

# CARPENTER ROAD SHORT PLAT

3019 CARPENTER RD SE, LACEY, WA

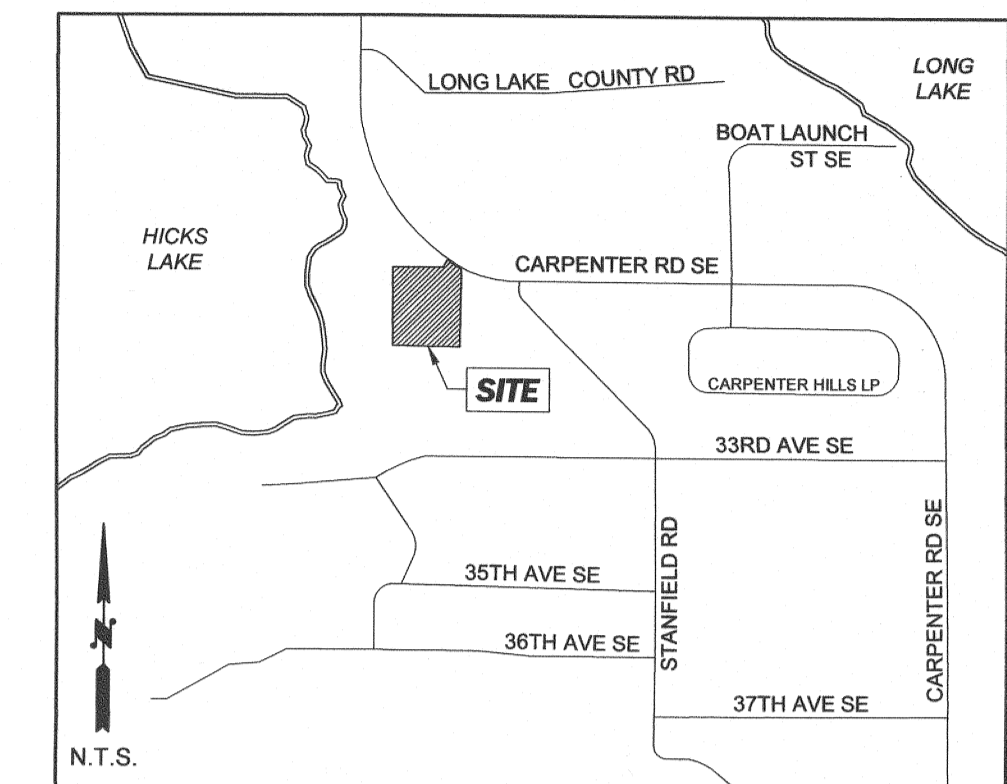
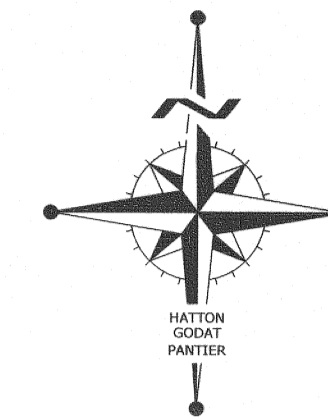
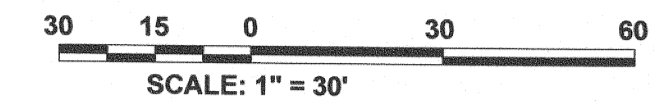
### PROJECT PROPONENT:

BAR HOLDINGS, LLC  
CONTACT: ROB RICE  
(360) 357-7010  
PO BOX 14996  
TUMWATER, WA 98511

### SHEET INDEX

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CITY OF LACEY	
<b>VERTICAL DATUM (NGVD 29)</b>	<b>MERIDIAN (HORIZ DATUM)</b>
BASED ON THURSTON COUNTY SURVEY CONTROL POINT NO. 1462A EL = 201.515	CITY OF LACEY COORDINATE SYSTEM BASED ON TIES TO THURSTON COUNTY HIGH PRECISION SURVEY, CONTROL POINTS NO. 7430 AND NO. 7468. THE BEARING BETWEEN SAID POINTS EQUALS N 43°26'32" E



VICINITY MAP

### SITE DATA

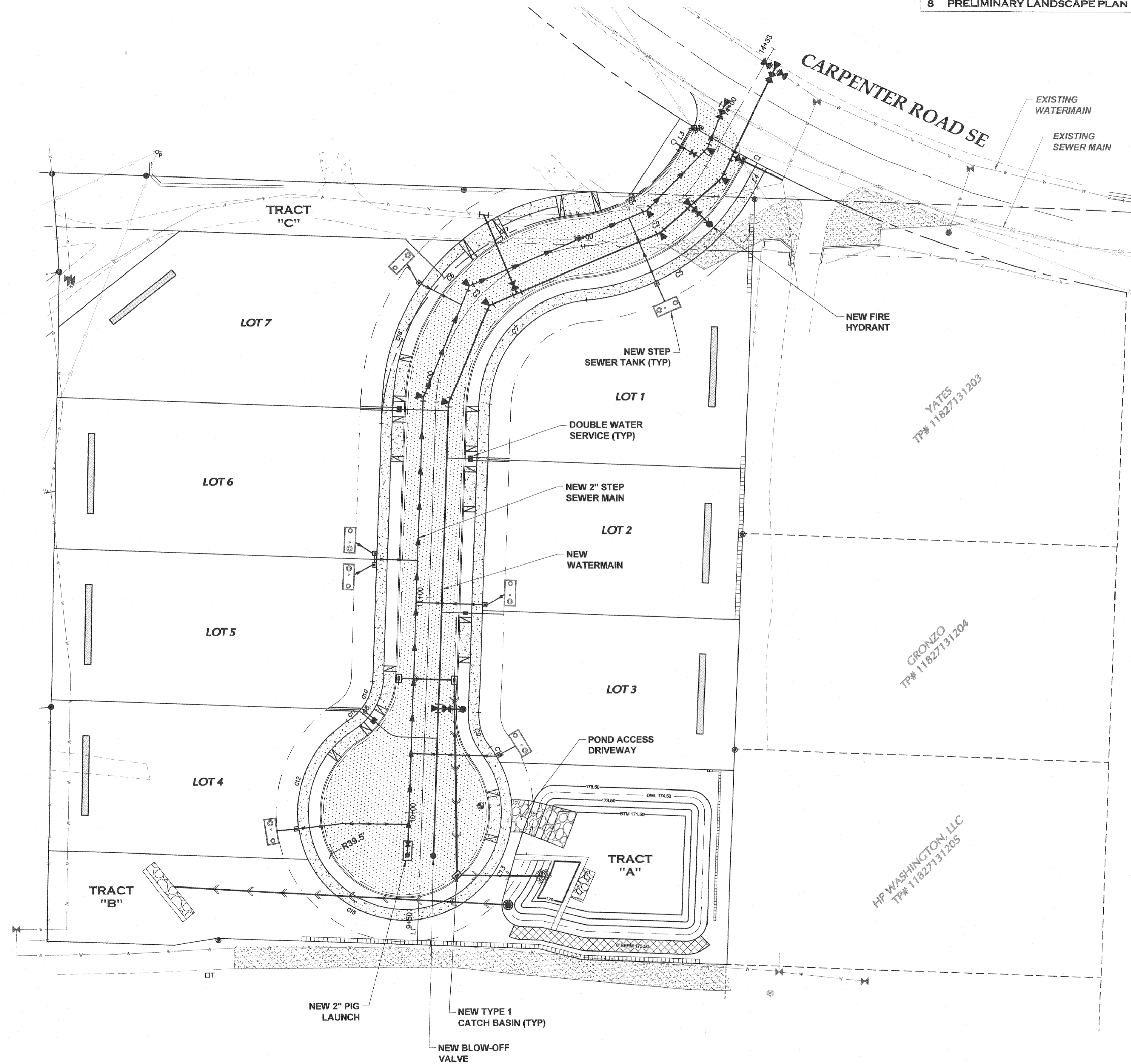
SITE ADDRESS.....	3019 CARPENTER ROAD, LACEY, WA 98503
ASSESSORS PARCEL NO.....	11827131206
ZONING.....	LD 0-4
TOTAL AREA.....	114,844 SF (2.64 AC.)
NUMBER OF LOTS.....	7
DENSITY.....	2.6 UNITS/ACRES
SMALLEST LOT AREA.....	8,316 SF (0.19 AC.)
OPEN SPACE.....	TRACT "A" (STORM WATER) 10,224 SF (0.23 AC.) TRACT "B" (TREE TRACT) 5,765 SF (0.13 AC.) TRACT "C" (PRIVATE ACCESS) 7,820 SF (0.18 AC.)

### UTILITIES

WATER.....	CITY OF LACEY
SEWER.....	CITY OF LACEY
GAS/ELECTRICITY.....	PSE (EXISTING)
TEL/COM.....	COMCAST
REFUSE.....	LEMAY

### LEGEND

	EX. HYDRANT
	EX. WATER METER
	EX. WATER VALVE
	EX. CATCH BASIN
	EX. SEWER MANHOLE
	EX. SEWER CLEANOUT
	EX. SEWER VALVE
	EX. GRAVITY SEWER
	EX. POWER LINE
	EX. STORM/ROOF LINE
	EX. WATER LINE
	EX. EDGE OF PAVEMENT
	EX. MINOR CONTOUR
	EX. MAJOR CONTOUR
	NEW STREET LIGHT
	NEW HYDRANT ASSEMBLY
	NEW DOUBLE WATER METER
	NEW WATER VALVE
	NEW TYPE 1 CATCH BASIN
	NEW LOW POINT DRAIN
	NEW SEWER FORCEMAIN
	NEW SEWER LATERAL
	NEW STORM DRAIN LINE
	NEW ROOF DRAIN LINE
	NEW WATERMAIN
	NEW WATER SERVICE



**TOPOGRAPHIC NOTE:**  
THE EXISTING TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, HGP CANNOT ENSURE ITS ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

**NOTE:** THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

### LEGAL DESCRIPTION

PARCEL 1 OF SHORT SUBDIVISION NO. SS-6072, AS RECORDED OCTOBER 24, 1980, UNDER AUDITOR'S FILE NO. 1126274; IN THURSTON COUNTY, WASHINGTON.

THIS DRAWING DOES NOT REPRESENT A RECORD DOCUMENT, UNLESS CERTIFIED BY HATTON GODAT PANTIER.

ANY ALTERATIONS TO THE DESIGN SHOWN HEREON MUST BE REVIEWED AND APPROVED BY HATTON GODAT PANTIER.

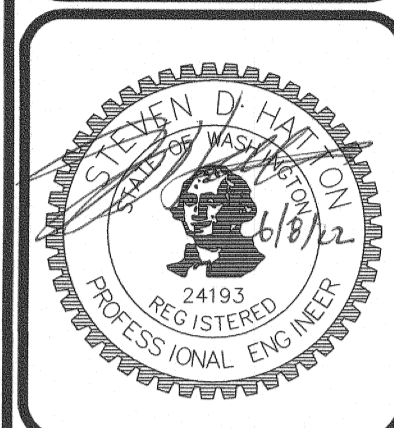
### CONSTRUCTION STAKING:

THIS PROJECT MUST BE STAKED PRIOR TO CONSTRUCTION BY THE DESIGN ENGINEER OR A LICENSED LAND SURVEYOR.

### RECORD DOCUMENTS:

THE CONTRACTOR SHALL FURNISH HATTON GODAT PANTIER WITH A DRAWING(S) SHOWING THE CHANGES MADE TO THE DESIGN DRAWING(S).

DESIGNED BY:	AK
DRAWN BY:	BMS
CHECKED BY:	SDH
DATE:	DECEMBER 2021
SCALE:	H 1" = 30' V N/A



**HATTON GODAT PANTIER**  
ENGINEERS AND SURVEYORS  
3910 MARTIN WAY E, SUITE B  
OLYMPIA, WA 98506  
TEL: 360.943.1599 FAX: 360.357.6299  
hattonpantier.com

REVISIONS:	DATE:

**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503  
**COVER SHEET**  
A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.

AGENCY NO.	
SHEET: 1 OF 8	
INDEX: 21-045 pre-cov.dwg	
JOB: 21-045	

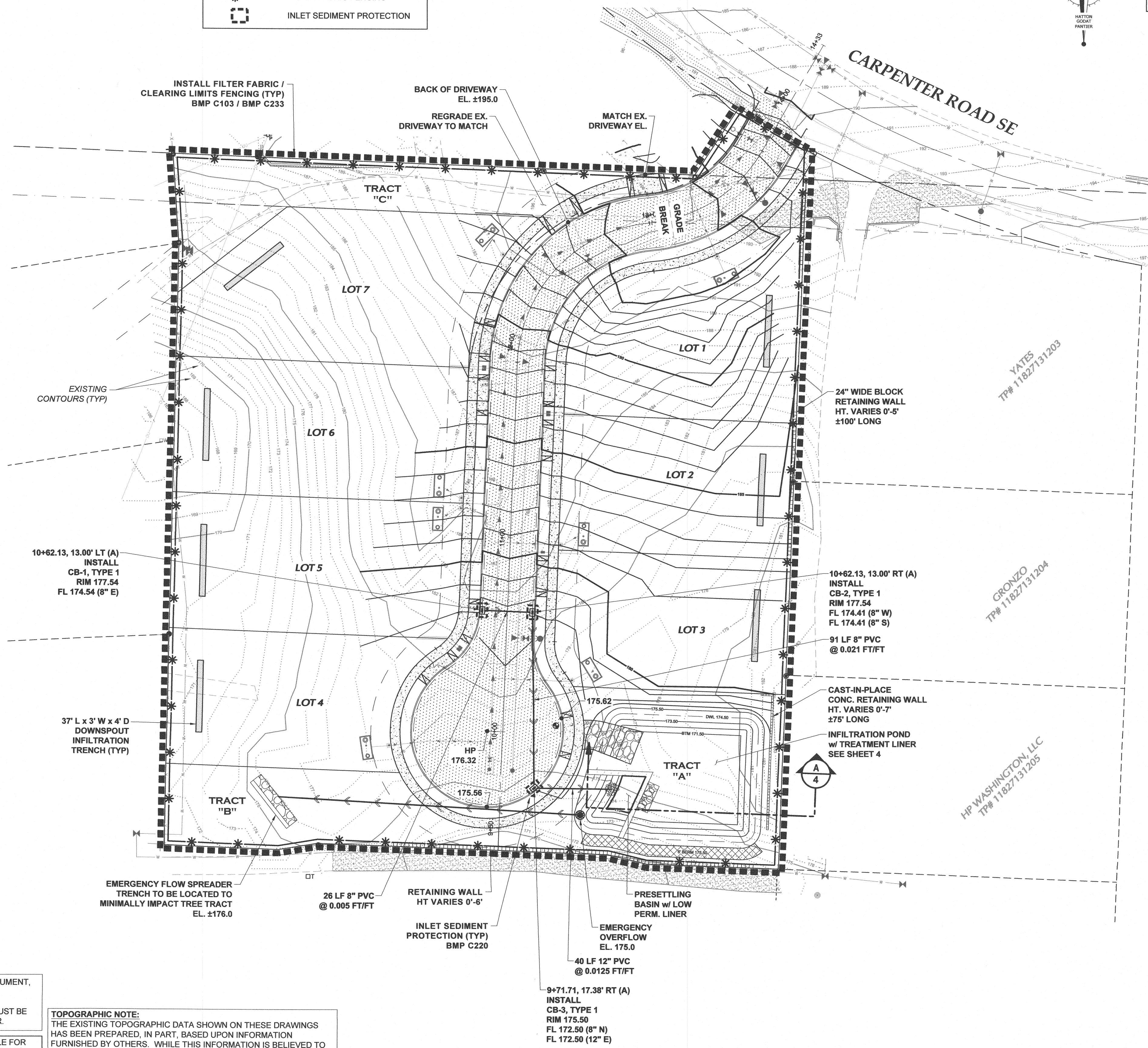
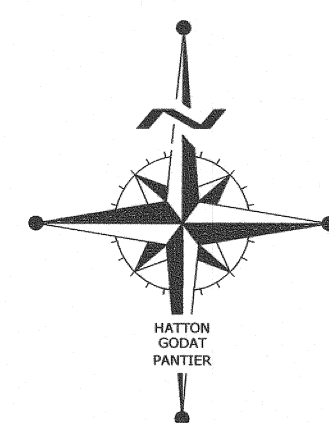
**LEGEND**

	CLEARING LIMITS
	FILTER FABRIC FENCING
	INLET SEDIMENT PROTECTION

**CITY OF LACEY**

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SCALE: 1" = 30'



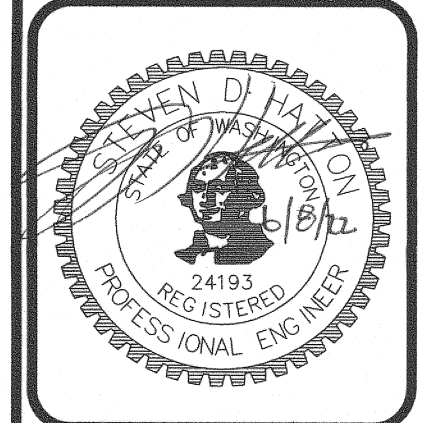
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SCALE:	1" = 30'
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REVISIONS:	DATE:

**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503

**GRADING, DRAINAGE & TESC PLAN**

A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 19 NORTH, RANGE 1 WEST, W.M.

AGENCY NO.	
SHEET:	2 OF 8
E:\qgn\21-00021-049\Preliminary	
INDEX: 21-045 pre-grd&dm.dwg	
JOB:	21-045

**MAINTENANCE OF EROSION CONTROL FACILITIES:**

IN GENERAL, ALL BMP'S SHALL BE CHECKED WEEKLY AND AFTER A SIGNIFICANT RAINFALL (MORE THAN APPROXIMATELY 0.5 INCHES IN 24 HOURS). THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:

1. SEDIMENT BASINS SHALL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT REACHES 1-1/2- FEET FROM THE TOP OF THE RISER PIPE.
2. GRAVEL AROUND THE RISER PIPE SHALL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WOULD RESTRICT DRAINAGE. IF THE GRAVEL BECOMES CLOGGED WITH SILT, IT SHALL BE REPLACED.
3. DIVERSION DIKES AND SWALES SHALL BE CHECKED FOR BLOCKAGE AND DAMAGE ON A REGULAR BASIS. WATER SHALL MOVE FREELY BEHIND DIKES AND IN SWALES AT ALL TIMES.
4. PIPE SLOPE DRAINS SHALL BE CHECKED FOR STABILITY. NO UNDERMINING OF THE PIPE SHALL BE ALLOWED.
5. FILTER FENCE SHALL BE CHECKED REGULARLY FOR UNDERMINING AND SEDIMENT BUILDUP. SEDIMENT SHALL BE REMOVED ONCE IT REACHES A DEPTH OF 1-FOOT.
6. EROSION CONTROL BLANKETS SHALL BE CHECKED FOR STABILITY. BLANKETS SHALL BE HELD IN PLACE AND HAVE GOOD CONTACT WITH THE FILL SLOPE AT ALL TIMES.
7. ALL SEEDED AND SODDED AREAS, ESPECIALLY FILL SLOPES, SHALL BE CHECKED REGULARLY TO MAKE SURE VEGETATIVE COVERAGE IS COMPLETE. AREAS SHALL BE RESEEDED AND FERTILIZED AS NEEDED.
8. TRACKING OF MUD OFF-SITE WILL NOT BE ALLOWED. IF EXCESSIVE MUD IS TRACKED OFF SITE, IT SHALL BE CLEANED WITH A STREET SWEEPER. FURTHER TRACKING SHALL THEN BE PREVENTED BY WASHING TRUCK TIRES OR SWEEPING CONTINUOUSLY.

**CONSTRUCTION SEQUENCE:**

1. CONSTRUCTION ON THIS SITE SHALL BE CONDUCTED SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THESE PLANS SHALL BE SUBMITTED TO THE PROJECT ENGINEER AND REVIEWING AGENCY. DEVIATIONS MUST BE APPROVED PRIOR TO ANY SITE DISTURBING ACTIVITY NOT CONTAINED WITHIN THE APPROVED PLANS.
2. FOR DEVELOPMENT OF THIS SITE, THE FOLLOWING GENERAL SEQUENCE SHALL BE OBSERVED:
  - A. CALL FOR PRECONSTRUCTION MEETING.
  - B. INSTALL STABILIZED CONSTRUCTION ENTRANCE TO PROVIDE SITE ACCESS AT INDICATED CONSTRUCTION ENTRANCE LOCATION. INSTALL FILTER FABRIC FENCE AND TREE PROTECTION FENCING AS SHOWN IN THESE PLANS.
  - C. INSTALL INLET PROTECTION FOR EXISTING INLETS IN THE VICINITY OF AREAS TO BE DISTURBED AS INDICATED ON PLANS.
  - D. CALL FOR INSPECTION BY THE REVIEWING AGENCY AND PROJECT ENGINEER.
  - E. BEGIN TREE CLEARING AND GRUBBING OF AREAS WHICH ARE TO BE GRADED.
  - F. INSTALL TEMPORARY SEDIMENT PONDS & BEGIN GRADING OF AREA AS SHOWN ON THESE PLANS.
  - G. INSTALL SITE IMPROVEMENTS IN ACCORDANCE WITH APPROVED PLANS.
  - H. PERMANENT EROSION CONTROL MEASURES (I.E., HYDROSEEDING, GRASSING, PLANTINGS, ETC.)
3. ONCE THE SITE HAS BEEN DISTURBED, CONTINUE OPERATIONS DILIGENTLY TOWARD COMPLETION AND STABILIZATION OF THE SITE.
4. MONITOR ALL EROSION CONTROL FACILITIES, REPAIR, MODIFY, AND ENHANCE AS DIRECTED OR AS REQUIRED.

**CONCRETE HANDLING NOTES: BMP C151**

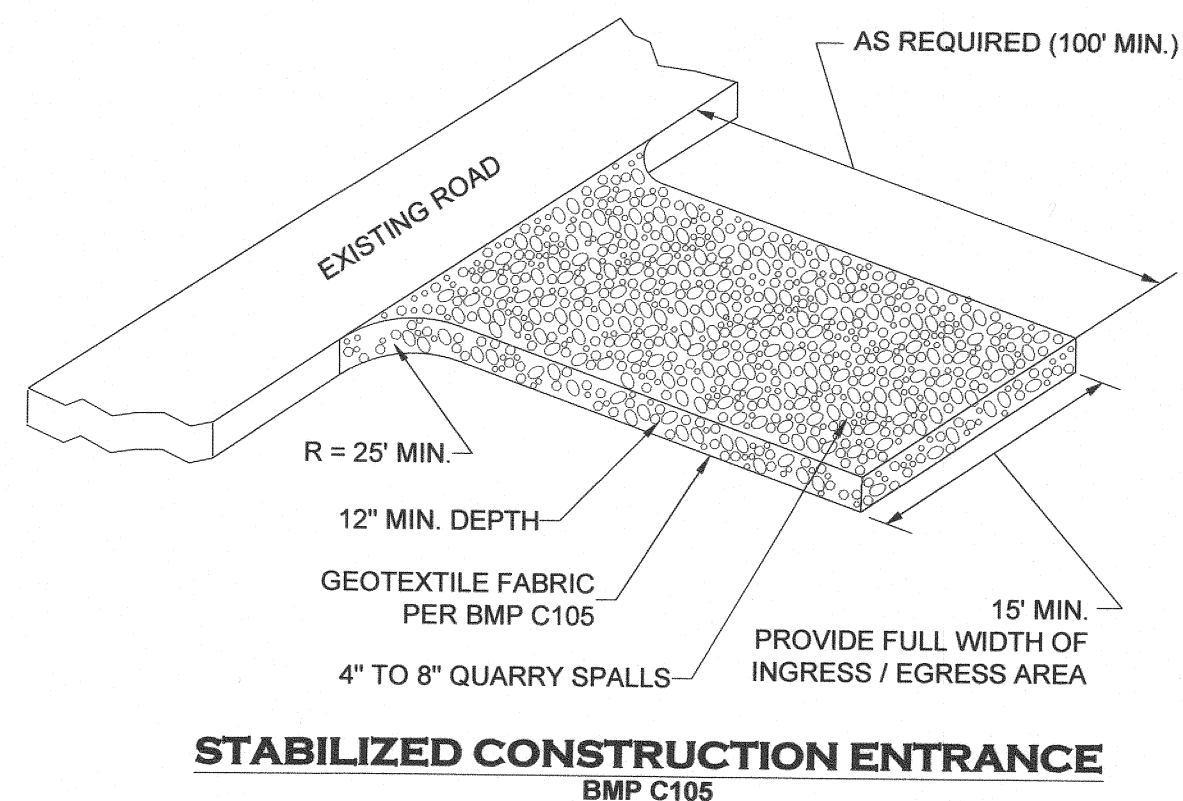
1. ANYTIME CONCRETE IS USED THESE MANAGEMENT PRACTICES SHALL BE UTILIZED.
2. CONCRETE PROJECTS INCLUDE BUT ARE NOT LIMITED TO CURBS, SIDEWALKS, ROADS, DRIVEWAYS, BRIDGES, FOUNDATIONS, FLOORS, STREET LIGHT BASES AND UTILITY BLOCKING.
3. CONCRETE EQUIPMENT SHALL BE WASHED OUT ONLY IN FORMED "WASH OUT" AREAS.
4. UNUSED CONCRETE SHALL BE RETURNED TO THE BATCH PLANT FOR RECYCLING.
5. CONCRETE WASHOUT AREAS SHALL BE CHECKED AND REPAIRED DAILY.

**EROSION CONTROL SEEDING NOTES: BMP C120**

1. SEED MIXTURE SHALL BE: 40% CHEWINGS OR ANNUAL BLUEGRASS, 50% PERENNIAL RYE, 5% RED TOP OR COLONIAL BENTGRASS AND 5% WHITE DUTCH CLOVER APPLIED AT THE RATE OF 120 POUNDS PER ACRE.
2. SEED BEDS PLANTED BETWEEN MAY 1 AND OCTOBER 31 WILL REQUIRE IRRIGATION AND OTHER MAINTENANCE AS NECESSARY TO FOSTER AND PROTECT THE ROOT STRUCTURE.
3. FOR SEED BEDS PLANTED BETWEEN OCTOBER 31 AND APRIL 30, ARMORING OF THE SEED BED WILL BE NECESSARY (E.G., GEOTEXTILES, JUTE MAT, CLEAR PLASTIC COVERING).
4. BEFORE SEEDING, INSTALL NEEDED SURFACE RUNOFF CONTROL MEASURES SUCH AS GRADIENT TERRACES, INTERCEPTOR DIKES, SWALES, LEVEL SPREADERS AND SEDIMENT BASINS.
5. THE SEEDBED SHALL BE FIRM WITH A FAIRLY FINE SURFACE, FOLLOWING SURFACE ROUGHENING. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPE.
6. FERTILIZERS ARE TO BE USED ACCORDING TO SUPPLIERS RECOMMENDATIONS. AMOUNTS USED SHOULD BE MINIMIZED, ESPECIALLY ADJACENT TO WATER BODIES AND WETLANDS.

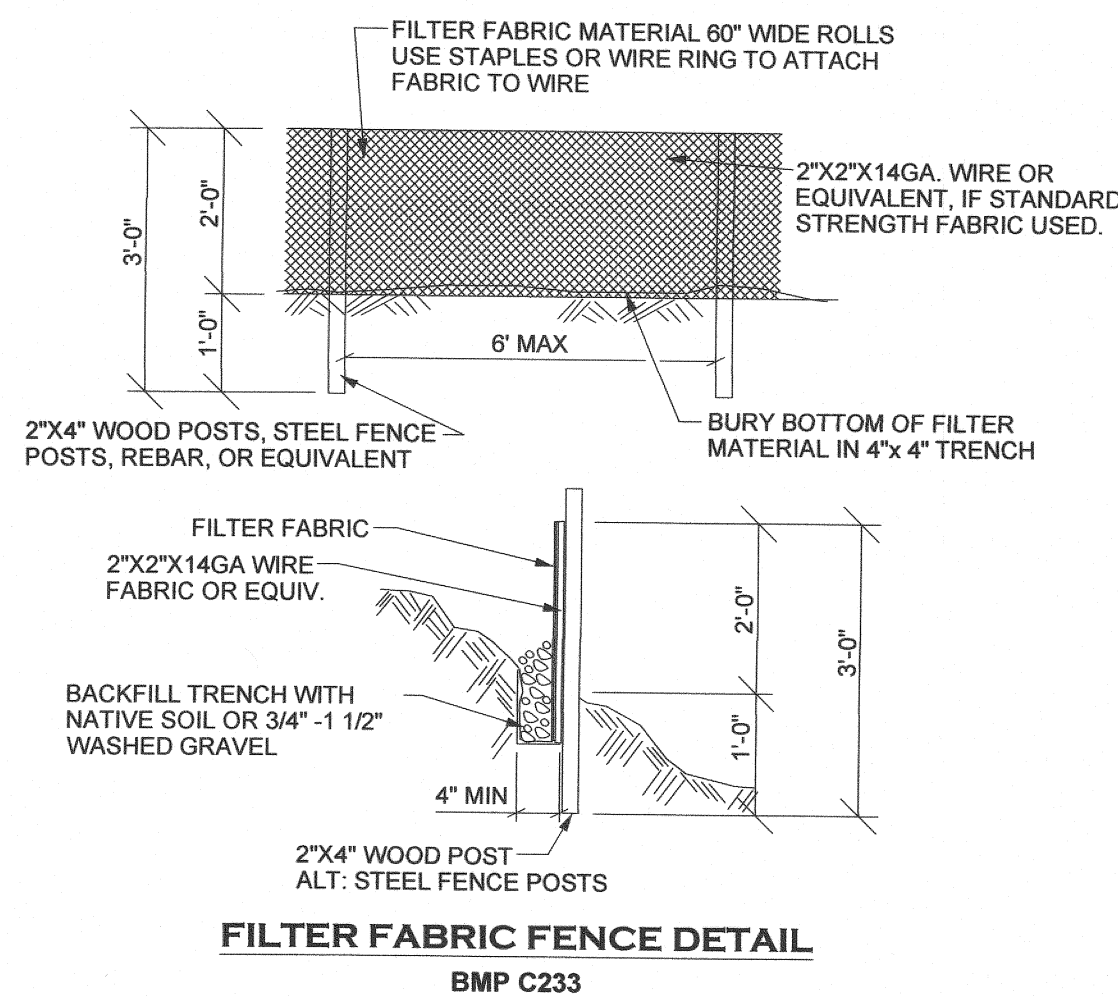
**MULCH NOTES: BMP C121**

1. MULCH MATERIALS USED SHALL BE HAY OR STRAW, AND SHALL BE APPLIED AT THE RATE OF 2 - 3 TONS / ACRE OR OTHER WOOD FIBER CELLULOSE MATERIAL TO BE APPLIED AT THE RATE OF APPROXIMATELY 100 TONS / ACRE.
2. MULCHES SHALL BE APPLIED IN ALL AREAS WITH EXPOSED SOILS.
3. MULCHING SHALL BE USED IMMEDIATELY AFTER SEEDING OR IN AREAS WHICH CANNOT BE SEEDED BECAUSE OF THE SEASON.
4. ALL AREAS NEEDING MULCH SHALL BE COVERED BY NOVEMBER 1.
5. MULCH MUST BE MAINTAINED UNTIL SITE HAS ESTABLISHED 80% GRASS COVERAGE.



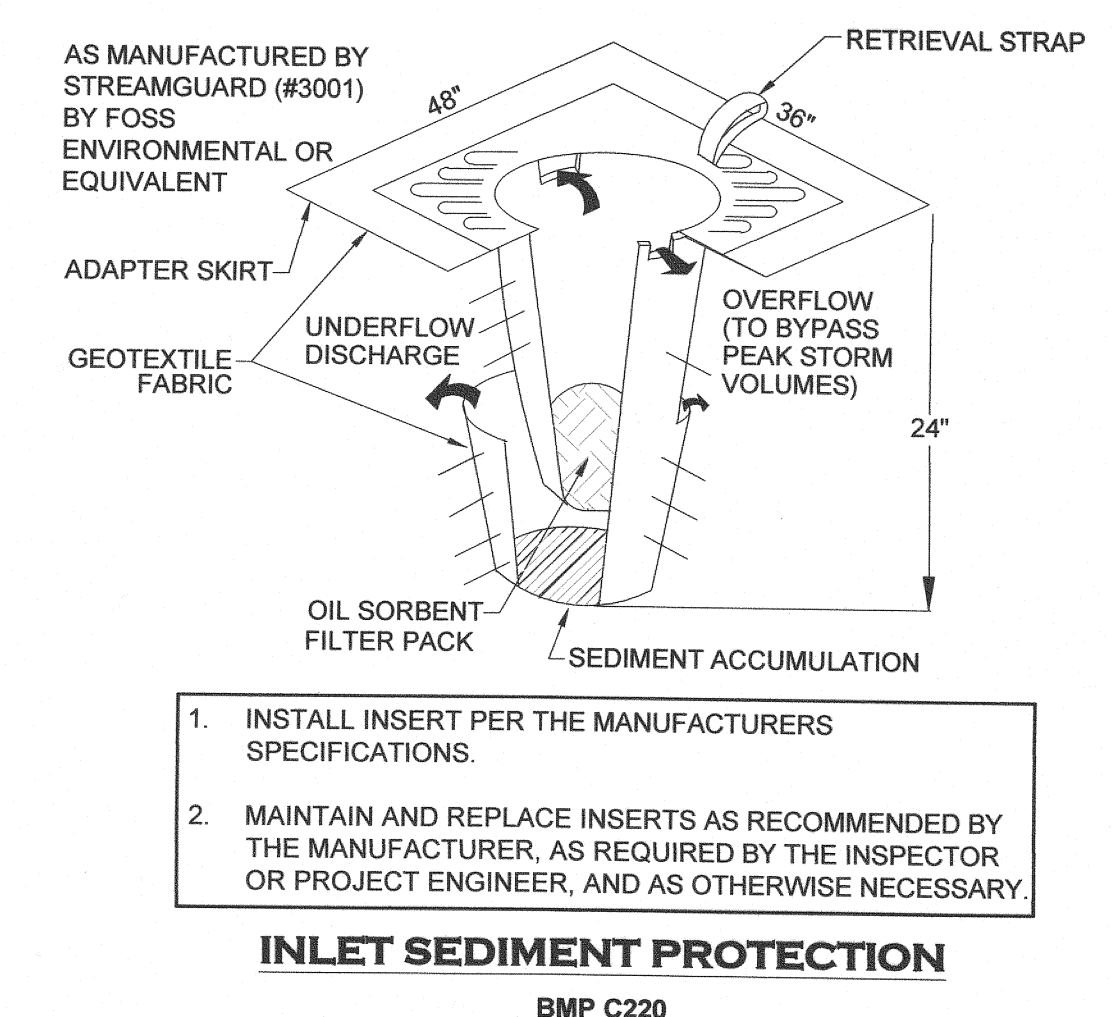
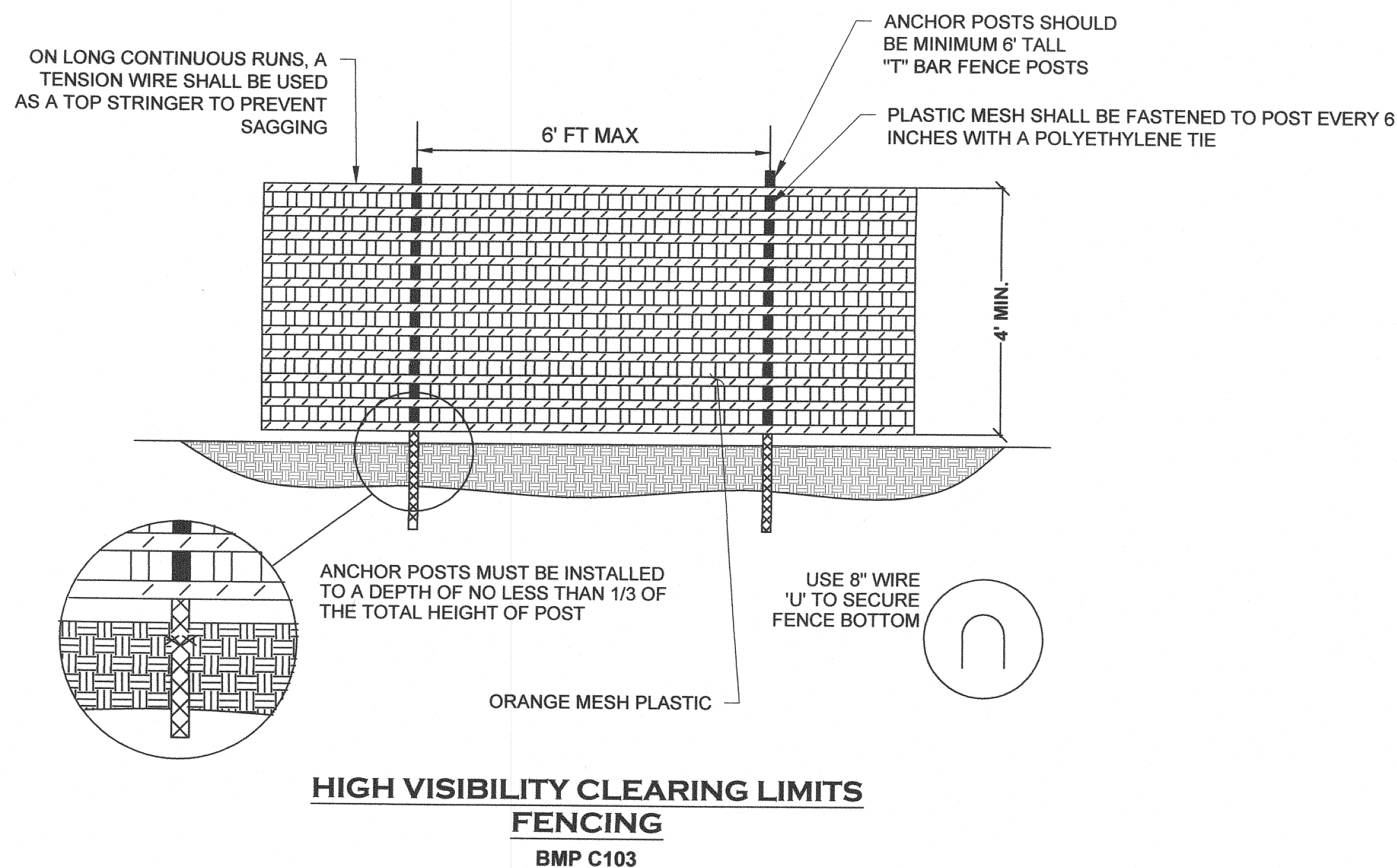
**STABILIZED CONSTRUCTION ENTRANCE NOTES: BMP C105**

1. MATERIAL SHALL BE 4 INCH TO 8 INCH QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1 INCH TO 3 INCH ROCK. (STATE STANDARD SPECIFICATIONS.)
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA. SMALLER PADS MAY BE APPROVED FOR SINGLE-FAMILY RESIDENTIAL AND SMALL COMMERCIAL SITES.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
4. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON AN AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.



**FILTER FABRIC FENCE NOTES: BMP C233**

1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED AT BOTH ENDS TO POST.
2. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND.
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 12 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 24 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
7. FILTER FABRIC FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.



1. INSTALL INSERT PER THE MANUFACTURERS SPECIFICATIONS.
2. MAINTAIN AND REPLACE INSERTS AS RECOMMENDED BY THE MANUFACTURER, AS REQUIRED BY THE INSPECTOR OR PROJECT ENGINEER, AND AS OTHERWISE NECESSARY.

**INLET SEDIMENT PROTECTION  
BMP C220**

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SCALE: H Y N/A



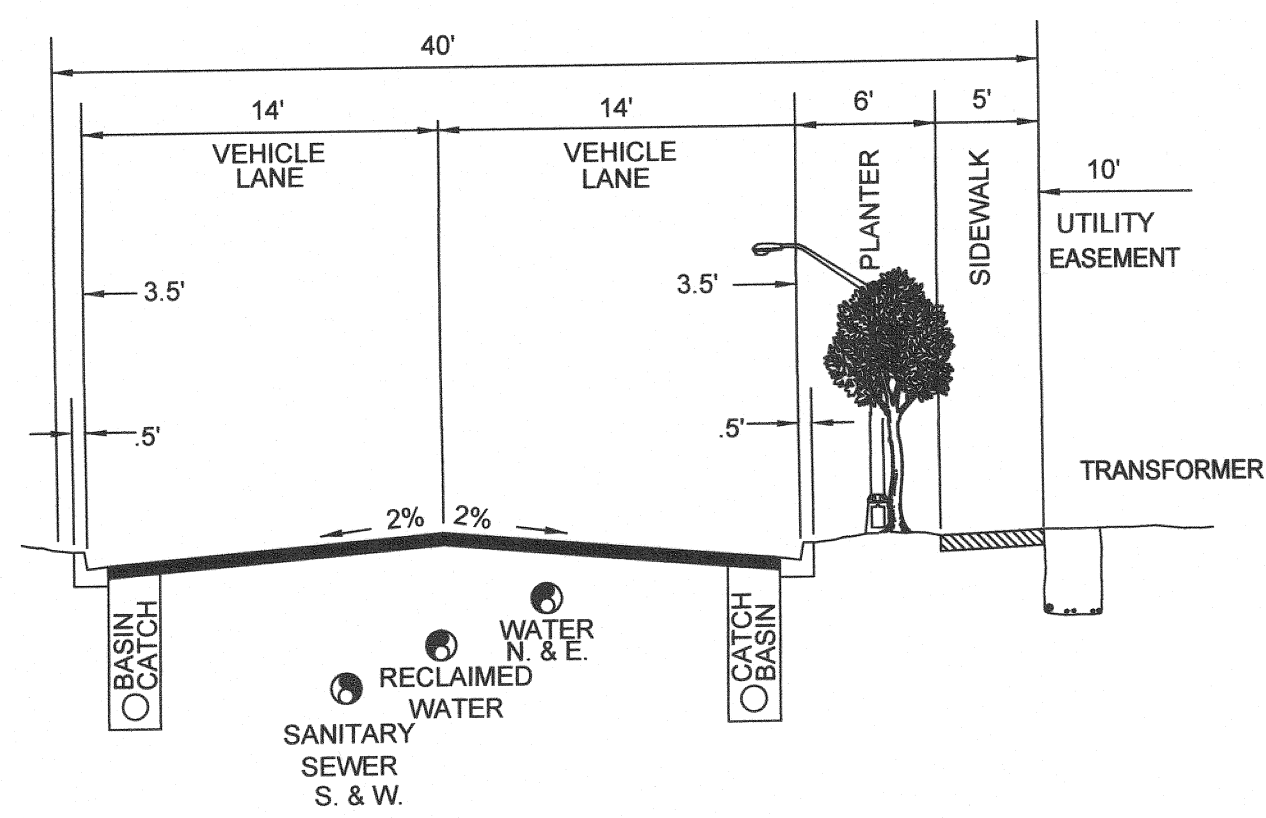
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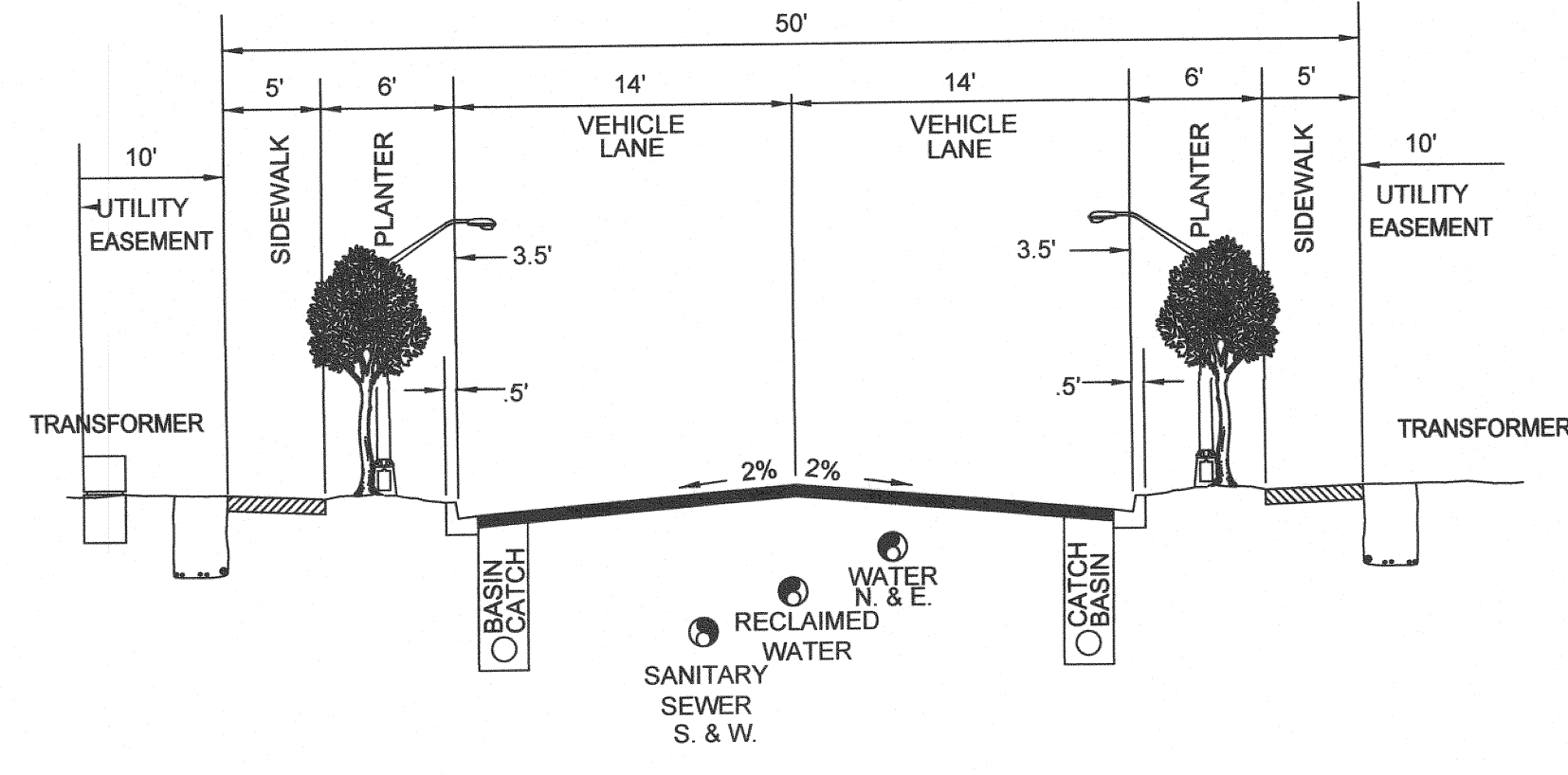
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PRELIMINARY TESC NOTES & DETAILS  
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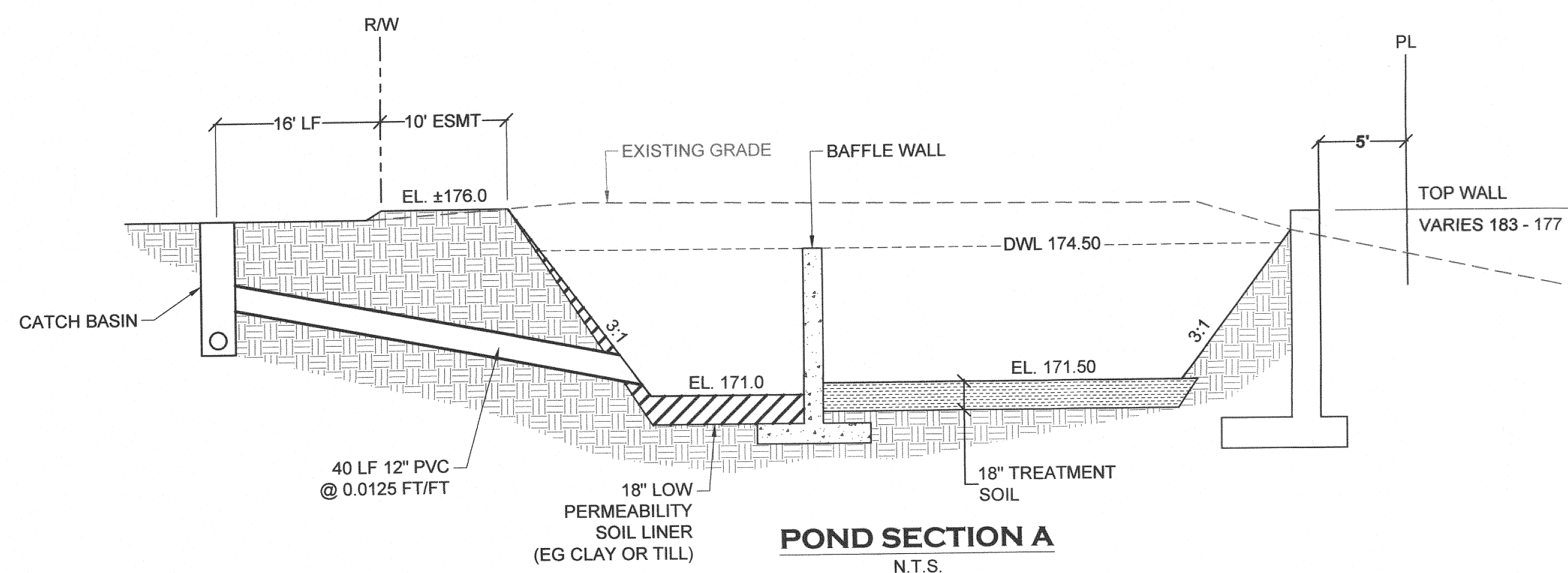
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**40' ENTRANCE ROADWAY CROSS-SECTION**  
N.T.S.



**PUBLIC ROAD CROSS-SECTION (MAJOR LOCAL)**  
N.T.S.



**POND SECTION A**  
N.T.S.

**LOW PERMEABILITY LINER SPECIFICATIONS:**

- 18" AFTER COMPACTION
- COMPACTED TO 95% MINIMUM DRY DENSITY, MODIFIED PROCTOR (ASTM D-1557)
- SOIL PLACED IN 6" LIFTS
- GRADATION REQUIREMENTS

SIEVE SIZE	% PASSING
6"	100 (MIN)
4"	90 (MIN)
#4	70-100
#200	20 (MIN)

- PERFORMANCE REQUIREMENT FOR ALTERNATIVE DEPTH/MATERIALS: 2.4 x 10<sup>-5</sup> INCHES PER MINUTE INFILTRATION RATE
- 12" CLAY LINER MAY BE USED IN LIEU OF ABOVE 18" WITH GRADATION SPECIFIED

**BIORETENTION SOIL MIXTURE**

THE PLANTING SOIL MIXTURE WITHIN THE BIORETENTION FACILITY SHALL BE A HIGHLY PERMEABLE, HIGHLY ORGANIC MIXTURE OF SANDY SOIL MIXED THOROUGHLY WITH COMPOST AMENDMENT. THE SOIL MIXTURE SHOULD NEVER BE COMPACTED. THE FINAL COMPOST-AMENDED SOIL MIXTURE SHALL BE COMPRISED OF APPROXIMATELY 2/3 LOAMY SAND AND 1/3 COMPOST AMENDMENT. ALTERNATIVELY, THE FINAL SOIL MIXTURE MAY BE 30% SANDY LOAM, 30% COARSE SAND, AND 40% COMPOST. THE MIXTURE SHOULD HAVE ABOUT 10% ORGANIC CONTENT, WITH LESS THAN 5% CLAY. SOIL MIXTURE SHALL BE CLEAN (NO MAN-MADE DEBRIS AND FREE OF ROCKS, ROOTS OR OTHER WOODY DEBRIS GREATER THAN 1"-DIAMETER. THE FINAL BIORETENTION SOIL MIX SHALL HAVE A CEC (CATION EXCHANGE CAPACITY) OF AT LEAST 5 MEQ/100 GRAMS OF DRY SOIL, 8% TO 10% ORGANIC MATTER CONTENT, 2% TO 5% FINES, AND A MAXIMUM OF 12% HOUR INITIAL (MEASURED) INFILTRATION RATE. A MINIMUM OF 18" SOIL DEPTH SHALL HAVE THESE PROPERTIES.

**SANDY SOIL COMPONENT:**

THE SOIL PORTION OF AMENDED SOIL MIXTURES FOR USE IN RAIN GARDENS SHALL CONSIST OF SAND, LOAMY SAND OR SANDY LOAM (WITH VERY LITTLE CLAY) PER THE USDA TEXTURAL TRIANGLE. IF ON-SITE EXCAVATED SOIL IS USED TO CREATE THE MIXTURE, IT MUST BE TESTED AND VERIFIED AS SUITABLE BY THE GEOTECHNICAL ENGINEER.

**COMPOST AMENDMENT COMPONENT:**

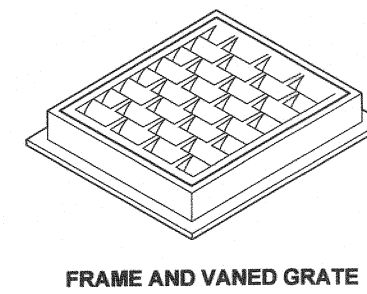
THE COMPOST USED TO AMEND SOILS FOR USE IN RAIN GARDENS MUST COMPLY WITH CHAPTER 173-360 WAC (SEE WWW.ECY.WA.GOV/PROGRAMS/BIOWASTE/FACILITIES/360.HTML), TO MEET THE DEFINITION OF COMPOSTED MATERIAL. IT MUST BE ORGANIC SOLID WASTE THAT HAS UNDERGONE BIOLOGICAL DEGRADATION AND TRANSFORMATION UNDER CONTROLLED CONDITIONS DESIGNED TO PROMOTE AEROBIC DECOMPOSITION.

THE COMPOST SHOULD BE STABLE AND MATURE, DARK BROWN IN COLOR, AND EARTHY-SMELLING, WITH A CRUMBLY TEXTURE. IT SHOULD REMAIN AT A STABLE TEMPERATURE (I.E. NOT HEAT-UP WHEN WETTED), HAVE MIXED PARTICLE SIZES, AND SHALL MEET THE FOLLOWING CRITERIA:

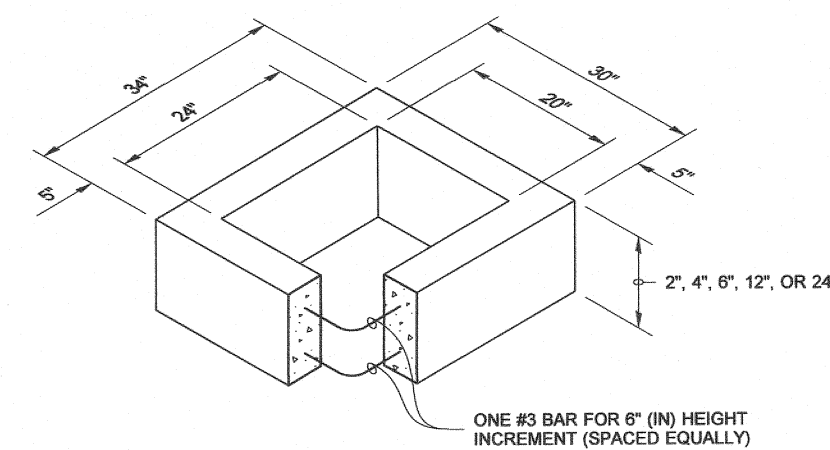
- ORGANIC CONTENT 45% - 65%
- PH BETWEEN 5.5 AND 7.5
- CARBON TO NITROGEN RATIO BETWEEN 20:1 AND 25:1 (30:1 TO 35:1 PREFERRED FOR NATIVE PLANTS)
- MOISTURE CONTENT 35% TO 50%
- NO VIABLE WEED SEEDS PRESENT
- LESS THAN 1% MANUFACTURED INERT MATERIAL (CONCRETE, PLASTIC, ETC.)

SOIL TESTING SHALL BE PERFORMED TO VERIFY THAT THE SOIL MIXTURE (OR THE SANDY SOIL AND COMPOST AMENDMENT COMPONENTS) MEETS SPECIFICATIONS. AT LEAST ONE SOIL TEST SHALL BE PERFORMED FOR EVERY 100 CUBIC YARDS OF SOIL MIXTURE, AND ALL TESTS SHALL BE CERTIFIED BY A TESTING LABORATORY OR GEOTECHNICAL ENGINEER FOR APPROVAL BY THE CITY OF LACEY PRIOR TO PLACEMENT ON THE PROJECT SITE.

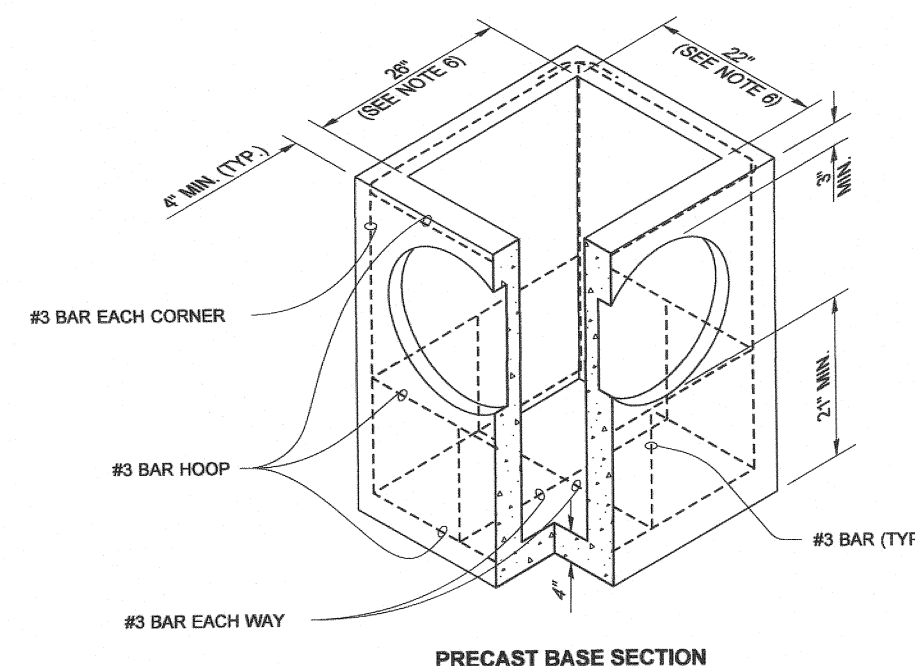
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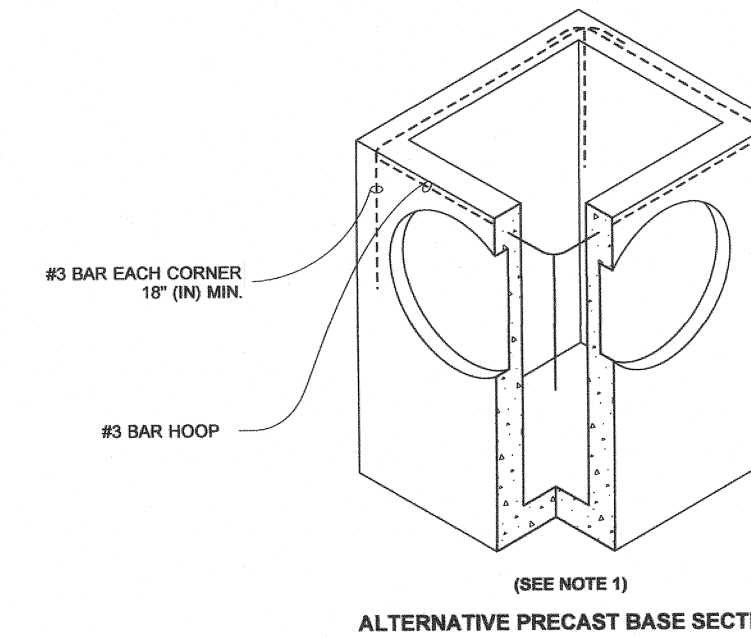
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

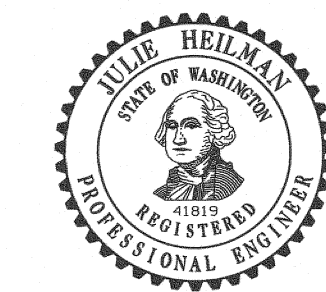
**PIPE ALLOWANCES**

PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP # (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

\* CORRUGATED POLYETHYLENE STORM SEWER PIPE

**NOTES**

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the 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 knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) 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 Standard Specification Section 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. 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.



Julie Heilman  
2020.09.01 07:52:50 -0700  
**CATCH BASIN TYPE 1**  
STANDARD PLAN B-5.20-03  
SHEET 1 OF 1 SHEET  
APPROVED FOR PUBLICATION  
Roark, Steve  
Digitally signed by Roark, Steve  
Date: 2020.09.09 09:43:23 -0700  
STATE DESIGN ENGINEER  
Washington State Department of Transportation

DESIGNED BY: AK  
DRAWN BY: BMS  
CHECKED BY: SDH  
DATE: DECEMBER 2021  
SCALE: H N/A  
V N/A



**HATTON GODAT PANTIER**  
ENGINEERS AND SURVEYORS  
3910 MARTIN WAY E, SUITE B  
OLYMPIA, WA 98506  
TEL: 360.943.1599, FAX: 360.357.6299  
hattonpantier.com

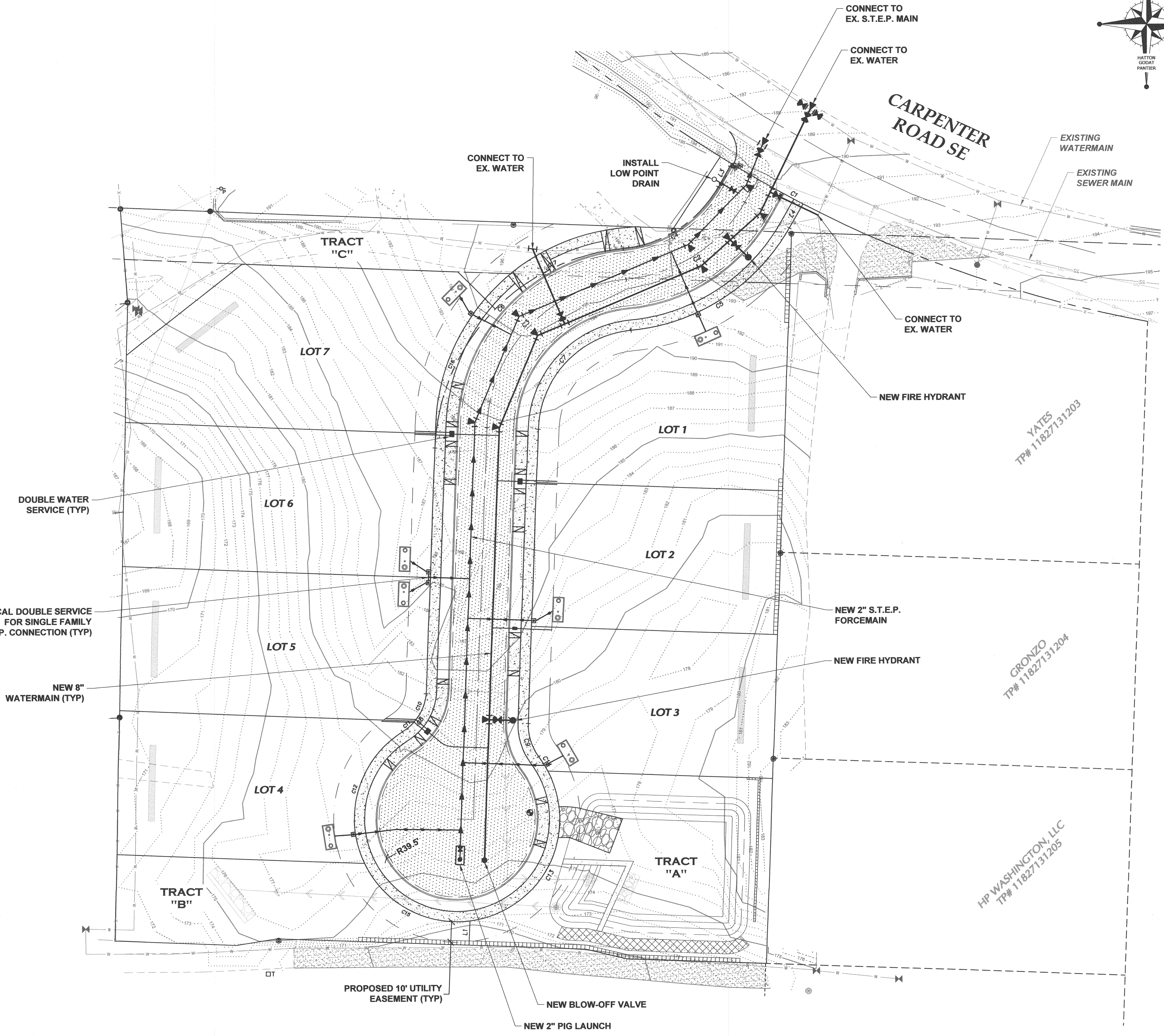
REVISIONS:  
DATE:

TP# 11827131206  
**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503  
**PRELIMINARY GRADING & DRAINAGE DETAILS**  
A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.

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AGENCY NO.  
SHEET: 4 OF 8  
E:\dgn\21-000\21-045\Preliminary  
INDEX: 21-045 pre-det.dwg  
JOB: 21-045

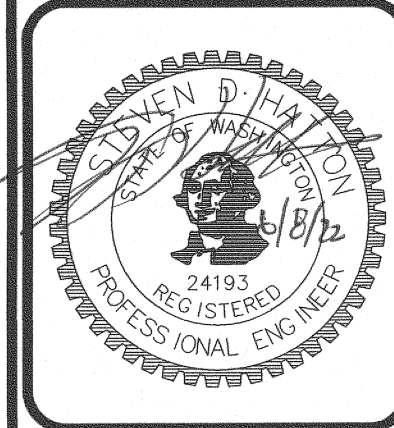


**CITY OF LACEY**

<b>VERTICAL DATUM (NGVD 29)</b> BASED ON THURSTON COUNTY SURVEY CONTROL POINT NO. 1462A EL = 201.515	<b>MERIDIAN (HORIZ DATUM)</b> CITY OF LACEY COORDINATE SYSTEM BASED ON TIES TO THURSTON COUNTY HIGH PRECISION SURVEY, CONTROL POINTS NO. 7430 AND NO. 7468. THE BEARING BETWEEN SAID POINTS EQUALS N 43°28'32" E
---	--

30 15 0 30 60  
SCALE: 1" = 30'

DESIGNED BY: AK	BMS	SDH	H	Y	N/A
DRAWN BY: BMS					
CHECKED BY: SDH					
DATE: DECEMBER 2021					
SCALE: 1" = 30'					



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OLYMPIA, WA 98506  
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hattonpantier.com

REVISIONS:	DATE:

**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503  
**PRELIMINARY UTILITY PLAN**  
A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.

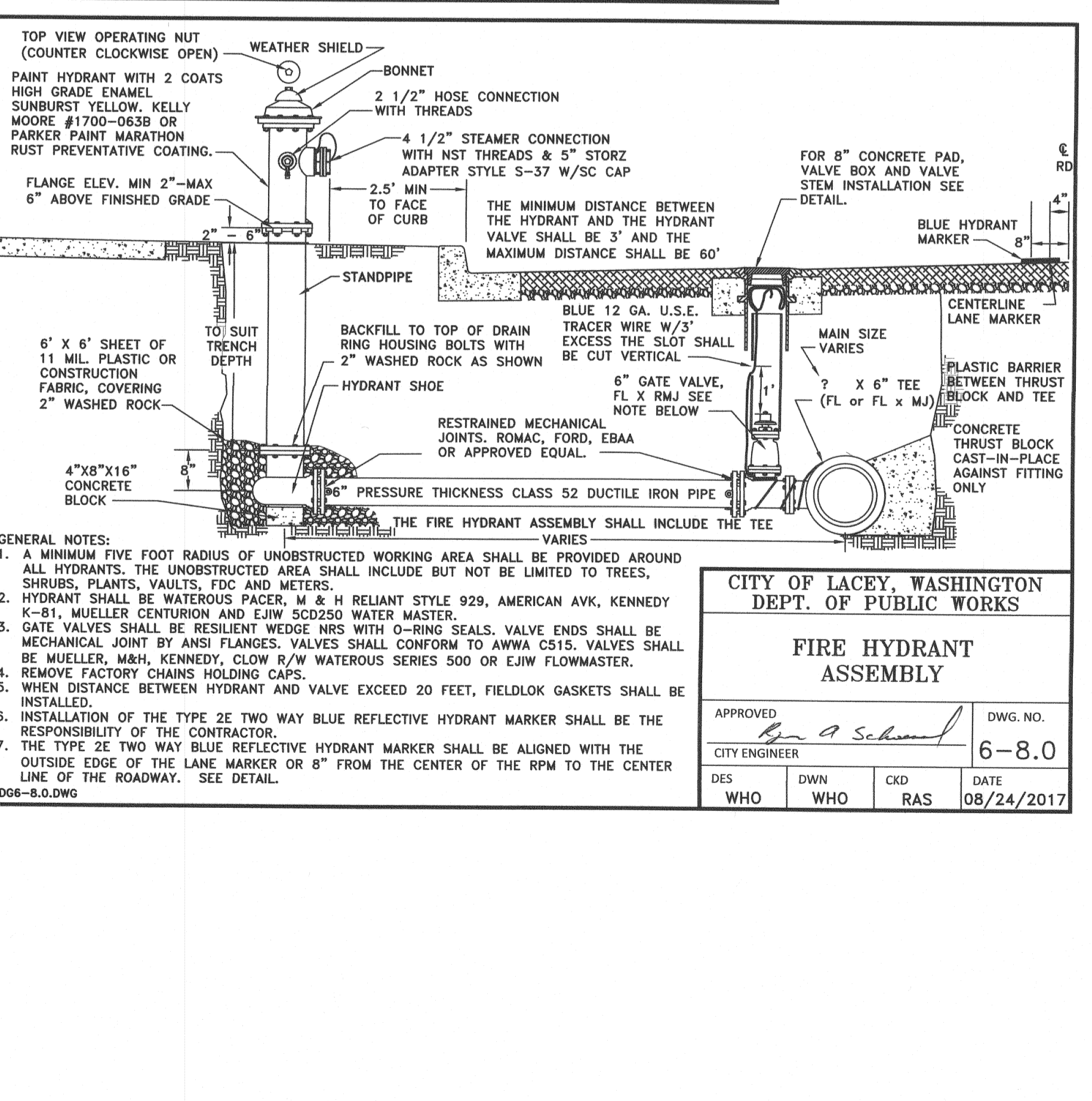
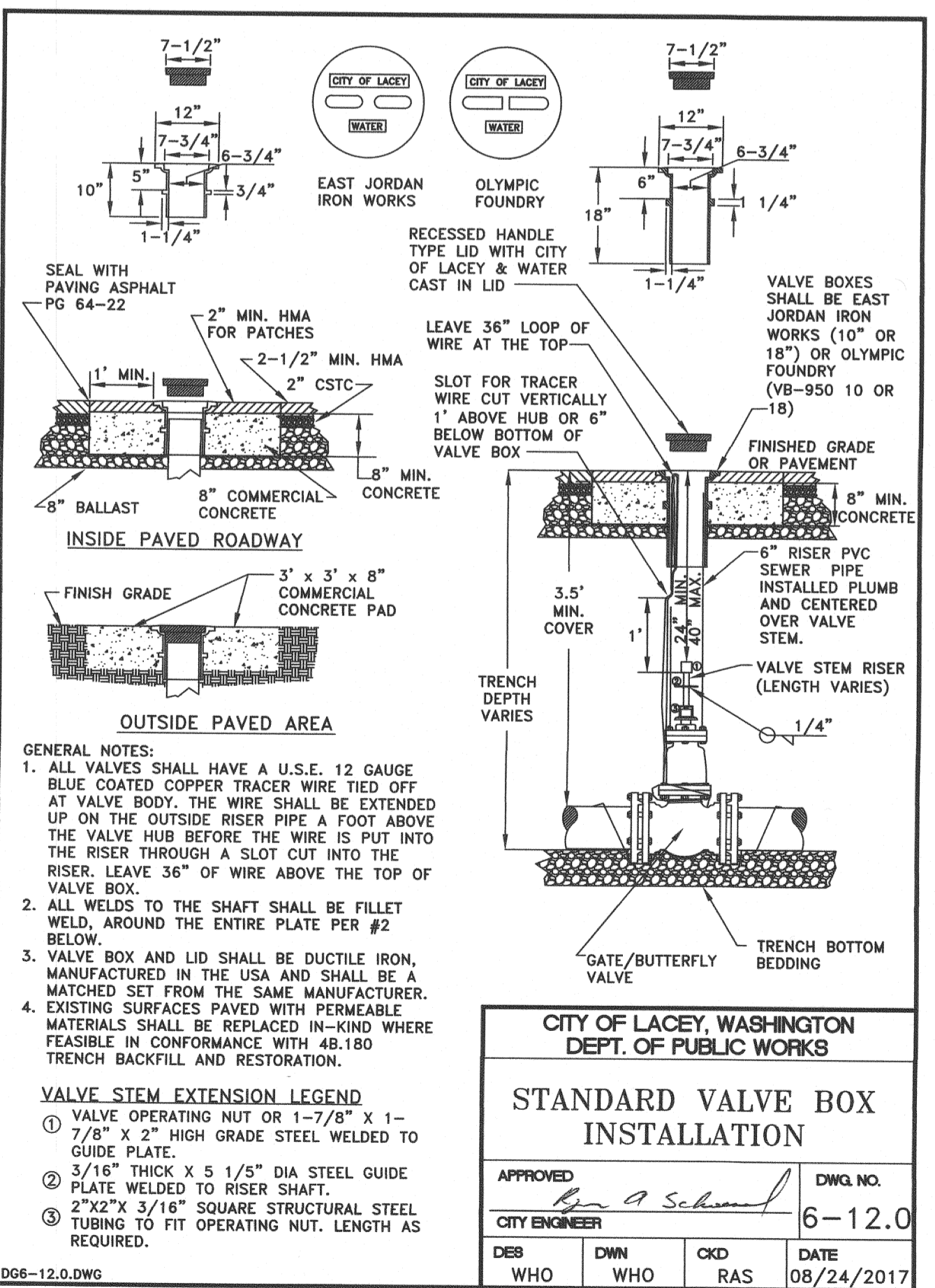
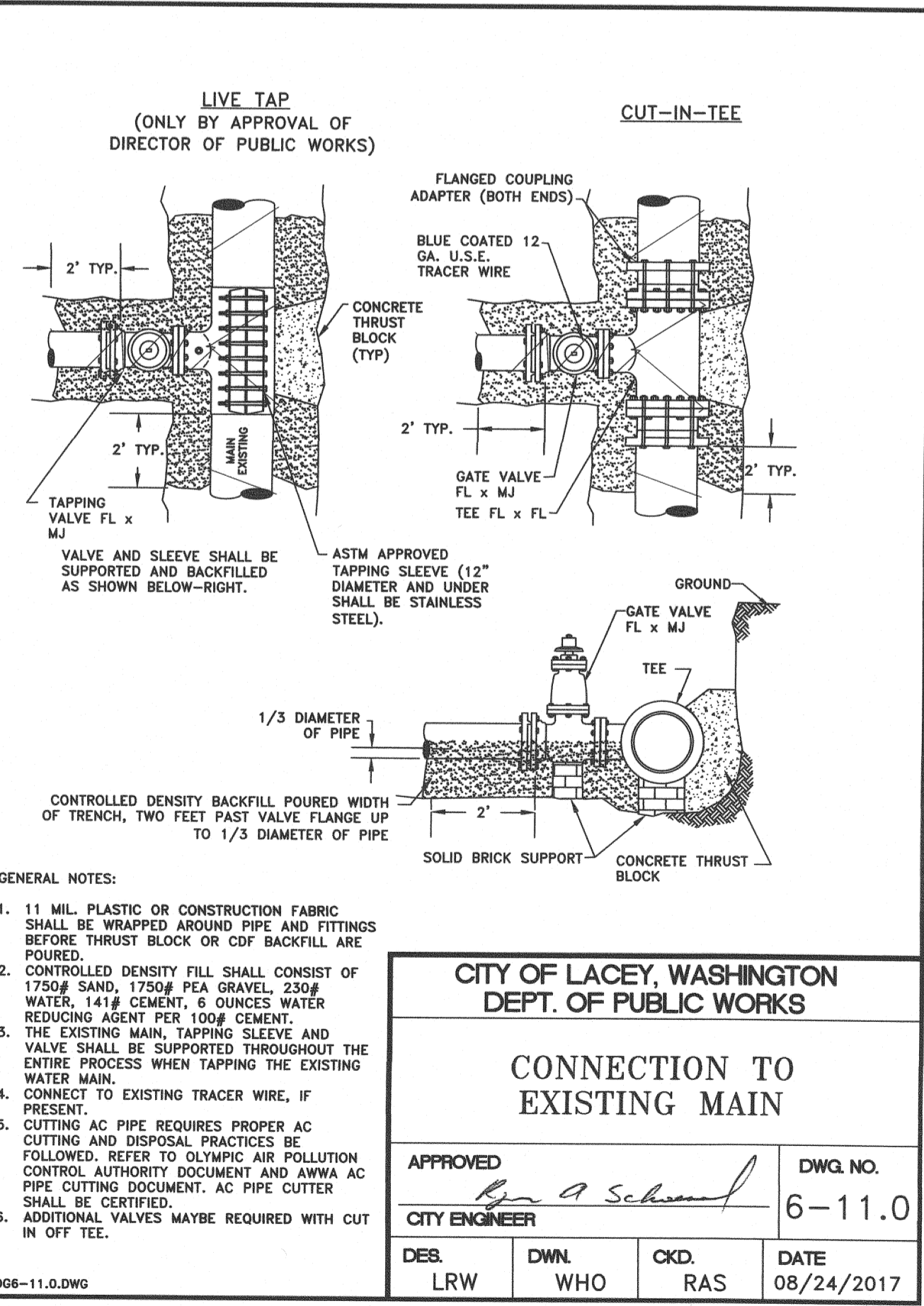
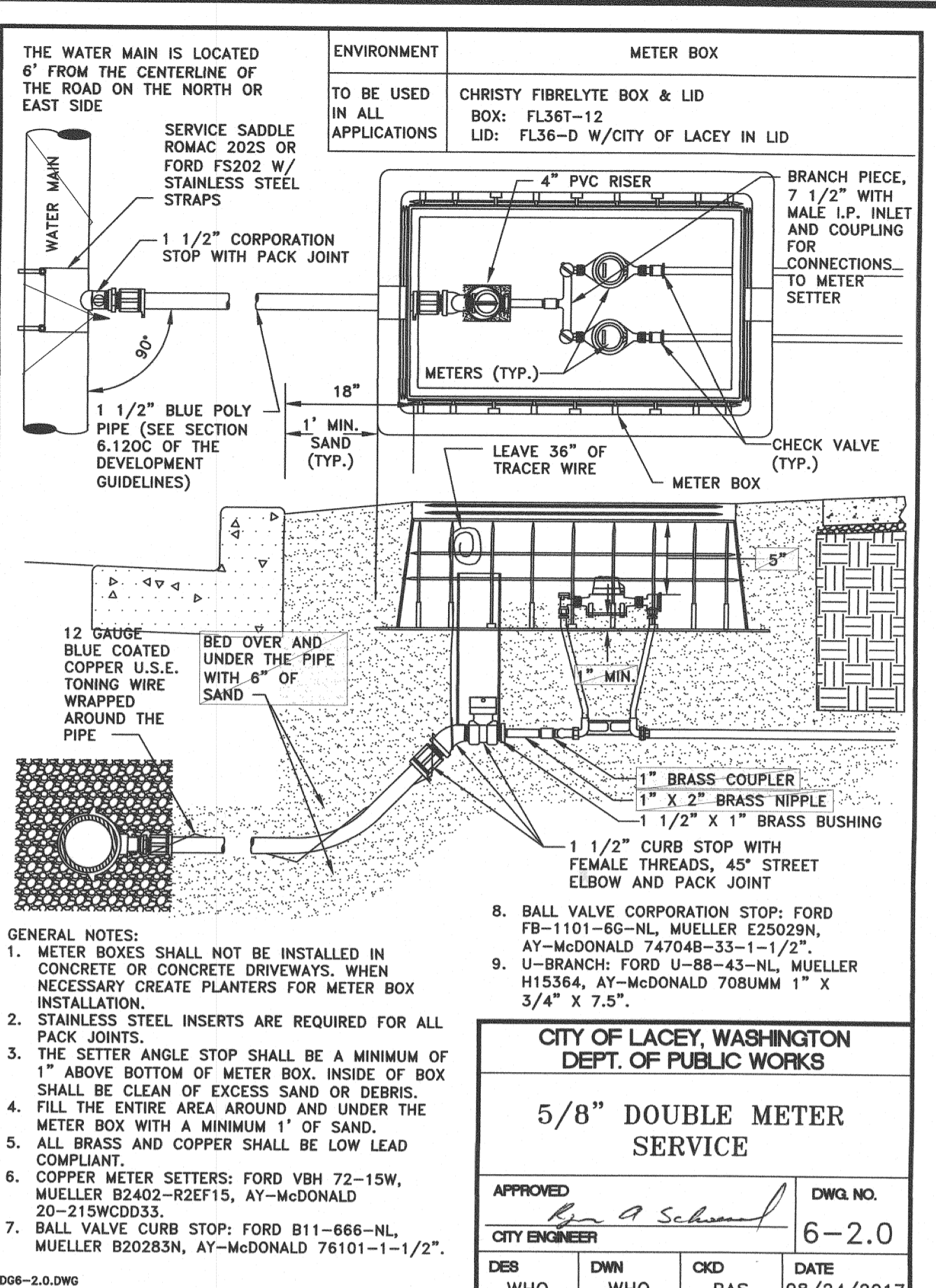
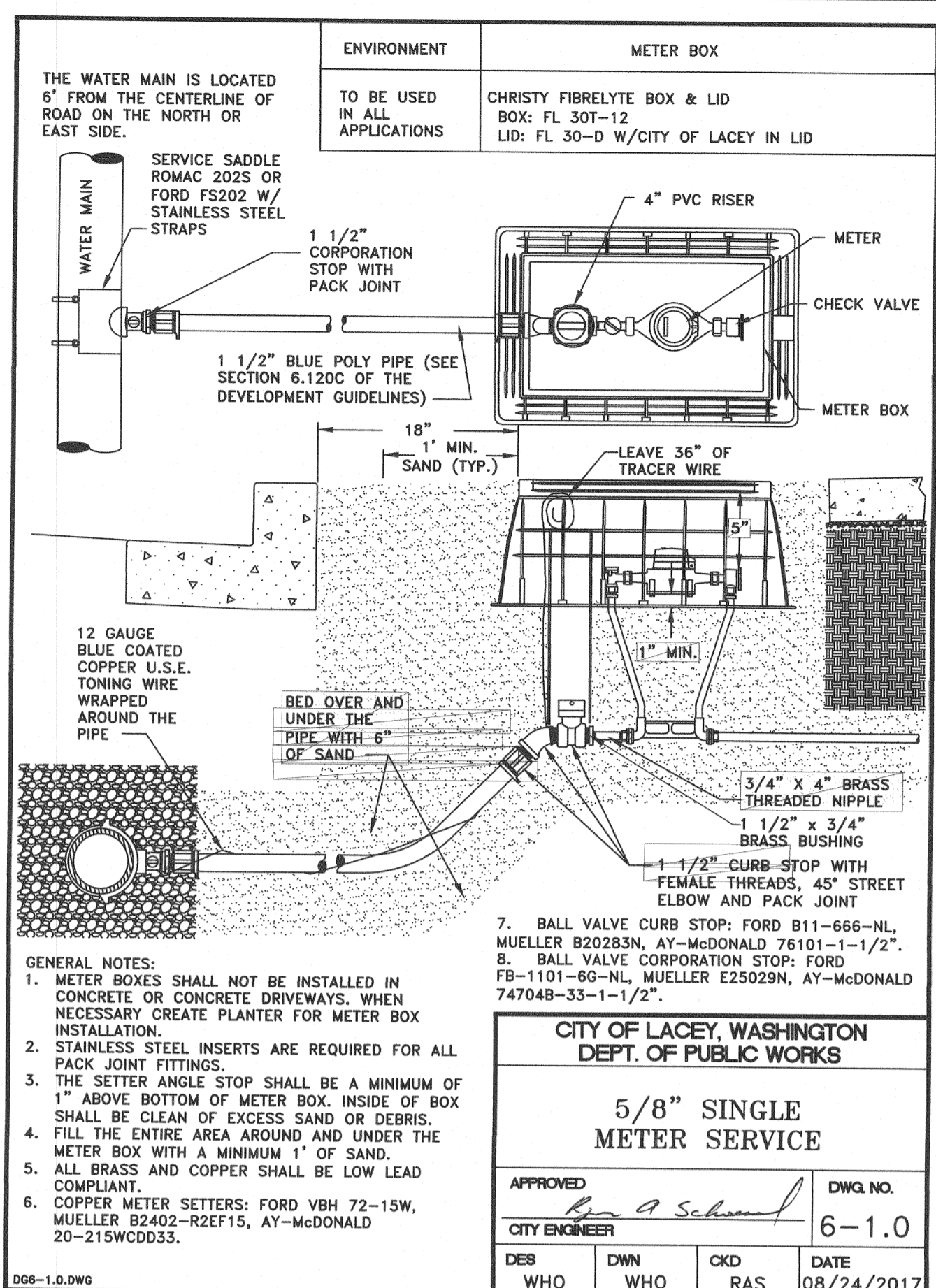
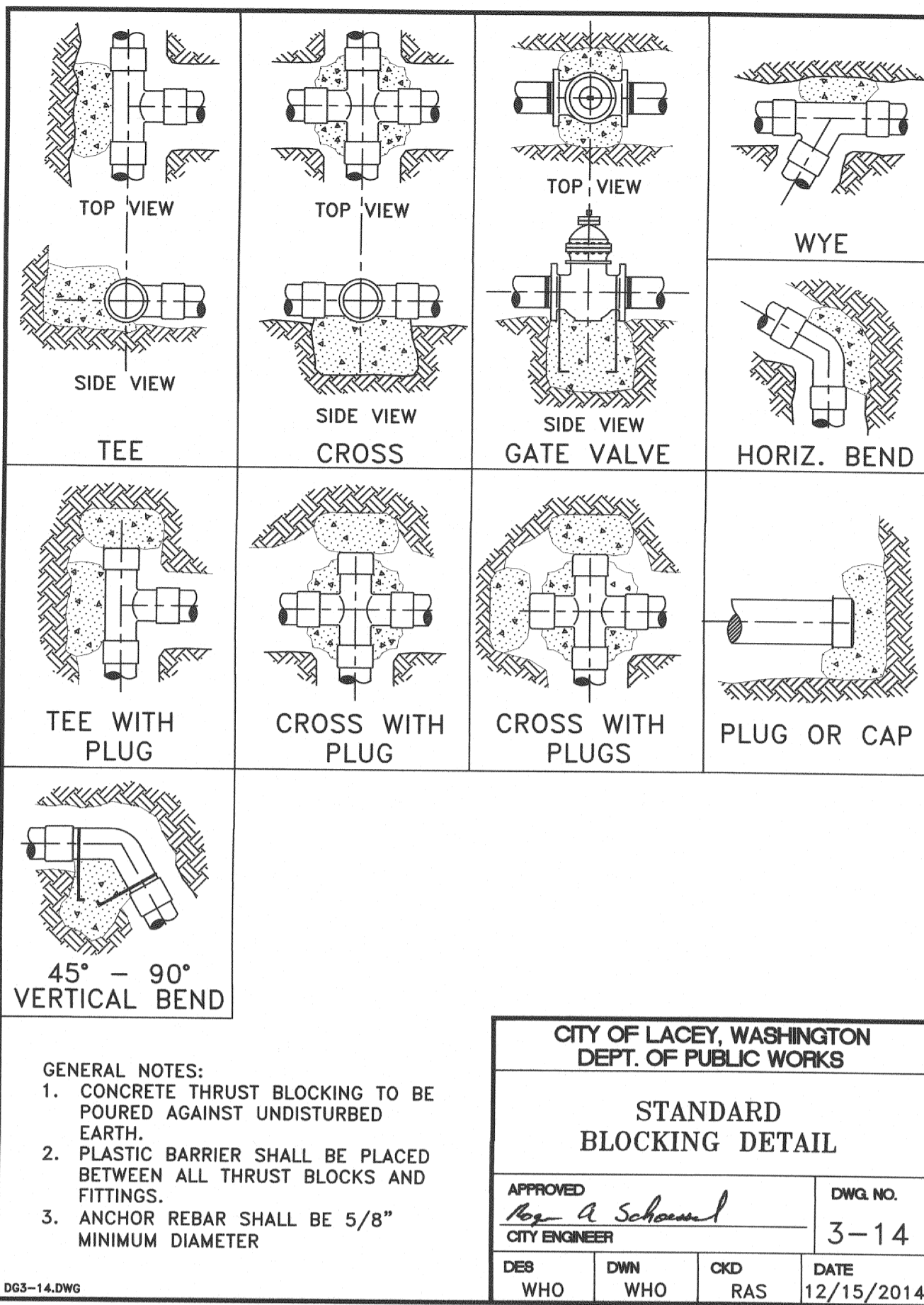
AGENCY NO.:	
SHEET: 5 OF 8	
INDEX: 21-045 pre-utl.dwg	
JOB: 21-045	

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THE EXISTING TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, HGP CANNOT ENSURE ITS ACCURACY AND THIS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

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TP# 11827131206



DESIGNED BY: AK  
DRAWN BY: BMS  
CHECKED BY: SDH  
DATE: DECEMBER 2021  
SCALE: H V N/A

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OLYMPIA, WA 98506  
TEL: 360.943.1599 FAX: 360.357.6299  
hatterpantier.com

DATE: \_\_\_\_\_  
REVISIONS: \_\_\_\_\_

**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503  
PRELIMINARY WATER DETAILS  
A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.

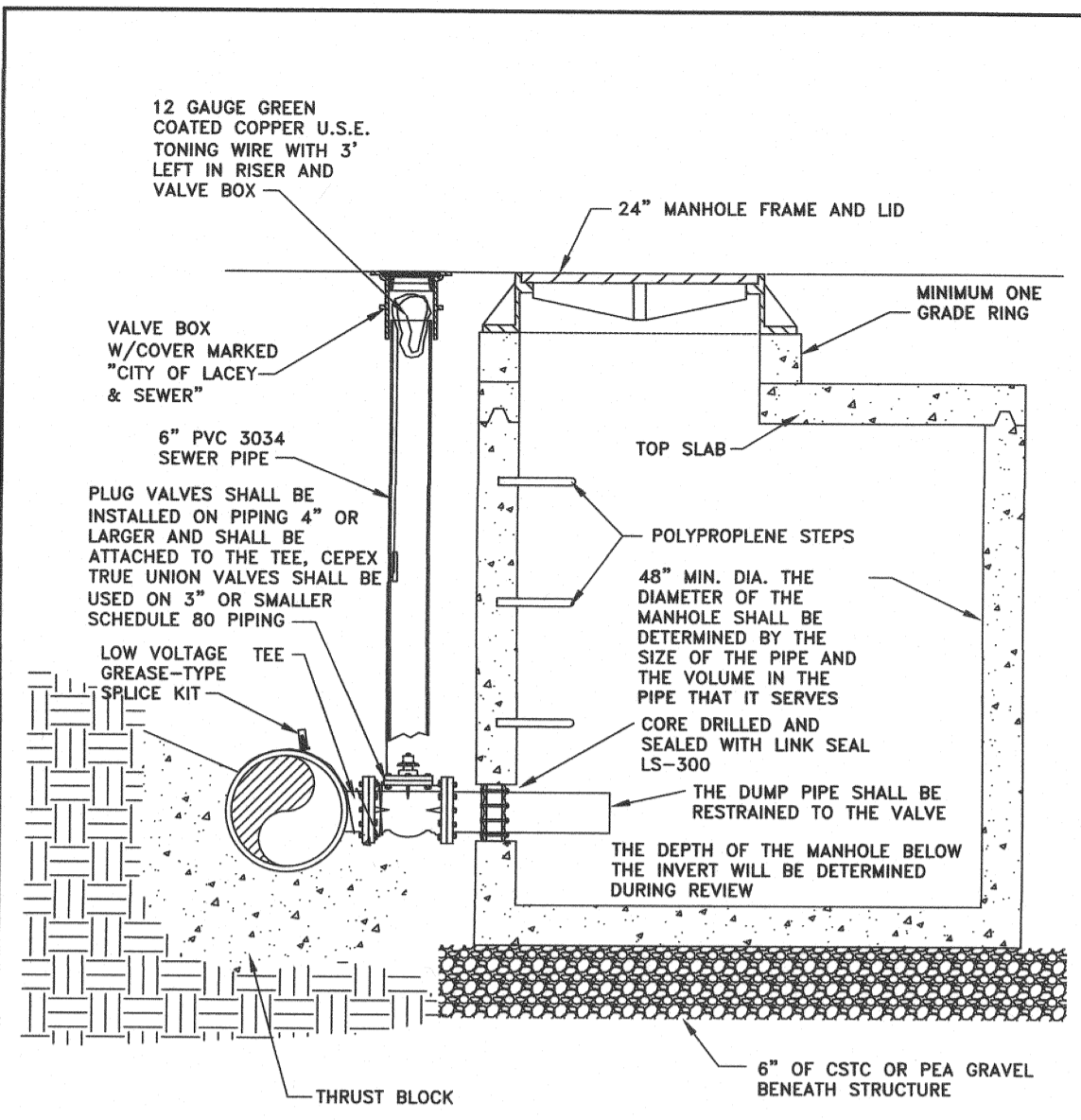
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AGENCY NO. \_\_\_\_\_  
SHEET: 6 OF 8  
E:\dgn\21-000\21-045\Preliminary  
INDEX: 21-045 pre-det.dwg  
JOB: 21-045

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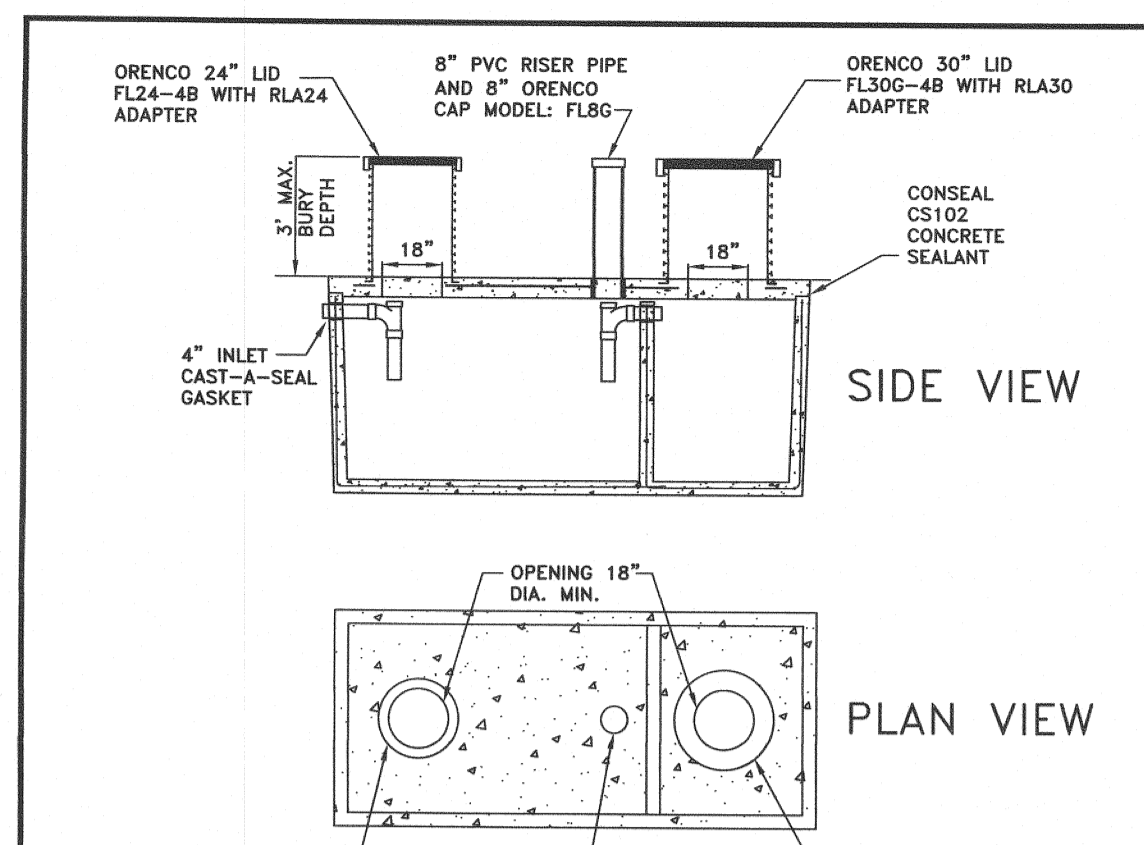
**CITY OF LACEY, WASHINGTON  
DEPT. OF PUBLIC WORKS**

**LOW POINT  
DRAIN**

APPROVED: [Signature] DWG. NO. 7-18.0  
CITY ENGINEER

DES. P/W	DWN. WHO	CKD. RAS	DATE 08/24/2017
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GENERAL NOTES:  
1. INSTALL A CONCRETE PAD WHEN LOW POINT DRAIN MANHOLE IS INSTALLED OUTSIDE OF PAVED AREA.  
2. THE MANHOLE LID SHALL BE THE CITY OF LACEY "LOGO" LID SEE DETAIL 7-3.  
3. THE SIZE OF THE LOW POINT DRAIN SHALL BE APPROVED BY THE CITY.  
4. UP TO 3 VALVES MAY BE REQUIRED AT THE LOW POINT DRAIN.  
5. FOR VALVE BOX REQUIREMENTS SEE DETAIL.



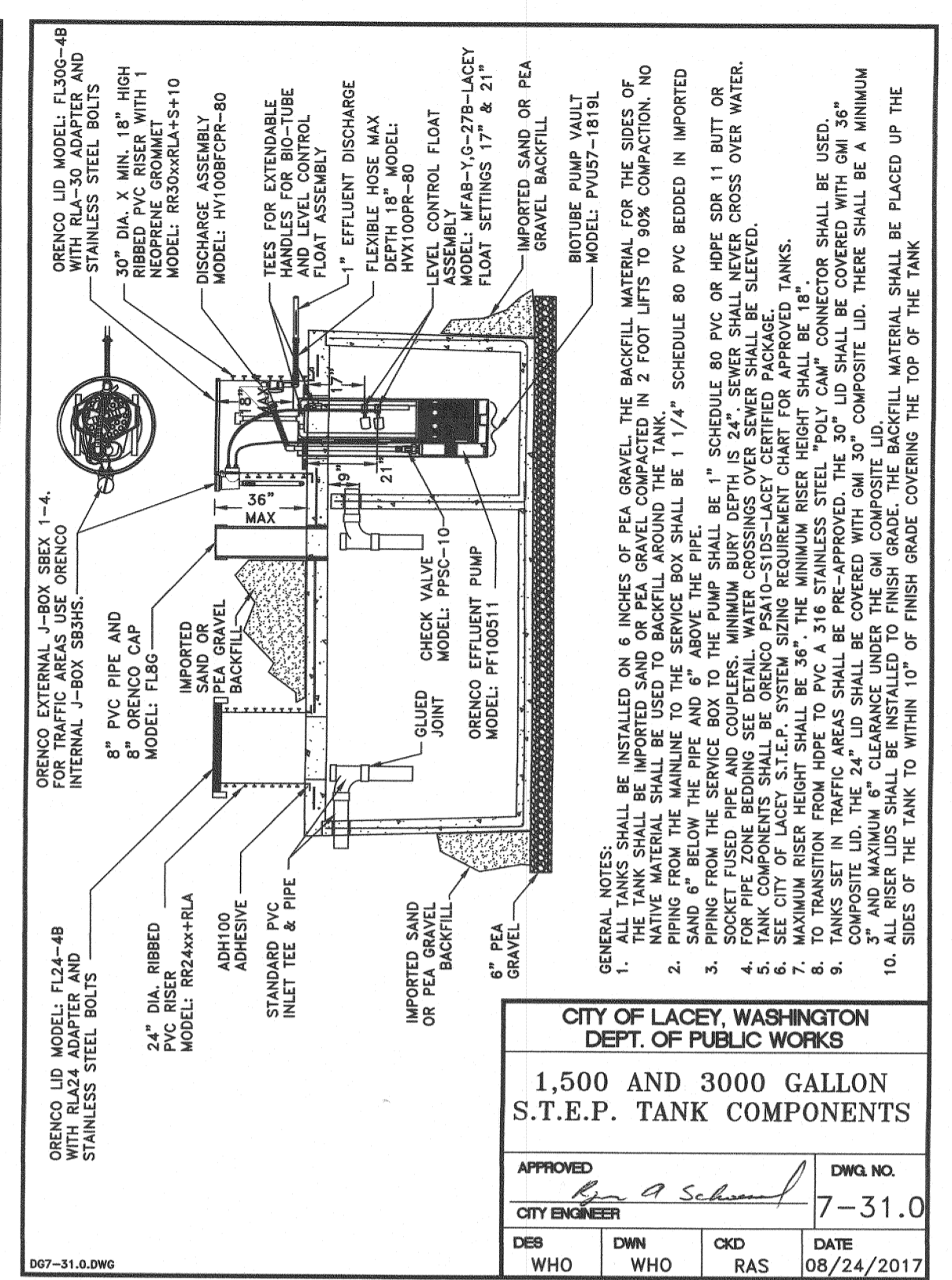
**CITY OF LACEY, WASHINGTON  
DEPT. OF PUBLIC WORKS**

**1,500 AND 3000 GALLON  
S.T.E.P. TANKS**

APPROVED: [Signature] DWG. NO. 7-30.0  
CITY ENGINEER

DES. WHO	DWN. WHO	CKD. RAS	DATE 08-24-2017
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GENERAL NOTES:  
1. TANKS SHALL BE DESIGNED BY A REGISTERED STRUCTURAL ENGINEER AND SHALL BE APPROVED BY THE CITY OF LACEY, THE CITY DOES NOT ACCEPT ANY REBAR SUBSTITUTIONS SUCH AS NOVOMESH OR SIMILAR PRODUCTS.  
2. TANKS AND/OR LIDS SHALL NOT BE TRANSPORTED FROM THE PRE-CAST MANUFACTURER'S SITE EARLIER THAN 7 DAYS AFTER MANUFACTURED DATE.  
3. TANKS SHIPPED EARLIER THAN 7 DAYS WILL BE REJECTED.  
4. TANK MANUFACTURED DATE SHALL BE CLEARLY MARKED INTO THE CONCRETE TANK AND LID WITHOUT PAINT.  
5. TANK APPROVED AS TRAFFIC BEARING TANKS SHALL BE DESIGNED TO WITHSTAND AN H-20 LIVE LOAD WITH A MINIMUM SOIL COVER OF 18 INCHES. LOAD RATING OF THE TANK SHALL BE CLEARLY STAMPED IN THE LID OR SIDE OF TANK, THE H-20 LIVE SUBMITTAL SHALL BE APPROVED BY THE CITY OF LACEY BEFORE DELIVERY AND INSTALLATION.  
6. FLEXIBLE 4" INLET CONNECTION SHALL BE CAST-A-SEAL MANUFACTURED BY PRESS-SEAL GASKET CORPORATION.  
7. THE S.T.E.P. TANK SHALL BE DESIGNED TO HOLD THE RATED CAPACITY OF STORAGE INSIDE THE TANK WHEN FILLED TO THE NORMAL WORKING LEVEL, THERE SHALL BE AN ADDITIONAL 200 GALLONS OF STORAGE (MINIMUM) FROM WORKING LEVEL TO THE TOP OF THE TANK TO ALLOW 24 HOUR ADDITIONAL STORAGE IN THE EVENT OF A POWER OUTAGE.  
8. THE INSIDE AND OUTSIDE SURFACES OF THE TANK SHALL BE PROTECTED BY APPLYING A HEAVY CEMENT-BASE WATERPROOF COATING OF THOROSEAL OR AN APPROVED EQUAL.  
9. SEE SECTION 7E.080 FOR CONCRETE TANK CONSTRUCTION REQUIREMENTS.



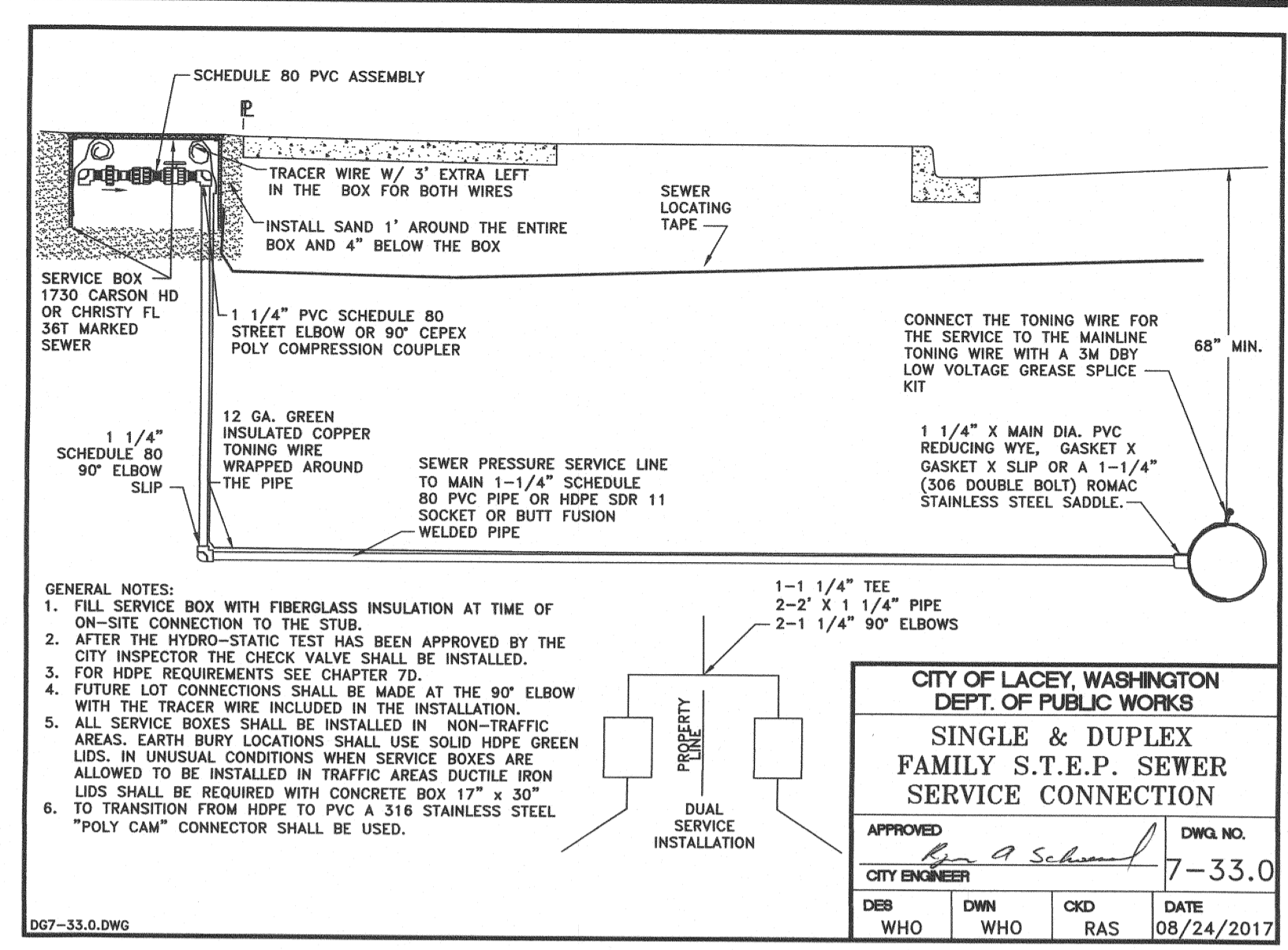
**CITY OF LACEY, WASHINGTON  
DEPT. OF PUBLIC WORKS**

**1,500 AND 3000 GALLON  
S.T.E.P. TANK COMPONENTS**

APPROVED: [Signature] DWG. NO. 7-31.0  
CITY ENGINEER

DES. WHO	DWN. WHO	CKD. RAS	DATE 08/24/2017
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GENERAL NOTES (PRESSURE SEWER MAIN INSTALLATION):  
1. ALL SEWER MAINS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT IN ACCORDANCE WITH SECTION 7A.030 OF THE DEVELOPMENT GUIDELINES.  
2. ALL SIDE SEWER LOCATIONS SHALL BE MARKED ON THE FACE OF THE CURB WITH AN EMBOSSED "S" 3" HIGH AND 1/4 INCH INTO CONCRETE.  
3. BEDDING OF THE PRESSURE SEWER MAIN AND COMPACTION OF THE BACKFILL MATERIAL SHALL BE REQUIRED (SEE DETAIL).  
4. A 3 FOOT SQUARE X 8 INCH THICK CONCRETE PAD WITH #4 REBAR SHALL BE INSTALLED AROUND ALL VALVES THAT ARE NOT IN A PAVEMENT AREA.  
5. TEMPORARY STREET PATCHING SHALL BE ALLOWED FOR AS APPROVED BY THE CITY ENGINEER. TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF 1 INCH MAXIMUM ASPHALT CONCRETE COLD MIX. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED.  
6. EROSION CONTROL MEASURES SHALL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.  
7. ALL BURIED POWER FOR S.T.E.P./GRINDER SYSTEMS SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12 INCHES ABOVE THE BURIED POWER. THE MARKER SHALL BE PLASTIC NON-BIODEGRADABLE, METAL CORE BACKING MARKED "POWER". TAPE SHALL BE FURNISHED BY CONTRACTOR.  
8. PRESSURE MAINS LESS THAN 4 INCHES IN DIAMETER SHALL BE HDPE SDR 11 OR SCHEDULE 80 PVC ASTM D1784 WITH RUBBER GASKET JOINTS. PRESSURE MAINS 4 INCHES IN DIAMETER OR GREATER SHALL BE HDPE SDR 11 OR PVC C-900DR 14. CERTAIN-TEED CERTA-LOK C-900 R/J PIPE IS APPROVED FOR USE WHERE RESTRAINED JOINTS ARE REQUIRED. WELDED POLY (HDPE) PIPE SHALL BE HI DENSITY ASTM D 3350, SDR 11 4710 SOCKET WELDED OR BUTT FUSION WELDED. HDPE PIPE SHALL BE SIZED BY INSIDE PIPE DIAMETER. FITTINGS AND VALVES SHALL COMPLY WITH SECTION 7E.040 OF THE DEVELOPMENT GUIDELINES. PIPING FOR SEWER LINES SHALL BE GREEN, WHITE OR BLACK. HDPE SEWER PIPE SHALL BE GREEN OR BLACK WITH A GREEN STRIPE MANUFACTURED ON THE PIPE.  
9. S.T.E.P./GRINDER SERVICE LINE FROM MAIN CONNECTION TO SERVICE BALL VALVE SHALL BE 1 1/4 INCH OR 2 INCH DIAMETER SCHEDULE 80 PVC. HDPE PIPE SHALL BE HI DENSITY ASTM D 3350, SDR 11 4710 SOCKET OR BUTT FUSION WELDED.  
10. ALL PLASTIC PIPE AND SERVICES SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12 INCHES TO 18 INCHES UNDER THE PROPOSED FINISHED SUB GRADE. THE MARKER SHALL BE PLASTIC NON-BIODEGRADABLE, METAL CORE OR BACKING MARKED SEWER WHICH CAN BE DETECTED BY A STANDARD METAL DETECTOR. IN ADDITION, S.T.E.P. SYSTEMS AND PRESSURE MAINS SHALL BE INSTALLED WITH 12 GAUGE DIRECT BURY, U.S.E. GREEN COATED COPPER WIRE WRAPPED AROUND ALL PLASTIC PIPE, BROUGHT UP AND TIED OFF AT VALVE BODY. CONTINUITY TESTING OF THE WIRE WILL BE DONE BY THE CITY. TAPE SHALL BE TERRA TAPE "DI" OR APPROVED EQUAL. THE TAPE AND WIRE SHALL BE FURNISHED BY THE CONTRACTOR.  
11. PRIOR TO ACCEPTANCE OF THE PROJECT THE PRESSURE MAINLINE AND SERVICE LINES SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST OF 175 POUNDS FOR 15 MINUTES AND ANY LEAKS OR IMPERFECTIONS DEVELOPING UNDER SAID PRESSURE SHALL BE REMEDIATED BY THE CONTRACTOR. PRESSURE TESTING SHALL NOT EXCEED THE PRESSURE RATING OF VALVES OR OTHER COMPONENTS WITHIN THE SYSTEM. NO AIR WILL BE ALLOWED IN THE LINE. THE MAIN SHALL BE TESTED BETWEEN VALVES. INsofar AS POSSIBLE, NO HYDROSTATIC PRESSURE SHALL BE PLACED AGAINST THE OPPOSITE SIDE OF THE VALVE BEING TESTED. THE PRESSURE TEST SHALL BE MAINTAINED WHILE THE ENTIRE INSTALLATION IS INSPECTED. IN ADDITION, ALL PRESSURE MAINS SHALL BE PIGGED IN THE PRESENCE OF THE CITY INSPECTOR PRIOR TO PLACING THE MAIN IN SERVICE.  
12. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF LACEY CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FOR CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF LACEY FOR THE REQUIRED INSPECTIONS.  
13. SINGLE AND DUPLEX FAMILY S.T.E.P. PUMPING SYSTEMS INSTALLED IN LACEY SHALL BE AN ORENCO CERTIFIED PACKAGE AND BE ACCOMPANIED BY A CERTIFICATE OF ORIGIN LETTER FROM ORENCO. THE CERTIFICATE OF ORIGIN LETTER SHALL BE PRESENTED TO THE CITY OF LACEY INSPECTOR AT TIME OF INSTALLATION AND INSPECTION OF THE PUMPING SYSTEM. PACKAGE COMPONENTS AND INSTALLATION REQUIREMENTS SHALL ALSO COMPLY WITH LACEY DETAILS. A PDF VERSION OF THE CERTIFICATE OF ORIGIN LETTER AND THE MANUFACTURER'S SUBMITTAL DATA OF THE REQUIRED COMPONENTS CAN BE FOUND ONLINE AT THE CITY OF LACEY WEBSITE UNDER THE PUBLIC WORKS HEADING THEN UNDER DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS.  
14. SINGLE AND DUPLEX FAMILY GRINDER SYSTEM SHALL BE MANUFACTURED BY EONE (ENVIRONMENT ONE CORPORATION) ONLY AND SHALL BE PURCHASED AND INSTALLED AS A PACKAGED SYSTEM FROM E-ONE. THIS INCLUDES THE ELECTRICAL CONTROL PANEL, WIRING FROM PANEL TO PUMP CHAMBER, THE PUMP AND PUMPING COMPONENTS AND PUMP CHAMBER. NO SUBSTITUTION OF PARTS SHALL BE ALLOWED.  
15. ALL STEP AND GRINDER SYSTEMS INSTALLED IN COMMERCIAL APPLICATIONS SHALL MEET THE APPLICATIVE ELECTRICAL REQUIREMENTS FOR COMMERCIAL SYSTEMS.  
16. ALL VALVES UP TO 2 INCH SHALL BE RED HANDLE CEPEX POLY TRUE UNION FIPT X FIPT BALL VALVES WITH APPROPRIATE COUPLINGS. ALL VALVES THREE TO 24 INCH SHALL BE PRATT, MILLIKEN, OR CRISPIN PLUG VALVES OR APPROVED EQUAL. PLUG VALVES SHALL BE OF A FULL ROUND PORT DESIGN (100% OPENING) AND EPOXY COATED ON THE INSIDE AND OUTSIDE AS SPECIFIED IN 7D.030. ALL PLUG VALVES SHALL HAVE A 2 INCH OPERATING NUT, GEAR REDUCTION OPERATION, AND BE RATED FOR BURIAL. TAPPING VALVES SHALL BE RESILIENT WEDGE GATE VALVES AND BE EPOXY COATED ON THE INSIDE AND OUTSIDE.



**CITY OF LACEY, WASHINGTON  
DEPT. OF PUBLIC WORKS**

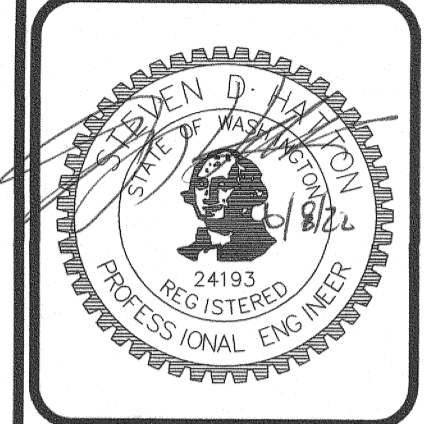
**SINGLE AND DUPLEX  
FAMILY S.T.E.P. SEWER  
SERVICE VALVE ASSEMBLY**

APPROVED: [Signature] DWG. NO. 7-34.0  
CITY ENGINEER

DES. EHA	DWN. EHA	CKD. RAS	DATE 08/24/2017
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GENERAL NOTES:  
1. VALVE ASSEMBLY SHALL BE ALL SCHEDULE 80 PVC SPEARS, KBI, CEPEX OR APPROVED EQUAL.  
2. FUTURE LOT CONNECTIONS SHALL BE MADE AT THE 90° ELBOW WITH THE TRACER WIRE INCLUDED IN THE INSTALLATION.  
3. TO TRANSITION FROM HDPE TO PVC A 316 STAINLESS STEEL "POLY CAM" CONNECTOR SHALL BE USED.

DESIGNED BY: AK  
DRAWN BY: BMS  
CHECKED BY: SDH  
DATE: DECEMBER 2021  
SCALE: H N/A V N/A



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hattonpantier.com

REVISIONS:

DATE:	
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**CARPENTER ROAD SHORT PLAT**  
3019 CARPENTER ROAD SE, LACEY, WA 98503

**PRELIMINARY UTILITY  
NOTES & DETAILS**

AGENCY NO. \_\_\_\_\_  
SHEET: 7 OF 8  
E:\dgn\21-00021-049\Preliminary

INDEX: 21-045 pre-det.dwg  
JOB: 21-045

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TP# 11827131206

REVISED: 03/2014

REVISED: 03/2014

A PORTION OF THE SE 1/4 OF SECTION 27, TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.