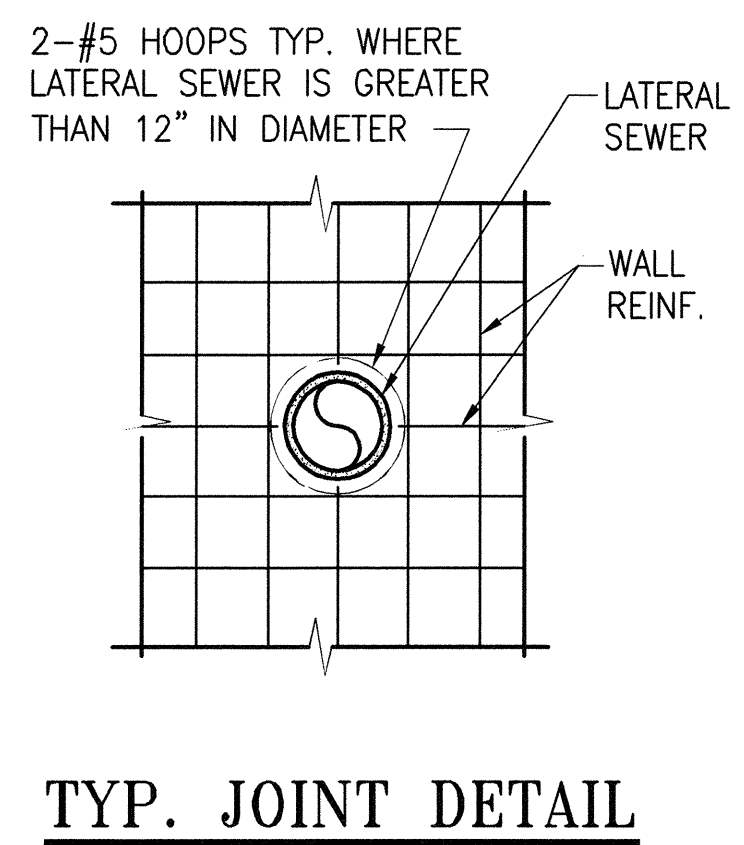
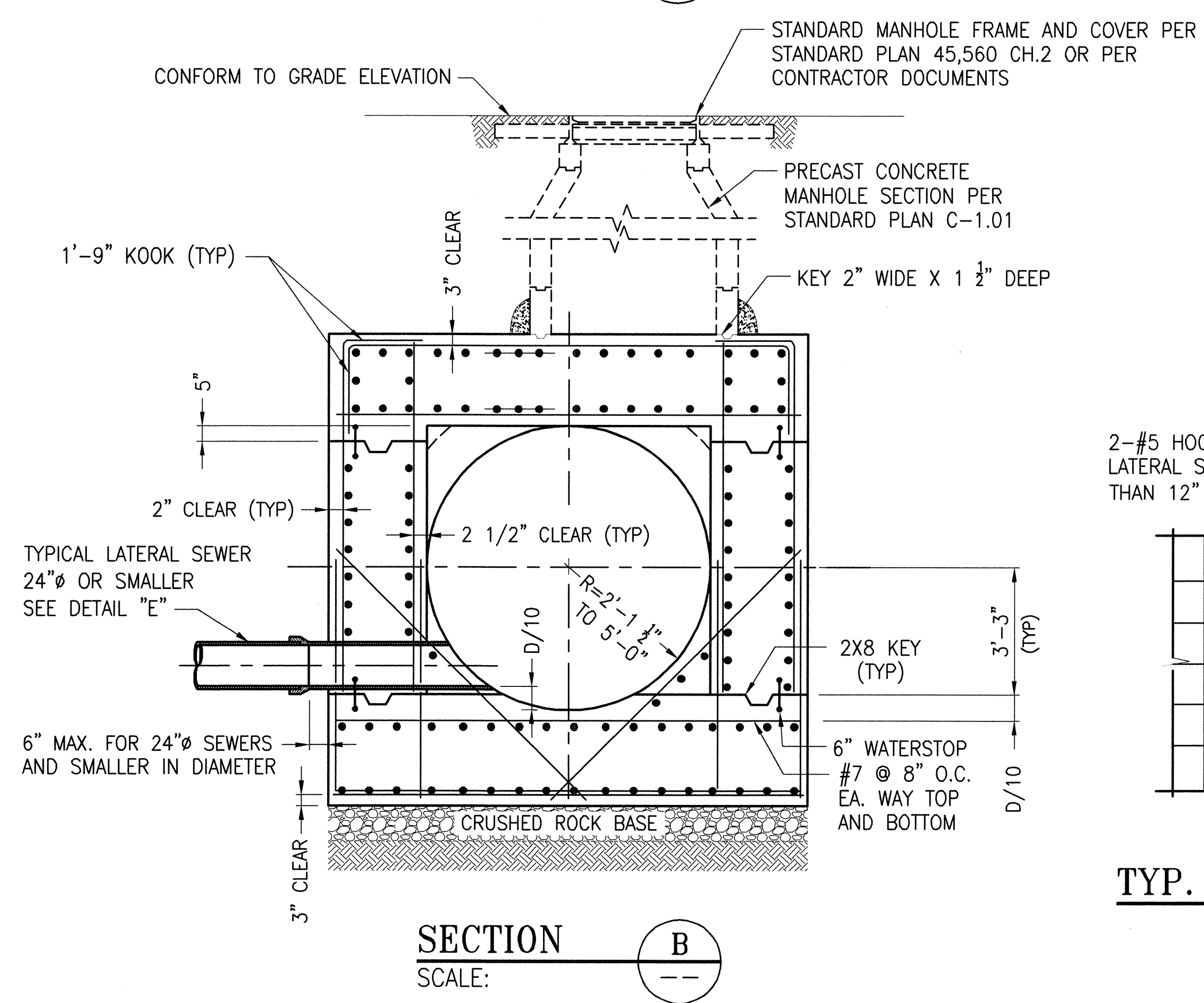
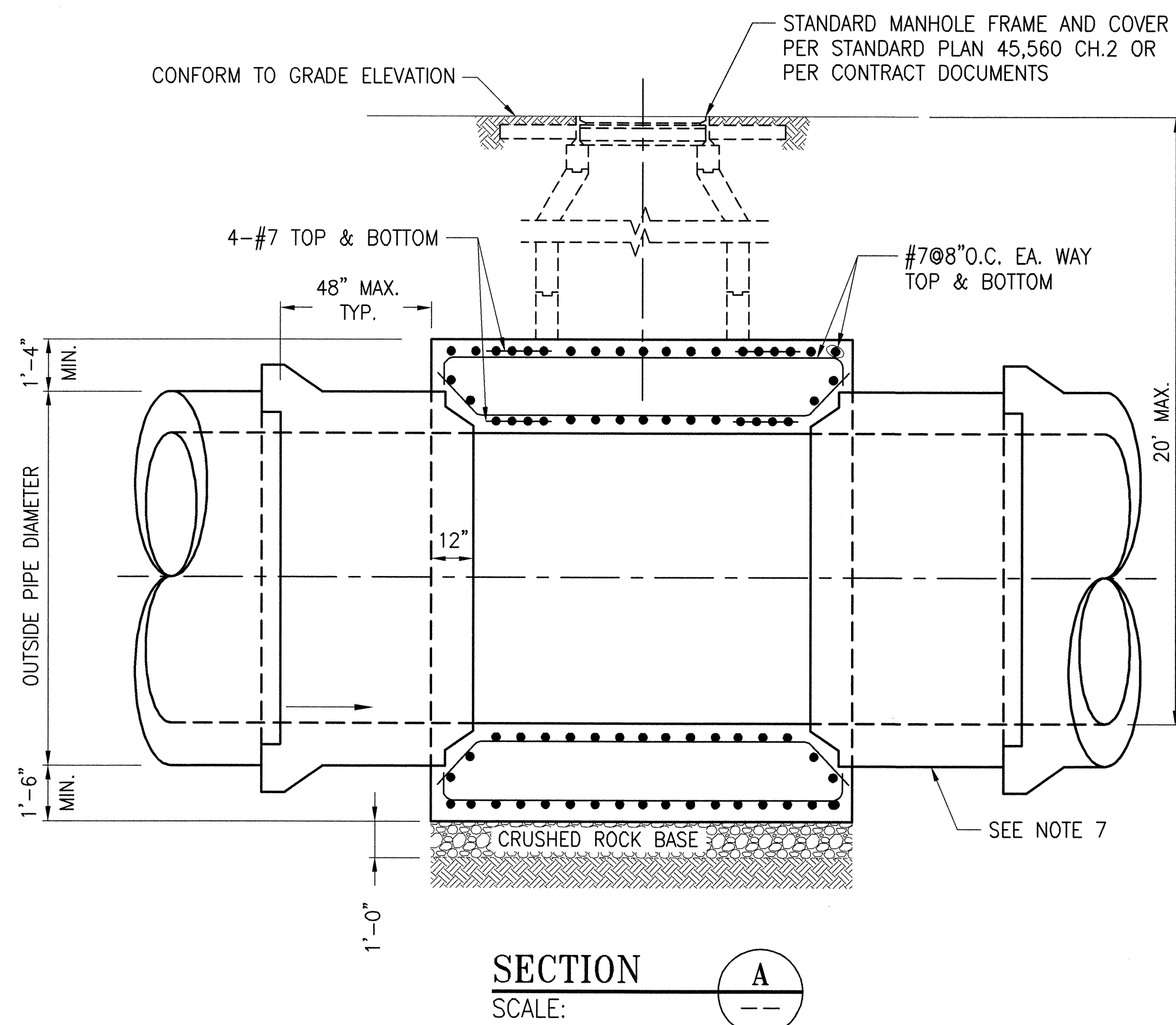
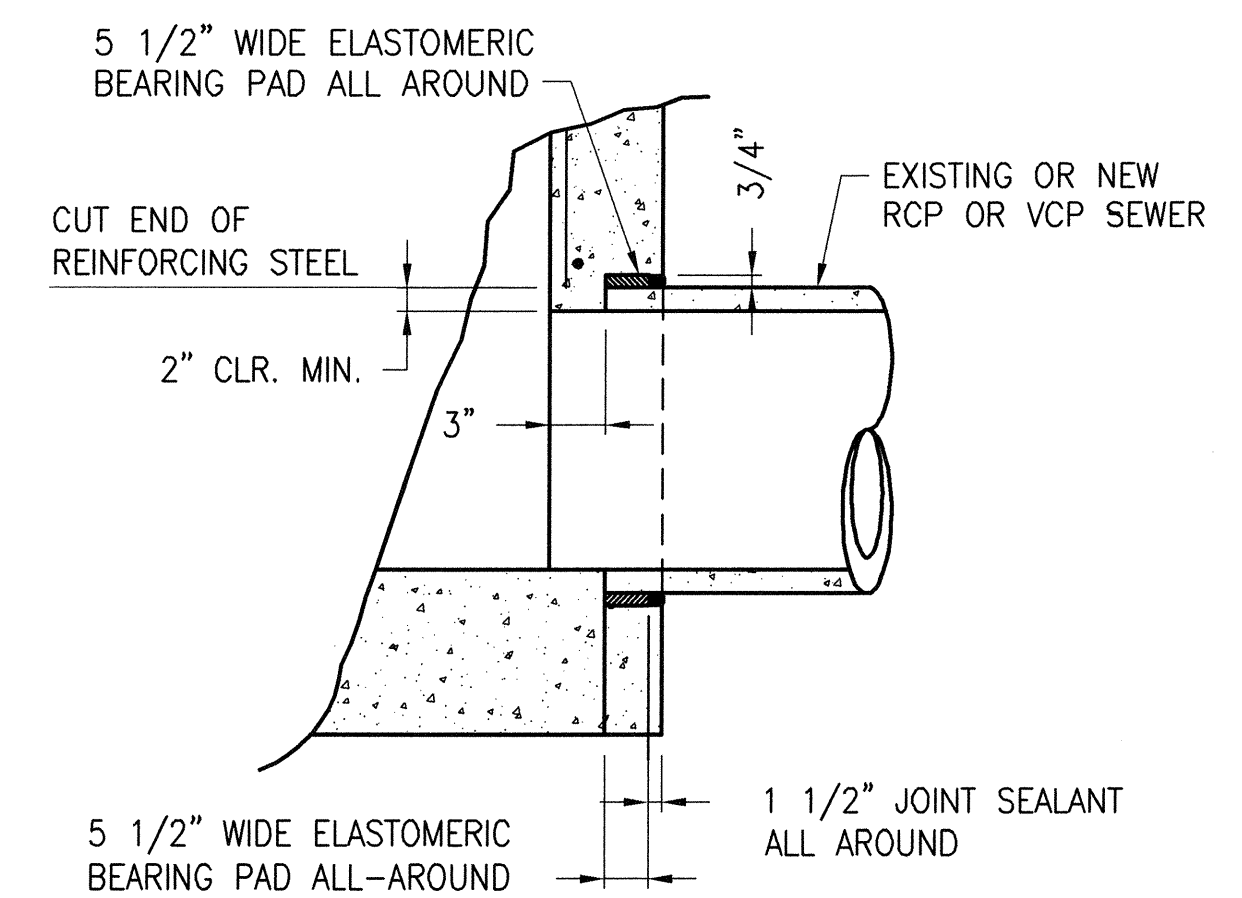
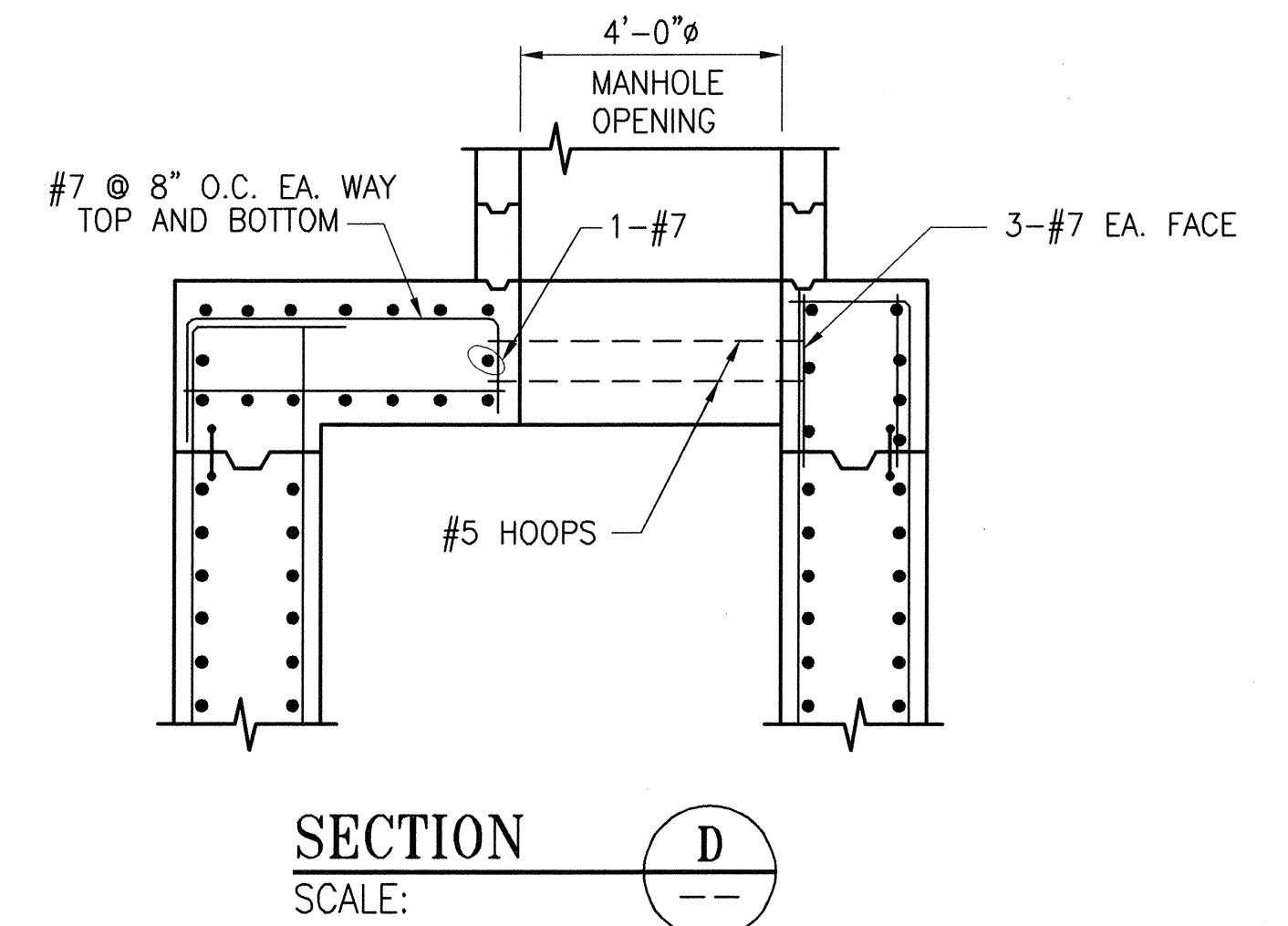
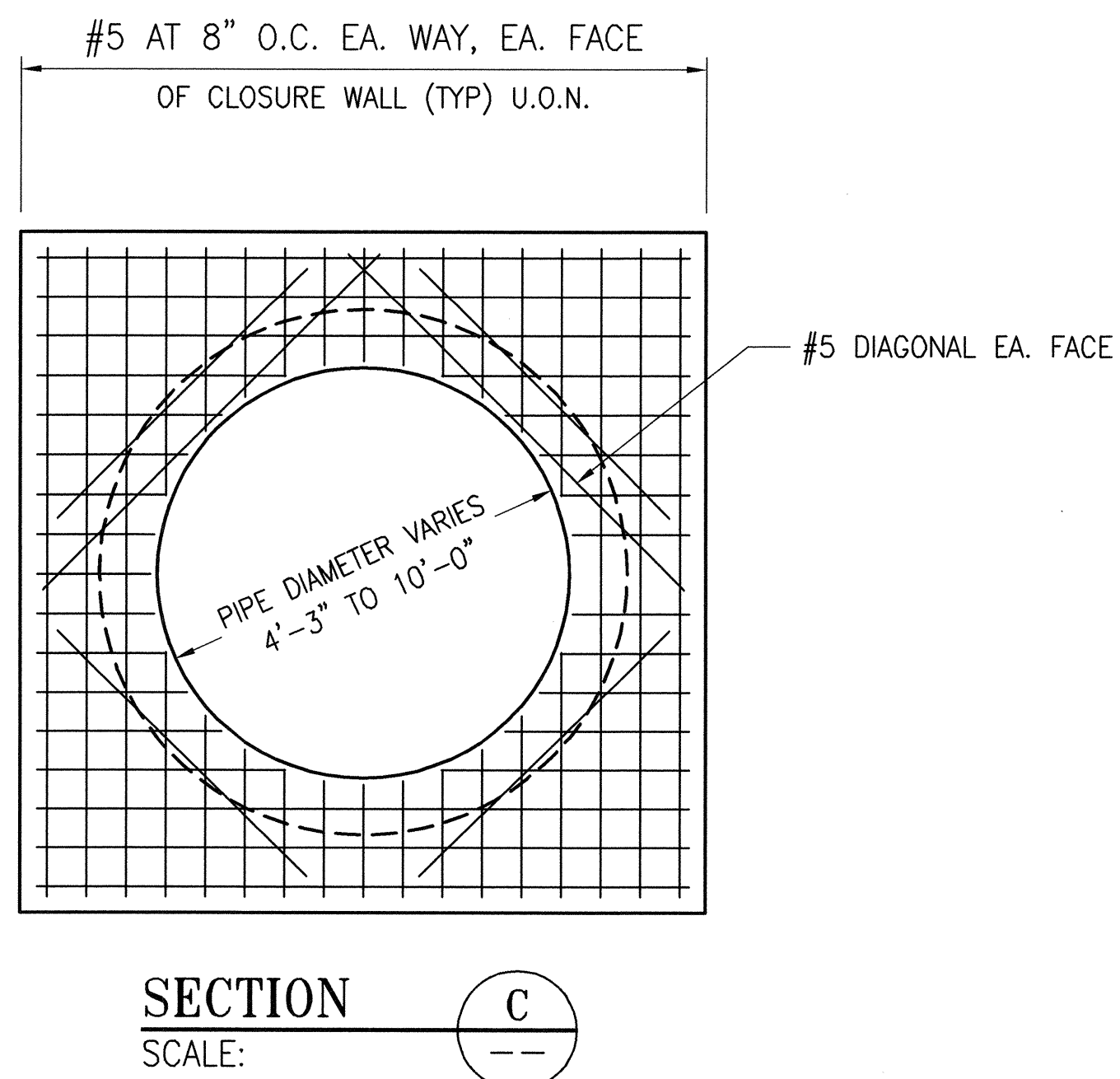
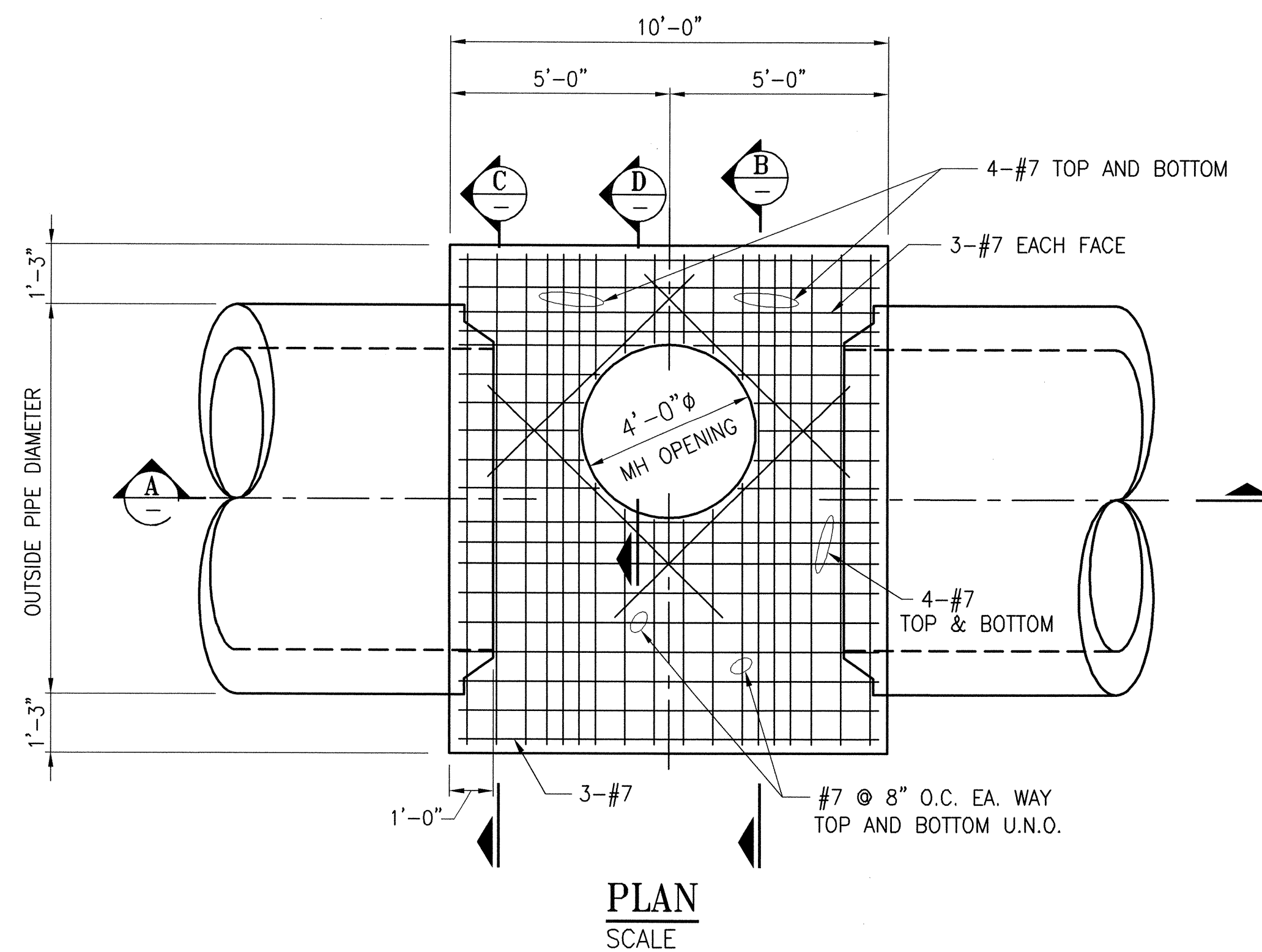


This Standard Plan was developed for use on public works projects in the City and County of San Francisco, and shall not be used without consulting a Registered Professional Engineer. The Department of Public Works reserves the right to make revisions to this Standard Plan at any time.



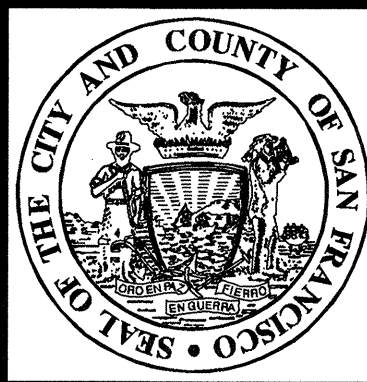
**DETAIL "E" - LATERAL SEWER PENETRATION THRU WALL DETAIL**

**GENERAL NOTES**

1. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, WITH  $f_y=60,000$  psi.
2. CAST-IN-PLACE CONCRETE SHALL BE CLASS 7-4000-3/4.
3. PROVIDE CONTINUOUS BENDS AT ALL CORNER OR LAP BARS 30 DIA.
4. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478.
5. MANHOLE FRAME AND ALL JOINTS SHALL BE SET IN A FLEXIBLE GASKET-JOINT SEALANT (RUB'R-NEK).
6. CONTRACTOR SHALL MINIMIZE THE NUMBER OF SECTION RINGS BY UTILIZING LARGEST SECTIONS AVAILABLE.
7. USE STEEL WALL ANCHOR RING CONNECTION PER CONTRACT DOCUMENTS FOR PIPE 42" AND GREATER.

NO.	DATE	DESCRIPTION	BY	APP.
TABLE OF REVISIONS				
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION				

REFERENCE INFORMATION & FILE NO. OF SURVEYS



**BUREAU OF ENGINEERING**  
**DEPARTMENT OF PUBLIC WORKS**  
**CITY AND COUNTY OF SAN FRANCISCO**

REVIEWED: DATE: ID 12/2006	PLANS APPROVAL DATE: APRIL 30, 2007
DRAWN: DATE: AM 07/2005	SECTION MANAGER: <i>[Signature]</i> 4/30/07
CHECKED: DATE: KS 12/2006	DEPUTY BUREAU MANAGER: <i>[Signature]</i> 4/30/07
	BUREAU MANAGER: <i>[Signature]</i>

**STANDARD PLAN**  
**HYDRAULICS**  
**STANDARD CONCRETE MANHOLE**  
**FOR PIPE SEWERS 4'-3" TO**  
**10'-0" DIAMETER**

OLD FILE NO. A-19,301.1
FILE NO. 87,183
REV. NO.

Drawing Path: V:\0966J Standard Plans & Specs Update\2\_Plans\Title\_Blocks\BCE STD Title Block.dwg  
 Plot Time: Fri, 27 Apr 2007 7:20pm  
 Dimension Scale: 24  
 Model Units: Feet