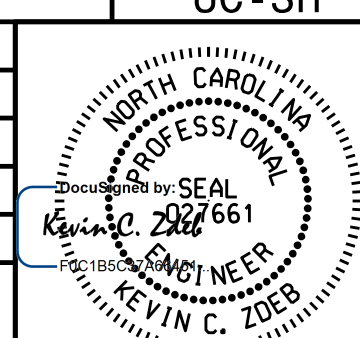

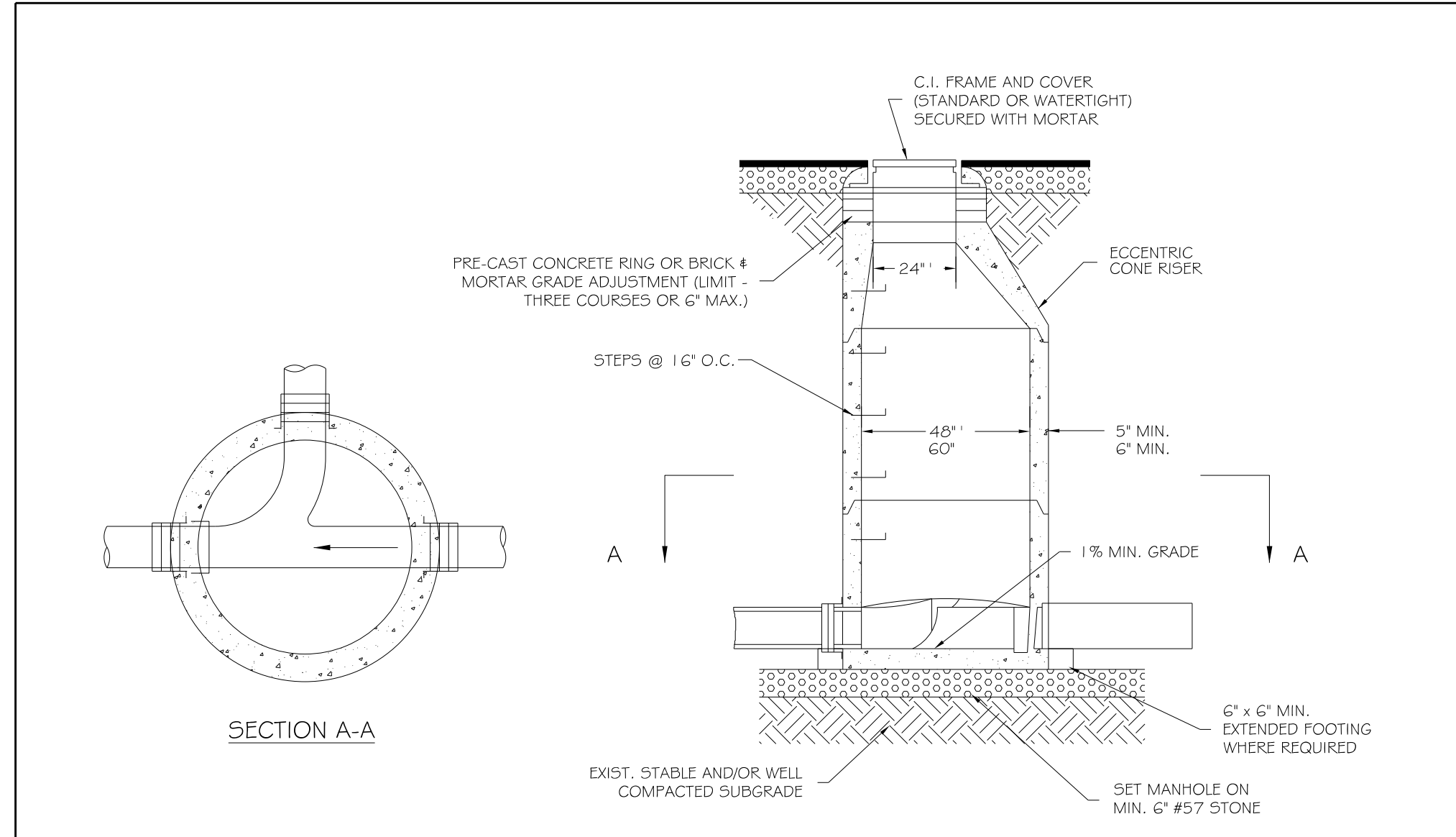


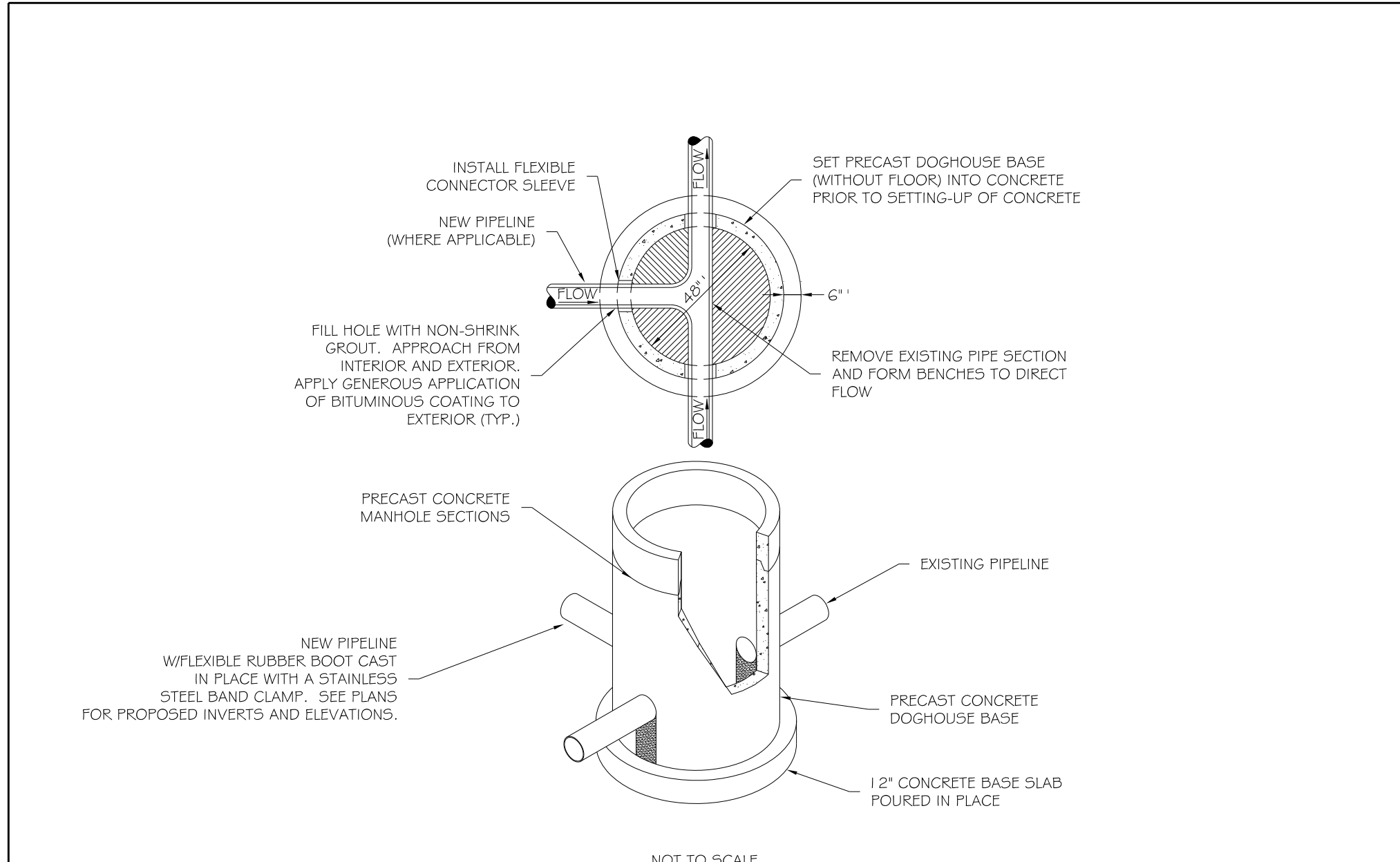
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-3330	UC-3H
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	2/22/2017
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
<i>DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED</i>	
 M A Engineering Consultants, Inc.	



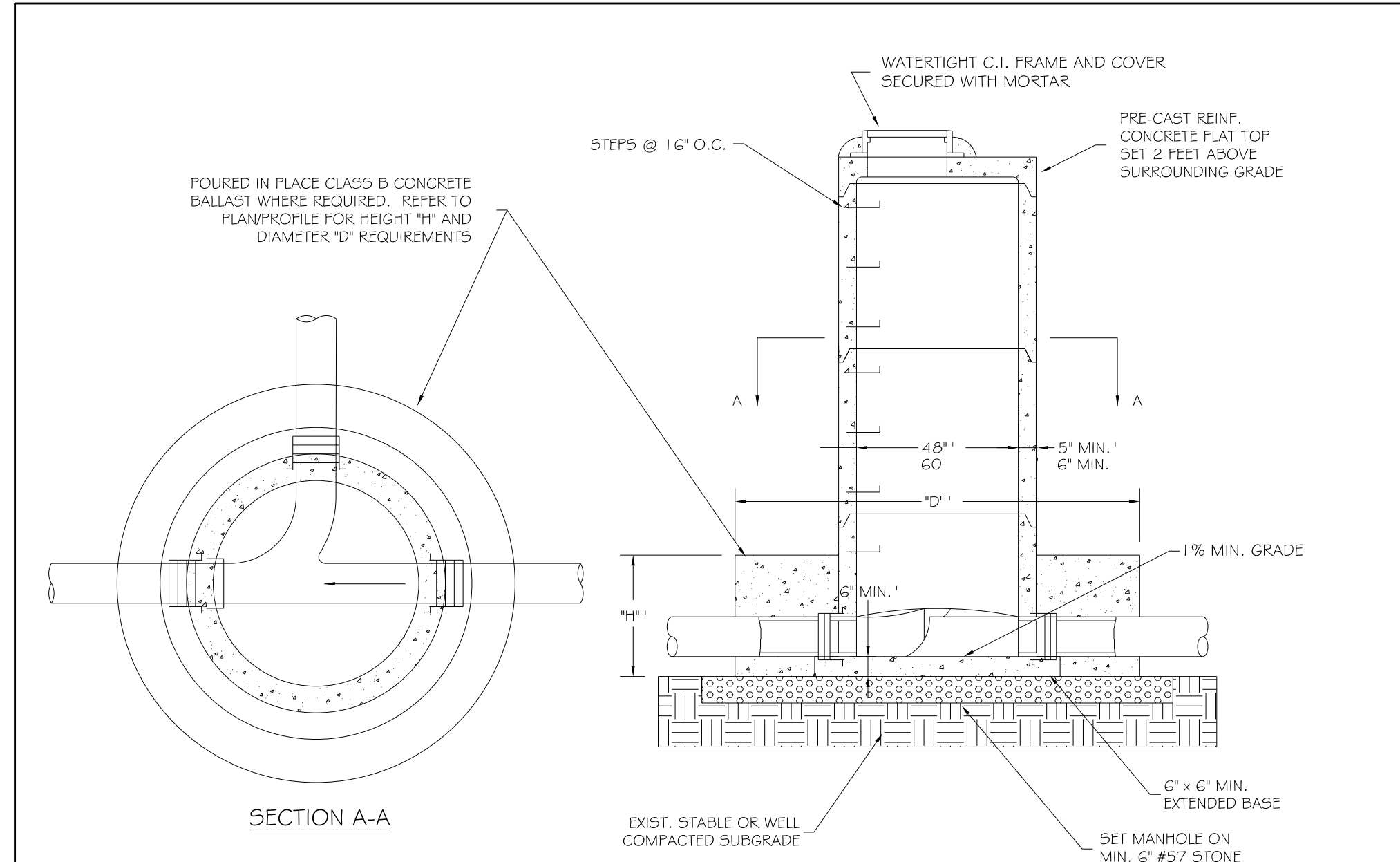
- NOTES:**
1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C748. ALL SURFACES SHALL BE SMOOTH AND EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FIN, AND OTHER IMPERFECTIONS.
 2. JOINTS BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT USING EITHER: O-RING GASKETS CONFORMING TO ASTM C-443; OR BUTYL RESIN CONFORMING TO AASHTO M-198.
 3. HOLES FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CORED. DIAMETER OF HOLE SHALL NOT EXCEED OUTSIDE DIAMETER OF PIPE BY MORE THAN 3 INCHES.
 4. CONNECTIONS OF PIPE TO MANHOLE SHALL BE MADE WATERTIGHT USING RESILIENT CONNECTORS CONFORMING TO ASTM C-923 OR NEOPRENE BOOTS EMBEDDED IN PRECAST BASE WITH STAINLESS STEEL COMPRESSION BANDS.
 5. MANHOLE INVERTS SHALL BE INSTALLED USING BRICK MORTAR, OR MANHOLES MAY BE PRECAST, MONOLITHIC SECTIONS WITH FORMED INVERTS.
 6. LIFT HOLES SHALL BE PLUGGED AND FILLED FLUSH WITH MORTAR.
 7. ALL BRICK AND MORTAR SHALL RECEIVE A ONE-HALF (1/2) INCH MORTAR PARGE COAT ON THE INSIDE AND OUTSIDE.

PRECAST CONCRETE SANITARY MANHOLE



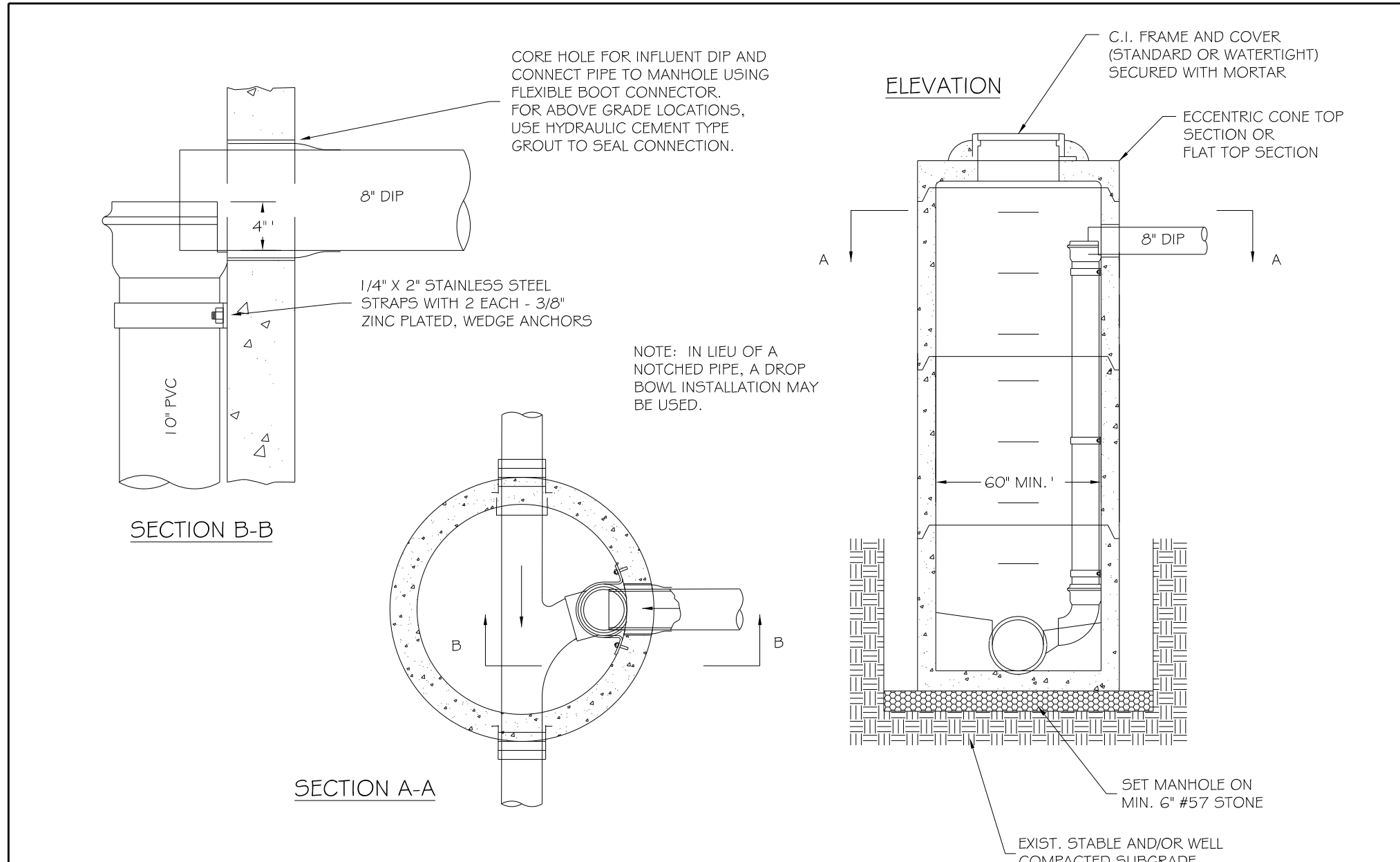
- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

DOGHOUSE SANITARY MANHOLE DETAIL



- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

SANITARY MANHOLE IN FLOOD PRONE AREA



- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

PRECAST CONCRETE SANITARY MANHOLE WITH INSIDE DROP

5/14/99