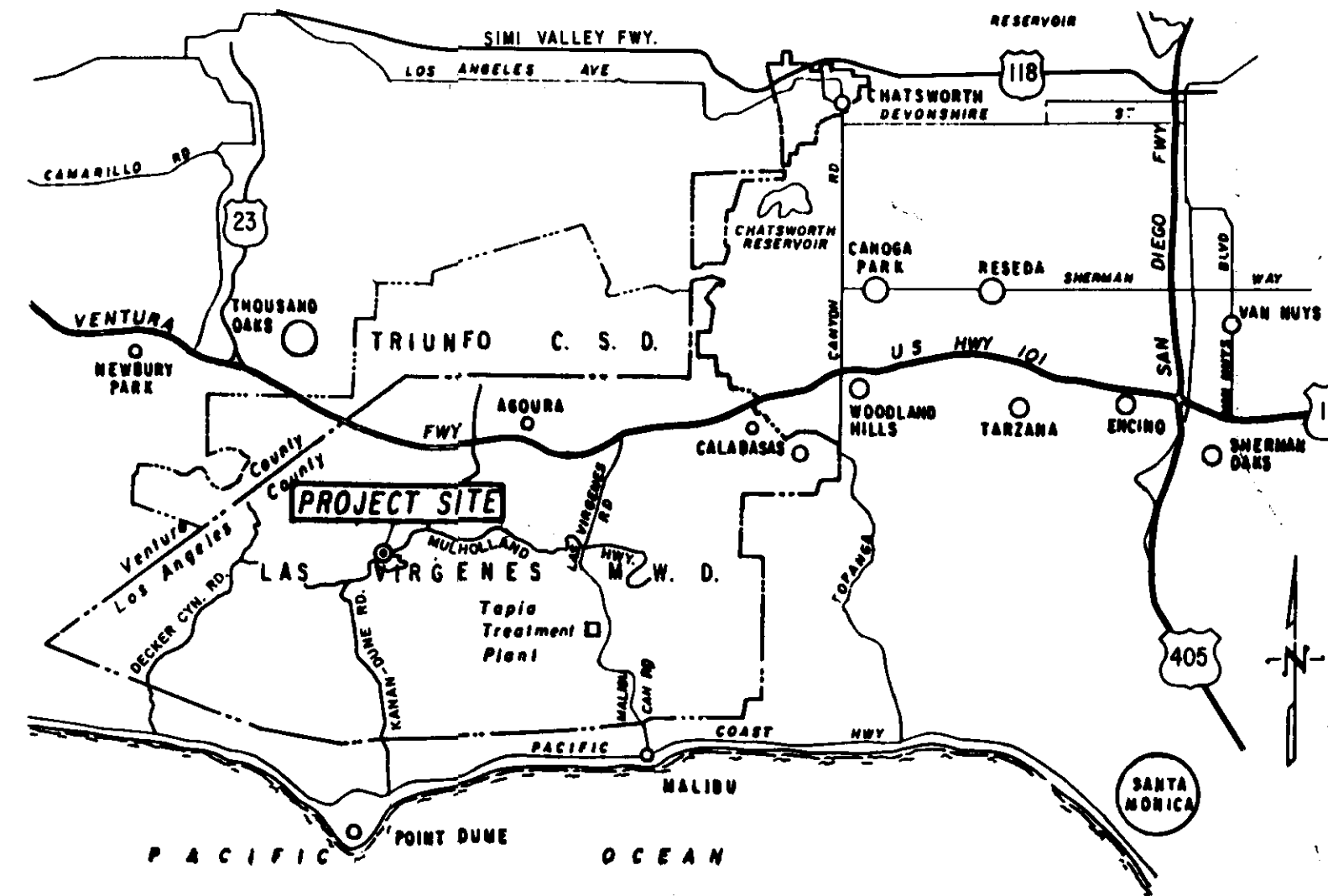


# LAS VIRGENES MUNICIPAL WATER DISTRICT

LOS ANGELES COUNTY, CALIFORNIA

## CONSTRUCTION PLANS FOR NEW SEMINOLE PUMP STATION

30619 WEST MULHOLLAND HWY  
AGOURA, CALIFORNIA 91301



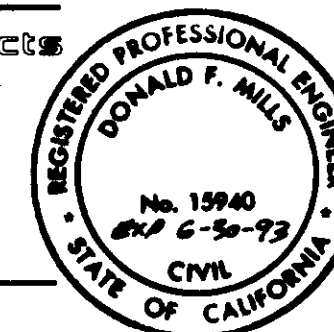
0 1 2 3 4 5  
SCALE IN MILES  
**VICINITY MAP**

**SEE ALSO LANDSCAPE PLANS  
FOR MISC. TANKS & PUMP STATIONS**

PLANS PREPARED BY

**BOYLE ENGINEERING CORPORATION**  
consulting engineers & architects

*Donald F. Mills*  
DONALD F. MILLS  
MANAGING ENGINEER DATE APRIL 30, 1990



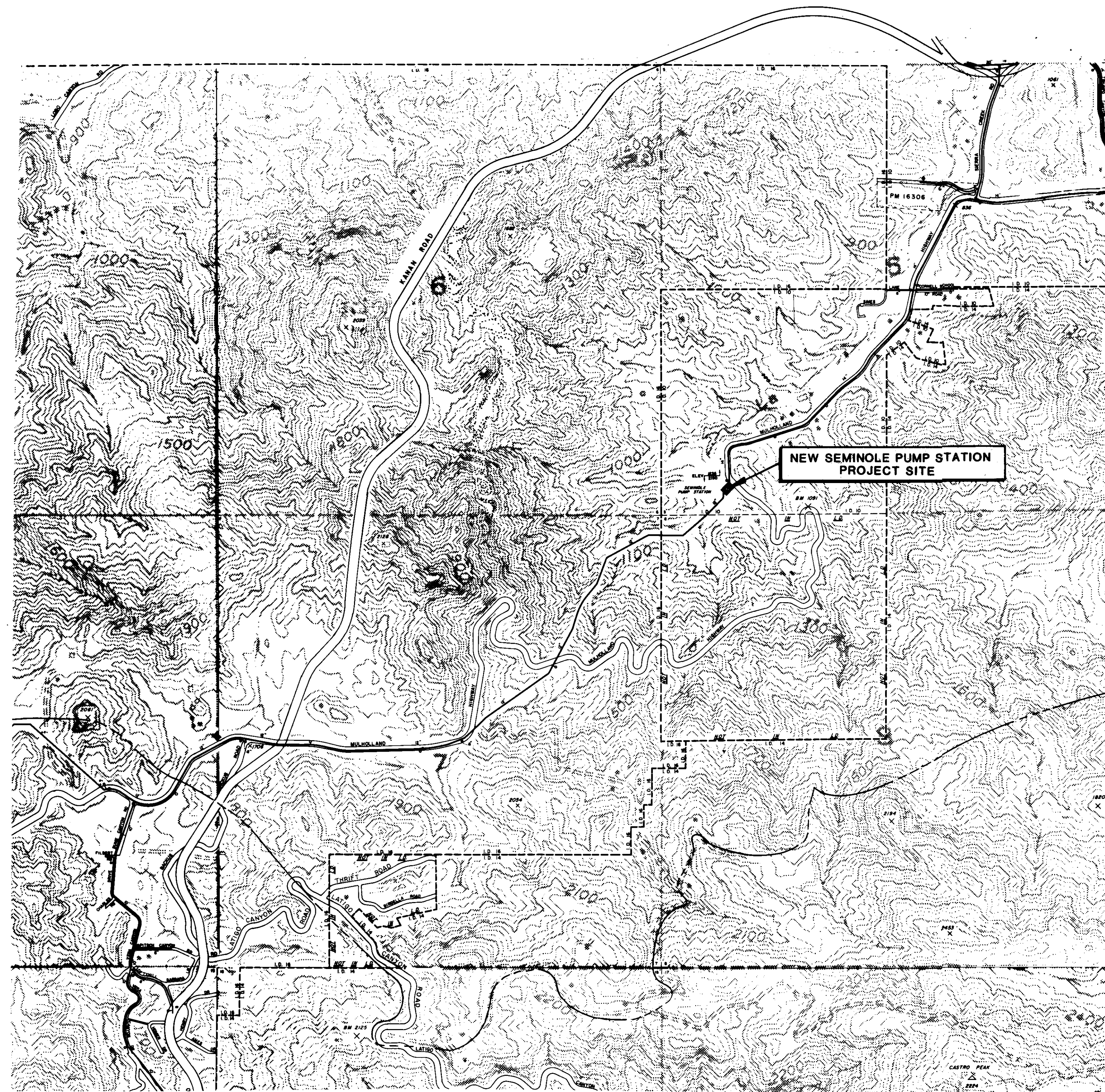
**RECORD DRAWING**  
THIS RECORD DRAWING APPLIES ONLY TO THOSE FACILITIES CONSTRUCTED UNDER THE CONTRACT IDENTIFIED IN THE TITLE BLOCK. THIS DRAWING HAS BEEN PREPARED ON THE BASIS OF THE INFORMATION FURNISHED BY THE CONTRACTOR AND THE CONSTRUCTION INSPECTOR.  
CONST. INSP. JAW AGENCY DATE 1/16/91  
DRAFTED BY AJR AGENCY REC DATE 11-12-93  
PROJ. ENGR. HEB AGENCY REL DATE 12/1/95

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
LOS ANGELES COUNTY  
**BOARD OF DIRECTORS**

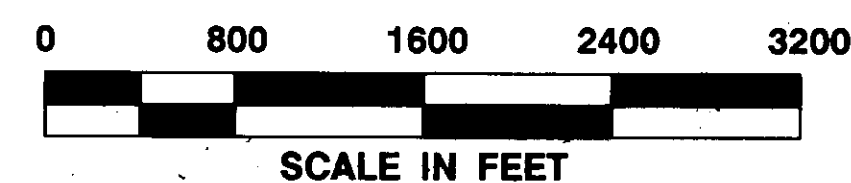
HAROLD V. HELSLEY - PRESIDENT  
A. MACNEIL STELLE STEVE GAVIN  
GLEN PETERSON ANN DORGELO  
EDWARD E. MCCOMBS - GENERAL MANAGER

Approved by the Board of Directors  
on this 30th day of APRIL 1990 **06143**

BY [Signature]  
HAROLD V. HELSLEY - PRESIDENT  
BY [Signature]  
STEVE GAVIN - SECRETARY  
BY [Signature]  
EDWARD E. MCCOMBS GENERAL MANAGER  
BY [Signature]  
JAMES E. COLBAUGH  
DIRECTOR OF PLANNING AND ENGINEERING



**PLAN**



**LIST OF DRAWINGS**

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX MAP
3	MATERIALS LIST
4	PUMP STATION - SITE PLAN
5	ACCESS ROAD
6	PUMP STATION - PIPING PLAN & DETAILS
7	PUMP STATION - SECTIONS & DETAILS
8	MISCELLANEOUS DETAILS
9	EXTERIOR ELEVATIONS & DETAILS
10	ROOF AND FLOOR PLANS
11	STRUCTURAL SECTIONS & DETAILS
12	STRUCTURAL & MISC. DETAILS
13	ELECTRICAL SITE PLAN & SYMBOLS
14	LIGHTING & POWER PLAN
15	SINGLE LINE DIAGRAM & PANEL SCHEDULE

**06144**

**VOID**  
 ORIGINAL SENT TO LONG-TERM STORAGE.  
 COPY IN PROJECT FILE.

**16** SCHEMATIC DIAGRAMS  
**16A** SCHEMATIC & ISOMETRIC DIAGRAMS  
**16B** CONTROL SCHEMATIC PUMP No. 1

**17** INSTRUMENTATION P & I DIAGRAM  
 REFER TO "SEMINOLE PUMP STATION HYDRAULIC AND CHARACTERISTICS"  
 (BOYLE ENGINEERING, 1992)  
 LVINGO LIBRARY REPORT #1684.0

**RECORD DRAWING**  
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 CONST. INSP. JAV AGENCY CV DATE 1/12/93  
 DRAFTED BY AJR AGENCY BEC DATE 11/2/92  
 PROJ. ENGR. HEB AGENCY BEC DATE 2/1/93

LAS VIRGENES MUNICIPAL WATER DISTRICT

NEW SEMINOLE PUMP STATION

**INDEX MAP**

**BOYLE ENGINEERING CORPORATION**  
 consulting engineers & architects  
 VENTURA, CA.

REV.	DATE	DESCRIPTION	APP.
—	8/15/88	SEE SHEETS 3, 6, 7, 14, 15, 16; VOID SHEET 17; PUMP No. 1 CONTROL VALVE ADDITION & MODIFICATION	<i>[Signature]</i>
—	11/19/93	AS CONSTRUCTED	MEB
—	8/8/90	ISSUED FOR CONSTRUCTION	MEB
—	5/4/90	ISSUED FOR BIDDING	

DATE: 5-22-93  
 C.A. NO.: VT-L02-122-15  
 DRAWING NO.: 5-227  
 SHEET NO.: **2**  
 OF 17 SHEETS



- ① VERTICAL TURBINE PUMP, MOTOR, AND ACCESSORIES. SEE SPECIFICATIONS. (JOHNSTON JD 800 G.P.M. AT 1100' - 300 HP)  $\Delta$
- ② 8" CML STEEL PIPE SPOOL, FLANGED END X FLANGED END (CLASS 300).
- ③ 8" SLANTING DISC CHECK VALVE CLASS 300, APCO SERIES 800B WITH BOTTOM MOUNTED BUFFER OR EQUAL. PUMPS 2 & 3 ONLY.  $\Delta$
- ④ 8" CML STEEP PIPE SPOOL, FLANGED END X PLAIN END.
- ⑤ STEEL PIPE COUPLING, BAKER ALL STEEL COUPLINGS, SERIES 200, OR EQUAL PER LINE SIZE. (WITH RESTRAINTS)  $\Delta$
- ⑥ 8" SINGLE FLANGE LUG-TYPE BUTTERFLY VALVE (CLASS 300) WITH HAND WHEEL ACTUATOR. DEZURIK HP II OR EQUAL.
- ⑦ 8" 90° SHORT RADIUS CML STEEL ELBOW, FLANGED END X FLANGED END.
- ⑧ 8" CML STEEL PIPE SPOOL, FLANGED END X WELDED END (CLASS 300).
- ⑨ 12" X 8" CML STEEL REDUCING TEE, WELDED END X WELDED END WITH END CAP X WELDED END.
- ⑩ 12" CML STEEL PIPE SPOOL, WELDED END X WELDED END (NONENCASED BURIED PIPE SHALL BE CML AND C).
- ⑪ 12" X 8" CML STEEL REDUCING TEE, WELDED ENDS.
- ⑫ 90° CML SHORT RADIUS ELBOW, WELDED ENDS.
- ⑬ 12" X 6" CML STEEL REDUCING TEE, WELDED ENDS.
- ⑭ 6" CML STEEL PIPE SPOOL, WELDED END X GROOVED END.
- ⑮ 6" GROOVED PIPE COUPLING, VICTAULIC STYLE 77 OR EQUAL.
- ⑯ 6" CML STEEL PIPE SPOOL, GROOVED END X FLANGED END.
- ⑰ 6" 90° CML SHORT RADIUS ELBOW, WELDED END X WELDED END.
- ⑱ 6" CML STEEL PIPE SPOOL, WELDED END X FLANGED END.
- ⑲ DISCHARGE SURGE TANK. SEE SPECIFICATIONS.
- ⑳ 12" CML STEEL PIPE SPOOL, FLANGED END X GROOVED END.
- ㉑ 12" GROOVED PIPE COUPLING, VICTAULIC STYLE 77 OR EQUAL.
- ㉒ 12" SINGLE FLANGE LUG-TYPE BUTTERFLY VALVE (CLASS 150) WITH HAND WHEEL ACTUATOR, DEZURIK OR EQUAL.
- ㉓ 16" X 12" CML STEEL REDUCING TEE, WELDED END X WELDED END X FLANGED END.
- ㉔ 16" X 12" CML STEEL REDUCING TEE, WELDED END X WELDED END WITH END CAP X FLANGED END.
- ㉕ 16" CML STEEL PIPE SPOOL, WELDED ENDS.
- ㉖ 12" PROPELLER METER WITH FLOW RATE INDICATOR AND TOTALIZER, FLANGED END X FLANGED END, ROCKWELL MODEL 102 OR EQUAL.
- ㉗ ADJUSTABLE PIPE SUPPORT WITH STEEL PIPE RISER AND FLOOR FLANGE, GRINNEL FIGURE 264 OR EQUAL.
- ㉘ 12" CML AND C STEEL PIPE SPOOL, FLANGED END X PLAIN END.
- ㉙ 12" CML AND C STEEL PIPE SPOOL, PLAIN END X WELDED END.

### MATERIALS LIST

- ⑩ 12" X 6" CML AND C STEEL REDUCING TEE, WELDED ENDS X FLANGED END.
- ⑪ 6" CML AND C STEEL PIPE SPOOL, WELDED END X FLANGED END.
- ⑫ 6" CML AND C STEEL 45° BEND, WELDED ENDS.
- ⑬ 6" 90° SHORT RADIUS CML STEEL ELBOW, WELDED ENDS.
- ⑭ 6" SINGLE FLANGE LUG TYPE BUTTERFLY VALVE (CLASS 300) WITH HANDWHEEL ACTUATOR. DEZURIK HP II OR EQUAL.
- ⑮ 6" SINGLE FLANGE LUG TYPE BUTTERFLY VALVE (CLASS 150) WITH HANDWHEEL ACTUATOR. DEZURIK HP II OR EQUAL.
- ⑯ 6" CML STEEL PIPE SPOOL, GROOVED END X FLANGED END (CLASS 150).
- ⑰ 6" CML STEEL PIPE SPOOL, WELDED END X FLANGED END (CLASS 150).
- ⑱ SUCTION SURGE TANK. SEE SPECIFICATIONS.
- ㉑ 14" X 12" CML AND C STEEL PIPE REDUCER, WELDED ENDS.
- ④ 9" TOP, HEAVY-DUTY, CAST-IRON FLOOR DRAIN WITH GRATE AND 4" OUTLET, ZURN Z-508 OR EQUAL.
- ④ 4" HIGH-PRESSURE PRESSURE REDUCING VALVE, FISHER OR EQUAL.  $\Delta$  (FISHER MODEL 667E0-300LB FLG. & BODY)
- ④ 4" CAST-IRON SOIL PIPE AND FITTING, HUB X SPIGOT ENDS.
- ④ AIR COMPRESSOR, RECEIVER TANK, AND PIPING. SEE SPECIFICATION SECTION 15088.
- ④ EXHAUST FAN WITH 1/2" MESH GALVANIZED SCREEN IN REMOVABLE FRAME AT FAN INTAKE.
- ④ 36" X 36" DUCT WITH 1" INTERNAL LINING.
- ④ 36" X 36"/30" X 30" DUCT TRANSITION WITH 1" INTERNAL LINING.
- ④ 30" X 30" 90° BEND DUCT WITH 1" INTERNAL LINING AND STRAIGHTENING VANES.
- ④ 30" X 30" DUCT WITH 1" INTERNAL LINING.
- ④ 30" X 30"/30" X 48" 90° DUCT TRANSITIONING BEND WITH 1" INTERNAL LINING AND STRAIGHTENING VANES.
- ④ FLEXIBLE CONNECTION BETWEEN FAN AND DUCT.
- ④ 15" DEEP X 8" WIDE X 5'6" HIGH DUCT WITH 1" INTERNAL LINING AT VENTILATION INTAKE. PROVIDE BRACING AS REQUIRED FOR STIFFENING IN ACCORDANCE WITH SPECIFICATIONS.
- ④ METAL WALL-MOUNT SHOP DESK WITH DRAWER, 36" X 29" DEPTH (FOREMAN'S DESK).
- ④ 1" GALVANIZED STEEL NIPPLE.
- ④ 4'0" X 4'0" ALUMINUM ROOF HATCH WITH REMOVABLE EXTERIOR HANDLE, BILCO MODEL SS OR EQUAL, 3 TOTAL.
- ④ 12" CML STEEL PIPE SPOOL, FLANGED END X WELDED END.
- ④ 3/4" TYPE K COPPER TUBING ASTM B88.
- ④ 3/4" COUPLING.
- ④ 3/4" TYPE L COPPER TUBING.

- ⑥ 1-3/8" X 1-5/8" X 6"-LONG CHANNEL WITH RIGID CONDUIT PIPE STRAP, HOT-DIPPED GALVANIZED, SUPERSTRUT OR EQUAL.
  - ⑥ 3/4" COPPER MALE ADAPTOR, TYPICAL.
  - ⑥ 1" STAINLESS STEEL DIFFUSER.
  - ⑥ 3/4" BRONZE HOSE BIB ASTM B62, PRESSURE RATING 150 PSI.
  - ⑥ 1" DIELECTRIC COUPLING WITH 1" X 1/2" BUSHING.
  - ⑥ 1/2" S.S. NIPPLES WHERE REQUIRED, TYPICAL.
  - ⑥ 1" EXTRA STRONG STEEL HALF COUPLING.
  - ⑥ 1/2" S.S. TEE, TYPICAL.
  - ⑥ 1" HIGH-PRESSURE STAINLESS STEEL BALL VALVE WITH HANDWHEEL OR RATCHETED LEVER.
  - ⑦ 1/2" STREET ELBOW S.S.
  - ⑦ MARSH 1/2" TYPE N314 S.S. NEEDLE VALVE.
  - ⑦ 1/2" 90° S.S. ELBOW, TYPICAL.
  - ⑦ MARSH 1/2" BLOCK/BLEED VALVE, TYPICAL.
  - ⑦ 1/2" S.S. PRESSURE SNUBBER, FEMALE X MALE, TYPICAL.
  - ⑦ 1/2" X 1/4" S.S. BUSHING, TYPICAL.
  - ⑦ 4-1/2" PRESSURE GAUGE, MARSH PATTERN WITH 1/4" MALE BOTTOM EQUIPPED WITH RECALIBRATOR, PRESSURE RANGE SUCTION SIDE 0-200 PSI (H4254) DISCHARGE SIDE PRESSURE RANGE 0-1,000 PSI (H4268).
  - ⑦ PRESSURE SWITCH WITH 1/4" MALE BOTTOM PER SPECIFICATIONS.
  - ⑦ 1-1/4" EXTRA STRONG STEEL HALF COUPLING WITH INSULATING BUSHING. INSTALL 1" CORPORATION STOP, JAMES JONES S-1505 OR EQUAL. JOIN TO 1" TYPE K COPPER TUBING.
  - ⑦ 1" TYPE K COPPER TUBING ASTM B88.
  - ⑦ 6" CML AND C STEEL PIPE SPOOL, WELDED ENDS.
  - ⑦ 1" GALVANIZED STEEL PLUG.
  - ⑦ 1" GATE VALVE. SUCTION SURGE TANK: CLASS 150, DISCHARGE SURGE TANK: CLASS 300.
  - ⑦ 1" GALVANIZED STEEL NIPPLES WHERE REQUIRED, TYPICAL.
  - ⑦ 1" GALVANIZED STEEL UNION.
  - ⑦ 1" EXTRA STRONG FULL COUPLING.
  - ⑦ 3" X 2" X 2" GALVANIZED STEEL TEE.
  - ⑦ 3" STANDARD WEIGHT GALVANIZED STEEL PIPE.
  - ⑦ ELECTRODE FITTING WITH 3" N.P.T.
  - ⑦ 16" X 12" CML STEEL REDUCER WELDED END X WELDED END.
  - ⑦ 8" 750 p.s.i. GOLDEN ANDERSON ELECTRIC CHECK PUMP CONTROL VALVE, RAISED FACED FLANGES. LAY LENGTH = 24.625" FOR PUMP No. 1 ONLY.  $\Delta$
- $\Delta$  NOTE: SEE OPERATION & MAINTENANCE MANUAL AND/OR SHOP DRAWINGS FOR ACTUAL MATERIAL USED.

### STRUCTURAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
2. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE STRUCTURAL NOTES AND TYPICAL DETAIL SHEETS.
3. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF THE WORK, CONSTRUCTION DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
4. ALL CONSTRUCTION SHALL BE COORDINATED WITH AND IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.

### FOUNDATIONS

1. REFER TO THE CONSTRUCTION SPECIFICATIONS FOR EARTHWORK AND FOUNDATION PREPARATION REQUIREMENTS.

### REINFORCED CONCRETE

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS: STRUCTURAL CONCRETE - CLASS A - 3,000 PSI.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
3. UNLESS OTHERWISE DETAILED, PROVIDE 3/8-INCH DIAMETER SPACER BARS OR TIES AT 24-INCH ON CENTER IN SLABS, BEAMS, GIRDERS, AND FOOTINGS TO KEEP MAIN REINFORCING IN PLACE.
4. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE WALLS, PIERS, SLABS, OR FOOTINGS UNLESS SPECIFICALLY DETAILED.
5. WATERSTOPS AND JOINT SEALANT SHALL BE PLACED IN ALL CONSTRUCTION AND EXPANSION JOINTS.
6. REINFORCING STEEL SPLICE LENGTHS SHALL CONFORM TO THE STRUCTURAL DETAILS. LOCATION OF SPLICES SHALL BE AS SHOWN. WHERE SPLICE LAP LOCATIONS ARE NOT SHOWN, STAGGER SPLICE LAPS IN ADJACENT BARS 48 BAR DIAMETERS.
7. ALL ANCHOR BOLTS, DOWELS, AND OTHER ITEMS EMBEDDED OR ANCHORED IN CONCRETE SHALL BE SECURED IN PLACE PRIOR TO CONCRETE PLACEMENT.
8. PROVIDE 3/4-INCH CHAMFER AT ALL EXPOSED CONCRETE EDGES AND CORNERS UNLESS OMITTED BY NOTE ON DRAWINGS.

### REINFORCED MASONRY

1. REFER TO CONSTRUCTION SPECIFICATIONS AND STRUCTURAL DETAILS.

### GENERAL NOTES

1. PIPELINE ELEVATIONS SHOWN IN PLAN AND PROFILE ARE CENTERLINE OF PIPE.
2. ALL PIPING IS STEEL UNLESS SHOWN OTHERWISE ON THE DRAWINGS. PIPE TO BE IN ACCORDANCE WITH SECTION 15061 OF THE SPECIFICATIONS.
3. ALL FIELD WELDED JOINTS SHALL BE LAP WELD JOINTS UNLESS SHOWN OTHERWISE ON THESE DRAWINGS.
4. STEEL PIPE FITTINGS TO BE DESIGNED PER LVMWD STANDARD SPECIFICATIONS V110376. MAXIMUM WORKING PRESSURES = 120 PSIG SUCTION AND 690 PSIG DISCHARGE.
5. ALL STEEL PIPE SHALL BE CEMENT MORTAR LINED AND COATED PER SECTION 15061 OF SPECIFICATIONS.
6. ALL SURFACES OF BURIED STEEL PIPE AND FITTINGS SHALL BE WRAPPED IN PLASTIC FILM SECURED IN POLYETHYLENE ADHESIVE TAPE IN ACCORDANCE WITH SECTION C-5 OF THE LVMWD STANDARD SPECIFICATIONS FOR STEEL WATER PIPE AND FITTINGS.
7. SEE GENERAL PROVISIONS AND SPECIAL PROVISIONS IN SPECIFICATIONS FOR SHEETING, SHORING, AND BRACING REQUIREMENTS.
8. BACKFILL MATERIAL WITHIN THE PIPE ZONE SHALL BE IN CONFORMANCE WITH SECTION 02200 OF THE SPECIAL PROVISIONS, CONSTRUCTION DETAILS AND DETAIL 1, SHEET 5 OF THESE PLANS. BACKFILL MATERIAL ABOVE THE PIPE ZONE SHALL BE IN CONFORMANCE WITH SECTION B-3.2 OF THE LVMWD STANDARD SPECIFICATIONS FOR EARTHWORK (WATER MAINS) AND DETAIL 1, SHEET 5 OF THESE PLANS.
9. ANY AREAS ADJACENT TO THE DISTRICT RIGHT-OF-WAY USED BY THE CONTRACTOR FOR EQUIPMENT OR MATERIAL STORAGE SHALL BE RETURNED TO ORIGINAL CONDITION PRIOR TO ACCEPTANCE OF THE WORK. FILL MATERIAL, INCLUDING TEMPORARY STOCKPILING, SHALL NOT BE PLACED IN ANY NATURAL WATERCOURSE.
10. ALL ABOVEGROUND APPURTENANCES SHALL BE PAINTED IN ACCORDANCE WITH THE LVMWD STANDARD SPECIFICATIONS FOR PAINTING.
11. ALL FLANGES ON SUCTION PIPING SHALL BE AWWA C207 CLASS E. ALL FLANGES ON DISCHARGE PIPING SHALL BE ANSI B16.5 CLASS 300. ALL FLANGES TO BE HUB TYPE AND FLAT FACE.

### NOTIFICATION OF UTILITIES

48 HOURS PRIOR TO ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITIES IN THE AREA BY MEANS OF THE UNDERGROUND SERVICE ALERT SYSTEM (U.S.A.): 1-800-422-4133.

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CONST. INSP. DATE: 11/19/93  
 AGENCY: HEB  
 DRAFTED BY: HEB  
 AGENCY: HEB  
 DATE: 11/19/93



06145

LAS VIRGENES MUNICIPAL WATER DISTRICT

NEW SEMINOLE PUMP STATION

MATERIALS LIST AND NOTES

REV.	DATE	DESCRIPTION	APP.
1	8-15-93	ADDED NOTE 90	MB
2	11-19-93	AS CONSTRUCTED	MB
3	8/8/90	ISSUED FOR CONSTRUCTION.	MB
4	5/4/90	ISSUED FOR BIDDING	MB

DESIGN	DRAWN	CHECKED	C.A. NO.	DATE	SHEET NO.
KIC	DC	MPE	VT-102-122-13	5-27	3

BOYLE ENGINEERING CORPORATION  
 consulting engineers & architects  
 VENTURA, CA.

OF 17 SHEETS



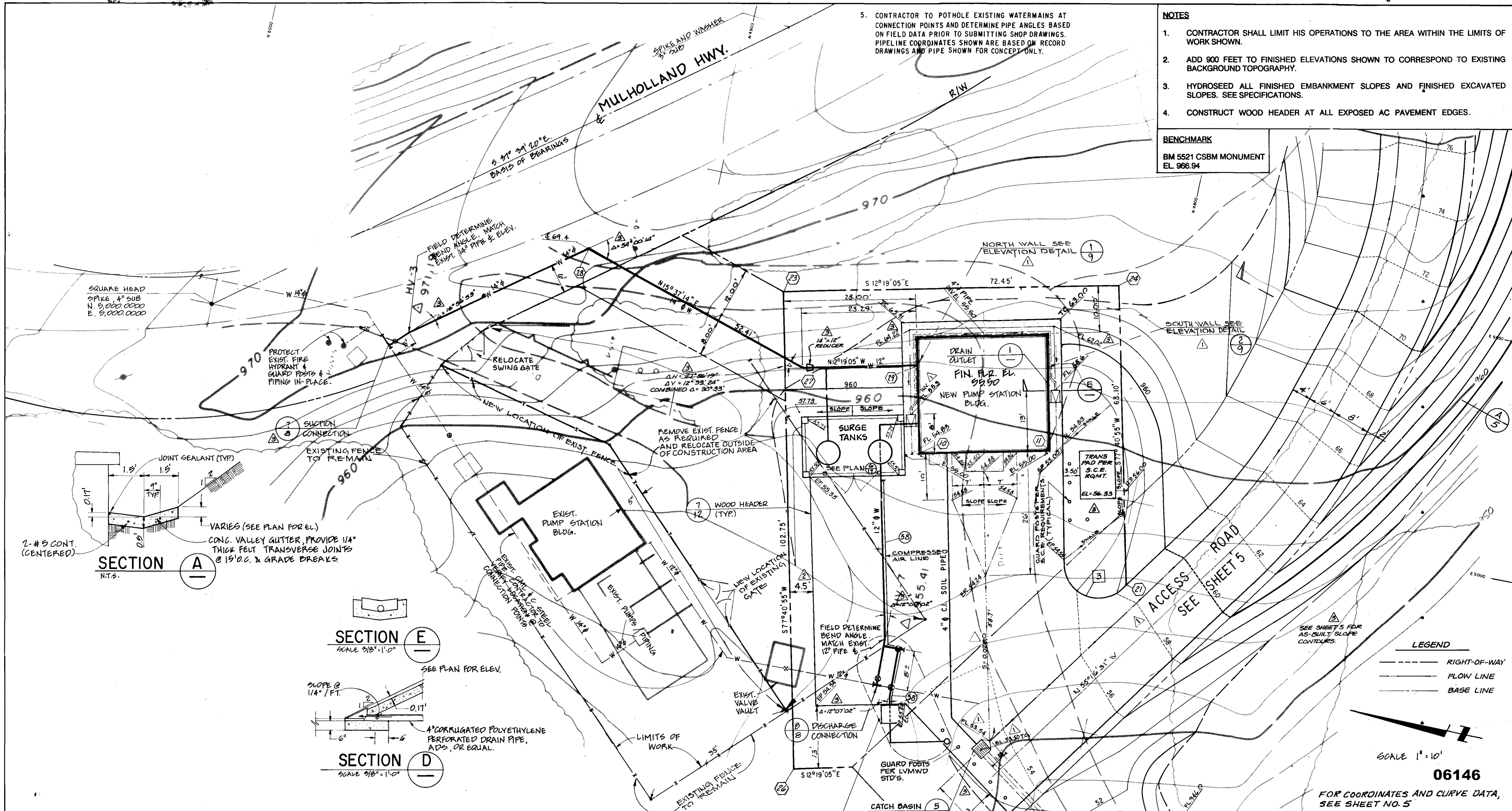
5. CONTRACTOR TO POTHOLE EXISTING WATERMAINS AT CONNECTION POINTS AND DETERMINE PIPE ANGLES BASED ON FIELD DATA PRIOR TO SUBMITTING SHOP DRAWINGS. PIPELINE COORDINATES SHOWN ARE BASED ON RECORD DRAWINGS AND PIPE SHOWN FOR CONCEPT ONLY.

**NOTES**

1. CONTRACTOR SHALL LIMIT HIS OPERATIONS TO THE AREA WITHIN THE LIMITS OF WORK SHOWN.
2. ADD 900 FEET TO FINISHED ELEVATIONS SHOWN TO CORRESPOND TO EXISTING BACKGROUND TOPOGRAPHY.
3. HYDROSEED ALL FINISHED EMBANKMENT SLOPES AND FINISHED EXCAVATED SLOPES. SEE SPECIFICATIONS.
4. CONSTRUCT WOOD HEADER AT ALL EXPOSED AC PAVEMENT EDGES.

**BENCHMARK**

BM 5521 CSBM MONUMENT  
EL. 966.94



SQUARE HEAD  
SPIKE, 4" SUB  
N. 9,000.0000  
E. 9,000.0000

PROTECT  
EXIST. FIRE  
HYDRANT &  
GUARD POSTS &  
PIPING IN-PLACE.

3 SUCTON  
CONNECTION

EXISTING FENCE  
TO REMAIN

EXIST. PUMP  
STATION  
BLDG.

REMOVE EXIST. FENCE  
AS REQUIRED  
AND RELOCATE OUTSIDE  
OF CONSTRUCTION AREA

7 WOOD HEADER  
(TYP.)

960  
SURGE  
TANKS

DRAIN  
OUTLET  
FIN. R.R. EL.  
999.90  
NEW PUMP STATION  
BLDG.

TRANS  
PAD PER  
S.C.E.  
REQMT.  
EL. 96.33

SOUTH WALL SEE  
ELEVATION DETAIL

NORTH WALL SEE  
ELEVATION DETAIL

ACCESS ROAD  
SEE SHEET 5

SEE SHEET 5 FOR  
AS-BUILT SLOPE  
CONTOURS.

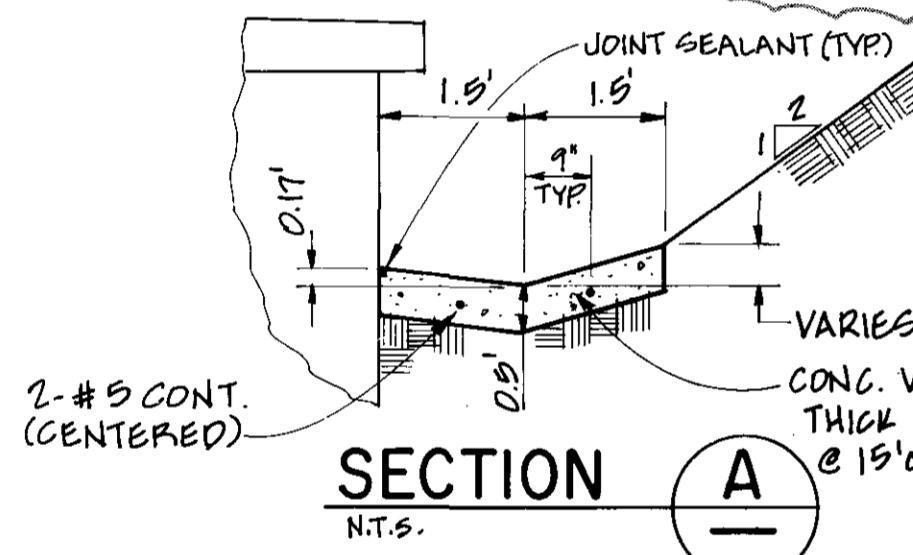
**LEGEND**

- RIGHT-OF-WAY
- FLOW LINE
- BASE LINE

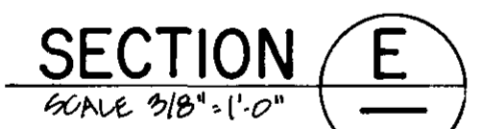
SCALE 1" = 10'

**06146**

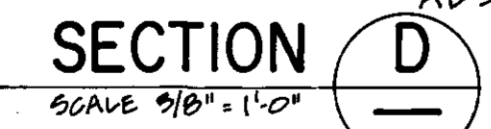
FOR COORDINATES AND CURVE DATA,  
SEE SHEET NO. 5



VARIABLES (SEE PLAN FOR EL.)  
CONC. VALLEY GUTTER, PROVIDE 1/4"  
THICK FELT TRANSVERSE JOINTS  
@ 15' O.C. & GRADE BREAKS



4" CORRUGATED POLYETHYLENE  
PERFORATED DRAIN PIPE,  
ADS, OR EQUAL.

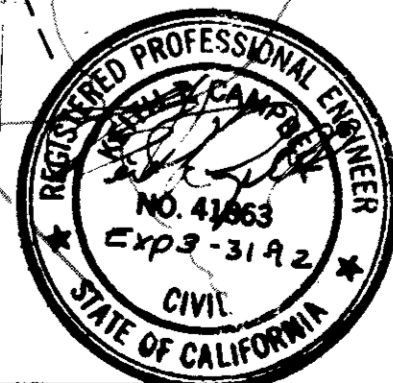


**NOTE: UNDAMAGED EXISTING FENCE MATERIAL CAN BE USED FOR NEW FENCE ALIGNMENT. DAMAGED FENCE MATERIAL SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. RELOCATION OF THE CHAIN LINK FENCE AND SWING GATES SHALL BE DONE IN A PROFESSIONAL MANNER. ALL POSTS SHALL BE SET IN CONCRETE FOOTINGS 8" IN DIAMETER BY 36" DEEP MINIMUM. EXISTING CONCRETE ON POSTS CAN REMAIN IF 2" OF NEW CONCRETE CAN ENIRCLE THE EXISTING CONCRETE WITH A 6" COVER BETWEEN EXISTING CONCRETE AND GROUND SURFACE.**

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CONST. INSP. *AV* AGENCY *REC* DATE *11/19/99*  
DRAFTED BY *AV* AGENCY *REC* DATE *11/19/99*  
PROJ. ENGR. *HEB* AGENCY *REC* DATE *12/10/99*



LAS VIRGENES MUNICIPAL WATER DISTRICT  
NEW SEMINOLE PUMP STATION  
PUMP STATION  
SITE PLAN

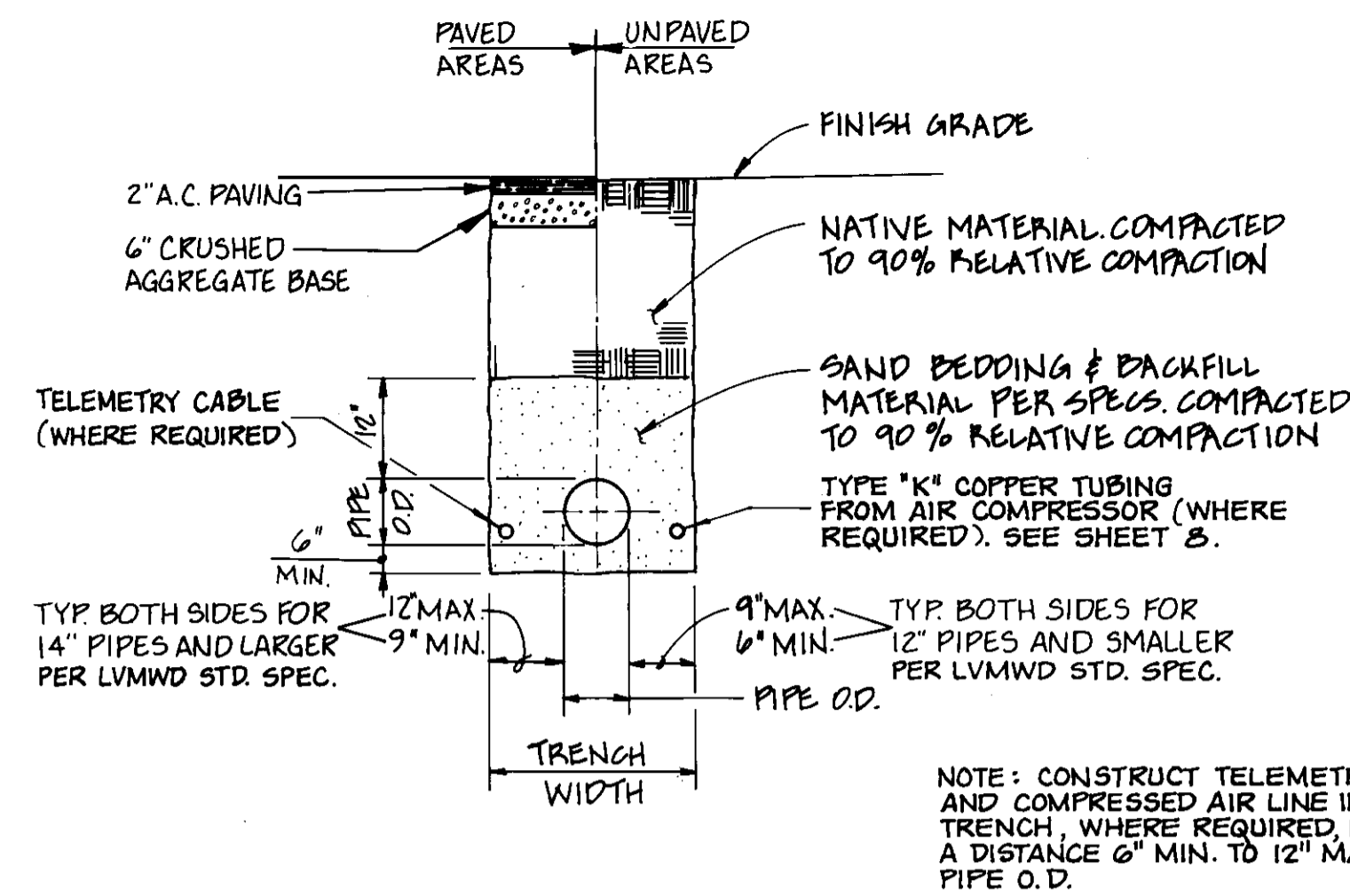
**BOYLE ENGINEERING CORPORATION**  
consulting engineers | architects  
VICTORIA, CA.

REV.	DATE	DESCRIPTION	APP.
1	11/19/99	AS CONSTRUCTED	HEB
2	3/7/99	REVISION	HEB
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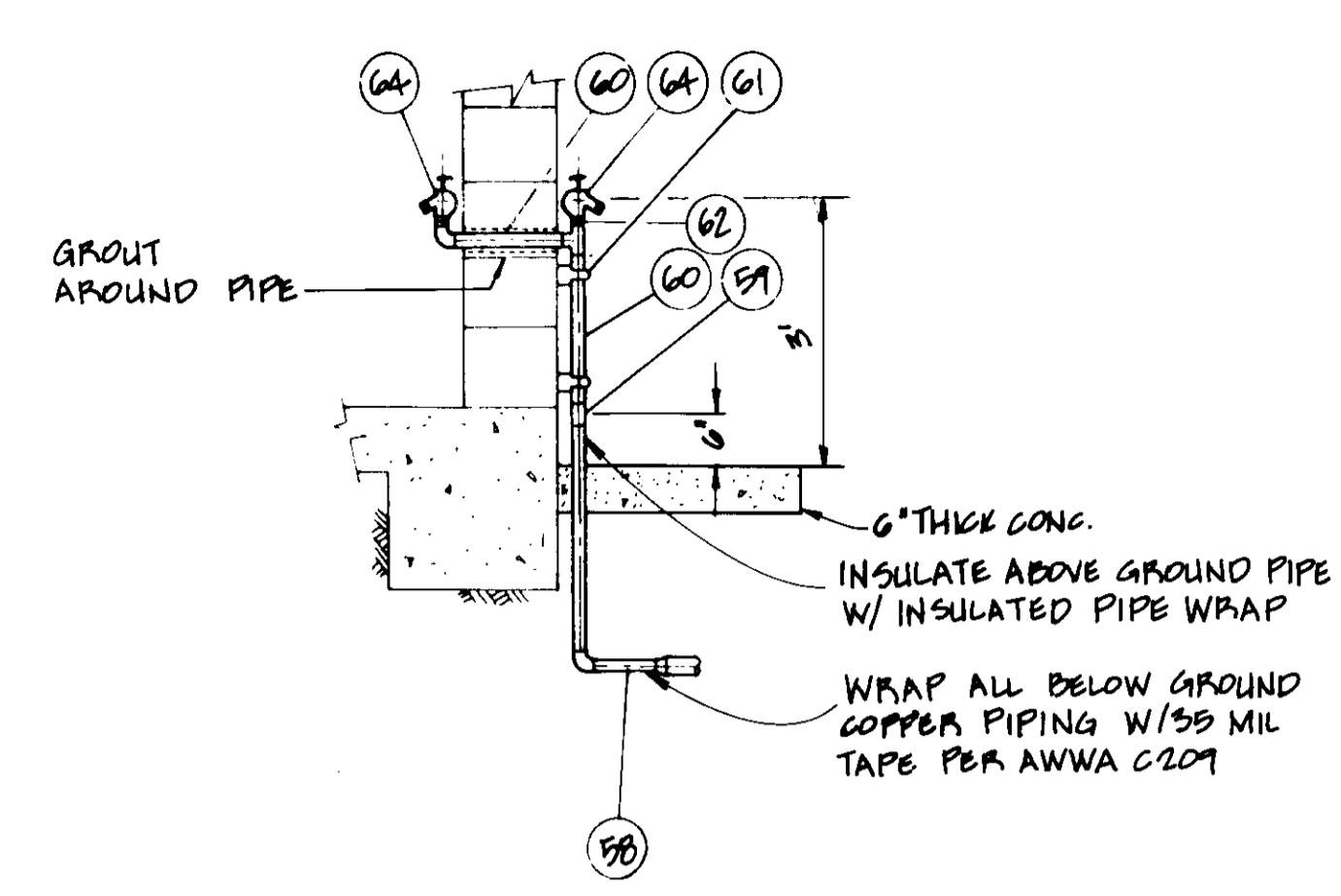
DESIGN	DRAWN	CHECKED	C.A. NO.	DRAWING NO.	DATE	SHEET NO.	TOTAL SHEETS
KTO	DLR, VHA	MPK	VT-102-122-15	S-227	5/4/90	4	17



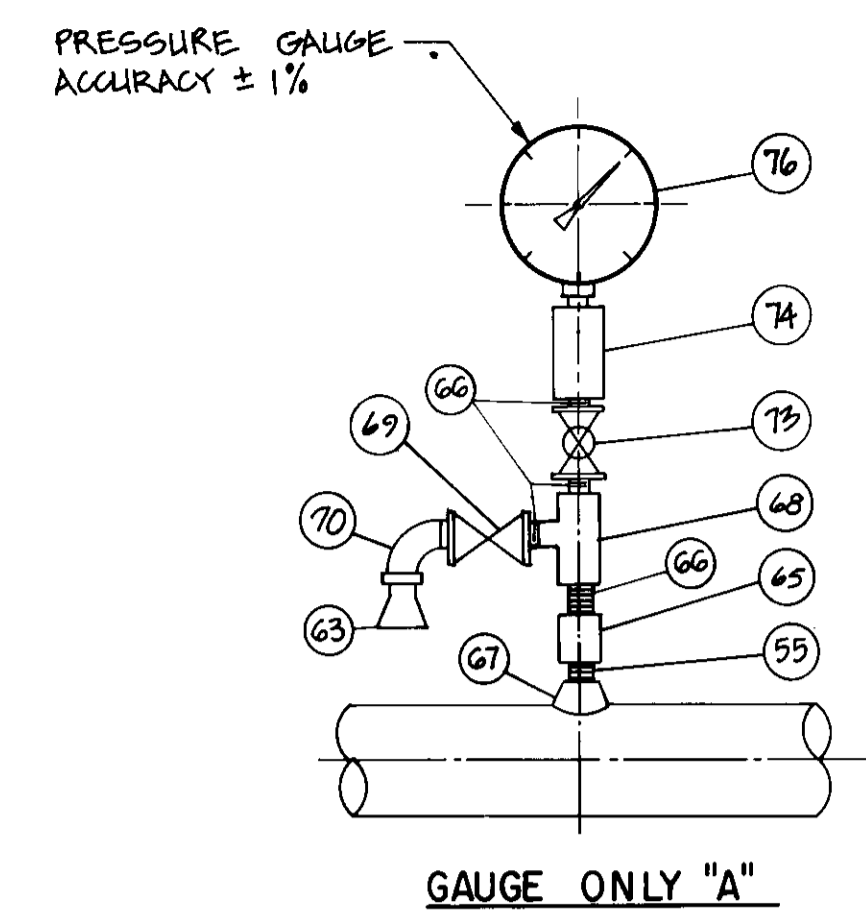




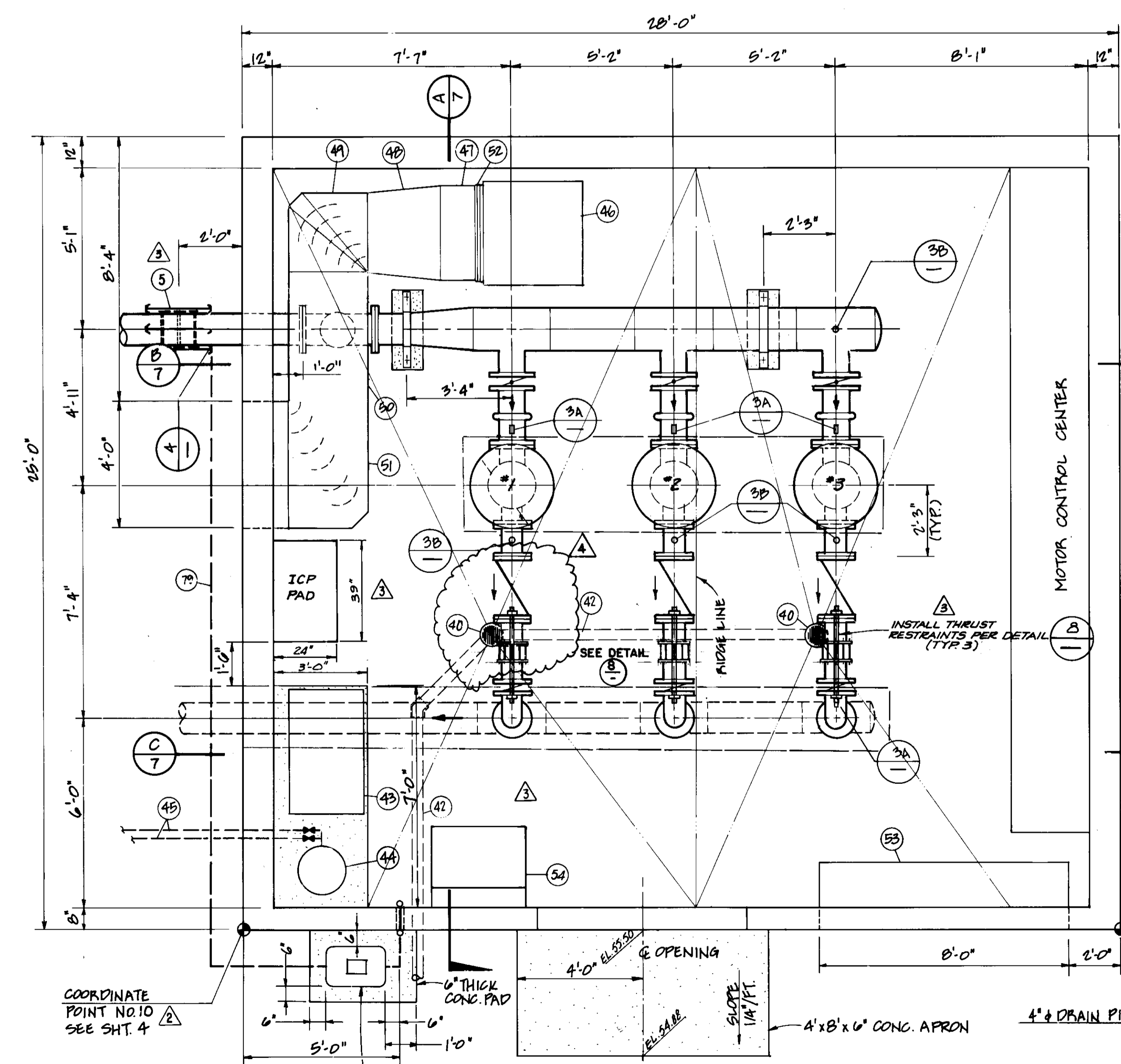
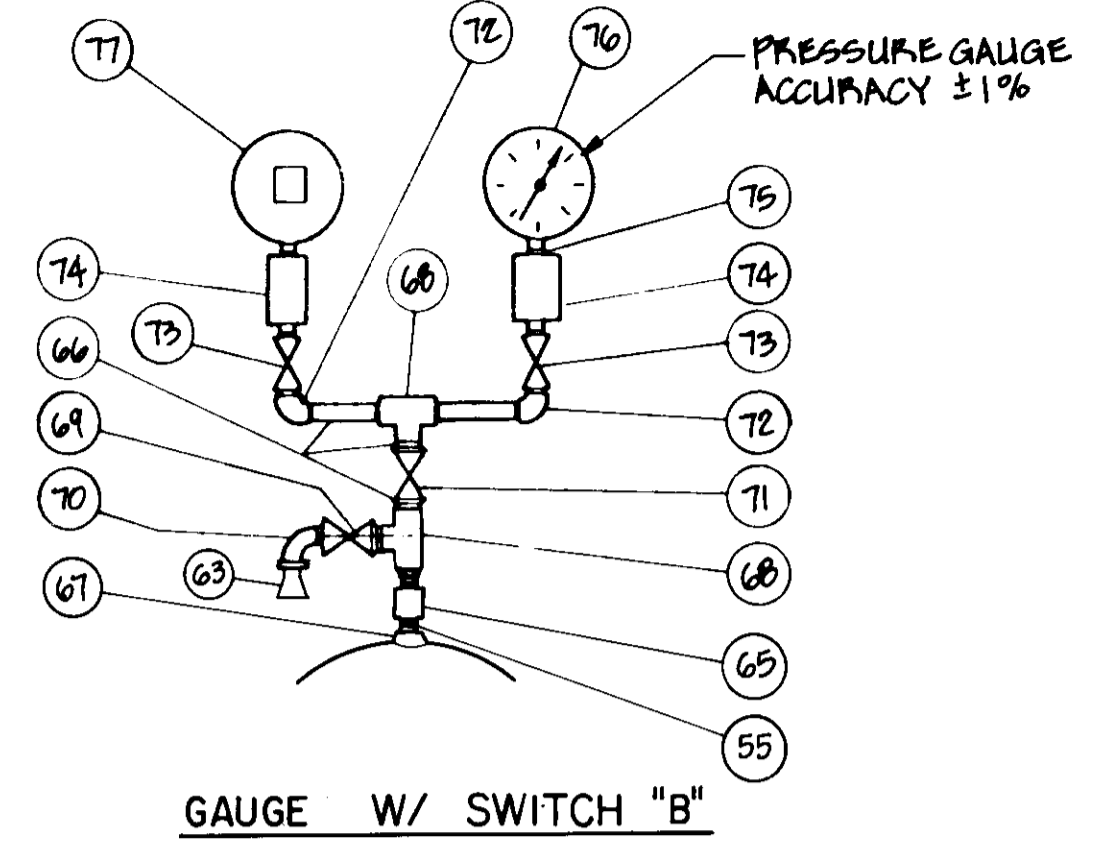
**TRENCH DETAIL 1**  
NOT TO SCALE



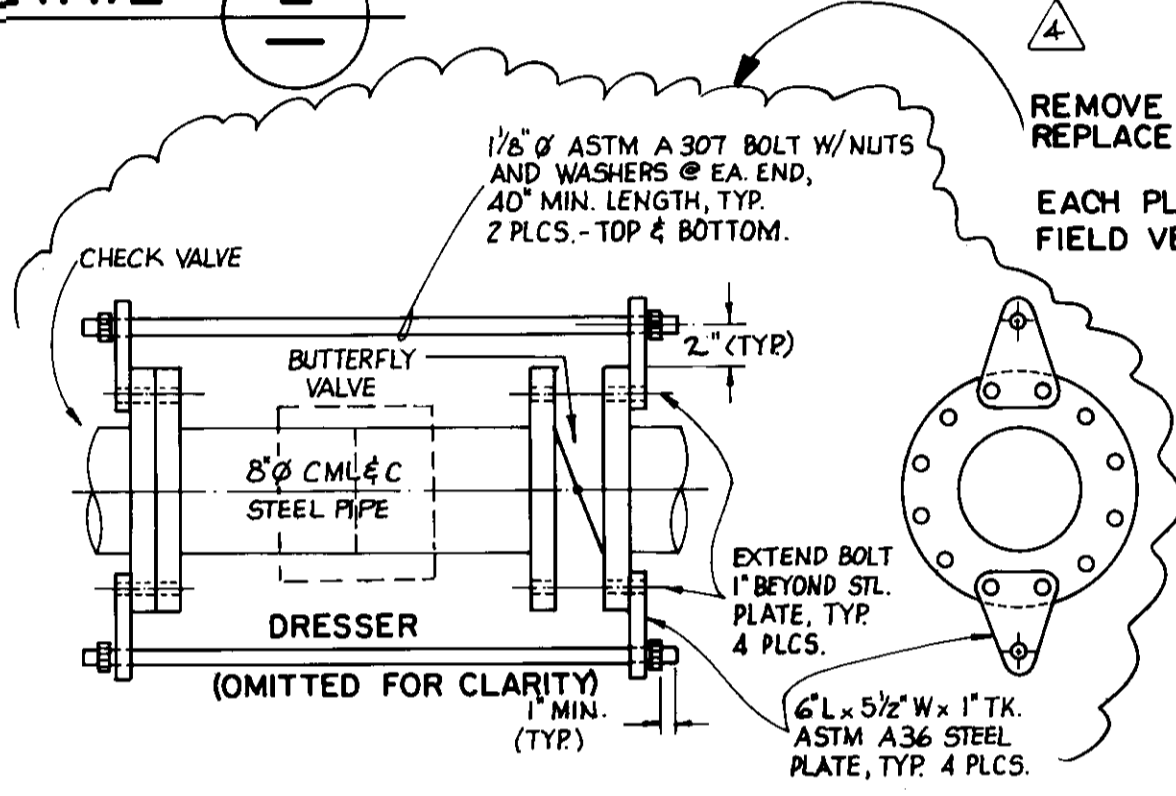
**HOSE BIBB DETAIL 2**  
NOT TO SCALE



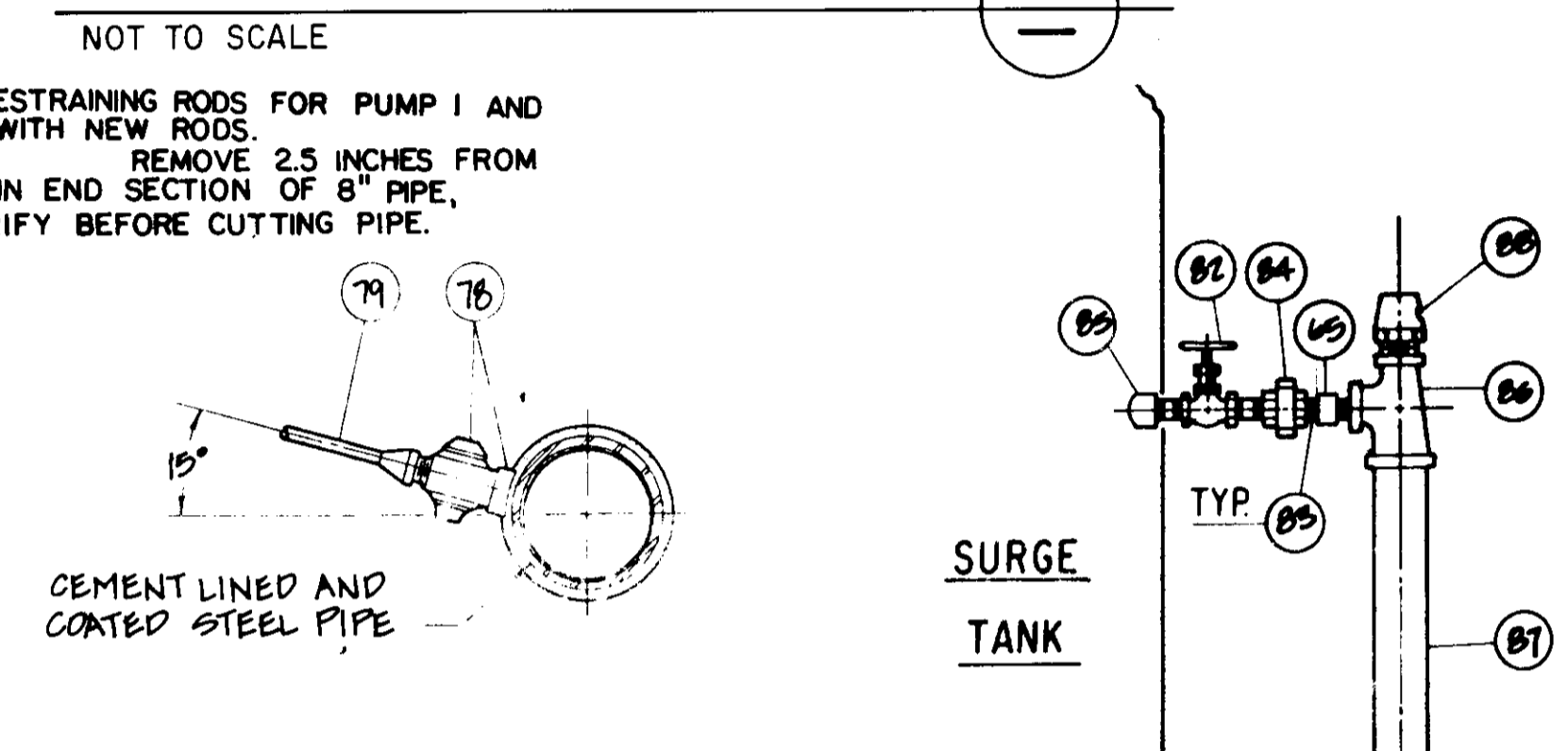
**PRESSURE GAUGE DETAILS 3**  
NOT TO SCALE



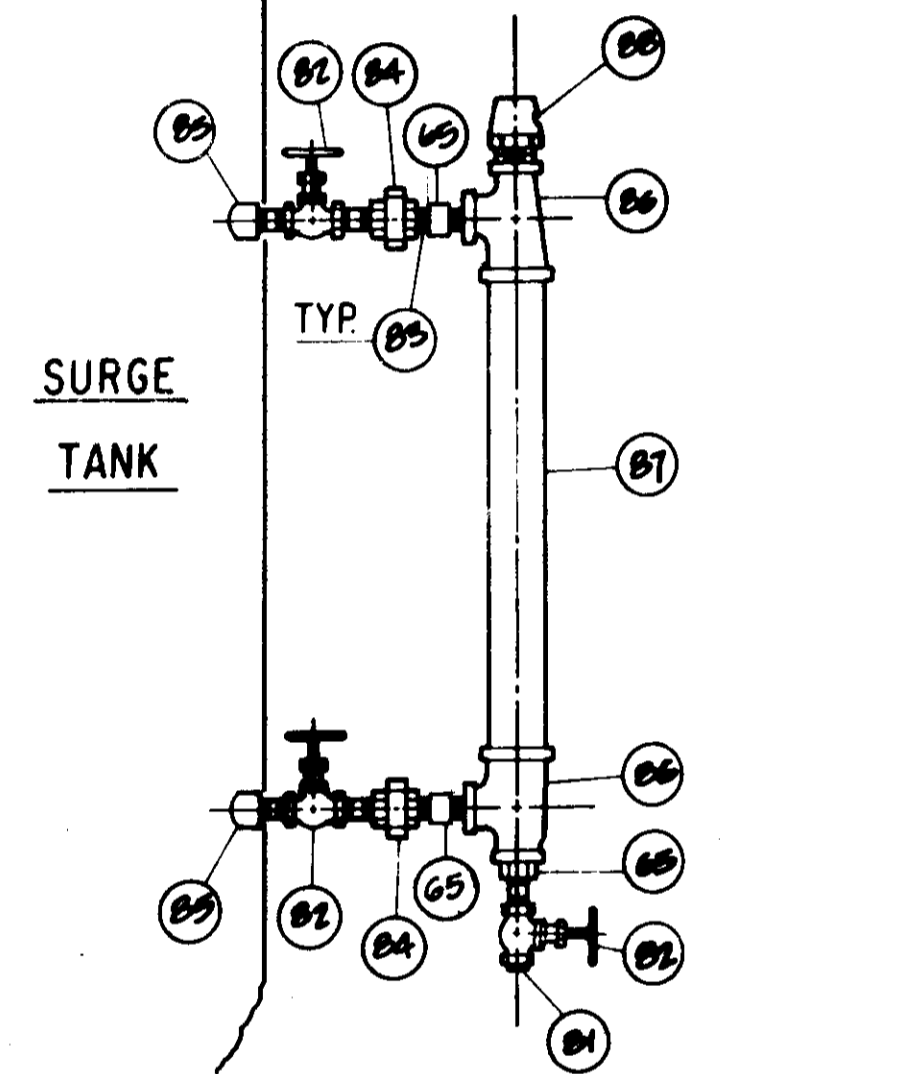
**PLAN**  
SCALE 3/8" = 1'-0"



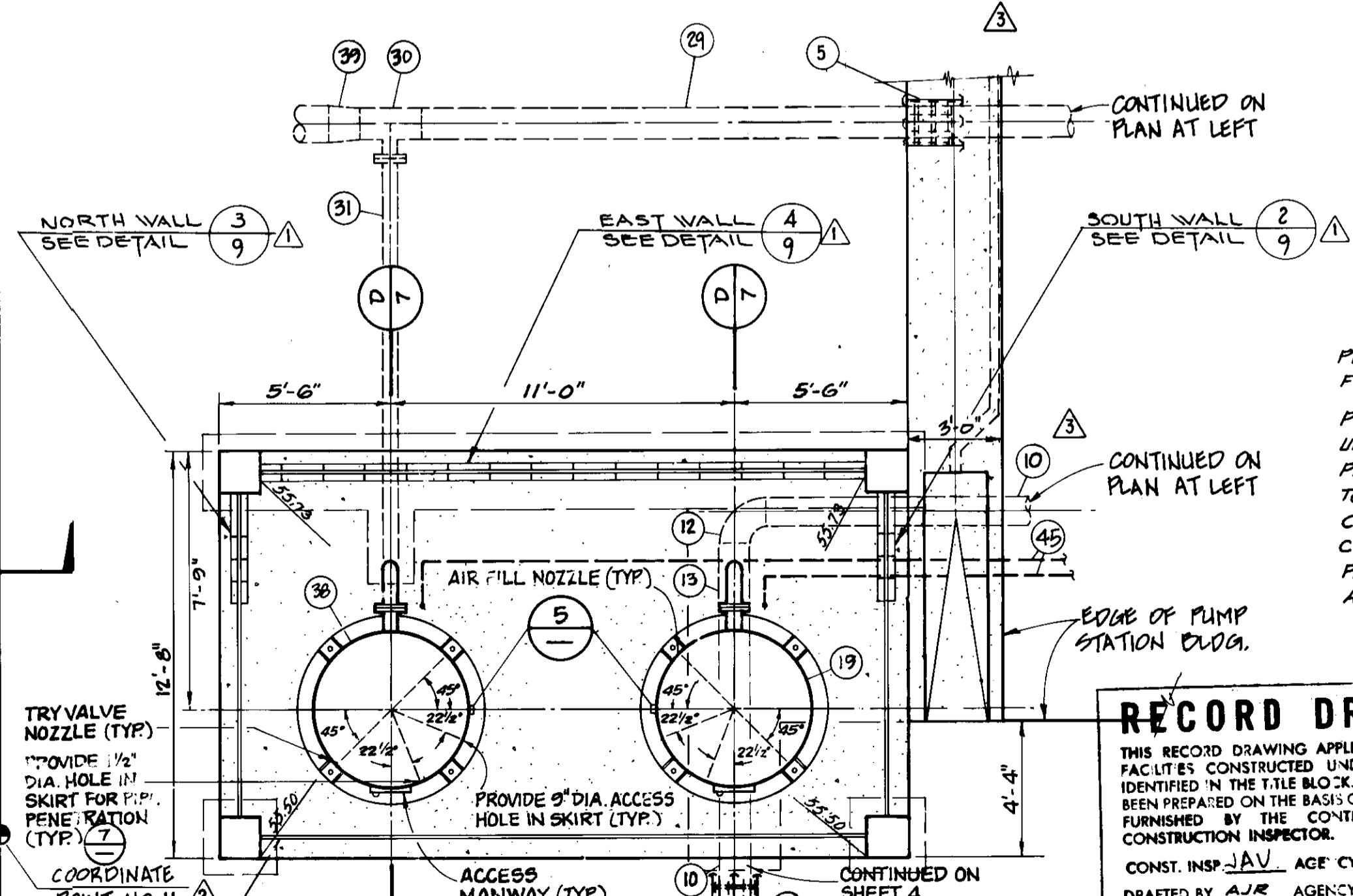
**THRUST RESTRAINT DETAIL 8**  
NOT TO SCALE



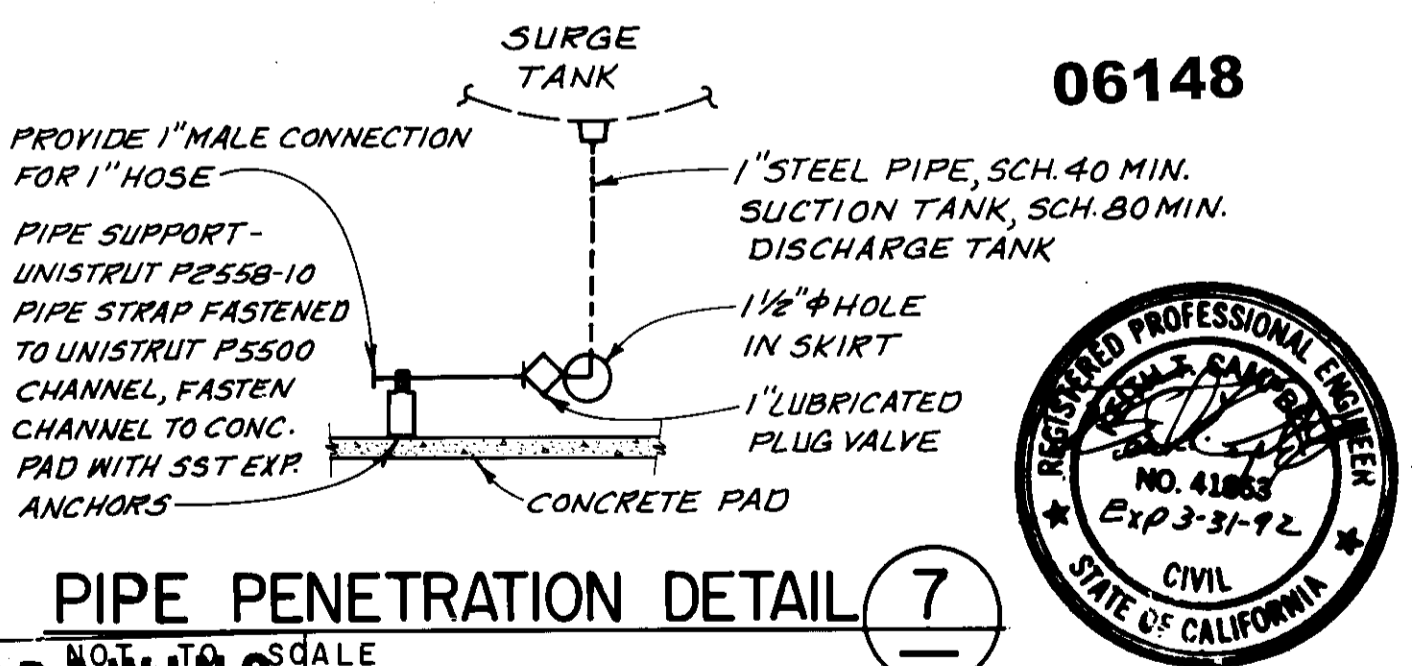
**CORPORATION STOP DETAIL 4**  
NOT TO SCALE



**SURGE TANK PROBE WELL 5**  
NOT TO SCALE



**SURGE TANKS PLAN 6**  
SCALE 1/4" = 1'-0"

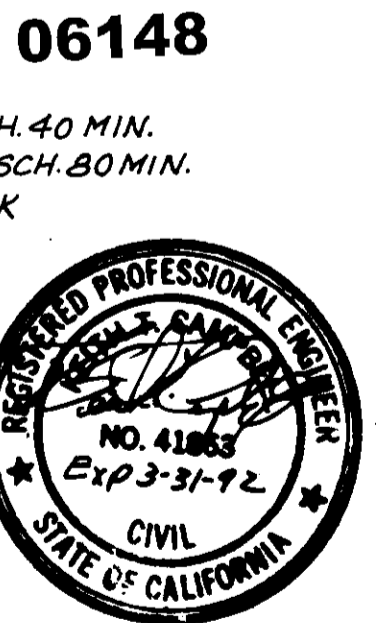


**PIPE PENETRATION DETAIL 7**  
NOT TO SCALE

**RECORD DRAWING**  
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CONST. INSP. JAV. AGE CYLUM. DATE 11/19/94  
DRAFTED BY ALE. AGENCY REC. DATE 11/12/93  
PROJ. ENGR. MEB. AGENCY REC. DATE 12/19/93

SEE SHEET NO. 3 FOR LIST OF MATERIALS.

REV.	DATE	DESCRIPTION	APP.
1	11/19/93	AS CONSTRUCTED	MEB
2	3/7/91	REVISIONS	MEB
3	8/8/90	ISSUED FOR CONSTRUCTION	MEB
4	5/4/90	ISSUED FOR BIDDING	



**06148**

LAS VIRGENES MUNICIPAL WATER DISTRICT

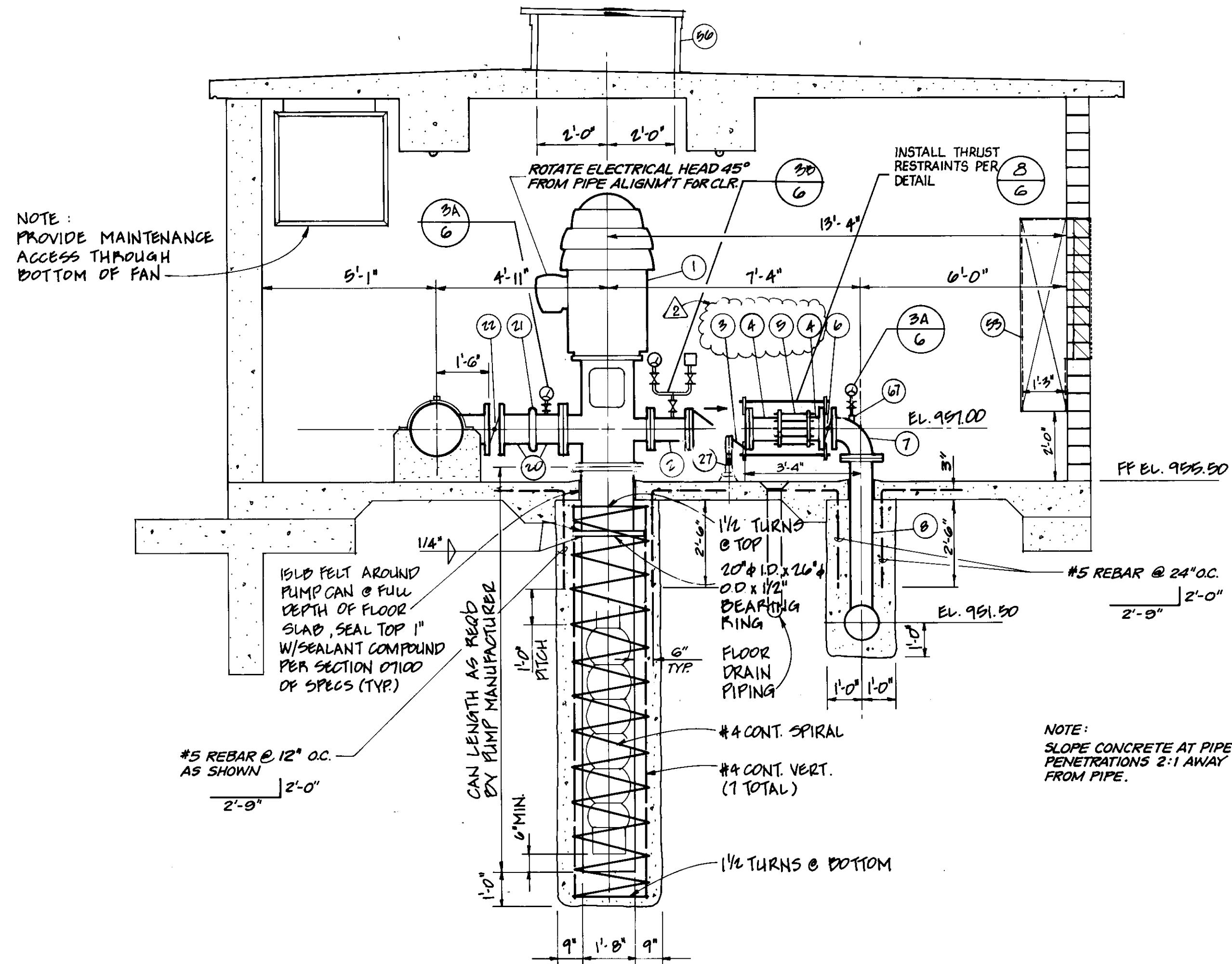
**NEW SEMMOLE PUMP STATION**

**PUMP STATION PIPING PLAN AND DETAILS**

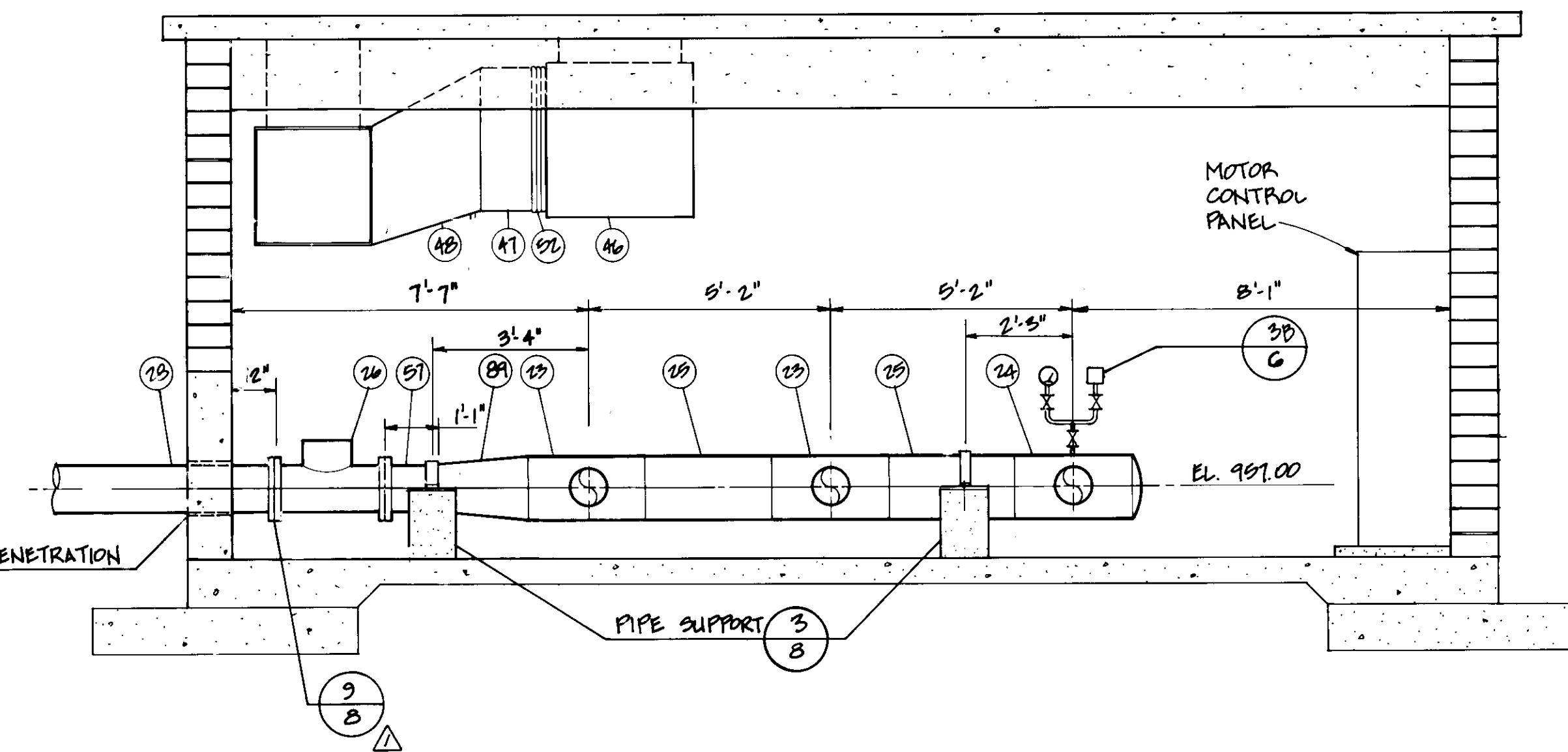
**BOYLE ENGINEERING CORPORATION**  
consulting engineers | architects  
VENTURA, CA.

SHEET NO. **6** OF 17 SHEETS

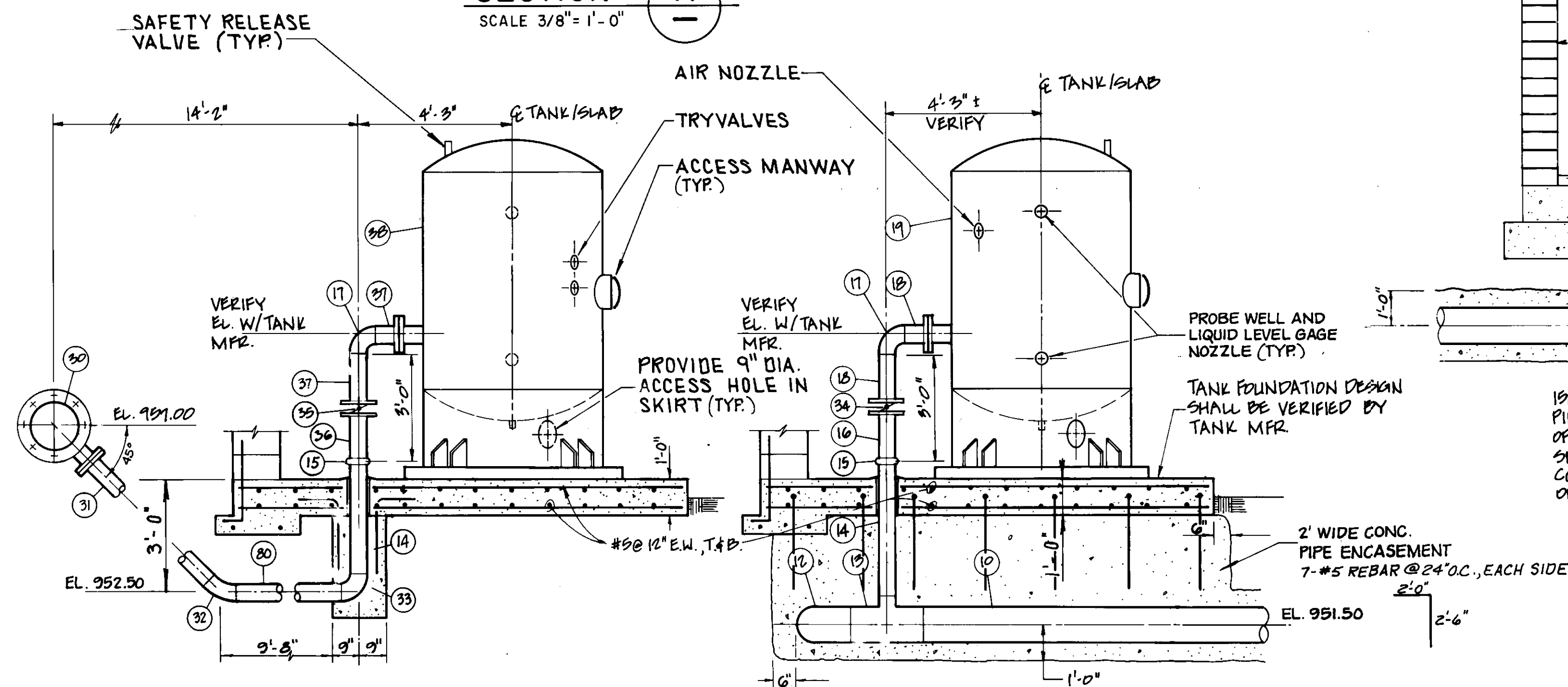




**SECTION A**  
SCALE 3/8" = 1'-0"

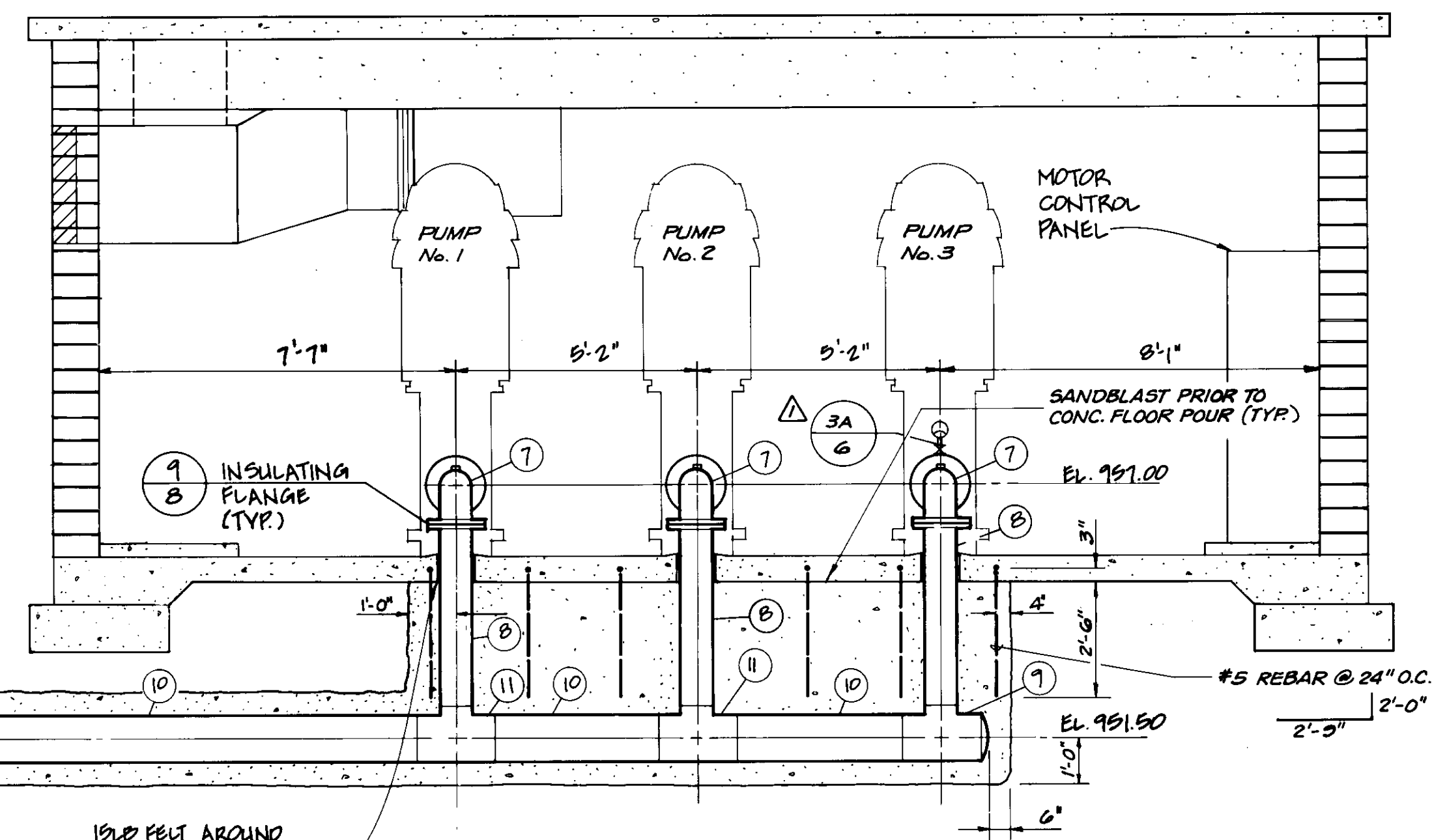


**"SECTION" SECTION B**  
SCALE 3/8" = 1'-0"



**SUCTION SURGE TANK PIPING**  
SCALE 3/8" = 1'-0"

**DISCHARGE SURGE TANK PIPING**  
SCALE 3/8" = 1'-0"

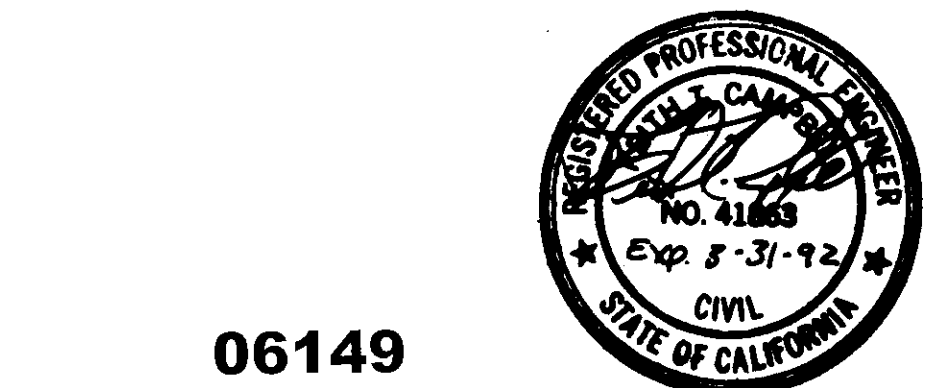


**"DISCHARGE" SECTION C**  
SCALE 3/8" = 1'-0"

**RECORD DRAWING**

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CONST. INSP. JAV AGE CY LUM DATE 11/19/93  
DRAFTED BY AJR AGENCY BEC DATE 11/19/93  
PROJ. ENGR. HEB AGENCY BEC DATE 12/14/93

8-15-95	REPLACE APCV VALVE ON PUMP No. 1 WITH A G.A. ELECTRIC CHECK VALVE	HMB
11-19-95	AS CONSTRUCTED	HMB
8/8/90	ISSUED FOR CONSTRUCTION	HMB
5/4/90	ISSUED FOR BIDDING	
REV.	DATE	DESCRIPTION



06149

LAS VIRGENES MUNICIPAL WATER DISTRICT

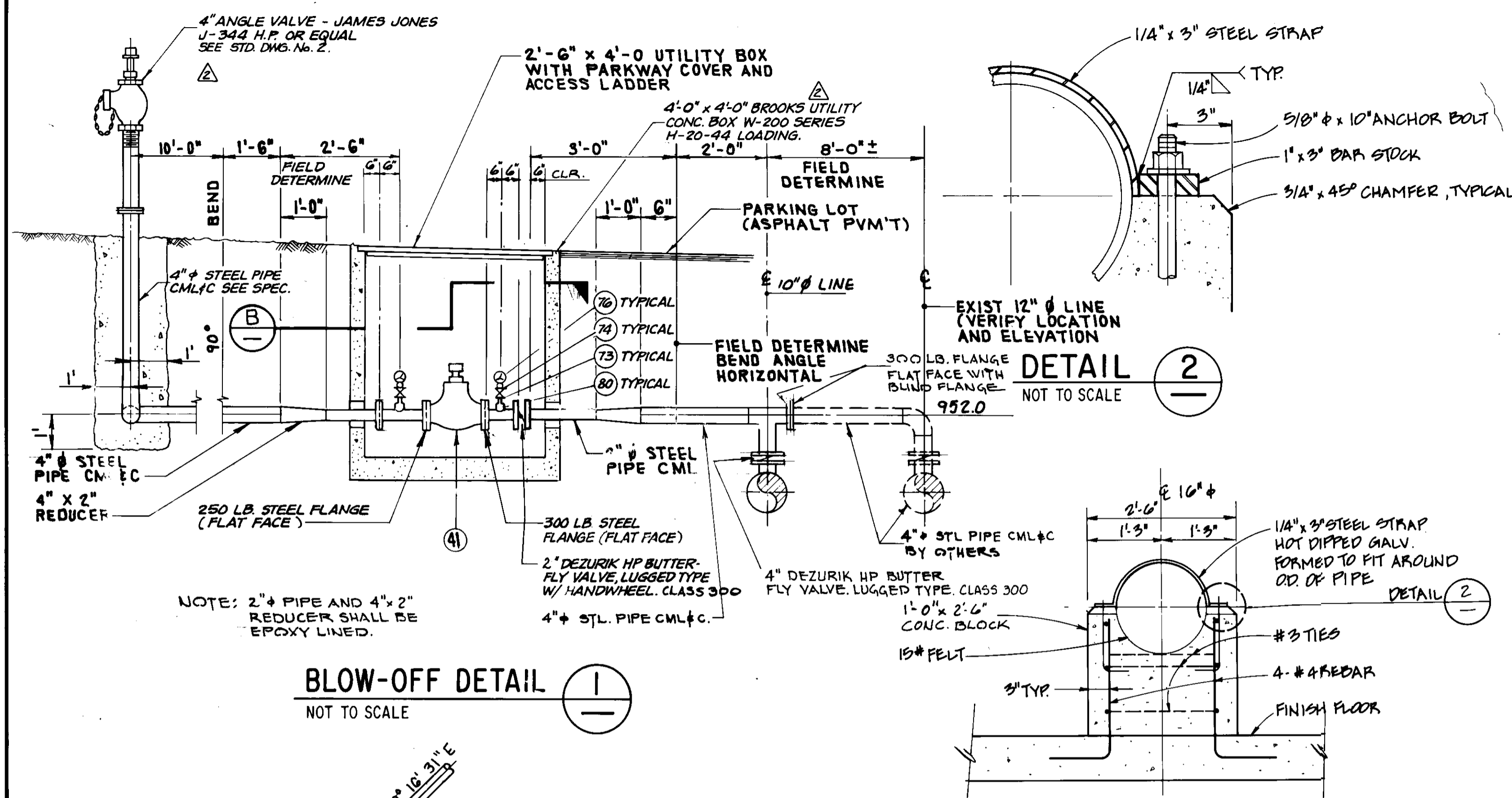
NEW SEMINOLE PUMP STATION

PUMP STATION SECTIONS AND DETAILS

**BOYLE ENGINEERING CORPORATION**  
consulting engineers / architects  
VENTURA, CA.

DESIGN	DRAWN	CHECKED	C.A. NO.	DATE	SHEET NO.
KTC	DJA	MPZ	VT-102-123	5-227	7

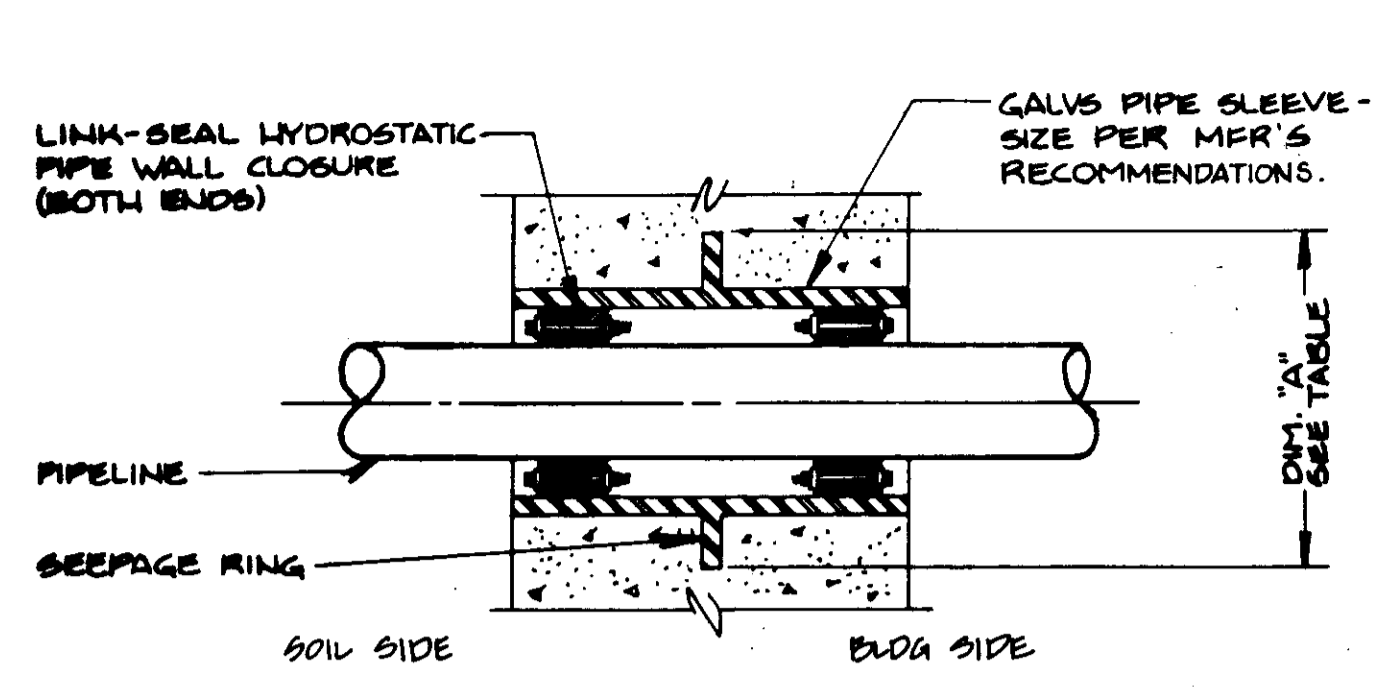
OF 17 SHEETS



**BLOW-OFF DETAIL 1**  
NOT TO SCALE

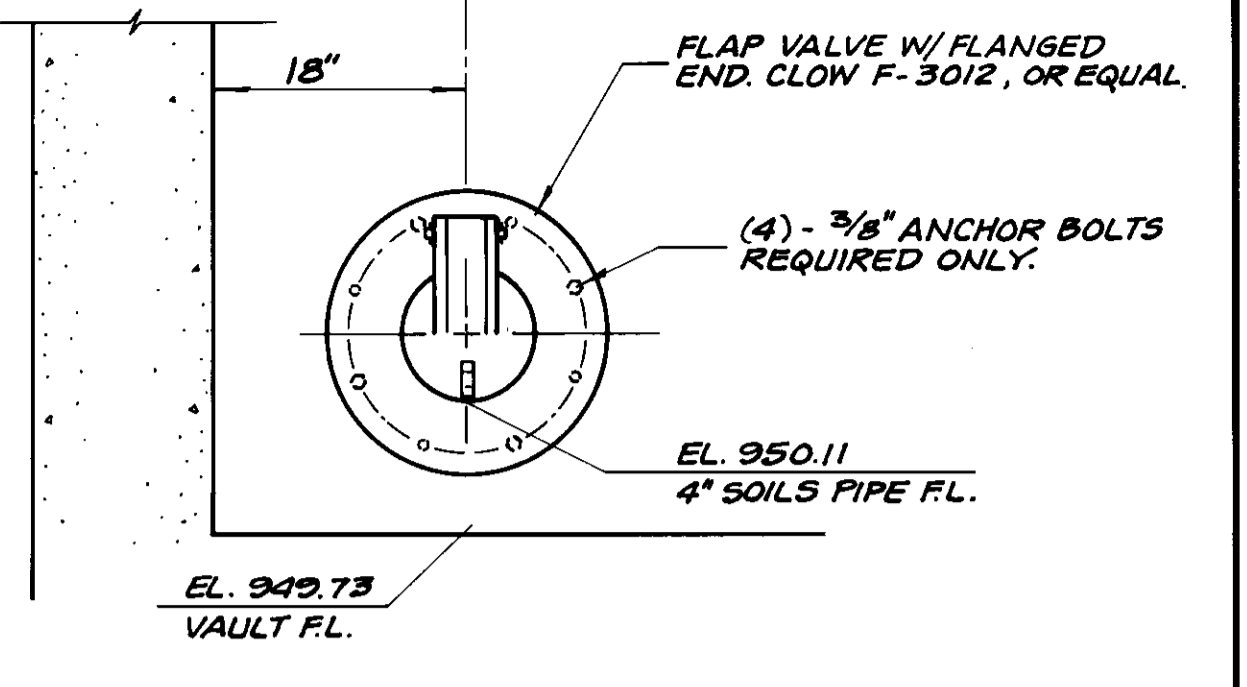
**DETAIL 2**  
NOT TO SCALE

**PIPE SUPPORT DETAIL 3**  
NOT TO SCALE

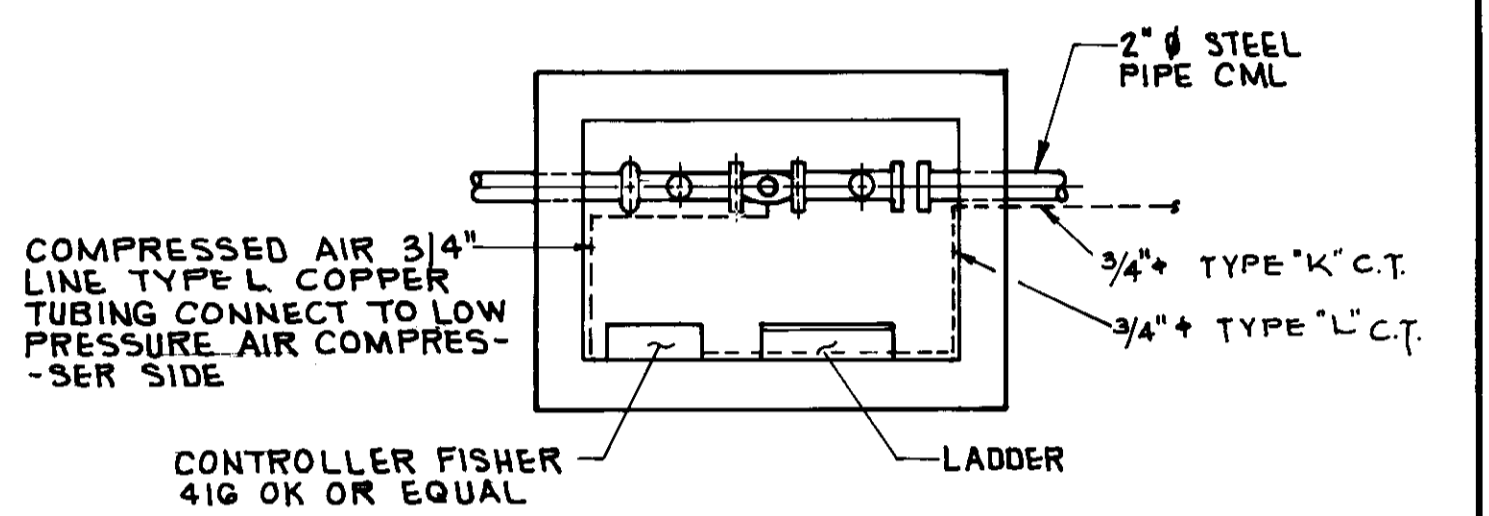


SLEEVE SIZE	DIM. "A" (INCHES)
2	6
2 1/2	7
3	7 1/2
3 1/2	8 1/2
4	9
6	11
8	13 1/2
10	16
12	19
14	21
16	23 1/2
18	25
20	27 1/2
24	32
30	38 3/4
36	46
42	53
48	59 1/2

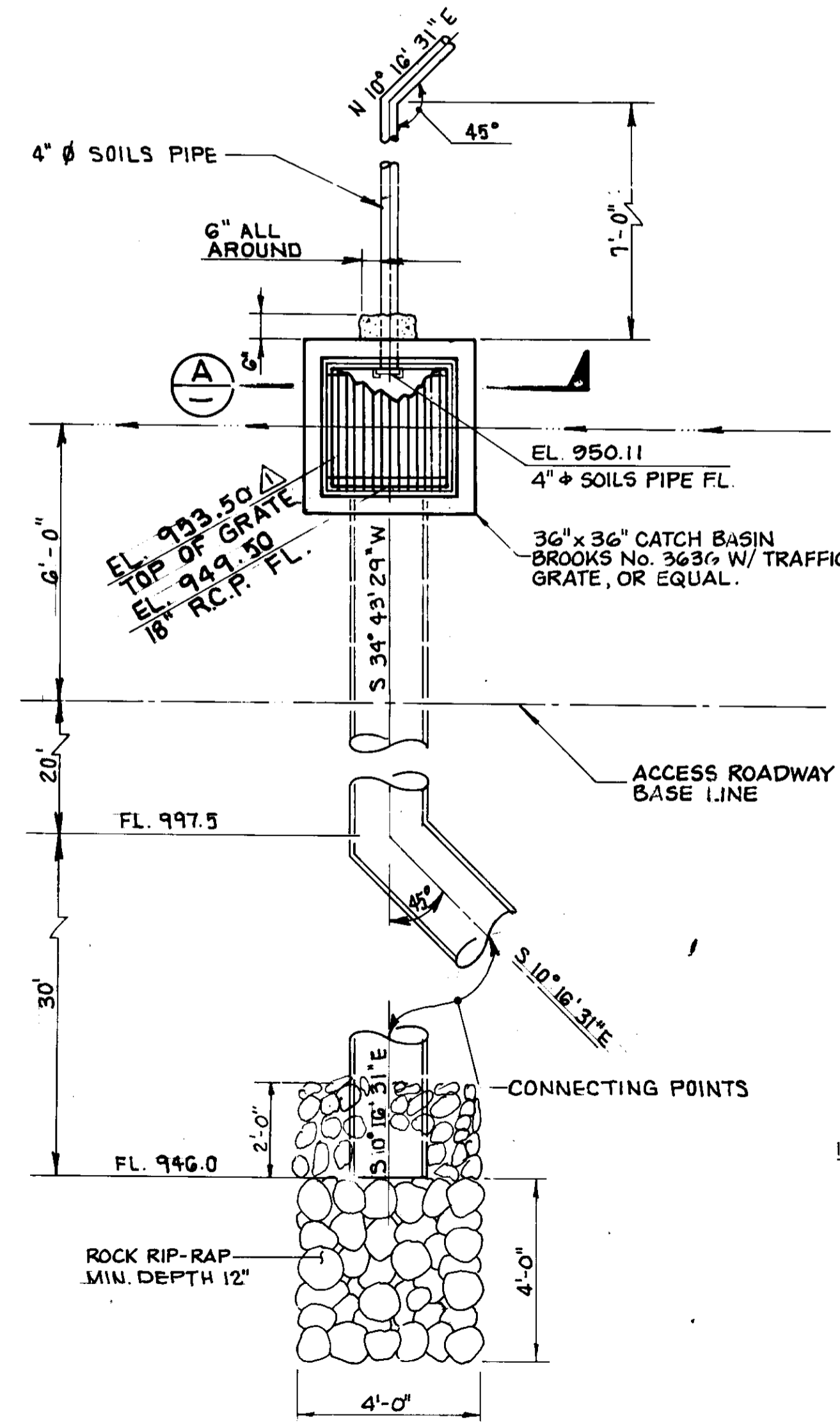
**WALL PENETRATION DETAIL 4**  
NOT TO SCALE



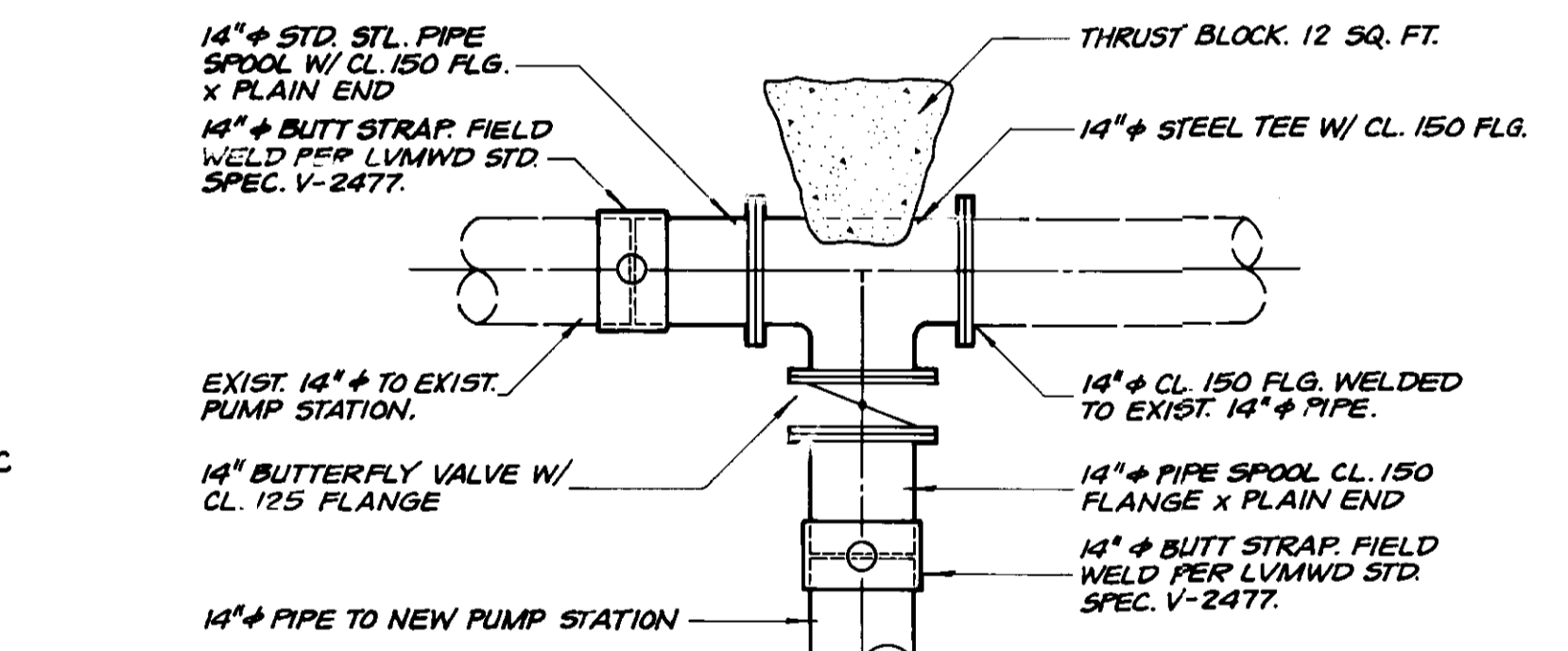
**SECTION A**  
NOT TO SCALE



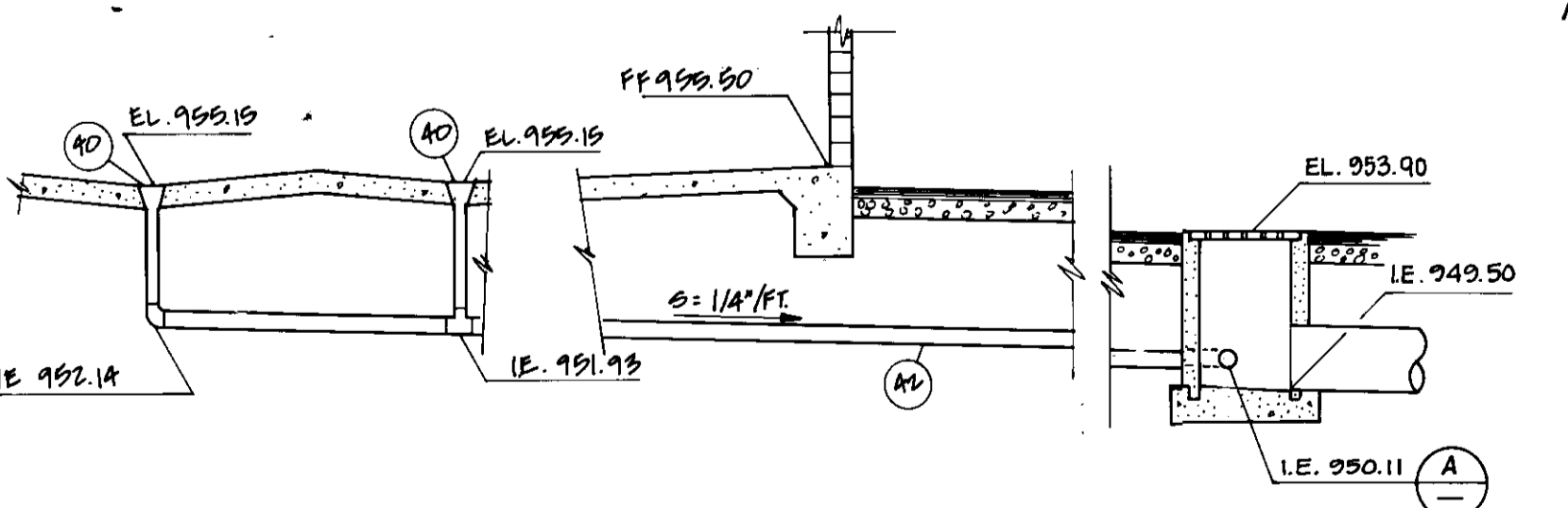
**SECTION B**  
NOT TO SCALE



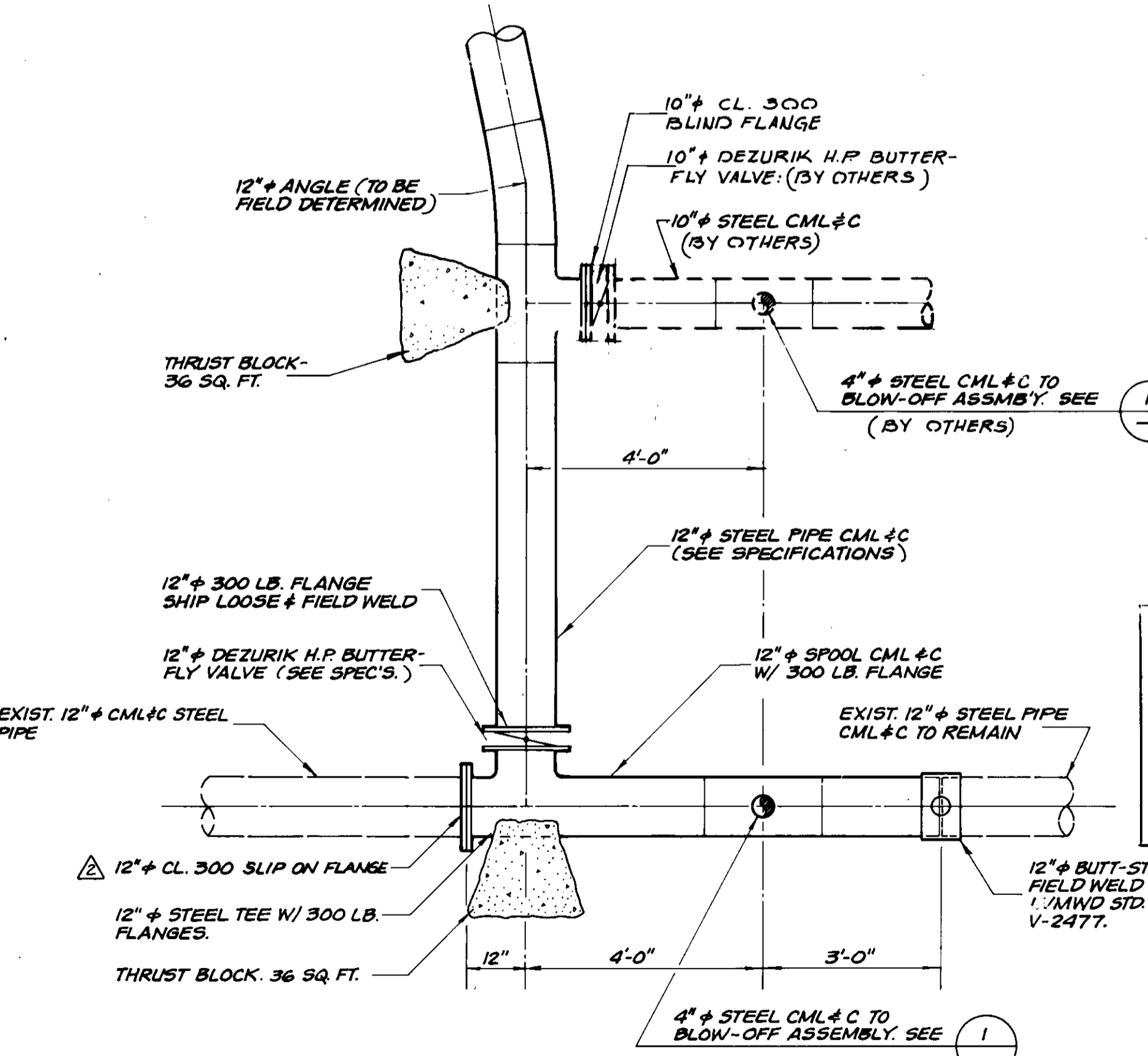
**CATCH BASIN DETAIL 5**  
SCALE: 3/8" = 1'-0"



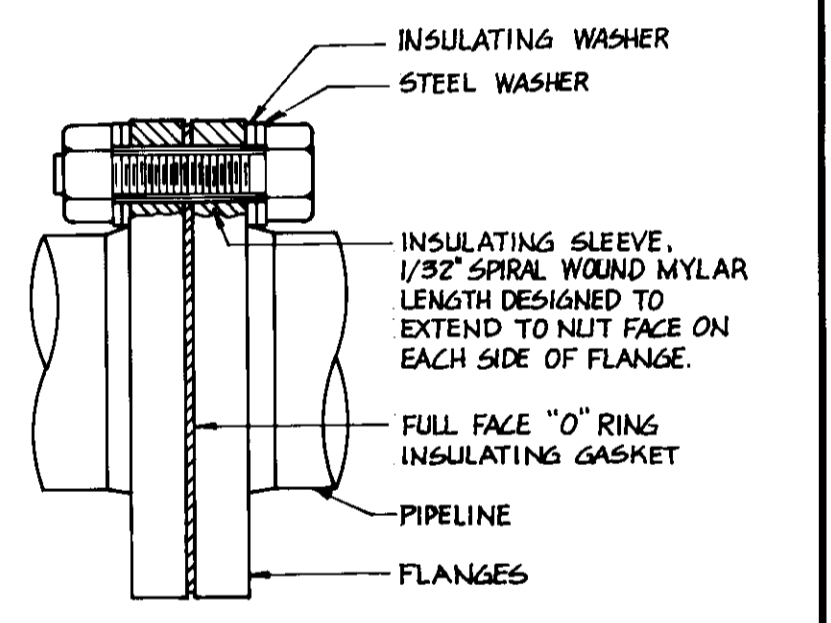
**CONNECTION DETAIL 7**  
SCALE: 1/2" = 1'-0"



**DRAIN PIPE PROFILE 10**  
NOT TO SCALE



**HIGH PRESSURE CONNECTION DETAIL 8**  
SCALE: 1/2" = 1'-0"

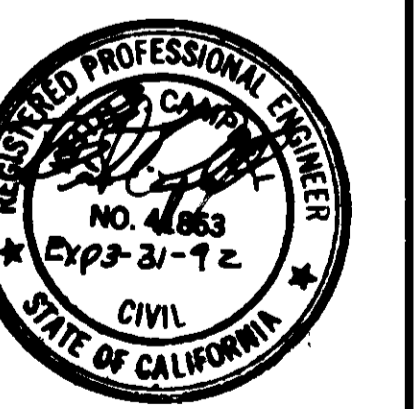


**INSULATING FLANGE DETAIL 9**  
NOT TO SCALE

**RECORD DRAWING**

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CONST. INSP. JAU AGENCY REC. DATE 1/4/94  
DRAFTED BY AVE AGENCY REC. DATE 11/2/93  
PROJ. ENGR. HEB AGENCY REC. DATE 12/19/93



**06150**

LAS VIRGENES MUNICIPAL WATER DISTRICT

**NEW SEMINOLE PUMP STATION**

**MISCELLANEOUS DETAILS**

**BOYLE ENGINEERING CORPORATION**  
consulting engineers / architects  
VENTURA, CA.

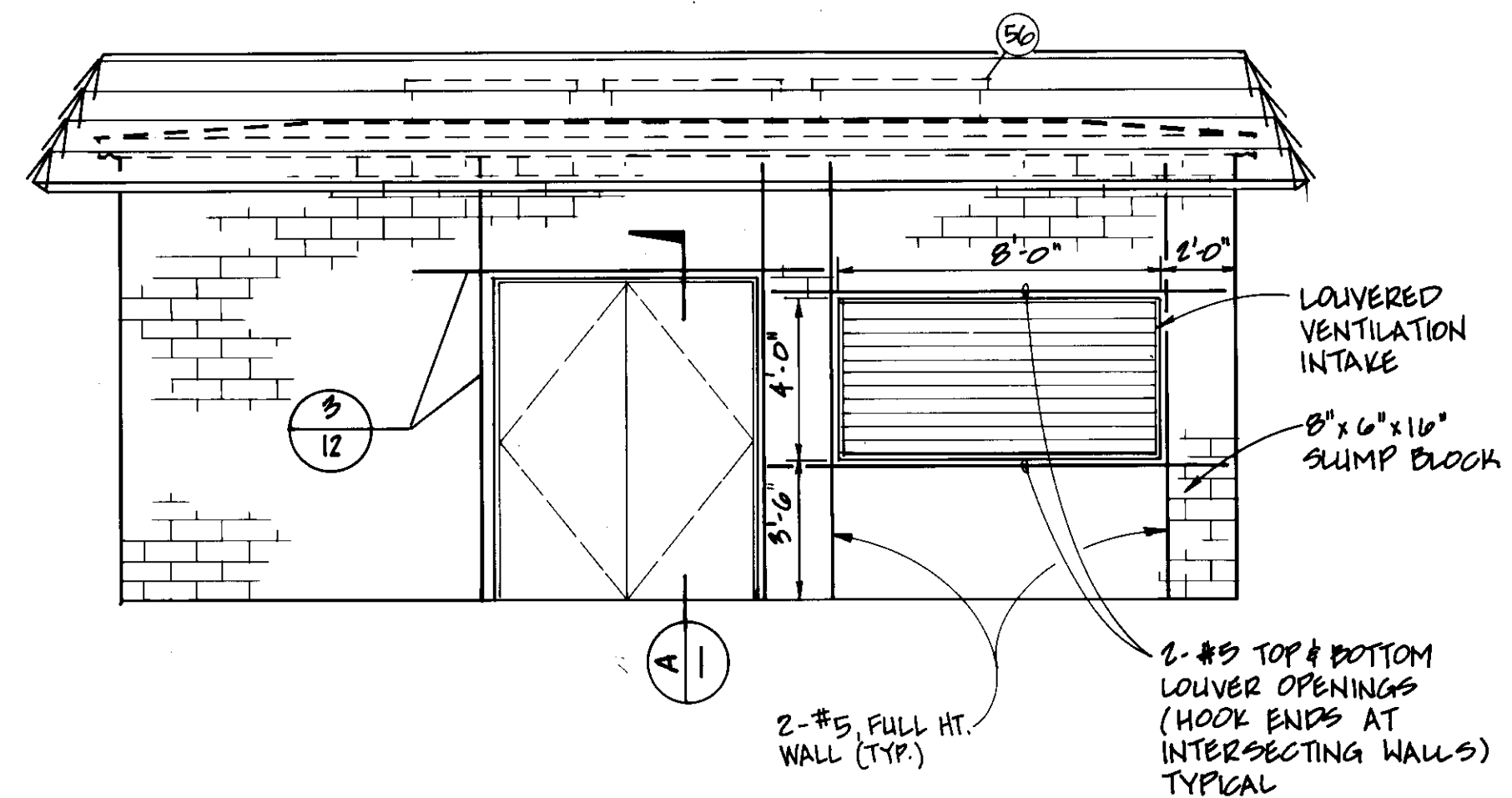
DESIGN: MTC  
DRAWN: CLW  
CHECKED: MPK  
DATE: 5/4/90

C.A. NO.: VT-102-122-3  
S-227

SHEET NO. **8**  
OF 17 SHEETS

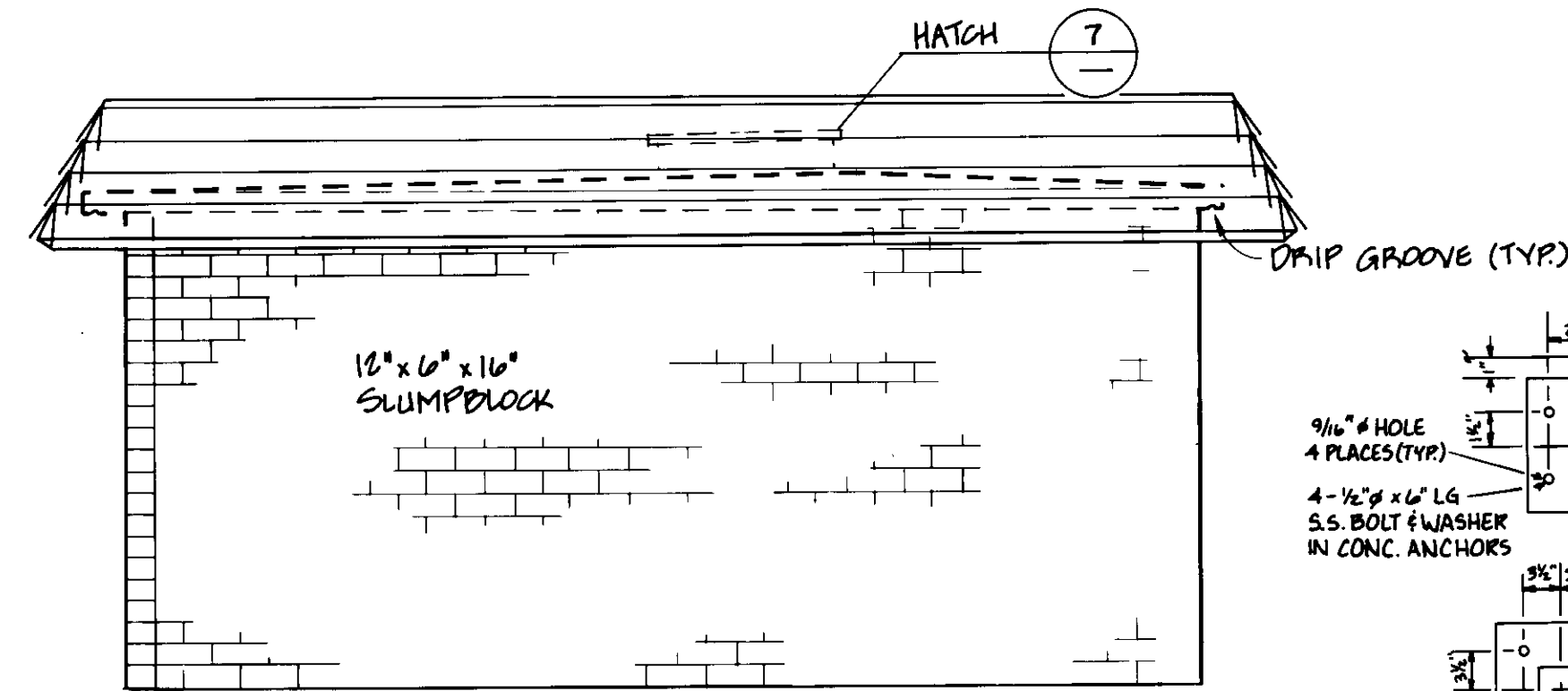
REV.	DATE	DESCRIPTION	APP.
1	11/19/93	AS CONSTRUCTED	HES
2	8/8/90	ISSUED FOR CONSTRUCTION	HES
3	5/4/90	ISSUE FOR BIDDING	





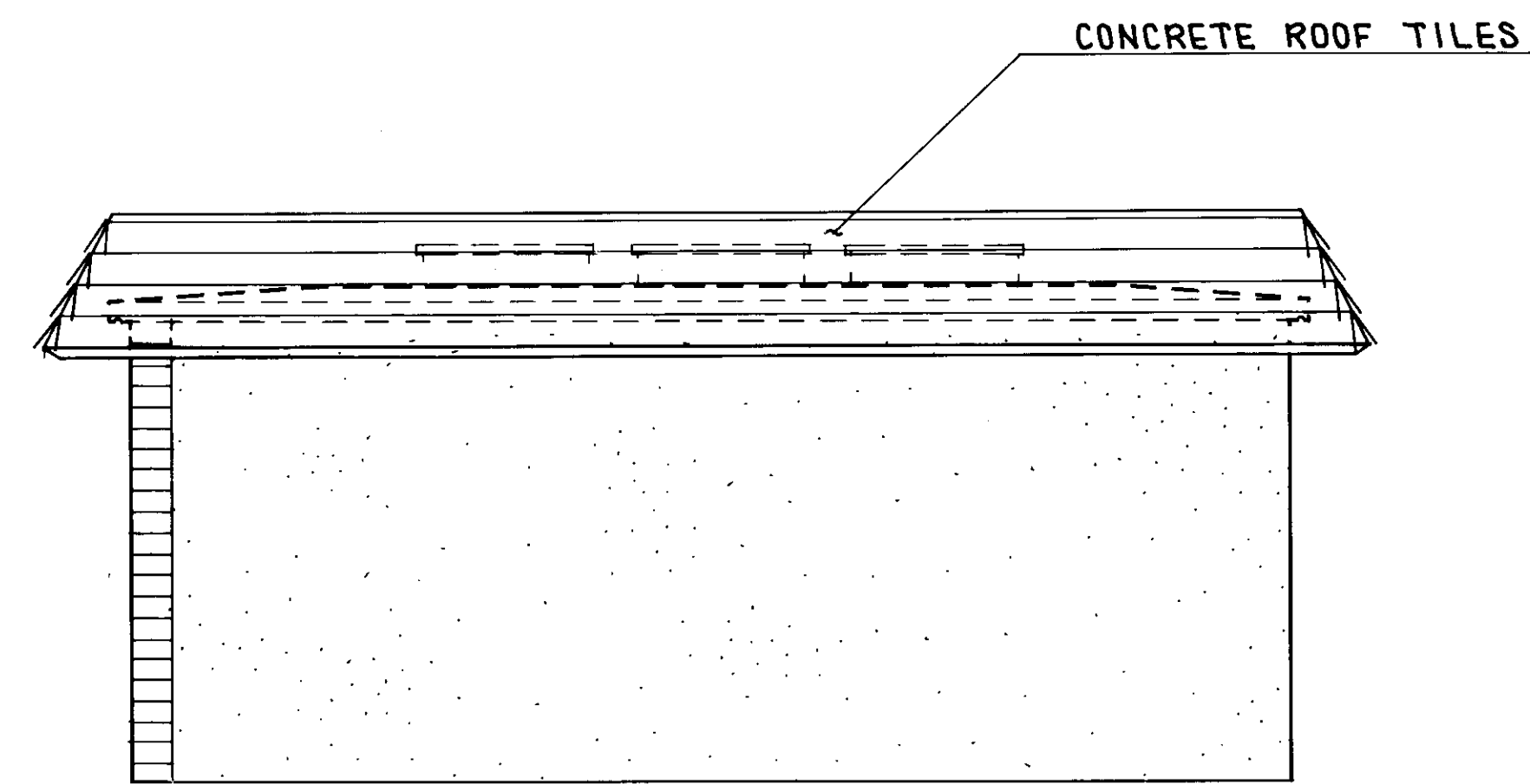
**WEST ELEVATION**

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



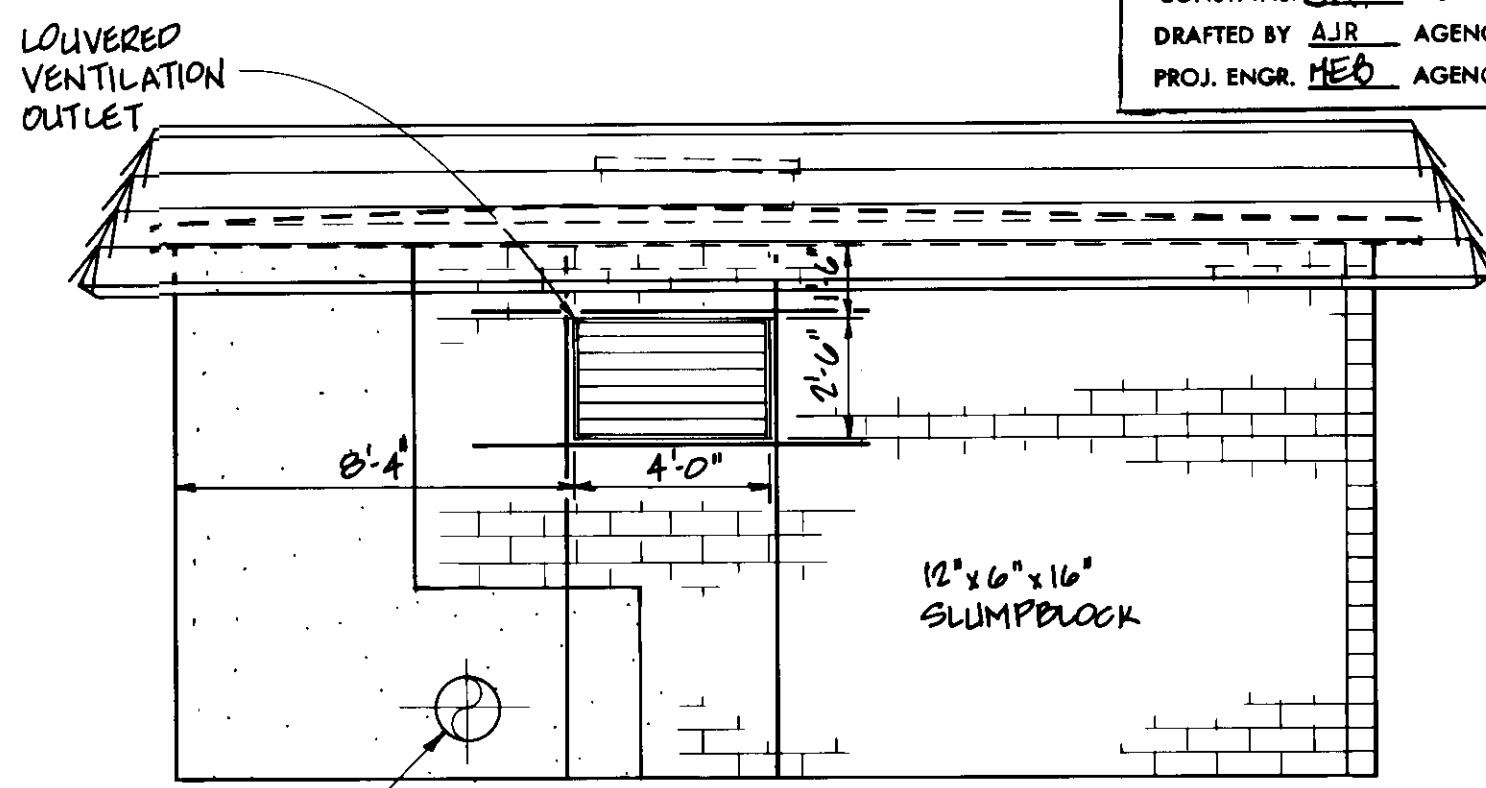
**SOUTH ELEVATION**

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



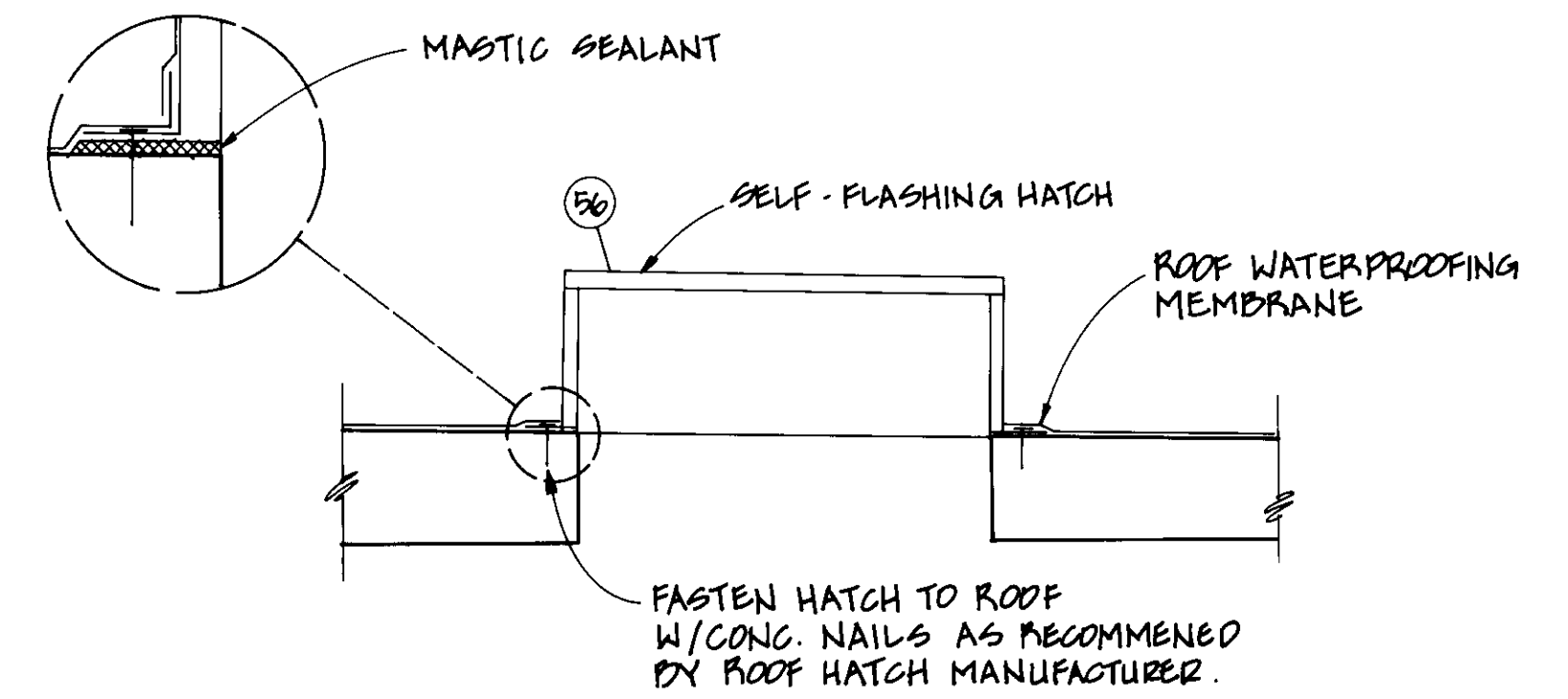
**EAST ELEVATION**

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

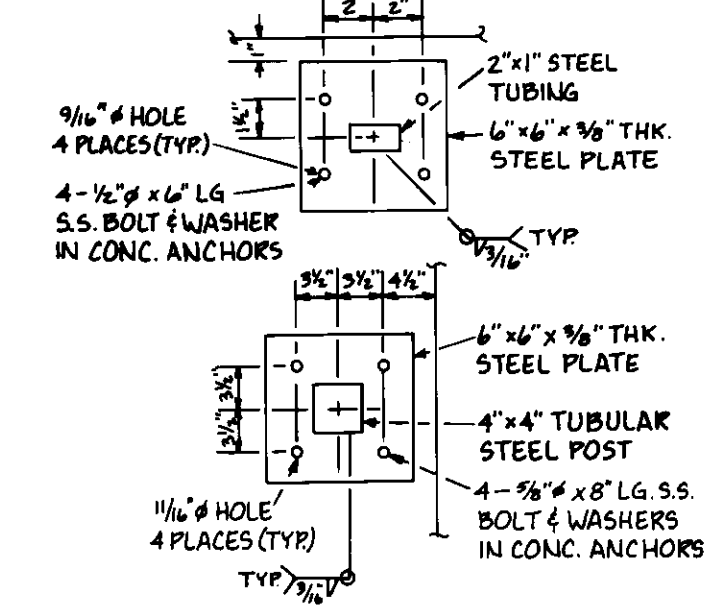


**NORTH ELEVATION**

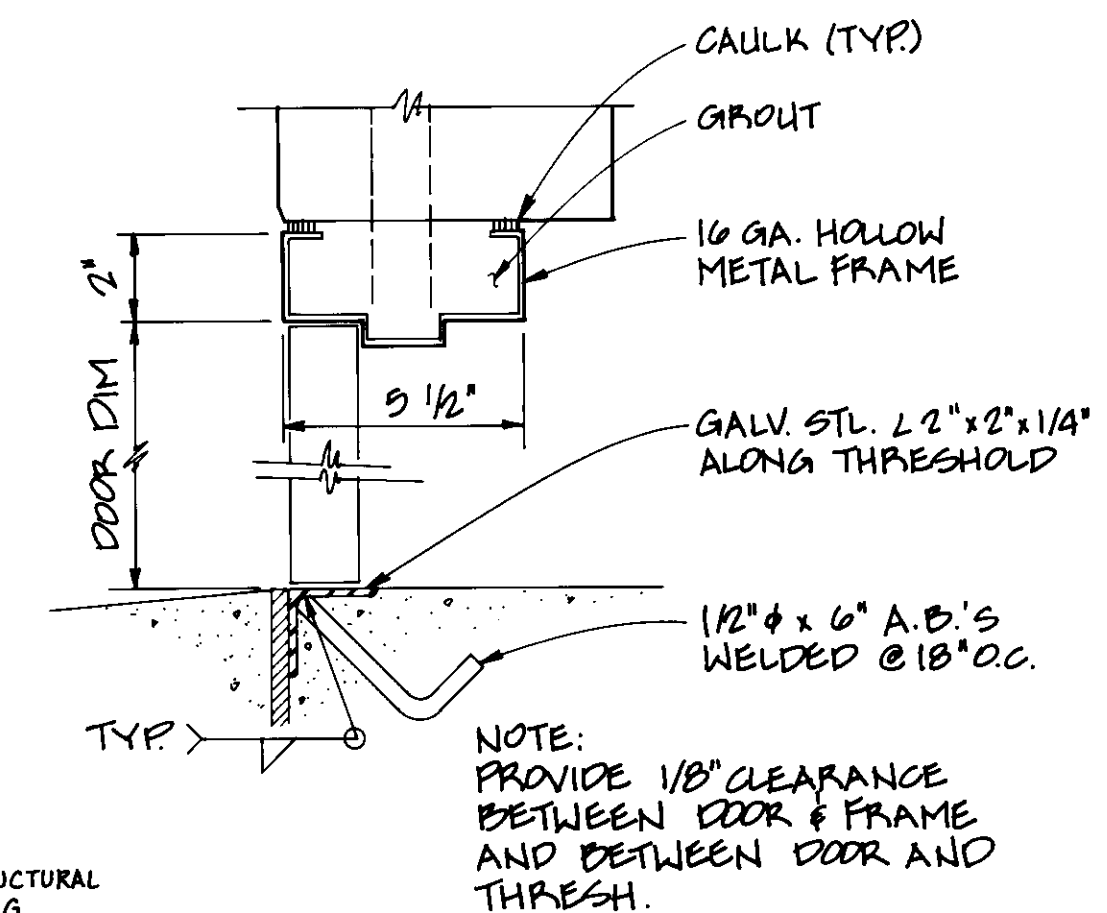
SCALE: 1/4" = 1'-0"



**HATCH DETAIL 7**  
NOT TO SCALE



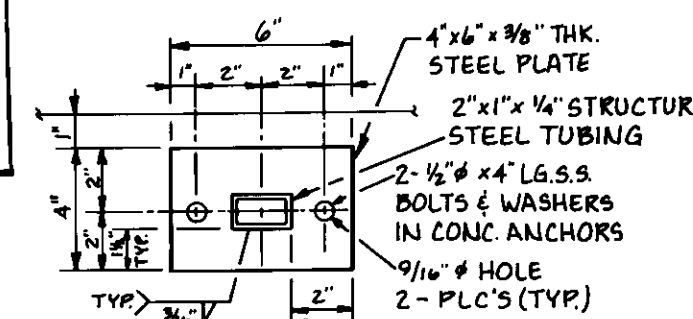
**ORNAMENTAL FENCE CONNECTION AT GATE DETAIL 8**  
N.T.S.



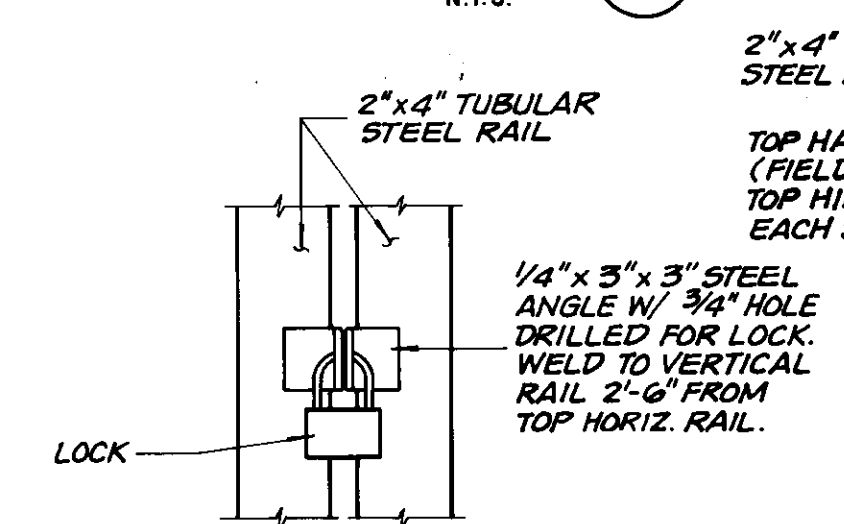
**HEAD AND JAMB**

**DOOR SECTION A**

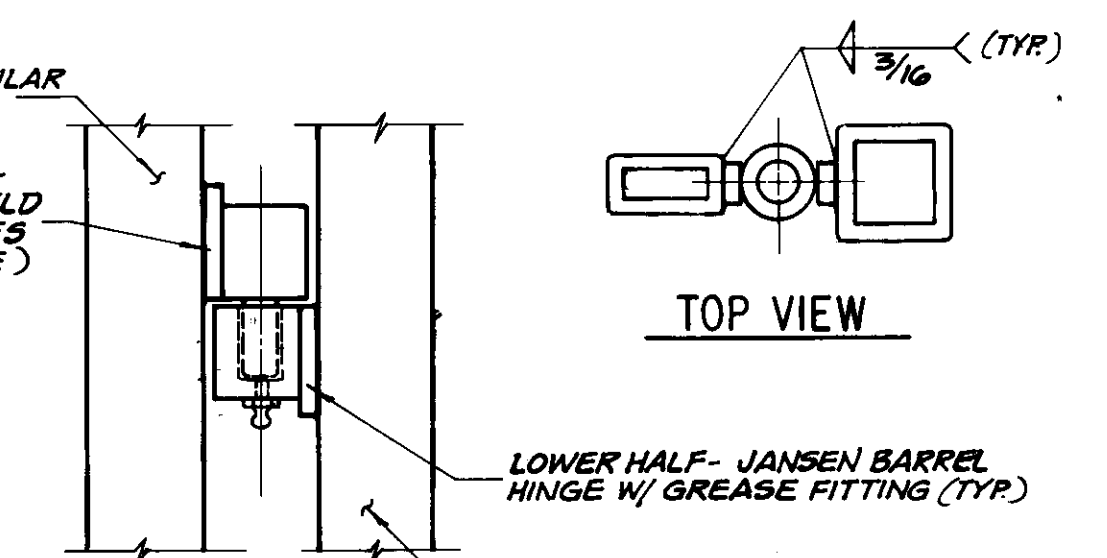
NOT TO SCALE



**ORNAMENTAL FENCE CONNECTION DETAIL 9**  
N.T.S.



**GATE LOCK DETAIL 5**  
NOT TO SCALE



**GATE HINGE DETAIL 6**  
NOT TO SCALE

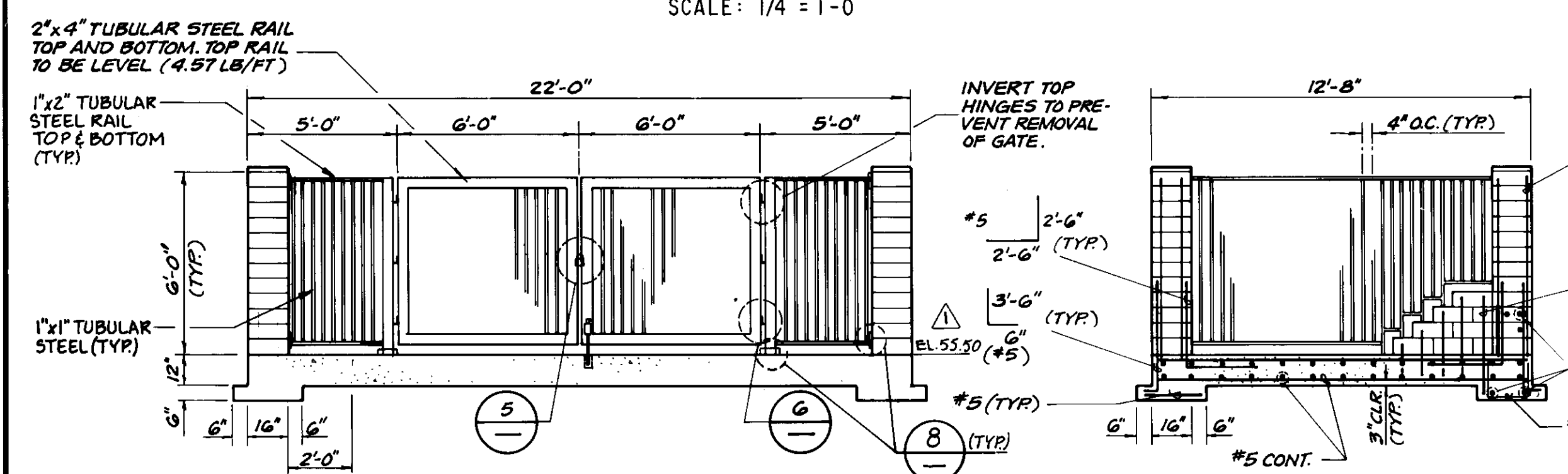


06151

LAS VIRGENES MUNICIPAL WATER DISTRICT  
NEW SEMINOLE PUMP STATION  
EXTERIOR ELEVATIONS AND DETAILS

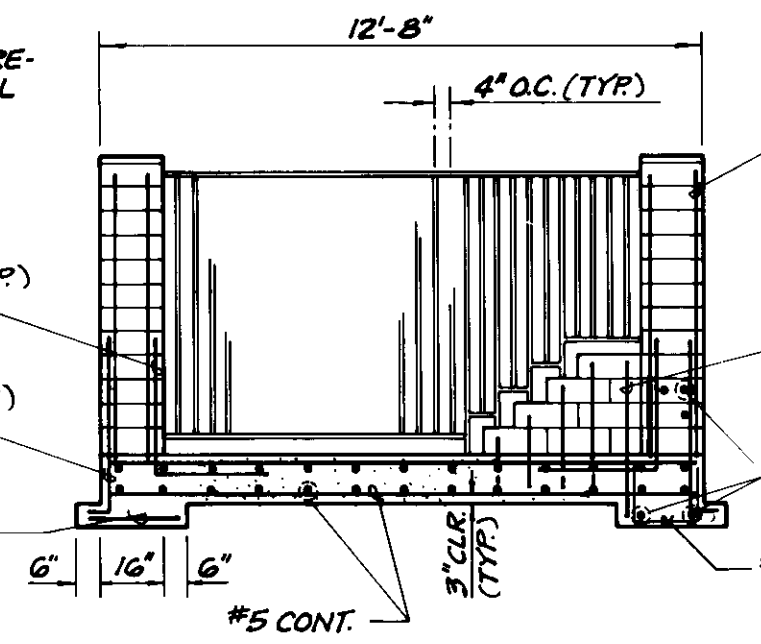
**BOYLE ENGINEERING CORPORATION**  
consulting engineers / architects  
VENTURA, CA.

**RECORD DRAWING**  
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CONST. INSP. JAV AGE CY LIND DATE 1-4-94  
DRAFTED BY AJR AGENCY REC DATE 11-12-23  
PROJ. ENGR. MEO AGENCY REC DATE 12/10/23



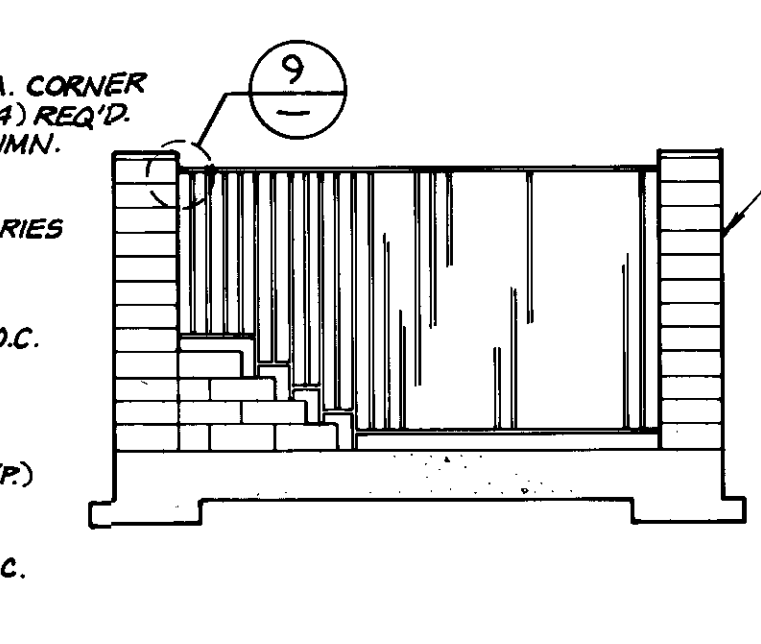
**WEST WALL/GATE DETAIL 1**

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



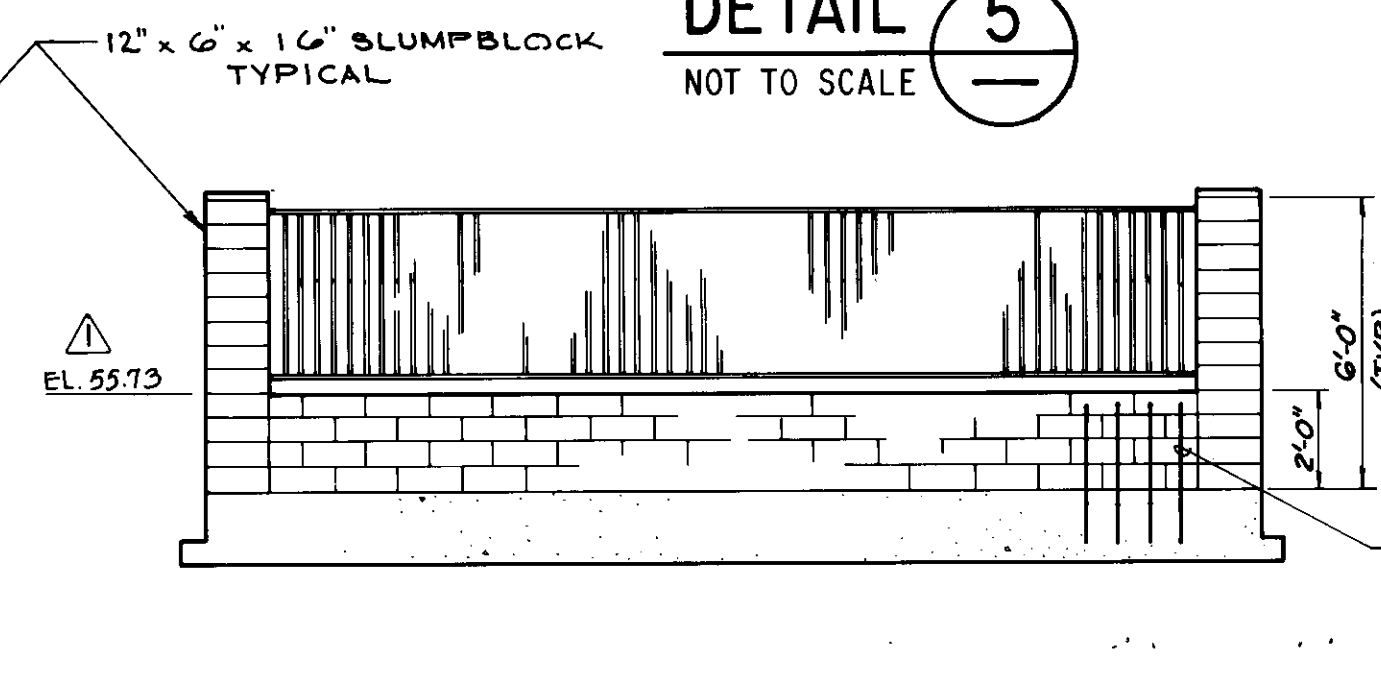
**SOUTH WALL DETAIL 2**

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



**NORTH WALL DETAIL 3**

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



**EAST WALL DETAIL 4**

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

REV.	DATE	DESCRIPTION	APP.
-	11-19-93	AS CONSTRUCTED	MEO
Δ	8/8/90	ISSUED FOR CONSTRUCTION.	MEO
	5/4/90	ISSUED FOR BIDDING	

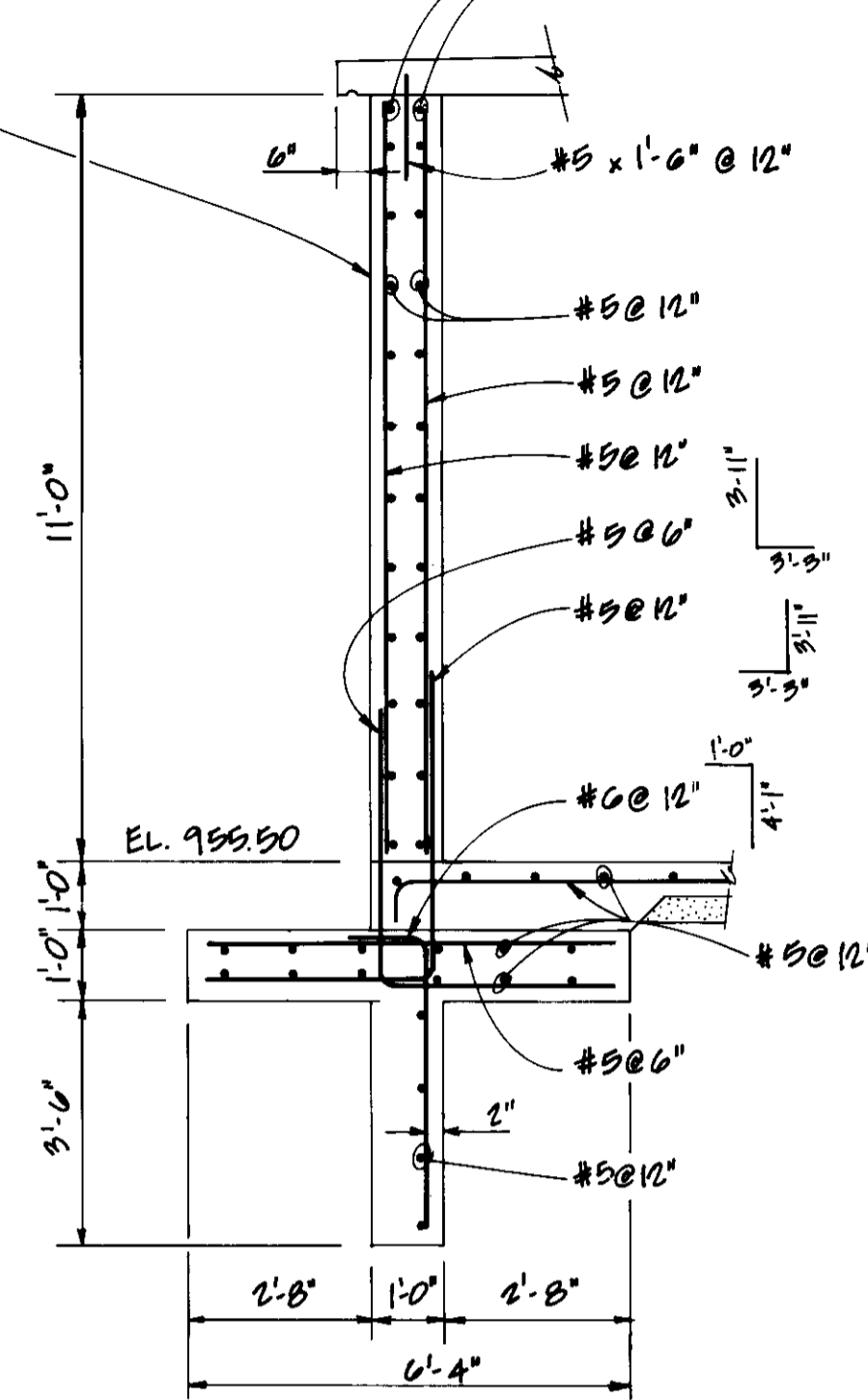
DESIGN	DRAWN	CHECKED	C.A. NO.	DATE	SHEET NO.
KTC	DLP	MEO	VF-L02-122-13	S-227	9



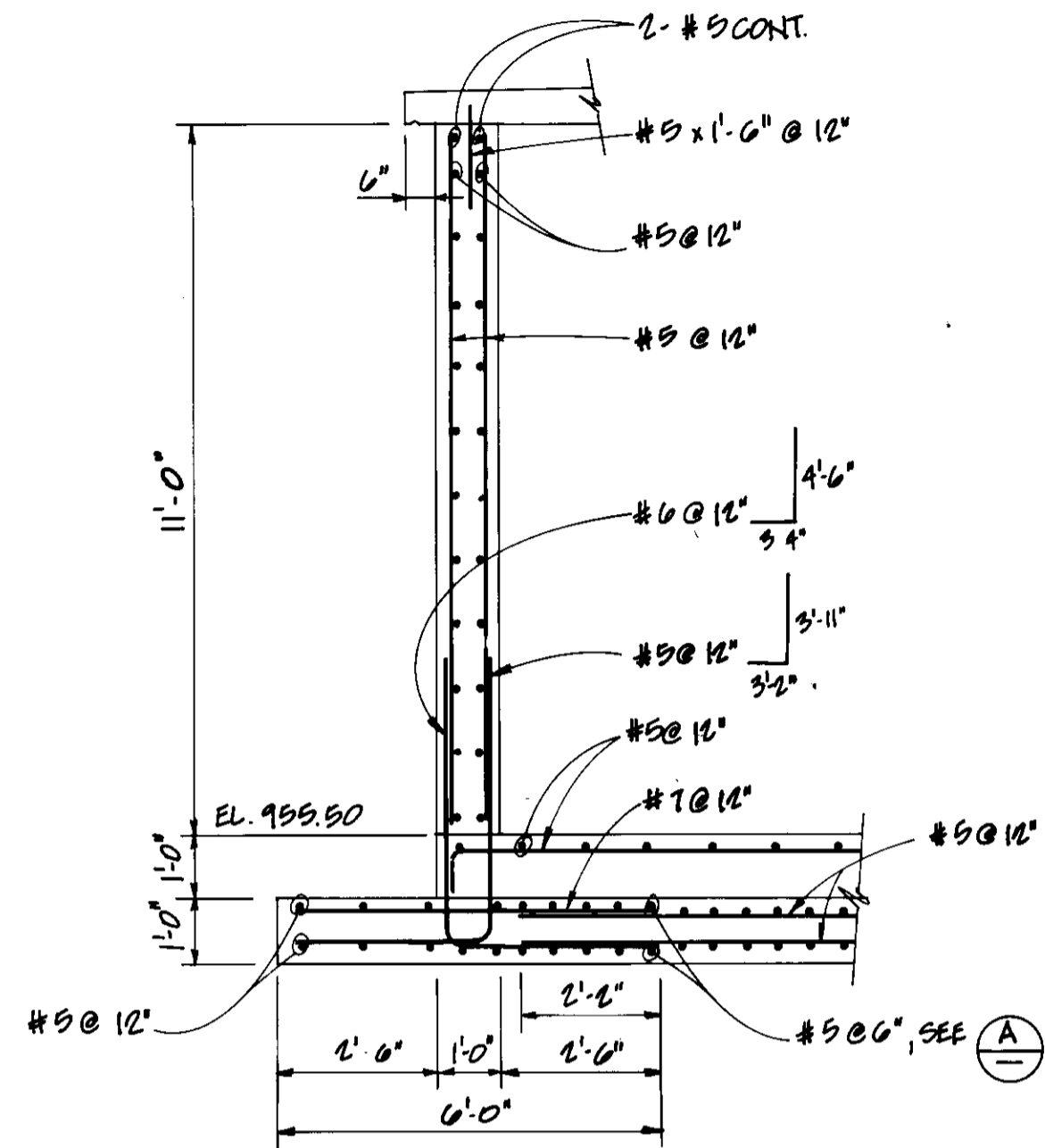


NOTE: ALL CELLS TO HAVE SOLID GROUT.

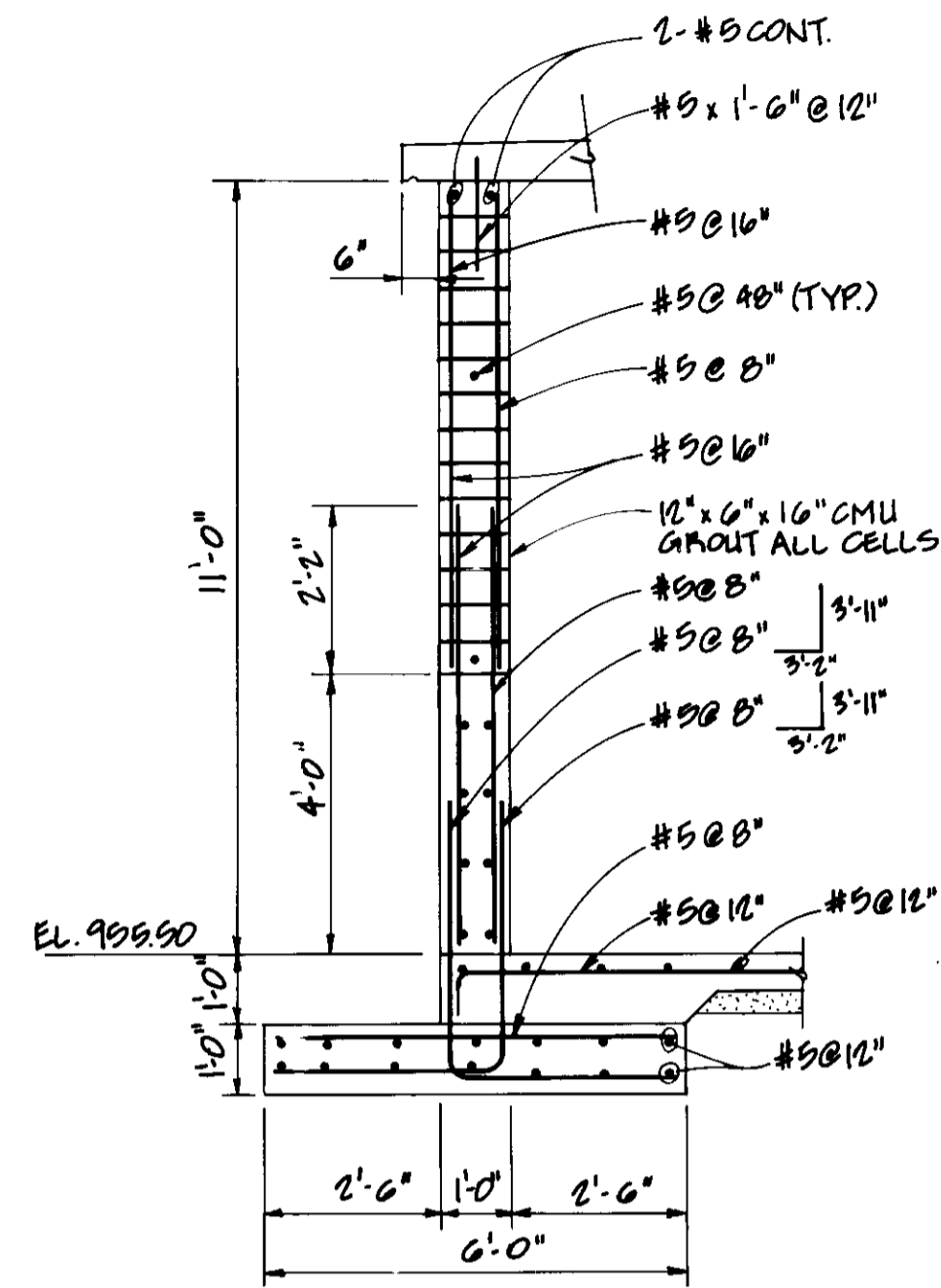
COAT BURIED EXTERIOR CONC. & CMU WALL SURFACES W/ COAL-TAR SATURATED FELT MEMBRANE WATERPROOFING



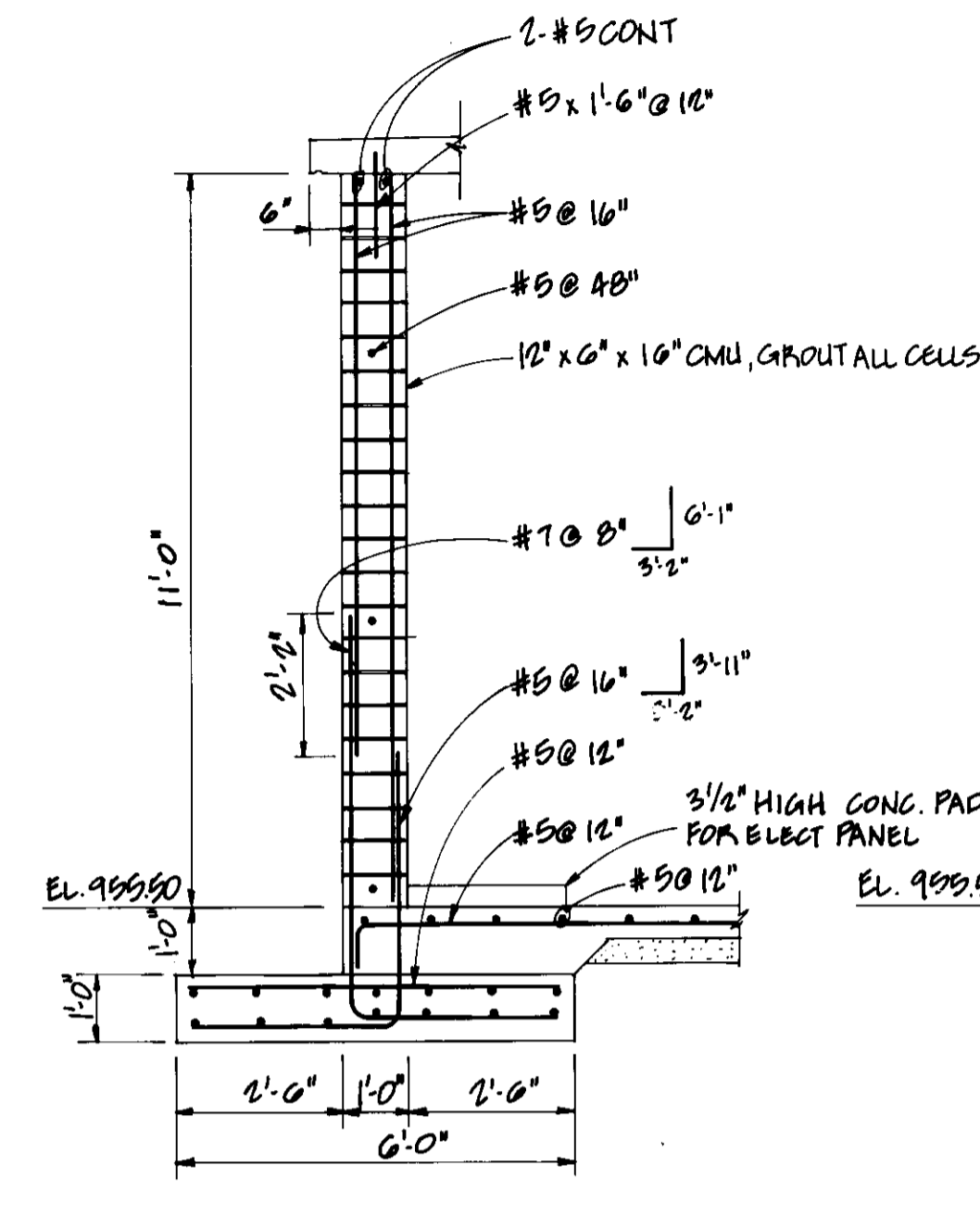
SECTION A  
SCALE 3/8" = 1'-0"



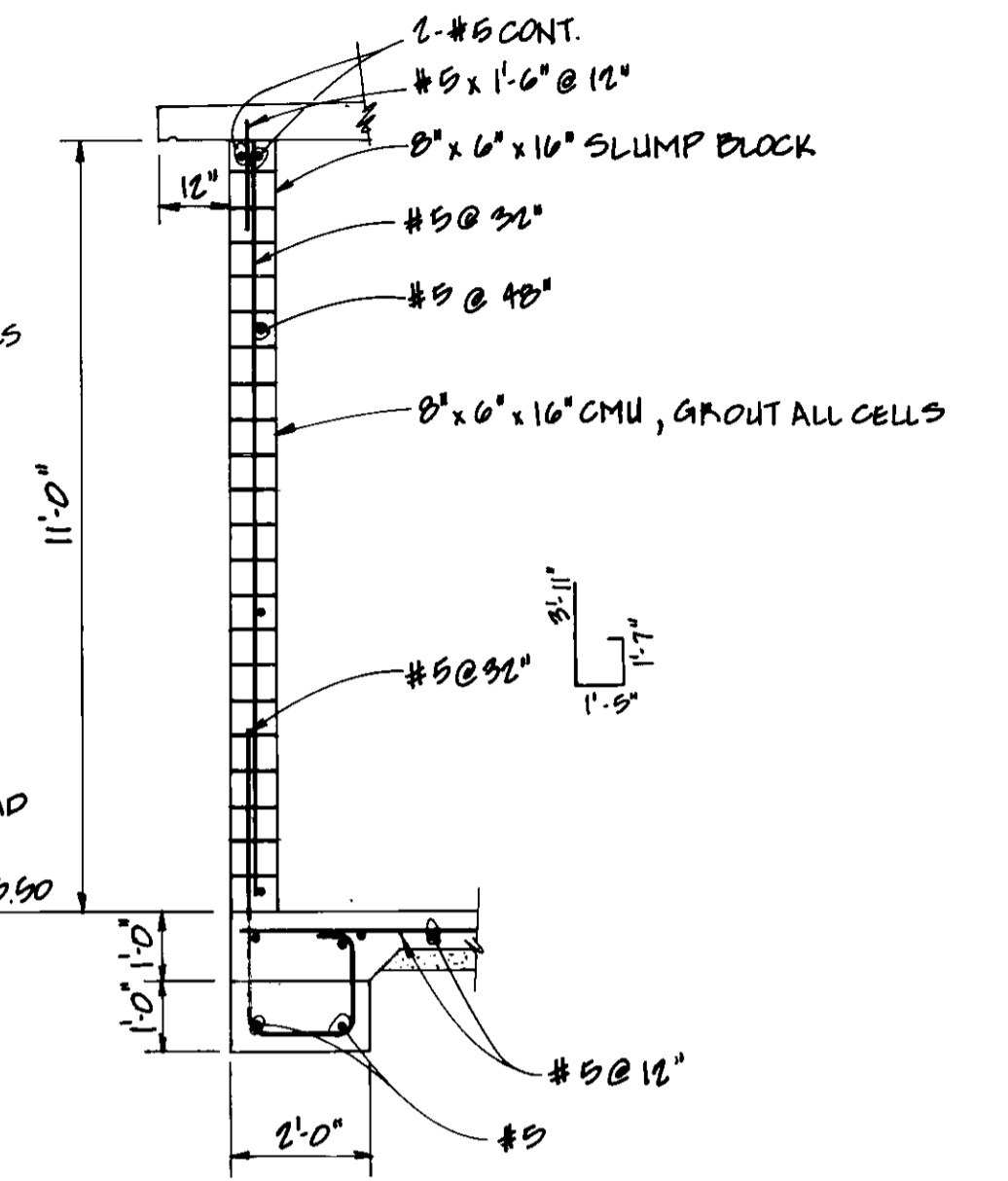
SECTION B  
SCALE 3/8" = 1'-0"



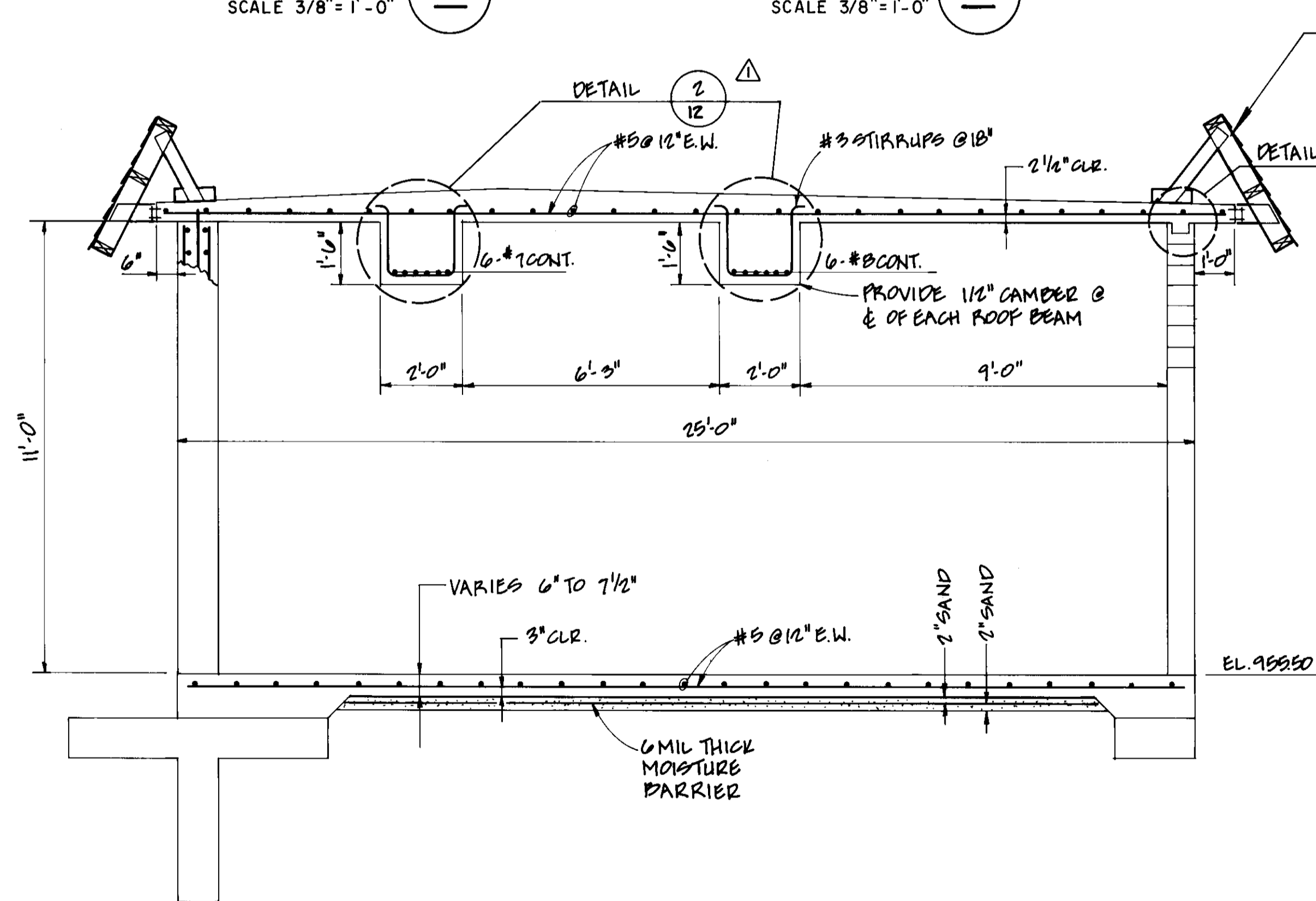
SECTION C  
SCALE 3/8" = 1'-0"



SECTION D  
SCALE 3/8" = 1'-0"



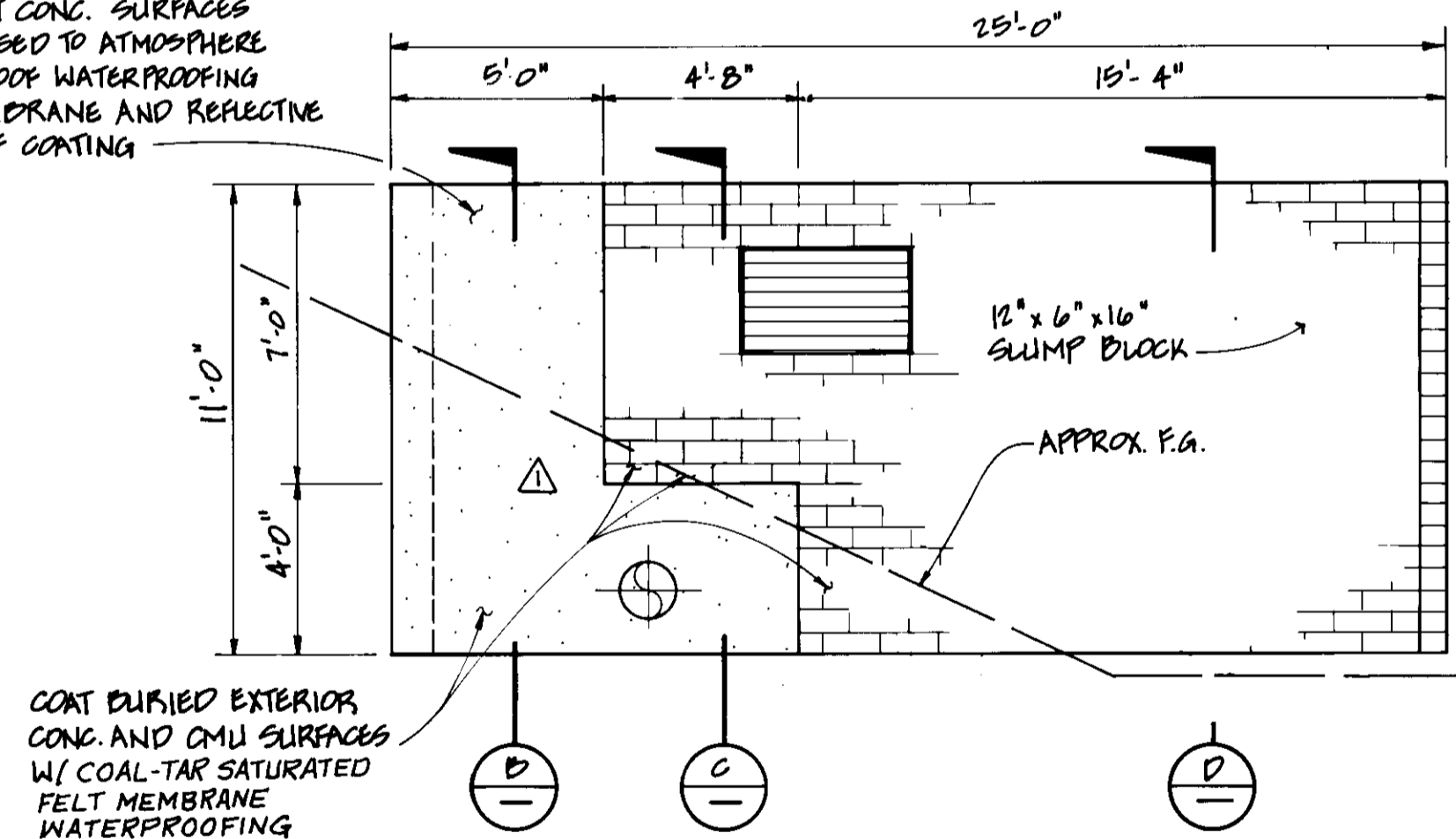
SECTION E  
SCALE 3/8" = 1'-0"



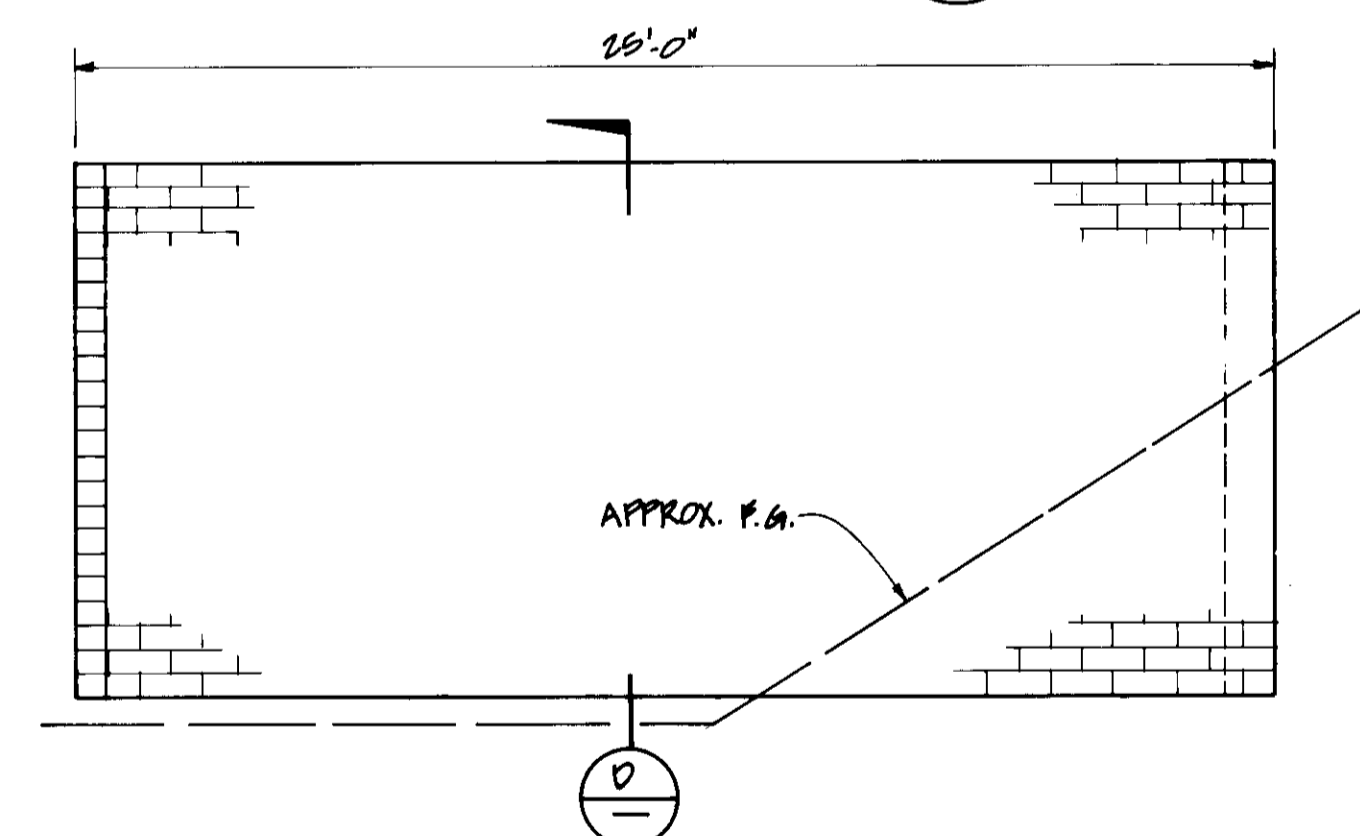
SECTION F  
SCALE 3/8" = 1'-0"

8 TYPICAL ALL AROUND

COAT CONC. SURFACES EXPOSED TO ATMOSPHERE W/ ROOF WATERPROOFING MEMBRANE AND REFLECTIVE ROOF COATING



NORTH WALL ELEVATION 1  
SCALE 1/4" = 1'-0"



SOUTH WALL ELEVATION 2  
SCALE 1/4" = 1'-0"

06153

RECORD DRAWING

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CONST. INSP. JAV AGENCY LVMW DATE 1-9-94  
DRAFTED BY AJR AGENCY BEC DATE 11-9-93  
PROJ. ENGR. MEB AGENCY BEC DATE 2/10/95



11-19-93	AS CONSTRUCTED	MEB
8/8/90	ISSUED FOR CONSTRUCTION	MEB
5/4/90	ISSUED FOR BIDDING	
REV.	DATE	DESCRIPTION

LAS VIRGENES MUNICIPAL WATER DISTRICT  
NEW SEMINOLE PUMP STATION  
STRUCTURAL SECTIONS AND DETAILS  
BOYLE ENGINEERING CORPORATION  
consulting engineers / architects  
VENTURA, CA.

DESIGN	DRAWN	CHECKED	C.A. NO.	DRAWING NO.	SHEET NO.
KTC	ELR	MFM	VT-L02-122-13	S-227	11

OF 17 SHEETS





MULHOLLAND HWY.

PROVIDE A 24" MINIMUM BURIAL DEPTH FOR TELEPHONE UTILITY SERVICE AND 12" SEPARATION DISTANCE BETWEEN THE TELEPHONE SERVICE CONDUIT AND OTHER UTILITY SERVICES.

2" C.O., SCHEDULE 40 PVC WITH 1/4" MINIMUM DIAMETER PULL ROPE

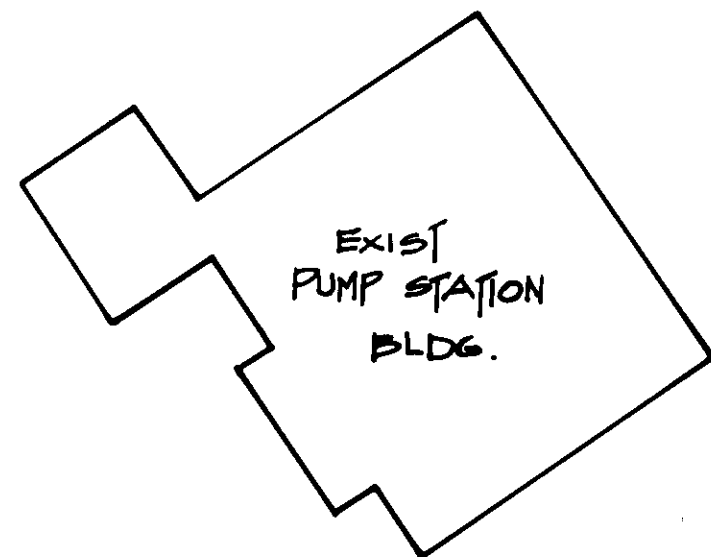
TELEPHONE TERMINAL CABINET

SWITCHBOARD & MCC  
NEW PUMP STATION BLDG.

SURGE TANKS

BARRIER POSTS PER SCE REQ'TS.

8' x 10' SLAB BOX AND GROUNDING PER S.C.E REQUIREMENTS



EXIST. VALVE VAULT

SCALE 1" = 10'

FILE NO: 1308509E  
REFER TO 13 FOR TRENCH INSTALLED GROUND

ELECTRICAL SYMBOLS - SCHEMATIC DIAGRAMS		
NORMALLY OPEN	NORMALLY CLOSED	DEVICE
⎓	⎓	CONTACT
⎓	⎓	TIMED CONTACT CONTACT ACTION RETARDED ON ENERGIZATION
⎓	⎓	PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT
⎓	⎓	PRESSURE OR VACUUM SWITCH
⎓	⎓	TEMPERATURE SWITCH
⎓	⎓	SELECTOR SWITCH
⎓	⎓	MANUAL MOTOR STARTER
⎓	⎓	PILOT LIGHT R= RED, W= WHITE, G= GREEN
⎓	⎓	RELAY
⎓	⎓	TIME DELAY RELAY
⎓	⎓	STARTER COIL
⎓	⎓	SOLENOID OPERATED VALVE
⎓	⎓	120V, SINGLE PHASE MOTOR
⎓	⎓	ELAPSED TIME METER
⎓	⎓	FUSE
⎓	⎓	CONTROL POWER TRANSFORMER
⎓	⎓	GROUND
⎓	⎓	WIRING IN MOTOR STARTER
⎓	⎓	FIELD WIRING
⎓	⎓	WIRE TERMINAL IN MTR. STARTER

ELECTRICAL SYMBOLS - SINGLE LINE DIAGRAM	
Ⓜ	UTILITY METERING
⎓	CURRENT TRANSFORMER, QUANTITY INDICATED
⎓	POWER TRANSFORMER
⎓	CIRCUIT BREAKER, 3 POLE UNLESS NOTED MCP INDICATES MOTOR CIRCUIT PROTECTOR
⎓	MAGNETIC MOTOR STARTER, NEMA SIZE INDICATED FULL-VOLTAGE NON-REVERSING UNLESS NOTED RV=REDUCED VOLTAGE STARTING 2S, 2W = 2SPEED, 2 WINDING
⎓	MOTOR, 10 HORSEPOWER
⎓	SOLID STATE STARTER
⎓	KEY INTERLOCKING OF EQUIPMENT
⎓	GROUND
Ⓣ	SWITCHGEAR DEVICE
27	UNDervOLTAGE RELAY
47	PHASE-SEQUENCE VOLTAGE RELAY

ELECTRICAL SYMBOLS - PLANS			
CLG	WALL	FLR	SYMBOL DESCRIPTION
○	○		INCANDESCENT OR HID FIXTURE
○	○		FLUORESCENT FIXTURE - CIRCLE INDICATES OUTLET
○ <sup>1b</sup>			FIXTURE CONNECTED TO CKT #1, SWITCH 'b'
Ⓜ <sup>3</sup>			FIXTURE TYPE 'A', 100 WATTS THREE FIXTURES OF SAME TYPE ON PLAN
Ⓜ	Ⓜ	Ⓜ	DUPLEX RECEPTACLE *
	Ⓜ	Ⓜ	TELEPHONE OUTLET **
	Ⓜ	Ⓜ	THERMOSTAT OUTLET + 66' UDN
Ⓜ	Ⓜ	Ⓜ	JUNCTION BOX
	Ⓜ		SINGLE POLE SWITCH **
	Ⓜ		TWO WAY SWITCH **
	Ⓜ		SWITCH CONTROLS CIRCUIT "ω" **
	Ⓜ		MANUAL MOTOR STARTER **
			CONDUIT IN SLAB OR UNDER GROUND
			CONDUIT EXPOSED
			QUANTITY #12 WIRE, 2 #12 UDN ***
			WIRE SIZE OTHER THAN #12 ***
			GROUNDING CONDUCTOR
			TELEPHONE CONDUIT 3/4" C.D. UDS
			HOMERUN TO PANEL A, CIRCUITS 1 AND 3
			CONDUIT BENDS TOWARD OBSERVER
			CONDUIT BENDS AWAY FROM OBSERVER
			FLEXIBLE CONNECTION
			MOTOR CONNECTION
			SOLENOID VALVE
			GROUND RDD, 3/4" x 10'-0" COPPERCLAD
			PANELBOARD
			INDICATES HEIGHT FROM FINISHED FLOOR GRADE TO CENTERLINE OF DEVICE
			+ 12'
			+ 12' UDN
			+ 48' UDN
			SEE CONDUIT FILL TABLE FOR CONDUIT SIZE

UTILITY COMPANIES	
ELECTRIC	TELEPHONE
SOUTHERN CALIFORNIA EDISON 3589 FOOTHILL DRIVE THOUSAND OAKS, CA 91361 CONTACT: MR. WILLIE CLAYTOR (805) 494-7072	PACIFIC BELL 2130 WARD AVENUE SIMI VALLEY, CA 93065 CONTACT: MR. TOM FUCHS (805) 583-6581

CONDUIT FILL TABLE				
MAXIMUM NUMBER OF CONDUCTORS IN TRADE SIZES OF CONDUIT OR TUBING				
CONDUCTOR SIZE (AWG)	CONDUIT TRADE SIZE (INCHES)			
	1/2	3/4	1	
14	6	10	16	
12	4	8	13	
10	4	6	11	
8	1	3	5	

**RECORD DRAWING**  
THIS RECORD DRAWING APPLIES ONLY TO THOSE FACILITIES CONSTRUCTED UNDER THE CONTRACT IDENTIFIED IN THE TITLE BLOCK. THIS DRAWING HAS BEEN PREPARED ON THE BASIS OF THE INFORMATION FURNISHED BY THE CONTRACTOR AND THE CONSTRUCTION INSPECTOR.  
CONST. INSP. JAV ACE CYLXND DATE 1-4-99  
DRAFTED BY AJR AGENCY REC DATE 11/22/97  
PROJ. ENGR. HEB AGENCY REC DATE 12/10/97



06155

LAS VIRGENES MUNICIPAL WATER DISTRICT

**NEW SEMINOLE PUMP STATION**

**ELECTRICAL SITE PLAN AND SYMBOLS**

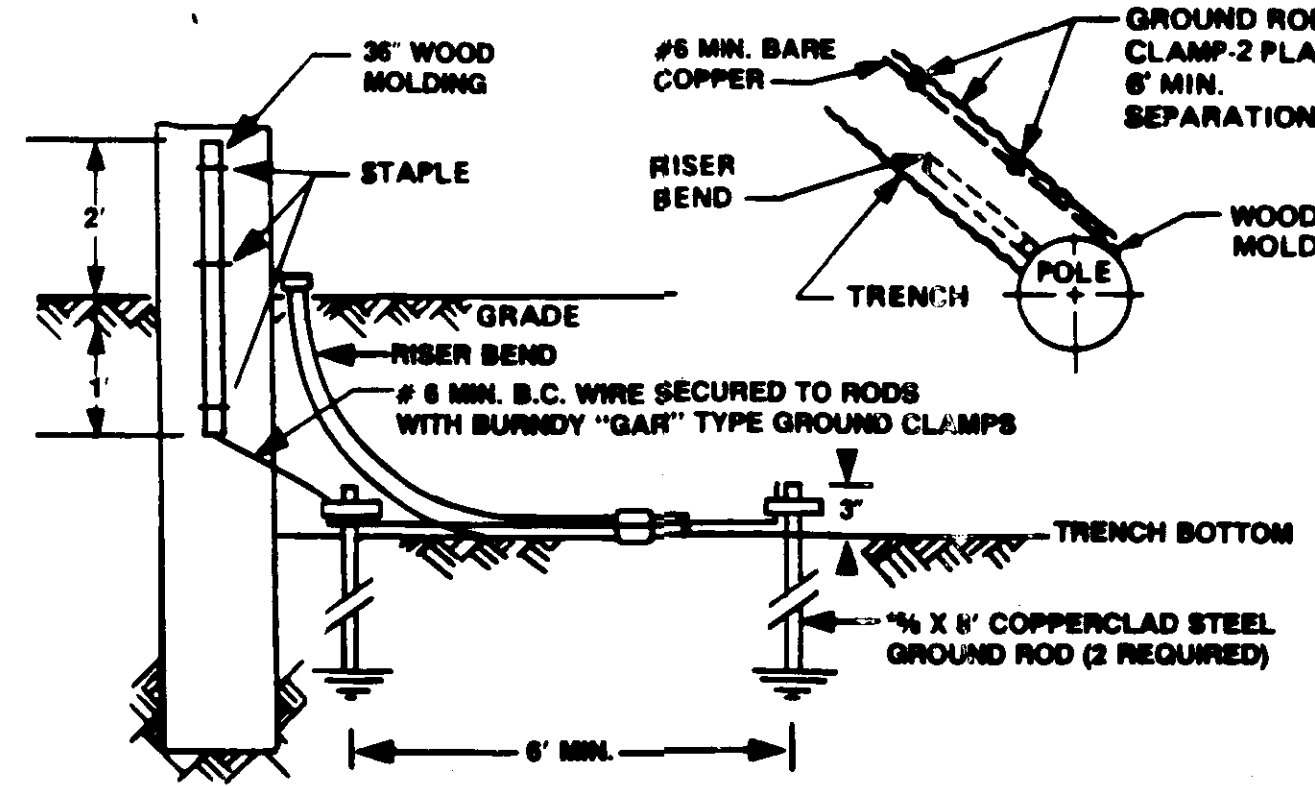
**BOYLE ENGINEERING CORPORATION**  
consulting engineers / architects  
VENTURA, CA.

DESIGN: EJA DRAWN: JF CHECKED: AR C.A. NO. VT-102-122-13 DATE: 3-14-90 SHEET NO. 13 OF 17 SHEETS

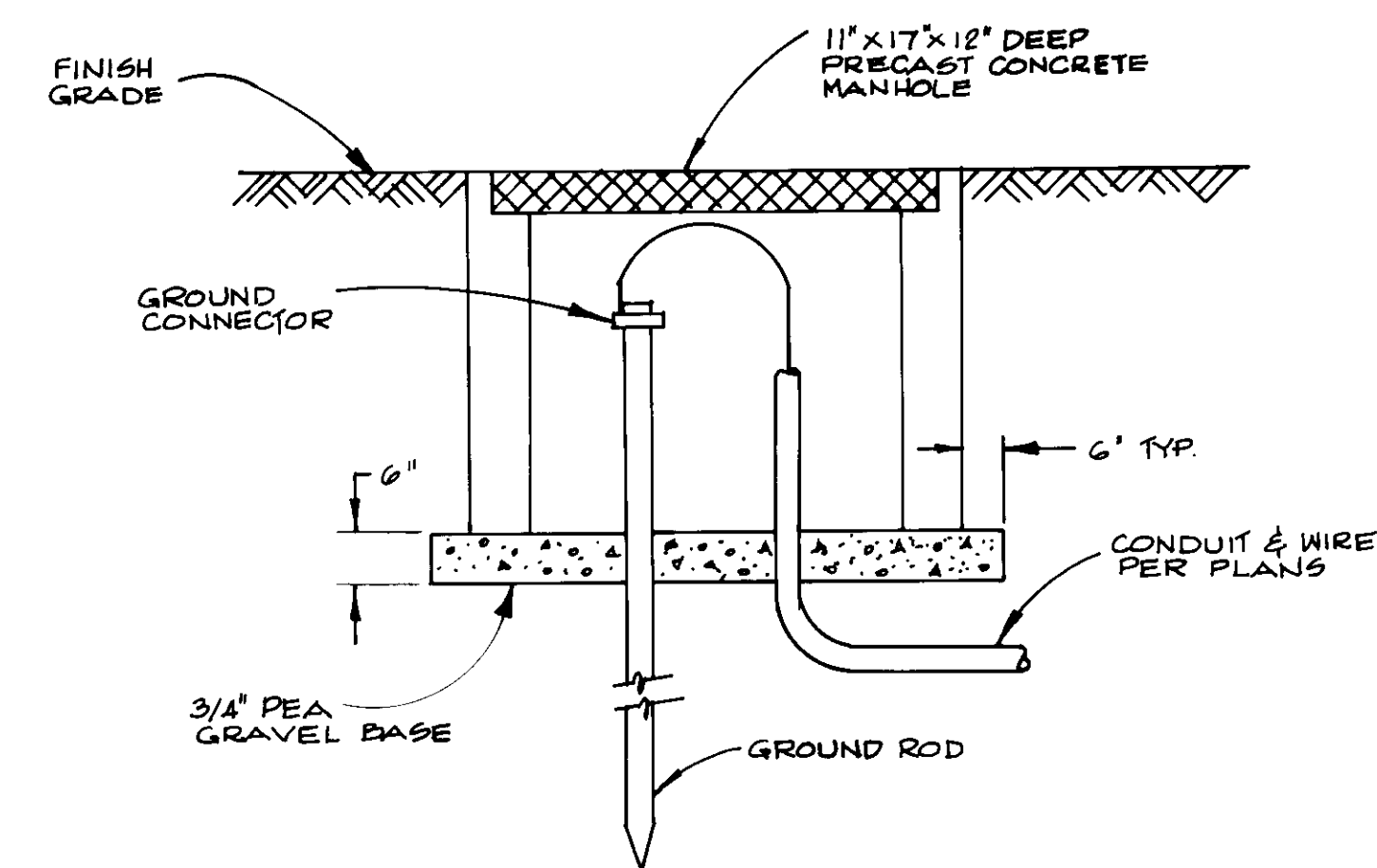
REV.	DATE	DESCRIPTION	APP.
1	11-19-95	A3-CONSTRUCTED	HEB
2	8/8/90	ISSUED FOR CONSTRUCTION	HEB
3	5/4/90	ISSUED FOR BIDDING	HEB

LIGHTING FIXTURE SCHEDULE					
TYPE	DESCRIPTION	MOUNTING	VOLTS	WATTS	LAMPS
A	4' FLUORESCENT, RAPID START, CLEAR PRISMATIC ACRYLIC LENS, BAKED WHITE ENAMEL FINISH, UL LISTED FOR DAMP LOCATIONS. PRUDENTIAL # P-1662-48RS-PRA OR EQUAL.	SURFACE	120	100	2-F40RS
B	HIGH PRESSURE SODIUM, DIE-CAST ALUMINUM HOUSING W/ACRYLIC BRONZE PAINT, DEEP SHIELDED DOWNLIGHT, UL LISTED FOR WET LOCATIONS. RUUD # E8503-1-P-H-BS OR EQUAL	WALL	120	50	1-35W HPS

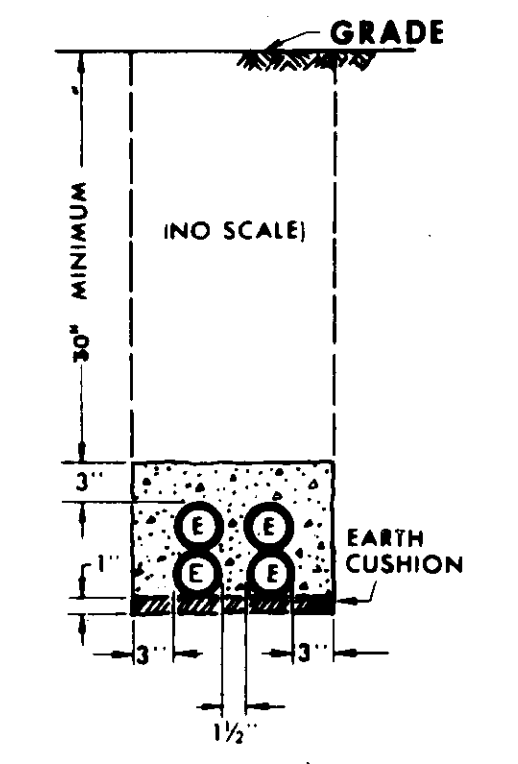
**TRENCH INSTALLED GROUNDING AT POLE RISER**



TWO GROUND RODS ARE REQUIRED AT ALL PRIMARY RISER POLES. DRIVE RODS IN TRENCH BOTTOM WITH 6" MIN. SEPARATION IN UNDISTURBED EARTH. LEAVE THE ROD TOPS 3" ABOVE THE TRENCH BOTTOM AND ATTACH CONTINUOUS GROUND WIRE WITH CLAMPS. EXTEND WIRE TO INDICATED LOCATION ON POLE AND STUB UP 2" (MIN.) ABOVE GRADE AND STAPLED TO POLE. ALL MATERIALS FOR GROUNDING SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.



**GROUND WELL DETAIL**



TYPICAL CONDUIT BANK SECTION SHOWING SEMI-ENCASEMENT SIMILAR CONSTRUCTION FOR FEWER CONDUIT

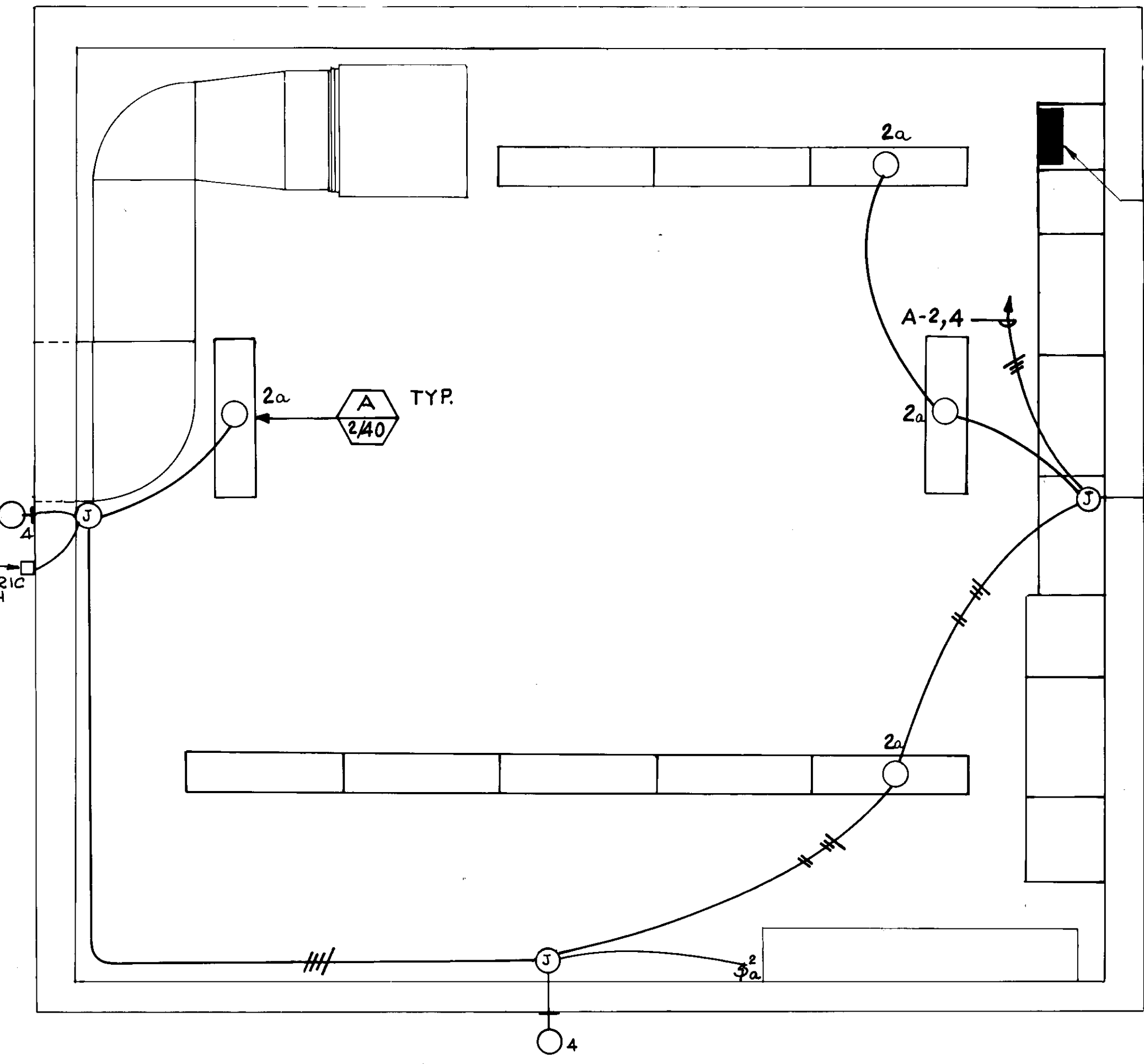
REV. 6-80 DECAL 73

REF. UGS - 100 & 101  
14-100-78 NEW 1/85

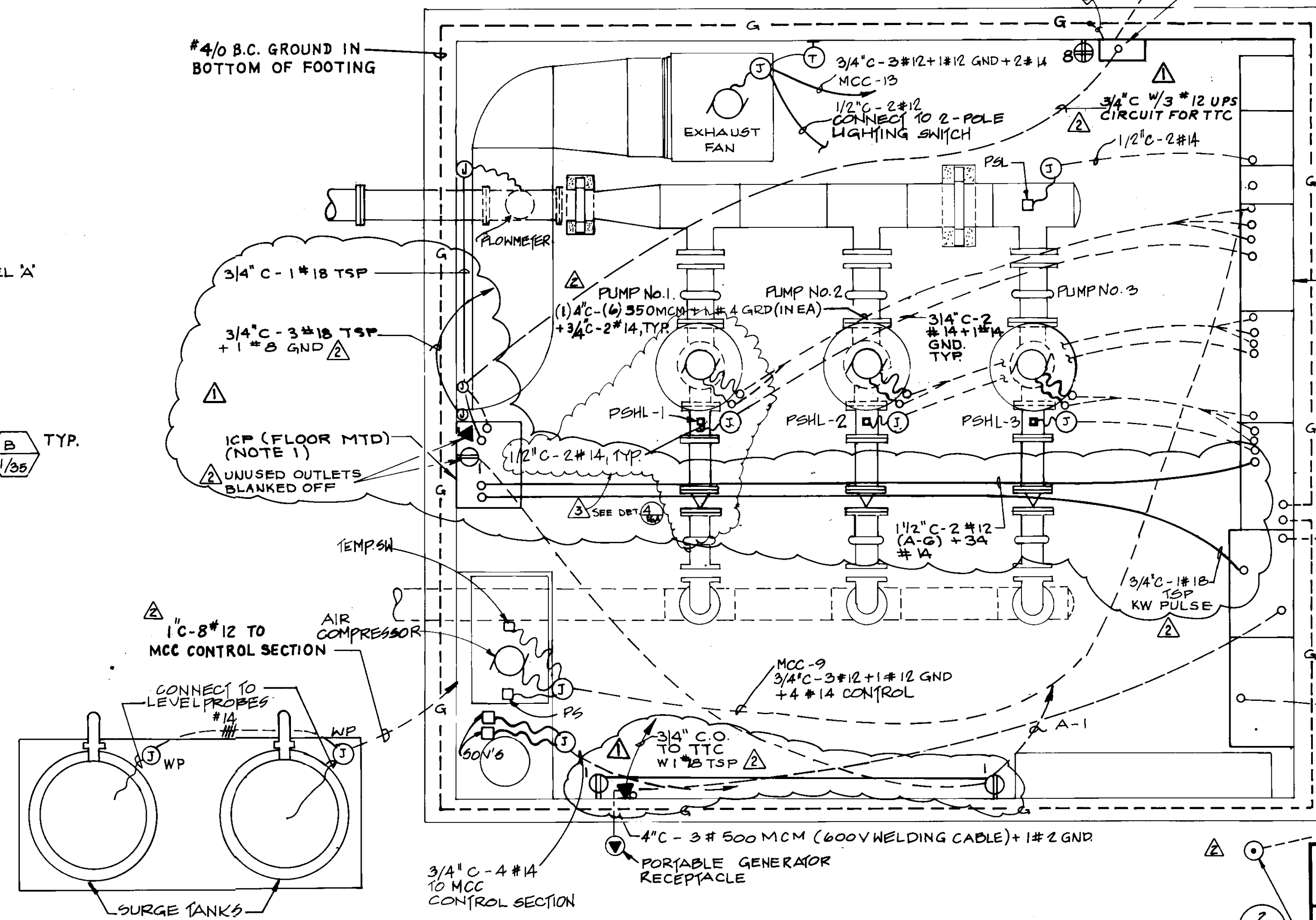
DECAL 73

SCE DETAIL NO.1

SCE DETAIL NO.2



LIGHTING PLAN  
3/8" = 1'-0"



**POWER PLAN**

NOTES:  
1. CONTRACTOR TO COORDINATE THE INSTALLATION, CONNECTION, AND TESTING OF ICP FURNISHED BY OWNER  
2. CONTRACTOR TO PULL WIRES TO OWNER FURNISHED EQUIPMENT AS SHOWN.  
3. TELEPHONE UTILITY Co. SHALL CIRCUIT EXISTING SEMINOLE TANK LEVEL SIGNAL TO TELEMETRY SYSTEM AT NEW PUMP STATION.  
4. 3/4 inch C-1 #8 CONNECTION TO BUILDING GROUNDING SYSTEM.

REV	DATE	DESCRIPTION	BY
1	8/6/95	ADDED CONTROL VALVE TO PUMP No.1	HEB
2	11-19-95	AS-CONSTRUCTED	HEB
3	8/6/91	CHANGE TO PROVIDE ICP	HEB
4	8/8/90	ISSUED FOR CONSTRUCTION	HEB
5	5/4/90	ISSUED FOR BIDDING	HEB

MOTOR CONTROL CENTER (MCC) & SWITCHBOARD



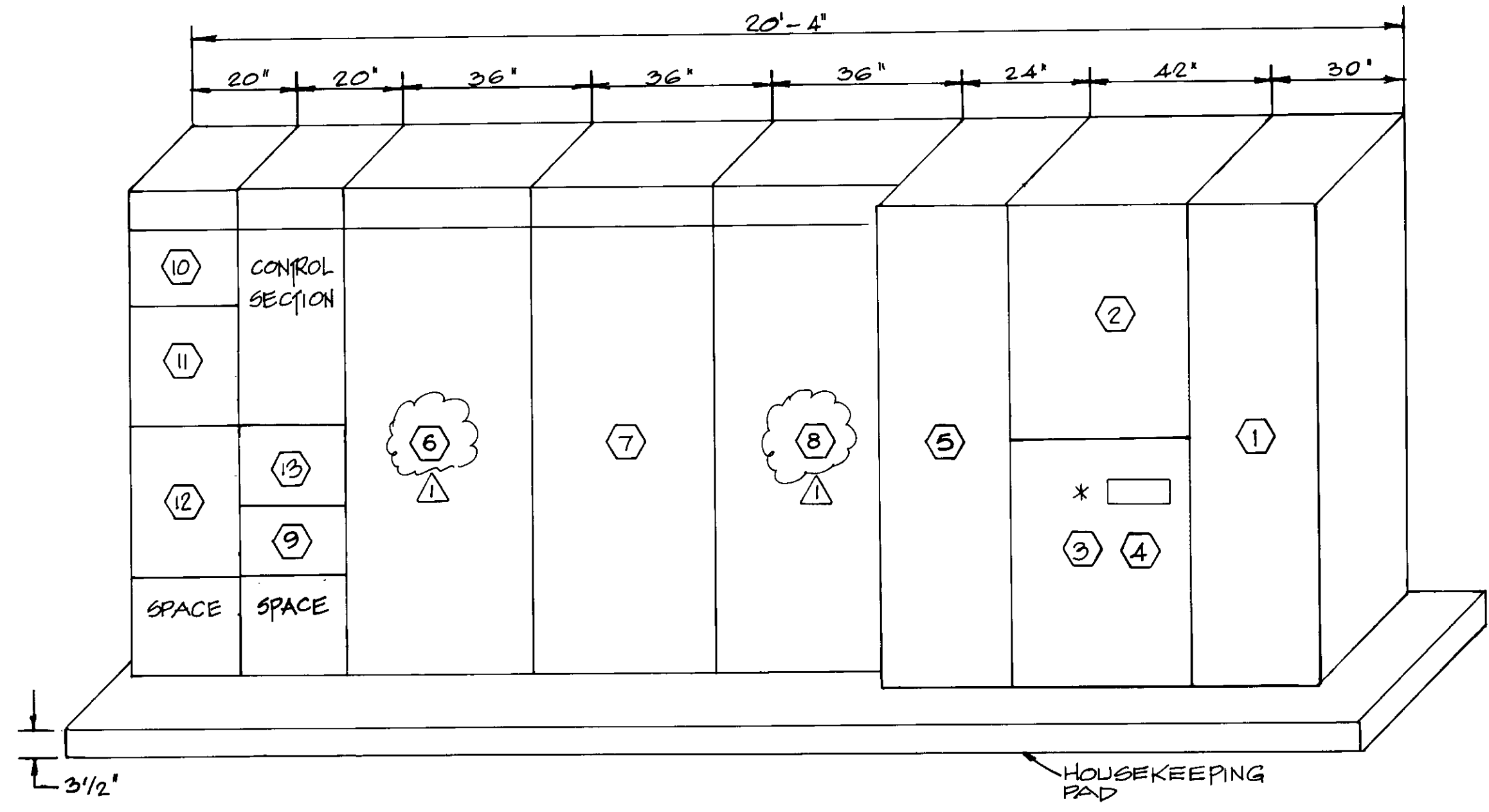
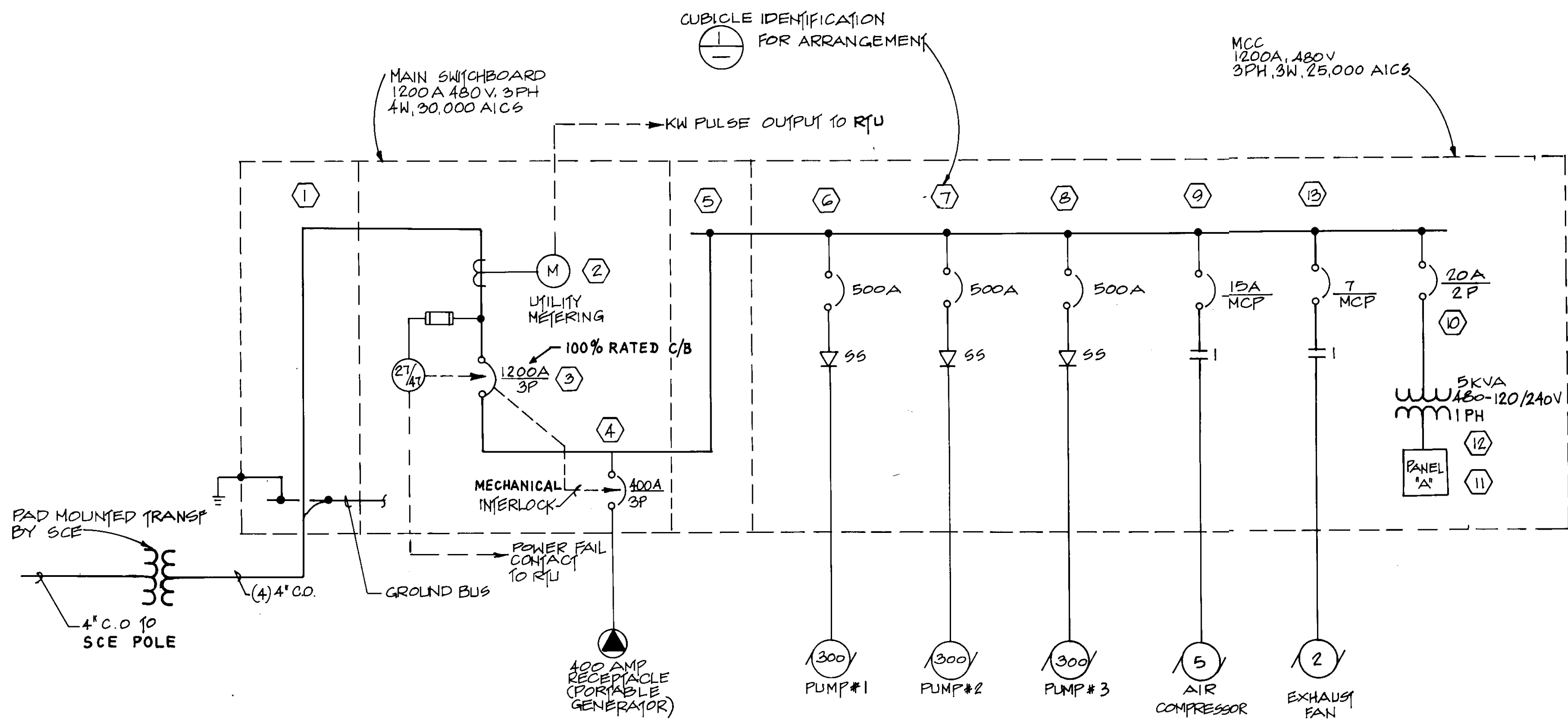
**RECORD DRAWING**  
THIS RECORD DRAWING APPLIES ONLY TO THOSE FACILITIES CONSTRUCTED UNDER THE CONTRACT IDENTIFIED IN THE TITLE BLOCK. THIS DRAWING HAS BEEN PREPARED ON THE BASIS OF THE INFORMATION FURNISHED BY THE CONTRACTOR AND THE CONSTRUCTION INSPECTOR.  
CONST. INSP. JAV AGENCY LVM DATE 1-9-94  
DRAFTED BY AJR AGENCY BEC DATE 11-9-93  
PROJ. ENGR. HEB AGENCY BEC DATE 2/12/93

06156

LAS VIRGENES MUNICIPAL WATER DISTRICT  
NEW SEMINOLE PUMP STATION  
LIGHTING AND POWER PLAN

**BOYLE ENGINEERING CORPORATION**  
consulting engineers & architects  
VENTURA, CA.  
DESIGN: E.N. DRAWN: I.F. CHECKED: AR. C.A. NO.: VT-102-122-13. S-227. SHEET NO.: 14 OF 17 SHEETS.





**MAIN SWITCHBOARD & MCC ELEVATION** (1)

\* NOTE: NAMEPLATE OVER GENERATOR RECEPTACLE SHALL READ "PRIOR TO OPERATION WITH MOBILE GENERATOR CONSULT O & M MANUAL."

**SINGLE LINE DIAGRAM**

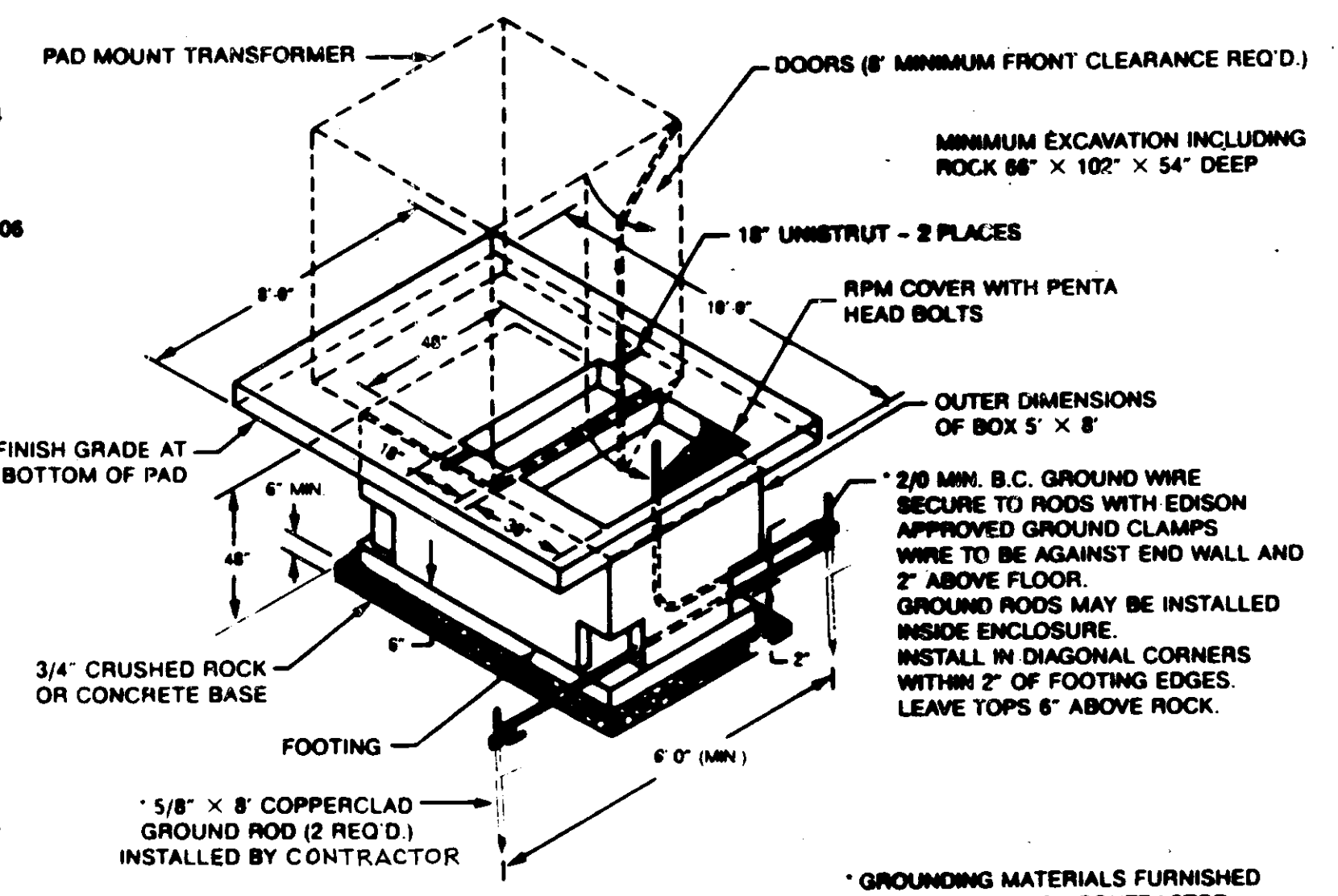
NAMEPLATE 'A'		BLDG. PUMP STATION		LOC.		MCC		MTG. FLUSH		MAIN 30A C.B.	
BUS: AMPS 100		VOLTS 120/240V, 1PH, 3W									
RECEPTACLES	WATTAGE		OUTLETS LTG. REC. MISC.	20A/1P C/B 10,000 AICS U.O.N.	OUTLETS LTG. REC. MISC.	WATTAGE					
	A	B				A	B				
CONTROL SECTION	360	100	1	1	3	1000	150				INSIDE LIGHTING
SPARE					4						OUTSIDE LIGHTING
SPARE					5		500				TELEMETRY CABINET
SPARE					7			360			TTC
SPARE					9						SPACE
SPARE					11						SPACE
					13						
					15						
					17						
					19						
					21						
					23						
TOTAL CONNECTED	360	100				1500	910				TOTAL CONNECTED

2.5 KW + LCL 0.4 KW = 2.9 KW AT 240 VOLTS 3φ = 12.0 AMPS

ASSOCIATED CONCRETE PRODUCTS, INC.  
4301 W. MAC ARTHUR BLVD.  
SANTA ANA, CALIFORNIA 92704  
DWG. NO. SB-10.8-86

BROOKS PRODUCTS, INC.  
4506 LITTLE JOHN ST.  
BALDWIN PARK, CALIFORNIA 91706  
DWG. NO. 1553 TPV42 ED1

UTILITY VAULT CO.  
10650 HEMLOCK AVE.  
FONTANA, CALIFORNIA 92335  
DWG. NO. ED810-42P



**8' x 10' SLAB-BOX**  
(FOOTING REQUIRED)

**SCE DETAIL NO.3** (2)

**RECORD DRAWING**

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CONST. INSP. JAV AGENCY CYLVIA DATE 1-4-94  
 DRAFTED BY AJR AGENCY BEC DATE 11-19-93  
 PROJ. ENGR. HEB AGENCY BEC DATE 12-10-93



06157

LAS VIRGENES MUNICIPAL WATER DISTRICT

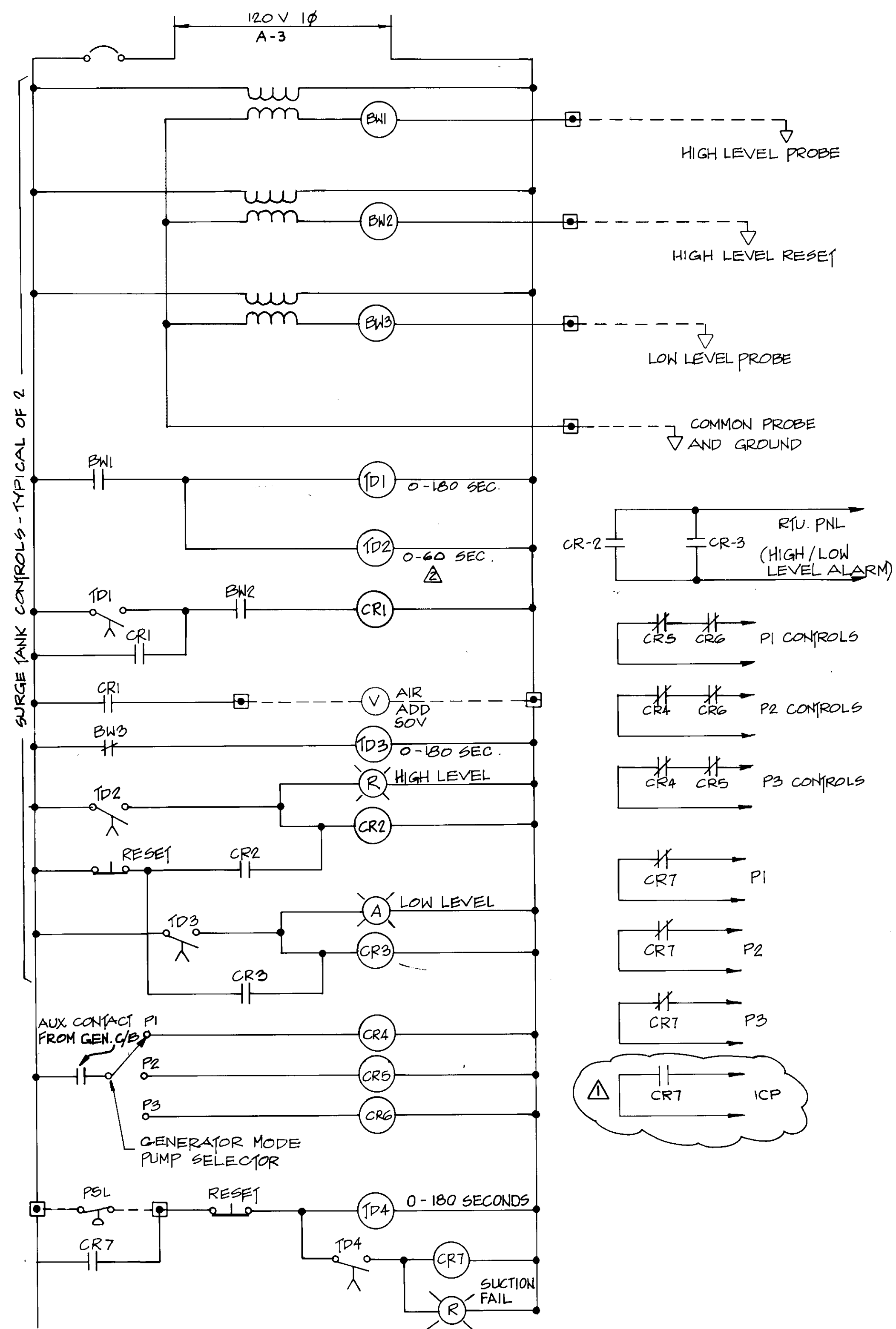
**NEW SEMNOLE PUMP STATION**

**SINGLE LINE DIAGRAM AND PANEL SCHEDULE**

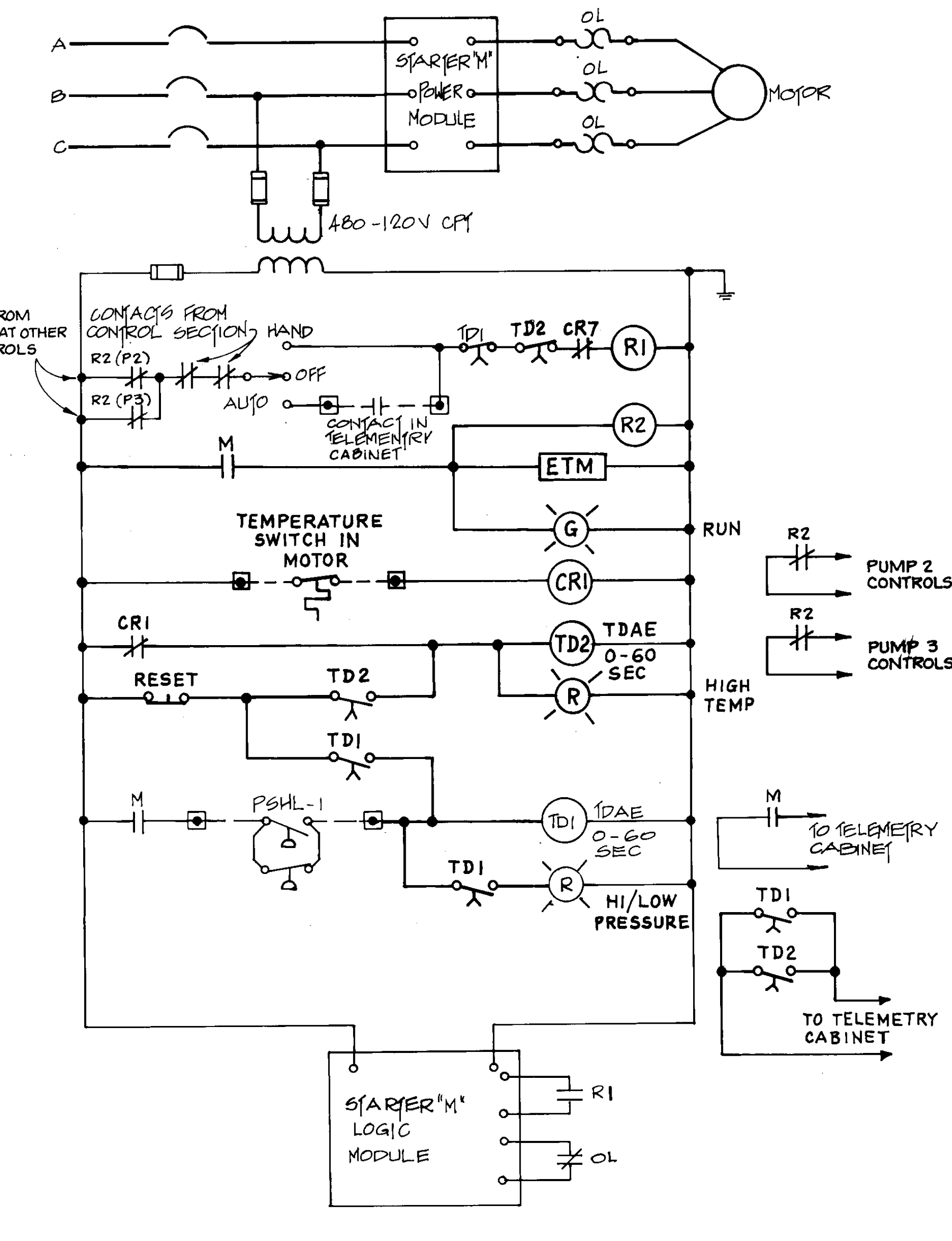
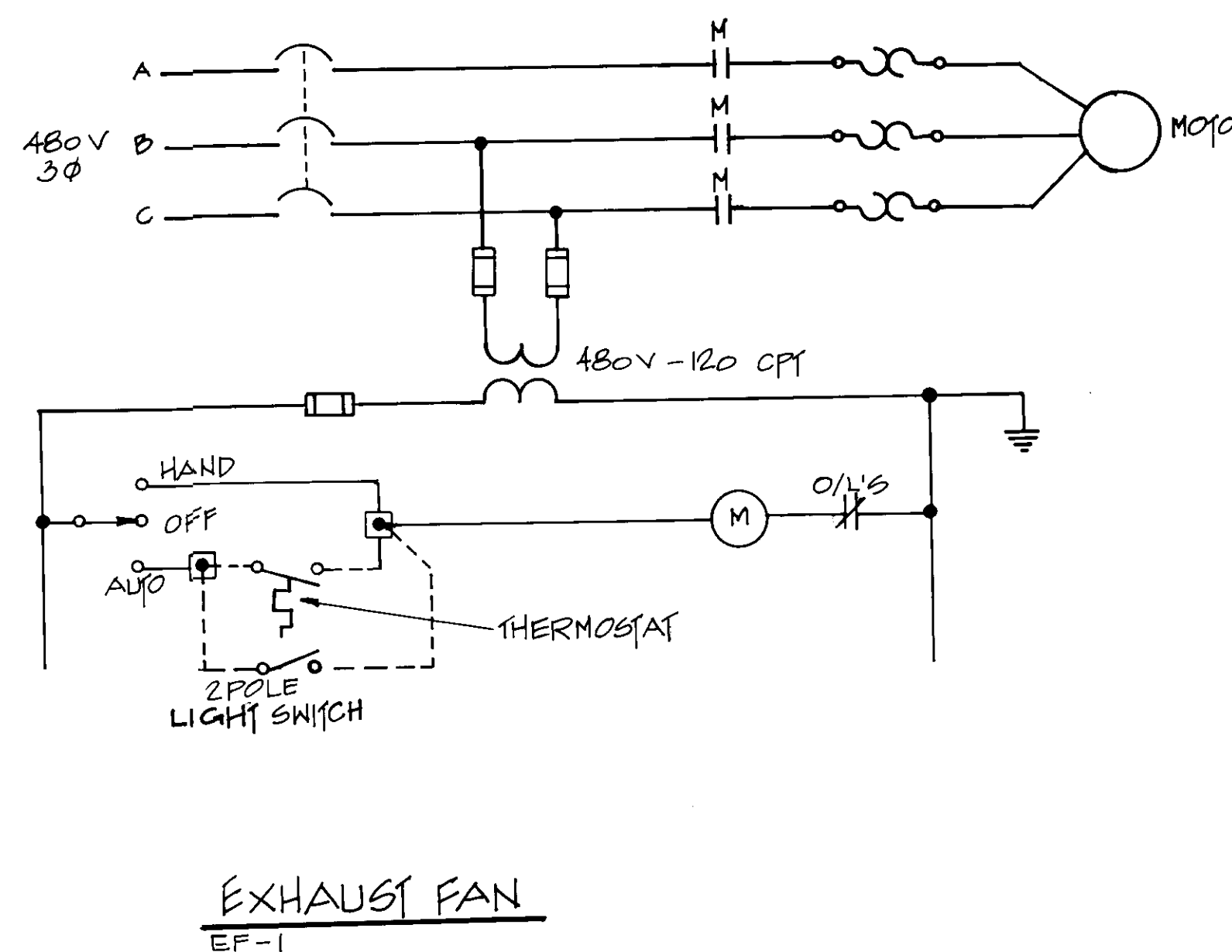
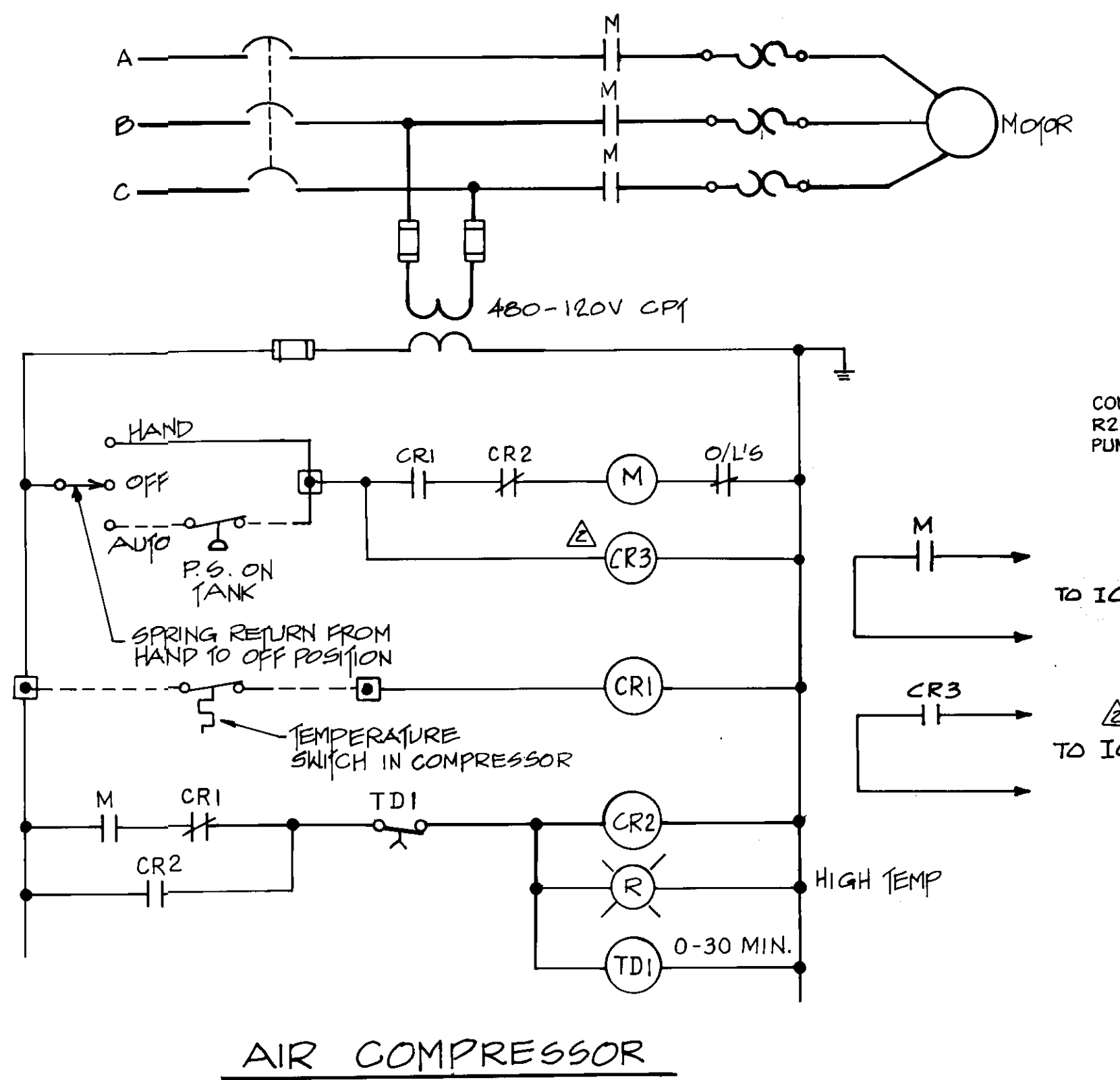
REV.	DATE	DESCRIPTION	APP.
Δ	10-20-93	CORRECTED MCC NUMBERING	
-	11-19-93	AS-CONSTRUCTED	HEB
-	8/8/90	ISSUED FOR CONSTRUCTION	HEB
-	5/4/90	ISSUED FOR BIDDING	

**BOYLE ENGINEERING CORPORATION**  
consulting engineers | architects  
VENTURA, CA

DESIGN: E.W. DRAWN: I.F. CHECKED: A.R. DATE: 3-14-90  
 C.A. NO. DRAWING NO. 5-227  
 SHEET NO. 15 OF 17 SHEETS



MCC CONTROL SECTION SCHEMATIC DIAGRAM



PUMP CONTROL SCHEMATIC DIAGRAM

△ TYPICAL OF PUMPS 2 AND 3  
SEE SHEET 16A FOR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM.

**RECORD DRAWING**  
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CONST. INSP. JAV AGE CY 11/19/93 DATE 1-4-94  
DRAFTED BY AJR AGENCY BEC DATE 11/19/93  
PROJ. ENGR. JEB AGENCY BEC DATE 12/10/93

06158

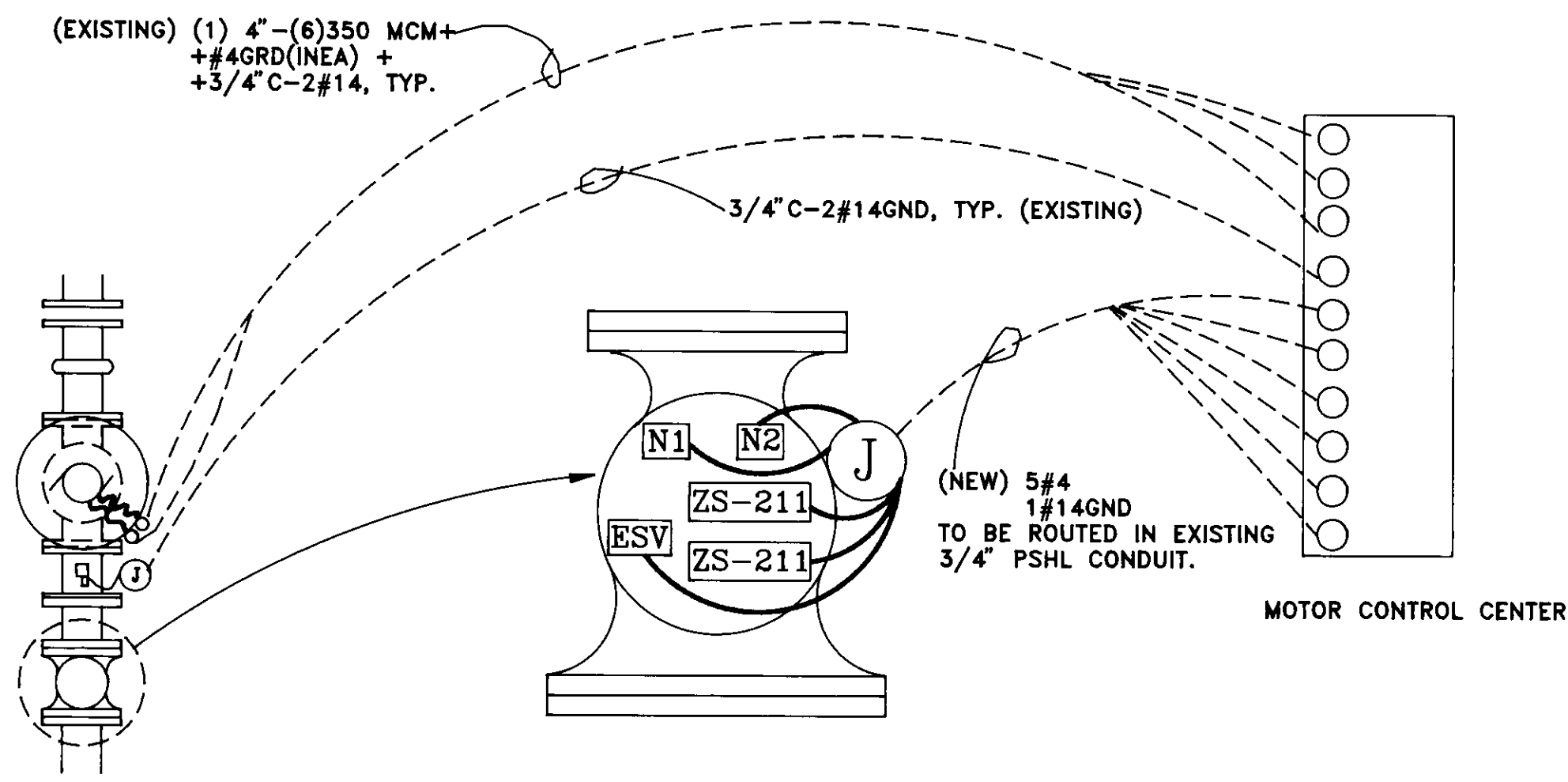
LAS VIRGENES MUNICIPAL WATER DISTRICT  
NEW SEMINOLE PUMP STATION  
SCHEMATIC DIAGRAMS

REV.	DATE	DESCRIPTION	APP.
△	8-15-95	REVISED PUMP CONTROL VALVE SCHEMATIC FOR PUMP 1.	JEB
△	11-19-93	AS-CONSTRUCTED	JEB
△	8/8/91	SUCTION FAIL CLARIFICATION	JEB
	8/8/90	ISSUED FOR CONSTRUCTION.	JEB
	5/4/90	ISSUED FOR BIDDING	JEB

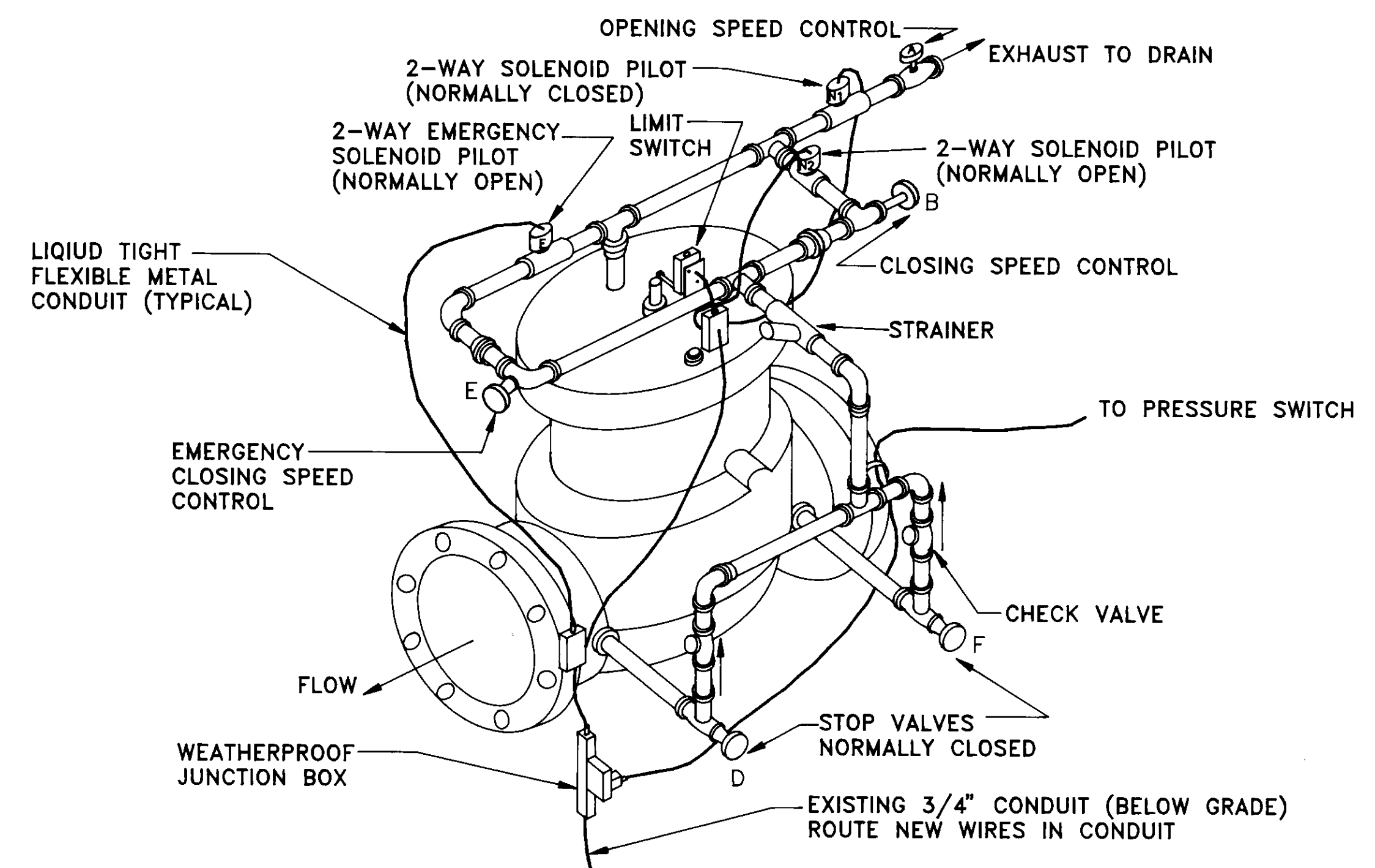
  

DESIGN EJW	CHECKED J.F.	DATE 3-16-90	C.A. NO. VT-102-122-13	DRAWING NO. S-227	SHEET NO. 16
BOYLE ENGINEERING CORPORATION Ventura, CA.				REGISTERED PROFESSIONAL ENGINEER ALLEN J. ANSELL E 9206 ELECTRICAL 9-30-93 STATE OF CALIFORNIA	



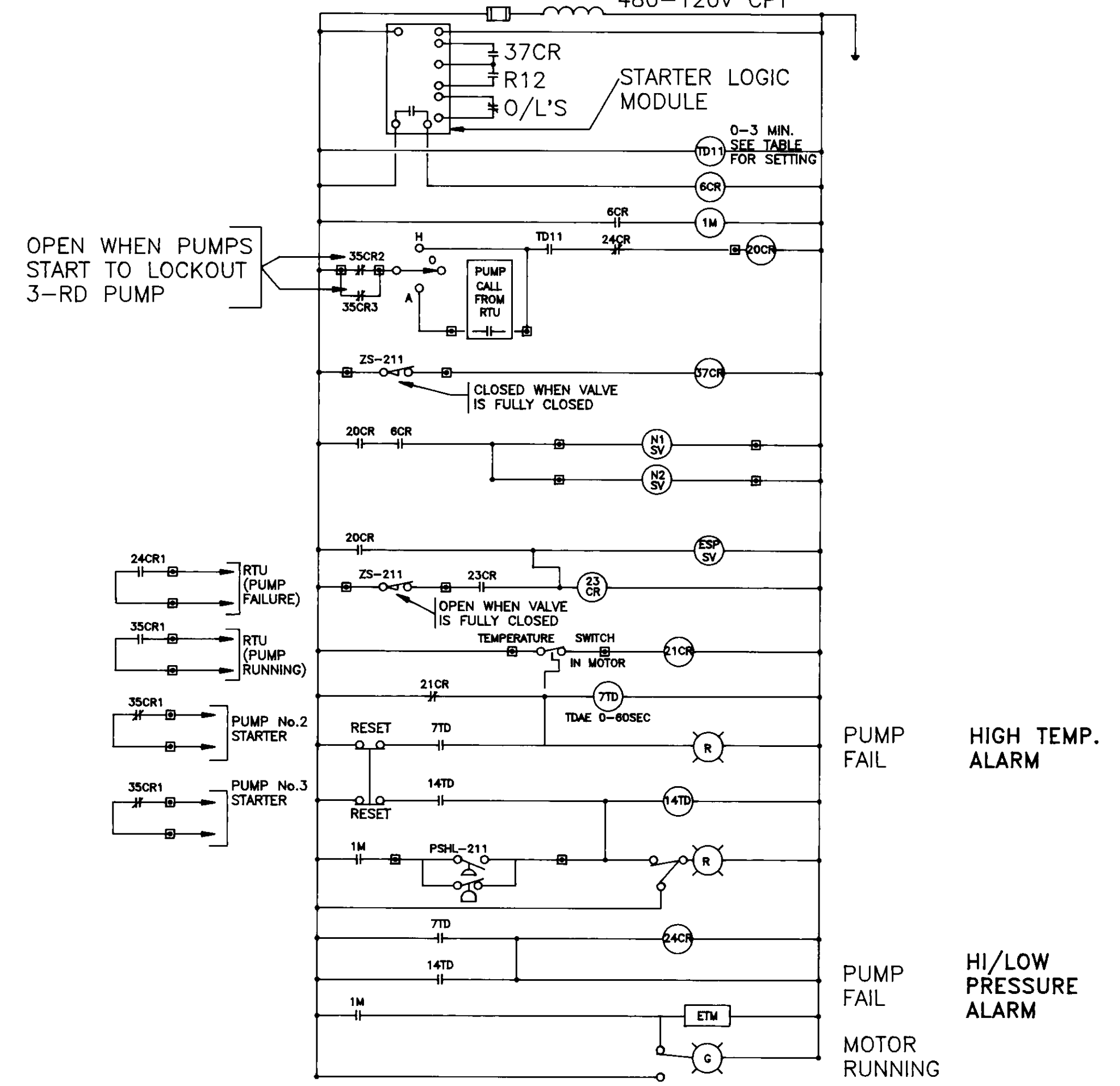
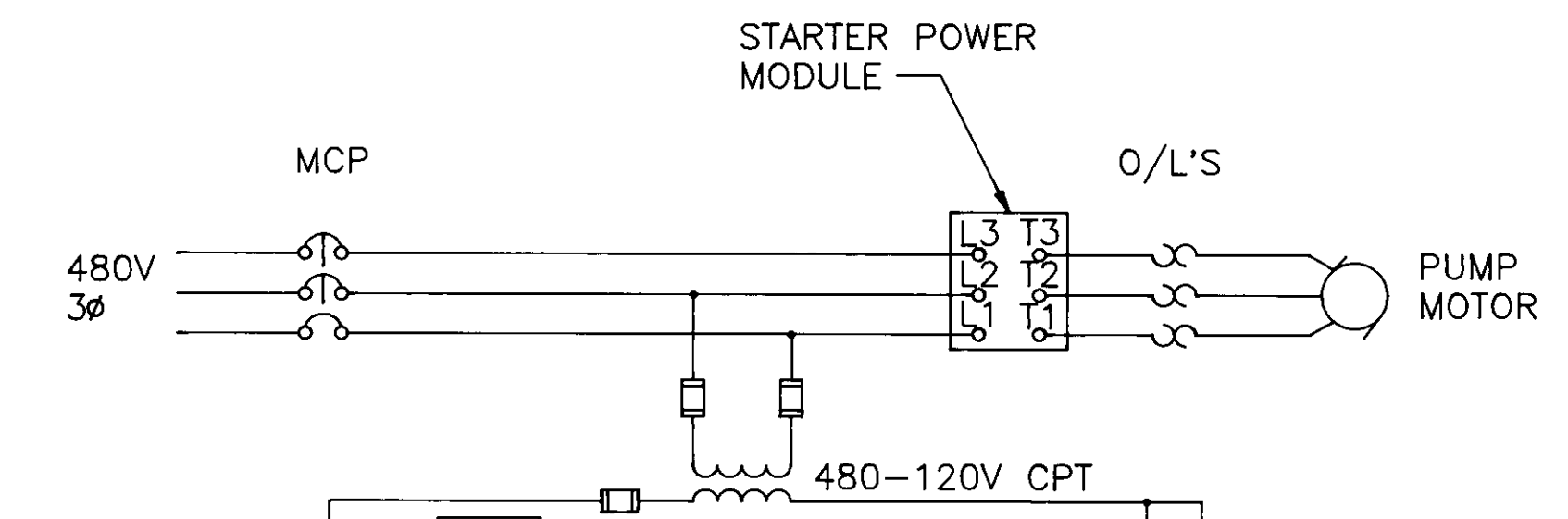


DETAIL  $\frac{4}{16}$   
 NEW GOLDEN ANDERSON VALVE  
 PUMP No. 1



GOLDEN ANDERSON 8-INCH ELECTRIC  
 PUMP CONTROL VALVE  
 (OWNER SUPPLIED)

SEMINOLE PUMP STATION  
 PUMP No. 1 CONTROL VALVE SCHEMATIC



PUMP TABLE					
PUMP No. 1	TD11 SET ● 10SEC	14TD SET ● 30SEC	35CR1	ZS-211	PSHL-211
PUMP No. 2	TD21 SET ● 20SEC	14TD SET ● 30SEC	35CR2	ZS-212	PSHL-212
PUMP No. 3	TD31 SET ● 30SEC	14TD SET ● 30SEC	35CR3	ZS-213	PSHL-213

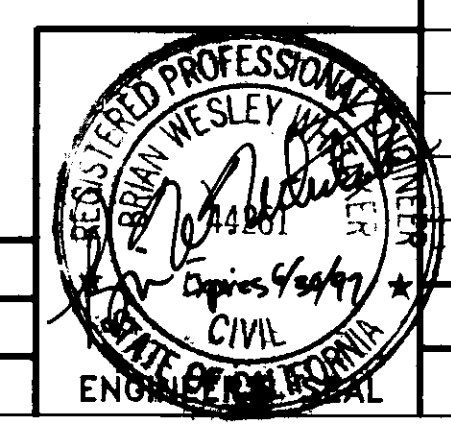
06159

LAS VIRGENES  
 MUNICIPAL WATER DISTRICT  
 NEW SEMINOLE PUMP STATION  
 INSTALLATION OF  
 PUMP CONTROL VALVE (PUMP No.1)

PREPARED BY:  
 LWMD ENGINEERING  
 4232 LAS VIRGENES ROAD  
 CALABASAS, CALIFORNIA 91302

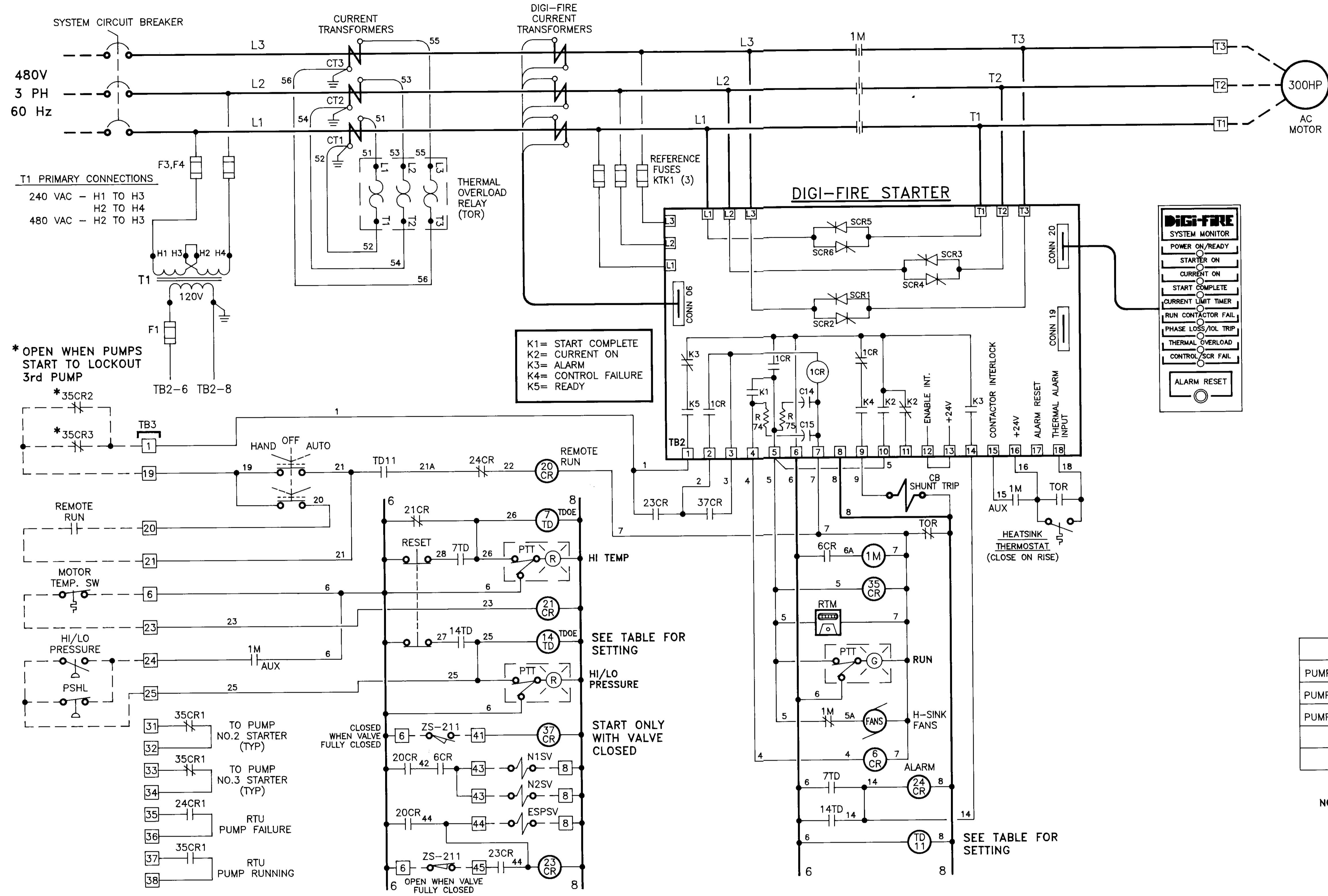
APPROVED FOR LAS VIRGENES  
 MUNICIPAL WATER DISTRICT  
 BY: *Dennis H. Ross*  
 DENNIS H. ROSS  
 DIRECTOR OF PLANNING & ENGINEERING  
 DATE: 10/20/95 R.C.E. 27272

DESIGN: STM  
 DRAWN: OB  
 CHECKED: BWW



REV. NO.	DATE	DESCRIPTION	APPVD.	DATE

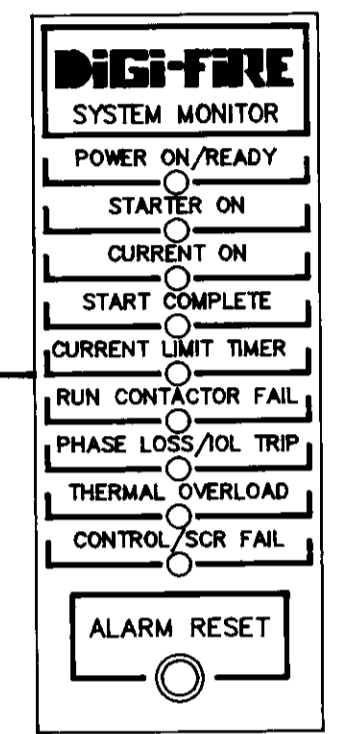
SCALE: AS SHOWN  
 DATE: OCTOBER 20, 1995  
 SHEET 16A OF 17



T1 PRIMARY CONNECTIONS  
 240 VAC - H1 TO H3  
 H2 TO H4  
 480 VAC - H2 TO H3

\* OPEN WHEN PUMPS START TO LOCKOUT 3rd PUMP

K1= START COMPLETE  
 K2= CURRENT ON  
 K3= ALARM  
 K4= CONTROL FAILURE  
 K5= READY



SHUNT DUTY STARTERS ACROSS THE LINE START

1. JUMPER TB2-1 TO TB2-6 AND TB2-4 TO TB2-5 ON AUX. BD.
2. DISCONNECT CONNECTOR 01 FROM AUXILIARY BOARD 08-1145.
3. IF AN SCR IS SHORTED DISCONNECT POWER LEADS L1,L2,L3 TO SCR MODULES AT 1M CONTACTOR. INSULATE LEADS TO PREVENT FAULTS.
4. OPERATE STOP/START CONTROLS AS BEFORE.

PUMP TABLE					
PUMP NO.1	TD11 SET @ 10 SEC	14TD SET @ 30 SEC	35CR1	ZS-211	PSHL-211
PUMP NO.2	TD21 SET @ 20 SEC	14TD SET @ 30 SEC	35CR2	ZS-212	PSHL-212
PUMP NO.3	TD31 SET @ 30 SEC	14TD SET @ 30 SEC	35CR3	ZS-213	PSHL-213

NOTE: REFER TO DNH CONTROL SCHEMATIC 02-1562 REV. B FOR EXISTING MCC COMPONENTS.

- 31 35CR1 TO PUMP NO.2 STARTER (TYP)
- 32 35CR1 TO PUMP NO.3 STARTER (TYP)
- 33 24CR1 RTU PUMP FAILURE
- 34 35CR1 RTU PUMP RUNNING

CLOSED WHEN VALVE FULLY CLOSED

START ONLY WITH VALVE CLOSED

SEE TABLE FOR SETTING

HI/LO PRESSURE

HI TEMP

REMOTE RUN

RESET

20CR 6CR

20CR 44

ZS-211

23CR 44

OPEN WHEN VALVE FULLY CLOSED

06160

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 NEW SEMINOLE PUMP STATION  
 INSTALLATION OF PUMP CONTROL VALVE (PUMP No.1)

PREPARED BY: LVMWD ENGINEERING  
 4232 LAS VIRGENES ROAD  
 CALABASAS, CALIFORNIA 91302

APPROVED FOR LAS VIRGENES MUNICIPAL WATER DISTRICT  
 BY: DENNIS H. ROSS  
 DIRECTOR OF PLANNING & ENGINEERING  
 DATE: 10/20/95 R.C.E. 27272

SCALE: AS SHOWN DATE: OCTOBER 20, 1995 SHEET 16B OF 17

DESIGN: STM  
 DRAWN: OB  
 CHECKED: BWW

ENGINEER'S SEAL

REV. NO.	DATE	DESCRIPTION	APPVD.	DATE
REVISIONS				