

MORTON STREET WATER MAIN REPLACEMENT

SECTION 28, CITY OF ST. JOHNS CLINTON COUNTY, MICHIGAN



PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM SERVICE PROVIDER AND FIELD OBSERVATION. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO THEIR ACCURACY OR OF HIS RESPONSIBILITY TO NOTIFY THE PROPER UTILITIES BEFORE COMMENCING WORK. THE FOLLOWING UTILITIES ARE LOCATED IN OR NEAR THE RIGHT OF WAY FOR THIS PROJECT.

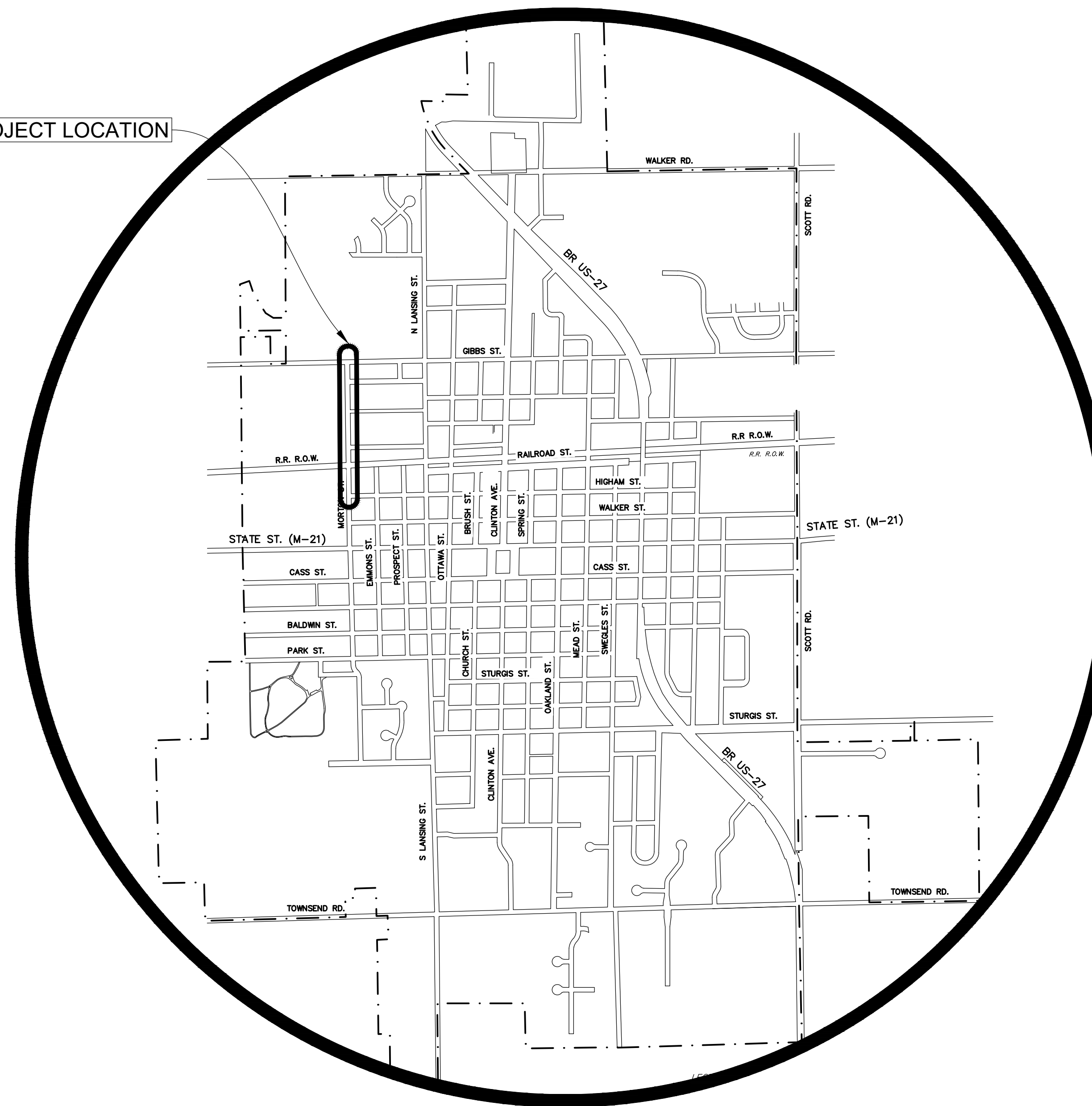
NAME AND ADDRESS OF UTILITY	TYPE OF UTILITY
CONSUMERS ENERGY (LOCAL OFFICE) 530 WEST WILLOW STREET LANSING, MI 48909 PH: 517-374-2375 CELL: 517-930-0879 DOUG FURMAN	GAS
CONSUMERS ENERGY (LOCAL OFFICE) 530 WEST WILLOW STREET LANSING, MI 48909 PH: 517-374-2329 CELL: 517-580-2049 JACOB CHALUT	ELECTRIC
CHARTER COMMUNICATIONS 1 145 SOUTH TELEGRAPH ROAD MONROE, MI 48161 PH: 734-240-4015 MARK PRICE	CABLE TELEVISION
COMLINK 1781 HOLLWAY DRIVE HOLT, MI 48842 PH: 517-742-4109 RYAN SCHANER	FIBER
FRONTIER COMMUNICATIONS 1943 WEST M-21 OWOSSO, MI 48667 PH: 989-723-0373 MARK STEVENS	TELEPHONE
CITY OF ST. JOHNS 100 EAST STATE STREET, SUITE 1000 ST. JOHNS, MI 48979 PH: 989-224-8944 JUSTIN SMITH	SANITARY SEWER & WATER MAIN
CLINTON COUNTY DRAIN COMMISSION 100 E STATE STREET, SUITE 2300 ST. JOHNS, MI 48879 PH: 989-224-5160 JON MORRISON	STORM SEWER

OWNERS OF PUBLIC UTILITIES WILL NOT BE REQUIRED TO MOVE POLES OR STRUCTURES THAT ARE NOT WITHIN GRADING OR STRUCTURE LIMITS IN ORDER TO FACILITATE THE OPERATION OF CONSTRUCTION EQUIPMENT, UNLESS IT IS DETERMINED BY THE ENGINEER THAT SUCH LINES OR STRUCTURES CONSTITUTE A HAZARD TO THE PUBLIC OR ARE EXTRA-ORDINARILY DANGEROUS TO THE CONTRACTOR'S OPERATIONS. (SEE SPECIAL PROVISIONS FOR UTILITY COORDINATION)

OWNER CONTACT INFORMATION

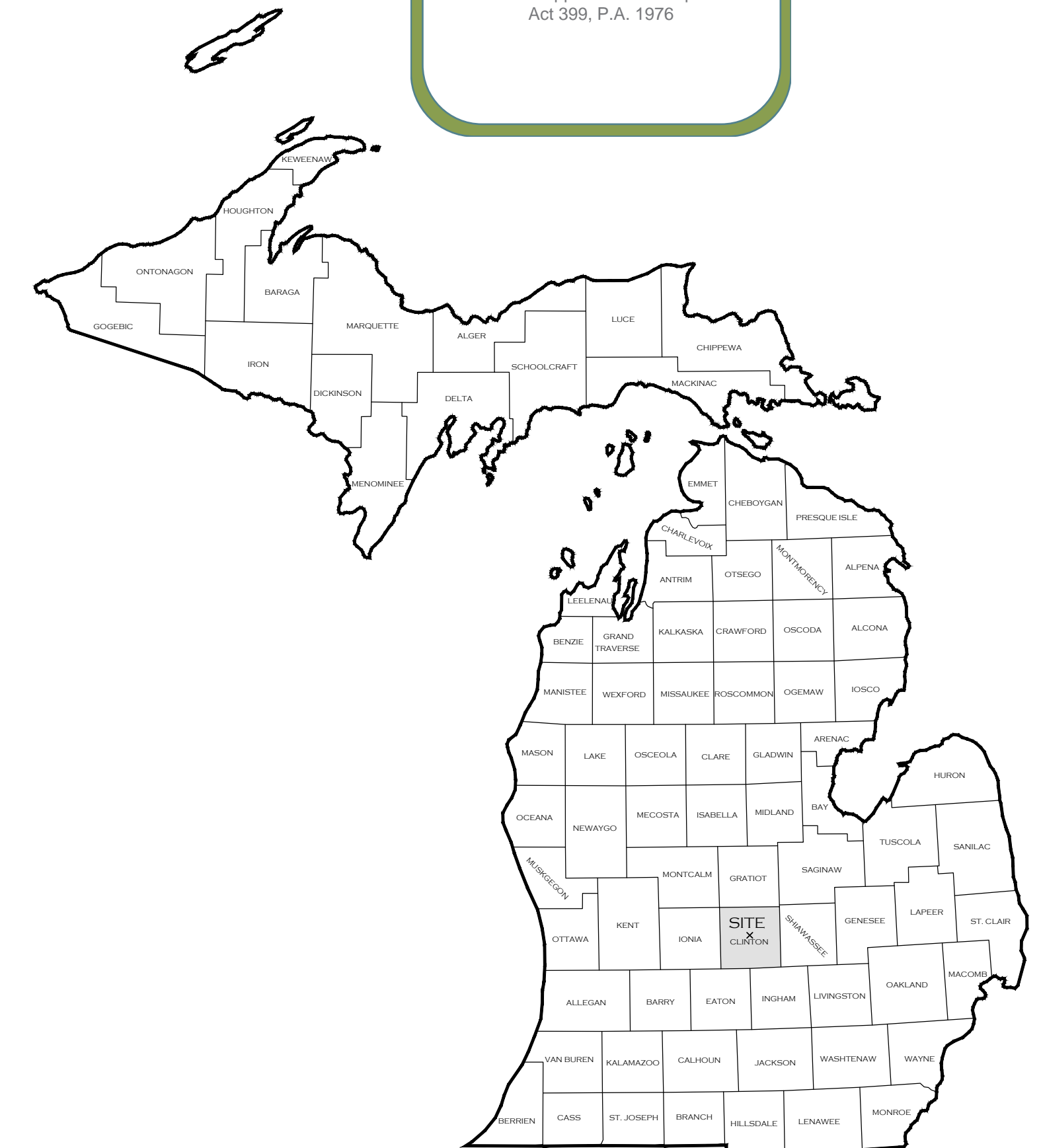
CITY OF ST. JOHNS
CONTACT: JUSTIN SMITH
100 E STATE STREET, SUITE 2900
ST. JOHNS, MICHIGAN 48879
PH: 517-224-8944 EXT. 235
FX: 517-224-2204
EMAIL: JSMITH@STJOHNSMICH.COM

PROJECT LOCATION



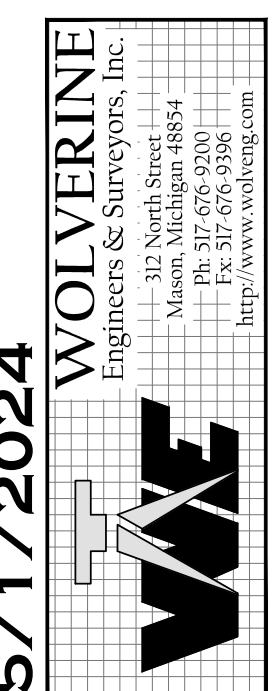
LOCATION MAP

NOT TO SCALE



Sheet List Table

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2	ABBREVIATIONS GENERAL NOTES LEGEND
3	NOTES AND SPECIFICATIONS
4	DETAILS
5	MORTON ST PLAN AND PROFILE
6	MORTON ST PLAN AND PROFILE
7	CROSS STREETS PLAN AND PROFILE



5/1/2024

PERMIT SET

MORTON STREET WATER MAIN REPLACEMENT 23-0083

BENCHMARKS:
 #1 *C* OF CITY ON HYDRANT, NW CORNER
 OF M-25 HWY AND PORTLAND STREETS
 ELEVATION = 605.82

ABBREVIATIONS

AB	AS-BUILT
BIT	BITUMINOUS
BLK	BULK HEAD
BM	BENCH MARK
BOC	BACK OF CURB
CB	CATCH BASIN
CI	CAST IRON
CIP	CAST IN PLACE
CL	CENTER LINE
CON	CONDUIT
CONC	CONCRETE
DI	DUCTILE IRON
DIA	DIAMETER
EG	EXISTING GROUND LEVEL
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EX	EXISTING
FF	FINISHED FLOOR
FOC	FACE ON CURB
HA	HYDRANT ASSEMBLY
HMA	HOT MIX ASPHALT
HYD	HYDRANT
LT	LEFT
O:	OFFSET
MH	MANHOLE
PAV	PAVEMENT
PR	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
FM	FORCE MAIN
REC	RECORD
REL	RELOCATE
REM	REMOVE
RT	RIGHT
S:	STATION
SAN	SANITARY
STM	STORM
TOC	TOP OF CONCRETE
TOP	TOP OF PIPE OR TOP OF PAVEMENT
TOW	TOP OF WALL OR TOP OF WALK
WTR	WATER MAIN
TOPO	TOPOGRAPHIC SURVEY

EXISTING LEGEND

	CONTOUR - MJR
	CONTOUR - MNR
	SANITARY SEWER
	STORM SEWER
	WATER MAIN
	GAS MAIN
	OVERHEAD UTILITY
	COMMUNICATION LINE
	CHAIN LINK FENCE
	WOOD FENCE
	VINYL FENCE
	CURB
	ROW
	PARCEL LINE
	GOVERNMENT LINE
	CENTERLINE
	TREE LINE
	STRUCTURE
	ASPHALT
	CONCRETE
	GRAVEL
	STONE
	SURFACE WATER
	WETLANDS
	DECIDUOUS TREE
	EVERGREEN TREE
	SHRUB
	STUMP
	SANITARY MANHOLE
	SANITARY CLEAN OUT
	SANITARY TRACE BOX
	STORM MANHOLE
	STORM CLEAN OUT
	STORM CATCH BASIN-CURB
	STORM CATCH BASIN-YARD
	STORM END SECTION
	STORM TRACE BOX
	HYDRANT
	WATER SERVICE VALVE
	WATER ISOLATION VALVE
	WATER MANHOLE
	WATER METER PIT
	WATER WELL
	WATER TRACE BOX
	LIGHT POLE
	UTILITY POLE
	GUY POLE
	GUY WIRE
	TELEPHONE RISER
	TELEPHONE MANHOLE
	GAS VALVE
	MAILBOX
	POST
	STREET SIGN
	SECTION CORNER
	FOUND PROPERTY IRON
	MONUMENT BOX
	SET PROPERTY IRON
	BENCHMARK
	SOIL BORING
	SATELLITE DISH

REMOVALS LEGEND

	SAW CUT, INTERMEDIATE
	CURB AND GUTTER, REM
	PAVT, REM ASPHALT
	PAVT, REM CONCRETE
	ABANDON
	REMOVAL
	SAVE
	SAWCUT
	RELOCATE
	RELOCATE BY OTHERS
	PROTECT
	SILT FENCE
	EROSION CONTROL ITEM NUMBER (SEE STANDARD PLAN R-96 SERIES)
	SLOPE STAKE LINE

PROPOSED LEGEND

	SANITARY SEWER
	STORM SEWER
	WATER MAIN
	SANITARY MANHOLE
	SANITARY TRACE BOX
	STORM MANHOLE
	STORM CATCH BASIN CURB/YARD
	STORM OUTLET STRUCTURE
	STORM TRACE BOX
	STORM SEWER END SECTION
	STORM OR SANITARY CLEANOUT
	FIRE HYDRANT
	ISOLATION VALVE
	WATER SERVICE VALVE
	METER PIT
	WATER TRACE BOX
	ASPHALT
	CONCRETE
	CURB AND GUTTER
	CONTOUR - MJR
	CONTOUR - MNR
	WORKOUT STATION
	LIGHT POLE
	ELECTRIC LINE
	OVERHEAD ELECTRIC LINE
	CABLE LINE
	OVERHEAD CABLE LINE
	FIBER OPTIC LINE
	TELEPHONE LINE
	OVERHEAD TELEPHONE LINE

SURVEY NOTES:

COORDINATE SYSTEM: STATE PLANE GRID
 ZONE: MICHIGAN SOUTH 2113
 ELLIPSOID: GRS 80
 HORIZONTAL DATUM: NAD 83 (MSRN CORS96)
 VERTICAL DATUM: NAVD 88
 GEOID: GEIOD 12B
 UNITS: INTERNATIONAL FEET

BENCHMARKS:

BM #1 ELEV. XXX.XX DESCRIPTION/LOCATION

GOVERNMENT CORNERS:

SECTION CORNER XXXXXX

GENERAL PLAN NOTES:

EXISTING WATER MAINS, SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, ETC.:

THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES DURING ALL CONSTRUCTION ACTIVITIES. INSPECT ALL EXISTING SEWER PIPES ENCOUNTERED DURING CONSTRUCTION AND CONNECT TO APPROPRIATE SEWER AS DIRECTED BY THE ENGINEER.

MIOSHA:

PERFORM ALL WORK UNDER THIS CONTRACT IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS, POLICIES, RULES, AND STANDARDS OF THE MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT (MIOSHA).

DUST CONTROL:

PROVIDE DUST CONTROL AS DIRECTED BY THE ENGINEER.

TREE PROTECTION:

DO NOT CUT ROOTS OR LIMBS OF ANY TREES WITHIN THE PROJECT LIMITS NOT BEING REMOVED UNLESS APPROVED BY THE MUNICIPALITY'S ARBORIST. PROVIDE MUNICIPALITY WITH 72 HOURS WRITTEN NOTICE TO COORDINATE WITH ARBORIST. PROCEED WITH WORK AFTER 72 HOURS IF ARBORIST IS UNRESPONSIVE.

EXISTING UTILITY CONFLICTS:

RELOCATE EXISTING BURIED UTILITY LINES THAT CONFLICT WITH NEW CONSTRUCTION. COORDINATE WITH ENGINEER AND SERVICE PROVIDER. PAYMENT FOR RELOCATING EXISTING UTILITY LINES IS INCLUDED IN RELATED ITEMS OF WORK.

UNDERGROUND UTILITY ACCURACY:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND FROM UTILITY COMPANY INFORMATION. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SIDEWALK REMOVAL:

EXACT LOCATIONS OF CONCRETE SIDEWALK TO BE REMOVED WILL BE DETERMINED IN THE FILED BY THE ENGINEER.

SANITARY SEWER, STORM SEWER, AND WATER SERVICES:

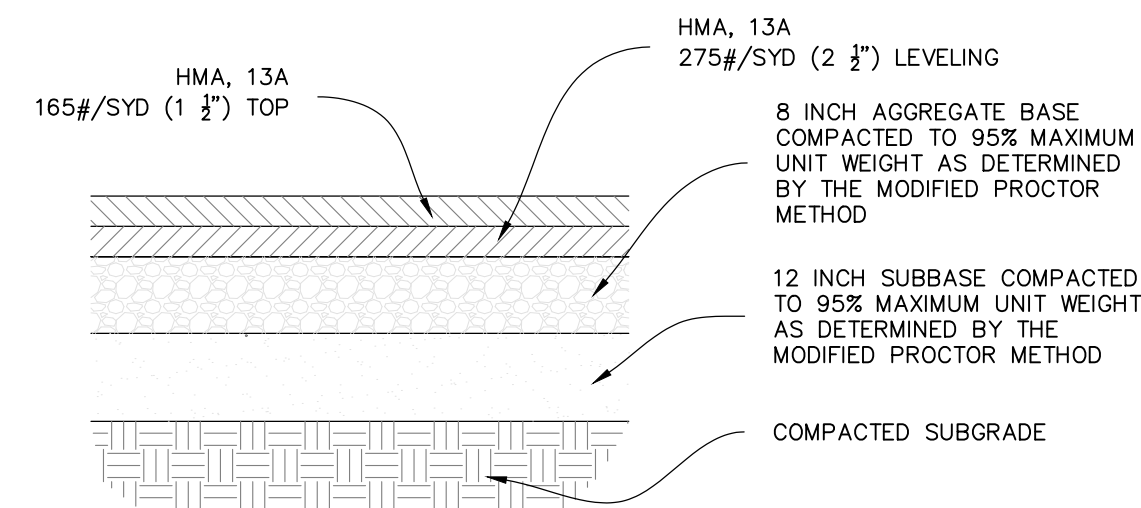
THE LOCATION OF EXISTING SERVICES IS APPROXIMATE. FIELD VERIFY TO DETERMINE THE ACTUAL LOCATION DURING CONSTRUCTION. PAYMENT FOR FIELD LOCATING SERVICES IS INCLUDED IN RELATED ITEMS OF WORK.

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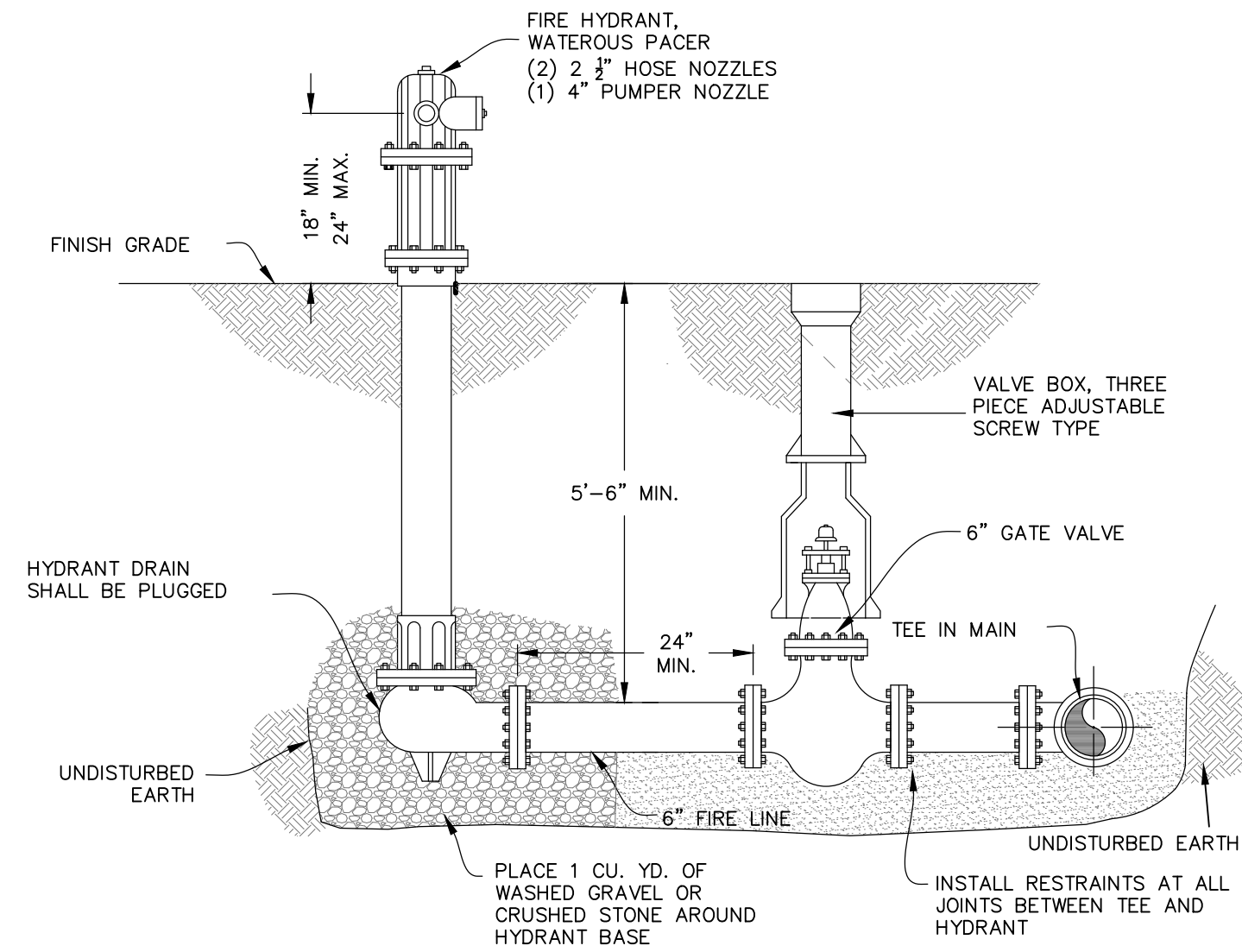
REVISION	DATE	DRAWN	DESCRIPTION
1	4/19/2024	TAP	EDGE REVIEW COMMENTS

WOLVERINE
 Engineers & Surveyors, Inc.
 312 North Street
 Mason, Michigan 48854
 Ph: 317.676.9200
 Fax: 317.676.9396
<http://www.wolvenge.com>

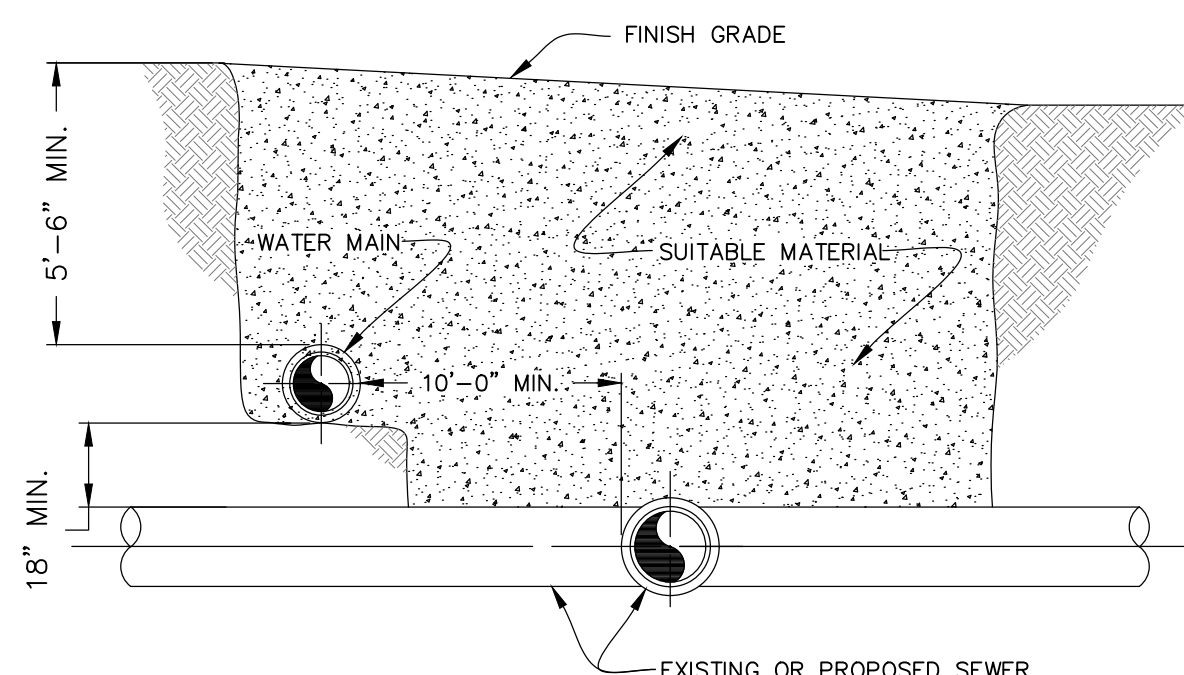
PROJECT	MORTON STREET WATER MAIN REPLACEMENT
CITY	CITY OF ST. JOHNS
COUNTY	CLINTON COUNTY, MICHIGAN
SHEET TITLE	ABBREVIATIONS GENERAL NOTES LEGEND
APPROVED	DBH
CHECKED	DBH
DRAWN	TAP
JOB NO.	23-0083
DATE	5/1/2024
SCALE	NO SCALE
SHEET NO.	2



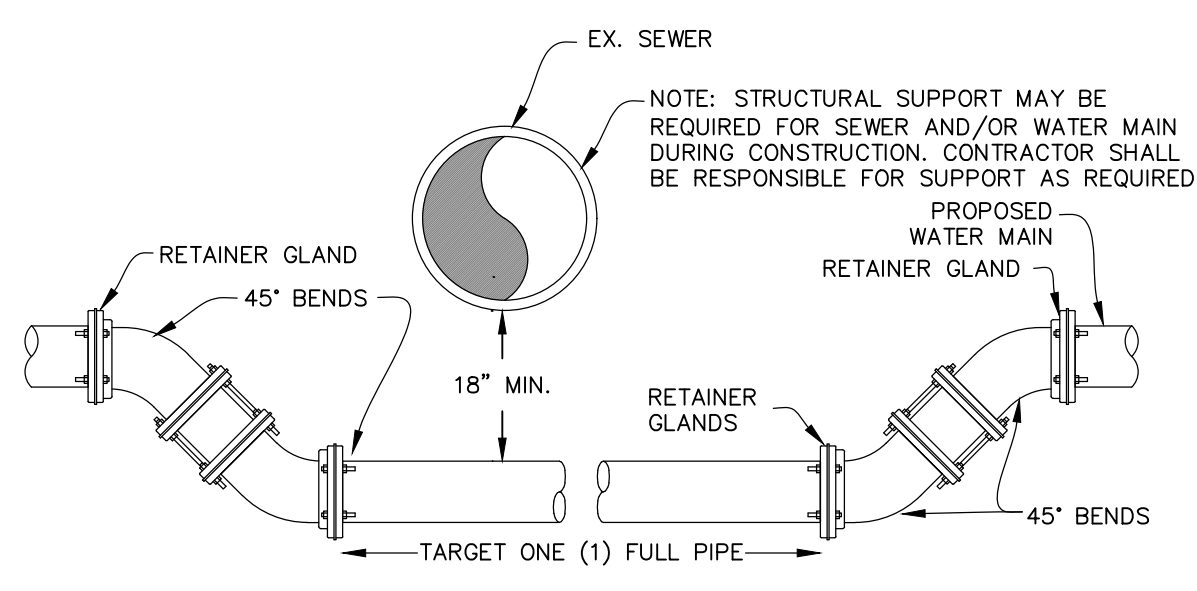
PAVEMENT REPLACEMENT SECTION
NO SCALE



HYDRANT & VALVE ASSEMBLY
NO SCALE

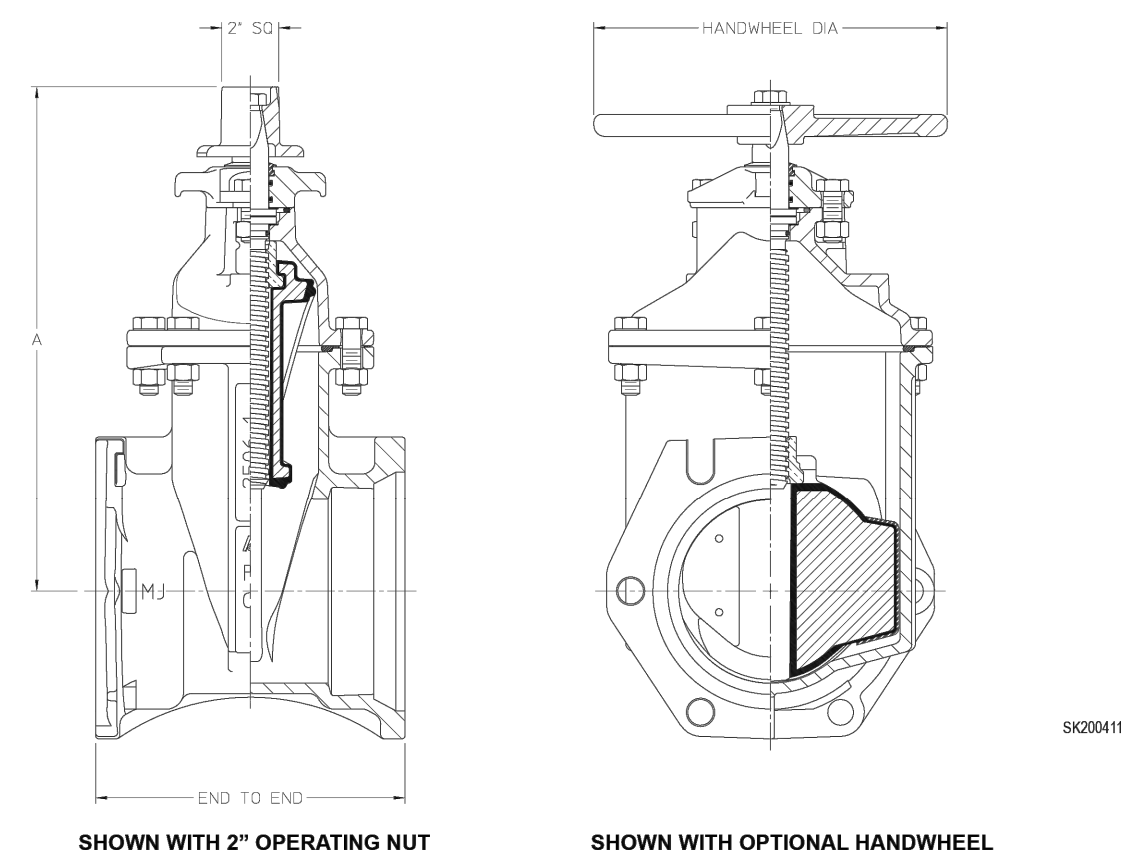


VERTICAL SEPARATION FOR WATER MAINS FROM SEWERS
NO SCALE



LOWERING WATER MAIN DETAIL
NO SCALE

AMERICAN Flow Control Submittal Information
4" - 12" SERIES 2500-1 RESILIENT WEDGE GATE VALVE, NRS



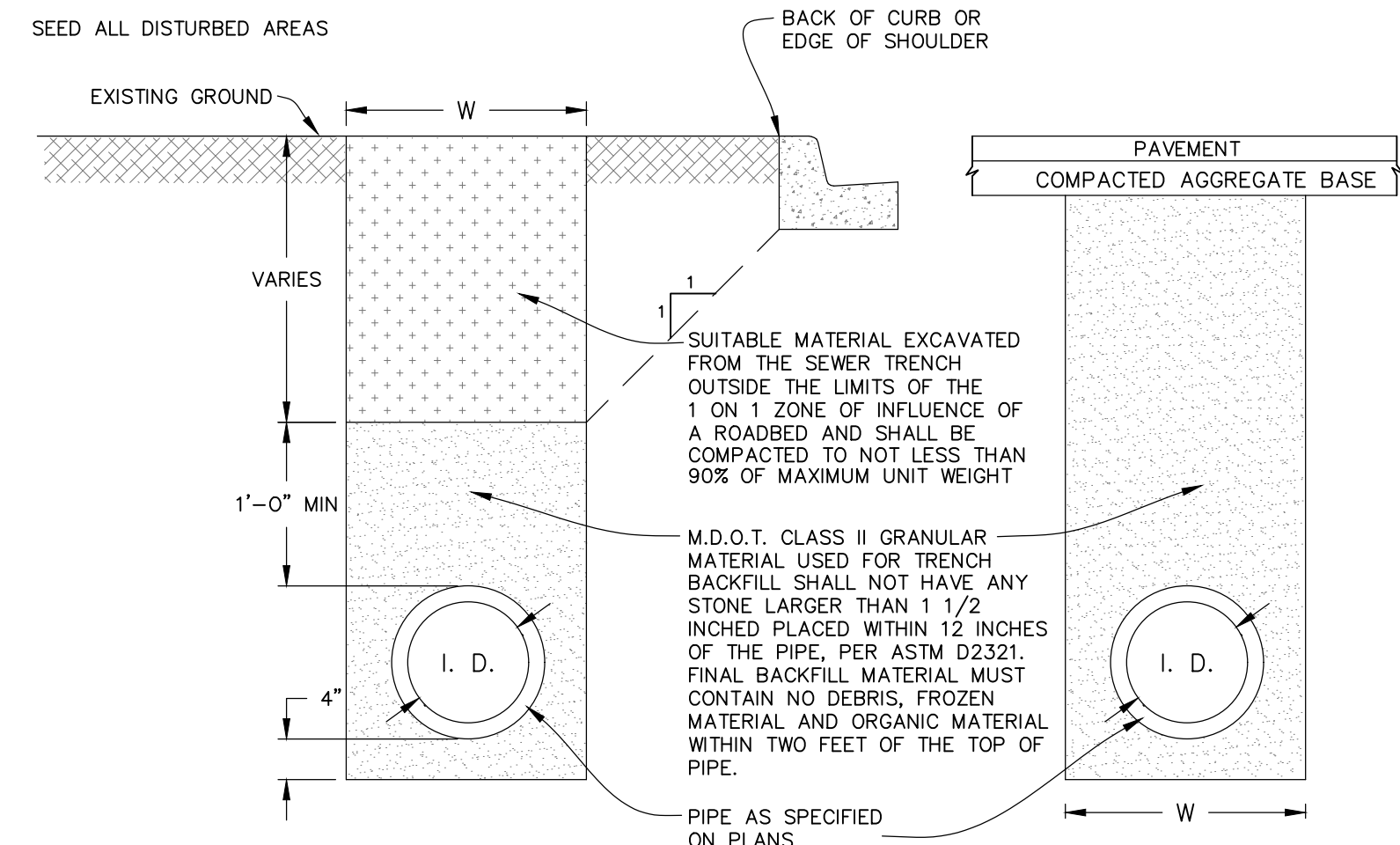
DIMENSION	VALVE SIZE				
	4"	6"	8"	10"	12"
End to End - M/JM	10.00	10.50	11.50	12.50	13.50
End to End - FL/FL	9.00	10.50	11.50	13.00	14.00
End to End - TY/TY	13.00	15.88	17.50	18.75	19.75
End to End - FL/MJ	9.50	10.50	12.38	13.62	14.38
End to End - FL/TY	11.00	13.19	14.50	15.88	16.88
End to End - PVC/PVC	13.00	15.88	17.50	-	-
A	13.91	17.12	20.47	24.06	27.59
B	2.50	2.50	2.50	2.50	2.50
C	4.00	5.22	5.50	-	-
D	4.00	5.22	5.50	5.62	5.62
E	9.00	11.19	13.50	15.88	18.00
F DIA	1.00	1.00	1.00	1.31	1.31
Handwheel Diameter	10.00	12.00	14.00	16.00	16.00
No. of Turns to Open	14	20	26	32	38



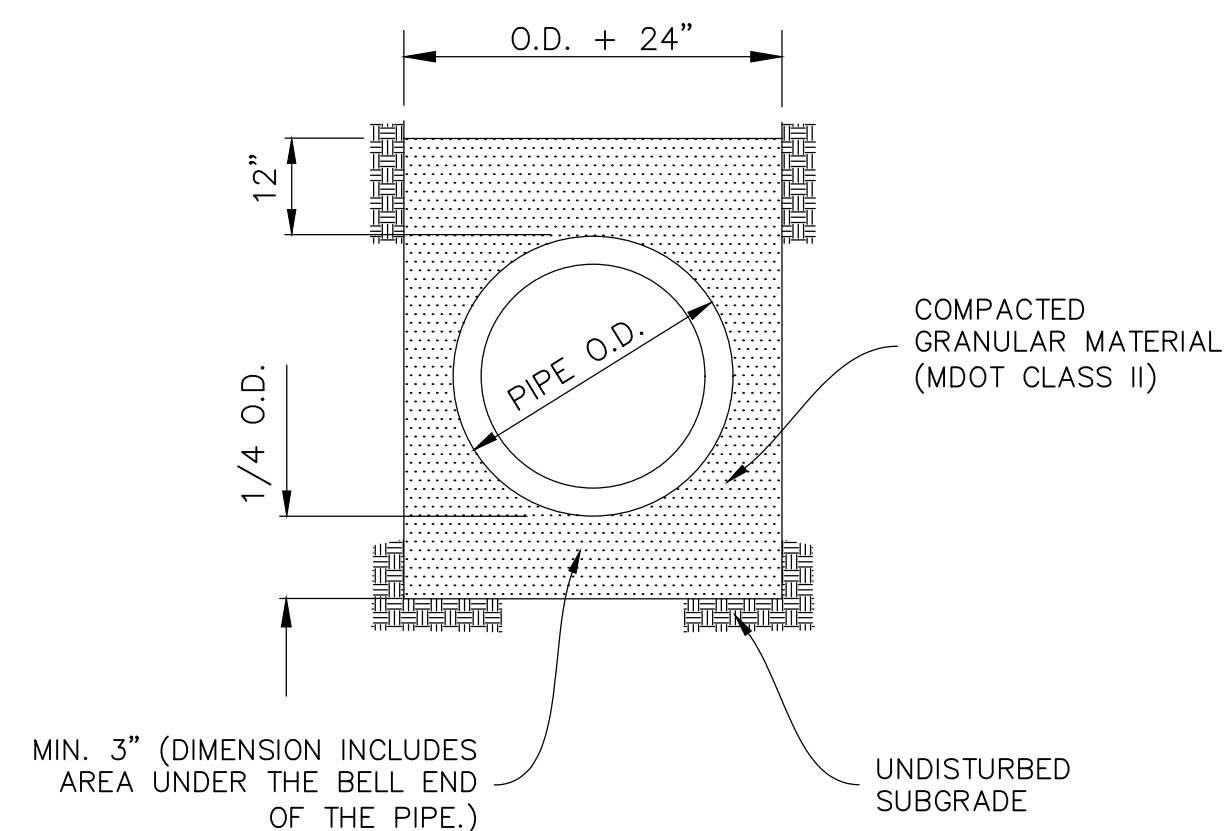
AMERICAN Flow Control
P.O. Box 2727
Birmingham, AL 35202-2727
Phone: 1-800-326-8251
Fax: 1-800-410-3269
E-mail: afcusa@american-usa.com

Waterous Company
125 Hazleman Avenue South
South St. Paul, MN 55075-1191
Phone: 1-888-256-3686
Fax: 1-800-451-2809
E-mail: afcusa@american-usa.com

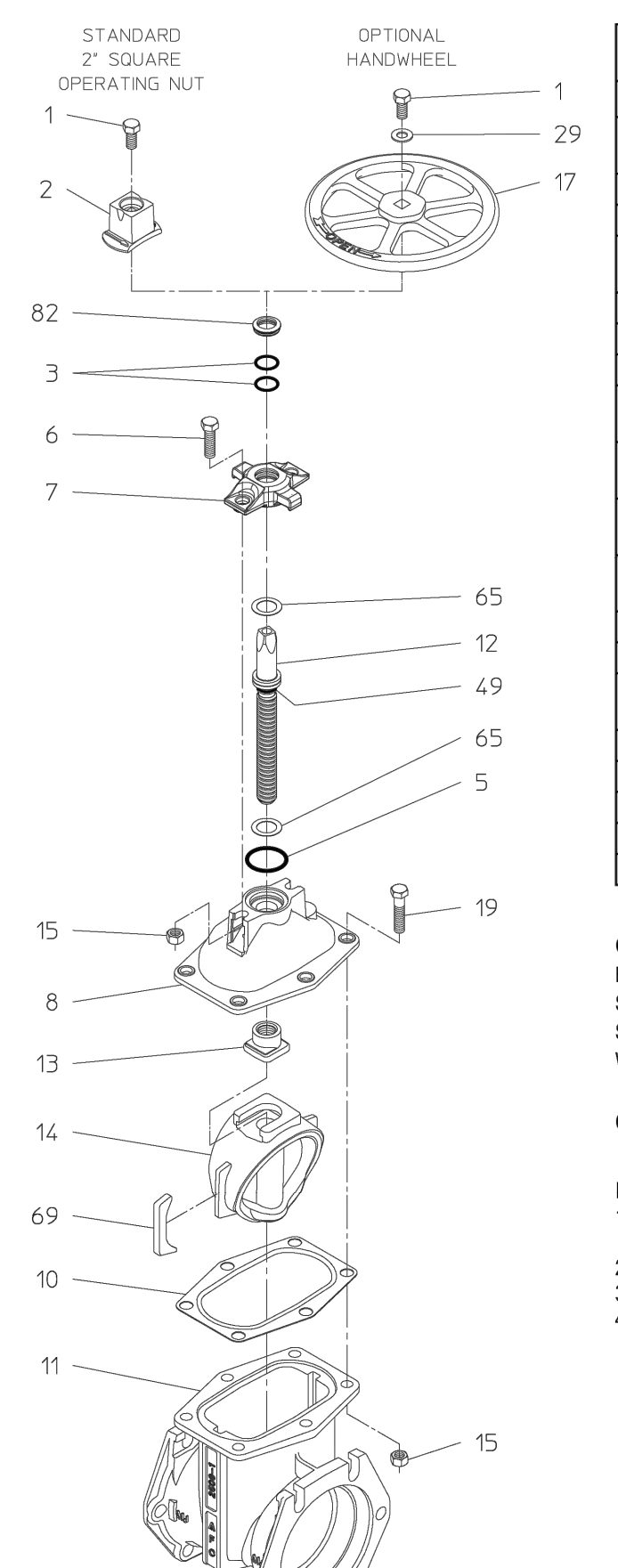
www.AMERICAN-USA.COM



UTILITY TRENCH UNDER OR WITHIN INFLUENCE OF ROADWAY
NO SCALE



PIPE BEDDING DETAIL
NO SCALE



REF NO.	DESCRIPTION	MATERIAL
1	Hex Head Bolt, 5/8-11 x 1"	304 Stainless Steel
2	Operating Nut, 2" Square	Ductile Iron, ASTM A536
3	O-Ring	Rubber
5	Stuffing Box Gasket	Rubber O-ring
6	Hex Head Bolt, 5/8-11 x 1-3/4"	304 Stainless Steel
7	Stuffing Box	Ductile Iron, ASTM A536
8	Bonnet	Ductile Iron, ASTM A536
10	Bonnet Gasket	Rubber
11	Body	Ductile Iron, ASTM A536
12	Stem	Manganese Bronze, ASTM B763, UNS C86700
13	Wedge Nut	Manganese Bronze, ASTM B763, UNS C86700
14	Resilient Wedge	EPDM Rubber Encapsulated Ductile Iron, ASTM A536
15	Hex Nut, 5/8-11	304 Stainless Steel
17	Handwheel	Ductile Iron, ASTM A536
19	Hex Head Bolt, 5/8-11 x 2-1/4"	304 Stainless Steel
29	Flat Washer, 5/8	304 Stainless Steel
49	O-Ring	Rubber
65	Thrust Washer	304 Stainless Steel
69	Wedge Cover	Acetal Polymer
82	Debris Seal	Rubber

OPTIONAL MATERIALS ARE AS FOLLOWS
BOLTS AND NUTS: 316 Stainless Steel
STEM: Cast NDZ-S Bronze, ASTM B763, UNS C99500
STEM: Stainless Steel
WEDGE NUT: Silicon Bronze, ASTM B584, UNS C87600

Open Direction: Left (C.C.W.) Right (C.W.)

- NOTES:**
- Available in configurations that are UL Listed and FM Approved with 250 psig rated working pressure.
 - Meets requirements of ANSI/AWWA C515 with 250 psig rated working pressure.
 - Fusion-bonded epoxy-coated in accordance with ANSI/AWWA C550.
 - Certified to NSF/ANSI 61 & 372.



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P.O. Box 2727
Birmingham, AL 35202-2727
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www.AMERICAN-USA.COM

REVISION	DATE	DESCRIPTION
1	4/19/2024	EDGE REVIEW COMMENTS

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Engineers & Surveyors, Inc.
312 North Street
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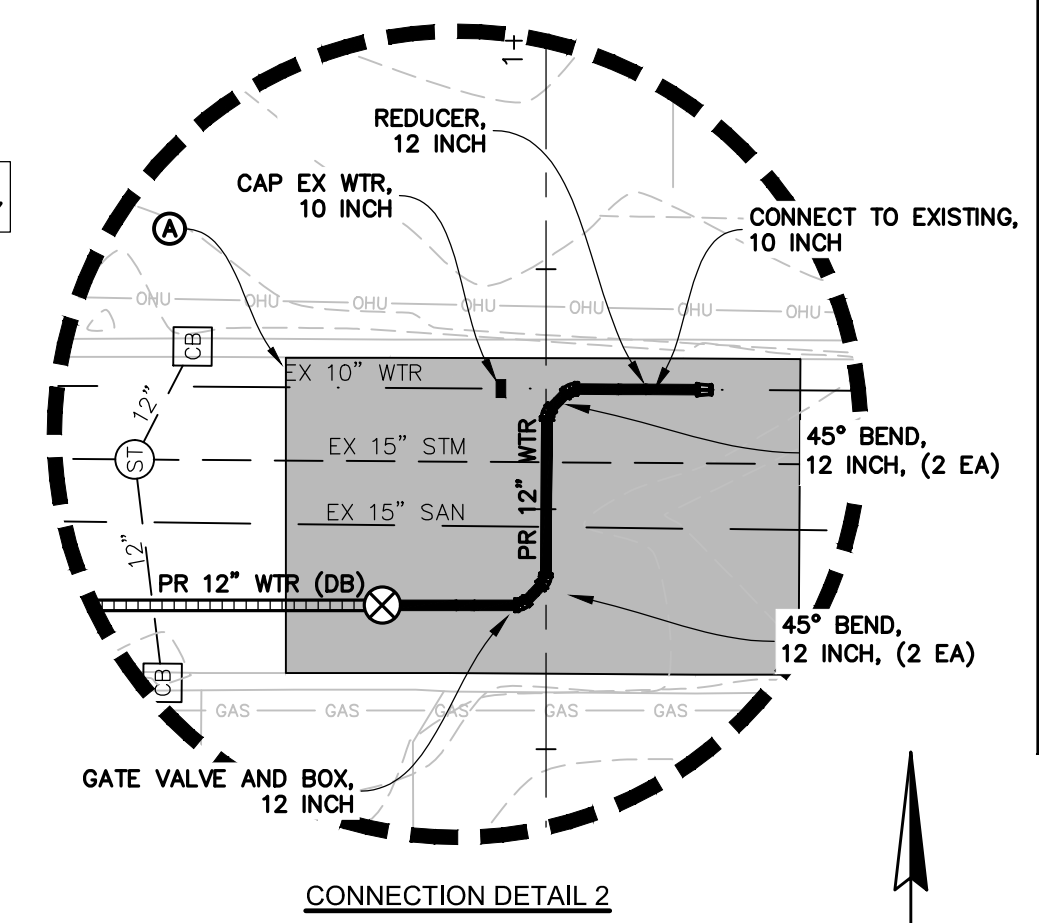
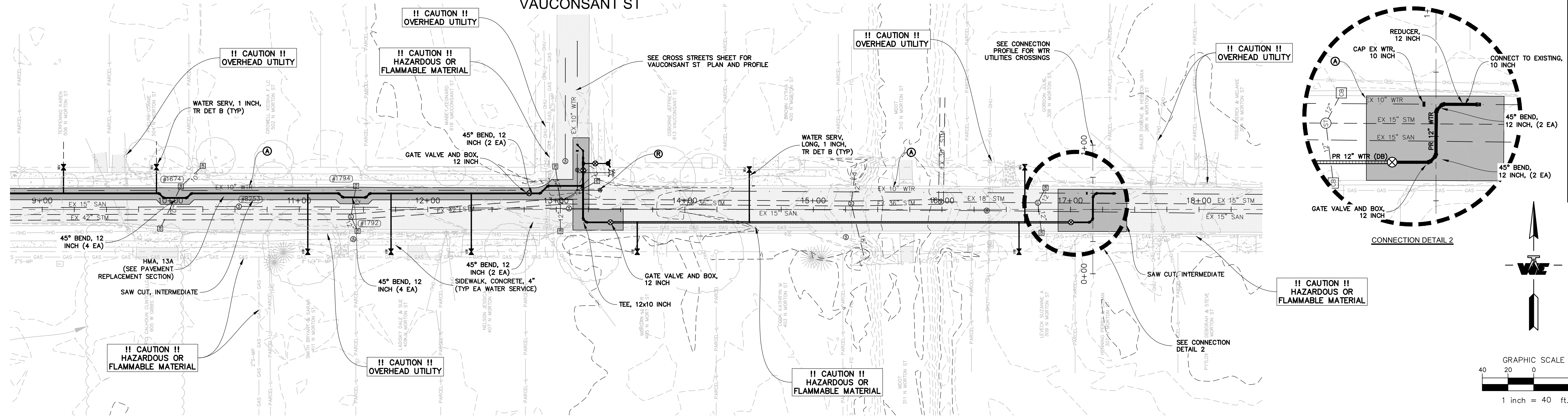
MORTON STREET WATER MAIN REPLACEMENT
CITY OF ST. JOHNS
CLINTON COUNTY, MICHIGAN

PROJECT: MORTON STREET WATER MAIN REPLACEMENT
APPROVED: DBH
CHECKED: DBH
DRAWN: TAP
JOB NO.: 23-0083
DATE: 5/1/2024
SCALE: AS NOTED
SHEET NO.: 4

MORTON STREET

66' ROW, 27'-33' EOP/EOP

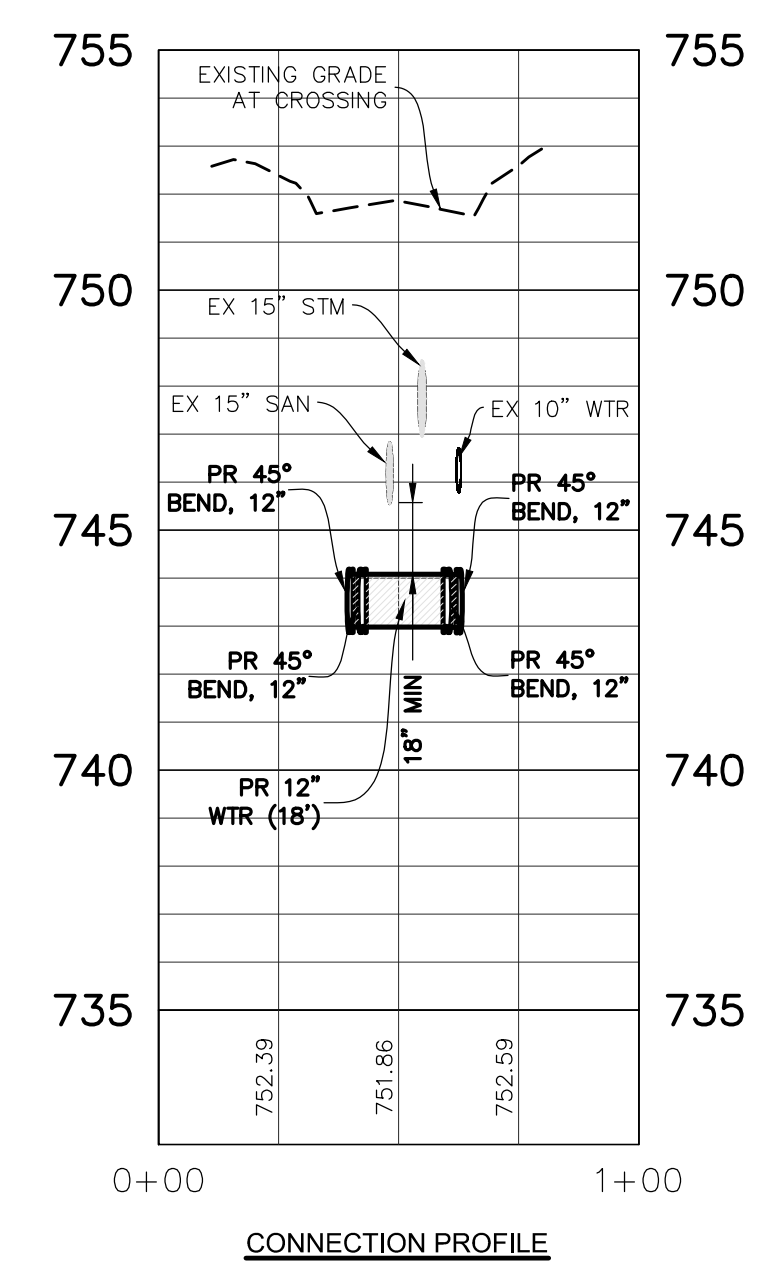
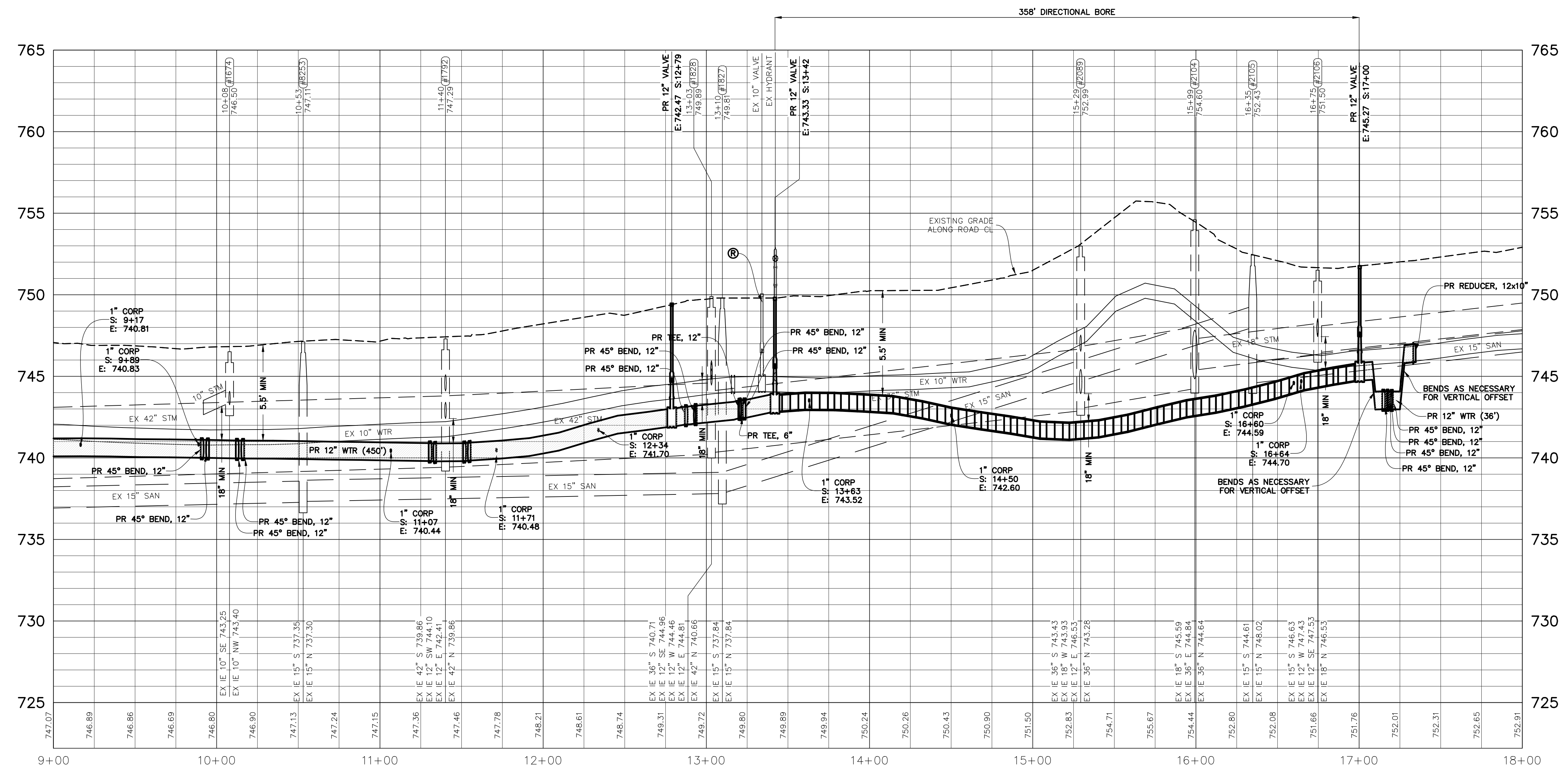
VAUCONSANT ST



REVISION	DATE	DESCRIPTION
1	4/19/2024	EDGE REVIEW COMMENTS

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STATION	STRUCTURE	DISTANCE
9+94 - 10+14	EX 15" SAN	7.04' MIN
10+08	EX STM CB	6.25'
11+33 - 11+53	EX 15" SAN	7.04' MIN
11+44	EX STM CB	6.38'
13+25 - 17+25	EX 15" SAN	7.60' MIN
16+35	EX STM CB	6.30'
7+96	EX STM CB	5.50'



MORTON STREET WATER MAIN REPLACEMENT
CITY OF ST. JOHNS
CLINTON COUNTY, MICHIGAN
MORTON ST PLAN AND PROFILE

APPROVED	DBH
CHECKED	DBH
DRAWN	TAP
JOB NO.	23-0083
DATE	5/1/2024
SCALE	1" = 40'
SHEET NO.	6

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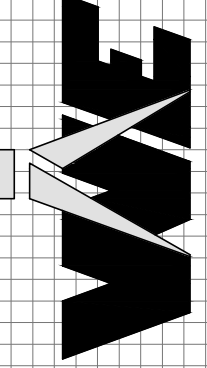
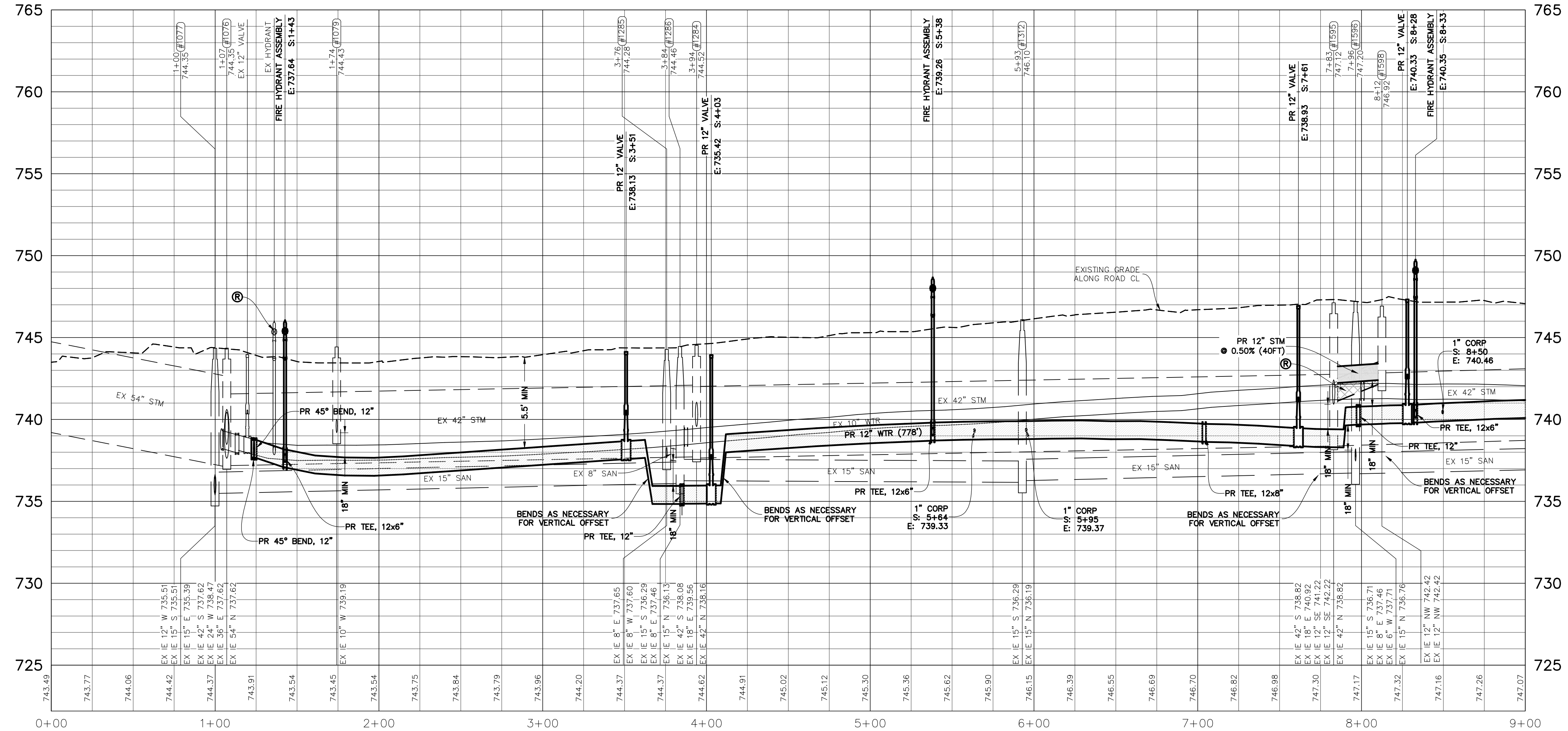
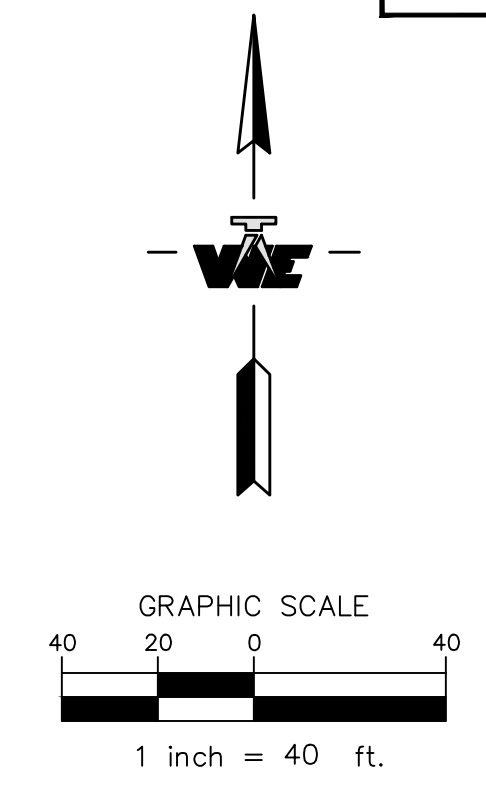
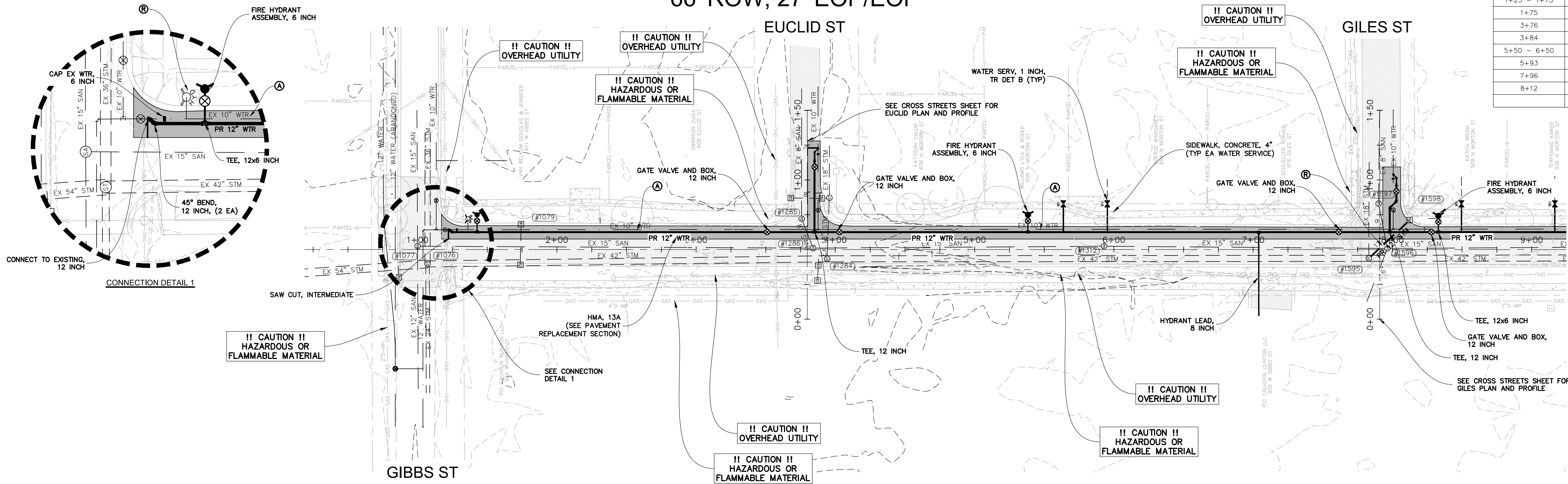
MORTON STREET

66' ROW, 27' EOP/EOP

ISOLATION CONFLICTS		
STATION	STRUCTURE	DISTANCE
1+25 - 1+75	EX 15" SAN	7.93' MIN
1+75	EX STM CB	3.10'
3+76	EX SAN MH	7.10'
3+84	EX SAN MH	8.85'
5+50 - 6+50	EX 15" SAN	9.5' MIN
5+93	EX SAN MH	7.56'
7+96	EX SAN MH	9.15'
8+12	EX STM CB	6.13'

REVISION	DATE	DESCRIPTION
1	4/19/2024	EDGE REVIEW COMMENTS

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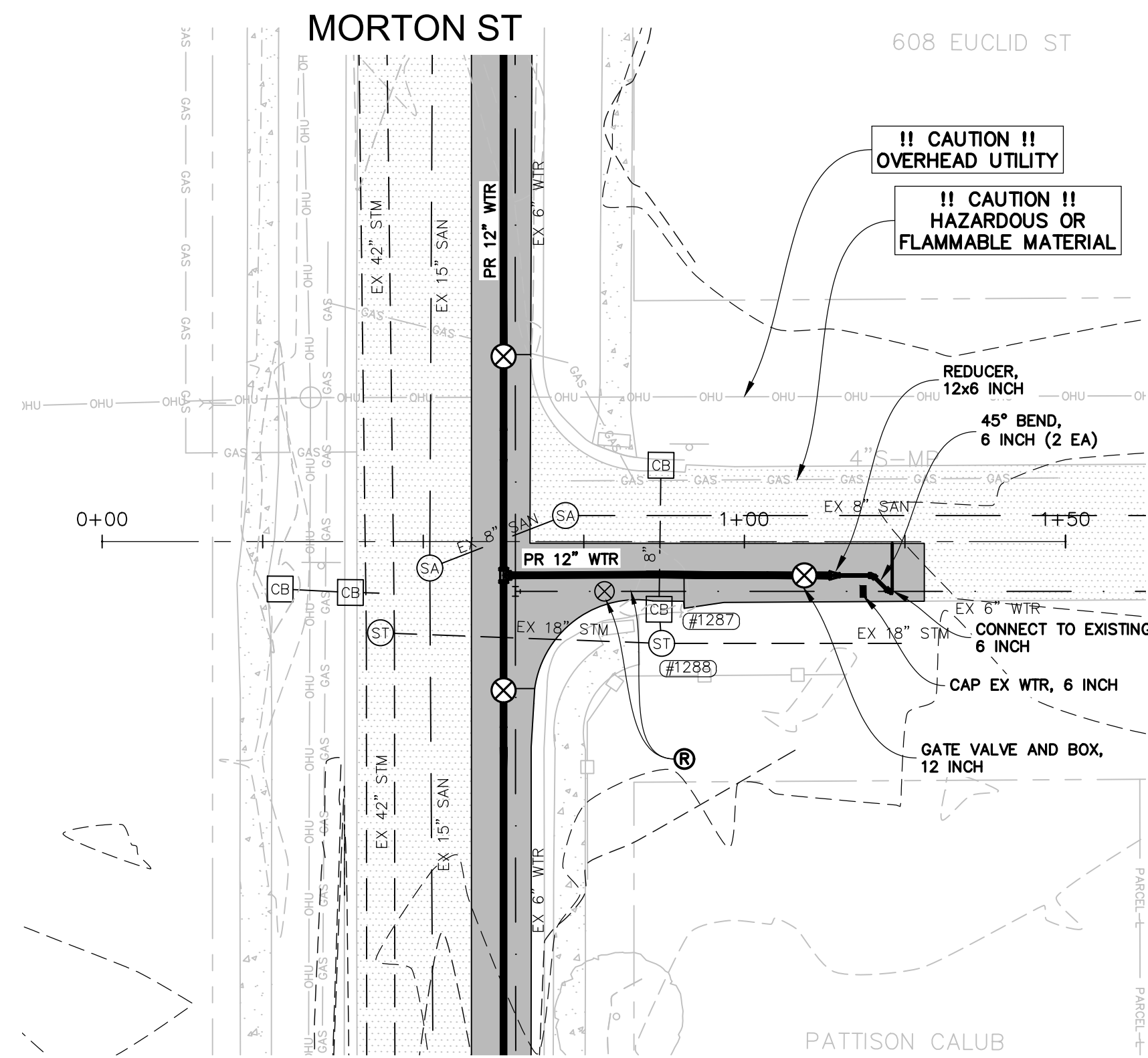
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MORTON STREET WATER MAIN REPLACEMENT
CITY OF ST. JOHNS
CLINTON COUNTY, MICHIGAN
MORTON ST PLAN AND PROFILE

APPROVED	DBH
CHECKED	DBH
DRAWN	TAP
JOB NO.	23-0083
DATE	5/1/2024
SCALE	1" = 40'
SHEET NO.	5

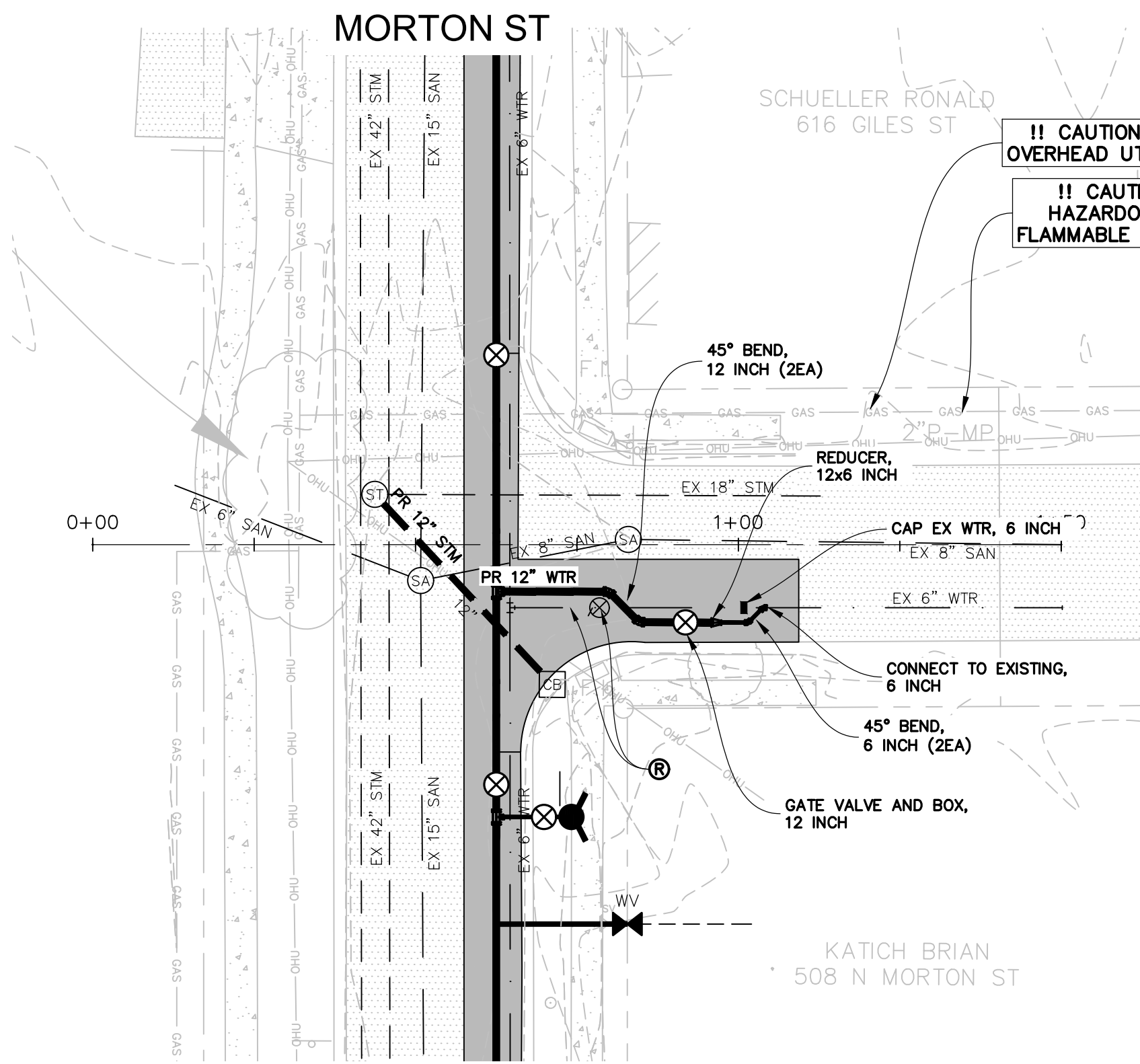
EUCLID STREET

66' ROW, 21' EOP/EOP



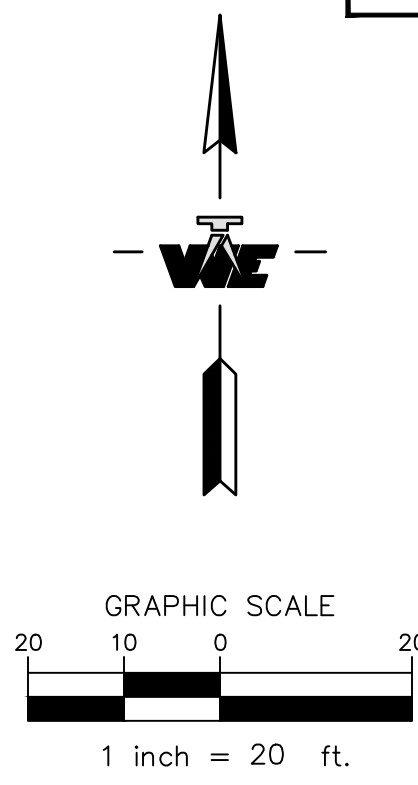
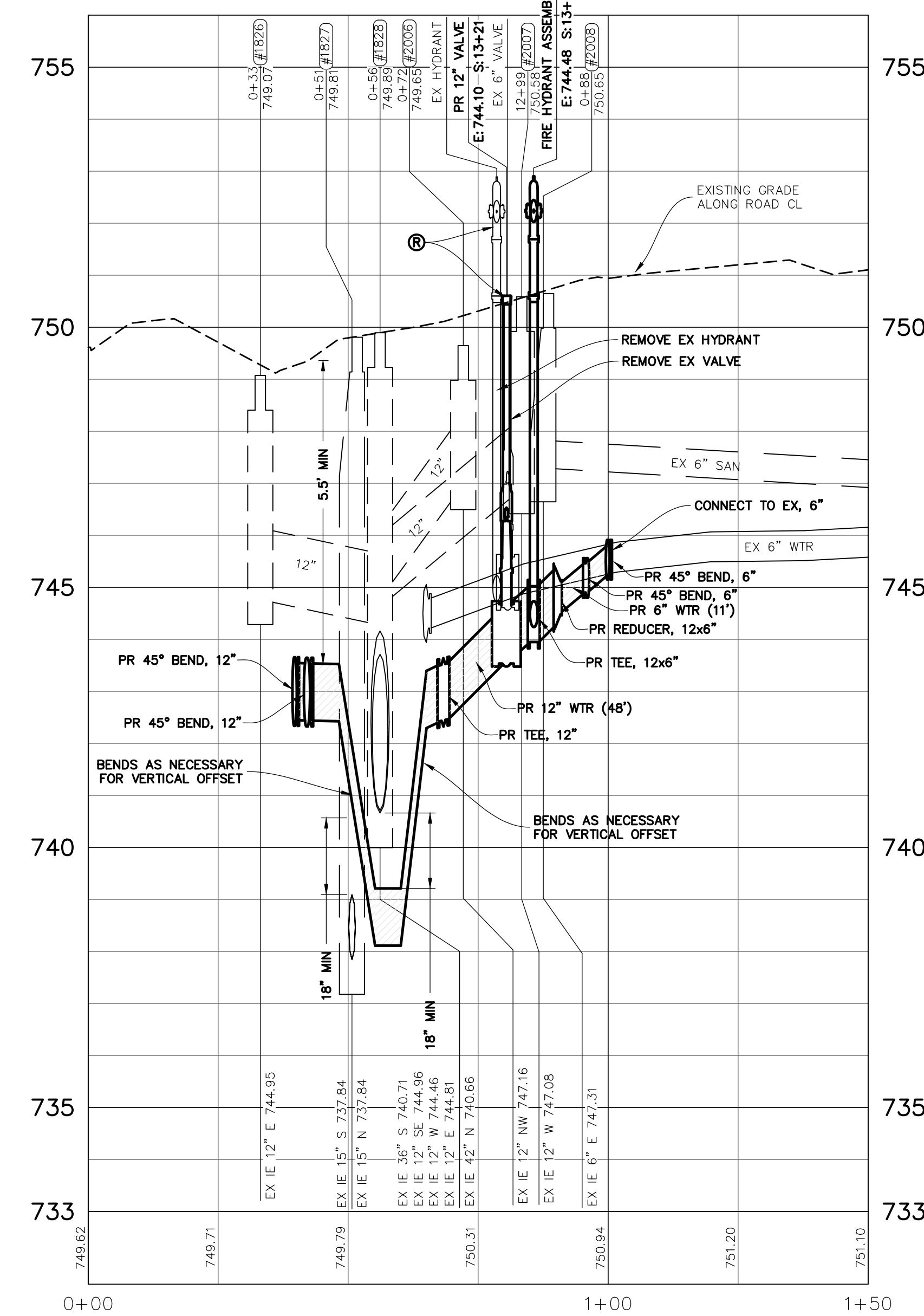
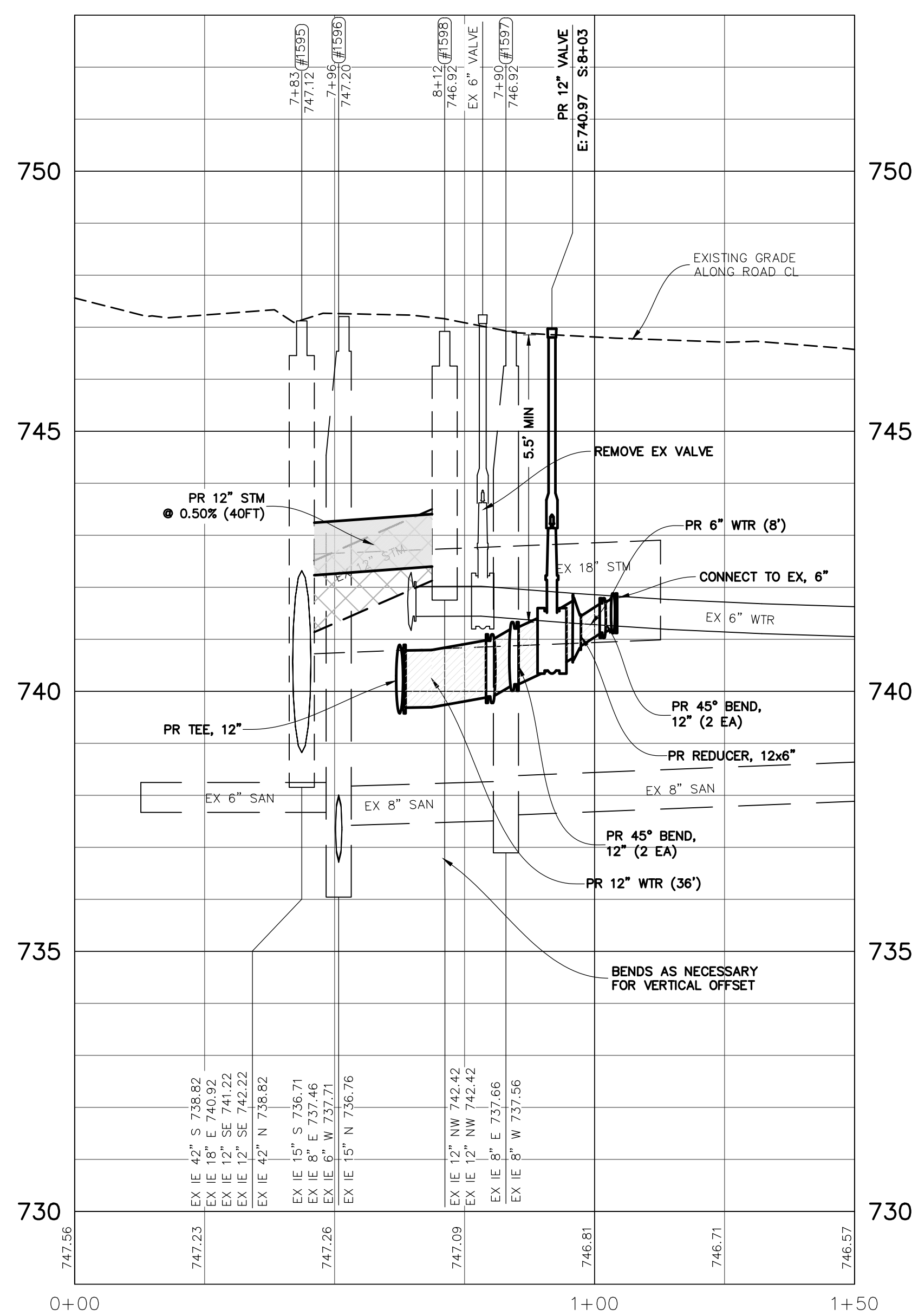
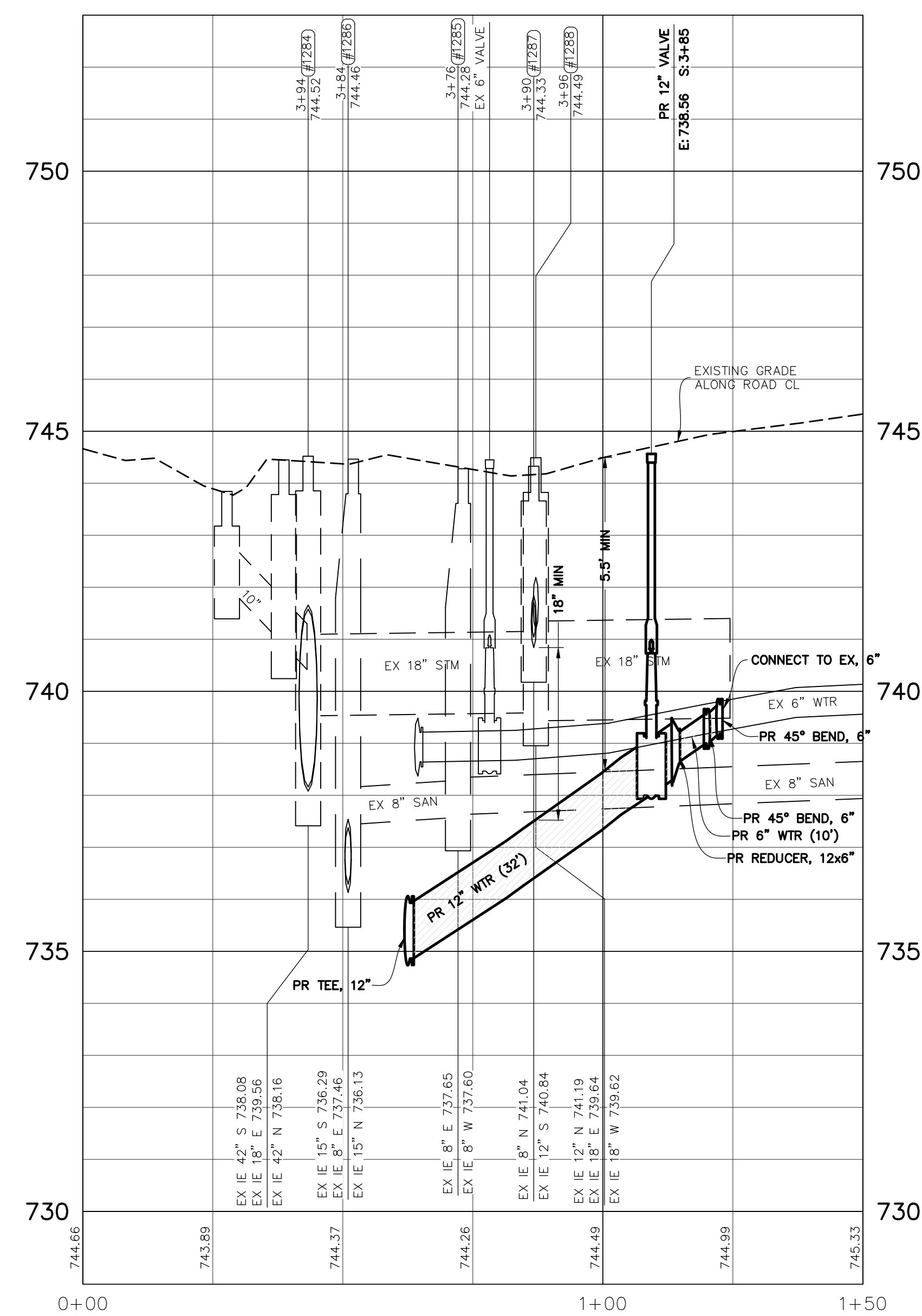
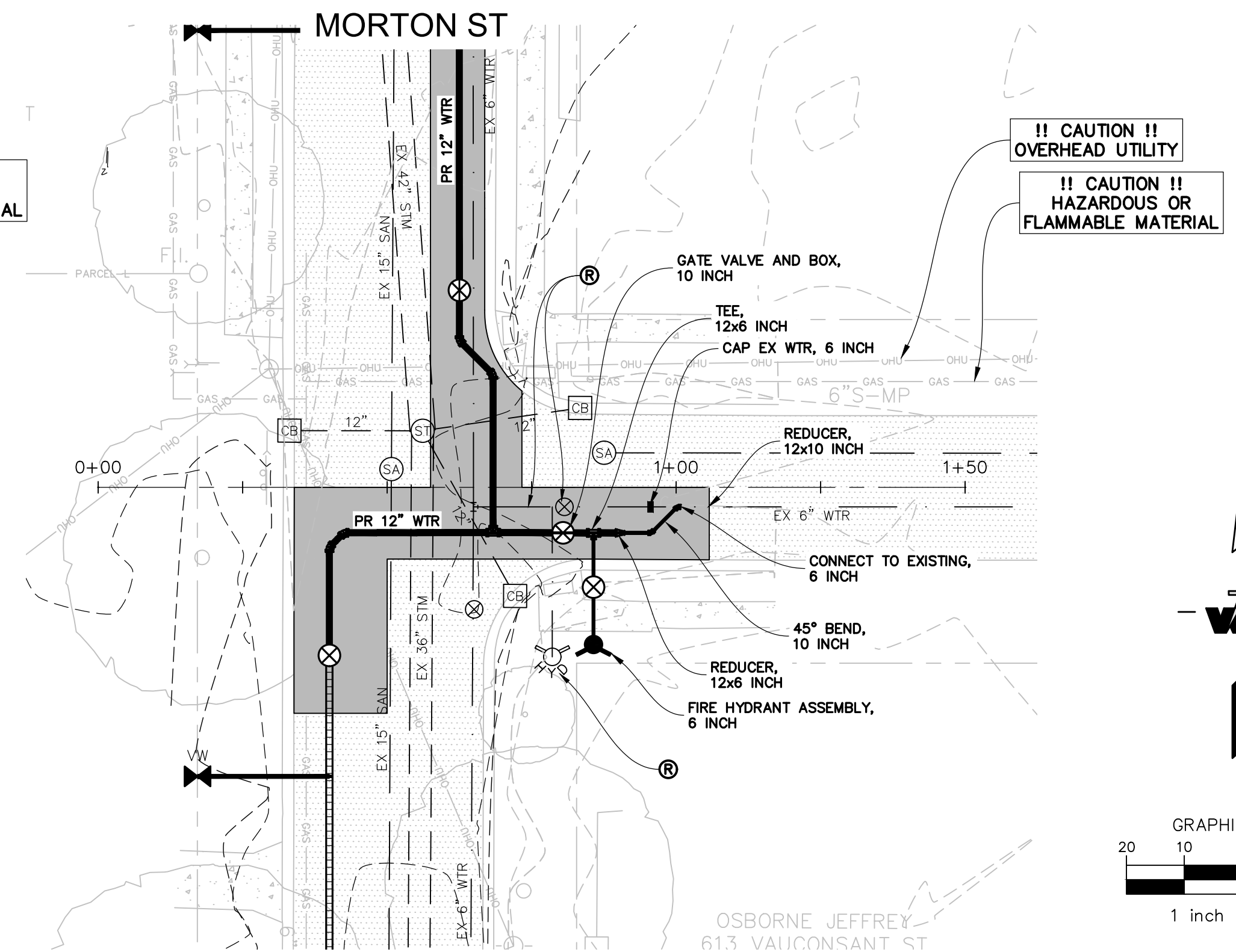
GILES STREET

66' ROW, 26' EOP/EOP



VAUCONSANT STREET

66' ROW, 26' EOP/EOP



REVISION	DATE	DRAWN	DESCRIPTION
1	4/19/2024	TAP	EDGE REVIEW COMMENTS

WOLVERINE
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312 North Street
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Ph: 317.676.9200
Fax: 317.676.9396
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PROJECT: MORTON STREET WATER MAIN REPLACEMENT
CITY OF ST. JOHNS
CLINTON COUNTY, MICHIGAN
SHEET TITLE: CROSS STREETS PLAN AND PROFILE

APPROVED: DBH
CHECKED: DBH
DRAWN: TAP
JOB NO.: 23-0083
DATE: 5/1/2024
SCALE: 1" = 20'
SHEET NO.: 7

S:\Projects\2023\23-0083 City Of St. Johns Morton St Watermain_CSD\DWG\7 CROSS STREETS PLAN AND PROFILE.dwg, Wednesday, May 1, 2024 4:04:19 PM, Trent Powers