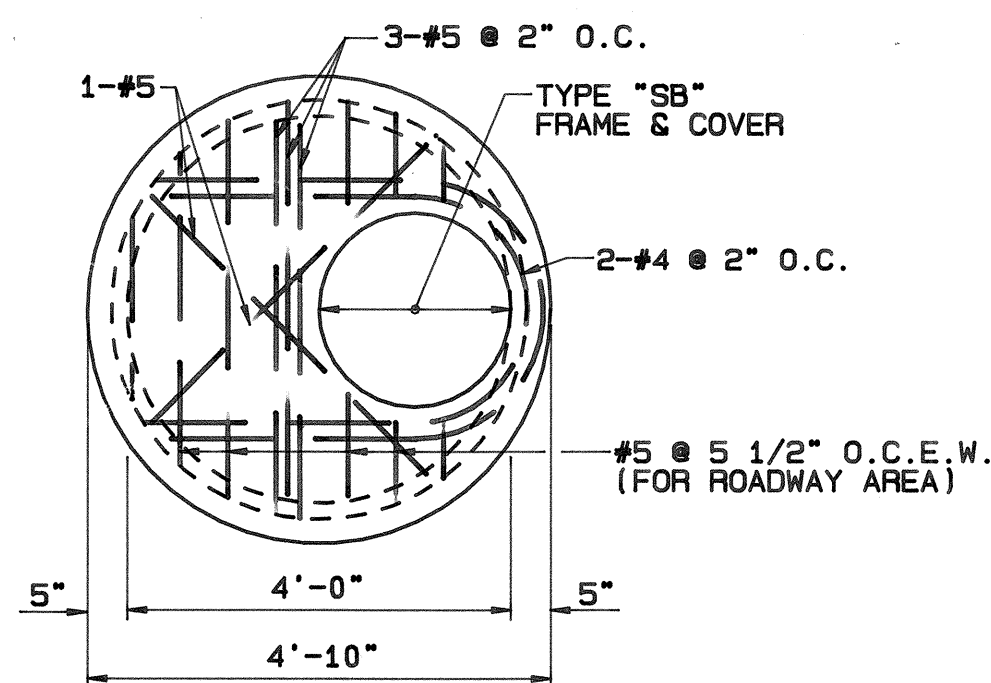


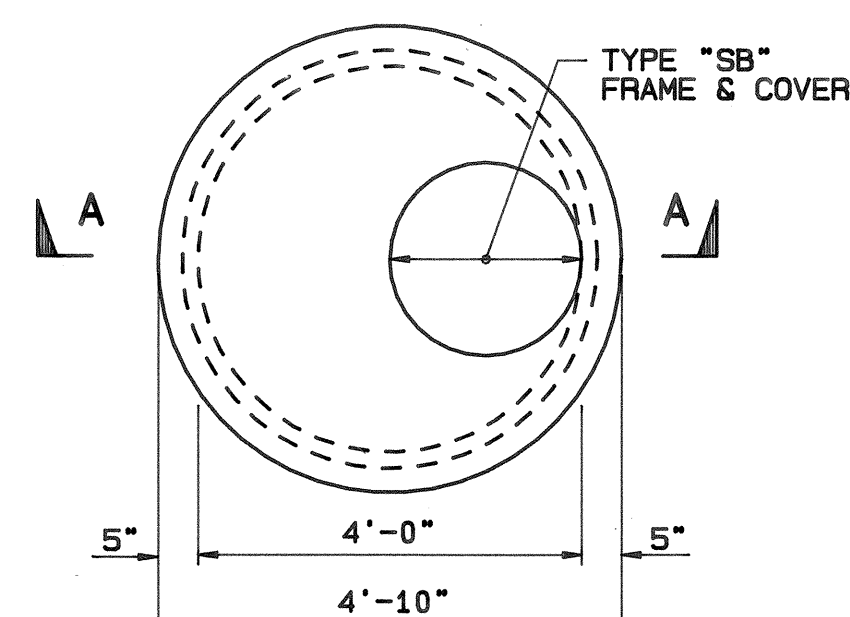
PRECAST SEWER MANHOLE SECTION

SCALE: 3/8" = 1'-0"



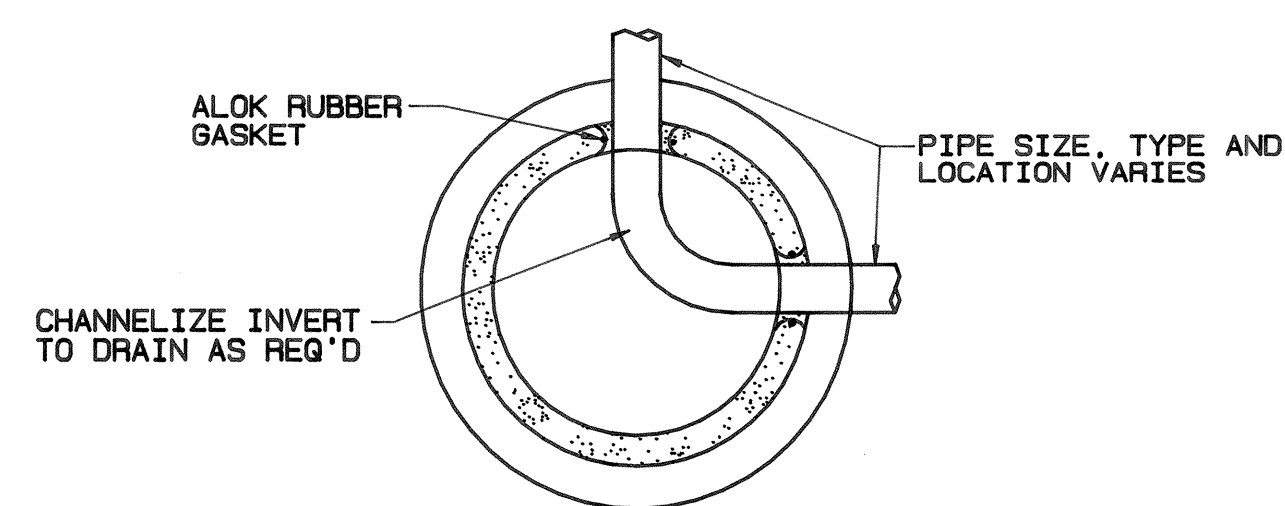
REINFORCEMENT LAYOUT

SCALE: 1/2" = 1'-0"



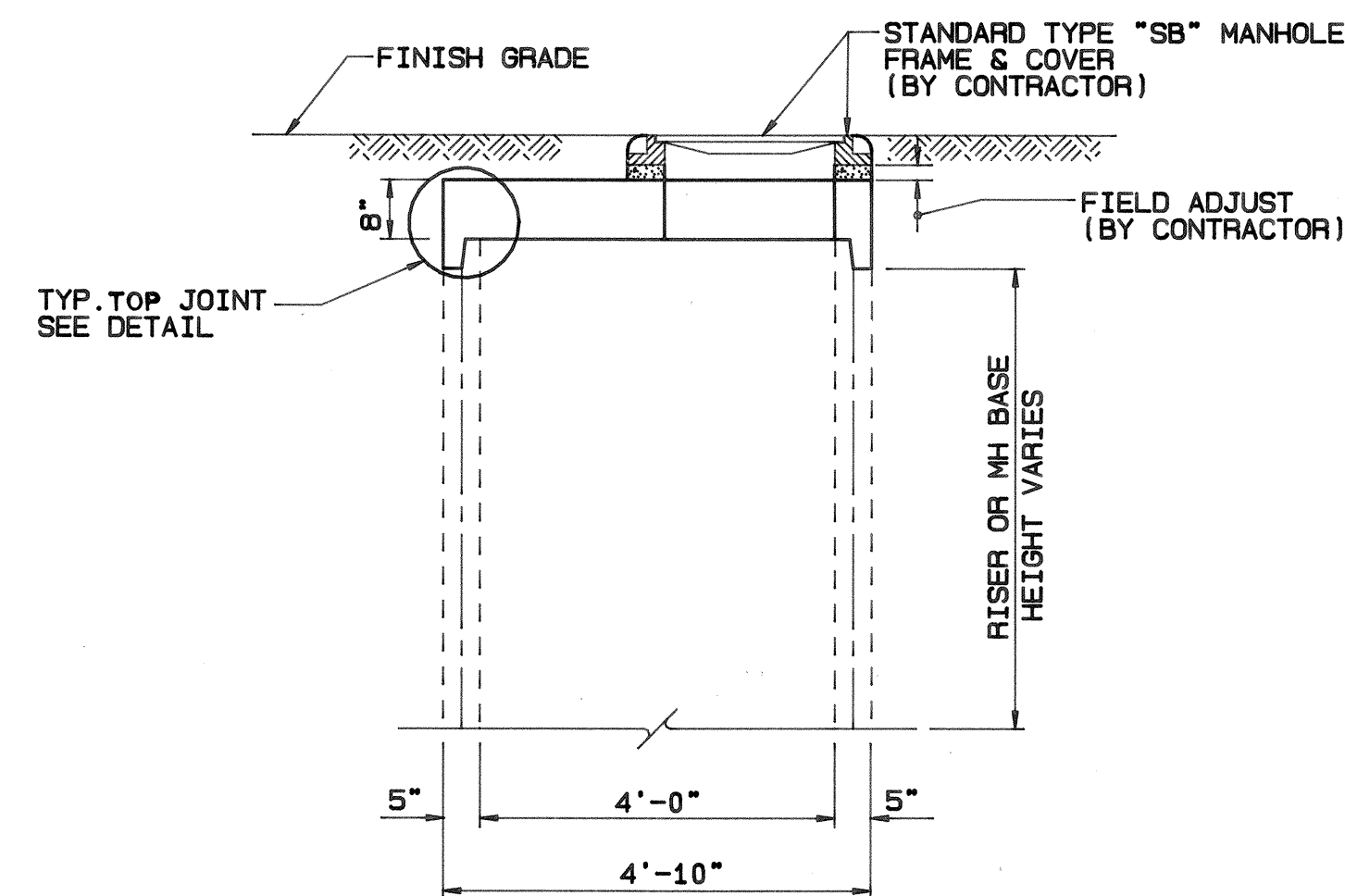
MANHOLE PLAN

SCALE: 1/2" = 1'-0"



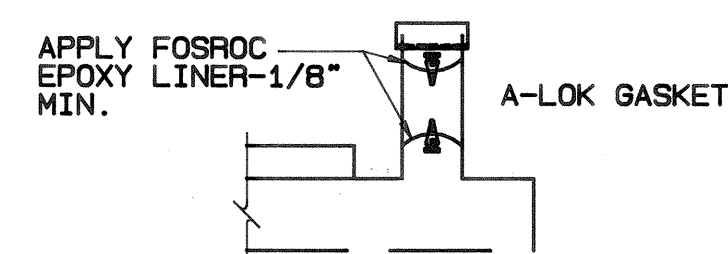
PLAN @ BASE

SCALE: 1/2" = 1'-0"



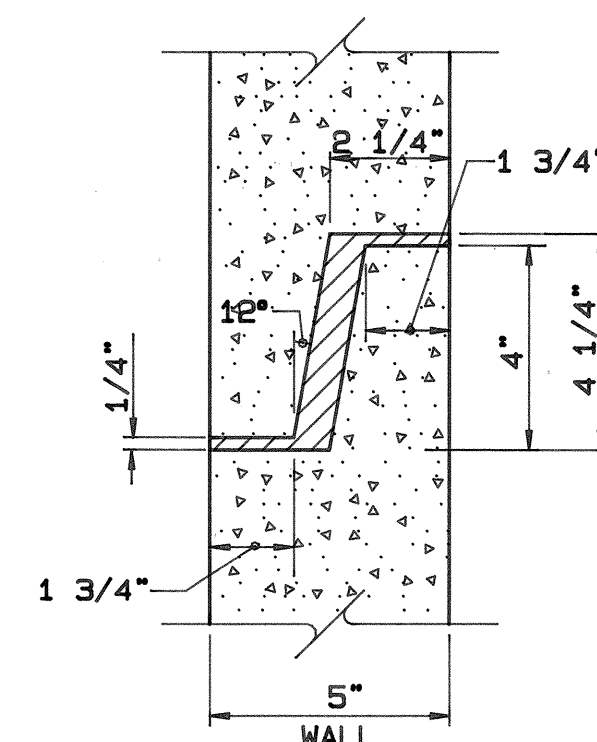
SECTION A-A

SCALE: 1/2" = 1'-0"



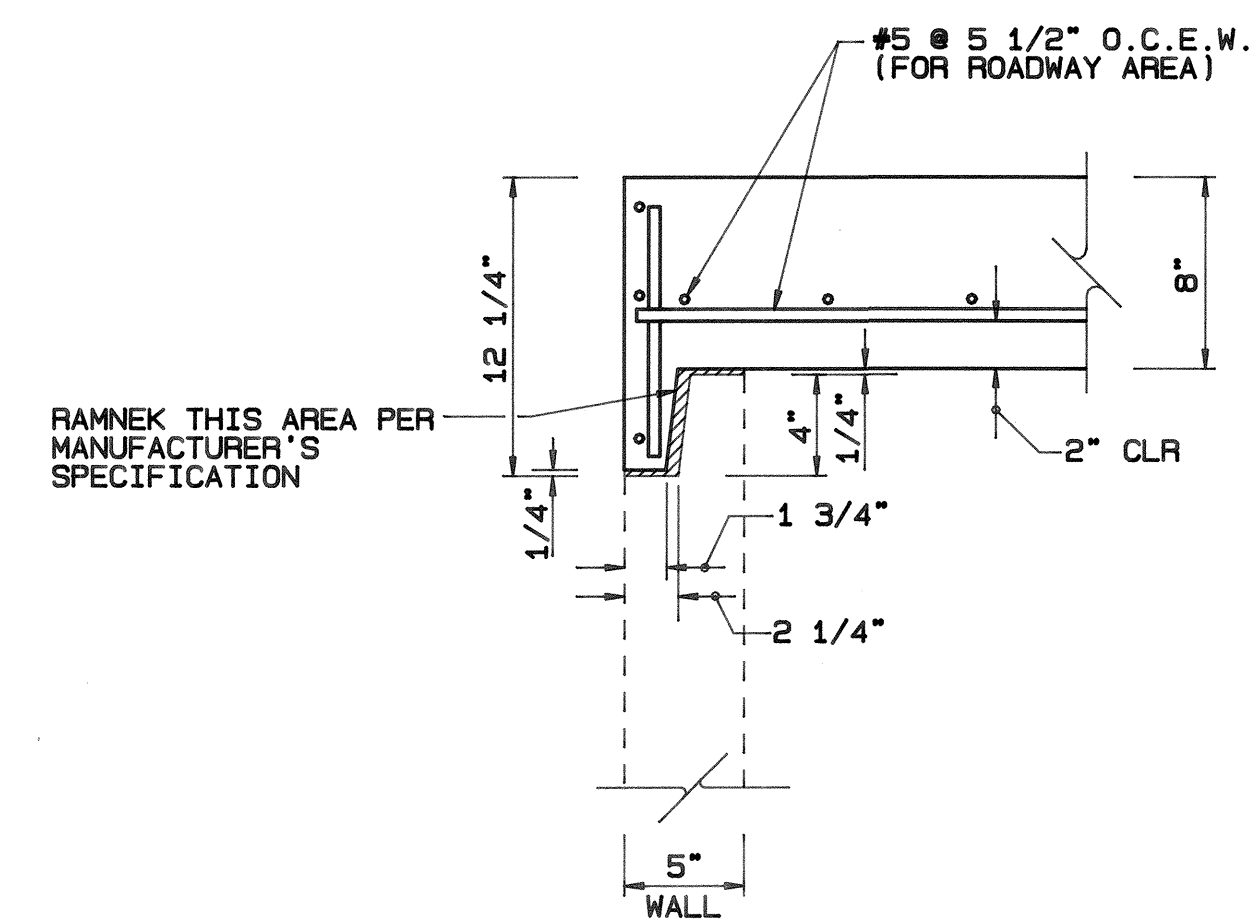
SECTION THRU WALL

SCALE: 3/4" = 1'-0"



TYPICAL MH JOINT DETAIL

SCALE: 3" = 1'-0"



TYPICAL TOP JOINT DETAIL

SCALE: 1 1/2" = 1'

NOTES:

- STANDARD PRECAST MANHOLE ELEMENTS CONFORM TO ASTM STANDARD C-478 AND AASHTO M-193
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
- ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 40 UNLESS OTHERWISE NOTED. PLACEMENT OF REBARS SHALL BE IN ACCORDANCE WITH ACI-315 AND ACI-318. ALL BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL BENDS SHALL BE MADE COLD.
- ALL REINFORCING BARS SHALL BE ACCURATELY AND SECURELY PLACED. ALL REINFORCING SHALL BE LAPPED 30 BAR DIAMETERS OR EIGHTEEN (18) INCHES, WHICHEVER IS GREATER AT SPLICES. ALL SPLICES SHALL BE MADE AWAY FROM POINT OF MAXIMUM STRESS.
- WIRE MESH SHALL CONFORM TO ASTM A-185. SUPPORTED BY SUITABLE "CHAIRS". PROVIDE A MINIMUM EIGHT (8) INCHES LAP.
- CONCRETE COVER TO REINFORCING STEEL SHALL BE 2" MINIMUM.
- FOR MANHOLES WITH LOW HEADROOM REQUIRING ITS USE WITH PRECAST BASE AND INTEGRAL RISER.

Rev	Date	Description	Eng	App

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

BELT COLLINS
H A W A I I
680 Ala Moana Blvd. First Floor Honolulu, Hawaii 96813
Phone: (808) 521-5361 Fax: (808) 538-7819
Consultant:

Client: **KM KONA PARTNERS**
PALAH TOWER, SUITE 1410
400 KEELE STREET
HONOLULU, HAWAII, 96813
PHONE: 848-7788
FAX: 848-7788

MAKALAPUA
SIGNALIZED INTERSECTION AT QUEEN
KAAHUMANU HIGHWAY AND MAKALA BLVD.

SEWER DETAILS

Designed By: **RI KT** Drawn By: **MH**
Project No. **(BCH) 333.5000** Date: **OCT. 1993**
Approved By: _____

FILE	POCKET	FOLDER	NO.