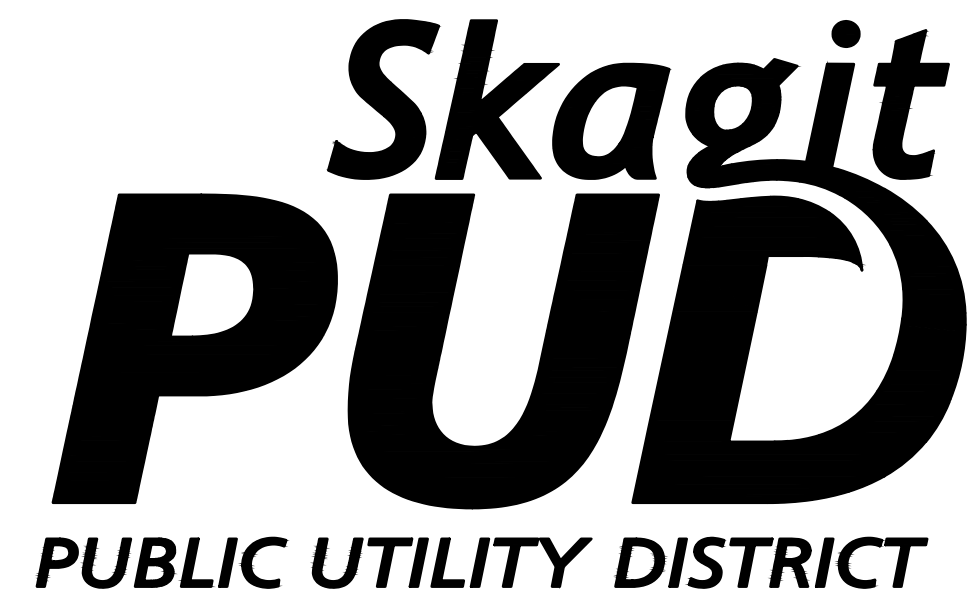


# MOUNTAIN VIEW ROAD PIPELINE PROJECT

ISSUED FOR BIDDING  
 MOUNT VERNON, SKAGIT COUNTY, WA  
 P.N. 3673  
 CO 4963  
 DECEMBER 12, 2019



## NO. 1 OF SKAGIT COUNTY

### DISTRICT OFFICIALS

ERON BERG	PRESIDENT
AL LITTLEFIELD	VICE PRESIDENT
JOE LINDQUIST	SECRETARY
GEORGE SIDHU, P.E.	GENERAL MANAGER
MARK C. HANDZLIK, P.E.	ENGINEERING MANAGER
MICHAEL FOX	OPERATIONS MANAGER

### UTILITY CONTACTS

<b>CASCADE NATURAL GAS</b> 1520 SOUTH 2nd STREET MOUNT VERNON, WA 98273 CONTACT: JAMES HOBBS TEL: (360) 336-3876	<b>FRONTIER COMMUNICATION</b> 595 PEASE ROAD BURLINGTON, WA 98233 CONTACT: BRET MURDOCK TEL: (360) 707-0641
<b>COMCAST XFINITY</b> 400 SEQUOIA DRIVE BELLINGHAM, WA 98226 CONTACT: CASEY JONES TEL: (360) 527-8243	<b>ATT FIBER OPTICS</b> C/O SIENA ENGINEERING GROUP, INC. 11241 WILLOW RD NE, SUITE 130 REDMOND, WA 98052 CONTACT: LOUIE VAN HOLLEBEKE TEL: (425) 896-9850
<b>PUGET SOUND ENERGY</b> PO BOX 90868 - MAIL STOP BOT01G BELLEVUE, WA 98009-0868 CONTACT: CUSTOMER CONSTRUCTION SERVICES TEL: (888) 321-7779	

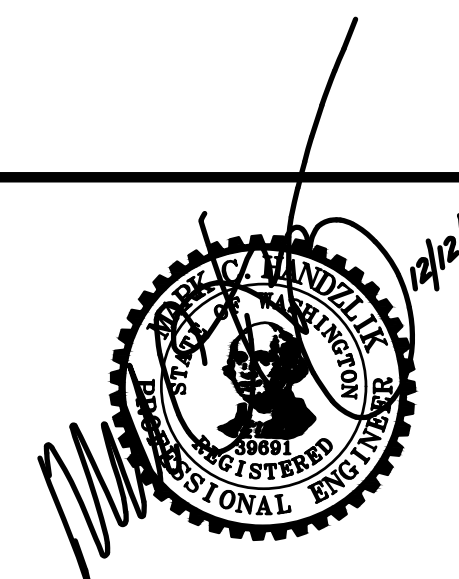
### DRAWING INDEX

- COVER
- 1. LEGEND
- 2. NOTES
- 3. SHUTDOWN MAP
- 4. EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS
- 5. MOUNTAIN VIEW RD PLAN & PROFILE : STA 01+00 TO STA 06+50
- 6. MOUNTAIN VIEW RD PLAN & PROFILE : STA 06+50 TO STA 12+50
- 7. MOUNTAIN VIEW RD PLAN & PROFILE : STA 12+50 TO STA 18+00
- 8. MOUNTAIN VIEW RD PLAN & PROFILE : STA 18+00 TO STA 23+50
- 9. MOUNTAIN VIEW RD PLAN & PROFILE : STA 23+50 TO STA 28+50
- 10. MOUNTAIN VIEW RD PLAN & PROFILE : STA 28+50 TO STA 33+50
- 11. MOUNTAIN VIEW RD PLAN & PROFILE : STA 33+50 TO STA 38+50
- 12. MOUNTAIN VIEW RD PLAN & PROFILE : STA 38+50 TO STA 43+50
- 13. MOUNTAIN VIEW RD PLAN & PROFILE : STA 43+50 TO STA 49+00
- 14. MOUNT VERNON BIG LAKE RD PLAN & PROFILE : STA 49+00 TO STA 53+00
- 15. MOUNT VERNON BIG LAKE RD PLAN & PROFILE : STA 53+00 TO STA 56+00
- 16. STANDARD DETAILS
- 17. STANDARD DETAILS
- 18. SERVICE LINE RELOCATIONS
- 19. TRAFFIC CONTROL



**VICINITY MAP**  
 NOT TO SCALE

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
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MOUNTAIN VIEW ROAD PIPELINE  
 PROJECT  
 COVER

P.N. 3673	SHEET:
C.O. 4963	COVER

APPROVED FOR CONSTRUCTION \_\_\_\_\_ DATE \_\_\_\_\_  
 SKAGIT COUNTY ENGINEER

APPROVED FOR CONSTRUCTION \_\_\_\_\_ DATE \_\_\_\_\_  
 CHIEF OF FIRE PREVENTION  
 APPROVAL VOID ONE YEAR FROM DATE SHOWN

**SURVEY SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER
⊙	MONUMENT	SMON	SV-CTRL-EXST-SYM
⊕	MONUMENT IN CASE	SMIC	SV-CTRL-EXST-SYM
⊙	REBAR & CAP	RCS	SV-CTRL-EXST-SYM
△	SCRIBED "X"	SAP	SV-CTRL-EXST-SYM
×	PK NAIL	PK	SV-CTRL-EXST-SYM
B-101	SOIL BORING	BORE	SV-SOIL-EXST-SYM
TP-101	SOIL TEST PIT	TP	SV-SOIL-EXST-SYM
⊗	UTILITY POT HOLE	P_SSB	UT-MISC-EXST-SYM

**SURFACE FEATURE SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER
⊙	METAL SIGN POST	E1S1	SF-SIGN-EXST-SYM
⊕	WOOD SIGN POST	SFSN	SF-SIGN-EXST-SYM
GTP ⊙	GATE POST	POST	SF-FENC-EXST-SYM
★	CONIFEROUS TREE	SFC	SF-VEGE-EXST-SYM
⊙	DECIDUOUS TREE	SFD	SF-VEGE-EXST-SYM
⊙	BUSH/SHRUB	PUDBUSH	SF-VEGE-EXST-SYM

**UTILITY SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER
⊙	SANITARY SEWER MANHOLE	PUDMH	SS-STCR-EXST-SYM
⊙	STORM DRAIN MANHOLE	SDMH	SD-STCR-EXST-SYM
⊙	CATCH BASIN	CBIN	SD-STCR-EXST-SYM
⊙	INLET/YARD DRAIN	SDGI	SD-STCR-EXST-SYM
⊙	GAS VALVE	GV	GS-VALV-EXST-SYM
⊙	GAS METER	P_GMET	GS-VALV-EXST-SYM
TR ⊙	TRAFFIC JUNCTION BOX	TJB1	TF-STCR-EXST-SYM
EL ⊙	ELEC. JUNCTION BOX	TJB1	PO-STCR-EXST-SYM
PM ⊙	POWER METER	EM	PO-STCR-EXST-SYM
TC ⊙	TELECOM. JUNCTION BOX	TJB1	TL-STCR-EXST-SYM
TV ⊙	CABLE TV JUNCTION BOX	TJB1	TV-STCR-EXST-SYM
⊙	JUNCTION BOX	TJB1	UT-STCR-EXST-SYM
T ⊙	TELEPHONE RISER	TELR	TL-STCR-EXST-SYM
⊙	UTILITY POLE	UP	PO-STCR-EXST-SYM
UG ⊙	UTILITY POLE W/CONDUIT	UP	PO-STCR-EXST-SYM
←	GUY ANCHOR	UPA	PO-STCR-EXST-SYM
GP ⊙	GUY POLE	GUP	PO-STCR-EXST-SYM
▲	TRANSFORMER	TRAN	PO-STCR-EXST-SYM
P	POWER VAULT	POWRV	PO-STCR-EXST-SYM
⊙	TRANSMISSION TOWER	PTWR	PO-STCR-EXST-SYM
T	TELEPHONE VAULT	TV	TL-STCR-EXST-SYM
⊙	PEDESTRIAN SIGNAL HEAD	TPSH	TF-SIGL-EXST-SYM
⊙	PEDESTRIAN SIGNAL BUTTON	TPB	TF-SIGL-EXST-SYM
⊙	TRAFFIC SIGNAL POLE W/LIGHT	TSPL	TF-SIGL-EXST-SYM
⊙	LUMINAIRE	TSLA	PO-STCR-EXST-SYM
⊙	YARD LIGHT	SFL	PO-STCR-EXST-SYM
⊙	MONITORING WELL		UT-STCR-EXST-SYM
⊙	WATER MANHOLE	WMH	WA-STCR-EXST-SYM
SH ⊙	SPRINKLER HEAD	SPRHD	WA-MISC-EXST-SYM
IRBX ⊙	IRRIGATION BOX	ICV	WA-MISC-EXST-SYM
⊙	MAILBOX	SFMB	SF-SIGN-EXST-SYM

**WATER SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER	USE EXST/PROP
EXIST.	PROP.			
⊙	CAP/PLUG	X_CAP/P_CAP	WA-FITT-XXXX-SYM	
⊙	COUPLING	X_COUP/P_COUP	WA-FITT-XXXX-SYM	
⊙	GUARD POST	X_GPOST/P_GPOST	WA-FITT-XXXX-SYM	
⊙	REDUCER	X_RED/P_RED	WA-FITT-XXXX-SYM	
⊙	THRUST BLOCK	X_TB/P_TB	WA-FITT-XXXX-SYM	
⊙	WATER METER	X_MTR/P_MTR	WA-METR-XXXX-SYM	
<b>FIRE HYDRANTS:</b>				
⊙	2 NOZZLE	X_HYD2/P_HYD2	WA-FHYD-XXXX-SYM	
⊙	3 NOZZLE	X_HYD3/P_HYD3	WA-FHYD-XXXX-SYM	
<b>JOINTS:</b>				
	FLANGE/BLIND FL	X_FL/P_FL	WA-FITT-XXXX-SYM	
[	MECHANICAL	X_MJ/P_MJ	WA-FITT-XXXX-SYM	
C	PUSH-ON/HUB	X_PHUB/P_PHUB	WA-FITT-XXXX-SYM	
	THREAD	X_THREAD/P_THREAD	WA-FITT-XXXX-SYM	
<b>VALVES:</b>				
⊙	AIR RELIEF VALVE	X_AR/P_AR	WA-VALV-XXXX-SYM	
⊙	BLOW-OFF VALVE	X_BO/P_BO	WA-VALV-XXXX-SYM	
⊙	BUTTERFLY VALVE	X_BFV/P_BFV	WA-VALV-XXXX-SYM	
⊙	CHECK VALVE	X_CV/P_CV	WA-VALV-XXXX-SYM	
⊙	GATE VALVE	X_GV/P_GV	WA-VALV-XXXX-SYM	
⊙	PLUG VALVE	X_PLUGV/P_PLUGV	WA-VALV-XXXX-SYM	
<b>ELBOWS:</b>				
⊙	90° ELBOW MjxMj		WA-FITT-XXXX-SYM	
⊙	45° ELBOW MjxMj		WA-FITT-XXXX-SYM	
⊙	22.5° ELBOW MjxMj		WA-FITT-XXXX-SYM	
⊙	11.25° ELBOW MjxMj		WA-FITT-XXXX-SYM	
⊙	CROSS MjxMj		WA-FITT-XXXX-SYM	
⊙	TEE MjxMj		WA-FITT-XXXX-SYM	
⊙	VERTICAL ELBOW MjxMj		WA-FITT-XXXX-SYM	
⊙	45° ELBOW MjxFL		WA-FITT-XXXX-SYM	
⊙	22.5° ELBOW MjxFL		WA-FITT-XXXX-SYM	
⊙	11.25° ELBOW MjxFL		WA-FITT-XXXX-SYM	
⊙	CROSS MjxFL		WA-FITT-XXXX-SYM	
⊙	TEE MjxFL		WA-FITT-XXXX-SYM	
⊙	CROSS FLxFL		WA-FITT-XXXX-SYM	
⊙	TEE FLxFL		WA-FITT-XXXX-SYM	
⊙	VERTICAL MjxFL		WA-FITT-XXXX-SYM	
⊙	TAPPING SLEEVE		WA-FITT-XXXX-SYM	

**NOTATION SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER
⊙	CATHODIC PROTECTION TEST STATION	CATH	G-ANNO-PROP-SYM
⊙	CHANGE IN PIPING MATERIAL	PMAT	G-ANNO-PROP-SYM
⊙	TRENCH BACKFILL AND SURFACE RESTORATION CODE	KEYNOTE	G-ANNO-PROP-SYM
⊙	CONSTRUCTION NOTE	KEYNOTES	G-ANNO-PROP-SYM

**TEXT**

	DESCRIPTION	HEIGHT	LAYER
1+00	ROAD STATIONING	.10	SV-CNTL-EXST-TXT
P77481	PARCEL NUMBER	.20	SV-PRCL-EXST-TXT
702	ADDRESS	.15	G-MISC-EXST-TXT

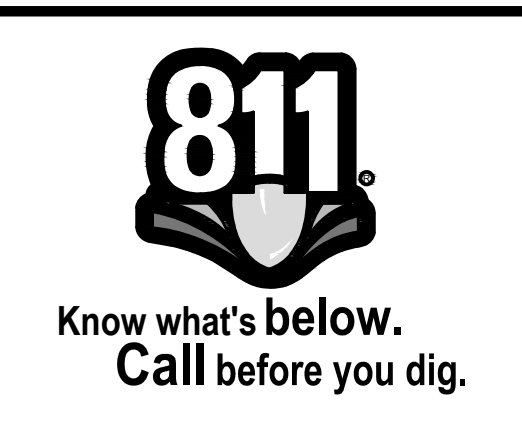
**LINE TYPES**

LINE TYPE	DESCRIPTION	LAYER
— GAS —	GENERIC GAS LINE	GS-PLIN-EXST-LIN
— GHP —	HIGH PRESSURE GAS	GS-PLIN-EXST-LIN
— GLP —	LOW PRESSURE GAS	GS-PLIN-EXST-LIN
— IRR —	IRRIGATION	WA-IRRI-EXST-LIN
— SD —	STORM DRAIN	SD-GLIN-EXST-LIN
=====	EXISTING CULVERT	SD-CULV-EXST-LIN
— SS —	SANITARY SEWER	SS-GLIN-EXST-LIN
— FM —	SS FORCEMAIN	SS-PLIN-EXST-LIN
— W — W —	WATER LINE	WA-PLIN-EXST-LIN
— UGE —	UNDERGROUND POWER	PO-BLIN-EXST-LIN
— UGF —	UNDERGROUND FIBER OPTIC	TL-BLIN-EXST-LIN
— UGT —	UNDERGROUND TELEPHONE	TL-BLIN-EXST-LIN
— UGTV —	UNDERGROUND TELEVISION	TV-BLIN-EXST-LIN
— OHE —	OVERHEAD ELECTRIC	PO-ALIN-EXST-LIN
— OHF —	OVERHEAD FIBER OPTIC	TL-ALIN-EXST-LIN
— OHT —	OVERHEAD TELEPHONE	TL-ALIN-EXST-LIN
— OHTV —	OVERHEAD TELEVISION	TV-ALIN-EXST-LIN
~~~~~	VEGETATION LINE	SF-VEGE-EXST-LIN
-----	EDGE OF GRAVEL	SF-GRVL-EXST-LIN
-----	EDGE OF ASPHALT	SF-ASPH-EXST-LIN
-----	CURB/CONCRETE LINE	SF-CONC-EXST-LIN
-----	DITCH FLOWLINE	SF-DTCH-EXST-LIN
-----	EXISTING FENCE	SF-FENC-EXST-LIN
-----	TOP/TOE OF SLOPE	SF-GRAD-EXST-LIN
+++++	RAILROAD TRACKS	SF-RAIL-EXST-LIN
-----	CENTERLINE	SV-CNTL-EXST-LIN
-----	RIGHT OF WAY	SV-ROFW-EXST-LIN
-----	EASEMENT LINE	SV-ESMT-EXST-LIN
-----	PROPERTY LINE	SV-PROP-EXST-LIN
-----	PROPOSED WATERLINE	WA-PLIN-PROP-LIN
-----	PROPOSED METER LINE	WA-PLIN-PROP-LIN

**HATCHING**

DESCRIPTION	LAYER
ASPHALT - SOLID	SF-ASPH-EXST-HCH
GRAVEL - AR-SAND, 0', SCALE=1.00	SF-FEAT-EXST-HCH
CONCRETE - AR-CONC, 0', SCALE=1.00	SF-FEAT-EXST-HCH
WETLAND - GRASS, 0', SCALE=.10 OF DWG SCALE	SF-FEAT-EXST-HCH
<b>PAVEMENT RESTORATION:</b>	
TEMP PVMT. PATCH - DASH, 0', SCALE=0.30 OF DWG SCALE	SF-ASPH-PROP-HCH

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**MOUNTAIN VIEW ROAD PIPELINE PROJECT**  
LEGEND

P.N. 3673	SHEET:
C.O. 4963	1 OF 19

## DISTRICT STANDARD GENERAL NOTES

(Minimum Requirements)

1. UNLESS STATED OTHERWISE, ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE DISTRICT REQUIREMENTS AS OUTLINED IN THE DISTRICT'S WATER POLICY MANUAL.
2. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE DISTRICT ENGINEERING DEPARTMENT, (360) 424-7104, A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
3. PERMITS FOR THE INSTALLATION OF THE PROPOSED WATER SYSTEM IMPROVEMENTS ARE ATTACHED IN APPENDIX B OF THE TECHNICAL SPECIFICATIONS.
4. DISTRICT REFERENCE DOCUMENTS, SUCH AS STANDARD DETAILS, WATER POLICY MANUAL, DRAWING STANDARDS, ETC., CAN BE FOUND ON THE DISTRICT WEBSITE AT WWW.SKAGITPUD.ORG.
5. ALL TIE-INS, SHUTDOWN, FLUSHING, AND HEALTH SAMPLES SHALL BE COORDINATED WITH THE DISTRICT. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES. CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL EXCAVATION, SHORING, DEWATERING, BACKFILL AND RESTORATION NECESSARY FOR DISTRICT CREWS TO PERFORM ALL TIE-INS TO ANY ACTIVE PUD OWNED AND OPERATED PIPELINE.
6. A LIST OF ALL MATERIALS, INDICATING THE MANUFACTURER, MODEL, AND SIZE, FOR THE WATER SYSTEM IMPROVEMENTS WILL BE APPROVED BY THE DISTRICT PRIOR TO CONSTRUCTION. CONTACT DISTRICT FOR SUBMITTAL REQUIREMENTS.
7. PVC PIPE SHALL BE IN ACCORDANCE WITH SECTION C909-16 OF THE AWWA STANDARDS.
8. ALL BOLTS USED IN BURIED FLANGES SHALL BE ASTM A307 GRADE B UNFINISHED WITH NUTS TO ASTM A563 GRADE A AND WASHERS TO ASTM F844, OR ASTM A325 TYPE 3 (CORTEN STEEL) UNFINISHED, WITH NUTS TO ASTM A563C3 OR A563DH3 AND WASHERS TO ASTM F436-1. ALL BOLTS, NUTS AND WASHERS USED IN EXPOSED OR ABOVE GROUND LOCATIONS SHALL BE ASTM A307 GRADE B UNFINISHED OR HOT-DIP GALVANIZED.
9. ALL GATE VALVES TO BE RESILIENT SEATED GATE VALVES, AWWA C515 OR C509 (DUCTILE IRON BODY ONLY) WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
10. ALL BUTTERFLY VALVES TO BE RUBBER SEATED BUTTERFLY VALVES, AWWA C504 WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
11. ALL BURIED DUCTILE IRON FITTING AND VALVES SHALL BE WRAPPED WITH ANIT CORROSION WAX/PETROLEUM TAPE BY TRENTON ANTICORROSION MATERIALS INC. DENSO NORTH AMERICA INC OR EQUAL.
12. RESTRAINED JOINTS MAY BE USED INPLACE OF CONCRETE BLOCKING AS DIRECTED BY THE PROJECT DESIGN ENGINEER AND ACCEPTED BY THE DISTRICT.
13. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA C502 WITH STORZ ADAPTORS. ACCEPTABLE FIRE HYDRANTS INCLUDE CLOW MEDALLION, MUELLER CENTURION OR SUPER CENTURION, AMERICAN DARLING B62B AND AMERICAN AVK NOSTALGIC.
14. A #10 SOLID COPPER WIRE WITH BLUE INSULATION IS TO BE INSTALLED WITH/AND ATTACHED TO ALL NEW WATER PIPELINES AND SERVICE PIPELINES. REFER TO DISTRICT DETAILS FOR INSTALLATION REQUIREMENTS.
15. A #10 SOLID COPPER WIRE WITH ORANGE INSULATION IS TO BE INSTALLED WITH/AND ATTACHED TO ALL NEW FIBER CONDUIT.
16. UNLESS OTHERWISE SPECIFIED, ALL WATER PIPELINE INSTALLATIONS REQUIRE A 36-INCH MINIMUM COVER AND 48-INCH TYPICAL TRENCH DEPTH TO EXISTING OR FUTURE FINISH GRADE AND A MINIMUM OF 1-FOOT VERTICAL AND 5-FOOT HORIZONTAL CLEARANCE BETWEEN WATER PIPELINE AND ALL OTHER UTILITIES UNLESS OTHERWISE SPECIFIED.
17. WHEN INSTALLING WATER PIPELINE ACROSS EXISTING OR PROPOSED SANITARY SEWER, A FULL LENGTH OF PIPE SHALL BE INSTALLED WITH MID-SPAN OF THE WATER PIPE OVER THE SEWER. A MINIMUM 10-FOOT HORIZONTAL SEPARATION AND 18-INCH VERTICAL SEPARATION BETWEEN WATER PIPELINES AND SANITARY SEWER PIPELINES IS REQUIRED, UNLESS AN ALTERNATIVE PROPOSAL FROM THE DESIGN ENGINEER IS SUBMITTED TO AND APPROVED BY THE DISTRICT.
18. BEDDING MATERIAL SHALL BE APPROVED PIPE BEDDING PER WSDOT SPECIFICATION 7-09.3(9) AND 9-03.12(3). PEA GRAVEL AND BUCKSHOT ARE NOT ACCEPTABLE.
19. BACKFILL TRENCHES IN PAVEMENT AREAS WITH PIT-RUN GRAVEL COMPACTED TO AT LEAST 95 PERCENT MINIMUM DENSITY PER WSDOT SPECIFICATION 7-09.3(11). THE CONTRACTOR SHALL MAKE ALL PAVEMENT REPAIRS AND PERFORM ALL RESTORATION.
20. DISINFECTION AND FLUSHING OF THE WATER PIPELINES ARE TO BE PER WSDOT SPECIFICATIONS. USE DECHLORINATION EQUIPMENT WHEN FLUSHING OR, WITH PERMISSION OF THE APPROPRIATE SEWER UTILITY, FLUSH INTO SANITARY SEWER MANHOLES. DO NOT FLUSH INTO OR ALLOW CHLORINATED WATER TO DRAIN INTO ANY CREEK, WETLAND, OR CATCH BASIN. THE CONTRACTOR WILL SUBMIT A PRESSURE TESTING, DISINFECTION, AND FLUSHING PLAN TO THE DISTRICT PRIOR TO CONSTRUCTION.
21. ALL SALVAGED USABLE DISTRICT OWNED MATERIALS ARE TO BE DELIVERED TO THE DISTRICT OFFICE AT 1415 FREEWAY DRIVE, MOUNT VERNON, OR AS DIRECTED BY THE DISTRICT.
22. THE UTILITY LOCATIONS MARKED ON THIS MAP ARE APPROXIMATE. THE CONTRACTOR IS TO VERIFY ACTUAL LOCATION AND DEPTH PRIOR TO CONSTRUCTION. CALL THE UNDERGROUND UTILITY LOCATE CENTER AT 800- 424-5555.
23. ALL PRIVATE FIRE SPRINKLERS OR PRIVATE FIRE HYDRANT PIPELINES ARE REQUIRED TO BE INSTALLED WITH A WASHINGTON STATE DEPARTMENT OF HEALTH (WSDOH) APPROVED DOUBLE CHECK DETECTOR ASSEMBLY(IES) OR REDUCED PRESSURE DETECTOR ASSEMBLY(IES), LOCATED IMMEDIATELY AFTER THE FIRE SERVICE CONNECTION. A BADGER RECORDALL METER WITH A REMOTE TOUCH-READ PAD WILL BE SUPPLIED AND INSTALLED BY THE DISTRICT WITHIN 6-INCHES OF THE VAULT LID'S HINGE AND BRASS PLUGS IN THE TEST PORTS. METER SUPPLY AND INSTALLATION WILL BE INCLUDED WITH THE CHARGES IN THE WORK ORDER.
24. A LEAD FREE, WASHINGTON STATE APPROVED, REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED AT TEMPORARY CONNECTIONS BETWEEN THE EXISTING DISTRICT PIPELINES AND NEW WATER PIPELINES FOR FILLING, FLUSHING AND PRESSURE TESTING OF THE IMPROVEMENTS. UPON TEMPORARY CONNECTION, AND PRIOR TO FILLING, THE ASSEMBLY SHALL HAVE BEEN SUCCESSFULLY TESTED BY A BACKFLOW ASSEMBLY TESTER (BAT) AND THE TEST REPORT IS TO BE PROVIDED TO THE DISTRICT.
25. BEFORE FINAL CONNECTION TO THE EXISTING DISTRICT SYSTEM, ALL NEW WATER PIPELINES AND REPAIRED PORTIONS OF/OR EXTENSION TO EXISTING PIPELINES SHALL BE ADEQUATELY DISINFECTED AND A SATISFACTORY BACTERIOLOGICAL REPORT OBTAINED.
26. PRESSURE TEST NEW PIPELINE, INCLUDING FIRE HYDRANTS AND SERVICE LINES AS PER WSDOT STANDARDS.

TEST DATE \_\_\_\_\_ TEST PRESSURE \_\_\_\_\_  
 TIME START \_\_\_\_\_ TIME END \_\_\_\_\_  
 PRESSURE DROP \_\_\_\_\_ MAKE-UP WATER \_\_\_\_\_

TEST DATE \_\_\_\_\_ TEST PRESSURE \_\_\_\_\_  
 TIME START \_\_\_\_\_ TIME END \_\_\_\_\_  
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**MOUNTAIN VIEW ROAD PIPELINE PROJECT**  
 NOTES

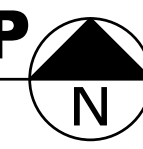
## CONSTRUCTION NOTES

1. VERIFY THE LOCATIONS, ELEVATIONS, DIAMETERS, MATERIALS, AND OTHER PARAMETERS OF EXISTING FACILITIES TO WHICH NEW FACILITIES CONNECT BEFORE BEGINNING ANY WORK.
2. VERIFY INVERT ELEVATION OF EXISTING UTILITIES BY POTHOLING A MINIMUM OF 200 FEET AHEAD OF WATERLINE INSTALLATION.
3. PROTECT ALL EXISTING UTILITIES, SERVICE CONNECTIONS AND ALL SURFACE IMPROVEMENTS. CONTRACTOR SHALL REPAIR ALL SERVICE CONNECTIONS WHETHER SHOWN ON THESE PLANS OR NOT.
4. PROTECT ALL EXISTING UTILITIES AND SURFACE IMPROVEMENTS. CONTRACTORS SHALL COORDINATE WITH PROPERTY OWNERS DURING CONSTRUCTION TO AVOID DAMAGING EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND LOCATE ALL EXISTING UTILITIES ON PRIVATE PROPERTY.
5. CONSTRUCTION ACTIVITIES SHALL NOT EXTEND BEYOND THE LIMITS SHOWN IN THE PLANS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
6. CONTRACTOR TO COORDINATE WORK WITH & WITHIN APPROVED TRAFFIC CONTROL PLANS.
7. REFER TO EROSION AND SEDIMENTATION CONTROL DRAWINGS FOR PROTECTION AND RESTORATION REQUIREMENTS.
8. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING, MAINTAINING AND REMOVING TEMPORARY ACCESS ROADS AND RESTORATION OF CONSTRUCTION AREAS TO PRE-CONSTRUCTION CONDITION OR BETTER.
9. PROVIDE AND MAINTAIN TEMPORARY PAVEMENT MARKINGS UNTIL PERMANENT MARKINGS RESTORATION. PROVIDE PERMANENT RESTORATION OF PAVEMENT MARKINGS AFTER PAVEMENT RESTORATION IS COMPLETED.
10. SUPPORT POWER AND TELEPHONE POLES DURING PIPELINE INSTALLATION. COORDINATE WITH PUGET SOUND ENERGY TO PROVIDE TEMPORARY GUYS OR SUPPORTS AS NECESSARY.
11. EXCESS TRENCH MATERIALS MUST BE HAULED OFF SITE. NO SPOILS SHALL BE SPREAD IN WETLANDS OR WETLAND BUFFERS. NO MATERIALS SHALL BE STOCKPILED IN WETLANDS OR WETLAND BUFFERS.
12. REMOVE AND REPLACE ALL MAILBOXES AS REQUIRED FOR CONSTRUCTION OF THE PIPELINE.
13. REMOVE AND REPLACE ALL TRAFFIC AND ROADWAY SIGNS AS REQUIRED FOR CONSTRUCTION.
14. MINIMUM 12-INCH SAND CUSHION IS DESIRED BETWEEN WATERLINE AND EXISTING PIPELINES OR OTHER CONDUITS WHEN ENCOUNTERED DURING CONSTRUCTION. NOTIFY DISTRICT INSPECTOR IF LESS THAN 12-INCHES OF CUSHION WILL OCCUR.
15. TURBID WATER GENERATED FROM CONSTRUCTION ACTIVITIES, INCLUDING TURBID DEWATERING WATER, SHALL NOT BE DISCHARGED DIRECTLY TO ANY SURFACE WATER. TEMPORARY SEDIMENT PONDS OR BAKER TANKS SHALL BE USED, AS NECESSARY, TO ALLOW THE TURBID WATER TO SETTLE BEFORE DISCHARGE. DEWATERED GROUNDWATER CAN BE TREATED USING BAKER TANKS ONSITE OR TREATED AND DISPOSED OFFSITE, UPON APPROVAL OF ENGINEER, AND PER APPLICABLE RULES AND GUIDELINES OF DEPARTMENT OF ECOLOGY AND OTHER REQUIREMENTS OF APPLICABLE JURISDICTIONS.



**SHUTDOWN MAP**

NOT TO SCALE



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



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VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23.26
	TWP: 34 N
	RGE: 4 E



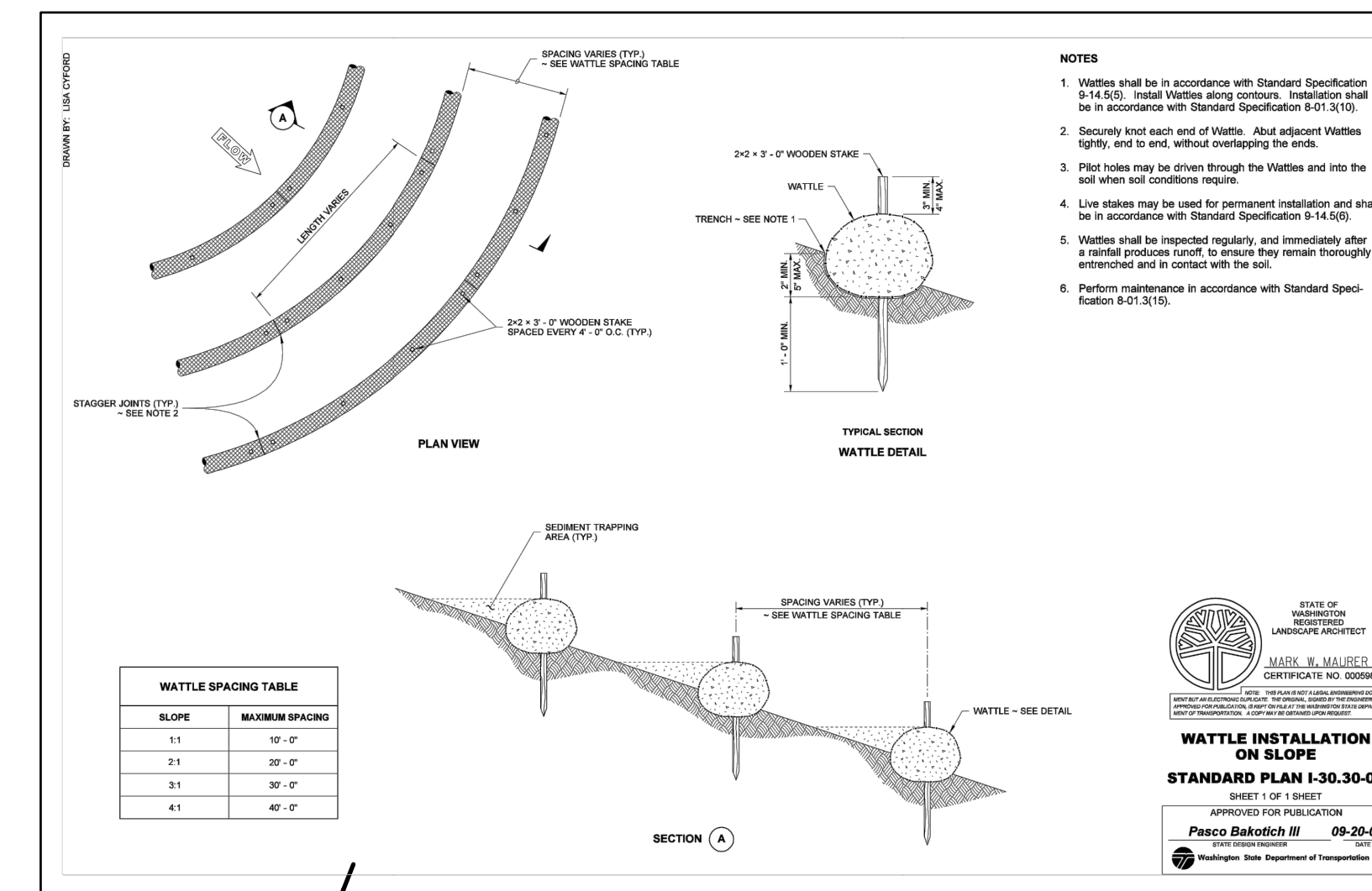
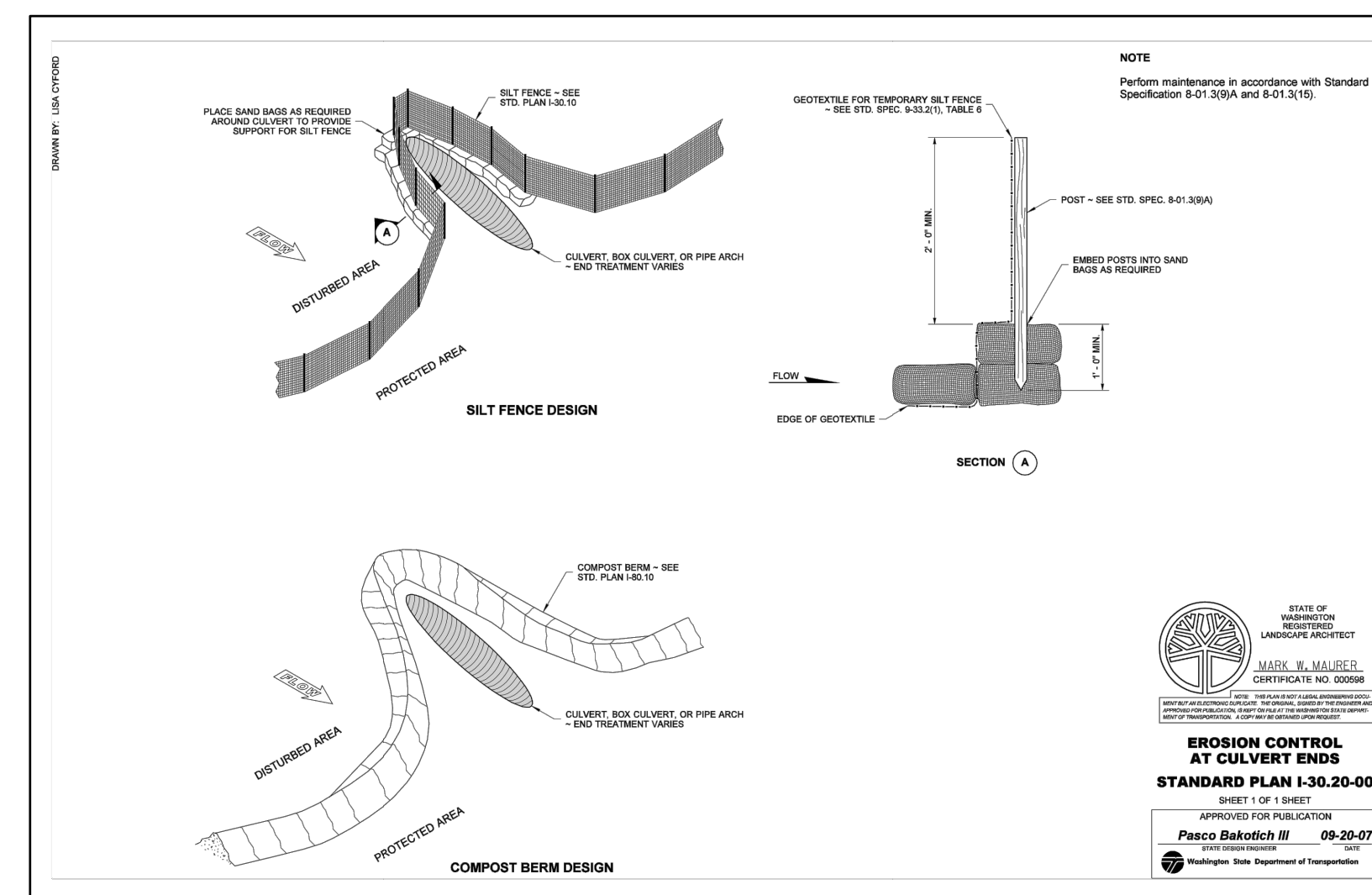
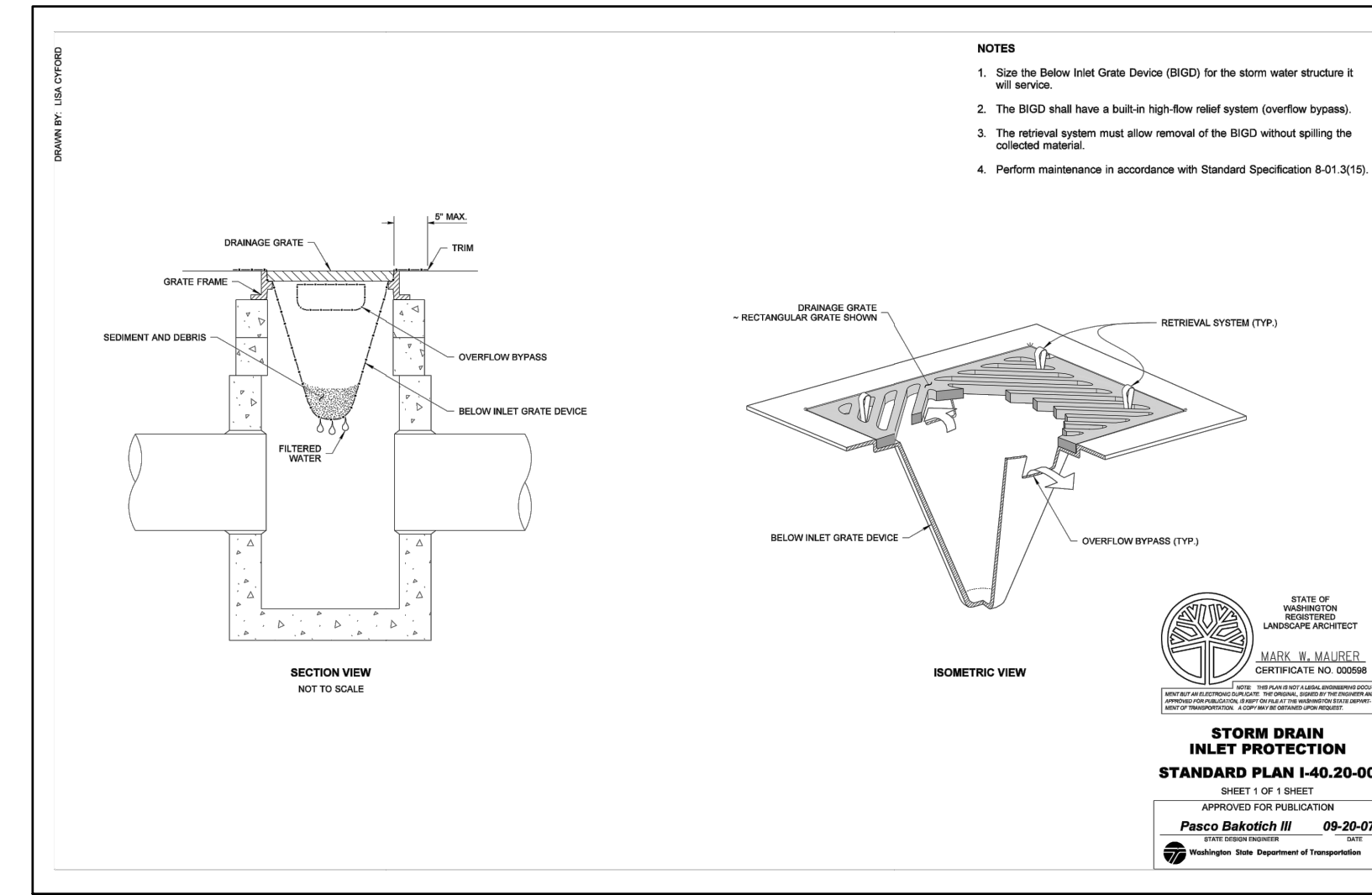
PUBLIC UTILITY DISTRICT  
 NO. 1 of SKAGIT COUNTY  
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 (360) 424-7104  
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MOUNTAIN VIEW ROAD PIPELINE  
 PROJECT  
 SHUTDOWN MAP

**Standard ESC Plan Notes**

- AS DIRECTED BY PUBLIC WORKS DIRECTOR PRIOR TO COMMENCING CONSTRUCTION, ALL CRITICAL AREAS, INCLUDING WETLAND BUFFERS, STREAM CORRIDOR, LANDFILL AREAS, AND STEEP SLOPES SHALL BE CONTINUOUSLY DEMARCATED IN THE FIELD USING FLAGGING TAPE OR FENCING.
- EROSION CONTROL METHODS AND MATERIALS SHALL MEET REQUIREMENTS OF SECTION 8-01 OF THE APWA/WASHINGTON STATE DEPARTMENT OF TRANSPORTATION 1998 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, AND REQUIREMENTS SET FORTH IN VOLUME II OF THE "STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN (THE TECHNICAL MANUAL)", BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY, CURRENT EDITION. THE CONTRACTOR SHALL FOLLOW RECOMMENDATIONS MADE BY SUPPLIERS AND MANUFACTURERS OF MATERIALS AND EQUIPMENT USED.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
- ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM, WHICH BACKS UNDER OR INTO A POND, SHALL BE USED AS A TEMPORARY SETTLING BASIN.
- WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
- WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO (2) INCHES.
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS OF THE CITY OR COUNTY IN WHICH THE WORK OCCURS.
- THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL.
- A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE CLEANED OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.
- ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE THEIR GRATES COVERED WITH FILTER FABRIC DURING CONSTRUCTION.
- THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION. ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.

- ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO DEPTH OF ONE (1) FOOT AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4" - 8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 1"-2" ROCK/10%-20% PASSING.
- IF ANY PART (S) OF THE CLEARING LIMIT; BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
- ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF DO NOT FLUSH CONCRETE BY PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RECLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RELAYING THE STORM LINE.
- THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE ESC LEAD'S NAME IS: \_\_\_\_\_
- THE APPLICANT'S NAME IS : PUD NO. 1 OF SKAGIT COUNTY, 24 HR. CONTACT NUMBER: 360-424-7104.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC LEAD AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES DURING THE WET SEASON (OCT. 1 TO APRIL 30) AND OF THE MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).
- ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
- ANY AREA NEEDING ESC MEASURES NOT REQUIRING IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
- THE ESC FACILITIES ON ACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN FORTY-EIGHT (48) HOURS FOLLOWING A STORM EVENT.
- AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES AND ROADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- ANY PERMANENT FLOW CONTROL FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE FACILITY IS TO FUNCTION AS ULTIMATELY AS AN INFILTRATION SYSTEM, THE TEMPORARY FACILITY MUST BE GRADED SO THAT THE BOTTOM AND SIDES ARE AT LEAST THREE FEET ABOVE THE FINAL GRADE OF THE PERMANENT FACILITY.
- PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE CITY INSPECTOR. THE CITY INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.
- CONTRACTOR SHALL MAINTAIN ALL BMP'S UNTIL DISTURBED AREAS HAVE STABILIZED.



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3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19

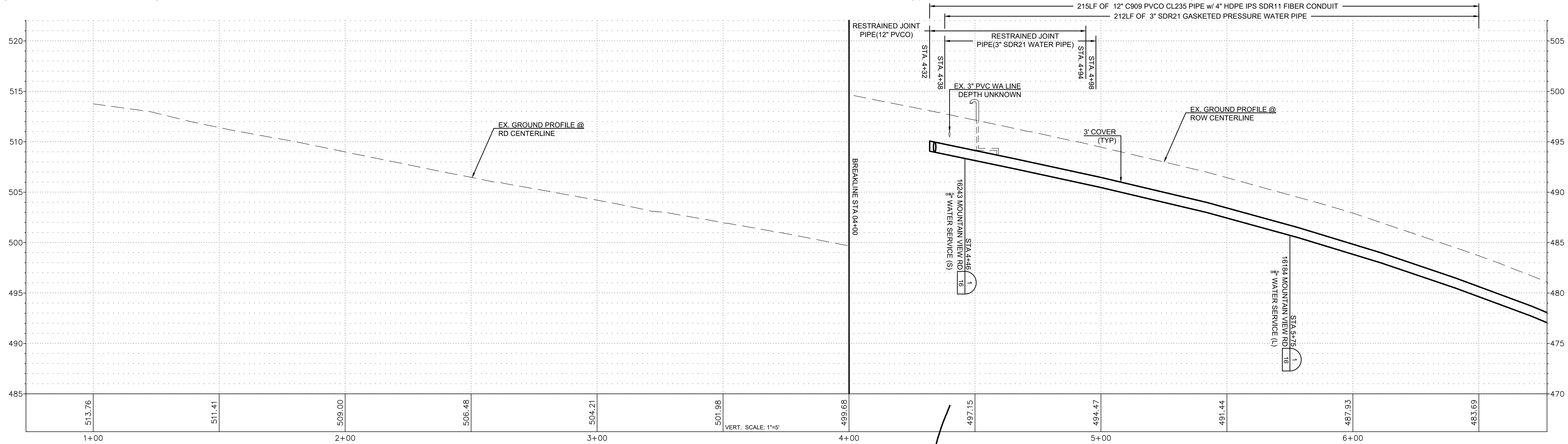
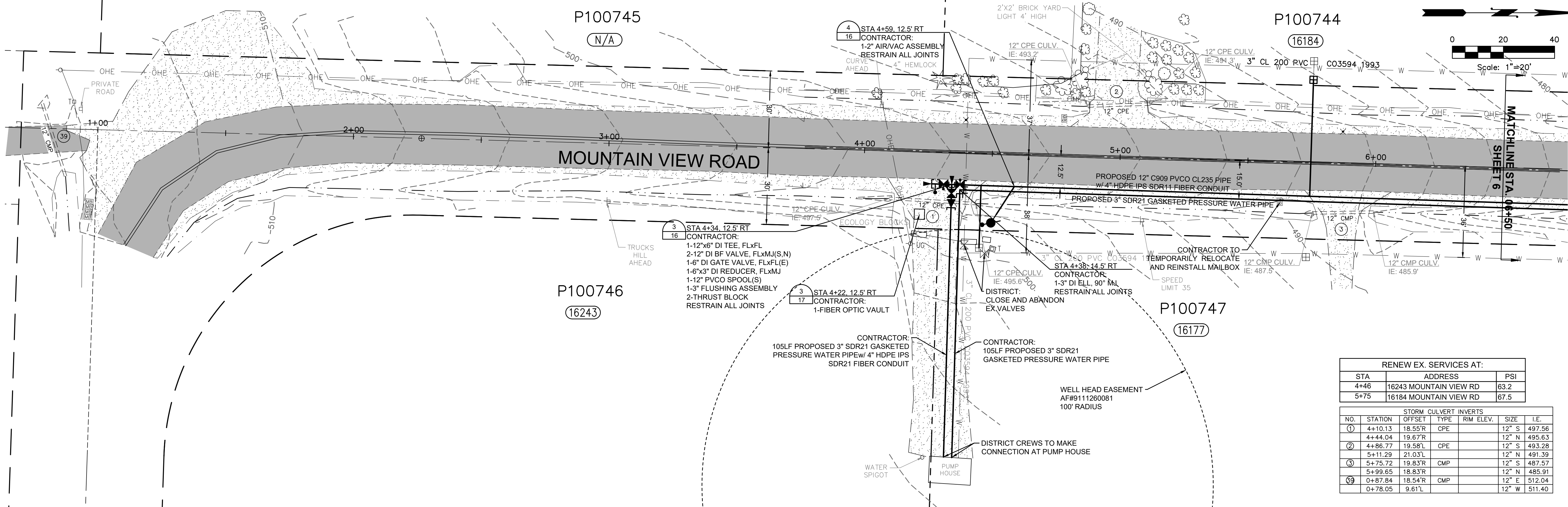


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HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23.26
	TWP: 34 N
	RGE: 4 E



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(360) 424-7104  
www.SkagitPud.org

MOUNTAIN VIEW ROAD PIPELINE PROJECT	
EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS	
P.N. 3673	SHEET: 4 OF 19
C.O. 4963	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
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Know what's below.  
Call before you dig.

DATUM: HOR: NAD 83 VERT: NAVD 88

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**Skagit PUD**  
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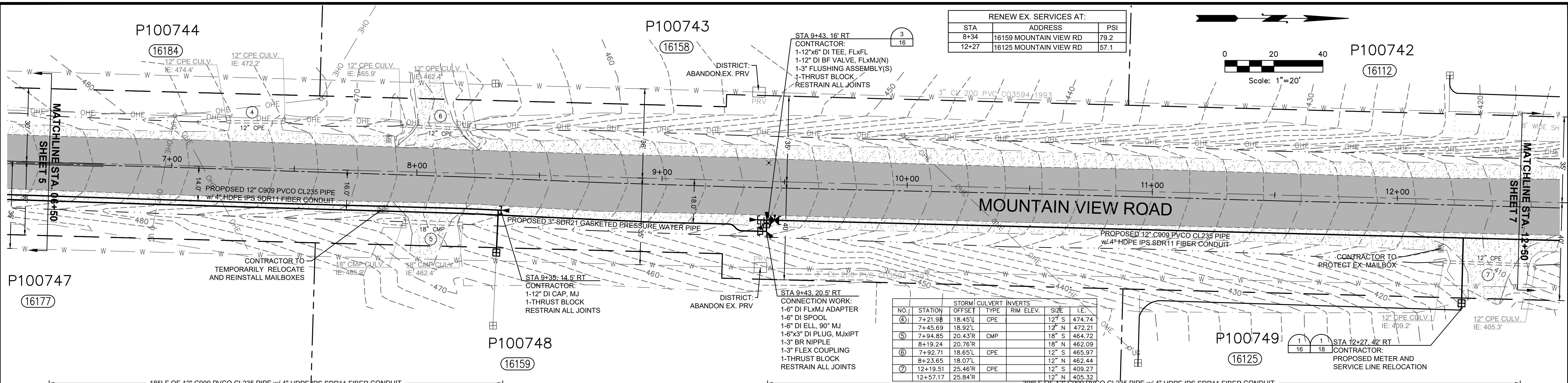
**MOUNTAIN VIEW ROAD PIPELINE PROJECT**

MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 01+00 TO STA 06+00

SCALE: 1"=20'

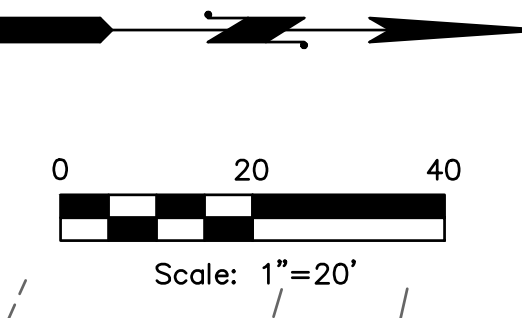
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C.O. 4963

SHEET:  
5 OF 19

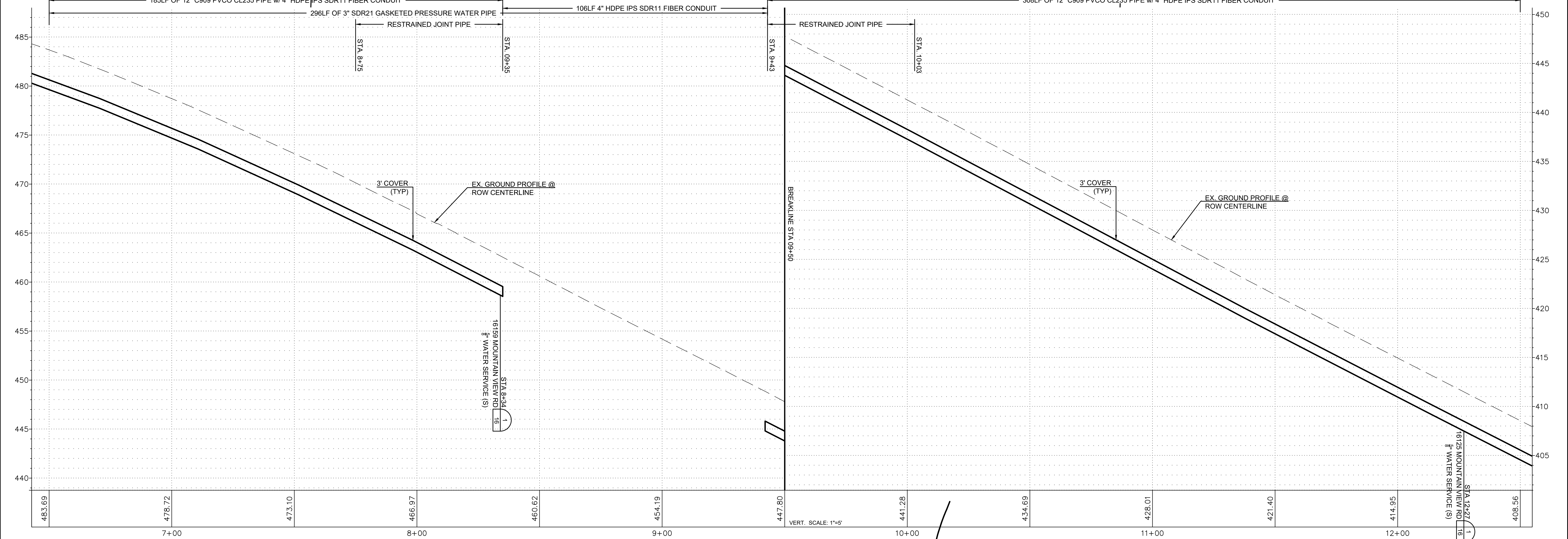


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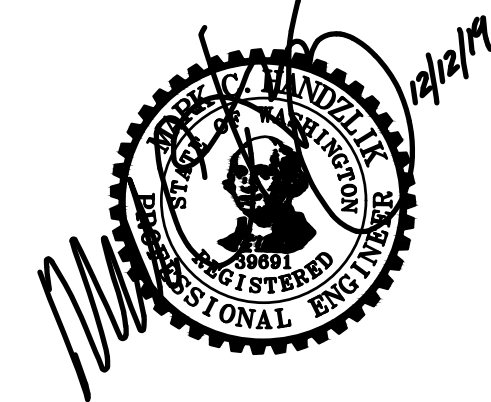
STA	ADDRESS	PSI
8+34	16159 MOUNTAIN VIEW RD	79.2
12+27	16125 MOUNTAIN VIEW RD	57.1



NO.	STATION	OFFSET	TYPE	INVERTS	
				RIM ELEV.	SIZE
④	7+21.98	18.45'L	CPE	12' S	474.74
	7+45.69	18.92'L		12' N	472.21
⑤	7+94.85	20.43'R	CMP	18" S	464.72
	8+19.24	20.76'R		18" N	462.09
⑥	7+92.71	18.65'L	CPE	12" S	465.97
	8+23.65	18.07'L		12" S	462.44
⑦	12+19.51	25.46'R	CPE	12" S	409.27
	12+57.17	25.84'R		12" N	405.32



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3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

DSGN BY: CJS  
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MOUNTAIN VIEW ROAD PIPELINE PROJECT  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 06+50 TO STA 12+50

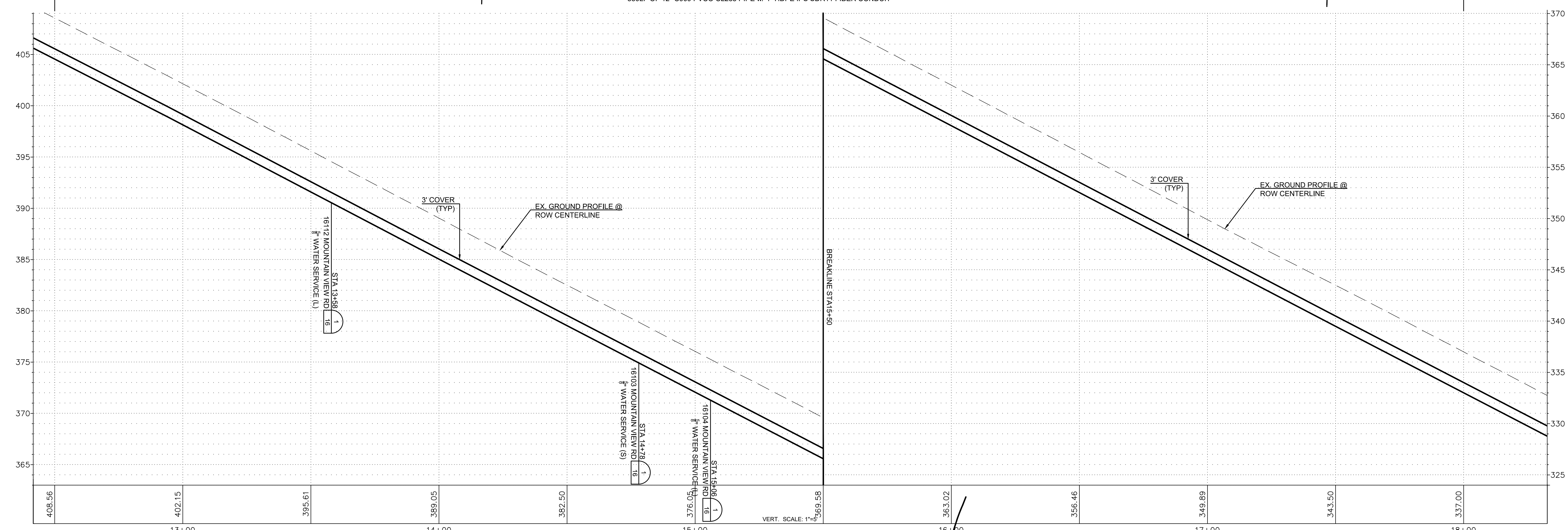
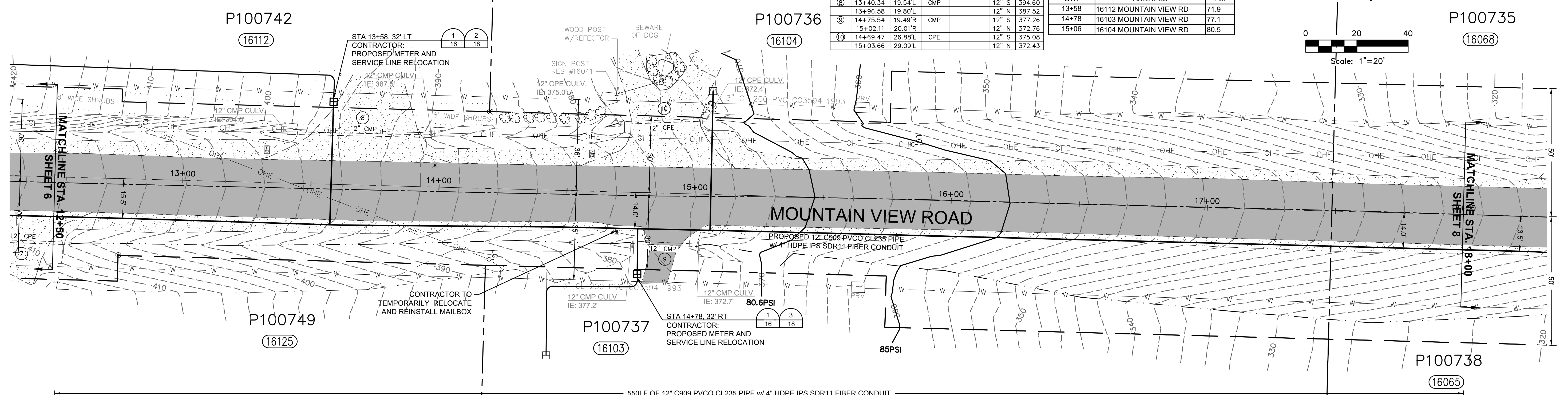
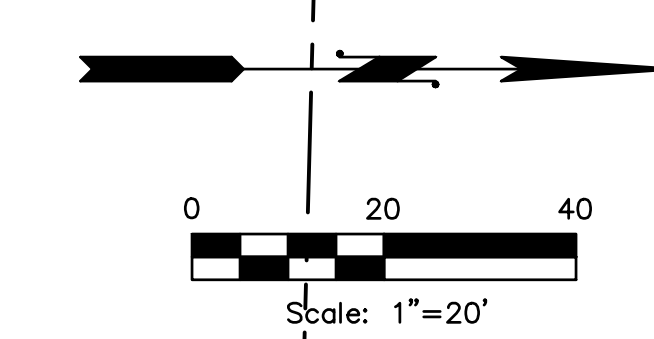
SCALE: 1"=20'

P.N. 3673  
C.O. 4963

SHEET:  
6 OF 19

STORM CULVERT INVERTS						
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
⑧	13+40.34	19.54'L	CMP	12" S	394.60	
⑧	13+96.58	19.80'L	CMP	12" N	387.52	
⑧	14+75.54	19.49'R	CMP	12" S	377.26	
⑧	15+02.11	20.01'R	CPE	12" N	372.76	
⑧	14+69.47	26.88'L	CPE	12" S	375.08	
⑧	15+03.66	29.09'L	CPE	12" N	372.43	

RENEW EX. SERVICES AT:		
STA	ADDRESS	PSI
13+58	16112 MOUNTAIN VIEW RD	71.9
14+78	16103 MOUNTAIN VIEW RD	77.1
15+06	16104 MOUNTAIN VIEW RD	80.5



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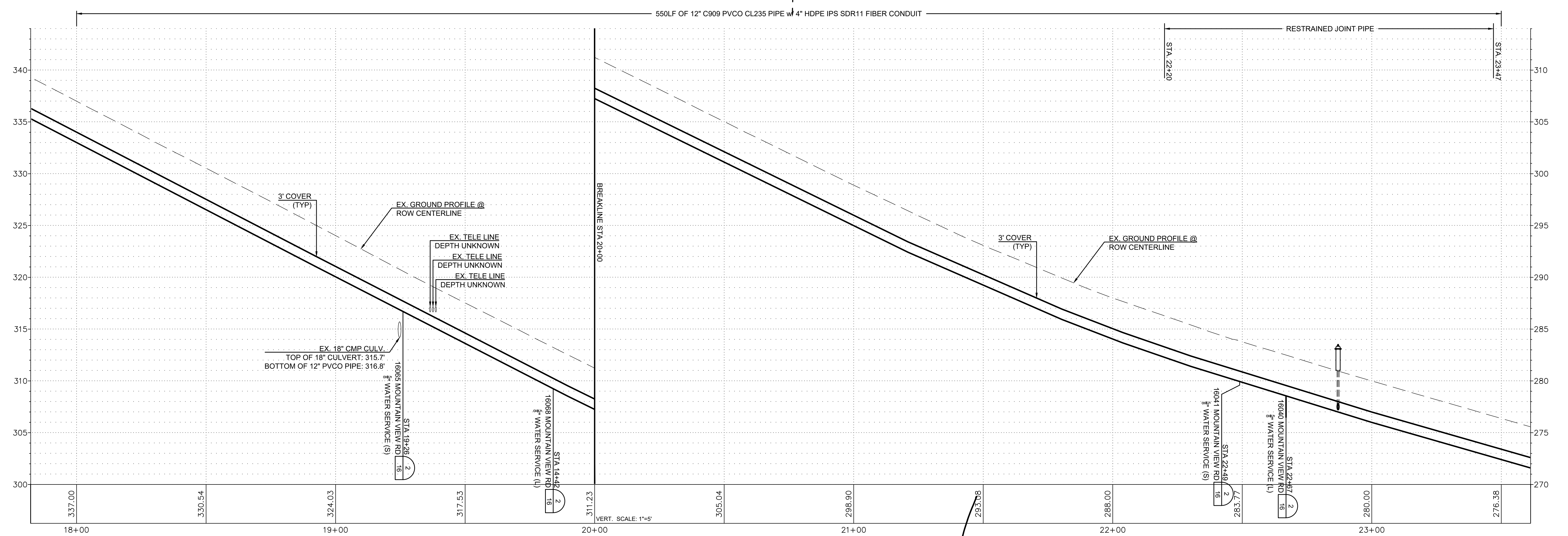
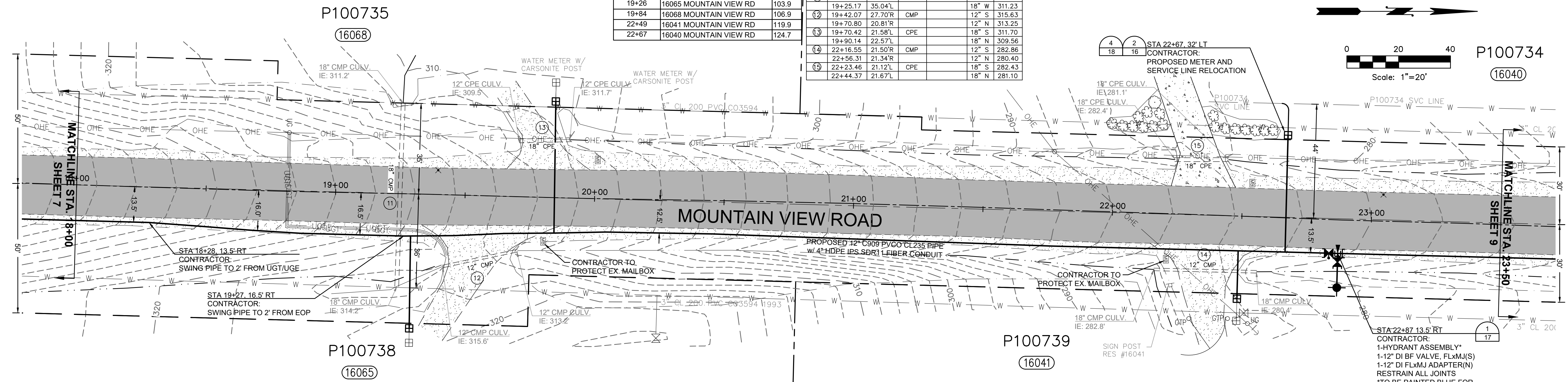
**MOUNTAIN VIEW ROAD PIPELINE PROJECT**  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 12+50 TO STA 18+00

SCALE: 1"=20'

P.N. 3673	SHEET: 7 OF 19
C.O. 4963	

STA	ADDRESS	PSI
19+26	16065 MOUNTAIN VIEW RD	103.9
19+84	16068 MOUNTAIN VIEW RD	106.9
22+49	16041 MOUNTAIN VIEW RD	119.9
22+67	16040 MOUNTAIN VIEW RD	124.7

NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
①	19+24.56	35.89'R	CMP	18" E	314.25	
	19+25.17	35.04'L		18" W	311.23	
②	19+42.07	27.70'R	CMP	12" S	315.63	
	19+70.80	20.81'R		12" N	313.25	
③	19+70.42	21.58'L	CPE	18" S	311.70	
	19+90.14	22.57'L		18" N	309.56	
④	22+16.55	21.50'R	CMP	12" S	282.86	
	22+56.31	21.34'R		12" N	280.40	
⑤	22+23.46	21.12'L	CPE	18" S	282.43	
	22+44.37	21.67'L		18" N	281.10	



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**MOUNTAIN VIEW ROAD PIPELINE PROJECT**  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 18+00 TO STA 23+50

SCALE: 1"=20'

P.N. 3673  
C.O. 4963

SHEET:  
8 OF 19

P100734

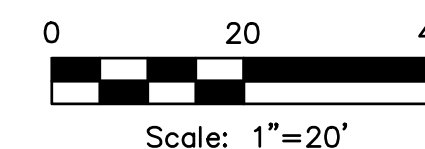
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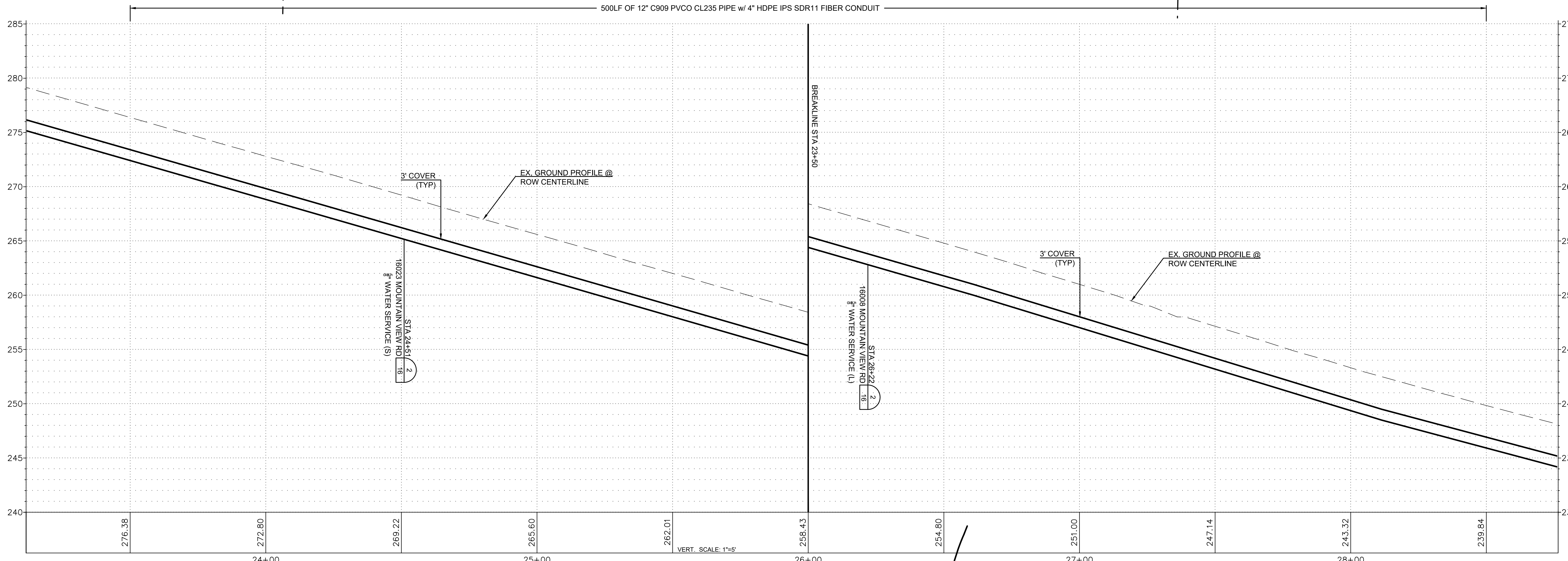
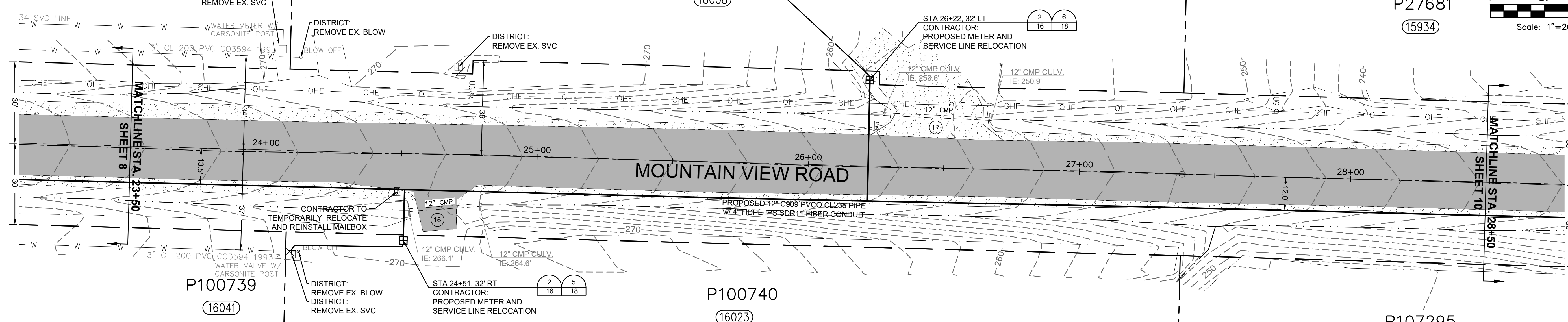
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STORM CULVERT INVERTS					
NO.	STATION	OFFSET	TYPE	RIM ELEV.	I.E.
16	24+53.01	20.84'R	CMP	12" S	266.16
	24+80.03	18.21'R		12" N	264.68
17	26+27.22	19.28'L	CMP	12" S	253.65
	26+67.10	18.49'L		12" N	250.97

RENEW EX. SERVICES AT:		
STA	ADDRESS	PSI
24+51	16023 MOUNTAIN VIEW RD	126.4
26+22	16008 MOUNTAIN VIEW RD	132.0



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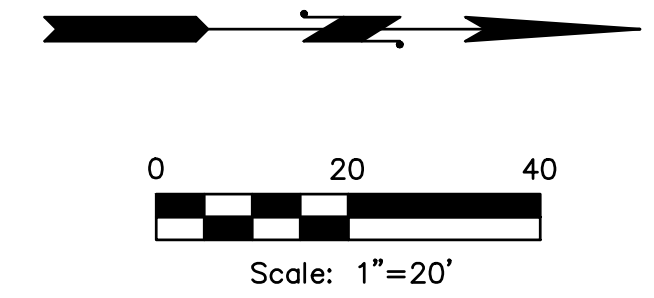


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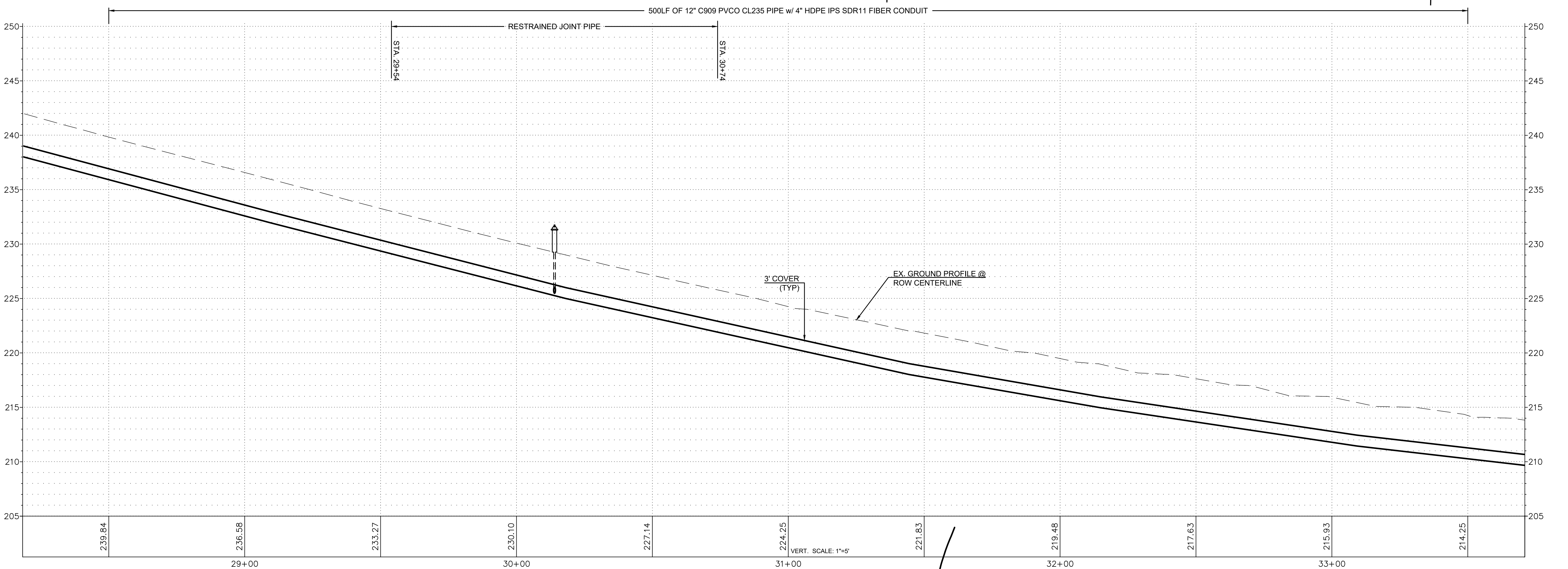
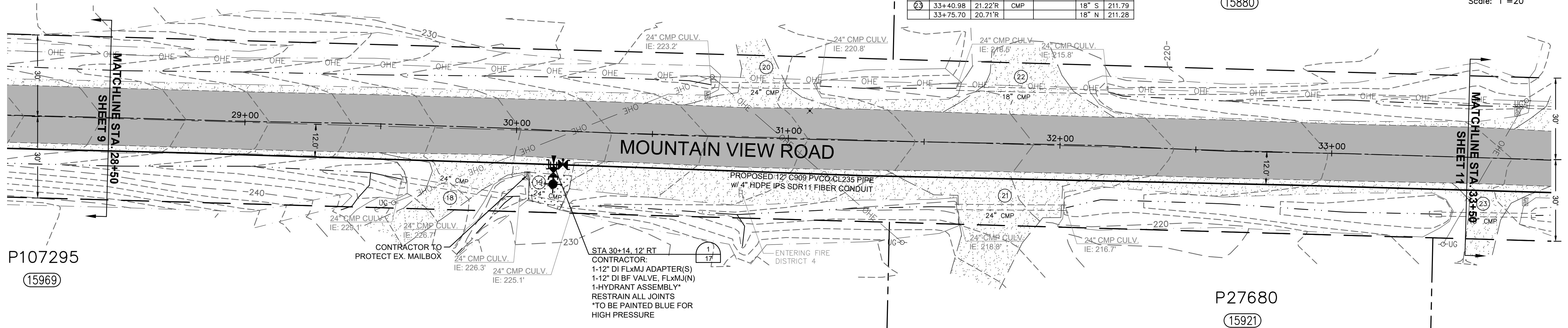
MOUNTAIN VIEW ROAD PIPELINE PROJECT  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 23+50 TO STA 28+50

P27681  
(15934)

P27628  
(15880)



STORM CULVERT INVERTS						
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
18	29+58.26	19.27'R	CMP		24" S	229.18
	29+96.99	24.59'R			24" N	226.75
19	30+01.79	24.29'R	CMP		24" S	226.39
	30+21.36	27.49'R			24" N	225.19
20	30+71.15	18.70'L	CMP		24" S	223.28
	31+11.17	19.35'L			24" N	220.84
21	31+62.01	23.68'R	CMP		24" S	218.85
	32+02.90	22.81'R			24" N	216.71
22	31+61.22	19.99'L	CMP		18" S	218.56
	32+17.25	20.20'L			18" N	215.89
23	33+40.98	21.22'R	CMP		18" S	211.79
	33+75.70	20.71'R			18" N	211.28



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: CJS DWN BY: JLB APPVD BY: MCH
DATE PRINTED:	SEC: 23 TWP: 34 N RGE: 4 E

**Skagit PUD**  
PUBLIC UTILITY DISTRICT

PUBLIC UTILITY DISTRICT  
NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

**MOUNTAIN VIEW ROAD PIPELINE PROJECT**

MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 28+50 TO STA 33+50

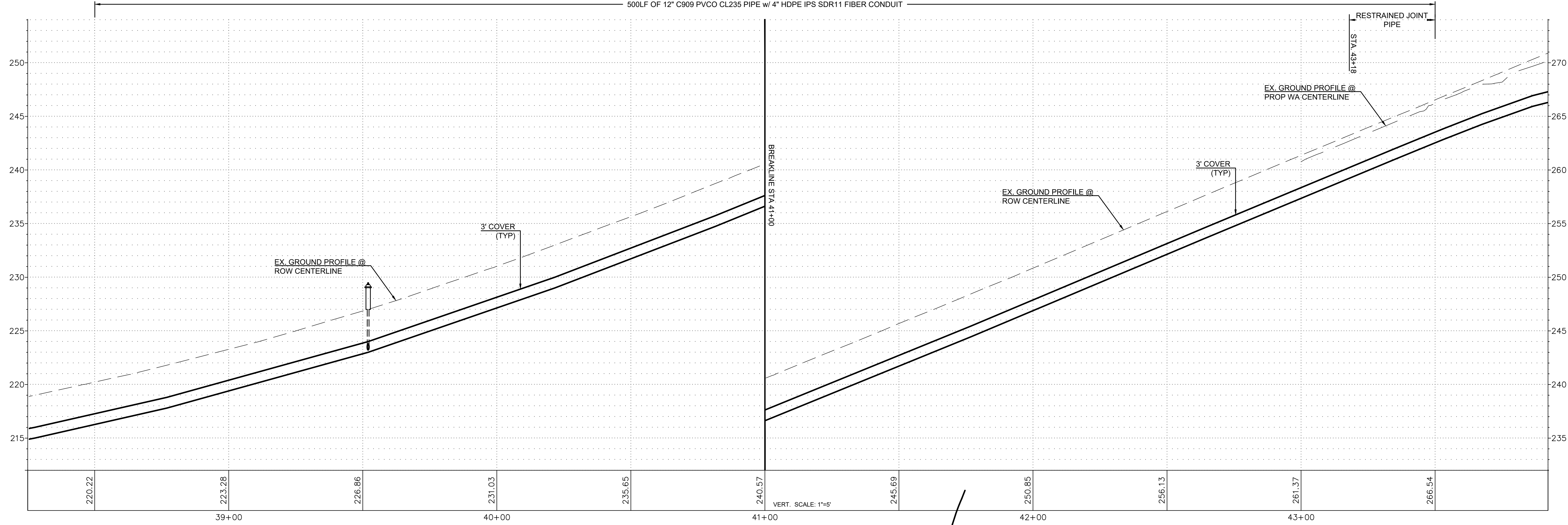
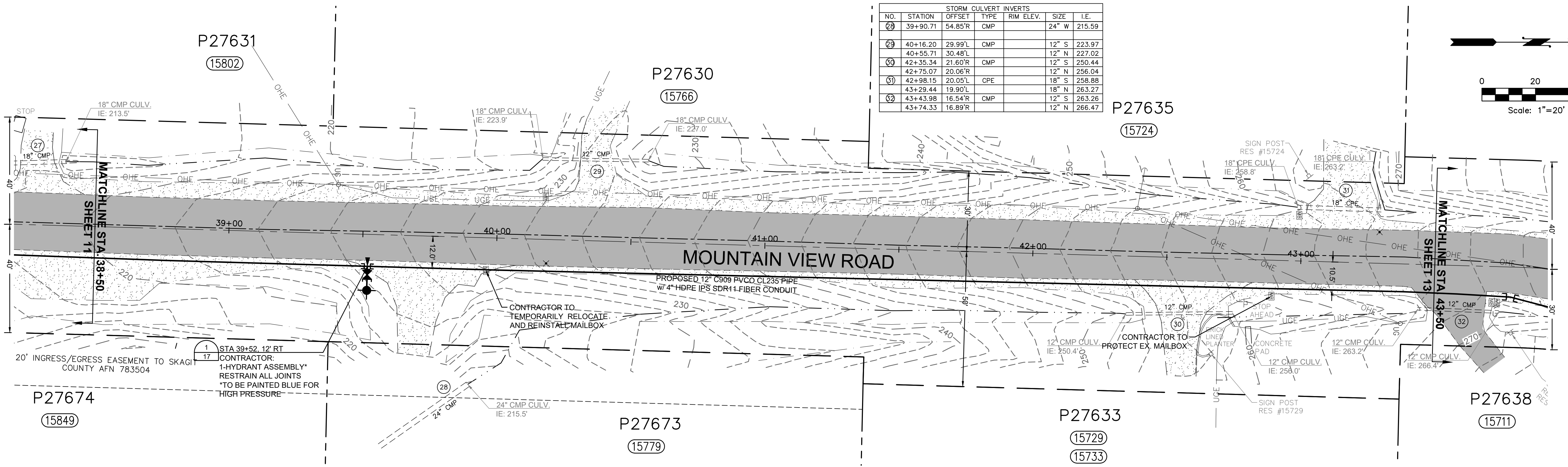
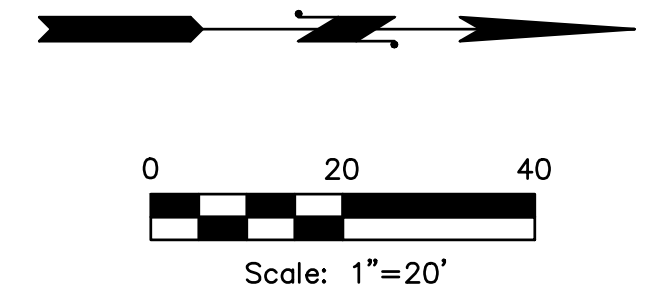
SCALE: 1"=20'

P.N. 3673  
C.O. 4963

SHEET:  
10 OF 19



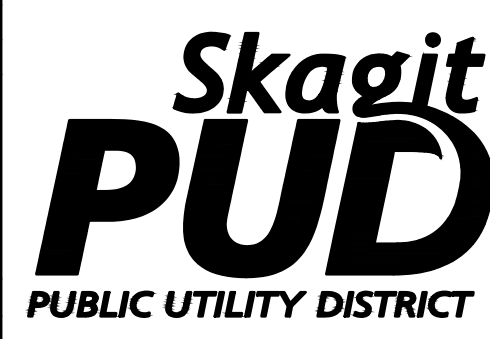
STORM CULVERT INVERTS						
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
28	39+90.71	54.85'R	CMP		24" W	215.59
29	40+16.20	29.99'L	CMP		12" S	223.97
	40+55.71	30.48'L			12" N	227.02
30	42+35.34	21.60'R	CMP		12" S	250.44
	42+75.07	20.06'R			12" N	256.04
31	42+98.15	20.05'L	CPE		18" S	258.88
	43+29.44	19.90'L			18" N	263.27
32	43+43.98	16.54'R	CMP		12" S	263.26
	43+74.33	16.89'R			12" N	266.47



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM:	DSGN BY: CJS
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23
	TWP: 34 N
	RGE: 4 E



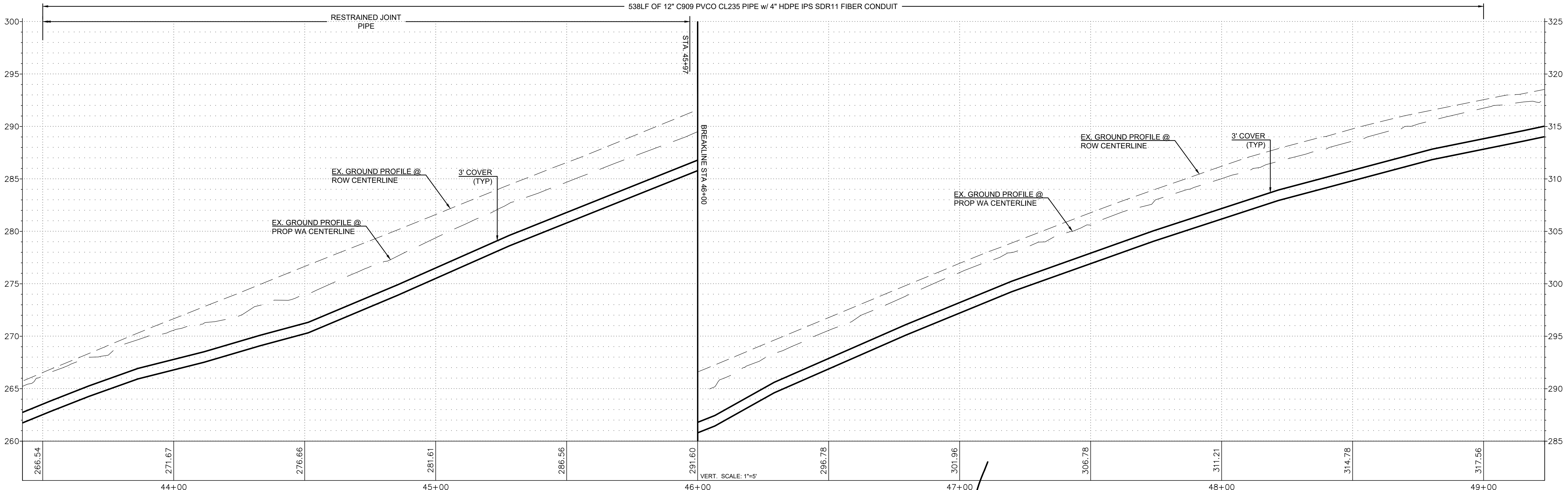
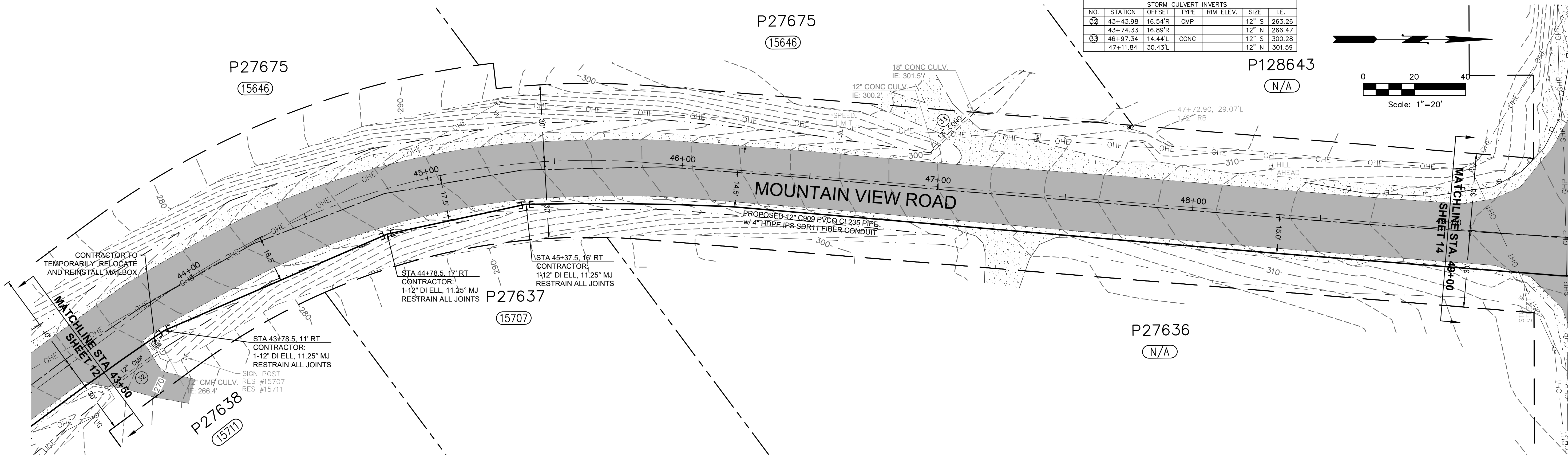
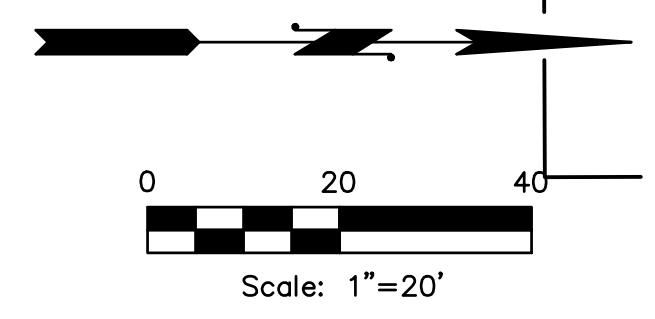
PUBLIC UTILITY DISTRICT  
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MOUNTAIN VIEW ROAD PIPELINE PROJECT  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 38+50 TO STA 43+50

P27675  
(15646)

STORM CULVERT INVERTS					
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE I.E.
②	43+43.98	16.54'R	CMP		12" S 263.26
	43+74.33	16.89'R			12" N 266.47
③	46+97.34	14.44'L	CONC		12" S 300.28
	47+11.84	30.43'L			12" N 301.59

P128643  
(N/A)



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19

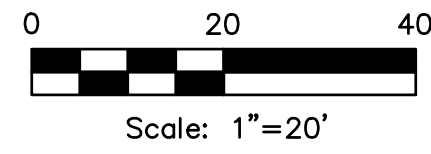
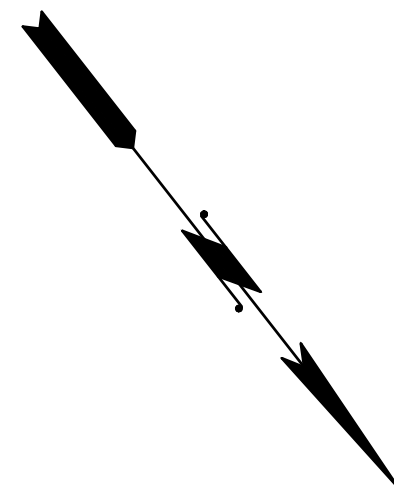


DATUM:	DSGN BY: CJS
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23
	TWP: 34 N
	RGE: 4 E

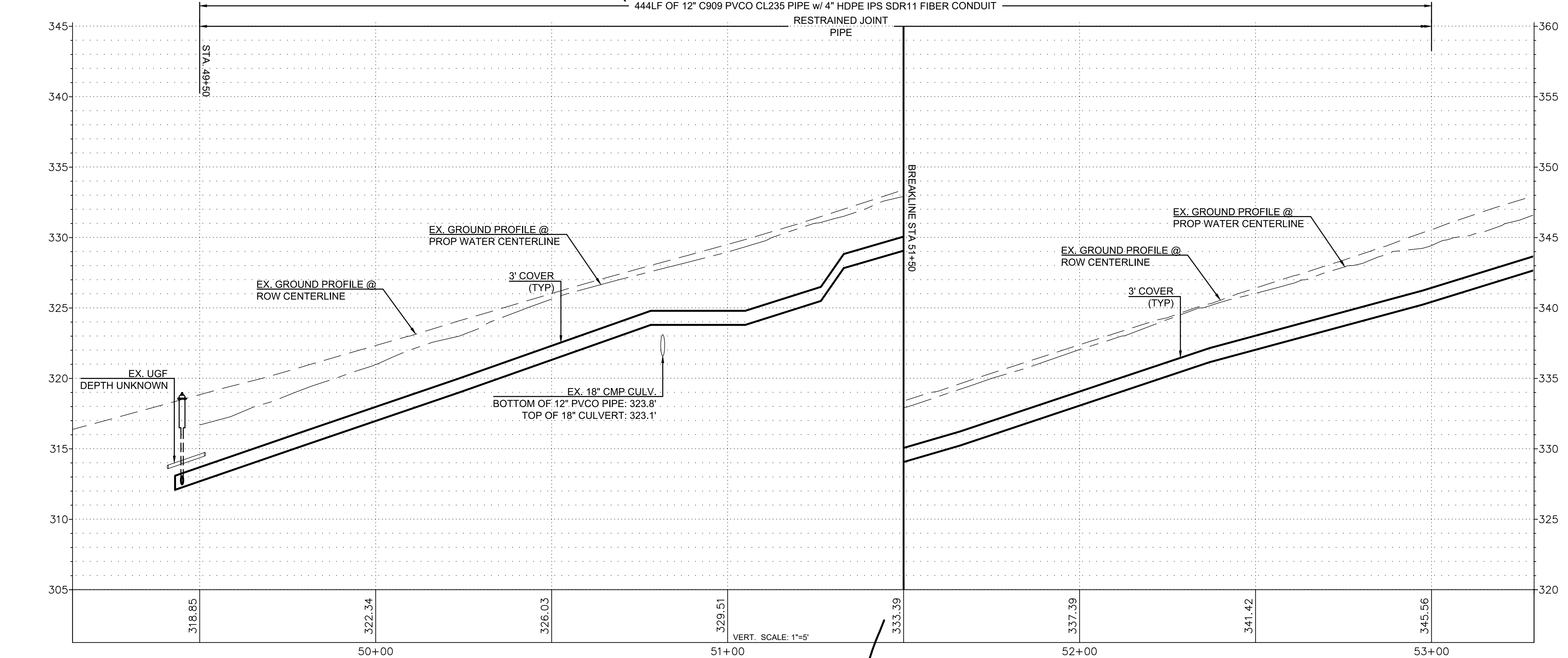
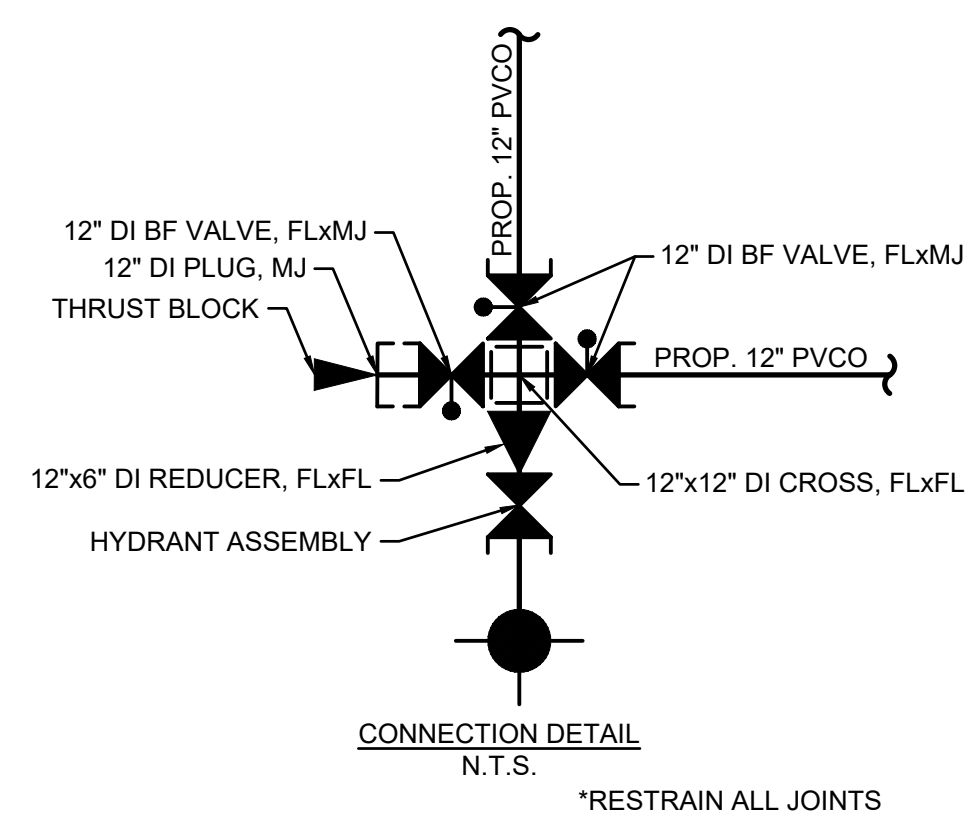
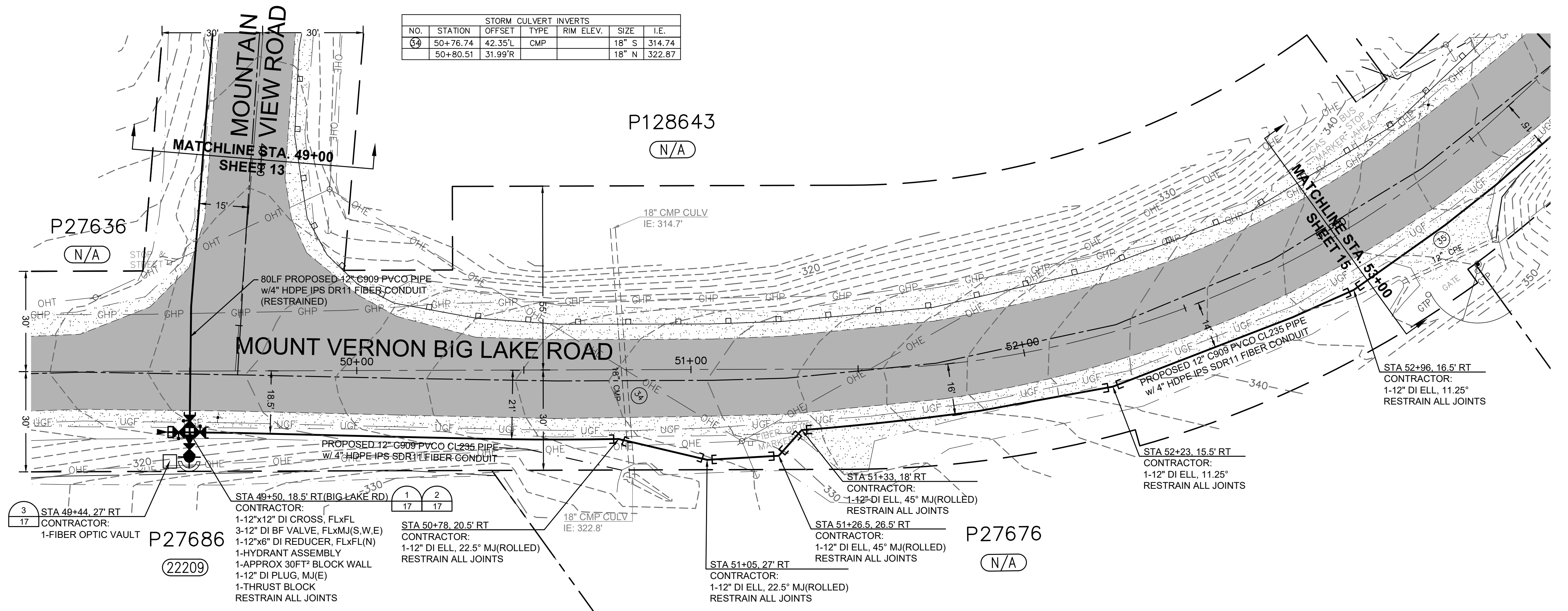


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MOUNTAIN VIEW ROAD PIPELINE PROJECT  
MOUNTAIN VIEW ROAD  
PLAN AND PROFILE  
STA 43+50 TO STA 49+00



STORM CULVERT INVERTS						
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
34	50+76.74	42.35'L	CMP	18" S	314.74	
	50+80.51	31.99'R		18" N	322.87	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



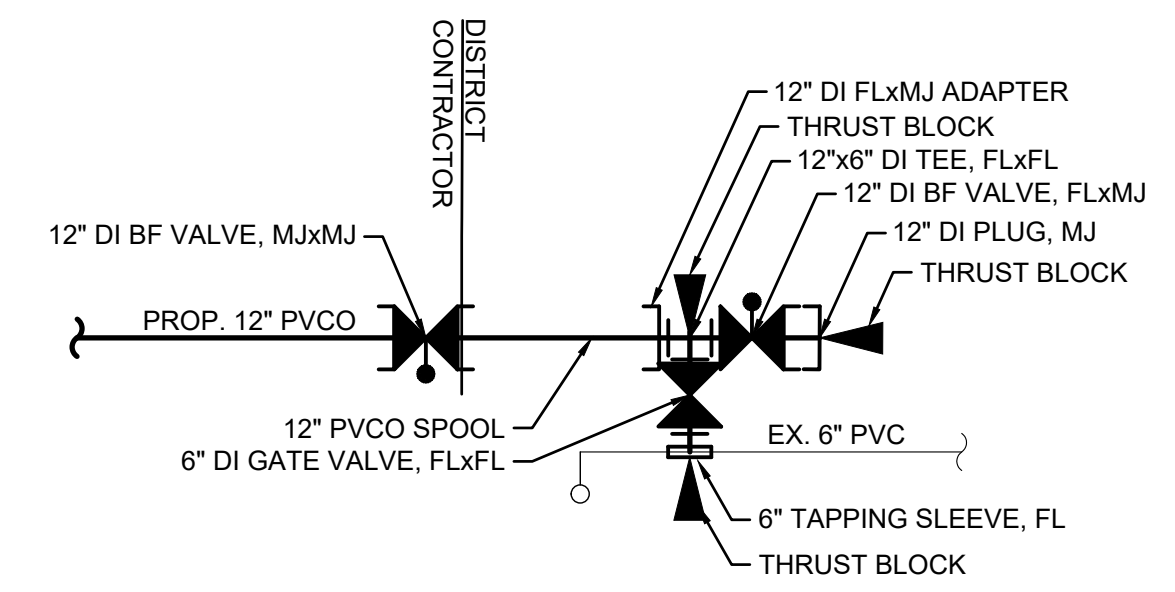
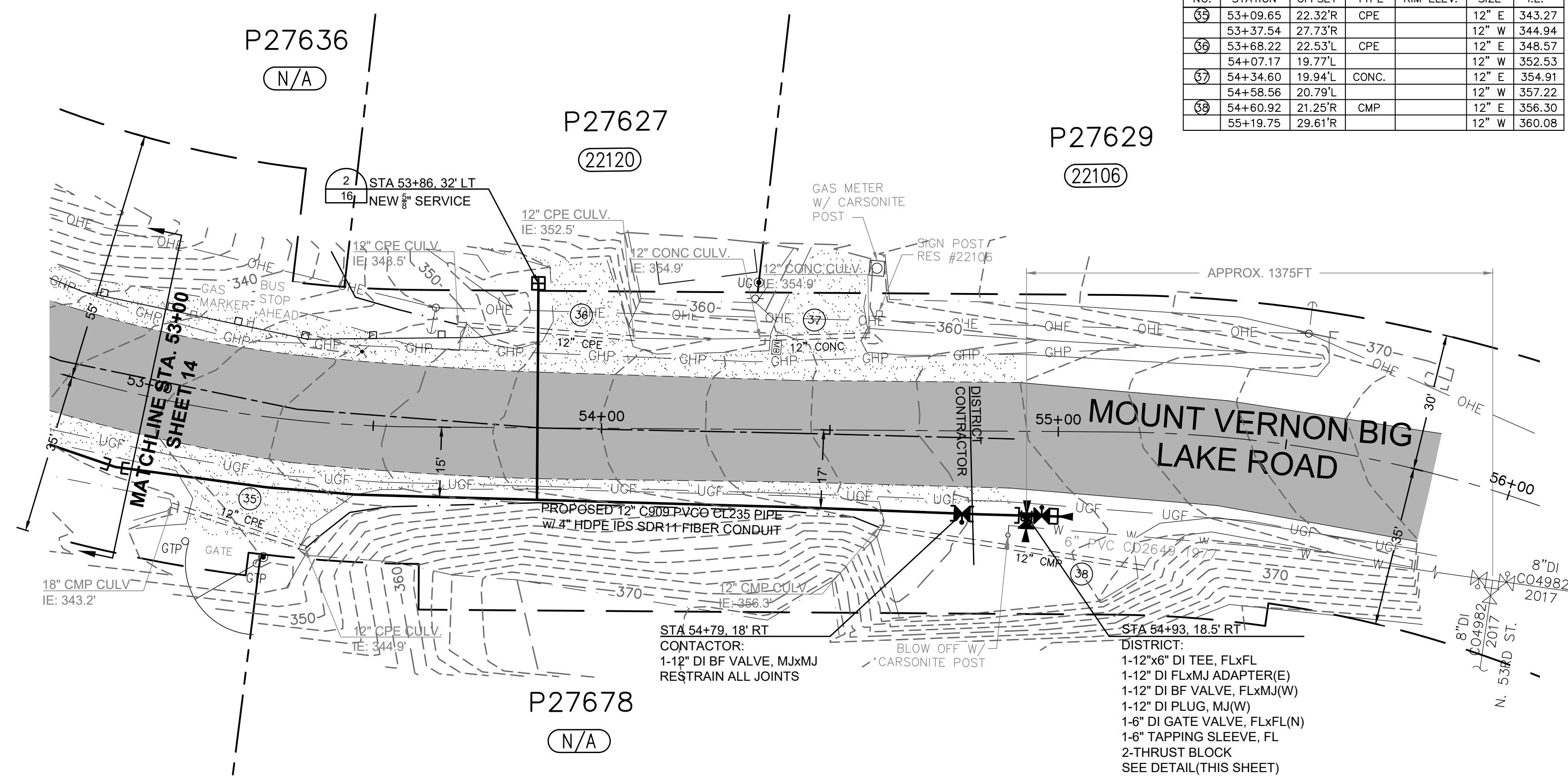
DATUM:	DSGN BY: CJS
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23
	TWP: 34 N
	RGE: 4 E



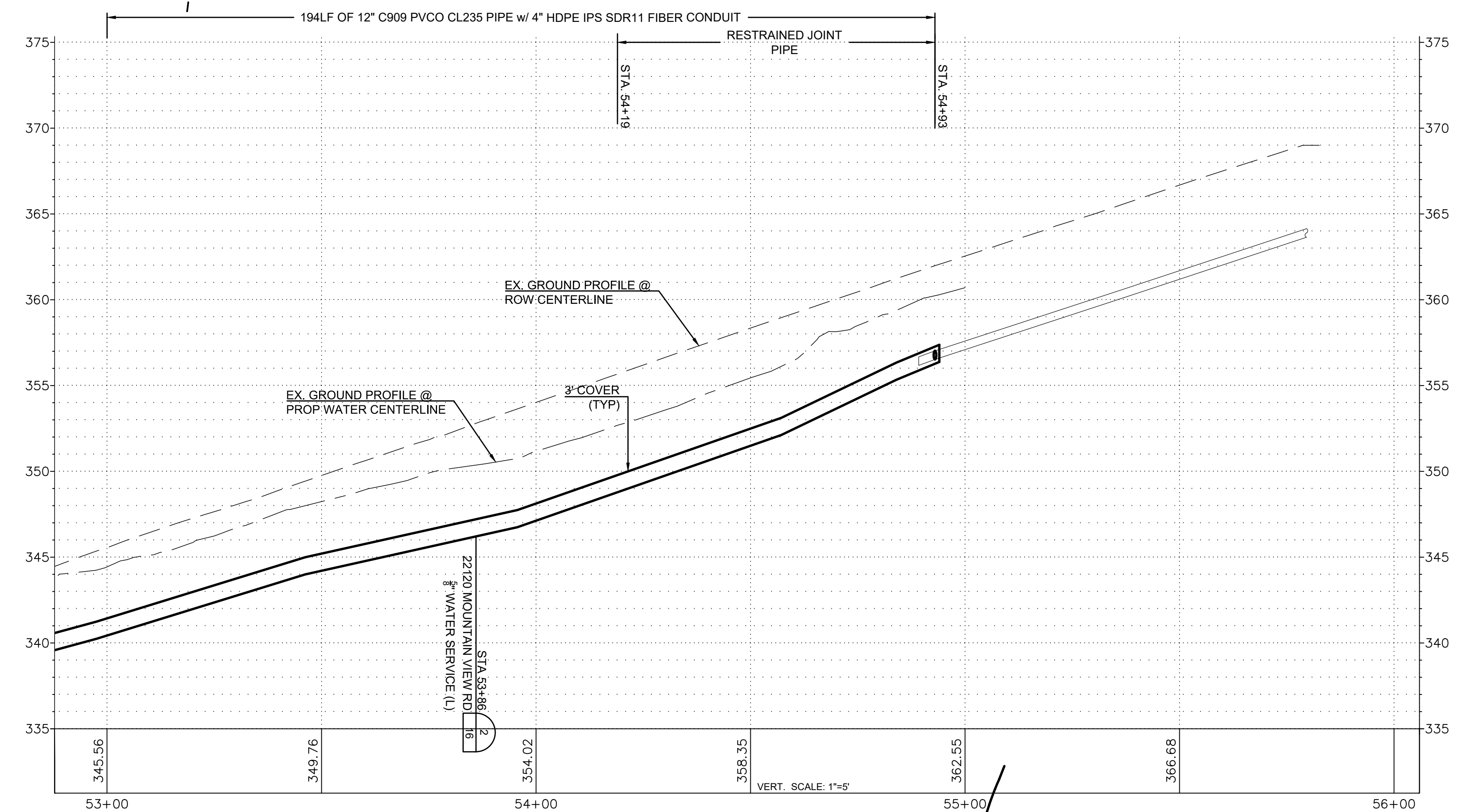
PUBLIC UTILITY DISTRICT  
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Mount Vernon, WA 98273  
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MOUNTAIN VIEW ROAD PIPELINE PROJECT  
MOUNT VERNON BIG LAKE ROAD  
PLAN AND PROFILE  
STA 49+00 TO STA 53+00

STORM CULVERT INVERTS						
NO.	STATION	OFFSET	TYPE	RIM ELEV.	SIZE	I.E.
69	53+09.65	22.32'R	CPE		12" E	343.27
	53+37.54	27.73'R			12" W	344.94
66	53+68.22	22.53'L	CPE		12" E	348.57
	54+07.17	19.77'L			12" W	352.53
67	54+34.60	19.94'L	CONC.		12" E	354.91
	54+58.56	20.79'L			12" W	357.22
68	54+60.92	21.25'R	CMP		12" E	356.30
	55+19.75	29.61'R			12" W	360.08



- STA 54+79.18' RT  
CONTACTOR:  
1-12" DI BF VALVE, MJxMJ  
RESTRAIN ALL JOINTS
- STA 54+93.18.5' RT  
DISTRICT:  
1-12x6" DI TEE, FLxFL  
1-12" DI FLxMJ ADAPTER(E)  
1-12" DI BF VALVE, FLxMJ(W)  
1-12" DI PLUG, MJ(W)  
1-6" DI GATE VALVE, FLxFL(N)  
1-6" TAPPING SLEEVE, FL  
2-THRUST BLOCK  
SEE DETAIL (THIS SHEET)



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: CJS DWN BY: JLB APPVD BY: MCH
DATE PRINTED:	SEC: 23 TWP: 34 N RGE: 4 E



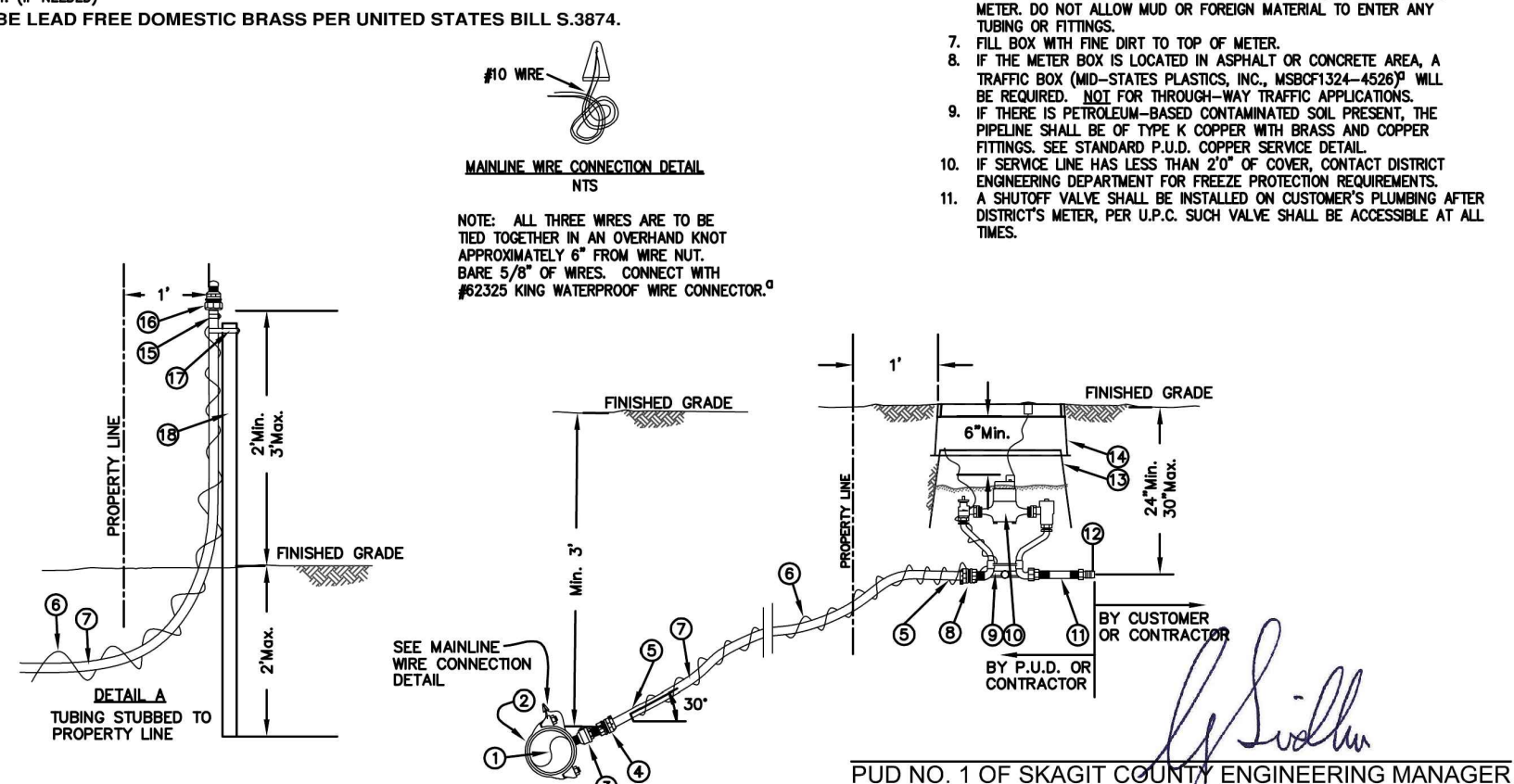
PUBLIC UTILITY DISTRICT  
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1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
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MOUNTAIN VIEW ROAD PIPELINE  
PROJECT  
MOUNT VERNON BIG LAKE ROAD  
PLAN AND PROFILE  
STA 53+00 TO STA 56+00

SCALE: 1"=20'	P.N. 3673 C.O. 4963	SHEET: 15 OF 19
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BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	REV'D
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #6030)	1	
3	COPR. 1" (FORD #6030-1P)	1	
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP (FORD #C14-44-2-N)	1	
5	INSERT STIFFENER, 3/4" (FORD #777)	2	
6	PIPE, 1" REHAU UNIPLEX TYPE A, 200 P.S.I.	1	
7	BRASS PAC JOINT, 1" M.I.P.T. x 1" COP (FORD #234-44-2-N)	1	
8	COPPERSTETER, 3/4" (FORD #6032-2P-11-44- N, 1P)	1	
9	METER, BAGGER MODEL M25 (5/8") OR M35 (3/4") BRONZE METER	1	
10	NIPPLE, BRASS, 1" x 1" INSERT	1	
11	ADAPTER, BRASS, 1" F.I.P.T. x 1" INSERT	1	
12	METER BOX & COVER, (CARSON INDUSTRIES LLC, L SERIES 1419-12)	1	
13	W/COVER 1419-3P	1	
14	EXTENSION METER BOX, CARSON INDUSTRIES LLC, L SERIES 1419-6"	1	
15	CLAMP, 1", ALL STAINLESS STEEL ONLY	1	
16	ADAPTER, 3/4" M.I.P.T. x 3/4" INSERT W/CAP (GALV.)	1	
17	HOSE CLAMP, 1-1/4" STAINLESS STEEL (STUB ONLY)	1	
18	POST, 4"-2" MIN. METAL, FENCE POST W/SPACE BROWNE (STUB ONLY)	1	

- NOTES**
- CORP TO BE IN FULL OPEN POSITION BEFORE BACKFILL.
  - INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.
  - SERVICE LINE IS TYPICALLY 1'0" TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.
  - WATER SERVICE TUBING INSTALLATION IN PLATED AREAS WILL BE COMPLETED BY THE CONTRACTOR/DEVELOPER FROM THE PIPELINE TO BEYOND THE PROPERTY LINE. IF METER BOX AND COPPERSTETER ARE NOT INSTALLED AT TIME OF SERVICE PIPE INSTALLATION, THE TUBING IS TO BE STUBBED UP AND COMPLETED AS PER DETAIL A. THE DISTRICT WILL COMPLETE THE ACTUAL METER AND BOX INSTALLATION WHEN NEEDED.
  - IF METER IS NOT INSTALLED IN COPPERSTETER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATER-TIGHT WRAP OF ELECTRICAL TAPE OVER END OF NIPPLE. SET COPPERSTETER FLUSH, PLUMB AND COVERED IN BOX. FLUSH OUT SERVICE TUBING AND COPPERSTETER BEFORE INSTALLING METER. DO NOT ALLOW MUD OR FOREIGN MATERIAL TO ENTER ANY TUBING OR FITTINGS.
  - FILL BOX WITH FINE BIRT TO TOP OF METER.
  - IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. MSB01324-426P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.
  - IF THERE IS PETROLEUM-BASED CONTAMINATED SOIL PRESENT, THE PIPELINE SHALL BE OF TYPE K COPPER WITH BRASS AND COPPER FITTINGS. SEE STANDARD P.I.D.D. COPPER SERVICE DETAIL.
  - IF SERVICE LINE HAS LESS THAN 2" OF COVER, CONTACT DISTRICT DIMENSIONAL DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.
  - A SHUTOFF VALVE SHALL BE INSTALLED ON CUSTOMER'S PLUMBING AFTER DISTRICT'S METER, PER U.P.C. SUCH VALVE SHALL BE ACCESSIBLE AT ALL TIMES.



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER  
APPROVED ON: OCTOBER 15, 2015

**Skagit PUD** PUBLIC UTILITY DISTRICT

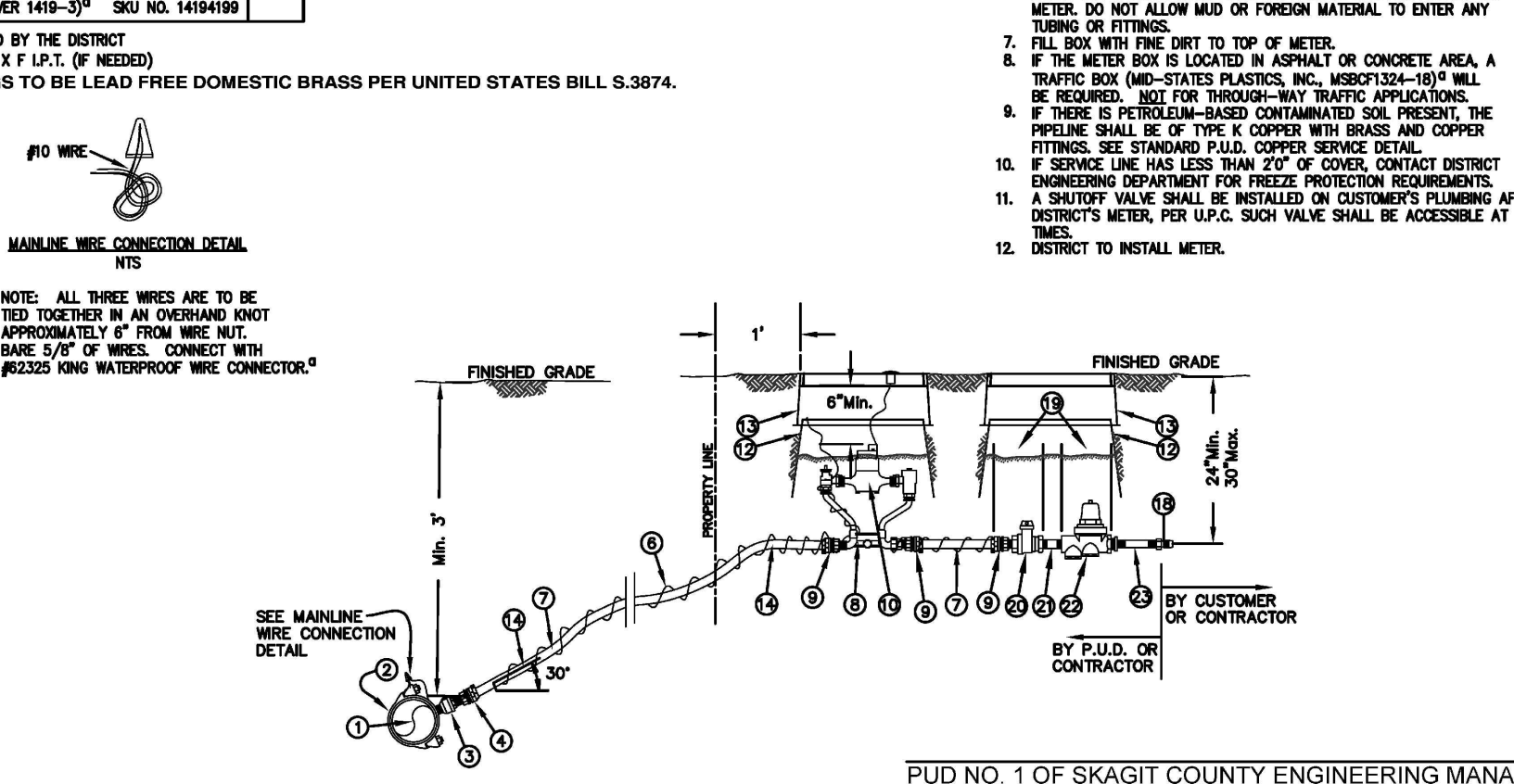
STANDARD INSTALLATION OF SINGLE 5/8" OR 3/4" METERED SERVICE WITH 200 P.S.I. REHAU SERVICE LINE

SCALE: 1"=2'  
DATE: 11-14-14  
REVISED: 10/18/16  
DRAWN BY: JLB  
APPROVED BY: GJS

**STANDARD**  
**WS58-1**

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	REV'D
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #6030)	1	
3	COPR. 1" (FORD #6030-1P)	1	
4	BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (C14-44-2-N)	1	
5	VACANT	1	
6	MISC. #10 SOLID COPPER, BLUE COATED, EXTEND MIN 18" INTO BOX, NEAR LD	1	
7	PIPE, 1" REHAU UNIPLEX TYPE A, 200 P.S.I.	1	
8	COPPERSTETER, 3/4" (FORD #6032-2P-11-44- N, 1P)	1	
9	BRASS PAC JOINT, 1" M.I.P.T. x 1" COP, (C14-44-2-N)	1	
10	METER, BAGGER MODEL M25 (5/8") OR M35 (3/4") BRONZE METER (INSTALLED BY DISTRICT)	1	
11	VACANT	1	
12	METER BOX & COVER, (CARSON INDUSTRIES LLC, L SERIES 1419-12) W/COVER 1419-3P SKU NO. 14194199	2	

- NOTES**
- CORP TO BE IN FULL OPEN POSITION BEFORE BACKFILL.
  - INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.
  - SERVICE LINE IS TYPICALLY 1'0" TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.
  - WATER SERVICE TUBING INSTALLATION IN PLATED AREAS WILL BE COMPLETED BY THE CONTRACTOR/DEVELOPER FROM THE PIPELINE TO BEYOND THE PROPERTY LINE. IF METER BOX AND COPPERSTETER ARE NOT INSTALLED AT TIME OF SERVICE PIPE INSTALLATION, THE TUBING IS TO BE STUBBED UP AND COMPLETED AS PER DETAIL A. THE DISTRICT WILL COMPLETE THE ACTUAL METER AND BOX INSTALLATION WHEN NEEDED.
  - IF METER IS NOT INSTALLED IN COPPERSTETER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATER-TIGHT WRAP OF ELECTRICAL TAPE OVER END OF NIPPLE. SET COPPERSTETER FLUSH, PLUMB AND COVERED IN BOX. FLUSH OUT SERVICE TUBING AND COPPERSTETER BEFORE INSTALLING METER. DO NOT ALLOW MUD OR FOREIGN MATERIAL TO ENTER ANY TUBING OR FITTINGS.
  - FILL BOX WITH FINE BIRT TO TOP OF METER.
  - IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. MSB01324-426P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.
  - IF THERE IS PETROLEUM-BASED CONTAMINATED SOIL PRESENT, THE PIPELINE SHALL BE OF TYPE K COPPER WITH BRASS AND COPPER FITTINGS. SEE STANDARD P.I.D.D. COPPER SERVICE DETAIL.
  - IF SERVICE LINE HAS LESS THAN 2" OF COVER, CONTACT DISTRICT DIMENSIONAL DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.
  - A SHUTOFF VALVE SHALL BE INSTALLED ON CUSTOMER'S PLUMBING AFTER DISTRICT'S METER, PER U.P.C. SUCH VALVE SHALL BE ACCESSIBLE AT ALL TIMES.
  - DISTRICT TO INSTALL METER.



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER  
APPROVED ON: \_\_\_\_\_, 2019

**Skagit PUD** PUBLIC UTILITY DISTRICT

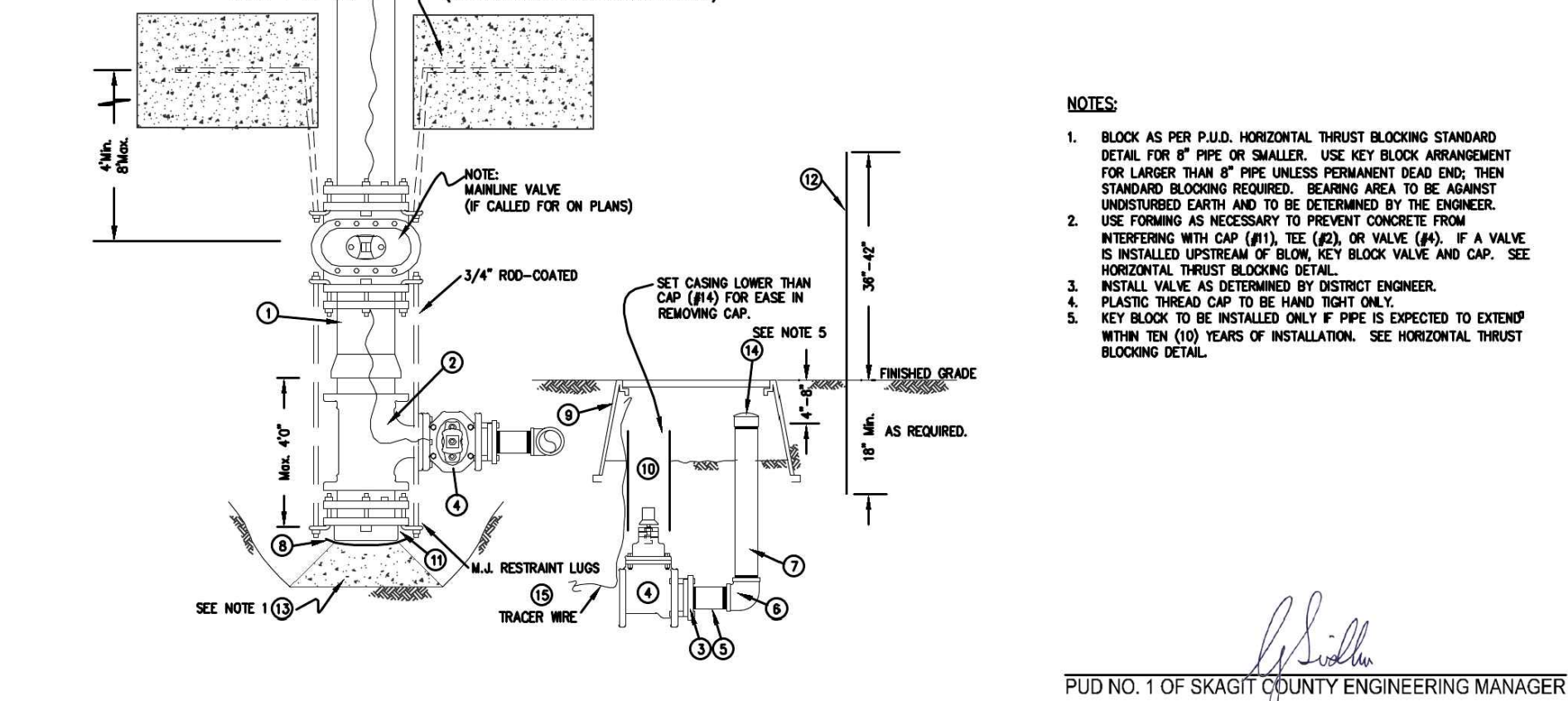
INSTALLATION OF SINGLE 5/8" OR 3/4" METERED SERVICE WITH 200 P.S.I. REHAU SERVICE LINE AND PRESSURE REDUCING VALVE

SCALE: 1"=2'  
DATE: 9-22-19  
REVISED: 9/4/19  
DRAWN BY: JLB  
APPROVED BY: MCH

**STANDARD**  
**WS58-PRV**

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	REV'D
1	WATER MAIN (12")		
2	THE WATERMAIN SIZE x KEY		
3	PLATE, 1" x 12" x 1/2"	1	
4	KEY BLOCK, 4" x 4" x 1/2" (SEE HORIZONTAL THRUST BLOCKING DETAIL)	1	
5	NIPPLE, 3/4" x 1/2" GALVANIZED	1	
6	KEY BLOCK, 4" x 4" x 1/2" GALVANIZED, BEHIND BOTH ENDS	2	
7	KEY BLOCK, 4" x 4" x 1/2" GALVANIZED, BEHIND BOTH ENDS	2	
8	KEY BLOCK, 4" x 4" x 1/2" GALVANIZED, BEHIND BOTH ENDS	2	
9	TRAFFIC BOX (MID-STATES PLASTICS, INC. MSB01324-18) NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS	1	
10	COPING, 1" x 1/2" x 1/2" (SEE DETAIL)	1	
11	CAP PIPE SIZE: 1/2" (SEE DETAIL)	1	
12	CAP x PLASTIC THROUSE	1	
13	CONCRETE BLOCKING FOR KEY BLOCK (IF REQUIRED)	1	
14	KEY BLOCK, 4" x 4" x 1/2" GALVANIZED	1	
15	THREE #10 SOLID COPPER, BLUE COATED, EXTEND MIN. 18" INTO BOX, NEAR LD	1	

\*OR EQUIVALENT APPROVED BY THE DISTRICT



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER  
APPROVED ON: MAY 16, 2014

**Skagit PUD** PUBLIC UTILITY DISTRICT

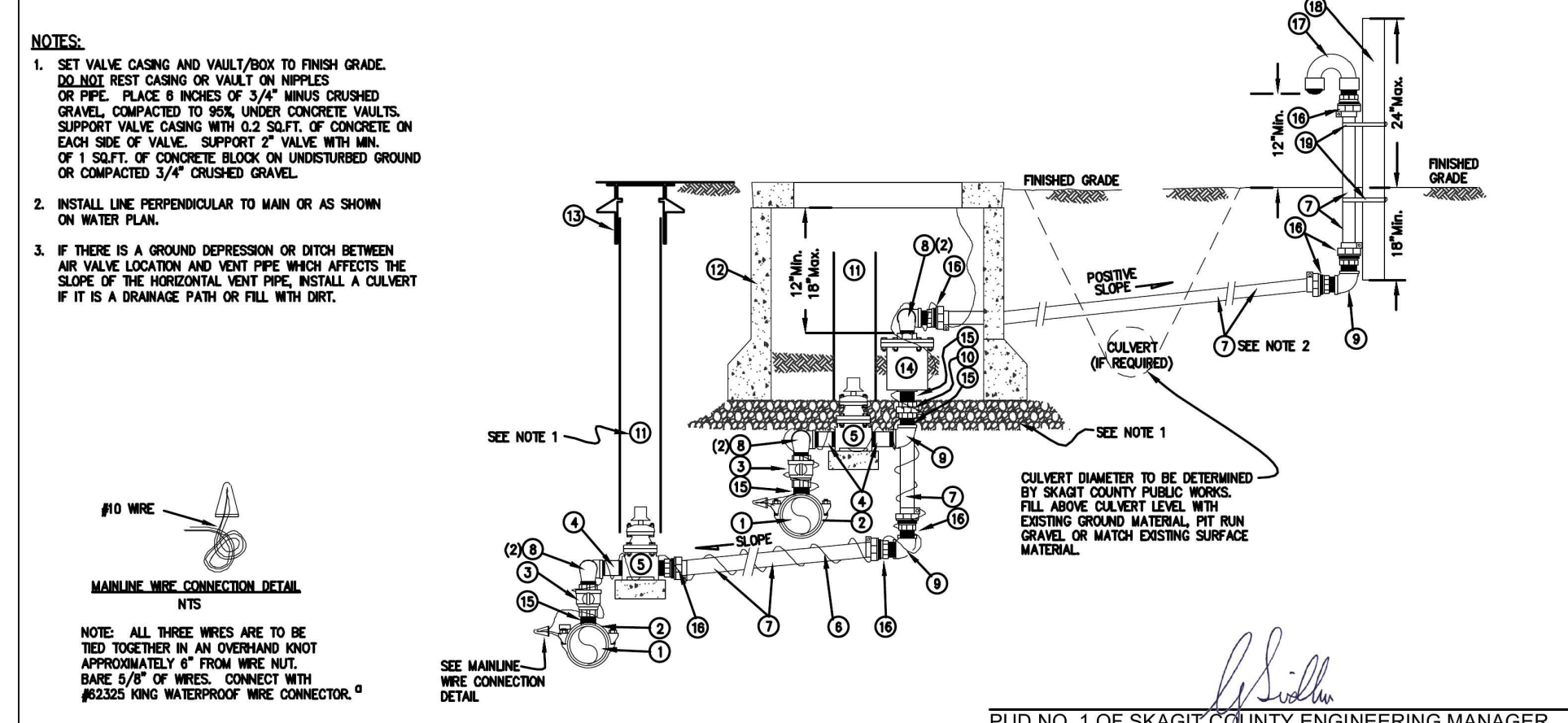
STANDARD INSTALLATION OF 5.6" 3-INCH FLUSHING ASSEMBLY

SCALE: 1"=2'  
DATE: 3-25-09  
REVISED: 5/18/14  
DRAWN BY: KDM  
APPROVED BY: GJS

**STANDARD**  
**WB3-1**

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	REV'D
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #6030)	1	
3	NIPPLE, BRASS, 1" x 1" INSERT	1	
4	ADAPTER, BRASS, 1" F.I.P.T. x 1" INSERT	1	
5	VALVE, 2" P.S.I. (FORD #715-777W)	1	
6	VALVE, 2" P.S.I. (FORD #715-777W)	1	
7	VALVE, 2" P.S.I. (FORD #715-777W)	1	
8	PIPE, 2" P.S.I. (FORD #715-777W)	1	
9	PIPE, 2" P.S.I. (FORD #715-777W)	1	
10	PIPE, 2" P.S.I. (FORD #715-777W)	1	
11	PIPE, 2" P.S.I. (FORD #715-777W)	1	
12	PIPE, 2" P.S.I. (FORD #715-777W)	1	
13	PIPE, 2" P.S.I. (FORD #715-777W)	1	
14	PIPE, 2" P.S.I. (FORD #715-777W)	1	
15	PIPE, 2" P.S.I. (FORD #715-777W)	1	
16	PIPE, 2" P.S.I. (FORD #715-777W)	1	
17	PIPE, 2" P.S.I. (FORD #715-777W)	1	
18	PIPE, 2" P.S.I. (FORD #715-777W)	1	
19	PIPE, 2" P.S.I. (FORD #715-777W)	1	
20	PIPE, 2" P.S.I. (FORD #715-777W)	1	
21	PIPE, 2" P.S.I. (FORD #715-777W)	1	
22	PIPE, 2" P.S.I. (FORD #715-777W)	1	
23	PIPE, 2" P.S.I. (FORD #715-777W)	1	
24	PIPE, 2" P.S.I. (FORD #715-777W)	1	
25	PIPE, 2" P.S.I. (FORD #715-777W)	1	
26	PIPE, 2" P.S.I. (FORD #715-777W)	1	
27	PIPE, 2" P.S.I. (FORD #715-777W)	1	
28	PIPE, 2" P.S.I. (FORD #715-777W)	1	
29	PIPE, 2" P.S.I. (FORD #715-777W)	1	
30	PIPE, 2" P.S.I. (FORD #715-777W)	1	
31	PIPE, 2" P.S.I. (FORD #715-777W)	1	
32	PIPE, 2" P.S.I. (FORD #715-777W)	1	
33	PIPE, 2" P.S.I. (FORD #715-777W)	1	
34	PIPE, 2" P.S.I. (FORD #715-777W)	1	
35	PIPE, 2" P.S.I. (FORD #715-777W)	1	
36	PIPE, 2" P.S.I. (FORD #715-777W)	1	
37	PIPE, 2" P.S.I. (FORD #715-777W)	1	
38	PIPE, 2" P.S.I. (FORD #715-777W)	1	
39	PIPE, 2" P.S.I. (FORD #715-777W)	1	
40	PIPE, 2" P.S.I. (FORD #715-777W)	1	
41	PIPE, 2" P.S.I. (FORD #715-777W)	1	
42	PIPE, 2" P.S.I. (FORD #715-777W)	1	
43	PIPE, 2" P.S.I. (FORD #715-777W)	1	
44	PIPE, 2" P.S.I. (FORD #715-777W)	1	
45	PIPE, 2" P.S.I. (FORD #715-777W)	1	
46	PIPE, 2" P.S.I. (FORD #715-777W)	1	
47	PIPE, 2" P.S.I. (FORD #715-777W)	1	
48	PIPE, 2" P.S.I. (FORD #715-777W)	1	
49	PIPE, 2" P.S.I. (FORD #715-777W)	1	
50	PIPE, 2" P.S.I. (FORD #715-777W)	1	
51	PIPE, 2" P.S.I. (FORD #715-777W)	1	
52	PIPE, 2" P.S.I. (FORD #715-777W)	1	
53	PIPE, 2" P.S.I. (FORD #715-777W)	1	
54	PIPE, 2" P.S.I. (FORD #715-777W)	1	
55	PIPE, 2" P.S.I. (FORD #715-777W)	1	
56	PIPE, 2" P.S.I. (FORD #715-777W)	1	
57	PIPE, 2" P.S.I. (FORD #715-777W)	1	
58	PIPE, 2" P.S.I. (FORD #715-777W)	1	
59	PIPE, 2" P.S.I. (FORD #715-777W)	1	
60	PIPE, 2" P.S.I. (FORD #715-777W)	1	
61	PIPE, 2" P.S.I. (FORD #715-777W)	1	
62	PIPE, 2" P.S.I. (FORD #715-777W)	1	
63	PIPE, 2" P.S.I. (FORD #715-777W)	1	
64	PIPE, 2" P.S.I. (FORD #715-777W)	1	
65	PIPE, 2" P.S.I. (FORD #715-777W)	1	
66	PIPE, 2" P.S.I. (FORD #715-777W)	1	
67	PIPE, 2" P.S.I. (FORD #715-777W)	1	
68	PIPE, 2" P.S.I. (FORD #715-777W)	1	
69	PIPE, 2" P.S.I. (FORD #715-777W)	1	
70	PIPE, 2" P.S.I. (FORD #715-777W)	1	
71	PIPE, 2" P.S.I. (FORD #715-777W)	1	
72	PIPE, 2" P.S.I. (FORD #715-777W)	1	
73	PIPE, 2" P.S.I. (FORD #715-777W)	1	
74	PIPE, 2" P.S.I. (FORD #715-777W)	1	
75	PIPE, 2" P.S.I. (FORD #715-777W)	1	
76	PIPE, 2" P.S.I. (FORD #715-777W)	1	
77	PIPE, 2" P.S.I. (FORD #715-777W)	1	
78	PIPE, 2" P.S.I. (FORD #715-777W)	1	
79	PIPE, 2" P.S.I. (FORD #715-777W)	1	
80	PIPE, 2" P.S.I. (FORD #715-777W)	1	
81	PIPE, 2" P.S.I. (FORD #715-777W)	1	
82	PIPE, 2" P.S.I. (FORD #715-777W)	1	
83	PIPE, 2" P.S.I. (FORD #715-777W)	1	
84	PIPE, 2" P.S.I. (FORD #715-777W)	1	
85	PIPE, 2" P.S.I. (FORD #715-777W)	1	
86	PIPE, 2" P.S.I. (FORD #715-777W)	1	
87	PIPE, 2" P.S.I. (FORD #715-777W)	1	
88	PIPE, 2" P.S.I. (FORD #715-777W)	1	
89	PIPE, 2" P.S.I. (FORD #715-777W)	1	
90	PIPE, 2" P.S.I. (FORD #715-777W)	1	
91	PIPE, 2" P.S.I. (FORD #715-777W)	1	
92	PIPE, 2" P.S.I. (FORD #715-777W)	1	
93	PIPE, 2" P.S.I. (FORD #715-777W)	1	
94	PIPE, 2" P.S.I. (FORD #715-777W)	1	
95	PIPE, 2" P.S.I. (FORD #715-777W)	1	
96	PIPE, 2" P.S.I. (FORD #715-777W)	1	
97	PIPE, 2" P.S.I. (FORD #715-777W)	1	
98	PIPE, 2" P.S.I. (FORD #715-777W)	1	
99	PIPE, 2" P.S.I. (FORD #715-777W)	1	
100	PIPE, 2" P.S.I. (FORD #715-777W)	1	

\*OR EQUIVALENT APPROVED BY THE DISTRICT  
ALL BRASS FITTINGS TO BE LEAD FREE DOMESTIC BRASS PER UNITED STATES BILL S.3874.



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER  
APPROVED ON: MAY 21, 2014

**Skagit PUD** PUBLIC UTILITY DISTRICT

STANDARD INSTALLATION OF 2" COMBINATION AIR VALVE ASSEMBLY

SCALE: 1"=2'  
DATE: 3-25-08  
REVISED: 5/21/14  
DRAWN BY: CAS  
APPROVED BY: GJS

**STANDARD**  
**WV2-1**

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM:	DSGN BY: CJS
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 23, 26
	TWP: 34 N
	RGE: 4 E

**Skagit PUD** PUBLIC UTILITY DISTRICT

PUBLIC UTILITY DISTRICT NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

MOUNTAIN VIEW ROAD PIPELINE PROJECT  
STANDARD DETAILS

SCALE: NONE

P.N. 3673  
C.O. 4963

SHEET: 16 OF 19

BILL OF MATERIALS		
NO.	DESCRIPTION	REQ'D
1	1" W/ FLANGED BRASS	1
2	2" VALVE W/ FLANG CONNECTIONS (SEE NOTE 8)	1
3	CASING, 6" PVC SENEER PIPE	1
4	1" DIA. 3" CLASS 50 DUCTILE IRON, RISE OUT	1
5	FIRE HYDRANT W/ PUMPER PORT, GLOW MEDIUM, OR AS APPROVED BY JURISDICTIONAL FIRE DEPARTMENT DISTRICT (SEE P.U.D. DETAIL)	1
6	VALVE BOX, CAST IRON OLYMPIC FOUNDRY V8007/SKAGIT (SEE P.U.D. DETAIL)	1
7	BLOCK, PRECAST CONCRETE, SEE NOTE 8	1
8	FABRIC, GEOTEXTILE, NON-WOVEN BARRIER FABRIC	1
9	1/4" OF GRAN ROCK, 1-1/2" (7-3/4" NO FIBES)	2
10	MED-A-LUG, 6" ASP RING 8"	2
11	HYDRANT ADAPTER STUB, STYLE S-37 W/3" CAP & CABLE, 5" W/4" PCT	1

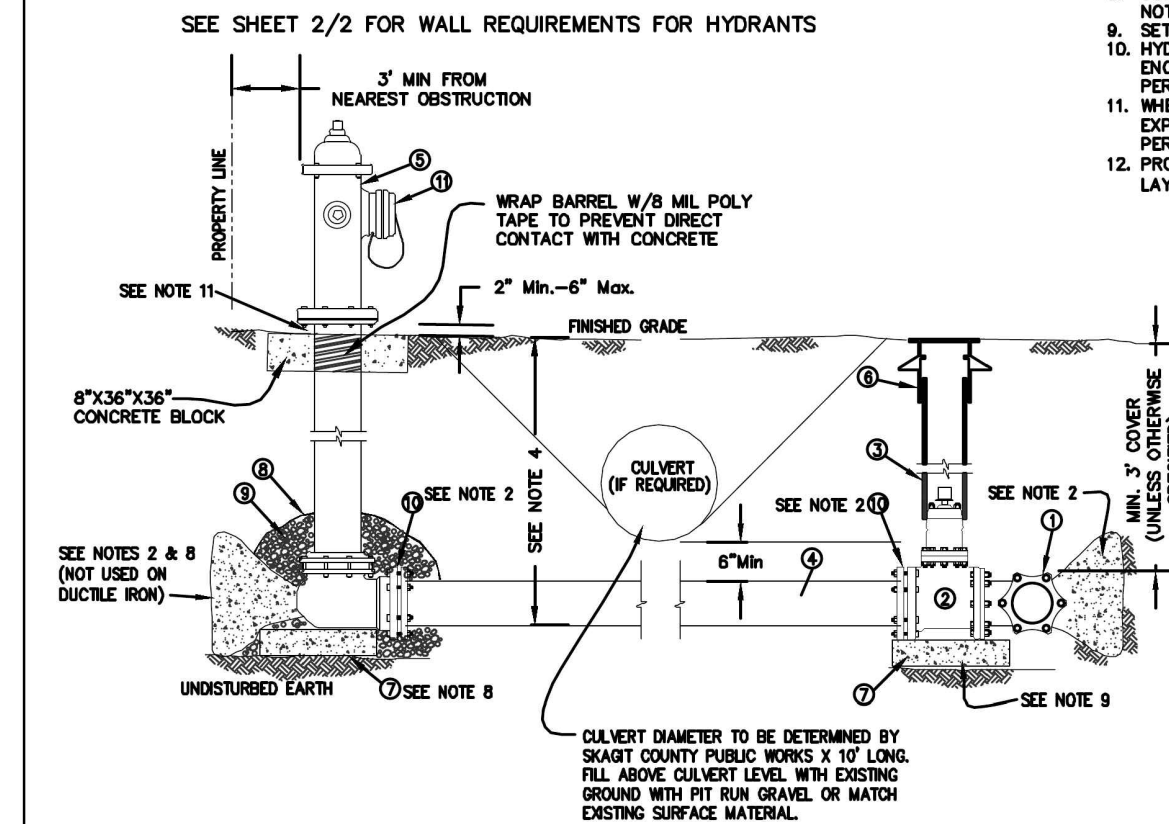
**NOTES:**

- ALL MATERIALS AND BRANDS MUST BE APPROVED BY P.U.D.
- BLOCK TEE AND HYDRANT WITH POURED CONCRETE ON ALL WATER MAINS OTHER THAN DUCTILE IRON AND ON ALL TAPPING SLEEVES AS REQUIRED PER DISTRICT BLOCKING DETAIL. IN ADDITION, 6" MEGALUGS (OR APPROVED EQUIVALENT) ARE TO BE INSTALLED AT VALVE AND HYDRANT W/4" OUTLETS. RESTRAIN ANY JOINTS IN THE PIPELINE WITH FIBER LOCK CASINGS (OR APPROVED EQUIVALENT) INSTALLED IN THE BELLS OF TYTON JOINT PIPE OR "MEGALUGS" ON M.J. BELLS.
- NO THURSTER BLOCK REQUIRED BEHIND TEE ON 4" DUCTILE IRON OR LARGER MAINS.
- PROTECTIVE BARRIER POSTS MAY BE NECESSARY AT SOME HYDRANT INSTALLATIONS. CONTACT FIRE DEPARTMENT/DISTRICT FOR SPECIFIC REQUIREMENTS.
- HYDRANT LENGTH AND TRENCH DEPTH SHALL BE AS TO PROVIDE FOR HYDRANT SETTING AT 2" MIN. AND 6" MAX. ELEVATION ABOVE FINISH GRADE.
- SET HYDRANT VERTICAL USE LEVEL. COMPACT ALL BACKFILL.
- VALVE SHALL BE AWWA STANDARD DATE, "O" RING PACKING, NON-RISING STEM, 2" OPERATING NUT, RESILIENT MEDIUM.
- HYDRANT LOCATIONS ARE DETERMINED BY THE FIRE MARSHAL WITH AUTHORITY FOR AREA CONCERNED.
- CONCRETE BLOCK WILL BE BELOW THE DRAIN HOLES AND DRAIN ROCK. TAKE CARE TO NOT PLUG DRAIN HOLES OR CONTAMINATE DRAIN ROCK.
- SET MINIMUM 1" SOFT CONCRETE SUPPORT TIGHT UP UNDER VALVE AND HYDRANT.
- HYDRANT BARREL, LEAD, TEE, AND VALVE MUST BE WRAPPED WITH POLYETHYLENE PIPE ENCASEMENT TAPE WHICH IS A MINIMUM OF 8-MIL THICK. IT MUST BE INSTALLED AS PER M.S.D.O.T. STANDARDS AND IN ACCORDANCE WITH A.W.W.A. C105.
- WHERE HYDRANTS ARE INSTALLED IN THE SIDEWALK, THERE SHALL BE A MINIMUM 3/8" EXPANSION JOINT AROUND THE BARREL OF THE HYDRANT AND AN EXPANSION JOINT PERPENDICULAR ACROSS THE SIDEWALK, INTERSECTING THE HYDRANT BARREL.
- PROVIDE A MINIMUM OF 3'-0" LEVEL WORKING AREA AROUND HYDRANT USING 6" THICK LAYER OF 5/8" MINUS CRUSHED ROCK COVERED TO 95%.

ALL FIRE HYDRANTS SHALL COMPLY WITH THE STANDARDS ISSUED BY THE SKAGIT COUNTY FIRE MARSHAL. HYDRANTS SHALL BE THE DRY BARREL TYPE WITH TWO HOSE OUTLETS WITH AN INSIDE DIAMETER OF 2-1/2 INCHES AND ONE LARGE PUMPER OUTLET WITH AN INSIDE DIAMETER OF 4 INCHES. SMALL PORTS SHALL HAVE NATIONAL STANDARD THREADS MEASURING 3.0225 INCHES OUTSIDE DIAMETER AT 7-1/2 THREADS PER INCH. PUMPER PORTS SHALL BE NO. 3 PUMPER COAST THREADS MEASURING 4.022 INCHES OUTSIDE DIAMETER AT 6 THREADS PER INCH. THE OPERATING NUT SHALL BE 1-1/4 INCH DIA. WITH 12 THREADS PER INCH.

A STUB QUICK COUPLER CONNECTED TO THE PUMPER PORT MAY BE REQUIRED. CONTACT FIRE DISTRICT/DEPARTMENT.

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER  
APPROVED ON: May 6, 2014

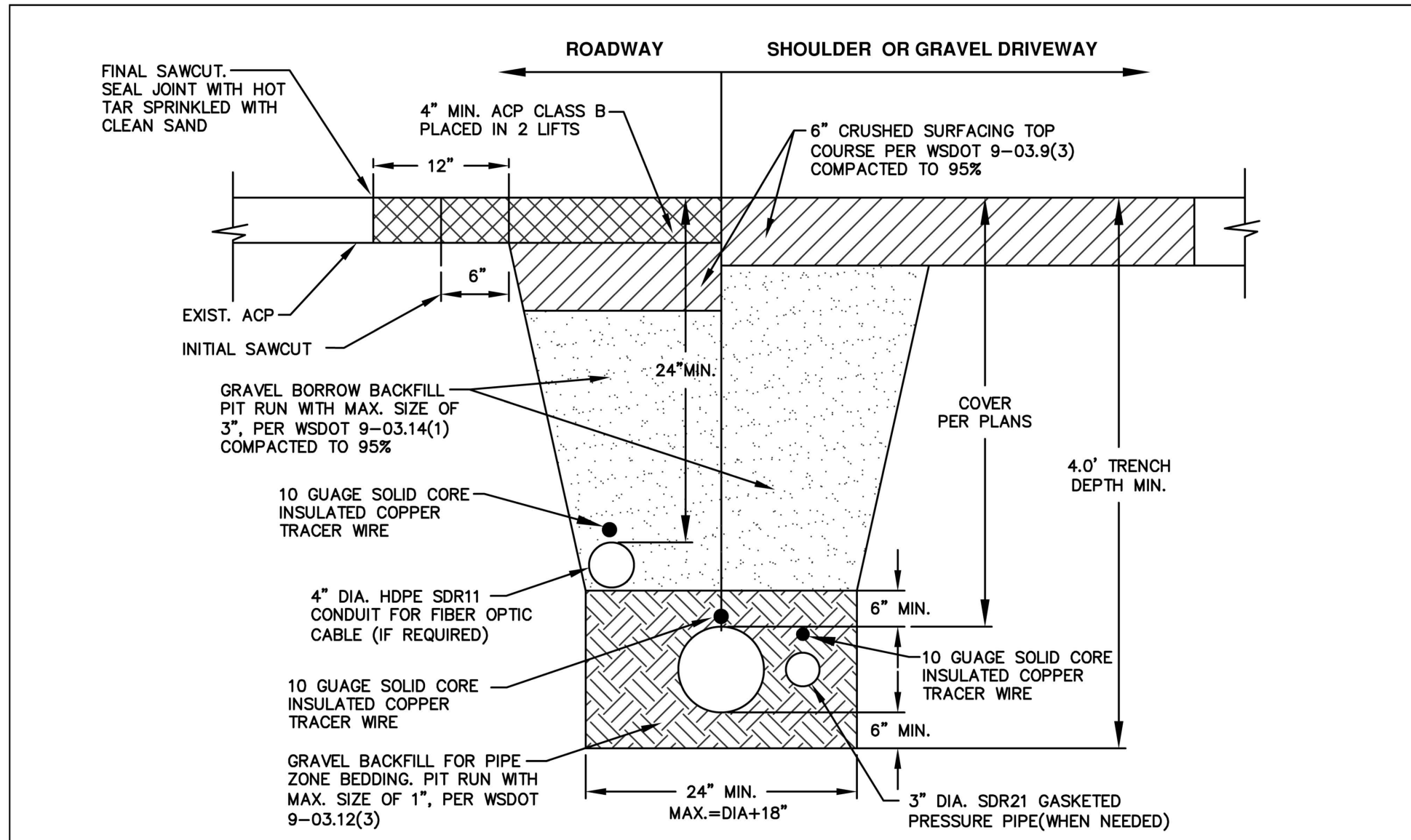


**Skagit PUD** PUBLIC UTILITY DISTRICT

**STANDARD INSTALLATION OF FIRE HYDRANT "CENTER STEM TYPE"**

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/6/14  
DRAWN BY: CAS  
SHEET 12 APPROVED BY: GJS

**STANDARD WH-1a**



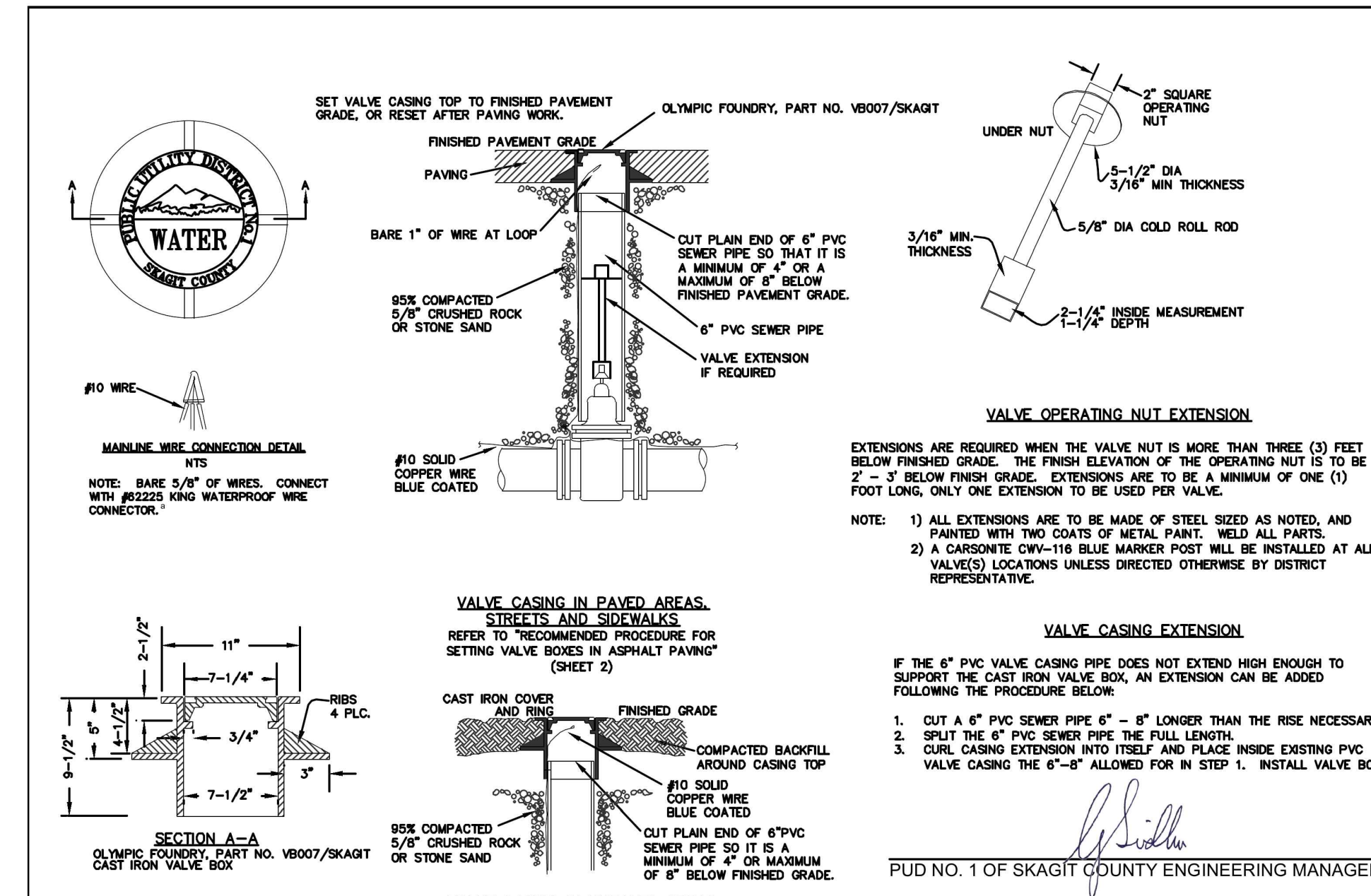
- NOTES:**
- DEPTH OF BEDDING BELOW PIPE DEPENDANT ON SOIL CONDITIONS. CONSULT WITH ENGINEER.
  - ALTERNATE TRENCH BACKFILL MATERIAL TO BE USED ONLY WITH ENGINEER'S APPROVAL.
  - SURFACE RESTORATION TO MATCH EXISTING PAVEMENT / SHOULDER SECTION.

**Skagit PUD** PUBLIC UTILITY DISTRICT

**TRENCH RESTORATION SECTION**

SCALE: 1" = 1'  
DATE: 12-10-19  
REVISED: 12/10/19  
DRAWN BY: ALB  
APPROVED BY: MCH

**WT1-2**

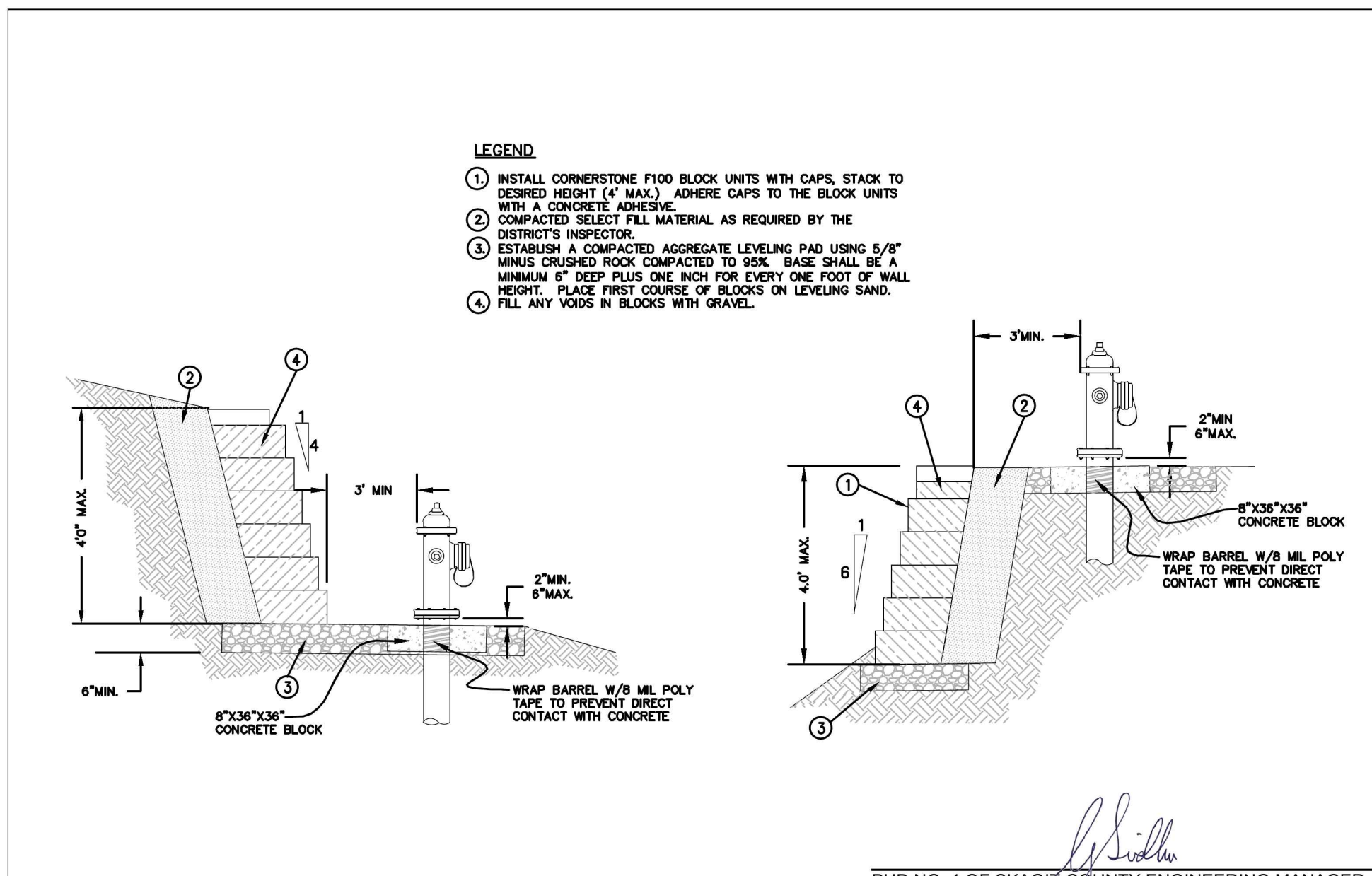


**Skagit PUD** PUBLIC UTILITY DISTRICT

**STANDARD INSTALLATION OF CAST IRON VALVE BOX & VALVE OPERATING NUT EXTENSION**

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/6/14  
DRAWN BY: CAS  
APPROVED BY: GJS

**STANDARD WV-1a**

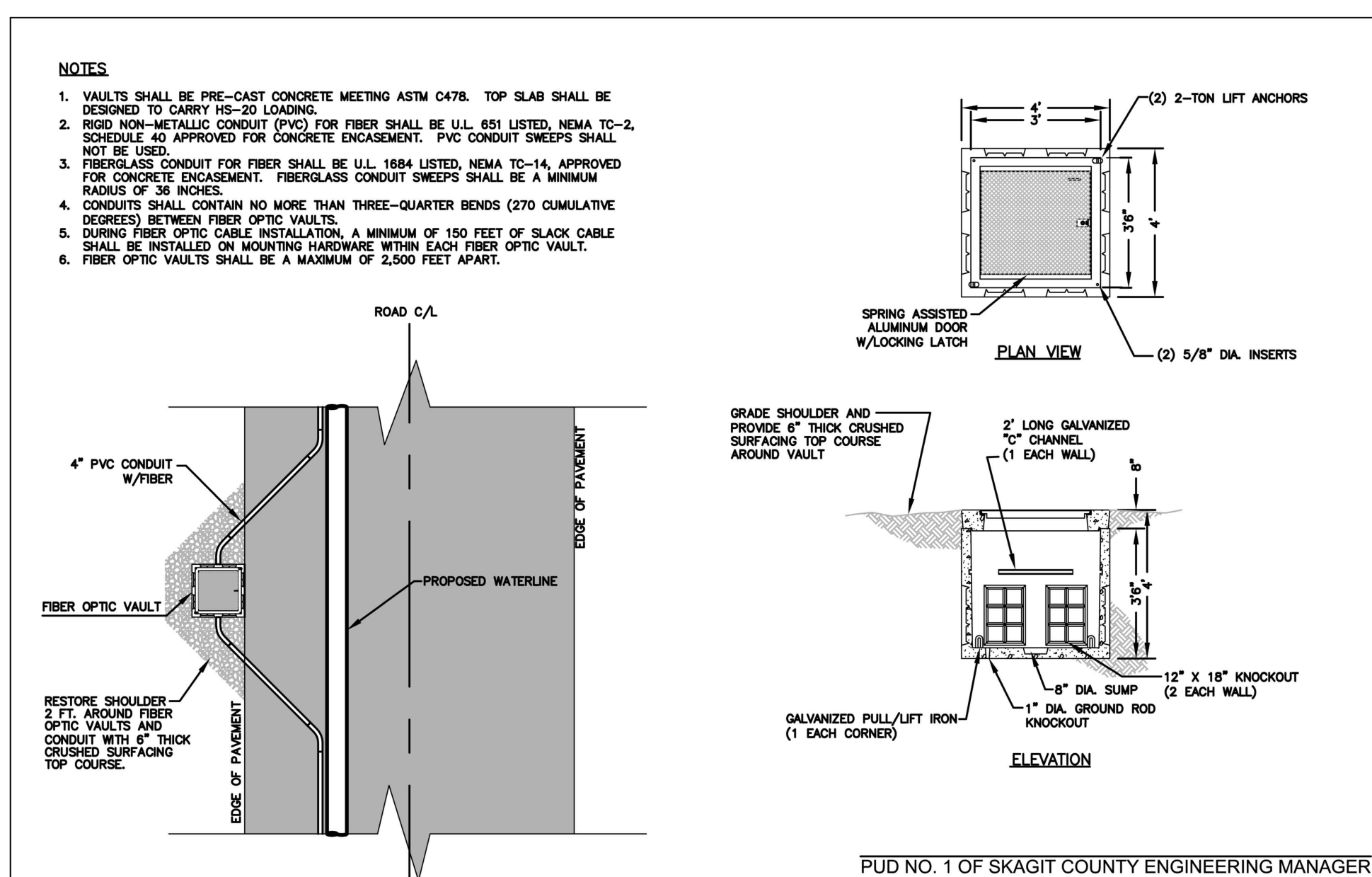


**Skagit PUD** PUBLIC UTILITY DISTRICT

**STANDARD INSTALLATION OF FIRE HYDRANT "CENTER STEM TYPE"**

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/27/14  
DRAWN BY: KDM  
APPROVED BY: GJS

**STANDARD WH-1b**

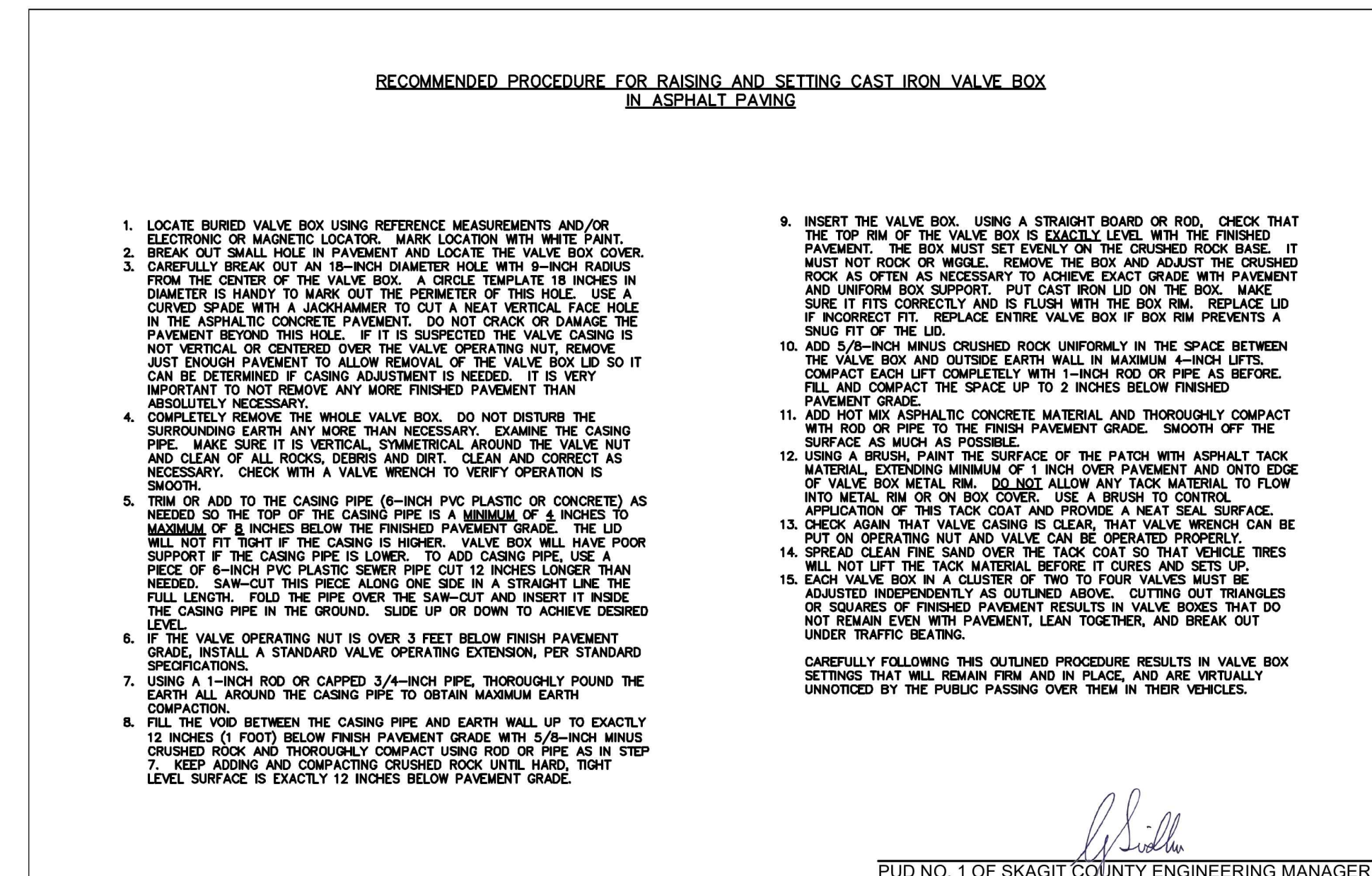


**Skagit PUD** PUBLIC UTILITY DISTRICT

**STANDARD FIBER OPTIC VAULT AND STANDARD FIBER OPTIC VAULT LAYOUT**

SCALE: NO SCALE  
DATE: 10/22/12  
REVISED: 3/13/19  
DRAWN BY: KDM  
APPROVED BY: MCH

**STANDARD WFO-1**



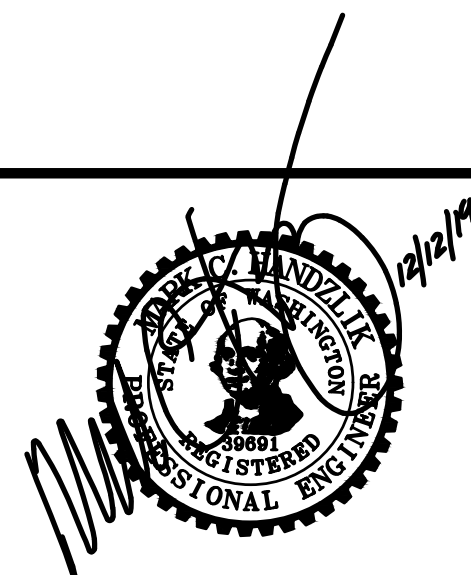
**Skagit PUD** PUBLIC UTILITY DISTRICT

**STANDARD INSTALLATION OF CAST IRON VALVE BOX & VALVE OPERATING NUT EXTENSION**

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/6/14  
DRAWN BY: CAS  
APPROVED BY: GJS

**STANDARD WV-1b**

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM:	DSGN BY: CJS
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPV BY: MCH
DATE PRINTED:	SEC: 23, 26
	TWP: 34 N
	RGE: 4 E



PUBLIC UTILITY DISTRICT  
NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
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www.SkagitPud.org

MOUNTAIN VIEW ROAD PIPELINE PROJECT  
STANDARD DETAILS

SCALE: NONE	P.N. 3673	SHEET: 17 OF 19
	C.O. 4963	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
2.	60% DESIGN	MCH	7/12/19
3.	90% DESIGN	MCH	9/20/19
4.	ISSUED FOR BIDDING	MCH	12/12/19



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

DSGN BY: CJS  
DWN BY: JLB  
APPVD BY: MCH

DATE PRINTED: SEC: 23.26  
TWP: 34 N  
RGE: 4 E

**Skagit PUD**  
PUBLIC UTILITY DISTRICT

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MOUNTAIN VIEW ROAD PIPELINE PROJECT  
SERVICE LINE RELOCATIONS

SCALE: NONE

P.N. 3673  
C.O. 4963

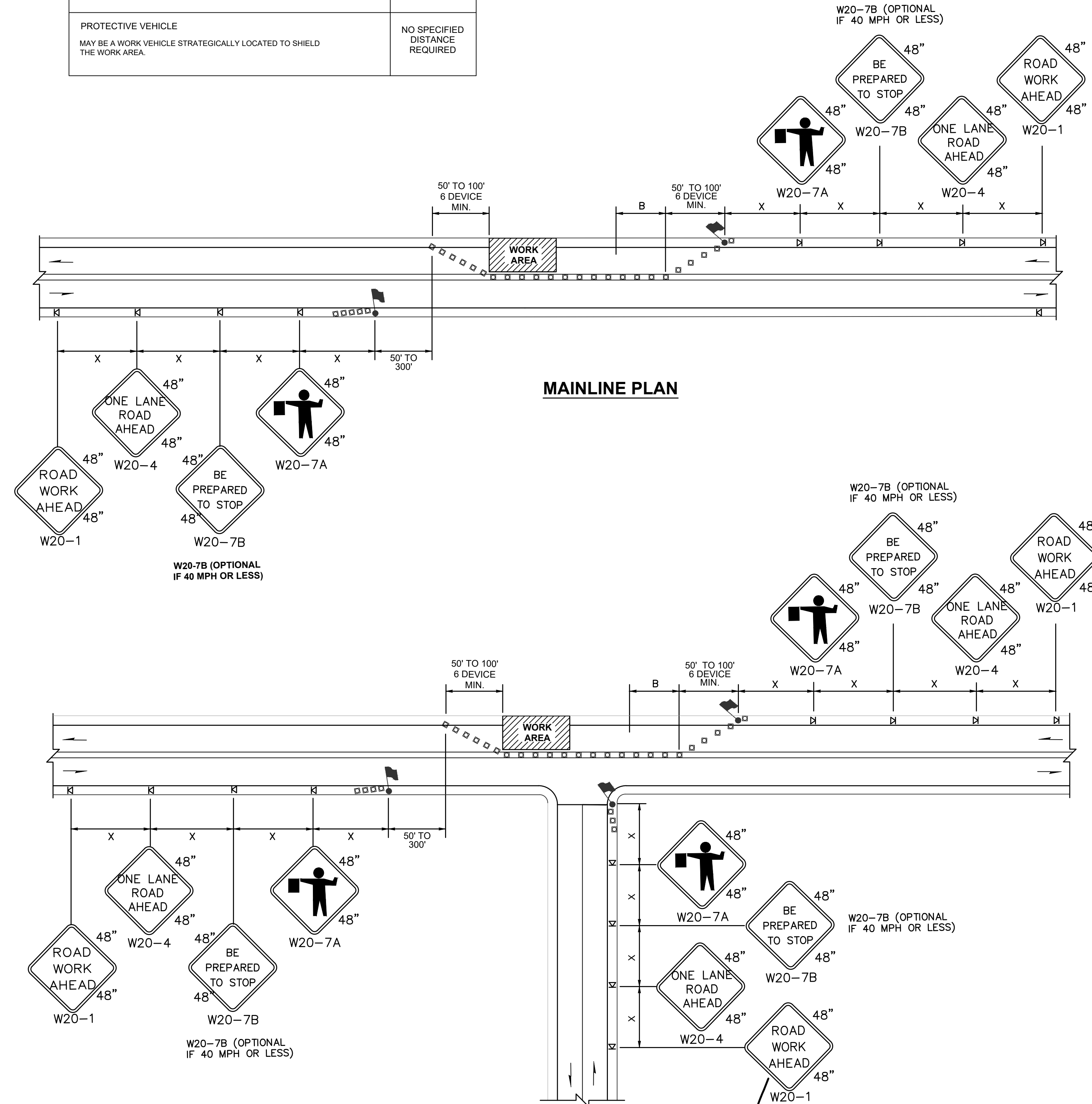
SHEET:  
18 OF 19

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	-
BUFFER VEHICLE ROLL AHEAD DISTANCE = R										
TRANSPORTABLE ATTENUATOR								30 FEET MIN. TO 100 FEET MAX.		
MINIMUM HOST VEHICLE WEIGHT 15,000 LBS. THE MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.										
PROTECTIVE VEHICLE								NO SPECIFIED DISTANCE REQUIRED		
MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.										

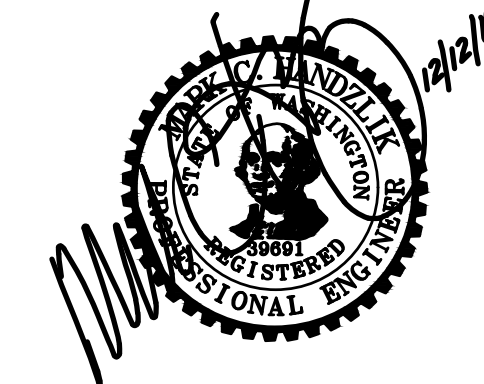
SIGN SPACING = X (1)		
RURAL HIGHWAYS	60 / 65 MPH	800' ?
RURAL ROADS	45 / 55 MPH	500' ?
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ?
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ? (2)
URBAN STREETS	25 MPH OR LESS	100' ? (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/65	10 to 20	80
35/45	10 to 20	60
25/30	10 to 20	40



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/5/19
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3.	90% DESIGN	MCH	9/20/19
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DATUM:	DSGN BY: CJS
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MOUNTAIN VIEW ROAD PIPELINE  
PROJECT  
TRAFFIC CONTROL

SCALE: NONE	P.N. 3673	SHEET:
	C.O. 4963	19 OF 19