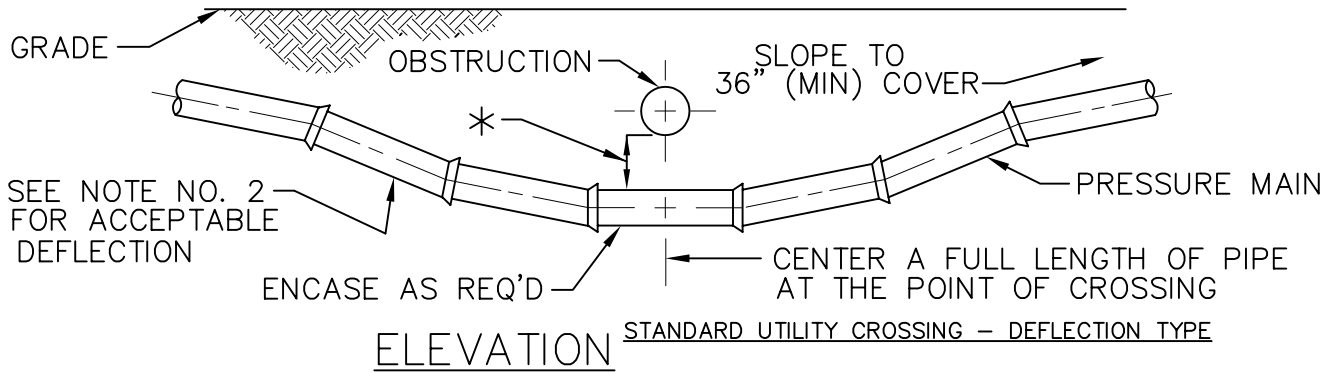


*18" MINIMUM CLEARANCE REQUIRED FOR WATER, STORM WATER, AND SANITARY SEWER MAIN CROSSINGS. IF MINIMUM CLEARANCE CANNOT BE OBTAINED, D.I.P. WITH MECHANICAL JOINTS OR CONCRETE ENCASEMENT IS REQUIRED (SEE NOTE 5A)



NOTES

1. THE DEFLECTION TYPE CROSSING SHALL BE USED WHEREVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER AND APPROVED BY IRCDUS SHALL THE FITTING TYPE CROSSING BE ALLOWED.
2. CONSTRUCT STANDARD CROSSING NOT TO EXCEED 75% OF THE MANUFACTURERS' MAXIMUM JOINT DEFLECTION.
3. IF USED, TIE RODS ARE TO BE COATED WITH A COAL TAR ENAMEL AFTER ASSEMBLY. (2 COATS MINIMUM)
4. OTHER METHODS OF RESTRAINT MAY BE USED AS APPROVED BY IRCDUS.
- *5A. USE DIP FOR GRAVITY SEWER WHERE VERTICAL CLEARANCE BETWEEN WATER MAIN AND SEWER IS LESS THAN 18 INCHES. DIP SHALL BE USED FOR GRAVITY SEWER AT WATER LINE CROSSING WITH A LENGTH OF PIPE. THE PIPE SHALL BE CENTERED AT THE POINT OF CROSSING, SO AS TO LOCATE JOINTS AT A POINT OF CROSSING, AND TO LOCATE THE JOINTS AT A MAXIMUM DISTANCE FROM THE WATER LINE.
- 5B. ONLY UNDER EXTREME CIRCUMSTANCES MAY MINIMUM AND HORIZONTAL SEPARATION REQUIREMENTS BE WAIVED AND ENCASEMENT BE UTILIZED BETWEEN WATER MAINS AND FORCE MAINS.
6. SEE TRACER WIRE DETAIL. M-14.
7. ALL WATER AND SEWER UTILITIES SHALL BE LOCATED A MINIMUM HORIZONTAL SEPARATION EQUAL TO THE DEPTH OF THE PIPE PLUS THE DIAMETER OF THE PIPE FROM ANY PERMANENT ABOVE GROUND STRUCTURES (I.E. WALLS, TREES, TRANSFORMER PADS, ETC.) AND A MINIMUM HORIZONTAL SEPARATION EQUAL TO FOUR (4) FEET FROM ANY UNDERGROUND UTILITIES (I.E. GAS MAINS, TELEPHONE LINES, CABLE LINES, IRRIGATION MAINS, ETC.)
8. ALL WATER AND SEWER UTILITIES SHALL BE LOCATED A MINIMUM HORIZONTAL SEPARATION EQUAL TO TWO TIMES THE DEPTH OF THE PIPE PLUS THE DIAMETER OF THE PIPE FROM THE TOP OF THE BANKS OF ANY BODIES OF WATER (I.E. STORMWATER PONDS, CANALS, ETC.)
9. ALL WATER AND SEWER UTILITIES SHALL BE LOCATED SUCH THAT A MINIMUM HORIZONTAL SEPARATION OF 10' EXISTS AS MEASURED FROM THE OUTSIDE WALL OF EACH MAIN.

INDIAN RIVER COUNTY
DEPARTMENT OF
UTILITIES SERVICES



UTILITY CROSSINGS

DRAWING
NO.

M-4

JULY 2009