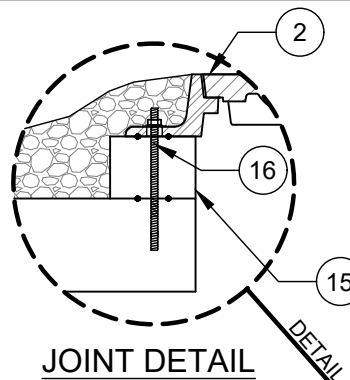
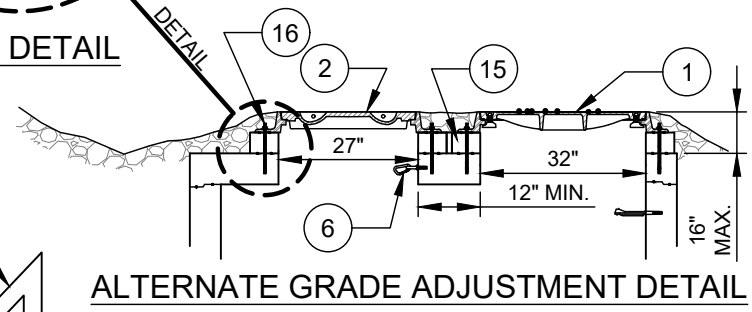


TOP VIEW

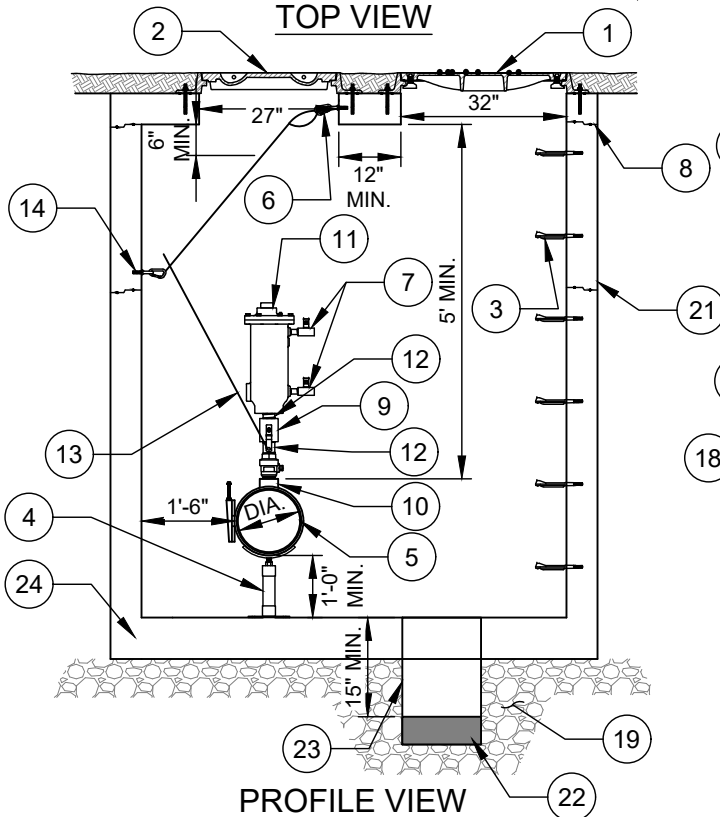


JOINT DETAIL

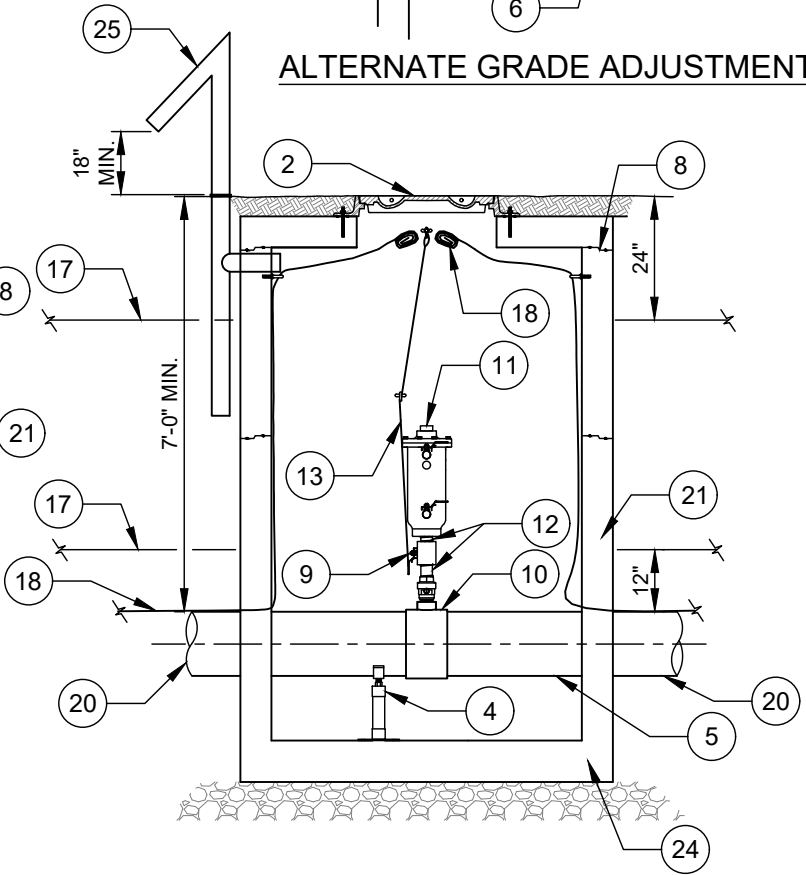
VAULT DIMENSION REQUIREMENTS		
PIPE DIA. D - (IN.)	LENGTH L - (FT.)	WIDTH W - (FT.)
4 - 6	6.5	5.0
8 - 16	7.0	5.0
18 - 24	7.5	5.0
30 - 36	8.0	5.0
42 - 48	8.5	5.0



ALTERNATE GRADE ADJUSTMENT DETAIL



PROFILE VIEW



SECTION VIEW

NO. DESCRIPTION:

1. 30" CAST IRON MANHOLE FRAME AND COVER (MAN ACCESS) PER CLTW STANDARDS - TYPE E / 4 .
2. 24" CAST IRON MANHOLE FRAME AND COVER (EQUIPMENT ACCESS) PER CLTW STANDARDS - TYPE C / 1 CENTER OVER AIR / VACUUM VALVE.
3. MANHOLE STEPS AT 12" O.C. - CENTERED WITH FRAME NO. 1.
4. STAINLESS STEEL PIPE SUPPORT WITH SADDLE.
5. PROTECTO 401 LINED DIP FORCE MAIN. MIN 40 FT EACH SIDE OF VAULT.
6. 1/2" DIAMETER TYPE 316 STAINLESS STEEL HOOK (ADHESIVE ANCHOR).
7. STAINLESS STEEL BALL VALVE - 1/4 TURN AND NIPPLE.
8. JOINT REQUIRED AT FLAT TOP SECTION.
9. 2" STAINLESS STEEL BALL VALVE. (3" AND LARGER - FL X FL PLUG VALVE).
10. 2" BRONZE BALL CORPORATION STOP WITH ALL STAINLESS STEEL (TYPE 316) TAPPING SADDLE - FORD FS 313 - ROMAC STYLE 306 OR APPROVED EQUAL. (3" AND LARGER - RMJ X RMJ X FL TEE)
11. 2" AIR AND VACUUM VALVE (3" AND LARGER - FLANGE A&VV) - SEE SPECIFICATIONS.
12. 2" STAINLESS STEEL PIPING.
13. ROUTE 1/8" TYPE 316 STAINLESS STEEL CABLE FROM BALL VALVE HANDLE (MOUNTED ON TOP OF CORPORATION STOP THROUGH EYELET TO HOOK) LEAVE 6" SECURED LOOP IN CABLE END TO HANG OVER HOOK.
14. 1/2" DIAMETER TYPE 316 STAINLESS STEEL EYE BOLT (ADHESIVE ANCHOR).
15. PRECAST CONCRETE GRADE ADJUSTMENT RING (8" WIDE) AS NEEDED.
16. 1/2" DIAMETER GALVANIZED ANCHOR BOLTS - FRAME TO VAULT (ADHESIVE ANCHOR).
17. GREEN PLASTIC WARNING TAPE.
18. AWG #12 GAUGE COPPER TRACER WIRE (HDPE) - WITH GREEN INSULATION - TERMINATE AT HOOK NO. 6 WITH 24" EXCESS WIRE (COILED).
19. 6" #57 WASHED STONE.
20. PVC PIPE ON EITHER SIDE OF VAULT, UNLESS CALLED OUT OTHERWISE.
21. PRECAST CONCRETE OR POLYMER CONCRETE VAULT.
22. 6" THICK REINFORCED CONCRETE PLUG.
23. 18" DIAMETER SUMP - PVC OR DIP PIPE, GROUTED INTO BASE FLOOR.
24. PRECAST CONCRETE BASE SECTION.
25. VENT PER CLTW STANDARD DETAIL.

NOTES:

- A. VAULT SHALL BE SIZED AS NEEDED FOR PIPE (6.5' X 5' MINIMUM) AND RATED FOR NCDOT HS-20 LOADING - SUBMIT SHOP DRAWINGS / P.E. SEALED FOR REVIEW.
- B. ALL CONCRETE SHALL BE MINIMUM 3,600 PSI COMPRESSIVE STRENGTH.
- C. DESIGN SHALL CONFORM TO ASTM C858 - SPECIFICATIONS FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE."
- D. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857.
- E. REBARS SHALL BE GRADE 60 PER ASTM A615.
- F. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- G. DIAGONAL REINFORCING SHALL BE ADDED AT ALL OPENINGS.
- H. PIPE PENETRATIONS SHALL BE SEALED WITH FLEXIBLE CONNECTERS (MANHOLE BOOTS) OR WITH 8" OF BRICK & MORTAR (AND 1/2 INCH THICK CONSTRUCTION EXPANSION MATERIAL).
- I. ALL VALVES SHALL OPEN COUNTERCLOCKWISE. (OPEN LEFT)
- J. FRAME TO BE FLUSH WITH GROUND IN MAINTAINED ROAD OR YARD R/W AND 2' ABOVE GROUND IN SEWER EASEMENT.
- K. AIR AND VACUUM VALVE TO BE SHORT BODY TYPE, SIZED PER MANUFACTURER'S RECOMMENDATIONS.
- L. VALVE TO BE INSTALLED AT MIDPOINT OF A FULL JOINT OF DUCTILE IRON PIPE WHEN INSTALLING PVC FORCE MAIN.
- M. VAULTS LOCATED IN AREAS SUBJECT TO FLOODING SHALL HAVE SOLID CONCRETE FLOOR AND VENT (PER CLTW STANDARD DETAILS) EXTENDING TO 2' ABOVE 100 YEAR FLOOD ELEVATION - FRAME AND COVERS SHALL BE WATERTIGHT TYPE E/5 AND TYPE C/3.
- N. ALL JOINTS SHALL BE MADE WATERTIGHT USING 2 RINGS OF BUTYL RUBBER JOINT MASTIC - SEE JOINT DETAIL.
- O. PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.