

# McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II SCHEDULE A

MOUNT VERNON, SKAGIT COUNTY, WA  
P.N. 03761  
CO 4829  
ISSUED FOR BIDDING  
JUNE 4, 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 98233 CONTACT: JAMES HOBBS TEL: (360) 336-3876	<b>FRONTIER COMMUNICATION</b> 595 PEASE ROAD BURLINGTON, WA 98233 CONTACT: BRETT MURDOCK TEL: (360) 707-0641
<b>COMCAST XFINITY</b> 400 SEQUOIA DRIVE BELLINGHAM, WA 98226 CONTACT: CASEY JONES TEL: (360) 527-8243	<b>SKAGIT COUNTY</b> 1800 CONTINENTAL PLACE MOUNT VERNON, WA 98273 CONTACT: PAUL ERICKSON TEL: (360) 416-1429
<b>PUGET SOUND ENERGY</b> PO BOX 90868 - MAIL STOP BOT01G BELLEVUE, WA 98009-0868 CONTACT: CUSTOMER CONSTRUCTION SERVICES TEL: (888) 321-7779	

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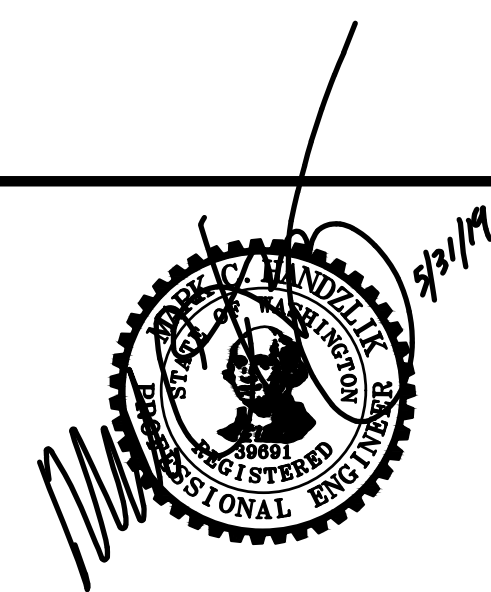


**VICINITY MAP**   
NOT TO SCALE

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

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

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM: DSGN BY: JLB  
HOR: NAD 83 DWN BY: JLB  
VERT: NAVD 88 APPVD BY: MCH

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555

DATE PRINTED: SEC: 21.22  
TWP: 34 N  
RGE: 3 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

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

COVER

SCALE: NONE P.N. 03761 SHEET: COVER  
C.O. 4829

**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
	SOIL BORING	BORE	SV-SOIL-EXST-SYM
	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
	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
	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
	TRAFFIC JUNCTION BOX	TJB1	TF-STCR-EXST-SYM
	ELEC. JUNCTION BOX	TJB1	PO-STCR-EXST-SYM
	POWER METER	EM	PO-STCR-EXST-SYM
	TELECOM. JUNCTION BOX	TJB1	TL-STCR-EXST-SYM
	CABLE TV JUNCTION BOX	TJB1	TV-STCR-EXST-SYM
	JUNCTION BOX	TJB1	UT-STCR-EXST-SYM
	TELEPHONE RISER	TELR	TL-STCR-EXST-SYM
	UTILITY POLE	UP	PO-STCR-EXST-SYM
	UTILITY POLE W/CONDUIT	UP	PO-STCR-EXST-SYM
	GUY ANCHOR	UPA	PO-STCR-EXST-SYM
	GUY POLE	GUP	PO-STCR-EXST-SYM
	TRANSFORMER	TRAN	PO-STCR-EXST-SYM
	POWER VAULT	POWRV	PO-STCR-EXST-SYM
	TRANSMISSION TOWER	PTWR	PO-STCR-EXST-SYM
	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
	SPRINKLER HEAD	SPRHD	WA-MISC-EXST-SYM
	IRRIGATION BOX	ICV	WA-MISC-EXST-SYM

**WATER SYMBOLS**

SYMBOL	DESCRIPTION	BLOCK	LAYER	USE EXST/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	
	2 NOZZLE	X_HYD2/P_HYD2	WA-FHYD-XXXX-SYM	
	3 NOZZLE	X_HYD3/P_HYD3	WA-FHYD-XXXX-SYM	
	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	
	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	

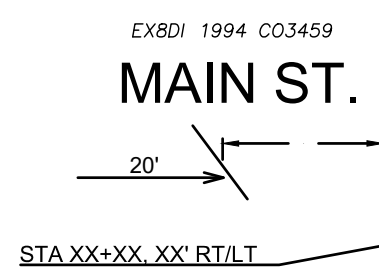
SYMBOL	DESCRIPTION	BLOCK	LAYER
	90° ELBOW	MjxMJ	WA-FITT-XXXX-SYM
	45° ELBOW	MjxMJ	WA-FITT-XXXX-SYM
	22.5° ELBOW	MjxMJ	WA-FITT-XXXX-SYM
	11.25° ELBOW	MjxMJ	WA-FITT-XXXX-SYM
	CROSS	MjxMJ	WA-FITT-XXXX-SYM
	TEE	MjxMJ	WA-FITT-XXXX-SYM
	VERTICAL ELBOW	MjxMJ	WA-FITT-XXXX-SYM
	45° ELBOW	MjxFL	WA-FITT-XXXX-SYM
	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
	WATERLINE LABEL	.10	WA-MAIN-PROP-TXT
	EX. WATERLINE LABEL		WA-MAIN-EXST-TXT
	STREET NAME	.25	RD-NAME-EXST-TXT
	WATERLINE DIMENSION FROM CENTERLINE	.10	WA-DIMS-EXST-TXT
	CALLOUT	2.0	WA-PLIN-PROP-TXT2



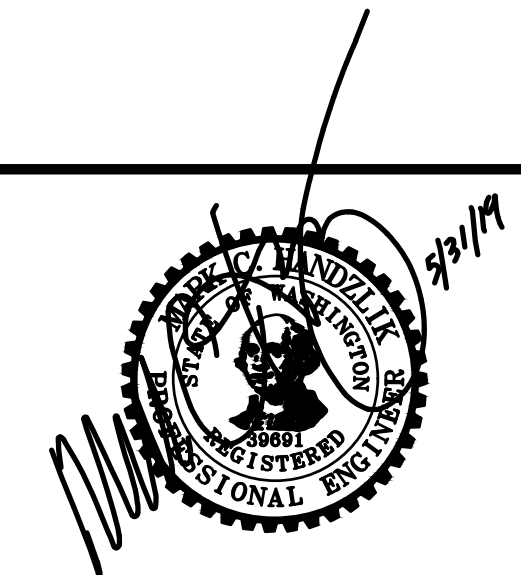
**LINE TYPES**

LINE TYPE	DESCRIPTION	LAYER
	GENERIC GAS LINE	GS-PLIN-EXST-LIN
	HIGH PRESSURE GAS	GS-PLIN-EXST-LIN
	LOW PRESSURE GAS	GS-PLIN-EXST-LIN
	IRRIGATION	WA-IRRI-EXST-LIN
	STORM DRAIN	SD-GLIN-EXST-LIN
	EXISTING CULVERT	SD-CULV-EXST-LIN
	SANITARY SEWER	SS-GLIN-EXST-LIN
	SS FORCEMAIN	SS-PLIN-EXST-LIN
	WATER LINE	WA-PLIN-EXST-LIN
	UNDERGROUND POWER	PO-BLIN-EXST-LIN
	UNDERGROUND FIBER OPTIC	FO-BLIN-EXST-LIN
	UNDERGROUND TELEPHONE	TL-BLIN-EXST-LIN
	UNDERGROUND TELEVISION	TV-BLIN-EXST-LIN
	OVERHEAD ELECTRIC	PO-ALIN-EXST-LIN
	OVERHEAD FIBER OPTIC	FO-ALIN-EXST-LIN
	OVERHEAD TELEPHONE	TL-ALIN-EXST-LIN
	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-METR-PROP-LIN
	RECLAIMED WATER LINE	WA-RCW-EXST-LIN
	VICINITY MAP	SF-VICINITY-C127
	SHUTOFF DETAIL LINES	VARIES

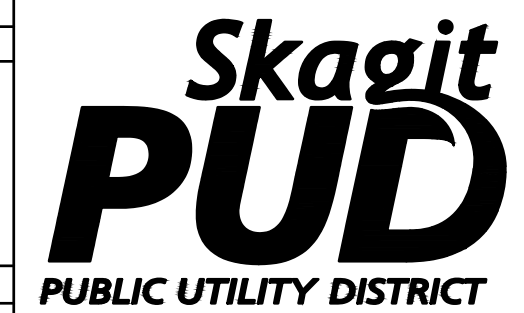
**HATCHING**

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
PAVEMENT RESTORATION:	
TEMP PVMT. PATCH - DASH, 0', SCALE=0.30 OF DWG SCALE	SF-ASPH-PROP-HCH

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DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPV BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21, 22
	TWP: 34 N
	RGE: 3 E



PUBLIC UTILITY DISTRICT  
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1415 Freeway Drive  
P.O. BOX 1436  
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www.SkagitPud.org

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

LEGEND

SCALE: NONE	P.N. 03781	SHEET: 1 OF 26
	C.O. 4829	

## DISTRICT STANDARD GENERAL NOTES

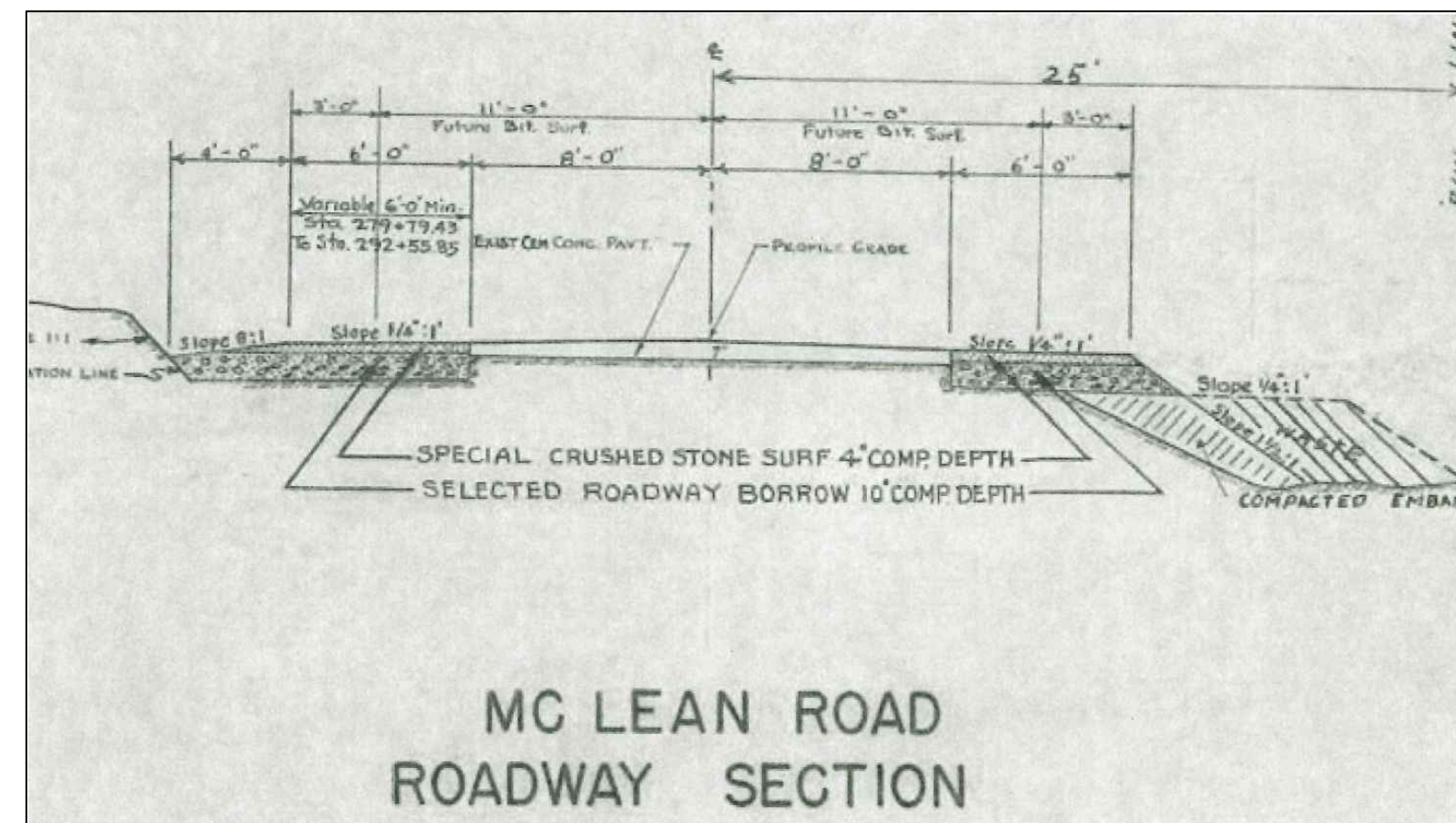
(Minimum Requirements)

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.
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 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 ANTI CORROSION WAX/PATROLAUM 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). BEA 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 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.
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 _____	_____
TEST DATE _____	TEST PRESSURE _____	_____
TIME START _____	TIME END _____	_____
PRESSURE DROP _____	MAKE-UP WATER _____	_____
TEST DATE _____	TEST PRESSURE _____	_____
TIME START _____	TIME END _____	_____
PRESSURE DROP _____	MAKE-UP WATER _____	_____
TEST DATE _____	TEST PRESSURE _____	_____
TIME START _____	TIME END _____	_____
PRESSURE DROP _____	MAKE-UP WATER _____	_____

## 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.

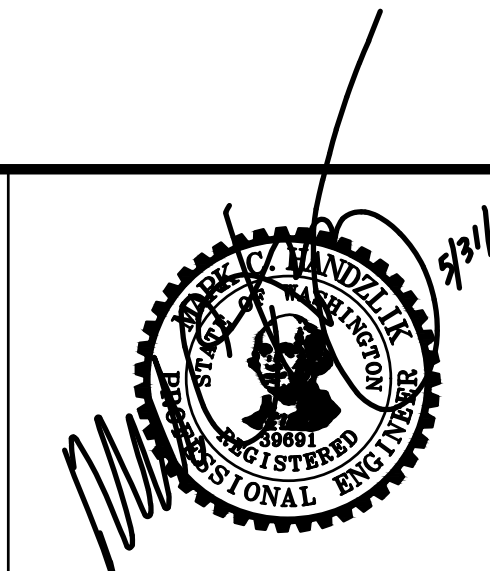


NOTE: DEPTH FROM EXISTING SURFACE TO CONCRETE PANELS VARIES AND MAY HAVE DEPTHS OF AGGREGATE BETWEEN EXISTING ASPHALT AND OLD CONCRETE PANELS BELOW.

### EX CONCRETE PANEL ROAD SECTION

PROVIDED BY SKAGIT COUNTY PUBLIC WORKS  
N.T.S.

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22 TWP: 34 N RGE: 3 E

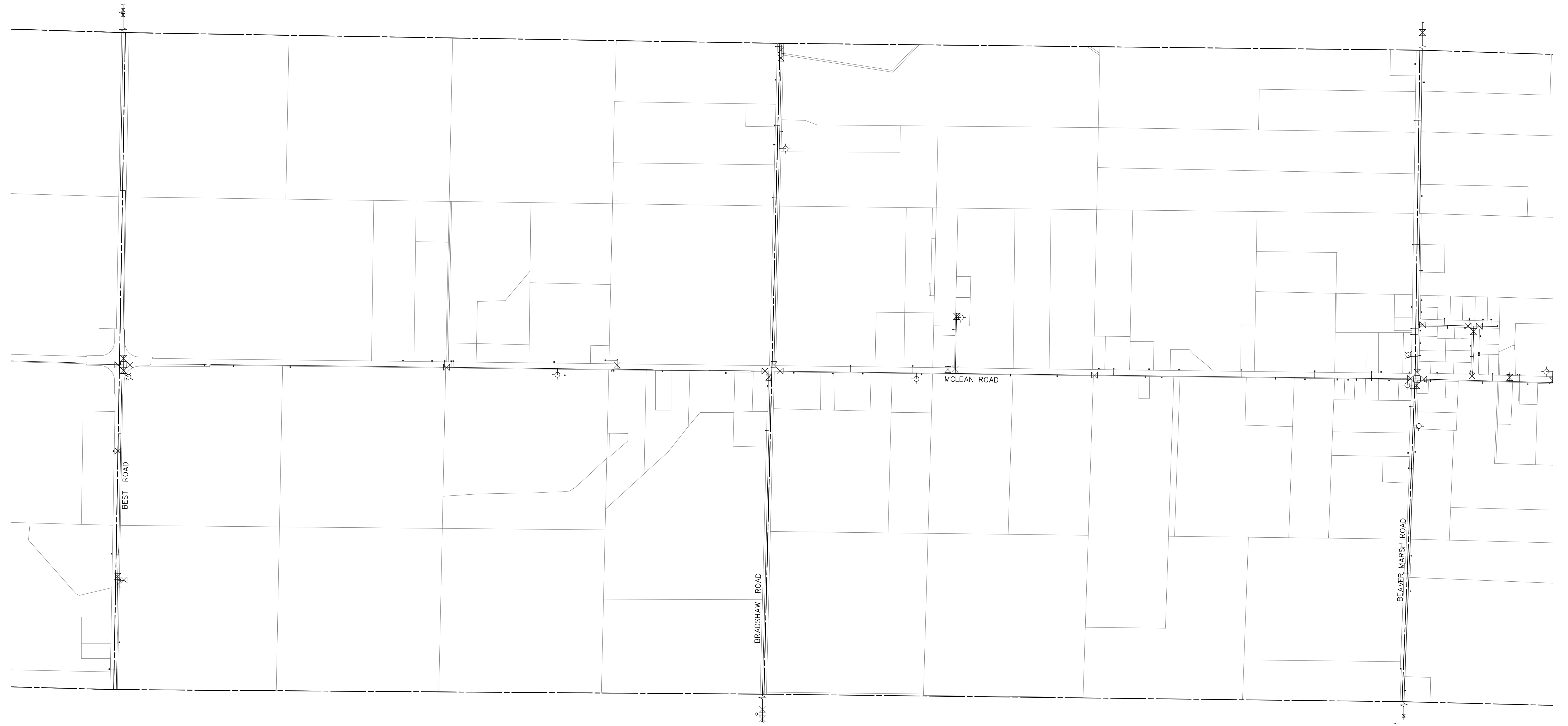


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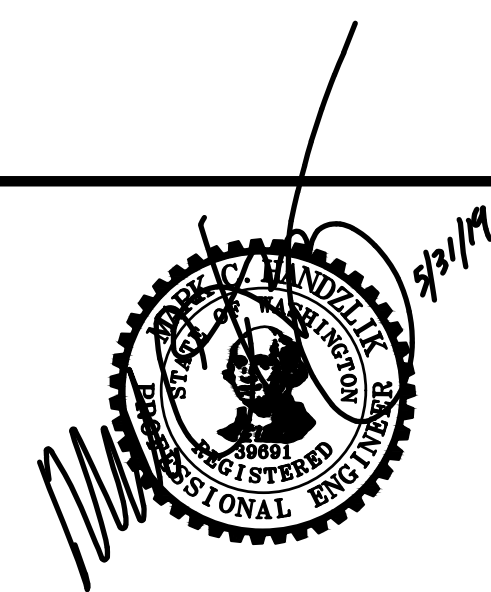
McLEAN ROAD, WALL STREET TO BEST  
ROAD PHASE II

GENERAL NOTES

SCALE: NONE	P.N. 03761	SHEET:
	C.O. 4829	2 OF 26



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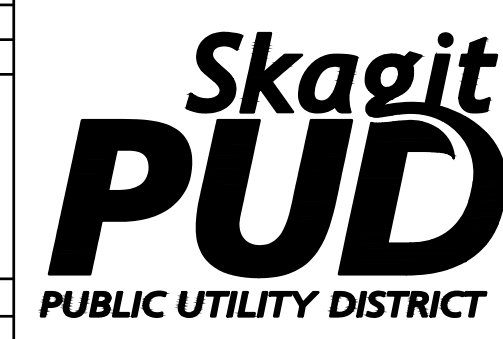


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MCLEAN ROAD, WALL STREET TO BEST  
 ROAD PHASE II

SHUTDOWN MAP

SCALE: NONE

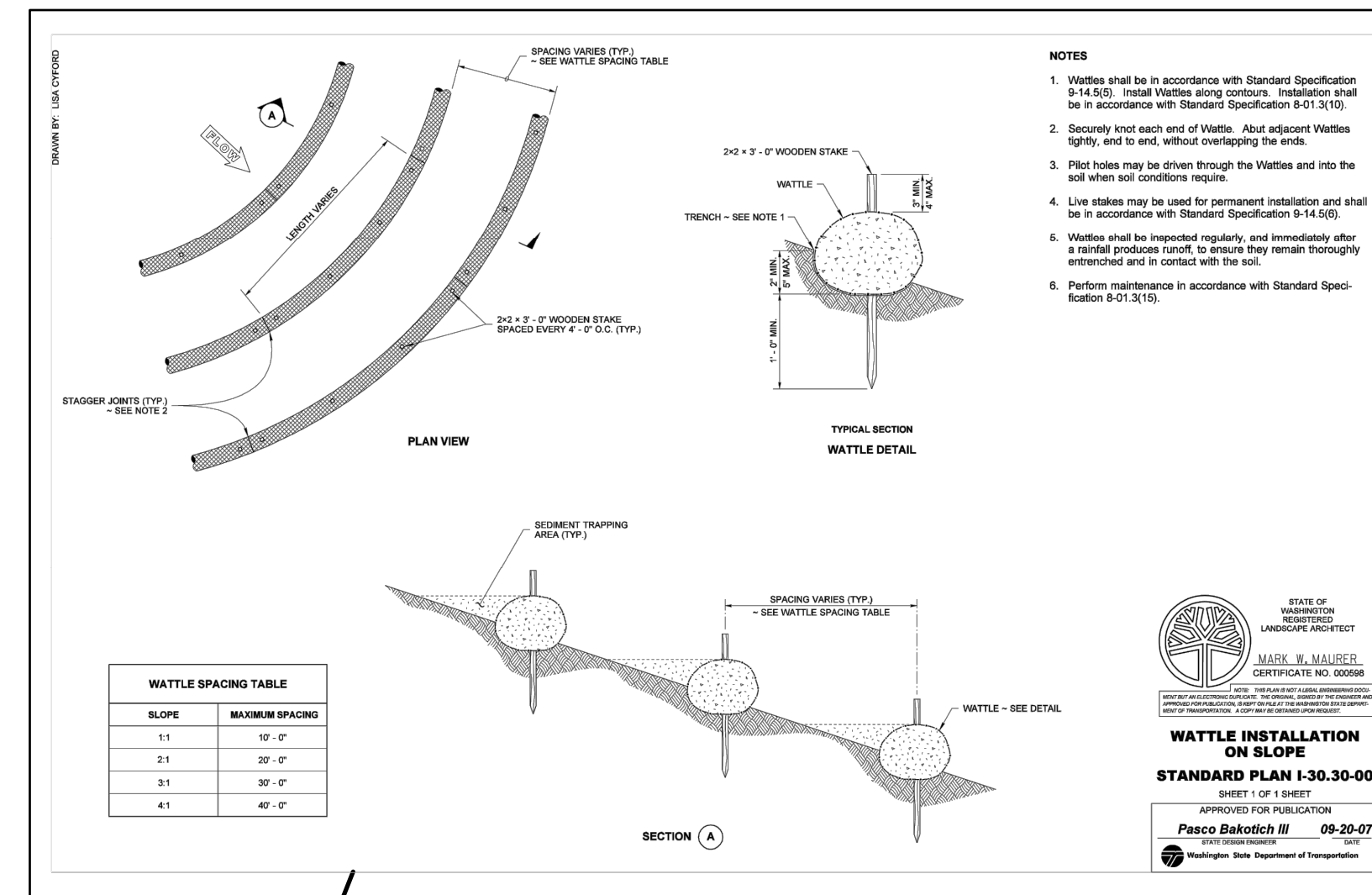
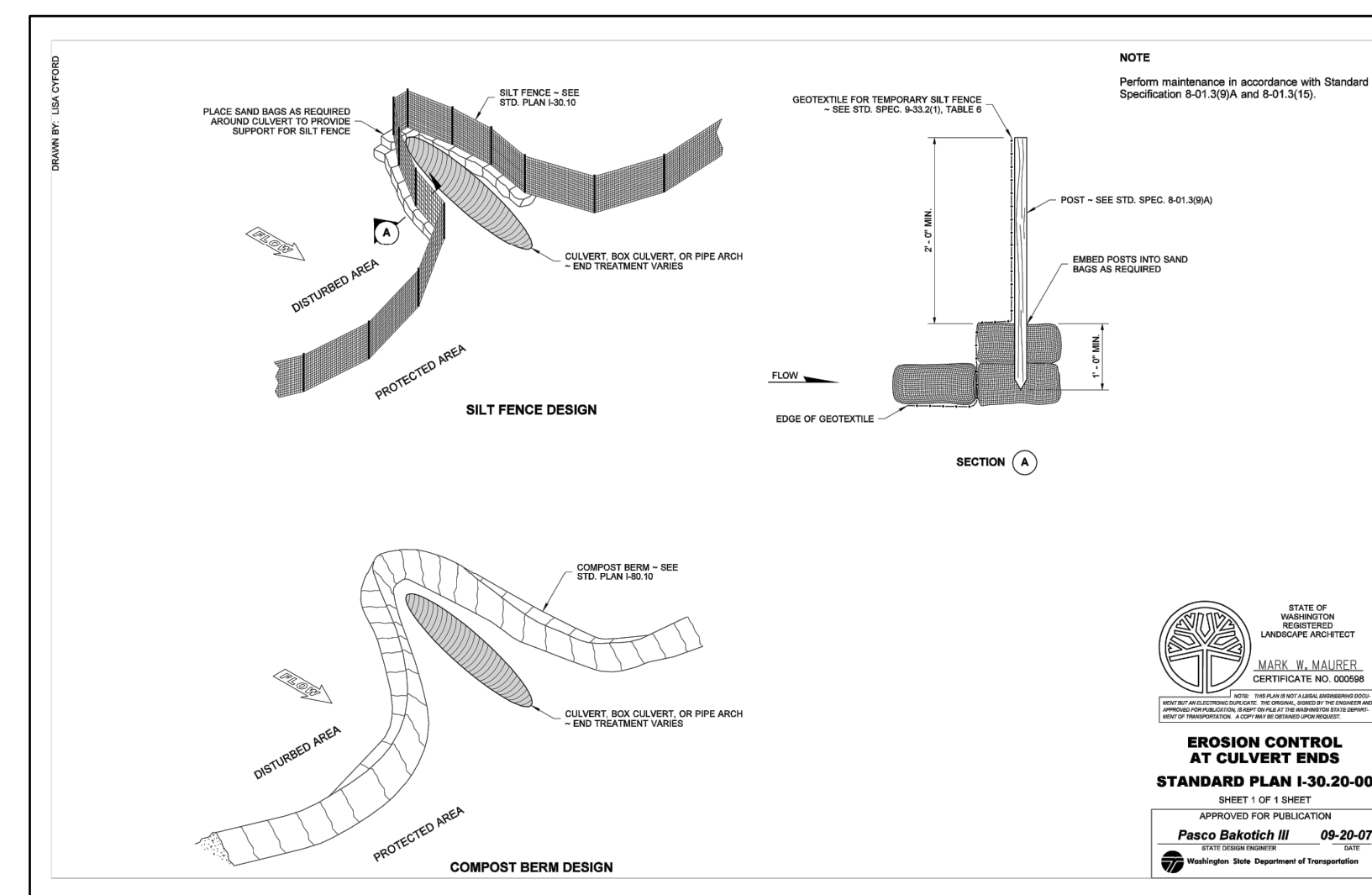
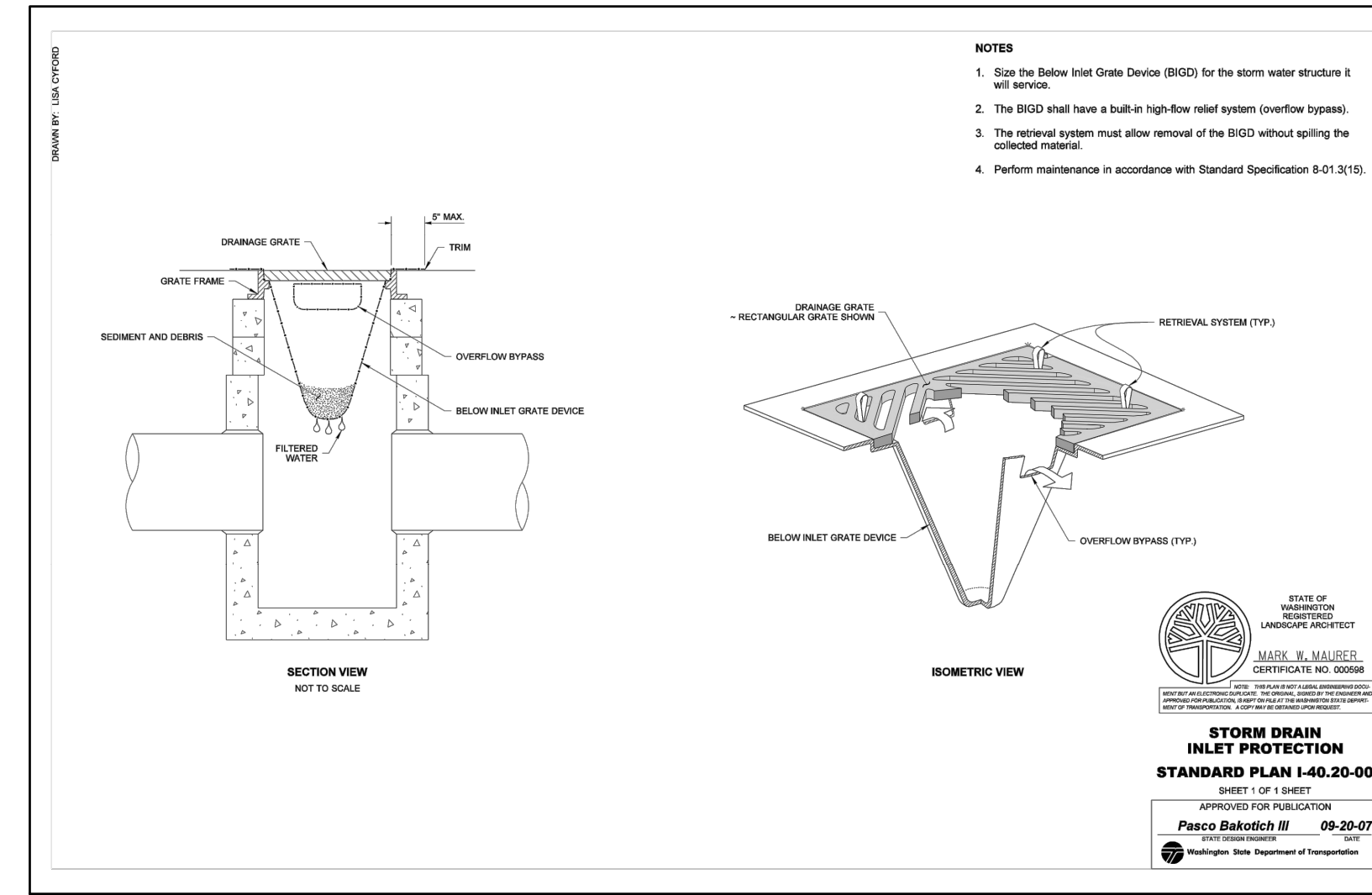
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SHEET:  
 3 OF 26

**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 UPGRADE 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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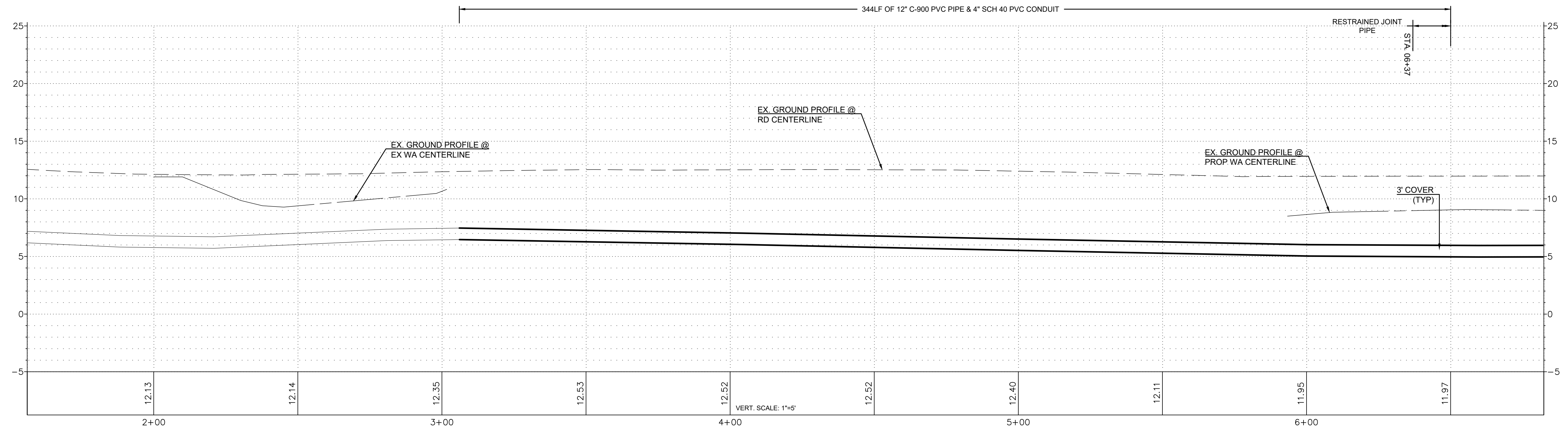
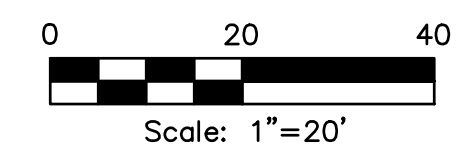
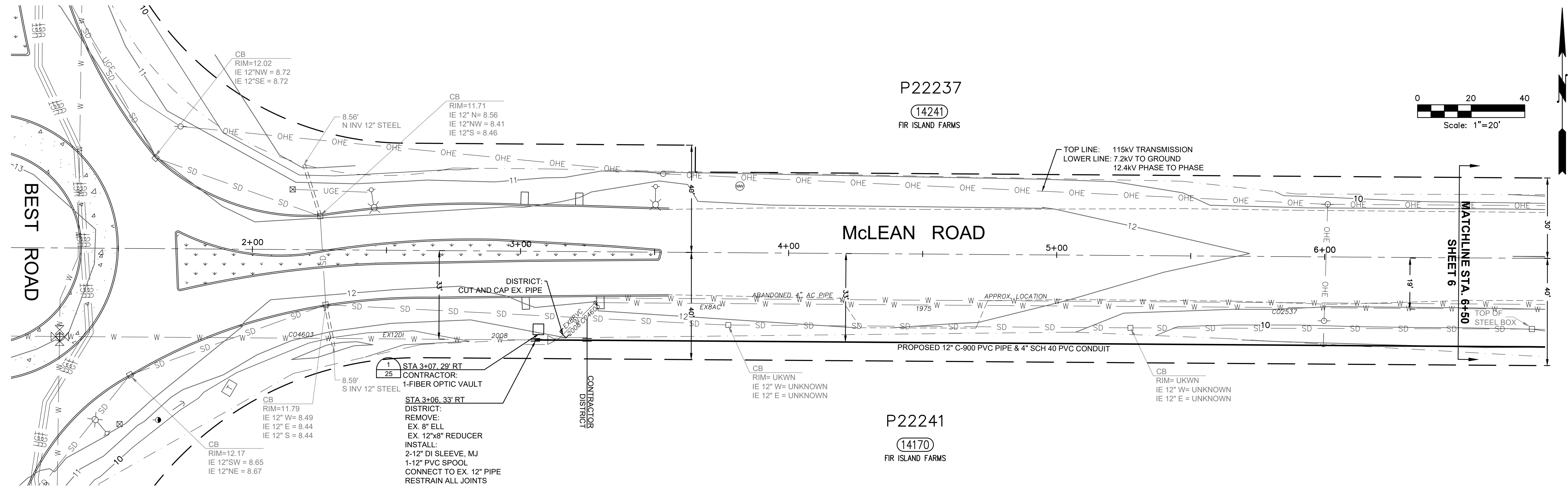
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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II  
EROSION AND SEDIMENTATION CONTROL NOTES AND DETAILS

SCALE: NONE

P.N. 03761  
C.O. 4829

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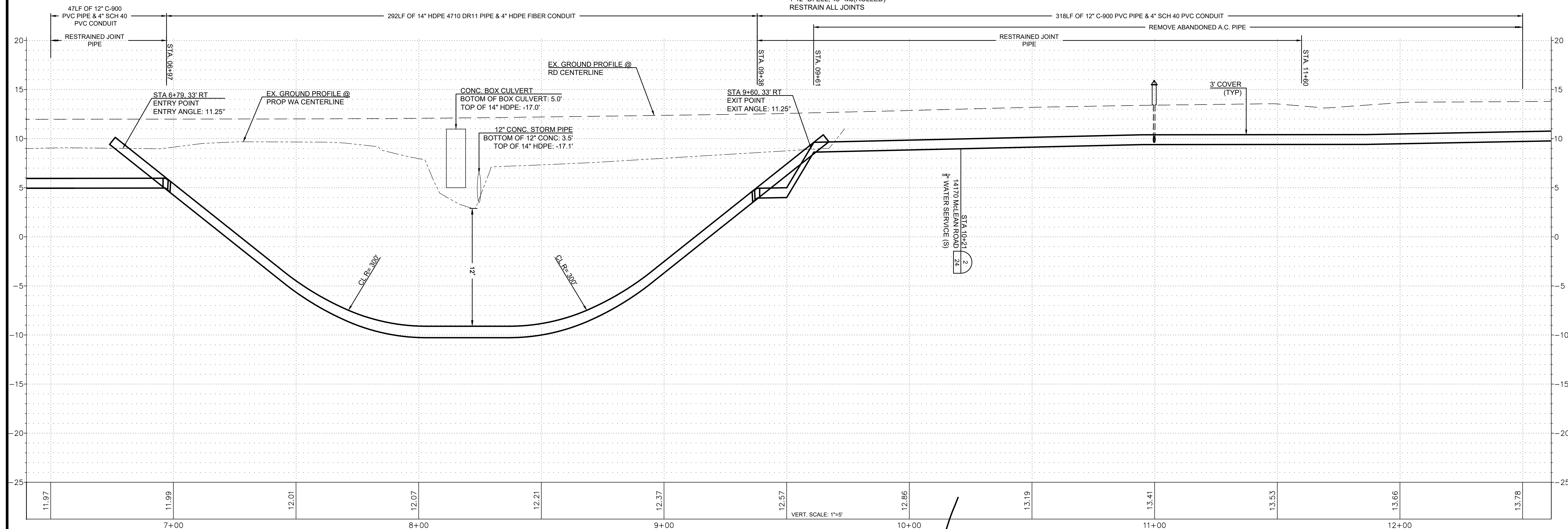
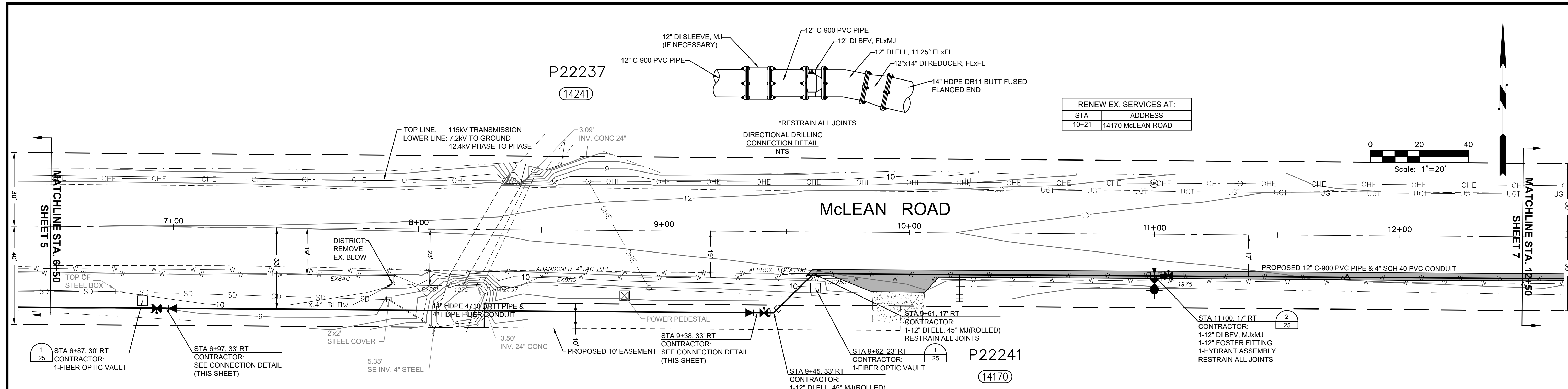
McLEAN ROAD, WALL STREET TO BEST  
ROAD PHASE II

PLAN AND PROFILE  
STA 2+00 TO STA 6+50

SCALE: 1"=20'

P.N. 03781  
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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 6+50 TO STA 12+50

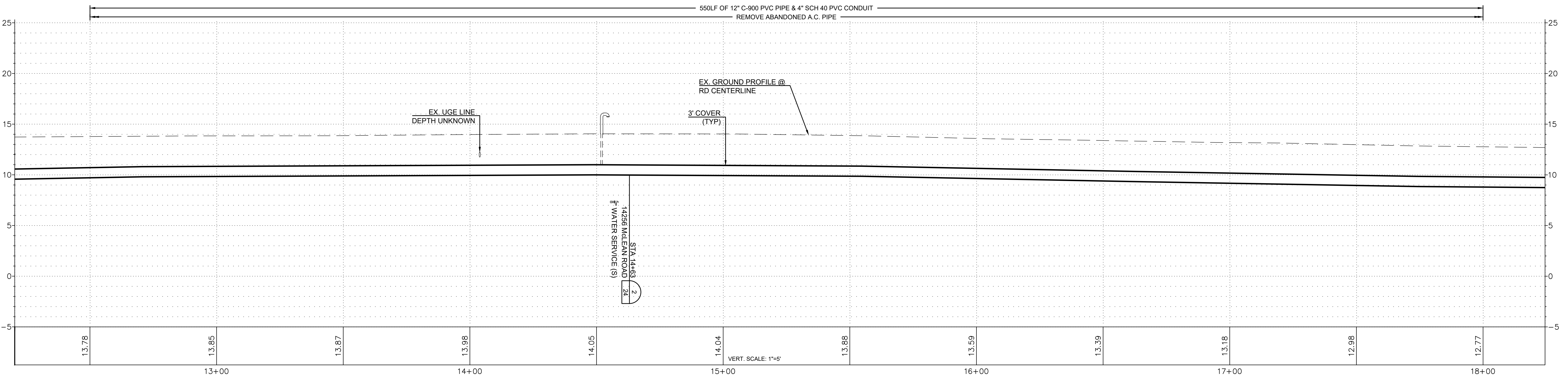
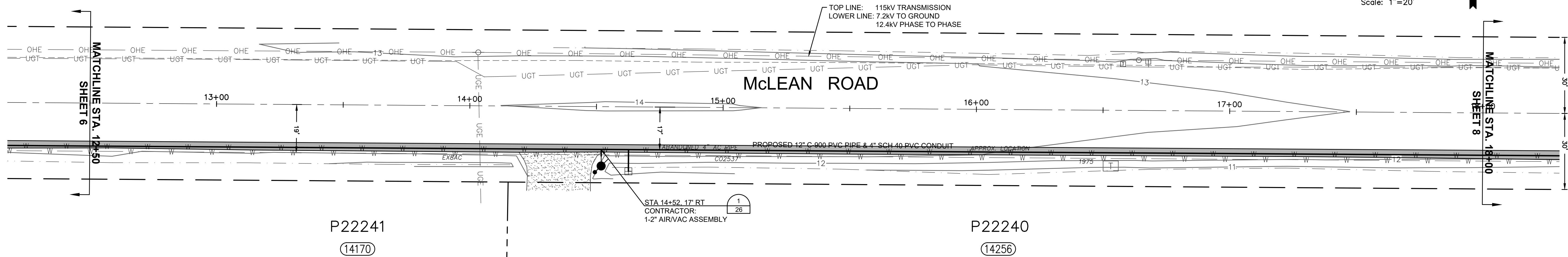
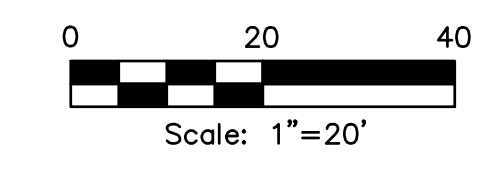
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14241

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14+63	14256 McLEAN ROAD



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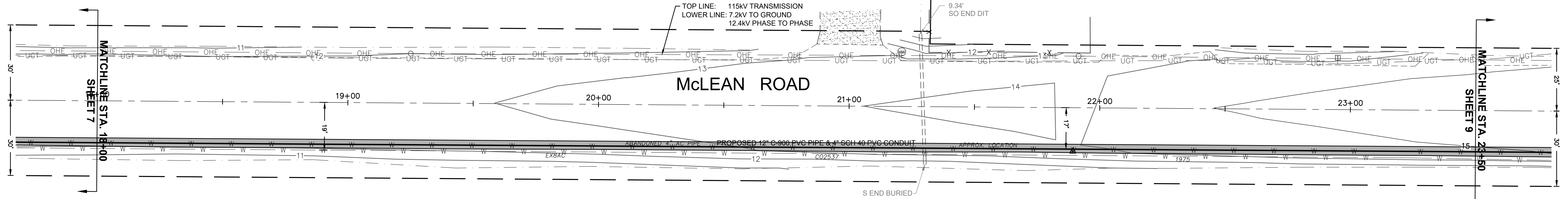
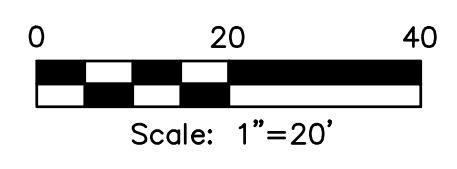
PLAN AND PROFILE  
STA 12+50 TO STA 18+00

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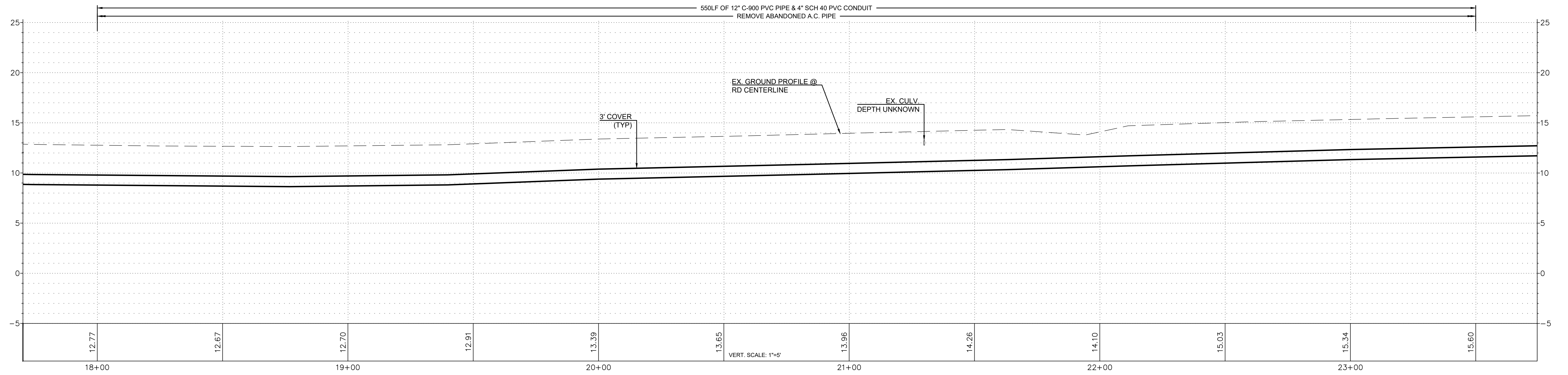


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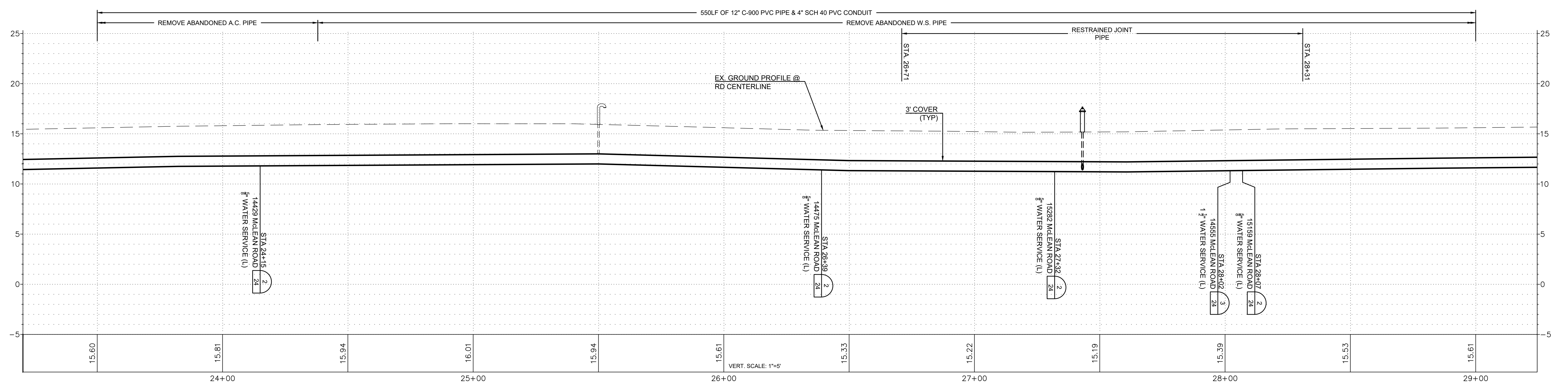
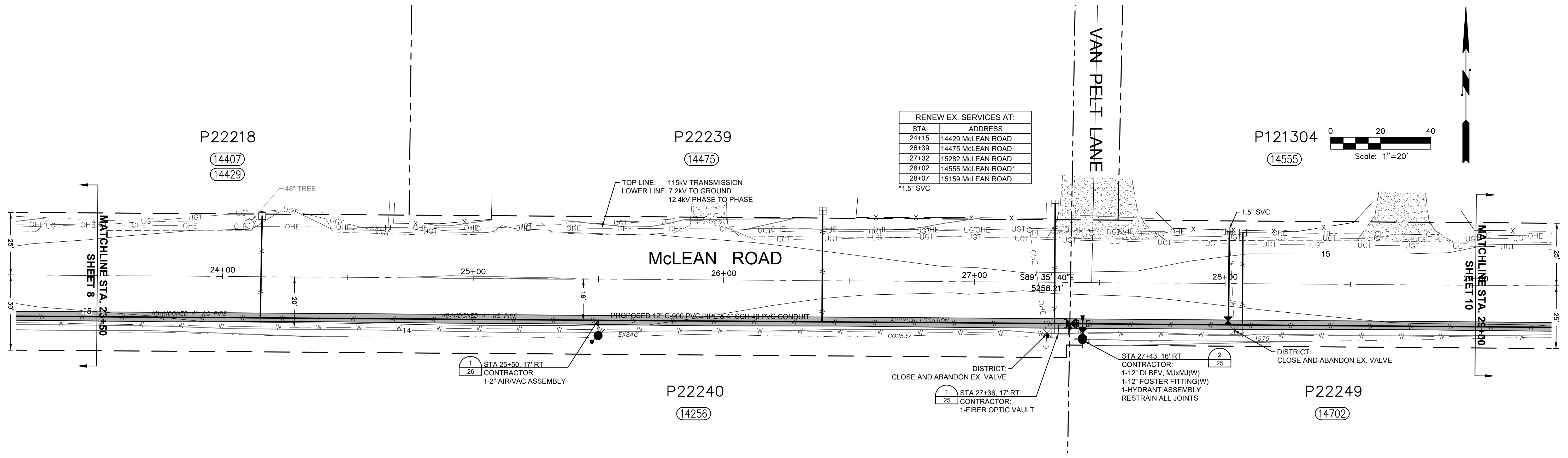
McLEAN ROAD, WALL STREET TO BEST  
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PLAN AND PROFILE  
STA 18+00 TO STA 23+50

SCALE: 1"=20'

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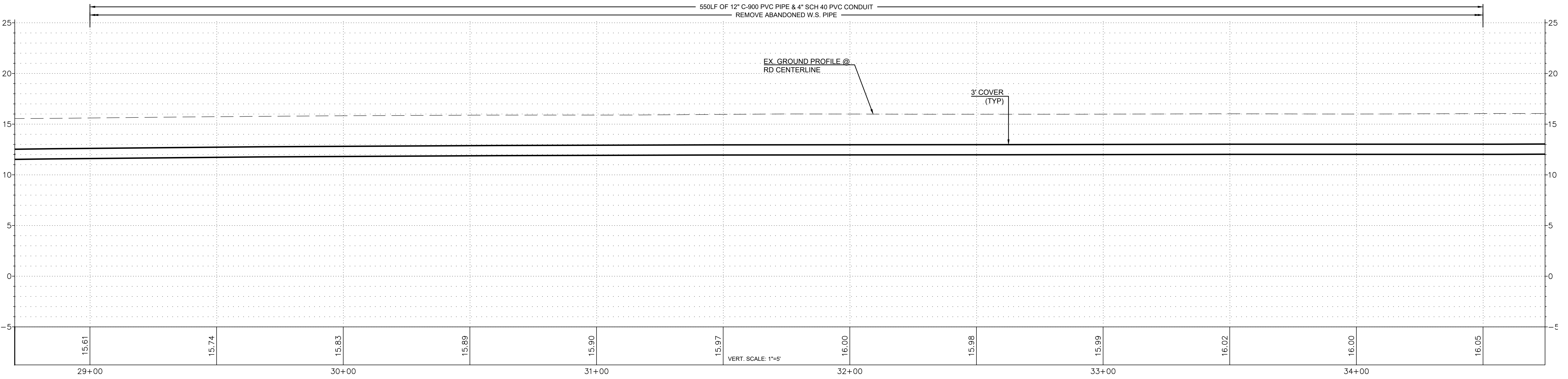
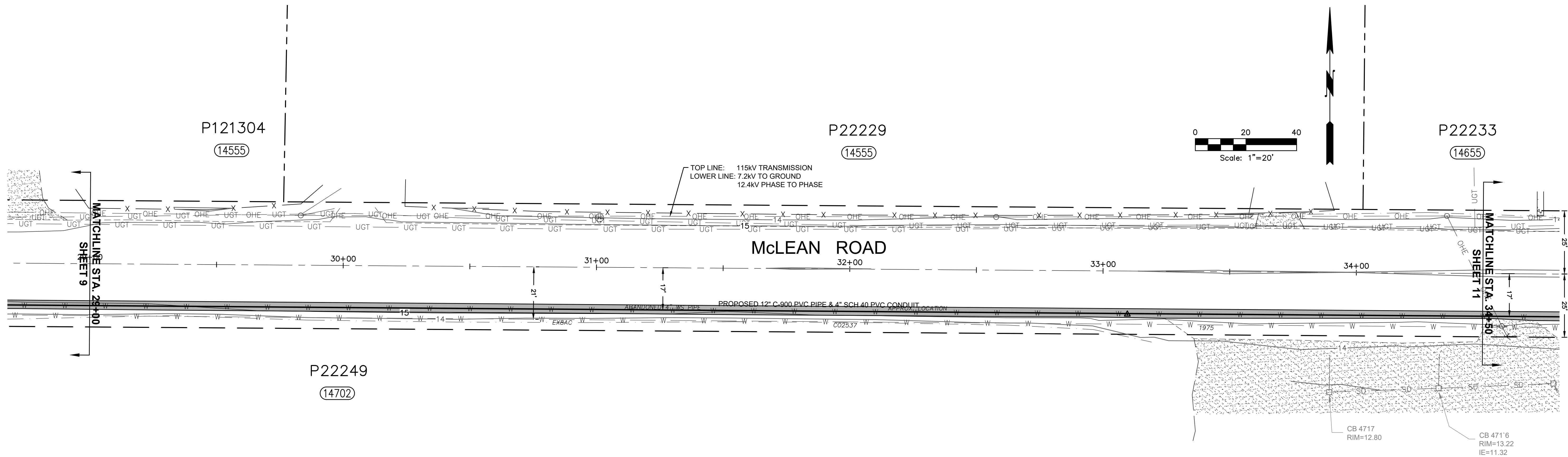
McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 23+50 TO STA 29+00

SCALE: 1"=20'

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C.O. 4829

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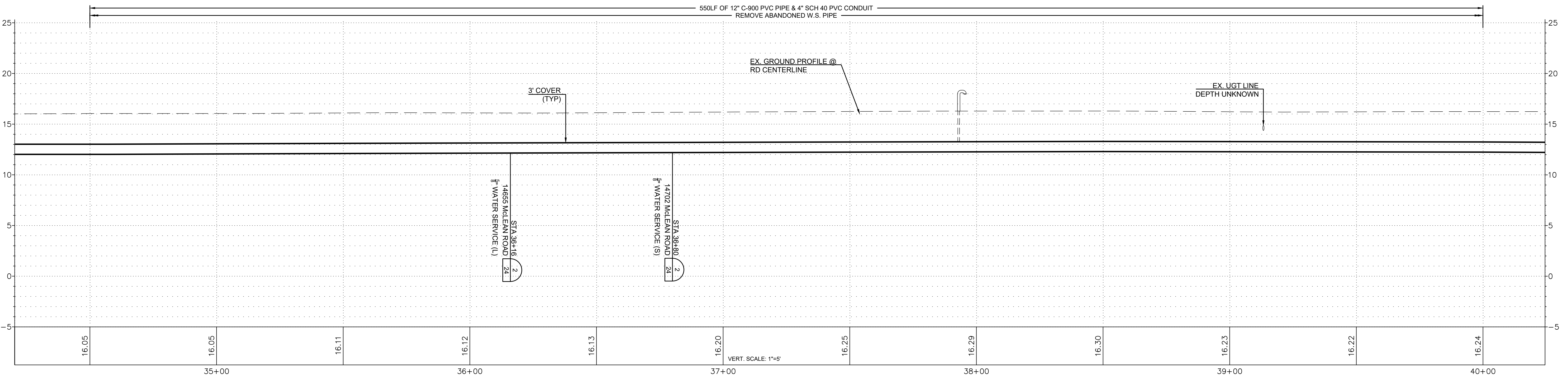
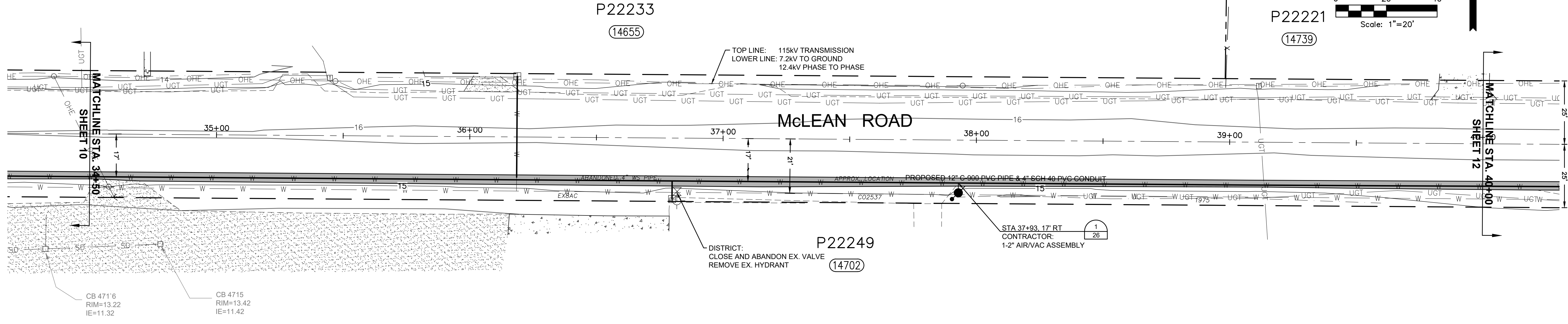
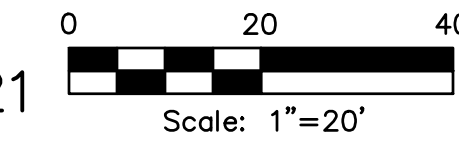
PLAN AND PROFILE  
STA 29+00 TO STA 34+50

SCALE: 1"=20'

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10 OF 26

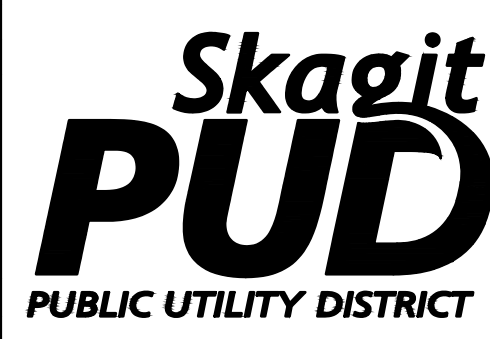
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STA	ADDRESS
36+18	14655 McLEAN ROAD
36+80	14702 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E



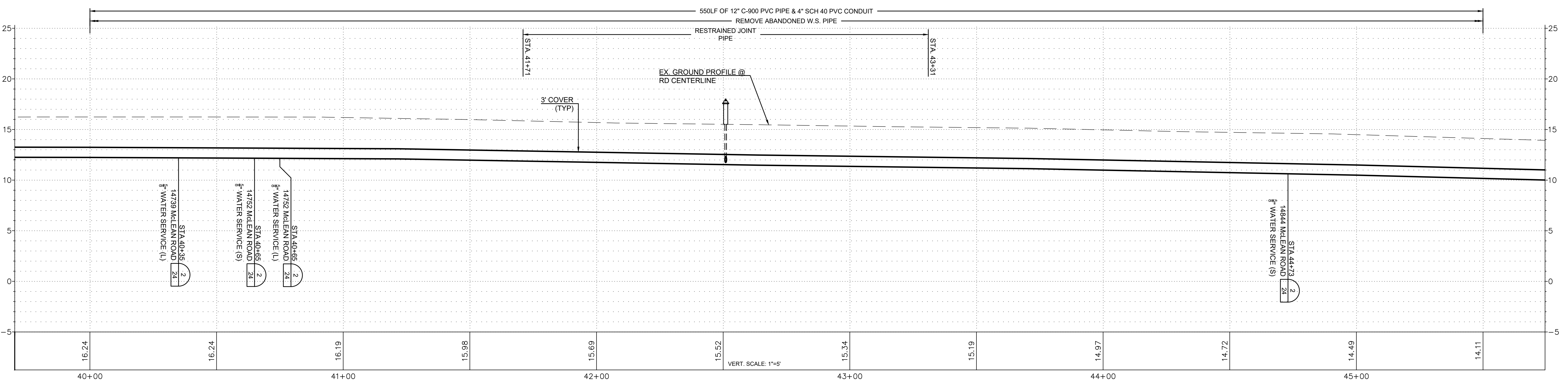
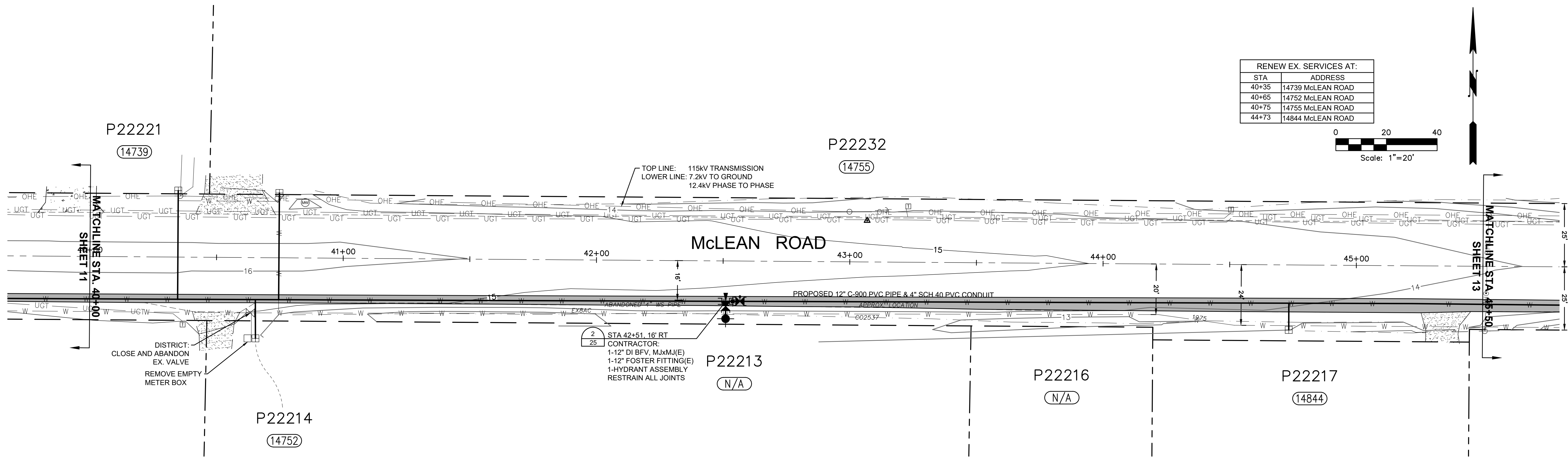
PUBLIC UTILITY DISTRICT NO. 1 of SKAGIT COUNTY  
 1415 Freeway Drive  
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 (360) 424-7104  
 www.SkagitPud.org

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
 STA 34+50 TO STA 40+00

SCALE: 1"=20'	P.N. 03761	SHEET: 11 OF 26
	C.O. 4829	

RENEW EX. SERVICES AT:	
STA	ADDRESS
40+35	14739 McLEAN ROAD
40+65	14752 McLEAN ROAD
40+75	14755 McLEAN ROAD
44+73	14844 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



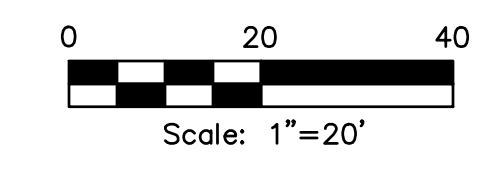
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HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21, 22
	TWP: 34 N
	RGE: 3 E



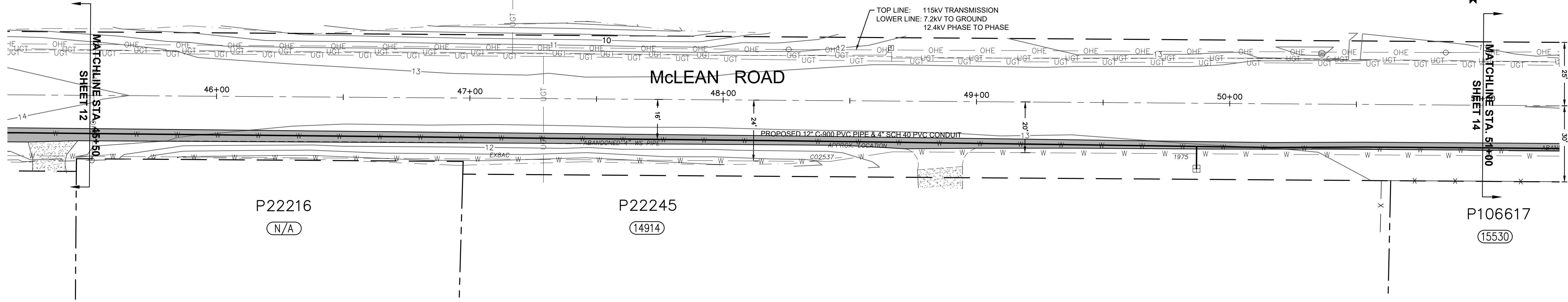
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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II  
PLAN AND PROFILE  
STA 40+00 TO STA 45+50  
SCALE: 1"=20'  
P.N. 03761  
C.O. 4829  
SHEET:  
12 OF 26

RENEW EX. SERVICES AT:	
STA	ADDRESS
49+87	14914 McLEAN ROAD



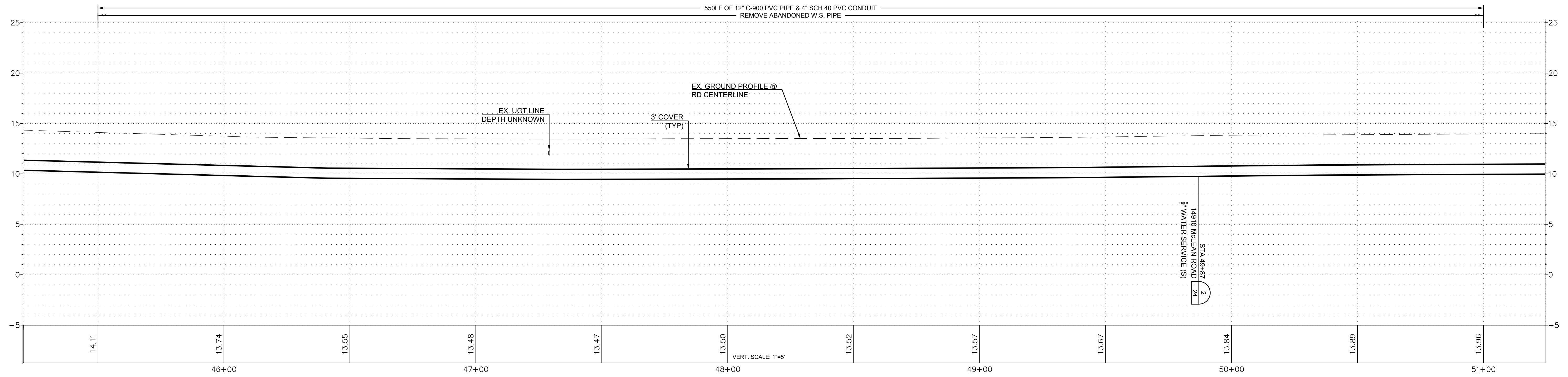
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(14755)



P22216  
(N/A)

P22245  
(14914)

P106617  
(15530)



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22 TWP: 34 N RGE: 3 E

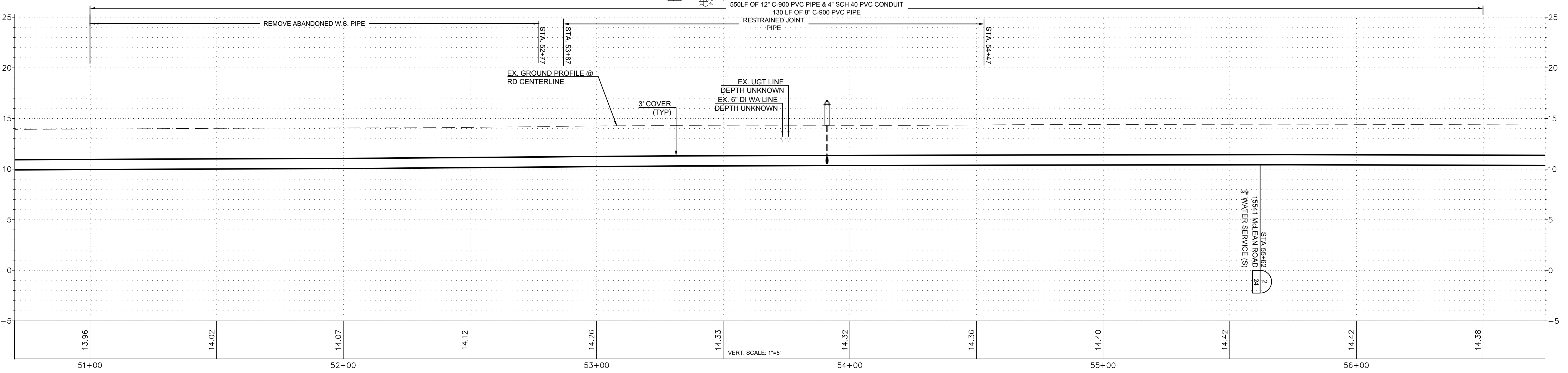
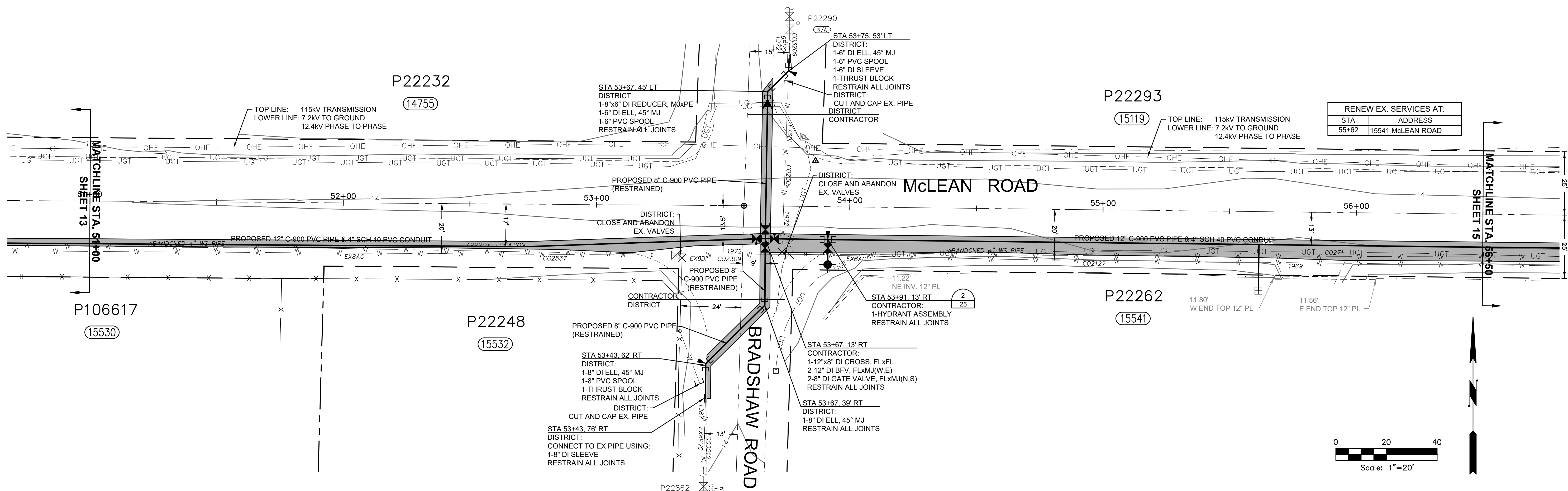


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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 45+50 TO STA 51+00

SCALE: 1"=20'	P.N. 03761	SHEET: 13 OF 26
	C.O. 4829	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21, 22
	TWP: 34 N
	RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

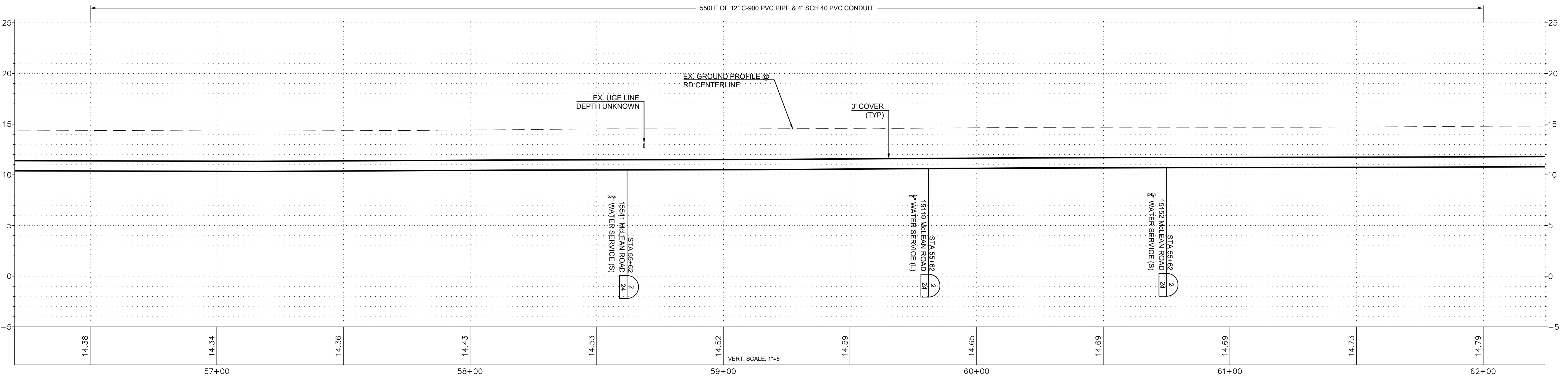
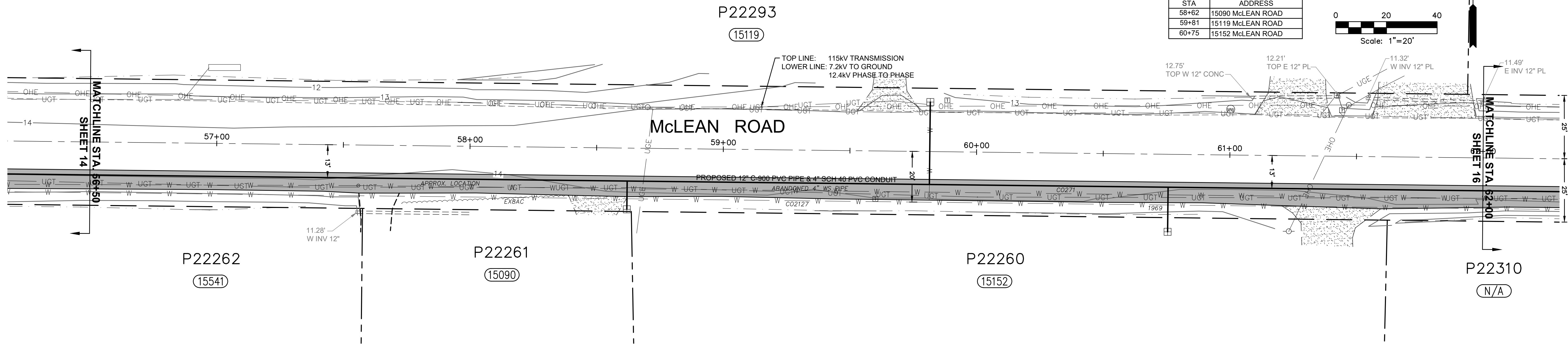
PLAN AND PROFILE  
STA 51+00 TO STA 56+50

SCALE: 1"=20'

P.N. 03761  
C.O. 4829

SHEET:  
14 OF 26

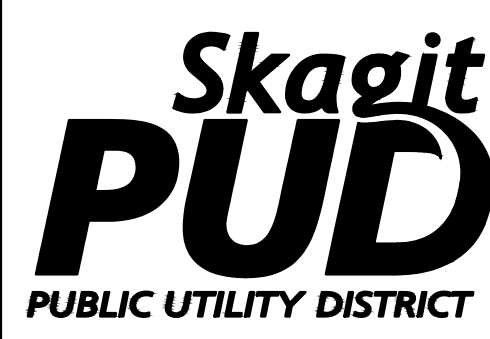
RENEW EX. SERVICES AT:	
STA	ADDRESS
58+62	15090 McLEAN ROAD
59+81	15119 McLEAN ROAD
60+75	15152 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



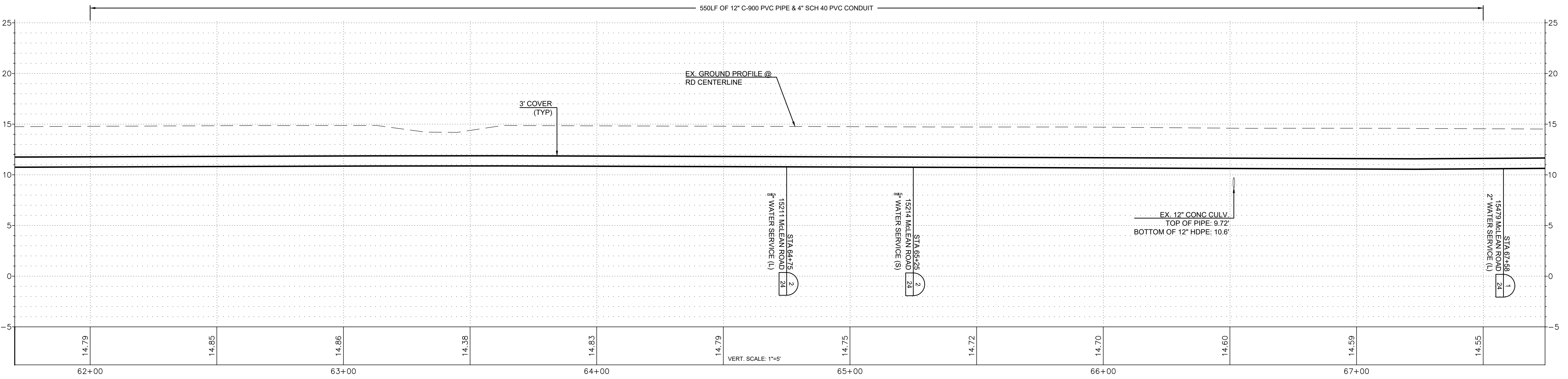
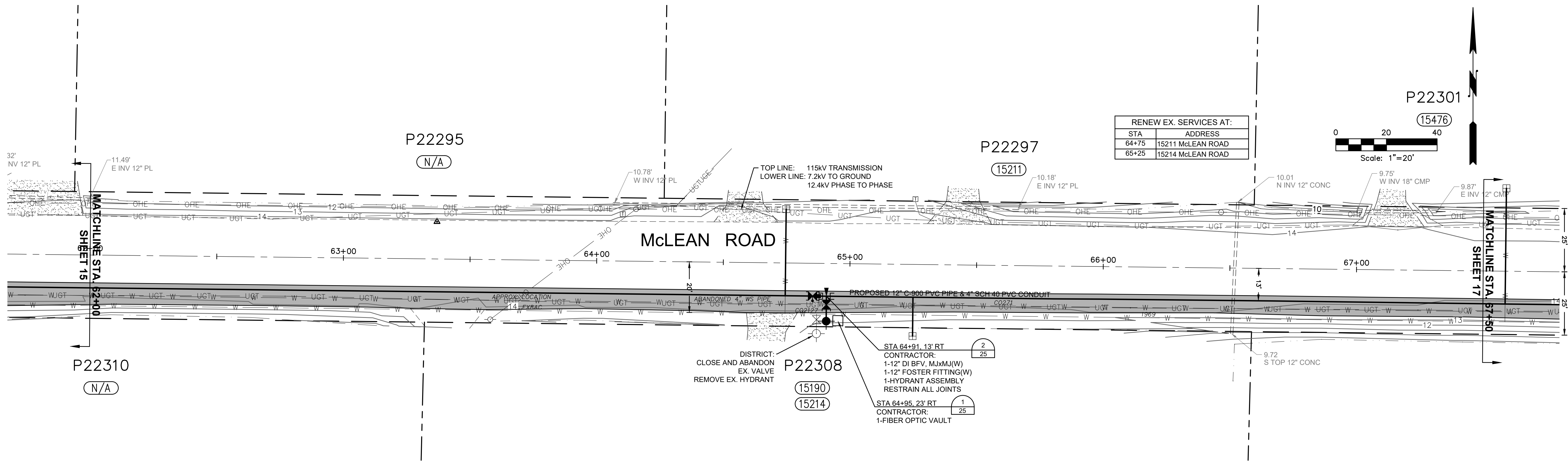
DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II  
 PLAN AND PROFILE  
 STA 56+50 TO STA 62+00  
 SCALE: 1"=20'  
 P.N. 03761  
 C.O. 4829  
 SHEET: 15 OF 26





ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21, 22
	TWP: 34 N
	RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

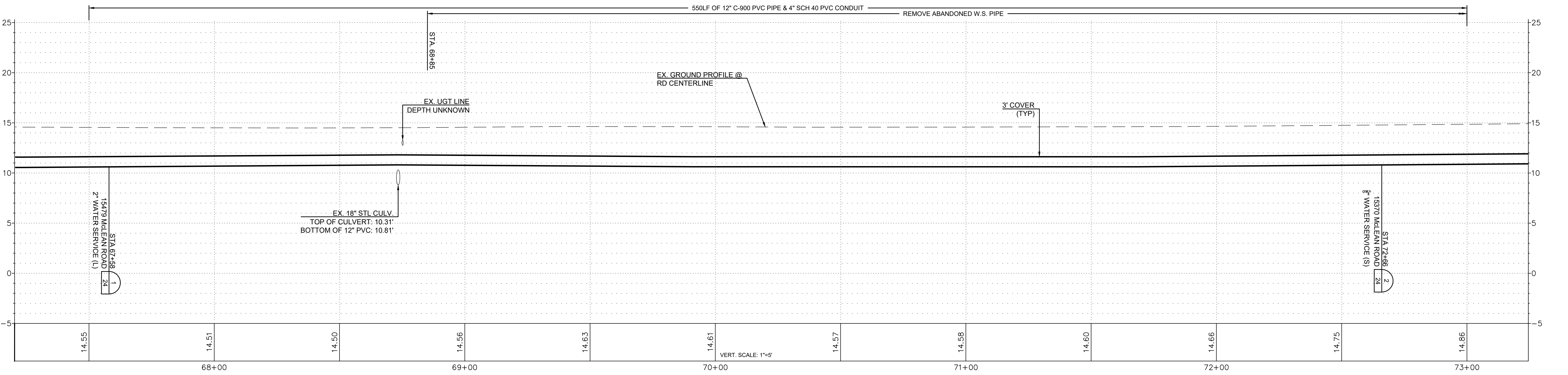
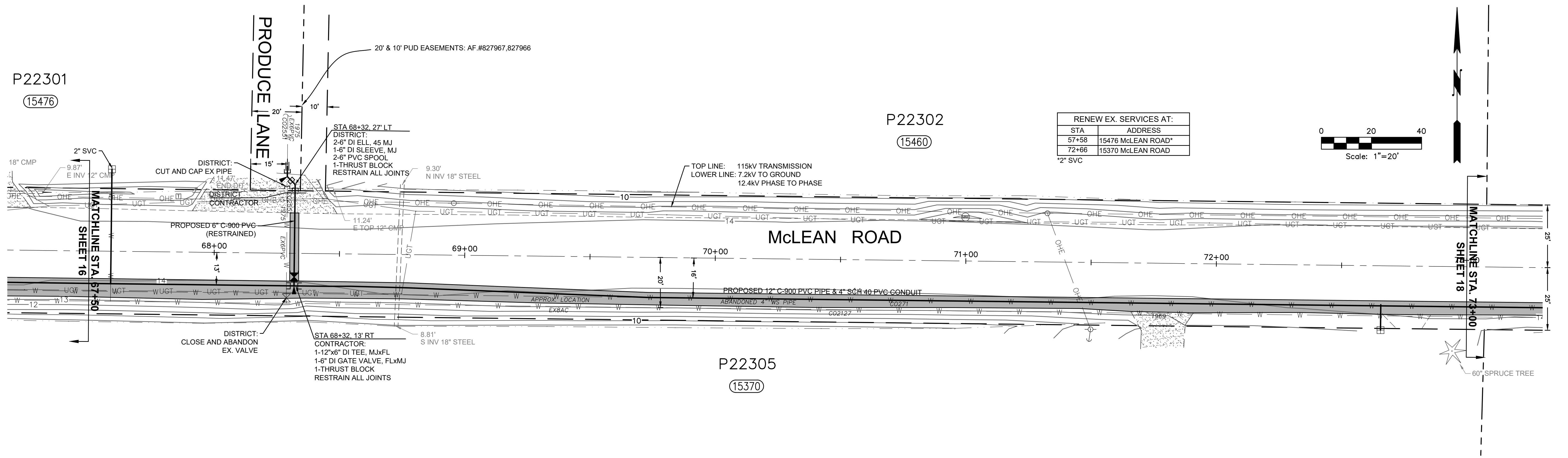
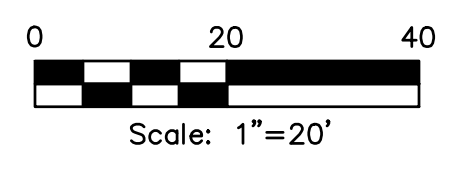
PLAN AND PROFILE  
STA 62+00 TO STA 67+50

SCALE: 1"=20'	P.N. 03761	SHEET: 16 OF 26
	C.O. 4829	

P22301  
(15476)

P22302  
(15460)

RENEW EX. SERVICES AT:	
STA	ADDRESS
57+58	15476 McLEAN ROAD*
72+66	15370 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22 TWP: 34 N RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST  
ROAD PHASE II

PLAN AND PROFILE  
STA 67+50 TO STA 73+00

SCALE: 1"=20'

P.N. 03761  
C.O. 4829  
SHEET:  
17 OF 26

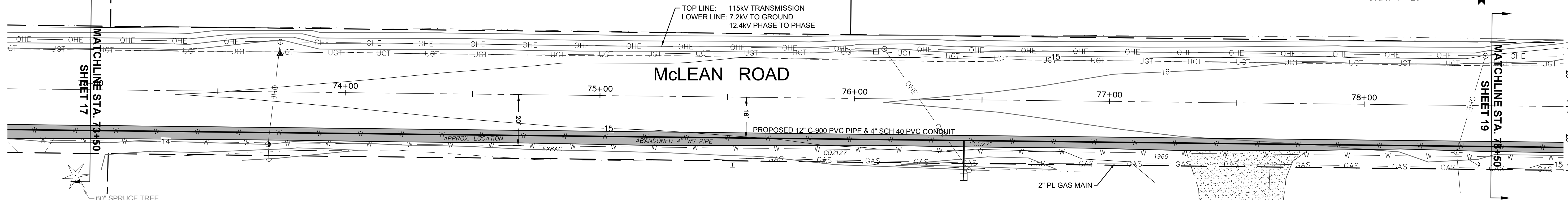
P22299

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RENEW EX. SERVICES AT:	
STA	ADDRESS
76+43	15462 McLEAN ROAD

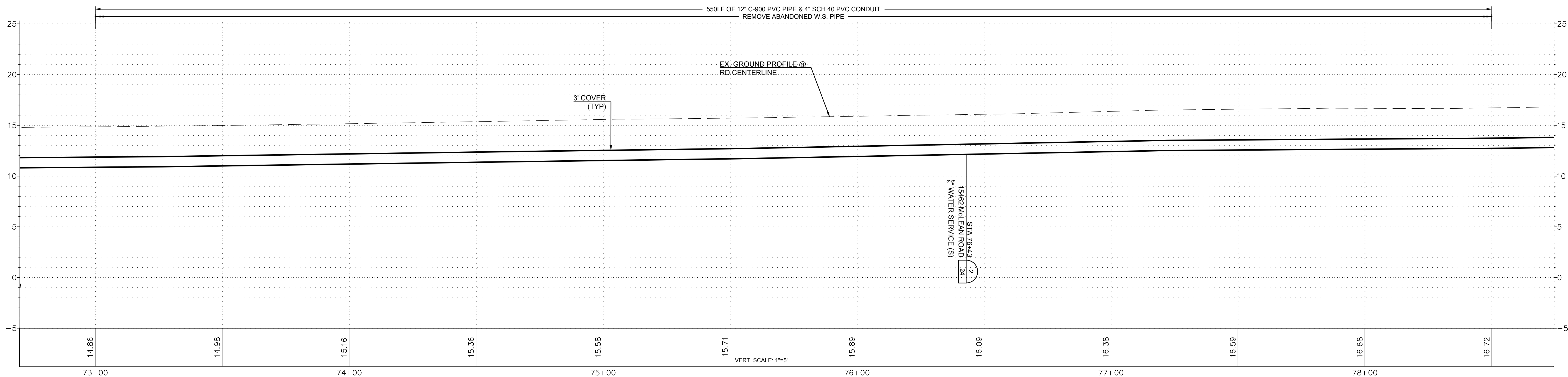
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P22307

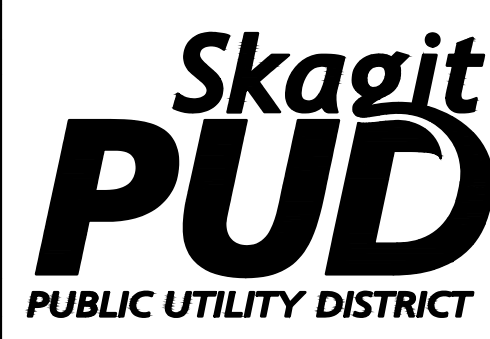
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ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E

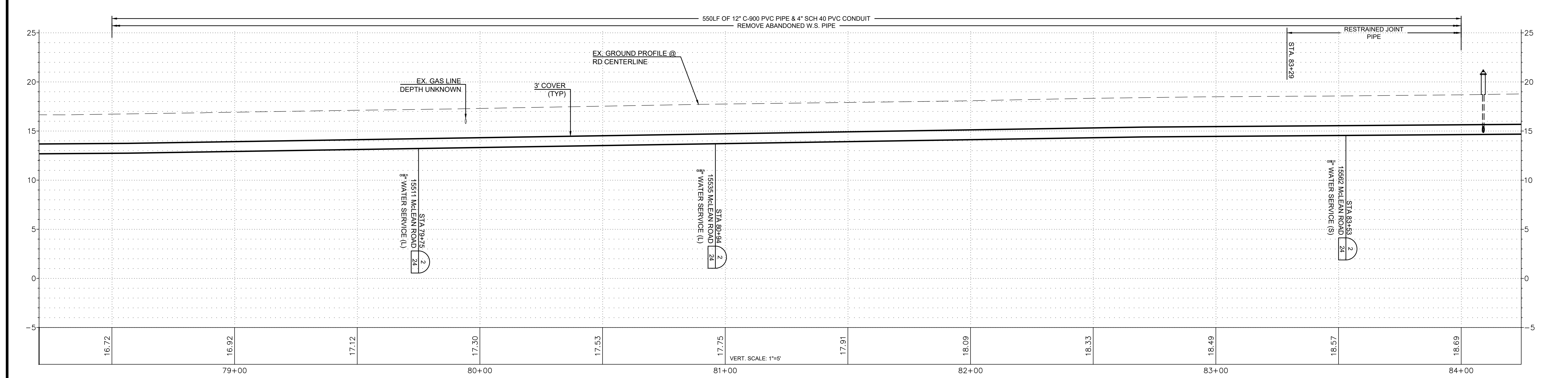
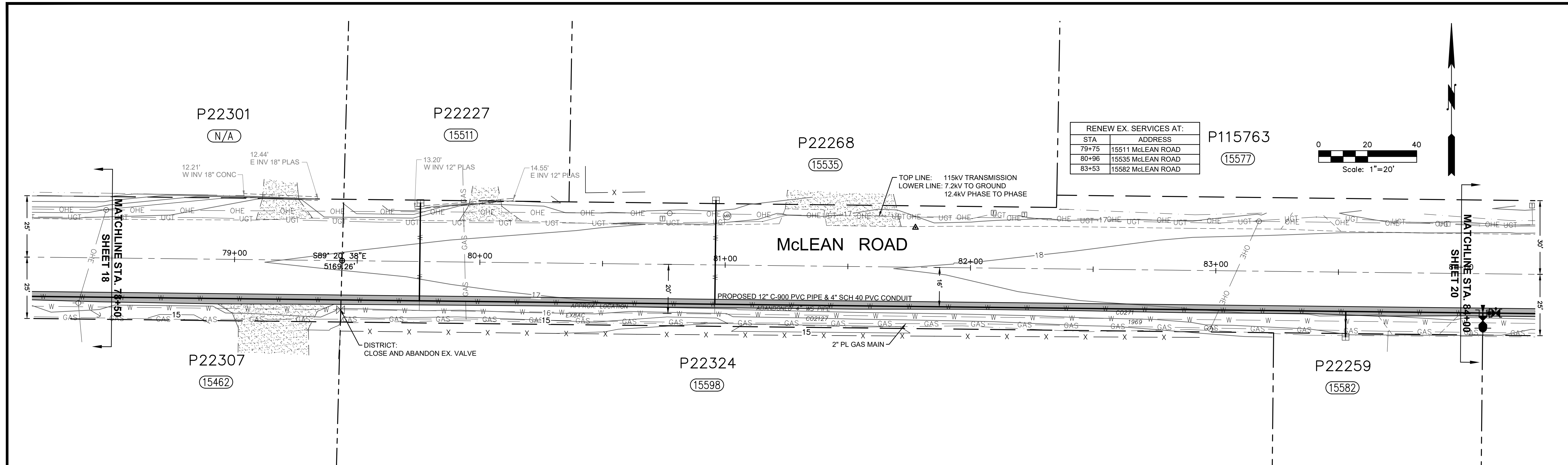


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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
 STA 73+00 TO STA 78+50

SCALE: 1"=20'	P.N. 03761	SHEET: 18 OF 26
	C.O. 4829	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
 STA 78+50 TO STA 84+00

SCALE: 1"=20'	P.N. 03761	SHEET: 19 OF 26
	C.O. 4829	

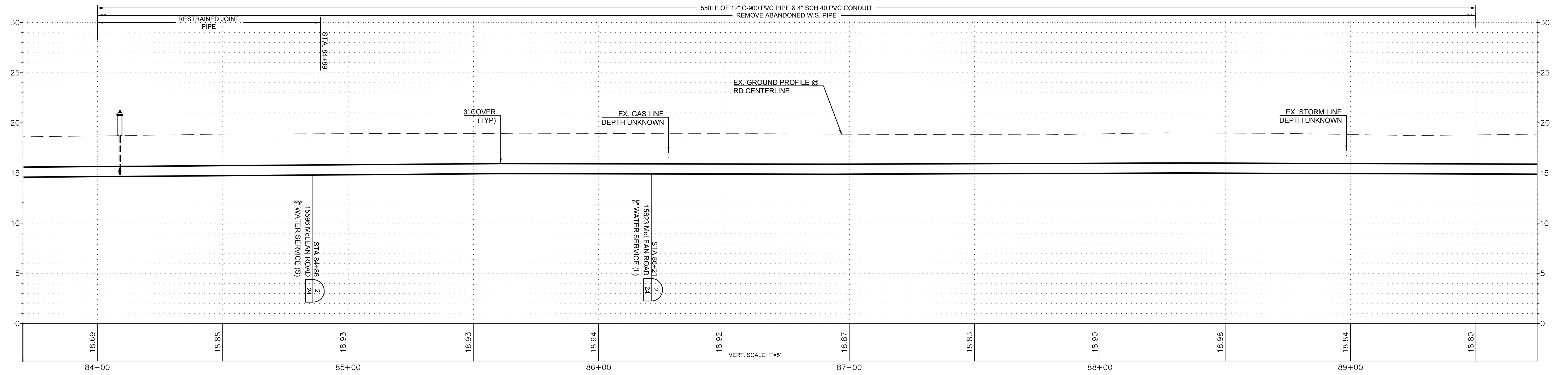
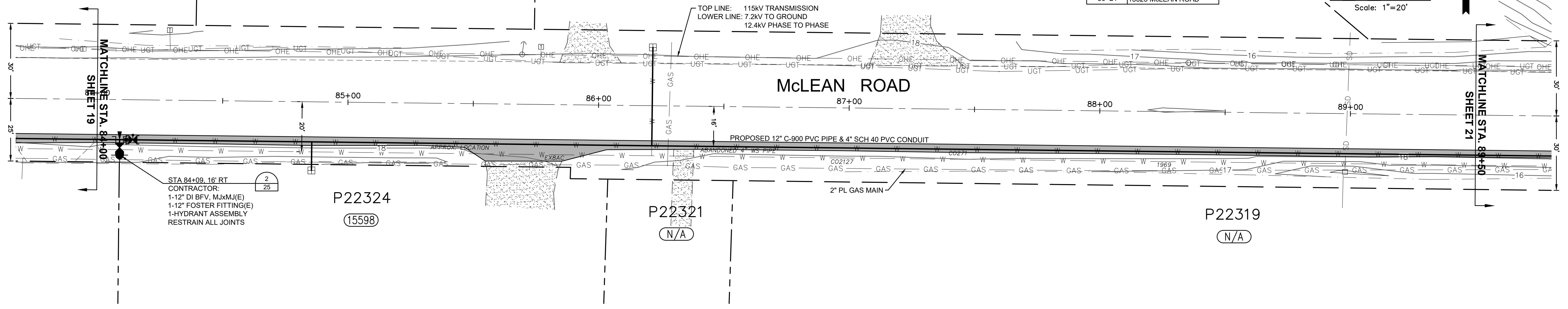
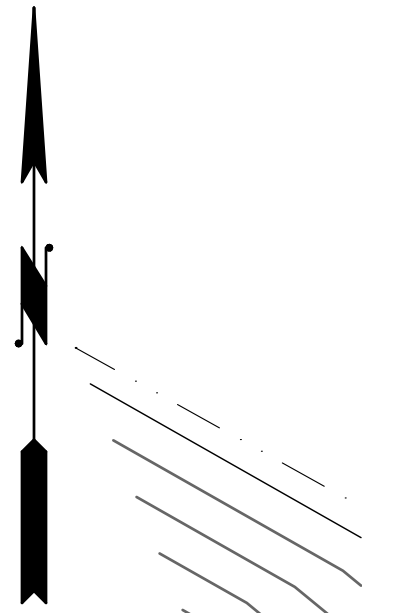
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(15577)

P115764  
(15615)

P22286  
(15623)

P115764  
(15615)

RENEW EX. SERVICES AT:	
STA	ADDRESS
84+86	15598 McLEAN ROAD
86+21	15623 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E



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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 84+00 TO STA 89+50

SCALE: 1"=20'

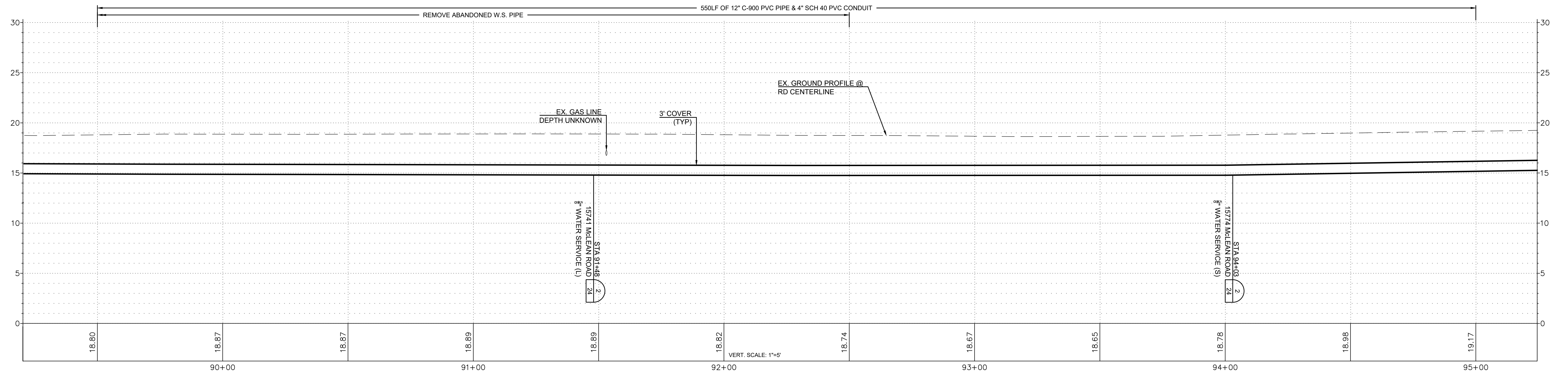
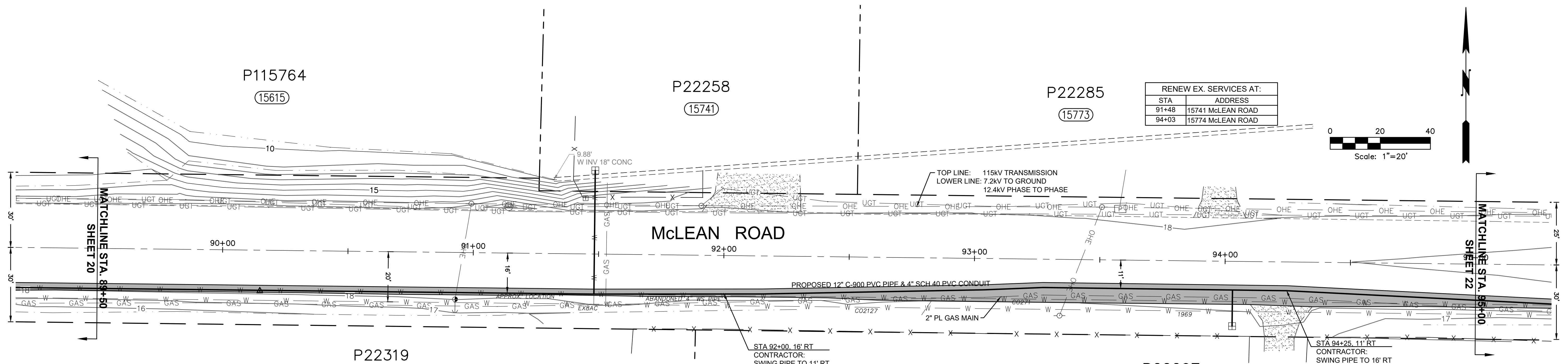
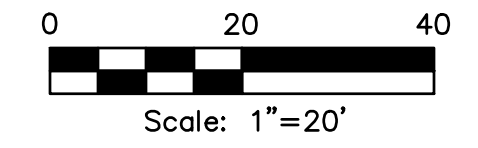
P.N. 03761  
C.O. 4829  
SHEET:  
20 OF 26

P115764  
(15615)

P22258  
(15741)

P22285  
(15773)

RENEW EX. SERVICES AT:	
STA	ADDRESS
91+48	15741 McLEAN ROAD
94+03	15774 McLEAN ROAD



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E



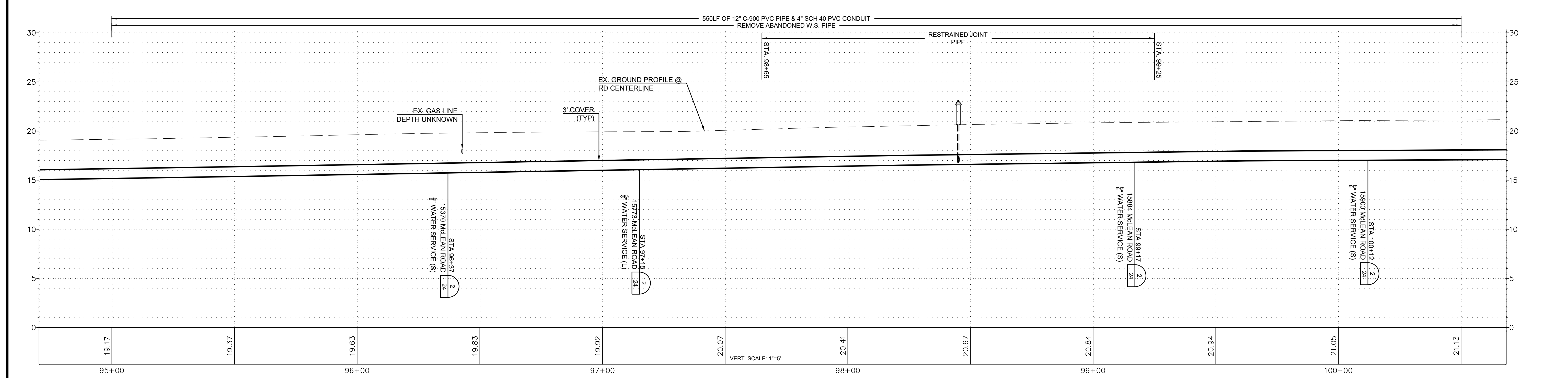
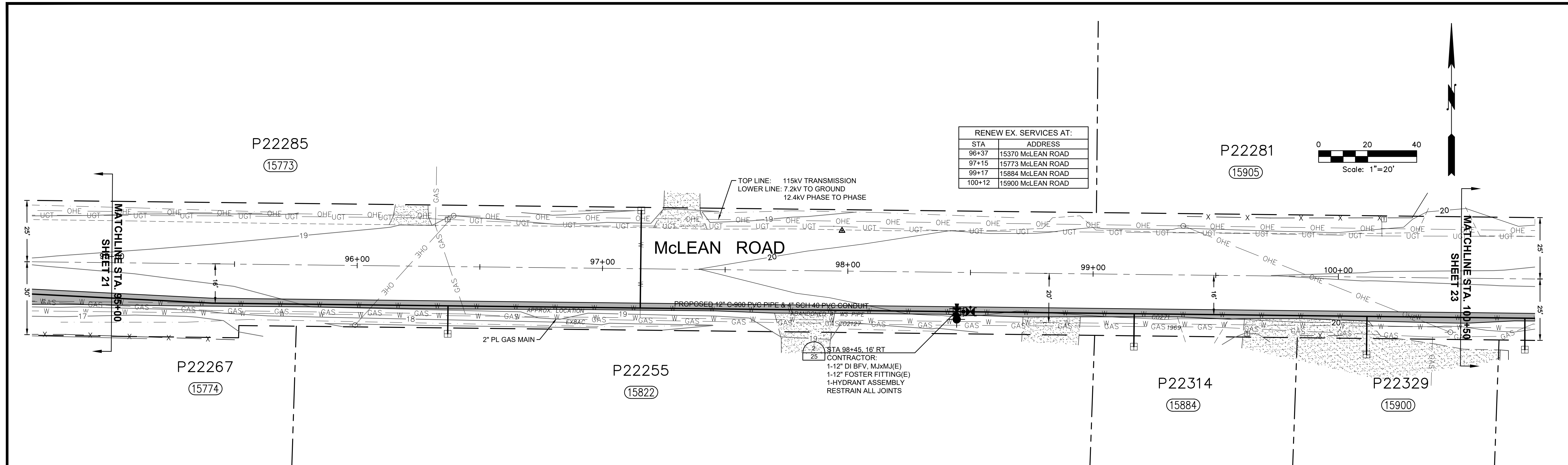
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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 89+50 TO STA 95+00

SCALE: 1"=20'

P.N. 03761  
C.O. 4829  
SHEET:  
21 OF 26



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 E

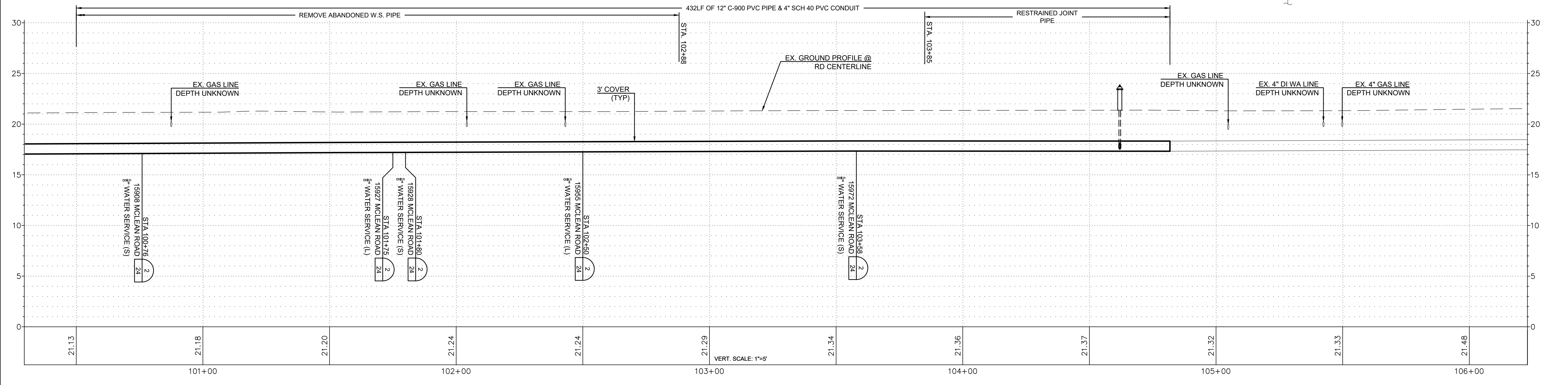
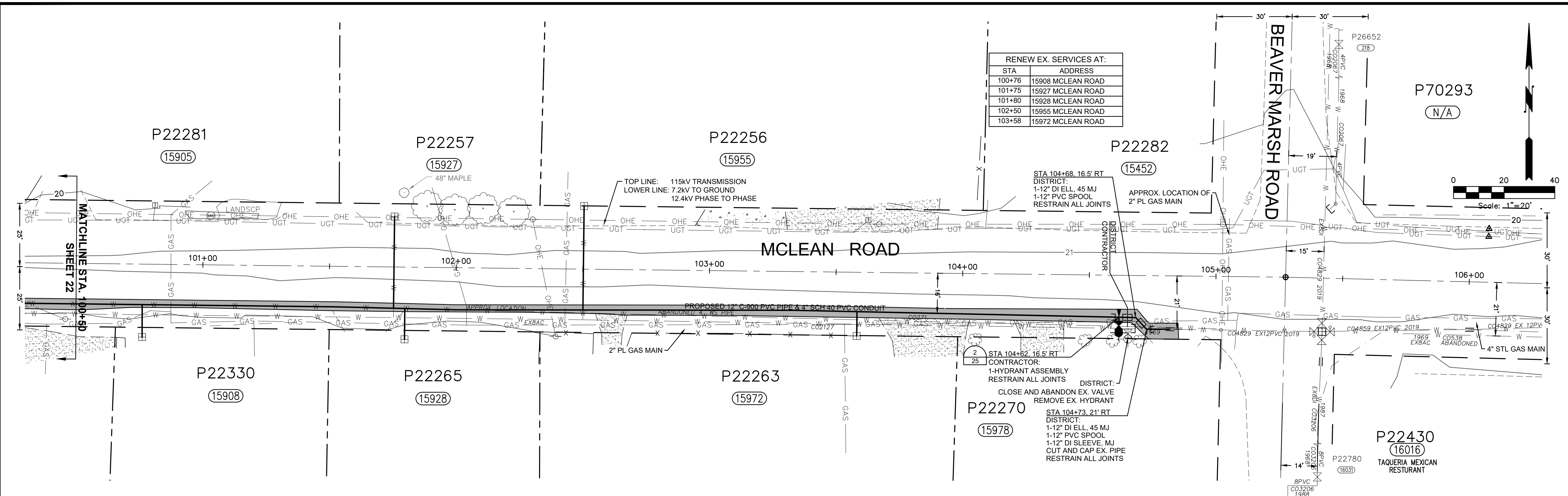


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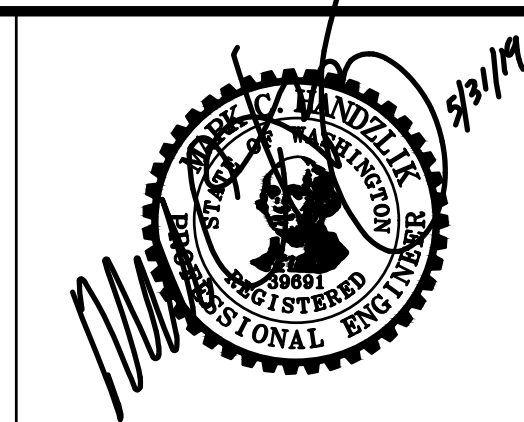
McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
 STA 95+00 TO STA 100+50

SCALE: 1"=20'	P.N. 03761	SHEET: 22 OF 26
	C.O. 4829	



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

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

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555

DATE PRINTED: SEC: 21.22  
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RGE: 3 E

**Skagit PUD**  
PUBLIC UTILITY DISTRICT

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McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

PLAN AND PROFILE  
STA 100+50 TO STA 106+00

SCALE: 1"=20'

P.N. 03761  
C.O. 4829

SHEET:  
23 OF 26



BILL OF MATERIALS		
NO.	NOMENCLATURE	REQ'D.
1	WATER MAIN	
2	CLAMP SERVICE DOUBLE STRAP x 2" I.P.T., ALL BRASS, (FORD #8080) <sup>a</sup>	1
3	NIPPLE BRASS 2"x4"	1
4	VALVE 2" DUCTILE IRON, RESILIENT WEDGE, I.P.T. x I.P.T.	1
5	INSERT STIFFENER, 1-1/2" (FORD #74) <sup>a</sup>	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MIN. 18" INTO BOX, NEAR LID	1
7	PIPE 2" REHAU MANIPLEX TYPE A, 200 P.S.I.	1
8	BRASS PAK JOINT, 2" M.I.P.T. x 2" COP (FORD #84-77-Q-NL) <sup>b</sup>	3
9	COPPERSETTER, 2" (FORD #8H77-120-11-66-NL FPP) <sup>c</sup>	1
10	METER, BADGER, 2" MODEL M170 BRONZE METER	1
11	NIPPLE BRASS 1-1/2"x2"	1
12	CAP, 2" GALVANIZED	1
13	UTILITY VAULT 3642-LA W/COVER 3642-2436P <sup>d</sup>	1
14	HOSE CLAMP, 2-1/2" STAINLESS STEEL (STUB ONLY)	1
15	POST, 4-1/2" MIN. METAL FENCE POST W/SPADE REMOVED (STUB ONLY)	1
16	CASING, 6" PVC SOWER PIPE	1
17	VALVE BOX, CAST IRON OLYMPIC FOUNDRY VB-007-SKAGIT (SEE P.U.D. DETAIL)	1

<sup>a</sup> OR EQUIVALENT APPROVED BY THE DISTRICT  
<sup>b</sup> ILL. 90" STREET, 2" M X F I.P.T. (IF NEEDED)  
 ALL BRASS FITTINGS TO BE LEAD FREE DOMESTIC BRASS PER UNITED STATES BILL S.3874

**NOTES**

- INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.
- IF METER IS NOT INSTALLED IN COPPERSETTER, OR IF CONNECTION IS NOT MADE PROOF TO CUSTOMER'S PLUMBING, INSTALL A TIGHT FITTING PLUG OR CAP IN OPEN END OF COPPERSETTER AND A TIGHT WRAP OF PLASTIC (ELECTRICAL) TAPE OVER END OF NIPPLE. MAKE WATER TIGHT.
- IF VAULT AND COPPERSETTER ARE NOT INSTALLED AT TIME OF SERVICE TUBING INSTALLATION, THEN TUBING IS TO BE STUBBED UP ABOVE FINISH GRADE AND CAPPED. SEE DETAIL A.
- SUPPORT COPPERSETTER WITH 1/8" TO 2" OF ROD OR PIPE THROUGH EACH EYELET. SET COPPERSETTER FLUSH, PLUMB AND CENTERED IN VAULT/BOX. LOCK BYPASS WITH P.U.D.-ISSUED PADLOCK.
- FLUSH OUT SERVICE TUBING AND COPPERSETTER BEFORE INSTALLING METER. DO NOT ALLOW MUD OR FOREIGN MATERIAL TO ENTER ANY TUBING OR FITTINGS.
- SET VALVE CASING AND VAULT/BOX TO FINISH GRADE. DO NOT REST CASING OR VAULT ON NIPPLES OR PIPE. PLACE 6 INCHES OF 3/4" MINUS CRUSHED GRAVEL, COMPACTED TO 95% UNDER CONCRETE VAULTS. SUPPORT VALVE CASING WITH 0.2 SQ.FT. OF CONCRETE ON EACH SIDE OF VALVE. SUPPORT 2" VALVE WITH MIN. OF 1 SQ.FT. OF CONCRETE BLOCK ON UNDISTURBED GROUND OR COMPACTED 3/4" CRUSHED GRAVEL.
- IF METER IS LOCATED IN ASPHALT OR CONCRETE AREA, A CONCRETE UTILITY VAULT WILL BE REQUIRED. IF IN LAWN OR LANDSCAPED AREA, A CARSON INDUSTRIES LLC L SERIES 1730-15 BOX W/COVER 1730-3L CAN BE INSTALLED WITH APPROVAL BY DISTRICT ENGINEER.
- IF THERE IS PETROLEUM-BASED CONTAMINATED SOIL PRESENT, PIPELINE SHALL BE OF TYPE K COPPER WITH BRASS AND COPPER FITTINGS. SEE STANDARD P.U.D. COPPER SERVICE DETAIL.
- METER SENSING PAD TO BE LOCATED IN STEEL LID OF UTILITY VAULT WITHIN SIX INCHES OF HINGE NEAR STREET END. IN A CARSON INDUSTRIES BOX, PAD IS TO BE LOCATED AT STREET END OF BOX.
- SEAL VAULT LIDS AND SEGMENTS WITH 1-1/2"x1" JOINT MASTIC.
- 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.

#10 WIRE

MAINLINE WIRE CONNECTION DETAIL NTS

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.<sup>e</sup>

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: OCTOBER 15, 2015

SCALE: 1" = 2"  
 DATE: 3-25-05  
 REVISED: 10/15/15  
 DRAWN BY: JLB  
 APPROVED BY: GJS

**STANDARD**  
**WS2-1**



STANDARD INSTALLATION OF  
 2" METERED SERVICE  
 WITH 200 P.S.I. REHAU  
 SERVICE LINE

BILL OF MATERIALS		
NO.	NOMENCLATURE	REQ'D.
1	WATER MAIN	
2	CLAMP SERVICE DOUBLE STRAP x 1" I.P.T., ALL BRASS, (FORD #8080) <sup>a</sup>	1
3	COP, 1" (FORD #8000-4) <sup>a</sup>	1
4	ADAPTER BRASS PAK JOINT, 1" F.I.P.T. x 1" COP (FORD #24-44-Q-NL)	1
5	INSERT STIFFENER, 3/4" (FORD #77) <sup>a</sup>	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MIN. 18" INTO BOX, NEAR LID	1
7	PIPE 1" REHAU MANIPLEX TYPE A, 200 P.S.I.	1
8	BRASS PAK JOINT, 1" M.I.P.T. x 1" COP (FORD #84-44-Q-NL) <sup>b</sup>	1
9	COPPERSETTER, 3/4" (FORD #8H77-120-11-66-NL FPP) <sup>c</sup>	1
10	METER, BADGER MODEL M20 (5/8") OR M20 (3/4") BRONZE METER	1
11	NIPPLE BRASS, 1"x6"	1
12	ADAPTER BRASS, 1" F.I.P.T. x 1" INSERT	1
13	METER BOX & COVER, CARSON INDUSTRIES LLC L SERIES 1419-12	1
14	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 COPPERSETTER ARE NOT INSTALLED AT TIME OF SERVICE PIPE INSTALLATION, THEN TUBING IS TO BE STUBBED UP AND COMPLETED AS PER DETAIL A. THE DISTRICT WILL COMPLETE THE ACTUAL METER AND BOX INSTALLATION WHEN NEEDED.	1
15	CLAMP, 1" ALL STAINLESS (STUB ONLY)	1
16	ADAPTER, 3/4" M.I.P.T. x 3/4" RESILIENT W/CAP (GALV.)	1
17	HOSE CLAMP, 1-1/2" STAINLESS STEEL (STUB ONLY)	1
18	POST, 4-1/2" MIN. METAL FENCE POST W/SPADE REMOVED (STUB ONLY)	1
19	RILL VALVE, 6" 3/4" F.I.P.T.	1

<sup>a</sup> OR EQUIVALENT APPROVED BY THE DISTRICT  
<sup>b</sup> ILL. 90" STREET, 3/4" M X F I.P.T. (IF NEEDED)  
 ALL BRASS FITTINGS TO BE LEAD FREE DOMESTIC BRASS PER UNITED STATES BILL S.3874.

**NOTES**

- COP 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.
- 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 COPPERSETTER ARE NOT INSTALLED AT TIME OF SERVICE PIPE INSTALLATION, THEN 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 COPPERSETTER, 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 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.
- FILL BOX WITH FINE DIRT TO TOP OF METER.
- IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M5801324-4526) WILL BE REQUIRED. NOI 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.U.D. COPPER SERVICE DETAIL.
- IF SERVICE LINE HAS LESS THAN 2" OF COVER, CONTACT DISTRICT ENGINEERING 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.

#10 WIRE

MAINLINE WIRE CONNECTION DETAIL NTS

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.<sup>e</sup>

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: OCTOBER 15, 2015

SCALE: 1" = 2"  
 DATE: 11-14-14  
 REVISED: 10/19/19  
 DRAWN BY: JLB  
 APPROVED BY: GJS

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



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

BILL OF MATERIALS		
NO.	NOMENCLATURE	REQ'D.
1	WATER MAIN	
2	CLAMP SERVICE DOUBLE STRAP x 2" I.P.T., ALL BRASS, (FORD #8080) <sup>a</sup>	1
3	NIPPLE BRASS 2"x4"	1
4	VALVE 2" DUCTILE IRON, RESILIENT WEDGE, I.P.T. x I.P.T.	1
5	INSERT STIFFENER, 1-1/2" (FORD #74) <sup>a</sup>	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MIN. 18" INTO BOX, NEAR LID	1
7	PIPE 2" REHAU MANIPLEX TYPE A, 200 P.S.I.	1
8	BRASS PAK JOINT, 2" M.I.P.T. x 2" COP (FORD #84-77-Q-NL) <sup>b</sup>	3
9	COPPERSETTER, 1-1/2" (FORD #8H77-120-11-66-NL FPP) <sup>c</sup>	1
10	METER, BADGER, MODEL M20 1-1/2" BRONZE METER	1
11	NIPPLE BRASS 1-1/2"x2"	1
12	CAP, 1-1/2" GALVANIZED	1
13	UTILITY VAULT 3642-LA W/COVER 3642-2436P <sup>d</sup>	1
14	VACANT	
15	VACANT	
16	CAP, 2" GALVANIZED (STUB ONLY)	1
17	HOSE CLAMP, 2-1/2" STAINLESS STEEL (STUB ONLY)	1
18	POST, 4-1/2" MIN. METAL FENCE POST W/SPADE REMOVED (STUB ONLY)	1
19	CASING, 6" PVC SOWER PIPE	1
20	VALVE BOX, CAST IRON OLYMPIC FOUNDRY VB-007-SKAGIT (SEE P.U.D. DETAIL)	1
21	ADAPTER BRASS PAK JOINT, 2" F.I.P.T. x 2" COP (FORD #24-44-Q-NL) <sup>b</sup>	1
22	BUSHING BRASS 2" M.I.P.T. x 1-1/2" F.I.P.T.	1
23	NIPPLE BRASS 1-1/2"x2"	1

<sup>a</sup> OR EQUIVALENT APPROVED BY THE DISTRICT  
<sup>b</sup> ILL. 90" STREET, 2" M X F I.P.T. (IF NEEDED)  
 ALL BRASS FITTINGS TO BE LEAD FREE DOMESTIC BRASS PER UNITED STATES BILL S.3874.

**NOTES**

- COP 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.
- 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 COPPERSETTER ARE NOT INSTALLED AT TIME OF SERVICE PIPE INSTALLATION, THEN 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 COPPERSETTER, 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 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.
- FILL BOX WITH FINE DIRT TO TOP OF METER.
- IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M5801324-4526) WILL BE REQUIRED. NOI 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.U.D. COPPER SERVICE DETAIL.
- IF SERVICE LINE HAS LESS THAN 2" OF COVER, CONTACT DISTRICT ENGINEERING 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.

#10 WIRE

MAINLINE WIRE CONNECTION DETAIL NTS

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.<sup>e</sup>

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

APPROVED ON: OCTOBER 15, 2015

SCALE: 1" = 2"  
 DATE: 3-01-05  
 REVISED: 10/15/15  
 DRAWN BY: JLB  
 APPROVED BY: GJS

**STANDARD**  
**WS1.5-1**



STANDARD INSTALLATION OF  
 1-1/2" METERED SERVICE  
 WITH 200 P.S.I. REHAU  
 SERVICE LINE

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	8/4/19



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555	
DATE PRINTED:	SEC: 21.22
	TWP: 34 N
	RGE: 3 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

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

SCALE: NONE	P.N. 03761	SHEET: 24 OF 26
	C.O. 4829	

**VALVE OPERATING NUT EXTENSION**

EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN THREE (3) FEET BELOW FINISHED GRADE. THE FINISH ELEVATION OF THE OPERATING NUT IS TO BE 2' - 3' BELOW FINISH GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG, ONLY ONE EXTENSION TO BE USED PER VALVE.

NOTE: 1) ALL EXTENSIONS ARE TO BE MADE OF STEEL SIZED AS NOTED, AND PAINTED WITH TWO COATS OF METAL PAINT. WELD ALL PARTS. 2) A CARBONITE CRY-116 BLUE MARKER SHALL BE INSTALLED AT ALL VALVE(S) LOCATIONS UNLESS DIRECTED OTHERWISE BY DISTRICT REPRESENTATIVE.

**VALVE CASING EXTENSION**

IF THE 6" PVC VALVE CASING PIPE DOES NOT EXTEND HIGH ENOUGH TO SUPPORT THE CAST IRON VALVE BOX, AN EXTENSION CAN BE ADDED FOLLOWING THE PROCEDURE BELOW:

- CUT A 6" PVC SEWER PIPE 6" - 8" LONGER THAN THE RISE NECESSARY.
- SPLIT THE 6" PVC SEWER PIPE THE FULL LENGTH.
- CURL CASING EXTENSION INTO ITSELF AND PLACE INSIDE EXISTING PVC VALVE CASING THE 6"-8" ALLOWED FOR IN STEP 1. INSTALL VALVE BOX.

**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

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

STANDARD  
WV-1a

**NOTES**

- VAULTS SHALL BE PRE-CAST CONCRETE MEETING ASTM C478. TOP SLAB SHALL BE DESIGNED TO CARRY HS-20 LOADING.
- RIGID NON-METALLIC CONDUIT (PVC) FOR FIBER SHALL BE ULL 651 LISTED, NEMA TC-2, SCHEDULE 40 APPROVED FOR CONCRETE ENCASUREMENT. PVC CONDUIT SWEEPS SHALL NOT BE USED.
- FIBERGLASS CONDUIT FOR FIBER SHALL BE ULL 1684 LISTED, NEMA TC-14, APPROVED FOR CONCRETE ENCASEMENT. FIBERGLASS CONDUIT SWEEPS SHALL BE A MINIMUM RADIUS OF 36 INCHES.
- CONDUITS SHALL CONTAIN NO MORE THAN THREE-QUARTER BENDS (270 CUMULATIVE DEGREES) BETWEEN FIBER OPTIC VAULTS.
- DURING FIBER OPTIC CABLE INSTALLATION, A MINIMUM OF 150 FEET OF SLACK CABLE SHALL BE INSTALLED ON MOUNTING HARDWARE WITHIN EACH FIBER OPTIC VAULT.
- FIBER OPTIC VAULTS SHALL BE A MAXIMUM OF 2,500 FEET APART.

**TYPICAL FIBER OPTIC VAULT LAYOUT**

**PLAN VIEW**

**ELEVATION**

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

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

STANDARD  
WFO-1

**BILL OF MATERIALS**

NO.	NOMENCLATURE	REQD.
1	TEE WITH FLANGED BRANCH	1
2	VALVE WITH FLANG CONNECTIONS (SEE NOTE 6)	1
3	CASING, 6" PVC SEWER PIPE	1
4	PIPE, 6" CLASS 50 DUCTILE IRON, FIELD CUT	1
5	FIRE HYDRANT WITH PUMPER PORT, LOW METALLURGICAL OR AS APPROVED BY JURISDICTIONAL FIRE DEPARTMENT/DISTRICT	1
6	VALVE BOX, CAST IRON Q.M.P.C. FOUNDRY V6007/SKAGIT (SEE P.U.D. DETAIL)	1
7	BLOCK, PRECAST CONCRETE, SEE NOTE 8	1
8	FABRIC, TEXTILE, NON-WOVEN (MIRAFI 140N) <sup>®</sup>	1
9	1/4" CY DRUM ROCK, 1-1/2" - 3/4", NO FINES	2
10	MEG-A-LUG, 6" / 8" RING 5"	2
11	HYDRANT ADAPTER, STORZ STYLE 5-37 W/50" CAP & CABLE, 5/4" RPT	1

\* OR EQUIVALENT APPROVED BY THE DISTRICT

**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, 6" MEGALUGS (OR APPROVED EQUIVALENT) ARE TO BE INSTALLED AT VALVE AND HYDRANT M.J. OUTLETS. RESTRAIN ANY JOINTS IN THE PIPELINE WITH TIE-BACK (SCHEDULE 40 APPROVED EQUIVALENT) INSTALLED IN THE BELLS OF TYPICAL JOINT PIPE OR "MEGALUGS" ON M.J. BELLS.
- NO THURST BLOCK REQUIRED. REINFORCING TIE ON 6" 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 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 ANWA STANDARD GATE, "O" RING PACKING, NON-RISING STEM, 2" OPERATING NUT, RESUBMIT 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 SOFT CONCRETE SUPPORT TIGHT UP UNDER VALVE AND HYDRANT.
- HYDRANT BARREL, LEAD, TEE, AND VALVE MUST BE WRAPPED WITH POLYETHYLENE PIPE ENCASUREMENT TAPE WHICH IS A MINIMUM OF 8-MIL THICK. IT MUST BE INSTALLED AS PER W.S.D.O.T. STANDARDS AND IN ACCORDANCE WITH A.M.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 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 NATURAL STANDARD THREADS MEASURING 3.025 INCHES OUTSIDE DIAMETER AT 7-1/2 THREADS PER INCH. PUMPER PORTS SHALL BE NO. 3 P.A.P.C. COAST THREADS MEASURING 4.88 INCHES OUTSIDE DIAMETER AT 8 THREADS PER INCH. THE OPERATING NUT SHALL BE 1-1/4 INCH PERMANENT.

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

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

STANDARD  
WH-1a

**RECOMMENDED PROCEDURE FOR RAISING AND SETTING CAST IRON VALVE BOX IN ASPHALT PAVING**

- LOCATE BURIED VALVE BOX USING REFERENCE MEASUREMENTS AND/OR ELECTRONIC OR MAGNETIC LOCATOR. MARK LOCATION WITH WHITE PAINT.
- BREAK OUT SMALL HOLE IN PAVEMENT AND LOCATE THE VALVE BOX COVER.
- CAREFULLY BREAK OUT AN 18-INCH DIAMETER HOLE WITH 8-INCH RADIUS FROM THE CENTER OF THE VALVE BOX. A GRATE TEMPLATE 18-INCH DIAMETER IS HANDY TO MARK OUT THE PERIMETER OF THIS HOLE. USE A CURVED SPADE WITH A JACKHAMMER TO CUT A NEAT VERTICAL FACE HOLE IN THE ASPHALTIC CONCRETE PAVEMENT. DO NOT CRACK OR DAMAGE THE PAVEMENT BEYOND THIS HOLE. IF IT IS SUSPECTED THE VALVE CASING IS NOT VERTICAL OR COVERED OVER THE VALVE OPERATING NUT, REMOVE JUST ENOUGH PAVEMENT TO ALLOW REMOVAL OF THE VALVE BOX LID SO IT CAN BE DETERMINED IF CASING ADJUSTMENT IS NEEDED. IT IS VERY IMPORTANT TO NOT REMOVE ANY MORE FINISHED PAVEMENT THAN ABSOLUTELY NECESSARY.
- COMPLETELY REMOVE THE WHOLE VALVE BOX. DO NOT DISTURB THE SURROUNDING EARTH ANY MORE THAN NECESSARY. EXAMINE THE CASING PIPE. MAKE SURE IT IS VERTICAL, SYMMETRICAL AROUND THE VALVE NUT AND CLEAN OF ALL ROCKS, DEBRIS AND DIRT. CLEAN AND CORRECT AS NECESSARY. CHECK WITH A VALVE WRENCH TO VERIFY OPERATION IS SMOOTH.
- TRIM OR ADD TO THE CASING PIPE (6-INCH PVC PLASTIC OR CONCRETE) AS NEEDED SO THE TOP OF THE CASING PIPE IS A MINIMUM OF 4 INCHES TO MAXIMUM OF 8 INCHES BELOW THE FINISHED PAVEMENT GRADE. THE LID WILL NOT FIT TIGHT IF THE CASING IS HIGHER. VALVE BOX WILL HAVE POOR SUPPORT IF THE CASING PIPE IS LOWER. TO ADD CASING PIPE, USE A PIECE OF 6-INCH PVC PLASTIC SEWER PIPE CUT 12 INCHES LONGER THAN NEEDED. SAW-CUT THIS PIECE ALONG ONE SIDE IN A STRAIGHT LINE THE FULL LENGTH. FOLD THE PIPE OVER THE SAW-CUT AND INSERT IT INSIDE THE CASING PIPE IN THE GROUND. SLIDE UP OR DOWN TO ACHIEVE DESIRED LEVEL.
- IF THE VALVE OPERATING NUT IS OVER 3 FEET BELOW FINISH PAVEMENT GRADE, INSTALL A STANDARD VALVE OPERATING EXTENSION, PER STANDARD SPECIFICATIONS.
- USING A 1-INCH ROD OR CAPED 3/4-INCH PIPE, THOROUGHLY POUND THE EARTH ALL AROUND THE CASING PIPE TO OBTAIN MAXIMUM EARTH COMPACTION.
- FILL THE VOID BETWEEN THE CASING PIPE AND EARTH WALL UP TO EXACTLY 12 INCHES (1 FOOT) BELOW FINISH PAVEMENT GRADE WITH 5/8-INCH MINUS CRUSHED ROCK AND THOROUGHLY COMPACT USING ROD OR PIPE AS IN STEP 7. KEEP ADDING AND COMPACTING CRUSHED ROCK UNTIL HARD, TIGHT LEVEL SURFACE IS EXACTLY 12 INCHES BELOW PAVEMENT GRADE.
- INSERT THE VALVE BOX. USING A STRAIGHT LEVEL OR ROD, CHECK THAT THE TOP RIM OF THE VALVE BOX IS EXACTLY LEVEL WITH THE FINISHED PAVEMENT. THE BOX MUST SET EVENLY ON THE CRUSHED ROCK BASE. IT MUST NOT ROCK OR WIGGLE. REMOVE THE BOX AND ADJUST THE CRUSHED ROCK AS OFTEN AS NECESSARY TO ACHIEVE EXACT GRADE WITH PAVEMENT AND UNIFORM BOX SUPPORT. PUT CAST IRON LID ON THE BOX. MAKE SURE IT FITS CORRECTLY AND IS FLUSH WITH THE BOX RIM. REPLACE LID IF INCORRECT FIT. REPLACE ENTIRE VALVE BOX IF BOX RIM PREVENTS A SNUG FIT OF THE LID.
- ADD 5/8-INCH MINUS CRUSHED ROCK UNIFORMLY IN THE SPACE BETWEEN THE VALVE BOX AND OUTSIDE EARTH WALL IN MAXIMUM 4-INCH LIFTS. COMPACT EACH LIFT COMPLETELY WITH 1-INCH ROD OR PIPE AS BEFORE. FILL AND COMPACT THE SPACE UP TO 2 INCHES BELOW FINISHED PAVEMENT GRADE.
- ADD HOT MIX ASPHALTIC CONCRETE MATERIAL AND THOROUGHLY COMPACT WITH ROD OR PIPE TO THE FINISH PAVEMENT GRADE. SMOOTH OFF THE SURFACE AS MUCH AS POSSIBLE.
- USING A BRUSH, PAINT THE SURFACE OF THE PATCH WITH ASPHALT TACK MATERIAL, EXTENDING MINIMUM OF 1 INCH OVER PAVEMENT AND ONTO EDGE OF VALVE BOX METAL RIM. DO NOT ALLOW ANY TACK MATERIAL TO FLOW INTO METAL RIM OR ON BOX COVER. USE A BRUSH TO CONTROL APPLICATION OF THIS TACK COAT AND PREPARE A NEAT SEAL SURFACE.
- CHECK AGAIN THAT VALVE CASING IS CLEAR. THAT VALVE WRENCH CAN BE PUT ON OPERATING NUT AND VALVE CAN BE OPERATED PROPERLY.
- SPREAD CLEAN FINE SAND OVER THE TACK COAT SO THAT VEHICLE TIRES WILL NOT LIFT THE TACK MATERIAL BEFORE IT CURES AND SETS UP.
- EACH VALVE BOX IN A CLUSTER OF TWO TO THREE MUST BE ADJUSTED INDEPENDENTLY AS OUTLINED ABOVE. CUTTING OUT TRIANGLES OR SQUARES OF FINISHED PAVEMENT RESULTS IN VALVE BOXES THAT DO NOT REMAIN EVEN WITH PAVEMENT, LEAN TOGETHER, AND BREAK OUT UNDER TRAFFIC BEATING.

CAREFULLY FOLLOWING THIS OUTLINED PROCEDURE RESULTS IN VALVE BOX SETTINGS THAT WILL REMAIN FIRM AND IN PLACE, AND ARE VIRTUALLY UNNOTICED BY THE PUBLIC PASSING OVER THEM IN THEIR VEHICLES.

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

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

STANDARD  
WV-1b

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

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

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

STANDARD  
WH-1b

**LEGEND**

- INSTALL CORNERSTONE F100 BLOCK UNITS WITH CAPS, STACK TO DESIRED HEIGHT (4" MAX.). ADHERE CAPS TO THE BLOCK UNITS WITH A CONCRETE ADHESIVE.
- COMPACTED 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

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

STANDARD  
WH-1b

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/18
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19

**811**  
Know what's below. Call before you dig.

**Skagit PUD**  
PUBLIC UTILITY DISTRICT

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555

DATE PRINTED: SEC: 21, 22  
TWP: 34 N  
RGE: 3 E

DATE: NAD 83  
VERT: NAVD 88

DSGN BY: JLB  
DWN BY: JLB  
APPV BY: MCH

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

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II  
STANDARD DETAILS

SCALE: NONE  
P.N. 03761  
C.O. 4829

SHEET: 25 OF 26

BILL OF MATERIALS			
NO.	QUANTITY	DESCRIPTION	REMARKS
1	1	CLAMP SERVICE DOUBLE STRAP X 2" L.P.T., ALL BRASS	
2	1	UTILITY VALVE SIZE 2" W/2" L.P.T. LOCKING STEEL COVER	
3	1	VALVE BALL BRASS 1/2" (P.O.D. #3500-7-1/2")	
4	1	VALVE BRASS 2"	
5	1	VALVE 2" COMBINATION AIR (A.P.O.D. 145C2 SERIES) W/ST TRIM	
6	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
7	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
8	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
9	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
10	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
11	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
12	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
13	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
14	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
15	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
16	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
17	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
18	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
19	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	
20	1	PIPE 2" SOLID COPPER BLUE COATED EXHIBIT 18" INTO BOX NEAR LD	

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

**NOTES:**

- SET VALVE CASING AND VALVE/BOX TO FINISH GRADE. DO NOT REST CASING OR VALVE ON WIPES OR PIPE. PLACE 6 INCHES OF 3/4" MINUS CRUSHED GRAVEL COMPACTED TO 95% UNDER CONCRETE VALVE SUPPORT VALVE CASING WITH 0.2 SQ. FT. OF CONCRETE ON EACH SIDE OF VALVE. SUPPORT 2" VALVE WITH MIN. OF 1' SOFT OF CONCRETE BLOCK ON UNDISTURBED GROUND OR COMPACTED 3/4" CRUSHED GRAVEL.
- INSTALL LINE PERPENDICULAR TO MAIN OR AS SHOWN ON WATER PLAN.
- IF THERE IS A GROUND DEPRESSION OR DITCH 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.

SCALE: 1" = 2"  
DATE: 3-25-05  
REVISED: 1/3/19  
DRAWN BY: CAS  
APPROVED BY: GJS

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

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

FINAL SAWCUT. SEAL JOINT WITH HOT TAR SPRINKLED WITH CLEAN SAND

4" MIN. ACP CLASS B PLACED IN 2 LIFTS

6" CRUSHED SURFACING TOP COURSE PER WSDOT 9-03.9(3) COMPACTED TO 95%

EXIST. ACP

INITIAL SAWCUT

GRAVEL BORROW BACKFILL PIT RUN WITH MAX. SIZE OF 3", PER WSDOT 9-03.14(1) COMPACTED TO 95%

COVER PER PLANS

4.0' TRENCH DEPTH MIN.

NOTE: -12-INCH BUTTERFLY VALVE OPERATING NUT 14" FROM CENTERLINE OF PIPE

6" MIN.

10 GAUGE SOLID CORE INSULATED COPPER TRACER WIRE

4" DIA. SCH. 40 PVC CONDUIT FOR FIBER OPTIC CABLE (IF REQUIRED)

6" MIN.

GRAVEL BACKFILL FOR PIPE ZONE BEDDING. PIT RUN WITH MAX. SIZE OF 1", PER WSDOT 9-03.12(3)

30" MIN.

**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.

SCALE: 1" = 1"  
DATE: 5/30/19  
REVISED: 5/30/19  
DRAWN BY: KDM

**STANDARD**

**TYPICAL TRENCH RESTORATION SECTION**

**THRUST BLOCK REQUIREMENTS**

PIPE SIZE (INCH)	BEARING AREA REQUIRED IN SQUARE FEET					
	90 Degree BEND	45 Degree BEND	22.5 Degree BEND	11.25 Degree BEND	TEE	CAP OR PLUG
4	1.8	2.0	2.3	2.6	2.9	3.2
6	2.7	3.0	3.4	3.9	4.4	4.9
8	3.6	4.0	4.6	5.2	5.9	6.6
10	4.5	5.0	5.7	6.5	7.4	8.3
12	5.4	6.0	6.9	7.9	9.0	10.1
14	6.3	7.0	8.0	9.2	10.5	11.8
16	7.2	8.0	9.2	10.6	12.1	13.6
18	8.1	9.0	10.4	11.9	13.5	15.2
20	9.0	10.0	11.6	13.3	15.1	16.9
24	10.8	12.0	14.0	16.0	18.0	20.4

**KEY BLOCKING SPECIFICATIONS:**

MATERIALS SHALL INCLUDE 3/4" INCH RESTRAINING RODS, HEX NUTS AND WASHERS OF HIGH STRENGTH LOW ALLOY STEEL. MEETING AWWA C-111-90 COMPOSITION SPECIFICATIONS. ROMAC "DUCTILE LUG" OR 90° EYE BOLTS AND "90°" SERIES PIPE RESTRAINING SYSTEM. THRUST RESTRAINT TO BE CALCULATED AT 7000 POUNDS PER BOLT OR AS RECOMMENDED BY ENGINEER. ALL RODS, EYE BOLTS AND PIPE RESTRAINTS ARE TO BE CLEAN. TWO SEPARATE BRUSH COATS OF ASPHALT COATING AS APPROVED BY THE ENGINEER TO BE APPLIED. A 3-INCH MINIMUM CLEARANCE IS REQUIRED BETWEEN WATER PIPE AND CONCRETE. SOIL IS TO BE COMPACTED TO 95% FIRM. FIRM TO BE MINIMUM #6 (3/4") SIZE AND HAVE A MINIMUM 6-INCH CLEARANCE FROM ANY CONCRETE SURFACE.

**BEARING AREA REQUIRED IN SQUARE FEET**

THE SAFE SOIL BEARING LOADS SHOWN BELOW ARE FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET.

**SOIL**

MUCK, PEAT, ETC.....0  
SOFT CLAY, SILT.....1,000  
SAND, SANDY SILT.....2,000  
SAND AND GRAVEL.....3,000  
SAND AND GRAVEL CEMENTED W/ CLAY.....4,000  
HARD SHALE.....10,000

**SAFE BEARING LOAD** LBS./SQ. FT.

\*IN MUCK OR PEAT, ALL THRUSTS SHALL BE RESTRAINED BY PILES OR TIE RODS TO SOLID FOUNDATIONS OR BY REMOVAL OF MUCK OR PEAT AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THRUSTS.

**KEY BLOCK USE:**

THE INSTALLATION OF A KEY BLOCK IS TO BE CONSIDERED ONLY FOR TEMPORARY BLOCKING FOR 5-10 YEARS. IF THE PIPELINE IS TO REMAIN A DEPENDANT OR AN EXTENSION IS LIKELY TO BE MORE THAN 10 YEARS AWAY THEN A STANDARD BLOCK FOR CAP OR PLUG WILL BE INSTALLED. USE OF KEY BLOCK IS TO BE APPROVED BY THE DISTRICT.

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

**STANDARD**  
**WT-1**

**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	730

**TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R**

HOST VEHICLE WEIGHT	9,000 TO 22,000 lbs.	> 22,000 lbs.
< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'
74'	100'	150'

**PROTECTIVE VEHICLE (WORK VEHICLE) = R**

NO SPECIFIED DISTANCE REQUIRED

**SIGN SPACING = X (1)**

ROAD TYPE	SPACING	MIN. SPACING
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.

**INTERSECTION PLAN**  
NOT TO SCALE

DATE: 5/31/2019  
DRAWN BY: JLB  
SCALE: N.T.S.

1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

McLEAN RD,  
S WALL ST TO BEST RD

PAGE 1 OF 1

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	4/19/18
2.	60% DESIGN	MCH	12/6/19
3.	90% DESIGN	MCH	2/22/19
4.	ISSUED FOR BIDDING	MCH	6/4/19

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Call before you dig.

**Skagit PUD**  
PUBLIC UTILITY DISTRICT

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555

DATE PRINTED: SEC: 21.22  
TWP: 34 N  
RGE: 3 E

DATE: 5/31/2019  
DRAWN BY: JLB  
SCALE: N.T.S.

1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

McLEAN ROAD, WALL STREET TO BEST ROAD PHASE II

STANDARD DETAILS

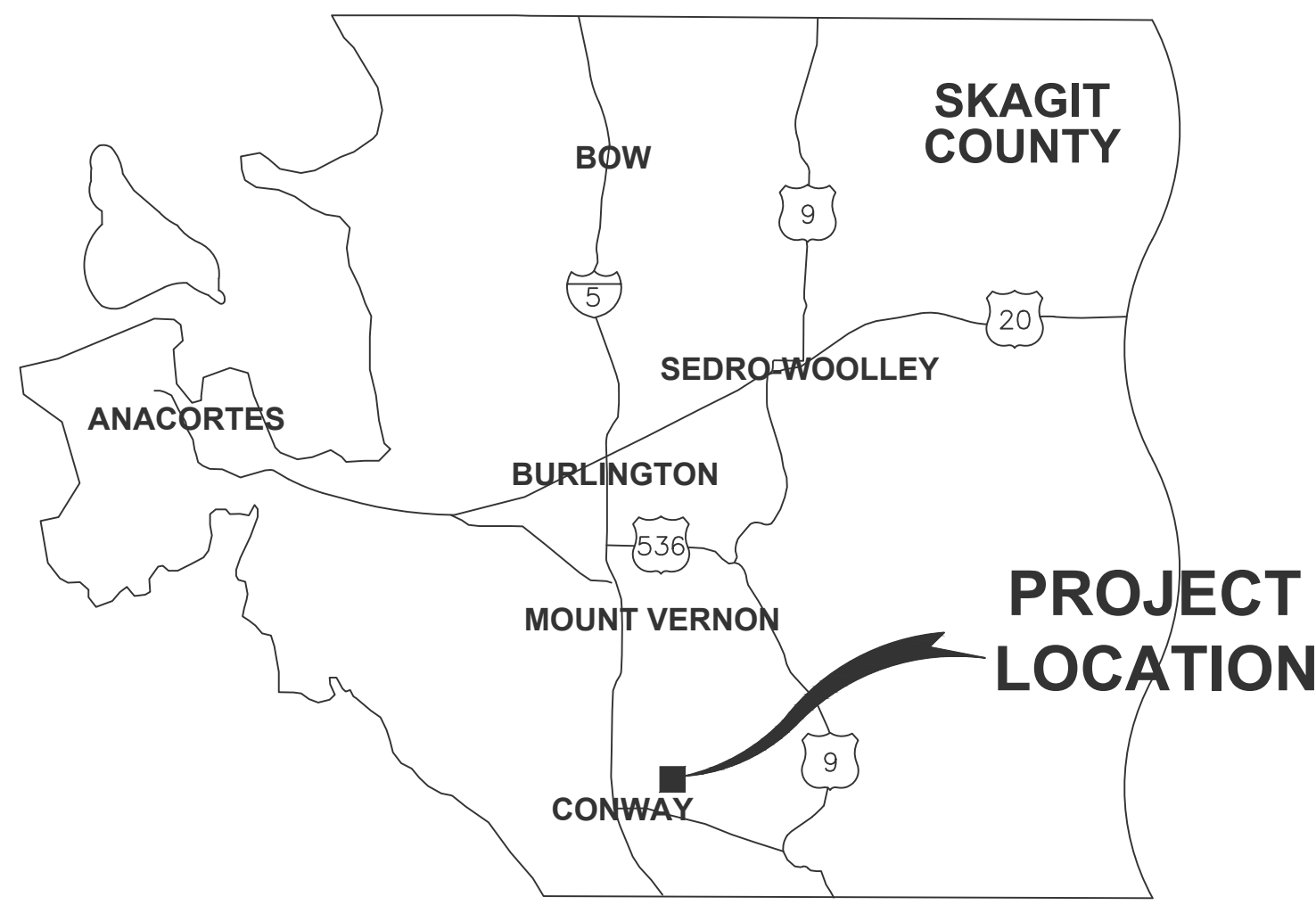
SCALE: NONE

P.N. 03761  
C.O. 4829

SHEET: 26 OF 26

# DAISY LANE STREAM CROSSING SCHEDULE B

MOUNT VERNON, SKAGIT COUNTY, WA  
P.N. 03733  
CO 5014  
ISSUED FOR BIDDING  
JUNE 4, 2019



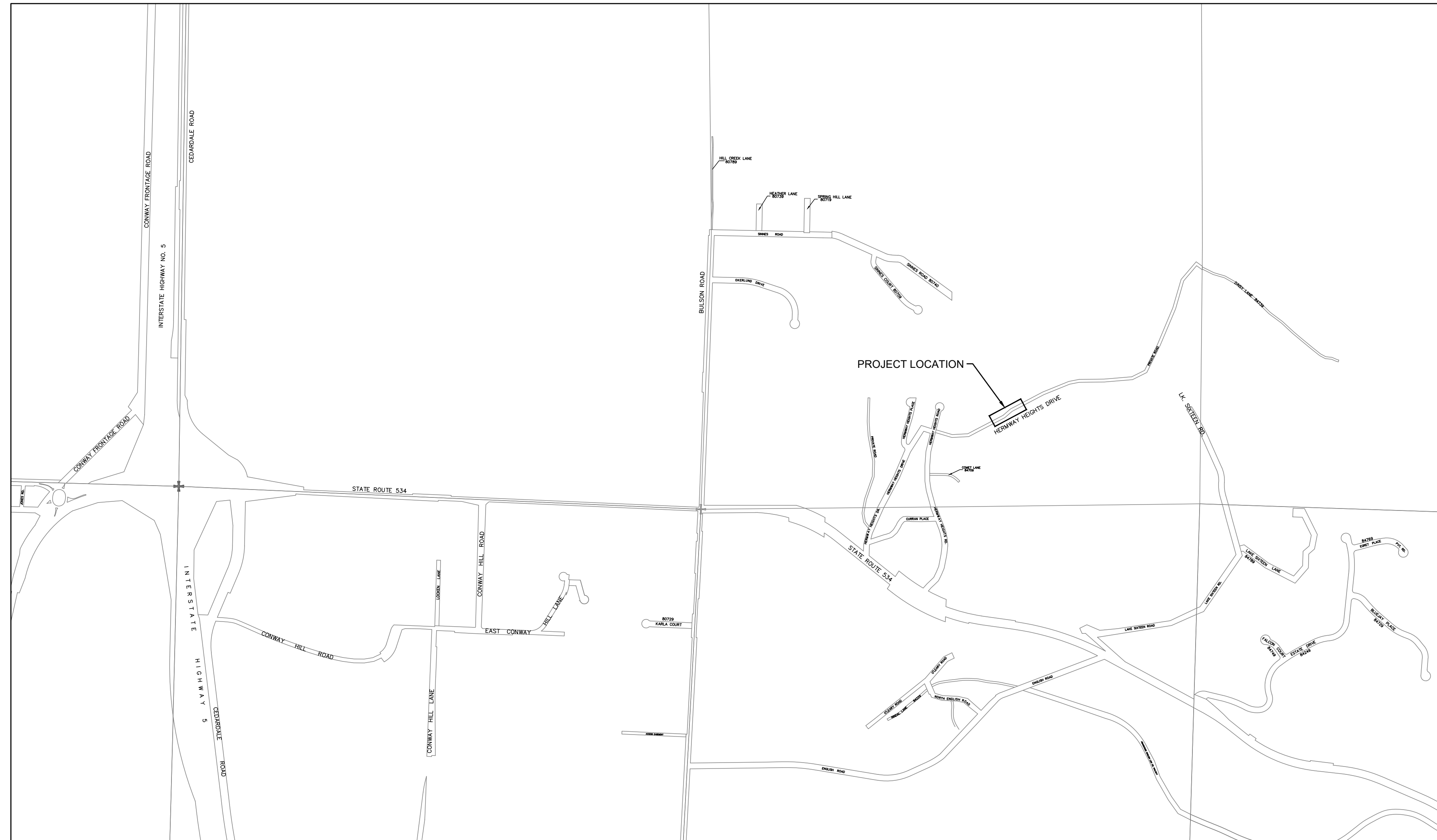
**Skagit  
PUD**  
PUBLIC UTILITY DISTRICT  
NO. 1 OF SKAGIT COUNTY

**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

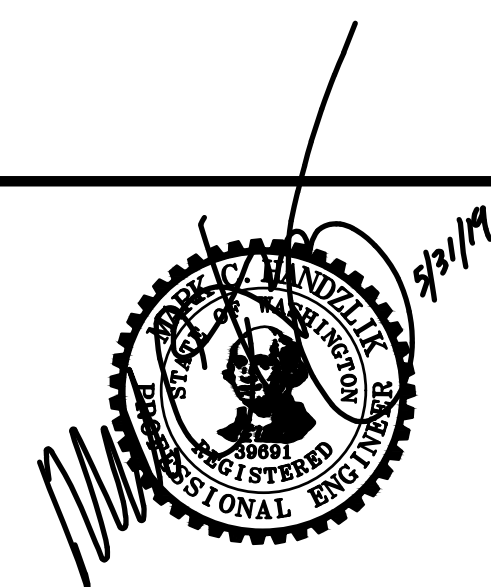
**DRAWING INDEX**

- COVER
- 1. PLAN AND PROFILE : STA 101+50 TO STA 104+00
- 2. NOTES AND DETAILS



**VICINITY MAP**   
NOT TO SCALE

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	2/6/19
2.	90% DESIGN	MCH	2/21/19
3.	ISSUED FOR BIDDING	MCH	6/4/19



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: CAS DWN BY: JLB APPVD BY: MCH
DATE PRINTED: 6/3/19	SEC: 16 TWP: 33 N RGE: 4 E

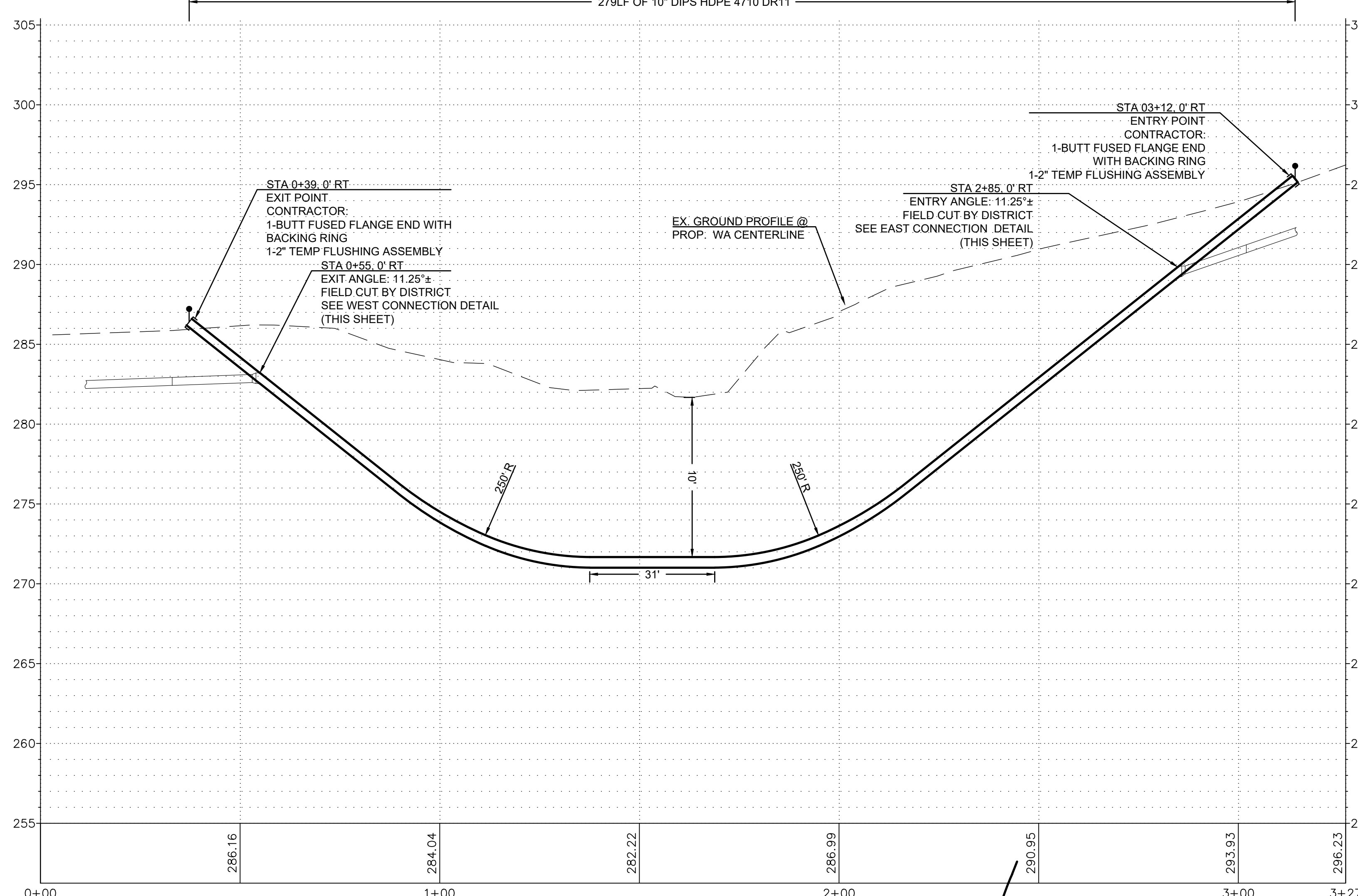
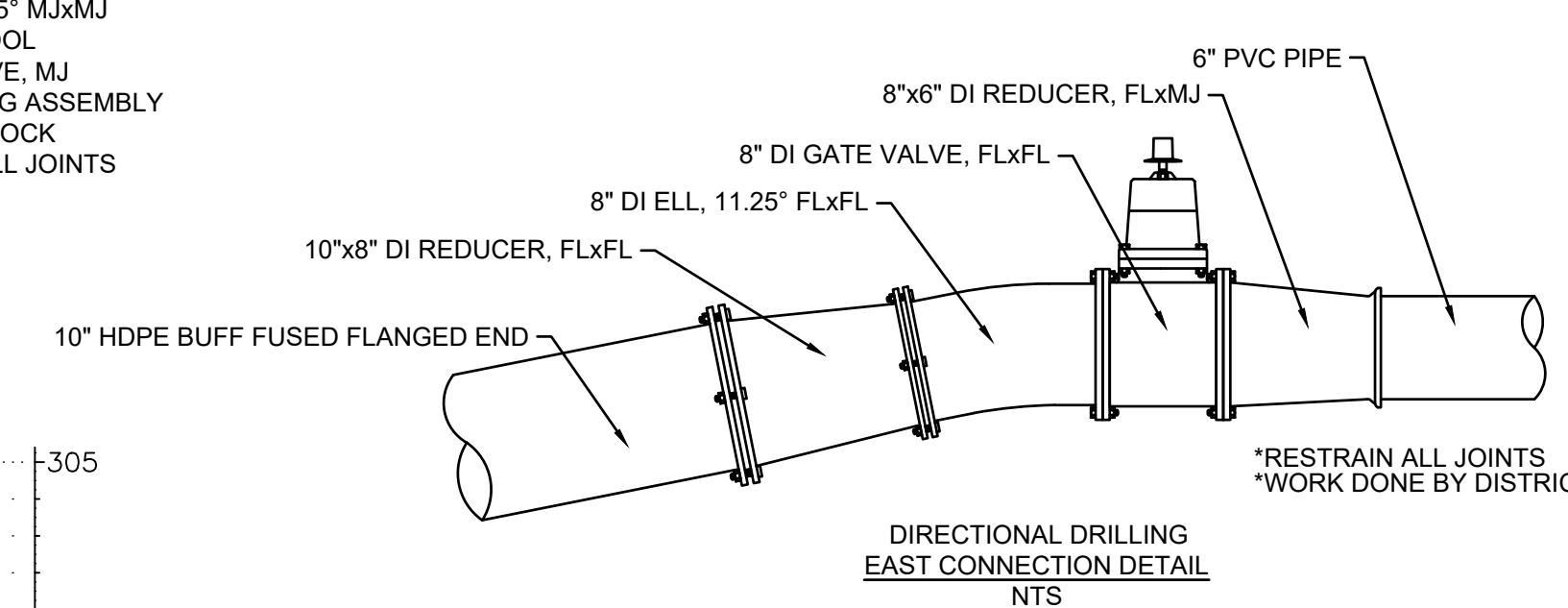
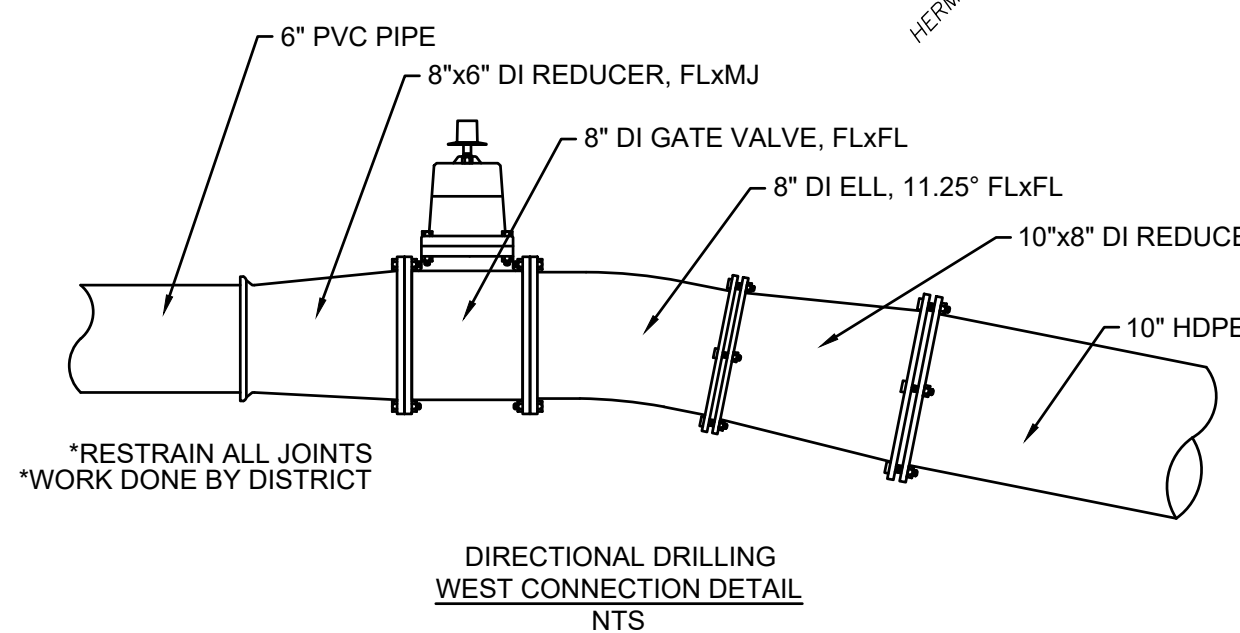
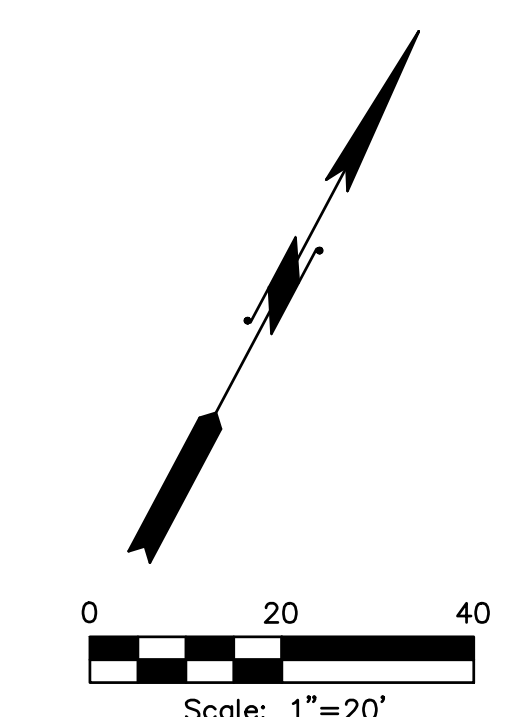
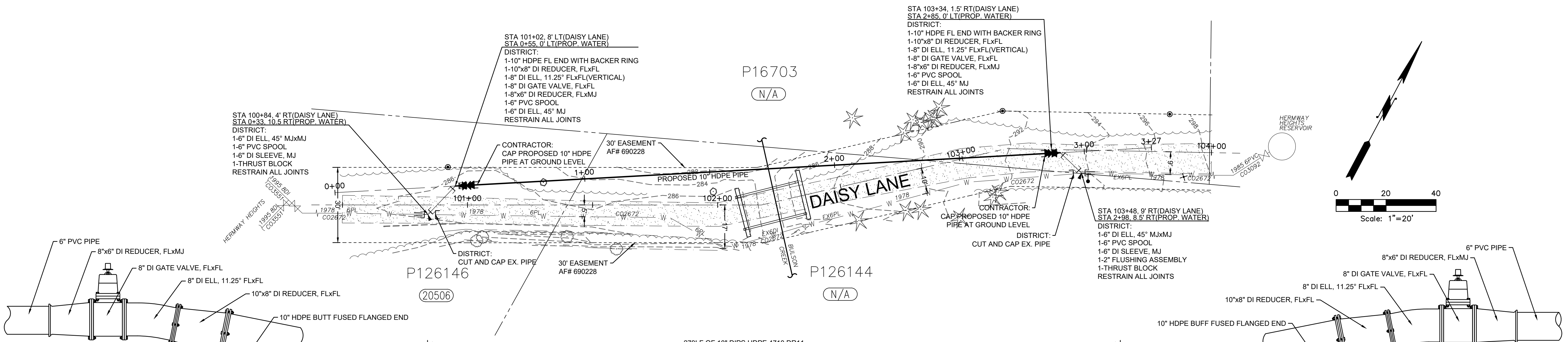


PUBLIC UTILITY DISTRICT  
NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
(360) 424-7104  
www.SkagitPud.org

DAISY LANE STREAM CROSSING

COVER

SCALE: NONE	P.N. 03733	SHEET:
	C.O. 5014	COVER



BILL OF MATERIALS			
NO.	QUANTITY	DESCRIPTION	REMARKS
1	1	10" DI BLIND FLANGE, CAP 2"	
2	1	VALVE, 8" DUCTILE IRON, RESILIENT WEDGE, 150PSI	
3	1	PIPE, 8" DI, GALVANIZED	
4	1	ELL, 8" DI, GALVANIZED	
5	1	REDUCER, 8" DI TO 6" DI, GALVANIZED	
6	1	TRAFIC RATED METER BOX AND LID (N=20 WITH BOLT DOWN LID)	
7	1	CASING, 6" P.V.C., SLEEVE PIPE	
8	1	MARKER BLUE CARBONITE POW-116	
9	1	CAP, 2" PLASTIC, TRUSS	
10	1	WIRE, #10 SOLID COPPER, BLUE COATED, EXTEND MIN. 18" INTO BOX NEAR LID	
11	1	6" CRUSHED SURFACING TOP COURSE COMPACTED TO 95% MAXIMUM DENSITY	

**NOTES:**  
 1. PLASTIC THREAD CAP TO BE HAND TIGHT ONLY.  
 2. TEE IS SEPARATE UNIT OF WORK.

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	2/6/19
2.	90% DESIGN	MCH	2/21/19
3.	ISSUED FOR BIDDING	MCH	6/4/19

DATUM:  
 HOR: NAD 83  
 VERT: NAVD 88  
 DSGN BY: CAS  
 DWN BY: JLB  
 APPVD BY: MCH  
 DATE PRINTED: 6/3/19  
 SEC: 16  
 TWP: 33 N  
 RGE: 4 E

**Skagit PUD**  
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**DAISY LANE STREAM CROSSING**

PLAN AND PROFILE  
 STA 101+50 TO STA 104+00

SCALE: 1"=20'

P.N. 03733	SHEET:
C.O. 5014	1 OF 2

# DISTRICT STANDARD GENERAL NOTES

(Minimum Requirements)

- 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.
- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE DISTRICT ENGINEERING DEPARTMENT, (360) 424-7104, A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- ALL PERMITS NECESSARY FOR THE INSTALLATION OF THE PROPOSED WATER SYSTEM IMPROVEMENTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER, ENGINEER, OR CONTRACTOR TO ACQUIRE. A COPY OF THE PERMITS WILL BE SUBMITTED TO THE DISTRICT, PRIOR TO CONSTRUCTION. ALL RIGHTS SHALL BE GRANTED TO, OR TRANSFERRED TO THE DISTRICT.
- DISTRICT REFERENCE DOCUMENTS, SUCH AS STANDARD DETAILS, WATER POLICY MANUAL, DRAWING STANDARDS, ETC., CAN BE FOUND ON THE DISTRICT WEBSITE AT WWW.SKAGITPUD.ORG.
- ALL TIE-INS, SHUTDOWN, FLUSHING, AND HEALTH SAMPLES SHALL BE COORDINATED WITH THE DISTRICT. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES.
- 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.
- DUCTILE IRON PIPE WILL BE MINIMUM CLASS 50 AWWA C151 PER WSDOT STANDARD SPECIFICATIONS 9-30.1 AND 9-30.1(1). ALL DUCTILE IRON WATER PIPE AND FITTINGS SHALL BE COMPLETELY WRAPPED WITH A MINIMUM OF EIGHT-MIL POLYETHYLENE PIPE ENCASEMENT AND INSTALLED IN ACCORDANCE WITH AWWA C105 AND WSDOT STANDARD SPECIFICATIONS 7-09.3(17) AND 9-30.1(2).
- 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 A563D43 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.
- ALL GATE VALVES TO BE RESILIENT SEATED GATE VALVES, AWWA C515 OR C509 (DUCTILE IRON BODY ONLY) WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
- ALL BUTTERFLY VALVES TO BE RUBBER SEATED BUTTERFLY VALVES, AWWA C504 WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
- RESTRAINED JOINTS MAY BE USED IN PLACE OF CONCRETE BLOCKING AS DIRECTED BY THE PROJECT'S DESIGN ENGINEER AND ACCEPTED BY THE DISTRICT.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 VALVE LID'S HINGE AND BRASS PLUGS IN THE TEST PORTS. METER SUPPLY AND INSTALLATION WILL BE INCLUDED WITH THE CHARGES IN THE WORK ORDER.
- 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.
- 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.
- 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 _____
PRESSURE DROP _____	MAKE-UP WATER _____
TEST DATE _____	TEST PRESSURE _____
TIME START _____	TIME END _____
PRESSURE DROP _____	MAKE-UP WATER _____
TEST DATE _____	TEST PRESSURE _____
TIME START _____	TIME END _____
PRESSURE DROP _____	MAKE-UP WATER _____

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	2/6/19
2.	90% DESIGN	MCH	2/21/19
3.	ISSUED FOR BIDDING	MCH	6/4/19

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

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/8/14  
DRAWN BY: CAS  
APPROVED BY: GJS

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

STANDARD  
WV-1a

**RECOMMENDED PROCEDURE FOR RAISING AND SETTING CAST IRON VALVE BOX IN ASPHALT PAVING**

- LOCATE BURIED VALVE BOX USING REFERENCE MEASUREMENTS AND/OR ELECTRONIC OR MAGNETIC LOCATOR. MARK LOCATION WITH WHITE PAINT.
- BREAK OUT SMALL HOLE IN PAVEMENT AND LOCATE THE VALVE BOX COVER.
- CAREFULLY BREAK OUT AN 18-INCH DIAMETER HOLE WITH 9-INCH RADIUS FROM THE CENTER OF THE VALVE BOX. A CIRCLE TEMPLATE 18 INCHES IN DIAMETER IS HANDY TO MARK OUT THE PERIMETER OF THIS HOLE. USE A CURVED SPADE WITH A JACKHAMMER TO CUT A NEAT VERTICAL FACE HOLE IN THE ASPHALTIC CONCRETE PAVEMENT. DO NOT CRACK OR DAMAGE THE PAVEMENT BEYOND THIS HOLE. IF IT IS SUSPECTED THE VALVE CASING IS NOT VERTICAL OR CENTERED OVER THE VALVE OPERATING NUT, REMOVE JUST ENOUGH PAVEMENT TO ALLOW REMOVAL OF THE VALVE BOX LID SO IT CAN BE DETERMINED IF CASING ADJUSTMENT IS NEEDED. IT IS VERY IMPORTANT TO NOT REMOVE ANY MORE FINISHED PAVEMENT THAN ABSOLUTELY NECESSARY.
- COMPLETELY REMOVE THE WHOLE VALVE BOX. DO NOT DISTURB THE SURROUNDING EARTH ANY MORE THAN NECESSARY. EXAMINE THE CASING PIPE. MAKE SURE IT IS VERTICAL, SYMMETRICAL AROUND THE VALVE NUT AND CLEAN OF ALL ROOTS, DEBRIS AND DIRT. CLEAN AND CORRECT AS NECESSARY. CHECK WITH A VALVE WRENCH TO VERIFY OPERATION IS SMOOTH.
- TRIM OR ADD TO THE CASING PIPE (6-INCH PVC PLASTIC OR CONCRETE) AS NEEDED SO THE TOP OF THE CASING PIPE IS A MINIMUM OF 4 INCHES TO MAXIMUM OF 8 INCHES BELOW THE FINISHED PAVEMENT GRADE. THE LID WILL NOT FIT TIGHT IF THE CASING IS HIGHER. VALVE BOX WILL HAVE POOR SUPPORT IF THE CASING PIPE IS LOWER. TO ADD CASING PIPE, USE A PIECE OF 6-INCH PVC PLASTIC SEWER PIPE CUT 12 INCHES LONGER THAN NEEDED. SAW-CUT THIS PIECE ALONG ONE SIDE IN A STRAIGHT LINE THE FULL LENGTH. FOLD THE PIPE OVER THE SAW-CUT AND INSERT IT INSIDE THE CASING PIPE IN THE GROUND. SLIDE UP OR DOWN TO ACHIEVE DESIRED LEVEL.
- IF THE VALVE OPERATING NUT IS OVER 3 FEET BELOW FINISH PAVEMENT GRADE, INSTALL A STANDARD VALVE OPERATING EXTENSION, PER STANDARD SPECIFICATIONS.
- USING A 1-INCH ROD OR CAPPED 3/4-INCH PIPE, THOROUGHLY POUND THE EARTH ALL AROUND THE CASING PIPE TO OBTAIN MAXIMUM EARTH COMPACTION.
- FILL THE VOID BETWEEN THE CASING PIPE AND EARTH WALL UP TO EXACTLY 12 INCHES (1 FOOT) BELOW FINISH PAVEMENT GRADE WITH 5/8-INCH MINUS CRUSHED ROCK AND THOROUGHLY COMPACT USING ROD OR PIPE AS IN STEP 7. KEEP ADDING AND COMPACTING CRUSHED ROCK UNTIL HARD, TIGHT LEVEL SURFACE IS EXACTLY 12 INCHES BELOW PAVEMENT GRADE.
- INSERT THE VALVE BOX. USING A STRAIGHT BOARD OR ROD, CHECK THAT THE TOP RIM OF THE VALVE BOX IS EXACTLY LEVEL WITH THE FINISHED PAVEMENT. THE BOX MUST SET EVENLY ON THE CRUSHED ROCK BASE. IT MUST NOT ROCK OR Wobble. REMOVE THE BOX AND ADJUST THE CRUSHED ROCK AS OFTEN AS NECESSARY TO ACHIEVE EXACT GRADE WITH PAVEMENT AND UNIFORM BOX SUPPORT. PUT CAST IRON LID ON THE BOX. MAKE SURE IT FITS CORRECTLY AND IS FLUSH WITH THE BOX RIM. REPLACE LID IF INCORRECT FIT. REPLACE ENTIRE VALVE BOX IF BOX RIM PREVENTS A SNUG FIT OF THE LID.
- ADD 5/8-INCH MINUS CRUSHED ROCK UNIFORMLY IN THE SPACE BETWEEN THE VALVE BOX AND OUTSIDE EARTH WALL IN MAXIMUM 4-INCH LIFTS. COMPACT EACH LIFT COMPLETELY WITH 1-INCH ROD OR PIPE AS BEFORE. FILL AND COMPACT THE SPACE UP TO 2 INCHES BELOW FINISHED PAVEMENT GRADE.
- ADD HOT MIX ASPHALTIC CONCRETE MATERIAL AND THOROUGHLY COMPACT WITH ROD OR PIPE TO THE FINISH PAVEMENT GRADE. SMOOTH OFF THE SURFACE AS MUCH AS POSSIBLE.
- USING A BRUSH, PAINT THE SURFACE OF THE PATCH WITH ASPHALT TACK MATERIAL. EXTENDING MINIMUM OF 1 INCH OVER PAVEMENT AND ONTO EDGE OF VALVE BOX METAL RIM. DO NOT ALLOW ANY TACK MATERIAL TO FLOW INTO METAL RIM OR ON BOX COVER. USE A BRUSH TO CONTROL APPLICATION OF THE TACK COAT AND PROVIDE A NEAT SEAL SURFACE.
- CHECK AGAIN THAT VALVE CASING IS CLEAR, THAT VALVE WRENCH CAN BE PUT ON OPERATING NUT AND VALVE CAN BE OPERATED PROPERLY.
- SPREAD CLEAN FINE SAND OVER THE TACK COAT SO THAT WHEEL TIRRES WILL NOT LIFT THE TACK MATERIAL BEFORE IT CURES AND SETS UP.
- EACH VALVE BOX IN A CLUSTER OF TWO TO FOUR VALVES MUST BE ADJUSTED INDEPENDENTLY AS OUTLINED ABOVE. CUTTING OUT TRIANGLES OR SQUARES OF FINISHED PAVEMENT RESULTS IN VALVE BOXES THAT DO NOT REMAIN EVEN WITH PAVEMENT, LEAN TOGETHER, AND BREAK OUT UNDER TRAFFIC BEATING.

CAREFULLY FOLLOWING THIS OUTLINED PROCEDURE RESULTS IN VALVE BOX SETTINGS THAT WILL REMAIN FIRM AND IN PLACE, AND ARE VIRTUALLY UNNOTICED BY THE PUBLIC PASSING OVER THEM IN THEIR VEHICLES.

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

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/8/14  
DRAWN BY: CAS  
APPROVED BY: GJS

STANDARD  
WV-1b

**HORIZONTAL THRUST BLOCKING DETAILS**

SCALE: NTS  
DATE: 3-25-05  
REVISED: 5/8/14  
DRAWN BY: CAS  
APPROVED BY: GJS

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

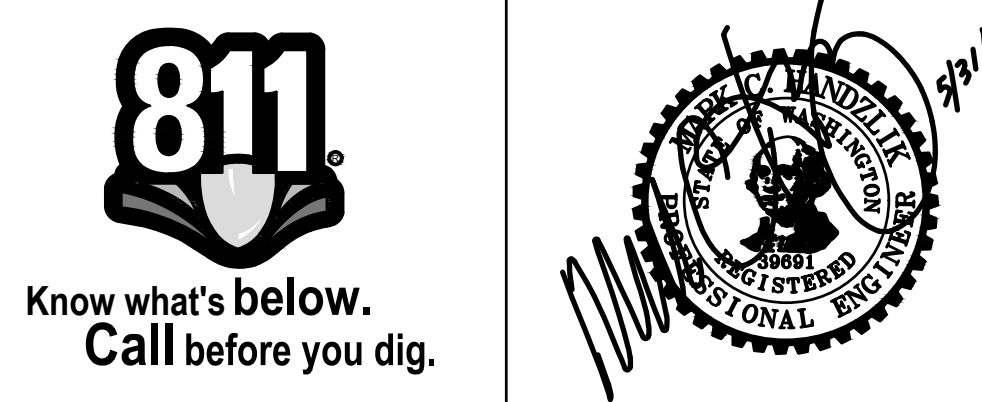
STANDARD  
WT-1

**TYPICAL TRENCH RESTORATION SECTION**

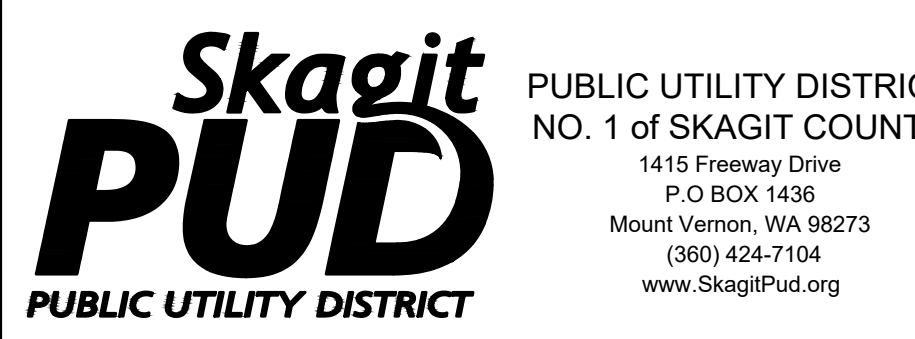
SCALE: 1" = 1'  
DATE: 11-15-11  
REVISED: 4/18/14  
DRAWN BY: KDM  
APPROVED BY: GJS

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

STANDARD  
WT-1-1



DATUM: HOR: NAD 88	DSGN BY: CAS
VERT: NAVD 83	DWN BY: JLB
	APPV BY: MCH
DATE PRINTED: 6/3/19	SEC: 16
	TWP: 33 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	DAISY LANE STREAM CROSSING
NOTES AND DETAILS	
SCALE: NONE	P.N. 03733
	C.O. 5014
	SHEET: 2 OF 2