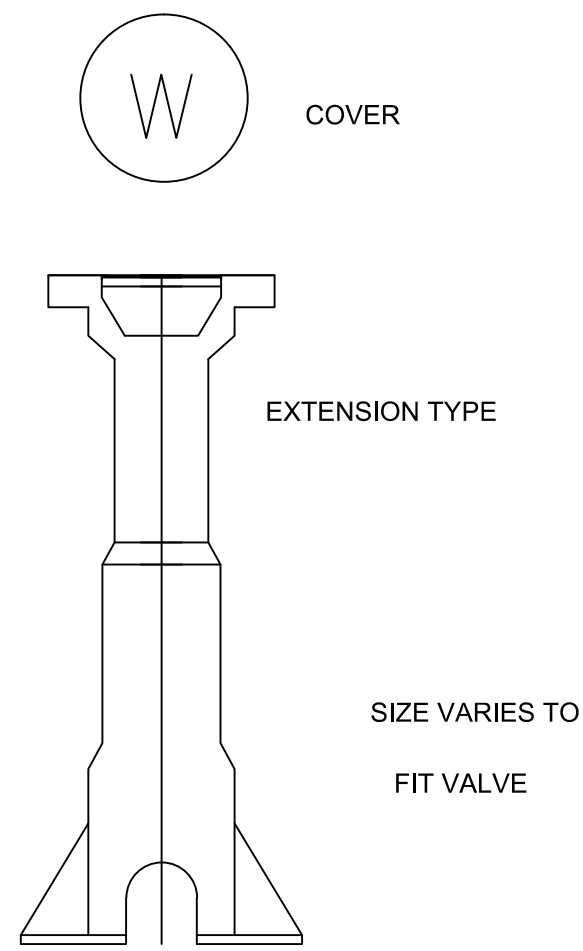
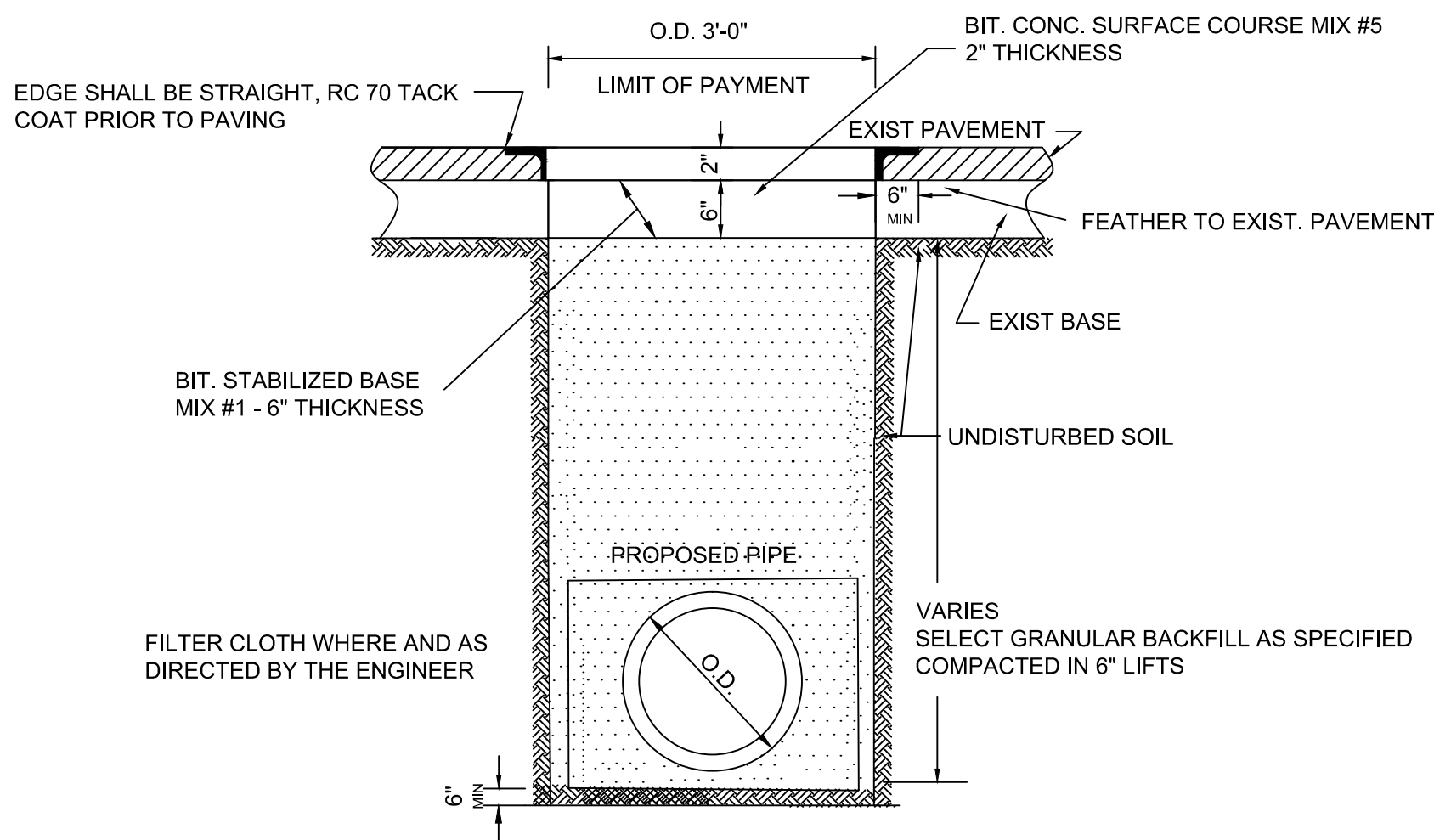


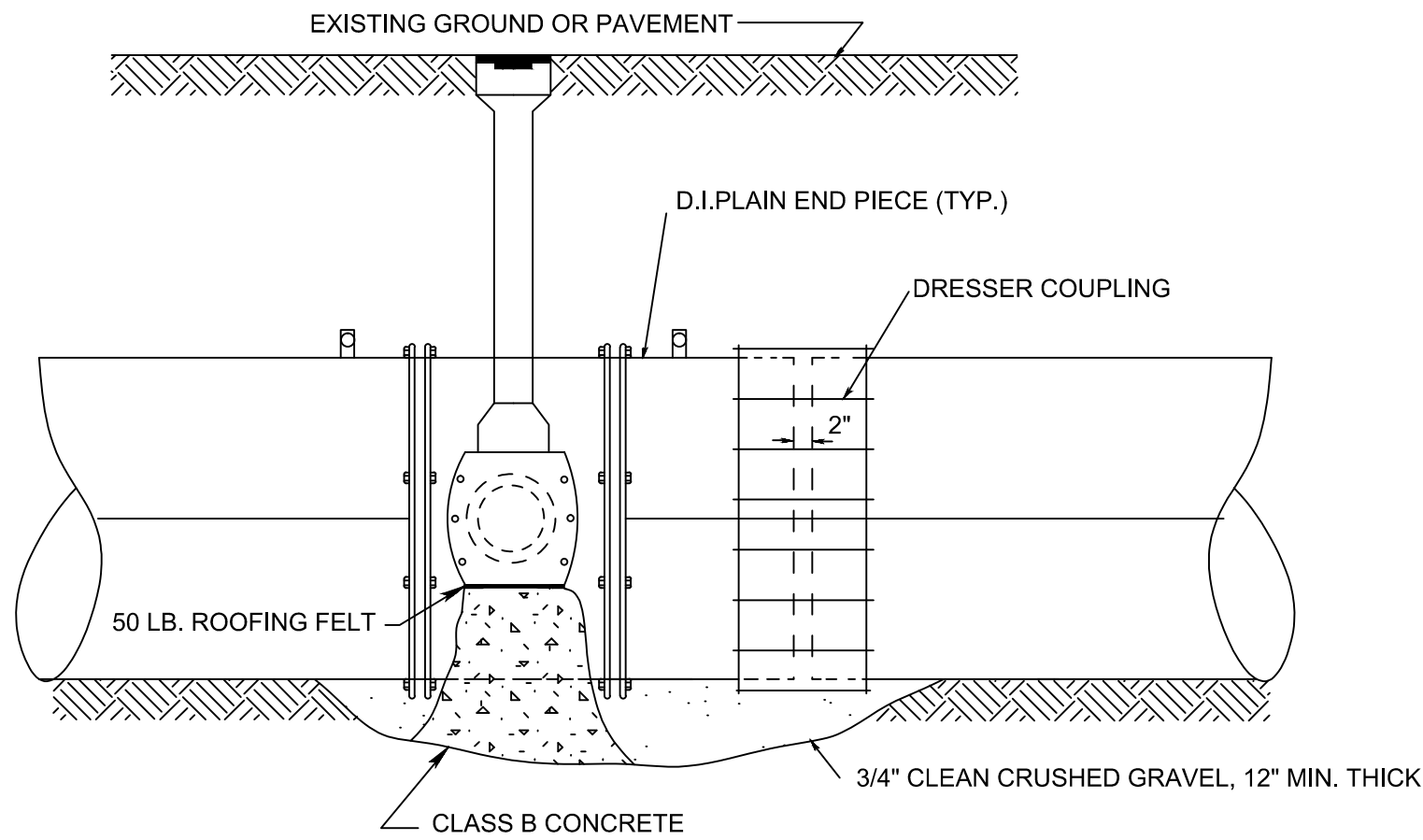
BUTTERFLY VALVE  
(N.T.S.)



CURB BOX DETAIL  
(FOR HOUSE CONNECTION SERVICE)  
N.T.S.

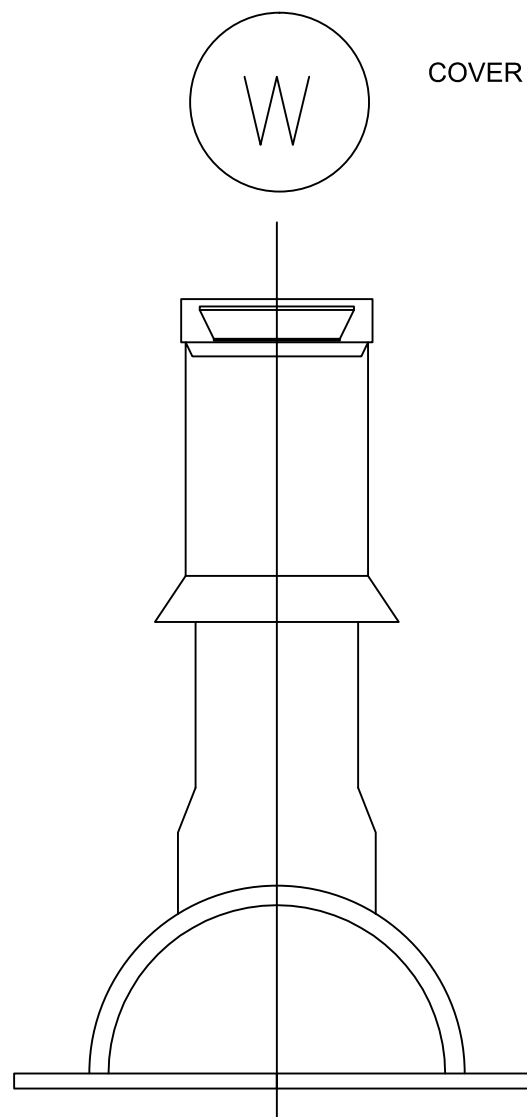


TYPICAL TRENCH  
N.T.S.



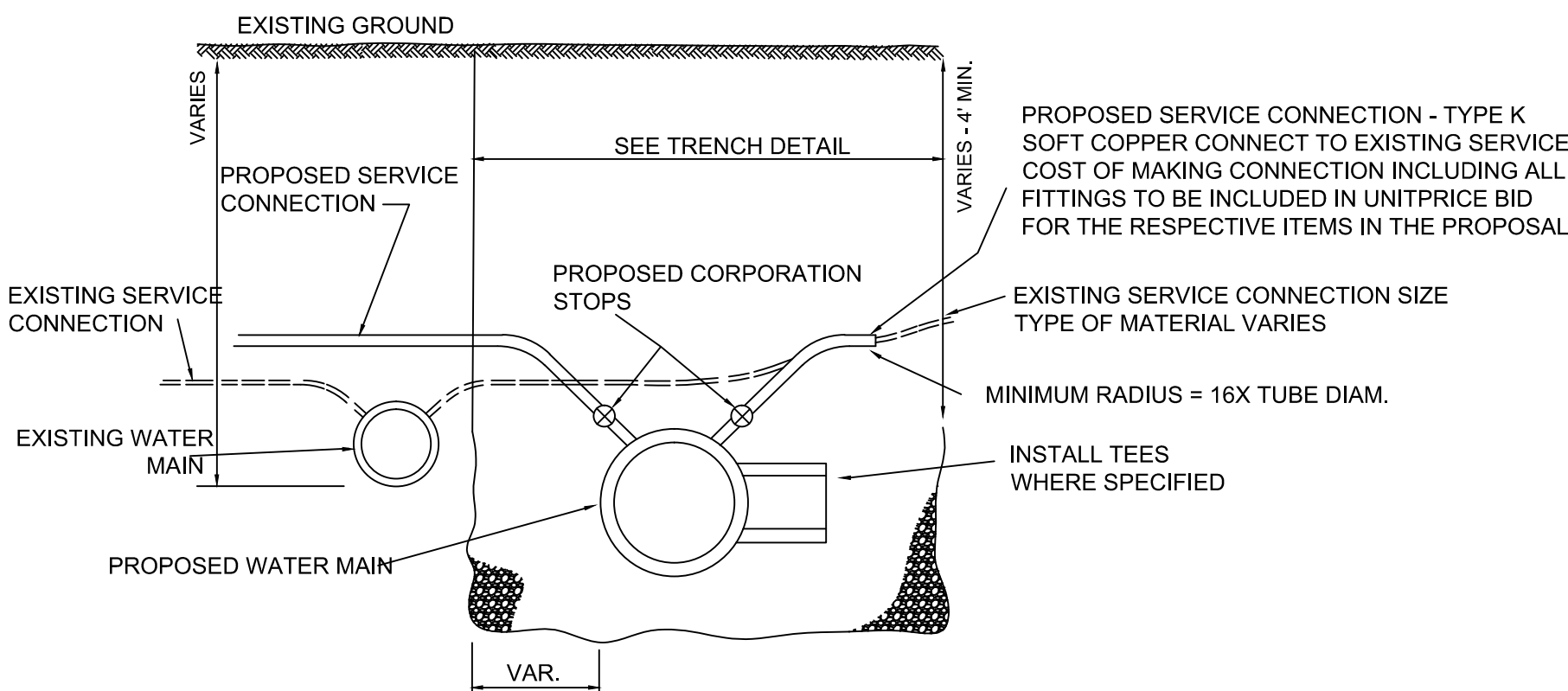
TYPICAL VALVE REPLACEMENT DETAIL  
N.T.S.

NOTE: ALL DOUBLE IRON PIPE AND VALVES TO BE ENCASED IN POLYETHYLENE.



BOX MUST BE PLUMB AND CENTERED OVER VALVE. BOX WHEN SET, MUST NOT BEAR ON VALVE, TUBE, PIPE, OR STOP. INTERMEDIATE BOX SECTIONS MAY BE REQUIRED ON DEEP VALVE SETTINGS. BOX INCLUDE FOOT PIECE.

VALVE BOX DETAIL  
N.T.S.



TYPICAL DETAIL FOR REPLACEMENT OF EXISTING WATER MAINS  
N.T.S.

## NOTES ON WATER MAINS AND VALVES

1) WATER MAINS SHALL BE CLASS 53, CEMENT LINED, DUCTILE IRON PIPES WITH MECHANICAL JOINTS AND SHALL BE IN CONFORMANCE WITH A.N.S.I. STANDARD A21.5-1976 [A.W.W.A. C151-76]

2) GATE VALVES SHALL BE IN CONFORMANCE WITH A.N.S.I./A.W.W.A. STANDARD C500-80 AND SHALL BE JERSEY CITY STANDARD VALVES, M&M METROPOLITAN JOINT VALVES AS MANUFACTURED BY DRESSER COMPANY OR APPROVED EQUIVALENT BY A MUNICIPAL ENGINEER. VALVES SHALL BE NON-RISING STEM; MECHANICAL JOINTS SHALL BE FURNISHED WITH A (2") SQUARE OPERATING NUT AND SHALL OPEN BY TURNING TO THE RIGHT. GATE VALVES (16") AND OVER SHALL BE FURNISHED WITH BY-PASS. VALVE SHALL BE 100% SOLID HEAT CURED EPOXY COATED HOLIDAY-FREE IN THE WATERWAY.

3) BUTTERFLY VALVES SHALL BE IN CONFORMANCE WITH A.N.S.I./A.W.W.A. STANDARD C504-80. BUTTERFLY VALVES SHALL BE CLASS 150B, MECHANICAL JOINT, WITH RUBBER SEAT MOUNTED ON THE DISC, SHALL BE FURNISHED WITH A (2") SQUARE OPERATING NUT AND SHALL OPEN BY TURNING TO THE RIGHT. VALVE SHALL BE 100% SOLID HEAT CURED EPOXY COATED HOLIDAY-FREE IN THE WATERWAY. THE BUTTERFLY VALVES WILL NOT BE PERMITTED IN MAINS (16") AND UNDER.

4) VALVE BOXES SHALL BE JERSEY CITY "STANDARD" AS MANUFACTURED BY BINGHAM AND TAYLOR, OR APPROVED EQUIVALENT BY A MUNICIPAL ENGINEER. BOXES SHALL HAVE A MIN. OF 8-1/4 INCH DIAMETER AND SHALL BE AN ADJUSTABLE SCREW TYPE WITH THE BOX EXTENDING FROM THE SURFACE TO (3") ABOVE THE VALVE BONNET BASE. VALVE BOX SHALL BE CAST FROM WATER DROP COVER AND THE WORK "WATER" CAST IN COVER. VALVE BOX COVER SHALL BE INSTALLED FLUSH WITH THE EXISTING GRADE ELEVATION.

5) CONCRETE FOR VALVE SEATS AND THRUST BLOCKS SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3000 PSI.

6) SELECT GRANULAR BACKFILL MATERIAL SHALL BE SOIL AGGREGATE TYPE I-6 (POROUS FILL, CLEAN SAND, GRAVEL OR STONE) OBTAINED FROM DRY SOURCES AND SHALL BE FREE FROM STUMPS, BRUSH, WEEDS, ROOTS, RUBBISH, WOOD, AND OTHER MATERIALS THAT MAY DECAY. GRADATION SHALL CONFORM TO TABLE 801-2, FOR TYPE I-6 IN ARTICLE 901.09 OF THE NJDOT STANDARD SPECIFICATIONS. BACKFILL MATERIAL SHALL BE PIECED AND COMPACTED IN 12 INCH LIFTS.

7) TIE RODS SHALL BE THREE QUARTER (3/4) INCH DIAMETER THREADED STEEL BARS. RODS SHALL HAVE A MINIMUM YIELD STRESS OF 36,000 PSI.

8) COUPLINGS SHALL BE DRESSER STYLE NUMBER 153 FOR PIPE SIZES THROUGH (30") INCH DIAMETER. FOR LARGER DIAMETER PIPE, DRESSER STYLE NUMBER 38 STEEL COUPLINGS SHALL BE USED.

9) SHEETING, SHORING, AND BRACING SHALL BE CLOSED VERTICAL SHEETING, TONGUE AND GROOVE WHICH IN BRACED TO PREVENT THE CAVE-IN OF TRENCHED. ALL LABOR EQUIPMENT, MATERIALS, AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.

MATERIALS FOR SHEETING SHALL BE TONGUE AND GROOVE WOODEN PLANKS AND TIMBER OR STEEL CONFORMING TO THE REQUIREMENTS OF THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. TIMBER SHALL BE A MIN. OF 3" THICK

SHEETING SHALL BE LEFT IN PLACE. SHORING AND BRACING SHALL BE REMOVED.

10) BROKEN STONE FOUNDATION CUSHION SHALL BE PLACED IN THESE AREAS WHERE THE DIRECTOR, DEPT. OF ENGINEERING HAS DEEMED THE SOIL CONDITIONS INFERIOR. BROKEN STONE SHALL CONFORM TO ARTICLE 901.03 OF THE STANDARD SPECIFICATION AS CURRENTLY AMENDED. THE SIZE OF THE BROKEN STONE SHALL BE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER OF SIZE NUMBER 2.4.5 OR 6 AS SHOWN IN TABLE 901-1. STANDARD SIZES OF COARSE AGGREGATES OF THE NEW JERSEY DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS.

11) FILTER CLOTH SHALL BE PLACED IN THOSE AREAS WHERE THE DIRECTOR DEPT. OF ENGINEERING HAS DEEMED THE SOIL CONDITIONS INFERIOR.

12) AFTER THE ENGINEER HAS INSPECTED THE COMPLETED INSTALLATION OF VALVES, AND WATER MAIN, AND BEFORE BACKFILLING THE EXCAVATIONS, THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO PRESSURE TEST THE PIPE. THE PIPE SHALL BE PRESSURIZED TO 1.5X THE WORKING PRESSURE FOR A PERIOD OF 2 HOURS. PRESSURE SHALL NOT VARY MORE THAN 5 PSI. THE VALVED SECTION OF THE PIPE SHALL BE APPLIED BY MEANS OF A PUMP CONNECTED TO THE PIPE IN A MANNER SATISFACTORY TO THE ENGINEER. BEFORE APPLYING THE TEST PRESSURE, AIR SHALL BE EXPELLED AS THE LINE IS FILLED WITH WATER. IF THE JOINT LEAKS, REPAIRS OR REPLACEMENTS SHALL BE MADE. TESTING SHALL BE IN CONFORMANCE WITH A.W.W.A. STANDARD C600-77.

13) THE CONTRACTOR SHALL DISINFECT ALL WATER MAINS IN ACCORDANCE WITH A.W.W.A. STANDARD FOR DISINFECTING WATER MAINS DESIGNATION C-601. COMMERCIAL PRODUCTS SUCH AS THE "HTH", "PERCHLORON", AND "MAXOXHLOR" MAY BE USED IN FLAKE OR CRYSTAL FORM, BUT IN NO INSTANCE WILL TABLETS BE PERMITTED TO BE USED IN THE DISINFECTION OF WATER MAINS.

THE CHLORINE DOSAGE SHALL INITIALLY PRODUCE 50 PPM RESIDUAL TO THE WATER AND MAINTAIN A MIN RESIDUAL OF 25 PPM AFTER 24 HOURS. AFTER SATISFACTORY DISINFECTION OF THE TEST SECTION, THE LINE SHALL BE CONTINUOUSLY FLUSHED UNTIL THE RESULTANT CHLORINE RESIDUAL EQUALS 1 PPM OR THE RESIDUAL OF THE SYSTEM, WHICHEVER IS GREATER. AFTER FINAL FLUSHING AND BEFORE THE WATER MAIN IS PLACED IN SERVICE SAMPLES SHALL BE COLLECTED FROM EACH END OF THE MAIN AND TESTED FOR BACTERIOLOGIC QUALITY. IF THE INITIAL DISINFECTION SHALL BE REPEATED UNTIL SATISFACTORY SAMPLES HAVE BEEN OBTAINED.

14) AIR RELEASE VALVES SHALL BE INSTALLED AT THE HIGH POINTS OF THE WATER MAINS.

15) ALL WATER MAINS WILL BE LEAST 8" DIAMETER. TEN (10") AND 14" DIAMETER MAINS SHALL NOT BE USED.

16) THRUST BLOCKS AND THE RODS SHALL BE INSTALLED AT ALL BONDS AND FITTINGS.

17) HYDRANTS SHALL BE 2 PIECE "JERSEY CITY STANDARD" HYDRANTS AS MANUFACTURED BY A.P. SMITH OR APPROVED EQUIVALENT. HYDRANT SPACING SHALL BE A MAX 200 FT. MEASURED CENTER TO CENTER.

18) FOR EITHER NEW CONSTRUCTION ON OR RELOCATION THE FOLLOWING SHALL BE REQUIRED:  
A. HYDRANTS SHALL BE LOCATED NO CLOSER THAN 20 FEET FROM THE POINT OF TANGENCY OR CURVATURE AT INTERSECTIONS.  
B. ALL ONE PIECE OR HYDRANTS NOT MANUFACTURED BY A.P. SMITH THAT ARE TO BE RELOCATED SHALL BE REMOVED AND DELIVERED TO JERSEY CITY DIVISION OF WATER DISTRIBUTION. A NEW HYDRANT WILL BE SUPPLIED BY THE CITY FOR INSTALLATION.  
C. HYDRANTS SHALL BE NO CLOSER THAN 12 FEET FROM THE EDGE OF A RESIDENTIAL DRIVEWAY. IN THE CASE WHERE DRIVEWAYS ARE EXPANDED OR NEWLY CONSTRUCTED, THE OWNER SHALL BE RESPONSIBLE FOR THE RELOCATION OF AN EXISTING HYDRANT IF ABOVE REQUIREMENTS ARE VIOLATED.  
D. ALL SINGLE GATED HYDRANTS ON 16" INCH OR LARGER MAINS SHALL REQUIRE A NEW VALVE AT THE BASE OF THE RELOCATED HYDRANT.  
E. NEW GATE VALVES AND BOXES ARE REQUIRED AT THE BASE OF RELOCATED HYDRANTS WHEN MORE THAN 10 FEET OF PIPE IS REQUIRED.

19) EXISTING WATER SERVICE LINES SHALL BE SHUT-OFF AND CAPPED AT THE MAIN PRIOR TO THE INSTALLATION OF NEW WATER SERVICES. PRIOR TO NEW SERVICE TAPE THE JERSEY CITY WATER DEPARTMENT SHALL INSPECT AND CERTIFY THE ABANDONED SERVICE.

20) WATER MAINS TO ABANDON SHALL BE CUT AND PLUGGED WITH REQUIRED FITTINGS, RODS, AND CONCRETE AS CLOSE TO THE EXISTING MAIN IN SERVICE AS POSSIBLE.

21) ALL VALVES SHALL BE OPERATED BY JERSEY CITY WATER DEPT. PERSONNEL. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE ANY VALVES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING, FIVE(5) DAYS IN ADVANCE OF VALVE OPERATING REQUIREMENTS.

22) FAILURE TO COMPLY WITH ABOVE REQUIREMENTS WILL RESULT IN THE IMMEDIATE SHUTDOWN OF THE PROJECT.

City of Jersey City  
Division of Architecture, Engineering,  
Traffic and Transportation

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JERSEY CITY, NEW JERSEY 07305  
(201) 547-4412



2	Director Name Changed	6/10
1	Roofing Felt Added to Valve Detail. Equal Changed to Equivalent	7/09
NO.	REVISIONS	DATE

CITY OF JERSEY CITY

## STANDARDS

NO.	REVISIONS	DATE




DRAWING

SHEET

16  
17