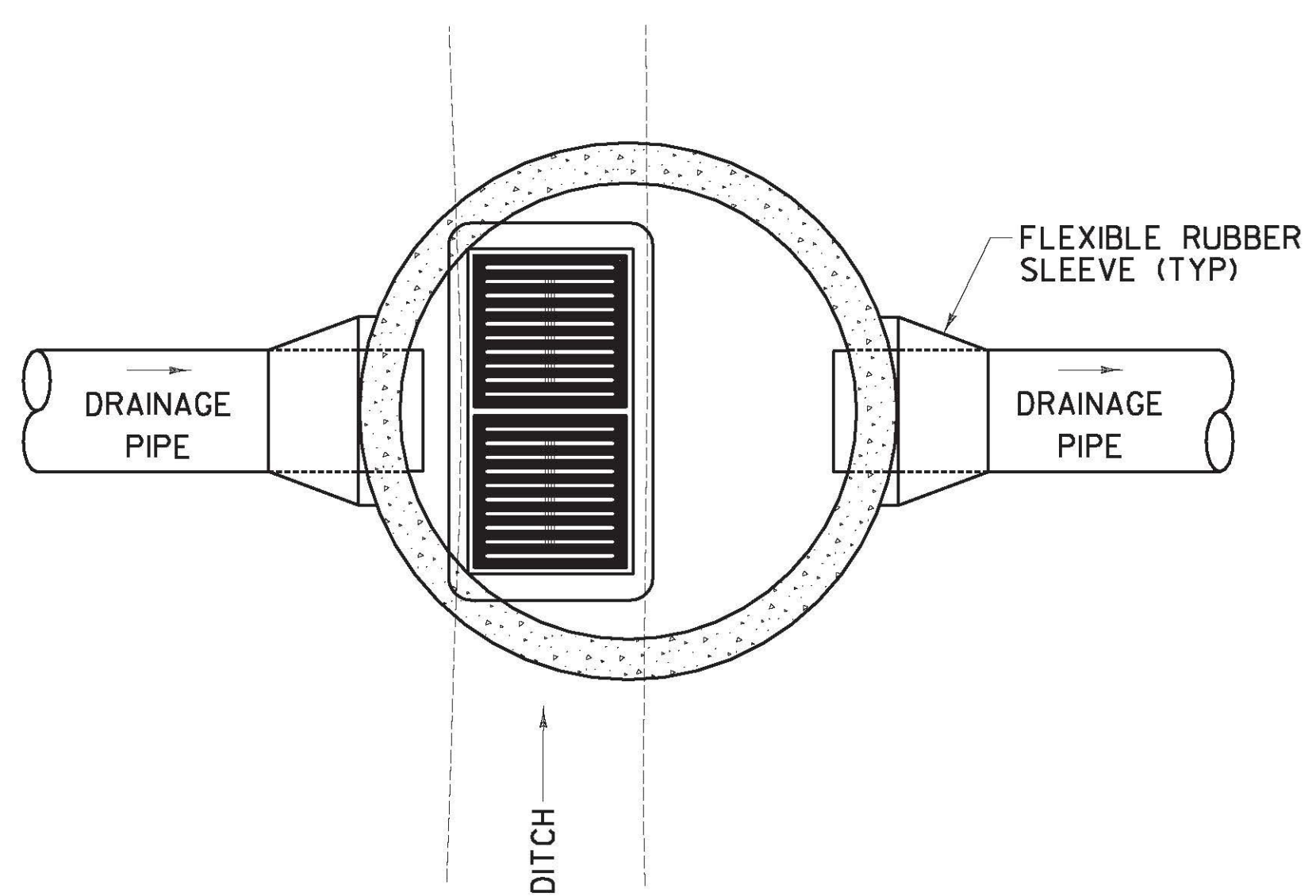
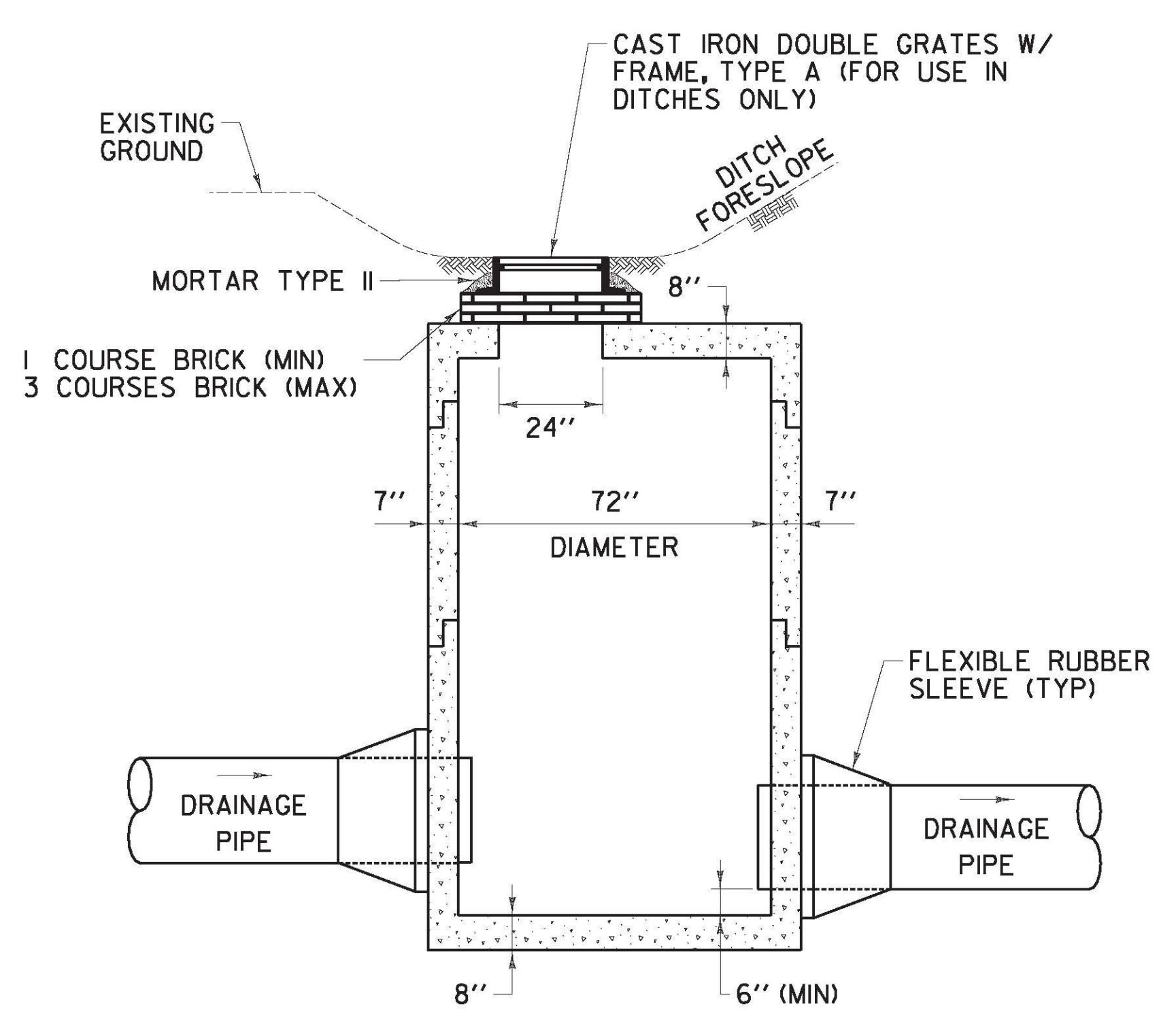


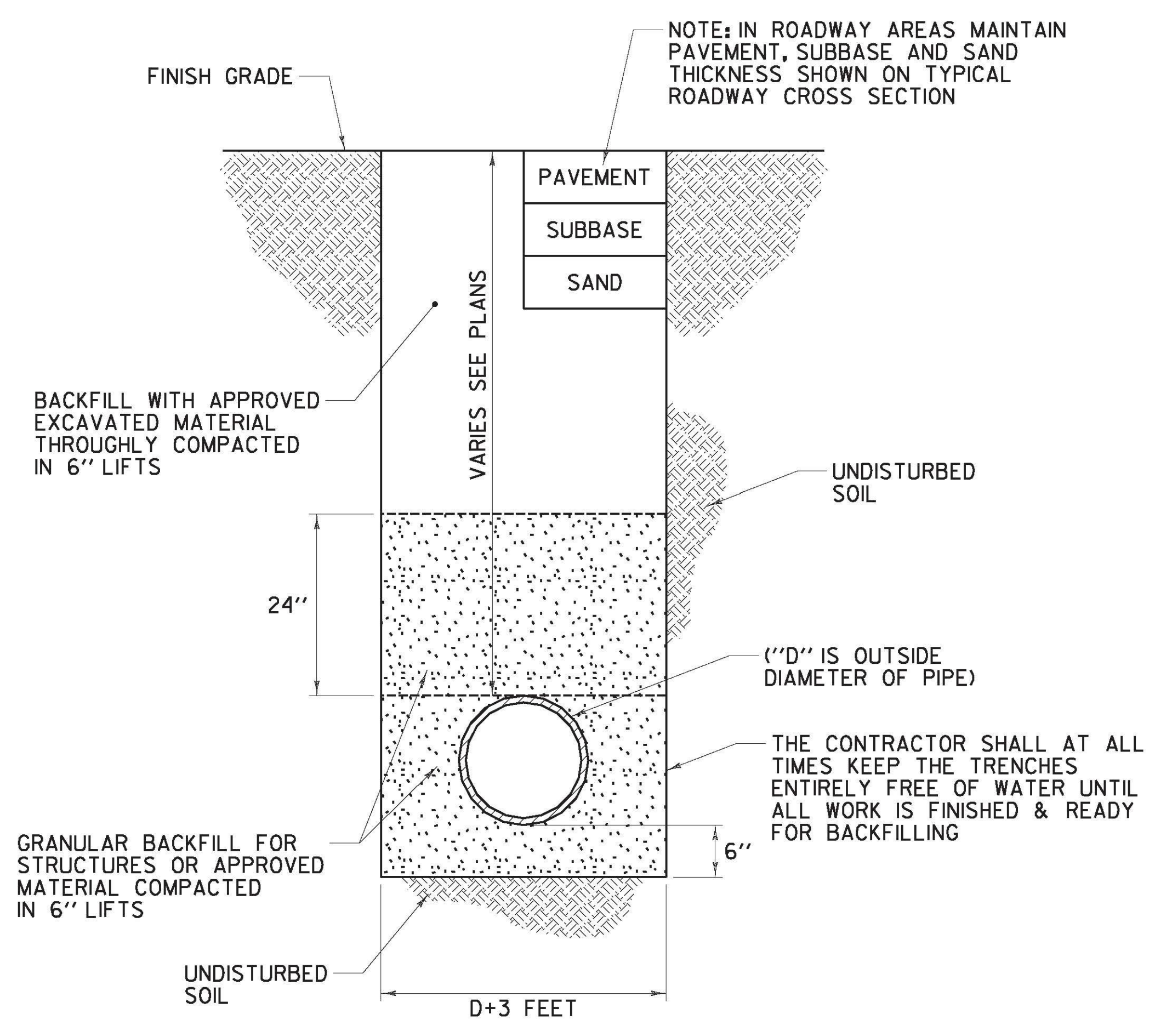
ABANDONING PIPE DETAIL



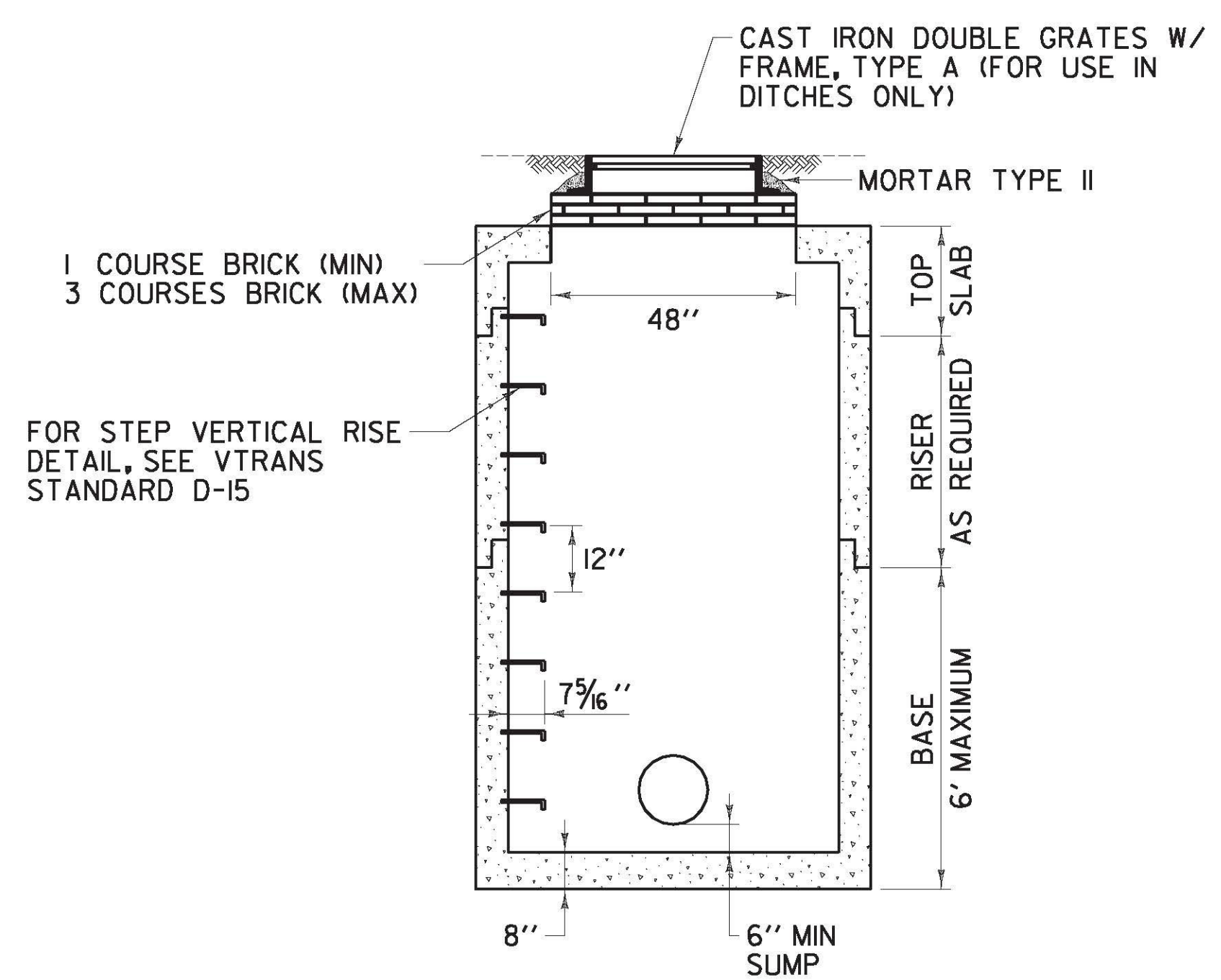
DOUBLE GRATE DROP INLET (PLAN)



TYPICAL GRATE INSTALLATION IN DITCH (SIDE)



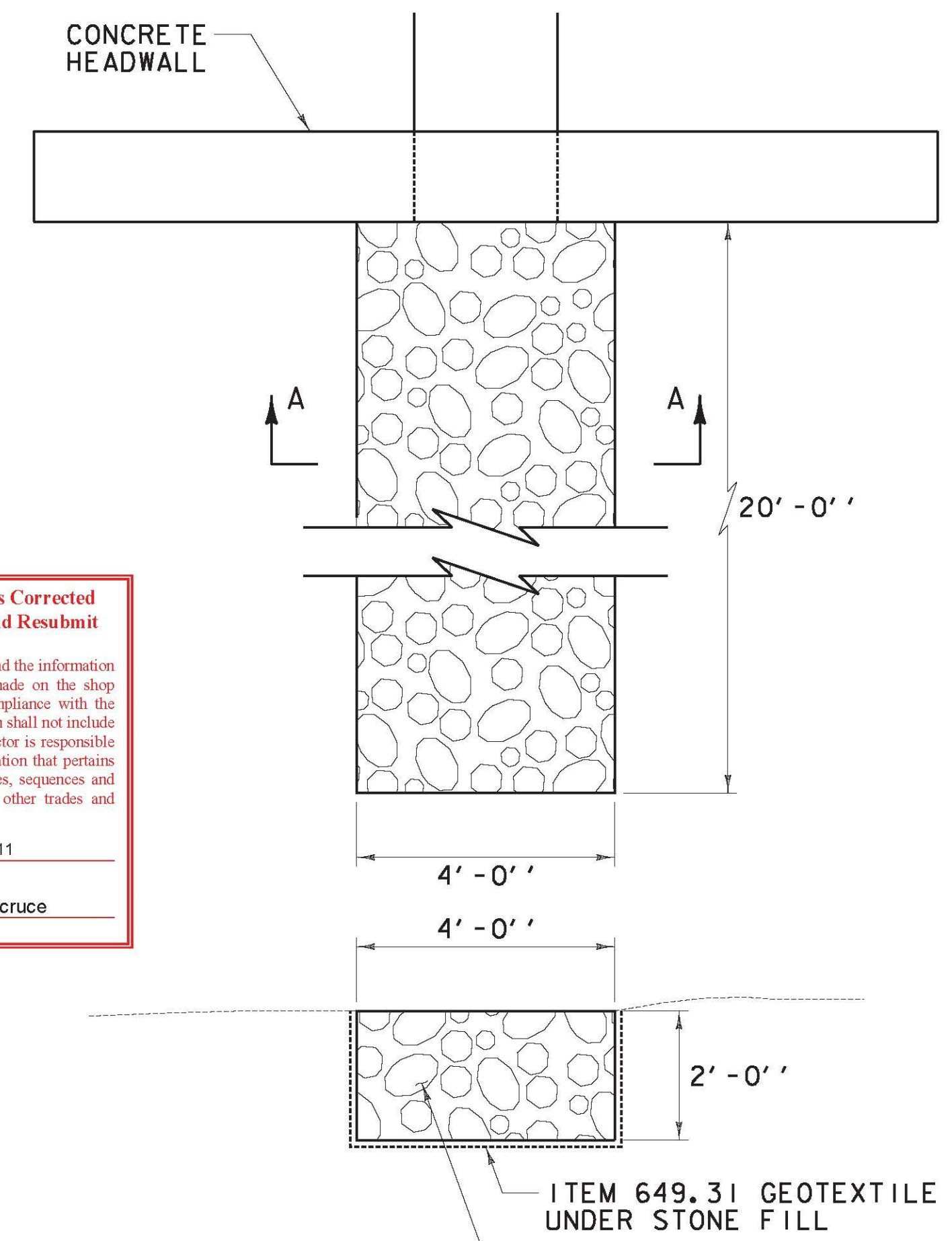
TYPICAL STORM DRAIN AND PIPE SLEEVE TRENCH



TYPICAL GRATE INSTALLATION IN DITCH (ELEVATION)

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: 5,000 PSI AT 28-DAYS.
3. STEEL REINFORCING SHALL CONFORM TO ASTM A185 OR A82 FOR HS-25 LOADING.
4. MANHOLE STEPS SHALL BE 14" WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST CONCRETE MANUFACTURER.
5. FACE OF PIPE SHALL NOT PROJECT MORE THAN 2" NOR 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 RESIDENT 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.
12. DEPTH AS SHOWN ON THE ITEM DETAIL & DRAINAGE SHEET IS DEFINED AS THE VERTICAL DISTANCE BETWEEN RIM ELEVATION AND THE BOTTOM OF SUMP.



**SECTION A-A
STONE PAD DETAIL**

X Reviewed	Furnish As Corrected
Rejected	Revise and Resubmit

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during the review do not relieve the Contractor from compliance with the requirements of the Plans and Specifications. Review of a specific item shall not include review of an assembly of which an item is a component. The Contractor is responsible for dimensions to be confirmed and corrected at the job site; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction, coordination of the Work with that of other trades and performing all Work in a safe and satisfactory manner.

Date: June 17, 2011
By: J. Santacruce

McFarland Johnson

NOTE:
1. STONE PADS SHALL BE CONSTRUCTED AT PIPE OUTLETS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

NOT TO SCALE

MISCELLANEOUS DETAIL SHEET	PROJECT NAME: RICHMOND	PLOT DATE: 6/7/2011
	PROJECT NUMBER: STP-RS 0284(II)	DRAWN BY: C.A.K.
	FILE NAME:	CHECKED BY: D.E.G.
	PROJECT LEADER: D.E.G. DESIGNED BY: B.T.H. DWG. NO.: MDT-1	SHEET 5 OF 5

FILE NAME = v:\projects\enry\222876\cadd\mstr\ubs (1-11) drainage\p98a092_cdi01.11.dgn
DATE/TIME = 6/7/2011
USER = 3086