

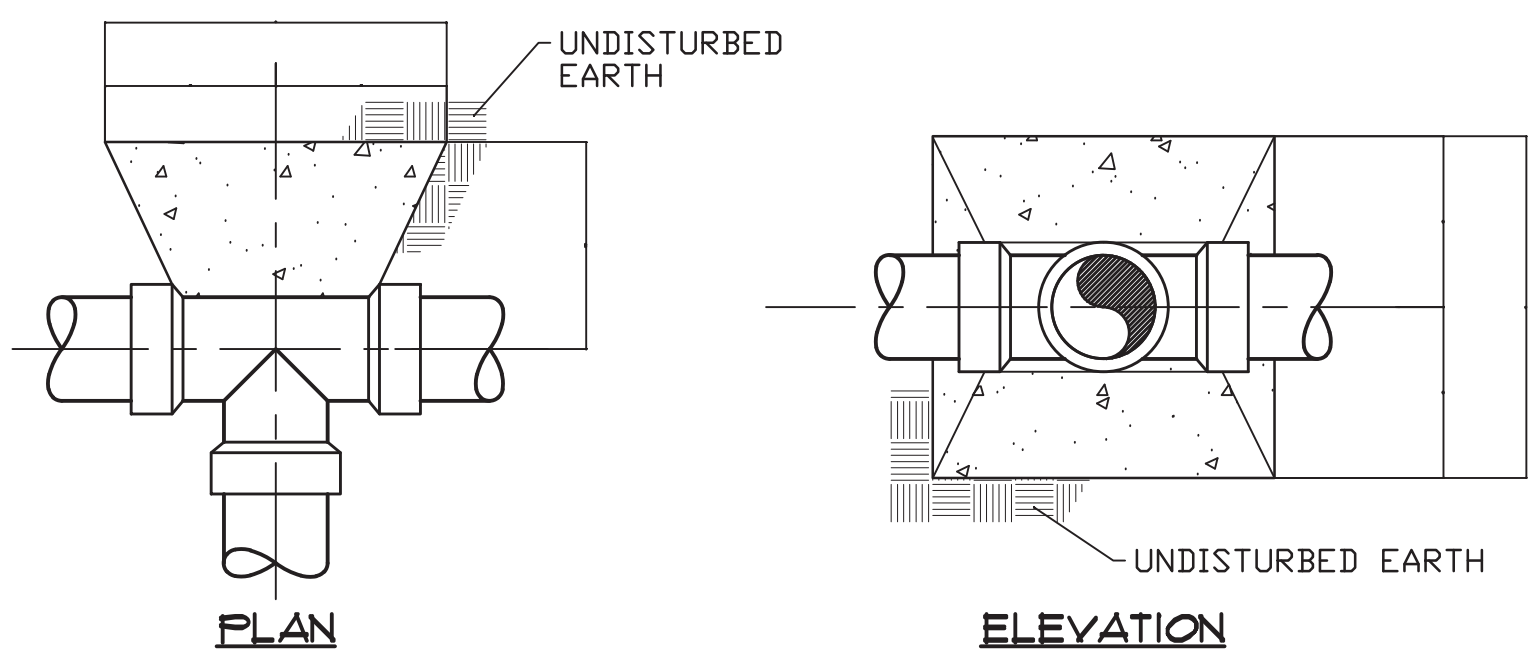
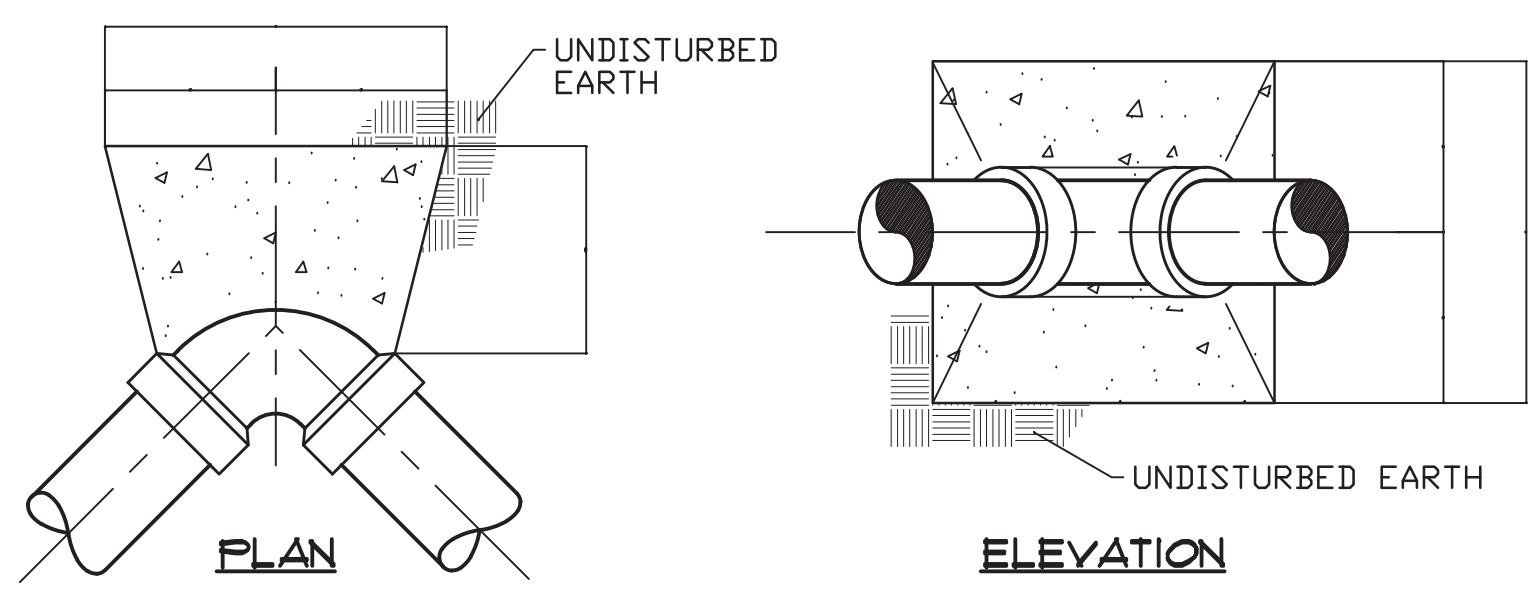
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# PROJECT TYPICAL DETAILS

## TOWN OF CARTHAGE

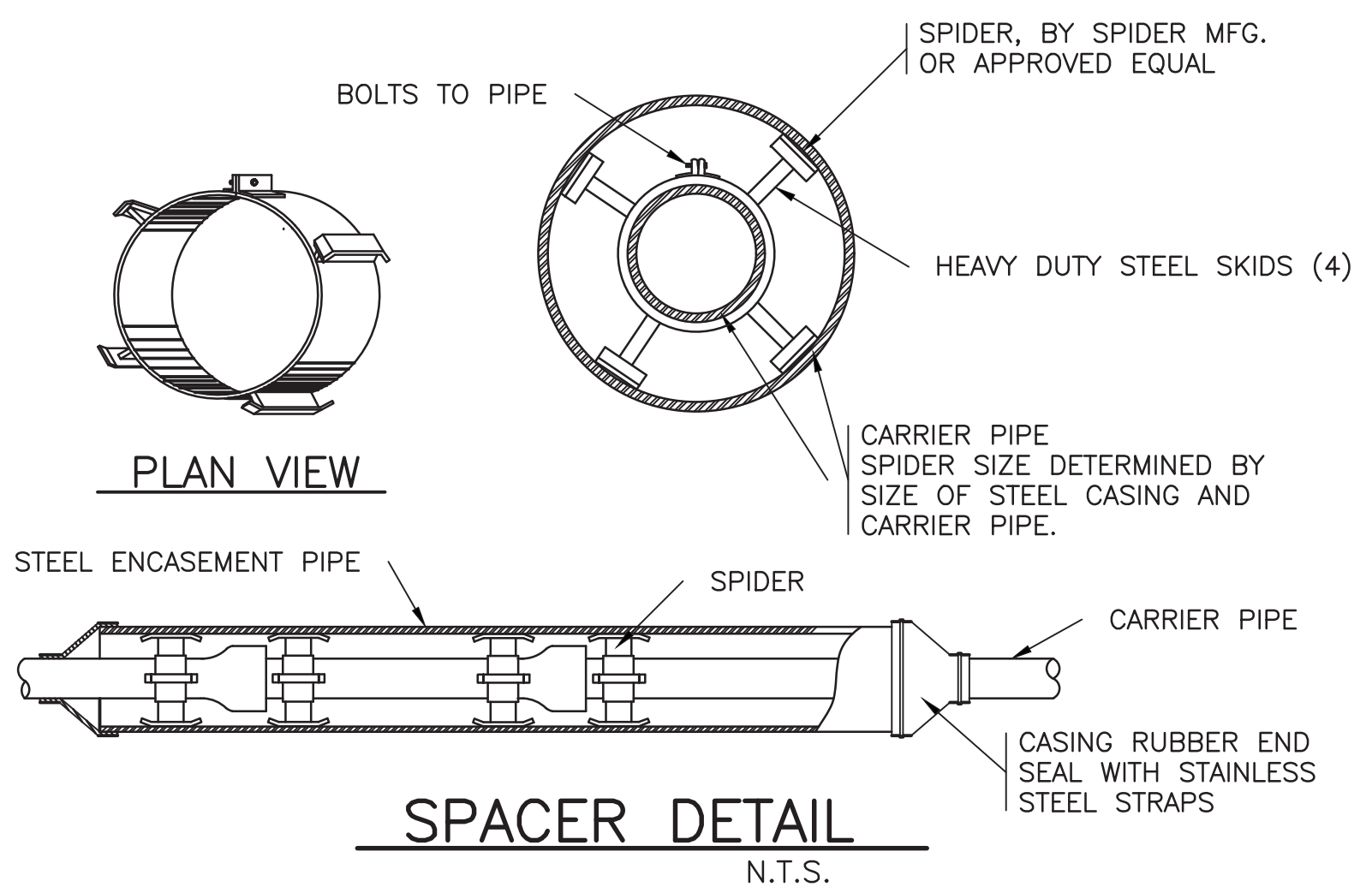
PROJECT REFERENCE NO.	SHEET NO.
BR-0035	UC-3D
DESIGNED BY: MAL	
DRAWN BY: BCS	
CHECKED BY: MAL	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	6/16/2020
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
<b>UTILITY CONSTRUCTION</b>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



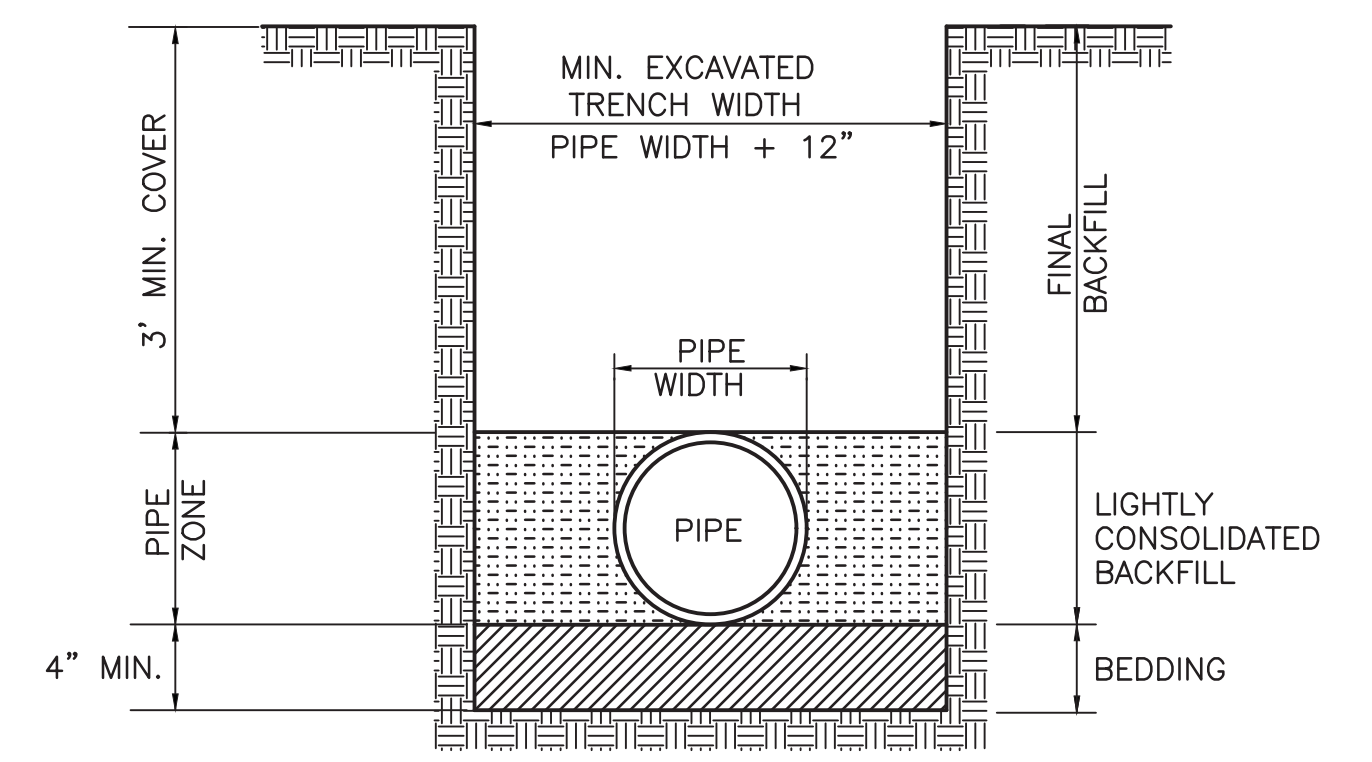
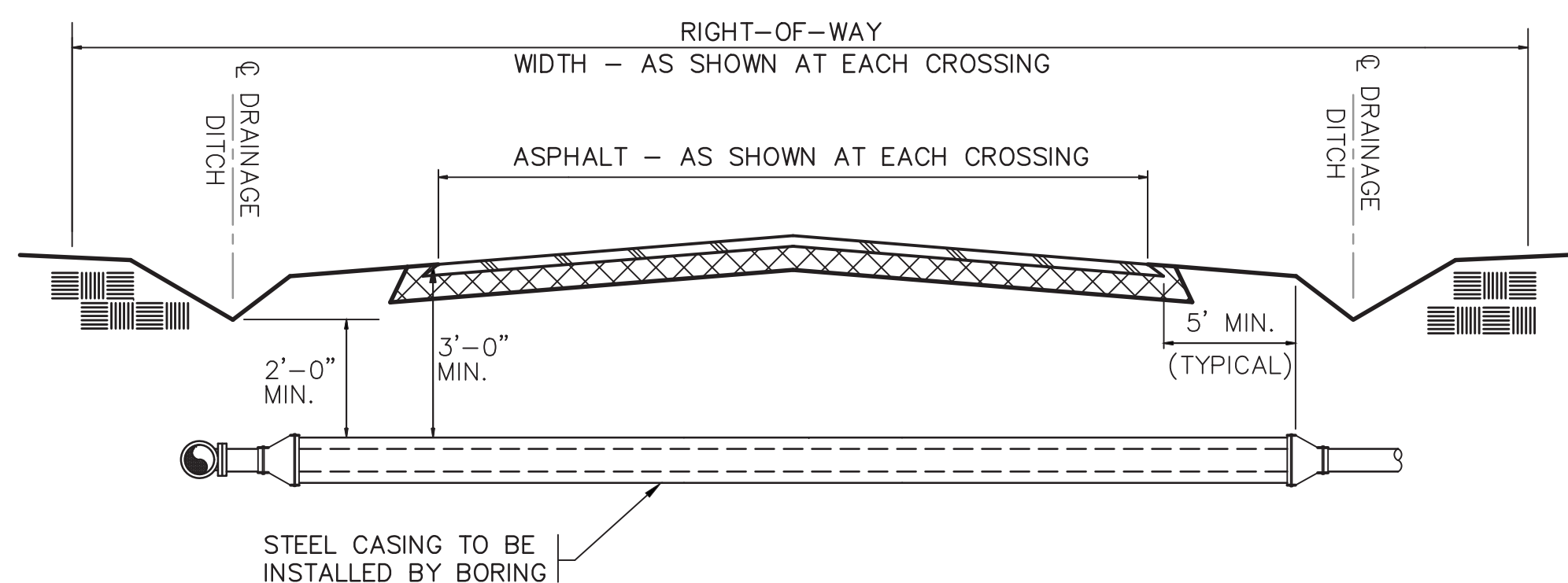
NOTES:  
1. THRUST BLOCKS SHALL BE CONSTRUCTED OF 2500 P.S.I. CONCRETE.  
2. INSTALL TAR PAPER AROUND BEND OR FITTING TO PREVENT BONDING OF CONCRETE.

BEND / FITTING	DIMENSION A (FEET)								
	PIPE SIZE (NOM. DIA. IN INCHES)								
	4	6	8	10	12	16	18	20	24
90° BEND	1.4	2.0	2.7	3.4	4.0	5.4	6.0	6.7	8.0
45° BEND	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0	5.9
22 1/2° BEND	0.8	1.1	1.5	1.8	2.2	2.9	3.2	3.6	4.3
11 1/4° BEND	0.5	0.8	1.0	1.3	1.5	2.0	2.3	2.5	3.0
TEE BRANCH/DEAD END	1.2	1.7	2.3	2.9	3.4	4.5	5.1	5.7	6.8

**CONCRETE THRUST BLOCK DETAIL FOR PRESSURE MAIN HORIZONTAL BENDS AND TEES**  
N.T.S.



NOTE:  
BEDDING SHALL BE 4" MINIMUM LOOSE SOIL, FREE FROM ROCKS, AND SHALL PROVIDE UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE.



NOMINAL D.I. CARRIER PIPE DIA. (INCHES)	STEEL CASING MINIMUM O.D. (INCHES)	MIN. WALL THICKNESS FOR HIGHWAYS (INCHES)	MIN. WALL THICKNESS FOR RAILROADS (INCHES)
3	8.625	0.250	0.250
4	10.750	0.250	0.250
6	14.0	0.250	0.250
8	16.0	0.250	0.312
10	18.0	0.250	0.312
12	20.0	0.250	0.375
14	24.0	0.250	0.375
16	26.0	0.312	0.500
18	28.0	0.312	0.500
20	30.0	0.312	0.500
24	34.0	0.500	0.625