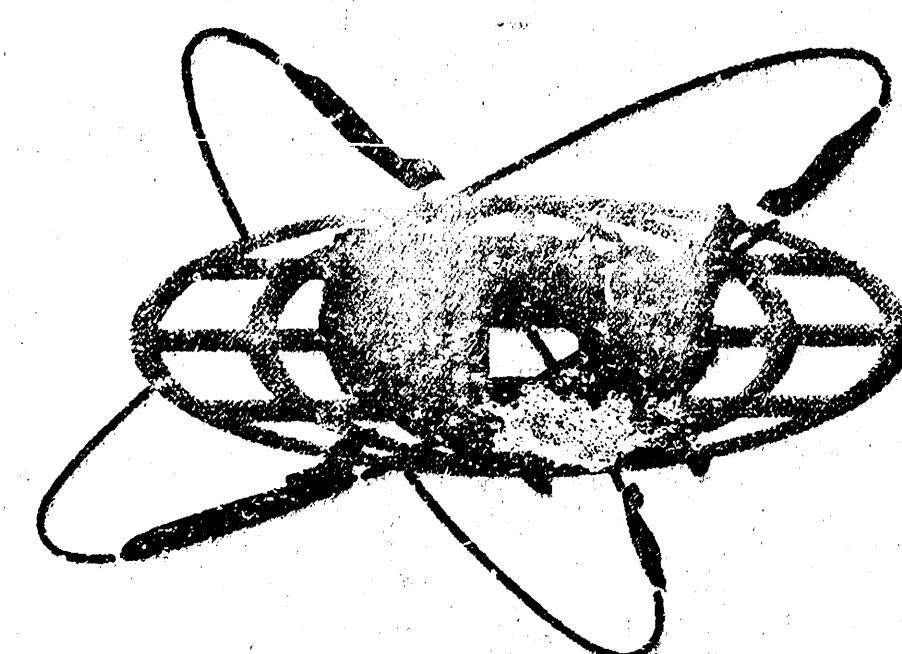


THE WICHITA AIRPORT AUTHORITY
WICHITA, KANSAS
COLONEL JAMES JABARA AIRPORT

PLANS FOR
TAXIWAY "L" SITE DEVELOPMENT
~~WATER MAIN EXTENSION~~
PROJECT NO. 920PPW (607 857)
SANITARY SEWER EXTENSION
PROJECT NO. 908PPS (607 861)

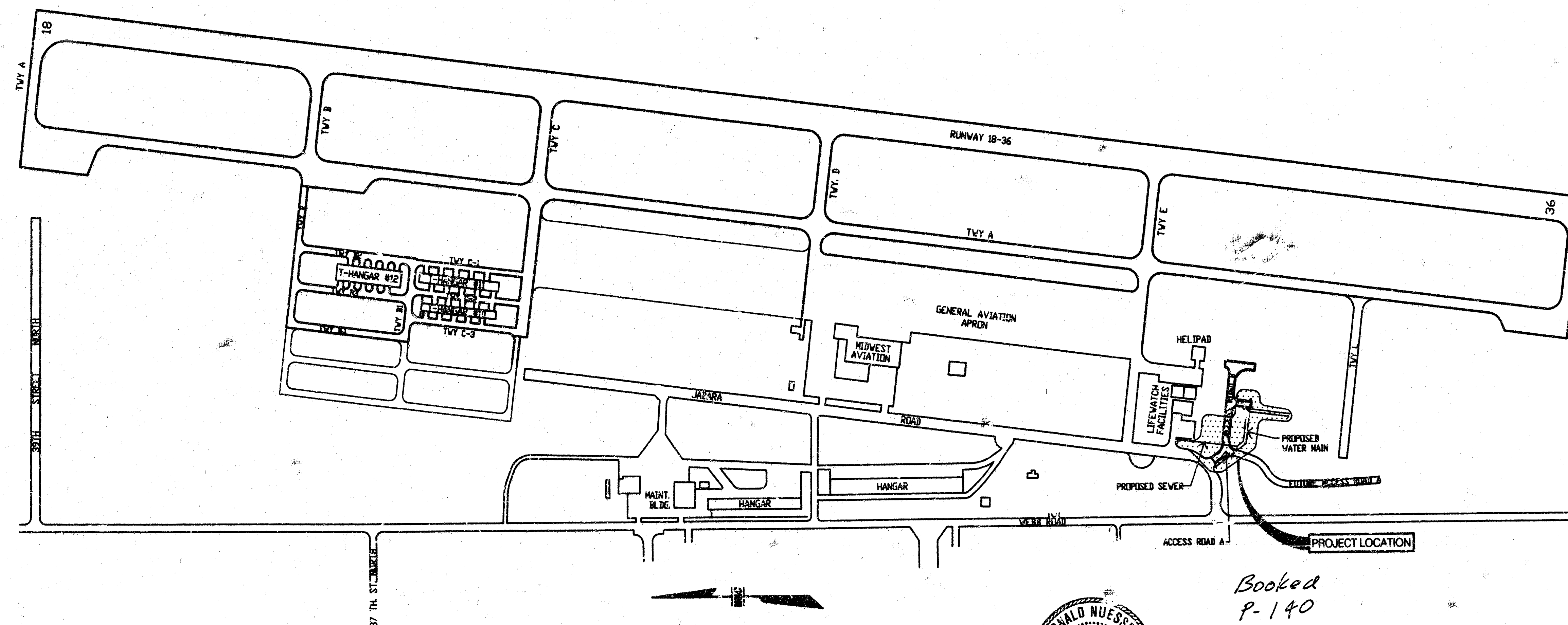
INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND INDEX TO DRAWINGS
2	DETAILS
3	WATER LINE PLAN AND PROFILE
4	WET WELL LAYOUT DETAILS
5	WET WELL ELECTRICAL DETAILS
6	STANDARD TYPE P" MANHOLES
7	SANITARY SEWER PLAN AND PROFILE

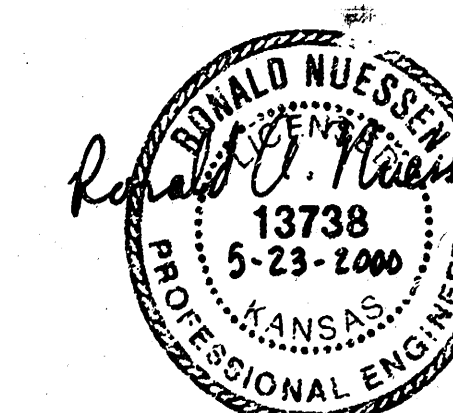


THE WICHITA AIRPORT AUTHORITY

ROBERT L. ALFORD, PRESIDENT
JAMES M. GREGORY, 1ST VICE PRESIDENT
RONALD CORNEJO, 2ND VICE PRESIDENT
ELIZABETH BAKER, MEMBER
DAVID BAYOUTH, MEMBER
ALAN COBB, MEMBER
DALE DIGGS, JR., MEMBER
JOHN E. DUGAN, MEMBER
RONALD MAPNELL, MEMBER



LOCATION MAP
SCALE: 1"=300'



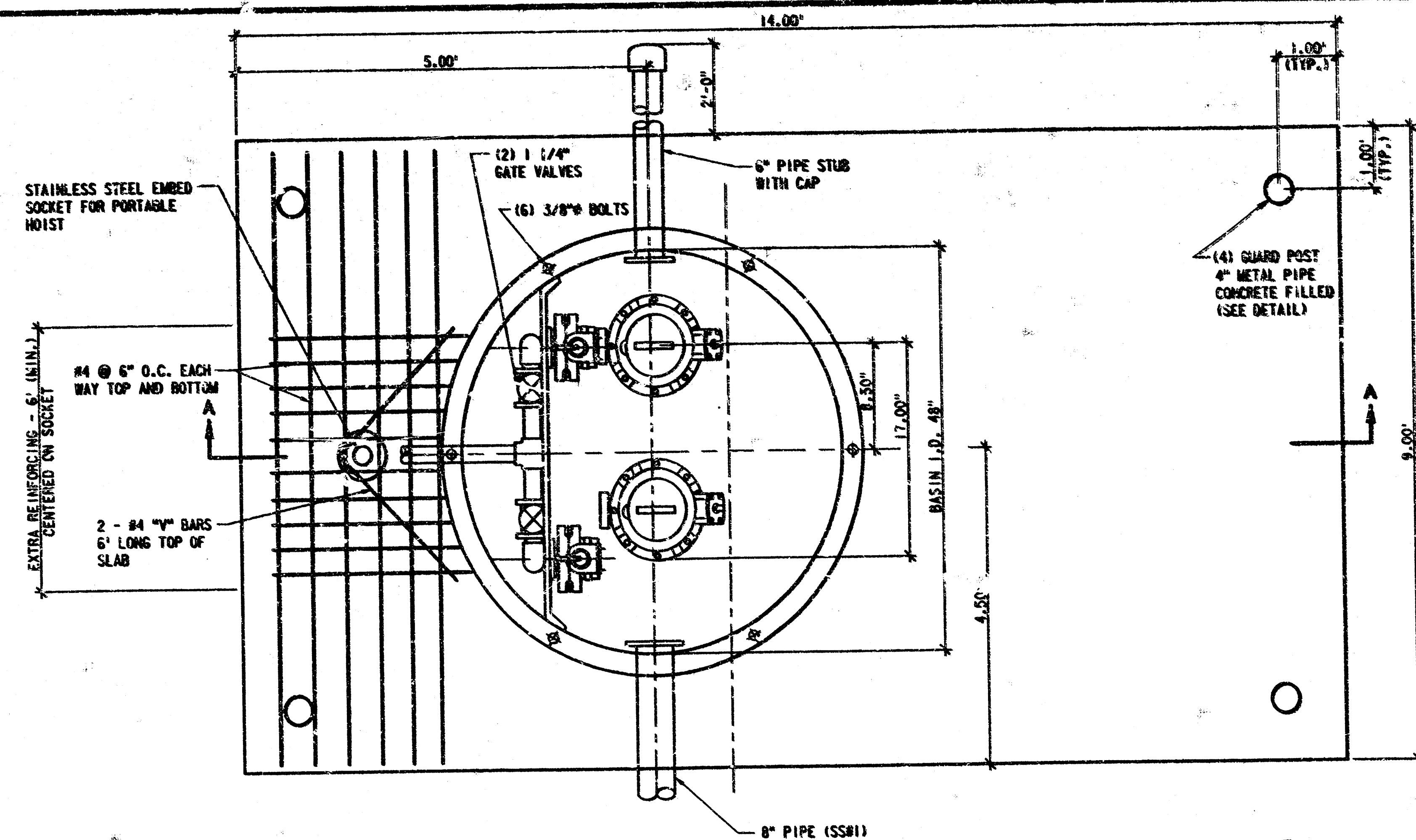
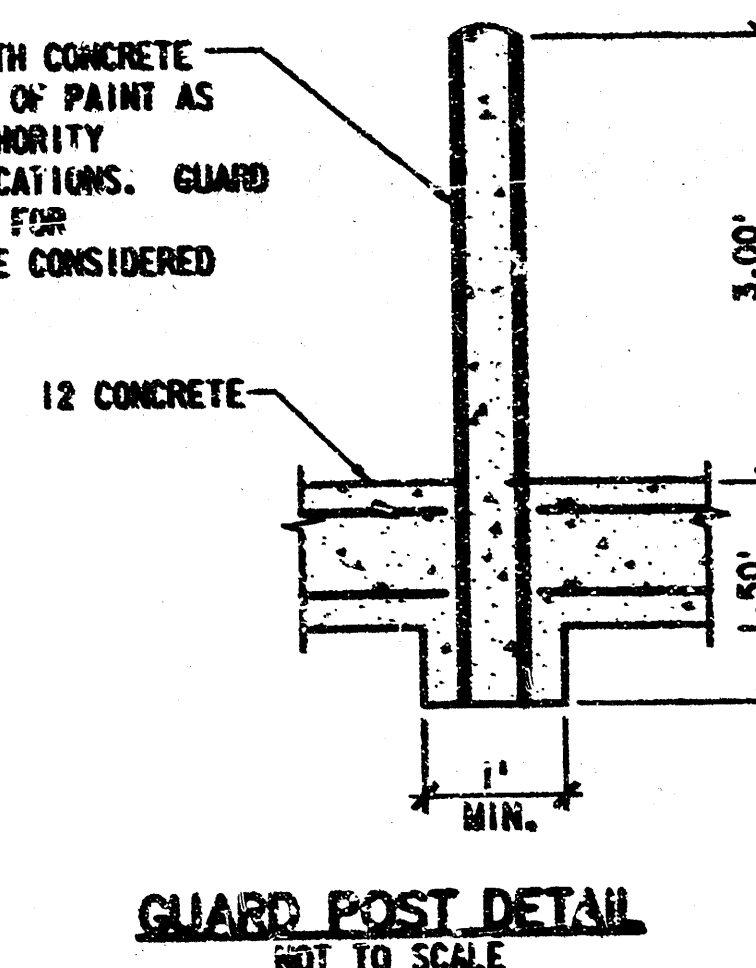
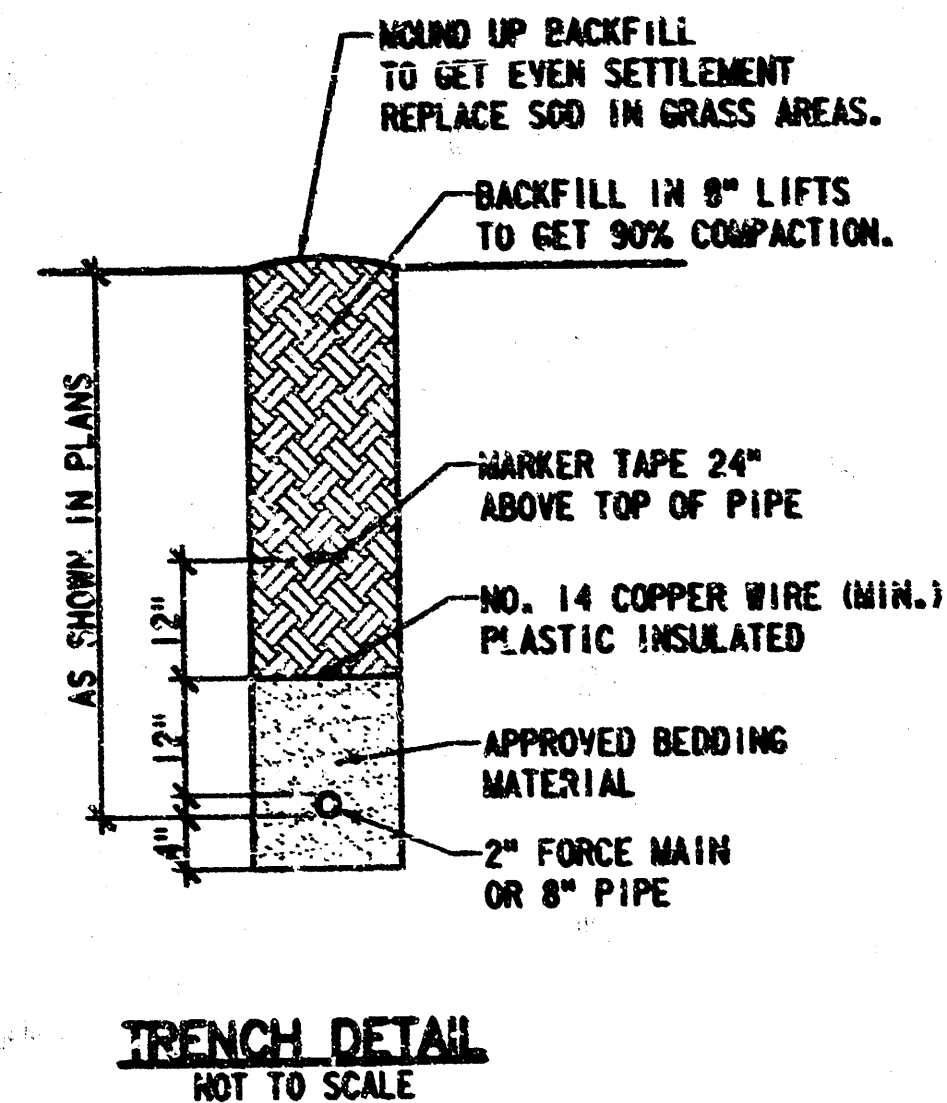
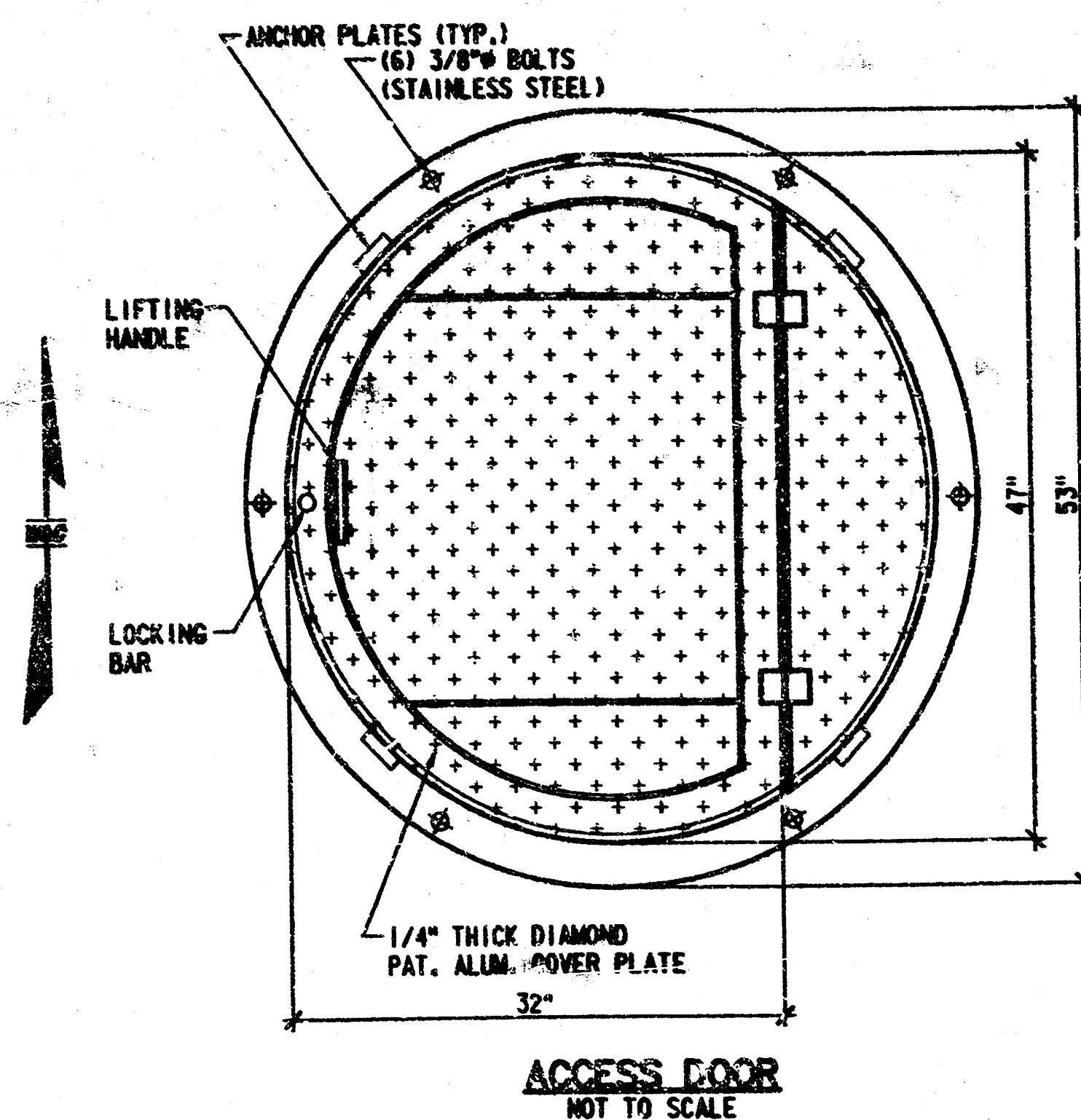
Booked
P-140
8-11-00
RPL

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DATED: 5-12-00

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA &
BY WICHITA FIRE DEPARTMENT

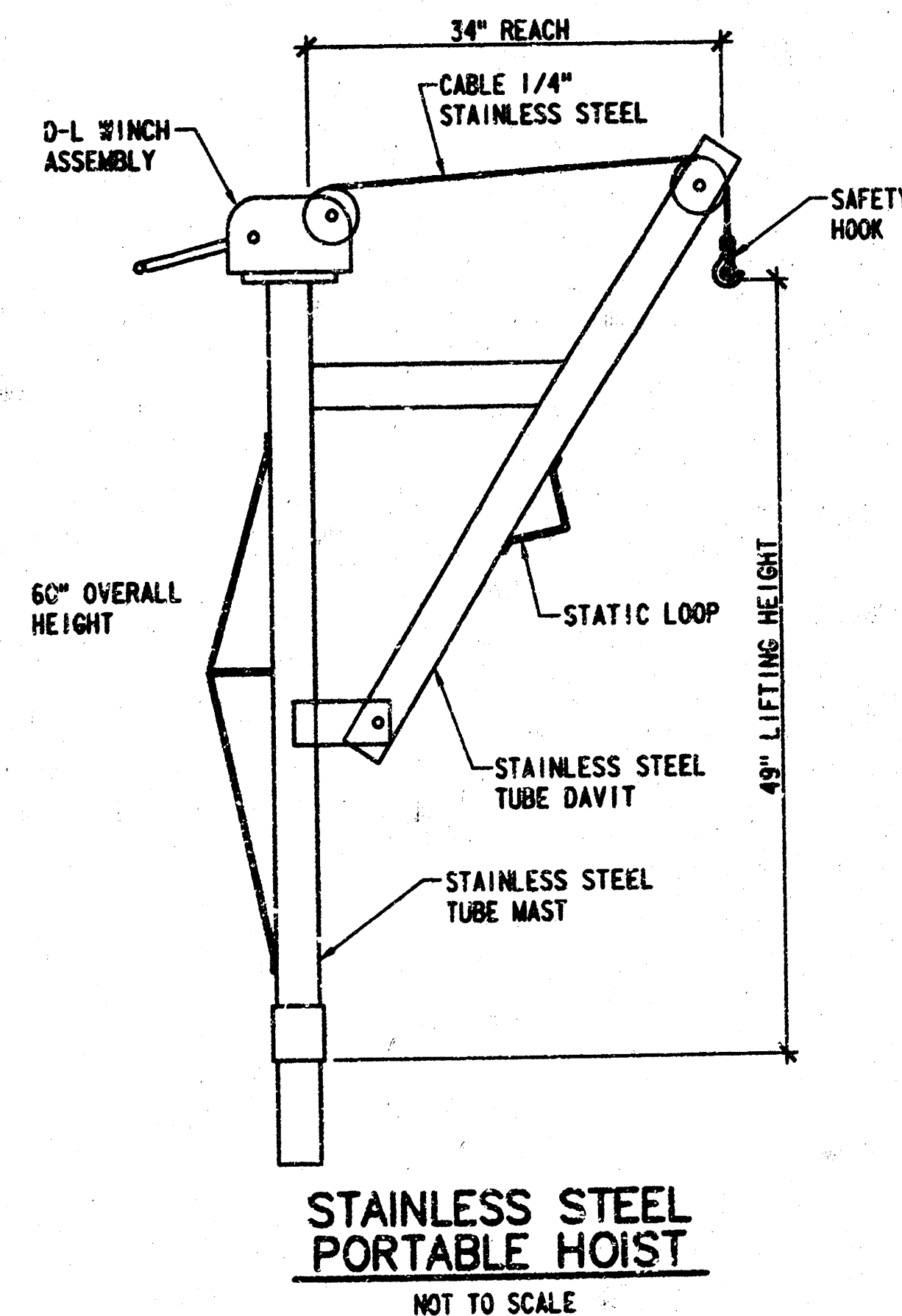
Water Mains
Fire Prot. Line
NOTE TO CONTRACTORS
Public Property:
Inspection and testing for the waterline is to be provided by a licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements of public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).
Private Property:
Inspection and testing for the fire protection line is to be performed by a City of Wichita certified fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All materials and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The Contractor shall not commence work without notification to and approval of the Wichita Fire Department.

APPROVED	
THE WICHITA AIRPORT AUTHORITY	
BAULIS F. BELL, DIRECTOR OF AIRPORTS	DATE
JOHN M. GONALD, P.E. DIRECTOR OF ENGINEERING AND PLANNING	DATE
PLANS PREPARED BY WILSON & COMPANY WICHITA - KANSAS	
97-450-022-01 97-450-022-02	MAY 1999

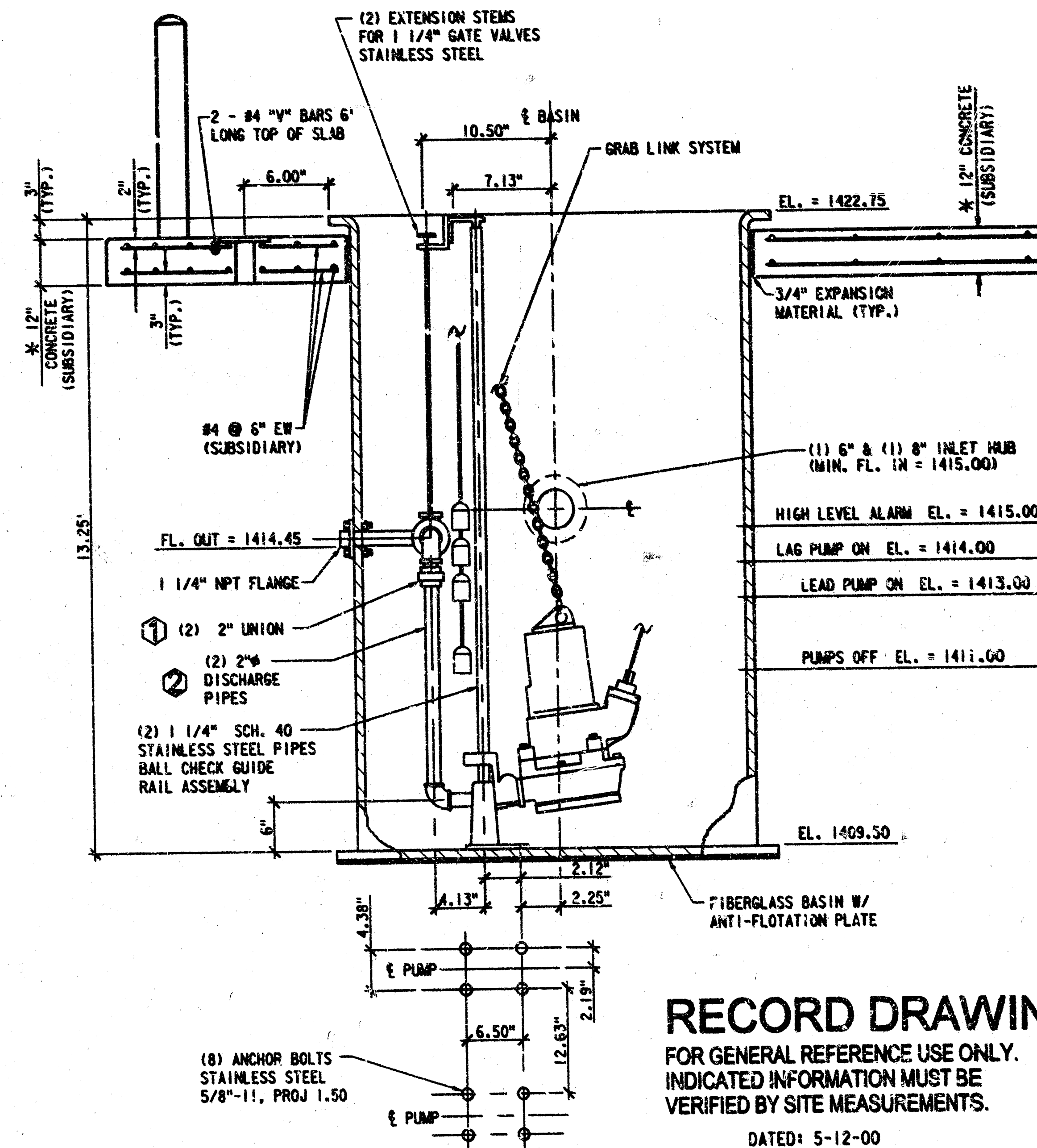


SPECIFICATIONS

ACCESS FRAME AND COVER SHALL HAVE A 1/4" THICK, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING EMBED ANCHOR PLATES. THE DOOR PANEL SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 LBS. PSF. DOOR SHALL OPEN TO 90° AND AUTOMATICALLY LOCK WITH A STAINLESS STEEL HOLD OPEN ARM WITH ALUMINUM RELEASE HANDLE. DOOR SHALL CLOSE FLUSH WITH THE FRAME. HINGES AND ALL FASTENING HARDWARE SHALL BE STAINLESS STEEL. UNIT SHALL LOCK WITH A NON-CORROSIVE LOCKING BAR AND HAVE A NON-CORROSIVE HANDLE. UNIT SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP FOR A PERIOD OF 10 YEARS.



STAINLESS STEEL EMBED SOCKET
NOT TO SCALE



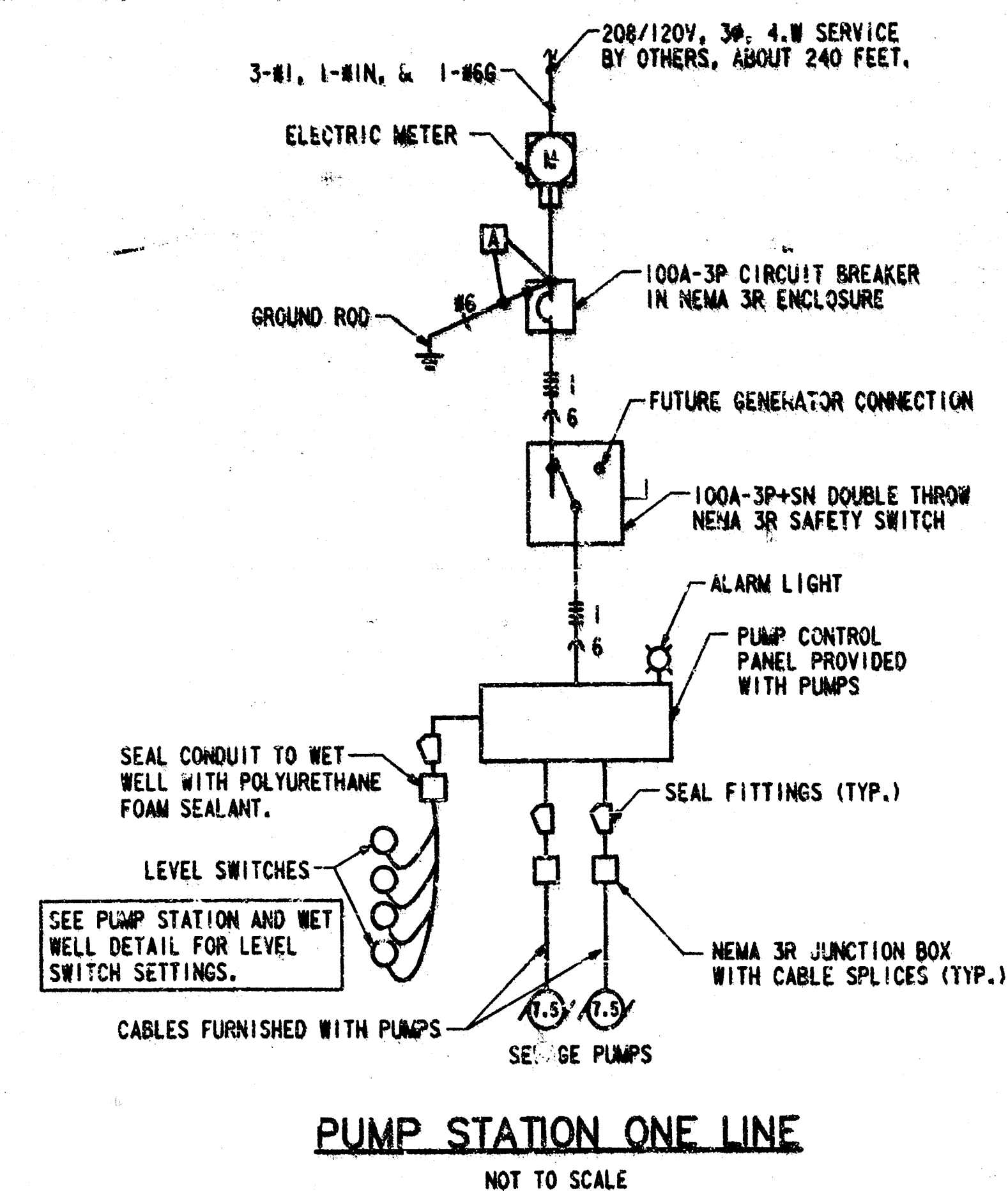
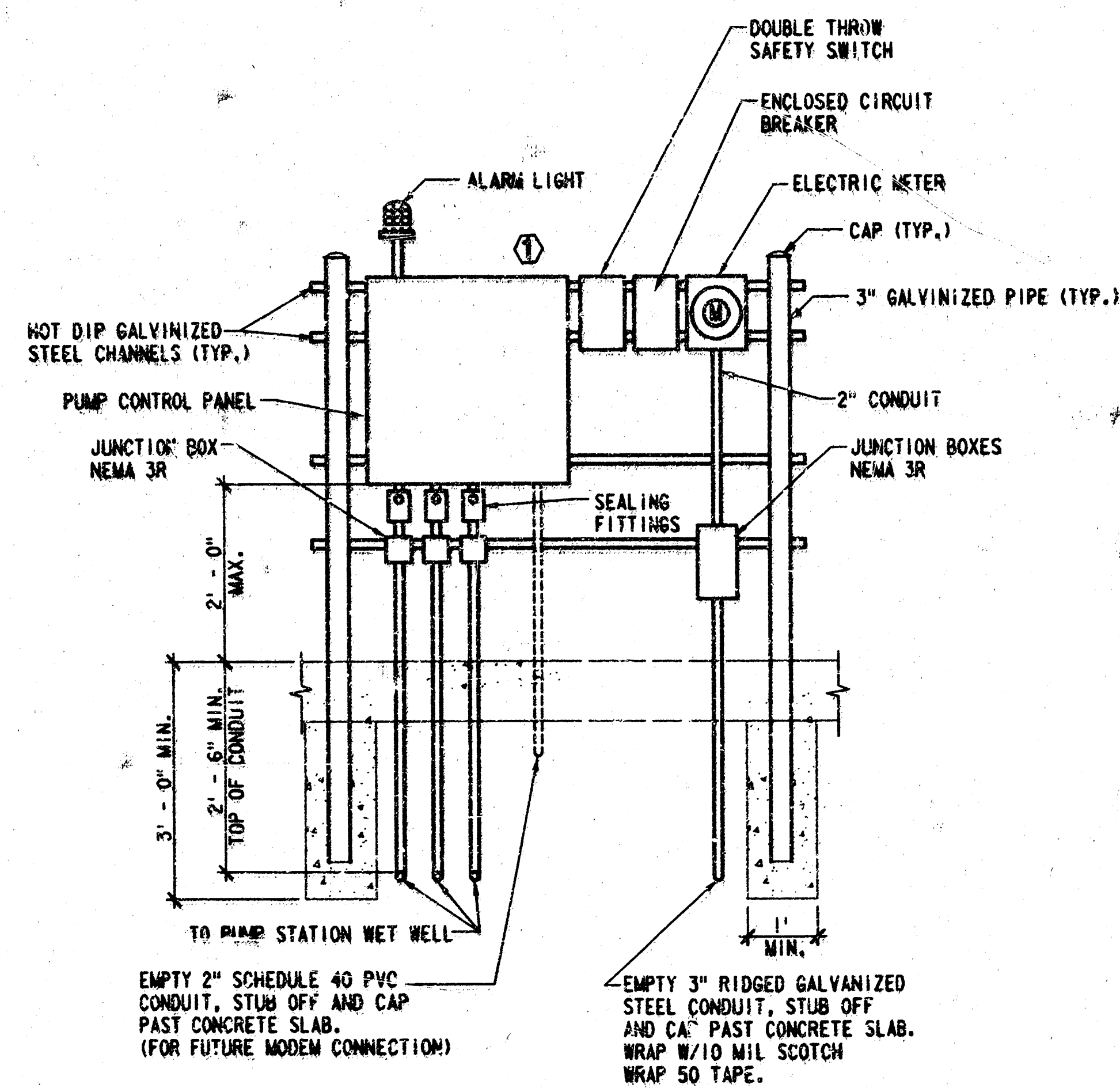
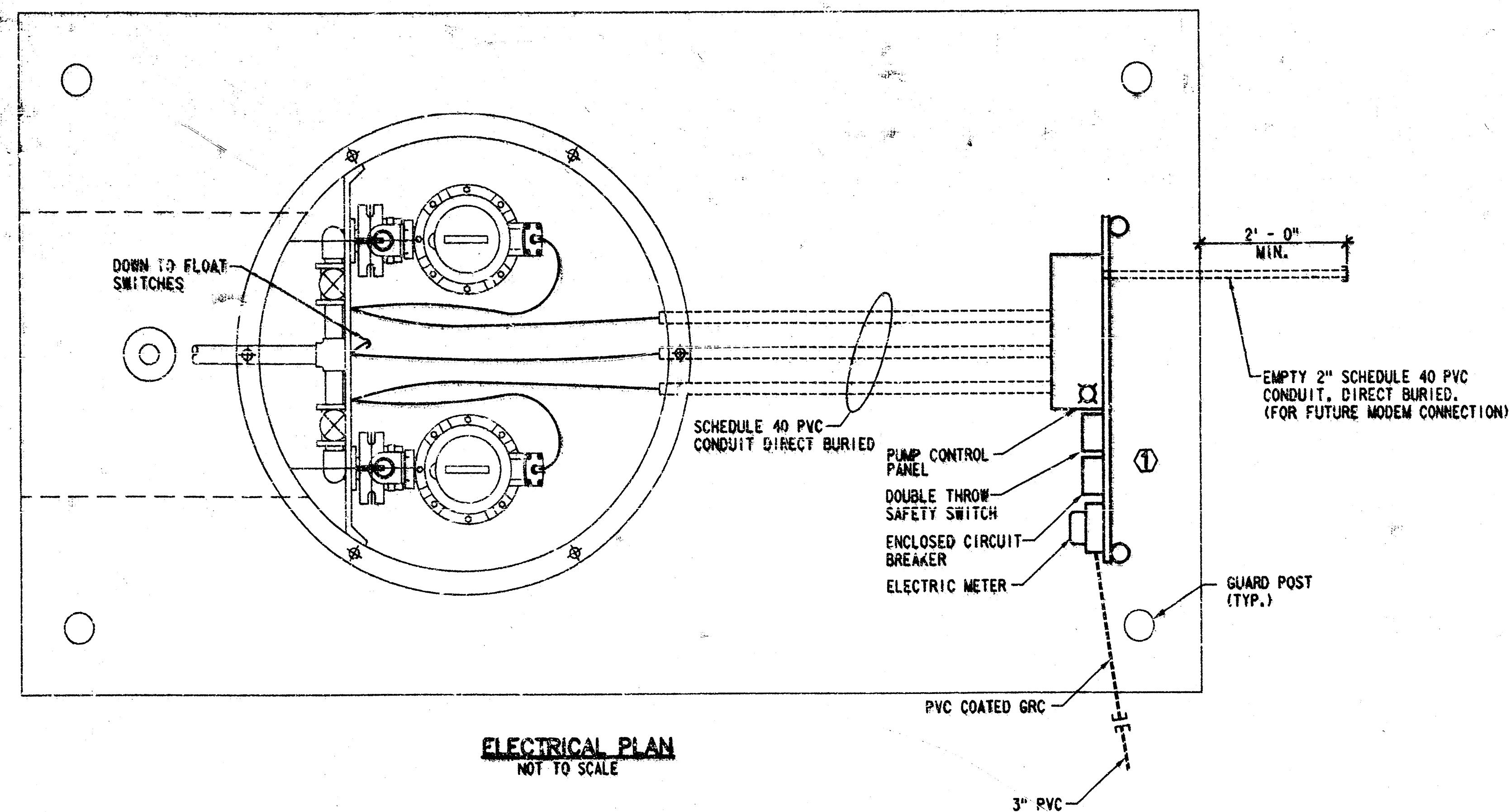
- NOTES:**
1. THE CONCRETE SHALL BE A MINIMUM OF 4,000 LB MIX. CONCRETE AND REINFORCING SHALL BE SUBSIDIARY.
 2. CONTRACTOR TO LOCATE AND INSTALL INLET HUBS IN FIELD AND CAP BY APPROVED METHODS. VERIFY LOCATIONS WITH OWNER.
 3. GRAB LINK SYSTEM: EACH SUBMERSIBLE PUMP SHALL BE FURNISHED WITH A STAINLESS STEEL CHAIN LIFT ASSEMBLY. THIS SHALL CONSIST OF ONE SCREW PIN ANCHOR, SHACKLE AND ONE 12 INCH LENGTH OF CHAIN FOR ATTACHMENT TO PUMP. CHAIN WILL IN ALL CASES BE SHORT ENOUGH NOT TO REACH PUMP SECTION WHEN ATTACHED TO LIFTING BAIL ON PUMP. THERE SHALL ALSO BE INCLUDED ONE NYLON ROPE 20 FEET LONG TO EXTEND TO THE TOP OF THE GUIDE RAIL SYSTEM.
 - GRAB LINK SHALL SLIDE DOWN THE NYLON ROPE AND GRAB THE SHORT LENGTH OF CHAIN WHEN THE ROPE IS GIVEN SLACK. THE HOIST OR OTHER MECHANICAL DEVICE SHALL BE ABLE TO RETRIEVE THE PUMP. THE GRAB LINK SYSTEM SHALL BE SIZED FOR A MINIMUM OF 50 PERCENT MORE THAN THE WEIGHT OF THE PUMP.
 - NOTE: FOR EASE OF LINK RETRIEVAL A 20 FOOT LENGTH OF ROPE WILL BE SUPPLIED FOR ATTACHMENT TO INVERT THE LINK AND ALLOW EASE OF CHAIN RELEASE DURING REINSTALLATION.
 4. STAINLESS STEEL PORTABLE HOIST: HALLIDAY PRODUCTS MODEL NO. D1424B OR EQUAL. EQUIPPED WITH 30' OF STAINLESS STEEL CABLE, SAFETY HOOK AND DUTTON-LAINSON HAND WINCH OR EQUAL.
 5. ACCESS DOOR: HALLIDAY PRODUCTS MODEL NO. R194B OR EQUAL. LID MUST BE CAPABLE OF BEING LOCKED CLOSED WITH A PAD LOCK.
 6. PUMP CONTROL PANEL DOORS MUST BE CAPABLE OF BEING LOCKED CLOSED WITH PADLOCK OR APPROVED METHODS.

RECORD DRAWING
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INDICATED INFORMATION MUST BE
VERIFIED BY SITE MEASUREMENTS.
DATED: 5-12-00

REVISIONS	DATE	BY	REVISIONS	DATE	BY
1 CHANGED 1 1/4" TO 2"					
2 CHANGED 1 1/4" TO 2"					

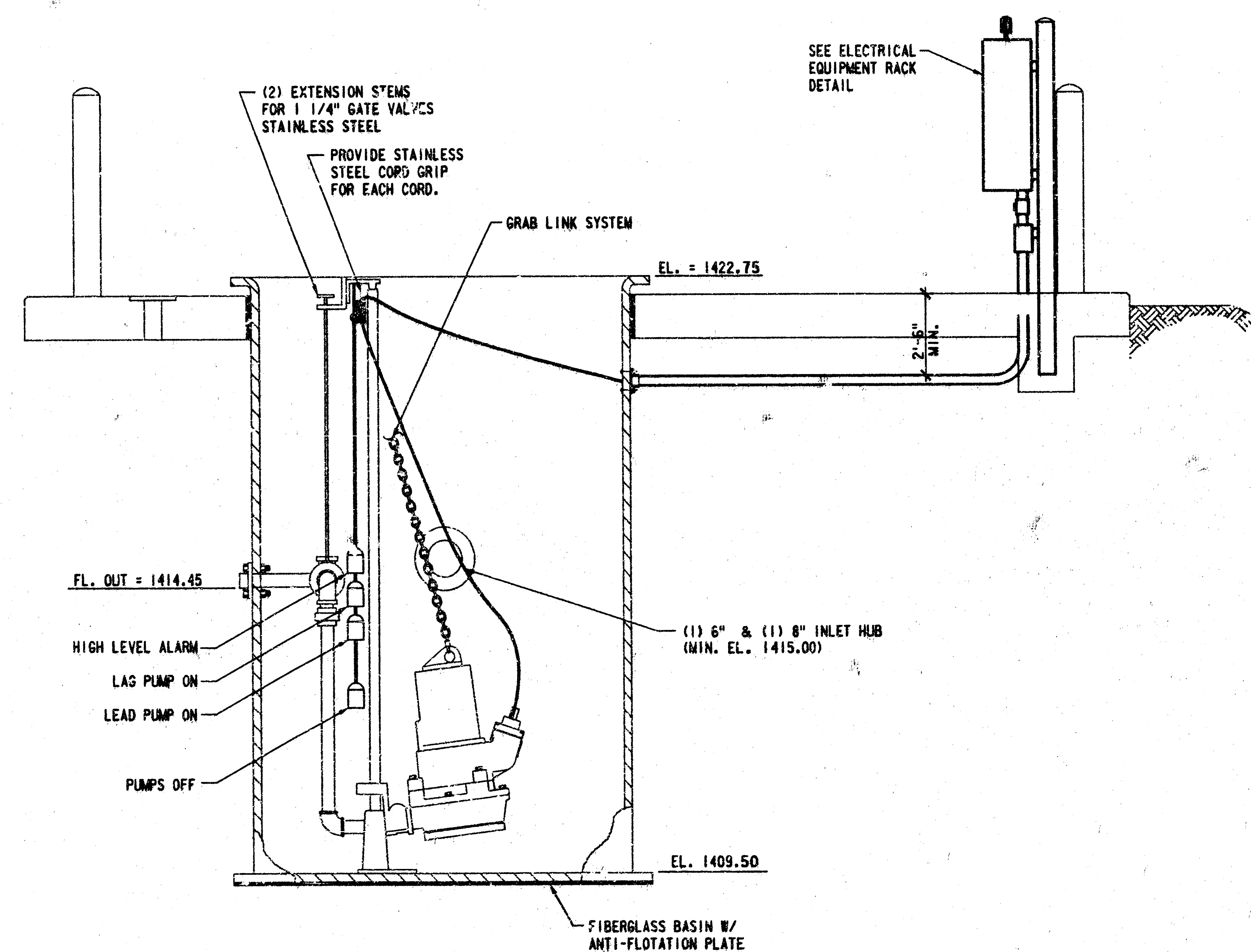
COLONEL JAMES JABARA AIRPORT
TAXIWAY "L" SITE DEVELOPMENT
SANITARY SEWER EXTENSION
WET WELL LAYOUT DETAILS

SCALE	NOT TO SCALE	DESIGN	RAN	CHECKED	WILSON & COMPANY	DATE	MAY 1999	FILE NO.	97-460-022 (02)
		DRAWN	MSM	APPROVED	WICHITA - KANSAS			SHEET	4 of 7



ELECTRICAL LEGEND

- CONDUIT AND WIRING. ARROWS INDICATE HOMERUN TO PANEL. HATCH MARKS INDICATE NUMBER OF CONDUCTORS IF MORE THAN TWO. NUMBER INDICATES SIZE OF CONDUCTORS IF OTHER THAN #12 AWG.
- EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT WITH CIRCUIT(S). NUMBER INDICATES SIZE IF OTHER THAN #12 AWG.
- MOTOR, HP INDICATED.
- SURGE ARRESTER



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DATED: 5-12-00

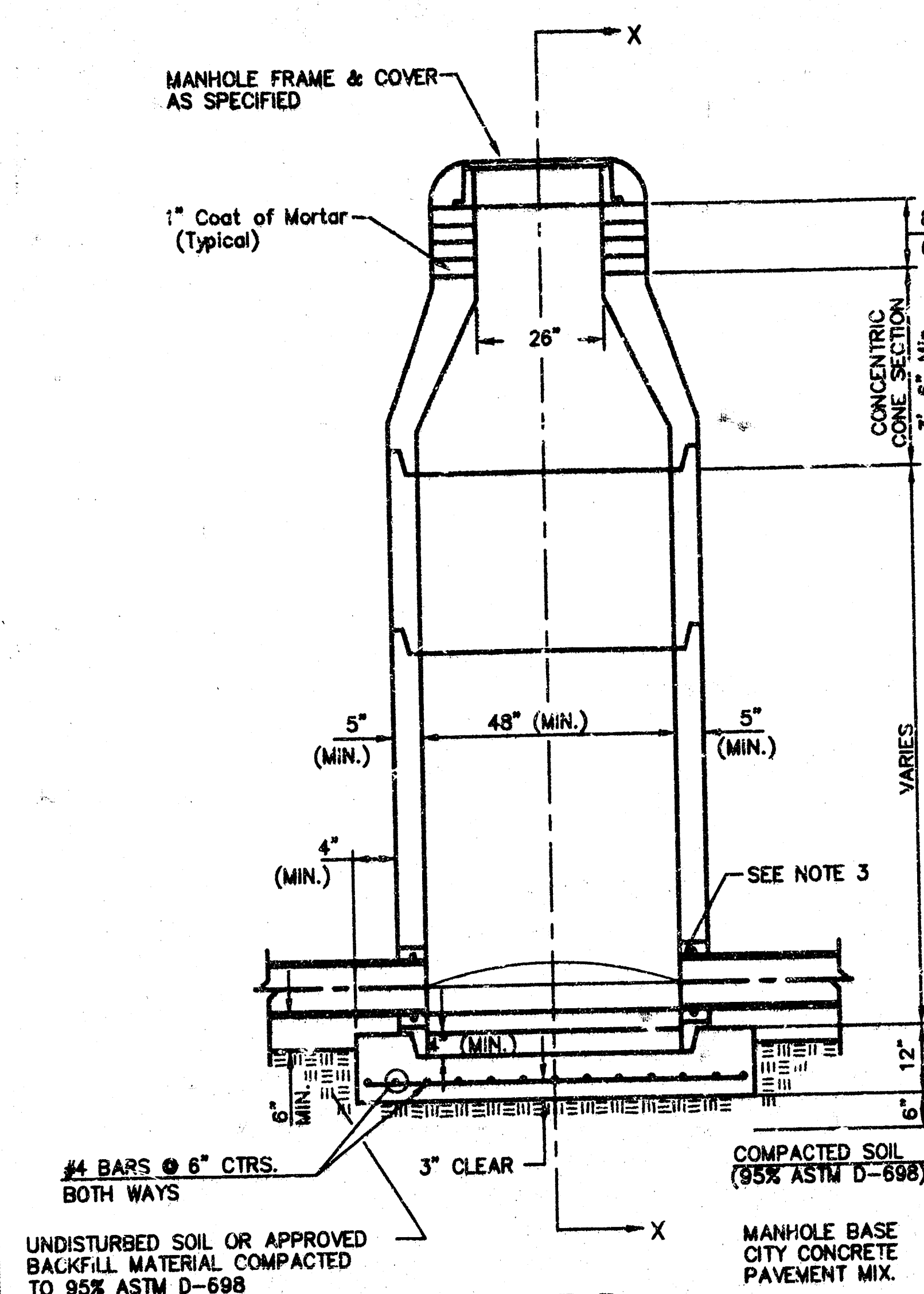
① REVERSED ELECTRICAL EQUIPMENT RACK	5-10-00	MVB			
REVISIONS	DATE	BY	REVISIONS	DATE	BY

COLONEL JAMES JABARA AIRPORT
TAXIWAY "L" SITE DEVELOPMENT
SANITARY SEWER EXTENSION
WET WELL ELECTRICAL DETAILS

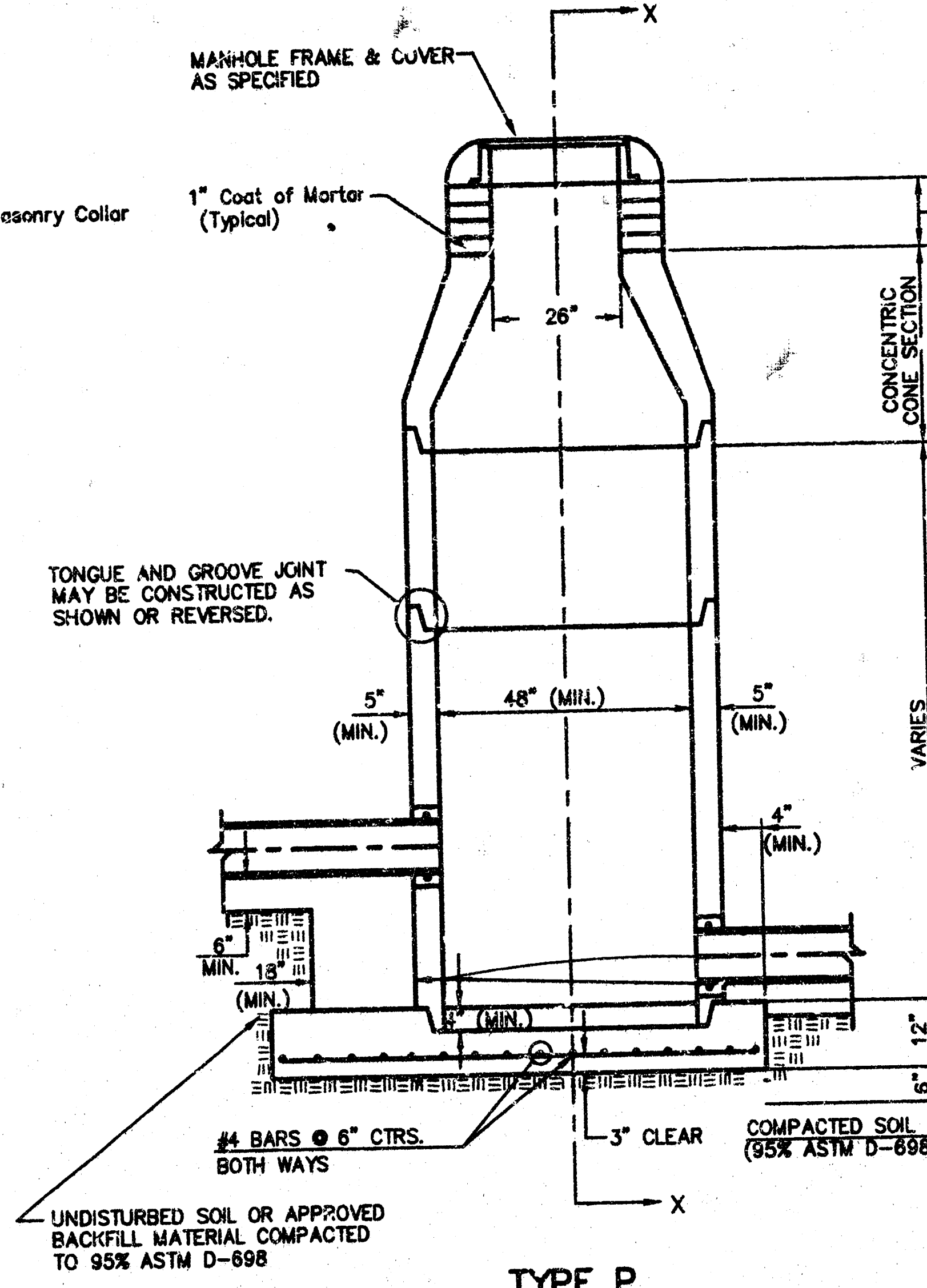
SCALE	DESIGN	CHECKED	DATE	FILE NO.
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	DRAWN			SHEET
				5 of 7

WILSON & COMPANY
WICHITA - KANSAS

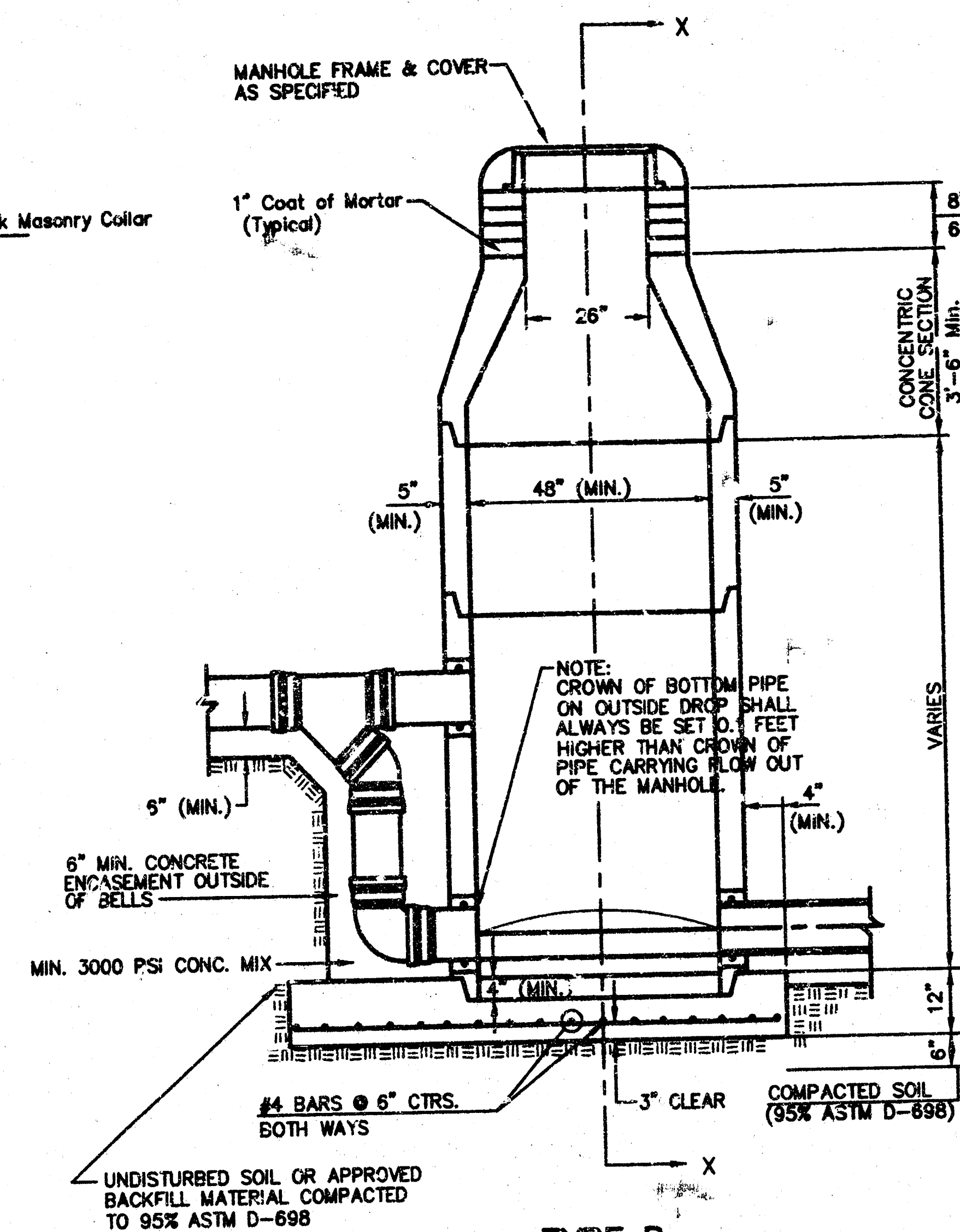
SEWER APPURTENANCES DETAILS



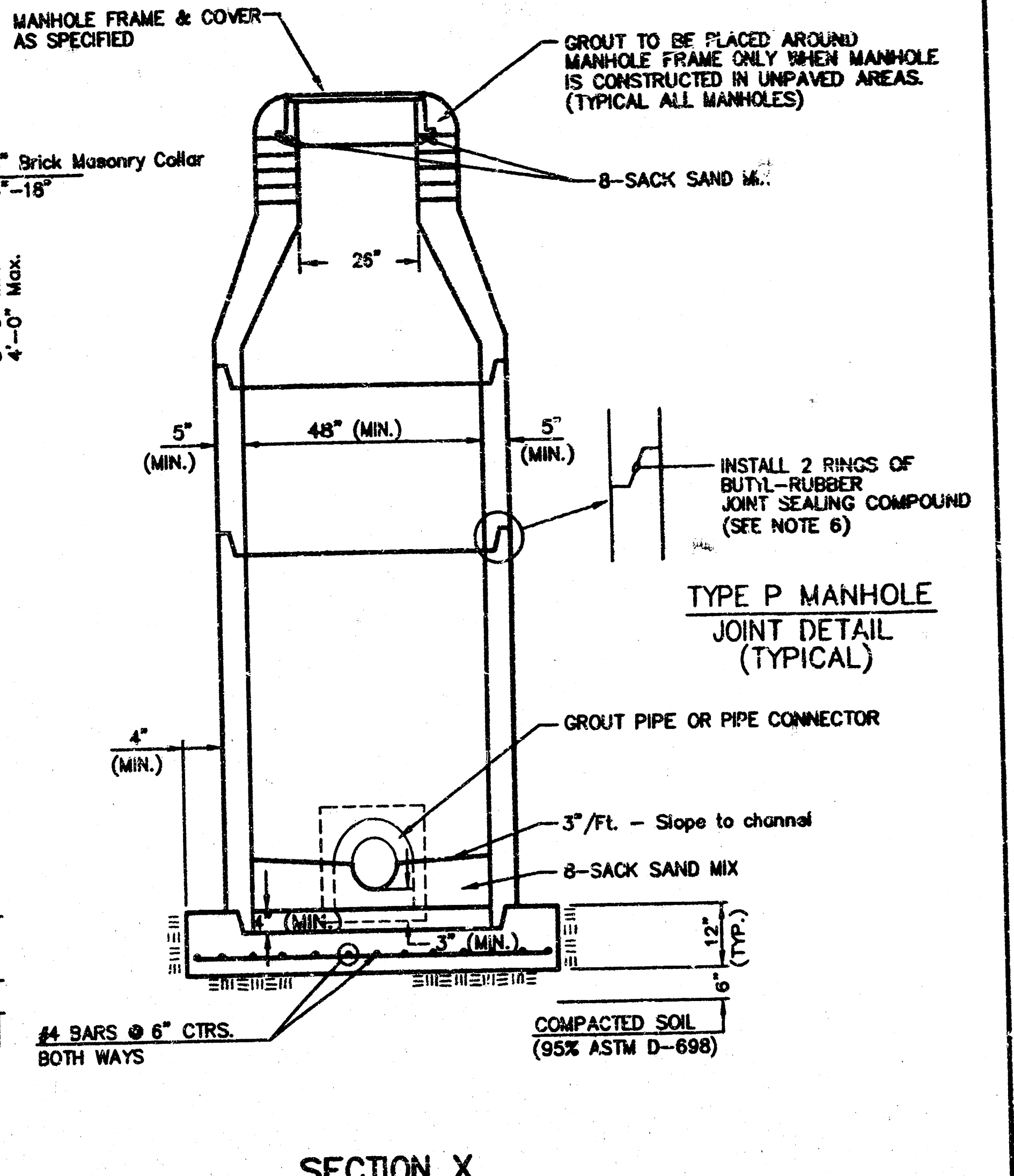
**TYPE P
STANDARD MANHOLE**



**TYPE P
INSIDE DROP MANHOLE**



**TYPE P
OUTSIDE DROP MANHOLE**



**SECTION X
(TYPICAL)**

GENERAL NOTES PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER PIPE SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEEC SERIES 68 HI-BUILD EPOXYLINE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVING CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVING MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP MAFF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE FLEXIBILITY OF THE JOINT. COST OF CRADLE WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
- A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.

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DATED: 5-12-00

THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 400 SOUTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4100 FAX	STANDARD TYPE 'P' MANHOLES	
	M. E. UNDERK P.E. - CITY ENGINEER	
	PROJECT NUMBER XXXX-XXXXX	DRAWING NUMBER XXXXXX
	DATE MAR 00	SHEET 6 OF 7

PMH.DWG

