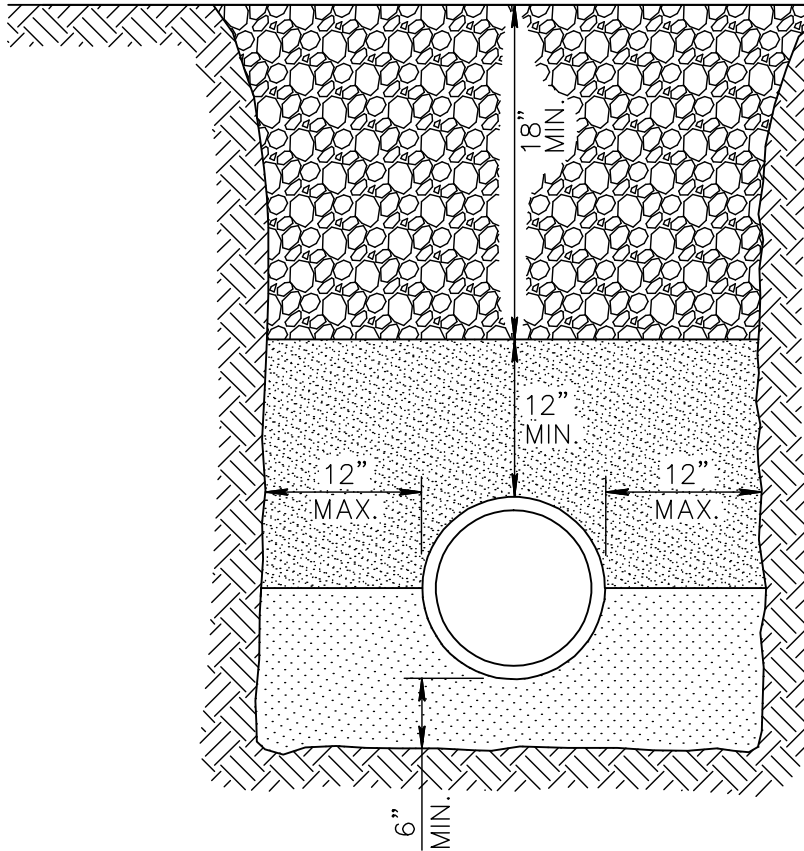


1. REPLACEMENT BASE TO BE AT MIN. 12" THICK.
- 2a. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180 (MAX. LIFT THICKNESS = 6").
- 2b. 12" EXCAVATABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
5. SURFACE MATERIAL SHALL BE F.D.O.T. TYPE S-I OR S-III ASPHALTIC CONC. (MIN. THICKNESS 1 1/2").
6. ANY PAVT. CUTS SHALL BE COLD PATCHED AT END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

EXISTING GROUND



REMAINING BACKFILL PLACED AND COMPACTED PER APPROPRIATE SPECIFICATIONS.(SEE NOTE 5 BELOW) 6" MAX. SIZE 18" MAX. LIFT.

GRANULAR BACKFILL PLACED AND COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180 7/8" MAX. AGGREGATE SIZE 6" MAX. LIFT.

BEDDING MATERIAL COMPACTED TO 98% MAX. DENSITY PER AASHTO T-180.

NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
5. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE.(AASHTO T-180)
6. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS, CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

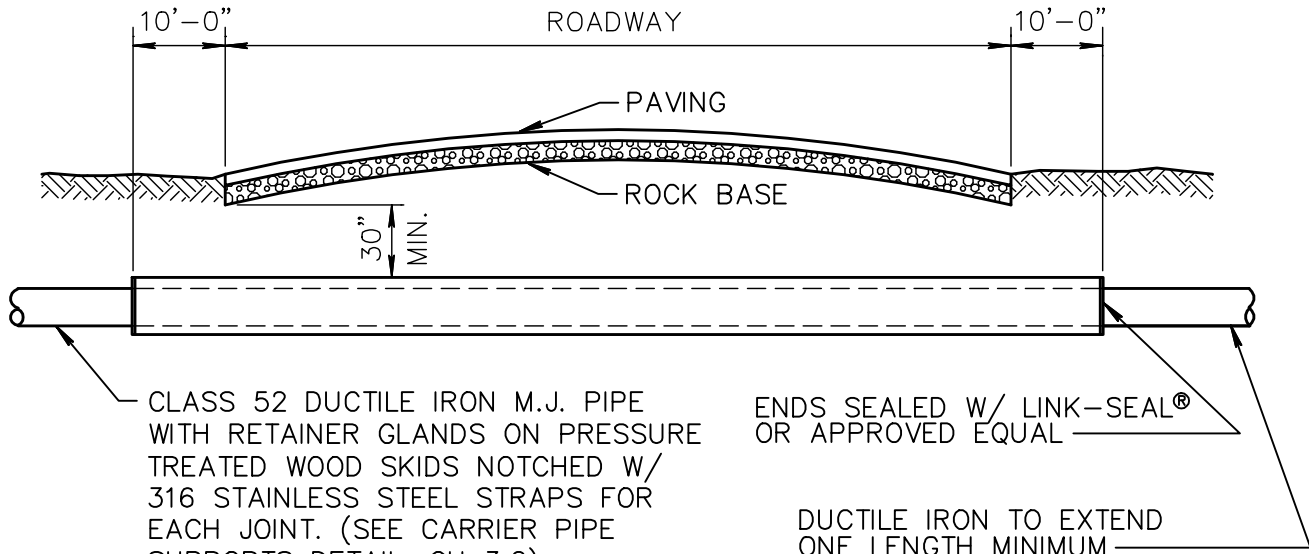


CITY of DELRAY BEACH
ENVIRONMENTAL SERVICES DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL BACKFILL DETAIL

DATE: 06-05-08

GU 2.1



CLASS 52 DUCTILE IRON M.J. PIPE WITH RETAINER GLANDS ON PRESSURE TREATED WOOD SKIDS NOTCHED W/ 316 STAINLESS STEEL STRAPS FOR EACH JOINT. (SEE CARRIER PIPE SUPPORTS DETAIL, GU 3.2) LININGS/COATINGS DEPENDENT ON TYPE OF MAIN (WATER/SEWER). REFER TO STANDARD PRODUCT LIST.

ENDS SEALED W/ LINK-SEAL® OR APPROVED EQUAL

DUCTILE IRON TO EXTEND ONE LENGTH MINIMUM

CARRIER PIPE SIZE	STEEL CASING INSIDE DIAMETER (MIN)	MINIMUM WALL THICKNESS
4"	12"	.188
6"	14"	.250
8"	20"	.250
10"	20"	.250
12"	24"	.250
14"	24"	.250
16"	30"	.250
18"	30"	.250
20"	36"	.250
24"	42"	.312
30"	48"	.375
36"	54"	.450
42"	60"	.500
48"	72"	.500

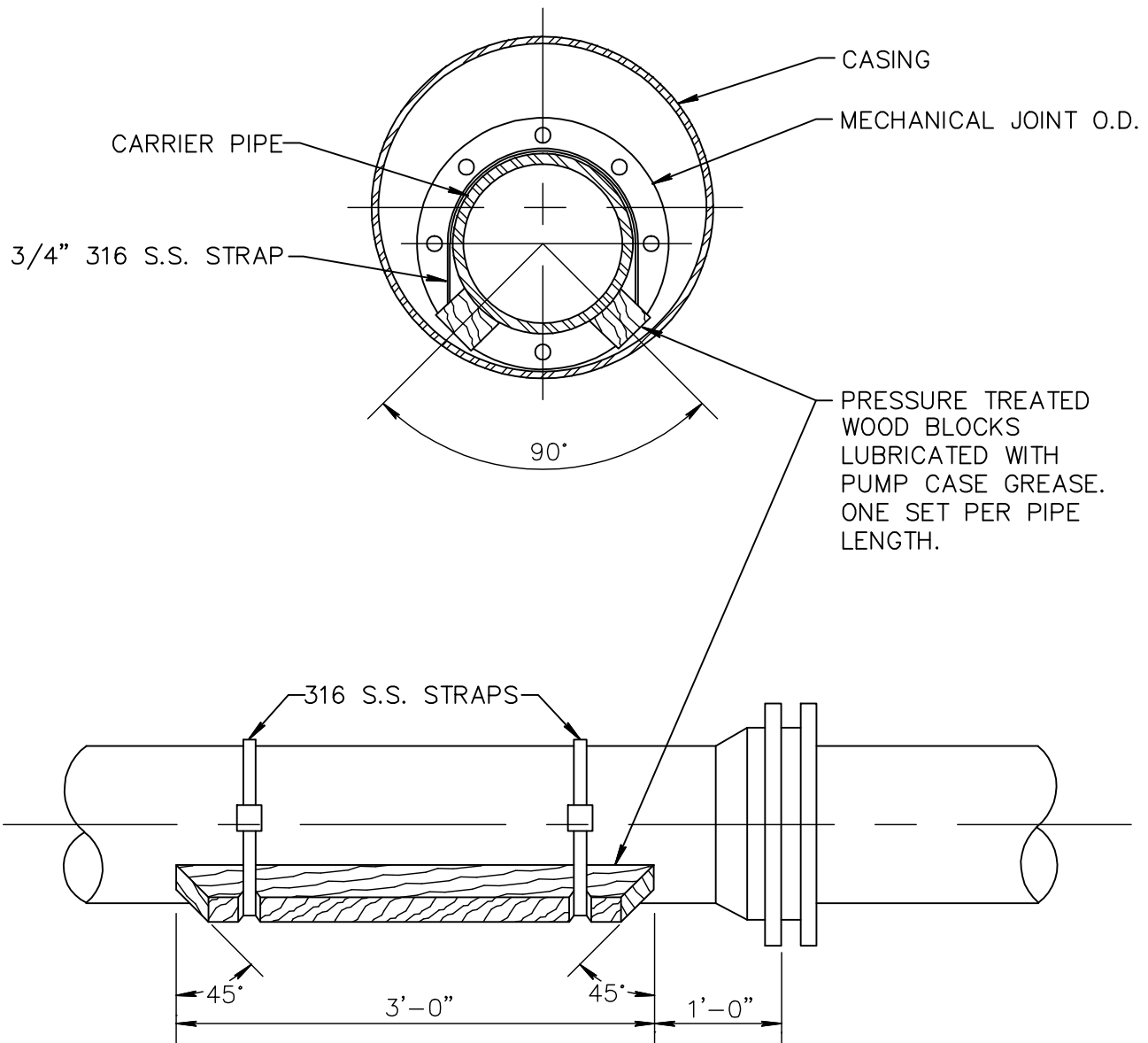


CITY of DELRAY BEACH
 ENVIRONMENTAL SERVICES DEPARTMENT
 434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

JACK AND BORE

DATE: 09-11-00

GU 3.1



ALTERNATE: MAY USE THE CASCADE CASING SPACER SYSTEM OR EQUAL. SUBMIT SHOP DRAWINGS FOR ENGINEER'S APPROVAL.



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CARRIER PIPE SUPPORTS

DATE: 09-11-00

GU 3.2