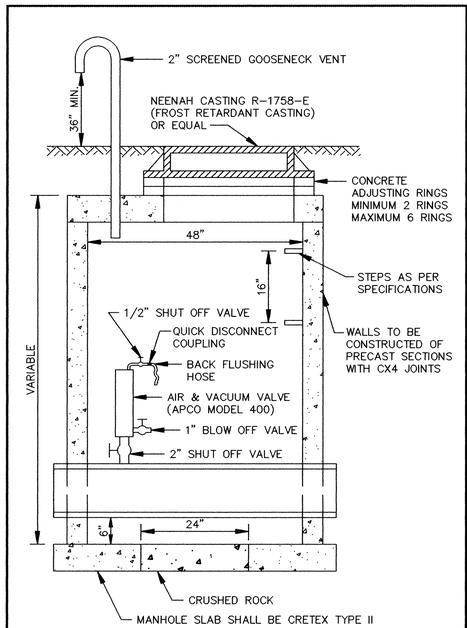
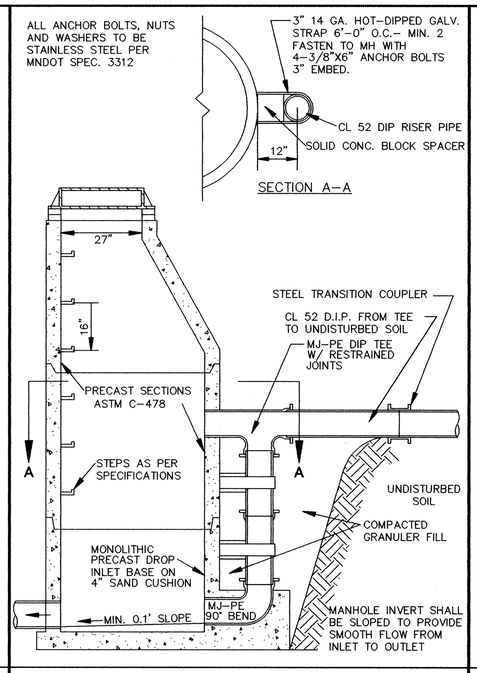
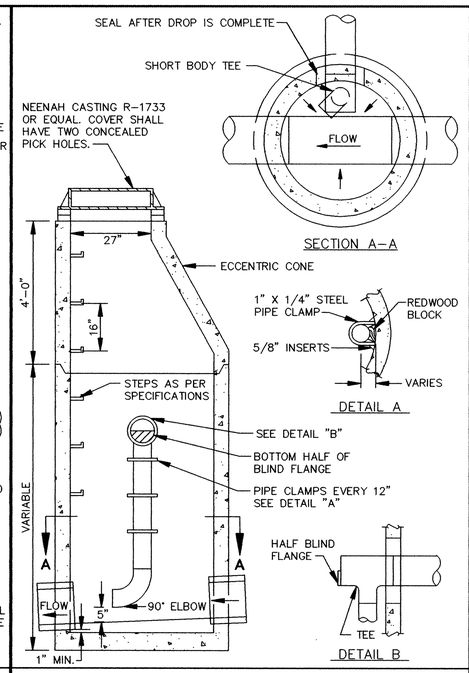


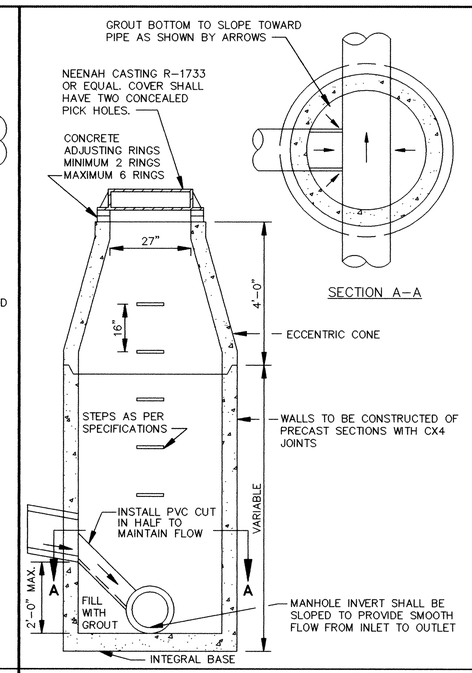

STANDARD AIR RELIEF MANHOLE



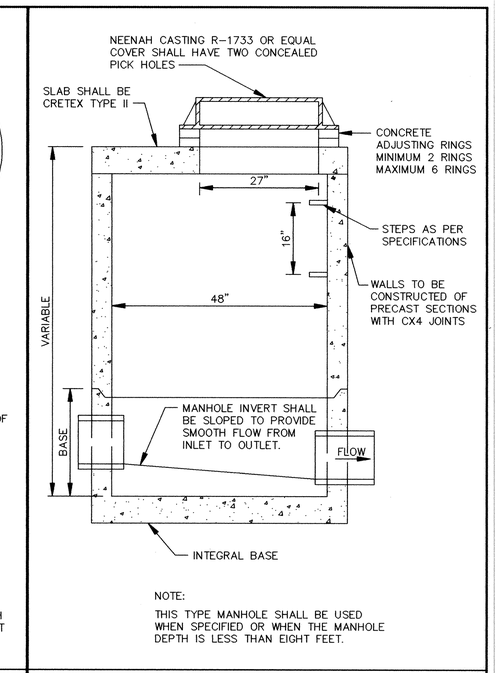

OUTSIDE DROP MANHOLE



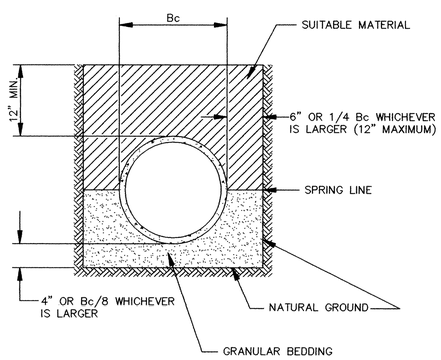

INSIDE DROP MANHOLE




INSIDE DROP MANHOLE (TWO FEET OR LESS)

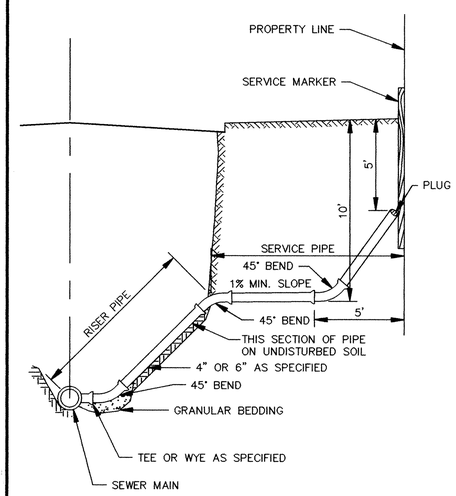



SLAB TOP MANHOLE



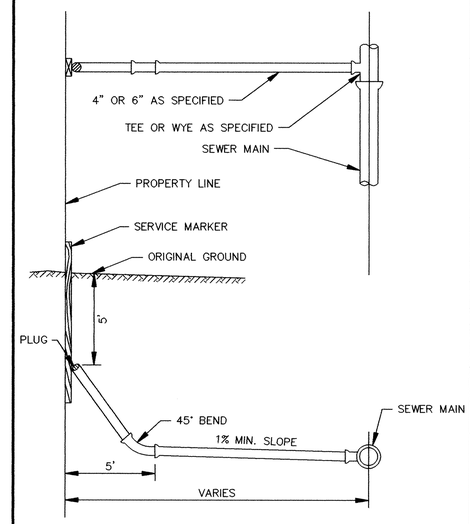

NOTE: ALL COSTS OF EXCAVATION BELOW GRADE AND PLACEMENT OF GRANULAR BEDDING SHALL BE INCLUDED IN THE BID PRICES FOR PIPE ITEMS.

CLASS B PIPE BEDDING

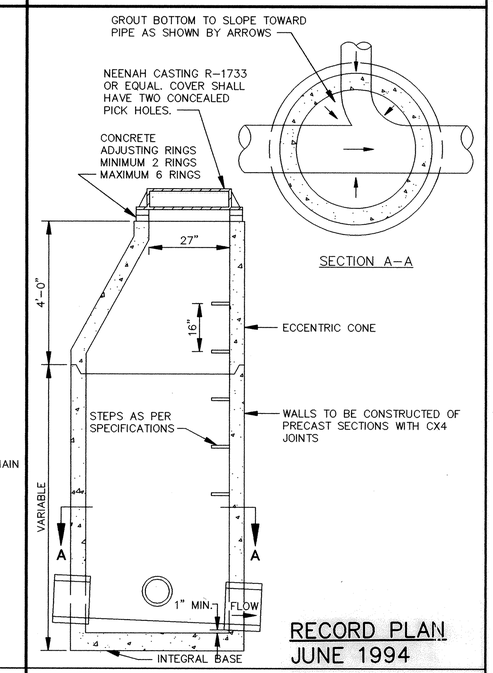



TO BE USED AS SERVICE CONNECTIONS ON DEEP LINES

SERVICE RISER SECTION




TYPICAL HOUSE SERVICE




RECORD PLAN
JUNE 1994

STANDARD MANHOLE

ER171-D1

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Mark V. Graham

DATE 8/13/93 REG.NO. 19130


CONSULTING ENGINEERS
Maier Stewart & Associates Inc.
1959 SLOAN PLACE (612) 774-6021 ST. PAUL, MINNESOTA 55117
9800 SHELARD PARKWAY (612) 546-0432 MINNEAPOLIS, MINNESOTA 55441


| REVISIONS | DATE | DESCRIPTION |
|---|---|---|
| | | |

DESIGNED
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GRAPHIC SCALE
HORIZ.
VERT.

# CITY OF ELK RIVER
## MEADOWVALE HEIGHTS-TRUNK UTILITY IMPROVEMENTS
## SANITARY SEWER DETAILS

DATE AUGUST 1993 | SHEET 10 OF 12 SHEETS | PROJECT NO. 230-171

DRAWING NUMBER
MEADOT 93
10

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER


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