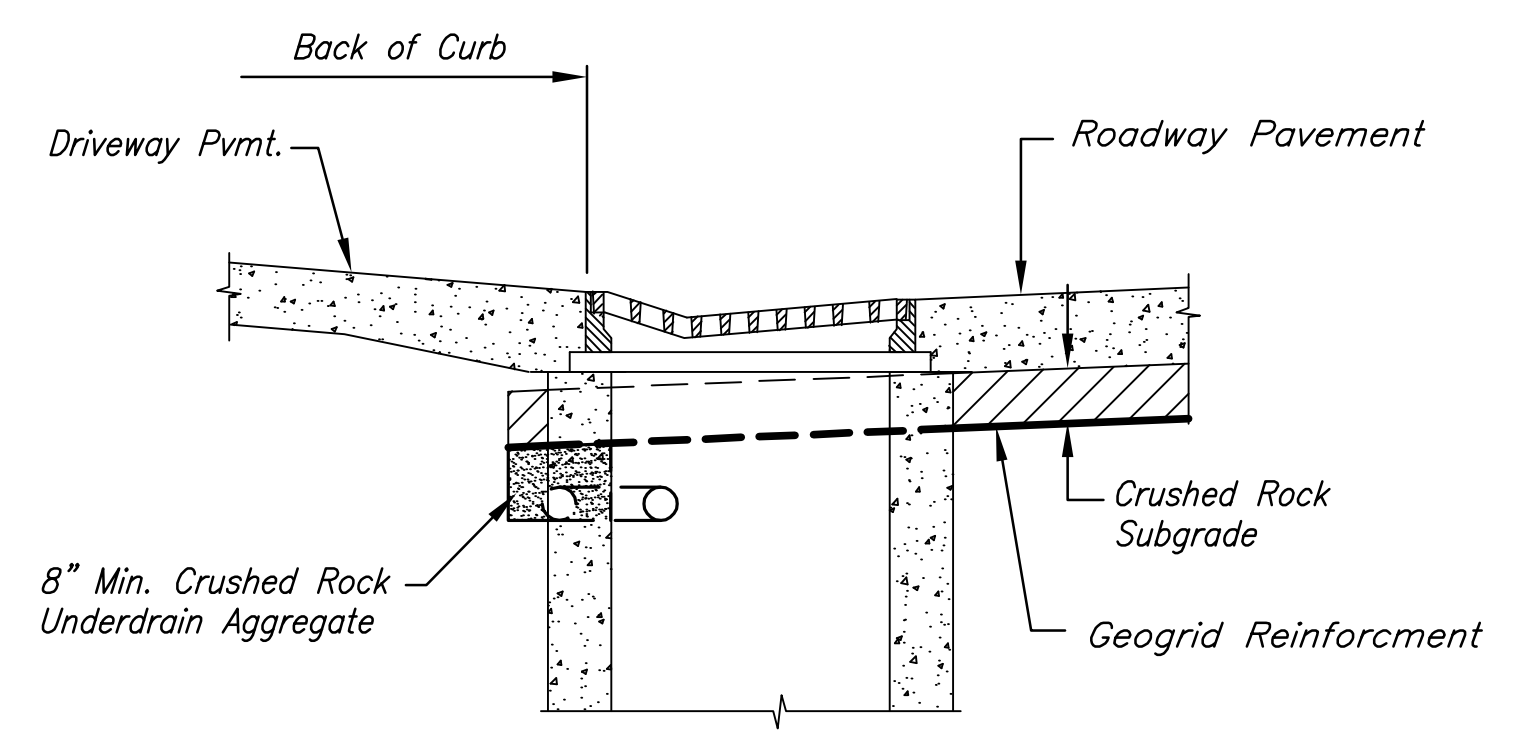
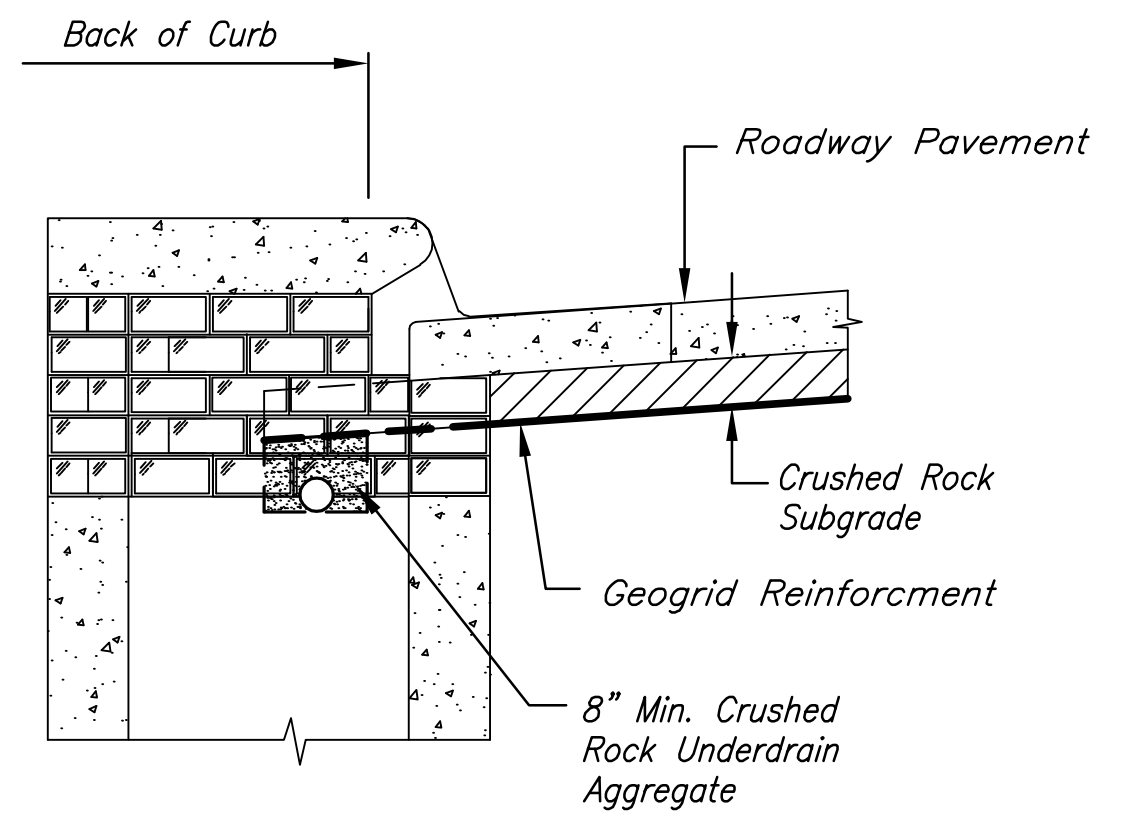


STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0361-01	2011	33	169

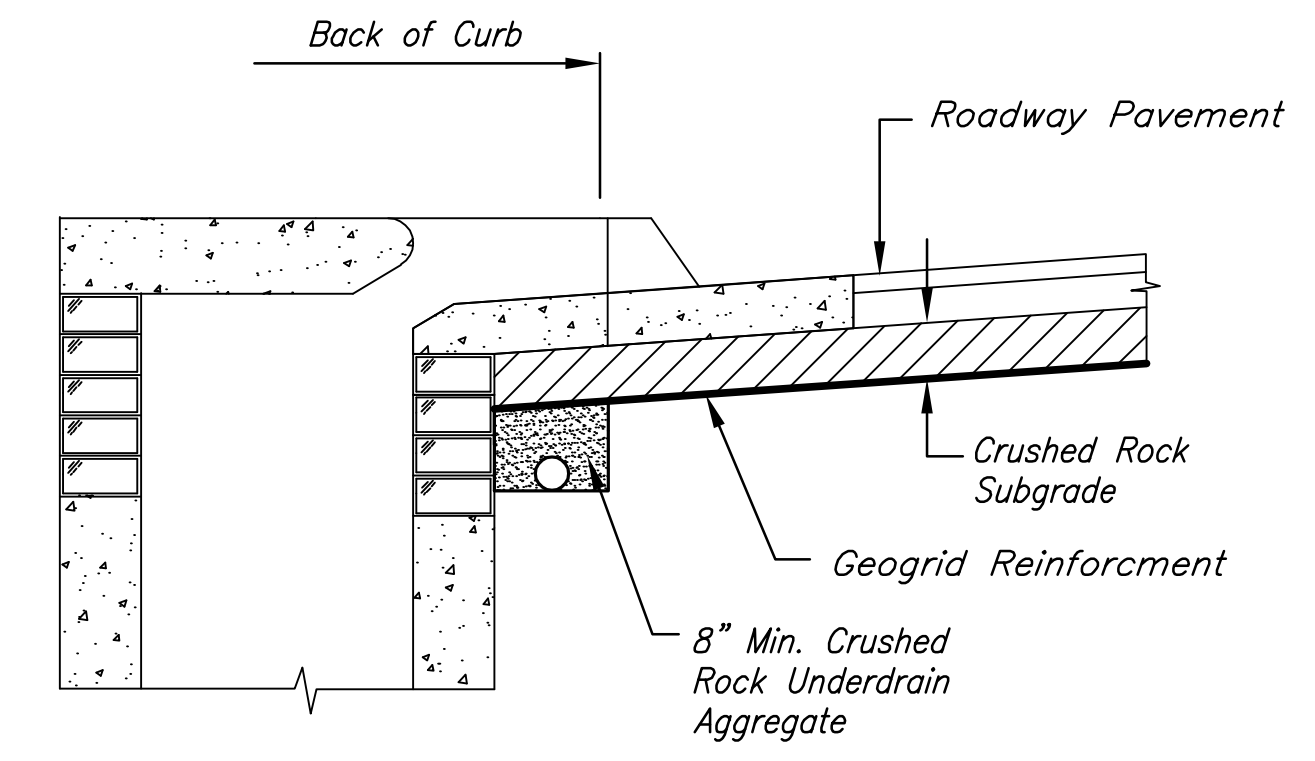
**MKEC**  
ENGINEERING  
CONSULTANTS, INC.  
411 N. WEBB ROAD  
WICHITA, K.S. 67206  
316-684-9600



SECTION C-C



SECTION B-B



SECTION A-A

**PAVEMENT UNDERDRAIN AT SUMPS**

NOTE:  
Place 4" PVC Perforated Pipe at all drainage sump locations.  
Cost of Underdrain System at sumps to be incidental to the Reinforced Crushed Rock Subgrade.  
Refer to "Pipe Connection Detail" for connections to structures.

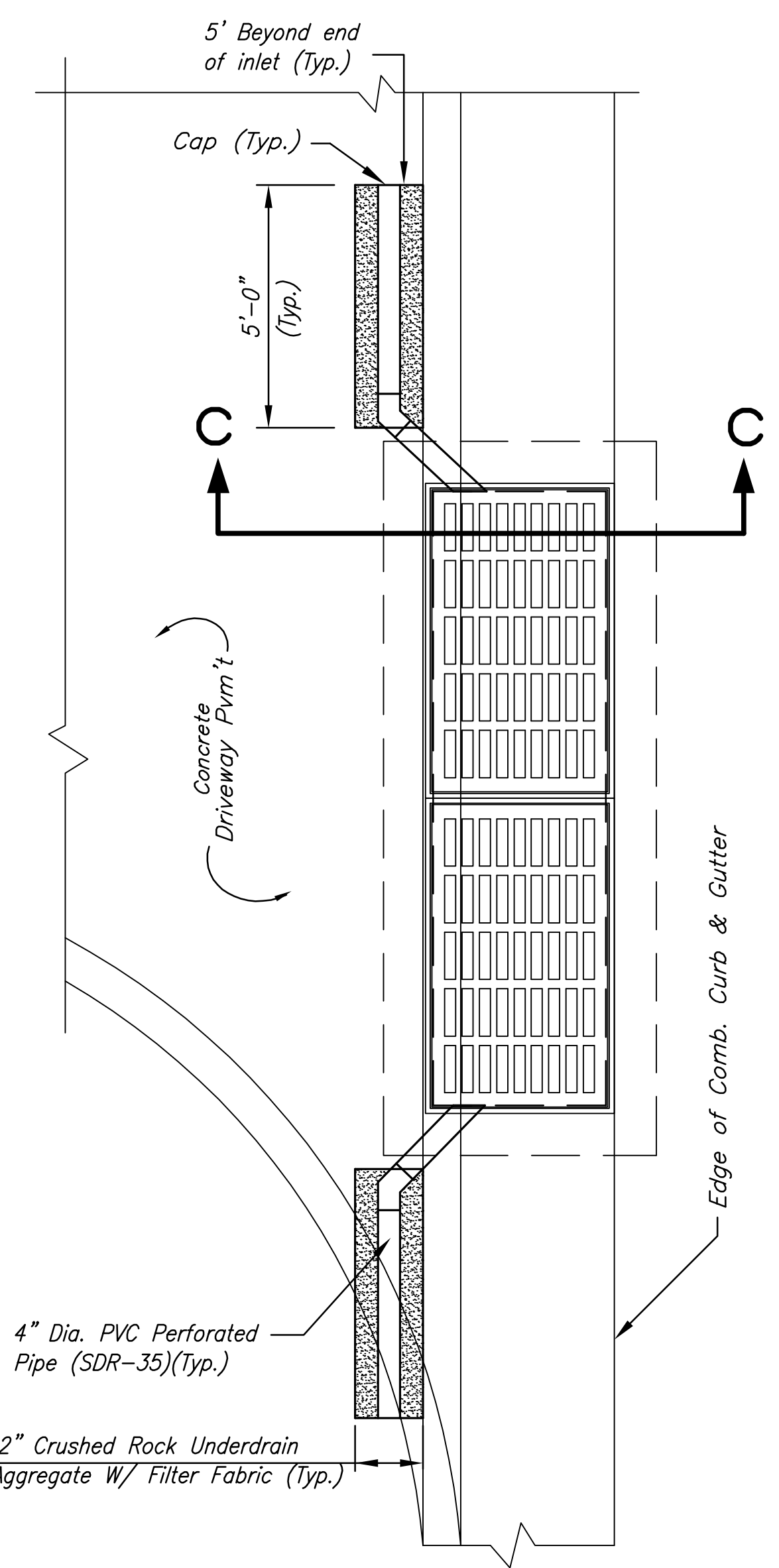
**CRUSHED ROCK UNDERDRAIN AGGREGATE GRADATION REQUIREMENTS**

Percent of Aggregate Retained

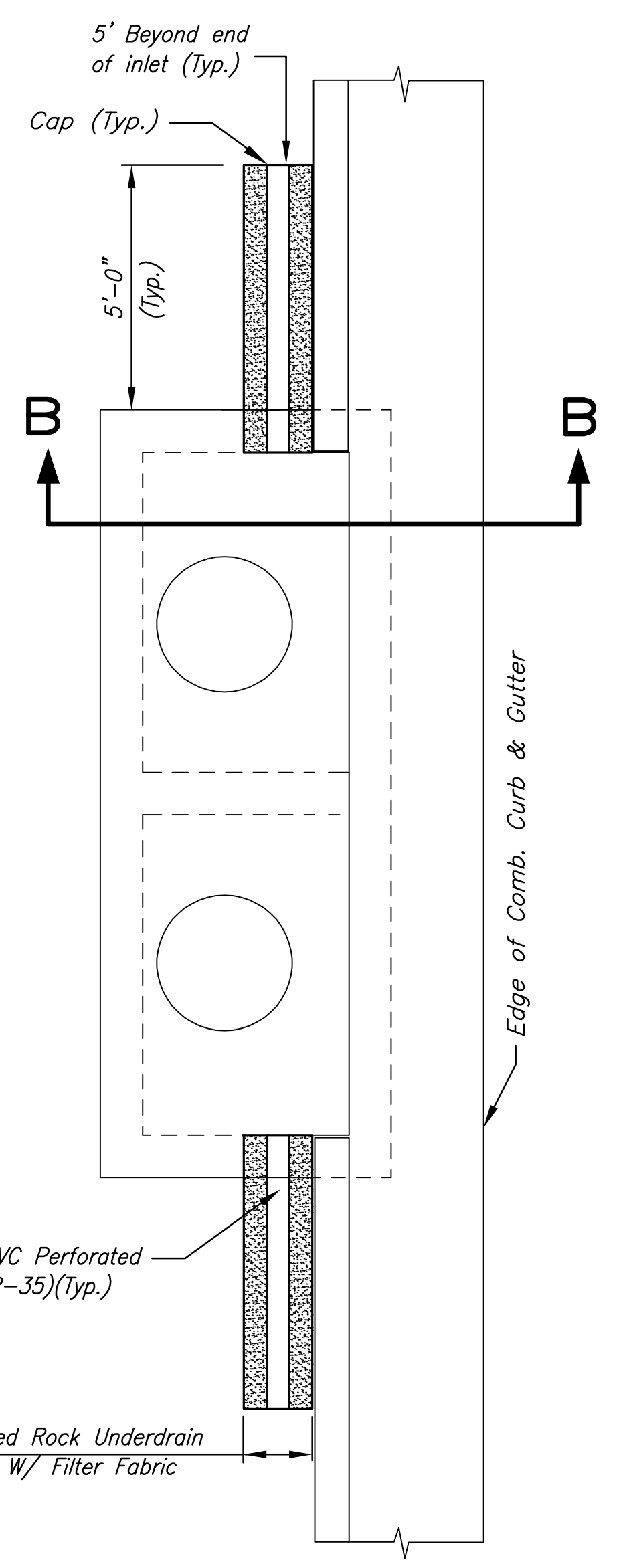
1 1/2"	0
3/4"	15-60
# 4	40-80
#40	74-92
P-200	4-12

Rock quality shall be the same as specified for coarse aggregate for asphalt concrete mixes.

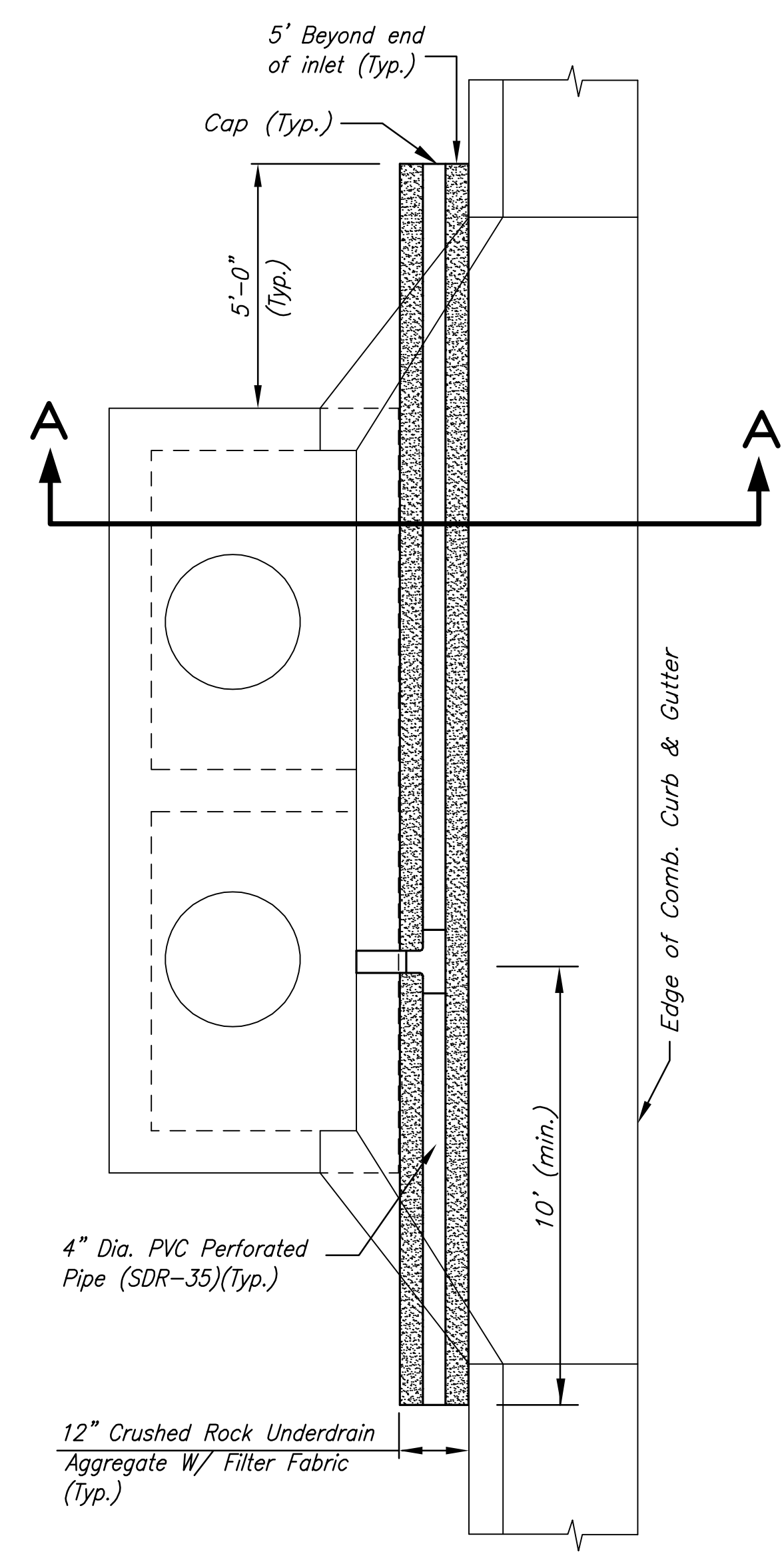
**LINCOLN STREET BRIDGE AND  
DAM IMPROVEMENTS OVER  
ARKANSAS RIVER**



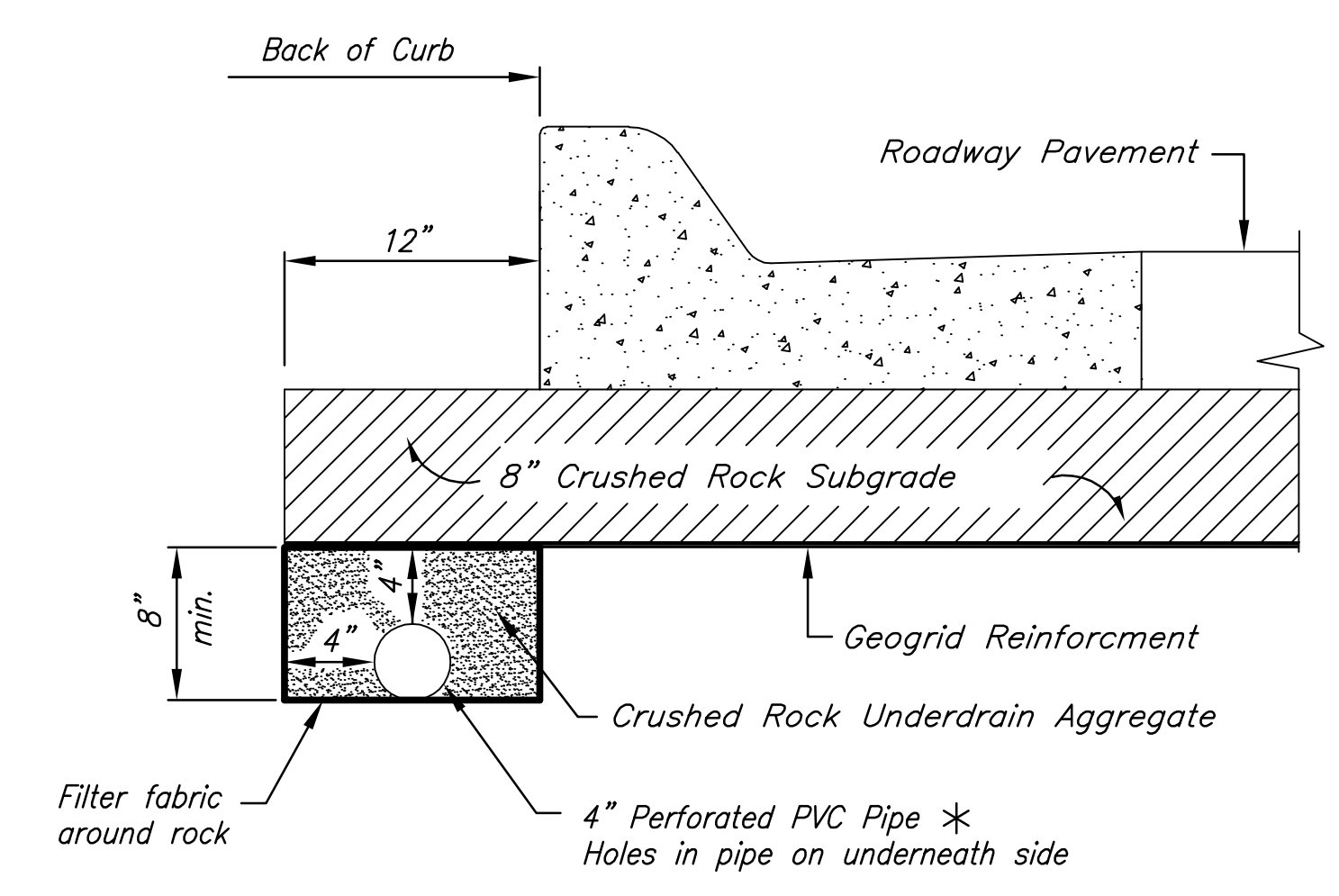
DRIVEWAY GRATE INLET  
TYPE 2 INLET SIMILAR



TYPE 1 INLET



TYPE 1-A INLET



\* Minimum 16 perforations per lineal feet @ 1/4" Dia. Perforations to be on bottom half of pipe.

PIPE DRAIN DETAIL

**PAVEMENT UNDERDRAIN DETAILS**  
SHEET TITLE  
472-84883  
PROJECT NUMBER

JRA  
DESIGN BY  
JSB  
DRAWN BY  
JRA  
CHECKED BY

ISSUED  
1/24/2011  
REVISED

SHEET NO.  
33 of 169

PLOTTED: Tuesday, January 25, 2011 8:51 AM

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