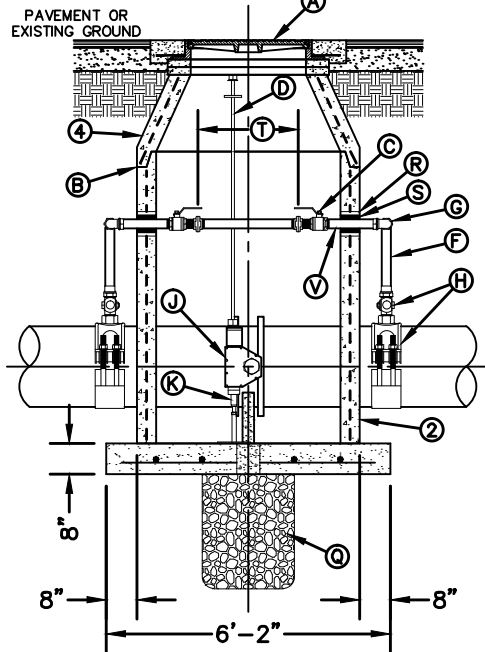
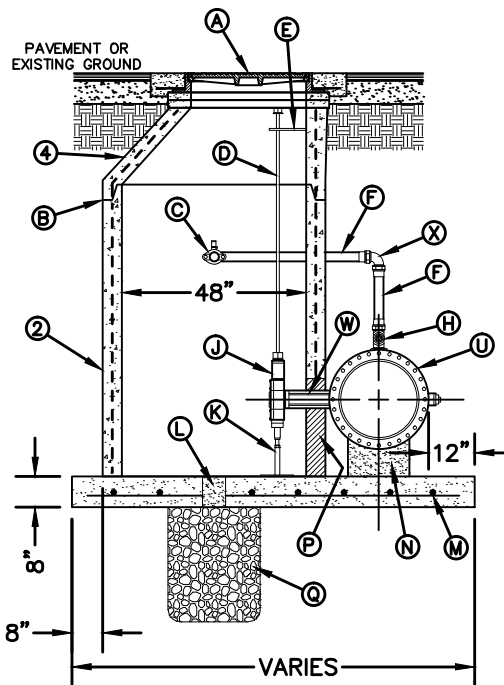


**TOP VIEW**



**SECTION A-A**



**SECTION B-B**

**GENERAL NOTES:**

1. INSTALLATION APPLICABLE TO P.V.C. & DUCTILE IRON WATER MAINS ONLY. INSTALLATION FOR OTHER PIPE MATERIALS REQUIRE E.P.W.U. APPROVAL.
2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING. PROVIDE REINFORCEMENT WITHIN 3" @ OPENINGS OR KNOCKOUTS, OPENINGS (UP TO 8") MADE IN FIELD SHALL BE CORE DRILLED.
3. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
4. ECCENTRIC CONE SECTION REINFORCEMENT IN ACCORDANCE WITH ASTM C-478.

**CONSTRUCTION KEY NOTES:**

- A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
- B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
- C. 2" BALL VALVE (NORMALLY CLOSED).
- D. 1 1/4" DIAMETER SOLID STEEL EXTENSION STEM WITH SQUARE SOCKET ON BOTTOM TO FIT 2" SQUARE VALVE NUT AND 2" SQUARE OPERATOR NUT ON TOP.
- E. ADJUSTABLE EXTENSION STEM GUIDE (AS PER DETAIL 261-3) @ 6' MAX. INTERVALS.
- F. 2" COPPER PIPE (TYPE-K).
- G. THREADED END TO FLARED END 90° ELBOW (TYP.).
- H. 20"x2" OR 16"x2" SADDLE TAP WITH 2" CORPORATION STOP.
- J. BUTTERFLY VALVE OPERATOR.
- K. ADJUSTABLE SUPPORT OR APPROVED EQUAL.
- L. 6" DIAMETER DRAIN HOLE FILLED WITH GRAVEL.
- M. #5 @ 12" O.C.E.W.
- N. CONCRETE SUPPORT.
- P. NOTCH MANHOLE SECTION FOR VALVE OPERATOR. FILL WITH BRICK AND MORTAR AFTER VALVE INSTALLATION.
- Q. 24" DIAMETER BY 2'-6" DEEP GRAVEL SUMP.
- R. CEMENT GROUT.
- S. 1" PREMOULDED ASPHALT EXPANSION JOINT.
- T. INSTALL A 2" DIA. BRASS SPOOL PIECE WITH FLANGED ENDS. ONE SPOOL PIECE TO BE PROVIDED FOR EACH BUTTERFLY VALVE LOCATION. PROVIDE A 1" THREADED OUTLET WITH PLUG ON SPOOL PIECE. ALL SPOOL PIECES TO BE PROVIDED WITH FULL FACE GASKETS.
- U. BUTTERFLY VALVE.
- V. 2" BRASS NIPPLE PIECE (TYP.).
- W. VALVE OPERATOR EXTENSION - 12" LONG.
- X. FLARED END TO FLARED END 90° ELBOW (TYP.).

STANDARD  
DETAIL

DATE: 3/1994  
REV: 7/20/2009

**BUTTERFLY VALVE IN MANHOLE INSTALLATION  
FOR 16" AND 20" WATER LINES**

N.T.S.



DETAIL No.  
261-2