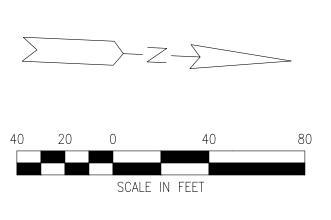
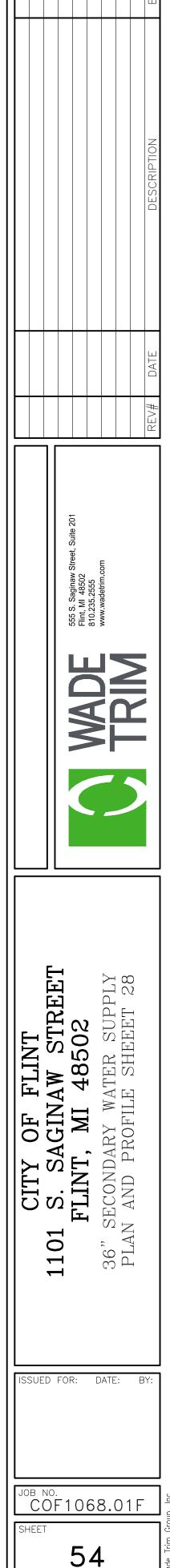


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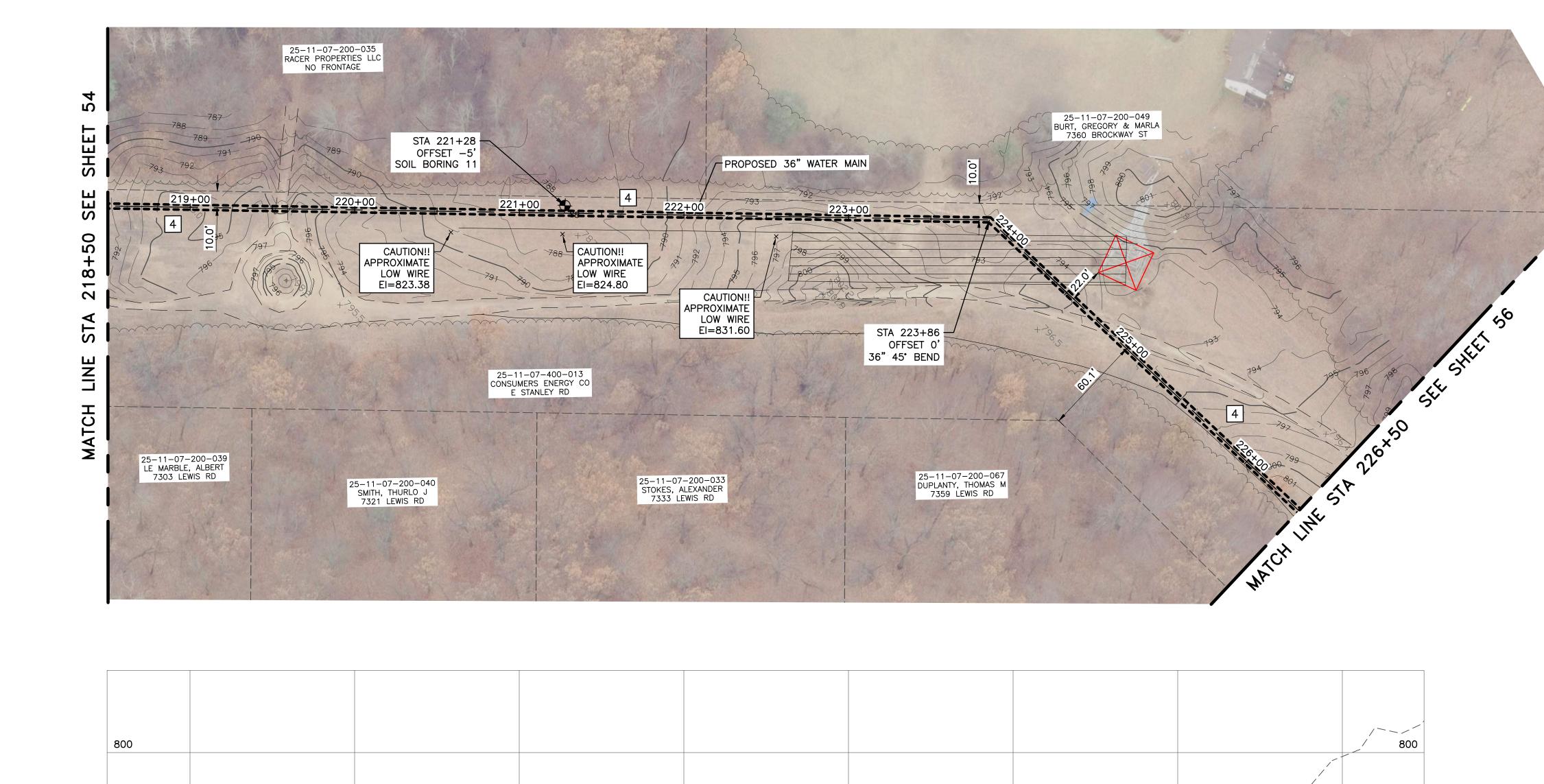
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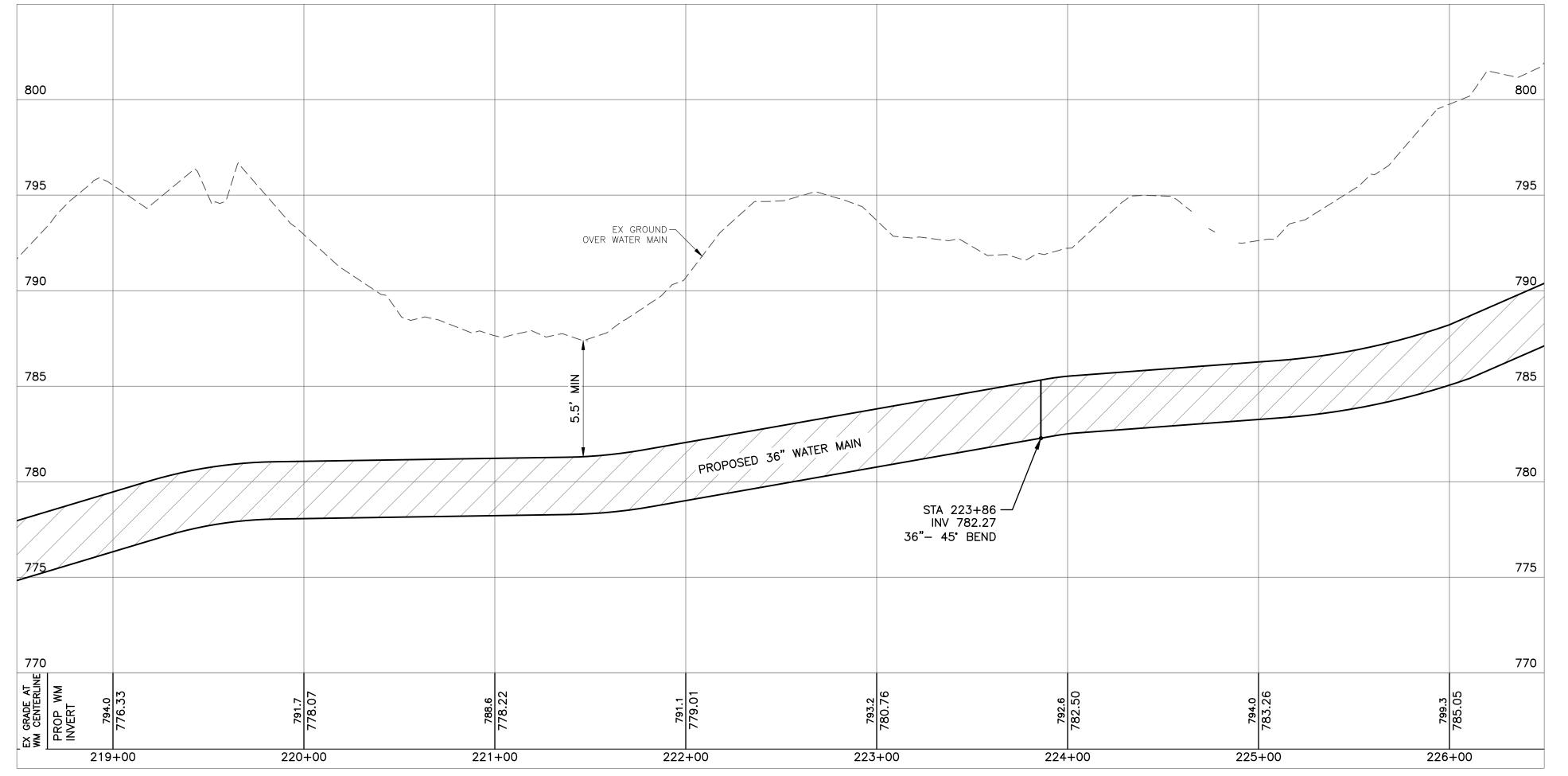
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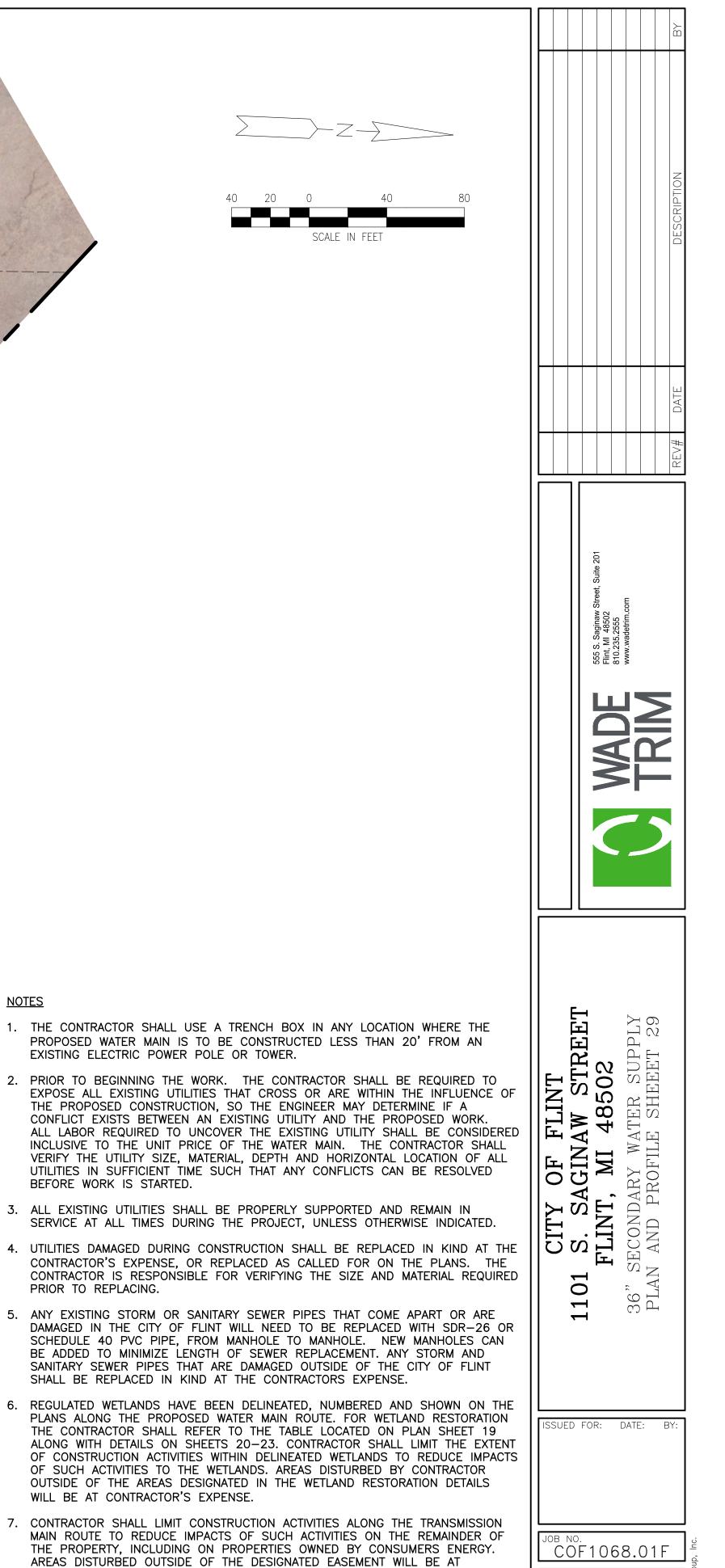
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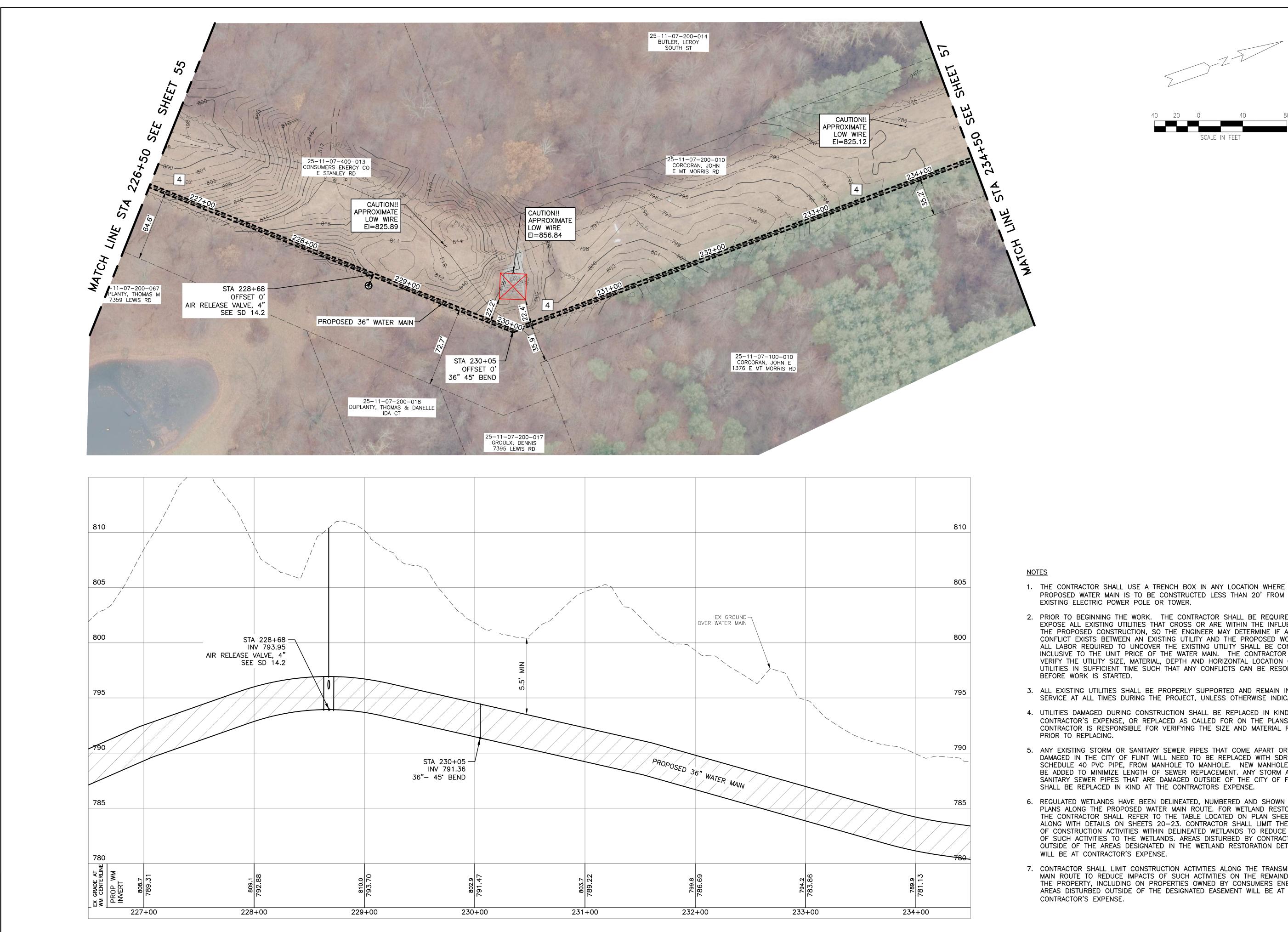


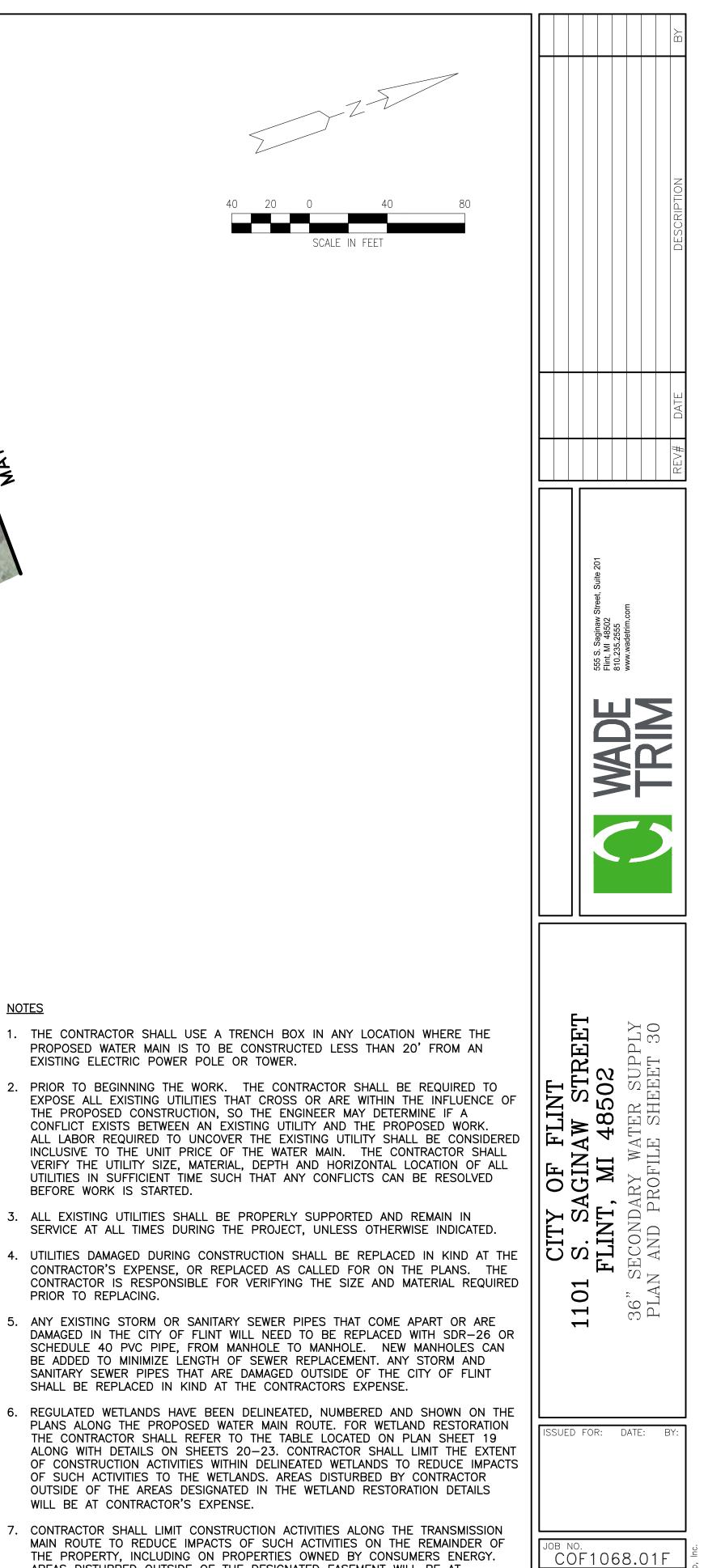


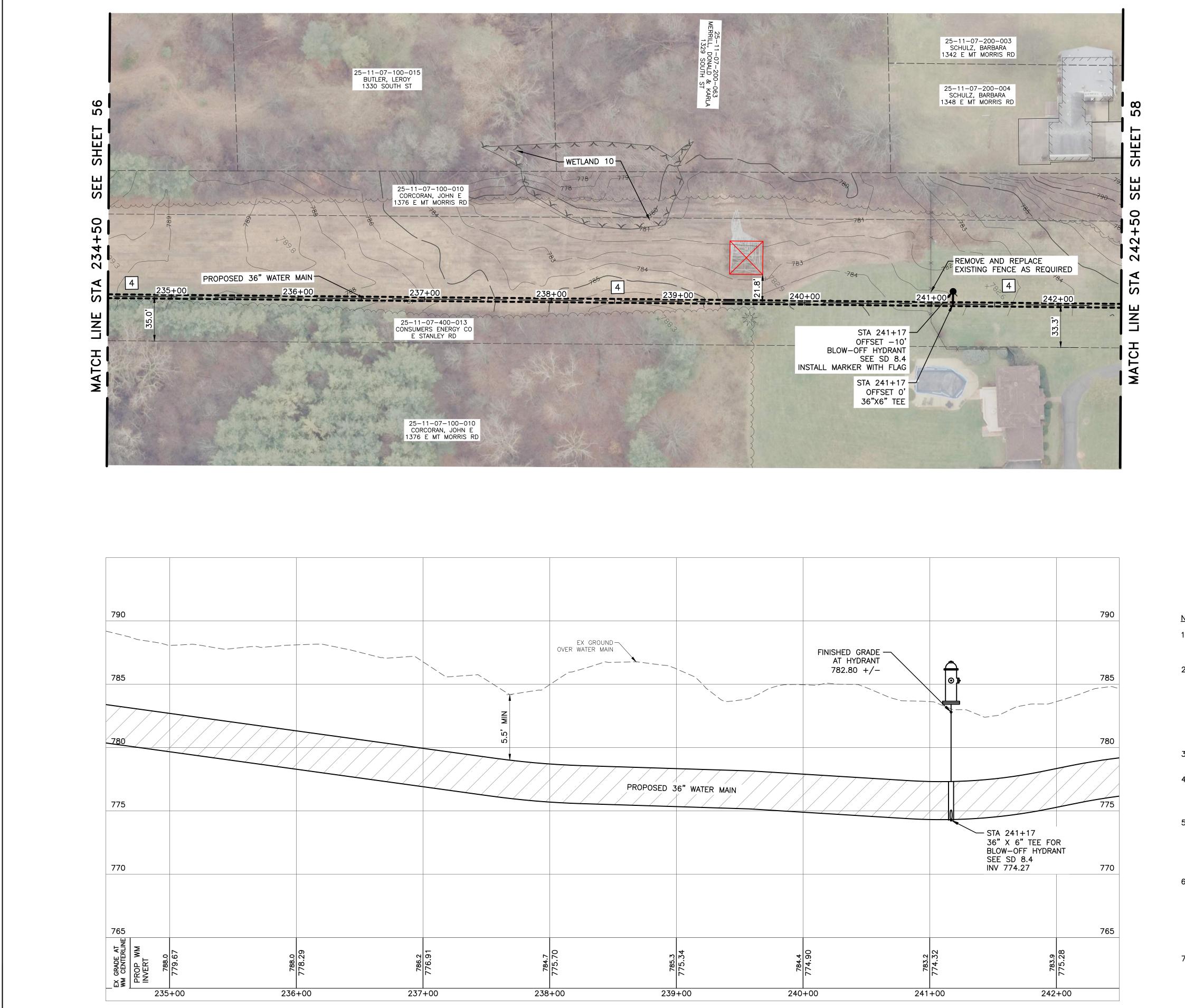
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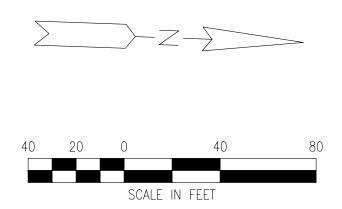
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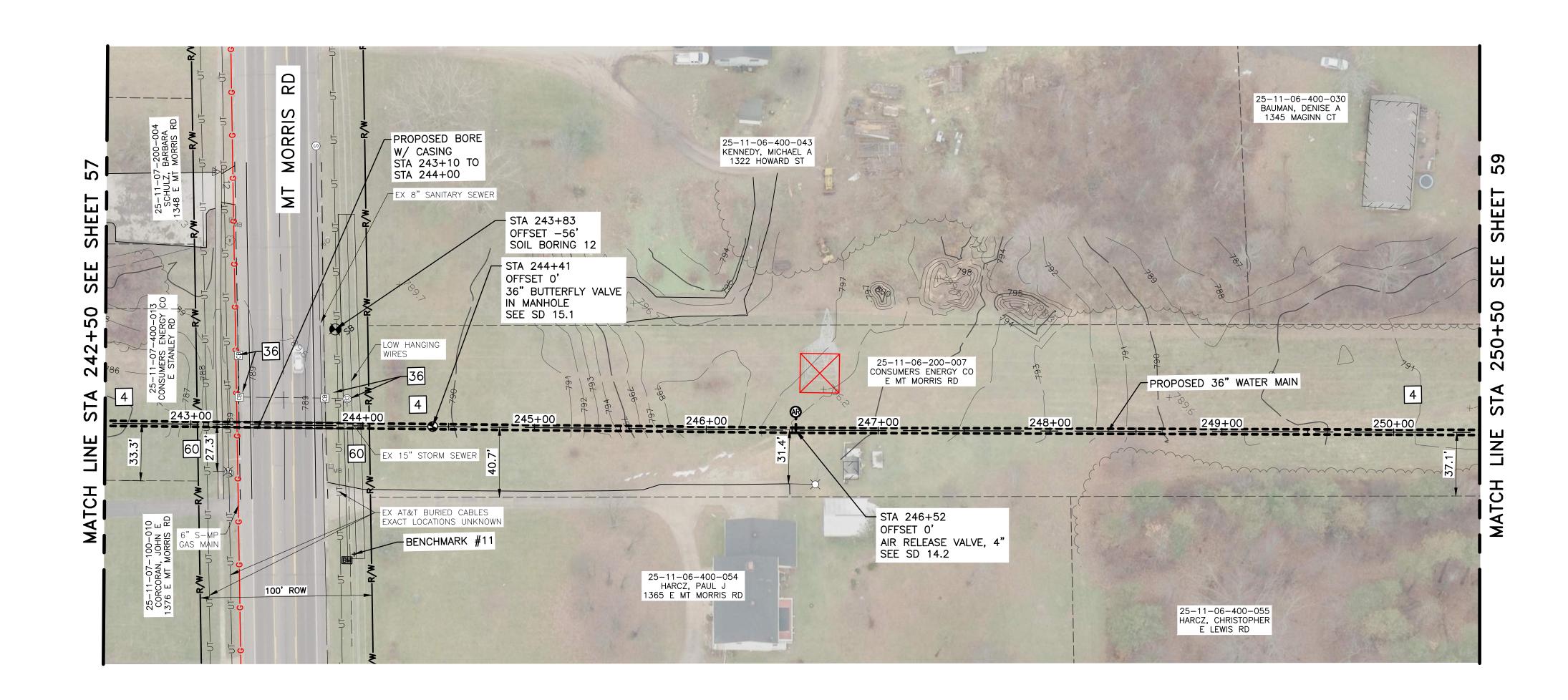
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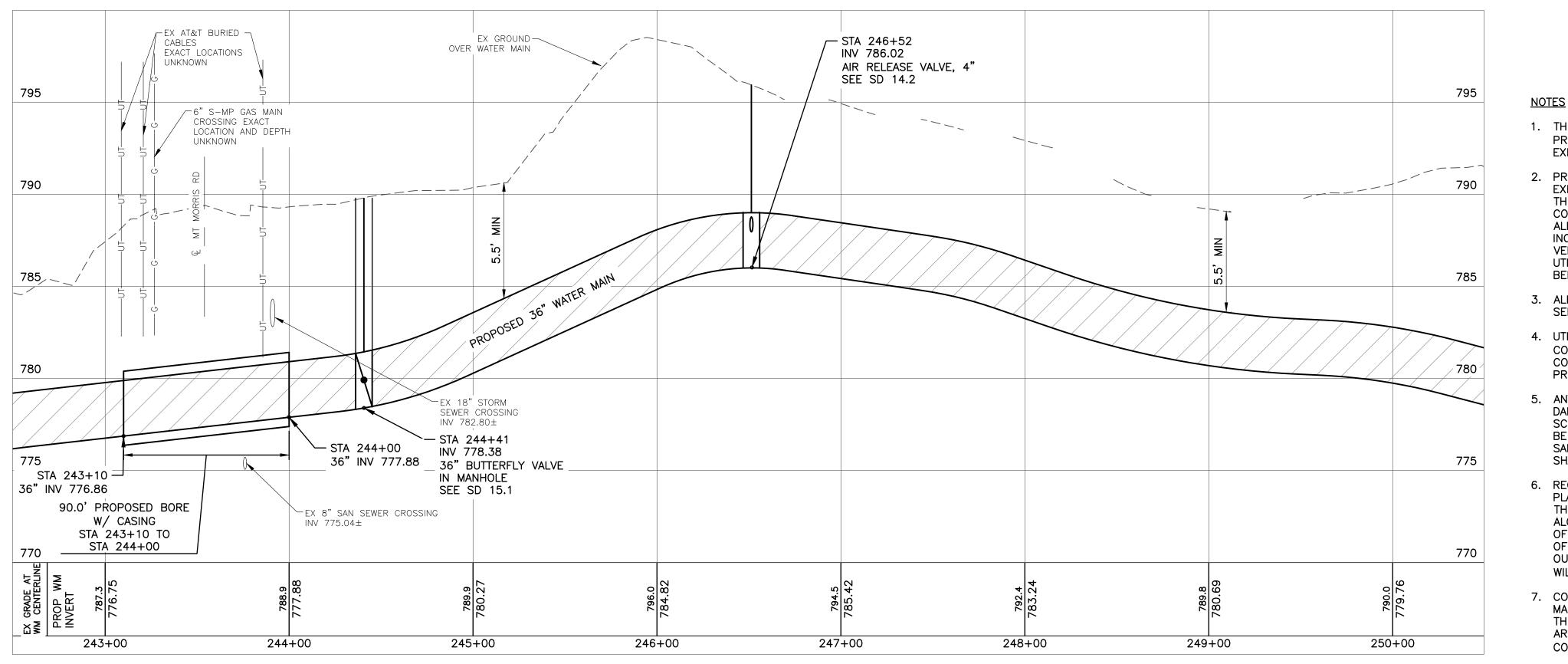
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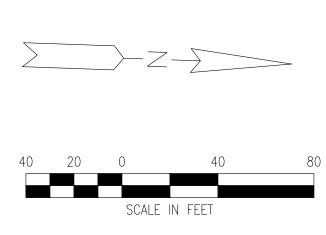
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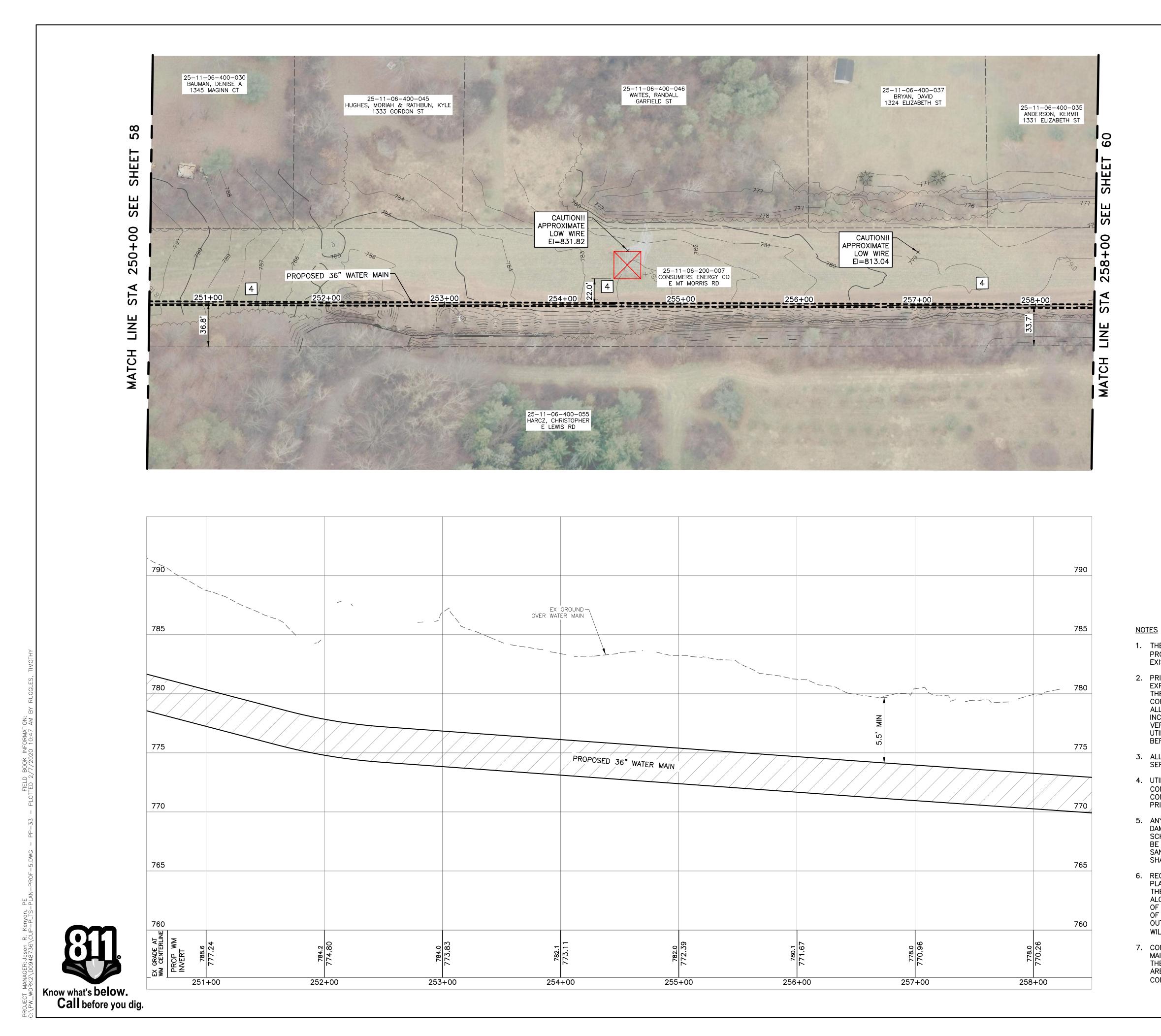
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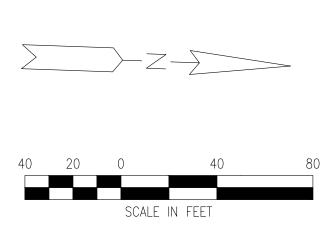
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			BY
			DESCRIPTION
			REV# DATE
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FLINT, MI 48502	36" SECONDARY WATER SUPPLY	PLAN AND PROFILE SHEEET 32	
بك	36" SECONDARY WATER SUPPLY		BY:





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CITY OF FLINT	1101 S. SAGINAW STREET	FLINT. MI 48502		36" SECONDARY WATER SUPPLY	DI AN AND DROFILE SHEFFT 33	
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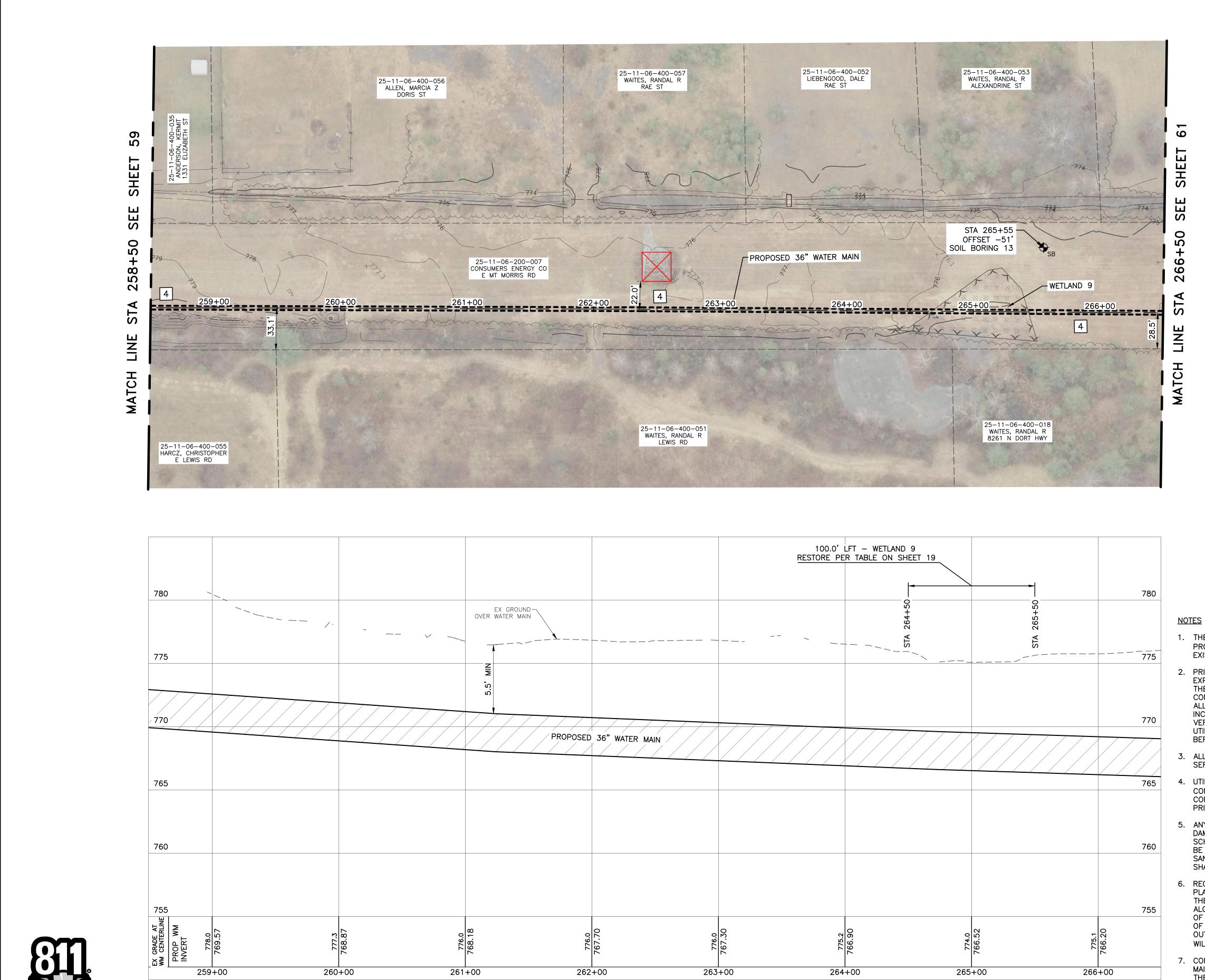
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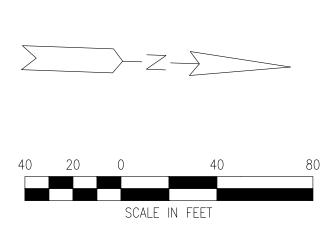
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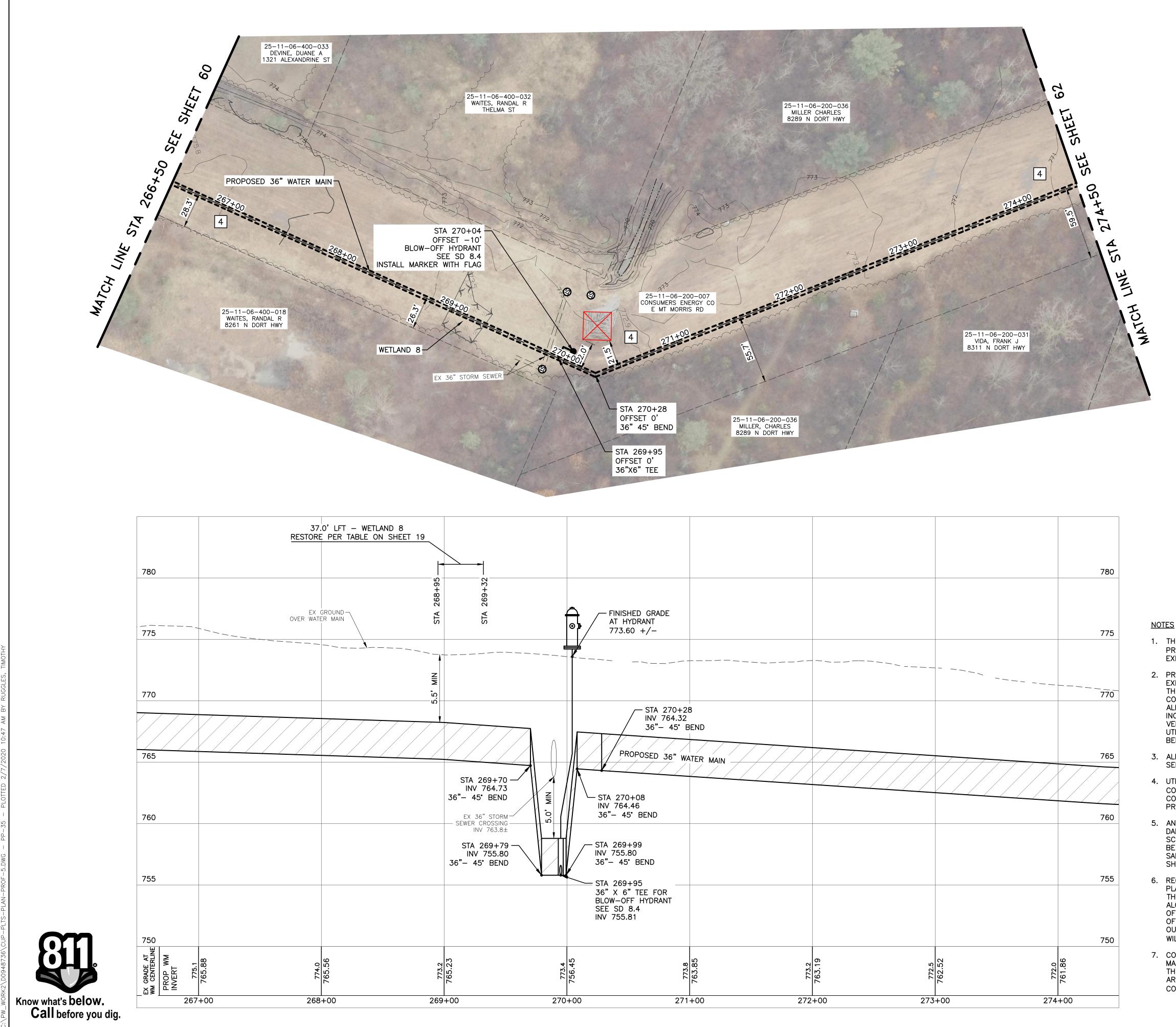
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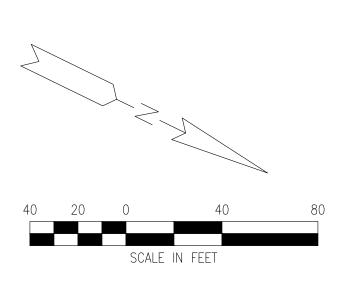
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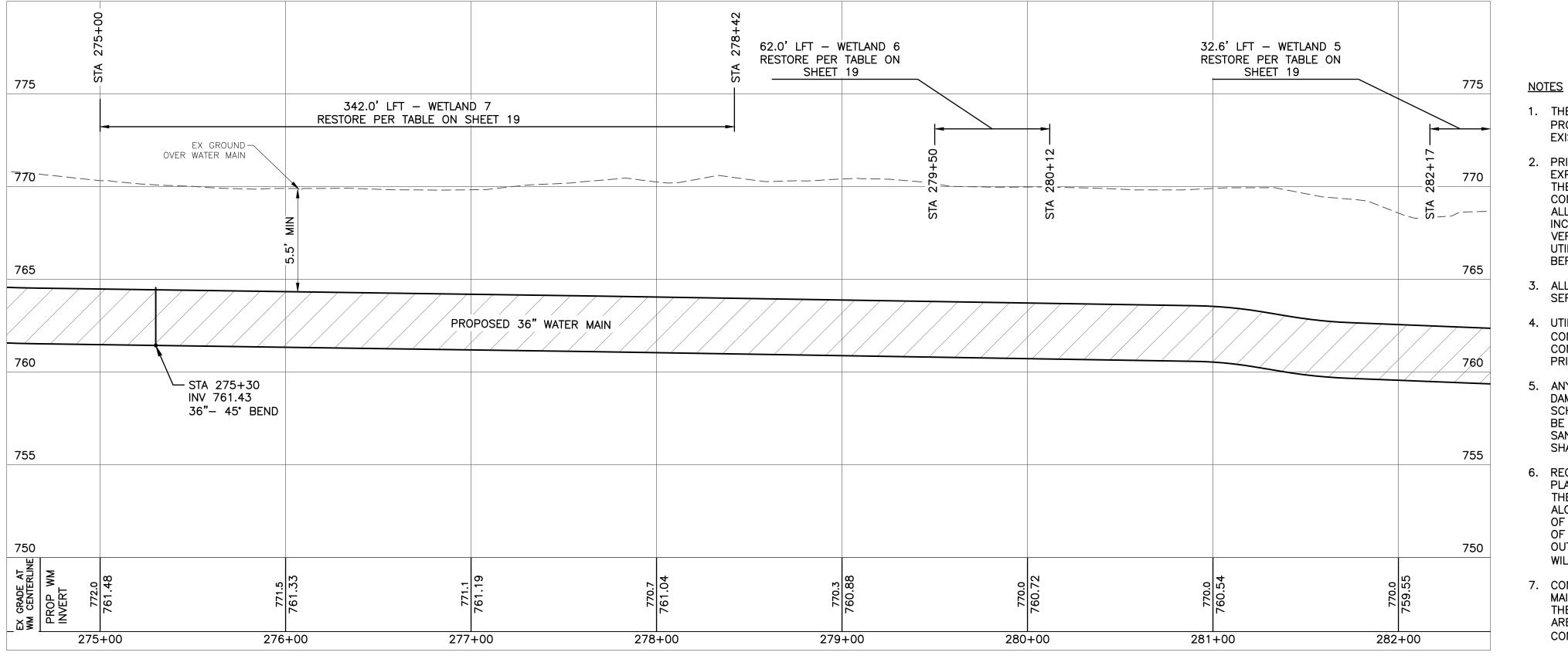
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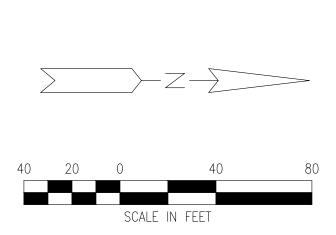
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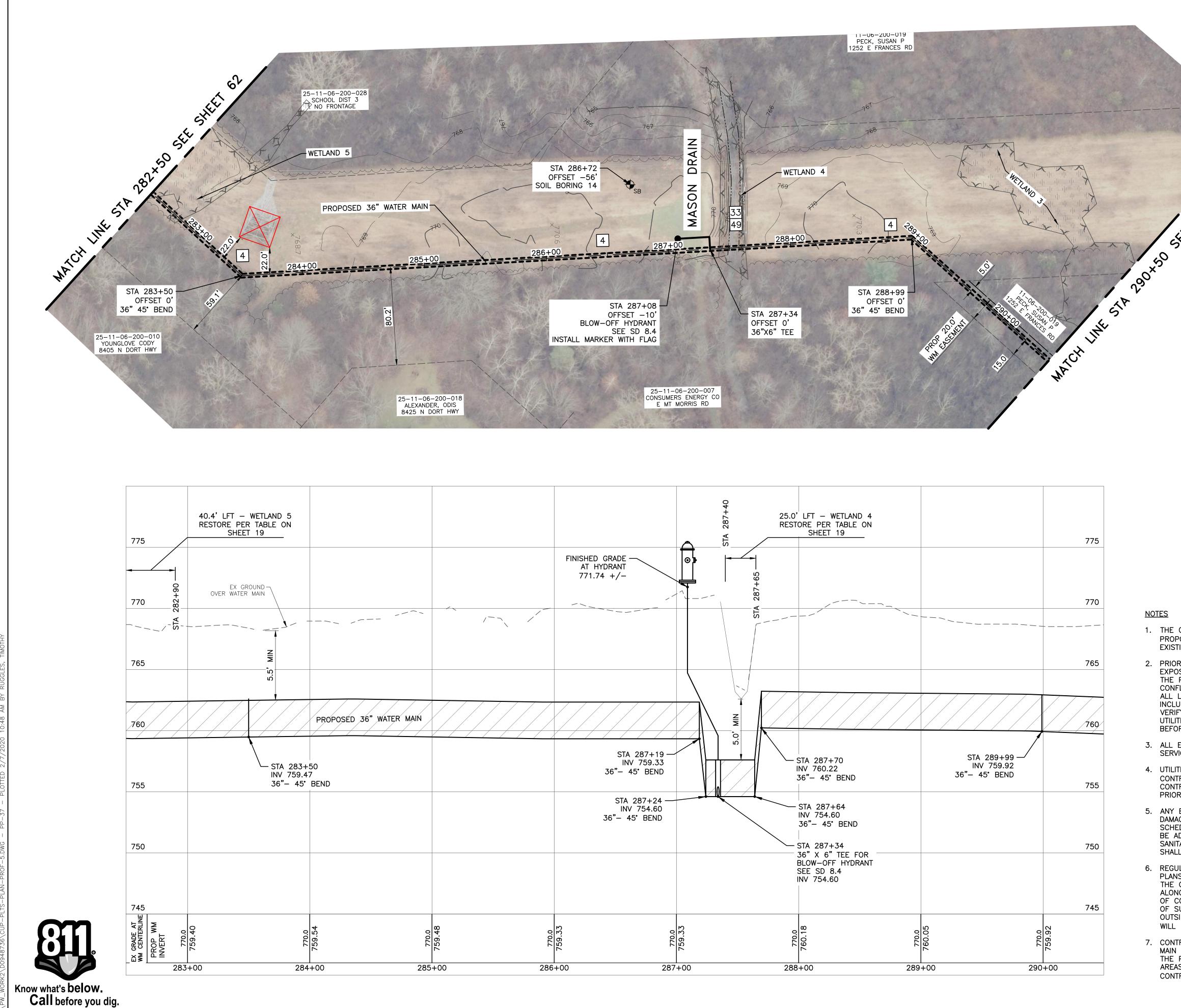
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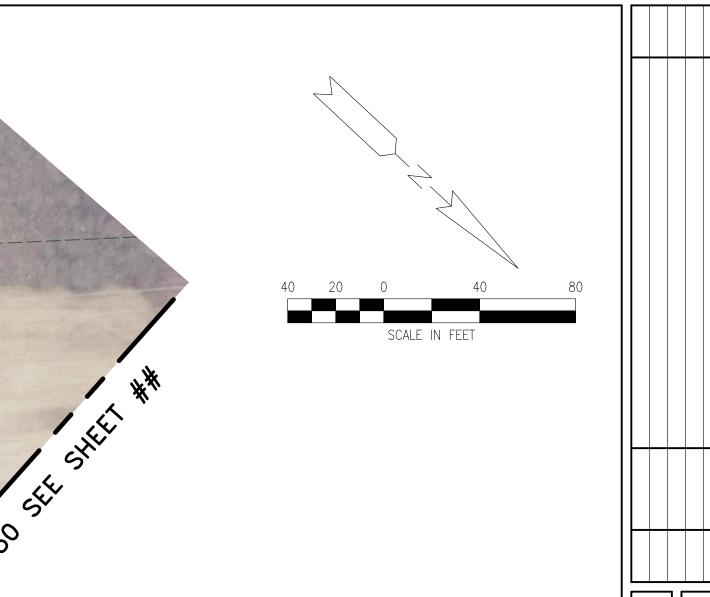
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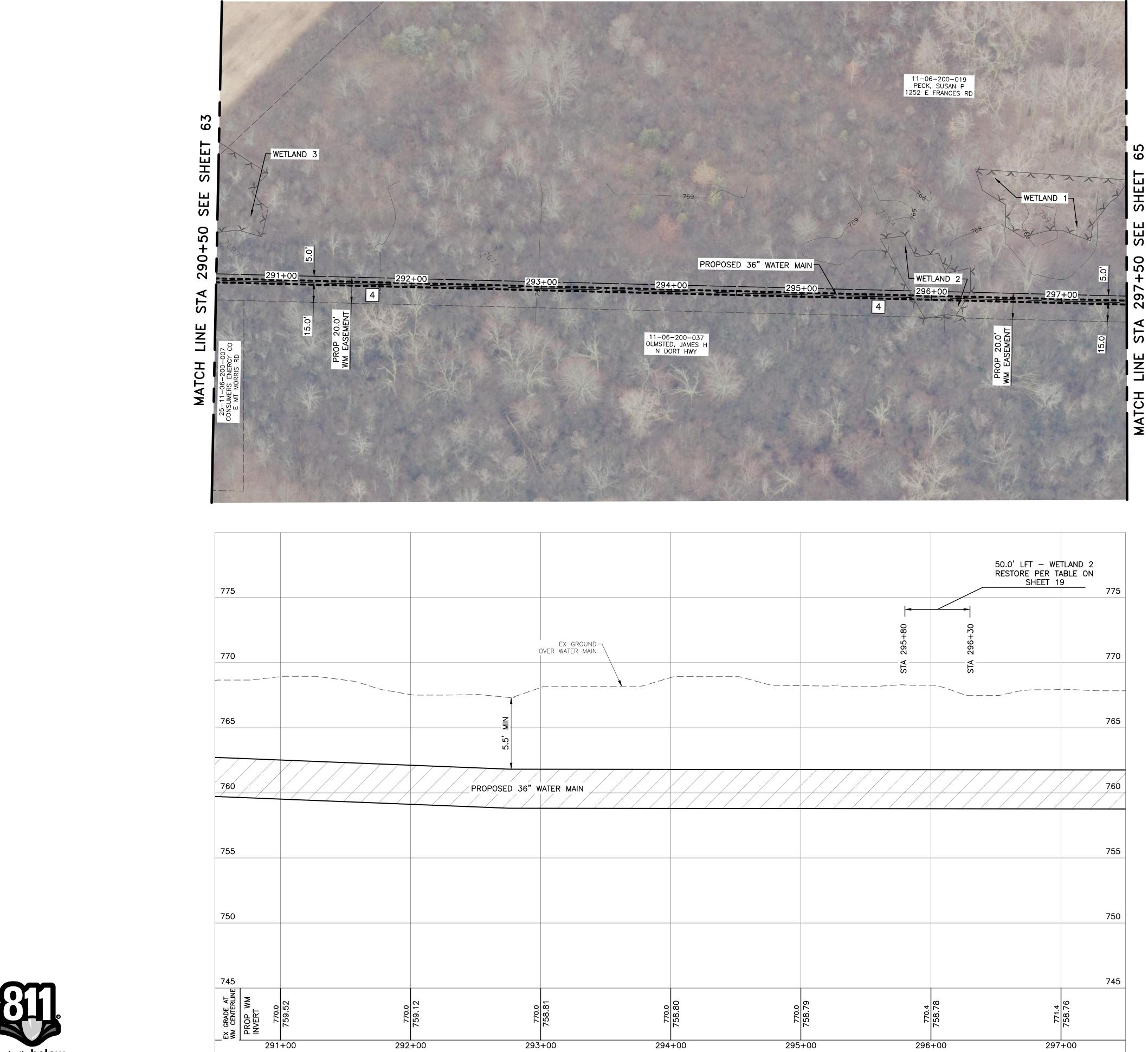
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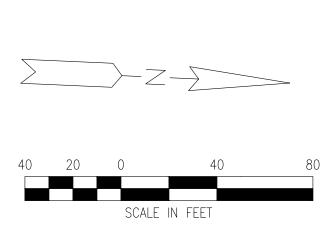
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555 Flint 810 TY OF FLINT SAGINAW STREET NT, MI 48502 NDARY WATER SUPPLY D PROFILE SHEEET 38 TER SUPPLY Sheeft 38 CITY S. S. FLIN SECONI NSJ $\overline{}$ č d 0 36' PL SUED FOR: DATE: BY COF1068.01F 64

<u>NOTES</u>

1. THE CONTRACTOR SHALL USE A TRENCH BOX IN ANY LOCATION WHERE THE PROPOSED WATER MAIN IS TO BE CONSTRUCTED LESS THAN 20' FROM AN EXISTING ELECTRIC POWER POLE OR TOWER.

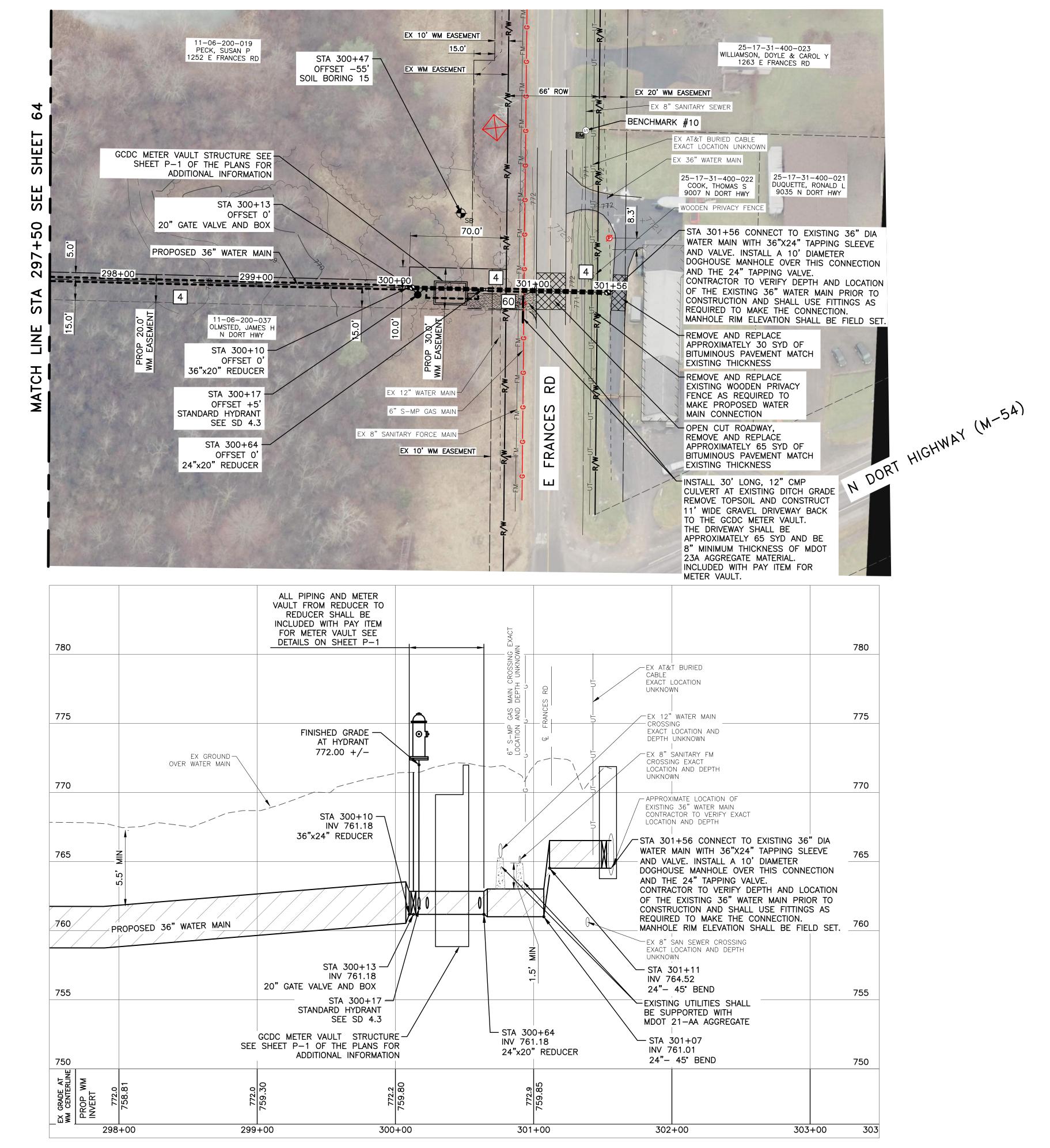
2. PRIOR TO BEGINNING THE WORK. THE CONTRACTOR SHALL BE REQUIRED TO EXPOSE ALL EXISTING UTILITIES THAT CROSS OR ARE WITHIN THE INFLUENCE OF THE PROPOSED CONSTRUCTION, SO THE ENGINEER MAY DETERMINE IF A CONFLICT EXISTS BETWEEN AN EXISTING UTILITY AND THE PROPOSED WORK. ALL LABOR REQUIRED TO UNCOVER THE EXISTING UTILITY SHALL BE CONSIDERED INCLUSIVE TO THE UNIT PRICE OF THE WATER MAIN. THE CONTRACTOR SHALL VERIFY THE UTILITY SIZE, MATERIAL, DEPTH AND HORIZONTAL LOCATION OF ALL UTILITIES IN SUFFICIENT TIME SUCH THAT ANY CONFLICTS CAN BE RESOLVED BEFORE WORK IS STARTED.

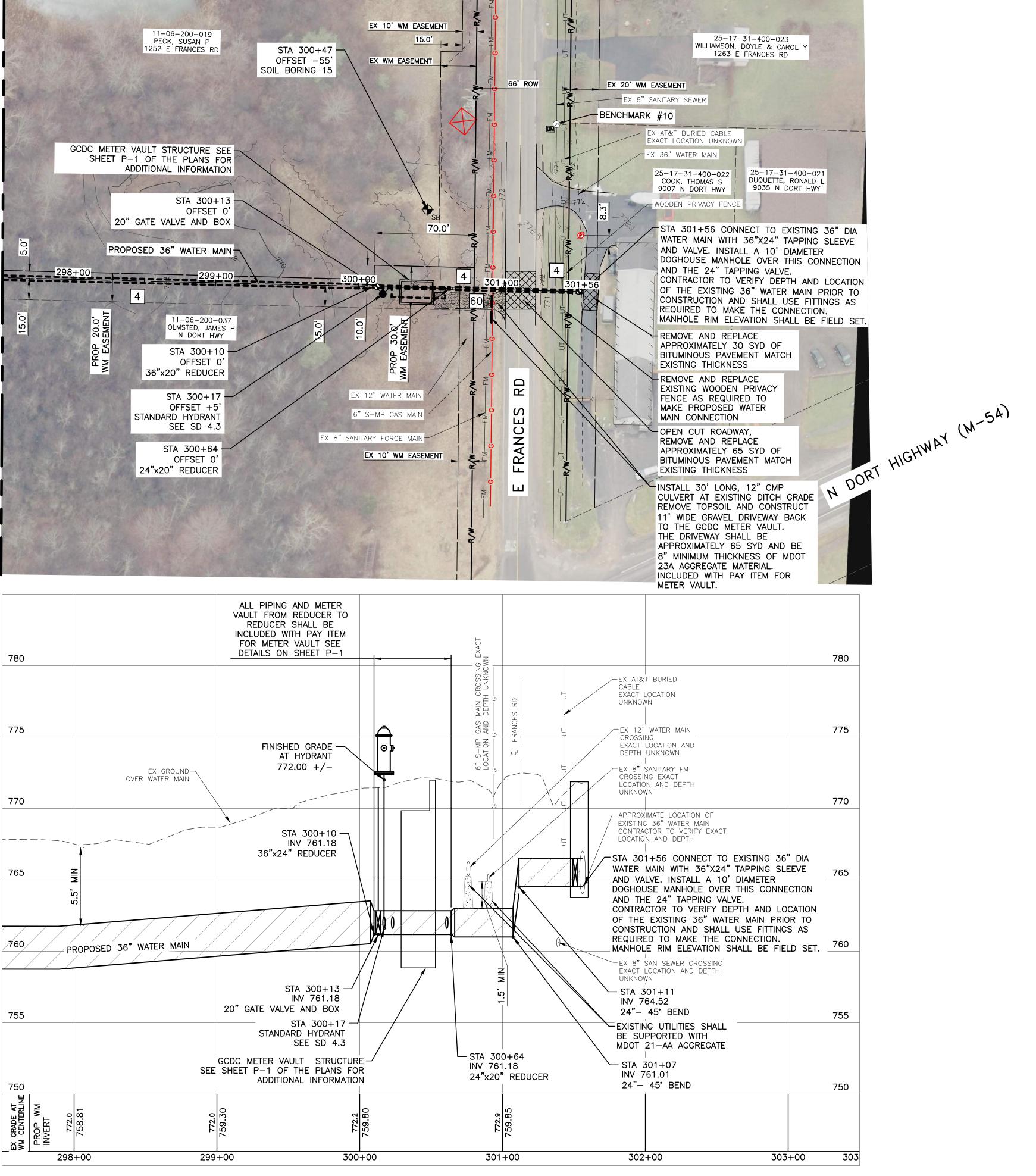
3. ALL EXISTING UTILITIES SHALL BE PROPERLY SUPPORTED AND REMAIN IN SERVICE AT ALL TIMES DURING THE PROJECT, UNLESS OTHERWISE INDICATED.

4. UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE, OR REPLACED AS CALLED FOR ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SIZE AND MATERIAL REQUIRED PRIOR TO REPLACING.

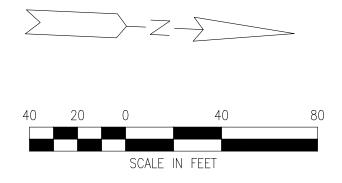
5. ANY EXISTING STORM OR SANITARY SEWER PIPES THAT COME APART OR ARE DAMAGED IN THE CITY OF FLINT WILL NEED TO BE REPLACED WITH SDR-26 OR SCHEDULE 40 PVC PIPE, FROM MANHOLE TO MANHOLE. NEW MANHOLES CAN BE ADDED TO MINIMIZE LENGTH OF SEWER REPLACEMENT. ANY STORM AND SANITARY SEWER PIPES THAT ARE DAMAGED OUTSIDE OF THE CITY OF FLINT SHALL BE REPLACED IN KIND AT THE CONTRACTORS EXPENSE.

6. REGULATED WETLANDS HAVE BEEN DELINEATED, NUMBERED AND SHOWN ON THE PLANS ALONG THE PROPOSED WATER MAIN ROUTE. FOR WETLAND RESTORATION THE CONTRACTOR SHALL REFER TO THE TABLE LOCATED ON PLAN SHEET 19 ALONG WITH DETAILS ON SHEETS 20-23. CONTRACTOR SHALL LIMIT THE EXTENT OF CONSTRUCTION ACTIVITIES WITHIN DELINEATED WETLANDS TO REDUCE IMPACTS OF SUCH ACTIVITIES TO THE WETLANDS. AREAS DISTURBED BY CONTRACTOR OUTSIDE OF THE AREAS DESIGNATED IN THE WETLAND RESTORATION DETAILS WILL BE AT CONTRACTOR'S EXPENSE.









BENCHMARK #10 SOUTH RIM OF SANITARY MANHOLE ELEVATION=772.89

<u>NOTES</u>

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			DESCRIPTION BY
			REV# DATE DE
	555 S. Saginaw Street, Suite 201 Flint, MI 48502 810 735 5555	HOLD Www.wadetrim.com	
CITY OF FLINT	FLINT, MI 48502	36" SECONDARY WATER SUPPLY	FLAN AND FINFILE SHEEFI JU
ISSUED	FOR:	DATE:	BY:
JOB NO CO SHEET	F106		1 F

		C C V	ere	FAX: JOB NO. <u>S-19-219</u> PROJECT: <u>City of Flint</u> LOCATION: Flint, Michig	ol Road, NE: (810) (810) LOG OF S Secondar	Burt) 603) 603 OIL B Ty Wat	on, M -0766 -0786 ORING er Supp /ATION:	[485: NO. Dly	29 1 Existing	
Sample & Type	Depth	Legend		Soil Description		Blows per 6"	Moisture %	Wt. P.C.F.	Comp. Strength	Str. %
			9"	Sand - Compact, Moist, Brown w/Gravel, Possible Road	d Gravel	pero		F.V.F.	Suengui	
	1		9							
4.4						-				\mid
1A SS	2			Sand - Compact, Moist, Brown		5 6				
	3		3'0"			6				
		\smallsetminus				_				
45	4	\mathbf{X}		Clay - Stiff, Moist, Silty, Variegated						
1B SS	5		4'6"	Sand - Medium Compact, Wet, Brown w/Pebble		3	14.7	115.1		
33	5		5'6"	(SM - Silty Sand)		4	14.7	115.1		
	6			(om - only cand)						
				Sand - Compact, Wet, Silty, Brown						
1C	7		-	Dand - Compact, Wet, Only, Drown		3				
SS	8		7'6"			5 6				
	0					-				
	9									
1D						4				
SS	10			Olare Otiff Malat Oilte Oracle Plus w/Orac Oracl Orac		6				
	11			Clay - Stiff, Moist, Silty, Sandy, Blue w/Grey Sand Sean	ns	7				
	+ • •									
	12									
	13		13'0"							
	14									\vdash
1E	1-4					4				
SS	15					4				
	40					7				\mid
	16			Clay - Stiff, Moist, Sandy, Blue						
	17			eray our, moloc, carray, blue						
	18									
	19									
1F	10		19'6"			8				
SS	20			Sand - Very Compact Wet Silty Grey		16				
			20'6"	Sand - Very Compact, Wet, Silty, Grey		23				
TVDE	21 OF SA			End of Boring BORING PLUGGED WITH NATURAL SOIL	CROU			REDV		Ļ
	- DISTUR				G.W. ENCO		ATER OF			<u>2</u> INS.
	UNDIST. I		'	The soli descriptions shown on the logs are norm visual	G.W. ENCO				T. 0	INS.
	SHELBY SPLIT SP			observations. No classification tests were performed.	G.W. ON CO	OMPLE	TION	18 F	Т. О	INS.
R.C.	- ROCK C	ORE			G.W. AFTEI			F	Т.	INS.
L	OTHER -		I		G.W. VOLU	MEG	Light			

			CC Lagone	Entot	FAX: JOB NO. <u>S-19-219</u> L PROJECT: <u>City of Flint</u> LOCATION: <u>Flint, Michig</u>	ol Road, IE: (810) (810) -OG OF S Secondar	Burt) 603) 603 OIL B	con, M -0766 -0786 ORING ter Supp	[4852 NO. Diy	29 3	
Sampl & Typ		Depth	Legend		Soil Description		SPT Blows per 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %
		1	\approx	9"	Topsoil - Medium Compact, Moist, Sandy, Black w/Root	ts			1.0.1	orengin	
3A SS		2		3'0"	Fill Sand - Medium Compact, Moist, Brown		3 3 3				
		4			Fill Sand - Compact, Moist, Brown w/Topsoil						
3B SS		5		4'6"	Sand - Compact, Moist, Brown w/Pebble (SM - Silty Sa	and)	5 6 7	12.4	99.6		
		6		6'0"	Sand - Compact, Wet, Brown w/Grey Silt Seams	/			8		
3C SS		7		6'9"	oand - compact, wet, brown worey out seams		4				
		8			Silt - Compact, Wet, Clayey, Grey		6				
3D SS		9 10		9'6"			3 5 7				
		11 12			Clay - Stiff, Moist, Silty, Sandy, Blue						
		13 14		13'0"							
3E SS		15			Clay - Firm, Moist, Blue w/Red Sand Layers		2 3 5				
		16 17		16'0"							
		18 19			Clay - Stiff, Moist, Blue w/Pebble						
3F SS		20		20'6"			4 5 5				
TV		21	MPLE		End of Boring	0001					
D U.L S.1 S.S) [Ul T SI S S	DISTUR NDIST. HELBY PLIT SI ROCK (BED Liner Tube Poon		observations. No classification tests were performed.	<u>GROU</u> G.W. ENCO G.W. ENCO G.W. ON CO G.W. AFTEI	UNTEI UNTEI OMPLE	RED AT	6 F F 18 F	T. 0 T. T. 0	INS. INS. INS. INS. INS.
		THER -			140# Hammer Falling 30"; Count Made At 6" Intervals.	G.W. VOLU	MES	Heavy			



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

J S S AN AND S S S S S S S S S S S S S S S S S S S	JOB NO. <u>S-19-219</u> LOG OF S PROJECT: <u>City of Flint Seconda</u>)) 603)) 603 :011 B (-0766 -0786 DRING	NO.	2	2			S	on
Series Series	LOCATION: Flint, Michigan DATE: 9/9/19 SURFACE				xistin	3		Salato S	ANO N	
Depth Legend	Soil Description	SPT Blows	Moisture %	Natural Wt.	Unc. Comp.	Str. %	Sam & Ty		Legend	
7"	Topsoil - Medium Compact, Moist, Sandy, Black w/Roots	per 6"	70	P.C.F.	Strength	70		21		
2	Sand - Medium Compact, Moist, Brown	2						21		
2'6		2 3 4						22		Clay - Ex
3'6	Clay - Firm, Moist, Silty, Sandy, Variegated							23		
5		5 7	17.6	129.4	3938	13.8	2G SS			
6	Clay - Very Stiff, Moist, Silty, Brown (CL - Low Plasticity Clay)	9						26		25'6" End of B
7		4						27		
8 8'0	n	8 10						28		
9 9'3	Clay - Very Stiff Moist Brown & Blue							29		
10		36						30		
11	Clay - Stiff, Moist, Silty, Blue w/Brown Sand Seams	6						31		
12 12'0)" 							32		
13								33		
14								34		
15		6 13						35		
16		17						36		
17	Clay - Extremely Stiff, Moist, Blue w/occ Pebble & Stone							37		
18								38		
19								39		
20		9 13 21						40		
21 OF SAMPLE	Continued BORING PLUGGED WITH NATURAL SOIL GRO		ATER OE	3SERV/	ATIONS		Т	PE OF SAMI	PLE	BORII
- DISTURBED UNDIST. LINER	* The soil descriptions shown on the logs are from visual	DUNTER	RED AT	F		INS.		D DISTURBE	D	* The soil de
						INS.				
- SHELBY TUBE - SPLIT SPOON - ROCK CORE OTHER -	Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals. G.W. ON C G.W. AFTE G.W. VOLU Construction Test 3300 E. Bristol Road	OMPLE R 1 HO JMES	TION UR <u>None</u> Servia	F F ces I 4852	т. т.	INS. INS. INS.	s	.T SHELBY TU S.S SPLIT SPOO R.C ROCK COF OTHER -	JBE ON	observatio Standard Pe 140# Hami
- SPLIT SPOON - ROCK CORE OTHER -	Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals. G.W. ON C G.W. AFTE G.W. VOLU Construction Test 3300 E. Bristol Road PHONE: (810 FAX: (810 JOB NO. PROJECT: G.W. ON C G.W. AFTE G.W. VOLU	esting Burto () 603 () 603 () 603	Servie on, M -0766 ORING	F F Ces I 4852 NO.	т. т.	INS. INS.	s	.T SHELBY TU S.S SPLIT SPO R.C ROCK COF	JBE ON	observatio Standard Pe
- SPLIT SPOON ROCK CORE	G.W. ON C Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals. Construction Te 3300 E. Bristol Road PHONE: (810 FAX: (810 JOB NO. S-19-219 LOG OF S	esting Burto Burto () 603 () 603 () 603 () 603 () 603 () 603	Servia on, M -0766 ORING	F F Ces I 4852 NO.	т. т. 29	INS. INS.	s	.T SHELBY TU S.S SPLIT SPO R.C ROCK COF	JBE ON	observatio Standard Pe
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DATE: <u>9/9/19</u> SURFAC		ATION:	E Natural	xisting	9
Soil Description	SPT Blows per 6"	Moisture %	Wt. P.C.F.	Unc. Comp. Strength	Str. %
tiff, Moist, Blue w/occ Pebble & Stone					
	8				
	14 19				
shown on the logs are from visual G.W. ENC	OUNTE		F	т.	INS.
sification tests were performed. G.W. ENC G.W. ON (OMPLE	TION	F	т. т. т	INS.
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CITY OF FLINT	노	36" SECONDARY WATER SUPPLY	SOIL BORING LOG SHEET 1
ISSUED	FOR:	DATE:	BY:
JOB NO. COI SHEET	- <u>106</u>		1 F

	Constructio	m Tag	ting	Somi	0.05		
CIS	3300 E. Bristol F PHONE: FAX:	Road, I : (810) (810)	Burt 603 603	on, M -0766 -0786	[4852		
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Comer Lange of		RFACE E	SPT	1	Natural	xisting Unc.	
Sample & Type Depth Legend	Soil Description		Blows per 6"	Moisture %	Wt. P.C.F.	Comp. Strength	Str. %
5"	Topsoil - Medium Compact, Moist, Sandy, Black w/occ Pet						
6A 2		E	3				
<u>3</u>	Clay - Stiff, Moist, Sandy, Brown w/occ Pebble & Oxidation	-	55				
4	(CL - Low Plasticity Clay)	F					
6B 5 5		F	5 8	16.7	140.1	11264	14.
5'6"		F	9				
		F	<u> </u>				
6C 7 SS	Clay - Very Stiff, Moist, Brown w/Pebble		6 13				
8'6"		F	16				
6D 9		F	8				
SS 10		F	11 16				
11		F					
12		F					
13	Sand - Compact, Moist, Silty, Brown	E					
14		F					
6E SS 15		F	7 11				_
16		F	13				
		F					
		E					
18		E					
6F 19	Sand - Compact, Wet, Brown	-	4				
SS 20 20'6"		F	5 8				
21 TYPE OF SAMPLE	End of Boring BORING PLUGGED WITH NATURAL SOIL	GROUN		ATER OE	SERV		
D DISTURBED	* The soil descriptions shown on the logs are from visual	. ENCOU	INTER	RED AT	17 F		INS INS
S.T SHELBY TUBE S.S SPLIT SPOON	G.W.	. ON COI	MPLE	TION	16 F		INS
R.C ROCK CORE OTHER -		. VOLUM			•	••	
THE REPORT OF THE PARTY OF THE	JOB NO. <u>S-19-219</u> LOG PROJECT: <u>City of Flint Sec</u> LOCATION: Flint, Michigan	Road, I : (810) (810) G OF SO condary	Burt 603 603 OIL BO Wat	on, M -0766 -0786 ORING ter Supp	[4852 NO. oly E	8	
Sample Depth Legend	Soil Description		SPT Blows per 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Sti %
6"	Topsoil - Medium Compact, Moist, Sandy, Clayey, Black w	/Roots					
BA 2		F	3				
	Clay - Stiff, Moist, Silty, Sandy, Variegated	ŀ	4 5				
4	(CL - Low Plasticity Clay)	F					
8B 5 5 5'0"		F	3 4	25.8	125.2	2040	15
6'0"	Clay - Stiff, Moist, Silty, Sandy, Variegated w/Brown Sand S	Seams	4				
		F	4				
	Clay Stiff Moint Silly Sandy Brown	F	4 6 10				
	Clay - Stiff, Moist, Silty, Sandy, Brown	F	10				
8D 9 9'6"		E	6				
		F	7 7				
SS 10		L					
SS 10 11	Clay - Stiff, Moist, Silty, Blue	F					
SS 10	Clay - Stiff, Moist, Silty, Blue						
SS 10 11							
SS 10 11 11 12 13 13 13'0"		-	۰ ۲				
SS 10 11 11 12 13 13 13'0"			347				
SS 10 11 11 12 13 13 13'0" 14 14							
SS 10 11 11 12 13 13 13'0" 14 8E SS 15	Sand - Compact, Wet, Brown		4				
SS 10 11 12 13 13 14 8E SS 15 16	Sand - Compact, Wet, Brown		4				

5

5 5

GROUND WATER OBSERVATIONS G.W. ENCOUNTERED AT 5 FT. 0 INS. G.W. ENCOUNTERED AT FT. INS. G.W. ON COMPLETION 7 FT. 0 INS. G.W. AFTER HOURS FT. INS. G.W. VOLUMES Heavy

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

20'6"

Clay - Stiff, Moist, Silty, Sandy, Blue

End of Boring BORING PLUGGED WITH NATURAL SOIL

* The soil descriptions shown on the logs are from visual observations. No classification tests were performed.

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals.

18

8F SS

19

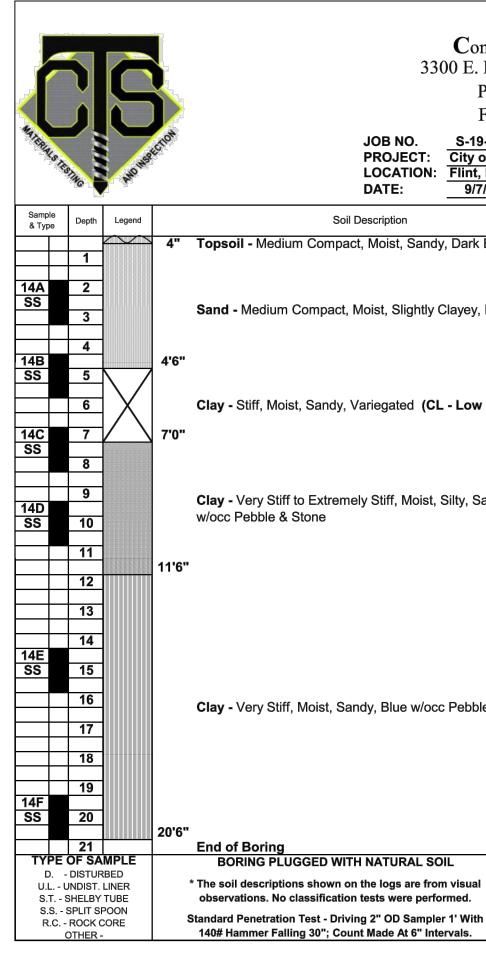
8F SS 20 TYPE OF SAMPLE D. - DISTURBED U.L. - UNDIST. LINER S.T. - SHELBY TUBE S.S. - SPLIT SPOON R.C. - ROCK CORE OTHER -

		Construction Te 3300 E. Bristol Road, PHONE: (810 FAX: (810 JOB NO. <u>S-19-219</u> LOG OF S PROJECT: <u>City of Flint Seconda</u>	, Bur) 603) 603 () 603	ton, M 3-0766 3-0786 8 0RING	I 485 NO.		7	
Tallo 2 alotte		LOCATION: Flint, Michigan				Sviatin		
		DATE: <u>9/7/19</u> SURFACE		T	Natural		-	
Sample & Type Depth Legend		Soil Description	Blows per 6"	Moisture %	Wt. P.C.F.	Comp. Strength	Str. %	Sample & Type
	1'0"	Topsoil - Medium Compact, Moist, Sandy, Brown w/Roots						
7A 2			2					
SS / /			3					
3		Clay - Firm, Moist, Silty, Sandy, Variegated	5					23 Clay - Extremely Sti
7B 4		(CL - Low Plasticity Clay)	3					
<u>SS</u> 5/			3	24.3	129.4	4867	15.5	
6	6'0"		5					25 0 End of Boring
7C 7		Clay Van Stiff Maiat Silly Sandy Brown W/Mat Sand Saama	3					27
SS 8	8'0"	Clay - Very Stiff, Moist, Silty, Sandy, Brown w/Wet Sand Seams	7 9					
9 7D		Clay - Very Stiff, Moist, Silty, Sandy, Brown & Blue	8					
SS 10	10'0"		9 10					30
11								
12								32
13								33
14		Clay - Stiff to Very Stiff, Moist, Silty, Blue						
7E			6					
			6 7					
16	16'6"							36
17								37
18								38
19		Clay - Extremely Stiff, Moist, Silty, Blue						39
7F SS 20			11 16					40
21		Continued	20					41
TYPE OF SAMPLE D DISTURBED		BORING PLUGGED WITH NATURAL SOIL <u>GROU</u>		ATER O			_	TYPE OF SAMPLE BORING PLUGGI
U.L UNDIST. LINER S.T SHELBY TUBE		* The soil descriptions shown on the logs are from visual observations. No classification tests were performed.	OUNTE	RED AT	F	⁼Т.	INS. INS.	U.L UNDIST. LINER S.T SHELBY TUBE observations. No class
S.S SPLIT SPOON R.C ROCK CORE	5	G.W. ON Construction Test - Driving 2" OD Sampler 1' With G.W. AFTE			13 F 4 F		INS. INS.	S.S SPLIT SPOON
		3300 E. Bristol Road, PHONE: (810 FAX: (810) JOB NO. <u>S-19-219</u> LOG OF S PROJECT: <u>City of Flint Secondar</u>) 603) 603 OIL B	3-0766 3-0786 ORING	NO.)	
Tollo S		LOCATION: Flint, Michigan						
Sample		DATE: <u>9/7/19</u> SURFACE	CLEV	ALION:	-	- 4"		
Sample & Type Depth Legend	6"	Soil Description	SPT		Natural	Existing	-	Samile
1	6"		SPT Blows per 6"	Moisture %			Str. %	Sample & Type Depth Legend
9A 2		Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows	Moisture	Natural Wt.	Unc. Comp.	Str.	i Denth Ledend
		Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6"	Moisture	Natural Wt.	Unc. Comp.	Str.	4" Topsoil - Medium C
SS			Blows per 6" 6 7	Moisture	Natural Wt.	Unc. Comp.	Str.	4" Topsoil - Medium C
SS 3	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6"	Moisture	Natural Wt.	Unc. Comp.	Str.	4" Topsoil - Medium C 10A 2 SS 3 Sand - Medium Con
SS 3 4	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6" 6 7 7 7 10	Moisture %	Natural Wt.	Unc. Comp.	Str.	4" Topsoil - Medium C 10A 2 SS 3 3 10B 4 Sand - Medium Con
SS 3 3 4 9B 5	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6" 6 7 7 7	Moisture	Natural Wt.	Unc. Comp.	Str.	4" Topsoil - Medium C 4" Topsoil - Medium C 10A 2 SS 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5
SS 3 3 4 9B 5 SS 5 6 6	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6" 6 7 7 7 10 10 10 13	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 4" Topsoil - Medium C 10A 2 SS 3 3 3 4 10B SS 5 6 6'0"
SS 3 3 4 9B 5 SS 5 6 6	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6" 6 7 7 7 10 10 10 13 12	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 4" Topsoil - Medium C 10A 2 SS 3 3 3 3 3 3 6'0" 10C 7
SS 3 3 4 9B 5 SS 5 6 6	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots	Blows per 6" 6 7 7 7 10 10 10 13	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 1 1 10A 2 SS 3 3 3 3 3 3 3 3 5 6 6'0" 10C 7 SS 8
SS 3 3 - 4 - 9B - SS 5 6 - 9C 7 SS - 88 - 99 -	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles	Blows per 6" 6 7 7 10 10 10 13 13 12 15 17	Moisture %	Natural Wt.	Unc. Comp.	Str.	A Type Depth Legend 4" Topsoil - Medium C 4" Topsoil - Medium C 4" Sand - Medium Con 4" Sand - Medium Con 6'0" 5 5 6'0" 5 6'0" 5 5 6'0" 5 5 6'0" 5 5 6'0" 5 5 6'0" 5 6'0" 5 6'0" 5 6'0" 5 6'0" 5 6'0" 5 6'0" 5 6'0" 5 7 5 6'0" 5 6'0" 5 7 5 6'0" 5 6'0" 5 7 5 6'0" 5 6'0" 5 7 5 7 5 6'0" 5 7 5 6'0" 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7
SS 3 3 - 4 - 9B - SS 5 6 - 9C 7 SS 8	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 13 13 12 15 17 13 14	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 1 1 4" Topsoil - Medium C 10A 2 SS 3 3 3 Sand - Medium Con 10B 6 6'0" 10C 7 SS 8 8 Sand - Medium Con
SS 3 3 - 4 - 9B - SS 5 6 - 9C 7 SS - 8 - 9D -	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 7 10 10 10 13 13 12 15 17	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 4" Topsoil - Medium C 10A 2 SS 3 3 3 3 3 3 3 3 6'0" 10B 6'0" 10C 7 SS 5 3 6'0" 10C 7 SS 5 3 5 3 6'0" 6'0" 5 3 5 3 5 5 5 5 5 6'0" 6'0" 10D 5 3 5 10D 5 11 11
SS 3 3 - 4 - 9B - SS 5 6 - 9C 7 SS - 8 - 9D - SS 10	3'9"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 13 13 12 15 17 13 14	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 1 1 4" Topsoil - Medium C 10A 2 SS - 10A 2 SS - 3 - - - 10A 2 - - 33 - - - 33 - - - 33 - - - 33 - - - 34 - - - 35 - - - 36 - - - 10B - - - 55 - - - 10C 7 - - 55 - - - - 9 - - - - 9 - - - - 10D - - - - 9
SS 3 3 4 9B 5 SS 5 6 6 9C 7 SS 8 9D 9 SS 10 11 12		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 13 13 12 15 17 13 14	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 4" Topsoil - Medium C 10A 2 SS 3 3 3 4 Sand - Medium Con 10B 6 SS 5 6 6'0" 10C 7 SS 6 9 Sand - Medium Con 10D 7 SS 10 10D 7 SS 10 10D 11 11 11 12 11 11 11'6"
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS - 9C 7 SS - 9D - 9D - SS 10 11 - 12 - 13 -	3'9" 13'0"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 13 13 12 15 17 13 14	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 1 4" Topsoil - Medium C 10A 2 SS 3 3 Sand - Medium Con 10B 6 6'0" 10C 7 SS 8 SS 6'0" 10D 7 SS 8 SS 10 10D 7 SS 11 11'6" 12 113 Sand - Compact, W
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS - 6 - 9C 7 SS - 9D - SS 10 11 - 12 - 13 - 14 9E		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 10 13 10 13 12 15 17 17 13 14 16	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 10A 2 SS 3 3 3 3 3 3 3 3 5 3 6'0" 10C 7 SS 5 6 6'0" 10C 7 SS 10 9 Sand - Medium Con (SM - Silty Sand) SS 10 11 11'6" 12 13 10E 14'6"
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS 8 9D - SS 10 11 - 12 - 13 - 5S 15		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 7 10 10 10 10 13 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	A Type Depth Legend 4" Topsoil - Medium C 4" Topsoil - Medium C 4" Topsoil - Medium C 4" Topsoil - Medium C 5S 5 6'0" 6'0" 5S 10 10D 5S 10 111 11'6" 5S 15 11'6" 5 16' 11'6" 5 16' 11'6" 5 16' 11'6" 5 16' 11'6"
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS - 6 - 9C 7 SS - 9D - SS 10 11 - 12 - 13 - 14 9E		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Legend 10A 2 SS 3 3 3 3 3 3 3 3 5 3 6'0" 10C 7 SS 5 6 6'0" 10C 7 SS 10 9 Sand - Medium Con (SM - Silty Sand) SS 10 11 11'6" 12 13 10E 14'6"
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS 8 9D - SS 10 11 - 12 - 13 - 5S 15		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble &	Blows per 6" 6 7 7 10 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depin Legend 1 1 10A 2 SS 3 3 3 3 3 3 3 3 6 10B 6 5 6 6 6'0" 10C 7 SS 5 6 6'0" 10C 7 SS 10 9 11 10D 11 11 11'6" 12 13 11 14'6"
SS 3 4 9B SS 5 6 6 9C 7 SS 8 9D 9 9D 5 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 111 11 111 11 111 11 111 11 111 11 111 11 113 11 113 11 114 11 115 116		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand)	Blows per 6" 6 7 7 10 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	A Type Depth Legend 4" Topsoil - Medium C 4" Topsoil - Medium C 4" Topsoil - Medium C 4" Topsoil - Medium C 5 5 5 5 6 6'0" 5 5 6'0" 5 7 5 6'0" 5 7 5 7 5 7 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7
SS 3 4 9B SS 5 6 9C 7 SS 8 9D 9 9D 9 9D 10 111 11 112 13 113 13 114 9 SS 15 16 17 18 19		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand)	Blows per 6" 6 7 7 10 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Deptin Legend 1 1 10A 2 SS 3 3 3 3 3 3 3 3 3 3 5 3 6 10B 6 10B 6 10C 7 SS 8 8 8 9 5 10D 5 10D 5 10D 5 10D 5 11 11 11 11'6'' 11 11'6'' 11 11'6'' 11 11'6'' 12 13 14'6'' Sand - Compact, W 14'6'' 14'6'' 18 Clay - Stiff, Moist, S 19 19
SS 3 4 9B SS 5 6 6 9C 7 SS 8 9D 9 9D 9 9D 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 111 11 112 113 113 114 9E 15 116 116 117 118 119 19		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand)	Blows per 6" 6 7 7 10 10 10 13 13 14 15 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Deptin Lagend 1 1 10A 2 SS 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 5 3 6 00 4 108 6 100 7 SS 5 6 6'0" 100 7 SS 10 100 9 100 5 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 12 11 13
SS 3 3 4 9B 5 SS 5 6 6 9C 7 SS 8 9P 9 9D 9 9D 9 9D 9 9D 9 9D 9 9D 11 112 12 13 13 14 9E SS 15 16 17 17 18 9F 9 SS 20		Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand)	Blows per 6" 6 7 7 10 10 10 13 13 14 15 17 13 14 16 	Moisture %	Natural Wt.	Unc. Comp.	Str.	& Type Depth Lagend 1 1 10A 2 SS 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 6 10B 6 10C 7 SS 5 6 6'0" 10C 7 SS 10 10D 9 111 11 112 13 13 14'6" Sand - Compact, W 10E 14'6" 118 14'6" 10F 10F 10F 20'6"
SS 3 3 4 9B 5 SS 5 6 6 9C 7 SS 8 99 9 9D 9 9D 9 9D 9 9D 9 9D 9 9D 11 111 12 12 13 14 9 9E 5 SS 15 16 17 18 19 9F 5 SS 20 21 21	13'0"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand) Sand - Compact, Wet, Brown w/Gravel End of Boring BORING PLUGGED WITH NATURAL SOIL	Blows per 6" 6 7 7 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength		& Type Deptil Legend 1 1 1 10A 2 SS 3 3 Sand - Medium Correction 10B 6 6'0" 10B 6 6'0" 10C 7 SS 8 9 Sand - Medium Correction 10D 7 SS 8 9 Sand - Medium Correction 10D 9 Sand - Medium Correction 10D 9 Sand - Medium Correction 10D 11 11'6" 11 11 11'6" 11 11 11'6" 11 11 11'6" 11 14'6" Sand - Compact, W 10E 16 17 118 11 Clay - Stiff, Moist, S 10F 20'6" 20'6" 21 End of Boring End of Boring TYPE OF SAMPLE BORING PLUGGI
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS - 9C 7 SS - 9D - 9D - SS 10 111 - 12 - 111 - 111 - 111 - 111 - 111 - 111 - 111 - 111 - 111 - 112 - 113 - 114 - 9E - SS 15 - - 116 - 117 - 118 - 9F - SS 20 21 - 121 - 121 - <tr td=""></tr>	13'0"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand) Sand - Compact, Wet, Brown w/Gravel End of Boring BORING PLUGGED WITH NATURAL SOIL The soil descriptions shown on the logs are from visual observations. No classification tests were negrormed	Blows per 6" 6 7 7 7 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %	8 Type Depth Legen 1 1 4" Topsoil - Medium Construction 10A 2 Ss 3 3 3 Sand - Medium Construction 6" 10B 5 6" 6" 10C 7 5 6" 10C 7 5 6" 10C 7 5 6" 10D 6 6"0" 6" 10D 5 6" 6" 10D 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11" 11 11 11" 11"
SS 3 3 - 4 9B SS 5 6 - 9C 7 SS - 9C 7 SS - 9D - 9D - SS 10 9D - SS 10 111 - 12 - 111 - 12 - 111 - 12 - 111 - 112 - 113 - 114 - 9E - SS 15 - - 116 - 117 - 118 - 119 - 9F - SS 20 21 - TYPE OF SAMPLE - D. - 0 -	13'0" 20'6"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand) Sand - Compact, Wet, Brown w/Gravel End of Boring BORING PLUGGED WITH NATURAL SOIL G.W. ENCO	Blows per 6" 6 7 7 10 10 10 13 14 15 17 17 13 14 16 	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %	8 Type Depth Legen 1 1 4" Topsoil - Medium Co 10A 2 3 Sand - Medium Cor 10B 5 6 6'0" 10C 7 5 8 8 6 6'0" 6'0" 10C 7 5 8 8 8 6'0" 6'0" 10D 9 6'0" 6'0" 10D 9 11 11'6" 11 11 11'6" 11'6" 11 11 11'6" Sand - Compact, W 10E 11 14'6" Clay - Stiff, Moist, S 10F 18 20'6" End of Boring 17FE OF SAMPLE 20'6" End of Boring * The soil descriptions s 18 19 10F BORING PLUGGI * The soil descriptions s 10F 21 Find of Boring * The soil descriptions s observations. No class 5 SPLIT SPOON 8 cndderenetration Tee
SS 3 3 4 9B 5 SS 5 6 9 9C 7 SS 8 9D 9 9D 9 9D 9 9D 10 111 11 12 12 13 13 14 9 SS 15 16 17 17 18 9F 5 20 21 TYPE OF SAMPLE 2 0. 0. 21 21	13'0" 20'6"	Topsoil - Compact, Moist, Sandy, Black w/Roots Sand - Compact, Moist, Brown w/Pebbles Sand - Compact to Very Compact, Moist, Brown w/Pebble & Stone (SM - Silty Sand) Sand - Compact, Wet, Brown w/Gravel End of Boring BORING PLUGGED WITH NATURAL SOIL * The soil descriptions shown on the logs are from visual observations. No classification tests were performed.	Blows per 6" 6 7 7 7 10 10 10 13 14 15 17 17 13 14 16 4 5 6 6 4 4 5 6	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %	8 Type Depth Legen 1 1 4" Topsoil - Medium Co 10A 2 3 Sand - Medium Cor 10B 55 5 6'0" 10C 7 55 6'0" 10C 7 55 6'0" 10C 7 55 6'0" 10D 9 6'0" 6'0" 10D 9 11' 11' 11 11 11' 11' 11 11 11' 11' 11 11 11' 11' 11 11 11' 11' 11 11 11' 11' 11 11 11' 11' 11 12 11' 11' 116 16 14'6'' Clay - Stiff, Moist, S 119 10F 5S 20'6'' End of Boring 10F 5S 20'6'' End of Boring 0'6''

\mathbf{C}	·· 7		c .			
Constr 3300 E. Bri	uction 7	- /			29	
	ONE: (8	-				
	X: (8) 9 LOG OF				7	,
	int Secon					
DATE: <u>9/7/19</u>			ATION:		xisting	9
Soil Description		SPT Blows per 6"	Moisture %	Natural Wt. P.C.F.	Unc. Comp. Strength	Str. %
iff, Moist, Silty, Blue						
		15				
		16 19				
ED WITH NATURAL SOIL						<u>.</u> INS.
shown on the logs are from visual sification tests were performed.	G.W. EN	COUNTEI			т.	INS.
st - Driving 2" OD Sampler 1' With				13 F	T. 4	1113.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri	G.W. AF G.W. VO	id, Burt	TION OURS <u>Heavy</u> Servi on, M	4 F ces I 4852	T. 2	INS.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. <u>S-19-219</u> PROJECT: <u>City of FI</u>	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 <u>9</u> LOG OF int Secon	Ter 10 Ho DUMES Id, Burt 10) 603 10) 603	Servi on, M -0766 oring	4 F ces I 4852 NO.	T. 2	INS.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NOS-19-219	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 <u>9</u> LOG OF int Secon	Ter 10 Ho DUMES Id, Burt 10) 603 10) 603	Servi on, M -0766 oring er Supp	4 F ces I 4852 NO.	т. 2 29	0 0
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: Flint, Mic	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 <u>9</u> LOG OF int Secon	Ter 10 Ho DUMES Testing d, Burt 10) 603 F SOIL Bo dary Wat	Servi on, M -0766 oring er Supp	4 F ces I 4852 NO. oly	T. 2 29 1 	0 0
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	TER 10 Ho DUMES Id, Burt 10) 603 10) 603 = SOIL Bo dary Wat CE ELEV	Servi on, M -0766 oRING er Supp ATION:	4 F Ces I 4852 NO. Dly	T. 2 29 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Testing ad, Burt 10) 603 F SOIL Bo dary Wat CE ELEV	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Testing ad, Burt 10) 603 F SOIL Bo dary Wat	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: <u>9/7/19</u>	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	TER 10 Ho DUMES Cesting Id, Burt 10) 603 10) 603 5 SOIL Bo dary Wat CE ELEV Blows per 6" 2 3 3	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Testing ad, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	TER 10 Ho DLUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV Blows per 6" 2 3 3 3 5 5 5	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	TER 10 Ho DLUMES Festing Id, Burt 10) 603 F SOIL Bo dary Wat CE ELEV Blows per 6" 2 3 3 5 5 5 5 3 3 3	Servi on, M -0766 oRING er Supp ATION:	4 F ces I 4852 NO. oly	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	TER 10 Ho DLUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV Blows per 6" 2 3 3 5 5 5 5	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Testing ad, Burt 10) 603 = SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 5 5 3 3 3 5 5 5 3 3 3 5 5 5 3 3 3 5 5 5 3 3 3 5 5 5 3 3 3 5 5 5 5 3 3 5	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Testing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing ad, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 4	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing ad, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 4	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6° 2 3 3 5 5 5 3 3 5 5 5 3 4 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 5 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAZ JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown mpact to Compact, Wet, Brown wet, Grey	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 5 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 5 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown mpact to Compact, Wet, Brown Met, Grey	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing Id, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 5 5 5 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown mpact to Compact, Wet, Brown Mage At 6" Intervals.	G.W. AF G.W. VO Stol Roa ONE: (8 X: (8 DNE: (8 LOG OF Int Second SURFA	Ter 10 Ho DUMES Festing ad, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV SPT Blows per 6" 2 3 3 5 5 5 3 3 4 6 6 3 3 5 5 5 5 3 3 4 6 6	Servi on, M -0766 -0786 ORING er Supp ATION: Moisture %	4 F	T. 2 29 1 	0 3 5tr.
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FAX JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown mpact to Compact, Wet, Brown wet, Grey	G.W. AF G.W. VO	TER 10 H DLUMES Festing Id, Burt 10) 603 5 SOIL B dary Wat CE ELEV Blows per 6" 2 3 3 5 5 5 3 3 5 5 5 6 6 6 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TION OURS Heavy Servi on, M -0766 -0786 ORING er Supp ATION: Moisture % 16.5	4 F CCES I 4852 NO. Dly Natural VVI. P.C.F.	T. 2	0 3 5 5 5 5 5 5 5 5 5 5 5 5 5
30"; Count Made At 6" Intervals. Constr 3300 E. Bri PHO FA2 JOB NO. PROJECT: LOCATION: DATE: Soil Description Compact, Moist, Sandy, Black w/F mpact to Compact, Moist, Brown mpact to Compact, Wet, Brown wet, Grey Vet, Grey	G.W. AF G.W. VO	Ter 10 Ho DUMES Festing ad, Burt 10) 603 5 SOIL Bo dary Wat CE ELEV Blows per 6" 2 3 3 5 5 5 3 3 4 6 6 6 6 6	TION OURS Heavy Servi on, M -0766 -0786 ORING er Supp ATION: Moisture % 16.5	4 F CCES I 4852 NO. Dly Natural Wt. P.C.F. 106.3 106.3 SSERV 6 F F	T. 2	0 Str. %

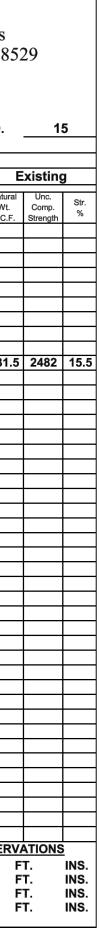
			DESCRIPTION BY
	ite 201		REV# DATE
	555 S. Saginaw Street, Suite 201 Flint, MI 48502	STULZSS-2555 www.wadetrin.com	
CITY OF FLINT 1101 S. SAGINAW STREET	무너	36" SECONDARY WATER SUPPLY	SOIL BORING LOG SHEET 2
ISSUED F	OR:	DATE:	BY:
JOB NO. COF SHEET	100 6		1 F

		C C L L L L L L L L L L L L L L L L L L		JOB NO. PROJECT:	FAX	stol Rc DNE: (% K: (% LOG C nt Seco nigan	oad, Burt 810) 603 810) 603 DF SOIL B	con, M 3-0766 3-0786 0RING ter Supp	I 4852 NO. Diy	29 1 	
Sample	Depth	Legend		Soil Description			SPT Blows	Moisture	Natural Wt.	Unc. Comp.	Str.
& Type	Depth		5"	Topsoil - Compact, Moist, Sandy, Dark Br	own w/Root	ts	per 6"	%	P.C.F.	Strength	%
	1		5	Topson - Compact, Molet, Carry, Bark Br	00011 0011000						
11A	2						4				
SS	3						7				
				Sand - Medium Compact to Compact, Moi	st, Brown						
11B	4			(SP - Poorly Graded Sand)			3				
SS	5						4	3.1	93.5		
	6						5				
11C	7		6'9"				3				
SS			7'6"	Clay - Stiff, Moist, Sandy, Brown			6				
	8		8'6"	Clay - Stiff, Moist, Silty, Sandy, Blue w/We	t Sand Sea	ms	7				
445	9		•••								
11D SS	10						7				
	11						10				
	12										
	13			Clay - Stiff, Moist, Blue w/Wet Sand Seam	S						
	14										
11E SS	15						4				
							9				
	16										<u> </u>
	17		17'0"								
	18										
	19			Clay - Very Stiff, Moist, Silty, Sandy, Blue							
11F							6				
SS	20		20'6"				9 11				
TYPE	21			End of Boring							Ĺ
	DISTUR	BED		BORING PLUGGED WITH NATURAL SO * The soil descriptions shown on the logs are from			ROUND W				<u>5</u> INS.
S.T S	NDIST.	TUBE		observations. No classification tests were perfor						Т. Т. б	INS. INS.
R.C	SPLIT SF ROCK C	ORE		Standard Penetration Test - Driving 2" OD Sampler		G.W. A	FTER HO	URS		т. Т.	INS
C	THER -			140# Hammer Falling 30"; Count Made At 6" Inte	rvais.	G.W. V	OLUMES	Light			





JOB NO PROJEC	T: City of Flint Secondary Water Supply	P	Construction Tes 3300 E. Bristol Road, PHONE: (810) FAX: (810) DB NO. ROJECT: <u>S-19-219</u> LOG OF SO City of Flint Secondar DCATION: Flint, Michigan	Burton, MI 48529) 603-0766) 603-0786 OIL BORING NO.	13
DATE:	9/7/19 SURFACE ELEVATION: Existing		ATE: <u>9/7/19</u> SURFACE	ELEVATION: Exist	Inc
Sample & Type Depth Legend Soil Description 5" Topsoil - Compact, Moist, Sandy, Da	Blows Moisture Wt. Comp. Str. per 6" 9.C.F. Strength	Sample & Type Depth Legend Soil Des 6" Topsoil - Medium Compact, M	cription Ioist, Sandy, Dark Brown w/Roots	Blows % P.C.F. Stren	omp. Str.
5" Topsoil - Compact, Moist, Sandy, Da			IOISI, Sanuy, Dark Brown w/Rools		
12A 2 Possible Fill Sand - Compact, Moist occ/Stone	Brown w/Pebble & 5 7	13A 2 SS Sand - Medium Compact, Mo	st, Brown w/occ Pebble & Stone	3 4	
3'6"	7	3'6"		4	
4 12B	2	13B Clay - Very Stiff, Moist, Silty, S	andy Variegated	4	
SS 5 Possible Fill Sand - Medium Compa		(CL - Low Plasticity Clay)		7 18.6 132.2 802 9	29 15.5
6 w/occ Pebble & Stone (SC - Clayey S	Sand)	6 6'0" 13C 7		5	
SS 7'7"	4	SS Clay - Very Stiff, Moist, Silty, S 8 8'3"	andy, Brown & Blue	7 10	
8'6" Clay - Stiff, Moist, Sandy, Variegated		9			
12D 9'6" Clay - Still, Moist, Silty, Blue SS 10	8	13D SS 10 Clay - Stiff, Moist, Silty, Sandy	, Blue	4 6	
11				8	
12					
13					
14 12E	4	14 13E		7	
SS 15 Sand - Compact, Wet, Fine, Grey	4 7			9 10	
		Clay - Very Stiff, Moist, Silty, S	andy, Blue w/occ Pebble		
18					
19		19			
12F SS 20 20'6"	7 8 9	13F SS 20 20'6"		8 11 12	
20 0 21 End of Boring TYPE OF SAMPLE BORING PLUGGED WITH NATURA		20 0 21 End of Boring TYPE OF SAMPLE BORING PLUGGED WITH N	ATURAL SOIL GROU	ND WATER OBSERVATIO	ONS
D DISTURBED U.L UNDIST. LINER S.T SHELBY TUBE D DISTURBED * The soil descriptions shown on the logs an observations. No classification tests were	e from visual G.W. ENCOUNTERED AT 13 FT. 0 INS.	D DISTURBED U.L UNDIST. LINER S.T SHELBY TUBE * The soil descriptions shown on the observations. No classification test	e logs are from visual G.W. ENCO	UNTERED AT FT. UNTERED AT FT.	INS. INS.
S.S SPLIT SPOON S.S SPLIT SPOON R.C ROCK CORE OTHER - 140# Hammer Falling 30"; Count Made At 6	mpler 1' With G.W. AFTER HOURS FT. INS.	S.S SPLIT SPOON R.C ROCK CORE OTHER - 140# Hammer Falling 30"; Count M	G.W. ON CC " OD Sampler 1' With G.W. AFTER	R HOURS FT.	INS. INS.
PHONE: (810) 603-0766 FAX: (810) 603-0786 S-19-219 LOG OF SOIL BORING NO. 14 City of Flint Secondary Water Supply 14 Flint, Michigan 14	THE REAL PROPERTY OF	PHONE: (810) 603-0766 FAX: (810) 603-0786 JOB NO. S-19-219 LOG OF SOIL BORING NO. 15 PROJECT: City of Flint Secondary Water Supply LOCATION: Flint, Michigan			
9/7/19 SURFACE ELEVATION: Existing	Sample	DATE: 9/7/19 SURFACE ELEVATION: Existing Description SPT Blows Moisture % Natural Wt. Unc. Comp.	Str.		
Blows per 6" Moisture % Wt. Comp. Str. % P.C.F. Strength %	a lýpe	Blows per 6" Moisture % Wt. P.C.F. Comp. Strength ct, Moist, Sandy, Dark Brown w/Roots	%		
	1 Sand - Medium Compact,	Moist, Brown w/Pebble			
layey, Brown w/Pebble 5	15A 2 SS 2'6" 2'6"	3 4 5	_		
		andy, Variegated w/occ Pebble	\neg		
3 5 12.9 134.5 4988 12.1	15B Image: Start and the sta) <u>3</u> <u>4</u> <u>14.3</u> <u>131.5</u> <u>2482</u> <u>-</u>	5.5		
- Low Plasticity Clay)	6'0"	6	-		
8 12	15C 7 SS	5 8	7		
13	8	14			
Silty, Sandy, Brown 10 15	9 15D SS 10 Clay - Very Stiff, Moist, Sa	andy, Brown 8 13			
		17	_		
			_		
	12'6"				
8		10	_		
9	15E SS 15	11	7		
Pebble	16	ity, Sandy, Blue w/occ Pebble			
			_		
			4		
7	15F SS 20	10 12	\exists		
10	20'6" 21 End of Boring	15			
L GROUND WATER OBSERVATIONS G.W. ENCOUNTERED AT FT. INS.	TYPE OF SAMPLE BORING PLUGGED WI D. - DISTURBED U.L UNDIST. LINER * The soil descriptions shown of	n the logs are from visual G.W. ENCOUNTERED AT FT.	NS.		
'med. G.W. ENCOUNTERED AT FT. INS. '1'With G.W. AFTER HOURS FT. INS.	S.T SHELBY TUBE observations. No classification S.S SPLIT SPOON R.C ROCK CORE Standard Penetration Test - Driv	G.W. ON COMPLETION FT.	15. 15. 15.		
vals. G.W. VOLUMES None	OTHER - 140# Hammer Falling 30"; Co				



							BΥ
							DESCRIPTION
							DATE
							REV#
				_			
	1101 S. SAGINAW STREET	FI.INT MI 48502		36" SECONDARY WATER SUPPLY			SULL BURING LUG SHEET 3
	1101			36" SECONDARY WATER SUPPLY			SUIL BURING LOG SHEET 3
JOB	1101 D FOF	₹:	D	ATE	2:	B	3Y:

ISP HIS I		ANDING	cliot		LOG OI <u>t Secon</u> igan	dary Wat	-0786 ORING er Supp	NO. Iy	1	
Sample & Type	Depth	Legend		Soil Description	-	SPT Blows	Moisture %	Natural Wt.	Unc. Comp.	Str. %
	1	-	4" 1'0"	Asphalt Fill Sand - Medium Compact, Moist, Dark Brown w/Bro	oken	per 6"		P.C.F.	Strength	
S S	2			Asphalt Sand - Medium Compact, Moist, Brown w/Pebble		2				
5	3	$\overline{}$	2'8" 3'6"	Clay - Firm, Moist, Silty, Sandy, Variegated w/Green T	int	5				
в	4		50			1				
5	5					1	15.2			
	6									
C S	7					0				
_	8			Sand - Loose, Wet, Fine, Brown (SM-Silty Sand)		1				
D	9					0				
5	10					0				
	11									
	12		12'0"						 	
	13									
E	14			Clay - Stiff, Moist, Silty, Sandy, Blue w/occ Pebble		4				
5	15	-		Clay - Still, Molst, Silty, Salidy, Dide Woldt Pebble		5 7				
	16									
	17		17'0"							
	18									
F	19			Clay - Extremely Stiff, Moist, Sandy, Blue w/occ Pebble	e	9				
6	20					16 18				
YPE	21 OF SA	MPLE		Continued BORING PLUGGED WITH NATURAL SOIL	GF	ROUND W	ATER OE	3SERV	ATIONS	;
U.L l	DISTUF JNDIST. SHELBY	LINER		The soil descriptions shown on the logs are from visual observations. No classification tests were performed.	G.W. EN G.W. EN	ICOUNTEI ICOUNTEI	RED AT RED AT	3 F F	Т. 6 Т.	INS. INS. INS.
R.C	SPLIT SI ROCK (OTHER -	CORE	5	tandard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals.	G.W. AF	I COMPLE TER HO	URS		т. о	INS.

Sample & Type Depth Legend Soil Description BPT Ber Ber SPC.F. Mointure SPC.F. Natural SPC.F. Natural SPC.F. <th>C S S</th>	C S S
4" Topsoil - Medium Compact, Moist, Sandy, Black w/Roots 1 1 1 17A 2 3 1 1 17A 2 3 1 1 17A 2 3 1 1 17B 3 1 1 1 1 17B 5 5 1 1 1 1 17B 5 5 1 1 1 1 1 17B 5 5 1	
17A 2 17B 2 17D 2 17D 3 11 2 11 2 11 2 11 2 11 2 11 2 11 2 11 2 11 2	
17B	A 2
SS 5 -	4
17C 7 SS	
8 6 1 1 9 9 10 </td <td>C 7</td>	C 7
17D 3 1 SS 10 5 1 11 11 14 1 12 11 1 1 13 13 1 1	8
11 Clay - Very Stiff, Moist, Silty, Sandy, Blue w/Brown Sand Seams 12 11 13 13	
13	
Clay - Stiff, Moist, Silty, Sandy, Blue w/occ Pebble	13
17E 3 4 SS 15 15'0"	
Image: Clay - Stiff, Moist, Silty, Sandy, Blue w/occ Pebble & Wet Grey Sand Seams 17	
19 Clay - Extremely Stiff, Moist, Silty, Sandy, Blue w/occ Pebble 10 1 17F 10 </td <td></td>	
22 22 22 22 22 22 22 22 22 22 22 22 22	21
TYPE OF SAMPLE BORING PLUGGED WITH NATURAL SOIL GROUND WATER OBSERVATIONS D DISTURBED * The soil descriptions shown on the logs are from visual observations. No classification tests were performed. G.W. ENCOUNTERED AT 15 FT. 0 IN: G.W. ENCOUNTERED AT FT. IN: G.W. ENCOUNTERED AT FT. IN: G.W. ON COMPLETION 23 FT. 6 IN: G.W. ON COMPLETION 23 FT. 6 IN: G.W. AFTER HOURS S.S SPLIT SPOON Standard Penetration Test - Driving 2" OD Sampler 1' With OTHER - G.W. AFTER HOURS FT. IN: G.W. AFTER HOURS	YPE OF SAMPLE D DISTURBED U.L UNDIST. LINER S.T SHELBY TUBE S.S SPLIT SPOON R.C ROCK CORE



OJECT MANAGER:Jason R. Kenyon, PE \PW_WORK2\D0948736\BLB-PLTS-SOIL-BORING-LOG.DWG - BL4 - PLOTTED 2/7/2020 10:49 AM BY RUGGLES, TIMOTH

3300 E. Bris PHO FAX JOB NO. PROJECT: LOCATION: S-19-219 City of Flir Flint, Mich	tion Testing Services of Road, Burton, MI 48529 IE: (810) 603-0766 (810) 603-0786 LOG OF SOIL BORING NO. 16 Secondary Water Supply Jan SURFACE ELEVATION: Existing	
Sample & Type Depth Legend Soil Description 21 21 22 22 23 23 24 16G	SPT Blows per 6" Moisture % Natural Wt. P.C.F. Unc. Strength - - - </td <td>DESCRIPTION</td>	DESCRIPTION
Clay - Extremely Stiff, Moist, Sandy, Blue w/occ Pebbl Clay - Extremely Stiff, Moist, Sandy, Blue w/occ Pebbl Clay - Extremely Stiff, Moist, Sandy, Blue w/occ Pebbl 27 27 28 29 16H SS 30 30'6" End of Boring	19	EV# DATE
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		v Street, Suite 201
38 39 40 40 41 TYPE OF SAMPLE D DISTURBED U.L UNDIST. LINER S.T SHELBY TUBE S.S SPLIT SPOON R.C ROCK CORE OTHER - BORING PLUGGED WITH NATURAL SOIL * The soil descriptions shown on the logs are from visual observations. No classification tests were performed. Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30"; Count Made At 6" Intervals.	GROUND WATER OBSERVATIONS G.W. ENCOUNTERED AT 3 FT. 6 INS. G.W. ENCOUNTERED AT FT. INS. G.W. ENCOUNTERED AT FT. INS. G.W. ON COMPLETION 2 FT. 6 INS. G.W. AFTER HOURS FT. INS. G.W. AFTER HOURS FT. INS. G.W. VOLUMES Heavy	555 S. Saginaw Fint. MI 48502 810.235.2555 www.wadetrim.c
3300 E. Brist	ion T esting S ervices l Road, Burton, MI 48529 E: (810) 603-0766	
FAX: JOB NO. PROJECT: LOCATION: DATE: JOB NO. S-19-219 City of Flint Flint, Michi 10/25/19	(810) 603-0786 OG OF SOIL BORING NO. <u>17</u> Secondary Water Supply an URFACE ELEVATION: Existing	ET L
Sample Depth Legend Soil Description 21 21 22 23 23 24 17G SS	SPT Blows per 6" Moisture % Natural Unc. Comp. P.C.F. Str. % 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OF FLINT GINAW STREET MI 48502 RY WATER SUPPLY G LOG SHEET 4
Clay - Extremely Stiff, Moist, Silty, Sandy, Blue w/occ P Clay - Extremely Stiff, Moist, Silty, Sandy, Blue w/occ P Clay - Extremely Stiff, Moist, Silty, Sandy, Blue w/occ P 27 28 29 17H SS 30 30'6" End of Boring	14	CITY C CITY C 101 S. SAC FLINT, 36" SECONDAR SOIL BORING
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		ISSUED FOR: DATE: BY:
38 39 40 41 TYPE OF SAMPLE 0 DISTURBED U.L UNDIST. LINER ST - SHE BY TIBE observations No classification tests were performed	GROUND WATER OBSERVATIONS W. ENCOUNTERED AT 15 FT. 0 INS. W. ENCOUNTERED AT 15 FT. 0 INS.	JOB NO. COF1068.01F
S.S SPLIT SPOON R.C ROCK CORE Standard Penetration Test - Driving 2" OD Sampler 1' With	.W. ON COMPLETION 23 FT. 6 INS. .W. AFTER HOURS FT. INS. .W. VOLUMES Heavy	© Made Tri

GENERAL NOTES 1. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES ARE BASED ON PREVIOUS CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING W/ FIELD MEASUREMENTS ALL DIMENSIONS AND ELEVATIONS FOR FABRICATION AND/OR MODIFICATIONS OR ADDITIONS BEING MADE UNDER THIS CONTRACT. ANY DISCREPANCIES SHALL BE PRESENTED TO THE OWNER AND ANY DESIGN CONFLICTS SHALL BE RESOLVED WITH OWNER PRIOR TO FABRICATIONS OR CONSTRUCTION OF IMPACTED ITEMS.	AND PROTECTION OF EXISTING STRU ARE THE SOLE RESPONSIBILITY OF CALCULATIONS FOR PROPOSED EART BY A PROFESSIONAL ENGINEER REG
 MATERIALS FOR THE FOLLOWING FACILITY COMPONENTS SHALL BE AS INDICATED BELOW UNLESS NOTED OTHERWISE: A. SUMP GRATING GALV. STEEL ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN WITH THE ± 	 SOIL BORING DATA IS INCLUDED IN INFORMATION ABOUT THE UNDERGRO LOCATIONS WHERE THE BORINGS W
 SYMBOL, ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION. 4. ALL DIMENSIONS OR ELEVATIONS MARKED WITH AN ASTERISK "*" SHALL BE DETERMINED OR VERIFIED WITH EQUIP. MFR. CERTIFIED SHOP DRAWINGS OR FIELD MEASUREMENTS OF EXISTING CONSTRUCTION BEFORE FABRICATION AND CONSTRUCTION. 5. ALL ADHESIVE ANCHORING SYSTEMS FOR POST-INSTALLED ANCHORS AND/OR REINFORCING DOWELS IN CONCRETE OR MASONRY SHALL BE PER SPECIFICATIONS AT SIZE AND SPACING INDICATED ON DRAWINGS WITH EMBEDMENT DEPTH INDICATED ON DRAWINGS. 6. ALL POST-INSTALLED ANCHOR BOLTS INTO NEW OR EXISTING CONCRETE SHALL BE ASTM A316 STAINLESS STEEL THREADED ROD WITH STAINLESS STEEL WASHER AND NUT, UNO. CAST-IN-PLACE CONCRETE 1. THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 350-06/350R-06 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER 2. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED 	ENCOUNTERED DURING CONSTRUCTION DESCRIBED IN THE GEOTECHNICAL IN PROJECT. THE CONTRACTOR SHALL AS TO SOIL CONDITIONS FROM THEIN INDEPENDENT NOWLEDGE, AND INVEC CONTRACTOR SHALL OBTAIN ADDITION INFORMATION AS THEY CONSIDER NOW WORK AT NO ADDITIONAL COST TO 3. CONTRACTOR SHALL PREPARE AN EXISTEMS, AND DEWATERING OR DEF REVIEW PRIOR TO START OF WORK. FOUNDATIONS 1. CONTRACTOR SHALL BE AWARE OF UNDERGROUND UTILITIES, TANKS, ET EXERCISED DURING CONSTRUCTION A
 BARS CONFORMING TO ASTM A615, GRADE 60. 3. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI 28 DAY UNLESS OTHERWISE NOTED. 4. WATERSTOPS SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS, CONTROL JOINTS AND EXPANSION JOINTS (UNLESS NOTED 	 ALL EXCAVATION, FILLING, BACKFILL COMPACTION CONSTRUCTION SHALL PROJECT GEOTECHNICAL EXPLORATION NOTED ON THE DRAWINGS, AND PRO BARRICADE ALL OPEN EXCAVATIONS
 OTHERWISE). 5 ALL STIRRUPS AND TIES SHALL BE CLOSED TYPE WITH 135 DEGREE HOOKS, U.N.O. 6 ALL COLD JOINTS IN CONCRETE STRUCTURES SHALL HAVE A CONTINUOUS WATERSTOP CREATING A WATERTIGHT JOINT AS DETAILED. WHERE NOT SPECIFIED ALL COLD JOINTS SHALL HAVE A HYDROPHILIC WATERSTOP PER SPECIFICATIONS. 	AND POST WITH WARNING LIGHTS. 5. SLOPE OR BENCH SIDES OF EXCAVA AND ORDINANCES HAVING JURISDICT SHIELDING WHERE SLOPING IS NOT RESTRICTION OR STABILITY OF MATE <u>MISCELLANEOUS</u> 1. BEFORE CONSTRUCTION, THE CONTR
 7 THE LENGTH OF ALL LAP SPLICES SHALL BE AS SPECIFIED IN "REINFORCING TENSION SPLICE TABLE" ON THIS SHEET UNLESS OTHERWISE INDICATED IN DRAWINGS. WHEN BARS OF DIFFERENT SIZE ARE BEING LAPPED, THE LENGTH SHALL BE THE SPECIFIED LAP LENGTH OF THE LARGER BAR. 8 BOTTOM AND TOP BEINFORCING BARS FOR ALL DISCONTINUOUS ENDS 	EQUIPMENT FOUNDATION, PAD AND SIZES AND LOCATIONS OF ANCHOR CERTIFIED SHOP DRAWINGS. 2. CONTRACTOR IS RESPONSIBLE TO ID OPENINGS AND EMBEDDED ITEMS SH 3. ALL ADHESIVE ANCHORING SYSTEMS
 8 BOTTOM AND TOP REINFORCING BARS FOR ALL DISCONTINUOUS ENDS OF BEAMS AND SLABS SHALL HAVE HOOKS AND SPLICES CONFORMING TO ACI MANUAL OF STANDARD PRACTICE. 9 ALL FILLET AND TOPPING CONCRETE SHALL BE HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6000 PSI. FILLET CONCRETE, SHALL BE PLACED TO PRODUCE CONTOURS INDICATED ON PLANS, AND SHALL RECEIVE SMOOTH FLOAT FINISH. 	 ALL ADHESIVE ANCHORING STSTEMS AND/OR REINFORCING DOWELS IN C BE "HIT-HY 200 ADHESIVE ANCHOR AND SPACING INDICATED ON DRAWII 4. PROVIDE EXPANDED METAL CLOSURE MATCHING MATERIAL AND FINISH OF EQUIPMENT OPENING LOCATIONS, AS AND LOCAL SAFETY REGULATIONS.
 10 CONCRETE COVER OVER PRIMARY REINFORCEMENT SHALL BE (2) INCHES MINIMUM (1 1/2" FOR COLUMN TIES AND BEAM STIRRUPS), UNLESS NOTED OTHERWISE, AND (3) INCHES MINIMUM WHERE CAST AGAINST EARTH. 11.CAST-IN-PLACE CONCRETE CONSTRUCTION JOINTS: A. ALL CONSTRUCTION JOINTS SHALL HAVE FORMED KEYWAYS AND 	
WATERSTOPS (WHERE INDICATED) PER DETAILS ON SHEET S-2. 12.CAST-IN-PLACE CONCRETE WALLS WHICH SUPPORT AN ELEVATED SLAB SHALL NOT BE BACKFILLED UNTIL THE ELEVATED SLAB IS PLACED AND CURED. 13.ALL EXPOSED EDGES OF BEAMS, COLUMNS, SLABS AND WALLS	
 METALS METALS 1. MISCELLANEOUS METALS SHALL CONFORM TO ASTM A-36. 2. ALL GALVANIZED STEEL SHALL BE HOT-DIP GALVANIZED 	
 ALL ORLYANIZED STELL STREET DE HOT DIT GREVANIZED CONFORMING TO ASTM A123, UNO. 3. ALL 11/2" DEEP STEEL GRATING INDICATED ON PLANS SHALL BE TYPE 15-SGI-4 GRATING AND SHALL HAVE A MINIMUM ALLOWABLE WORKING STRESS OF 12,000 PSI WITH THE FOLLOWING MINIMUM SECTION PROPERTIES: Sx = 0.90 IN3/FT Ix = 0.675 IN4/FT 	
Know what's below. Call before you dig.	

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THE PROXIMITY OF EXISTING STRUCTURES, ROADS AND S, IT WILL BE NECESSARY TO PROVIDE TEMPORARY EARTH ION FOR CONSTRUCTION WITHIN DEEP EXCAVATIONS. ION AND DESIGN OF TEMPORARY EARTH RETENTION SYSTEMS ROTECTION OF EXISTING STRUCTURES, ROADS AND UTILITIES SOLE RESPONSIBILITY OF THE CONTRACTOR. DESIGN ATIONS FOR PROPOSED EARTH RETENTION MEASURES, SEALED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF AN, SHALL BE SUBMITTED TO AND APPROVED BY THE ER PRIOR TO BEGINNING RELATED EXCAVATION WORK.

ORING DATA IS INCLUDED IN THE SPECIFICATIONS FOR ATION ABOUT THE UNDERGROUND CONDITIONS ONLY AT THE ONS WHERE THE BORINGS WERE MADE. THE OWNER DOES PRESENT OR WARRANT THAT THE UNDERGROUND CONDITIONS ITERED DURING CONSTRUCTION SHALL CONFORM TO THOSE BED IN THE GEOTECHNICAL REPORT PREPARED FOR THIS T. THE CONTRACTOR SHALL DRAW THEIR OWN CONCLUSIONS SOIL CONDITIONS FROM THEIR OWN EXPERIENCE, NDENT NOWLEDGE, AND INVESTIGATION OF THE SITE. THE CTOR SHALL OBTAIN ADDITIONAL SUBSURFACE CONDITION ATION AS THEY CONSIDER NECESSARY TO COMPLETE THE NO ADDITIONAL COST TO THE OWNER.

CTOR SHALL PREPARE AN EXCAVATION PLAN INCLUDING SIDE ROPOSED, TEMPORARY OR PERMANENT EARTH RETENTION S, AND DEWATERING OR DEPRESSURIZING SYSTEMS FOR

CTOR SHALL BE AWARE OF AND VERIFY LOCATION OF ALL ROUND UTILITIES, TANKS, ETC. DUE CARE SHALL BE SED DURING CONSTRUCTION ACTIVITIES SUCH THAT EXISTING

CAVATED MATERIAL SHALL BE DISPOSED OF IN AN APPROVED ALL EXCAVATIONS SHALL CONFORM TO OSHA

CAVATION, FILLING, BACKFILLING, FOUNDATION AND TION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL EXPLORATION REPORT, REQUIREMENTS ON THE DRAWINGS, AND PROJECT SPECIFICATIONS, UNO.

ADE ALL OPEN EXCAVATIONS OCCURRING AS PART THE WORK

OR BENCH SIDES OF EXCAVATIONS TO COMPLY WITH CODES RDINANCES HAVING JURISDICTION. PROVIDE SHORING OR NG WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE TION OR STABILITY OF MATERIAL EXCAVATED.

CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ENT FOUNDATION, PAD AND CURB DIMENSIONS, AND THE AND LOCATIONS OF ANCHOR BOLTS FROM MANUFACTURER'S

CTOR IS RESPONSIBLE TO IDENTIFY AND ACCOMMODATE GS AND EMBEDDED ITEMS SHOWN ON OTHER DRAWINGS.

HESIVE ANCHORING SYSTEMS FOR POST INSTALLED ANCHORS REINFORCING DOWELS IN CONCRETE AND MASONRY SHALL T-HY 200 ADHESIVE ANCHORING SYSTEM" BY HILTI AT SIZE PACING INDICATED ON DRAWINGS (OR APPROVED EQUAL).

EXPANDED METAL CLOSURES AND SUPPORT FRAMING, NG MATERIAL AND FINISH OF ADJACENT GUARDRAILS, AT ALL ENT OPENING LOCATIONS, AS REQUIRED TO MEET FEDERAL

	5	PLICE 1	ABL	
BAF	R SIZE T	ENSION LAP	LENGTH	* TOP BARS
	#3	16"		22"
	#4	20"		29"
	#5	24"		36"
	#6	29"		43"
	#7	42"		63"
	#8	48"		72"
	#9	<u> </u>		81"
-	#10	61 67"		91" 101"
	#11	0/		101
NOTES				
	'E TABLE IS F 5,000 PSI ANE			fy=60,000 PSI.
LAP OTHE	LENGTHS IN T RWISE ON THE	ABLE ABOVE E DRAWINGS.	UNLESS	NSION SPLICES USING SPECIFICALLY SHOWN
CENT	THS ARE BASI ER TO CENTER TER THAN 6 I	R SPACING OF		SPLICES WITH EQUAL TO OR
	BARS ARE HO ONCRETE CAS			MORE THAN 12"
5. USE	TENSION LAP	LENGTHS FOR	R HORIZ	& VERT. WALL BARS.
<u>STRL</u>	JCTURAL	ABBR	EVIA	TIONS
	ALTERNATE	ID		INSIDE DIAMETER
ALUM	ALUMINUM	IE IF		INVERT ELEVATION INSIDE FACE
в/	воттом	IF IN		INCHES
BLDG	BUILDING	IN	FL	INFLUENT
BM BOT	ВЕАМ ВОТТОМ	IN	Т	INTERIOR
BSMT	BASEMENT	JT	-	JOINT
CHAN	CHANNEL	KI	Р	THOUSAND POUNDS
	CAST-IN-PL	ACE KE		KNEE BRACE
CJ JOINT	CONSTRUCTIO)N LF	0	LOW POINT
CL	CENTERLINE			LENGTH
CLR	CLEAR			
COL CONC	COLUMN CONCRETE			MAXIMUM MANUFACTURER
	CONSTANT		FR IN	MANUFACIURER
CONSTR	CONSTRUCTIO			MASONRY OPENING
CONT CLSM	CONTINUOUS CONTROLLED	10W	_	
	STRENGTH M			NEAR FACE NEAR SIDE
COR	CORNER		rs	NOT TO SCALE
CY	CUBIC YARD	NI	С	NOT IN CONTRACT
DET		00		ON CENTER
DIA / Ø		0		OUTSIDE DIAMETER

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PRE-ENGINEERED METAL BUILDING

POUNDS PER SQ.

POUNDS PER SQ.

REINFORCEMENT

SLAB CONTROL

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UNLESS NOTED

OTHERWISE

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VERTICAL

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REFER TO

SCHEDULE

SETTLING

SHEETS

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DISTANCE

EACH END

EACH FACE

EACH SIDE

EACH WAY

EXISTING

EACH

EL/ ELEV ELEVATION

EFFLUENT

EXTERIOR/

FLOOR DRAIN

FAR FACE

FAR SIDE

FOUNDATION

GALVANIZED

HIGH POINT

FINAL SETTLING

FINISH

FLOOR

FEET

GRADE

ноок

HEIGHT

H/ HORIZ HORIZONTAL

DOWELS

DISCONTINOUS

EXPANSION JOINT

S. Saginaw t, MI 48502 .235.2555 v.wadetrim.o 555 Flint, 810.3 www TREET OUTSIDE DIAMETER FLINT AW ST Ζ OFAGI CITY S. S¹ S E $\overline{}$ \bigcirc 36" $\overline{}$ $\overline{}$ ELEVATION TOP OF STRUCTURAL STEEL ISSUED OR PRELIMINARY SHEET S - 0

BN **₹**R Ω 48502 VATER SUPPLY JRAL) ABBREVIATIONS FLINT, MI Secondary wa Structuf L notes and NERAL 되 ப DATE: BY: ^{NO.}COF1068.01F

11/15/19

	GENERAL NOTES 1. DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES ARE BASED ON PREVIOUS CONTRACT DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING W/ FIELD MEASUREMENTS ALL DIMENSIONS AND ELEVATIONS FOR FABRICATION AND/OR MODIFICATIONS OR ADDITIONS BEING MADE UNDER THIS CONTRACT. ANY DISCREPANCIES SHALL BE PRESENTED TO THE OWNER AND ANY DESIGN CONFLICTS SHALL BE RESOLVED WITH OWNER PRIOR TO FABRICATIONS OR CONSTRUCTION OF IMPACTED ITEMS.	AND PR
	 MATERIALS FOR THE FOLLOWING FACILITY COMPONENTS SHALL BE AS INDICATED BELOW UNLESS NOTED OTHERWISE: A. SUMP GRATING GALV. STEEL 	2. SOIL BC
	3. ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN WITH THE ± SYMBOL, ARE APPROXIMATE AND SHALL BE VERIFIED IN FIELD BY THE CONTRACTOR BEFORE FABRICATION AND CONSTRUCTION.	INFORMA LOCATIO NOT RE ENCOUN
	4. ALL DIMENSIONS OR ELEVATIONS MARKED WITH AN ASTERISK "*" SHALL BE DETERMINED OR VERIFIED WITH EQUIP. MFR. CERTIFIED SHOP DRAWINGS OR FIELD MEASUREMENTS OF EXISTING CONSTRUCTION BEFORE FABRICATION AND CONSTRUCTION.	DESCRIE PROJEC AS TO INDEPEN CONTRA
	5. ALL ADHESIVE ANCHORING SYSTEMS FOR POST-INSTALLED ANCHORS AND/OR REINFORCING DOWELS IN CONCRETE OR MASONRY SHALL BE PER SPECIFICATIONS AT SIZE AND SPACING INDICATED ON DRAWINGS WITH EMBEDMENT DEPTH INDICATED ON DRAWINGS.	INFORMA WORK A 3. CONTRA SLOPES
	6. ALL POST-INSTALLED ANCHOR BOLTS INTO NEW OR EXISTING CONCRETE SHALL BE ASTM A316 STAINLESS STEEL THREADED ROD WITH STAINLESS STEEL WASHER AND NUT, UNO.	SLOPES SYSTEM REVIEW FOUNDAT
	CAST-IN-PLACE CONCRETE	1. CONTRA UNDERG
	 THE DETAILING, BENDING, AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI STANDARD 350-06/350R-06 CODE AND ACI DETAILING MANUAL, SP-66 (94). FIELD BENDING WILL NOT BE PERMITTED UNLESS APPROVED BY ENGINEER 	EXERCIS UTILITIES 2. ALL EXC MANNER
	2. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.	REQUIRE
	 ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAY UNLESS OTHERWISE NOTED. 	3. ALL EXC COMPAC PROJEC NOTED
	 WATERSTOPS SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS, CONTROL JOINTS AND EXPANSION JOINTS (UNLESS NOTED OTHERWISE). 	4. BARRICA AND PO
	5 ALL STIRRUPS AND TIES SHALL BE CLOSED TYPE WITH 135 DEGREE HOOKS, U.N.O.	AND OR
	6 ALL COLD JOINTS IN CONCRETE STRUCTURES SHALL HAVE A CONTINUOUS WATERSTOP CREATING A WATERTIGHT JOINT AS DETAILED. WHERE NOT SPECIFIED ALL COLD JOINTS SHALL HAVE A HYDROPHILIC WATERSTOP PER SPECIFICATIONS.	SHIELDII RESTRIC <u>MISCELL</u> 1. BEFORE
	7 THE LENGTH OF ALL LAP SPLICES SHALL BE AS SPECIFIED IN "REINFORCING TENSION SPLICE TABLE" ON THIS SHEET UNLESS OTHERWISE INDICATED IN DRAWINGS. WHEN BARS OF DIFFERENT SIZE ARE BEING LAPPED, THE LENGTH SHALL BE THE SPECIFIED LAP LENGTH OF THE LARGER BAR.	EQUIPMI SIZES A CERTIFIE 2. CONTRA OPENING
	8 BOTTOM AND TOP REINFORCING BARS FOR ALL DISCONTINUOUS ENDS OF BEAMS AND SLABS SHALL HAVE HOOKS AND SPLICES CONFORMING TO ACI MANUAL OF STANDARD PRACTICE.	and/or be "hit
	9 ALL FILLET AND TOPPING CONCRETE SHALL BE HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6000 PSI. FILLET CONCRETE, SHALL BE PLACED TO PRODUCE CONTOURS INDICATED ON PLANS, AND SHALL RECEIVE SMOOTH FLOAT FINISH.	AND SP 4. PROVIDE MATCHIN EQUIPME
	10 CONCRETE COVER OVER PRIMARY REINFORCEMENT SHALL BE (2) INCHES MINIMUM (1 1/2" FOR COLUMN TIES AND BEAM STIRRUPS), UNLESS NOTED OTHERWISE, AND (3) INCHES MINIMUM WHERE CAST AGAINST EARTH.	AND LO
	11.CAST-IN-PLACE CONCRETE CONSTRUCTION JOINTS: A. ALL CONSTRUCTION JOINTS SHALL HAVE FORMED KEYWAYS AND WATERSTOPS (WHERE INDICATED) PER DETAILS ON SHEET S-2.	
	12.CAST—IN—PLACE CONCRETE WALLS WHICH SUPPORT AN ELEVATED SLAB SHALL NOT BE BACKFILLED UNTIL THE ELEVATED SLAB IS PLACED AND CURED.	
	13.ALL EXPOSED EDGES OF BEAMS, COLUMNS, SLABS AND WALLS SHALL BE CHAMFERED 3/4".	
	METALS	
	 MISCELLANEOUS METALS SHALL CONFORM TO ASTM A-36. ALL GALVANIZED STEEL SHALL BE HOT-DIP GALVANIZED 	
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- CTOR SHALL BE AWARE OF AND VERIFY LOCATION OF ALL ROUND UTILITIES, TANKS, ETC. DUE CARE SHALL BE SED DURING CONSTRUCTION ACTIVITIES SUCH THAT EXISTING ARE NOT DAMAGED.
- CAVATED MATERIAL SHALL BE DISPOSED OF IN AN APPROVED ALL EXCAVATIONS SHALL CONFORM TO OSHA EMENTS.
- CAVATION, FILLING, BACKFILLING, FOUNDATION AND TION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL EXPLORATION REPORT, REQUIREMENTS ON THE DRAWINGS, AND PROJECT SPECIFICATIONS, UNO.
- ADE ALL OPEN EXCAVATIONS OCCURRING AS PART THE WORK OST WITH WARNING LIGHTS.
- OR BENCH SIDES OF EXCAVATIONS TO COMPLY WITH CODES DINANCES HAVING JURISDICTION. PROVIDE SHORING OR ING WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE CTION OR STABILITY OF MATERIAL EXCAVATED.
- <u>ANEOUS</u>
- CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ENT FOUNDATION, PAD AND CURB DIMENSIONS, AND THE AND LOCATIONS OF ANCHOR BOLTS FROM MANUFACTURER'S ED SHOP DRAWINGS.
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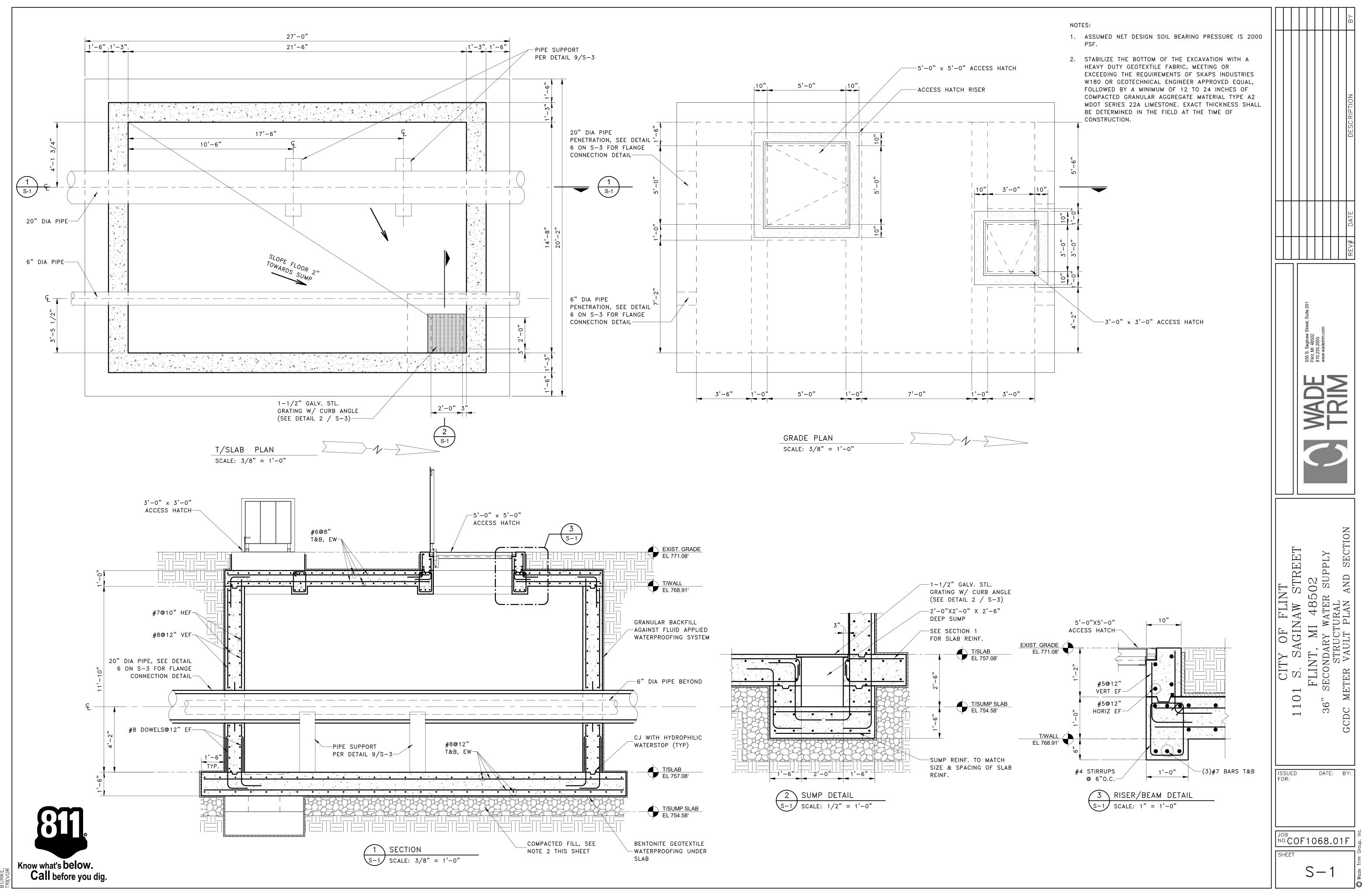
REINFORCING TENSION					
SPLICE TABLE					
BAR SIZE	TENSION LAP LENGTH	* TOP BARS			
#3	16"	22"			
#4	20"	29"			
#5	24"	36"			
#6	29"	43"			
#7	42"	63"			
#8	48"	72"			
#9	54"	81"			
#10	61"	91"			
#11	67"	101"			
NOTES					
 ABOVE TABLE IS FOR NORMAL WEIGHT CONCRETE; f'c=5,000 PSI AND REINFORCING STEEL; fy=60,000 PSI. 					

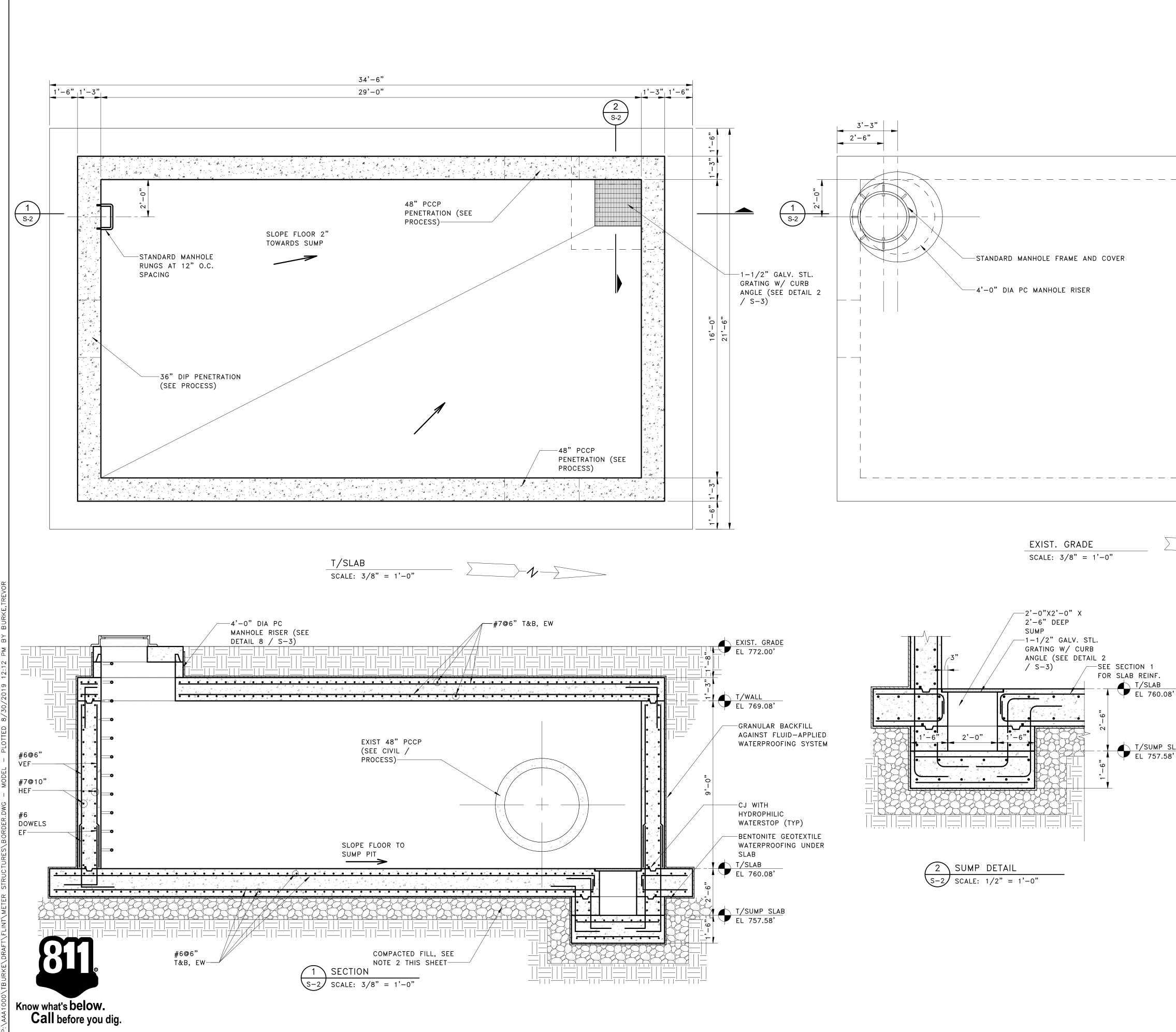
- 2. ALL SPLICES SHALL BE CONSIDERED TENSION SPLICES USING LAP LENGTHS IN TABLE ABOVE UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS.
- 3. LENGTHS ARE BASED ON LAP CLASS B SPLICES WITH CENTER TO CENTER SPACING OF BARS EQUAL TO OR GREATER THAN 6 DIAMETERS.
- 4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST UNDER THEM.
- 5. USE TENSION LAP LENGTHS FOR HORIZ & VERT. WALL BARS.

STRUCTURAL ABBREVIATIONS

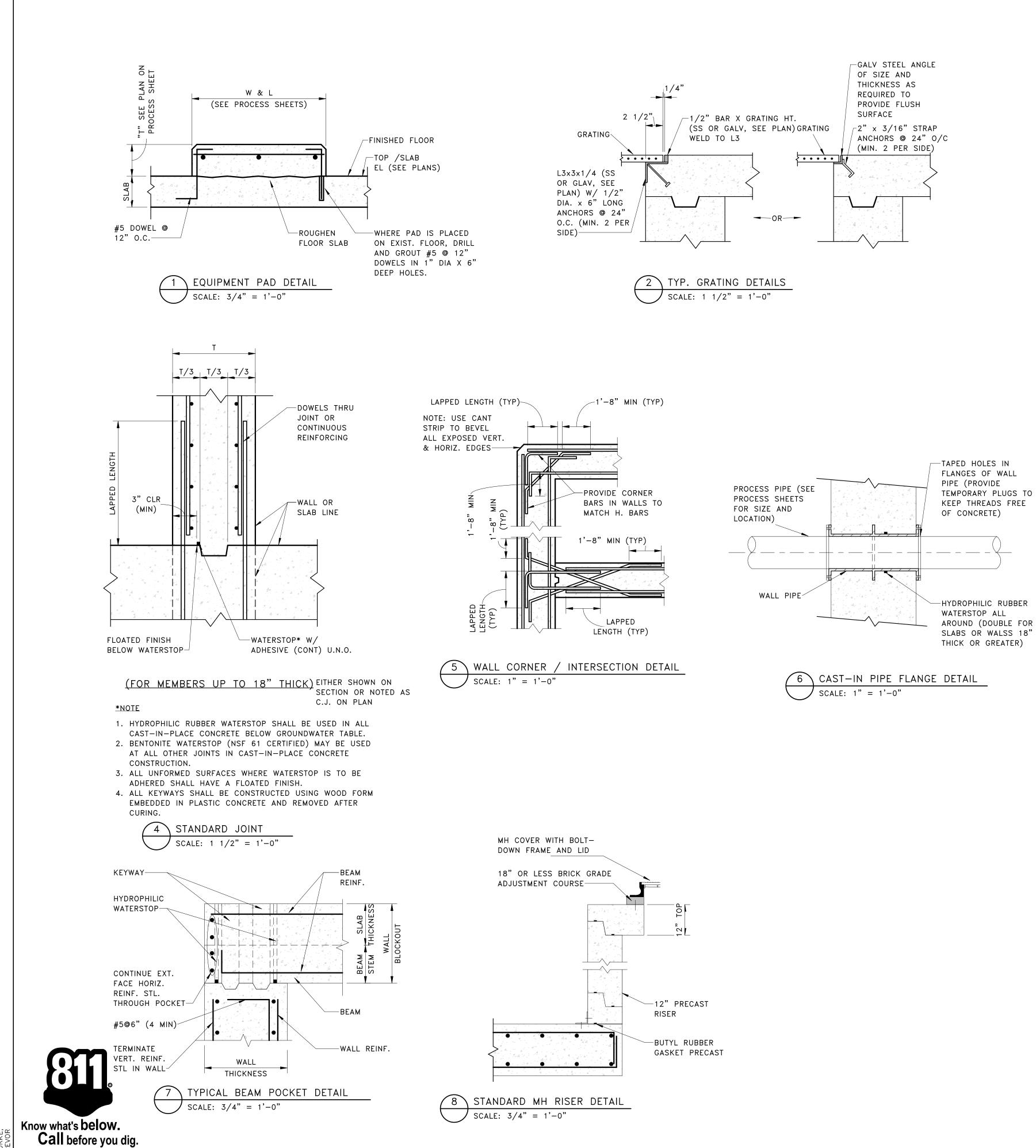
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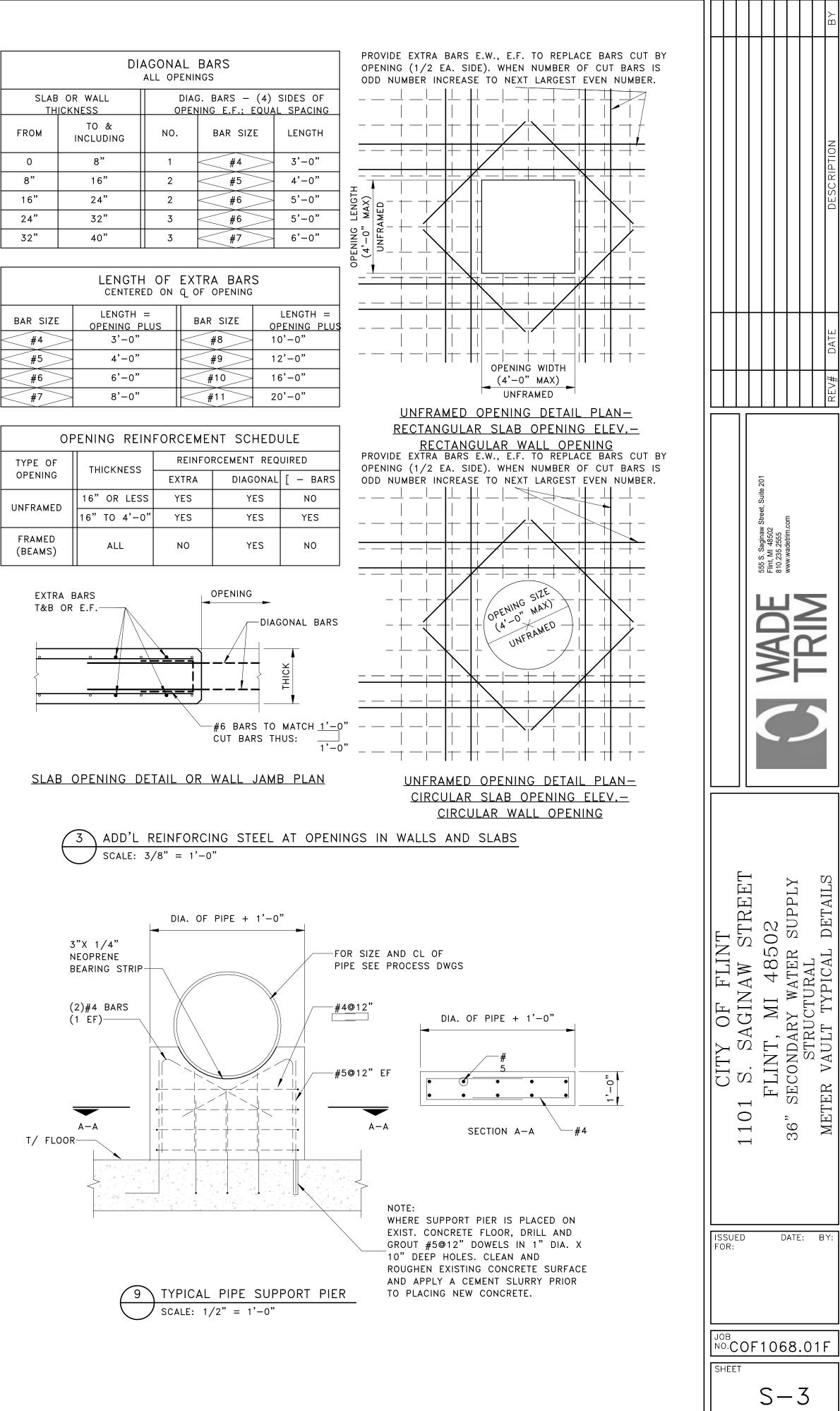
						ΒY
						DESCRIPTION
						DATE
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					100	
CITY OF FLINT	1101 S. SAGINAW STREET	FLINT MI 48502	36" SECONDARY WATER SUPPLY	STRIICTIRAL		GENERAL NUIES AND ABBREVIATIONS
CITY OF FLINT		FLINT MI 48502	36" SECONDARY WATER SUPPLY			x





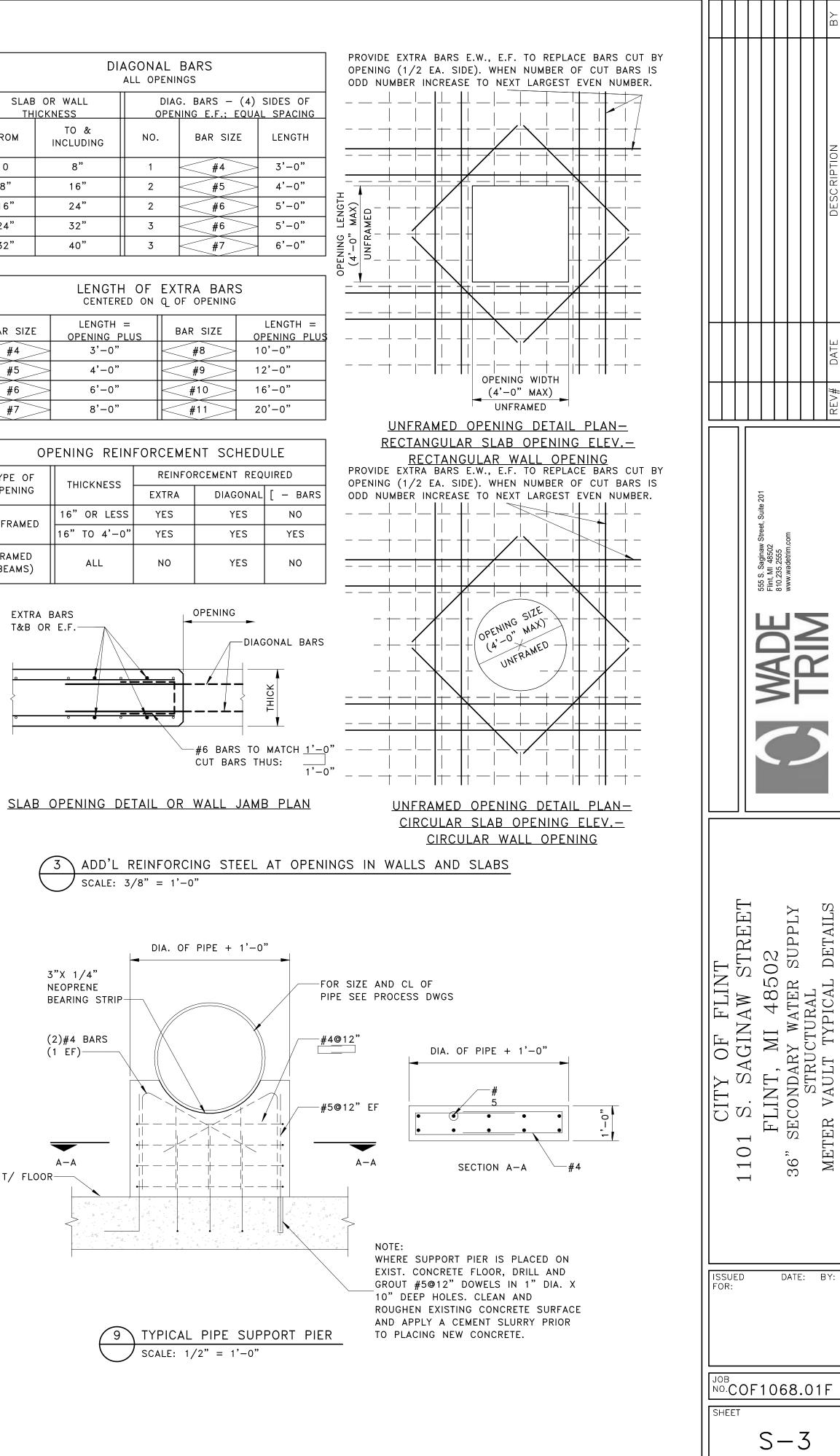
	NOTES:					В
	1. ASSUMED NET DESIGN SOIL PSF.	BEARING PRESSURE I	S 2000			
	2. STABILIZE THE BOTTOM OF HEAVY DUTY GEOTEXTILE F EXCEEDING THE REQUIREME W180 OR GEOTECHNICAL E FOLLOWED BY A MINIMUM COMPACTED GRANULAR AGO MDOT SERIES 22A LIMESTO BE DETERMINED IN THE FIE CONSTRUCTION.	ABRIC, MEETING OR NTS OF SKAPS INDUST NGINEER APPROVED EQ OF 12 TO 24 INCHES GREGATE MATERIAL TYP NE. EXACT THICKNESS	RIES UAL, OF E A2			DESCRIPTION
					++++	REV# DATE
				555 S. Saginaw Street, Suite 201	Flint, MI 48502 810.235.2555 www.wadetrim.com	
/						
,				Y OF FLINT SAGINAW STREET	FLINT, MI 48502 36" SECONDARY WATER SUPPLY STRUCTURAL FLINT METER VALLT PLAN AND SECTION	
<u>LAB</u>				CIT 1101 S.	СТТҮ ОР	
				JOB	DATE: B`	
				SHEET	1068.01	F
				S	6-2	=

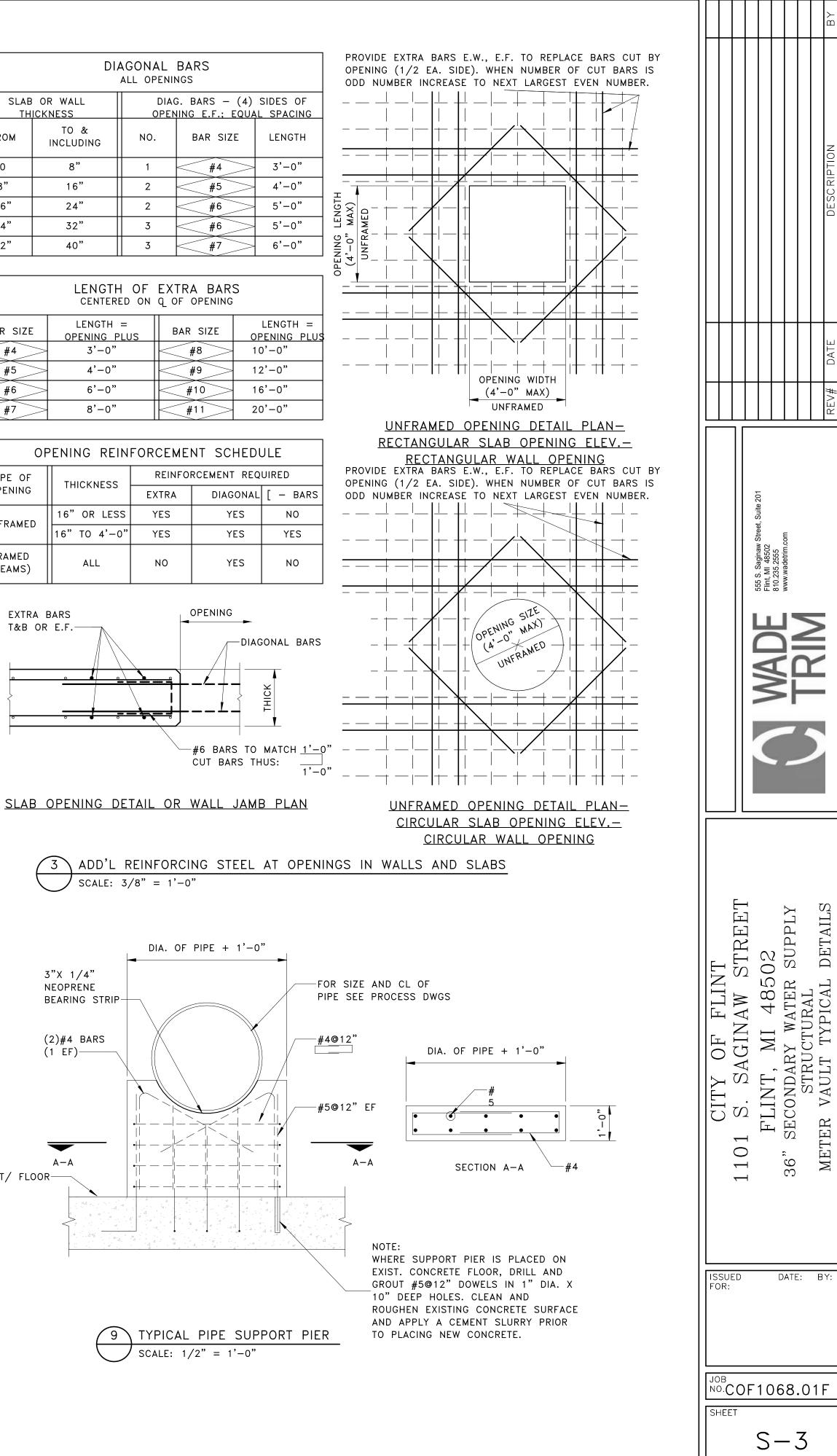


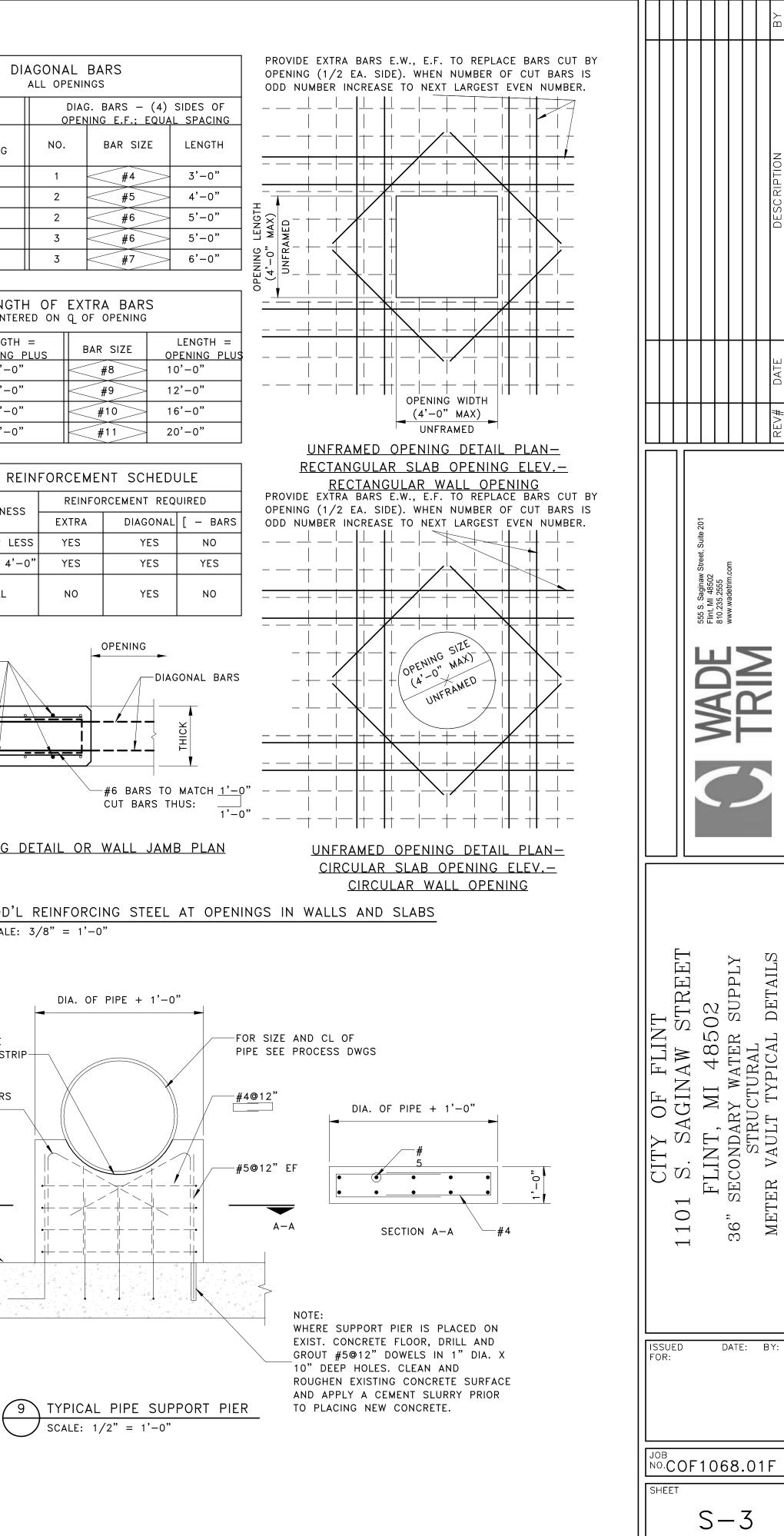


		EXTRA BARS Q OF OPENING
BAR SIZE	LENGTH = OPENING PLUS	BAR SIZE
#4	3'-0"	#8
#5	4'-0"	#9
#6	6'-0"	#10
#7	8'-0"	#11

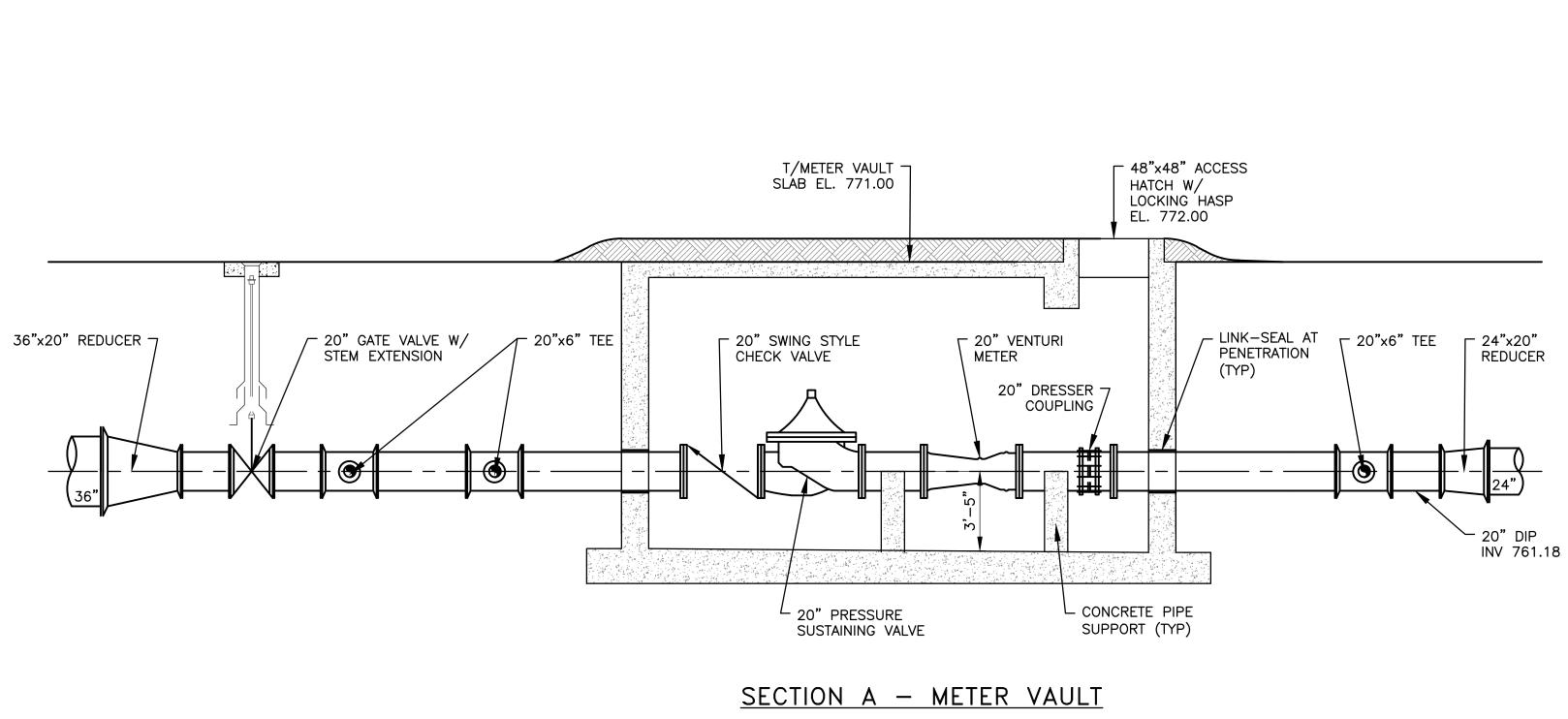
Г									
	OPENING REINFORCEMENT SCHI								
	TYPE OF	THICKNESS	REINFO	RCEMENT I					
	OPENING	Inickiess	EXTRA	DIAGO					
	UNFRAMED	16" OR LESS	YES	YES					
		16" TO 4'-0"	YES	YES					
	FRAMED (BEAMS)	ALL	NO	YES					





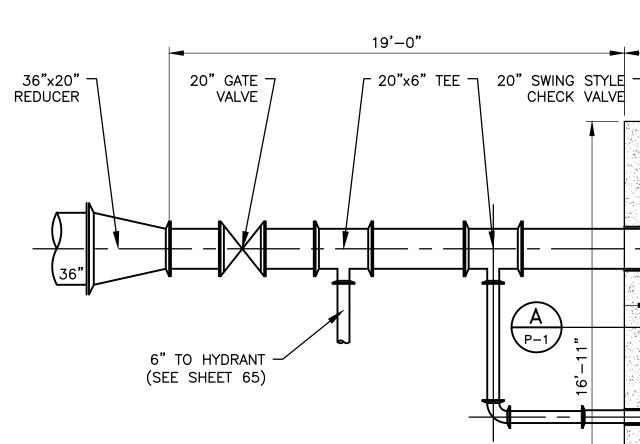






6" SWING STYLE –/ CHECK VALVE

1" CORP STOP –/ (TYP OF 4)



SCALE: ¼"=1'-0"

23'-10"

20" PRESSURE 7

 \sim

000 Trans. 720 VENTURI 720 DRESSER METER COUPLING

2'-0"

CONCRETE -

SUPPORT (TYP)

- 60"x60" ACCESS

215 6

└── 6" OMNI TURBO WATER METER

6" BUTTERFLY

<u>METER VAULT – PLAN</u>

SCALE: ¼"=1'-0"

VAVLE (ACTUATED)

1 1 1 15

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L SUMP

11'-4"

/- 20"x6" TEE

- 6"90 DEGREE

BEND (TYP)

LINK-SEAL AT PENETRATION

(TYP)

- 36"X36" ACCESS

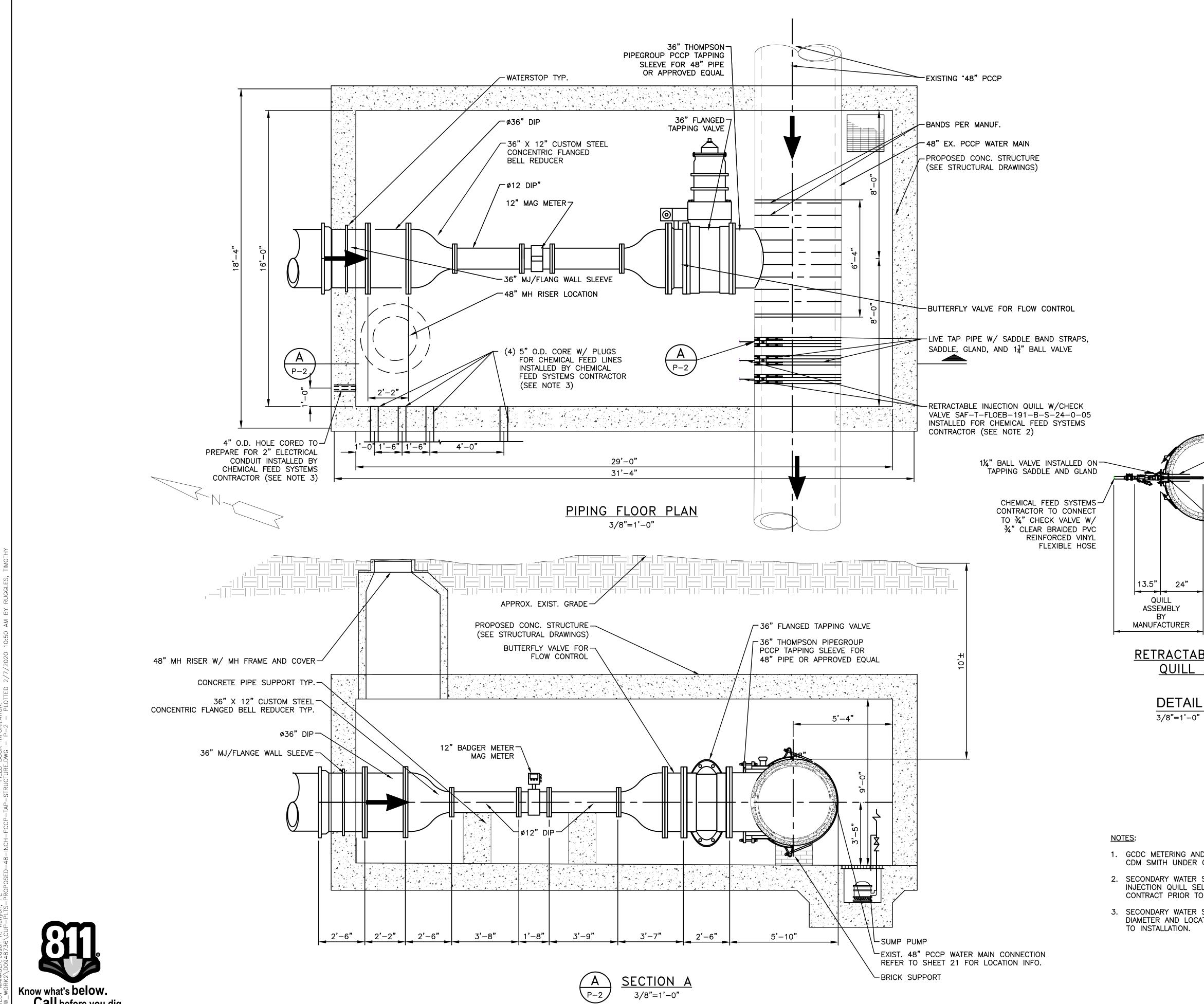
L 2" SCH 80 PVC PER AWWA C900 DRAIN TO DITCH

HATCH W/ LOCKING HASP

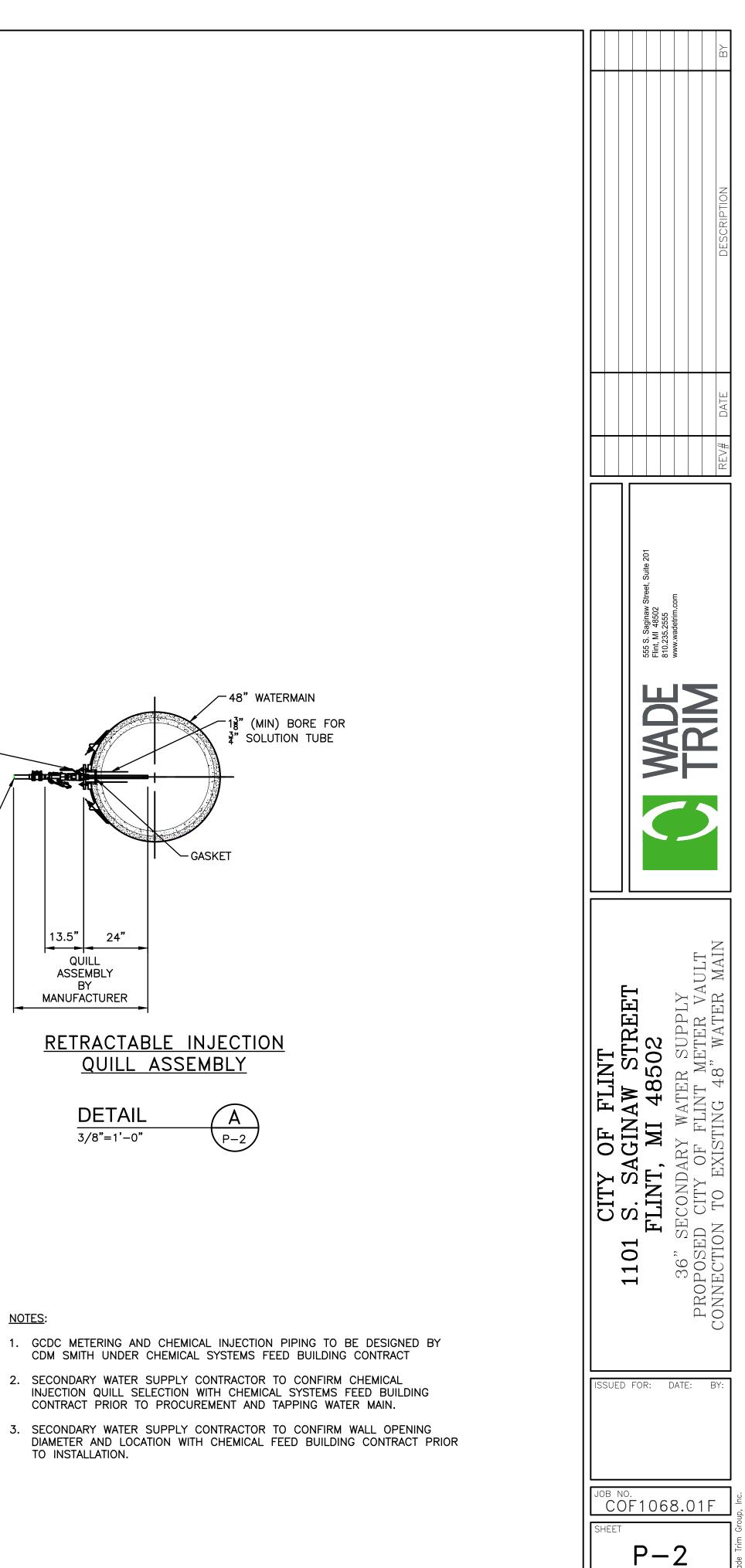
′—6'

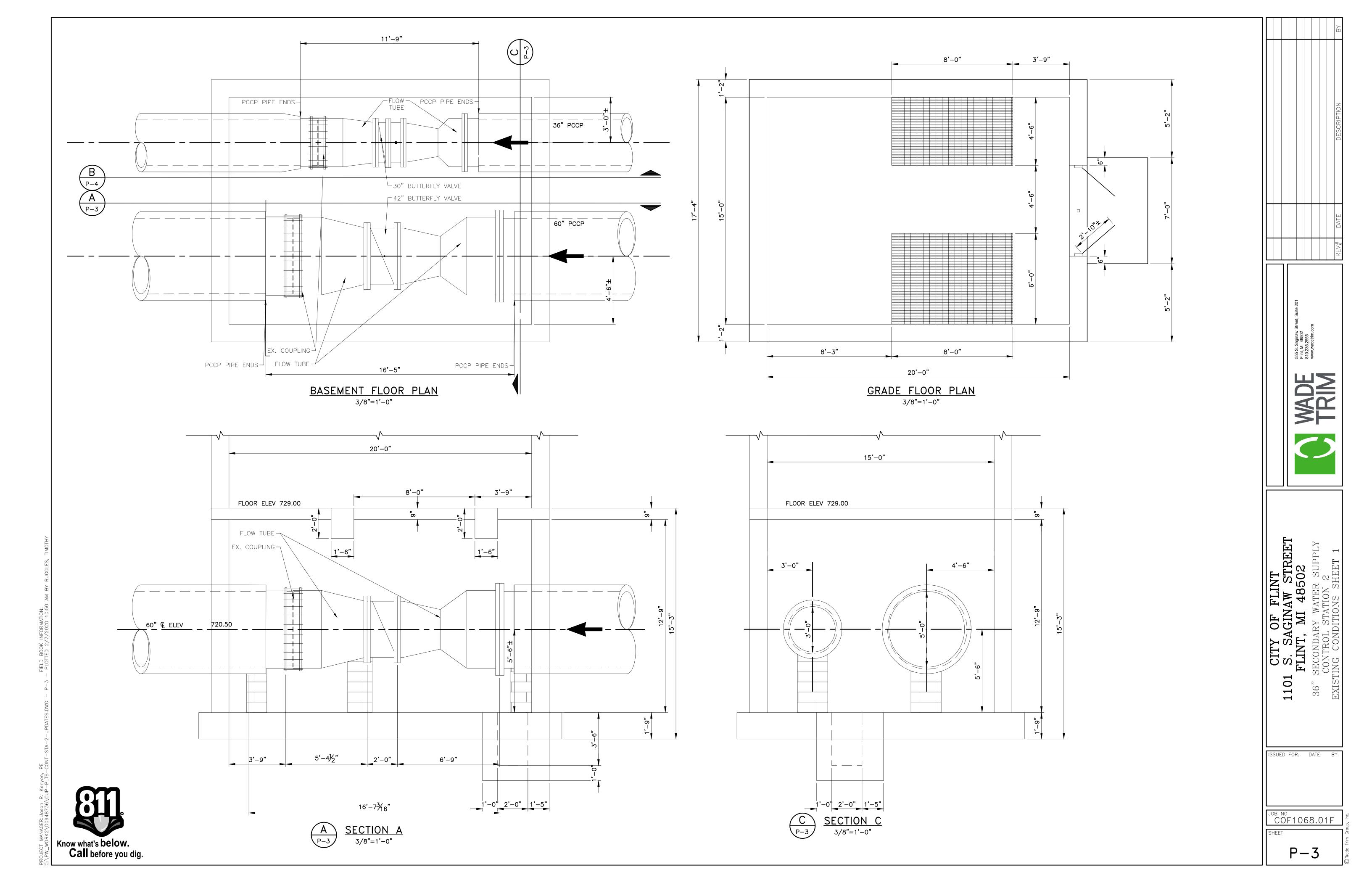
CITY OF FLINT CITY OF FLINT 1101 S. SAGINAW STREET 1101 S. SAGINAW STREET 1101 S. SAGINAW STREET Emilian (1990) 36" SECONDARY WATER SUPPLY Emilian (1990) 36" SECONDARY WATER SUPPLY Emilian (1990) 36" SECONDARY WATER SUPPLY Emilian (1990) 9000SED- GCDC METER VAULT AT FRANCES RD Emilian (1990) PROPOSED- GCDC METER VAULT AT FRANCES RD Emilian (1990)		B
CITY OF FLINT CITY OF FLINT 11 S. SAGINAW STREET 1 12 S. SAGINAW STREET 555.58ginaw street, sule 201 13 S. SAGINAW STREET 555.58ginaw street, sule 201 14 SECONDARY WATER SUPPLY 555.58ginaw street, sule 201 15 SECONDARY WATER SUPPLY 555.58ginaw street, sule 201 16 GCDC METER VAULT AT FRANCES RD 555.58ginaw street, sule 201 17 SECONDARY WATER SUPPLY 555.58ginaw street, sule 201 18 SECONDARY WATER SUPPLY 555.58ginaw street, sule 201		DESCRIPTION
CITY OF FLINT 1 S. SAGINAW STREET FLINT, MI 48502 ' SECONDARY WATER SUPPLY GCDC METER VAULT AT FRANCES RD GCDC METER VAULT AT FRANCES RD		
CITY OF FLINT 1101 S. SAGINAW STREET FLINT, MI 48502 36" SECONDARY WATER SUPPLY PROPOSED- GCDC METER VAULT AT FRANCES RD	555 S. Saginaw Street, Suite 201 Fint, MI 48502 810 235 2555	And static com
	بتحا	36" SECONDARY WATER SUPPLY PROPOSED- GCDC METER VAULT AT FRANCES RD
SHEET		8.01F

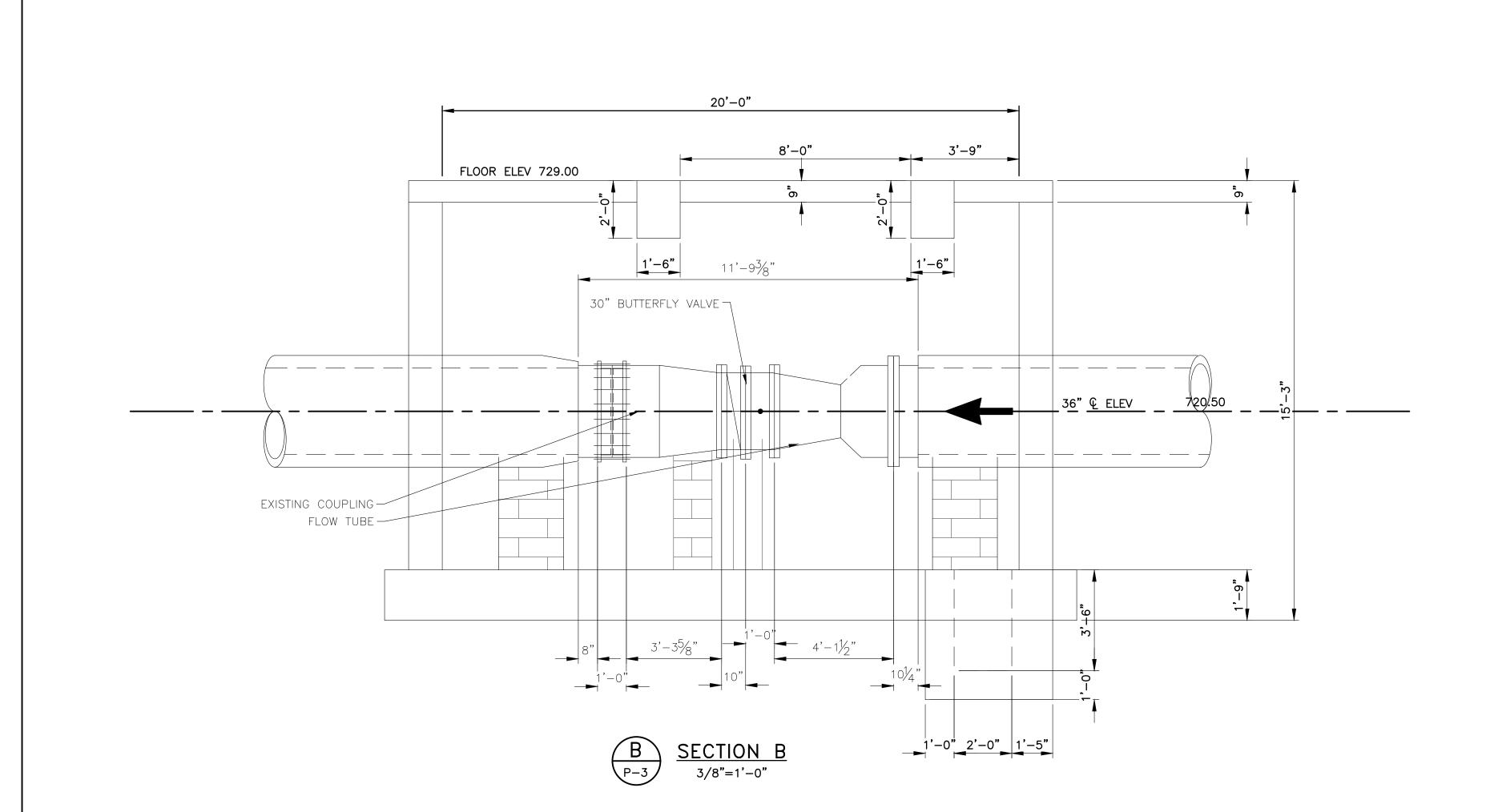
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Call before you dig.

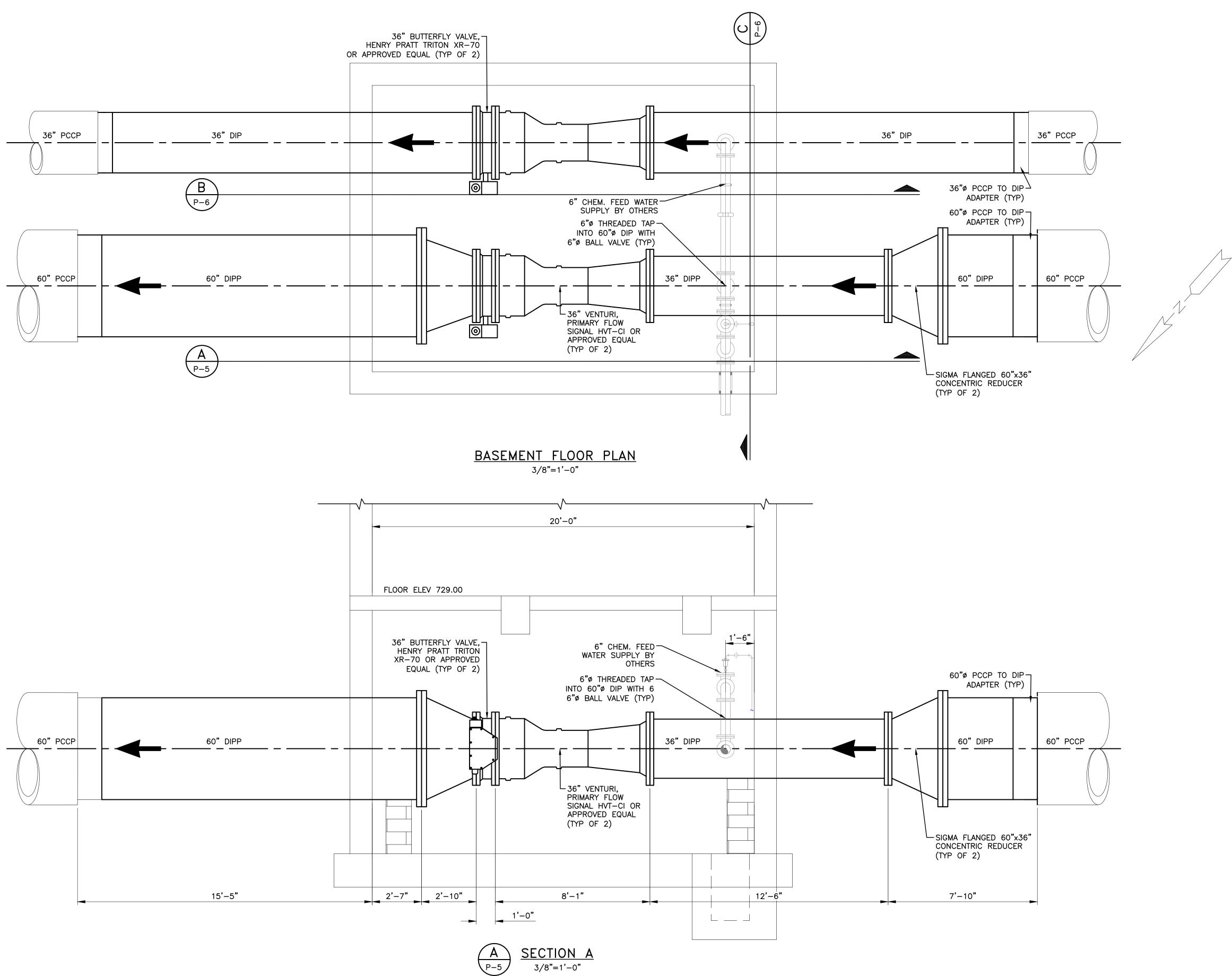


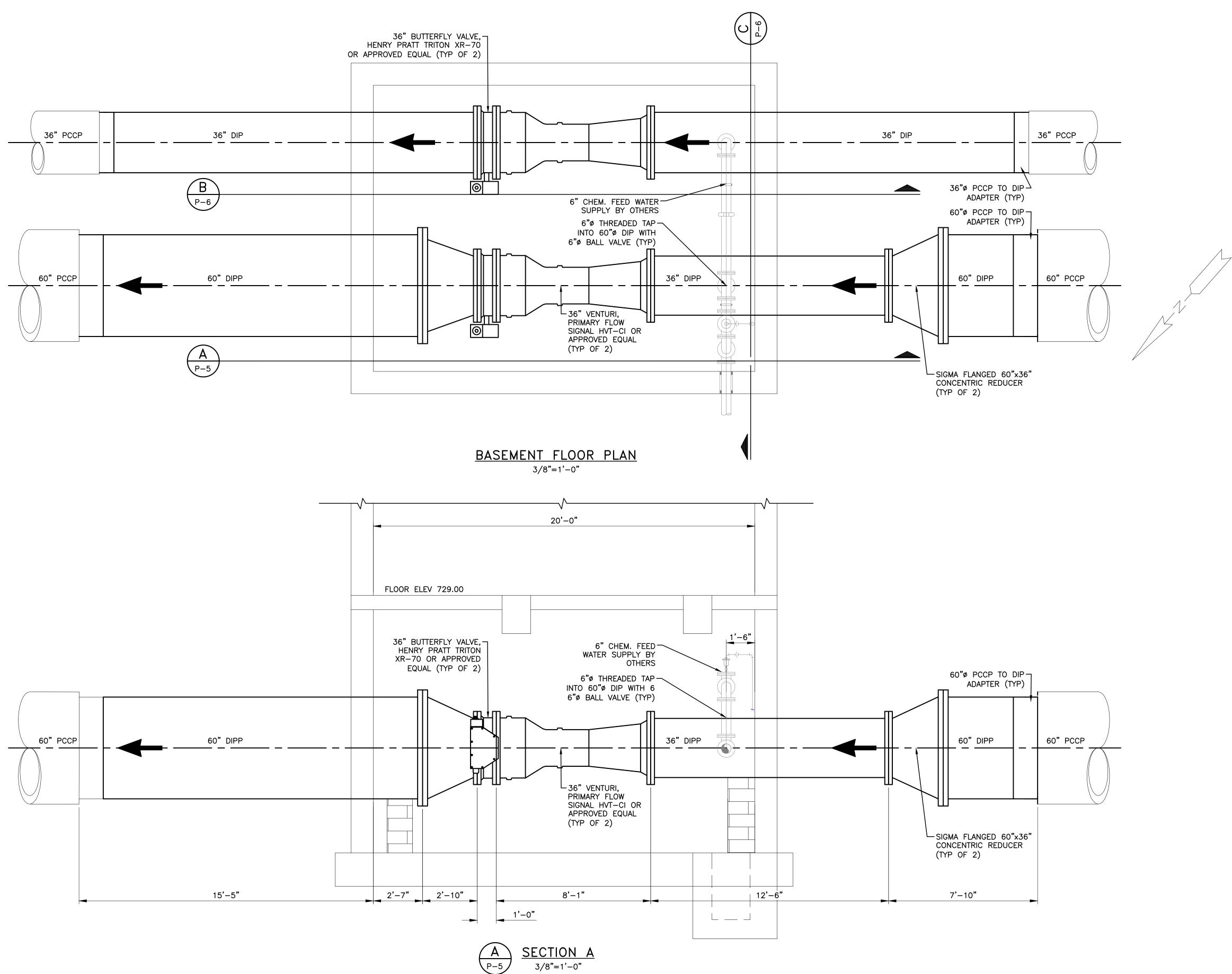






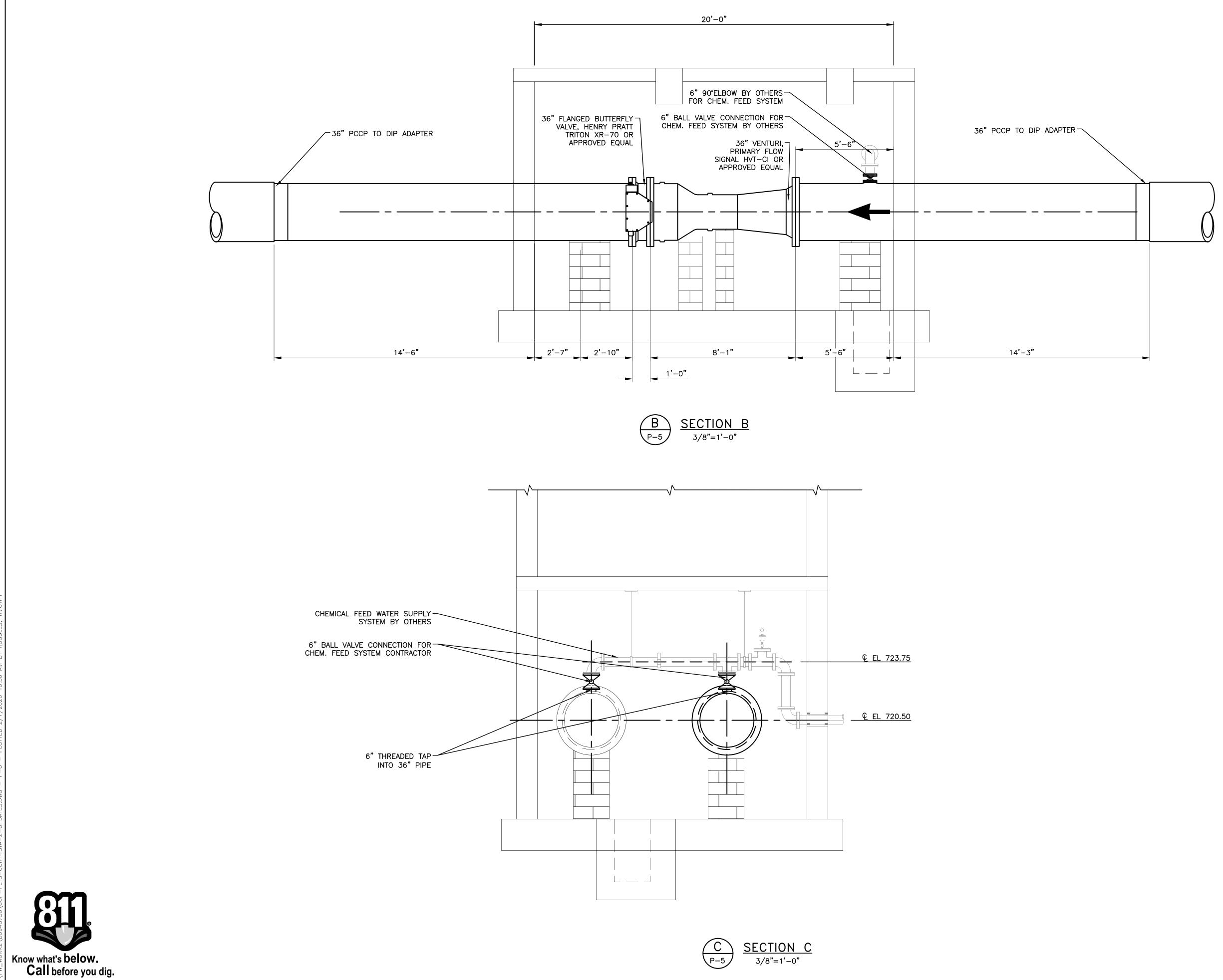
			BY
			DESCRIPTION
			REV# DATE
	555 S. Saginaw Street, Suite 201 Flint, MI 48502 840 235 555		
د CIT د	FLINT, MI 48502	36" SECONDARY WATER SUPPLY	EXISITNG CONDITIONS SHEET 2
د CIT د	FLIN 5.	36" SECONDARY WATER SUPPLY	EXISITNG CONDITIONS SHEET 2



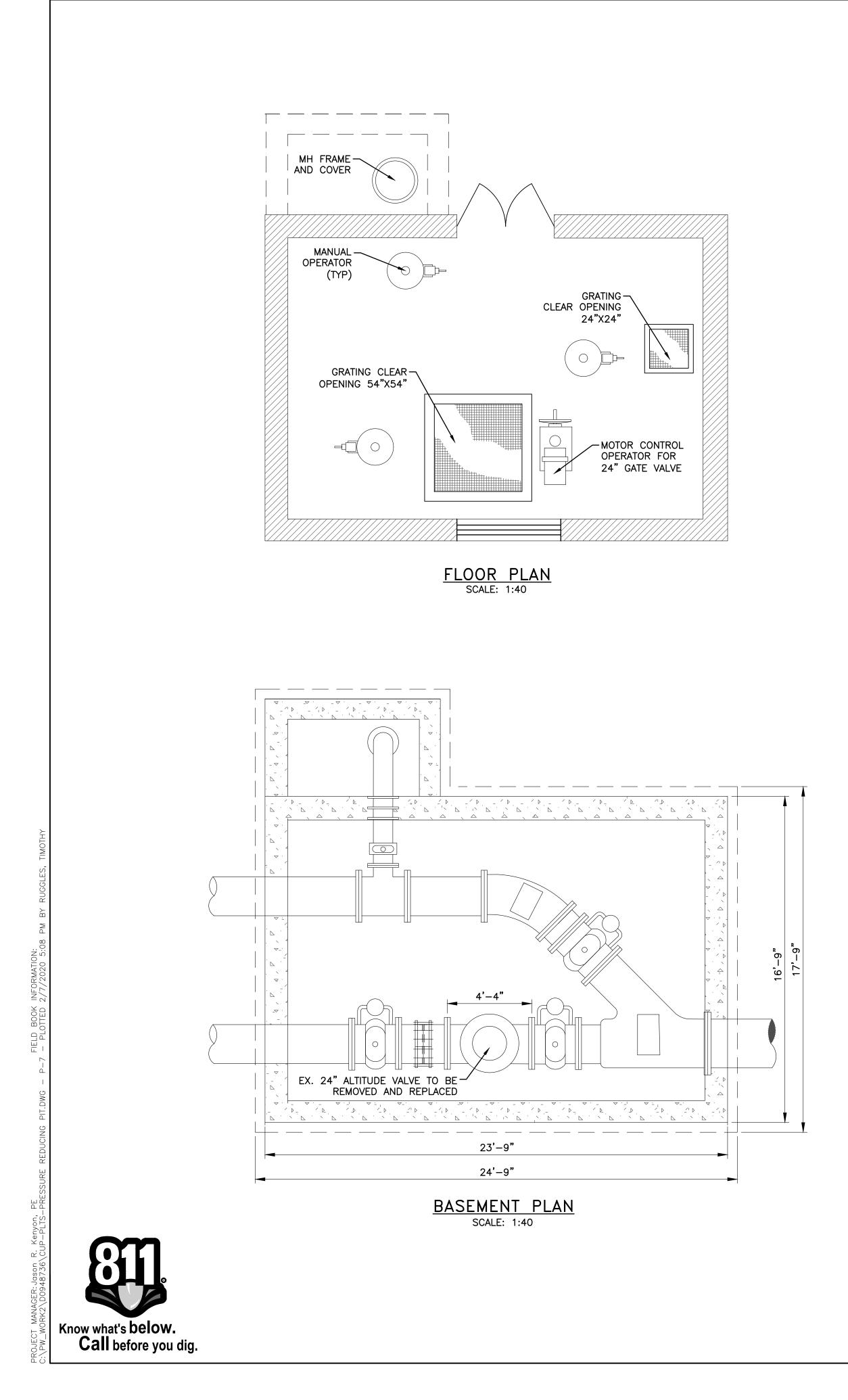


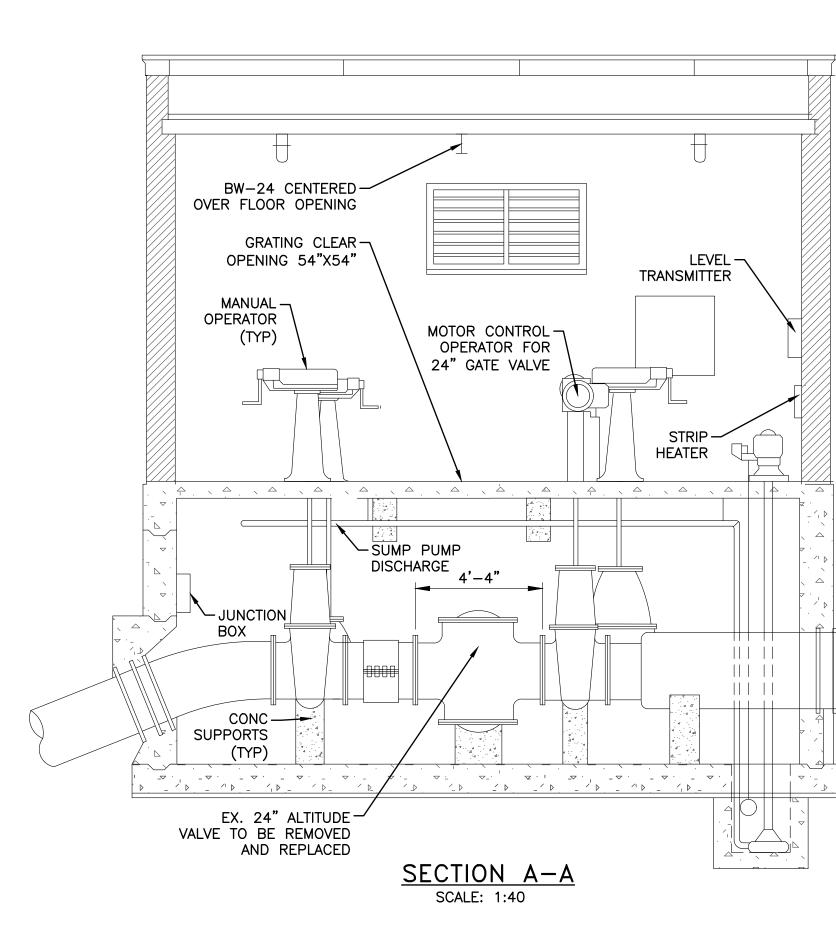


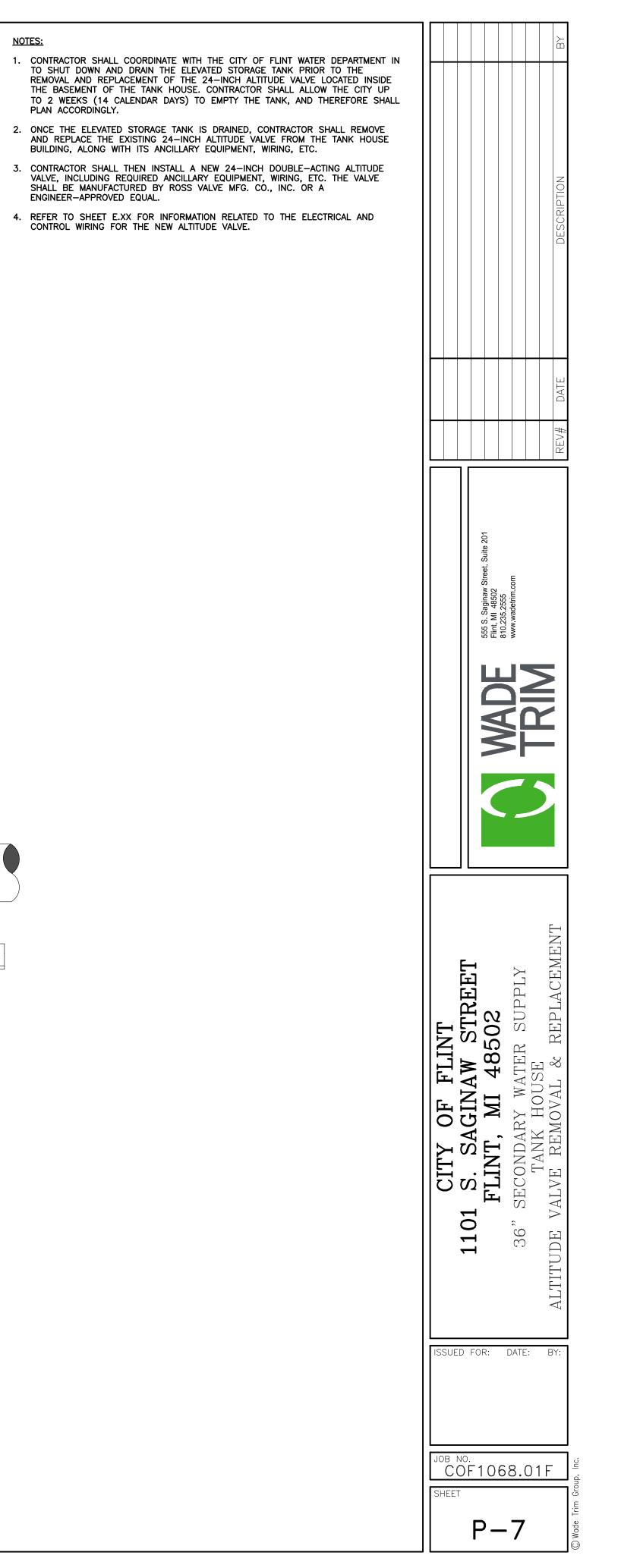


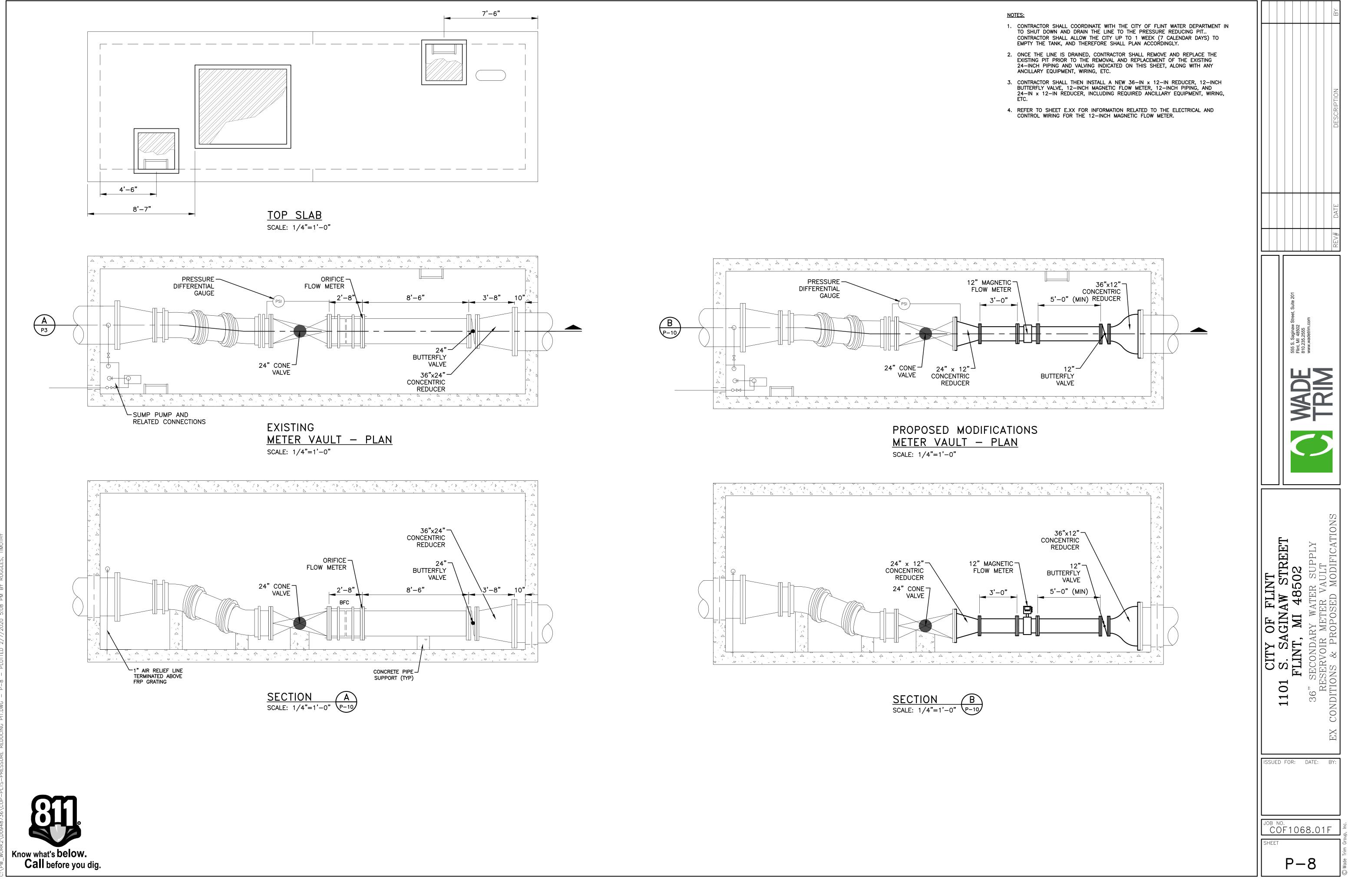


			REV# DATE DESCRIPTION BY
	555 S. Saginaw Street, Suite 201 Flint, MI 48502 810.235.2555	A Adetim.com	
CITY OF FLINT	누포니	36" SECONDARY WATER SUPPLY CONTROL STATION 2	PROPOSED IMPROVEMENTS SHEET 2
ISSUED	FOR:	DATE:	BY:
JOB NO CO SHEET	F106 P-	8.01 • 6	F

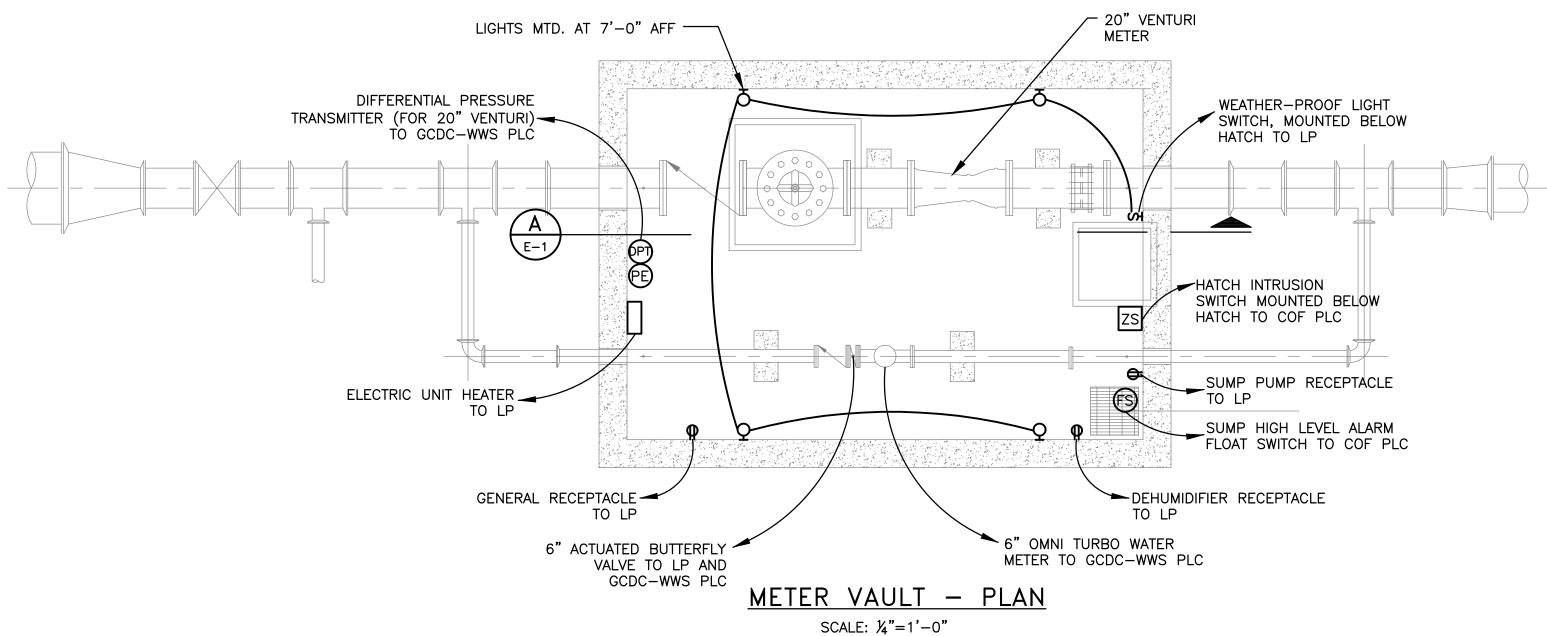




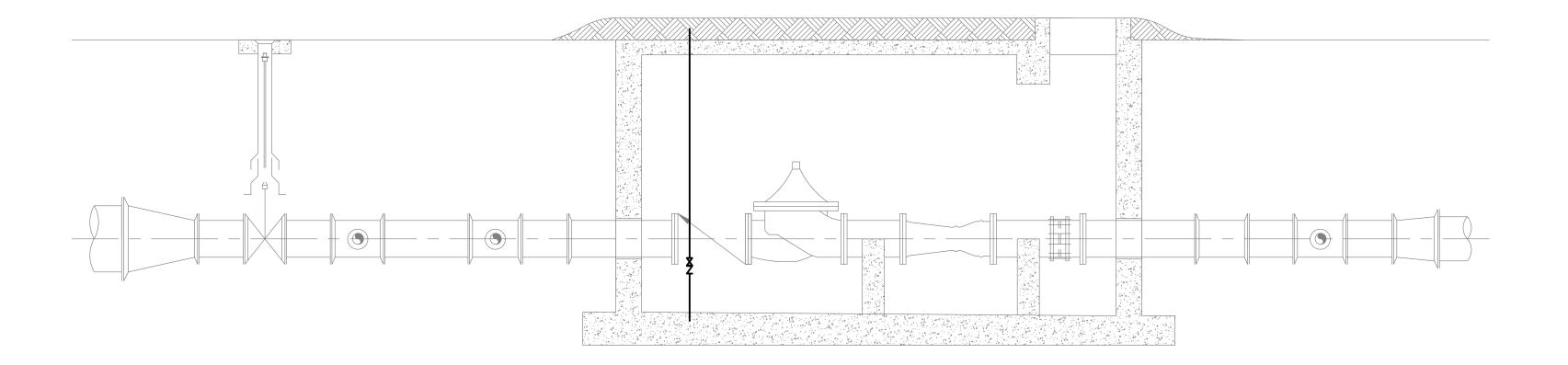




JECT MANAGER:Jason R. Kenyon, PE w_work2\D0948736\cup-plts-pressure reducing pit.Dwg - p-8 - plotted 2/7/2020 5:08 pm BY ruggles, 1





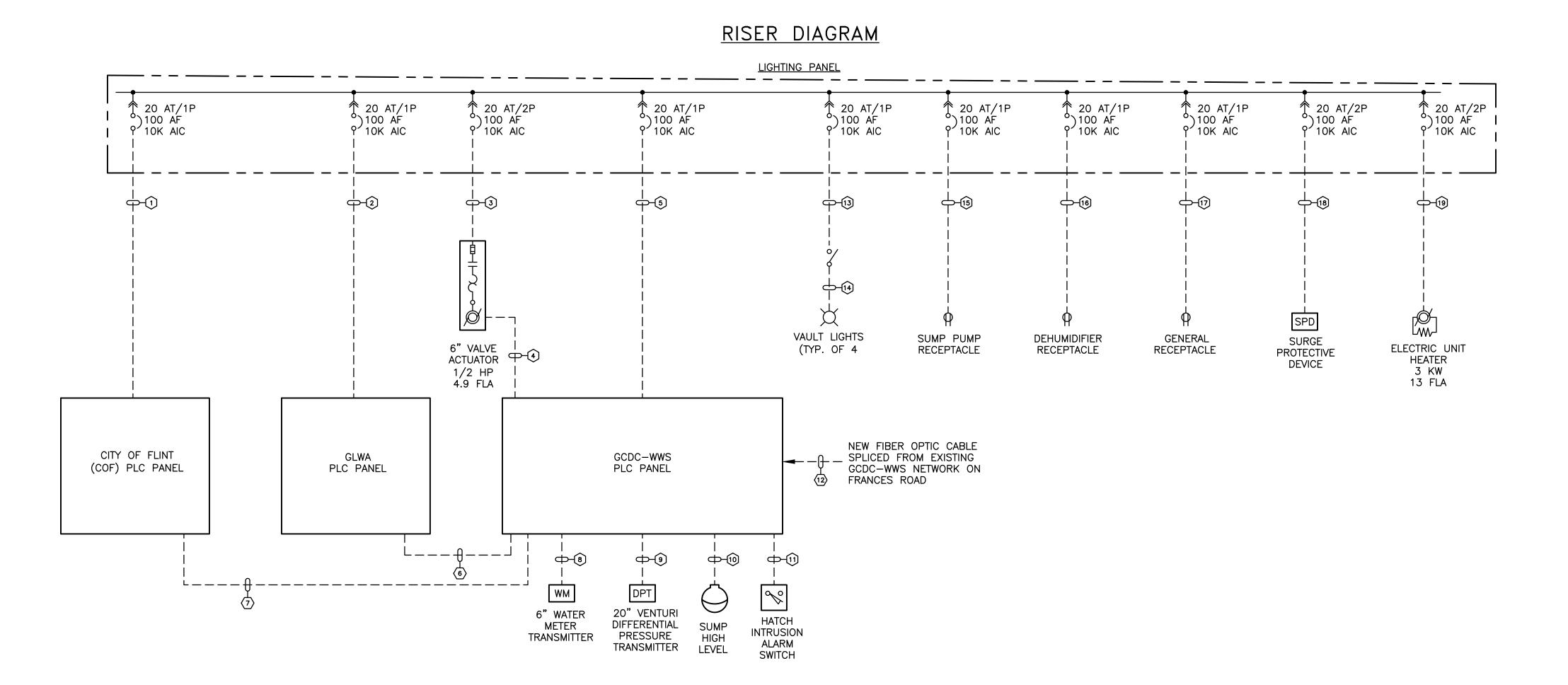




<u>METER VAULT – PROFILE</u> SCALE: ¼"=1'-0"

					BΥ
					DESCRIPTION
					DATE
					rev#
				2	
CITY OF FLINT	FLINT MI 48502		36" SECONDARY WATER SUPPLY	PROPOSED- GCDC METER VALLT AT FRANCES RD	ELECTRICAL PLAN
1101	노		36" SECONDARY WATER SUPPLY	PROPOSED-	ELECTRICAL PLAN
ISSUED	FOR:	D	ATE	PROPOSED-	3Y:

 \sum -Z \rightarrow



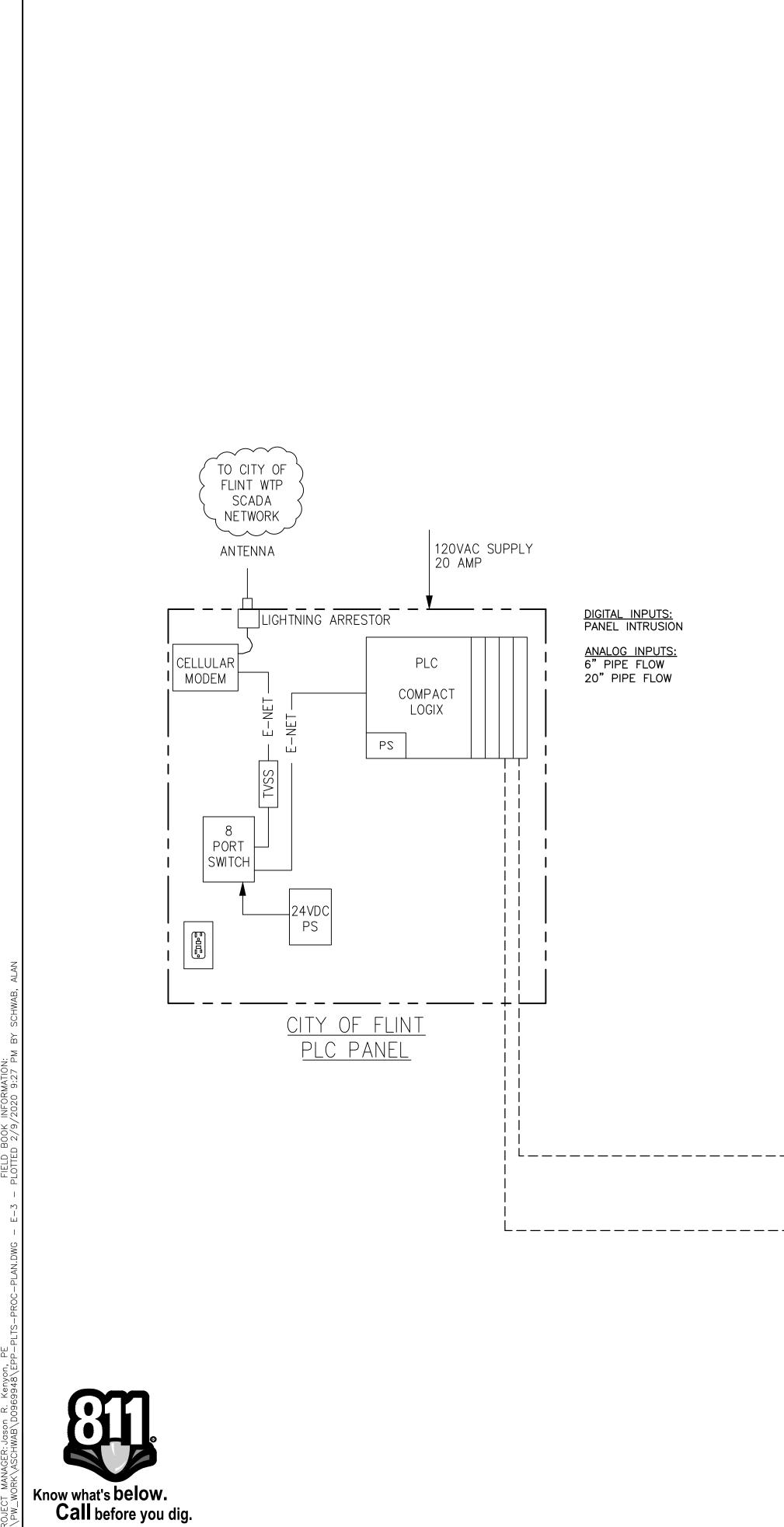
	CABLE SCHEDULE										
					NDUIT	CABLE					
NO.	CONDUIT LABEL	FROM	TO	SIZE	TYPE	QTY. AND SIZE	VOLT	TYPE	COMMENTS		
1	COFPLC-PWR-1	LIGHTING PANEL	COF PLC PANEL	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
2	GLWAPLC-PWR-1	LIGHTING PANEL	GLWA PLC PANEL	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
3	VA6-PWR-1	LIGHTING PANEL	6" ACTUATOR	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	240V. POWER		
4	VA6-CTRL-1	GCDC PLC PANEL	6" ACTUATOR	3/4"	RGS	10#14	600	THWN-2	120V. CONTROL		
5	GCDCPLC-PWR-1	LIGHTING PANEL	GCDC PLC PANEL	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
6	GCDC/GLWA-COM-1		GCDC PLC PANEL	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 20" FLOW		
0	GCDC/GLWA-COM-T	GLWA PLC PANEL	GCDC PLC PANEL	5/4	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 6" FLOW		
7			GCDC PLC PANEL	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 20" FLOW		
'	GCDC/COF-COM-1	COF FLC FANEL	GCDC PLC PANEL	5/4	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 6" FLOW		
8	WM6-CTRL-1	6" WM	GCDC PLC PANEL	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 6" FLOW		
9	DPT20-CTRL-1	20" DPT	GCDC PLC PANEL	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 20" FLOW		
10	GCDCPLC-CTRL-1	FLOAT SWITCH	GCDC PLC PANEL	3/4"	RGS	2#14	600	THWN-2	120V. CONTROL		
11	GCDCPLC-CTRL-2	LIMIT SWITCH	GCDC PLC PANEL	3/4"	RGS	2#14 + 1#14 GND	600	THWN-2	120V. CONTROL		
12	GCDC-COM-1	CCDC	GCDC PLC PANEL	2"	PVC	FIBER OPTIC CABLE	N/A	-	COMMUNICATION		
13	LIGHTS-PWR-1	LIGHTING PANEL	LIGHT SWITCH	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
14	LIGHTS-PWR-2	LIGHTS (TYP.)	LIGHT SWITCH	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
15	SPRECP-PWR-1	LIGHTING PANEL	SUMP PUMP REC.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
16	DHRECP-PWR-1	LIGHTING PANEL	DEHUMID. RECP.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
17	GENRECP-PWR-1	LIGHTING PANEL	GENERAL RECP.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
18	SPD-PWR-1	LIGHTING PANEL	SPD	3/4"	RGS	3#12 + 1#12 GND	600	THWN-2	120V. POWER		
19	EUH-PWR-1	LIGHTING PANEL	UNIT HEATER	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	240V. POWER		

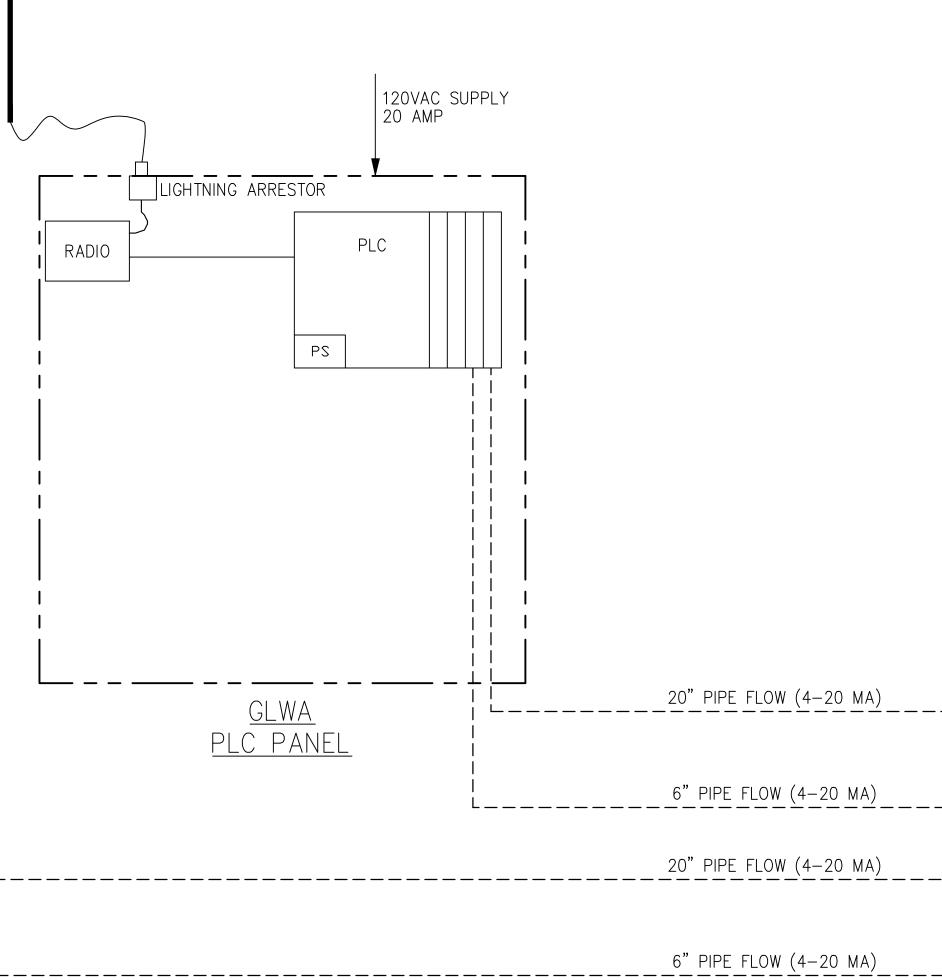


PANEL: LIGHTING PANEL 100A BUS (10K AIC)								
VOLTAGE: 240/120 VAC PHASE: 1 WIRE: 3 MAIN: 100 AMP/2P TYPE: NEMA 4X STAINLESS STEEL MOUNTING: SURFACE								
CKT	BKR	LOAD	VA	PH	VA	LOAD	BKR	СКТ
1	20A/2P	ELECTRIC UNIT HEATER	1560	A	0	SURGE PROTECTIVE DEVICE (SPD)	20A/2P	2
3	20A/2P	ELECTRIC UNIT HEATER	1560	В	0	SORGE FROTECTIVE DEVICE (SFD)	204/25	4
5	20A/2P	6" VALVE ACTUATOR	588	A	1176	SUMP PUMP RECEPTACLE	20A/1P	6
7	204/28	8 VALVE ACTUATOR	588	В	600	DEHUMIDIFIER RECEPTACLE	20A/1P	8
9	20A/1P	METER PIT LIGHTS	200	A	180	GENERAL RECEPTACLE	20A/1P*	10
11	20A/1P	GCDC-WWS PLC PANEL	600	В	600	CITY OF FLINT PLC PANEL	20A/1P	12
13	20A/1P	GLWA PLC PANEL	600	A	0	SPARE	20A/1P	14
15	20A/1P	SPARE	0	В	0	SPARE	20A/1P	16
17	SPACE	SPACE	0	A	0	SPACE	SPACE	18
19	SPACE	SPACE	0	В	0	SPACE	SPACE	20
TOTAL:						·		
		A=4304				B=	3948	
TOTAL	CONNECTED	D LOAD:		8252				

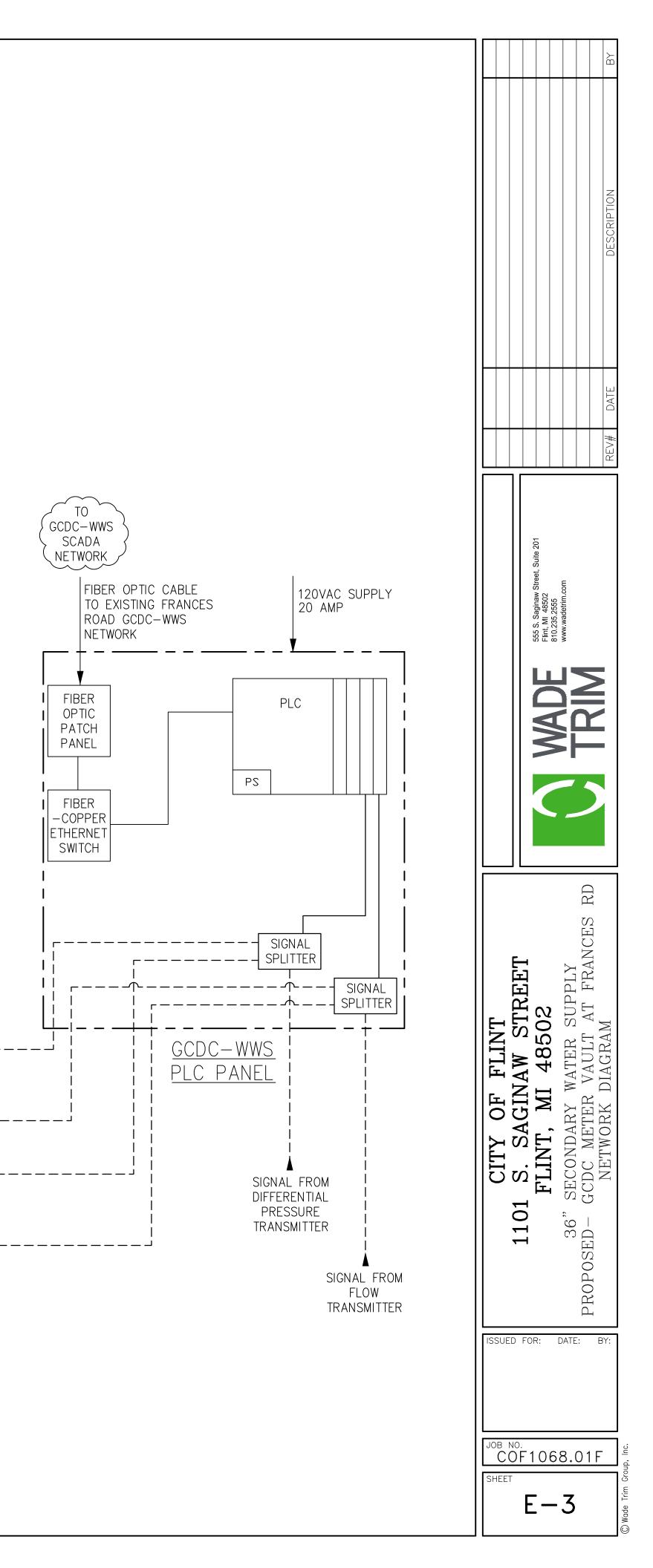
* GFCI CIRCUIT BREAKER

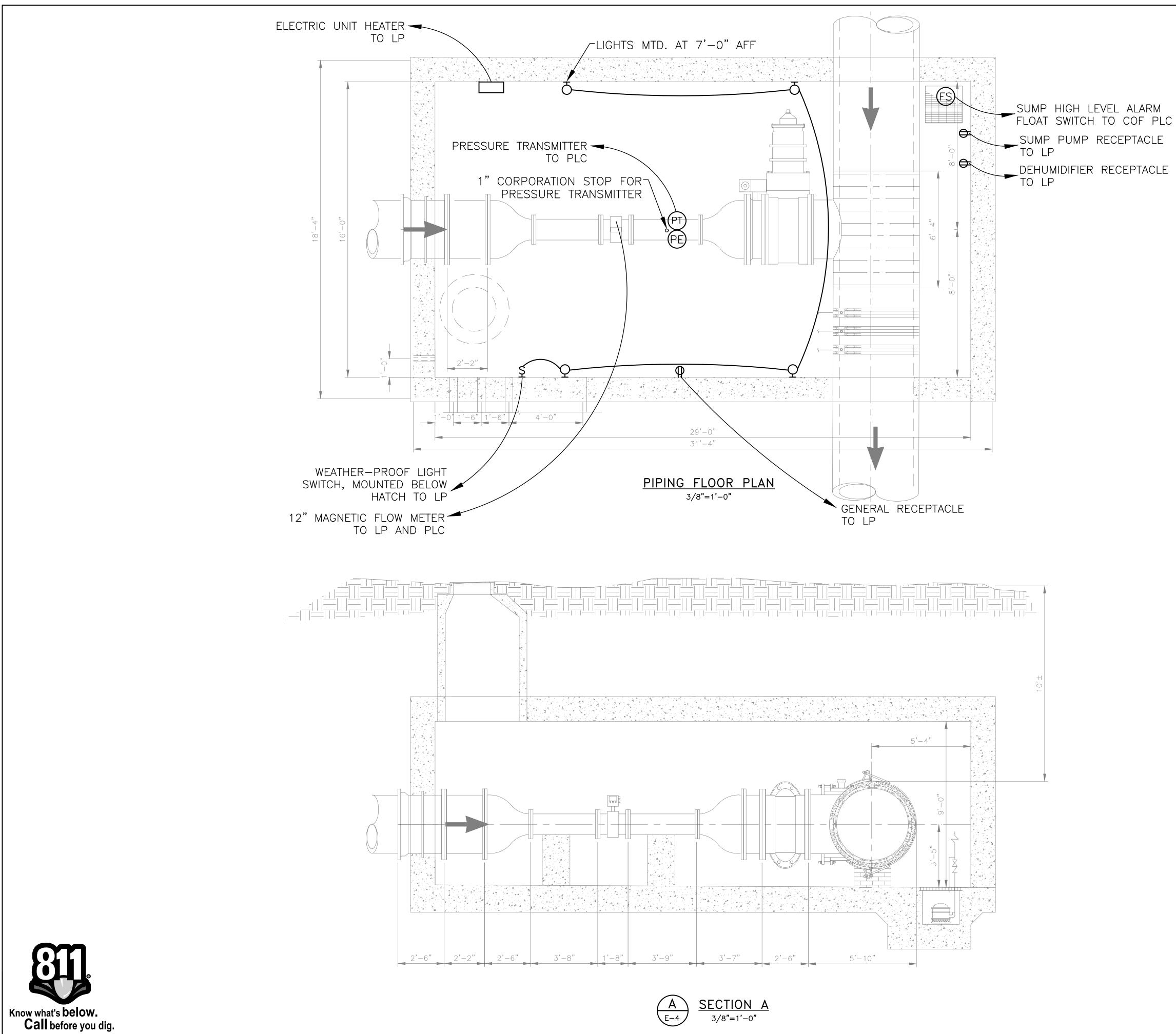






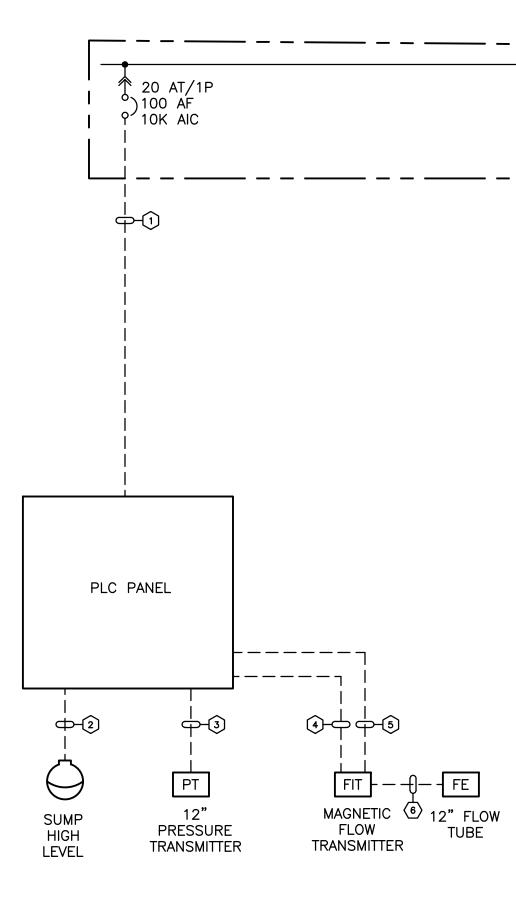
TO GLWA SCADA NETWORK





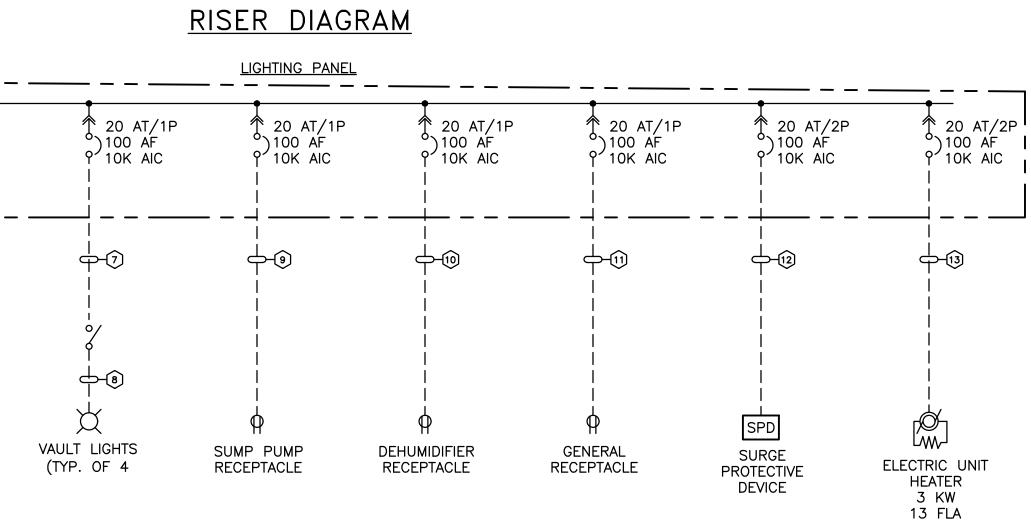
PROJECT MANAGER:Jason R. Kenyon, PE 2:\Pw_work\aschwab\dog48736\eup-plts-proposed-48-inch-pccp-tap-structure.dwg - e-4 - plotted 2/7/2020 6:15 PM BY SchwaB, AL

								BΥ	
								DESCRIPTION	
								DATE	
								rev#	2
			Flint, MI 48502						
CITY OF FLINT			FLINT MI 48502		36" SECONDARY WATER SUPPLY	PROPOSED CITY OF FLINT METER VALLE		ELECIRICAL FLAN	
CITY OF FLINT	1011				36" SECONDARY WATER SUPPLY			ELECIRICAL FLAN	
ISSU		TOTT FOF	₹:	D	ATE		B	Υ:	



	CABLE SCHEDULE										
					NDUIT	CABLE					
NO.	CONDUIT LABEL	FROM	то	SIZE	TYPE	QTY. AND SIZE	VOLT	TYPE	COMMENTS		
1	PLC-PWR-1	LIGHTING PANEL	PLC PANEL	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
2	PLC-CTRL-1	FLOAT SWITCH	PLC PANEL	3/4"	RGS	2#14	600	THWN-2	120V. CONTROL		
3	PT12-CTRL-1	12" PT	PLC PANEL	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. 12" PRESSURE		
4	FIT-PWR-1	PLC PANEL	FLOW XMTTR.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
5	FIT-CTRL-1	PLC PANEL	FLOW XMTTR.	3/4"	RGS	1#16 TWIST SHIELD PAIR	600	THWN-2	24V. 12" FLOW		
6	FIT-CTRL-2	FLOW TUBE	FLOW XMTTR.	3/4"	RGS	MANUFACTURER CABLE	600	THWN-2	POWER AND SIGNAL		
7	LIGHTS-PWR-1	LIGHTING PANEL	LIGHT SWITCH	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
8	LIGHTS-PWR-2	LIGHTS (TYP.)	LIGHT SWITCH	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
9	SPRECP-PWR-1	LIGHTING PANEL	SUMP PUMP REC.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
10	DHRECP-PWR-1	LIGHTING PANEL	DEHUMID. RECP.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
11	GENRECP-PWR-1	LIGHTING PANEL	GENERAL RECP.	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V. POWER		
12	SPD-PWR-1	LIGHTING PANEL	SPD	3/4"	RGS	3#12 + 1#12 GND	600	THWN-2	120V. POWER		
13	EUH-PWR-1	LIGHTING PANEL	UNIT HEATER	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	240V. POWER		

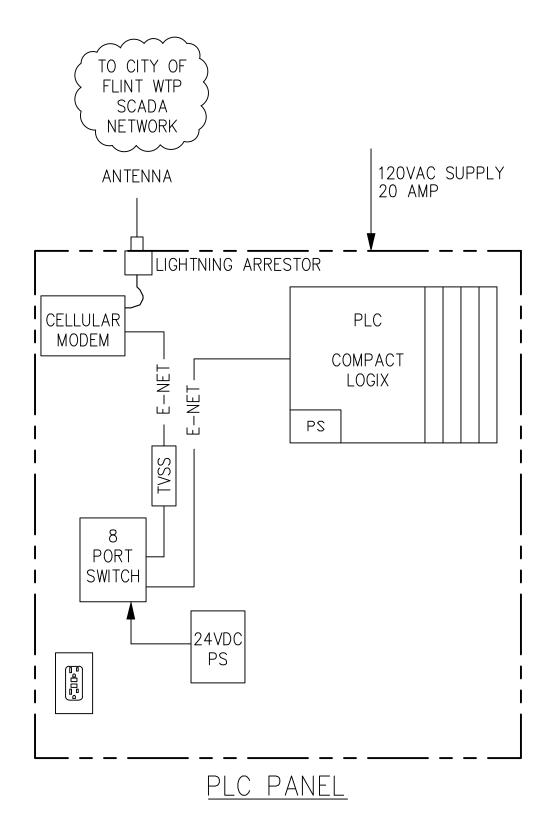




PANEL:		LIGHTING PANEL	100/	A BUS (10	OK AIC)			
VOLTAG	E: 240/12	O VAC PHASE: 1 WIRE: 3 MAIN: 10	0 AMP/2P TYPE: NE	MA 4X S	TAINLESS S	TEEL MOUNTING: SURFACE		
СКТ	BKR	LOAD	VA	PH	VA	LOAD	BKR	СКТ
1			1560	A	0		20A/2P	2
3	20A/2P	ELECTRIC UNIT HEATER	1560	В	0	SURGE PROTECTIVE DEVICE (SPD)	20A/2P	4
5	20A/1P	METER PIT LIGHTS	200	A	1176	SUMP PUMP RECEPTACLE	20A/1P	6
7	20A/1P	CITY OF FLINT PLC PANEL	600	В	600	DEHUMIDIFIER RECEPTACLE	20A/1P	8
9	20A/1P	SPARE	0	A	180	GENERAL RECEPTACLE	20A/1P*	10
11	20A/1P	SPARE	0	В	0	SPARE	20A/1P	12
13	SPACE	SPACE	0	A	0	SPARE	20A/1P	14
15	SPACE	SPACE	0	В	0	SPACE	SPACE	16
17	SPACE	SPACE	0	A	0	SPACE	SPACE	18
19	SPACE	SPACE	0	В	0	SPACE	SPACE	20
TOTAL:		-		·				
		A=3116				В	=2760	
TOTAL	CONNECTE	D LOAD:		5876				

* GFCI CIRCUIT BREAKER

JOB N	ISSUEI					
10. DF106	D FOR:	1101 S. SAGINAW STREET FLINT, MI 48502	555 S. Saginaw Street, Suite 201 Flint, MI 48502			
	DATE:	36" SECONDARY WATER SUPPLY	B10.235.2555 www.wadetrim.com			
1 [BY:	ELECTRICAL DIAGRAM AND SCHEDULES		REV# DATE	DESCRIPTION	B

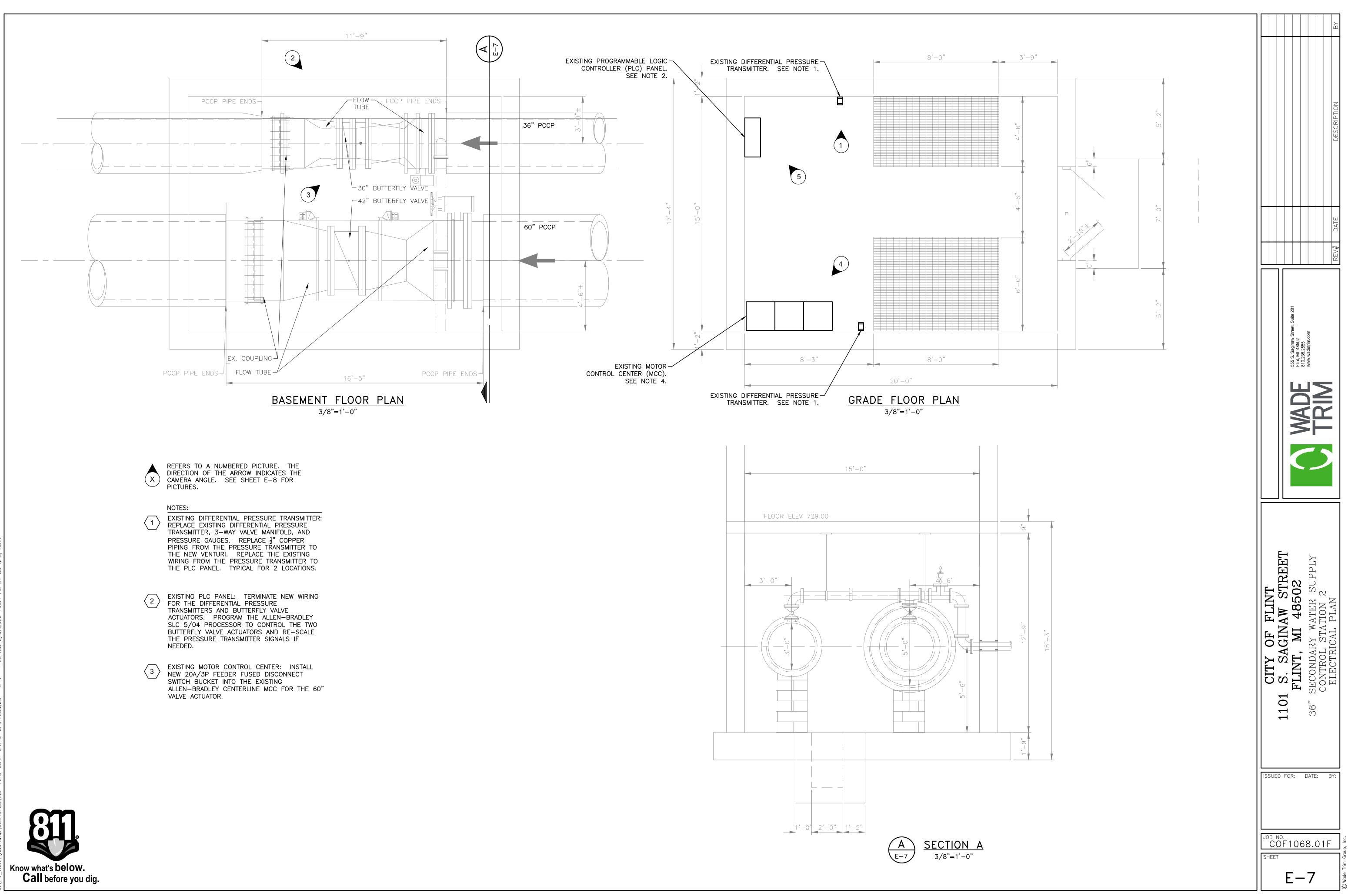


<u>DIGITAL INPUTS:</u> SUMP HIGH LEVEL VAULT HATCH INTRUSION PANEL INTRUSION

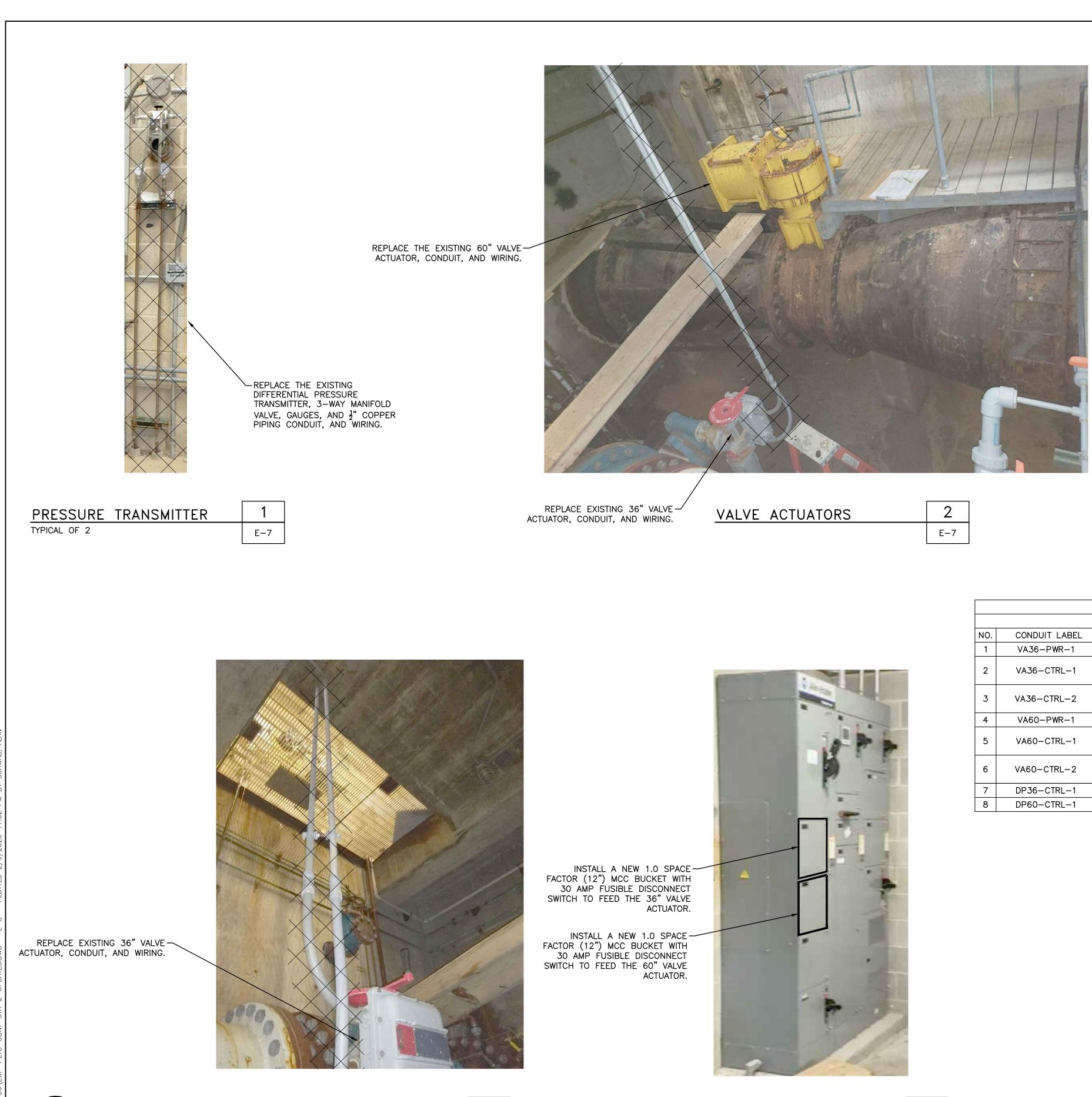
<u>ANALOG INPUTS:</u> 12' PIPE FLOW 12" PIPE PRESSURE



				BY	
				DESCRIPTION	
				# DATE	
				REV#	
	555 S. Sagina	Flint, MI 48502 810.235.2555			
FLINT	V. VAGINAW VIREET	1 400US	ATER SUPPLY Nt Meter vaint	AGRAM	
11	IIUI S. SAGI	FLINI, MI 40002	36" SECONDARY WATER SUPPLY DRODOSED CITV OF FLINT METER VALLT	NETWORK DIAGRAM	
11			I I I I I I I I I I I I I I I I I I I	RETWORK DIA	
ISSUED	FOR:	D		BY:	© W-1-1 T-1-2 1



PROJECT MANAGER:Jason R. Kenyon, PE 3:\Pw_work\aschwab\dog48736\eup-pLts-cont-sta-2-updates.dwg - e-7 - plotted 2/9/2020 10:54 PM BY schwab, A



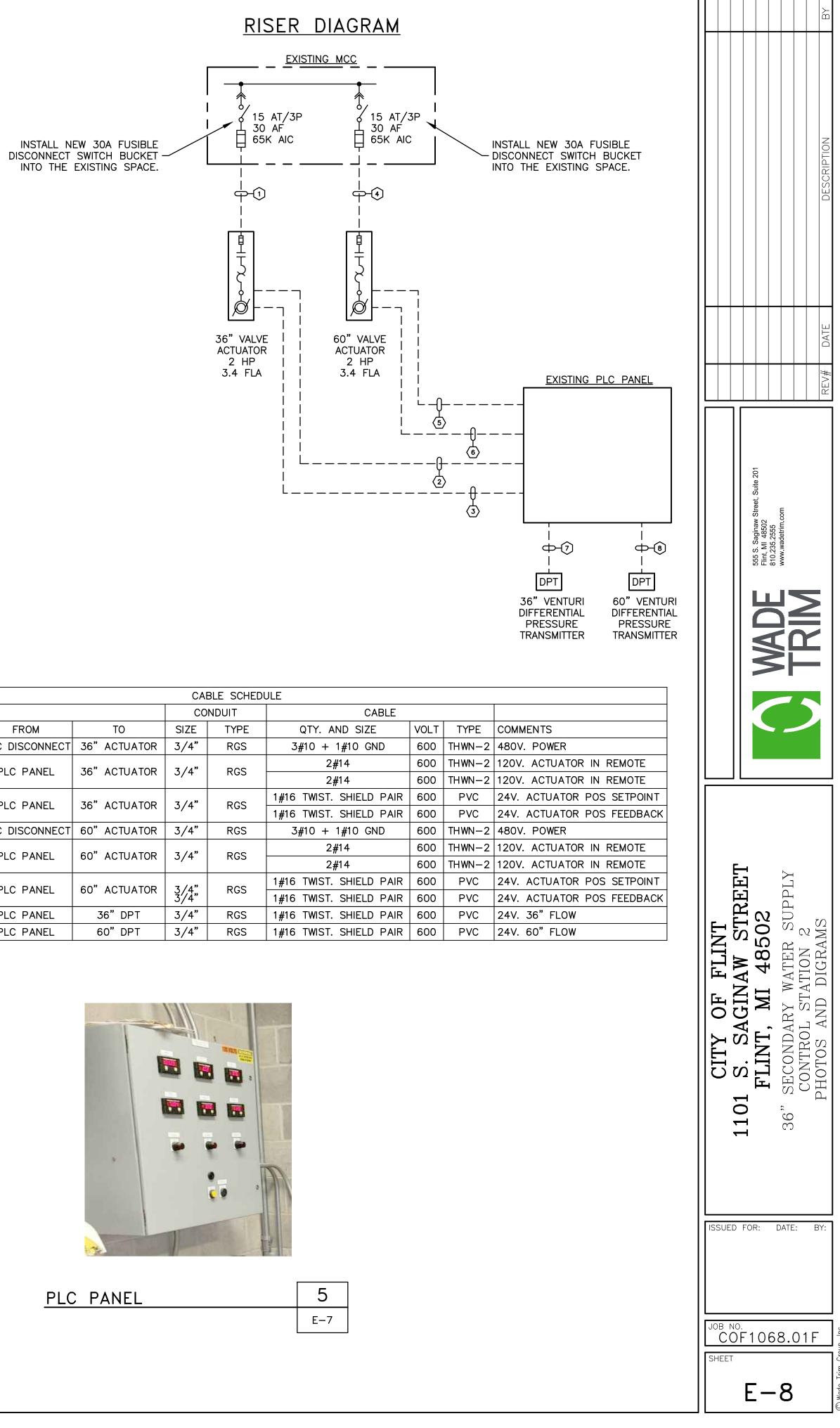
Know what's **below.**

Call before you dig.

VALVE ACTUATOR

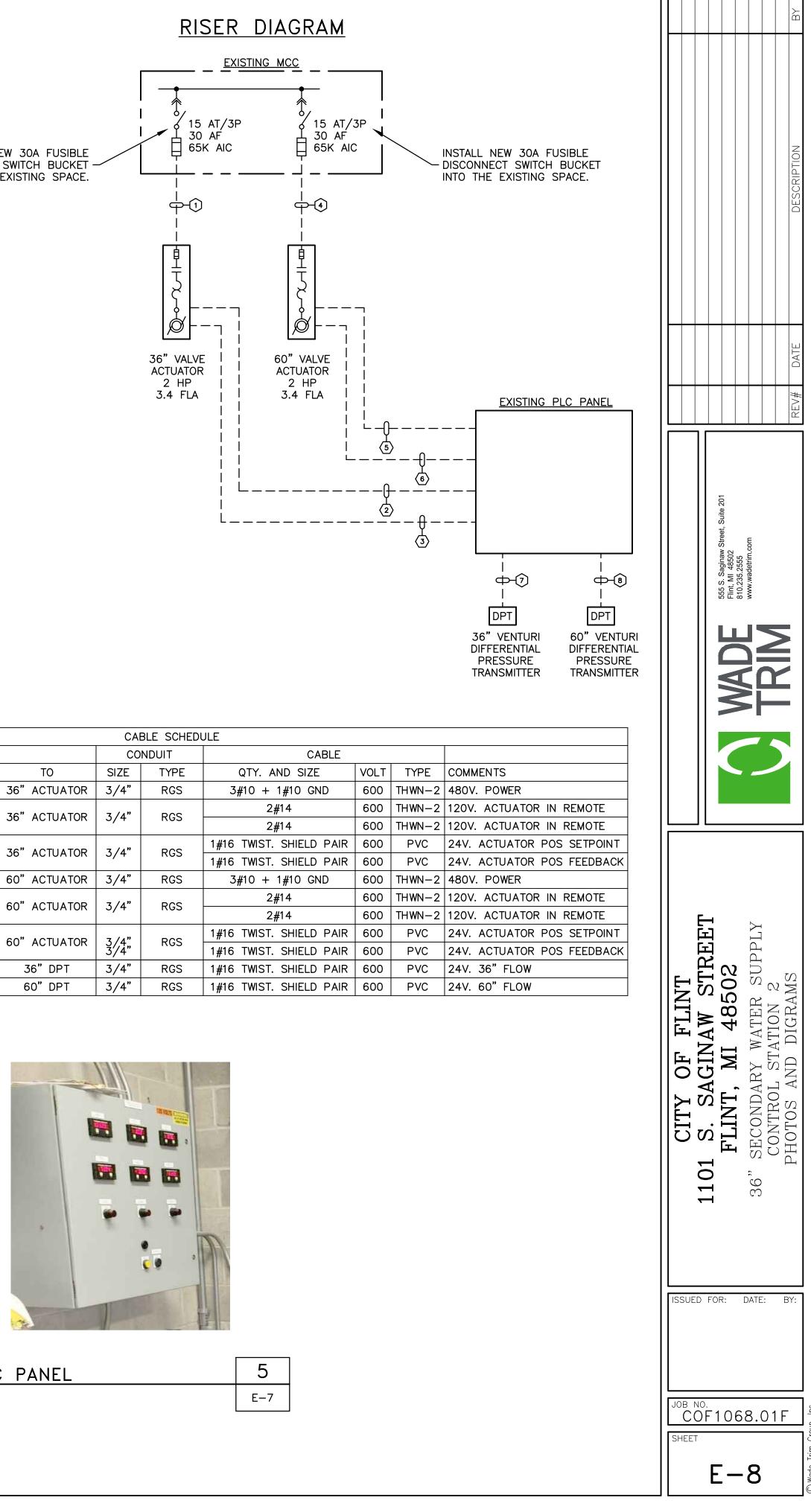
3

E-7



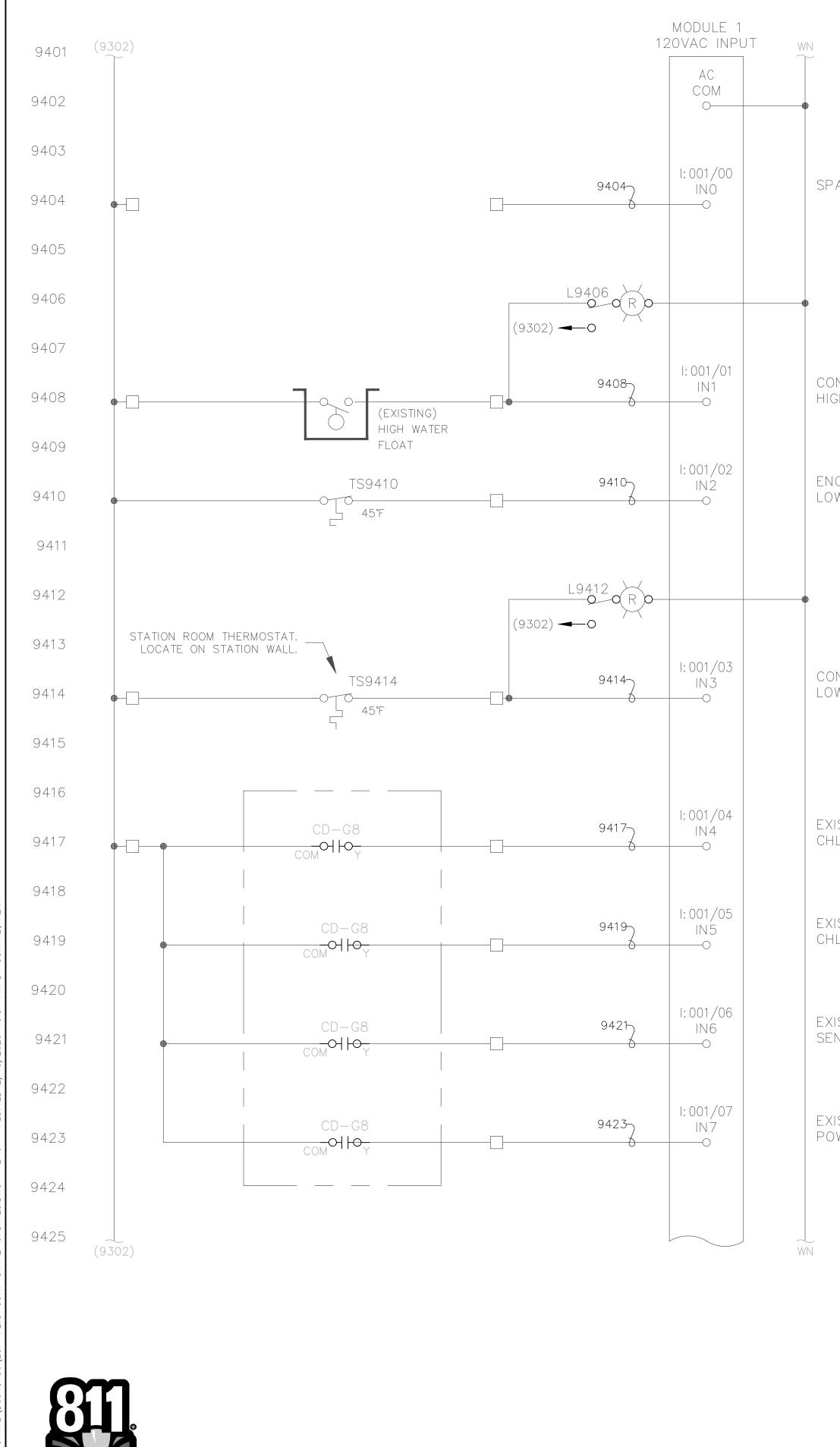
" VALVE	VALVE	ACTUATORS	

				CA	BLE SCHED	
				1		
NO.	CONDUIT LABEL	FROM	ТО	SIZE	TYPE	
1	VA36-PWR-1	MCC DISCONNECT	36" ACTUATOR	3/4"	RGS	
2	VA36-CTRL-1	PLC PANEL	36" ACTUATOR	3/4"	RGS	
3	VA36-CTRL-2	PLC PANEL	36" ACTUATOR	3/4"	RGS	1
4	VA60-PWR-1	MCC DISCONNECT	60" ACTUATOR	3/4"	RGS	
5	VA60-CTRL-1	PLC PANEL	60" ACTUATOR	3/4"	RGS	
6	VA60-CTRL-2	PLC PANEL	60" ACTUATOR	3/4" 3/4"	RGS	1
7	DP36-CTRL-1	PLC PANEL	36" DPT	3/4"	RGS	1
8	DP60-CTRL-1	PLC PANEL	60" DPT	3/4"	RGS	1



MOTOR CONTROL CENTER

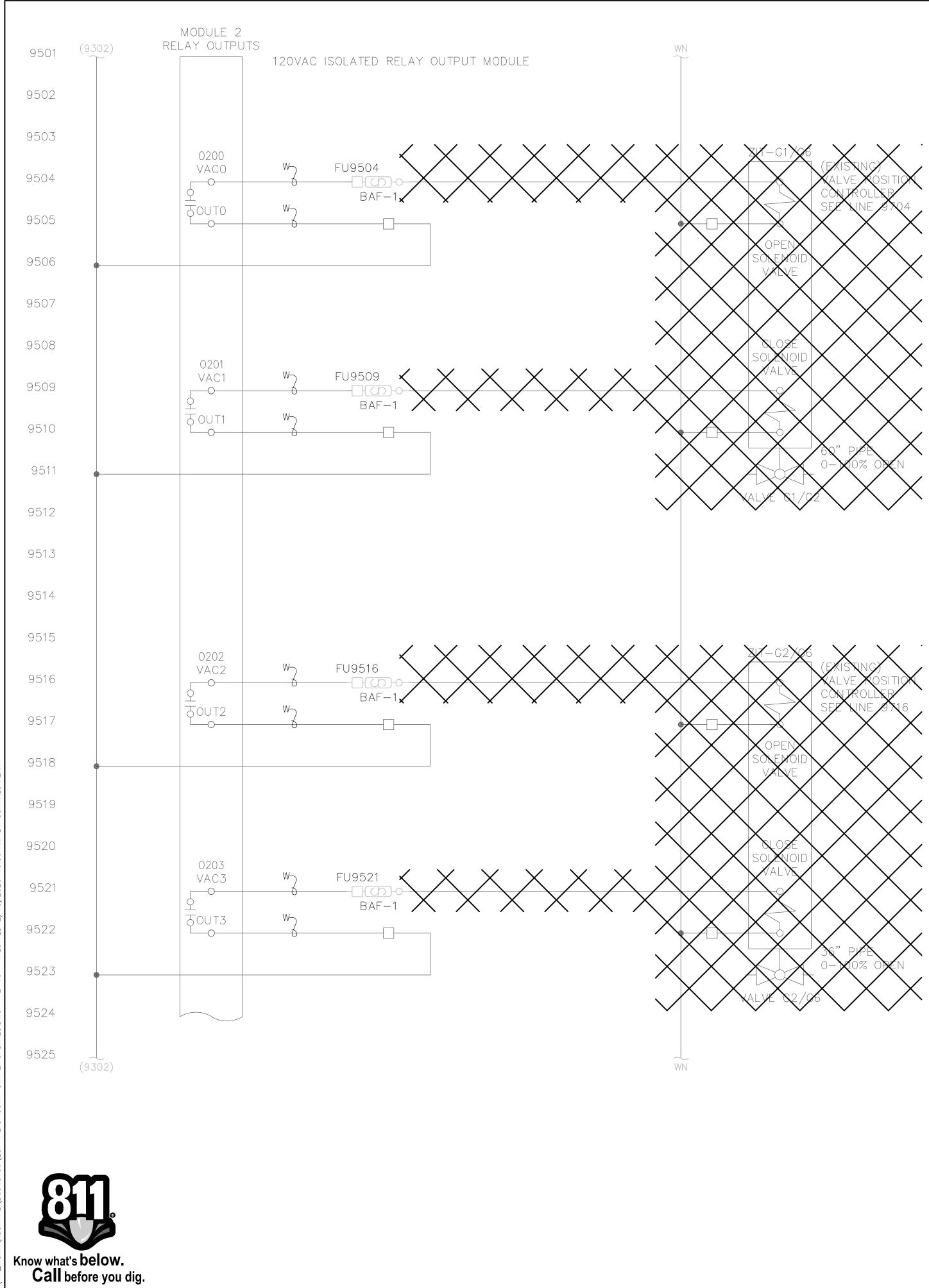
4 E-7

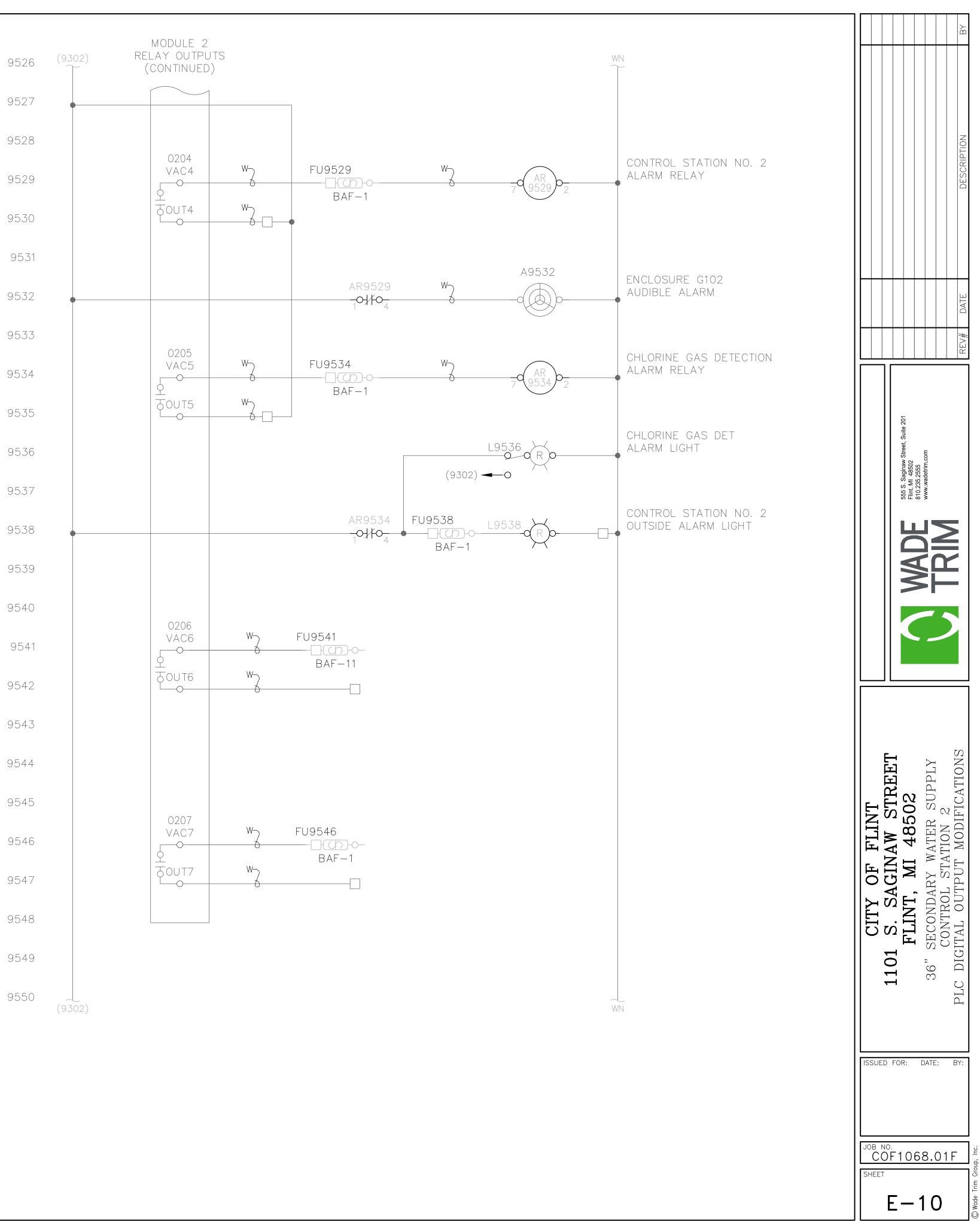


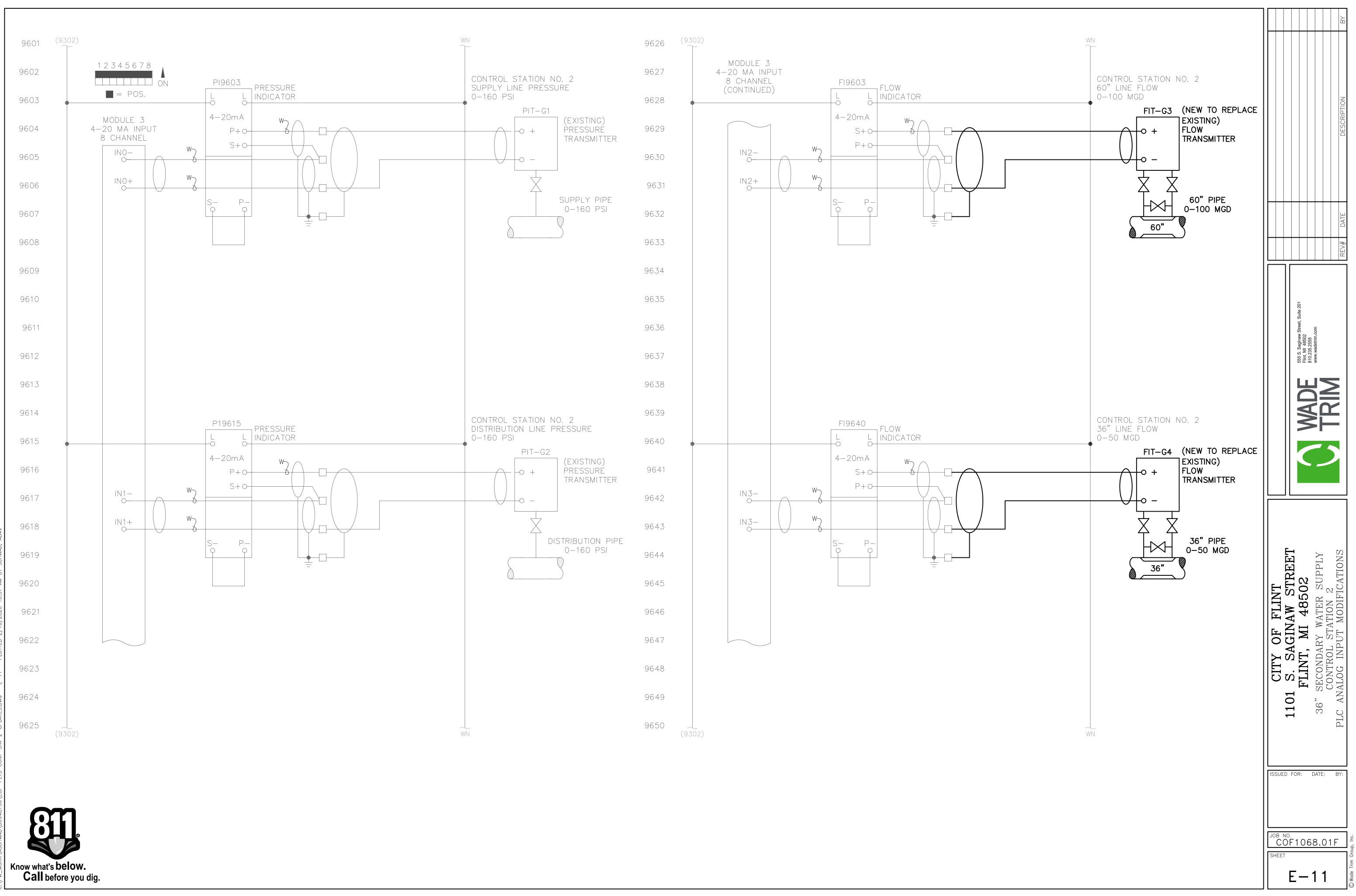
Know what's below. Call before you dig.

CCT MANAGER:Jason R. Kenyon, PE WORK\ASCHWAB\D0948736\EUP-PLTS-CONT-STA-2-UPDATES.DWG - E-9 - PLOTTED 2/10/2020 10:54 AM BY SCHV

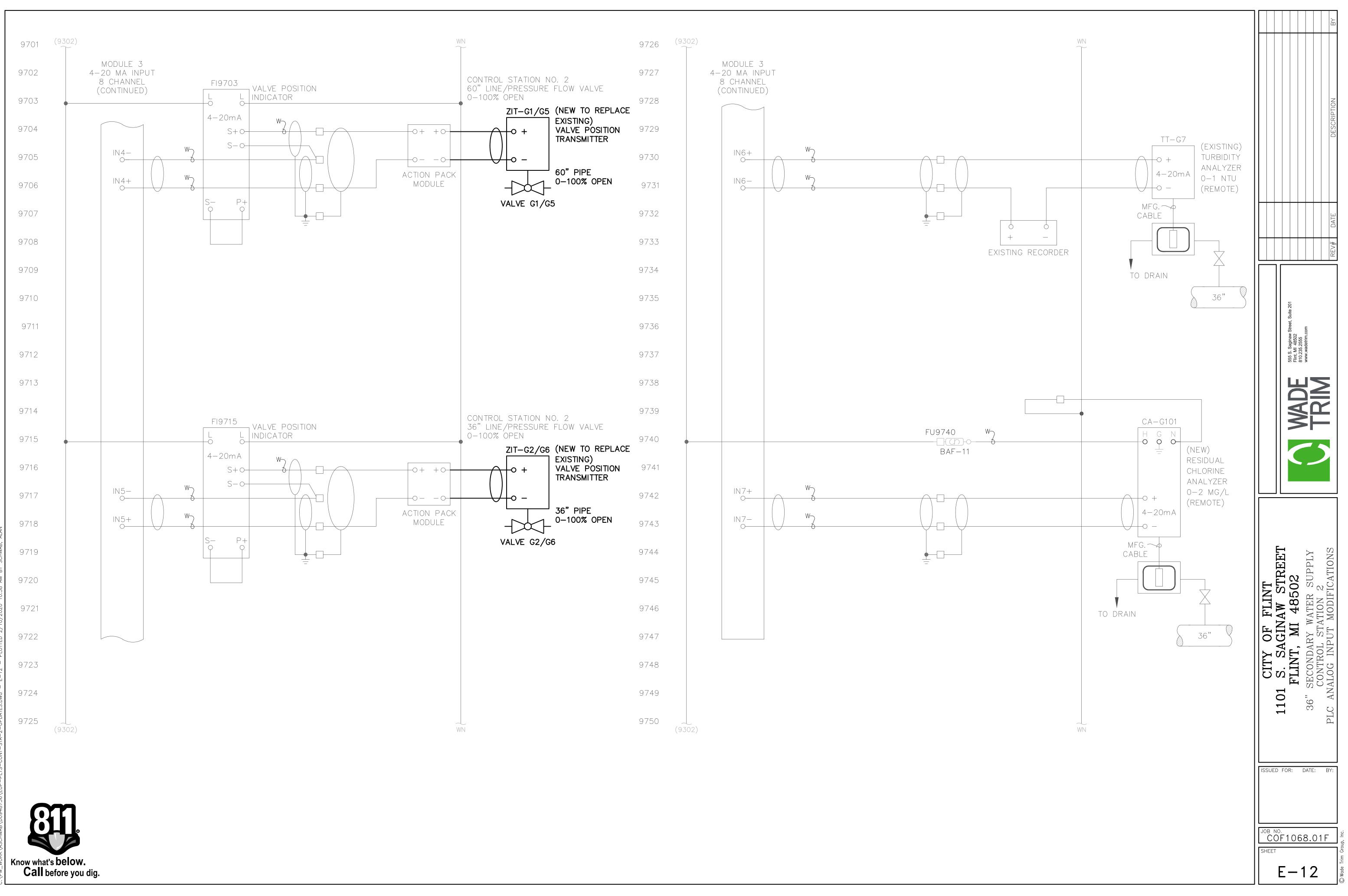
	9426 9427	(9302)		1	MODULE 1 120VAC INPUT CONTINUED	WN		
spare input	9428 9429	•	PB9429 TEST 	9429	I: 001/08 IN08	CONTROL ENCLOSURE G103 Alarm circuit test		DESCRIPTION
	9430 9431	•	PB9431 SIL 	9431	I: 001/09 IN09 O	CONTROL ENCLOSURE G103 Alarm Silence		
CONTROL STATION NO. 2 HIGH WATER	9432 9433	•- D •	 -어ŀo	9433	I: 001/10 IN10	NEW 60" ACTUATED VALVE VALVE IN REMOTE		REV# DATE
ENCLOSURE Low temperature alarm	9434 9435 9436		-어ŀ>	9435	I: 001/11 IN11 O	NEW 60" ACTUATED VALVE VALVE FAULT		Street, Suite 201 com
	9437 9438	•□-•	 -어ŀ아	9437	I: 001/12 IN12 0 I: 001/13	NEW 36" ACTUATED VALVE VALVE IN REMOTE		555 S. Saginaw Flint, MI 48502 810.235.2555 www.wadetrim.c
CONTROL STATION NO. 2 Low temperature alarm	9439 9440		-어ŀ>	9439	I: 001/14 IN13	NEW 36" ACTUATED VALVE VALVE FAULT		
EXISTING CHLORINE GAS DETECTOR CHLORINE ALARM	9441 9442 9443			9443	I: 001/15 IN15			
EXISTING CHLORINE GAS DETECTOR Chlorine Warning	9444 9445							STREET 02 SUPPLY 2 TCATIONS
EXISTING CHLORINE GAS DETECTOR SENSOR FAILURE	9446 9447						COF FLIN	SAGINAW SAGINAW SAGINAW SAGINAW AB5 DARY WATER OL STATION NPUT MODIF
EXISTING CHLORINE GAS DETECTOR Power Failure	9448 9449				AC COM O	•		1101 F 36" SF C C LC DIGI
	9450	(9302)				WN	ISSUE	D, ED FOR: DATE: BY:
								NO. OF1068.01F
							SHEET	



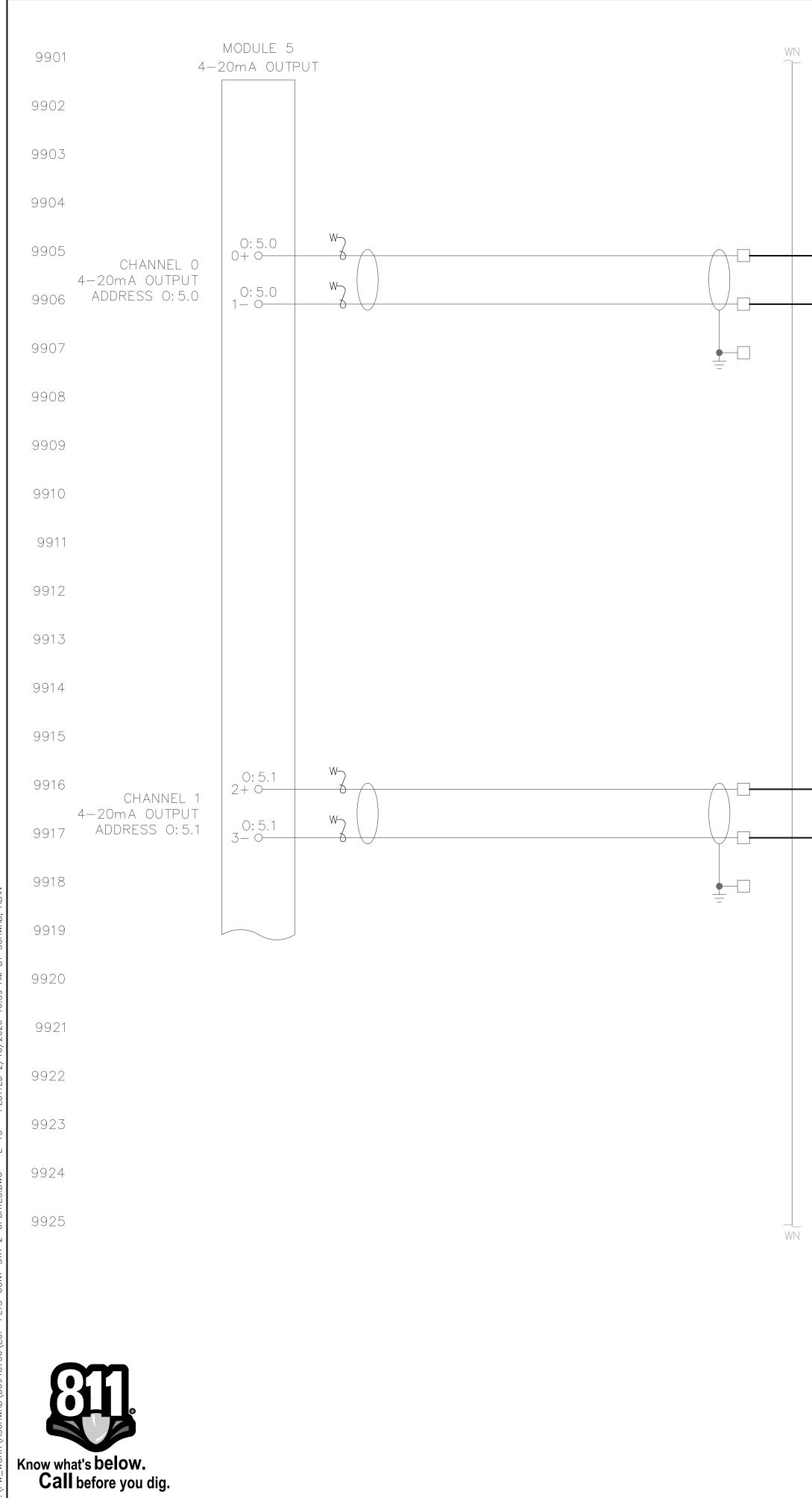




JJECT MANAGER:Jason R. Kenyon, PE Pw_work\aschwab\dog48736\eup-plts-cont-sta-2-updates.dwg - E-11 - plotted 2/10/2020 10:57 AM BY Schwab, /



JECT MANAGER:Jøson R. Kenyon, PE W_WORK\ASCHWAB\D0948736\EUP-PLTS-CONT-STA-2-UPDATES.DWG – E-12 – PLOTTED 2/10/2020 10:58 AM BY SCHWAB,



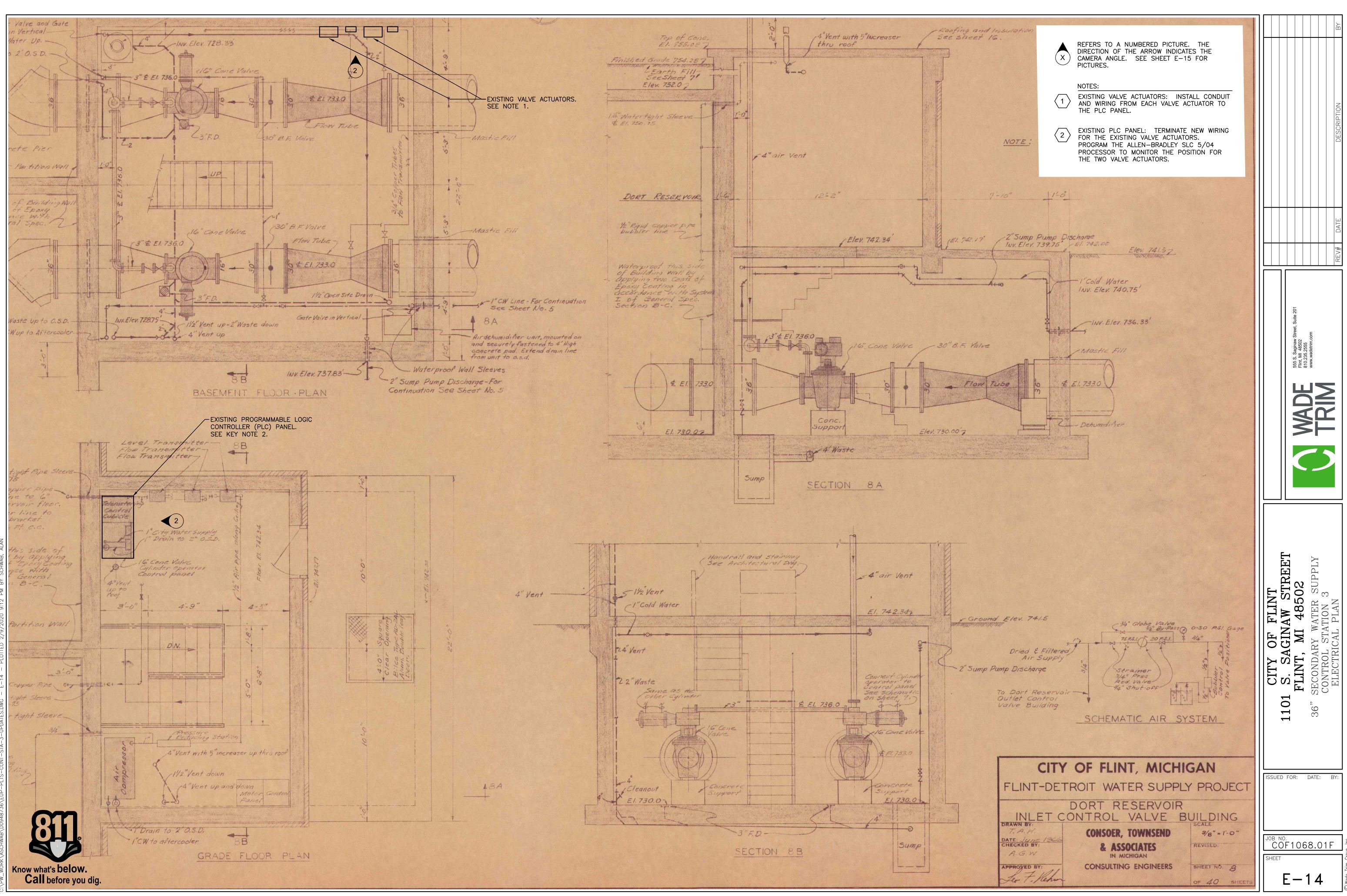
CT MANAGER:Jason R. Kenyon, PE _work\aschwab\d0948736\eup-plts-cont-sta-2-updates.dwg - e-13 - plotted 2/10/2020 10:59 am by schwae

	9926		
	9927		
	9928		
ZIT-G1/G5 (NEW TO REPLACE	9929		
COCH EXISTING) VALVE POSITION TRANSMITTER	9930	CHANNEL 2	0:5.2 4+ 0
	9931	4–20mA OUTPUT ADDRESS 0:5.2	0: 5.2 5-0
60" PIPE 	9932		
VALVE G1/G5	9933		
	9934		
	9935		
	9936		
	9937		
	9938		
	9939		
ZIT-G2/G6 (NEW TO REPLACE	9940		
O + EXISTING) VALVE POSITION TRANSMITTER	9941	CHANNEL 3 4–20ma output	0:5.3 6+0
	9942		0: 5.3 7– 0
VALVE G2/G6	9943		
VALVL GZ/GO	9944		
	9945		
	9946		
	9947		
	9948		
	9949		
	9950		

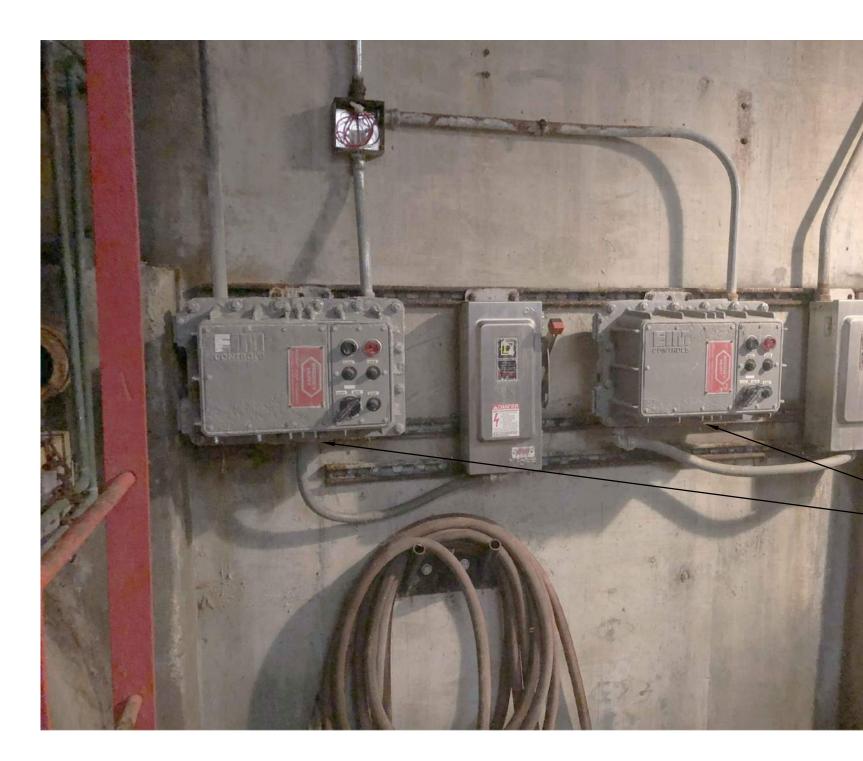
DESCRIPTION
REV# DATE
555 S. Saginaw Street, Suite 201 Flint, MI 48502 810 235.2555 www.wadetrim.com
CITY OF FLINT 1101 S. SAGINAW STREET FLINT, MI 48502 36" SECONDARY WATER SUPPLY CONTROL STATION 2 PLC ANALOG OUTPUT MODIFICATIONS
ISSUED FOR: DATE: BY:
JOB NO. COF1068.01F

WN

WN



ECT MANAGER:Jason R. Kenyon, PE v_work\aschwab\dog48736\eup-plts-cont-sta-3-updates.dwg - e-14 - plotted 2/9/2020 9:12 PM BY schwae



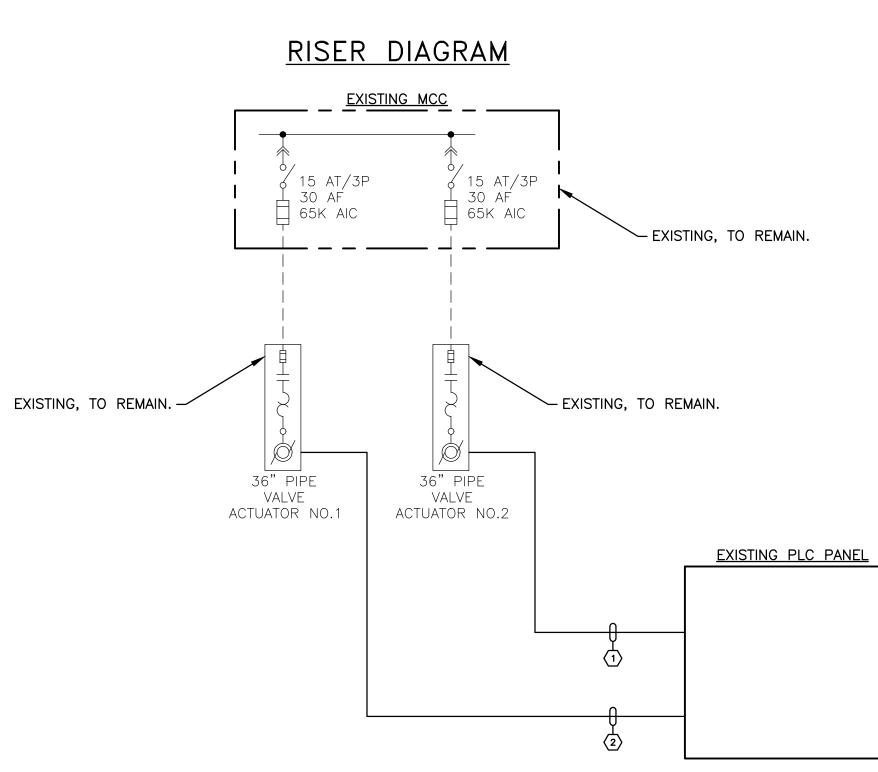
VALVE ACTUATORS

1 E-14





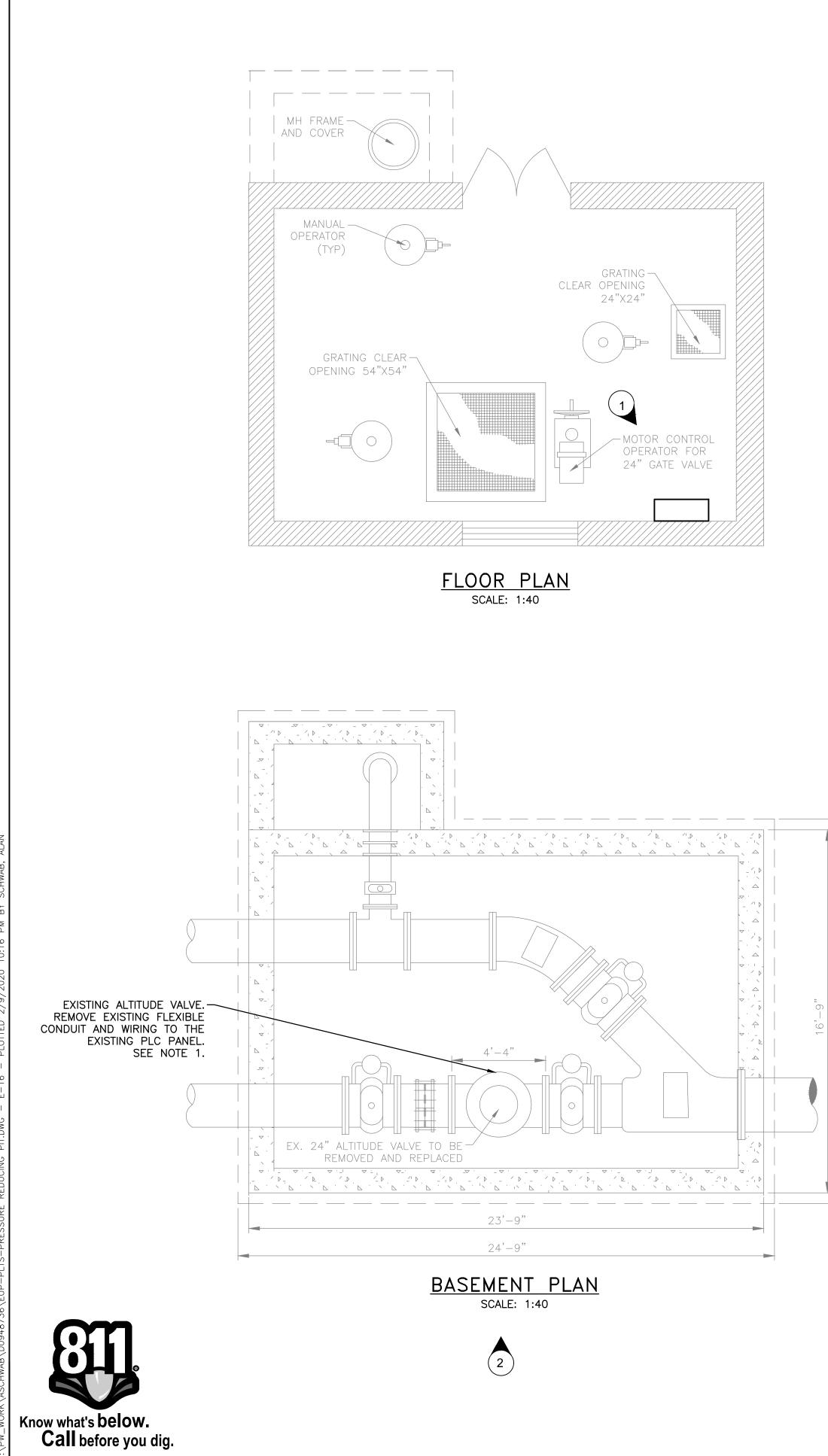
V.	PLC PANEL	2
ou dig.		E-14



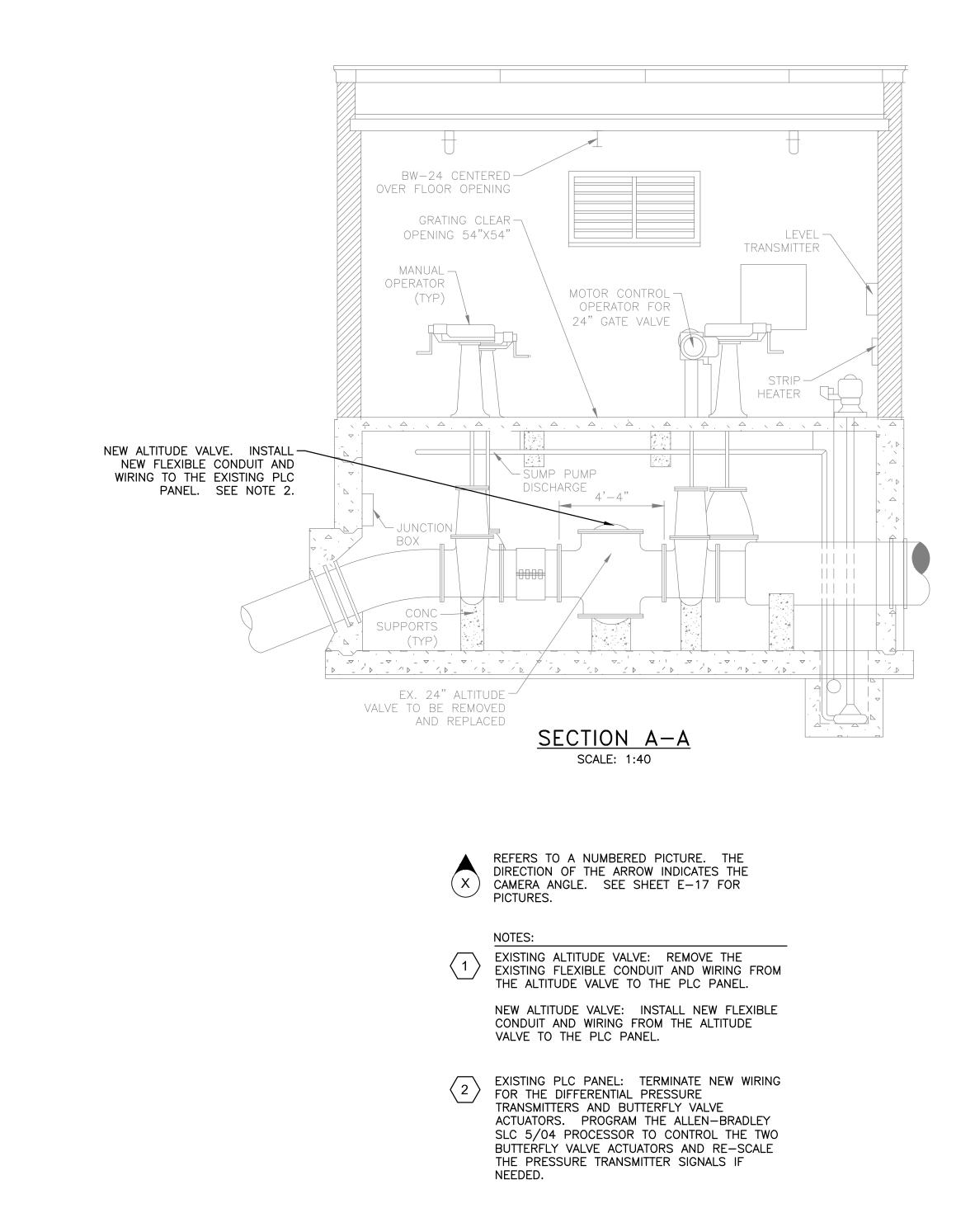
- INSTALL NEW CONDUIT AND WIRING FROM EACH VALVE ACTUATOR TO THE PLC PANEL.

				CA	BLE SCHED	ULE			
				CC	NDUIT	CABLE			
NO.	CONDUIT LABEL	FROM	ТО	SIZE	TYPE	QTY. AND SIZE	VOLT	TYPE	COMMENTS
1	VA36NO1-CTRL-1	PLC PANEL	36" ACTUATOR 1	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. ACTUATOR POS FEEDBACK
2	VA36NO2-CTRL-1	PLC PANEL	36" ACTUATOR 2	3/4"	RGS	1#16 TWIST. SHIELD PAIR	600	PVC	24V. ACTUATOR POS FEEDBACK

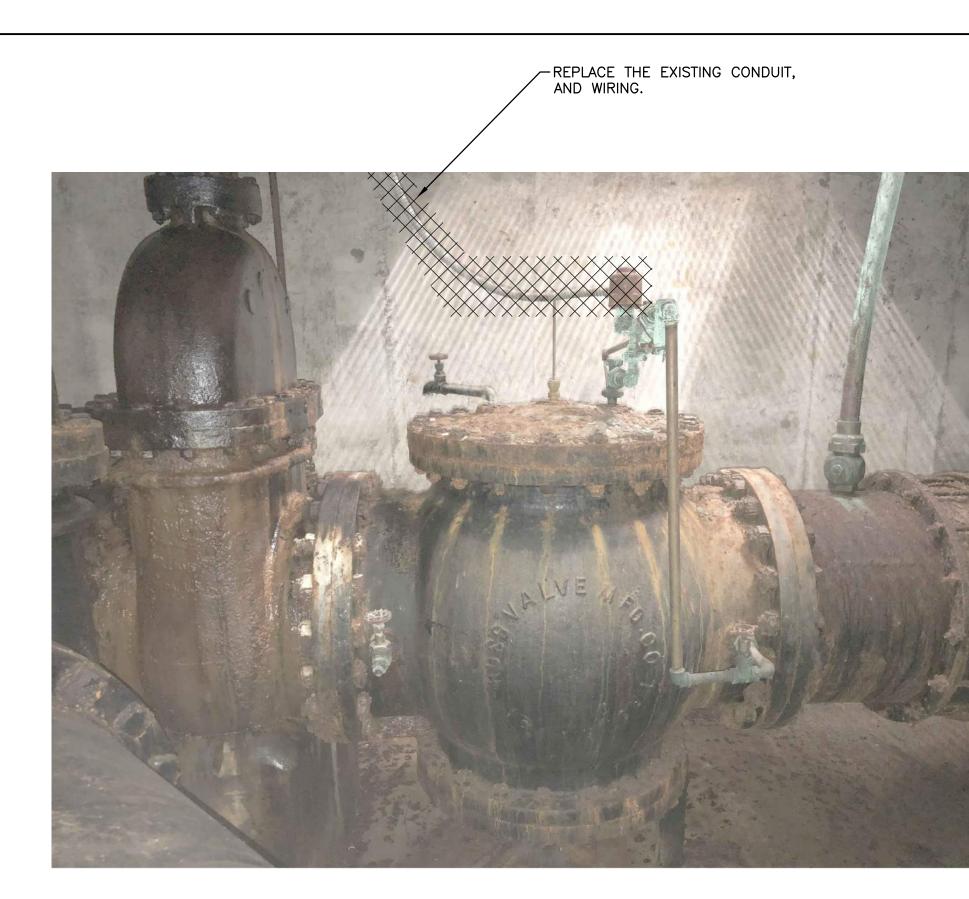




ECT MANAGER: Jason R. Kenyon, PE v_work\aschwab\d0948736\eup-plts-pressure reducing pit.dwg - e-16 - plotted 2/9/2020 10:16 PM BY SCHWAB,



					BY
					DESCRIPTION
					DATE
					REV#
	FEE C Carinou Ct	Flint, MI 4502	810.235.2559 www.wadetrim.com		
CITY OF FLINT		FLINT, MI 48502	36" SECONDARY WATER SUPPLY	TANK HOUSE	ELECTRICAL PLAN
	1101		36"		
		?:	20°.		BY:
ISSUE			DATE		



1	
E-16	

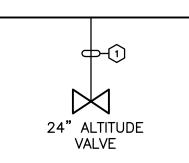






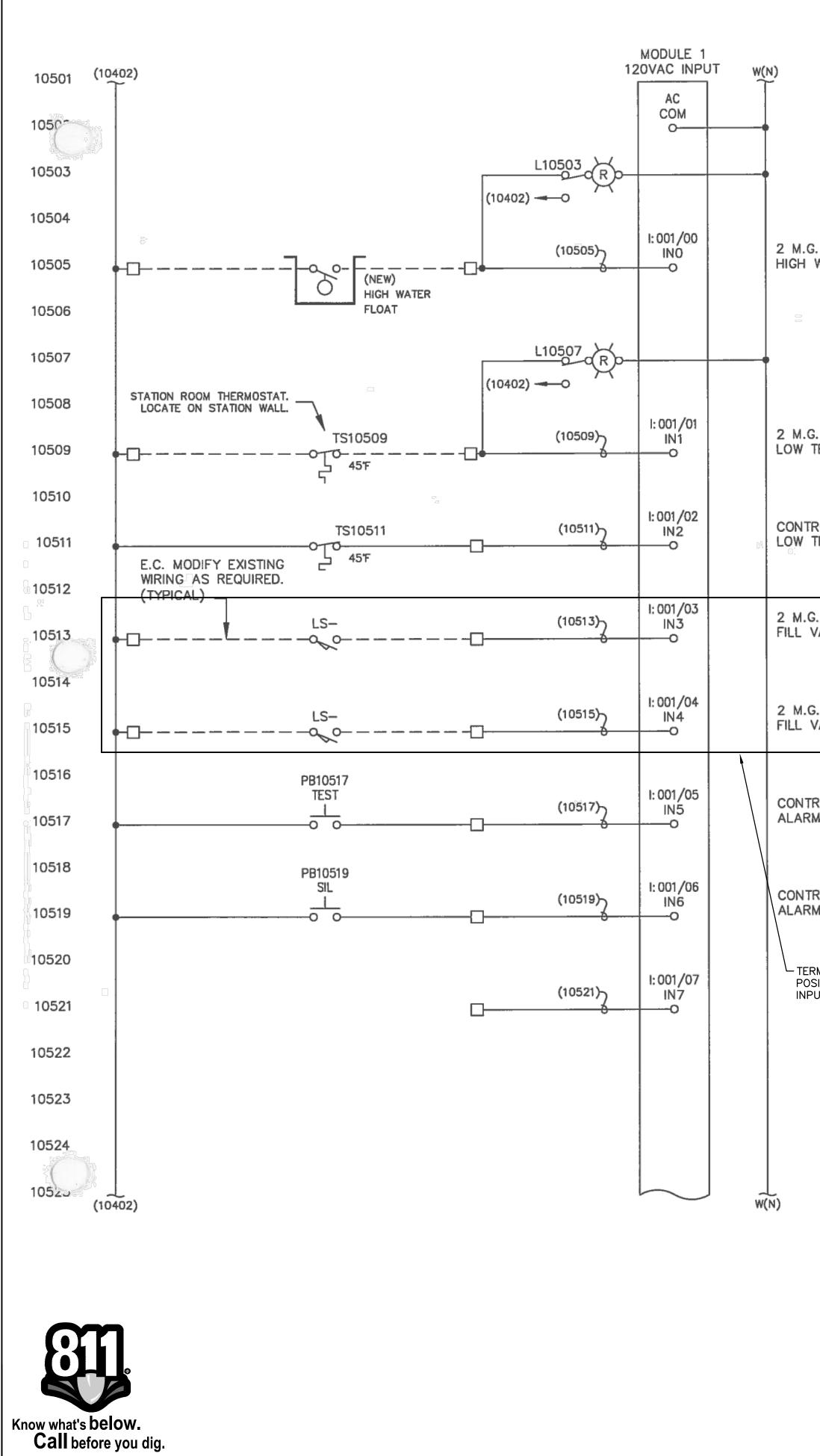
RISER DIAGRAM

EXISTING PLC PANEL

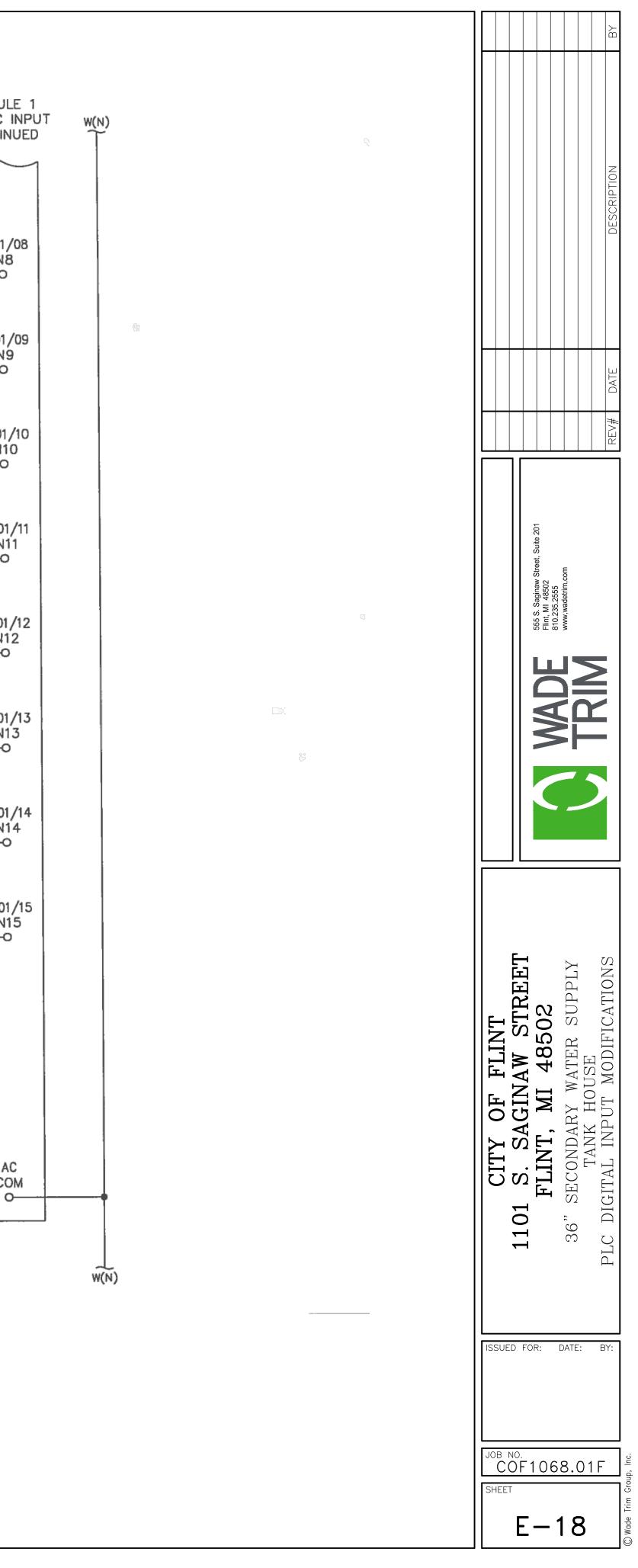


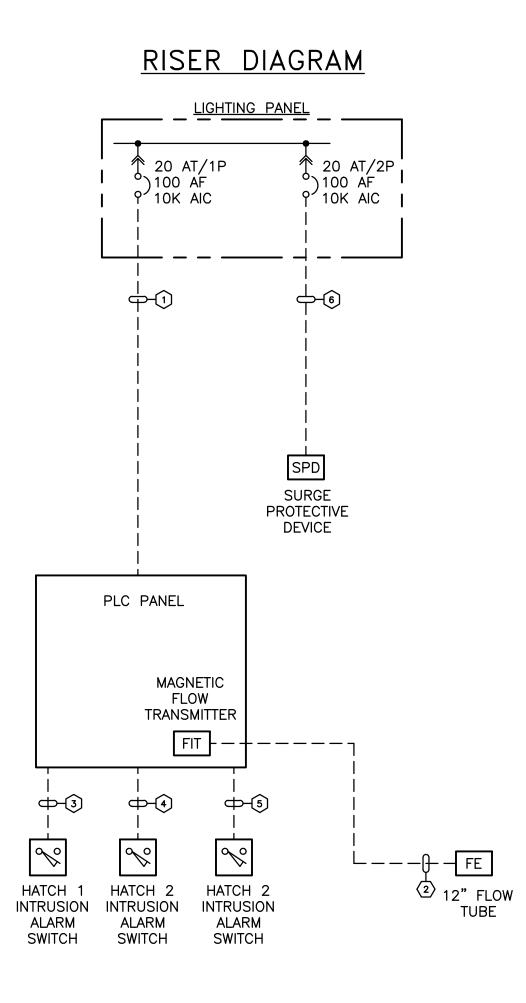
				CA	BLE SCHEDU	LE			
				CC	NDUIT	CABLE			
NO.	CONDUIT LABEL	FROM	ТО	SIZE	TYPE	QTY. AND SIZE	VOLT	TYPE	COMMENTS
1	VA24-CTRL-1	PLC PANEL	24" VALVE	3/4"	EXIST/LFMC	4#14 + 1#14 GND	600	THWN-2	120V. CONTROL

SHEET	JOB 1	ISSUE	1					
_	^{10.} DF1	D FOF	1101 S. SAGINAW STREET	EEE C Socierous Street Suits 204				
	06	?:	FLINT, MI 48502	Flint, MI 48502 B10 235 2555				
17	8.0	DATE:	36" SECONDARY WATER SUPPLY	www.wadetrim.com				
,)1F	E	TANK HOUSE					
		8Y:	PHUTUS AND DIGRAMS		REV# DATE	DESCRIPTION	ON	ВҮ
● W=4= T=i== O								



	10526	(10402)				1	MODULE 20VAC IN CONTINUI
	10527						
	10528						1:001/08
	10529				(1 	0529)	IN8
.G. TANK CONTROL HOUSE I WATER	10530						1:001/09
	10531) []	10531)	0 IN9
	10532				,	0677)	1:001/10
R.	10533					10533)	IN10 0
.G. TANK CONTROL HOUSE	10534					<u>م</u>	1:001/1
	10535) 	10535)7	IN11
TROL ENCLOSURE H103 TEMPERATURE ALARM	10536						1:001/1
	10537				(10537)	IN12
.G. TANK CONTROL HOUSE VAVLE LIMIT SWITCH OPEN	10538						1:001/1
	10539) 	10539)	IN13
.G. TANK CONTROL HOUSE VAVLE LIMIT SWITCH CLOSED	10540			F.			1:001/1
	10541) [1]	10541)	IN14
TROL ENCLOSURE H103 RM CIRCUIT TEST	10542						1:001/1
	10543				(10543)	IN15
ITROL ENCLOSURE H103 RM SILENCE	ి 10544						
ERMINATE THE NEW ALTITUDE VALVE	10545						
OSITION SWITCHES AT THE SAME PLC NPUTS AS THE EXISTING.	10546						
	10547	69					
	10548						AC COM O
	10549						
	10550	(10402)					



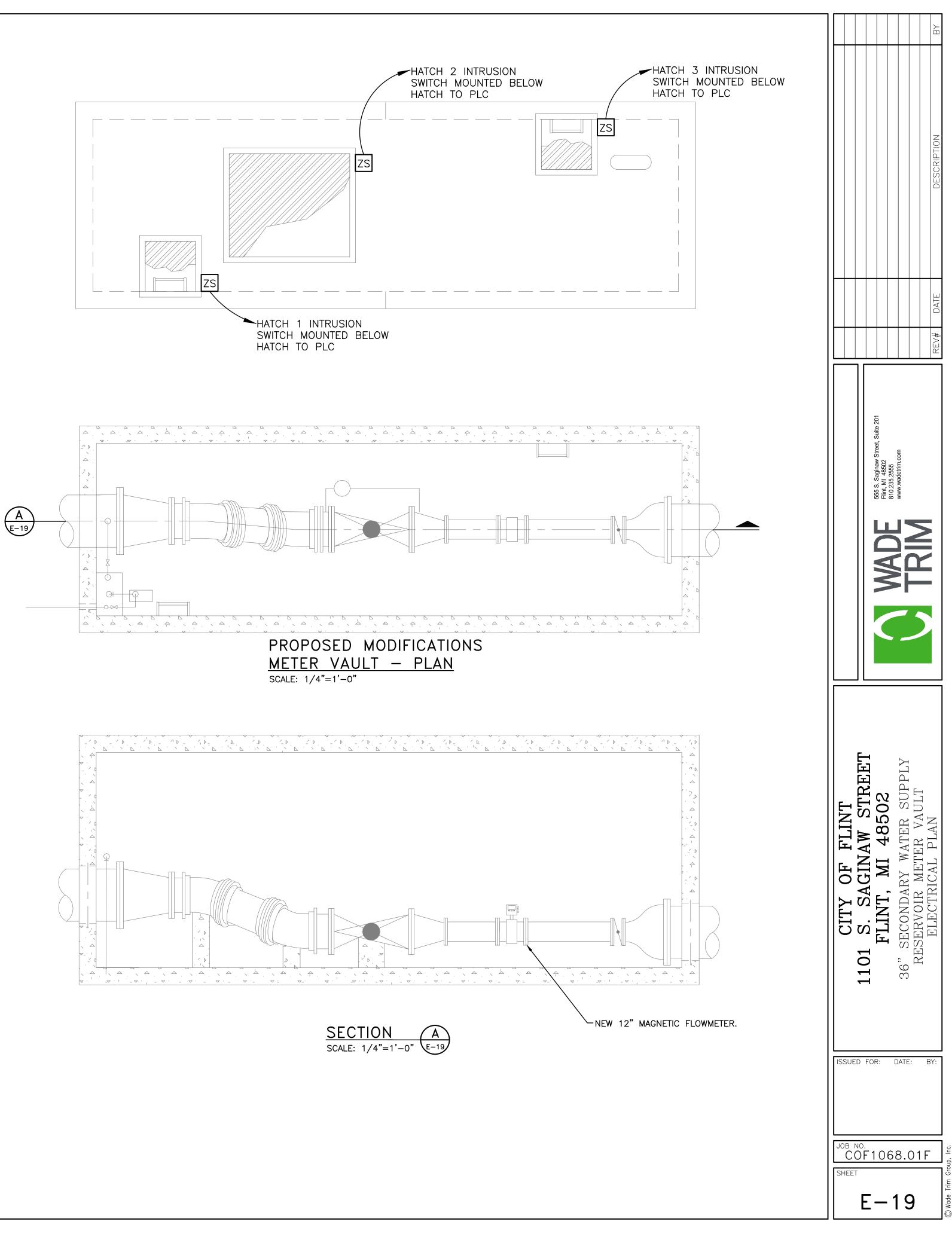


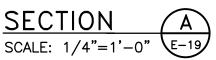
	CABLE SCHEDULE								
					NDUIT	CABLE			
NO.	CONDUIT LABEL	FROM	ТО	SIZE	TYPE	QTY. AND SIZE	VOLT	TYPE	СОММЕ
1	PLC-PWR-1	LIGHTING PANEL	PLC PANEL	3/4"	RGS	2#12 + 1#12 GND	600	THWN-2	120V.
2	FIT-CTRL-1	FLOW TUBE	FLOW XMTTR.	3/4"	RGS	MANUFACTURER CABLE	600	THWN-2	POWER
3	ZS1-CTRL-1	LIMIT SWITCH 1	PLC PANEL	3/4"	RGS	2#14 + 1#14 GND	600	THWN-2	120V.
4	ZS2-CTRL-1	LIMIT SWITCH 2	PLC PANEL	3/4"	RGS	2#14 + 1#14 GND	600	THWN-2	120V.
5	ZS3-CTRL-1	LIMIT SWITCH 3	PLC PANEL	3/4"	RGS	2#14 + 1#14 GND	600	THWN-2	120V.
6	SPD-PWR-1	LIGHTING PANEL	SPD	3/4"	RGS	3#12 + 1#12 GND	600	THWN-2	120V.

PANEL: LIGHTING PANEL		100A	BUS (10					
VOLTA	GE: 240/12	20 VAC PHASE: 1 WIRE: 3 MAIN: 100 AI	MP/2P TYPE: NEM	A 4X ST	AINLESS S	TEEL MOUNTING: SURFACE		
СКТ	BKR	LOAD	VA	PH	VA	LOAD	BKR	СК
1	20A/1P	CITY OF FLINT PLC PANEL	600	A	0	- SURGE PROTECTIVE DEVICE (SPD) 20A/2		2
3	20A/1P	SPARE	0	В	0			
5	20A/1P	SPARE	0	A	0	SPACE	SPACE	6
7	SPACE	SPACE	0	В	0	SPACE	SPACE	8
9	SPACE	SPACE	0	A	0	SPACE	SPACE	1(
11	SPACE	SPACE	0	В	0	SPACE	SPACE	1:
13	SPACE	SPACE	0	A	0	SPACE	SPACE	14
15	SPACE	SPACE	0	В	0	SPACE	SPACE	10
17	SPACE	SPACE	0	A	0	SPACE	SPACE	18
19	SPACE	SPACE	0	В	0	SPACE	SPACE	20
TOTAL:								
A=600							B=0	
TOTAL	CONNECTE	D LOAD:		600				

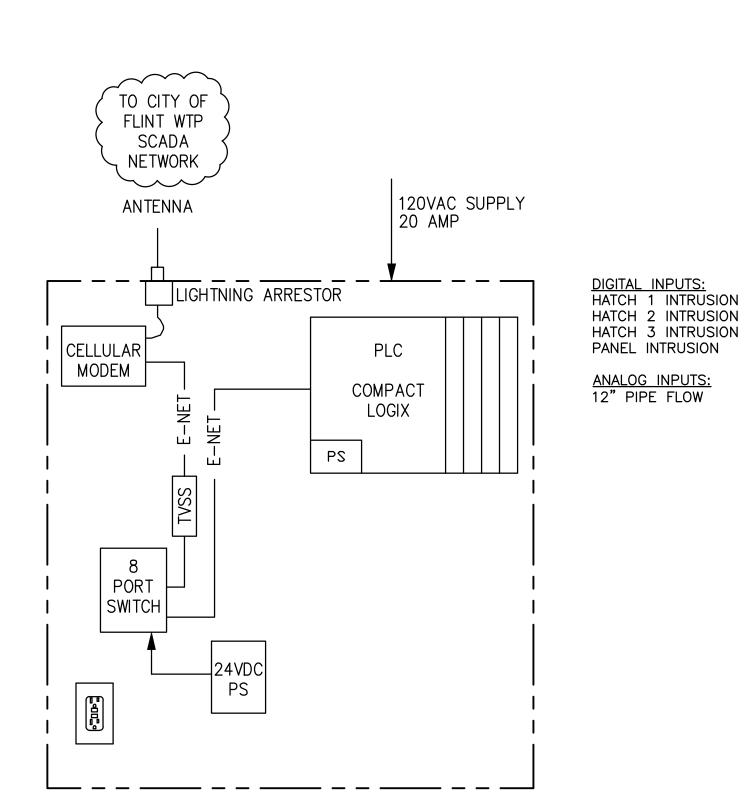
* GFCI CIRCUIT BREAKER







IMENTS . POWER ER AND SIGNAL CONTROL CONTROL CONTROL POWER





JJECT MANAGER:Jɑson R. Kenyon, PE ⊃w_work\aschwab\do948736\EUP-PLTS-PRESSURE REDUCING PIT.DWG - E-20 - PLOTTED 2/9/2020 10:34 PM BY SCHWAB, ALAN

			B	
			DESCRIPTION	
			REV# DATE	
	Flint, MI 48502 810 235 2555	www.wadetrim.com		
CITY OF FLINT	FLINT, MI 48502	36" SECONDARY WATER SUPPLY	RESERVOIR MEIER VAULI NETWORK DIAGRAM	
ISSUED	FOR:	DATE:	BY:	
JOB NO. COF SHEET	- <u>106</u>	8.0 20	1 F	© Wade Trim Group, Inc.

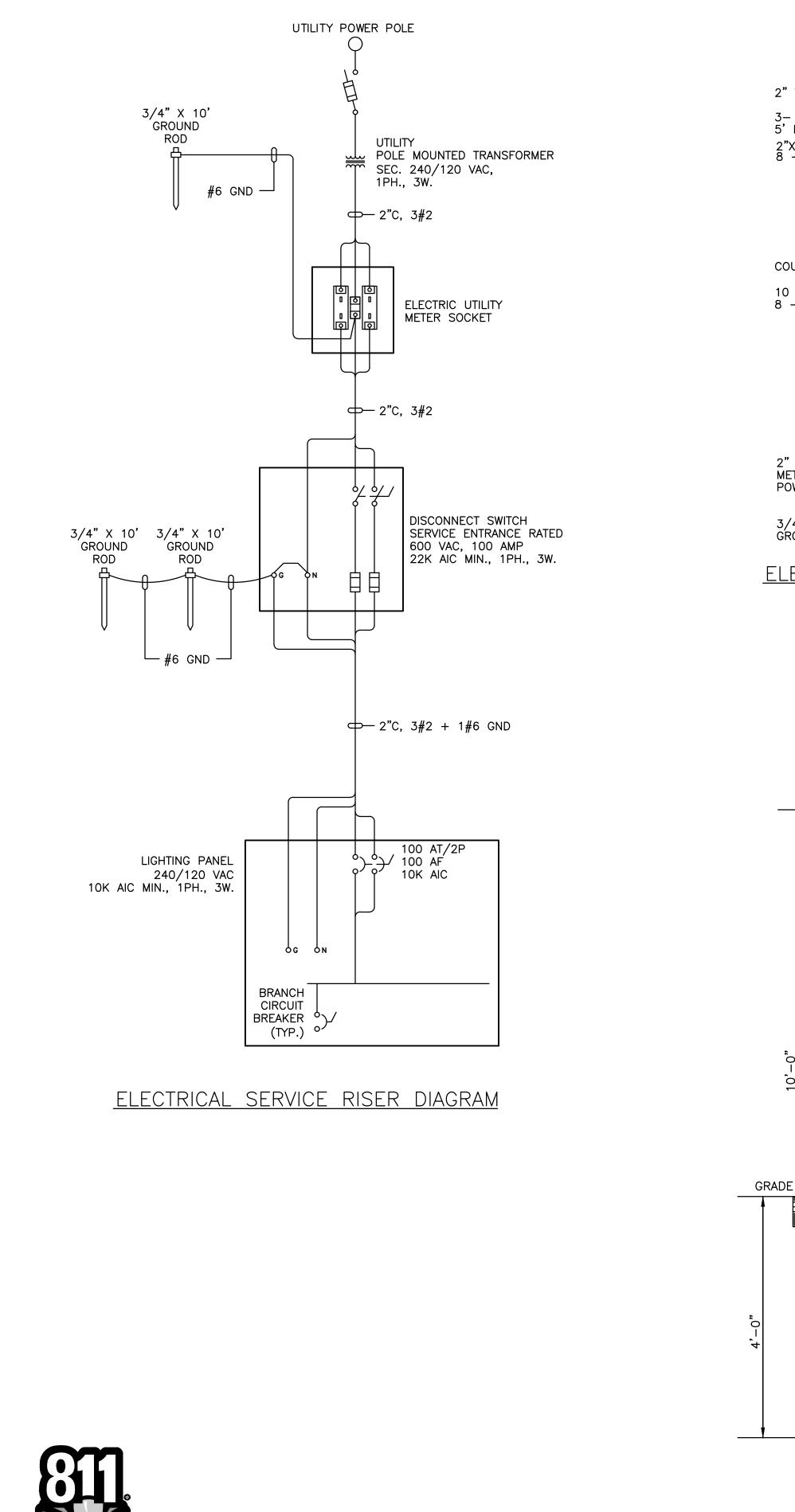
(MAXIMUM)

6'-0"

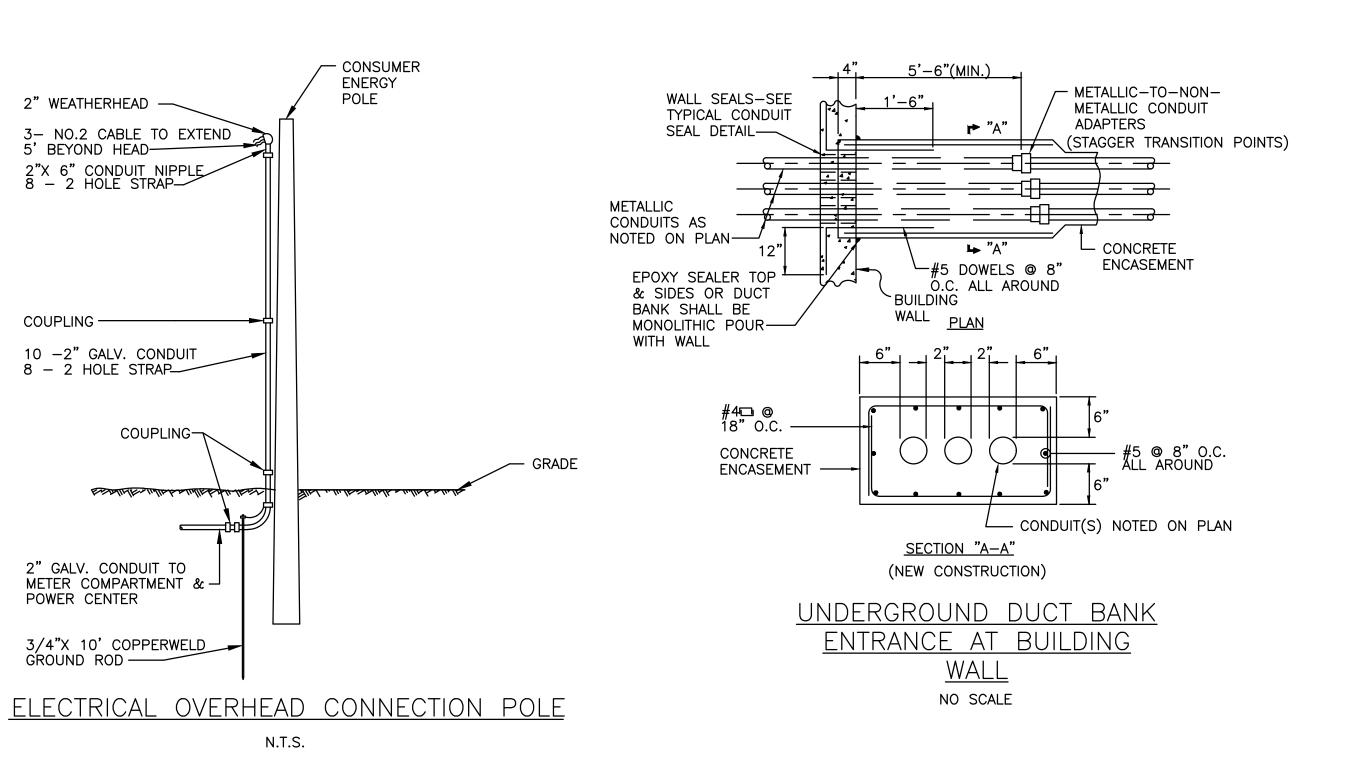
INIMUM),

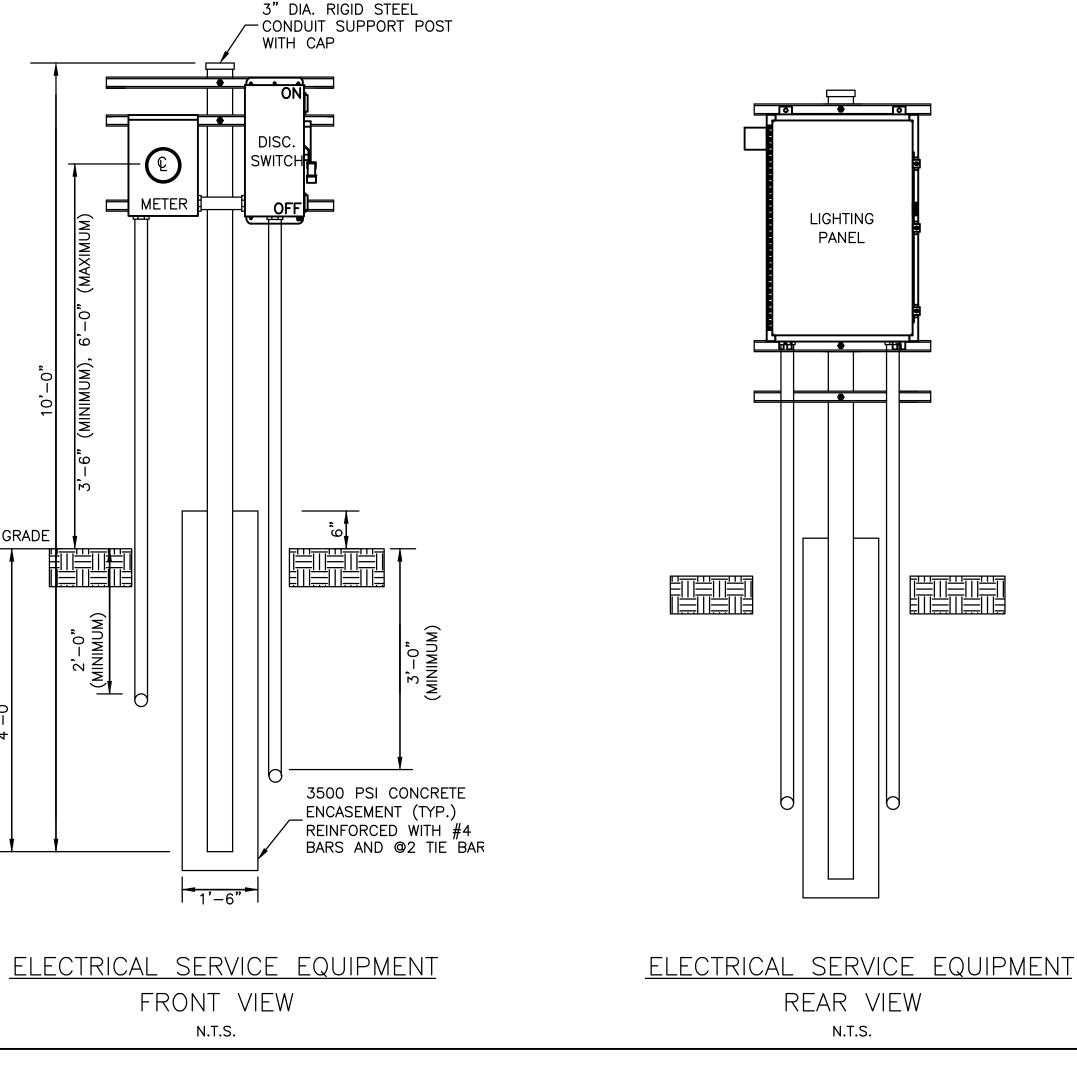
M)

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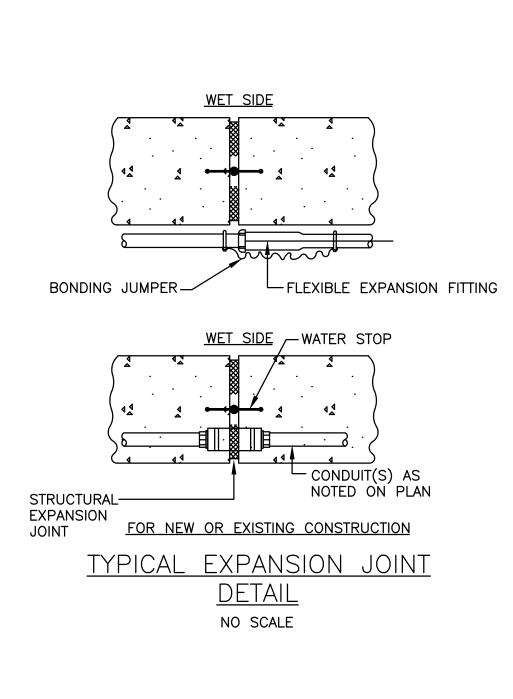


Know what's **below**. Call before you dig.



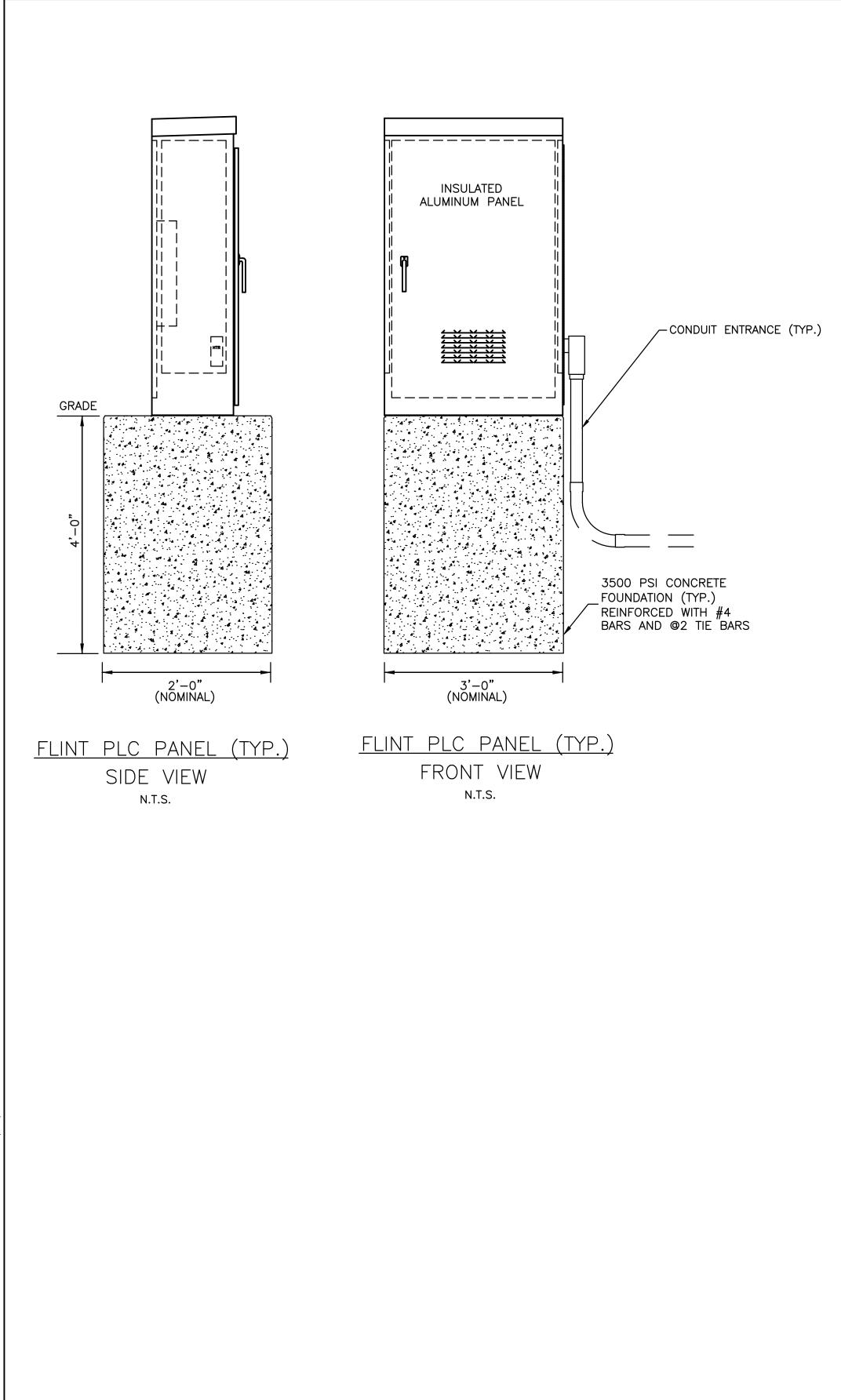




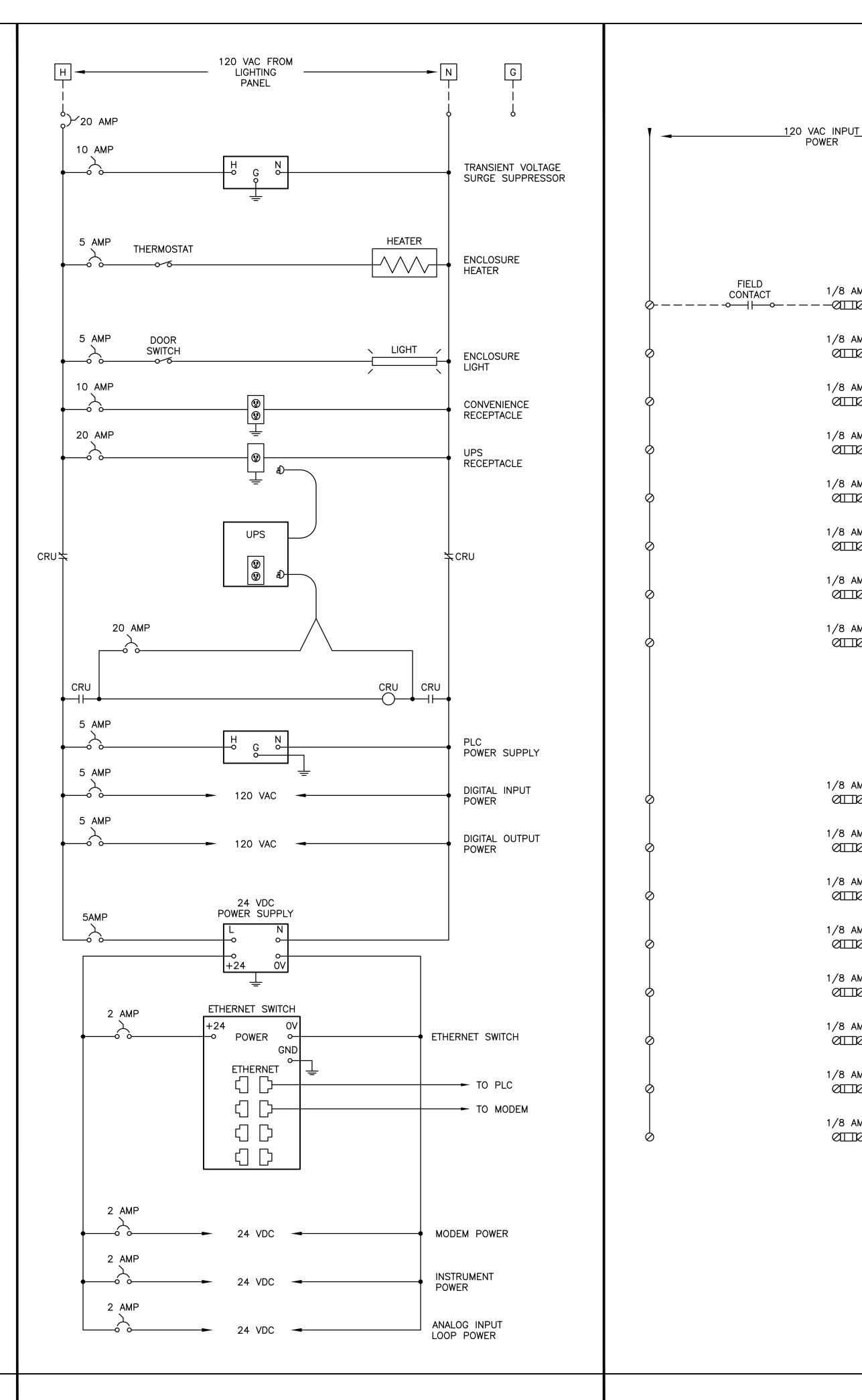


NOTES:

PROVIDE CONDUIT SEAL WITH WATERPROOFING MEMBRANE FOR ALL CONDUITS INSTALLED THROUGH CORED HOLES IN METER WALLS.







	DIGITAL INPUT
1/8 AMP	TB1
	0
1/8 AMP ØIIIØ-	TB1 0
1∕8 AMP ⊘∏∏⊘-	TB1 0
1∕8 AMP ⊘∏∏⊘-	TB1 0
1∕8 AMP ⊘∏∏⊘-	TB1 5 0
1∕8 AMP ⊘⊡⊒⊘-	TB1 6 0
1∕8 AMP ⊘⊡∏⊘-	TB1 0
1/8 AMP 01110-	TB1 8 0
	TB1 9
	TB1 10 0
1/8 AMP ØIIIØ-	TB2 0
1/8 AMP ØIIIØ-	TB2 0
1/8 AMP 2000-	TB2 0
1/8 AMP ØIIIØ-	TB2 0
1/8 AMP ØIIIØ-	TB2 5
1∕8 AMP ⊘⊡∏⊘-	TB2 6 0
1/8 AMP ØIIIØ-	TB2 7 0
1∕8 AMP ⊘⊡∏⊘-	TB2 8
	TB2 9 0
	TB2 10 0

TYPICAL DIGITAL INPUT SPARE SPARE

0



