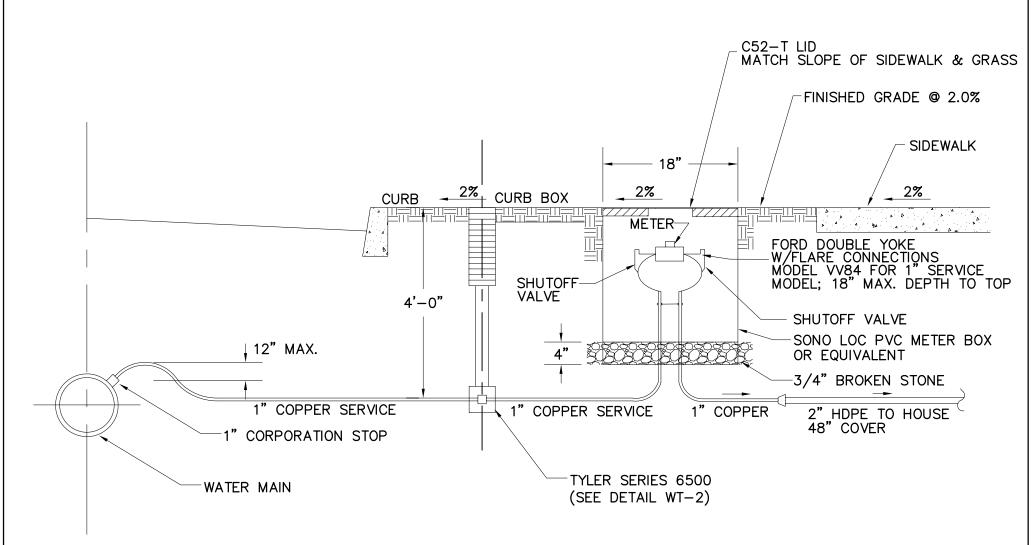


METER PIT AND CURB BOX MUST BE INSTALLED BETWEEN THE CURB AND THE SIDEWALK.

METER SHALL BE INSTALLED 18" BELOW FINISHED GRADE.

METER SHALL BE (NEPTUNE 5/8"c3/4" RF COMPLETE WITH E-CODER 9001 PIT VERSION)

(WT-1)

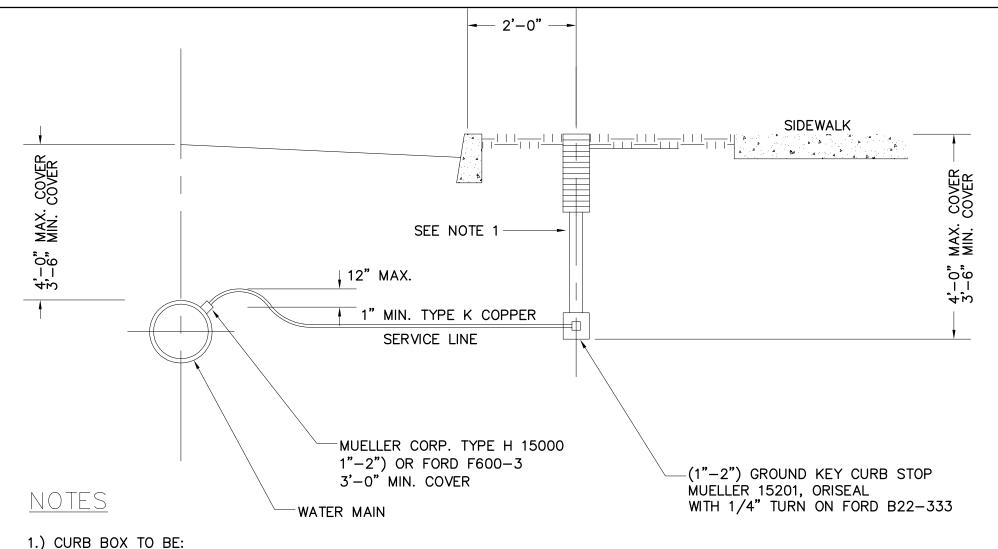


1" WATER SERVICE &
METER PIT DETAIL — 1" METER W/ 2" LEAVING
N.T.S.

METER PIT AND CURB BOX MUST BE INSTALLED BETWEEN THE CURB AND THE SIDEWALK. HOWEVER, IF HANDICAP RAMP IMPEDES THIS, PIT MUST BE WITHIN PUBLIC R.O.W. METER SHALL BE INSTALLED 18" BELOW FINISHED GRADE.

METER SHALL BE (NEPTUNE 5/8"c3/4" RF COMPLETE WITH E-CODER 9001 PIT VERSION)

(WT-1A)

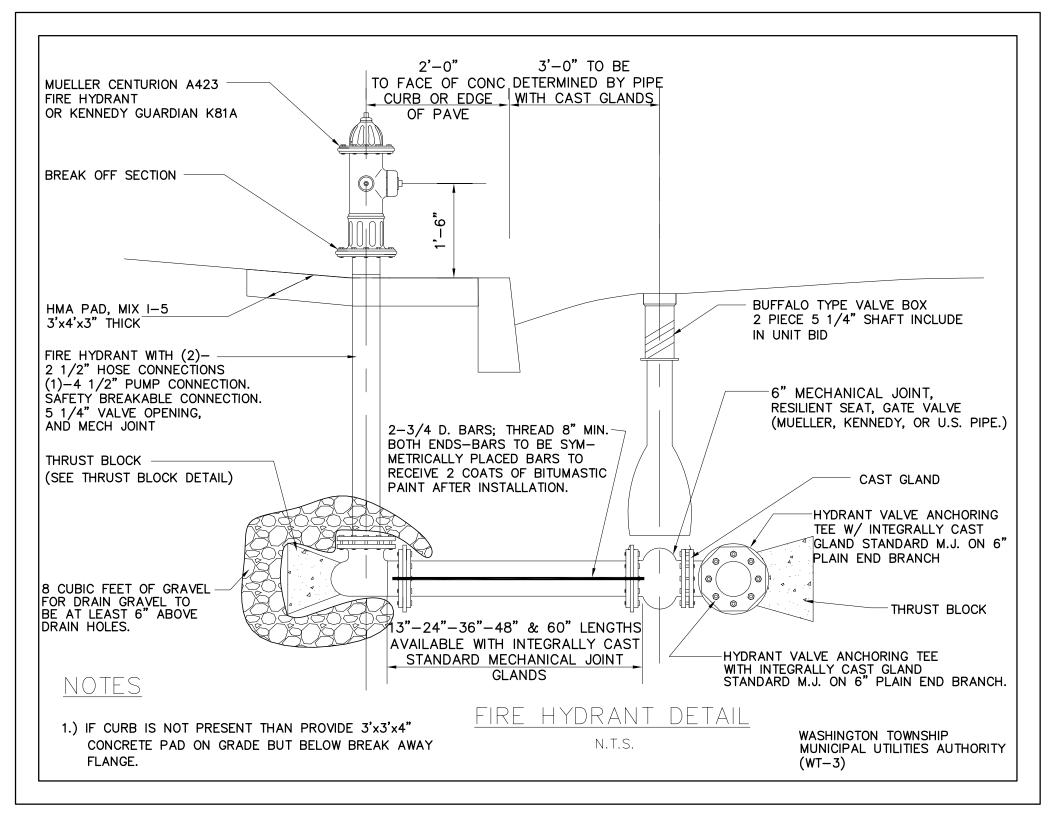


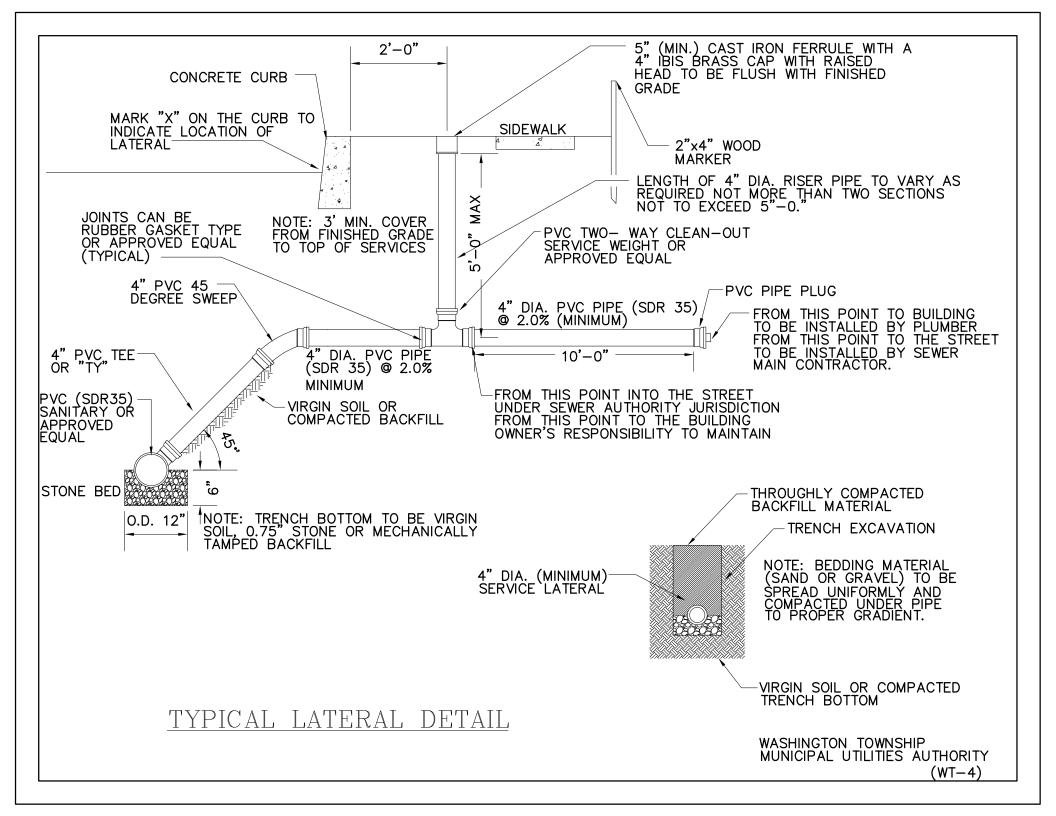
EITHER-TYLER SERIES 6500 CURB BOX- 93D (36"-48") COMPLETE WITH LID MARKED "WATER" (3/4" TO 1-1/4" SERVICE). FOR LARGER THAN 1-1/4" UP TO 2" SERVICE USE ENLARGED BASE, SERIES 6500. (BUFFALO STYLE)

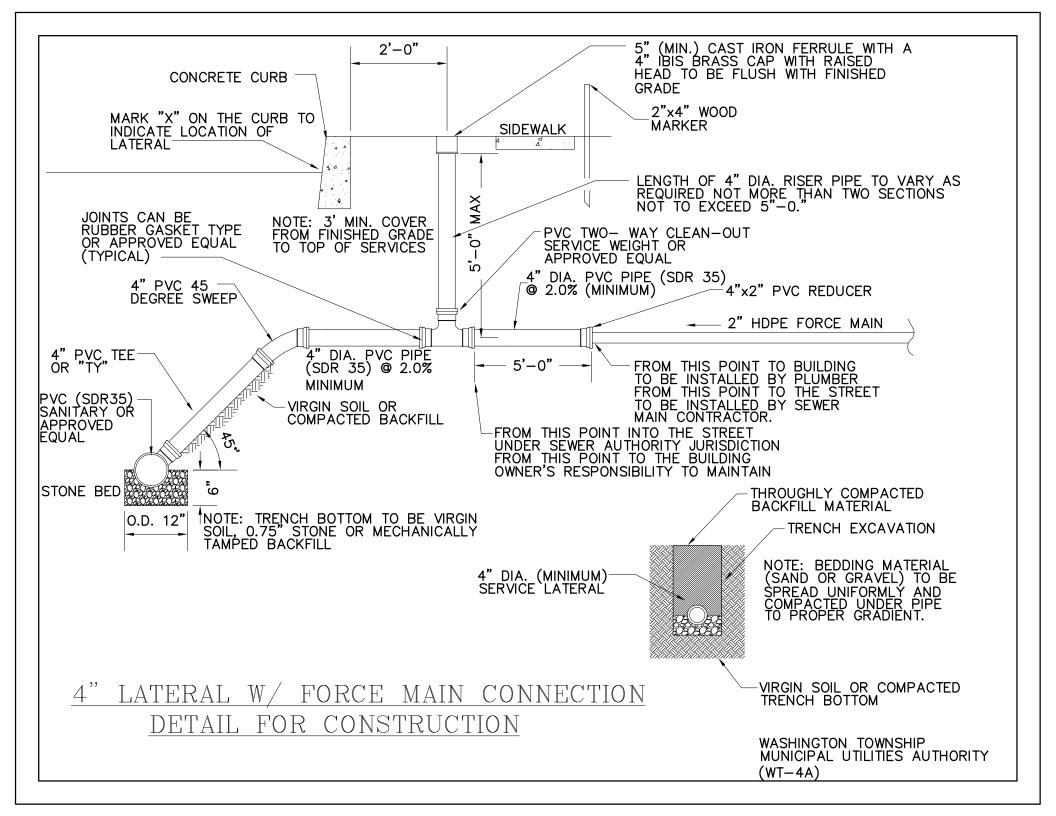
> BRASS SHALL BE AS SUPPLIED BY EITHER McDONALD, MUELLER OR FORD

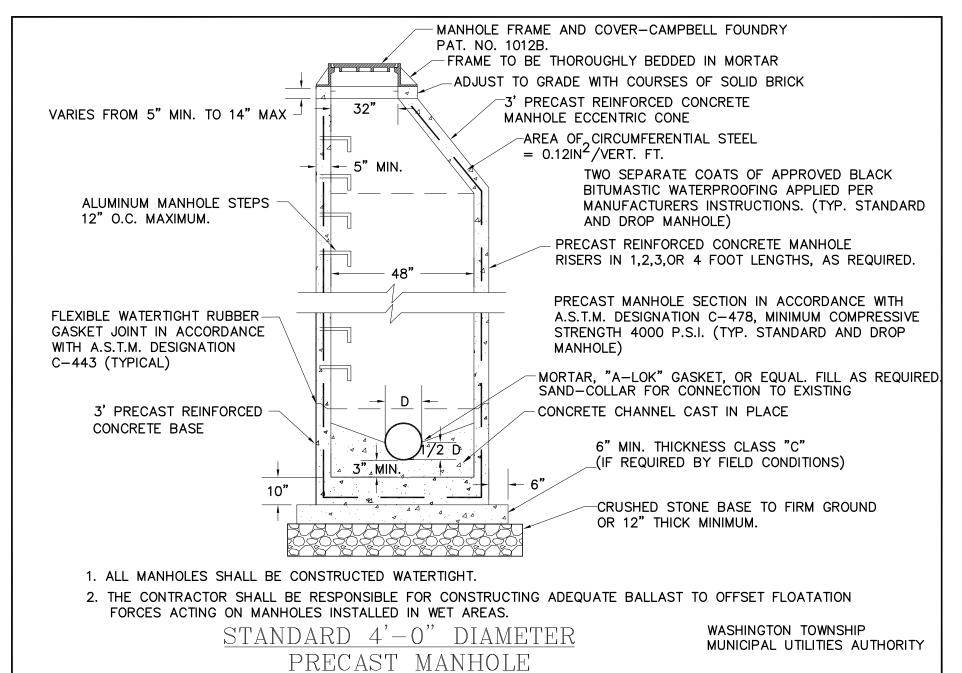
> > WATER SERVICE CONNECTION DETAIL N.T.S.

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY (WT-2)

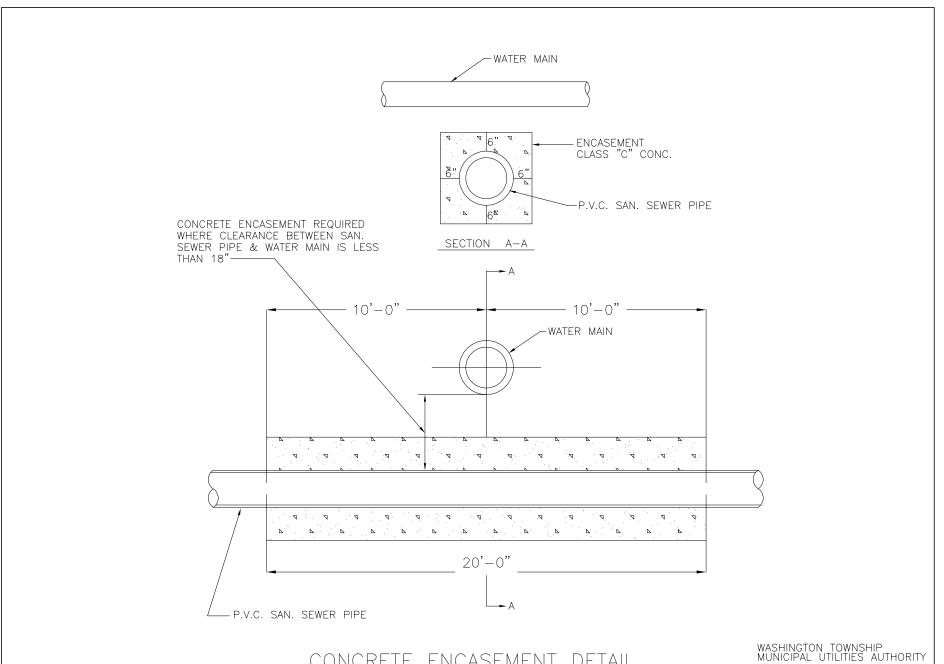








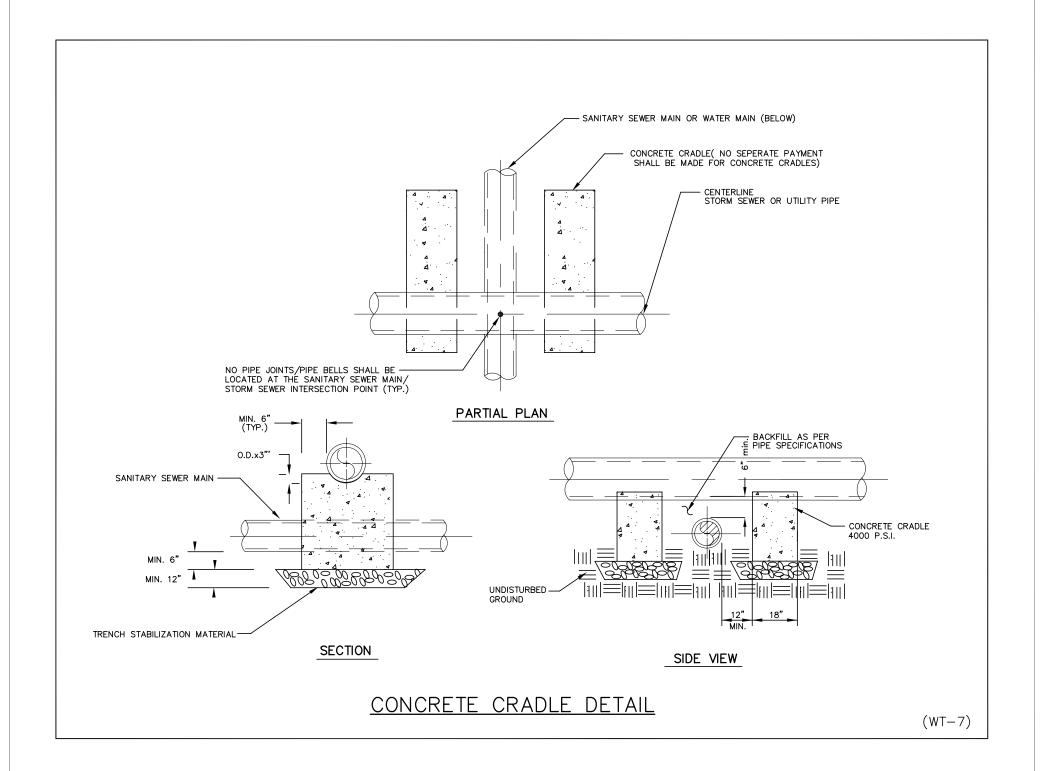
(FOR PIPES 36" DIA. OR LESS) N.T.S. (WT-5)

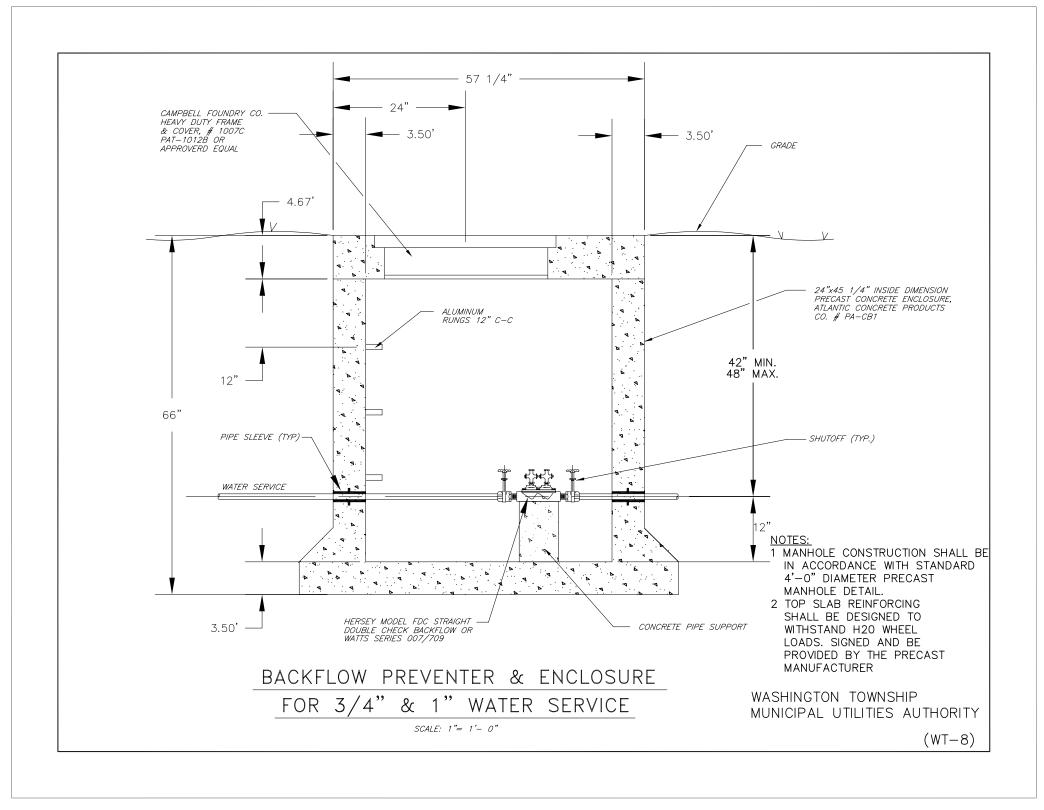


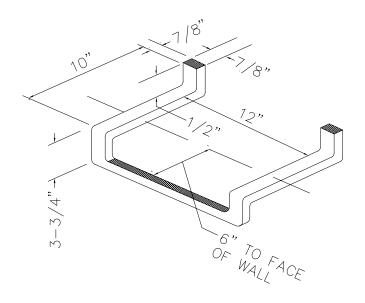
CONCRETE ENCASEMENT DETAIL

SCALE: 3/8"= 1'- 0"

(WT-6)





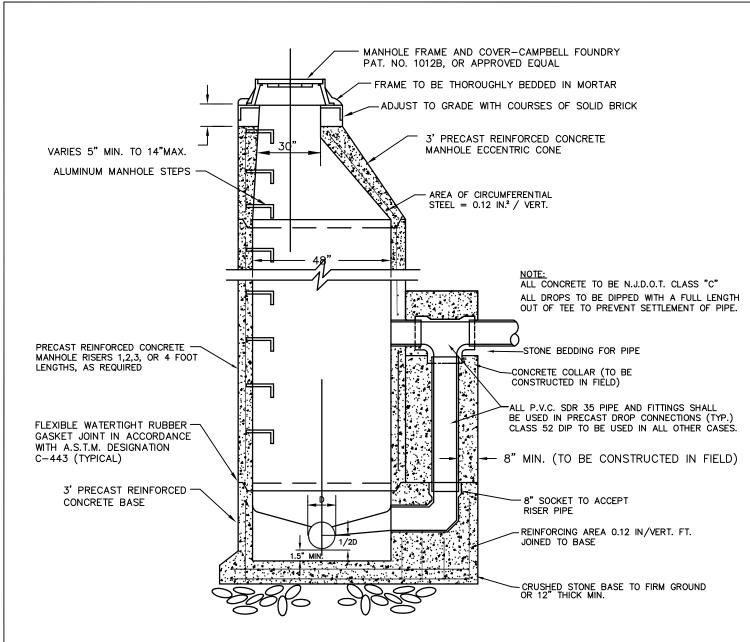


PORTION EMBEDDED IN MASONRY TO BE COATED WITH COAL TAR, PITCH, VARNISH OR OTHER SPECIFIED MATERIAL.

ALUMINUM MANHOLE RUNG DETAIL

SCALE: 1-1/2"= 1'- 0"

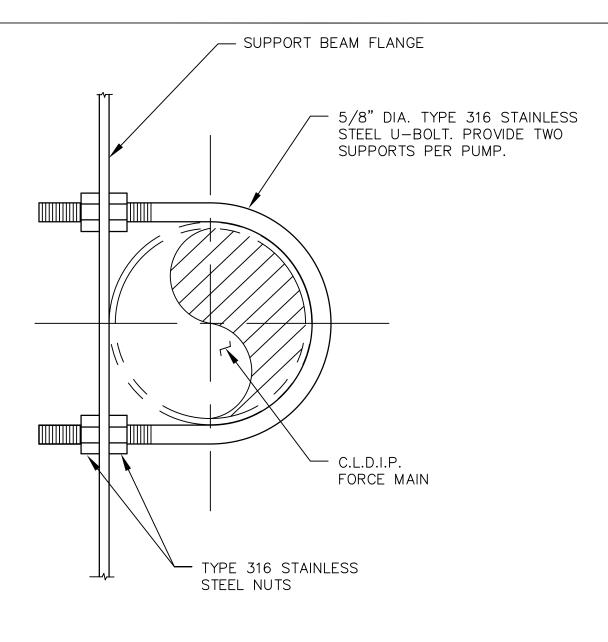
WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY



STANDARD PRECAST DROP MANHOLE

WASHINGTON TOWNSHIP MUNICITAL UTILITIES AUTHORITY

(WT-10)

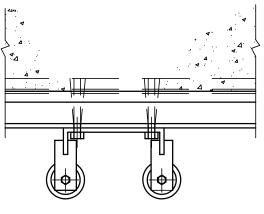


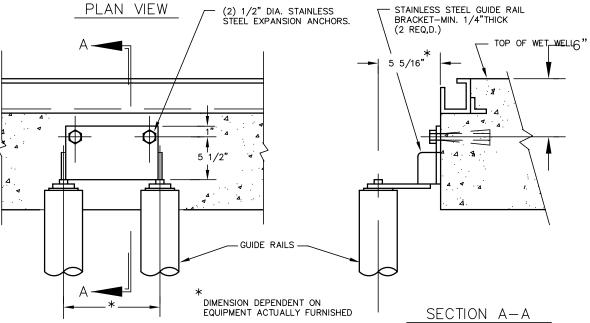
FORCE MAIN PIPE SUPPORT DETAIL

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

NTS

(WT-11)





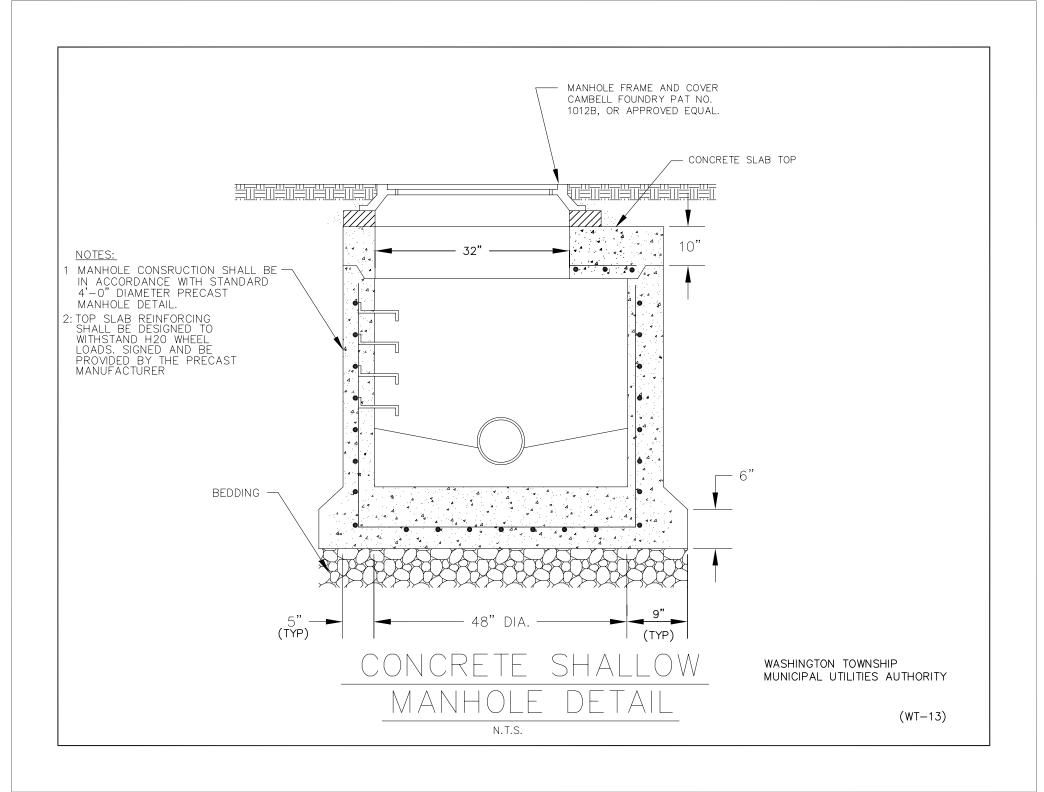
FRONT ELEVATION

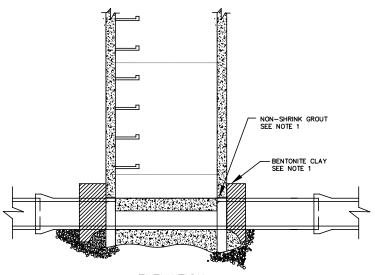
SUBMERSIBLE PUMP GUIDE RAIL DETAIL

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

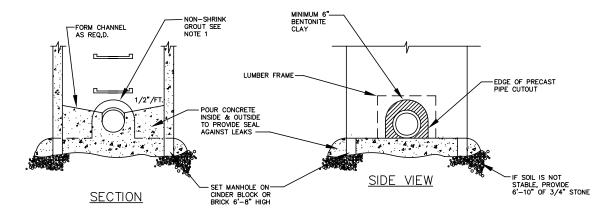
NTS

(WT-12)





ELEVATION



- NOTES:

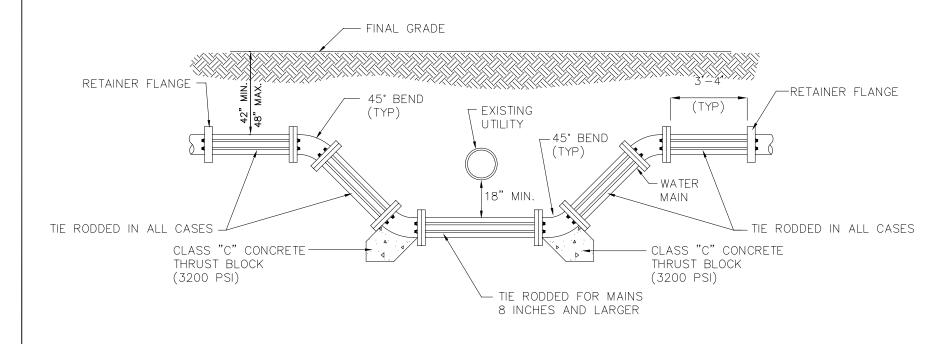
 1. SPACE BETWEEN PIPE AND MANHOLE TO BE FILLED WITH NON-SHRINK GROUT AND COVERED WITH MINIMUM 6" BENTONITE CLAY, LUMBER FRAME TO BE PROVIDED TO ENSURE 6" BENTONITE OVERLAP ONTO PRECAST MANHOLE UNIT, AND REMAIN IN PLACE.

 2. TOP HALF OF EXISTING STORM SEWER PIPE INSIDE MANHOLE TO BE REMOVED.

MANHOLE INSTALLATION OVER EXISTING PIPE (DOGHOUSE MANHOLE)

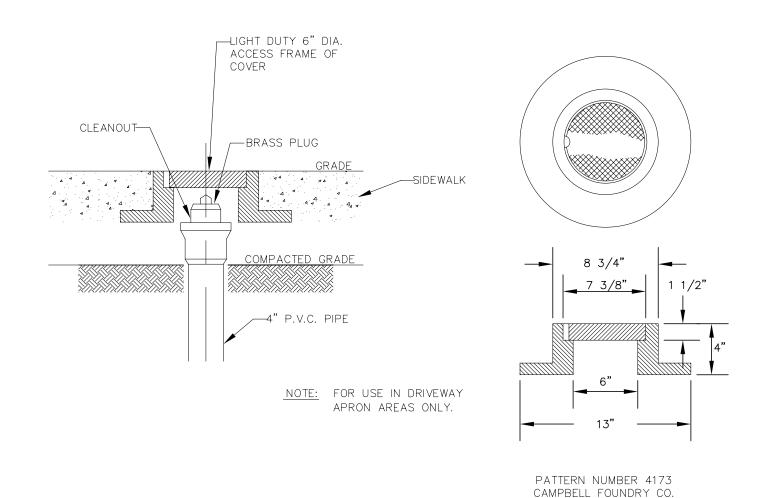
WASHINGTON TOWNSHIP MUNICIPAL UTILITY AUTHORITY

(WT-14)



WATER MAIN OFF-SET DETAIL

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY
(WT-15)

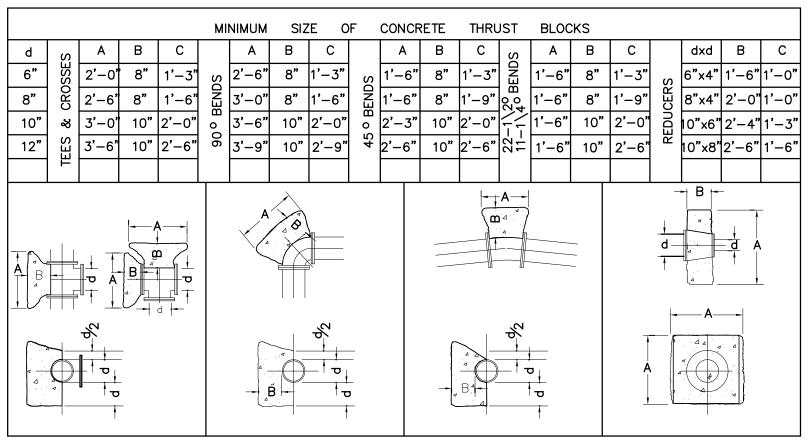


SANITARY SEWER CLEANOUT DETAIL - IN PAVEMENT

N.T.S.

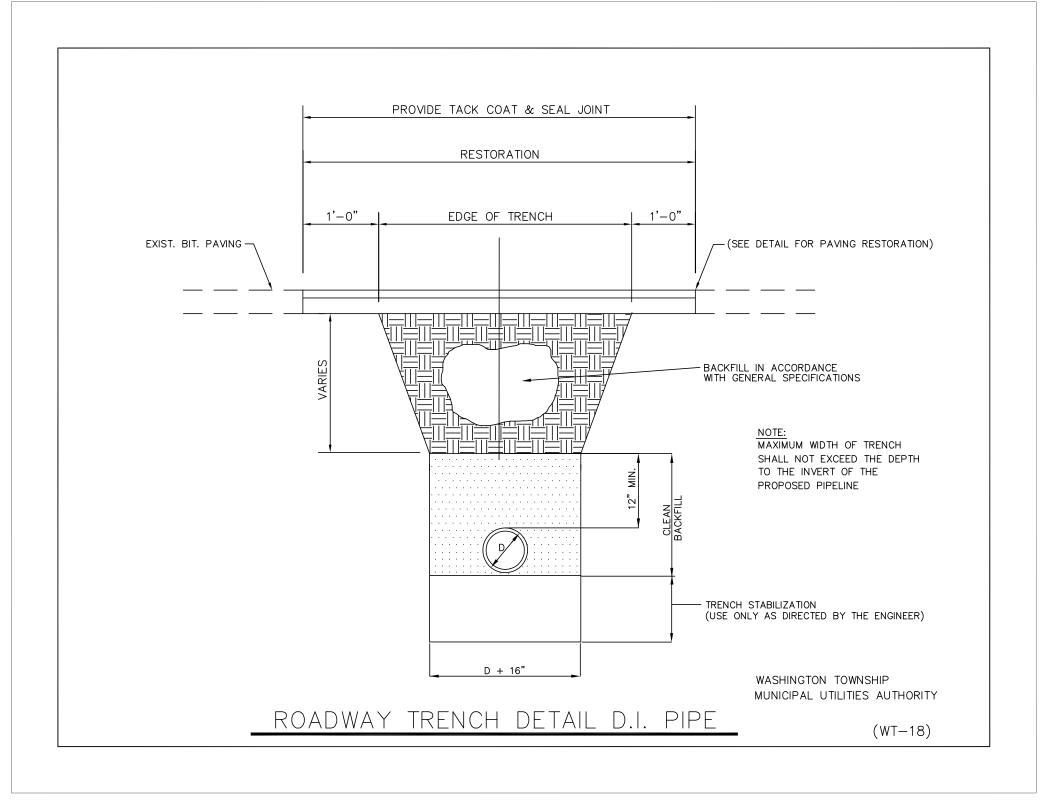
WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

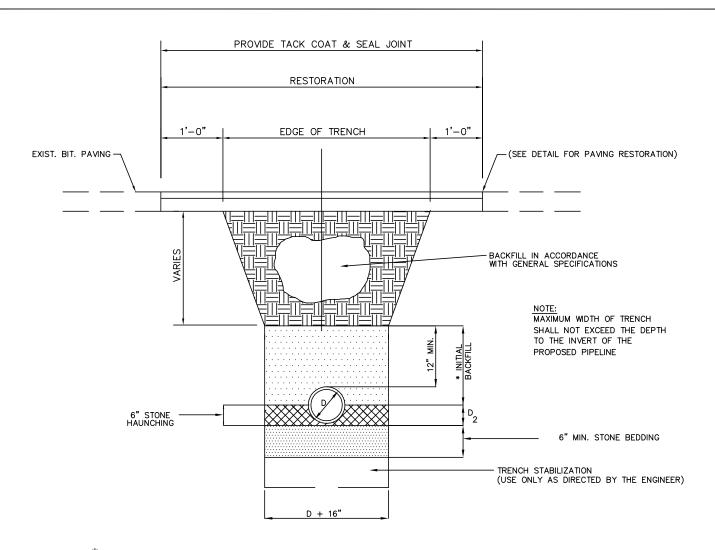
(WT-16)



- 1. THRUST BLOCKS TO BE USED FOR WATER MAIN AND FORCE MAINS AT ALL BENDS, TEES, REDUCERS AND PLUGS.
- 2. BEARING AREAS FOR THRUST BLOCKS ARE BASED ON THE UNDISTURBED SOIL WITH BEARING CAPACITY OF 1000 LBS. PER SQ. FT. FOR OTHER SOILS OF LESS BEARING CAPACITY, THE AREAS SHALL BE ADJUSTED ACCORDINGLY, (FIG. 14, ASCE "PIPELINE DESIGN FOR WATER AND WASTEWATER, 1975").
- 3. ALL CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI COMPRESSIVE STRENGTH WITHIN 28 DAYS.
- 4. THE THRUST BLOCKS SHALL BE POURED FROM FITTING SUCH THAT THEY BEAR ON THE UNDISTURBED WALL OF THE TRENCH.
- 5. THE TABULATED CONTACT BEARING AREAS LISTED ARE FOR HORIZONTAL AND DOWNWARD THRUST ONLY AND ARE NOT APPLICABLE FOR UPWARD THRUST.

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY
(WT-17)





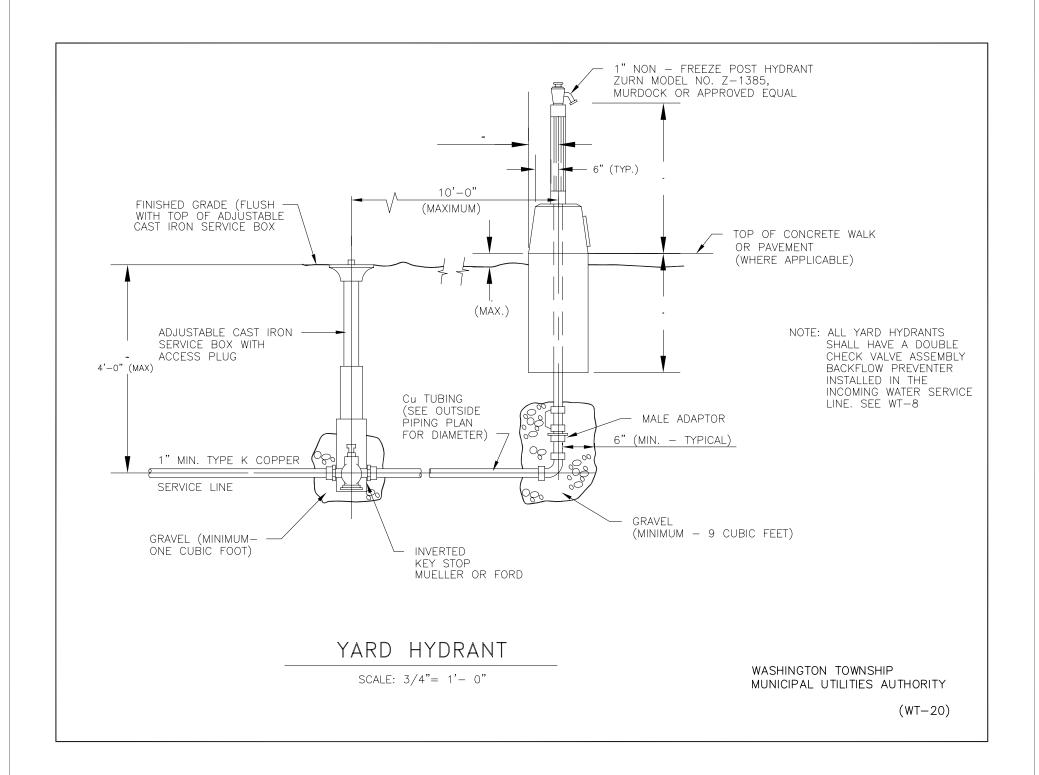
INITIAL BACKFILL AND BEDDING MATERIAL SHALL BE SOIL AGGREGATE DESIGNATION I—8 CONFORMING TO THE REQUIREMENTS OF ARTICLE 8.8.1. TABLE 36 OF THE STANDARD SPECIFICATIONS, 1980 SUPPLEMENT, OR STONE CRUSHINGS TO CONFORM WITH AASHTO DESIGNATION M—43—54 (1974) (ASTM DESIGNATION D448—54), SIZE No. 8, 1/8" TO 3/8" (2.36mm TO 9.25mm) CLEAN, FREE FLOWING AND SHALL MEET ALL ASTM C—33 FOR QUALITY AND SOUNDNESS.

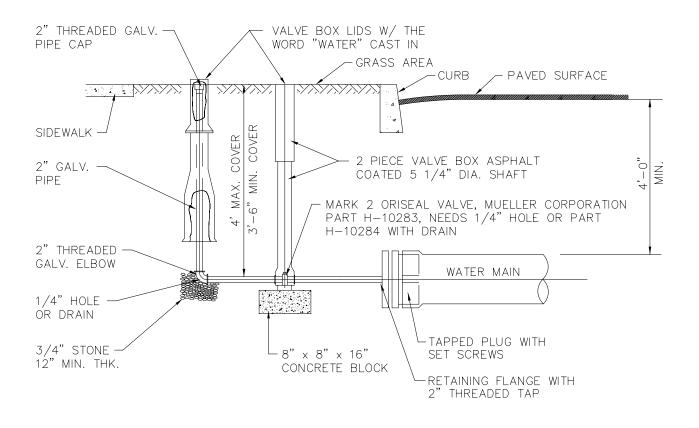
TRENCH DETAIL FOR P.V.C. PIPE

SCALE: NOT TO SCALE

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT-19)





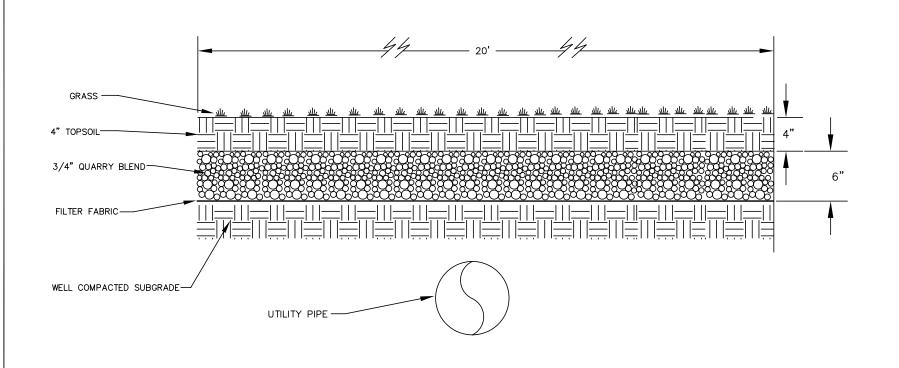
BLOW — OFF DETAIL N. T. S.

NOTE:

- 1. BLOW-OFF MAY BE LOCATED IN STREET
- 2. WATER MAIN END CAP SHALL BE THRUST BLOCKED

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

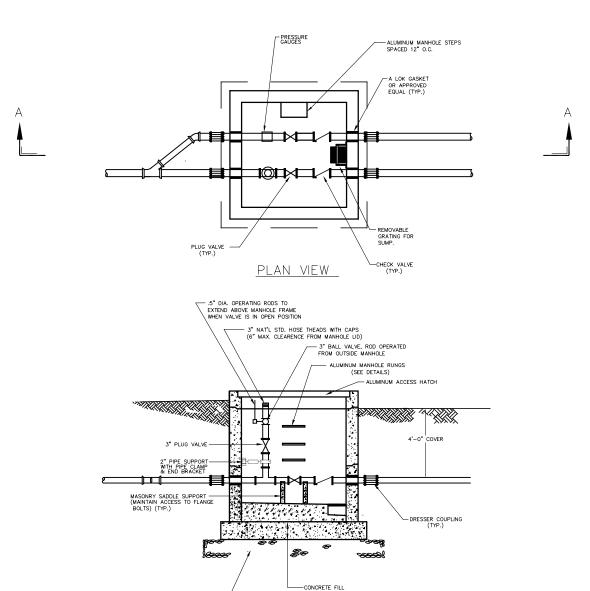
(WT-21)



EASEMENT DETAIL N.T.S.

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT-22)



NOTE: COAT OUTSIDE OF MANHOLE WITH TWO COATS OF BITUMASTIC WATERPROOFING COMPOUND

VALVE PIT AND BY-PASS MANHOLE DETAIL

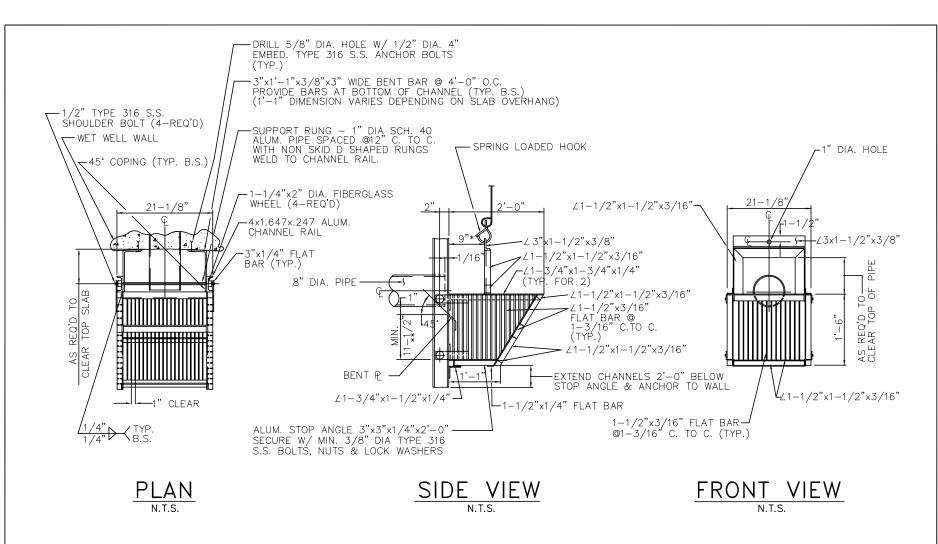
12" CRUSHED STONE -

(AASHTO STD. NO. 57)

NO SCALE

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

(WT - 23)



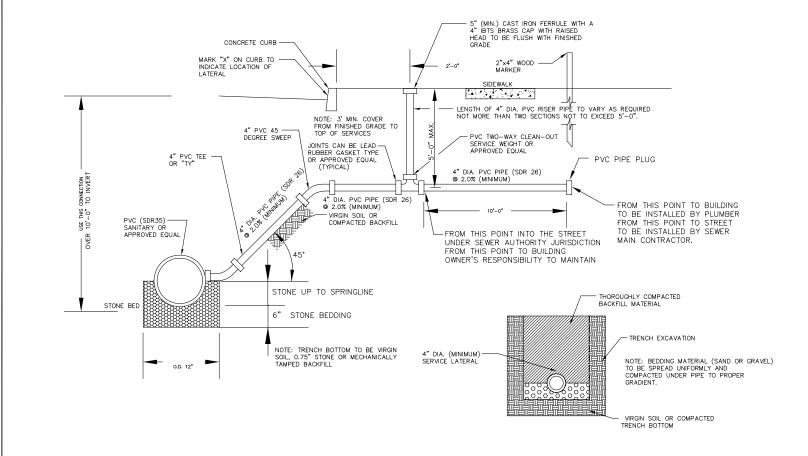
NOTES:

- *CONTRACTOR TO COORDINATE DIMENSION IN ORDER TO PROVIDE A DIRECTLY VERTICAL ALIGNMENT FOR THE BAR SCREEN CABLE.
- 2. **PROVIDE 1-1/2" x 3/16" @ 1-3/16" CENTER TO CENTER FLAT BARS ON BACK SIDE OF BAR SCREEN FOR ENTIRE 11-1/2" DEPTH.
- 3. PROVIDE SLOT IN ACCESS DOOR FOR PERMANENT CONNECTION OF WINCH CABLE.

- 4. ALL MATERIALS UTILIZED TO FABRICATE AND INSTALL THE BAR SCREEN SYSTEM SHALL BE EITHER ALUMINUM ALLOY 6061-T6 OR 6063-T6, TYPE 316 STAINLESS STEEL (S.S.) OR FIBERGLASS
- 5. BAR SCREEN WIDTH SHOWN IS FOR EIGHT INCH SANITARY SEWER PIPE. BAR SCREEN WIDTH SHALL BE INCREASED WITH CORRESPONDING INCREASE IN SANITARY SEWER PIPE DIAMETER.

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY (WT-24)

BAR SCREEN DETAIL

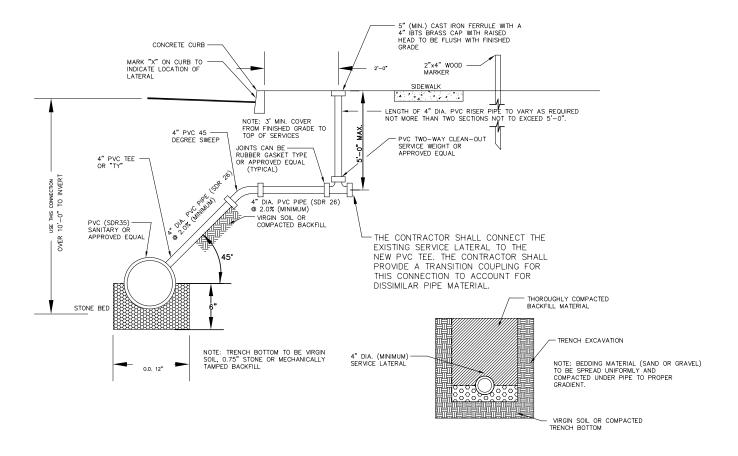


DEEP CUT LATERAL 10' AND OVER IN DEPTH

N.T.S.

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT - 25)

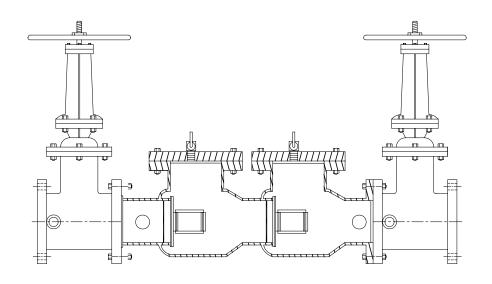


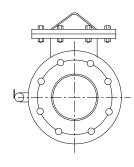
DEEP CUT LATERAL 10' AND OVER IN DEPTH

N.T.S.

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

NOTE: AMES MODEL 2000 DCA OR EQUIVALENT APPROVED BY M.U.A. / AUTHORITY ENGINEER.





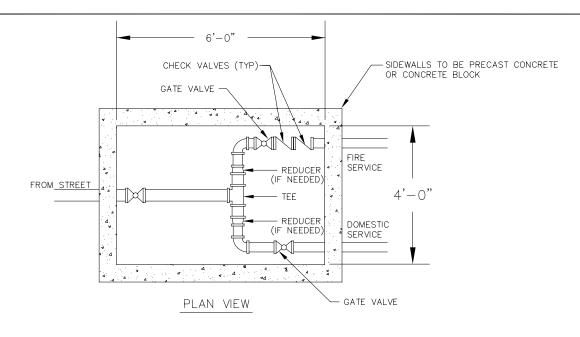
BACKFLOW PREVENTER DETAIL

FOR FIRE SERVICE

N.T.S.

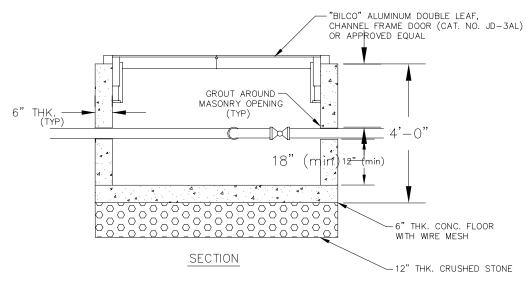
WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT-26)



NOTES:

- 1. PIPE SIZES VARY WITH SITE LOCATION.
- 2. FIRE SERVICE IS TO HAVE DETECTOR DOUBLE CHECK VALVES. SEE DRAWING NO. WT-26.

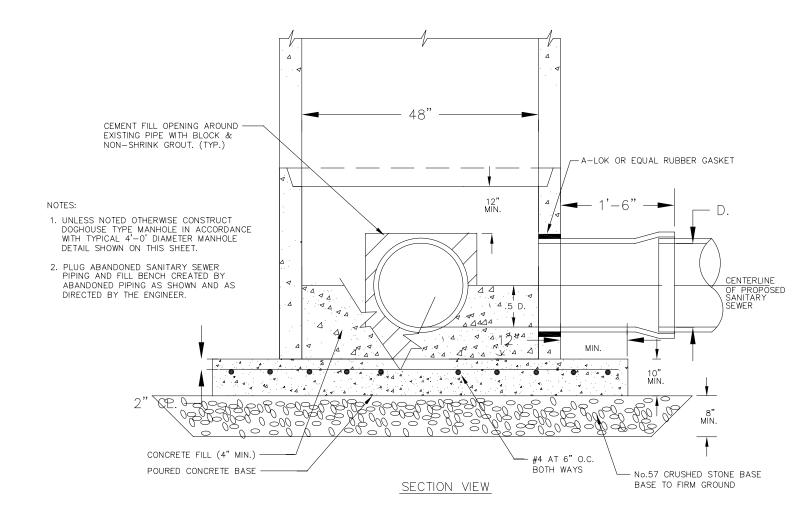


METER PIT WITH FIRE SERVICE

N.T.S.

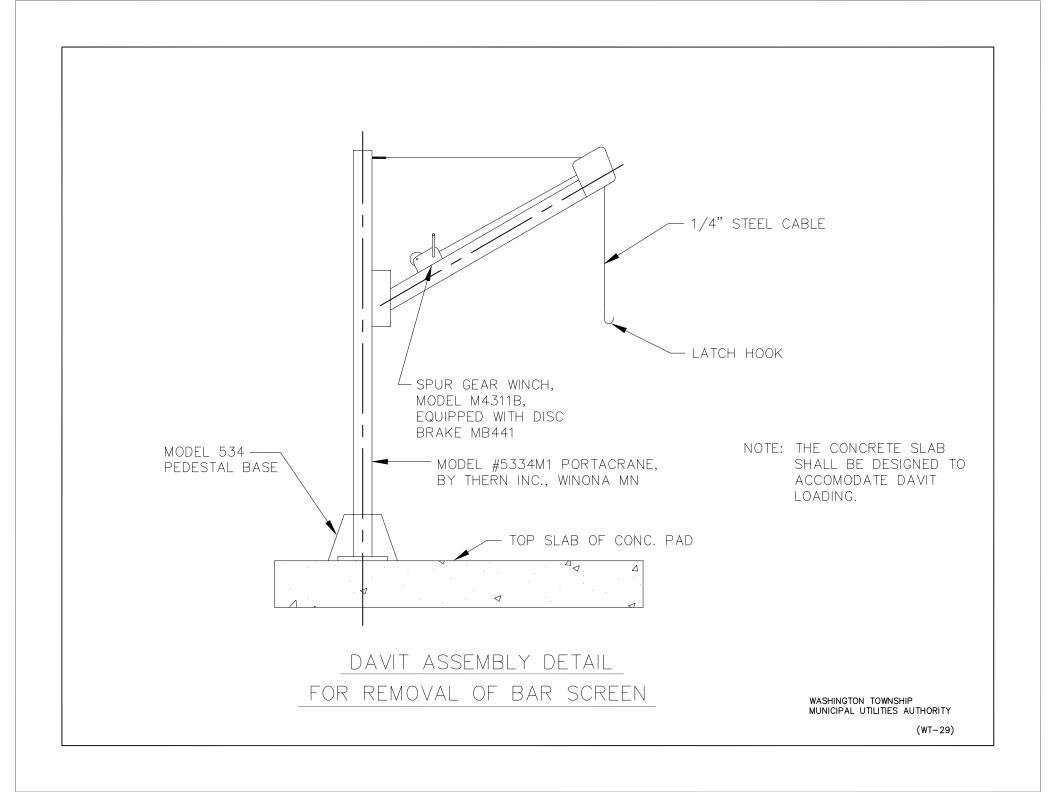
WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

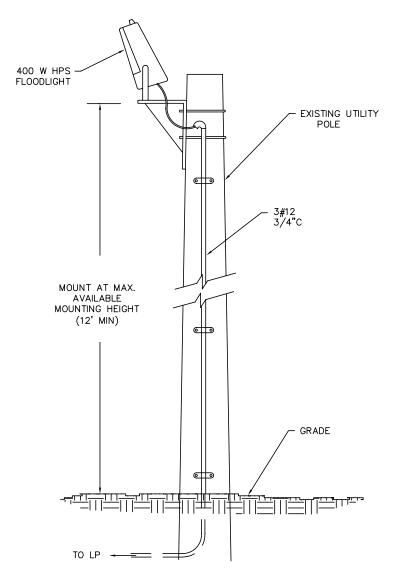
(WT - 27)



DOGHOUSE MANHOLE DETAIL

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY



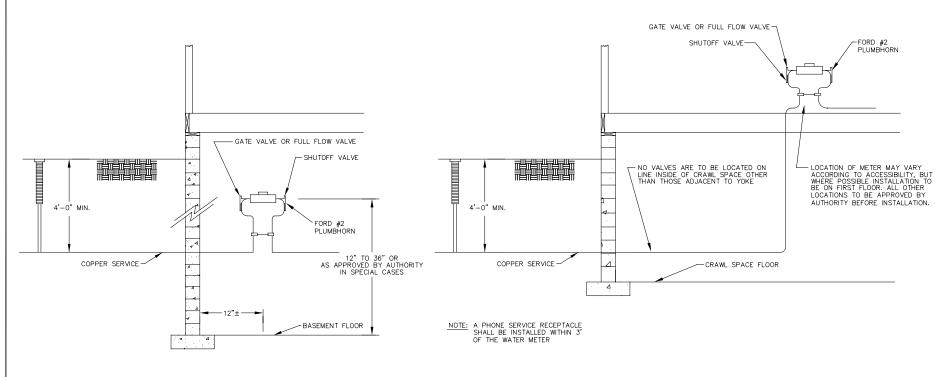


FLOODLIGHT INSTALLATION DETAIL

NO SCALE

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT - 30)



FULL BASEMENT METER DETAIL

CRAWL SPACE METER DETAIL

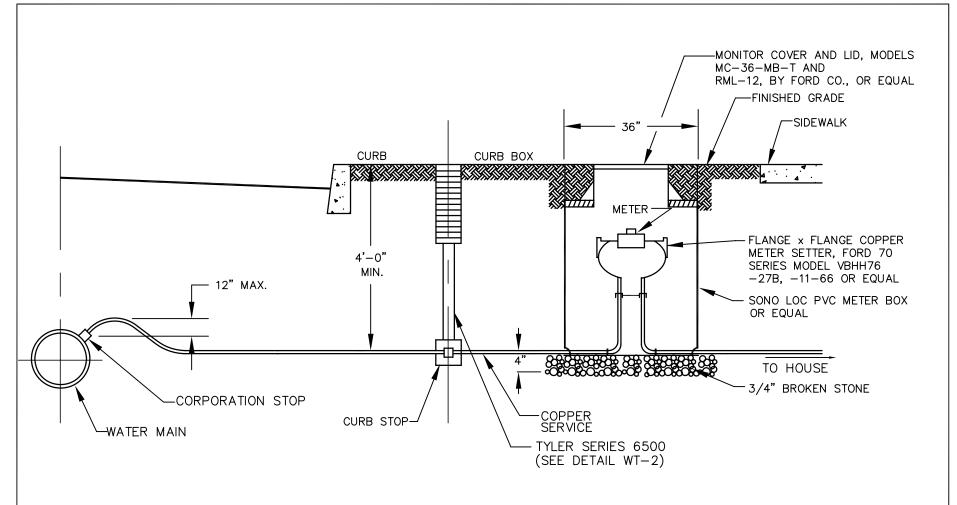
NO SCALE

NO SCALE

WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

(WT - 31)

- 1. ALL CONSTRUCTION, MATERIALS, RESTORATIONS AND METHODS OF INSTALLATION IN TOWNSHIP ROADS SHALL BE SUBJECT TO THE REQUIREMENTS AND APPROVAL OF THE TOWNSHIP OF WASHINGTON.
- 2. SANITARY SEWER CONSTRUCTION, MATERIALS AND TESTING SHALL BE SUBJECT TO THE APPROVAL OF AN INSPECTION BY THE WASHINGTON TOWNSHIP M.U.A. ENGINEER, AND SUBJECT TO W.T.M.U.A. RULES & REGULATIONS.
- 3. SANITARY SEWER MAINS SHALL BE A MINIMUM SIZE OF 8" POLYVINYL CHLORIDE (PVC) PIPE (MEETING ASTM 03034, SDR 35 SPECIFICATIONS) CONNECTION TO NEW SEWER MAIN SHALL BE WITH 8"x4" TEE, A 4" PVC SEWER PIPE LATERAL CONSTRUCTED AT 1/4" PER FOOT MINIMUM SLOPE AND ONE (1) BUILDING TRAP WITH VENT SHALL BE PROVIDED FOR EACH UNIT.
- 4. ALL WATER PIPING 4" AND LARGER SHALL BE CLASS 52 CEMENT LINED DUCTILE IRON PIPE WITH PUSH ON JOINTS. WATER PIPING SMALLER THAN 3" SHALL BE TYPE "K" SOFT TEMPER COPPER TUBING WITH FLARED FITTINGS. WATER PIPING SHALL BE DISINFECTED BY CONTACT WITH A CHLORIDE SOLUTION NOT LESS THAN 50 PPM FOR NOT LESS THAN 24 HOURS.
- 5. ALL WATER PIPING TO BE PLACED AT A MINIMUM FINAL COVERAGE DEPTH OF 42", MAXIMUM 48". PROPOSED WATER AND SANITARY MAINS TO BE CONSTRUCTED A MINIMUM DISTANCE OF THREE (3) FEET FROM THE FACE OF CURB. IF A CONFLICT ARISES, AN OFFSET MUST BE UTILIZED AND BE APPROVED BY THE WASHINGTON TOWNSHIP MUNICIPAL UTILITIES AUTHORITY PRIOR TO INSTALLATION.
- 6. WATER MAINS AND SANITARY SEWER SHALL BE SEPARATED BY TEN (10) FEET HORIZONTALLY WHEREVER POSSIBLE. OTHERWISE, THE SEWER AND WATER SHALL BE IN SEPARATE TRENCHES WITH THE SEWER 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. AT WATER AND SEWER CROSSINGS, THE SEWER SHALL BE 18 INCHES MINIMUM BELOW THE WATER OR SEWER MAIN SHALL BE DUCTILE IRON PIPE WITH SLIP—ON JOINT FOR TEN (10) FEET MINIMUM OF EACH SIDE OF THE CROSSING.
- ALL SANITARY SEWERS SHALL BE CONSTRUCTED WITH CLASS "C" MODIFIED BEDDING UNLESS OTHERWISE NOTED.
- 8. WHEREVER THE TRENCH BOTTOM DOES NOT AFFORD SUFFICIENT BEARING STRENGTH TO SUSTAIN THE WEIGHT OF THE PIPE AND SUPERIMPOSED LOADS, IT SHALL BE OVER EXCAVATED AND STABILIZED WITH A 12 INCH THICK MINIMUM LAYER OF CRUSHED STONE. IN THE EVENT THE EXCAVATED SOILS ARE DEEMED UNSUITABLE, THE SOILS SHALL BE REMOVED AND REPLACED WITH SUITABLE SOIL.
- 9. THE CONTRACTOR SHALL CONSTRUCT TEST PITS AS REQUIRED TO VERIFY THE LOCATION AND THE DEPTH OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND PROPOSED FACILITIES.
- CONTRACTOR EFFORTS SHALL BE MADE TO RETAIN EXISTING TREES, VEGETATION, AND NATURAL CHARACTERISTICS OF THE
- 11. THE CONTRACTOR SHALL PAY ALL STREET OPENING FEES AND GIVE NOTICES NECESSARY FOR THE INCIDENTAL TO THE DUE AND LAWFUL EXECUTION OF THE PROJECT.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE EXCAVATION.
- 13. NO MATERIALS SHALL BE PLACED NOR ANY DISTURBANCE PERMITTED BEYOND THE PROJECT PROPERTY LINE WITHOUT THE WRITTEN PERMISSION OF THE PROPERTY OWNER DIRECTLY INVOLVED.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING, PAVING, TOPSOILING, SODDING, FERTILIZING AND SEEDING ALL AREAS DISTURBED BY HIS ACTIVITIES. ROAD PAVEMENT, REPLACEMENT, AND ALL RESTORATION IN COUNTY ROADS SHALL MEET THE REQUIREMENTS OF THE COUNTY ENGINEER.
 - 15. INSPECTION OF, OR FAILURE TO INSPECT ANY MATERIALS OR WORKMANSHIP BY STATE, COUNTY OR TOWNSHIP OFFICIALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM THE WORK IN ACCORDANCE WITH APPLICABLE PLANS, SPECIFICATIONS AND LAWS.
 - - 16. PRIOR TO CONSTRUCTION, ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE APPROVED BY THE SOIL CONSERVATION DISTRICT IN COMPLIANCE WITH CHAPTER 251 OR THE PUBLIC LAWS OF 1975. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED OR THE AREA IS STABILIZED IN ACCORDANCE WITH THE SOIL CONSERVATION DISTRICT'S RECOMMENDATIONS.
- 17. ALL WATER AND SEWER INSTALLATIONS SHALL CONFIRM TO THE REQUIREMENTS OF THE TESTING AND INSPECTING PROCEDURES MANUAL OF THE W.T.M.U.A.
- THRUST BLOCKS ARE TO BE INSTALLED AT ALL WATER MAIN BENDS AND FITTINGS. œ.
- NO SANITARY SEWER LATERALS SHALL BE CONNECTED DIRECTLY INTO ANY MANHOLES. <u>6</u>
- 20. SANITARY SEWER CONNECTIONS TO EXISTING MANHOLE SHALL BE OVERSIZED CORING. INSTALL A SAND COLLAR AND FILL / VOIDS AT CONNECTION WITH NON—SINK GROUT AS SPECIFIED BY THE AUTHORITY ENGINEER. THE EXISTING FLOW SHALL NOT BE INTERRUPTED DURING PROPOSED CONNECTION AND CONSTRUCTION.
- 21. THE APPLICANT/OWNER IS AWARE AND AGREES THAT THE REVIEW BY THE W.T.M.U.A. AND THE AUTHORITY ENGINEER IS BASED UPON THE BEST INFORMATION AVAILABLE AND IN NO AWAY DOES IT GUARANTEE THE EXISTENCE OF, OR NOW EXISTENCE OF SANITARY SEWER AND WATER MAINS, AND/OR APPURTENANCES. IT IS THE RESPONSIBILITY OF THE APPLICANT/OWNER TO VERIFY THE LOCATION OF SUCH MAINS/ APPURTENCES.
- ANY UNITS HAVING FOOD PREPARATION FACILITIES SHALL INSTALL A GREASE TRAP WITHIN THE SEWER LATERAL.
- 23. EACH UNIT SHALL HAVE A CURB STOP AND A WATER METER INSTALLED IN A PIT. THE PIT METER AND THE CURB STOP SHALL BE LOCATED IN THE GRASS AREA BETWEEN THE CURB AND THE SIDEWALK WITHIN PUBLIC PROPERTY.
- 24. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES IN THE WTMUA SYSTEM. ARRANGEMENT SHALL BE MADE WITH THE WTMUA SUPERINTENDENT TO SCHEDULE OPERATION OF ANY SYSTEM VALVES.
- 25. DEVELOPER SHALL PERFORM PRESSURE TEST, LAMPING AND AS—BUILT SURVEY OF NEW GRAVITY MAINS, IMMEDIATELY AFTER THE WORK IS COMPLETED. NO BASE PAVING SHALL OCCUR UNTIL THE TESTING AND SURVEY DATA IS ACCEPTED BY AUTHORITY ENGINEER.
- WATER MAINS SHALL BE FULLY TESTED FOR PRESSURE AND BACTERIOLOGICAL PRIOR TO INSTALLING METER PITS.



METER PIT DETAIL FOR 1 1/2" AND 2" SERVICES

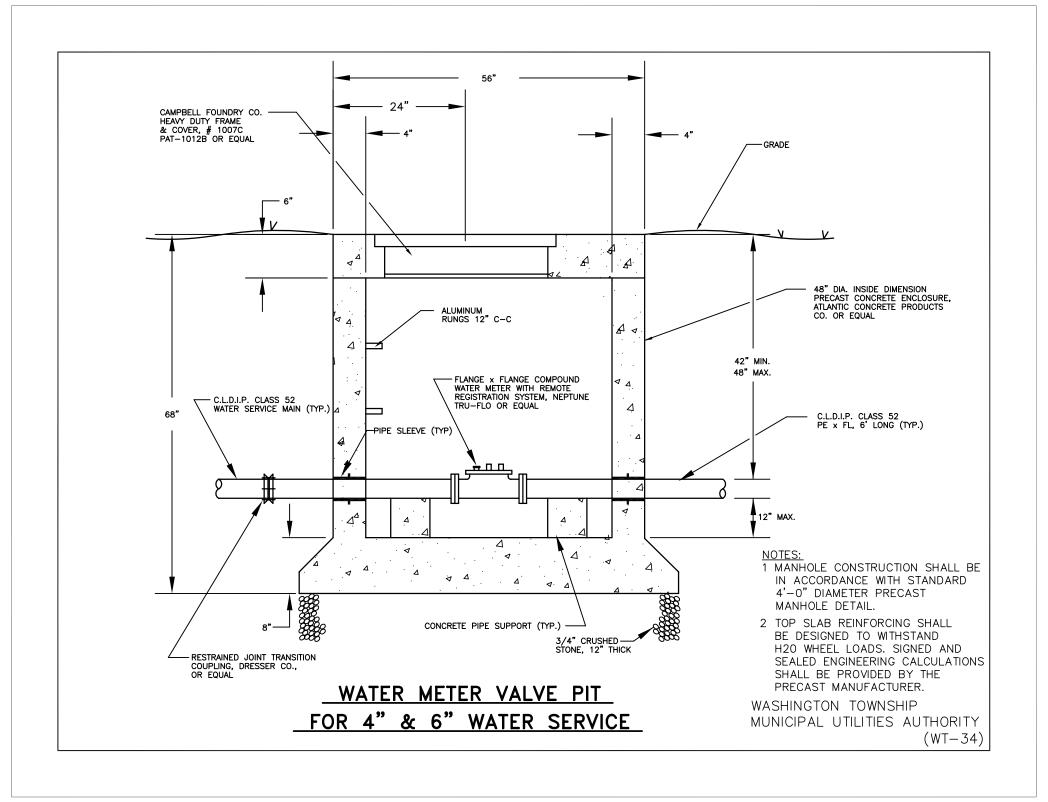
N. T. S.

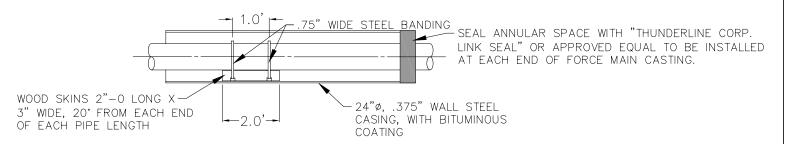
NOTE: METER PIT AND CURB BOX MUST BE INSTALLED BETWEEN THE CURB AND SIDEWALK.

METER SHALL BE INSTALLED 20" BELOW FINISHED GRADE

WASHINGTON TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY

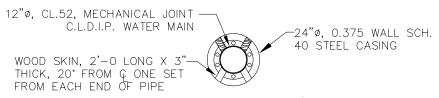
(WT - 33)





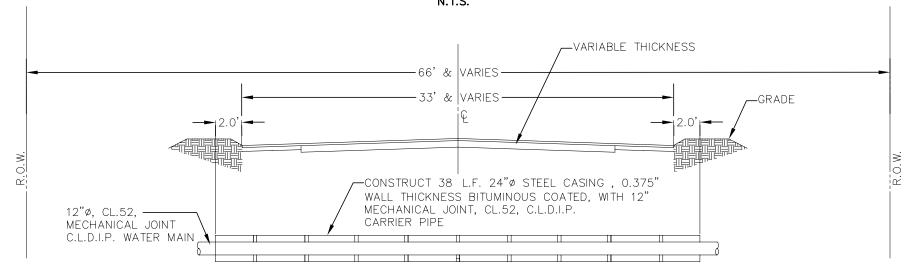
CASING SKIDS DETAIL

N.T.S.



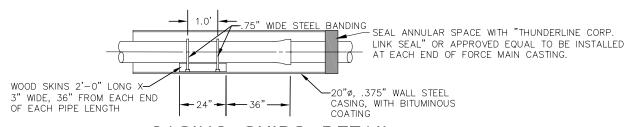
WATER MAIN SECTION

N.T.S.

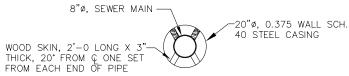


BORING DETAIL-STATE HIGHWAYS & COUNTY ROADS

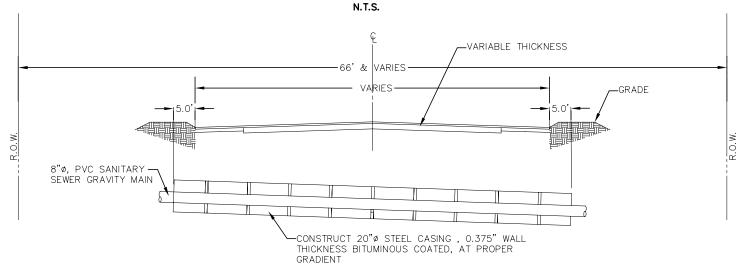
N.T.S.



CASING SKIDS DETAIL



SEWER MAIN SECTION



BORING DETAIL-STATE HIGHWAYS & COUNTY ROADS N.T.S.