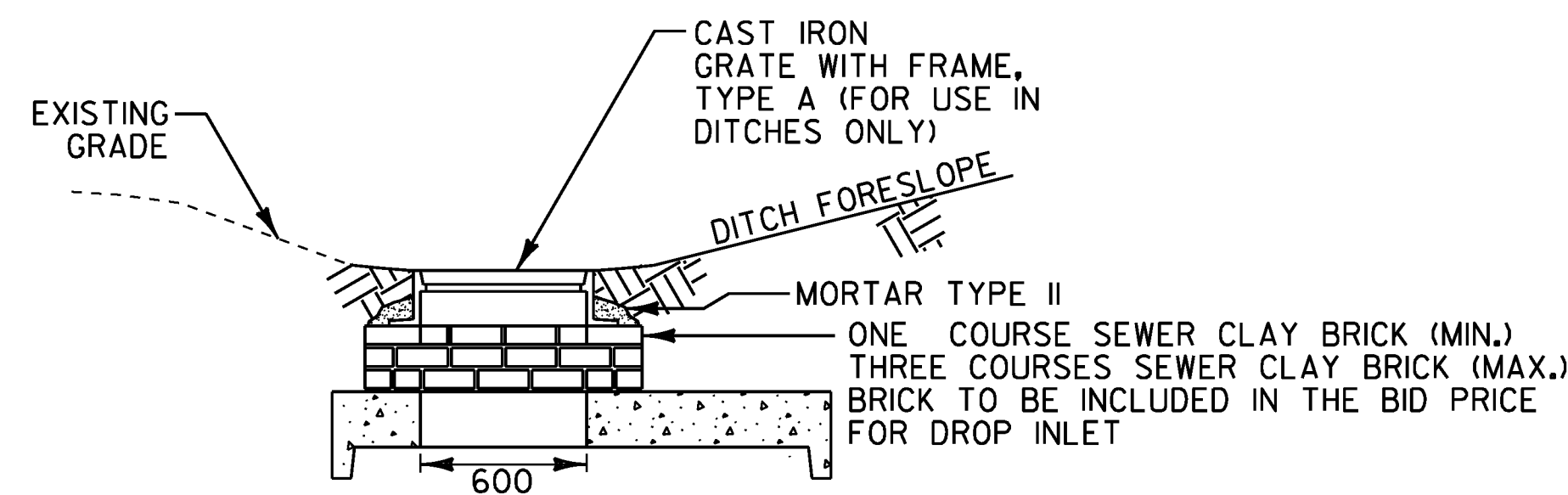
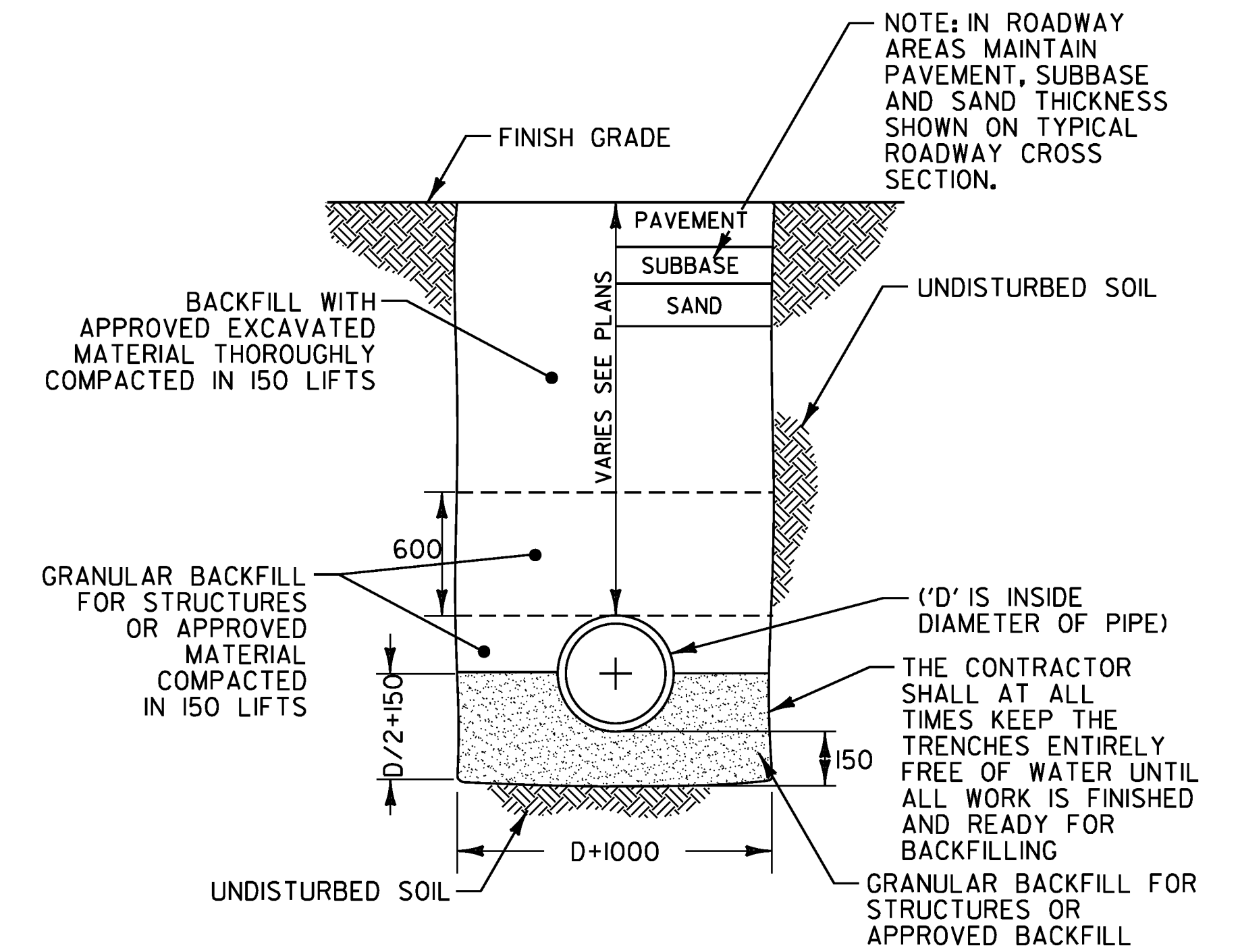


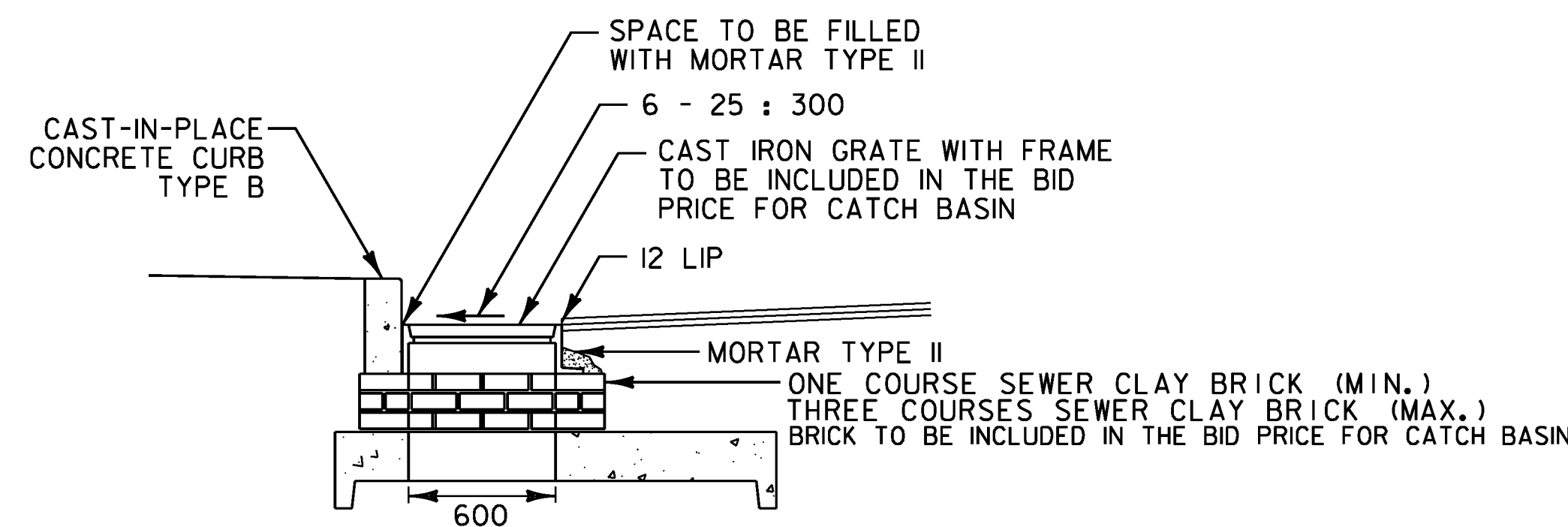
CATCH BASIN (PLAN) WITH UNDERDRAIN



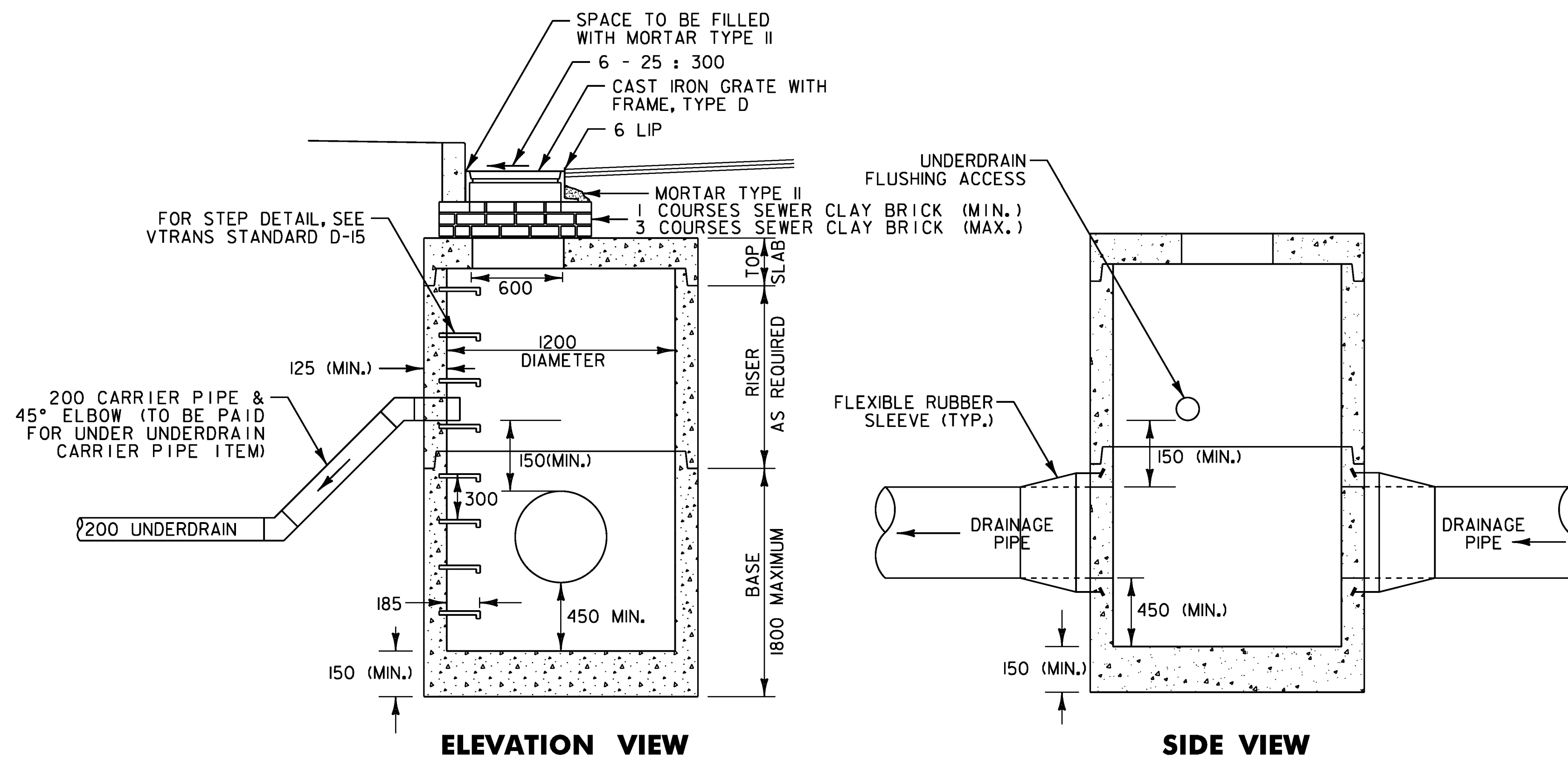
TYPICAL GRATE INSTALLATION IN DITCH (ELEVATION)



TYPICAL STORM DRAIN AND PIPE SLEEVE TRENCH



TYPICAL GRATE INSTALLATION WITH CAST-IN-PLACE CURB (ELEVATION)



ELEVATION VIEW

SIDE VIEW

TYPICAL PRECAST CATCH BASIN OR MANHOLE WITH UNDERDRAIN FLUSHING ACCESS

PRECAST REINFORCED CONCRETE CATCH BASIN NOTES:

1. PRECAST CONCRETE SECTIONS SHALL CONFORM TO SUBSECTION 705.04 OF THE STANDARD SPECIFICATIONS.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH: 35MPa (5,000 PSI) AT 28-DAYS
3. STEEL REINFORCING SHALL CONFORM TO SUBSECTION 713.01 OF THE STANDARD SPECIFICATIONS.
4. MANHOLE STEPS SHALL BE 350MM WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC CONFORMING TO SUBSECTION 705.04 OF THE STANDARD SPECIFICATIONS AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER.
5. FACE OF PIPE SHALL NOT PROJECT MORE THAN 50MM OR LESS THAN 25MM FROM INSIDE WALL OF STRUCTURE.
6. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 300MM 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 75MM TO JOINTS.
7. FITTING FRAME TO FINAL GRADE MAY BE DONE WITH CLAY 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 BE CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS.
12. PAYMENT FOR INSTALLATION OF THE CATCH BASINS SHALL BE MADE UNDER THE PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE ITEM (604.20).

NOT TO SCALE

PROJECT NAME:	CAMBRIDGE
PROJECT NUMBER:	STP 030-2(27)
FILE NAME:	+78f163frm.dgn
PROJECT LEADER:	JLS
DESIGNED BY:	MBL
DRAINAGE DETAIL SHEET	
PLOT DATE:	05-JUN-2012
DRAWN BY:	MBL
CHECKED BY:	JAD
SHEET	58 OF 214