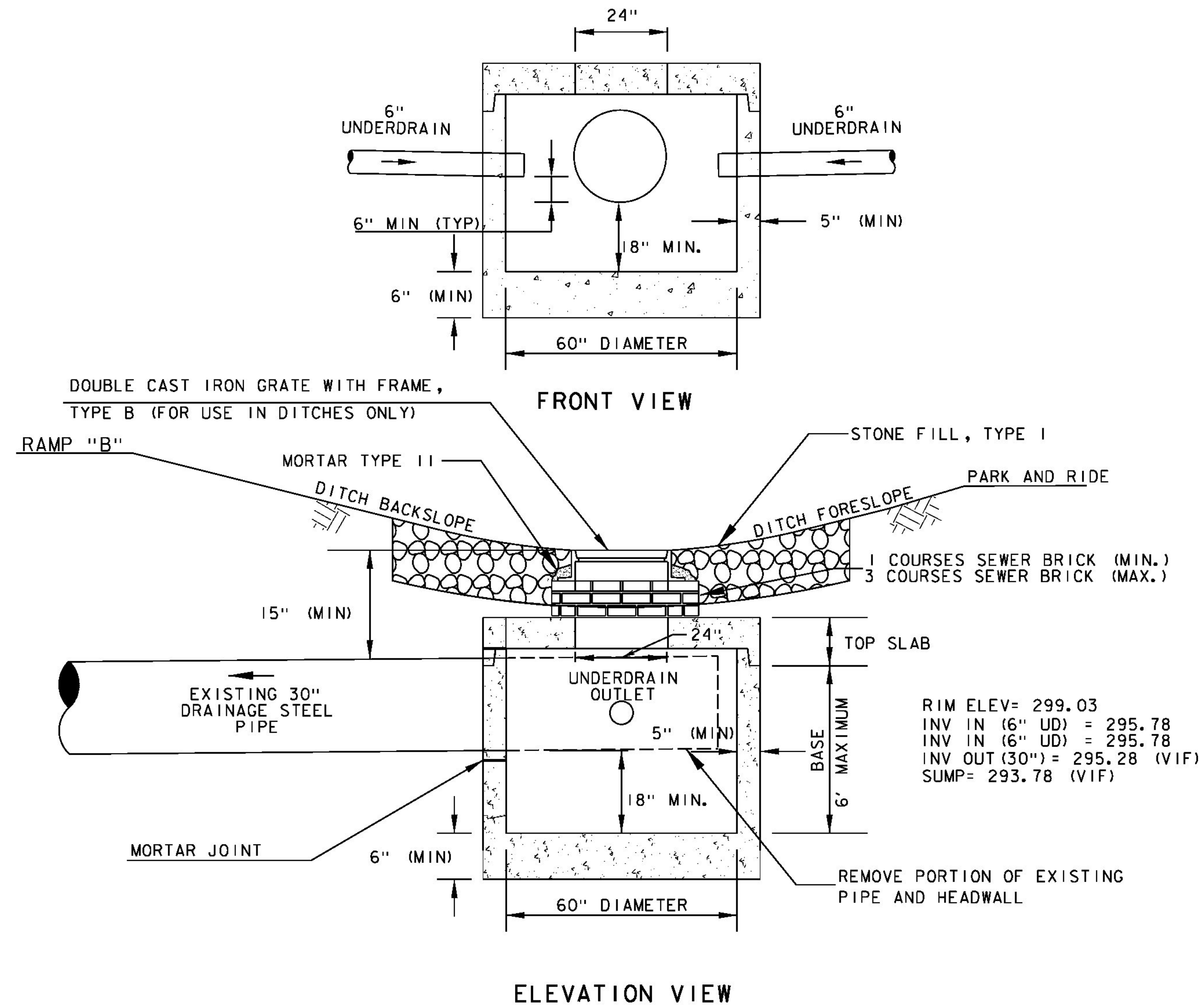


DRAINAGE DETAILS

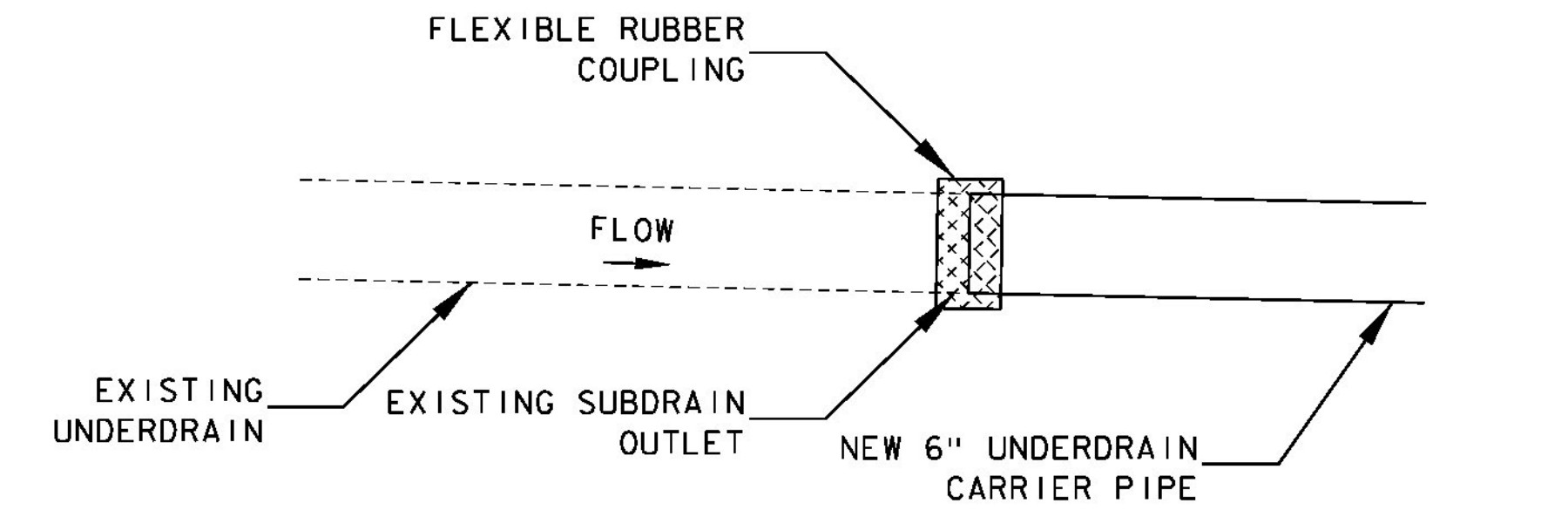


**PRECAST CATCH BASIN INSTALLED IN DITCH
W/ UNDERDRAIN FLUSHING ACCESS
@ RAMP "B" STA. 75+57.78 RT**

NOT TO SCALE

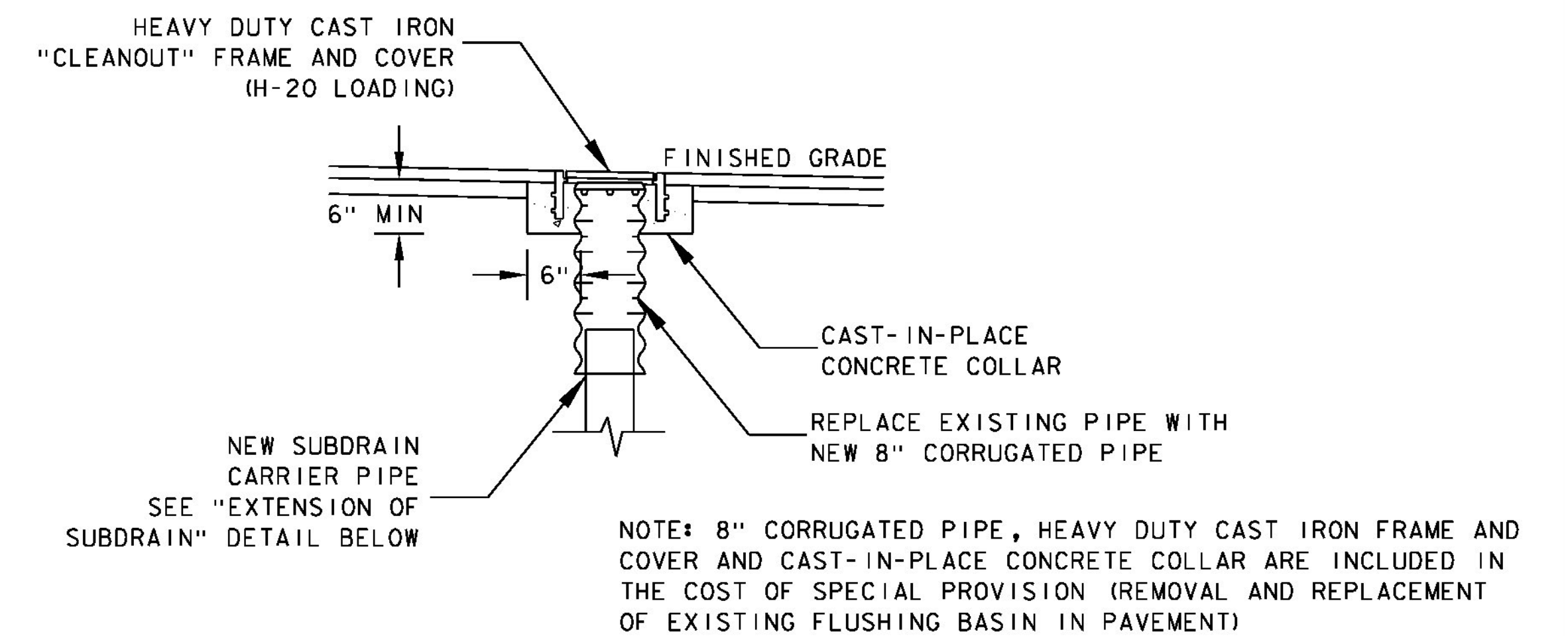
PRECAST CONCRETE CATCH BASIN NOTES:

- 1) AT A MINIMUM ALL PRECAST CONCRETE STRUCTURES, FRAME AND COVER/GRATE SHALL MEET AASTHO H-20 LOADING REQUIREMENTS. REFER TO SECTION 604 AND SUBSECTIONS 705.04 AND 715.01 OF THE STANDARD SPECIFICATIONS.
- 2) FACE OF PIPE SHALL NOT PROJECT MORE THAN 2" OR LESS THAN 1" FROM INSIDE WALL OF STRUCTURE.
- 3) THE COST OF CUTTING THE EXISTING STEEL PIPE SHALL BE CONSIDERED INCIDENTAL TO ITEM 604.20.
- 4) 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.
- 5) THE FRAME SHALL NOT BE SET DIRECTLY ON PRECAST STRUCTURE. FITTING FRAME TO FINAL GRADE SHALL BE DONE WITH BRICK OR PRECAST CONCRETE GRADE RINGS OF APPROPRIATE THICKNESS (3 COURSES MAX).
- 6) FLAT SLAB TOPS SHALL BE USED FOR ALL CATCH BASINS, UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- 7) ALL PIPE INVERTS AND PENETRATION ANGLES SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- 8) PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AND BE ASSEMBLED USING A BUTYL RUBBER OR APPROVED EQUAL SEALANT.
- 9) PROVIDE FLEXIBLE RUBBER BOOTS CONFORMING TO ASTM C-923, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO STRUCTURE. BOOTS SHALL BE CAST INTO PRECAST STRUCTURE BY THE MANUFACTURER FOR ALL PIPE PENETRATIONS. FOR RCP PIPES, USE BRICK AND MORTAR.
- 10) CATCH BASIN GRATE ORIENTATION SHALL BE IN ACCORDANCE WITH STANDARD D-16 FOR TYPE B GRATES.
- 11) INSTALLATION OF DROP INLETS OVER EXISTING PIPES SHALL INCLUDE CLEAN CUTTING OF THE EXISTING PIPE AND MORTARING ALL JOINTS AS SHOWN IN DETAILS PROVIDED ON THIS SHEET.
- 12) PAYMENT FOR INSTALLATION OF THE CATCH BASIN SHALL BE MADE UNDER THE PRECAST REINFORCED CONC. CATCH BASIN WITH CAST IRON GRATE ITEM (604.20).
- 13) REINFORCING IS NOT SHOWN FOR CLARITY.



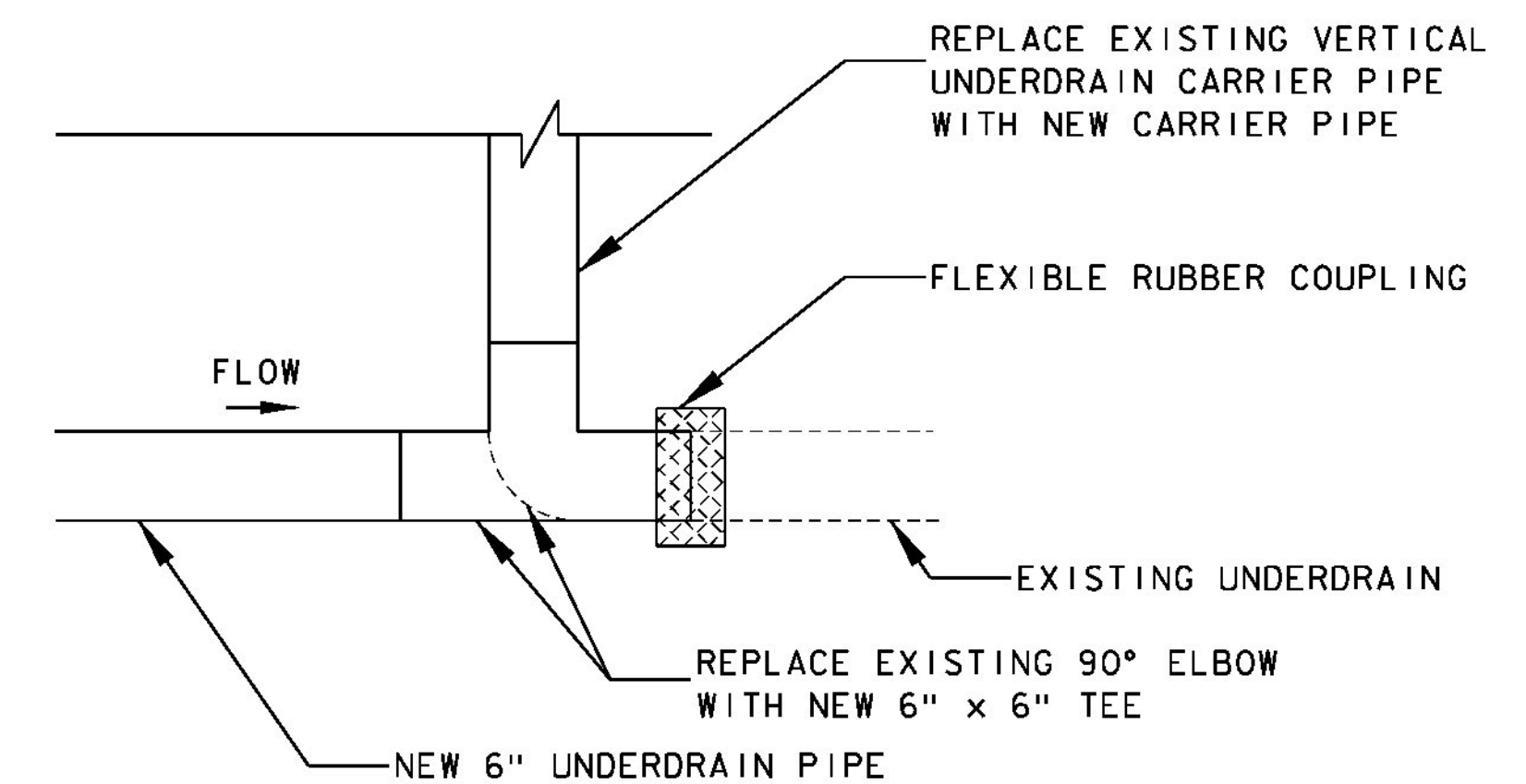
EXTENSION OF SUBDRAIN WITH CARRIER PIPE

NOT TO SCALE



**SPECIAL PROVISION (REMOVAL AND REPLACEMENT OF EXISTING
FLUSHING BASIN IN PAVEMENT)**

NOT TO SCALE



EXTENSION OF SUBDRAIN

NOT TO SCALE

PROJECT NAME: RICHMOND	
PROJECT NUMBER: CMG PARK (31)	
FILE NAME: z97cl86drndet.dgn	PLOT DATE: 4/29/2013
PROJECT LEADER: ERIK ATKINS	DRAWN BY: N. BOSAN
DESIGNED BY: T. BIGELOW	CHECKED BY: E. ATKINS
DRAINAGE DETAILS SHEET 2	SHEET 112 OF 133