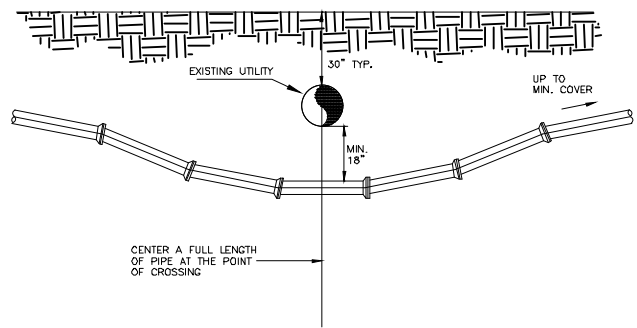
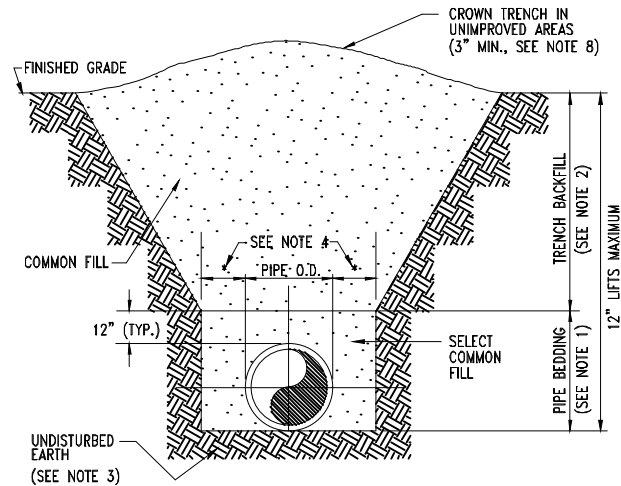


UTILITY CROSSING - FITTING TYPE



1. THE DEFLECTION TYPE CROSSING SHALL BE USED WHENEVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
2. CONSTRUCT CROSSING USING 75% OF MANUFACTURERS MAXIMUM JOINT DEFLECTION (MAXIMUM).

UTILITY CROSSING - DEFLECTION

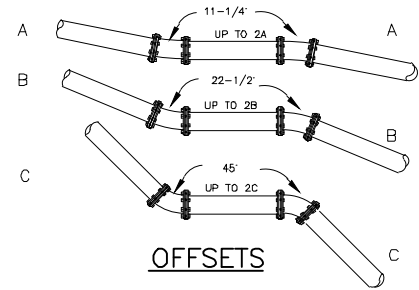


- NOTES:
1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
 2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
 3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE "A" BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE COUNTY.
 4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
 5. TRENCHES MUST BE FREE OF WATER AT ALL TIMES DURING CONSTRUCTION.
 6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
 7. REFER TO THE MANUAL FOR SHEETING AND BRACING EXCAVATIONS.
 8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN MUNICIPAL RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

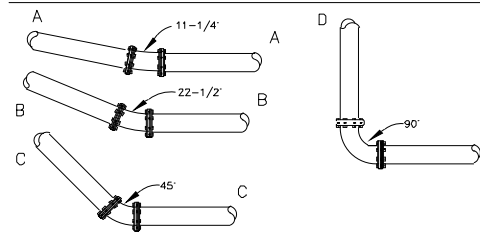
TYPE B BEDDING AND TRENCHING DETAIL

RESTRAINED PIPE

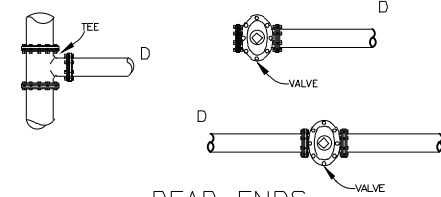
SIZE	DISTANCE IN FEET			
	A & B	C	D	
4"	18	18	54	
6"	18	18	72	
8"	18	36	90	
10"	18	36	108	
12"	18	36	126	
14"	18	54	144	
16"	18	54	162	
18"	18	54	180	
20"	18	72	198	
24"	18	72	216	



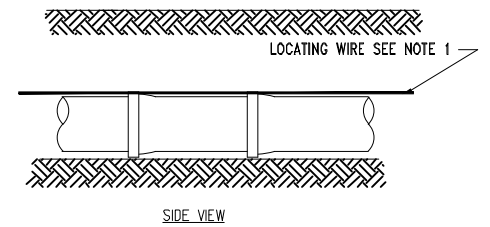
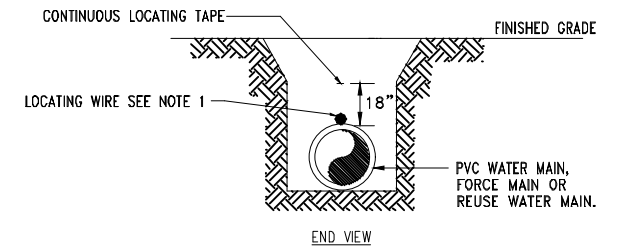
OFFSETS



DEFLECTIONS

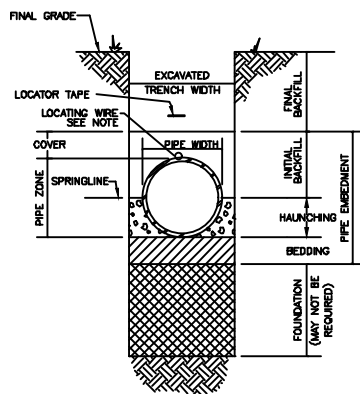


DEAD ENDS RESTRAINED PIPE



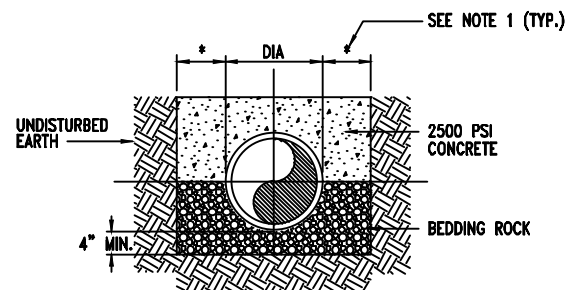
- NOTES:
1. THE TRACER WIRE SHALL BE A BLUE-COATED #10 COPPER HEAD HIGH STRENGTH (HS) SOLID TRACER AND JOINT SEAL SHALL BE INSTALLED ALONG ALL PIPE AND SERVICE. TRACER WIRE SHALL BE TAPED TO THE PIPE AND STUBBED UP AT ALL HYDRANTS AND VALVES.
 2. LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
 3. USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY AGAINST THE PIPE.

PVC PIPE LOCATING WIRE DETAIL

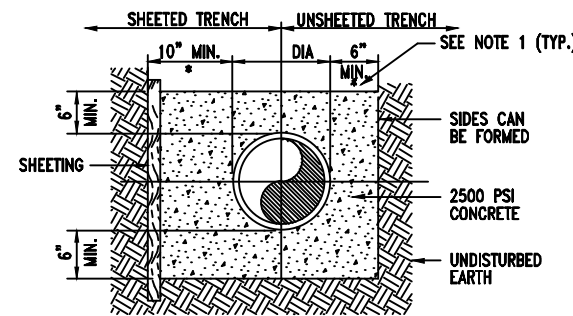


NOTE:
THE TRACER WIRE SHALL BE A BLUE-COATED #10 COPPER HEAD HIGH STRENGTH (HS) SOLID TRACER AND JOINT SEAL SHALL BE INSTALLED ALONG ALL PIPE AND SERVICE. TRACER WIRE SHALL BE TAPED TO THE PIPE AND STUBBED UP AT ALL HYDRANTS AND VALVES.

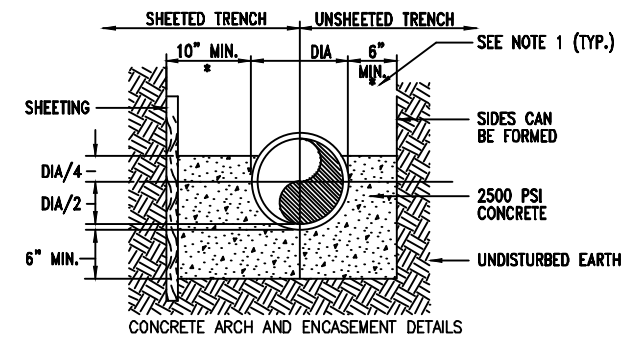
TRENCH CROSS-SECTION TERMINOLOGY



CONCRETE ARCH



FULL ENCASEMENT



CRADLE OR HALF ENCASEMENT

- NOTES:
1. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIA. 24" AND OVER.
 2. USE OF CONCRETE ARCH HALF ENCASEMENT OR FULL ENCASEMENT TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE COUNTY.
 3. REFER TO THE MANUAL FOR SHEETING AND BRACING EXCAVATIONS.

ISSUE CODE
MODIFIED: MJC 07-16-21
MODIFIED: MJC 06-16-21

CITY OF LAKE WALES
200 W CENTRAL AVE. LAKE WALES, FLORIDA 33853

ISSUE CODE	A PRELIMINARY	B DESIGN
C BIDS	D CONSTRUCTION	E APPROVAL

DESIGN: _____ SCALE: N.T.S.
CHK'D BY: _____ DATE: _____
DRAWN BY: _____ ENGR. APPR. _____
DRAWING TITLE: **UNDERGROUND WORK DETAILS**
JOB NO. _____
AREA: CITY-OF-LAKE-WALES REV. _____