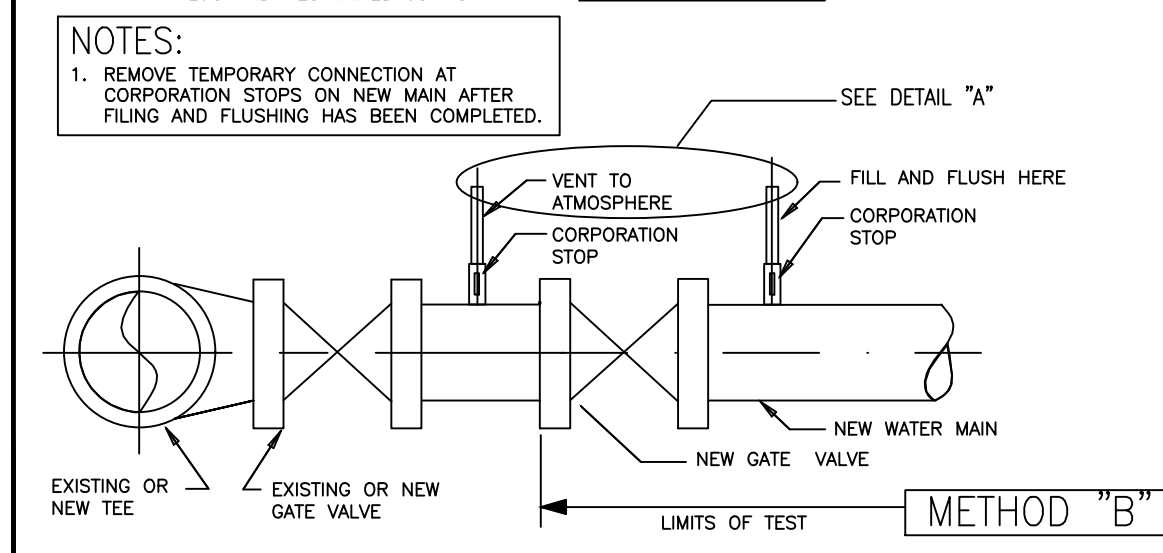
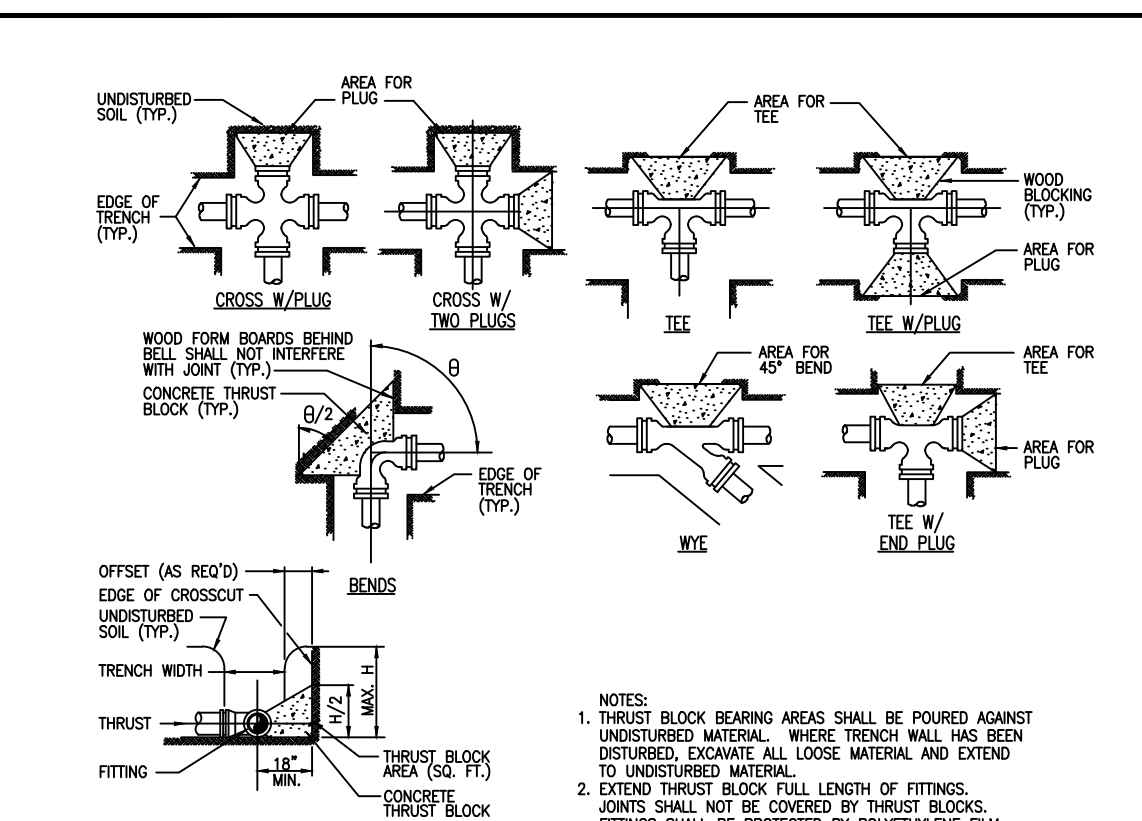


NOTES:
 1. REMOVE TEMPORARY CONNECTION AT CORPORATION STOP ON EXISTING MAIN AFTER FILING AND FLUSHING OF NEW LINE.
 2. DO NOT REMOVE TEMPORARY CONNECTION AT CORPORATION STOP ON NEW MAIN UNTIL ALL TESTING HAS BEEN COMPLETED.



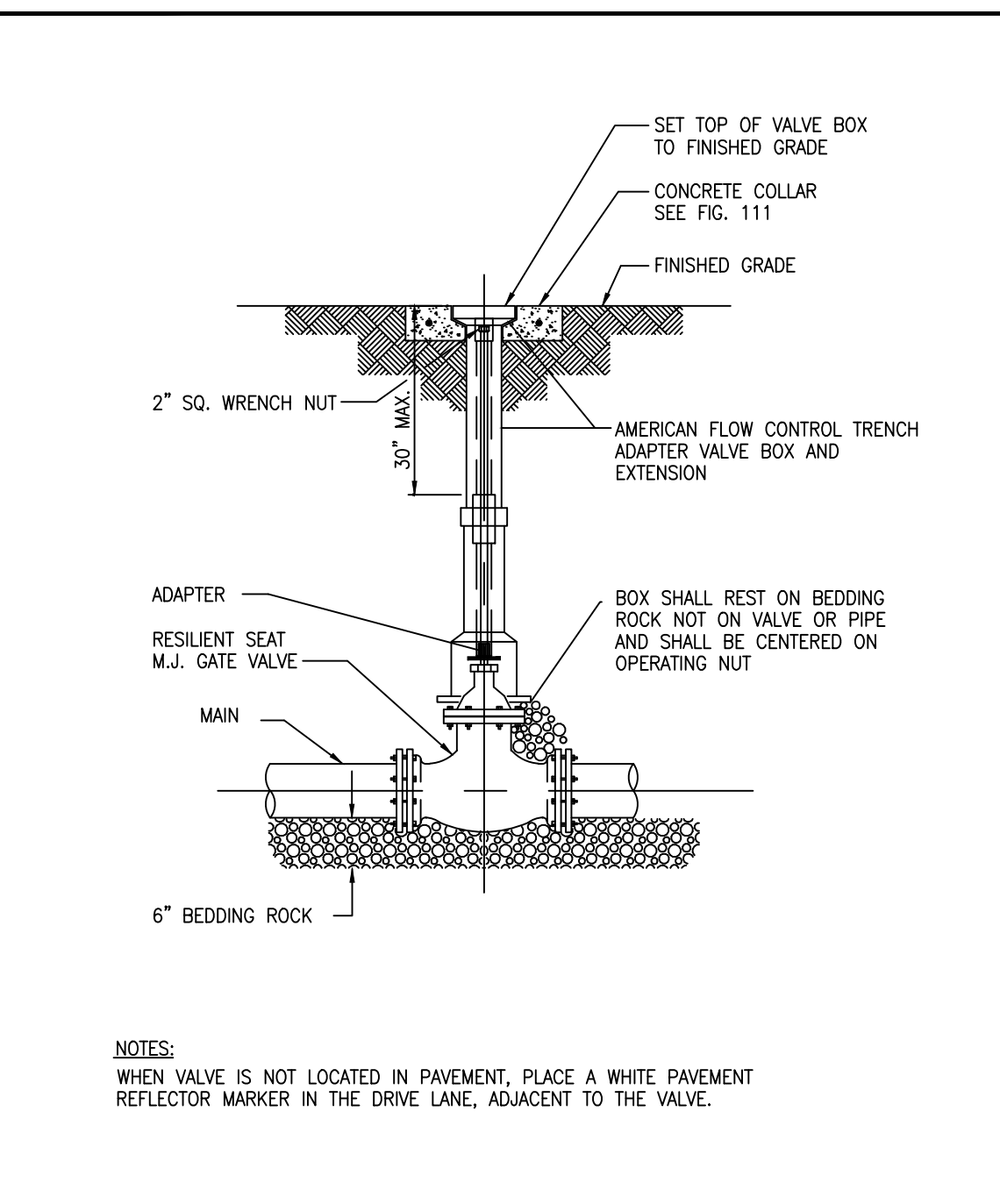
NOTES:
 1. REMOVE TEMPORARY CONNECTION AT CORPORATION STOPS ON NEW MAIN AFTER FILING AND FLUSHING HAS BEEN COMPLETED.



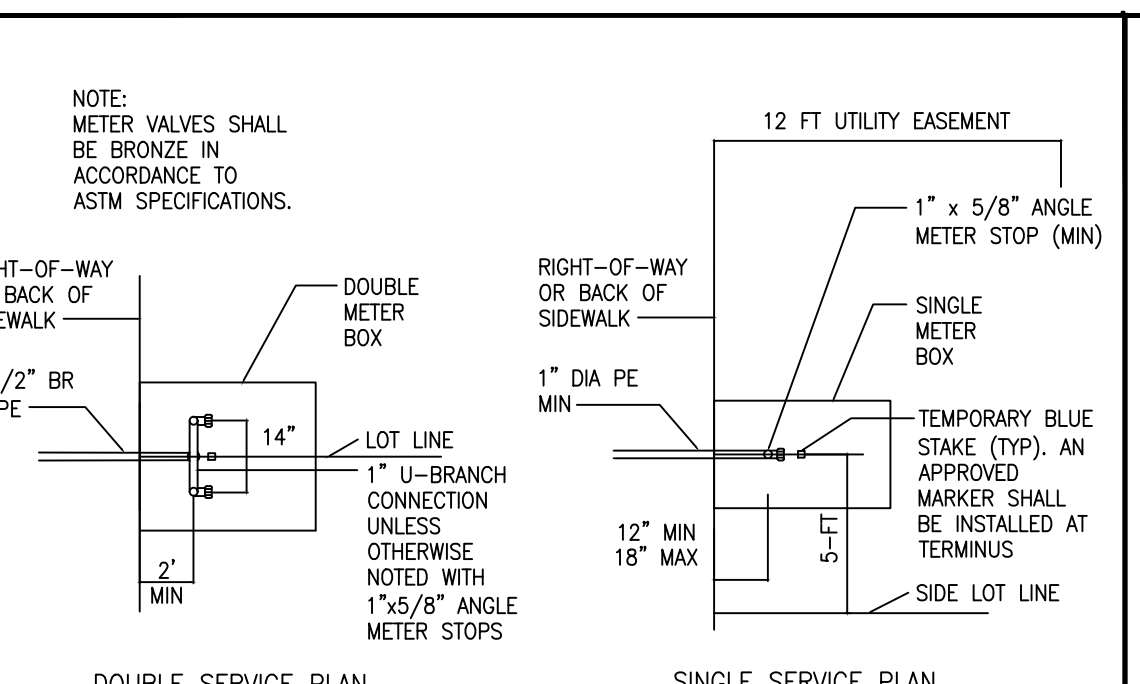
SCHEDULE FOR THRUST BLOCK AREAS *

PIPE SIZE (INCHES)	90° BEND (SQ. FT.)	45° BEND (SQ. FT.)	22-1/2° BEND (SQ. FT.)	11-1/4° BEND (SQ. FT.)	TEE & CROSS (SQ. FT.)	DESIGN PRESS (PSI)
4	150	150	150	150	150	150
6	150	150	150	150	150	150
8	150	150	150	150	150	150
10	150	150	150	150	150	150
12	150	150	150	150	150	150
14	150	150	150	150	150	150
16	150	150	150	150	150	150
18	150	150	150	150	150	150
20	150	150	150	150	150	150
24	150	150	150	150	150	150

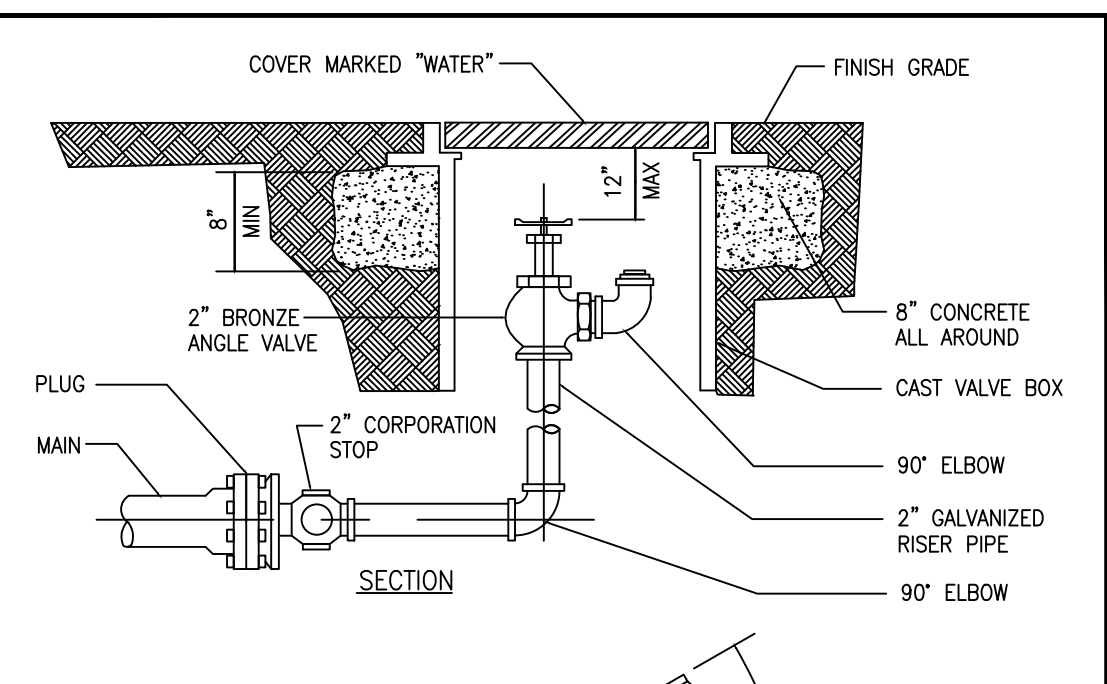
NOTES:
 1. THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIAL...
 2. EXTENDING THRUST BLOCK FULL LENGTH OF FITTINGS...
 3. JOINTS SHALL NOT BE COVERED BY THRUST BLOCKS...
 4. THRUST BLOCKS SHALL BE PROTECTED BY POLYETHYLENE FILM (8 MIL) PRIOR TO PLACING CONCRETE THRUST BLOCK...
 5. ROUGH BLOCKING ZONES SHALL BE USED ALONG SIDES OF THRUST BLOCKS AS REQUIRED...
 6. THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED, TO SUIT THE SPECIFIC FITTING ARRANGEMENT...
 7. ALTERNATE DESIGN RESTRAINING SYSTEMS SHALL BE PROVIDED WHERE STANDARD THRUST BLOCKING IS NOT SUITABLE AND/OR SOIL RESISTANCE BEARING IS LESS THAN 1500 PSF...
 8. ALL WOOD BLOCKING SHALL BE PRESSURE TREATED WITH PRESERVATIVE...
 9. RESISTANT ALL FITTINGS AND PIPE JOINTS 8" OR SMALLER MAY BE RESTRAINED USING THRUST BLOCKS. ALL OTHERS MUST BE RESTRAINED AS FOLLOWS:
 JOINT RESTRAINT
 PUSH-ON PVC EBBA IRON SERIES 2800 HARNESS
 PUSH-ON DIP TR-FLEX BY U.S. PIPE OR FLEX RING BY AMERICAN
 FITTINGS WITH DP EBBA IRON SERIES 1100 MEGALUG
 FITTINGS WITH PFC EBBA IRON SERIES 2000 MEGALUG
 10. SOIL TYPE 3000 SAND
 11. LAYING CONDITIONS: TYPE 2, STANDARD ANA/AMA C150/A2150
 12. HYDROSTATIC TEST PRESSURE: 150 PSI
 13. DEPTH OF COVER: 2.5 FT.
 14. LENGTHS LISTED HERE ARE BASED ON CLASS 50 D.I.P.
 * TO BE COMPLETED BY ENGINEER.



NOTES:
 WHEN VALVE IS NOT LOCATED IN PAVEMENT, PLACE A WHITE PAVEMENT REFLECTOR MARKER IN THE DRIVE LANE, ADJACENT TO THE VALVE.



NOTE: METER VALVES SHALL BE BRONZE IN ACCORDANCE TO ASTM SPECIFICATIONS.
 RIGHT-OF-WAY OR BACK OF SIDEWALK
 12 FT UTILITY EASEMENT
 1" x 5/8" ANGLE METER STOP (MIN)
 SINGLE METER BOX
 1" DIA PE
 TEMPORARY BLUE STAKE (TYP), AN APPROVED MARKER SHALL BE INSTALLED AT TERMINUS
 SIDE LOT LINE
 1" U-BRANCH CONNECTION UNLESS OTHERWISE NOTED WITH 1"x5/8" ANGLE METER STOPS
 14" MIN. R
 3/4" ROCK
 1" (MIN) POLYETHYLENE OR TYPE "K" COPPER TUBING
 CORPORATION STOP (BRASS ALLOY)
NOTE: WATER METER TO BE INSTALLED BY THE CITY. METER BOX TO BE SUPPLIED BY THE CITY AND INSTALLED BY THE BUILDER. BACKFLOW PREVENTOR SHALL BE INSTALLED DOWNSTREAM OF METER PER CODE. 18" MIN SEPARATION SHALL BE MAINTAINED BETWEEN SERVICE SADDLES.
NOTE: USE STAINLESS STEEL TUBE LINERS FOR ALL COMPRESSION CONNECTIONS.
 DOUBLE STRAP SERVICE SADDLES SHALL BE INSTALLED ON PIPE OTHER THAN DIP



BEARING AREAS FOR BLOW OFF THRUST BLOCKS

PLUG SIZE (INCHES)	BEARING AREA IN (SQ. FT.)
4	1.0
6	2.1
8	3.8
10	5.9
12	8.5
14	11.5
16	15.0
18	19.0
20	23.5
24	34.0

BEARING AREA = (TEST PRESSURE/150) x (2000/SOIL BEARING STRESS) x (TABLE VALUE)
NOTES:
 1. PIPE COMPOUND SHALL BE APPLIED TO MALE THREADS ONLY.
 2. COAT ALL EXPOSED THREADS WITH BITUMASTIC BEFORE BACKFILLING.
 3. 2" TOP IN BOTTOM OF PLUG.
 4. PLYWOOD AND CONCRETE TO HAVE A HEIGHT EQUAL TO THE DIAMETER OF THE PIPE.

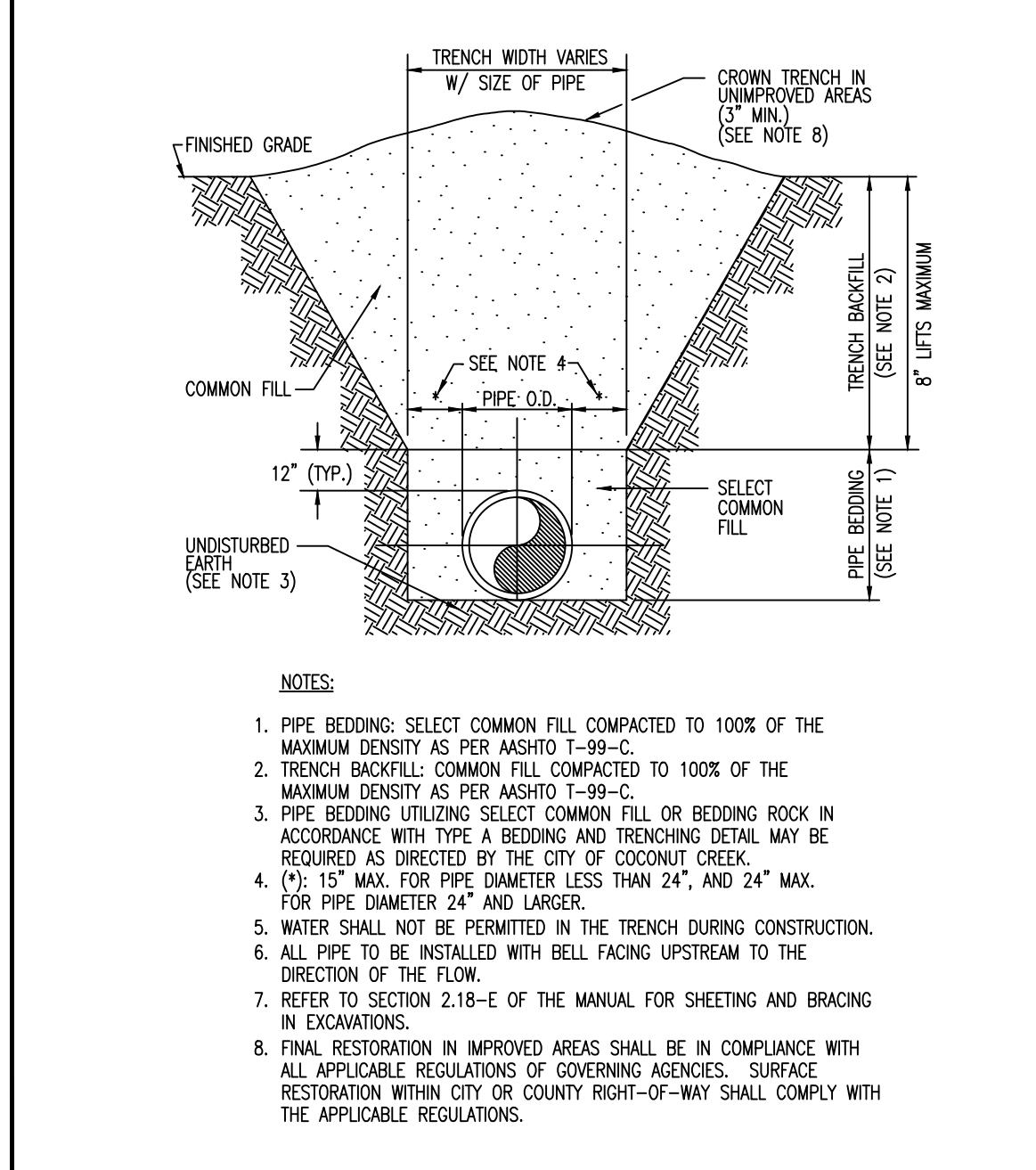
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 FILLING AND FLUSHING DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F104 Fig: 104

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 THRUST BLOCK DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F107 Fig: 107

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 GATE VALVE AND BOX DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F115 Fig: 115

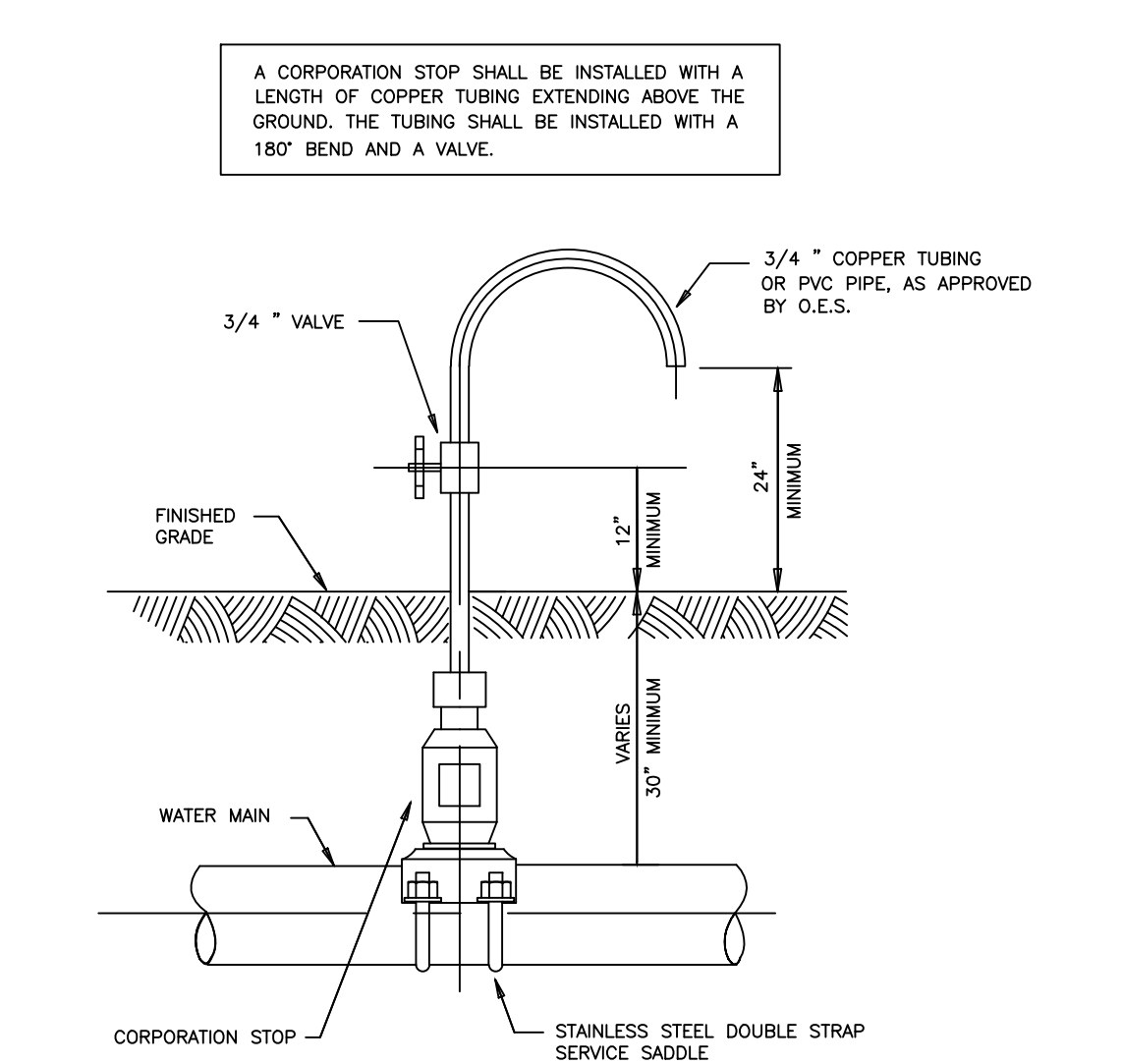
CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 WATER SERVICE CONNECTION DETAILS
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F119 Fig: 119

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 BLOW OFF VALVE DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F117 Fig: 117



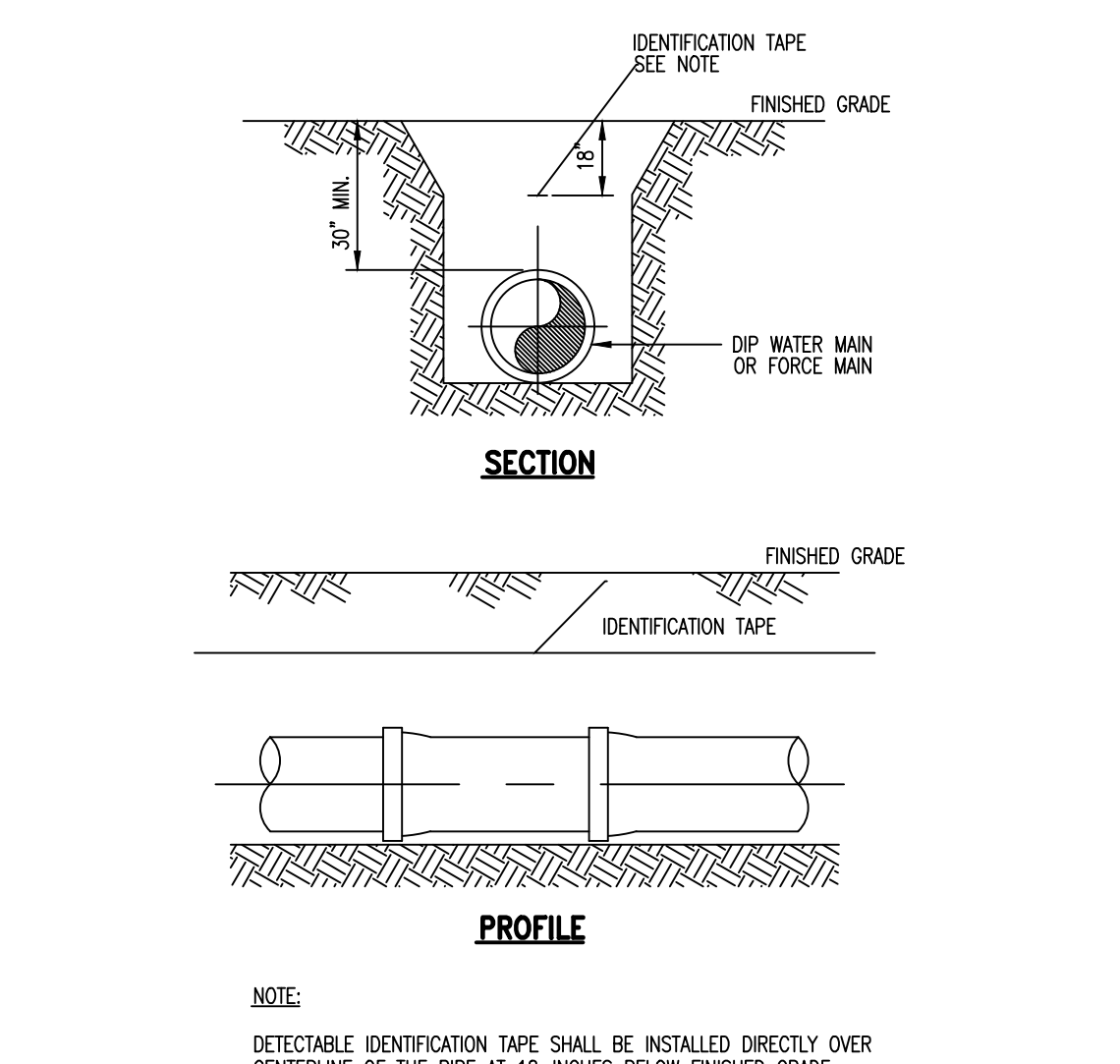
NOTES:
 1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 100% OF THE MAXIMUM DENSITY AS PER ASTM T-99-C.
 2. TRENCH BACKFILL COMMON FILL COMPACTED TO 100% OF THE MAXIMUM DENSITY AS PER ASTM T-99-C.
 3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY OF COCONUT CREEK.
 4. (1) 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
 5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
 6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
 7. REFER TO SECTION 2.18-E OF THE MANUAL FOR SHEETING AND BRACING IN EXCAVATIONS.
 8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY OR COUNTY RIGHT-OF-WAY SHALL COMPLY WITH THE APPLICABLE REGULATIONS.

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 TYPE B BEDDING AND TRENCHING DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F010 Fig: 010



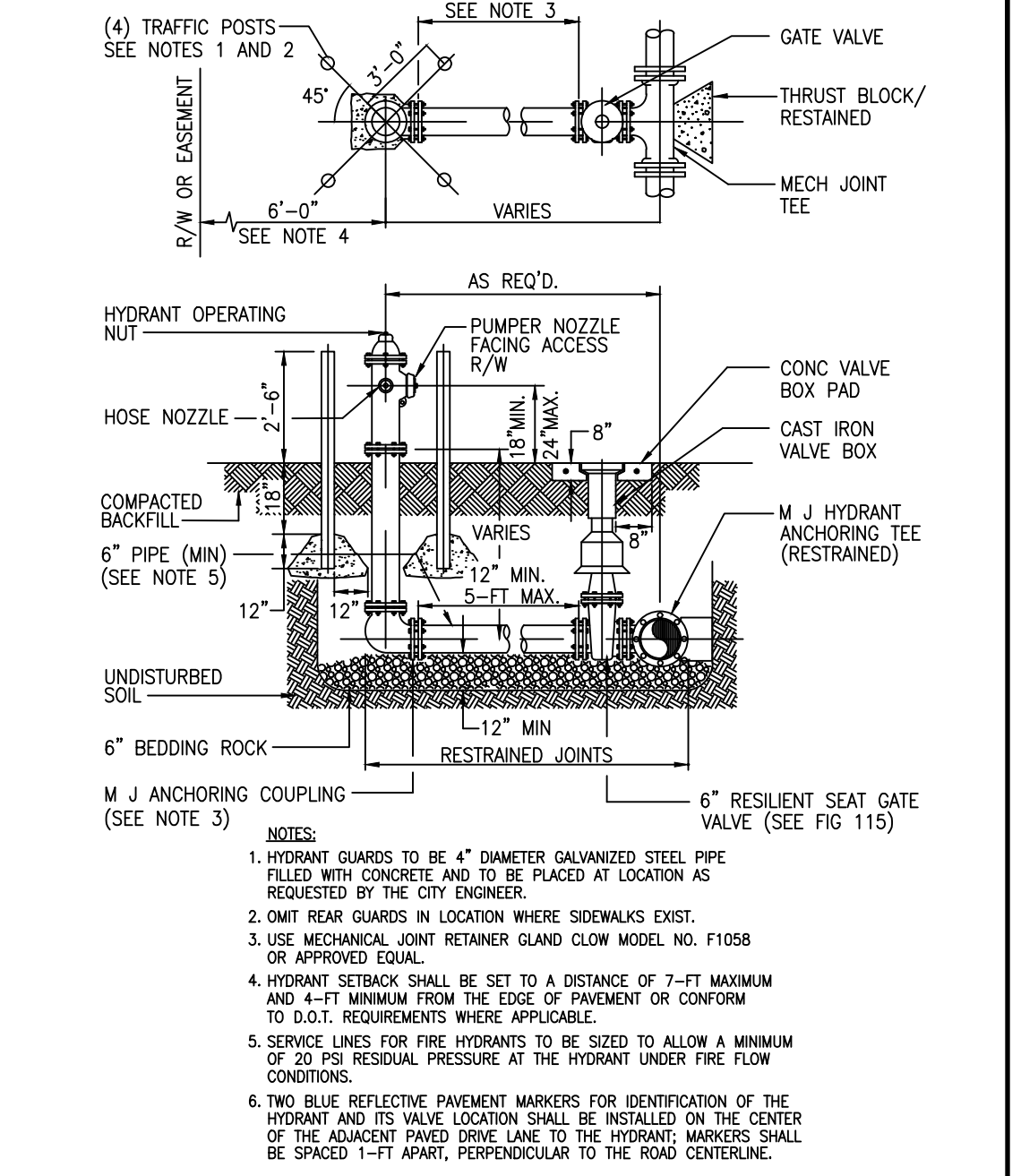
NOTES:
 SAMPLING POINTS SHALL BE LOCATED AND LATER REMOVED AS REQUIRED BY BROWARD COUNTY HEALTH DEPARTMENT. CORPORATION STOP SHALL BE REMOVED AND SADDLE PLUGGED WITH A BRASS FITTING.

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 BACTERIOLOGICAL DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F106 Fig: 106



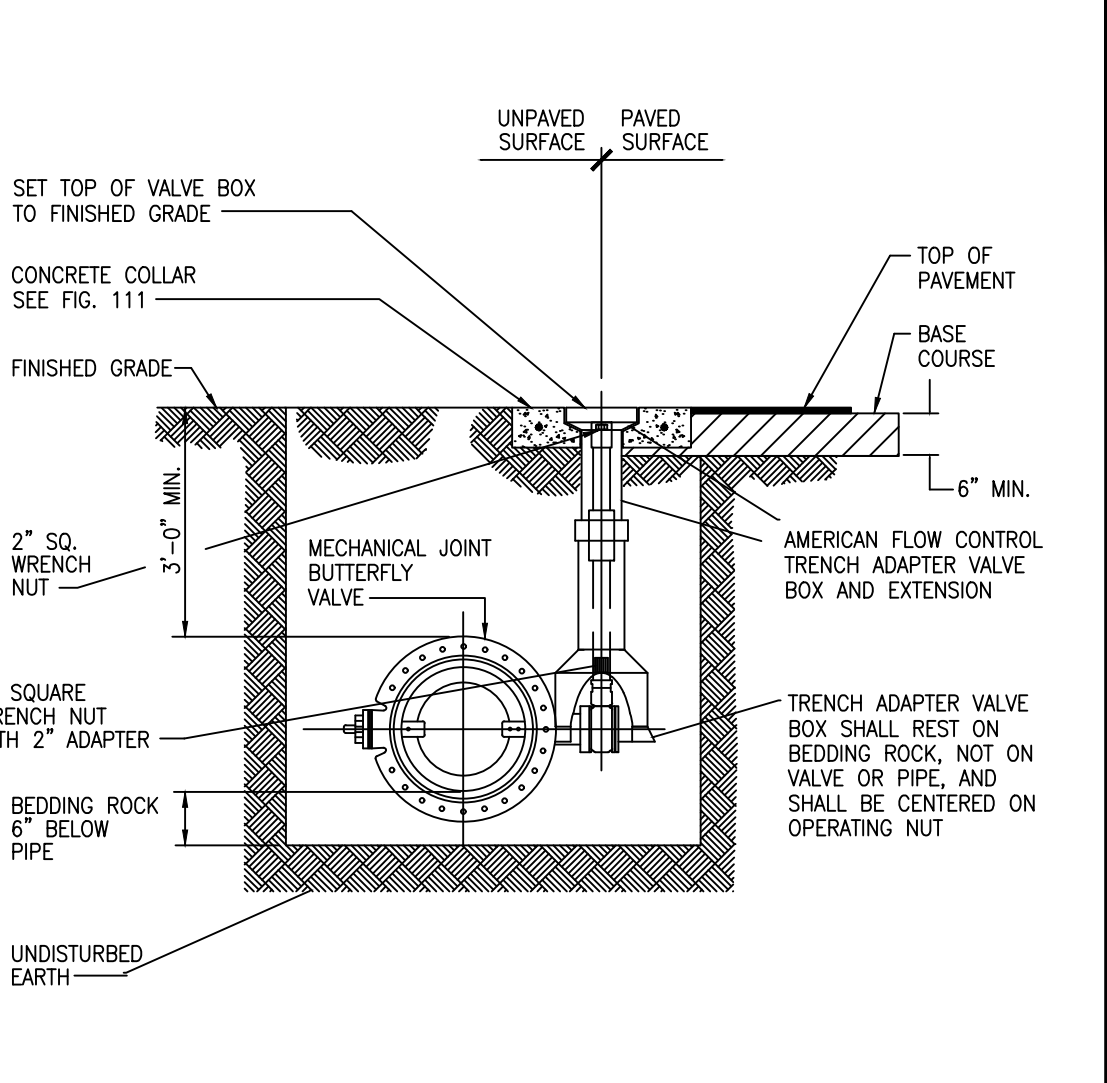
NOTE: DETECTABLE IDENTIFICATION TAPE SHALL BE INSTALLED DIRECTLY OVER CENTERLINE OF THE PIPE AT 18-INCHES BELOW FINISHED GRADE.

CITY OF COCONUT CREEK UTILITIES DEPARTMENT
 LOCATING TAPE DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F112 Fig: 112



NOTES:
 1. HYDRANT GUARDS TO BE 4" DIAMETER GALVANIZED STEEL PIPE FILLED WITH CONCRETE AND TO BE PLACED AT LOCATION AS REQUESTED BY THE CITY ENGINEER.
 2. OMIT REAR GUARDS IN LOCATION WHERE SIDEWALKS EXIST.
 3. USE MECHANICAL JOINT RETAINER GLAND GLOW MODEL NO. F1058 OR APPROVED EQUAL.
 4. HYDRANT SETBACK SHALL BE SET TO A DISTANCE OF 7'-FT MAXIMUM AND 4'-FT MINIMUM FROM THE EDGE OF PAVEMENT OR CONFORM TO D.O.T. REQUIREMENTS WHERE APPLICABLE.
 5. SERVICE LINES FOR FIRE HYDRANTS TO BE SIZED TO ALLOW A MINIMUM OF 20 PSI RESIDUAL PRESSURE AT THE HYDRANT UNDER FIRE FLOW CONDITIONS.
 6. TWO BLUE REFLECTIVE PAVEMENT MARKERS FOR IDENTIFICATION OF THE HYDRANT AND ITS VALVE LOCATION SHALL BE INSTALLED ON THE CENTER OF THE ADJACENT PAVED DRIVE LANE TO THE HYDRANT. MARKERS SHALL BE SPACED 1'-FT APART, PERPENDICULAR TO THE ROAD CENTERLINE.
 7. FIRE HYDRANT SHALL BE CLOW MEDALLION OR AMERICAN DARLING.

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 FIRE HYDRANT ASSEMBLY DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F103 Fig: 103



NOTES:
 WHEN WATER VALVE IS NOT LOCATED IN PAVEMENT, PLACE A WHITE PAVEMENT REFLECTOR MARKER IN THE DRIVE LANE, ADJACENT TO THE VALVE.

CITY OF COCONUT CREEK UTILITIES AND ENGINEERING DEPARTMENT
 BUTTERFLY VALVE AND BOX DETAIL
 Date Revisions Appr. by Date: Scale: N.T.S. Dwg: F116 Fig: 116

PRESSURE PIPE NOTES

- THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE, AND 24" MINIMUM FOR WATER SERVICE LINE.
- DUCTILE IRON PIPE (DIP) THICKNESS SHALL CONFORM TO THE DEPARTMENT'S APPROVED MATERIAL LIST. POTABLE WATER DIP SHALL BE CEMENT LINED. FORCE MAIN DIP SHALL BE CERAMIC EPOXY LINED.
- ALL FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS AND CEMENT OR CERAMIC EPOXY LINING.
- POTABLE WATER VALVES 10 INCHES AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES AND SHALL BE IN CONFORMANCE WITH CITY OF COCONUT CREEK REQUIREMENTS. (ECCENTRIC PLUG VALVES. POTABLE WATER)
- ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND HEALTH DEPARTMENT STANDARDS AND REGULATIONS.

REV. PER CITY	05/13/19	BAH
REV. PER CITY	04/04/19	NJA
REVISIONS		DATE
FILE NAME	E27ENGINE.DWG	

CAULFIELD & WHEELER, INC.
 CIVIL ENGINEERING - LAND PLANNING
 LANDSCAPE ARCHITECTURE - SURVEYING
 7900 GLADES ROAD - SUITE 100
 BOCA RATON, FLORIDA 33434
 PHONE (561)-392-1991 / FAX (561)-750-1452

LYONS EXCHANGE CENTER
 COCONUT CREEK, FLORIDA
 WATER DISTRIBUTION &
 SANITARY SEWER DETAILS
 COCONUT CREEK, FLORIDA

DATE 6/26/18
 DRAWN BY BAH
 F.B./ PG. N/A
 SCALE N.T.S.

JOHN F. WHEELER
 PROFESSIONAL ENGINEER
 LICENSE NO. 25478
 STATE OF FLORIDA
 ENG. NO. EB-0003591
 DATE

JOB # 8281
 SHT. NO.
WS-3
 OF 15 SHEETS