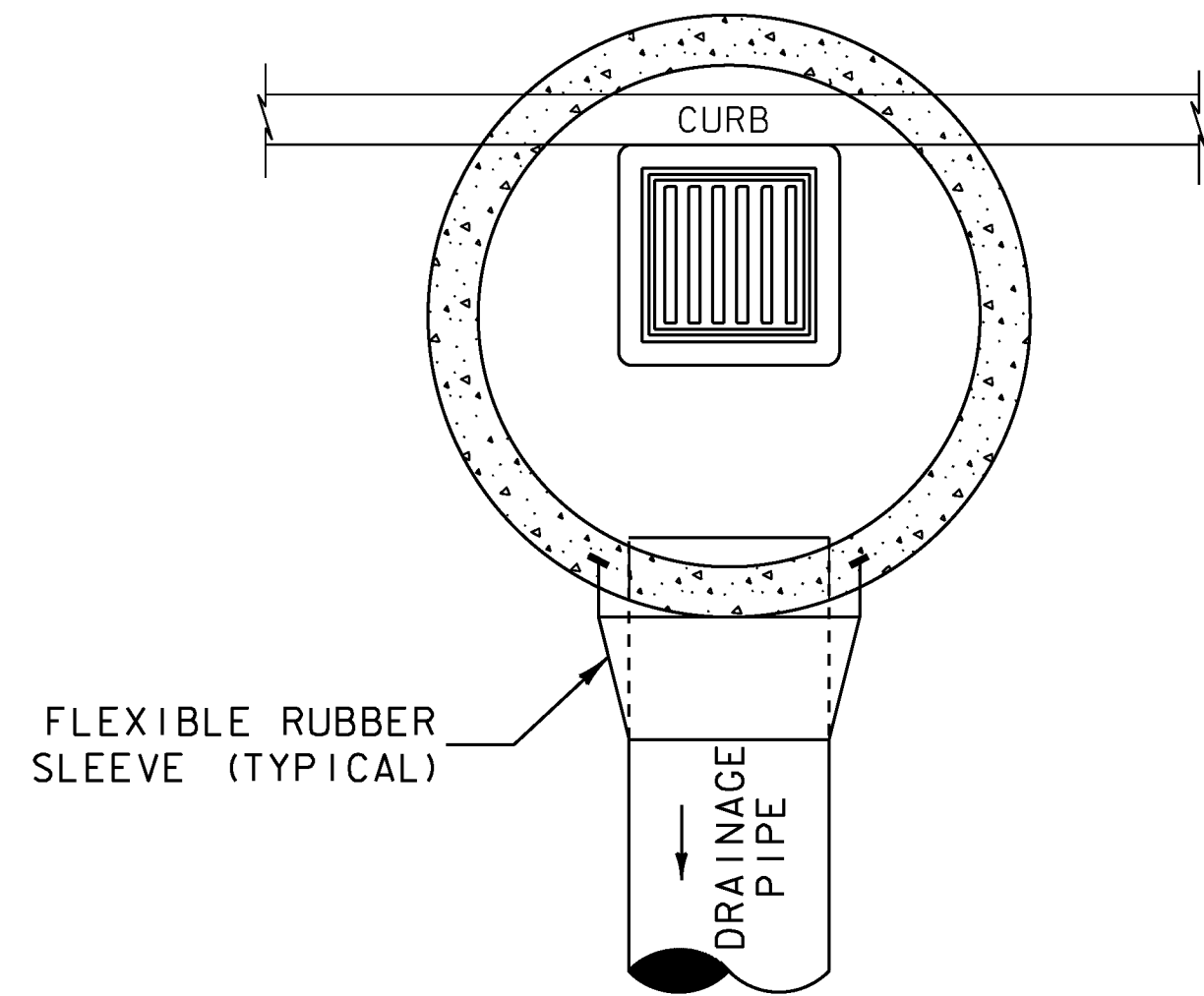
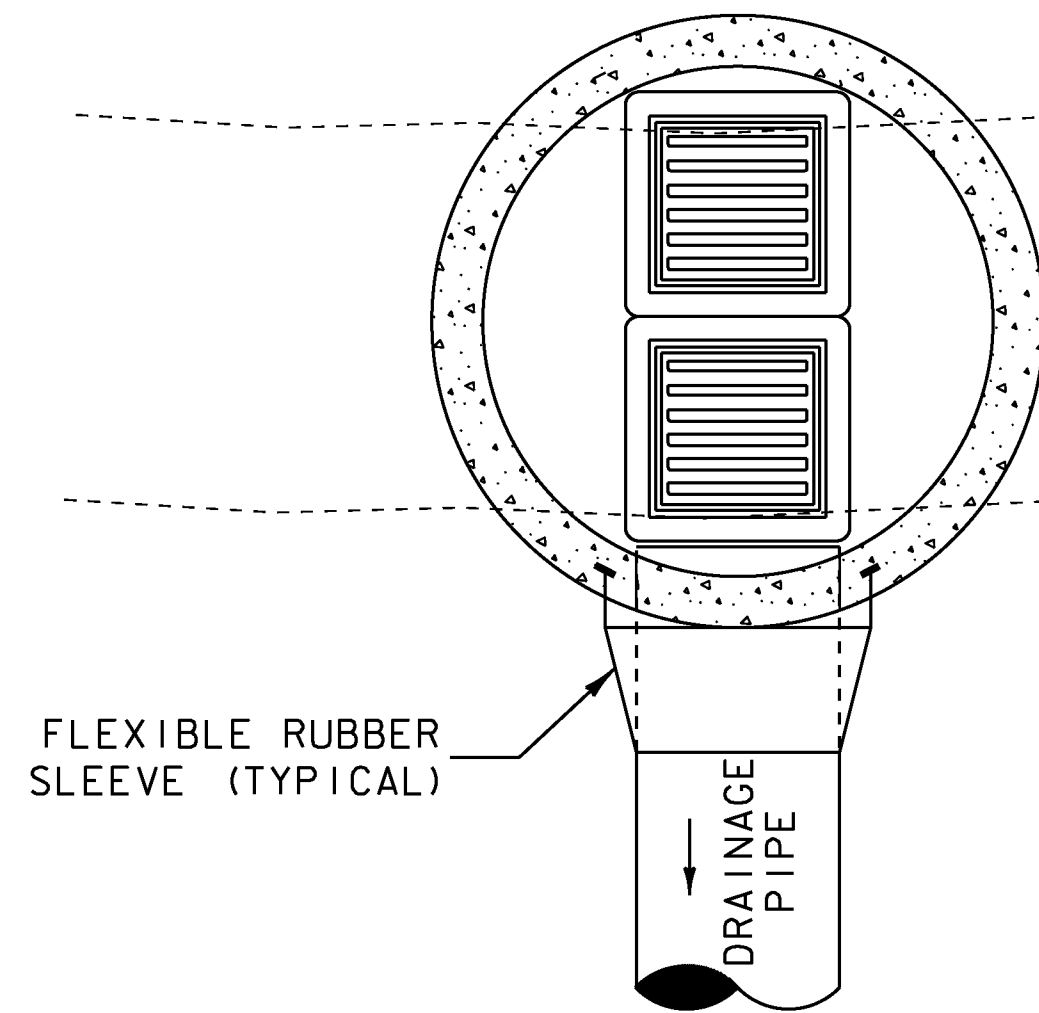


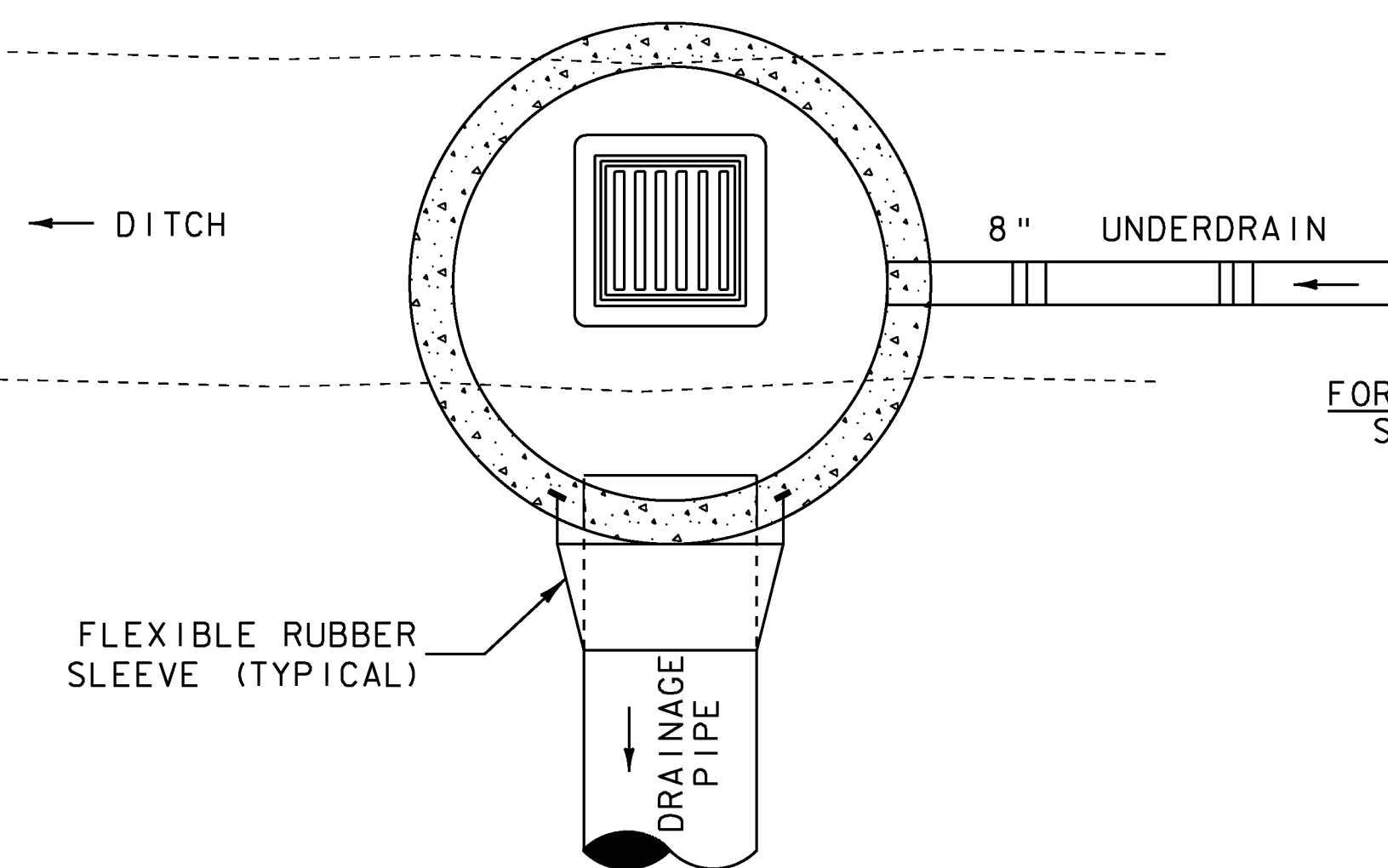
# TYPICAL DRAINAGE DETAILS



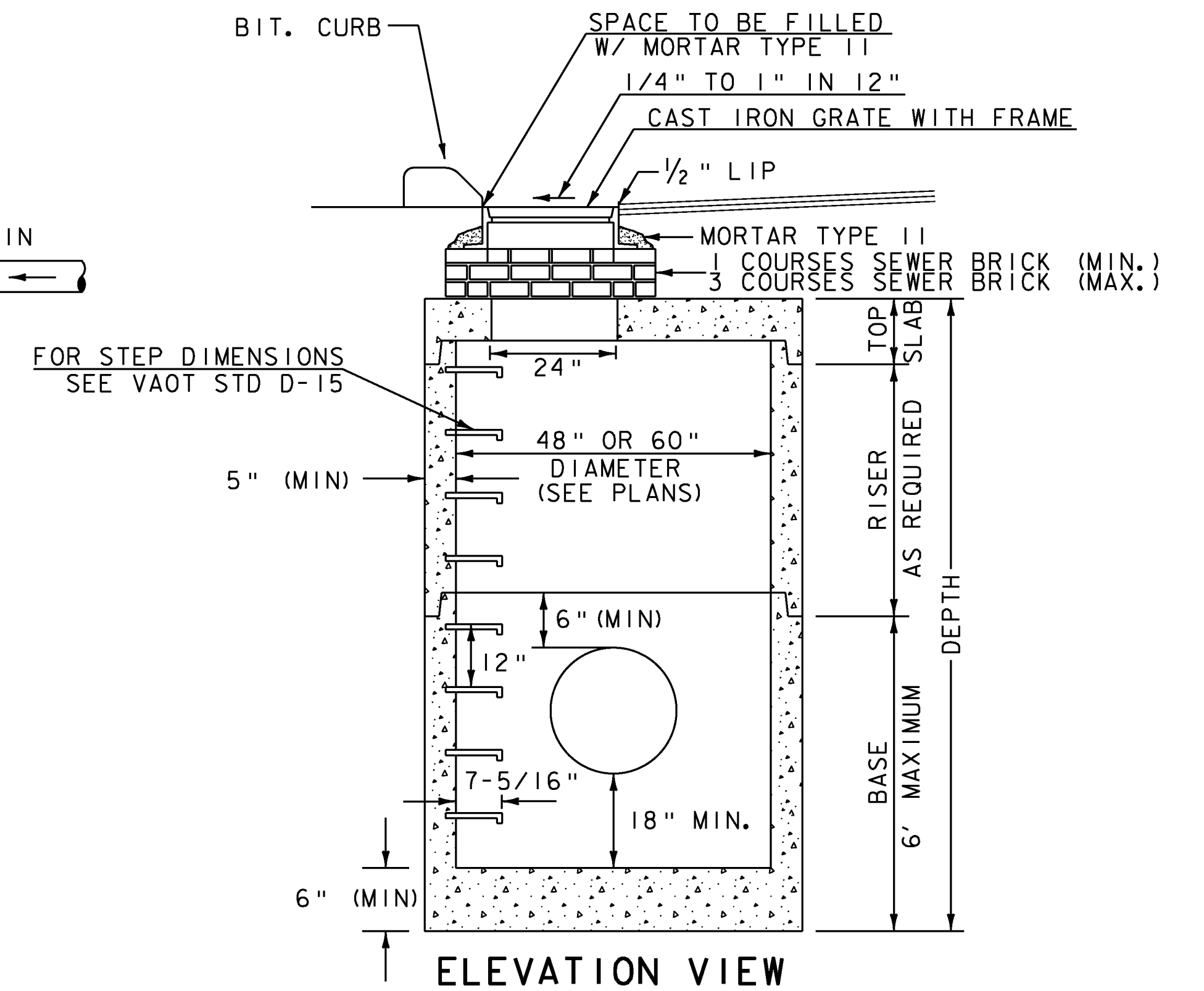
SINGLE GRATE CATCHBASIN  
PLAN VIEW W/ CURB



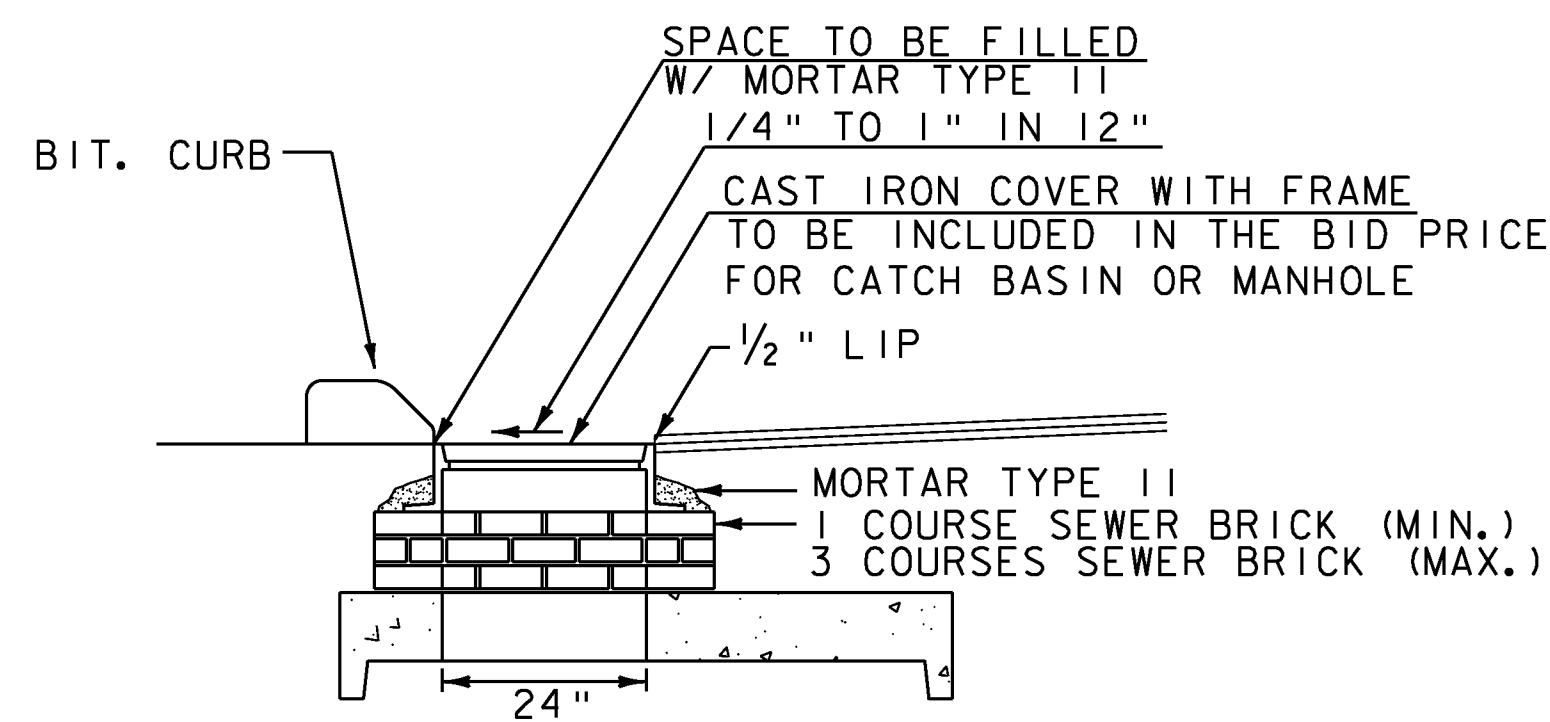
DOUBLE GRATE CATCHBASIN  
PLAN VIEW



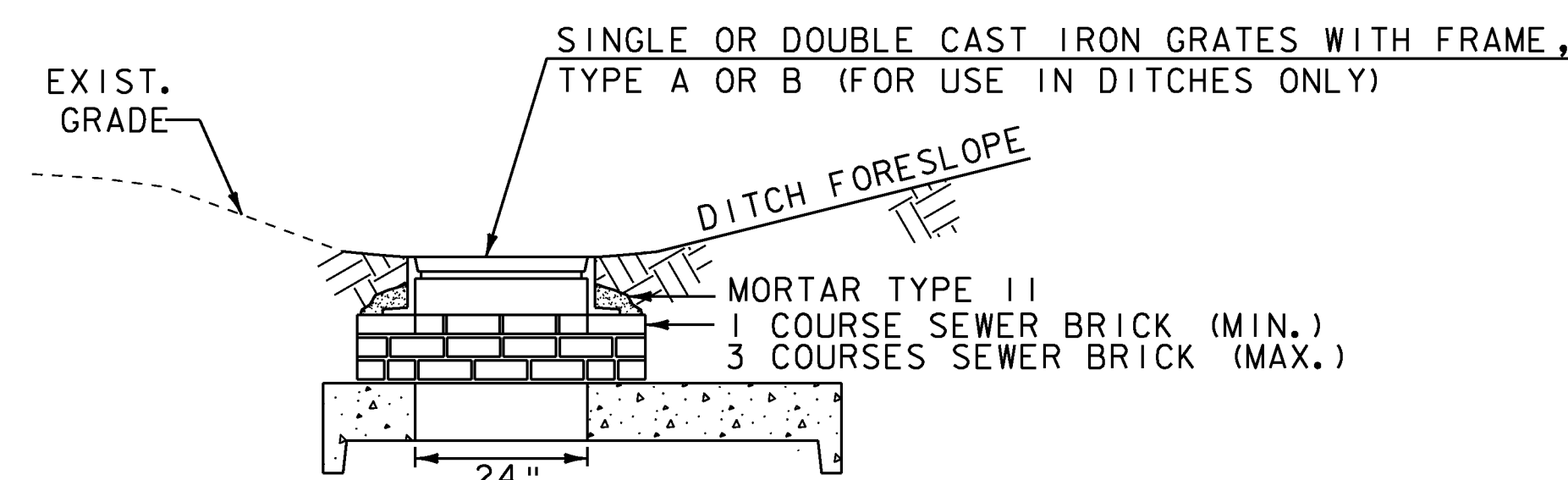
SINGLE GRATE CATCHBASIN  
PLAN VIEW W/ UNDERDRAIN



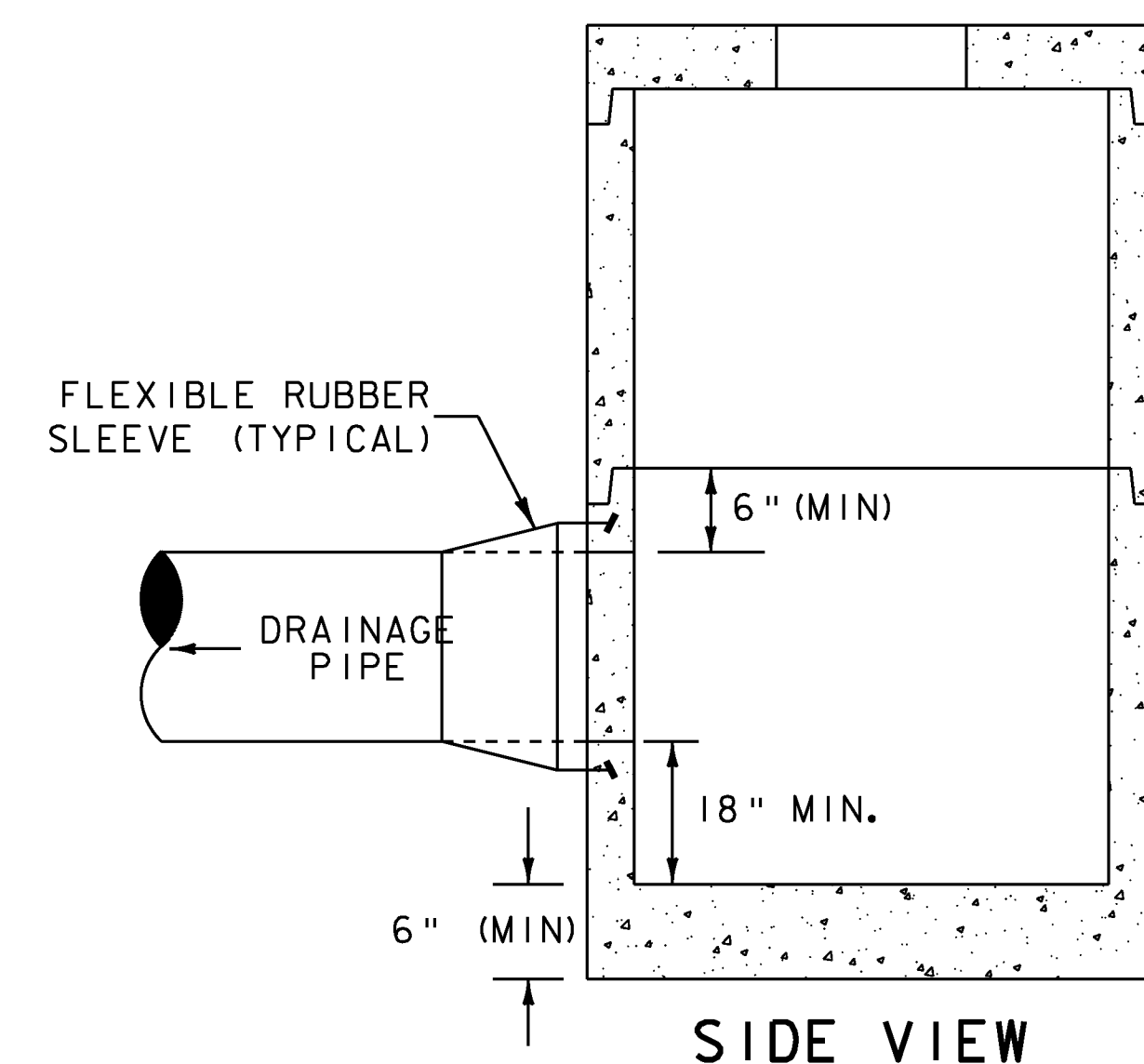
ELEVATION VIEW



TYPICAL ELEVATION OF GRATE INSTALLATION  
WITH BITUMINOUS CONCRETE CURB



TYPICAL ELEVATION OF GRATE INSTALLATION  
IN DITCH



SIDE VIEW

TYPICAL PRECAST CATCHBASIN

SCALE: NOT TO SCALE

## PRECAST CONCRETE CATCH BASIN AND MANHOLE NOTES:

- 1) PRECAST CONCRETE SECTIONS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND ASTM C-478.
- 2) MINIMUM CONCRETE COMPRESSIVE STRENGTH: 4,000 PSI AT 28-DAYS
- 3) STEEL REINFORCING SHALL CONFORM TO ASTM A185 OR A82 FOR HS25 LOADING.
- 4) STEPS SHALL BE 14" WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO ASTM C-478 AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER.
- 5) FACE OF PIPE SHALL NOT PROJECT MORE THAN 2" OR LESS THAN 1" FROM INSIDE WALL OF STRUCTURE.
- 6) ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF OUTSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.
- 7) FITTING FRAME TO FINAL GRADE MAY BE DONE WITH BRICK OR PRECAST CONCRETE GRADE RINGS OF APPROPRIATE THICKNESS (3 COURSES MAX).
- 8) FLAT SLAB TOPS SHALL BE USED FOR ALL CATCH BASINS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- 9) ALL PIPE INVERTS AND PENETRATION ANGLES SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- 10) PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AND BE ASSEMBLED USING A BUTYL RUBBER OR APPROVED EQUAL SEALANT.
- 11) PROVIDE FLEXIBLE RUBBER SLEEVES CONFORMING TO ASTM C-923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO STRUCTURE. SLEEVES SHALL EITHER BE SNAP-IN-PLACE BOOTS PROVIDED BY THE MANUFACTURER OR CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS.
- 12) PAYMENT FOR INSTALLATION OF THE CATCH BASINS SHALL BE MADE UNDER ITEM (604.20) PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE.

PROJECT NAME: CABOT-DANVILLE	PLOT DATE: 13-OCT-2010
PROJECT NUMBER: FEGC F 028-3(26) C/1	DRAWN BY: I. SHEA
FILE NAME: d78d058frm.dgn	CHECKED BY: S. MENARD
PROJECT LEADER: K. ROBBIE	SHEET 6 OF 250
DESIGNED BY: I. SHEA	
TYPICAL DRAINAGE DETAILS	