ALL TESTING SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE CITY OF FERNDALE.

1'1"	ONE FOOT/ONE INCH	K	LENGTH OF VERTICAL CURVE
AC	ACRE	K	PERCENT GRADE DIFFERENCE
AD	ABSOLUTE VALUE OF THE ALGEBRAIC GRADE DIFFERENCE	PT/POT	POINT OF TANGENCY
AF#	AUDITORS FILE NUMBER	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATE	PVI	POINT OF VERTICAL INFLECTION
ASB/AB	AS-BUILT	PWR	POWER
ASPH	ASPHALT	R	RADIUS
BLDG	BUILDING	R/C	REBAR WITH CAP
BMP	BEST MANAGEMENT PRACTICE	RCP	REINFORCED CONCRETE PIPE
BOUND	BOUNDARY	RET	RETAINING
BVCS	BEGINNING OF VERTICAL CURVE	RM	RIGHT-OF-WAY
STATION	BEGINNING OF VERTICAL CURVE	RPP	REDUCED PRESSURE PRINCIPAL
ELEVATION		RR	RAILROAD
C	COMPACT PARKING STALL	S	SOUTH
CB	CATCH BASIN	SAN	SANITARY
CL	CENTERLINE	SCH	SCHEDULE
CONTR	CORRUGATED METAL PIPE	SD	STORM DRAIN
CO	CLEANOUT	SDBC	STORM DRAIN CATCH BASIN
COR	CORNER	SDDC	STORM DRAIN MAN HOLE
OPP	CORRUGATED POLYETHYLENE PIPE	SDMH	STORM DRAIN MAN HOLE
CONC	CONCRETE	SERV	SERVICE
CSTC	CRUSHED SURFACING TOP COURSE	STND/STD	STANDARD
CLV	CURB	SS	SANITARY SEWER
D	DIAMETER	SSCO	SANITARY SEWER CLEANOUT
DEMO	DEMOLITION	SSMH	SANITARY SEWER MANHOLE
DI	DUCTILE IRON	ST	ST
DWSG	DRAWINGS	TBM	TEMPORARY BENCH MARK
E	EAST	TC	TOP OF CURB
EACH	EACH	TELE/TELE	TELEPHONE
ELEV	ELEVATION	TESC	TEMPORARY EROSION & SEDIMENTATION CONTROL
ENC	REVOCAABLE ENCROACHMENT PERMIT	TS	TOP OF PAVEMENT
EP	EDGE OF PAVEMENT	TP	TOP OF SIDEWALK
ESOM	EASEMENT	TW	TOP OF WALL
EVCS	END OF VERTICAL CURVE STATION	TYW	UNDERGROUND
EVC	END OF VERTICAL CURVE ELEVATION	VC	VERTICAL CURVE
EX/EXIST	EXISTING	VEG	VEGETATION
FDC	FIRE DEPARTMENT CONNECTION	W	WEST
FFE/FF	FINISH FLOOR ELEVATION	WA	WATER
FH	FINISH GRADE	W/N	WITHIN
FND	FIRE HYDRANT	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
GND	GROUND		
GUTT	GUTTER		
HP	HIGH POINT		
INV	INVERT		
IE/L.E	INVERT ELEVATION		
IRRG	IRRIGATION		
LF	LAND FOOT		
S.S.	LAND SURVEYOR		
MAX	MAXIMUM		
MIN	MINIMUM		
MON	MONUMENT		
NIC	NOT IN CONTRACT		
N	NORTH		
NUMBER	NUMBER		
O.C./#	ON CENTER		
PC	POINT OF CURVATURE		
PCL	PARCEL		
PERF	PERFORATED		
PI	POINT OF INTERSECTION		
PIV	POST INDICATOR VALVE		
POB	POINT OF BEGINNING		
PP	POWER POLE		
PROP	PROPERTY		
PSI	POUNDS PER SQUARE INCH		

APPROVED

NOV 08 2019
B. For Kevin
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT
Renz



220 West Champion Street, Suite 200
Bellingham, WA 98225

t: 360.650.1408
f: 360.650.1401

**FREELAND
& ASSOCIATES**

[illegible]

CLIENT:	TRAVIS FOX 3412 CRESTLINE PLACE BELLINGHAM, WA 98226 CALL BEFORE YOU DIG FOR BURIED UTILITY LOCATIONS 1-800-424-5555
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PROJECT LOCATION:	TRAVIS FOX SHORT PLAT 2440 THORNTON STREET FERNDALE, WA	
	DRAWING #: 17291AB1.DWG	DRAWN BY: EJP
	DESIGNED BY: JPS	CHECKED BY: JPS

SHEET NO. _____		DATE: _____	
CONTENTS: _____		11-6-2019	
			
JOB #: 17291		DATE: 11-6-2019	
SCALE: _____		SHEET: C1	
HORIZ: N/A			
VERT: N/A			

SURVEYOR'S NOTES

1. THIS SURVEY WAS PERFORMED BY STANDARD FIELD TRAVERSE USING A LEICA TS12 TOTAL STATION WITH A CARLSON SURVEYOR PLUS COLLECTOR/FIELD COMPUTER IN OCTOBER OF 2017. ACCURACY EXCEEDS 1:10000.
2. THIS SURVEY TIED INTO STREET MONUMENTATION AND LOT CORNERS AS SHOWN AND RELIED UPON THE MEYNDERS SHORT PLAT FILED UNDER AF No. 930831084 FOR BASIS OF BEARINGS.
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.
4. VERTICAL DATUM IS PER THE CITY OF FERDALE SURVEY MONUMENT NETWORK (NGVD29). SEE TBM'S AS SHOWN.
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.

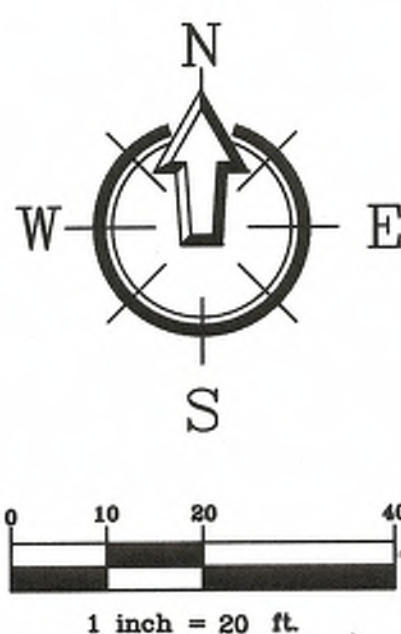
LAND DESCRIPTION

THE SOUTH 286.24 FEET OF THE EAST 170 FEET OF THE FOLLOWING DESCRIBED TRACT:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 18,
TOWNSHIP 39 NORTH, RANGE 2 EAST OF W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE WEST 45 FEET ALONG THE SECTION LINE TO THE TRUE POINT OF BEGINNING; THENCE NORTH 589.95 FEET; THENCE WEST 419 FEET, MORE OR LESS, TO THE WEST LINE OF THE EAST 15 ACRES OF SAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE SOUTH 589.95 FEET TO THE SECTION LINE; THENCE EAST ALONG THE SECTION LINE 419 FEET TO THE TRUE POINT OF BEGINNING; EXCEPT ROAD.

SITUATE IN WHATCOM COUNTY, WASHINGTON.

SUBJECT TO AND/OR TOGETHER WITH ALL EASEMENTS, COVENANTS, RESTRICTIONS AND/OR AGREEMENTS OF RECORD, OR OTHERWISE.



ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS OF
TRAVIS FOX SHORT PLAT 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 FERDALE DEPARTMENT OF PUBLIC WORKS."

BY: *[Signature]* DATE: 11-6-19

AS-BUILT DRAWING

AS-BUILT NOTE:
ONLY INFORMATION NOTED AS AS-BUILT "AB"
HAS BEEN PROVIDED BY CONTRACTOR

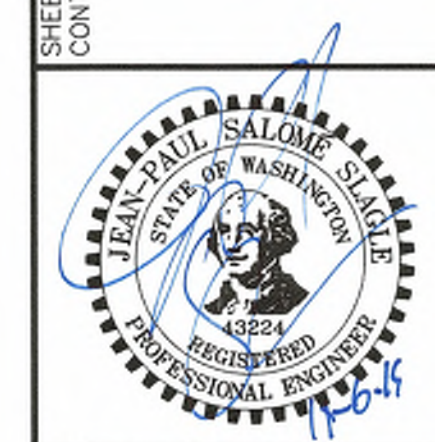


REV.	DATE	DESCRIPTION

CLIENT:
TRAVIS FOX
3412 CRESTLINE PLACE
BELLINGHAM, WA 98226
CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

PROJECT LOCATION:
TRAVIS FOX SHORT PLAT
2440 THORNTON STREET
FERDALE, WA
DRAWN BY: EJP
CHECKED BY: JPS
DESIGNED BY: JPS

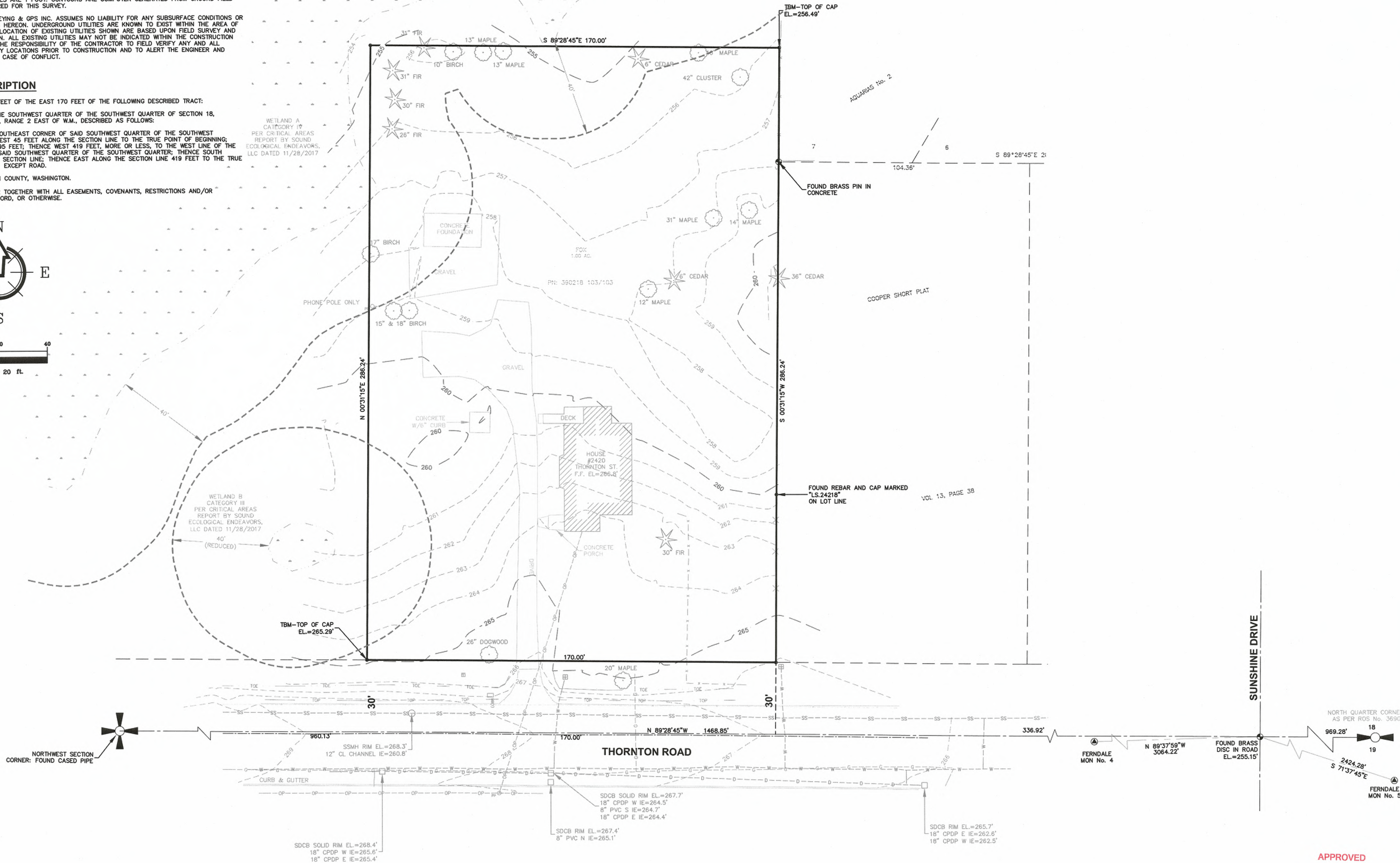
SHEET CONTENTS:
EXISTING CONDITIONS



JOB #: 17291
DATE: 11-6-2019
SCALE: 1"=20'
HORIZ: N/A
VERT: N/A
SHEET: **C2**

APPROVED

NOV 08 2019
[Signature]
PUBLIC WORKS DEPARTMENT



CONSTRUCTION SCHEDULING NOTE

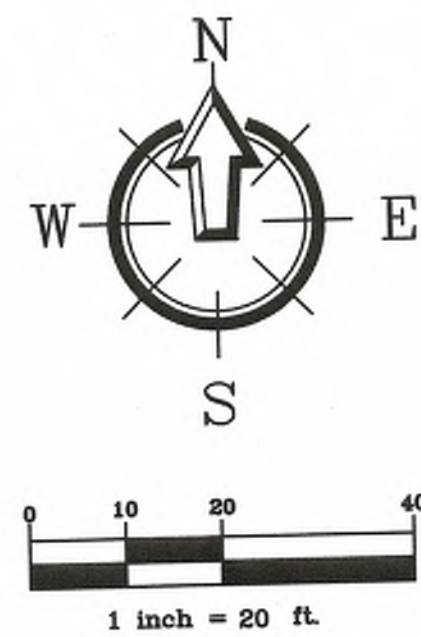
THIS PROJECT INCLUDES SIGNIFICANT EARTHWORK DURING WINTER AND SPRING SEASONS. CONTRACTOR SHALL MONITOR WEATHER CONDITIONS AND FORECASTS DURING CONSTRUCTION. THE AMOUNT OF SOIL THAT MAY BE EXPOSED AT ANY TIME DEPENDS ON THE CONTRACTOR'S AVAILABLE CREW, MATERIALS, AND EQUIPMENT. CONTRACTOR SHALL SCHEDULE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

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 APPROVED.
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 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 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.
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 PROJECT.
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 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 CONTRACTOR'S 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 FERNDALE.
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 EDITION.

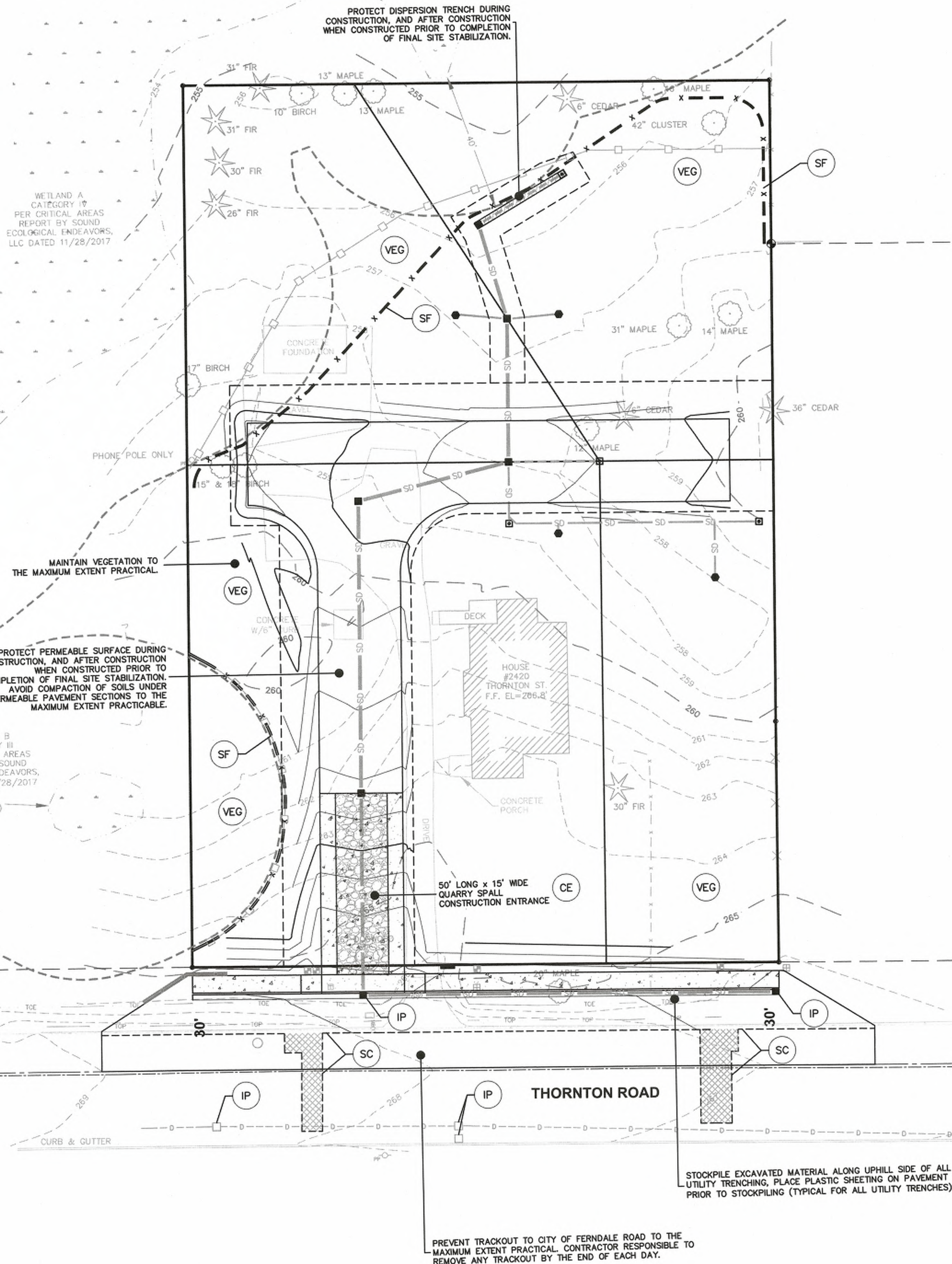
TESC CONTRACTOR RESPONSIBILITY

1. 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 CONSTRUCTION.



TESC LEGEND

VEG	WSDOE BMP C101 PRESERVING NATURAL VEGETATION	A
CE	WSDOE BMP C105 STABILIZED CONSTRUCTION EXIT	C4
PS	WSDOE BMP C120 TEMPORARY AND PERMANENT SEEDING	
MU	WSDOE BMP C121 MULCHING	
PC	WSDOE BMP C123 PLASTIC COVERING	
SC	WSDOE BMP C152 SAWCUTTING & SURFACING POLLUTION PREVENTION	D C4
IP	WSDOE BMP C220 STORM DRAIN INLET PROTECTION	B C4
SF	WSDOE BMP C233 SILT FENCE	C C4



ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS OF
TRAVIS FOX SHORT PLAT 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."
BY: *[Signature]* DATE: 11-6-19

AS-BUILT DRAWING

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



BY:	
REV:	
DATE:	
DESCRIPTION:	
CLIENT:	TRAVIS FOX 3412 CRESTLINE PLACE BELLINGHAM, WA 98226 CALL BEFORE YOU DIG FOR BURIED UTILITY LOCATIONS 1-800-424-5555

PROJECT LOCATION:	TRAVIS FOX SHORT PLAT 2440 THORNTON STREET FERNDALE, WA
DRAWN BY:	EJP
CHECKED BY:	JPS
DRAWING #:	17291AB1.DWG
DESIGNED BY:	JPS

SHEET CONTENTS:	TEMPORARY EROSION & SEDIMENT CONTROL PLAN
JOB #:	17291
DATE:	11-6-2019
SCALE:	HORIZ: 1"=20' VERT: N/A
SHEET:	C3

APPROVED
NOV 8 2019
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

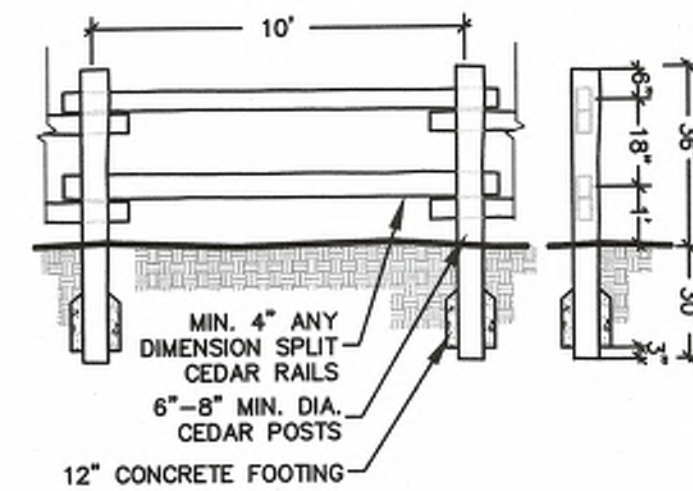
00681.004 11/13/19 KB

1. SITE GRADING SHALL BE COMPLETED IN ACCORDANCE WITH APPENDIX J OF THE 2012 INTERNATIONAL BUILDING CODE.
2. IN ORDER FOR THE ENGINEER OF RECORD TO CERTIFY THE PROJECT, THE PROJECT'S GEOTECHNICAL PROFESSIONAL MUST BE PRESENT ON SITE TO INSPECT AND APPROVE MATERIALS, PLACEMENT, AND CONSTRUCTION METHODS OF THE PROPOSED LID IN THE PRIVATE DRIVEWAY.
3. THE "STORMWATER MANAGEMENT PLAN" IS SUBJECT TO REVISIONS TO BE MADE TO THE RECORD SET AND IS SUBJECT TO CHANGE BASED ON REVIEW OF THE STORM RECORD SUBMITTED WITH THE CIVIL PLANS.
4. LOTS RECEIVING FILL REQUIRE A STRUCTURAL FILL CERTIFICATE FROM THE GEOTECHNICAL ASSESSOR NOTING THE FILL AND COMPACTION RECORDS IN ORDER TO CERTIFY THE LOTS FILL ARE APPROVED FOR HOME CONSTRUCTION, THE DIMENSIONS OF THE BUILDING ENVELOPE FILLED FOR EACH LOT MUST BE DEFINED BY THE USE OF THE LOT'S DIMENSIONS.
5. PER WFOF NO. 7 NO OBSTRUCTIONS SHALL BE ALLOWED WITHIN THE MINIMUM 24' ACCESS TO THE PROPERTIES, I.E. LANDSCAPE PLANTINGS, FENCES, ETC.

- 1) ALL DRIVEWAYS, WALKWAYS, AND PATIOS SHALL BE CONSTRUCTED WITH PERMEABLE SURFACES, SUCH AS PERMEABLE CONCRETE, PERMEABLE PAVERS, ETC.
- 2) AREAS DISTURBED DURING CONSTRUCTION SHALL BE AMENDED PER BMP T5.13. A NOTE TO THAT EFFECT SHALL BE PLACED ON THE FACE OF THE FINAL PLAT.

PRIOR TO ANY WORK THE CONTRACTOR MUST POTHOLE THE EXISTING UTILITIES LOCATED IN CITY RIGHT OF WAY ON PACIFIC HEIGHTS DRIVE AND PROVIDE THE ENGINEER OF RECORD WITH THEIR AS-BUILTS LOCATION. PLAN AMENDMENTS, IF ANY, WILL BE APPROVED BY THE CITY OF FERNDALE PRIOR TO CONSTRUCTION OF THE APPLICABLE PORTIONS OF THE PROJECT.

CONTRACTOR SHALL COORDINATE WITH OWNER TO VERIFY CONDITION OF EXISTING SANITARY SEWER SERVICE TO HOUSE ON LOT 1. REPLACE SERVICE IF IT IS NOT FOUND TO BE IN GOOD CONDITION.



A SPLIT RAIL FENCE



100 West Champion Street, Suite 200 t: 360.650.1408
 Bellingham, WA 98225 f: 360.650.1401

FREELAND
 ASSOCIATES

[illegible]

TRAVIS FOX
3412 CRESTLINE PLACE
BELLINGHAM, WA 98226

CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

PROJECT LOCATION:

TRAVIS FOX SHORT PLAT
2440 THORNTON STREET
FERDALE, WA

DRAWING #	DRAWN BY:
17291AB1.DWG	EJP
DESIGNED BY:	CHECKED BY:
JPS	JPS

SHEET 1 CONTENTS:



JOB #: 17291	DATE: 11-6-2019
SCALE: HORIZ: 1"=20' VERT: N/A	SHEET: C5

ENGINEER'S CERTIFICATION:
"I HEREBY CERTIFY THAT THE IMPROVEMENTS OF
TRAMS FOX SHORT PLAT 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."

BY: [Signature] DATE: 1/6/79

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

APPROVED

NOV 08 2019
BY For Kevin
CITY OF FERDALE
PUBLIC WORKS DEPARTMENT BenZ

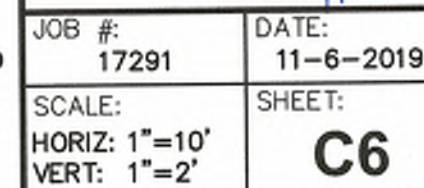
00681.005 11/13/19 KB



TRAVIS FOX
3412 ORESTLINE PLACE
BELLINGHAM, WA 98226

**CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS**
1-800-424-5555

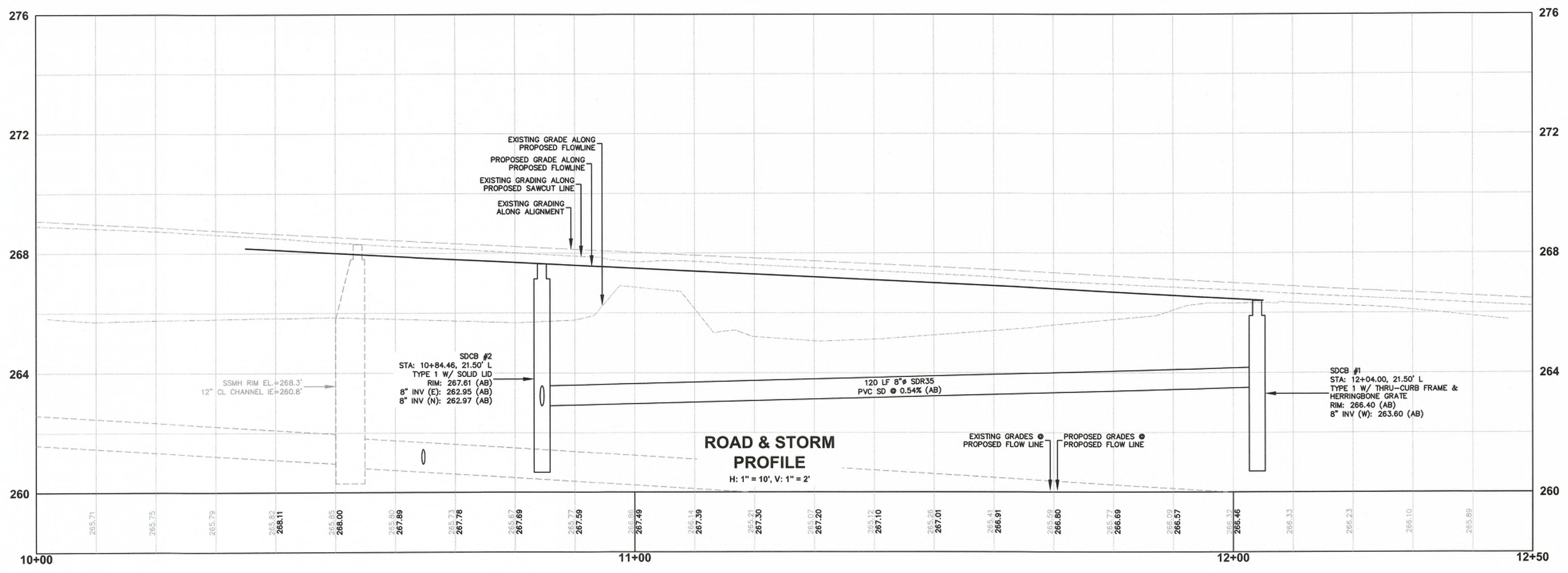
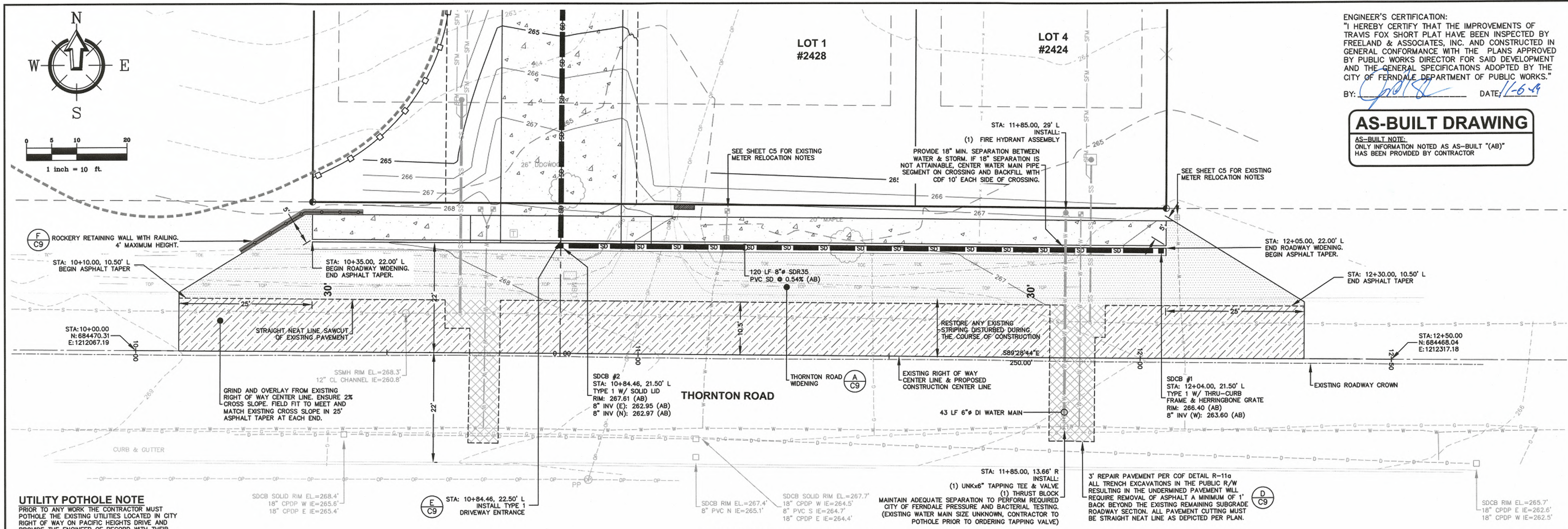
SHEET
CONTENTS:



AS-BUILT DRAWING

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

1 inch = 10 ft.



CLIENT:
TRAVIS FOX
3412 CRESTLINE PLACE
BELLINGHAM, WA 98226
CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-6666

PROJECT LOCATION:
TRAVIS FOX SHORT PLAT
2440 THORNTON STREET
FERNDALE, WA

SHEET CONTENTS:
THORNTON ROAD WIDENING
PLAN & PROFILE

APPROVED
JAN 8 2019
CITY OF FERNDALE
PUBLIC WORKS DEPARTMENT

JOB #: 17291
DATE: 11-6-2019
SCALE: HORIZ: 1"=10'
VERT: 1"=2'
SHEET: C7

DRAWN BY: EJP
CHECKED BY: JPS
DESIGNED BY: JPS

PROFESSIONAL ENGINEER
JAN PAUL SALOME SALOME
STATE OF WASHINGTON
43234

AS-BUILT DRAWING

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



220 West Champion Street, Suite 200
Bellingham, WA 98225
t: 360.650.1408
f: 360.650.1401

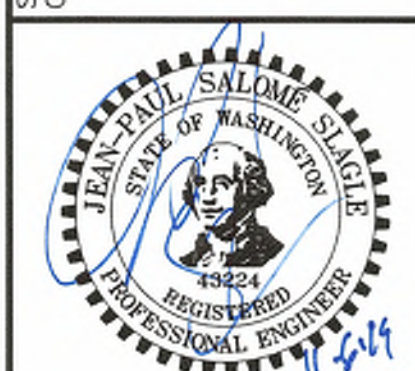
FREELAND
& ASSOCIATES

BY:	
DESCRIPTION:	
REV:	
DATE:	

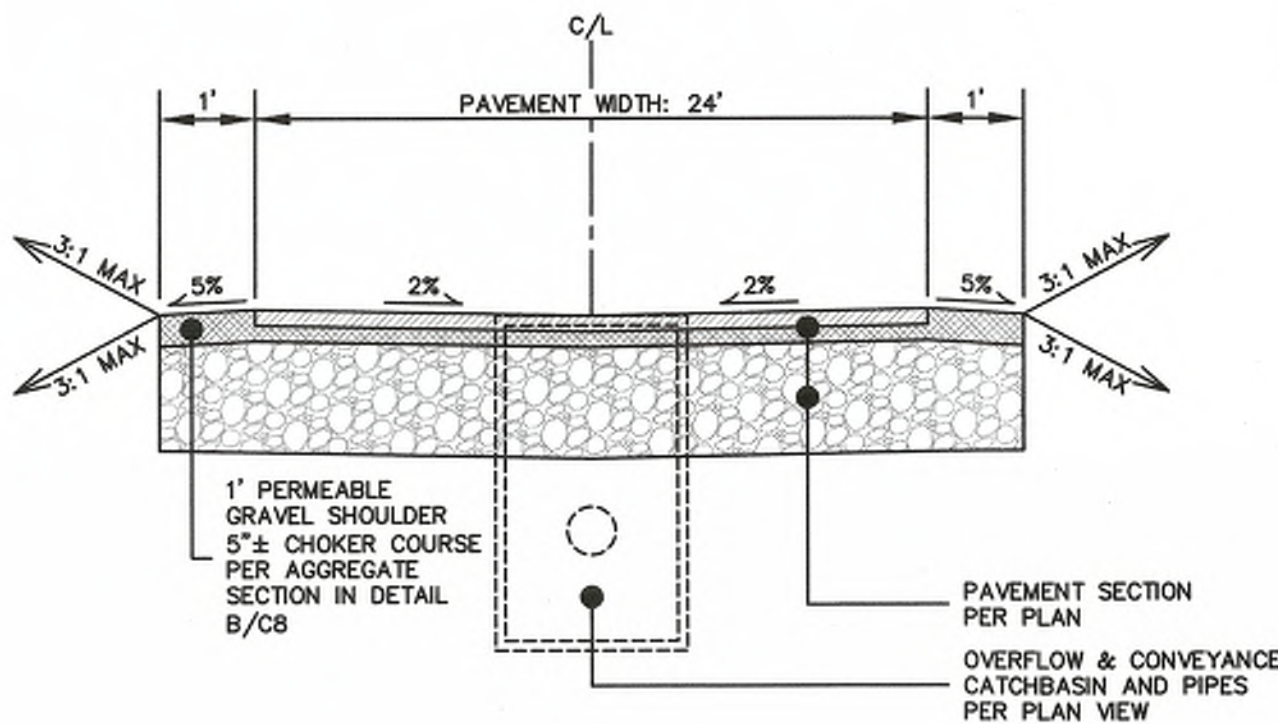
CLIENT:
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3412 CRESTLINE PLACE
BELLINGHAM, WA 98226
CALL BEFORE YOU DIG
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1-800-424-5555

PROJECT LOCATION:
TRAVIS FOX SHORT PLAT
2440 THORNTON STREET
FERDALE, WA
DRAWN BY: EJP
CHECKED BY: JPS
DESIGNED BY: JPS

PAVING DETAILS



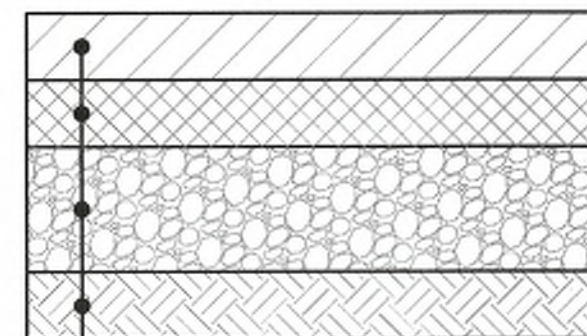
JOB #: 17291
DATE: 11-6-2019
SCALE: HORIZ: N/A
VERT: N/A
SHEET: **C8**



A PRIVATE DRIVEWAY SECTION
nts

GENERAL NOTES:

- ALL DEPTHS REPRESENT COMPACTED DEPTHS.
- AFTER GRADING, THE EXISTING SUBRADE SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
- IMMEDIATELY BEFORE BASE AGGREGATE AND POROUS ASPHALT PLACEMENT, REMOVE ANY ACCUMULATION OF FINE MATERIAL FROM EROSION WITH LIGHT EQUIPMENT AND SCARIFY SOIL TO A MINIMUM DEPTH OF 6 INCHES.
- EROSION AND INTRODUCTION OF SEDIMENT SHALL BE STRICTLY CONTROLLED DURING AND AFTER CONSTRUCTION TO PREVENT CLOGGING OF THE VOID SPACES IN THE BASE MATERIAL AND POROUS SURFACE.
- A QUALIFIED GEOTECHNICAL PROFESSIONAL MUST BE PRESENT DURING THE EXCAVATION OF THE POROUS SUBRADE TO ENSURE THAT THE DESIGN ASSUMPTIONS MADE REGARDING THE LONG TERM INFILTRATION RATES, SOIL CONDITIONS, AND INFILTRATION CHARACTERISTICS MEET THE APPROVED DESIGN. THIS SHALL BE ACCOMPLISHED BY PROVIDING THE CITY A MEMORANDUM, SIGNED AND SEALED BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST STATING THE FOUND GEOLOGICAL CONDITIONS MATCH THE APPROVED DESIGN.
- PROJECT GEOTECHNICAL ENGINEER OR ENGINEERING GEOLOGIST TO CONFIRM A MINIMUM OF 1.5' OF INFILTRATEABLE SOILS UNDER POROUS PAVEMENT SECTION. IF THE SOIL DEPTH IS DETERMINED TO BE LESS THAN 1.5', THEN INSTALL SAND LAYER AS NECESSARY TO MEET THE 1.5' MINIMUM. SEE SAND SPECIFICATION IN THIS DETAIL.
- ORGANIC CONTENT OF THE TREATMENT SOIL (STM D 2974): ORGANIC MATTER CAN INCREASE THE SORPTIVE CAPACITY OF THE SOIL FOR SOME POLLUTANTS. A MINIMUM OF 1.0 PERCENT ORGANIC CONTENT IS NECESSARY AND SHALL BE INCLUDED IN THE SAND MIX.

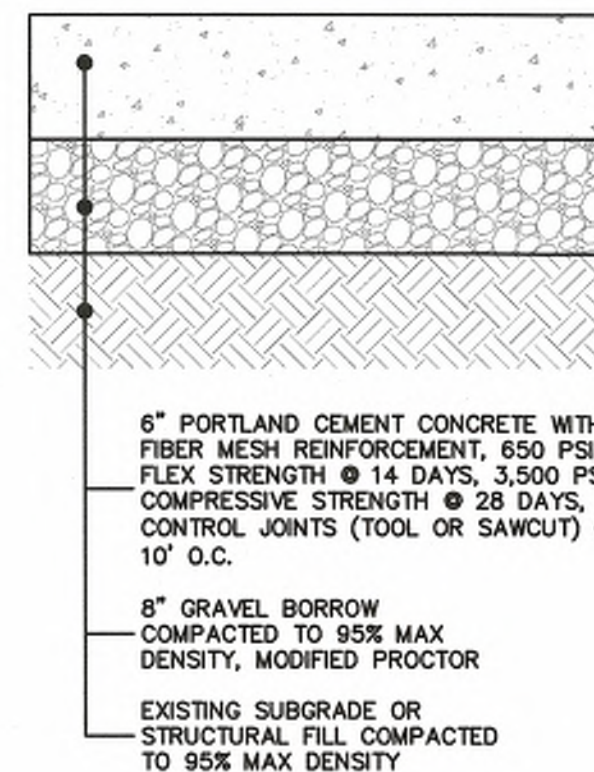


B PERMEABLE ASPHALT SECTION
nts

SAND SPECIFICATION		
U.S. SIEVE NUMBER	PERCENT PASSING	
4	95 - 100	
8	70 - 100	
16	40 - 90	
30	25 - 75	
50	2 - 25	
100	< 4	
200	< 2	

NOTES:

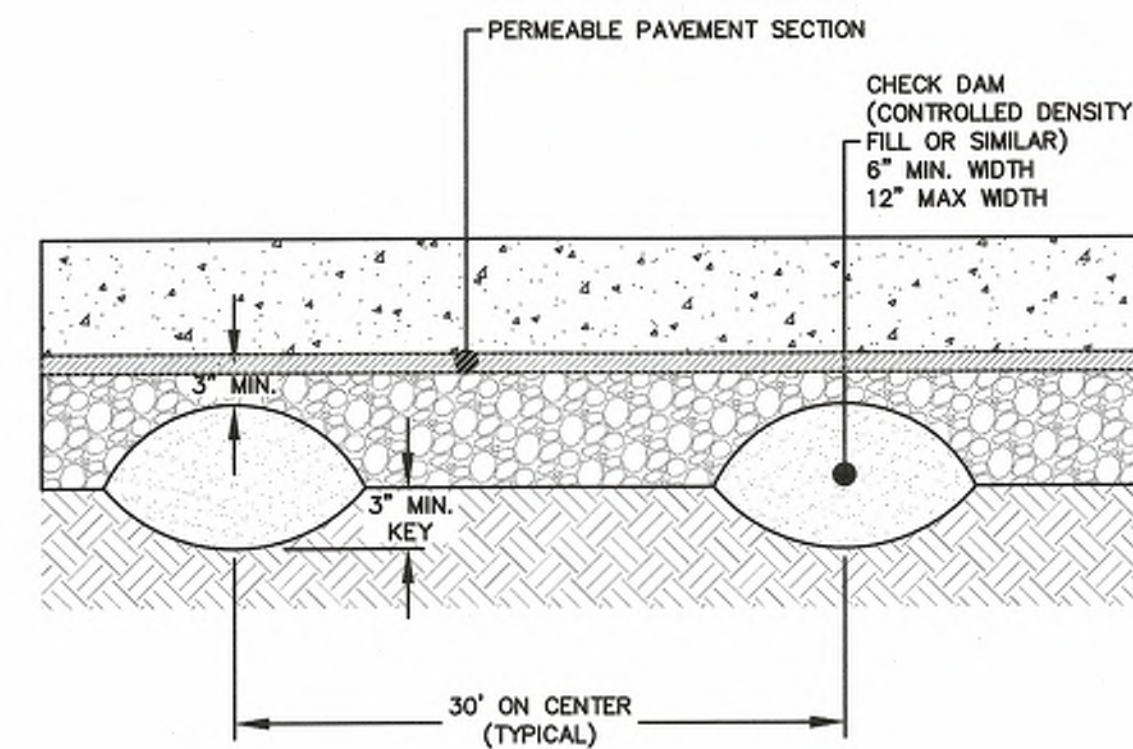
- ALL DEPTHS REPRESENT COMPACTED THICKNESSES.
- CONTROL JOINTS SHALL BE 1/4 DEPTH OF THE SLAB.
- ALL CONSTRUCTION JOINTS SHALL BE DOWLED.



C CONCRETE PAVEMENT SECTION
nts

NOTES:

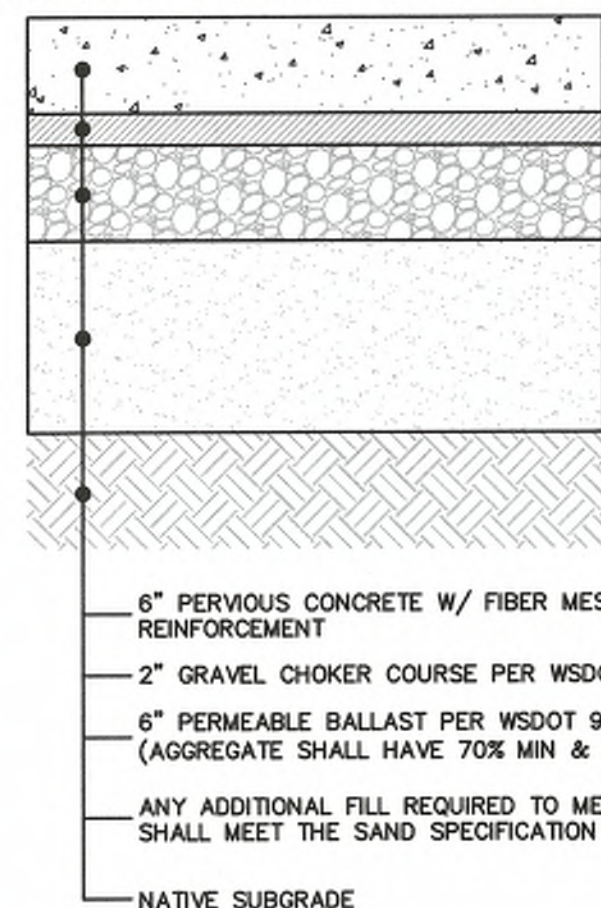
- USE FOR PERMEABLE PAVEMENT WITH A GRADE OVER 2% ONLY.



D CHECK DAM DETAILS
nts

GENERAL NOTES:

- ALL DEPTHS REPRESENT COMPACTED DEPTHS.
- CONTROL JOINTS (TOOLED) SHALL BE 10' O.C. MAXIMUM. CONTROL JOINTS SHALL BE 1/4 DEPTH OF SLAB. ALL CONSTRUCTION JOINTS SHALL BE DOWLED.
- CHOKER COURSE SHALL CONSIST OF 1.5 INCH TO 0.25 INCH UNIFORMLY GRADED CRUSHED WASHED STONE OR SIMILAR.
- ALL TOPSOIL SHALL BE REMOVED UNDER PAVEMENT SECTION.
- AFTER GRADING, THE EXISTING SUBRADE SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
- IMMEDIATELY BEFORE BASE AGGREGATE AND CONCRETE PLACEMENT, REMOVE ANY ACCUMULATION OF FINE MATERIAL FROM EROSION WITH LIGHT EQUIPMENT AND SCARIFY SOIL TO A MINIMUM DEPTH OF 6 INCHES.
- EROSION AND INTRODUCTION OF SEDIMENT SHALL BE STRICTLY CONTROLLED DURING AND AFTER CONSTRUCTION TO PREVENT CLOGGING OF THE VOID SPACES IN THE BASE MATERIAL AND PERMEABLE SURFACE.
- A QUALIFIED GEOTECHNICAL PROFESSIONAL MUST BE PRESENT DURING THE EXCAVATION OF THE PERMEABLE CONCRETE SUBRADE TO ENSURE THAT THE DESIGN ASSUMPTIONS MADE REGARDING THE LONG TERM INFILTRATION RATES, SOIL CONDITIONS, AND INFILTRATION CHARACTERISTICS MEET THE APPROVED DESIGN. THIS SHALL BE ACCOMPLISHED BY PROVIDING THE CITY A MEMORANDUM, SIGNED AND SEALED BY THE PROJECT GEOTECHNICAL ENGINEER OR GEOLOGIST STATING THE FOUND GEOLOGICAL CONDITIONS MATCH THE APPROVED DESIGN.
- CATION EXCHANGE CAPACITY (CEC) TESTING HAS NOT BEEN PERFORMED AT THE TIME OF DESIGN AND WILL BE PERFORMED AT TIME OF CONSTRUCTION. IF ADEQUATE CEC CAPACITY IS NOT FOUND A MINIMUM OF 12" OF TREATMENT SAND SHALL BE INSTALLED BELOW PAVEMENT SECTION. ORGANIC CONTENT OF THE TREATMENT SOIL (STM D 2974): ORGANIC MATTER CAN INCREASE THE SORPTIVE CAPACITY OF THE SOIL FOR SOME POLLUTANTS. A MINIMUM OF 1.0 PERCENT ORGANIC CONTENT IS NECESSARY AND SHALL BE INCLUDED IN THE SAND MIX.



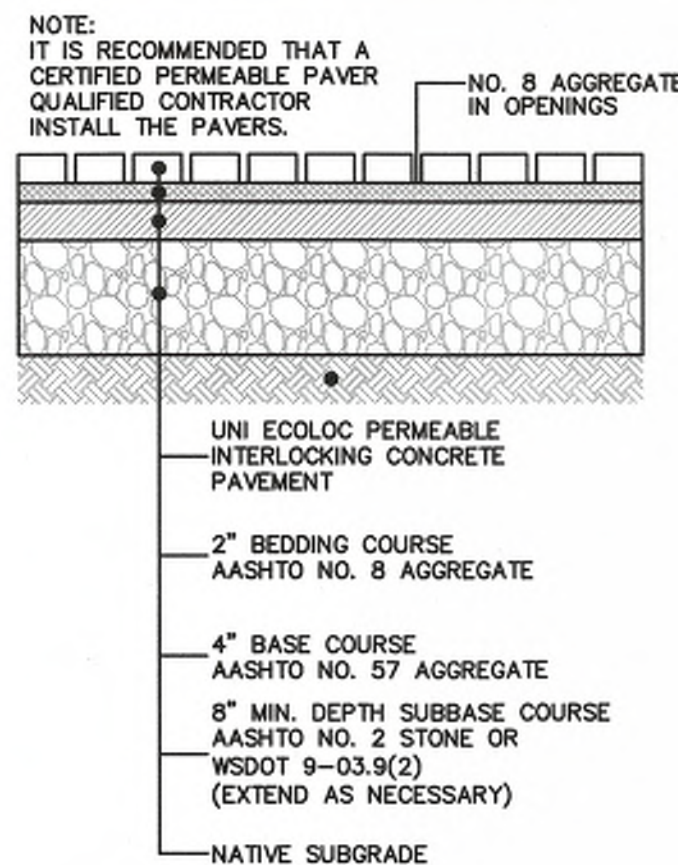
PERMEABLE CONCRETE SECTION

E PAVEMENT SECTIONS FOR INDIVIDUAL LOT DRIVEWAYS
nts

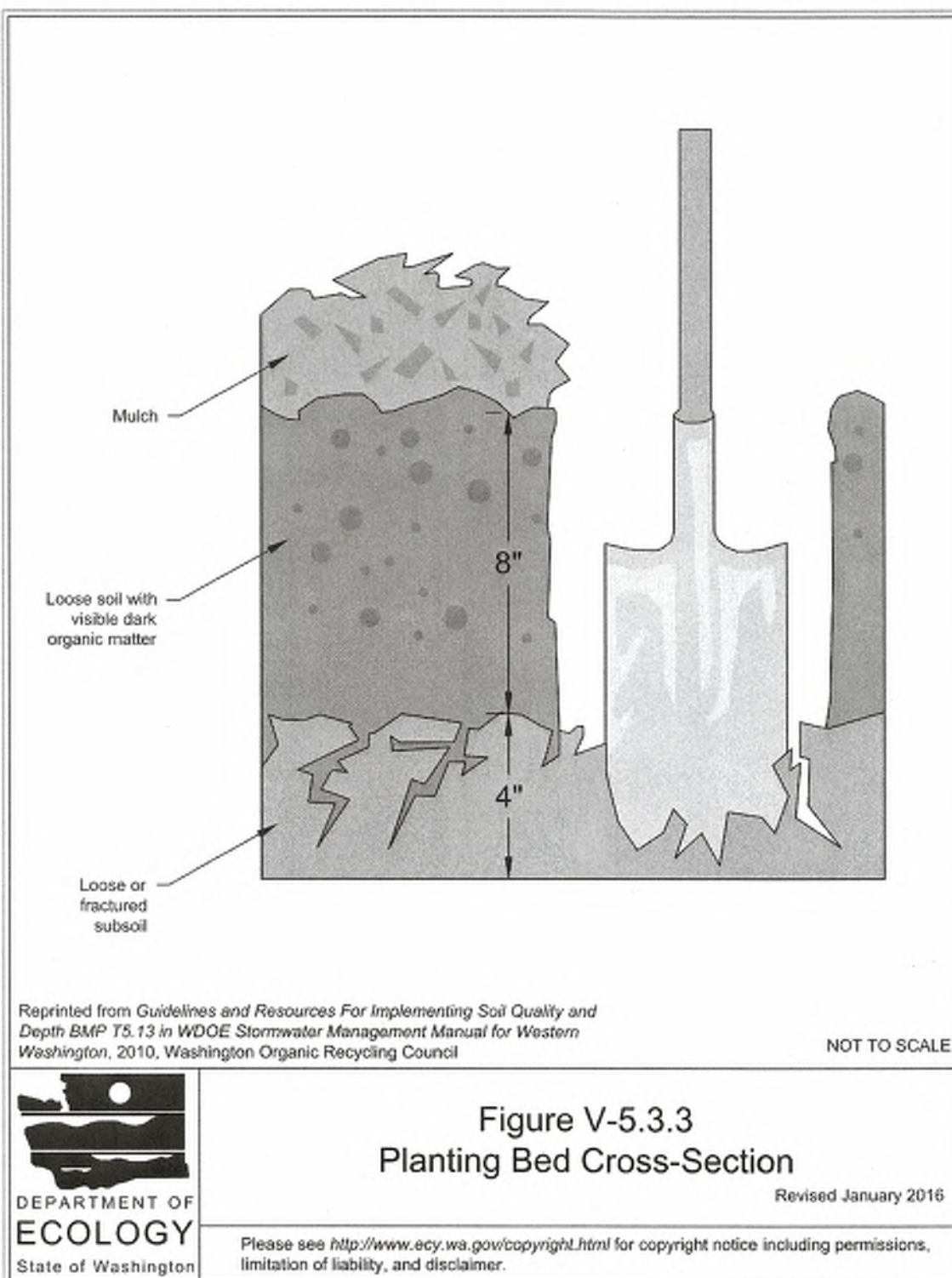
GENERAL NOTES:

- ALL DEPTHS REPRESENT COMPACTED DEPTHS.
- AFTER GRADING, THE EXISTING SUBRADE SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
- IMMEDIATELY BEFORE BASE AGGREGATE PLACEMENT, REMOVE ANY ACCUMULATION OF FINE MATERIAL FROM EROSION WITH LIGHT EQUIPMENT AND SCARIFY SOIL TO A MINIMUM DEPTH OF 2 INCHES.
- EROSION AND INTRODUCTION OF SEDIMENT SHALL BE STRICTLY CONTROLLED DURING AND AFTER CONSTRUCTION TO PREVENT CLOGGING OF THE VOID SPACES IN THE BASE MATERIAL AND PERMEABLE SURFACE.

NOTE:
SPECIFICATIONS ABOVE ARE FOR
UNI-ECOLOG PERMEABLE PAVERS.
IF DESIRED, ALTERNATIVE
PERMEABLE PAVERS CAN BE
CHOSEN BY THE OWNER.
INSTALL ALTERNATIVE PAYER
SYSTEM PER MANUFACTURER'S
SPECIFICATIONS.



PERMEABLE PAVER SECTION



Reprinted from Guidelines and Resources For Implementing Soil Quality and
Depth BMP T5.13 in WDOE Stormwater Management Manual for Western
Washington, 2010, Washington Organic Recycling Council



Figure V-5.3.3
Planting Bed Cross-Section

Revised January 2016

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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:

- 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 MATURING 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.
- MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
- USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
 - 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 AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
 - 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.

IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:

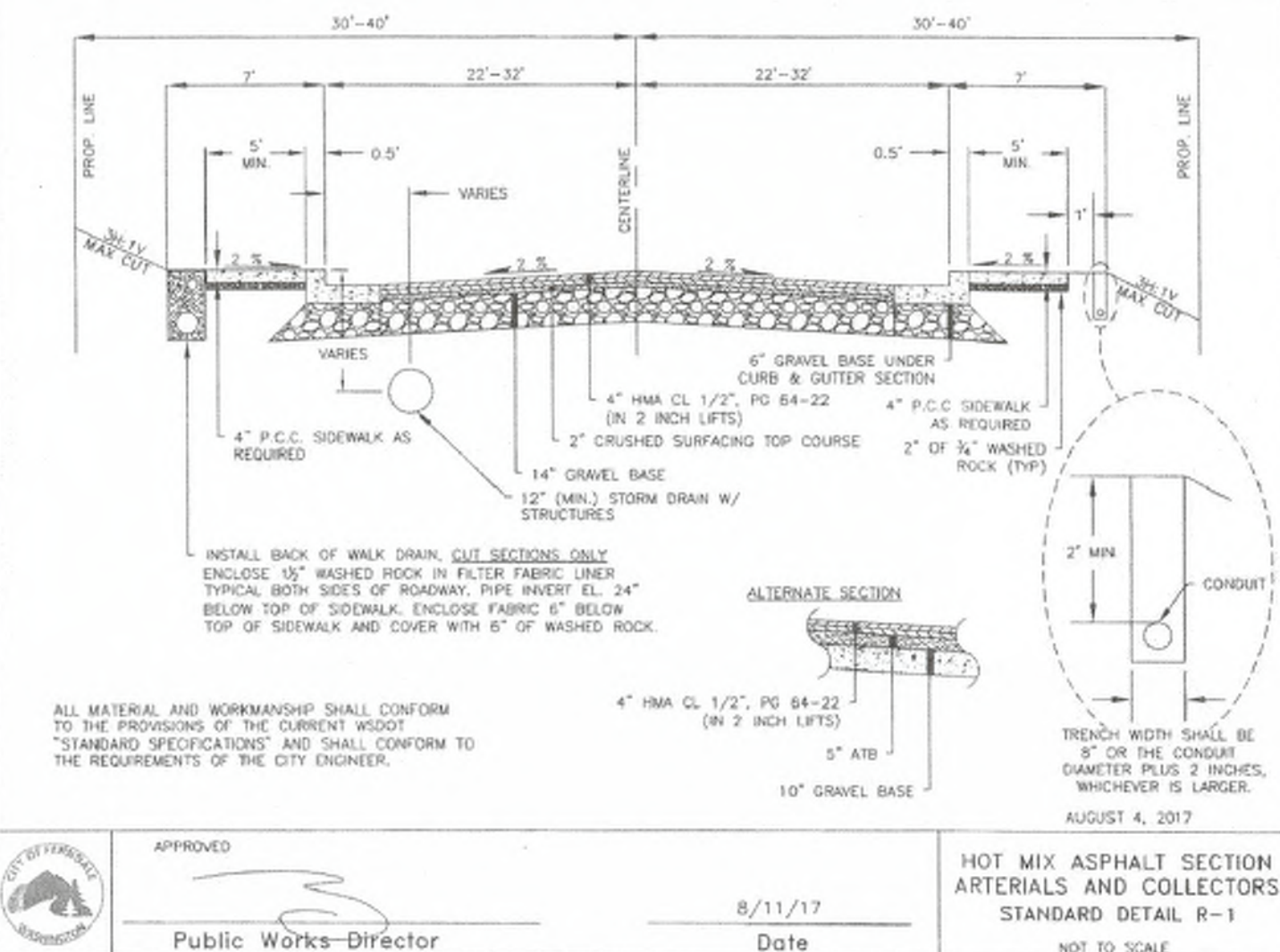
- LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
- AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
- STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE 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.
- 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.

APPROVED
11/8/2019
Kevin J. Ranz
PUBLIC WORKS DEPARTMENT

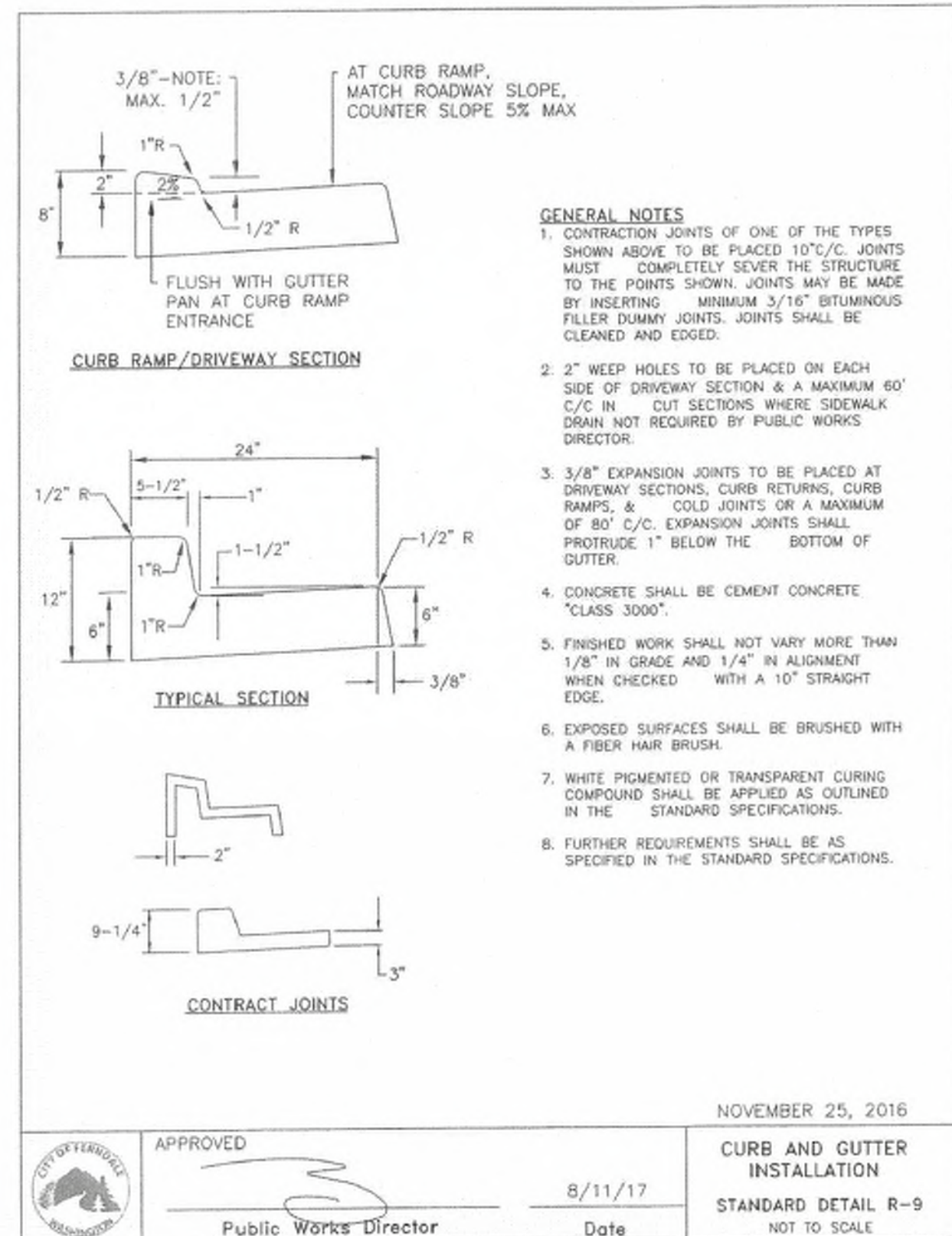
F SOIL AMENDMENTS - BMP T5.13
nts

AS-BUILT DRAWING

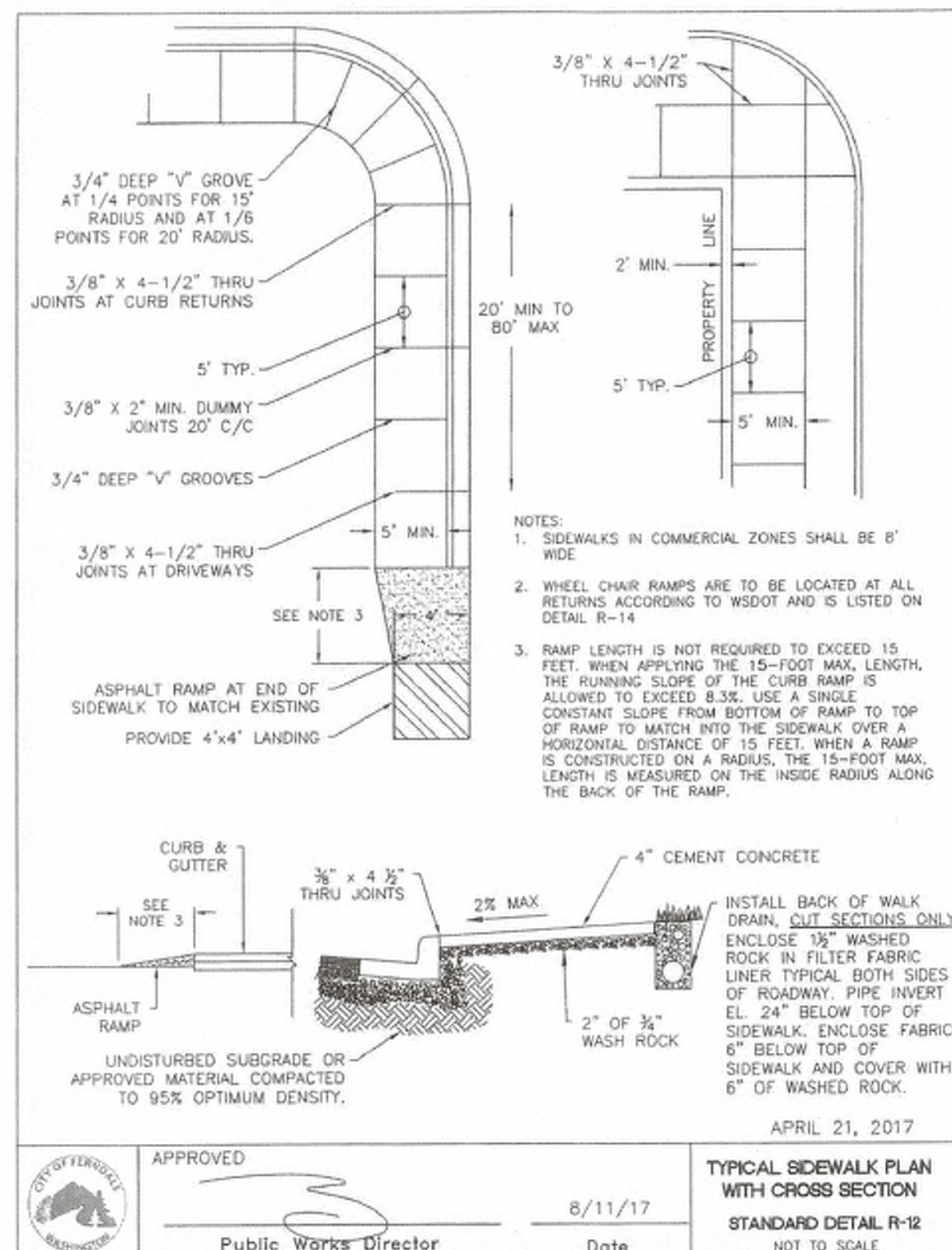
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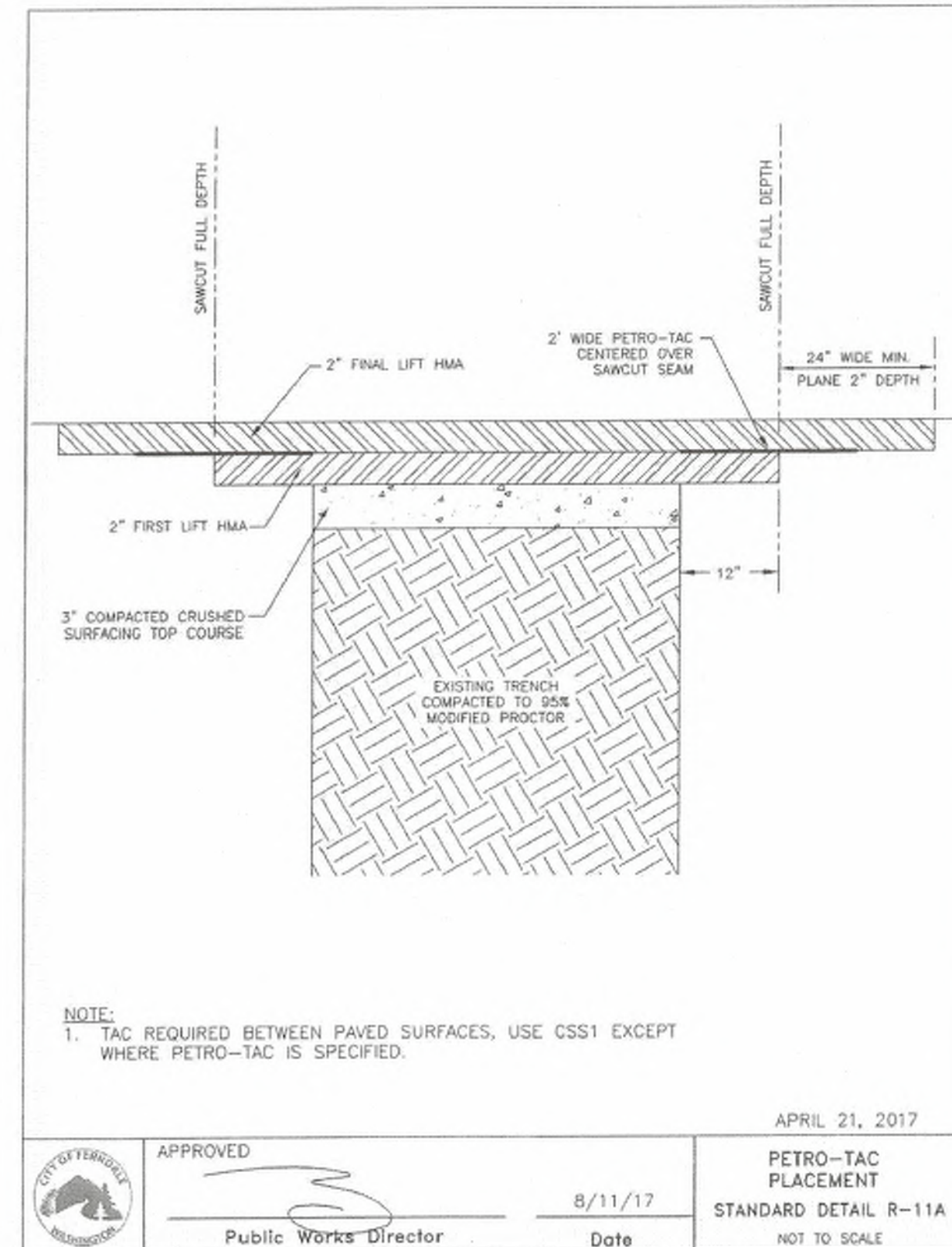
A THORNTON ROAD SECTION
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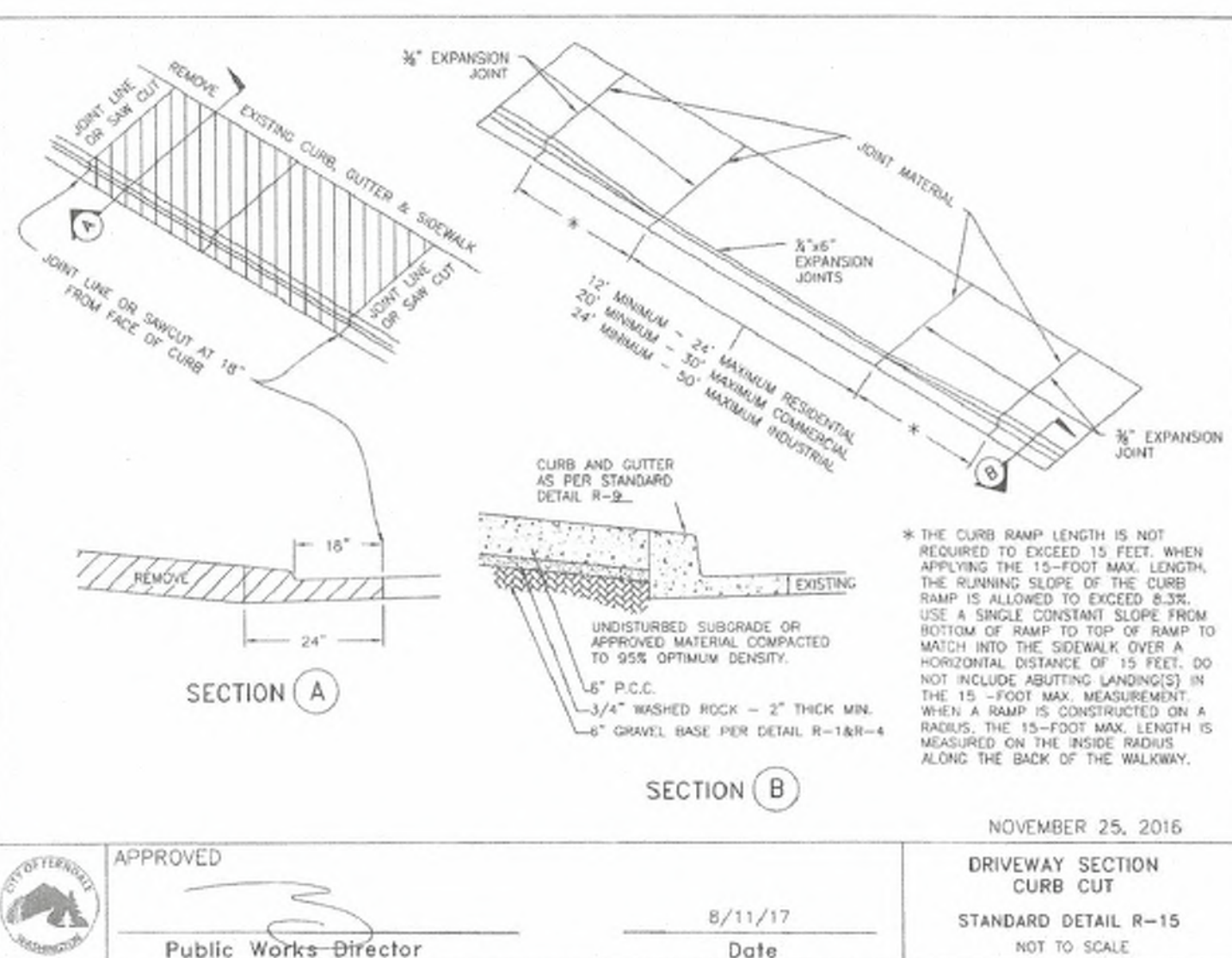
B CONCRETE CURB & GUTTER
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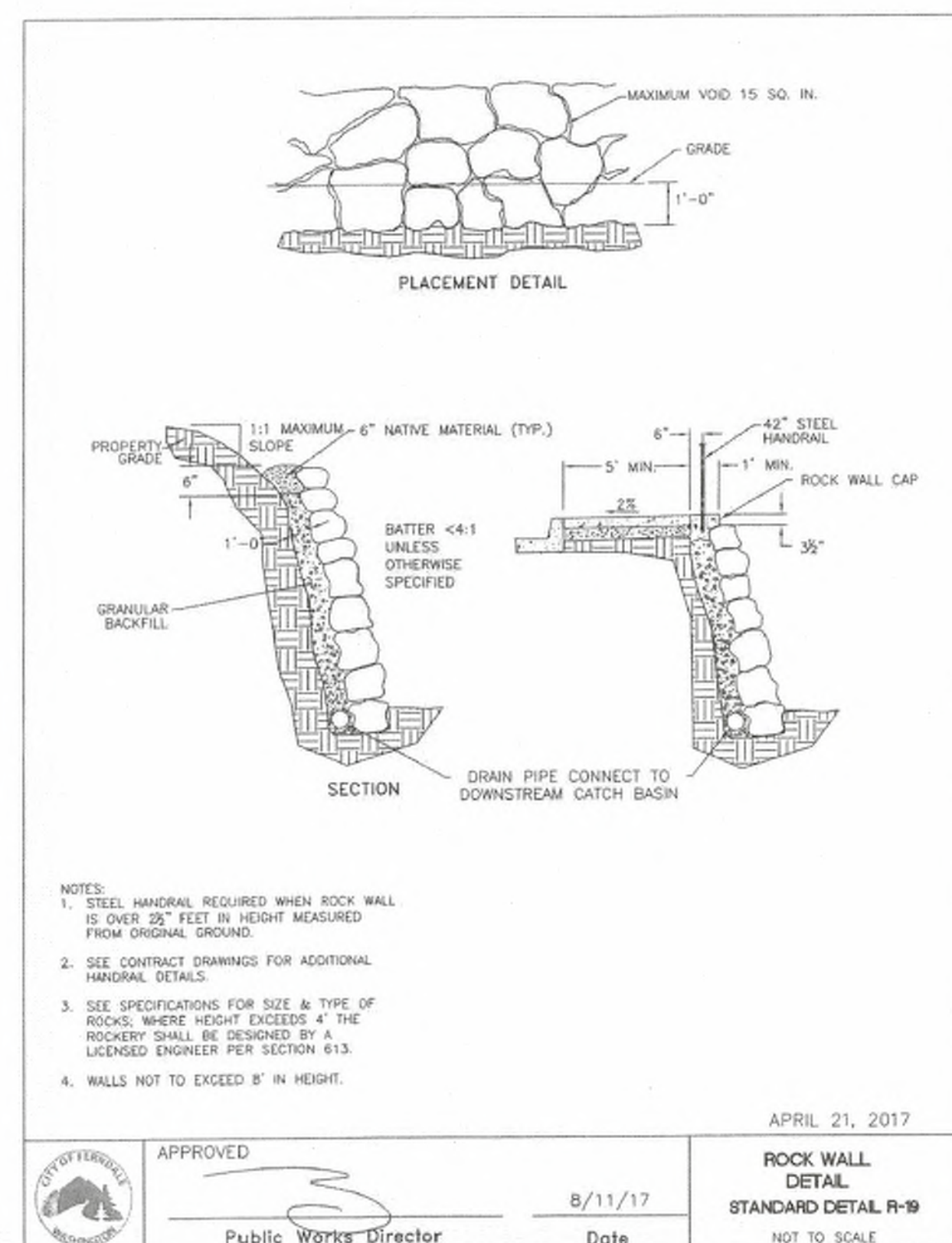
C CONCRETE SIDEWALK
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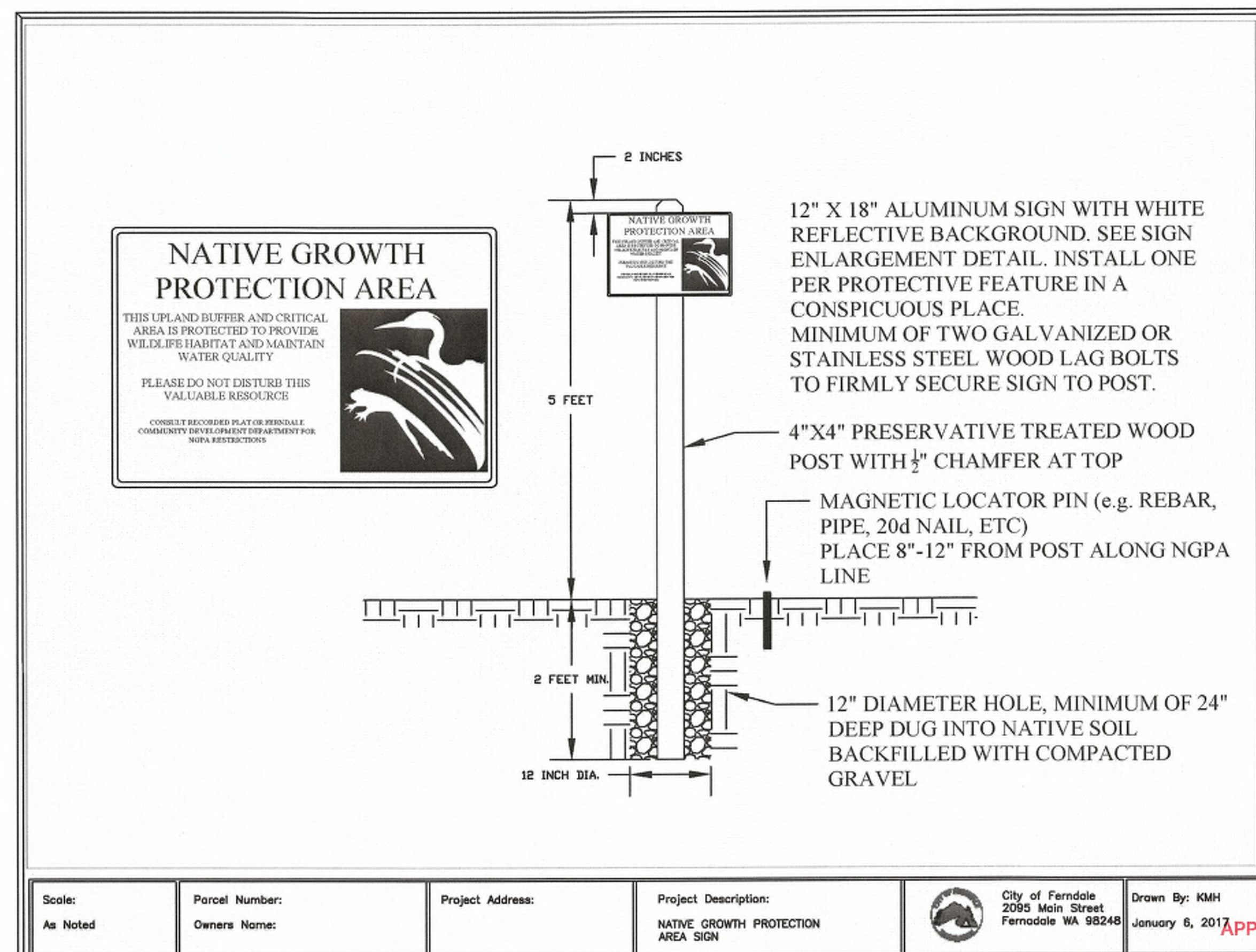
D PETRO-TAC PLACEMENT
nts



E DRIVEWAY SECTION
nts



F RETAINING ROCKERY
nts



G NGPA SIGN
nts



BY:	DESCRIPTION:
REV:	DATE:

TRAVIS FOX
3412 CRESTLINE PLACE
BELLINGHAM, WA 98226
CALL BEFORE YOU DIG
FOR BURIED UTILITY LOCATIONS
1-800-424-5555

PROJECT LOCATION:
TRAVIS FOX SHORT PLAT
2440 THORNTON STREET
FERDALE, WA
DRAWING #:
17291AB1.DWG
DESIGNED BY:
EJP
CHECKED BY:
JPS

PAVING DETAILS



JOB #:
17291
DATE:
11-6-2019
SCALE:
HORIZ: N/A
VERT: N/A
SHEET:
C9



00681.011 11/13/19 KB