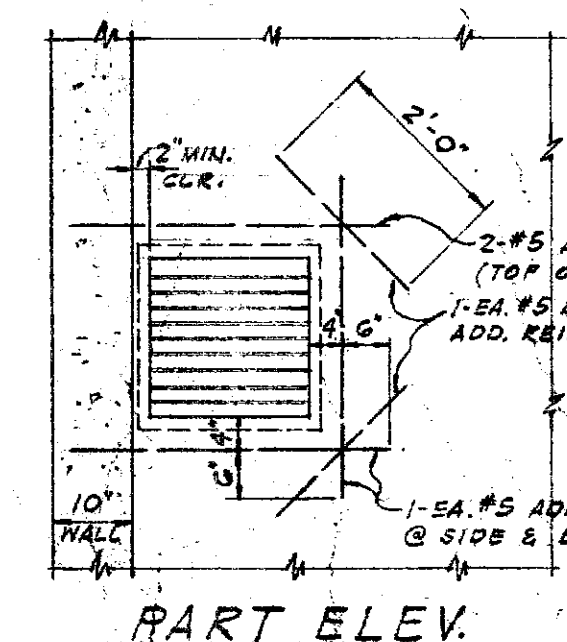
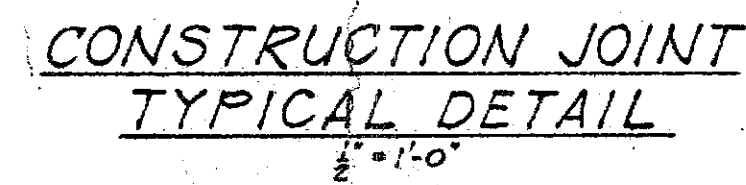
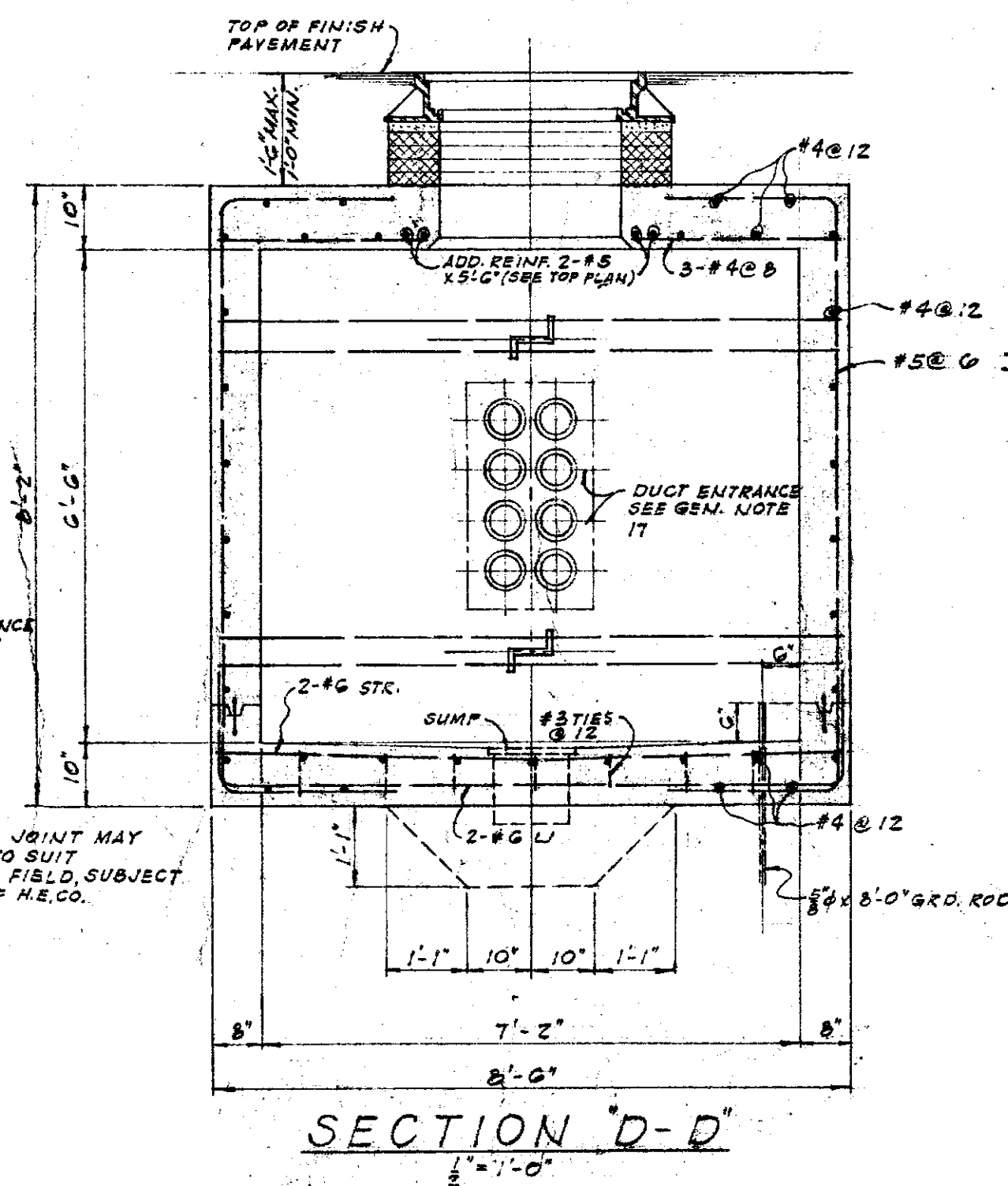
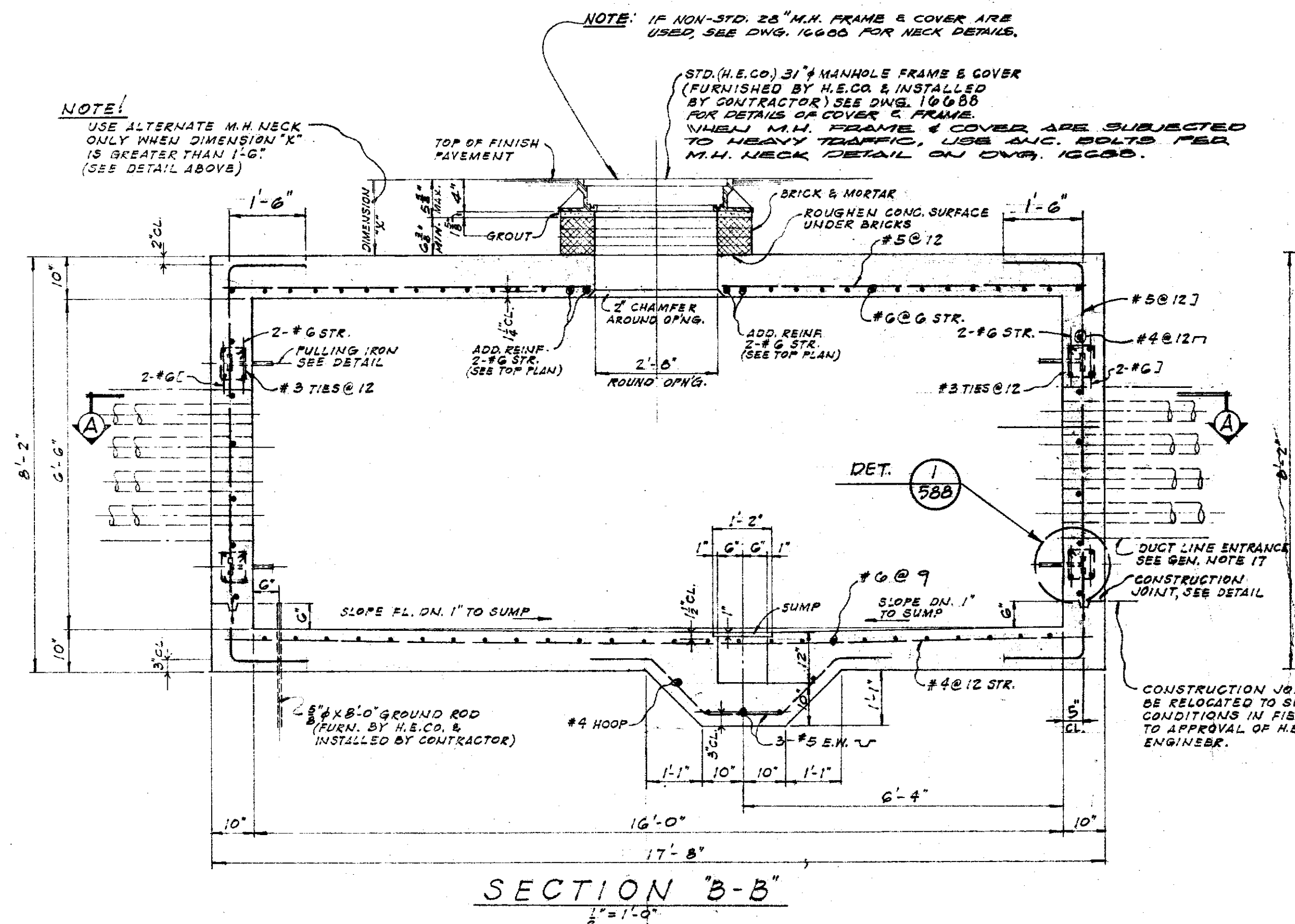
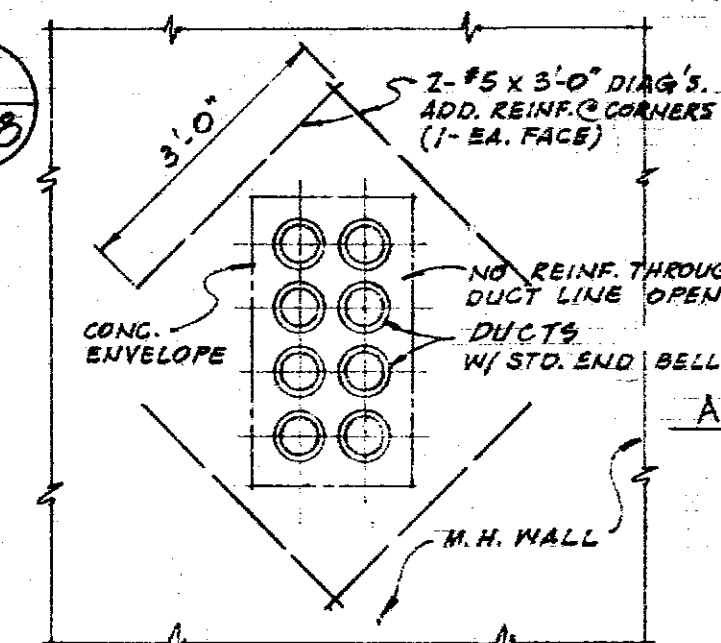
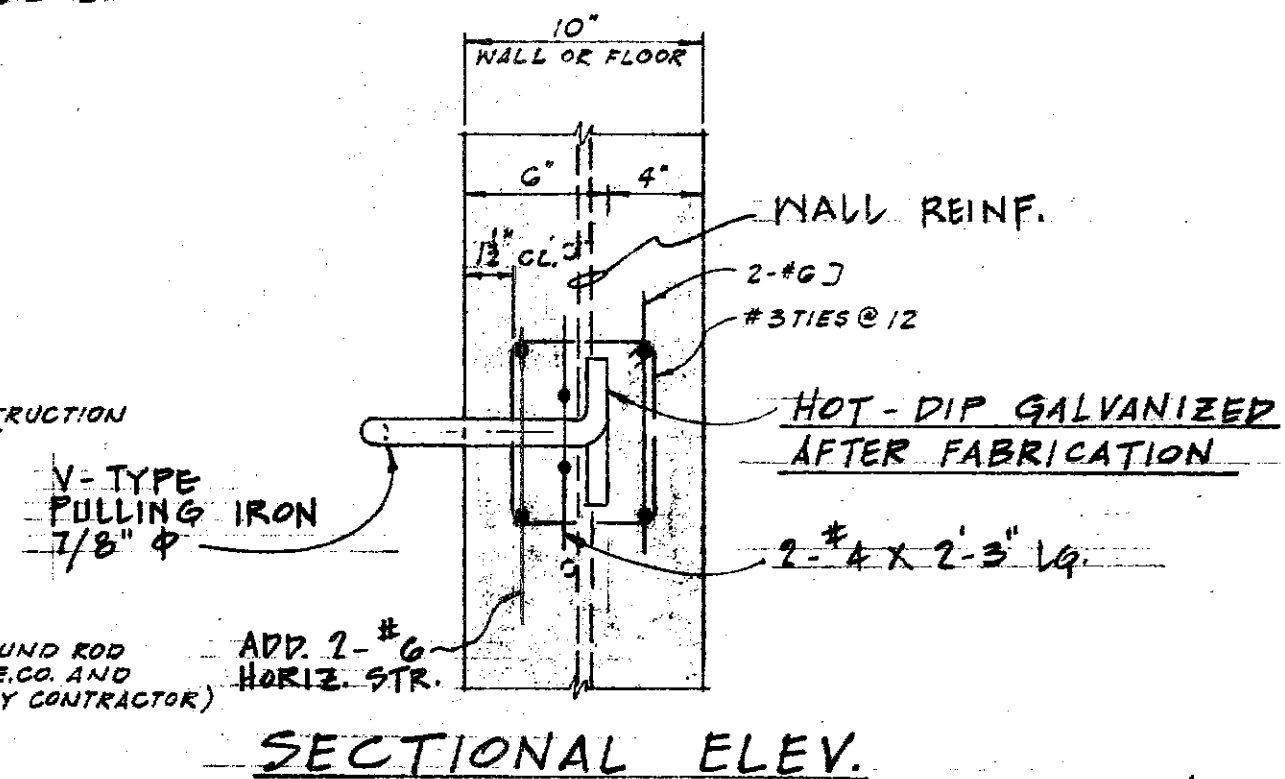
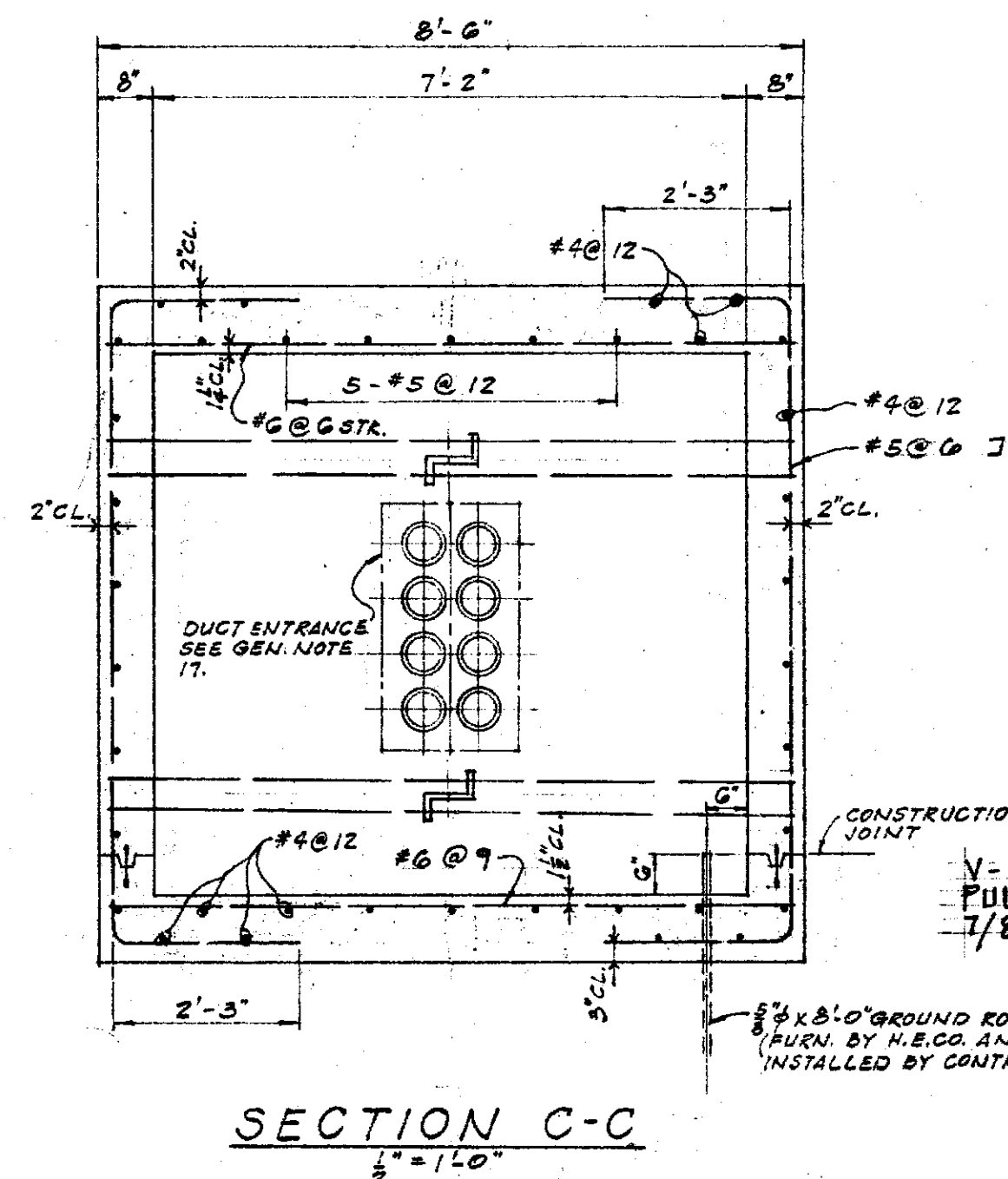
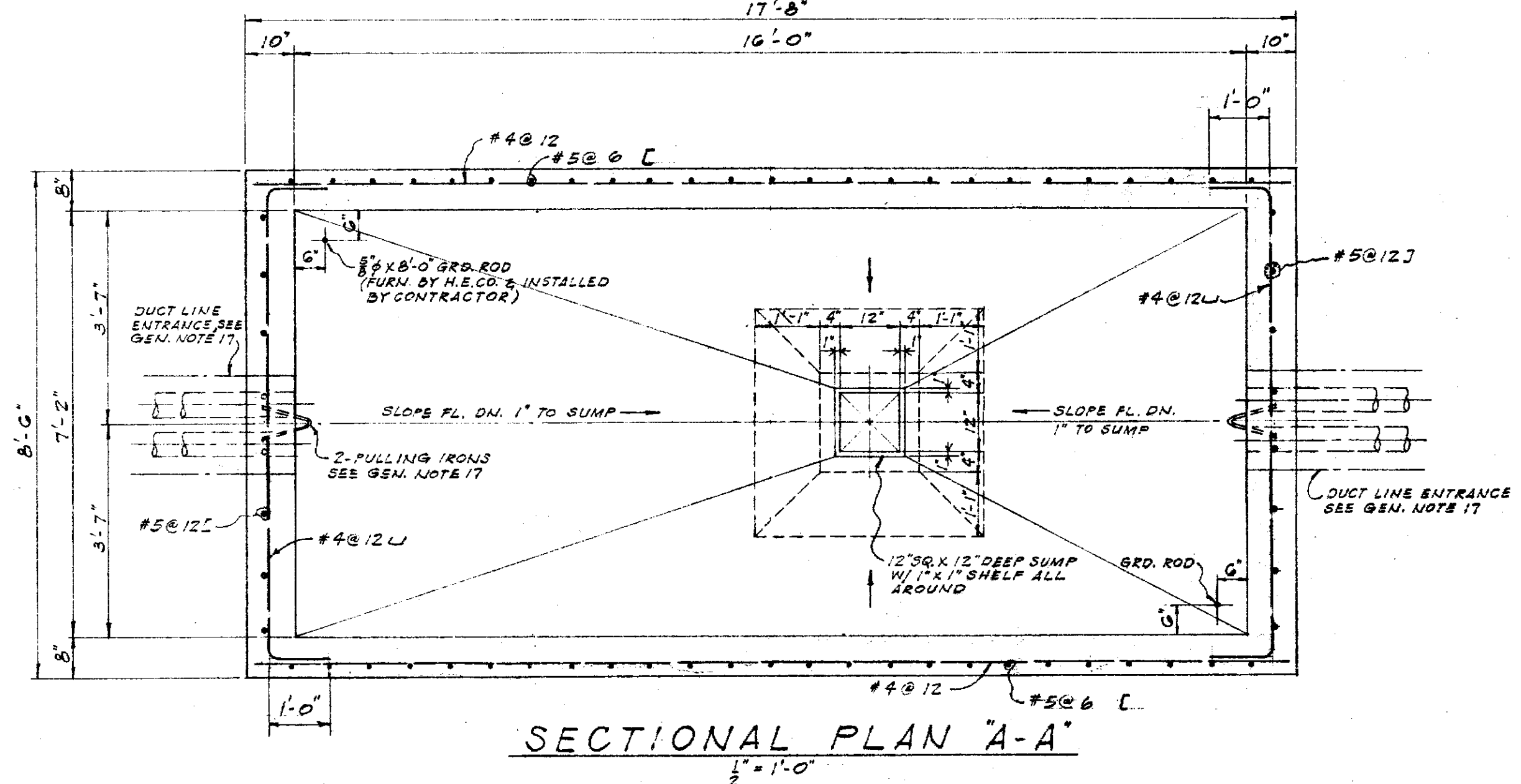
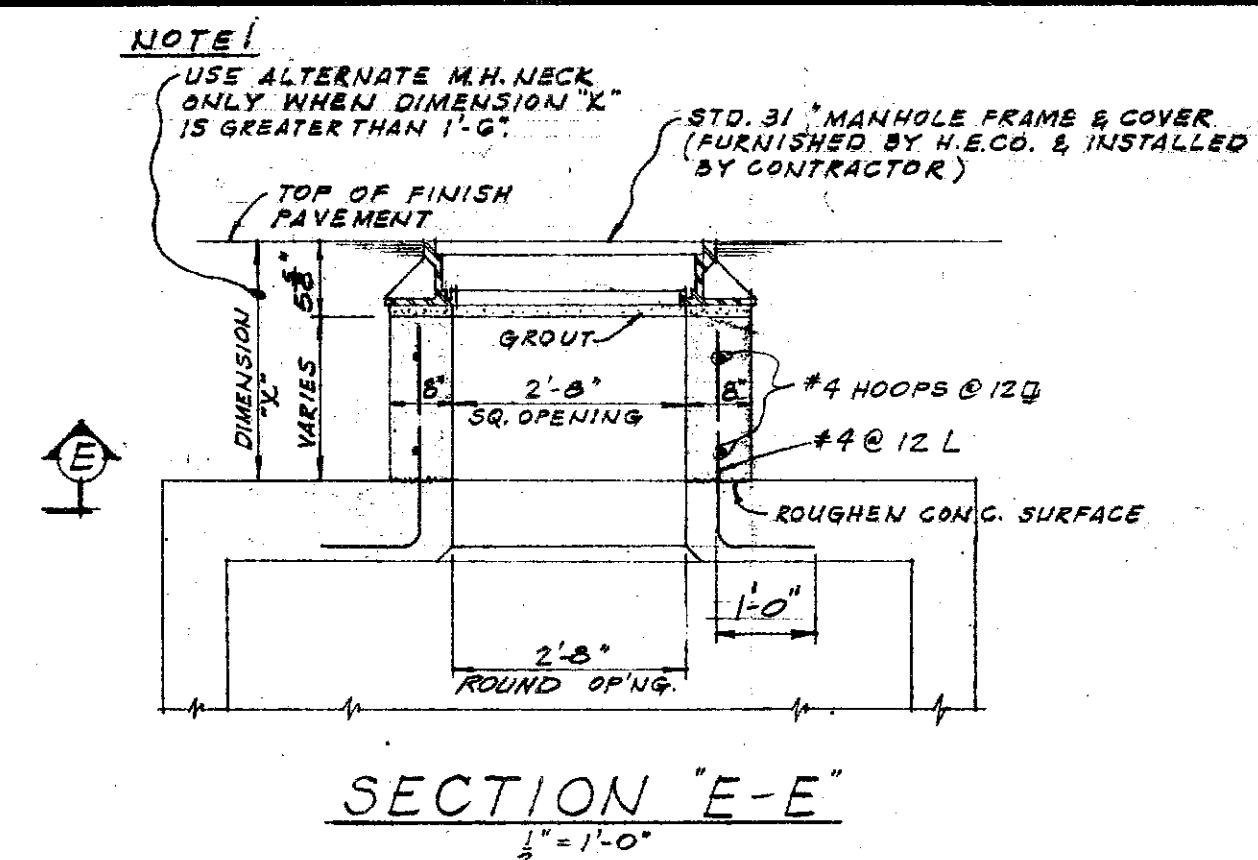
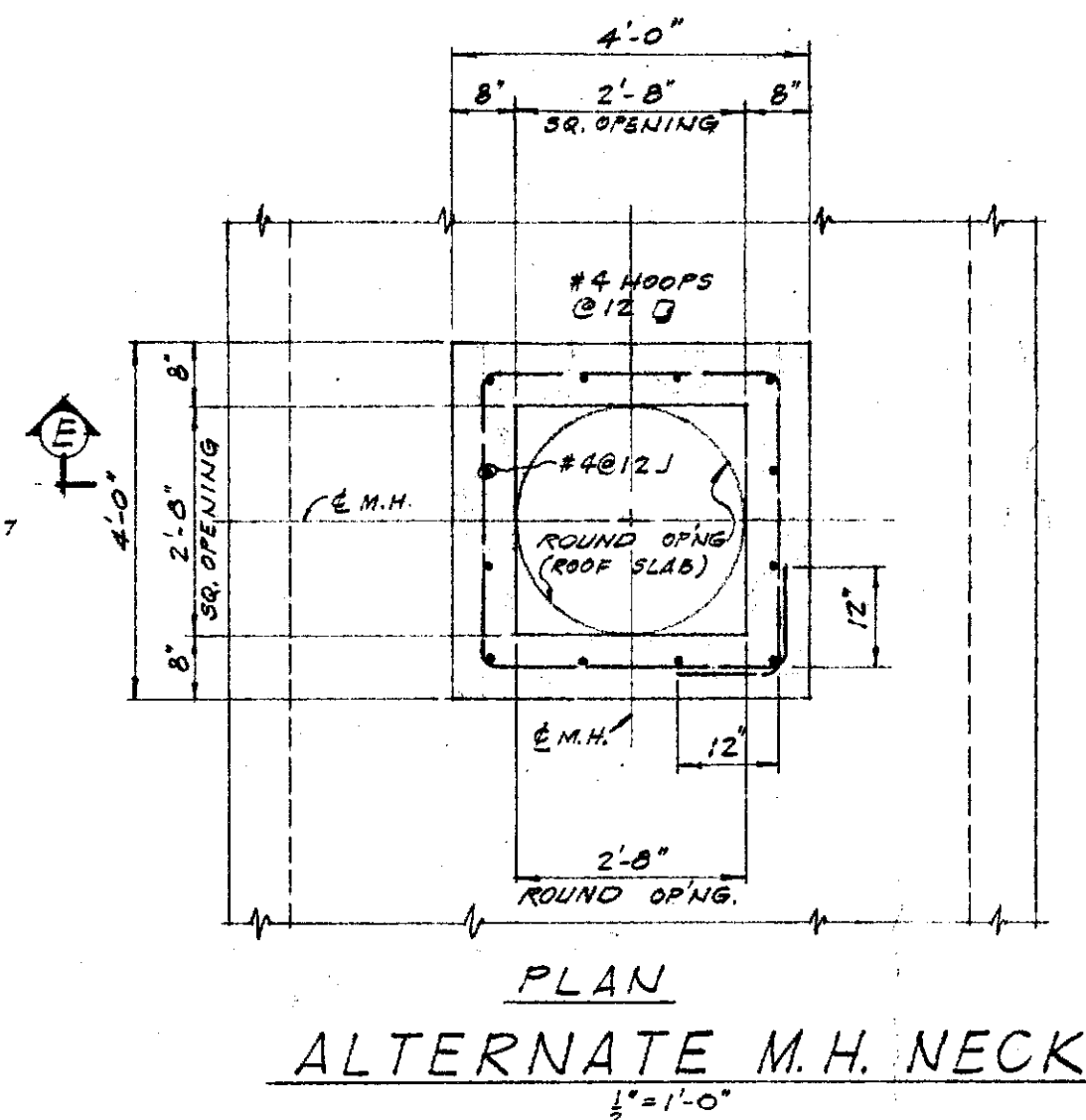
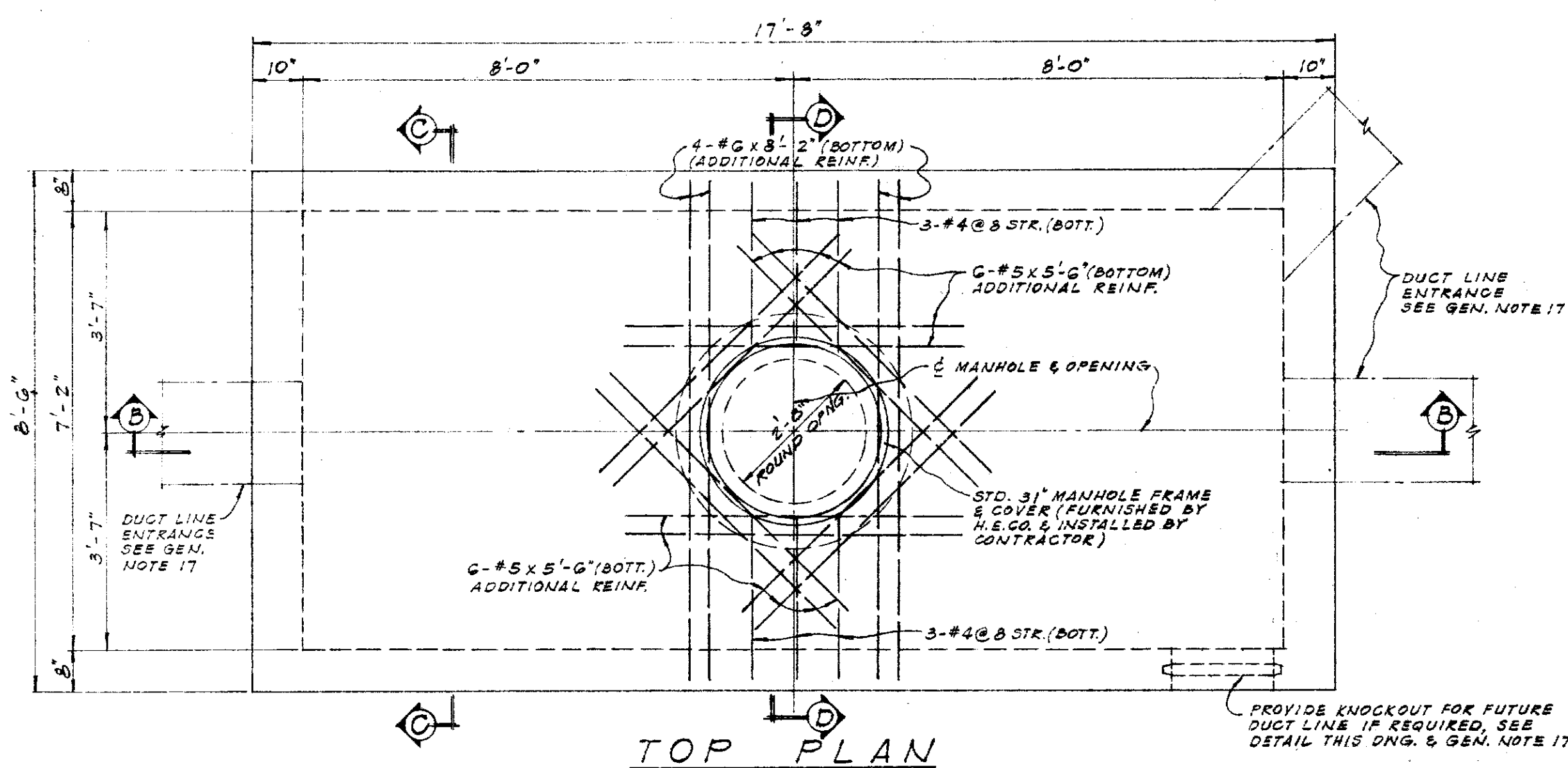




- GENERAL NOTES.

1. EXCAVATIONS: EXCAVATE FOR MANHOLE TO ACCURATE ALIGNMENT, GRADES AND DIMENSIONS AS SHOWN IN DRAWINGS. ALL EXCAVATION MUST BE APPROVED BY THE ENGINEERING DEPT., H.E.CO., BEFORE ANY CONCRETE IS POURED. ALL EXCESS CUT SHALL BE BACKFILLED WITH CONCRETE OR ROCKS.
2. BACKFILL: REMOVE ALL DEBRIS BEFORE BACKFILLING. BACKFILL IN ACCORDANCE WITH LATEST SPECIFICATIONS OF DIVISION OF HIGHWAYS, STATE OF HAWAII, OR DIVISION OF ENGINEERING, CITY & COUNTY OF HONOLULU, WHICHEVER AGENCY HAS AUTHORITY OVER THE WORK.
3. ALL WORK TO BE DONE IN DRY.
4. CONCRETE COMPRESSIVE STRENGTH: 3,000 P.S.I. IN 28 DAYS.
5. MIXING: READY-MIXED A.S.T.M. C-94.
6. REINFORCING: ROUND REFORMED BARS (CLEAN & NEW)
7. SPLICE: LAP 30 BAR DIAMETERS UNLESS OTHERWISE SHOWN.
8. CURING: KEEP CONCRETE MOIST AT LEAST 7 DAYS AFTER POURING (BY APPROVED METHOD)
9. FINISH: ALL SURFACES SMOOTH AND FREE FROM DEFECTS.
TOP OF MANHOLE - WOOD FLOATED
MANHOLE FLOOR - STEEL TROWELLED
INSIDE WALLS & CEILING - CEMENT WASHED
10. INSTALL ALL INSERTS, INCLUDING PULLING IRONS, GROUND RODS, AND ETC., BEFORE POURING CONCRETE.
11. POURING: NOTIFY THE H.E.CO. CONTRACTING & INSPECTION DIV., PH. 548-5668 OR 548-7771 24 HOURS BEFORE POURING ANY CONCRETE. ALL CONCRETE POURING SHALL BE DONE IN THE PRESENCE OF AN H.E.CO. ENGINEER OR INSPECTOR.
12. FORMS: MAKE OF GOOD SOUND LUMBER OF SUFFICIENT STRENGTH, WATER TIGHT AND CONFORMING TO SHAPE AND DIMENSIONS INDICATED ON DRAWINGS.
13. THE HAWAII ELECTRIC CO. INC. TO FURNISH AND CONTRACTOR TO INSTALL, FOR EACH MANHOLE:
A. 2 - 8"x8"-O" COPPERWELDED GROUND RODS.
B. STANDARD (H.E.CO.) 3" MANHOLE FRAME & COVER.
14. SLOPE MANHOLE FLOOR DOWN 1" TOWARDS SUMP.
15. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE HAWAII ELECTRIC CO. INC. AND/OR DIVISION OF HIGHWAYS, STATE OF HAWAII, OR DIVISION OF ENGINEERING, CITY & COUNTY OF HONOLULU.
16. ALL MATERIALS SHALL BE NEW AND MANUFACTURED IN THE UNITED STATES OF AMERICA.
17. FOR NUMBER, SIZE AND EXACT LOCATION OF DUCT ENTRANCES & PULLING IRONS, REFER TO PROJECT DRAWINGS.

- REFERENCE DRAWINGS

- CS 7001 CONSTRUCTION OF UNDERGROUND FACILITIES
(6 SHEETS) SPECIFICATION SHEET
- CS 7003 CONSTRUCTION OF ELECTRICAL FACILITIES
(4 SHEETS) SPECIFICATION SHEET
- 16688 STANDARD H.E.CO. 31" MANHOLE COVER
- 16688 STANDARD H.E.CO. 31" MANHOLE FRAME
- 16688 MISCELLANEOUS DETAILS, MANHOLES
AND HANDHOLES

SPECIAL.

- | APPROXIMATE QUANTITY OF MATERIALS, (M.H. ONLY) | | |
|--|------|------|
| CONCRETE | 19 | C.Y. |
| REINFORCING | 2500 | LB. |
| MISC. STEEL (PULL'G IRON, EA.) | 12 | LB. |

KALANIANA'OLE HIGHWAY WIDENING
PHASE I

5	9-1-81	CHANGED WALL STEEL. REVISED PULLING IRON DETAILS	RQ	#4	AL
4	6/27/79	REMOVED PULLING IRONS FROM FLOOR	MM	#4	ST
3	4-4-74	REMOVED "SEE GENERAL NOTE 17" & ADDED 1/2" DIA. 14 IN SECT. PLAIN "A"	AL	#4	ST
2	1-21-71	REVISED GENERAL NOTE #11 AND REFERENCE DRAWINGS	HC	#4	ST
6	9-18-85	UP-DATED DRAWING	RQ	PAC	AL
NO.	DATE	REVISIONS	BY	CHK'D	APP'D

MANHOLE TYPE No 4 (7'-2" x 16'-0")
 SURFACE PLAN, SECTIONS & DETAILS
 UNDERGROUND STANDARDS

DESIGNED	HKJ	DRAWN	S.L.U.	DATE	11-23-85	SCALE	AS NOTED
CHECKED	ELC. MECH. ETRUC.						
APPROVAL	H.K. [Signature] L. [Signature]			ENGINEERING DEPARTMENT HAWAIIAN ELECTRIC CO., INC. HONOLULU, HAWAII			
	[Signature]			DRAWING NUMBER 15588			
				REV. 6			