

STANDARD
CONSTRUCTION
DETAILS

WATER

JANUARY 2022



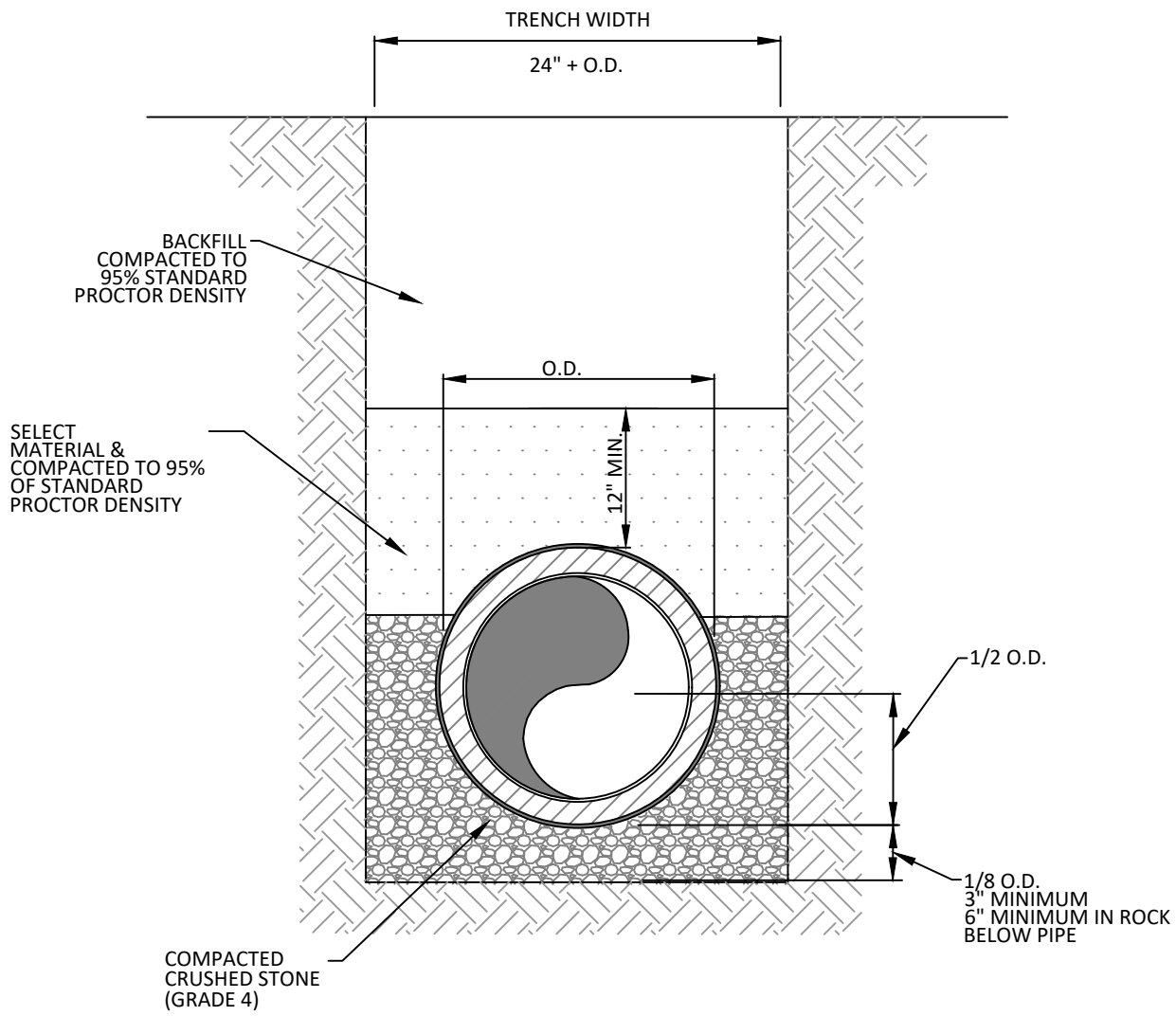
PUBLIC WORKS & ENGINEERING SERVICES

TABLE OF CONTENTS

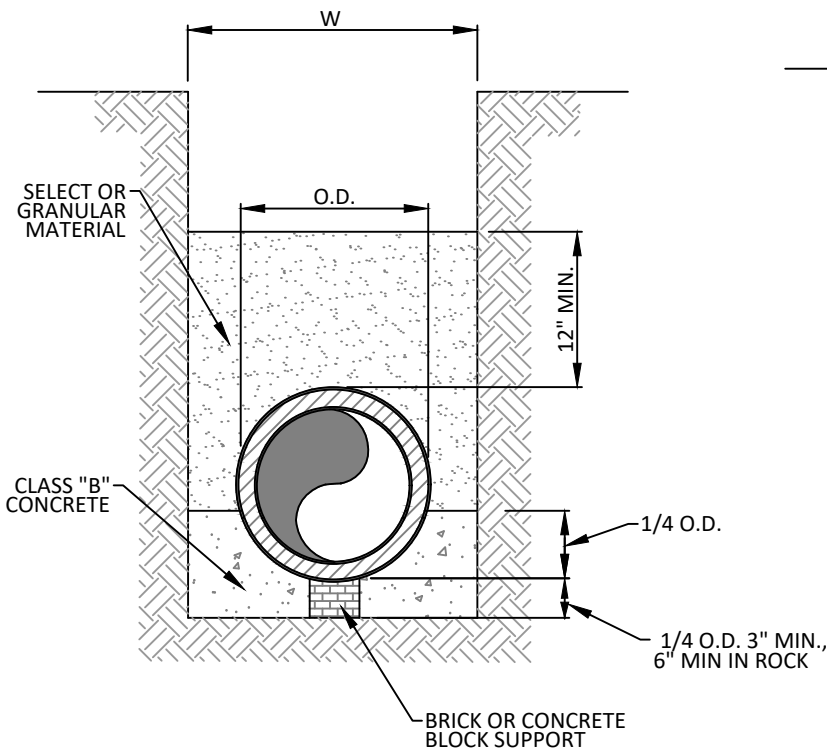
WATER

P.V.C. WATER MAIN EMBEDMENT	SD-W01
R.C.C.P. WATER MAIN EMBEDMENT	SD-W02
CASING	SD-W03
HORIZONTAL THRUST BLOCK AT PIPE BEND	SD-W04
VALVE SETTING	SD-W05
VALVE BOX WITH EXTENSION	SD-W06
VALVE EXTENSION	SD-W07
2" BLOW OFF WITH METER BOX	SD-W08
TYPICAL FIRE HYDRANT INSTALLATION	SD-W09
TYPICAL FIRE HYDRANT INSTALLATION	SD-W10
FIRE HYDRANT GUARD POST	SD-W11
SERVICE CONNECTION WITH METER BOX	SD-W12

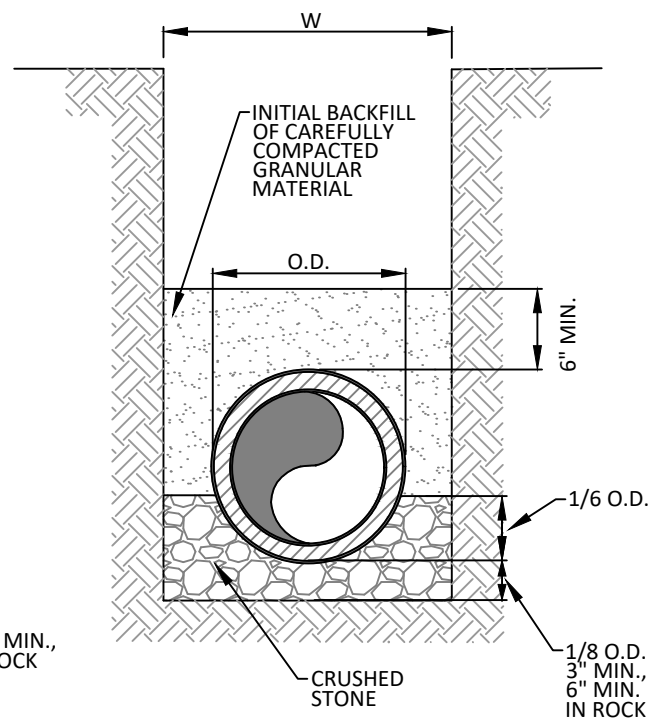
1. WATER SYSTEM GENERAL NOTES ARE IN THE TOWN OF ADDISON GENERAL CONSTRUCTION NOTES DOCUMENT.
2. CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF NCTCOG DETAILS AND SPECIFICATIONS, THE MOST CURRENT TCEQ REGULATIONS, AND THESE STANDARDS. WHEN THESE STANDARDS ARE IN CONFLICT, THE MORE RESTRICTIVE REGULATIONS/DETAILS SHALL GOVERN.
3. STANDARD DETAILS CONTAINED HEREIN ARE THE MINIMUM STANDARDS, MORE STRINGENT CRITERIA MAY BE REQUIRED AT THE DIRECTION OF PUBLIC WORKS SERVICES.



TYPICAL P.V.C. WATER MAIN EMBEDMENT
N.T.S.



**CONCRETE CRADLE
CLASS "A" EMBEDMENT
N.T.S.**

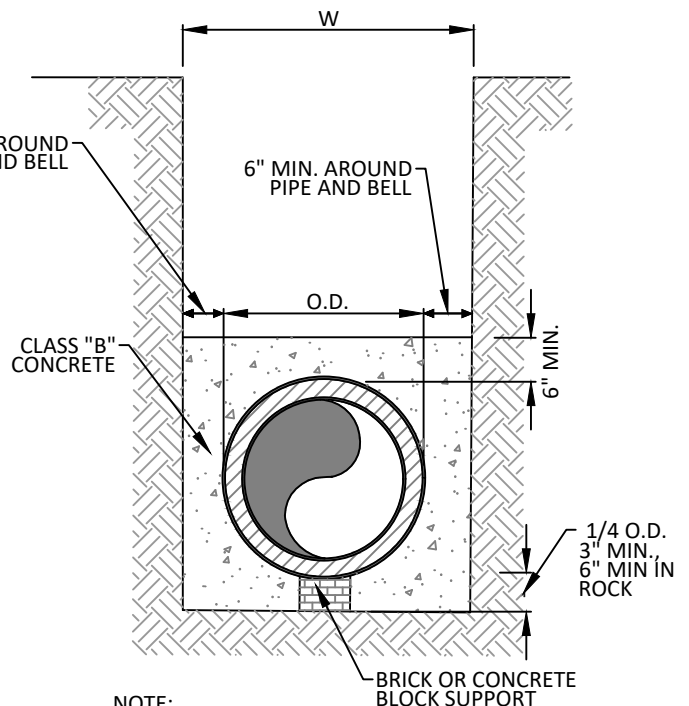


**CLASS "C" EMBEDMENT
N.T.S.**

W = 16" + O.D. MIN.
24" + O.D. MAX.

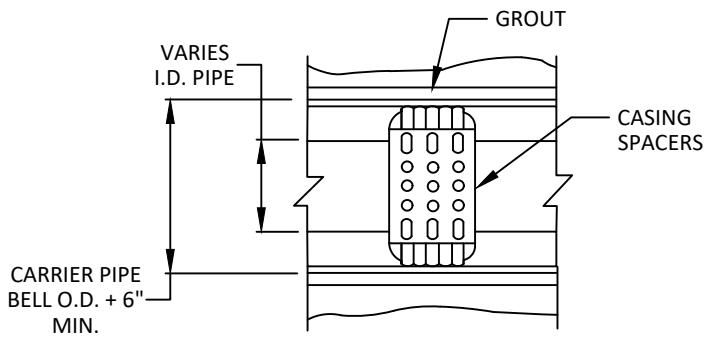
TABLE OF QUANTITIES OF MATERIAL IN CUBIC YARDS PER 100 LINEAR FEET						
INSIDE DIAMETER OF PIPE	OUTSIDE DIAMETER OF PIPE	TRENCH WIDTH IN IN.	TRENCH WIDTH IN FT.	CONCRETE		CRUSHED STONE CLASS "C" EMBED.
				CLASS "A" EMBED.	CLASS "G" EMBED.	
REINFORCED CONCRETE CYLINDER PIPE						
14"	17.25"	34"	2.83	6.37	10.59	4.48
16"	19.38"	36"	3.00	7.49	12.26	4.94
18"	21.78"	38"	3.17	8.77	14.33	5.43
20"	23.78"	40"	3.33	10.00	16.14	5.91
24"	27.75"	44"	3.67	12.66	20.02	7.46

NOTE:
ALL COMPACTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND /OR SPECIAL PROVISIONS.



NOTE:
CONCRETE ENCASEMENT SHALL BEGIN AND END 6 INCHES FROM THE END OF JOINT

**CLASS "G" EMBEDMENT
N.T.S.**



TYPICAL CASING SECTION
N.T.S.

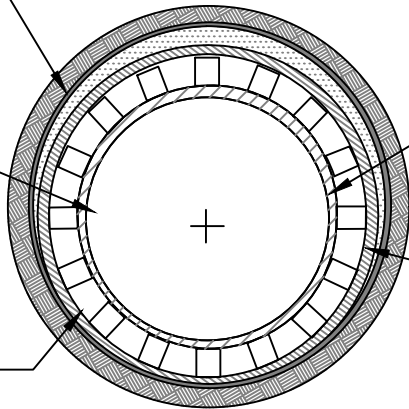
CARRIER PIPE SIZE (IN)	STEEL ENCASEMENT O.D. (IN)	STEEL ENCASEMENT WALL THICKNESS (IN)
6	14	1/4
8	18	1/4
12	21	1/4
18	27	3/8
21	30	3/8
24	36	3/8
27	39	3/8

FOR ALL CARRIER PIPE OVER 27", THE STEEL ENCASEMENT PIPE SHALL BE SIZED TO ACCOMMODATE THE APPROPRIATE CASING SPACERS, AND MINIMUM WALL THICKNESS SHALL BE 1/2".

OVERCUTTING SHALL BE FILLED WITH HYDRAULICALLY PLACED NON-SHRINK GROUT AS PER ASTM C476

CARRIER PIPE C-900 HIGH PRESSURE PIPE BLUE IN COLOR

SPACERS (SEE NOTE)



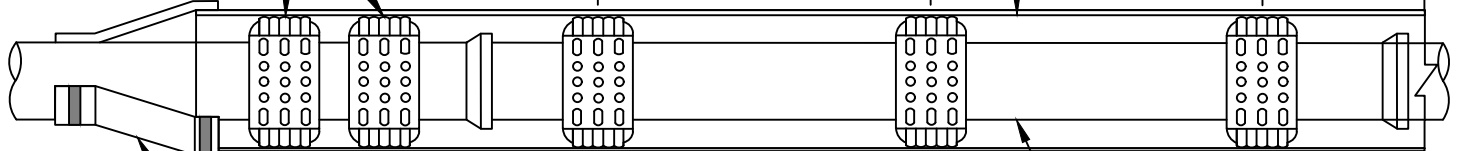
WATER MAIN ENCASEMENT
N.T.S.

TWO SPACERS PLACED AT EACH END OF CASING (TYP)

6'-10' TYPICAL BETWEEN SPACERS OR AS PER MANUFACTURED SPECIFICATION

CASING PIPE

2' FROM BELL END

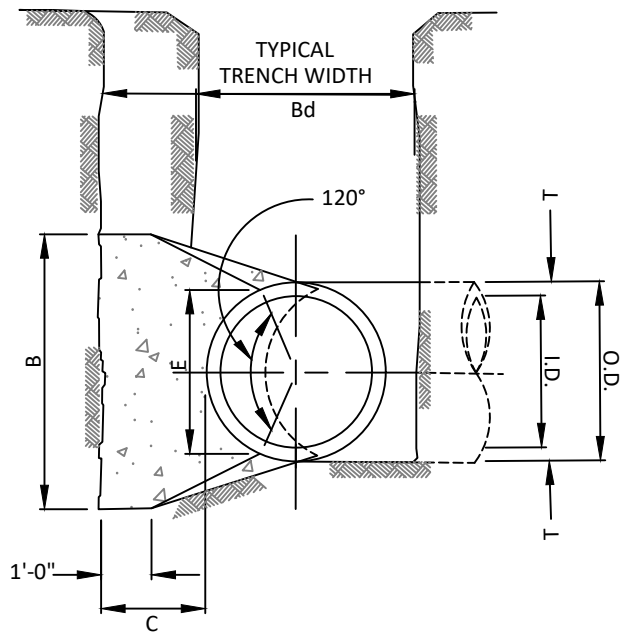
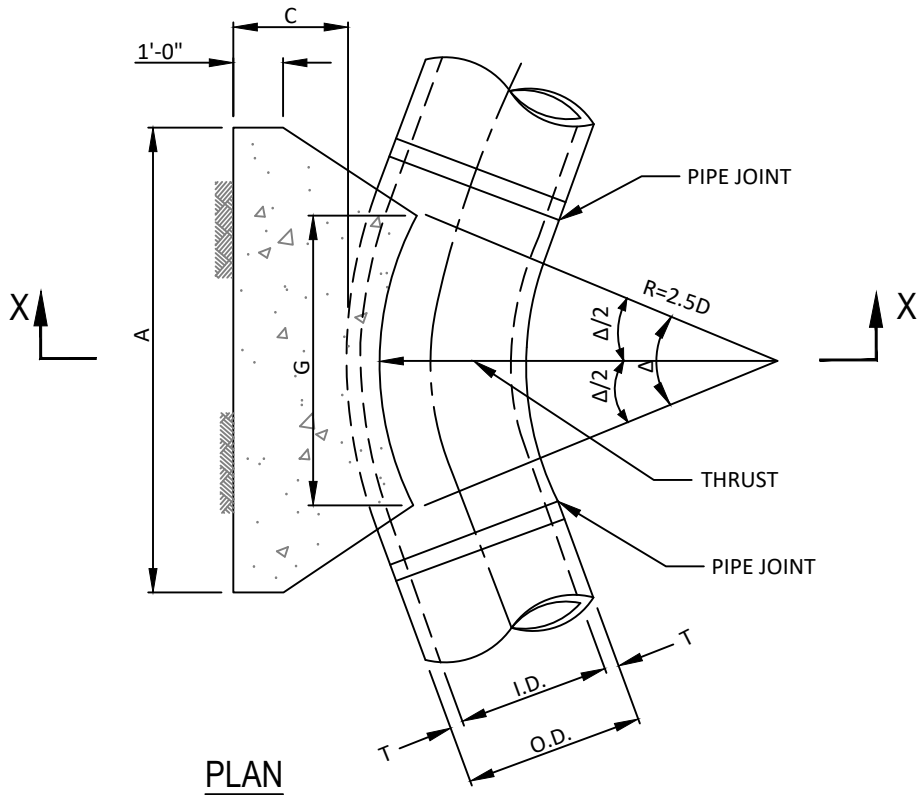


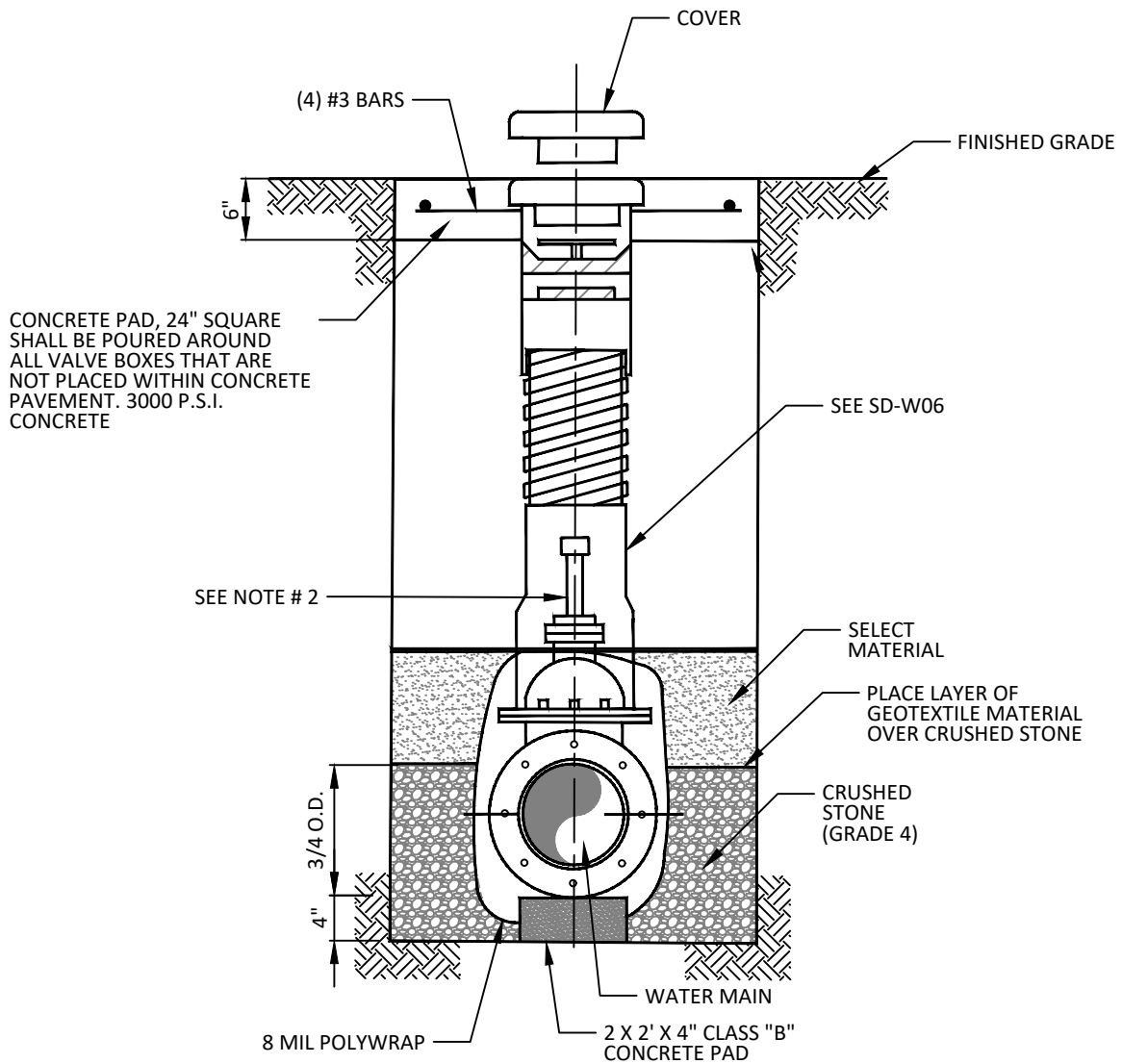
RUBBER END SEAL WITH STAINLESS STEEL BANDS

CASING PIPE

INSULATOR SPACING DETAIL
N.T.S.

1. HIGH DENSITY POLYETHYLENE SPACERS, RACI OR EQUAL, SHALL BE USED. WHERE NO CASING PIPE IS REQUIRED OVERCUTTING AROUND UTILITY SHALL BE FILLED WITH HYDRAULICALLY PLACED NON-SHRINK GROUT AS PER ASTM C476.
2. ENCASEMENT PIPE SHALL BE HIGH DENSITY STEEL PIPE. ALL JOINTS TO BE WELDED 100%

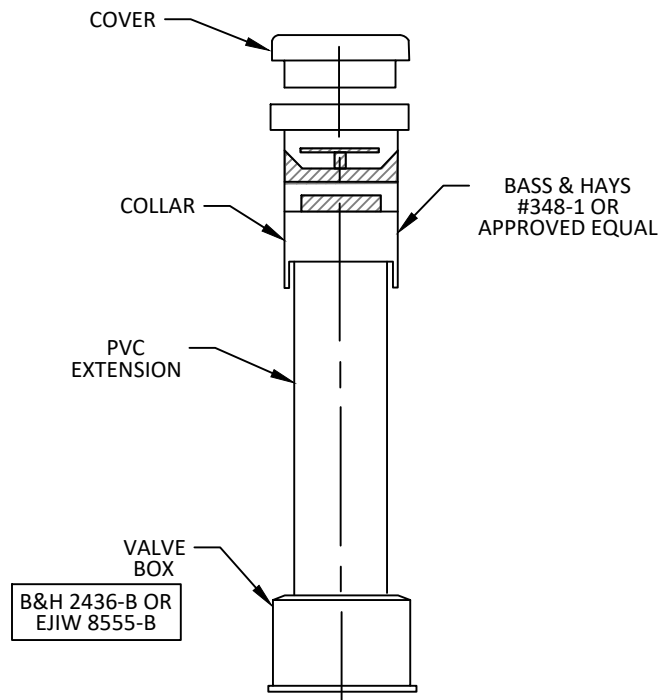




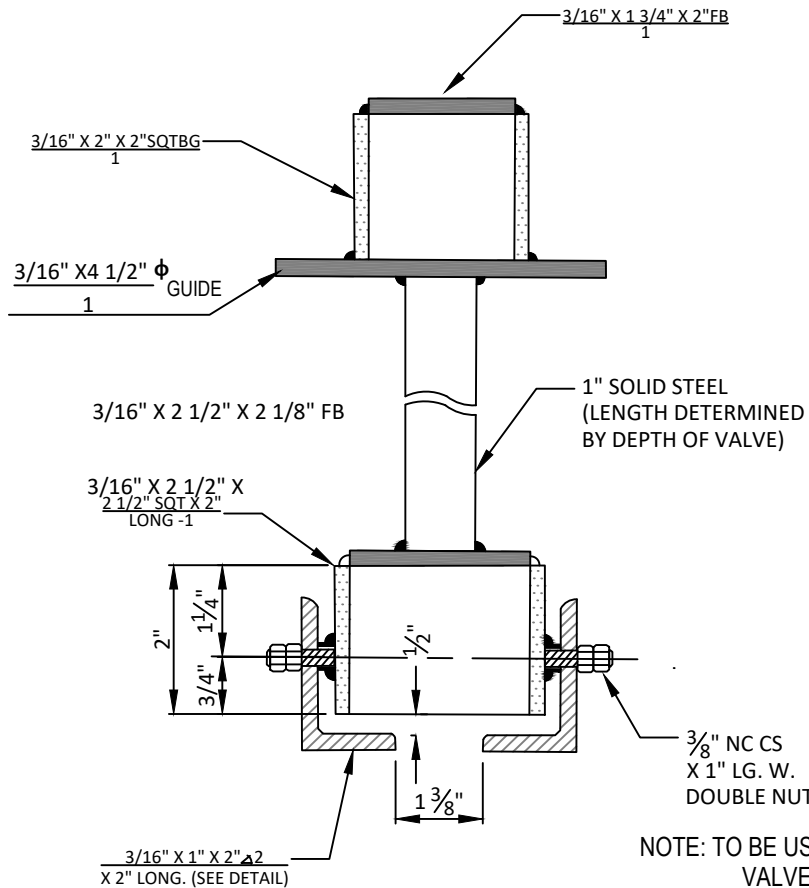
TYPICAL VALVE SETTING AND BOX

NOTES:

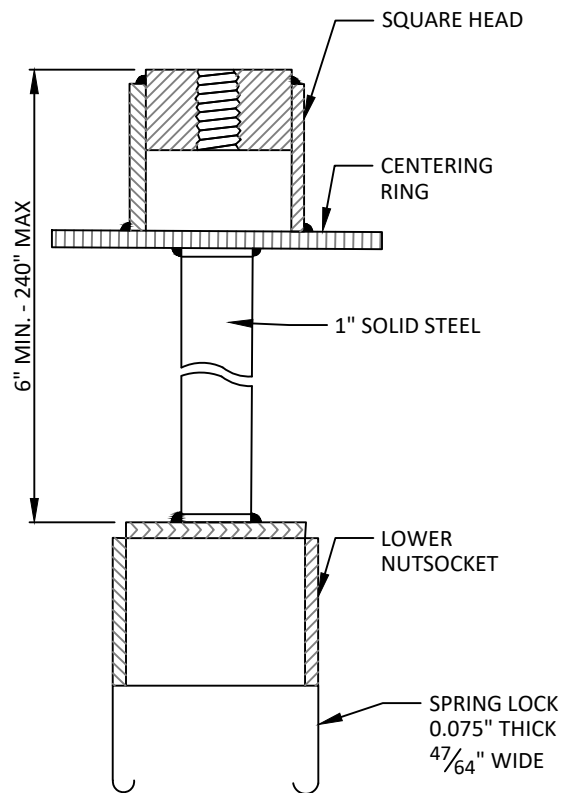
1. 4" THRU 12" R.S. GATE VALVES SHALL BE IN ACCORDANCE WITH TOWN OF ADDISON WATER SYSTEM REQUIREMENTS.
2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHERE OPERATING NUT IS LOCATED IN EXCESS OF 5' BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO ENSURE THAT ITS TOP IS WITHIN 5' OF VALVE BOX LID.
3. BLUE "V" (3") CUT INTO FACE OF NEAREST CURB AND POINTING TOWARD THE VALVE.
4. ALL IRON MATERIALS SHALL BE DOMESTIC. (MADE IN USA)



FOR ALL VALVES- 6" C-900 PVC
NTS

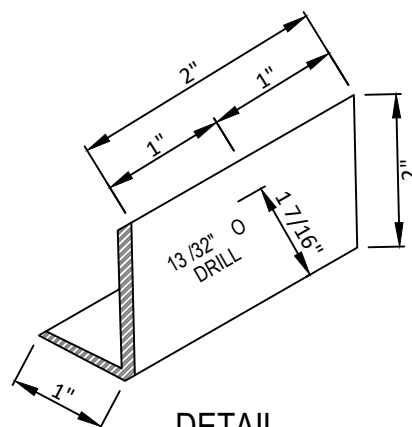


**TYPE - B
VALVE EXTENSION
N.T.S.**

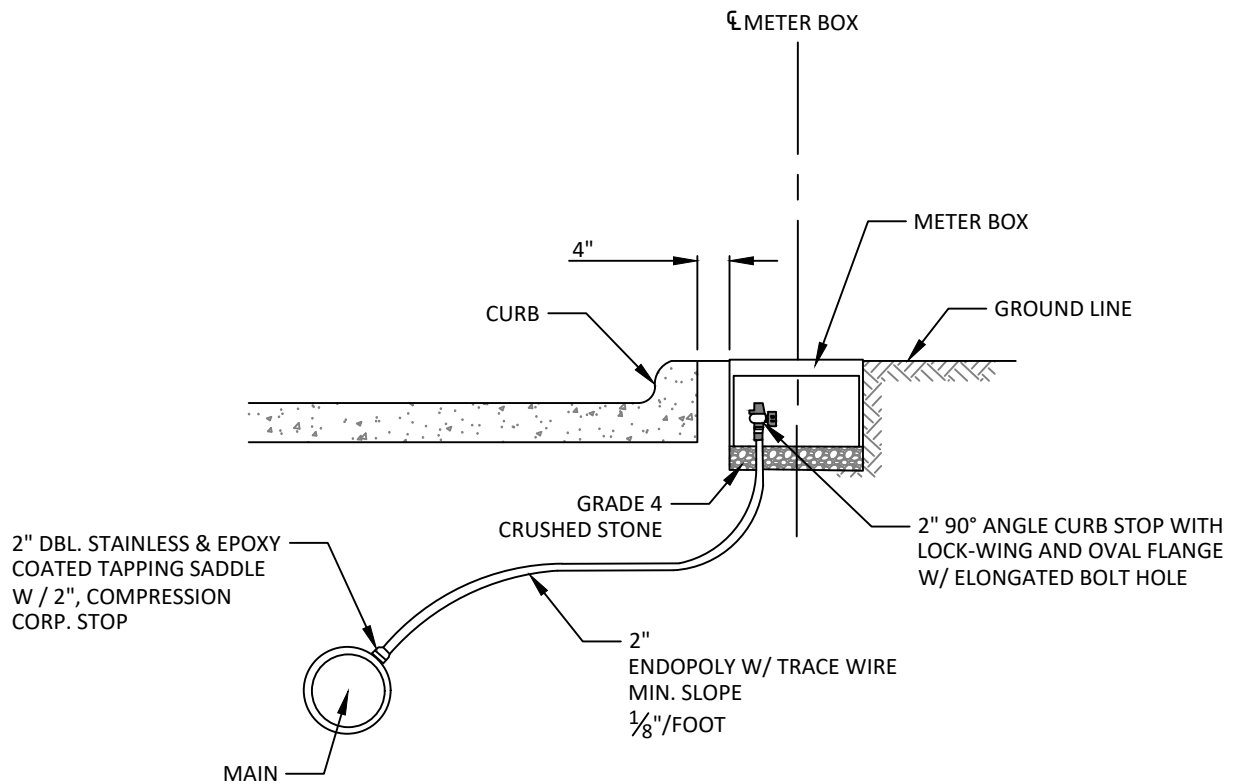


**SPRING LOCK
VALVE EXTENSION
N.T.S.**

NOTE: TO BE USED ON ALL VALVES DEEPER THAN 5' - 0".



**DETAIL
N.T.S.**

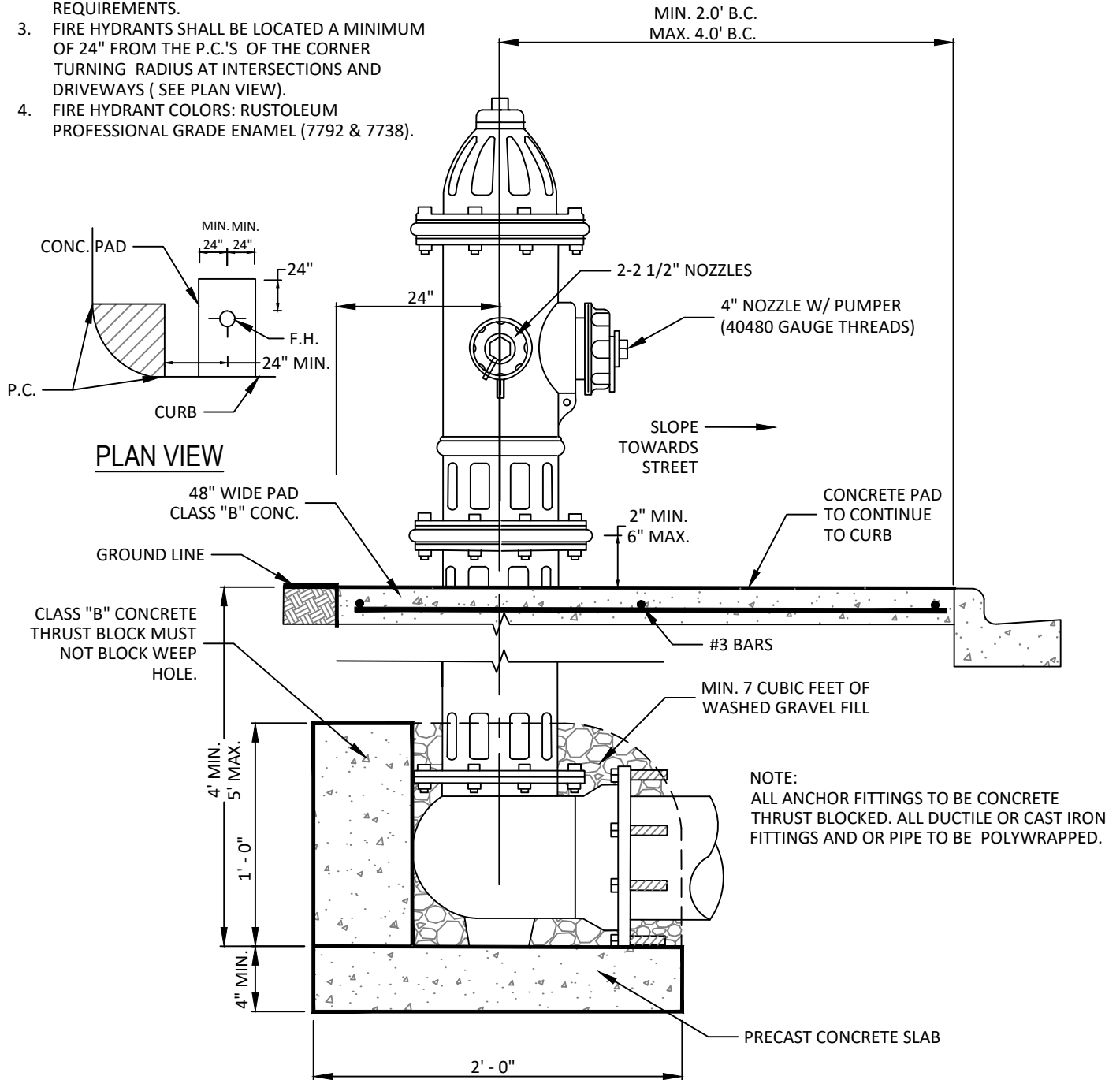


2" BLOW OFF
N.T.S.

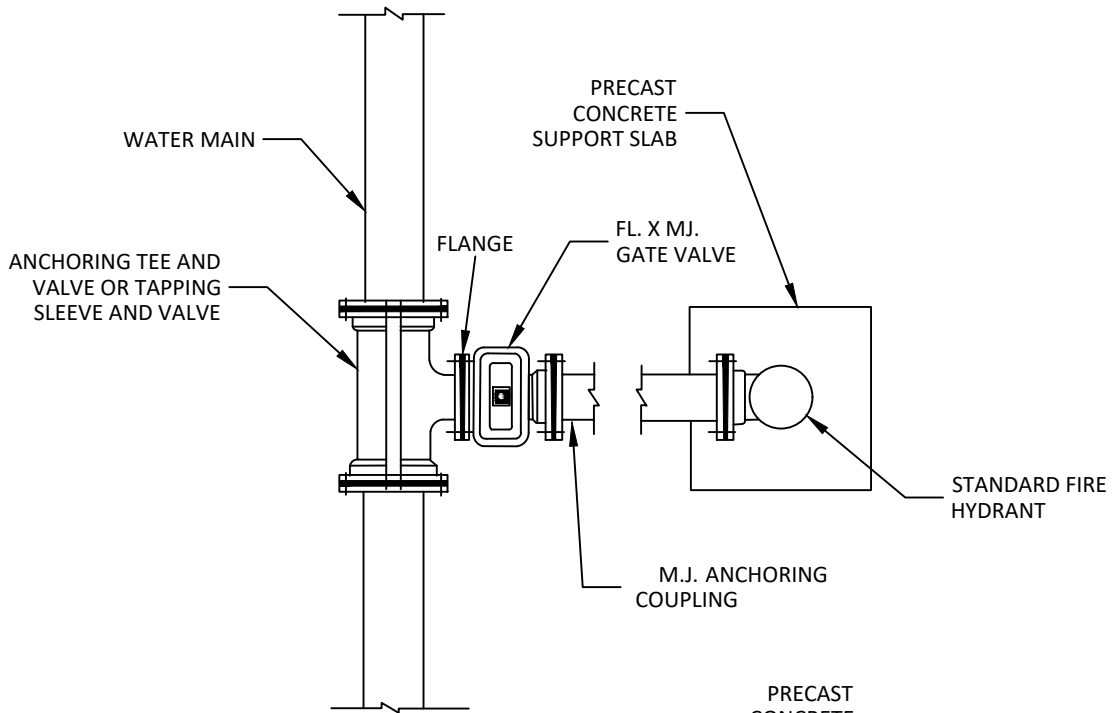
NOTES:
FOR METER BOX SPECIFICATIONS REFER TO THE DFW PLASTICS, INC. METER BOX MODEL NUMBER: DFWA2WBC-24 OR APPROVE EQUIVALENT BY THE DIRECTOR OF PUBLIC WORK & ENGINEERING SERVICES.

NOTE:

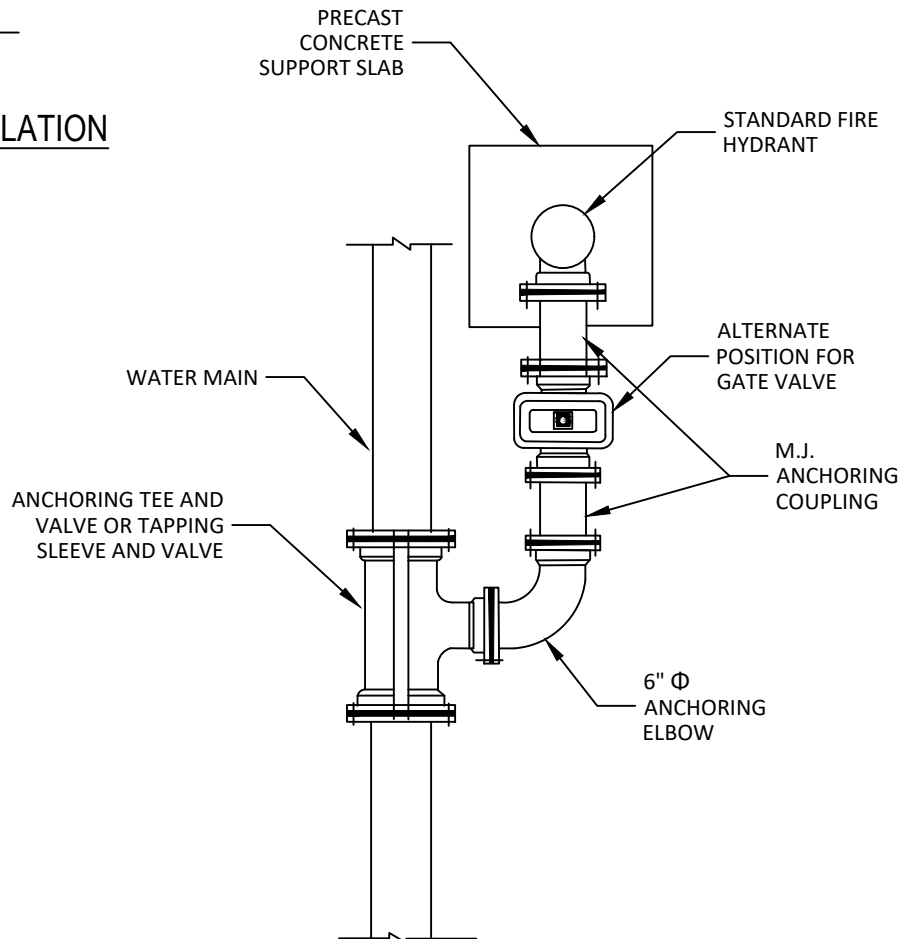
1. EJIW 5CD250 HYDRANT OR EQUIVALENT APPROVED BY THE CITY.
2. DESIGN, SITE REQUIREMENTS, THE GENERAL OPERATION, PAINTING AND DELIVERY OF ALL FIRE HYDRANTS SHALL BE IN ACCORDANCE WITH THE TOWN OF ADDISON WATER SYSTEM REQUIREMENTS.
3. FIRE HYDRANTS SHALL BE LOCATED A MINIMUM OF 24" FROM THE P.C.'S OF THE CORNER TURNING RADIUS AT INTERSECTIONS AND DRIVEWAYS (SEE PLAN VIEW).
4. FIRE HYDRANT COLORS: RUSTOLEUM PROFESSIONAL GRADE ENAMEL (7792 & 7738).



TYPICAL FIRE HYDRANT INSTALLATION
N.T.S.



STANDARD INSTALLATION

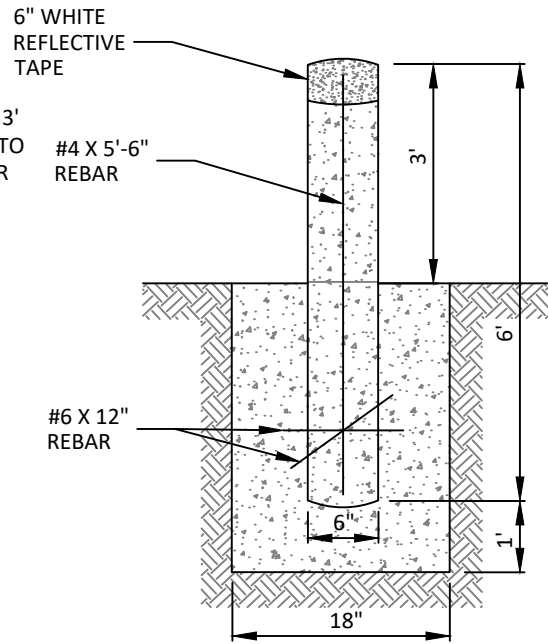


ALTERNATE INSTALLATION

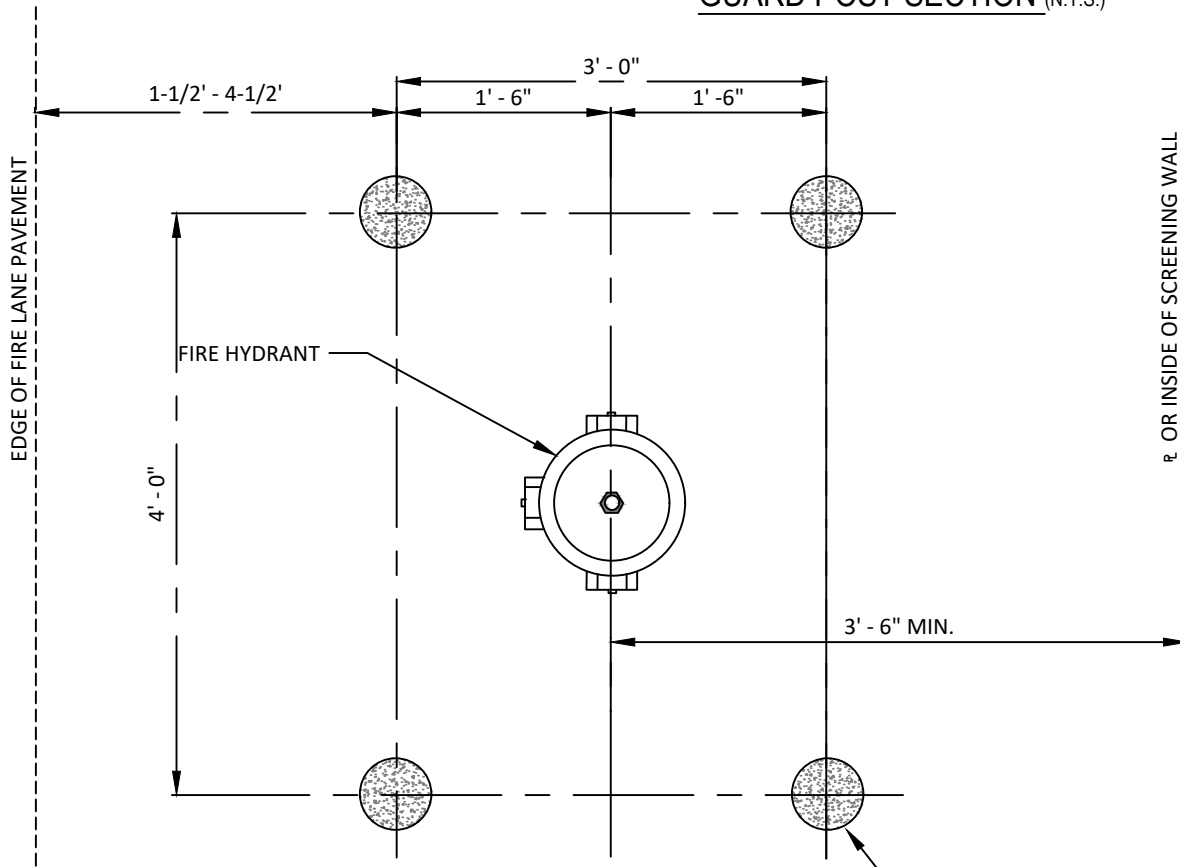
NOTE:
MEGALUGS SHALL BE USED AT ALL TEES AND BENDS.

NOTES:

1. 6" ϕ STEEL PIPE W/CONCRETE FILL 6' LENGTH (3' ABOVE PAVING, 3' BELOW PAVING) WITH 1-#4 X 5'-6" TO BE CASED IN 18" ϕ PIER TO DEPTH OF 1'-0" BELOW BOTTOM OF PIPE. USE 2 - #6 X 12" REBAR THRU PIPE INTO CONCRETE PIER. PIPES TO BE PAINTED TRAFFIC YELLOW W/6" WHITE REFLECTOR TAPE WRAPPED AROUND TOP.
2. BLUE STIMONITE REFLECTORS SHALL BE INSTALLED BE IN ACCORDANCE WITH THE WATER DESIGN SYSTEM STANDARDS.



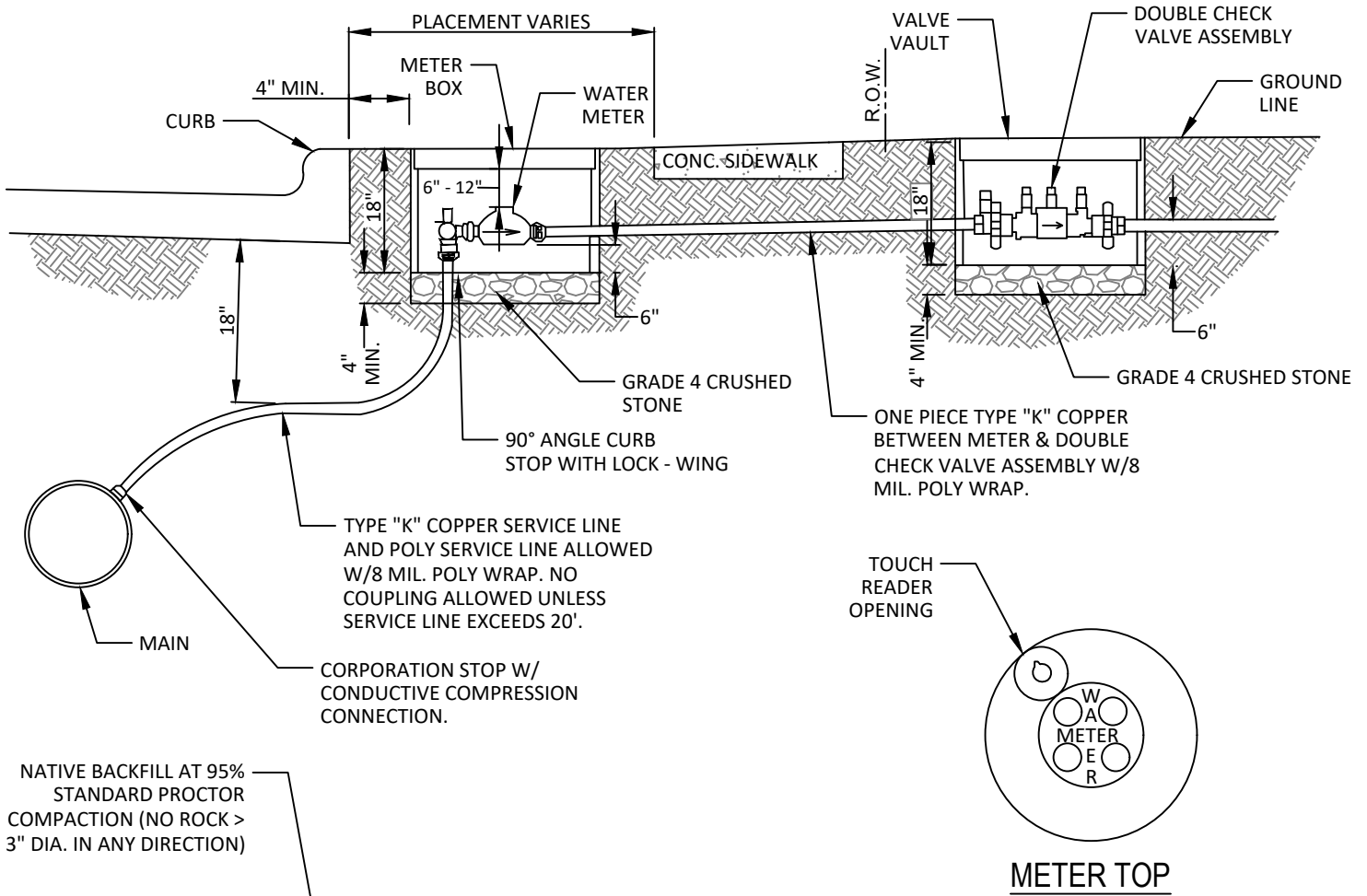
GUARD POST SECTION (N.T.S.)



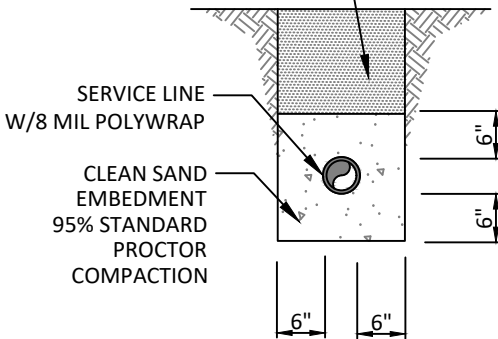
NOTE:
FOR USE ONLY WHERE
CURBS ARE NOT POSSIBLE.

6" ϕ CONCRETE
FILLED STEEL PIPE

FIRE HYDRANT GUARD POST DETAIL (N.T.S.)



NATIVE BACKFILL AT 95% STANDARD PROCTOR COMPACTION (NO ROCK > 3" DIA. IN ANY DIRECTION)



GENERAL INSTALLATION NOTES:

1. WATER METER SHALL BE PLACED IN CENTER OF LOT WITH THE WASTEWATER SERVICE TO BE LOCATED 10' DOWN STREAM.
2. METER AND BOX SHALL BE SET BY THE CONTRACTOR TO ADDISON STANDARDS IN ALL CASES.
3. THE METER BOX SHALL BE SET WITHIN THE R.O.W. OR A DEDICATED UTILITY EASEMENT. IN ALL CASES, THE METER BOX SHALL BE PROTECTED FROM VEHICULAR TRAFFIC.
4. WATER SERVICES SHALL NOT BE CONNECTED TO DEAD END LINES OR FIRE HYDRANT LEADS WITHOUT PRIOR APPROVAL.
5. ALL MATERIALS SHALL CONFORM TO THE TOWN OF ADDISON WATER SYSTEM REQUIREMENTS.

POLY SERVICE LINE ALLOWED	DFW PLASTICS, INC. DFWAWBC-24-1 RING & COVER					
	ENDOTRACE CONNECTION	MIN. DIA.	COVER & RINGS	MIN. HT.	MIN. CAN WEIGHT	MIN. TOTAL WEIGHT
1 INCH	1 INCH	24 INCHES	20 1/8 INCHES	18 INCHES	17 LBS.	98 LBS.
2 INCH	2 INCH	28 INCHES	20 1/8 INCHES	18 INCHES	20 LBS.	127 LBS.