

RESTRAINT JOINT TABLE MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTINGS (FEET)											
NOM. PIPE SIZE (IN.)	ELBOWS (DEG.)				PLUG VALVE	VERTICAL BENDS (DEG.)					
	1.25	2.25	4.5	9.0		1.25	2.25	4.5			
4	3	7	13	31	70	70	7	14	29		
6	5	9	18	43	99	99	10	20	41		
8	6	12	23	56	129	129	13	26	54		
10	7	14	28	66	154	154	16	31	64		
12	8	16	32	78	182	182	18	37	76		
14	9	18	37	88	207	207	21	42	86		
16	10	20	41	99	233	233	23	47	97		
18	11	22	45	109	258	258	26	52	107		
20	12	24	49	118	282	282	28	56	117		

RESTRAINT JOINT TABLE MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTINGS (FEET)																		
NOM. PIPE SIZE (IN.)	TEES (*) (BRANCH SIDE ONLY)								REDUCERS (**) (REDUCED SIDE)									
	4	6	8	10	12	14	16	18	20	4	6	8	10	12	14	16	18	
4	25									51								
6	25	25								93	54							
8	25	25	35							126	95	52						
10	25	25	25	54						158	132	97	54					
12	25	25	25	40	75					187	165	135	98	53				
14	25	25	25	25	62	94				215	196	170	138	99	53			
16	25	25	25	25	49	84	114			242	225	202	174	140	99	53		
18	25	25	25	25	36	72	104	133		268	253	232	207	177	141	99	53	
20	25	25	25	25	25	60	94	124	151	282	268	253	232	207	177	141	99	53

NOTES:

- (\*) 25' MIN. EACH RUN SIDE OF TEES.
- (\*\*) LENGTH SHOWN IS FOR LARGE SIDE OF REDUCER, 25' MIN. ON SMALL SIDE.
- RESTRAINED LENGTHS DETERMINED USING EBAA IRON - RESTRAINT LENGTH CALCULATOR 6.3, WITH THE FOLLOWING CONSTANTS AS INPUT / ASSUMPTIONS:
  - PIPE MATERIAL = PVC - TEST PRESSURE = 150 PSI
  - SAFETY FACTOR = 2:1 - GATE VALVES = DEAD ENDS
  - TRENCH TYPE = 3 - LENGTH ALONG RUN FOR TEES = 20'
  - DEPTH OF BURY = 3' - SOIL TYPE = ML
- IF THE ANY OF THE ASSUMPTIONS / INPUTS STATED IN NOTE 3 NEED TO BE REVISED TO FIT PROJECT CONDITIONS, THE ENGINEER OF RECORD SHALL SUBMIT A REVISED MECHANICAL JOINT TABLE TO BE USED ON THE PROJECT. HOWEVER, THE ENGINEER OF RECORD MUST SUBMIT SIGNED AND SEALED CALCULATIONS TO SJCD FOR REVIEW AND APPROVAL.

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

**SJC ST. JOHNS COUNTY UTILITY DEPARTMENT**  
1205 STATE ROAD 16  
ST. AUGUSTINE, FLORIDA 32084-8646  
Phone: (904) 209-2700 • Fax: (904) 209-2702

**GATE VALVE & BOX FOR UNPAVED LOCATIONS**  
4" - 16"  
SCALE: N.T.S.

PLATE: G-1

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**GATE VALVE & BOX FOR PAVED LOCATIONS**  
4" - 16"  
SCALE: N.T.S.

PLATE: G-2

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**PLUGGED DEAD END MECHANICAL RESTRAINTS**  
SCALE: N.T.S.

PLATE: G-3

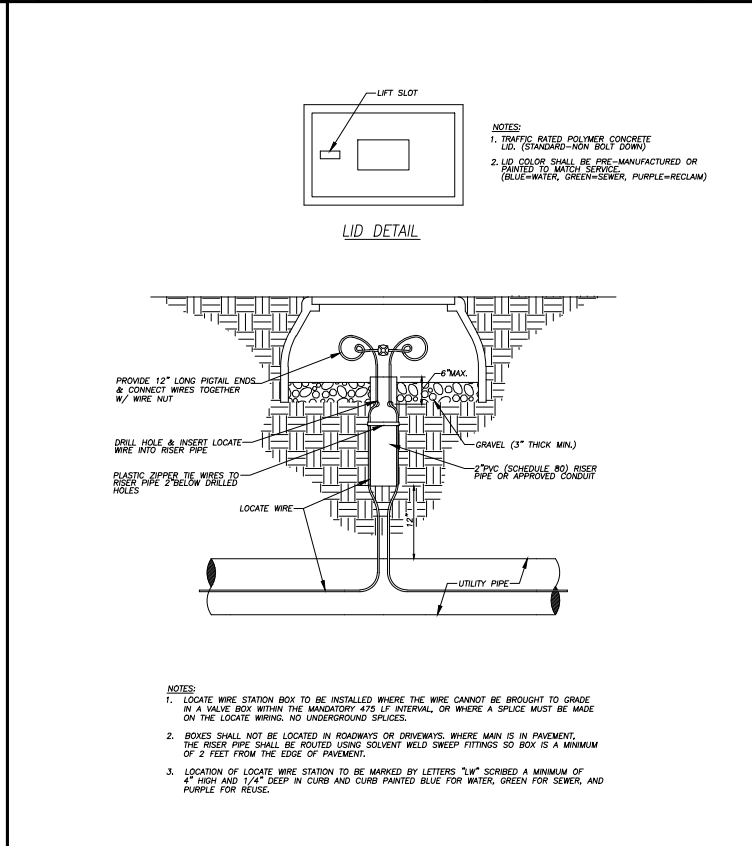
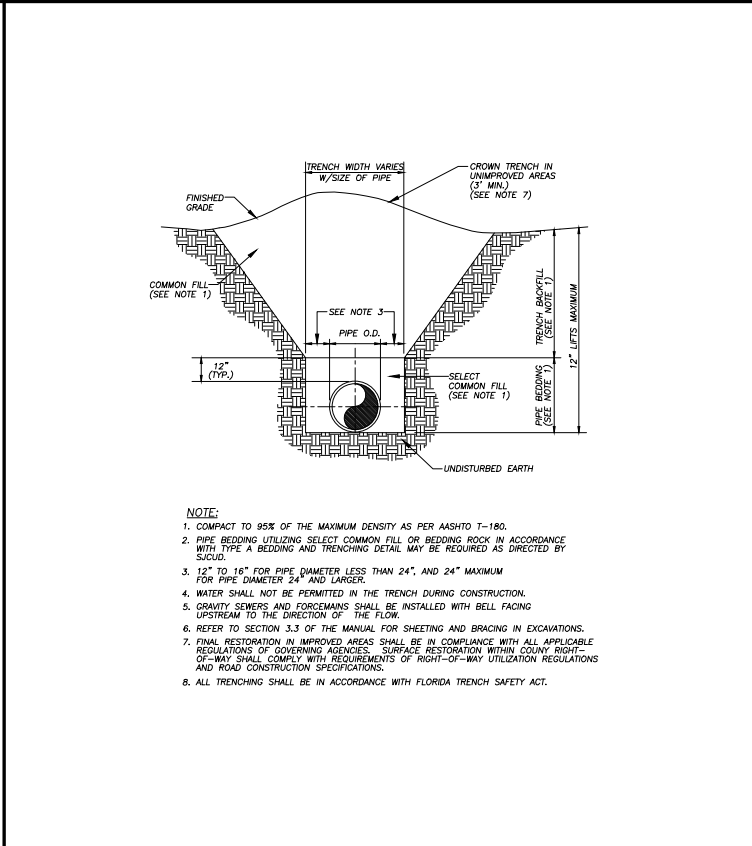
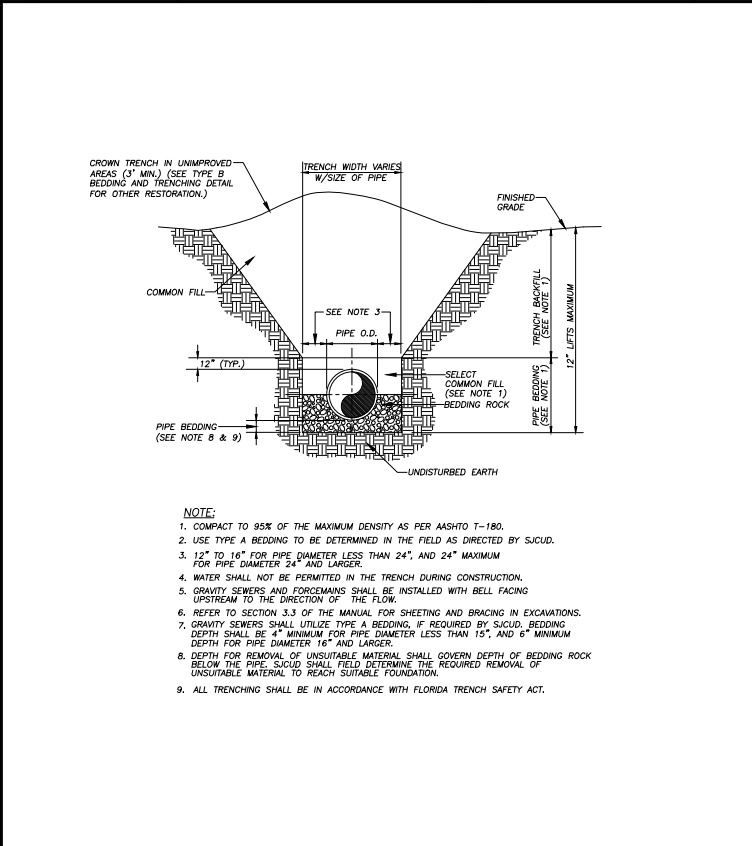
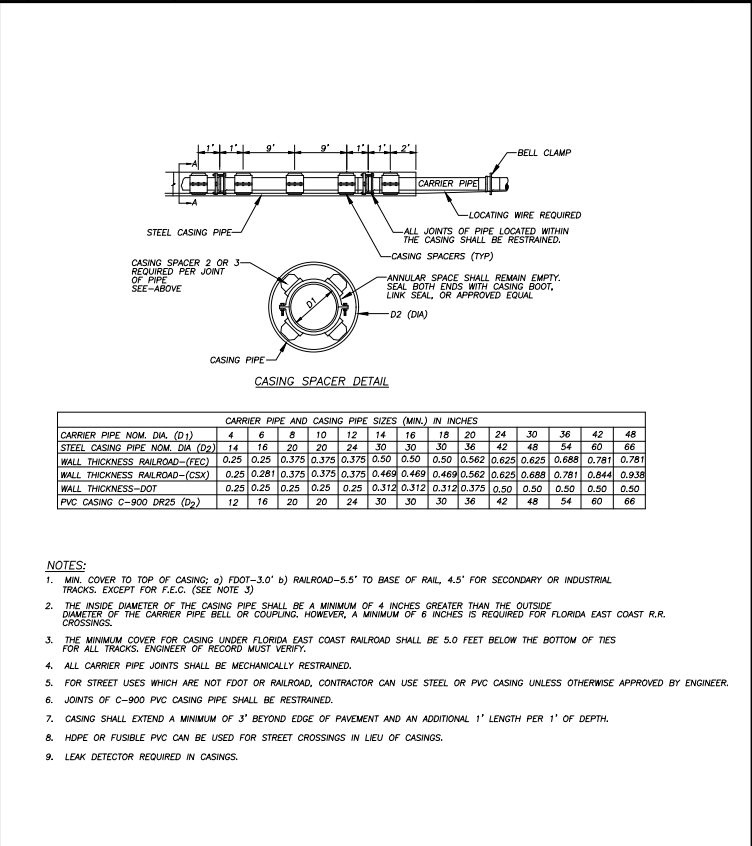
REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**RESTRAINED JOINT TABLE**  
SCALE: N.T.S.

PLATE: G-4



REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**CASING DETAIL**  
SCALE: N.T.S.

PLATE: G-5

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**TYPE A BEDDING & TRENCHING**  
SCALE: N.T.S.

PLATE: G-6

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**TYPE B BEDDING & TRENCHING**  
SCALE: N.T.S.

PLATE: G-7

REVISIONS

Date	Comments
2025	REVISION 2
2020	REVISION 1

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**LOCATE WIRE STATION DETAIL**  
SCALE: N.T.S.

PLATE: G-8

NO. BY DATE SYMBOL	REVISIONS	DESIGNER:	DESIGN ENGINEER	<b>SJC ST. JOHNS COUNTY UTILITY DEPARTMENT</b>	NO. SHEETS
6.		DRAWN BY:		1205 STATE ROAD 16	SHEET NO.
5.		DATE:		ST. AUGUSTINE, FLORIDA 32084-8646	DRAWING NO.
4.		CHECKED BY:	FLORIDA REGISTRATION NO.	Phone: (904) 209-2700 • Fax: (904) 209-2702	D-01
3.		DATE:			
2. SJCD 2025	REVISION 2				
1. SJCD 2020	REVISION 1				

GENERAL DETAILS