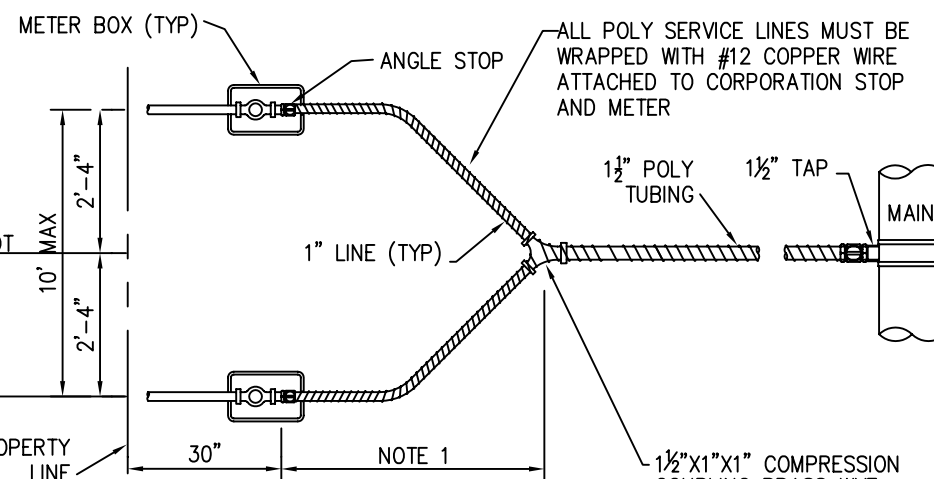
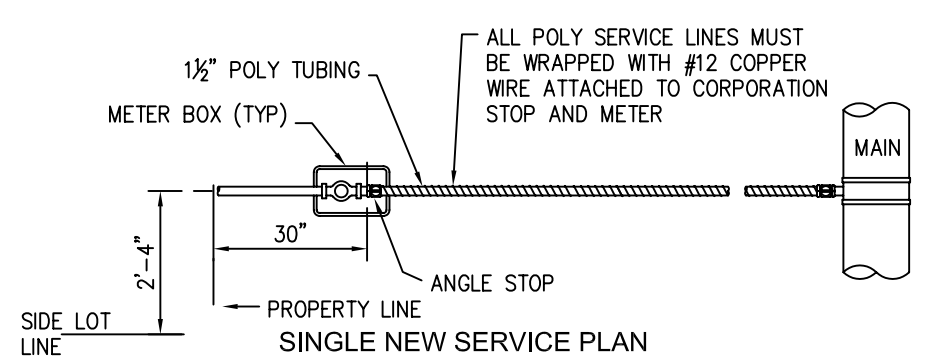


TYPICAL WATER SERVICE INSTALLATION (300)

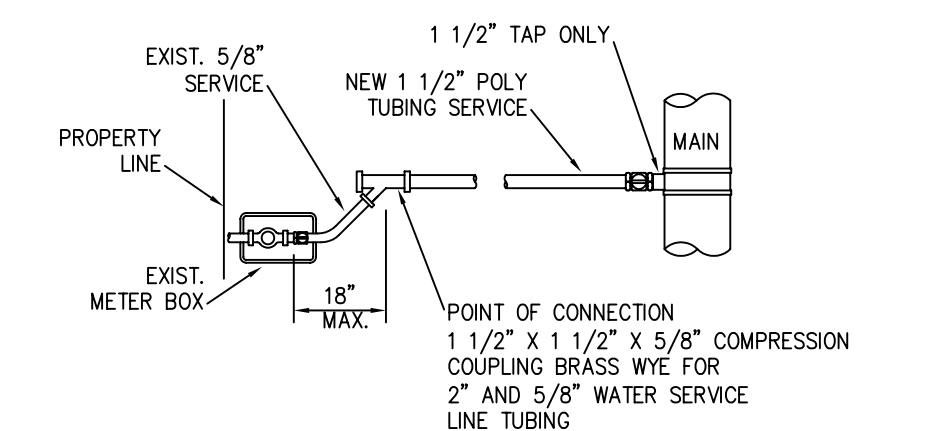
- GROUND KEY ANGLE METER STOP, CONDUCTIVE COMPRESSION FOR CTS O.D. TUBING, X METER FLANGE 180° TURN CHECK-LOCK WING "MUELLER" H-14277, FOR 2-INCH INCLUDING THE STAINLESS STEEL LINER, "MUELLER" 506141 (FOR 2-INCH) OR APPROVED EQUAL, AND MUELLER 110 COMPRESSION CONNECTION.
- METER BOXES FOR 5/8, 3/4, AND 1 INCH METERS SHALL BE THE OKIE DOKIE #690-40-260282 MEDIUM BOX AND 90-40-260257 MEDIUM LID OR EQUAL.

TYPICAL WATER SERVICE INSTALLATION (300)



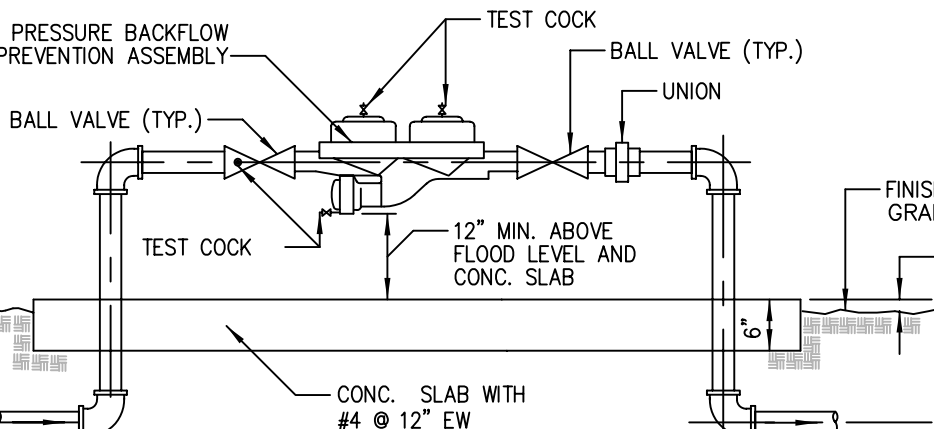
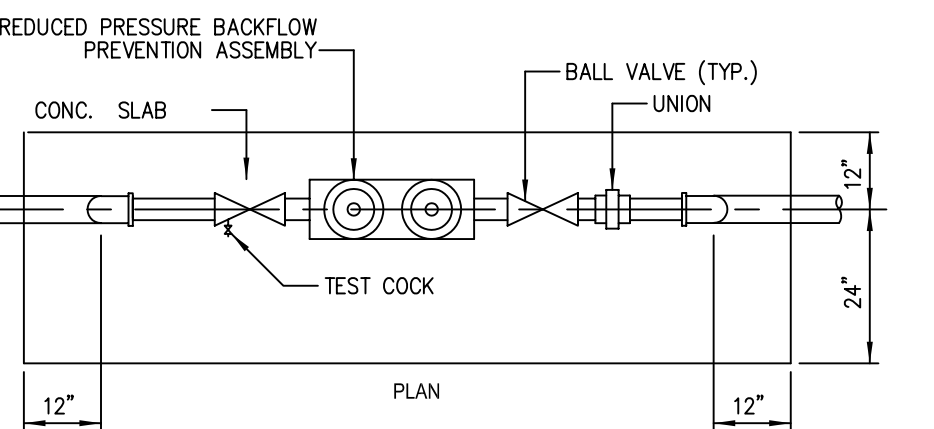
NOTE: KEEP 1/8" WYE AS CLOSE AS POSSIBLE TO METER BOX.

DOUBLE NEW SERVICE PLAN



EXISTING SERVICE PLAN

TYPICAL WATER SERVICE (301)

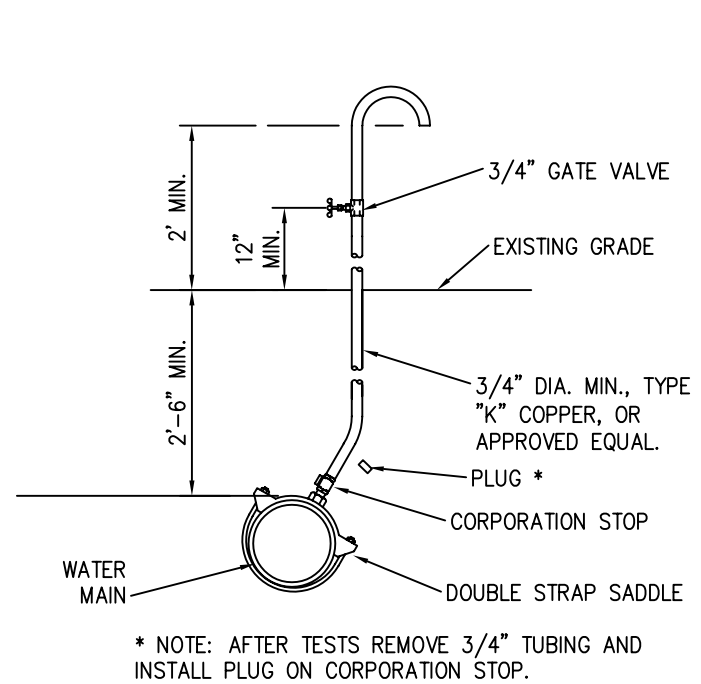


REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY DETAIL (FOR METERED POTABLE WATER SERVICES SIZES 3/4" THRU 2")

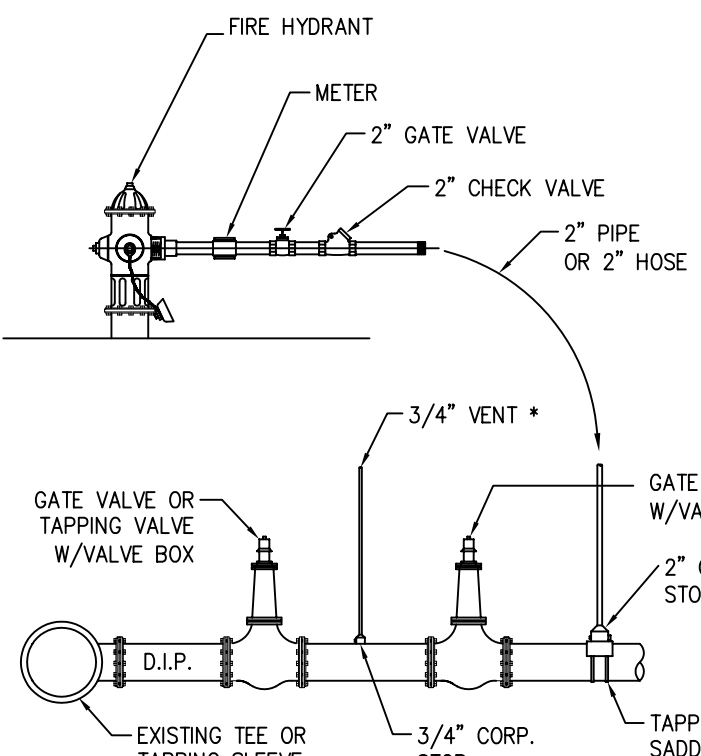
NTS

NOTES:

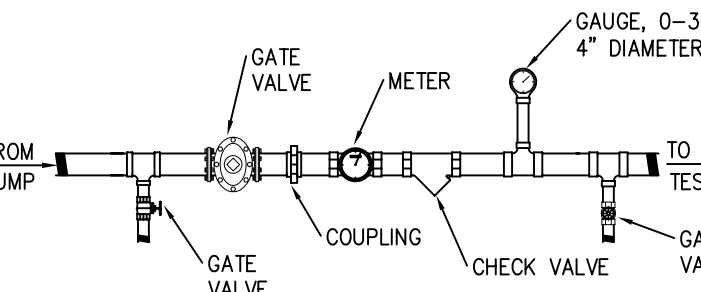
- THE ASSEMBLY SHALL BE INSTALLED WITH MINIMUM HORIZONTAL CLEARANCES OF 30 INCHES FREE FROM OBSTRUCTIONS IN ALL DIRECTIONS.
- GUARD POSTS SHALL BE INSTALLED IF THE ASSEMBLY IS EXPOSED TO POSSIBLE DAMAGE FROM VEHICULAR TRAFFIC, AS DETERMINED BY THE ENGINEER, OR THE CITY INSPECTOR.
- THE ASSEMBLY SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION, APPROVED BY THE ENGINEER AND THE CITY INSPECTOR.
- ADJUSTABLE PIPE SADDLE SUPPORT (GRINNELL FIG.264, OR EQUAL) SIZED TO FIT CURVATURE OF DOUBLE DETECTOR CHECK VALVE ASSEMBLY, WITH GALVANIZED STEEL PIPE AND FLOOR FLANGE, ATTACH FLOOR FLANGE TO CONCRETE SLAB WITH GALVANIZED EXPANSION BOLTS.
- THE CITY SHALL HAVE UNRESTRICTED AND CONTINUOUS ACCESS TO THE BACKFLOW PREVENTION ASSEMBLY. PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE WITH GALVANIZED MALLEABLE IRON THREADED FITTINGS.
- PIPING 2-1/2" AND LARGER SHALL BE DUCTILE IRON PIPE WITH FLANGED FITTINGS. ALL PIPING SHALL BE IN ACCORDANCE WITH VILLAGE STANDARDS.
- ALL EXPOSED METALLIC THREADS SHALL BE PAINTED WITH BITUMASTIC PAINT.
- CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER OF RECORD FOR APPROVAL.



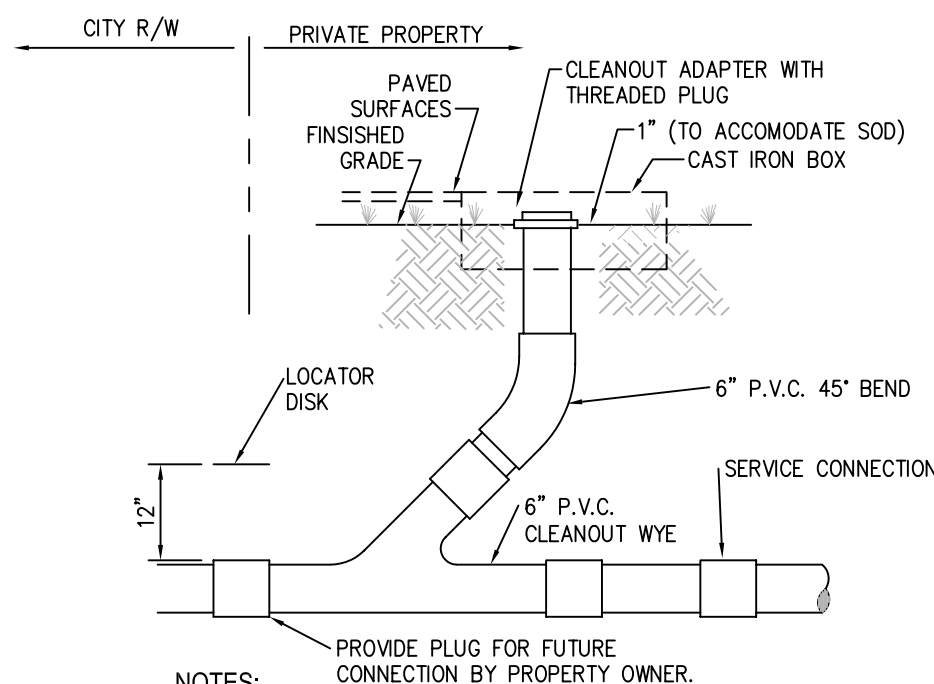
TYPICAL BACTERIOLOGICAL SAMPLING POINT AT INTERMEDIATE POINTS (304)



FILLING CONNECTION (305)



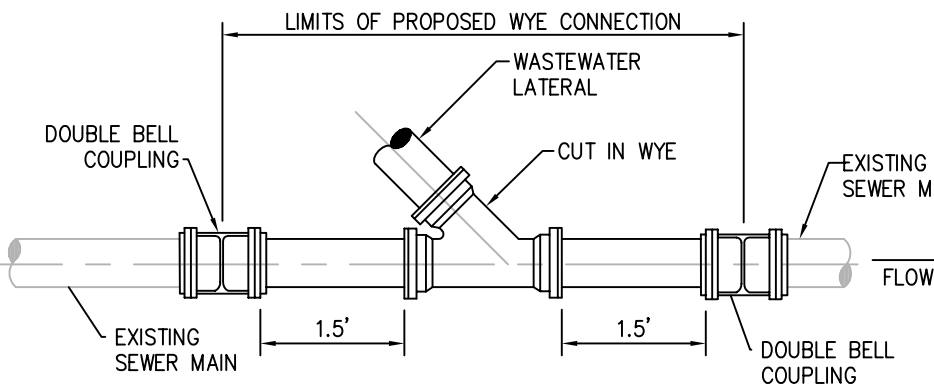
PRESSURE TEST DETAIL (306)



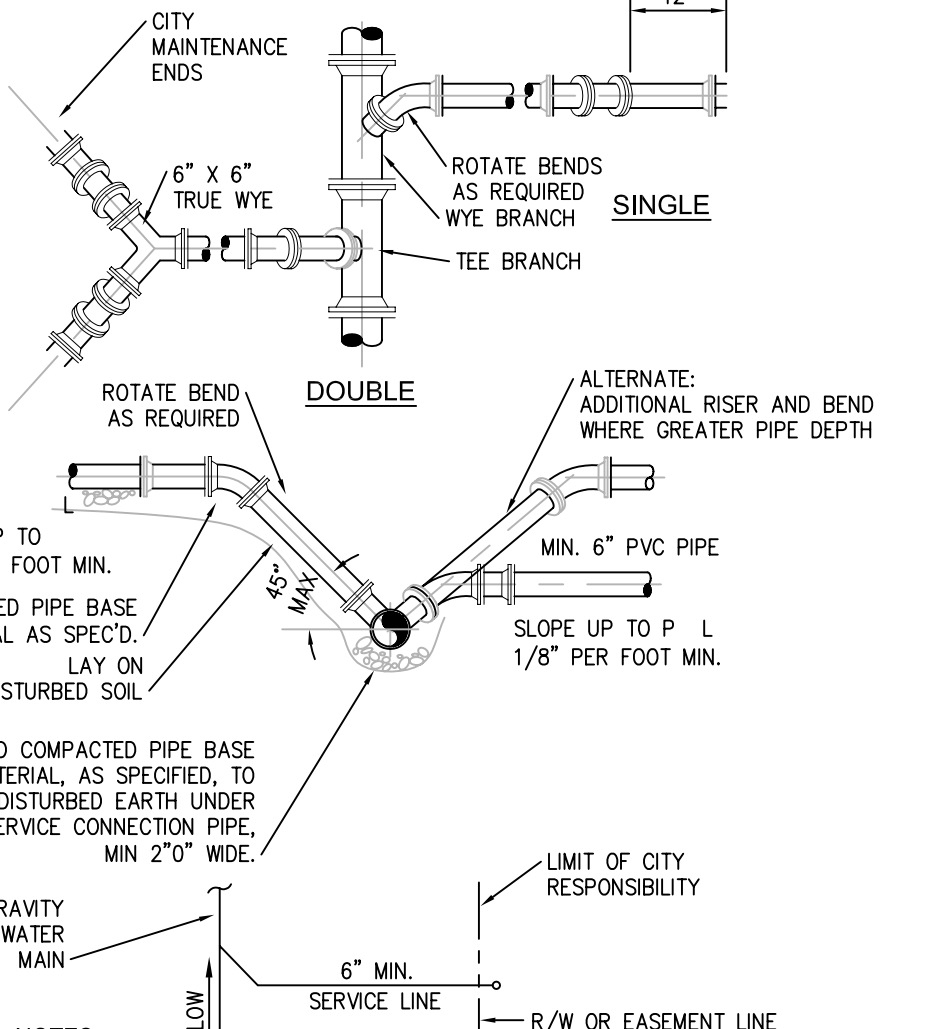
NOTES:

- PROVIDE APPROVED PLUG OR JOINT FOR DISSIMILAR GRAVITY SEWER PIPE FOR SERVICE CONNECTION.
- CLEAN-OUT ASSEMBLY SHALL BE INSTALLED BY PROPERTY OWNER.

TYPICAL CLEANOUT INSTALLATION (309)



NEW LATERAL ON EXISTING GRAVITY WASTEWATER MAIN (210)



NOTES:

- WASTEWATER MAIN WYE BRANCH TO MATCH MAIN PIPE MATERIAL.
- NO 90° BENDS SHALL BE USED FOR WASTEWATER SERVICE AND CLEANOUT INSTALLATIONS.
- SERVICE LATERALS SHALL TERMINATE AT 12" INSIDE THE PROPERTY LINE AT A DEPTH OF 3 FEET EXCEPT WHERE A DEEPER INVERT IS REQUIRED BY EXISTING BUILDING CONDITIONS.

TYPICAL WASTEWATER SERVICE CONNECTION (208)

GENERAL CONSTRUCTION NOTES:

- NO CONNECTIONS FOR THE PURPOSE OF OBTAINING WATER SUPPLY DURING CONSTRUCTION SHALL BE MADE TO ANY FIRE HYDRANT OR BLOW-OFF STRUCTURE WITHOUT FIRST OBTAINING PERMISSION AND A CONSTRUCTION METER FROM THE CITY OF FORT LAUDERDALE.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING, MOVING AND RELOCATING OR REPLACING ALL WATER SERVICES OR SEWER LATERALS WHICH ARE ENCOUNTERED DURING EXCAVATION. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN FOR WATER SERVICE AND WASTEWATER SERVICE DISRUPTION FOR APPROVAL 7 (SEVEN) CALENDAR DAYS PRIOR TO THE ANTICIPATED DISRUPTION. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS 48 HOURS IN ADVANCE OF ANY WORK ON THEIR SERVICES. THIS WORK SHALL BE CONSIDERED INCIDENTAL.
- THE CONTRACTOR MUST USE EXTREME CARE TO AVOID DAMAGE OR DISRUPTION TO ANY EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. ALL PLAN LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED. CONTRACTOR IS TO CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 AND ALL OTHER PARTICIPATING UTILITIES 2 FULL BUSINESS DAYS PRIOR TO CONSTRUCTION FOR FIELD MARKUP LOCATIONS OF EXISTING UTILITIES AND FACILITIES.
- THE CONTRACTOR MUST INFORM THE CITY AT LEAST 48-HOURS IN ADVANCE OF CONSTRUCTION, IN WRITING IF ANY CONFLICT IS DISCOVERED DURING POT HOLE OPERATIONS FOR CLARIFICATION BY THE CITY.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITIES DEPARTMENT OF THE CITY OF FORT LAUDERDALE AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO COORDINATE ANY ACTIVITY TO BE PERFORMED BY THE CITY'S UTILITIES DEPARTMENT.
- CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE EXISTING RIGHTS-OF-WAY.
- IN GENERAL, EXISTING STRUCTURES AND UTILITIES ARE NOTED AS EXISTING AND/OR SHOWN IN THIN LINES. NEW CONSTRUCTION IS IN HEAVY LINES AND/OR UNDERLINED.
- ALL WORK WITHIN STATE DEPARTMENT OF TRANSPORTATION (FDOT) RIGHTS-OF-WAYS SHALL BE IN CONFORMANCE WITH FDOT SPECIFICATIONS AND PERMIT REQUIREMENTS.
- ALL WORK WITHIN BROWARD COUNTY RIGHT-OF-WAYS SHALL BE IN CONFORMANCE WITH THE BROWARD COUNTY MINIMUM STANDARDS AND/OR REQUIREMENTS.
- CONTRACTOR SHALL COMPLY WITH ALL LOCAL CITY, COUNTY AND STATE REGULATIONS PERTAINING TO THE CLOSING OF PUBLIC STREETS FOR USE OF TRAFFIC DURING CONSTRUCTION.
- CONTRACTOR SHALL PREPARE AND SUBMIT MAINTENANCE OF TRAFFIC (MOT) PLANS TO FDOT, CITY OF FORT LAUDERDALE, BROWARD COUNTY AS REQUIRED FOR WORK TO BE DONE WITHIN THEIR R/W PRIOR TO COMMENCEMENT OF WORK. SPECIFIC AGENCY MOT REQUIREMENTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- STATIONS SHOWN ON THE DRAWINGS ARE BASED ON THE ESTABLISHED BASELINE AND SHALL NOT BE CONSIDERED AS DISTANCES OR AS A MEASURE OF THE LINEAR FOOTAGE OF PIPE TO BE INSTALLED.
- THE GENERAL INTENT IS TO PROVIDE SEWER SERVICE LATERALS FOR EACH PROPERTY. ALL LATERAL LOCATIONS SHALL BE FIELD ADJUSTED.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES.
- ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS SHALL NOT BE LEFT OPEN DURING NIGHT TIME HOURS WITHOUT ADEQUATE PROTECTION.
- CONTRACTOR SHALL PROMPTLY REPAIR AND RESTORE EXISTING PAVEMENT, SIDEWALKS, CURBS, DRIVEWAYS, PIPES, RESIDENTIAL AND COMMERCIAL SPRINKLER LINES, CONDUIT, CABLES, ETC. AND LANDSCAPE AREAS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED BY AGENCIES HAVING JURISDICTION OVER THE PROJECT AND/OR WHEN REQUIRED FOR PUBLIC SAFETY.
- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF WORK, FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
- LOCATION OF AIR RELEASE VALVES MAY BE FIELD ADJUSTED BY THE ENGINEER OR CITY OF FORT LAUDERDALE AS NECESSARY.
- CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND HOLES, PULL BOXES, INLETS AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAPPED WITH ASPHALT.
- EXISTING TRAFFIC SIGNS SHALL BE RESET UPON COMPLETION PER FDOT STANDARDS. COST SHALL BE CONSIDERED INCIDENTAL. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED TRAFFIC SIGNAL LOOPS PER BROWARD COUNTY TRAFFIC ENGINEERING SPECIFICATIONS; COST SHALL BE INCIDENTAL.
- THE CONTRACTOR SHALL PAINT NEW TRAFFIC STRIPE MARKINGS WHERE EXISTING TRAFFIC STRIPE MARKINGS ARE DAMAGED OR REMOVED DURING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL.

GENERAL NOTES - TRAFFIC CONTROL PLAN

- THE TRAFFIC CONTROL PLANS FOR THE PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 600-660. MUTED AND THE STANDARD SPECIFICATIONS. THE CONTRACTOR'S RESPONSE TIME TO ALL REPORTED MALFUNCTIONS OF TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS SHALL BE NO MORE THAN TWO (2) HOURS AND SHALL RESTORE ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT TO ITS LEVEL OF OPERATION PRIOR TO THE MALFUNCTIONING WITHIN TWENTY-FOUR (24) HOURS. DURING THIS TIME THE CONTRACTOR SHALL PROVIDE AT HIS EXPENSE TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGER PERSONNEL AND LAW ENFORCEMENT, AS NECESSARY, TO MAINTAIN A SAFE AND EFFICIENT FLOW OF TRAFFIC AT THE AFFECTED WORK ZONE. THE ENGINEER OR THE CITY OF FORT LAUDERDALE SHALL APPROVE ALL MODIFICATIONS PRIOR TO THEIR IMPLEMENTATION.
- THE CONTRACTOR SHALL MAINTAIN PROPER OPERATION OF ALL TRAFFIC SIGNAL LOOP ASSEMBLIES AND LOOP DETECTORS WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL CORRECT ALL LOOP ASSEMBLY/DETECTOR MALFUNCTIONS WITHIN 24 HOURS OF NOTIFICATION OF SUCH MALFUNCTIONS BY THE ENGINEER.
- THE AGENCY RESPONSIBLE FOR MAINTENANCE OF THE TRAFFIC SIGNALS AND RELATED EQUIPMENT IS BROWARD COUNTY TRAFFIC ENGINEERING.
- A REGULATORY SPEED OF 25 MPH SHALL BE POSTED WITHIN THE LIMITS OF THE WORK ZONE.
- EXISTING SIGNS AND PAVEMENT MARKINGS THAT CONFLICT WITH CONSTRUCTION SIGNS AND MARKINGS SHALL BE REMOVED DURING CONSTRUCTION. ALL EXISTING SIGNS THAT ARE REMOVED SHALL BE STORED IN A SECURE PLACE AND REINSTALLED AFTER CONSTRUCTION. REMOVE AND REPLACE ANY GROUND MOUNT SIGN BY USE OF INDEX NO. 611.
- THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AND PREVENT ADVERSE FLOODING OF THE TRAVEL LANES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE CITY OF FORT LAUDERDALE FOR ANY AND ALL CONSTRUCTION ACTIVITIES TO BE PERFORMED AT NIGHT. NO LANE CLOSURE SHALL BE ALLOWED BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM, MONDAY THROUGH FRIDAY UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY TWO (2) BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT TO IDENTIFY THE LOCATION OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. SEE SPECS FOR LIST OF UTILITY COMPANIES.

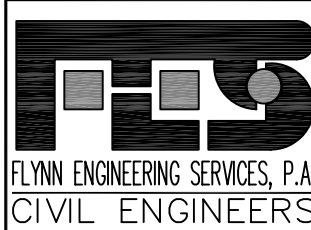
GENERAL PRESSURE PIPE NOTES

- THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE.
- ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY, CITY AND HEALTH DEPARTMENT STANDARDS AND REGULATIONS.
- THESE NOTES AND THE DETAIL SHEETS THAT ACCOMPANY THESE PLANS ARE TYPICAL IN NATURE. THE MAIN PLANS AND SPECIFICATIONS PROVISIONS WILL TAKE PRECEDENCE OVER ANY NOTE CONTAINED ON THIS OR OTHER DETAIL SHEETS.
- THE CONTRACTOR MUST POT HOLE AND VERIFY THE LOCATION, SIZE, AND ELEVATION OF EXISTING PRESSURE MAINS BEFORE MAKING A TIE-IN.

WATER SYSTEM NOTES

- DUCTILE IRON WATER MAIN PIPE SHALL CONFORM TO THE REQUIREMENTS OF A.N.S.I./A.W.W.A. C-151/A 21.51-02 AND LINED AND COATED PER A.N.S.I./A.W.W.A. C-104/A-214-03. 20" AND SMALLER PIPE SHALL BE PRESSURE CLASS 350; 24" AND LARGER, PIPE SHALL BE PRESSURE CLASS 250.
- ALL P.V.C. MAINS SHALL BE SERIES 1120, CLASS 150 (DR 18) PRESSURE PIPE, CONFORMING TO A.N.S.I./A.W.W.A. C-900-97, OR LATEST REVISION, AND SHALL HAVE PUSH ON JOINTS, AND IRON PIPE OLD.
- FITTINGS SHALL BE DUCTILE IRON MEETING A.N.S.I./A.W.W.A. C153/21.00 AND SHALL BE WELDED WITH 6 TO 8 MIL THICKNESS COAL TAR EPOXY CONFORMING TO THE REQUIREMENTS OF A.N.S.I./A.W.W.A. C550-05 AND C116/A21.16-03.
- TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL.
- GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS. NO SUBSTITUTIONS ALLOWED.
- TAPPING SLEEVES SHALL BE MUELLER H615 OR APPROVED EQUAL.
- RESTRAINED JOINT PIPE SHALL BE USED FOR ALL BENDS, TEES, CROSSES, PLUGS, AND FIRE HYDRANTS. THRUST BLOCKS SHALL NOT BE ALLOWED.
- ALL VALVES SHALL BE FURNISHED WITH EXTENSION TYPE CAST IRON VALVE BOXES OF PROPER LENGTH FOR PIPE DEPTH. ALL BOXES SHALL CONFORM WITH A.W.W.A. SPECIFICATIONS WITH A SHAFT OF NO LESS THAN 5 INCHES AND HAVE THE WORD "WATER" CAST IN THE COVER. BASE OF VALVE BOX SHALL HAVE A FLARED SECTION TO FIT OVER STUFFING BOX OF VALVE.
- GATE VALVES 4" OR LARGER SHALL MEET A.W.W.A. C-500-02 SPECIFICATION (LATEST REVISION). VALVES SHALL BE MUELLER CO. OR APPROVED EQUAL.
- FIRE HYDRANTS SHALL BE BREAKAWAY MUELLER CO. CENTURIUM MODEL #A-423, OR METROPOLITAN 250 EDDY COMPRESSION TYPE F.H. OR APPROVED EQUAL.
- FIRE HYDRANTS SHALL BE INSTALLED WITH THE CENTER OF THE NOZZLE 18" ABOVE FINISHED GRADE.
- ALL METER SERVICE CONNECTIONS SHALL BE BRONZE FROM PLUG VALVE. NO GATE VALVES ARE TO BE USED (2" OR LESS).
- THE CITY OF FORT LAUDERDALE PUBLIC SERVICES DEPARTMENT WILL TAKE ALL BACTERIOLOGICAL TESTS, TO BE SCHEDULED VIA INSPECTOR. IF OTHERWISE SPECIFIED IN CONTRACT DETAILED SPECIFICATION AND/OR AUTHORIZED BY THE ENGINEER OF RECORD, BACTERIOLOGICAL TESTS MAY BE PERFORMED BY A CERTIFIED ENVIRONMENTAL TESTING LABORATORY.
- ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE CITY OF FORT LAUDERDALE.
- PIPE SHALL BE TESTED UNDER CONSTANT PRESSURE OF 150 P.S.I. FOR A MINIMUM TEST PERIOD OF 2 HOURS AND SHALL NOT EXCEED THE LEAKAGE REQUIREMENTS AS PER A.N.S.I./A.W.W.A. SPECIFICATIONS OF C-600-99 LEAKAGE FORMULA: $Q = (SD/P)^{1/4} \times 148,000$
Q = ALLOWABLE LEAKAGE IN GALLONS PER HOUR
D = DIAMETER OF THE PIPE TESTED, IN INCHES.
P = AVERAGE TEST PRESSURE, IN POUNDS PER SQUARE INCH.
- THE MINIMUM DEPTH OF COVER OVER WATER MAINS IS 36" EXCEPT WHERE SHOWN DIFFERENTLY ON PLANS.
- DISINFECTION OF MAINS SHALL COMPLY WITH A.N.S.I./A.W.W.A. C-651-05 STANDARD. BACTERIOLOGICAL SAMPLING POINTS SHALL BE DESIGNATED ON THE ENGINEERING PLANS. MINIMUM ONE SAMPLING POINT AT EACH END. MAXIMUM SPACE BETWEEN SAMPLING POINTS IS 1500 FEET.
- DEAD-END WATER MAINS 6" OR LARGER SHALL TERMINATE WITH A FIRE HYDRANT.
- THERE SHALL BE NO CONNECTION TO AN EXISTING WATER MAIN UNTIL PRESSURE AND BACTERIOLOGICAL TESTS HAVE BEEN CONDUCTED AND THE RESULTS ARE APPROVED AND ACCEPTED BY THE CITY OF FORT LAUDERDALE.
- ALL SERVICE LINES SHALL BE COPPER TUBING, TYPE "K", OR PLASTICIZED POLYETHYLENE 3408, A.S.T.M. D-2737, S.D.R. 9, 200 P.S.I.
- SANITARY SEWERS AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.
- WHERE SANITARY SEWER FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18" VERTICAL SEPARATION, BOTH THE SEWER AND WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM VERTICAL SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING SHALL BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6" MUST BE MAINTAINED AT ALL CROSSINGS.
- A MINIMUM 10 FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- THE PREFERRED SEPARATION BETWEEN WATER MAINS AND SEWER MAINS SHALL BE 10 FEET. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 6 FOOT HORIZONTAL SEPARATION BETWEEN THE WATER MAINS AND SEWER MAINS, ONE OF THE FOLLOWING CONDITIONS MUST BE MET. THE MINIMUM SEPARATION BETWEEN WATER AND SEWER MAINS SHALL BE 3 FEET:
 - THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
 - THE SEWER OR FORCE MAIN IS ENCASED IN CONCRETE OR A WATERIGHT CARRIER.
 - BOTH THE SEWER AND THE WATER MAIN ARE CONSTRUCTED OF PRESSURE PIPE TESTED TO 150 P.S.I.

- WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18" IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR FORCE MAIN SHALL BE CONSTRUCTED OF DIP, WITH A MINIMUM VERTICAL CLEARANCE OF 6". THE WATER MAIN SHOULD BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM THE JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
- ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).
- WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18" VERTICAL CLEARANCE, THE NEW PIPE SHALL BE ARRANGED TO MEET THE CROSSING REQUIREMENTS ABOVE.
- ALL DIP SHALL HAVE ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION AND IT SHALL BE USED ONLY IF AS DETERMINED BY THE DESIGN ENGINEER, BASED ON FIELD CONDITIONS.
- RETAINER GLANDS/MECHANICAL JOINT RESTRAINT SHALL BE USED ONLY IF AUTHORIZED BY THE ENGINEER AND SHALL CONFORM TO A.N.S.I./A.W.W.A. STANDARDS C 111/A-21.11-00, OR LATEST REVISION.
- ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITER'S LABORATORY FOR 250 P.S.I. MINIMUM WATER PRESSURE RATING.
- GLANDS SHALL BE CLOW CORPORATION MODEL F-1058, STANDARD FIRE PROTECTION EQUIPMENT COMPANY, OR APPROVED EQUAL.
- SERVICE SADDLES SHALL BE DUCTILE IRON WITH STAINLESS STEEL STRAPS. SADDLES SHALL BE DOUBLE STRAP TYPE. ALL SERVICE SADDLES SHALL CONFORM TO A.N.S.I./A.W.W.A. C 111/A-21.11-00 AND A.S.T.M. A588.
- ALL P.V.C. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION'S "GUIDE FOR INSTALLATION OF P.V.C. PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEM". WATER DISTRIBUTION PIPE SHALL BE OF "BLUE" COLOR.
- DETECTOR TAPE ON ALL P.V.C. MAINS SHALL BE INSTALLED 18" ABOVE THE WATER MAIN.
- ALL P.V.C. MAINS MUST HAVE #6 COPPER WIRE, SINGLE STRAND, PLACED ON TOP OF PIPE, SHALL BE ELECTRICALLY CONTINUOUS OVER THE ENTIRE LENGTH OF THE PIPE, AND FASTENED EVERY 10' WITH A #12 WIRE.
- ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH A.N.S.I./A.W.W.A. C-600-05, OR LATEST REVISION.
- PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
- A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED. BACKFILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AS SHOWN ON THE PLANS AND/OR CITY OF FORT LAUDERDALE CONSTRUCTION STANDARDS AND SPECIFICATIONS, JANUARY 1982. ROCKS OR STONES LARGER THAN 3/4" DIAMETER FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE.
- ALL DETAILS AND NOTES ON THIS SHEET SHALL BE APPLICABLE UNLESS OTHERWISE SUPERSEDED ELSEWHERE IN PLANS OR SPECIFICATIONS.



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WATER & SEWER DETAILS

Sheet Title

AIRPORT PET LODGE

Job Title

Phase:
DRC
DOCUMENTS

Revisions

Scale: AS NOTED Date: 06/24/11
Job No. 10-0928.00 Plot Date: 07/11/11

Drawn by BB Sheet No. C-6.0
Proj. Mgr. JMF

Appr. by JMF 8 of 9

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