

# TERTIARY TREATMENT FACILITIES

FOR THE

## POINT DUME' CLUB

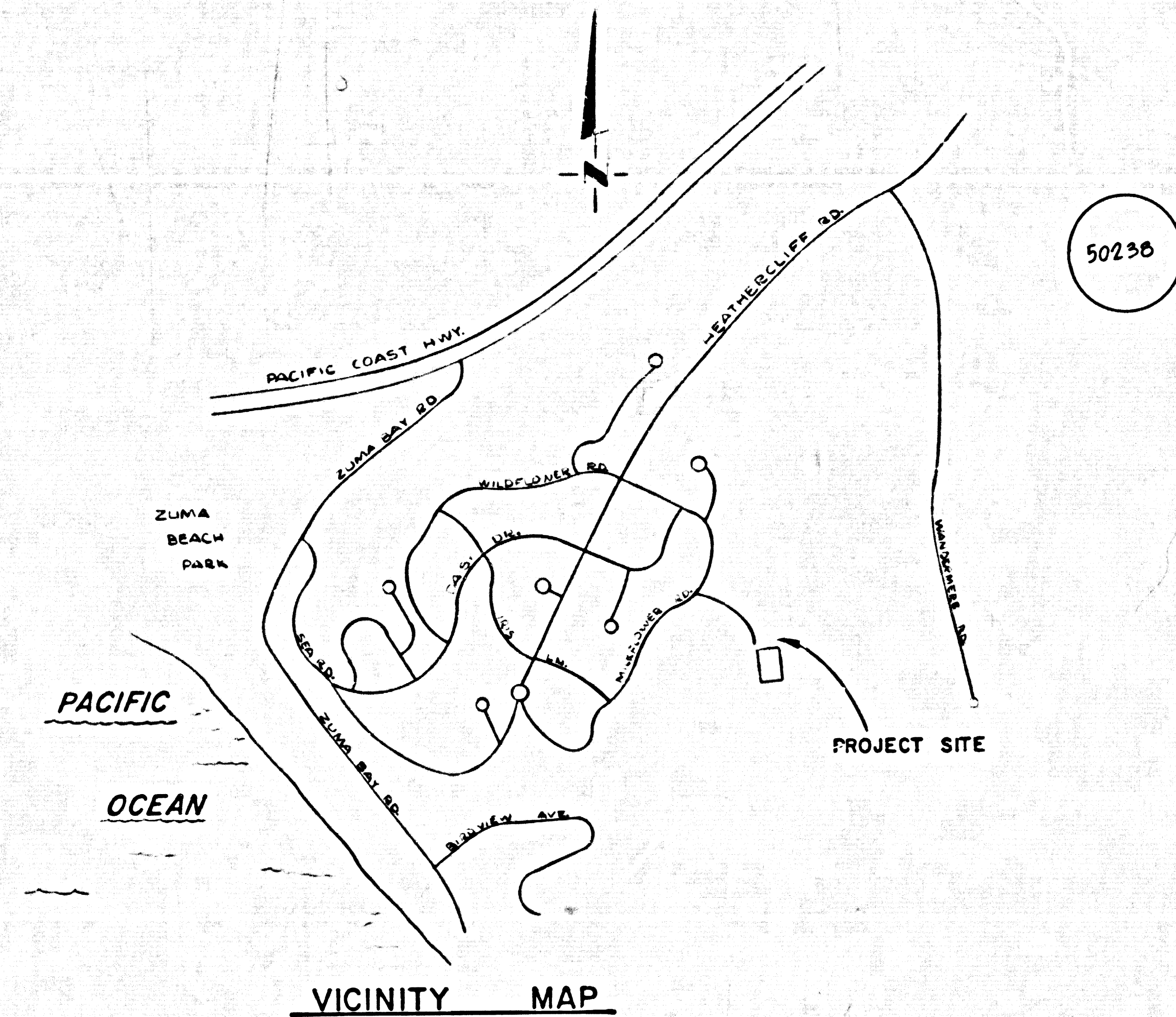
29500 HEATHERCLIFF ROAD

MALIBU, CALIFORNIA

### OWNER

THE ADAMSON COMPANIES  
12381 WILSHIRE BLVD.  
LOS ANGELES, CALIFORNIA

PRIVATE CONTRACT NO. 10,088



VICINITY MAP

**BENCH MARK** NO. 48-121 (DUME' POINT L-108)  
PACIFIC COAST HWY. & HEATHERCLIFF RD. ON NORTH SIDE OF HWY. ABOUT 240' EAST OF ROAD, 38.6' NELY. OF A L&T IN NLY CURB OF HWY DIVIDER STRIP & 26.6' ELY. OF PWR. POLE NO. 1095794E. ADJ. EL. 200.563 (1964)  
DATUM-USC&GS. DUME' POINT L-108-RE 329-1950  
REF: F.B. NO. 1369 p. 103

#### LIST OF DRAWINGS

1. TITLE, VICINITY MAP, LIST OF DRAWINGS
2. SITE PLAN, GRADING PLAN, FLOW DIAGRAM
3. MECHANICAL EQUIP ROOM FLOOR PLAN, ELEVATIONS & DETAILS
4. PUMPING STATIONS, PLANS, SECTIONS
5. HYDROPNEUMATIC TANK, SUMP PUMP, PIPING DETAILS
6. PLANS AND SECTIONS
7. AIR COMPRESSOR, MECH. EQUIP ROOM DETAILS & SECTIONS
8. FILTER, PLAN & SECTION, EXHAUST FAN DETAILS & SECTIONS
9. ELECTRICAL DETAILS
10. ELECTRICAL DETAILS
11. ELECTRICAL DETAILS
12. ELECTRICAL DETAILS

#### NOTES

1. FOR DEFINITIONS OF ELECTRICAL SYMBOLS, SEE STANDARD DRAWINGS E-1 THRU E-5.
2. PRIOR TO THE ISSUANCE OF THE REQUIRED SEWER CONSTRUCTION PERMIT THE CONTRACTOR SHALL OBTAIN AND FILE WITH THE COUNTY ENGINEER COPIES OF A PERMIT FOR EXCAVATION AND TRENCHES FROM THE STATE OF CALIF. DIV. OF INDUSTRIAL SAFETY AND A CERTIFICATE OF WORKER'S COMPENSATION INSURANCE WITH THE DEPT. OF CO. ENGR. 550 S. VERMONT, RM. 406, LOS ANGELES, CALIFORNIA 90020 NAMED AS *(Signature)*

#### NOTES CONTINUED:

THE CERTIFICATE HOLDER TO BE NOTIFIED 30 DAYS PRIOR TO CANCELLATION OF POLICY.

#### PERMITS:

THE CONTRACTOR SHALL OBTAIN THE FOLLOWING PERMITS AND PAY THE REQUIRED FEE BEFORE STARTING CONSTRUCTION OF ANY PHASES OF WORK LISTED BELOW:

1. CONSTRUCTION AND OPERATING PERMIT - SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT.
2. CONSTRUCTION PERMIT - LOS ANGELES COUNTY ENGINEERS, ENVIRONMENTAL DEVELOPMENT DIVISION.
3. GRADING PERMIT - LOS ANGELES COUNTY ENGINEERS, BUILDING AND SAFETY DIVISION.
4. ELECTRICAL PERMIT - LOS ANGELES COUNTY ENGINEERS, BUILDING AND SAFETY DIVISION.
5. PLUMBING PERMIT - LOS ANGELES COUNTY ENGINEERS, BUILDING AND SAFETY DIVISION.
6. BUILDING PERMIT - LOS ANGELES COUNTY ENGINEERS, BUILDING AND SAFETY DIVISION.

STATE OF CALIFORNIA DEPT. OF HEALTH SERVICES  
SANITARY ENGINEERING SECTION  
APPROVED BY: *(Signature)* DATE: *(Date)*

LOS ANGELES COUNTY ENGINEER - FACILITIES  
CHECKED BY: *(Signature)* DATE: *(Date)*  
REG. C. E. NO. 76883

LOS ANGELES COUNTY DEPT. OF HEALTH SERVICES  
APPROVED BY: *(Signature)* DATE: *(Date)*

REV.	DATE	BY	DESCRIPTION

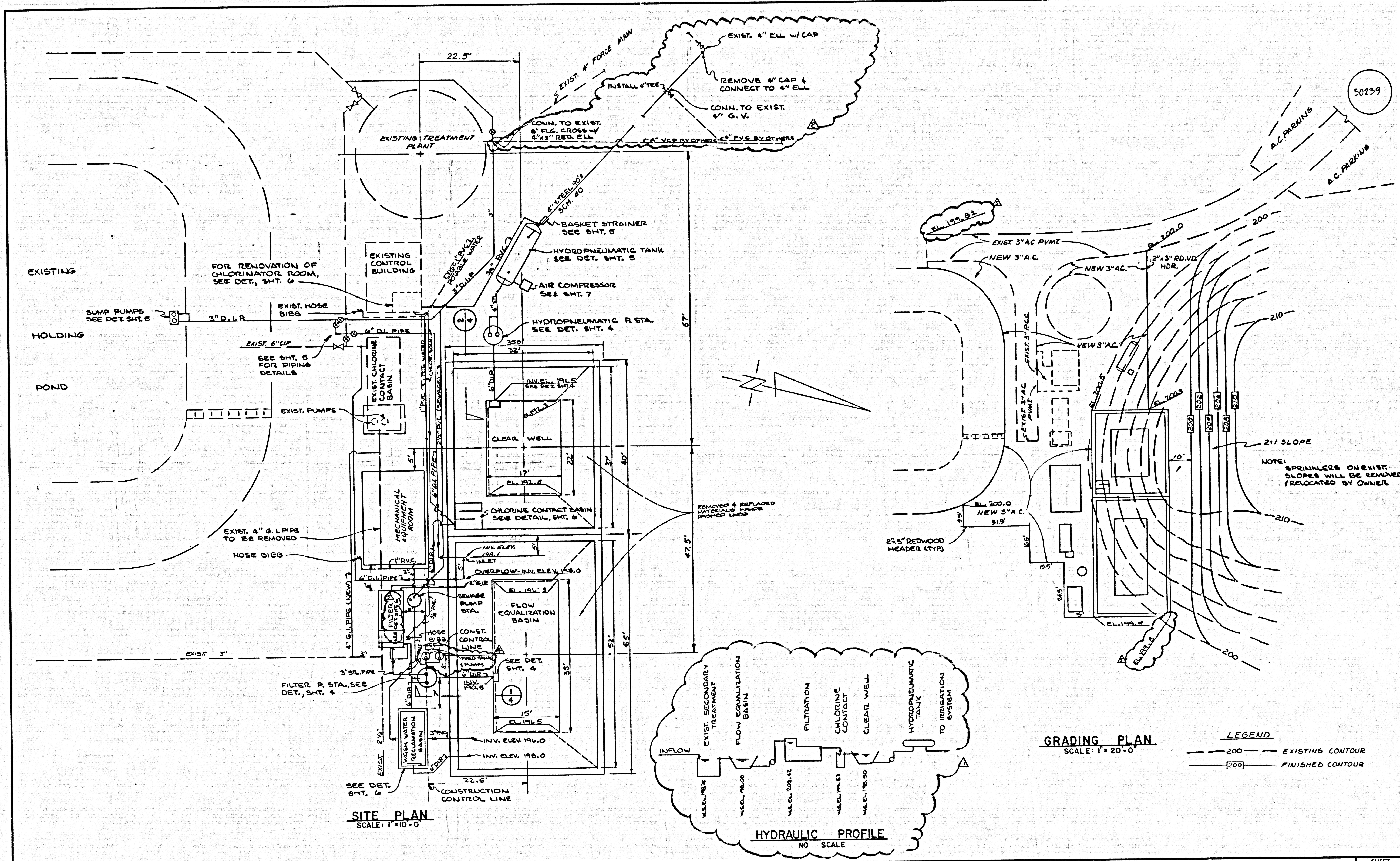
SUBMITTED: *(Signature)*  
FOR THE CONSULTANT  
APPROVED: *(Signature)*  
9692 R.C.E. DATE: *(Date)*

DESIGNED: KIM  
DRAWN: TPC  
CHECKED: KIM

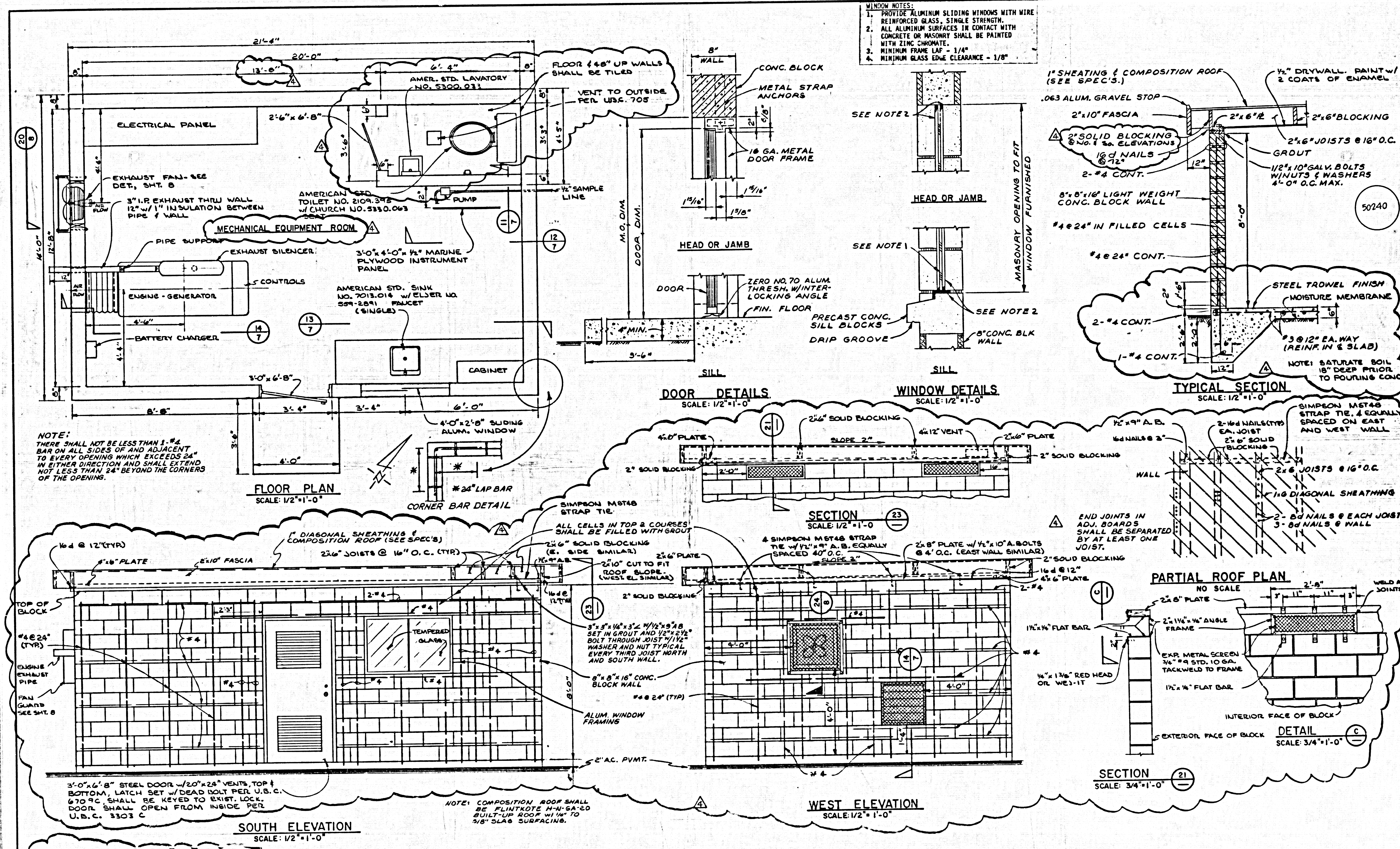
SCALE: AS SHOWN  
KENNETH I. MULLEN. CONSULTING ENGINEERS, INC.  
ARCADIA  
(213) 445-2212 (213) 681-5428

THE ADAMSON COMPANIES  
POINT DUME' TERTIARY TREATMENT FACILITIES  
TITLE, LIST OF DRAWINGS & VICINITY MAP

SHEET 1 OF 12 SHEETS



<table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>1/18/02</td> <td>TPC</td> <td>ADD. NOTES &amp; ELEV'S.</td> </tr> <tr> <td>2</td> <td>1/18/02</td> <td>TPC</td> <td>ADD. FEED TANKS &amp; PUMPS</td> </tr> <tr> <td>3</td> <td>1/18/02</td> <td>TPC</td> <td>CHANGED HYDRAULIC PROFILE</td> </tr> <tr> <td>4</td> <td>1/18/02</td> <td>TPC</td> <td>CHANGED CONNECTION</td> </tr> </table>	REV.	DATE	BY	DESCRIPTION	1	1/18/02	TPC	ADD. NOTES & ELEV'S.	2	1/18/02	TPC	ADD. FEED TANKS & PUMPS	3	1/18/02	TPC	CHANGED HYDRAULIC PROFILE	4	1/18/02	TPC	CHANGED CONNECTION	SUBMITTER: <i>Kenneth I. Mullen</i> FOR THE CONSULTANT APPROVED: DATE: 7/16/02	9692 R.C.E. DATE: 7/16/02	DESIGNED: KIM DRAWN: TPC CHECKED: KIM	SCALE: AS SHOWN	KENNETH I. MULLEN, CONSULTING ENGINEERS, INC. ARCADIA (213) 445-2212 (213) 681-5428	THE ADAMSON COMPANIES POINT DUME TERTIARY TREATMENT FACILITIES SITE PLAN, GRADING PLAN & FLOW DIAGRAM	SHEET <b>2</b> OF 12 SHEETS
REV.	DATE	BY	DESCRIPTION																								
1	1/18/02	TPC	ADD. NOTES & ELEV'S.																								
2	1/18/02	TPC	ADD. FEED TANKS & PUMPS																								
3	1/18/02	TPC	CHANGED HYDRAULIC PROFILE																								
4	1/18/02	TPC	CHANGED CONNECTION																								

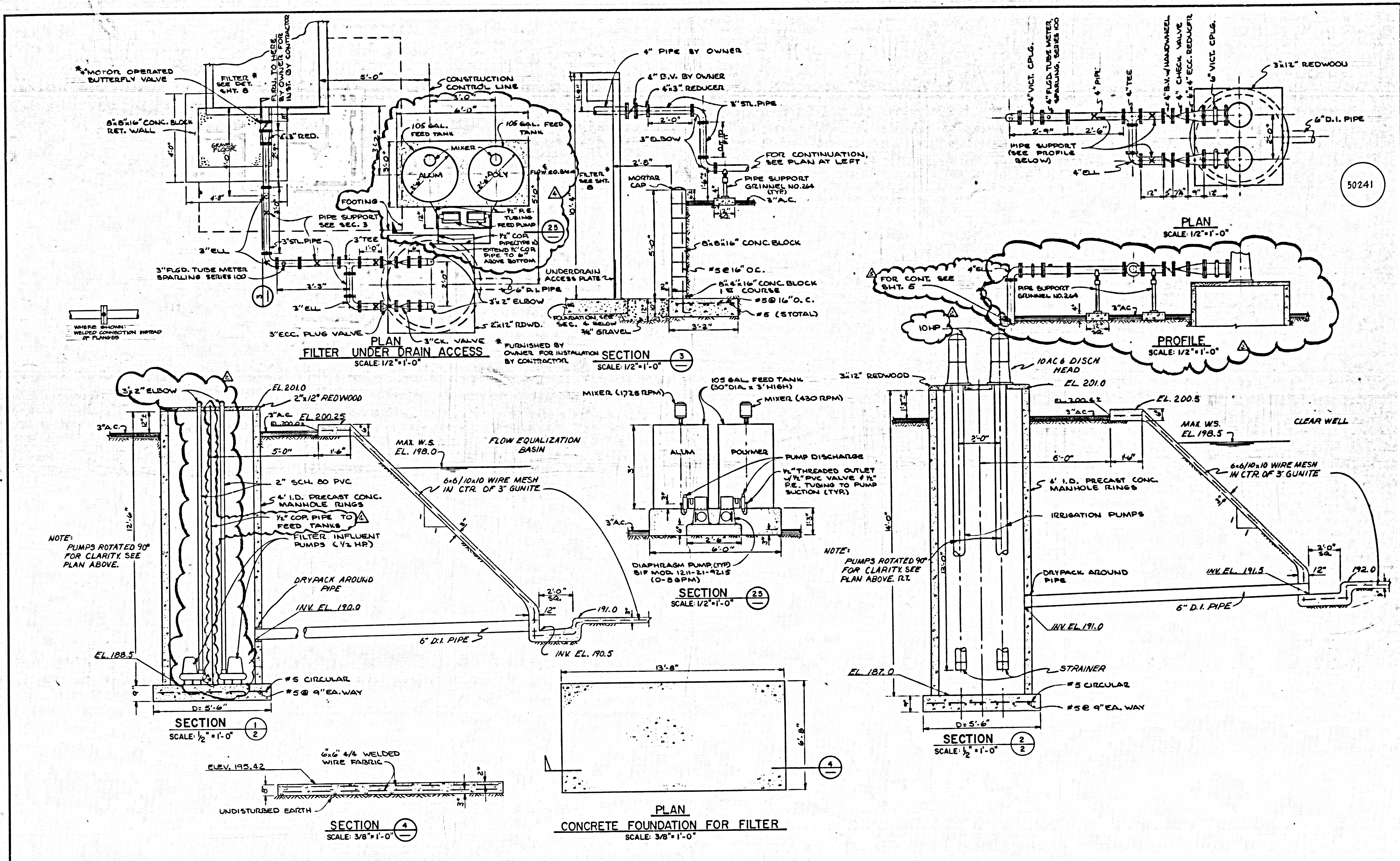


**WINDOW NOTES:**  
 1. PROVIDE ALUMINUM SLIDING WINDOWS WITH WIRE REINFORCED GLASS. SINGLE STRENGTH.  
 2. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PAINTED WITH ZINC CHROMATE.  
 3. MINIMUM FRAME LAP = 1/4"  
 4. MINIMUM GLASS EDGE CLEARANCE = 1/8"

50240

SUBMITTED:  FOR THE CONSULTANT APPROVED:	9692 R.C.E. DATE	DESIGNED: KIM DRAWN: TPG CHECKED: KIM	SCALE: AS SHOWN	KENNETH I. MULLEN, CONSULTING ENGINEERS, INC. ARCADIA (213) 445-2212 (213) 681-5428
--	---------------------	---	--------------------	---

THE ADAMSON COMPANIES POINT DUME TERTIARY TREATMENT FACILITIES MECHANICAL EQUIP ROOM, PLAN, ELEVATIONS AND DETAILS	SHEET <b>3</b> OF 12 SHEETS
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50241

NOTE: PUMPS ROTATED 90° FOR CLARITY SEE PLAN ABOVE.

NOTE: PUMPS ROTATED 90° FOR CLARITY SEE PLAN ABOVE, RT.

REV	DATE	BY	DESCRIPTION

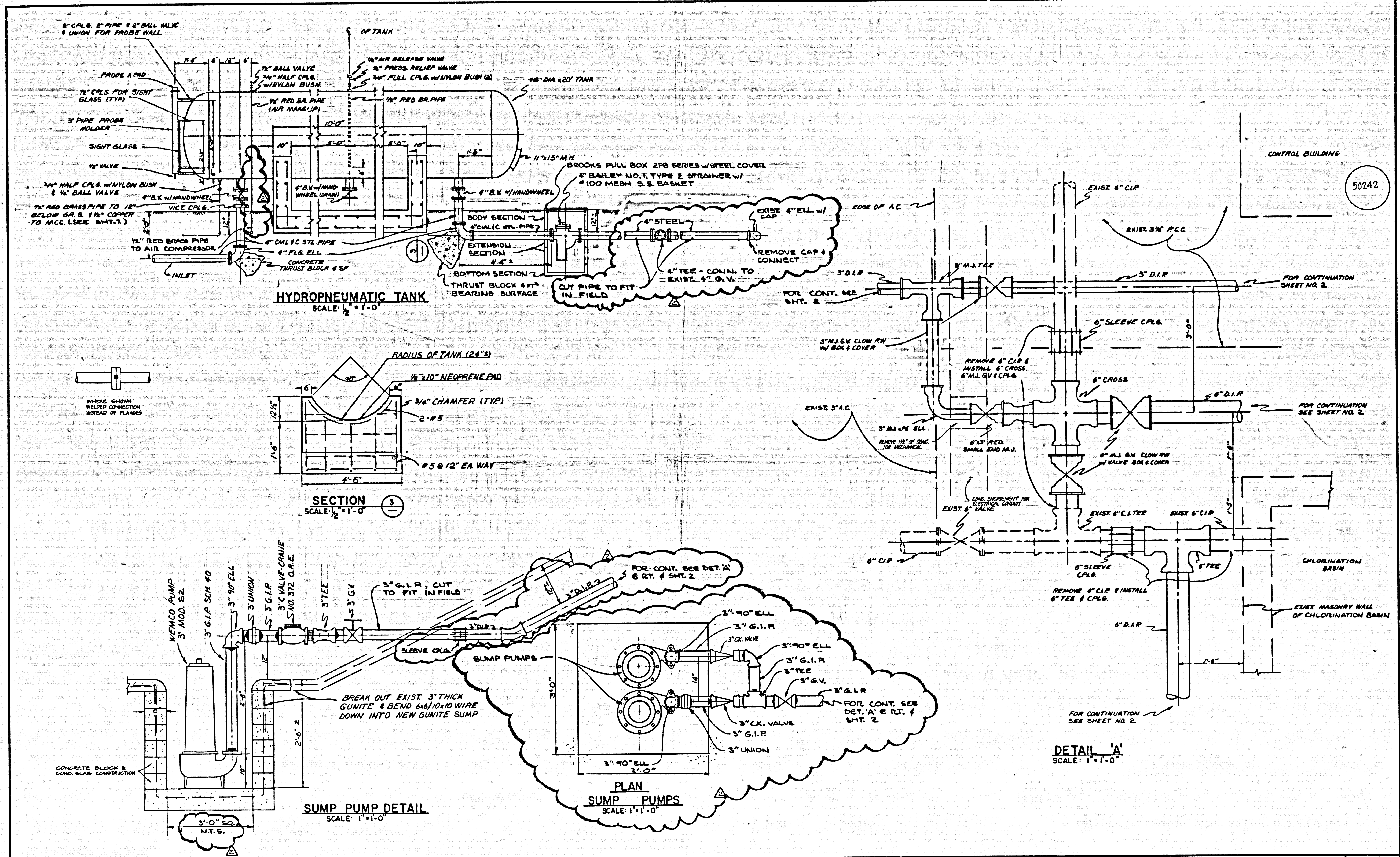
SUBMITTER:  
*Kenneth I. Mullen*  
FOR THE CONSULTANT  
APPROVED:

DESIGNED: KIM  
DRAWN: TPC  
CHECKED: KIM

SCALE:  
AS SHOWN  
KENNETH I. MULLEN, CONSULTING ENGINEERS, INC.  
ARCADIA  
(213) 445-2212 (213) 441-5428

THE ADAMSON COMPANIES  
POINT DUME TERTIARY TREATMENT FACILITIES  
PUMPING STATIONS - PLANS AND SECTIONS

SHEET  
**4**  
OF 12 SHEETS



REV.	DATE	BY	DESCRIPTION

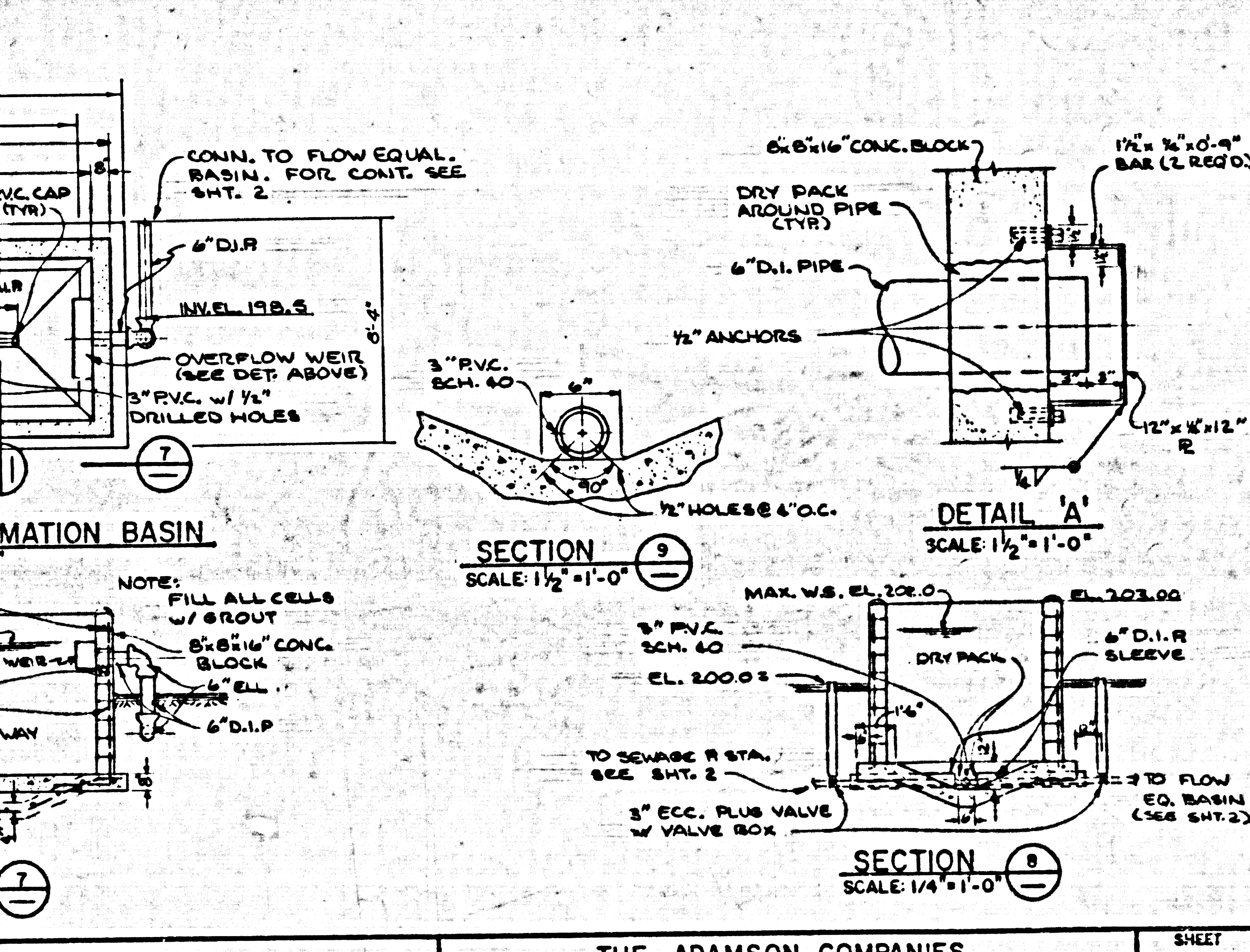
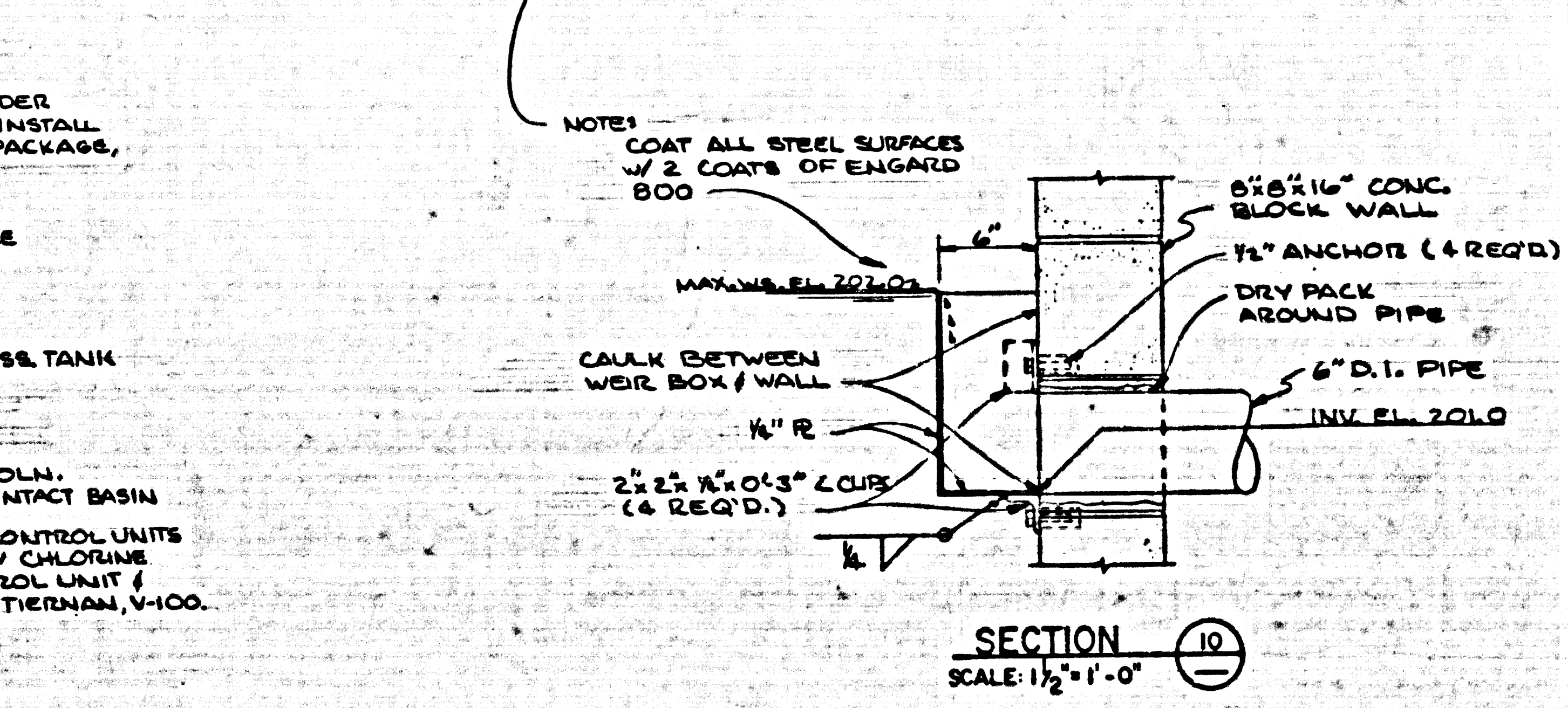
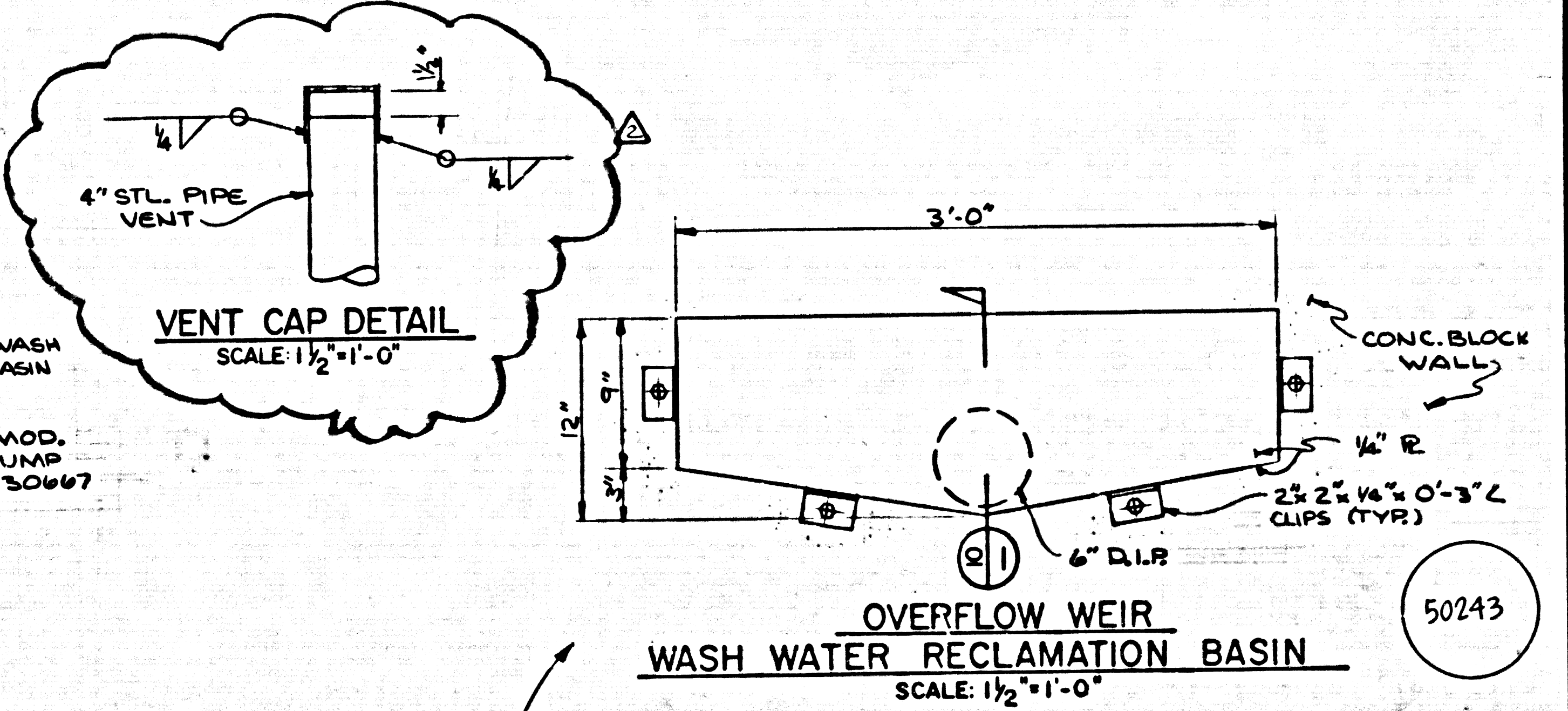
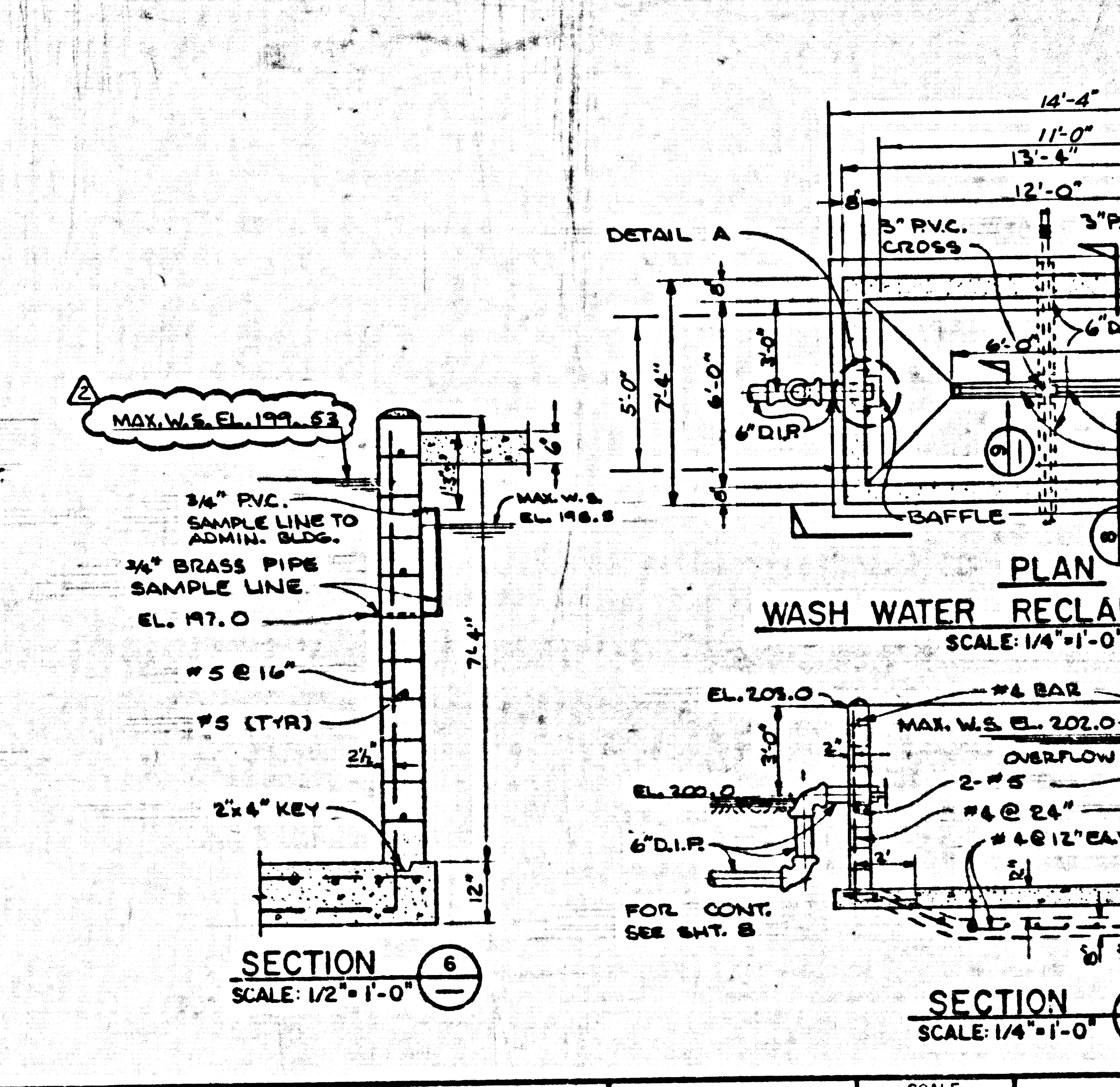
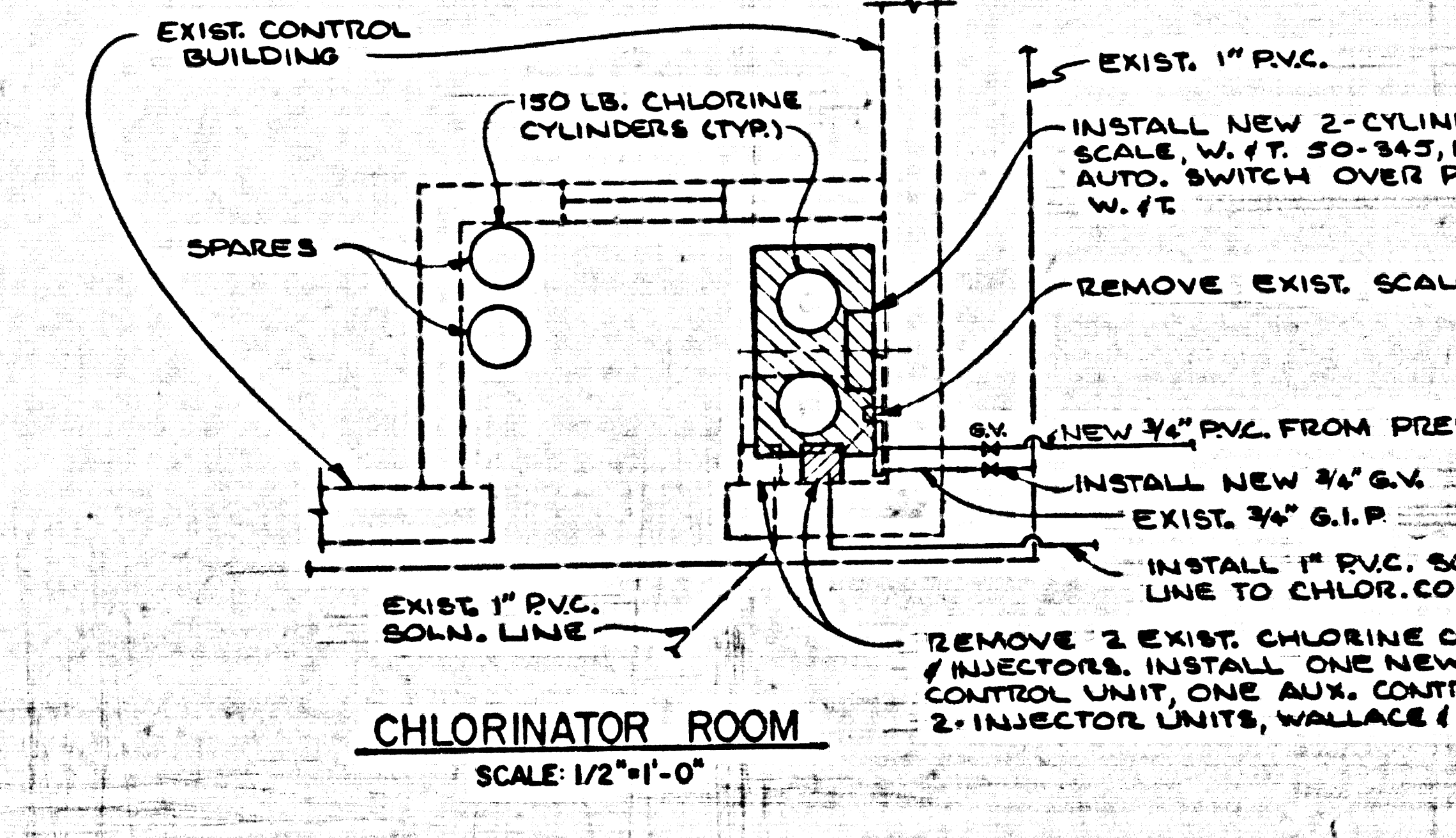
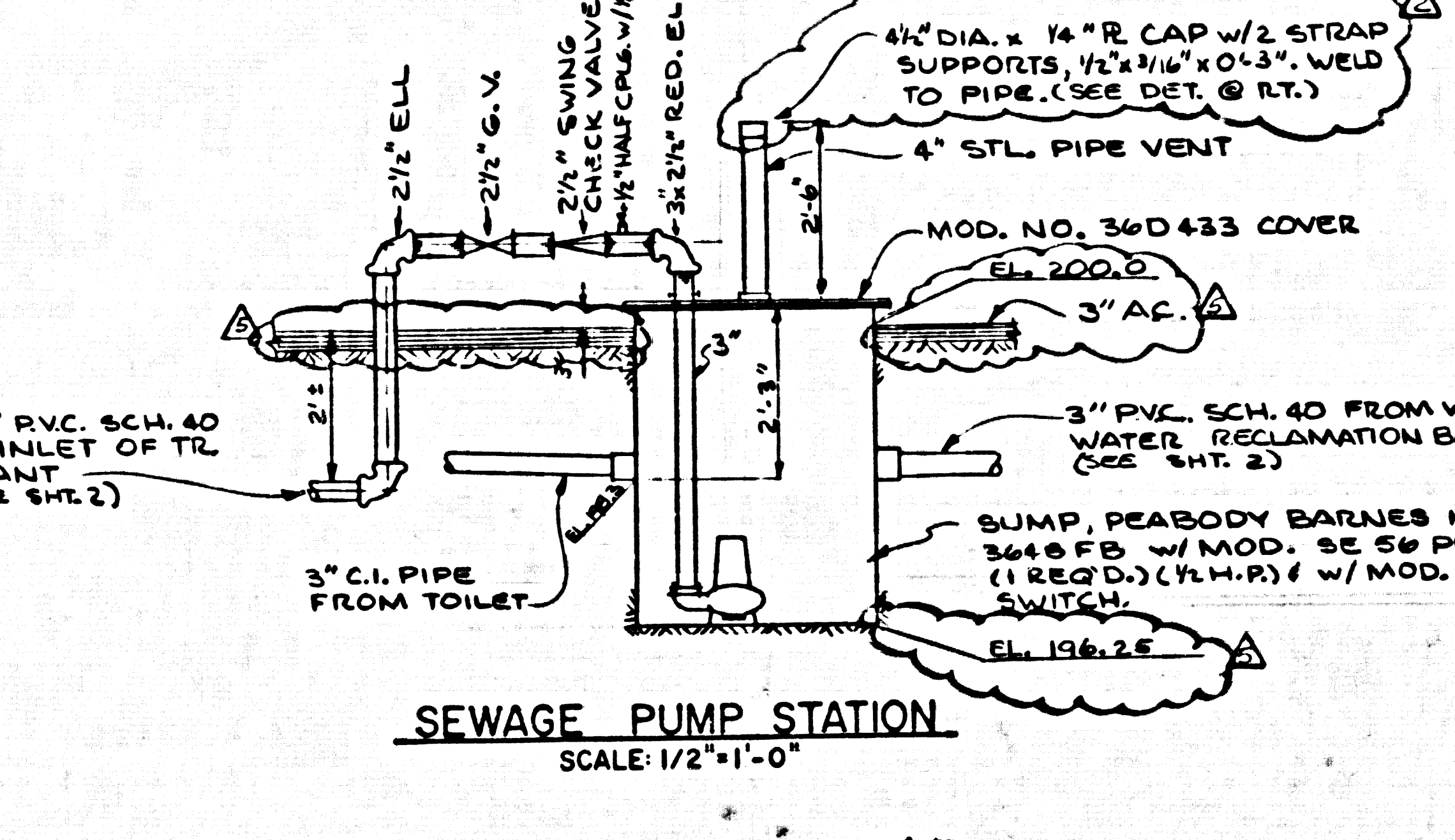
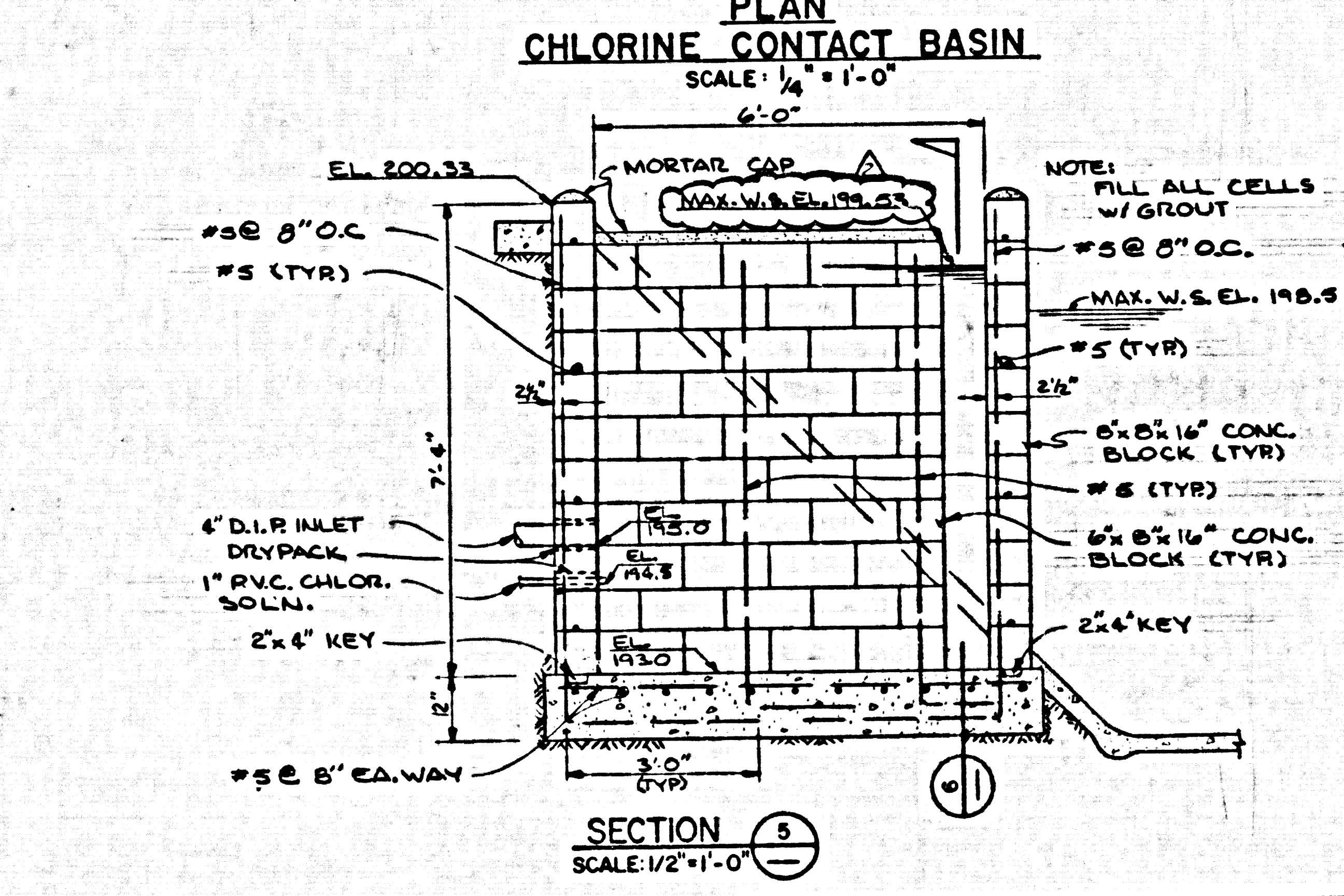
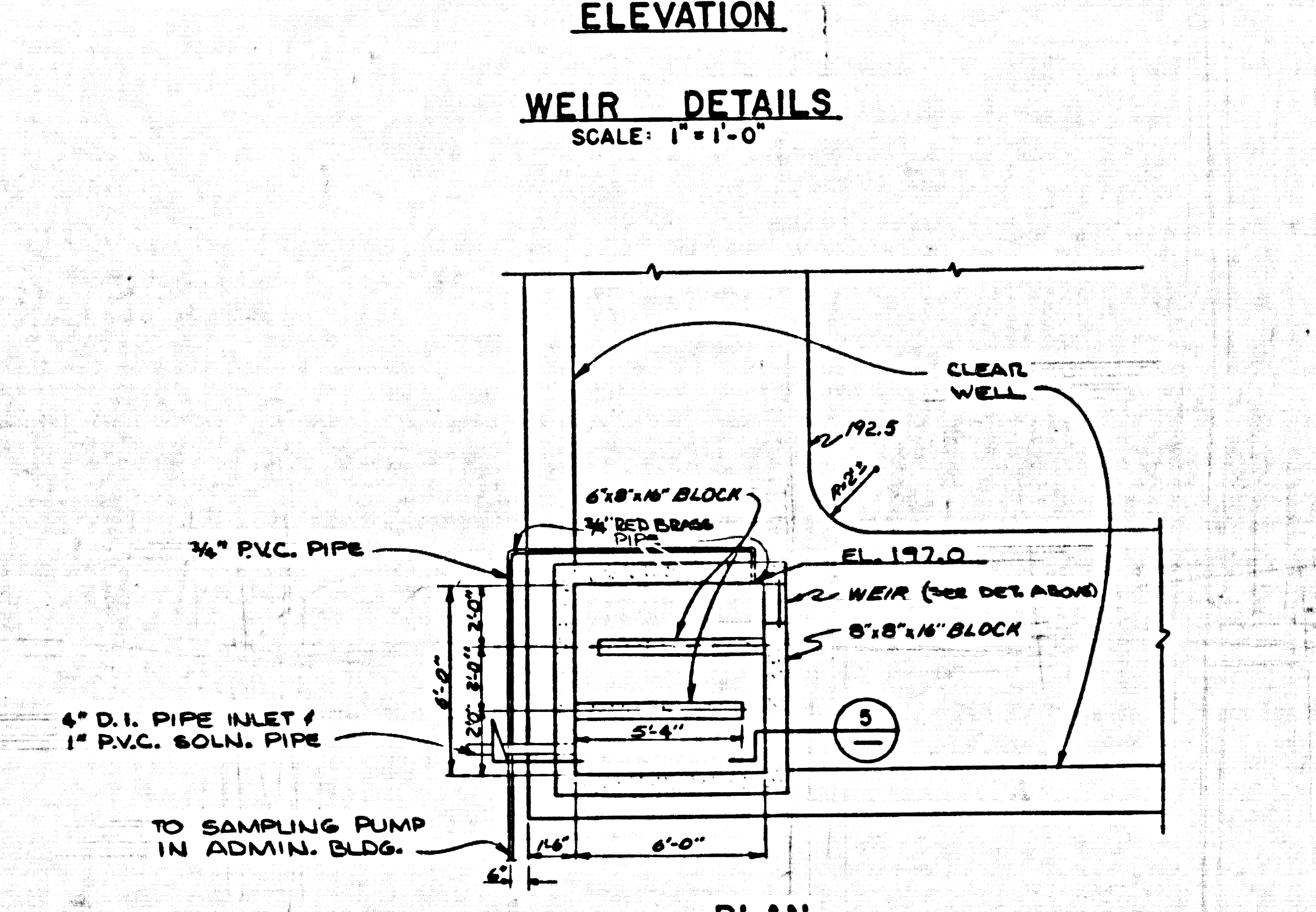
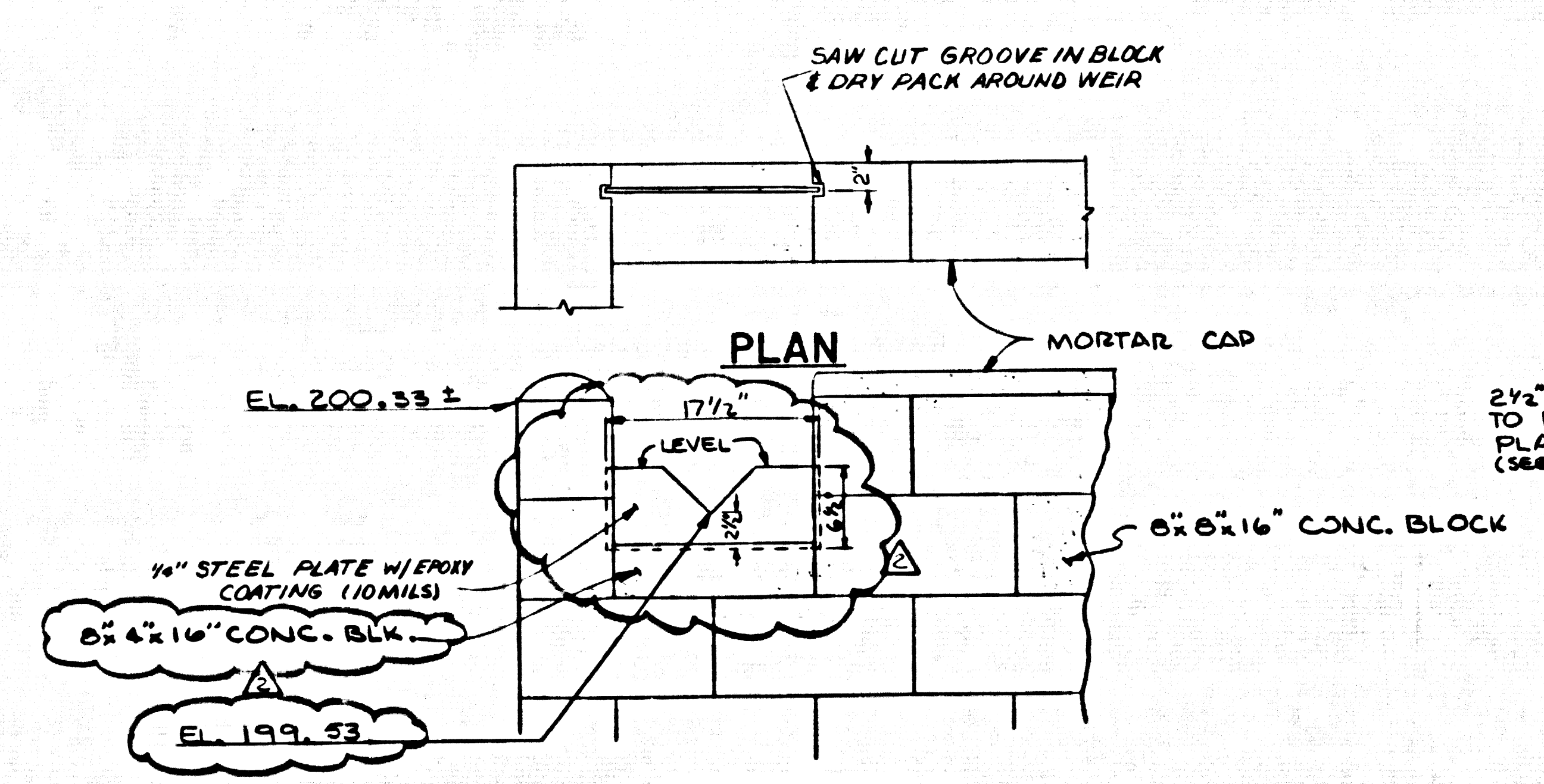
SUBMITTED: *Kenneth L. Mullen*  
FOR THE CONSULTANT  
APPROVED: \_\_\_\_\_  
DATE: 9/1/92

DESIGNED: KIM  
DRAWN: TPC  
CHECKED: KIM

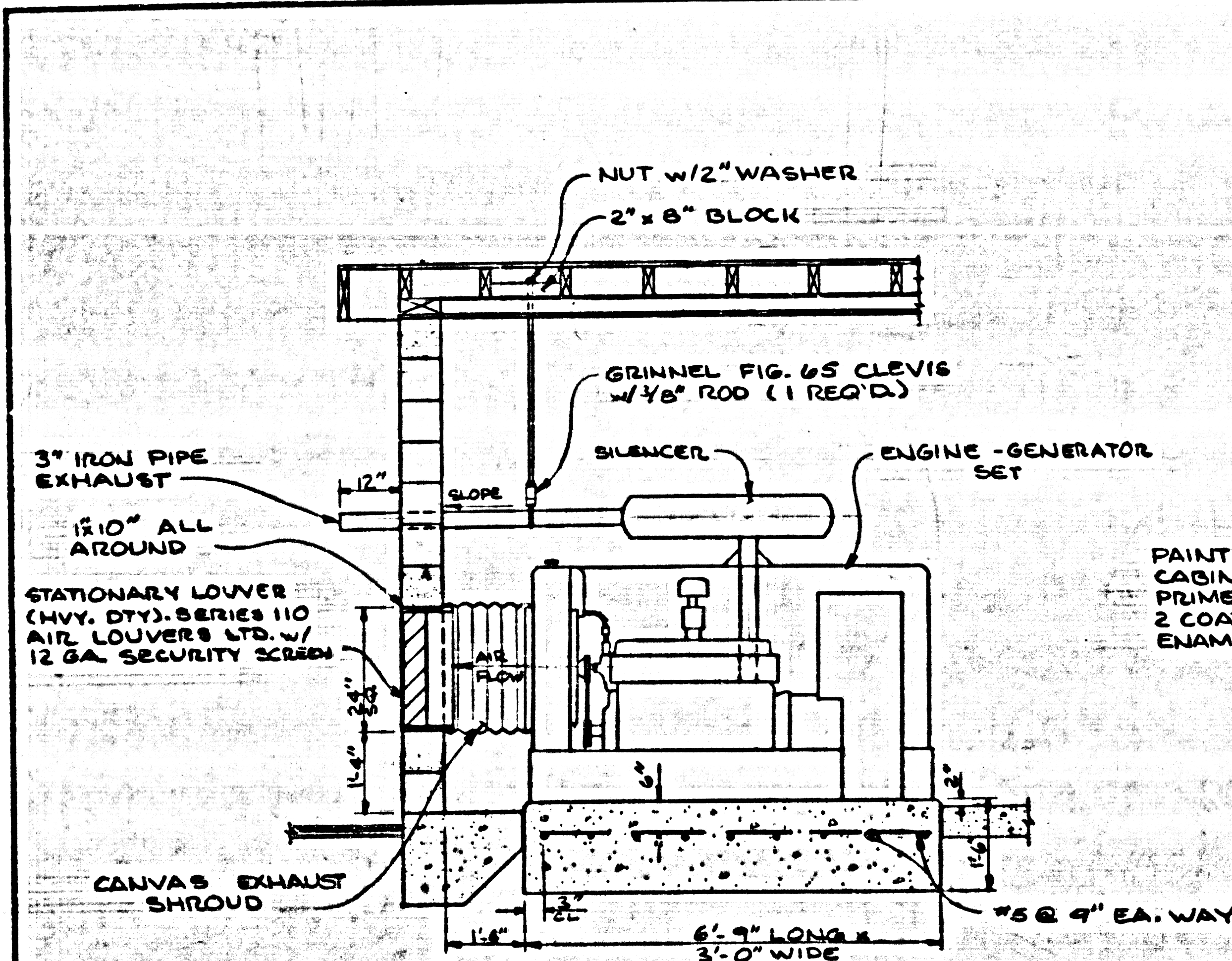
SCALE: AS SHOWN  
KENNETH L. MULLEN, CONSULTING ENGINEERS, INC.  
ARCADIA  
213 445-2212 (213) 681-5428  
**KIM**

THE ADAMSON COMPANIES  
POINT DUME TERTIARY TREATMENT FACILITIES  
HYDROPNEUMATIC TANK, SUMP PUMP & PIPING DETAILS

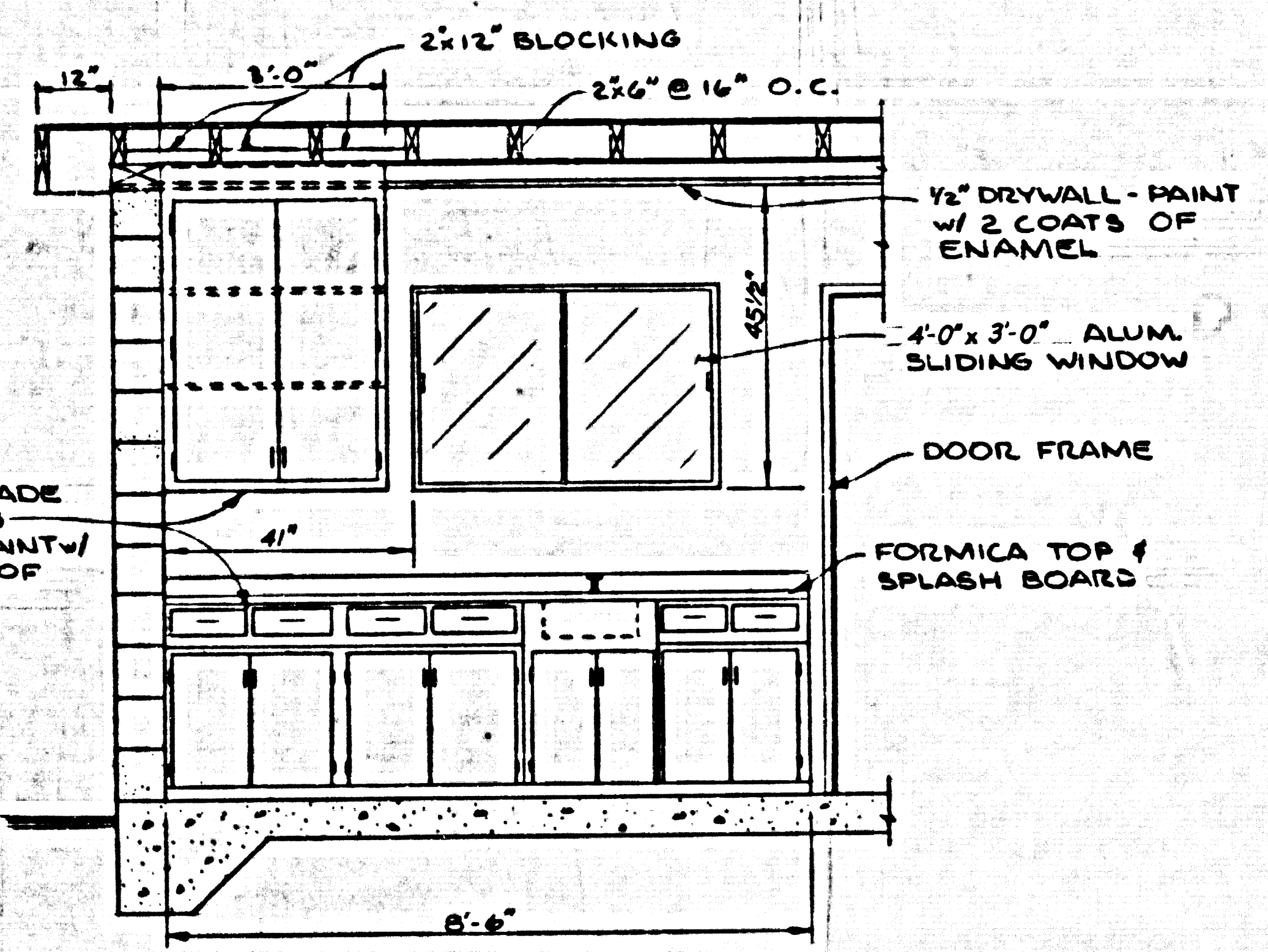
SHEET  
**5**  
OF 12 SHEETS



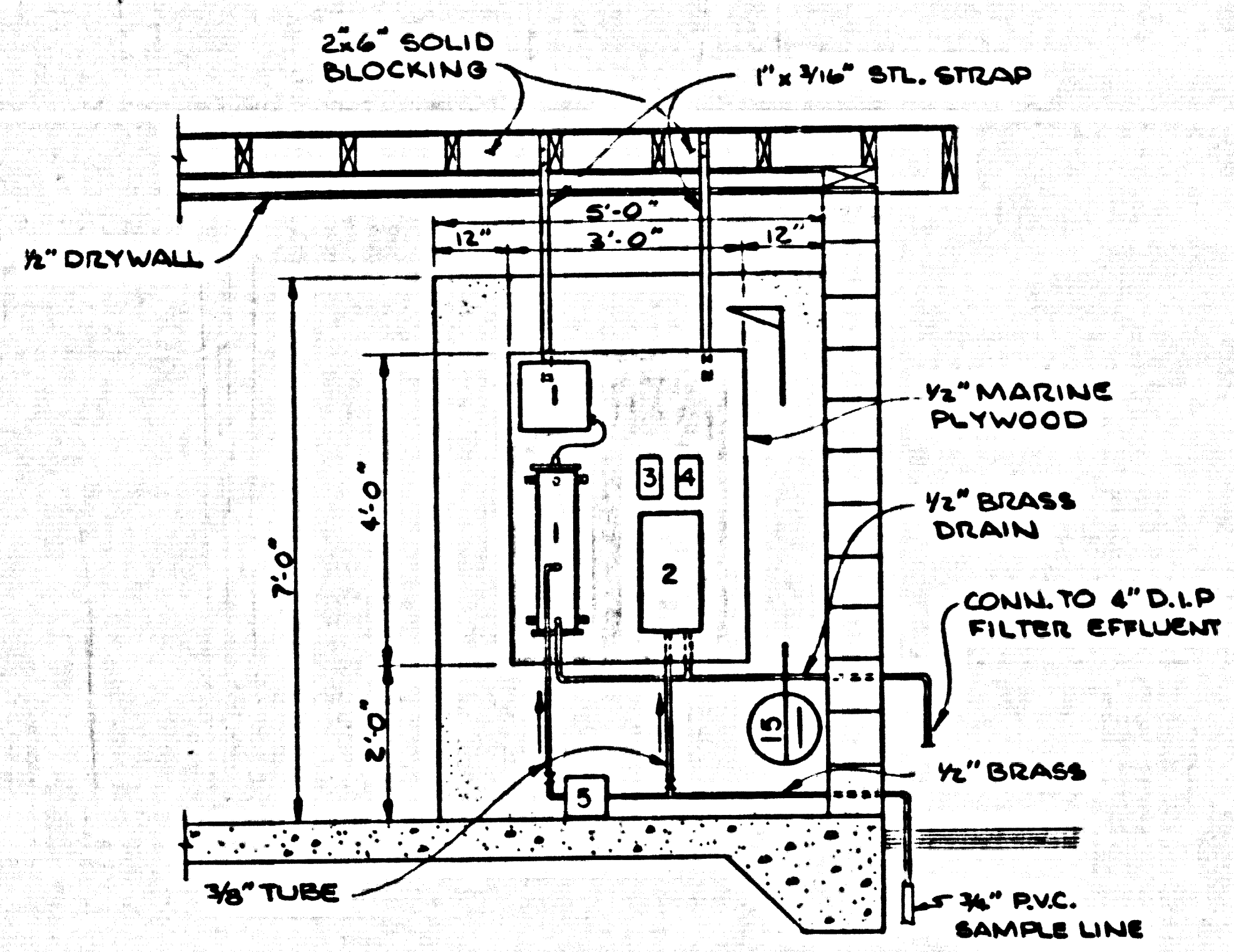
SUBMITTED:		DESIGNED: KIM		SCALE:		KENNETH I. MULLEN, CONSULTING ENGINEERS, INC.		THE ADAMSON COMPANIES		SHEET	
FOR THE CONSULTANT:		DRAWN: TPC		AS SHOWN		ARCADIA		POINT DUME TERTIARY TREATMENT FACILITIES		6	
APPROVED:		CHECKED: KIM		DATE		(213) 445-2212 (213) 681-5428		PLANS AND SECTIONS		OF 12 SHEETS	
REV.	DATE	BY	ADD. NOTE, A.C. & ELEV.	DATE	DESCRIPTION						



SECTION 14  
SCALE: 1/2" = 1'-0"

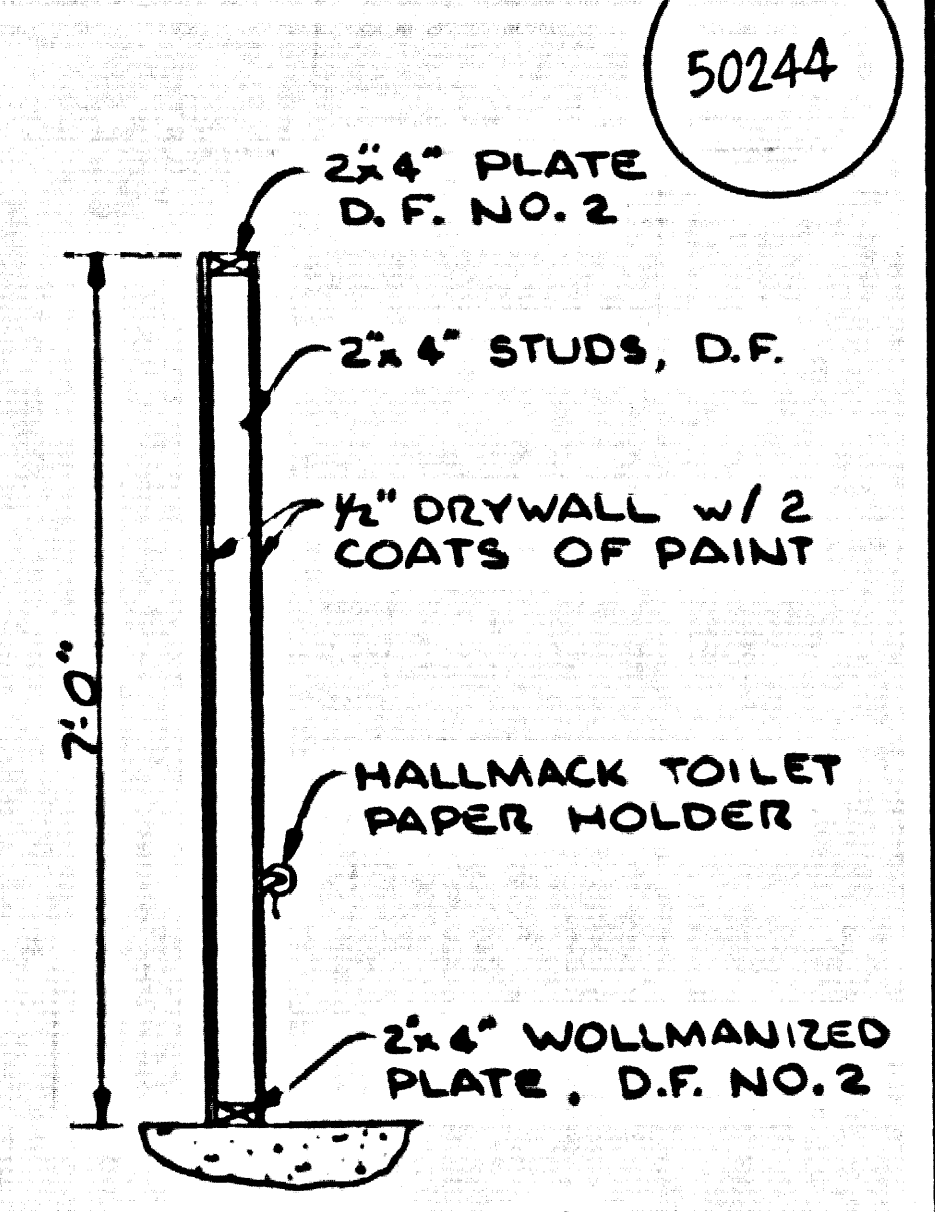


CABINET DETAILS 13  
SCALE: 1/2" = 1'-0"

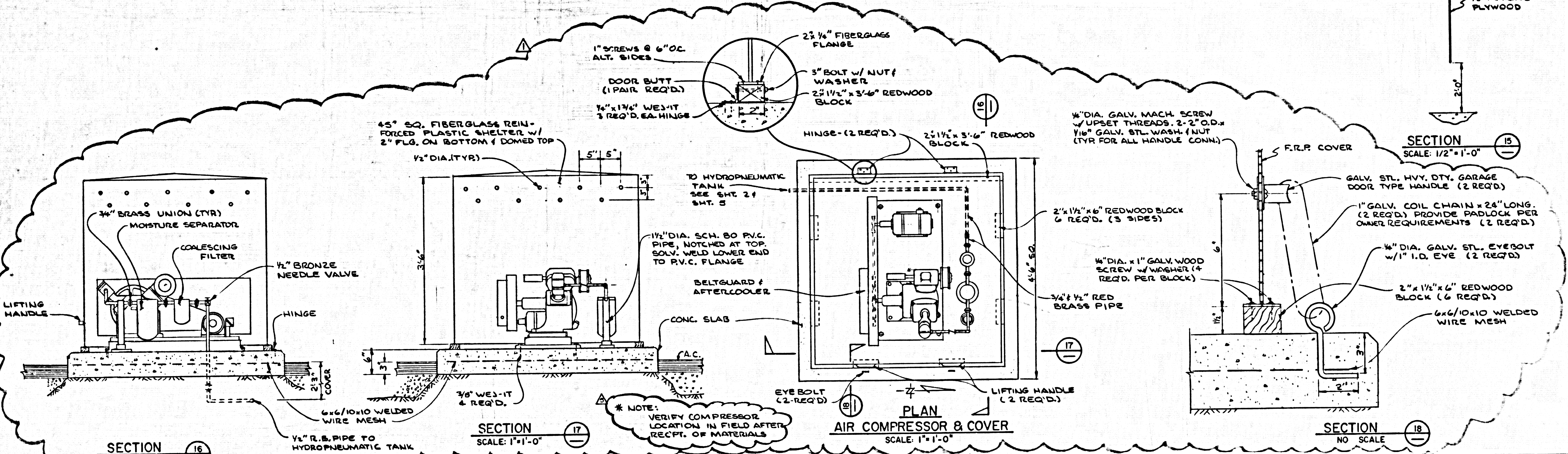


INSTRUMENT PANEL 12  
SCALE: 1/2" = 1'-0"

- 1 TURBIDMETER & INDICATOR  
HACH CAT. NO. 1720 A
- 2 RESIDUAL CHLORINE ANALYZER  
HACH CAT. NO. 40100-03
- 3 RECORDER (TURBIDITY)  
HACH CAT. NO. 61493-00 w/ALARM
- 4 RECORDER (RESIDUAL CHLORINE)  
HACH CAT. NO. 61493-00 w/o ALARM
- 5 SAMPLE PUMP  
HACH CAT. NO. 15973-00



SECTION 11  
SCALE: 1/2" = 1'-0"



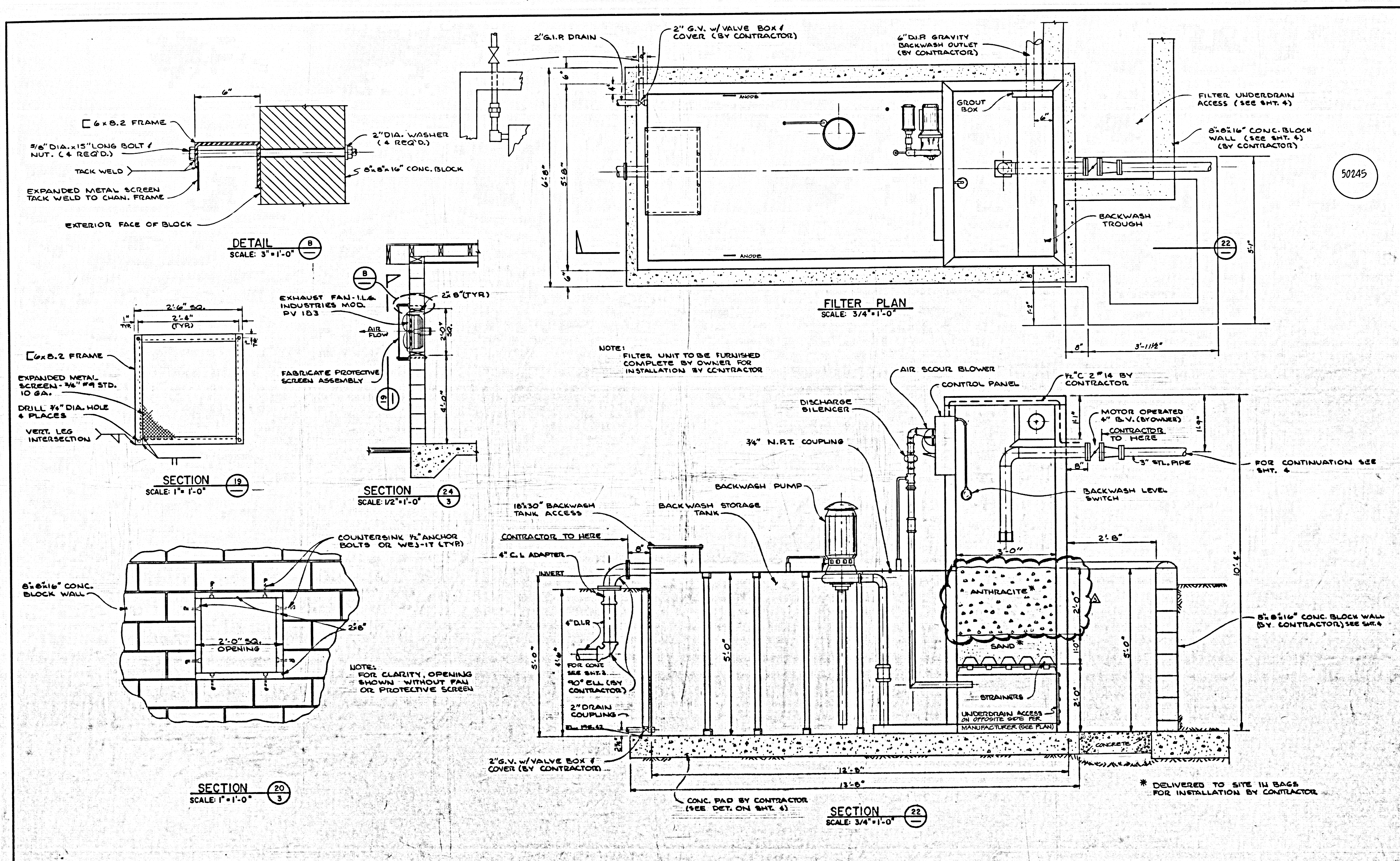
SECTION 16  
SCALE: 1" = 1'-0"

SECTION 17  
SCALE: 1" = 1'-0"

PLAN  
AIR COMPRESSOR & COVER  
SCALE: 1" = 1'-0"

SECTION 18  
NO SCALE

SUBMITTED: <i>Kenneth I. Mullen</i>		DESIGNED: KIM	SCALE: AS SHOWN	KENNETH I. MULLEN, CONSULTING ENGINEERS, INC.		THE ADAMSON COMPANIES		SHEET
FOR THE CONSULTANT APPROVED:		DRAWN: TPC	DATE: 7/1/62	ARCADIA		POINT DUME TERTIARY TREATMENT FACILITIES		7
REVISIONS:		CHECKED: KIM	DATE:	(213) 445-2212 (213) 681-5428		AIR COMPRESSOR & MECH. EQUIP. ROOM DET. & SECTIONS		OF 12 SHEETS
REV.	DATE	BY	DESCRIPTION					



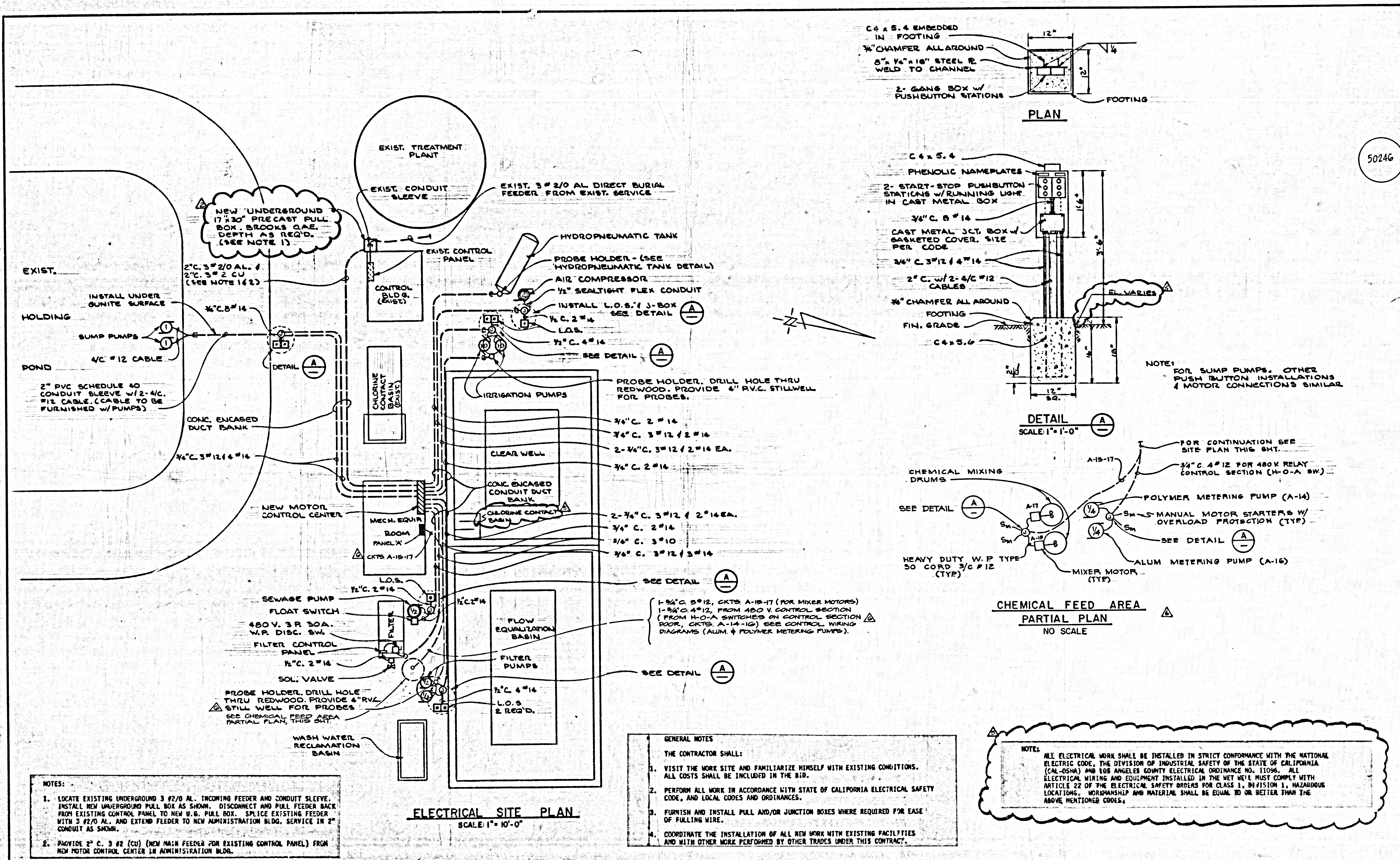
50245

NOTE: FILTER UNIT TO BE FURNISHED COMPLETE BY OWNER FOR INSTALLATION BY CONTRACTOR

\* DELIVERED TO SITE IN BAGS FOR INSTALLATION BY CONTRACTOR

SUBMITTED: <i>Kenneth L. Mullen</i>		DESIGNED: KIM	SCALE: AS SHOWN	KENNETH L. MULLEN, CONSULTING ENGINEERS, INC. ARCADIA 213 445-2212 (213) 881-5428	THE ADAMSON COMPANIES POINT DUME TERTIARY TREATMENT FACILITIES FILTER PLAN AND SECTION, EXHAUST FAN DET. & SECTIONS	SHEET 8 OF 12 SHEETS
FOR THE CONSULTANT APPROVED:		DRAWN: TPC	CHECKED: KIM			
REV.	DATE	BY	DESCRIPTION	DATE		
			CHANGED ANTHRACITE LEVEL			





50246

**NOTES:**

1. LOCATE EXISTING UNDERGROUND 3 #2/0 AL. INCOMING FEEDER AND CONDUIT SLEEVE. INSTALL NEW UNDERGROUND PULL BOX AS SHOWN. DISCONNECT AND PULL FEEDER BACK FROM EXISTING CONTROL PANEL TO NEW U.G. PULL BOX. SPLICE EXISTING FEEDER WITH 3 #2/0 AL. AND EXTEND FEEDER TO NEW ADMINISTRATION BLDG. SERVICE IN 2" CONDUIT AS SHOWN.
2. PROVIDE 2" C. 3 #2 (CU) (NEW MAIN FEEDER FOR EXISTING CONTROL PANEL) FROM NEW MOTOR CONTROL CENTER IN ADMINISTRATION BLDG.

**GENERAL NOTES**

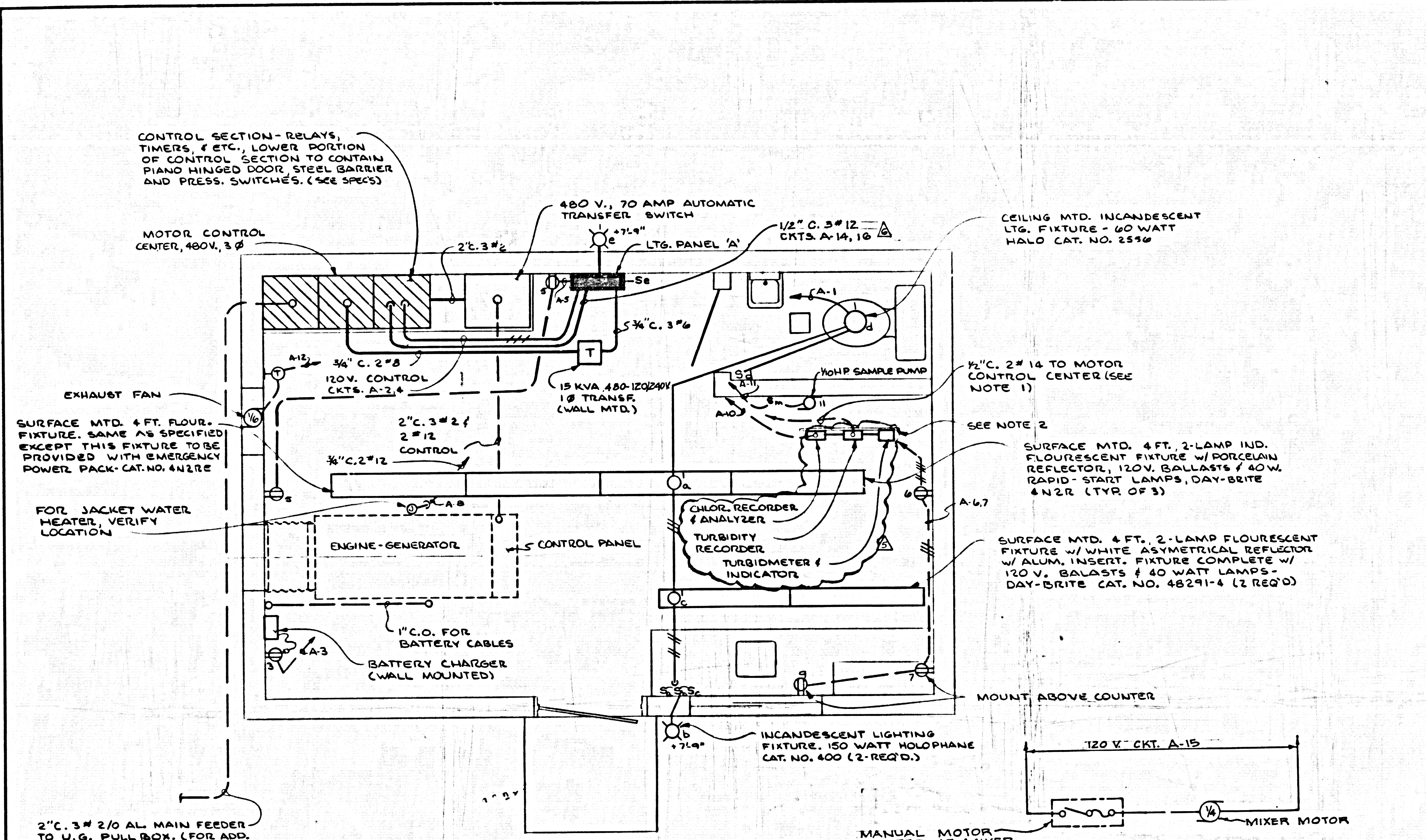
THE CONTRACTOR SHALL:

1. VISIT THE WORK SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. ALL COSTS SHALL BE INCLUDED IN THE BID.
2. PERFORM ALL WORK IN ACCORDANCE WITH STATE OF CALIFORNIA ELECTRICAL SAFETY CODE, AND LOCAL CODES AND ORDINANCES.
3. FURNISH AND INSTALL PULL AND/OR JUNCTION BOXES WHERE REQUIRED FOR EASE OF PULLING WIRE.
4. COORDINATE THE INSTALLATION OF ALL NEW WORK WITH EXISTING FACILITIES AND WITH OTHER WORK PERFORMED BY OTHER TRADES UNDER THIS CONTRACT.

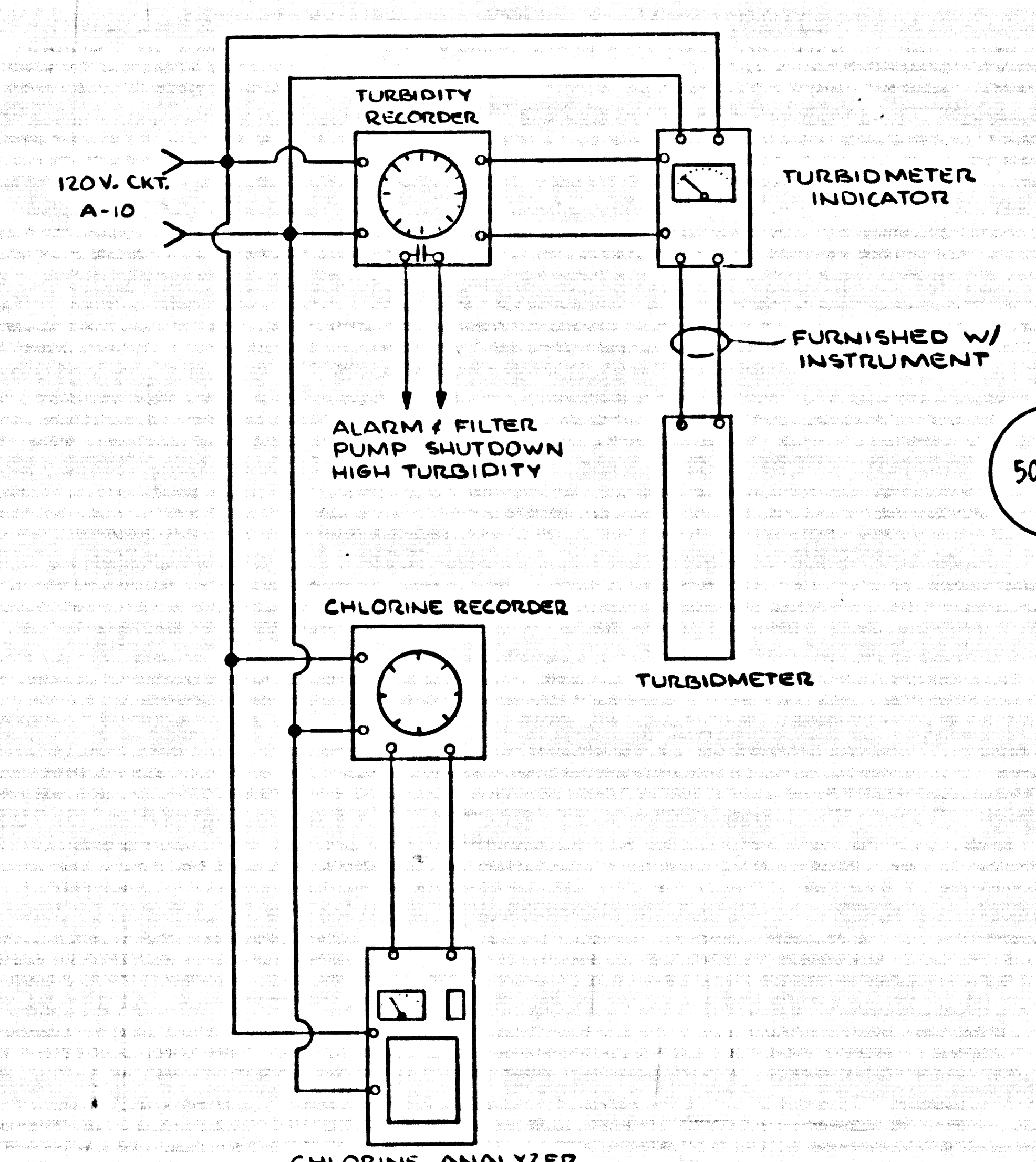
**NOTE:**

ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE NATIONAL ELECTRIC CODE, THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA (CAL-OSHA) AND LOS ANGELES COUNTY ELECTRICAL ORDINANCE NO. 11096. ALL ELECTRICAL WIRING AND EQUIPMENT INSTALLED IN THE NET HERE MUST COMPLY WITH ARTICLE 22 OF THE ELECTRICAL SAFETY ORDERS FOR CLASS 1, DIVISION 1, HAZARDOUS LOCATIONS. WORKMANSHIP AND MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE ABOVE MENTIONED CODES.

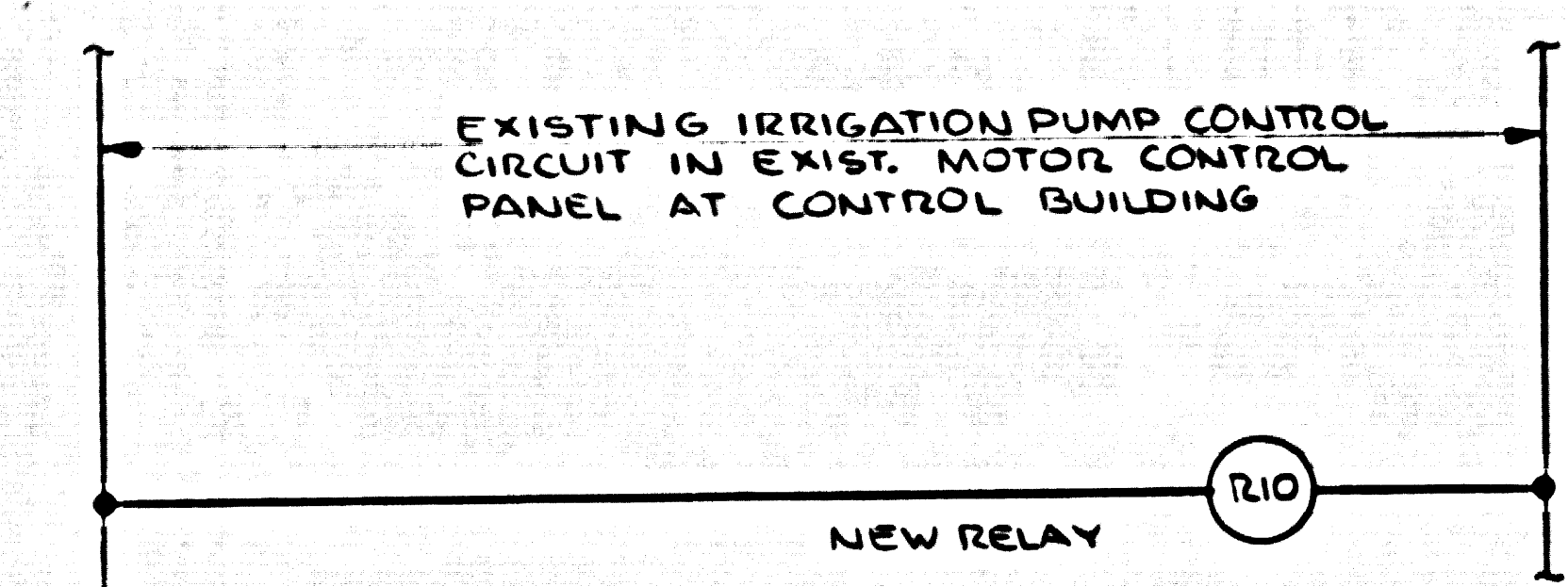
SUBMITTED		DESIGNED: ARR	SCALE: AS SHOWN	KENNETH L. MULLEN, CONSULTING ENGINEERS, INC.		THE ADAMSON COMPANIES		SHEET <b>9</b> OF 12 SHEETS
FOR THE CONSULTANT APPROVED		DRAWN: TPC	DATE: 9/2/82	ARCADIA (213) 445-2212 (213) 681-5428		POINT DUME TERTIARY TREATMENT FACILITIES		
REV.	DATE	BY	DESCRIPTION	CHECKED: KIM	ELECTRICAL SITE PLAN & DETAILS			



MECHANICAL EQUIP ROOM LIGHTING & POWER PLAN

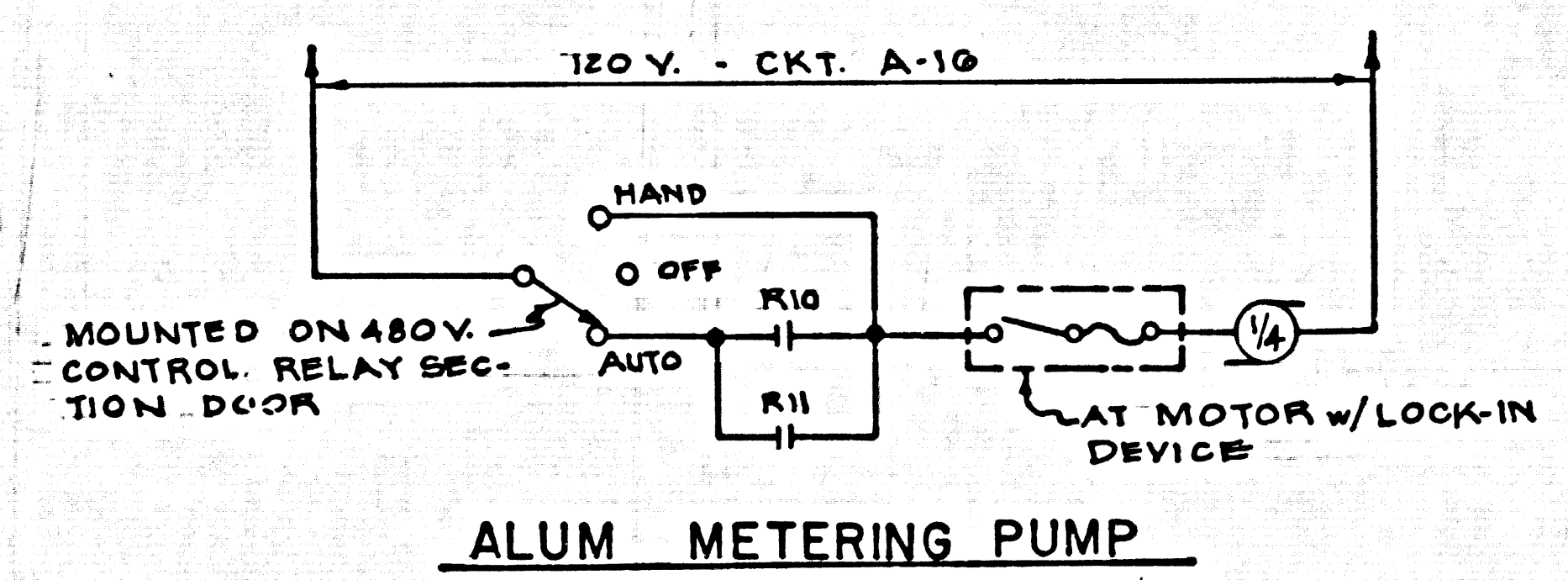


INSTRUMENT WIRING BLOCK DIAGRAM

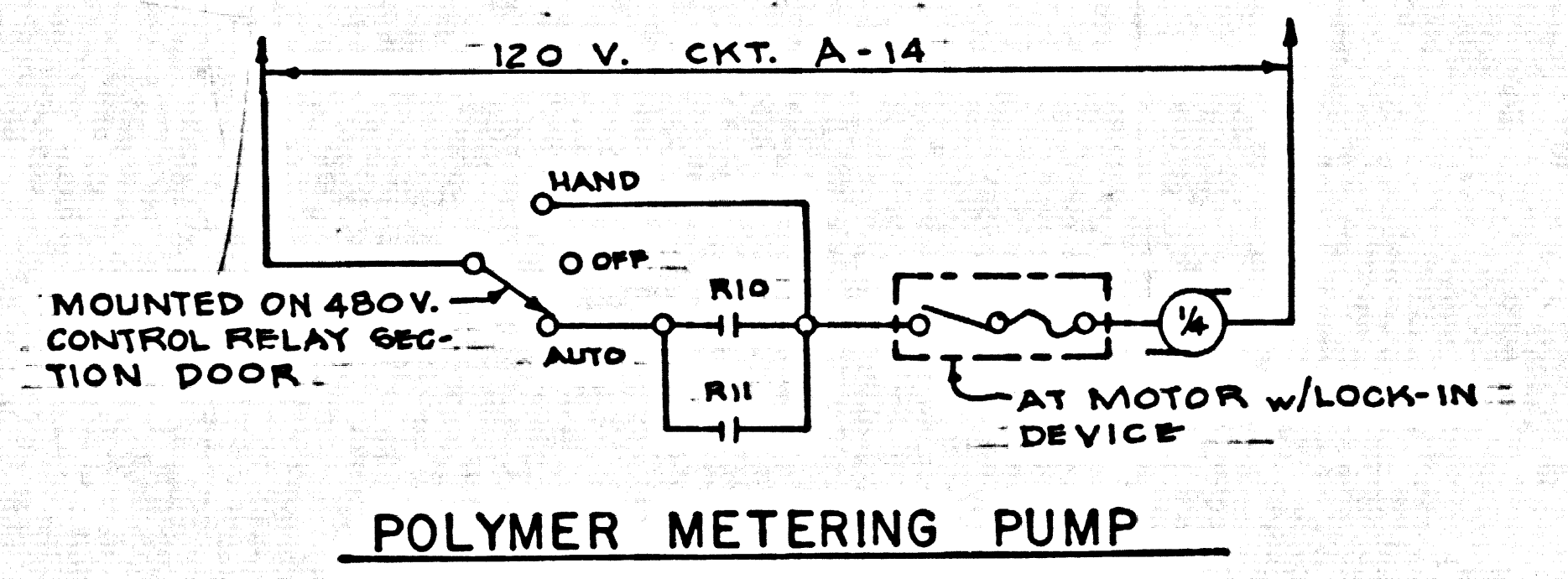


MODIFICATION TO EXIST. IRRIGATION PUMP CONTROLS

PANEL "A" 120/240V, 1Ø				REMARKS			WATTS			
NO.	CIR. BRKR.	OUTLETS	REMARKS	L-1	L-2	L-3				
1	20	9	INT. & EXT. LIGHTS				1140			
2			CONTROLS				200			
3			BATTERY CHARGER				300			
4			CONV. RECEPTACLES				200			
5			BLDG. RECEPTACLES				360			
6			BLDG. RECEPTACLES				180			
7			CONV. RECEPTACLES				500			
8			ENGINE JACKET MTR.				1000			
9			CONV. RECEPTACLES				180			
10			INSTRUMENTS				180			
11			SAMPLE PUMP				180			
12			EXHAUST FAN				400			
13			SPARE							
14			POLYMER METERING PUMP				700			
15			ALUM. MIXER MOTOR				700			
16			ALUM. METERING PUMP				700			
17			POLYMER MIXER MOTOR				700			
18			# SPARES							
TOTAL WATTS 7620				TOTAL E. W. 7.6			3640 3980			
32 AMPERS @ 120/240 VOLTS				1 PHASE - 60 CYCLES			3 W. S. B.			
3/4" COND. W/3 #6				CABLES - LOC. TOP						
80 AMP BRKR.				MOUNT SURFACE			(24 CKT. PANEL)			



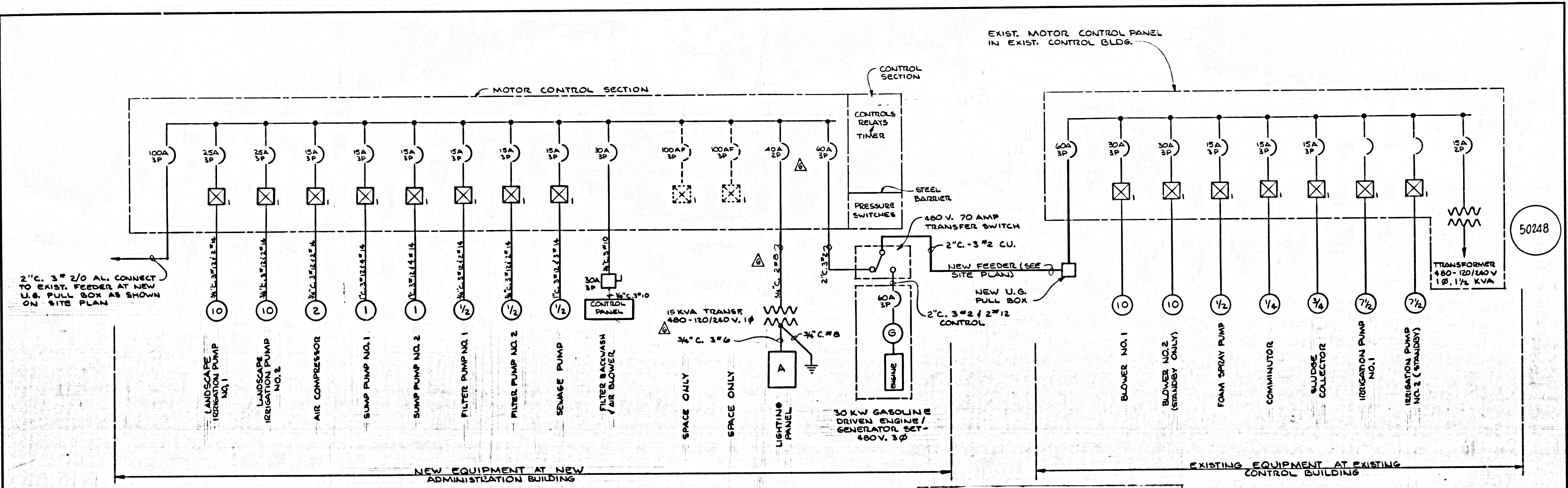
ALUM. METERING PUMP



POLYMER METERING PUMP

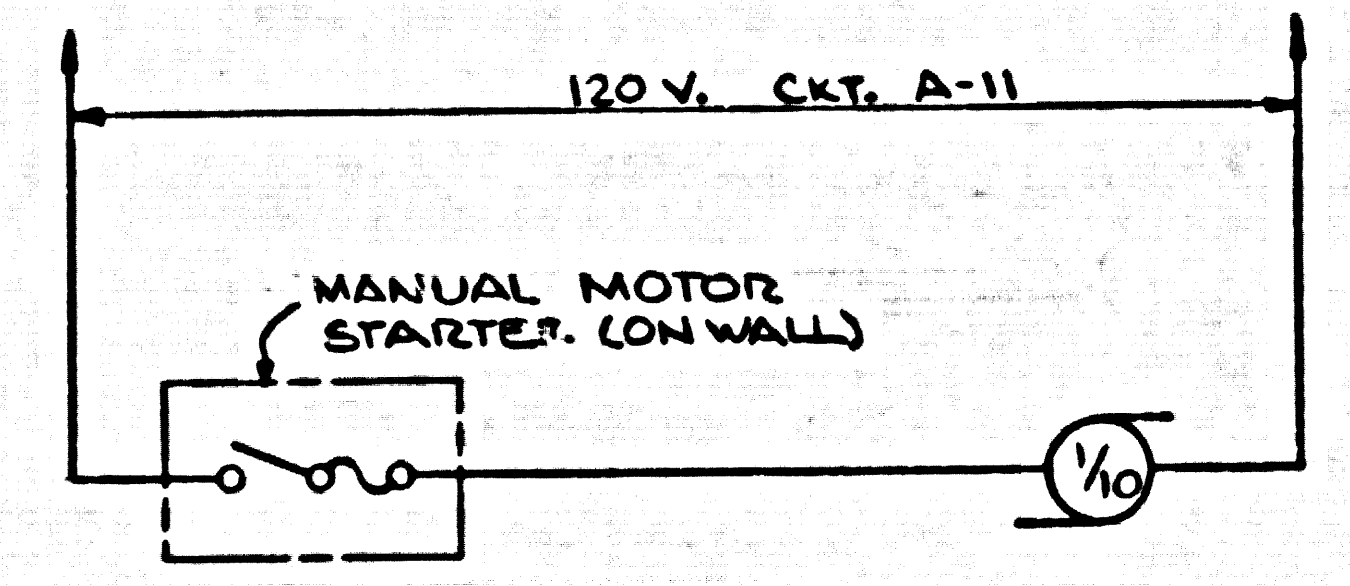
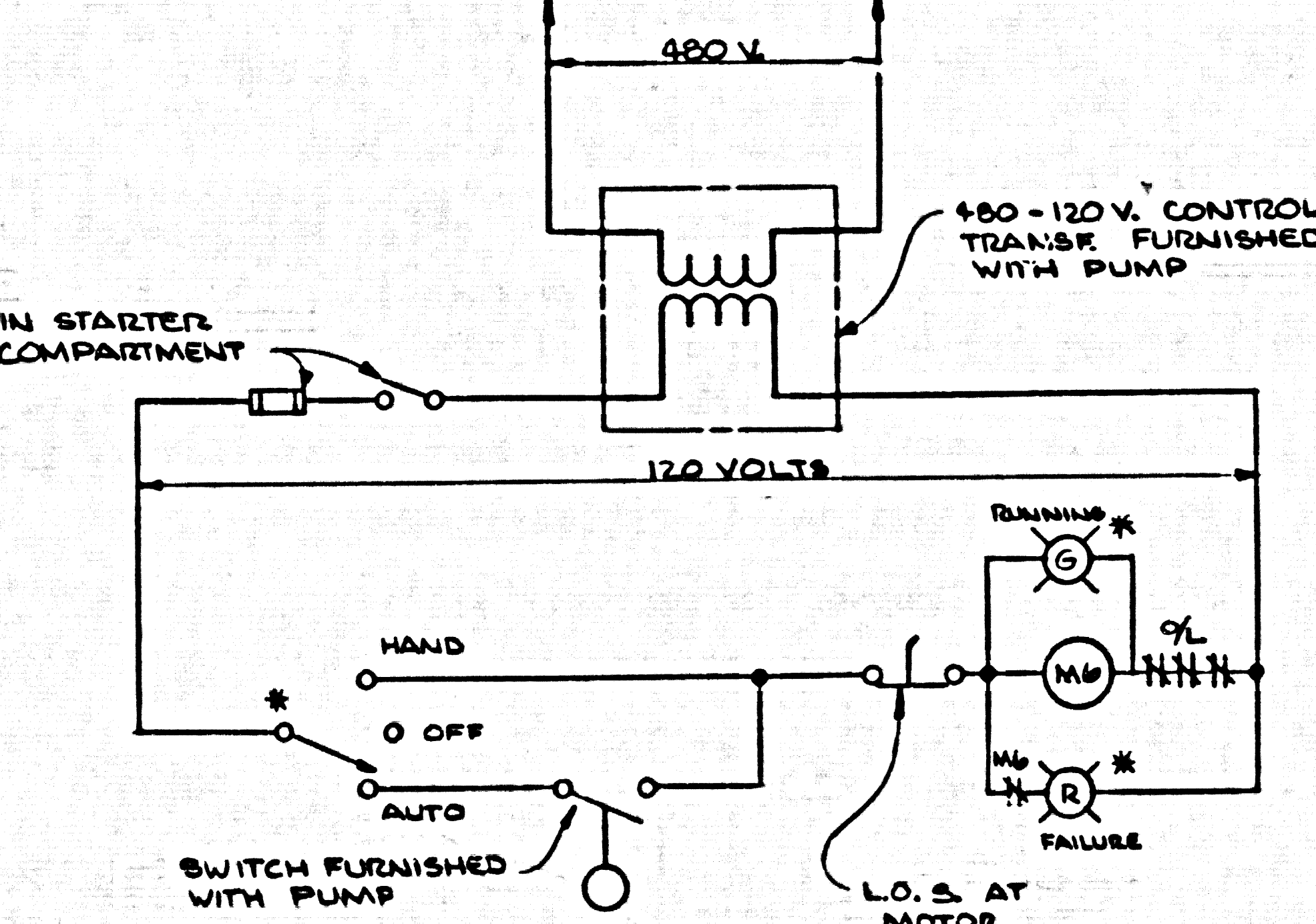
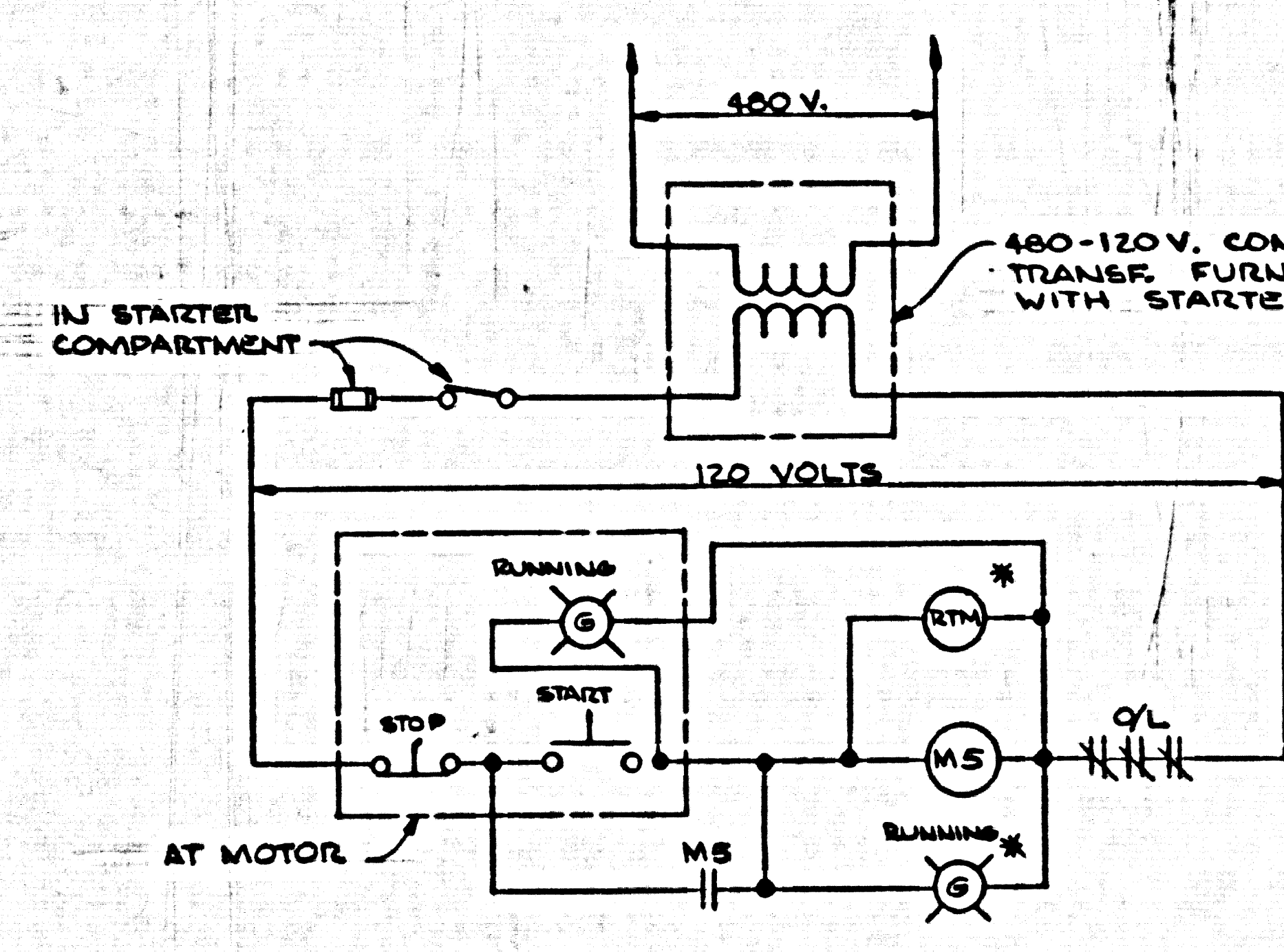
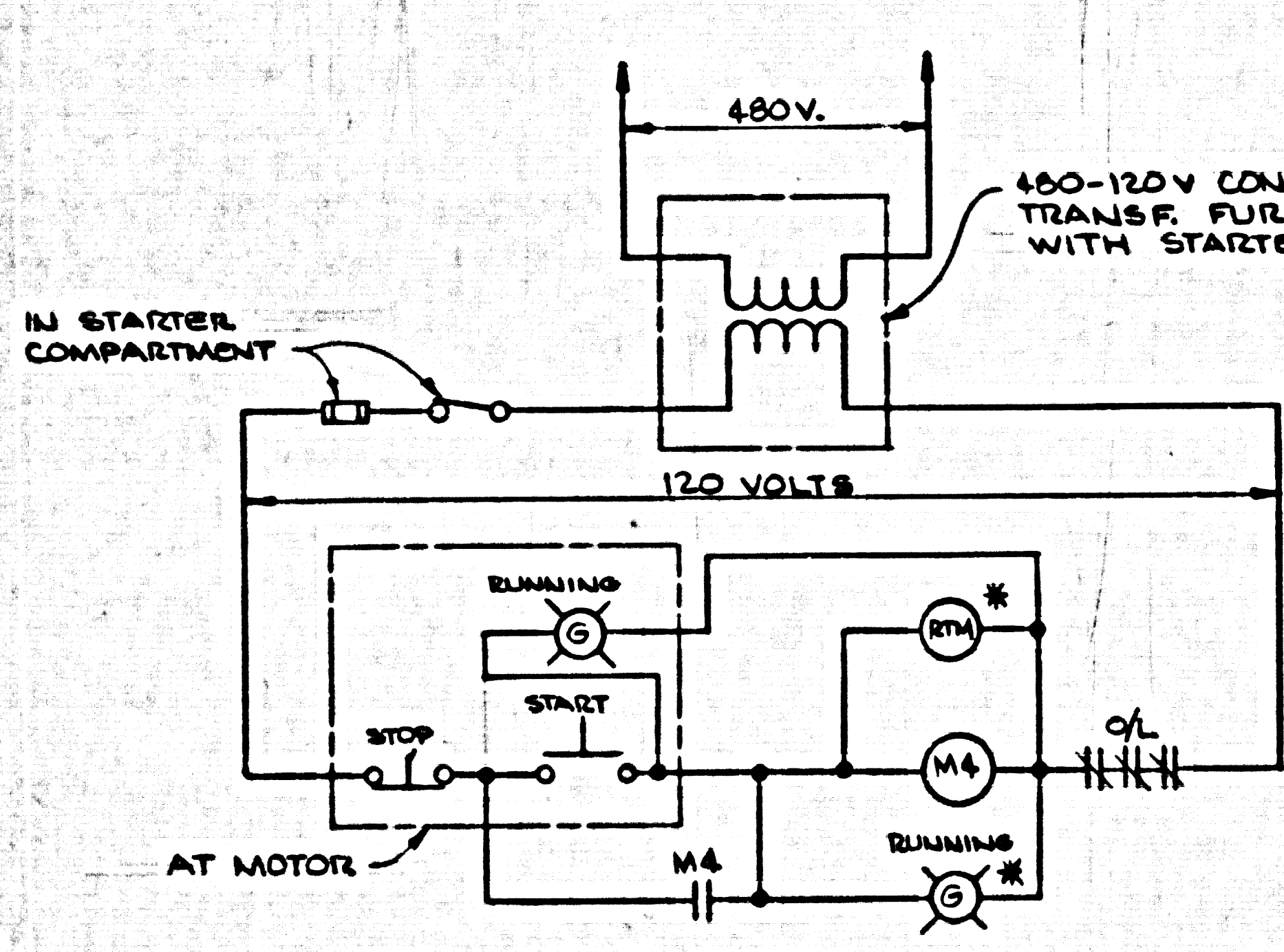
SUBMITTED: <i>Kenneth I. Mullen</i> FOR THE CONSULTANT APPROVED:	9692 R.C.E. DATE: 9/6/68	DESIGNED: ARB DRAWN: TPC CHECKED: KIM	SCALE: NONE	KENNETH I. MULLEN, CONSULTING ENGINEERS, INC. ARCADIA (213) 445-2712 (213) 681-5428	THE ADAMSON COMPANIES POINT DUME' TERTIARY TREATMENT FACILITIES MECH EQUIP ROOM LIGHTING & POWER PLAN, INSTRUMENT WIRING BLK. DIAG. & IRRIG. PUMP CONTROLS MODIFICATION	SHEET <b>10</b> OF 12 SHEETS
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50247



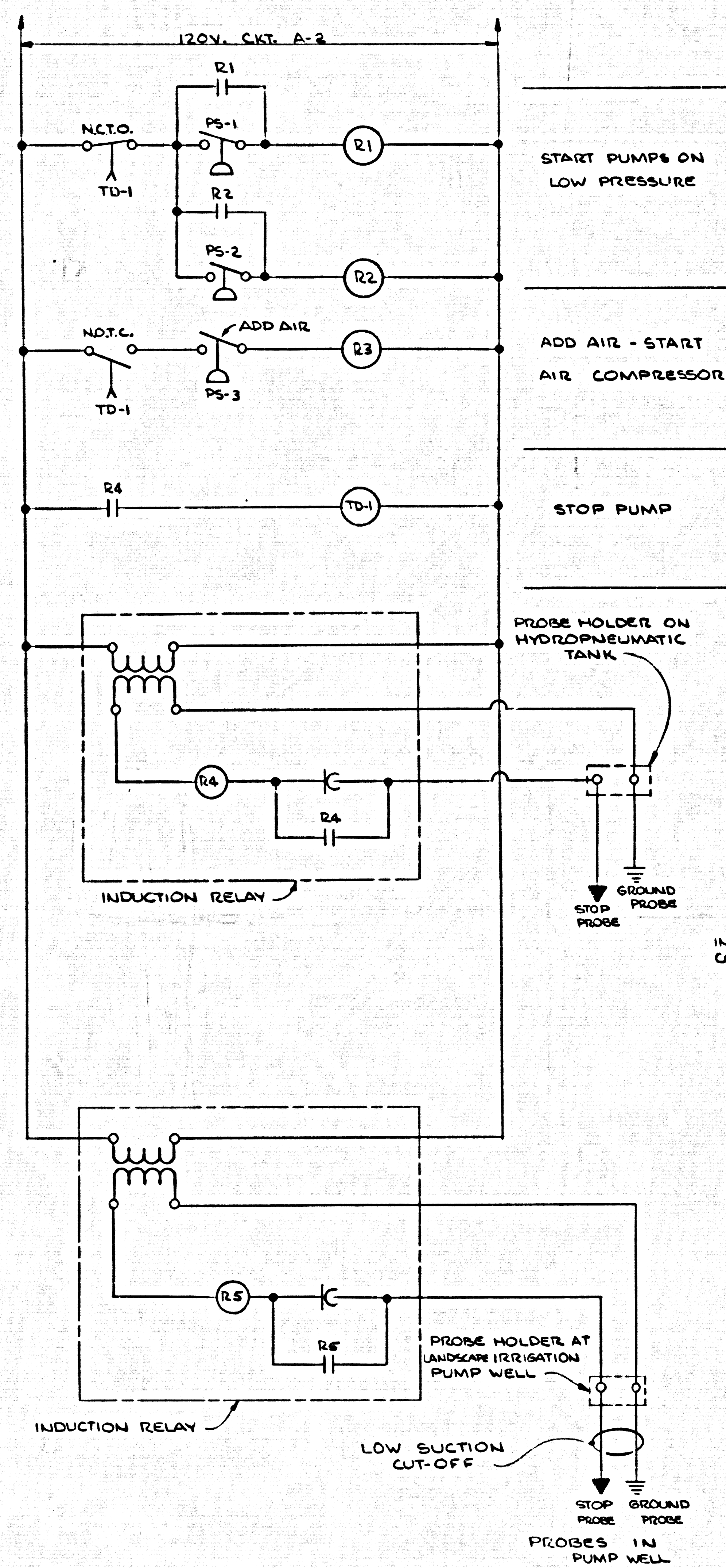
SINGLE LINE DIAGRAM

- SINGLE LINE DIAGRAM NOTES
1. REMOVE EXISTING 100 AMP, 3P, 480V. CIRCUIT BREAKER. INSTALL NEW 60 AMP, 480V, 3P, BRKR. (TO MATCH EXISTING)
  2. INSTALL A 120V. RELAY WITH 2- N.O. 10AMP CONTACTS. CONNECT TO IRRIGATION PUMP 1&2 120V. CONTROLS. (LOCKS OUT PUMPS DURING POWER OUTAGE) SEE CONTROL WIRING DIAGRAMS

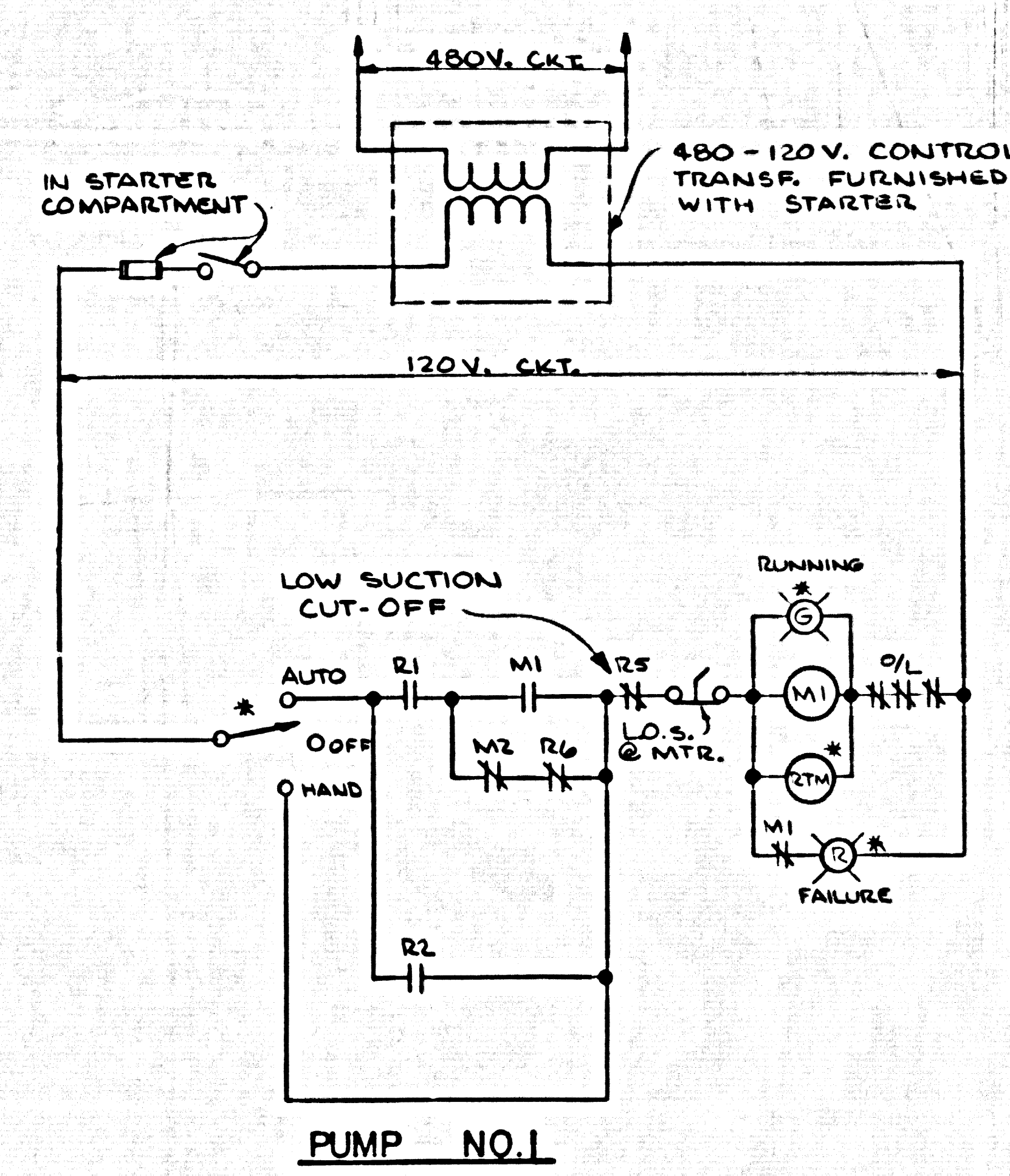


\* NOTE: ITEMS MARKED WITH AN ASTERISK (\*) ARE TO BE MOUNTED ON STARTER COVER.

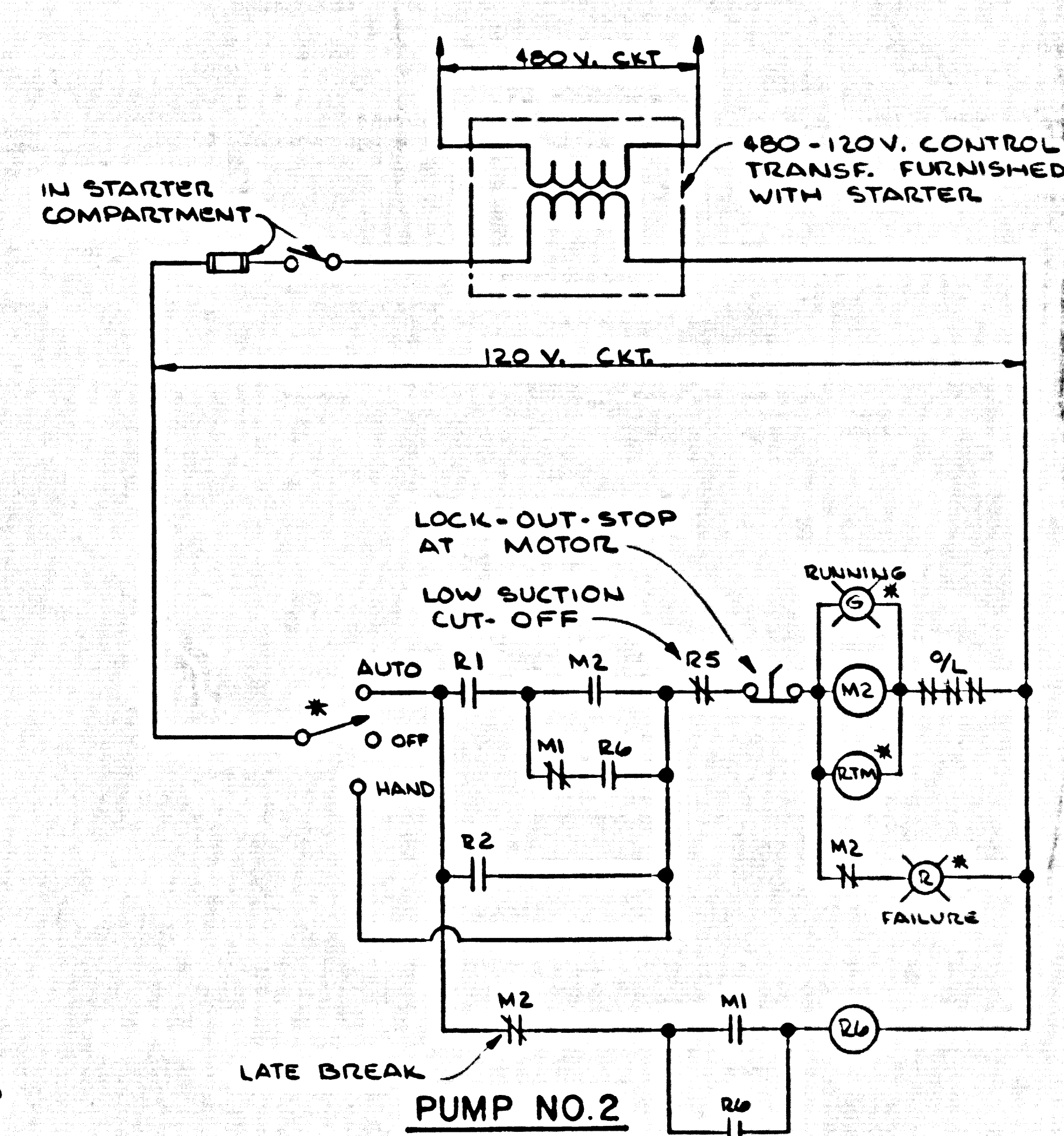
SUBMITTED: <i>Kenneth Mullen</i>		DESIGNED: ARB	SCALE: NONE	KENNETH I. MULLEN, CONSULTING ENGINEERS, INC.		THE ADAMSON COMPANIES		SHEET 11
FOR THE CONSULTANT APPROVED:		DATE: 9/1/68	DRAWN: TPC	ARCADIA		POINT DUME' TERTIARY TREATMENT FACILITIES		
CHANGED SINGLE LINE DIAGRAM		DATE:	CHECKED: KIM	213 445-2212 (213) 681-5428		SINGLE LINE DIAGRAM, SUMP PUMP NO'S 1&2, SEWAGE PUMP, SAMPLE PUMP		OF 12 SHEETS



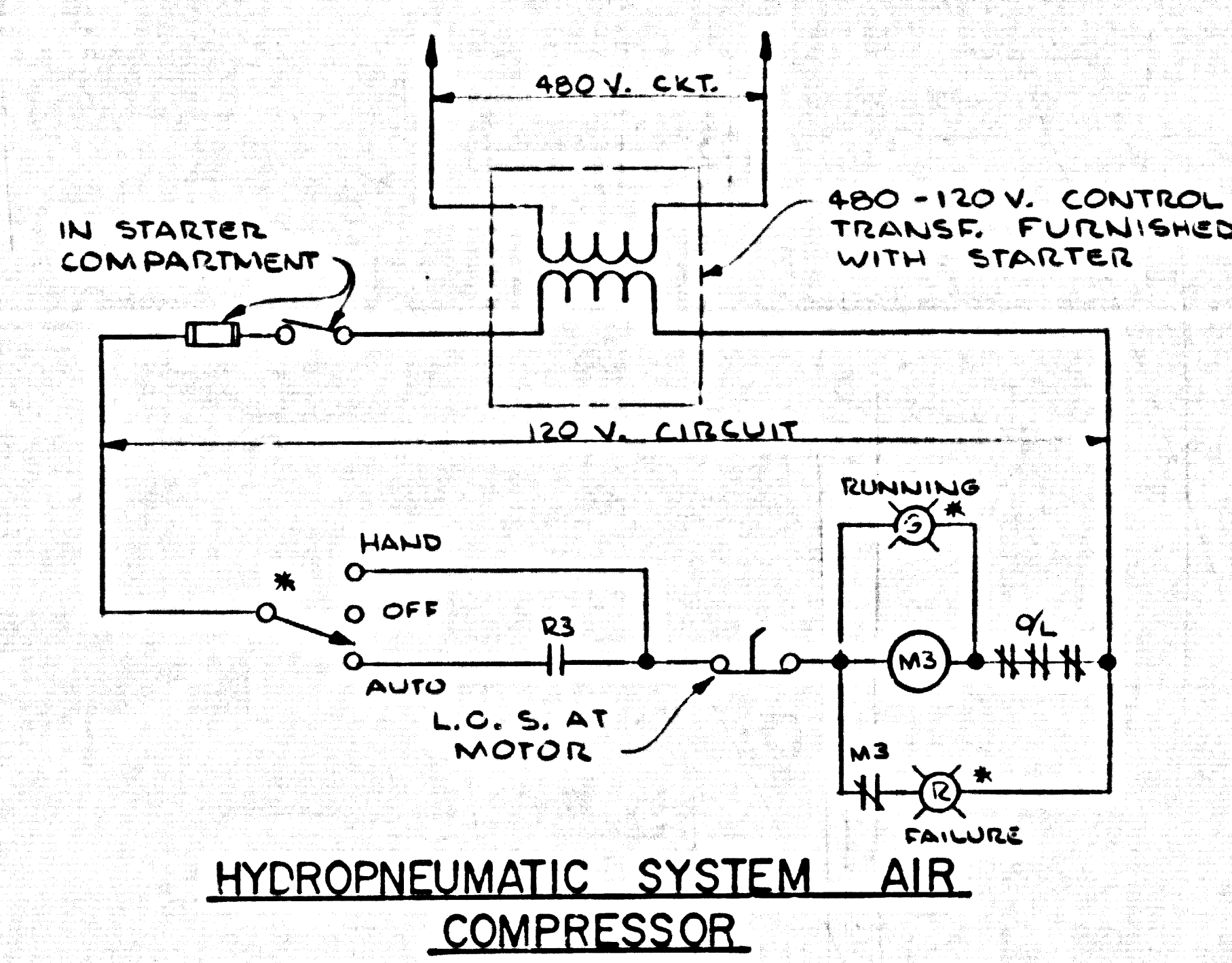
**HYDROPNEUMATIC SYSTEM PRESSURE AND LEVEL CONTROLS**



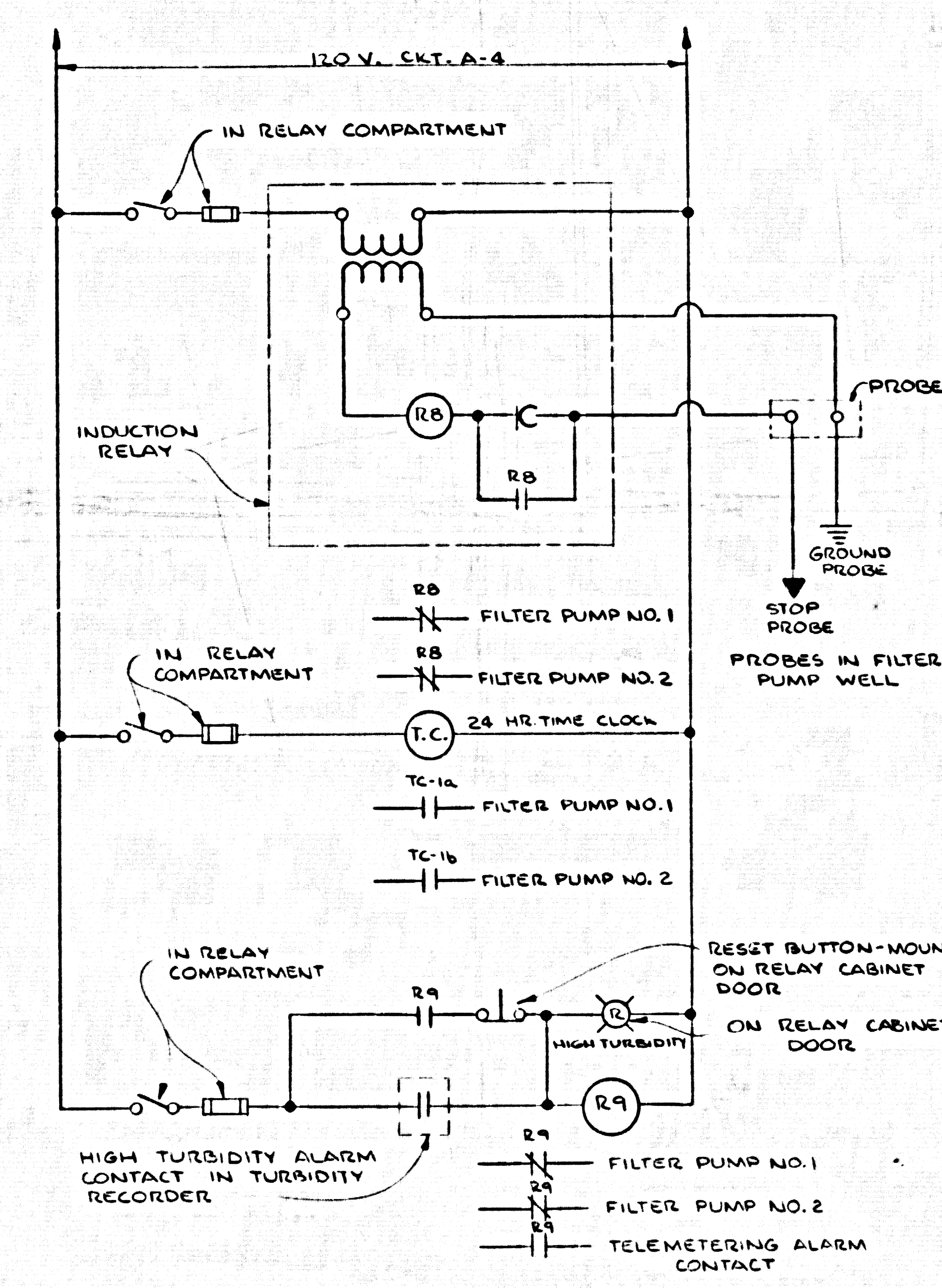
**HYDROPNEUMATIC SYSTEM IRRIGATION PUMP CONTROLS (WITH ELECTRICAL ALTERNATION)**



**HYDROPNEUMATIC SYSTEM IRRIGATION PUMP CONTROLS (WITH ELECTRICAL ALTERNATION)**

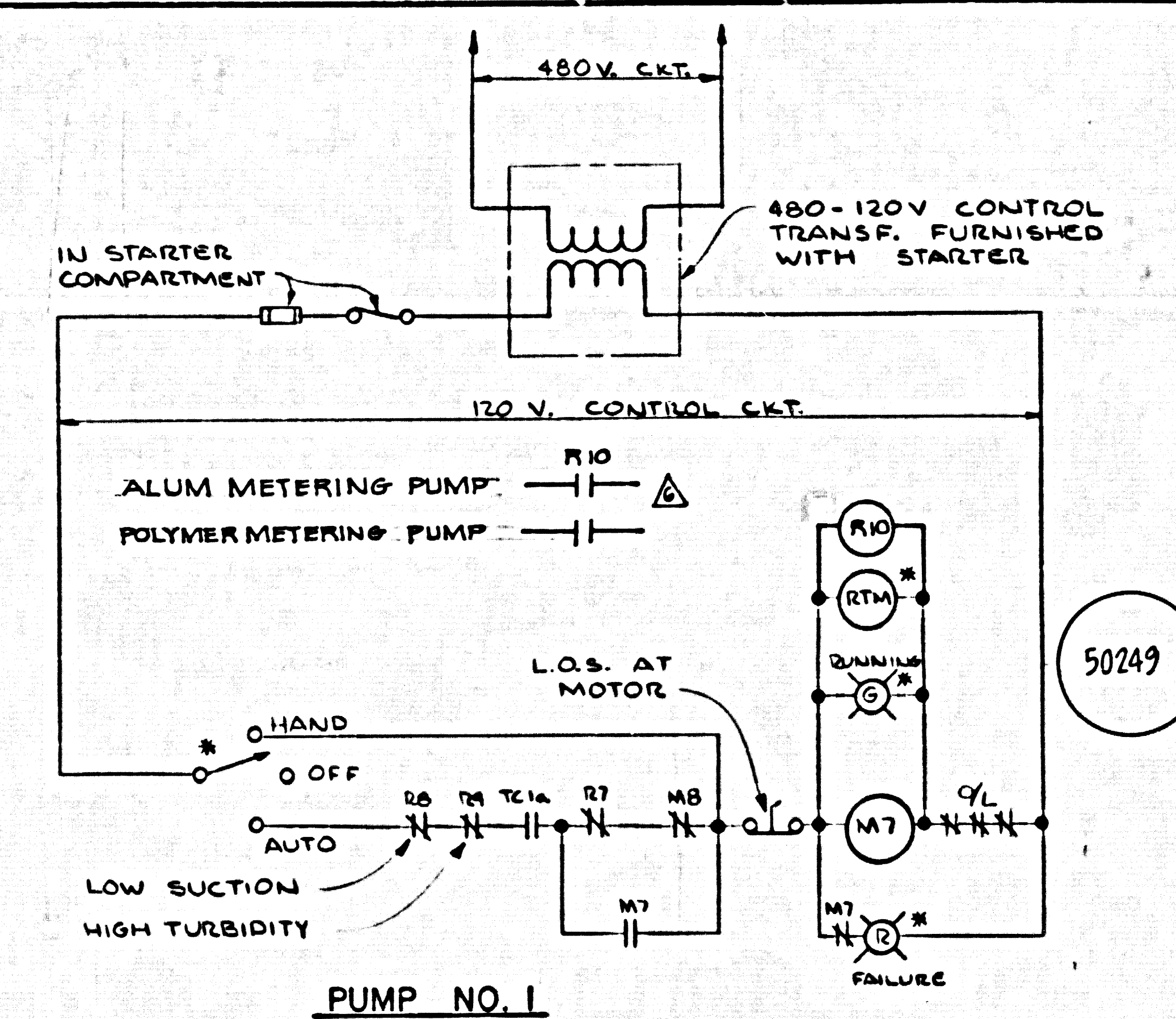


**HYDROPNEUMATIC SYSTEM AIR COMPRESSOR**

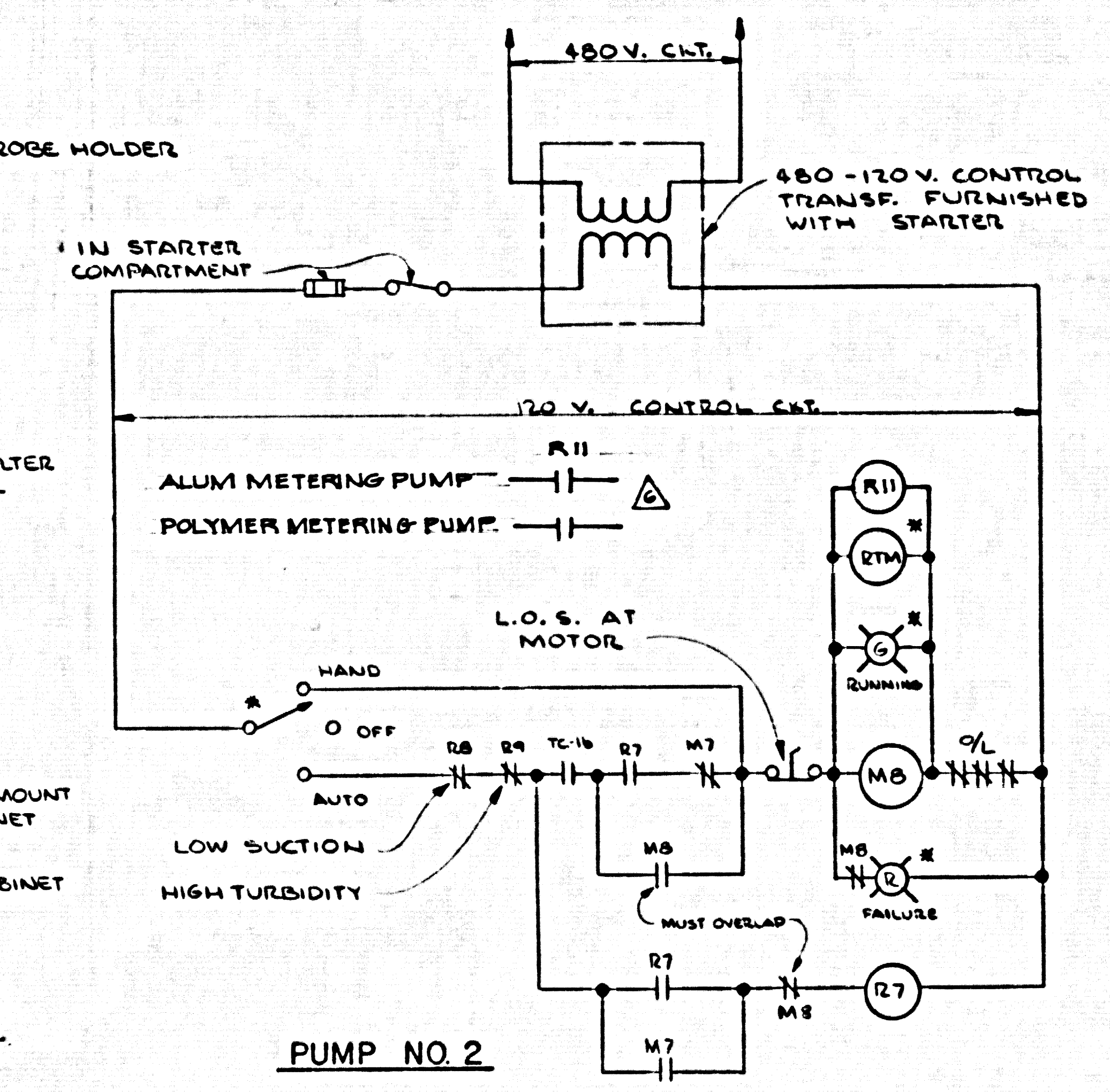


**FILTER PUMPS SHUT DOWN CONTROLS**

\* NOTE: ITEMS MARKED WITH AN ASTERISK (\*) ARE TO BE MOUNTED ON STARTER COVER



**PUMP NO. 1**



**PUMP NO. 2**

**FILTER PUMP CONTROLS (WITH ELECTRICAL ALTERNATION)**

REVISION	DATE	BY	DESCRIPTION
1		TPC	CHANGED FILTER PUMP CONTROLS
2		TPC	CHANGED FILTER PUMP CONTROLS

SUBMITTED	DESIGNED	SCALE
<i>Kenneth I. Mullen</i>	ARB	NONE
FOR THE CONSULTANT APPROVED	DRAWN	
	TPC	
	CHECKED	
	KIM	

KENNETH I. MULLEN, CONSULTING ENGINEERS, INC.	THE ADAMSON COMPANIES
ARCADIA	POINT DUME' TERTIARY TREATMENT FACILITIES
(213) 445-2212 (213) 681-5428	CONTROL WIRING DIAGRAMS