

SURVEY SYMBOLS

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

SURFACE FEATURE SYMBOLS

SYMBOL	DESCRIPTION	BLOCK	LAYER
⊙	METAL SIGN POST	E1S1	SF-SIGN-EXST-SYM
⊕	WOOD SIGN POST	SFSN	SF-SIGN-EXST-SYM
GTP ⊙	GATE POST	POST	SF-FENC-EXST-SYM
★	CONIFEROUS TREE	SFC	SF-VEGE-EXST-SYM
⊙	DECIDUOUS TREE	SFD	SF-VEGE-EXST-SYM
⊗	BUSH/SHRUB	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
TR ⊗	TRAFFIC JUNCTION BOX	TJB1	TF-STCR-EXST-SYM
EL ⊗	ELEC. JUNCTION BOX	TJB1	PO-STCR-EXST-SYM
PM ⊗	POWER METER	EM	PO-STCR-EXST-SYM
TC ⊗	TELECOM. JUNCTION BOX	TJB1	TL-STCR-EXST-SYM
TV ⊗	CABLE TV JUNCTION BOX	TJB1	TV-STCR-EXST-SYM
⊗	JUNCTION BOX	TJB1	UT-STCR-EXST-SYM
T ⊗	TELEPHONE RISER	TEL	TL-STCR-EXST-SYM
⊙	UTILITY POLE	UP	PO-STCR-EXST-SYM
UG ⊙	UTILITY POLE W/CONDUIT	UP	PO-STCR-EXST-SYM
←	GUY ANCHOR	UPA	PO-STCR-EXST-SYM
GP ⊙	GUY POLE	GUP	PO-STCR-EXST-SYM
▲	TRANSFORMER	TRAN	PO-STCR-EXST-SYM
P	POWER VAULT	POWRV	PO-STCR-EXST-SYM
⊗	TRANSMISSION TOWER	PTWR	PO-STCR-EXST-SYM
T	TELEPHONE VAULT	TV	TL-STCR-EXST-SYM
→	PEDESTRIAN SIGNAL HEAD	TPSH	TF-SIGL-EXST-SYM
⊙	PEDESTRIAN SIGNAL BUTTON	TPB	TF-SIGL-EXST-SYM
⊗	TRAFFIC SIGNAL POLE W/LIGHT	TSPL	TF-SIGL-EXST-SYM
⊗	LUMINAIRE	TSLA	PO-STCR-EXST-SYM
X	YARD LIGHT	SFL	PO-STCR-EXST-SYM
MW	MONITORING WELL		UT-STCR-EXST-SYM
⊕	WATER MANHOLE	WMH	WA-STCR-EXST-SYM
SH ⊙	SPRINKLER HEAD	SPRHD	WA-MISC-EXST-SYM
IRBX ⊗	IRRIGATION BOX	ICV	WA-MISC-EXST-SYM

WATER SYMBOLS

SYMBOL	DESCRIPTION	BLOCK	LAYER
EXIST.	PROP.		USE EXST/PROP
]]	X_CAP/P_CAP	WA-FITT-XXXX-SYM
⊕	⊕	X_COUP/P_COUP	WA-FITT-XXXX-SYM
=	=	X_SLV/P_SLV	WA-FITT-XXXX-SYM
○	•	X_GPOST/P_GPOST	WA-FITT-XXXX-SYM
▷	▶	X_RED/P_RED	WA-FITT-XXXX-SYM
◁	◀	X_TB/P_TB	WA-FITT-XXXX-SYM
⊕	⊕	X_MTR/P_MTR	WA-METR-XXXX-SYM
FIRE HYDRANTS:			
⊙	⊙	2 NOZZLE X_HYD2/P_HYD2	WA-FHYD-XXXX-SYM
⊙	⊙	3 NOZZLE X_HYD3/P_HYD3	WA-FHYD-XXXX-SYM
JOINTS:			
		FLANGE/BLIND FL X_FL/P_FL	WA-FITT-XXXX-SYM
⌋	⌋	MECHANICAL X_MJ/P_MJ	WA-FITT-XXXX-SYM
⌋	⌋	PUSH-ON/HUB X_PHUB/P_PHUB	WA-FITT-XXXX-SYM
		THREAD X_THREAD/P_THREAD	WA-FITT-XXXX-SYM
VALVES			
⊙	⊙	AIR RELIEF VALVE X_AR/P_AR	WA-VALV-XXXX-SYM
⊙	⊙	BLOW-OFF VALVE X_BO/P_BO	WA-VALV-XXXX-SYM
⊗	⊗	BUTTERFLY VALVE X_BFV/P_BFV	WA-VALV-XXXX-SYM
⊗	⊗	CHECK VALVE X_CV/P_CV	WA-VALV-XXXX-SYM
⊗	⊗	GATE VALVE X_GV/P_GV	WA-VALV-XXXX-SYM
⊗	⊗	PLUG VALVE X_PLUGV/P_PLUGV	WA-VALV-XXXX-SYM
ELBOWS			
⌋		90° ELBOW MjxMJ	WA-FITT-XXXX-SYM
⌋		45° ELBOW MjxMJ	WA-FITT-XXXX-SYM
⌋		22.5° ELBOW MjxMJ	WA-FITT-XXXX-SYM
⌋		11.25° ELBOW MjxMJ	WA-FITT-XXXX-SYM
⌋		CROSS MjxMJ	WA-FITT-XXXX-SYM
⌋		TEE MjxMJ	WA-FITT-XXXX-SYM
⌋		VERTICAL ELBOW MjxMJ	WA-FITT-XXXX-SYM
⌋		45° ELBOW MjxFL	WA-FITT-XXXX-SYM
⌋		22.5° ELBOW MjxFL	WA-FITT-XXXX-SYM
⌋		11.25° ELBOW MjxFL	WA-FITT-XXXX-SYM
⌋		CROSS MjxFL	WA-FITT-XXXX-SYM
⌋		TEE MjxFL	WA-FITT-XXXX-SYM
⌋		CROSS FLxFL	WA-FITT-XXXX-SYM
⌋		TEE FLxFL	WA-FITT-XXXX-SYM
⌋		VERTICAL MjxFL	WA-FITT-XXXX-SYM
⌋		TAPPING SLEEVE	WA-FITT-XXXX-SYM

NOTATION SYMBOLS

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

TEXT

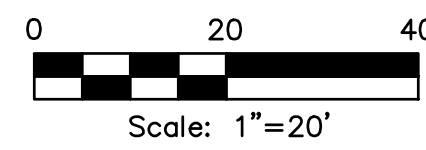
SYMBOL	DESCRIPTION	HEIGHT	LAYER
1+00	ROAD STATIONING	.10	SV-CNTL-EXST-TXT
P77481	PARCEL NUMBER	.20	SV-PRCL-EXST-TXT
702	ADDRESS	.15	G-MISC-EXST-TXT

LINE TYPES

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

**HATCHING**

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



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**Skagit PUD**  
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

N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
LEGEND

SCALE: 1"=20'

P.N. 3760  
C.O. 5037

SHEET:  
1 OF 20

## DISTRICT STANDARD GENERAL NOTES

(Minimum Requirements)

1. UNLESS STATED OTHERWISE, ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE MOST CURRENT WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE DISTRICT REQUIREMENTS AS OUTLINED IN THE DISTRICT'S WATER POLICY MANUAL.
2. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE DISTRICT ENGINEERING DEPARTMENT, (360) 424-7104, A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
3. PERMITS FOR THE INSTALLATION OF THE PROPOSED WATER SYSTEM IMPROVEMENTS ARE ATTACHED IN APPENDIX B OF THE TECHNICAL SPECIFICATIONS.
4. DISTRICT REFERENCE DOCUMENTS, SUCH AS STANDARD DETAILS, WATER POLICY MANUAL, DRAWING STANDARDS, ETC., CAN BE FOUND ON THE DISTRICT WEBSITE AT WWW.SKAGITPUD.ORG.
5. ALL TIE-INS, SHUTDOWN, FLUSHING, AND HEALTH SAMPLES SHALL BE COORDINATED WITH THE DISTRICT. THE CONTRACTOR SHALL NOT OPERATE ANY VALVES. CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL EXCAVATION, SHORING, DEWATERING, BACKFILL AND RESTORATION NECESSARY FOR DISTRICT CREWS TO PERFORM ALL TIE-INS TO ANY ACTIVE PUD OWNED AND OPERATED PIPELINE.
6. A LIST OF ALL MATERIALS, INDICATING THE MANUFACTURER, MODEL, AND SIZE, FOR THE WATER SYSTEM IMPROVEMENTS WILL BE APPROVED BY THE DISTRICT PRIOR TO CONSTRUCTION. CONTACT DISTRICT FOR SUBMITTAL REQUIREMENTS.
7. PVC PIPE SHALL BE IN ACCORDANCE WITH SECTION C909-16 OF THE AWWA STANDARDS.
8. ALL BOLTS USED IN BURIED FLANGES SHALL BE ASTM A307 GRADE B UNFINISHED WITH NUTS TO ASTM A563 GRADE A AND WASHERS TO ASTM F844, OR ASTM A325 TYPE 3 (CORTEN STEEL) UNFINISHED, WITH NUTS TO ASTM A563C3 OR A563DH3 AND WASHERS TO ASTM F436-1. ALL BOLTS, NUTS AND WASHERS USED IN EXPOSED OR ABOVE GROUND LOCATIONS SHALL BE ASTM A307 GRADE B UNFINISHED OR HOT-DIP GALVANIZED.
9. ALL GATE VALVES TO BE RESILIENT SEATED GATE VALVES, AWWA C515 OR C509 (DUCTILE IRON BODY ONLY) WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
10. ALL BUTTERFLY VALVES TO BE RUBBER SEATED BUTTERFLY VALVES, AWWA C504 WITH STAINLESS STEEL NUTS, BOLTS AND TRIM.
11. ALL BURIED DUCTILE IRON FITTING AND VALVES SHALL BE WRAPPED WITH ANIT CORROSION WAX/PETROLEUM TAPE BY TRENTON ANTICORROSION MATERIALS INC. DENSO NORTH AMERICA INC OR EQUAL.
12. 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 AND PIPE ZONE BACKFILL MATERIAL SHALL BE APPROVED PIPE BEDDING PER WSDOT SPECIFICATION 7-09.3(9) AND 9-03.12(3) WITH MAXIMUM SIZE OF 1-INCH PEA GRAVEL AND BUCKSHOT ARE NOT ACCEPTABLE.
17. BACKFILL TRENCHES IN PAVEMENT AREAS WITH GRAVEL BORROW PER WSDOT 09-03.14(1) 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 OFIOR EXTENSION TO EXISTING PIPELINES SHALL BE ADEQUATELY DISINFECTED AND A SATISFACTORY BACTERIOLOGICAL REPORT OBTAINED.
24. PRESSURE TEST NEW PIPELINE, INCLUDING FIRE HYDRANTS AND SERVICE LINES AS PER WSDOT STANDARDS.

TEST DATE _____	TEST PRESSURE _____
TIME START _____	TIME END _____
PRESSURE DROP _____	MAKE-UP WATER _____

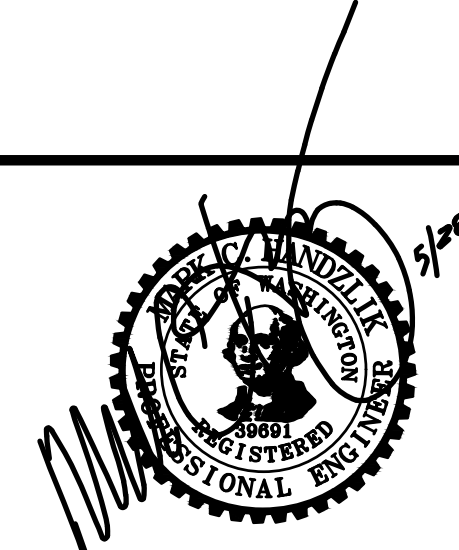
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N. 18TH STREET, E. DIVISION TO  
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N. LAVENTURE TO N. 30TH  
GENERAL NOTES

SCALE: NONE	P.N. 3760 C.O. 5037	SHEET: 2 OF 20
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## CONSTRUCTION NOTES

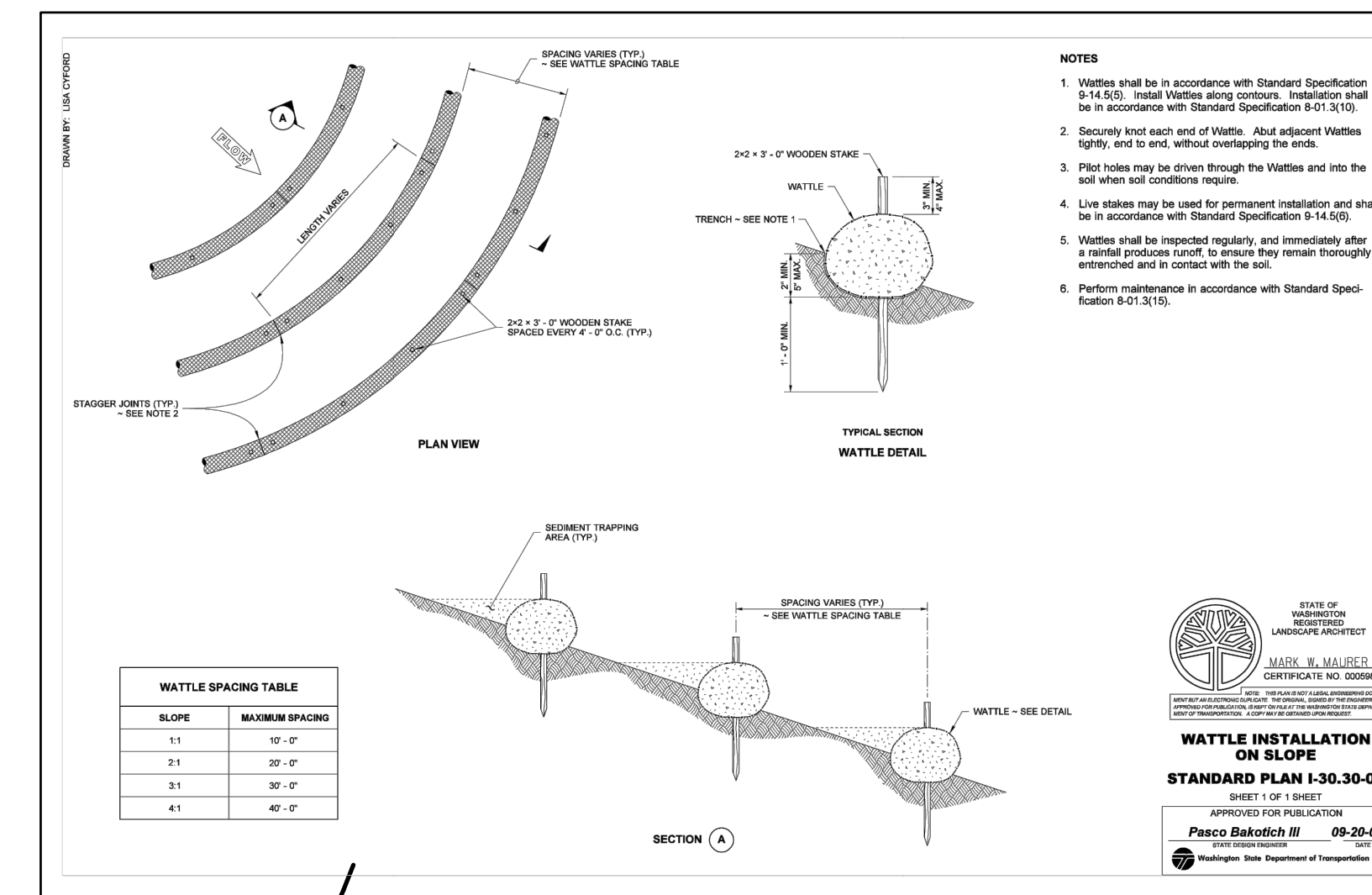
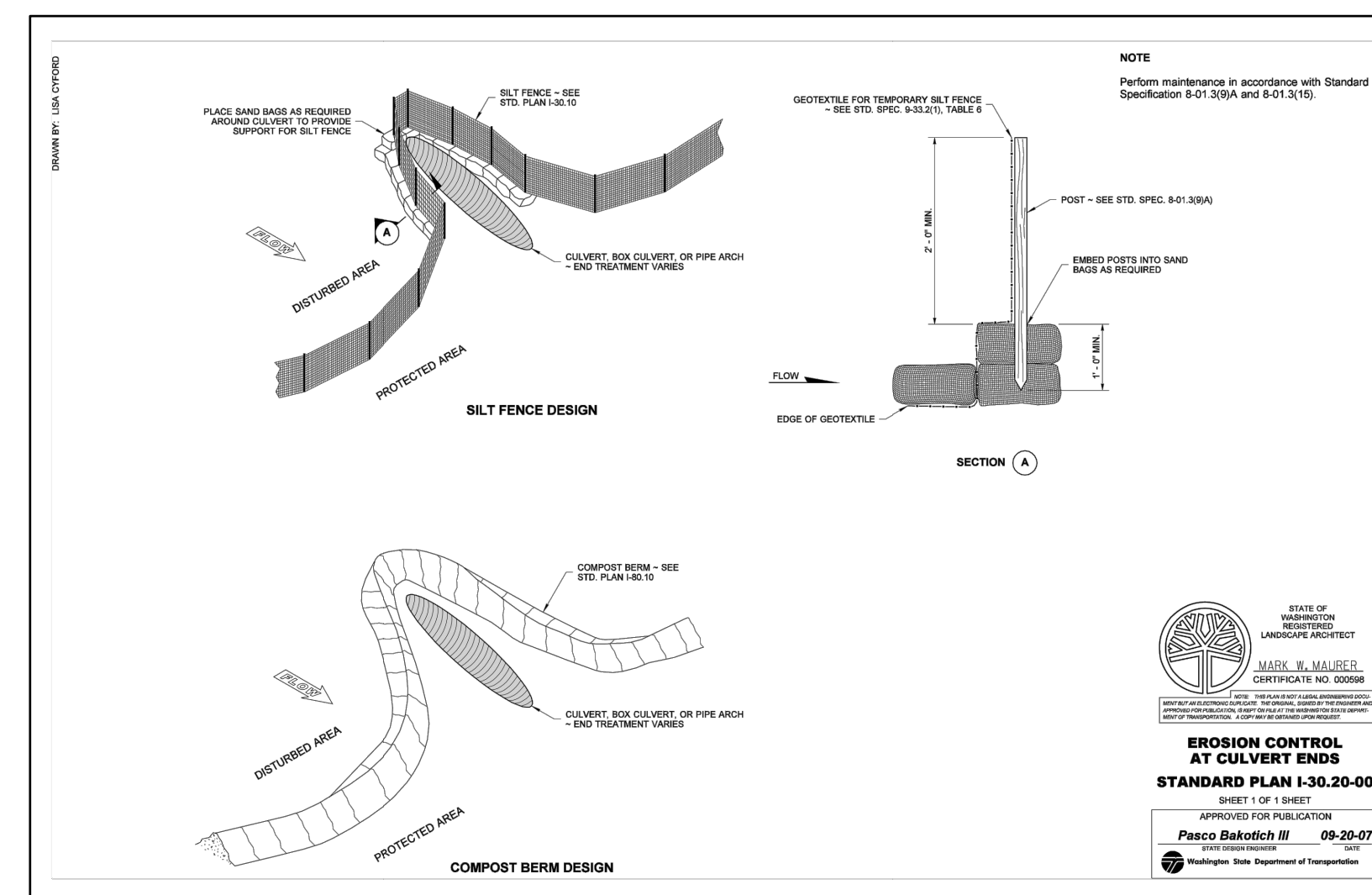
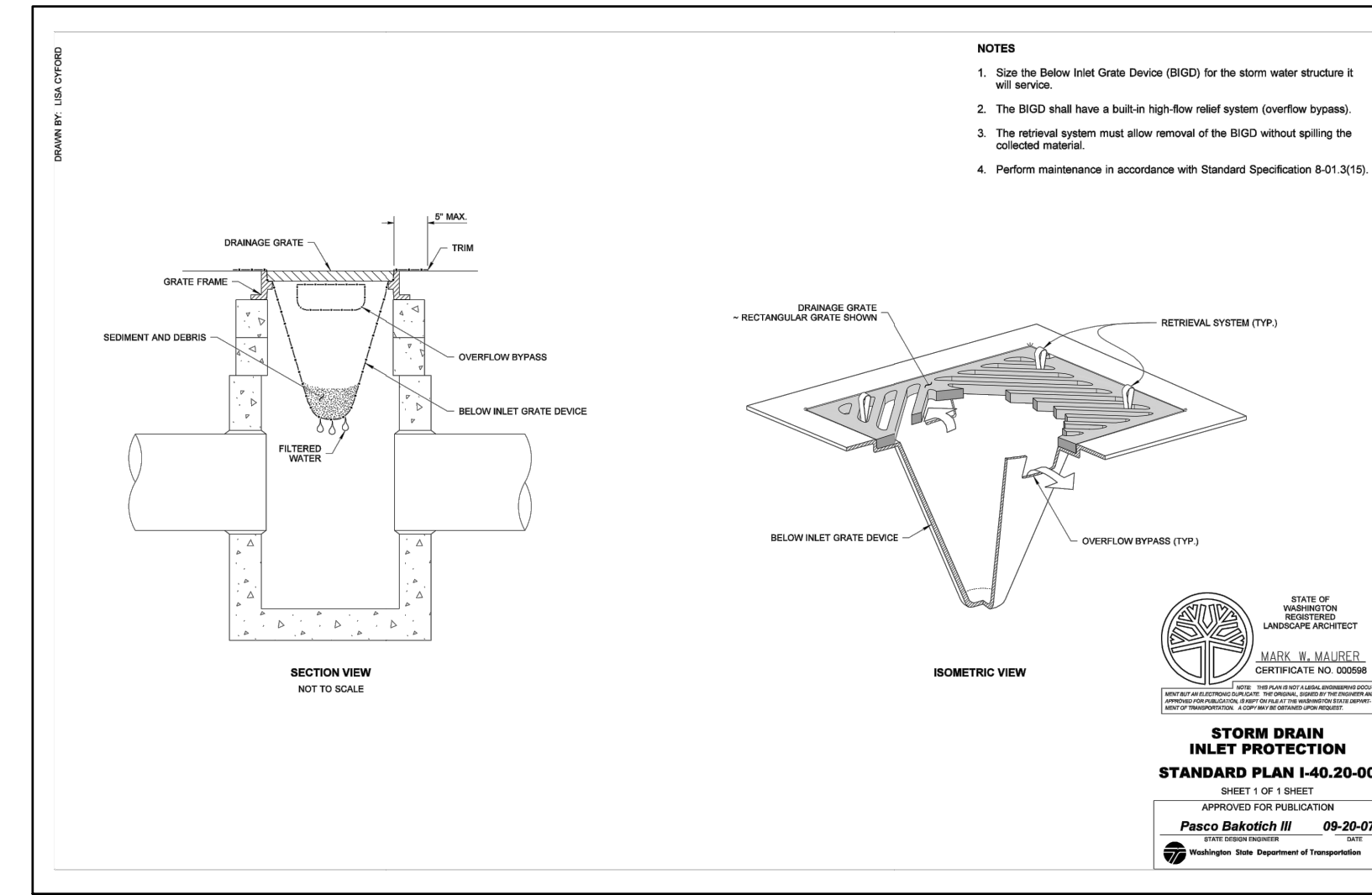
1. VERIFY THE LOCATIONS, ELEVATIONS, DIAMETERS, MATERIALS, AND OTHER PARAMETERS OF EXISTING FACILITIES TO WHICH NEW FACILITIES CONNECT BEFORE BEGINNING ANY WORK.
2. VERIFY INVERT ELEVATION OF EXISTING UTILITIES BY POTHOLING A MINIMUM OF 200 FEET AHEAD OF WATERLINE INSTALLATION.
3. PROTECT ALL EXISTING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



**Standard ESC Plan Notes**

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

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



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

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

DATE PRINTED: 8/4/20

SEC: 20, 16, 21  
TWP: 34 N  
RGE: 4 E



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NO. 1 of SKAGIT COUNTY  
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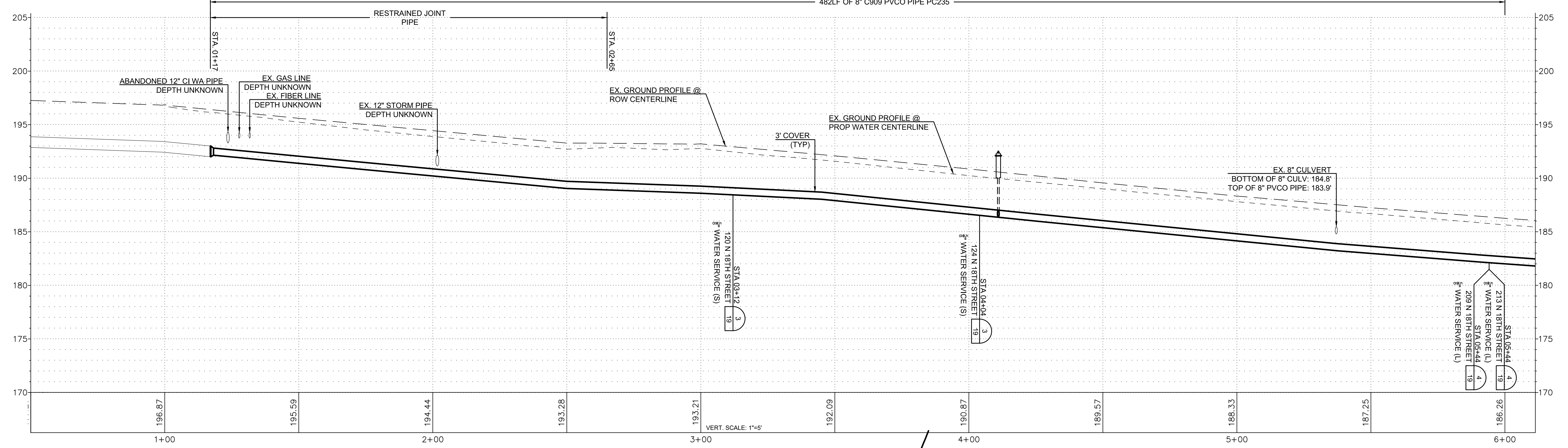
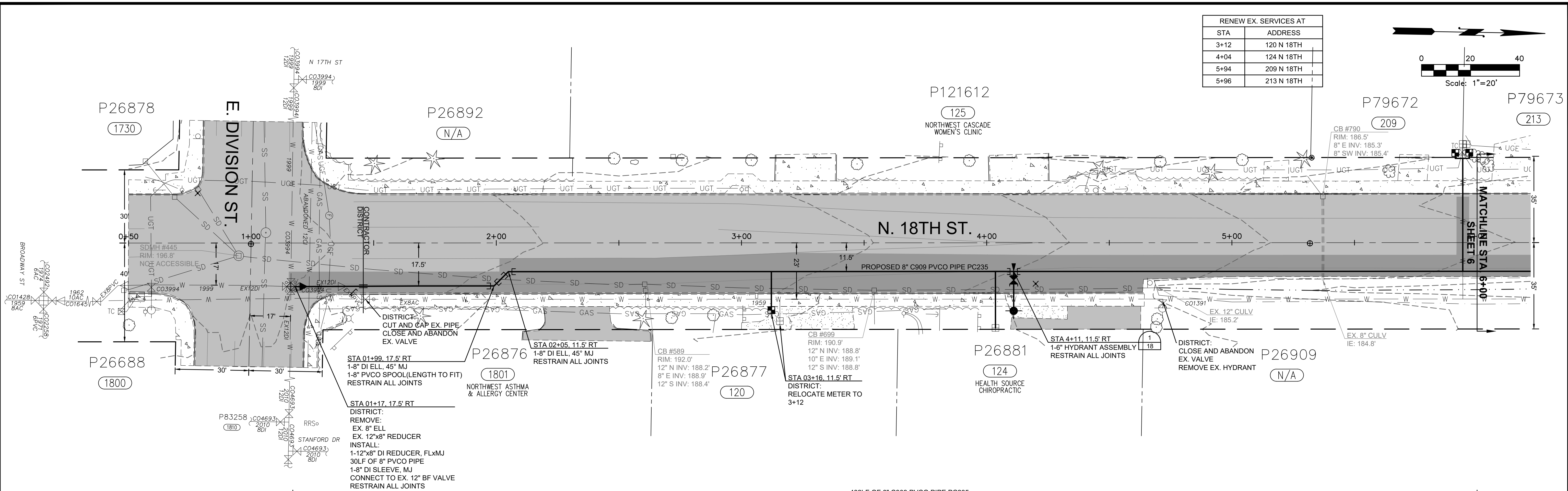
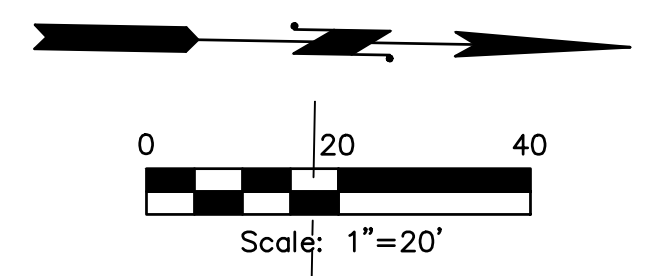
N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
EROSION AND SEDIMENTATION  
CONTROL NOTES AND DETAILS

SCALE: 1"=20'

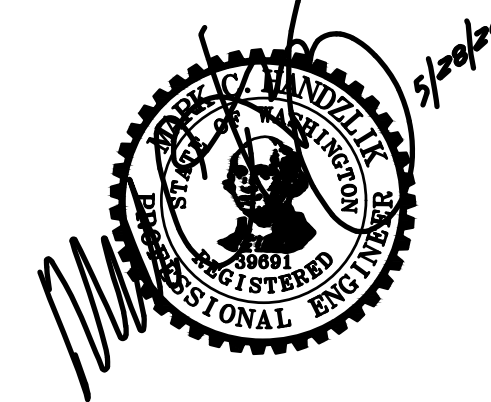
P.N. 3760  
C.O. 5037

SHEET:  
4 OF 20

RENEW EX. SERVICES AT	
STA	ADDRESS
3+12	120 N 18TH
4+04	124 N 18TH
5+94	209 N 18TH
5+96	213 N 18TH



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPVD BY: MCH
DATE PRINTED: 8/4/20	SEC: 20, 16, 21
	TWP: 34 N
	RGE: 4 E



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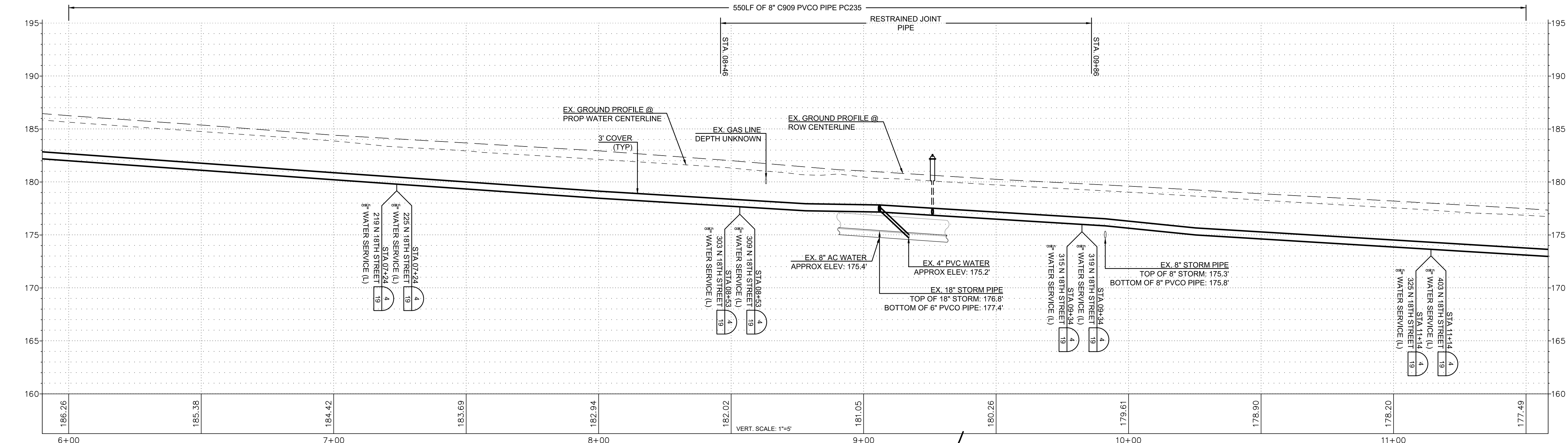
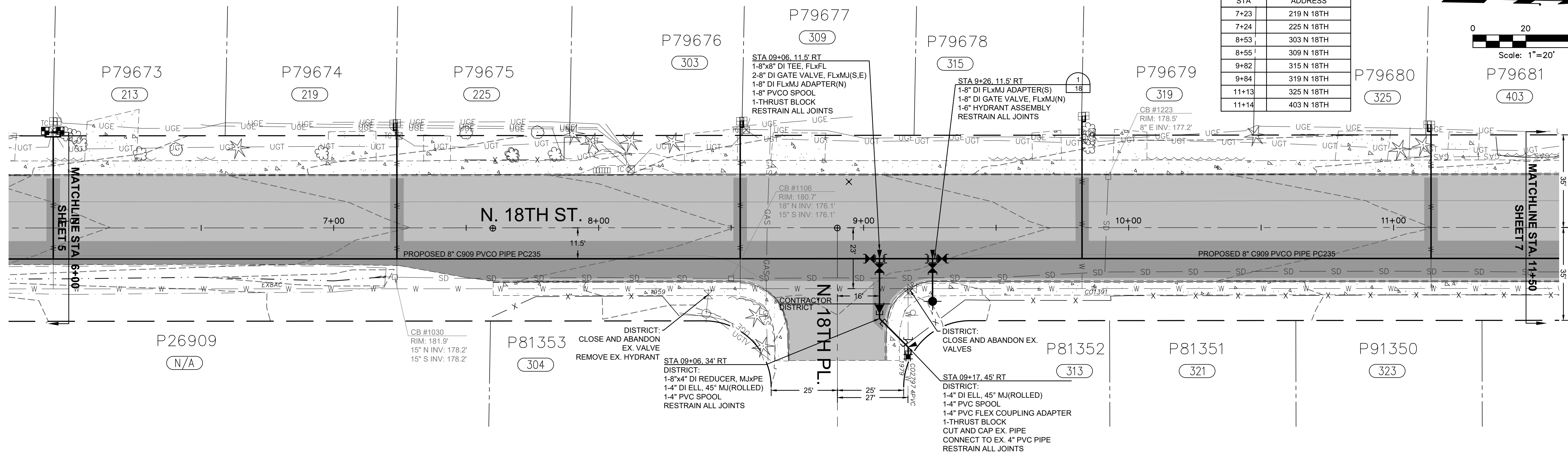
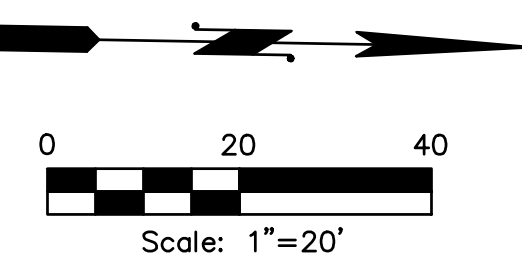
N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
N 18TH STREET  
PLAN AND PROFILE  
STA 0+50 TO STA 6+00

SCALE: 1"=20'

P.N. 3760  
C.O. 5037

SHEET:  
5 OF 20

RENEW EX. SERVICES AT	
STA	ADDRESS
7+23	219 N 18TH
7+24	225 N 18TH
8+53	303 N 18TH
8+55	309 N 18TH
9+82	315 N 18TH
9+84	319 N 18TH
11+13	325 N 18TH
11+14	403 N 18TH



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:  
HOR: NAD 83  
VERT: NAVD 88

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

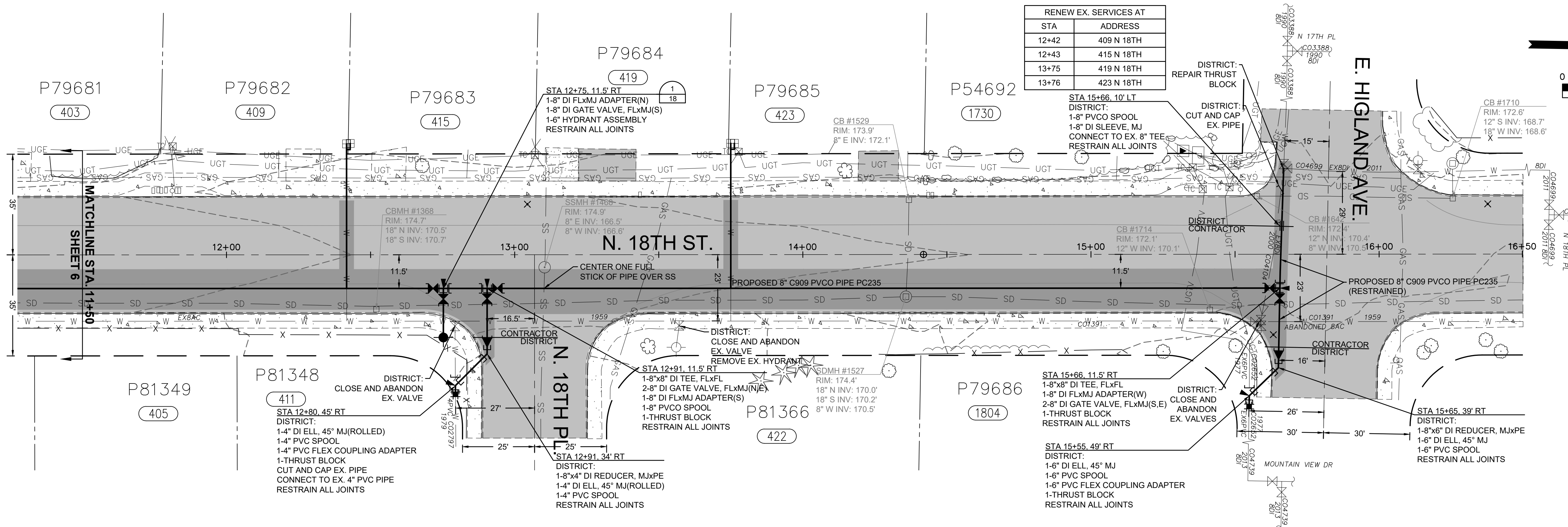
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SEC: 20, 16, 21  
TWP: 34 N  
RGE: 4 E

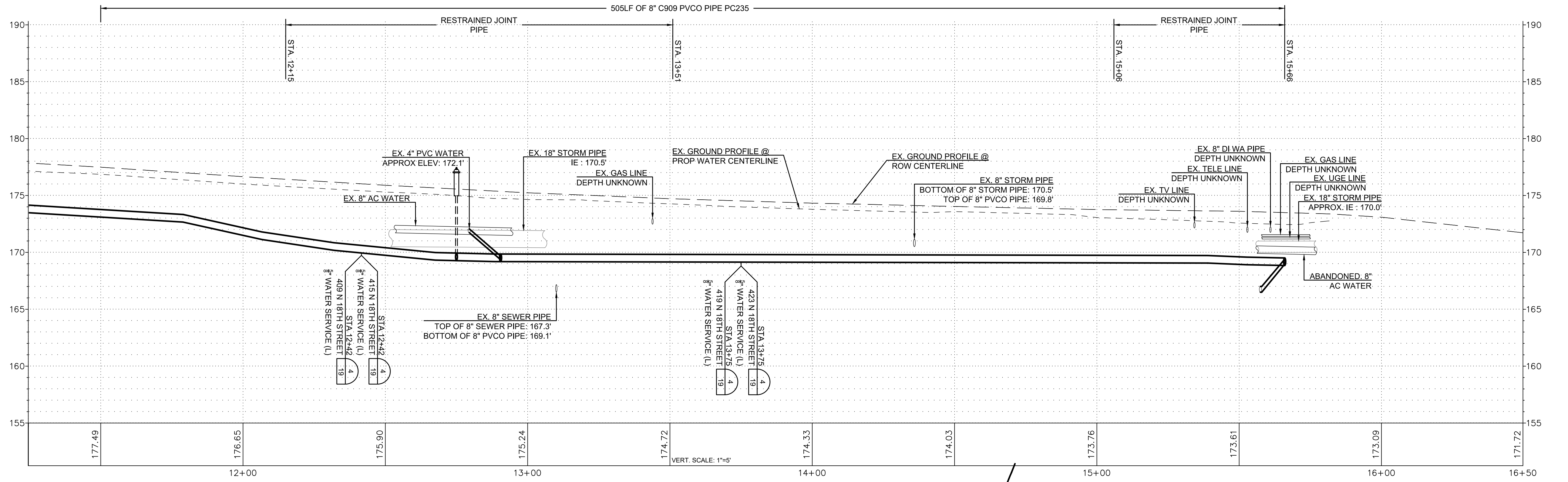
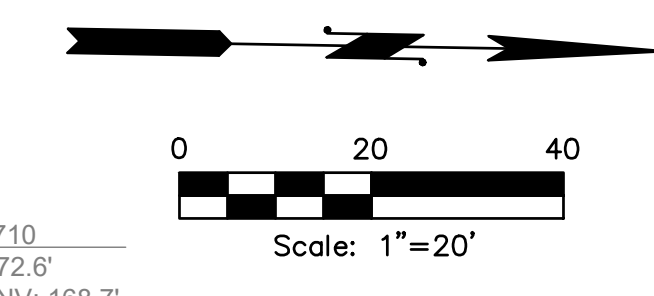


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N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
N 18TH STREET  
PLAN AND PROFILE  
STA 6+00 TO STA 11+50



STA	ADDRESS
12+42	409 N 18TH
12+43	415 N 18TH
13+75	419 N 18TH
13+76	423 N 18TH



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
DATE PRINTED: 8/4/20	SEC: 20, 16, 21 TWP: 34 N RGE: 4 E



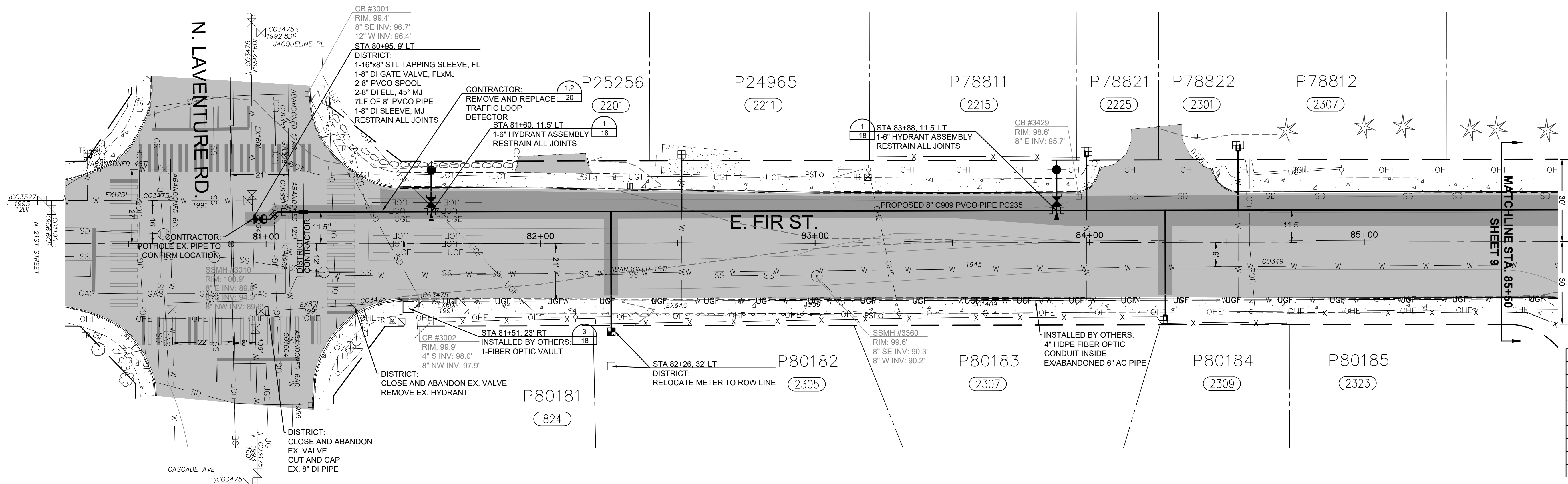
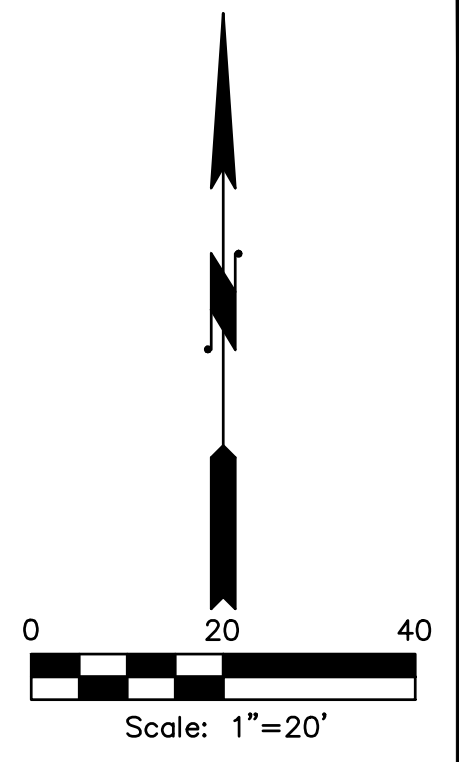
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E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
N 18TH STREET  
PLAN AND PROFILE  
STA 11+50 TO STA 16+50

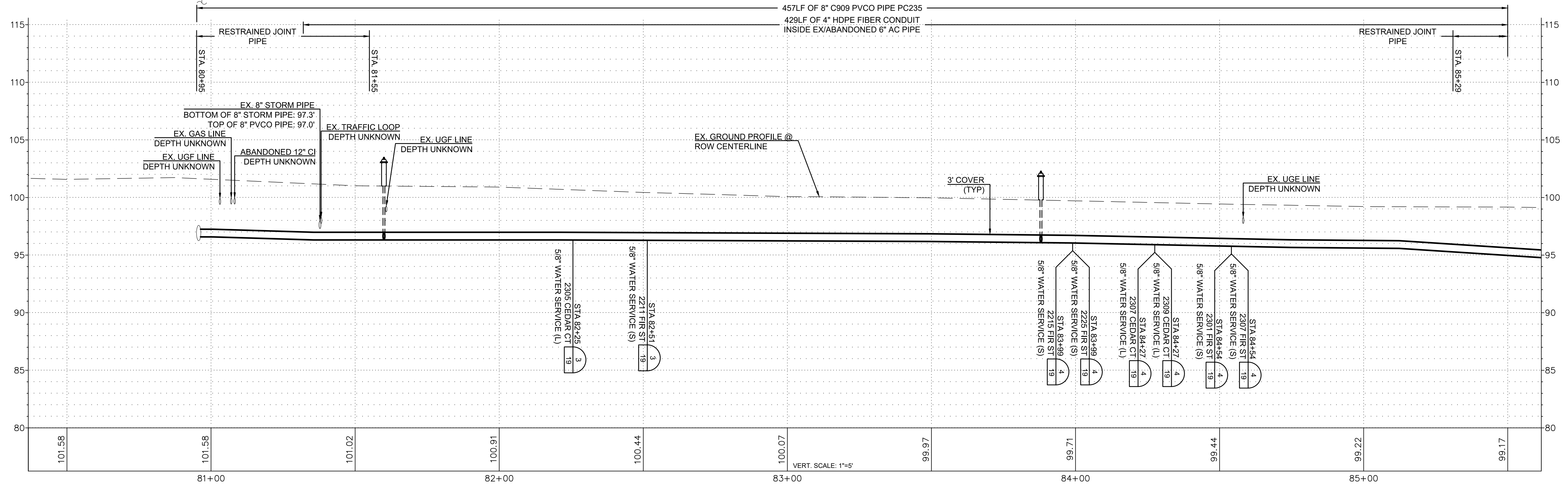
SCALE: 1"=20'

P.N. 3760  
C.O. 5037

SHEET:  
7 OF 20



STA	ADDRESS
82+26	2305 CEDAR CT
82+51	2211 E FIR
83+98	2215 E FIR
84+00	2225 E FIR
84+27	2307 CEDAR CT
84+28	2309 CEDAR CT
84+53	2301 E FIR
84+55	2307 E FIR



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2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20

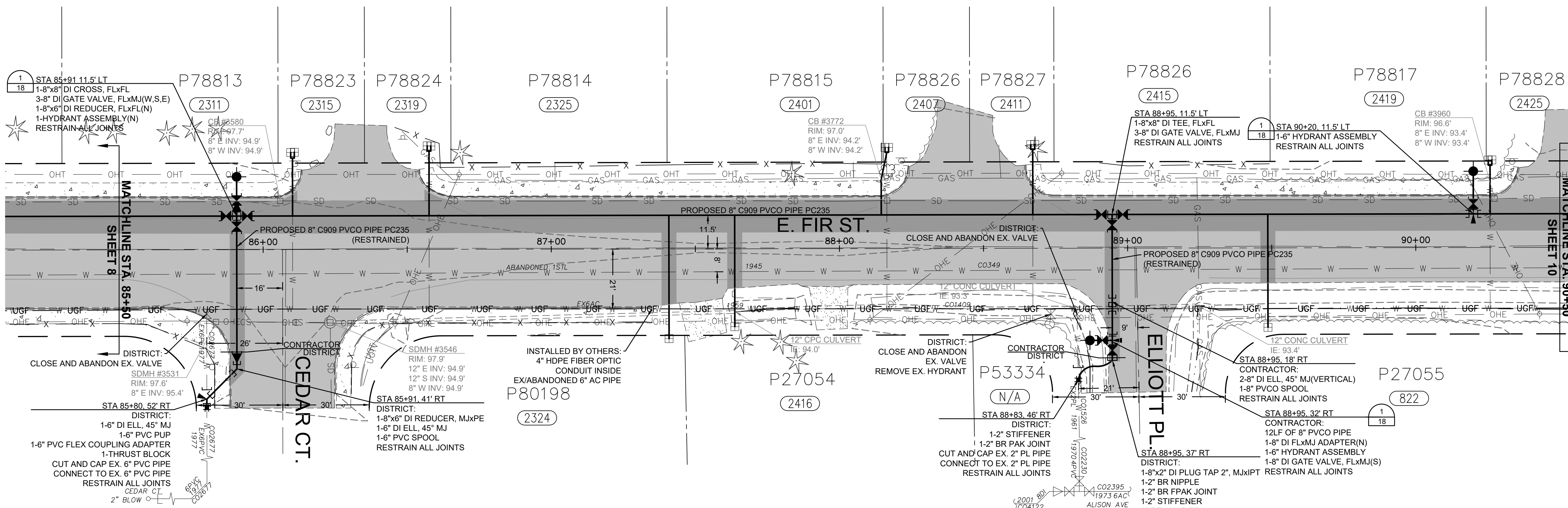
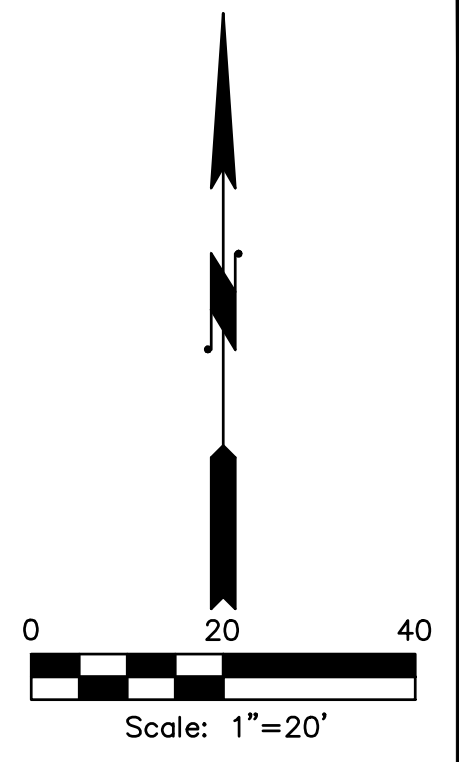


DATUM: HOR: NAD 83 VERT: NAVD 88  
 DSGN BY: JLB  
 DWN BY: JLB  
 APPVD BY: MCH  
 DATE PRINTED: 8/4/20  
 SEC: 20, 16, 21  
 TWP: 34 N  
 RGE: 4 E

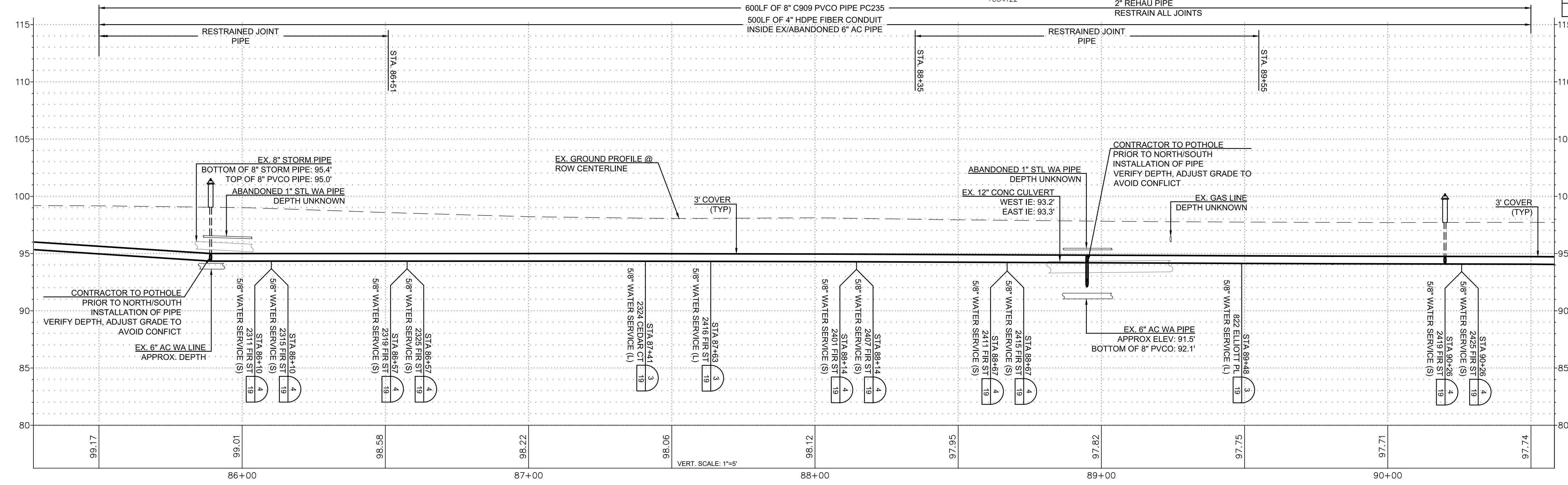


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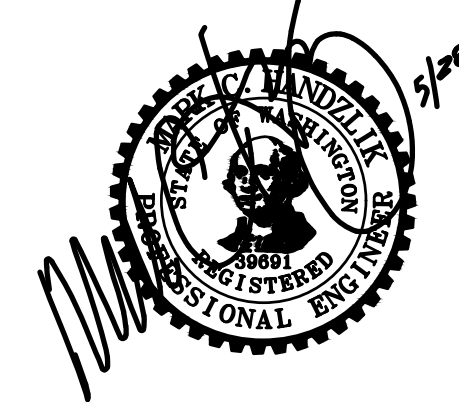
N. 18TH STREET, E. DIVISION TO E. HIGHLAND, E. FIR STREET, N. LAVENTURE TO N. 30TH  
 E FIR STREET  
 PLAN AND PROFILE  
 STA 80+50 TO STA 85+50  
 SCALE: 1"=20'  
 P.N. 3760  
 C.O. 5037  
 SHEET: 8 OF 20



STA	ADDRESS
86+10	2311 E FIR
86+11	2315 E FIR
86+57	2319 E FIR
86+58	2325 E FIR
87+41	2324 CEDAR CT
87+64	2416 E FIR
88+16	2401 E FIR
88+17	2407 E FIR
88+66	2411 E FIR
88+68	2415 E FIR
89+49	822 ELLIOTT PL
90+25	2419 E FIR
90+26	2425 E FIR



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3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:  
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VERT: NAVD 88

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DWN BY: JLB  
APPVD BY: MCH

DATE PRINTED: 8/4/20

SEC: 20, 16, 21  
TWP: 34 N  
RGE: 4 E



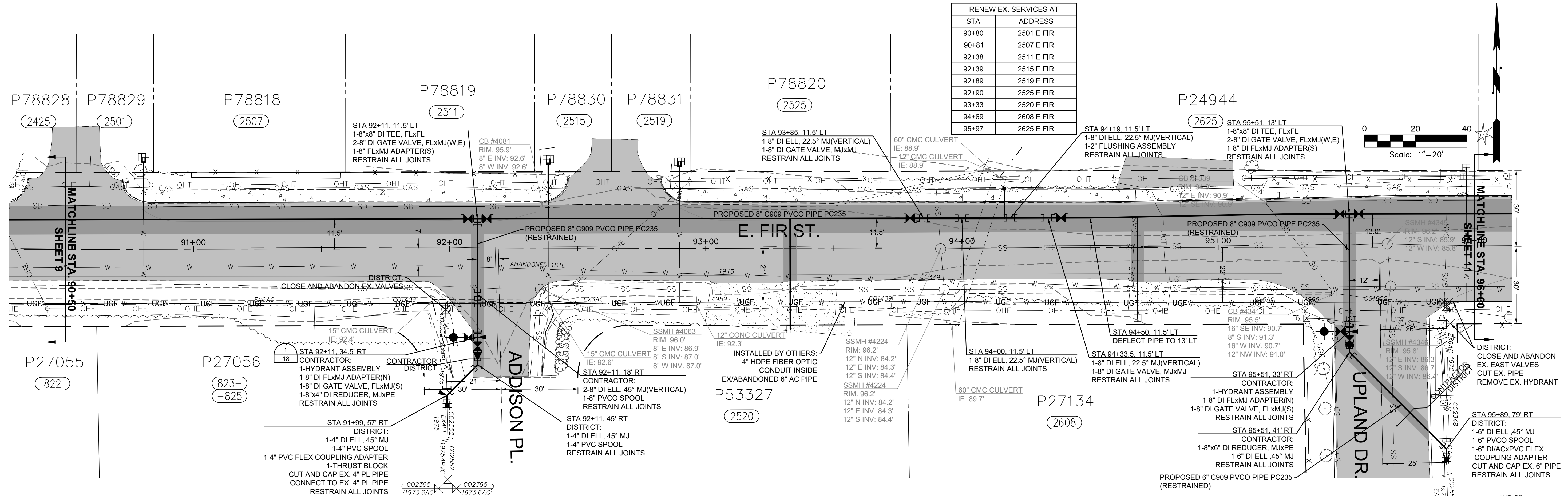
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E FIR STREET  
PLAN AND PROFILE  
STA 85+50 TO STA 90+50

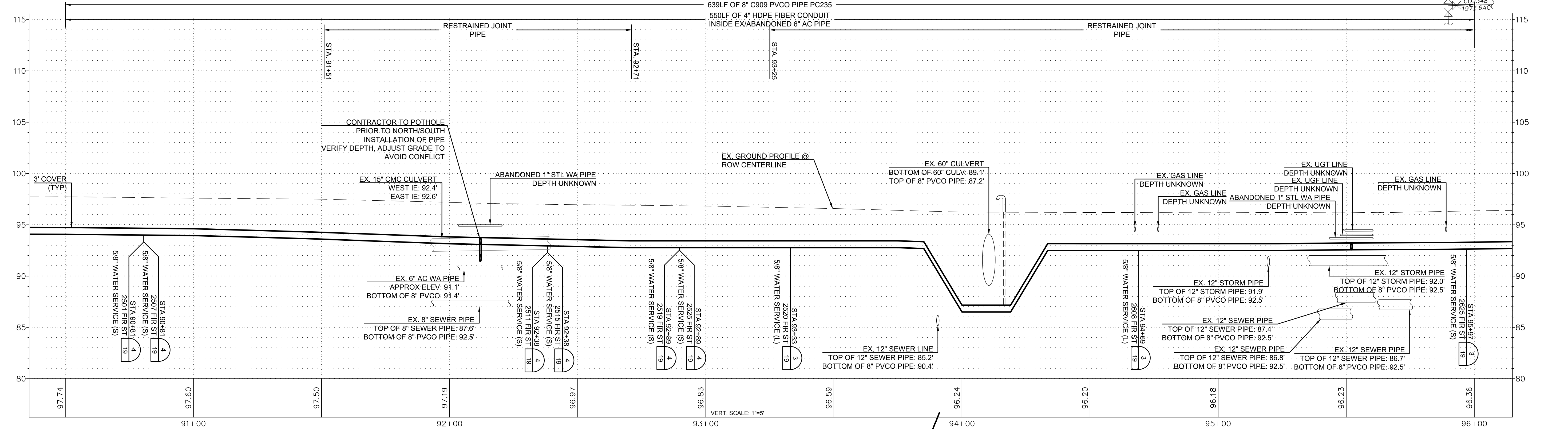
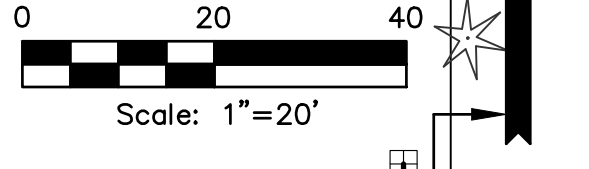
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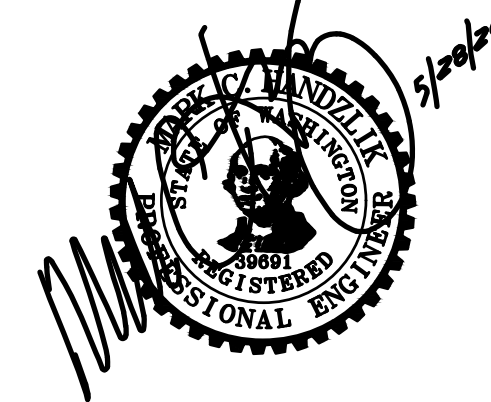
SHEET:  
9 OF 20



STA	ADDRESS
90+80	2501 E FIR
90+81	2507 E FIR
92+38	2511 E FIR
92+39	2515 E FIR
92+89	2519 E FIR
92+90	2525 E FIR
93+33	2520 E FIR
94+69	2608 E FIR
95+97	2625 E FIR



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3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
DATE PRINTED: 8/4/20	SEC: 20, 16, 21 TWP: 34 N RGE: 4 E



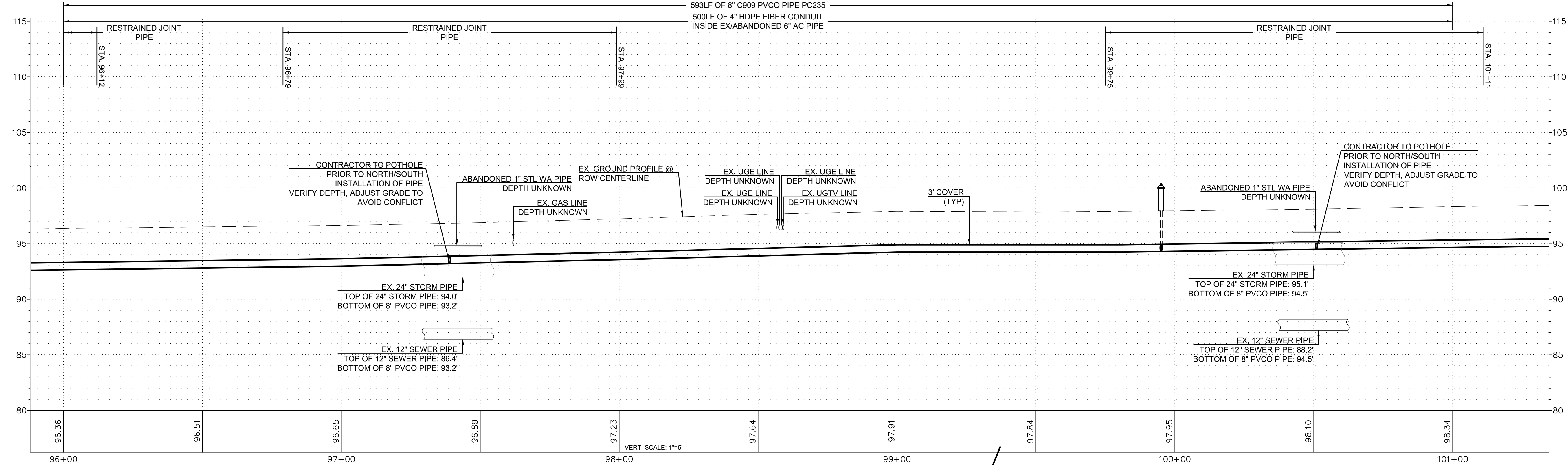
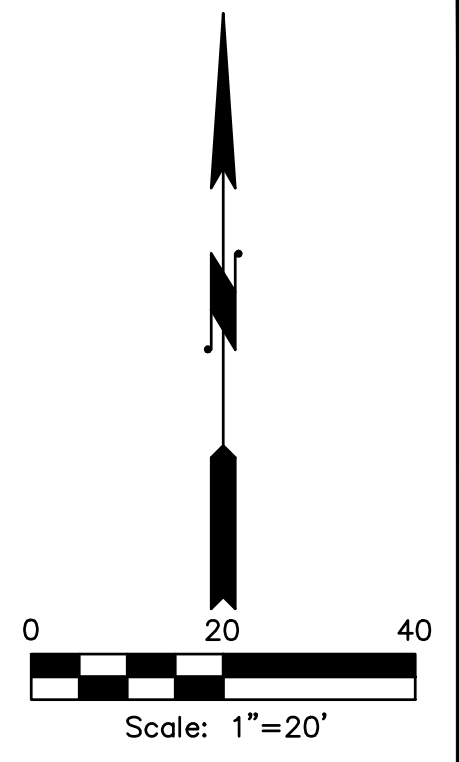
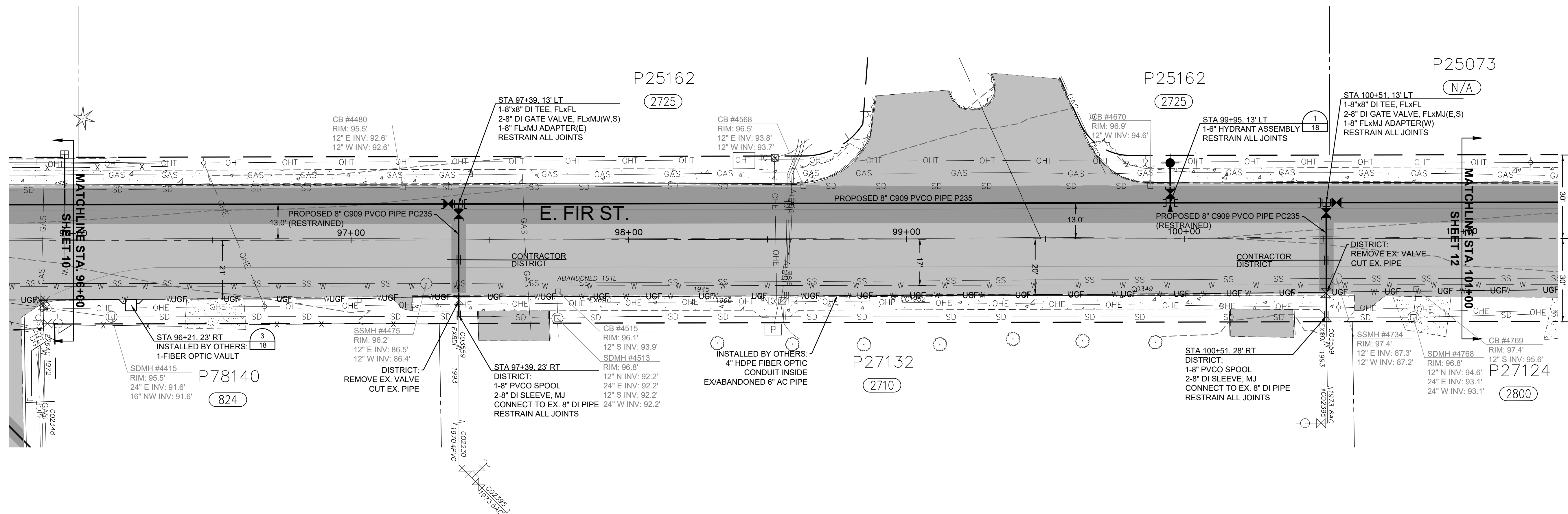
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E FIR STREET  
PLAN AND PROFILE  
STA 90+50 TO STA 96+00

SCALE: 1"=20'

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C.O. 5037

SHEET:  
10 OF 20



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:  
HOR: NAD 88  
VERT: NAVD 83

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

DATE PRINTED: 8/4/20  
SEC: 20, 16, 21  
TWP: 34 N  
RGE: 4 E



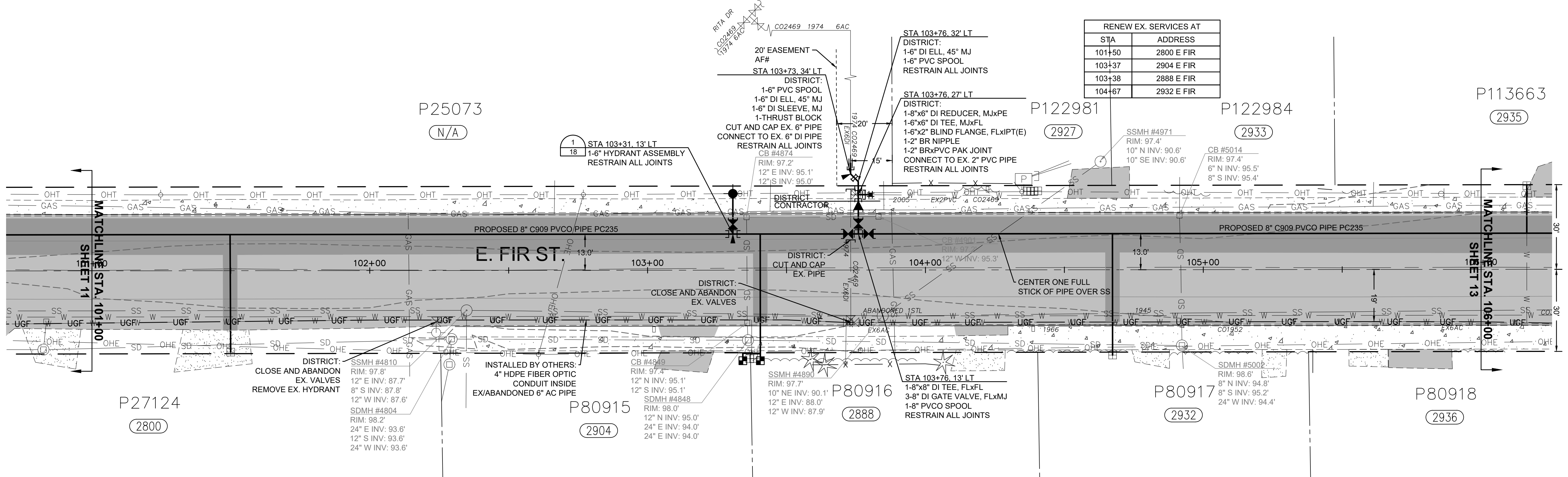
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N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 96+00 TO STA 101+00

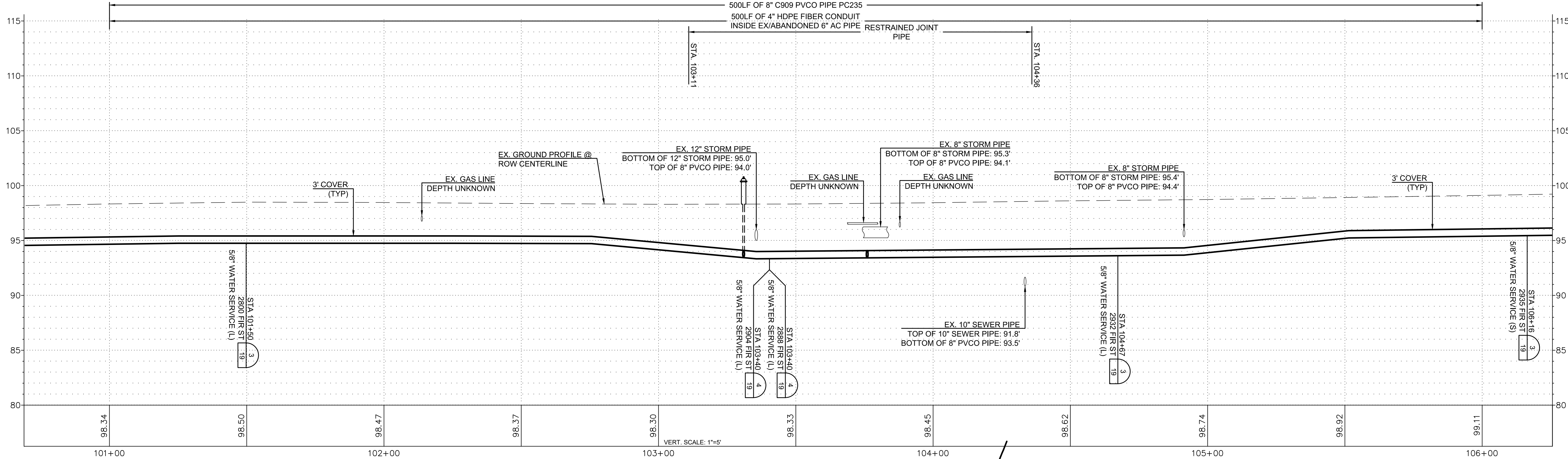
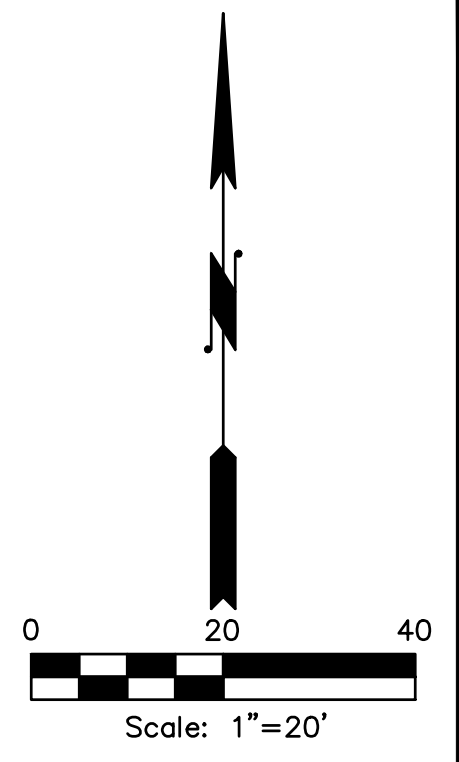
SCALE: 1"=20'

P.N. 3760  
C.O. 5037

SHEET:  
11 OF 20



RENEW EX. SERVICES AT	
STA	ADDRESS
101+50	2800 E FIR
103+37	2904 E FIR
103+38	2888 E FIR
104+67	2932 E FIR



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM: HOR: NAD 83 VERT: NAVD 88	DSGN BY: JLB DWN BY: JLB APPVD BY: MCH
DATE PRINTED: 8/4/20	SEC: 20, 16, 21 TWP: 34 N RGE: 4 E



PUBLIC UTILITY DISTRICT  
NO. 1 of SKAGIT COUNTY  
1415 Freeway Drive  
P.O. BOX 1436  
Mount Vernon, WA 98273  
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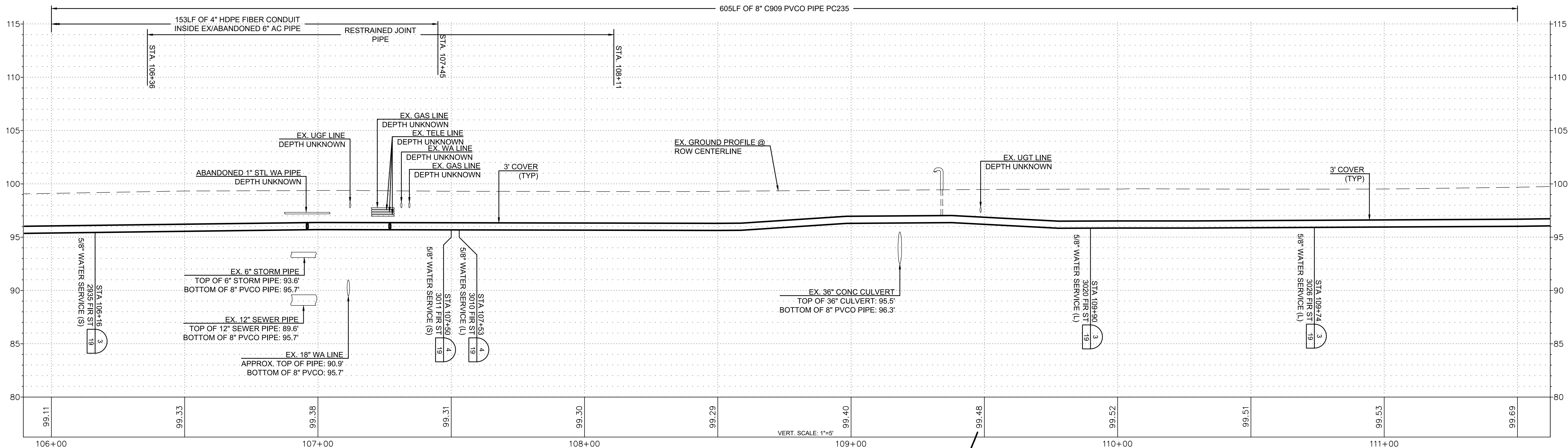
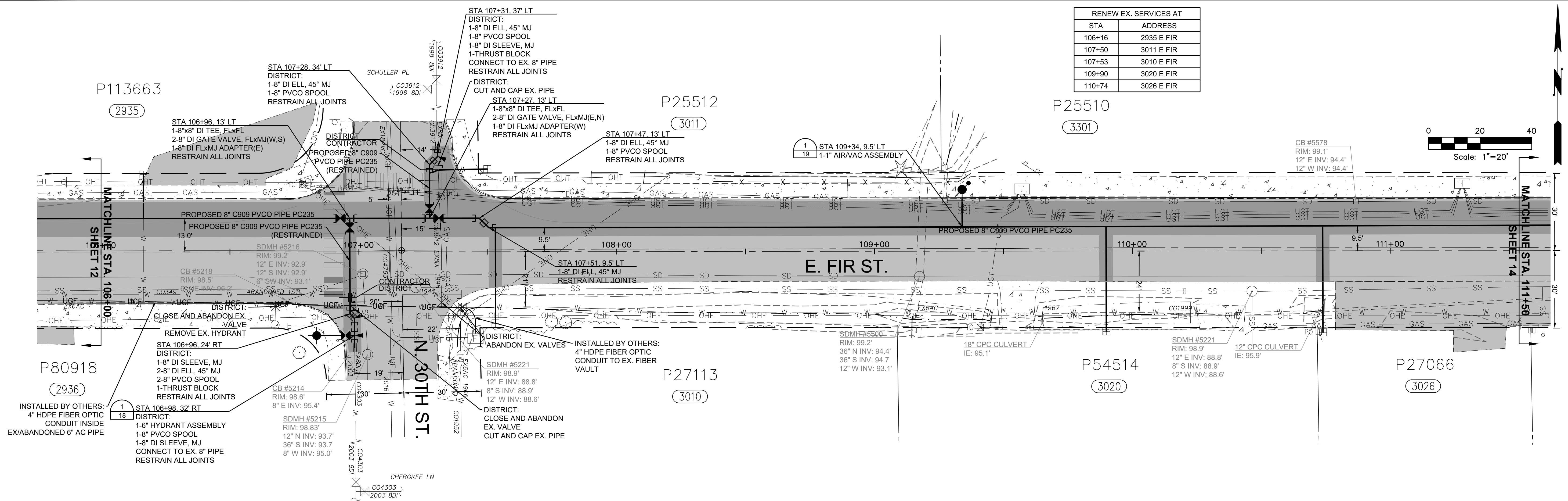
N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 101+00 TO STA 106+00

SCALE: 1"=20'

P.N. 3760  
C.O. 5037

SHEET:  
12 OF 20

RENEW EX. SERVICES AT	
STA	ADDRESS
106+16	2935 E FIR
107+50	3011 E FIR
107+53	3010 E FIR
109+90	3020 E FIR
110+74	3026 E FIR



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



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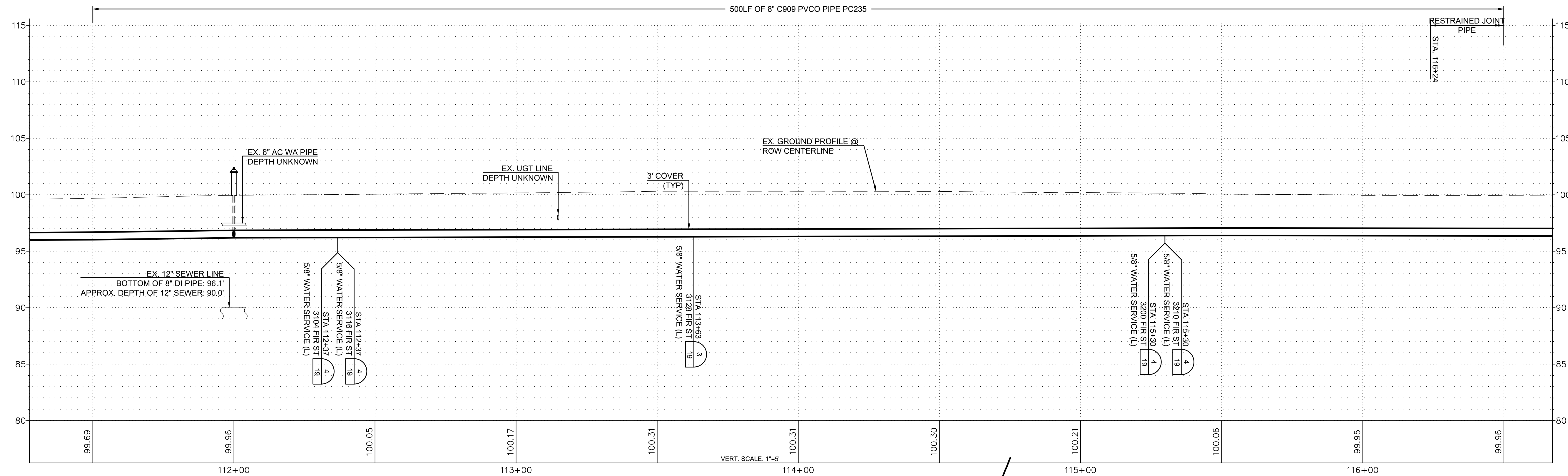
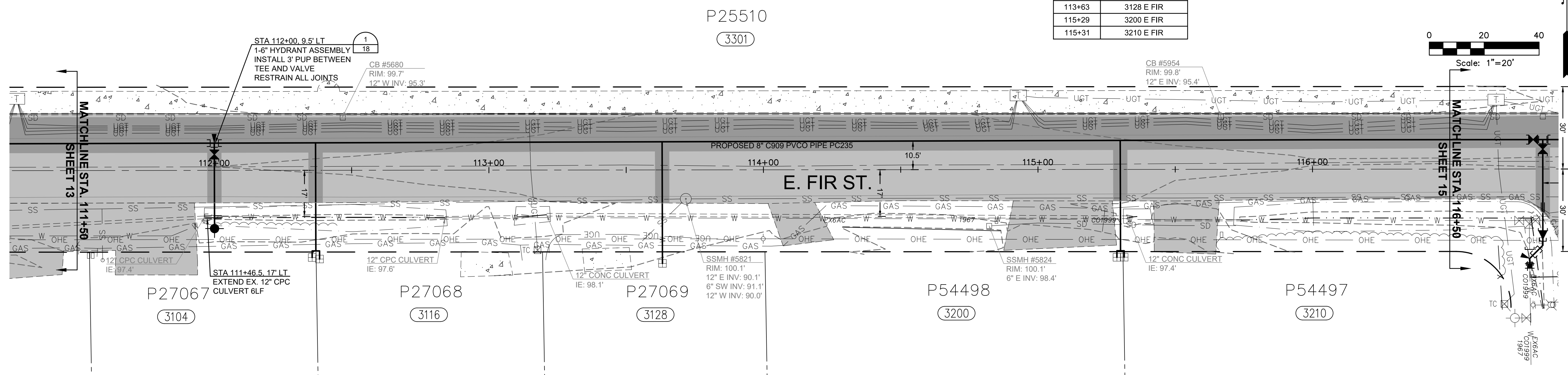


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N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 106+00 TO STA 111+50

SCALE: 1"=20'	P.N. 3760	SHEET:
	C.O. 5037	13 OF 20

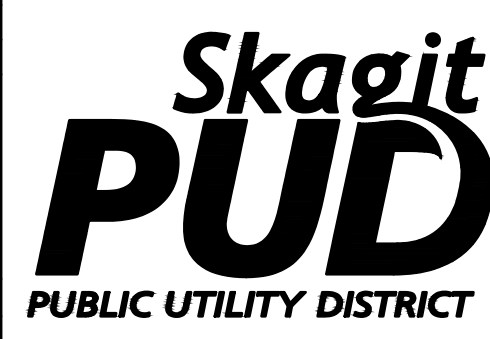
RENEW EX. SERVICES AT	
STA	ADDRESS
112+36	3104 E FIR
112+38	3116 E FIR
113+63	3128 E FIR
115+29	3200 E FIR
115+31	3210 E FIR



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
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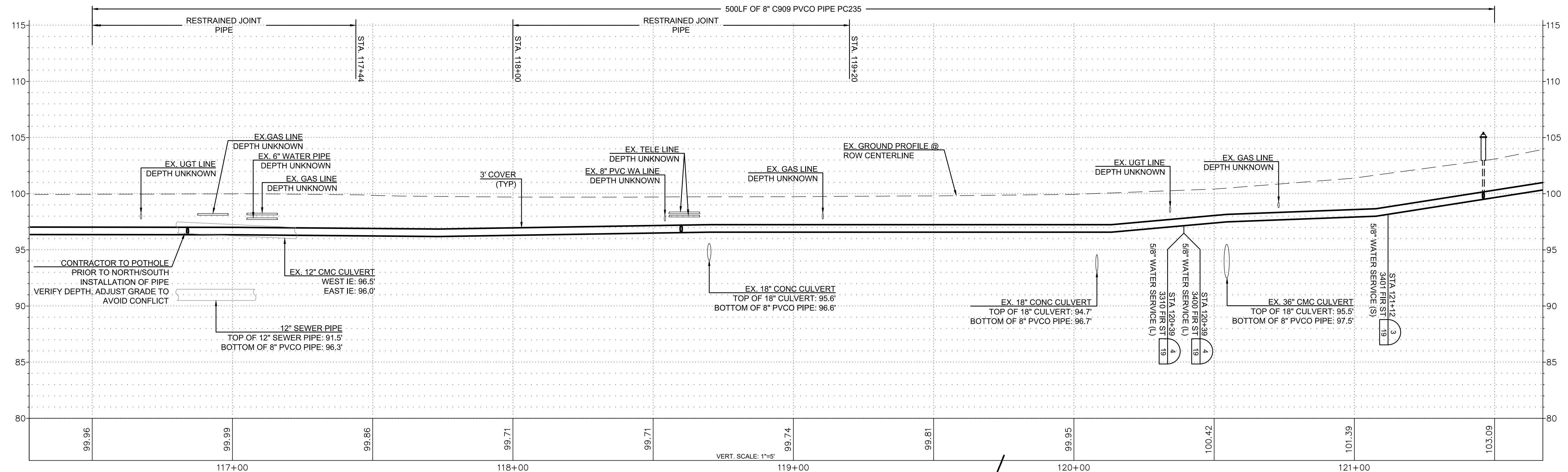
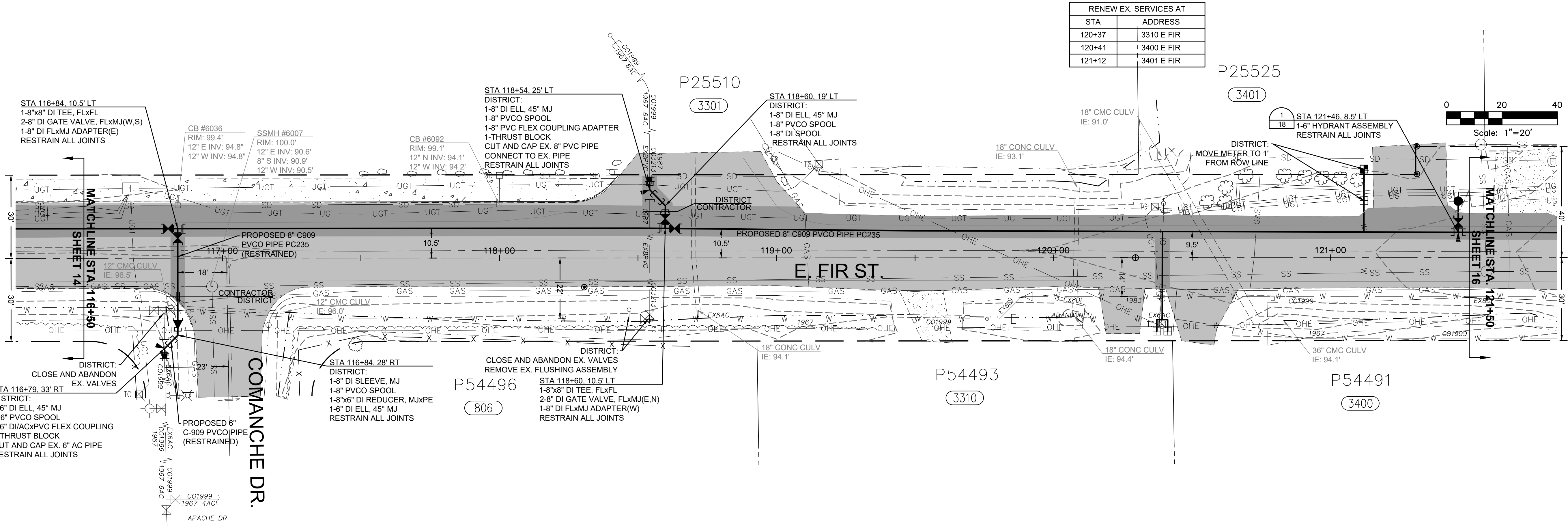
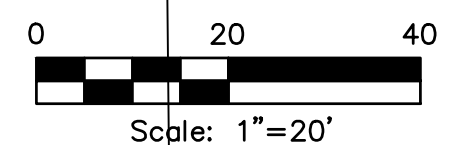
DATE PRINTED:	8/4/20	SEC:	20, 16, 21
TWP:	34 N	RGE:	4 E



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E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 111+50 TO STA 116+50

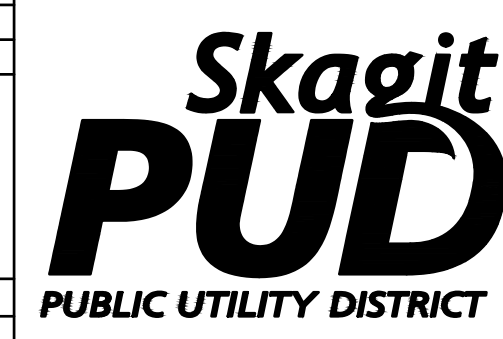
STA	ADDRESS
120+37	3310 E FIR
120+41	3400 E FIR
121+12	3401 E FIR



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20

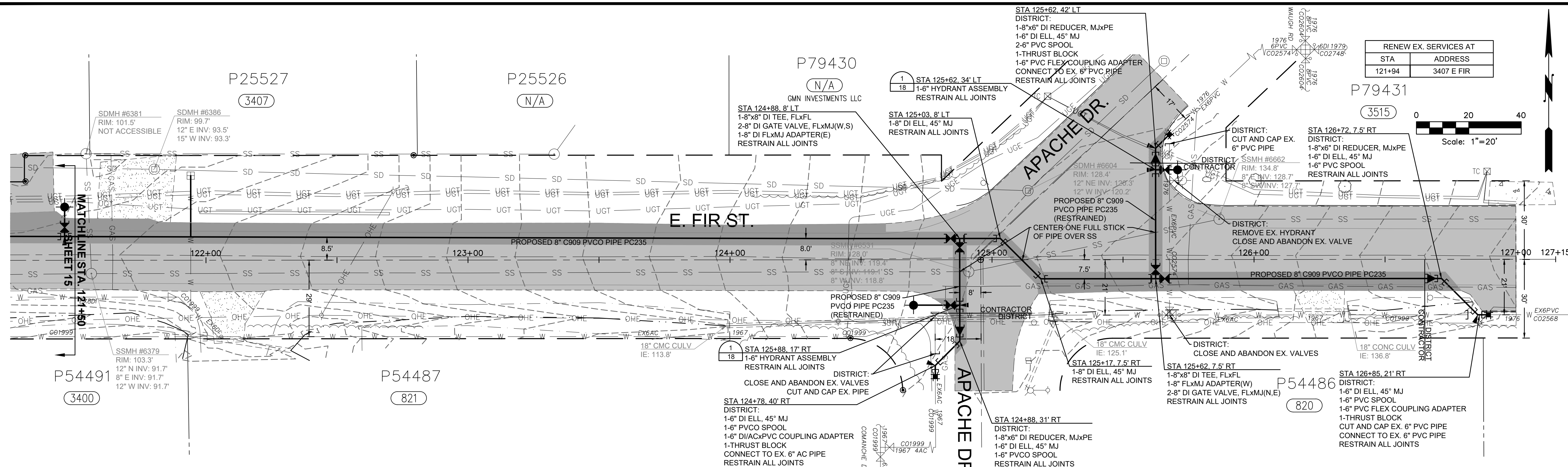


DATE PRINTED:	8/4/20	SEC:	20, 16, 21
TWP:	34 N	RGE:	4 E

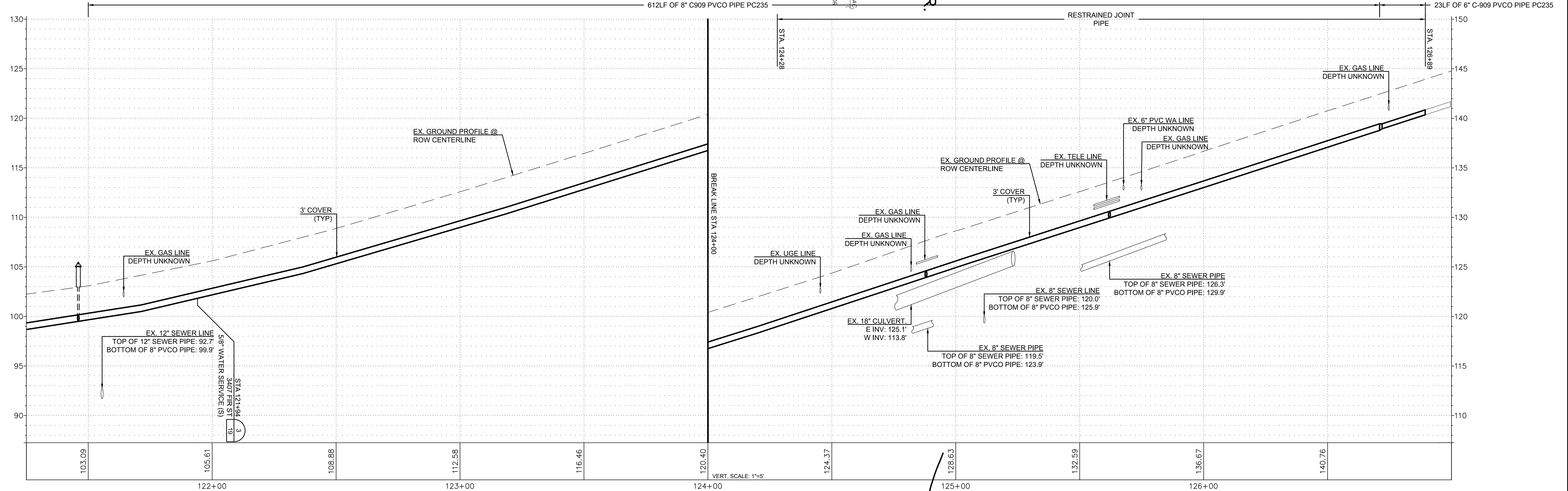
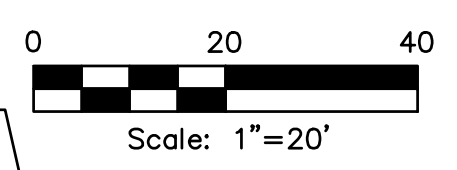


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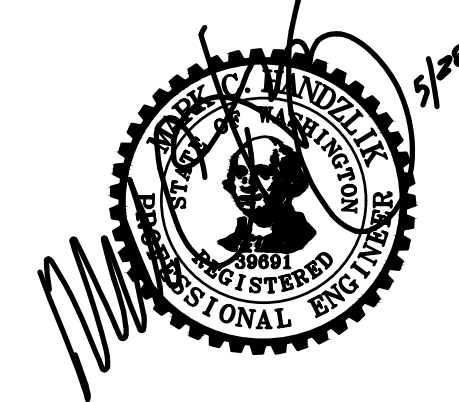
N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 116+50 TO STA 121+50



RENEW EX. SERVICES AT	
STA	ADDRESS
121+94	3407 E FIR



ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
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DATE PRINTED:	8/4/20	SEC:	20, 16, 21
HOR. NAD 83	VERT. NAVD 88	TWP. BY:	34 N
DSGN BY:	JLB	RGE. BY:	4 E
DWN BY:	JLB		
APPVD BY:	MCH		



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N. LAVENTURE TO N. 30TH  
E FIR STREET  
PLAN AND PROFILE  
STA 121+50 TO STA 126+89

SCALE: 1"=20'

P.N. 3760  
C.O. 5037

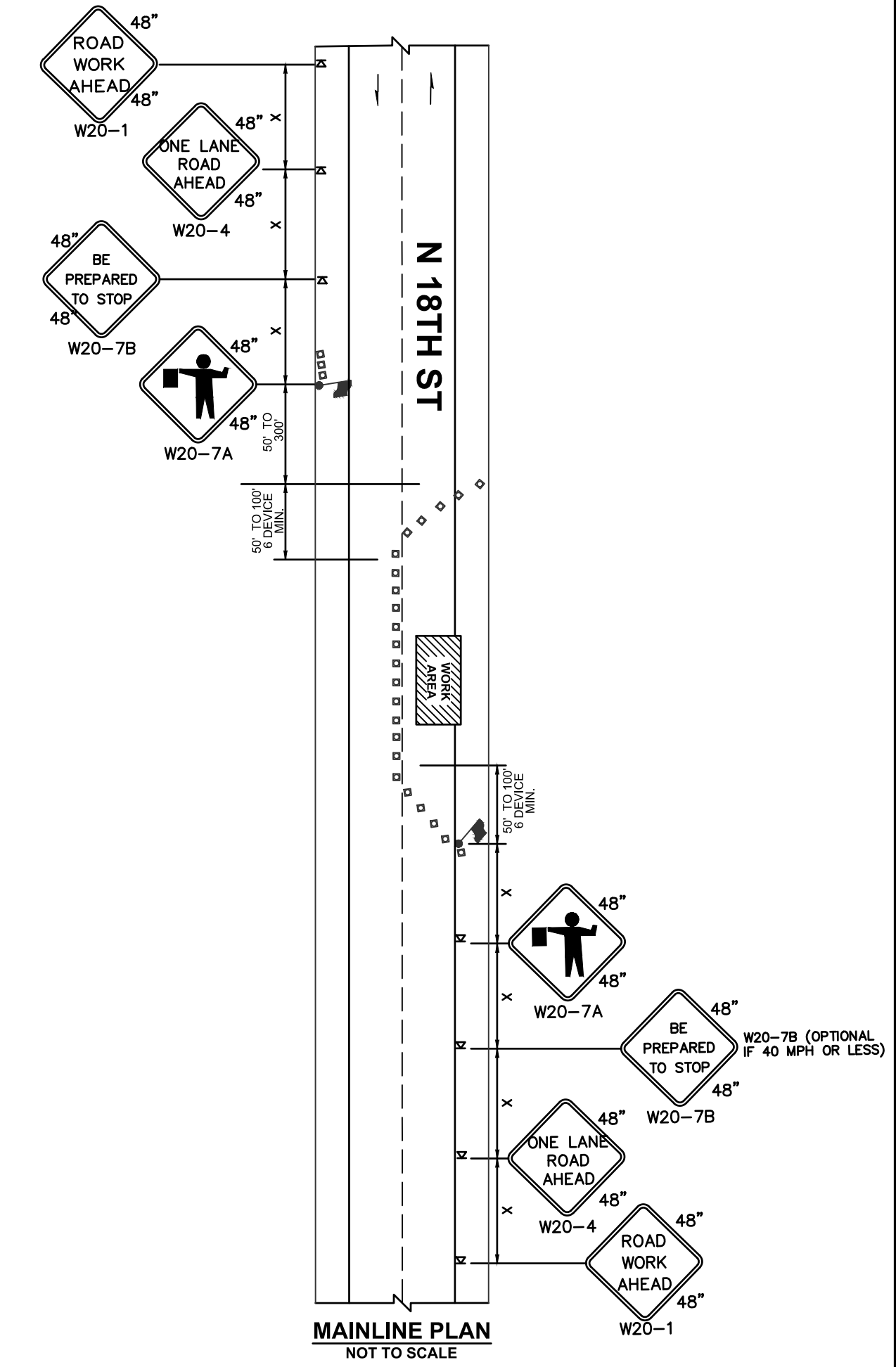
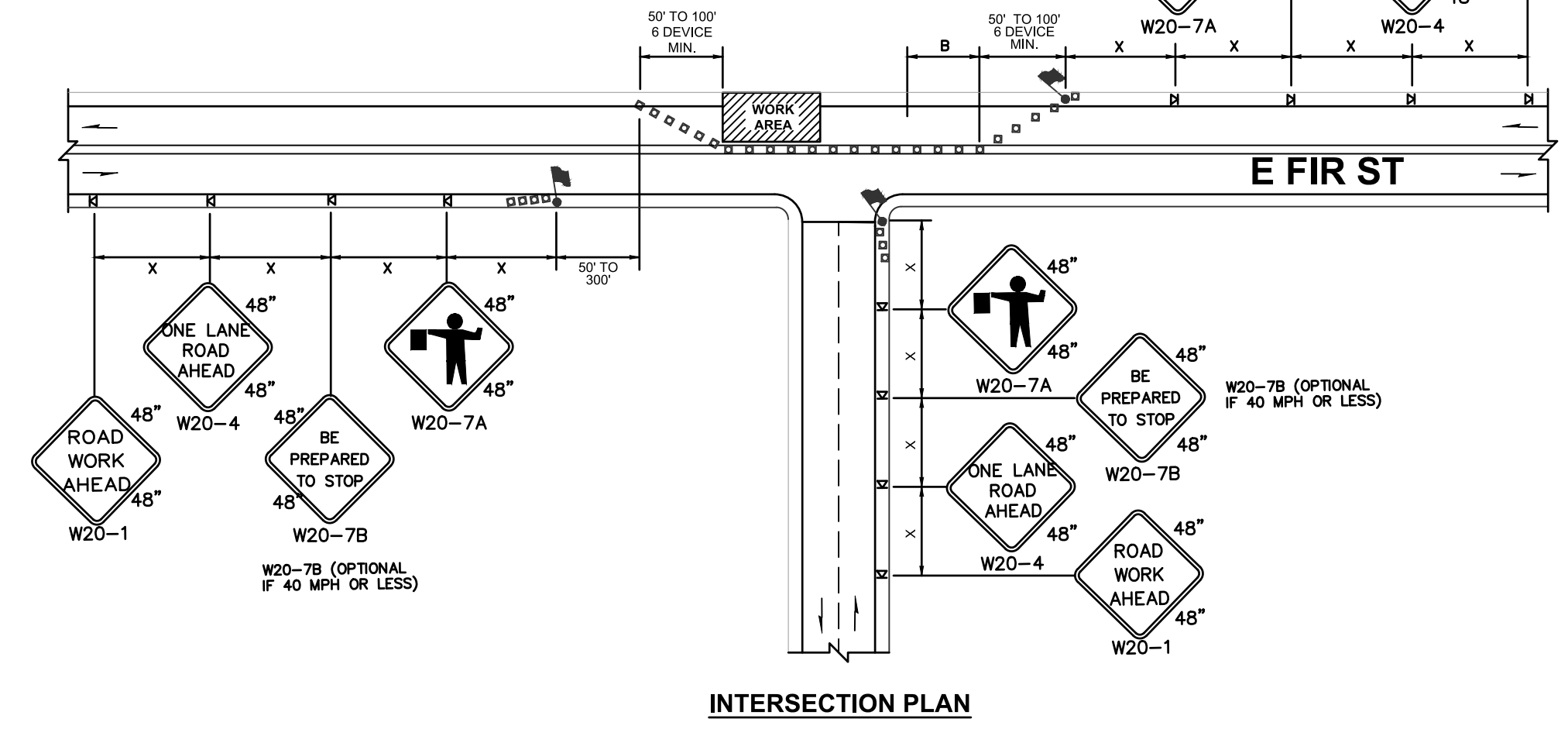
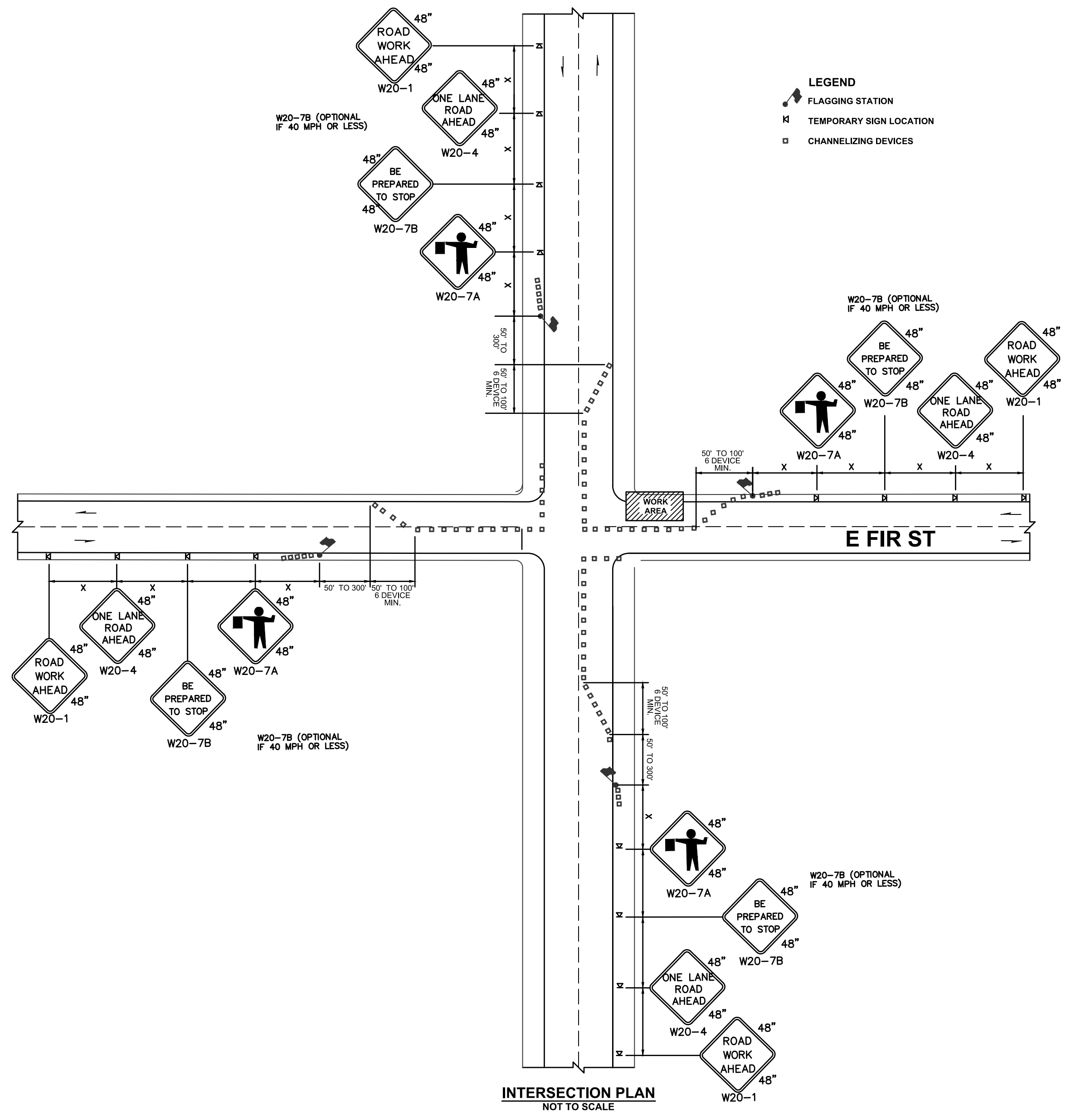
SHEET:  
16 OF 20

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

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

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

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



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 N. LAVENTURE TO N. 30TH  
 TRAFFIC CONTROL PLANS

SCALE: NONE	P.N. 3760 C.O. 5037	SHEET: 17 OF 20
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NO.	DESCRIPTION	REQD.
1	TEE WITH FLANGED BRANCH	1
2	6" VALVE WITH FLANGED CONNECTIONS (SEE NOTE 6)	1
3	6" VALVE WITH FLANGED CONNECTIONS (SEE NOTE 6)	1
4	PIPE, 6" CLASS 50 DUCTILE IRON, FIELD CUT	1
5	PIPE HYDRANT WITH PUMPER PORT, CLOW METALWORK, OR AS APPROVED BY SUBORDINATE FIRE DEPARTMENT DISTRICT	1
6	VALVE BOX, CAST IRON OLYMPIC FOUNDRY V8007/SKAGIT (SEE P.U.D. DETAIL)	1
7	BLOCK, PRECAST CONCRETE, SEE NOTE 8	1
8	FABRIC, GEOTEXTILE, NON-WOVEN (MIRAFI 1000) ²	1
9	1/4" OF GRANULAR FILL, 1-1/2" - 3/4", NO FINES	1
10	1/4" OF GRANULAR FILL, 1-1/2" - 3/4", NO FINES	1
11	HYDRANT VALVE, STOREZ STYLE S-37 W/SC CAP & CABLE, 5" W/PCP OR EQUIVALENT APPROVED BY THE DISTRICT	1

**NOTES:**

- ALL MATERIALS AND BRANDS MUST BE APPROVED BY P.U.D.
- BLOCK TEE AND HYDRANT WITH POURED CONCRETE ON ALL WATER MAINS OTHER THAN DUCTILE IRON AND ON ALL TAPPING SLEEVES AS REQUIRED PER DISTRICT BLOCKING DETAIL. IN ADDITION, "MEGALOCK" (OR APPROVED EQUIVALENT) ARE TO BE INSTALLED AT VALVE AND HYDRANT M.J. OUTLETS. RESTRAIN ANY JOINTS IN THE PIPELINE WITH "FIELD LOCK" GASKETS (OR APPROVED EQUIVALENT) INSTALLED IN THE BELLS OF TYTON JOINT PIPE OR "MEGALOCK" ON M.J. BELLS.
- PROTECTIVE BARRIER POSTS MAY BE NECESSARY AT SOME HYDRANT INSTALLATIONS. CONTACT FIRE DEPARTMENT/DISTRICT FOR SPECIFIC REQUIREMENTS.
- SET HYDRANT VERTICAL, USE LEVEL, COMPACT ALL BACKFILL.
- VALVE SHALL BE ANNA STANDARD GATE, 10" RING PACKING, NON-RISING STEM, 2" OPERATING NUT, RESIDENT WEDGE.
- HYDRANT LOCATIONS ARE DETERMINED BY THE FIRE MARSHAL WITH AUTHORITY FOR AREA CONCERNED.
- CONCRETE BLOCK WILL BE BELOW THE DRAIN HOLES AND DRAIN ROOK. TAKE CARE TO NOT PLUG DRAIN HOLES OR CONTAMINATE DRAIN ROOK.
- SET MINIMUM 1" SOFT, CONCRETE SUPPORT TIGHT UP UNDER VALVE AND HYDRANT. HYDRANT BARREL, LEAD, TEE, AND VALVE MUST BE WRAPPED WITH POLYETHYLENE PIPE ENCASEMENT TAPE WHICH IS A MINIMUM OF 8-MIL THICK. IT MUST BE INSTALLED AS PER W.S.D.O.T. STANDARDS AND IN ACCORDANCE WITH A.W.M.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 4" THICK LAYER OF 5/8" MINUS CRUSHED ROCK COMPACTED TO 95%.

SEE SHEET 2/2 FOR WALL REQUIREMENTS FOR HYDRANTS

APPROVED ON: May 6, 2014

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WH-1a

SHEET 1/2

**KEY BLOCKING SPECIFICATION:**  
MATERIALS SHALL INCLUDE 3/4" INCH RESTRAINING RODS, H.E. NUTS AND WASHERS OF HIGH STRENGTH LOW ALLOY STEEL. MEETING ANNA C-111-50 COMPOSITION SPECIFICATIONS. ROMAC "DUCTILE LUG" OR 90° EYE BOLTS AND "RAB" SERIES PIPE RESTRAINING SYSTEM, THRUST RESTRAINT TO BE CALCULATED AT 7500 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% REAR TO BE MINIMUM #6 (3/4") SIZE AND HAVE A MINIMUM 8-INCH CLEARANCE FROM ANY CONCRETE SURFACE.

**BEARING AREA REQUIRED IN SQUARE FEET**

PIPE SIZE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	1.8	1.2	0.8	0.5
6"	2.7	1.8	1.2	0.8
8"	3.6	2.4	1.6	1.1
10"	4.5	3.0	2.0	1.4
12"	5.4	3.6	2.4	1.7
14"	6.3	4.2	2.8	2.0
16"	7.2	4.8	3.2	2.3
18"	8.1	5.4	3.6	2.6
20"	9.0	6.0	4.0	2.9
22"	9.9	6.6	4.4	3.2
24"	10.8	7.2	4.8	3.5
26"	11.7	7.8	5.2	3.8
28"	12.6	8.4	5.6	4.1
30"	13.5	9.0	6.0	4.4

**SAFE BEARING LOAD**

SOIL TYPE	SAFE BEARING LOAD (LBS/SQ. FT.)
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

**KEY BLOCK USE:**  
THE INSTALLATION OF A KEY BLOCK IS TO BE CONSIDERED ONLY FOR TEMPORARY BLOCKING FOR 6-10 YEARS. IF THE PIPELINE IS TO REMAIN A PERMANENT INSTALLATION, A PERMANENT BLOCKING 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.

APPROVED ON: MAY 6, 2014

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WT-1

SHEET 1/2

**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.

**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.
- CURE CASING EXTENSION INTO TRENCH AND PLACE INSIDE EXISTING PVC VALVE CASING THE 6"-8" ALLOWED FOR IN STEP 1. INSTALL VALVE BOX.

APPROVED ON: MAY 6, 2014

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WV-1a

SHEET 1/2

**LEGEND:**

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

APPROVED ON: MAY 16, 2014

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WH-1b

SHEET 2/2

**NOTES:**

- VAULTS SHALL BE PRE-CAST CONCRETE MEETING ASTM C478. TOP SLAB SHALL BE DESIGNED TO CARRY HS-20 LOADING.
- ROAD NON-METALLIC CONDUIT (PVC) FOR FIBER SHALL BE U.L. 651 LISTED, NEMA TC-2, SCHEDULE 40 APPROVED FOR CONCRETE ENCASEMENT. PVC CONDUIT SWEEPS SHALL NOT BE USED.
- FIBERGLASS CONDUIT FOR FIBER SHALL BE U.L. 1884 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 BENDS FROM 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 2500 FEET APART.

APPROVED ON: MARCH 13, 2019

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WFO-1

SHEET 3

**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.
- REMOVE TOP SMALL HOLE IN PAVEMENT AND LOCATE VALVE BOX COVER.
- CAREFULLY BREAK OUT AN 18-INCH DIAMETER HOLE WITH 8-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 ROCKS, DEBRIS AND DIRT. CLEAN AND CORRECT AS NECESSARY. CHECK WITH A VALVE WRENCH TO VERIFY OPERATOR 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 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 COMPACTATION.
- FILL THE VOID BETWEEN THE CASING PIPE AND EARTH WALL UP TO EXACTLY 12 INCHES (1 FOOT) BELOW FINISH PAVEMENT GRADE WITH 5/8"-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 EVEN 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"-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 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 WRENCH TINES WILL NOT LIFT THE TACK MATERIAL. REMOVE IT CURS 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.

APPROVED ON: MAY 6, 2014

PUD NO. 1 OF SKAGIT COUNTY ENGINEERING MANAGER

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

STANDARD  
WV-1b

SHEET 2/2

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPV BY: MCH
DATE PRINTED:	SEC: 20, 16, 21
8/4/20	TWP: 34 N
	RGE: 4 E



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

N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
STANDARD DETAILS

SCALE: NONE

P.N. 3760  
C.O. 5037

SHEET:  
18 OF 20

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 1" I.P.T., ALL BRASS, (FORD #808)	1	1
3	CLAMP 1" BRASS FB-300 ³	1	1
4	NIPPLE BRASS 1/2"	1	1
5	CLAMP STOP 1" B1-444	1	1
6	VALVE BOX CART IRON OLYMPIC FOUNDRY V6-307-SKAGIT (SEE P.U.D. DETAIL)	1	1
7	CASING 6" PVC SLOPE PIPE	4	1
8	BELL 1" BRASS 90° STREET	2	2
9	BELL 1" BRASS 90° STREET	2	2
10	URON BRASS 1"	1	1
11	ADAPTER BRASS PAC JOINT, 1" M.P.T. x 1" COP, (FORD #808)	1	1
12	UTILITY VALVE 3030-LA W/3030-P COVER (SEE NOTE 4)	1	1
13	NIPPLE 1/2" BRASS	1	1
14	VALVE 1" COMBINATION AIR (APCO) (W/ STAINLESS STEEL TRIM)	1	1
15	PIPE 1" PVC S2A 80	1	1
16	HOSE CLAMP 3/4" STAINLESS	1	1
17	BEND 1" COPPER 180° WITH INSECT SCREEN	1	1
18	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
19	POST, 4"-Ø MIN. METAL, FENCE POST W/SPACE REMOVE (PRESSURE TREATED 4" x 4" POST W/MARKER WHERE APPROPRIATE)	2	2
20	NIPPLE 1/2" BRASS	1	1
21	CONCRETE SUPPORT, MIN. 1 FT. SQUARE x 1-1/4" IN. THICK	1	1

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

NOTES:  
1. COPP. TO BE IN FULL "ON" POSITION BEFORE BACKFILL.  
2. SET VALVE CASINGS AND VALVET TO FINISHED GRADE. PROVIDE CONCRETE BLOCK SUPPORT UNDER CASING. DO NOT REST ON PIPE. REFER TO DETAIL OF STANDARD VALVE CASING INSTALLATION.  
3. INSTALL LINE PERPENDICULAR TO MAIN OR AS SHOWN ON WATER PLAN.  
4. CARSON INDUSTRIES BOX 1730-15 W/COVER 1730-3L MAY BE USED IN LAWN OR LANDSCAPED AREA UPON APPROVAL BY P.U.D.  
5. 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.

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.³

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

SCALE: 1"=2'	STANDARD
DATE: 3-25-06	
REVISED: 5/21/14	
DRAWN BY: CAS	
APPROVED BY: GJS	

STANDARD INSTALLATION OF 1" COMBINATION AIR VALVE ASSEMBLY

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 1" I.P.T., ALL BRASS, (FORD #808)	1	1
3	COPP. 1" (FORD #8500-4) ³	1	1
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
5	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
7	PIPE 1" REHAU MUNDREX TYPE A, 200 P.S.I.	1	1
8	BRASS PAC JOINT, 1" M.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
9	COPPERSETTER 3/4" (FORD #M674-28-11-44-NL-PP) ³	1	1
10	METER, BAGGER MODEL M25 (5/8") OR M35 (3/4") BRONZE METER	1	1
11	NIPPLE BRASS 1"	1	1
12	ADAPTER BRASS 1" F.I.P.T. x 1" INSERT	1	1
13	METER BOX & COVER, (CARSON INDUSTRIES LLC, L SERIES 1419-12)	1	1
14	EXTENSION METER BOX, CARSON INDUSTRIES LLC, L SERIES 1419-6 ³	1	1
15	CLAMP, 1" ALL STAINLESS/STUB ONLY	1	1
16	ADAPTER 3/4" M.P.T. x 3/4" INSERT W/CAP (GALV.)	1	1
17	HOSE CLAMP 1-1/2" STAINLESS/STUB ONLY	1	1
18	POST, 4"-Ø MIN. METAL FENCE POST W/SPACE REMOVE/STUB ONLY	1	1

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

NOTES:  
1. COPP. TO BE IN FULL OPEN POSITION BEFORE BACKFILL.  
2. INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.  
3. SERVICE LINE IS TYPICALLY 1' TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.  
4. 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.  
5. IF METER IS NOT INSTALLED IN COPPERSETTER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATERPROOF 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.  
6. IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M2507324-450P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.  
7. 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. CONTRACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
8. IF SERVICE LINE HAS LESS THAN 2' OF COVER, CONTACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
9. 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.

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.³

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

SCALE: 1"=2'	STANDARD
DATE: 11-14-14	
REVISED: 10/31/16	
DRAWN BY: JLB	
APPROVED BY: GJS	

STANDARD 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.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 1" I.P.T., ALL BRASS, (FORD #808)	1	1
3	COPP. 1" (FORD #8500-4) ³	1	1
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
5	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
7	PIPE 1" REHAU MUNDREX TYPE A, 200 P.S.I.	1	1
8	ADAPTER BRASS PAC JOINT, 1" M.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
9	COPPERSETTER 1" (FORD #M674-128-11-44-NL-PP) ³	1	1
10	METER, BAGGER MODEL M70 1" BRONZE METER	1	1
11	NIPPLE BRASS 1" x 6"	1	1
12	ADAPTER BRASS 1" F.I.P.T. x 1" INSERT	1	1
13	METER BOX & COVER, (CARSON INDUSTRIES LLC, L1324) (W/FLUSH COVER)	1	1
14	EXTENSION METER BOX, (CARSON INDUSTRIES LLC, L1324)	1	1
15	CLAMP 1" ALL STAINLESS/STUB ONLY	1	1
16	ADAPTER 3/4" M.P.T. x 3/4" INSERT W/CAP (GALVANIZED)	1	1
17	HOSE CLAMP 1-1/2" STAINLESS/STUB ONLY	1	1
18	POST, 4"-Ø MIN. METAL FENCE POST W/SPACE REMOVE/STUB ONLY	1	1
19	CONCRETE SUPPORT, MIN. 1 FT. SQUARE x 1-1/4" IN. THICK	1	1

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

NOTES:  
1. COPP. TO BE IN FULL OPEN POSITION BEFORE BACKFILL.  
2. INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.  
3. SERVICE LINE IS TYPICALLY 1' TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.  
4. 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.  
5. IF METER IS NOT INSTALLED IN COPPERSETTER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATERPROOF 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.  
6. IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M2507324-450P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.  
7. 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. CONTRACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
8. IF SERVICE LINE HAS LESS THAN 2' OF COVER, CONTACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
9. 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.

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.³

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

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

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

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 2" I.P.T., ALL BRASS, (FORD #808)	1	1
3	COPP. 2" x 4" BRASS	1	1
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
5	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
7	PIPE 2" PLASTIC THREADED	1	1
8	CAP 2" PLASTIC THREADED	1	1
9	TRAFFIC RATER METER BOX AND LID (MID-STATES PLASTICS, INC. M2507324-18) NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS ³	1	1
10	CASING 6" PVC SLOPE PIPE	1	1
11	CAP M.I. BLIND	1	1
12	WARRANTY BLUE CARBONAL KEY-BLOCK	1	1
13	CONCRETE BLOCKING (8" BLOCK IF REQUIRED)	1	1
14	POLYETHYLENE SHEETING 5' M THICKNESS	1	1
15	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1

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

NOTES:  
1. BLOCK AS PER P.U.D. HORIZONTAL THRUST BLOCKING DETAIL. BEARING AREA TO BE AGAINST UNDISTURBED EARTH AND TO BE DETERMINED BY THE ENGINEER. USE FORMING AS NECESSARY TO PREVENT CONCRETE FROM INTERFERING WITH CAP (4") CLAMP (4") OR VALVE (4").  
2. PLASTIC THREADED CAP (4") TO BE HAND TIGHT ONLY.  
3. IF A MANLINE VALVE IS INSTALLED UPSTREAM OF FLUSHING ASSEMBLY, KEY BLOCK VALVE AND CAP. SEE THRUST BLOCKING DETAIL.  
4. KEY BLOCK TO BE INSTALLED ONLY IF PIPE IS EXPECTED TO EXTEND WITHIN TEN (10) YEARS OF INSTALLATION. SEE HORIZONTAL THRUST BLOCKING DETAIL.

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.³

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

SCALE: 1"=2'	STANDARD
DATE: 3-25-06	
REVISED: 5/8/14	
DRAWN BY: CAS	
APPROVED BY: GJS	

STANDARD 2-INCH FLUSHING ASSEMBLY

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 1" I.P.T., ALL BRASS, (FORD #808)	1	1
3	COPP. 1" (FORD #8500-4) ³	1	1
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
5	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
7	PIPE 1" REHAU MUNDREX TYPE A, 200 P.S.I.	1	1
8	ADAPTER BRASS PAC JOINT, 1" M.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
9	COPPERSETTER 3/4" (FORD #M674-28-11-44-NL-PP) ³	1	1
10	METER, BAGGER MODEL M25 (5/8") OR M35 (3/4") BRONZE METER	1	1
11	NIPPLE BRASS 1"	1	1
12	ADAPTER BRASS 1" F.I.P.T. x 1" INSERT	1	1
13	METER BOX & COVER, (CARSON INDUSTRIES LLC, L SERIES 1419-12)	1	1
14	EXTENSION METER BOX, (CARSON INDUSTRIES LLC, L SERIES 1419-6) ³	1	1
15	CLAMP 1" ALL STAINLESS/STUB ONLY	1	1
16	ADAPTER 3/4" M.P.T. x 3/4" INSERT W/CAP (GALVANIZED)	1	1
17	HOSE CLAMP 1-1/2" STAINLESS/STUB ONLY	1	1
18	POST, 4"-Ø MIN. METAL FENCE POST W/SPACE REMOVE/STUB ONLY	1	1
19	CONCRETE SUPPORT, MIN. 1 FT. SQUARE x 1-1/4" IN. THICK	1	1

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

NOTES:  
1. COPP. TO BE IN FULL OPEN POSITION BEFORE BACKFILL.  
2. INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.  
3. SERVICE LINE IS TYPICALLY 1' TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.  
4. 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.  
5. IF METER IS NOT INSTALLED IN COPPERSETTER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATERPROOF 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.  
6. IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M2507324-450P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.  
7. 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. CONTRACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
8. IF SERVICE LINE HAS LESS THAN 2' OF COVER, CONTACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
9. 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.

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.³

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

SCALE: 1"=2'	STANDARD
DATE: 3-01-05	
REVISED: 10/31/16	
DRAWN BY: JLB	
APPROVED BY: GJS	

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

BILL OF MATERIALS			
NO.	NOMENCLATURE	REQ'D.	RECD.
1	WATER MAIN		
2	CLAMP SERVICE DOUBLE STRAP X 1" I.P.T., ALL BRASS, (FORD #808)	1	1
3	COPP. 1" (FORD #8500-4) ³	1	1
4	ADAPTER BRASS PAC JOINT, 1" F.I.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
5	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
6	WIRE #10 SOLID COPPER, BLUE COATED, EXTEND MULTIB INTO BOX, NEAR LD.	1	1
7	PIPE 1" REHAU MUNDREX TYPE A, 200 P.S.I.	1	1
8	COPPERSETTER 3/4" (FORD #M674-28-11-44-NL-PP) ³	1	1
9	ADAPTER BRASS PAC JOINT, 1" M.P.T. x 1" COP, (FORD #214-44-Q-NL)	1	1
10	METER, BAGGER MODEL M25 (5/8") OR M35 (3/4") BRONZE METER (INSTALLED BY DISTRICT)	1	1
11	W/ACAP	1	1
12	METER BOX & COVER, (CARSON INDUSTRIES LLC, L SERIES 1419-12 W/COVER 1419-3 ³ SKU NO. 1419419)	1	1
13	EXTENSION METER BOX, CARSON INDUSTRIES LLC, L SERIES 1419-6 ³	2	2
14	INSERT STIFFENER 3/4" (FORD #217) ³	2	2
15	W/ACAP	1	1
16	W/ACAP	1	1
17	W/ACAP	1	1
18	ADAPTER BRASS 1" F.I.P.T. x 1" INSERT	1	1
19	CASING 6" PVC SLOPE PIPE	2	2
20	CARB STOP, 1" BRASS, (FORD #211-444) ³	1	1
21	NIPPLE BRASS 1"	1	1
22	FRV, 1" ZURN MILKINS BOOK HUSS ³	1	1
23	NIPPLE BRASS 1" x 6"	1	1
24	NIPPLE BRASS 1" x 6"	1	1

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

NOTES:  
1. COPP. TO BE IN FULL OPEN POSITION BEFORE BACKFILL.  
2. INSTALL SERVICE LINE PERPENDICULAR TO MAIN UNLESS OTHERWISE SHOWN ON WATER CONSTRUCTION PLAN.  
3. SERVICE LINE IS TYPICALLY 1' TO NORTH OR WEST OF PROPERTY CORNER OR AS OTHERWISE SPECIFIED.  
4. 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.  
5. IF METER IS NOT INSTALLED IN COPPERSETTER, INSTALL PLUGS IN METER CONNECTIONS. IF CONNECTION IS NOT MADE TO CUSTOMER'S PLUMBING, INSTALL A WATERPROOF 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.  
6. IF THE METER BOX IS LOCATED IN ASPHALT OR CONCRETE AREA, A TRAFFIC BOX (MID-STATES PLASTICS, INC. M2507324-450P) WILL BE REQUIRED. NOT FOR THROUGH-WAY TRAFFIC APPLICATIONS.  
7. 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. CONTRACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
8. IF SERVICE LINE HAS LESS THAN 2' OF COVER, CONTACT DISTRICT ENGINEERING DEPARTMENT FOR FREEZE PROTECTION REQUIREMENTS.  
9. 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. DISTRICT TO INSTALL METER.

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.³

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

SCALE: 1"=2'	STANDARD
DATE: 8-22-19	
REVISED: 9/4/19	
DRAWN BY: JLB	
APPROVED BY: MCH	

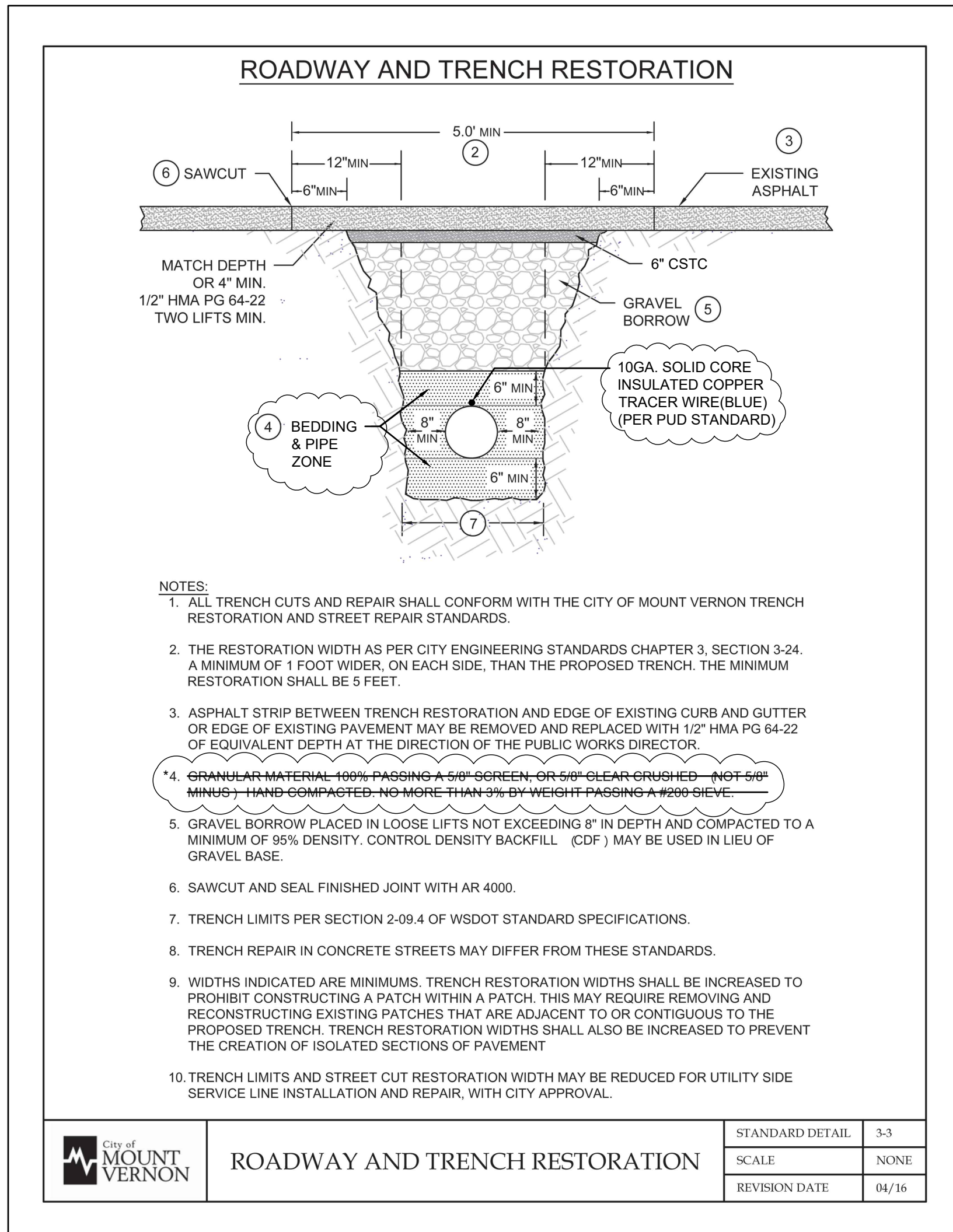
INSTALLATION OF SINGLE 5/8" OR 3/4" METERED SERVICE WITH 200 P.S.I. REHAU SERVICE LINE AND PRESSURE REDUCING VALVE

ISSUE	REVISIONS	BY	DATE
1.	30% DESIGN	MCH	3/11/19
2.	60% DESIGN	MCH	4/22/19
3.	90% DESIGN	MCH	7/10/19
4.	ISSUED FOR BIDDING	MCH	8/5/20



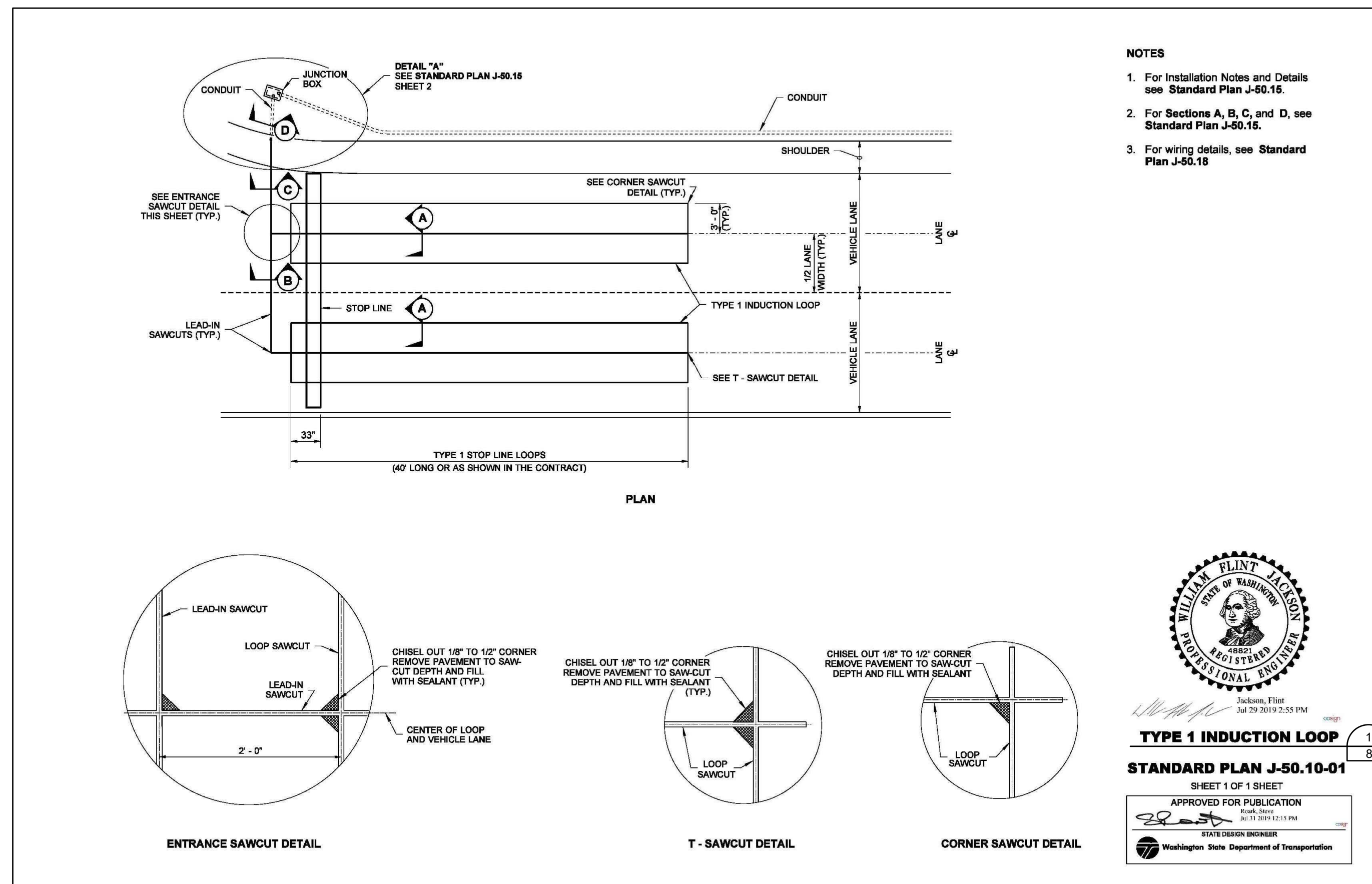
DATUM:	DSGN BY: JLB
HOR: NAD 83	DWN BY: JLB
VERT: NAVD 88	APPV BY: MCH
DATE PRINTED:	SEC: 20, 16, 21
8/4/20	TWP: 34 N
	RGE: 4 E





*4. GRAVEL BACKFILL FOR PIPE ZONE BEDDING, MAX SIZE 1-1/2" PER WSDOT 9-03.12(3)(PER PUD STANDARD)

11. ANY ROAD CUTS SHALL REPLACE THE ASPHALT FROM THE FAR SIDE OF THE CUT TO THE EDGE OF CURB AND GUTTER, OR EDGE OF PAVEMENT WHERE APPLICABLE.



- NOTES**
- For Installation Notes and Details see Standard Plan J-50.15.
  - For Sections A, B, C, and D, see Standard Plan J-50.15.
  - For wiring details, see Standard Plan J-50.18



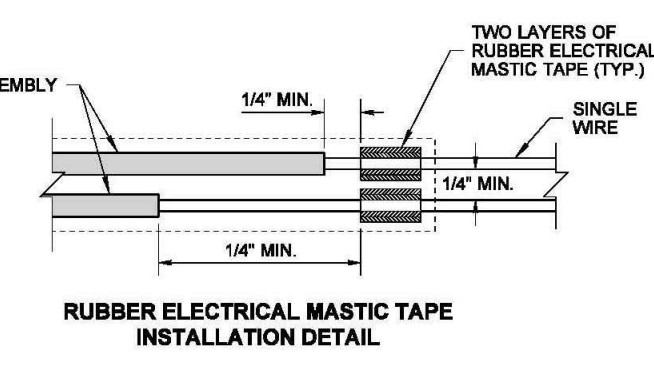
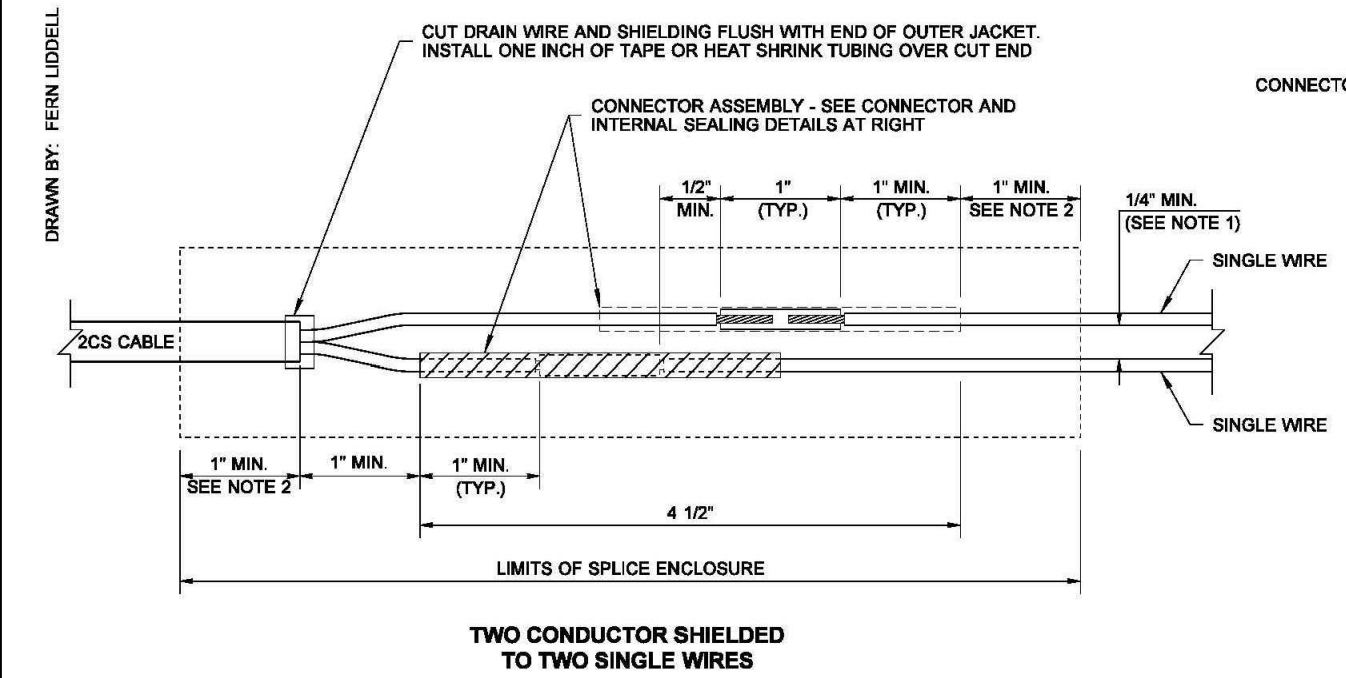
**TYPE 1 INDUCTION LOOP**

STANDARD PLAN J-50.10-01

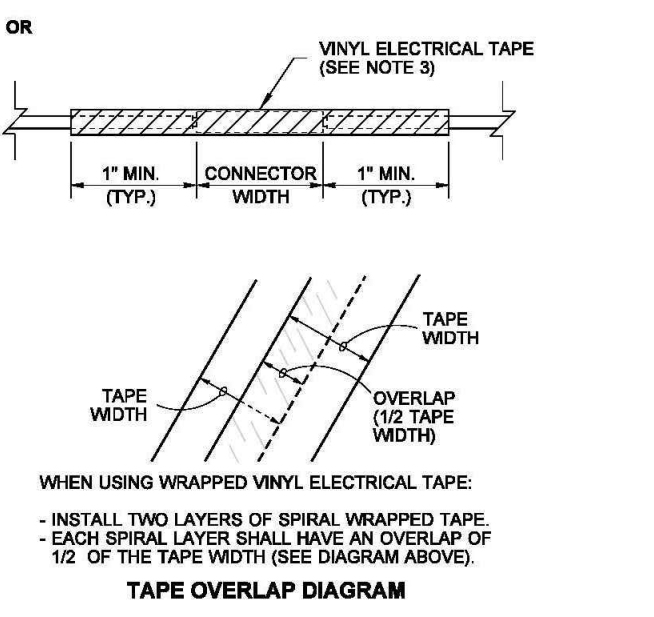
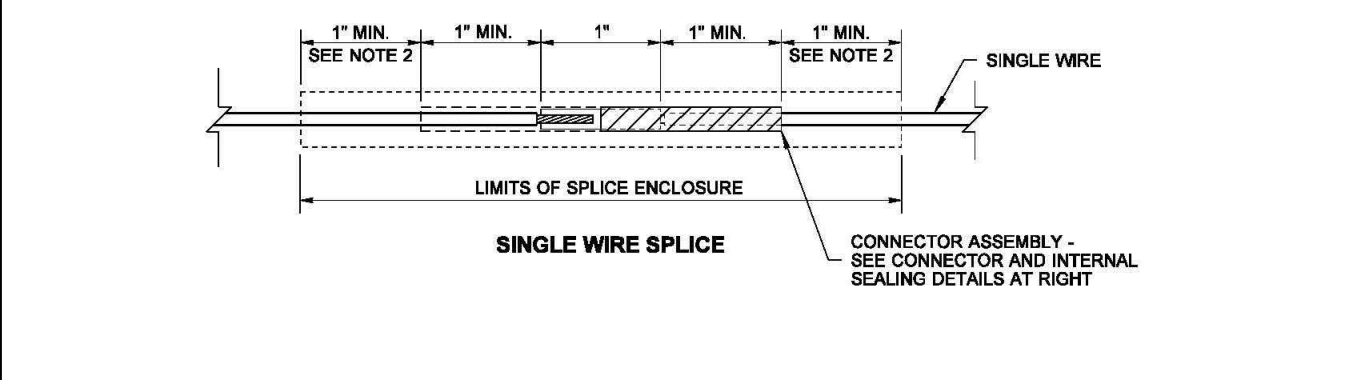
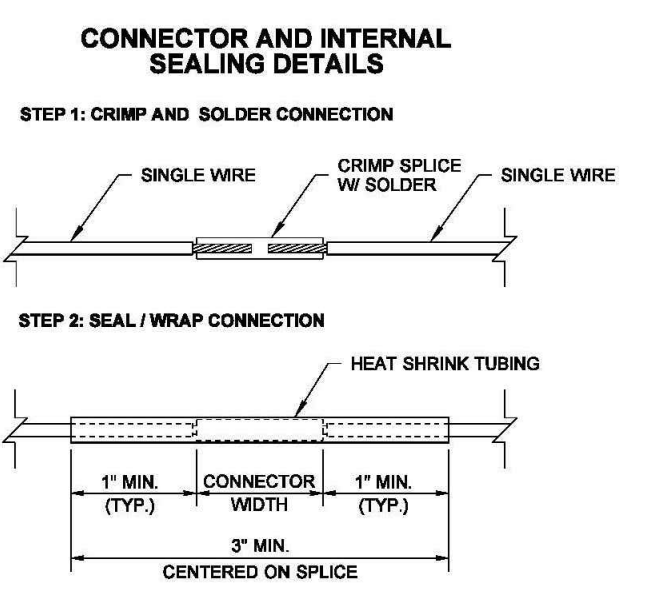
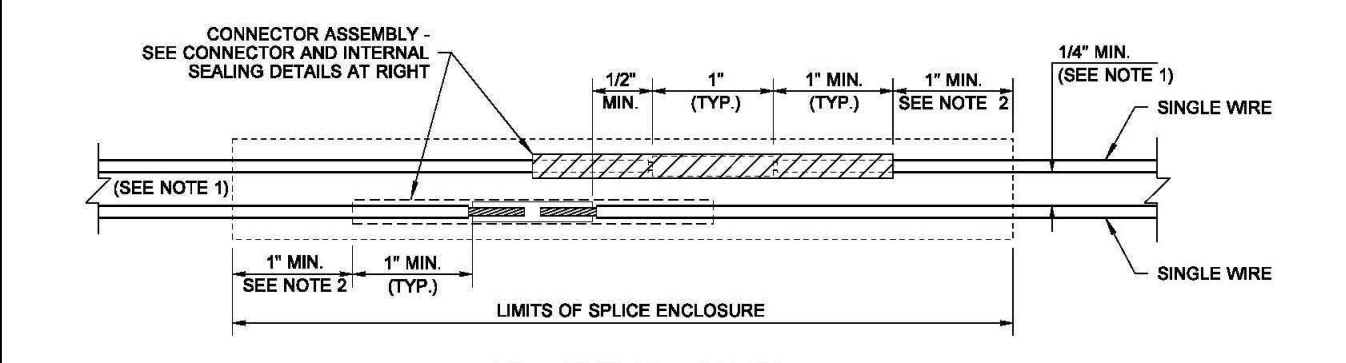
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION  
JUL 13 2019 12:15 PM

STATE DESIGN ENGINEER  
Washington State Department of Transportation



- NOTES**
- Each wire shall be physically separated by at least 1/4" (n) so that sealing material can fill in between the wires; where heat shrink tubing is used for the outer splice enclosure, it shall meet one of the following requirements:
    - Have separate ports for each conductor ("WYE" or "X" shaped tubing). ~ or ~
    - Have rubber electrical mastic tape wrapped around each conductor to ensure a weather-proof seal. See Rubber Electrical Mastic Tape Installation Detail.
  - Heat shrink tubing shall extend a minimum of one inch onto the original wire insulation of each wire in the splice. Rigid splice enclosures shall be centered over the crimped connection(s).
  - Electrical tape used in splicing applications shall be 3/4" (n) wide, be UL listed under UL 510, and be CSA certified under C22.2 No. 197-M1983.
  - No more than two splices may be installed in the same splice enclosure.
  - Crimp splices shall be installed with an approved crimping tool for the type and size of crimp splice used. Pliers and similar multi-purpose tools may not be used.



**LOOP SPLICE DETAILS**

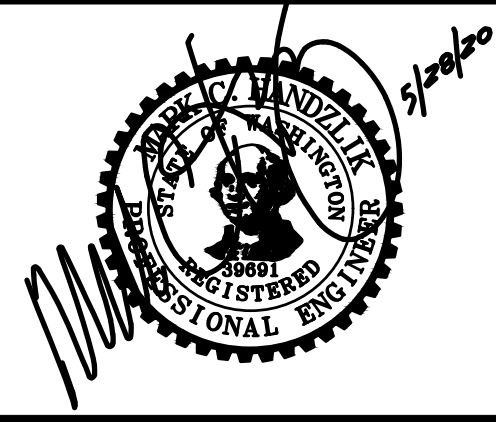
STANDARD PLAN J-50.05-00

SHEET 1 OF 1 SHEET

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JUL 13 2019 9:55 AM

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Washington State Department of Transportation

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SEC: 20, 16, 21  
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**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

N. 18TH STREET, E. DIVISION TO  
E. HIGHLAND, E. FIR STREET,  
N. LAVENTURE TO N. 30TH  
STANDARD DETAILS

SCALE: NONE

P.N. 3760  
C.O. 5037

SHEET:  
20 OF 20