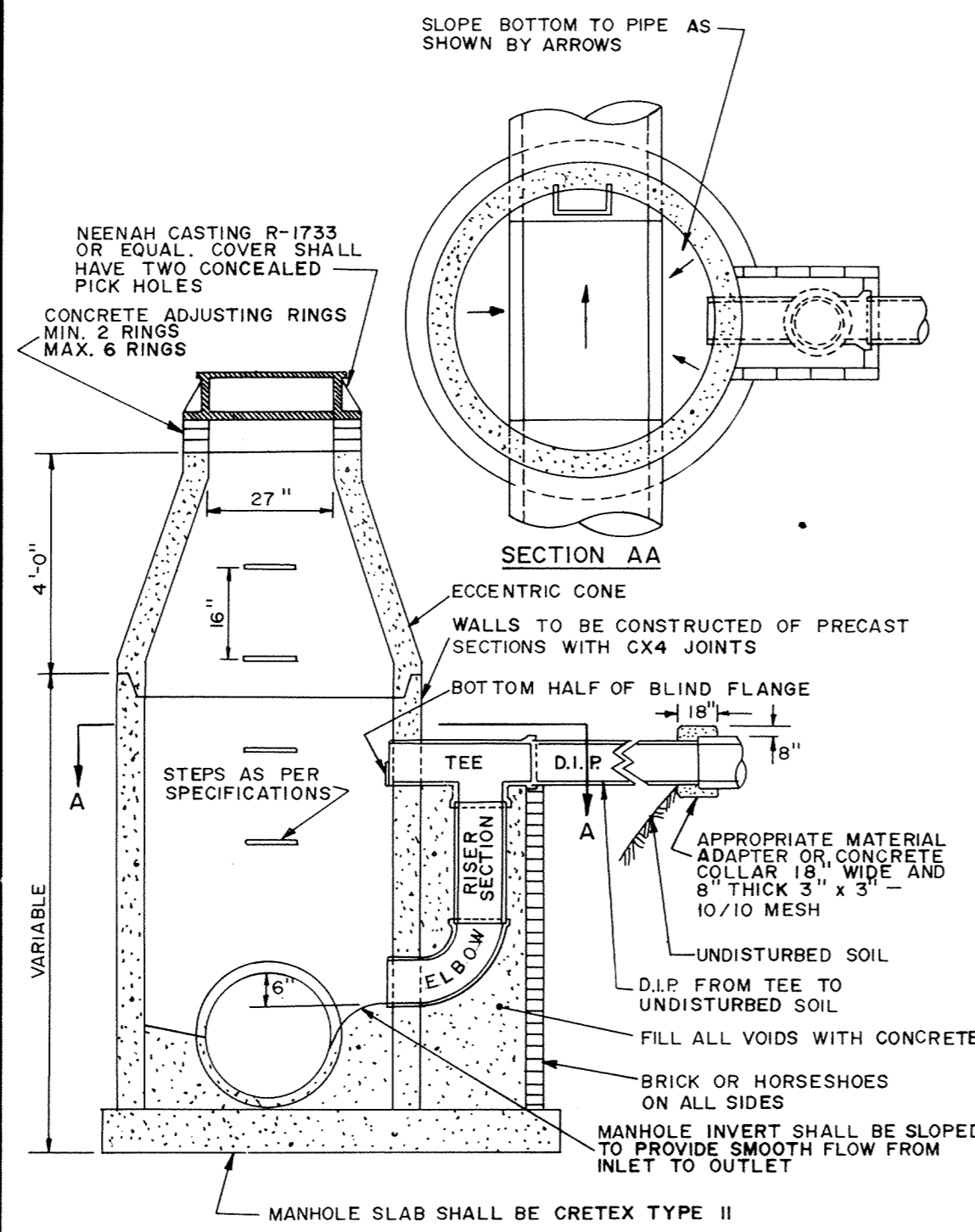
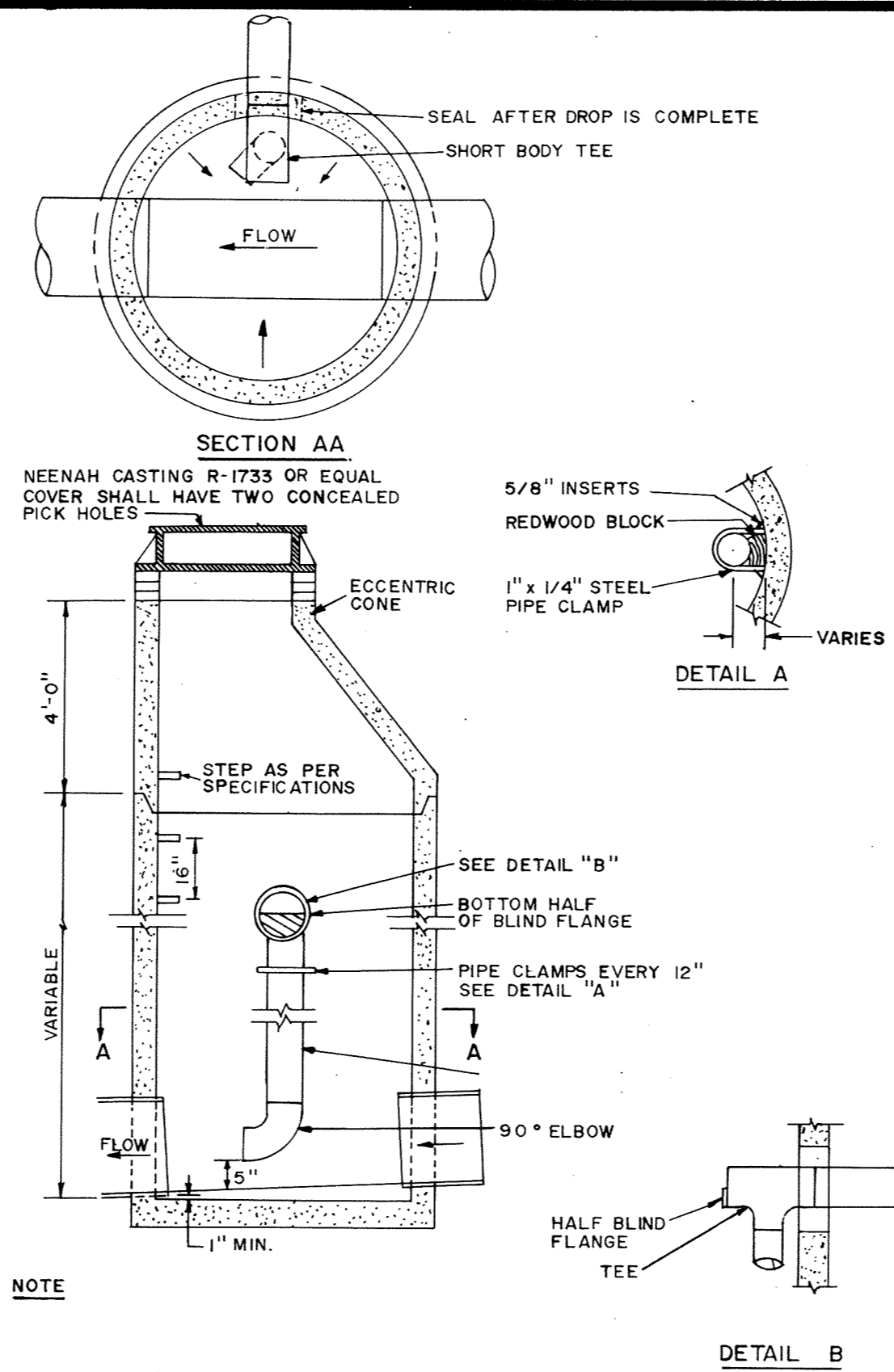


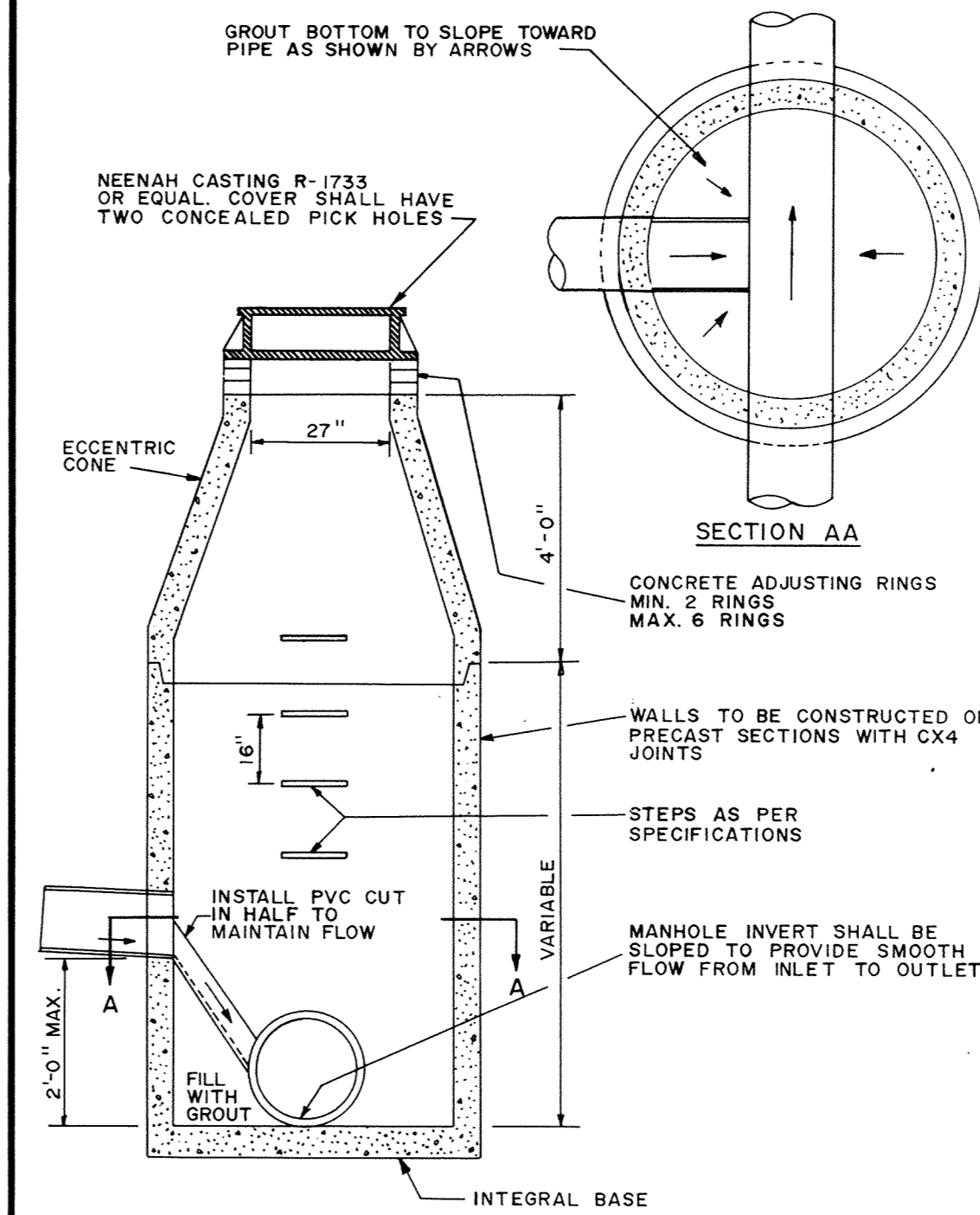
STANDARD AIR RELIEF MANHOLE



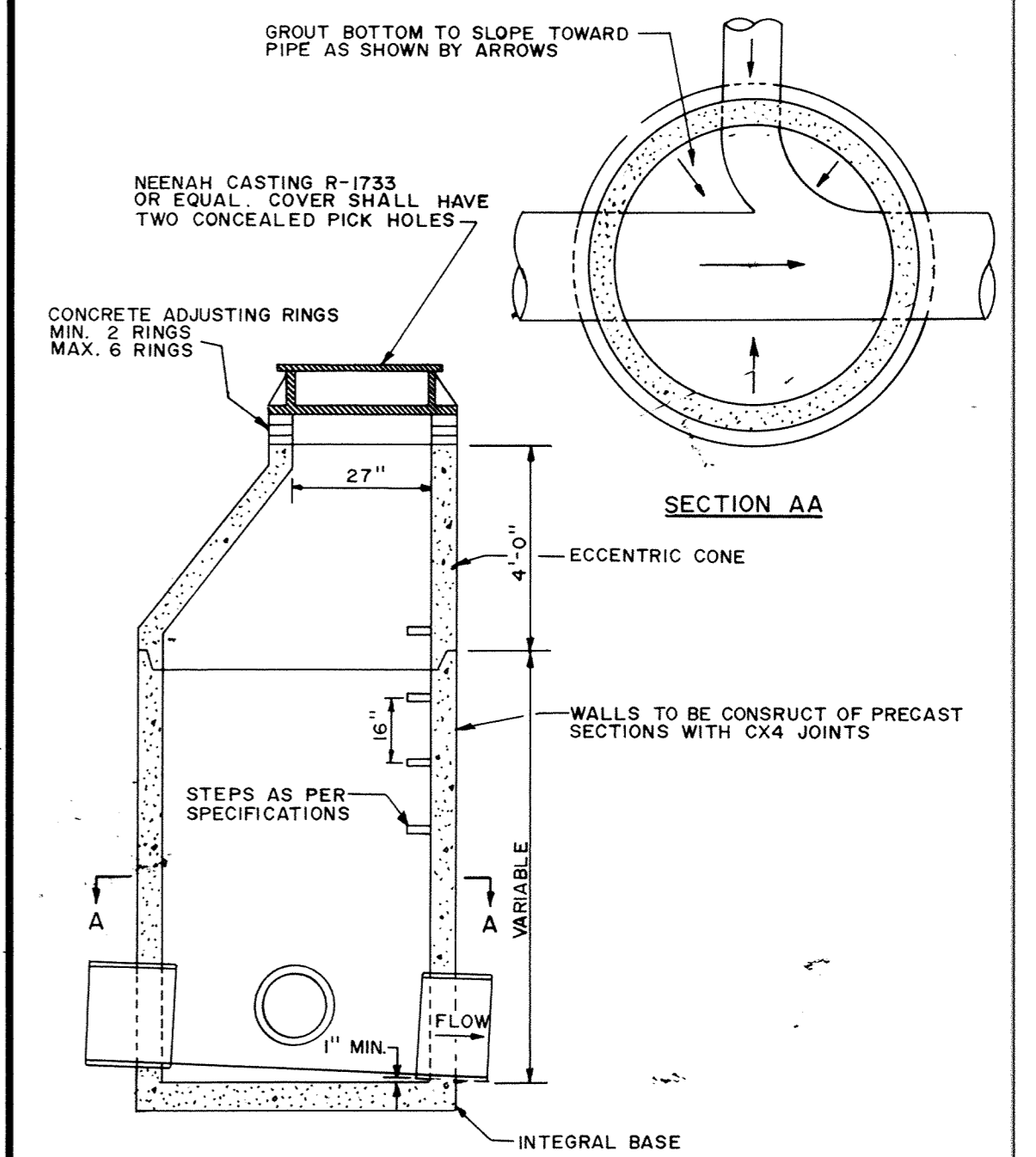
OUTSIDE DROP MANHOLE



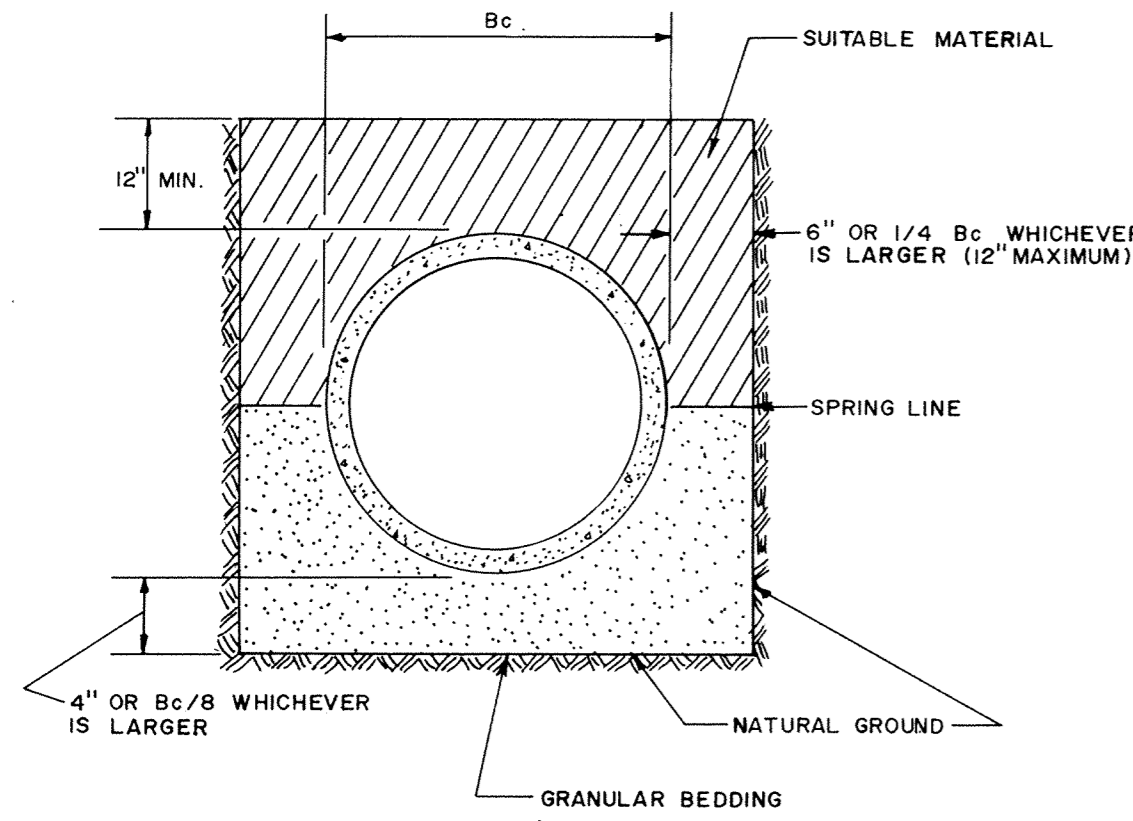
INSIDE DROP MANHOLE



INSIDE DROP MANHOLE (2 FEET OR LESS)

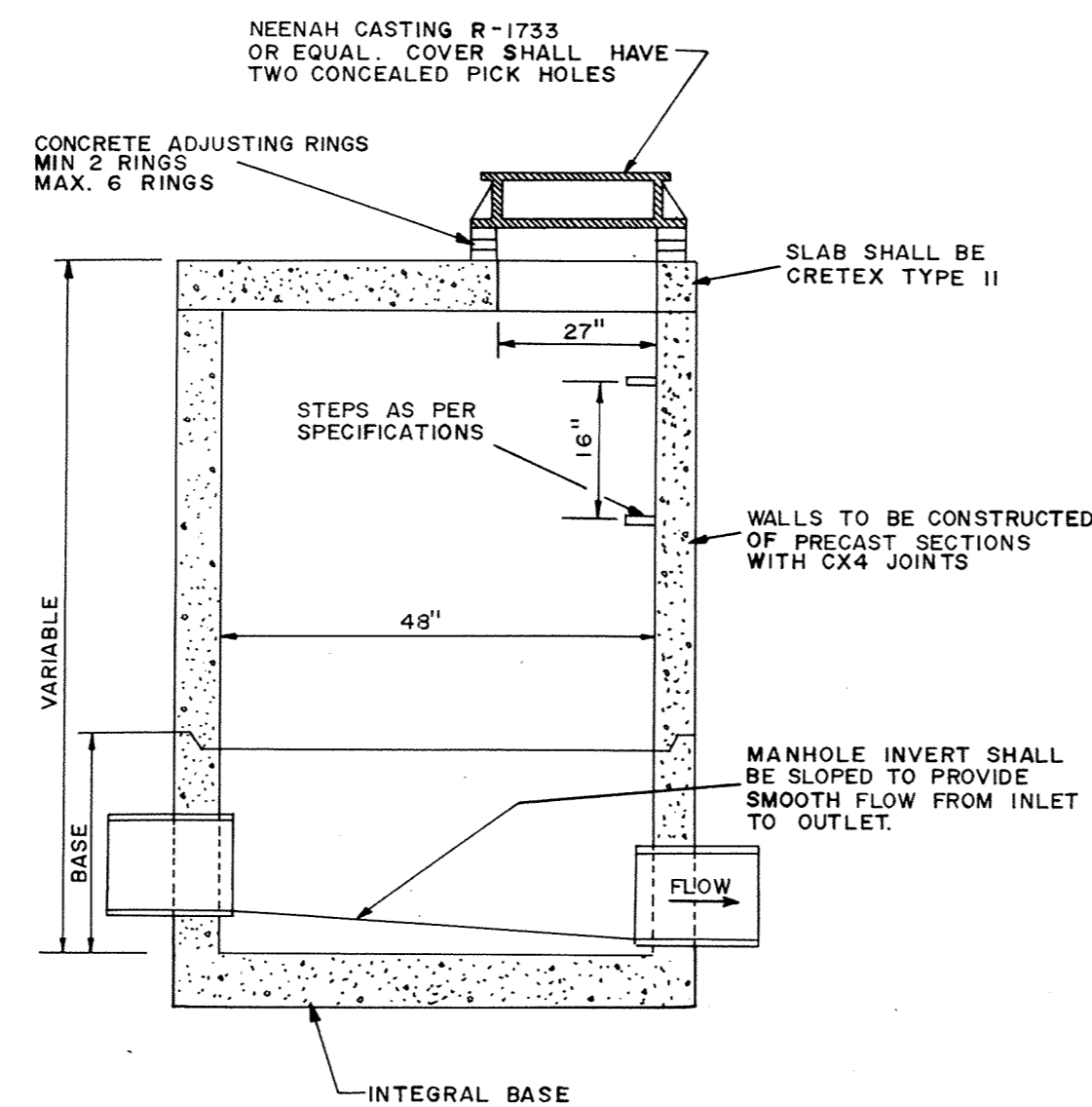


STANDARD MANHOLE



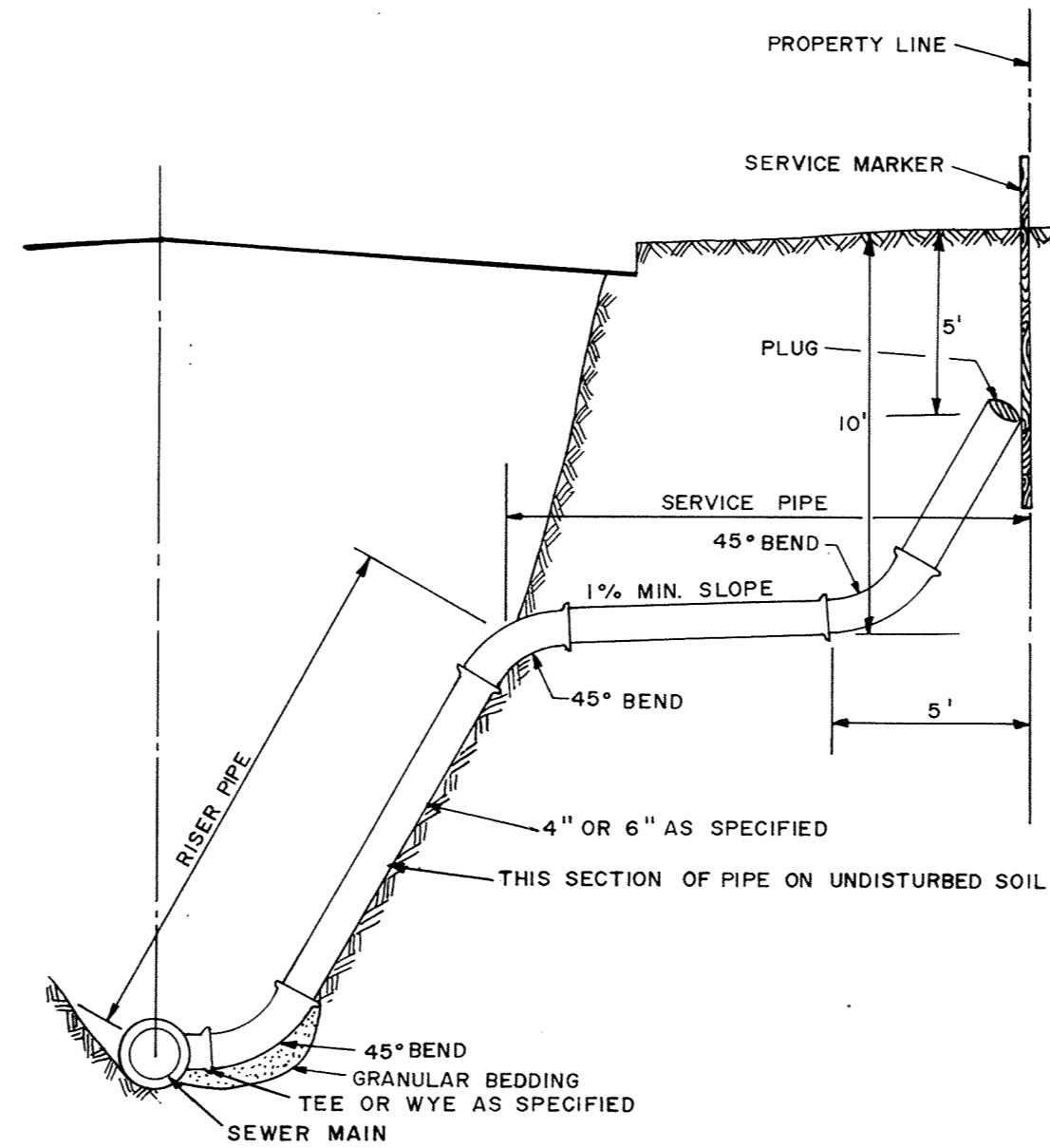
NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.

CLASS B PIPE BEDDING



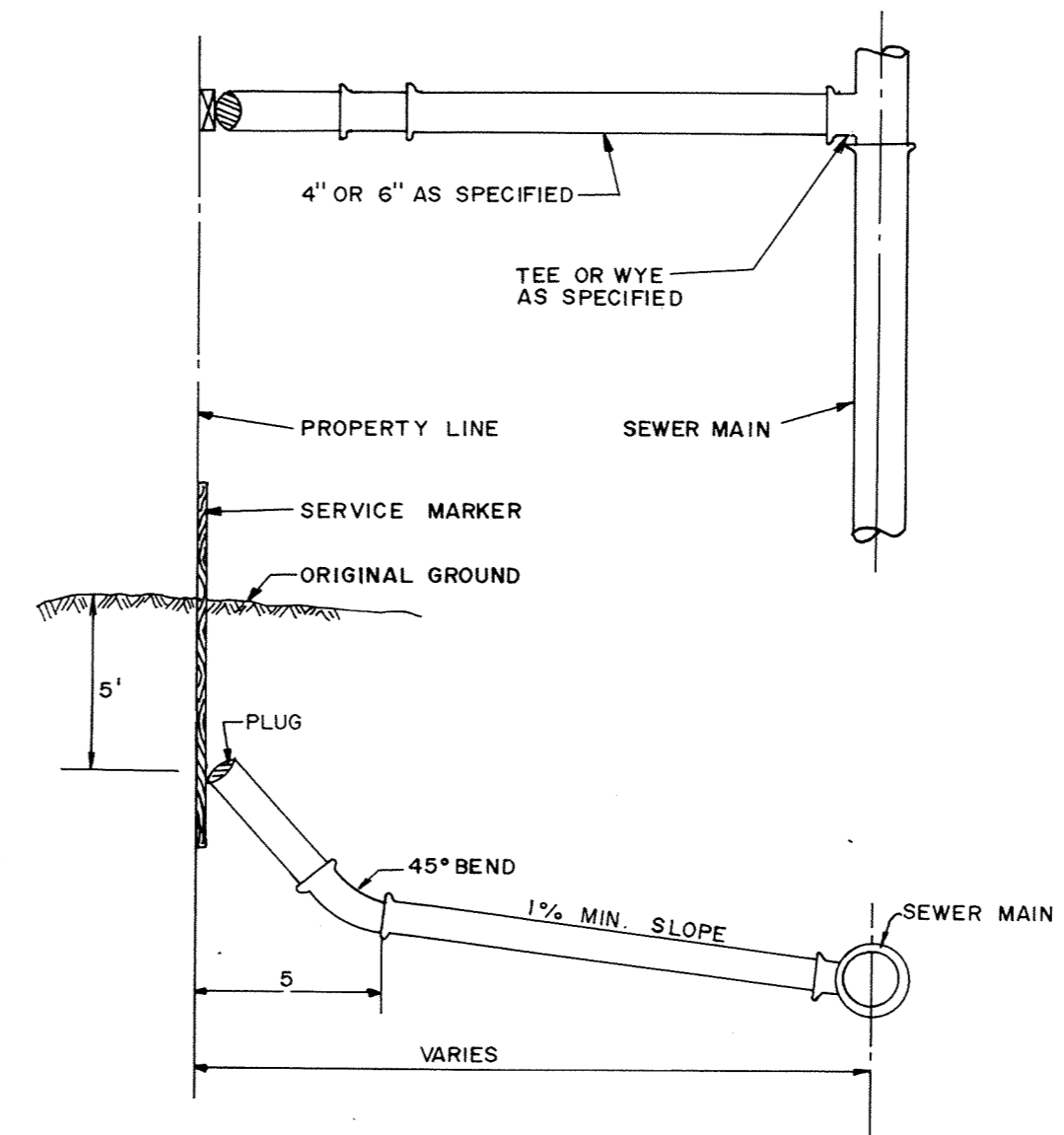
NOTE: THIS TYPE MANHOLE SHALL BE USED WHEN SPECIFIED OR WHEN THE MANHOLE DEPTH IS LESS THAN 8 FEET.

SLAB TOP MANHOLE



TO BE USED AS SERVICE CONNECTIONS ON DEEP LINES

SERVICE RISER SECTION



TYPICAL HOUSE SERVICE

RECORD PLAN APRIL 1993

MSA CONSULTING ENGINEERS
Maier Stewart & Associates Inc.
 1959 SLOAN PLACE (612) 774 6021 ST. PAUL, MINNESOTA 55117

DATE	DESCRIPTION	DESIGNED

CITY OF ELK RIVER
 ELEMENTARY SCHOOL UTILITIES
 SANITARY SEWER DETAILS

DATE AUG, 1991 SHEET 11 OF 14 SHEETS PROJECT NO. 230-125

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER
 MEADO 92