

LITTLE MOUNTAIN SKY RIDGE ROAD PIPELINE REPLACEMENT

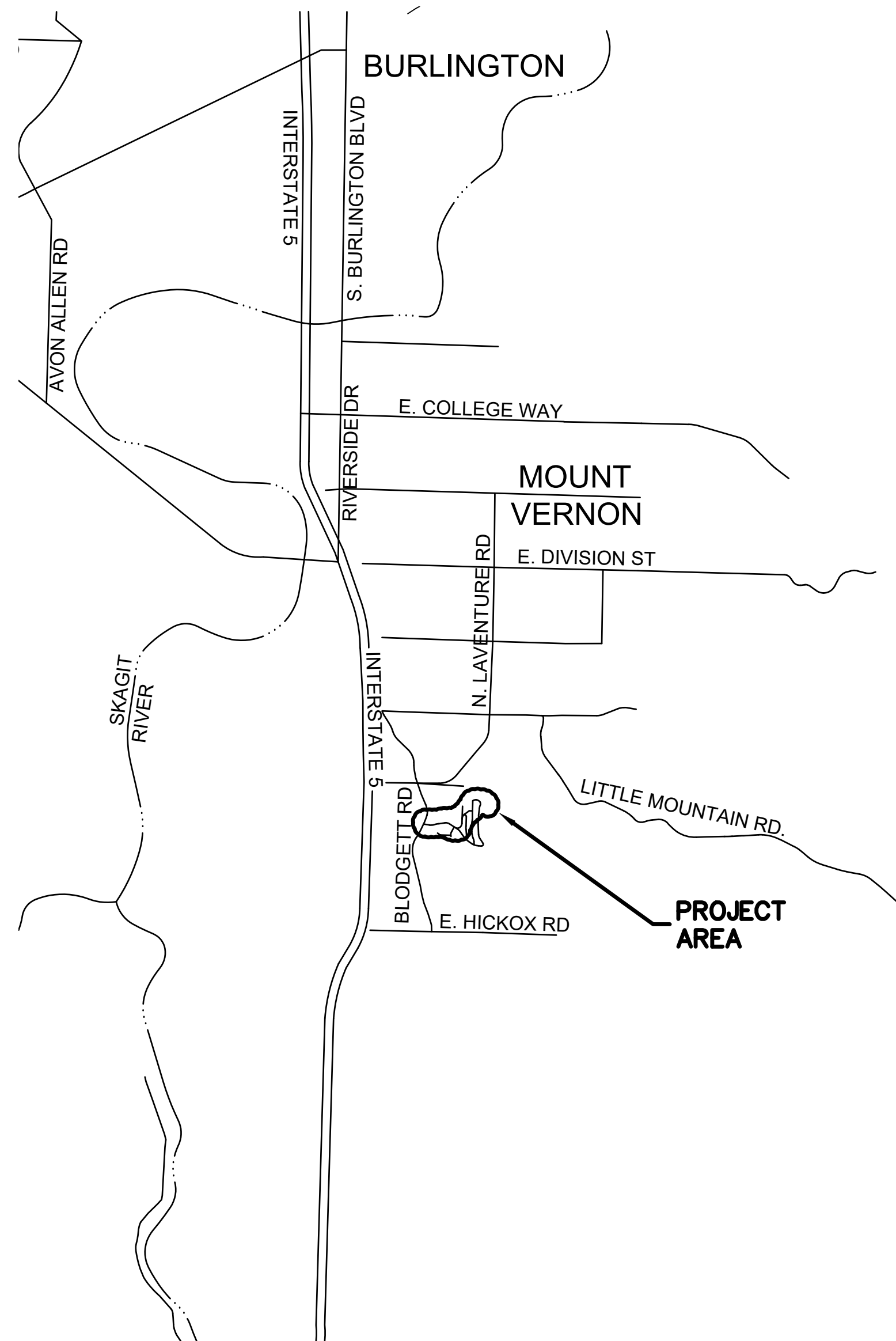
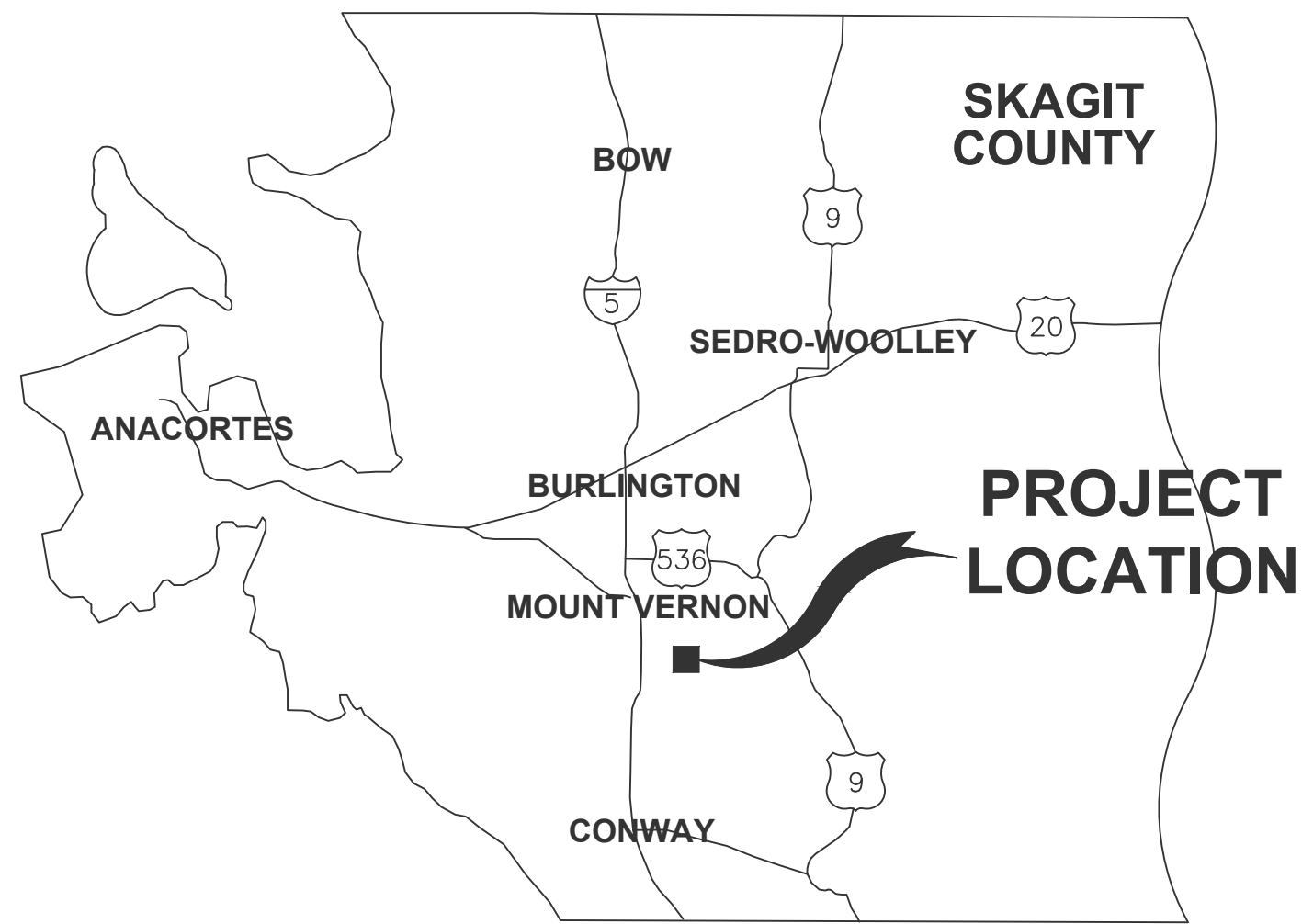
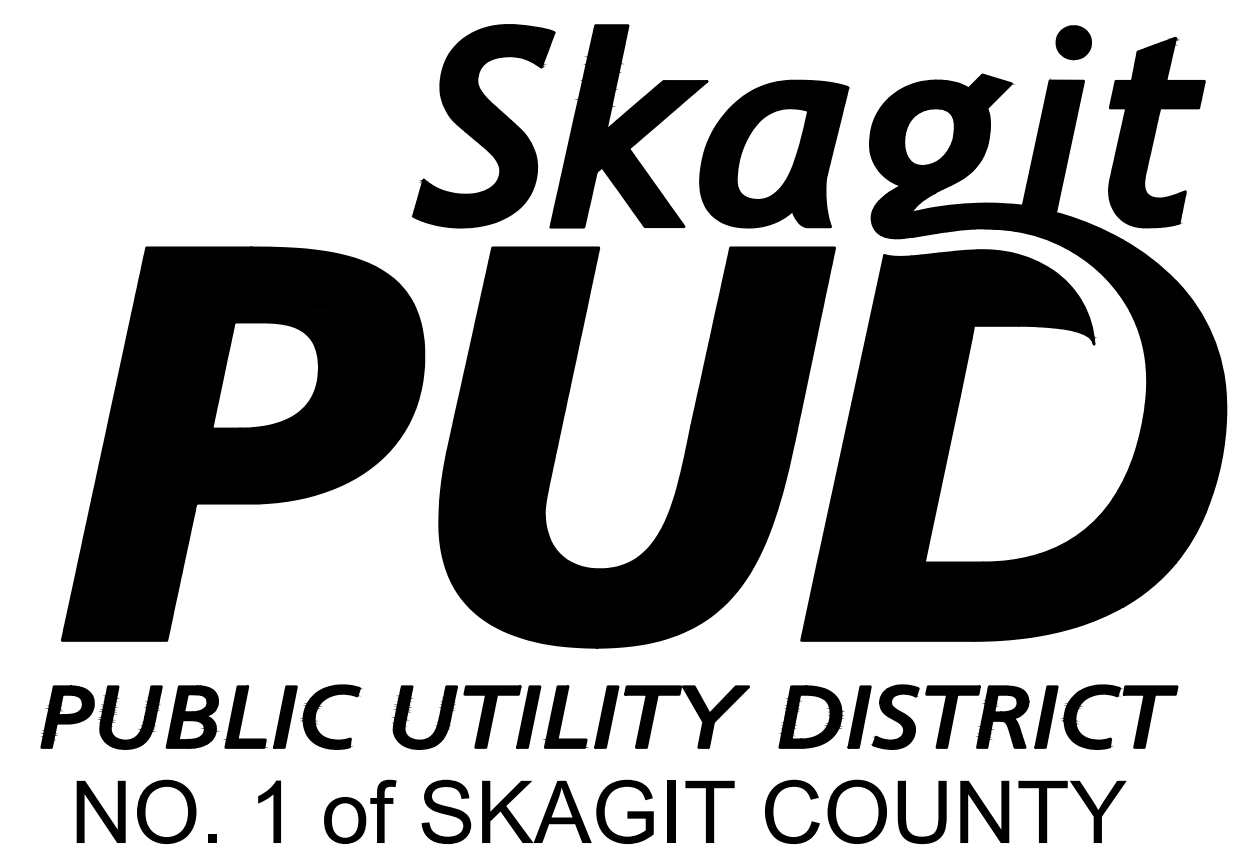
BLODGETT TO OLYMPIC PLACE ISSUED FOR BIDDING

MOUNT VERNON, SKAGIT COUNTY, WA

W.O. 13-03484

CO 4791

DECEMBER 2, 2022



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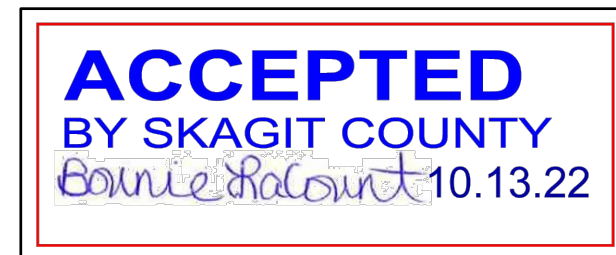
DISTRICT OFFICIALS

JOE LINDQUIST	PRESIDENT
GERMAINE KORNEGAY	VICE PRESIDENT
ANDREW MILLER	SECRETARY
GEORGE SIDHU, P.E.	GENERAL MANAGER
MARK HANDZLIK, P.E.	ENGINEERING MANAGER
MICHAEL FOX	OPERATIONS MANAGER

UTILITY CONTACTS

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

APPROVED FOR CONSTRUCTION _____ DATE _____
SKAGIT COUNTY ENGINEER



ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
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PIPELINE REPLACEMENT
VICINITY MAP AND
DRAWING INDEX

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
X	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 POTHOLE/ GROUND WATER MONITORING WELL	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	PUBUSH	SF-VEGE-EXST-SYM
⊙	STUMP	STUMP	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	TEL R	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
MM	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

WATER SYMBOLS

SYMBOL	DESCRIPTION	BLOCK	LAYER
EXIST. PROP.			
]	CAP/PLUG	X_CAP/P_CAP	WA-FITT-XXXX-SYM
#	COUPLING	X_COUP/P_COUP	WA-FITT-XXXX-SYM
=	SLEEVE	X_SLV/P_SLV	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
FIRE HYDRANTS:			
⊕	2 NOZZLE	X_HYD2/P_HYD2	WA-FHYD-XXXX-SYM
⊕	3 NOZZLE	X_HYD3/P_HYD3	WA-FHYD-XXXX-SYM
JOINTS:			
	FLANGE/BLIND FL	X_FL/P_FL	WA-FITT-XXXX-SYM
⌈	MECHANICAL	X_MJ/P_MJ	WA-FITT-XXXX-SYM
⌋	PUSH-ON/HUB	X_PHUB/P_PHUB	WA-FITT-XXXX-SYM
	THREAD	X_THREAD/P_THREAD	WA-FITT-XXXX-SYM
VALVES:			
⊕	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
ELBOWS:			
⌋	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
①	CONSTRUCTION NOTE	KEYNOTES	G-ANNO-PROP-SYM

TEXT

	DESCRIPTION	HEIGHT	LAYER
1+00	ROAD STATIONING	.10	SV-CNTL-EXST-TXT
P77777	PARCEL NUMBER	.20	SV-PRCL-EXST-TXT
7777	ADDRESS	.15	G-MISC-EXST-TXT

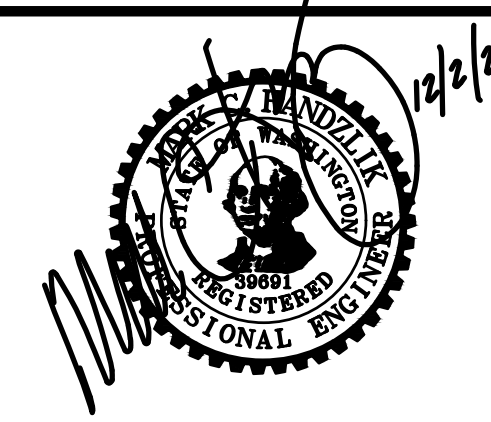
LINE TYPES

LINE TYPE	DESCRIPTION	LAYER
— GAS —	GENERIC GAS LINE	GS-PLIN-EXST-LIN
— GAS —	HIGH PRESSURE GAS	GS-PLIN-EXST-LIN
— GAS —	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
— SS —	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	FO-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	FO-ALIN-EXST-LIN
— OHF —	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
— X — X —	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-METR-PROP-LIN
-----	RECLAIMED WATER LINE	WA-RCW-EXST-LIN
-----	FOG LINE	SF-STRP-EXST-LIN
⋈ ⋆ ⋄ ⋈	SHUTOFF DETAIL LINES	VARIES

**HATCHING**

DESCRIPTION	LAYER
ASPHALT - SOLID	SF-ASPH-EXST-HCH
GRAVEL - AR-SAND, 0', SCALE=1.6667	SF-FEAT-EXST-HCH
CONCRETE - AR-CONC, 0', SCALE=1.6667	SF-FEAT-EXST-HCH
WETLAND - GRASS, 0', SCALE=.10 OF DWG SCALE	SF-FEAT-EXST-HCH
<b>PAVEMENT RESTORATION:</b>	
PERM PVMT. PATCH - DASH, 0', SCALE=0.30 OF DWG SCALE	SF-ASPH-PROP-HCH

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LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT  
SYMBOL INDEX

SCALE: 1"=20'	W.O. 13-03484	SHEET: 2 OF 16
	C.O. 4791	

## 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 9-30.1(5)A OF THE STANDARD SPECIFICATIONS.
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 F8444, 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 ANTI CORROSION WAX/PATROLATUM TAPE BY TRENTON ANTICORROSION MATERIALS INC, DENSO NORTH AMERICA INC OR EQUAL.
12. 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.
13. 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.
14. 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.
15. 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.
16. BEDDING MATERIAL FOR THE DUCTILE IRON PIPE SHALL BE SELECT, NATIVE, GRANULAR MATERIAL FREE FROM WOOD WASTE, ORGANIC MATERIAL OR OTHER EXTRANEOUS OR OBJECTIONABLE MATERIALS AND SHALL BE A MAXIMUM SIZE OF 1 1/2-INCHES OR APPROVED PIPE BEDDING PER WSDOT SPECIFICATION 7-09.3(9) AND 9-03.12(3). PEA GRAVEL AND BUCKSHOT ARE NOT ACCEPTABLE.
17. 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.
18. DISINFECTION AND FLUSHING OF THE WATER PIPELINES SHALL BE ACCORDING TO SKAGIT PUD STANDARD ATTACHED AS APPENDIX D TO THE TECHNICAL 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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 _____

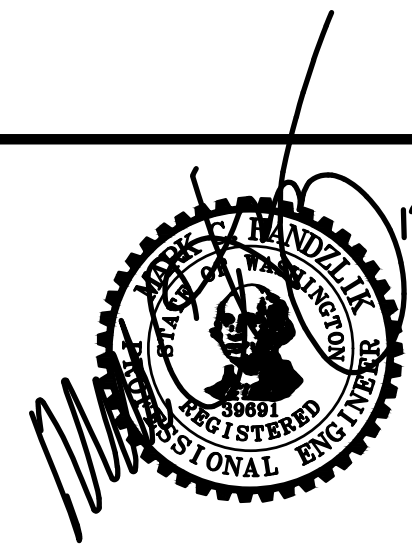
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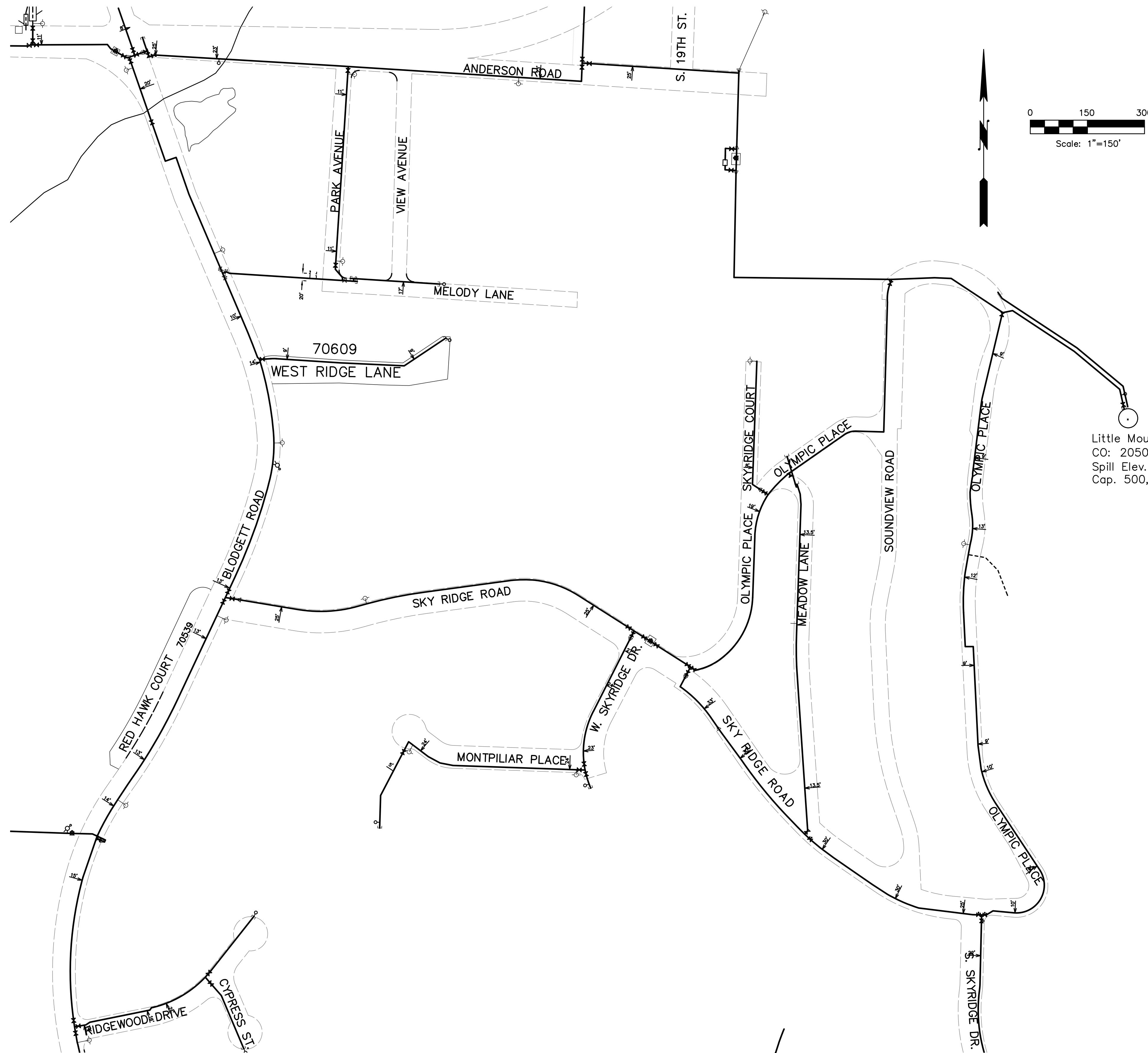
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GENERAL & CONSTRUCTION NOTES

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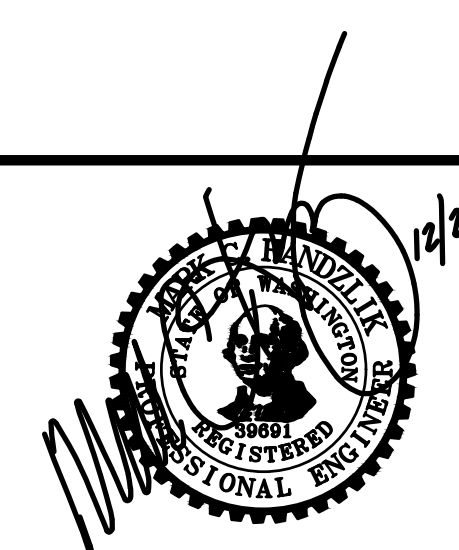
### CONSTRUCTION NOTES

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.



Little Mountain Reservoir  
 CO: 2050 (68)  
 Spill Elev. = 463'  
 Cap. 500,000 Gal.

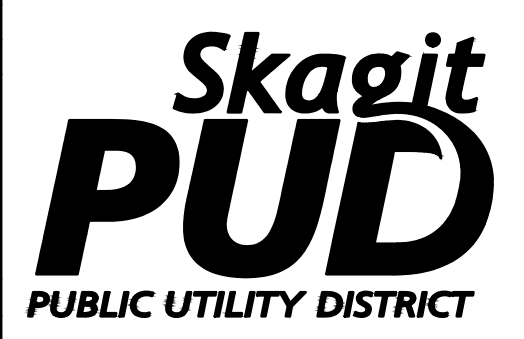
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2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM:  
 HOR: NAD 83  
 VERT: NAVD 88

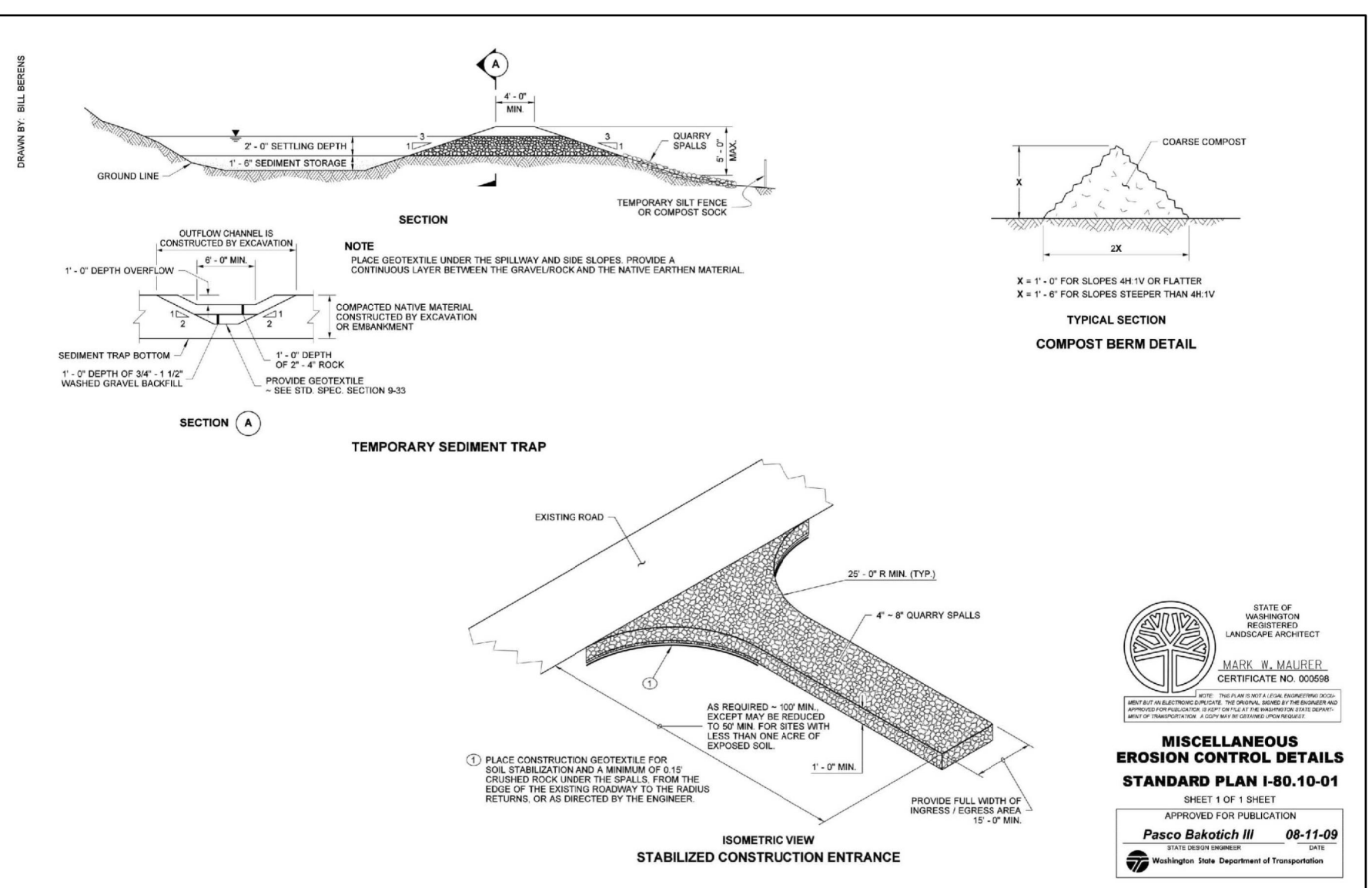
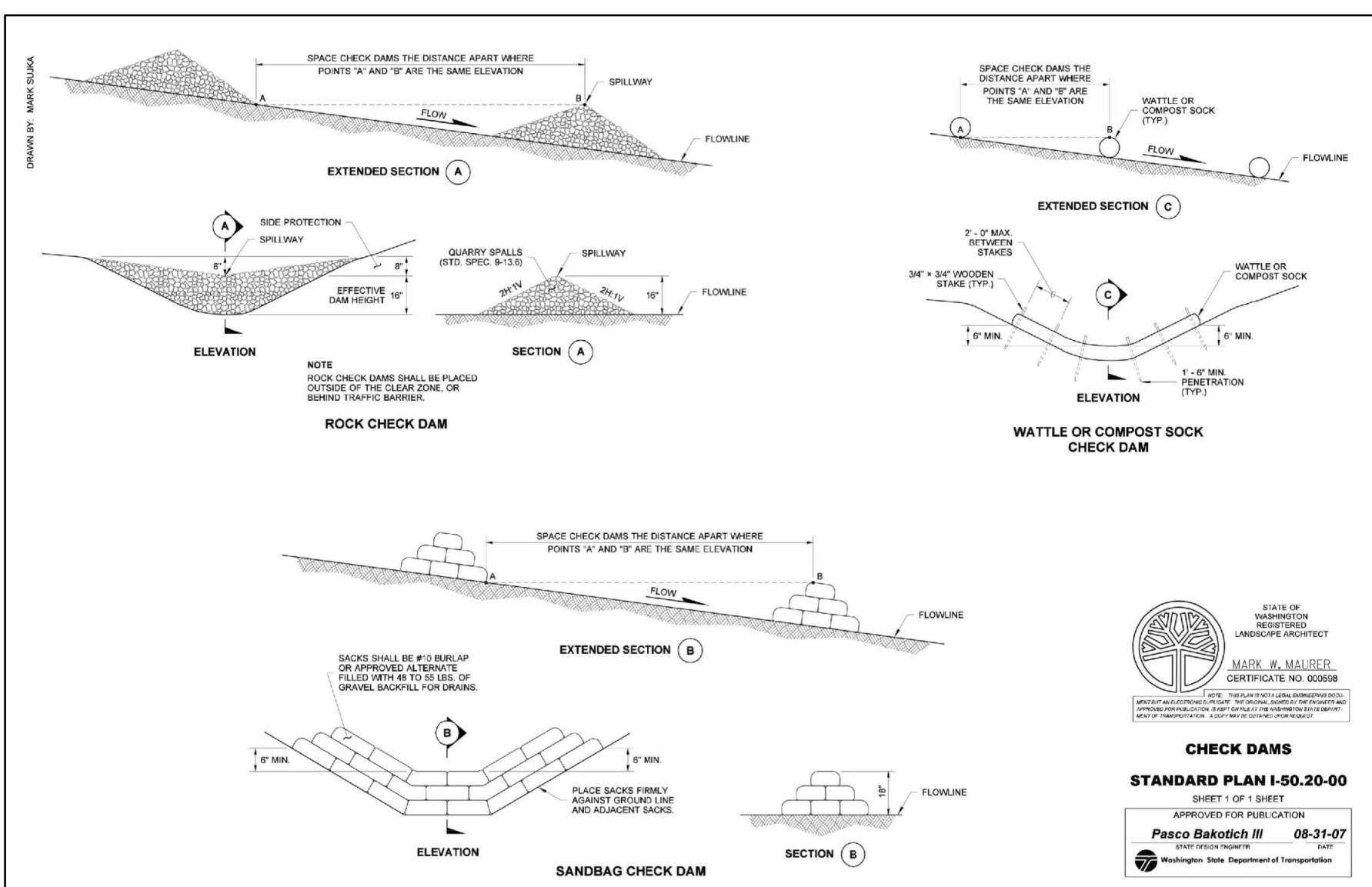
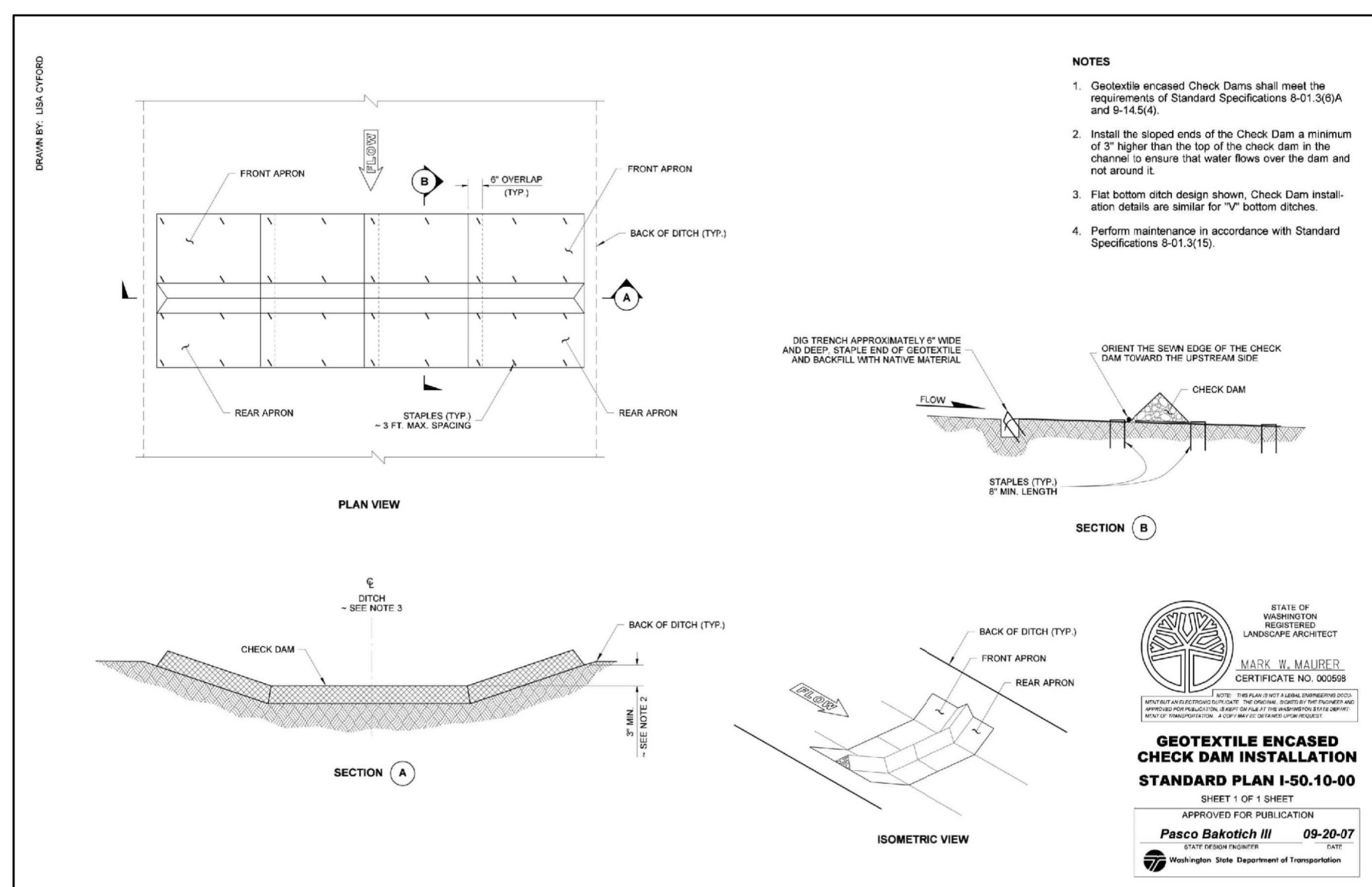
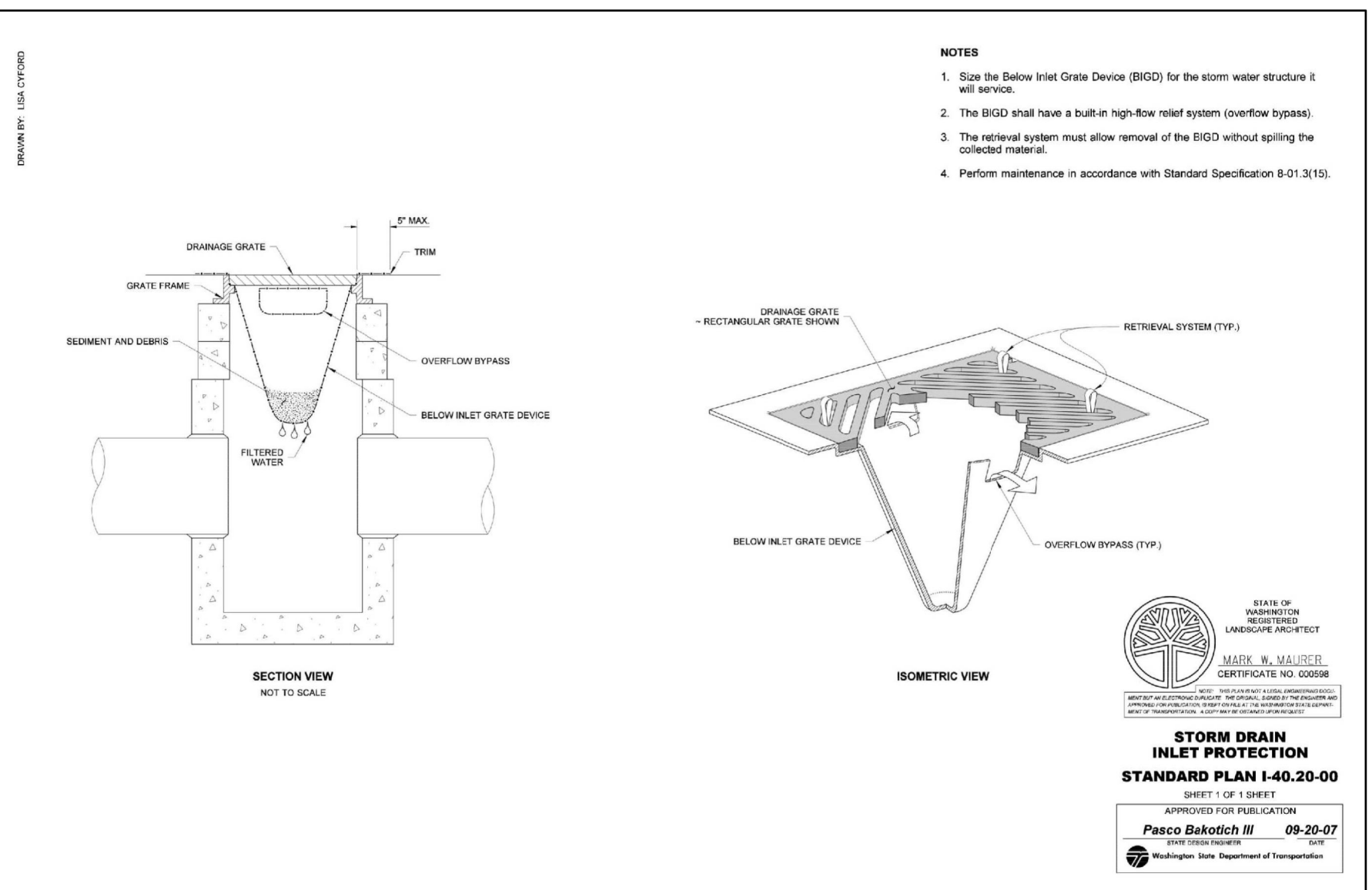
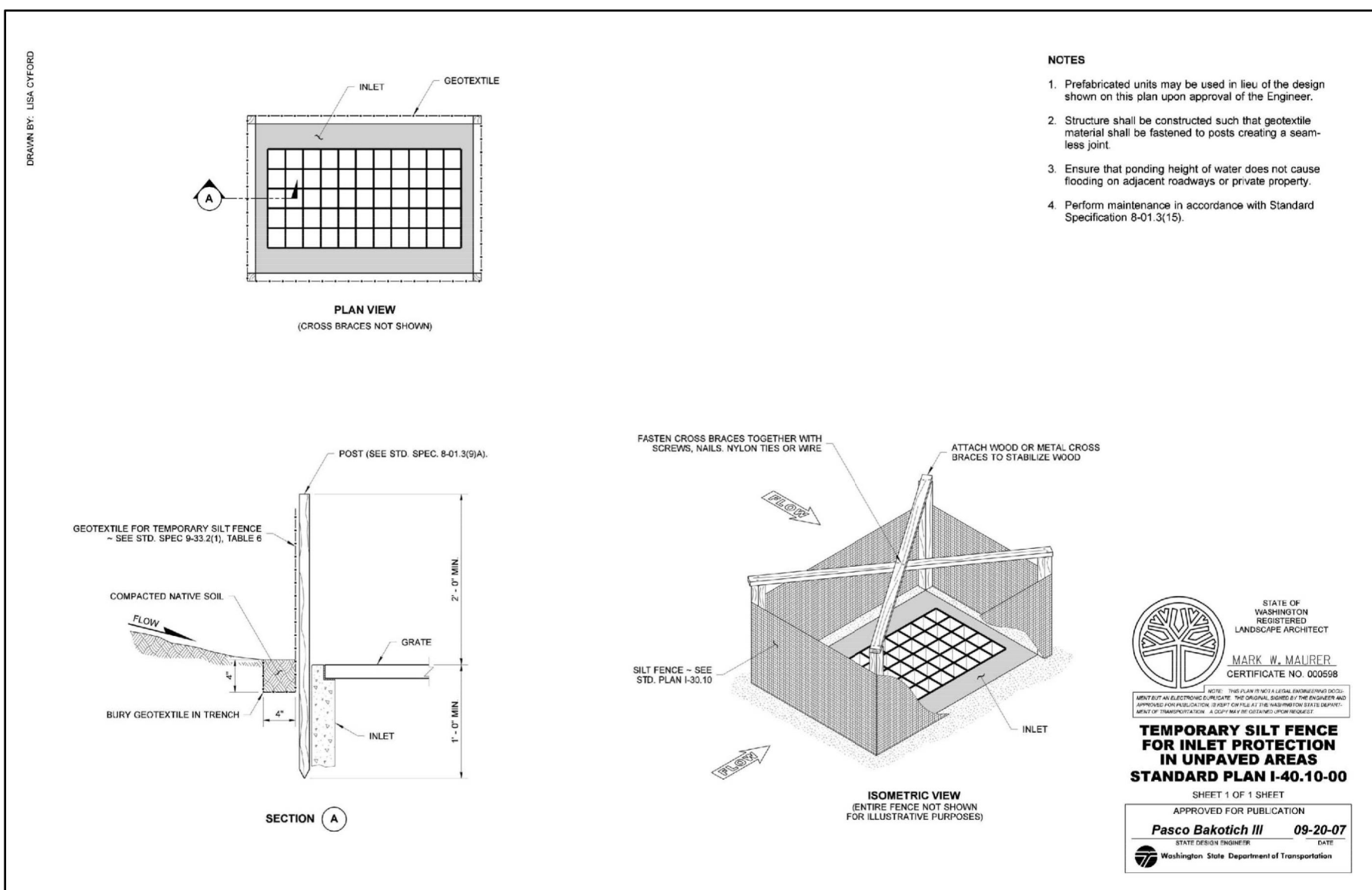
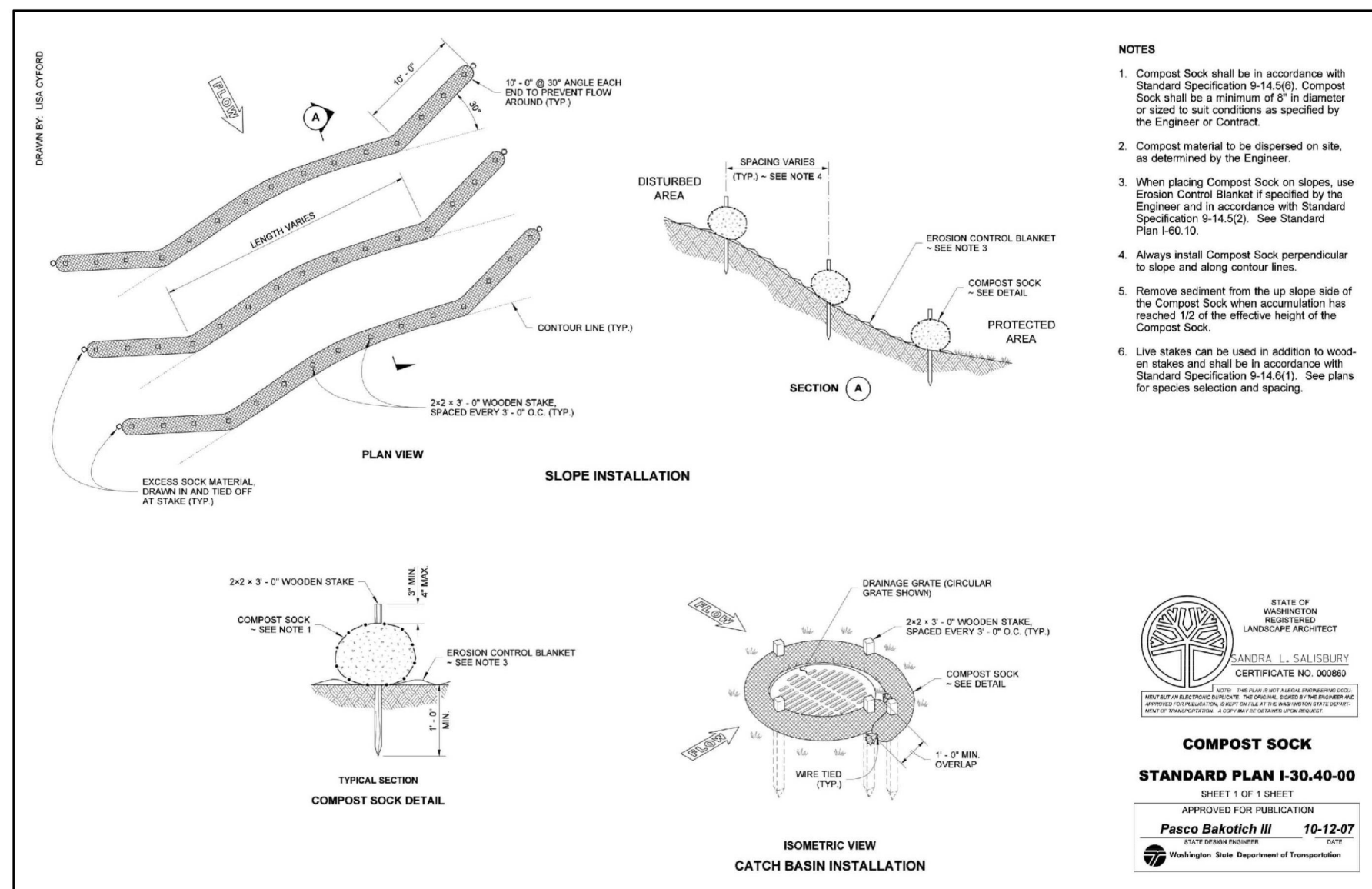
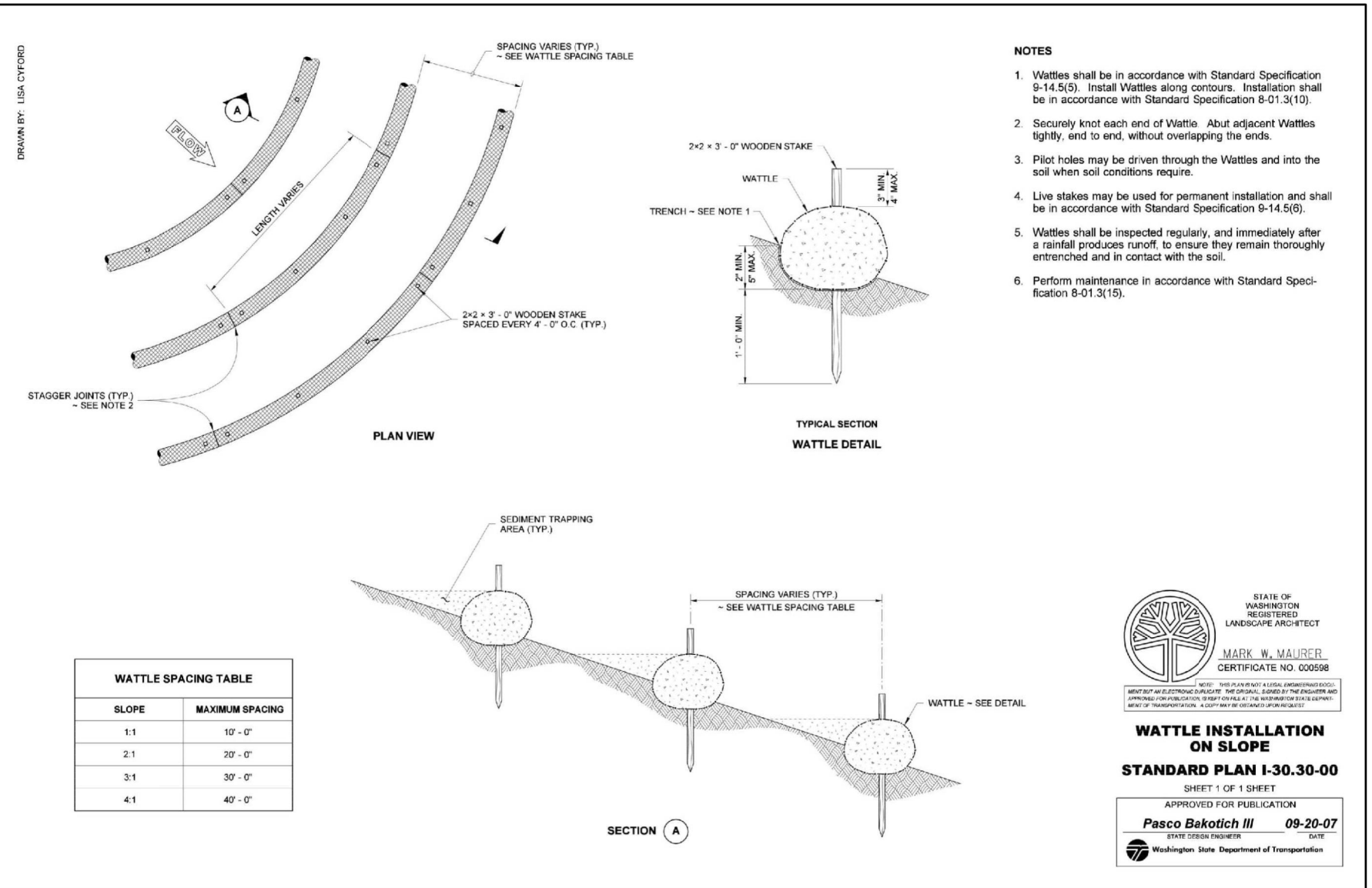
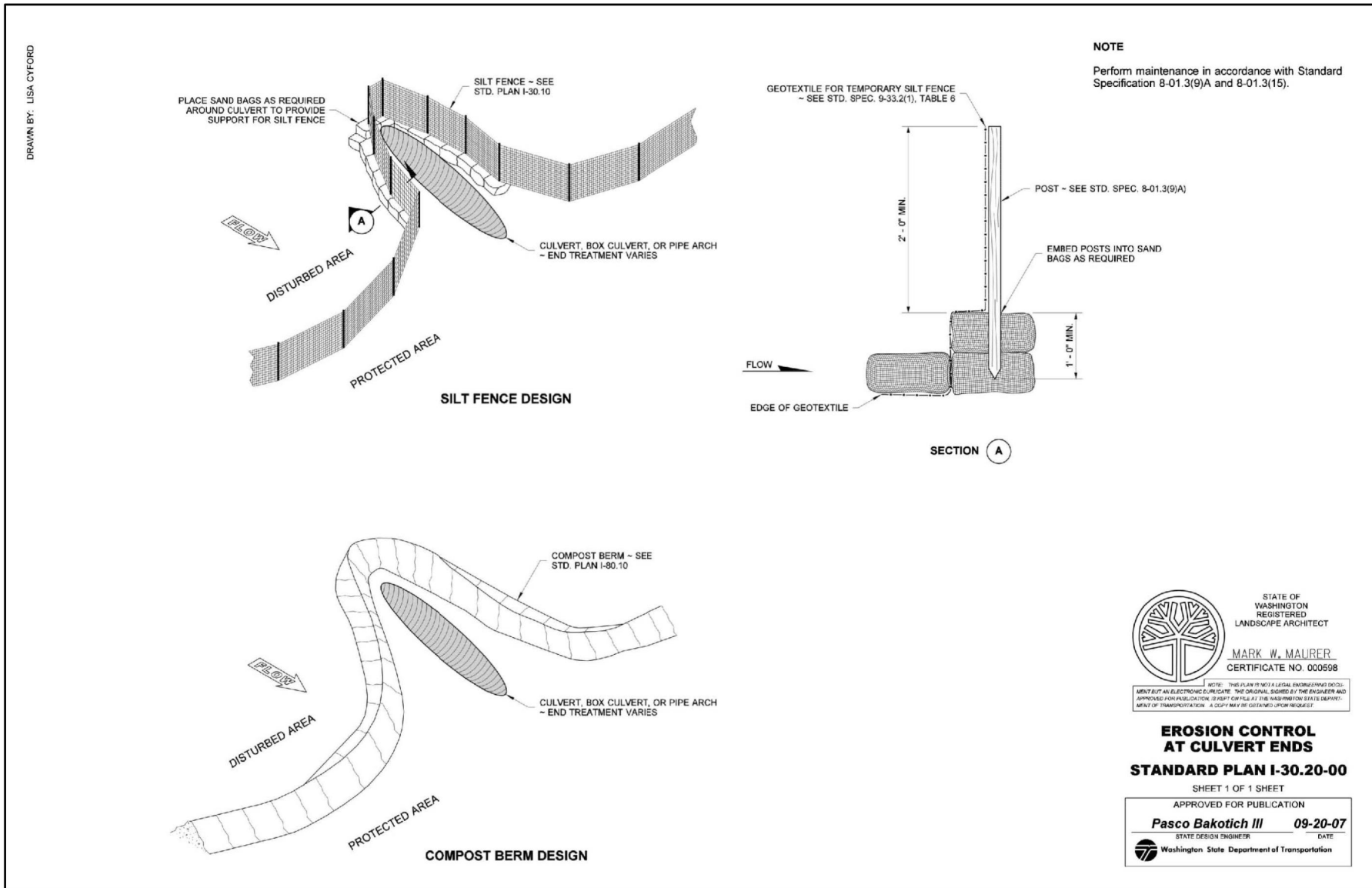
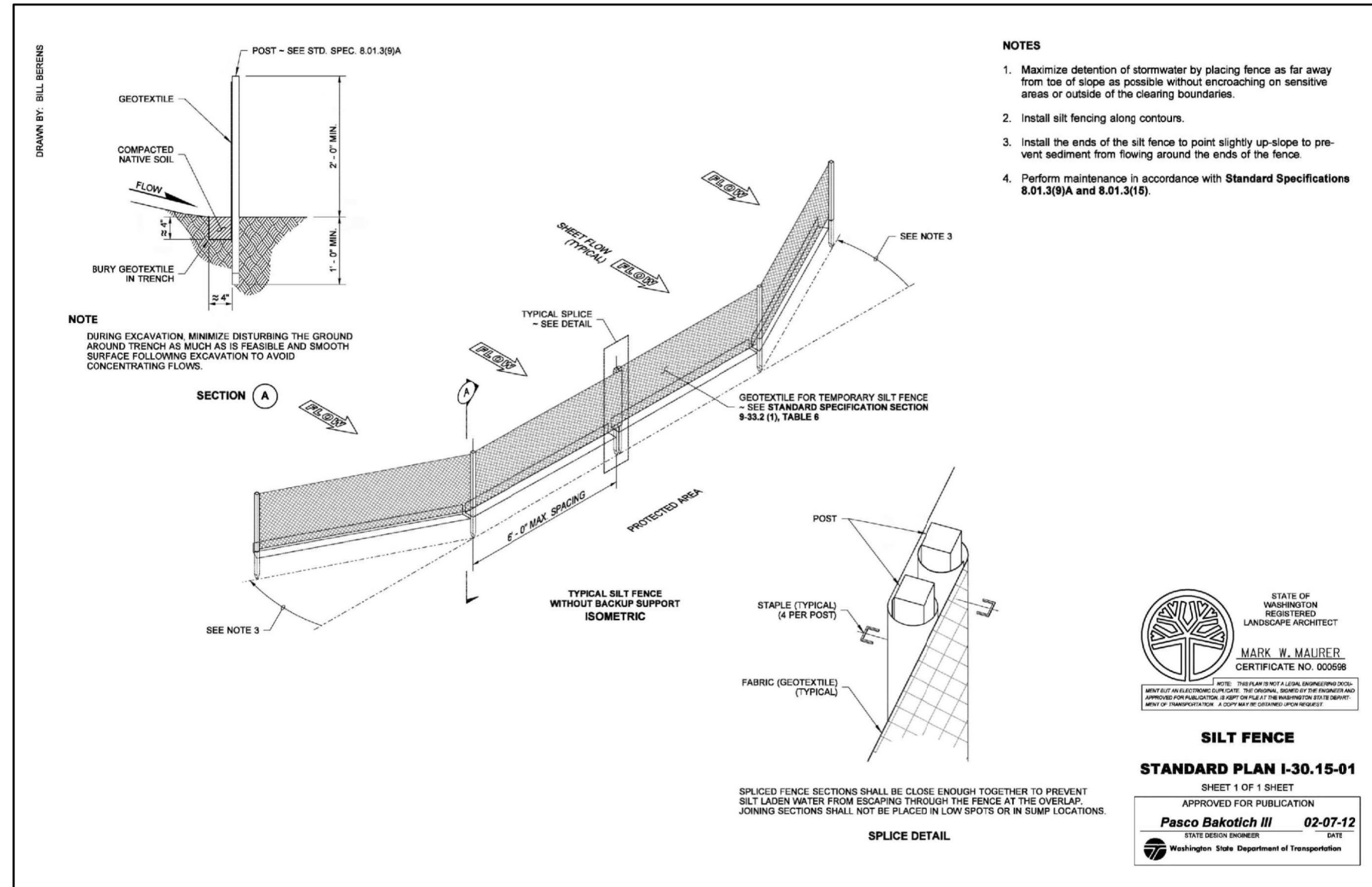
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 APPVD BY: MCH

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 TWP: 34 N  
 RGE: 4 E

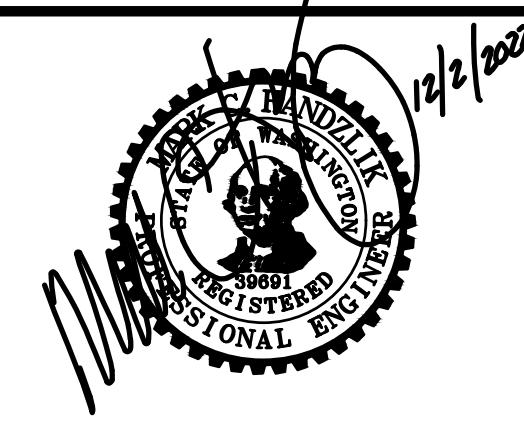


PUBLIC UTILITY DISTRICT  
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LITTLE MOUNTAIN SKY RIDGE ROAD  
 PIPELINE REPLACEMENT  
 VALVE ISOLATION MAP



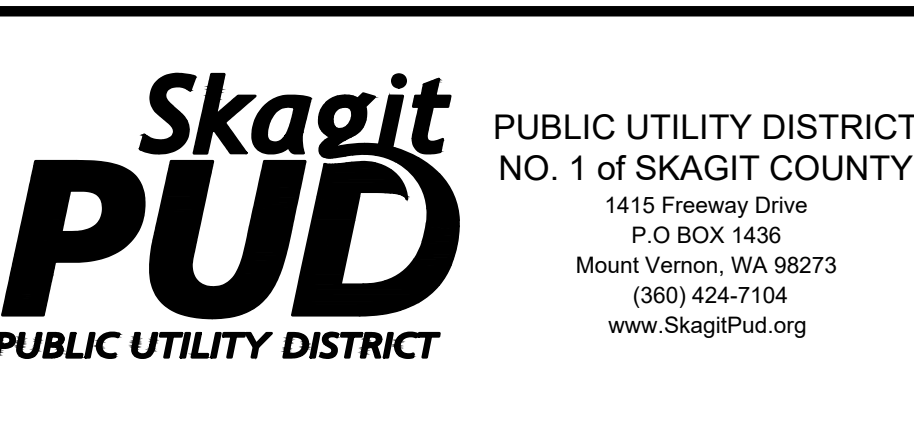
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1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM: HOR: NAD 83  
VERT: NAVD 88

DSGN BY: CAS  
DWN BY: MDO  
APPVD BY: MCH

DATE PRINTED: SEC: 32  
TWP: 34 N  
RGE: 4 E



LITTLE MOUNTAIN SKY RIDGE ROAD PIPELINE REPLACEMENT STORMWATER BMP DETAILS

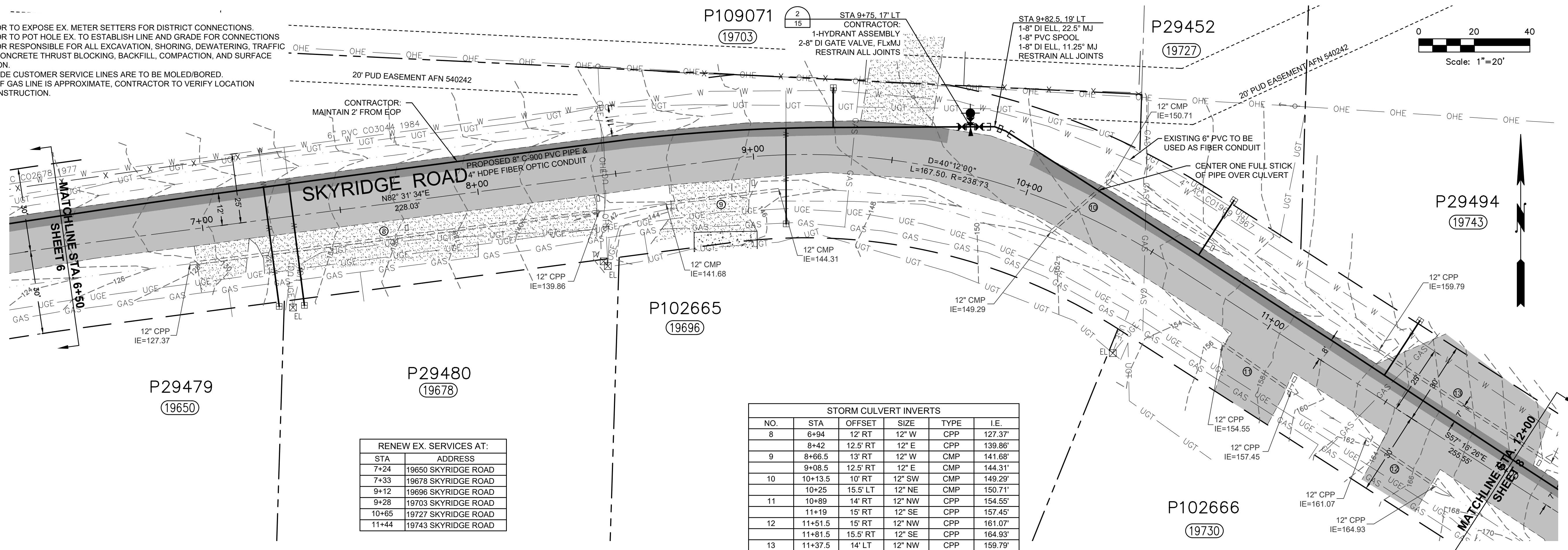
SCALE: NONE

W.O. 13-03484  
C.O. 4791

SHEET: 5 OF 16



- NOTES:
1. CONTRACTOR TO EXPOSE EX. METER SETTERS FOR DISTRICT CONNECTIONS.
  2. CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
  3. CONTRACTOR RESPONSIBLE FOR ALL EXCAVATION, SHORING, DEWATERING, TRAFFIC CONTROL, CONCRETE THRUST BLOCKING, BACKFILL, COMPACTION, AND SURFACE RESTORATION.
  4. ALL LONG SIDE CUSTOMER SERVICE LINES ARE TO BE MOLED/BORED.
  5. LOCATION OF GAS LINE IS APPROXIMATE, CONTRACTOR TO VERIFY LOCATION BEFORE CONSTRUCTION.

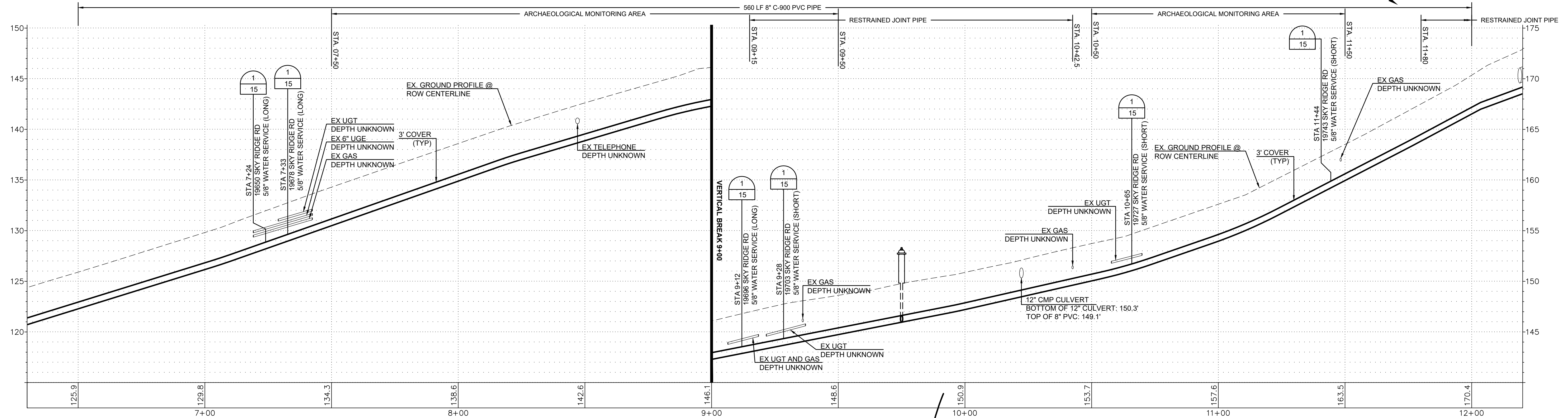


RENEW EX. SERVICES AT:

STA	ADDRESS
7+24	19650 SKYRIDGE ROAD
7+33	19678 SKYRIDGE ROAD
9+12	19696 SKYRIDGE ROAD
9+28	19703 SKYRIDGE ROAD
10+65	19727 SKYRIDGE ROAD
11+44	19743 SKYRIDGE ROAD

STORM CULVERT INVERTS

NO.	STA	OFFSET	SIZE	TYPE	I.E.
8	6+94	12' RT	12" W	CPP	127.37'
	8+42	12.5' RT	12" E	CPP	139.86'
9	8+66.5	13' RT	12" W	CMP	141.68'
	9+08.5	12.5' RT	12" E	CMP	144.31'
10	10+13.5	10' RT	12" SW	CMP	149.29'
	10+25	15.5' LT	12" NE	CMP	150.71'
11	10+89	14' RT	12" NW	CPP	154.55'
	11+19	15' RT	12" SE	CPP	157.45'
12	11+51.5	15' RT	12" NW	CPP	161.07'
	11+81.5	15.5' RT	12" SE	CPP	164.93'
13	11+37.5	14' LT	12" NW	CPP	159.79'
	12+12	13.5' LT	12" SE	CPP	170.23'



HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM: HOR: NAD 83  
VERT: NAVD 88

DSGN BY: CAS  
DWN BY: MDO  
APPVD BY: MCH

DATE PRINTED: SEC: 32  
TWP: 34 N  
RGE: 4 E



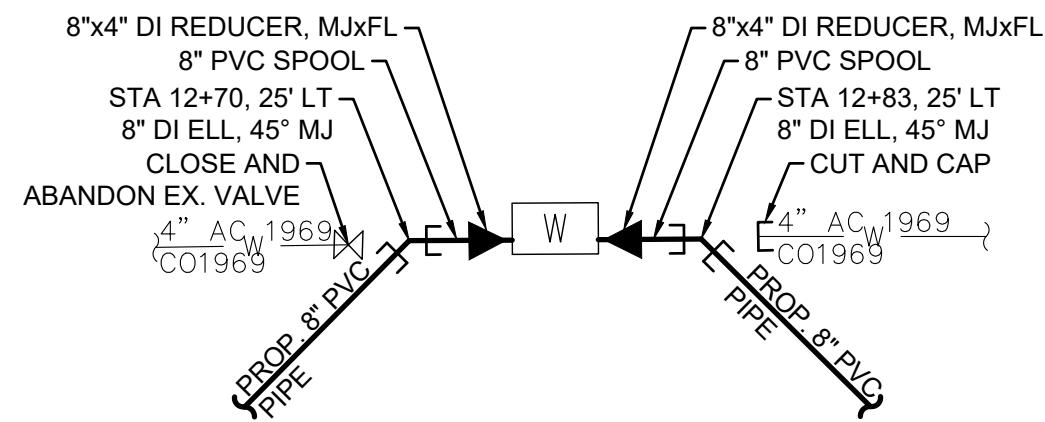
PUBLIC UTILITY DISTRICT  
NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT  
PLAN AND PROFILE  
STA 6+50 TO STA 12+00

SCALE: 1"=20'

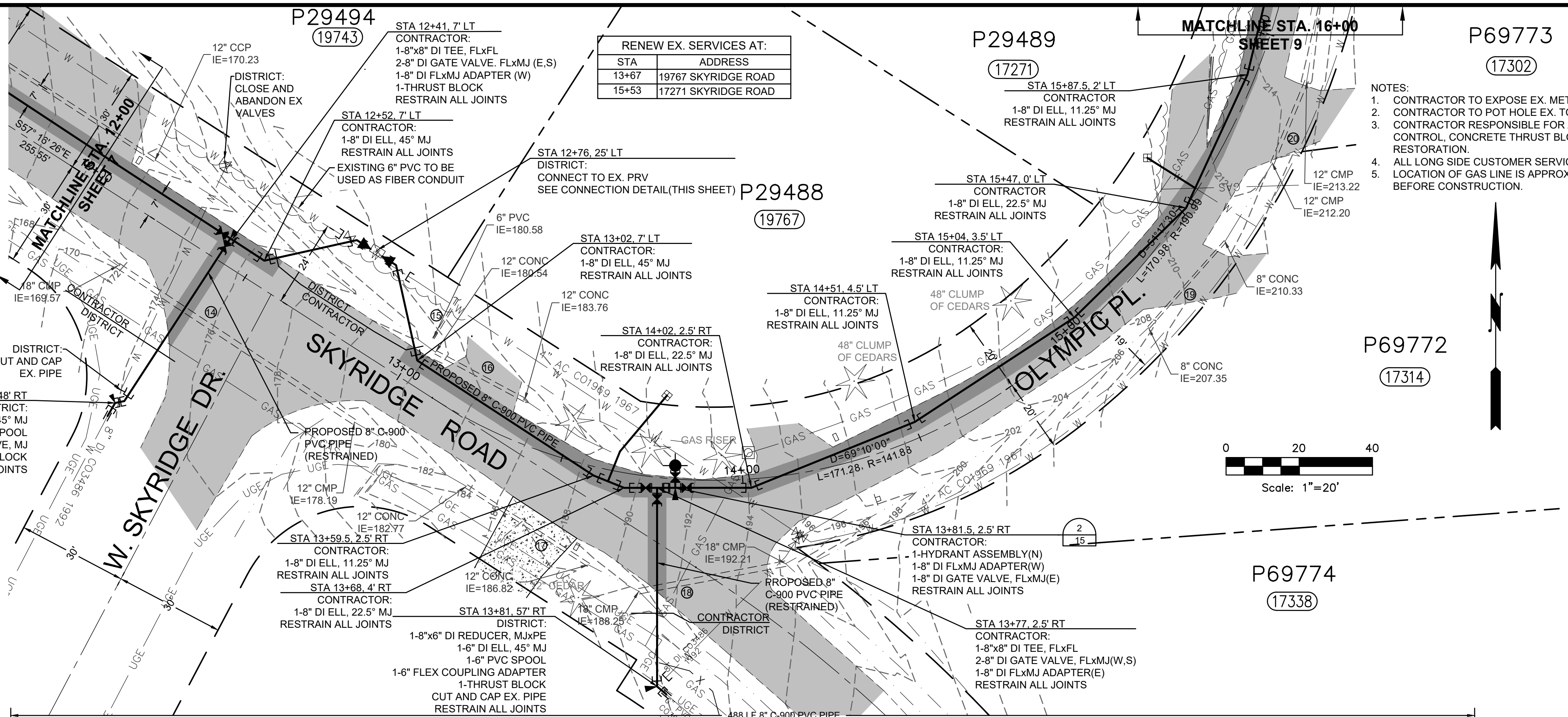
W.O. 13-03484  
C.O. 4791

SHEET:  
7 OF 16



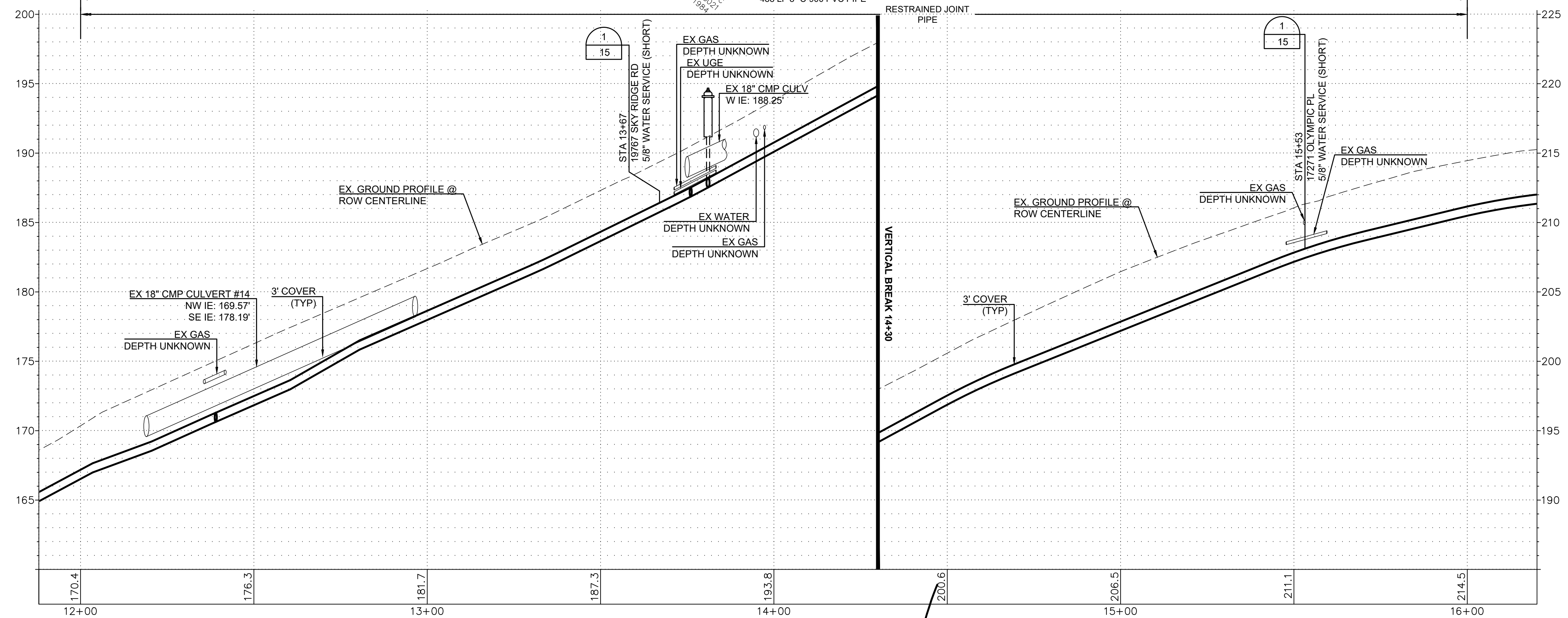
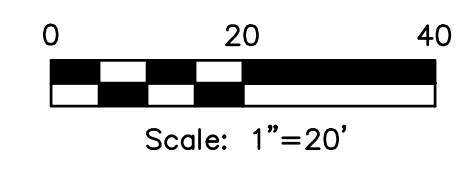
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PRV CONNECTION DETAIL  
BY DISTRICT  
N.T.S.

STORM CULVERT INVERTS					
NO.	STA	OFFSET	SIZE	TYPE	I.E.
14	12+19	16' RT	18" NW	CMP	169.57'
	12+96.5	17' RT	18" SE	CMP	178.19'
15	13+04	14' LT	6" SW	PVC	180.58'
16	13+02	11' LT	12" NW	CONC.	180.54'
	13+34	11.5' LT	12" SE	CONC.	183.76'
17	13+29	16.5' RT	12" NW	CONC.	182.77'
	13+63	26.5' RT	12" SE	CONC.	186.82'
18	13+75	31.5' RT	18" SW	CMP	188.25'
	14+09	24' RT	18" NE	CMP	192.21'
19	15+16	12.5' RT	8" SW	CONC.	207.35'
	15+45	14' RT	8" NE	CONC.	210.33'
20	15+69	14' RT	12" SW	CMP	212.20'
	15+91.5	13.5' RT	12" NE	CMP	213.22'



RENEW EX. SERVICES AT:	
STA	ADDRESS
13+67	19767 SKYRIDGE ROAD
15+53	17271 SKYRIDGE ROAD

- NOTES:
- CONTRACTOR TO EXPOSE EX. METER SETTERS FOR DISTRICT CONNECTIONS.
  - CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
  - CONTRACTOR RESPONSIBLE FOR ALL EXCAVATION, SHORING, DEWATERING, TRAFFIC CONTROL, CONCRETE THRUST BLOCKING, BACKFILL, COMPACTION, AND SURFACE RESTORATION.
  - ALL LONG SIDE CUSTOMER SERVICE LINES ARE TO BE MOLED/BORED.
  - LOCATION OF GAS LINE IS APPROXIMATE, CONTRACTOR TO VERIFY LOCATION BEFORE CONSTRUCTION.



HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22

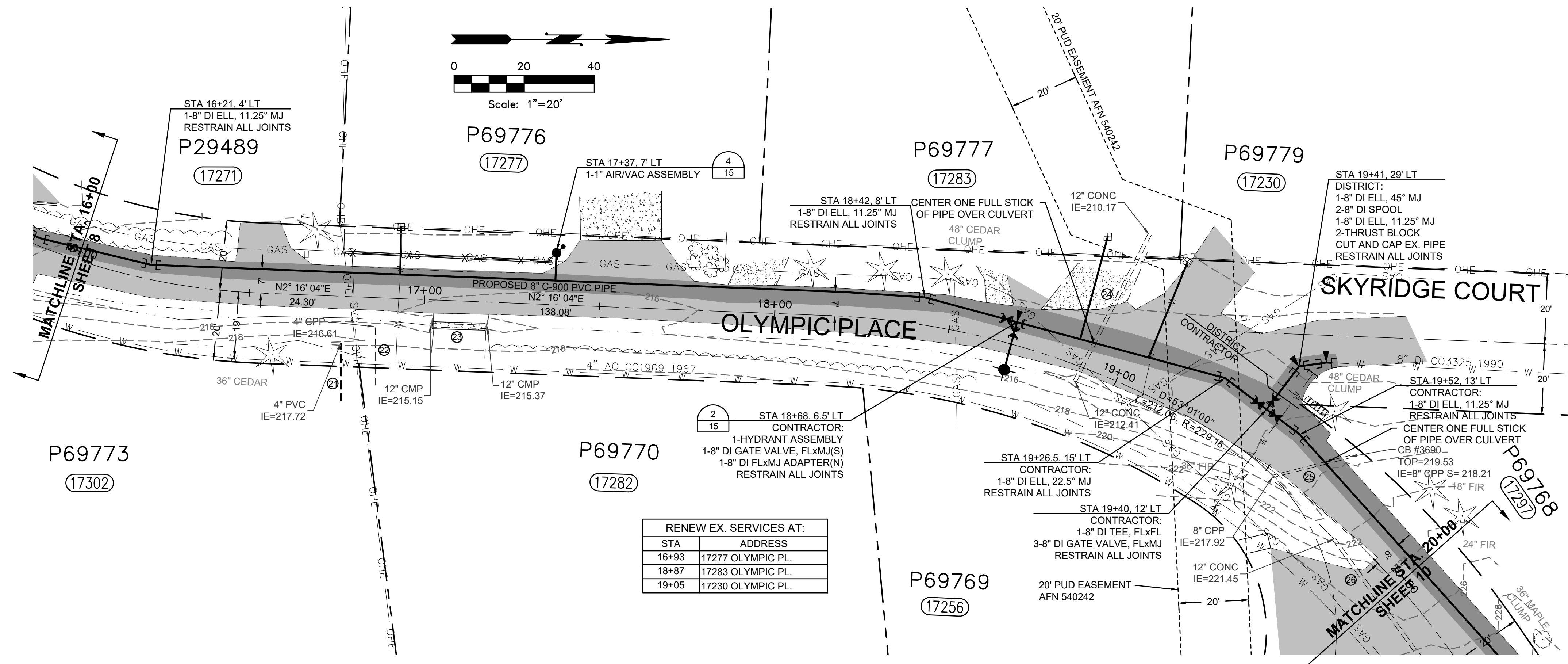


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HOR: NAD 83	DWN BY: MDO
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 32
	TWP: 34 N
	RGE: 4 E



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LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT  
PLAN AND PROFILE  
STA 12+00 TO STA 16+00



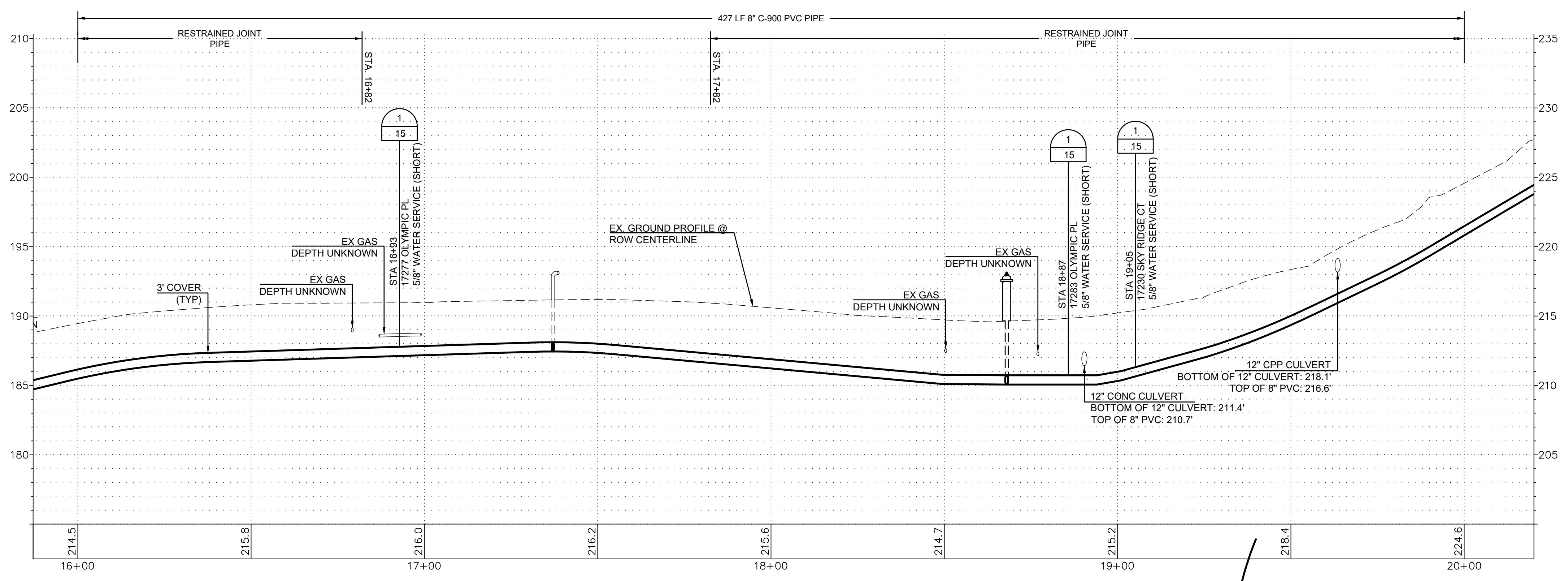
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RENEW EX. SERVICES AT:

STA	ADDRESS
16+93	17277 OLYMPIC PL.
18+87	17283 OLYMPIC PL.
19+05	17230 OLYMPIC PL.

STORM CULVERT INVERTS

NO.	STA	OFFSET	SIZE	TYPE	I.E.
21	16+76.5	13' RT	4" W	PVC	217.72'
22	16+86	8.5 RT	4" W	CPP	213.22'
23	17+02	7' RT	12" S	CMP	215.15'
	17+18	7' RT	12" N	CMP	215.37'
24	18+89	4.5 RT	12" SE	CONC.	212.41'
	18+93.5	42' LT	12" NW	CONC.	210.17'
25	19+52.5	1' RT	8" SE	CPP	217.92'
26	19+77.5	4' RT	12" SW	CONC.	221.45'
	20+66.5	7' RT	12" NE	CONC.	232.64'



HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

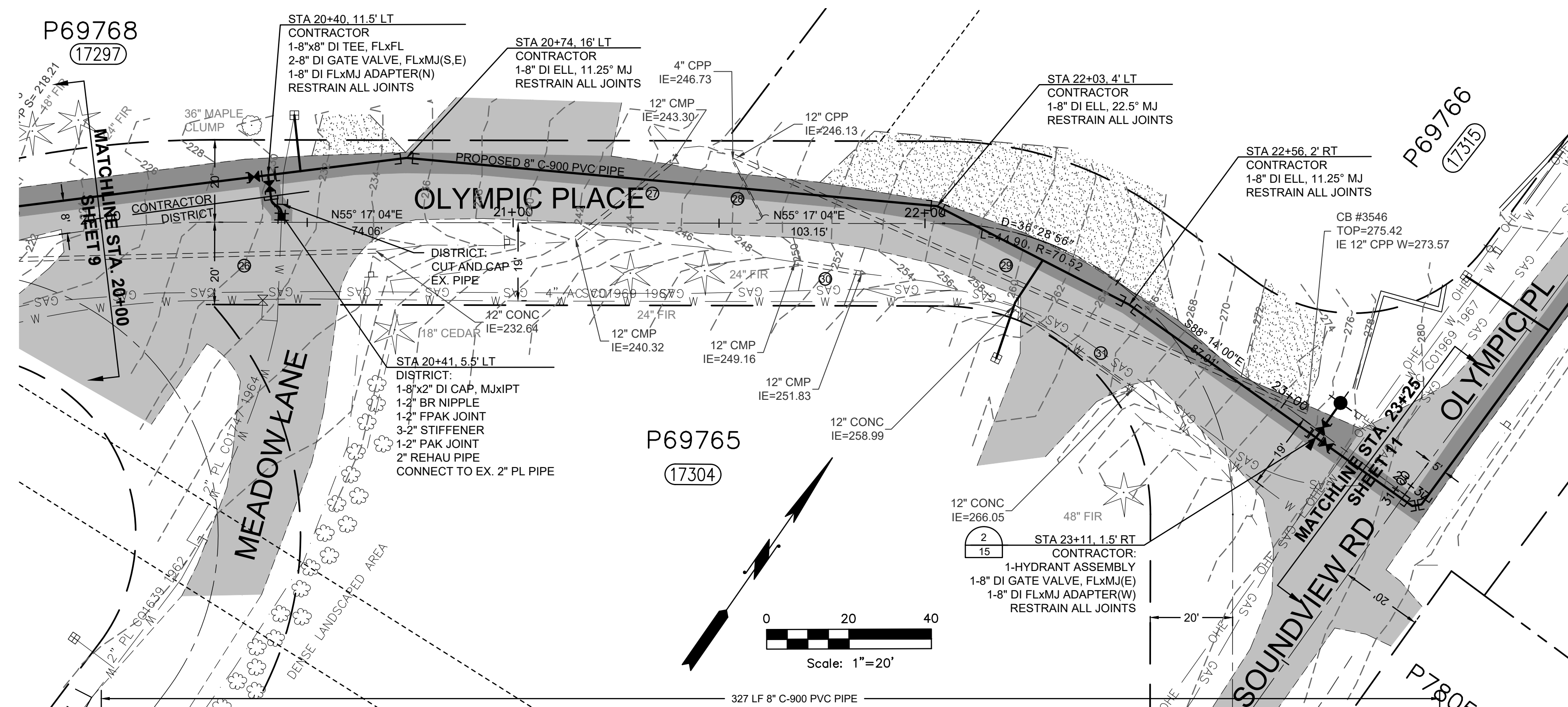
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DWN BY: MDO  
APPVD BY: MCH

DATE PRINTED: SEC: 32  
TWP: 34 N  
RGE: 4 E



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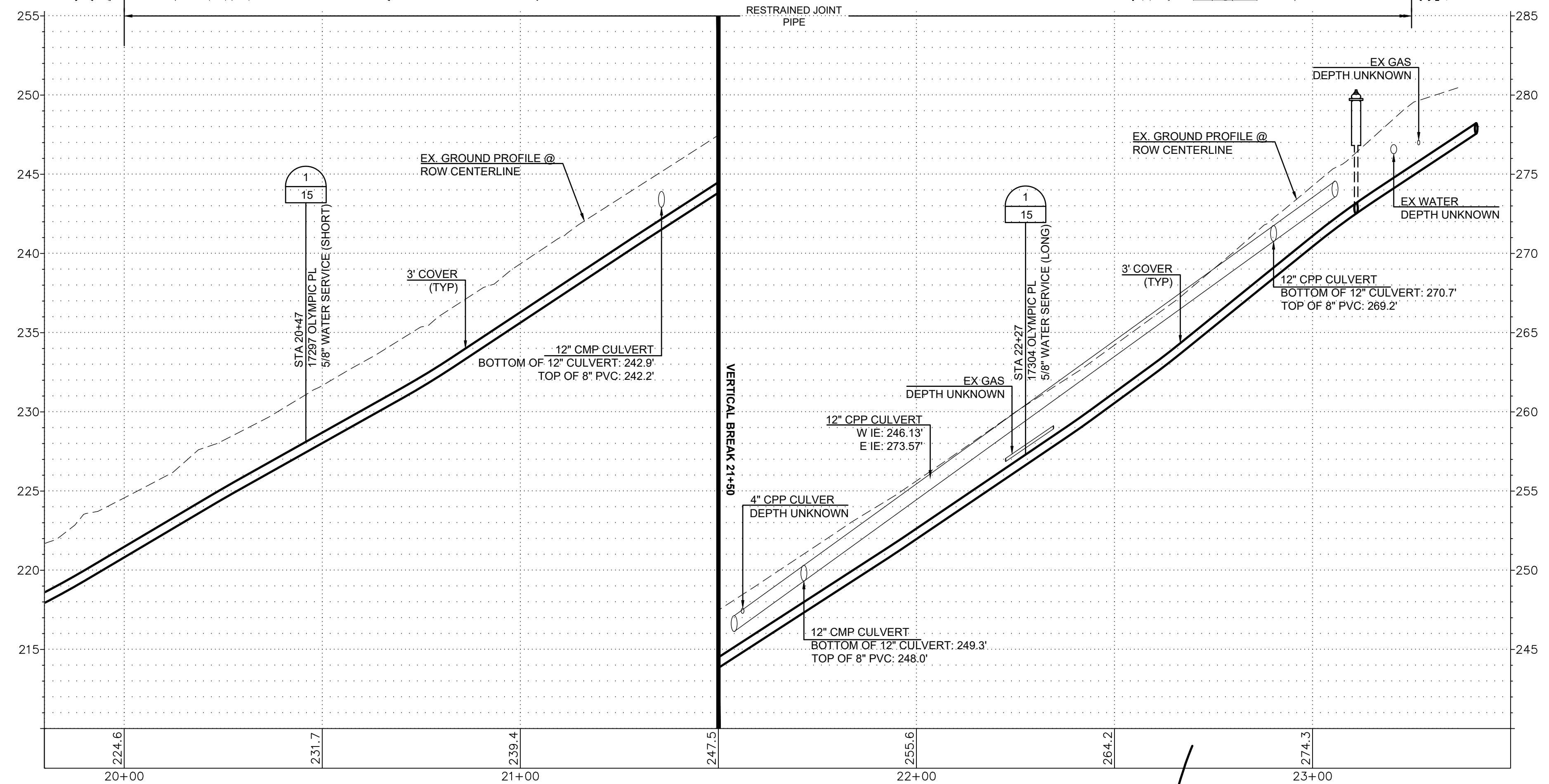
LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT  
PLAN AND PROFILE  
STA 16+00 TO STA 20+00



- NOTES:
1. CONTRACTOR TO EXPOSE EX. METER SETTERS FOR DISTRICT CONNECTIONS.
  2. CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
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STORM CULVERT INVERTS					
NO.	STA	OFFSET	SIZE	TYPE	I.E.
26	19+77.5	4' RT	12" SW	CONC.	221.45'
	20+66.5	7' RT	12" NE	CONC.	232.64'
27	21+15	4' RT	12" S	CMP	240.32'
	21+38.5	15' LT	12" N	CMP	243.30'
28	21+53.5	14.5' LT	4" NW	CPP	246.73'
29	21+53.5	16' LT	12" NW	CPP	246.13'
	23+05.5	2' LT	12" SE	CPP	273.57'
30	21+68.5	9.5' RT	12" SW	CMP	249.16'
	21+84.5	12' RT	12" NE	CMP	251.99'
31	22+27.5	17.5' RT	12" SW	CONC.	258.99'
	22+68.5	19' RT	12" NE	CONC.	268.05'

RENEW EX. SERVICES AT:	
STA	ADDRESS
20+47	17297 OLYMPIC PL.
22+27	17304 OLYMPIC PL.



HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



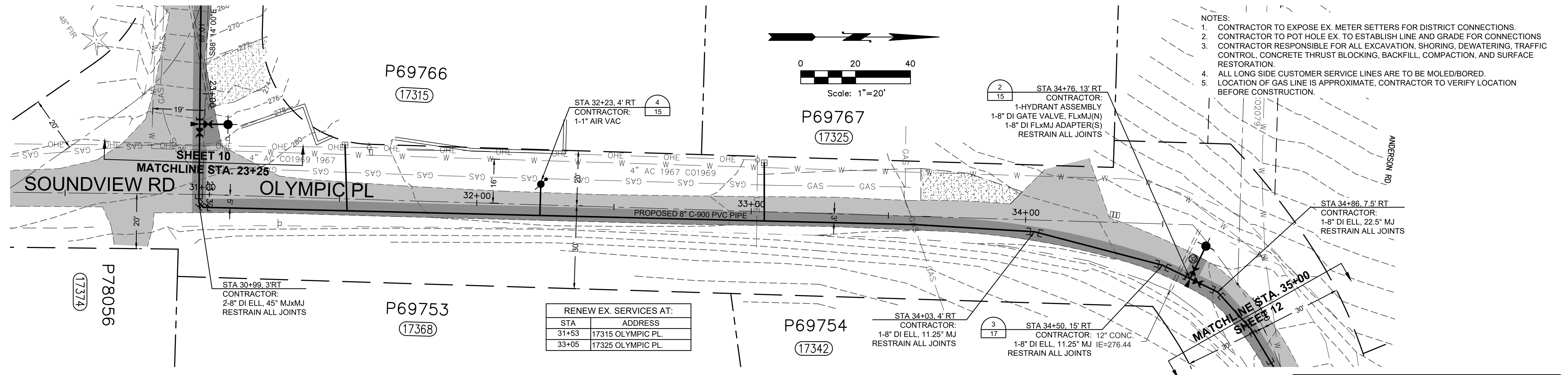
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HOR: NAD 83	DWN BY: MDO
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 32
	TWP: 34 N
	RGE: 4 E



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

LITTLE MOUNTAIN SKY RIDGE ROAD  
 PIPELINE REPLACEMENT  
 PLAN AND PROFILE  
 STA 20+00 TO STA 23+25

SCALE: 1"=20'	W.O. 13-03484	SHEET:
	C.O. 4791	10 OF 16



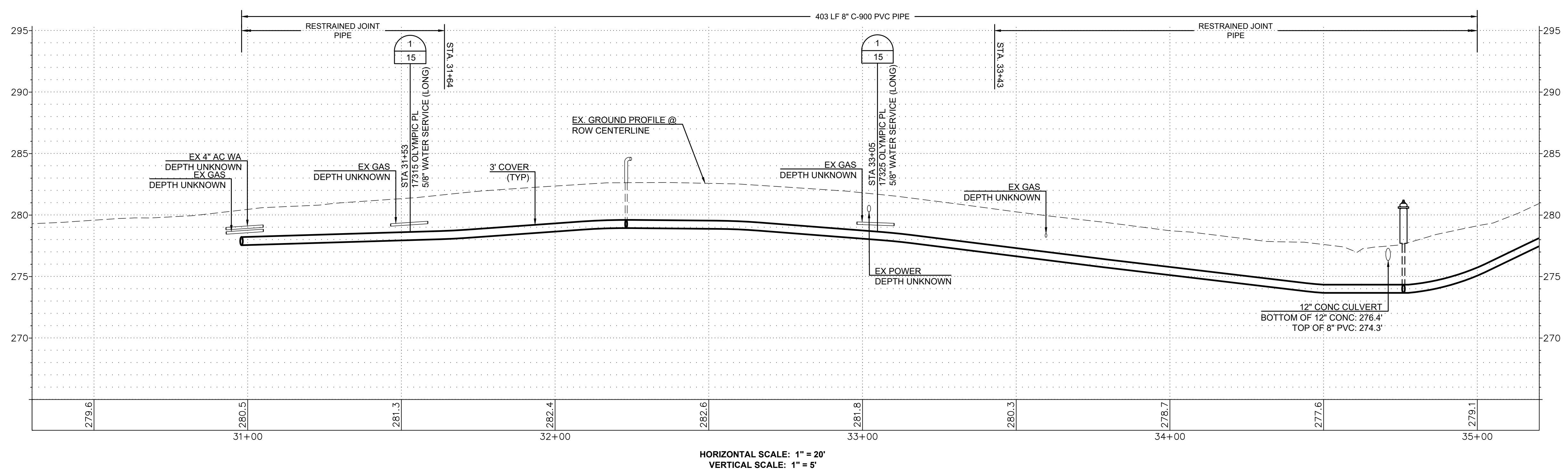
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  4. ALL LONG SIDE CUSTOMER SERVICE LINES ARE TO BE MOLED/BORED.
  5. LOCATION OF GAS LINE IS APPROXIMATE, CONTRACTOR TO VERIFY LOCATION BEFORE CONSTRUCTION.

RENEW EX. SERVICES AT:

STA	ADDRESS
31+53	17315 OLYMPIC PL.
33+05	17325 OLYMPIC PL.

STORM CULVERT INVERTS

NO.	STA	OFFSET	SIZE	TYPE	I.E.
32	34+75	21' RT	12" SE	CONC.	276.44'
	34+64	5' LT	12" NW	CONC.	UNKWN



HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

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2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



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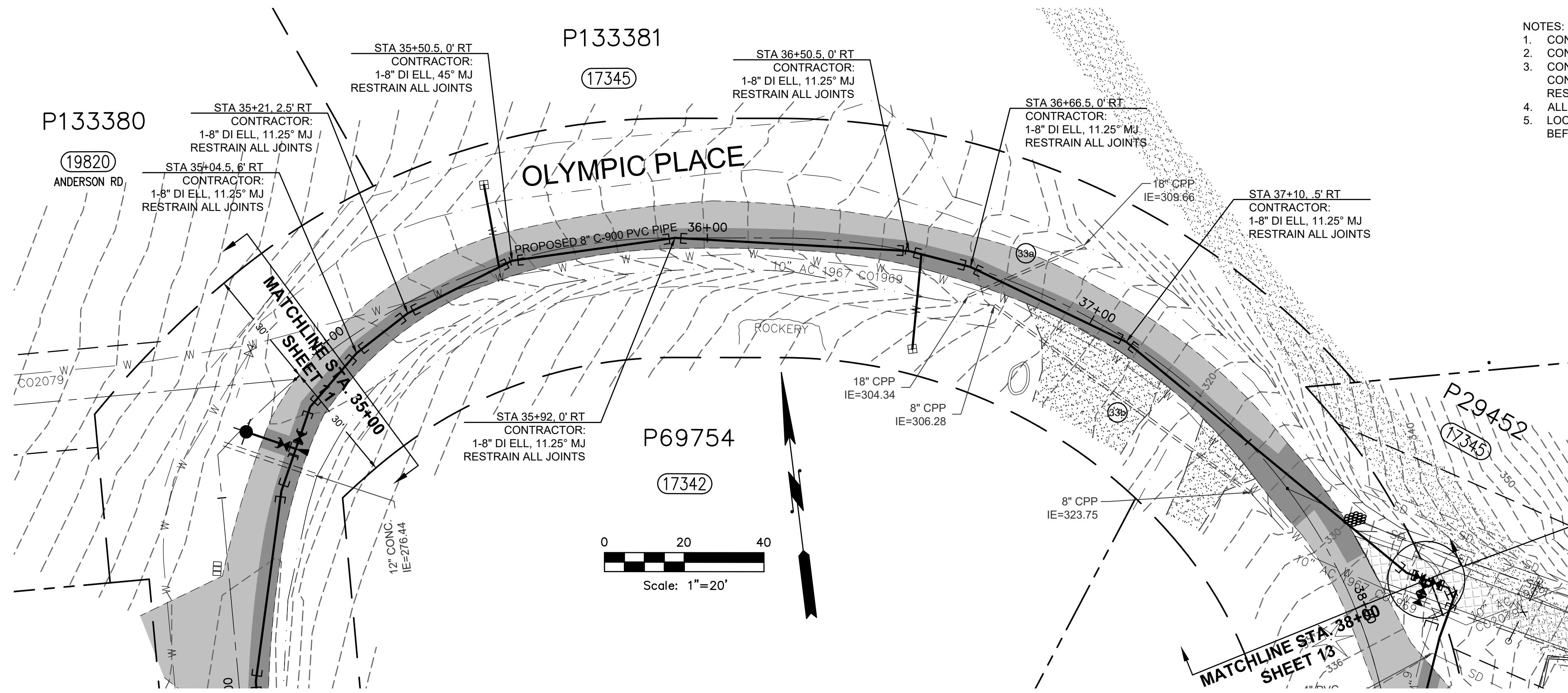
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LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT

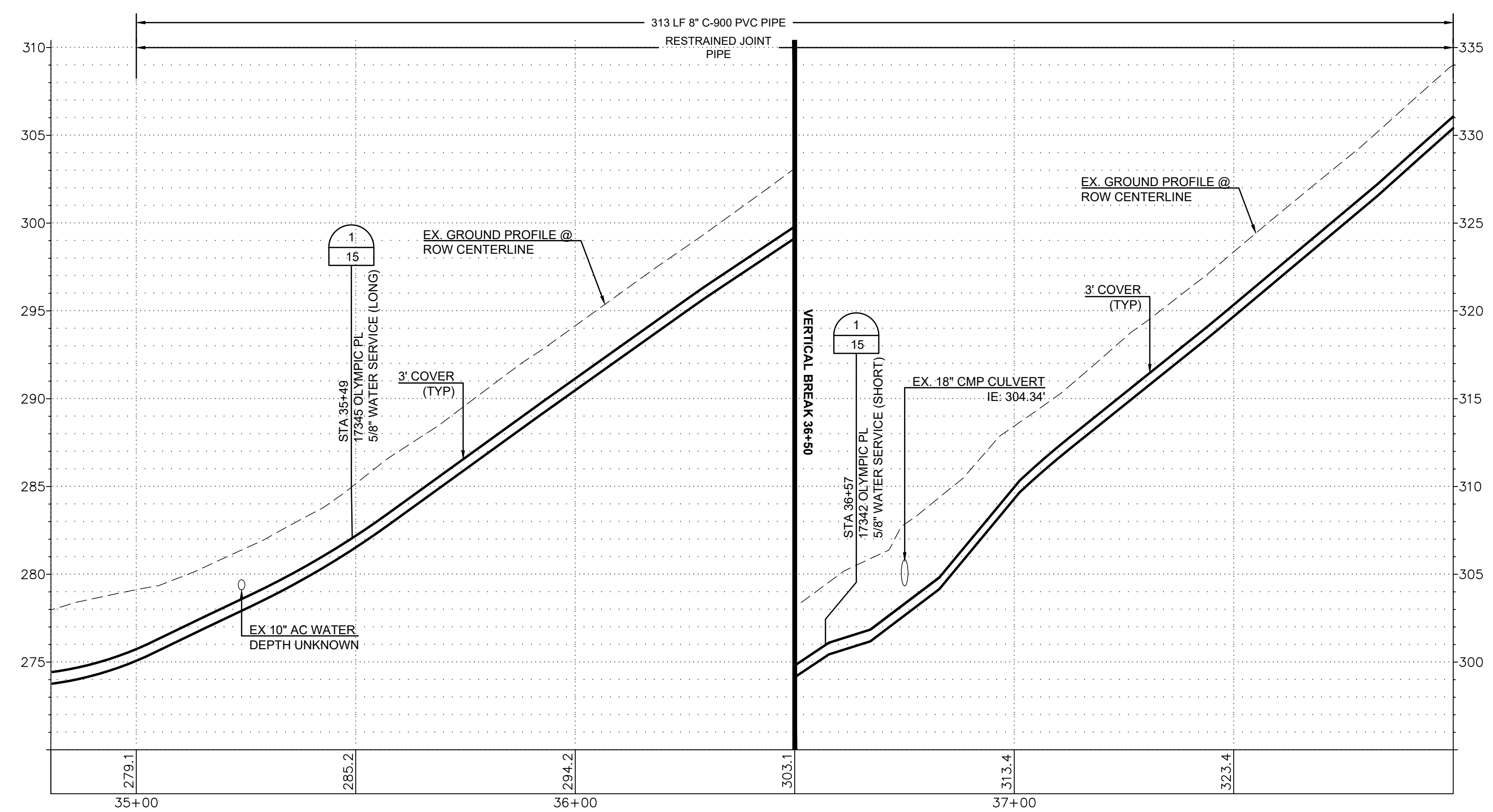
PLAN AND PROFILE  
STA 30+50 TO STA 35+00



- NOTES:
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  2. CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
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STORM CULVERT INVERTS					
NO.	STA	OFFSET	SIZE	TYPE	I.E.
33a	36+68.5	7' RT	18" SW	CPP	304.34'
	36+90	15.5' LT	18" NE	CPP	309.66'
33b	36+72.5	7' RT	8" NW	CPP	306.28'
	37+60	8' RT	8" SE	CPP	323.75'

RENEW EX. SERVICES AT:	
STA	ADDRESS
35+49	17345 OLYMPIC PL.
36+57	17342 OLYMPIC PL.



HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
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2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



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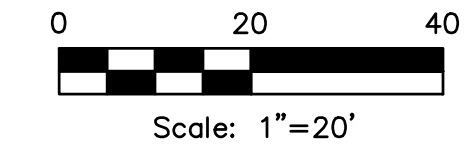
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 RGE: 4 E



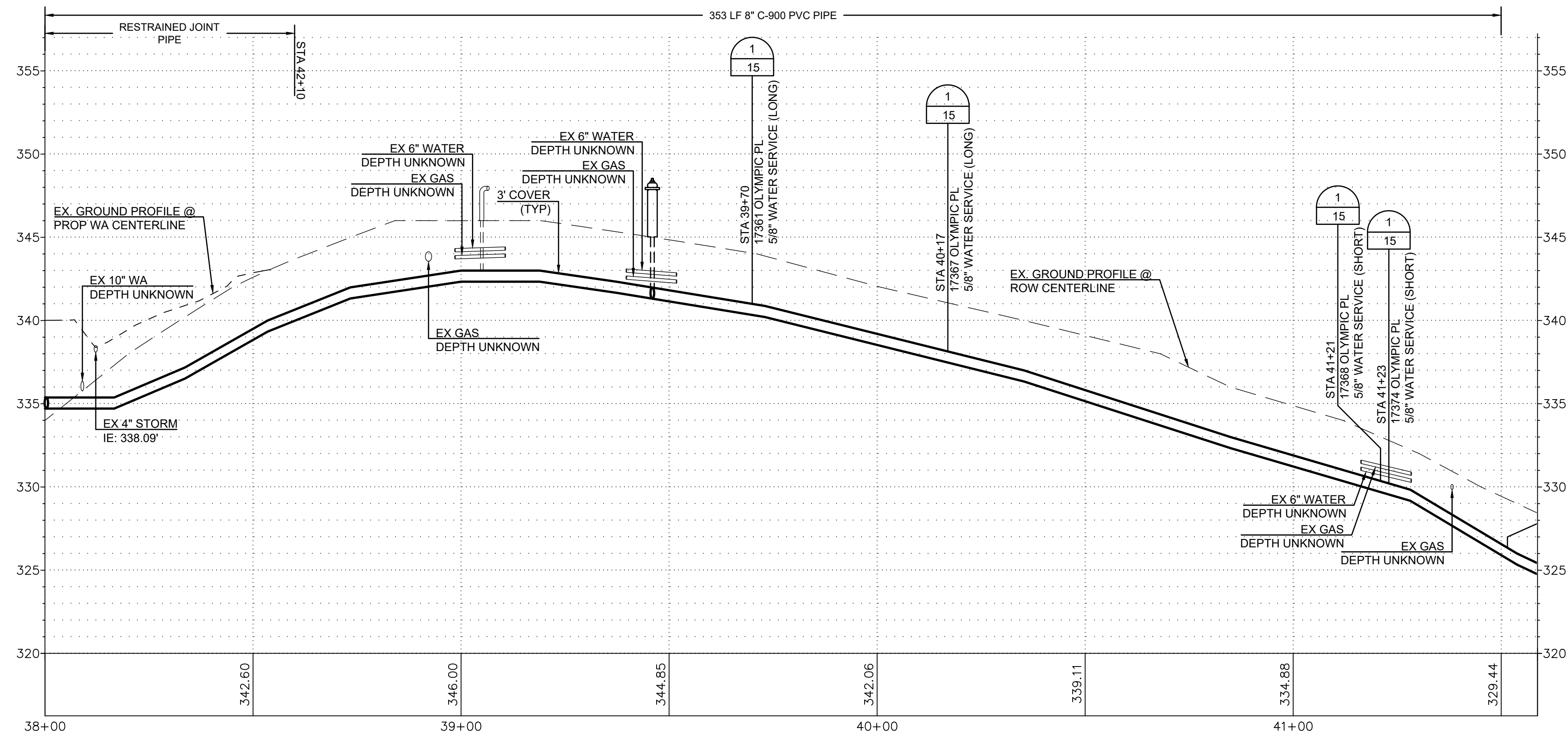
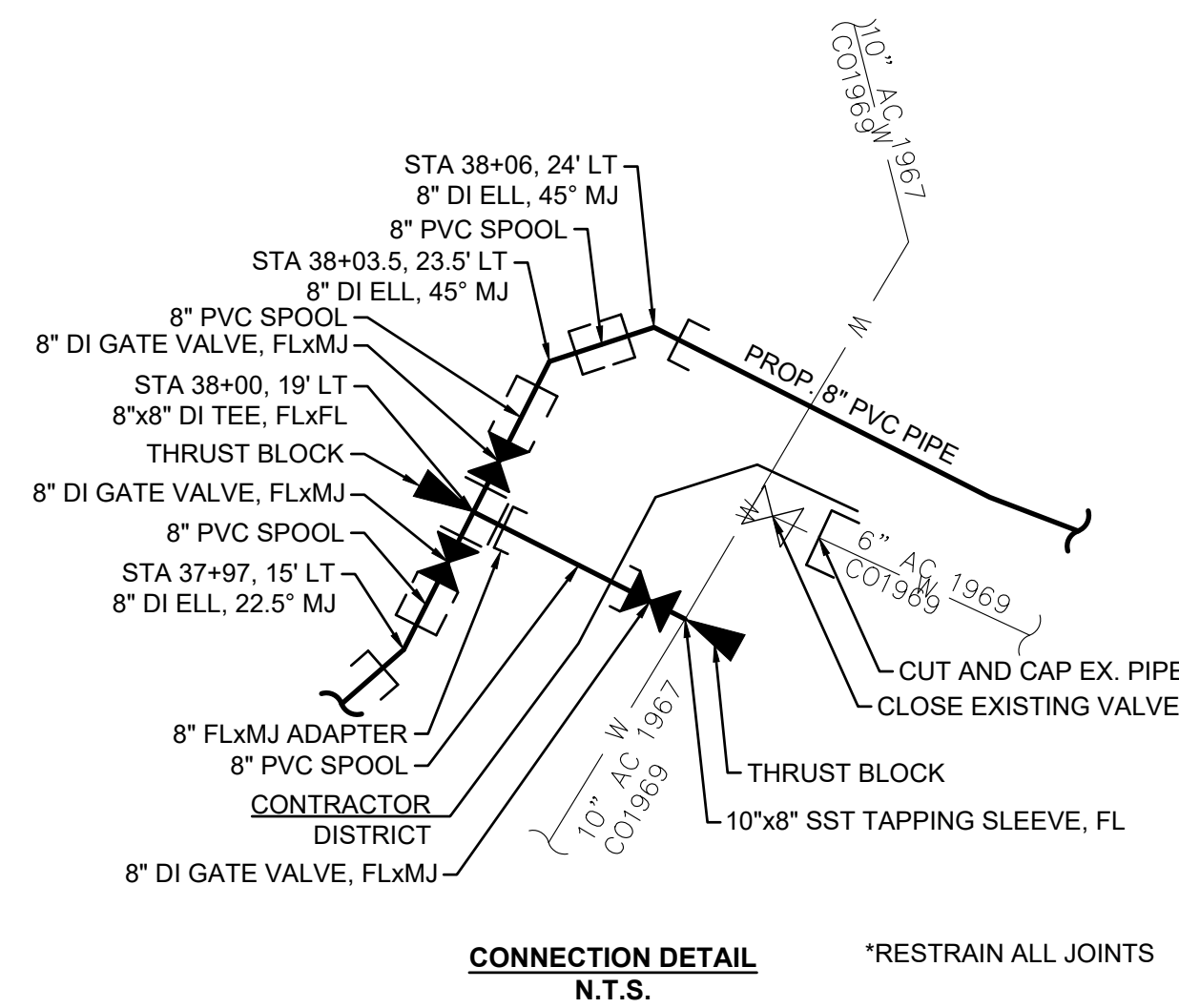
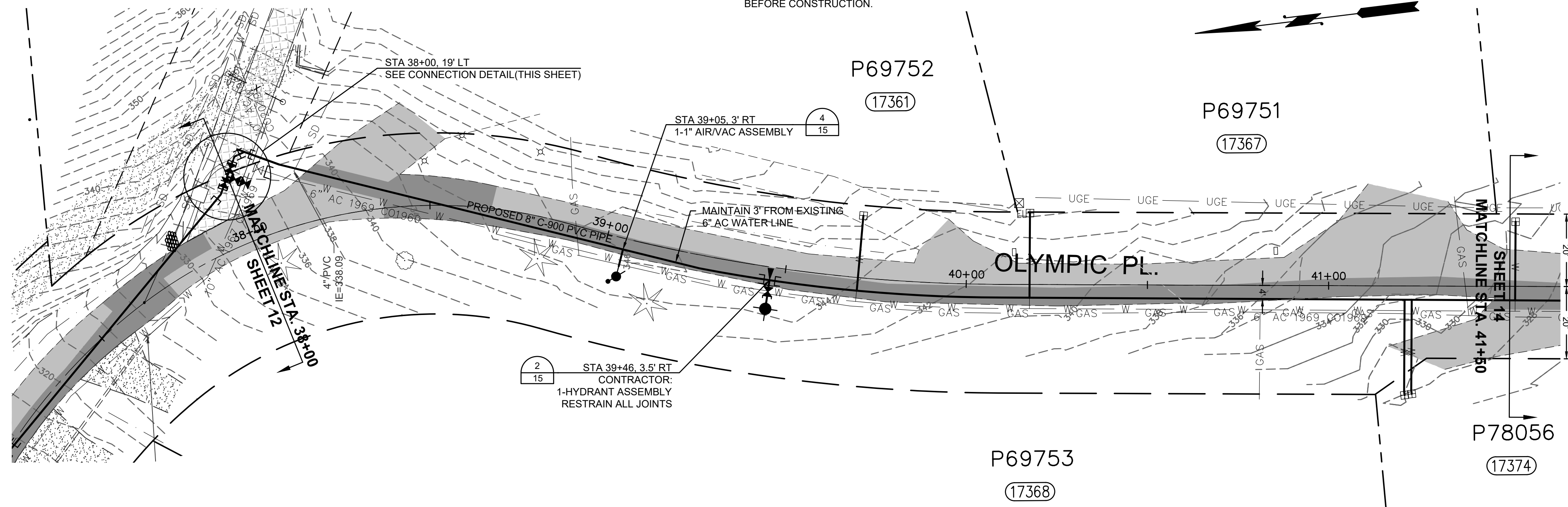
PUBLIC UTILITY DISTRICT  
 NO. 1 of SKAGIT COUNTY  
 1415 Freeway Drive  
 P.O. BOX 1436  
 Mount Vernon, WA 98273  
 (360) 424-7104  
 www.SkagitPud.org

LITTLE MOUNTAIN SKY RIDGE ROAD  
 PIPELINE REPLACEMENT  
 OLYMPIC PLACE  
 PLAN AND PROFILE  
 STA 35+00 TO STA 38+00

- NOTES:
1. CONTRACTOR TO EXPOSE EX. METER SETTERS FOR DISTRICT CONNECTIONS.
  2. CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
  3. CONTRACTOR RESPONSIBLE FOR ALL EXCAVATION, SHORING, DEWATERING, TRAFFIC CONTROL, CONCRETE THRUST BLOCKING, BACKFILL, COMPACTION, AND SURFACE RESTORATION.
  4. ALL LONG SIDE CUSTOMER SERVICE LINES ARE TO BE MOLED/BORED.
  5. LOCATION OF GAS LINE IS APPROXIMATE. CONTRACTOR TO VERIFY LOCATION BEFORE CONSTRUCTION.

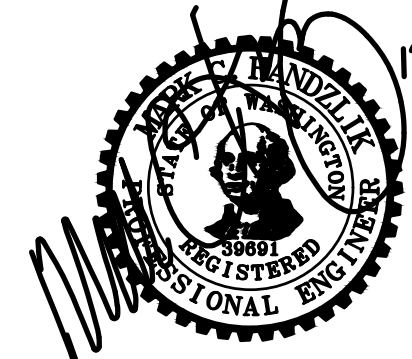


RENEW EX. SERVICES AT:	
STA	ADDRESS
39+70	17361 OLYMPIC PL.
40+17	17367 OLYMPIC PL.
41+21	17368 OLYMPIC PL.
41+23	17374 OLYMPIC PL.

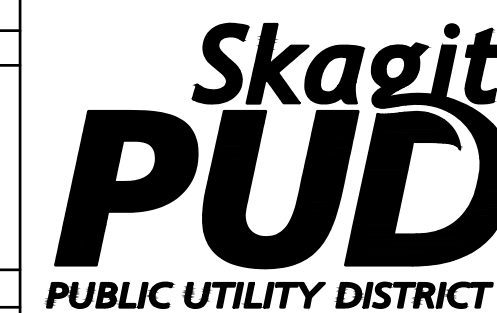


HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM:	DSGN BY: CAS
HOR: NAD 83	DWN BY: MDO
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 32
	TWP: 34 N
	RGE: 4 E



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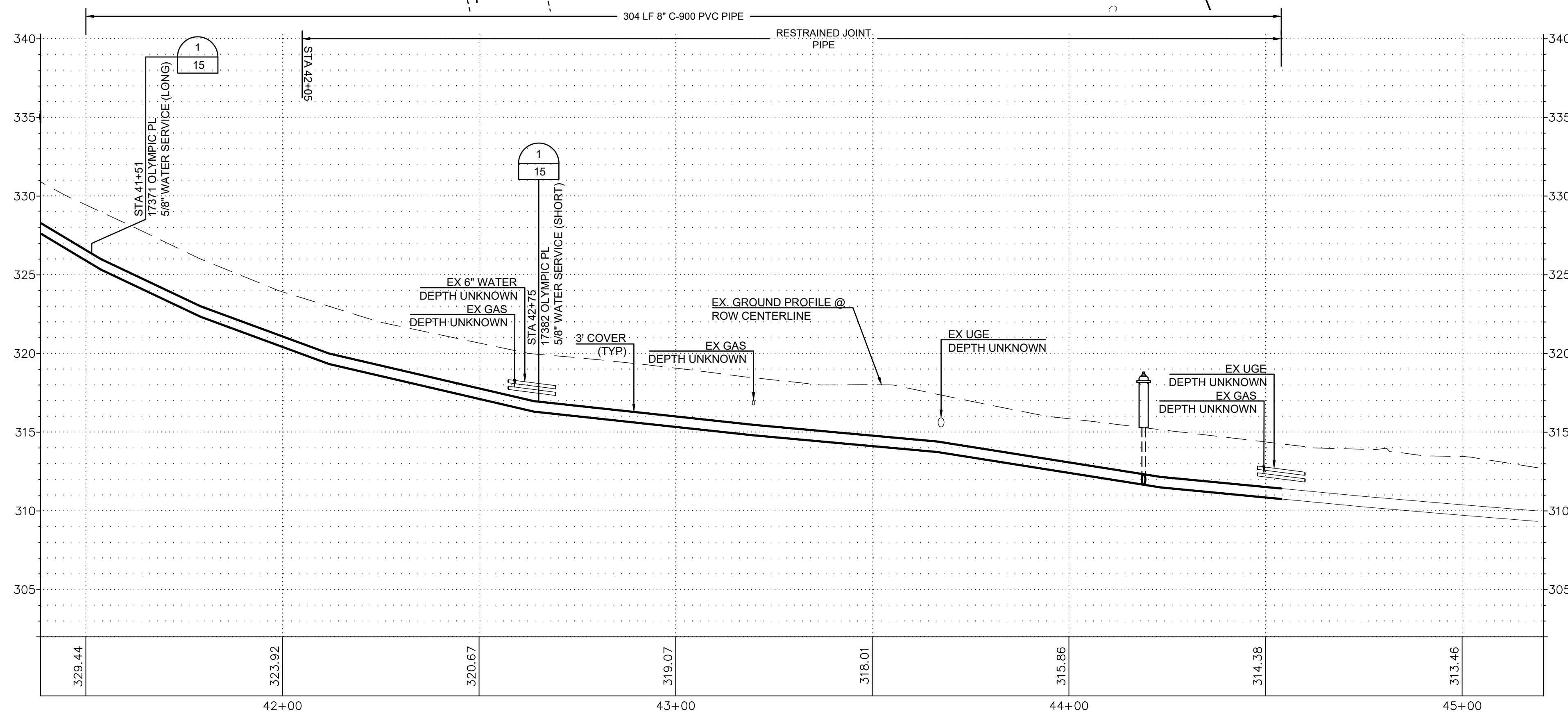
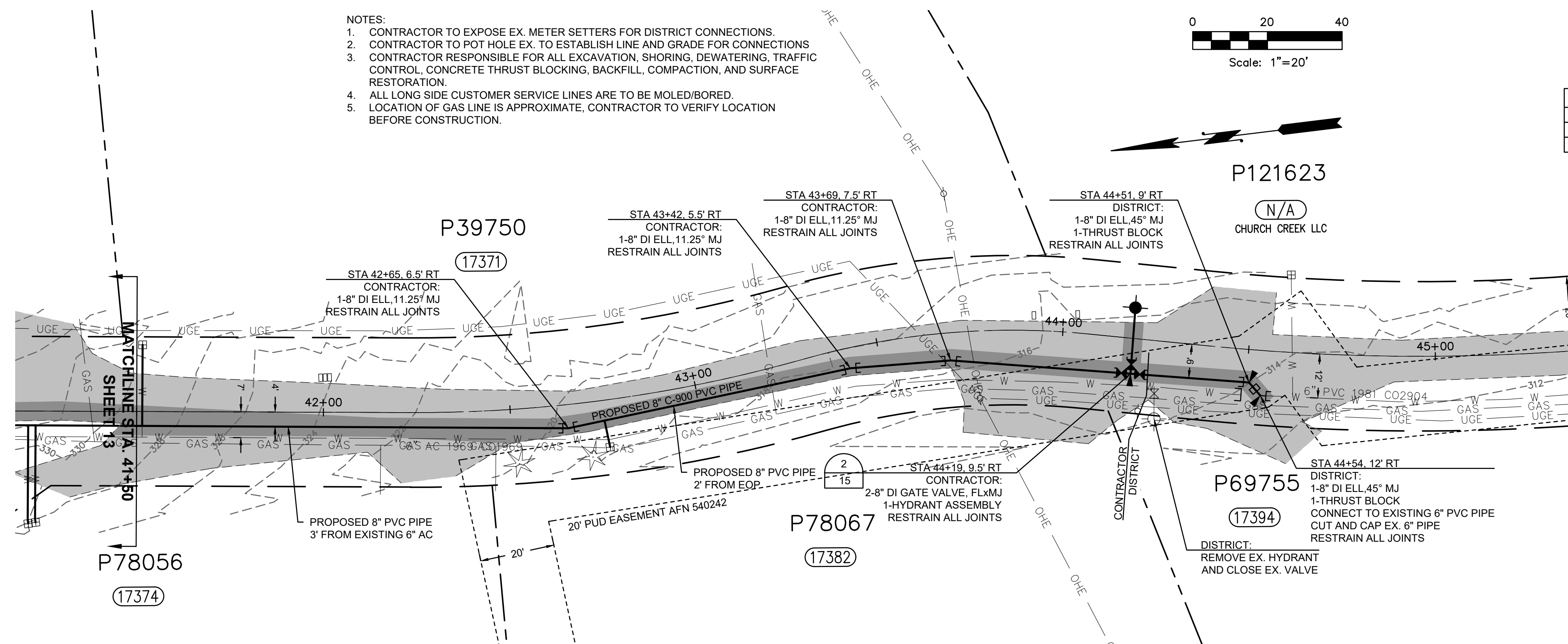
LITTLE MOUNTAIN SKY RIDGE ROAD  
 PIPELINE REPLACEMENT  
 OLYMPIC PLACE  
 PLAN AND PROFILE  
 STA 38+00 TO STA 41+50

SCALE: 1"=20'	W.O. 13-03484	SHEET:
	C.O. 4791	13 OF 16

- NOTES:
1. CONTRACTOR TO EXPOSE EX. METER SETTERS FOR DISTRICT CONNECTIONS.
  2. CONTRACTOR TO POT HOLE EX. TO ESTABLISH LINE AND GRADE FOR CONNECTIONS
  3. CONTRACTOR RESPONSIBLE FOR ALL EXCAVATION, SHORING, DEWATERING, TRAFFIC CONTROL, CONCRETE THRUST BLOCKING, BACKFILL, COMPACTION, AND SURFACE RESTORATION.
  4. ALL LONG SIDE CUSTOMER SERVICE LINES ARE TO BE MOLED/BORED.
  5. LOCATION OF GAS LINE IS APPROXIMATE, CONTRACTOR TO VERIFY LOCATION BEFORE CONSTRUCTION.



RENEW EX. SERVICES AT:	
STA	ADDRESS
41+51	17371 OLYMPIC PL.
42+75	17382 OLYMPIC PL.

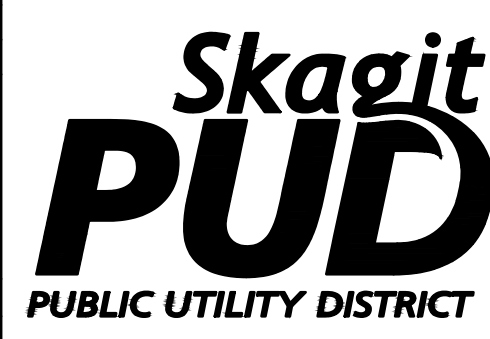


HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 5'

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM:	DSGN BY: CAS
HOR: NAD 83	DWN BY: MDO
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 32
	TWP: 34 N
	RGE: 4 E



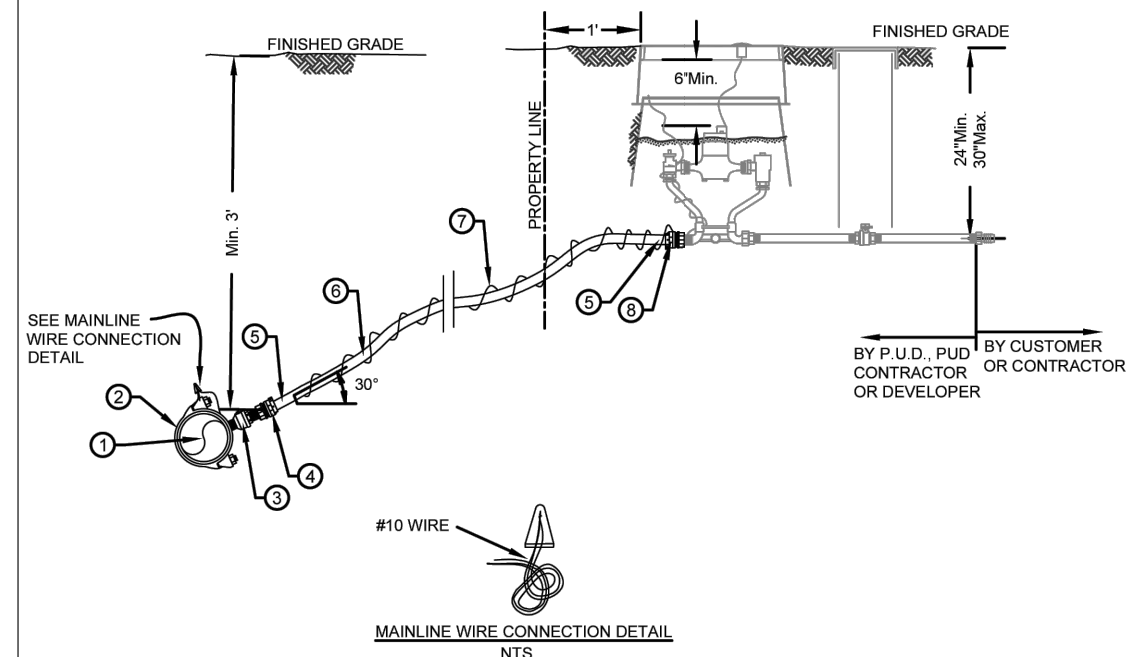
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LITTLE MOUNTAIN SKY RIDGE ROAD  
PIPELINE REPLACEMENT  
OLYMPIC PLACE  
PLAN AND PROFILE  
STA 41+50 TO STA 45+00

SCALE: 1"=20'	W.O. 13-03484	SHEET:
	C.O. 4791	14 OF 16

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	NO.
1	WATER MAIN		
2	CLAMP SERVICE, DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #2029)	1	
3	CORP. 1" (FORD #B500-4)	1	
4	ADAPTER, BRASS PAC JOINT, 1" I.P.T. x 1" COP (FORD #C1444.NL)	1	
5	INSERT, STIFFENER, 3/4" (FORD #71)	2	
6	PIPE, 1" REHAU MUNICIPEX TYPE A, 200 P.S.I.		
7	WIRE, #10 SOLID COPPER, BLUE COATED, EXTEND MIN 18" INTO BOX, NEAR LID		
8	ADAPTER, BRASS PAC JOINT, 1" I.P.T. x 1" COP (FORD #C6444.NL)	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" TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.
  - ADAPTERS AND VALVES AT THE METER AND METER BOX WATER SERVICES TO BE CONNECTED TO AN ACTIVE WATERLINE ARE REQUIRED TO BE INSTALLED BY PUD. WATER SERVICES INSTALLED WITH A NEW WATERLINE OR WATERLINE EXTENSION WILL BE PERFORMED BY THE CONTRACTOR/DEVELOPER PRIOR TO CONNECTION OF THE NEW WATERLINE TO THE PUD SYSTEM. THE PUD IS REQUIRED TO SET ALL METERS. IF A NEW WATER SERVICE IS INSTALLED BY THE PUD, PUD WILL INCLUDE THE PRIVATE SHUT-OFF VALVE AFTER THE METER. AFTER INSTALLATION THE OWNER IS RESPONSIBLE FOR ALL FUTURE MAINTENANCE, REPAIR AND REPLACEMENT OF THE PRIVATE SHUT-OFF VALVE.
  - IF METER IS NOT INSTALLED IN COPPERSETTER, INSTALL A PVC NIPPLE BETWEEN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATER TIGHT WRAP OF ELECTRICAL TAPE OVER END OF ADAPTER(S). SET COPPERSETTER FLUSH, PLUMB AND CENTERED IN BOX.
  - FLUSH OUT SERVICE TUBING AND COPPERSETTER BEFORE INSTALLING METER. DO NOT ALLOW MUD OR FOREIGN MATERIAL TO ENTER ANY TUBING OR FITTINGS.
  - FULL BOX WITH FINE DIRT TO TOP OF METER.
  - IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX, CARSON 1334-250 W/COVER 1334-455 WILL BE REQUIRED. NDI FOR THROUGH-WAY TRAFFIC APPLICATIONS.
  - IF THERE IS PETROLEUM-BASED CONTAMINATED SOIL PRESENT, THE SERVICE PRELINE SHALL BE OF TYPE K COPPER WITH BRASS AND COPPER FITTINGS.
  - IF SERVICE LINE HAS LESS THAN 2" OF COVER, CONTACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.
  - BACKFLOW PROTECTION AT THE SERVICE CONNECTION IS REQUIRED FOR NON-RESIDENTIAL, AGRICULTURAL, AND IRRIGATION USES, ON LARGE SIZED PROPERTIES, PROPERTIES WITH EXISTING WELLS AND BOOSTER/SEWAGE PUMPS, AND IN OTHER SITUATIONS AS DESCRIBED IN THE DISTRICT'S CROSS CONNECTION CONTROL MANUAL.



NOTE: ALL THREE WIRES ARE TO BE TIED TOGETHER IN AN OVERHAND KNOT APPROXIMATELY 6" FROM WIRE NUT. BARE 5/8" OF WIRES, CONNECT WITH #62325 KING WATERPROOF WIRE CONNECTOR.

BY PUD, PUD CONTRACTOR OR DEVELOPER

BY CUSTOMER CONTRACTOR OR DEVELOPER

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: SEPTEMBER 9, 2022

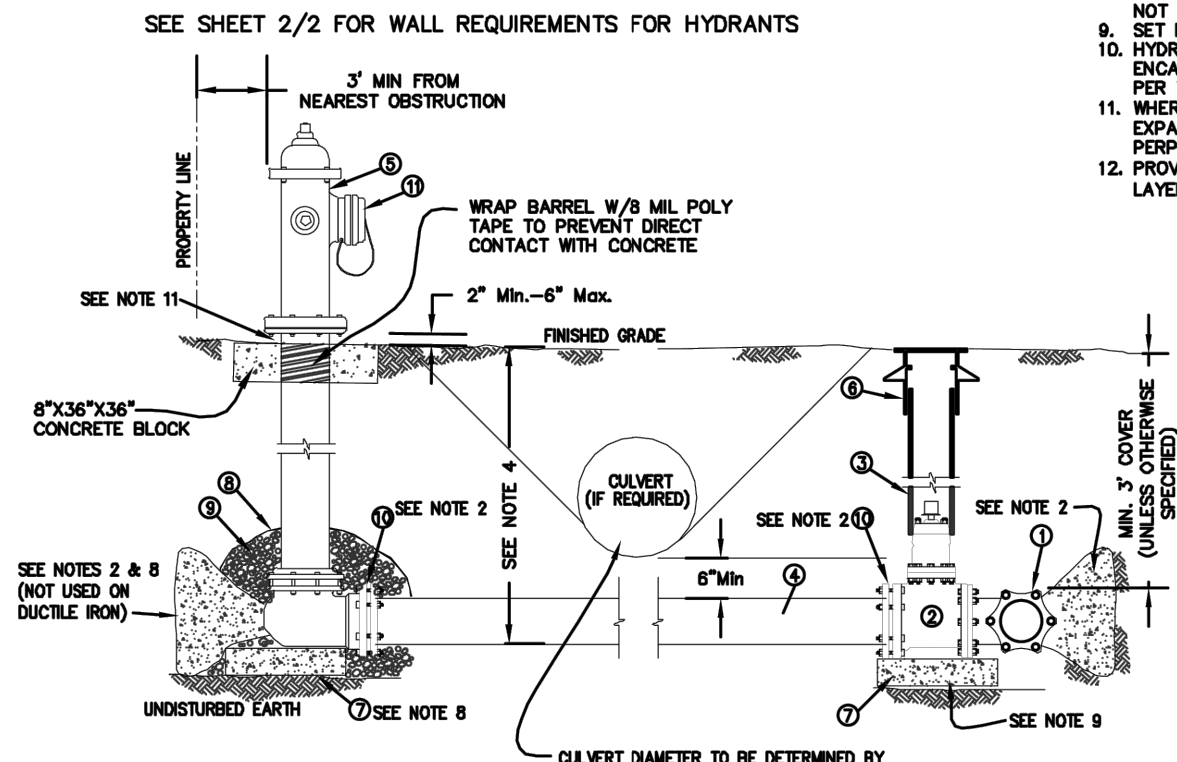


STANDARD INSTALLATION OF SINGLE 5/8" OR 3/4" METERED SERVICE WITH 200 P.S.I. REHAU SERVICE LINE

SCALE: 1" = 2'	STANDARD
DATE: 11/14/14	
REVISED: 11/28/22	
DRAWN BY: KAN	WS58-1
APPROVED BY: MCH	

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	NO.
1	TEE WITH FLANGED BRANCH	1	
2	VALVE WITH FLANGING CONNECTIONS (SEE NOTE 8)	1	
3	CASING, 6" PVC, SNIER PIPE	1	
4	PIPE, 8" CLASS 50 DUCTILE IRON, FIELD JOINT	1	
5	FIRE HYDRANT WITH PUMPER PORT, GLOW MEDALLION OR AS APPROVED BY JURISDICTION FIRE DEPARTMENT DISTRICT	1	
6	VALVE BOX, CAST IRON CLIMPC FOUNDRY 16007/SKAGIT (SEE P.U.D. DETAIL)	1	
7	BLOCK, PRECAST CONCRETE, SEE NOTE 8	1	
8	FABRIC, GEOTEXTILE, NON-WOVEN (MIRAF 140N)	1	
9	1 1/4" CY DRAM ROCK, 1-1/2" - 3/4", NO FINES	2	
10	WIRE - #10 COP, 30" STRIP	2	
11	HYDRANT ADAPTER, STORZ STYLE S-37 W/SD CAP & CABLE, 5"x4"PT	1	

- NOTES:**
- ALL MATERIALS AND BRANDS MUST BE APPROVED BY P.U.D.
  - BLOCK TEE AND HYDRANT WITH PUMPER PORT CONCRETE ON ALL WATER MAINS OTHER THAN DUCTILE IRON AND ON ALL TAPPING SLEEVES AS REQUIRED PER DISTRICT BLOCKING DETAIL. IN ADDITION 8" "MEGALUGS" (OR APPROVED EQUIVALENT) ARE TO BE INSTALLED AT VALVE AND HYDRANT M.A. OUTLETS. RESTRAIN ANY JOINTS IN THE PIPELINE WITH "FIELD LOCK" GASKETS (OR APPROVED EQUIVALENT) INSTALLED IN THE BELLS OF TYTON JOINT PIPE OR "MEGALUGS" ON 4" BELLS.
  - NO THRUST BLOCK REQUIRED BEHIND TEE ON 8" DUCTILE IRON OR LARGER MAINS.
  - PROTECTIVE BARBER POSTS MAY BE NECESSARY AT SOME HYDRANT INSTALLATIONS. CONTACT FIRE DEPARTMENT/DISTRICT FOR SPECIFIC REQUIREMENTS.
  - HYDRANT LENGTH AND TRENCH DEPTH SHALL BE SO 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 ANNA STANDARD DATE, "O" RING PACKING, NON-RISING STEM, 2" OPERATING NUT, RESILIENT WEDGE.
  - 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 S.F.T. CONCRETE SUPPORT TIGHT UP UNDER VALVE AND HYDRANT.
  - HYDRANT BARREL, LEAD, TEE, AND VALVE MUST BE WRAPPED WITH POLYETHYLENE PIPE ENCASMENT TAPS WHICH IS A MINIMUM OF 8" MIN. THICK. IT MUST BE INSTALLED AS PER W.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 8" THICK LAYER OF 5/8" MINUS CRUSHED ROCK COMPACTED 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 3.0625 INCHES OUTSIDE DIAMETER AT 7-1/2 THREADS PER INCH. PUMPER PORTS SHALL BE NO. 2 PADOIC COAST THREADS MEASURING 4.825 INCHES OUTSIDE DIAMETER AT 8 THREADS PER INCH. THE OPERATING NUT SHALL BE 1-1/4 INCH PENTAGON.

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

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

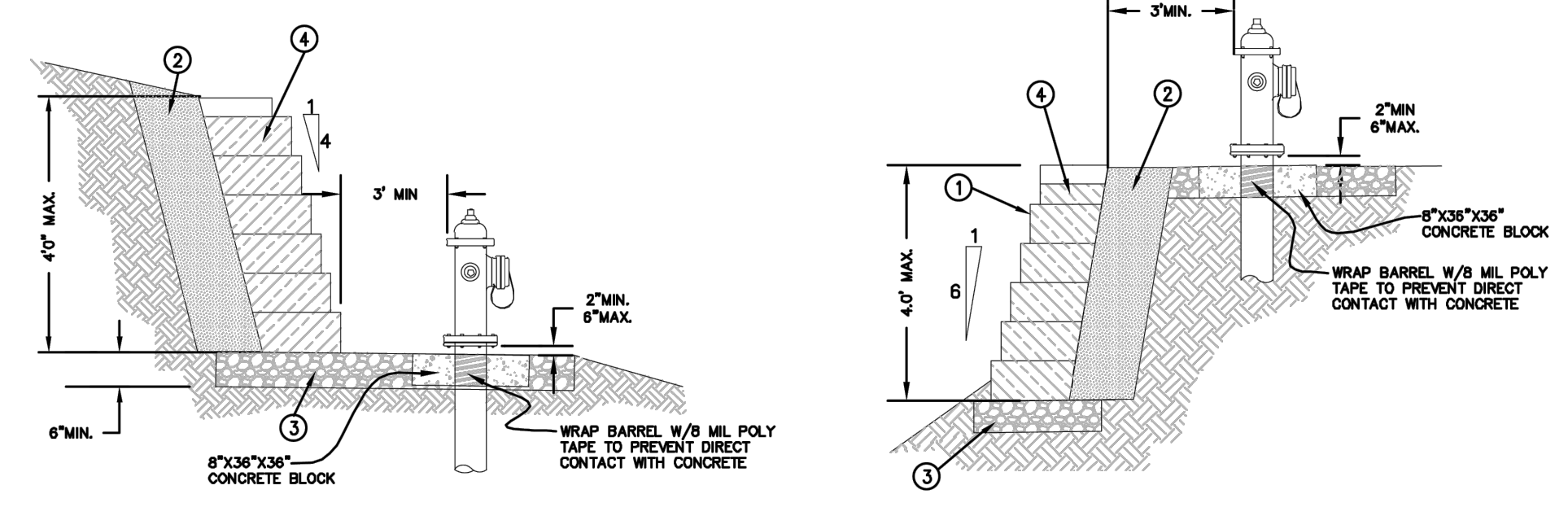
APPROVED ON: May 6, 2014



STANDARD INSTALLATION OF FIRE HYDRANT "CENTER STEM TYPE"

SCALE: NTS	STANDARD
DATE: 3-25-05	
REVISED: 5/6/14	
DRAWN BY: CAS	WH-1a
APPROVED BY: GJS	

- LEGEND**
- INSTALL CORNERSTONE F100 BLOCK UNITS WITH CAPS, STACK TO DESIRED HEIGHT (4" MAX.). ADHERE CAPS TO THE BLOCK UNITS WITH A CONCRETE ADHESIVE.
  - COMPACT SELECT FILL MATERIAL AS REQUIRED BY THE DISTRICT'S INSPECTOR.
  - ESTABLISH A COMPACTED AGGREGATE LEVELING PAD USING 5/8" MINUS CRUSHED ROCK COMPACTED TO 95%. BASE SHALL BE A MINIMUM 6" DEEP PLUS ONE INCH FOR EVERY ONE FOOT OF WALL HEIGHT. PLACE FIRST COURSE OF BLOCKS ON LEVELING SAND. FILL ANY VOIDS IN BLOCKS WITH GRAVEL.
  -



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: MAY 16, 2014

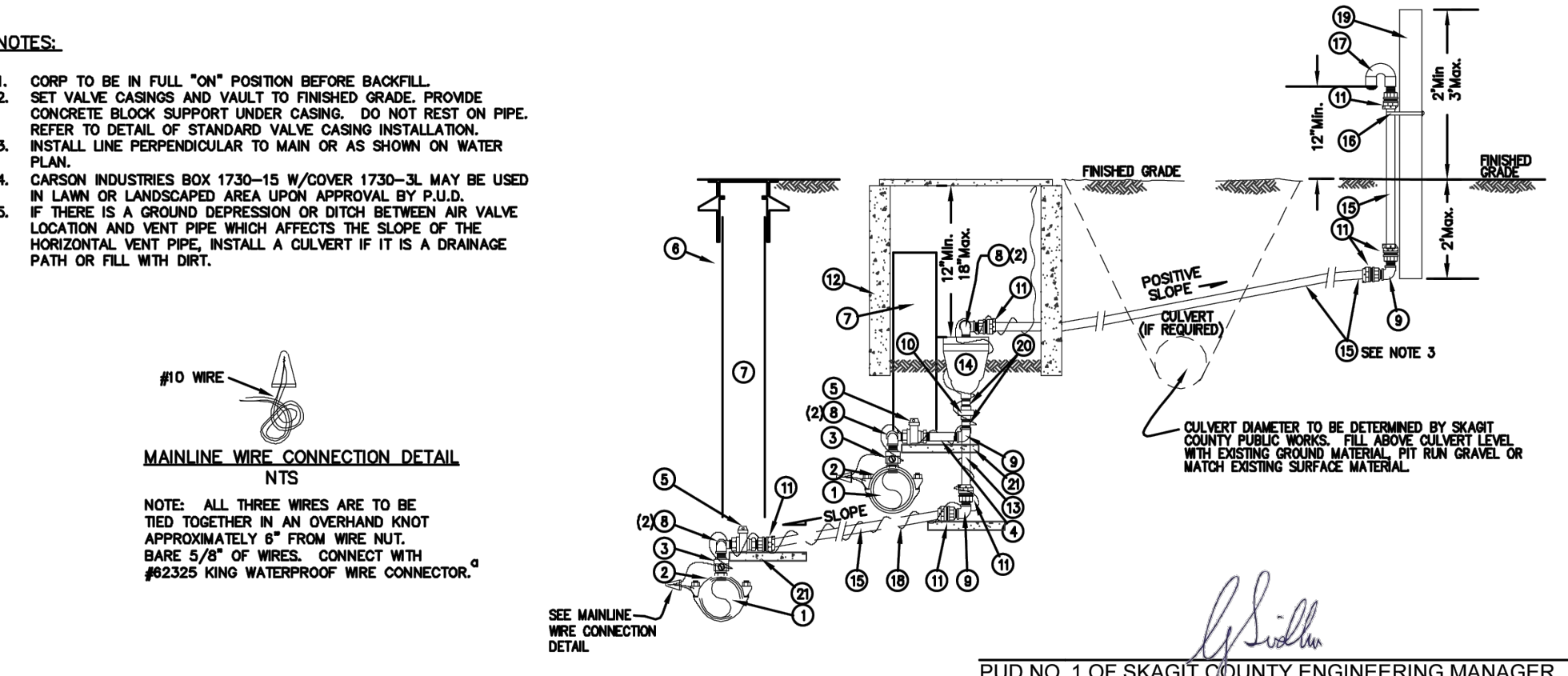


STANDARD INSTALLATION OF FIRE HYDRANT "CENTER STEM TYPE"

SCALE: NTS	STANDARD
DATE: 3-25-05	
REVISED: 5/27/14	
DRAWN BY: KDM	WH-1b
APPROVED BY: GJS	

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D	NO.
1	WATER MAIN		
2	CLAMP SERVICE, DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #2029)	1	
3	CORP. 1" BRASS FB-500	1	
4	NIPPLE, BRASS 1/2"	1	
5	CURB STOP, 1" B11-444	1	
6	VALVE BOX, CAST IRON OLYMPIC FOUNDRY VB-007-SKAGIT (SEE P.U.D. DETAIL)	1	
7	CASING, 6" PVC, SNIER PIPE	1	
8	ELL, 1" BRASS, 90°	4	
9	ELL, 1" BRASS, 90°	2	
10	UNION, BRASS 1"	1	
11	ADAPTER, BRASS PAC JOINT, 1" I.P.T. x 1" PVC (FORD #287-44)	4-7	
12	UTILITY VALVE 3030-LA W/3030-P COVER (SEE NOTE 4)	1	
13	NIPPLE, 1/2" BRASS	1	
14	VALVE, 1" COMBINATION AIR (AFCD) (W/ STAINLESS STEEL TRIM)	1	
15	PIPE, 1" PVC, SGL 80	1	
16	HOSE CLAMP, 3/4" STAINLESS STEEL	1	
17	SEAL, 1" COPPER, 100% WITH INSERT SCREEN	1	
18	WIRE, #10 SOLID COPPER, BLUE COATED, EXTEND MIN 18" INTO BOX, NEAR LID	1	
19	POST, 4"-0" MIN. METAL FENCE POST W/SPACE REMOVED (PRESSURE TREATED 4" x 4" POST W/MARKER WHERE APPROPRIATE)	1	
20	NIPPLE, 1/2" BRASS	2	
21	CONCRETE SUPPORT, MIN. 1 FT. SQUARE x 1-1/4 IN. THICK	1-2	

- NOTES:**
- CORP TO BE IN FULL "ON" POSITION BEFORE BACKFILL.
  - SET VALVE CASINGS AND VALVE TO FINISHED GRADE. PROVIDE CONCRETE BLOCK SUPPORT UNDER CASING. DO NOT REST ON PIPE. REFER TO DETAIL OF STANDARD VALVE CASING INSTALLATION.
  - INSTALL LINE PERPENDICULAR TO MAIN OR AS SHOWN ON WATER PLAN.
  - CARSON INDUSTRIES BOX 1730-15 W/COVER 1730-3, MAY BE USED IN LAWN OR LANDSCAPED AREA UPON APPROVAL BY P.U.D.
  - IF THERE IS A GROUND DEPRESSION OR BUMP BETWEEN AIR VALVE LOCATION AND VENT PIPE WHICH AFFECTS THE SLOPE OF THE HORIZONTAL VENT PIPE, INSTALL A CULVERT IF IT IS A DRAINAGE PATH OR FILL WITH DIRT.



PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: MAY 21, 2014



STANDARD INSTALLATION OF 1" COMBINATION AIR VALVE ASSEMBLY

SCALE: 1" = 2'	STANDARD
DATE: 3-25-05	
REVISED: 5/21/14	
DRAWN BY: CAS	WV1-1
APPROVED BY: GJS	

ISSUE	REVISIONS	BY	DATE
1.	ISSUED FOR BIDDING	MCH	8/7/18
2.	REVISED ALIGNMENT	MCH	3/12/19
3.	ISSUED FOR BIDDING	MCH	12/2/22



DATUM:	DSGN BY: CAS
HOR: NAD 83	DWN BY: MDO
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED:	SEC: 3 & 10
	TWP: 33 N
	RGE: 3 E



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www.SkagitPud.org

LITTLE MOUNTAIN SKY RIDGE ROAD PIPELINE REPLACEMENT

DETAILS 1 OF 2

SCALE: 1"=20'	W.O. 13-03484	SHEET: 15 OF 16
	C.O. 4791	

