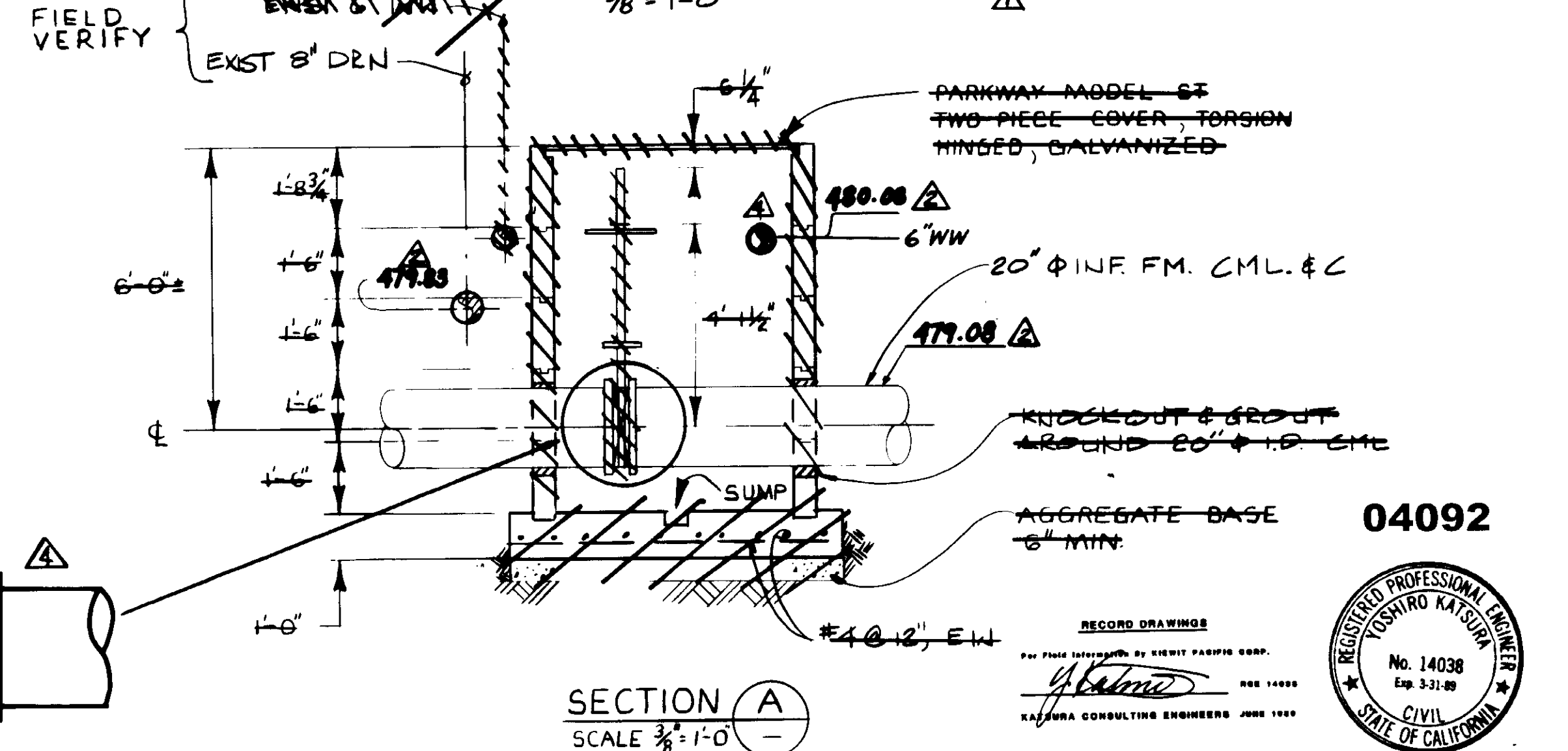
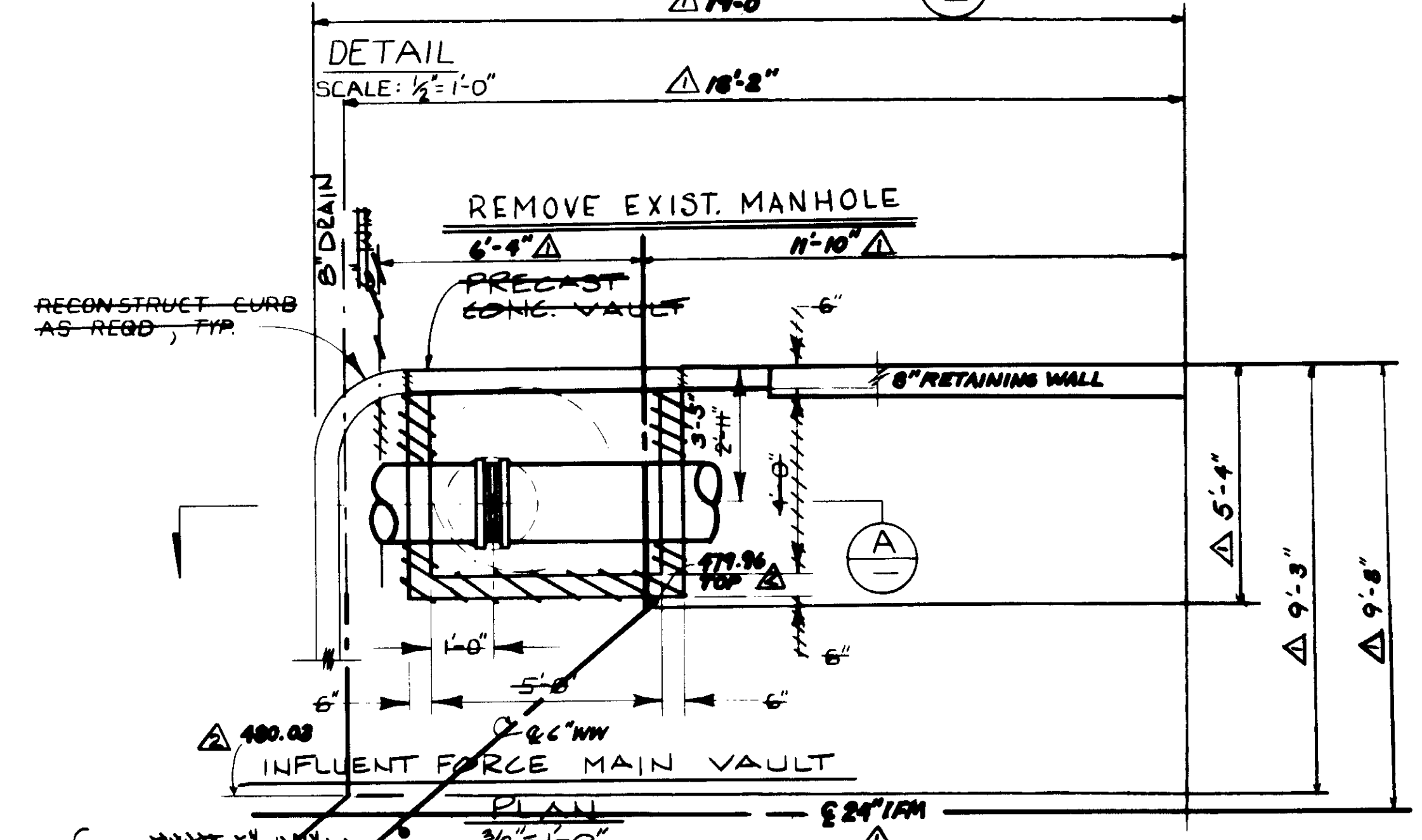
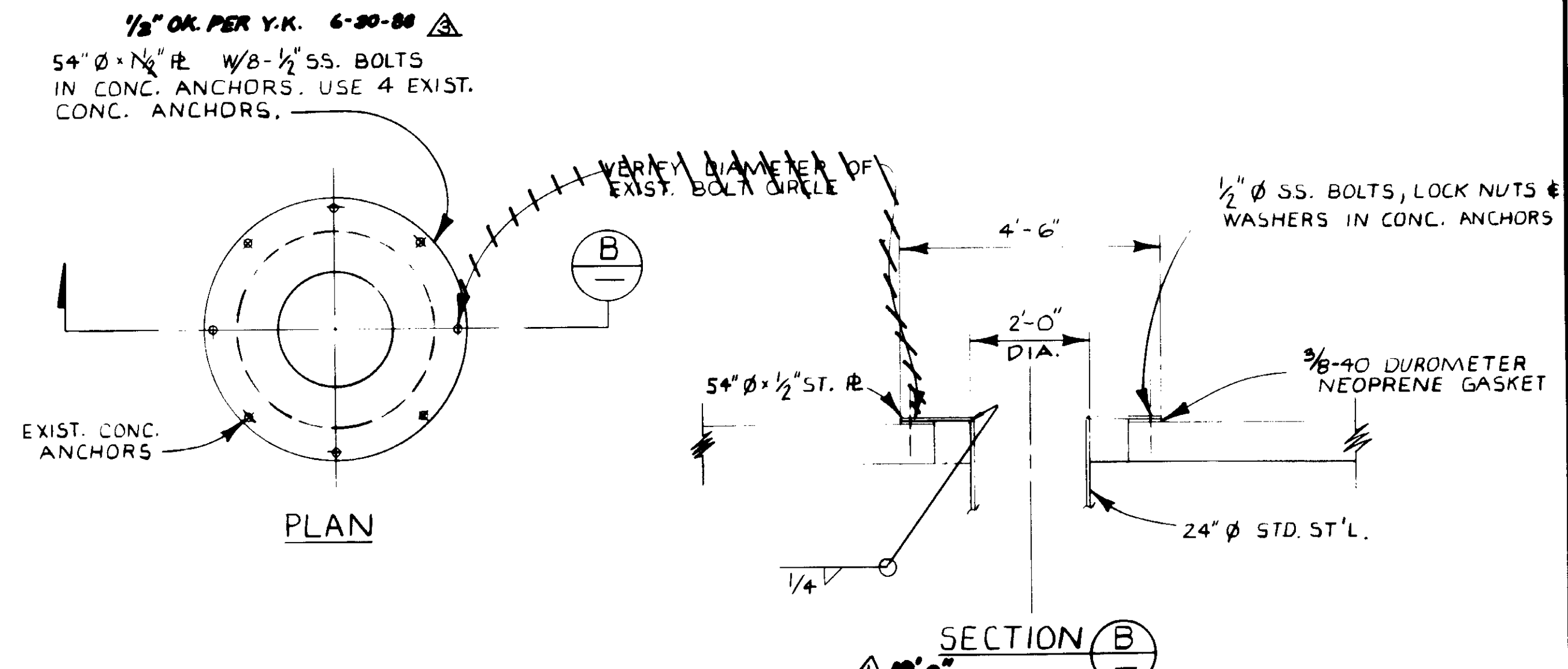


SECTION C  
1/2" = 1'-0"



SECTION A  
SCALE: 3/8\"/>

REV	DATE	BY	DESCRIPTION
4-N-87	A.B.	REV. PER K.P.C.	
4-N-87	A.B.	REV. PER K.P.C.	
4-N-87	A.B.	REV. PER K.P.C.	
4-N-87	A.B.	REV. PER K.P.C.	

SCALE:	AS NOTED
DESIGNED	YK/RK
DRAWN	RK/CL
CHECKED	YK

SUBMITTED	<i>[Signature]</i>	8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO.	DATE
	813	
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

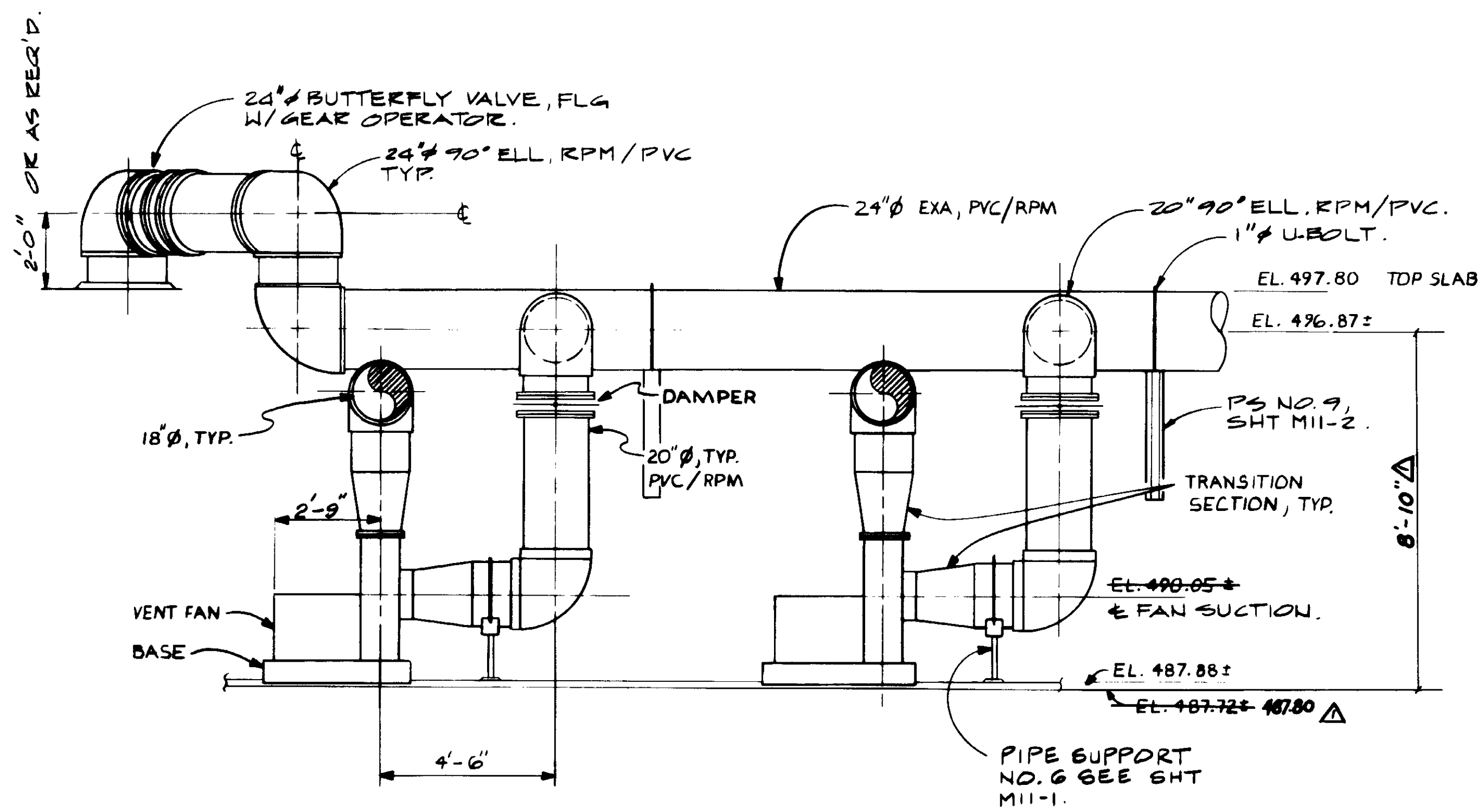
**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 INFLUENT FORCE MAIN DETAILS

SHEET  
M2-7

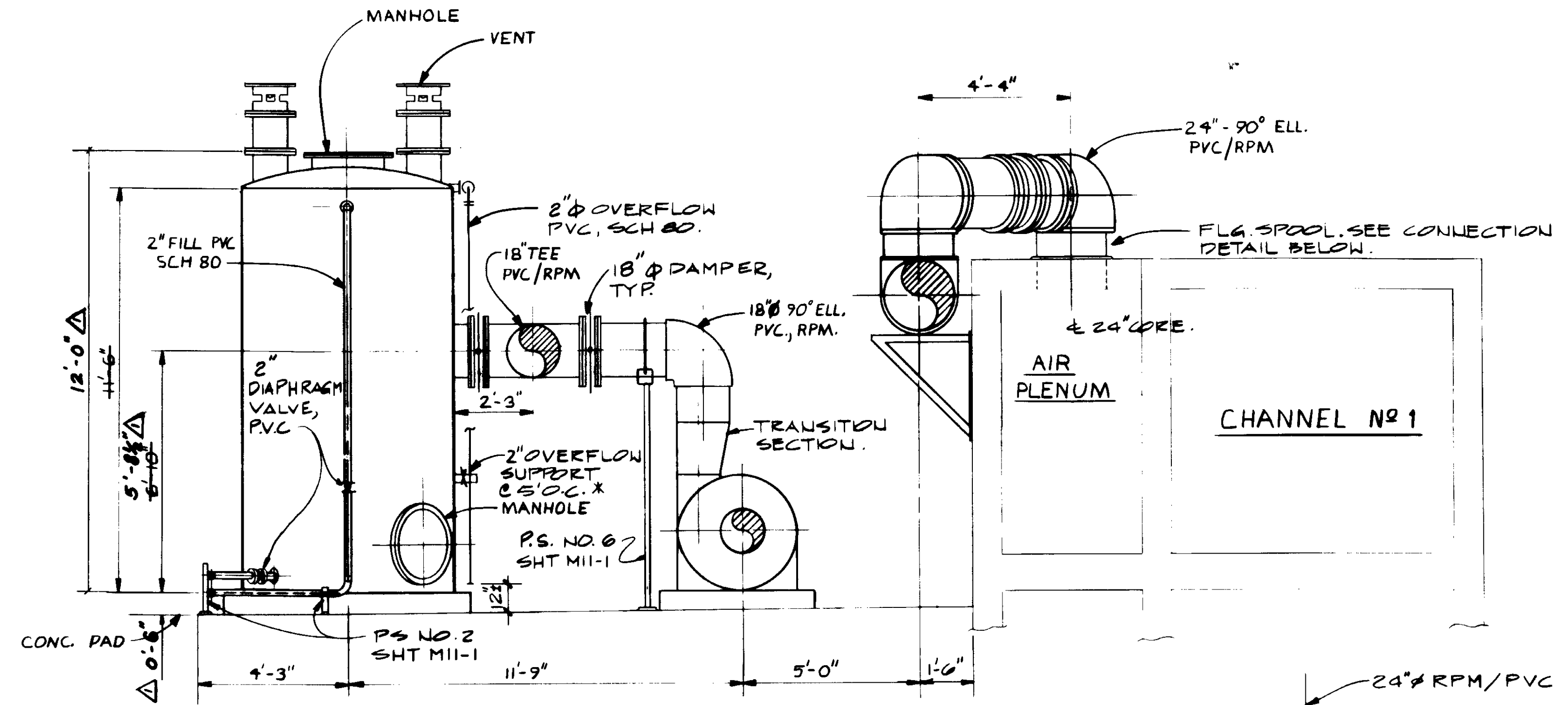
04092



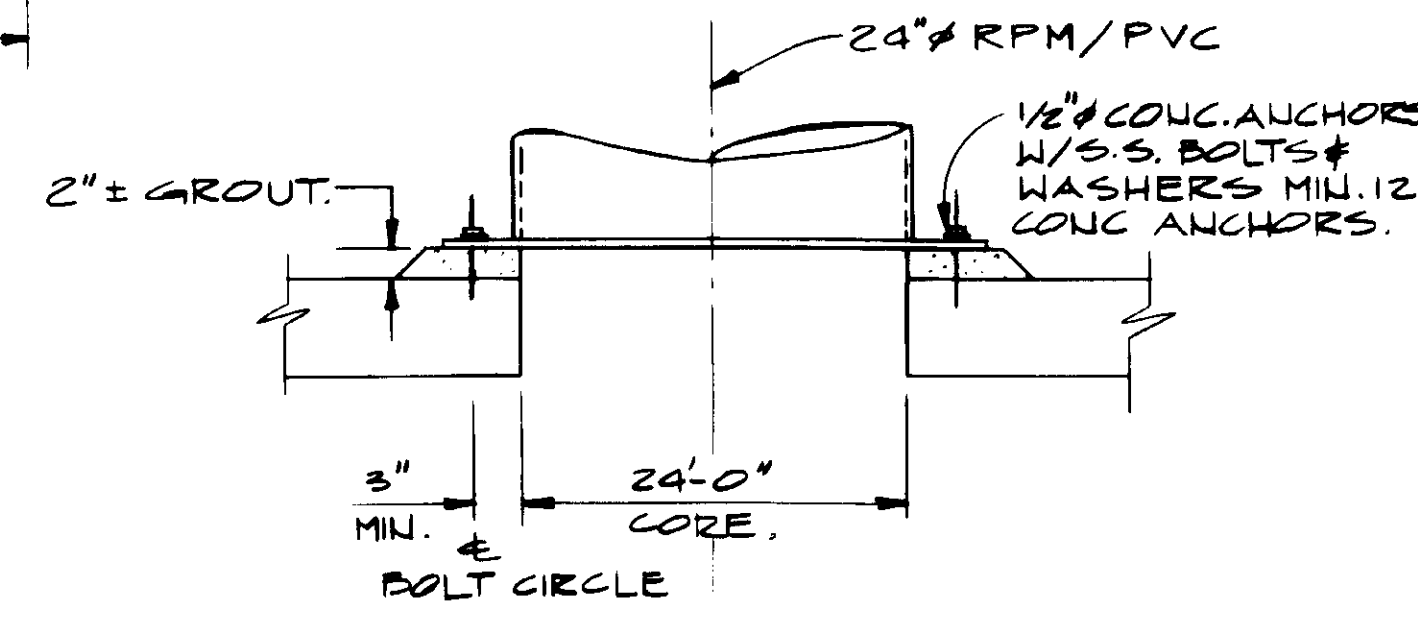


SECTION A

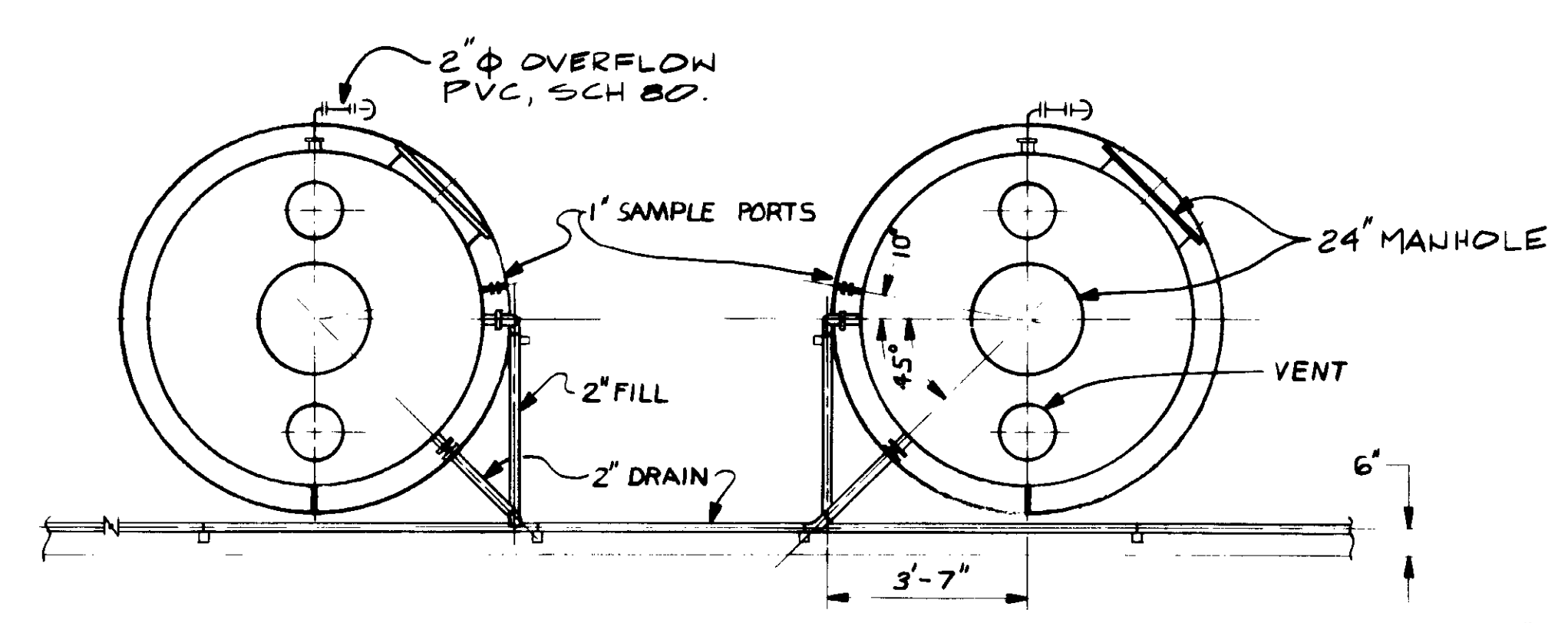
**NOTE:**  
 1. SEE DUCON DWGS. DC 88-720-01 & DC 88-720-02



SECTION B

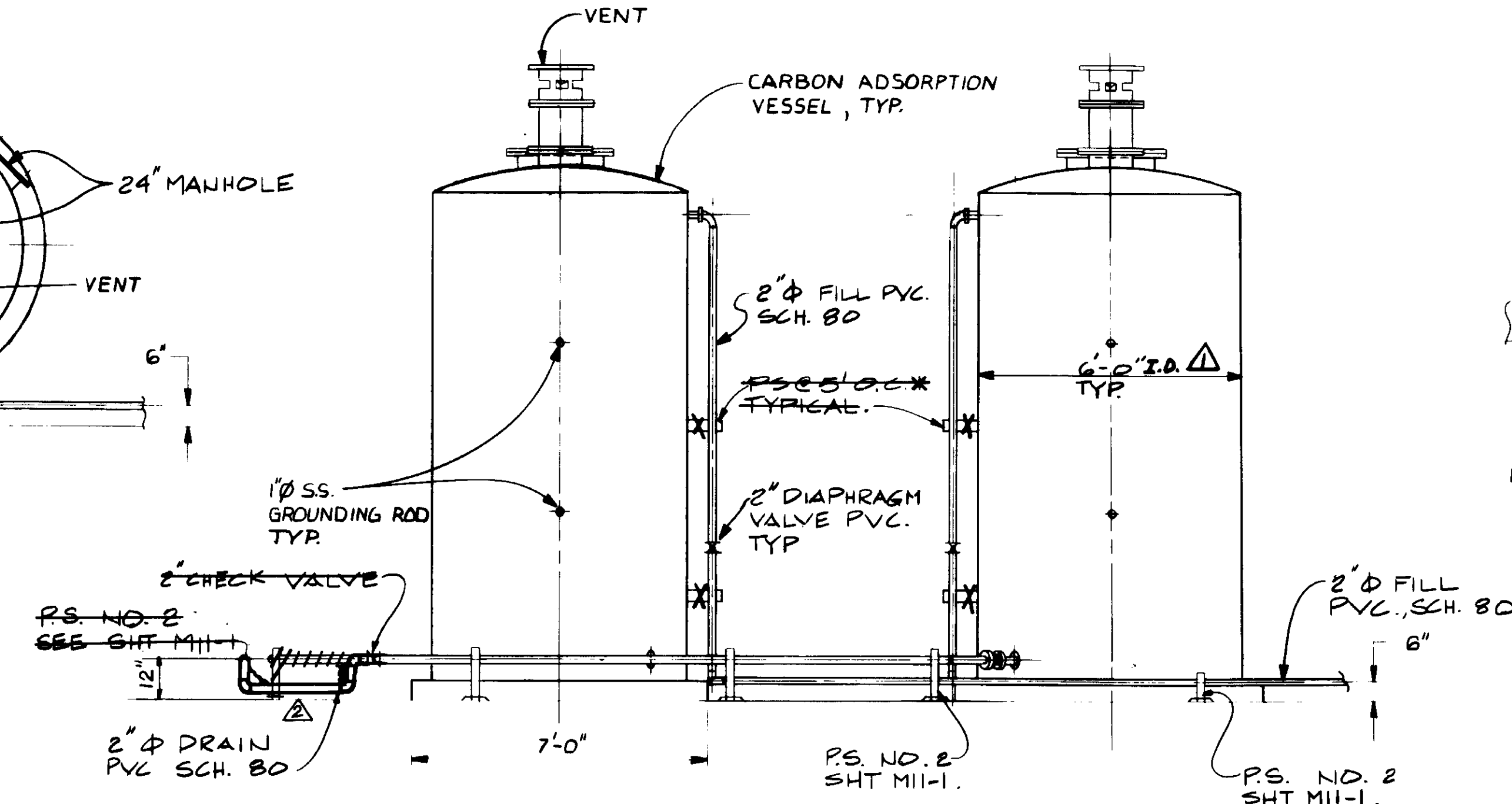


24" EXHAUST AIR CONNECTION. NO SCALE.

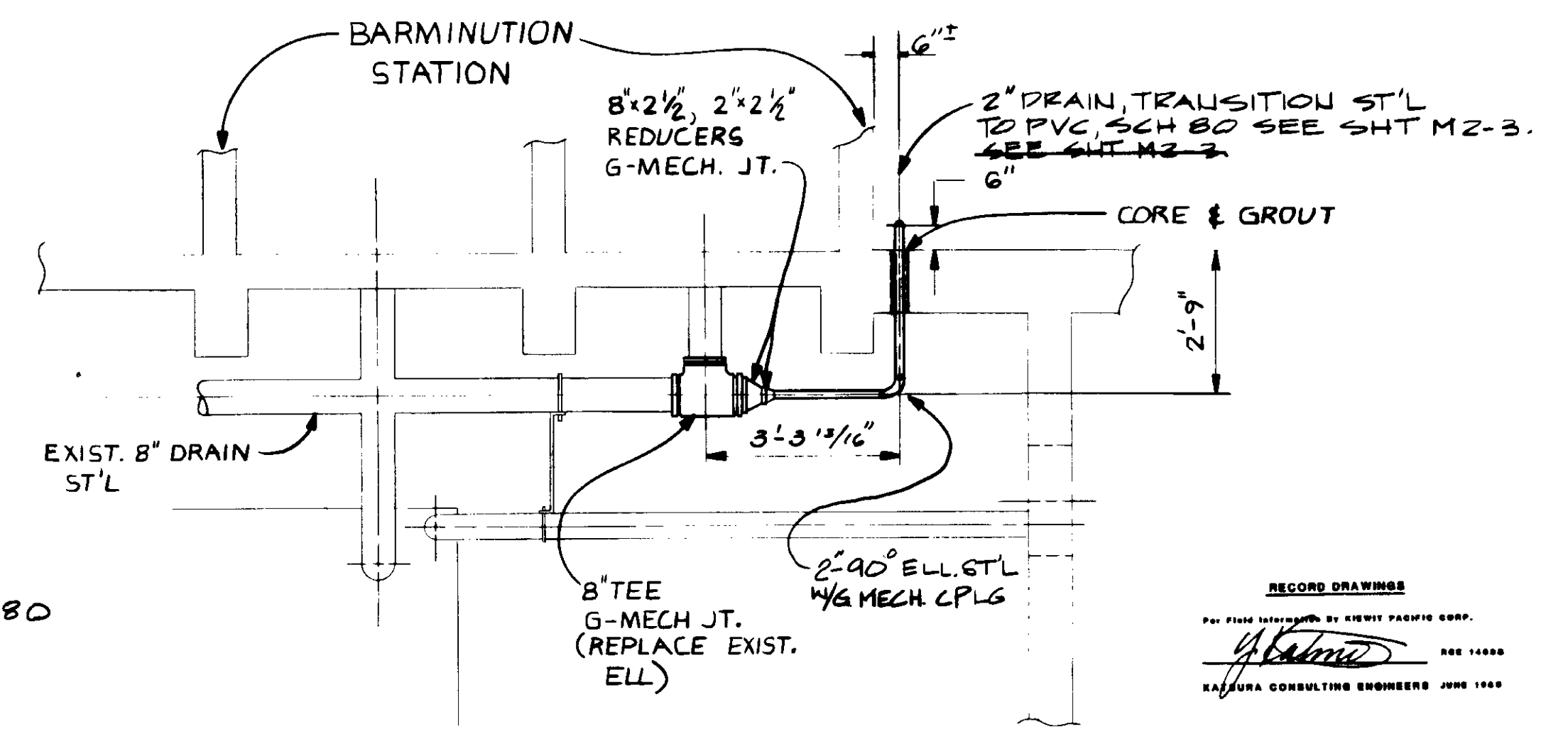


PLAN

**NOTE:** FAN & PIPING NOT SHOWN



SECTION C



DRAIN DETAIL

04093

REV	DATE	BY	DESCRIPTION
1	4-14-89	A.B.	REV. PER K.P.C.
2	4-14-89	A.B.	REV. PER K.P.C.
3	4-14-89	A.B.	REV. PER K.P.C.

SCALE:	YK/RK
3/8" = 1'-0"	DESIGNED RK
	DRAWN YK
	CHECKED

SUBMITTED	14088	8-7-89
<i>Yoshiro Katsura</i>	R.C.E. NO.	DATE
KATSURA CONSULTING ENGINEERS		
	513	
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

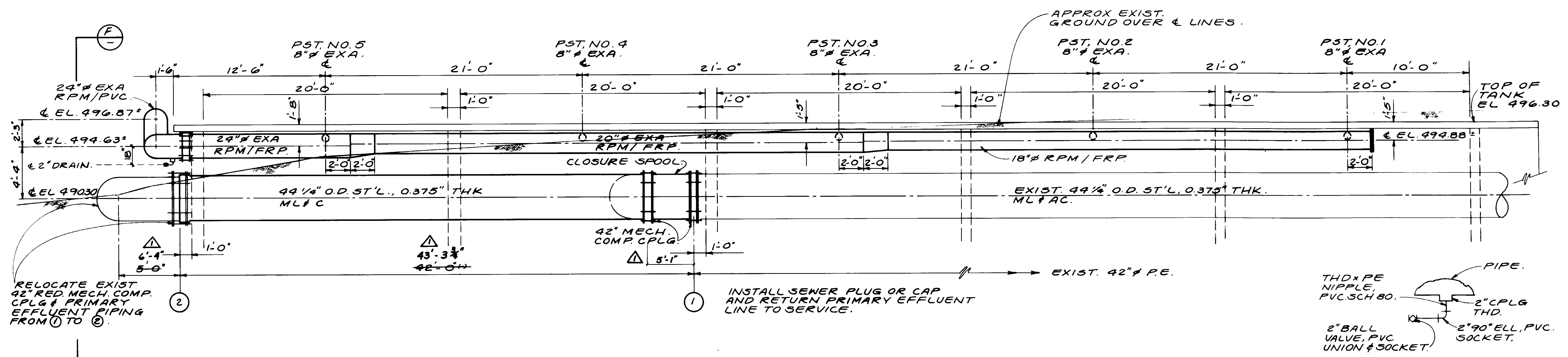
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 EXHAUST AIR SCRUBBING FACILITY

SHEET  
 M2-8

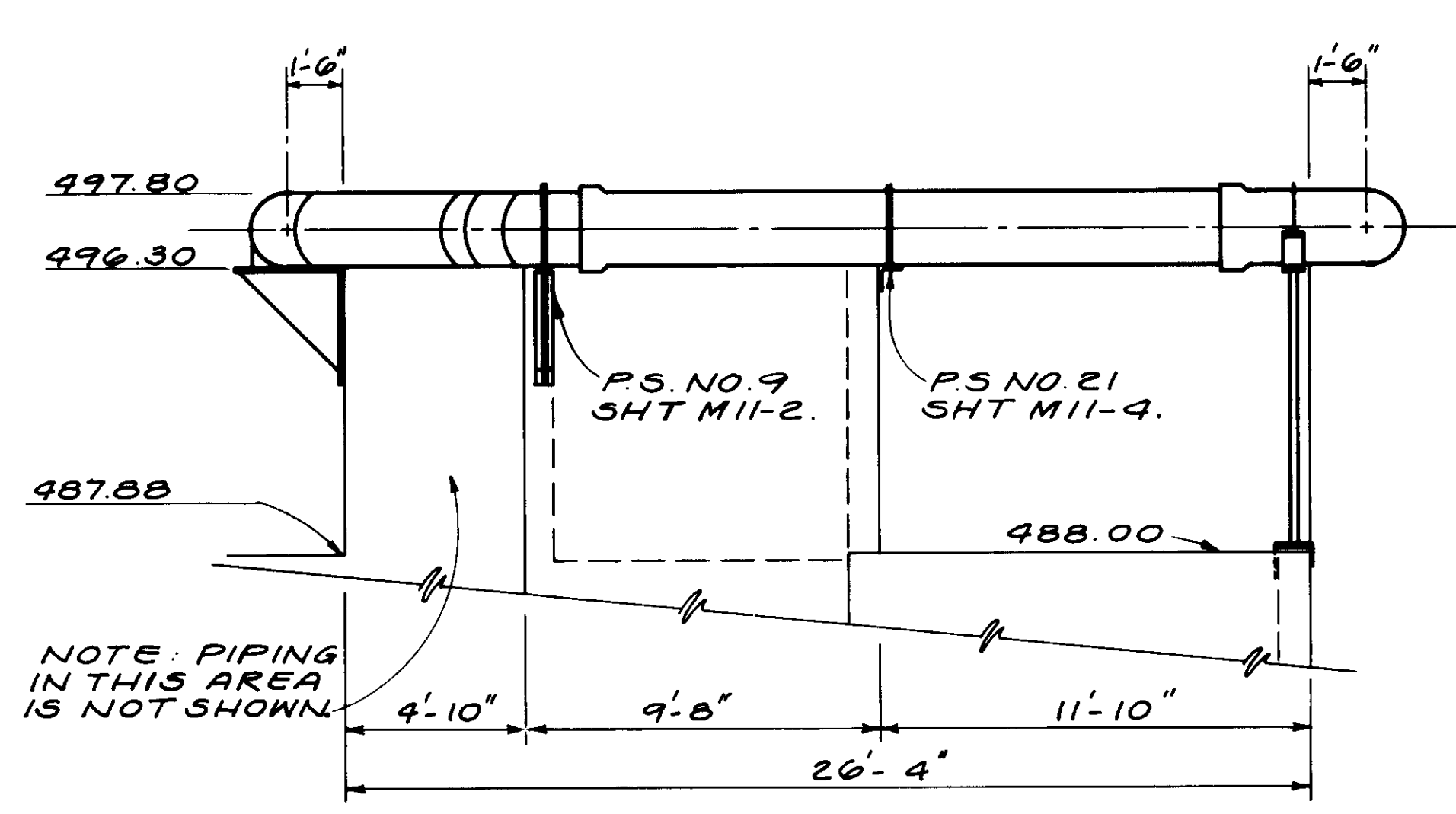
RECORD DRAWING  
 PREPARED BY: YOSHIRO KATSURA  
 KATSURA CONSULTING ENGINEERS, JUNE 1989



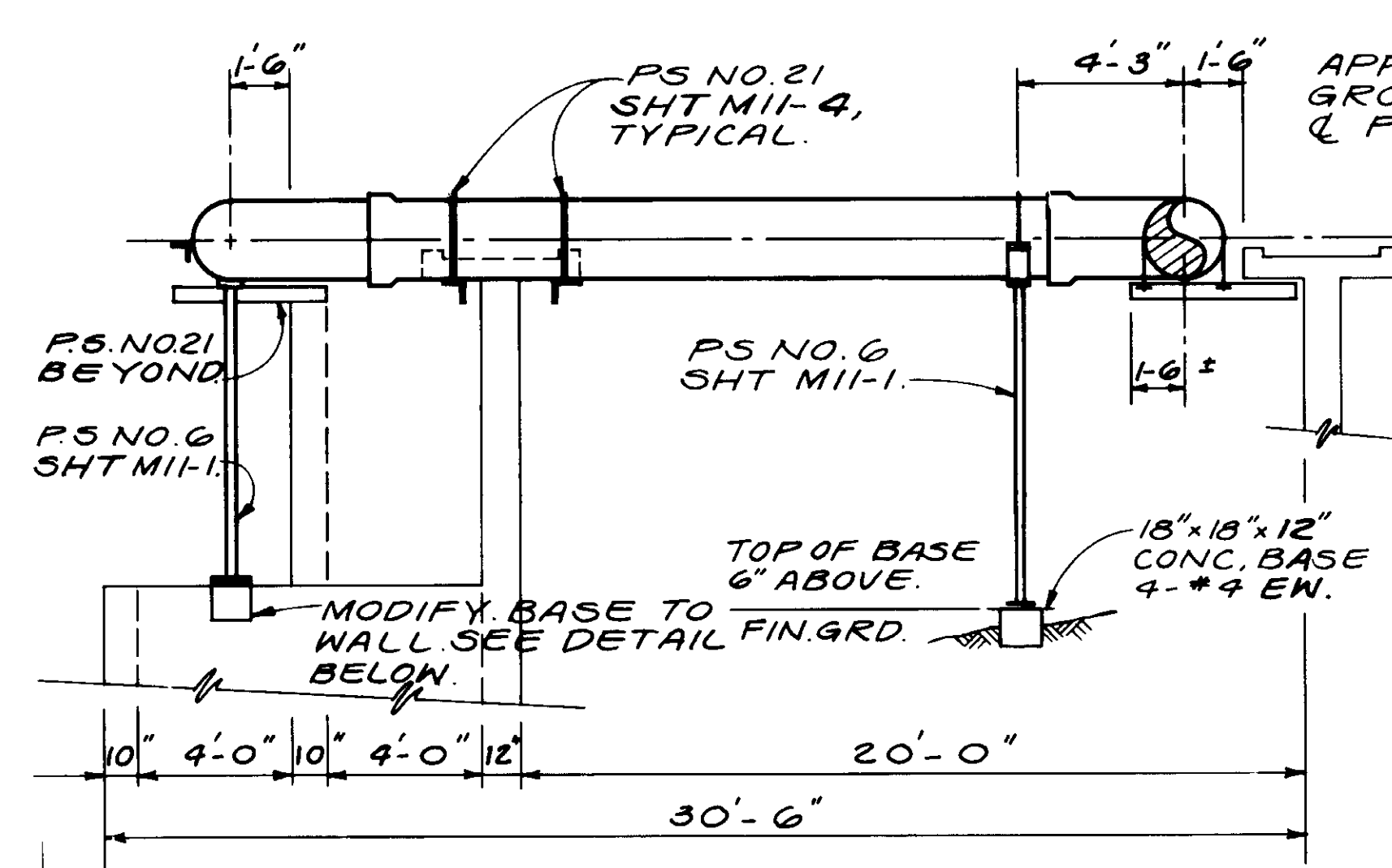


**PRIMARY EFFLUENT & EXHAUST AIR LINES.**

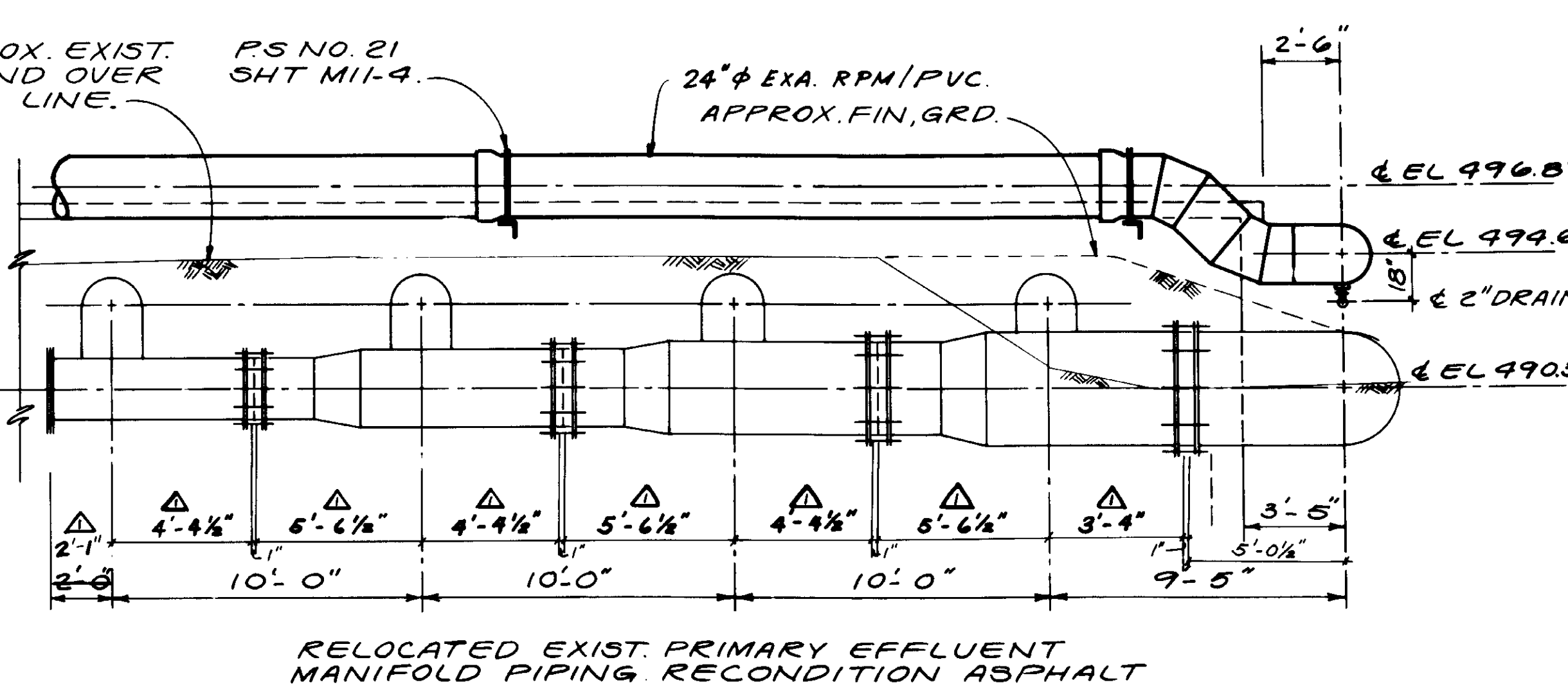
**DRAIN VALVE.**



**SECTION D**



**SECTION E**



**SECTION F**

REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED: Y.K.	SUBMITTED: 6-7-87
DRAWN: Y.K.	CHECKED: Y.K.	DATE: 6-7-87

**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

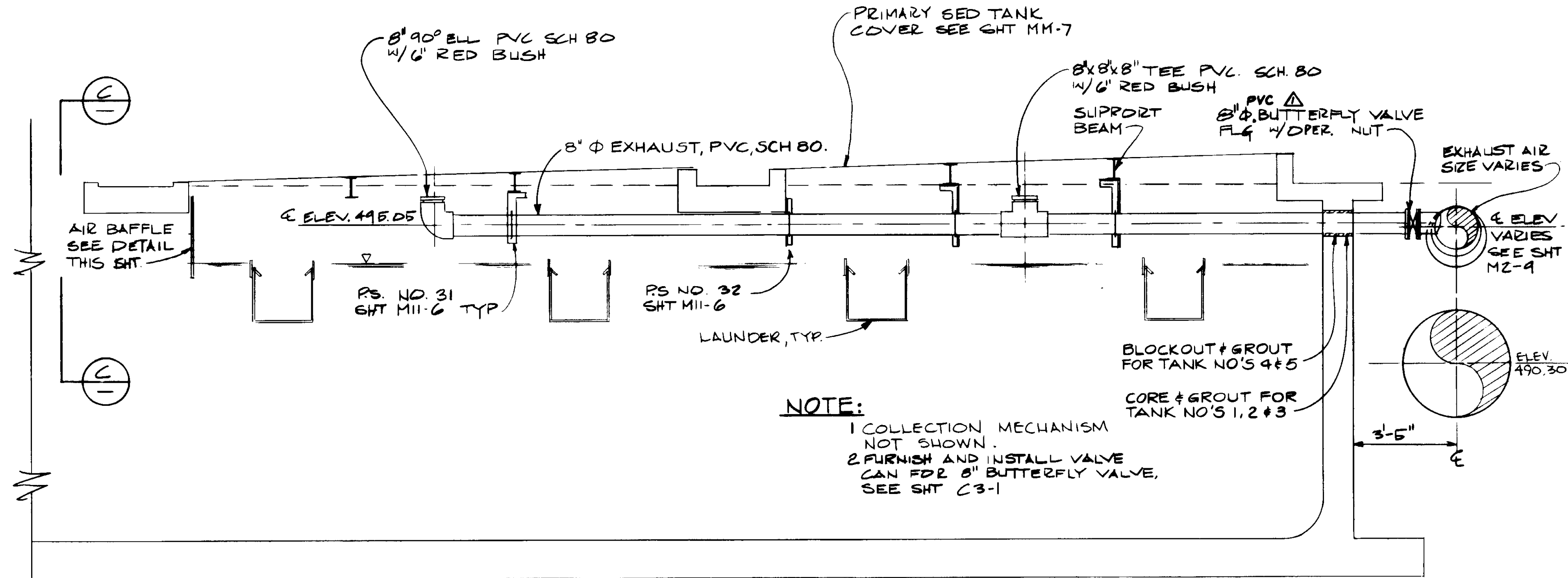
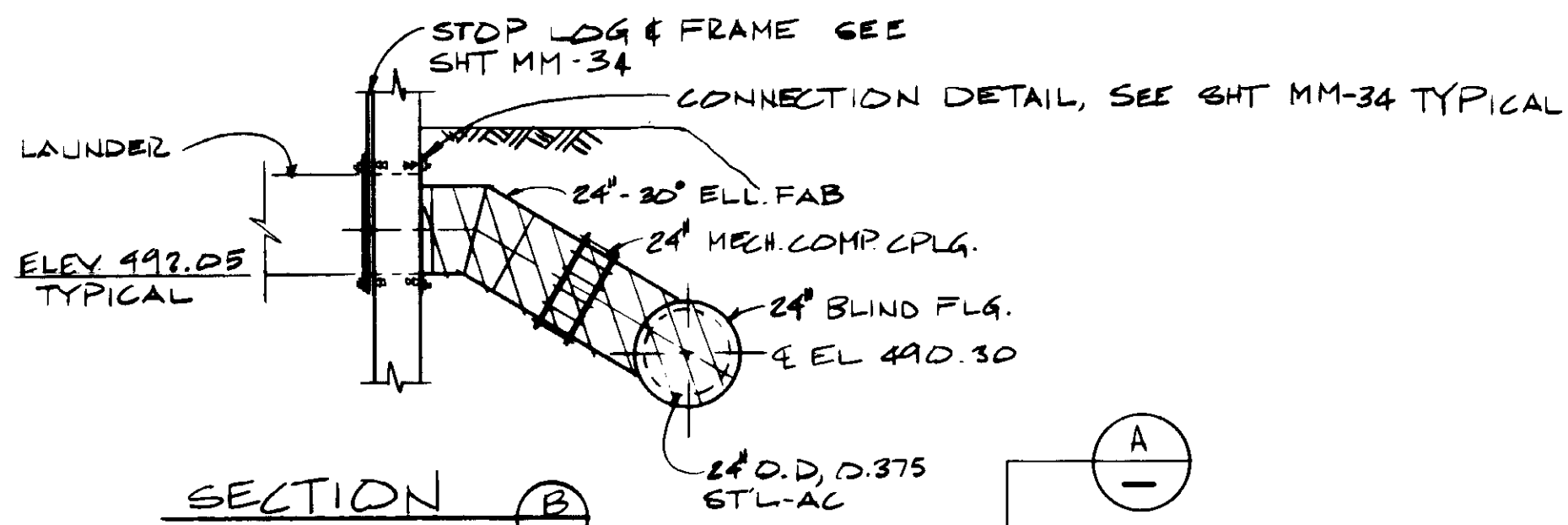
EXHAUST AIR & PRIMARY EFFLUENT LINES - I

SHEET M2-9

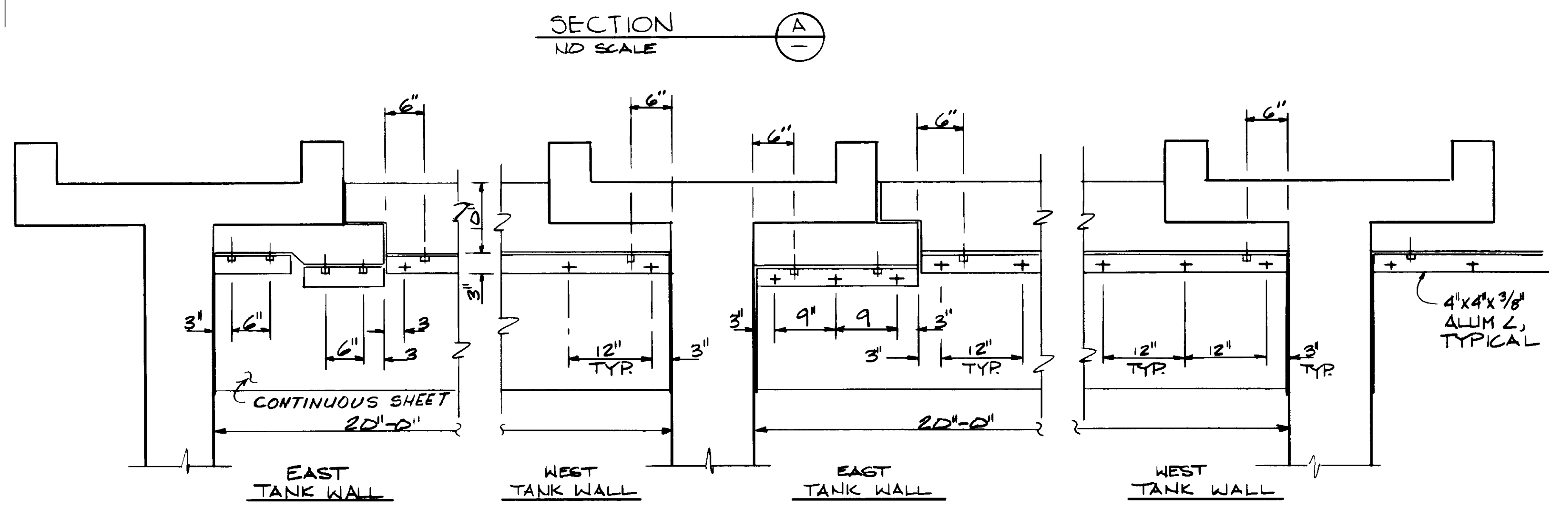
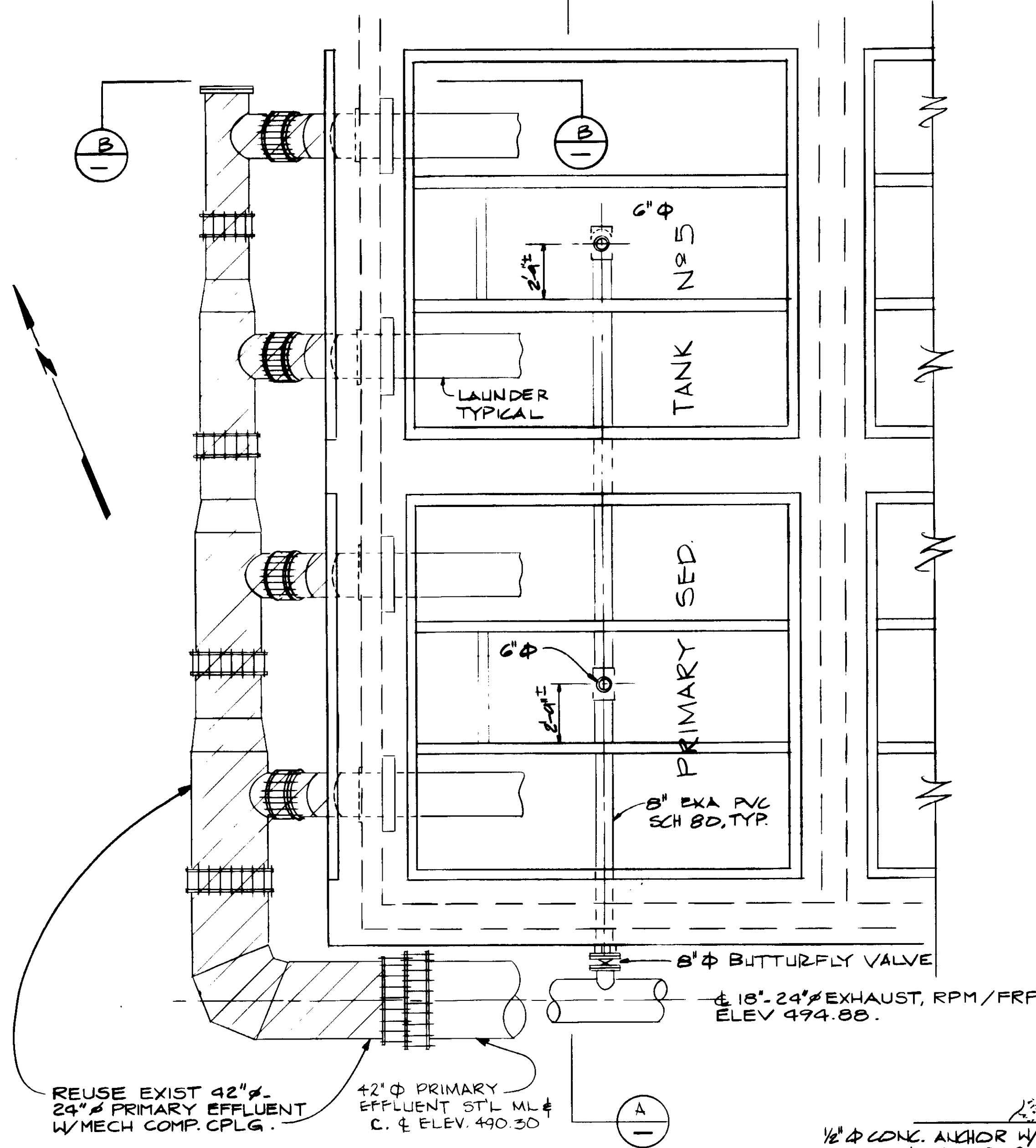
RECORD DRAWINGS

REGISTERED PROFESSIONAL ENGINEER  
FOSTURO KATSURA  
No. 14038  
Exp. 3-31-89  
STATE OF CALIFORNIA

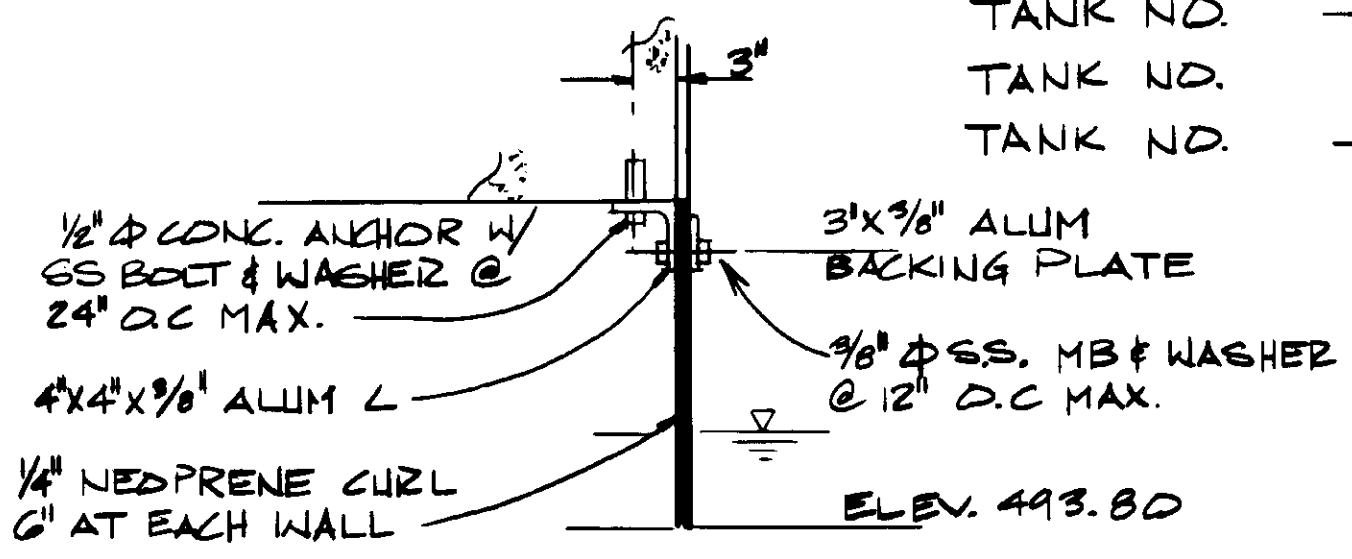
04094



**NOTE:**  
 1 COLLECTION MECHANISM NOT SHOWN.  
 2 FURNISH AND INSTALL VALVE CAN FOR 6" BUTTERFLY VALVE, SEE SHT C-3-1



TANK NO.	_____	1	_____	1
TANK NO.	_____	2	_____	2
TANK NO.	3	_____	4	3
TANK NO.	_____	_____	_____	4



**AIR BAFFLE DETAIL**  
NO SCALE

**PLAN**  
SCALE 1/4" = 1'-0"

04095

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE:	YK/JB
DESIGNED:	JB
DRAWN:	YK
CHECKED:	

SUBMITTED:	14098 8-7-87
DATE:	8-7-87
DESIGNED BY:	YOSHIO KATSURA
REGISTERED PROFESSIONAL ENGINEER:	R.C.E. NO. DATE
REGISTERED PROFESSIONAL ENGINEER:	513
REGISTERED PROFESSIONAL ENGINEER:	R.C.E. NO. DATE

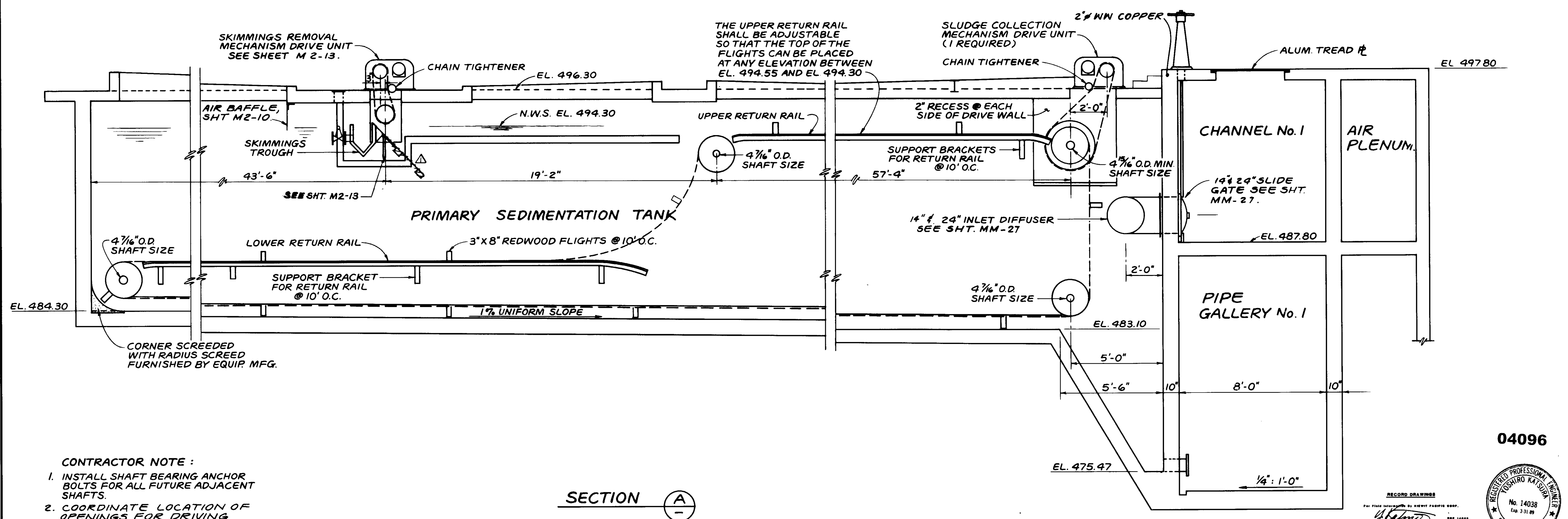
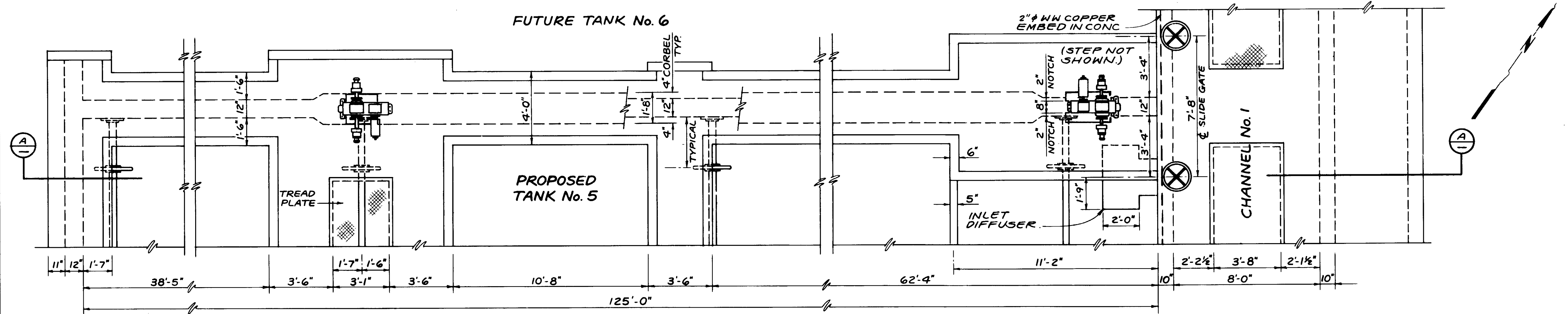
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

EXHAUST AIR & PRIMARY EFFLUENT LINES - II

SHEET  
M2-10





- CONTRACTOR NOTE :**
1. INSTALL SHAFT BEARING ANCHOR BOLTS FOR ALL FUTURE ADJACENT SHAFTS.
  2. COORDINATE LOCATION OF OPENINGS FOR DRIVING EQUIPMENT WITH MFR.

EL @ 7 1/2

04096

RECORD DRAWING

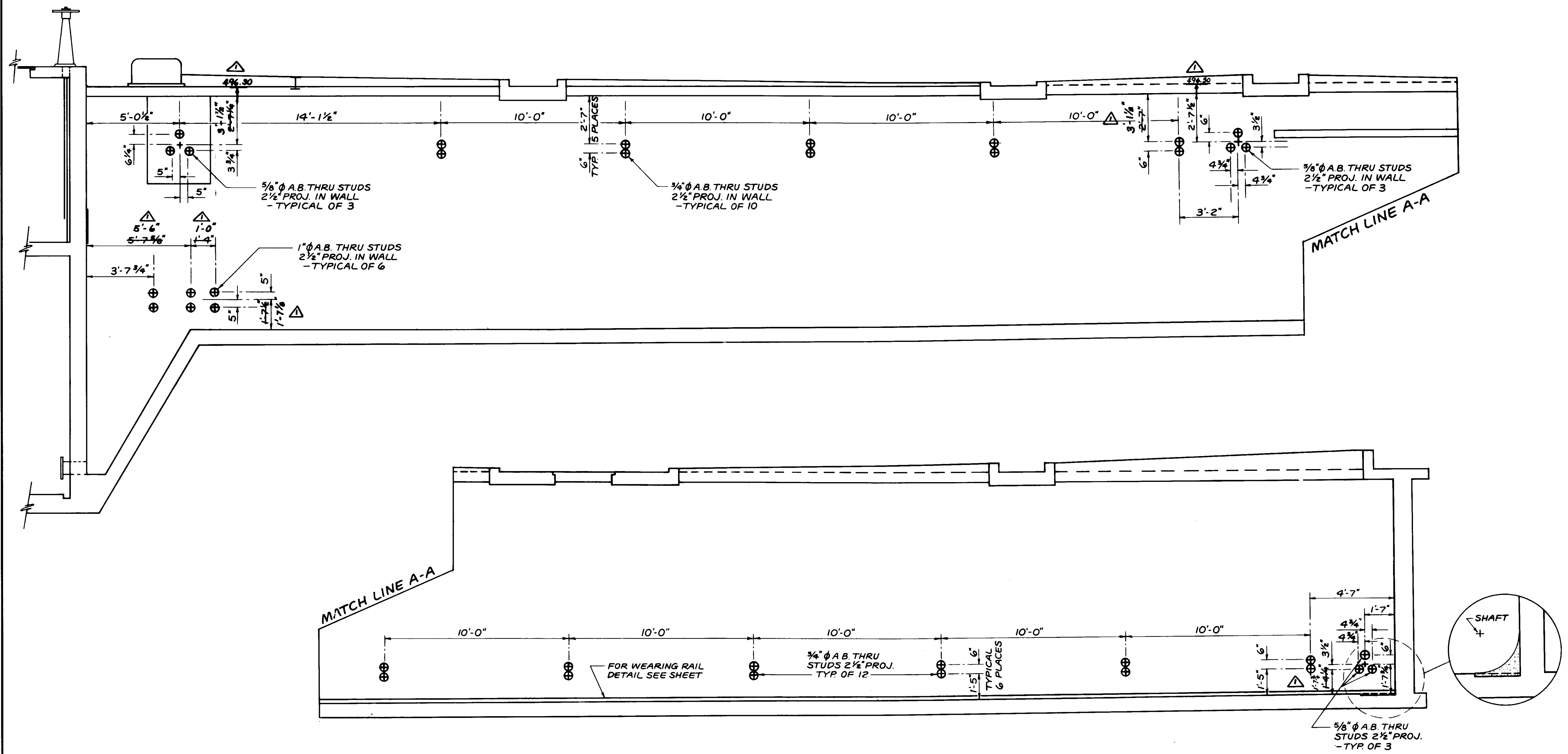
DESIGNED BY: *[Signature]*

DATE: 8-7-87

PROJECT: LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III

REGISTERED PROFESSIONAL ENGINEER  
TOSHIRO KATSUDA  
No. 14038  
Exp. 3-31-89  
CIVIL  
STATE OF CALIFORNIA

SCALE: 3/8" = 1'-0"		DESIGNED: YK/CC	SUBMITTED: <i>[Signature]</i> 14038 8-7-87	KALEX ENGINEERS Katsuda Consulting Engineers / Alexander Engineers Ventura, California Glendora, California	LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III	SHEET M2-11	
DRAWN: YK		CHECKED: YK	DATE: 8-7-87				SLUDGE COLLECTION MECHANISM, PLAN & SECTION
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION



**NOTES :**

1. ALL DIMENSIONS SHOWN OF THE EXISTING BOLT LAYOUT SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL USE FIELD DATA TO MATCH EXISTING WALL BOLT LOCATIONS FOR PROPOSED TANK No. 4.

04097

RECORD DRAWINGS  
 Per Field Inspection by KERRY PABSTO CORP.  
*Kerry Pabsto*  
 KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE:	C.C.I.Y.K.
DESIGNED	JK
DRAWN	YK
CHECKED	

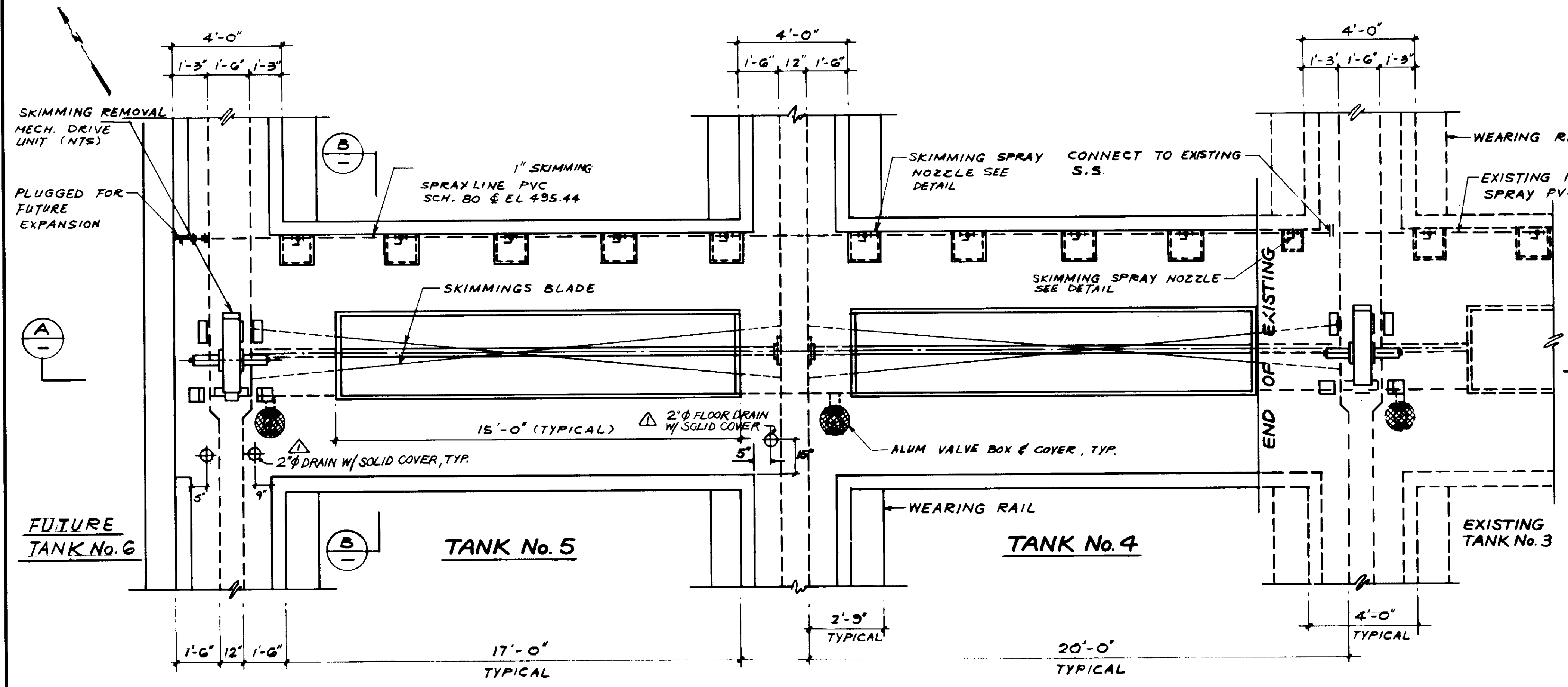
SUBMITTED	<i>Yoshitiro Katsura</i>	14038	8-7-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE	
ALEXANDER ENGINEERS	813	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

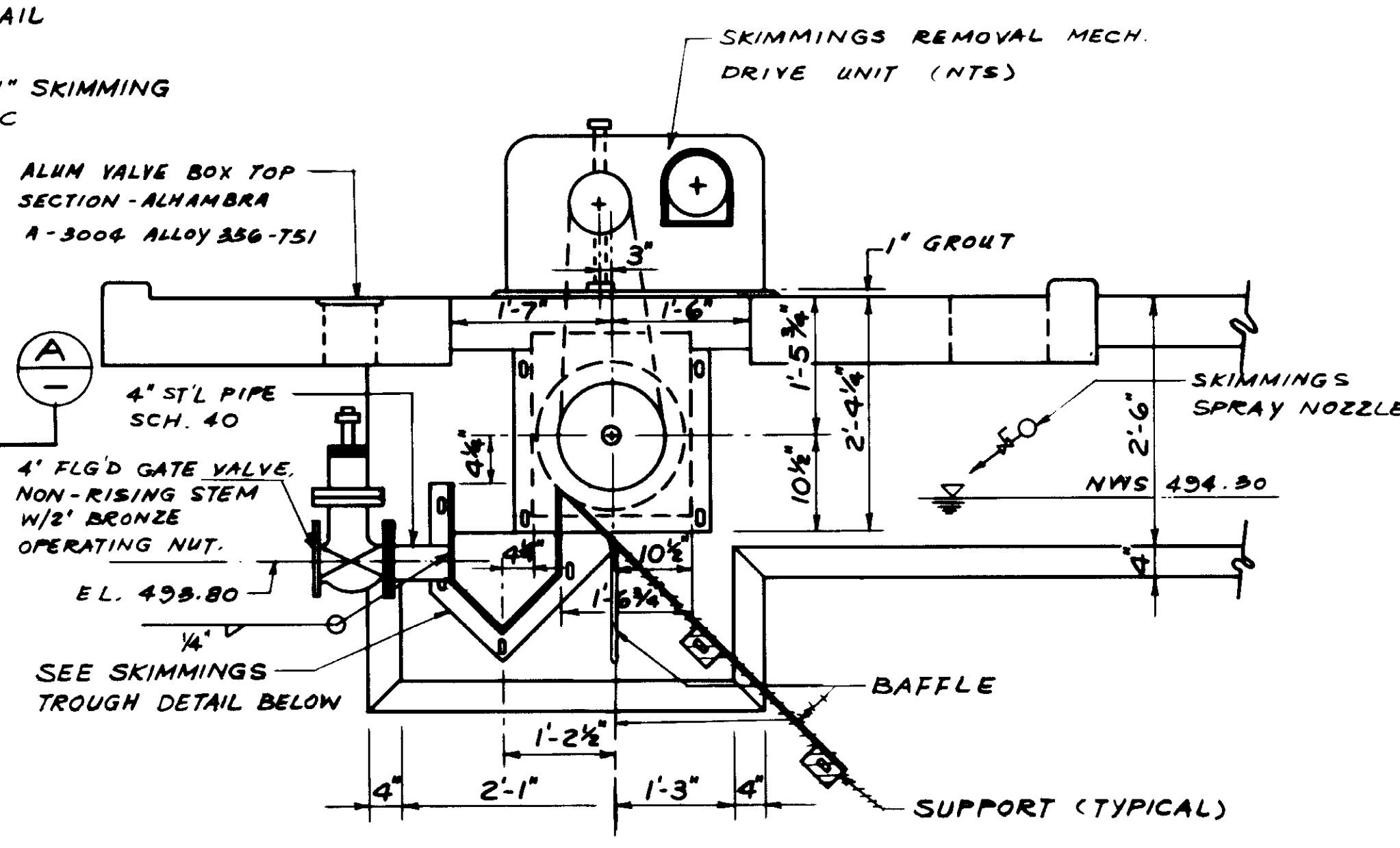
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SLUDGE COLLECTION MECHANISM, ANCHOR BOLTS

SHEET  
**M2-12**

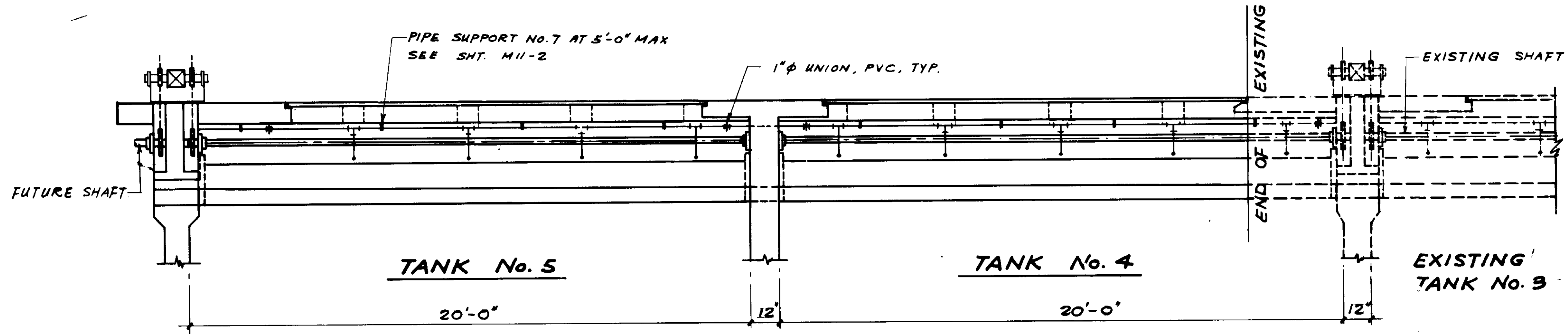
8 of 75



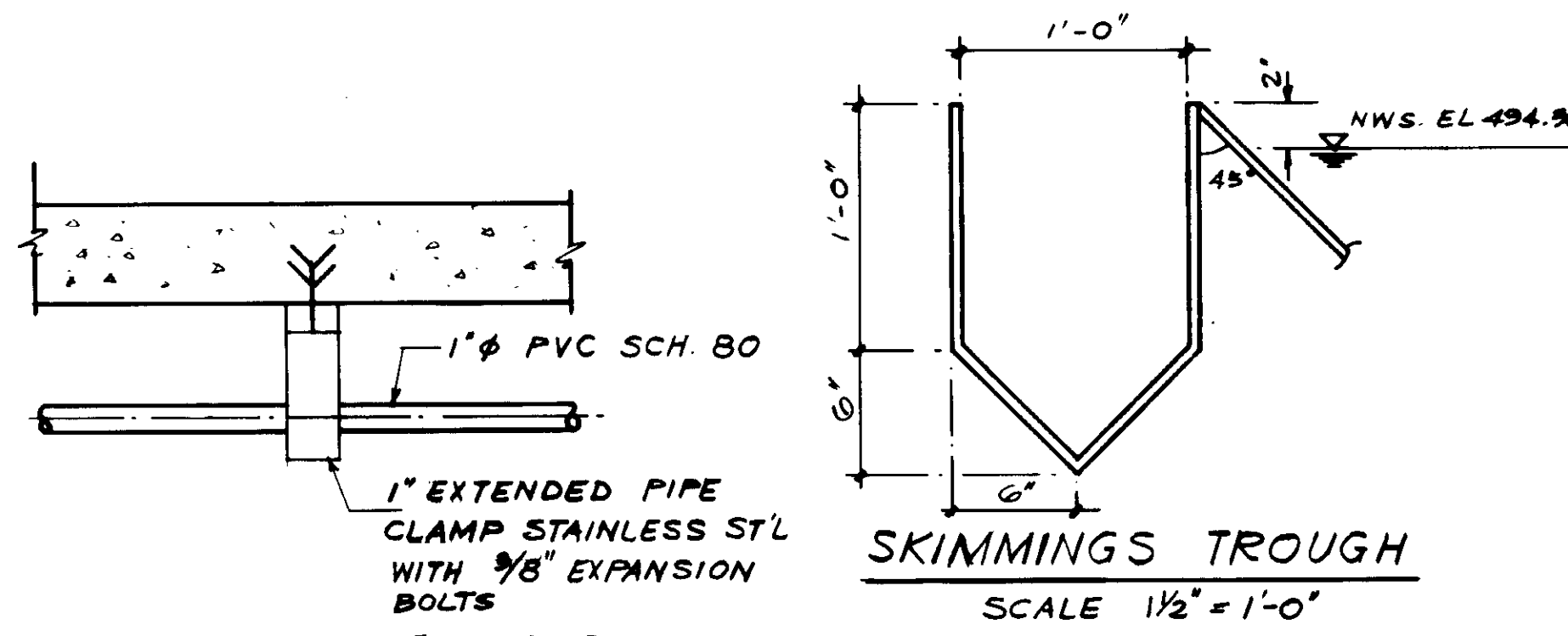
**PLAN**  
SCALE 3/8" = 1'-0"



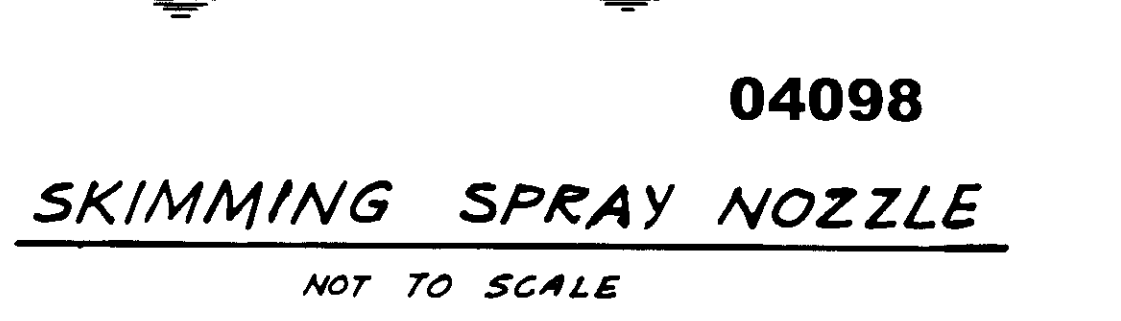
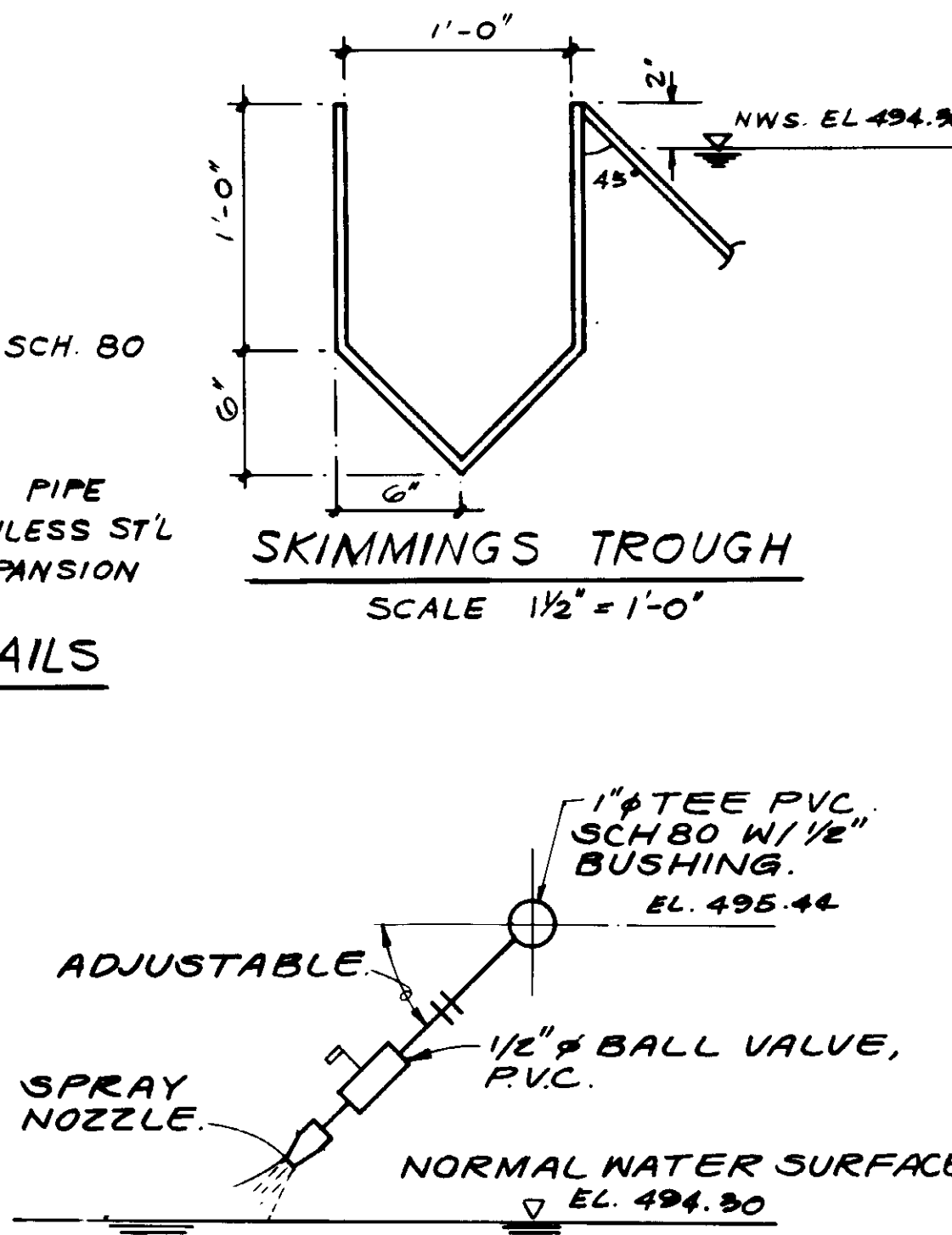
**ELEVATION SECTION B**  
NOT TO SCALE



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



**SPRAY NOZZLE DETAILS**  
NOT TO SCALE



**SKIMMING SPRAY NOZZLE**  
NOT TO SCALE

RECORD DRAWINGS  
KATSUMA CONSULTING ENGINEERS  
No. 14038  
Exp. 3-31-88  
KATSUMA CONSULTING ENGINEERS 2006 1000



04098

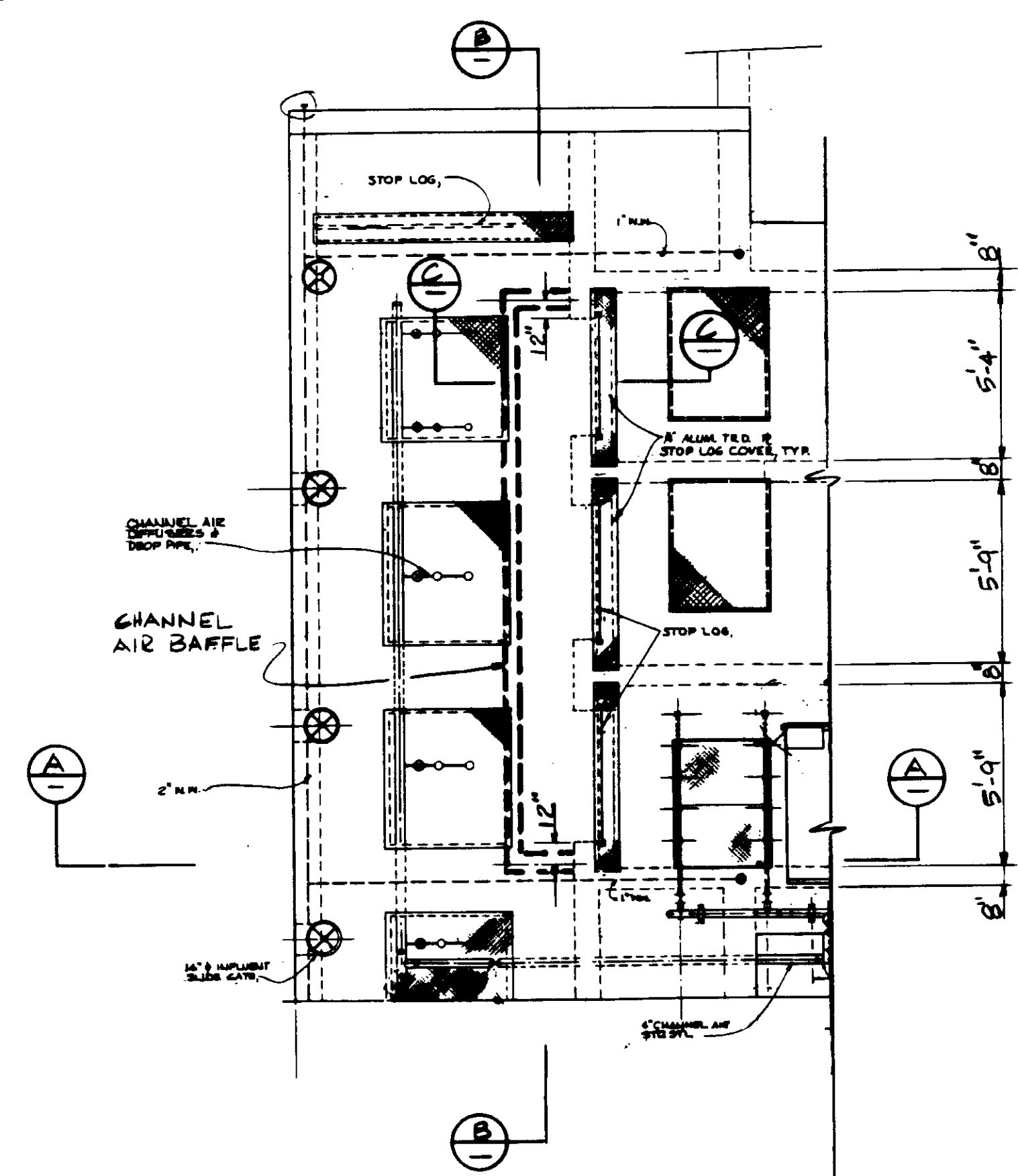
**SKIMMING SPRAY NOZZLE**

REV	DATE	BY	DESCRIPTION

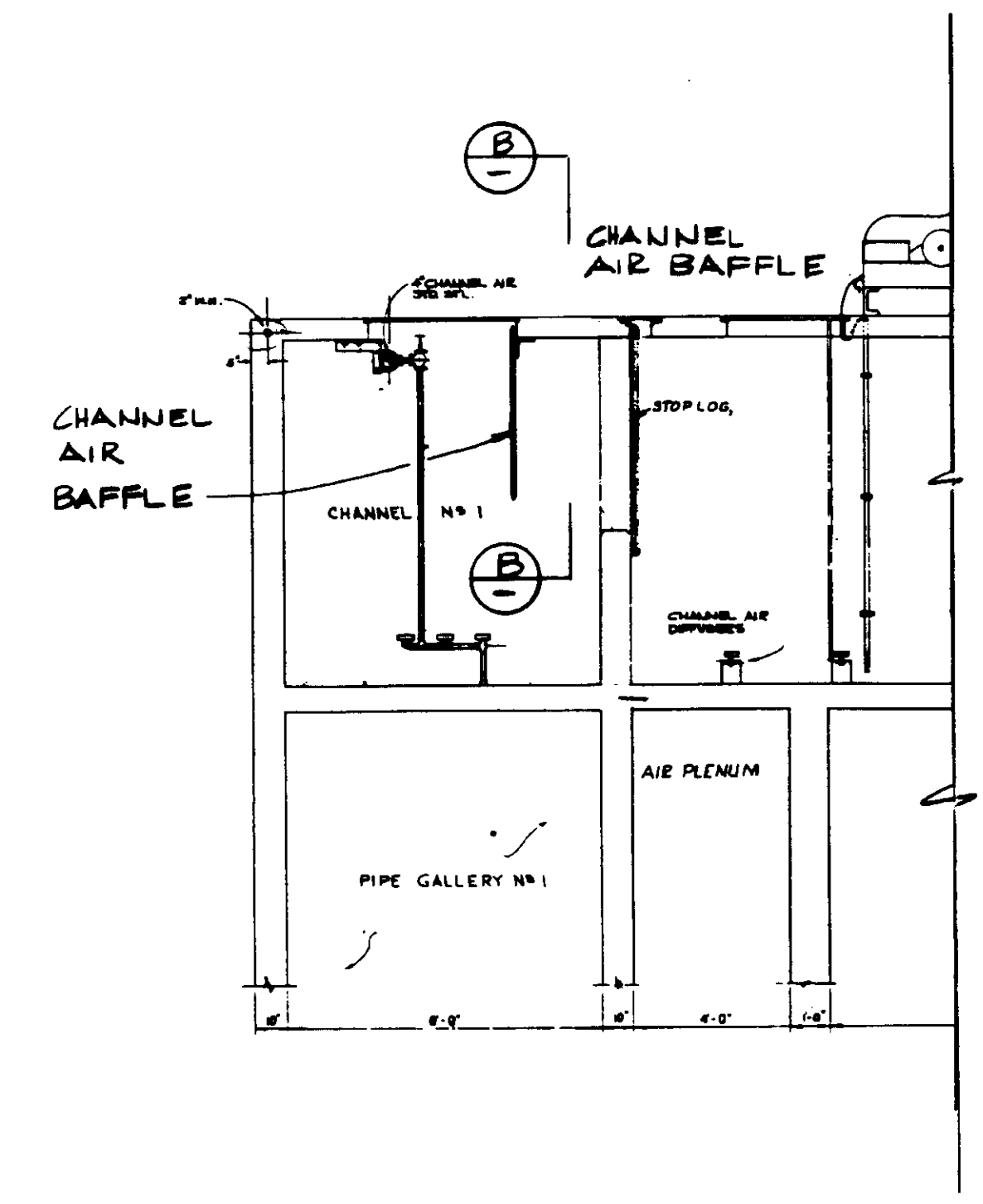
SCALE: AS NOTES.	DESIGNED: Y.K.I.C.C.	SUBMITTED: 8-7-87
DRAWN: J.K.I.S.K.	CHECKED: Y.K.	DATE: 8-7-87

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

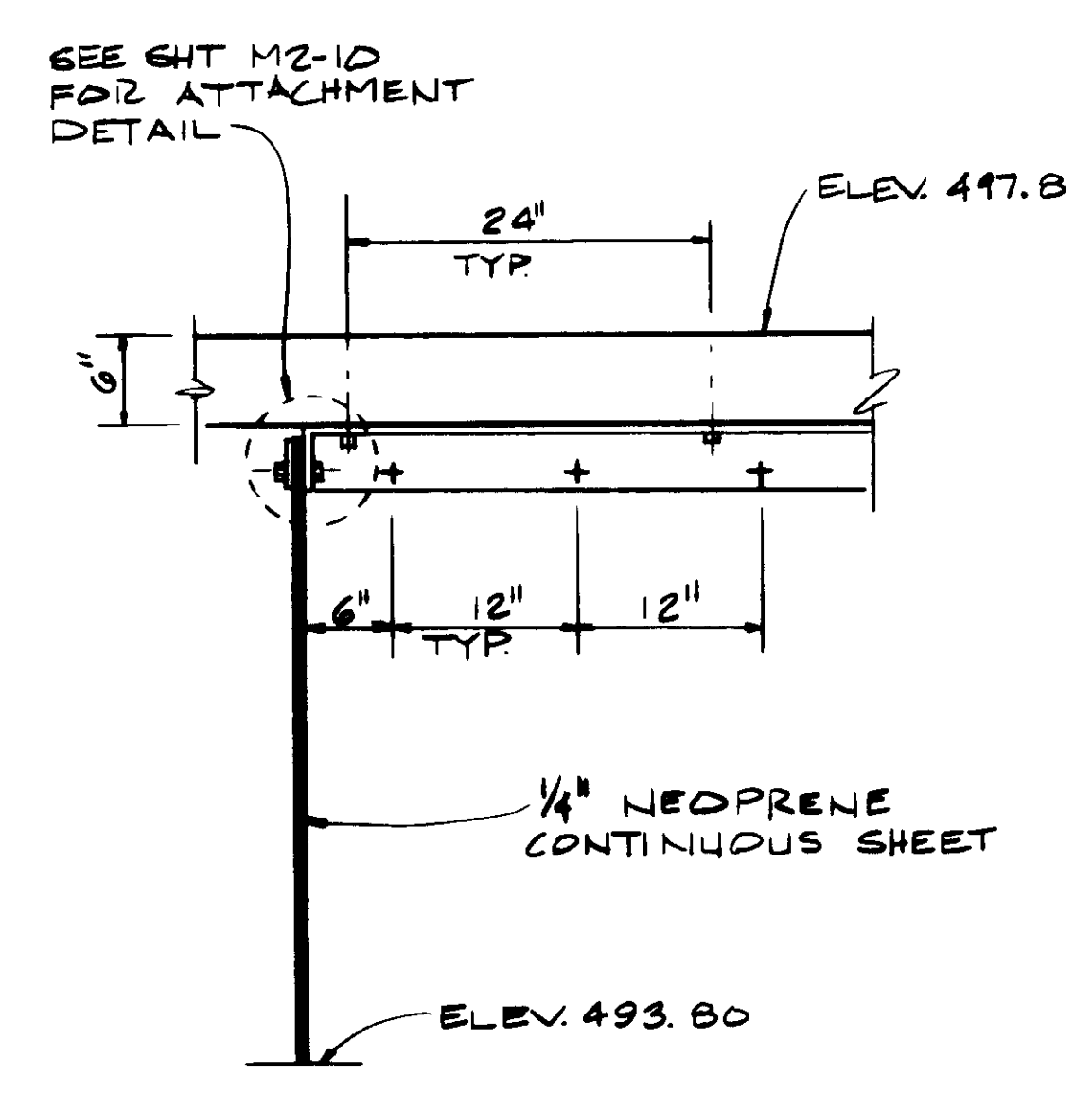
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SKIMMING REMOVAL MECHANISM, PLAN & SECTIONS  
SHEET M2-13



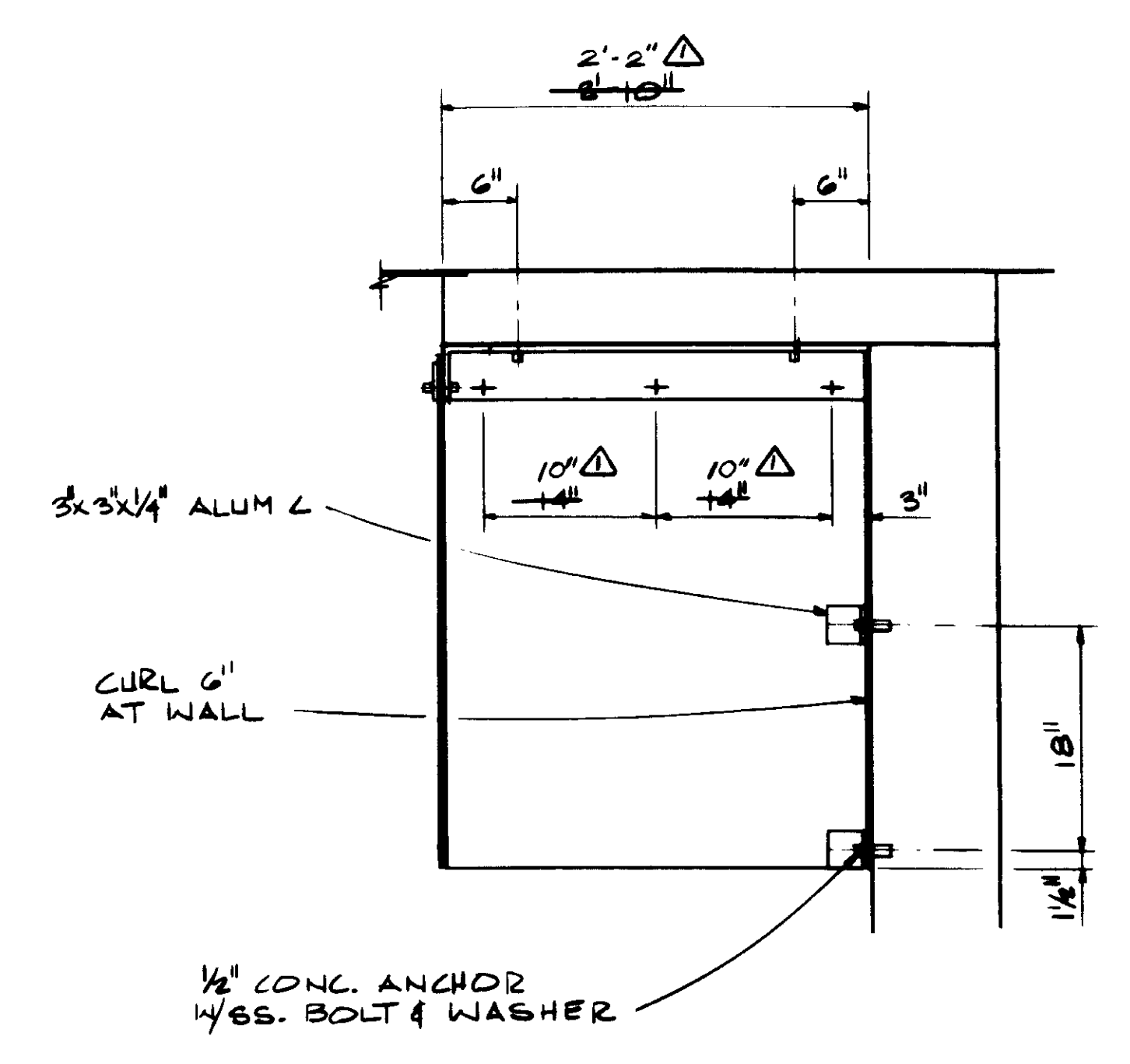
CHANNEL AIR BAFFLE  
PLAN  
NO SCALE



SECTION A-A  
NO SCALE



PARTIAL SECTION B-B  
1"=1'-0"



SECTION C-C  
1"=1'-0"

04099

RECORD DRAWINGS  
FOR FILE WITH THE CITY OF SANTA ANA  
KATSUMURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	YK
DRAWN:	CL.
CHECKED:	YK
SUBMITTED:	<i>[Signature]</i> 14038 8-7-87
DATE:	8-7-87
DESIGNED BY:	YK
DRAWN BY:	CL.
CHECKED BY:	YK
DATE:	8-7-87

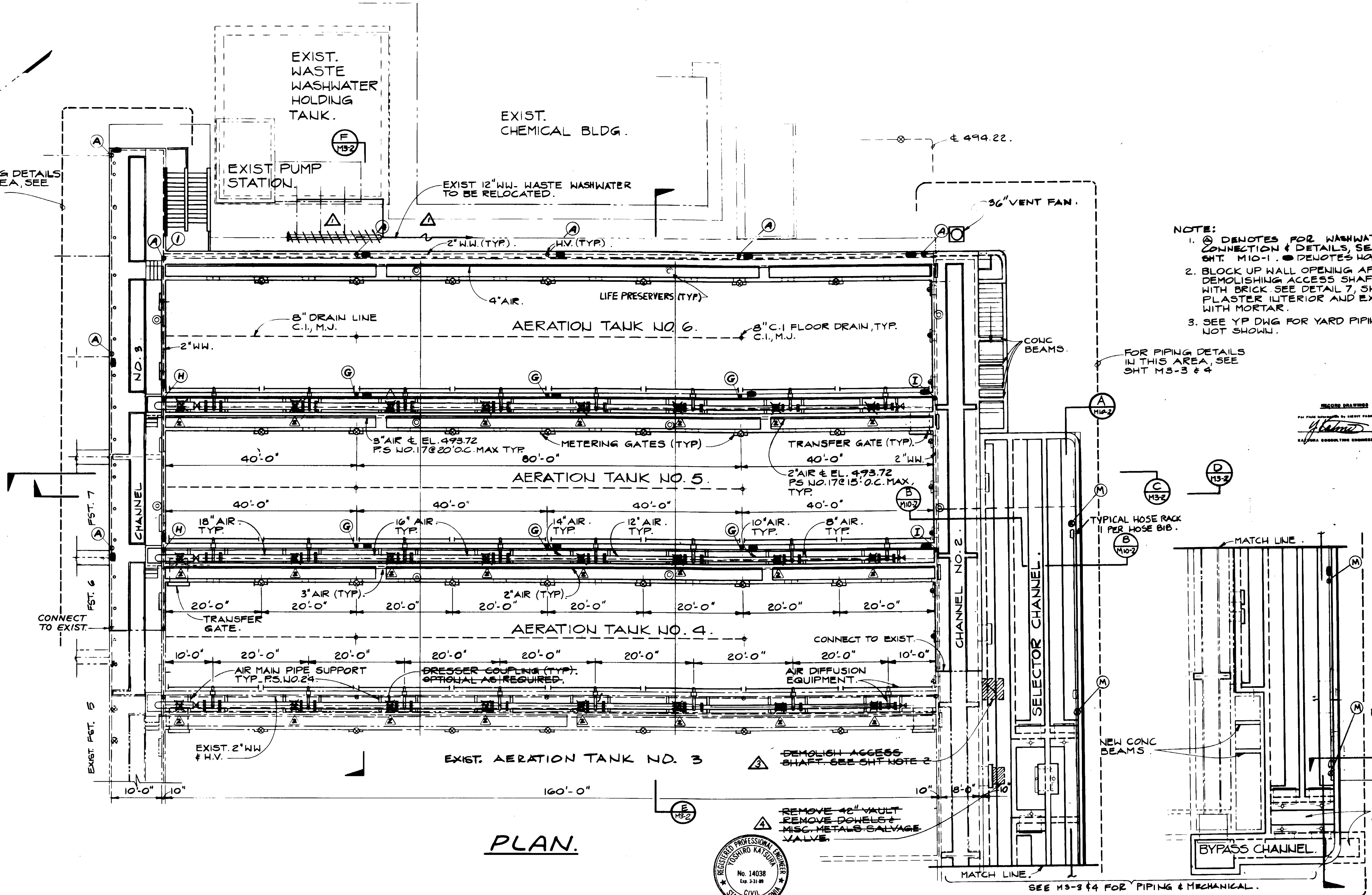
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
MISCELLANEOUS DETAIL

SHEET  
M2-14



FOR PIPING DETAILS IN THIS AREA, SEE SHT M4-3.



- NOTE:**
- ① DENOTES FOR WASHWATER CONNECTION & DETAILS, SEE SHT. M10-1. ● DENOTES HOSE RACK.
  - BLOCK UP WALL OPENING AFTER DEMOLISHING ACCESS SHAFT WITH BRICK. SEE DETAIL 7, SHT S1.3. PLASTER INTERIOR AND EXTERIOR WITH MORTAR.
  - SEE YP DWG FOR YARD PIPING WORK NOT SHOWN.

RECORD DRAWING  
 FOR PLAN REVIEW BY GREAT PACIFIC CORP.  
*[Signature]*  
 KALEX CONSULTING ENGINEERS JUN 1988

**PLAN.**



REMOVE 42" VAULT  
 REMOVE DOWELS &  
 MISC. METALS-SALVAGE  
 VALVE.

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

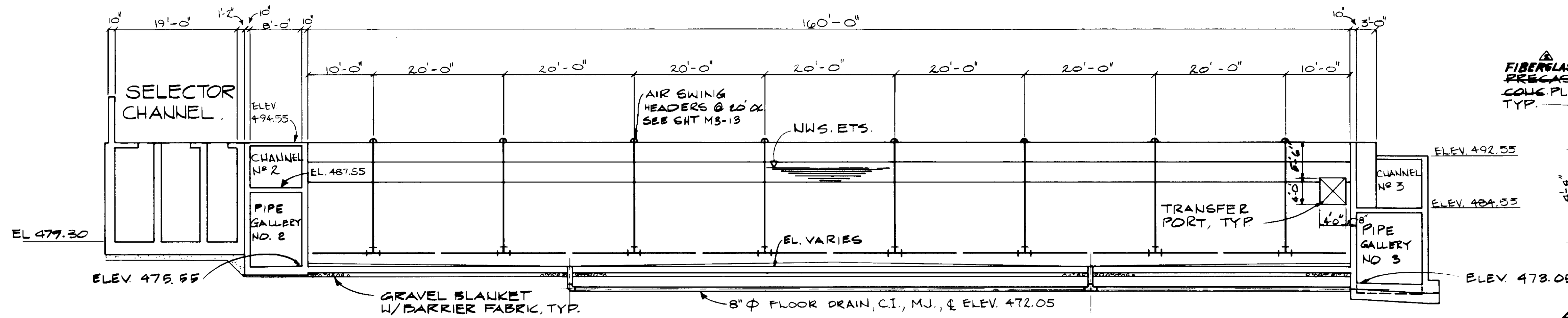
SEE M3-3 & 4 FOR PIPING & MECHANICAL.

04100

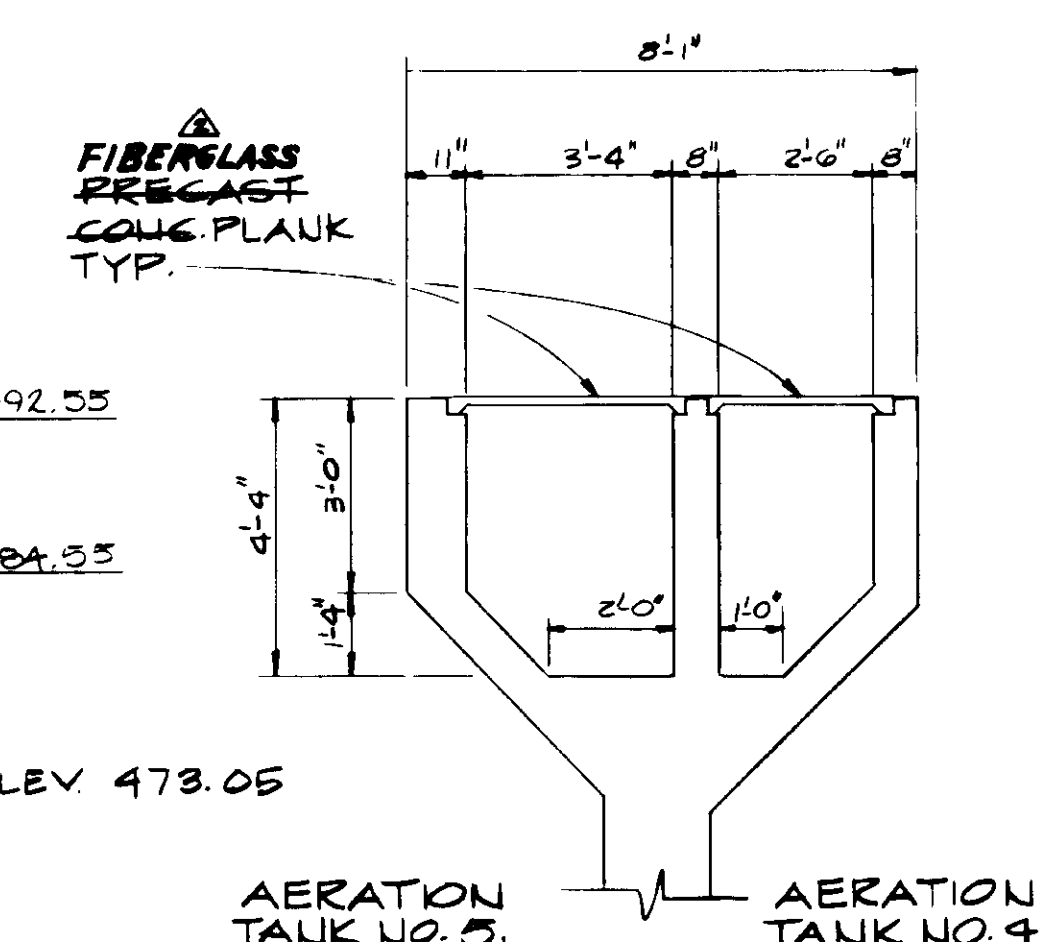
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2	4-17-87	A.B.	REV. PER K.P.C.
3	4-17-87	A.B.	REV. PER K.P.C.
4	4-17-87	A.B.	REV. PER K.P.C.

SCALE: 1" = 10'	DESIGNED C.C.Y.K. DN	SUBMITTED <i>[Signature]</i> KATSUMA CONSULTING ENGINEERS	14038 R.C.E. NO.	8-7-87 DATE
CHECKED Y.K.	DRAWN Y.K.	513 ALEXANDER ENGINEERS	R.C.E. NO.	DATE

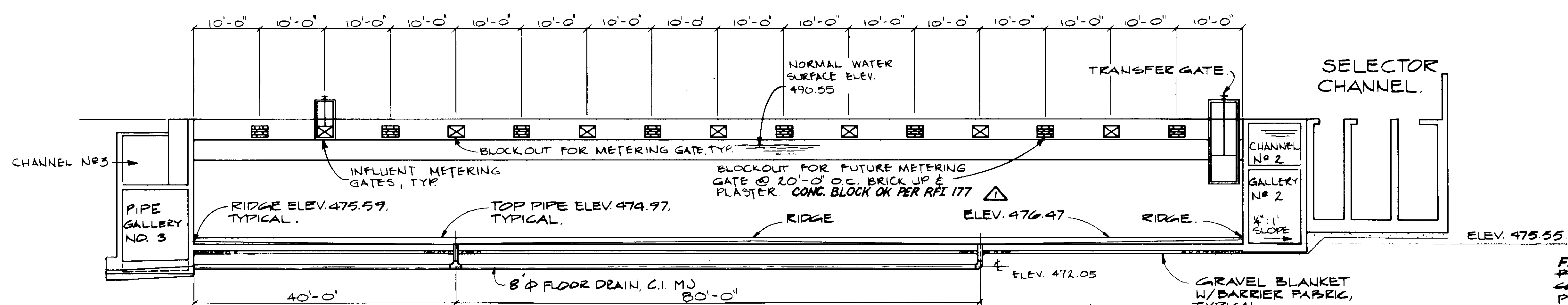
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III		SHEET MS-1
AERATION TANK & VICINITY, LAYOUT		



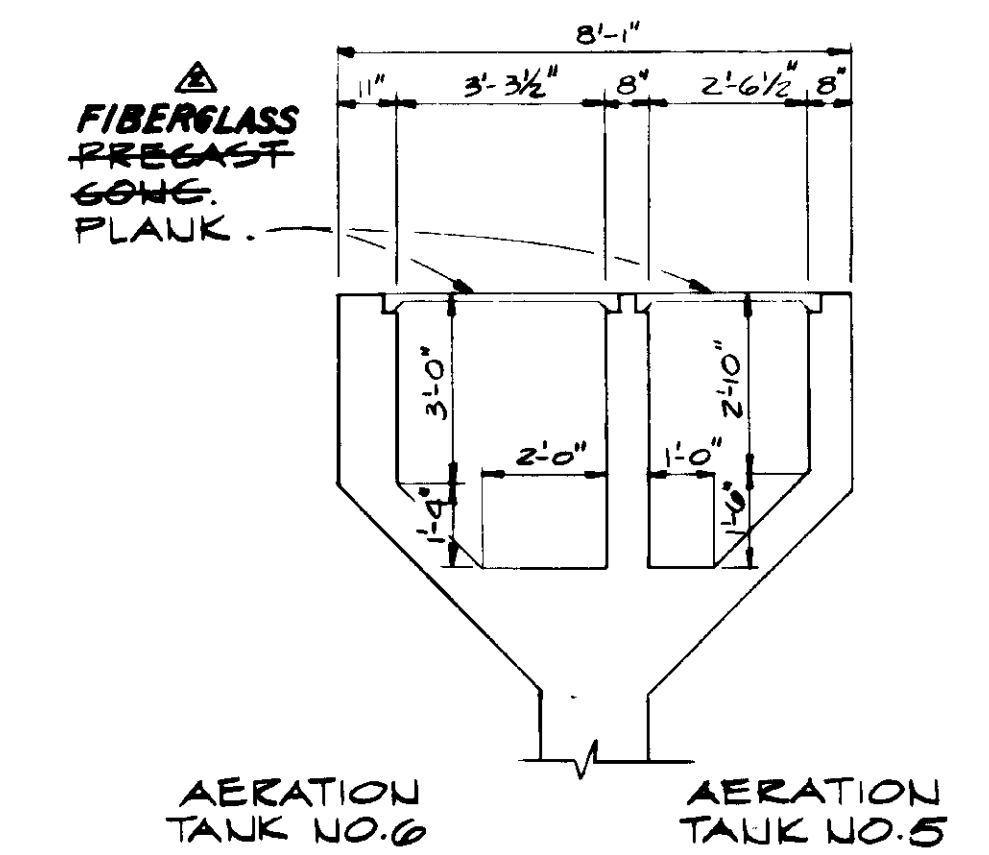
SECTION C  
AERATION TANK NO. 5.



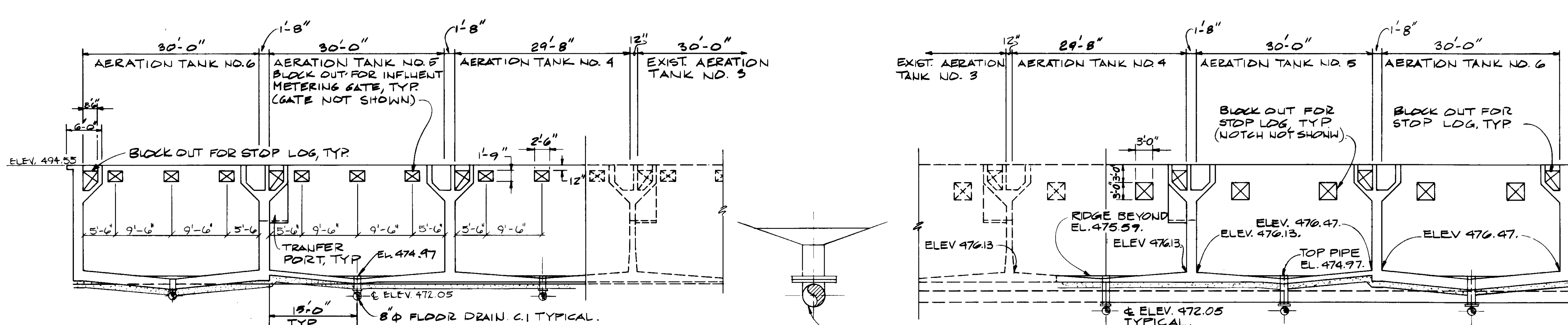
AERATION TANK NO. 5.



SECTION D  
AERATION TANK NO. 5.

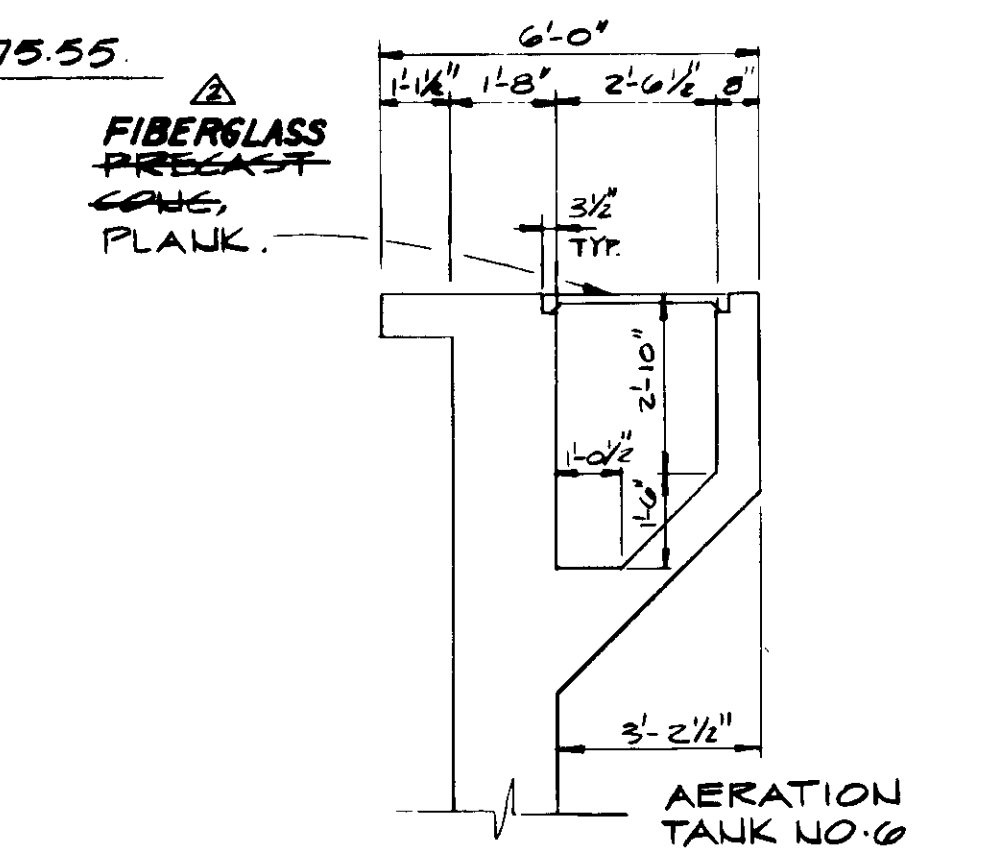


AERATION TANK NO. 6



SECTION E

SECTION F



WYE WALL DIMENSIONS.

NOTES: FIBERGLASS PRECAST CONCRETE PLANKS TO BE INSTALLED BETWEEN ALUMINUM PLANKS.

04101

RECORD DRAWINGS  
KATSUMA CONSULTING ENGINEERS  
No. 14038  
Exp. 3-31-89  
CIVIL ENGINEER  
STATE OF CALIFORNIA

REV	DATE	BY	DESCRIPTION

SCALE:	1" = 10'
DESIGNED	Y.K.
DRAWN	R.K./J.B.
CHECKED	Y.K.

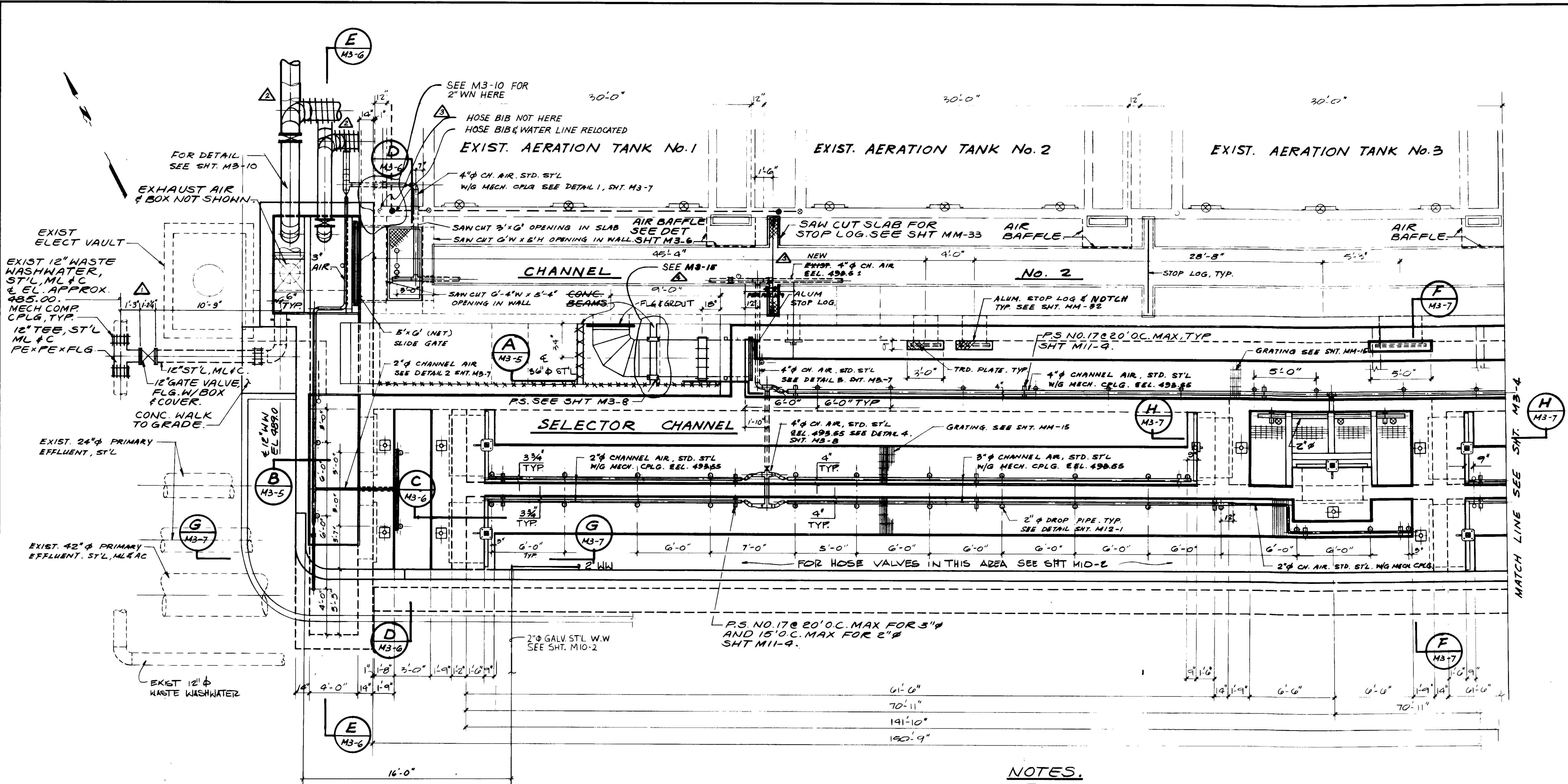
SUBMITTED	<i>[Signature]</i>	14038	8-7-87
	KATSUMA CONSULTING ENGINEERS	R.C.E. NO.	DATE
	ALEXANDER ENGINEERS	613	
		R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

GENERAL SECTIONS

SHEET M3-2



# PLAN

- NOTES.**
1. DENOTES CAST IRON SLIDE GATE.
  2. DENOTES ALUM. SLIDE GATE
  3. P.S. NO. 17 ANCHOR BOLT LOCATION SHALL BE MODIFIED FOR ATTACHMENT UNDER SLAB

04102

RECORD DRAWING  
 PREPARED BY: KATELRA CONSULTING ENGINEERS  
 DATE: 8-7-87



REV	DATE	BY	DESCRIPTION
1	8-17-87	A.B.	REV. PER K.P.C.
2	8-17-87	A.B.	REV. PER K.P.C.
3	8-17-87	A.B.	REV. PER K.P.C.
4	8-17-87	A.B.	REV. PER K.P.C.

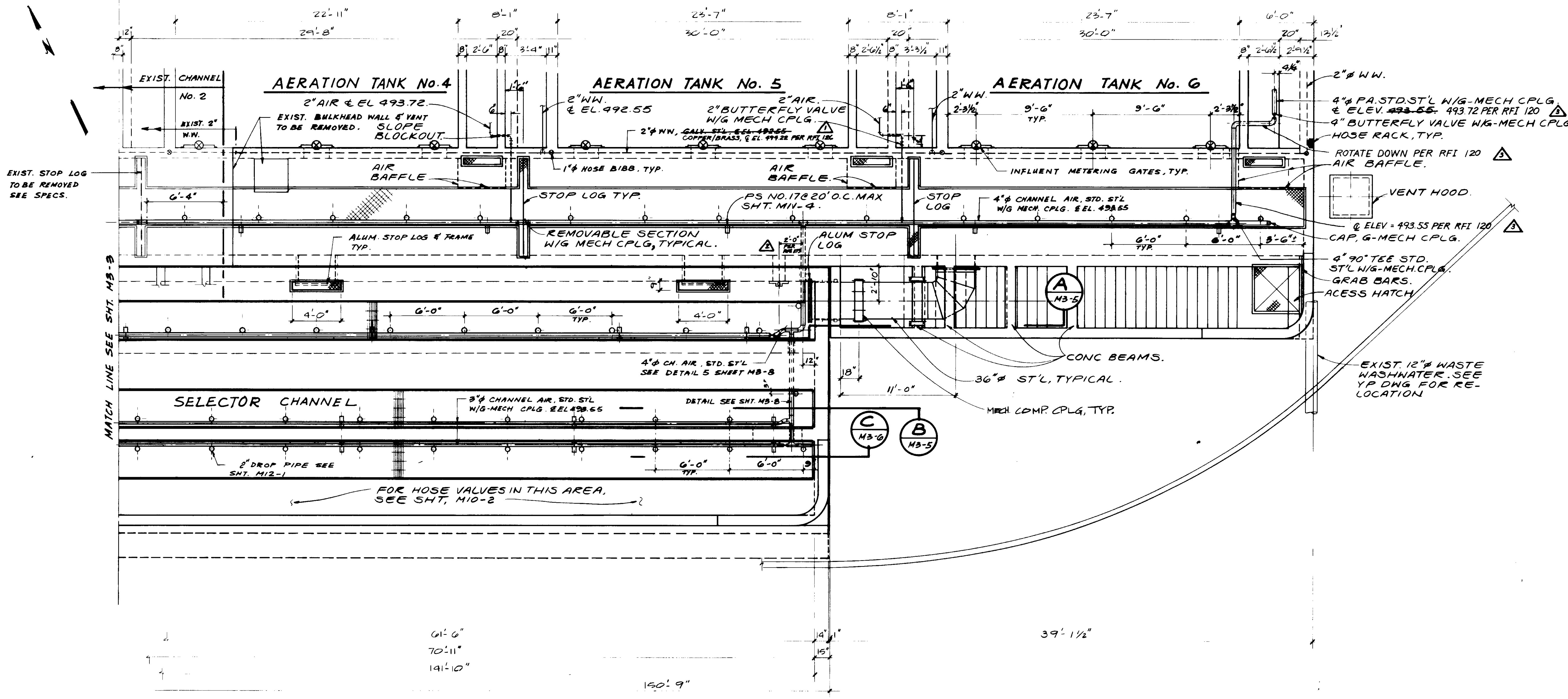
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DRAWN: Y.K.	CHECKED:ALEXANDER ENGINEERS	DATE: 8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SELECTOR CHANNEL & CHANNEL No. 2, PLAN - I

SHEET M3-3





**PLAN**

04103

RECORD DRAWING  
 For Final Approval by SHRETT FAVORING CORP.  
*[Signature]*  
 KALEX CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION
1	4-17-87	A.B.	REV. PER K.F.C.
2	4-17-87	A.B.	REV. PER K.F.C.
3	4-17-87	A.B.	REV. PER K.F.C.

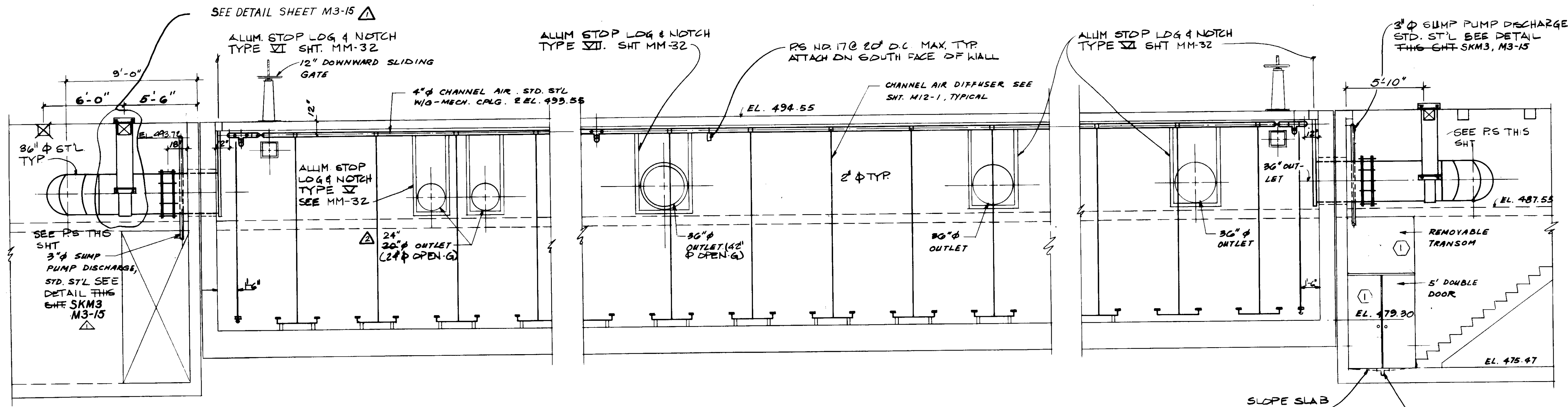
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DESIGNED:	DN/KOH
DRAWN:	YK
CHECKED:	
SUBMITTED:	Y. K. / DN
DATE:	8-7-87
PROJECT:	14038
ENGINEER:	KALEX CONSULTING ENGINEERS
REGISTERED:	R.C.E. NO.
DATE:	
REGISTERED:	813
ENGINEER:	ALEXANDER ENGINEERS
REGISTERED:	R.C.E. NO.
DATE:	

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

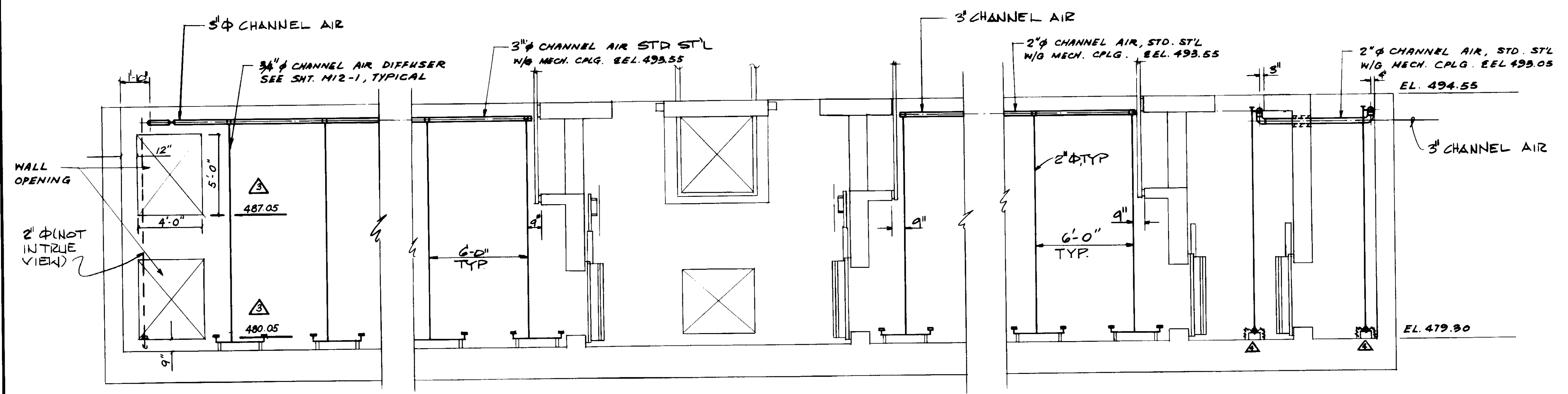
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SELECTOR CHANNEL & CHANNEL NO. 2, PLAN - II

SHEET  
M3-4





**SECTION A**



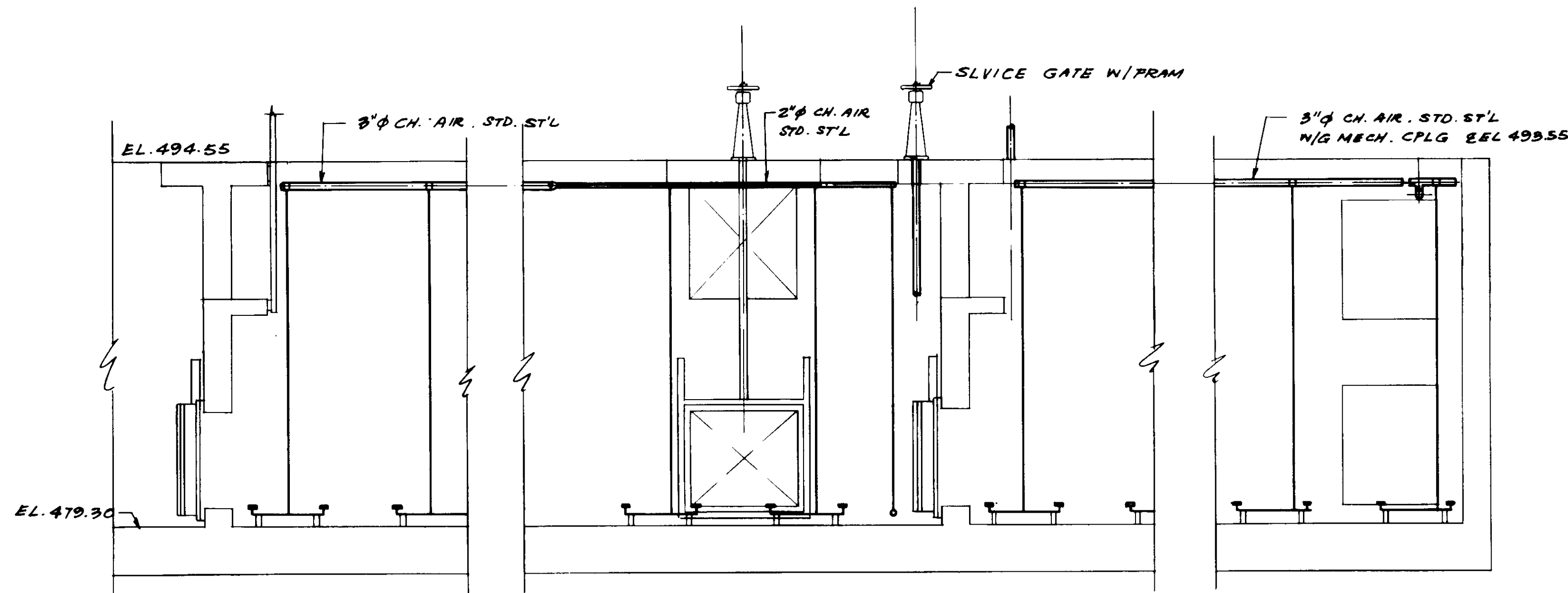
**SECTION B**

04104

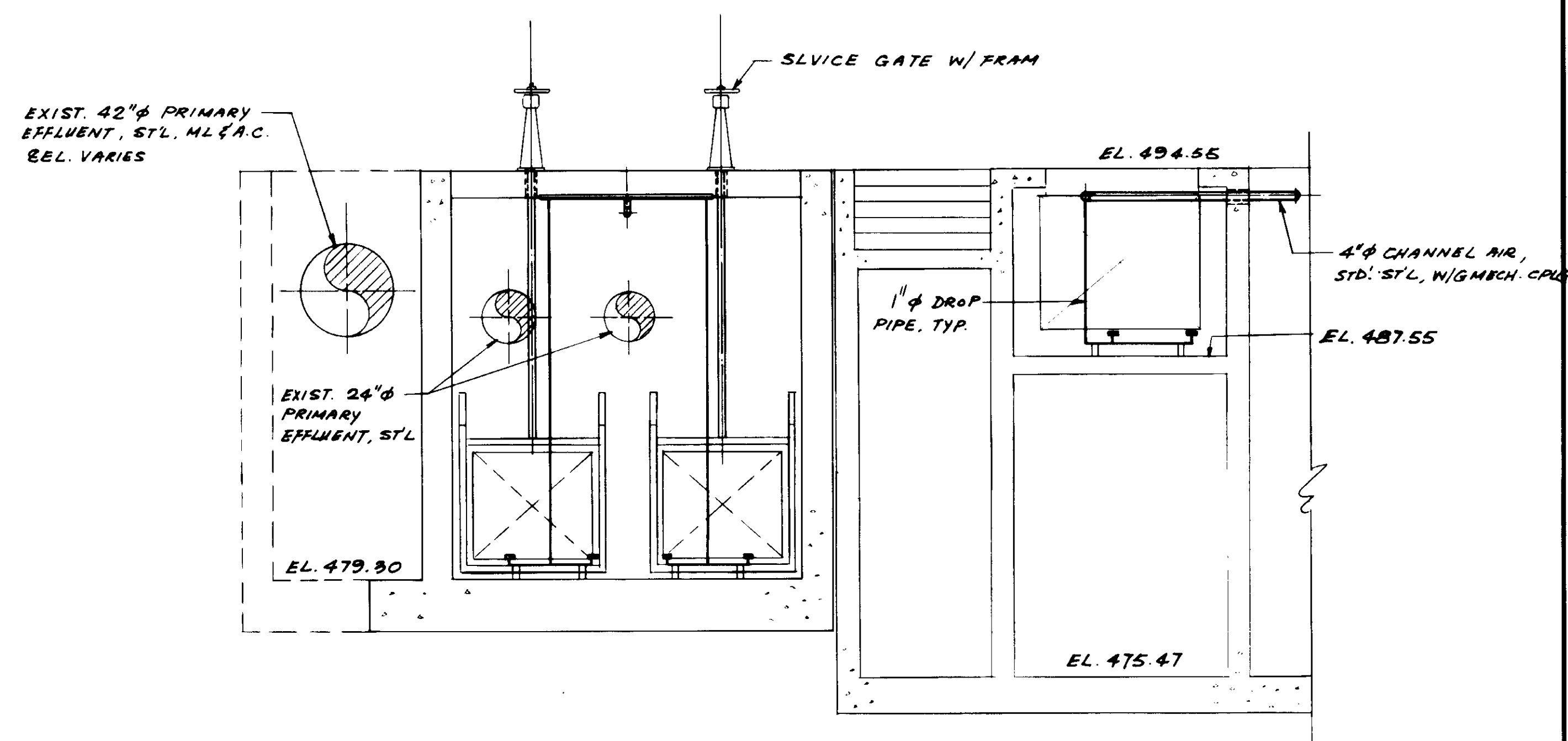
RECORD DRAWING  
 For Plans Issued by Permitting Agency  
 KATSUMURA CONSULTING ENGINEERS JUNE 1989



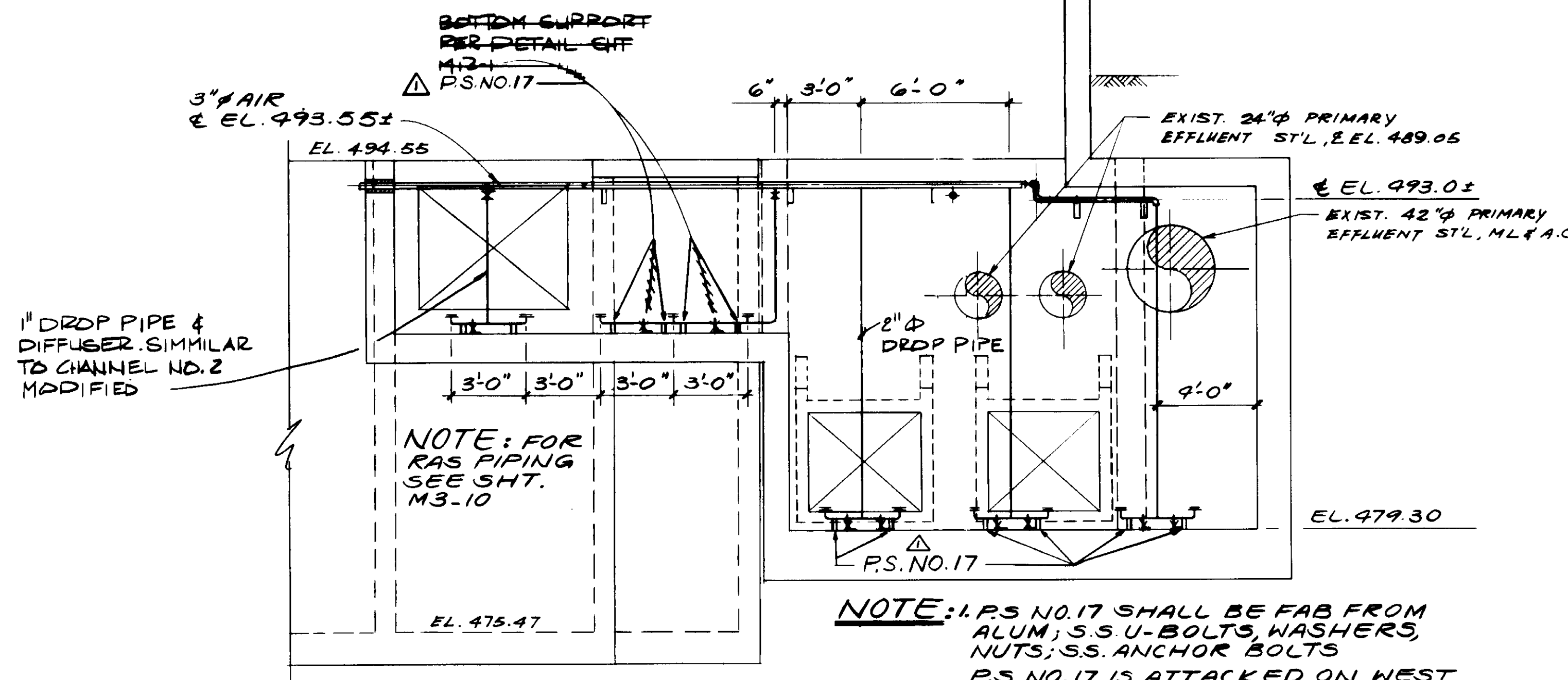
<table border="1"> <tr> <td>REV</td> <td>DATE</td> <td>BY</td> <td>DESCRIPTION</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				REV	DATE	BY	DESCRIPTION					<table border="1"> <tr> <td>REV</td> <td>DATE</td> <td>BY</td> <td>DESCRIPTION</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>				REV	DATE	BY	DESCRIPTION					SCALE: 1/4" = 1'-0"		DESIGNED: Y.K./KOH DRAWN: KOH CHECKED: Y.K.		SUBMITTED: <i>Y. K. Katsumura</i> 14038 8-7-87 KATSUMURA CONSULTING ENGINEERS R.C.E. NO. DATE 613 ALEXANDER ENGINEERS R.C.S.E. NO. DATE		<b>KALEX ENGINEERS</b> Katsumura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California		<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> SELECTOR CHANNEL, SECTIONS - I		SHEET <b>M3-5</b>	
REV	DATE	BY	DESCRIPTION																																
REV	DATE	BY	DESCRIPTION																																



SECTION C

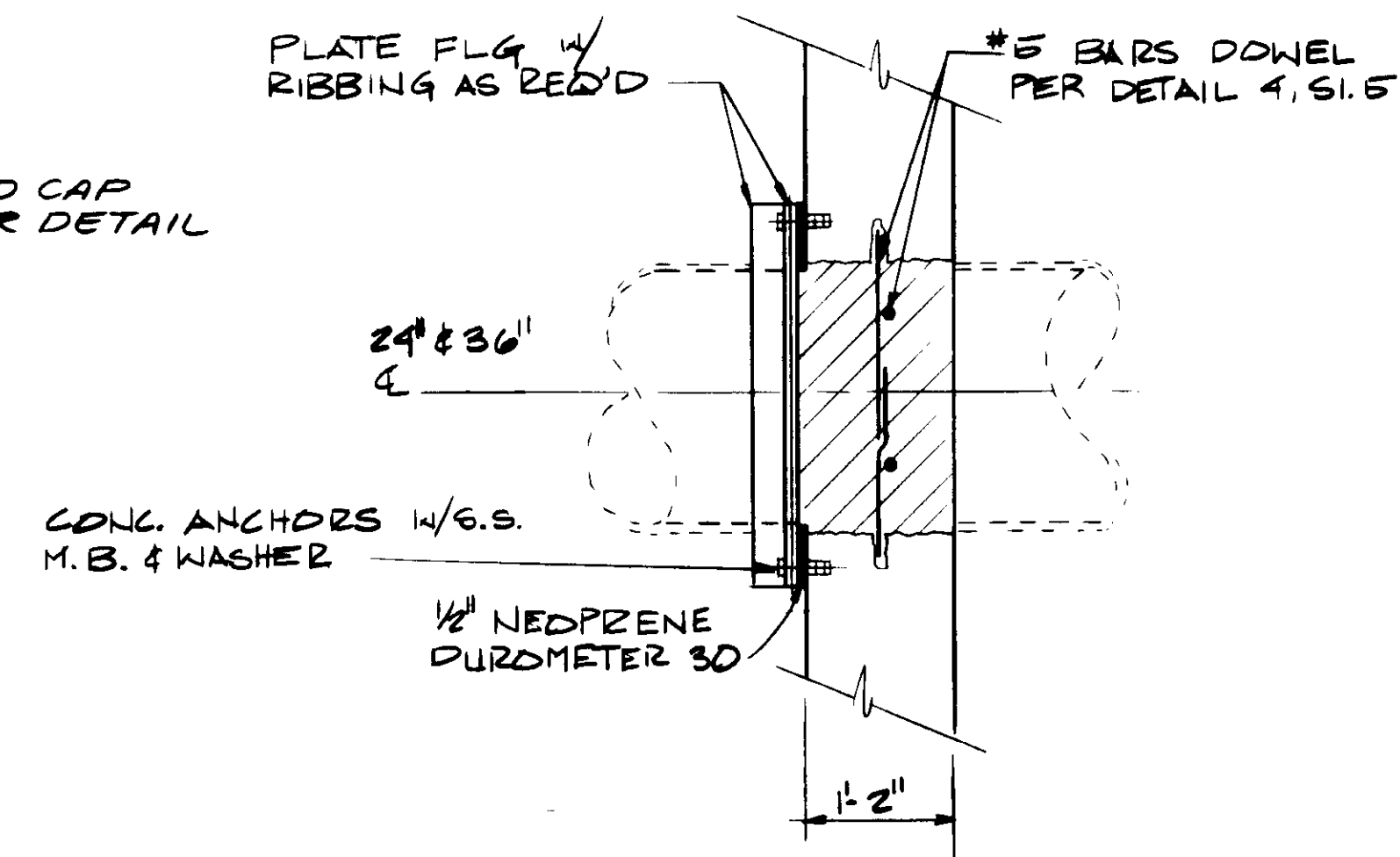


SECTION D



SECTION E

REMOVE AND CAP  
OUTLET PER DETAIL  
BELOW



CAPPING DETAIL  
NO SCALE

PIPE SIZE	24"	36"
NOM. SIZE	28"	44"
FLG. D.P	36 1/2"	55 1/2"
DIA. B.C	34"	51 3/4"
BOLT DIA.	3/4"	1"
NO BOLT	14	20
FLG THK.	7/8"	1 1/8"

- NOTES:
1. PLATE FLG TO HAVE SUBMERGED METAL PROTECTIVE COATING
  2. INSTALL RE FLG W/ NEOPRENE GASGET. AFTER REMOVING PIPE
  3. INSTALL REBAR AND POUR CONCRETE SOLID
  4. SURFACE FINISH PER SPECS.

RECORD DRAWING  
KATSURA CONSULTING ENGINEERS JUNE 1988

04105



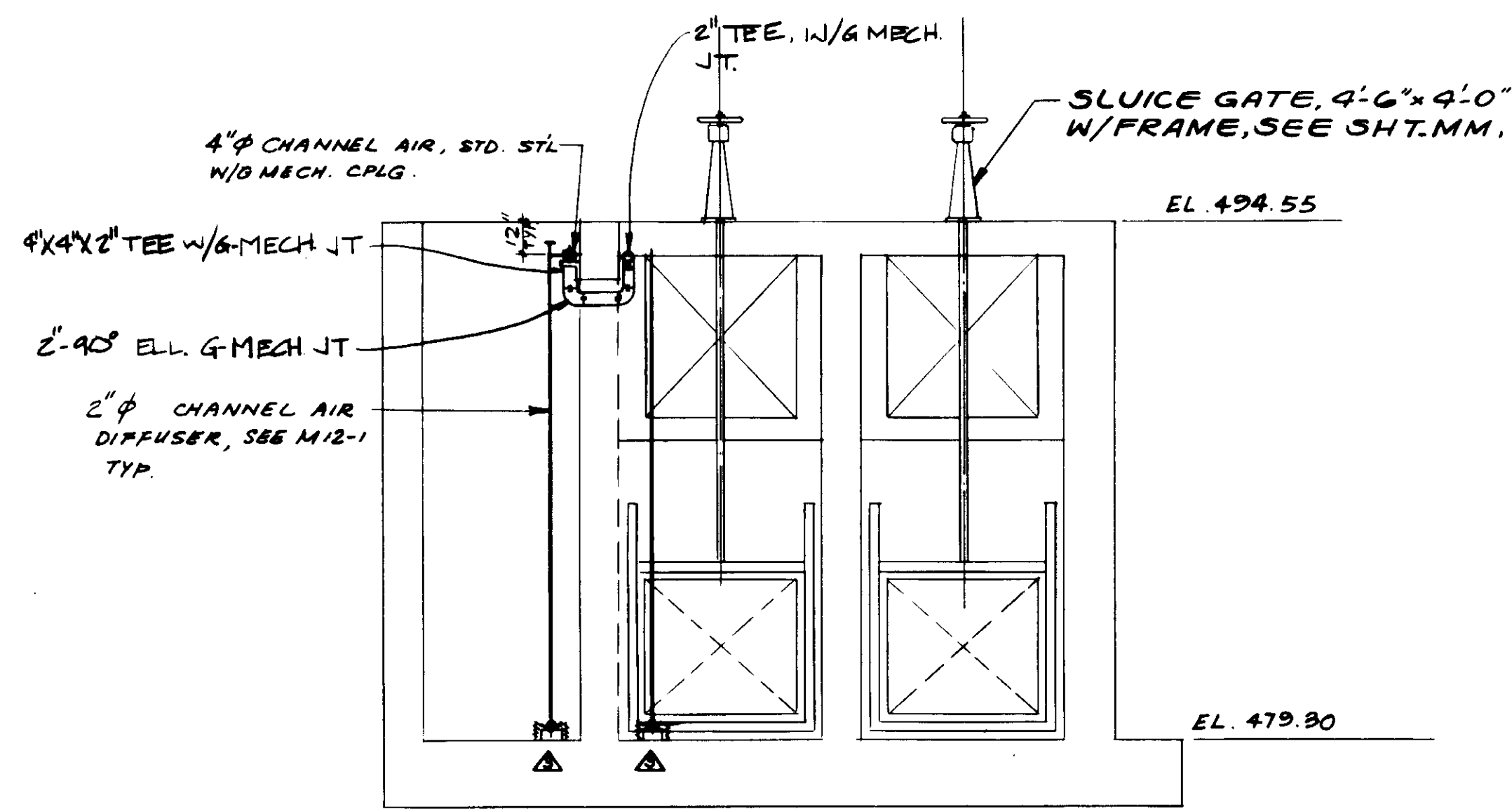
REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED: Y.K./S.K.	SUBMITTED: 14038 8-7-87
DRAWN: Y.K.	CHECKED: S.K.	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS 613 R.C.E. NO. DATE

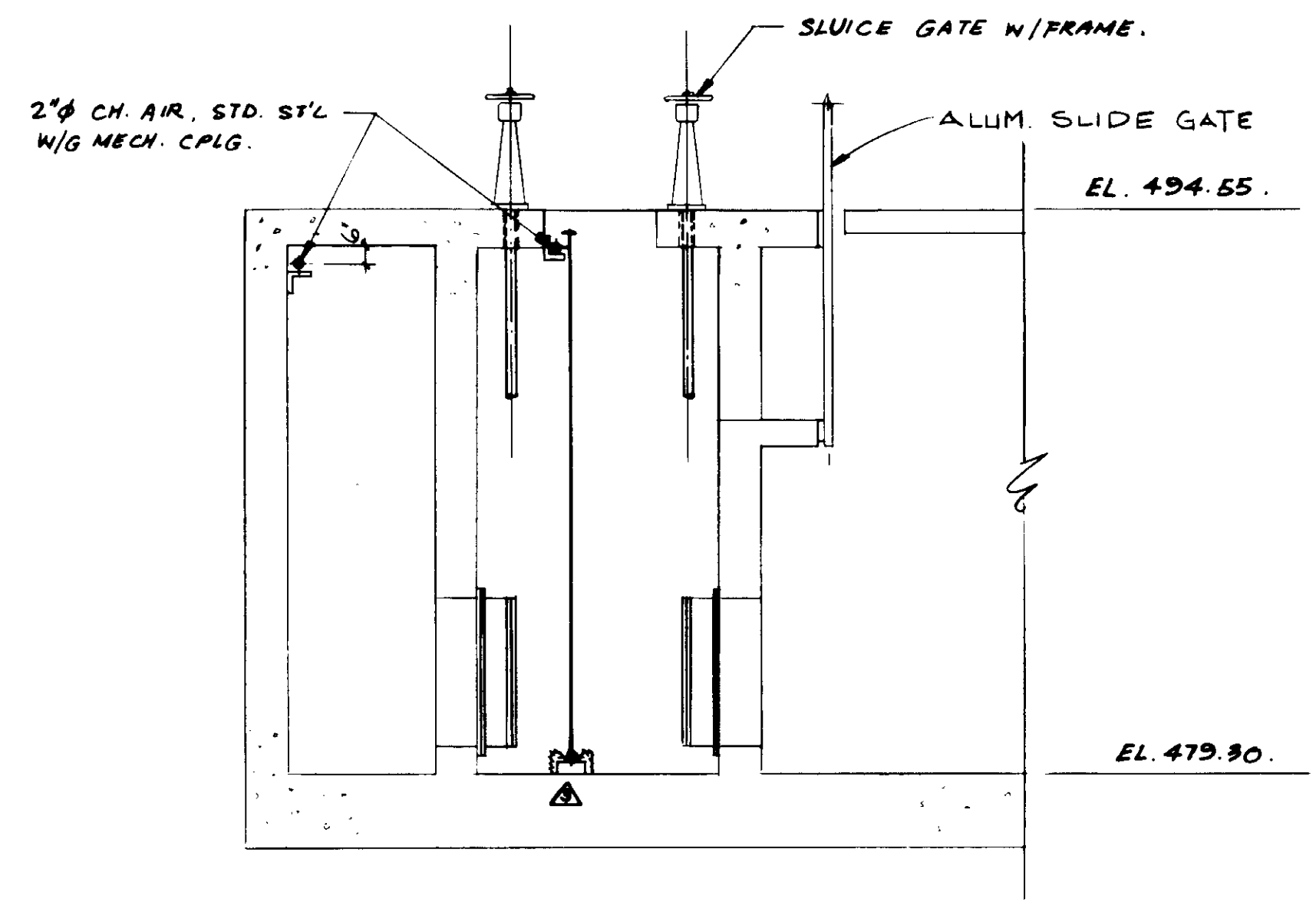
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SELECTOR CHANNEL, SECTIONS - II

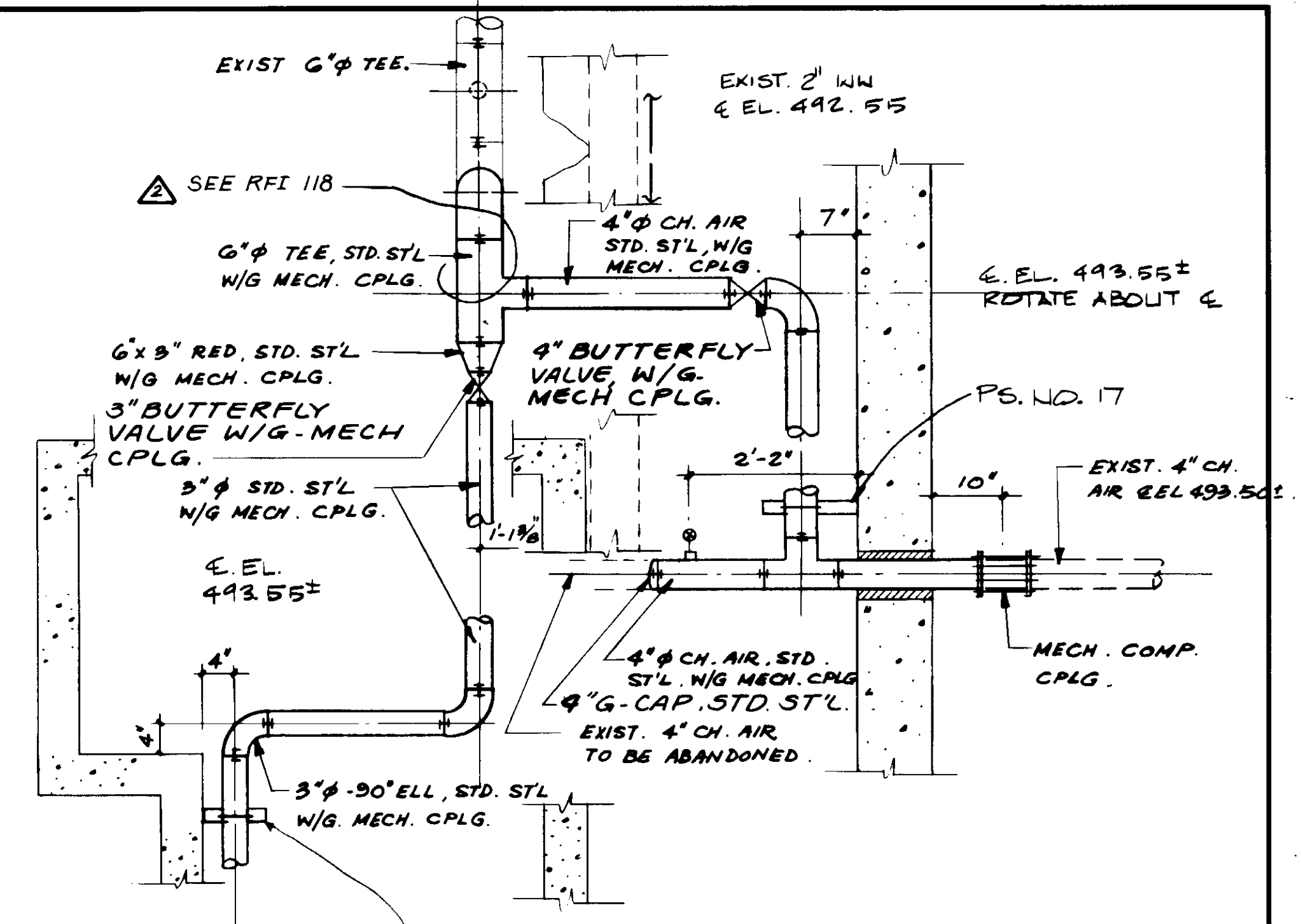
SHEET  
M3-6



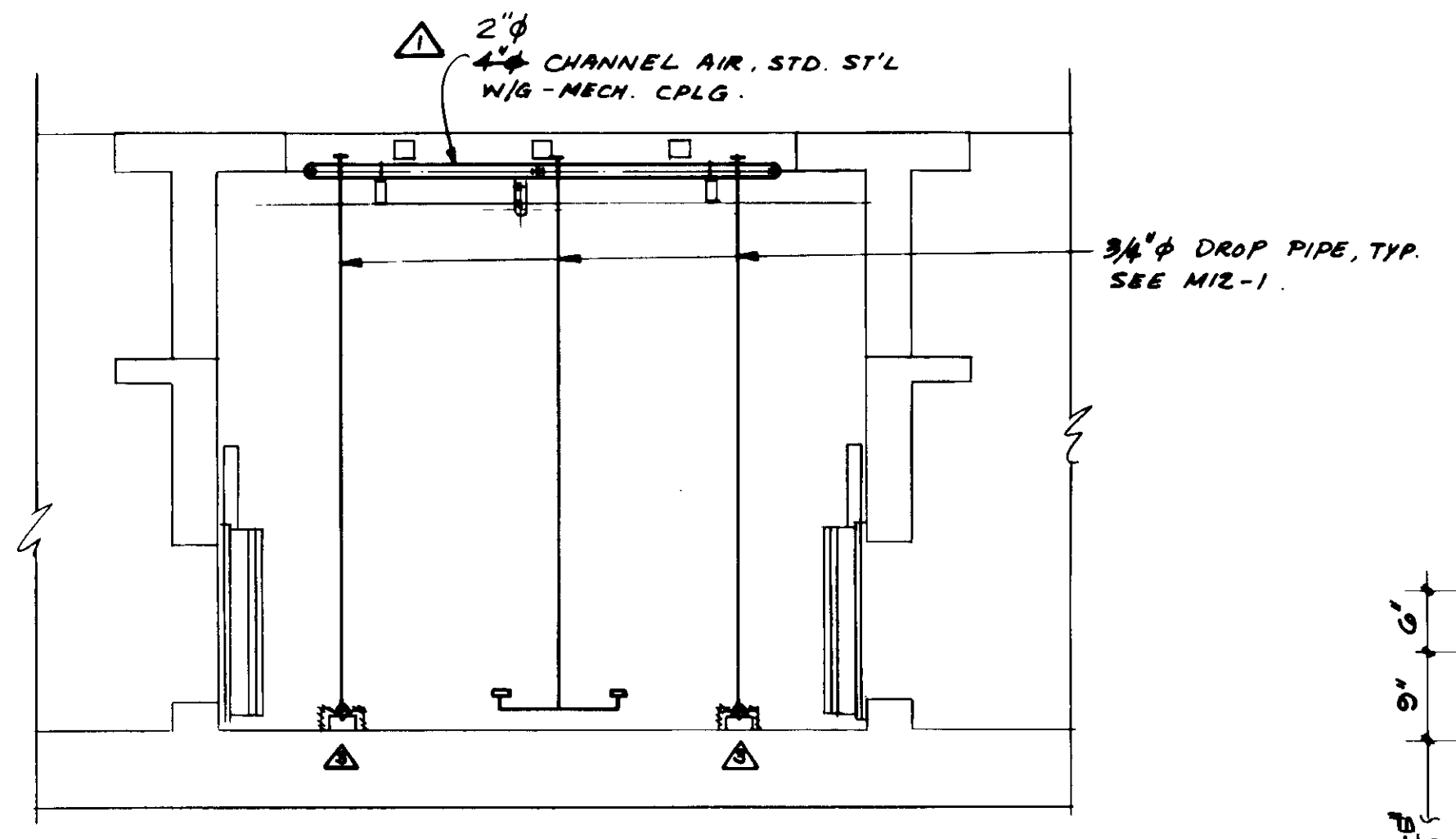
**SECTION F**  
SCALE: 1/4" = 1'-0"



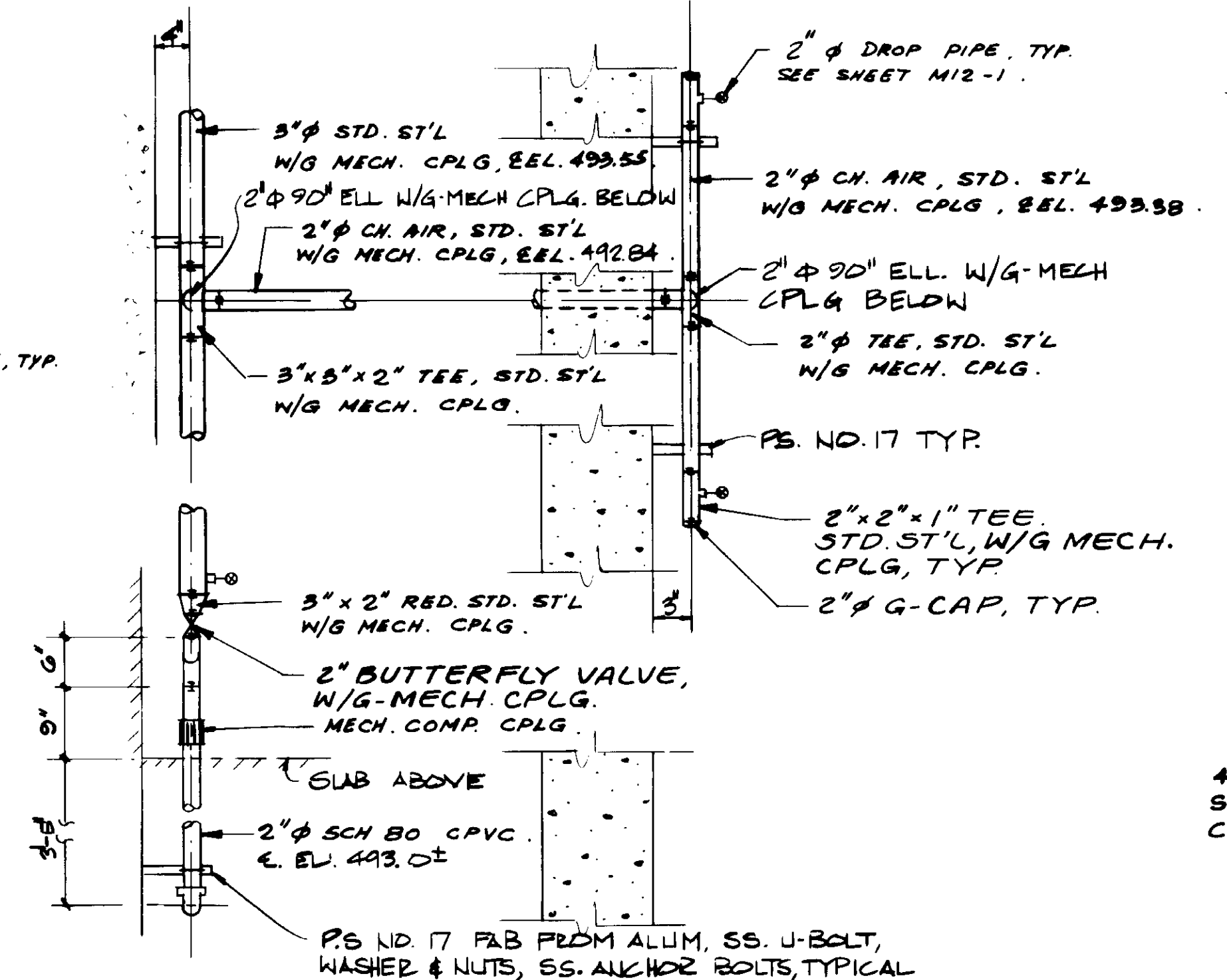
**SECTION G**  
SCALE: 1/4" = 1'-0"



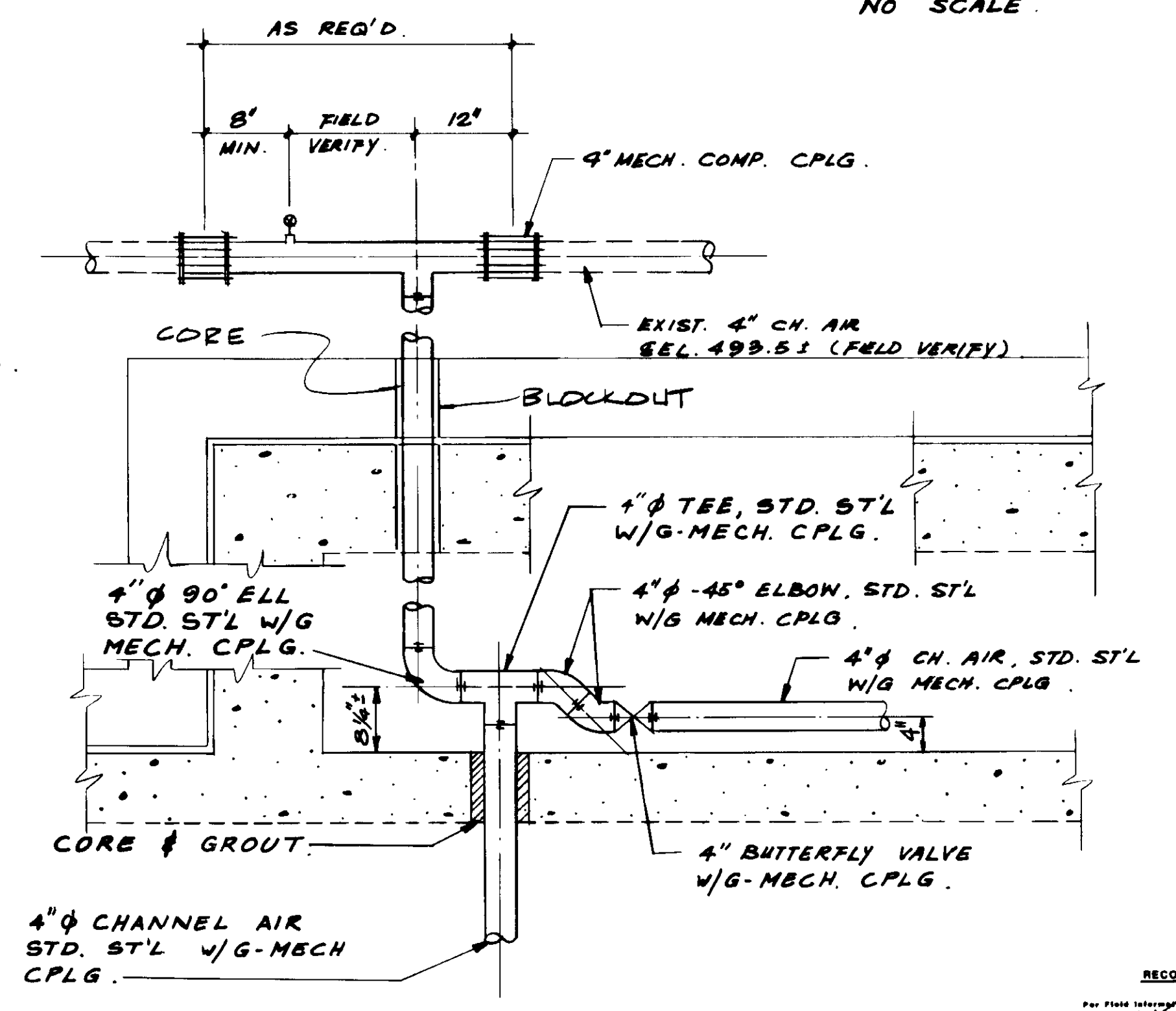
**DETAIL 1**  
NO SCALE



**SECTION H**  
SCALE: 1/4" = 1'-0"



**DETAIL 2**  
NO SCALE



**DETAIL 3**  
NO SCALE

RECORD DRAWINGS  
For Plans Prepared by DIRECT PAVING CORP.  
*[Signature]*  
KATARA CONSULTING ENGINEERS JUNE 1989

04106



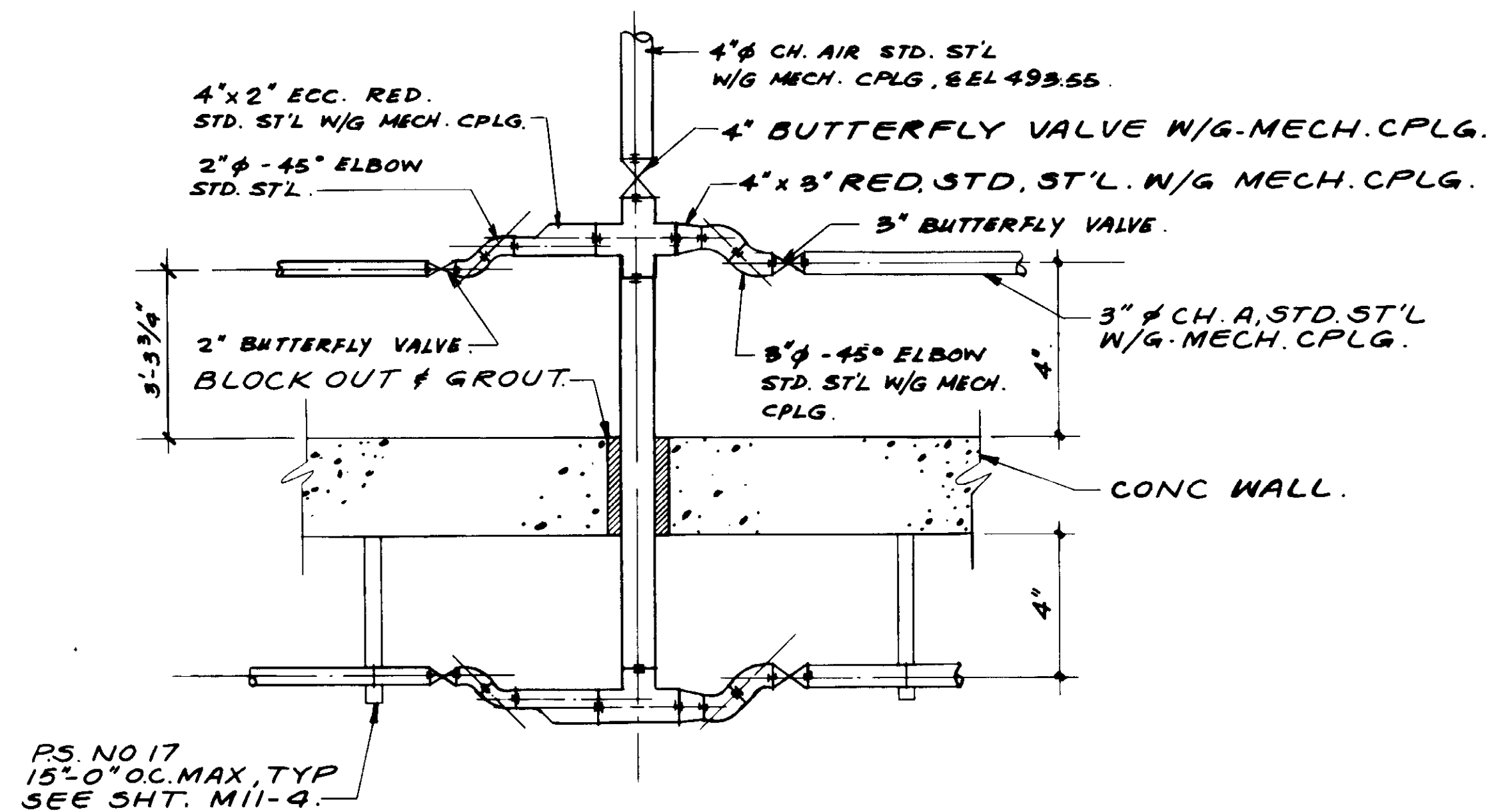
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2	4-17-89	A.B.	REV. PER K.P.C.
3	4-17-89	A.B.	REV. PER K.P.C.

SCALE:	AS	NOTED
DESIGNED	S.K.	
DRAWN	Y.K.	
CHECKED		
SUBMITTED	<i>[Signature]</i>	14038 8-7-87
	KATARA CONSULTING ENGINEERS	R.C.E. NO. DATE
	ALEXANDER ENGINEERS	513 R.C.E. NO. DATE

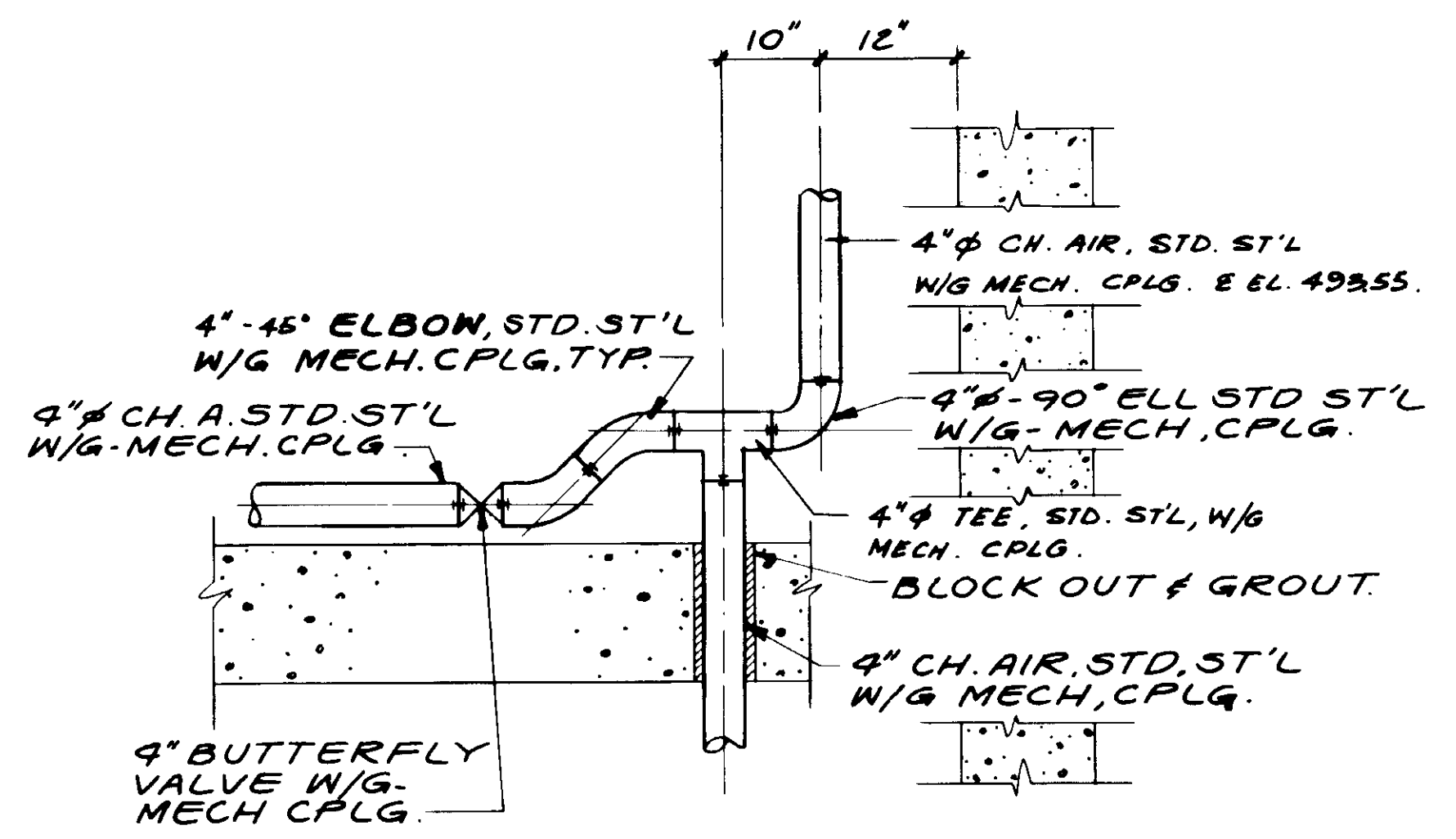
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SELECTOR CHANNEL, PIPING DETAILS - I

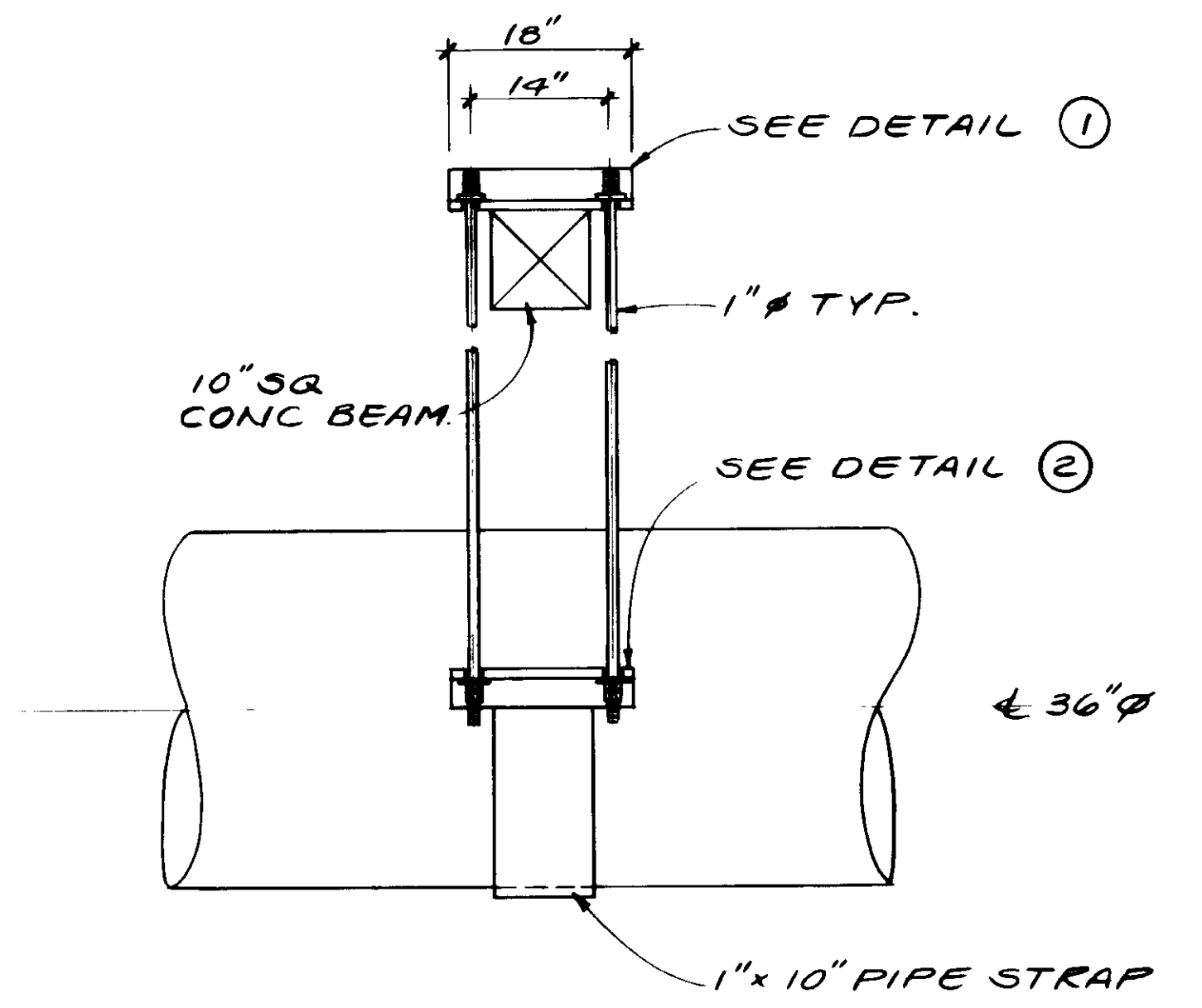
SHEET  
M3-7



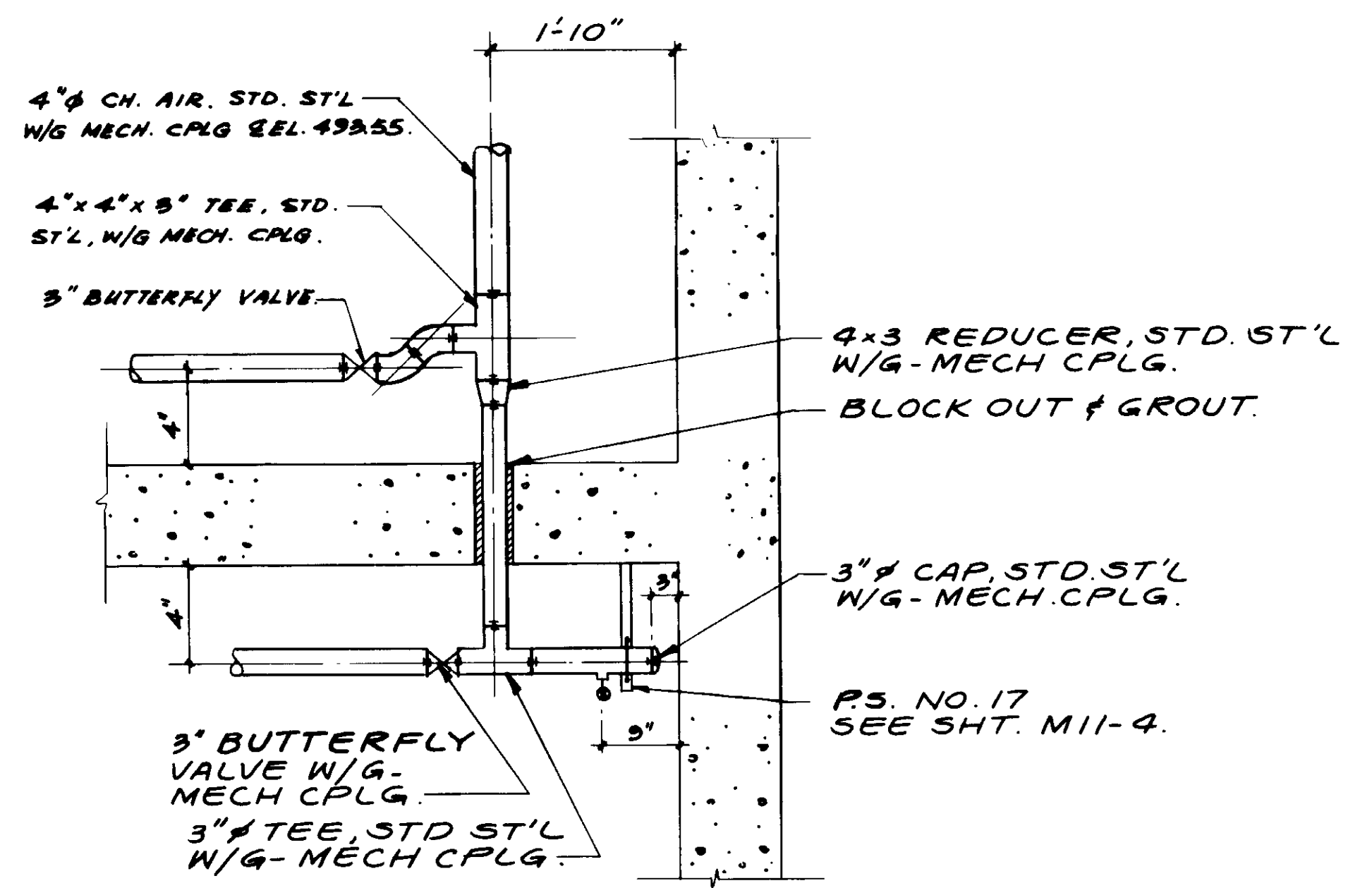
**DETAIL 4.**  
NO SCALE.



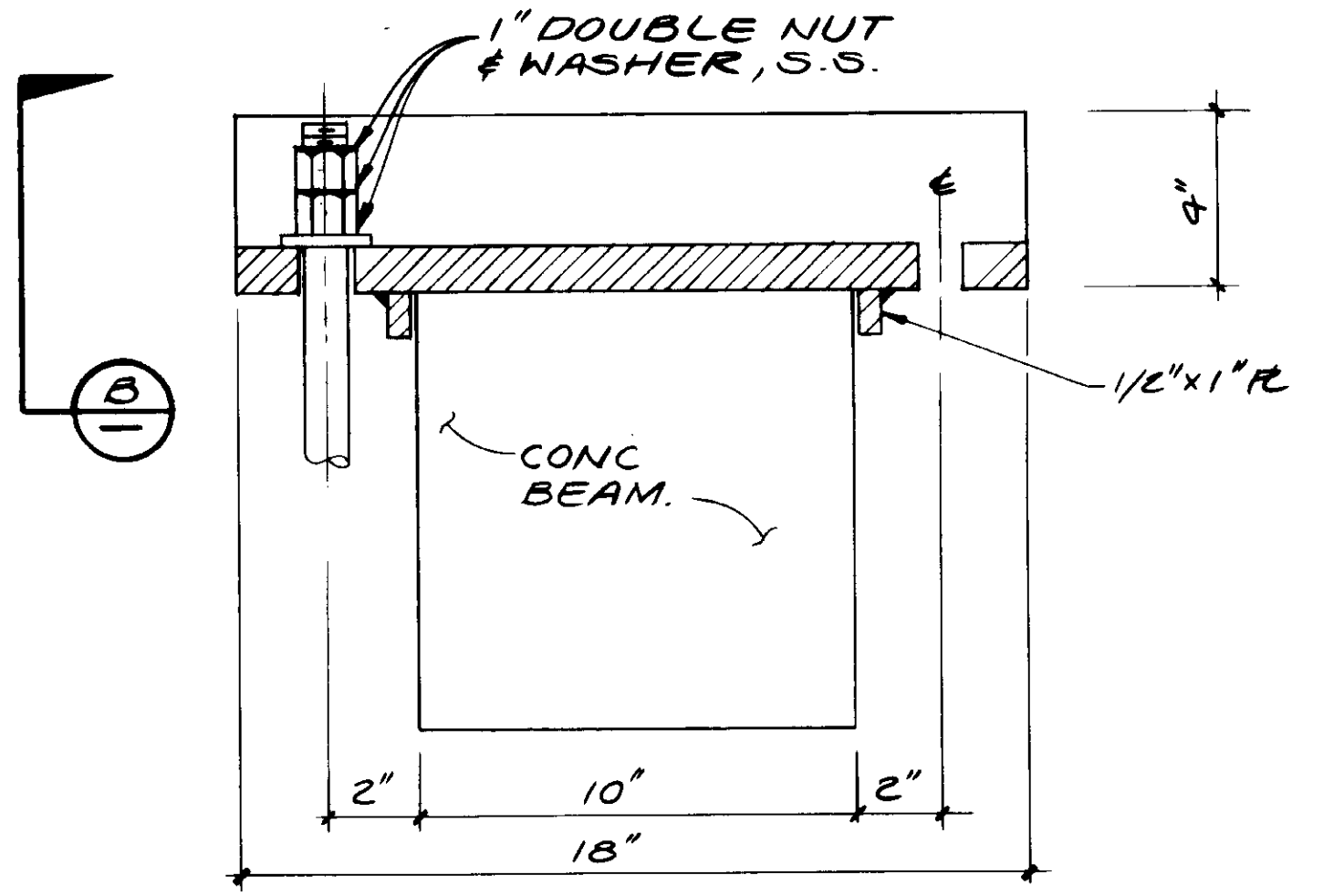
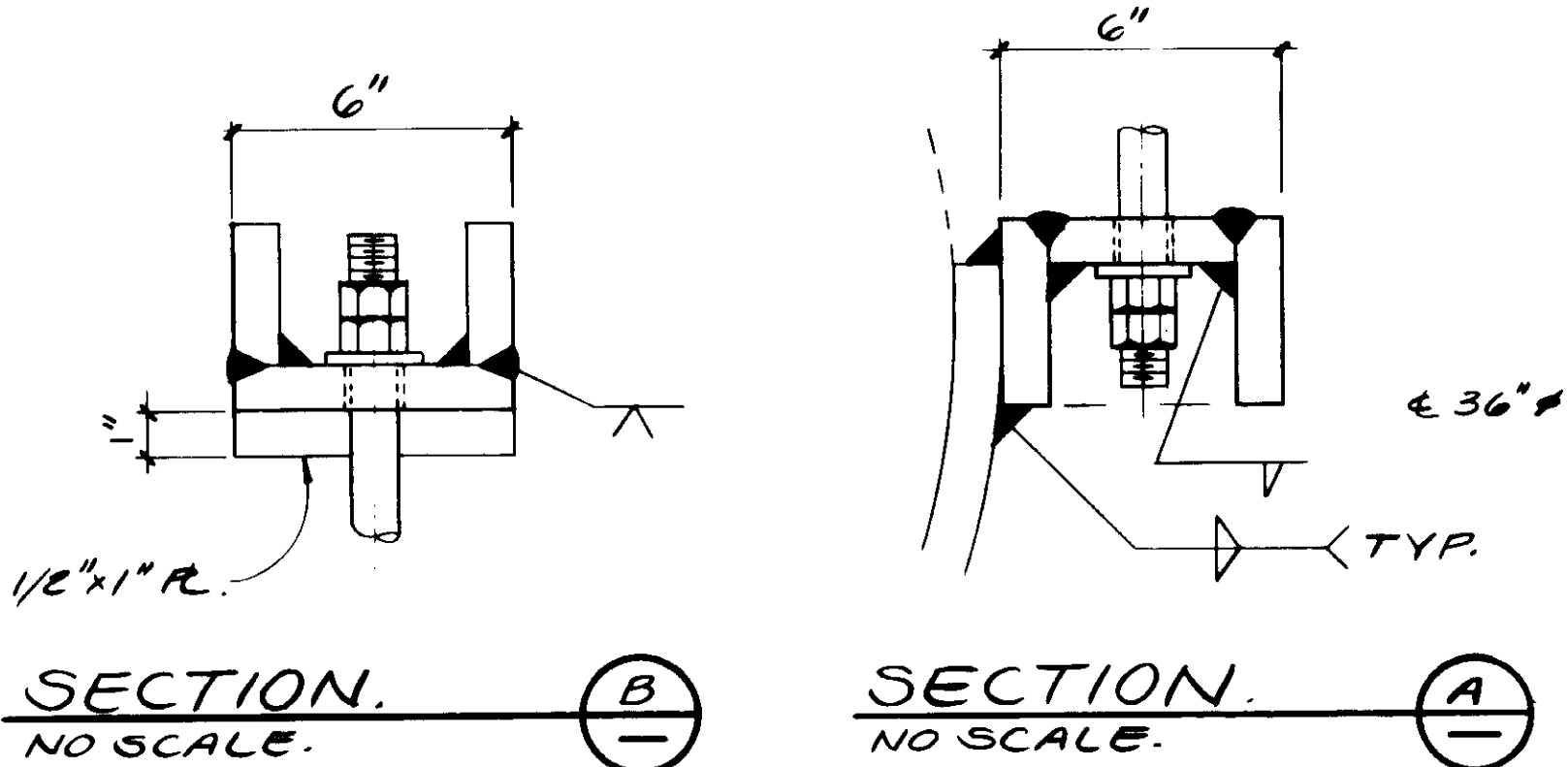
**DETAIL 5.**  
NO SCALE.



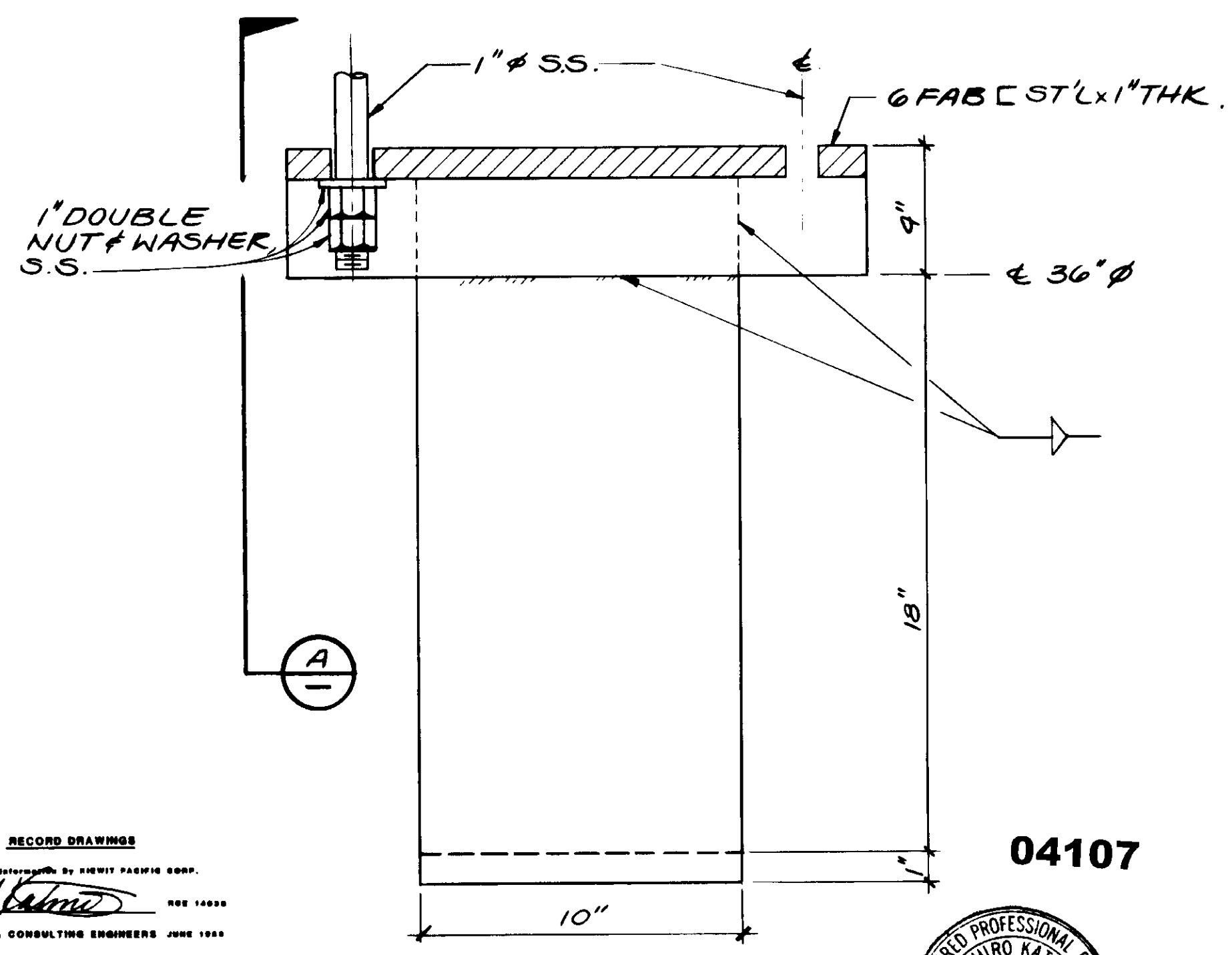
**36" PRE. PIPE SUPPORT. ELEVATION.**  
NO SCALE.



**DETAIL 6.**  
NO SCALE.



**DETAIL 1.**  
NO SCALE.



**DETAIL 2.**  
NO SCALE.

RECORD DRAWING  
 FOR FINAL REVIEW BY BREWIT PARTNER GROUP  
 KATSUMA CONSULTING ENGINEERS  
 002 14038  
 KATSUMA CONSULTING ENGINEERS JUNE 1988

04107



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

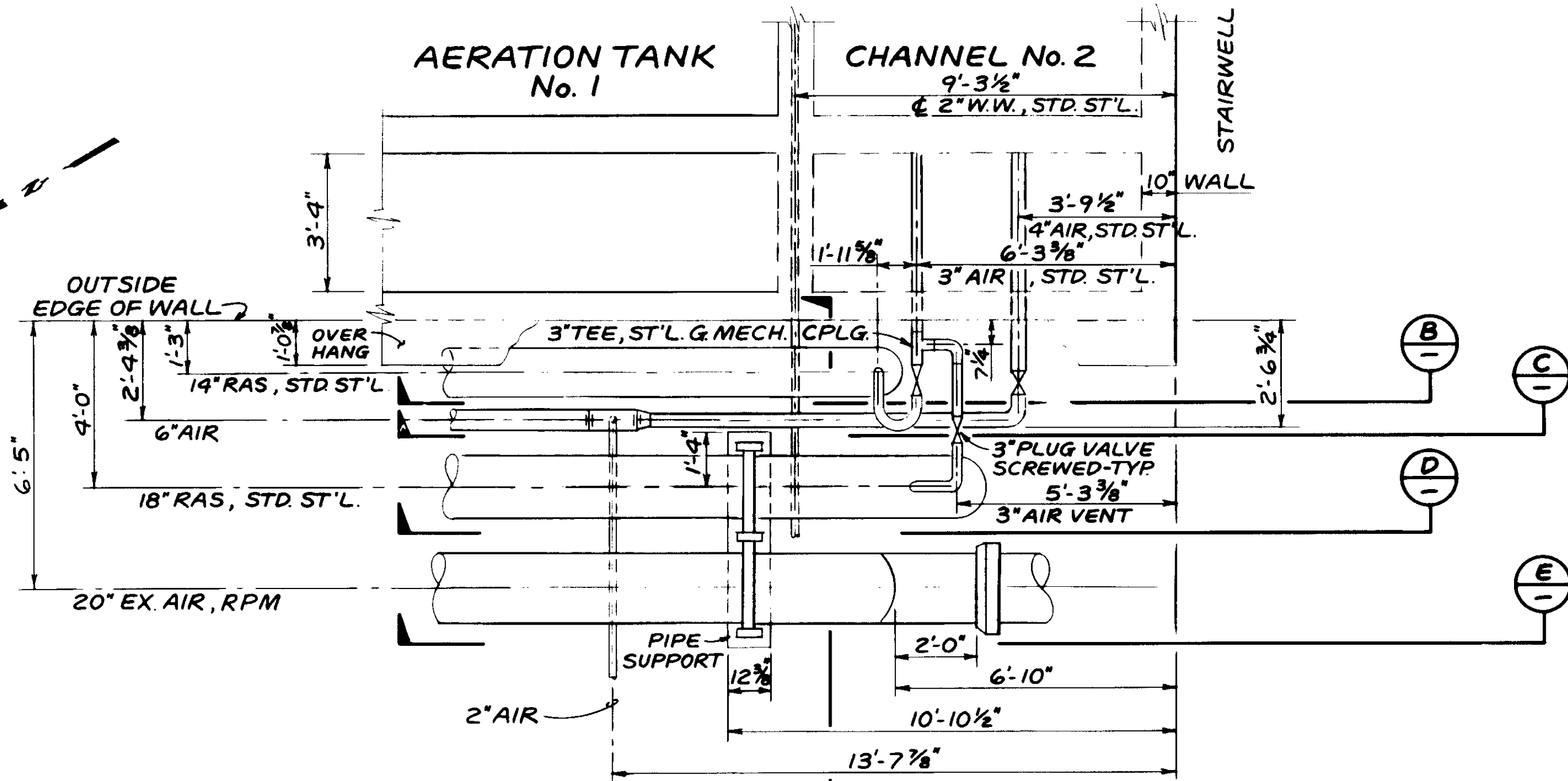
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DRAWN:	Y.K.	CHECKED:	Y.K.	14038	DATE
				KATSUMA CONSULTING ENGINEERS	R.C.E. NO.
				ALEXANDER ENGINEERS	R.C.E. NO.

**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

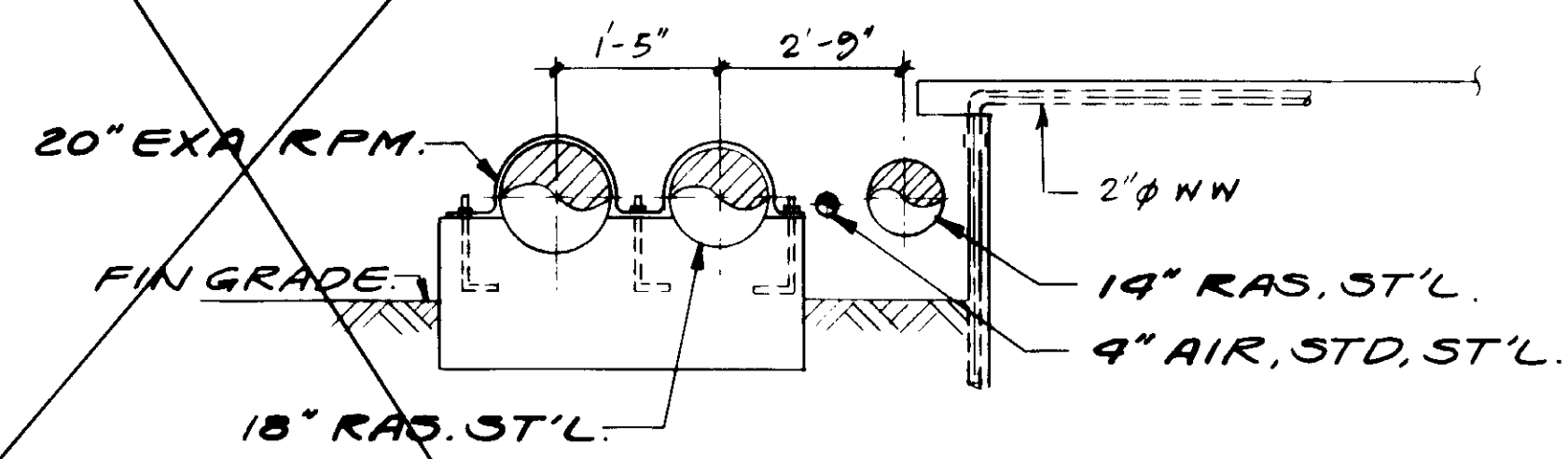
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SELECTOR CHANNELS, PIPING DETAILS - II

SHEET  
**M3-8**

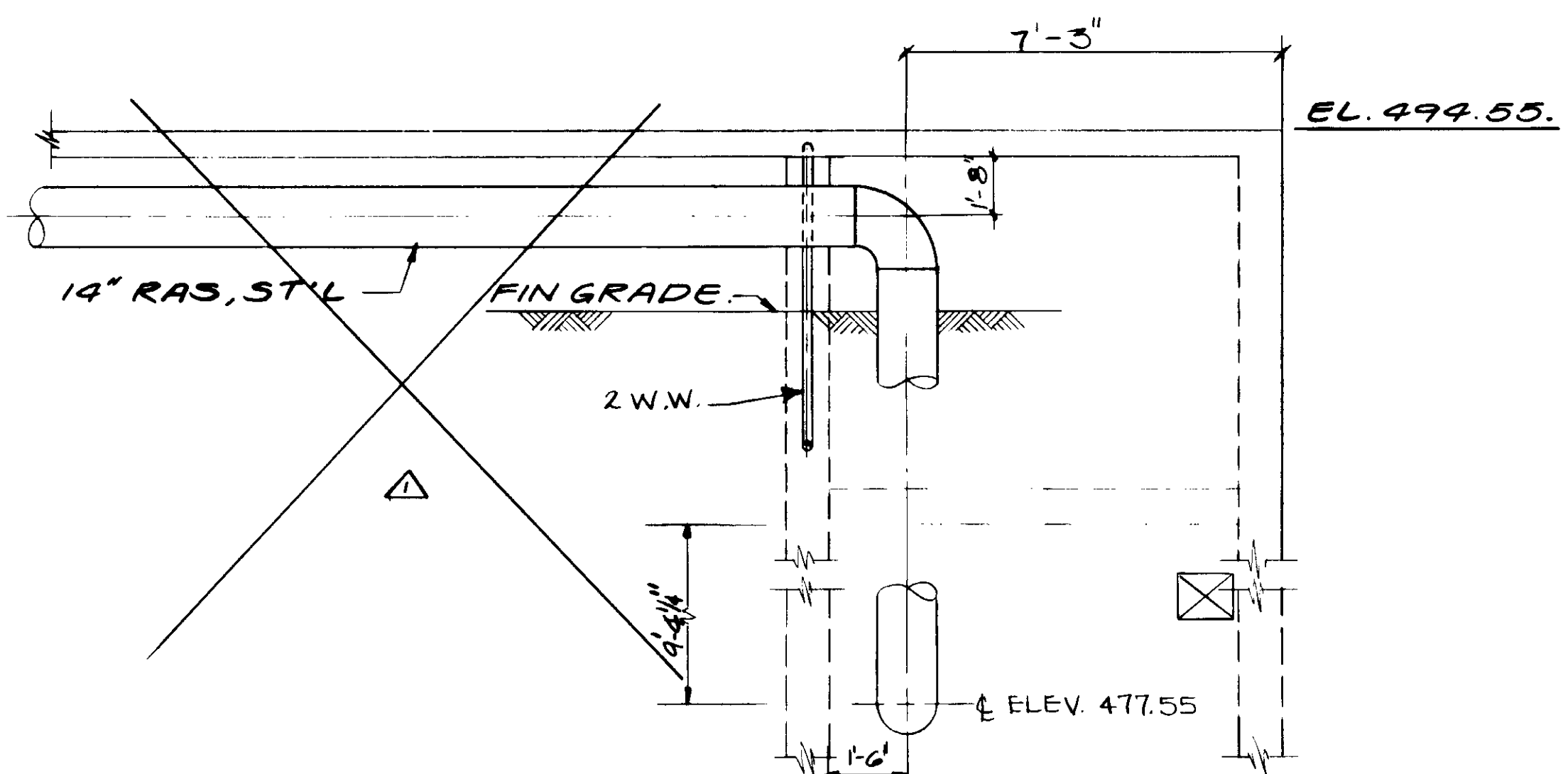




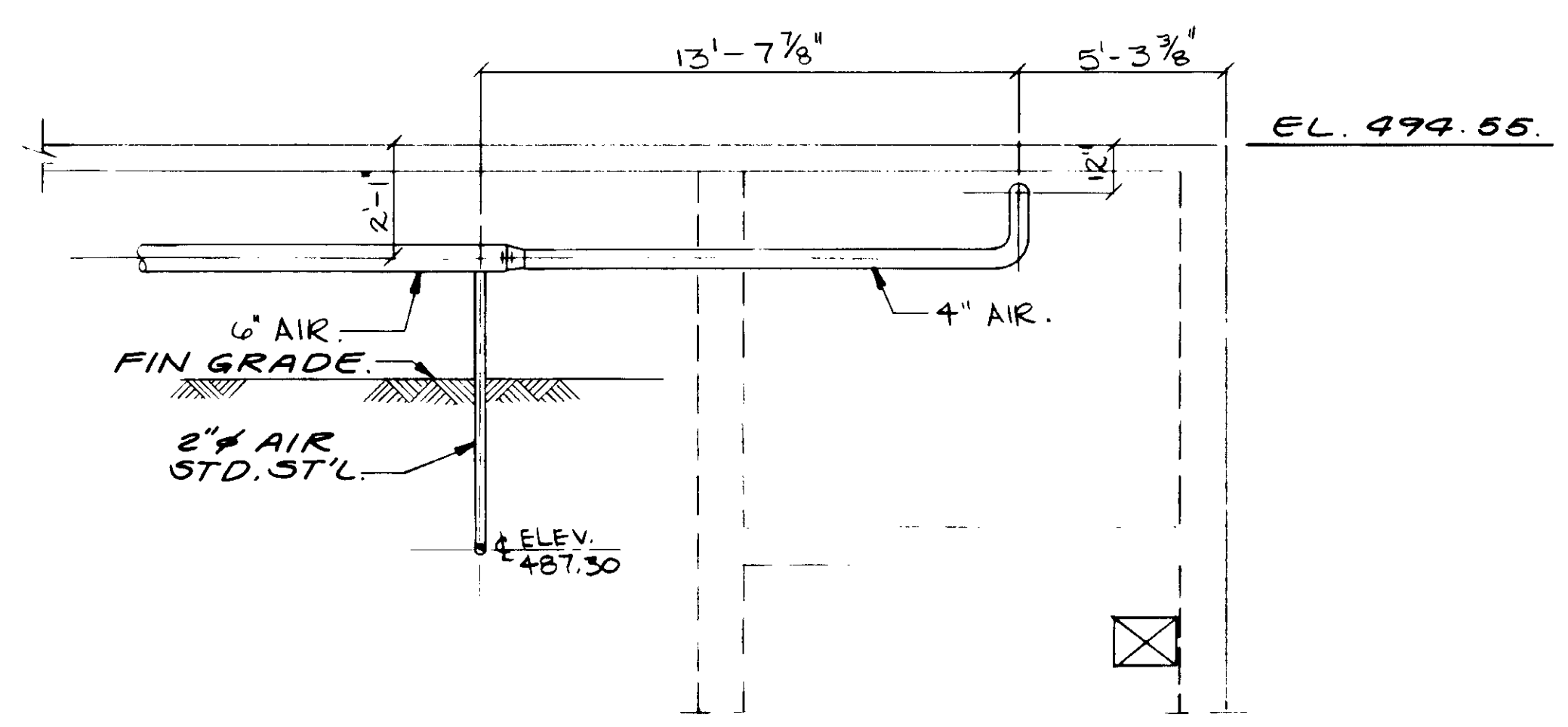
PLAN



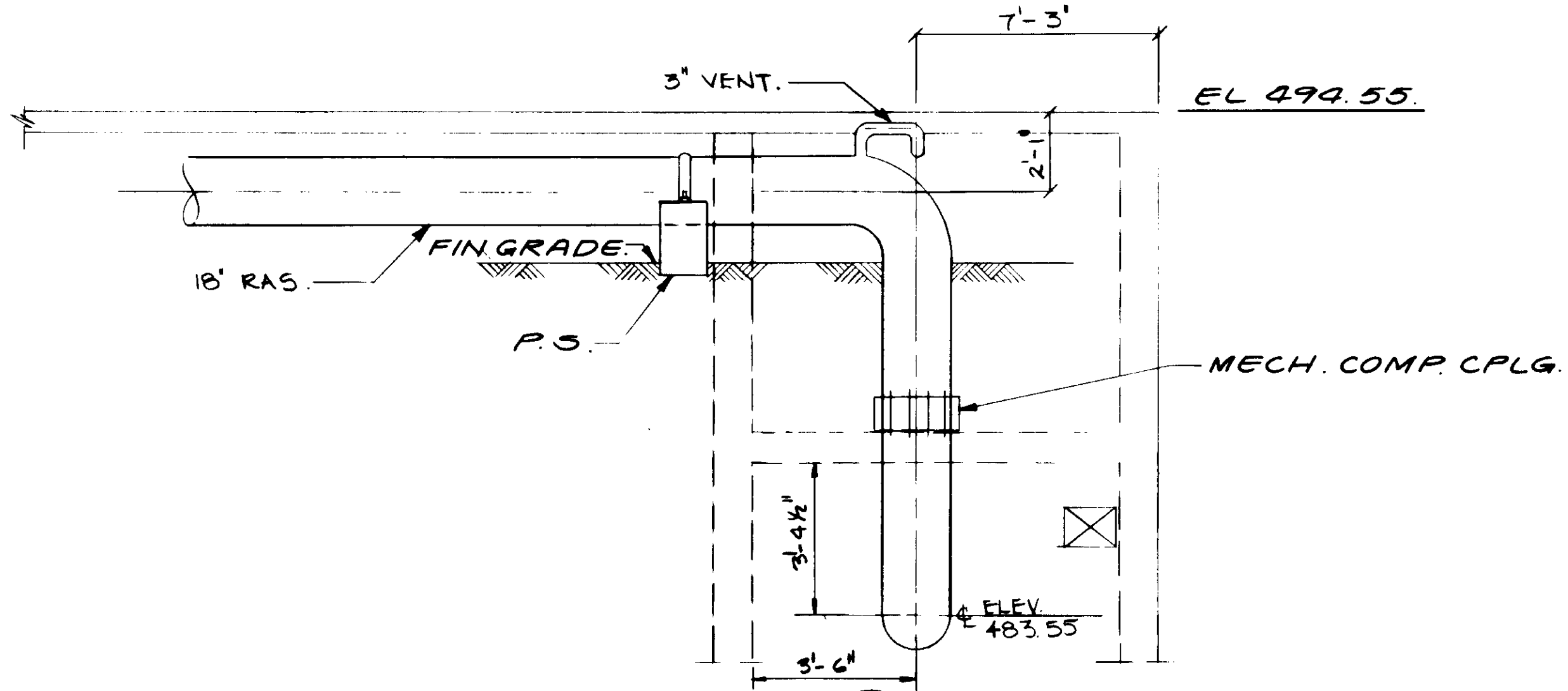
SECTION A



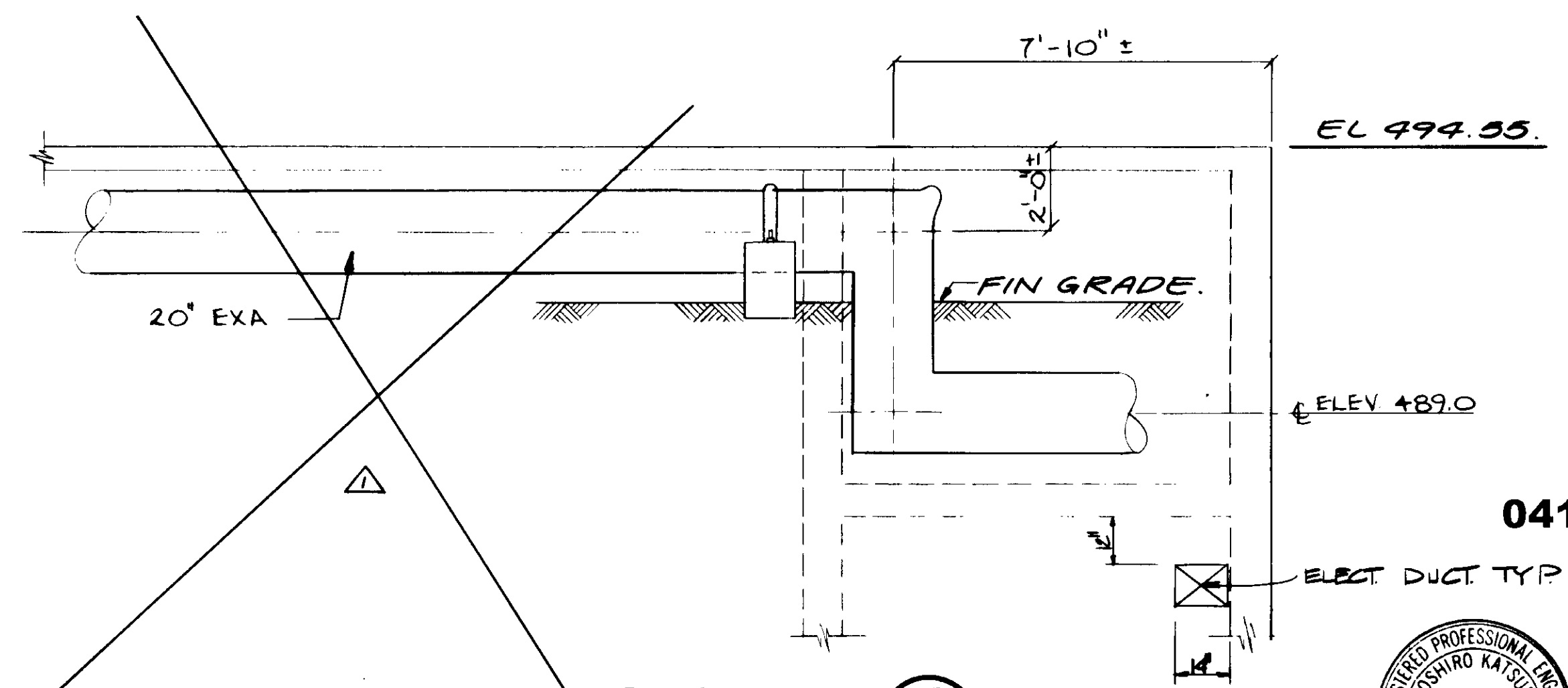
SECTION B



SECTION C



SECTION D



SECTION E

04108



RECORD DRAWING  
KATSURA CONSULTING ENGINEERS

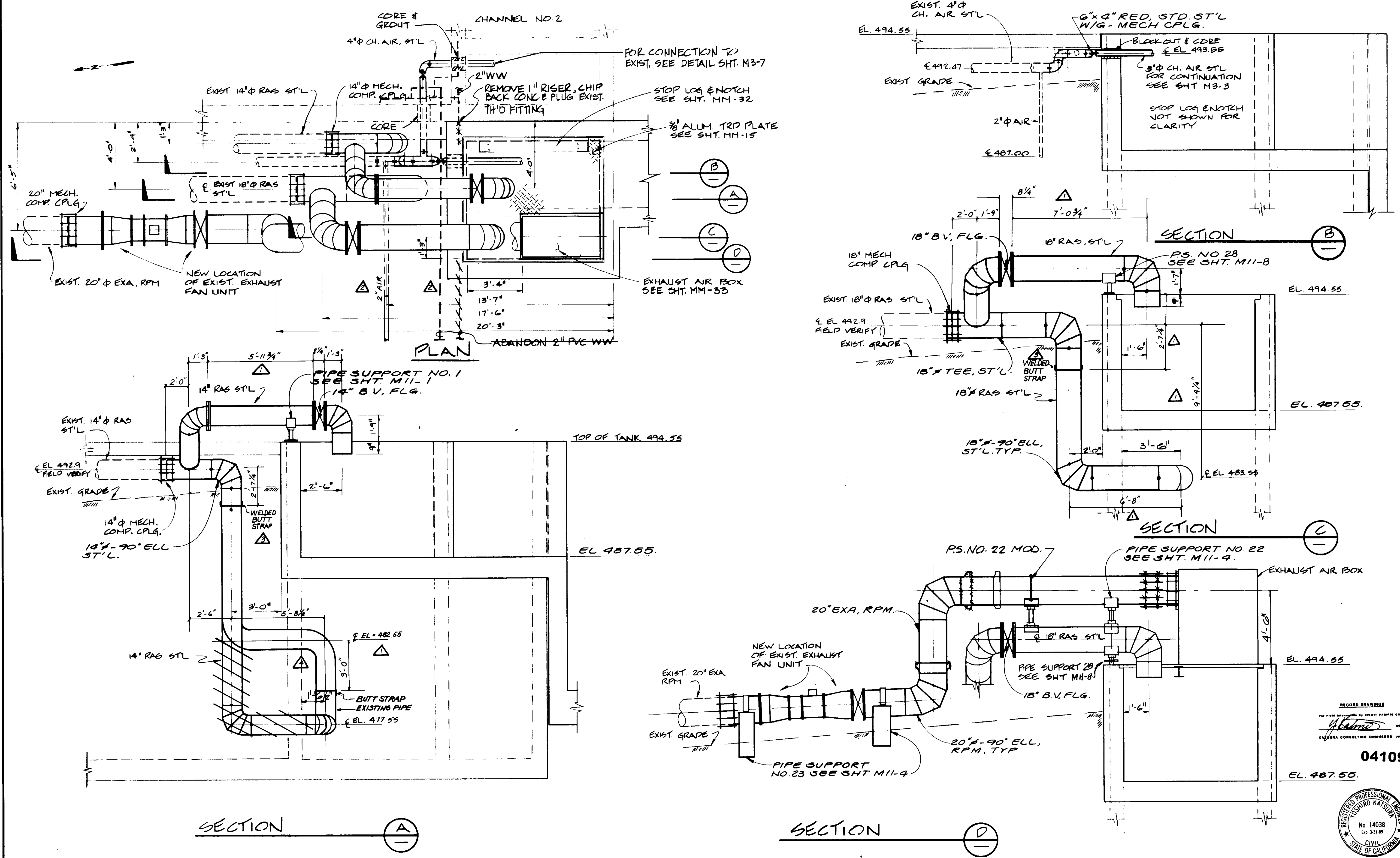
REV	DATE	BY	DESCRIPTION

SCALE:	3/8" = 1'-0"
DESIGNED:	Y.K./A.R.
DRAWN:	A.R.
CHECKED:	Y.K.
SUBMITTED:	<i>Yoshuro Katsura</i>
DATE:	8-7-87
R.C.E. NO.:	14038
DESIGNED BY:	ALEXANDER ENGINEERS
CHECKED BY:	ALEXANDER ENGINEERS

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
EXISTING RETURN ACTIVATED SLUDGE & EXHAUST AIR LINES,  
PLAN & SECTIONS

SHEET M3-9



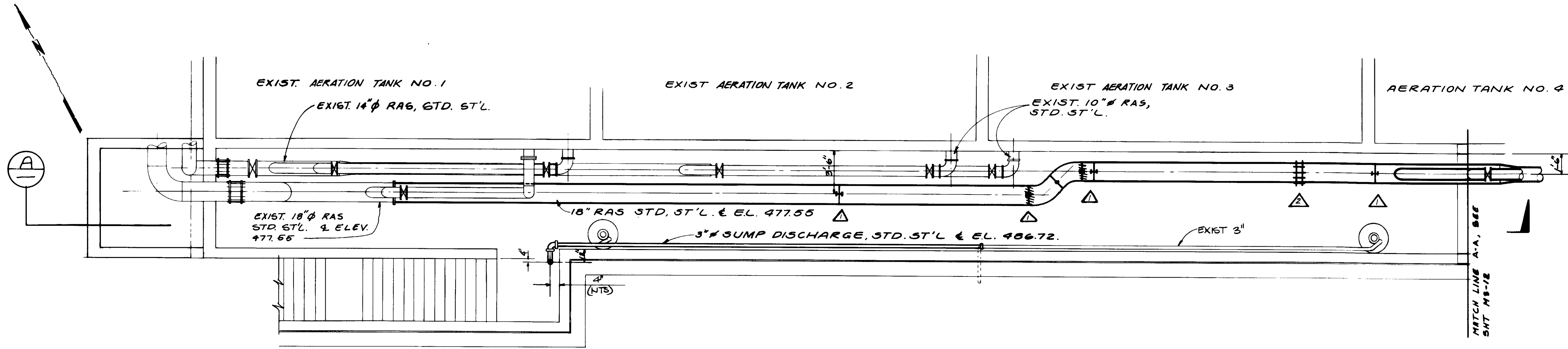
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2	1-18-87	A.B.	REV. PER K.P.C.
3	1-18-87	A.B.	REV. PER K.P.C.
4	1-18-87	A.B.	REV. PER K.P.C.

SCALE:	3/8" = 1'-0"
DESIGNED:	J.L.I.A.R.
DRAWN:	Y.K.
CHECKED:	
SUBMITTED:	8-7-87
DATE:	
R.C.S.E. NO.:	14038
DATE:	
R.C.S.E. NO.:	613
DATE:	

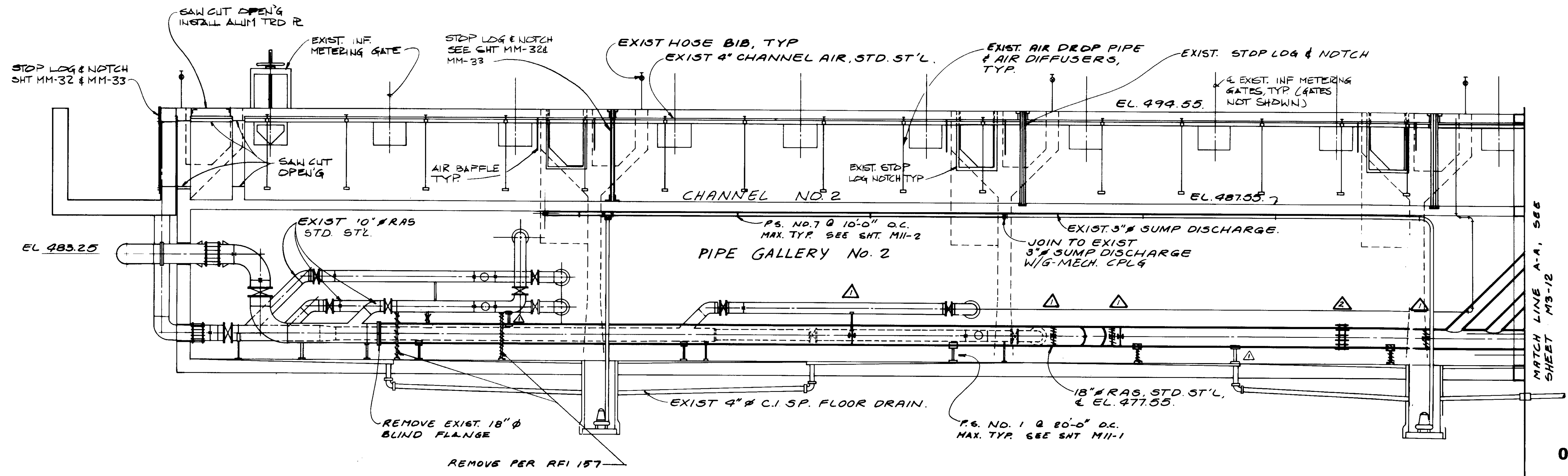
**KALEX ENGINEERS**  
 Katura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 MODIFICATIONS TO RETURN ACTIVATED SLUDGE & EXHAUST AIR LINES, PLAN & SECTIONS

REGISTERED PROFESSIONAL ENGINEER  
 TORIYUO KATSURA  
 No. 14038  
 Exp. 3-31-89  
 CIVIL  
 STATE OF CALIFORNIA



PLAN



SECTION

MATCH LINE A-A, SEE SHEET M3-12

MATCH LINE A-A, SEE SHEET M3-12

04110

RECORD DRAWING  
 FOR FILE INFORMATION BY KIMBERLY PACIFIC CORP.  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1999



REV	DATE	BY	DESCRIPTION

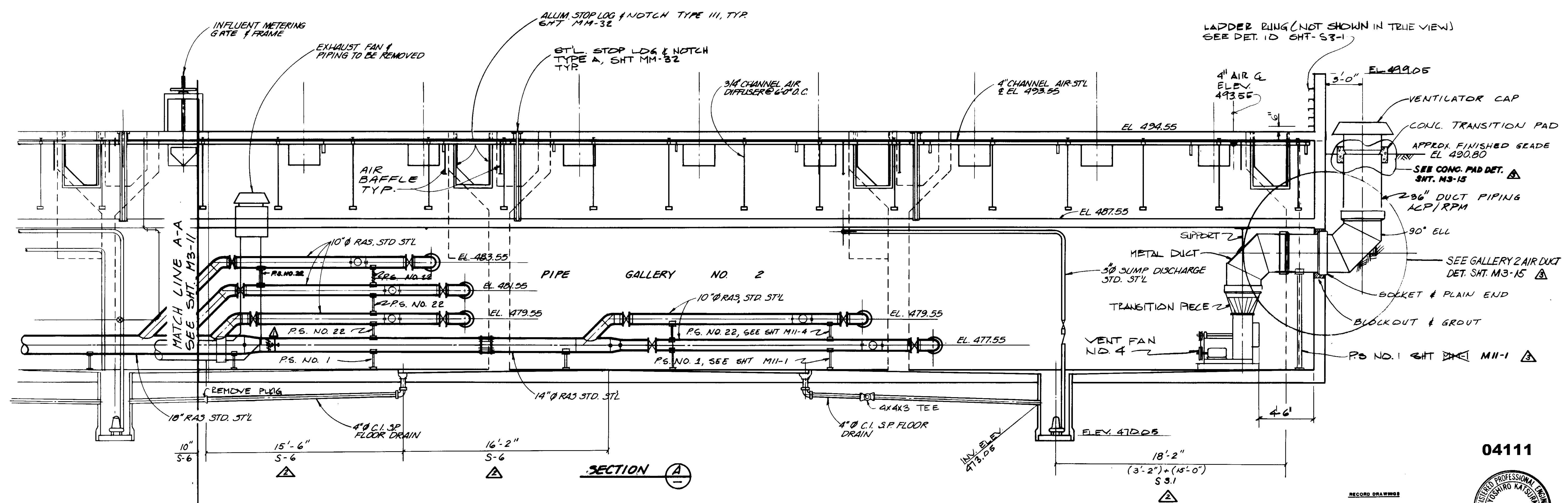
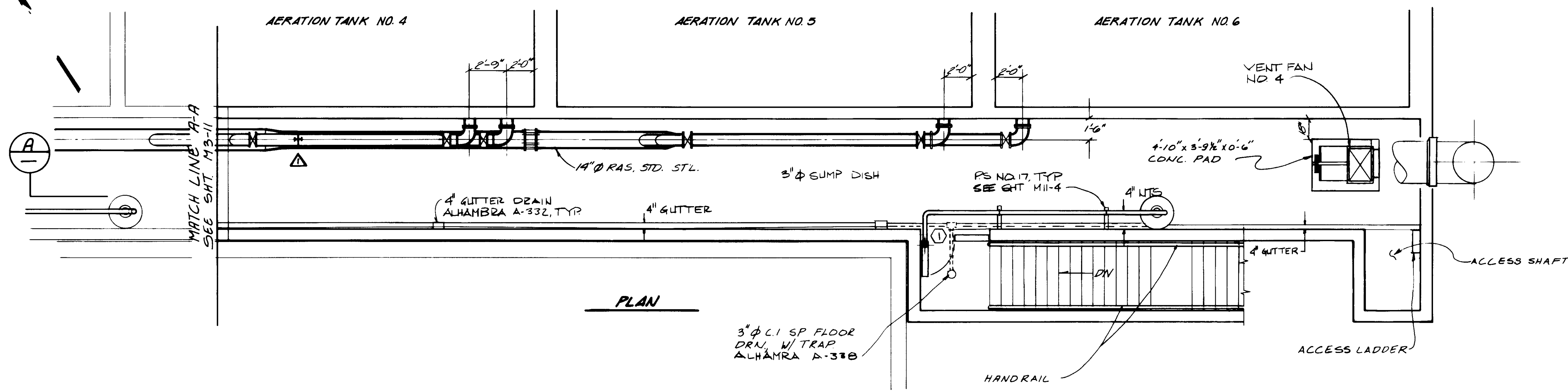
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DESIGNED	RD/DN
DRAWN	YK
CHECKED	

SUBMITTED	8-7-87
DATE	
R.C.E. NO.	14038
DATE	
R.C.E. NO.	513
DATE	

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 2, PLAN & SECTION - I

SHEET  
**M3-11**



04111

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87



REV	DATE	BY	DESCRIPTION
1	8-7-87	A.R.	REV. PER K.P.C.
2	8-7-87	A.R.	REV. PER K.P.C.
3	8-7-87	A.R.	REV. PER K.P.C.

SCALE:	1/4" = 1'-0"
DESIGNED:	YK/AD
DRAWN:	YK
CHECKED:	

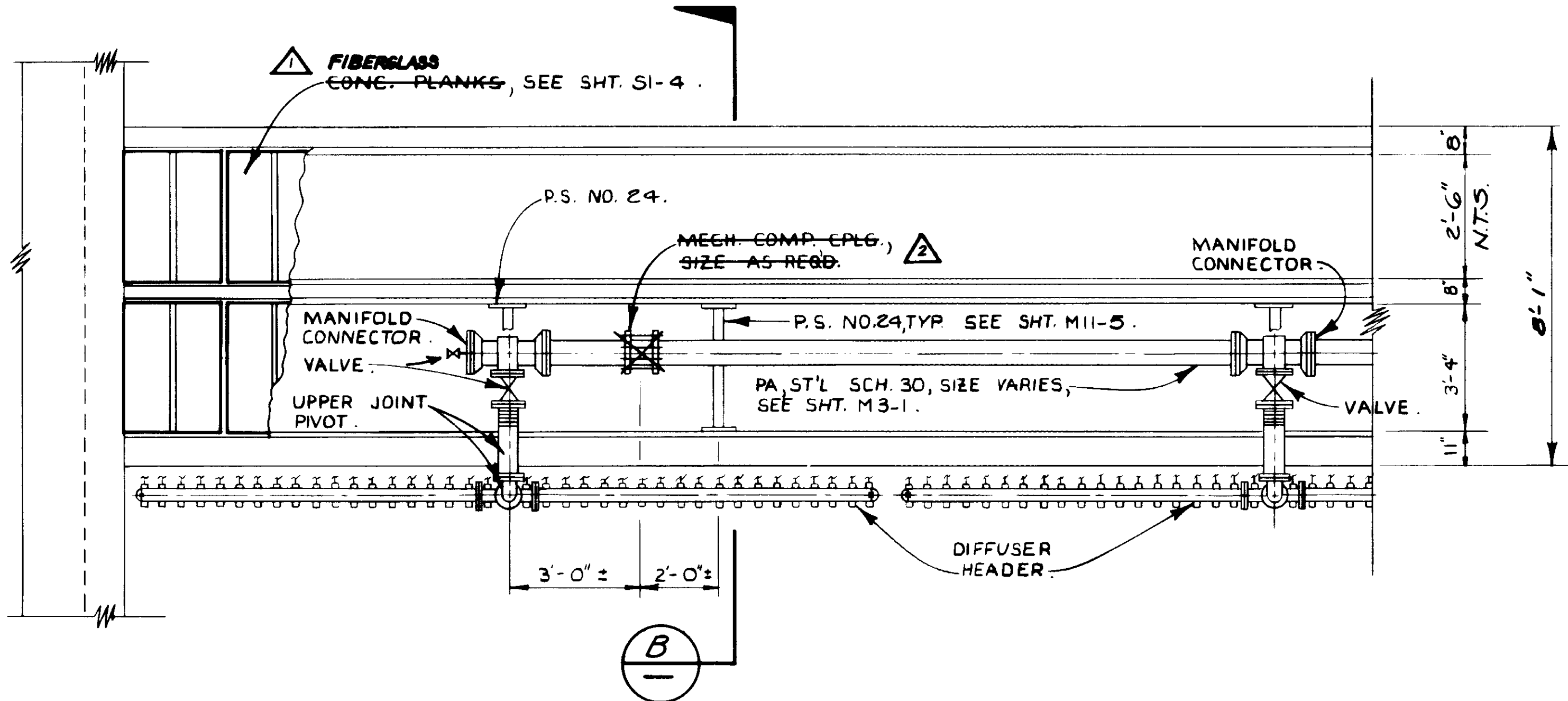
SUBMITTED:	14038	8-7-87
DESIGNED:	YK/AD	
DRAWN:	YK	
CHECKED:		

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

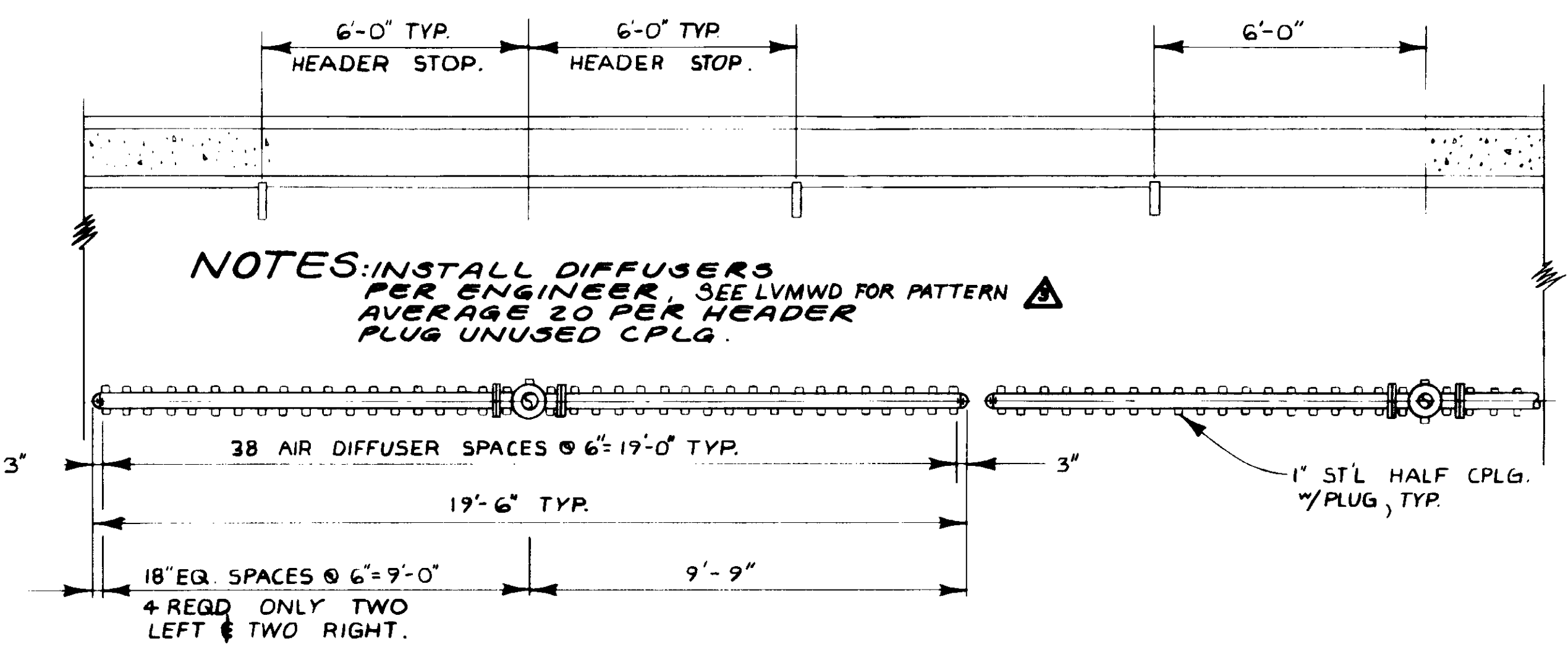
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 2, PLAN & SECTION - II

SHEET  
**M3-12**

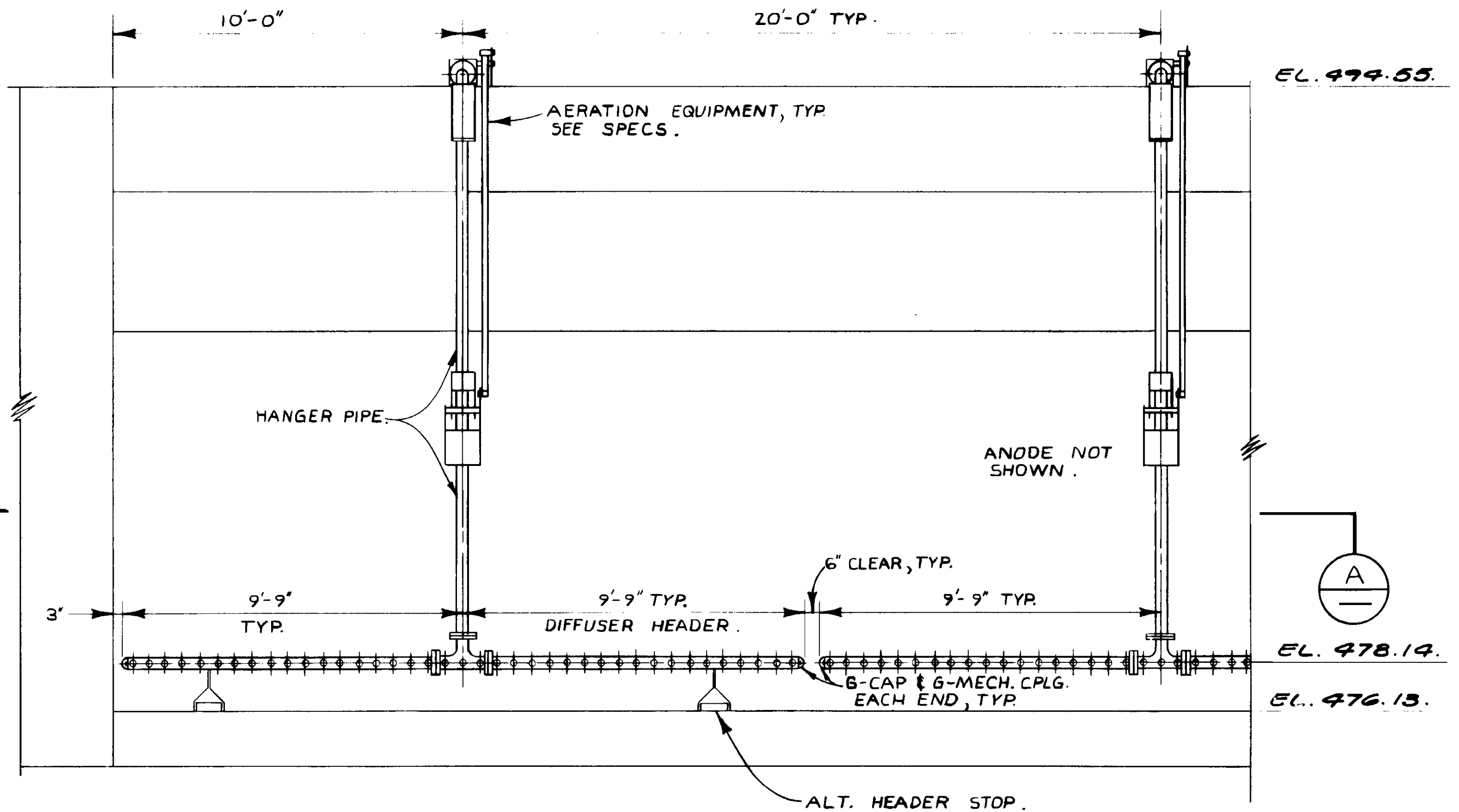




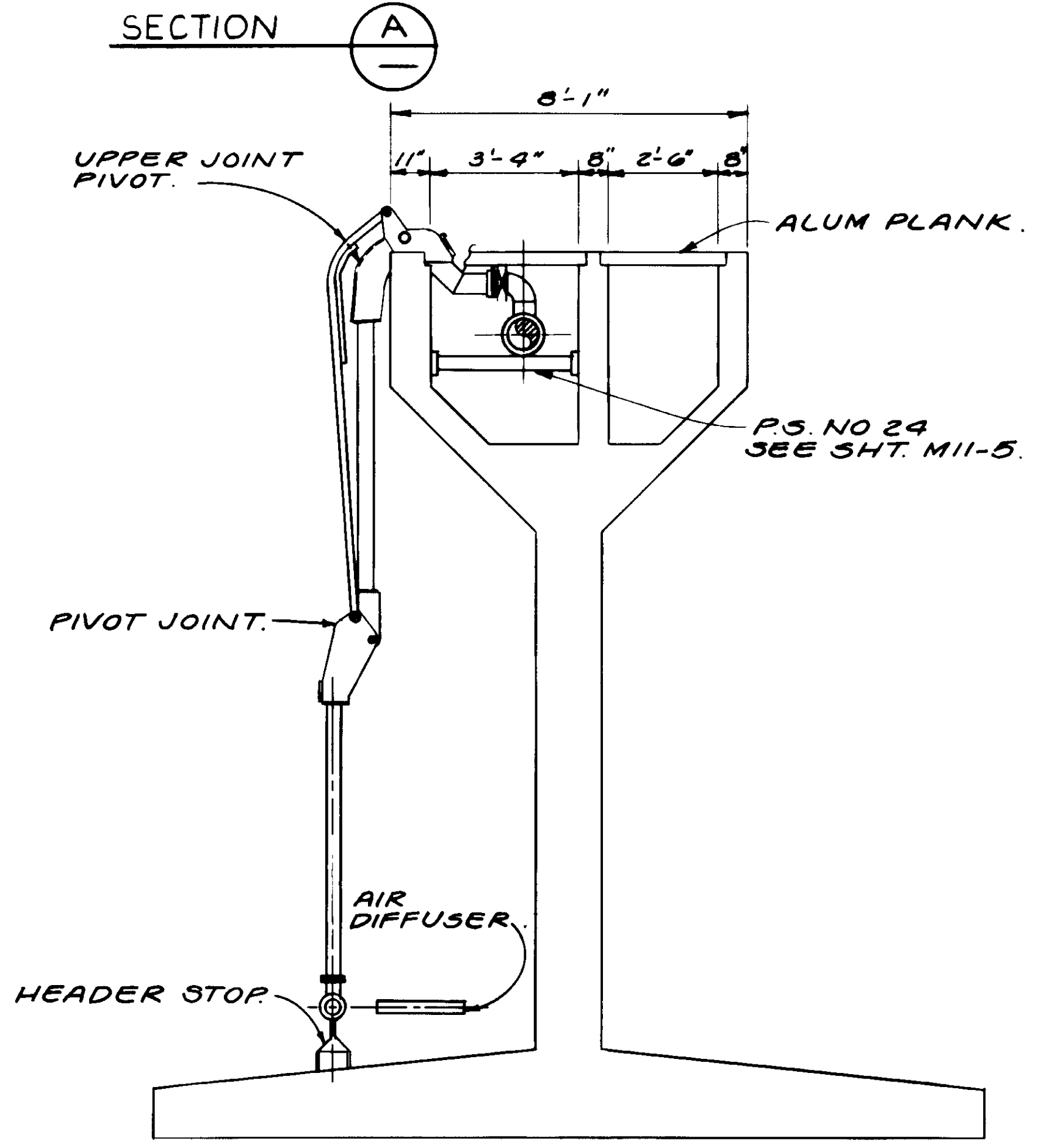
PLAN



SECTION A



ELEVATION.



SECTION B

RECORD DRAWING  
 PREPARED BY: KATSUMA CONSULTING ENGINEERS  
 KATSUMA CONSULTING ENGINEERS, INC. 1988

04112



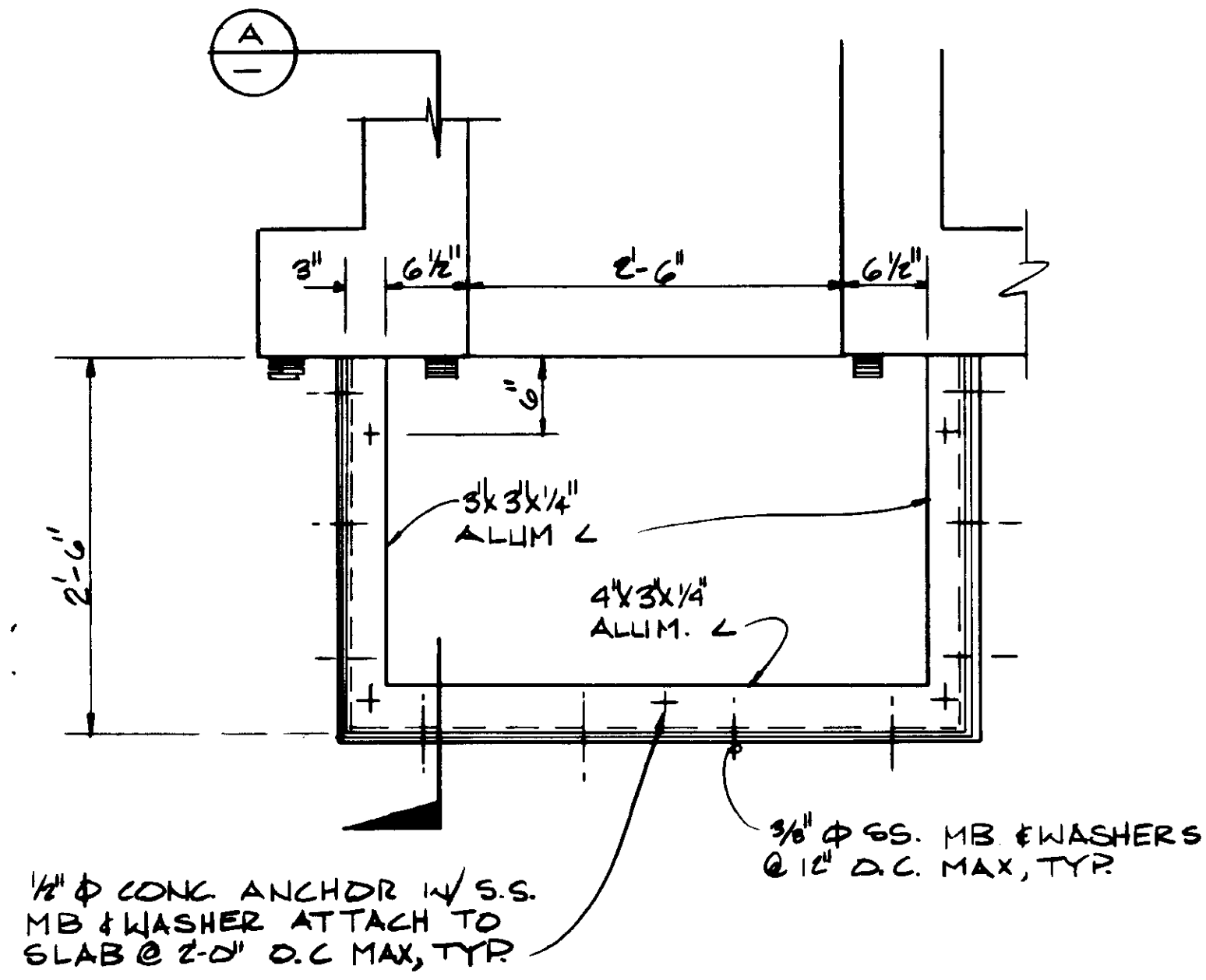
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2	4-18-87	A.B.	REV. PER K.P.C.
3	4-18-87	A.B.	REV. PER K.P.C.

SCALE:	3/8" = 1'-0"
DESIGNED:	R.K.
DRAWN:	Y.K.
CHECKED:	
SUBMITTED:	8-7-87
DATE:	
R.C.E. NO.:	14038
DATE:	
R.C.S.E. NO.:	819
DATE:	

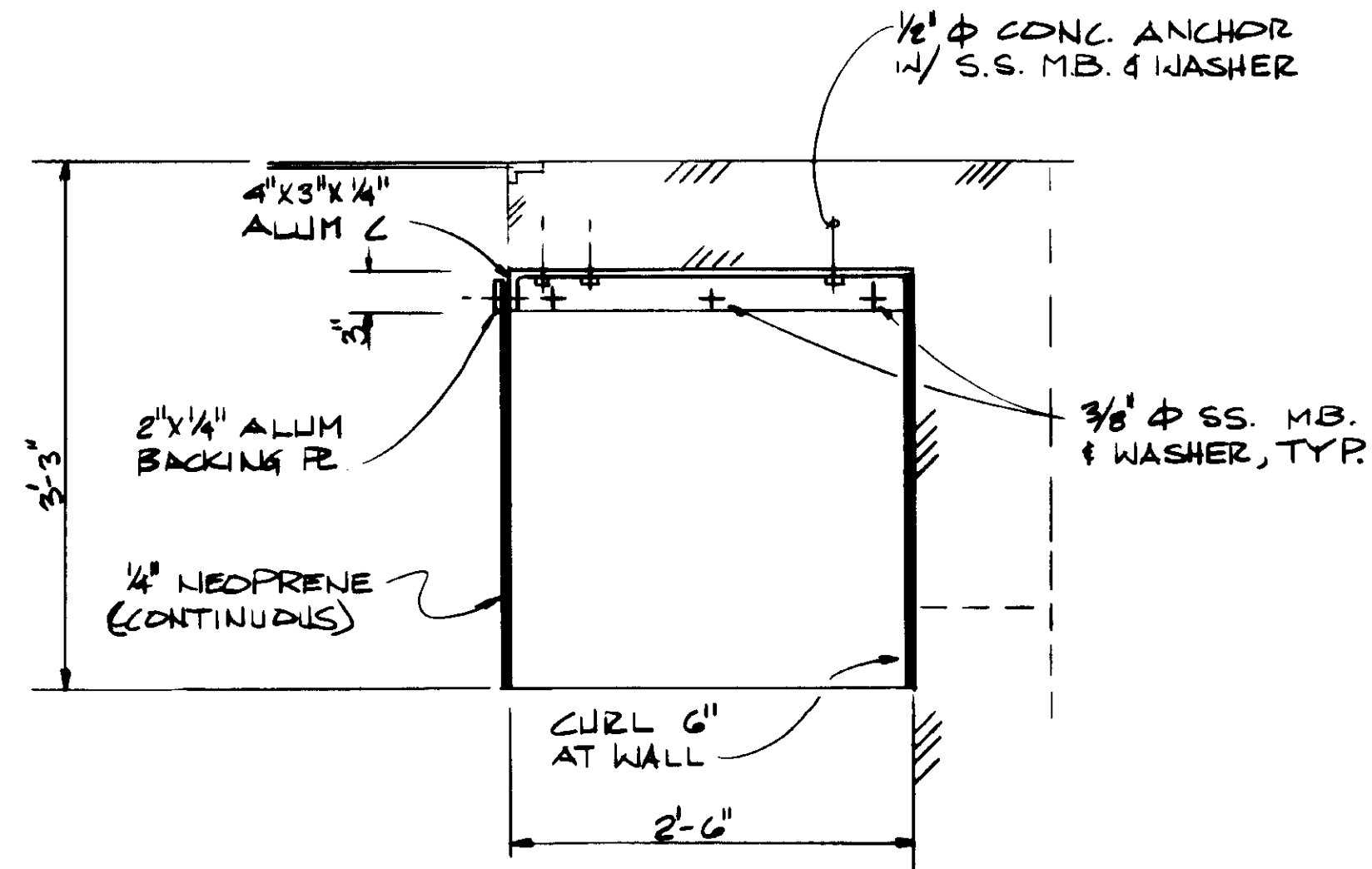
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AERATION EQUIPMENT

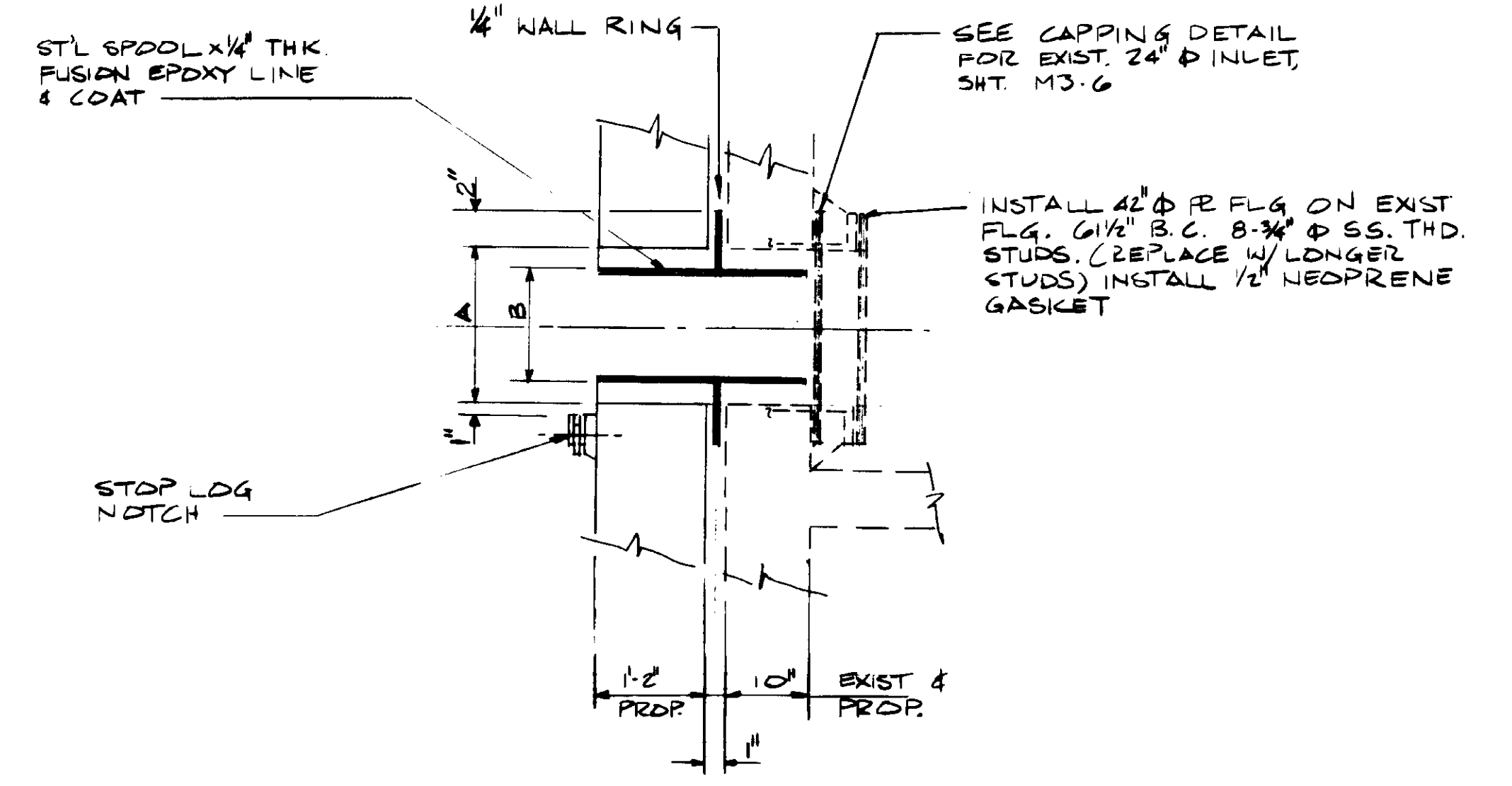
SHEET  
**M3-13**



**AIR BAFFL - PLAN**  
1"=1'-0"



**SECTION A**  
1"=1'-0"

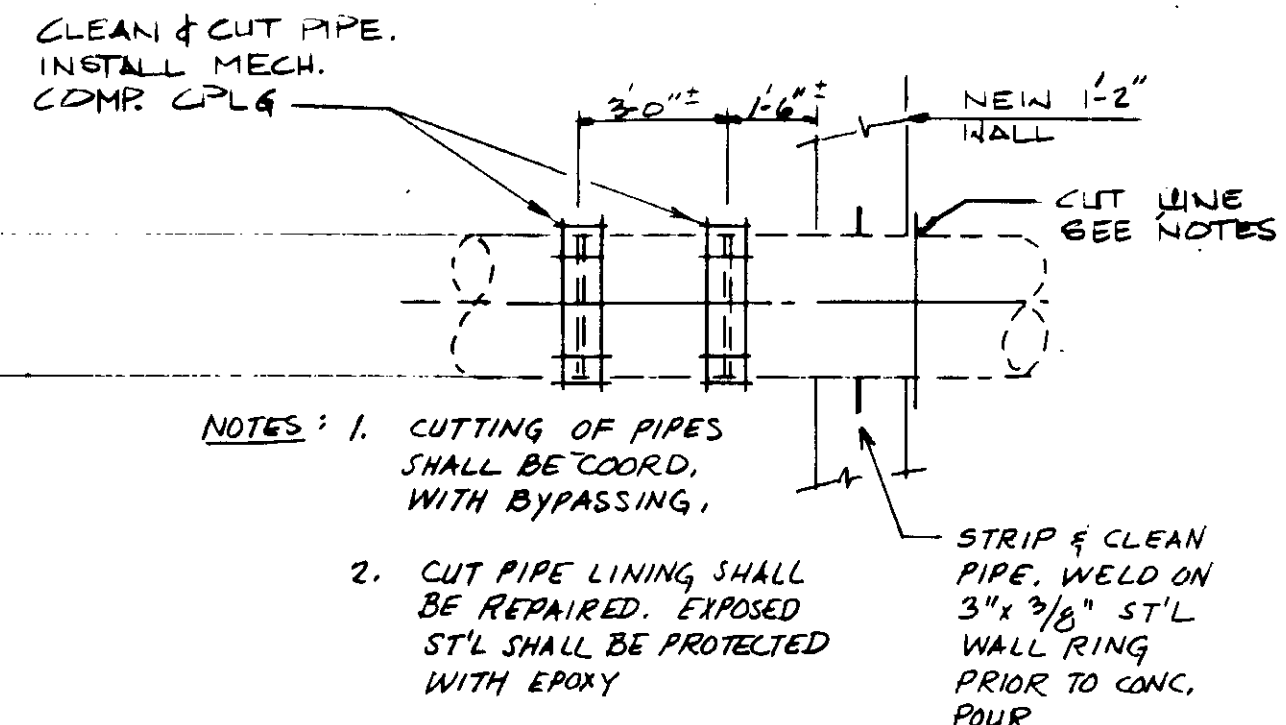


ITEM	A	B
EXIST 24" $\phi$	$\Delta$ 28" $\phi$	$\Delta$ 24" $\phi$
EXIST 42" $\phi$	42" $\phi$	38" $\phi$
PROR 36" $\phi$	42" $\phi$	38" $\phi$
PROR 12" $\phi$	$\Delta$ 18" $\phi$	12" $\phi$

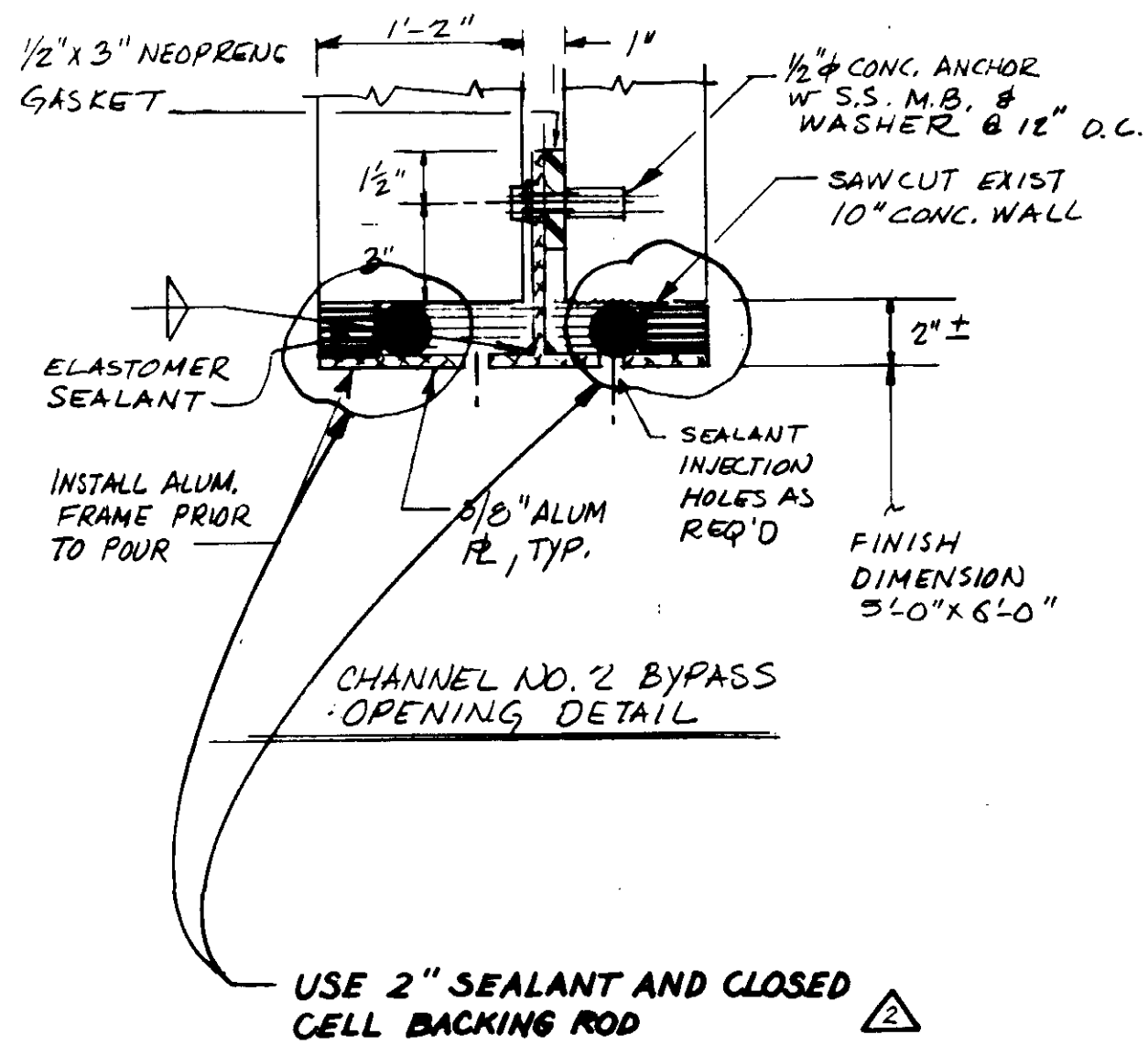
FOR DOWNWARD OPENING SLIDE GATE

- NOTES:**
- CUT EXIST PIPES CLEAN AT WALL FACE
  - GROUT ANNULAR AT 10" WALL
  - INSTALL JOINT SEALANT AT 1'-2" WALL
  - 12" DOWNWARD OPENING SLIDE GATE NOT SHOWN

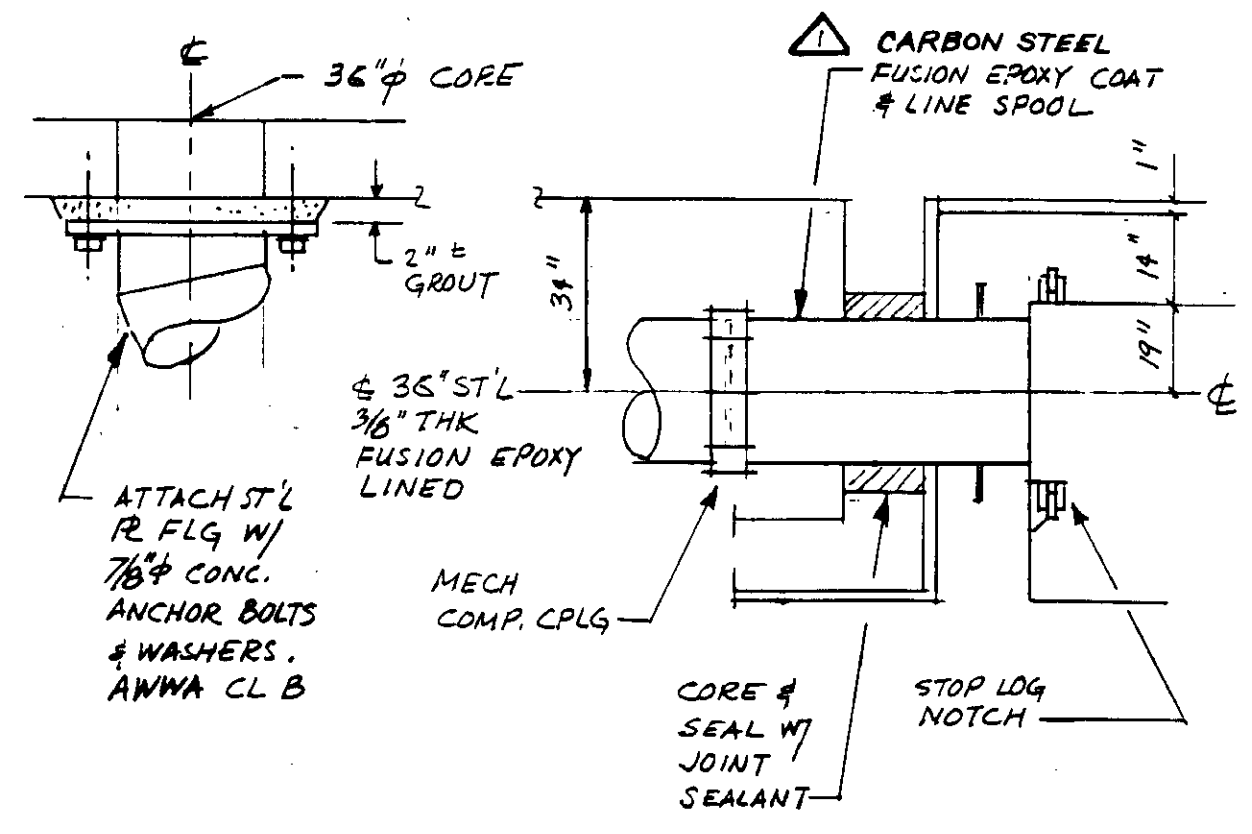
**SELECTOR CHANNEL OUTLET**  
NO SCALE



**PRIMARY EFFLUENT LINE CONSTRUCTION**



**CHANNEL NO. 2 BYPASS OPENING DETAIL**



**36" INLET TO AERATION TANK NO. 1**  
NOTE: INLET TO AERATION TANK NO. 6 OPP. HAND.

04113

RECORD DRAWINGS  
For Field Use Only - By VISIT PACIFIC CORP.  
*[Signature]*  
KALEX CONSULTING ENGINEERS 1988-1989  
REGISTERED PROFESSIONAL ENGINEER  
YOSHIO KATSURA  
No. 14038  
Exp. 3-31-89  
CIVIL  
STATE OF CALIFORNIA

REV	DATE	BY	DESCRIPTION
1	8-7-87	A.B.	REV. PER K.P.C.
2	8-7-87	A.B.	REV. PER K.P.C.
3	8-7-87	A.B.	REV. PER K.P.C.

SCALE: AS NOTED

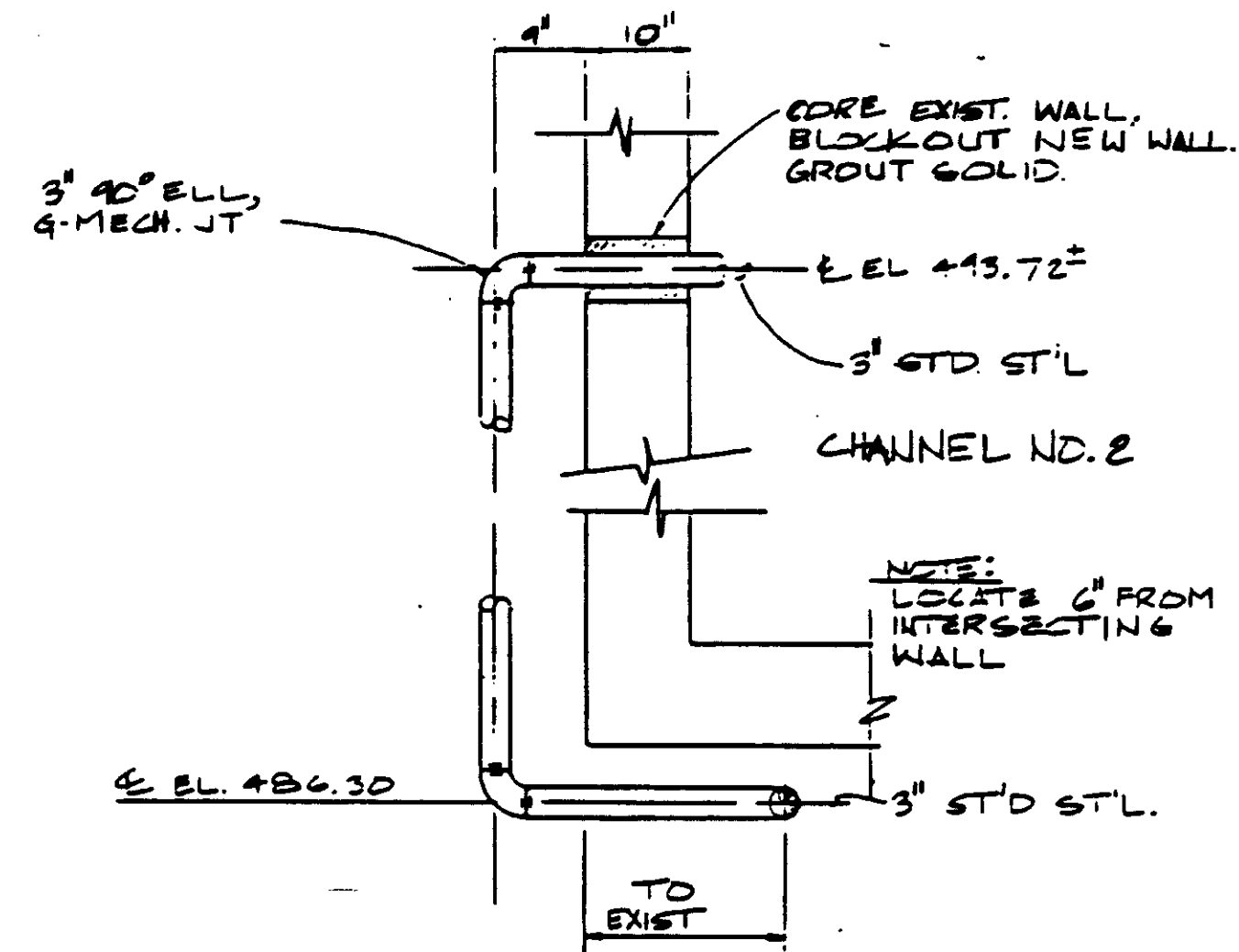
DESIGNED	YK
DRAWN	CL
CHECKED	YK

SUBMITTED	14038	8-7-87
<i>[Signature]</i>	R.C.E. NO.	DATE
KALEX CONSULTING ENGINEERS		
ALEXANDER ENGINEERS	813	
	R.C.E. NO.	DATE

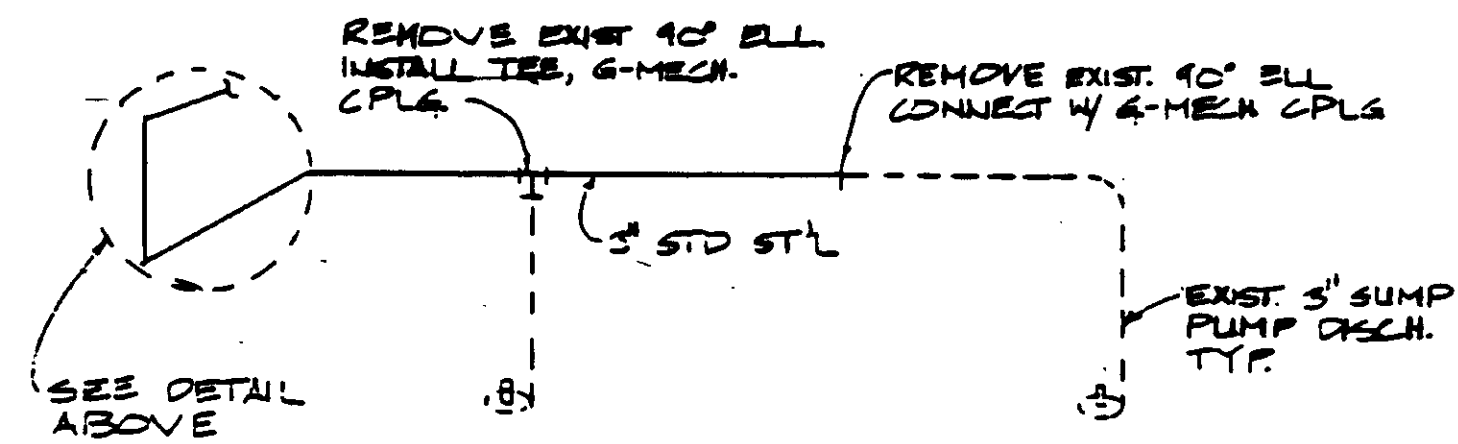
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
MISCELLANEOUS DETAILS

SHEET  
M3-14



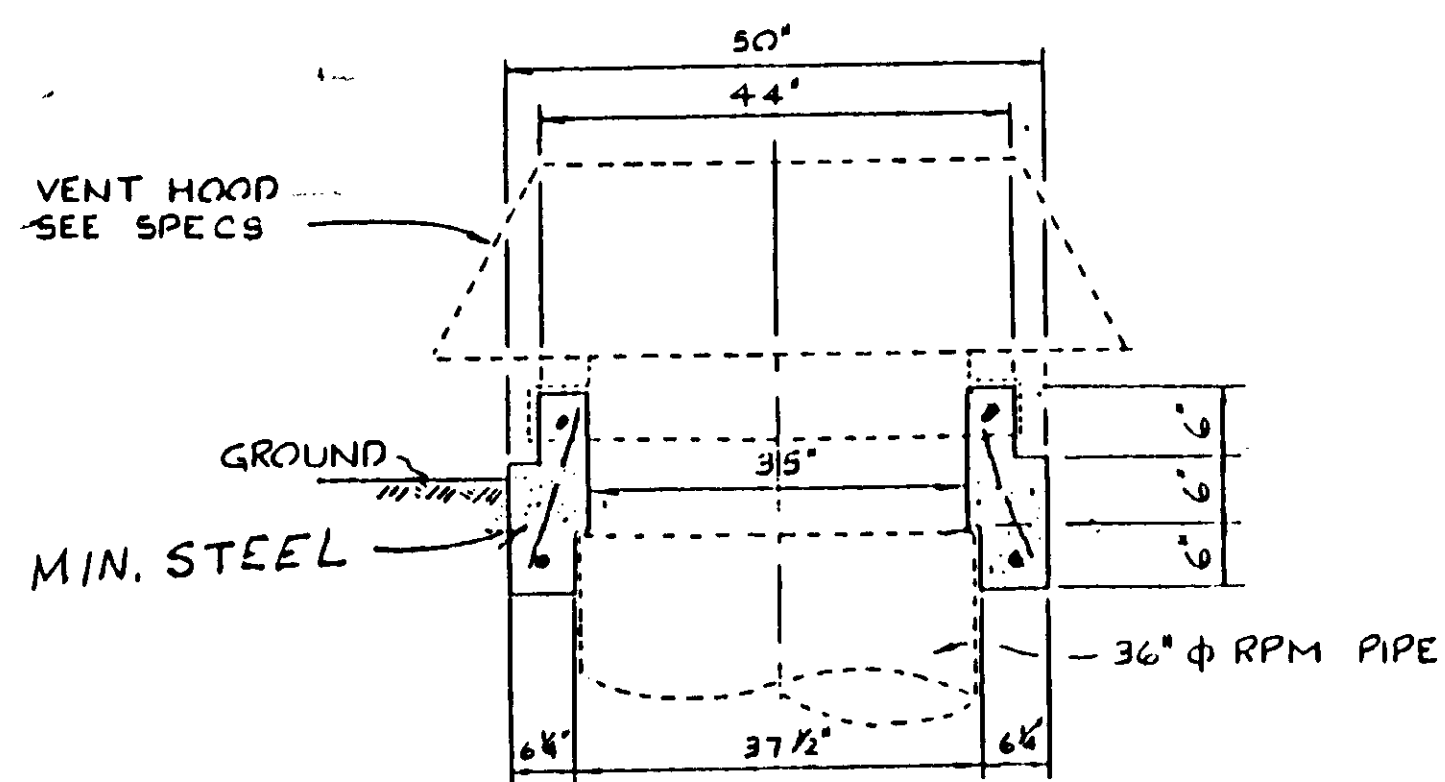
TYPICAL SUMP PUMP DISCHARGE TO CHANNEL NO. 2



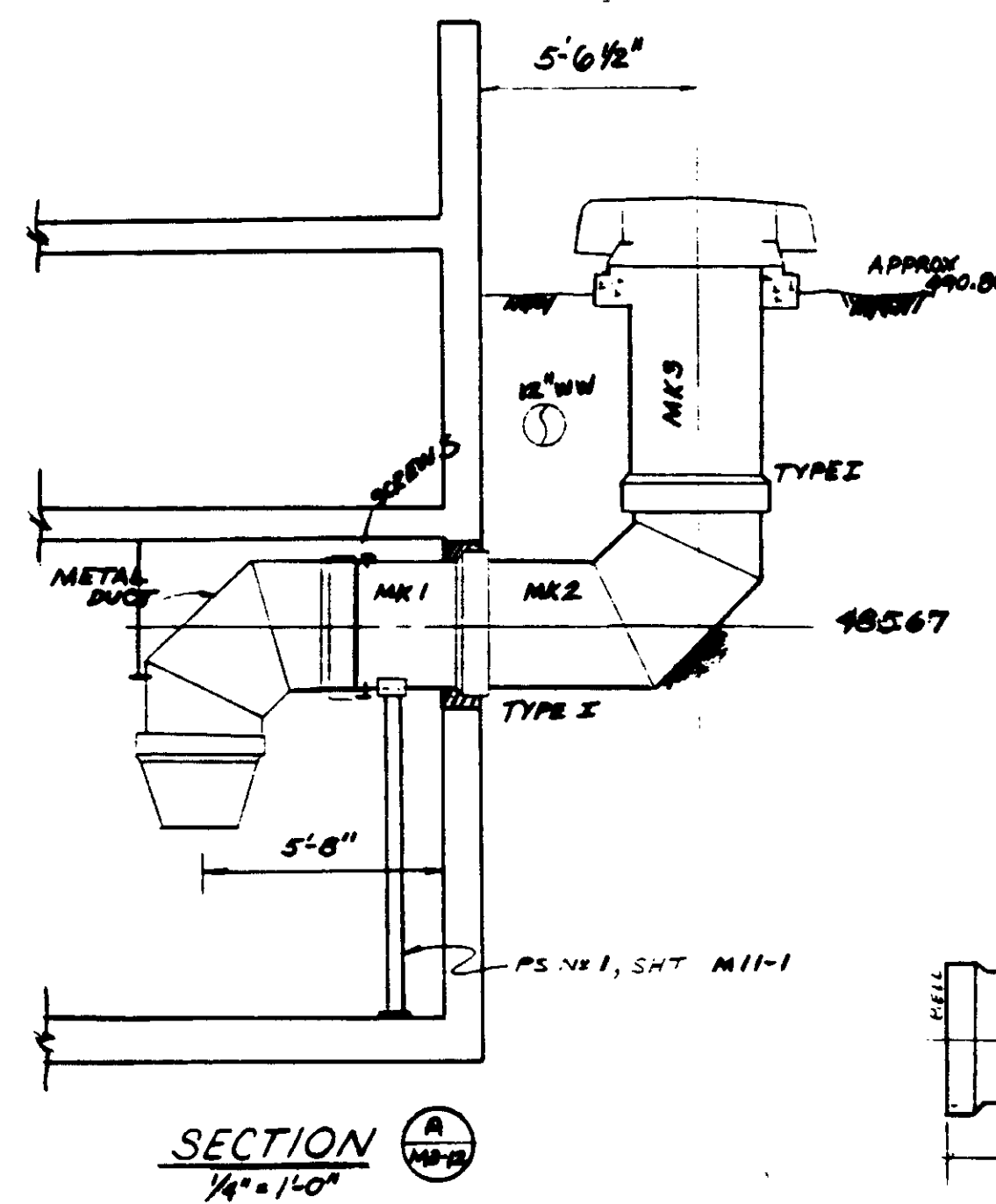
GALLERY NO. 2 SUMP PUMP DISCHARGE TO WEST

SUMP PUMP DISCHARGE

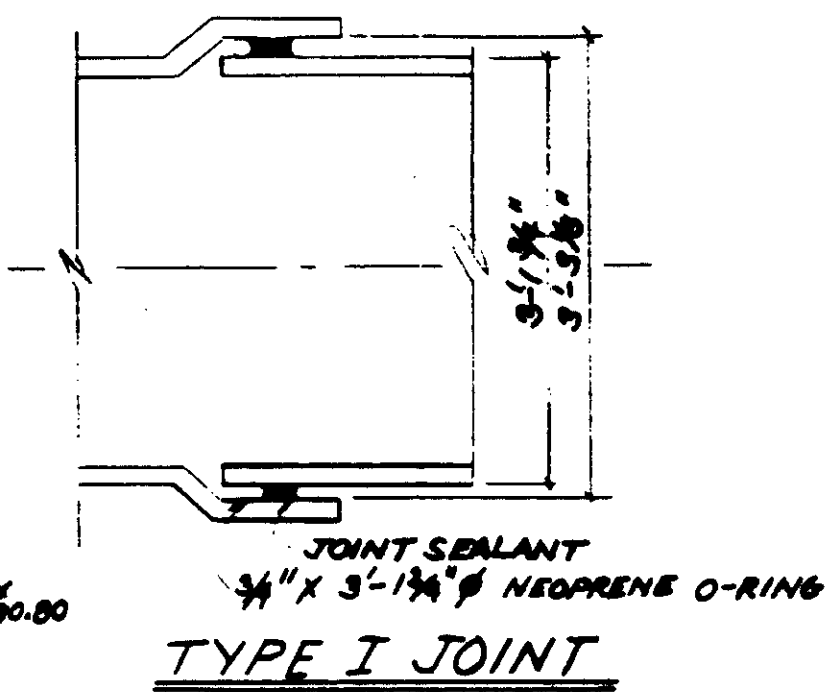
SKETCH SK M3



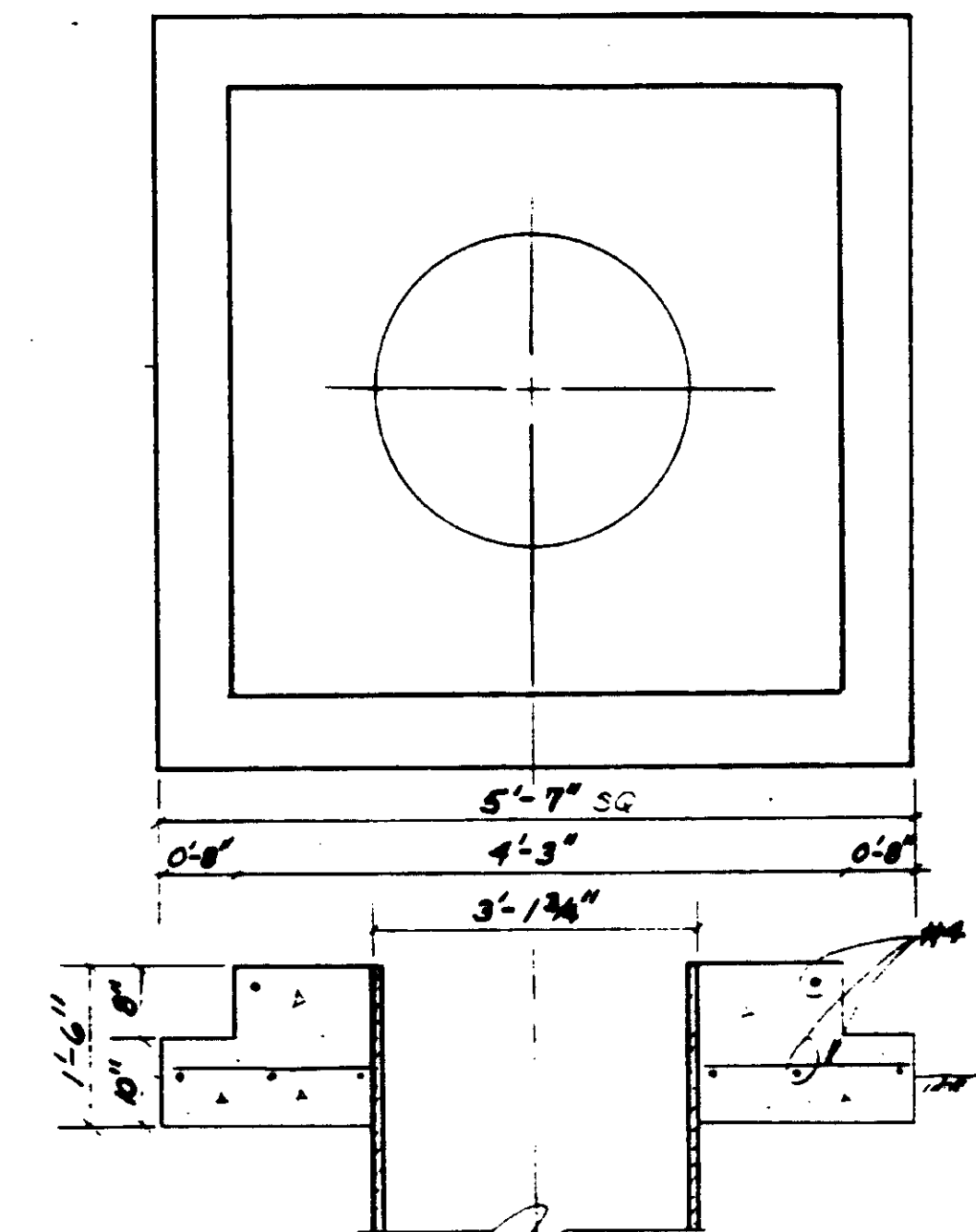
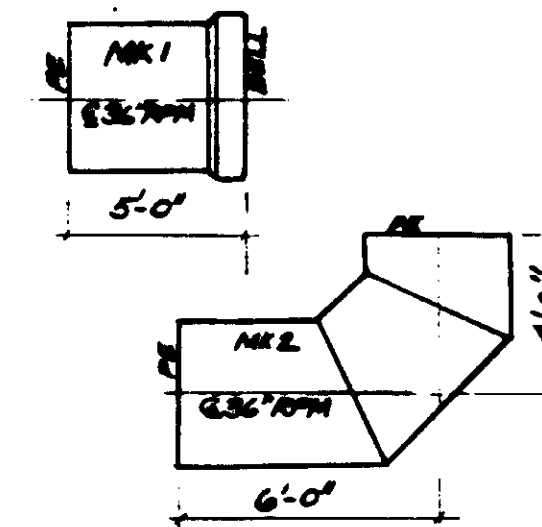
CONCRETE PAD FOR VENT HOOD  
NOT TO SCALE



SECTION A  
1/4" = 1'-0"

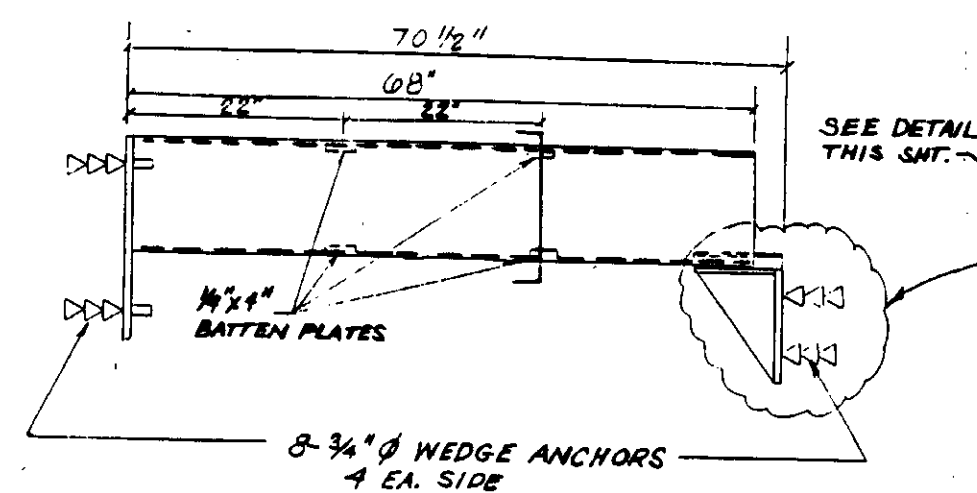


TYPE I JOINT

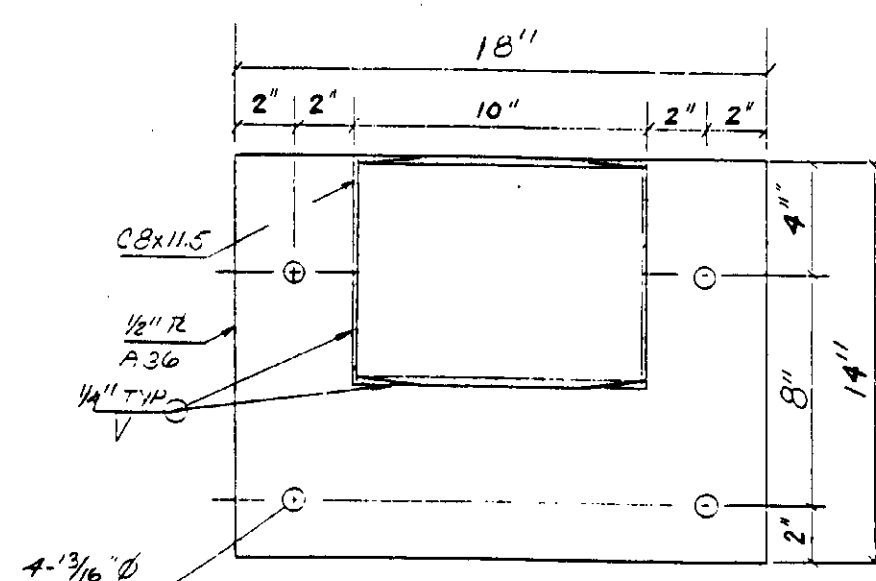


AIR VENT SLAB DETAIL

GALLERY 2 AIR DUCT

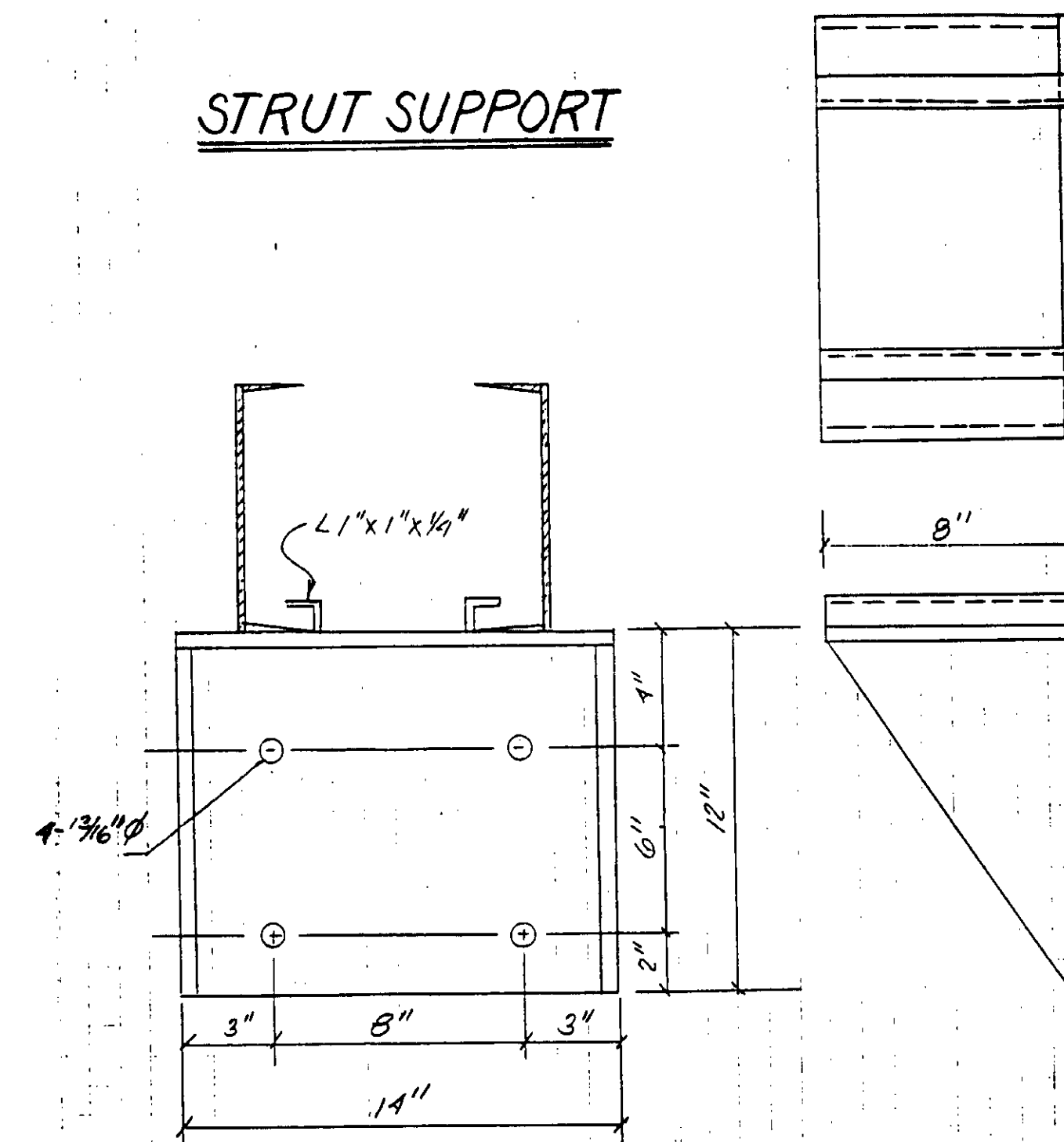


G-2 STAIRWELL STRUT  
NO SCALE



SECTION  
NO SCALE

STRUT SUPPORT



ALL WELDS 1/4" FILLET ALL AROUND

04114

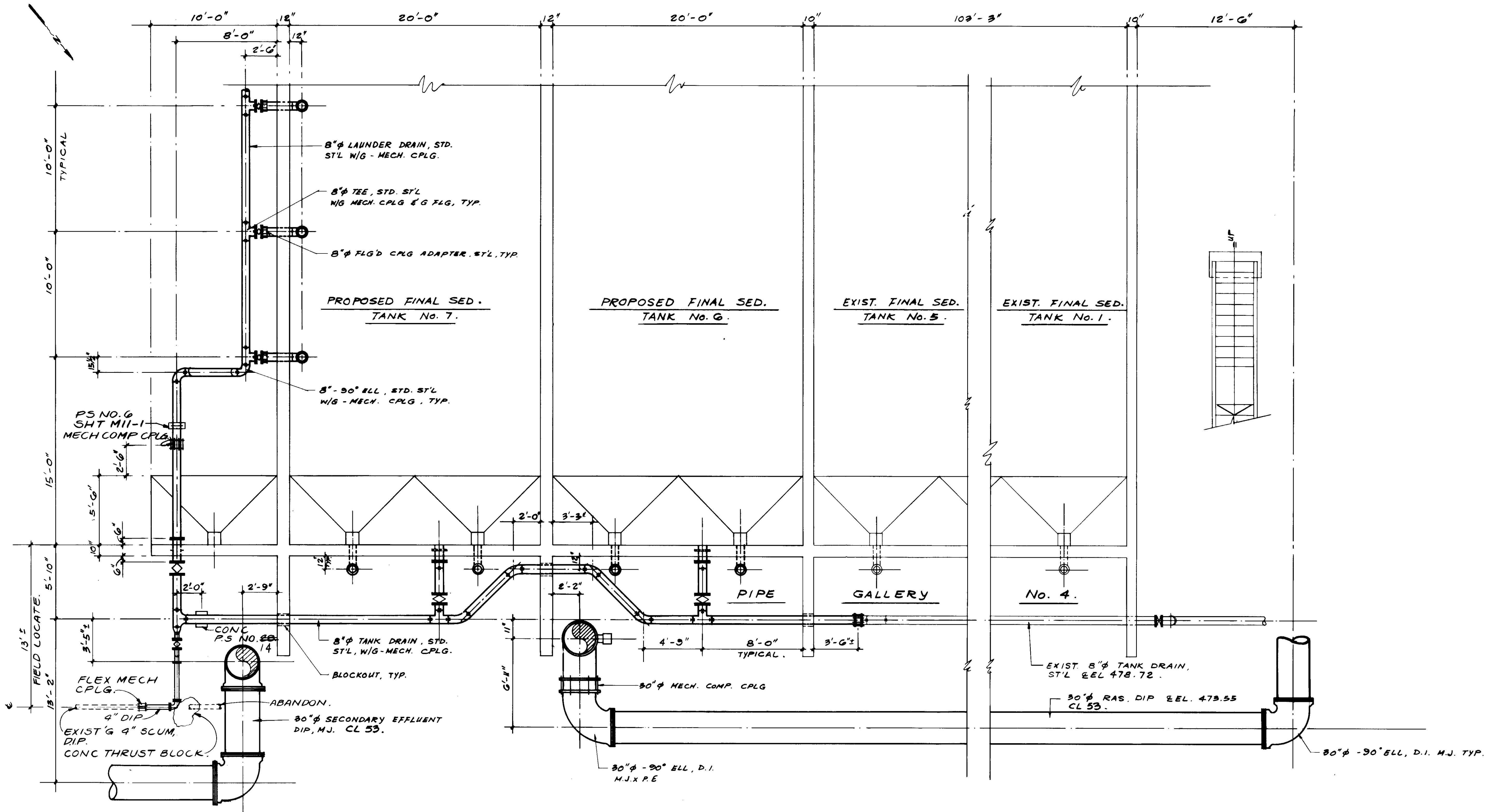
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED	SUBMITTED	14038
DRAWN	CHECKED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

04114



PLAN SECTION.

04115

RECORD DRAWING  
 FOR THIS PROJECT BY NIGHT PAVING CO.,  
 KATSURA CONSULTING ENGINEERS JUNE 1987



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	1/4" = 1'-0"	DESIGNED:	Y.K./S.K.	SUBMITTED:	8-7-87
		DRAWN:	S.K.	DATE:	8-7-87
		CHECKED:	Y.K.	R.C.E. NO.:	14038
				DATE:	8-7-87

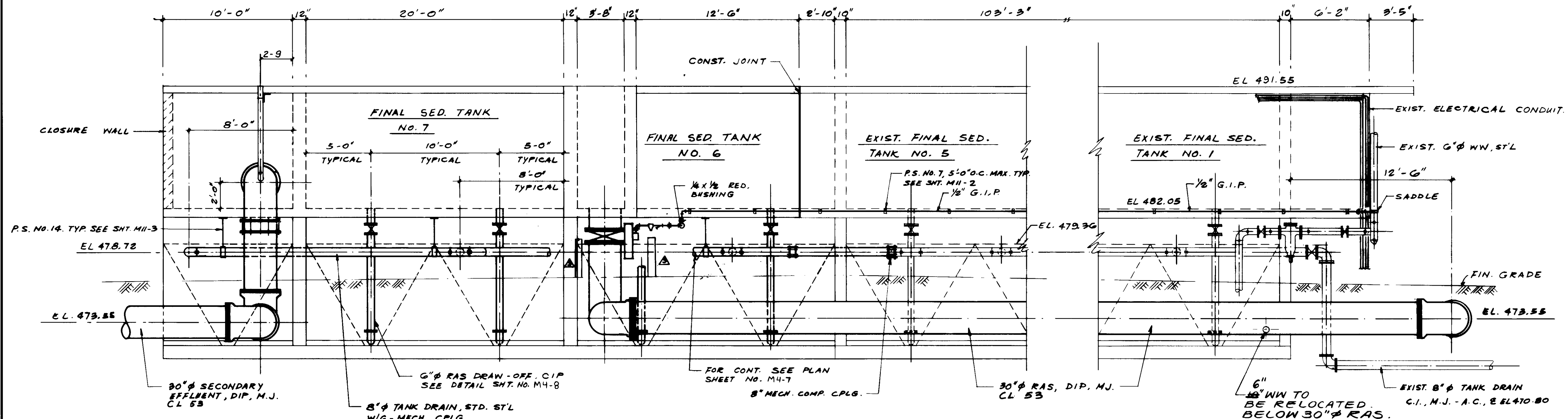
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

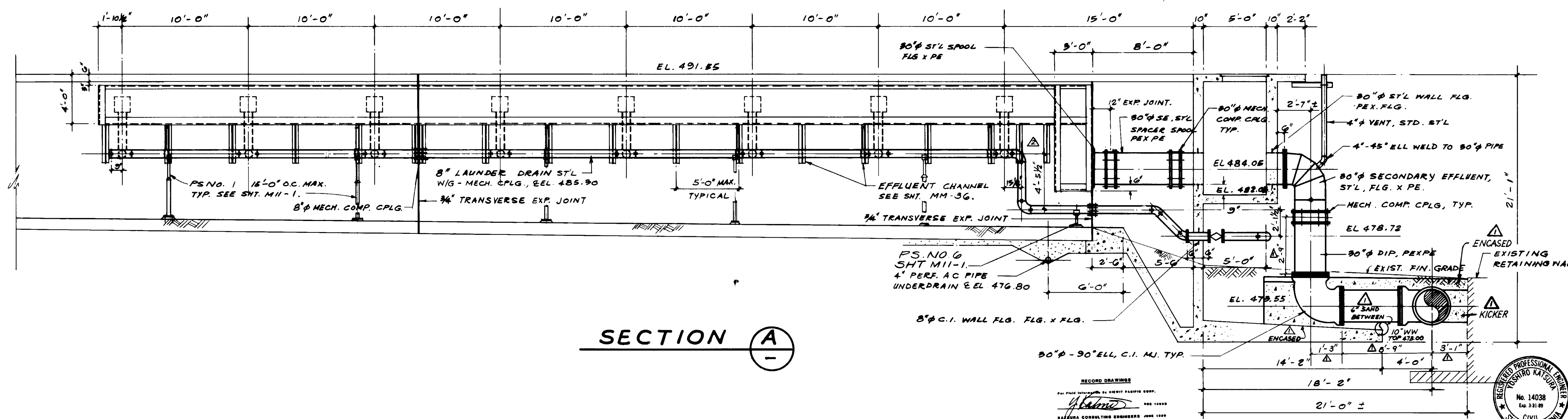
PIPE GALLERY NO. 4, PLAN SECTION

SHEET M4-8





**ELEVATION**



**SECTION A**

RECORD DRAWING  
 KALEX ENGINEERS  
 KATSUMA CONSULTING ENGINEERS

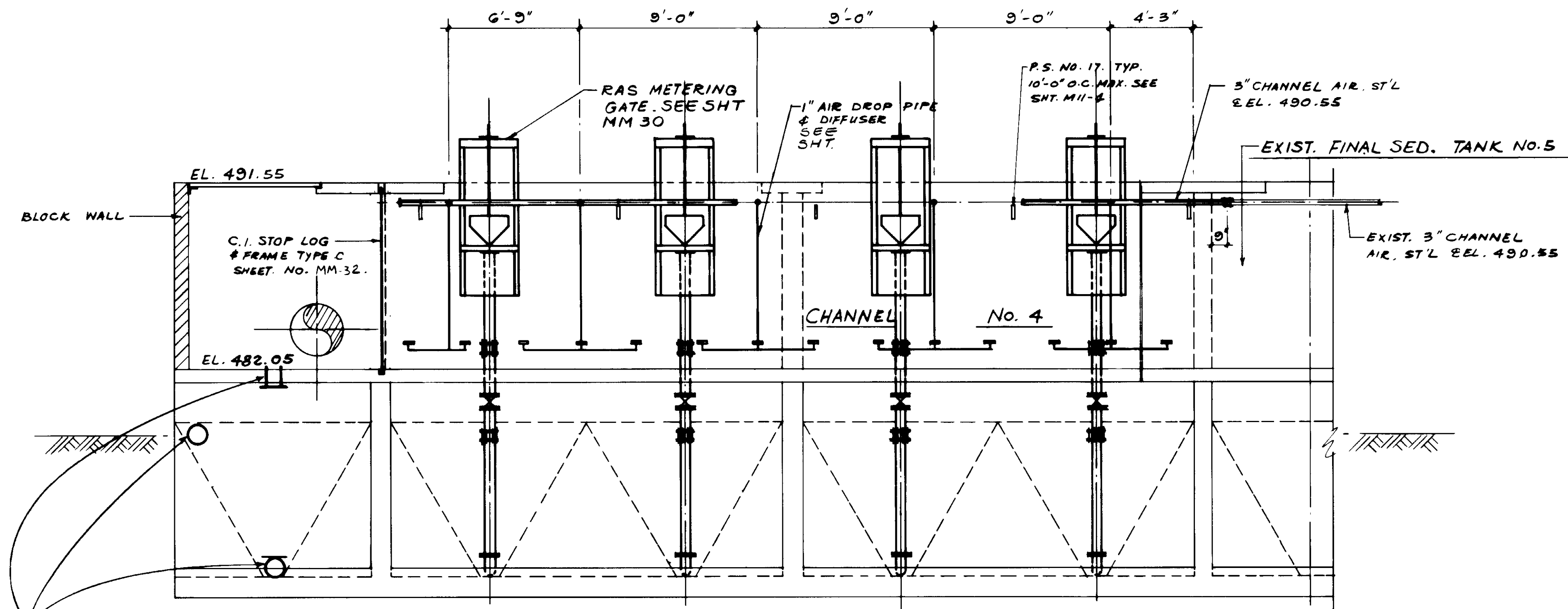


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2	4-20-87	A.B.	REV. PER K.P.C.
3	4-20-87	A.B.	REV. PER K.P.C.

SCALE:	1/4" = 1'-0"
DESIGNED:	Y. K./S.K.
DRAWN:	S.K.
CHECKED:	Y.K.
SUBMITTED:	8-7-87
DATE:	8-7-87
R.C.E. NO.:	613
ALEXANDER ENGINEERS:	

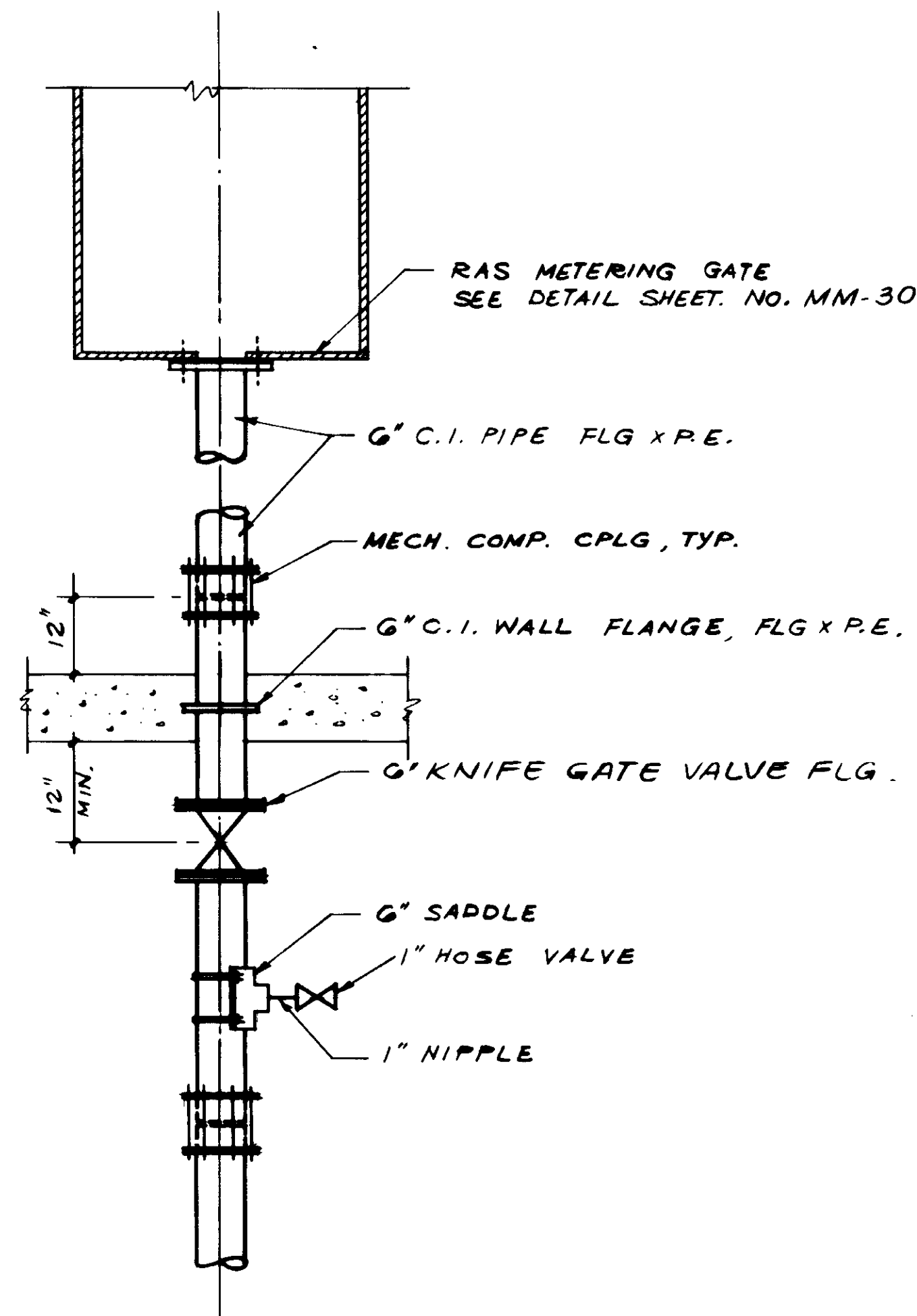
**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**04116**  
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SECONDARY EFFLUENT & RETURN ACTIVATED SLUDGE - PIPING  
 SHEET M4-9

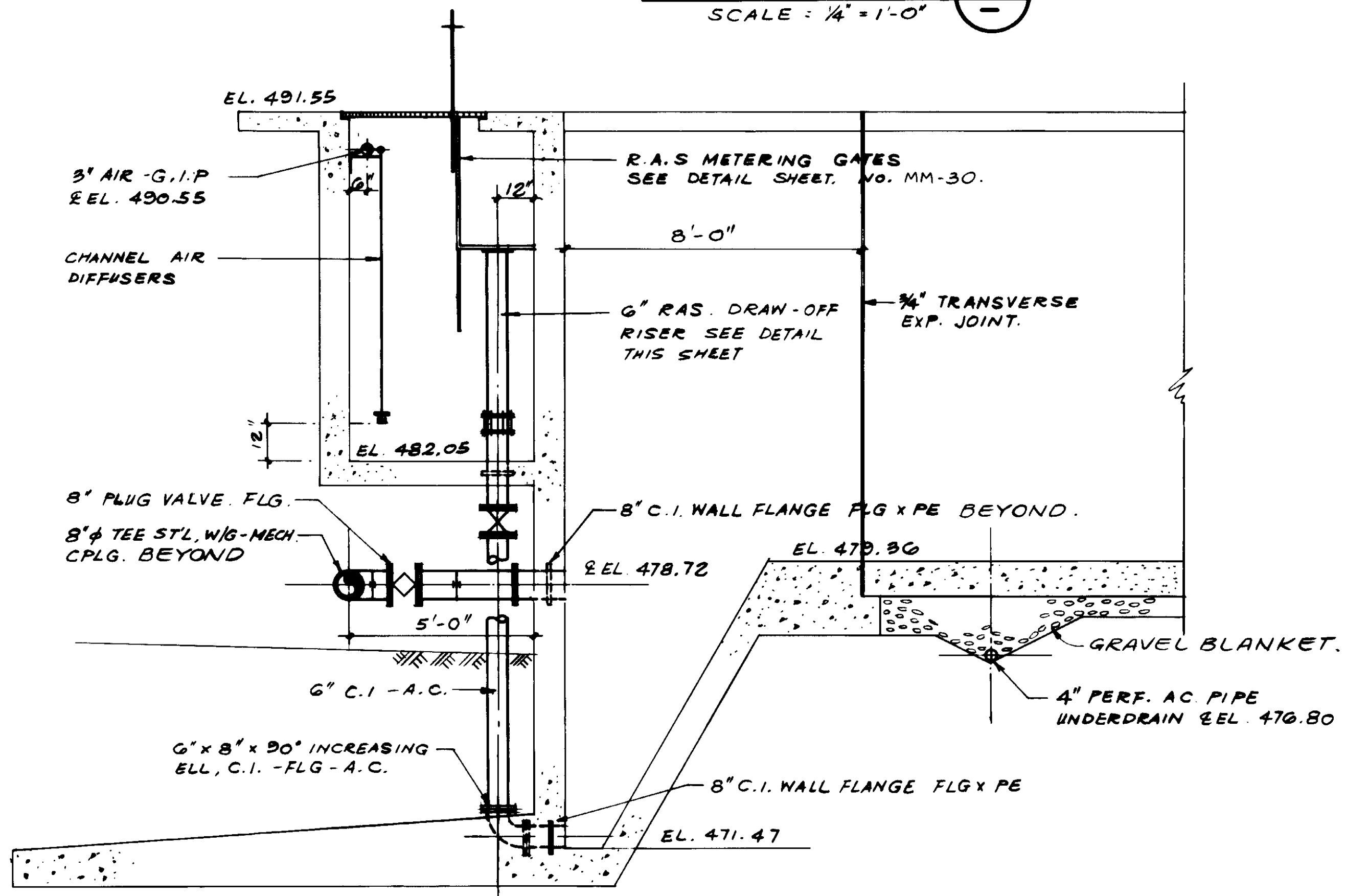


INSTALL EMBEDS PER M4-10, C/S-18 ON S-19, E/S-11 ON S-14 & N/S-11 ON S-16 PER RFI 50

**SECTION B**  
SCALE: 1/4" = 1'-0"



**R.A.S. DRAW-OFF RISER DETAIL**  
SCALE: NONE



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

04117

RECORD DRAWING  
PREPARED BY KATSUMI KATSURA  
*Katsumi Katsura*  
KATSUMI CONSULTING ENGINEERS JUNE 1988

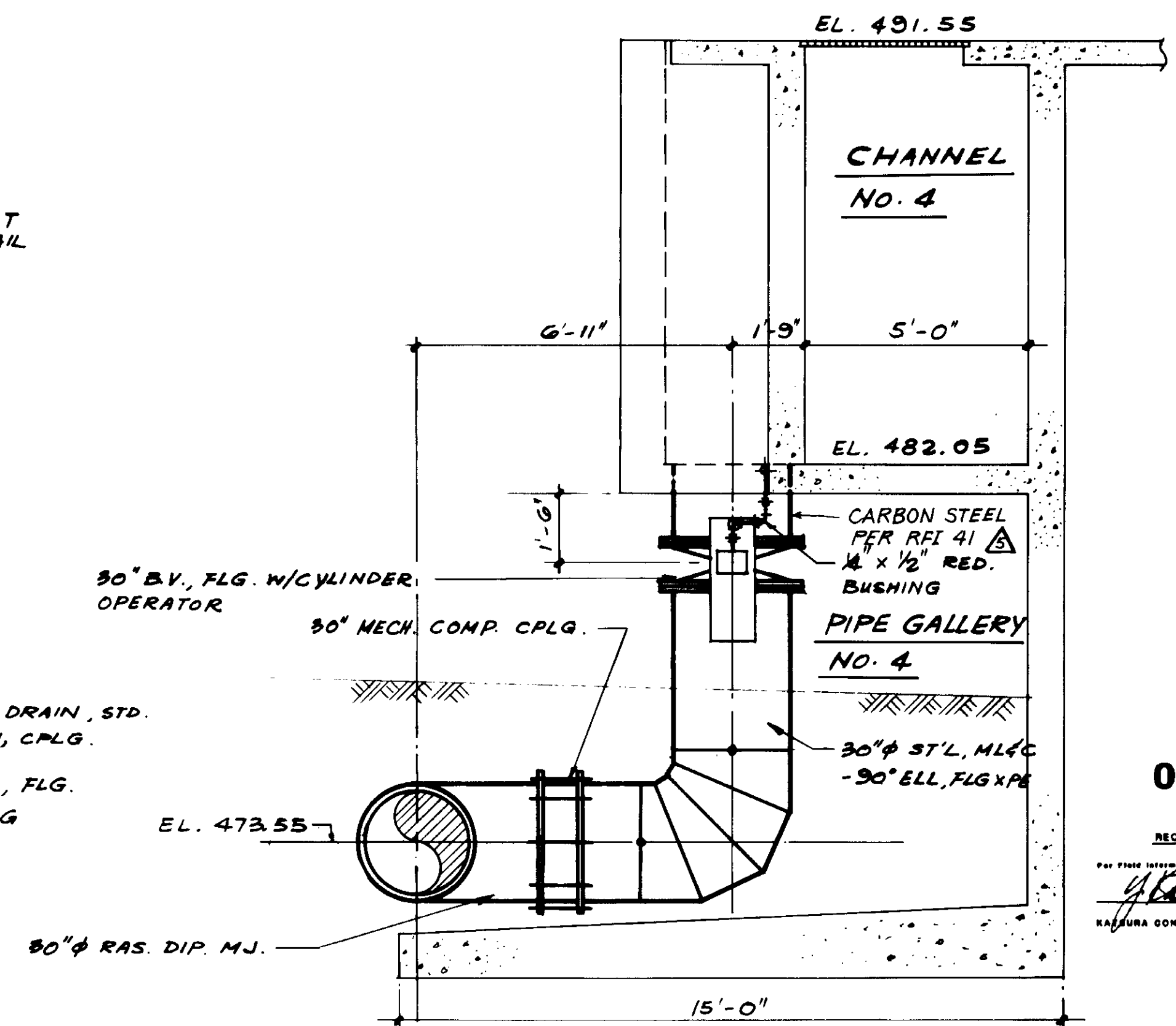
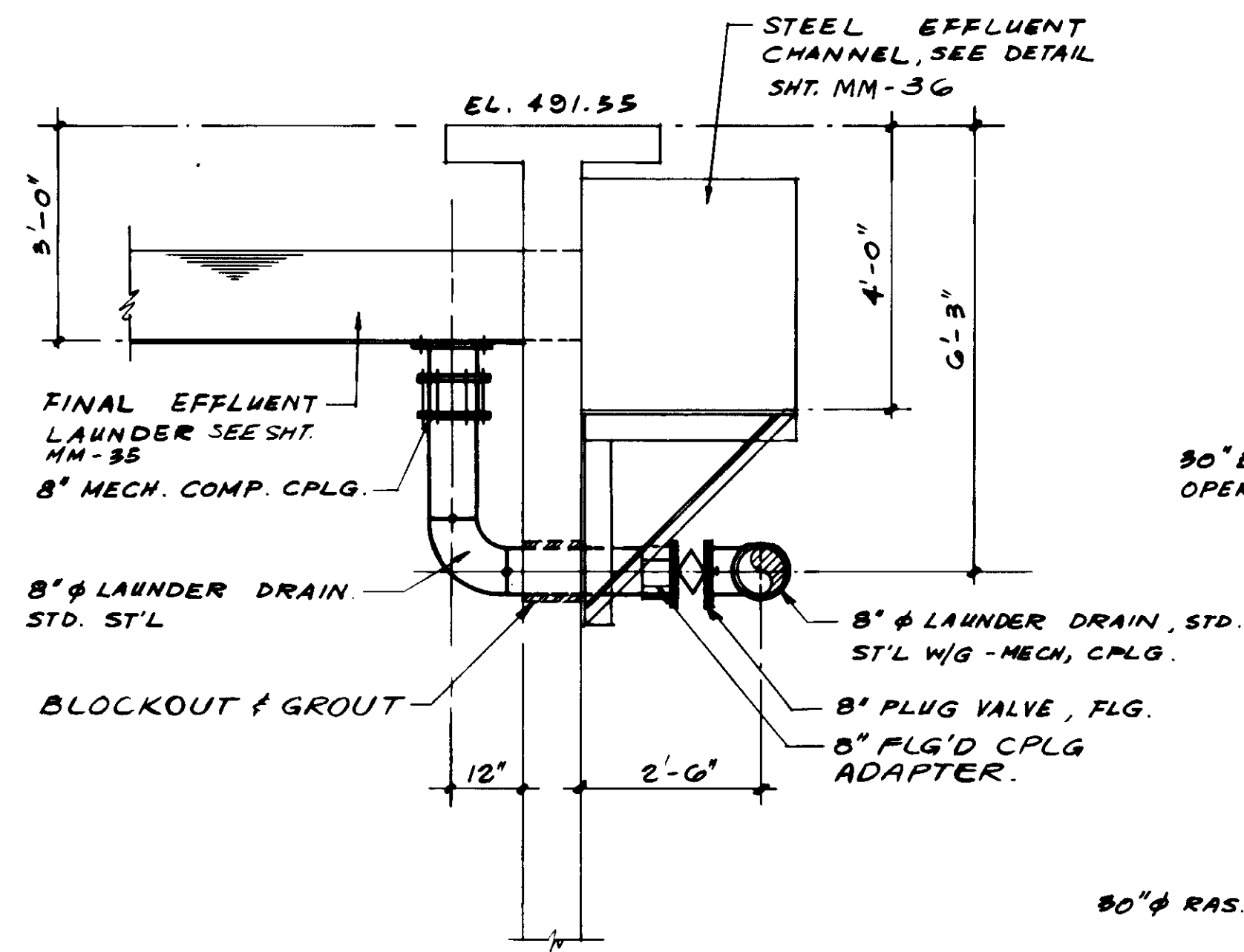
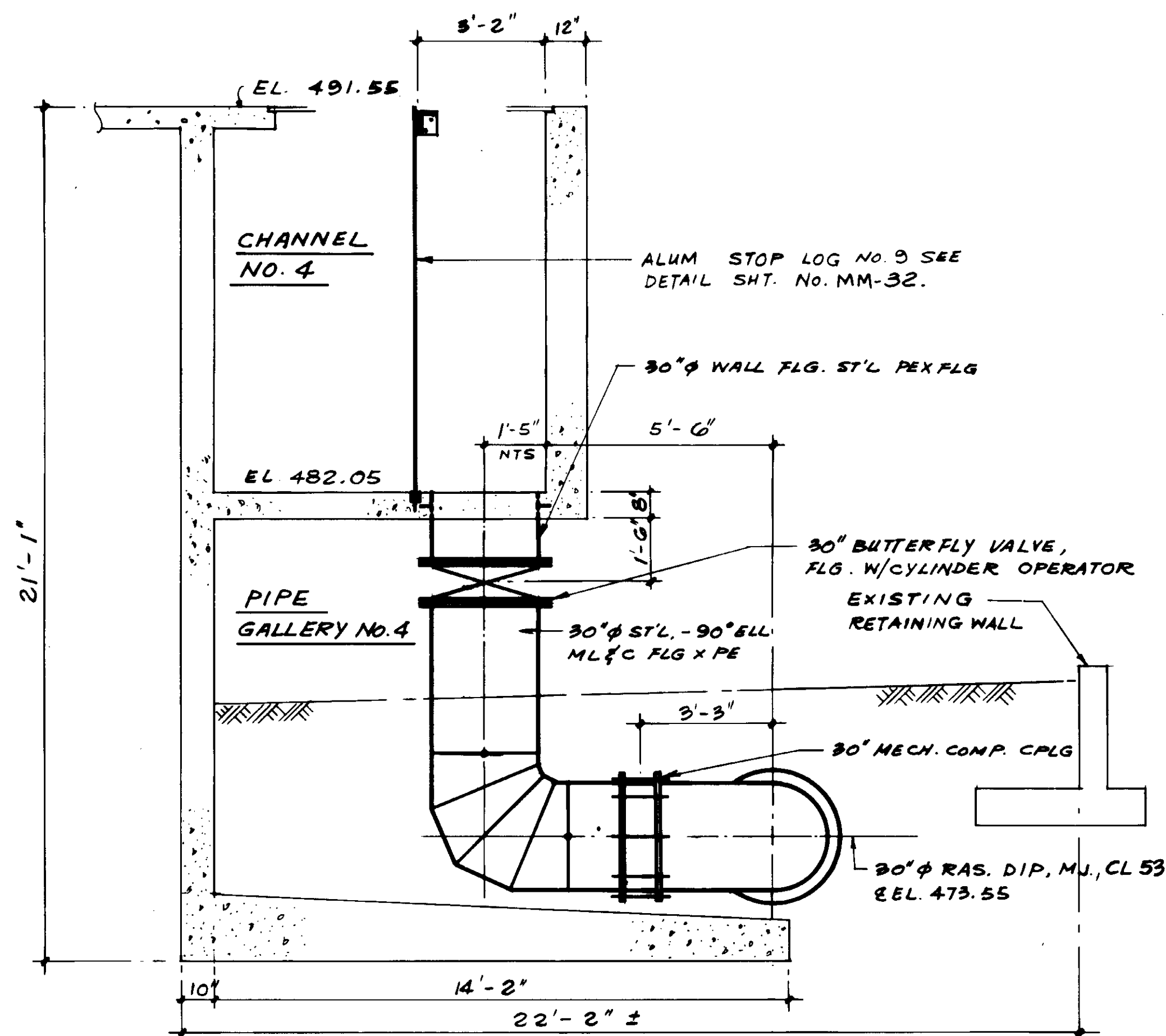
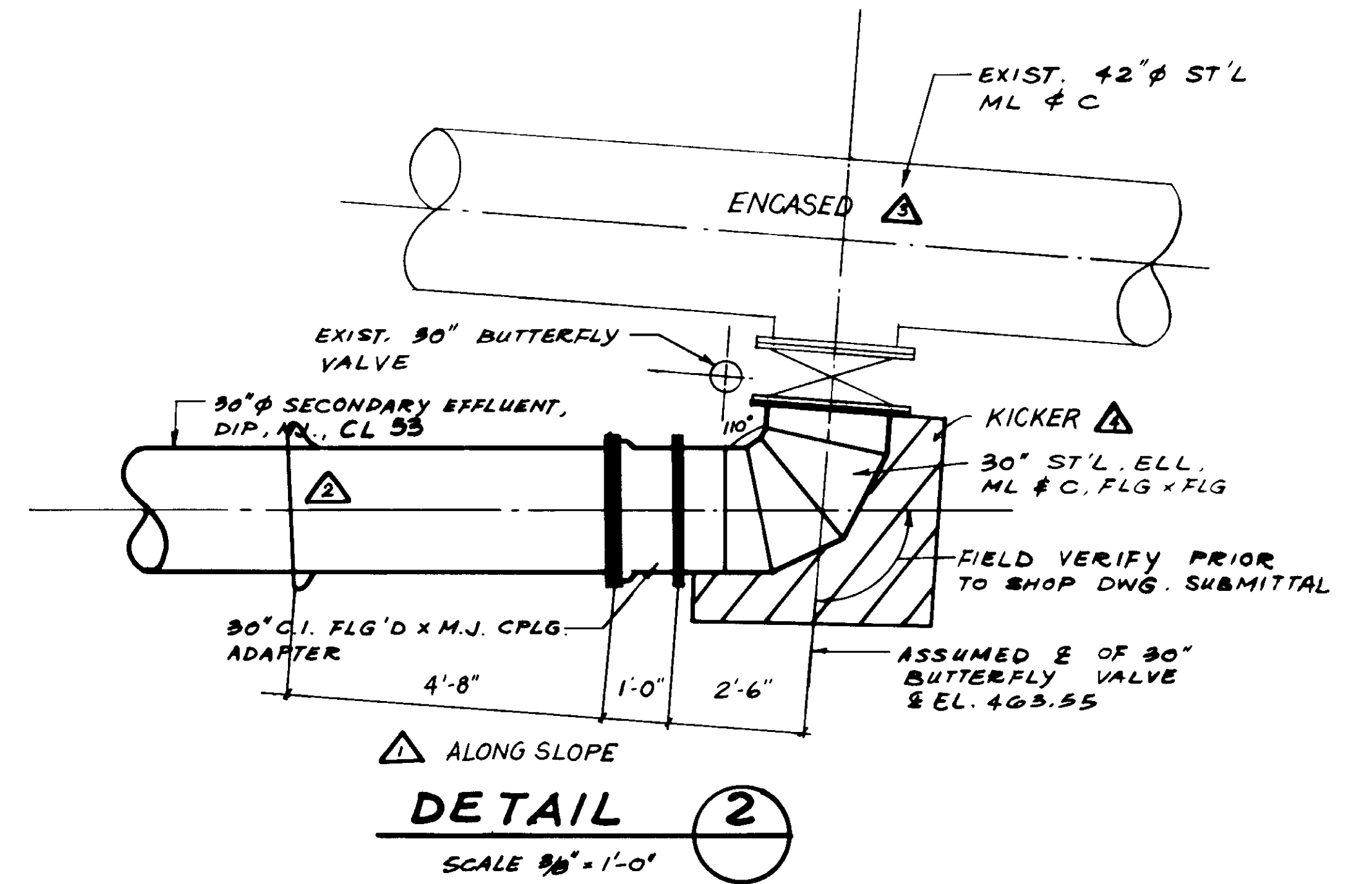


REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED: Y. K. / S. K.	SUBMITTED: <i>[Signature]</i> 8-7-87
	DRAWN: Y. K.	KATSUMI CONSULTING ENGINEERS R.C.E. NO. DATE
	CHECKED: Y. K.	ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PIPE GALLERY NO. 4, SECTIONS  
SHEET M4-10



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

**SECTION F**  
SCALE: 1/2" = 1'-0"

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

04118

RECORD DRAWING  
KATSUMA CONSULTING ENGINEERS



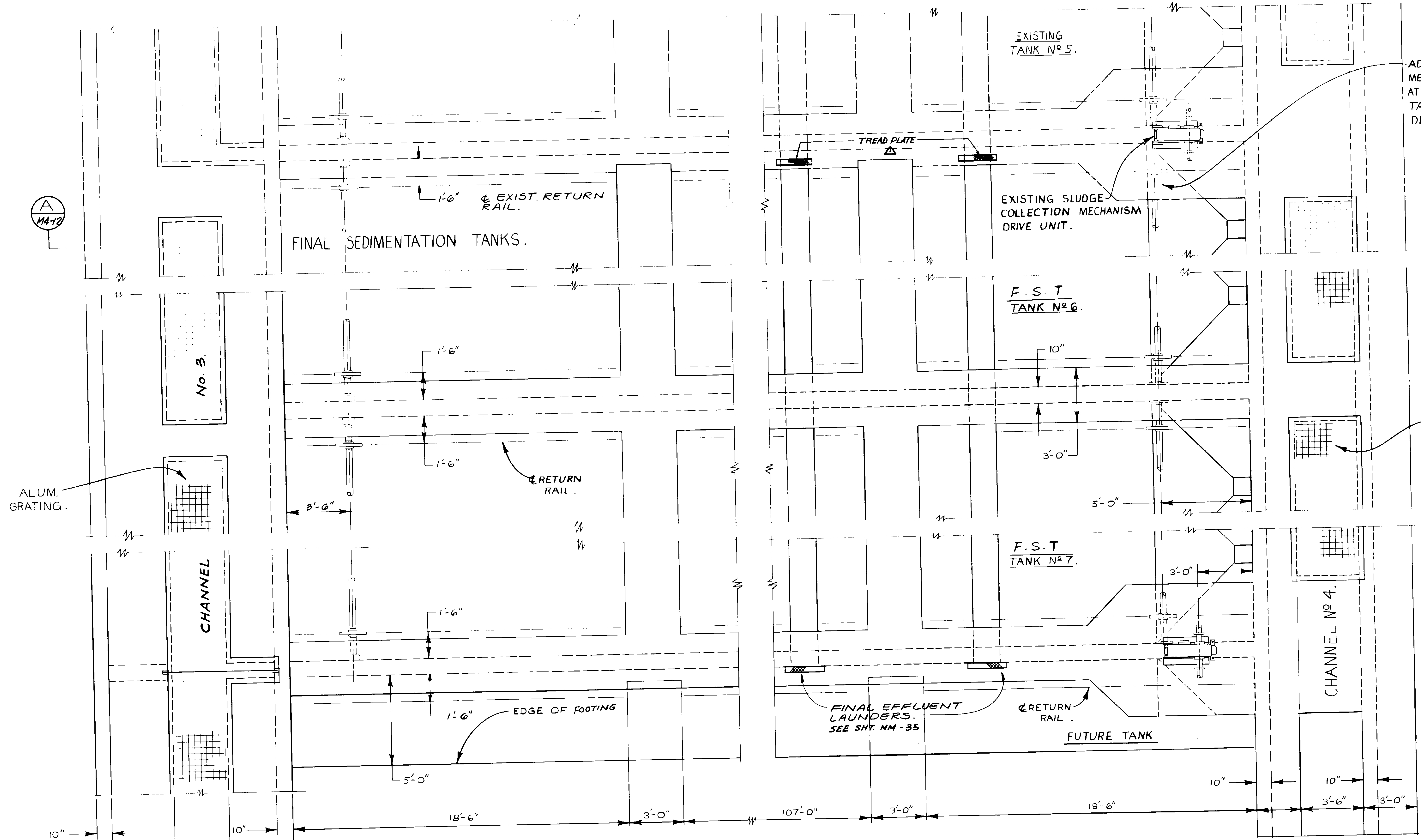
REV	DATE	BY	DESCRIPTION
1-20-87	A.B.	REV. PER K.P.C.	
1-20-87	A.B.	REV. PER K.P.C.	
1-20-87	A.B.	REV. PER K.P.C.	
1-20-87	A.B.	REV. PER K.P.C.	

SCALE:	AS NOTED
DESIGNED:	Y.K./S.K.
DRAWN:	S.K.
CHECKED:	Y.K.
SUBMITTED:	14038 8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
ALEXANDER ENGINEERS	813
	R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SECONDARY EFFLUENT & RETURN ACTIVATED SLUDGE - SECTIONS

SHEET  
M4-11



ADD SLUDGE COLLECTION MECHANISM EQUIPMENT ATTACHMENTS FOR TANK 6 TO EXISTING DRIVE.

ALUM. GRATING.

ALUM. GRATING.

FUTURE TANK.  
PROVIDE ANCHORS FOR FUTURE SHAFT BEARING AND APPURTENANCES, AND RETURN RAILS.

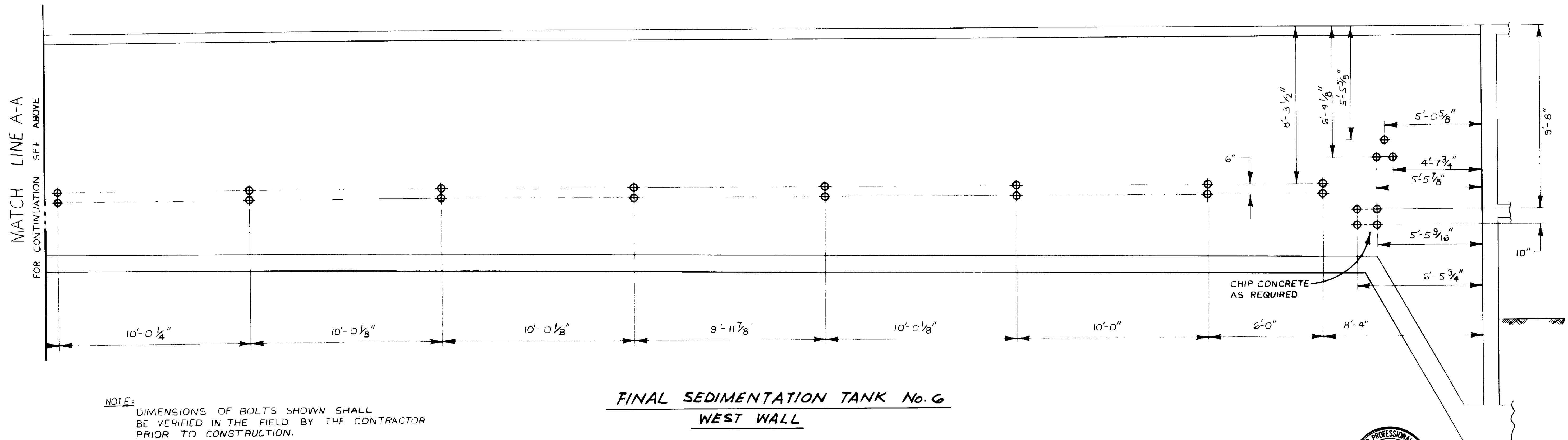
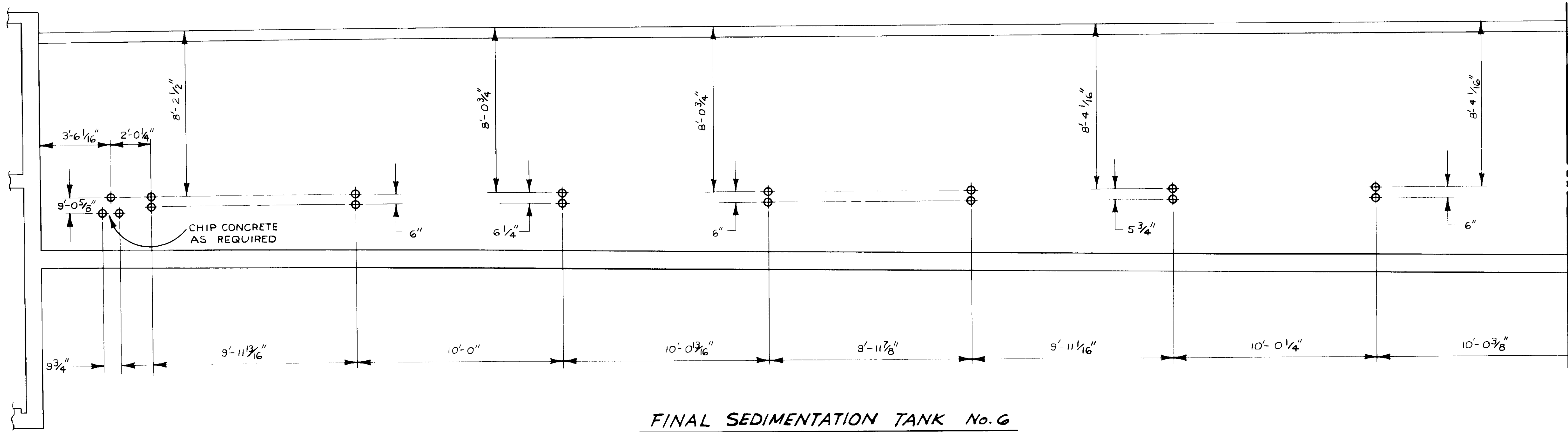
RECORD DRAWINGS  
FOR THIS PROJECT BY: SHIBU PAPER CO. INC.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1980



04119

SCALE: $\frac{3}{8}'' = 1'-0''$			SUBMITTED: <i>[Signature]</i> 14038 8-7-87 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE			<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California			<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b>			SHEET <b>M4-12</b>		
DESIGNED: R.K. DRAWN: Y.K. CHECKED: ALEXANDER ENGINEERS			519 R.C.E. NO. DATE			SLUDGE COLLECTION MECHANISM - PLAN								
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION							
				1-20-87	A.B.	REV. PER K.P.C.								





NOTE: DIMENSIONS OF BOLTS SHOWN SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

RECORD DRAWING  
KATSUMA CONSULTING ENGINEERS JUN 1987



04120

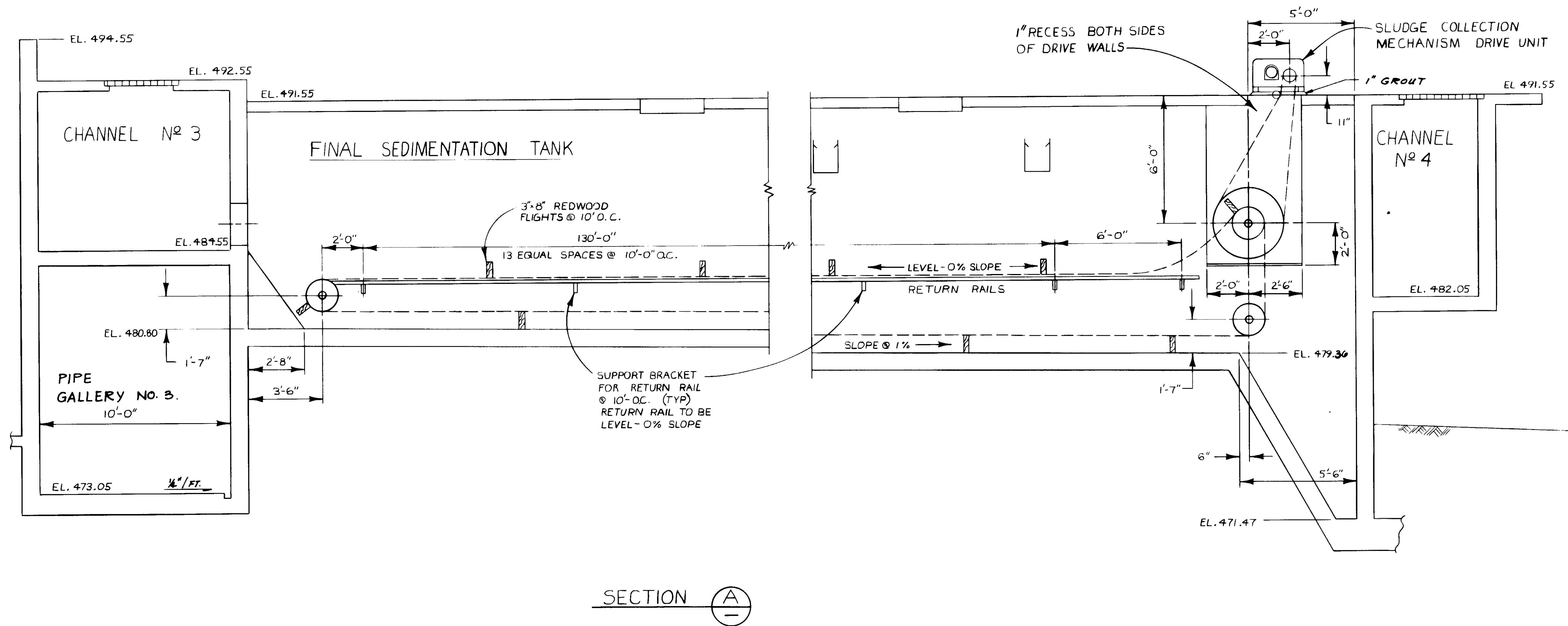
REV	DATE	BY	DESCRIPTION

SCALE: 3/8" = 1'-0"	DESIGNED: Y.K./C.C.	SUBMITTED: 8-7-87
DRAWN: R.K.	CHECKED: Y.K.	KATSUMA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SLUDGE COLLECTION MECHANISM - ANCHOR BOLTS

SHEET  
M4-13



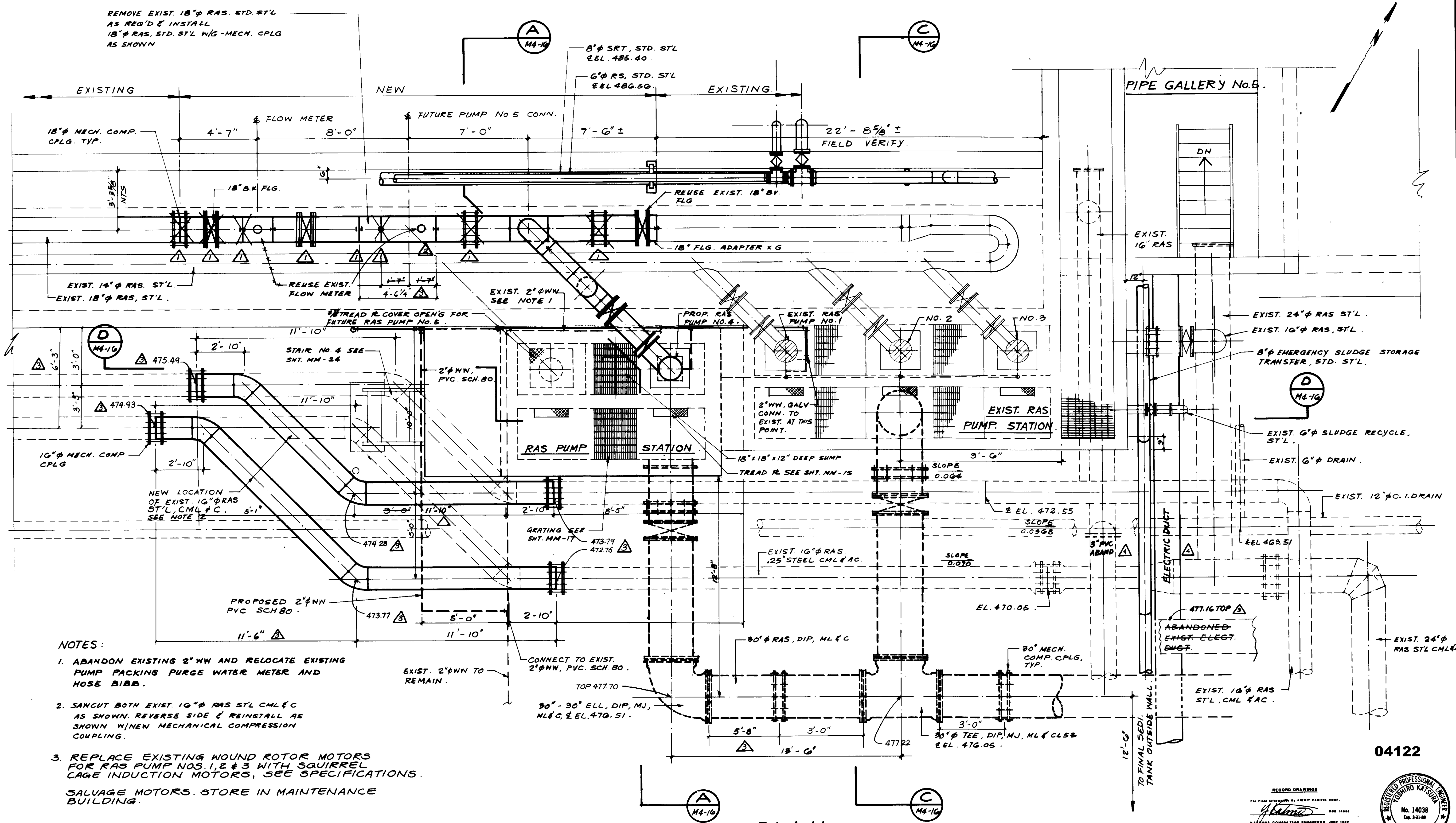
04121

RECORD DRAWINGS  
 FOR STATE INTEREST ONLY BY JEREMY PARRISH GROUP  
 KATSURA CONSULTING ENGINEERS JUNE 1999



SCALE: 3/8" = 1'-0"		DESIGNED: Y.K./C.C. R.K. DRAWN: Y.K. CHECKED:	SUBMITTED: <i>[Signature]</i> 14038 8-7-87 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE 813 ALEXANDER ENGINEERS R.C.E.E. NO. DATE	<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California	<b>LAS VIRGENES MUNICIPAL WATER DISTRICT          TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> SLUDGE COLLECTION MECHANISM - SECTION	SHEET <b>M4-14</b>	
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

REMOVE EXIST. 18"  $\phi$  RAS. STD. ST'L AS REQ'D & INSTALL 18"  $\phi$  RAS. STD. ST'L W/G-MECH. CPLG AS SHOWN



**NOTES:**

1. ABANDON EXISTING 2" WW AND RELOCATE EXISTING PUMP PACKING PURGE WATER METER AND HOSE BIBB.
2. SAWCUT BOTH EXIST. 10"  $\phi$  RAS ST'L CML & C AS SHOWN. REVERSE SIDE & REINSTALL AS SHOWN W/NEW MECHANICAL COMPRESSION COUPLING.
3. REPLACE EXISTING WOUND ROTOR MOTORS FOR RAS PUMP NOS. 1, 2 & 3 WITH SQUIRREL CAGE INDUCTION MOTORS, SEE SPECIFICATIONS. SALVAGE MOTORS. STORE IN MAINTENANCE BUILDING.

**PLAN**

04122

RECORD DRAWING  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988



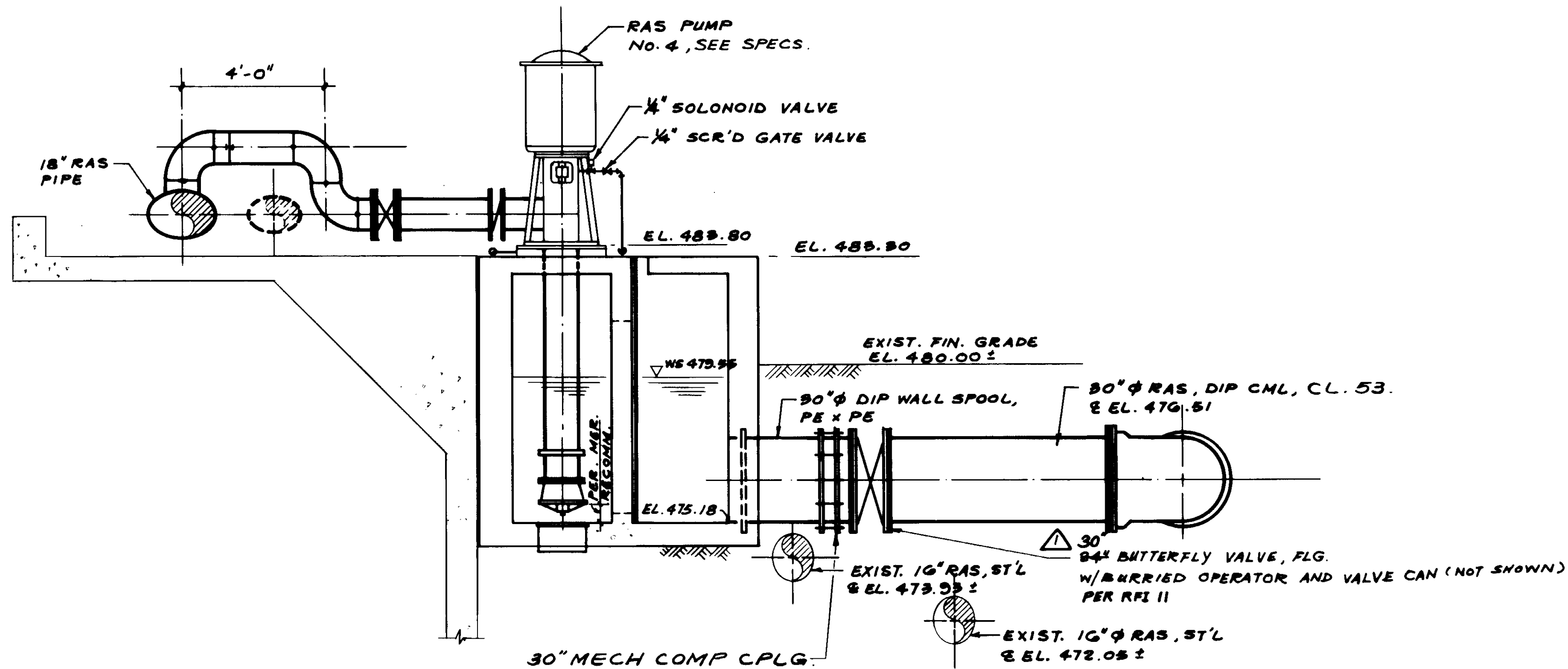
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+	4-21-87	A.B.	REV. PER K.P.C.
+	4-21-87	A.B.	REV. PER K.P.C.
+	4-21-87	A.B.	REV. PER K.P.C.

SCALE:	3/8" = 1'-0"
DESIGNED:	Y. K. / C.S.
DRAWN:	S. K.
CHECKED:	Y. K.
SUBMITTED:	14038 8-7-87
DATE:	8-7-87
DATE:	8-7-87

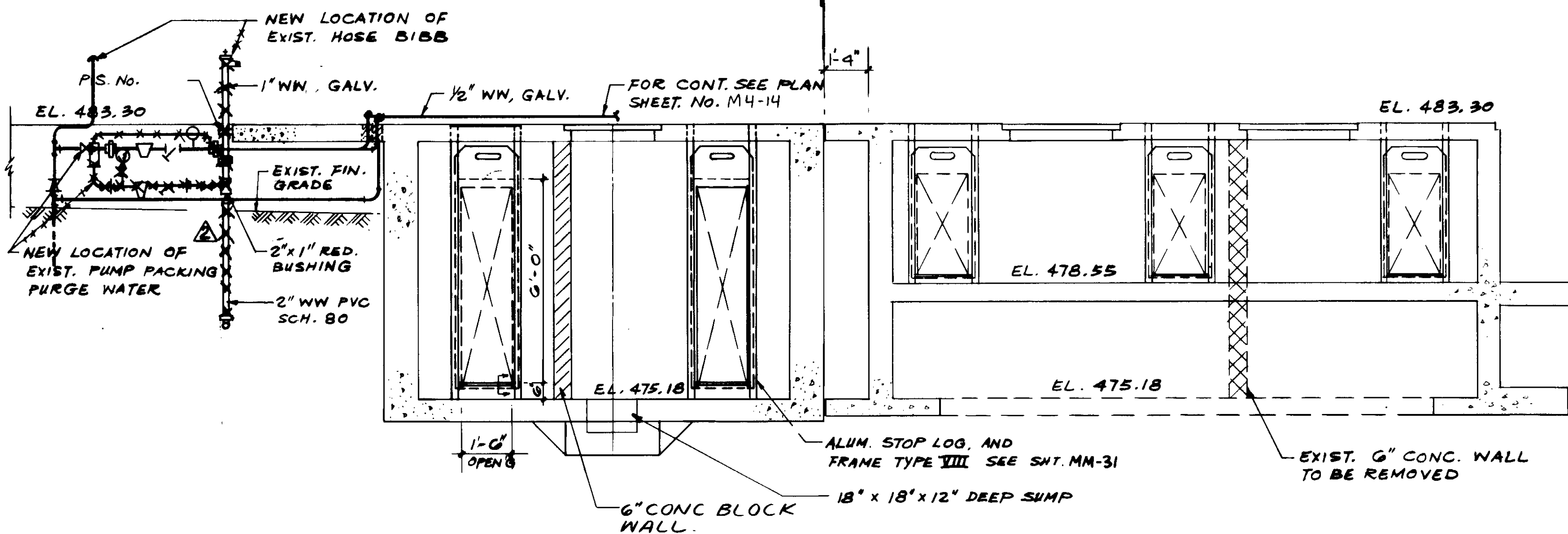
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 RETURN ACTIVATED SLUDGE PUMP STATION - PLAN

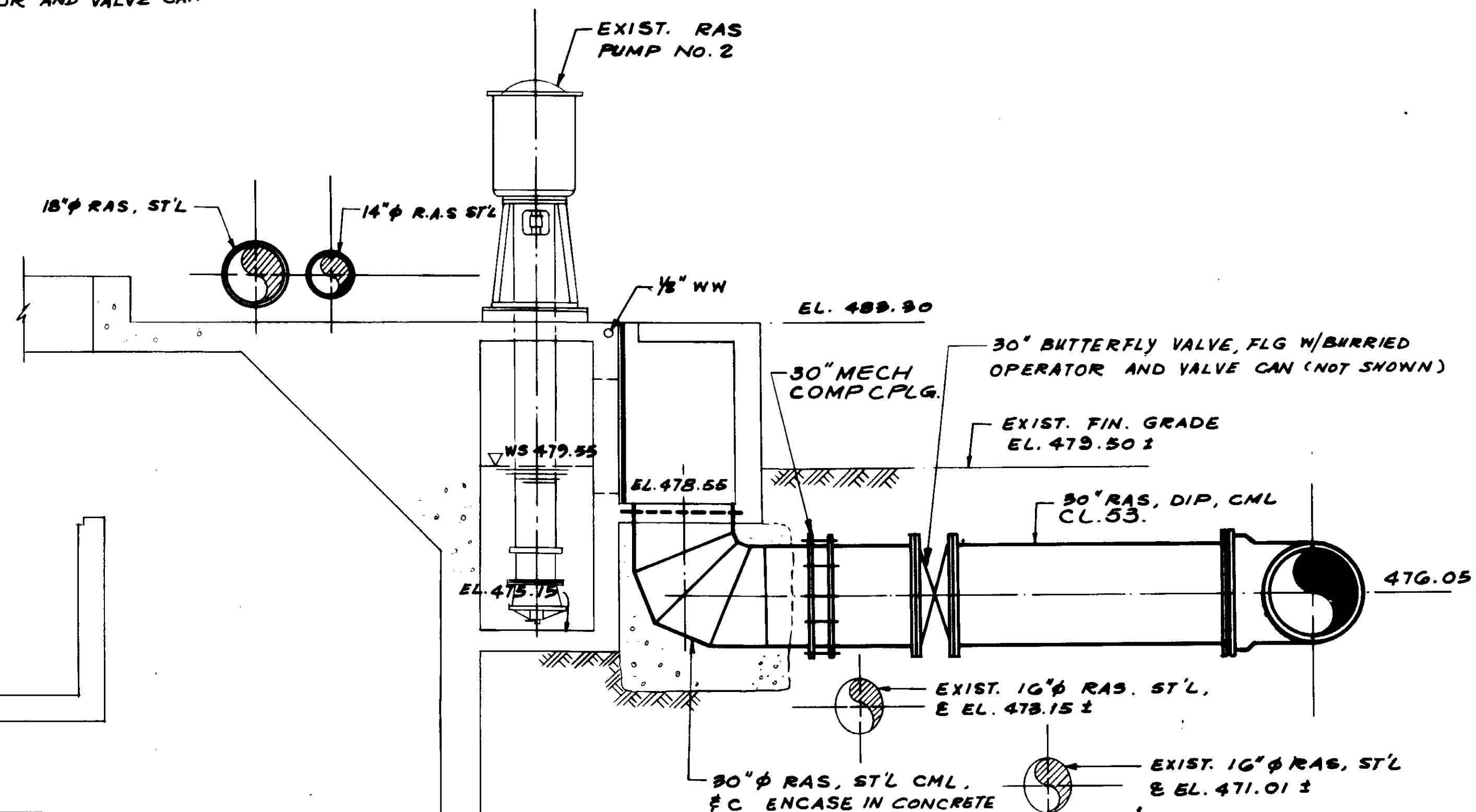
SHEET  
**M4-15**



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



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



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

RECORD DRAWING  
 PREPARED BY KATSUMI KATSUMI  
 KATSUMI CONSULTING ENGINEERS JUNE 1989

REGISTERED PROFESSIONAL ENGINEER  
 TOSHIRO KATSUMI  
 No. 14038  
 Exp. 3-31-89  
 CIVIL  
 STATE OF CALIFORNIA

04123

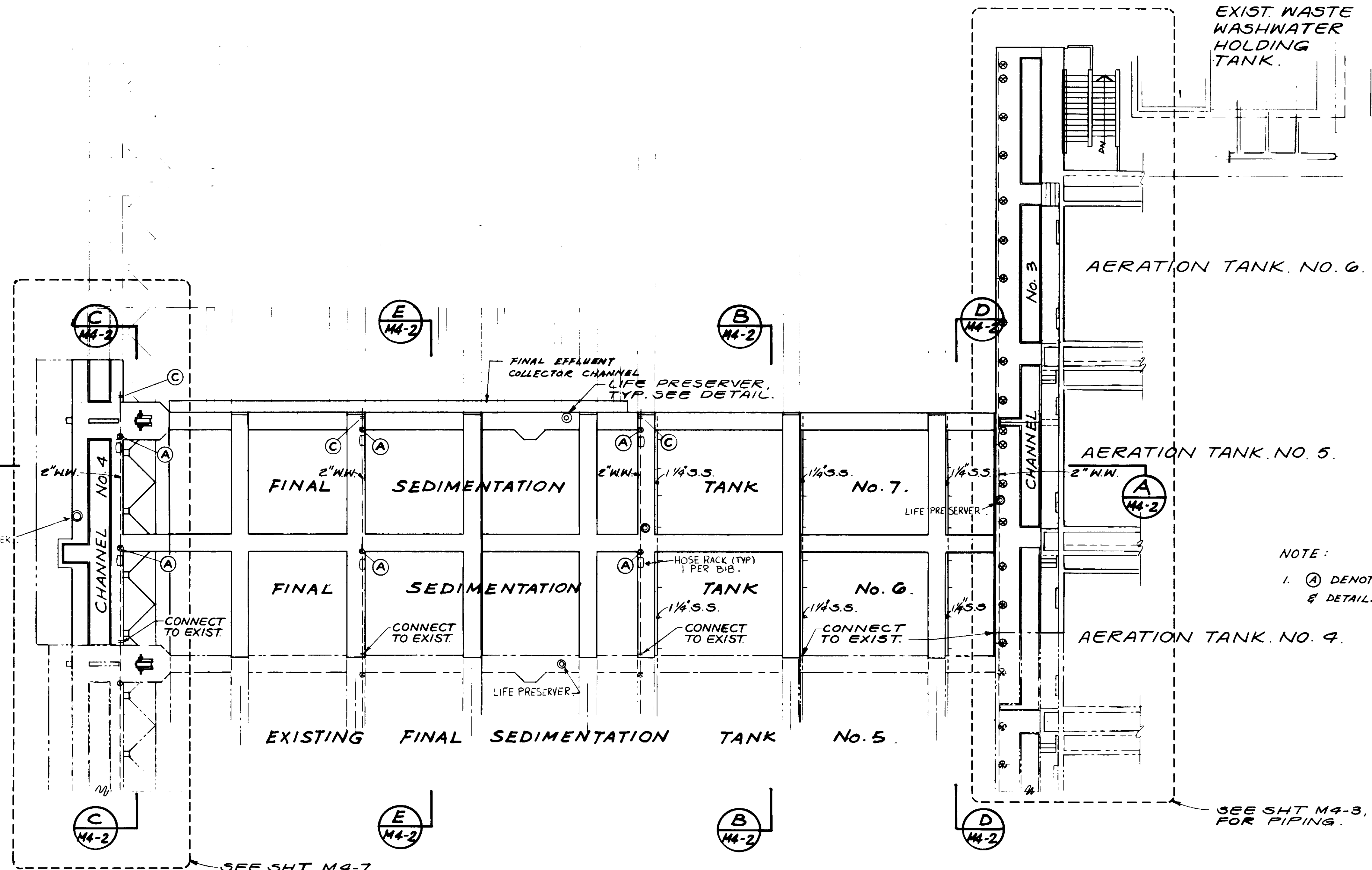
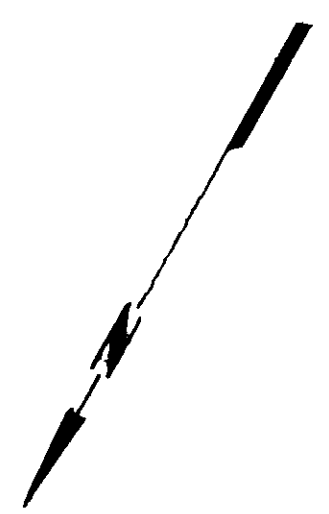
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SCALE:	AS NOTED	DESIGNED:	Y. K./C.S.	SUBMITTED:	8-7-87
		DRAWN:	S. K.	KATSUMI CONSULTING ENGINEERS	R.C.E. NO. DATE
		CHECKED:	Y. K.	ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 RETURN ACTIVATED SLUDGE PUMP STATION - SECTIONS  
 SHEET M4-16





EXIST. WASTE WASHWATER HOLDING TANK.  
 EXIST. CHEMICAL BLDG.

AERATION TANK NO. 6.

AERATION TANK NO. 5.

AERATION TANK NO. 4.

NOTE:  
 1. (A) DENOTE FOR WASH WATER CONNECTION & DETAILS SEE SHT M10-1.

SEE SHT M4-3, M4-5 & FOR PIPING.

SEE SHT. M4-7 FOR PIPING.

**PLAN**

04124

RECORD DRAWINGS  
 KATYORA CONSULTING ENGINEERS



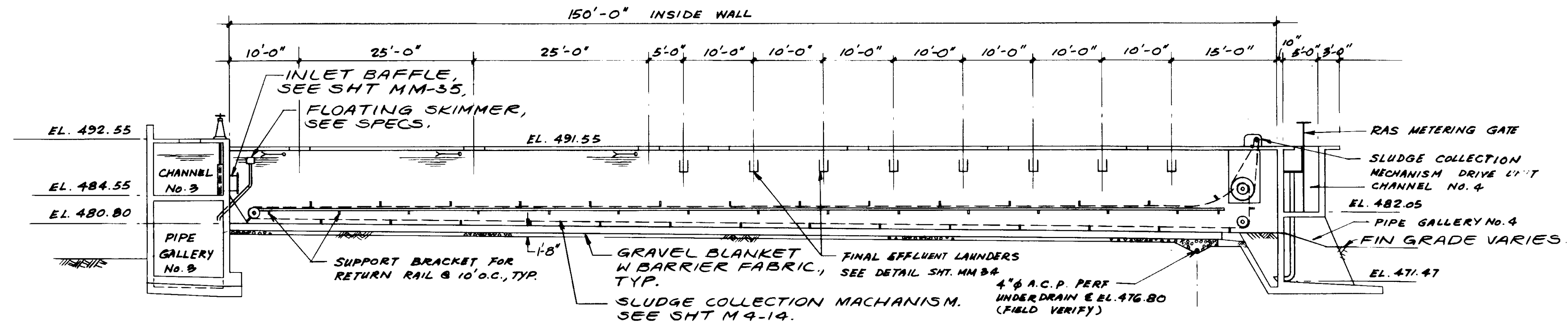
REV	DATE	BY	DESCRIPTION

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DRAWN: Y.K.	CHECKED: Y.K.	14038 R.C.E. NO.
		613 DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

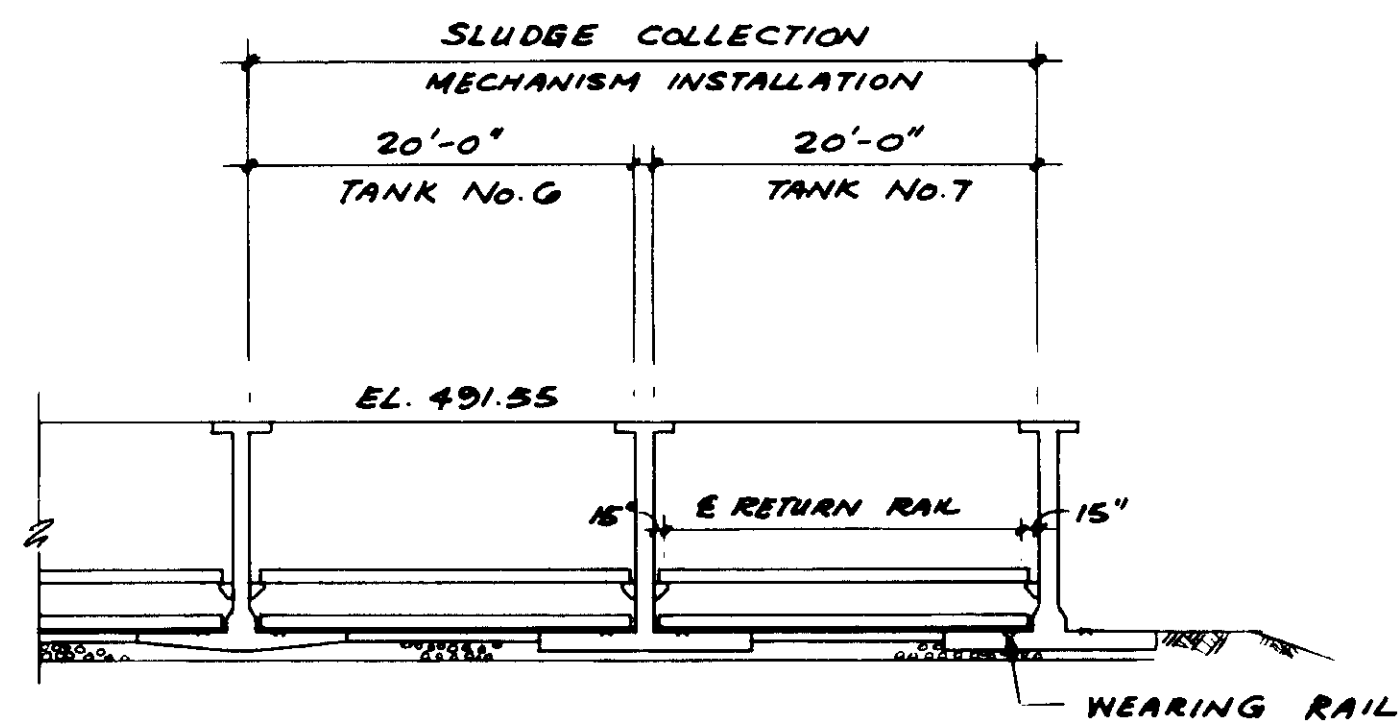
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 FINAL SEDIMENTATION TANK & VICINITY, LAYOUT

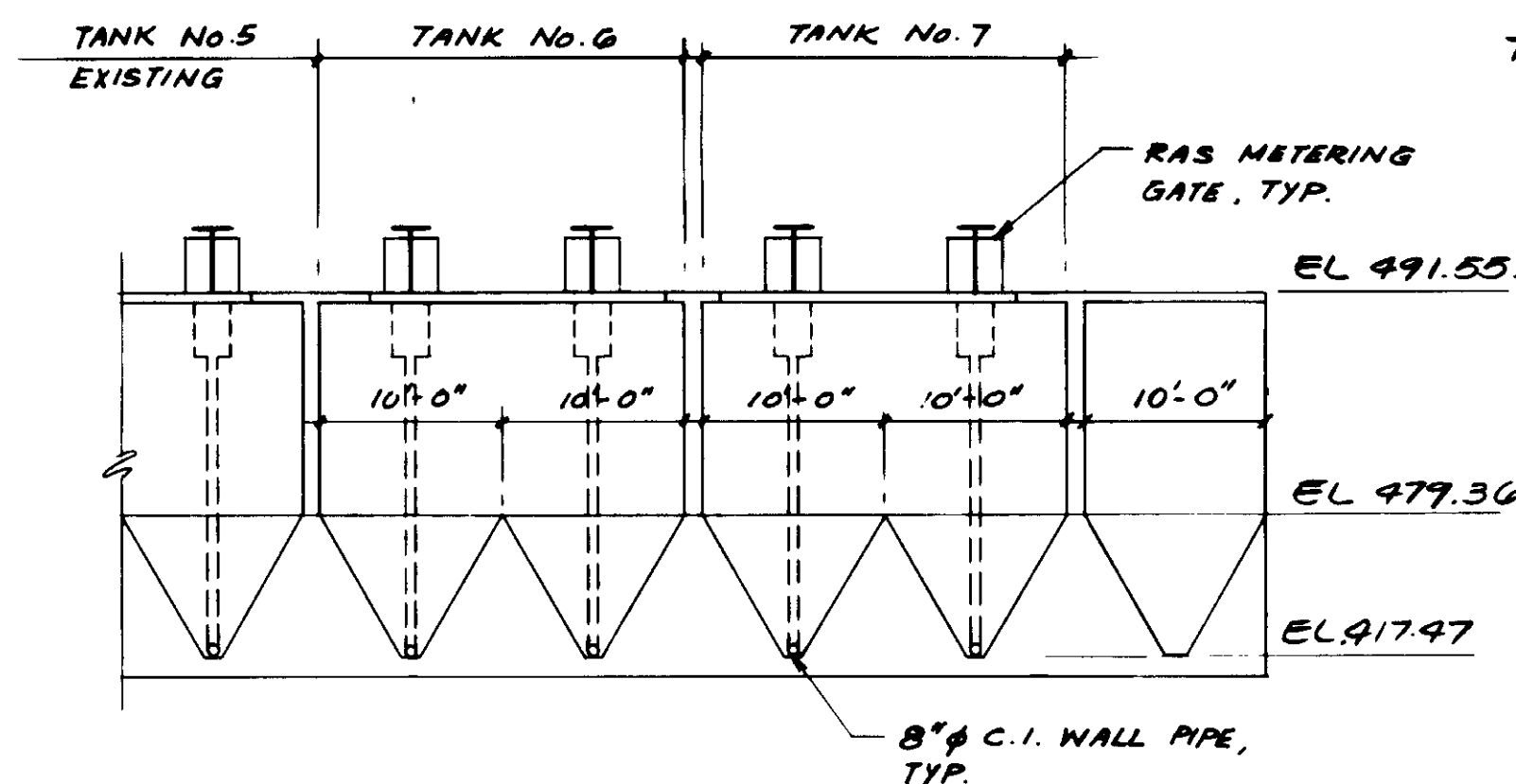
SHEET  
 M4-1



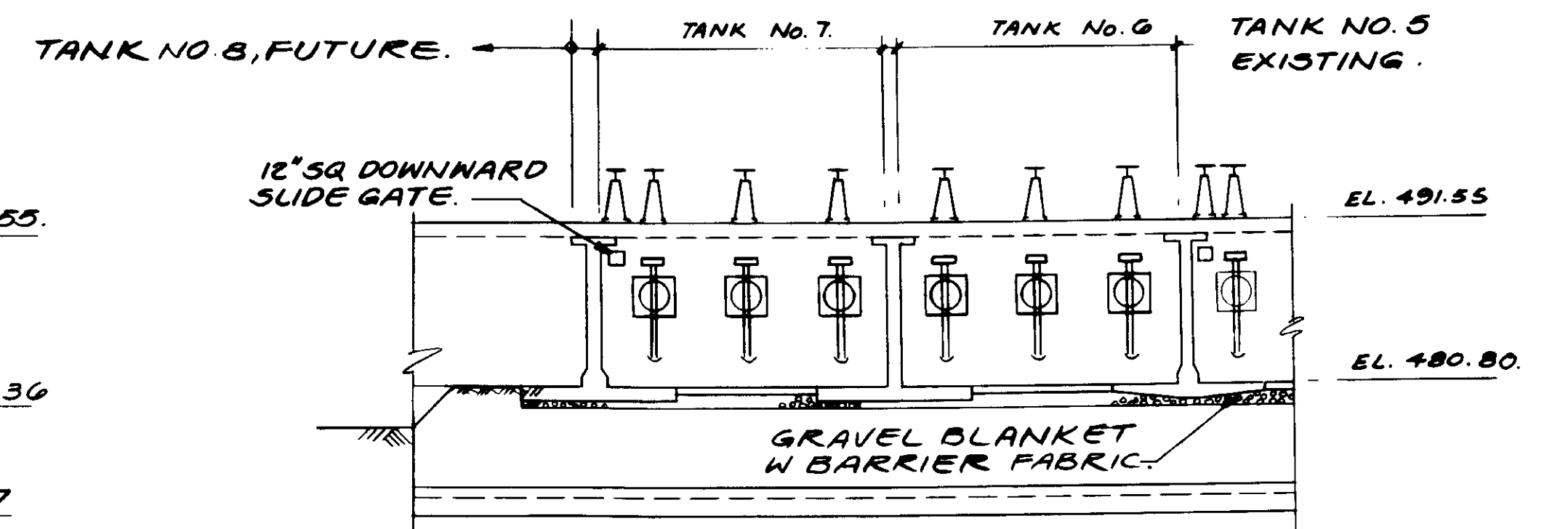
SECTION A  
M4-1



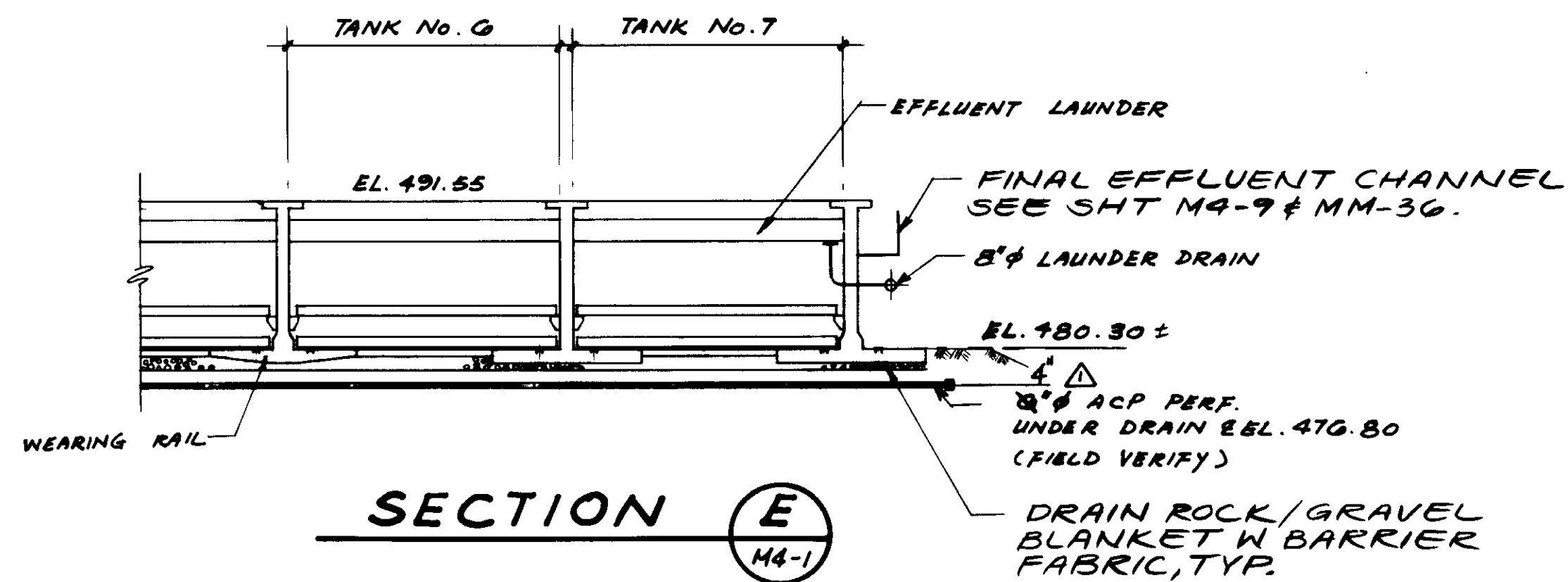
SECTION B  
M4-1



SECTION C  
M4-1



SECTION D  
M4-1



SECTION E  
M4-1

04125

RECORD DRAWINGS  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS  
 JUNE 1987



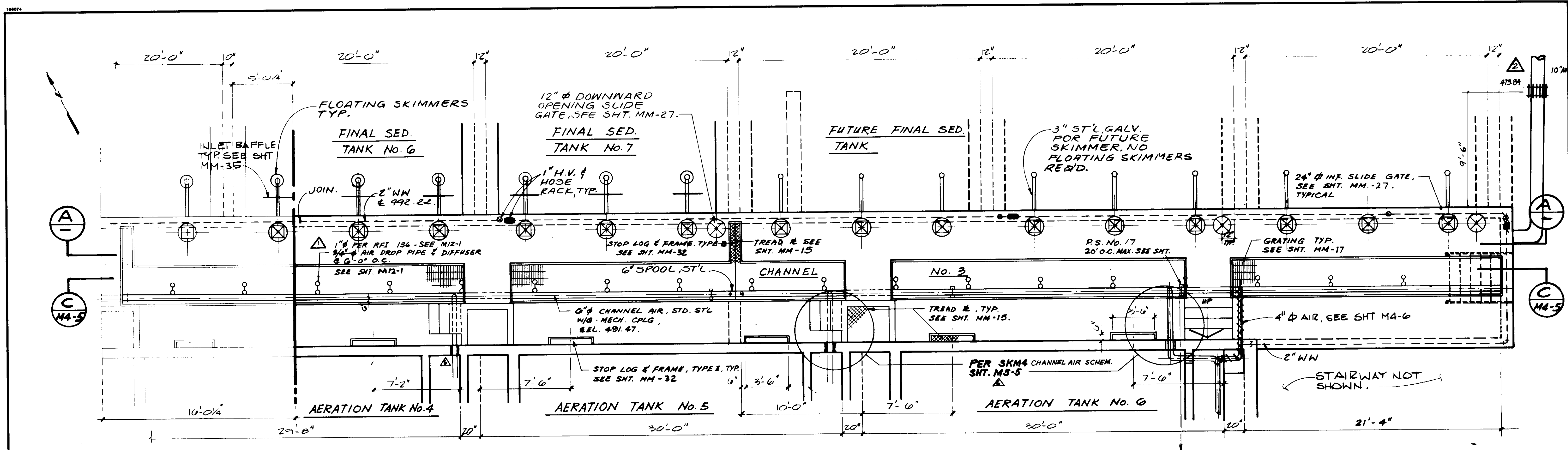
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'	DESIGNED Y. K.	SUBMITTED KATSUMA CONSULTING ENGINEERS 14038 8-7-87
	DRAWN Y. K.	R.C.E. NO. DATE
	CHECKED	513 ALEXANDER ENGINEERS R.C.E. NO. DATE

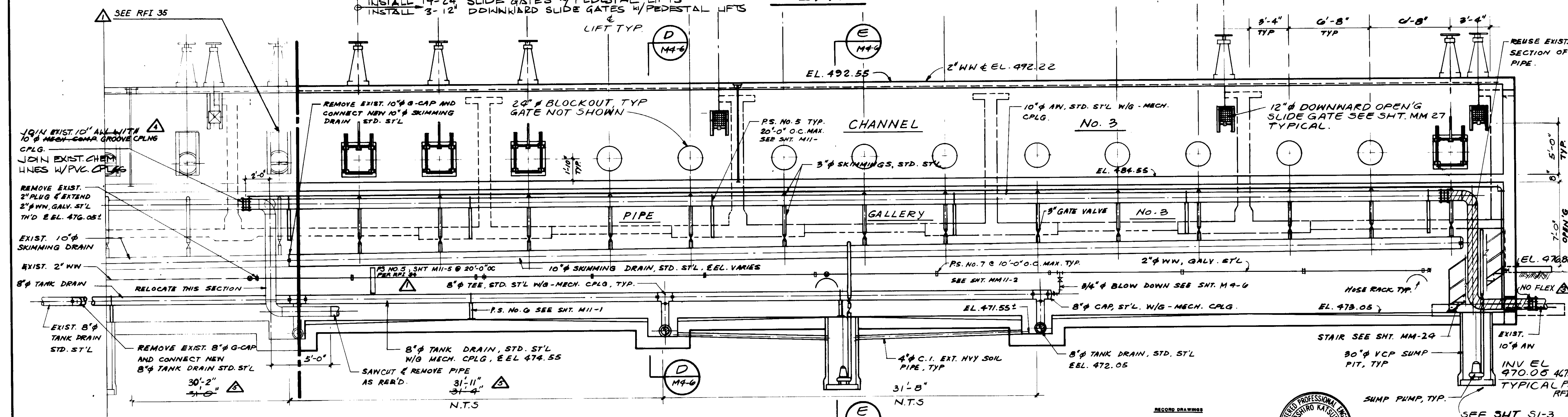
**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GENERAL SECTIONS

SHEET  
M4-2



**PLAN**

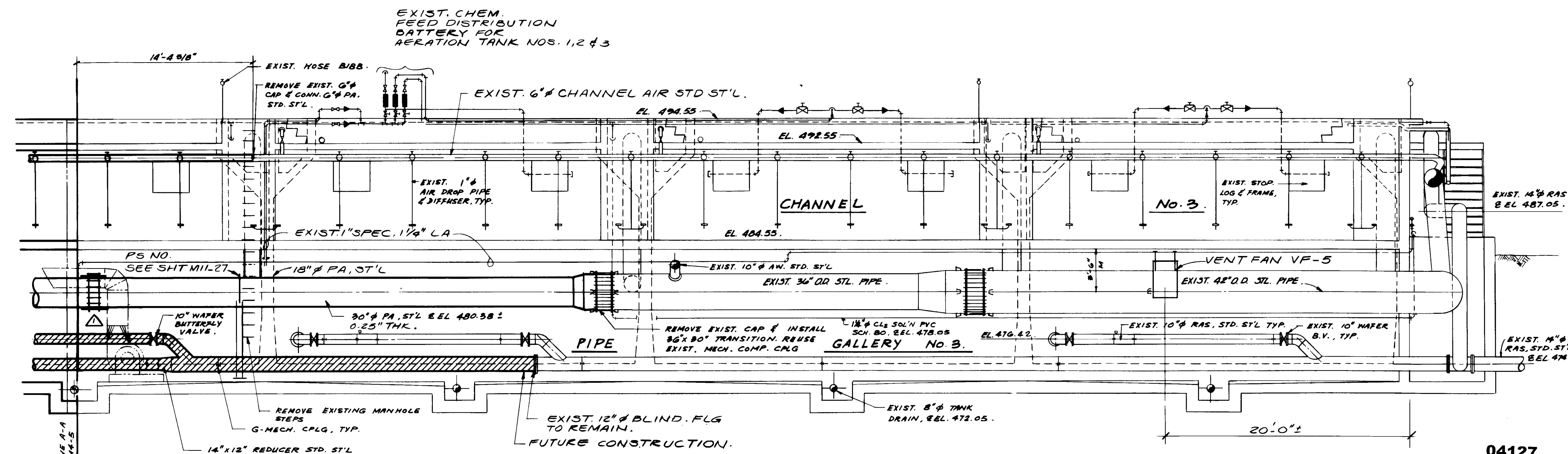
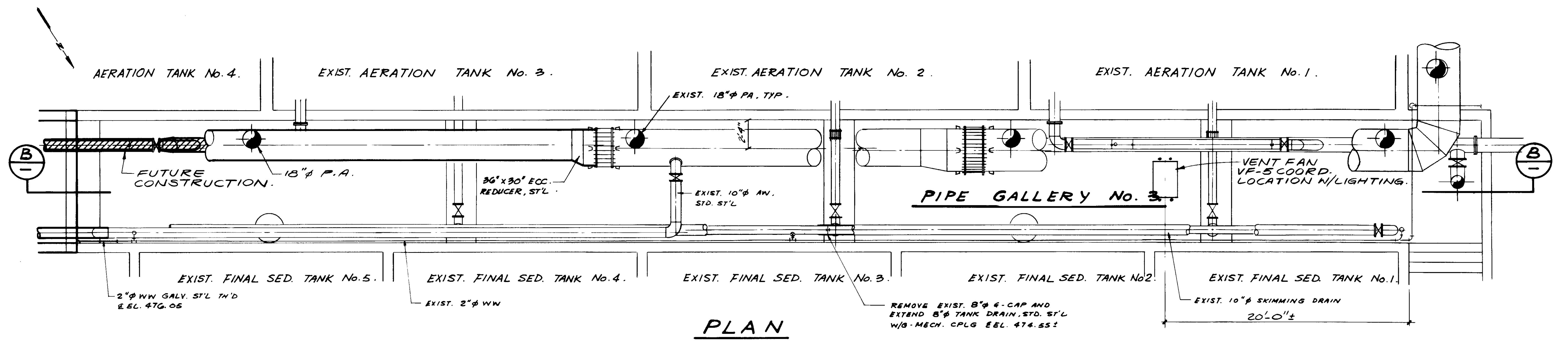


**SECTION A-A**

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REV	DATE	BY	DESCRIPTION																																				
1-17-81	A.B.	REV. PER K.P.C.																																					
1-17-81	A.B.	REV. PER K.P.C.																																					
1-17-81	A.B.	REV. PER K.P.C.																																					
REV	DATE	BY	DESCRIPTION																																				
1-17-81	A.B.	REV. PER K.P.C.																																					
1-17-81	A.B.	REV. PER K.P.C.																																					
1-17-81	A.B.	REV. PER K.P.C.																																					



04126



04127

RECORD DRAWINGS  
 PREPARED BY: KATSUMI KATSURA  
 KATSUMI KATSURA  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA



REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"	DESIGNED: Y.K./A.D.	SUBMITTED: 8-7-87
DRAWN: Y.K.	CHECKED: A.D./S.K.	DATE: 8-7-87

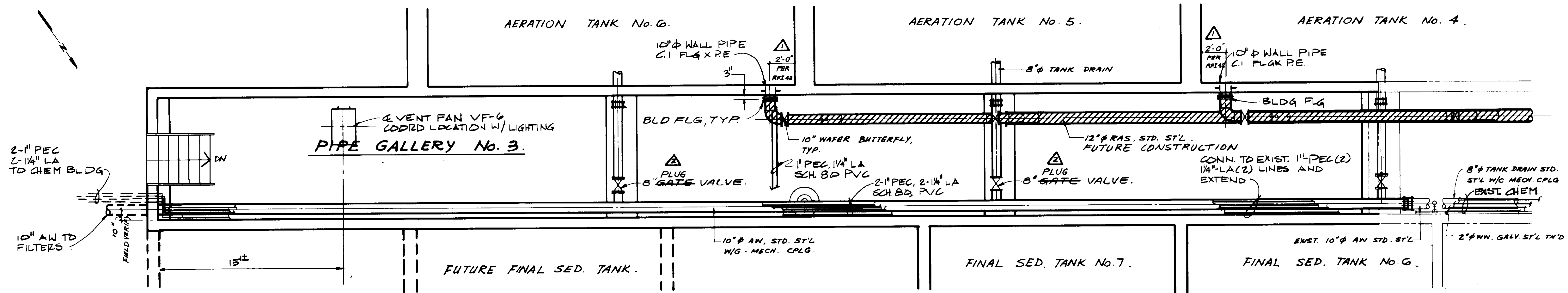
**KALEX ENGINEERS**  
 Katsumi Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

PIPE GALLERY NO. 3, PLAN & SECTION - I

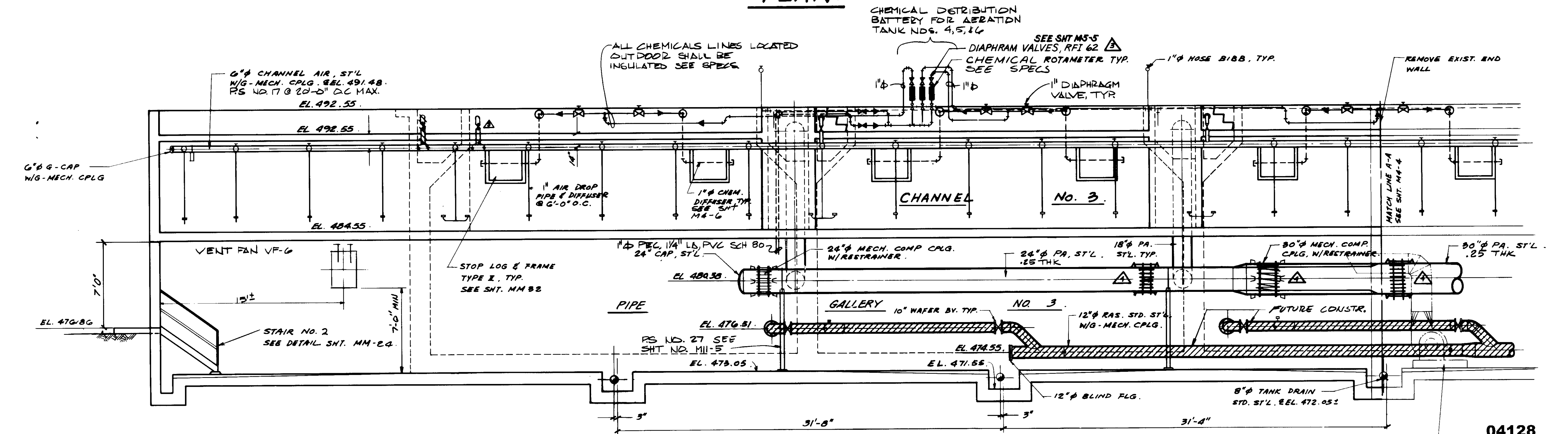
SHEET M4-4





**PLAN.**

CHEMICAL DISTRIBUTION BATTERY FOR AERATION TANK NOS. 4, 5, & 6



**SECTION. C**

REMOVE EXIST. EXHAUST FAN, PIPES & CONC. PAD. SALVAGE EXCEPT CONC. PAD.

04128



RECORD DRAWINGS  
 PREPARED BY KERRY PARRISH GROUP  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988

REV	DATE	BY	DESCRIPTION
4-14-87	A.B.	REV. PER K.P.C.	
4-14-87	A.B.	REV. PER K.P.C.	
4-14-87	A.B.	REV. PER K.P.C.	
4-14-87	A.B.	REV. PER K.P.C.	

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

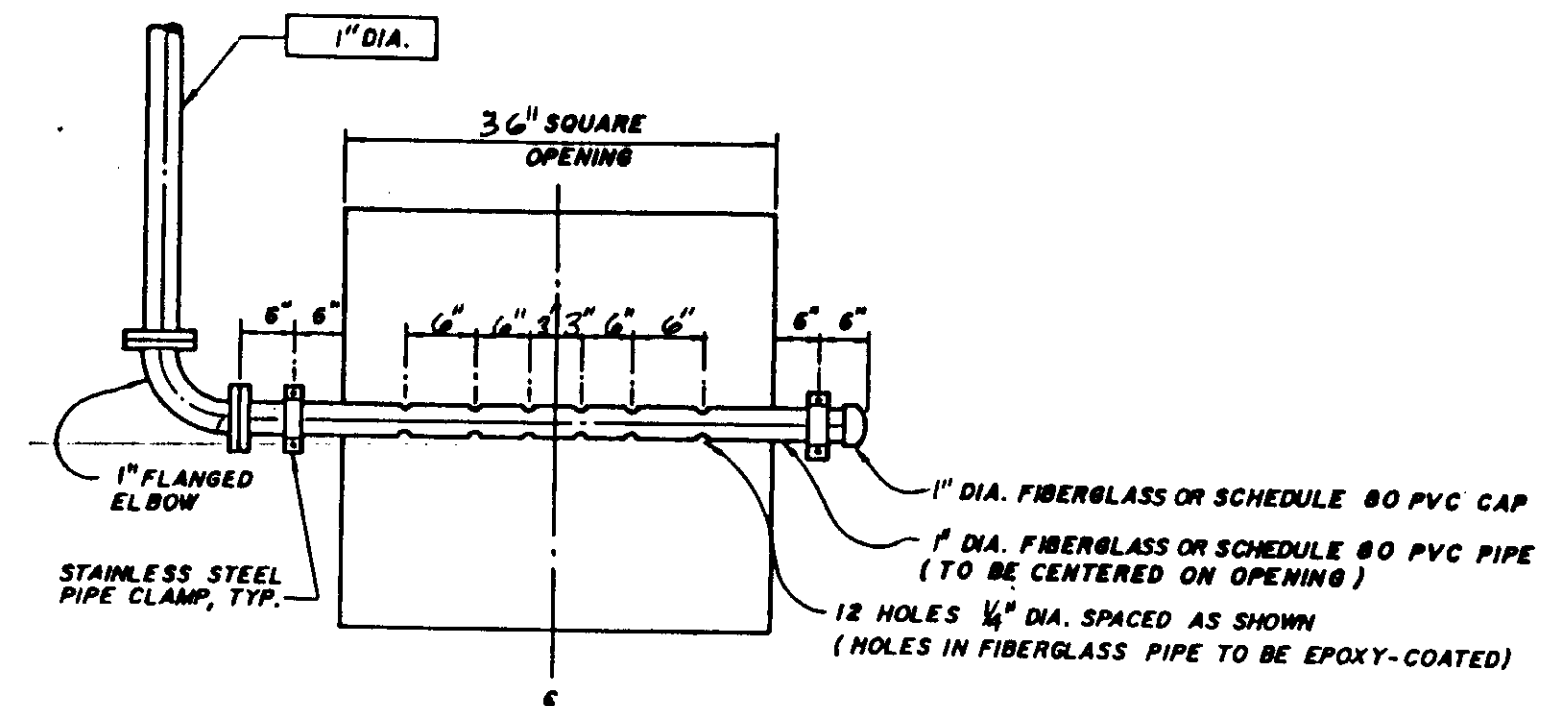
DESIGNED	ADY.K.
DRAWN	S.K.
CHECKED	Y.K.

SUBMITTED	<i>Yoshio Katsura</i>	8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	R.C.E.E. NO.	DATE

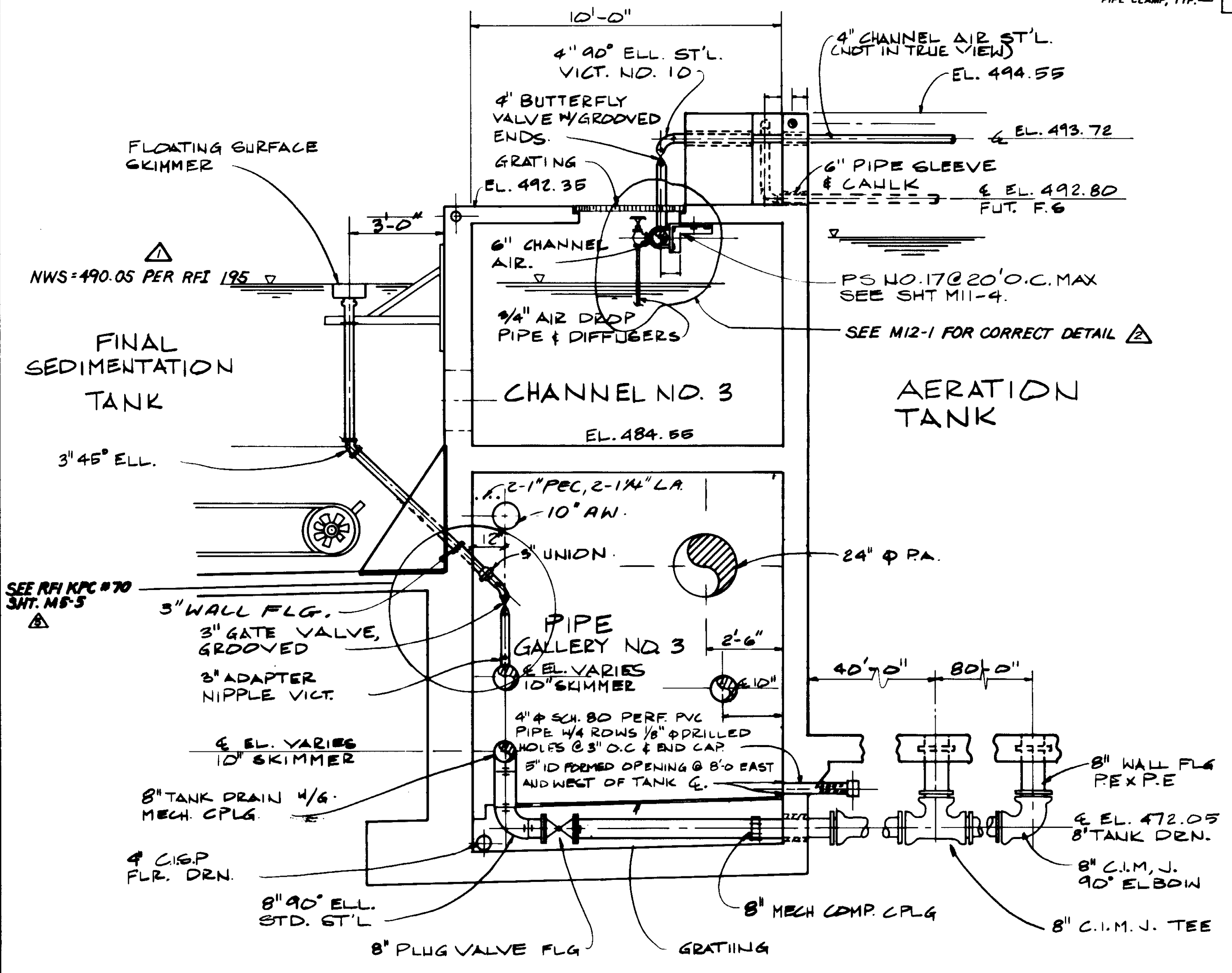
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 3, PLAN & SECTION - II

SHEET M4-5

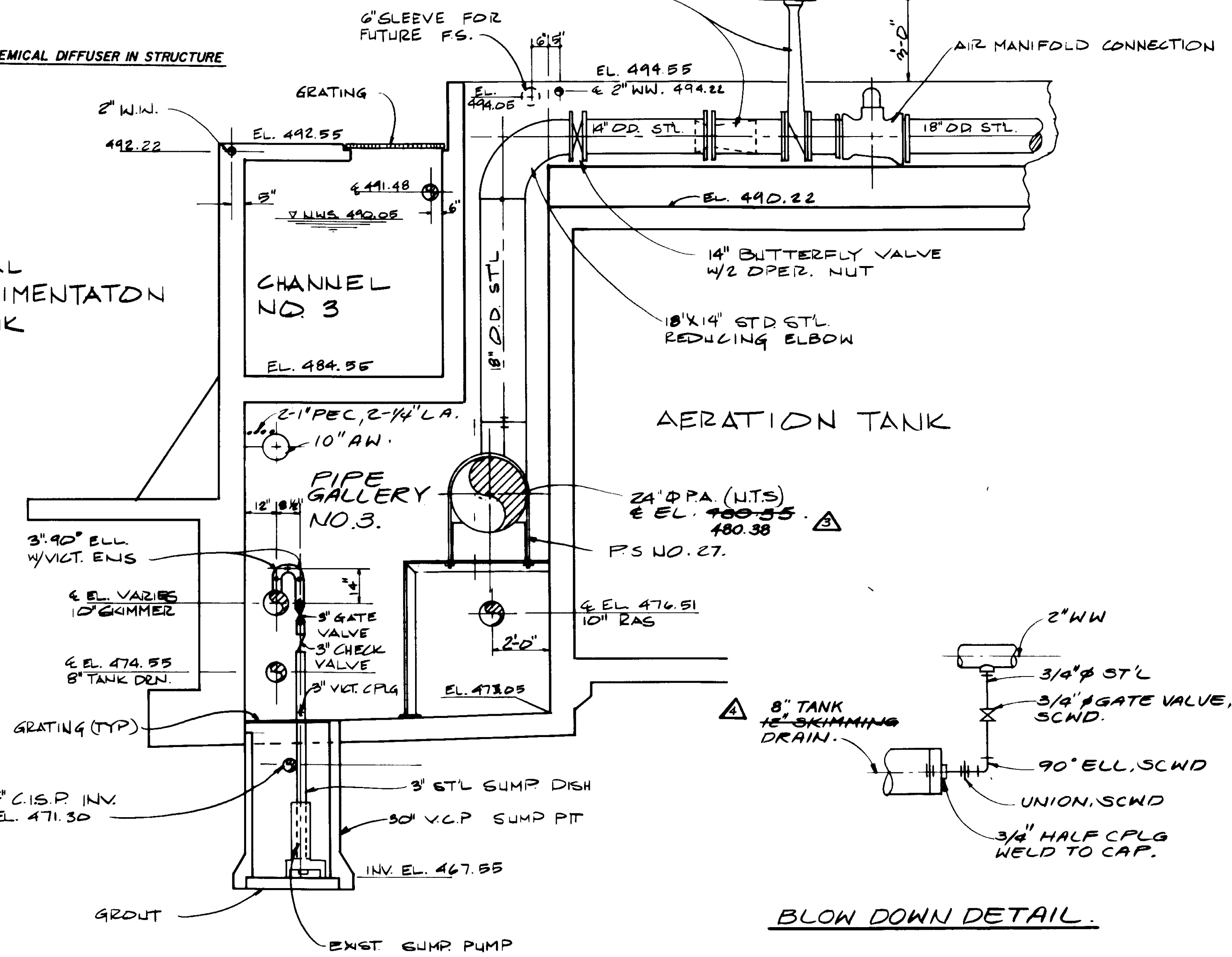


NOTE: CONC. PLANKS NOT SHOWN.



CHEMICAL DIFFUSER IN STRUCTURE

FINAL SEDIMENTATION TANK



BLOW DOWN DETAIL.

SECTION D

SECTION E

04129

RECORD DRAWING  
 PREPARED BY: STEVE PARRISH, ESQ.  
 KATSUMA CONSULTING ENGINEERS, JUNE 1989



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
4-19-81	A.B.	REV. PER K.P.C.		4-19-81	A.B.	REV. PER K.P.C.	
4-19-81	A.B.	REV. PER K.P.C.		4-19-81	A.B.	REV. PER K.P.C.	
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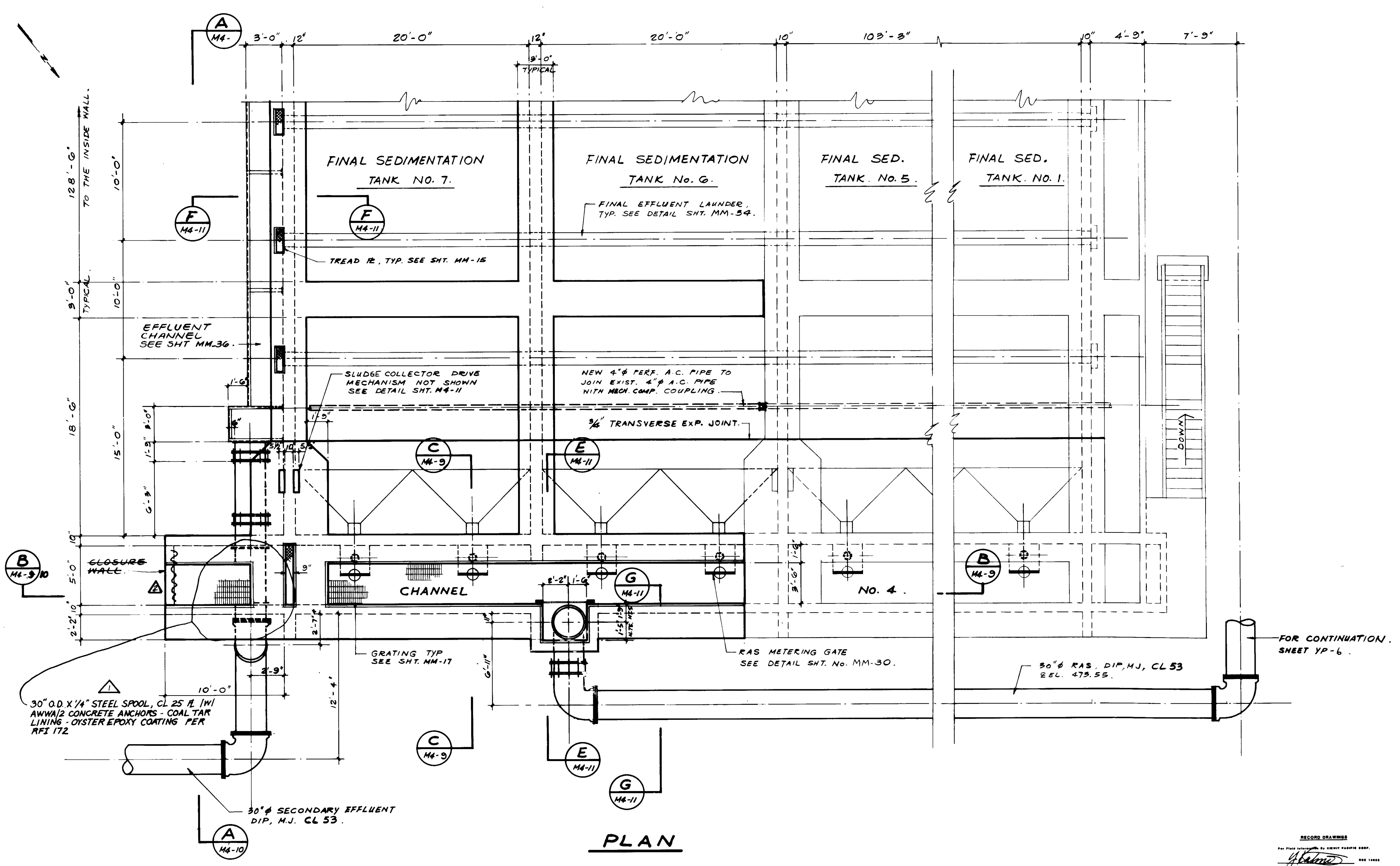
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 DESIGNED: Y.K.  
 DRAWN: Y.K.  
 CHECKED: Y.K.

SUBMITTED: 14038 8-7-87  
 KATSUMA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO.3 SECTIONS

SHEET M4-6



PLAN

FOR CONTINUATION. SHEET YP-6.

30" O.D. X 1/4" STEEL SPOOL, CL 25 FL 1W/  
 AWWA/2 CONCRETE ANCHORS - COAL TAR  
 LINING - OYSTER EPOXY COATING PER  
 RFI 172

30"  $\phi$  SECONDARY EFFLUENT  
 DIP, M.J. CL 53.

30"  $\phi$  RAS. DIP, M.J. CL 53  
 REL. 473.55.

04130



RECORD DRAWING  
 No. 14038  
 Exp. 3-31-89  
 KATSUMA CONSULTING ENGINEERS JUNE 1982

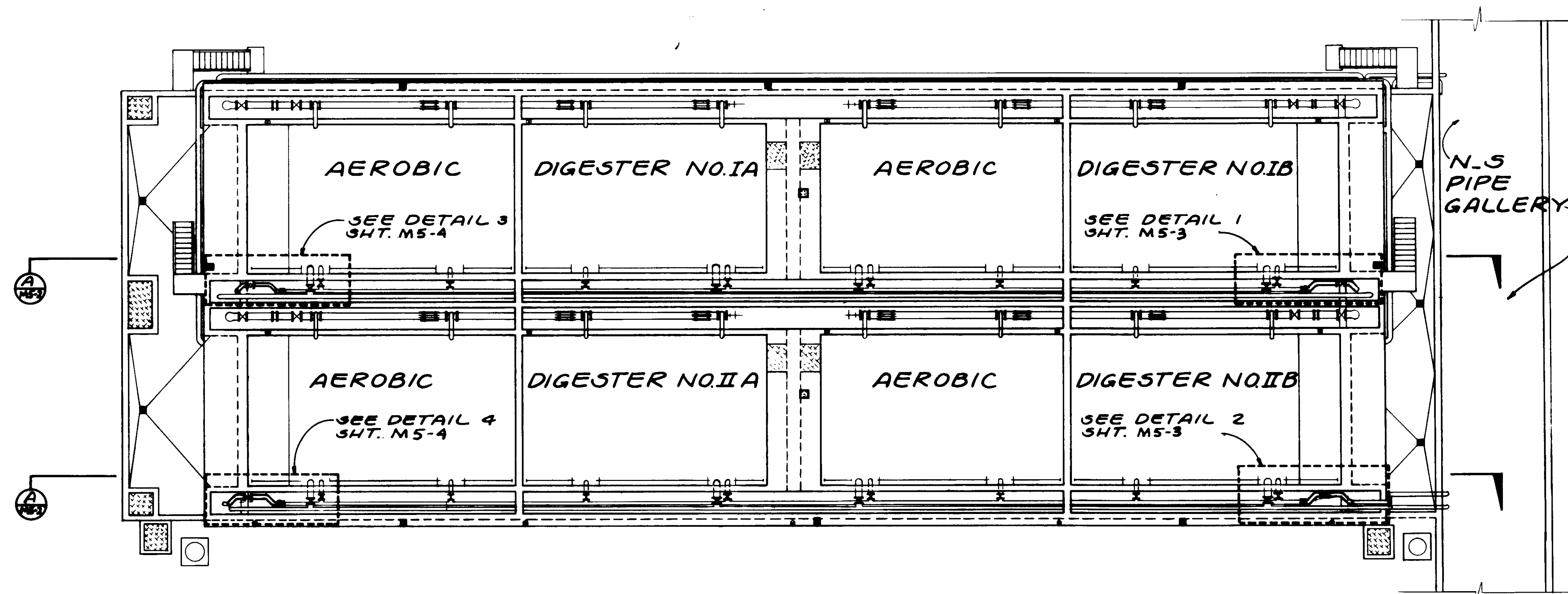
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2	1-20-87	A.B.	REV. PER K.P.C.

SCALE:	1/4" = 1'-0"
DESIGNED	Y. K.
DRAWN	S. K.
CHECKED	Y. K.
SUBMITTED	Yoshio Katsuta 8-7-87
KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CHANNEL NO. 4, PLAN

SHEET  
 M4-7



PLAN.

04131

RECORD DRAWING  
 PREPARED BY: KATSUMI KATSURA  
 KATSURA CONSULTING ENGINEERS  
 14038  
 Exp. 3-31-89



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1" = 10'  
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 DRAWN: D.N.  
 CHECKED: Y.K.

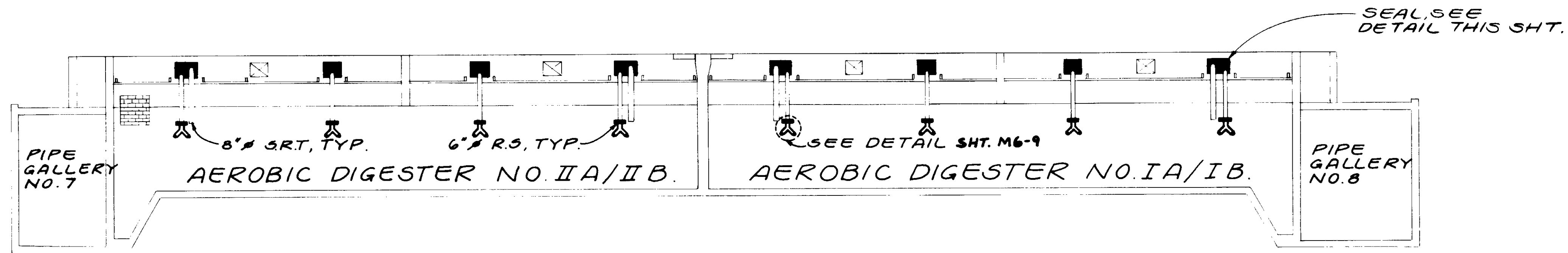
SUBMITTED: *[Signature]* 14038 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

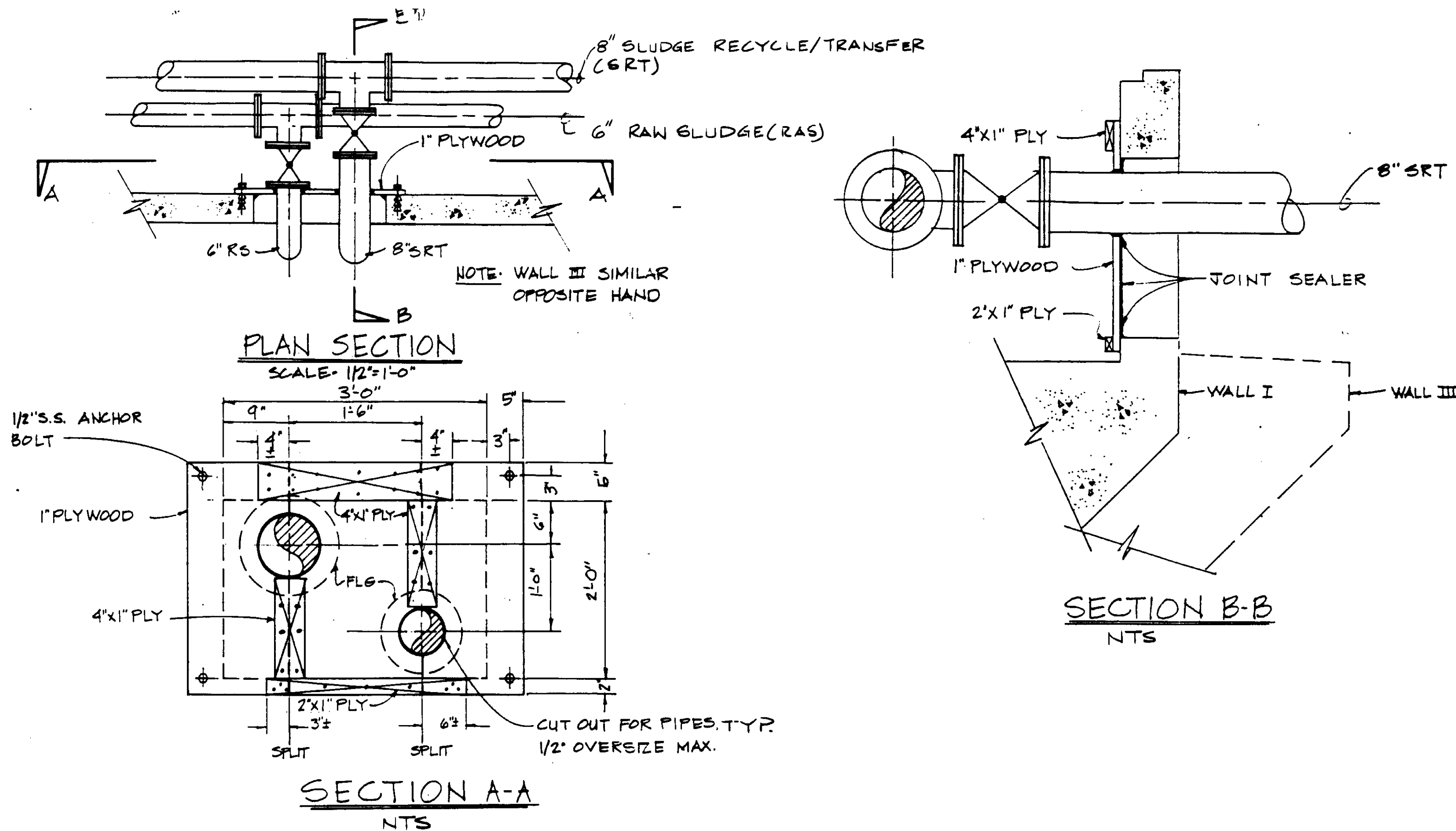
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AEROBIC DIGESTER NOS. I & II, PLAN

SHEET M5-1





**SECTION.** A  
SCALE: 1"=10'



△ NOTE:  
FOR AEROBIC DIGESTER BLOCKOUT  
SEALS SEE SKAD-1 SHT. M5-5

**BLOCKOUT SEAL FOR RS & SRT**

04132

RECORD DRAWINGS  
FOR THIS DRAWING, SEE SHEET PACIFIC GROUP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1988



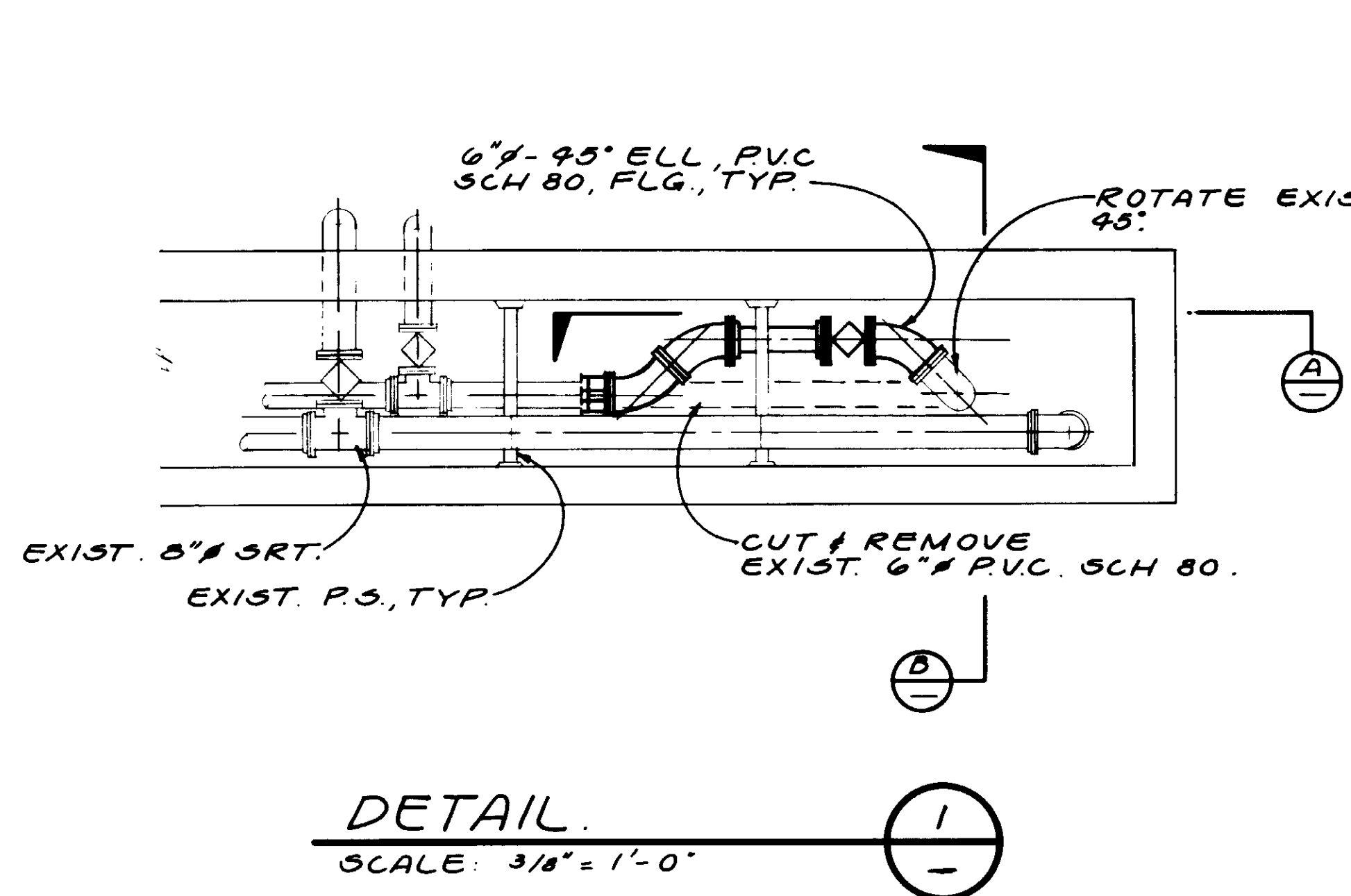
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SCALE: AS NOTED	DESIGNED Y.K./D.N.	SUBMITTED <i>[Signature]</i> 14038 8-7-87
DRAWN Y.K.	CHECKED	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS 813 R.C.E.E. NO. DATE

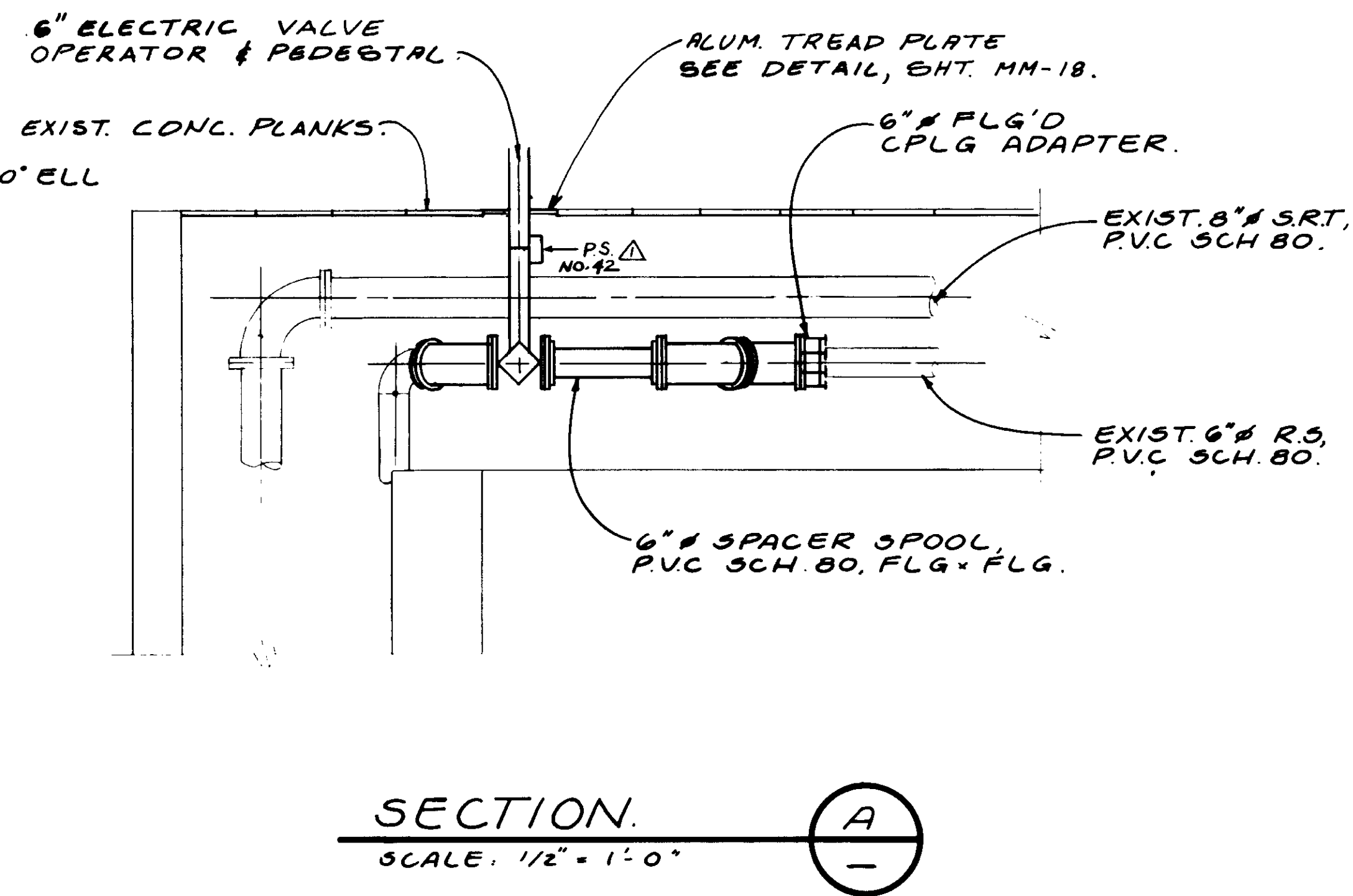
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
GENERAL SECTION

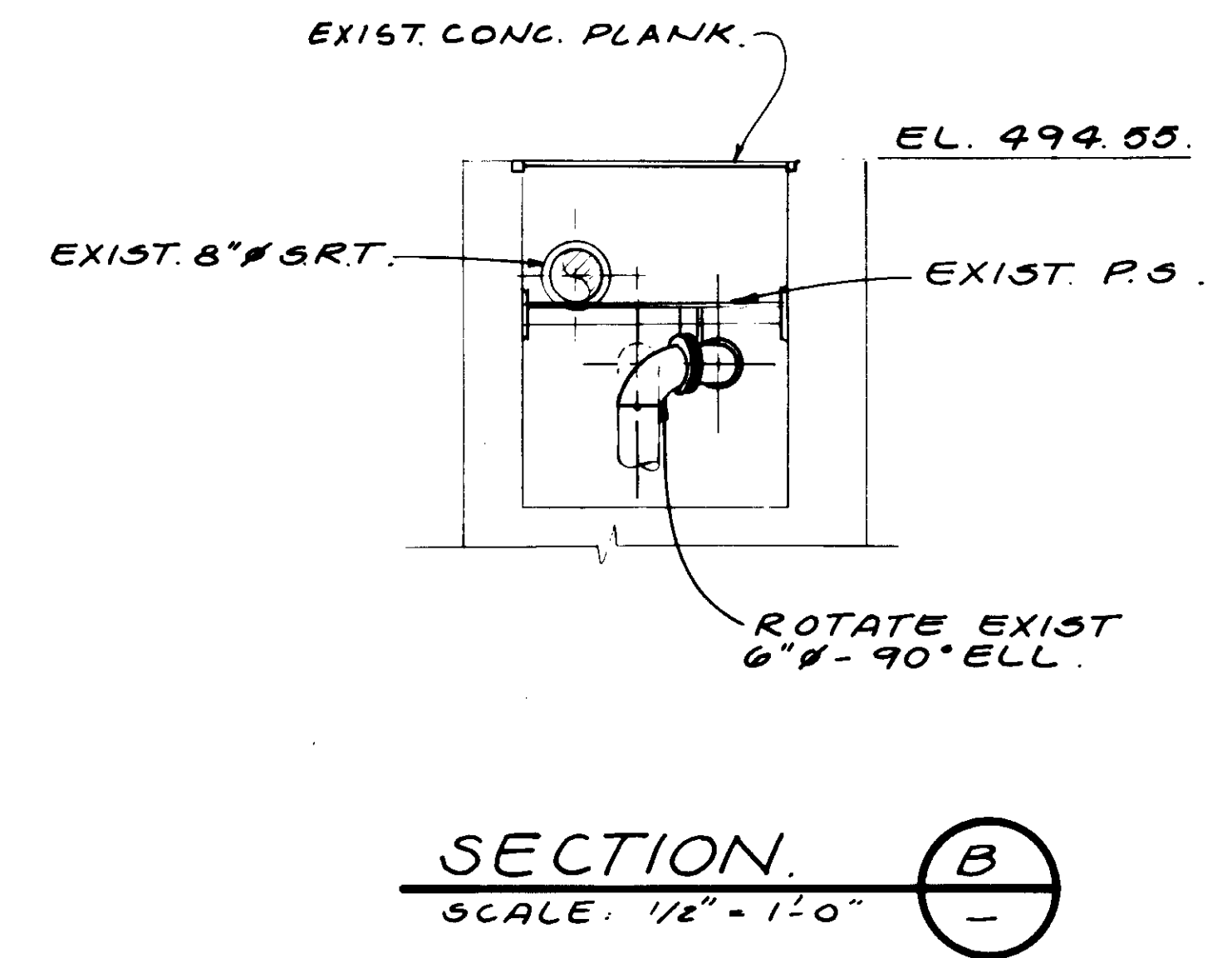
SHEET  
M5-2



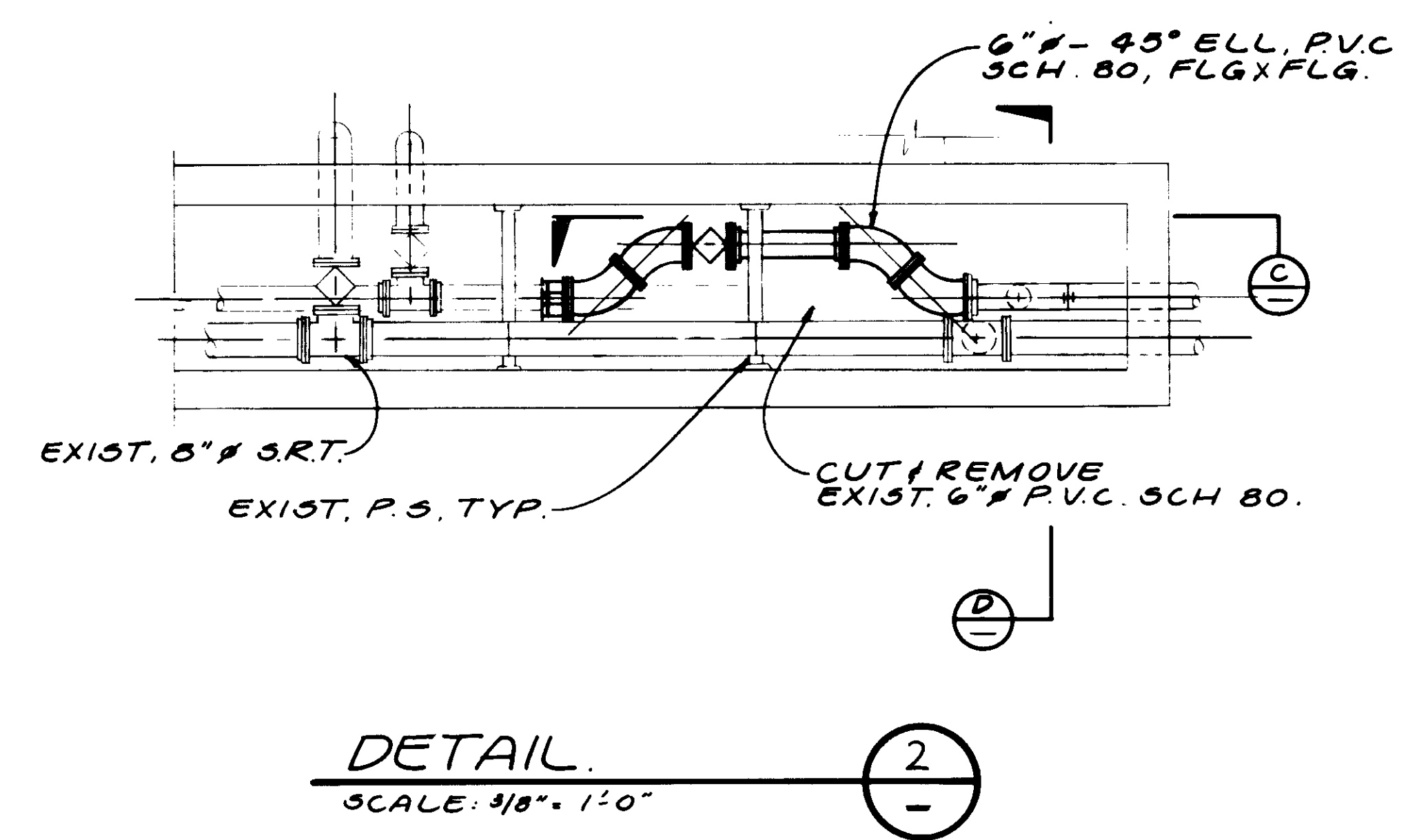
DETAIL 1  
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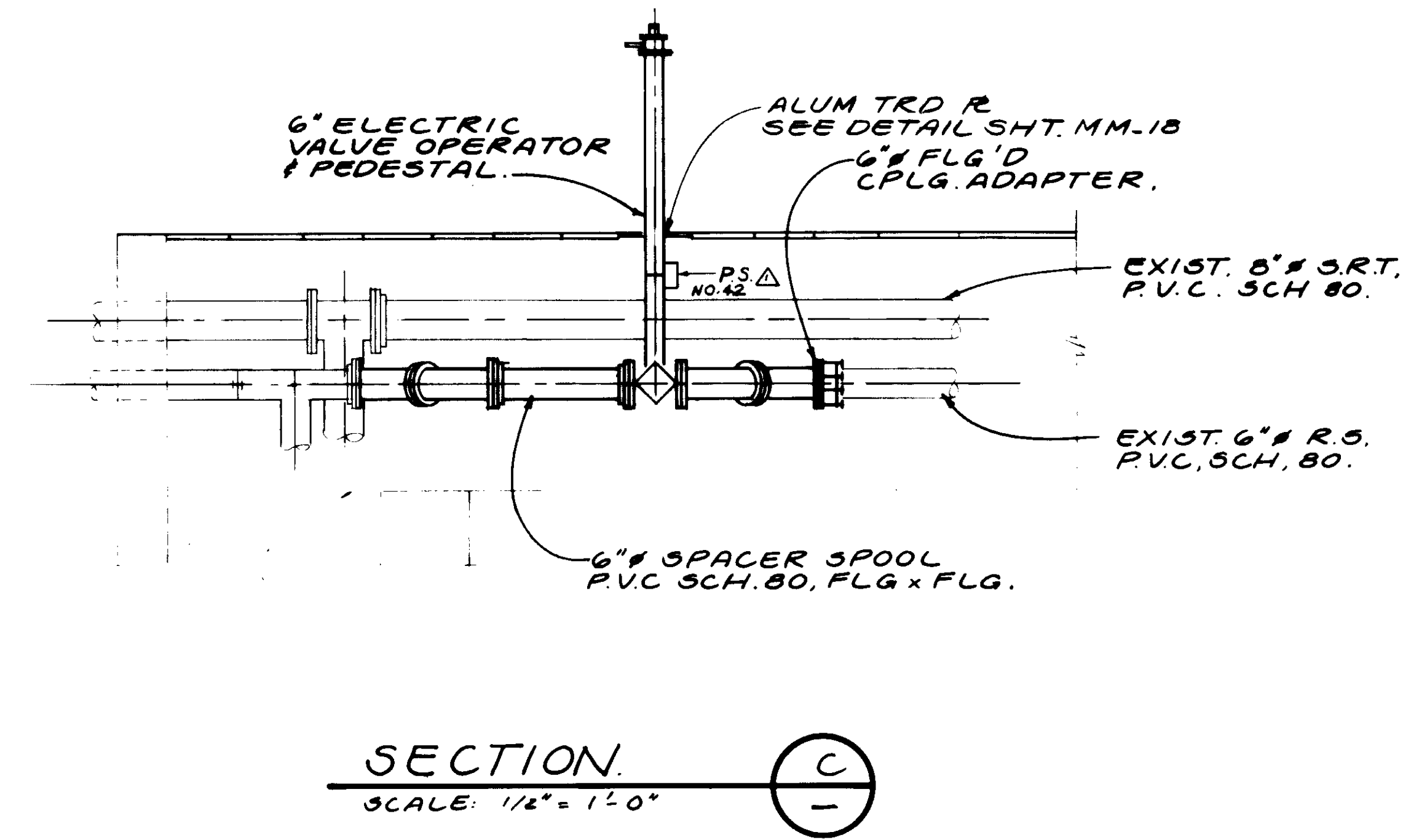
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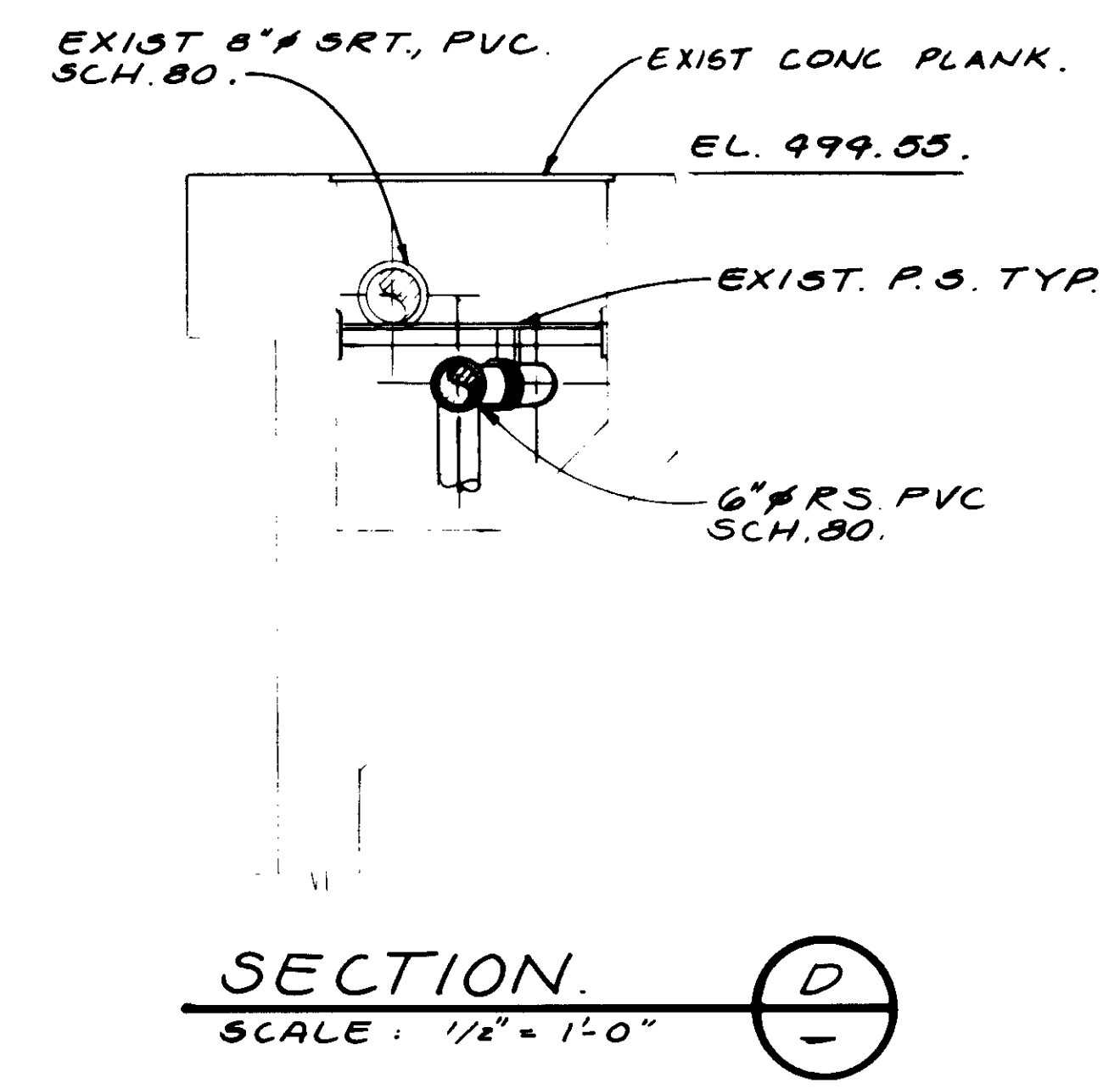
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SCALE: 1/2" = 1'-0"



DETAIL 2  
SCALE: 3/8" = 1'-0"



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



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

NOTE:  
HANDRAIL NOT SHOWN

04133

RECORD DRAWING  
FOR FILE IN PROJECT BY CLIENT PARTIAL COPY  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1983



REV	DATE	BY	DESCRIPTION

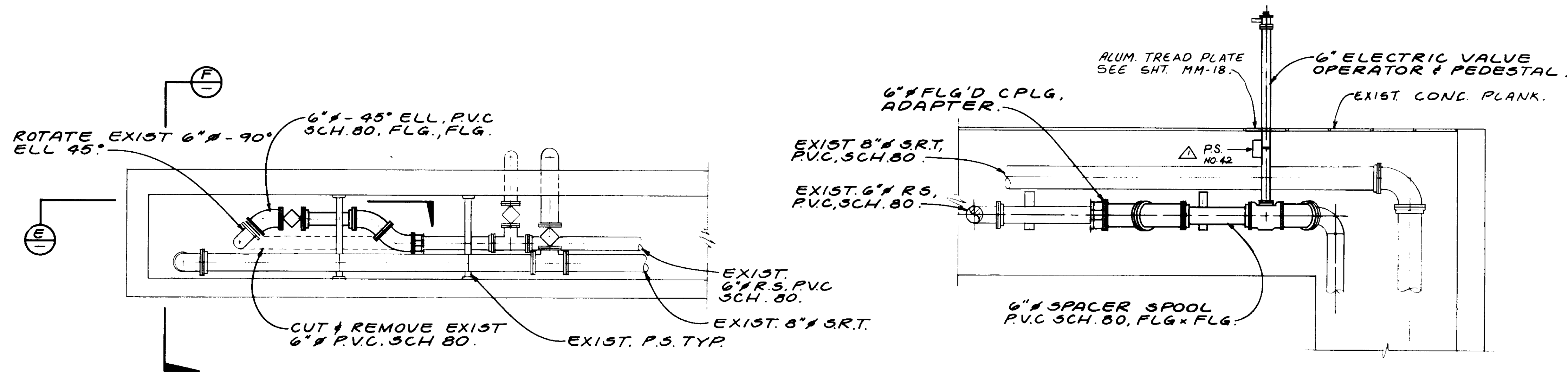
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DESIGNED:	Y.K./D.N.
DRAWN:	D.N./A.R.
CHECKED:	Y.K.

SUBMITTED:	<i>[Signature]</i>	14038	8-7-87
DESIGNED:	KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
DRAWN:	ALEXANDER ENGINEERS	613	
CHECKED:	ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

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Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
AEROBIC DIGESTER NOS. I & II, DETAILS - I

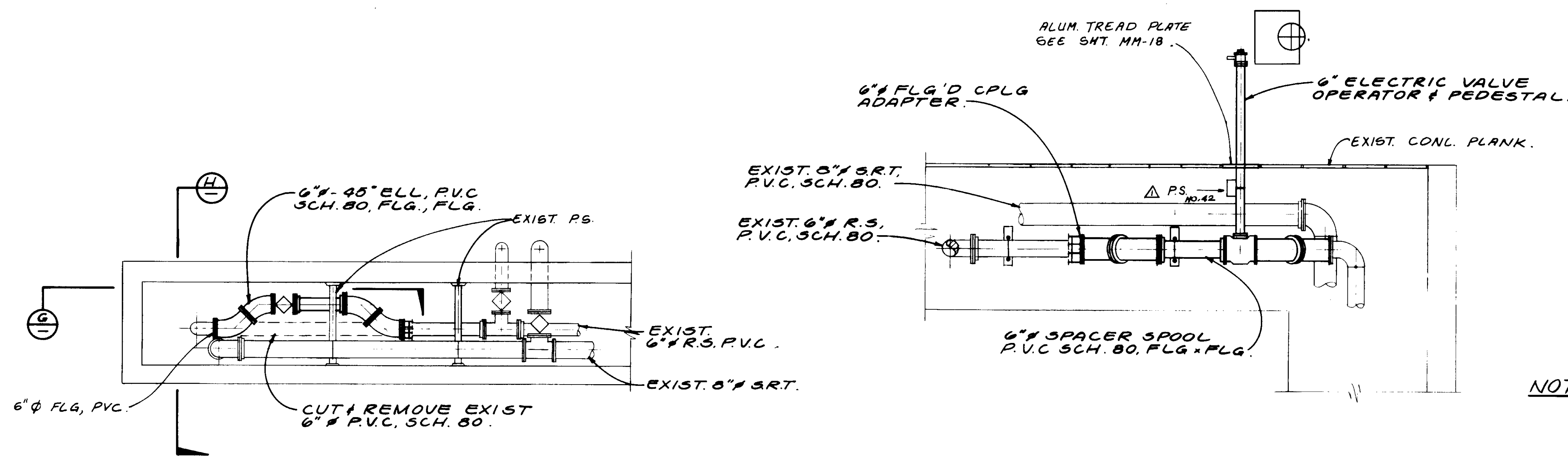
SHEET  
M5-3



DETAIL. 3  
SCALE: 3/8" = 1'-0"

SECTION. E  
SCALE: 1/2" = 1'-0"

SECTION. F  
SCALE: 1/2" = 1'-0"



DETAIL. 4  
SCALE: 3/8" = 1'-0"

SECTION. G  
SCALE: 1/2" = 1'-0"

SECTION. H  
SCALE: 1/2" = 1'-0"

NOTE: HANDRAIL NOT SHOWN.

RECORD DRAWING  
 No. 14038  
 Exp. 3-31-89  
 KALEX ENGINEERS  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA

04134

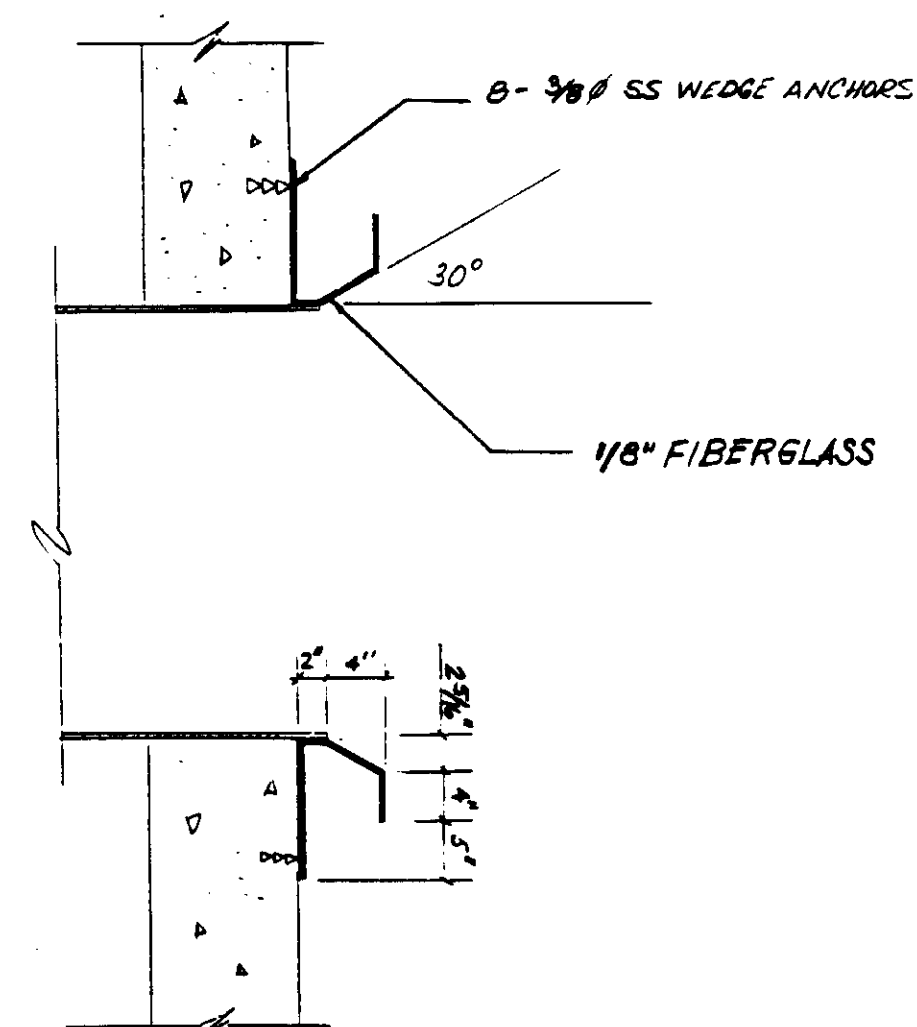
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DRAWN: Y.K.	CHECKED: <i>[Signature]</i>	DATE: 8-7-87

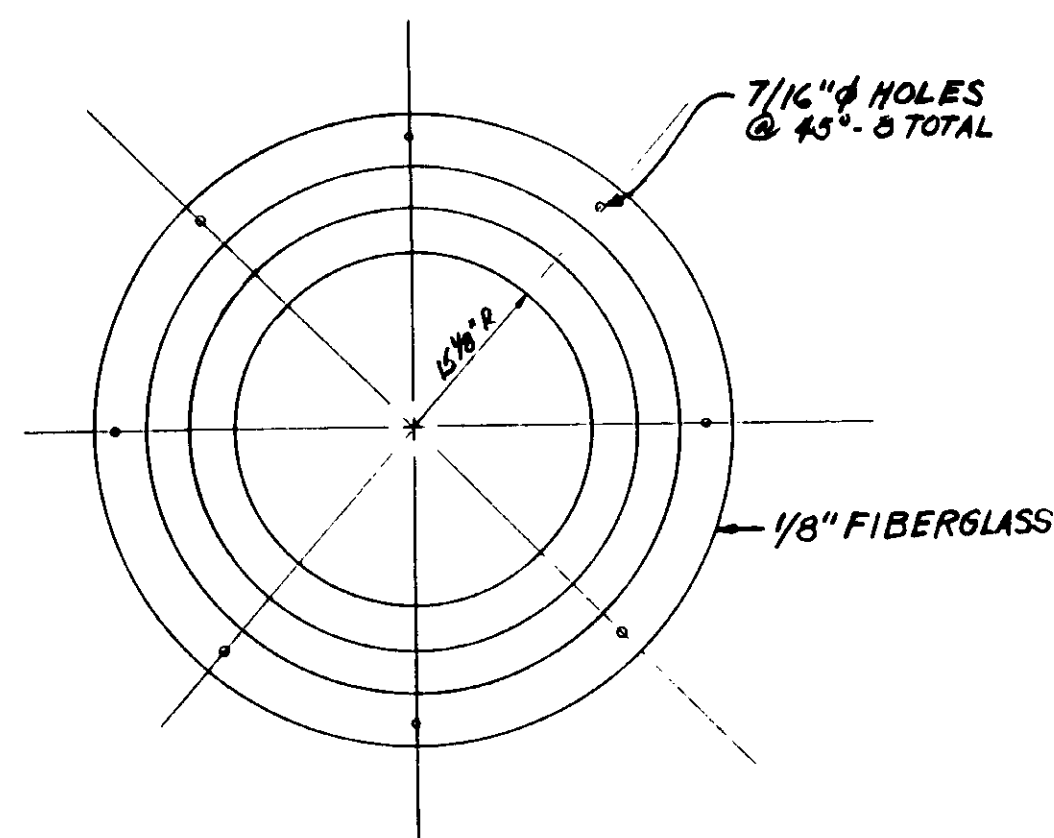
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AEROBIC DIGESTER NOS. I & II, DETAILS - II

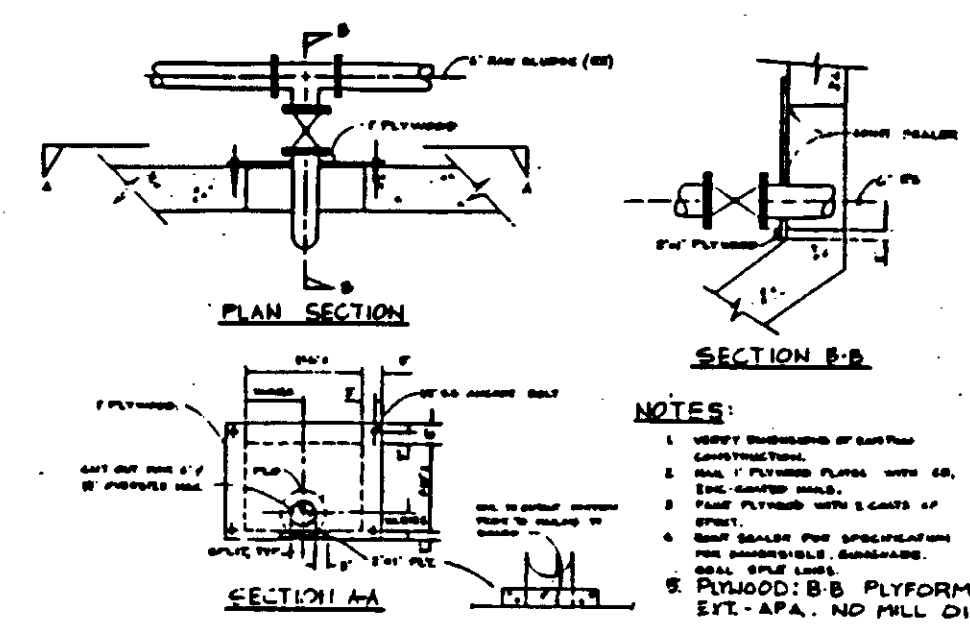
SHEET M5-4



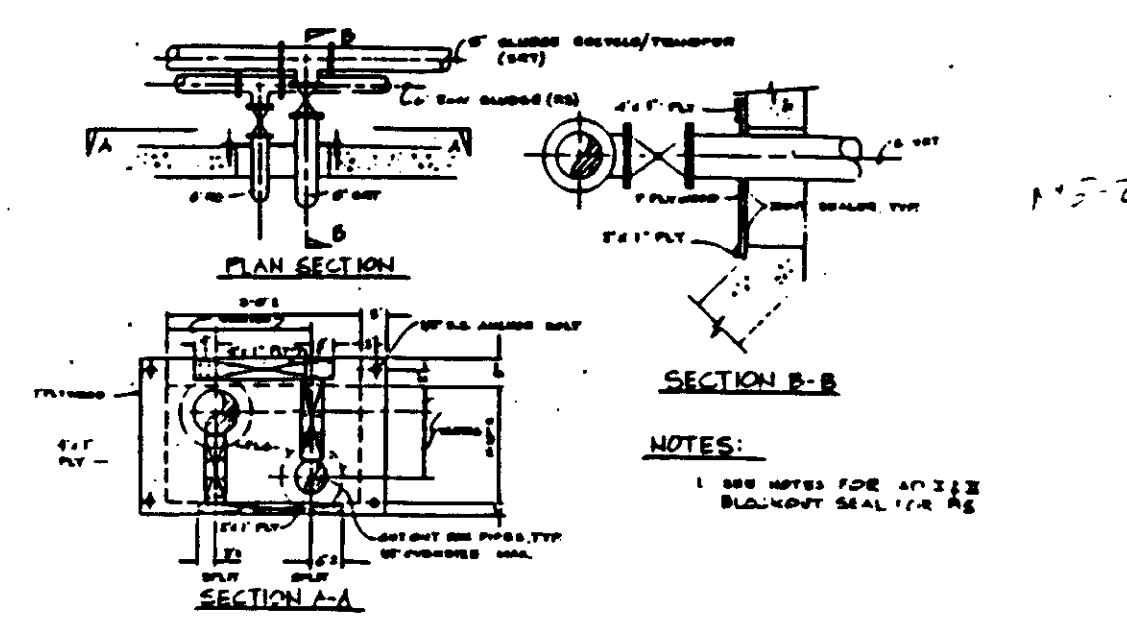
PAC 3 NOZZLE



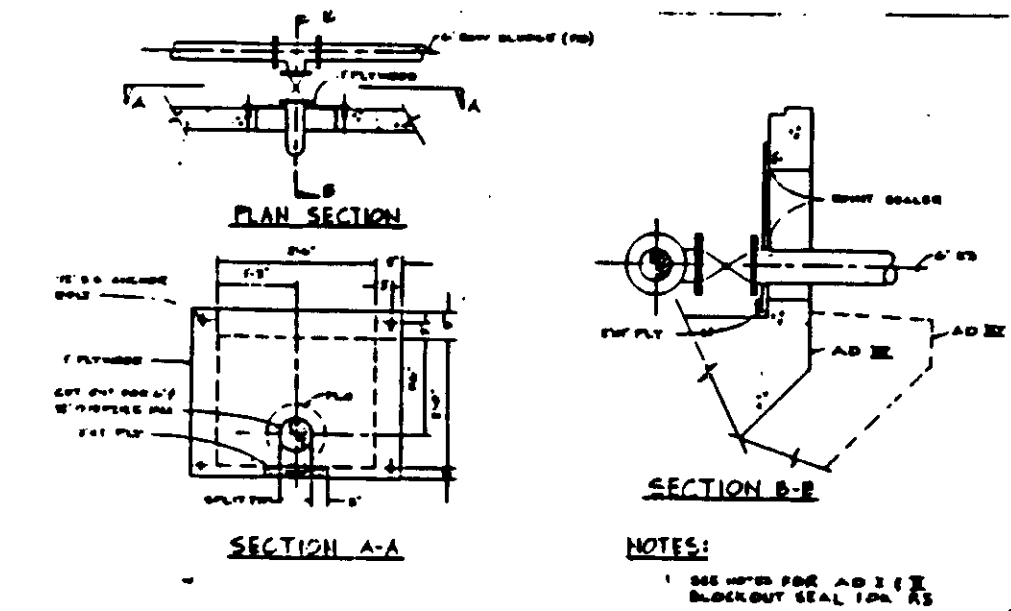
FIBERGLASS INLET NOZZLE FOR PAC 3



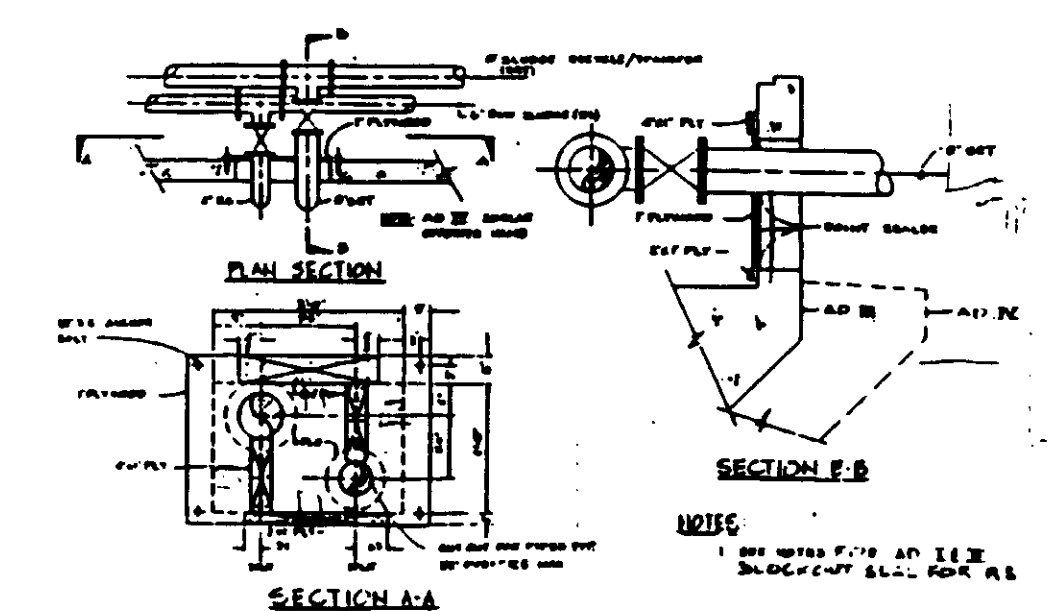
AEROBIC DIGESTER I & II BLOCKOUT SEAL FOR RS



AEROBIC DIGESTER III BLOCKOUT SEAL FOR RS & SRT



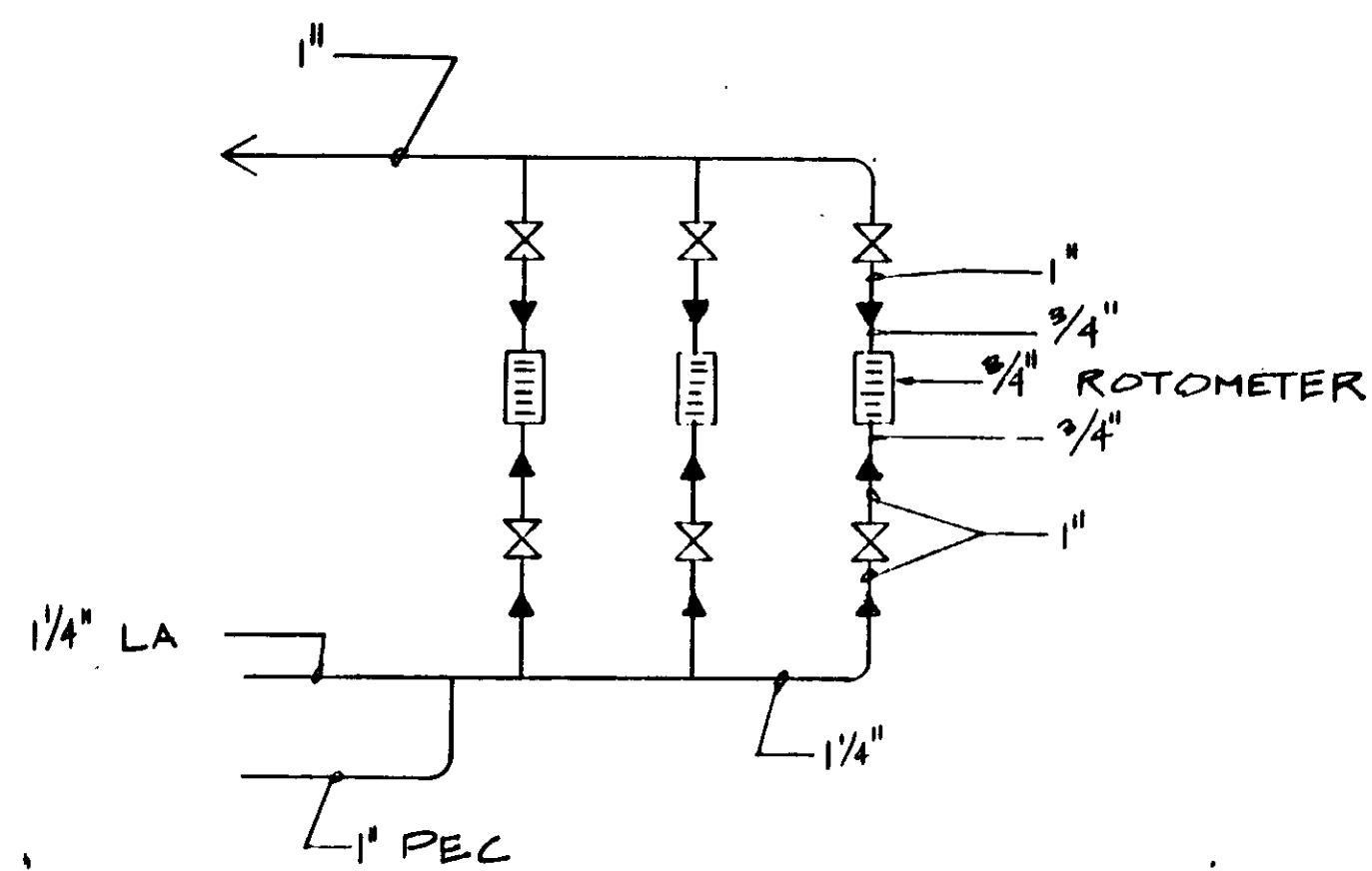
AEROBIC DIGESTER III & IV BLOCKOUT SEAL FOR RS



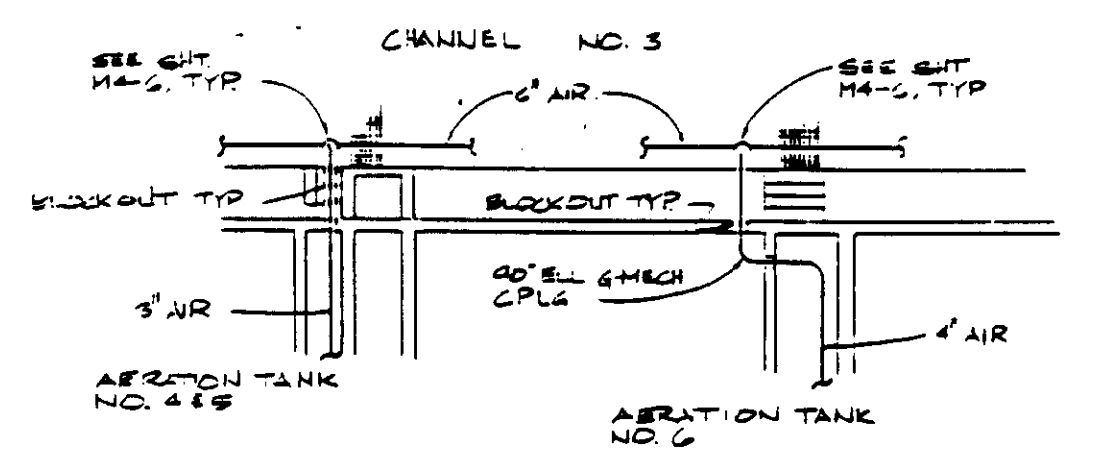
AEROBIC DIGESTER II & IV BLOCKOUT SEAL FOR RS & SRT

AEROBIC DIGESTER BLOCKOUT SEALS

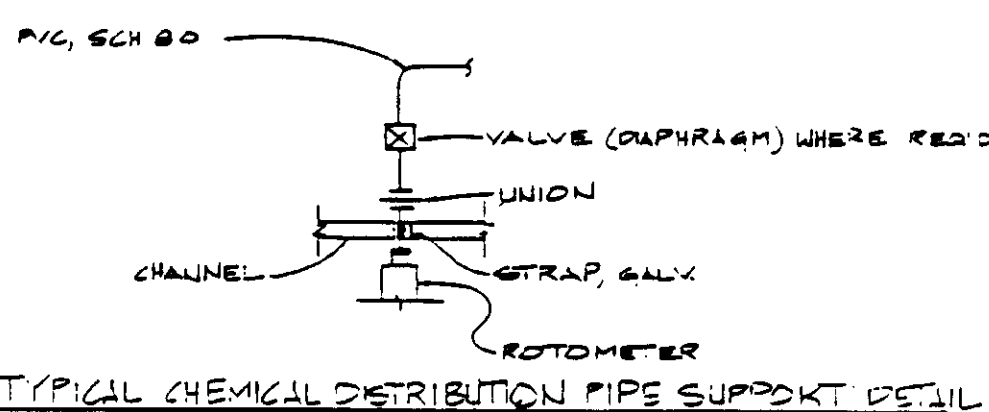
SKETCH SKAD-1



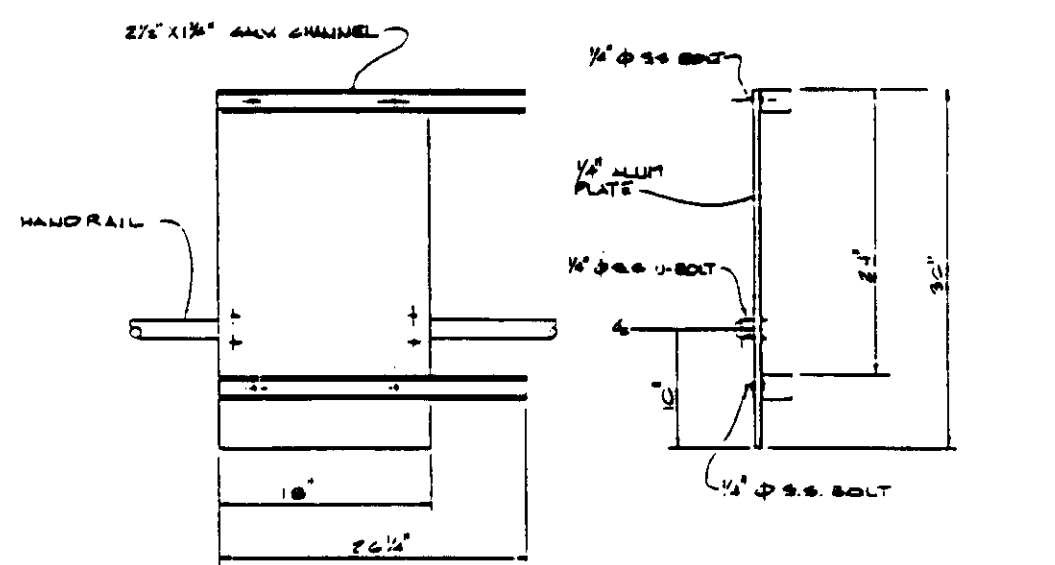
DIAPHRAGM VALVES RFI 62



CHANNEL AIR SCHEMATIC

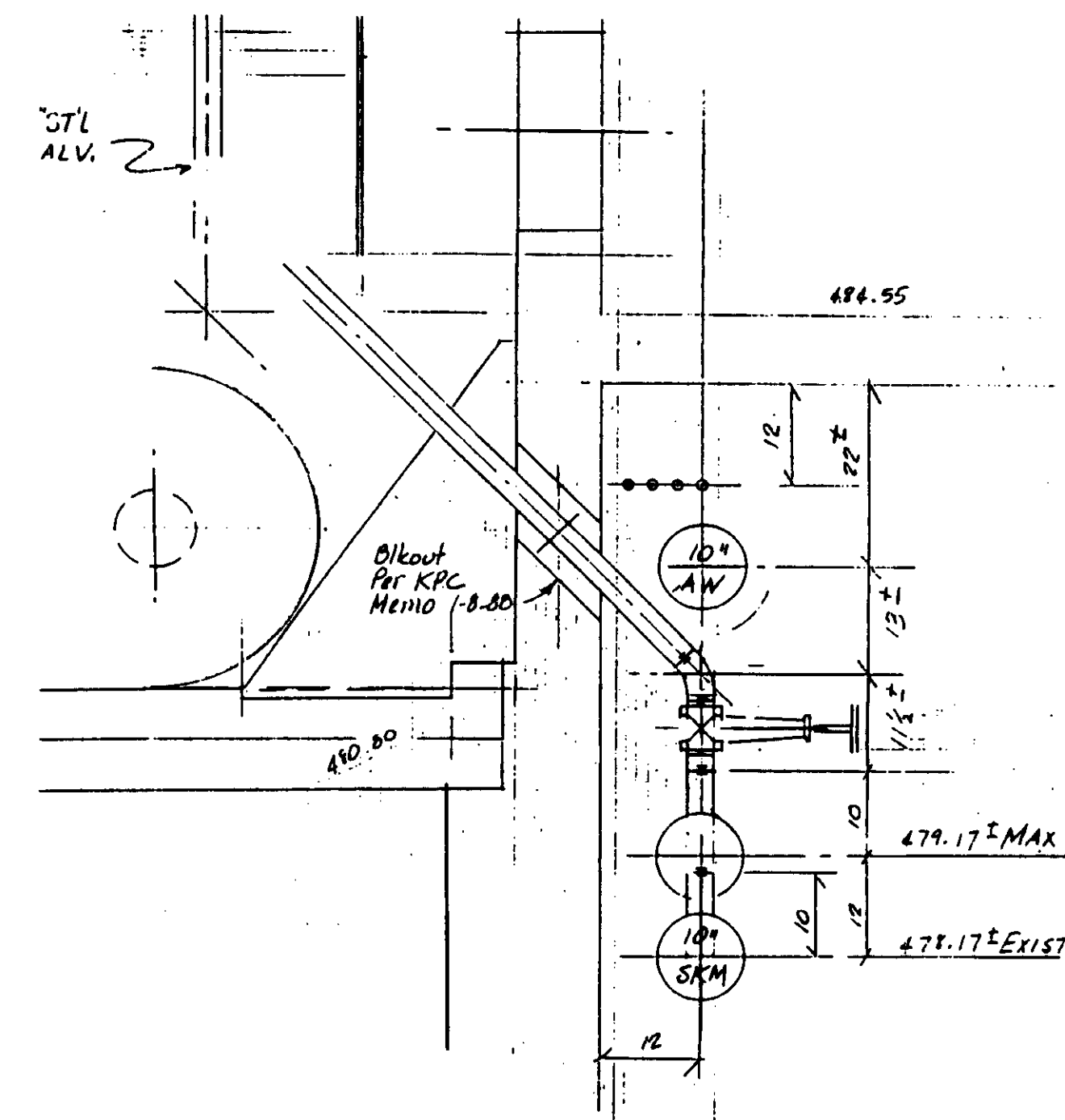


TYPICAL CHEMICAL DISTRIBUTION PIPE SUPPORT DETAIL



CHEMICAL DISTRIBUTION SUPPORT

MISCELLANEOUS DETAILS SKETCH SKM4



SKIM LINE VALVES RFI 70

DESIGNED BY: [Signature]  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]

04135

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

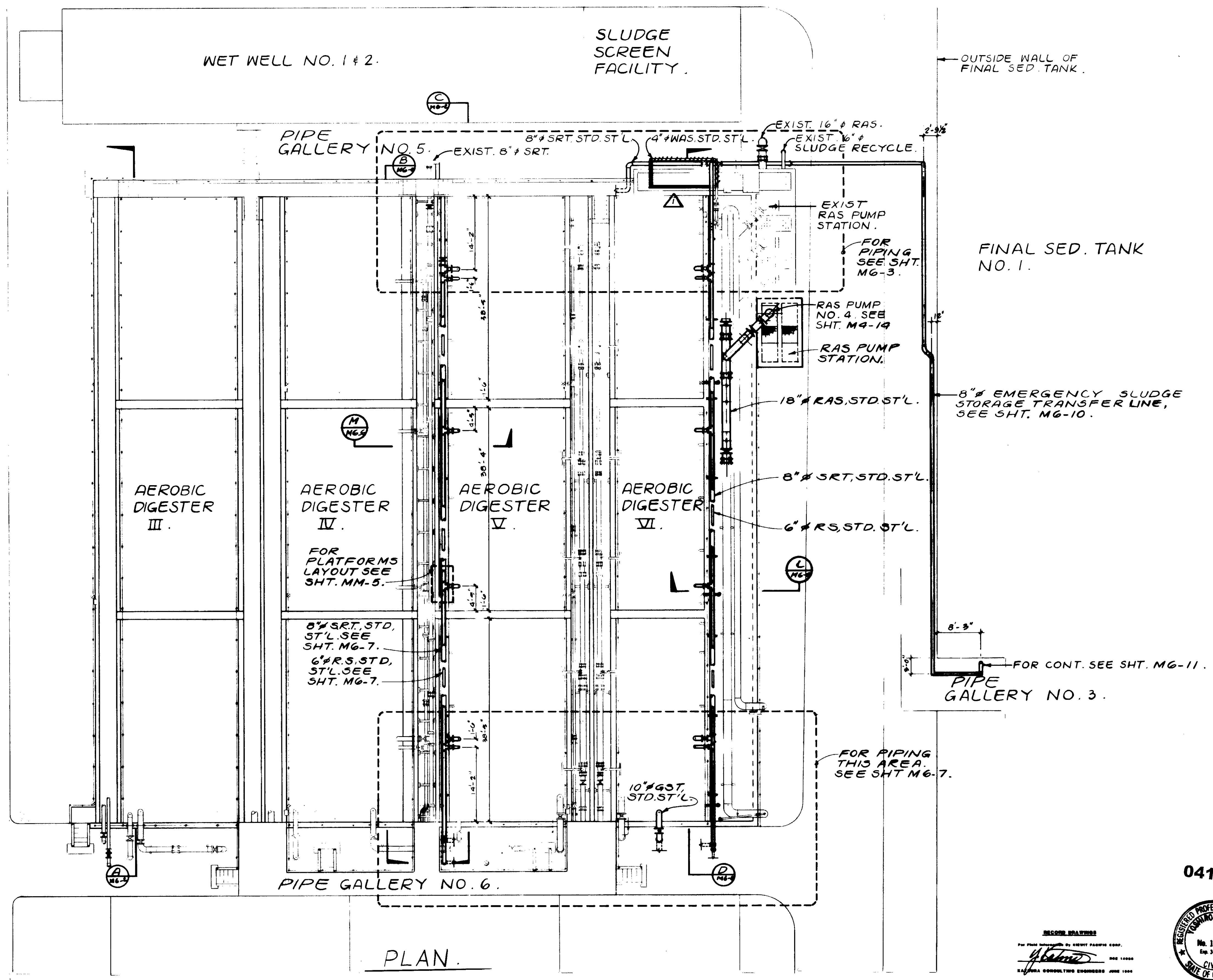
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**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

ENR-1





PLAN.

04136

RECORD DRAWING  
 FOR FILE MAINTAINED BY CLIENT PURSUANT TO  
 4-21-01 A.B. REV. PER K.P.C.  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS JUNE 1988



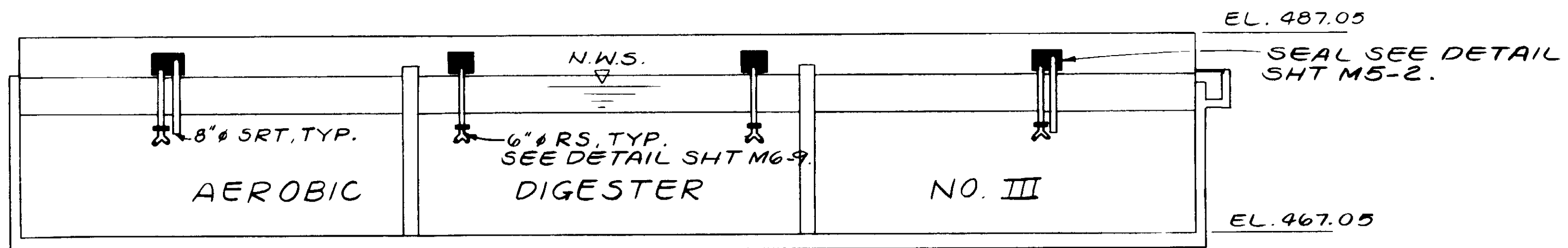
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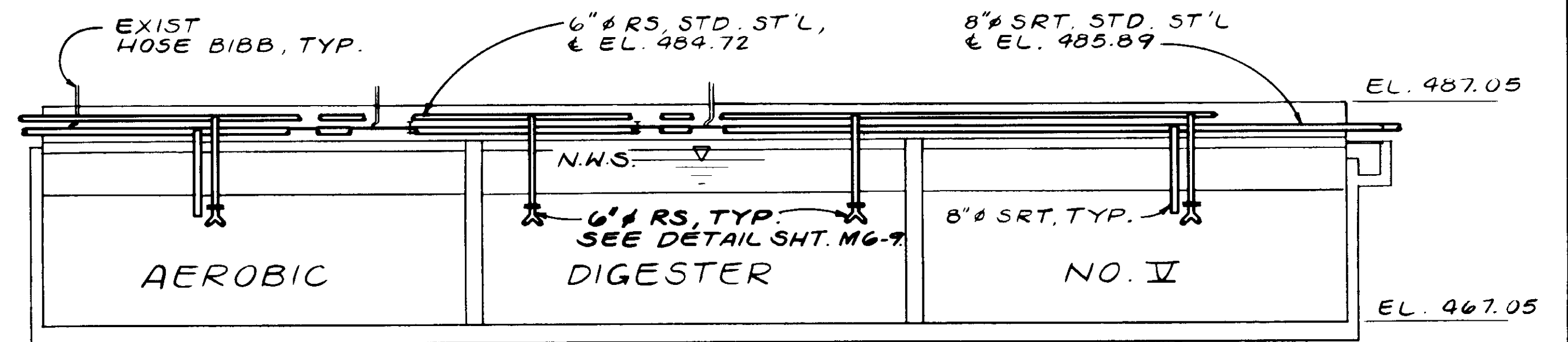
**KALEX ENGINEERS**  
 Katerina Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 AEROBIC DIGESTER NOS. III, IV, V & VI, PLAN

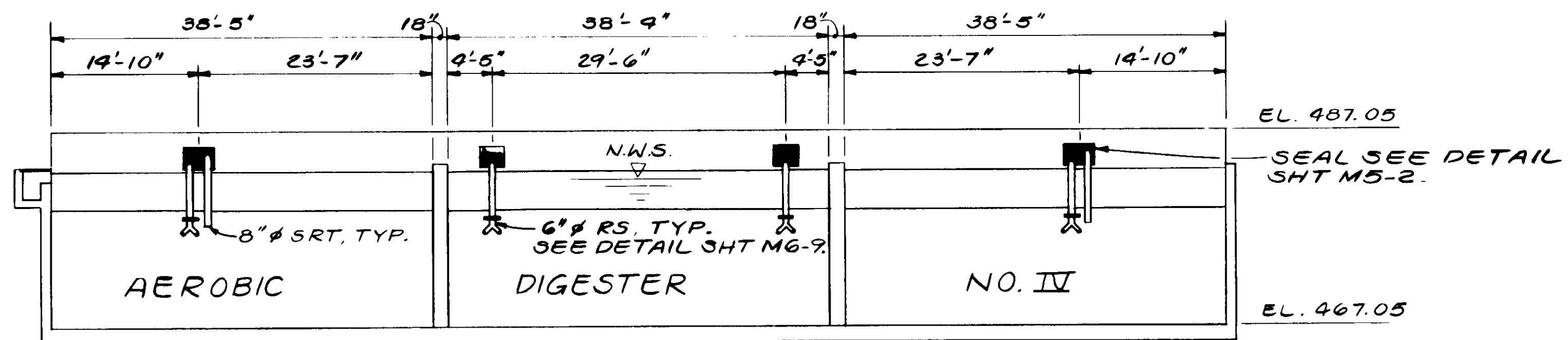
SHEET  
**M6-1**



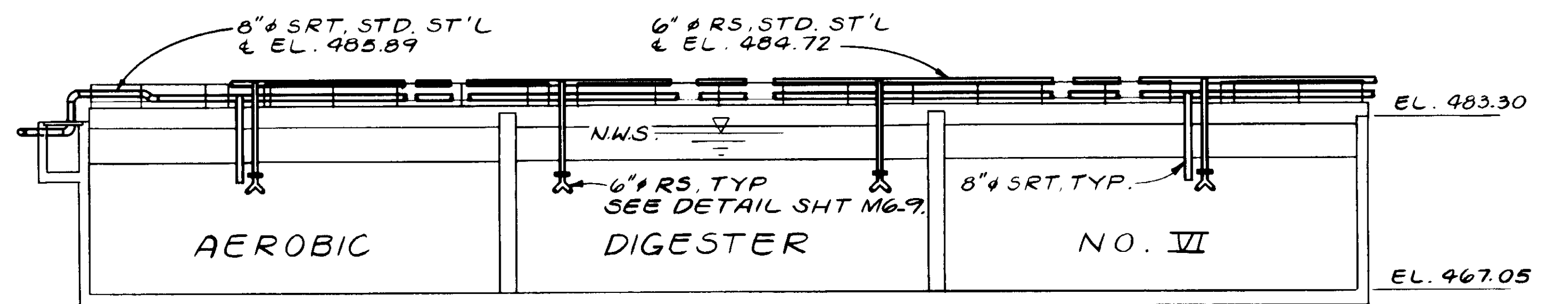
SECTION A



SECTION C



SECTION B



SECTION D

04137

RECORD DRAWINGS  
FOR FILE MAINTAINED BY CLIENT RECORDING GROUP.  
*[Signature]*  
KATSURA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

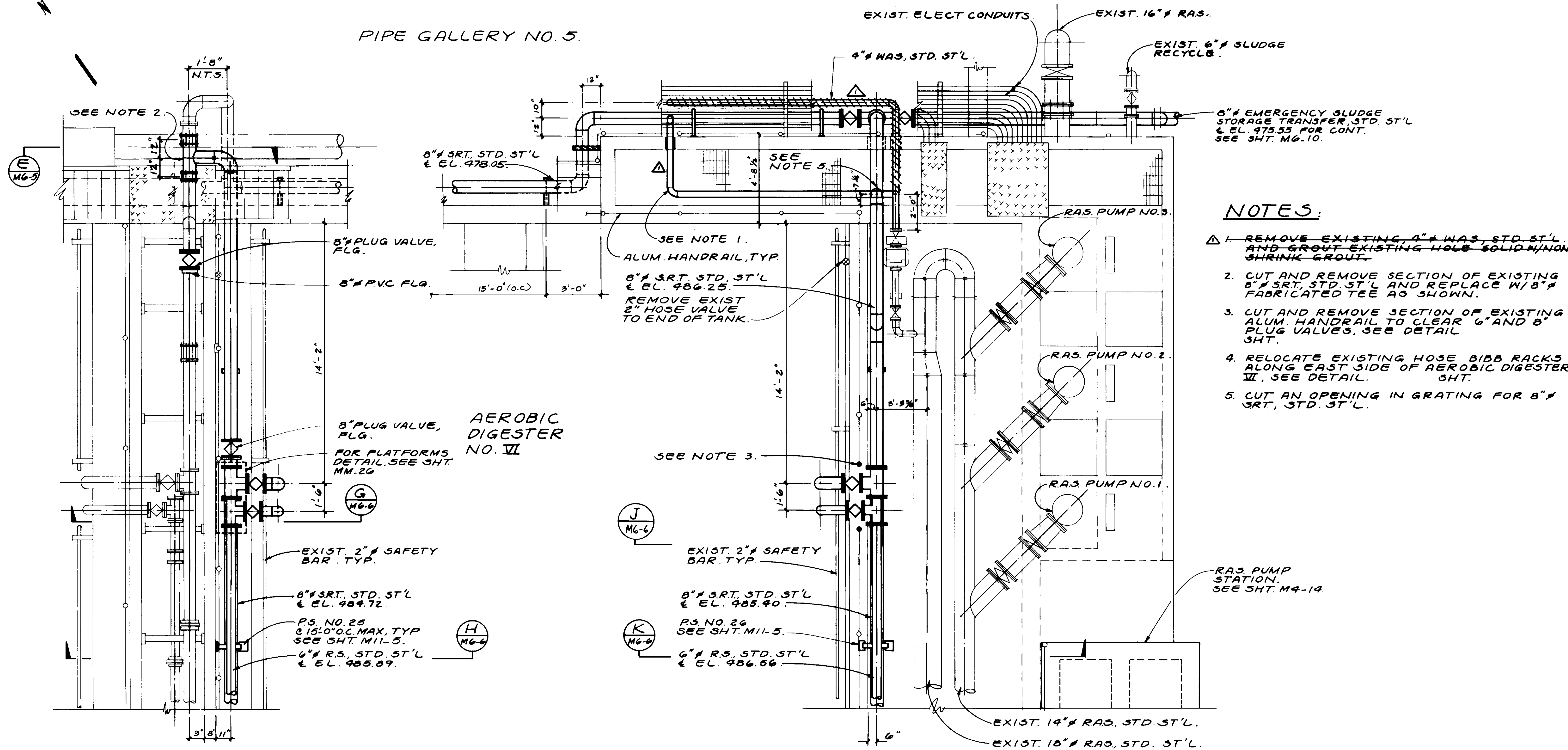
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DRAWN Y.K.	CHECKED	KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
GENERAL SECTIONS

SHEET  
M6-2

PIPE GALLERY NO. 5.



**NOTES:**

1. REMOVE EXISTING 4" WAS, STD. ST'L. AND GROUT EXISTING HOLE SOLID WINDOW SHRINK GROUT.
2. CUT AND REMOVE SECTION OF EXISTING 8" SRT, STD. ST'L AND REPLACE W/ 8" FABRICATED TEE AS SHOWN.
3. CUT AND REMOVE SECTION OF EXISTING ALUM. HANDRAIL TO CLEAR 6" AND 8" PLUG VALVES, SEE DETAIL SHT.
4. RELOCATE EXISTING HOSE BIBB RACKS ALONG EAST SIDE OF AEROBIC DIGESTER VII, SEE DETAIL SHT.
5. CUT AN OPENING IN GRATING FOR 8" SRT, STD. ST'L.

PLAN

04138

RECORD DRAWING  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS 2000 1999



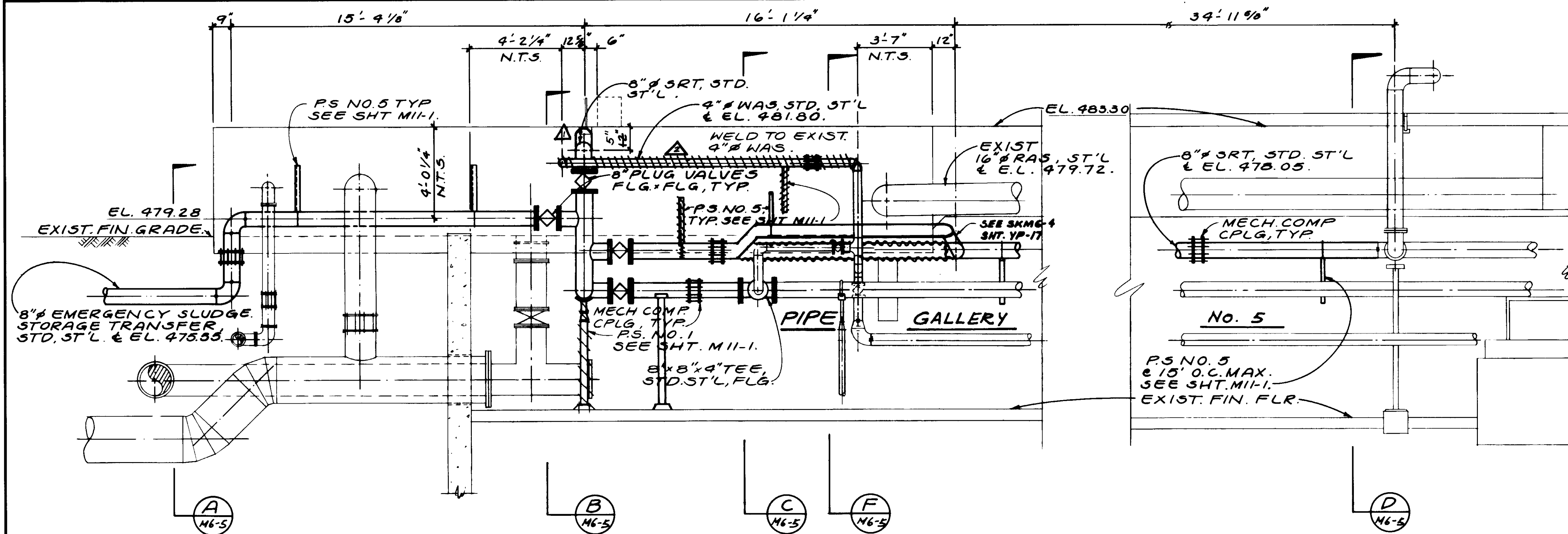
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SCALE: 3/8" = 1'-0"	DESIGNED Y.K./DN	SUBMITTED <i>[Signature]</i> 14038 8-7-87
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		ALEXANDER ENGINEERS R.C.E. NO. DATE

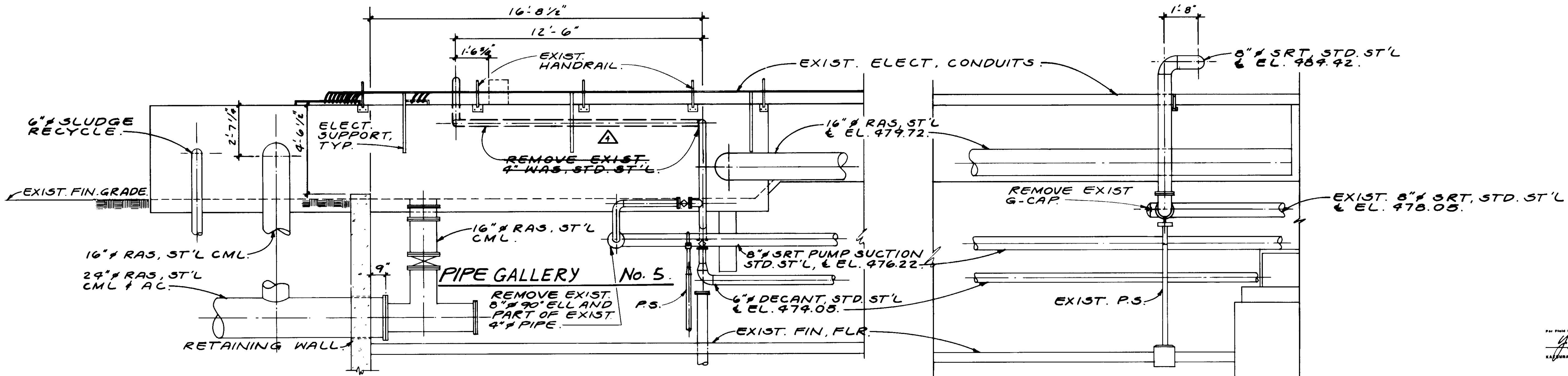
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 5 VICINITY, PLAN

SHEET  
M6-3



**PROPOSED ELEVATION**



**EXISTING ELEVATION**

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS  
 04139



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	1-24-87	A.B.	REV. PER K.P.C.	1	1-24-87	A.B.	REV. PER K.P.C.
2	1-24-87	A.B.	REV. PER K.P.C.	2	1-24-87	A.B.	REV. PER K.P.C.
3	1-24-87	A.B.	REV. PER K.P.C.	3	1-24-87	A.B.	REV. PER K.P.C.
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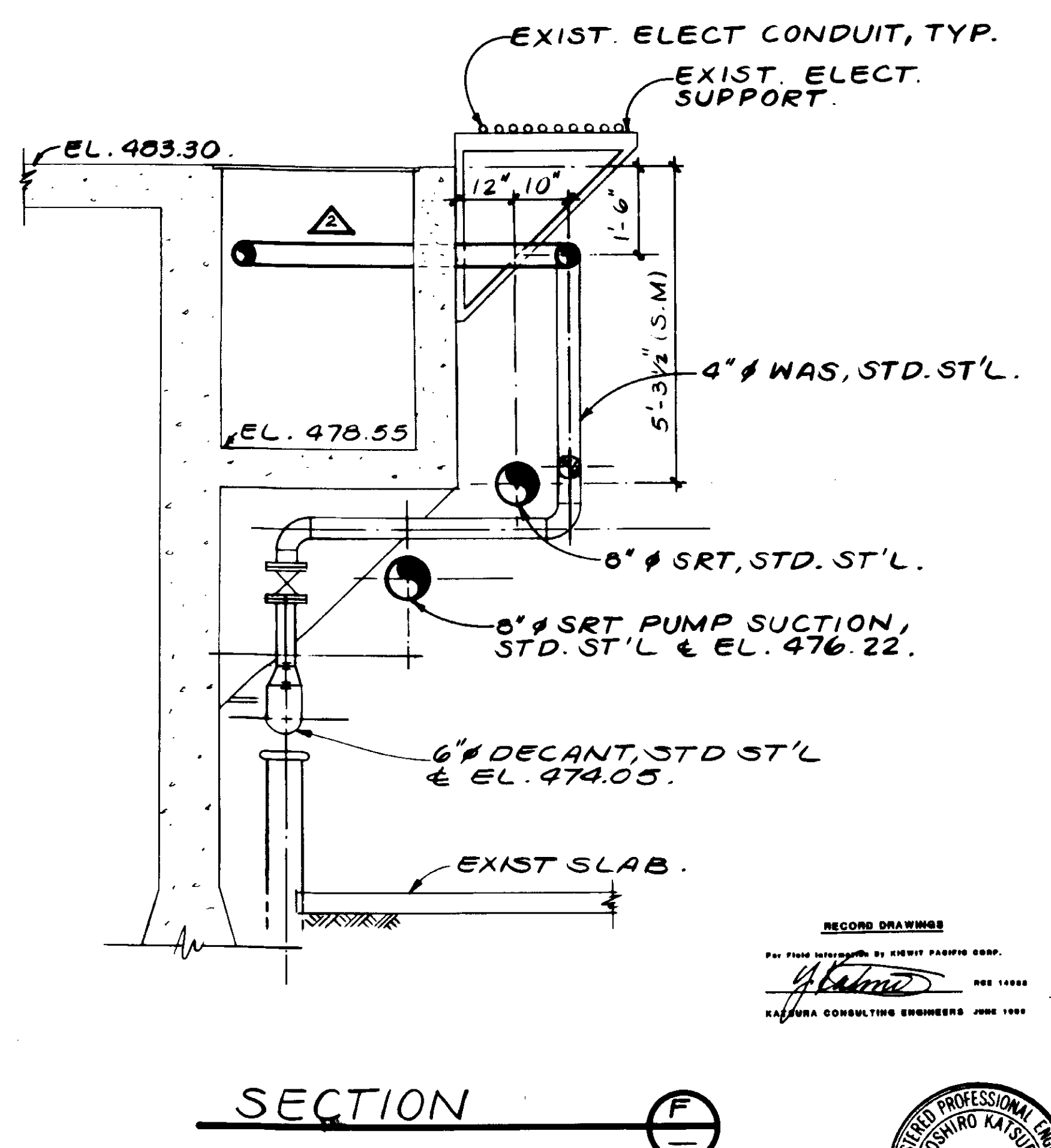
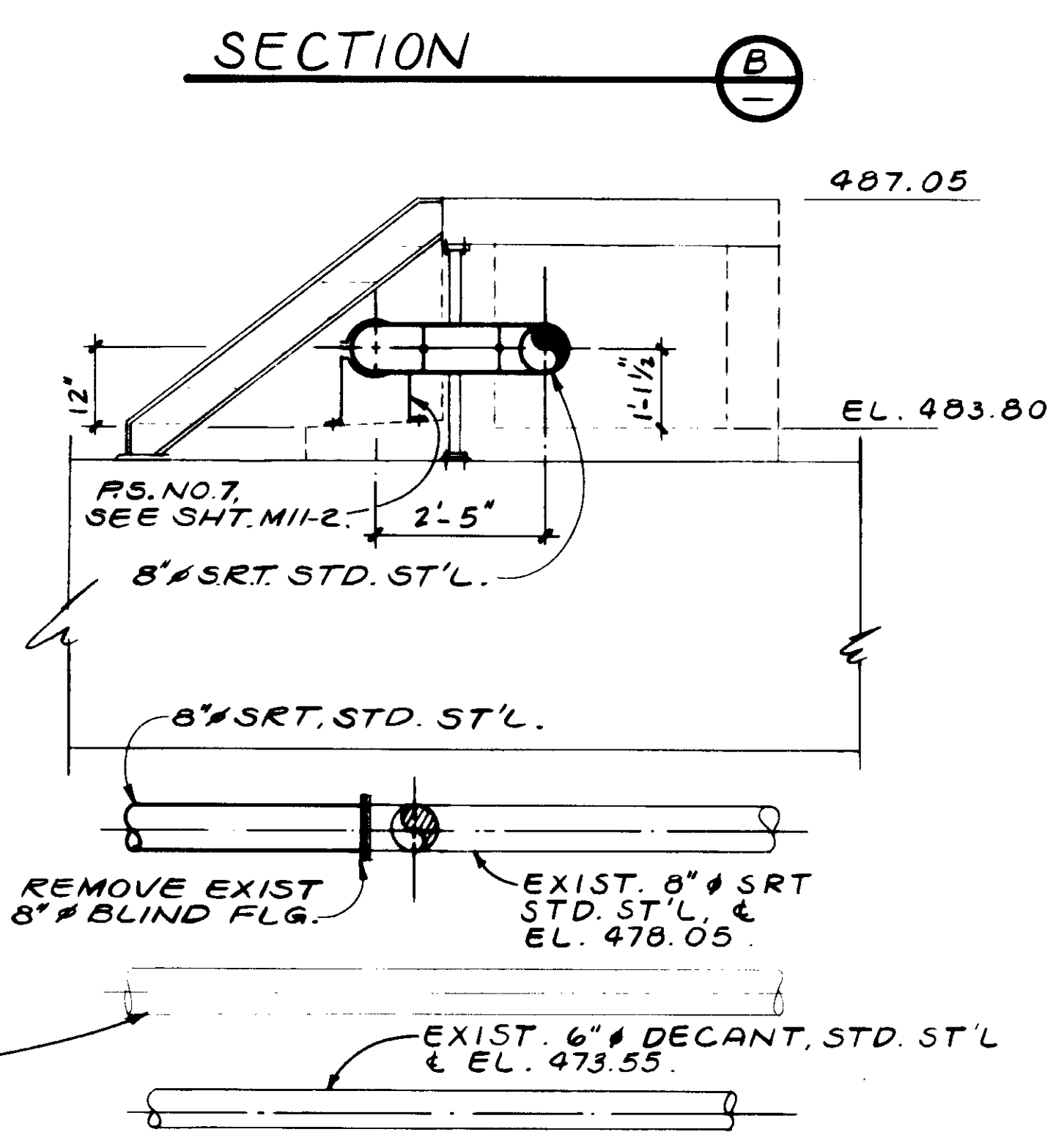
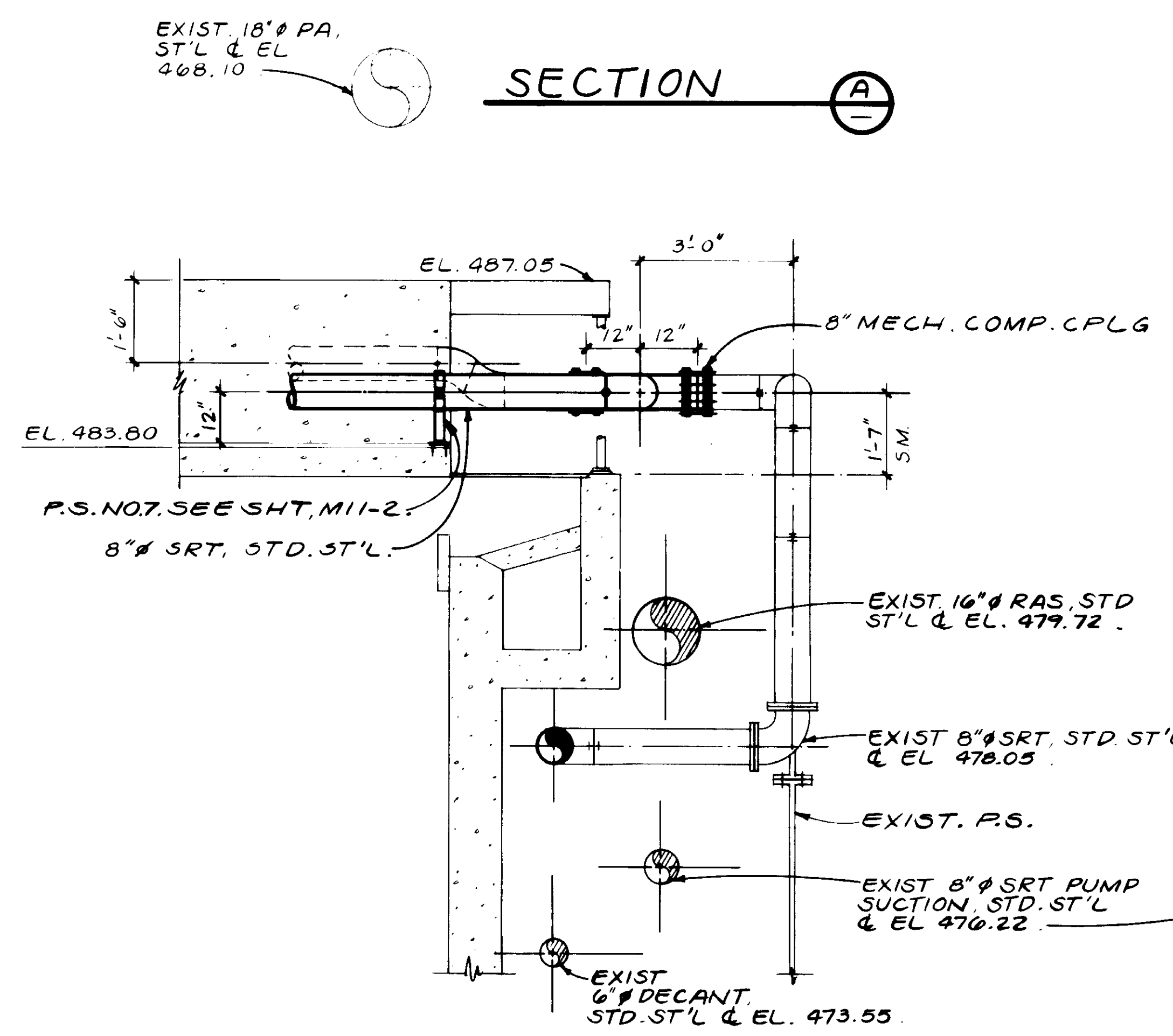
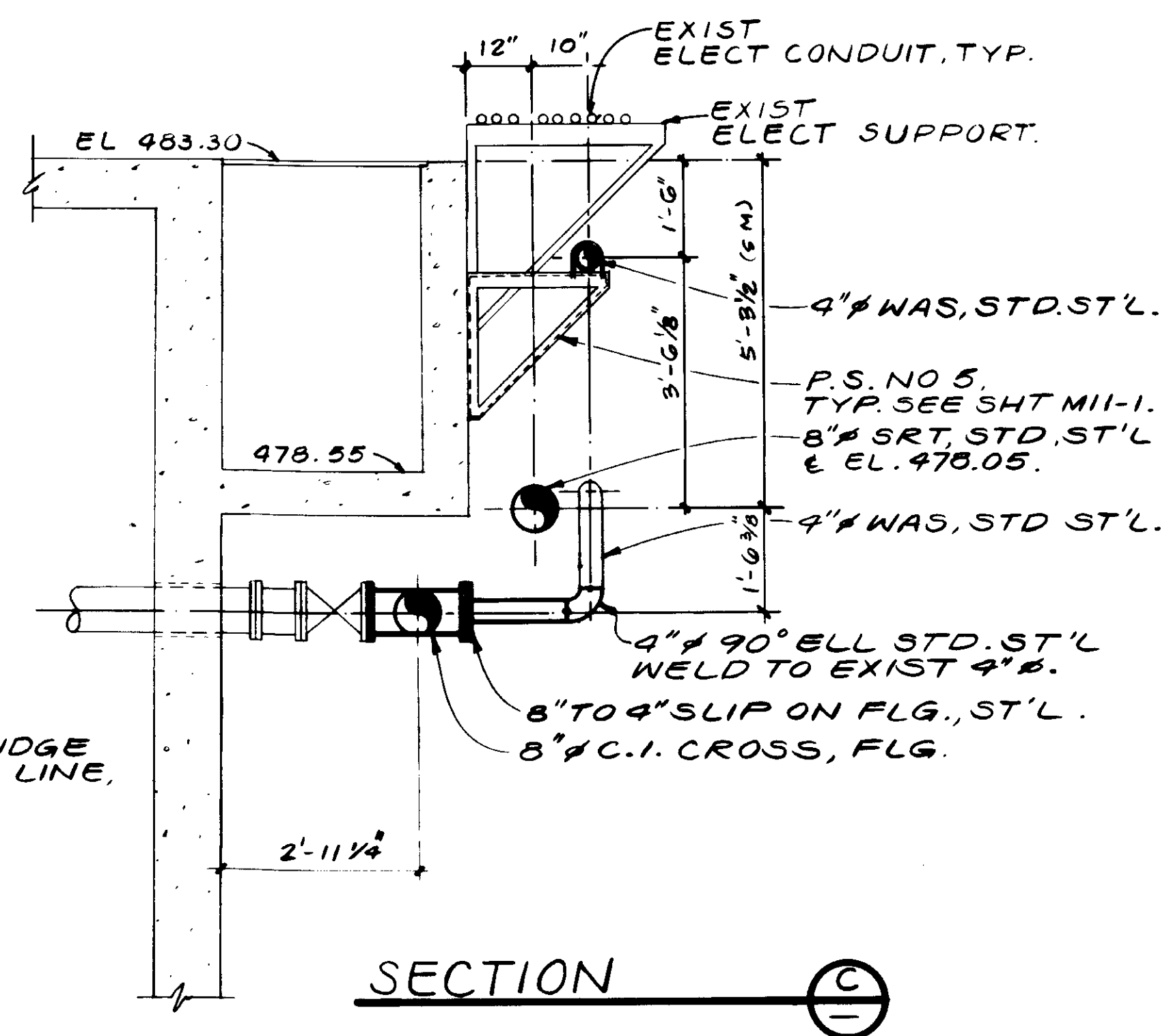
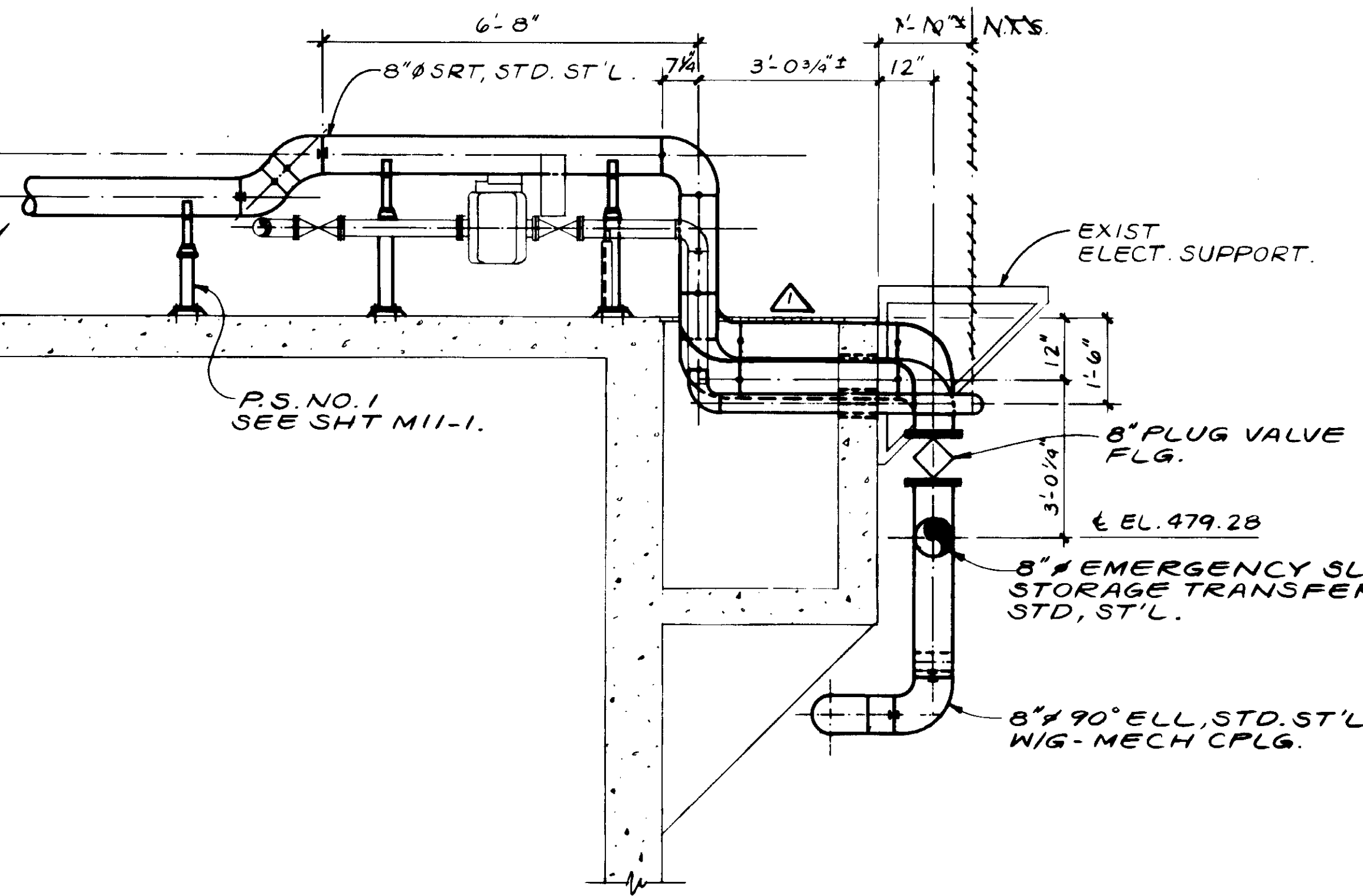
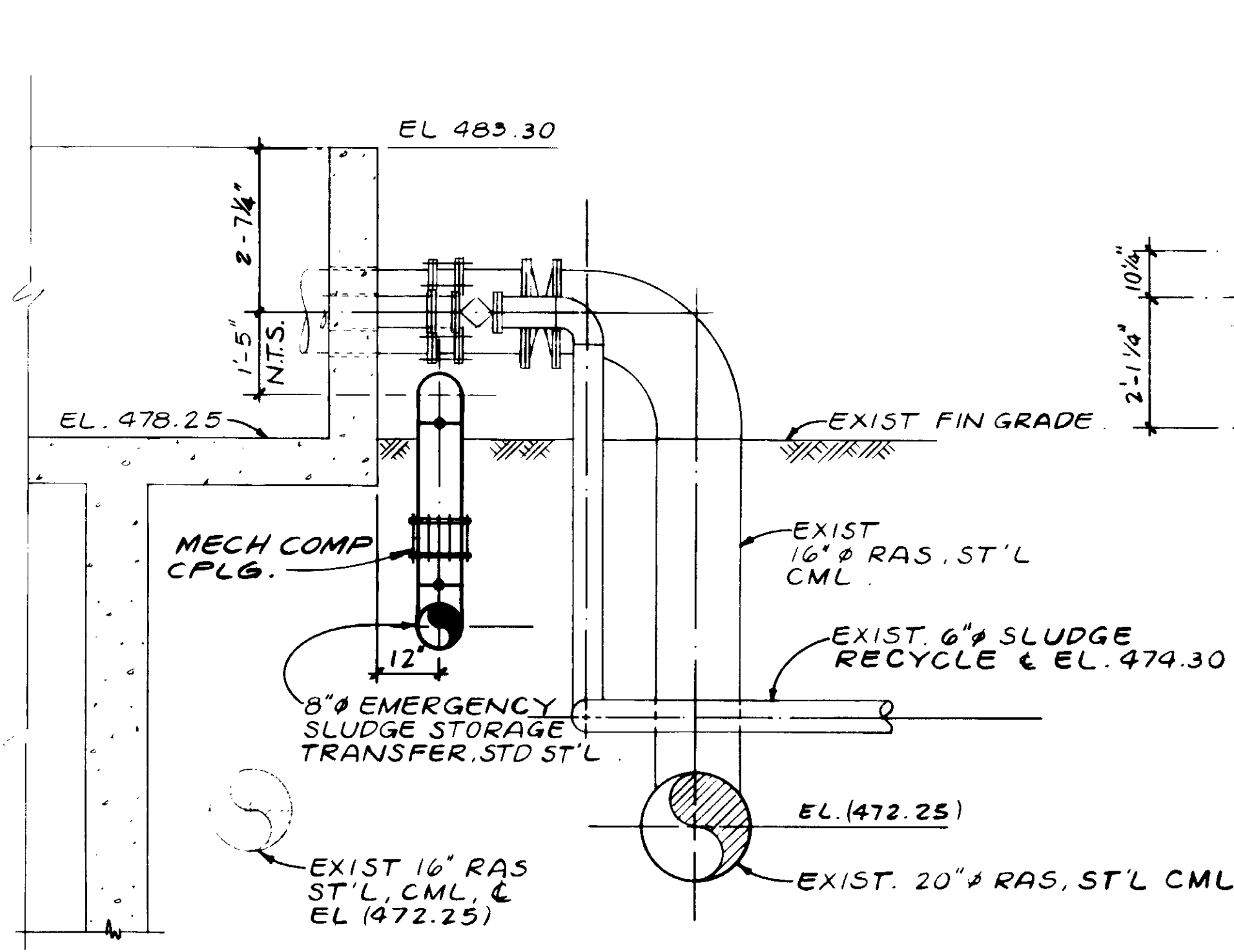
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DESIGNED:	D.N.	DESIGNED BY:	KATSURA CONSULTING ENGINEERS	R.C.E. NO.
DRAWN:	Y.K.	DATE:		
CHECKED:				
		ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 5 VICINITY, ELEVATION

SHEET  
**M6-4**





RECORD DRAWING  
 PREPARED BY KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS, JUNE 1987



04140

REV	DATE	BY	DESCRIPTION
2	4-24-87	A.B.	REV. PER K.P.C.
1	4-24-87	A.B.	REV. PER K.P.C.

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

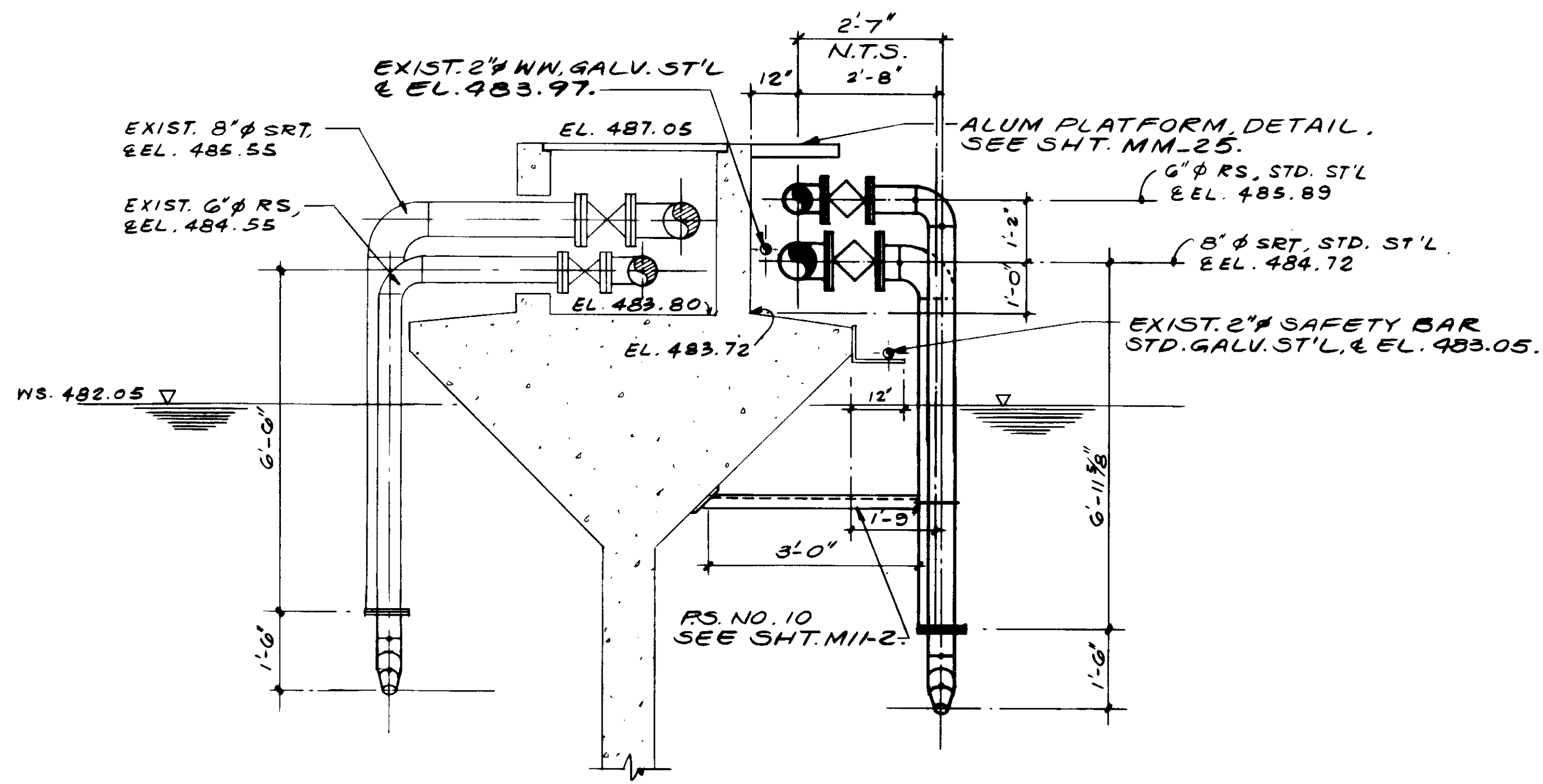
DESIGNED Y.K./DN.  
 DRAWN D.N.  
 CHECKED Y.K.

SUBMITTED 8-7-87  
 KALEX CONSULTING ENGINEERS R.C.E. NO. 14038 DATE  
 ALEXANDER ENGINEERS R.C.E. NO. 613 DATE

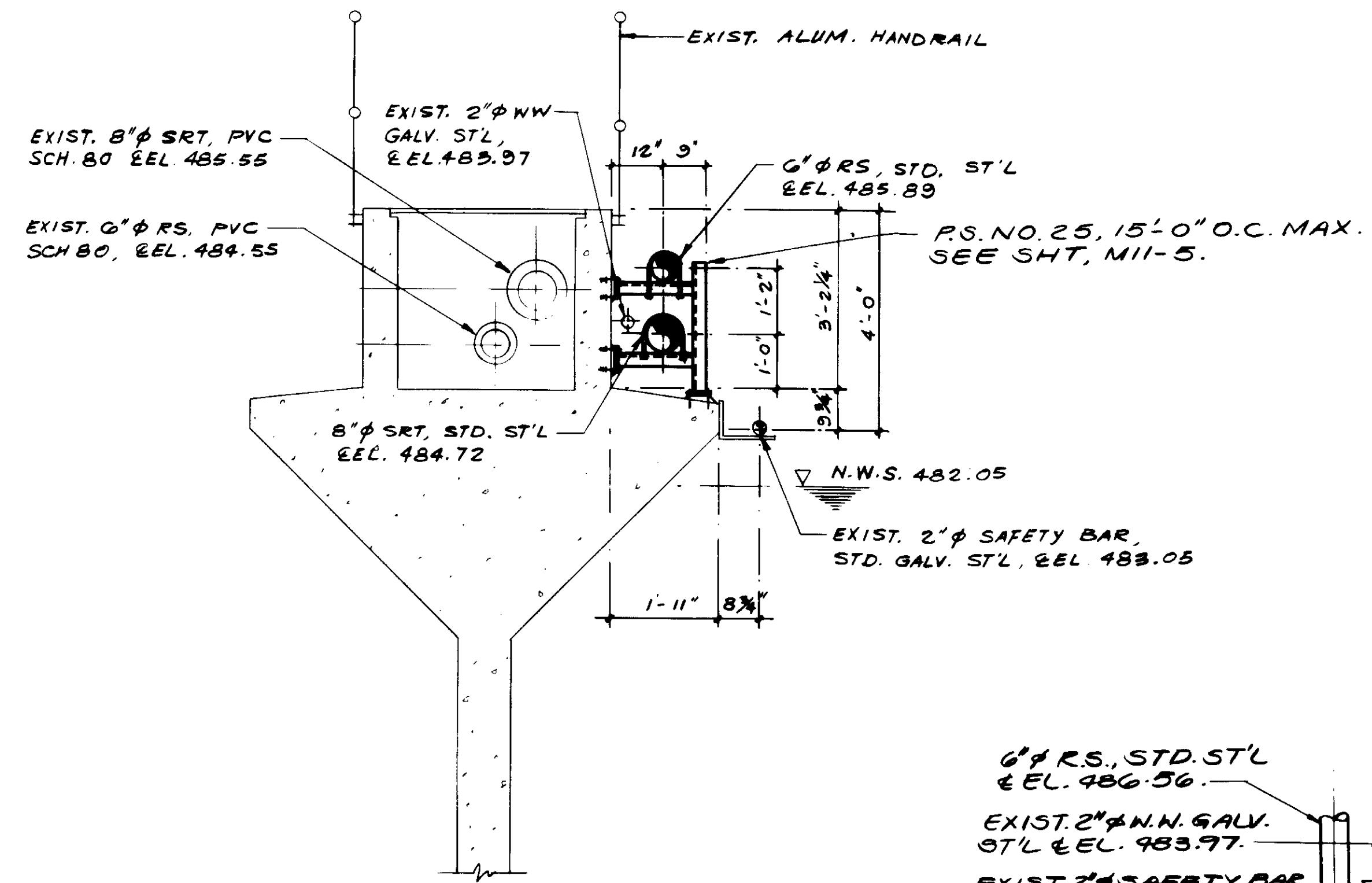
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 5 VICINITY, SECTIONS - I

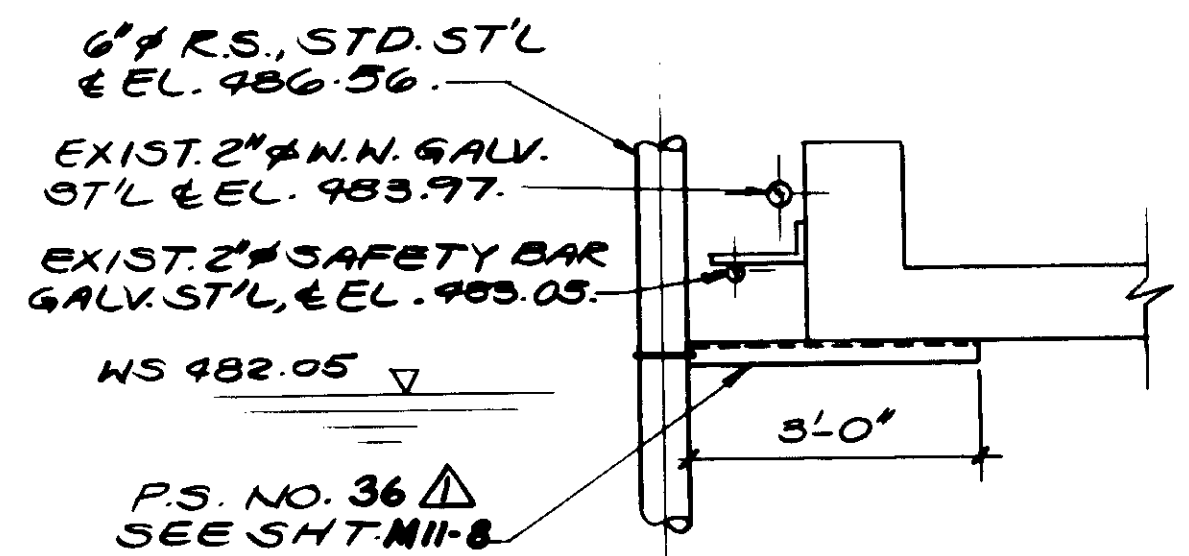
SHEET  
 M6-5



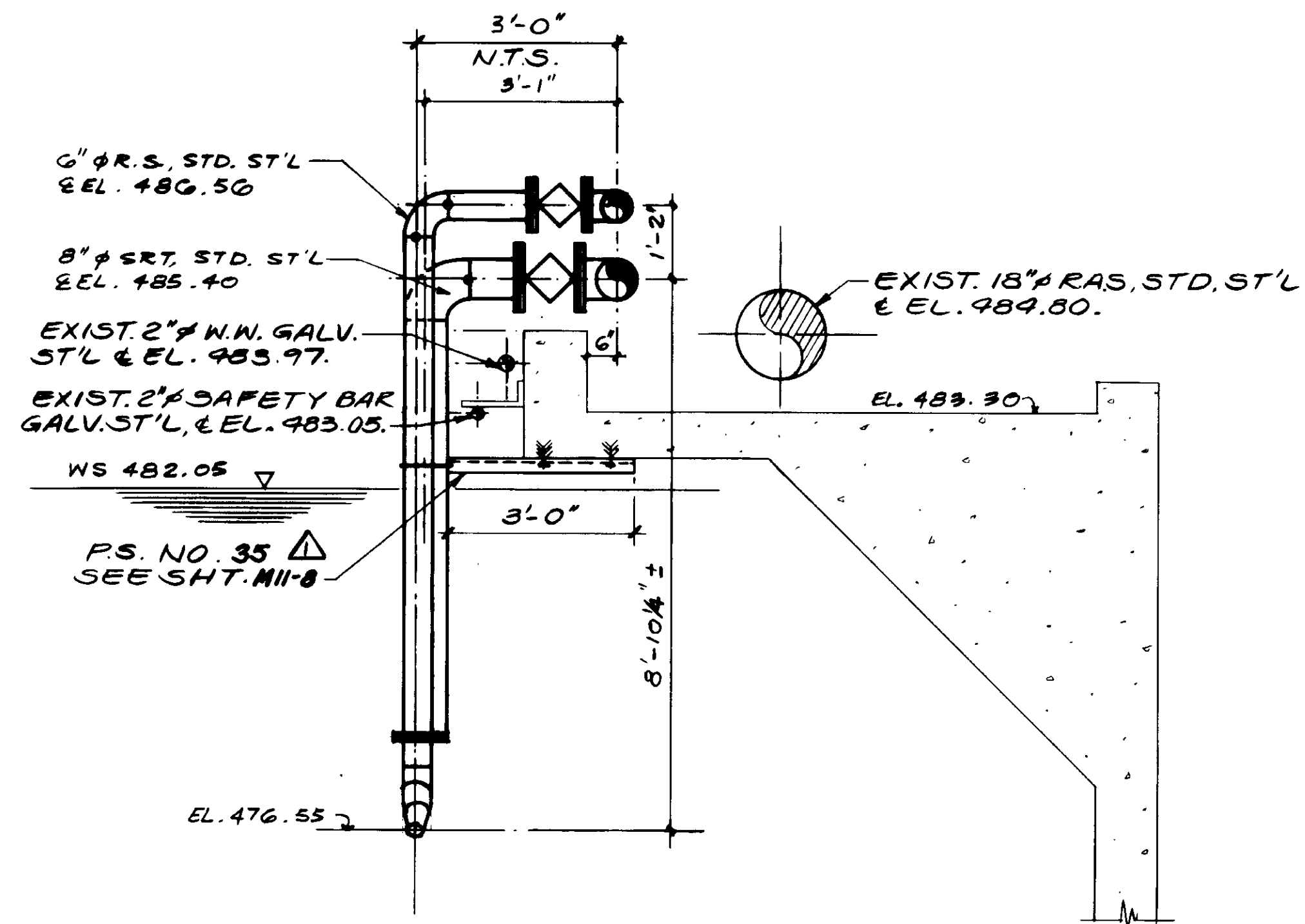
SECTION G



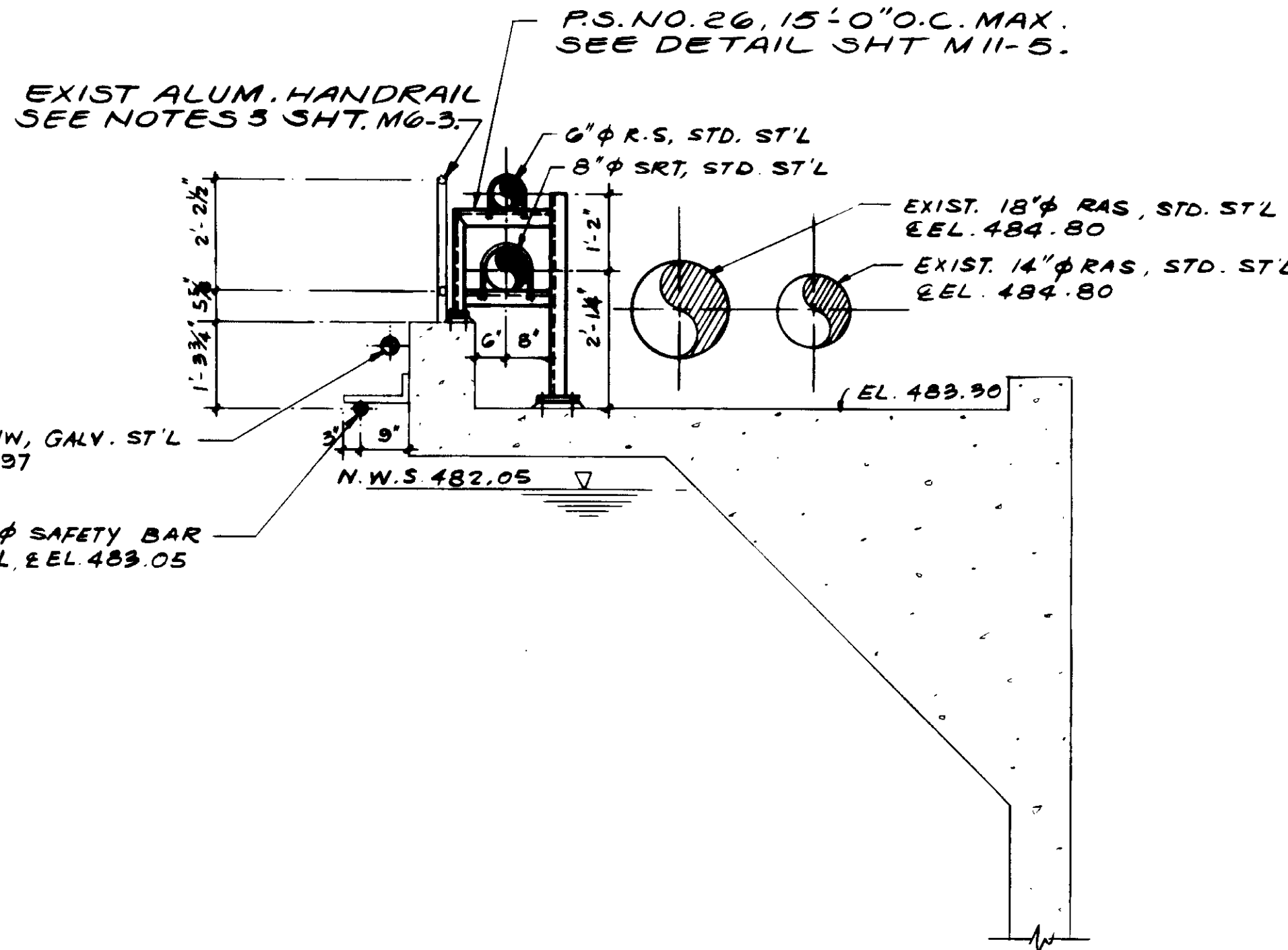
SECTION H



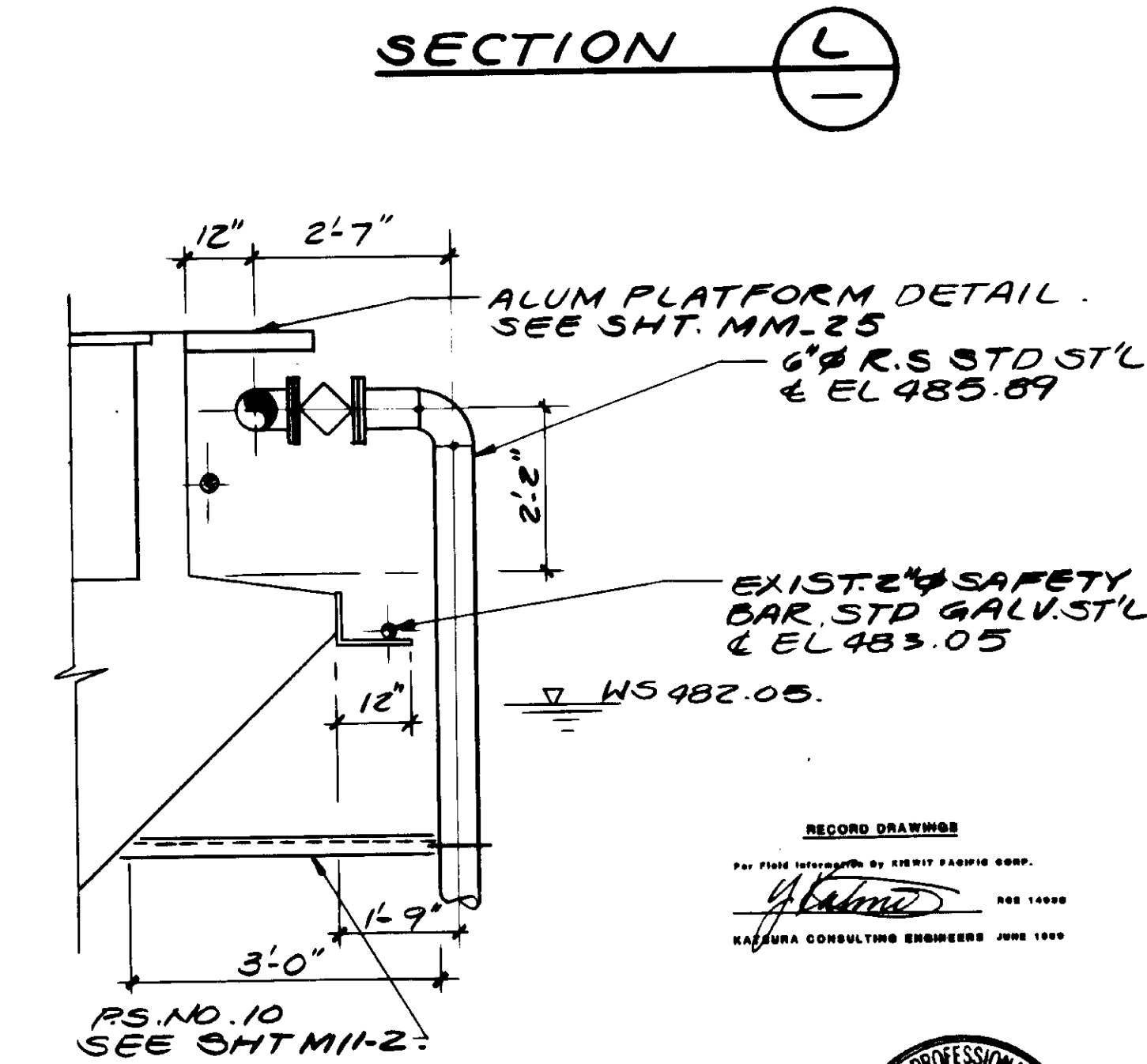
SECTION L



SECTION J



SECTION K



SECTION M

RECORD DRAWING  
 PREPARED BY: KATSUMI KATSURA  
 KATSUMI CONSULTING ENGINEERS JUNE 1988



04141

REV	DATE	BY	DESCRIPTION

SCALE: 1/2" = 1'-0"	DESIGNED D.N./S.K.	DRAWN Y.K.	CHECKED
Y.K./D.N./J.L.	SUBMITTED KATSUMI CONSULTING ENGINEERS	14038 R.C.E. NO.	8-7-87 DATE
		618 R.C.E. NO.	

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 5 VICINITY, SECTIONS - II

SHEET  
**M6-6**

AEROBIC  
DIGESTER  
NO. IV.

AEROBIC  
DIGESTER  
NO. V.

AEROBIC  
DIGESTER  
NO. VI.

NOTE:  
FOR PLUG VALVE AND OPERATOR  
ORIENTATION SEE SHT. M6-12

EXIST. 6" RS, PVC  
SCH. 80, & EL. 484.55.  
EXIST. 2" SAFETY  
BAR.  
EXIST. 8" RS, PVC  
SCH. 80, & EL. 485.25.

P.S. NO. 25, 15'-0" O.C. MAX  
SEE SHT. M11-5.  
6" MECH. COMP. CPLG.  
8" MECH. COMP. CPLG.

P.S. NO. 26, 15'-0" O.C. MAX.  
SEE SHT. M11-5.

6" MECH. COMP. CPLG.  
8" MECH. COMP. CPLG.

EXIST. 2" WW.

6" RS, STD. ST'L.  
& EL. 486.56.

RELOCATE HOSE RACK TO  
NEAREST P.S. AS REQ'D SEE DETAIL.

8" SRT, STD. ST'L  
& EL. 485.90.  
2" HOSE VALVE.

REMOVE EXIST.  
2" HOSE VALVE.

10" GST, STD. ST'L  
& EL. 484.36.

EXIST.  
2" GATE  
VALVE

10" PLUG VALVE,  
FLG.

REUSE EXIST.  
10" BLIND FLG.

10" TEE, C.I. FLG.

6" C.I. FLG'D  
CPLG. ADAPTER, TYP.

RELOCATE  
EXIST. 6" PLUG VALVE,  
EXIST. 12" RAS,  
& EL. 486.05.  
EXIST. 16" RAS,  
& EL. 480.55.  
EXIST. 10" GST,  
& EL. 481.88.  
EXIST. 6" RS, C.I.  
ML & A.C., & EL. 481.88

EXIST. 6" WW,  
STD. ST'L.

8" SRT, C.I. ML & A.C.  
& EL. 481.88

SKETCH #2, SHT. M6-12

REMOVE EXIST. 10" BLIND  
FLG. AND EXTEND EXIST. 10" GST,  
ST'L, ML & A.C., & EL. 481.88

SEE SKETCH #3

SHT. M6-12

CUT EXIST. 6" RS AND INSTALL  
6" TEE, C.I. W/FLG'D CPLG ADAPTER.

EXIST.  
6" WW, PVC

EXIST. 16" RAS,  
& EL. 485.05

EXIST. 16" RAS  
& EL. 485.05

EXIST.  
2" WW, GALV  
ST'L

EXIST. 6" WW,  
STD. ST'L.

8" SRT, C.I. ML & A.C.  
& EL. 481.88

SKETCH #2, SHT. M6-12

REMOVE EXIST. 10" BLIND  
FLG. AND EXTEND EXIST. 10" GST,  
ST'L, ML & A.C., & EL. 481.88

SEE SKETCH #3

SHT. M6-12

CUT EXIST. 6" RS AND INSTALL  
6" TEE, C.I. W/FLG'D CPLG ADAPTER.

MECH. COMP. CPLG.  
TYP.

EXIST. 14" PA,  
ST'L SCH. 30

10" TEE, C.I. FLG.

6" C.I. FLG'D  
CPLG. ADAPTER, TYP.

EXIST. 42" PA,  
ST'L, & EL. 480.05

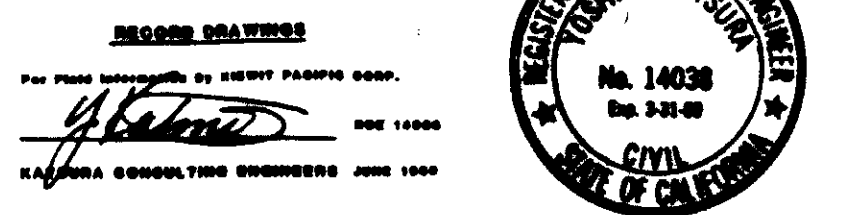
SEE SKETCH #1

SHT. M6-12

PIPE GALLERY  
NO. 6

PLAN

04142



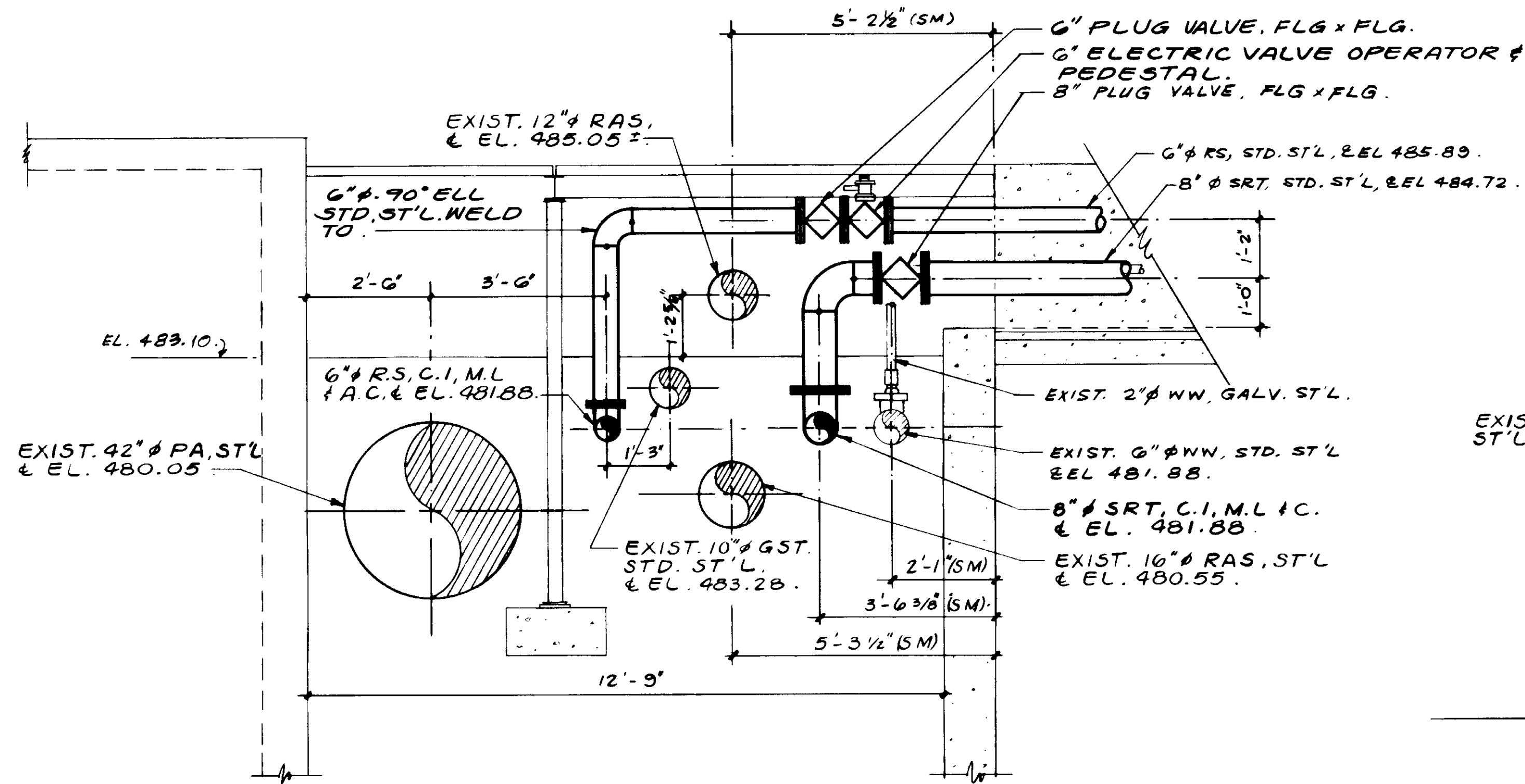
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	DESIGNED:	KATSUMA CONSULTING ENGINEERS	R.C.E. NO. DATE
	DRAWN:		
	CHECKED:		

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

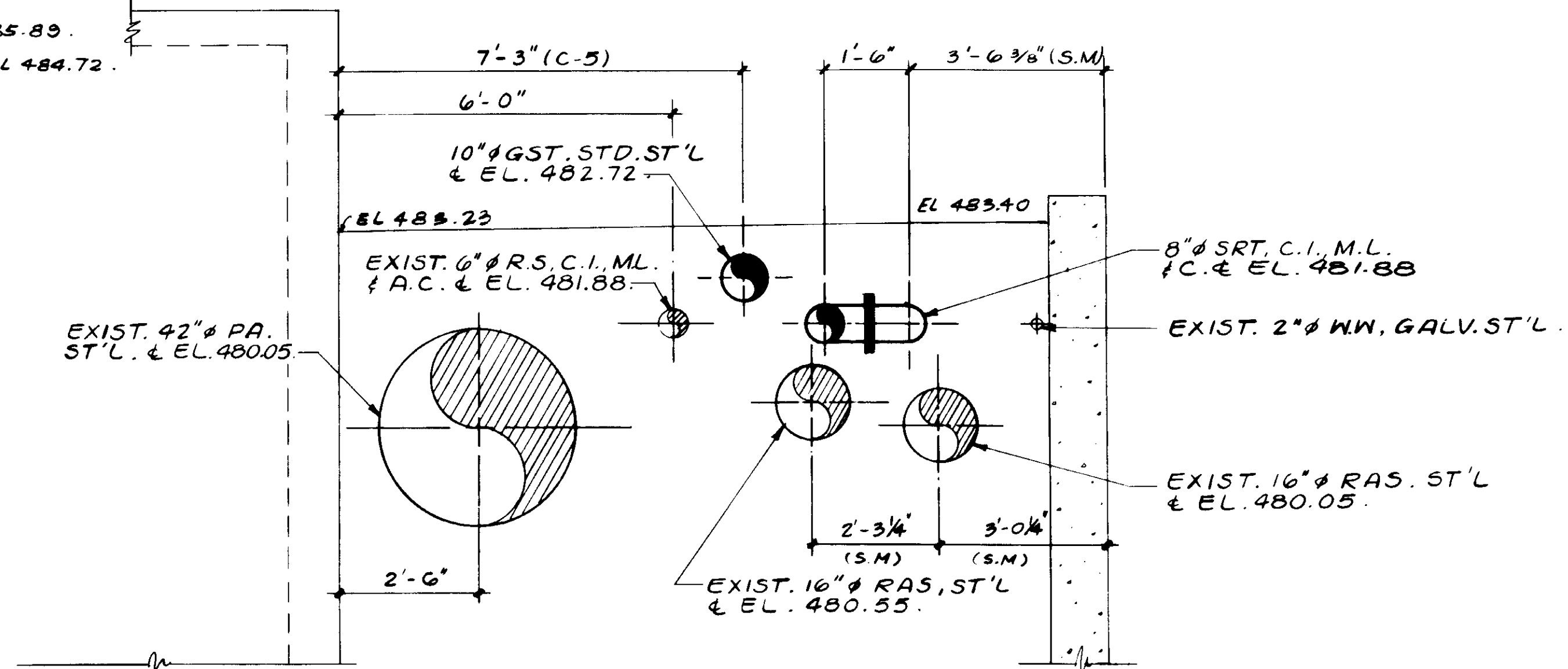
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PIPE GALLERY NO. 6 VICINITY, PLAN

SHEET  
M6-7

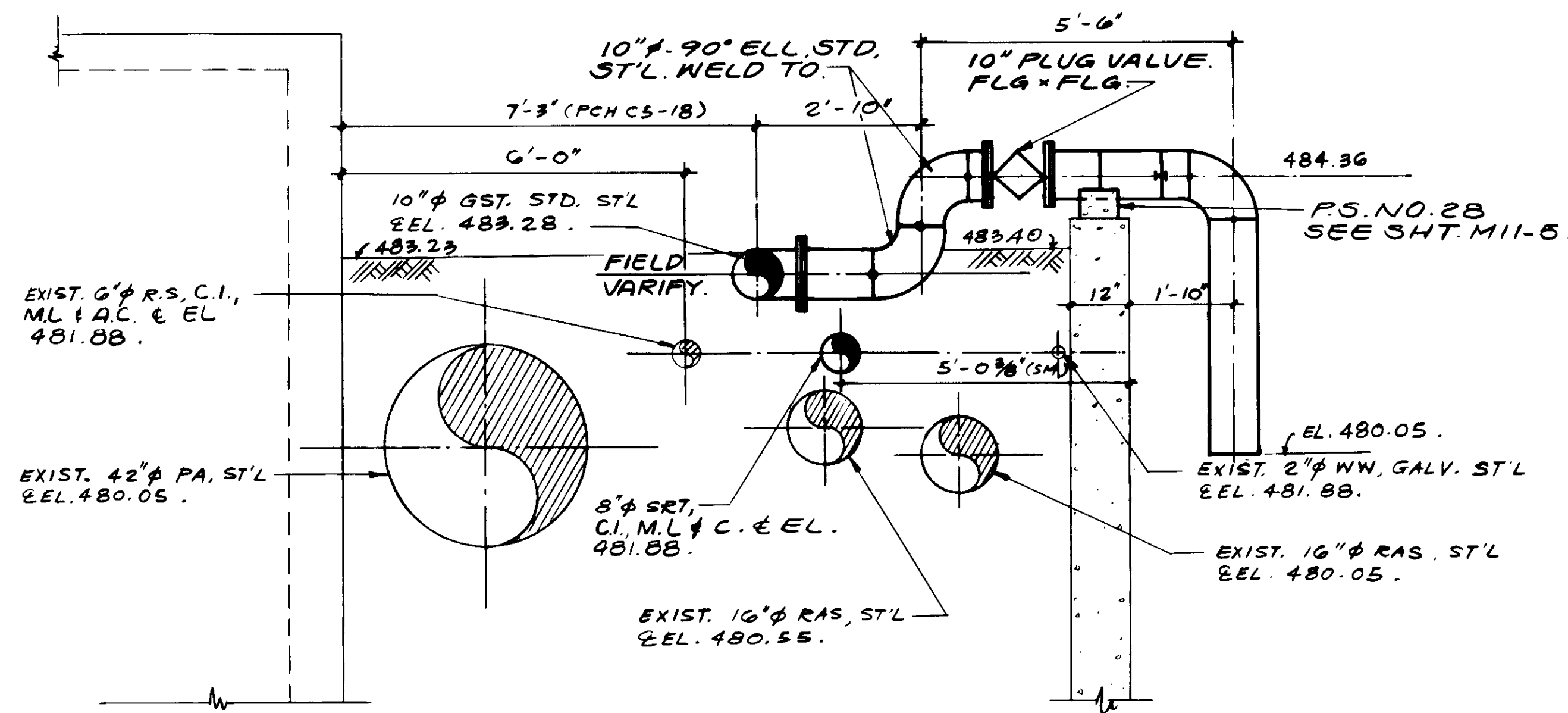
REV	DATE	BY	DESCRIPTION
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2		A.B.	REV. PER K.P.C.



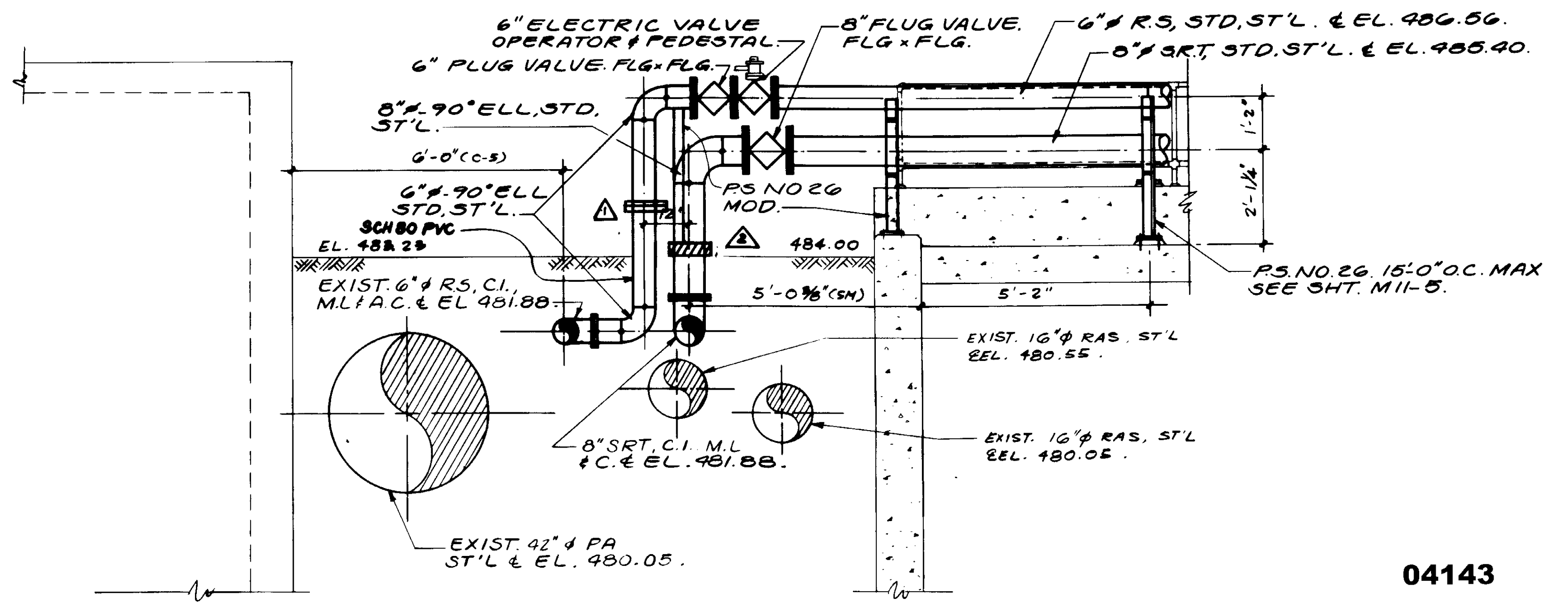
SECTION **L**



SECTION **M**



SECTION **N**



SECTION **P**

04143

RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87



REV	DATE	BY	DESCRIPTION

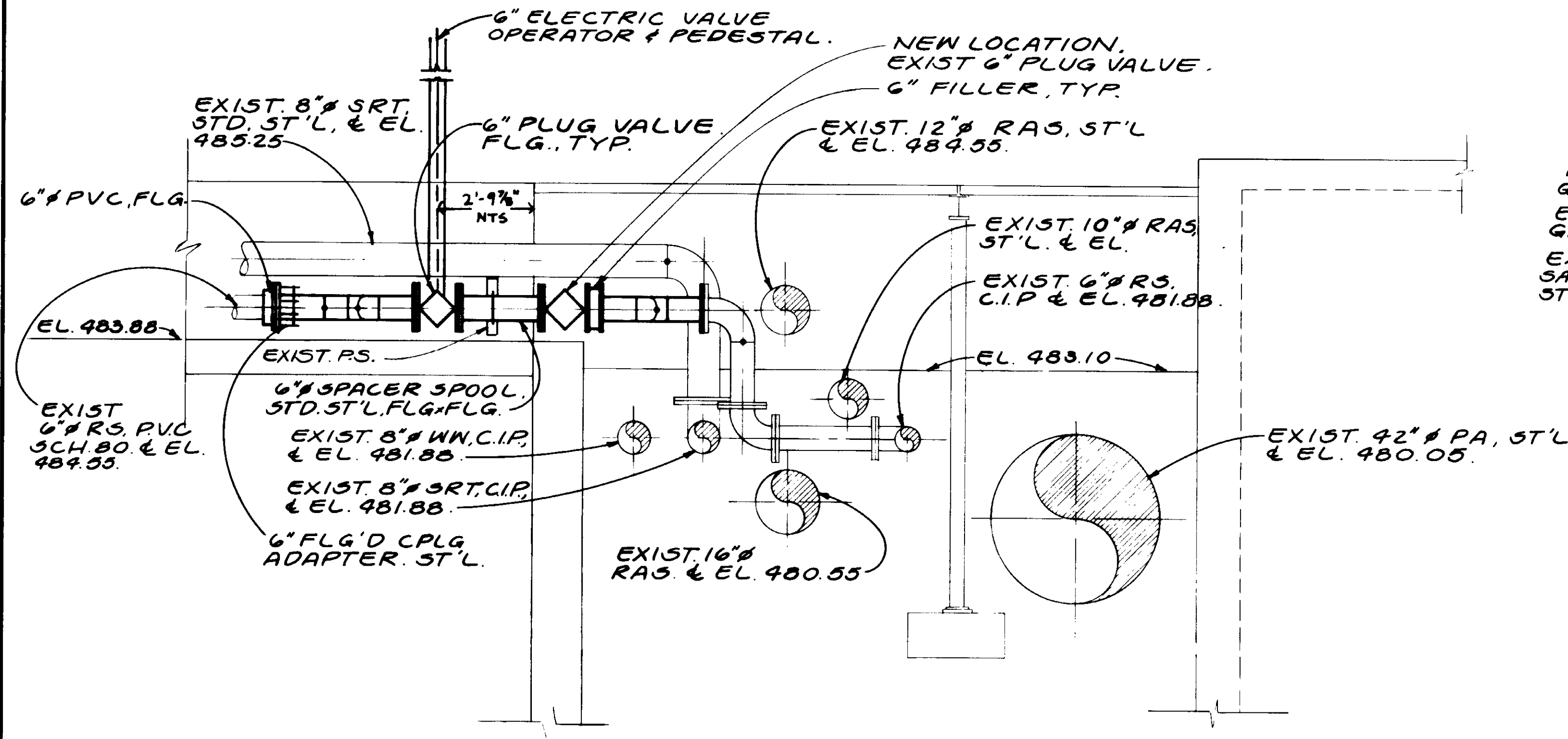
SCALE: 1/2" = 1'-0"	DESIGNED: Y.K./D.N.	SUBMITTED: 8-7-87
DRAWN: Y.K.	CHECKED: D.N./S.K.	DATE: 8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

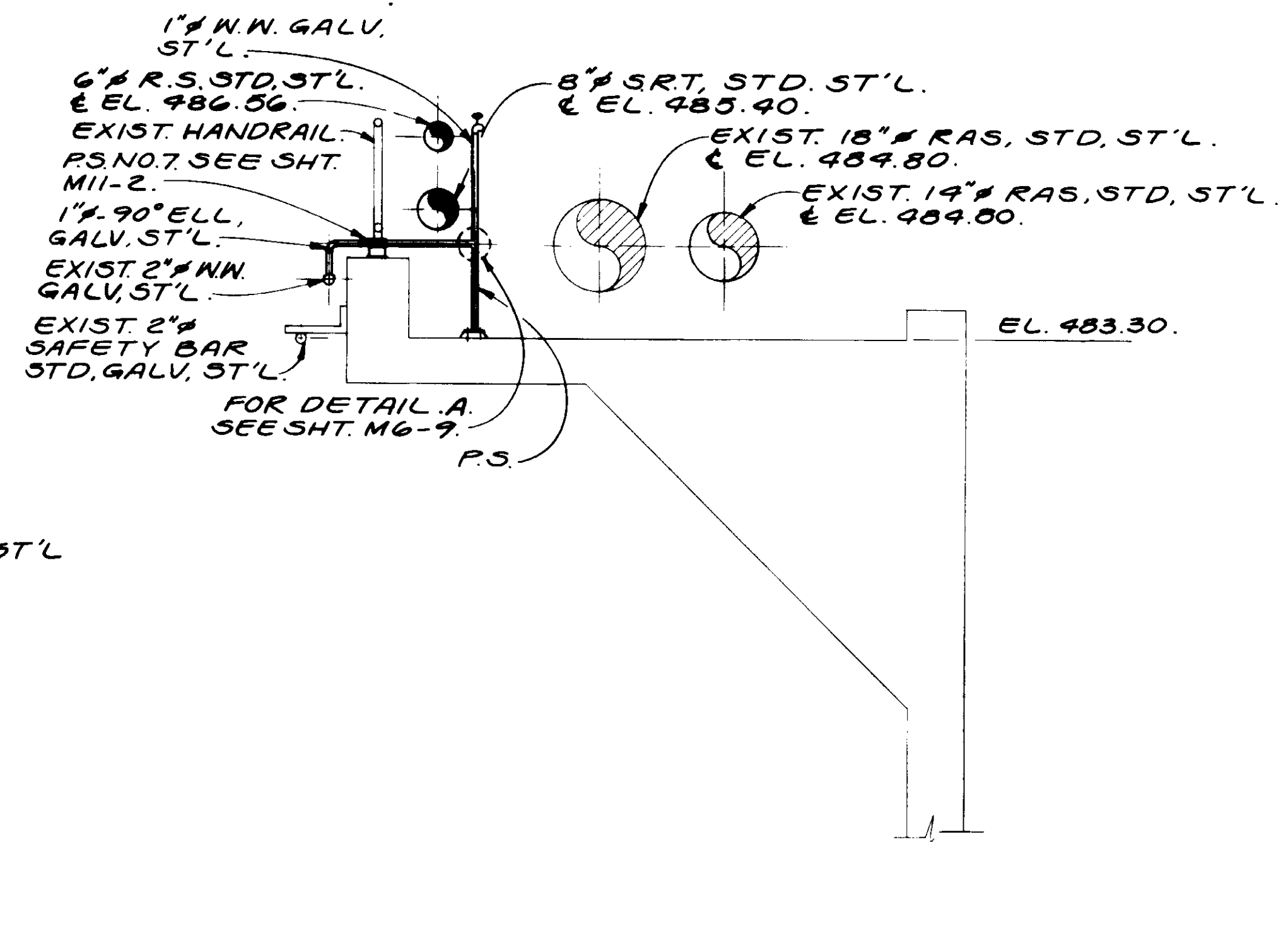
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE GALLERY NO. 6 VICINITY, SECTIONS - 1

SHEET  
**M6-8**

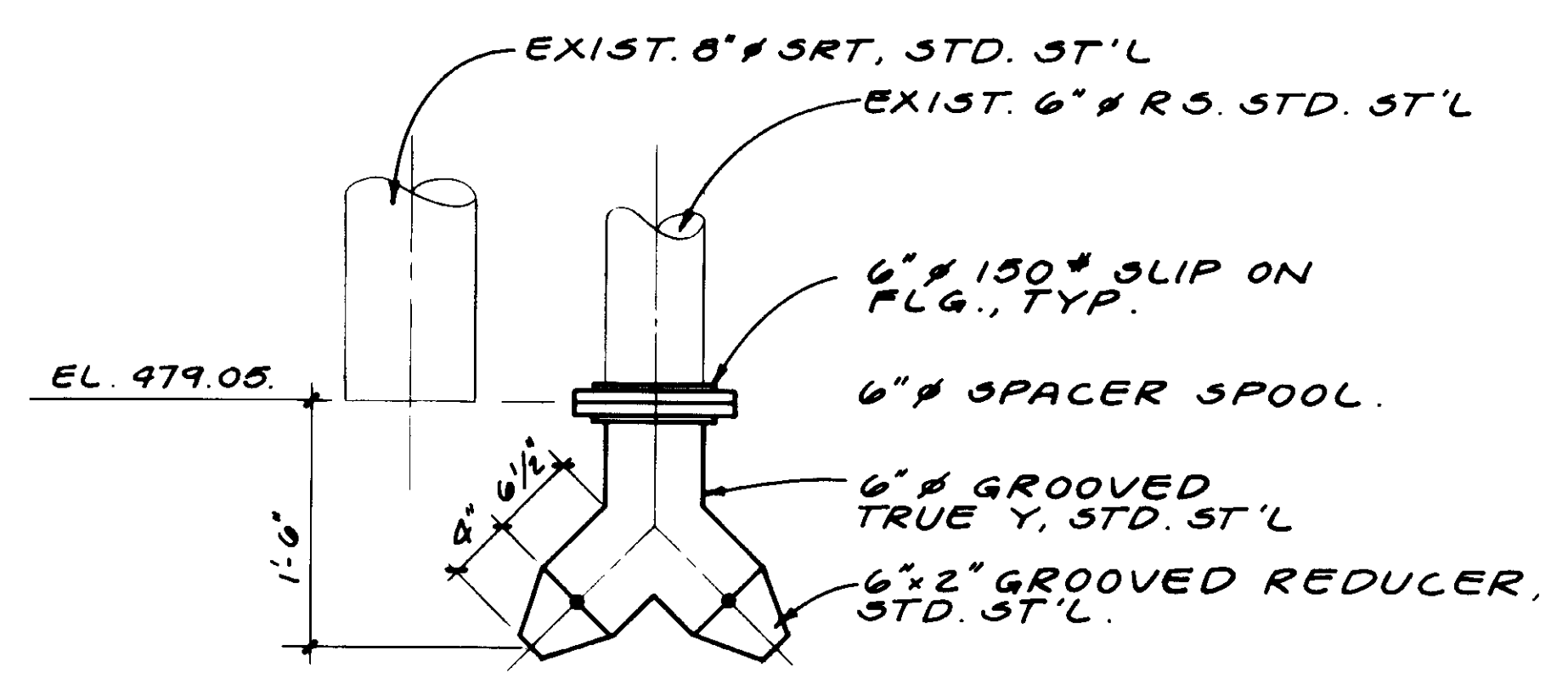




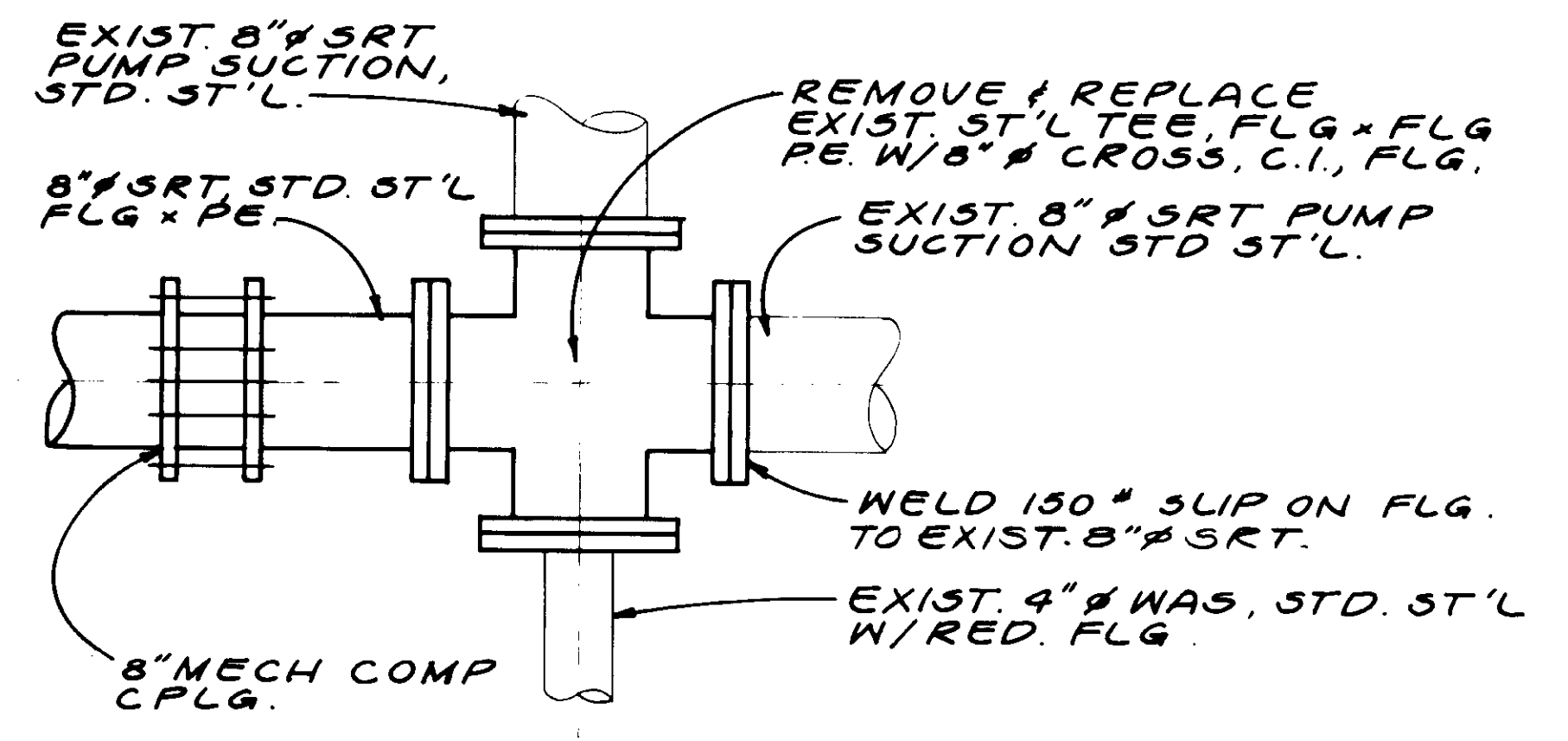
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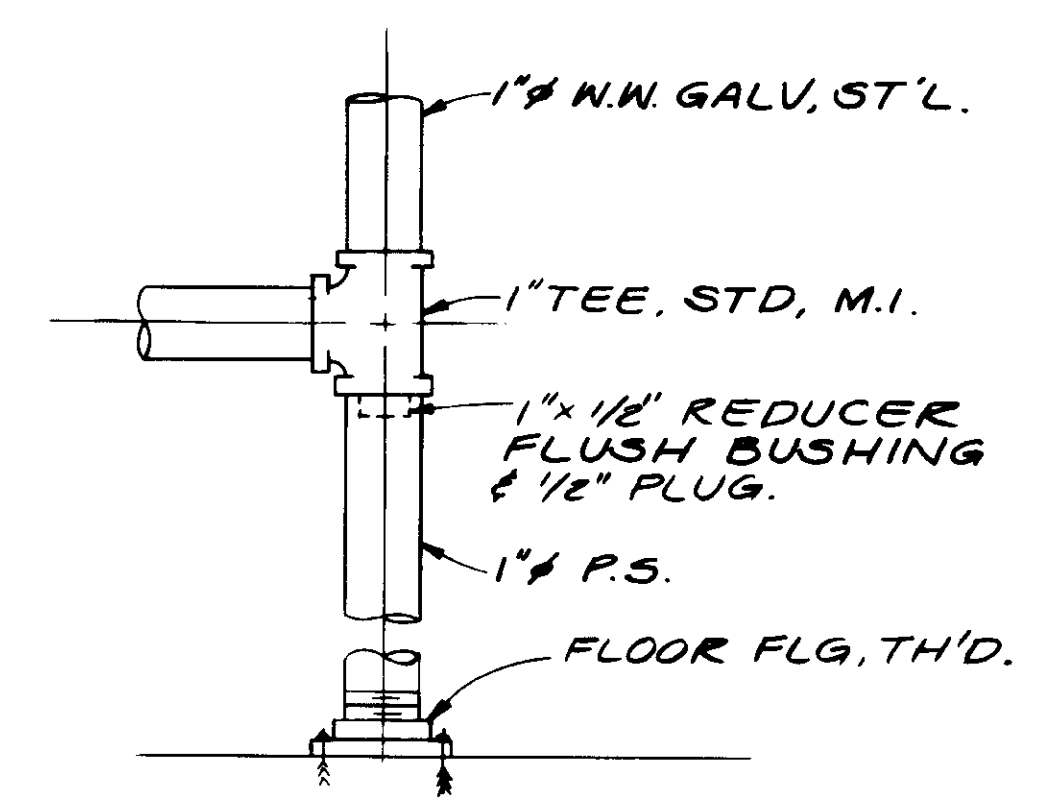
**SECTION S**  
SCALE: 1/2" = 1'-0"



**DETAIL A**  
SCALE: 1" = 1'-0"



**PLAN SECTION**  
SCALE: 1" = 1'-0"



**DETAIL B**  
N.T.S.

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED.  
DESIGNED: Y.K./D.N.  
DRAWN: D.N.  
CHECKED: Y.K.

SUBMITTED: *[Signature]* 14038 8-7-87  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
ALEXANDER ENGINEERS 519 R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

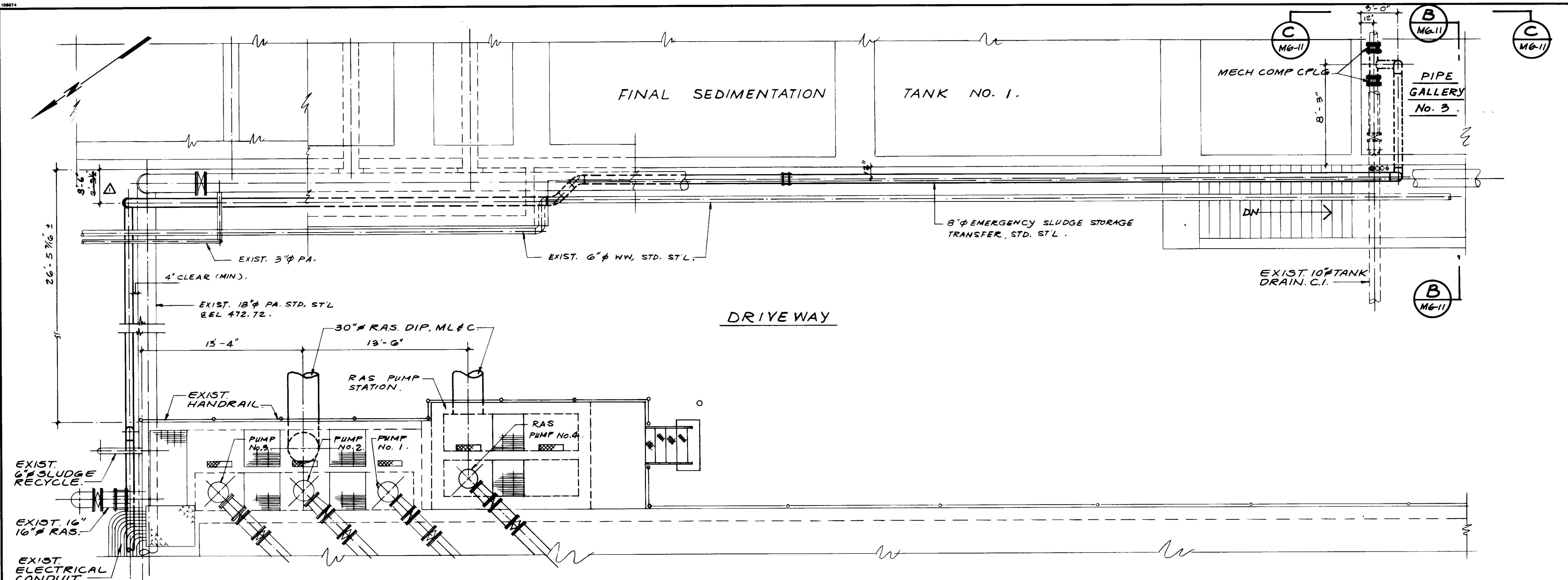
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PIPE GALLERY NO. 6 VICINITY, SECTIONS - II

SHEET M6-9

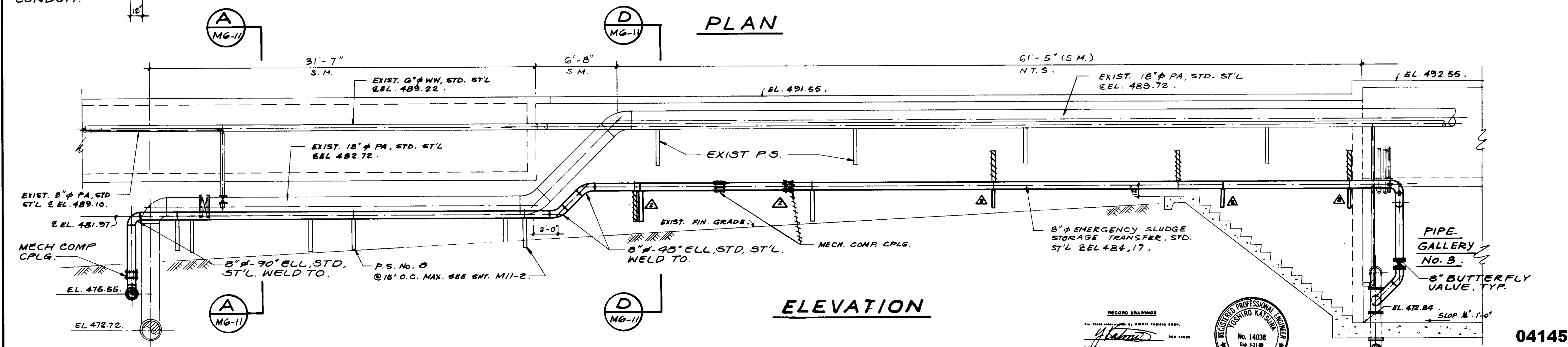
RECORD DRAWING  
FOR FILE MAINTAINED BY CREDIT PACIFIC CORP.  
*[Signature]* 14038  
KATSURA CONSULTING ENGINEERS JUNE 1988



04144



PLAN



ELEVATION



RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87

04145

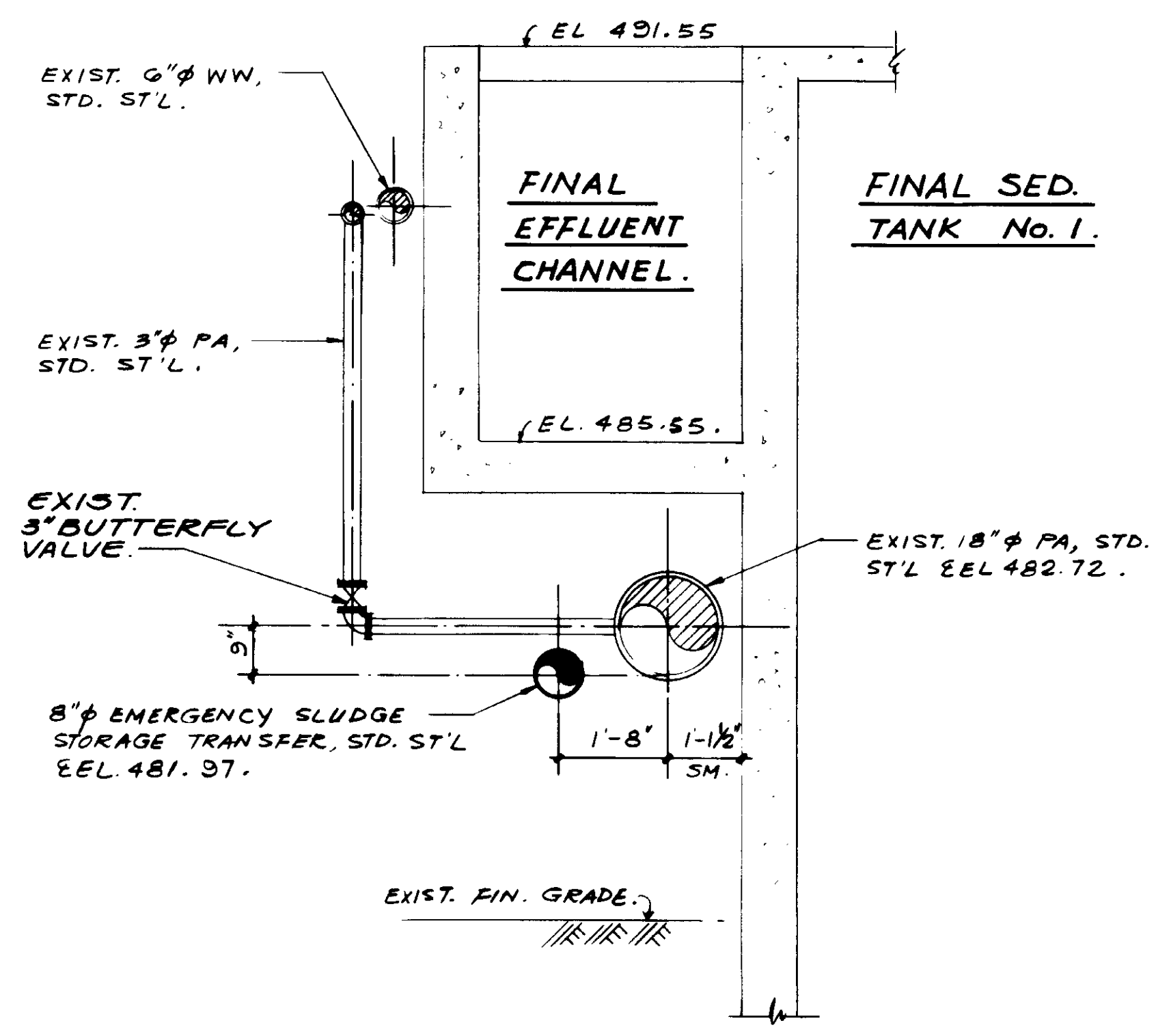
REV	DATE	BY	DESCRIPTION
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2	8-28-87	A.B.	REV. PER K.P.C.

SCALE:	1/4" = 1'-0"
DESIGNED:	S. K.
DRAWN:	Y. K.
CHECKED:	
SUBMITTED:	Y. K. / S. K.
DATE:	8-7-87
PROJECT NO.:	14038
ENGINEER:	ALEXANDER ENGINEERS
REGISTERED PROFESSIONAL ENGINEER:	YOSHITIRO KATSURA
NO.:	14038
EXPIRES:	3-31-88
STATE:	CALIFORNIA

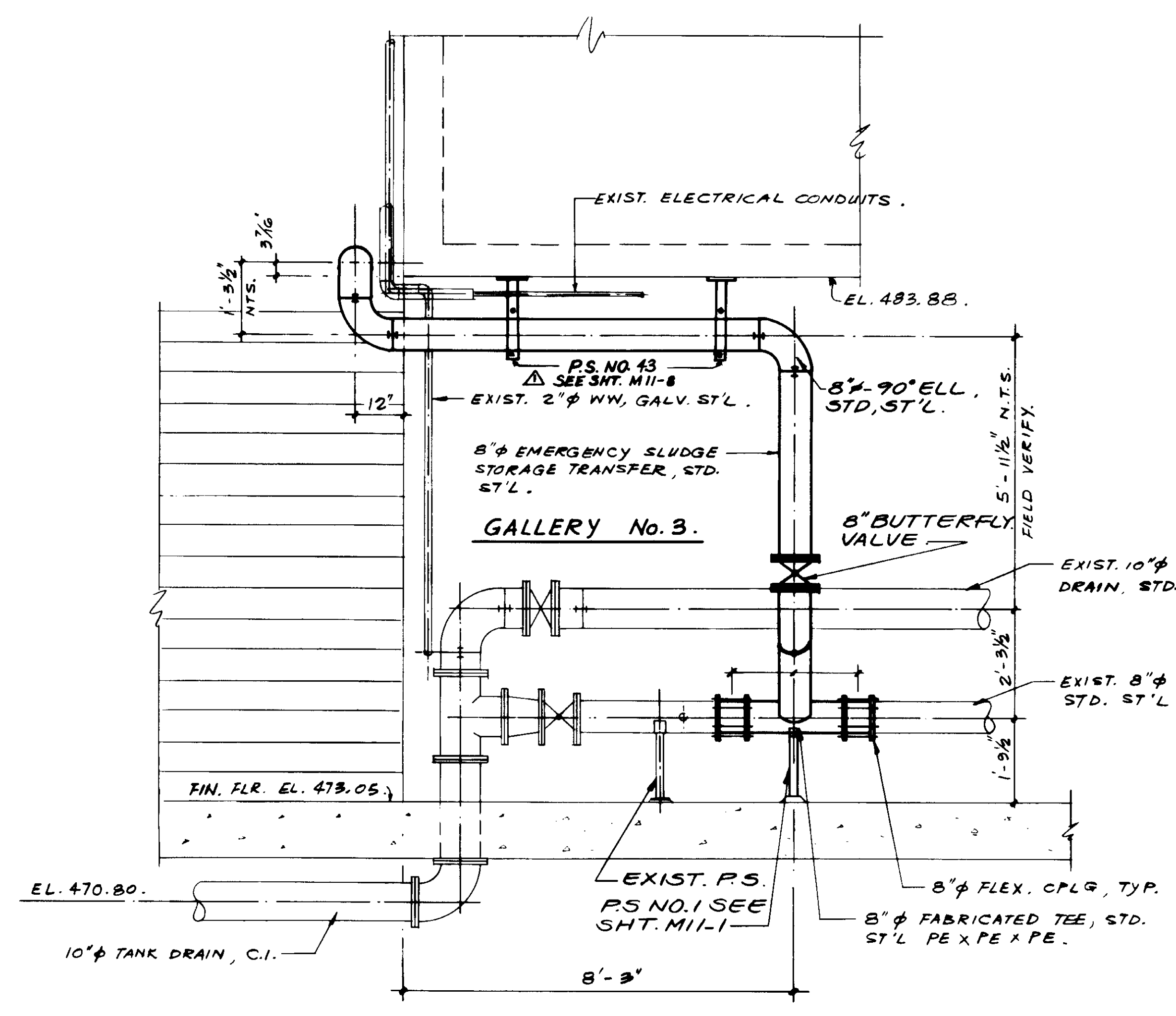
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 EMERGENCY SLUDGE STORAGE TRANSFER LINE,  
 PLAN & ELEVATIONS

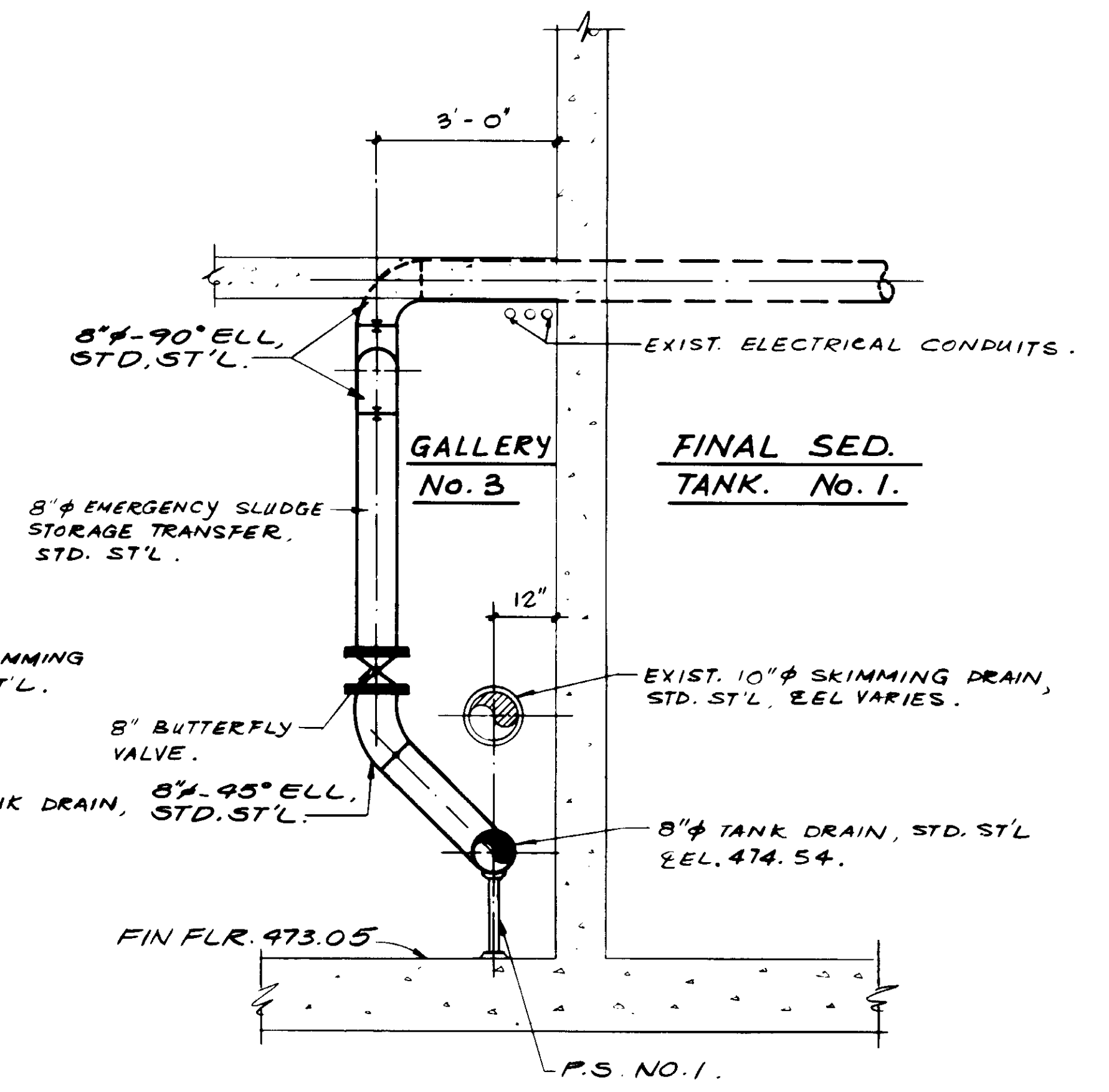
SHEET  
**M6-10**



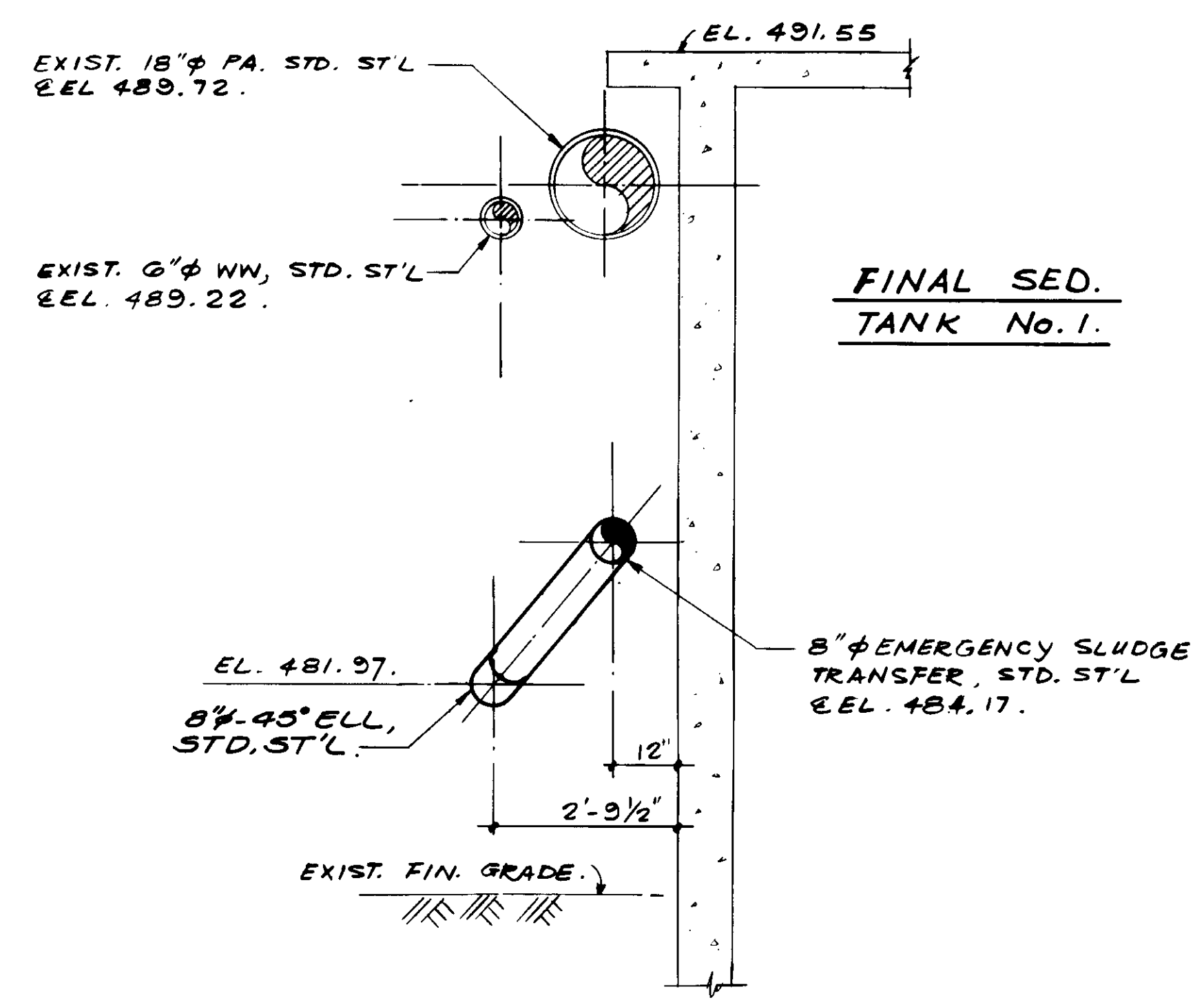
**SECTION. A**



**SECTION. B**



**SECTION. C**



**SECTION. D**

04146

RECORD DRAWINGS  
 PREPARED BY SHREY PAREKH GROUP  
 KATSURA CONSULTING ENGINEERS JUNE 1999



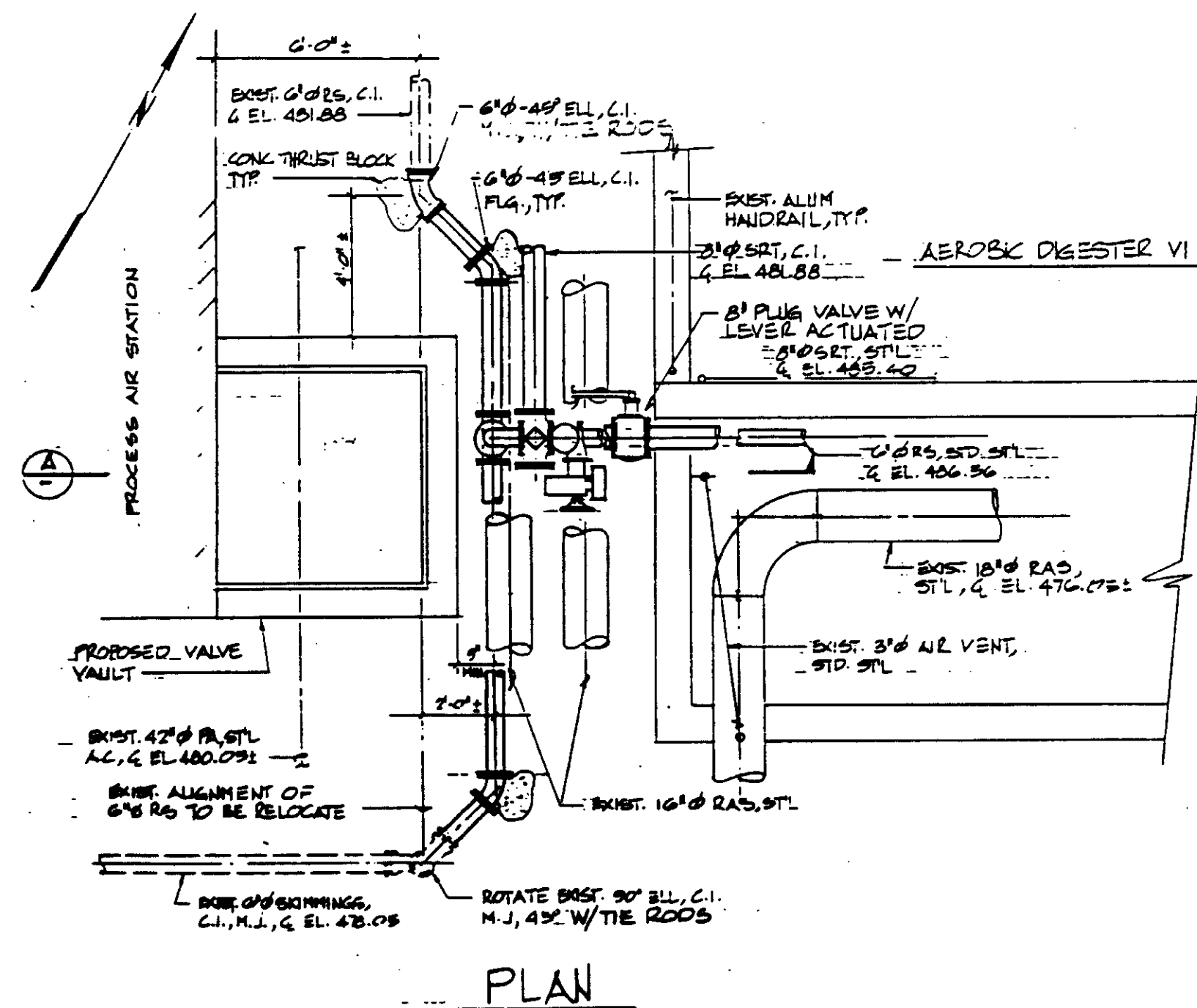
REV	DATE	BY	DESCRIPTION

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DRAWN Y.K.	CHECKED S.K.	DATE 8-7-87

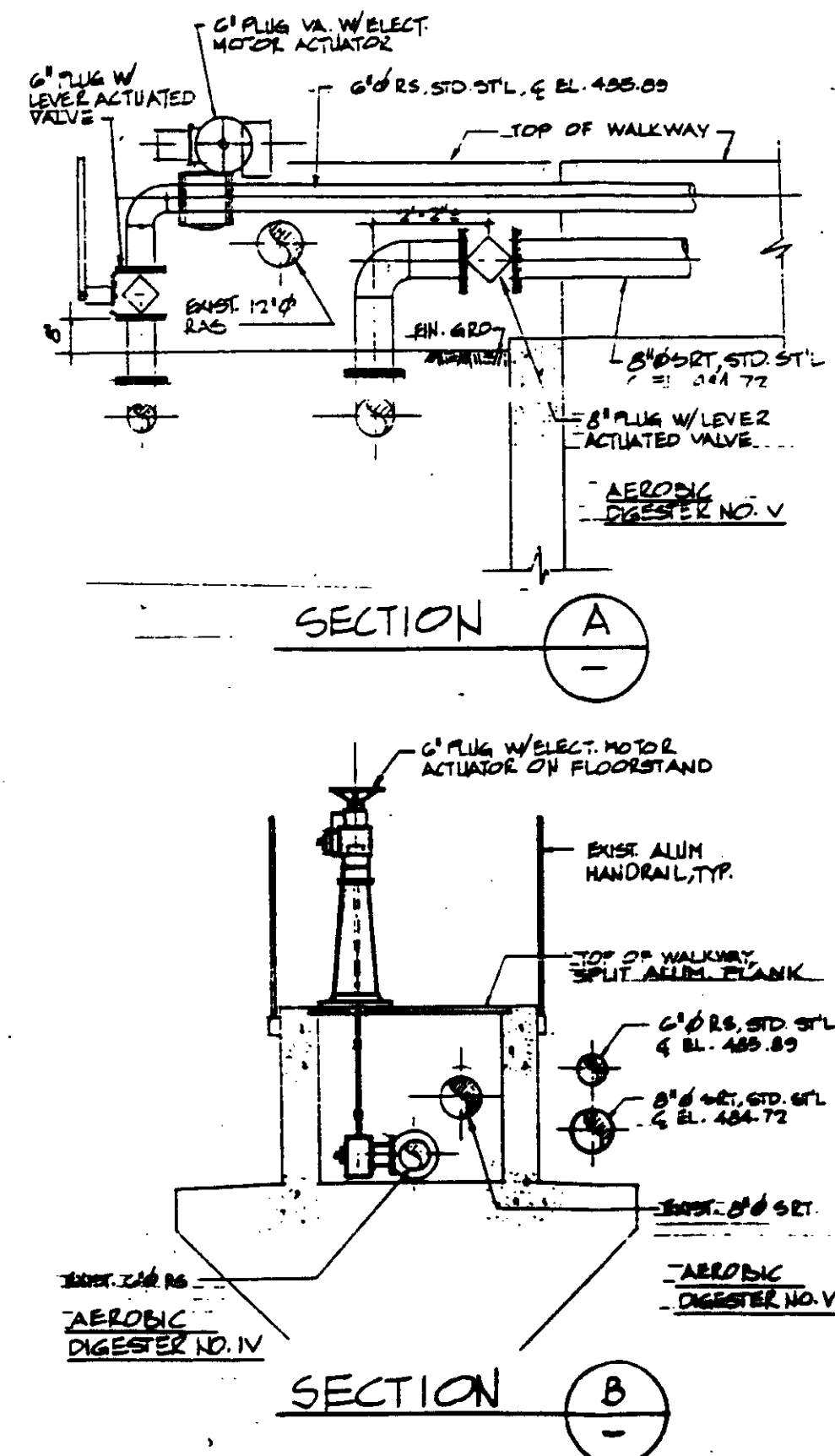
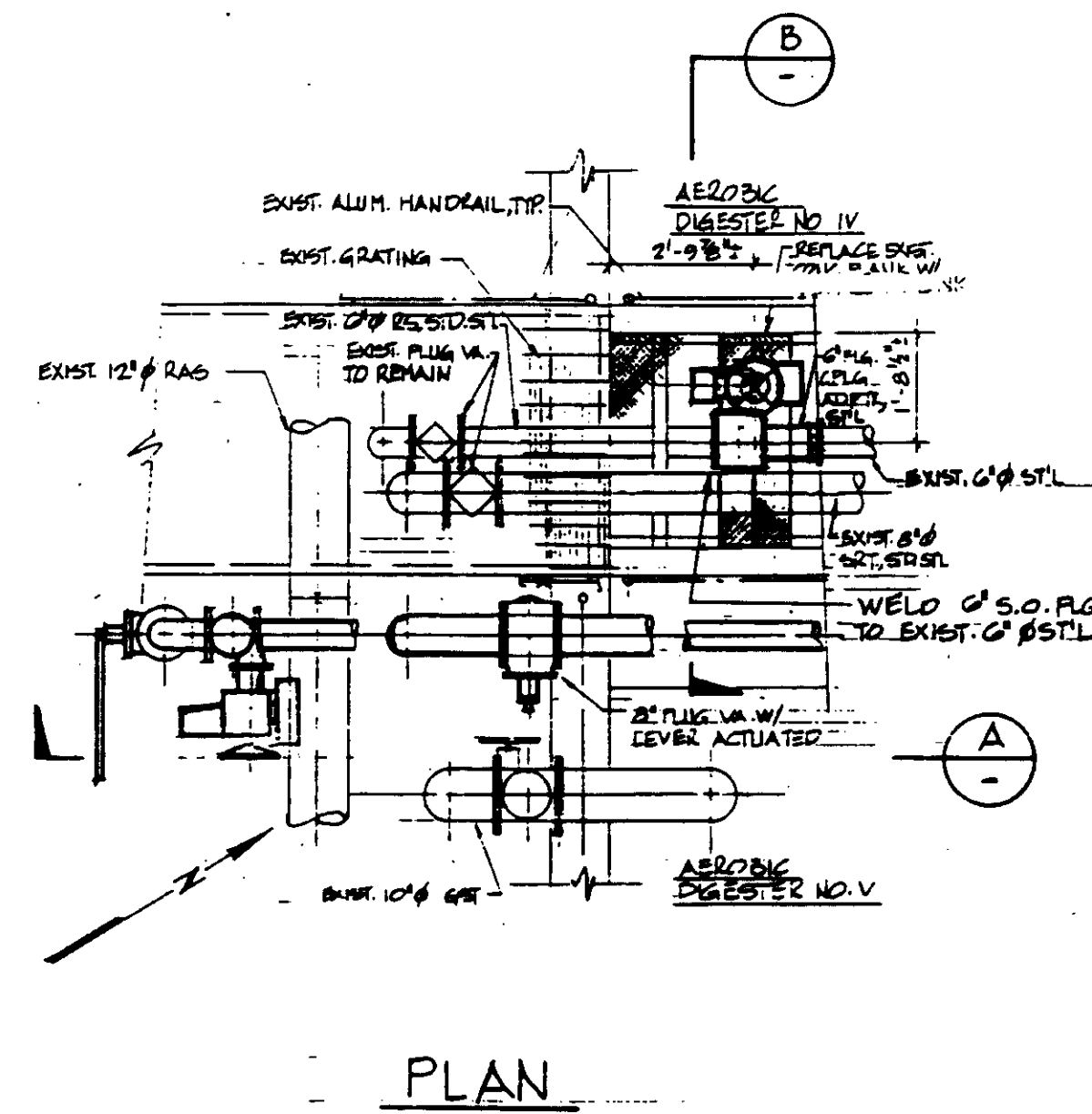
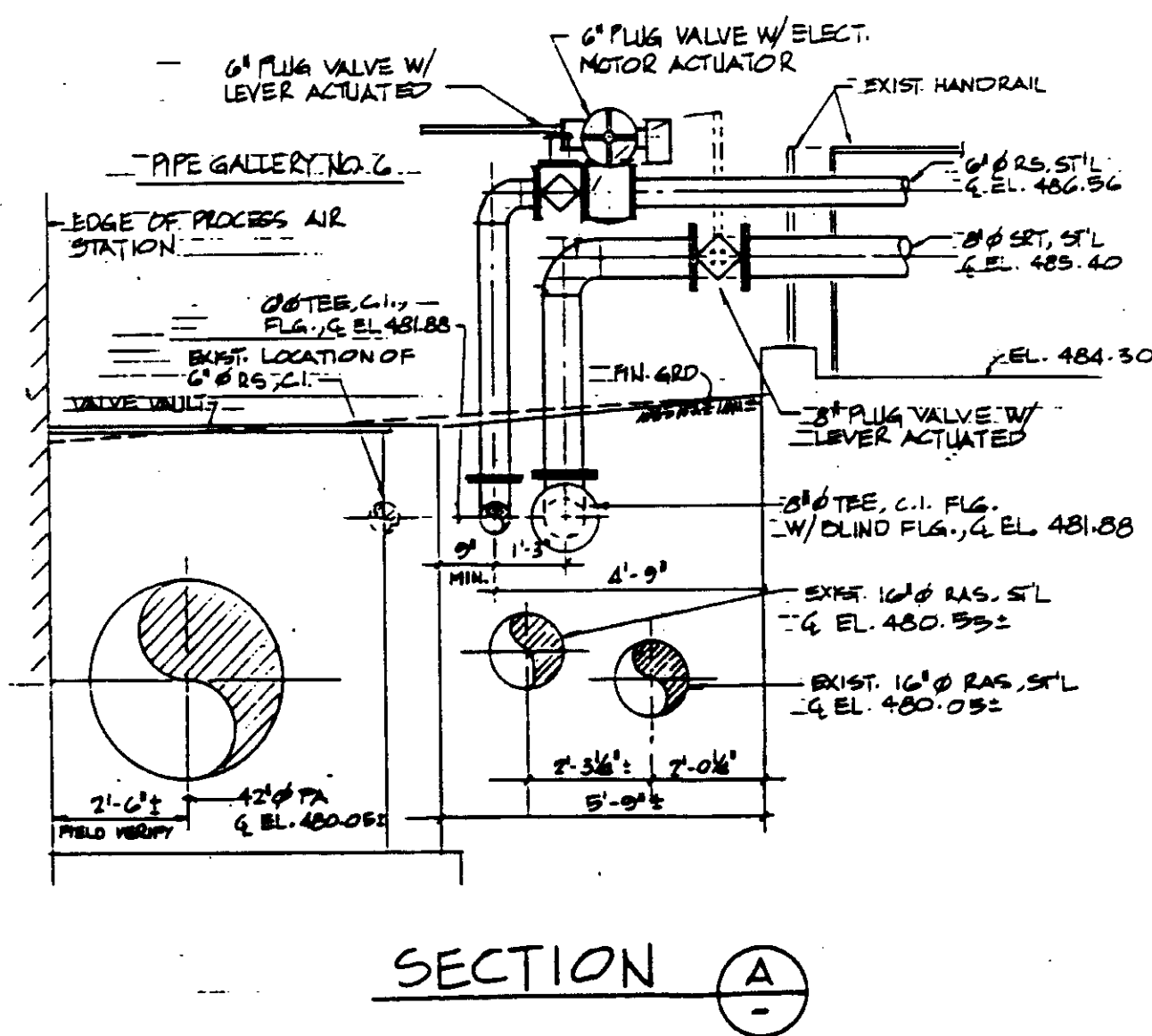
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 EMERGENCY SLUDGE STORAGE TRANSFER LINE, SECTIONS

SHEET  
M6-11

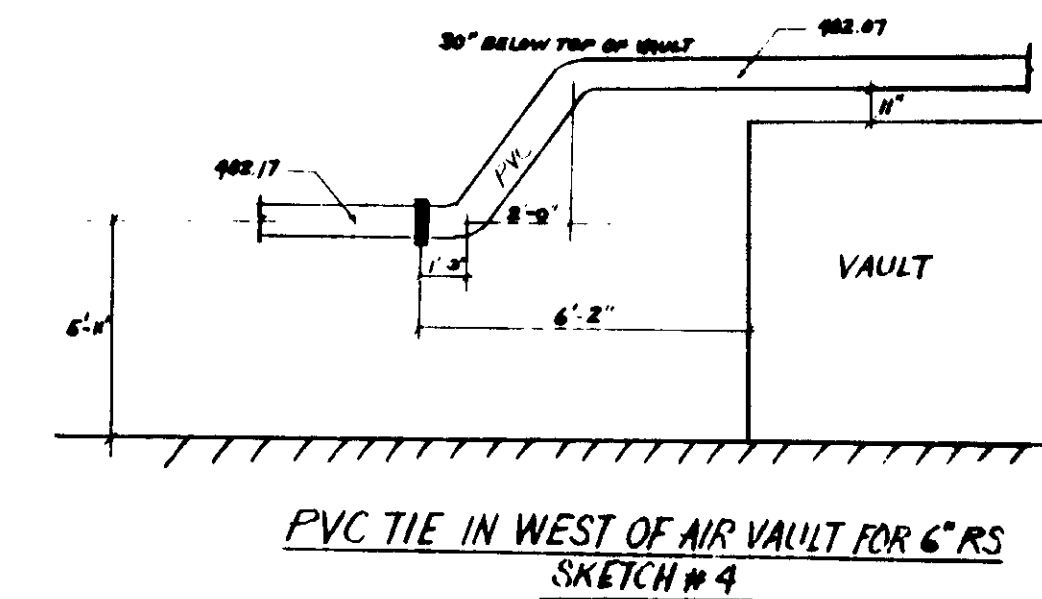
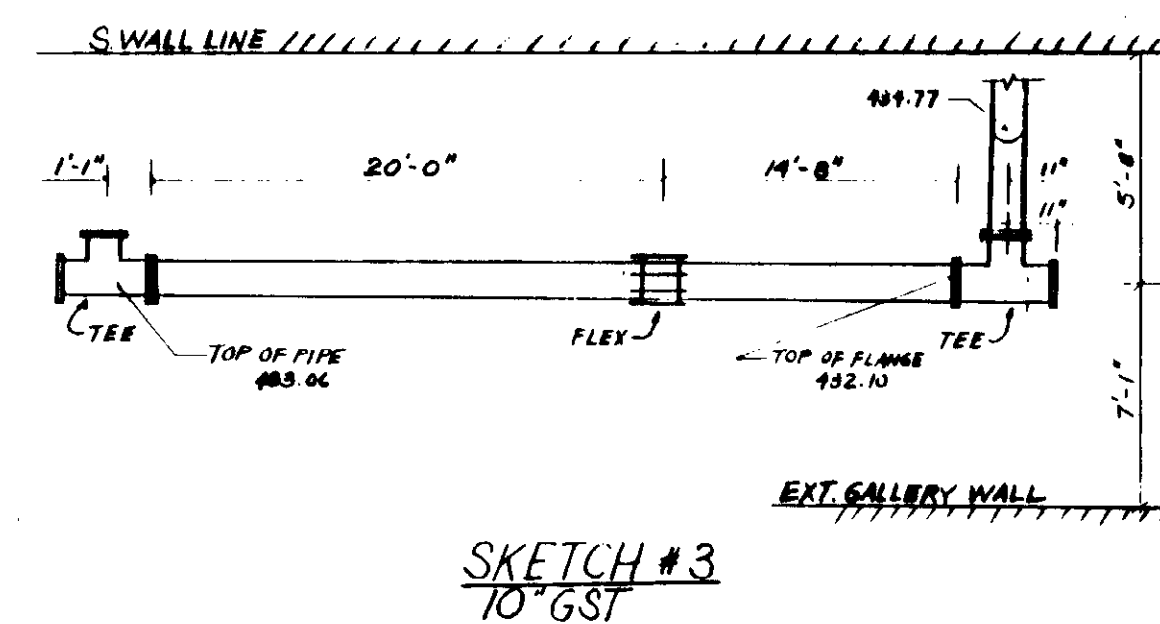
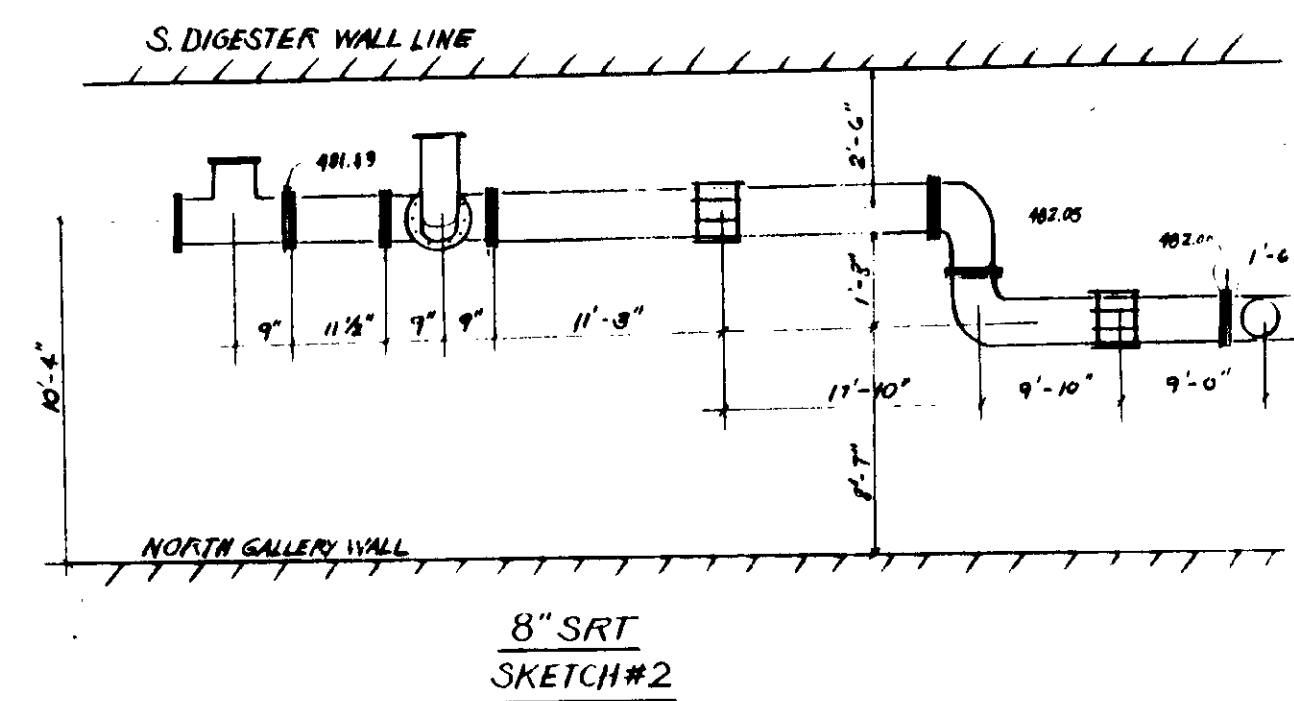
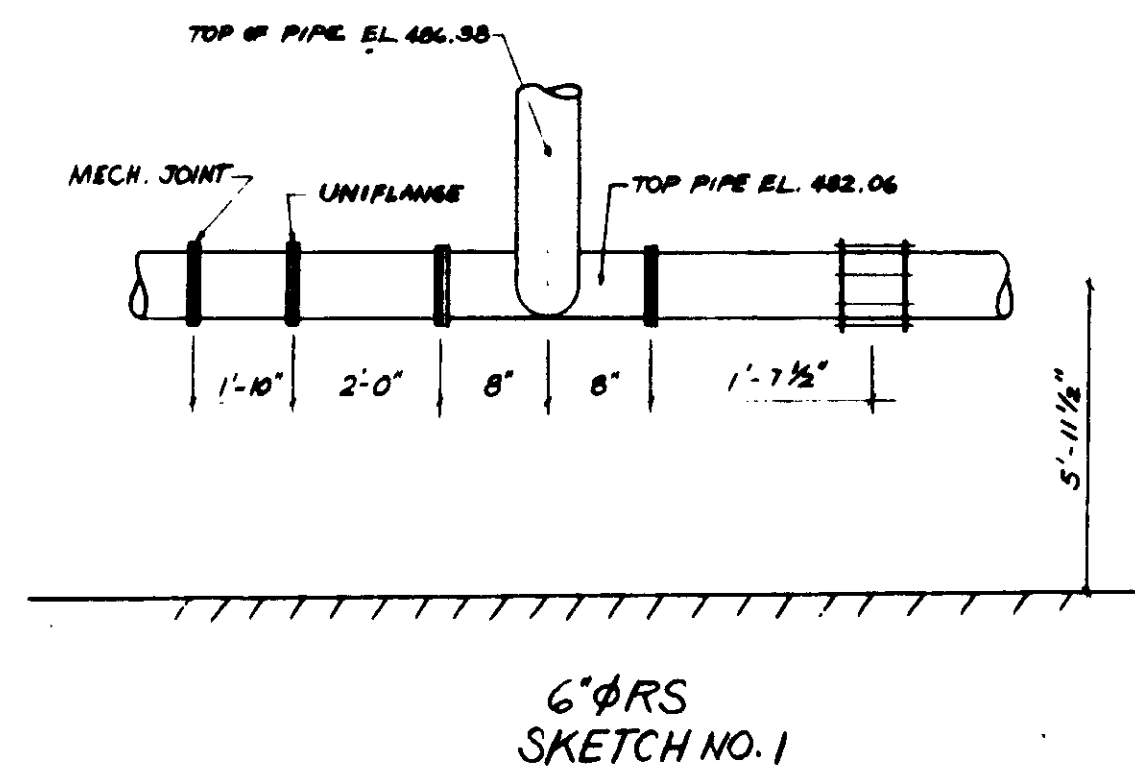


NOTE: CONSTRUCT CONC. THRUST BLOCK AFTER BACKFILLING STRUCTURE



RAW SLUDGE FEED PLUG VALVE & OPERATOR ORIENTATION FOR AEROBIC DIGESTER NO VI SKM 6-7

RAW SLUDGE FEED PLUG VALVE & OPERATOR ORIENTATION FOR AEROBIC DIGESTER NOS IV & V SKM 6-7



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

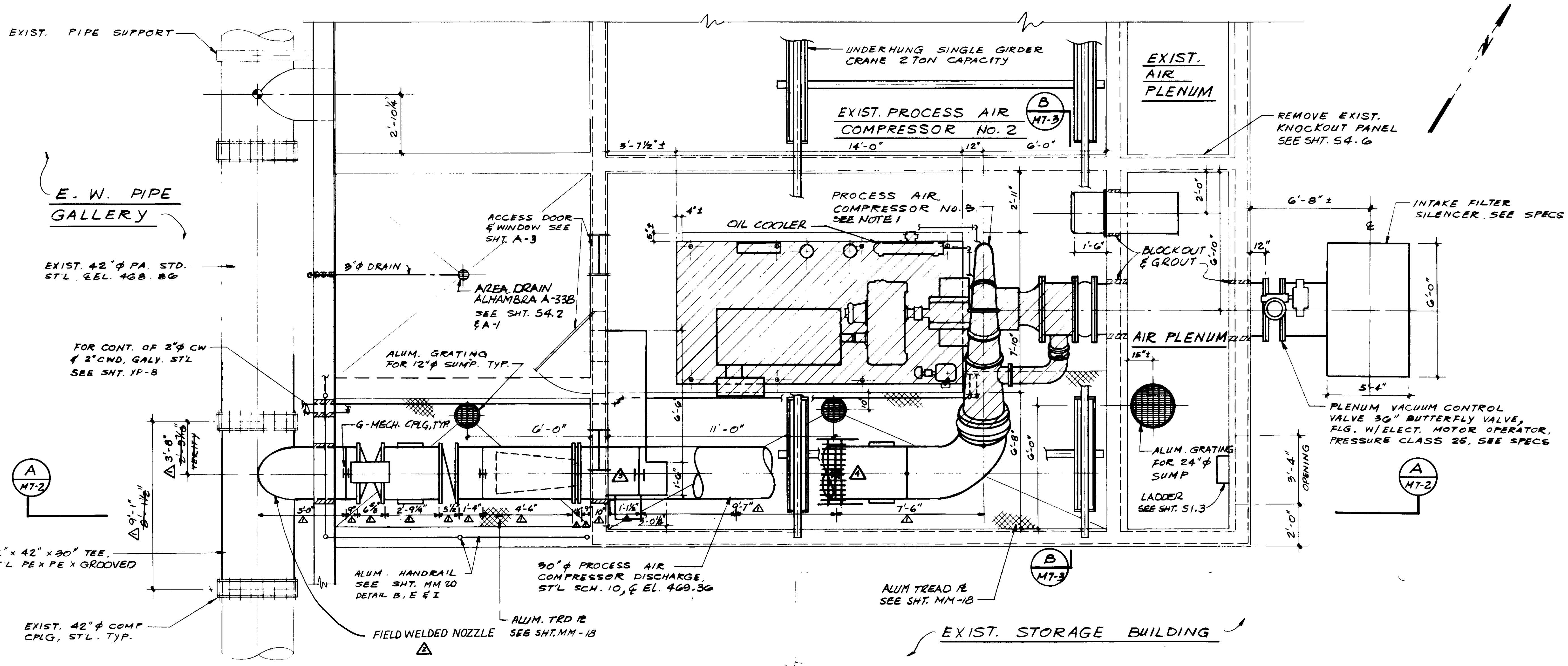
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DRAWN	CHECKED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
		ALEXANDER ENGINEERS	813 R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

04147





**PLAN**

- NOTES:
1. TO BE FURNISHED BY DISTRICT TO CONTRACTOR FOR INSTALLATION, SEE SPECS.
  2. CONTRACTOR TO VERIFY DIMENSIONS & ELEVATIONS.

**LEGEND**

EQUIPMENT FURNISHED BY OWNER

04148

RECORD DRAWINGS  
 For Plans Intended to be Client Property Only.  
*[Signature]*  
 KALEX CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION
1	8-26-87	A.B.	REV. PER K.P.C.
2	9-26-87	A.B.	REV. PER K.P.C.
3	9-26-87	A.B.	REV. PER K.P.C.
4	9-26-87	A.B.	REV. PER K.P.C.

SCALE:	3/8" = 1'-0"
DESIGNED	Y. KICS
DRAWN	AR/KOH
CHECKED	Y. K.
SUBMITTED	<i>[Signature]</i> 14038 8-7-87
KALEX CONSULTING ENGINEERS	R.C.E. NO. DATE
ALEXANDER ENGINEERS	513 R.C.E. NO. DATE

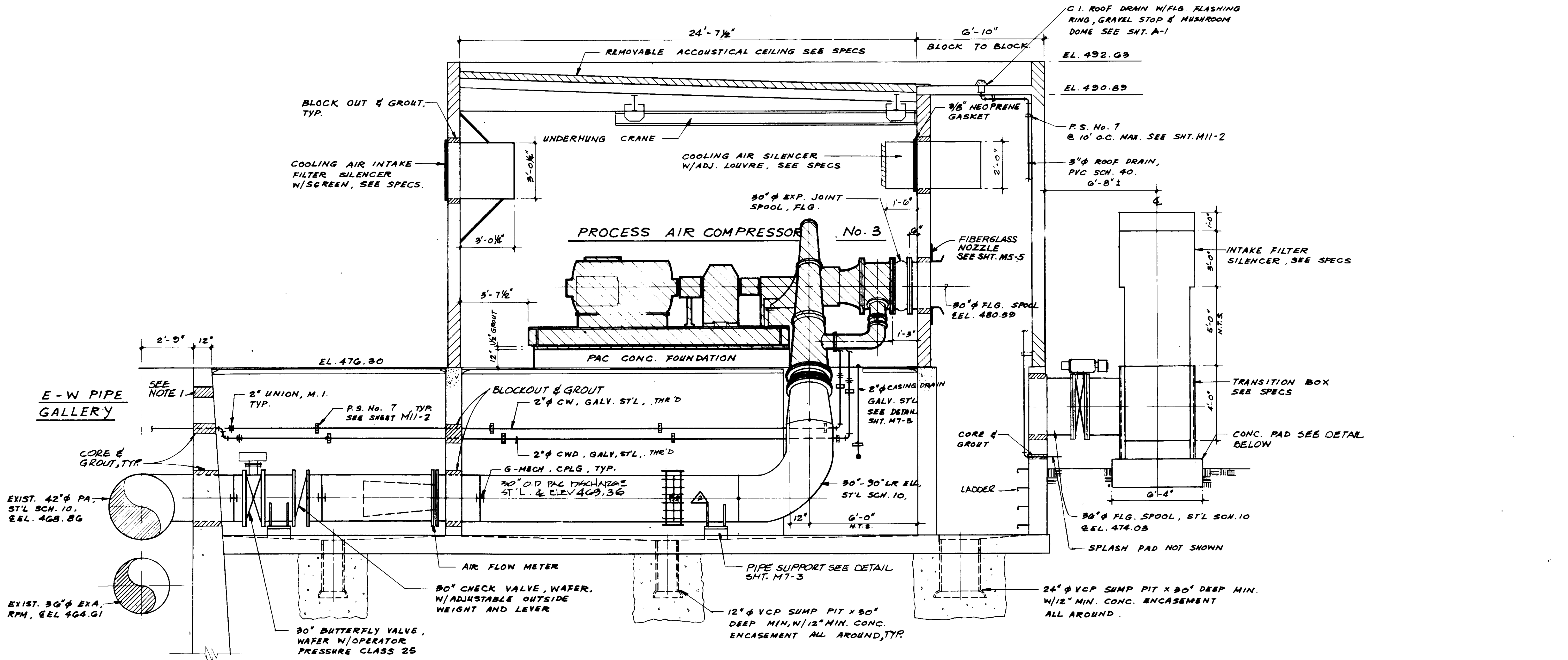
**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

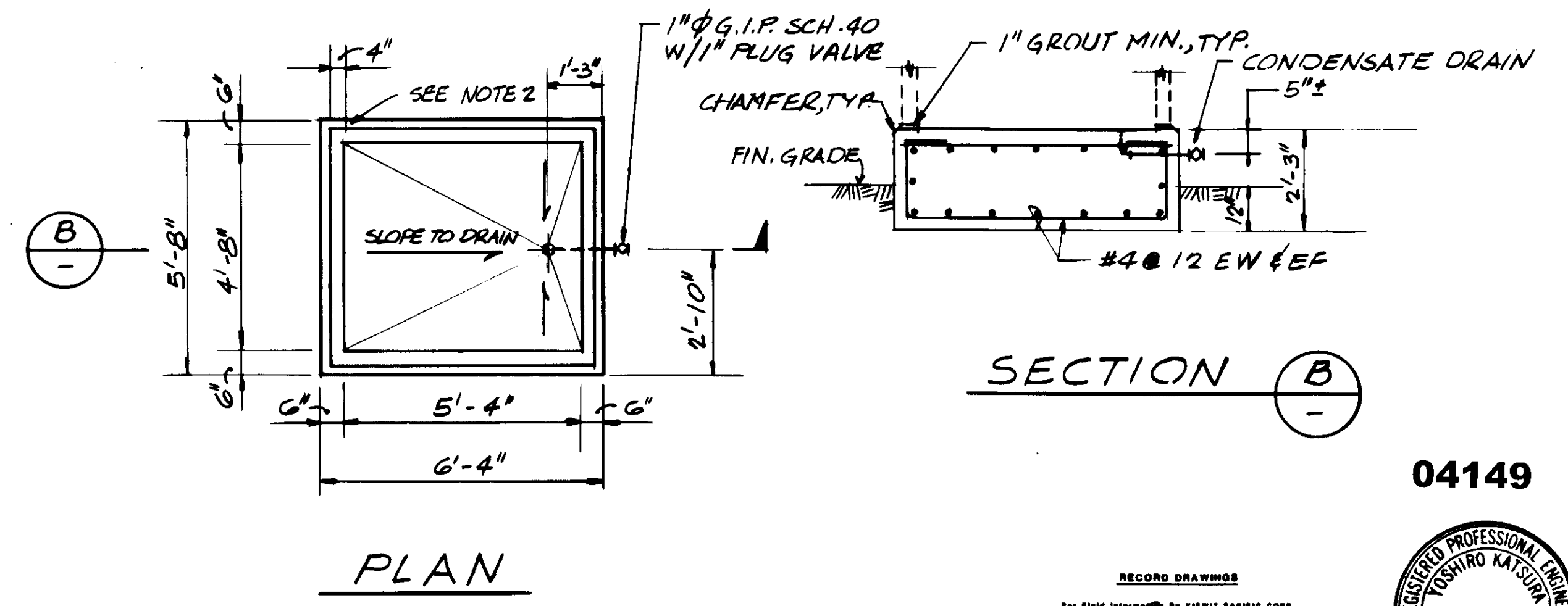
PROCESS AIR COMPRESSOR NO. 3A, PLAN

SHEET  
 MT-1



**SECTION A**

- NOTES:
- COORDINATE W/ELECTRICAL DWGS. FOR LOCATION & SIZE OF CORING REQUIRED FOR CONDUITS.
  - ANCHOR BOLTS NOT SHOWN, FOR SIZE & LOCATION VERIFY W/EQUIPMENT MFG.



**PLAN**

04149

RECORD DRAWINGS  
 PREPARED BY: KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS 2000 1999



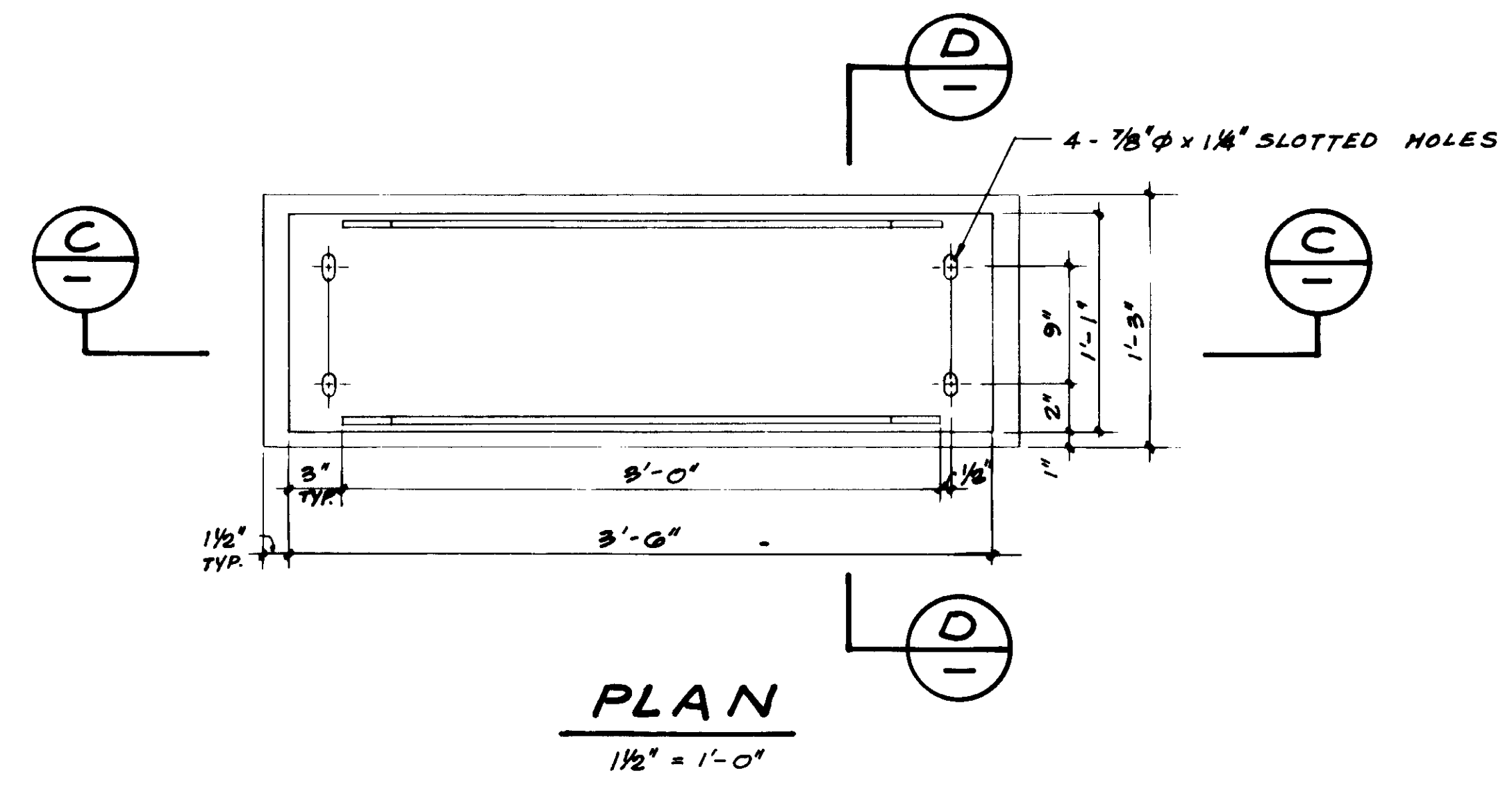
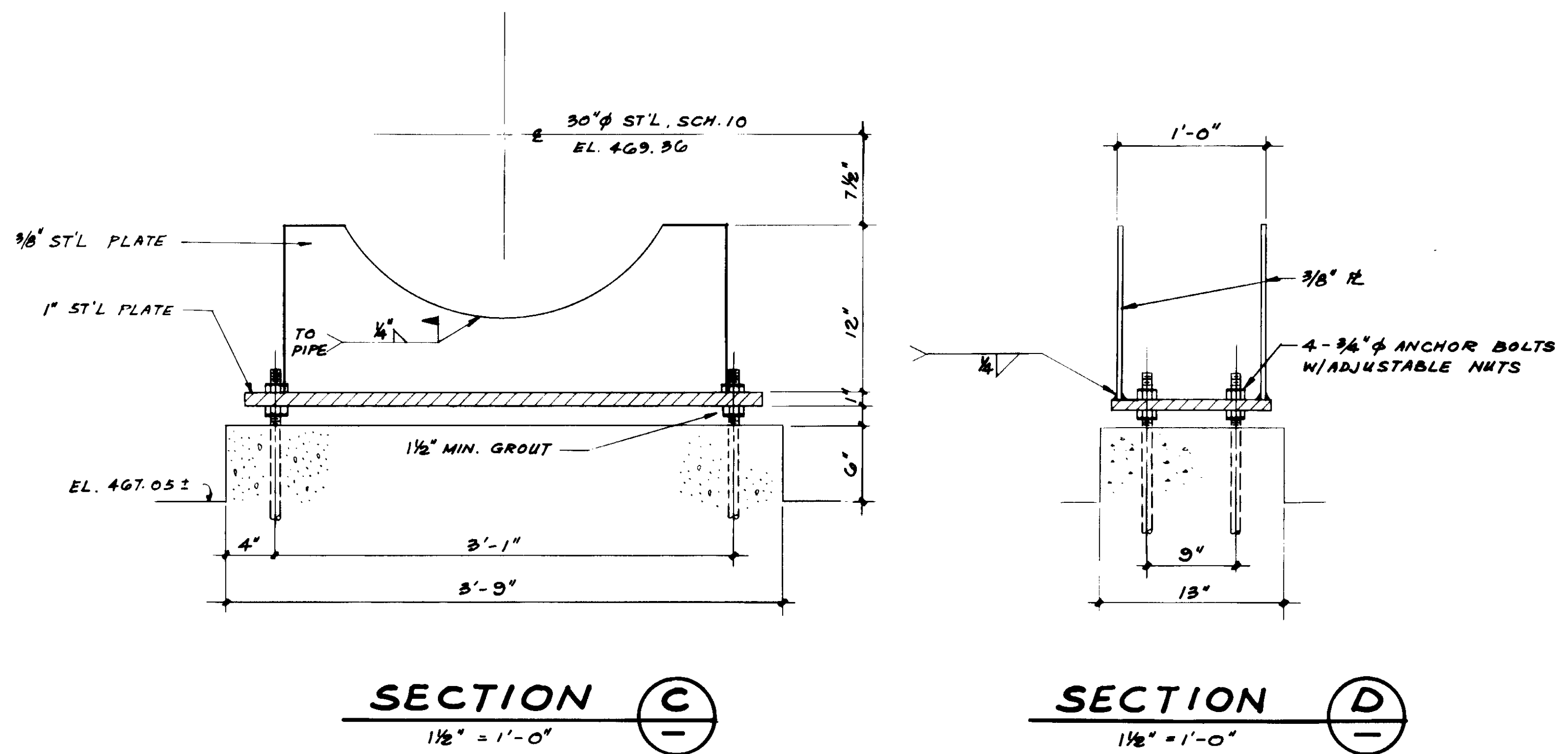
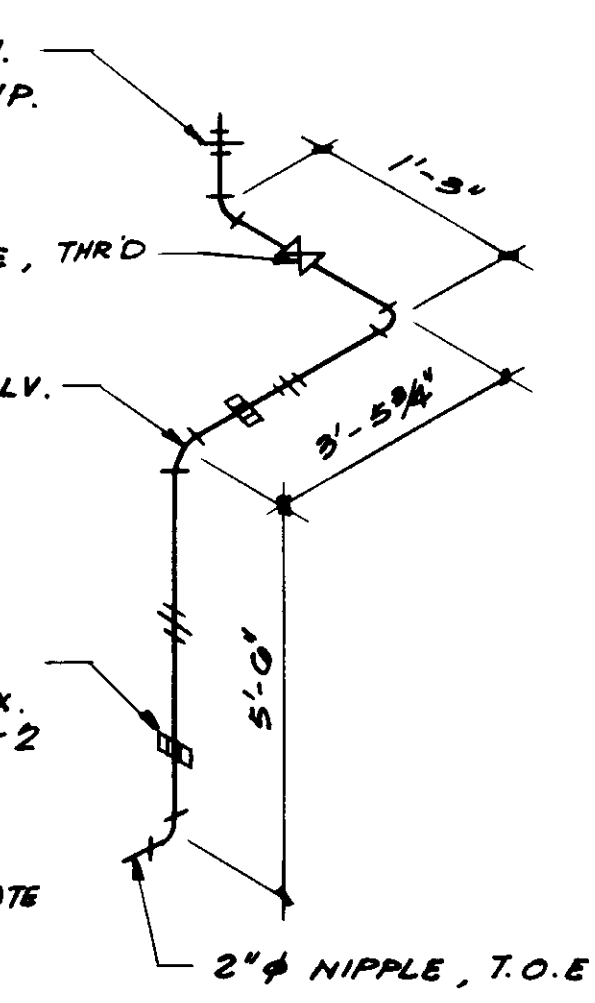
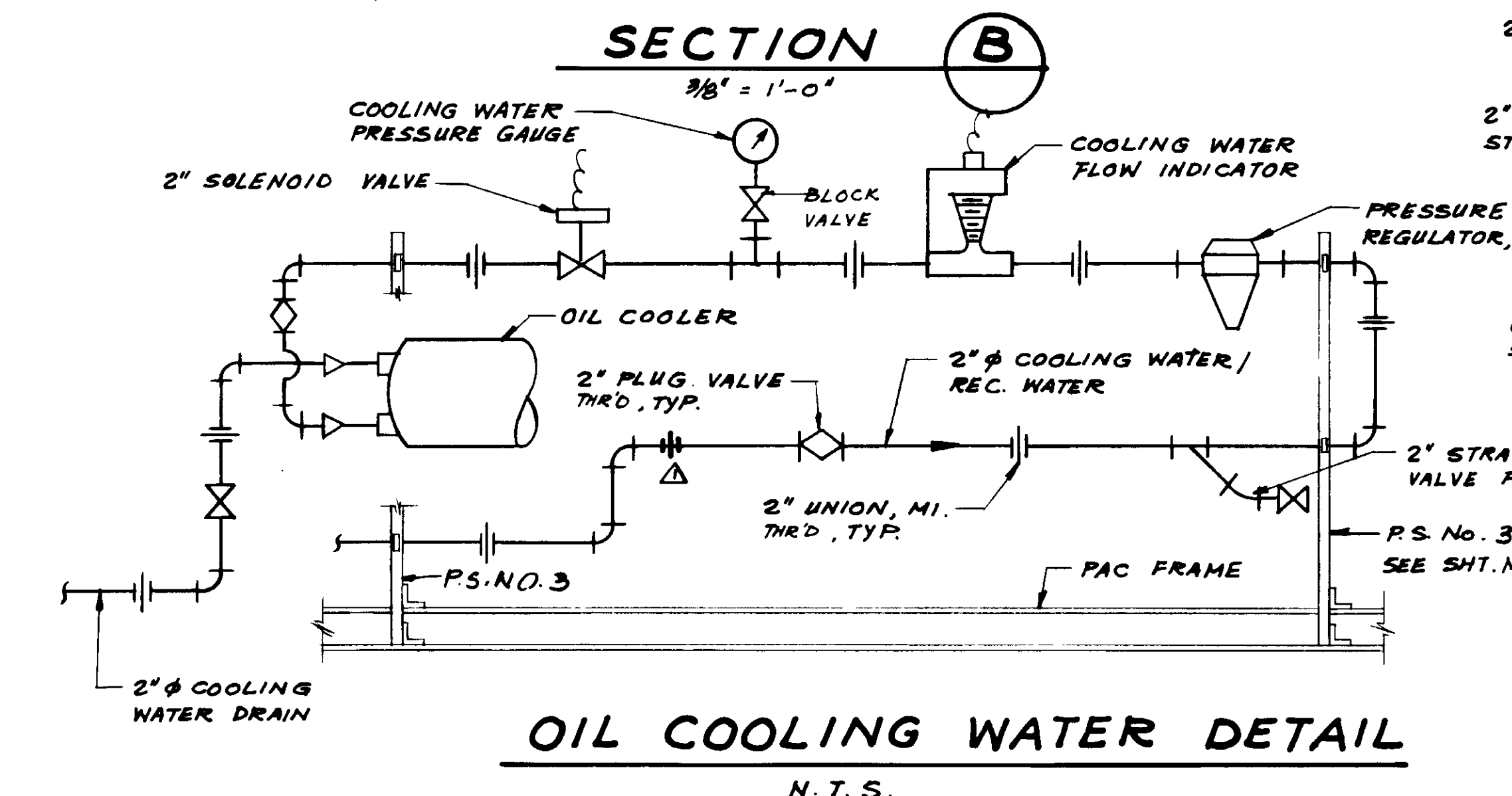
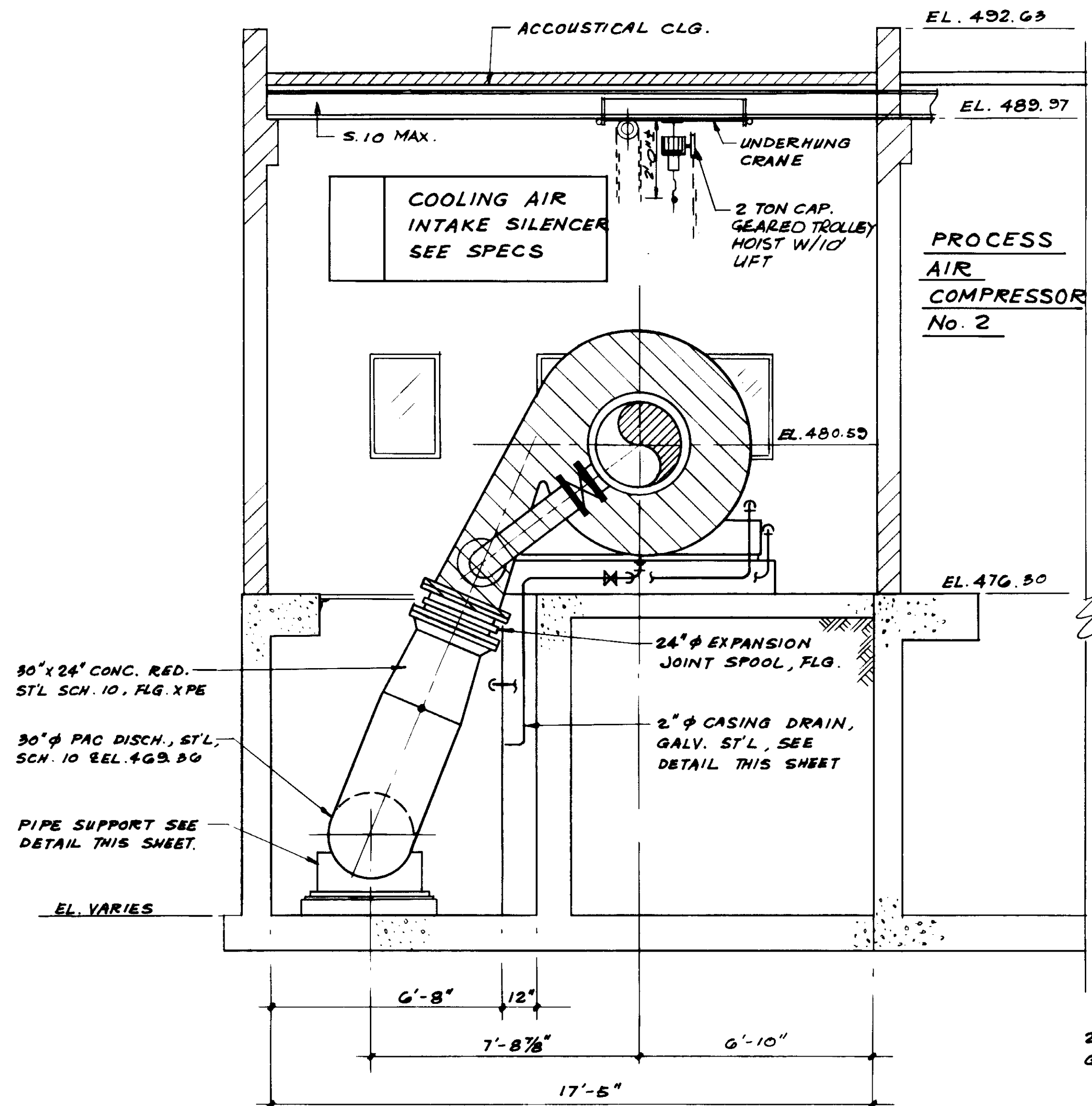
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2	7-28-87	A.B.	REV. PER K.P.C.

SCALE:	C.S./Y.K.	SUBMITTED:	14038	8-7-87
3/8"=1'-0"	DESIGNED: D.N./SK	DESIGNED:	KALEX CONSULTING ENGINEERS	R.C.E. NO. DATE
	DRAWN: Y.K.	CHECKED:	ALEXANDER ENGINEERS	613 R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS AIR COMPRESSOR NO. 3A, SECTION

SHEET  
M7-2



**OIL COOLING WATER DETAIL**  
N.T.S.

**CASING DRAIN DETAIL**  
N.T.S.

**PIPE SUPPORT DETAIL**  
1 1/2" = 1'-0"

REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	Y.K./CS
DRAWN:	AR/KOH
CHECKED:	Y.K.
SUBMITTED:	8-7-87
DATE:	8-7-87
R.C.E. NO.:	4038
DATE:	8-7-87
R.C.E. NO.:	613
DATE:	

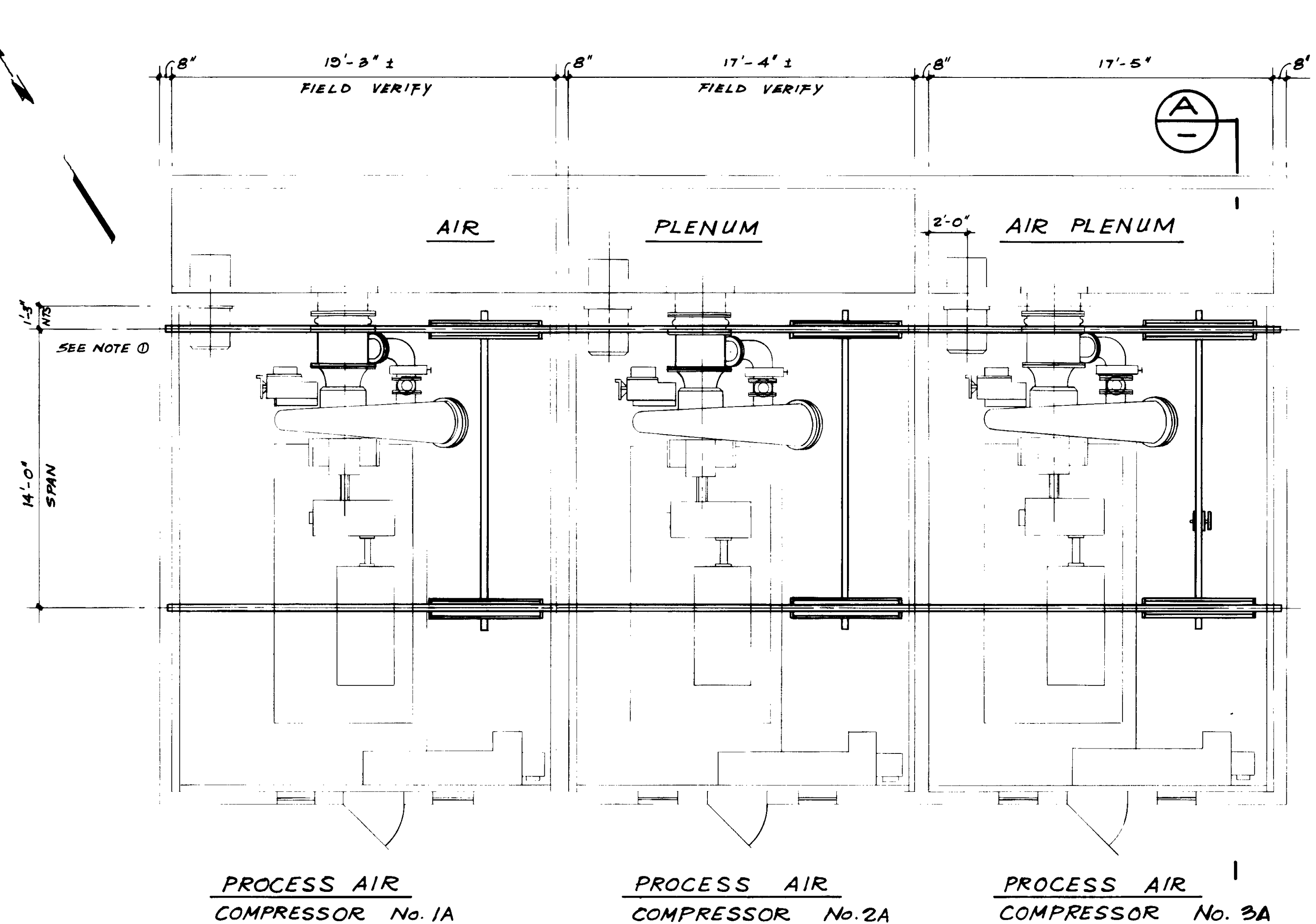
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
PROCESS AIR COMPRESSOR NO. 3A, SECTION & DETAIL

SHEET  
M7-3

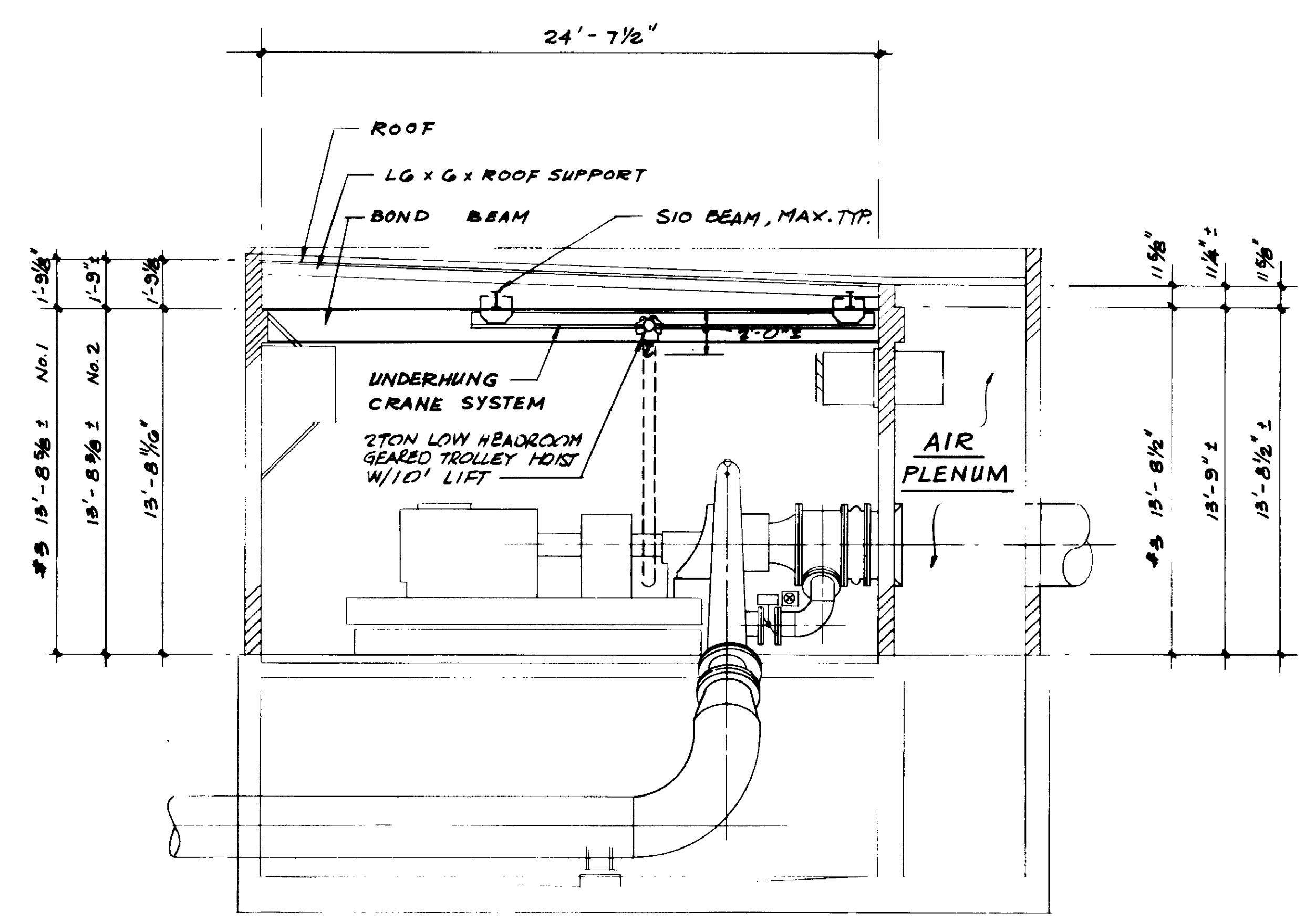
RECORD DRAWINGS  
FOR FILE IN PROJECT BY SHEET PAGING BOARD.  
*[Signature]*  
KATSUMURA CONSULTING ENGINEERS  
REGISTERED PROFESSIONAL ENGINEER  
No. 14038  
Exp. 3-31-89  
CIVIL  
STATE OF CALIFORNIA

04150



**PLAN**

- NOTES: 1. REMOVE EXISTING INLET NOZZLE FOR PROCESS AIR COMPRESSOR Nos. 1A AND 2A. FURNISH AND INSTALL REPLACEMENT NOZZLE PER SPECS.  
 2. SEE STRUCTURAL DWGS SH. 54.10 FOR CRANE RAIL SUPPORTS & CONNECTIONS.



TYPICAL FOR PROCESS AIR COMPRESSOR Nos. 1A, 2A & 3A.

**SECTION A**

04151

RECORD DRAWING  
 PREPARED AND DRAWN BY: [Signature]  
 KATSURA CONSULTING ENGINEERS, JUNE 1988



REV	DATE	BY	DESCRIPTION

SCALE: 1/4" = 1'-0"  
 DESIGNED: AR/KDH  
 DRAWN: y.k.  
 CHECKED: [Signature]

SUBMITTED: [Signature] 8-7-87  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 ALEXANDER ENGINEERS 613 R.C.E. NO. DATE

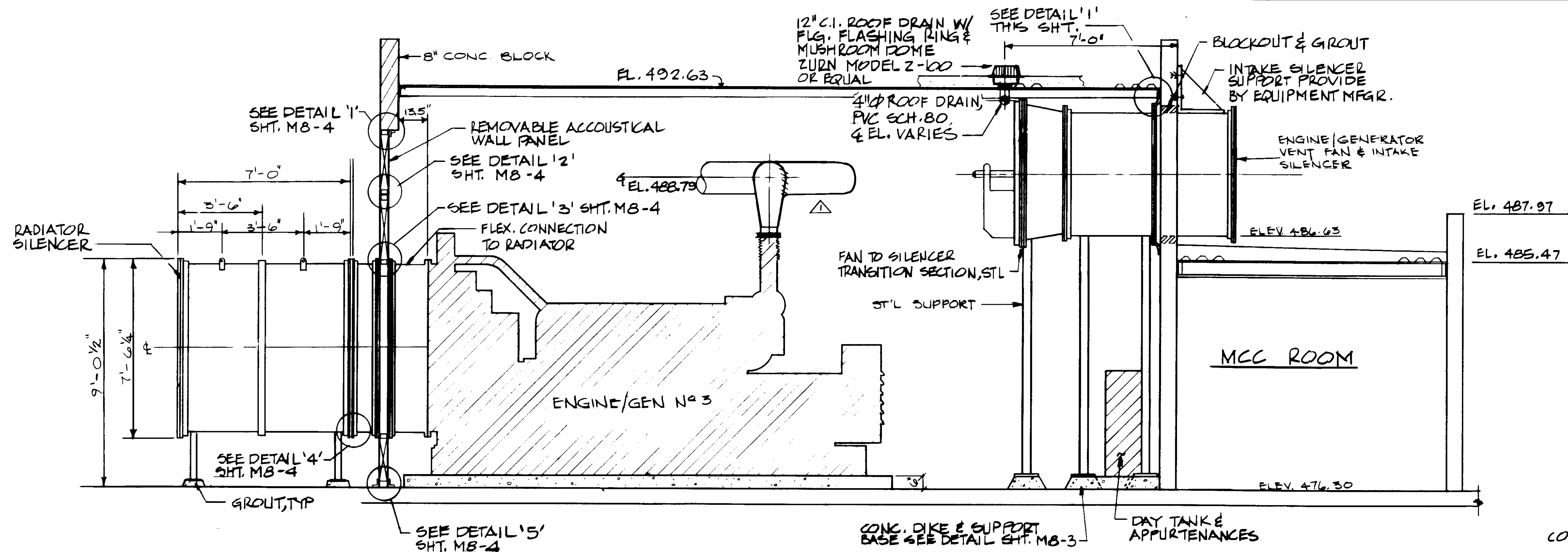
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS AIR COMPRESSOR NO. 1A, 2A & 3A, CRANE RAIL & HOIST

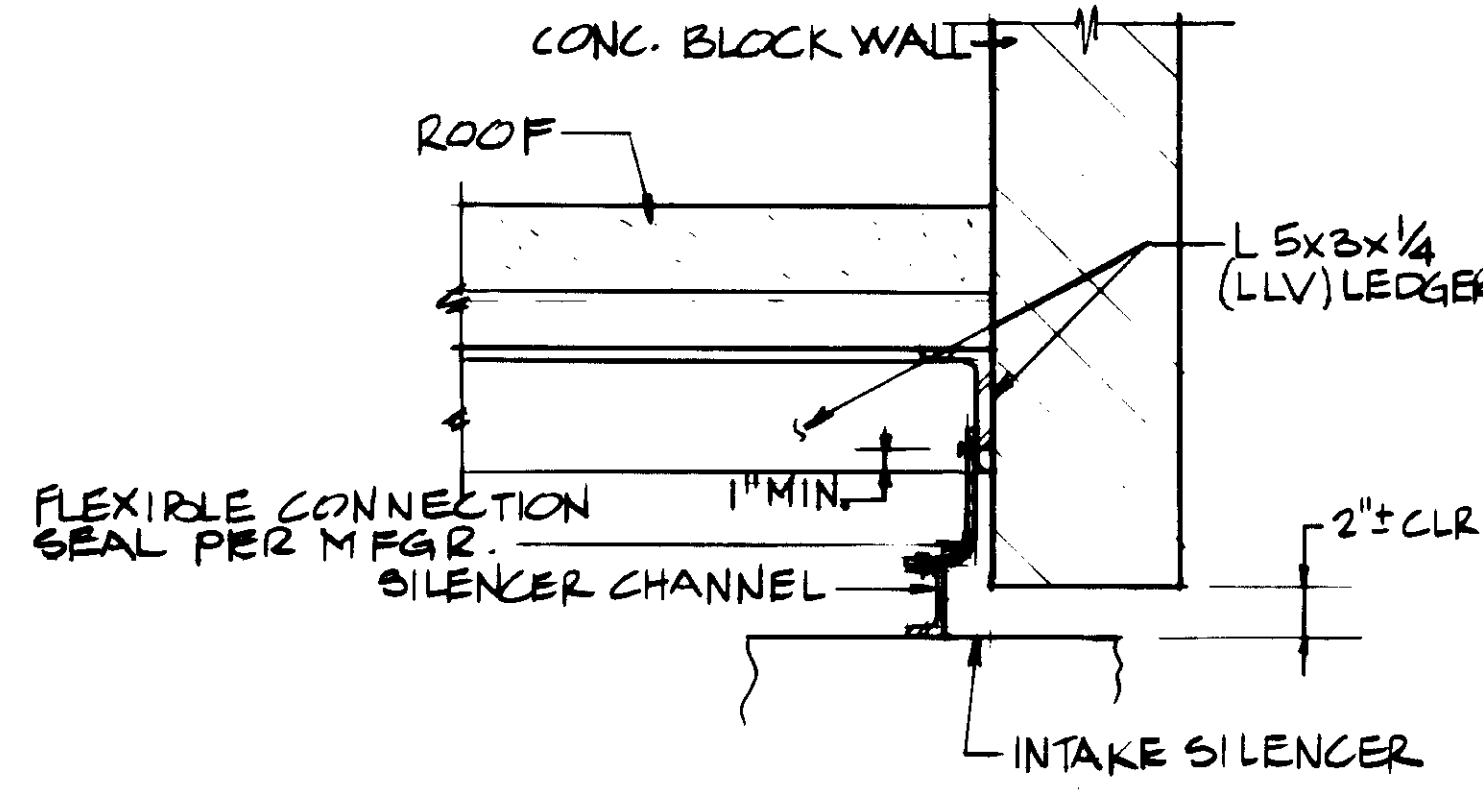
SHEET M7-4



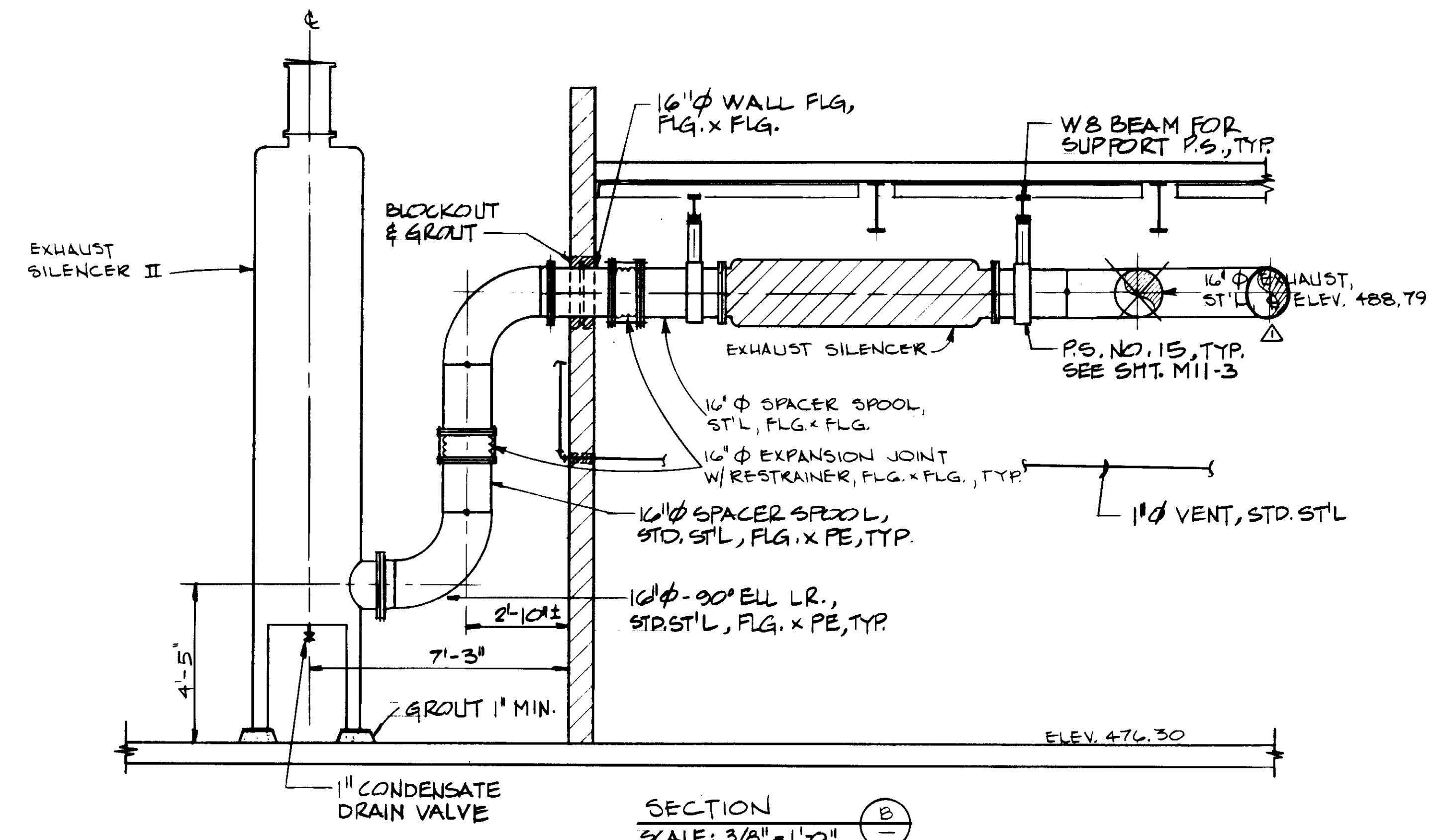




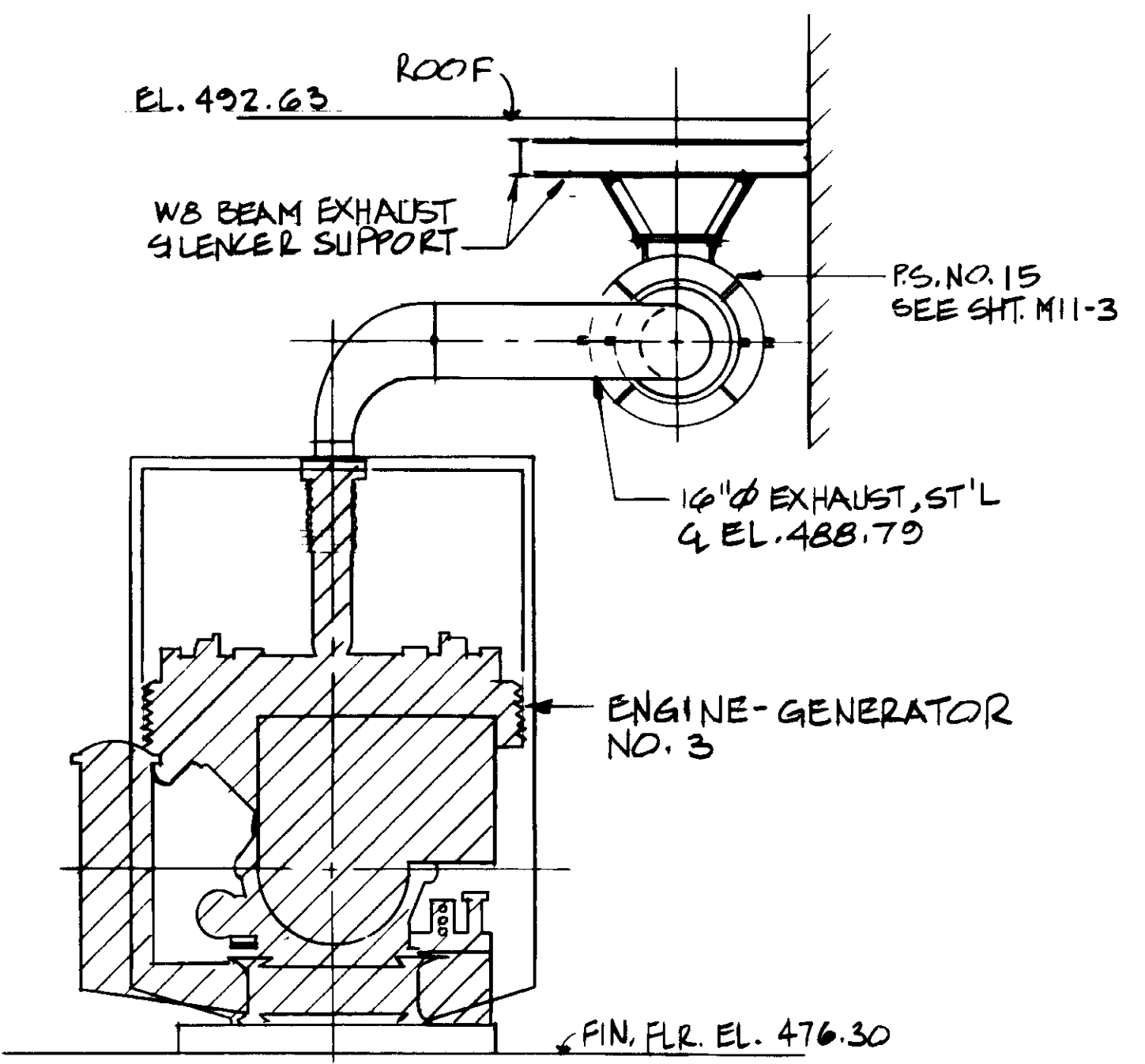
SECTION A  
SCALE: 3/8" = 1'-0"



DETAIL 1  
NOT TO SCALE



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



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

04153

RECORD DRAWINGS  
No. 14038  
Exp. 3-31-89  
KATSURA CONSULTING ENGINEERS JUNE 1984



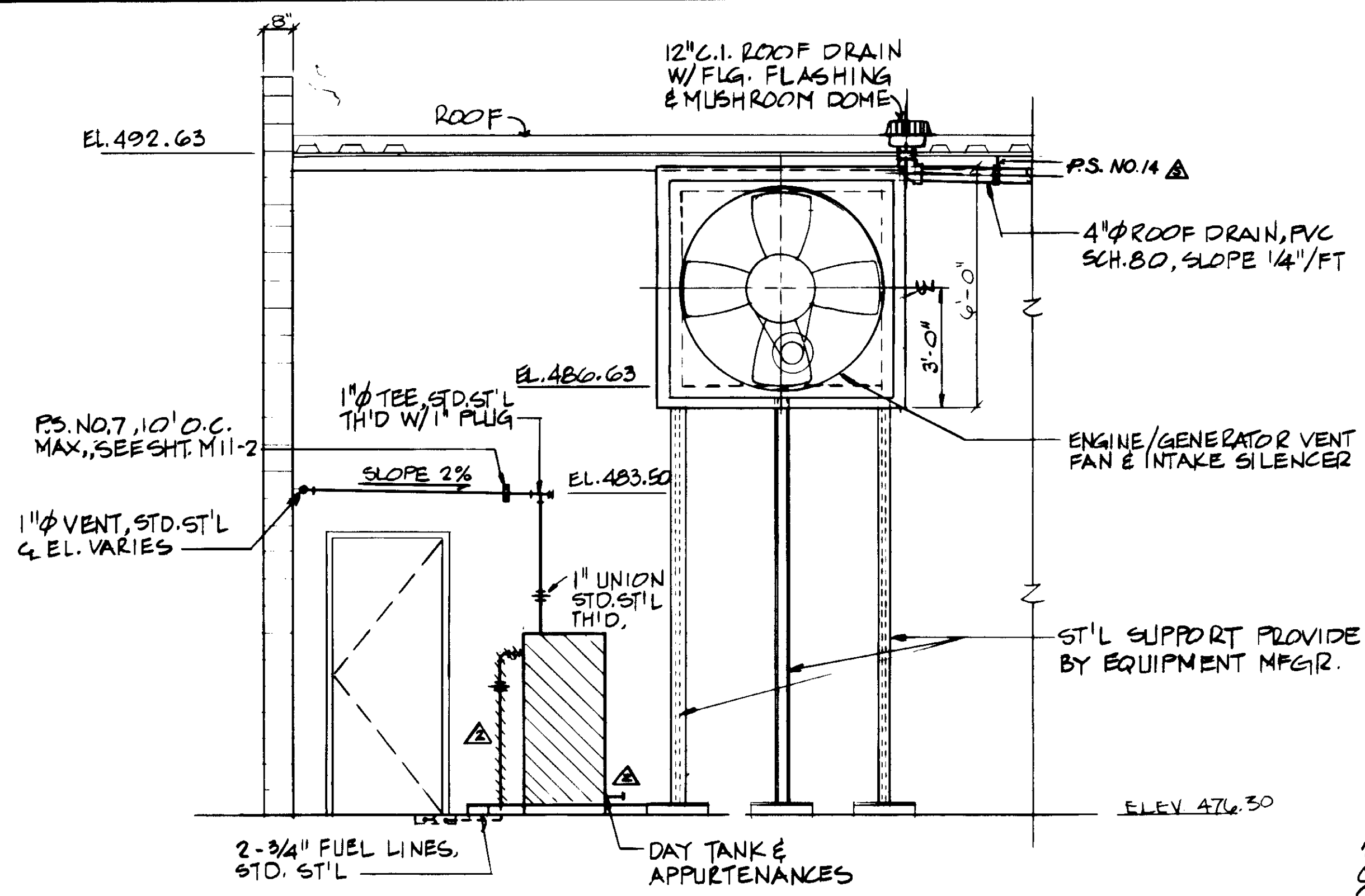
REV	DATE	BY	DESCRIPTION

SCALE: AS NOTED	DESIGNED: CS/YK	SUBMITTED: <i>[Signature]</i>	DATE: 8-7-87
DRAWN: YK	CHECKED: YK	14038	R.C.E. NO.
		513	DATE
		ALEXANDER ENGINEERS	R.C.S.E. NO.

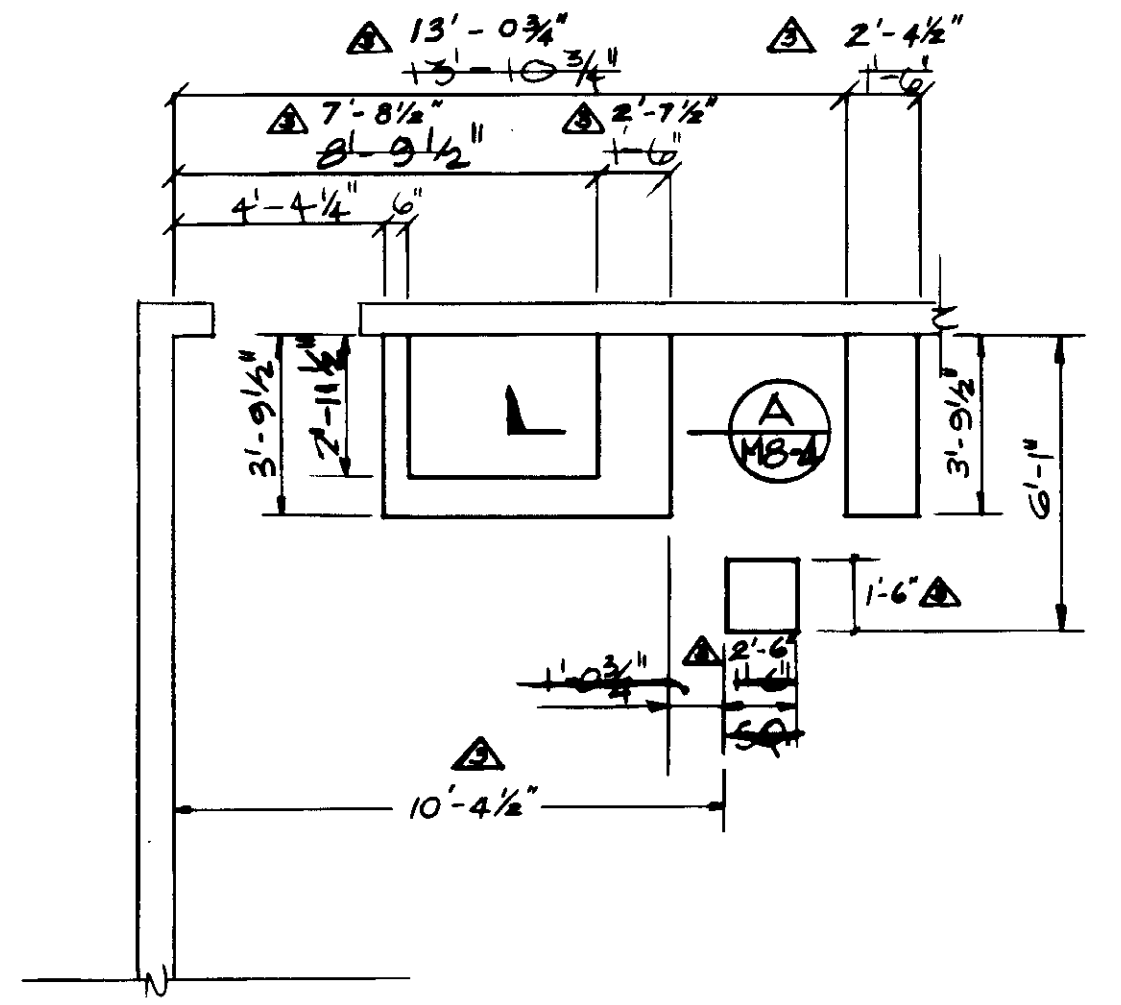
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ENGINE-GENERATOR NO. 3, SECTIONS - I

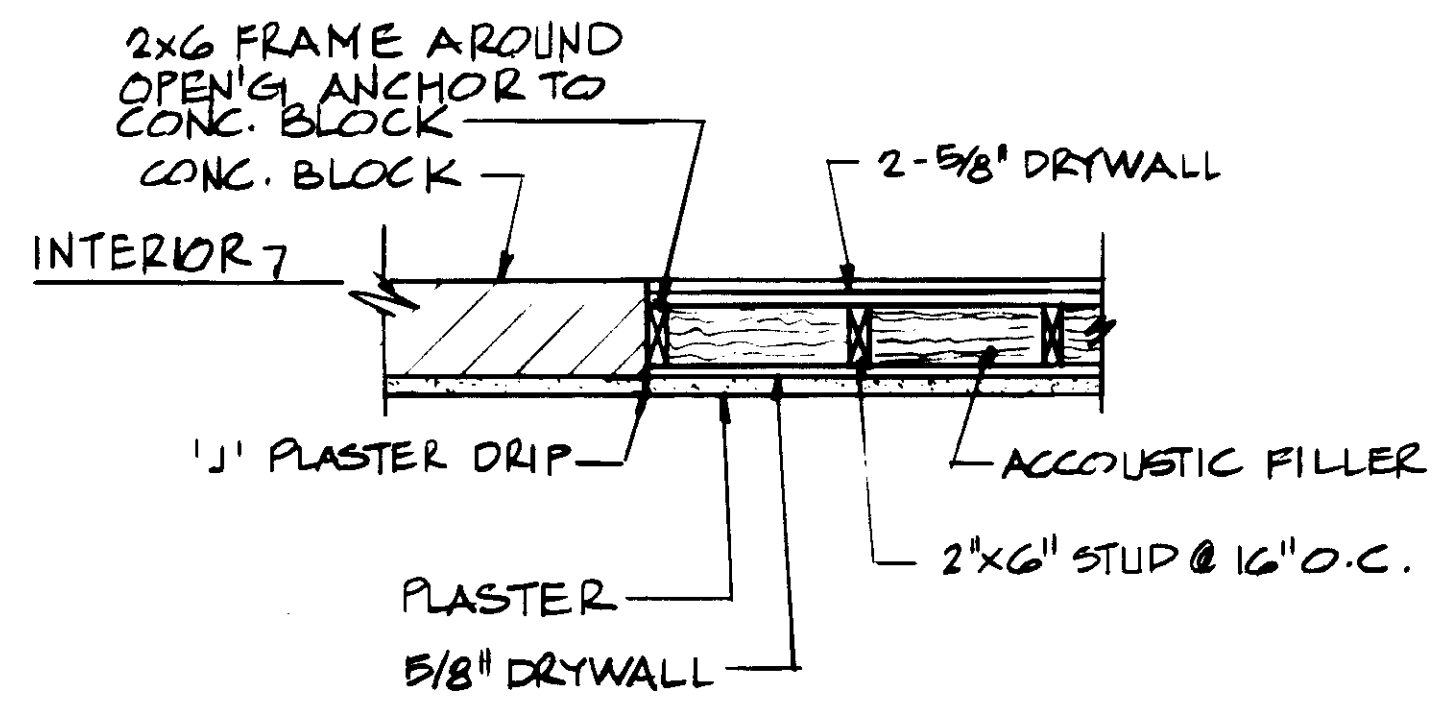
SHEET M8-2



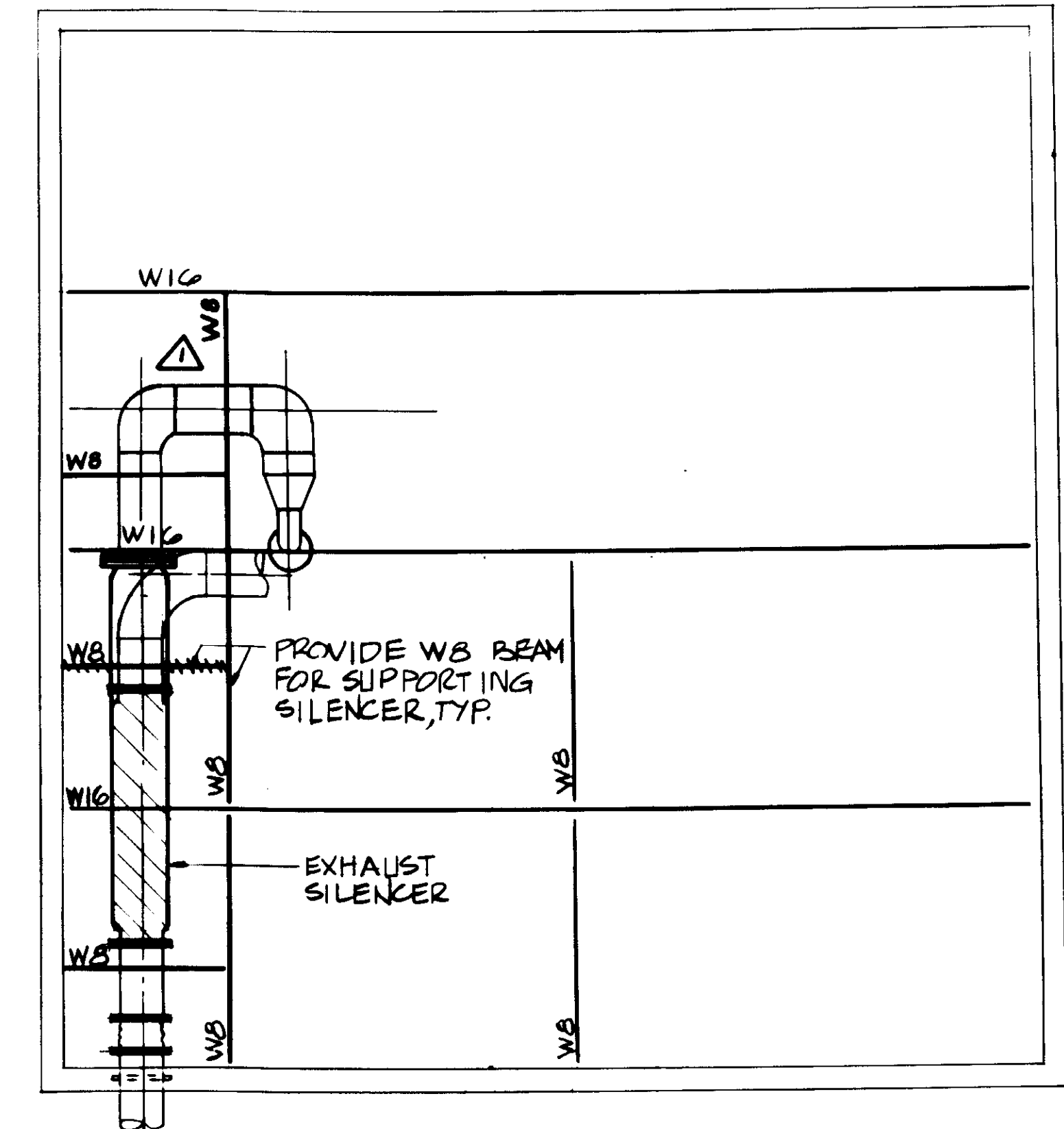
**SECTION D**  
SCALE: 3/8" = 1'-0"



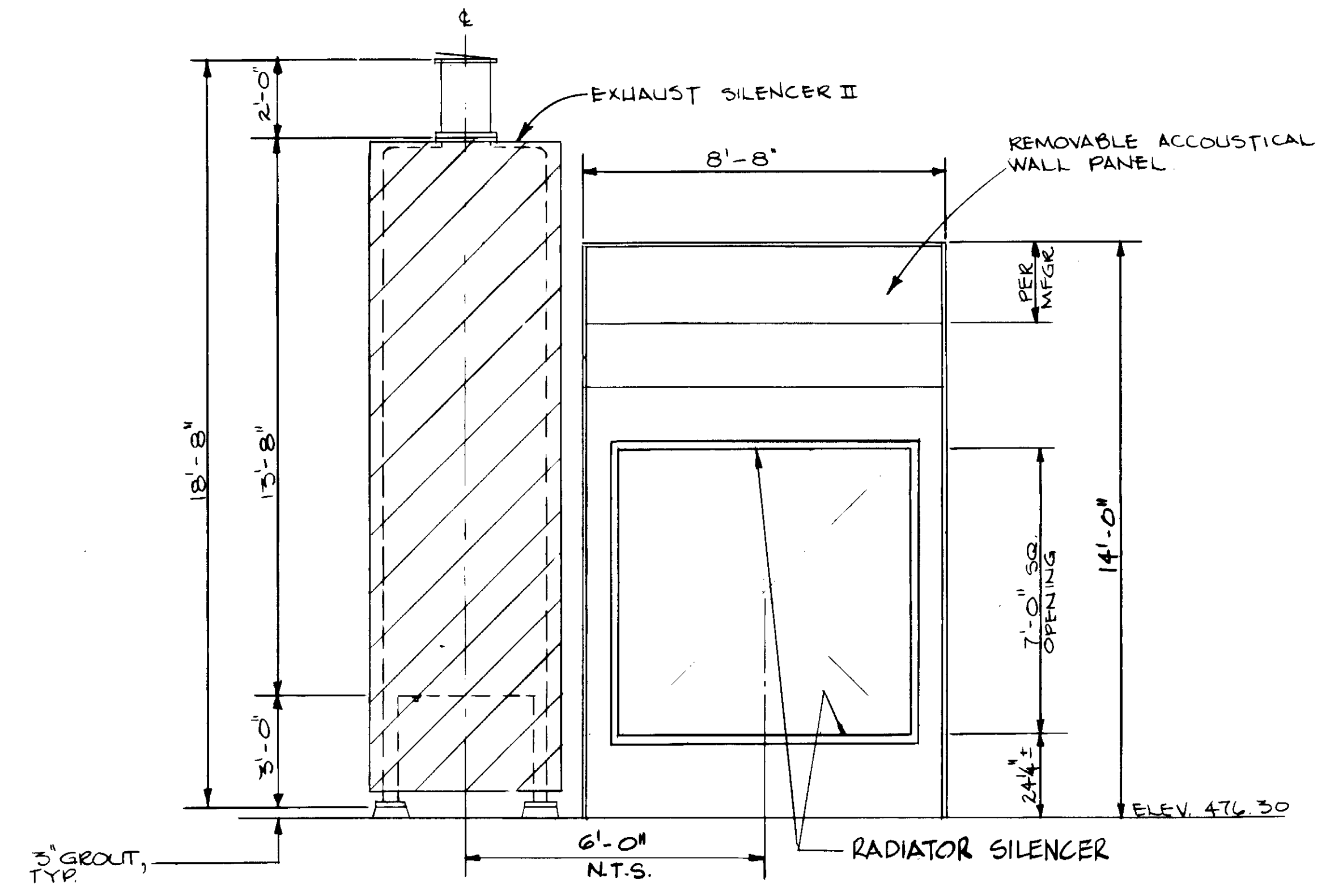
**CONCRETE PAD SUPPORT DETAIL**  
SCALE: 1/4" = 1'-0"



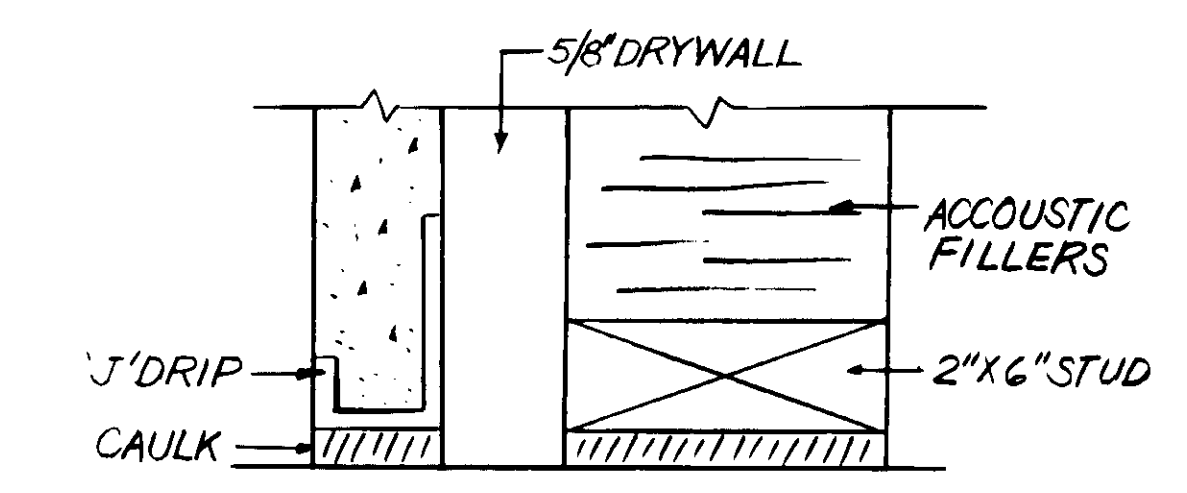
**BLOCKOUT DETAIL**  
SCALE: 3/4" = 1'-0"



**SILENCER SUPPORT FRAMING**  
SCALE: 1/4" = 1'-0"



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



INSTALL 1/2" DRIP PER M8-3 ALONG BOTTOM & CAULK BETWEEN DRIP AND CONC. SLAB  
SKETCH SKM8-3

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	4-25-87	A.B.	REV. PER K.P.C.	1	4-25-87	A.B.	REV. PER K.P.C.
2	4-25-87	A.B.	REV. PER K.P.C.	2	4-25-87	A.B.	REV. PER K.P.C.
3	4-25-87	A.B.	REV. PER K.P.C.	3	4-25-87	A.B.	REV. PER K.P.C.
4	4-25-87	A.B.	REV. PER K.P.C.	4	4-25-87	A.B.	REV. PER K.P.C.

SCALE:	AS NOTED	DESIGNED:	C.S./Y.K.	SUBMITTED:	8-7-87
		DRAWN:	J. BURR	DATE:	8-7-87
		CHECKED:	Y.K.	R.C.E. NO.:	14038
				DATE:	8-7-87

**KALEX ENGINEERS**  
Katzura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

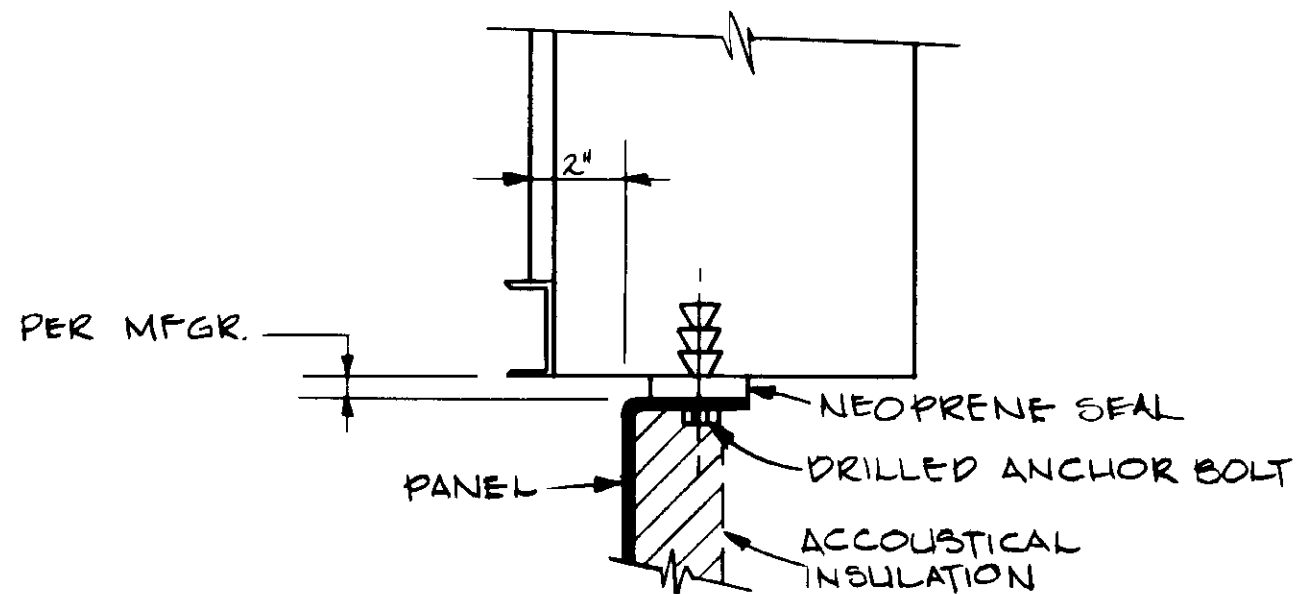
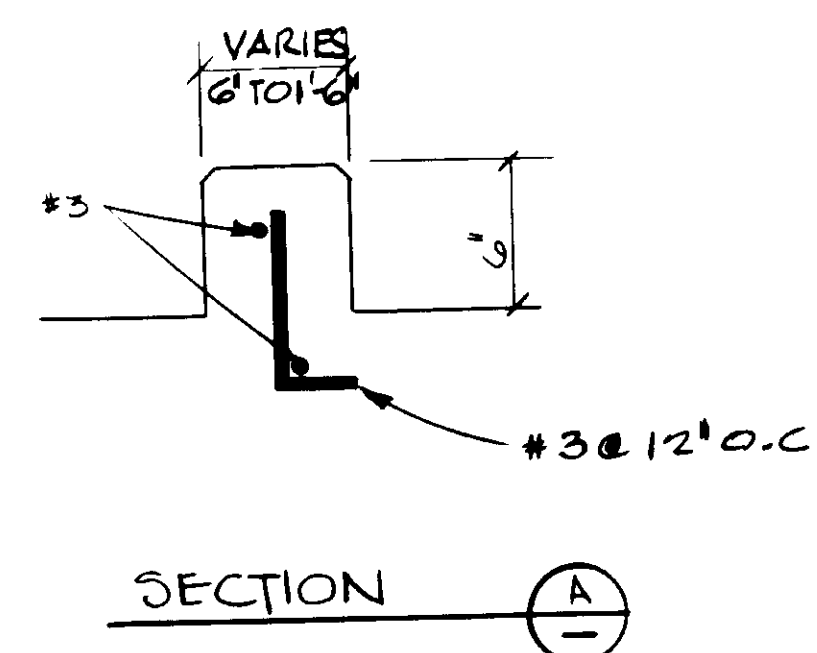
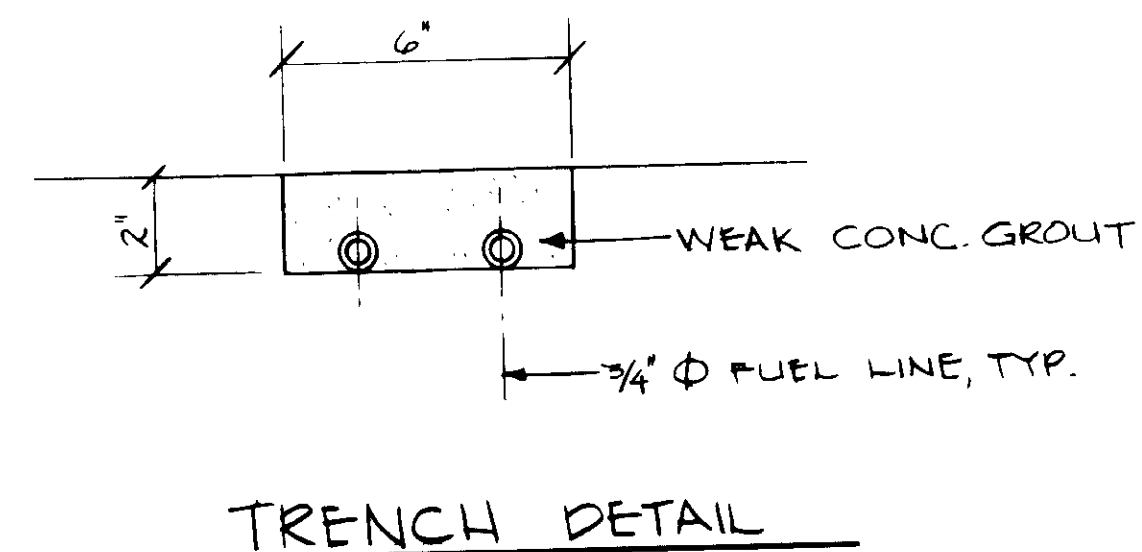
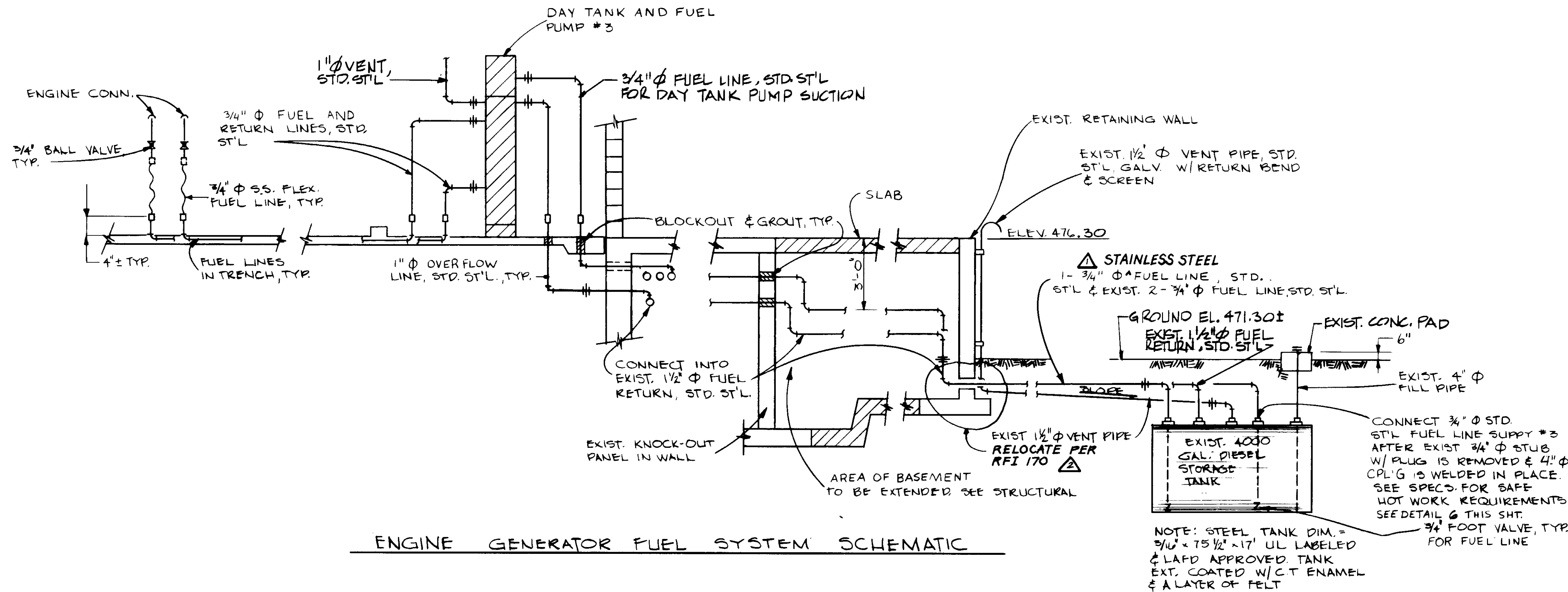
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ENGINE-GENERATOR NO. 3, SECTIONS - II

SHEET  
**M8-3**

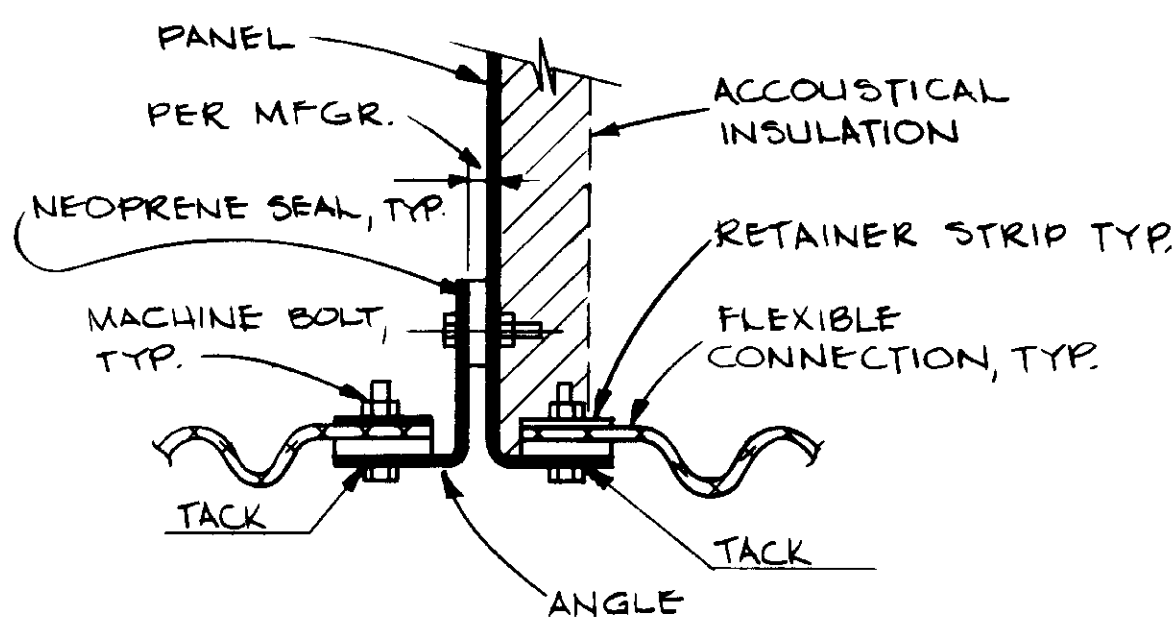
04154

RECORD DRAWING  
FOR FILE INFORMATION BY CLIENT FURNISH GROUP.  
KATZURA CONSULTING ENGINEERS JUNE 1984

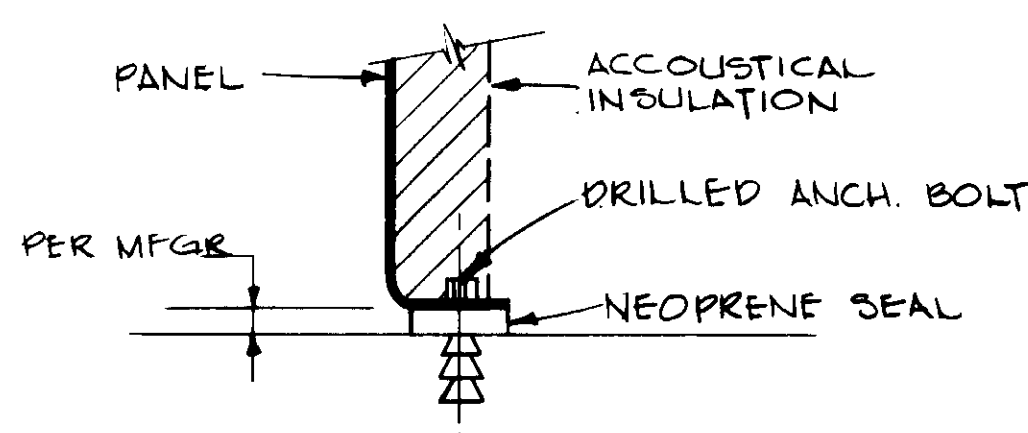




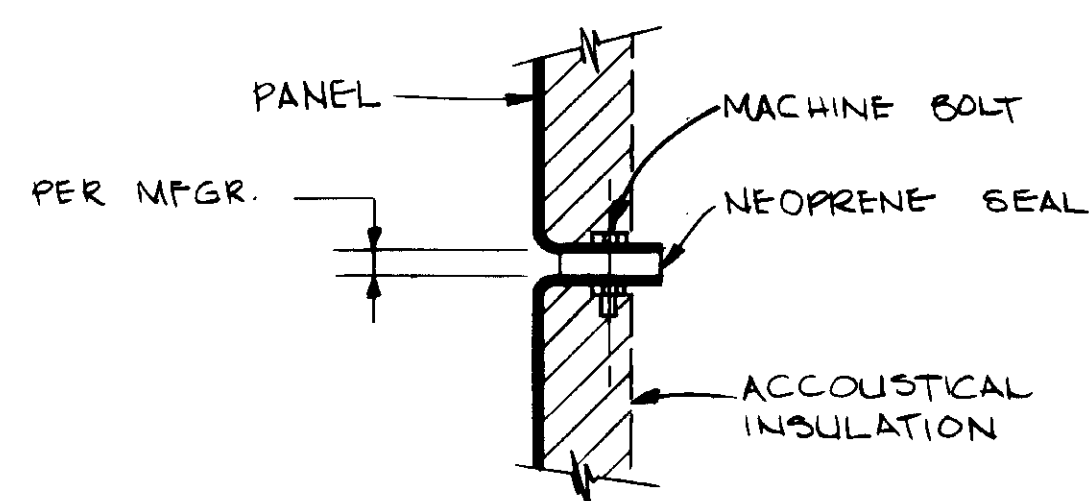
DETAIL '1'



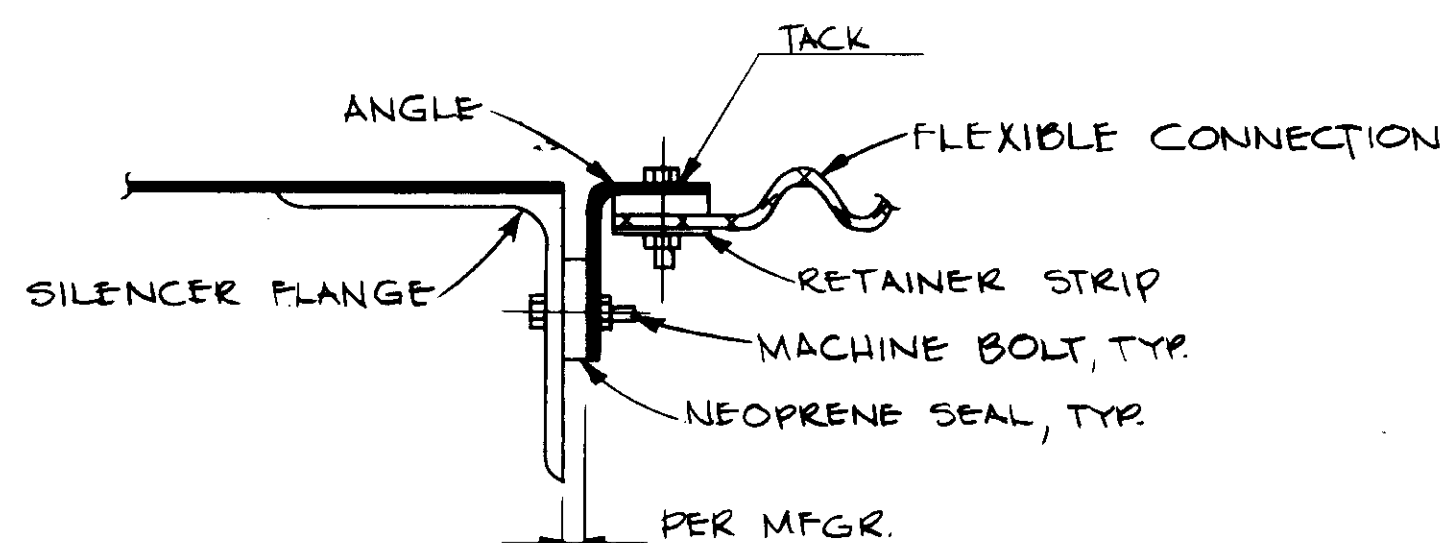
DETAIL '3'



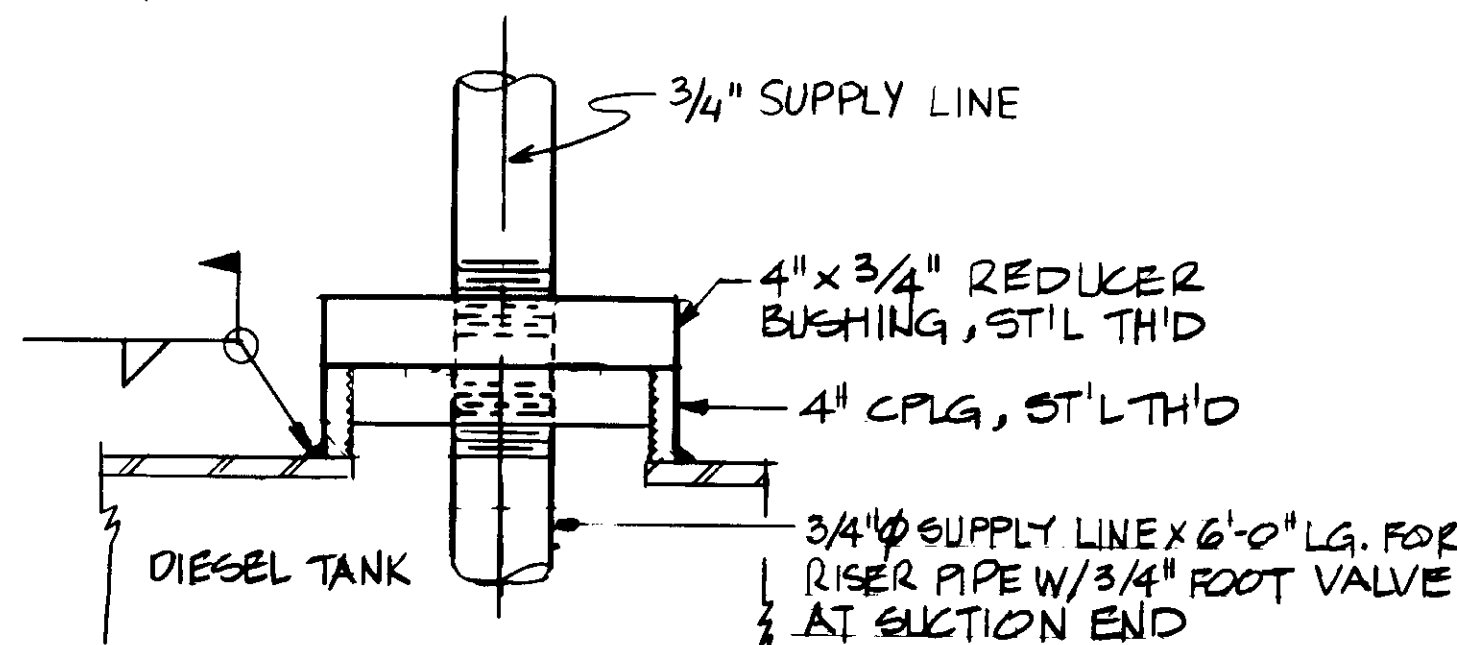
DETAIL '5'



DETAIL '2'



DETAIL '4'



DETAIL '6'

NOTE: STEEL TANK DIM. = 3/4" x 75 1/2" x 17" UL LABELED & LAFD APPROVED TANK EXT. COATED W/ C ENAMEL & A LAYER OF FELT

04155

RECORD DRAWING  
 PREPARED BY KALEX ENGINEERS  
 KALEX ENGINEERS  
 KATSUMA CONSULTING ENGINEERS JUNE 1987



REV	DATE	BY	DESCRIPTION
1	4-25-87	A.B.	REV. PER K.P.C.
2	4-25-87	A.B.	REV. PER K.P.C.

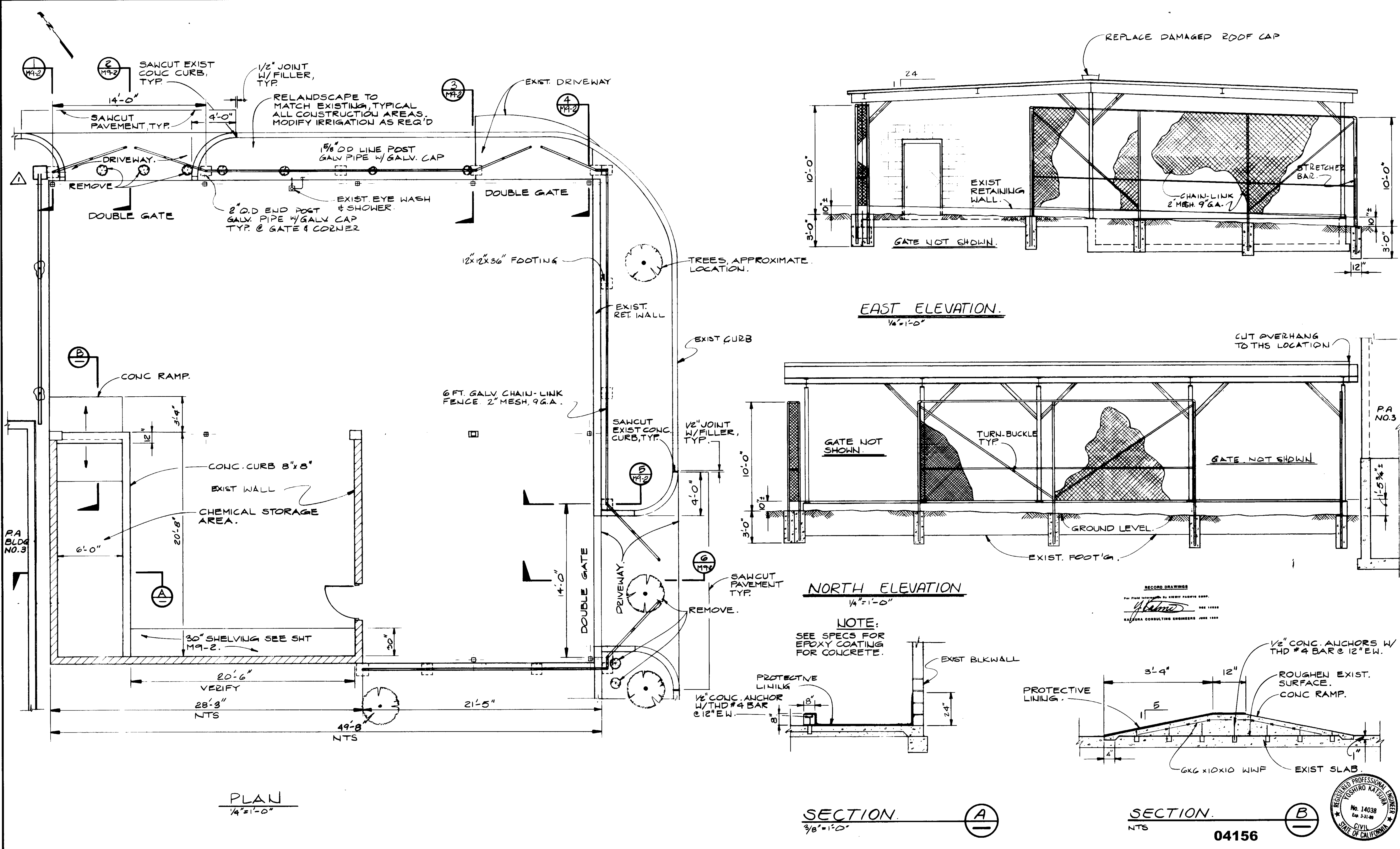
SCALE:	CS/CC/YR	DESIGNED:	AR/LJB	DRAWN:	YK	CHECKED:	
NONE							

**KALEX ENGINEERS**  
 Katsuma Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 ENGINE-GENERATOR NO. 3, DETAILS

SHEET M8-4





REV	DATE	BY	DESCRIPTION

SCALE:	Y.K./D.N./C.L.	SUBMITTED	14038 8-7-87
AS NOTED	A.R./C.L.	DESIGNED	KATELOR CONSULTING ENGINEERS R.C.E. NO. DATE
		DRAWN	Y.K.
		CHECKED	

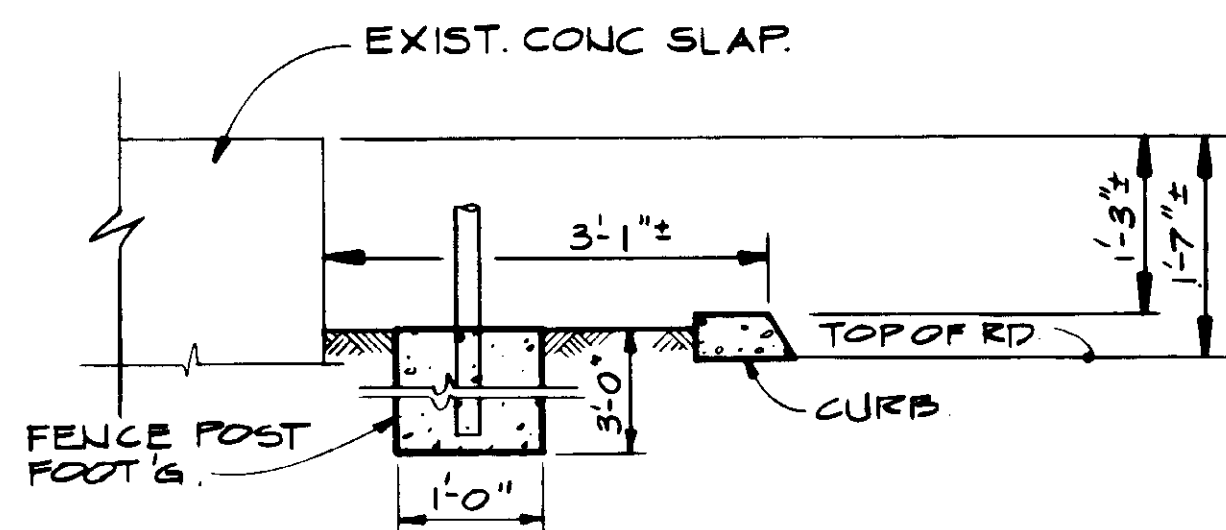
**KALEX ENGINEERS**

Katsumi Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

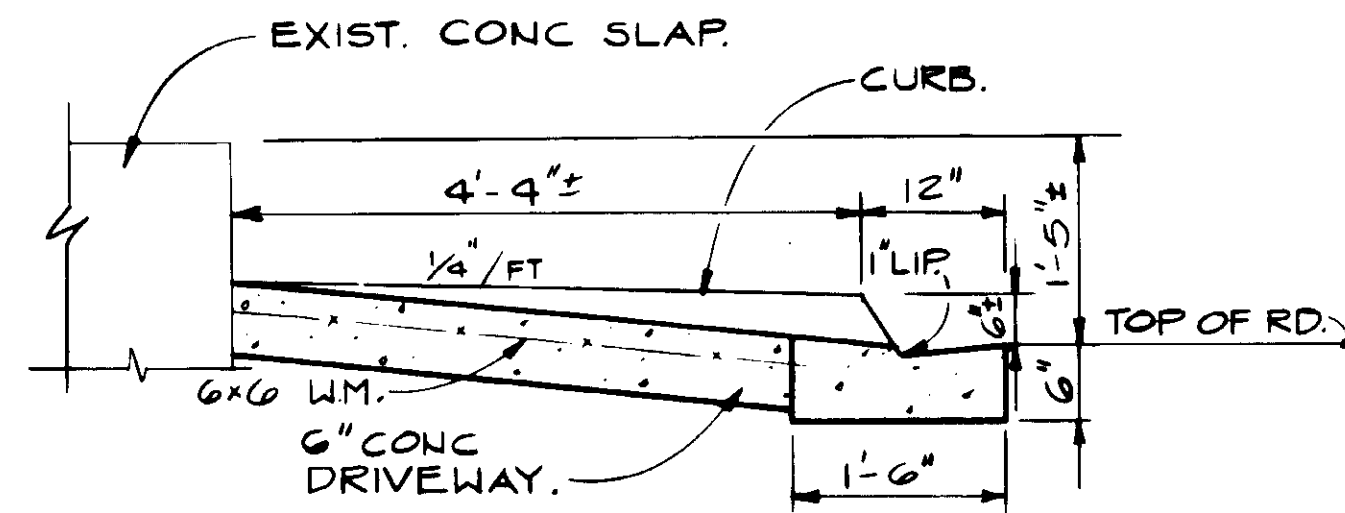
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

STORAGE BUILDING, PLAN & SECTIONS

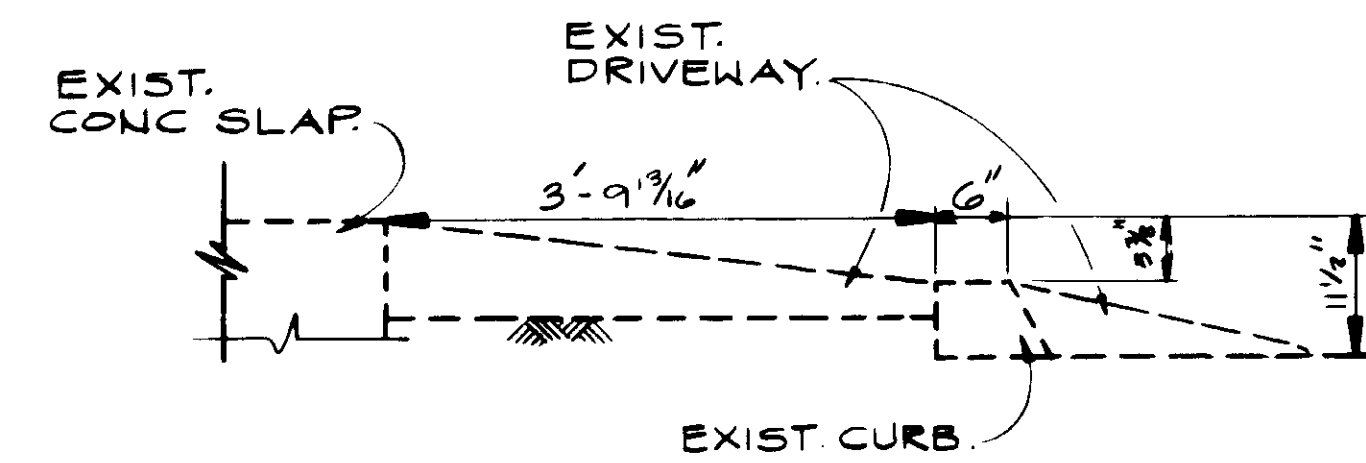
SHEET  
**M9-1**



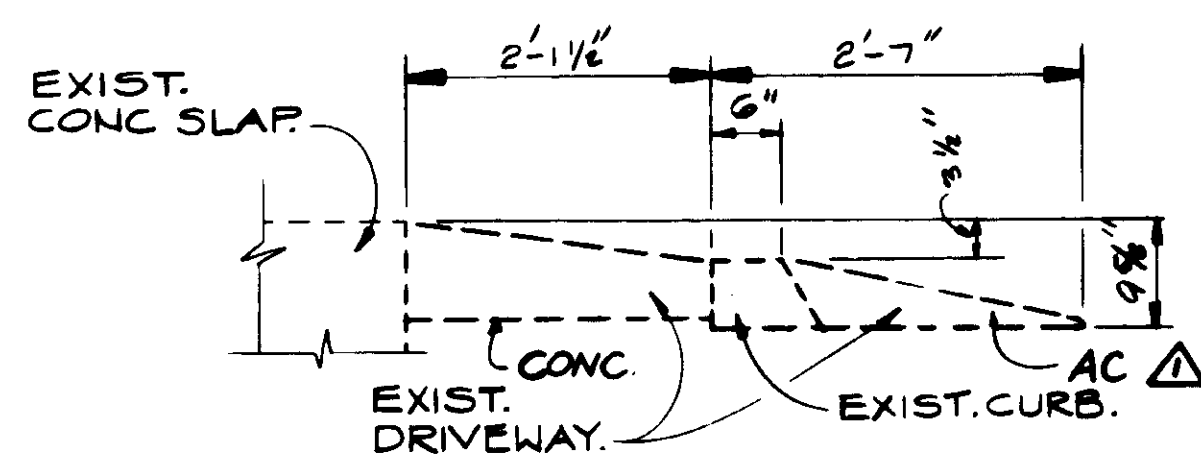
SECTION 1  
3/4" = 1'-0"



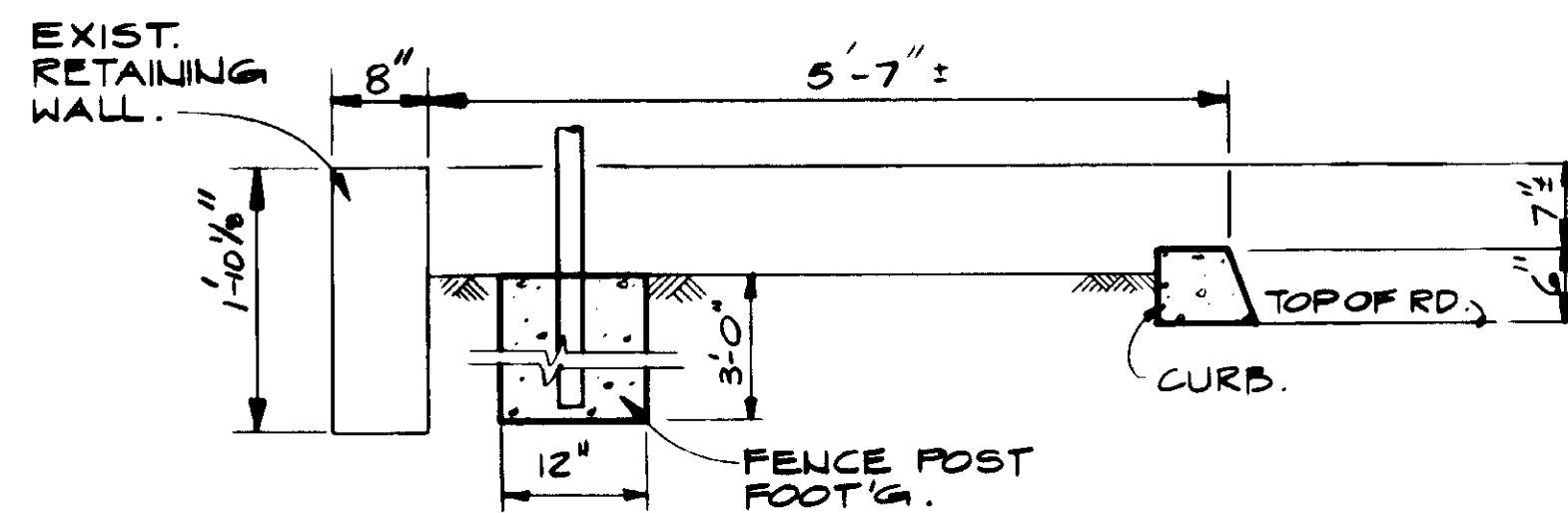
SECTION 2  
3/4" = 1'-0"



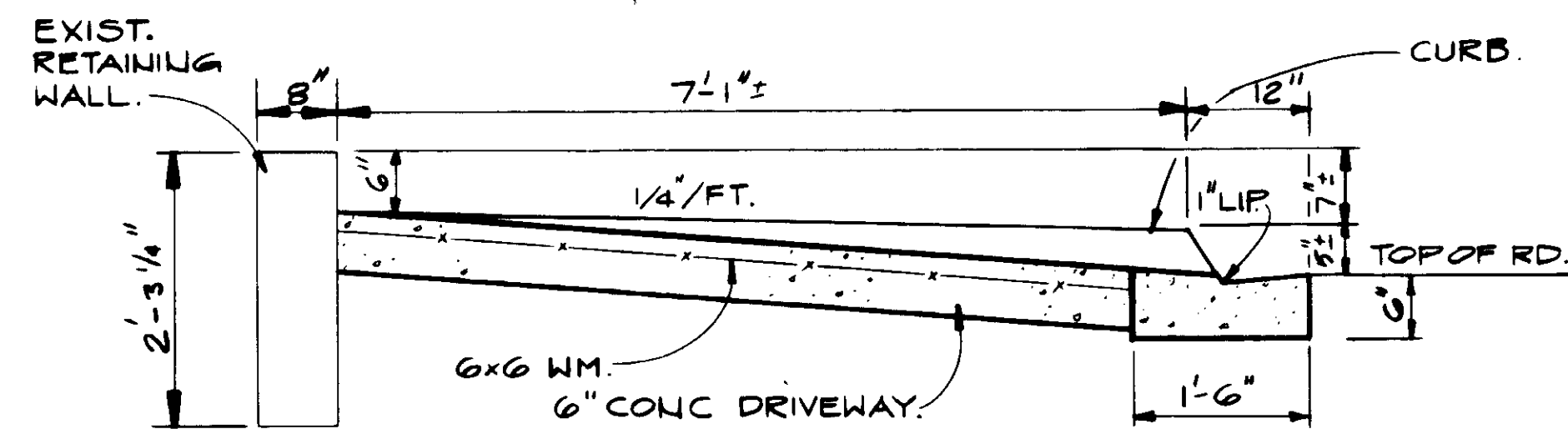
SECTION 3  
3/4" = 1'-0"



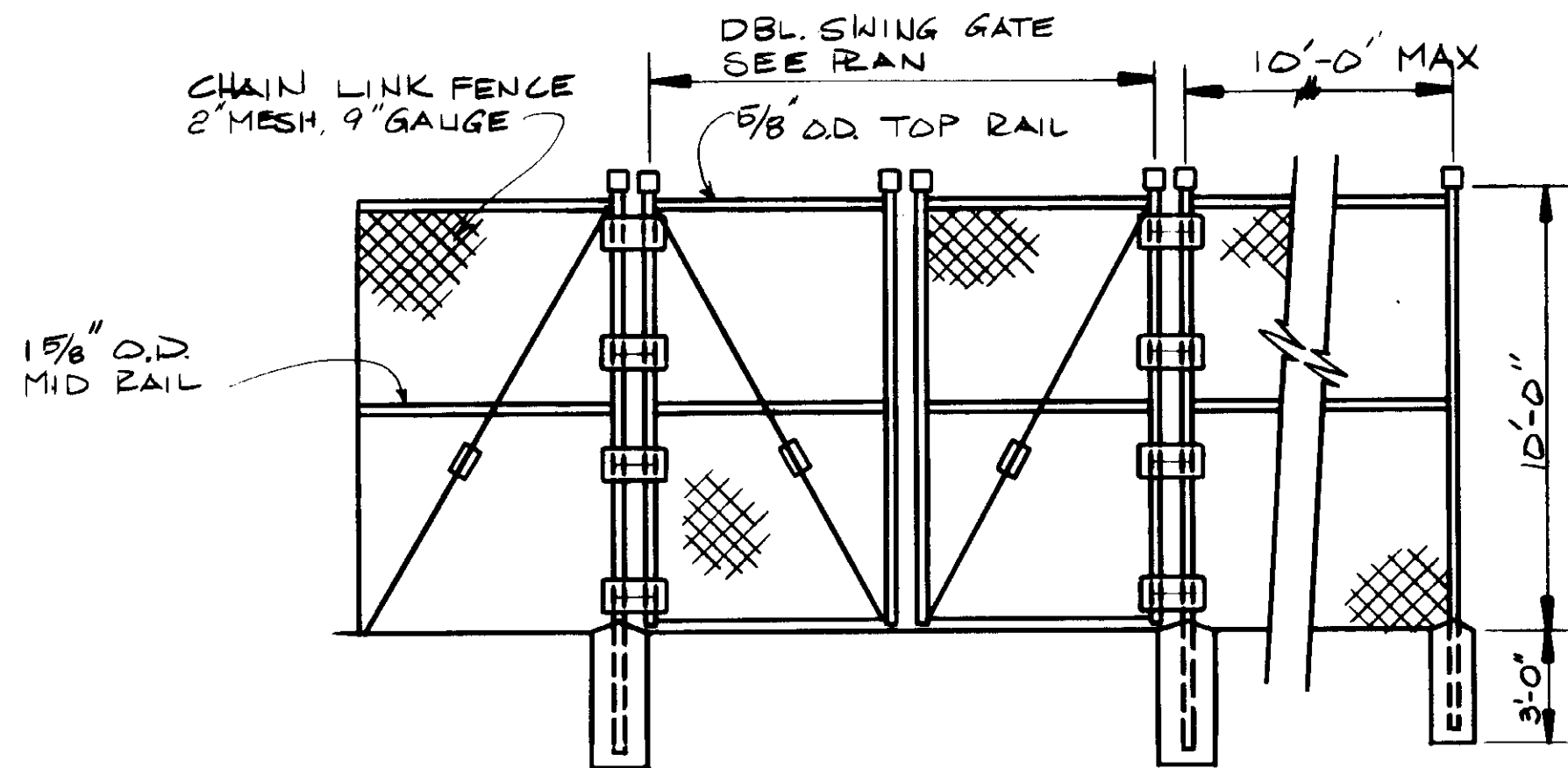
SECTION 4  
3/4" = 1'-0"



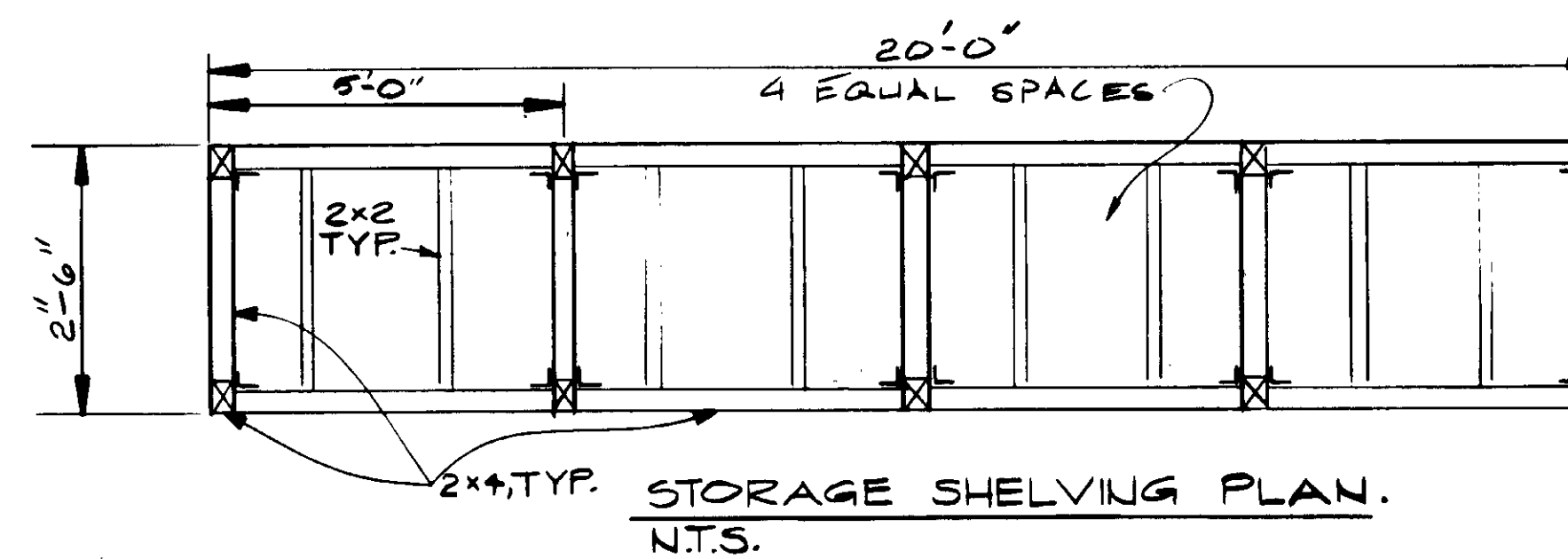
SECTION 5  
3/4" = 1'-0"



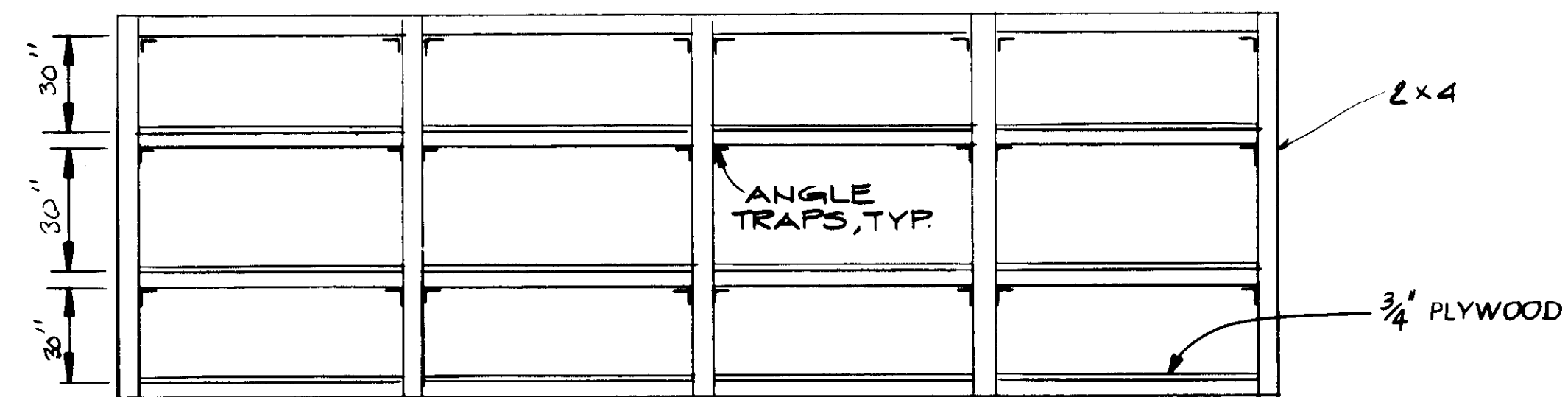
SECTION 6  
3/4" = 1'-0"



GATE DETAIL  
1/4" = 1'-0"



**NOTE:** ELECTROGALVANIZE PER RFI 282  
 1. ANGLE STRAPS SHALL BE 2x2x3/16 x 0'-1 1/2".  
 2. SCREWS SHALL BE S.S.  
 3. ALL LUMBER SHALL BE DOUGLAS FIR CONSTRUCTION GRADE.



ELEVATION

04157



RECORD DRAWING  
 PREPARED BY: KALEX ENGINEERS  
 DATE: 8-7-87

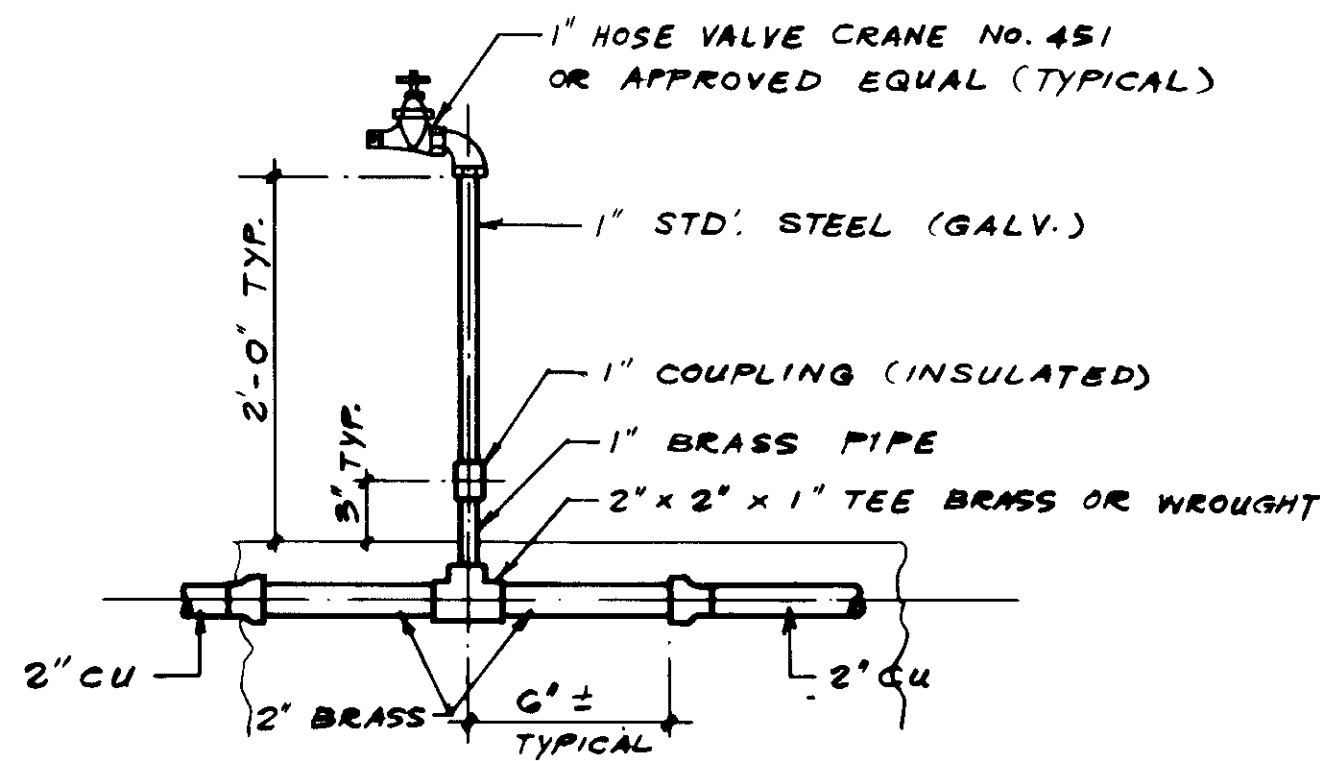
REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	Y.K./D.N./C.L.
DRAWN:	C.L./A.R.
CHECKED:	Y.K.
SUBMITTED:	8-7-87
DATE:	8-7-87
PROJECT:	KALEX ENGINEERS
ENGINEER:	YOSHIO KATSURA
NO.:	14038
EXPIRES:	3-31-89
STATE:	CALIFORNIA

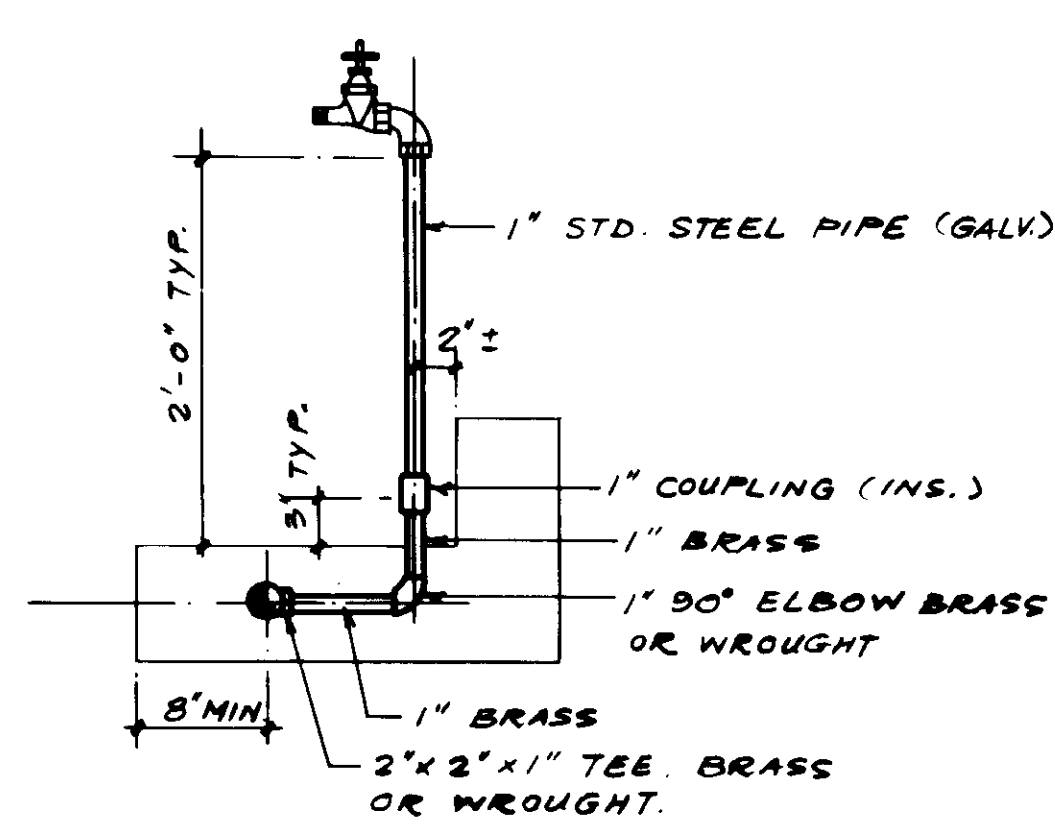
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 STORAGE BUILDING, DETAILS

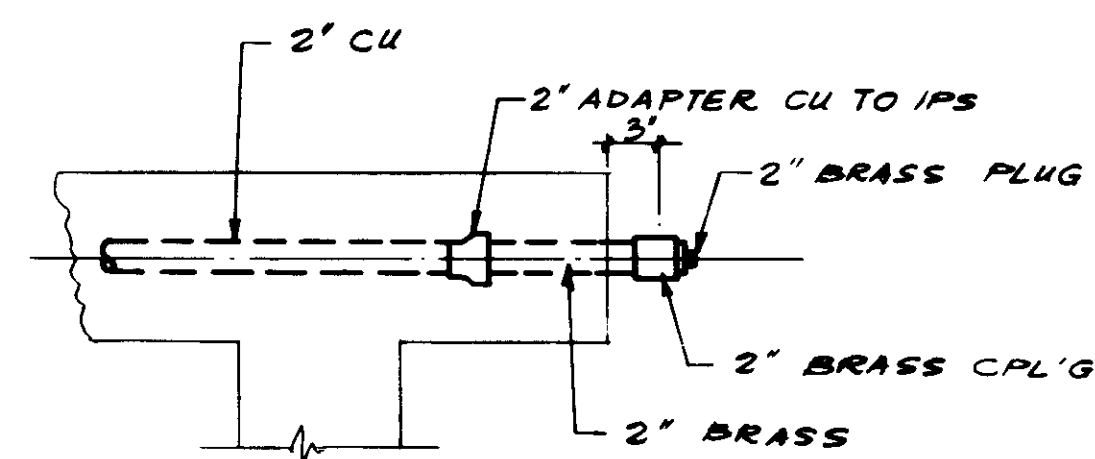
SHEET  
 M9-2



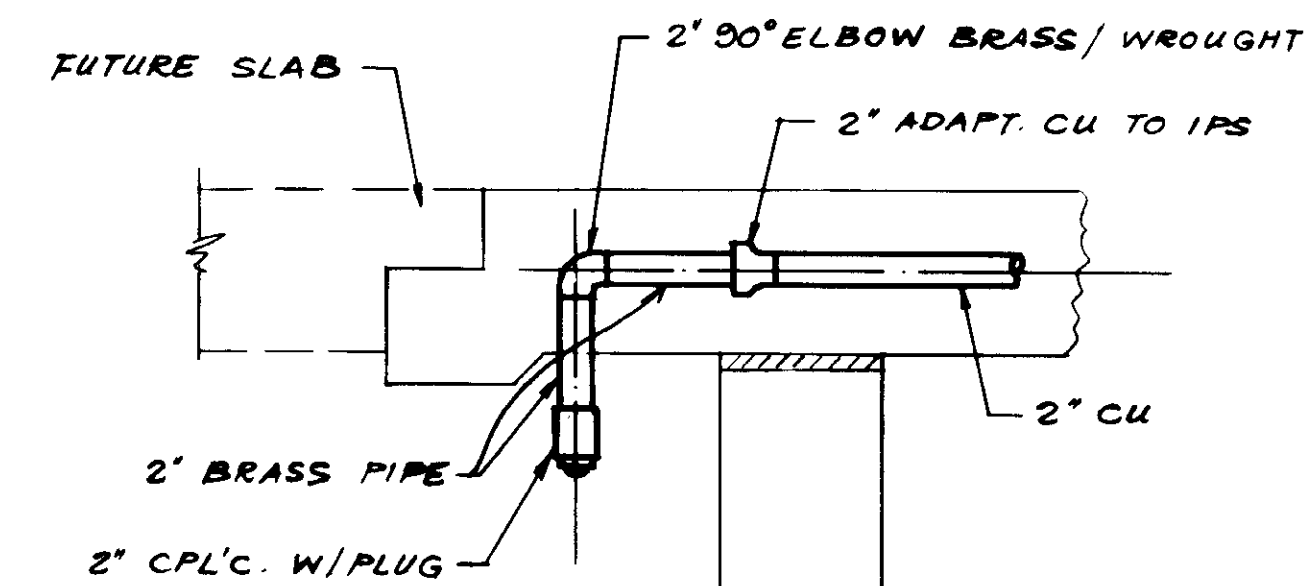
**DETAIL A**



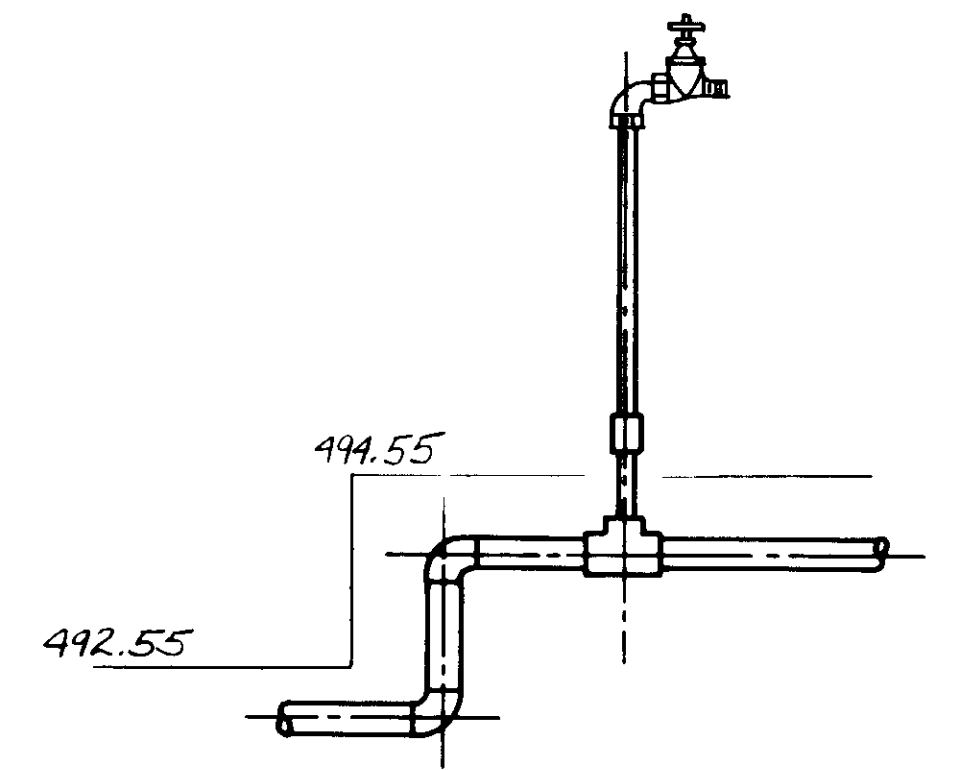
**DETAIL B**



**DETAIL C**

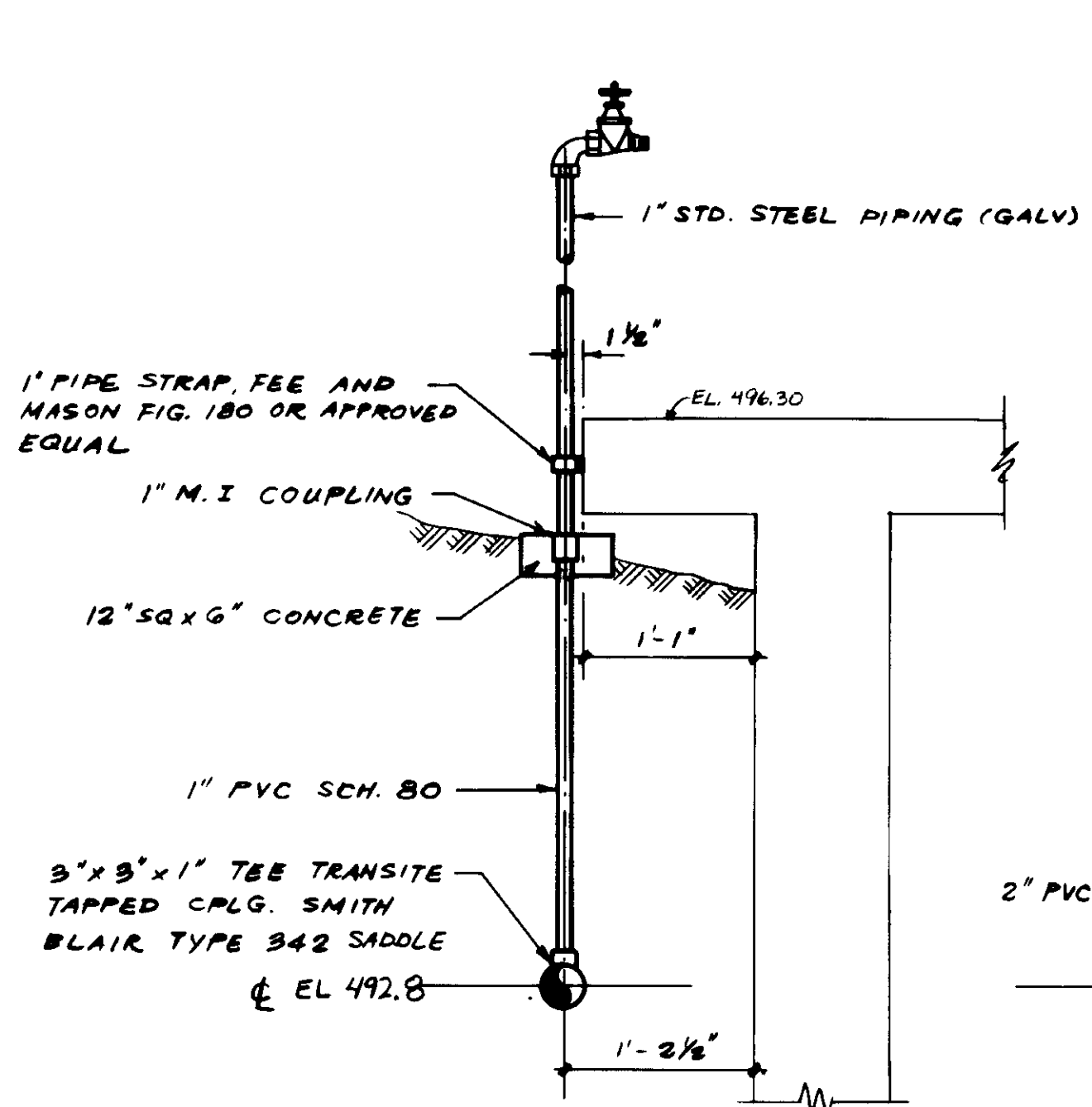


**DETAIL D**

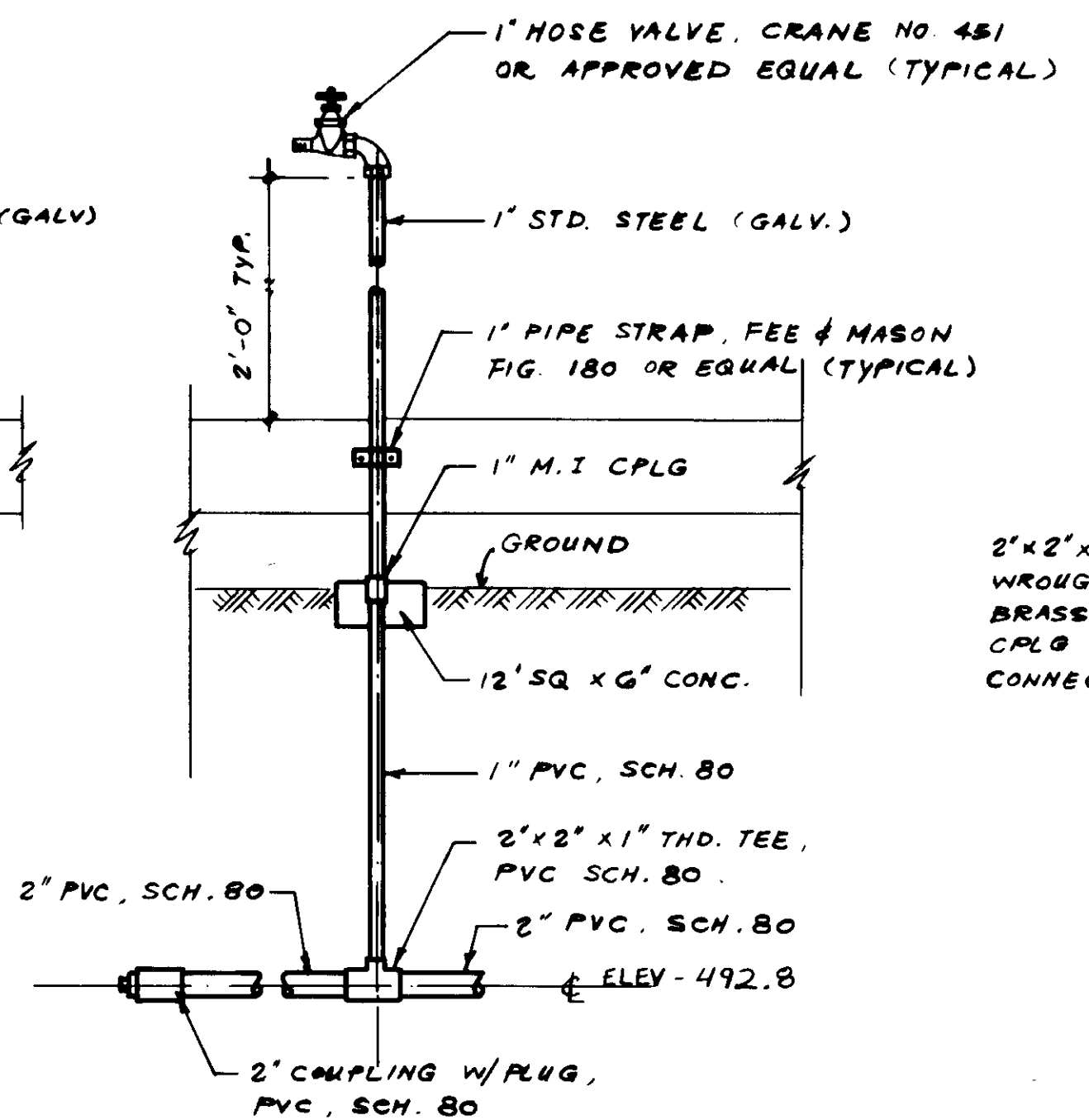


NOTE: FITTINGS SIMILAR TO DETAILS HEREON

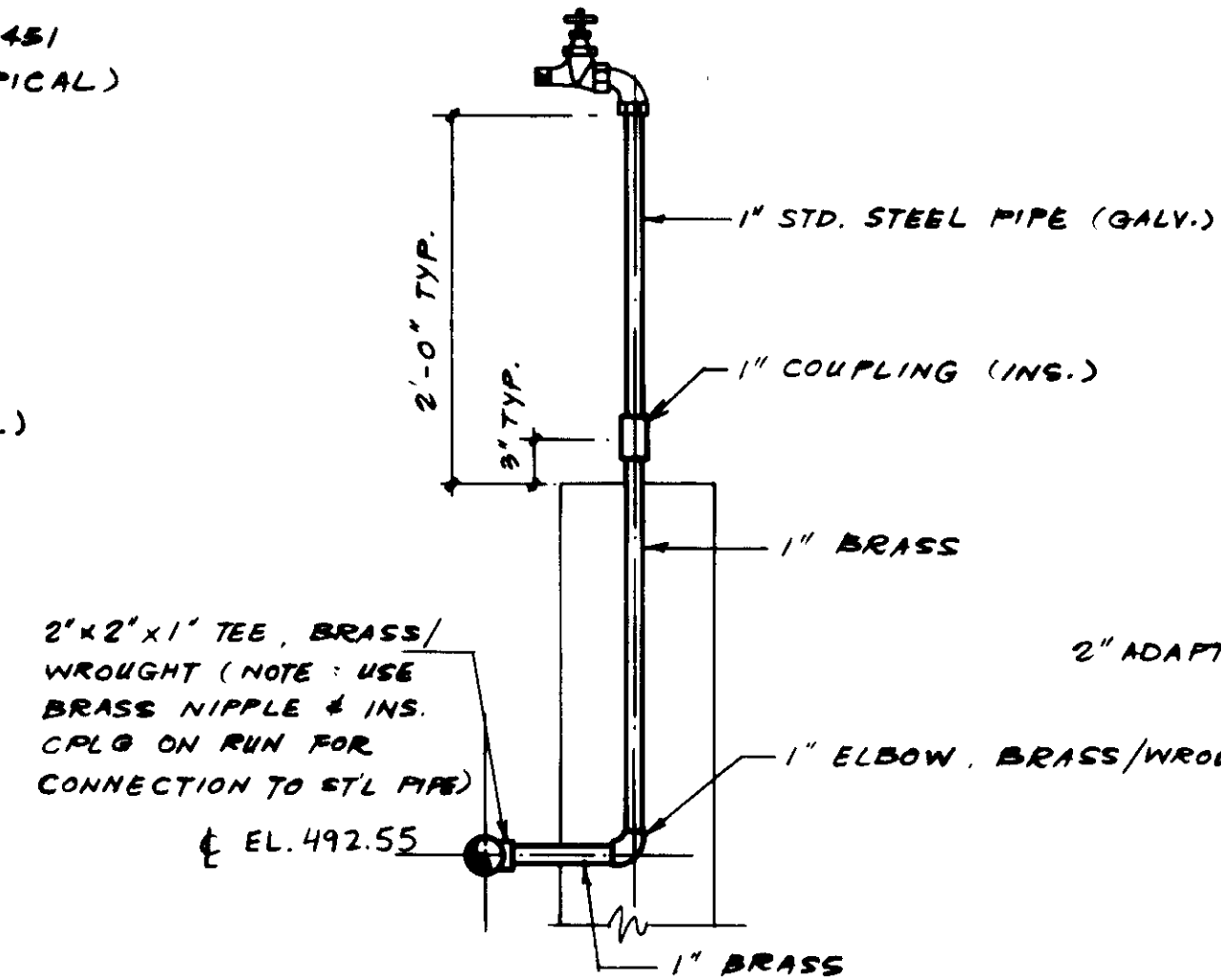
**DETAIL 1**



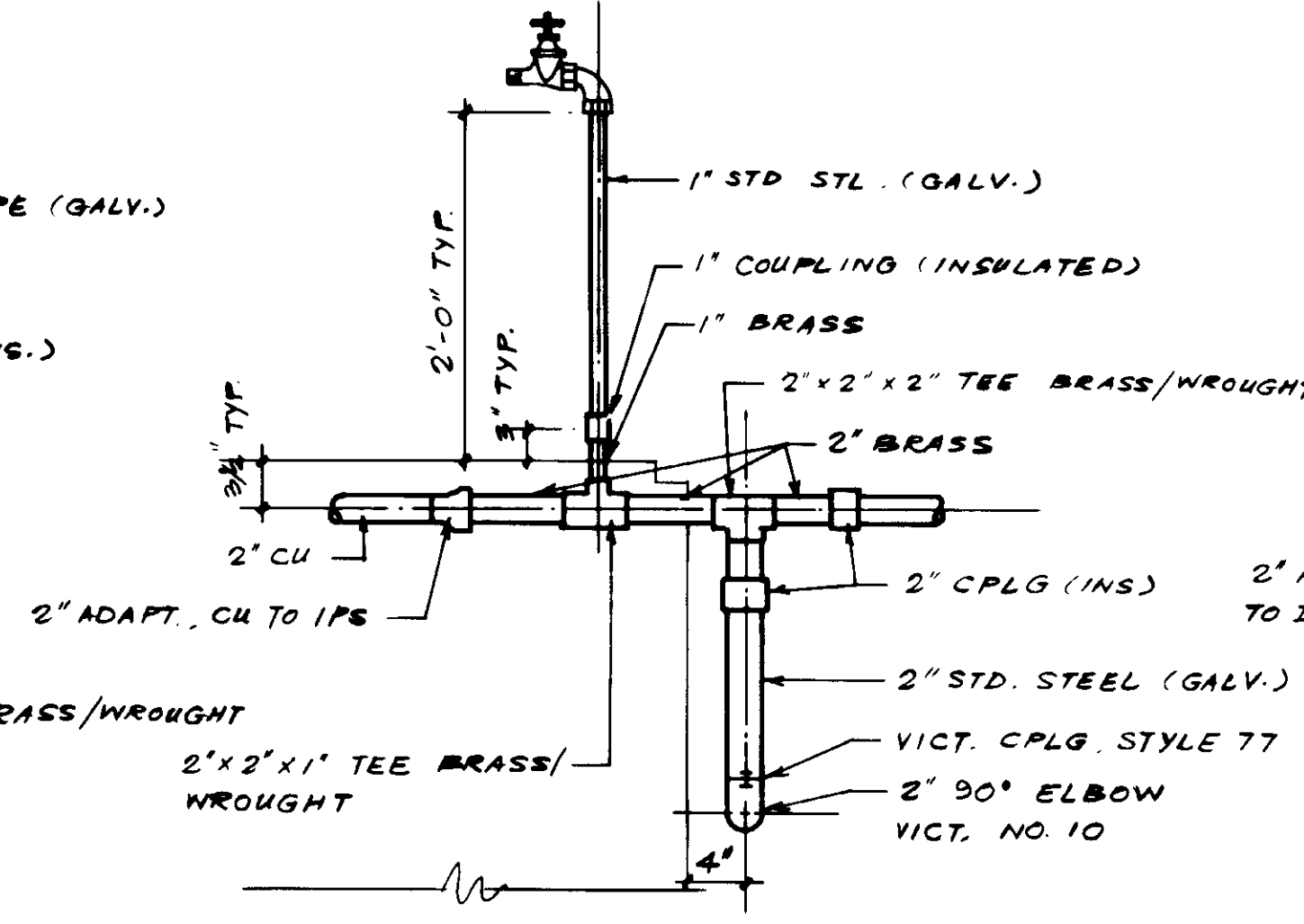
**DETAIL E**



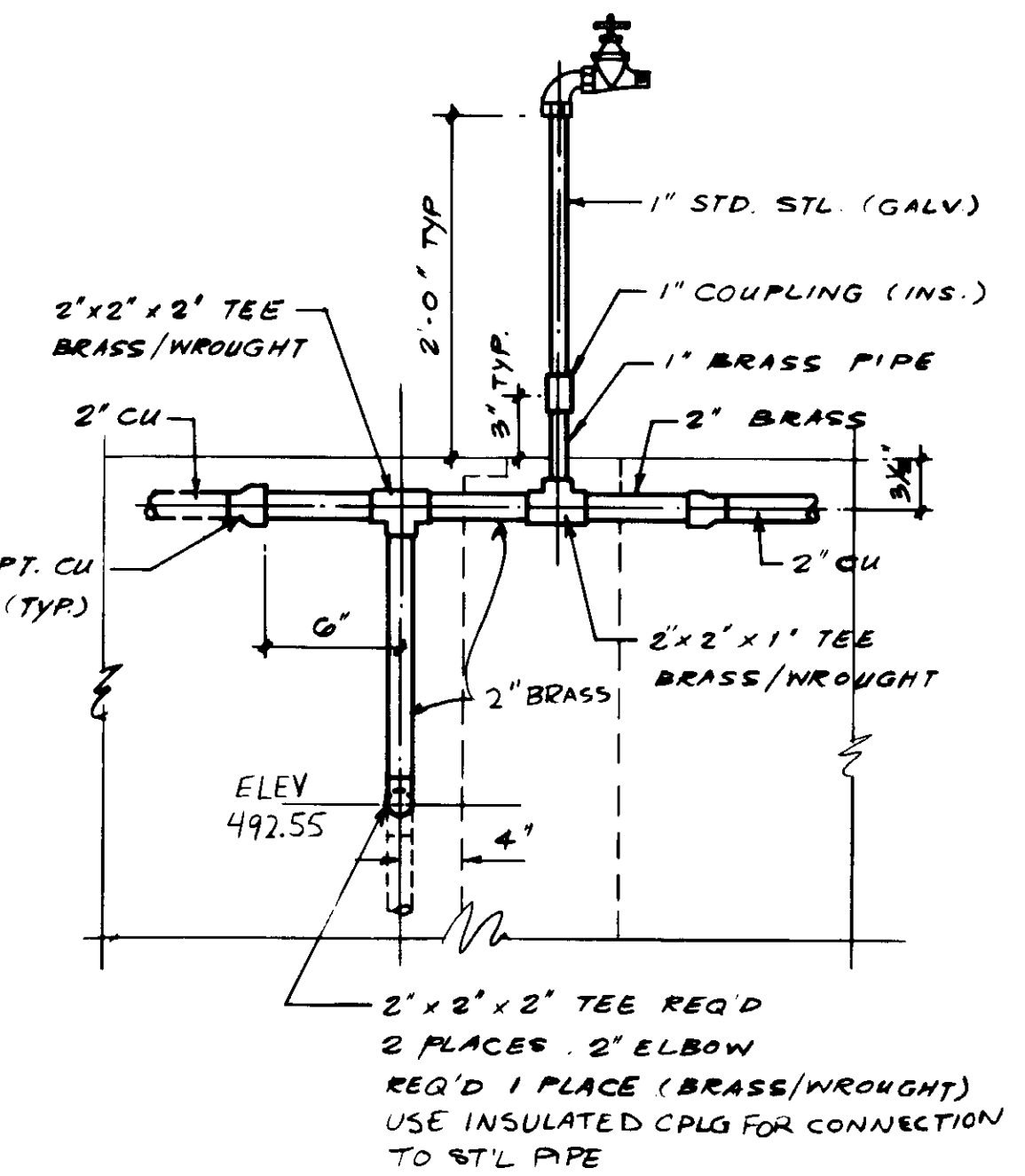
**DETAIL F**



**DETAIL G**



**DETAIL H**



**DETAIL I**

NOTE:  
FOR LOCATION OF THESE DETAILS  
SEE PLAN SHTS. M2-1, M3-1 & M4-1

04158

RECORD DRAWING  
FOR FILE MAINTAINED BY CLIENT FABRIC SHOP.  
KATANA CONSULTING ENGINEERS 1988 1989

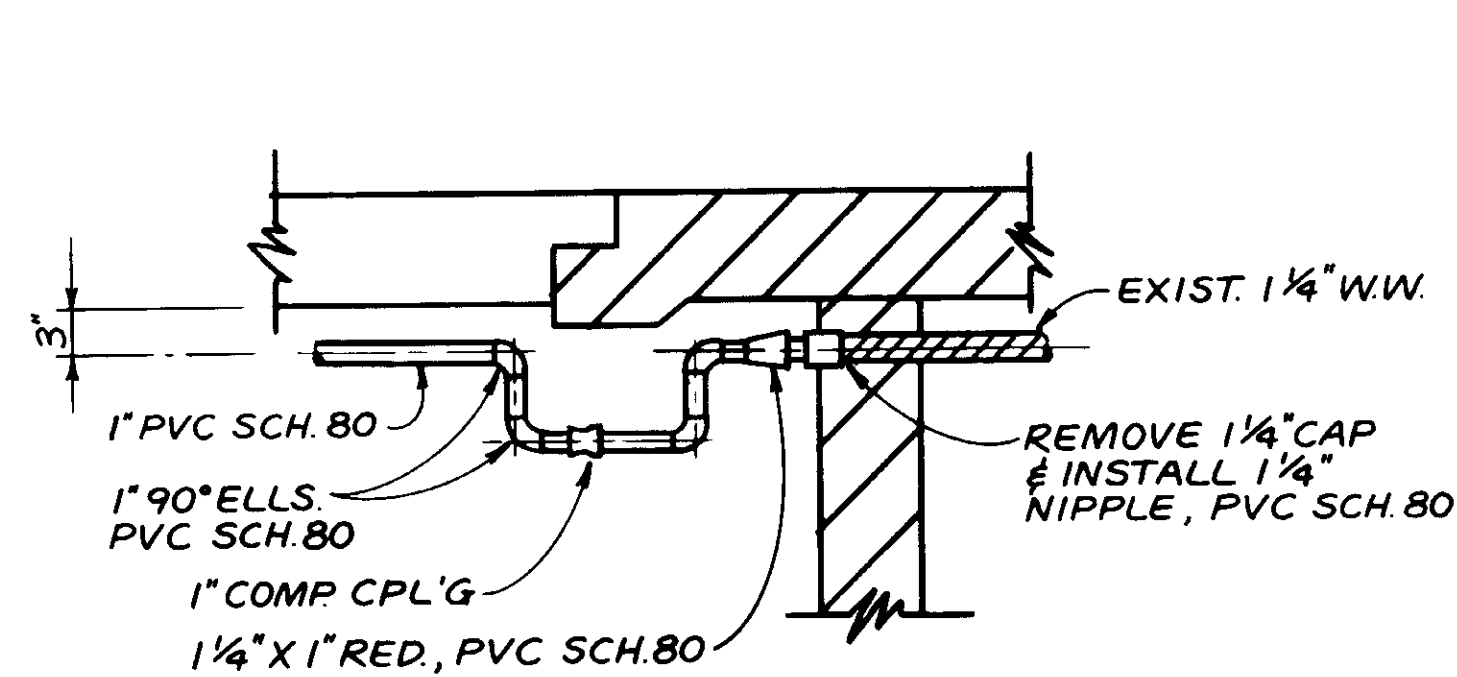


REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

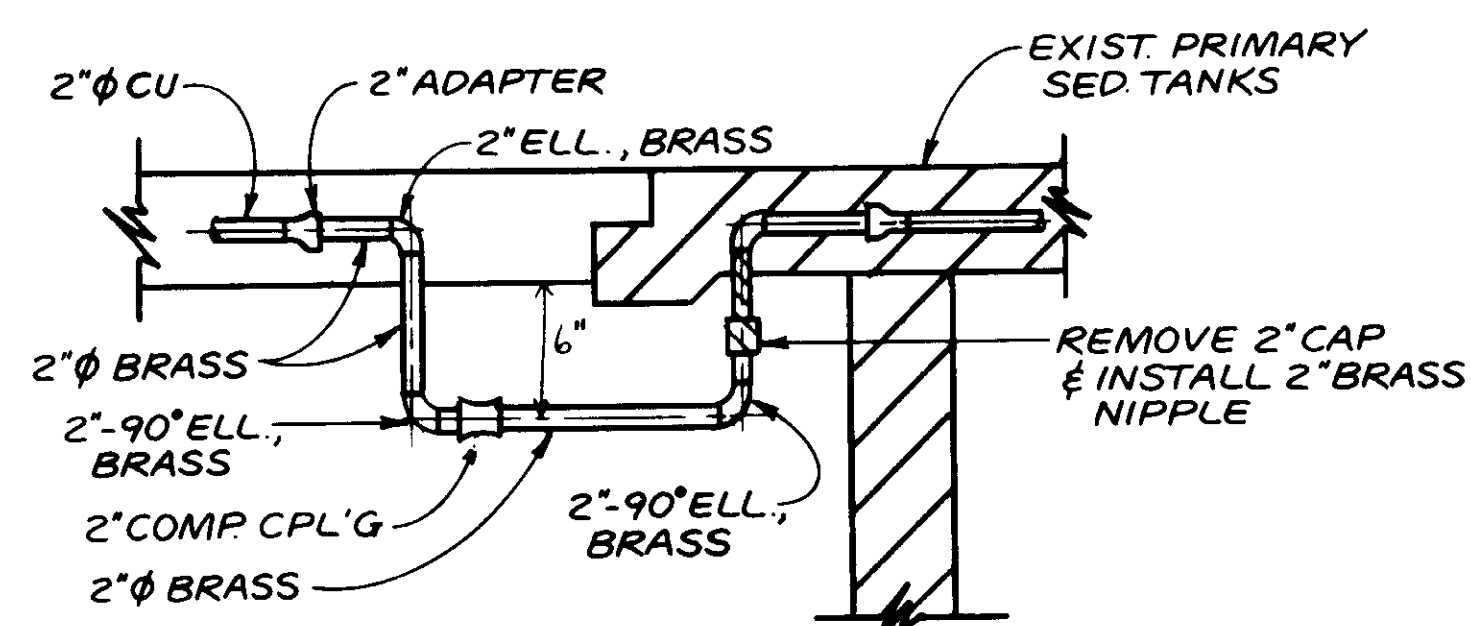
SCALE:	YK/CC	SUBMITTED	14038	8-7-87
NO SCALE	DESIGNED S.K.	KATANA CONSULTING ENGINEERS	R.C.E. NO.	DATE
	DRAWN Y.K.			
	CHECKED	ALEXANDER ENGINEERS	513	
			R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

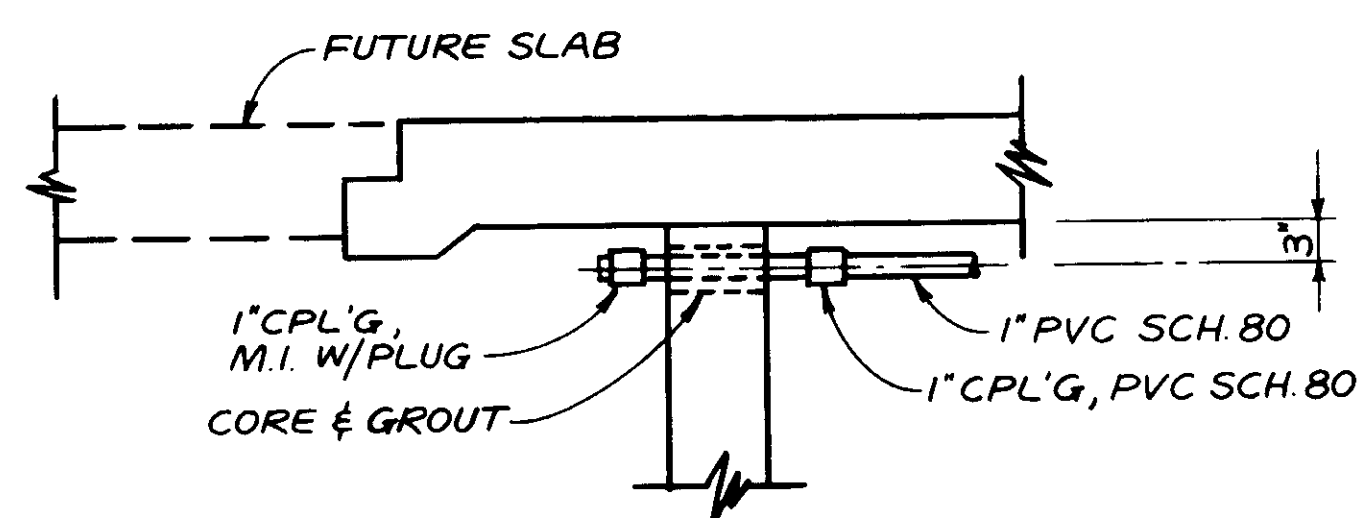
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
WASH WATER CONNECTION DETAILS - I  
SHEET M10-1



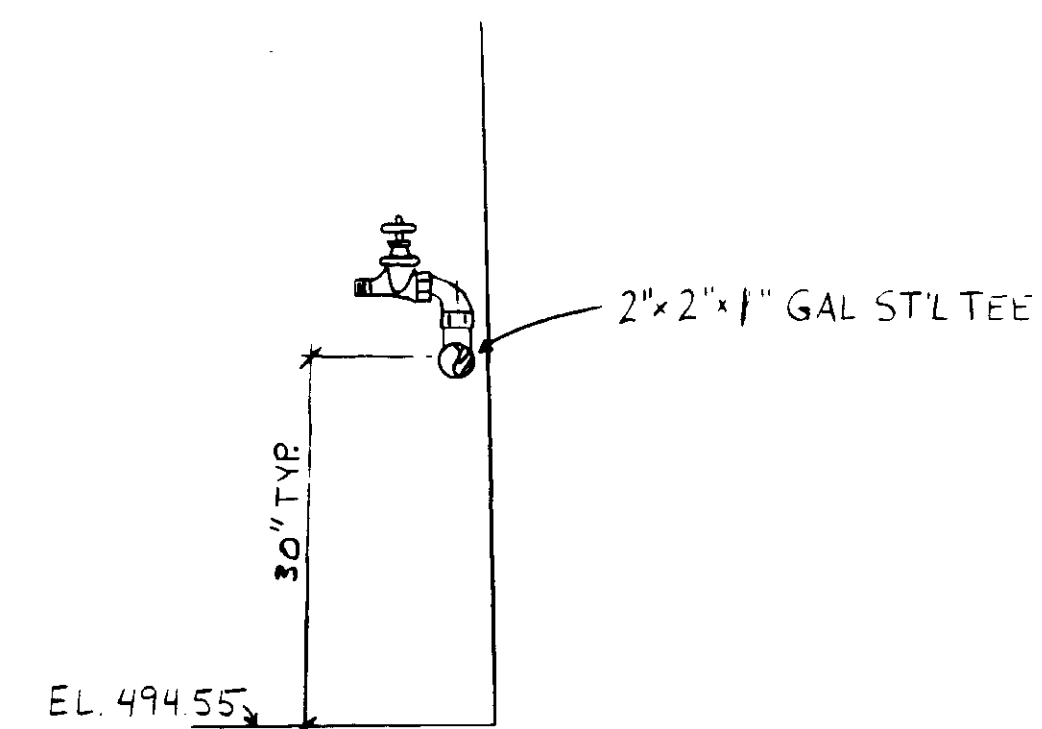
DETAIL J



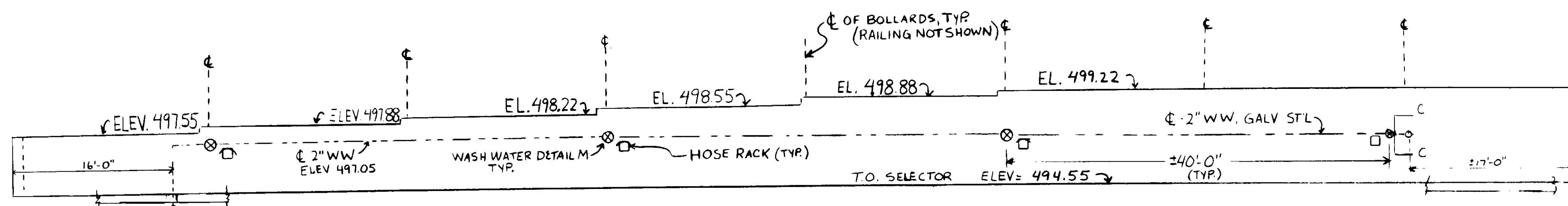
DETAIL K



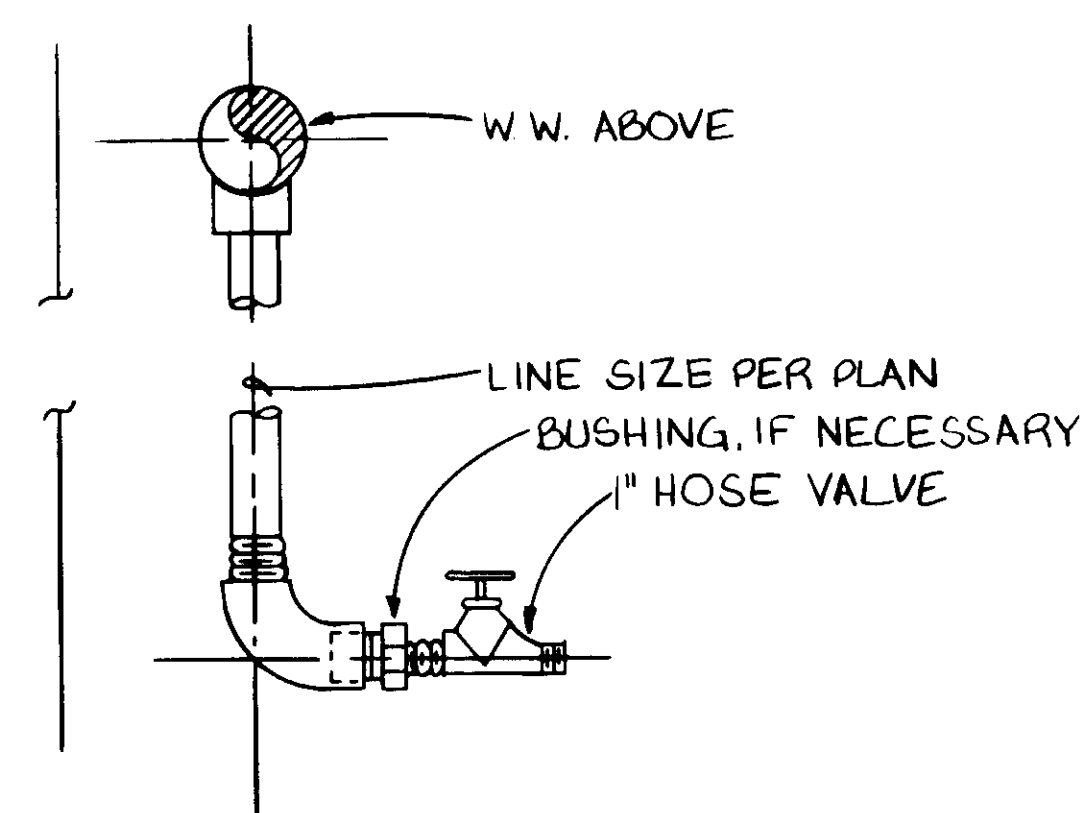
DETAIL L



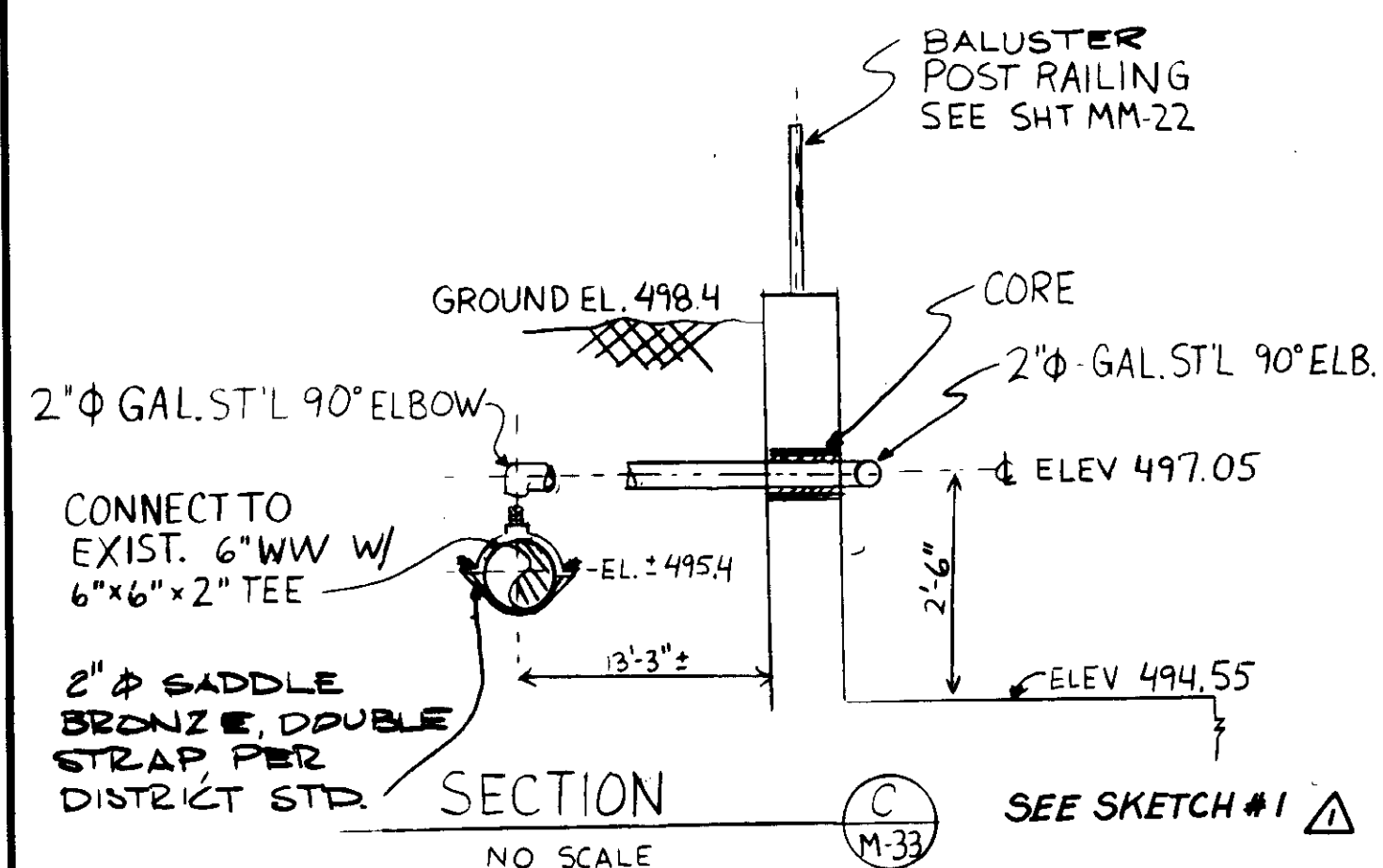
DETAIL M



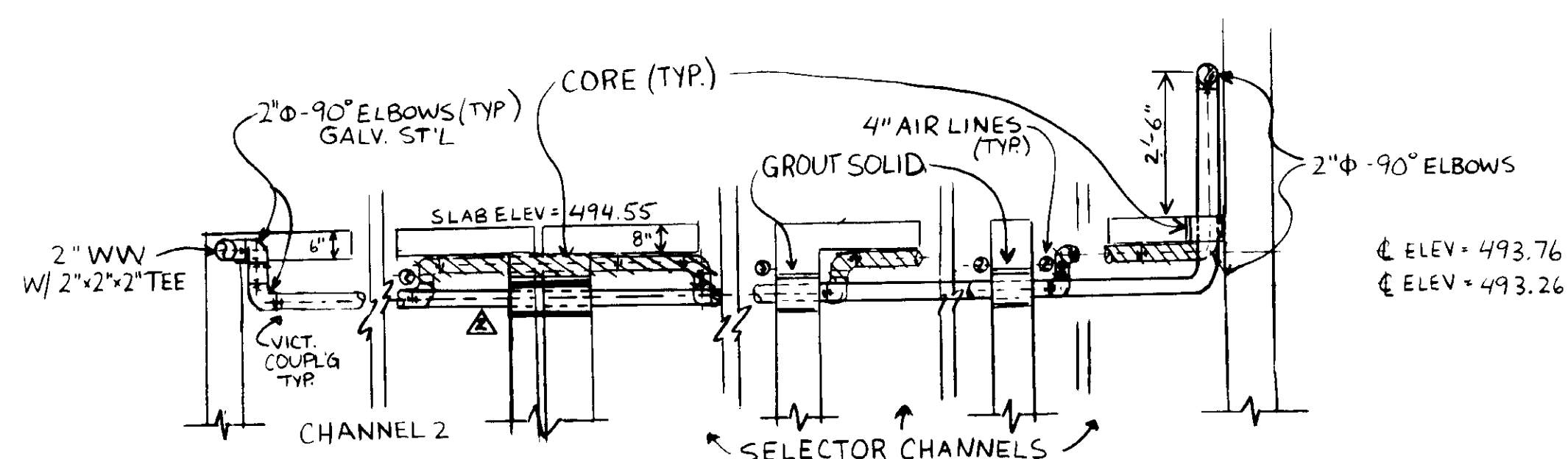
SECTION A  
SCALE HORT: 1/8" = 1'-0"  
VERT: 1/4" = 1'-0"



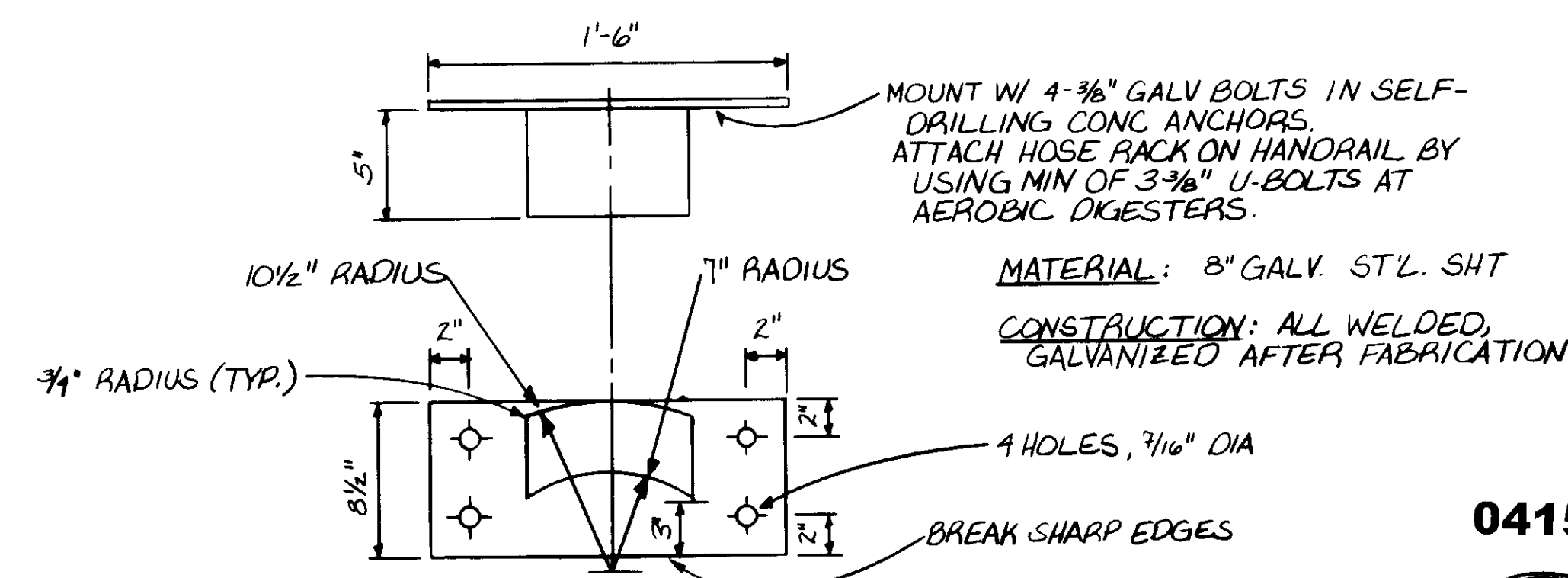
DROP HOSE VALVE



SECTION C  
NO SCALE  
SEE SKETCH #1



SECTION B  
NO SCALE



HOSE RACK

04159

RECORD DRAWING  
KATSUMURA CONSULTING ENGINEERS  
No. 14038  
EST. 3-31-89  
CIVIL  
STATE OF CALIFORNIA

REV	DATE	BY	DESCRIPTION
5-2-89	A.B.	REV. PER K.P.C.	
5-2-89	A.B.	REV. PER K.P.C.	

SCALE:	AS NOTED
DESIGNED:	YK/CC
DRAWN:	CC/DN
CHECKED:	YK

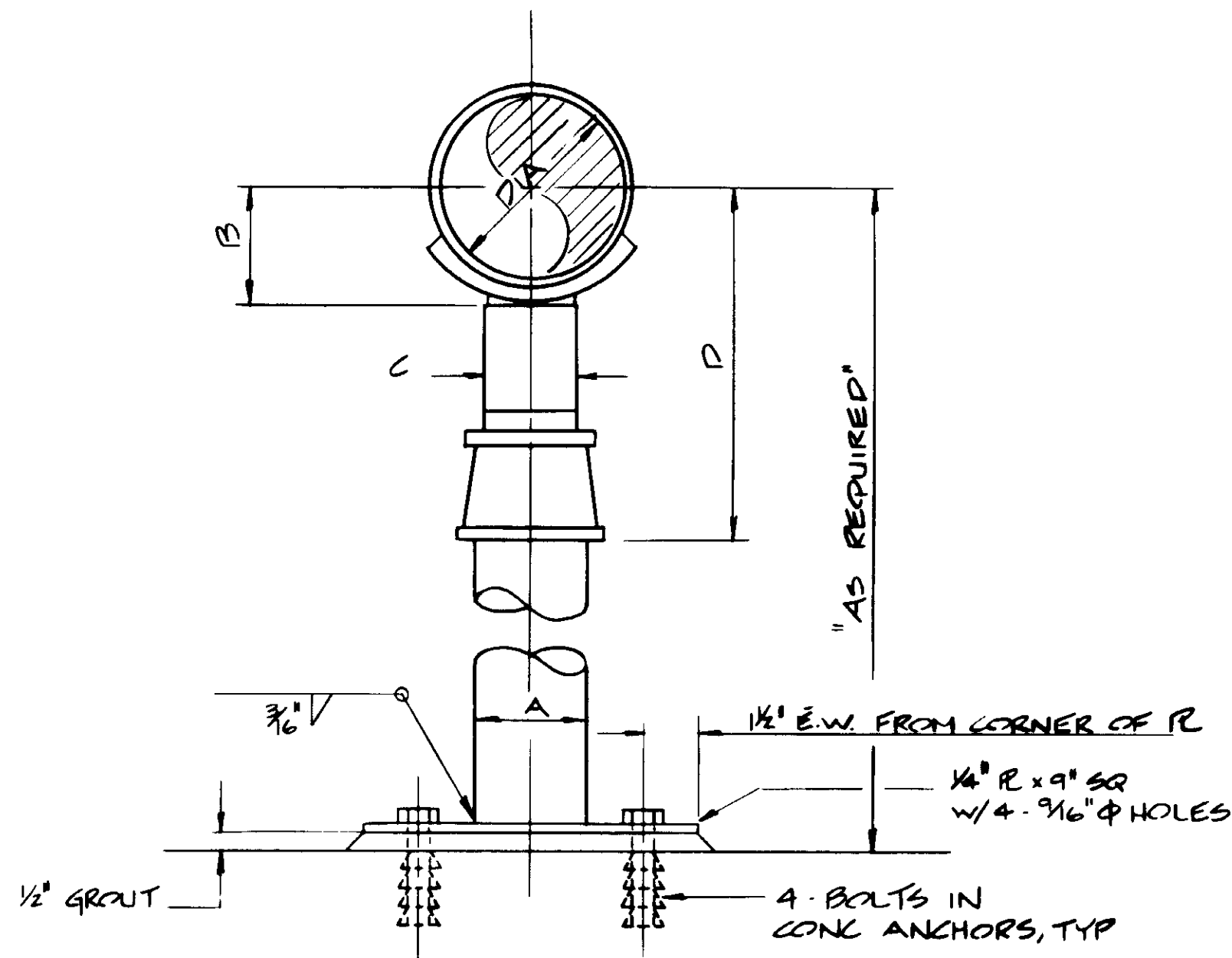
SUBMITTED:	14038	8-7-87
KATSUMURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
ALEXANDER ENGINEERS	R.C.S.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
WASH WATER CONNECTION DETAILS - II

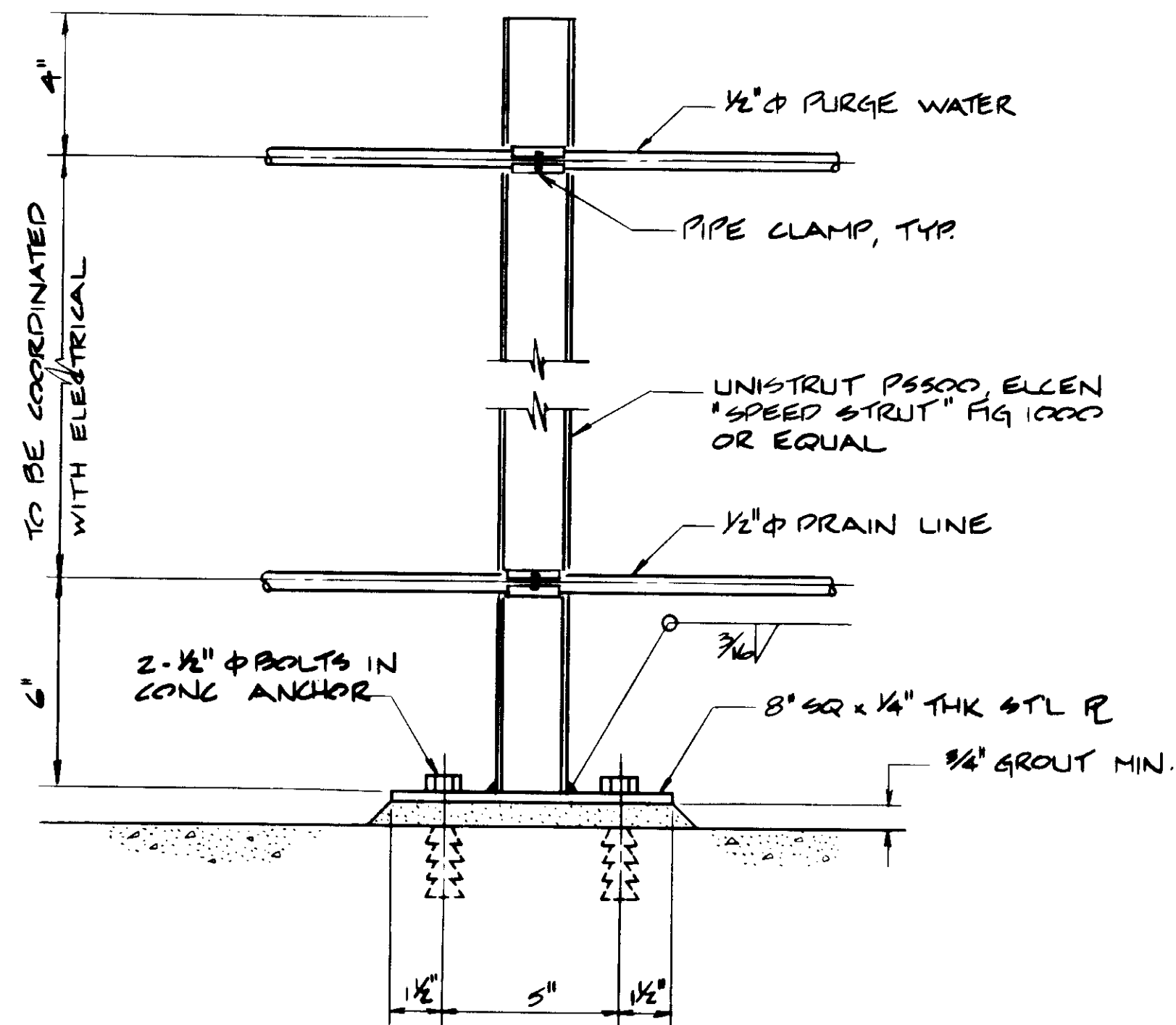
SHEET  
M10-2



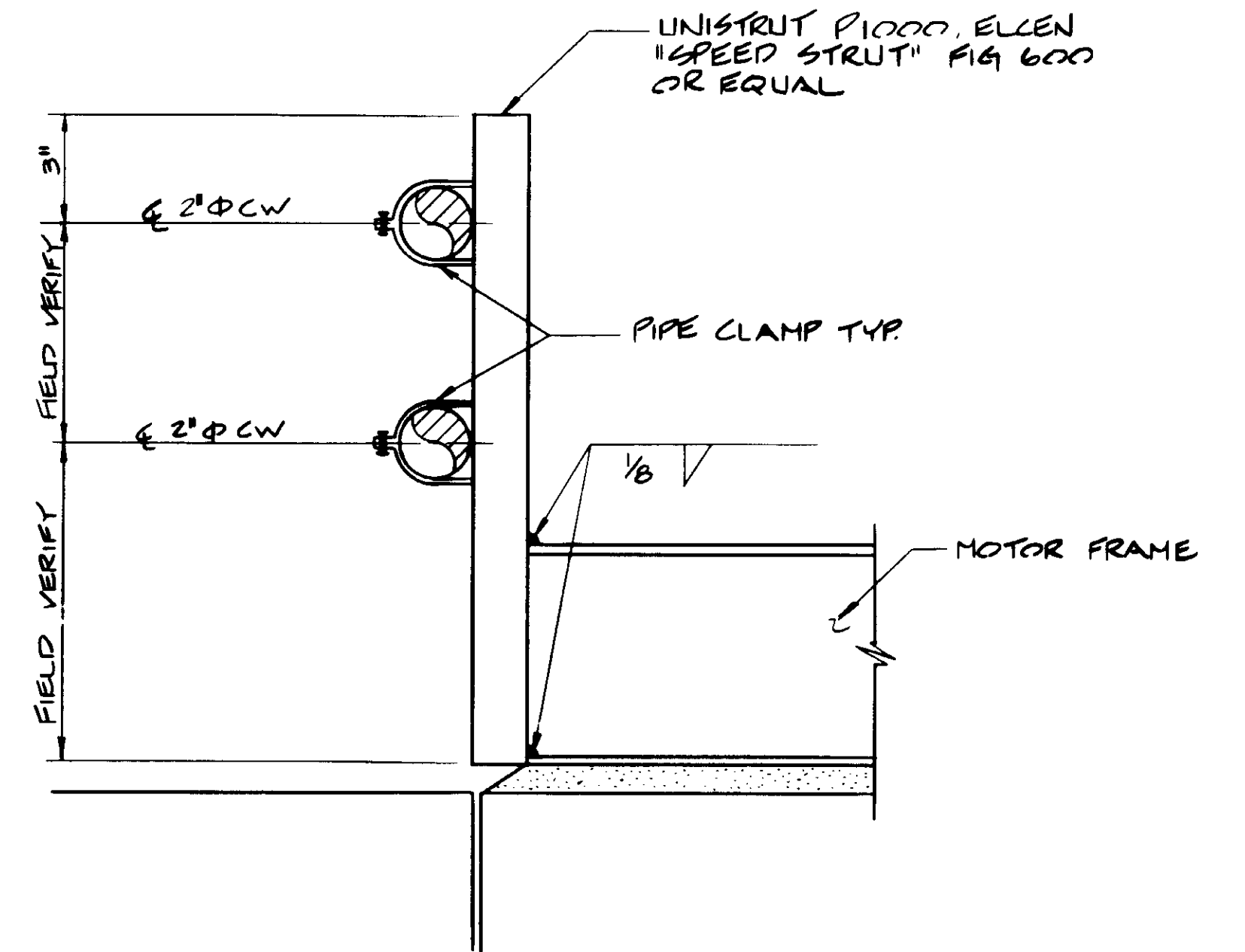


DIA	A	B	C	P	
				MIN	MAX
5"	3"	3 1/2"	2 1/2"	9 3/8"	14 3/8"
6"	3"	3 3/4"	2 1/2"	10 1/4"	15 1/4"
8"	3"	4 3/8"	2 1/2"	11 1/4"	16 1/4"
10"	3"	5 1/8"	2 1/2"	12 3/8"	17 3/8"
12"	3"	6 1/8"	2 1/2"	13 3/8"	18 3/8"
24"	6"	12 3/4"	4"	22 1/4"	27 1/4"
36"	6"	18 3/4"	4"	24 1/4"	28 3/4"

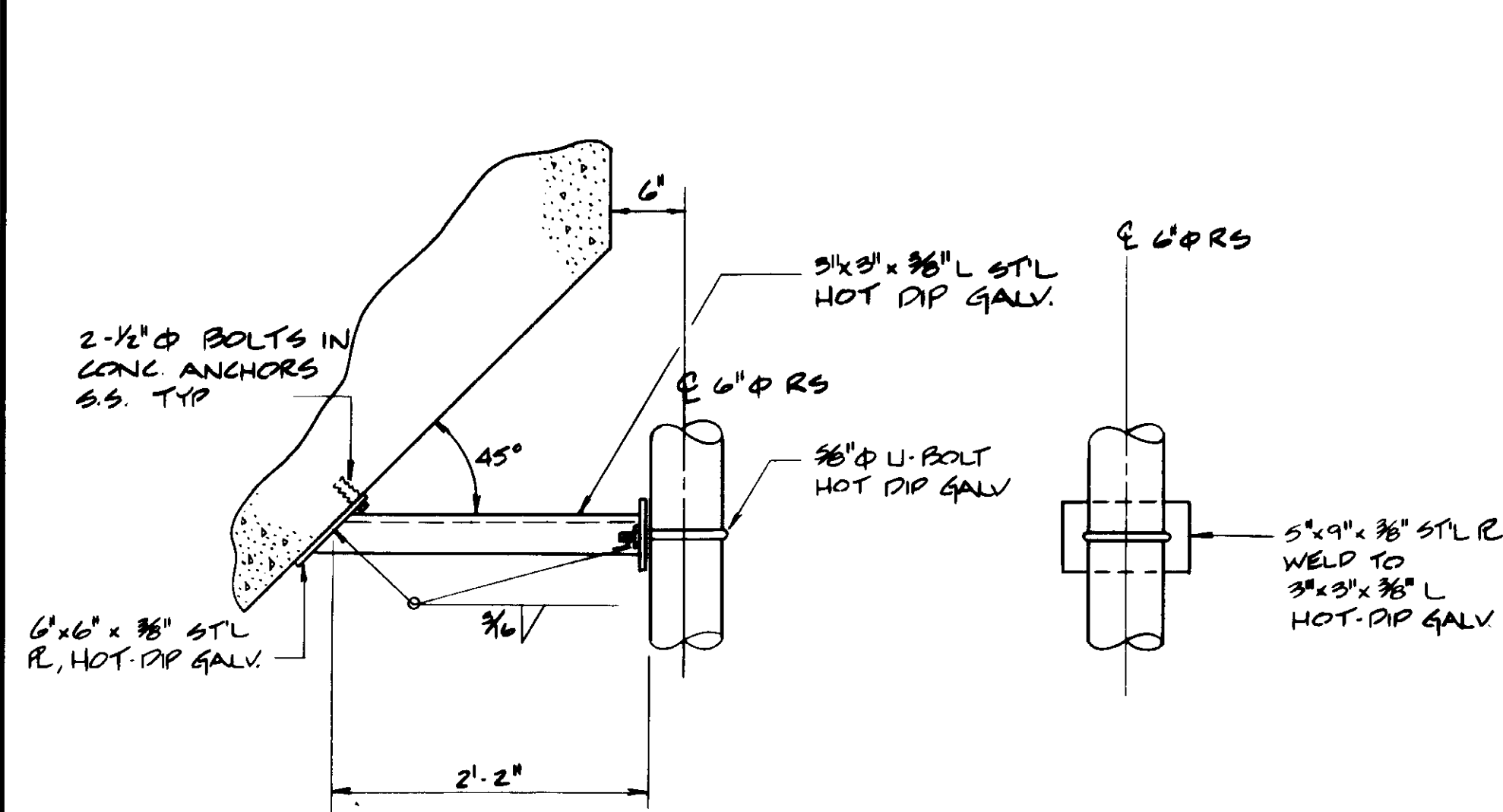
PIPE SUPPORT NO. 1



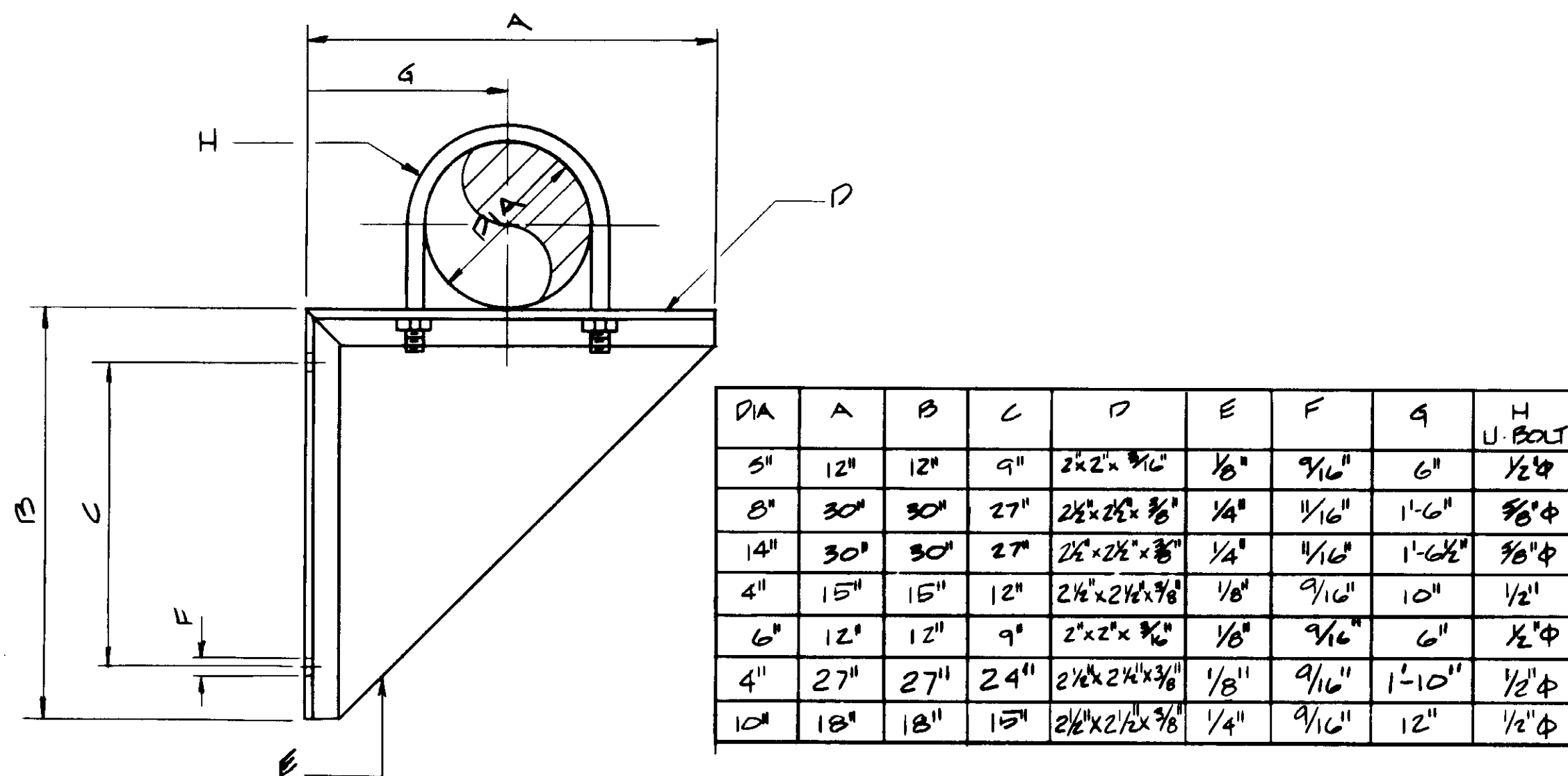
PIPE SUPPORT NO. 2



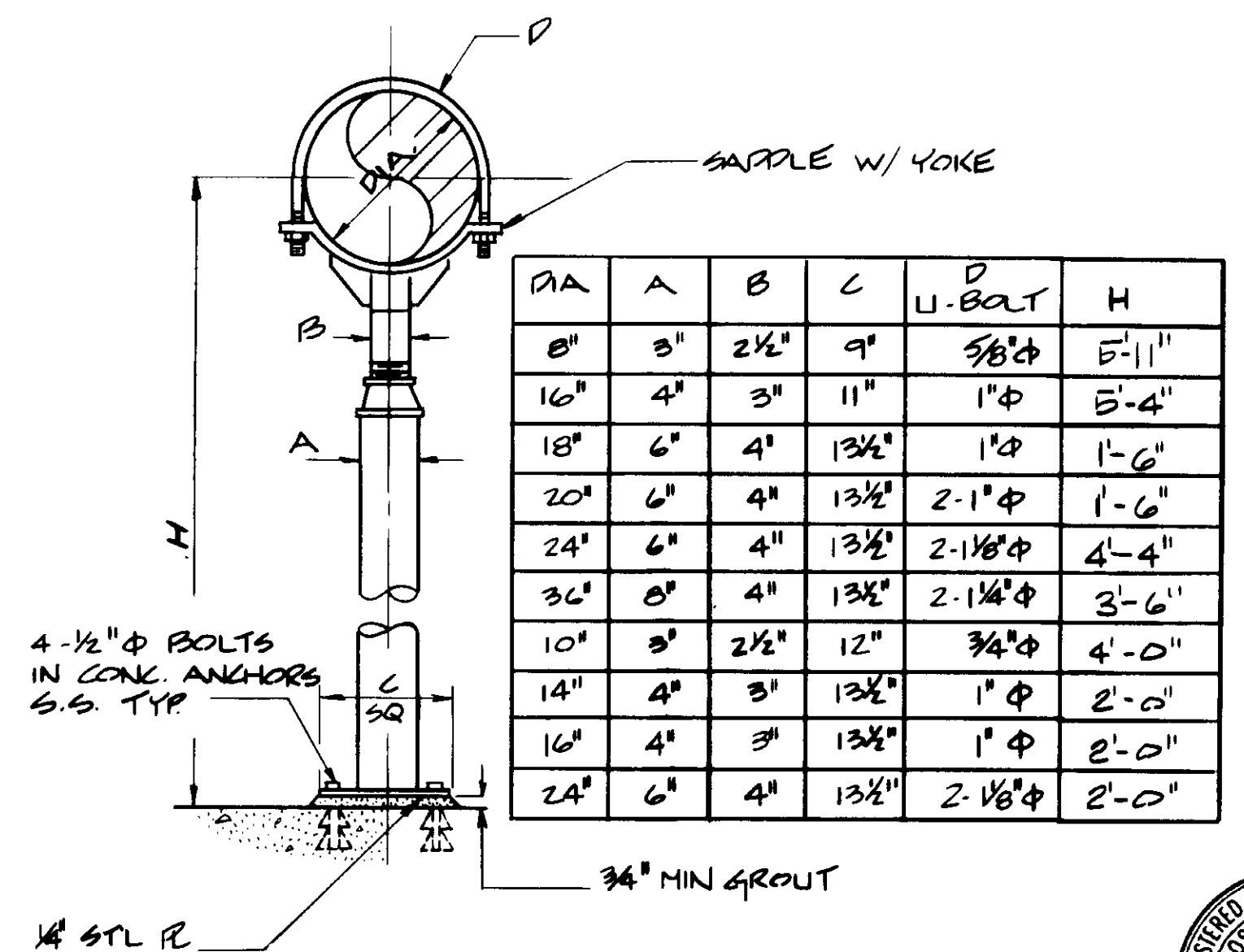
PIPE SUPPORT NO. 3



PIPE SUPPORT NO. 4



PIPE SUPPORT NO. 5



PIPE SUPPORT NO. 6

RECORD DRAWING  
 For Field Information by SHERIDAN PACIFIC CORP.  
 KATSUMURA CONSULTING ENGINEERS JUNE 1984

REV	DATE	BY	DESCRIPTION

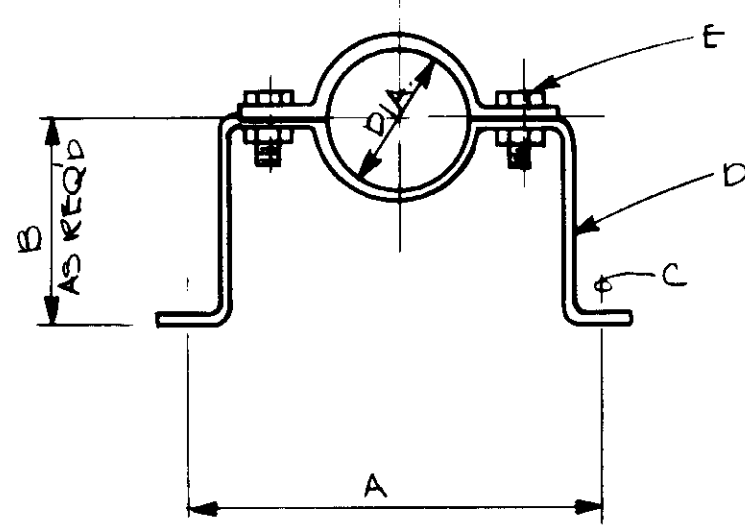
SCALE: NONE	DESIGNED: YK/CS	SUBMITTED: 8-7-87
DRAWN: YK	CHECKED: AR/JL	DATE: 8-7-87

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE SUPPORT DETAILS - I

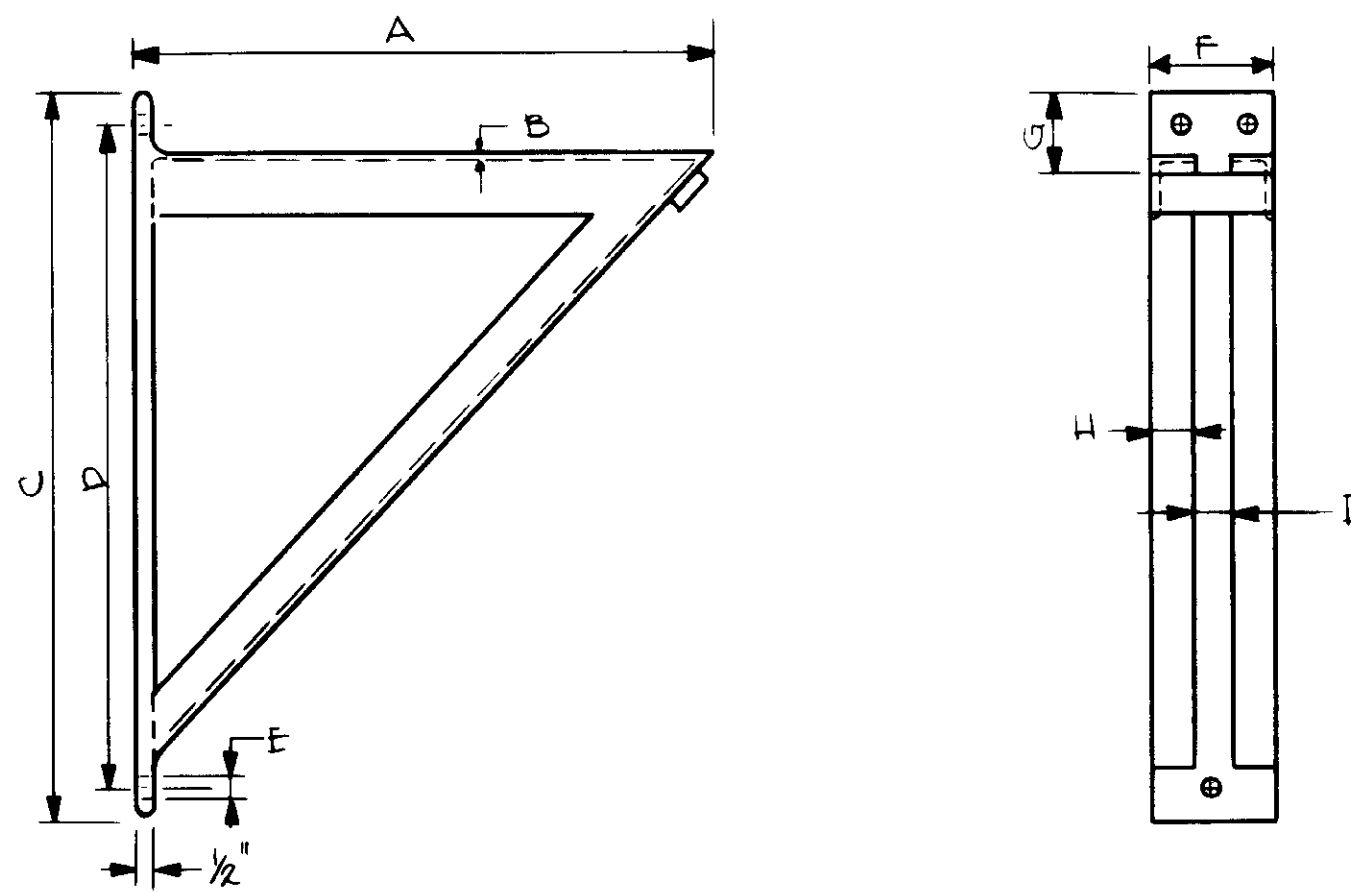
SHEET M11-1





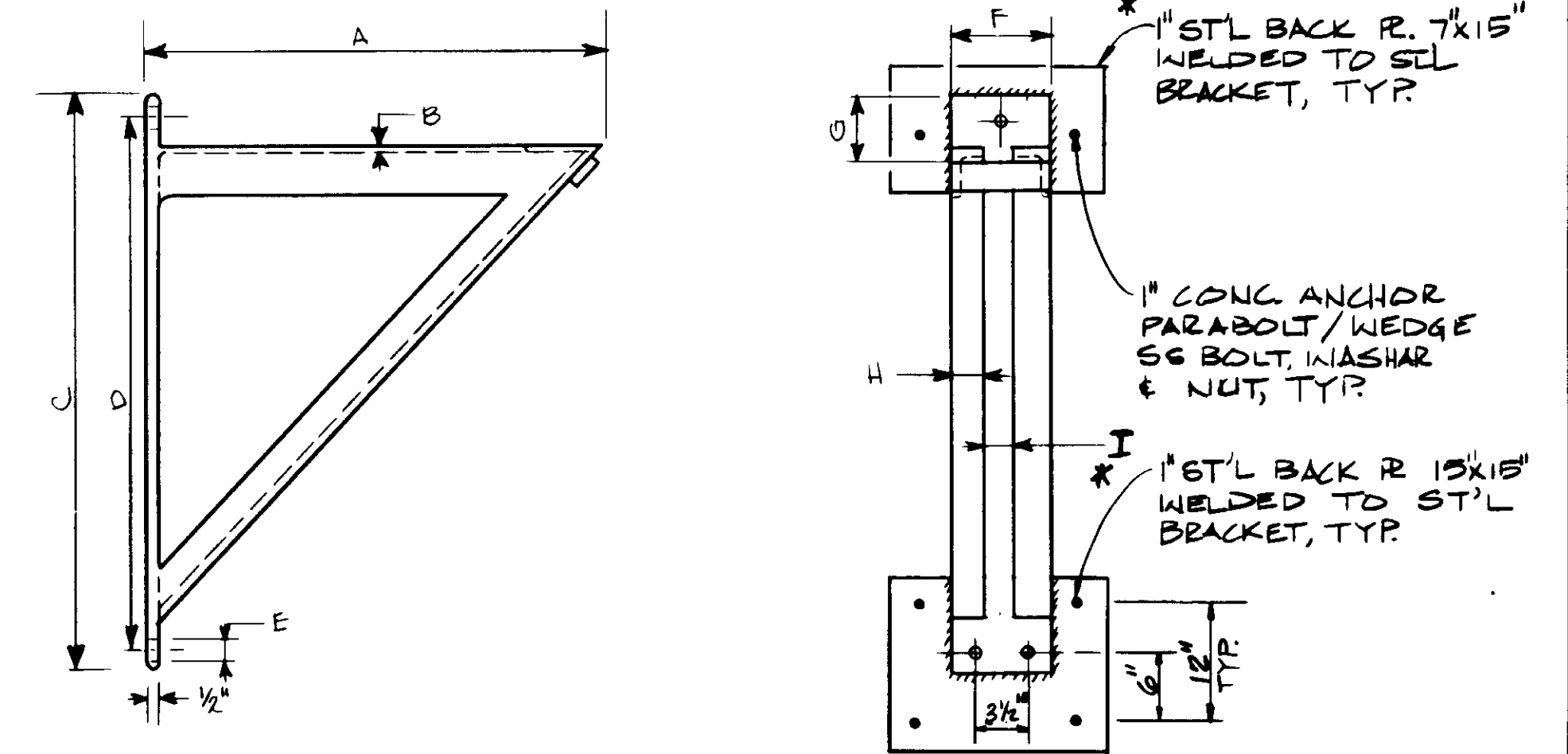
DIA	A	B	C BOLT SIZE	D STEEL SIZE	E BOLT SIZE
3/4"	7 3/4"	"AS REQUIRED"	3/8"	3/16" x 1"	3/8" x 1/4"
1"	7 9/16"		3/8"	3/16" x 1 1/4"	3/8" x 1/4"
1 1/2"	8 1/4"		3/8"	3/16" x 1 1/4"	3/8" x 1/4"
2"	9 1/8"		3/8"	3/16" x 1 1/2"	3/8" x 1/4"
3"	11 1/8"		3/8"	1/4" x 1 1/2"	3/8" x 1/4"
4"	12 1/2"		1/2"	1/4" x 1 1/2"	1/2" x 1/2"
6"	16 1/2"		1/2"	3/8" x 2"	1/2" x 1/2"
8"	18 3/8"		1/2"	3/8" x 2"	1/2" x 1 1/2"

PIPE SUPPORT NO. 7



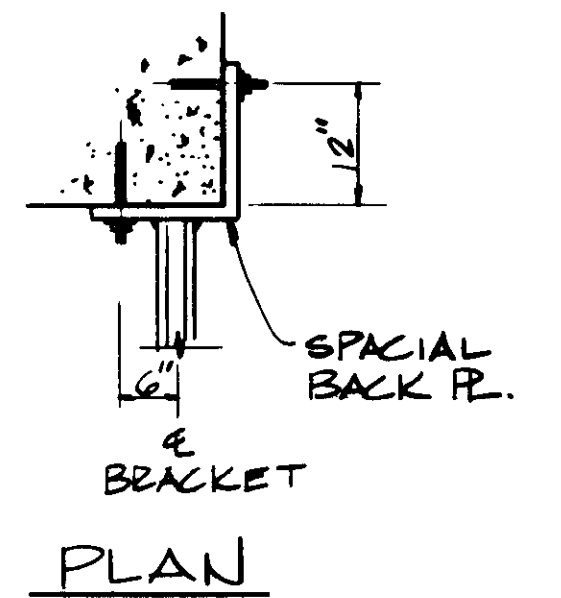
DIA	A	B	C	D	E	F	G	H	I
3"	12"	3/16"	18"	15 1/2"	1 3/16"	4"	2 1/2"	1 1/2"	1"
5"	18"	3/16"	24"	21 1/2"	1 3/16"	4 1/2"	2 1/2"	1 3/4"	1"
6"	12"	3/16"	18"	15 1/2"	1 3/16"	4"	2 1/2"	1 1/2"	1"
6"	18"	3/16"	24"	21 1/2"	1 3/16"	4 1/2"	2 1/2"	1 3/4"	1"
8"	18"	3/16"	24"	21 1/2"	1 3/16"	4 1/2"	2 1/2"	1 3/4"	1"
10"	18"	3/16"	24"	21 1/2"	1 3/16"	4 1/2"	2 1/2"	1 3/4"	1"
10"	24"	1/4"	30"	27 1/2"	1 3/16"	5"	2 1/2"	2"	1"

PIPE SUPPORT NO. 8

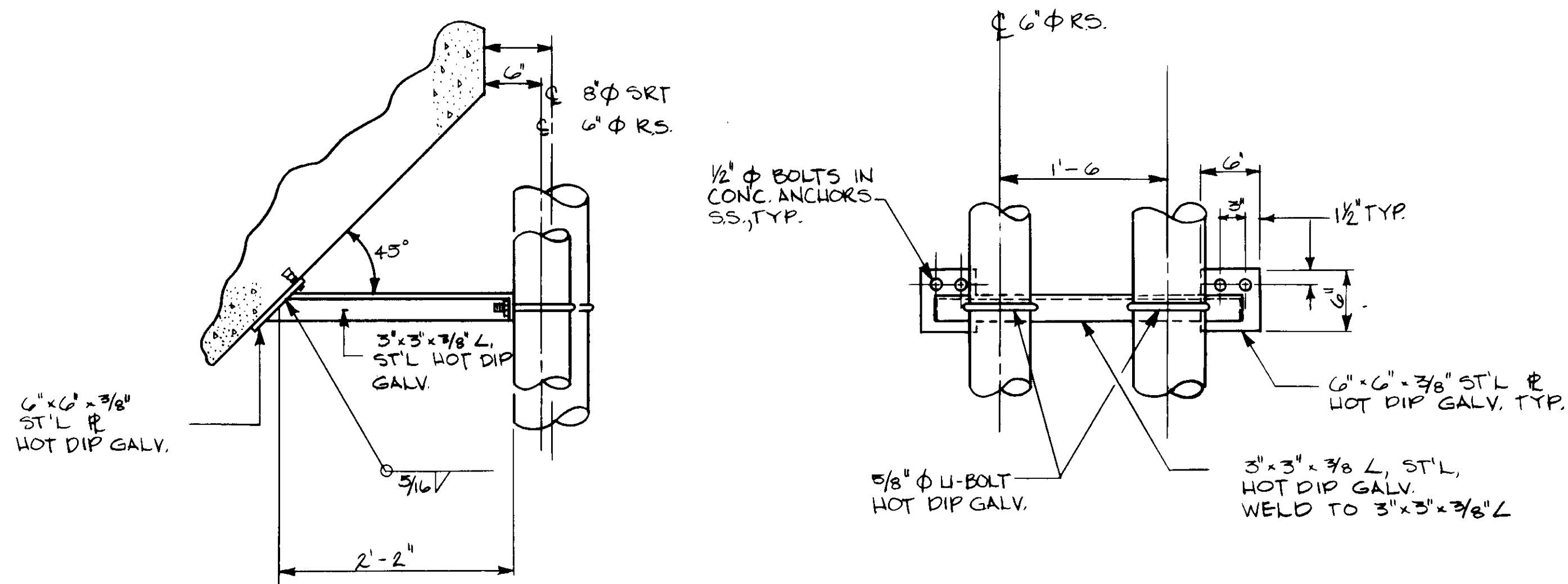


DIA	A	B	C	D	E	F	G	H	I
24"	36"	3/8"	42"	39"	1 1/16"	6"	3"	2 1/4"	1"
* 24"	42"	3/8"	50"	46"	1 1/16"	6"	3 1/2"	2 1/2"	1"

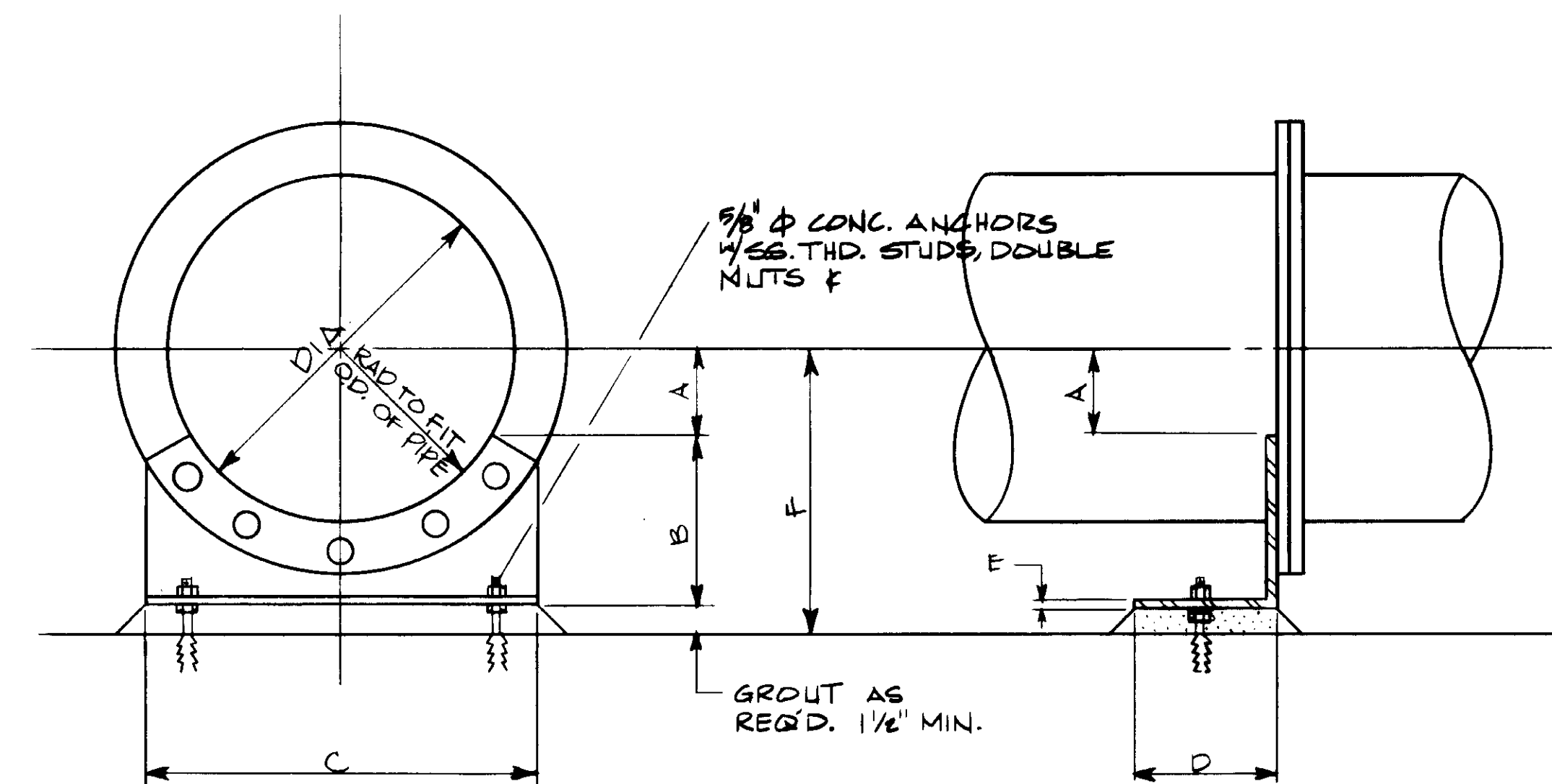
PIPE SUPPORT NO. 9



PLAN



PIPE SUPPORT NO. 10



PIPE SUPPORT NO. 11

DIA	A	B	C	D	E	F
24"	6"	1 1/2"	28"	4"	3/8"	1'-0"
30"	7 1/2"	1'-4"	34 1/2"	4"	1/2"	2'-0"
30"	7 1/2"	1'-2"	34 1/2"	4"	1/2"	1'-10"
36"	9"	1'-2 1/2"	42"	6"	3/8"	2'-0"

04161



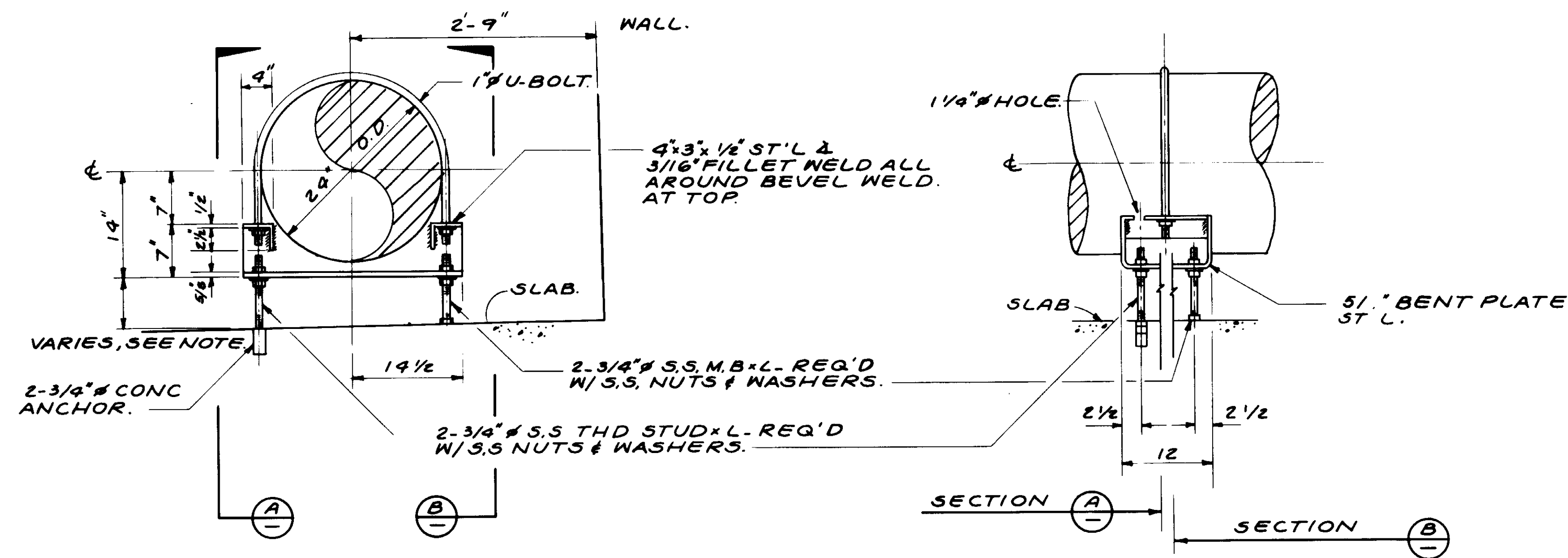
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: NONE	DESIGNED: YK/CS	SUBMITTED: 8-7-87
DRAWN: YK	CHECKED: YK	DATE: 8-7-87

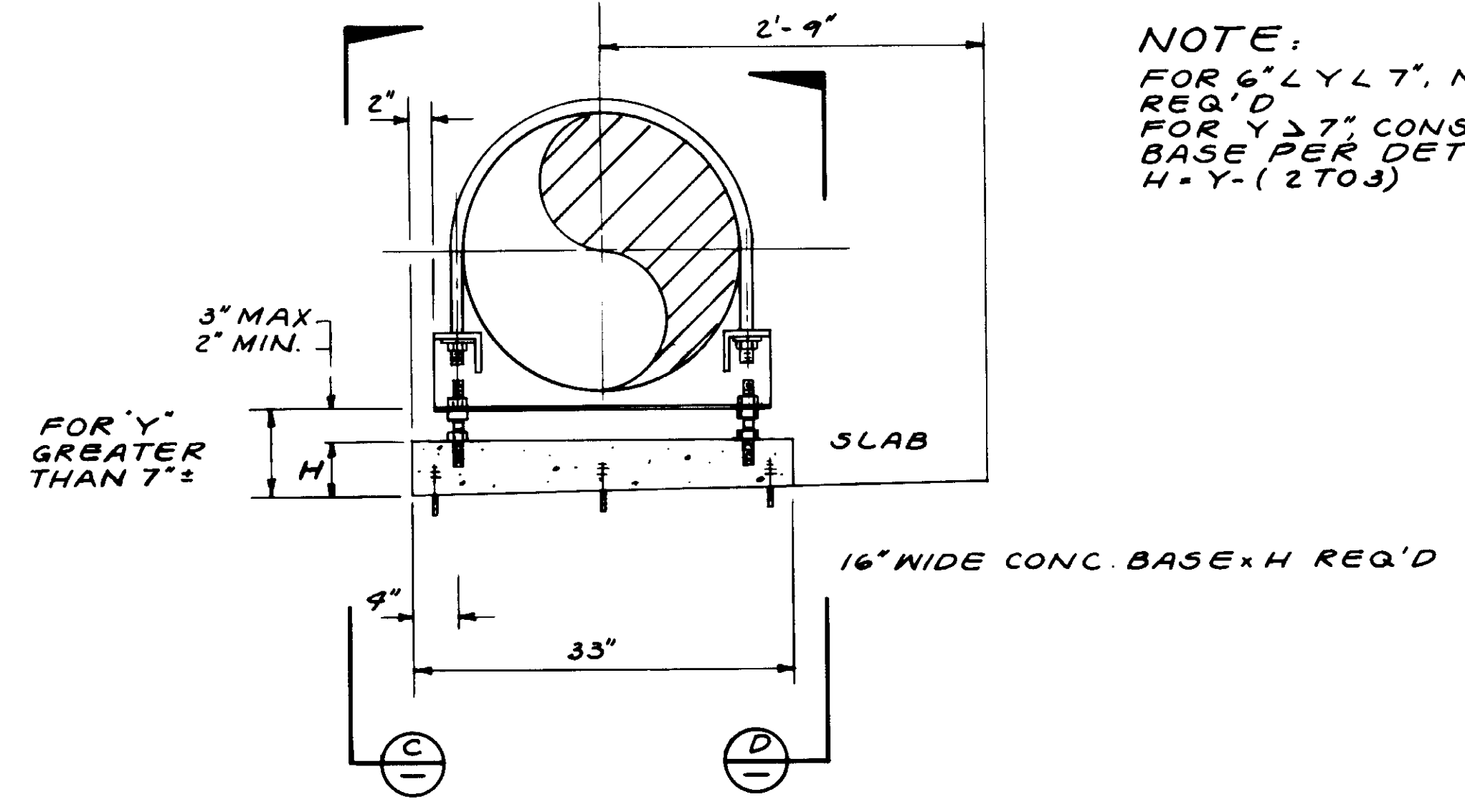
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE SUPPORT DETAILS - II

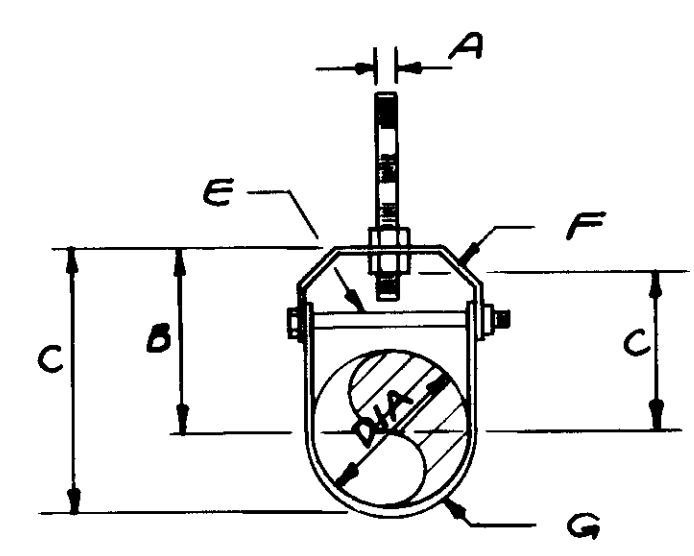
SHEET  
**M11-2**



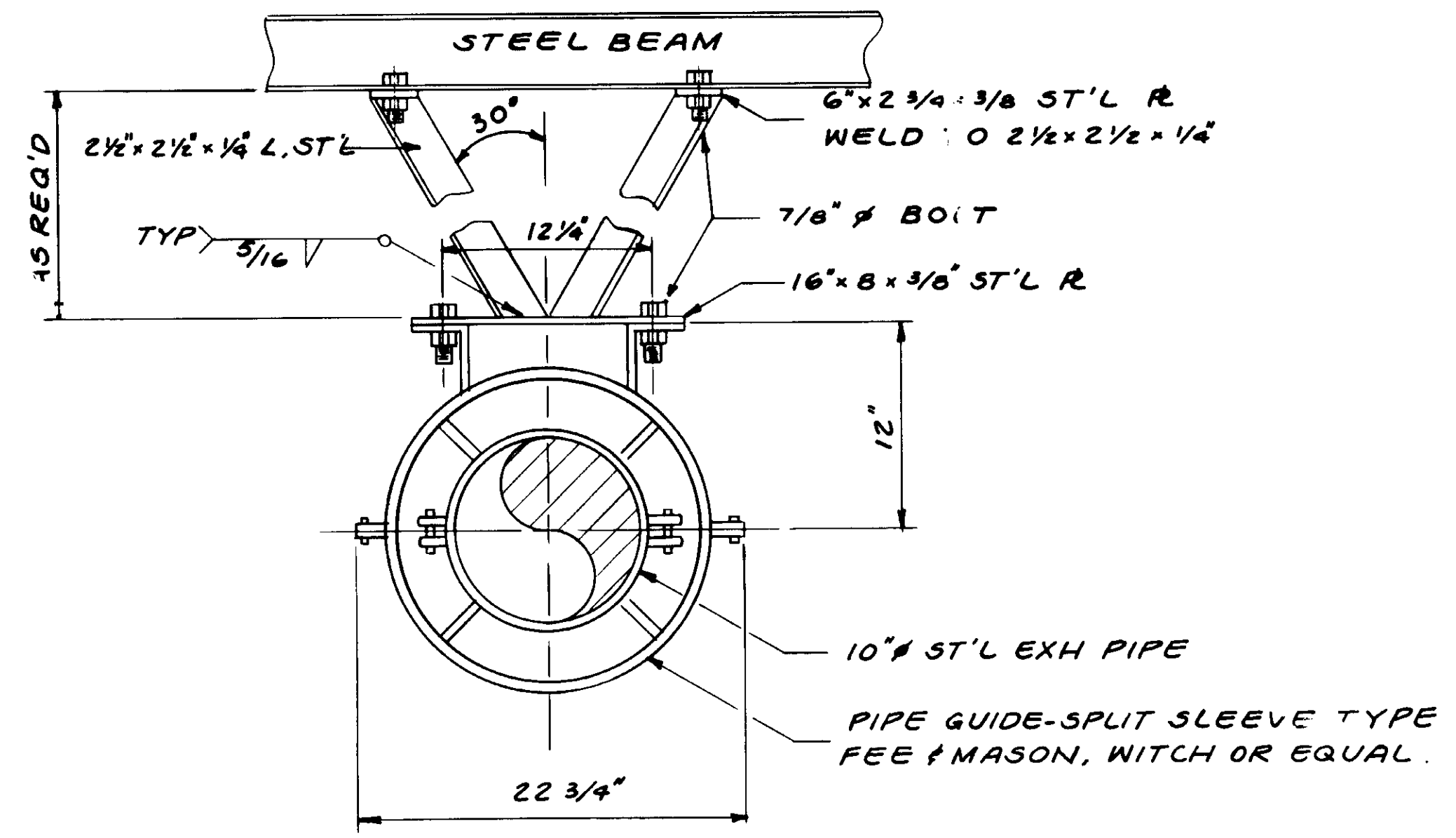
PIPE SUPPORT NO. 12



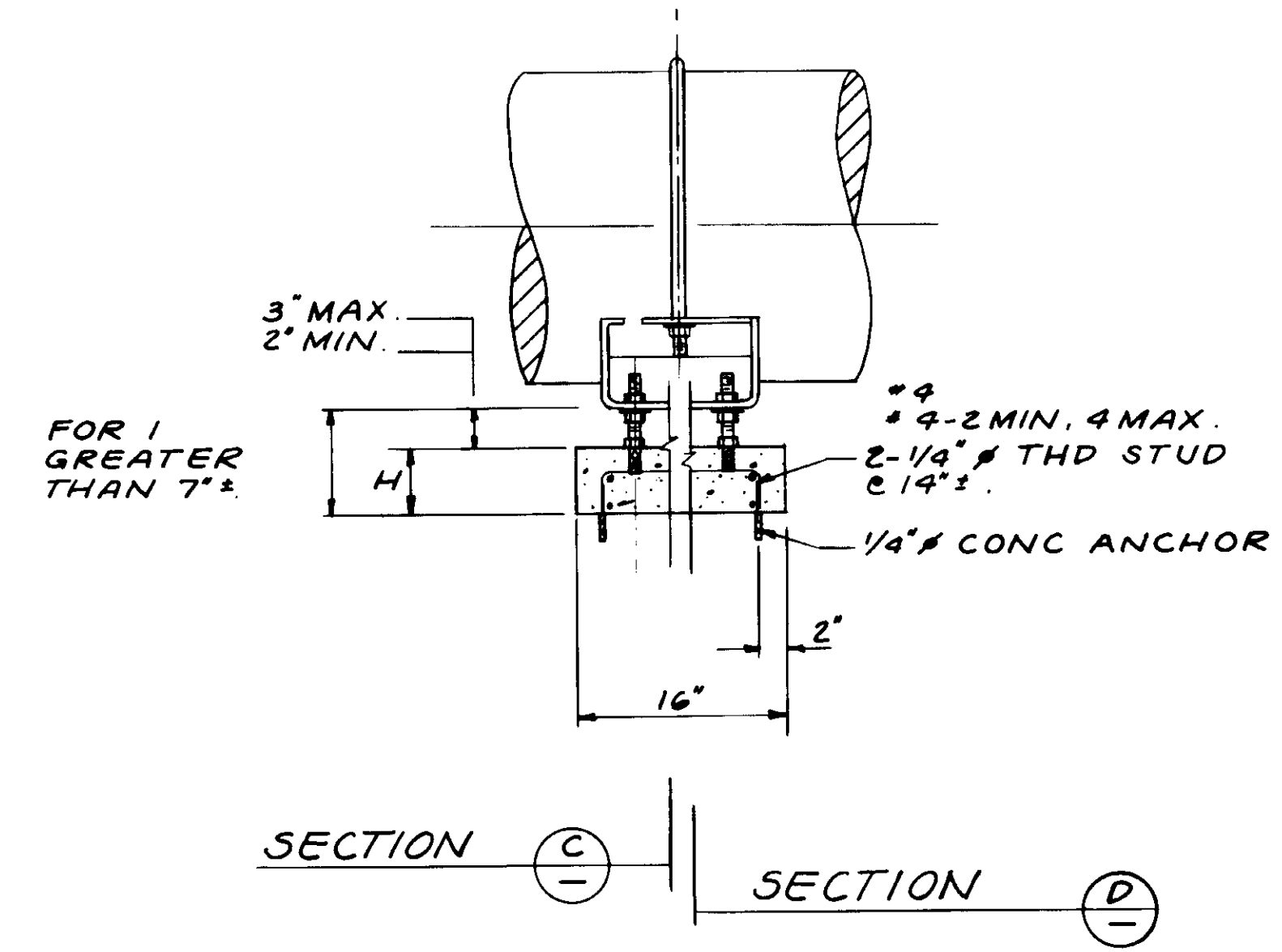
NOTE:  
 FOR 6" L Y L 7", NO CONC. BASE REQ'D  
 FOR Y > 7" CONSTRUCT CONC. BASE PER DETAIL.  
 H = Y - (2 TO 3)



PIPE SUPPORT NO. 14

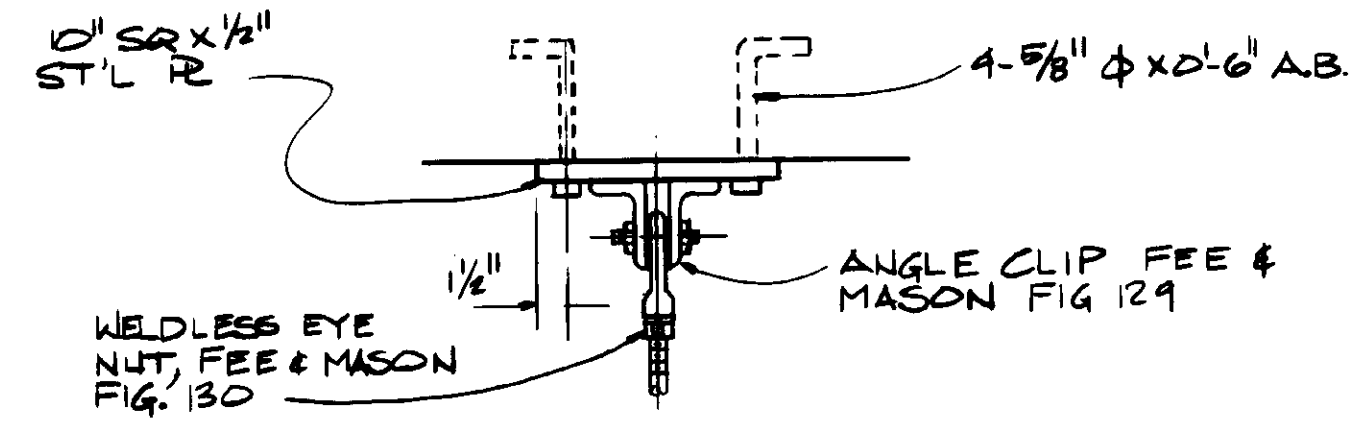


PIPE SUPPORT NO. 15



PIPE SUPPORT NO. 13

DIA	A	B	C	D	E	F	G
3"	1/2"	4 1/4"	6"	3 1/16"	1/4"	1/8" x 1 1/4"	1/8" x 1 1/4"
6"	3/4"	7"	10 1/2"	5 3/4"	1/2"	1/4" x 1 1/2"	1/4" x 1 1/2"

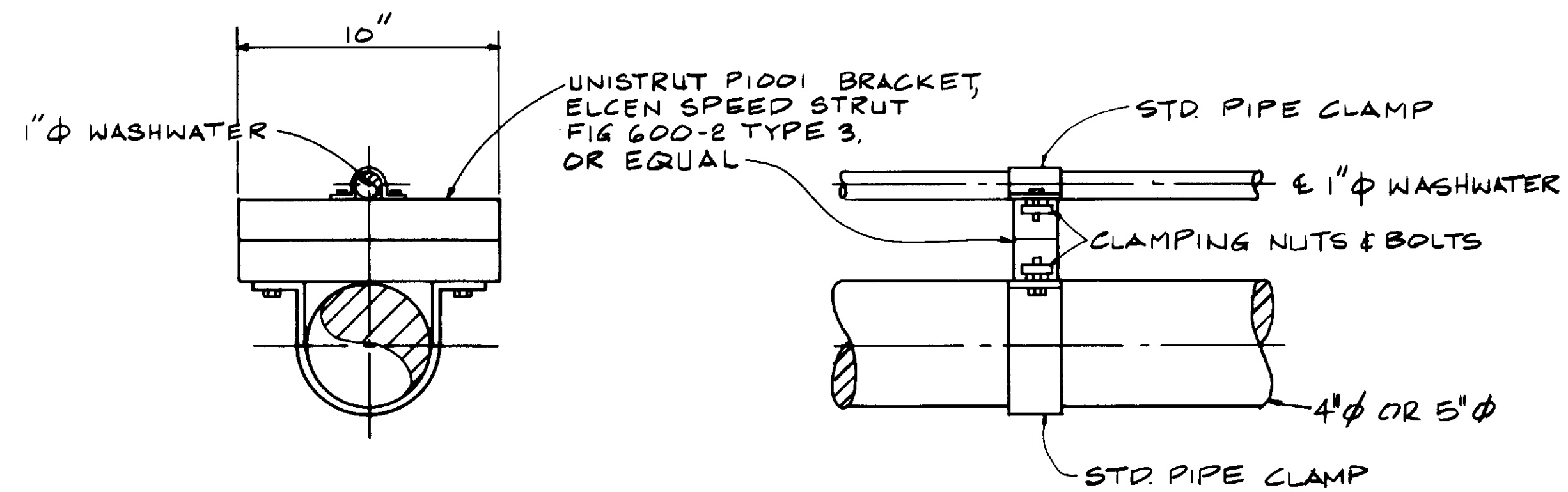


04162

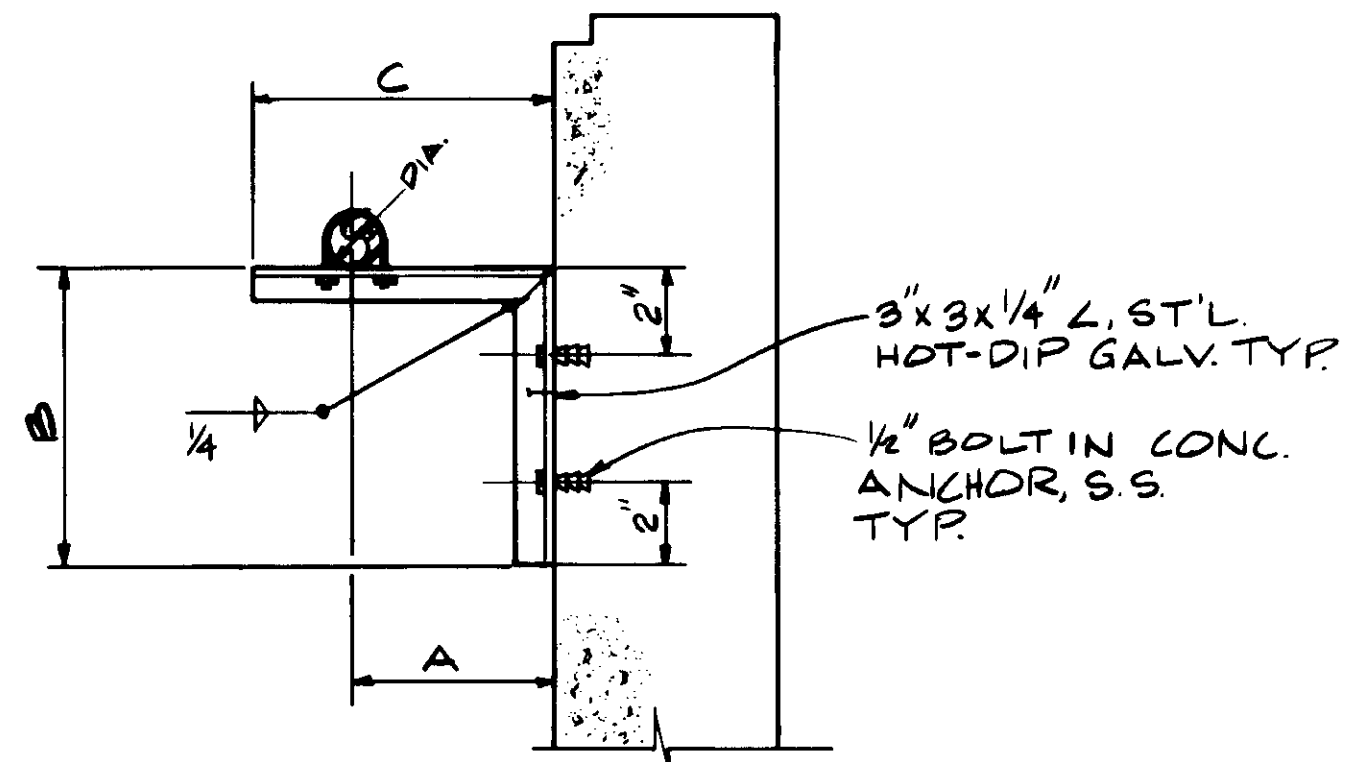
RECORD DRAWINGS  
 PREPARED BY KATSUMI KATSUKI  
 KATSUKI CONSULTING ENGINEERS JUNE 1988



SCALE: NO SCALE		DESIGNED: D.N.	CHECKED: Y.K.	SUBMITTED: 8-7-87		KALEX ENGINEERS Katsura Consulting Engineers / Alexander Engineers Ventura, California / Glendora, California		LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III		SHEET M11-3
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION	PIPE SUPPORT DETAILS - III		

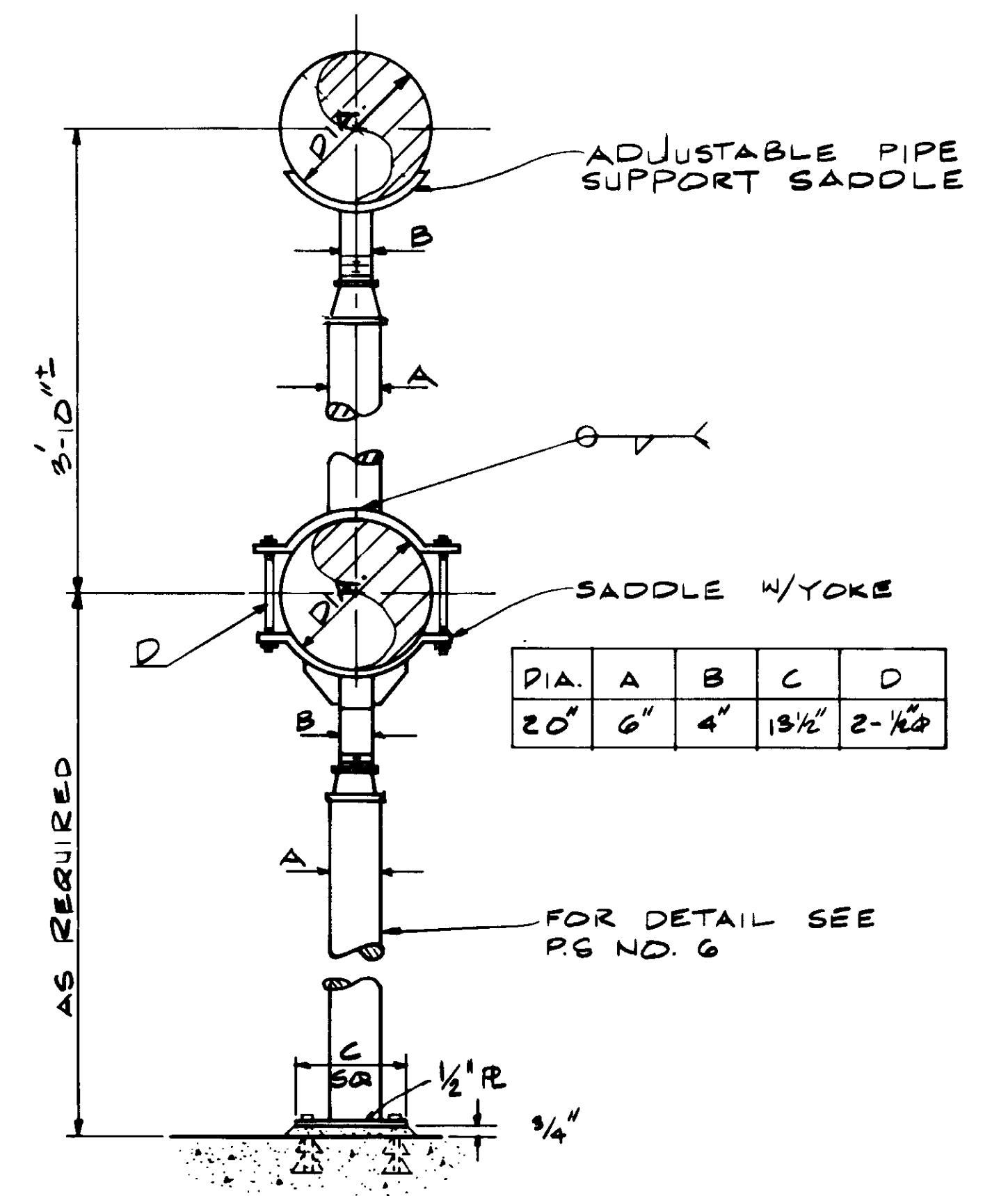


PIPE SUPPORT NO. 16

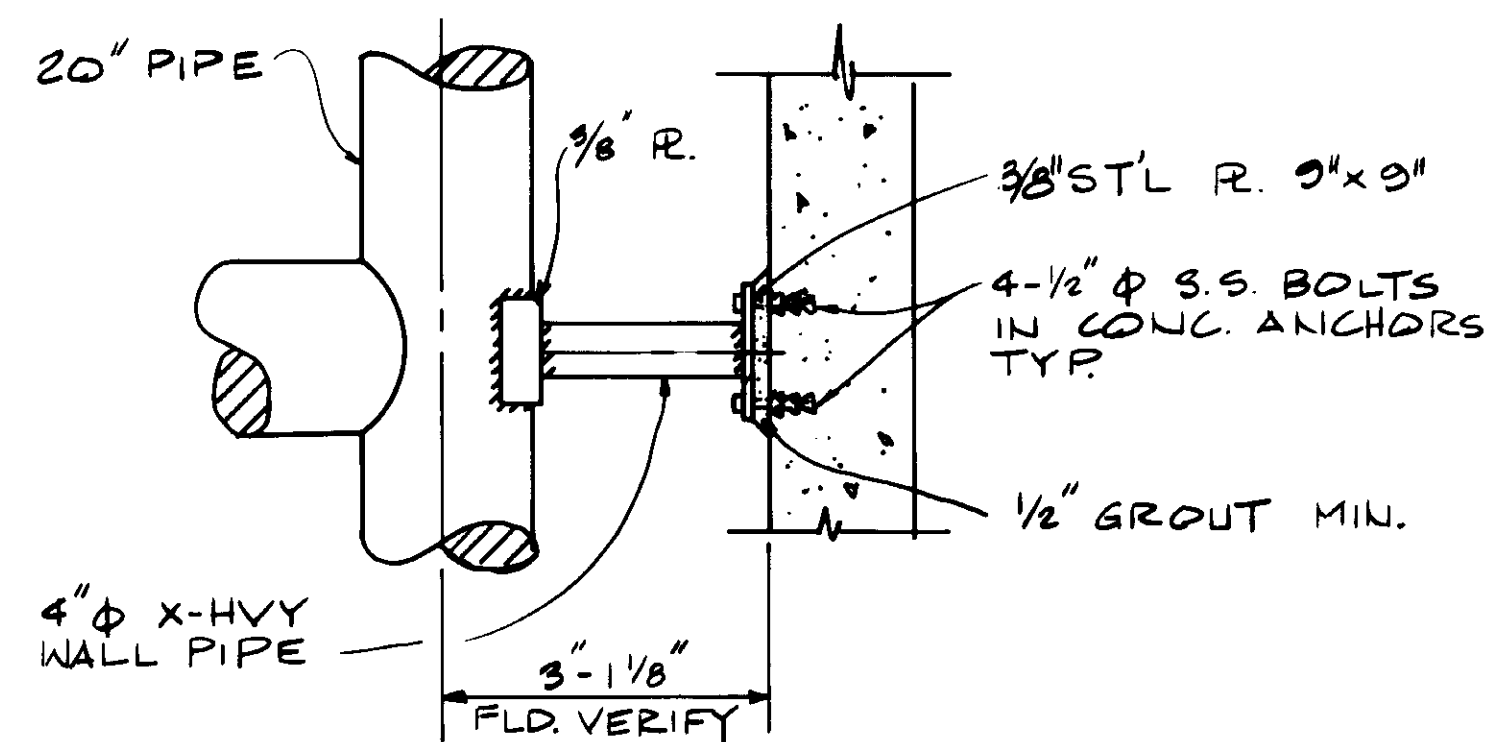


DIA.	A	B	C	U-BOLT Φ
3"	6"	10"	12"	1/2"
4"	6"	10"	13"	1/2"

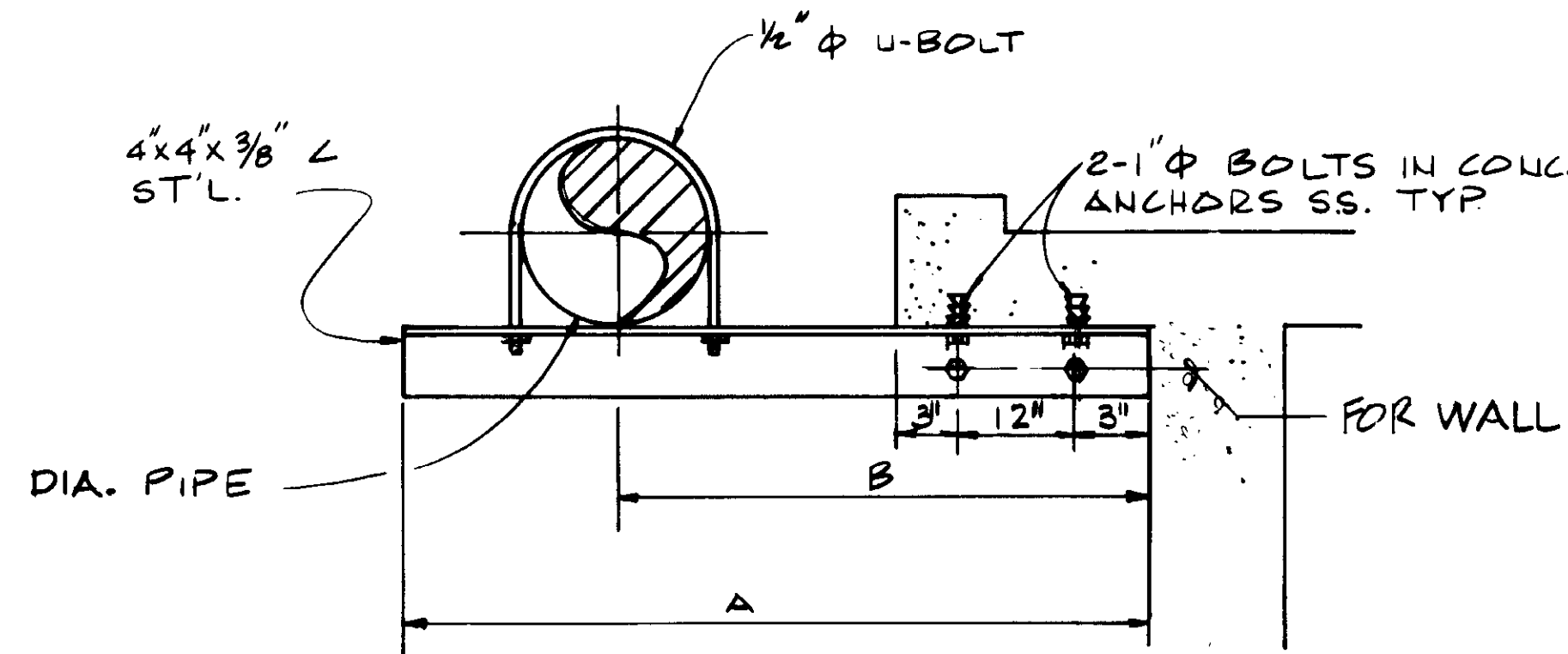
PIPE SUPPORT NO. 17



PIPE SUPPORT NO. 18

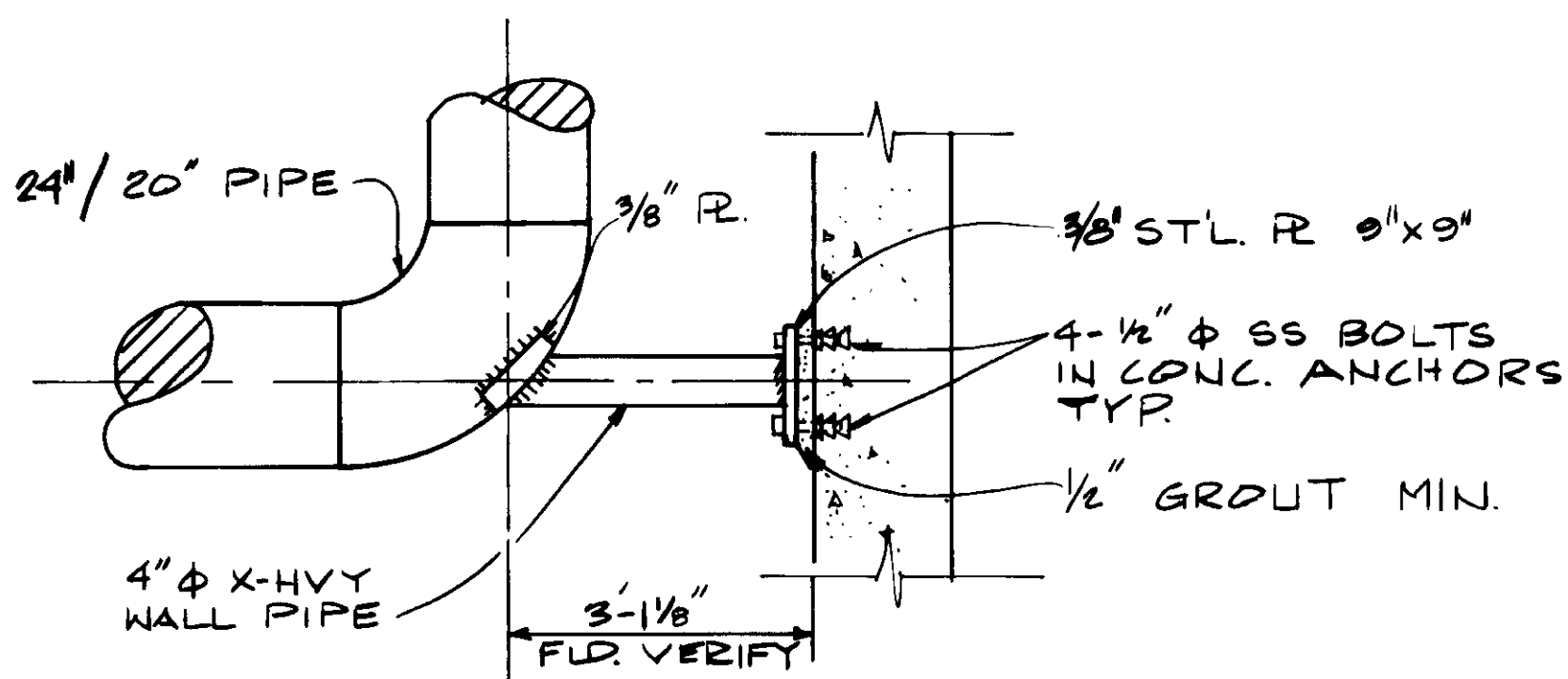


PIPE SUPPORT NO. 19

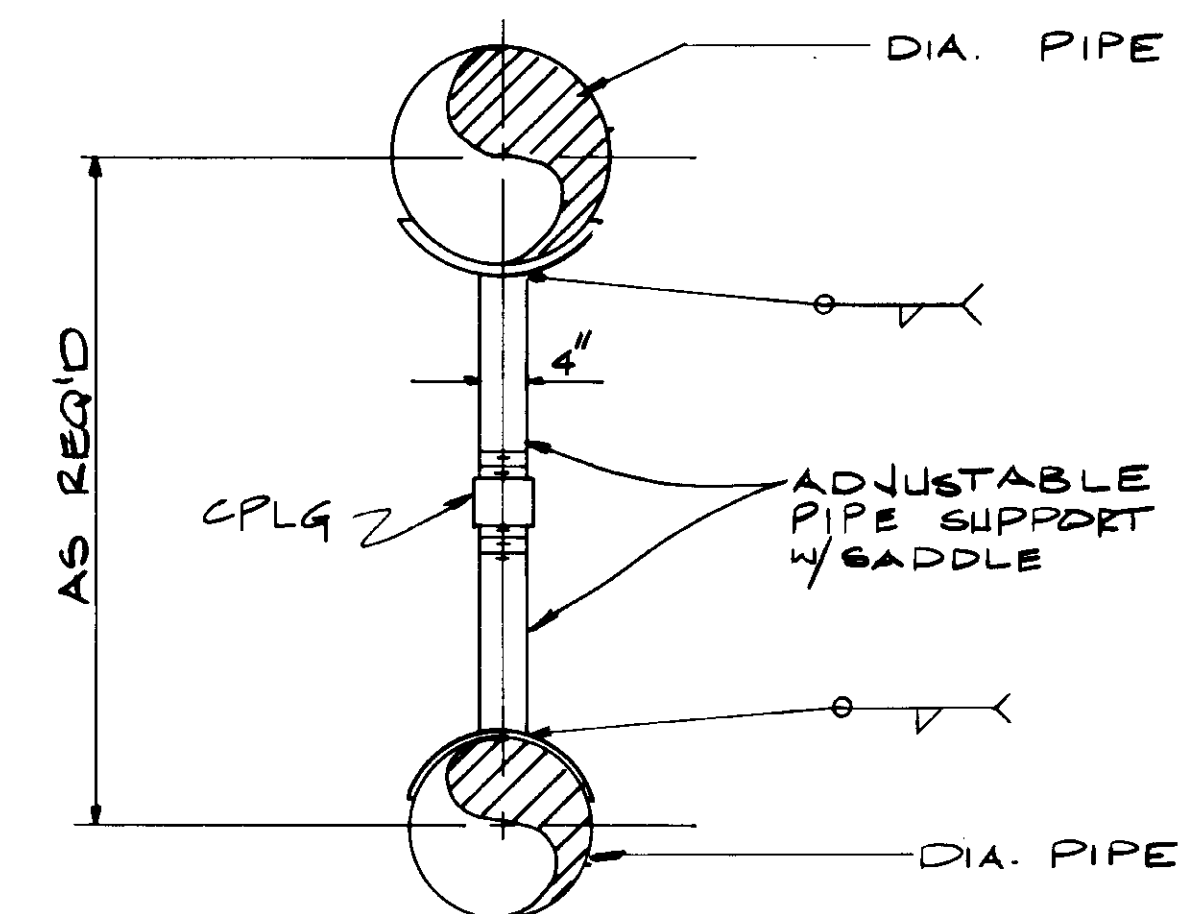


DIA.	A	B
24"	4'-6"	3'-0"
24"	3'-0"	3'-6"

PIPE SUPPORT NO. 21



PIPE SUPPORT NO. 20



PIPE SUPPORT NO. 22

04163

RECORD DRAWING  
 For File Intentionally By KATSUMI PACIFIC CORP.  
 KATSUMI CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

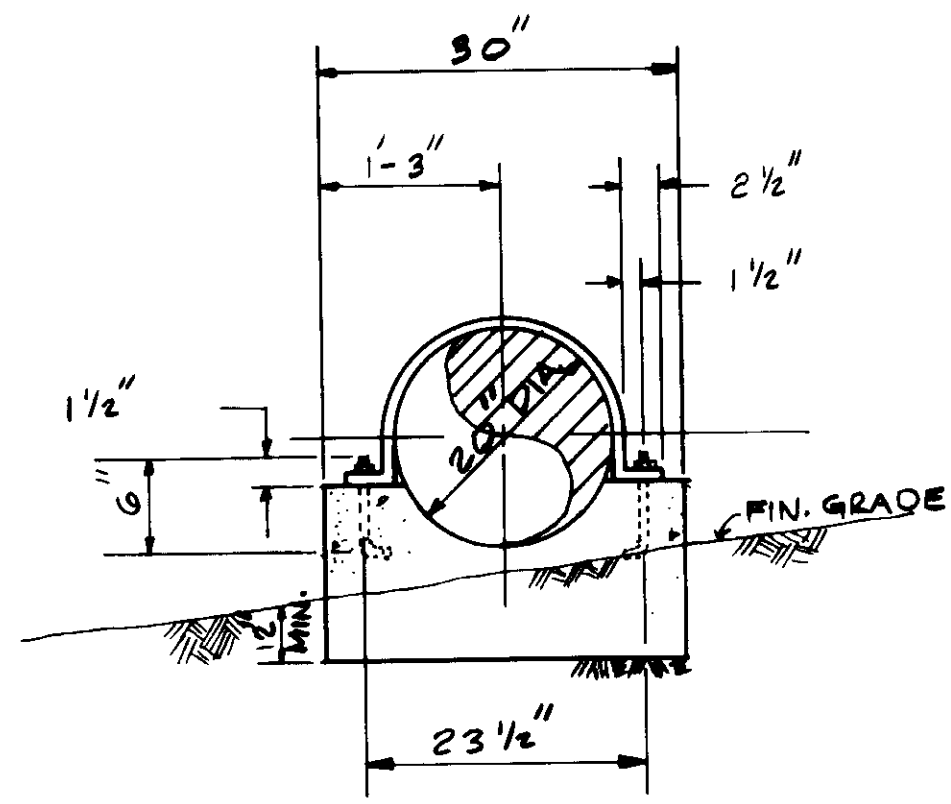
SCALE:	YK/CS.	SUBMITTED:	14038 8-7-87
DESIGNED:	CL.	DESIGNED BY:	KATSUMI CONSULTING ENGINEERS R.C.E. NO. DATE
DRAWN:	CS.	CHECKED:	ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

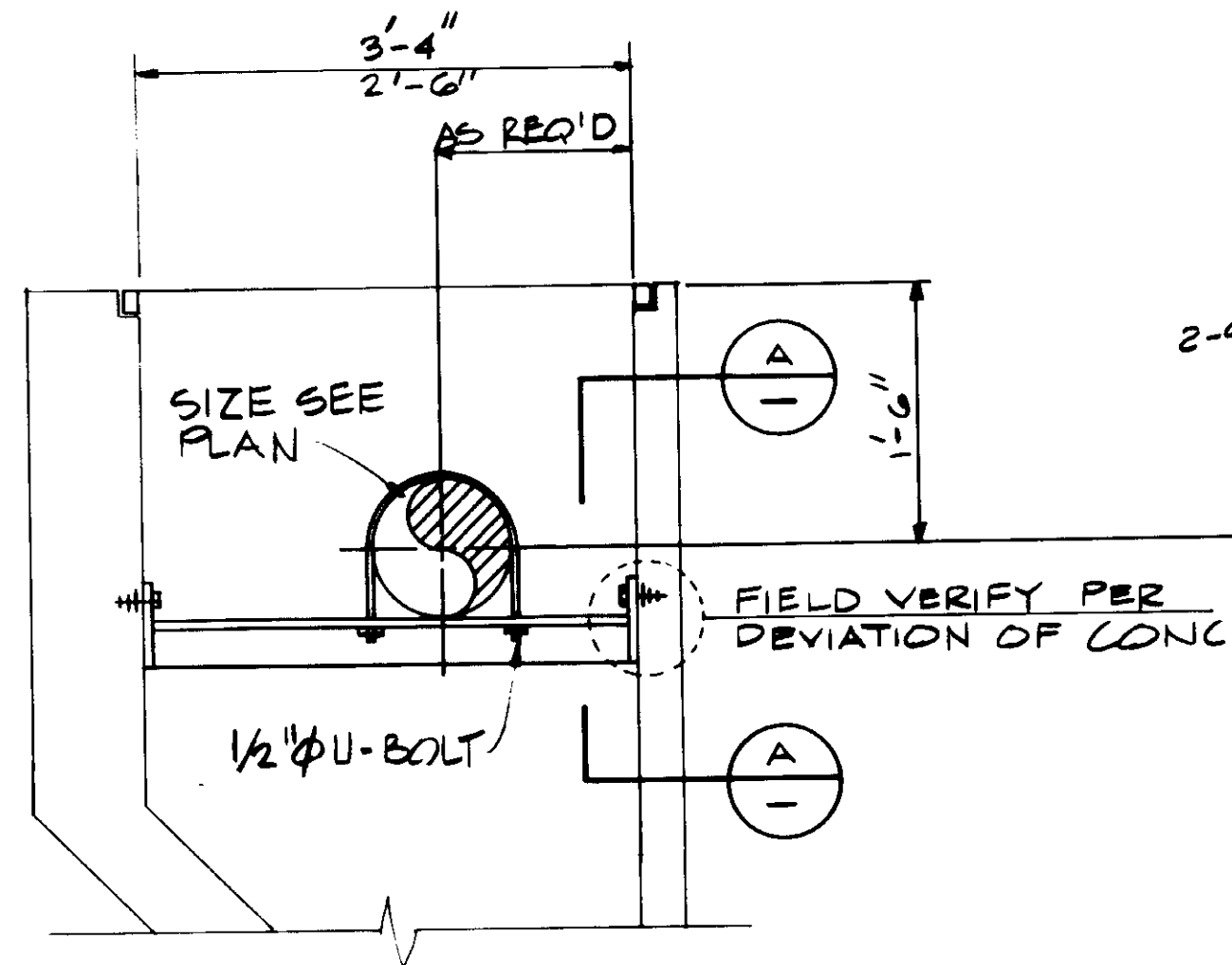
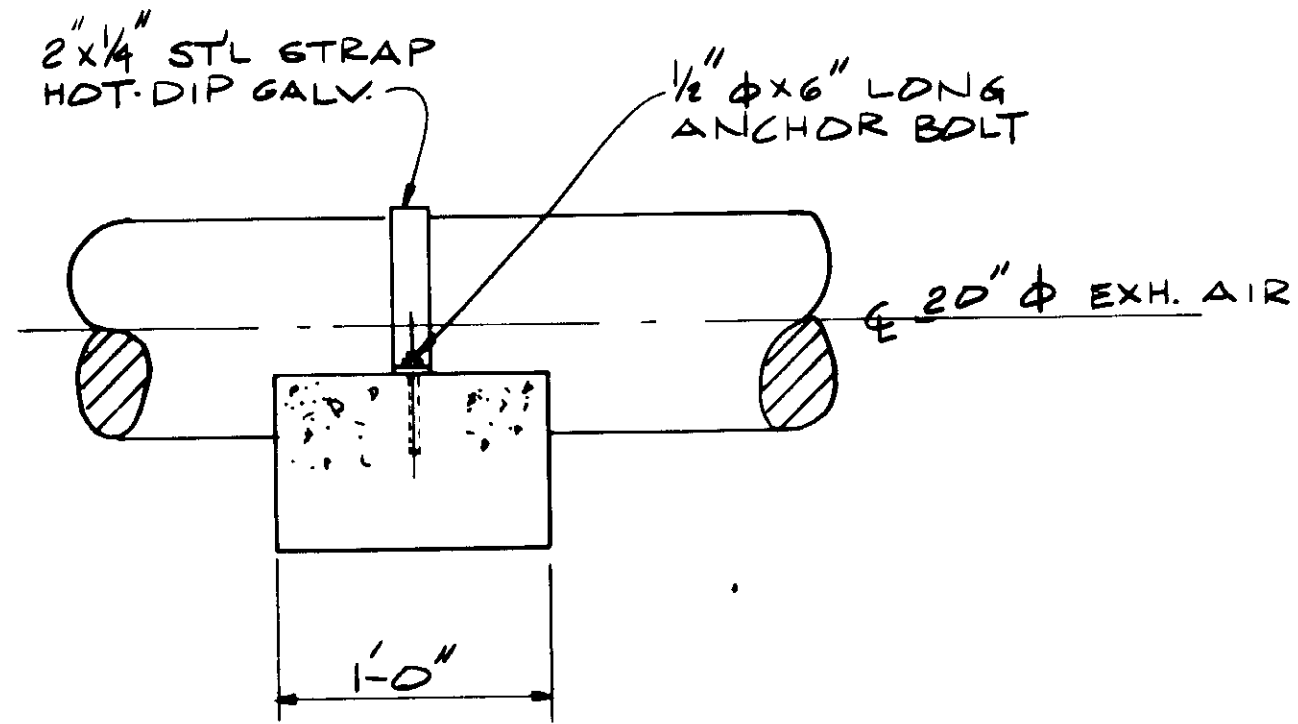
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE SUPPORT DETAILS-IV

SHEET  
 M11-4

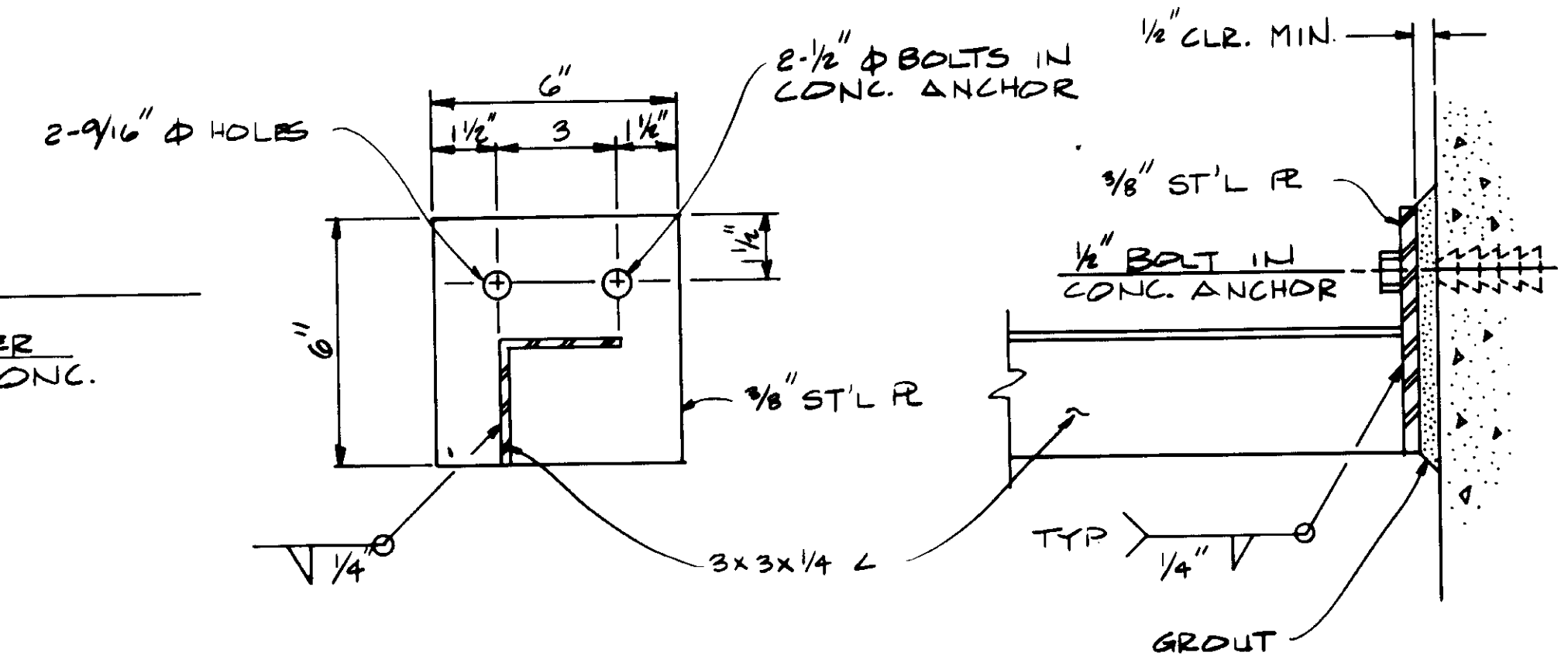




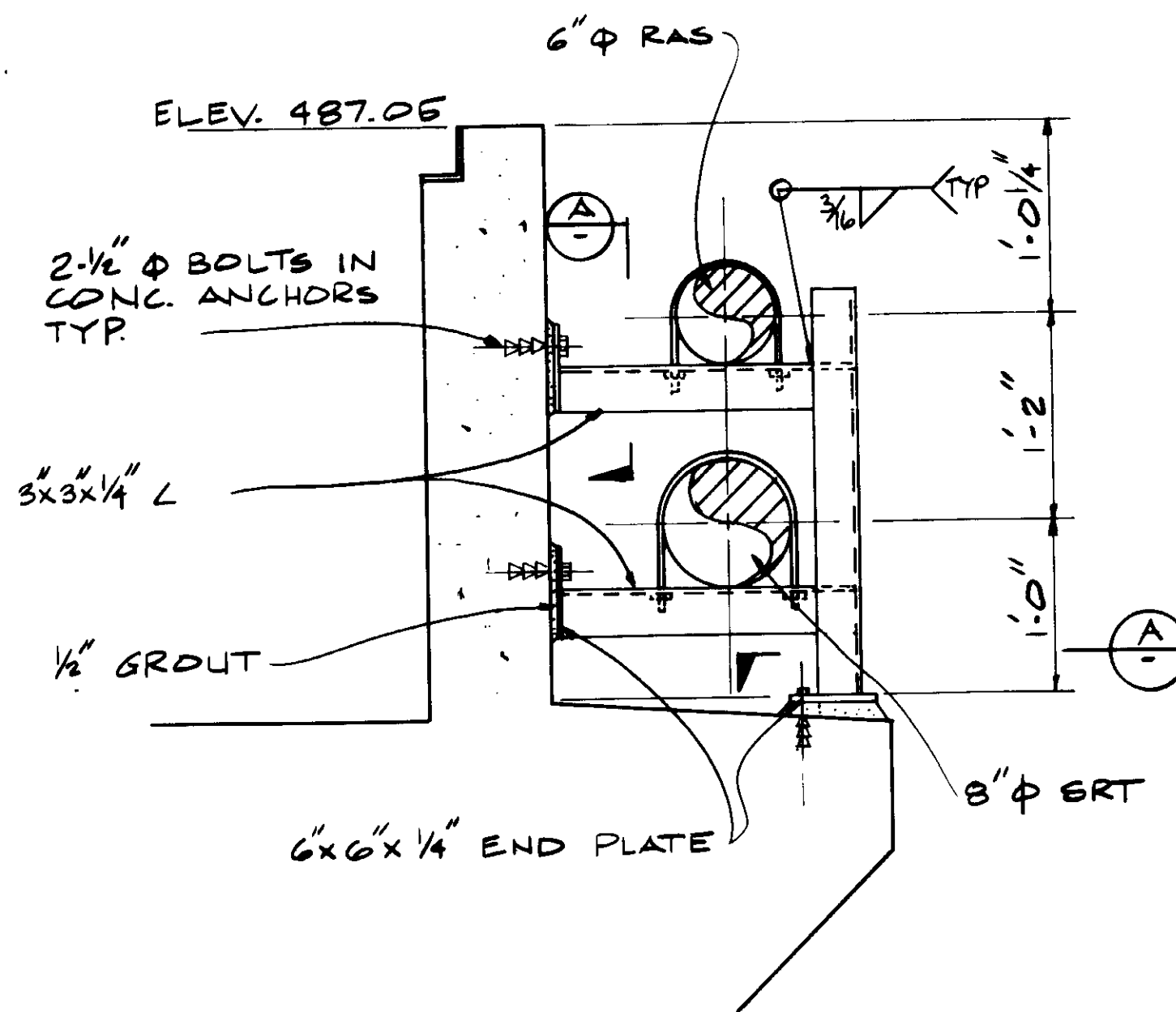
PIPE SUPPORT NO. 23



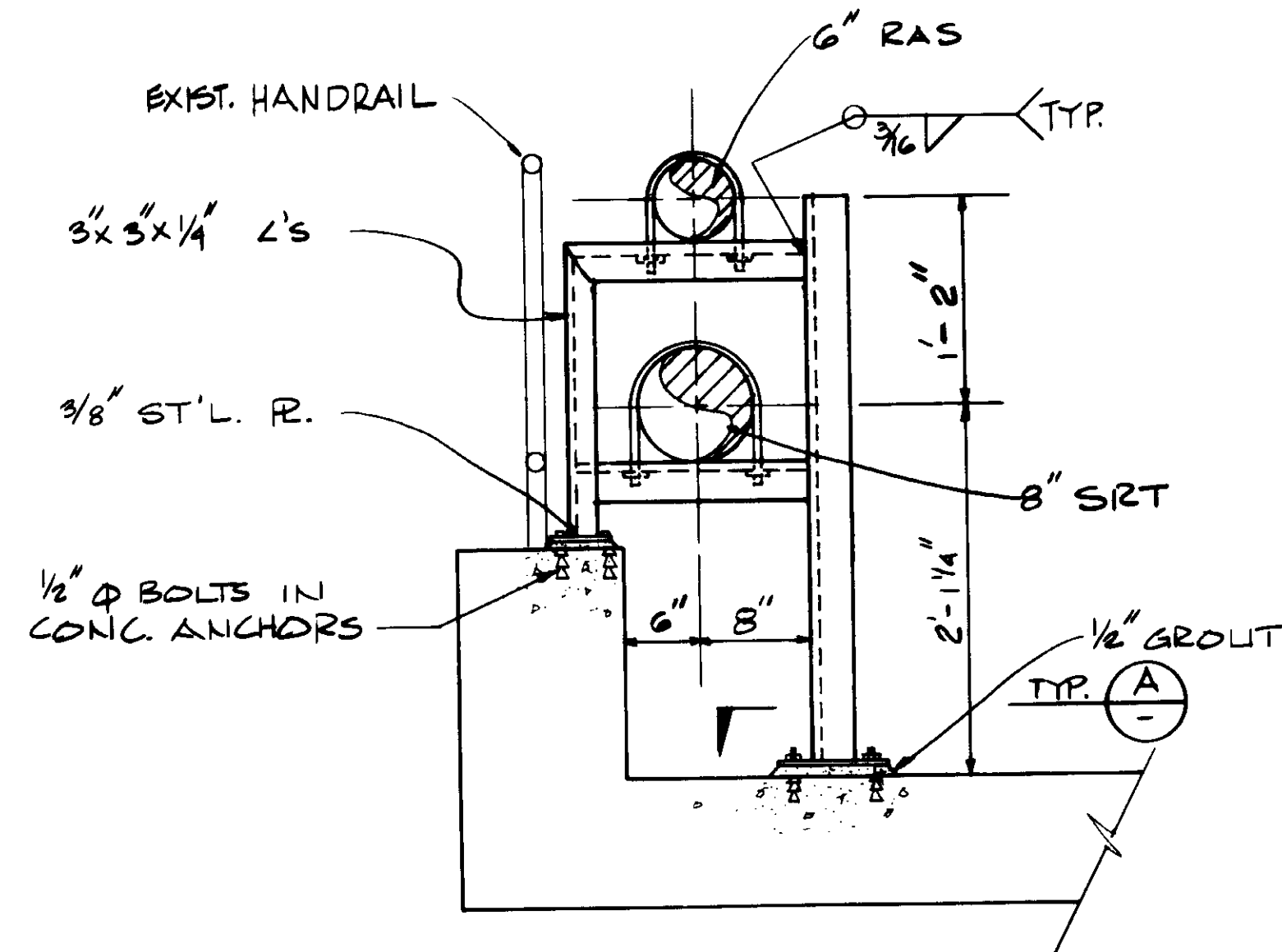
PIPE SUPPORT NO. 24



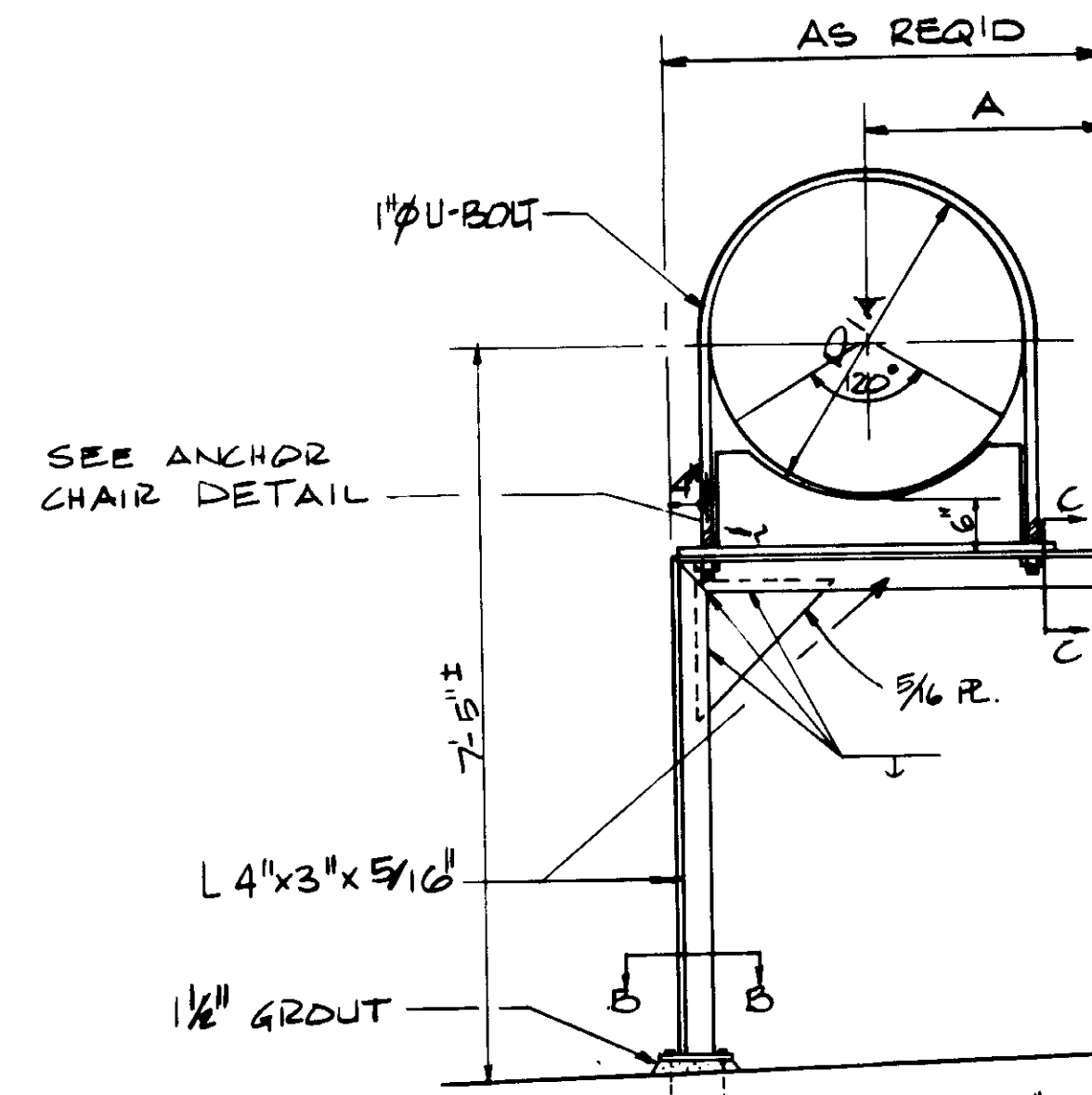
SECTION A



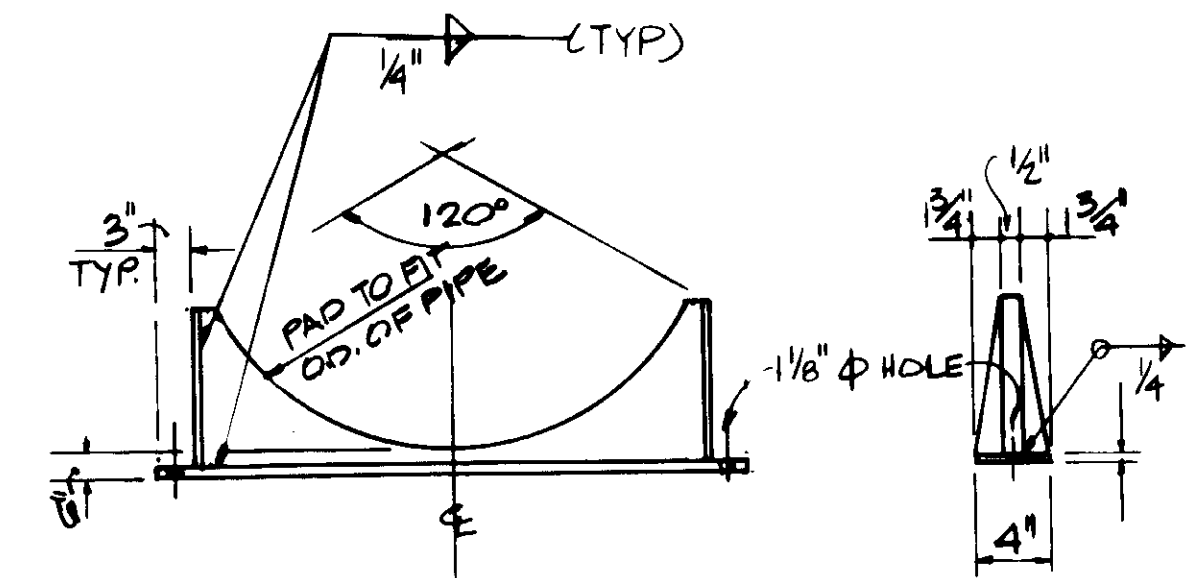
PIPE SUPPORT NO. 25



PIPE SUPPORT NO. 26



SECTION B



ANCHOR CHAIR DETAIL

DIA	A		
24"	1'-10"		
30"	2'-1"		

SECTION C

PIPE SUPPORT NO. 27

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	NONE	DESIGNED:	YK/CS	SUBMITTED:	14038	DATE:	8-7-87
		DRAWN:	YK				
		CHECKED:	YK				

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

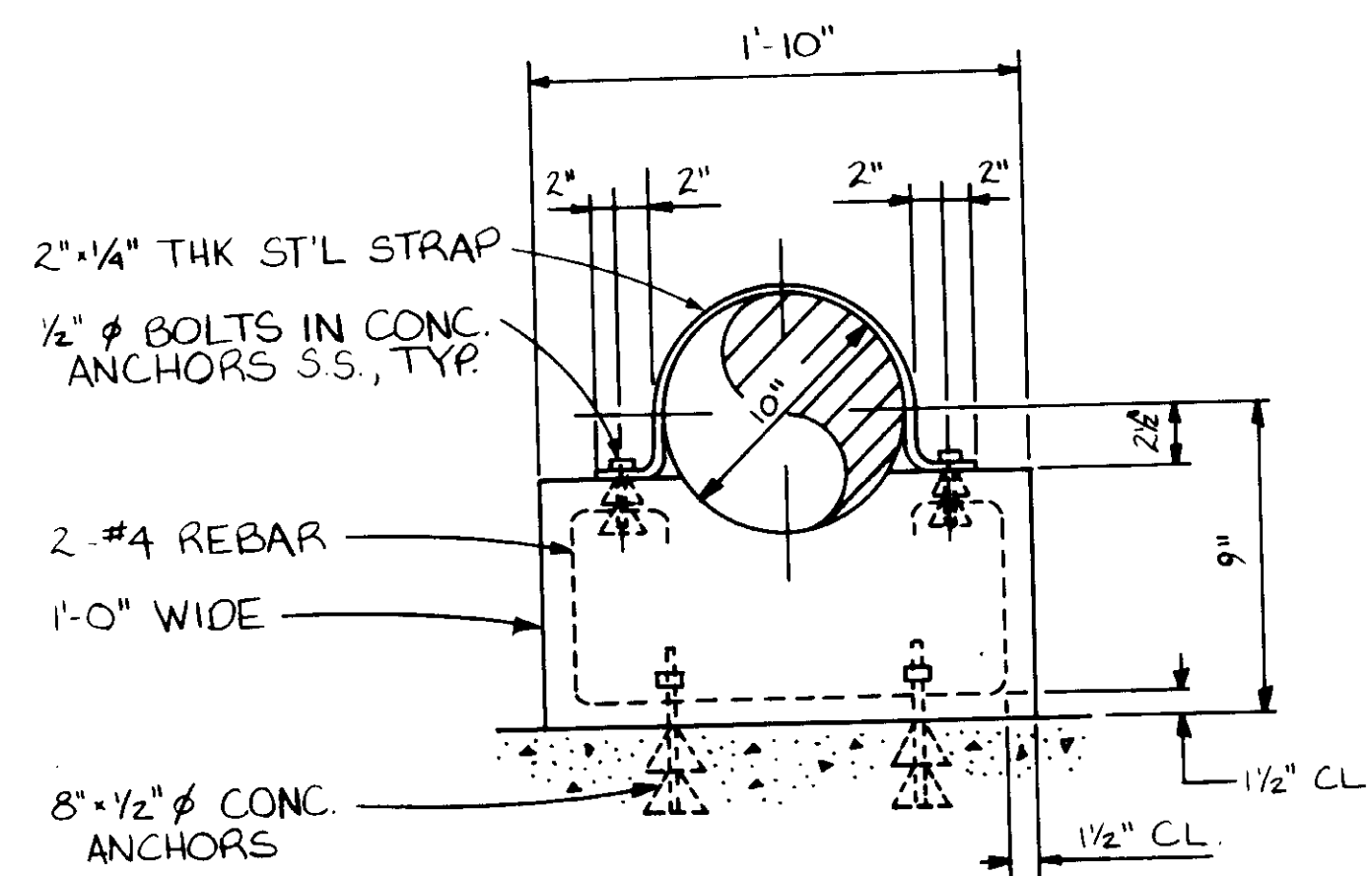
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PIPE SUPPORT DETAILS-V

SHEET M11-5

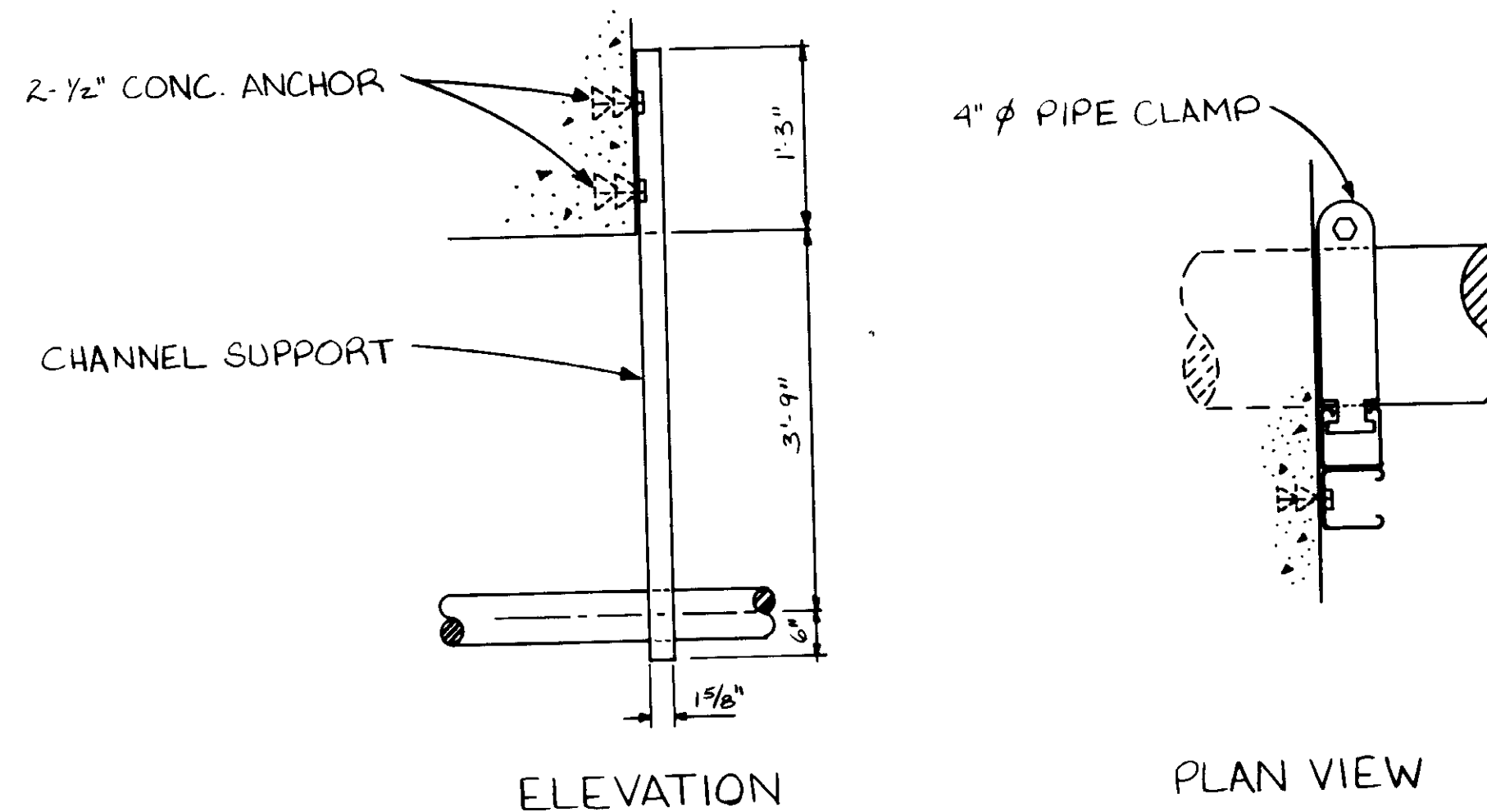
04164

RECORD DRAWING  
 Katsura Consulting Engineers, Inc.  
 No. 14038  
 Exp. 3-31-89

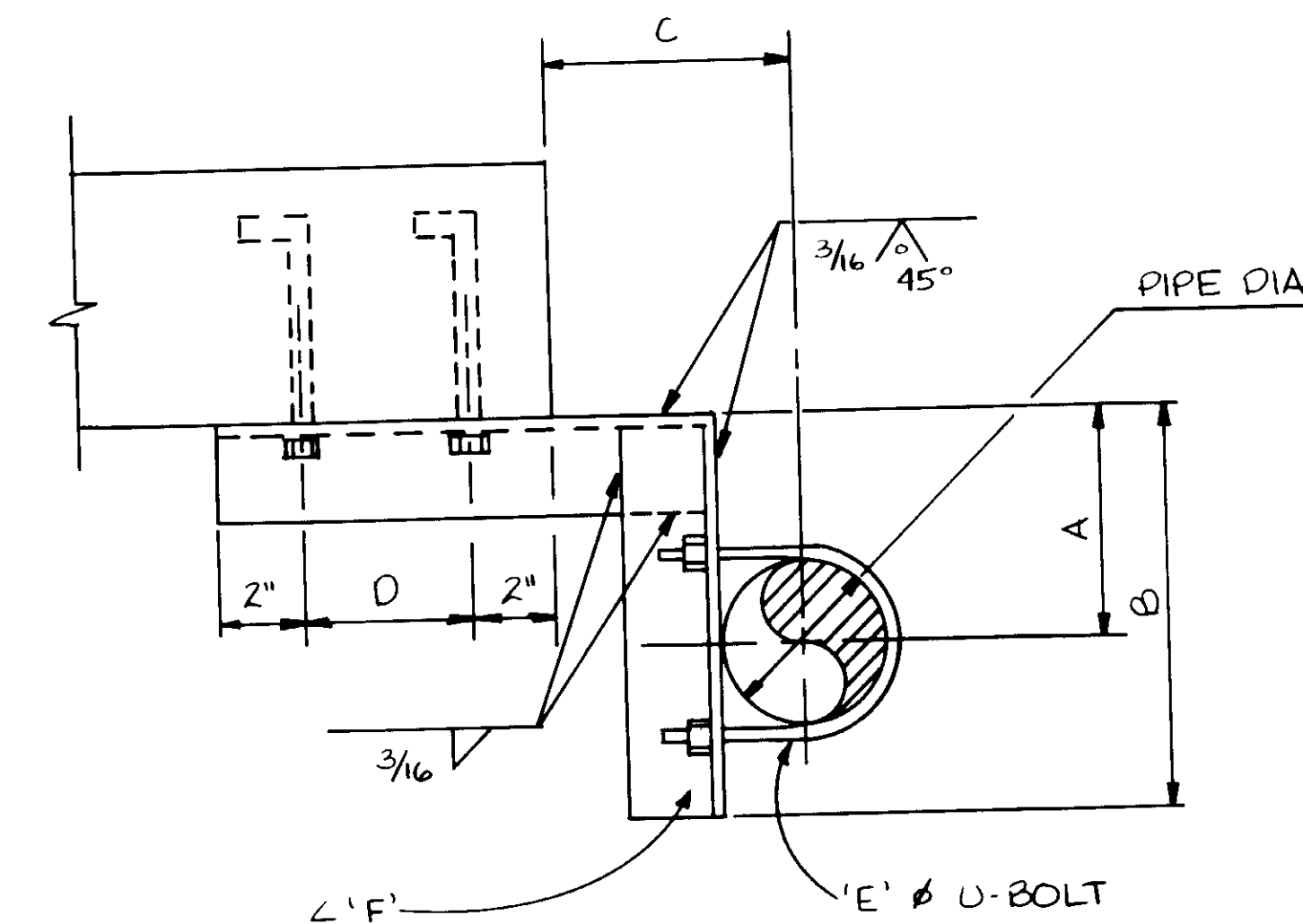




PIPE SUPPORT NO 28

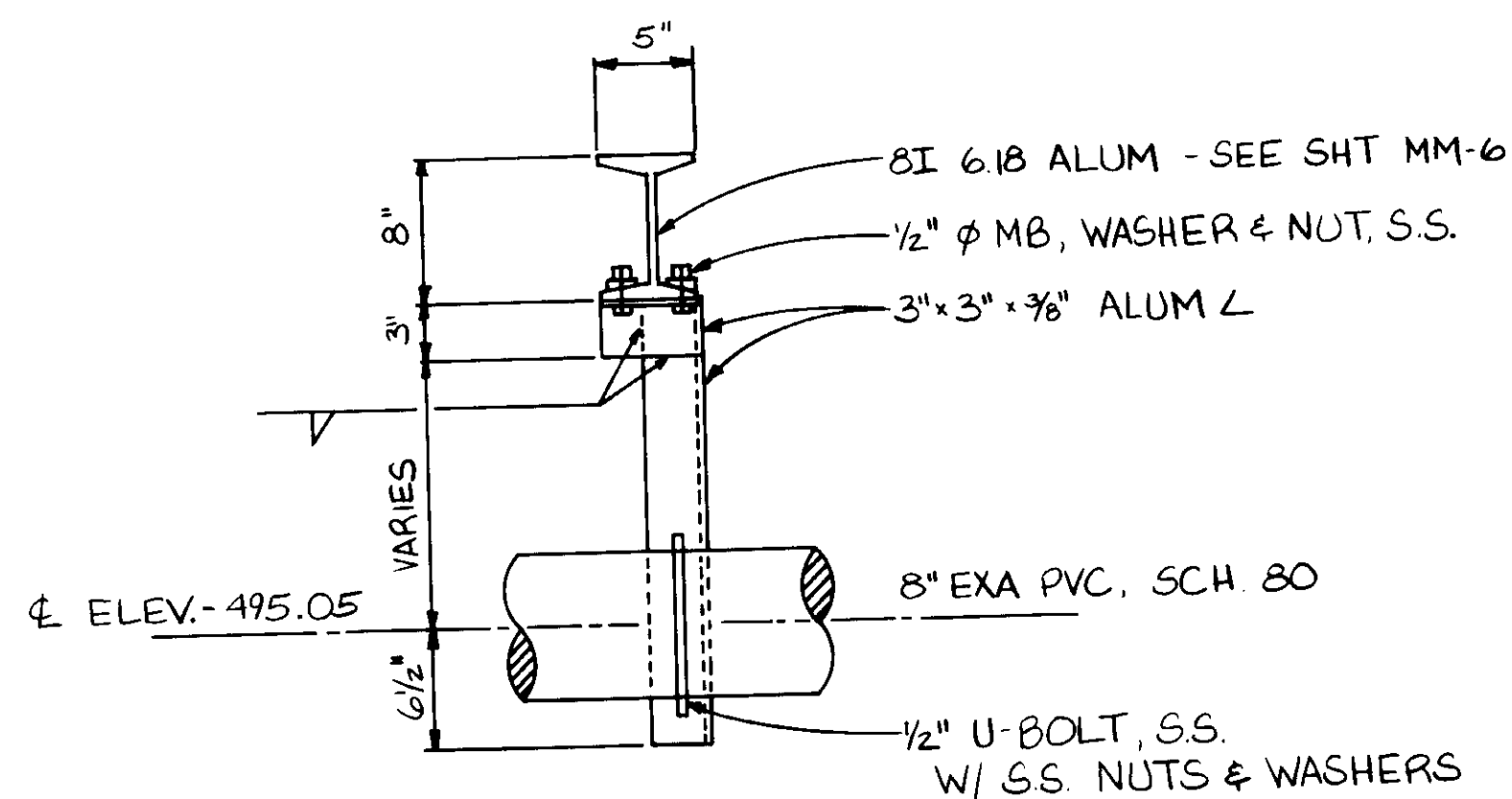


PIPE SUPPORT NO 29

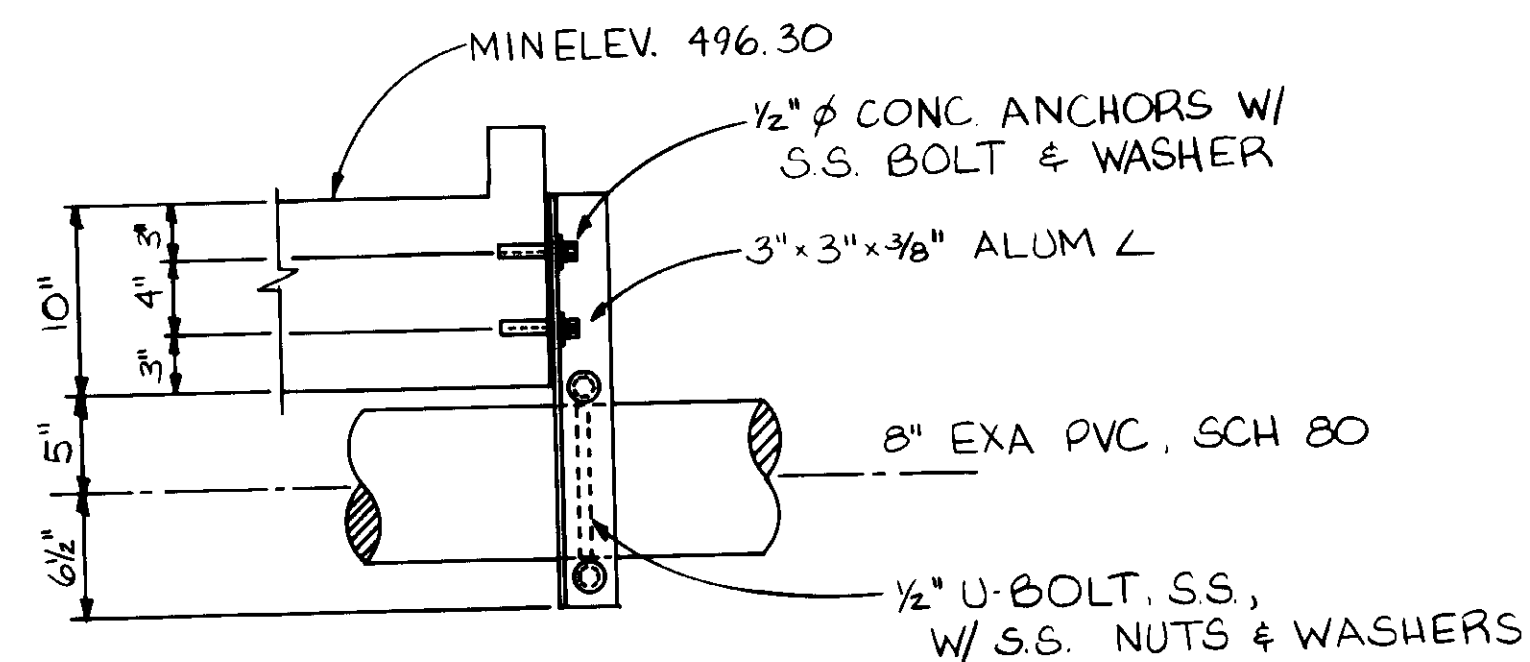


DIA	A	B	C	D	E	F
2"	3"	6"	4"	4"	3/8"	∠ 1 1/2" x 1 1/2" x 1/4"
3"	6"	9"	6"	5"	3/8"	∠ 2" x 2" x 1/4"
4"	6"	10"	6"	6"	1/2"	∠ 2 1/2" x 2 1/2" x 1/4"
4"	4"	8"	6"	6"	1/2"	∠ 2 1/2" x 2 1/2" x 1/4"
6"	7"	12"	6"	6"	1/2"	∠ 2 1/2" x 2 1/2" x 1/4"

PIPE SUPPORT NO 30



PIPE SUPPORT NO 31

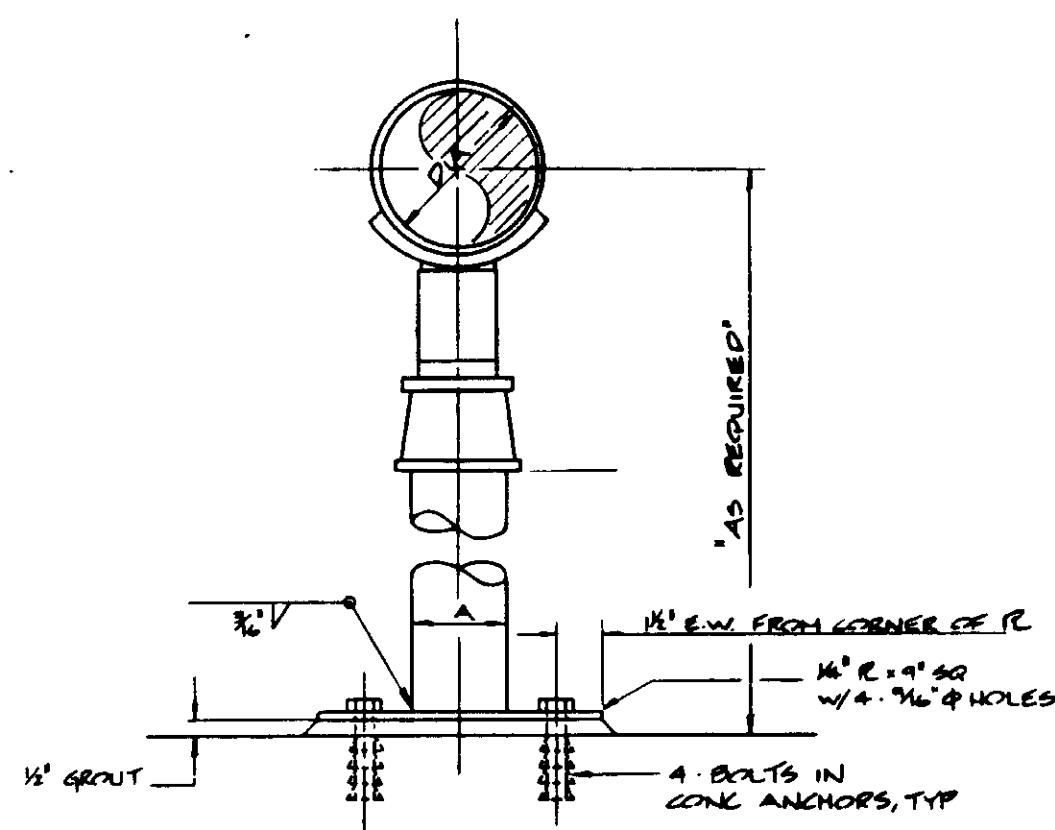


PIPE SUPPORT NO 32

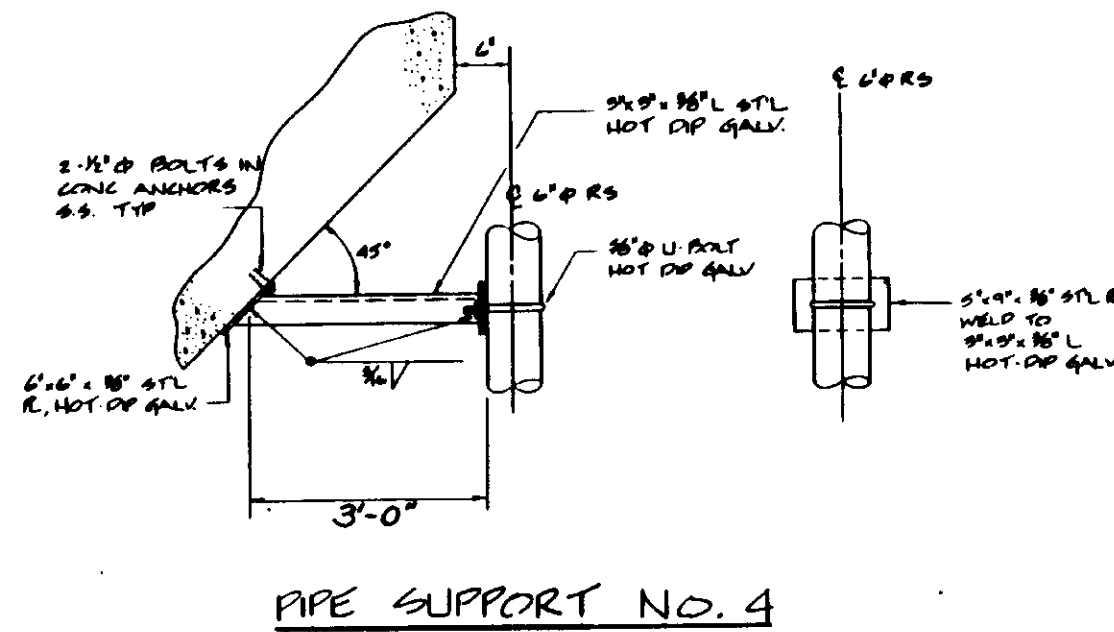
RECORD DRAWINGS  
 For Plans Prepared by CIVILIT PACIFIC GROUP  
 KATSUMA CONSULTING ENGINEERS  
 JUNE 1999

04165

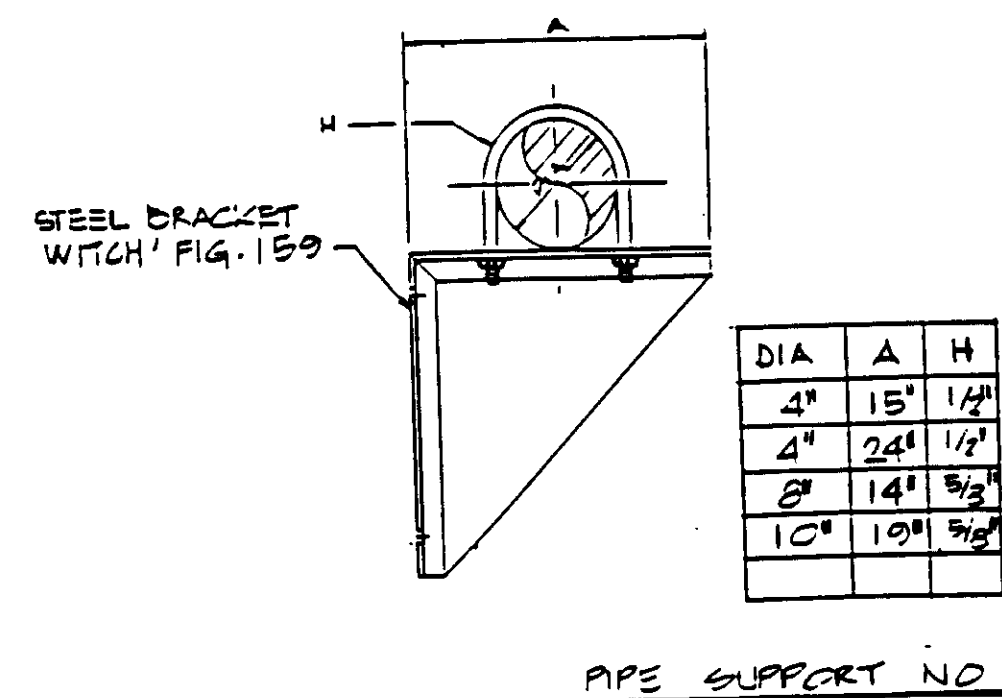
SCALE:		DESIGNED: CS	SUBMITTED: 8-7-07	<p>KALEX ENGINEERS        Katsura Consulting Engineers / Alexander Engineers        Ventura, California Glendora, California</p>	LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III		SHEET M11-6
		DRAWN: CS	DATE: 8-7-07		PIPE SUPPORT DETAILS-VI		
		CHECKED: CS	R.C.E. NO. 513				
			DATE: 8-7-07				
REV	DATE	BY	DESCRIPTION				



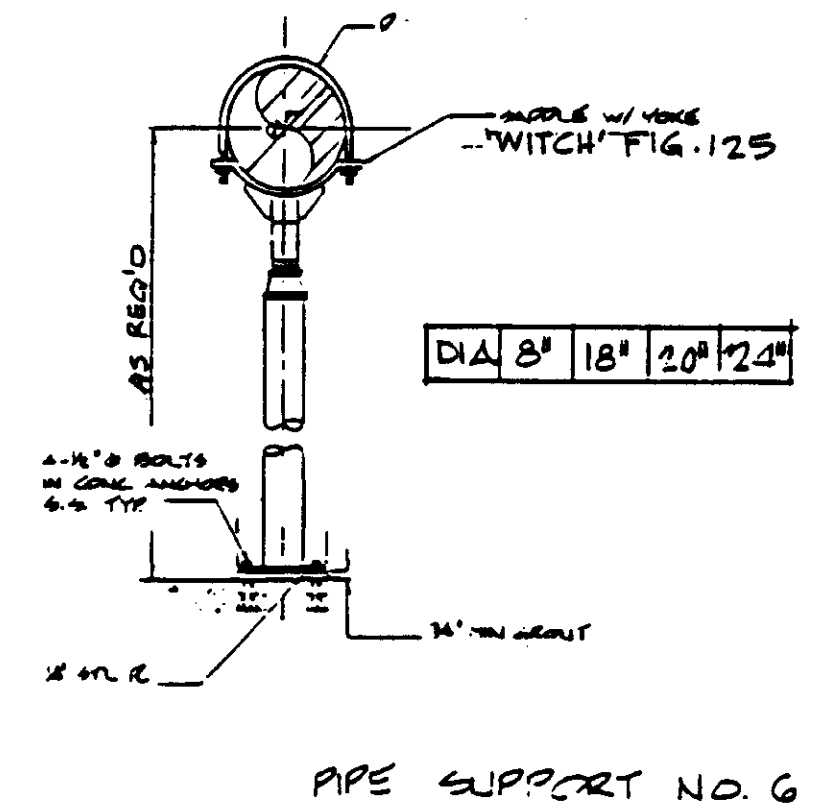
DIA 4" 5" 6" 8" 10" 14" 18" 24" 36"  
PIPE SUPPORT NO. 1



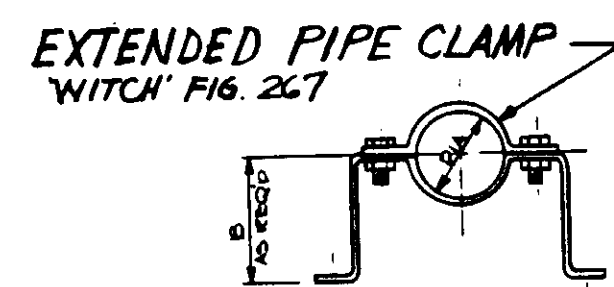
PIPE SUPPORT NO. 4



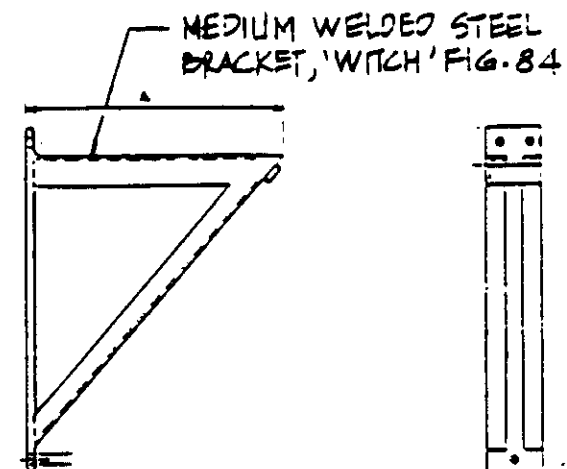
PIPE SUPPORT NO. 5



PIPE SUPPORT NO. 6

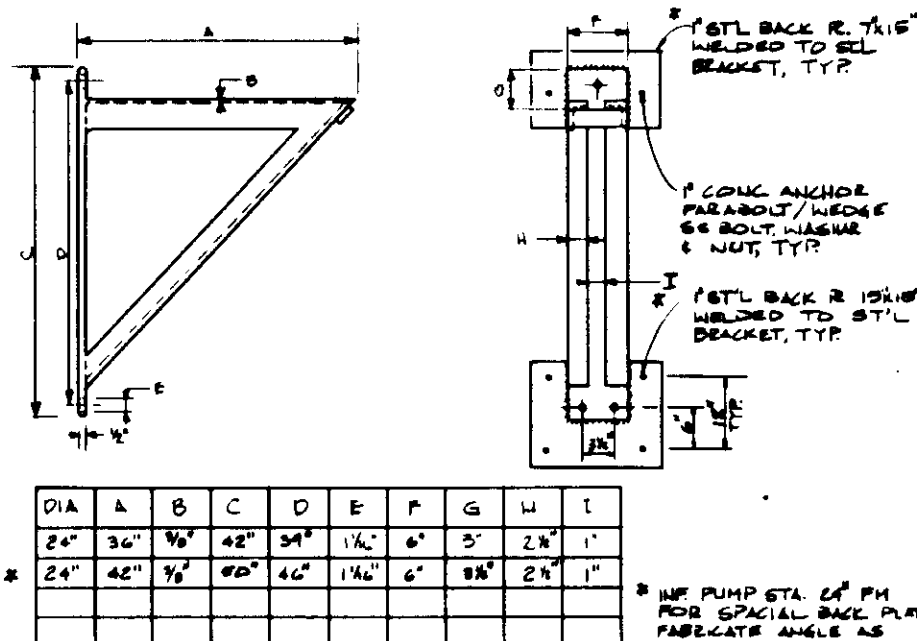


DIA 1" 1 1/2" 2" 3" 4" 8"  
PIPE SUPPORT NO. 7

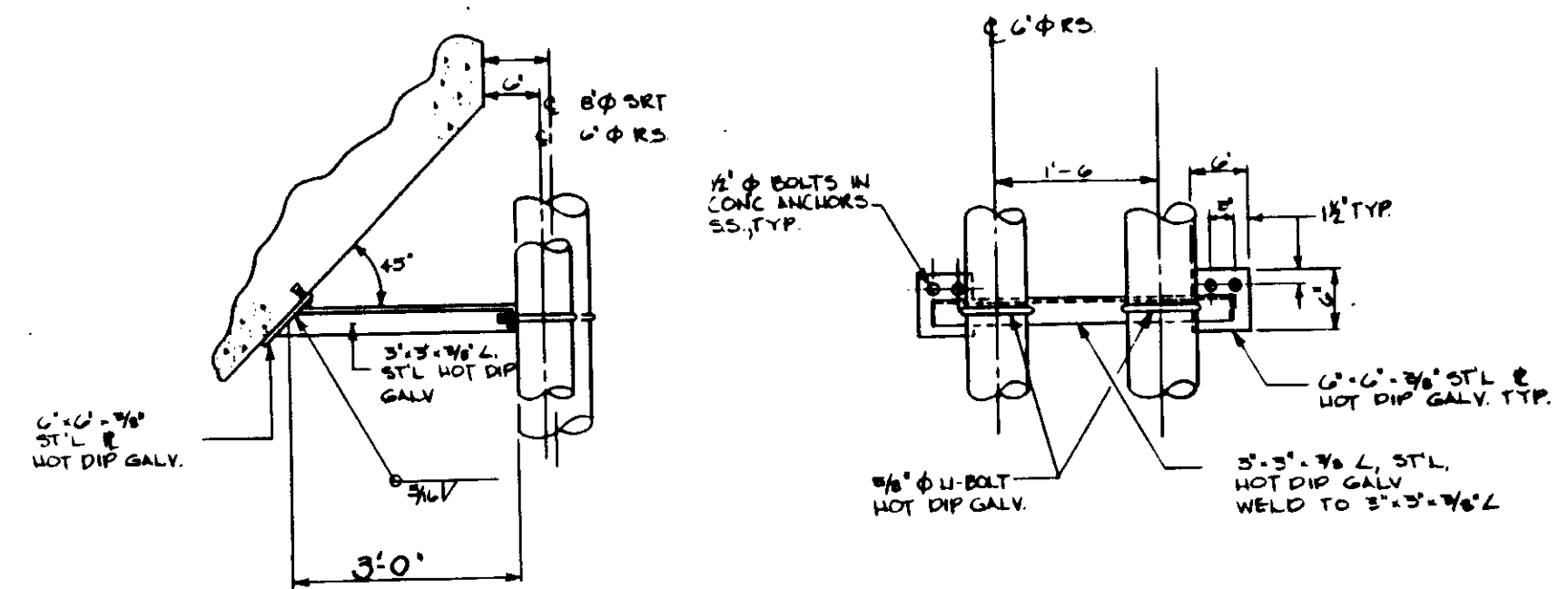


DIA.	A	U-BOLT
4"	13"	1 1/2"
5"	18"	1 1/2"
6"	16 3/4"	1 1/4"
8"	20"	3/4"
8"	30 3/4"	3/8"
10"	24"	3/8"

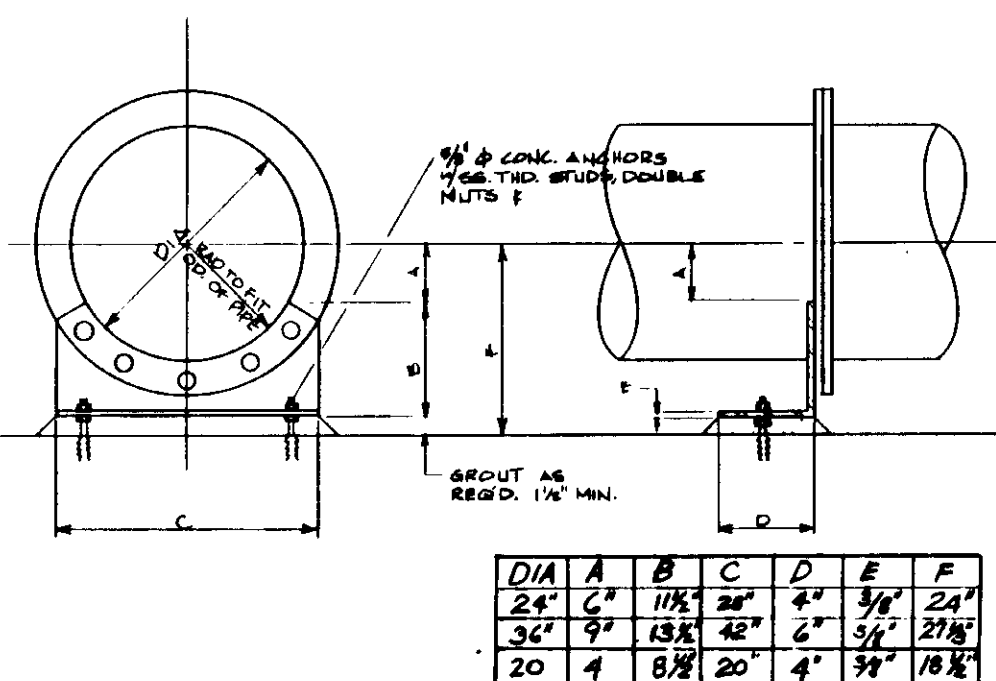
PIPE SUPPORT NO. 8



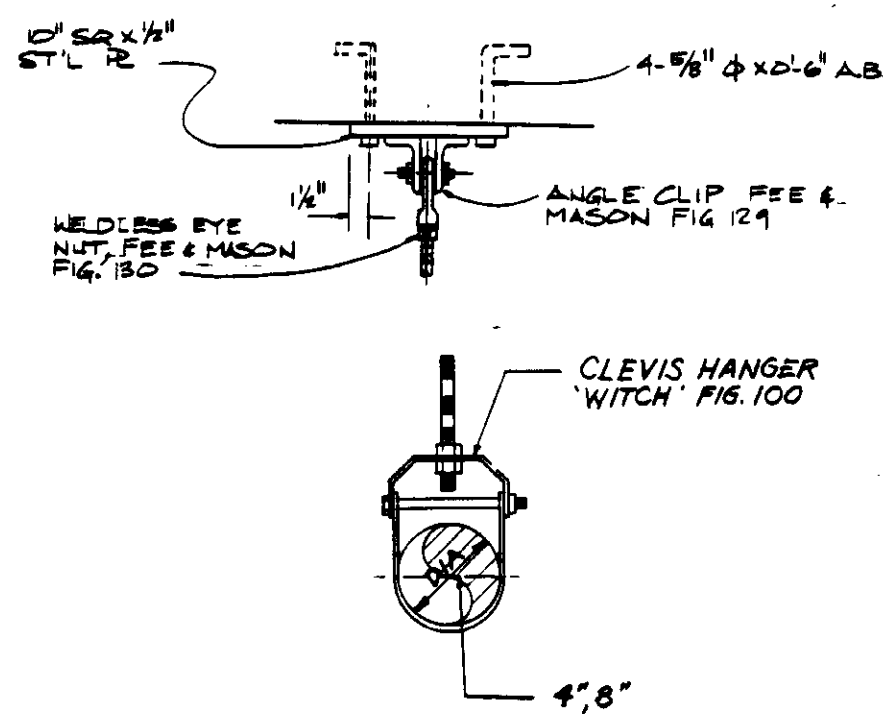
PIPE SUPPORT NO. 9



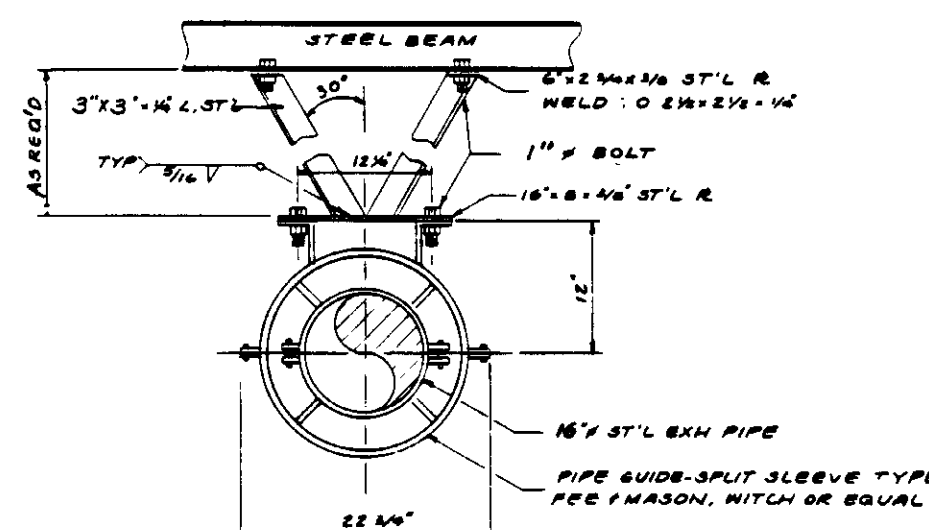
PIPE SUPPORT NO. 10



PIPE SUPPORT NO. 11



PIPE SUPPORT NO. 14



PIPE SUPPORT NO. 15

RECORD DRAWING  
FOR FILE MAINTAINED BY DESIG. PARTS DEPT.  
KATSURA CONSULTING ENGINEERS  
KALEX ENGINEERS

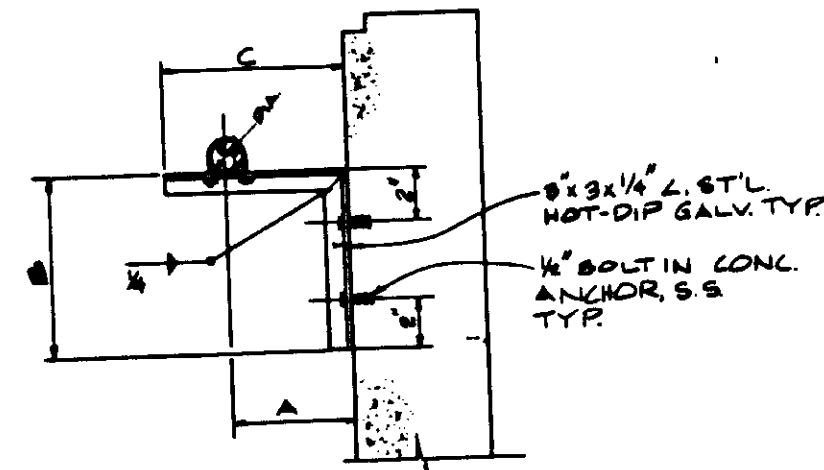
04166

REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED	SUBMITTED	14038
DRAWN	CHECKED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
		ALEXANDER ENGINEERS	813
			R.C.S.E. NO. DATE

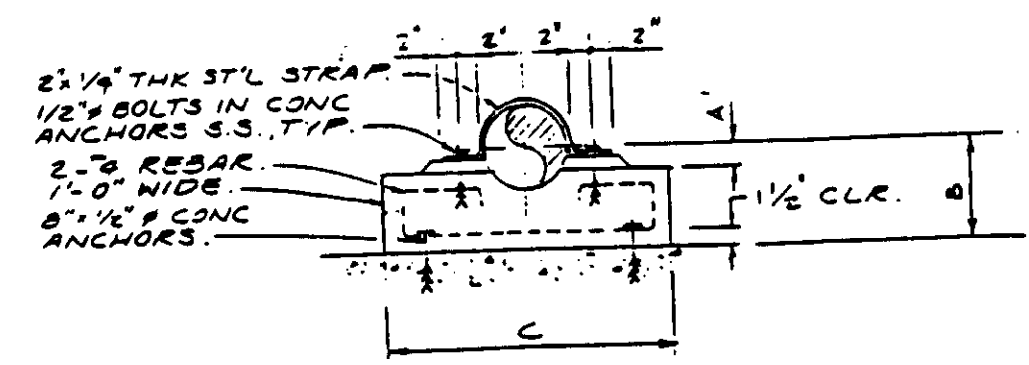
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**



PIPE SUPPORT NO. 17

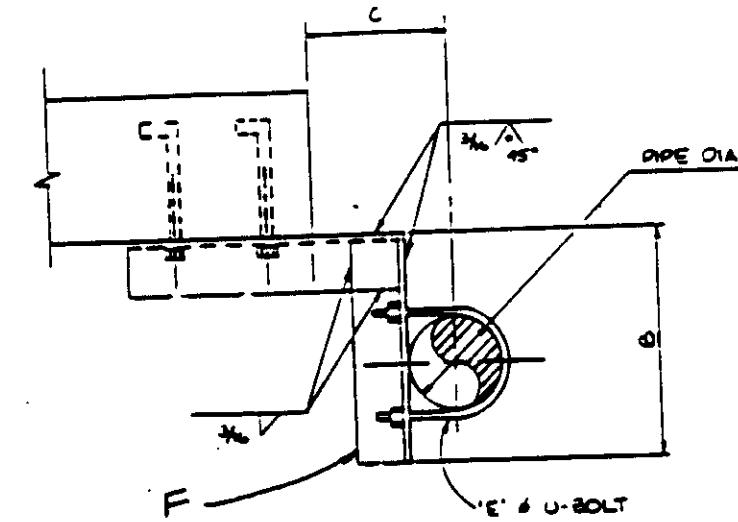
DIA	A	B	C	U-BOLT
3"	5 1/2"	7"	10"	1/2"
3"	6"	7"	10"	1/2"
4"	6"	7"	10"	1/2"
4"	7"	10"	11"	1/2"
6"	12"	10"	18"	3/8"
2"	6"	6"	10"	1/2"



PS # 22

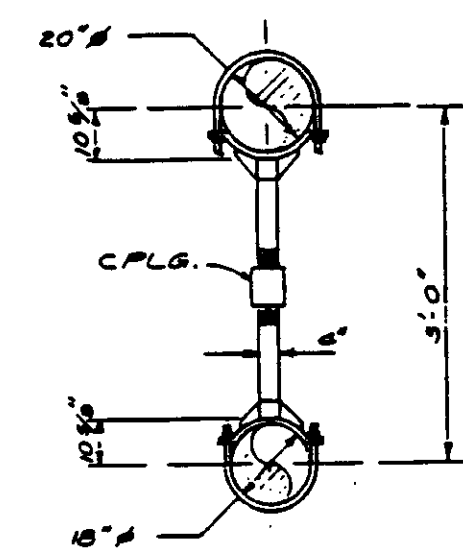
DIA	A	B	C
10"	2"	4"	27 1/2"
18"	4"	14"	35"

\* FIELD VERIFY

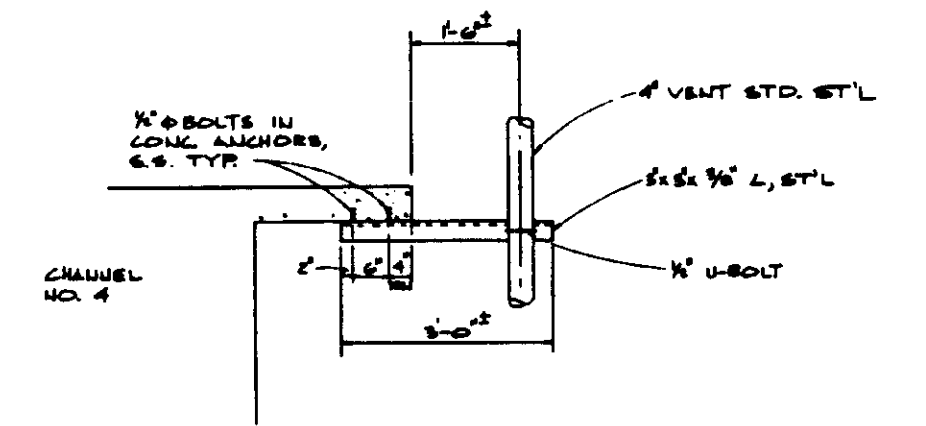


DIA	B	C	E	F
4"	10"	6"	1 1/2"	L 2 1/2 x 2 1/2 x 1/4"
6"	15"	6"	1 1/2"	" "

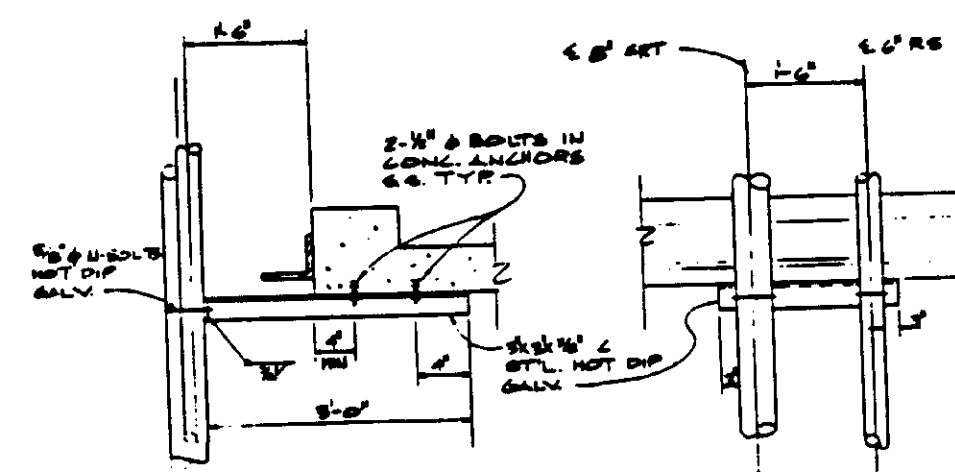
PIPE SUPPORT NO. 30



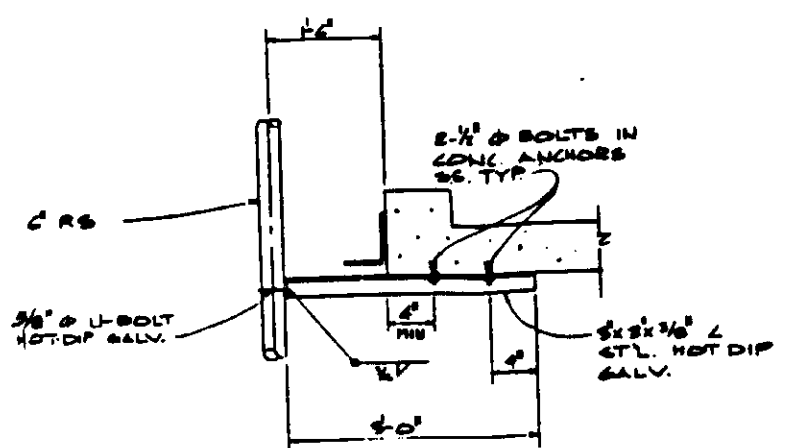
PS # 33



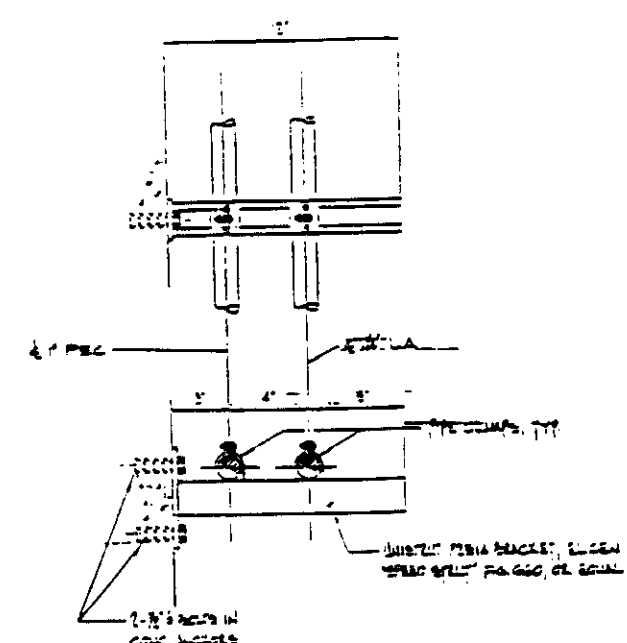
PIPE SUPPORT NO. 34



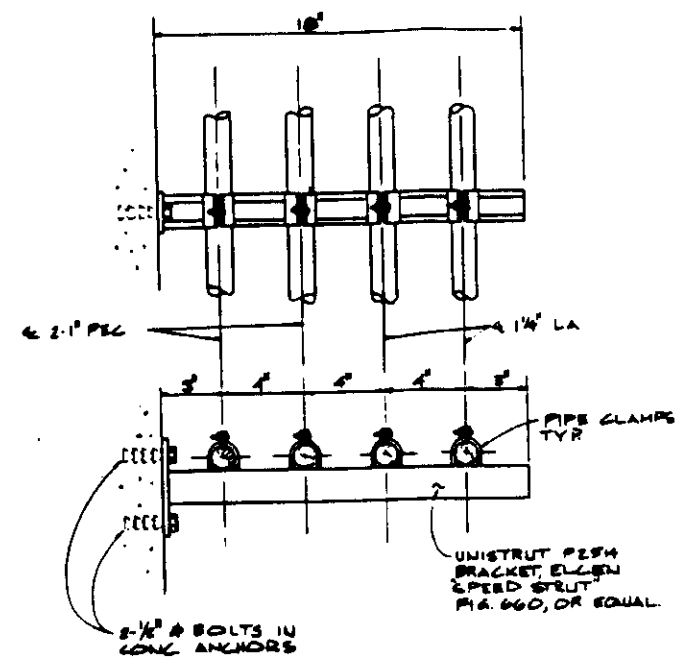
PIPE SUPPORT NO. 35



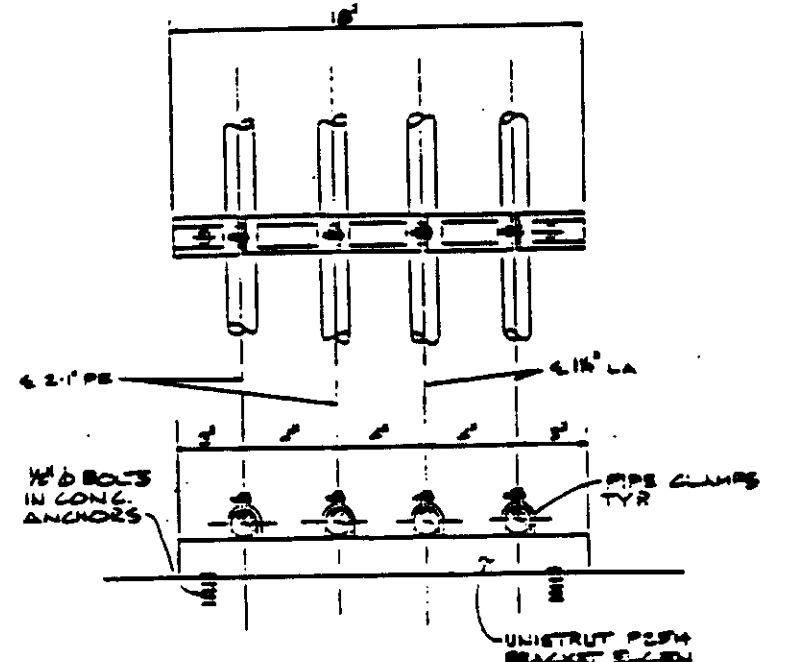
PIPE SUPPORT NO. 36



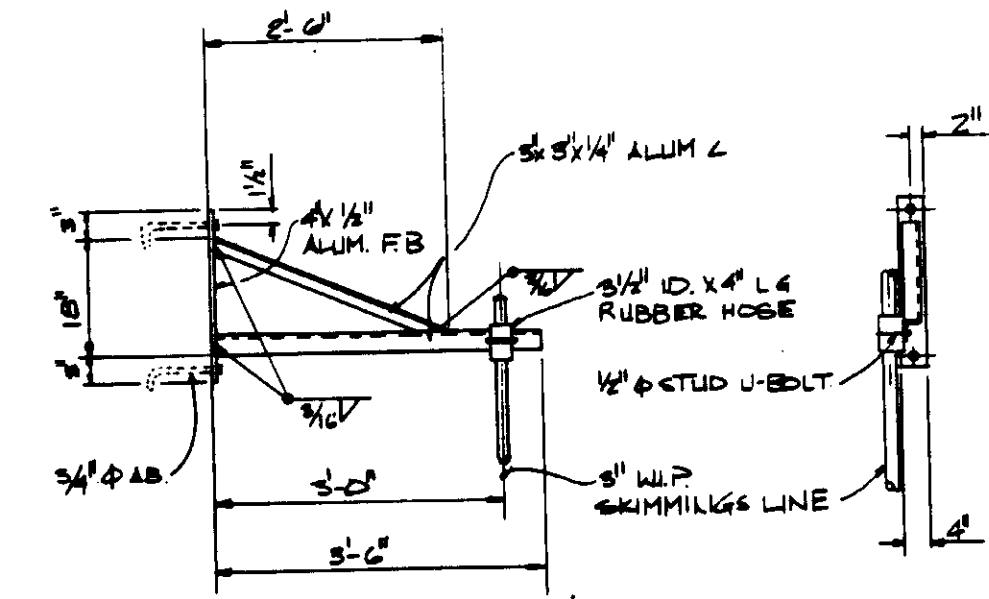
PIPE SUPPORT NO. 37



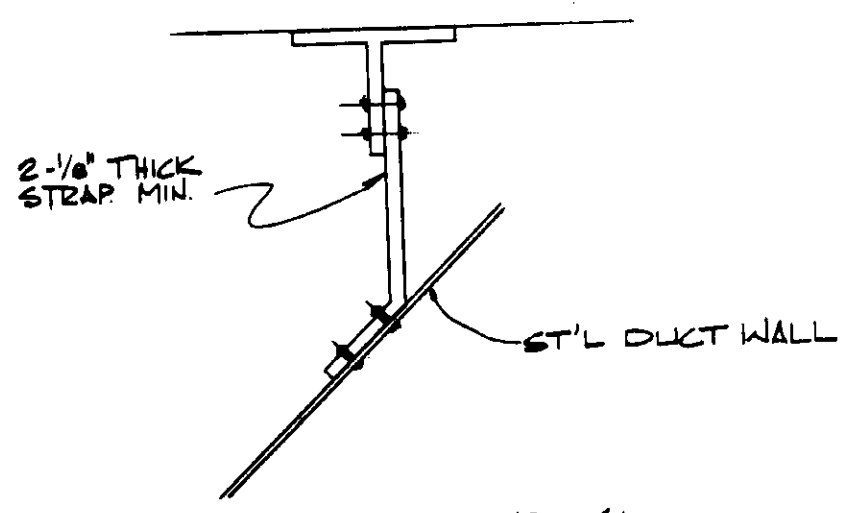
PIPE SUPPORT NO. 38



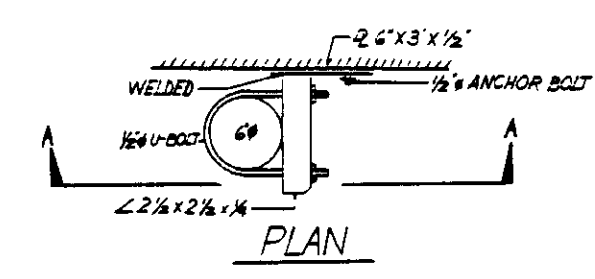
PIPE SUPPORT NO. 39



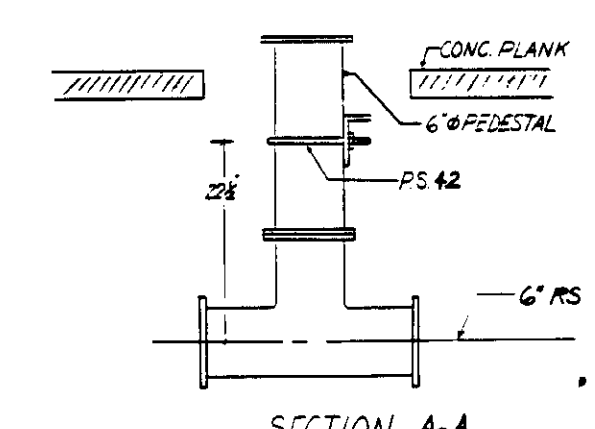
PIPE SUPPORT NO. 40



PIPE SUPPORT NO. 41

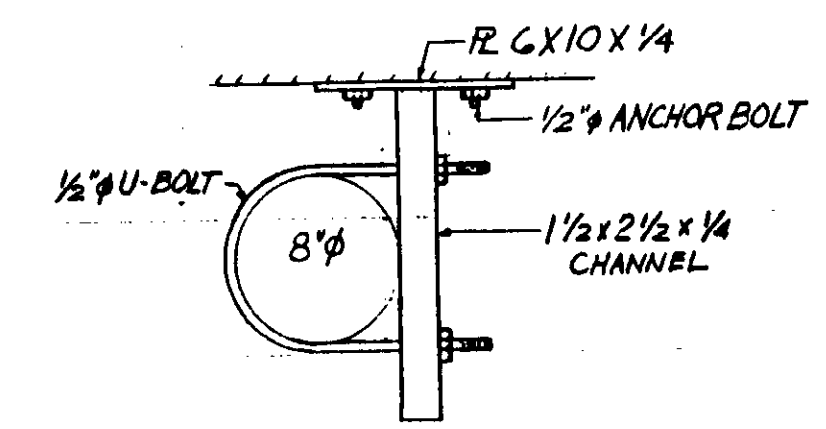


PLAN



SECTION A-A

P.S. NO. 42

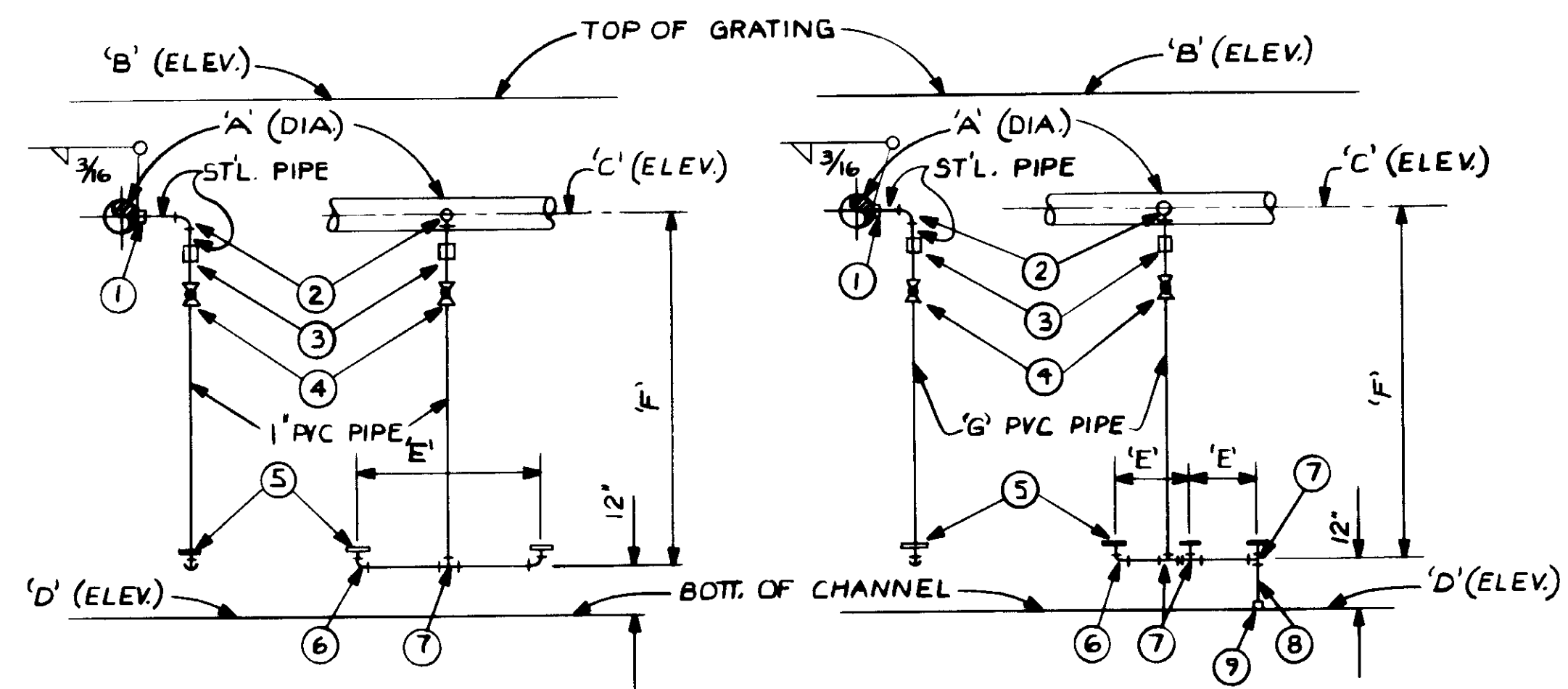


P.S. NO. 43

DESIGNED BY  
 KALEX ENGINEERS  
 KATSURA CONSULTING ENGINEERS / ALEXANDER ENGINEERS  
 VENTURA, CALIFORNIA

04167





NOTE: CHANNEL NO. 1 DIFFUSERS ROTATED 90°

LOCATION	'A'	'B'	'C'	'D'	'E'	'F'
CHANNEL #2	4"	+94.55	+93.72	+87.55	24"	5'-2"
CHANNEL #3	6"	+92.55	+91.47	+84.55	24"	5'-11"

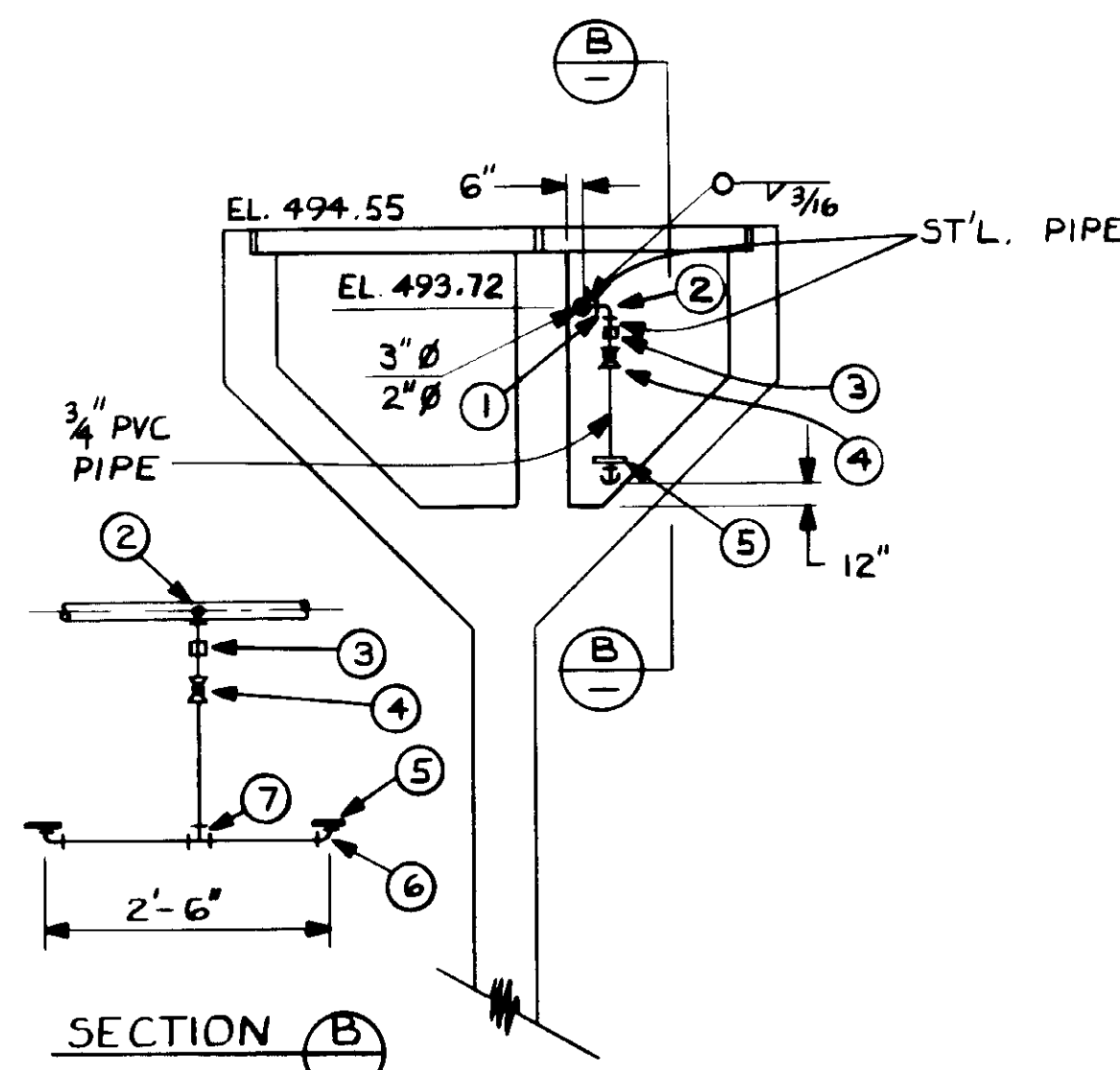
TWO DIFFUSERS PER DROP PIPE

LOCATION	'A'	'B'	'C'	'D'	'E'	'F'	'G'
CHANNEL #1	4"	+97.80	+96.80	+87.80	12"	8'-0"	1 1/4"
CHANNEL #4	3"	+91.55	+90.55	+82.05	36"	7'-6"	1"

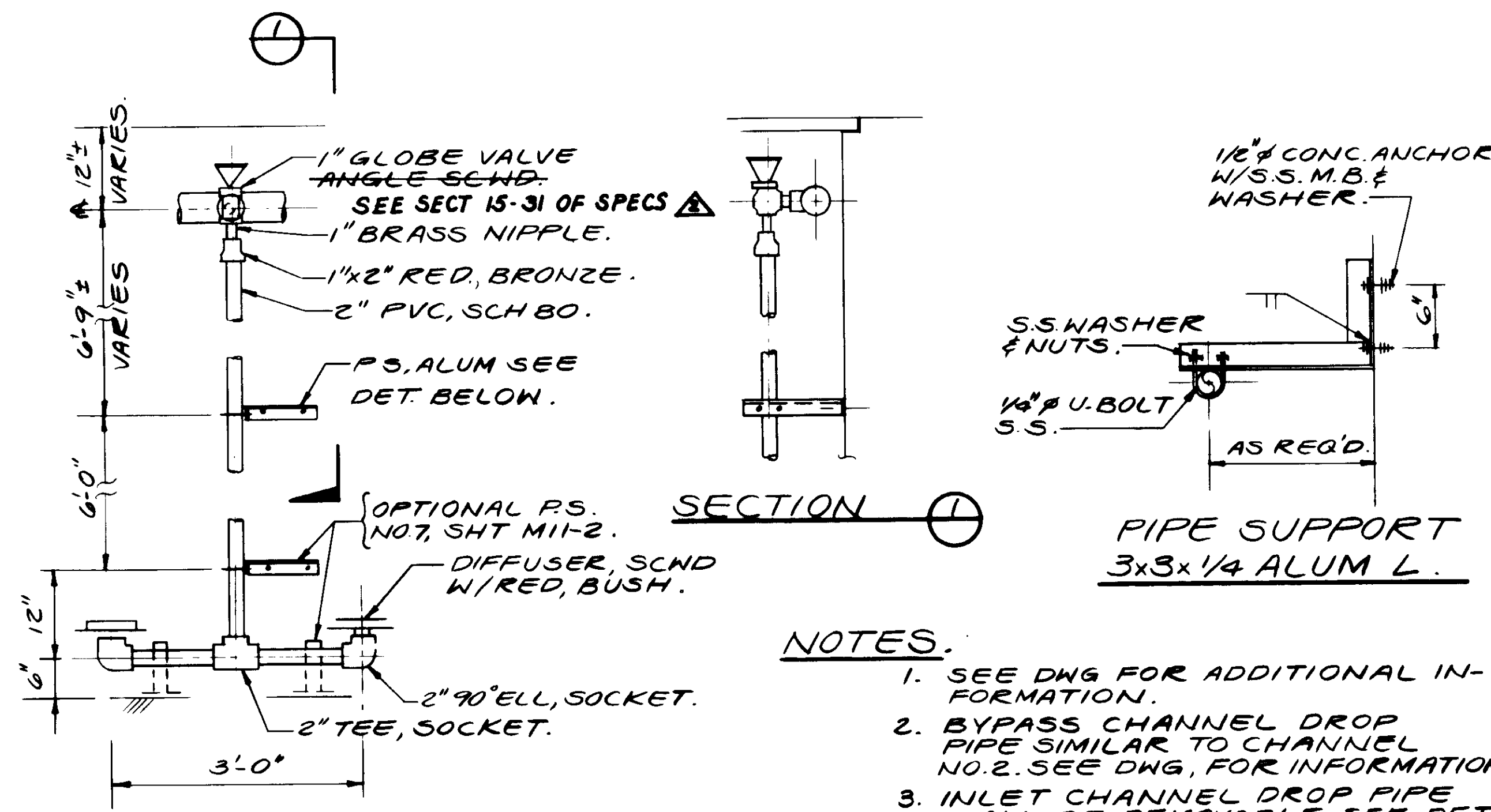
THREE DIFFUSERS PER DROP PIPE

ITEM	DESCRIPTION
1	WELD HALF CPLG., EXTRA HEAVY ST'L, PER LINE SIZE
2	90° ELBOW, SCH. 40 ST'L., PER LINE SIZE
3	PVC COUPLING, PER LINE SIZE
4	1" SCH. 80 PVC, UNION BALL VALVE
5	DIFFUSERS, FURNISHED BY DIST., SEE DETAIL SPECS
6	90° ELBOW, SCH. 80 PVC, PER LINE SIZE
7	TEE, SCH. 80 PVC, PER LINE SIZE
8	SCREWED NIPPLE, PVC, PER LINE SIZE
9	SCREWED CAP, SCH. 80 PVC, PER LINE SIZE

NOTE: PER RFI 122, DIFFUSER DROP DISTANCE FOR AERATION FEED CHANNEL TO BE 2'-6" FROM END WALL AND 5'-0" OC THEREAFTER, SIMILAR TO CHANNEL NO. 2



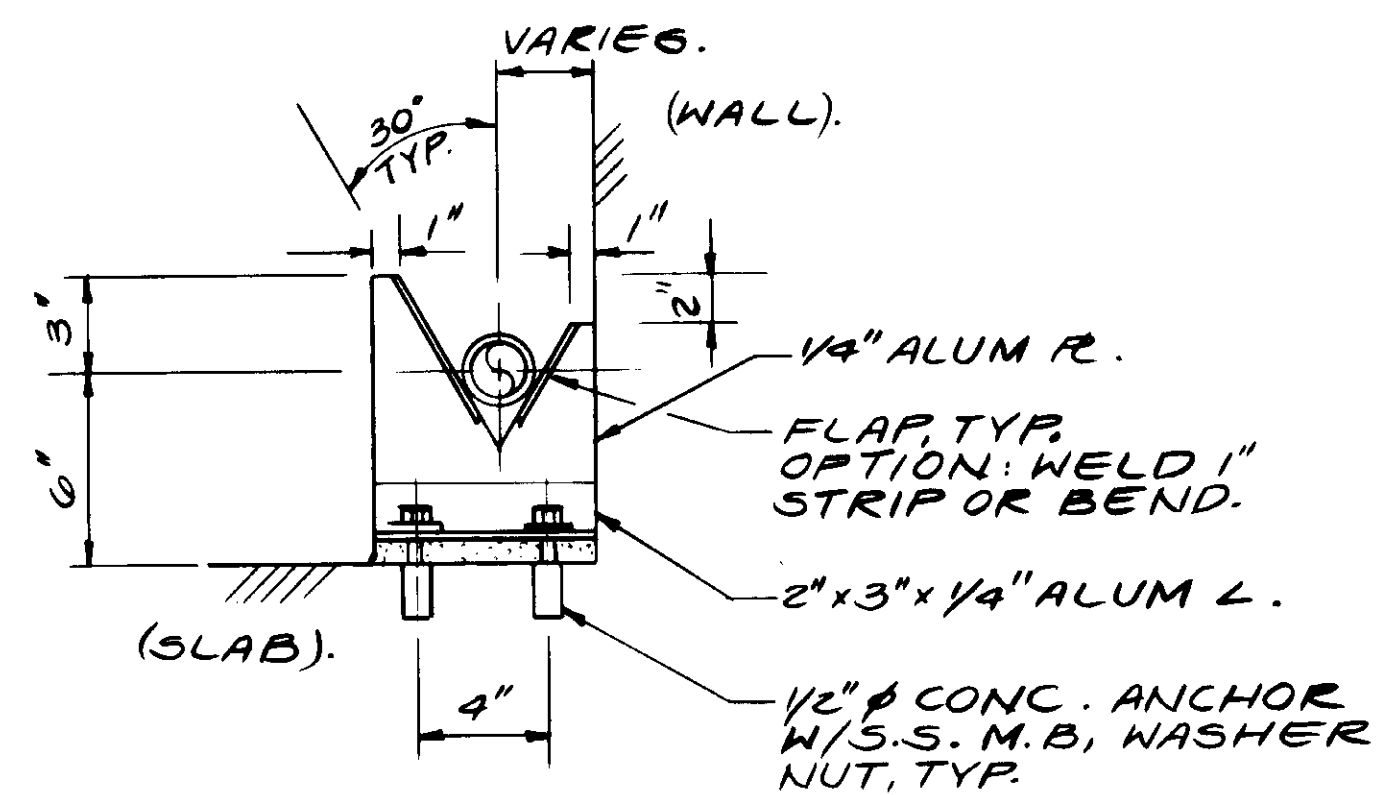
AERATION FEED CHANNEL



TYPICAL SELECTOR DROP PIPE.

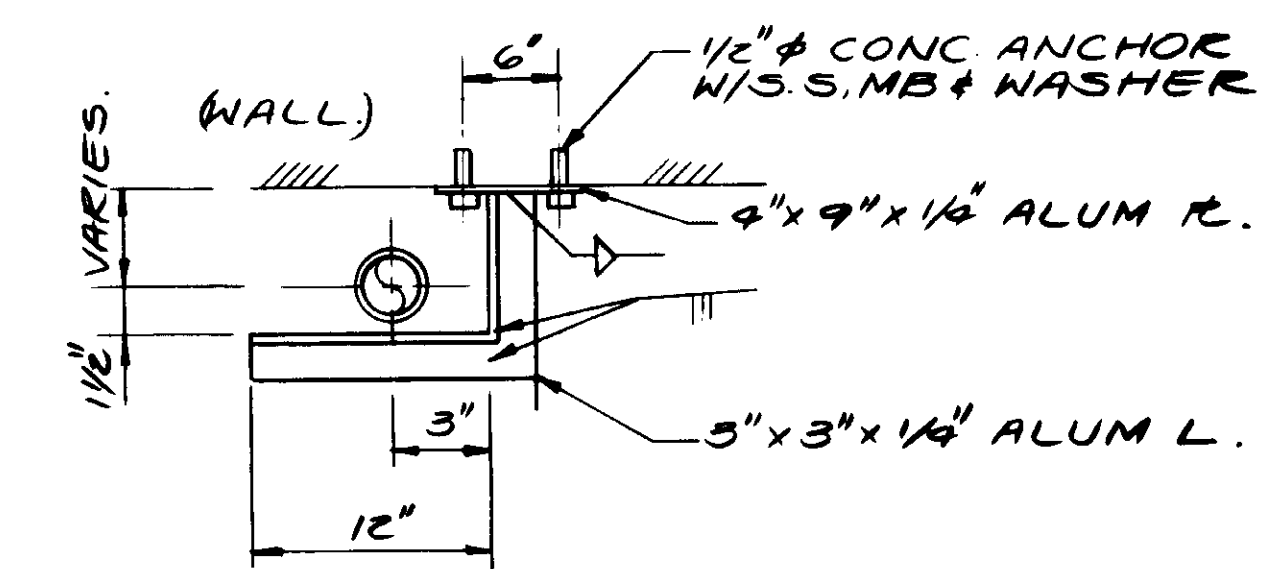
NOTES:

- SEE DWG FOR ADDITIONAL INFORMATION.
- BYPASS CHANNEL DROP PIPE SIMILAR TO CHANNEL NO. 2. SEE DWG, FOR INFORMATION.
- INLET CHANNEL DROP PIPE SHALL BE REMOVABLE. SEE DET. THIS SHT.



ELEVATION-DROP PIPE BOTTOM SUPPORT.

NOTE: LOCATE APPROX. 6" FROM ENDS OF HEADER.



PLAN-DROP PIPE GUIDE.

NOTE: LOCATE WHERE PIPE SUPPORTS SHOWN.

04168

RECORD DRAWING  
 PREPARED BY: ALEXANDER ENGINEERS  
 KALEX ENGINEERS  
 EST. 1988



SCALE: NONE

DESIGNED: YK/CC  
 DRAWN: RK/DN  
 CHECKED: YK

SUBMITTED: 8-7-87  
 KALEX ENGINEERS  
 R.C.E. NO. 14038  
 DATE: 8-7-87  
 ALEXANDER ENGINEERS  
 R.C.E. NO. 613  
 DATE:

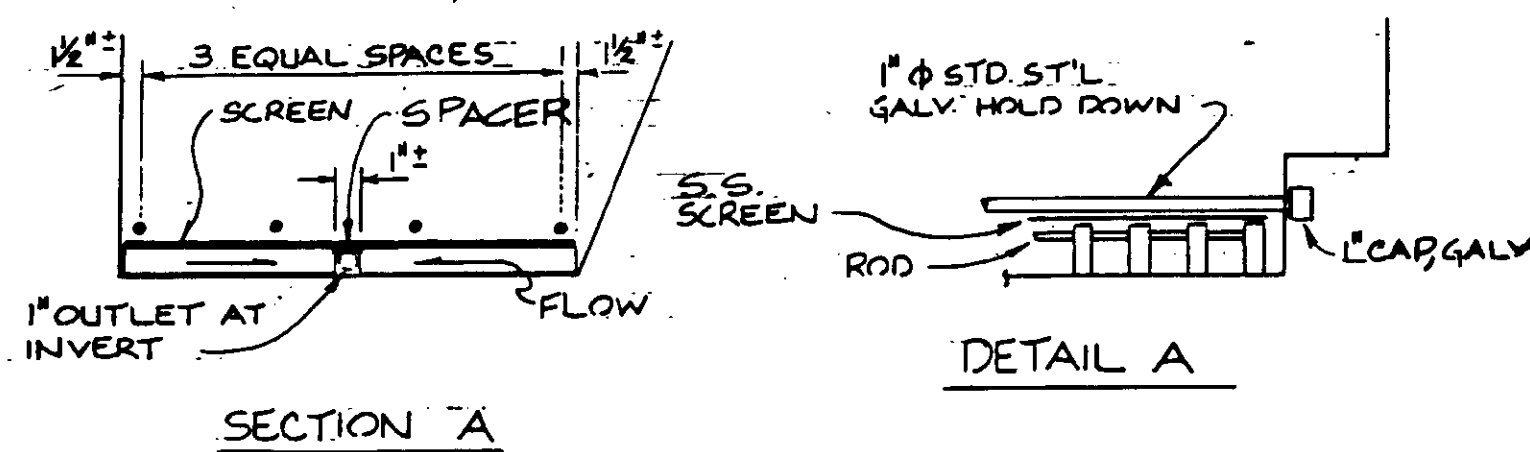
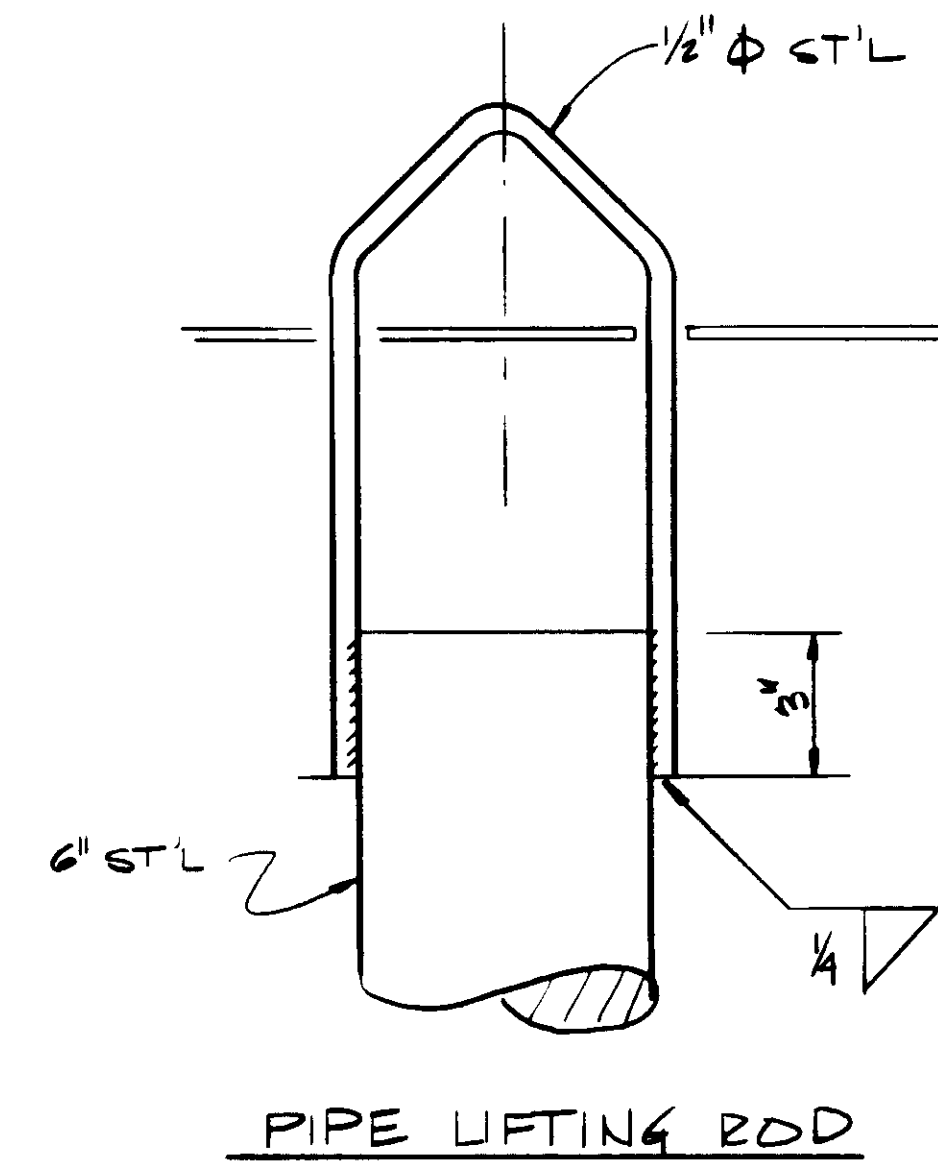
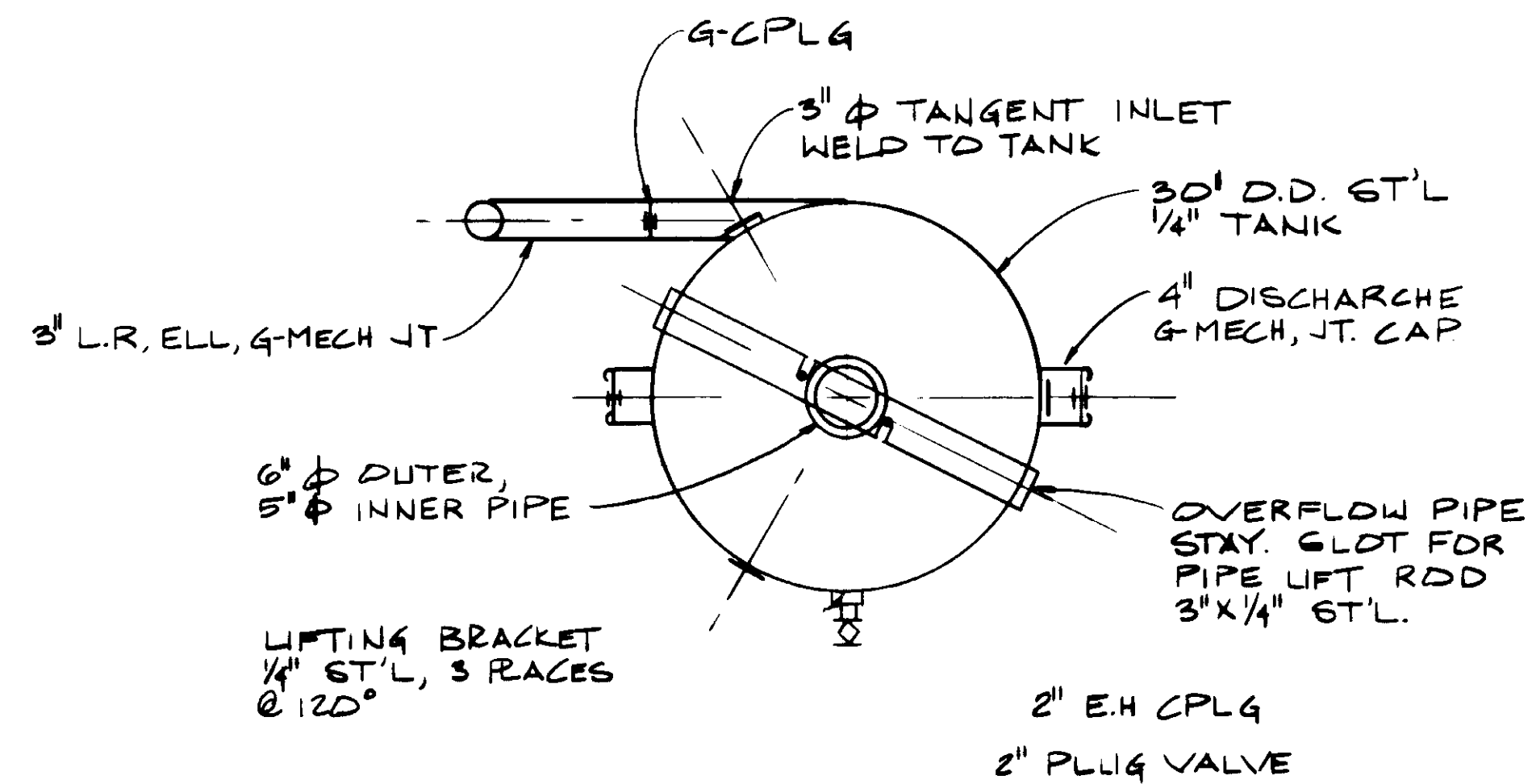
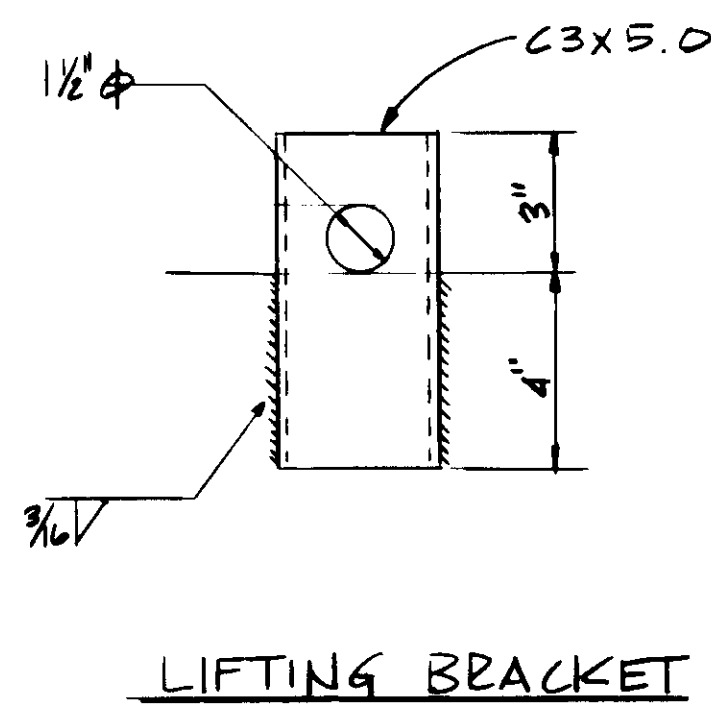
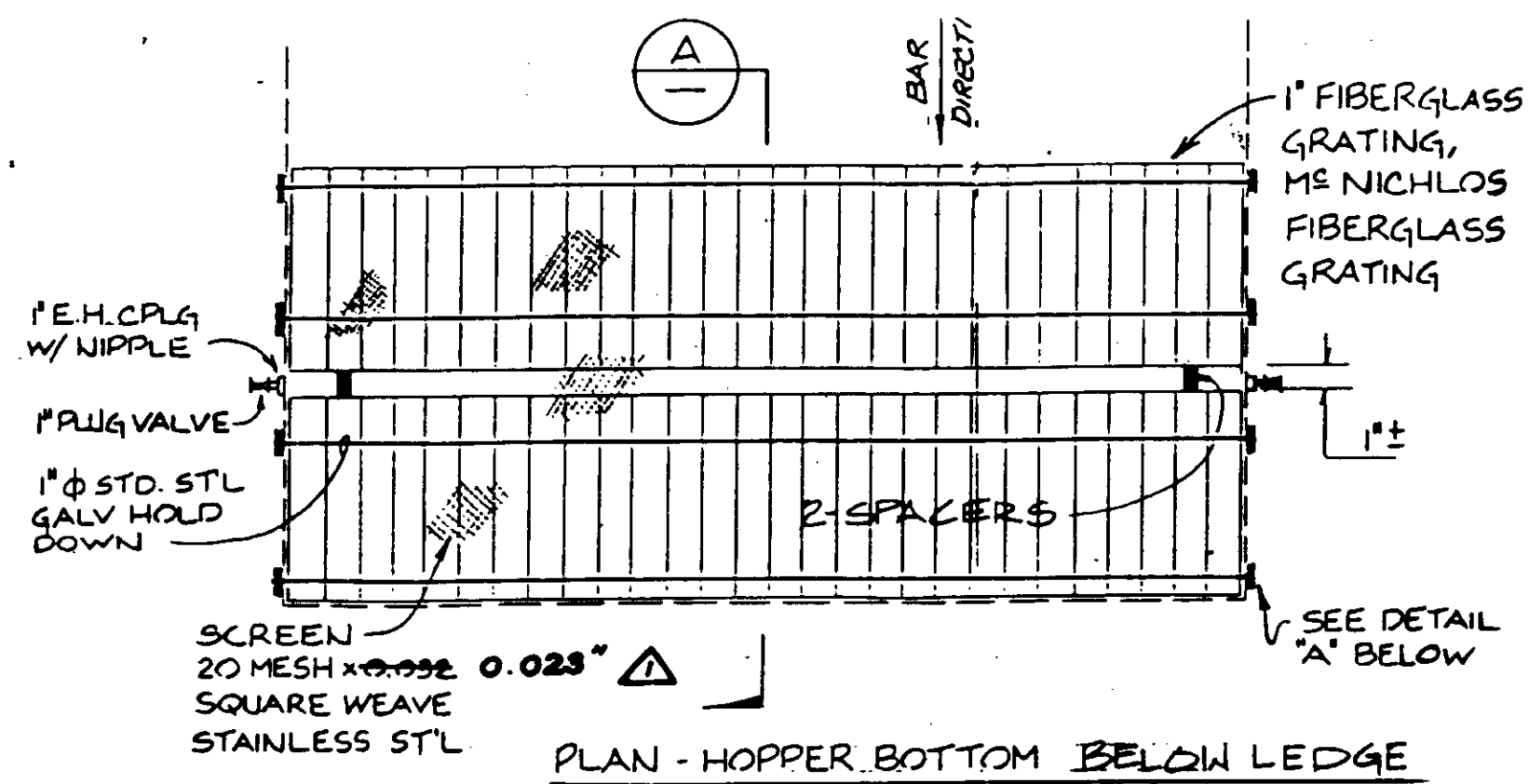
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY EXPANSION III

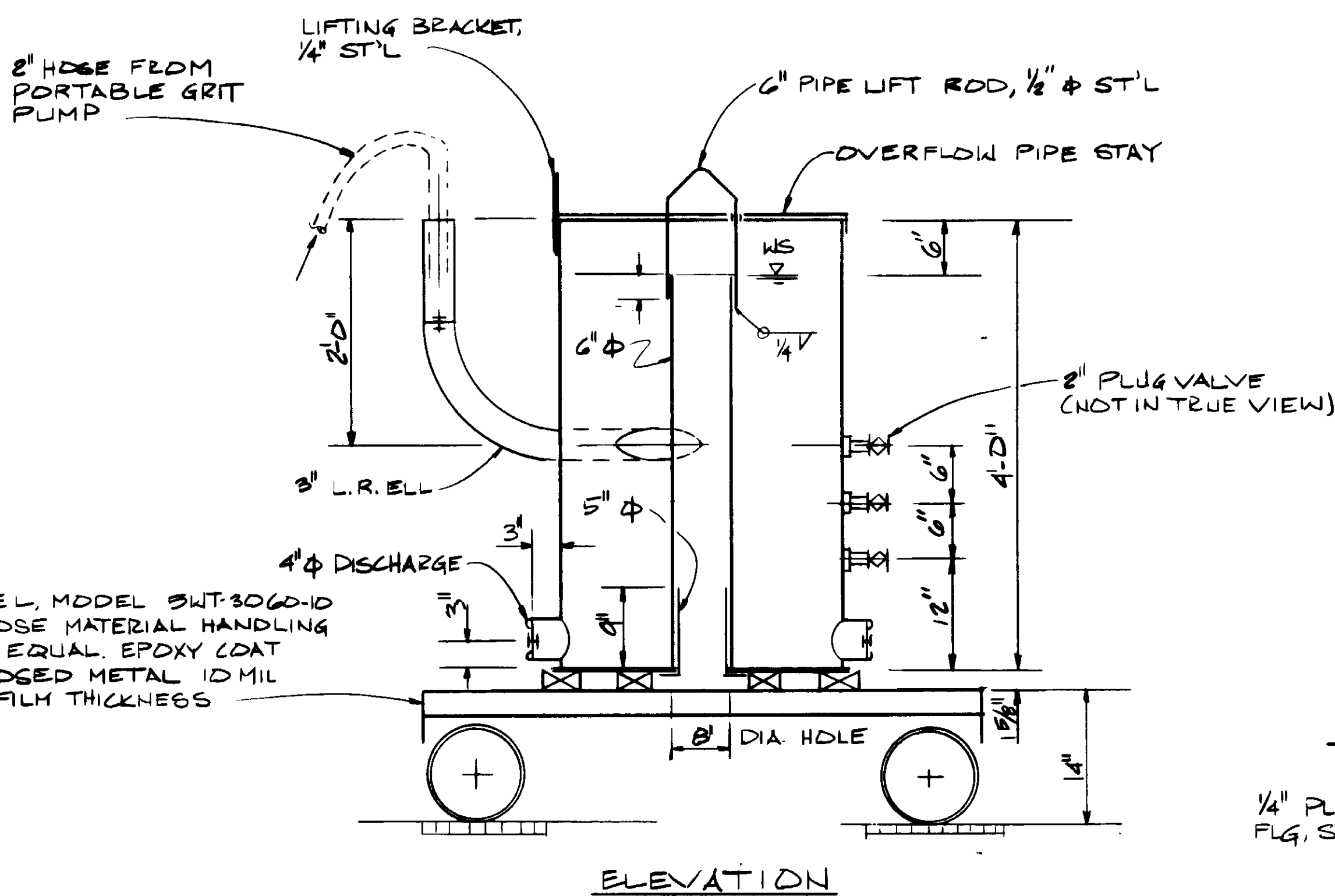
MISCELLANEOUS DETAILS - CHANNEL AERATION

SHEET M12-1

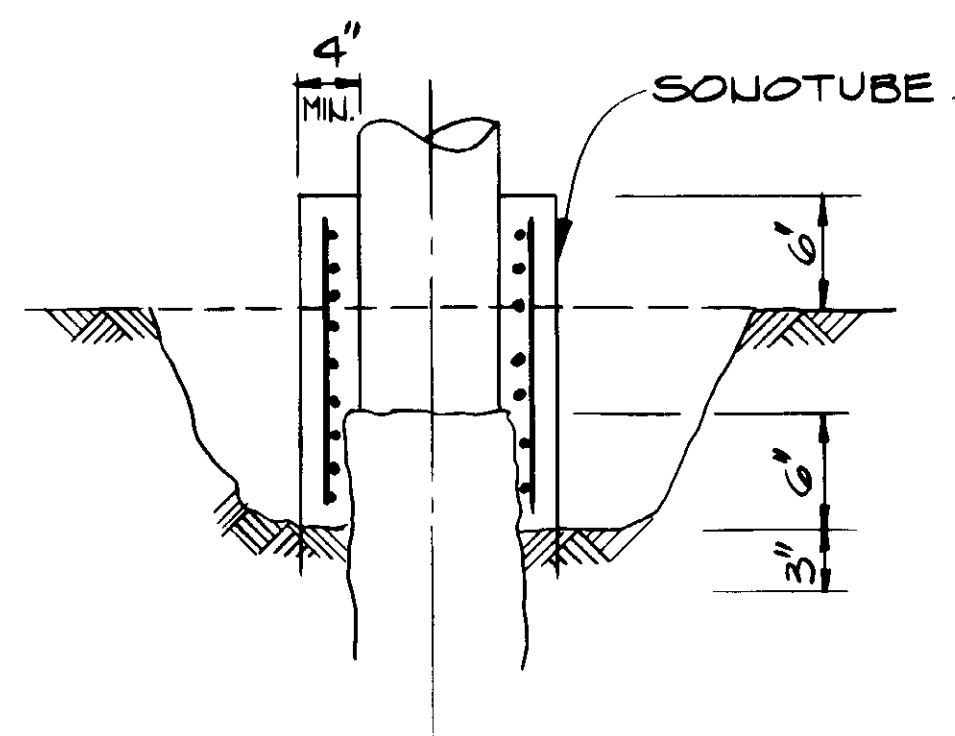
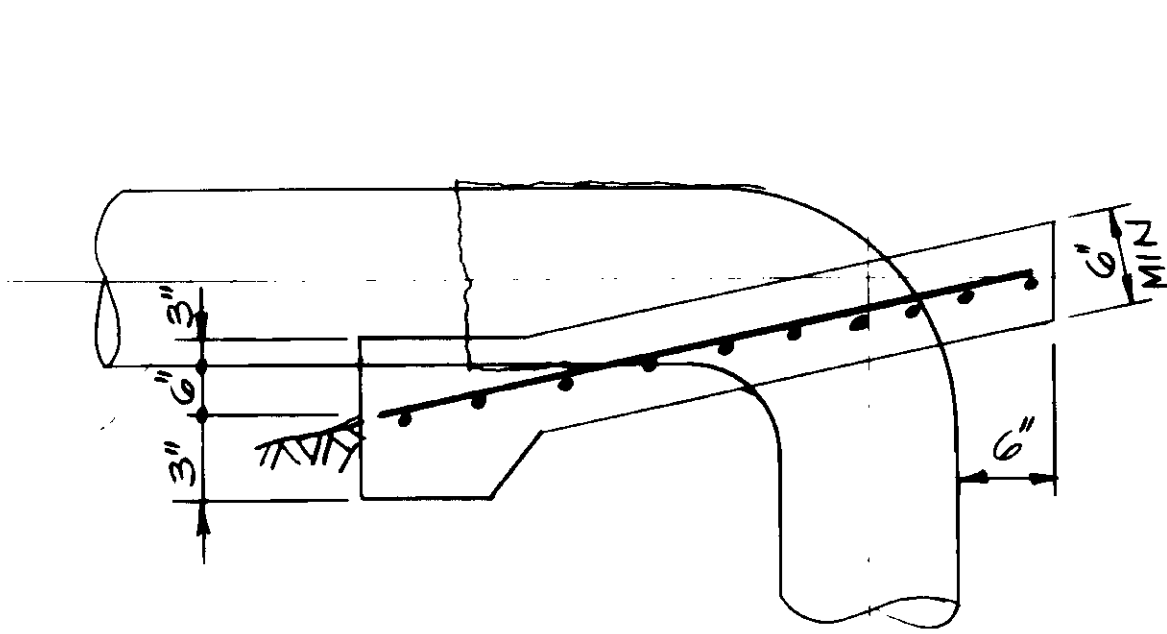
REV	DATE	BY	DESCRIPTION
6-2-89	A.B.	REV. PER K.P.C.	
5-2-89	A.B.	REV. PER K.P.C.	



HOPPER SCREEN AND DRAIN VALVE  
 NO SCALE



GRIT SLUICE TANK



PIPE PROTECTION NO 1 & 2

04169



RECORD DRAWINGS  
 FOR FILE INFORMATION BY PERMITTING AGENCY  
 KATSURA CONSULTING ENGINEERS JUNE 1999

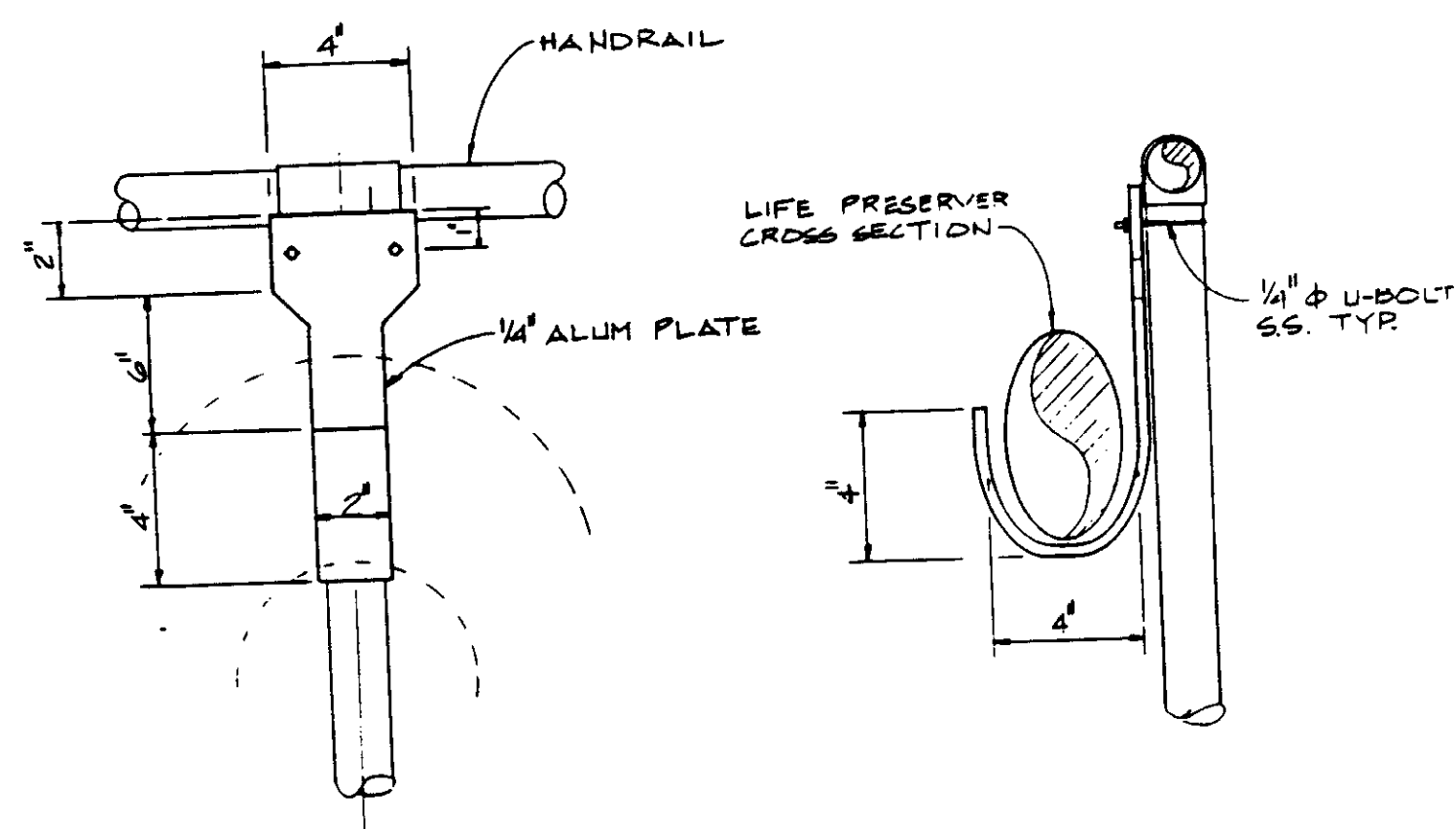
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SCALE:	NONE	DESIGNED:	YK	CHECKED:	YK
SUBMITTED:	0-7-87	DRAWN:	CL		
KATSURA CONSULTING ENGINEERS		ALEXANDER ENGINEERS		R.C.E. NO. DATE	

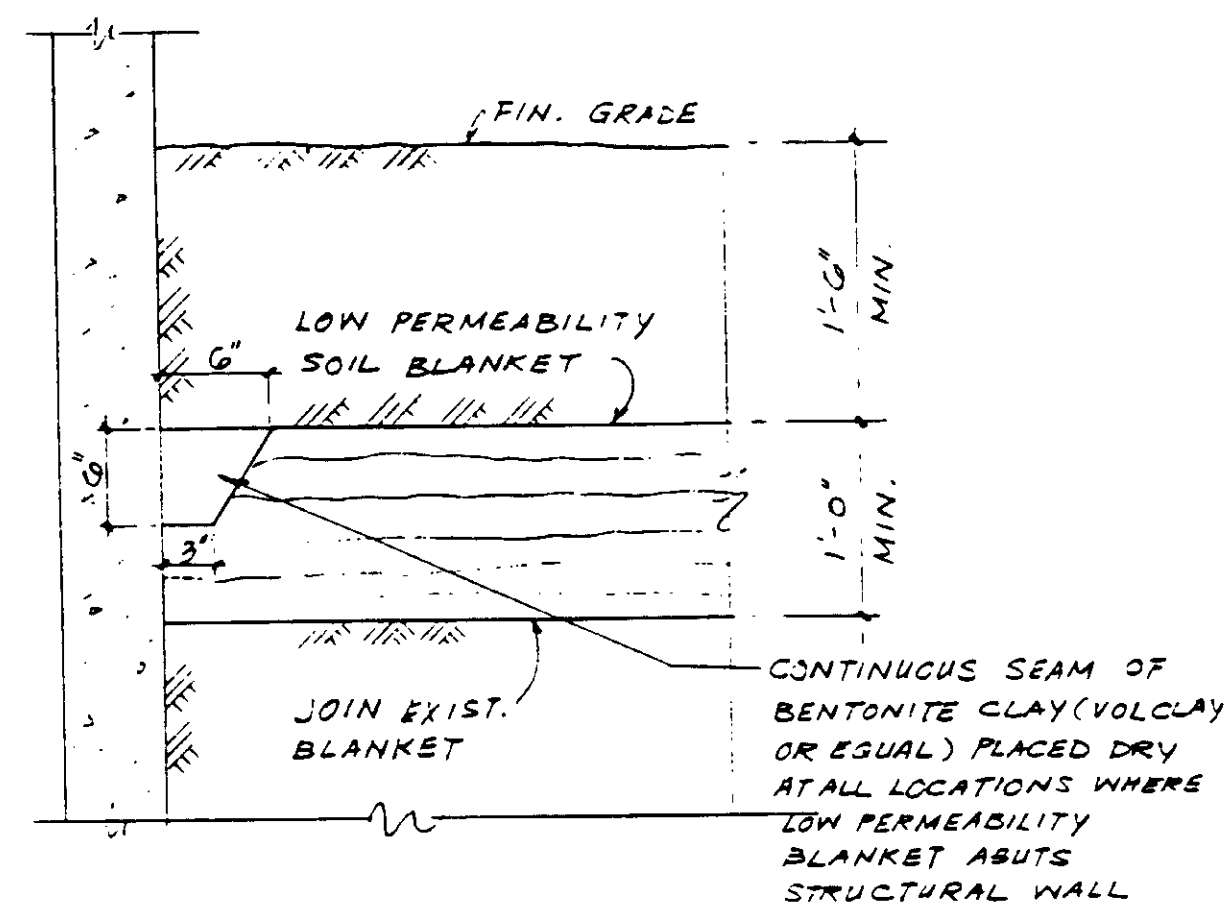
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III	
MISCELLANEOUS DETAILS-MATERIAL HANDLING	

SHEET  
 M12-2

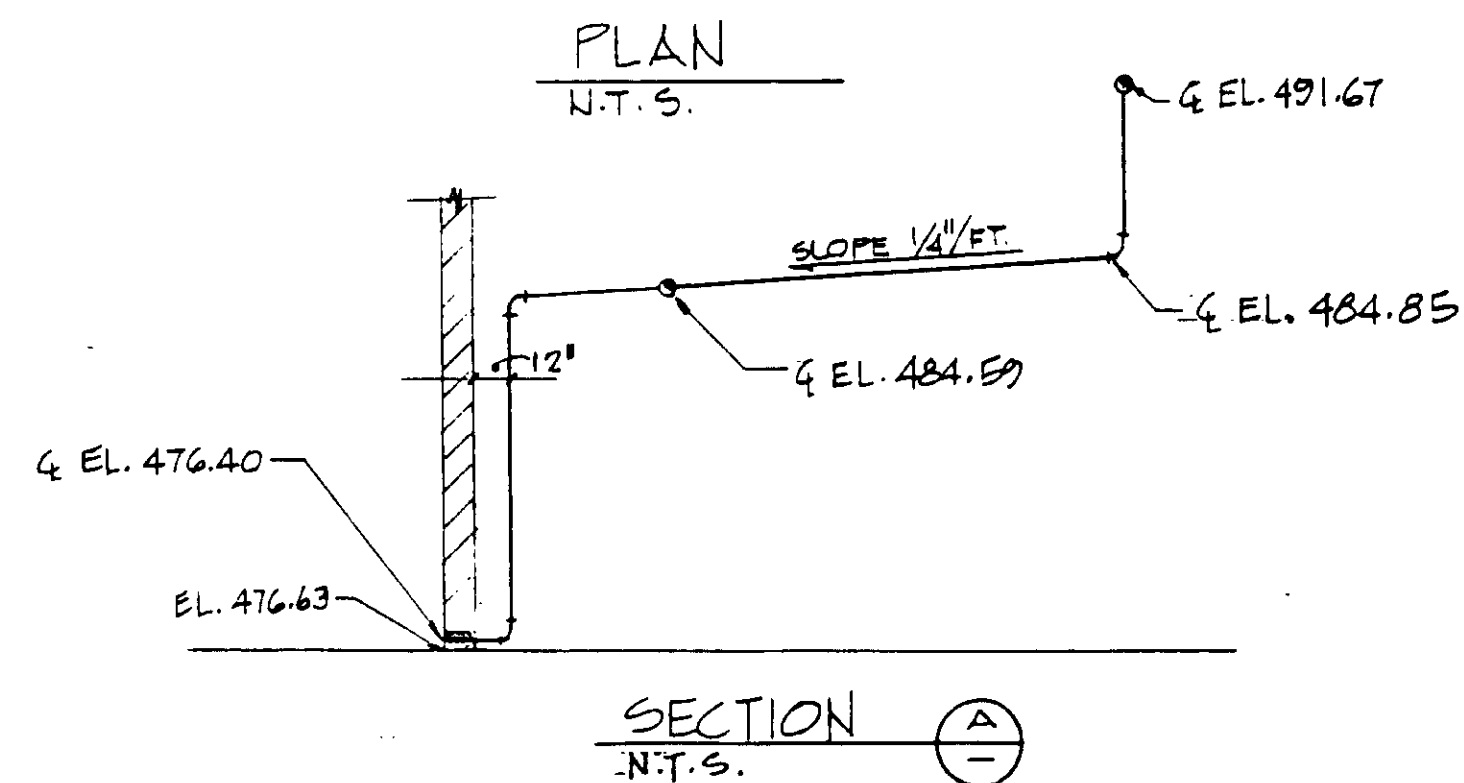
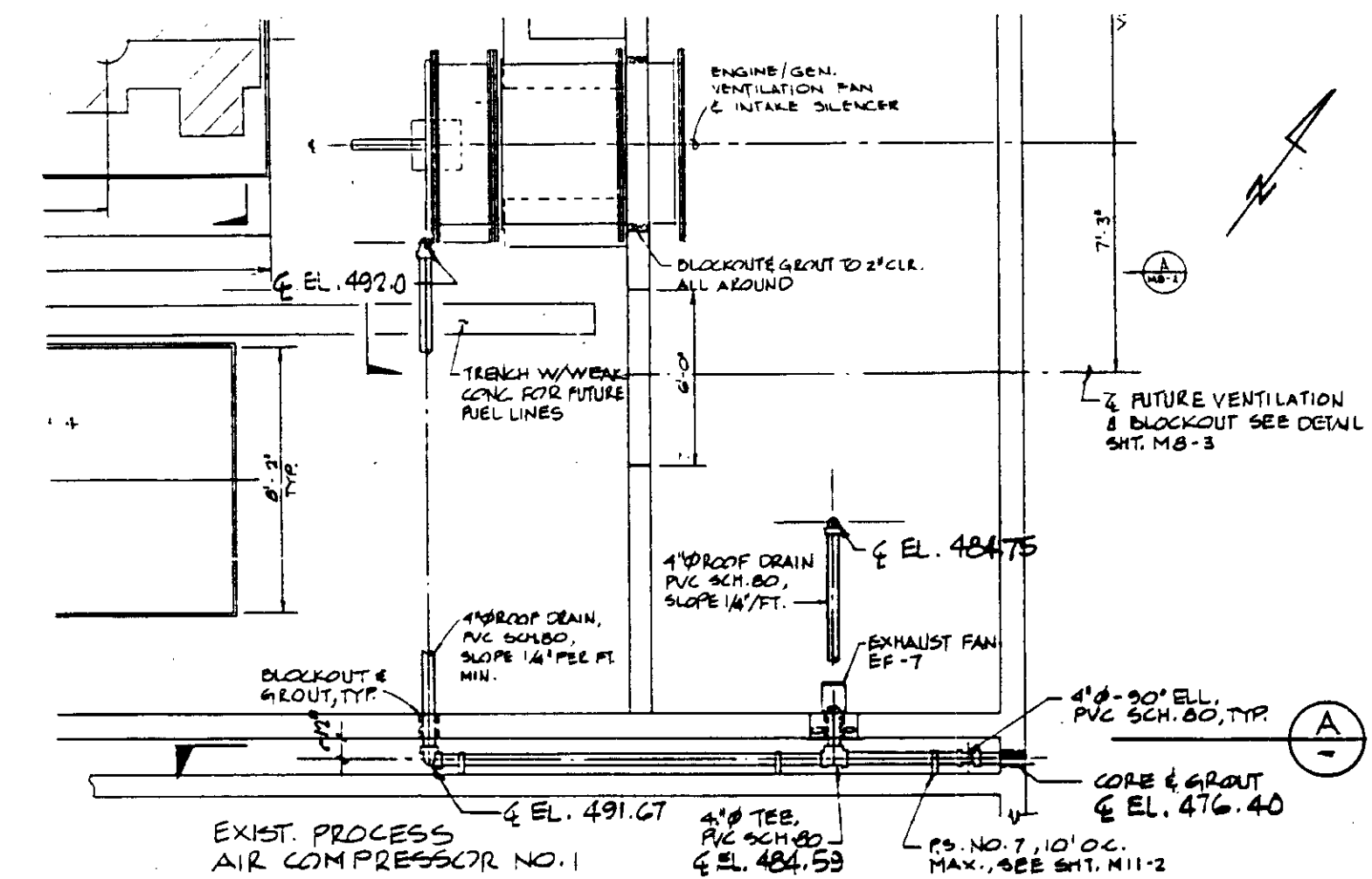


LIFE PRESERVER RACK DETAIL  
 MISCELLANEOUS DETAILS SKETCH SKM12-3

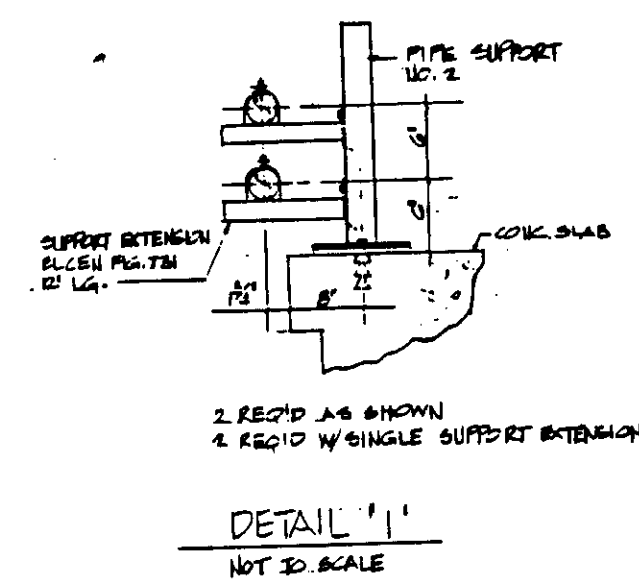


- NOTES:
1. CONSTRUCT FLOOD PROTECTION NORTH, SOUTH AND EAST OF PROCESS AIR COMPRESSOR NO. 3
  2. LOW PERMEABILITY SOIL BLANKET MATERIAL TO HAVE PERMEABILITY NOT LESS THAN  $10^{-6}$  CM/SEC NOR MORE THAN  $10^{-4}$  CM/SEC. MATERIAL TO BE SELECTED FROM ONSITE EXCAVATED MATERIALS BY SOILS CONSULTANT. ALTERNATIVE USE OF BENTONITE AND ONSITE MATERIAL ACCEPTABLE WITH APPROVED MIXING AND PLACEMENT.

FLOOD PROTECTION SKETCH SKC4-11

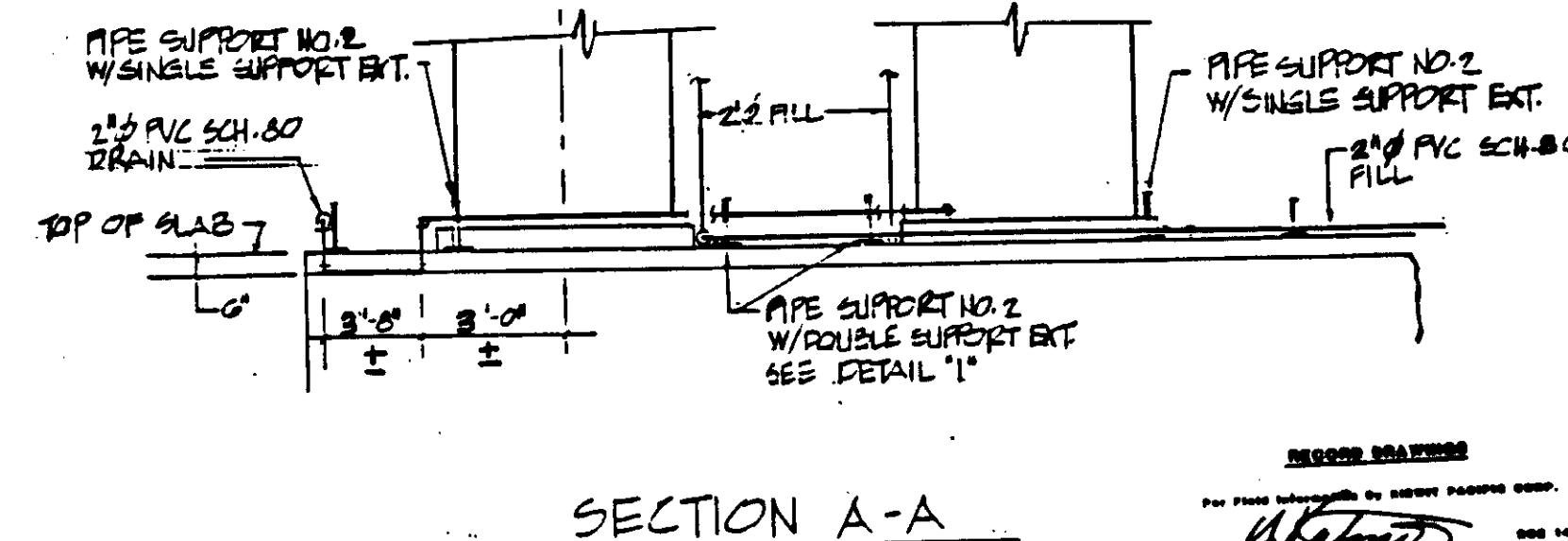
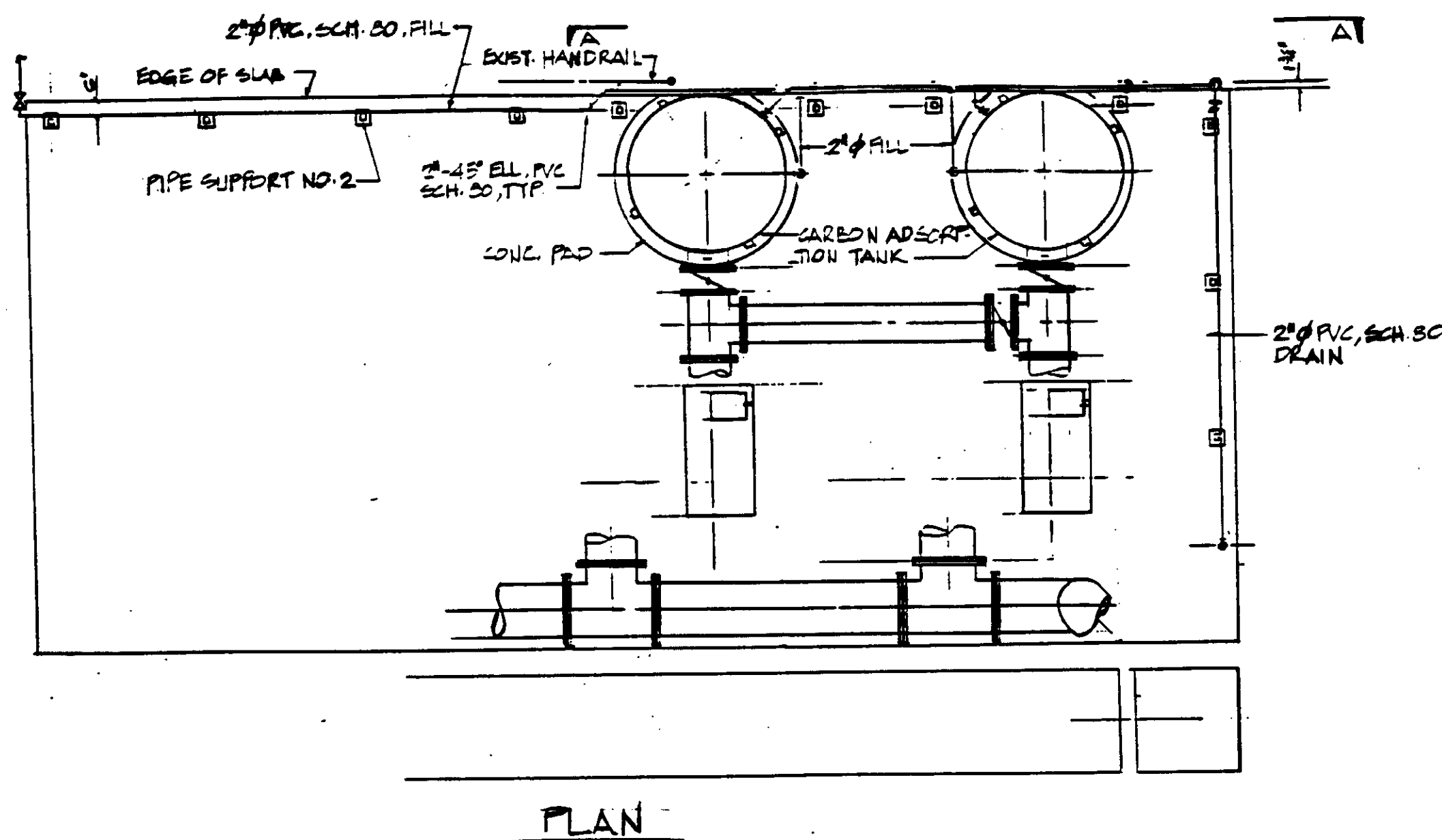


4" ROOF DRAIN AT GENERATOR BLDG. RFI 215



- ADDITIONAL MATERIAL REQ'D
- 6 - SUPPORT EXTENSION ELSEN FIG. 731 - 12' LG.
  - 3 - 2'-90° ELL, PVC SCH. 80
  - 2 - 2'-45° ELL, PVC SCH. 80

CARBON ADSORPTION TANK CHEMICAL & DRAIN REVISION PCH-8



REVISIONS  
 FOR THIS PROJECT BY SHEET NUMBER ONLY  
 KALEX ENGINEERS  
 KALEX CONSULTING ENGINEERS AND ARCHITECTS

04170

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED:	SUBMITTED:	14038
DRAWN:	CHECKED:	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

**CONTRACT**

**ELECTRICAL PLAN SYMBOLS & ABBREVIATIONS**

SYMBOL	DESCRIPTION
	FLUORESCENT LIGHTING FIXTURE (TYPE & MOUNTING AS NOTED)
	INCANDESCENT LIGHTING FIXTURE (TYPE & MOUNTING AS NOTED)
	LIGHTING FIXTURE (WALL BRACKET MOUNTED)
	AREA LIGHT AND POLE (TYPE AND SIZE AS NOTED)
	NO. OF FIXTURES NO. OF LAMPS WATTS TYPE CONVENIENCE OUTLET, DUPLEX, 125V, 2 POLE, 3 WIRE GROUNDED TYPE M.H. + 12" UNLESS NOTED. GFI=GROUND FAULT INTERRUPTER
	CONVENIENCE OUTLET, SINGLE, 250V, 2 POLE, 3 WIRE GROUNDED TYPE, AMPS AS NOTED
	POWER OUTLET, 3 POLE, 4 WIRE, GROUNDED TYPE RATED FOR SYSTEM VOLTAGE, AMPS AS NOTED
	JUNCTION BOX OR CONDUIT FITTING
	ELECTRICAL DEVICE OR OUTLET AS NOTED ON DRAWINGS
	PAGING SPEAKERS
	INTERCOM SPEAKER HANDSET
	ALARM BELL
	TOGGLE SWITCH 1 POLE, 20A, 120V, SUBSCRIPT INDICATES OUTLET CONTROLLED (TYPICAL)
	TOGGLE SWITCH, 2 POLE, 20A, 120V
	TOGGLE SWITCH 3 WAY, 20A, 120V
	TOGGLE SWITCH WITH PILOT LIGHT
	ELECTRICAL DEVICE - SURFACE MOUNTED
	ELECTRICAL DEVICE - FLUSH MOUNTED
	CONDUIT RUN, EXPOSED
	CONDUIT RUN, HIDDEN FROM VIEW
	CONDUIT RUN, IN SLAB OR BELOW GRADE
	CONDUIT SEAL - HORIZ. OR VERT. TYPE AS REQ'D - COMPOUND FILLED
	FLEXIBLE CONDUIT CONNECTION
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	TELEPHONE CONDUIT, SIZE AS NOTED
	GROUND WIRE, SIZE AS NOTED
	GROUND ROD 5/8" x 8'-0" COPPERWELD (UNLESS NOTED OTHERWISE)
	UNDERGROUND DUCTBANK
	LIGHTING PANEL
	TERMINAL CABINET
	SURFACE MOUNTED PANEL
	PUSH BUTTON STATION, SUBSCRIPT INDICATES FUNCTION : 'S/S' START - STOP
	SELECTOR SWITCH, SUBSCRIPT INDICATES FUNCTION : 'HOA' = HAND-OFF-AUTO, 'F' = FORWARD, 'R' = REVERSE, 'LOS' = LOCK OUT STOP
	DETAIL SHEET ON WHICH DETAIL APPEARS
	WEATHERPROOF
	EXPLOSION - PROOF
	PULL BOX
	CONDUIT ONLY
	MOUNTING HEIGHT
	SLUDGE BLANKET DETECTOR
	CONDUIT
	EXHAUST FAN
	SUMP PUMP

**ELECTRICAL PLAN SYMBOLS & ABBREVIATIONS CON'T**

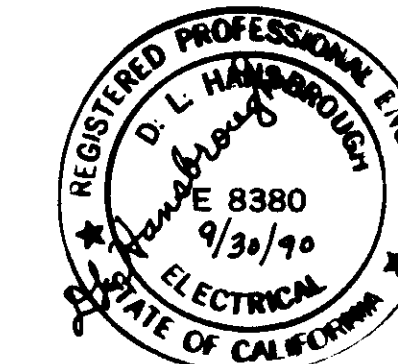
SYMBOL	DESCRIPTION
SV	SOLENOID VALVE
PNL	PANEL
CKT	CIRCUIT
IC	INTERCOMMUNICATION
PA	PUBLIC ADDRESS SYSTEM

**CONTROL SYMBOLS & ABBREVIATIONS**

SYMBOL	DESCRIPTION
	PUSH BUTTON - NORMALLY CLOSED MOMENTARY CONTACT
	PUSH BUTTON - NORMALLY OPEN MOMENTARY CONTACT
	LOCK OUT STOP (LOS) OR (ON-OFF)
	MAINTAINED CONTACT SELECTOR SWITCH
	ROTARY SELECTOR SWITCH "HAND-OFF-AUTO" OR AS NOTED
	NORMALLY CLOSED CONTACT (OFF THE SHELF POSITION)
	NORMALLY OPEN CONTACT (OFF THE SHELF POSITION)
	INDICATING LIGHT : R=RED, G=GREEN, A=AMBER, B=BLUE, W=WHITE
	CONDUCTORS CONNECTED
	CONDUCTORS NOT CONNECTED
TDAE	TIME DELAY AFTER ENERGIZING
TDAD	TIME DELAY AFTER DE-ENERGIZING
ICTO	INSTANT CLOSE TIME TO OPEN
IOTC	INSTANT OPEN TIME TO CLOSE
MS	MOTOR STARTER COIL
OL	OVERLOADS
CR	CONTROL RELAY
ETM	ELAPSED TIME METER
LS	LIMIT SWITCH
TD	TIME DELAY RELAY
TD-M	TIME DELAY RELAY IN MOTOR STARTER (SAME NO. AS MOTOR)
LC	LEVEL CONTROLLER
PS	PRESSURE SWITCH
PT	PRESSURE TRANSMITTER
FT	FLOW TRANSMITTER
CV	CONTROL VALVE
CT	CURRENT TRANSFORMER
DO	DISSOLVED OXYGEN
TS	TEMPERATURE SWITCH
VS	VIBRATION SWITCH
LT	LEVEL TRANSMITTER
CPT	CONTROL POWER TRANSFORMER

**SINGLELINE DIAGRAM SYMBOLS**

SYMBOL	DESCRIPTION
	CURRENT TRANSFORMER & WATTHOUR METER
	ELECTRICALLY OPERATED AIR CIRCUIT BREAKER, DRAWOUT TYPE
	FUSED LOAD INTERRUPTER SWITCH, DRAWOUT TYPE
	NON-FUSED ISOLATION SWITCH
	MOLDED CASE AIR CIRCUIT BREAKER, 225A FRAME, 3 POLE WITH 200A TRIP
	KEY INTERLOCKED BREAKER, "a" IDENTIFIES BREAKERS IN INTERLOCK SCHEME.
	KEY INTERLOCKED SWITCH, "b" IDENTIFIES SWITCHES IN INTERLOCK SCHEME.
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
	3 PHASE CURRENT TRANSFORMER, RATIO=150AMP : 5AMPS
	POTENTIAL TRANSFORMER, 10 120/240V 1 PHASE, 30 240V, 3 PHASE
	VOLTMETER SWITCH & VOLTMETER, 3 PHASE
	AMMETER SWITCH & AMMETER, 3 PHASE
	CURRENT TRANSFORMER & DEMAND METER
	PROTECTIVE RELAY, 3 PHASE, 64 ANSI DEVICE IDENTIFICATION
	5KV, REDUCED VOLTAGE, CLOSED TRANSITION TYPE AUTO-TRANSFORMER MOTOR CONTROLLER
	480V, 3 PHASE MOTOR CONTROLLER, FULL VOLTAGE, NON-REVERSING
	480V, 3 PHASE MOTOR CONTROLLER, FULL VOLTAGE, REVERSING
	3 PHASE CONTACTOR & CAPACITORS
	GROUNDING RESISTOR
	INDICATING LIGHT, ONE PER PHASE WITH CLEAR LENS
	POWER TRANSFORMER
	ENGINE GENERATOR
	MOTOR, 200 H.P.
HV-1A	HIGH VOLTAGE FEEDER FROM BUS "A"
PF-6A2	POWER FEEDER NUMBER 2 FROM UNIT SUB "6A"
2A-F1	POWER FEEDER NO.1 FROM MCC-2A



RECORD DRAWING 04171

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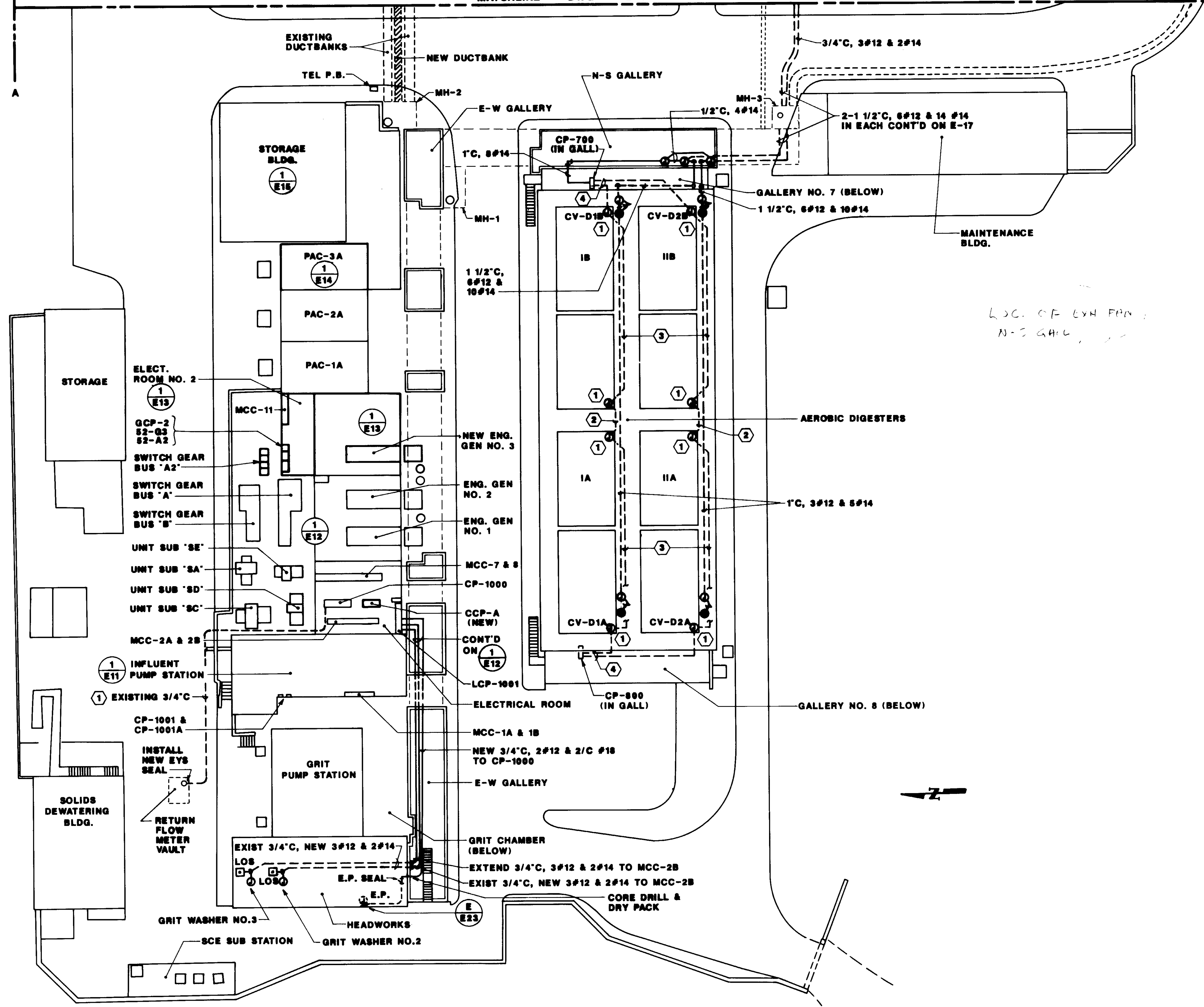
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SUBMITTED: 14038	DATE: 6-30-87	R.C.E. NO. 513
KATSUBA CONSULTING ENGINEERS		
ALEXANDER ENGINEERS		

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 ELECTRICAL SYMBOLS & ABBREVIATIONS

SHEET E-1





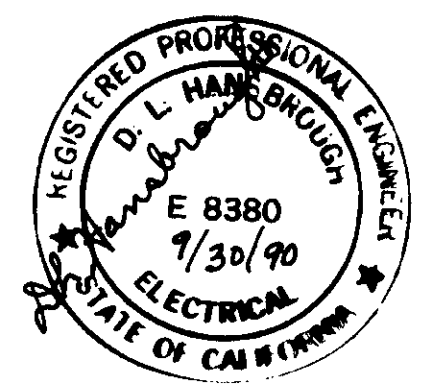
NOTES:

- ① EXISTING J. BOXES
- ② NEW 3/4", 8#14
- ③ EXISTING 1"C, PULL OUT 2#12 & 2-2/C #18  
REPULL 2#12, 8#14 & 2-2/C #18
- ④ EXISTING 1"C, PULL OUT 2#12 & 2-2/C #18  
REPULL 2#12, 8#14 & 4-2/C #18

L.S.C. OF EXH PAN  
N-S GALL.

04172

RECORD DRAWING



REV	DATE	BY	DESCRIPTION
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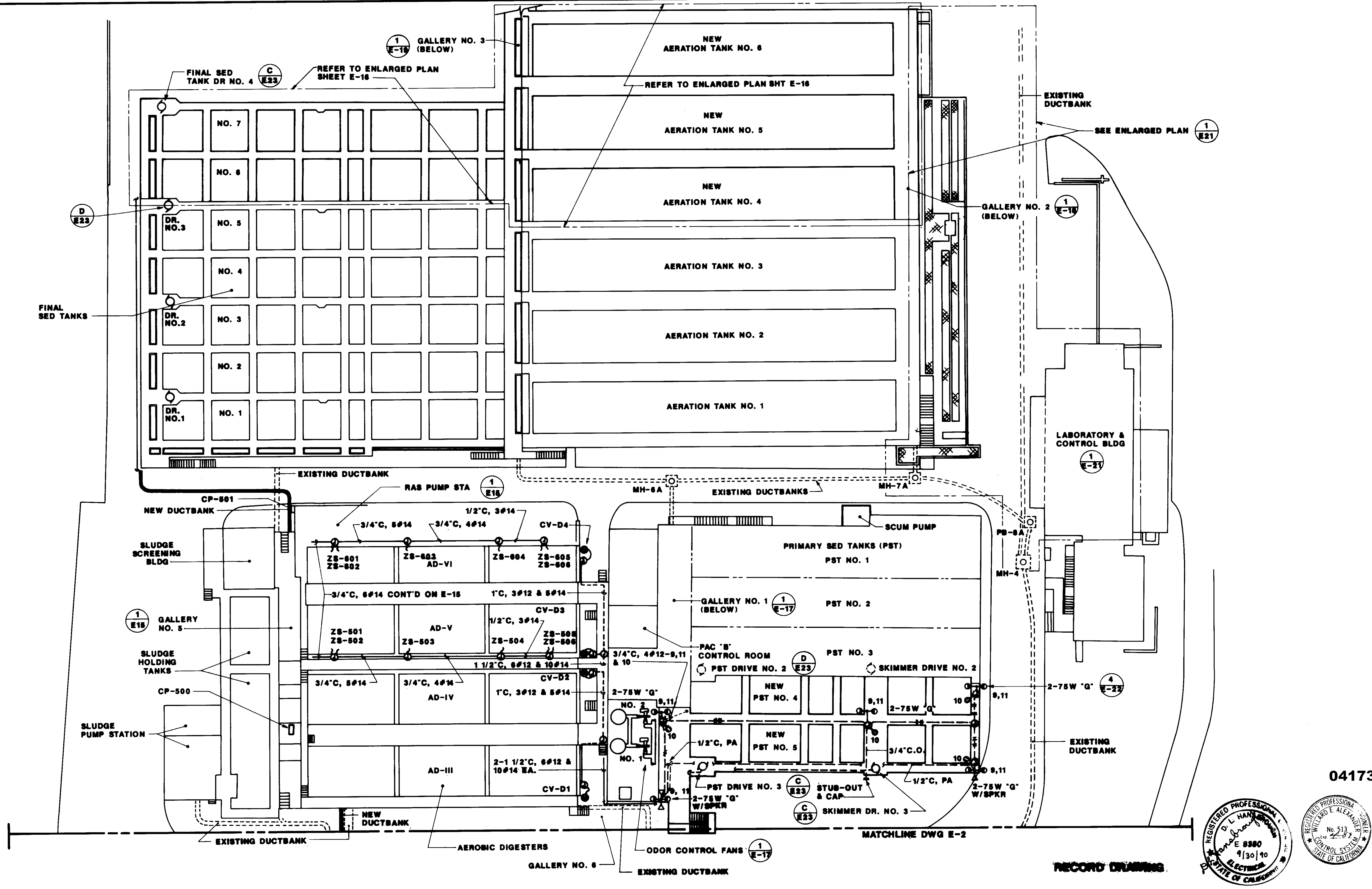
DESIGNED: W.A.  
DRAWN: W.A.  
CHECKED: W.A.

SUBMITTED	14038
KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
Willard Alexander	513 6-30-87
ALEXANDER ENGINEERS	R.C.E. NO. DATE

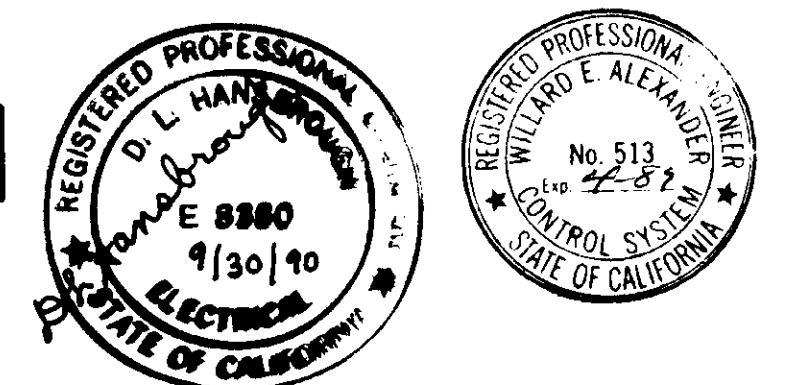
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ELECTRICAL SITE PLAN  
SHEET 1 OF 2

SHEET E-2



04173



RECORD DRAWING

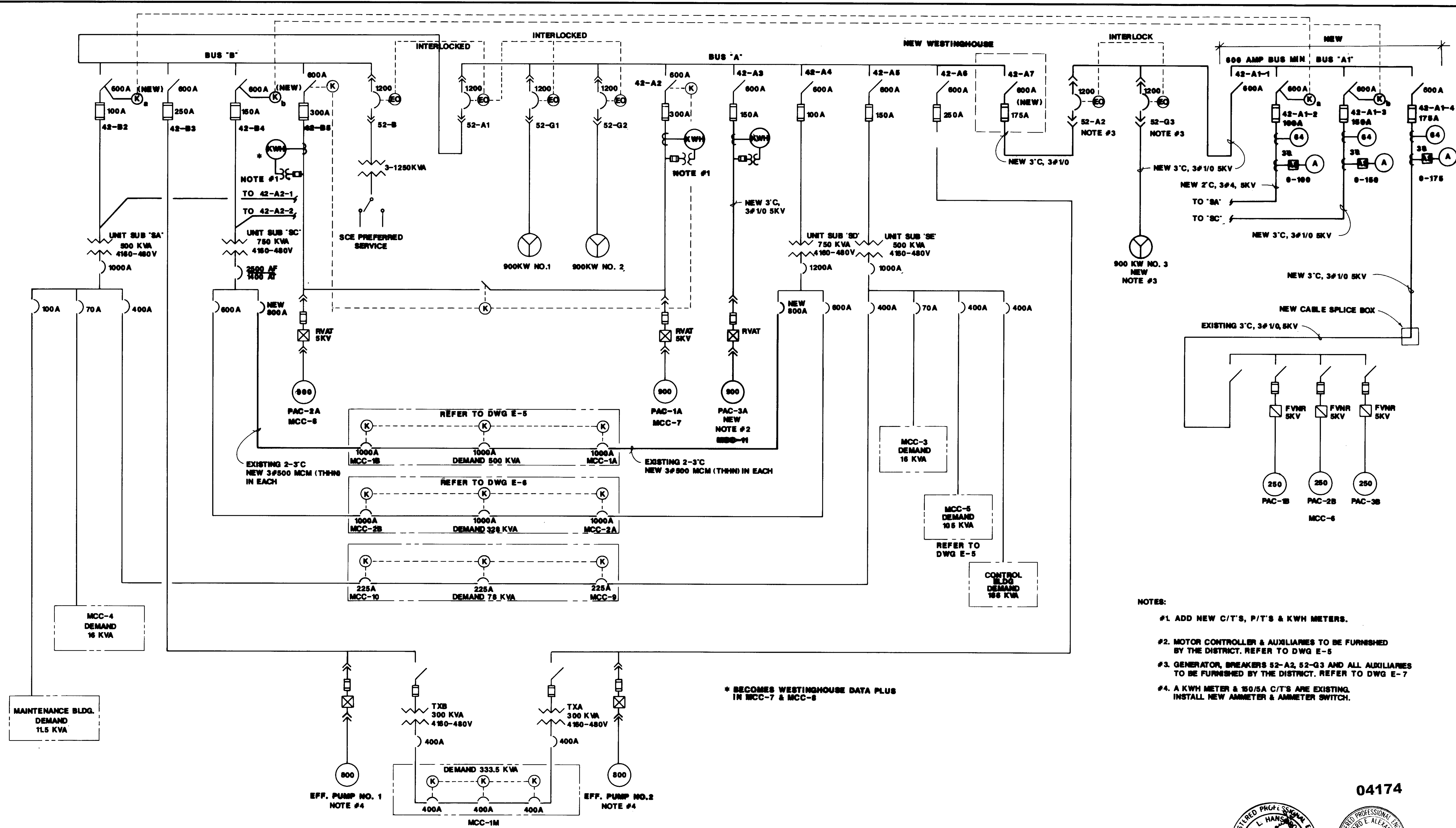
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1	0-00	WA	REVISED FOR REDD				

SCALE:	1" = 20'
DESIGNED:	W.A.A.
DRAWN:	S.A.
CHECKED:	W.A.A.
SUBMITTED:	10000
DESIGNED:	KATSURA CONSULTING ENGINEERS
DRAWN:	W. Alexander
CHECKED:	ALEXANDER ENGINEERS
DATE:	6-30-87

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 Ventura, California / Glendora, California

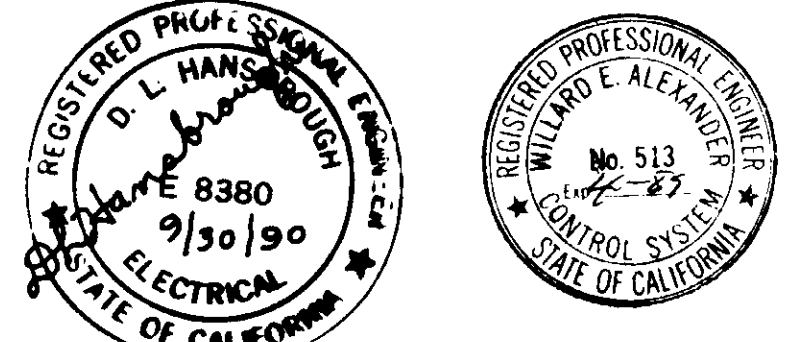
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 ELECTRICAL SITE PLAN  
 SHEET 2 OF 2

SHEET  
E-3



- NOTES:
- #1. ADD NEW C/T'S, P/T'S & KWH METERS.
  - #2. MOTOR CONTROLLER & AUXILIARIES TO BE FURNISHED BY THE DISTRICT. REFER TO DWG E-5
  - #3. GENERATOR, BREAKERS 52-A2, 52-G3 AND ALL AUXILIARIES TO BE FURNISHED BY THE DISTRICT. REFER TO DWG E-7
  - #4. A KWH METER & 150/5A C/T'S ARE EXISTING. INSTALL NEW AMMETER & AMMETER SWITCH.

04174



RECORD DRAWING

REV	DATE	BY	DESCRIPTION
1	6-30-87	W.A.	REVISED PER RECORDS

SCALE:	W.A.	SUBMITTED	14038
NONE	DESIGNED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	DRAWN	W. Alexander	513 6-30-87
	CHECKED	ALEXANDER ENGINEERS	R.C.E. NO. DATE

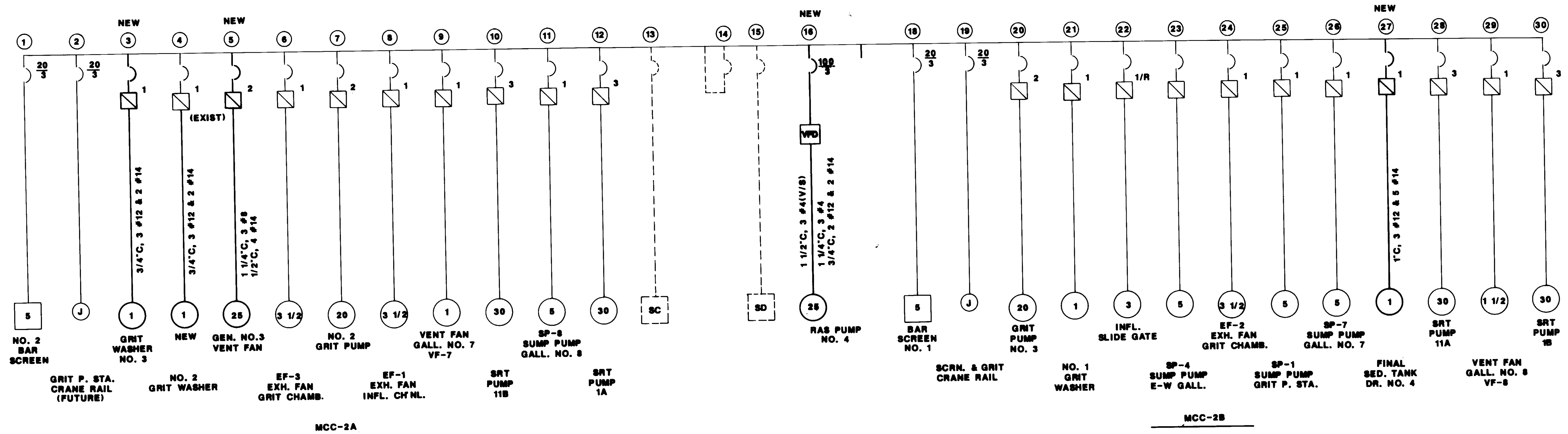
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL DISTRIBUTION SYSTEM**  
**SINGLELINE DIAGRAM**

SHEET E-4

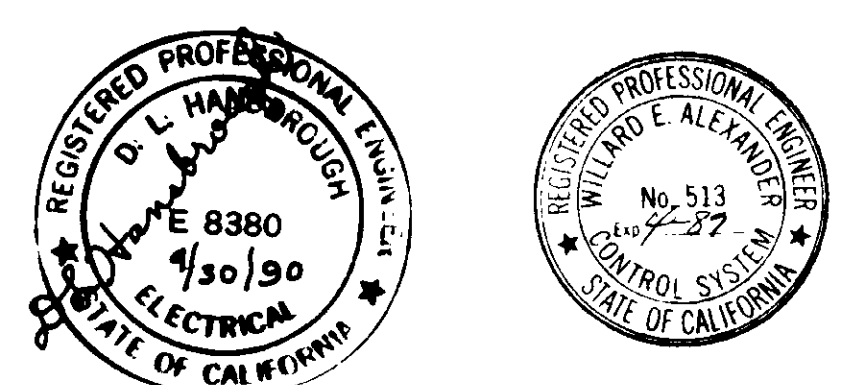
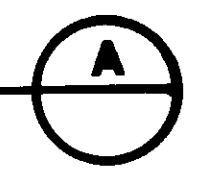






SPACE	BLANK	①	②	⑥	⑩	⑬	⑭	⑮	NEW ⑰	⑱	⑲	LIGHTING XFMR BREAKER	
SPACE		NEW ③	⑦	⑪					SPACE	⑳	SPACE		
SPACE		④	⑧						SPACE	㉑	SPACE		㉒
SPACE		NEW ⑤	⑨	⑫					SPACE	㉒	㉓		㉓
SPACE		SPACE	SPACE	SPACE					SPACE	SPACE	㉔		㉔
SPACE				SPACE					SPACE	SPACE	NEW ㉗		SPACE

MCC-2A/2B WEST ELEVATION



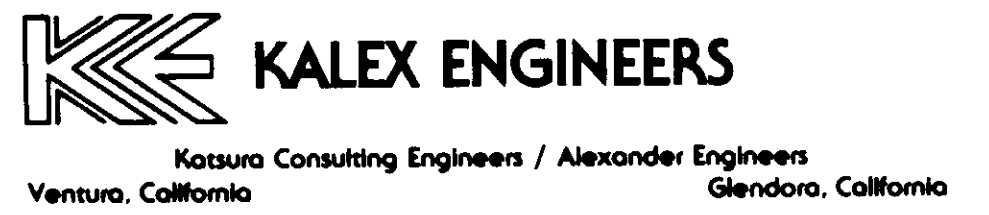
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04176

REV	DATE	BY	DESCRIPTION
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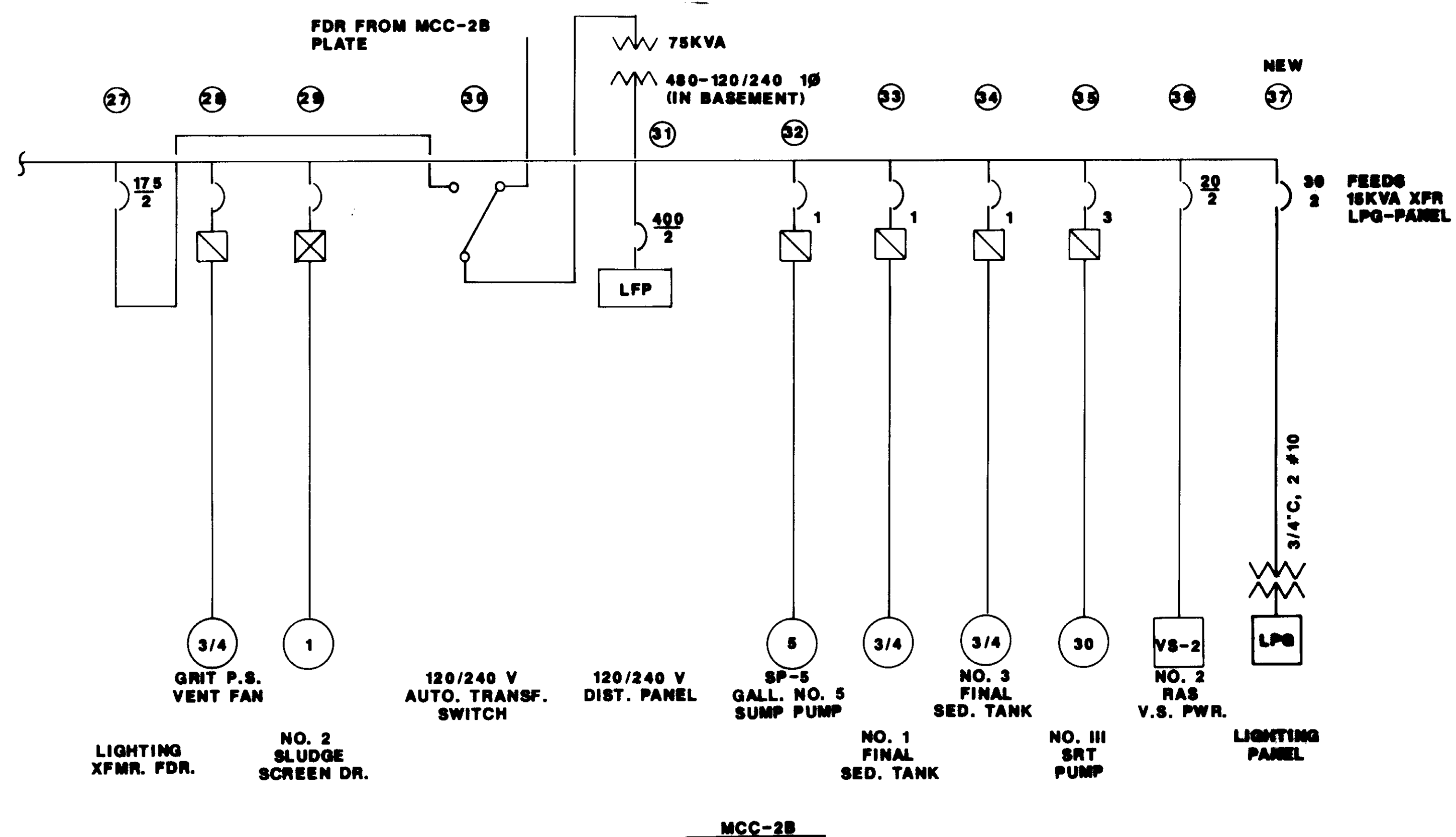
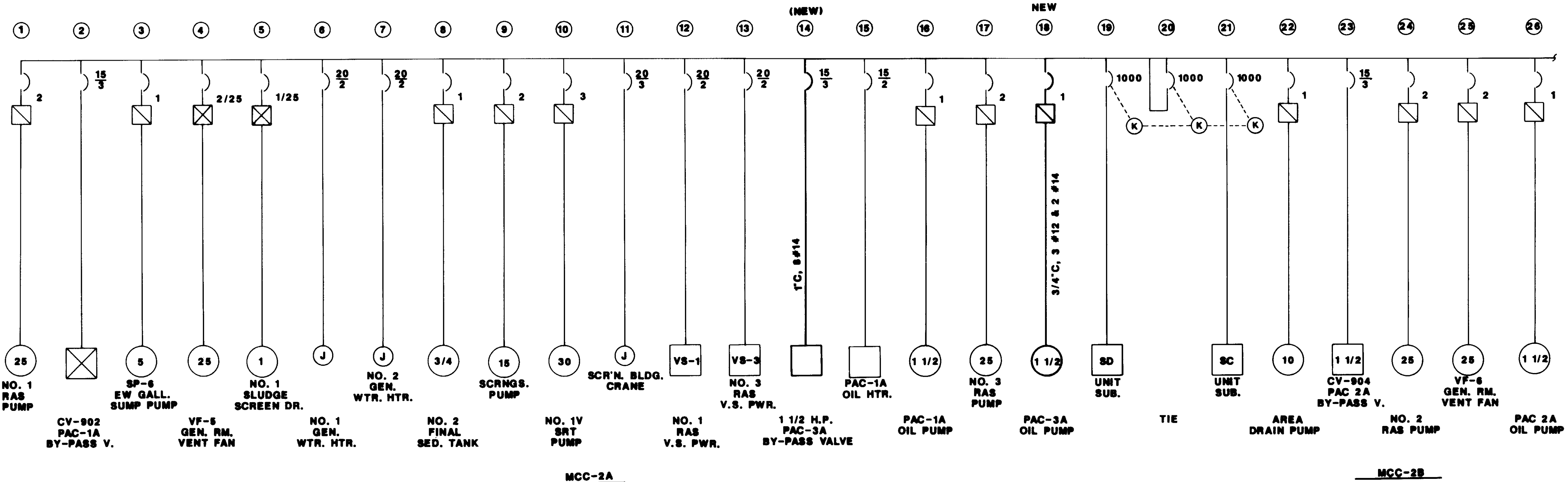
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 DESIGNED: W.A.  
 DRAWN: W.A.  
 CHECKED: W.A.

SUBMITTED: 14036  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 613 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE



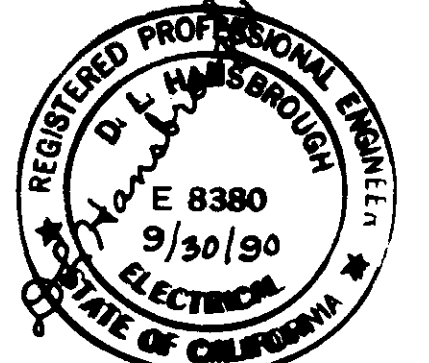
LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY EXPANSION III  
 MCC-2A/2B SINGLELINE DIAGRAM & WEST ELEVATION

SHEET E-6



1	6	7	11	12	SPACE				22			32
2	8		13	14	SPACE	19	20	21	23	27	30	33
3	9		15		SPACE				24	CCP-1 CONTROL		34
4	10		16		SPACE				25	SPACE		35
			17		SPACE				26	28		36
5	CCP-1 CONTROL		NEW		SPACE				29	29		NEW 37
	SPACE		18		SPACE				SPACE	28		SPACE

04177



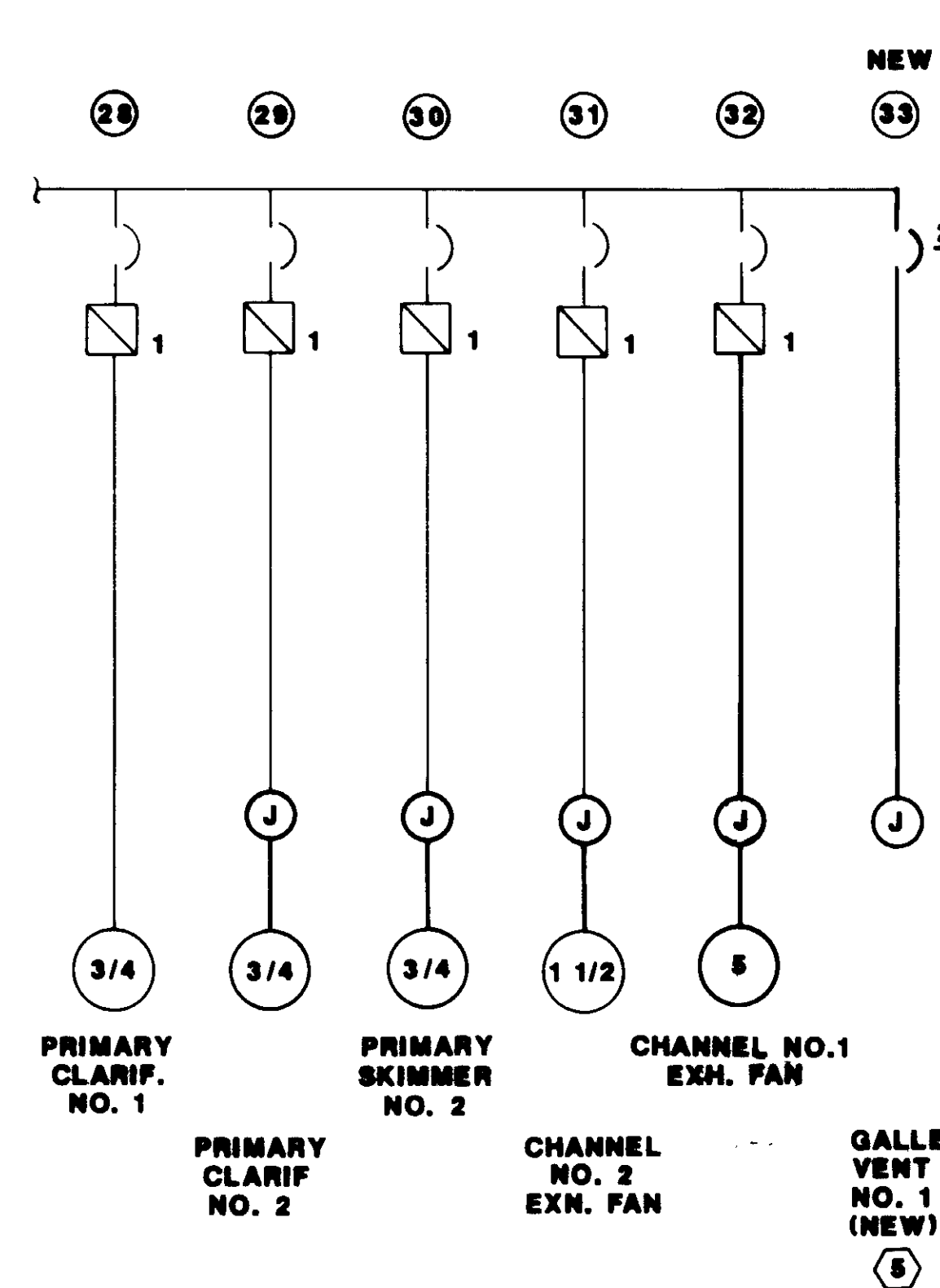
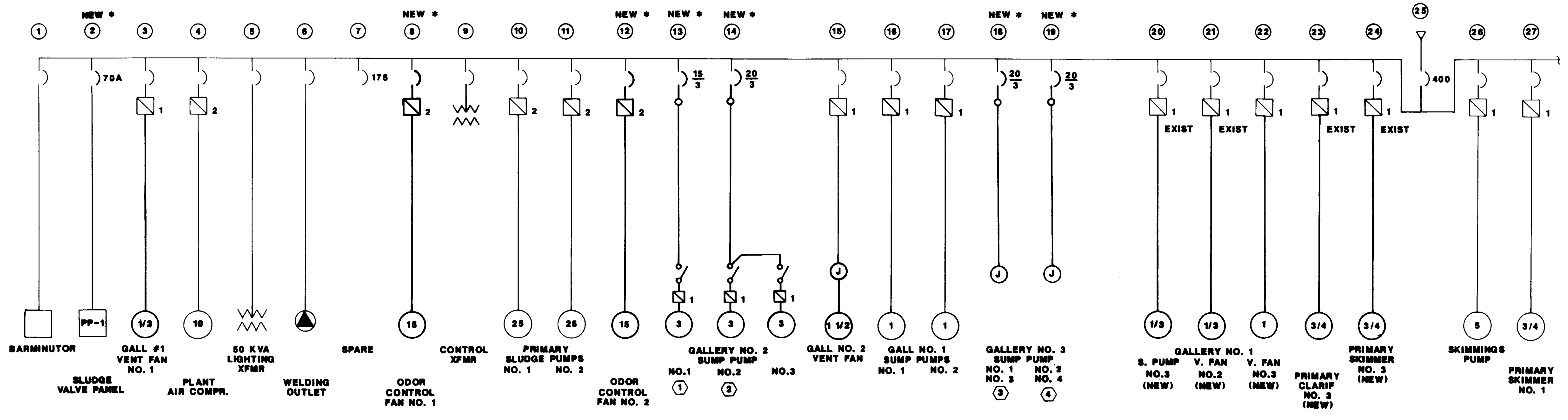
REVISIONS

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	0-00	ENR	ISSUED FOR BIDDING				

SCALE:	W.A. DESIGNED	SUBMITTED	10038
NONE	J.A. DRAWN	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	W.A. CHECKED	Willard Alexander	813 6-30-87
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**MCC-2A/2B SINGLELINE DIAGRAM**  
**& EAST ELEVATION**



\* NEW WESTINGHOUSE SECTION 8 DEVICES

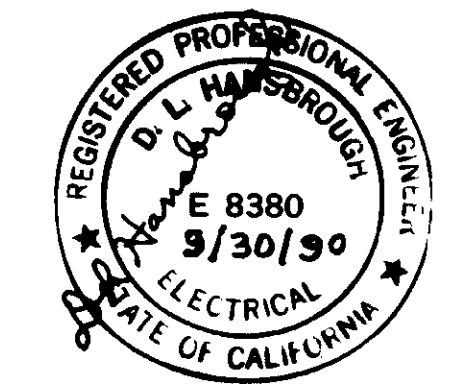
7	11	17	24	SPACE	LUGS
8	8	16	23	28	32
4	10	15	SPARE 22 SIZE 1	27	31
3	9	13	14	21	30
1	2	NEW	NEW	20	29
SPACE	8	12	18	19	33
				PRIMARY SLUDGE VALVE CONTROL	
				SPACE	

- NOTES:**
- CONNECT TO EXISTING CIRCUIT PRESENTLY CONNECTED TO CUBICLE 24
  - CONNECT TO EXISTING CIRCUIT PRESENTLY CONNECTED TO CUBICLE 23
  - CONNECT TO EXISTING CIRCUIT PRESENTLY CONNECTED TO CUBICLE 21
  - CONNECT TO EXISTING CIRCUIT PRESENTLY CONNECTED TO CUBICLE 20
  - CONNECT TO EXISTING CIRCUIT PRESENTLY CONNECTED TO CUBICLE 22

MCC-5 ELEVATION A

04178

RECORD DRAWING



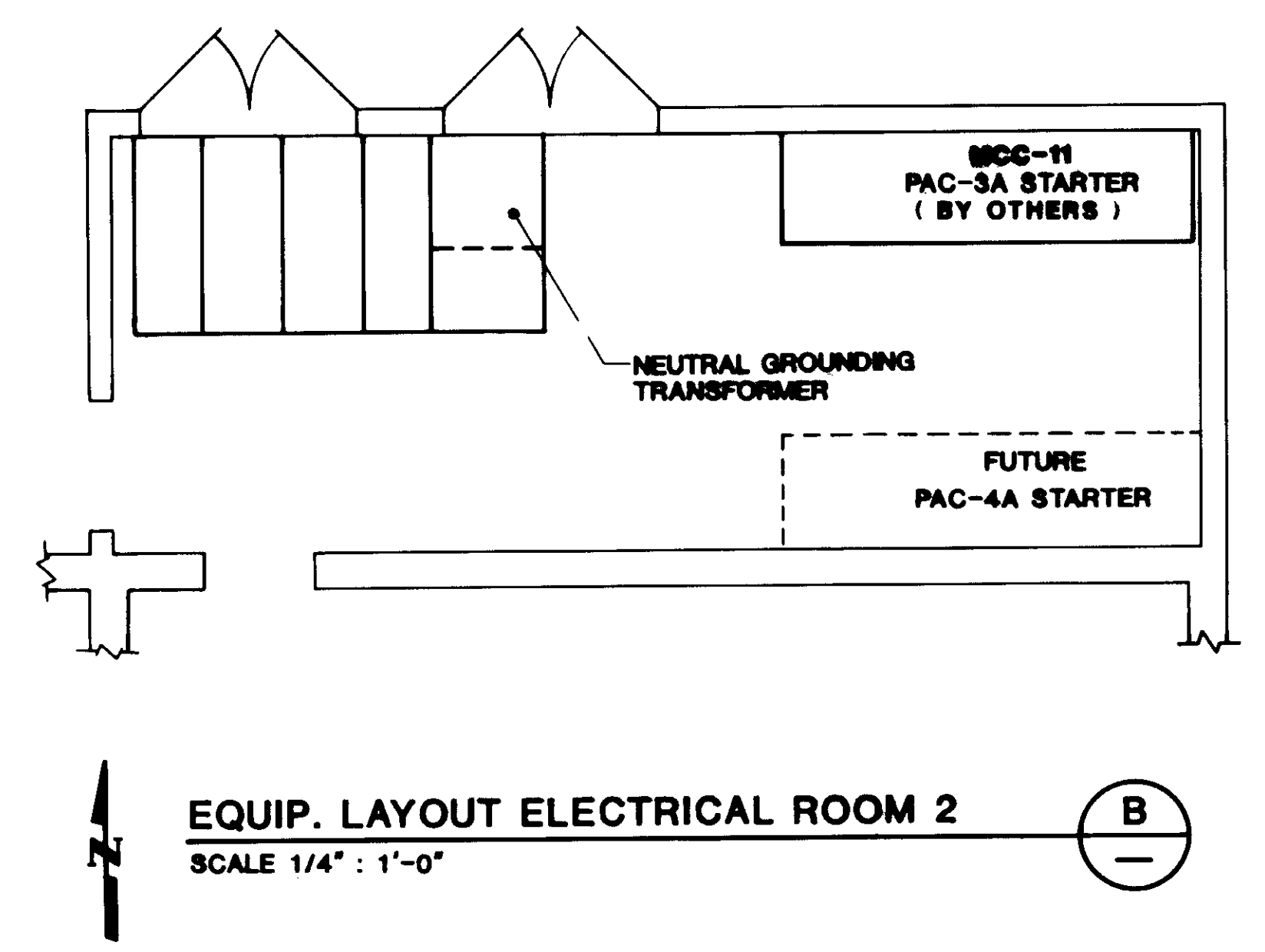
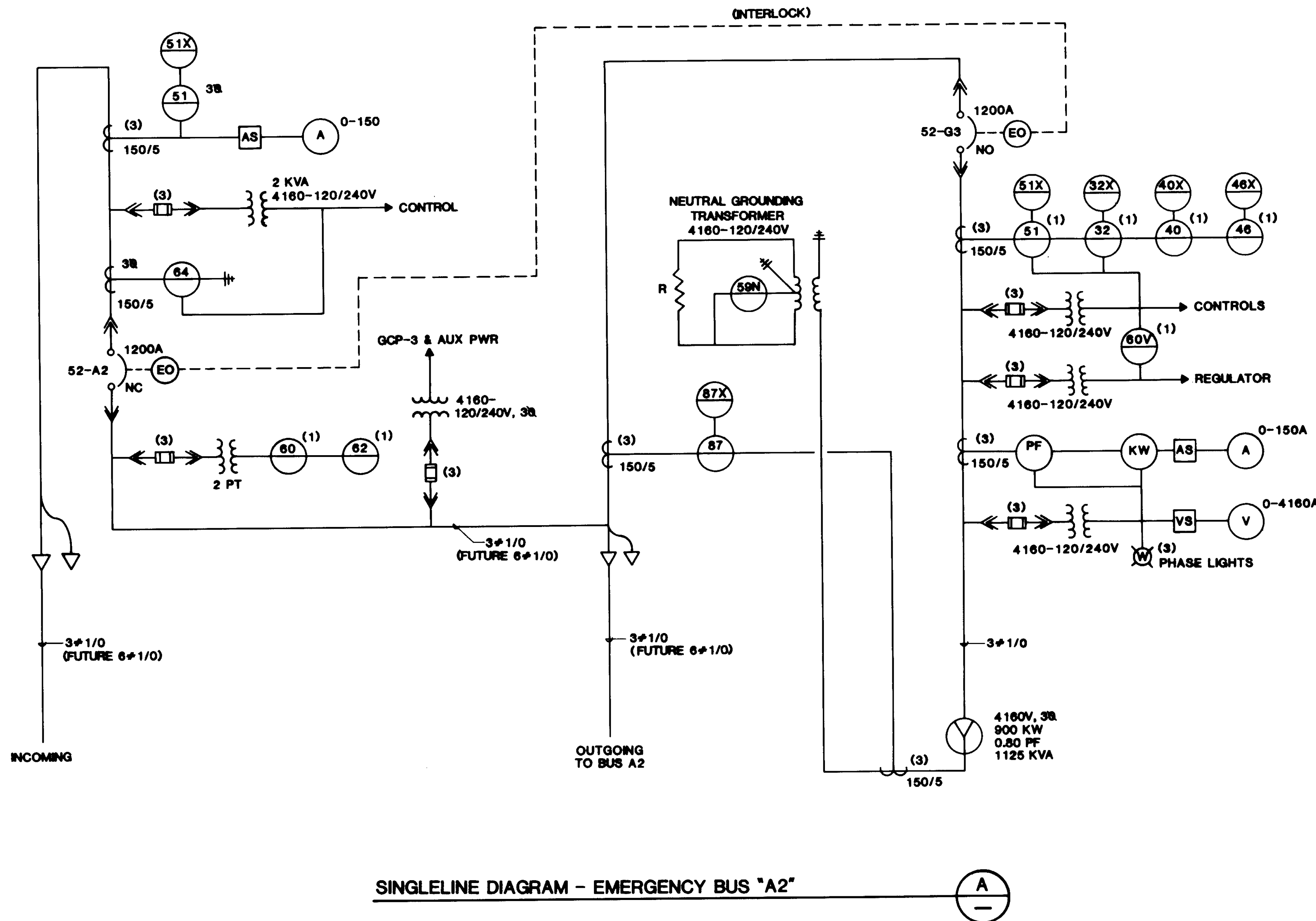
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SCALE: NONE	DESIGNED: W.A. J.A. DRAWN: W.A. CHECKED: W.A.	SUBMITTED: 14986 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE Willard Alexander 513 6-30-87 ALEXANDER ENGINEERS R.C.E. NO. DATE
-------------	---	--

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Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
MCC-5 SINGLELINE DIAGRAM & ELEVATION

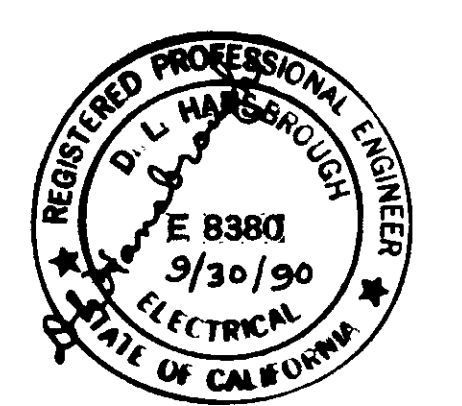
SHEET E-8



SINGLELINE DIAGRAM - EMERGENCY BUS "A2" A

04179

RECORD DRAWING



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
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SCALE: AS SHOWN  
 W.A. DESIGNED  
 S.A. DRAWN  
 W.A. CHECKED

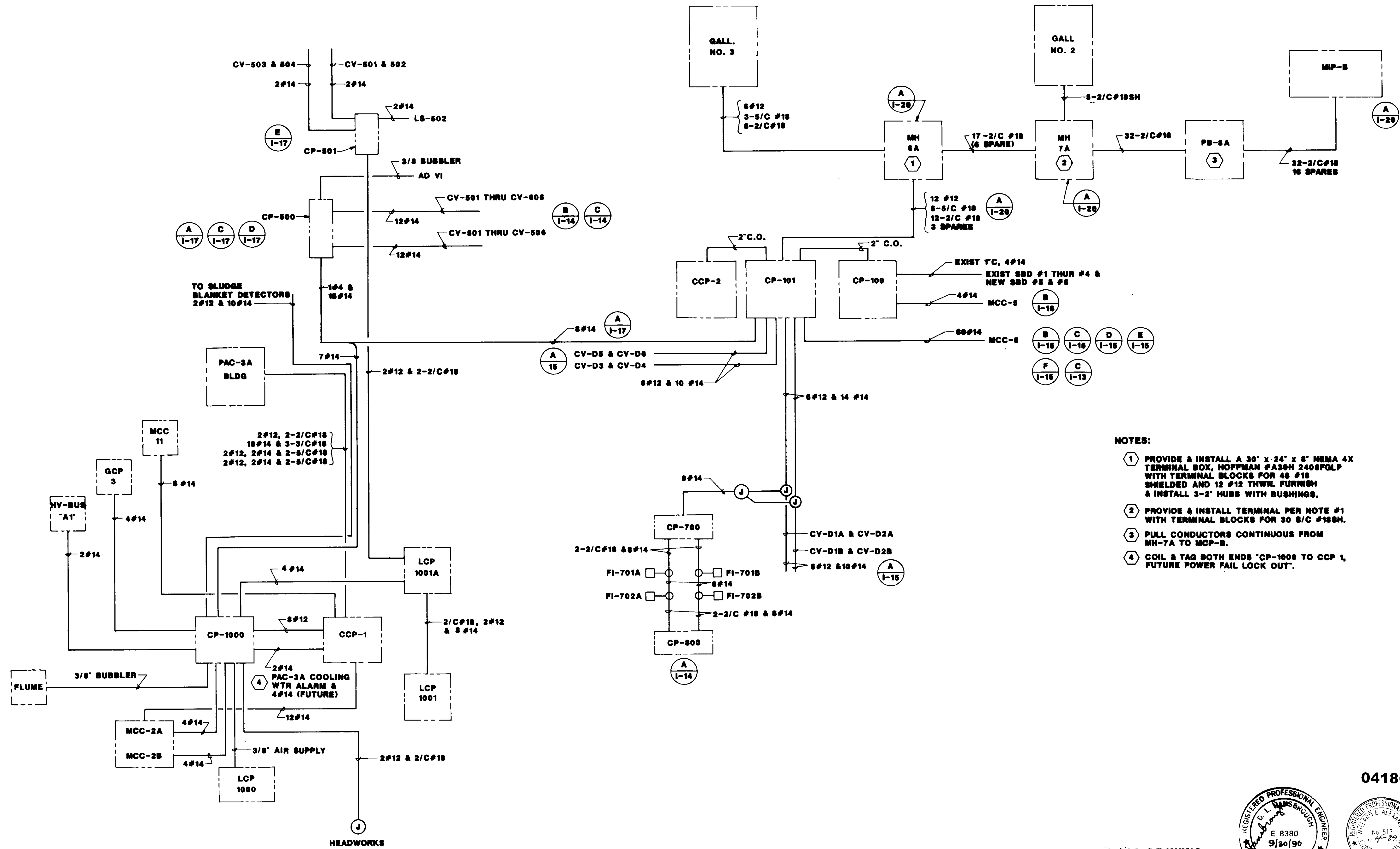
SUBMITTED 14038  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 513 6-30-87  
 ALEXANDER ENGINEERS R.C.S.E. NO. DATE

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 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ENGINE GENERATOR SWITCHGEAR**  
**REFERENCE DRAWING**

SHEET E-9





- NOTES:**
- ① PROVIDE & INSTALL A 30" x 24" x 8" NEMA 4X TERMINAL BOX, HOFFMAN #A30H 2406FGLP WITH TERMINAL BLOCKS FOR 48 #18 SHIELDED AND 12 #12 THWN. FURNISH & INSTALL 3-2" HUBS WITH BUSHINGS.
  - ② PROVIDE & INSTALL TERMINAL PER NOTE #1 WITH TERMINAL BLOCKS FOR 30 5/C #18SH.
  - ③ PULL CONDUCTORS CONTINUOUS FROM MH-7A TO MCP-B.
  - ④ COIL & TAG BOTH ENDS "CP-1000 TO CCP 1, FUTURE POWER FAIL LOCK OUT".

04180

RECORD DRAWING



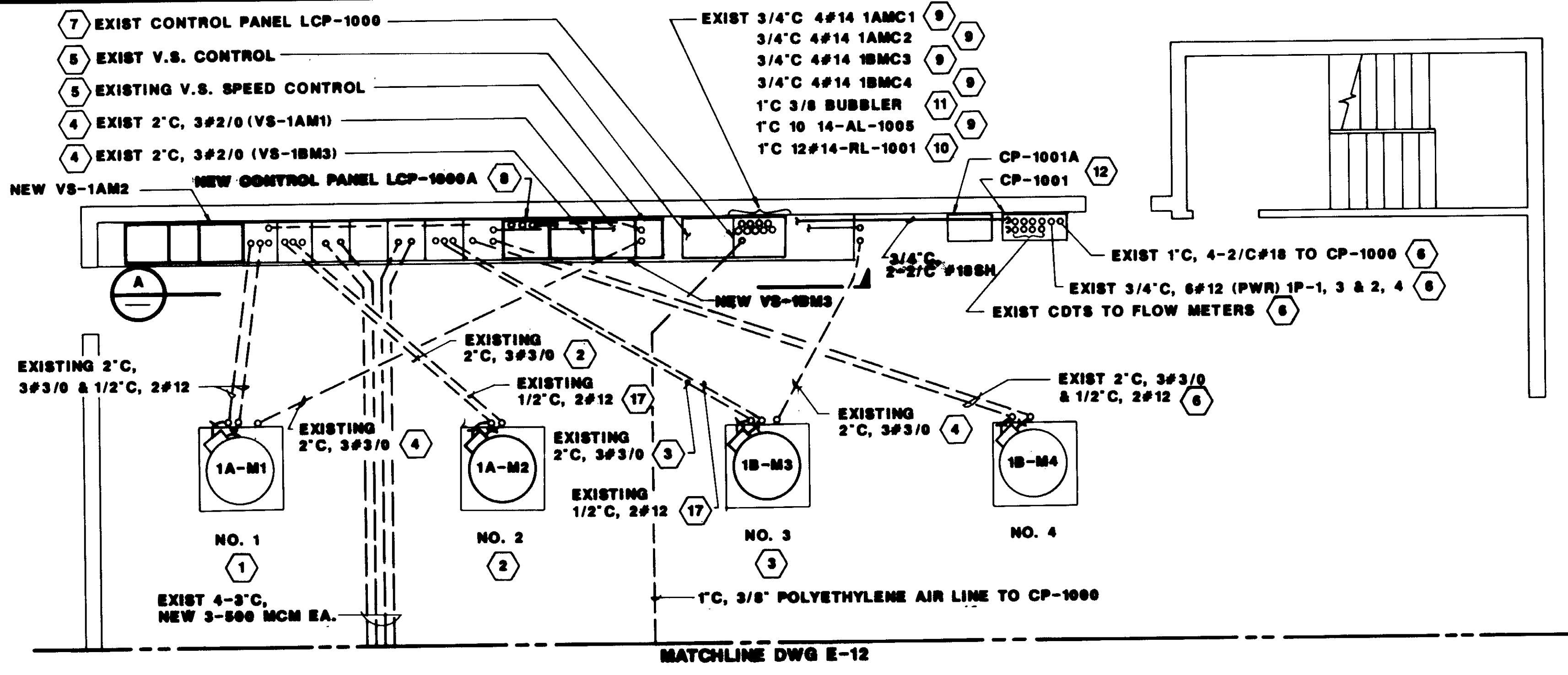
REV	DATE	BY	DESCRIPTION
1	6-30-87	W.A.	DESIGNED FOR RECORD

SCALE:	W.A.	SUBMITTED	10028
NONE	DESIGNED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	DRAWN	<i>William Alexander</i>	6-30-87
	CHECKED	ALEXANDER ENGINEERS	R.C.E. NO. DATE

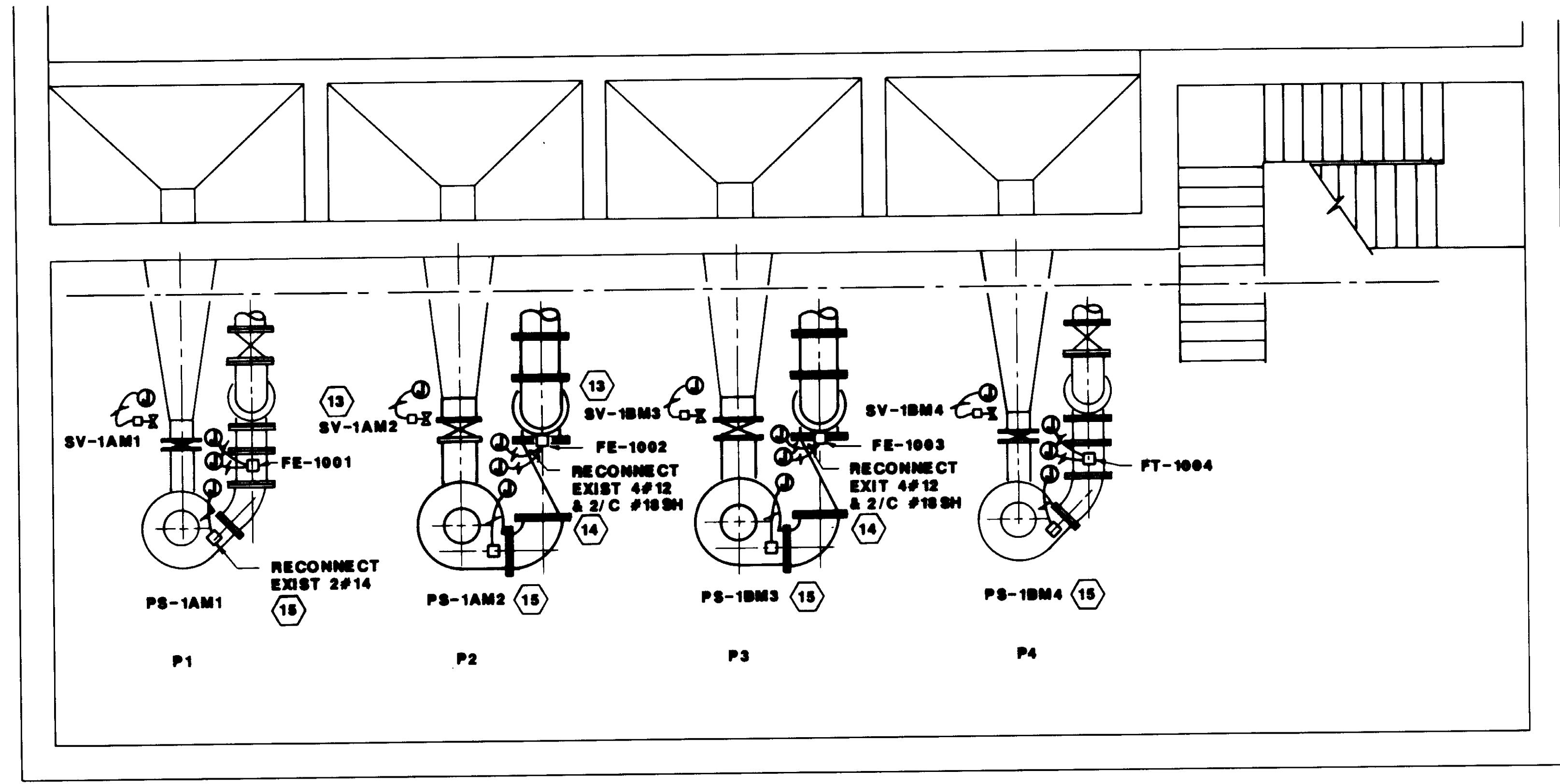
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**I & C/ELECTRICAL INTERFACE**

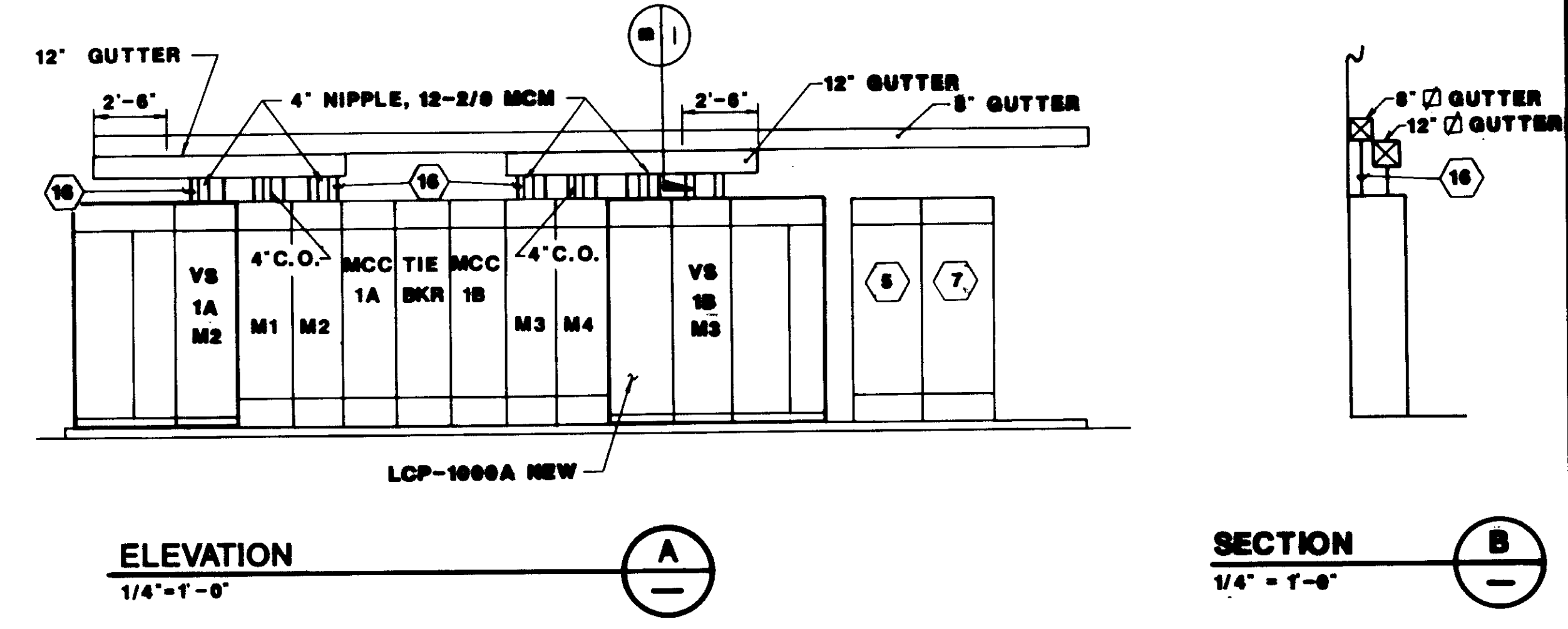
SHEET E-10



UPPER LEVEL POWER PLAN  
 1/4"=1'-0"

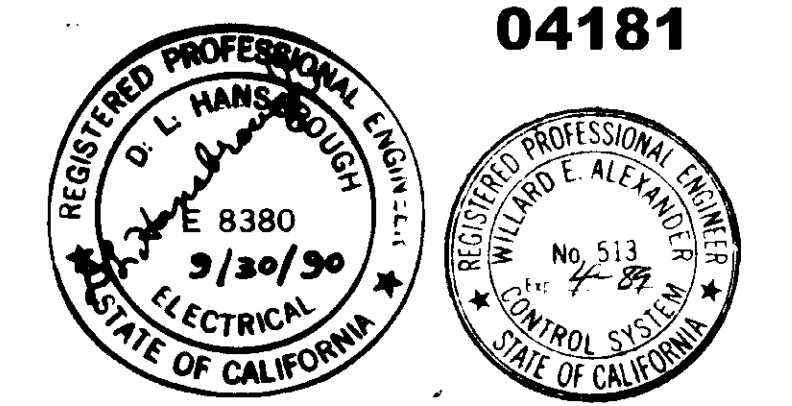


LOWER LEVEL POWER PLAN  
 1/4"=1'-0"



NOTES

- EXIST 100 H.P. WOUND ROTOR MOTOR TO BE REMOVED & REPLACED WITH 100 H.P. SQUIRREL CAGE MOTOR FROM EXIST PUMP P2. DISCONNECT & RECONNECT POWER & SPACE HEATER WIRING.
- NEW 50 H.P. SQUIRREL CAGE MOTOR. PULL OUT 3#3/0, REPULL & CONNECT 6#2/0 MCM (THHN) TO VS-1AM2. RECONNECT SPACE HTR TO VS-1AM2 CONTACTOR AUX.
- NEW 50 H.P. SQUIRREL CAGE MOTOR. PULL OUT 3#3/0, REPULL & CONNECT 6#2/0 MCM (THHN) TO VS-1BM3. RECONNECT SPACE HTR TO VS-1BM3 CONTACTOR AUX.
- PULL OUT CONDUCTORS & CAP CONDUITS.
- REMOVE VS CONTROLLERS & TURN OVER TO DISTRICT.
- CONDUITS & CONDUCTORS TO REMAIN.
- REMOVE EXISTING PROGRAM CONTROLS AFTER LCP-1000A IS OPERATIVE. BUBBLE AIR COMPRESSORS TO BE REUSED. CONTROL WIRING TO BE EXTENDED & RECONNECTED TO LCP-1000A.
- NEW CONTROL PANEL FOR 4 PUMP LEVEL CONTROL.
- EXTEND WIRING TO LCP-1000A.
- 4#14 USED FOR WET WELL M-LEVEL CONTROL OF P2 AND P4. RECONNECT WIRING TO CONTROL P1 AND P4.
- BUBBLER TO REMAIN.
- RECALIBRATE CONVERTERS AND FLOW INDICATORS FOR FE-1002 & FE-1003.
- RECONNECT EXISTING WIRING. EXTEND WIRING FOR SV CONTROL FROM NEW VS CONTROLLERS.
- RECONNECT TO NEW FLOW METERS.
- REPLACE EXISTING WITH NEW PRESSURE SWITCH WITH ONE N.C. CONTACT TO CLOSE ON PRESSURE INCREASE. EXTEND WIRING TO LCP-1000A.
- 1"C, 6#14 - TO M1 & M4  
 1"C, 12#14 - TO M2 & M3  
 1"C, 12#14 - TO VS-1A & VS-1B  
 2"C, 6#14 - TO LCP-1000A
- PULL OUT 2#12 & REPULL 2#12 & 2#14



RECORD DRAWING

04181

REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED
DESIGNED:	W.A. ALEXANDER
DRAWN:	J.L. KATSUBA
CHECKED:	W.A. ALEXANDER

SUBMITTED:	14030
KATSUBA CONSULTING ENGINEERS	R.C.E. NO. DATE
Willard Alexander	6-30-87
ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsuba Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 INFLUENT PUMP STATION POWER PLAN AND DETAILS

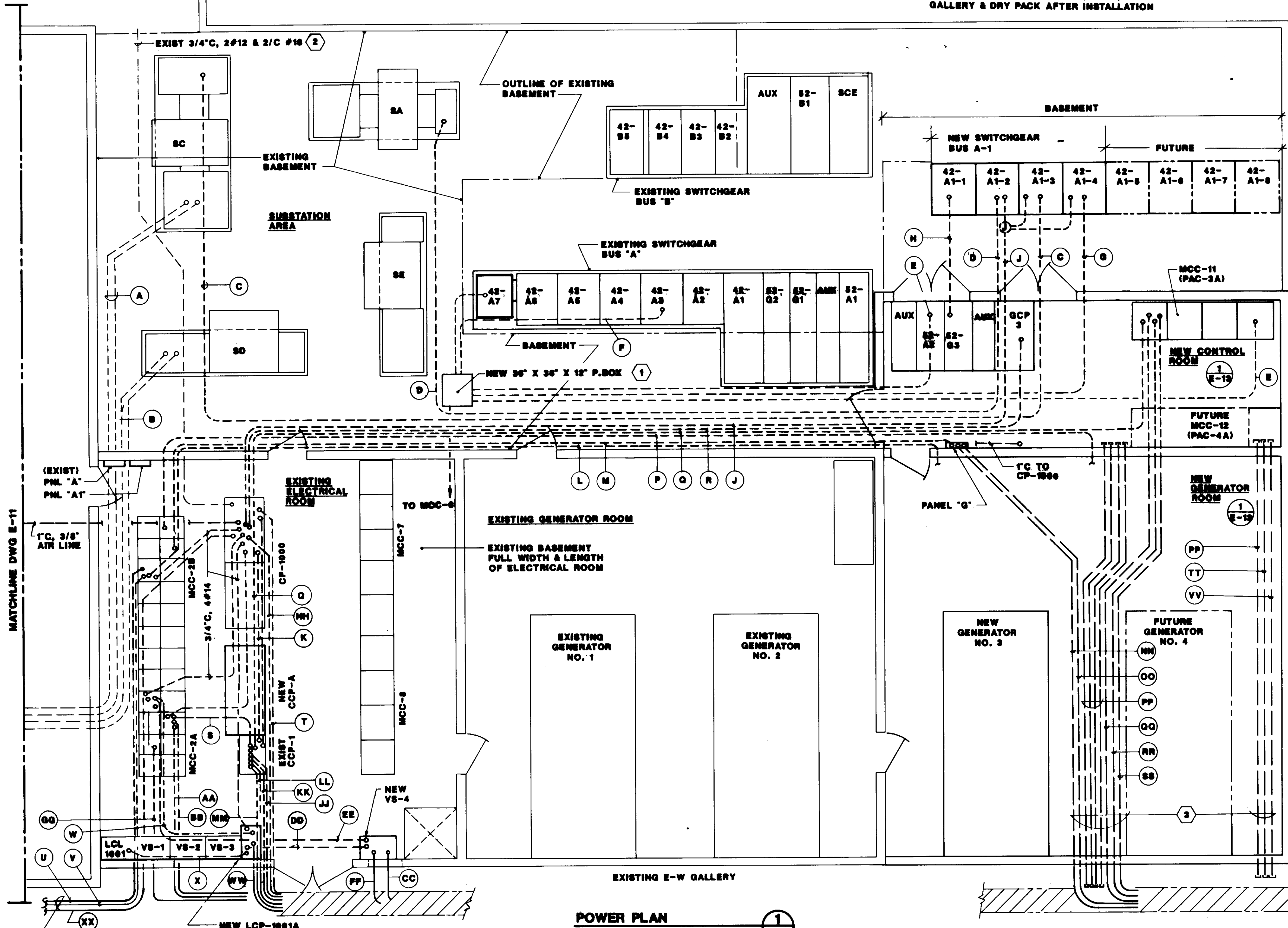
SHEET  
 E-11

**NOTES**

- 1 INTERCEPT EXISTING 3" C, 3#1/0 FEEDER TO MCC-6 & SPLICE TO
- 2 PULL OUT WIRING & INSTALL 3/8" O.D. LINE
- 3 COORDINATE CONDUIT INSTALLATION WITH MECHANICAL CORE DRILL WALL TO E-W GALLERY & DRY PACK AFTER INSTALLATION

**CONDUIT LEGEND**

- A. EXISTING 2-3" C, PULL OUT 3-250 MCM & REPULL 3-500MCM (THHN) IN EACH
- B. EXISTING 2-3" C, PULL OUT 3-250MCM & REPULL 3-500 MCM (THHN) IN EACH
- C. 3" C, 3#1/0, 5KV
- D. 2" C, 3#4, 5KV
- E. EXISTING 3" C STUB-OUT. EXTEND & INSTALL 3#1/0 5KV
- F. EXISTING 3" C, 3#1/0, 5KV TO MCC-6. DISCONNECT FROM 42-A3 & SPLICE TO FEEDER "G" FROM 42-A1-4
- G. 3" C, 3#1/0, 5KV, SPLICE TO FDR "F"
- H. 3" C, 3#1/0
- J. 1/2" C, 2#14 TO CP-1000 (S.F. ALARM)
- K. 3/4" C, 4#14, (COOLING WTR ALARM & FUTURE T.C, 8#12, 1P-32, 34 & 36, 38 & 37, 39
- L. 3/4" C, 4#14 GEN NO. 3 VENT FAN CONTROL TO MCC-2B
- M. PNL LPG FDR TO MCC-2B 3/4" C, 3#6
- P. 1 1/4" C, 6#8 VF-G3 TO MCC-2B
- Q. 3/4" C, 6#14 MCC-11 TO CCP-1, PAC-3A (CONTROL RUN & MOTOR TEMP ALARM)
- R. 3/4" C, 4#14, GEN NO. 3 RUN/ALARM TO-CP-1000
- S. T.C, 4#14, PAC-3A OIL PUMP START/STOP & RUN & 8#14 FCV-908 CONTROL & STATUS
- T. 3/4" C, 7#14 TO CP-800
- U. 3/4" C, 3#12 & 2#14, GRIT WASHER NO. 3 TO MCC-2B
- V. EXIST 3/4" C, NEW 3#12 & 2#14 GRIT WASHER NO. 2 TO MCC-2B
- W. 3/4" C, 6#14
- X. 1" C, 2#12 (PWR), 8#14 & 2/C #18SH
- AA. 3/4" C, 3#12 & 2#14 MCC-2A TO PAC-3A OIL PUMP
- BB. T.C, 3#12 & 8#14 MCC-2A TO FCV-908
- CC. 1 1/2" C, 3#4 & #8GND, VS-4 TO RAS PUMP
- DD. T.C, 8#14, 2#12 & 2/C #18
- EE. 1 1/2" C, 3#4 & #8GND MCC-2A TO VS-4
- FF. 3/4" C, 2#12 4#14 TO RAS PUMP NO. 4
- GG. T.C.O. MCC-2A TO FUTURE FINAL SED TANK DRIVE NO. 8
- HH. T.C, 2#12 (PWR) & 10#14 CP-1000 TO SBD-406, 407 & FUTURE SBD-406, 409 & 410
- JJ. 1 1/4" C, 2#12, 2#14 & 2-5/C #18 CCP-A TO FCV-907
- KK. 1 1/2" C, 18#14 & 2/C#18 & 2-3/C#18 SH. CCP-A TO PAC-3A UNIT MTD CONTROL PANEL
- LL. 1" C, 2#12, & 2-2/C #18 CCP-A TO FT-903 & PT-903B
- MM. 1 1/4" C, 2#12, 2#14 & 2-5/C #18 CCP-A TO FCV-908
- NN. T.C, 2#6 LPG-8 TO PAC-3A OIL HTR OO. 1/2"
- OO. LPG-8, 11 TO PAC-3A LIGHTING
- PP. 3" C.O.
- QQ. 3" C, 3#1/0, 5KV MCC-11 TO PAC-3A
- RR. 1 1/2" C, 6-2/C#18 SH MCC-11 TO PAC-3A
- SS. 3/4" C, 2#12 & 2#14 PAC-3A LOS & SPACE HTR.
- TT. 1 1/2" C.O.
- VV. 3/4" C.O.
- WW. 3/4" C, 2-2/C #18 TO CP-501
- XX. 3/4" C, 2#12 & 2/C #18 TO CP-500



**POWER PLAN**

1

RECORD DRAWING

SCALE:	W.A.	SUBMITTED	14028
1/4" = 1'-0"	DESIGNED	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	DRAWN	Willard Alexander	813 6-30-87
	CHECKED	ALEXANDER ENGINEERS	R.C.E.E. NO. DATE

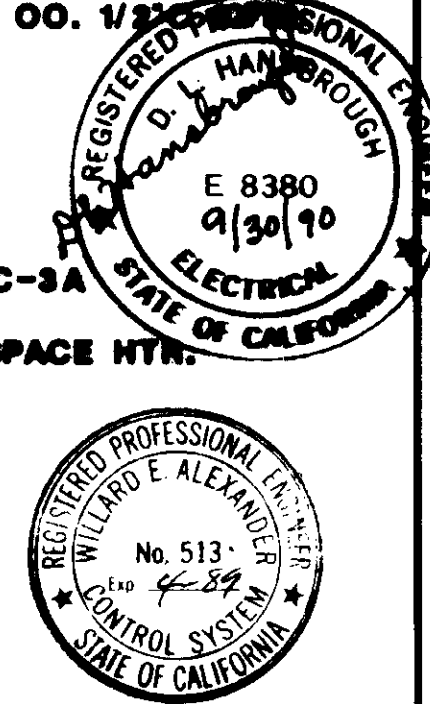
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

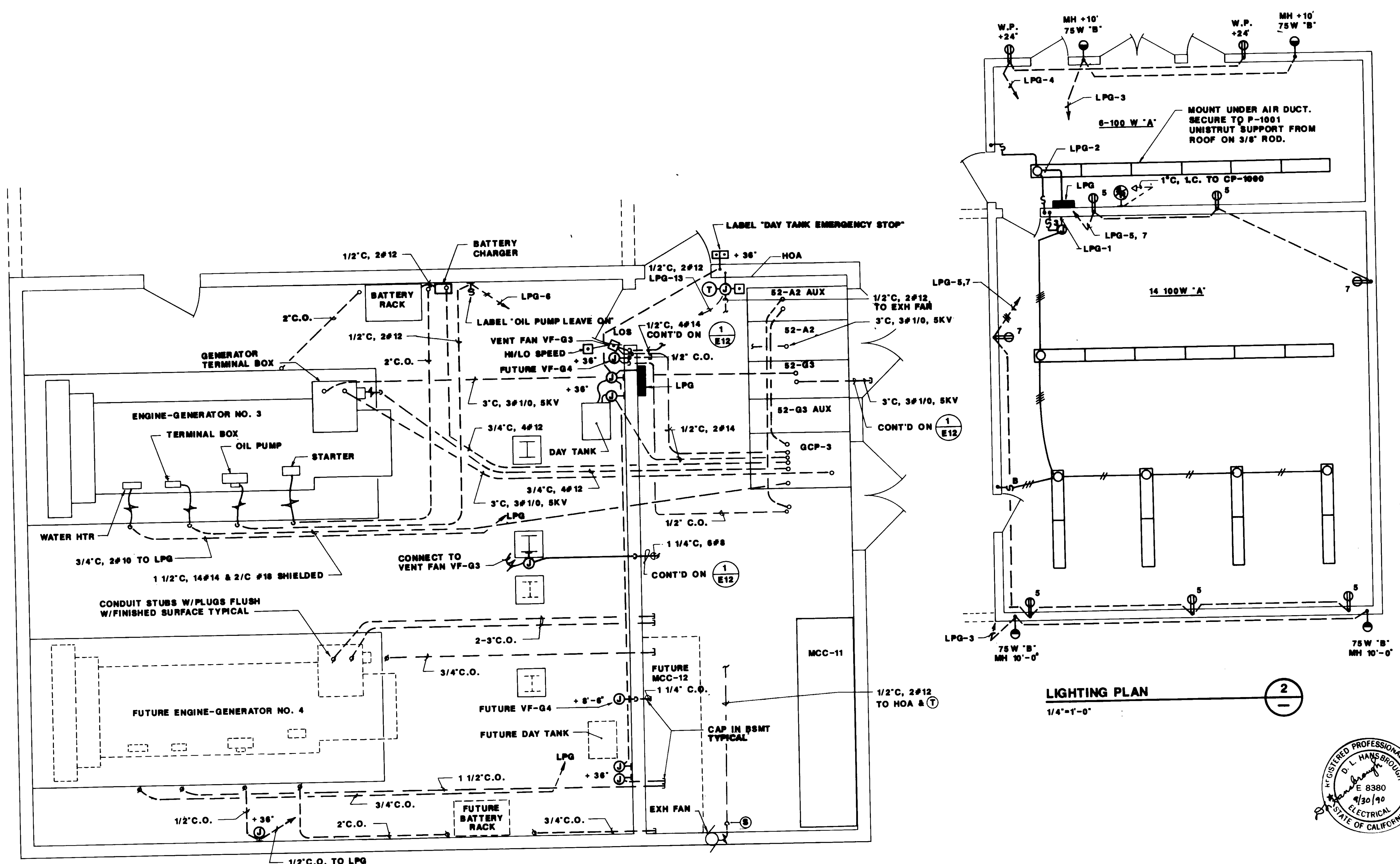
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SUBSTATION & ELECTRICAL ROOM AREA POWER PLAN

04182

SHEET E-12

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION





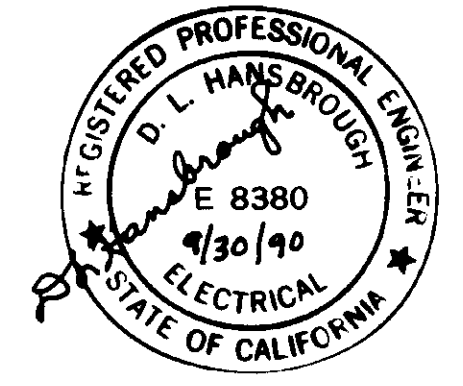
**POWER PLAN**  
3/8" = 1'-0"

**LIGHTING PLAN**  
1/4" = 1'-0"

NOTE: REFER TO SHEET E-12 FOR ADDITIONAL CONDUITS.

04183

RECORD DRAWING



REV	DATE	BY	DESCRIPTION

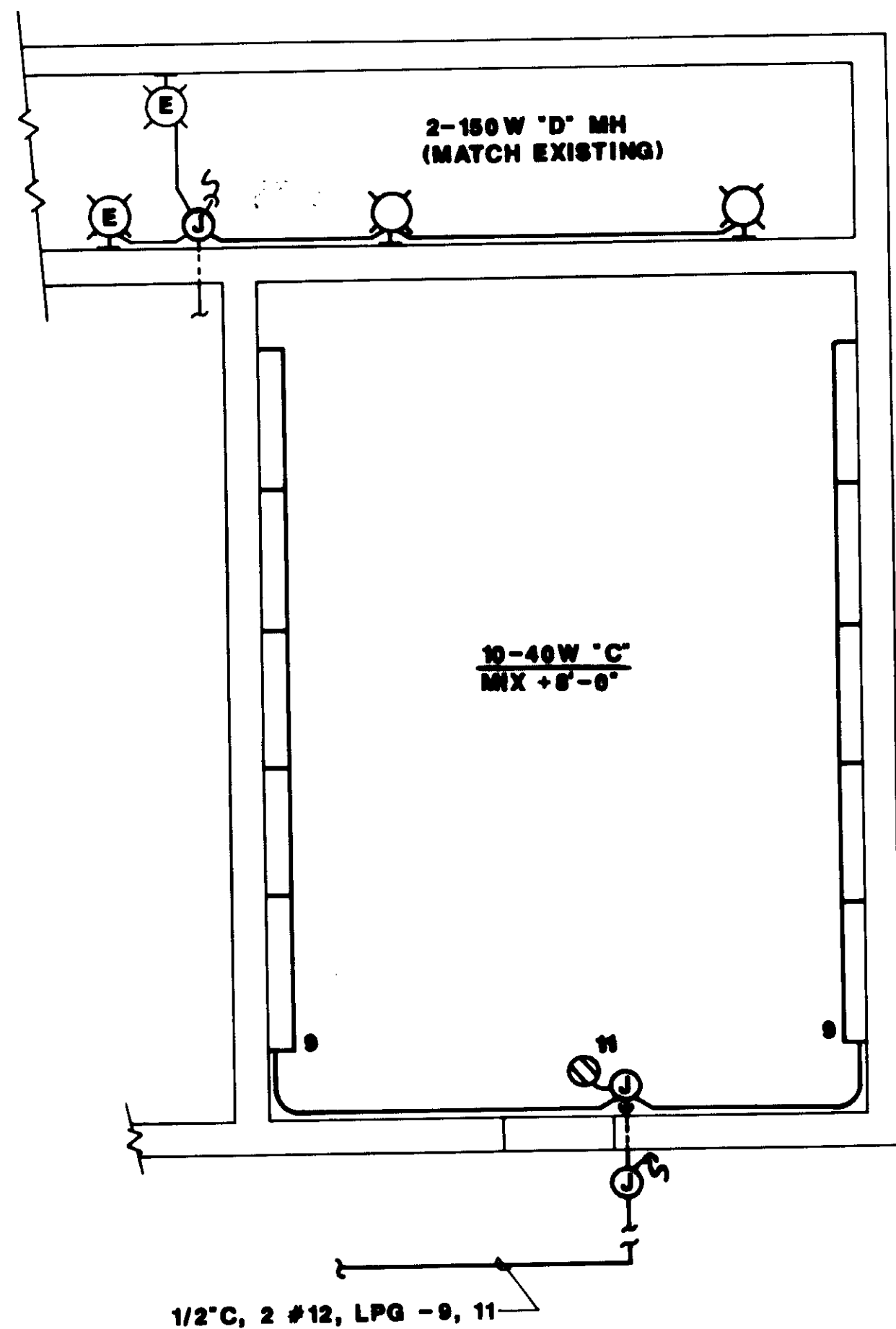
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CHECKED: W.A.	DRAWN: W.A.	KATBURA CONSULTING ENGINEERS R.C.E. NO. DATE
		Willard Alexander ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**POWER AND LIGHTING PLAN**  
**ENGINE-GENERATOR NO.3 AND CONTROL ROOM NO.2**

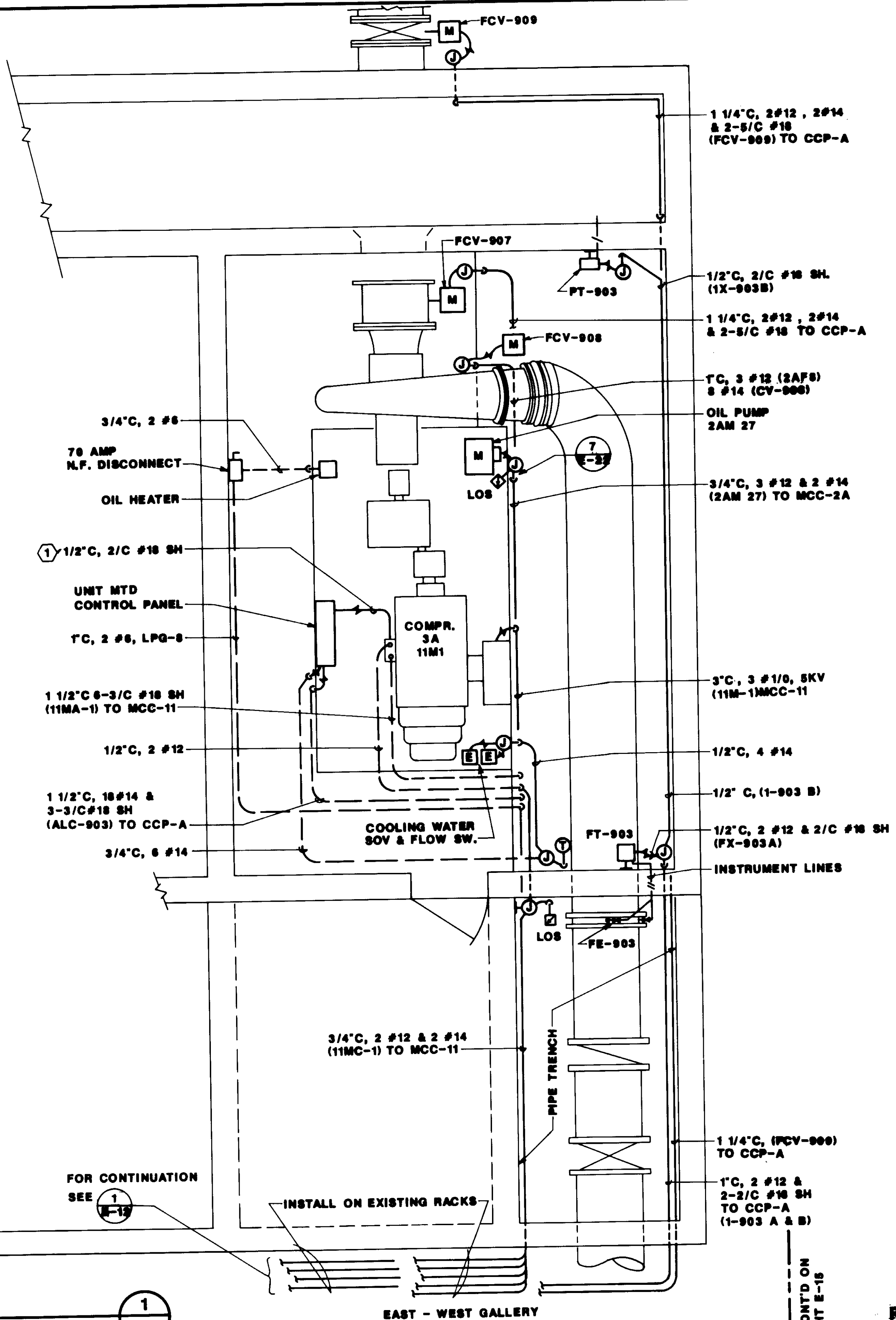
SHEET E-13





**LIGHTING PLAN**  
1/4" = 1'-0"

2



**NOTES:**

1 COORDINATE CONDUIT INSTALLATION WITH PROCESS PIPING & EQUIPMENT. COREDRILL WALL TO E-W GALLERY & DRY PACK AFTER INSTALLATION.

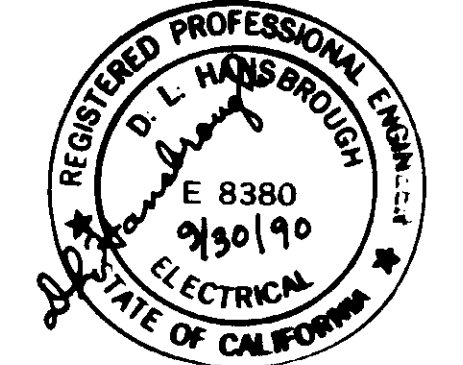
CONT'D ON DWG E-12

FOR CONTINUATION SEE 1 E-12

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

1

CONT'D ON SHEET E-15



04184

RECORD DRAWING

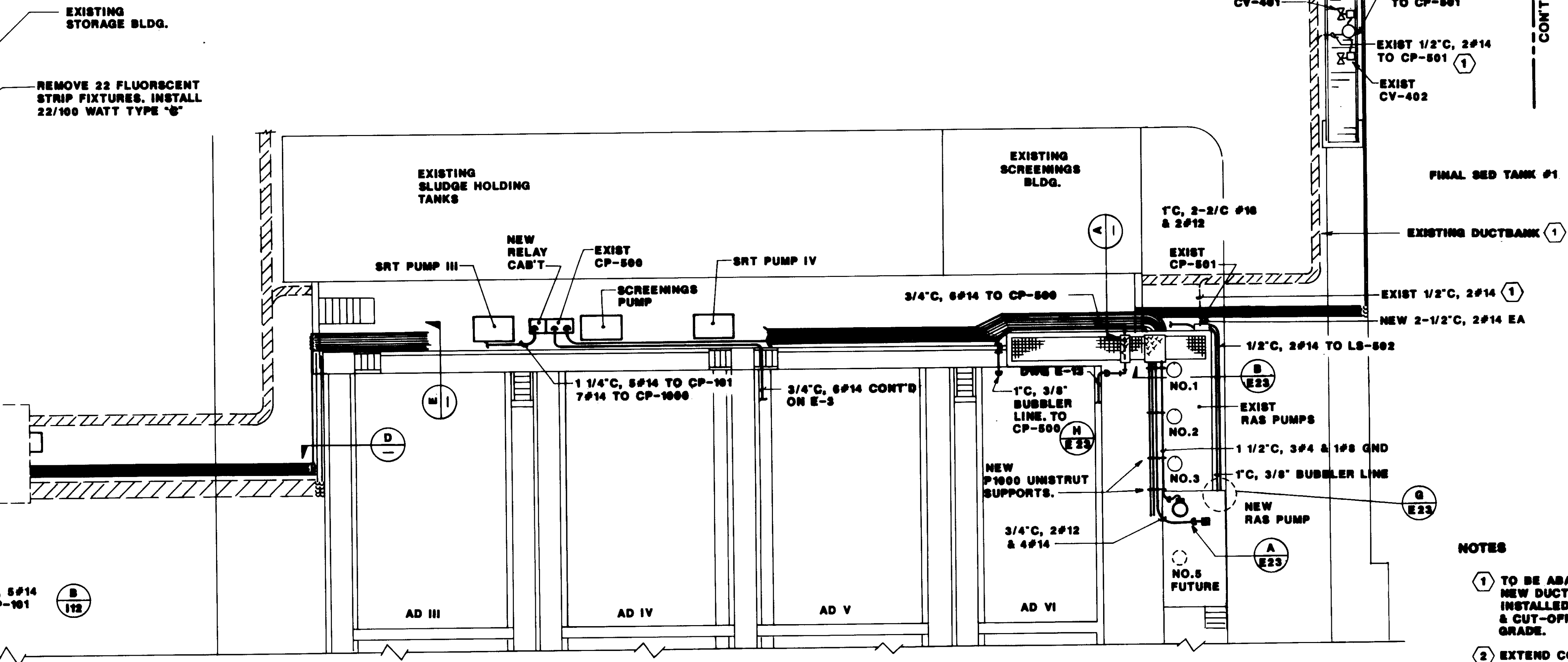
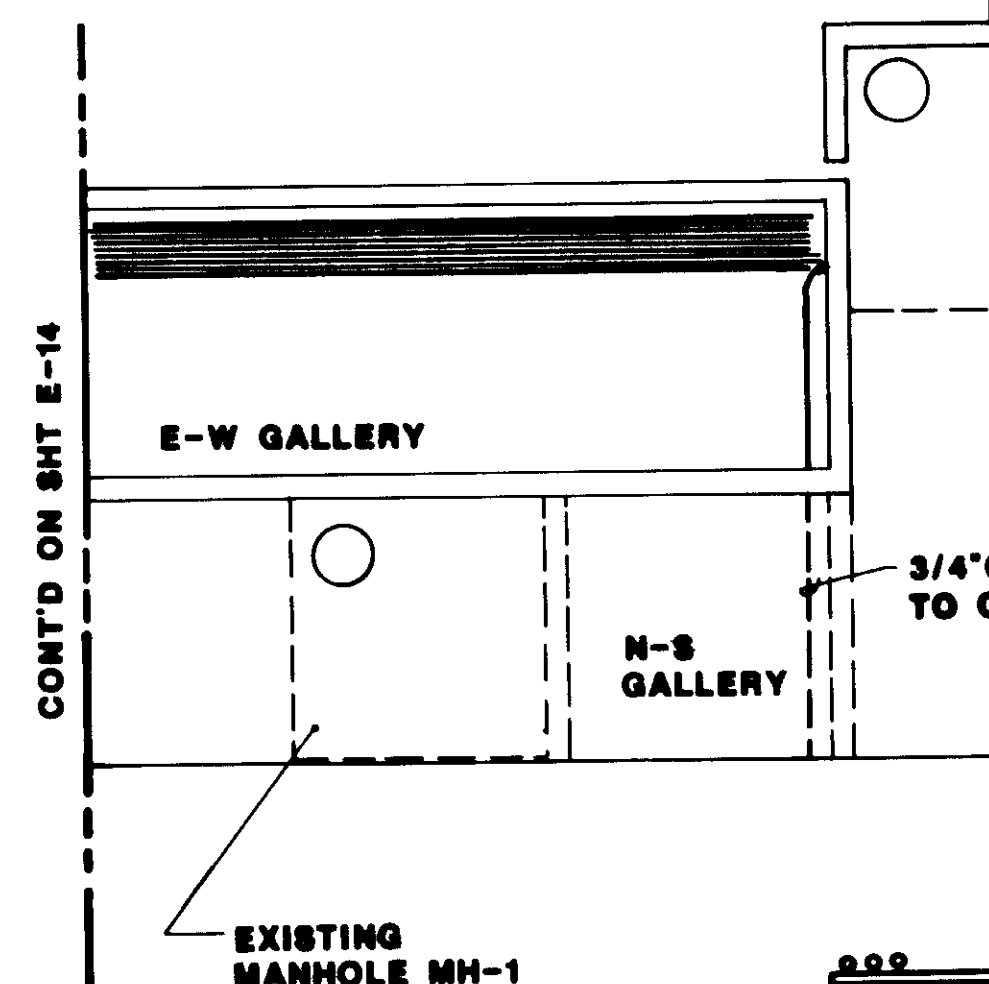
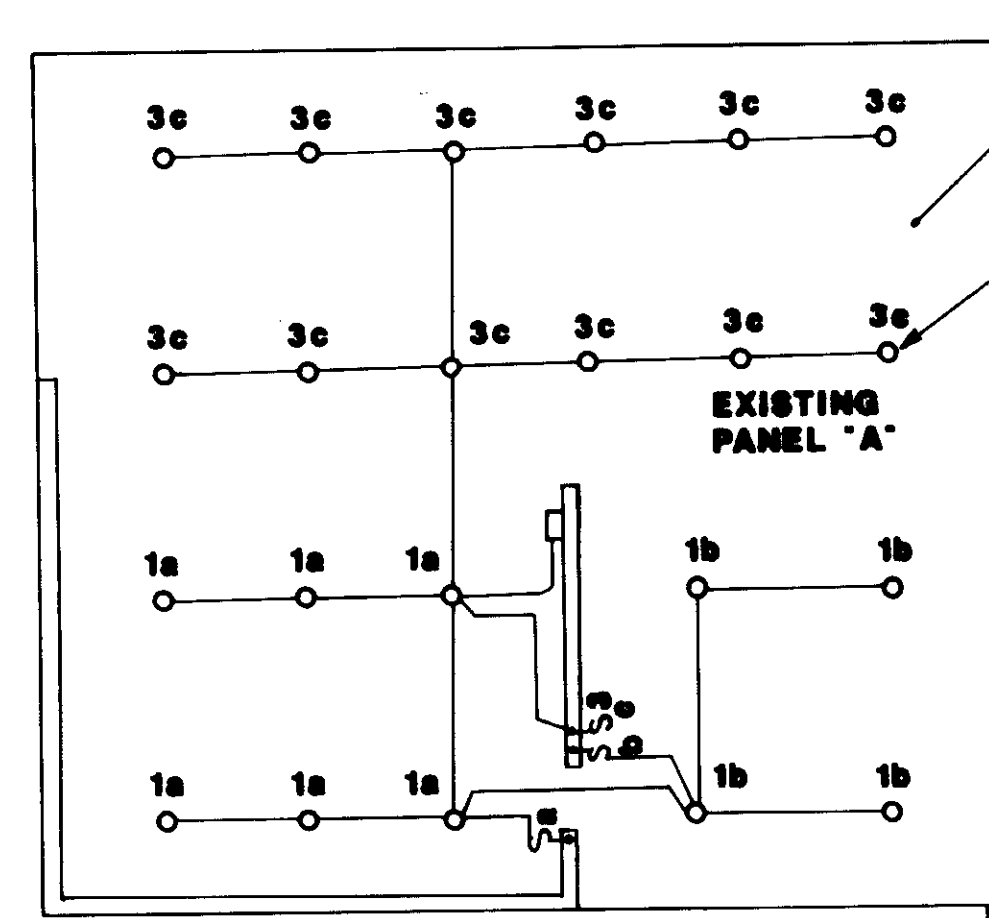
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SCALE:	W.A. DESIGNED	SUBMITTED	14098
3/8" = 1'-0"	S.A. DRAWN	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	W.A. CHECKED	Willard Alexander	613 6-30-87
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**POWER & LIGHTING PLAN**  
**PROCESS AIR COMPRESSOR PAC-3A**

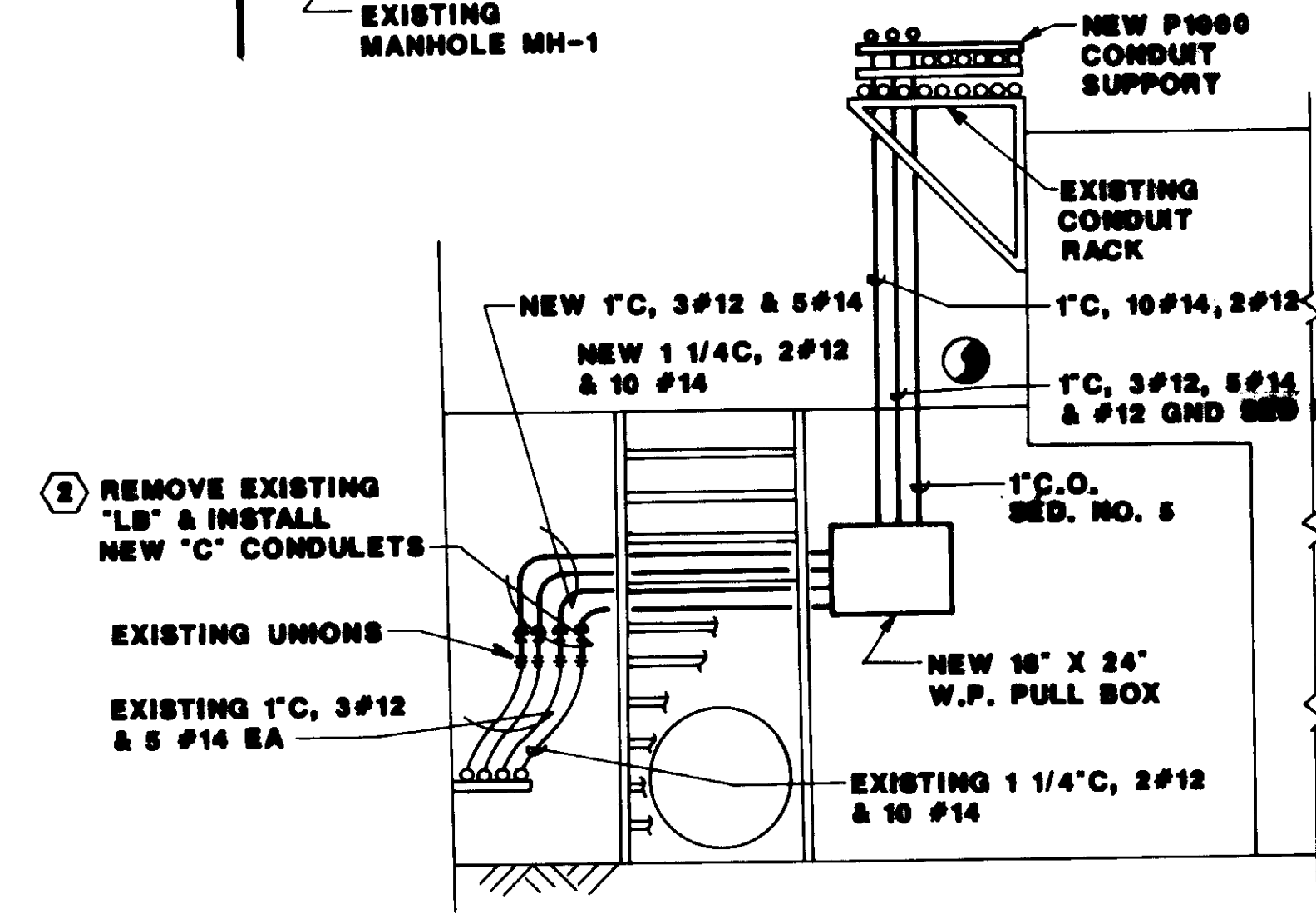
SHEET  
E-14



- NOTES**
- 1 TO BE ABANDONED AFTER NEW DUCT BANK HAS BEEN INSTALLED. REMOVE WIRE & CUT-OFF CONDUITS BELOW GRADE.
  - 2 EXTEND CONDUCTORS TO NEW PULL BOX & SPLICE.

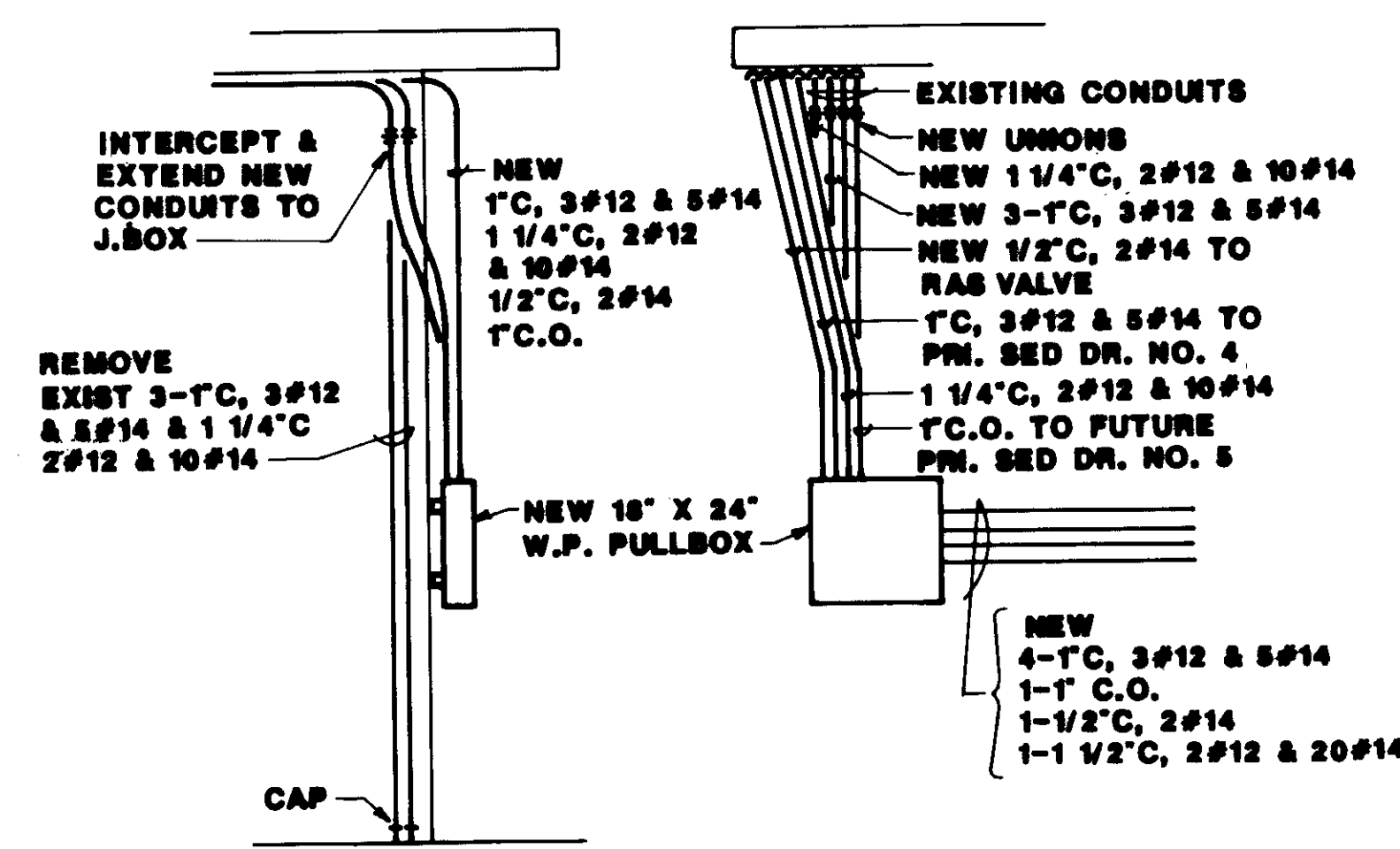
**POWER PLAN - GALLERY NO.5 & VICINITY**

1" = 10'



**ELEVATION A**

3/8" = 1'-0"

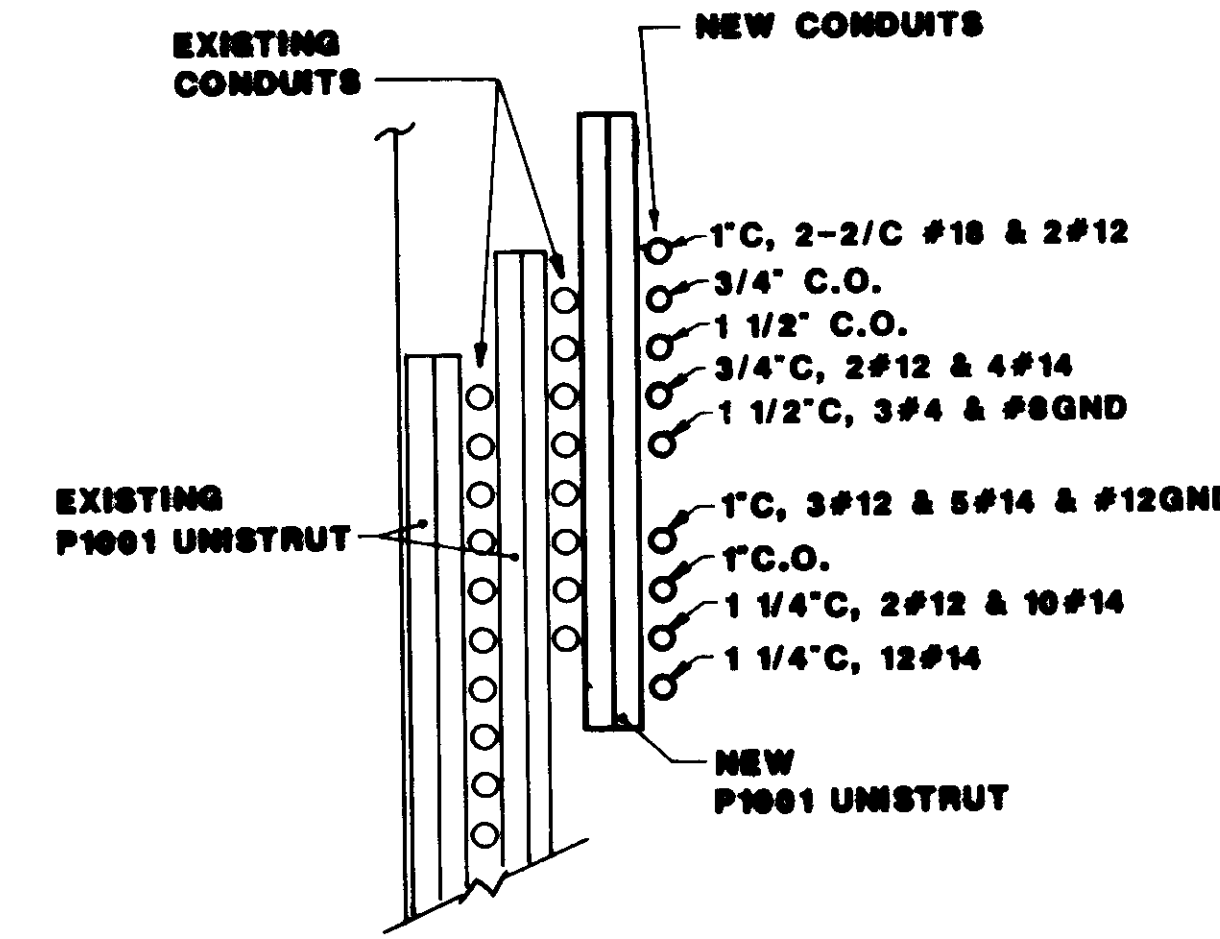


**ELEVATION B**

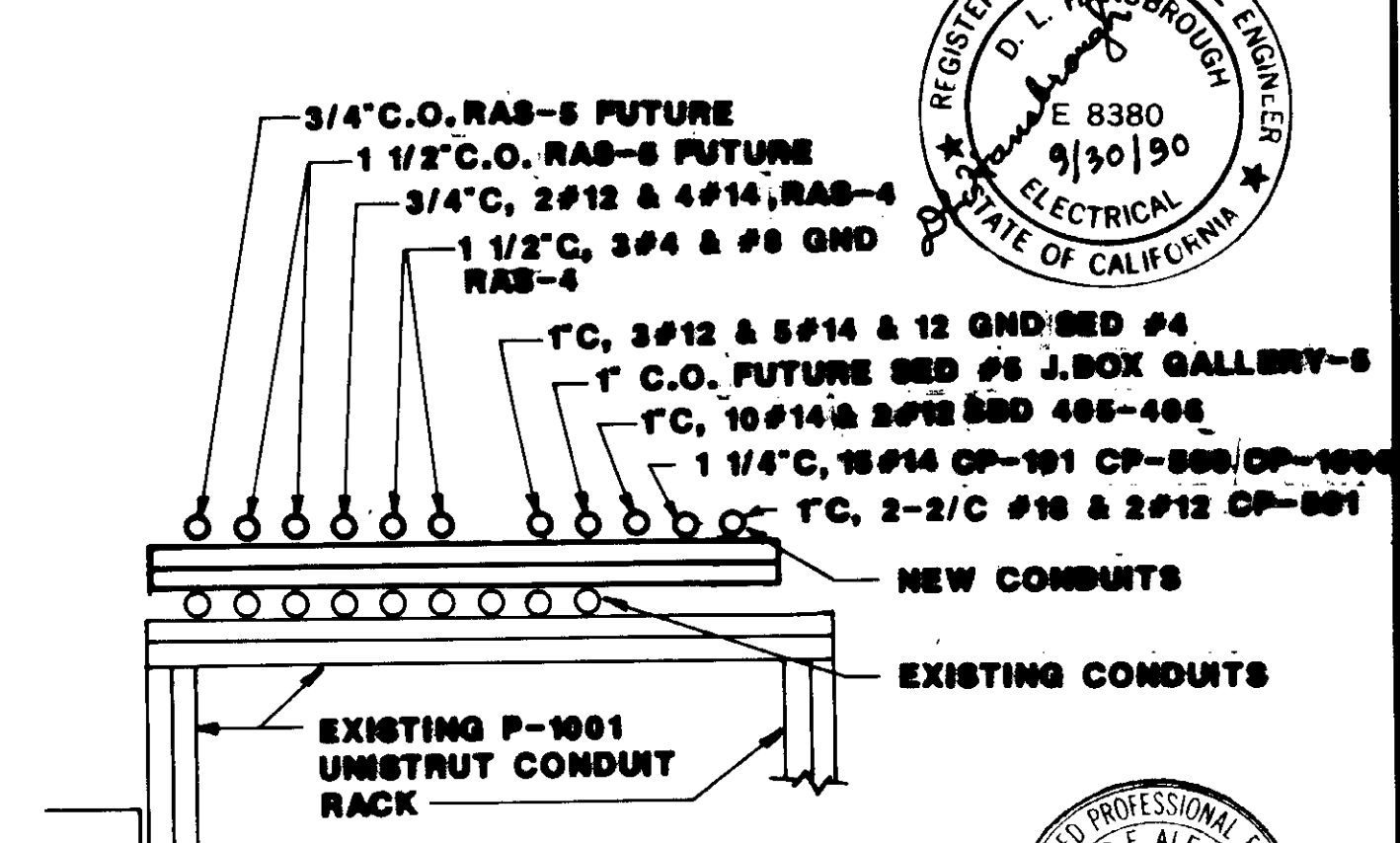
NTS

**ELEVATION C**

NTS

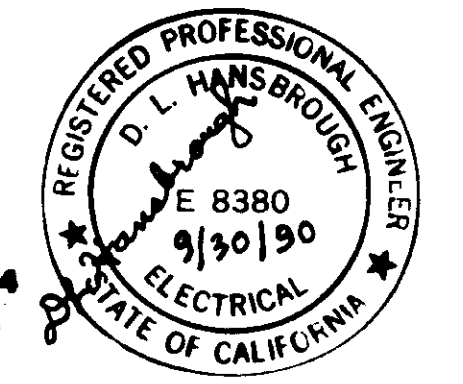


**SECTION D**



**SECTION E**

RECORD DRAWING



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	AS NOTED	DESIGNED: W.A.	CHECKED: W.A.	SUBMITTED: 14000	DATE: 6-30-87
		S.A.		KATSURA CONSULTING ENGINEERS	R.C.E. NO. 513
				ALEXANDER ENGINEERS	R.C.E. NO. 513

**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

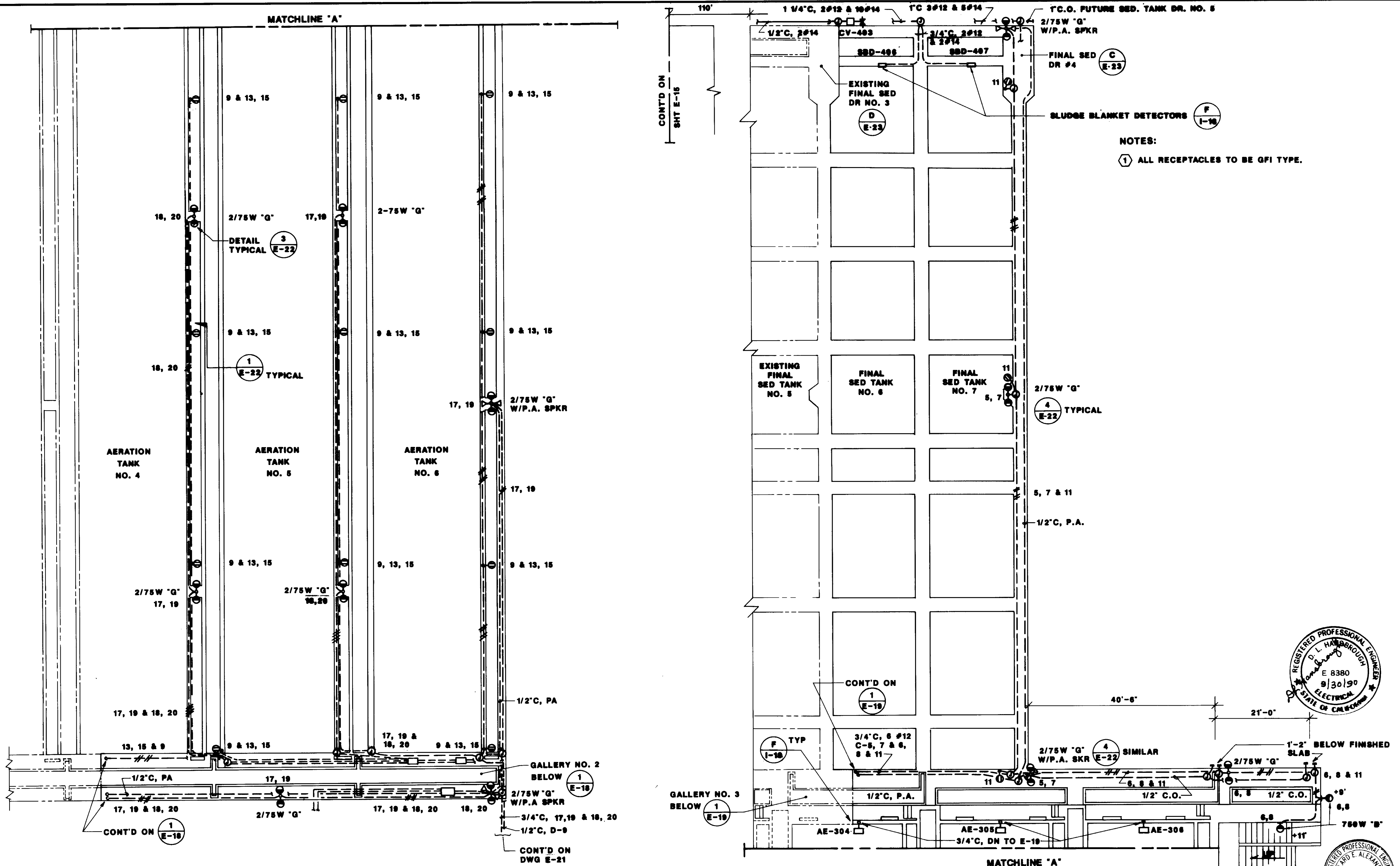
**LAS VIRGENES MUNICIPAL WATER DISTRICT**

**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

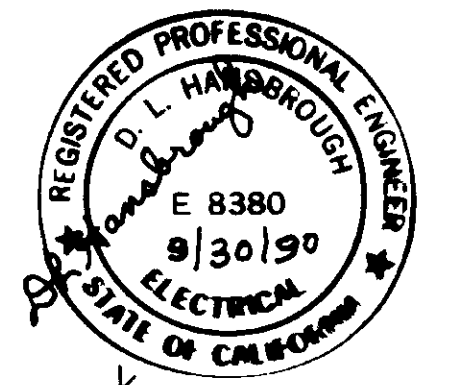
**GALLERY NO.5 & ADJACENT AREAS**

**POWER PLAN & DETAILS**

SHEET E-15



NOTES:  
 ① ALL RECEPTACLES TO BE GFI TYPE.



RECORD DRAWING 04186

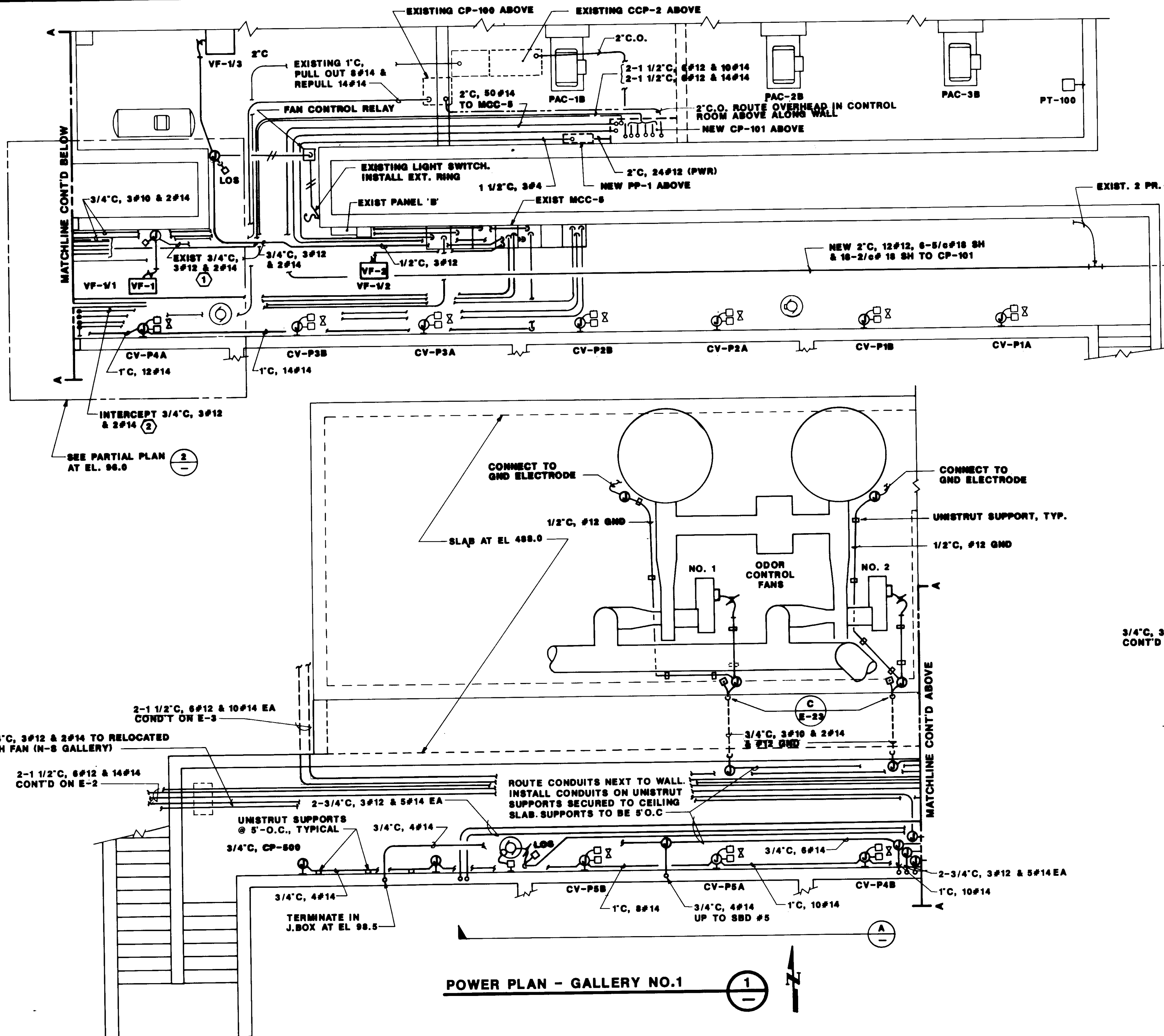
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	6-30-90	W.A.	REVISED FOR RECORD				

SCALE:	1"=10'	DESIGNED:	W.A.	SUBMITTED:	14000
		DRAWN:	W.A.	DATE:	
		CHECKED:		DATE:	
				WALLACE ALEXANDER 813 6-30-87	
				ALEXANDER ENGINEERS R.C.E. NO.	

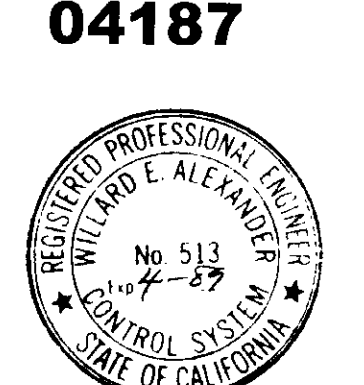
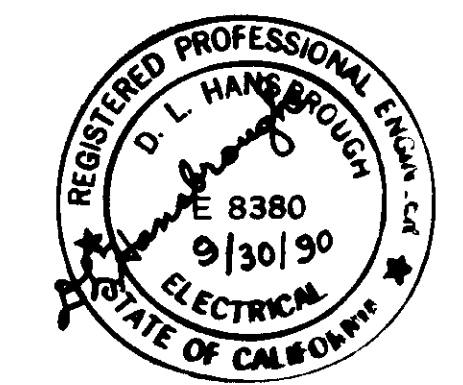
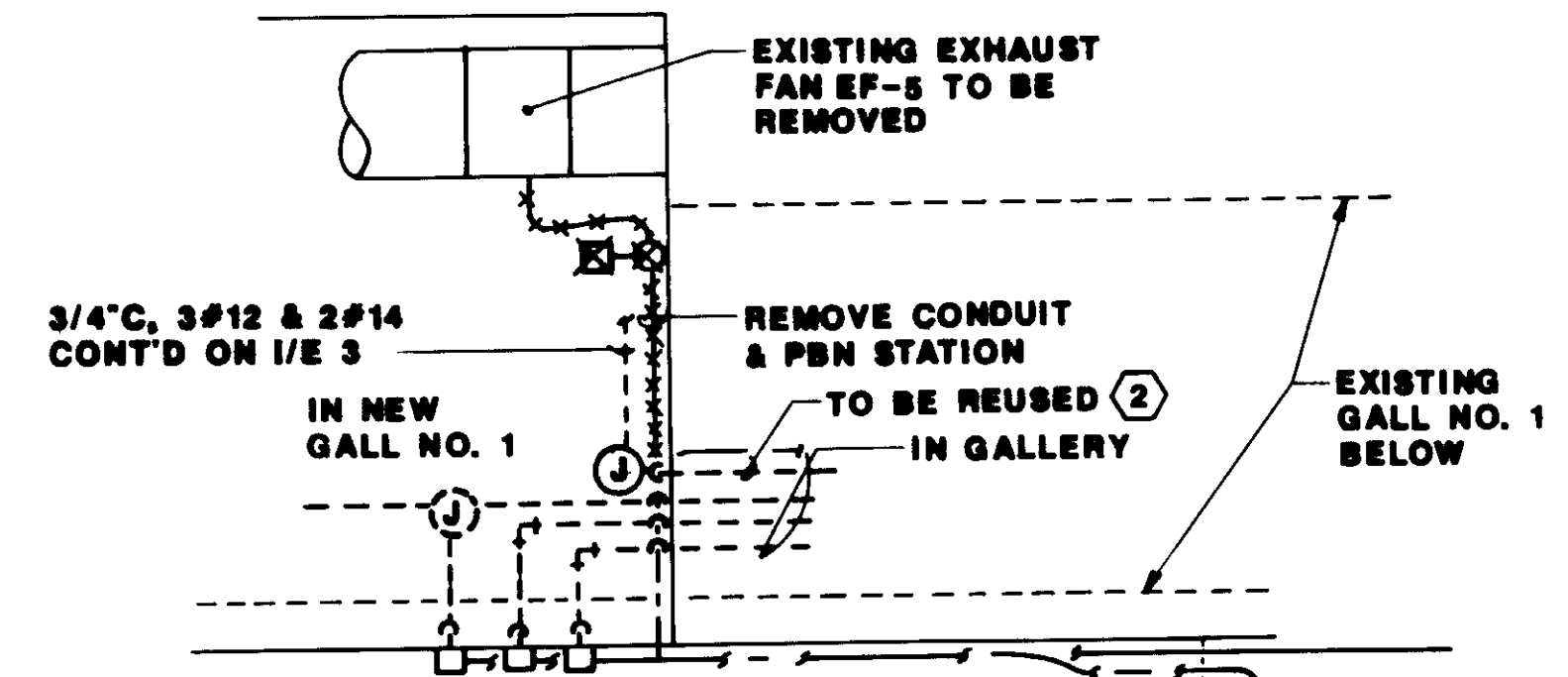
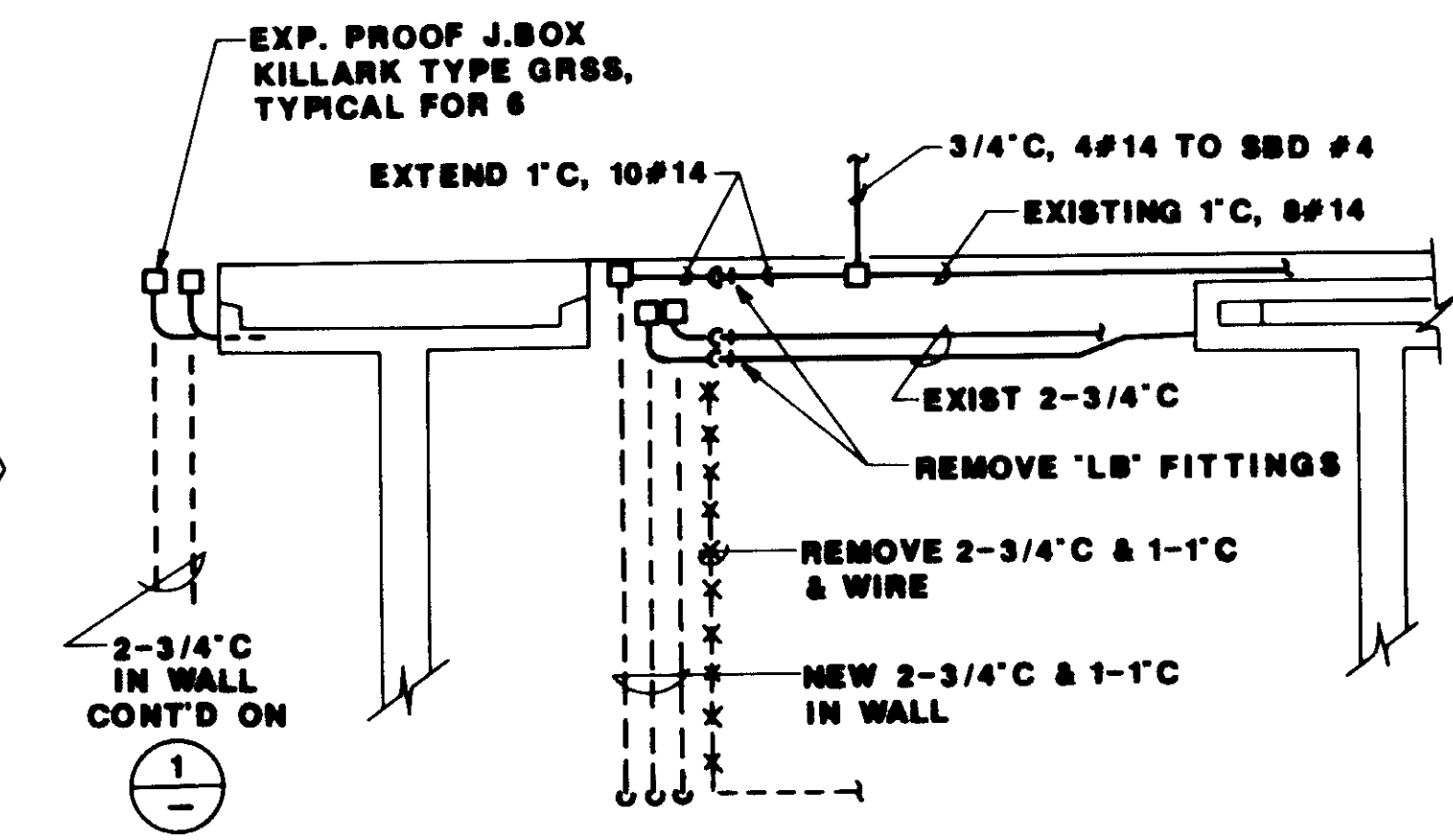
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**FINAL & AERATION TANK POWER & LIGHTING PLAN**

SHEET E-16



- NOTES:**
- ① INTERCEPT EXISTING 3/4" C TO EXISTING VENT FAN AT LOS AND EXTEND TO NEW VF-1.
  - ② EXTEND TO RELOCATED EXH. FAN IN N-S GALLERY
  - ③ PULL OUT EXISTING 2 PR & REPULL WITH NEW 12#12, 6-5/8" SH & 16-2/8" SH. RECONNECT EXISTING 2PR FOR EXISTING PLANT ALARM.



04187

RECORD DRAWING

REV	DATE	BY	DESCRIPTION
1	0-00	WA	ISSUED FOR RECORD

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

DESIGNED: W.A.  
DRAWN: W.A.  
CHECKED: W.A.

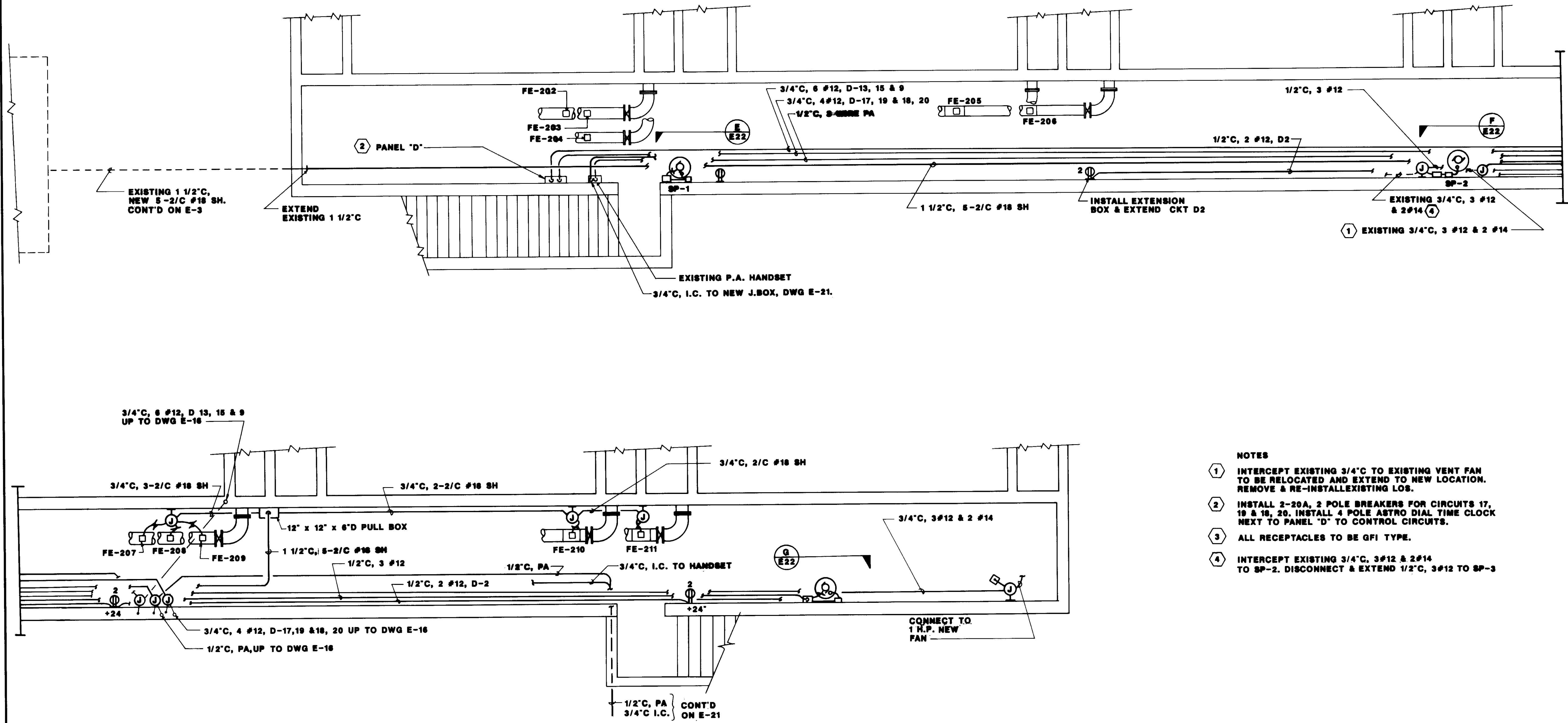
SUBMITTED: 14000  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
Willard Alexander 513 6-30-87  
ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
GALLERY NO.1 POWER PLAN & DETAILS

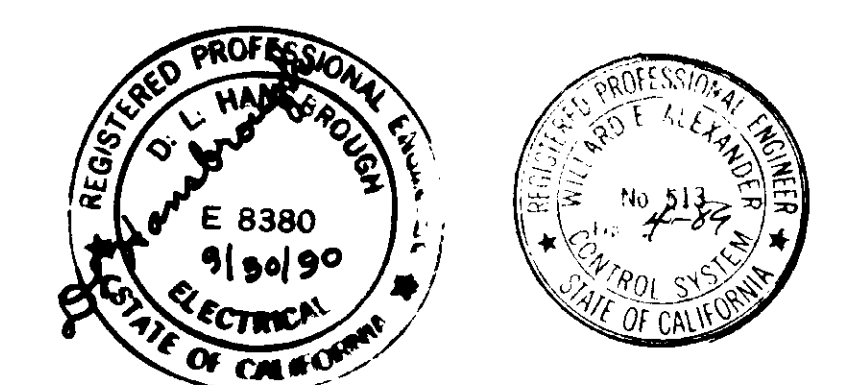
SHEET E-17





- NOTES**
- ① INTERCEPT EXISTING 3/4\"/>

04188



**RECORD DRAWING**

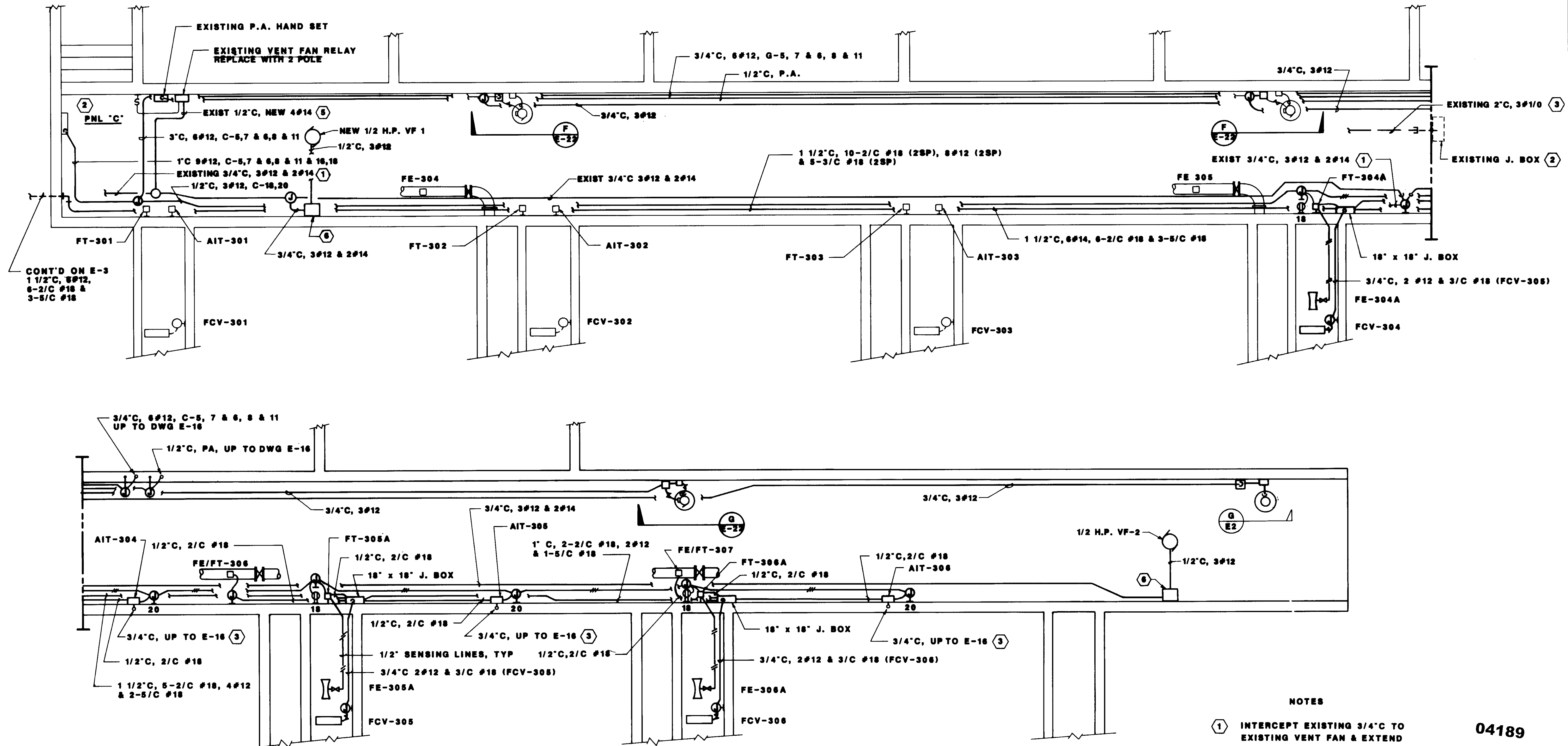
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	6-30-87	WA	REVISED FOR RECORD				

SCALE: 1/4"=1'-0"	DESIGNED J.L.A.	CHECKED W.A.	SUBMITTED KATSURA CONSULTING ENGINEERS	DATE 6-30-87
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**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California      Glendora, California

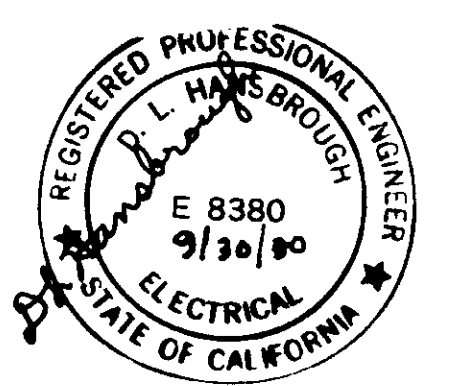
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 POWER PLAN - GALLERY NO. 2

SHEET  
E-18



- NOTES**
- ① INTERCEPT EXISTING 3/4\"/>
  - ② INSTALL 2-1 POLE 20 AMP BREAKERS FOR CKTS C-18 & 20.
  - ③ CABLE BY AIT MFRG.
  - ④ ALL RECEPTACLES TO BE GFI TYPE.
  - ⑤ PULL OUT 2#14 & REPULL 4#14 TO CONTROL VF-1 & VF-2 WITH LIGHTS
  - ⑥ NEW SIZE 1 COMB. STARTER IN NEMA 4X ENCLOSURE W/HOA IN COVER.

04189



**RECORD DRAWING**

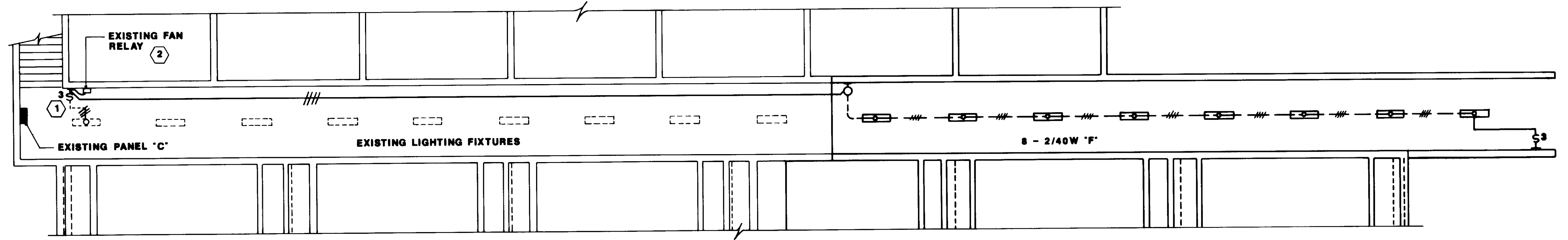
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	6-30-87	WA	REVISED FOR RECORD				

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SUBMITTED	14030	KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
		Willard Alexander	513	6-30-87
		ALEXANDER ENGINEERS	R.C.E. NO.	DATE

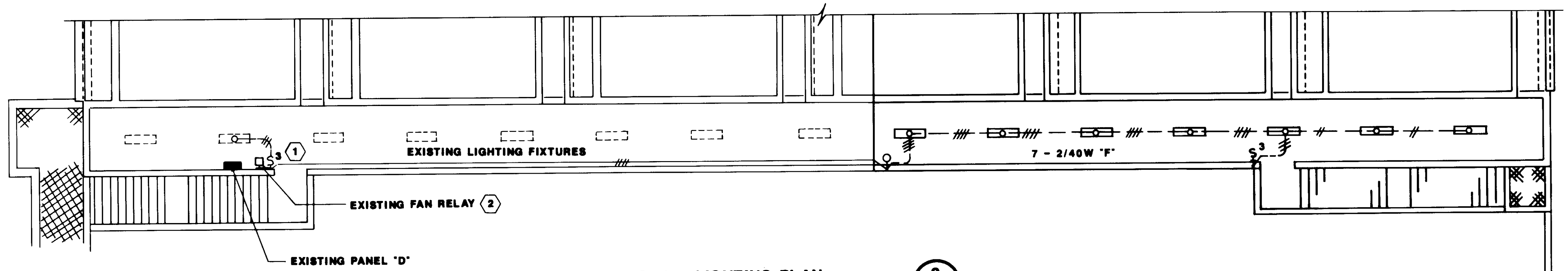
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**GALLERY NO. 3 POWER PLAN**

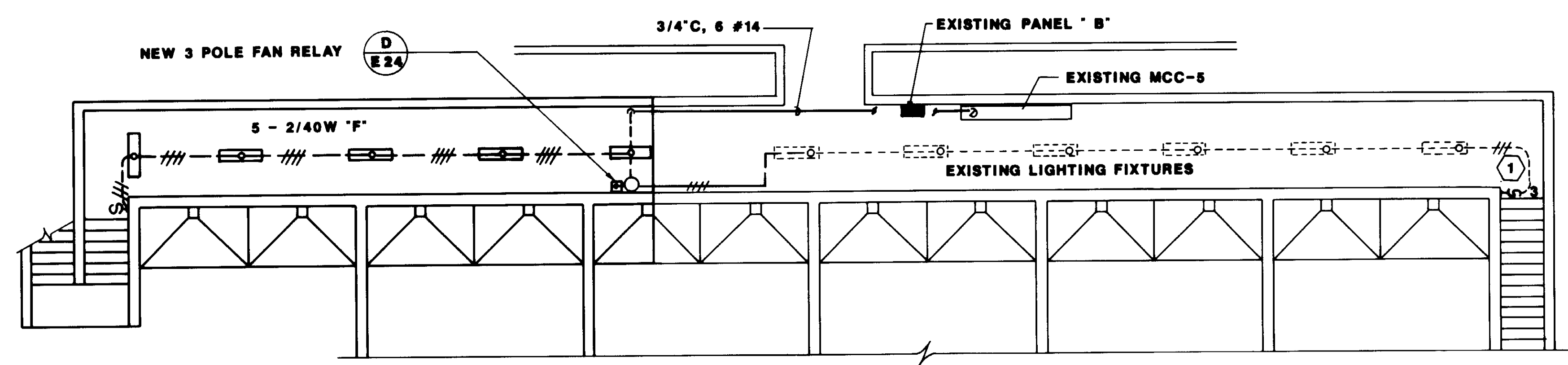
SHEET  
E-19



GALLERY NO. 3 - LIGHTING PLAN 3



GALLERY NO. 2 - LIGHTING PLAN 2

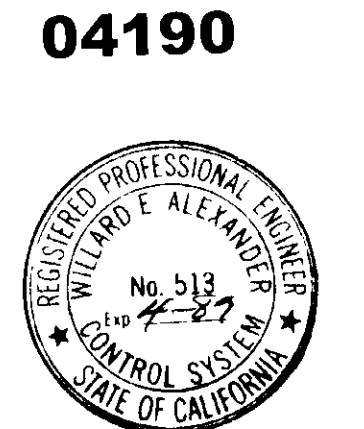
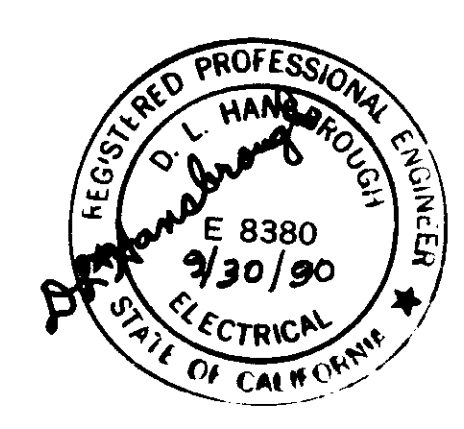


GALLERY NO. 1 - LIGHTING PLAN 1

NOTES

- ① INSTALL W.P. EXTENSION BOX & NEW 3 WAY SWITCH. PULL NEW WIRING FROM EXISTING LIGHT FIXTURE AND CONNECT TO EXISTING 120V CKT.
- ② RECONNECT EXISTING FAN RELAY TO BE CONTROLLED WITH LIGHTS.

RECORD DRAWING



04190

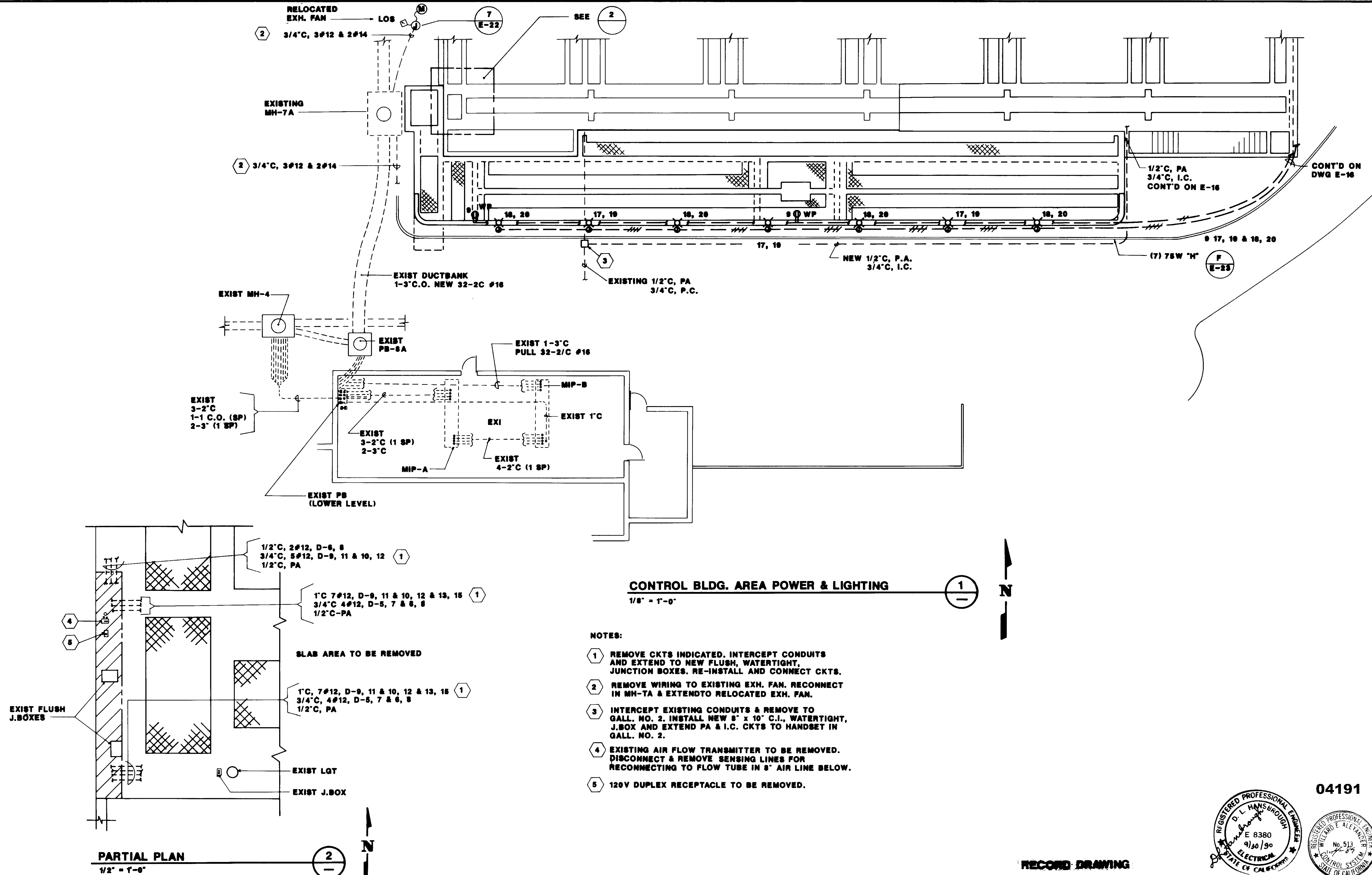
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1	6-30	W.A.	REVISED FOR RECORD				

SCALE:	1/8" = 1'-0"	DESIGNED:	W.A.	SUBMITTED:	14098
		DRAWN:	J.L.	KATSURA CONSULTING ENGINEERS	R.C.E. NO.
		CHECKED:	W.A.	DATE:	6-30-87
				ALEXANDER ENGINEERS	R.C.E.E. NO.

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 GALLERY NO.1, NO.2 & NO.3 LIGHTING PLAN

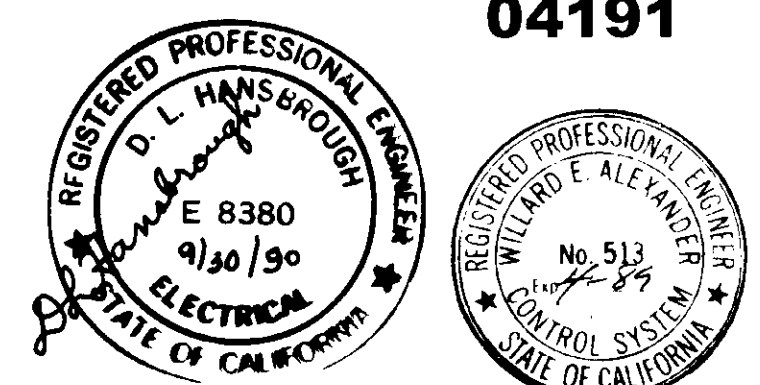
SHEET  
E-20



**CONTROL BLDG. AREA POWER & LIGHTING**  
 1/8" = 1'-0"

- NOTES:**
- ① REMOVE CKTS INDICATED. INTERCEPT CONDUITS AND EXTEND TO NEW FLUSH, WATERTIGHT, JUNCTION BOXES. RE-INSTALL AND CONNECT CKTS.
  - ② REMOVE WIRING TO EXISTING EXH. FAN. RECONNECT IN MH-TA & EXTEND TO RELOCATED EXH. FAN.
  - ③ INTERCEPT EXISTING CONDUITS & REMOVE TO GALL. NO. 2. INSTALL NEW 8" x 10" C.I., WATERTIGHT, J.BOX AND EXTEND PA & I.C. CKTS TO HANDSET IN GALL. NO. 2.
  - ④ EXISTING AIR FLOW TRANSMITTER TO BE REMOVED. DISCONNECT & REMOVE SENSING LINES FOR RECONNECTING TO FLOW TUBE IN 8" AIR LINE BELOW.
  - ⑤ 120V DUPLEX RECEPTACLE TO BE REMOVED.

**PARTIAL PLAN**  
 1/2" = 1'-0"



**RECORD DRAWING**

04191

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
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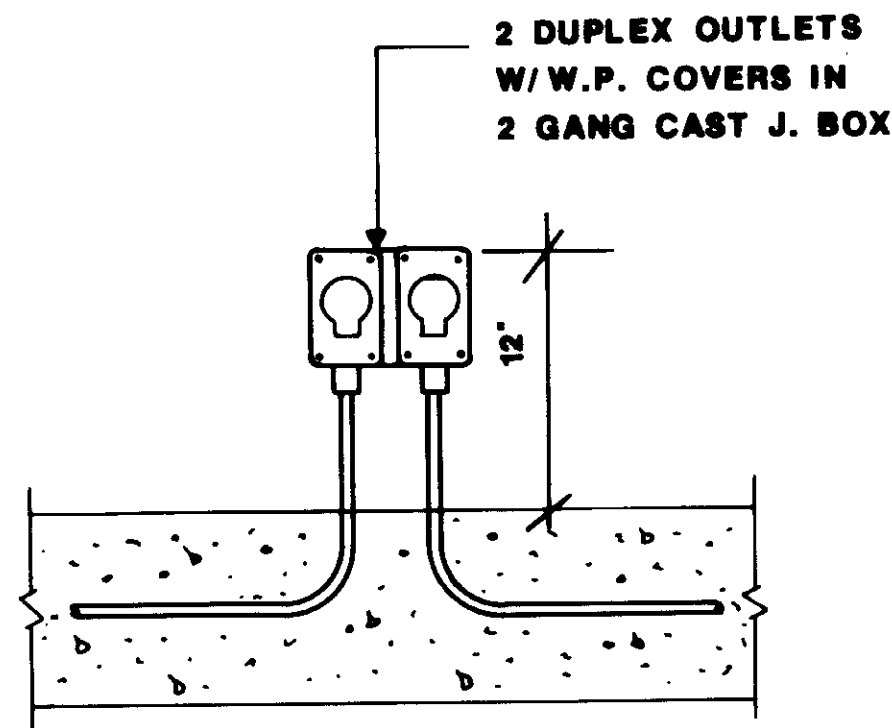
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**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

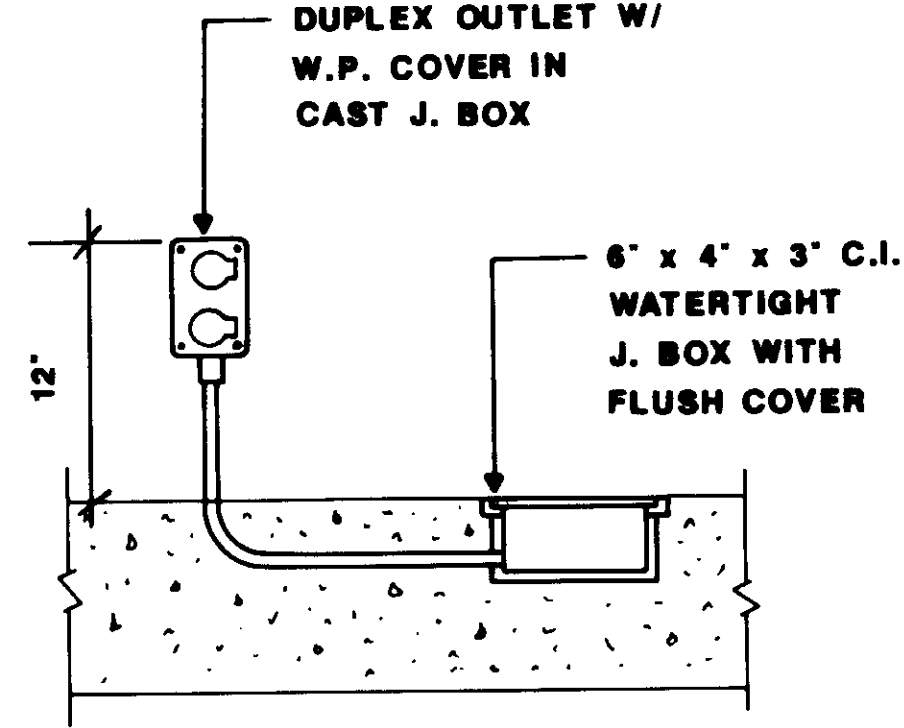
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**CONTROL BLDG. AREA POWER & LIGHTING**

SHEET  
E-21

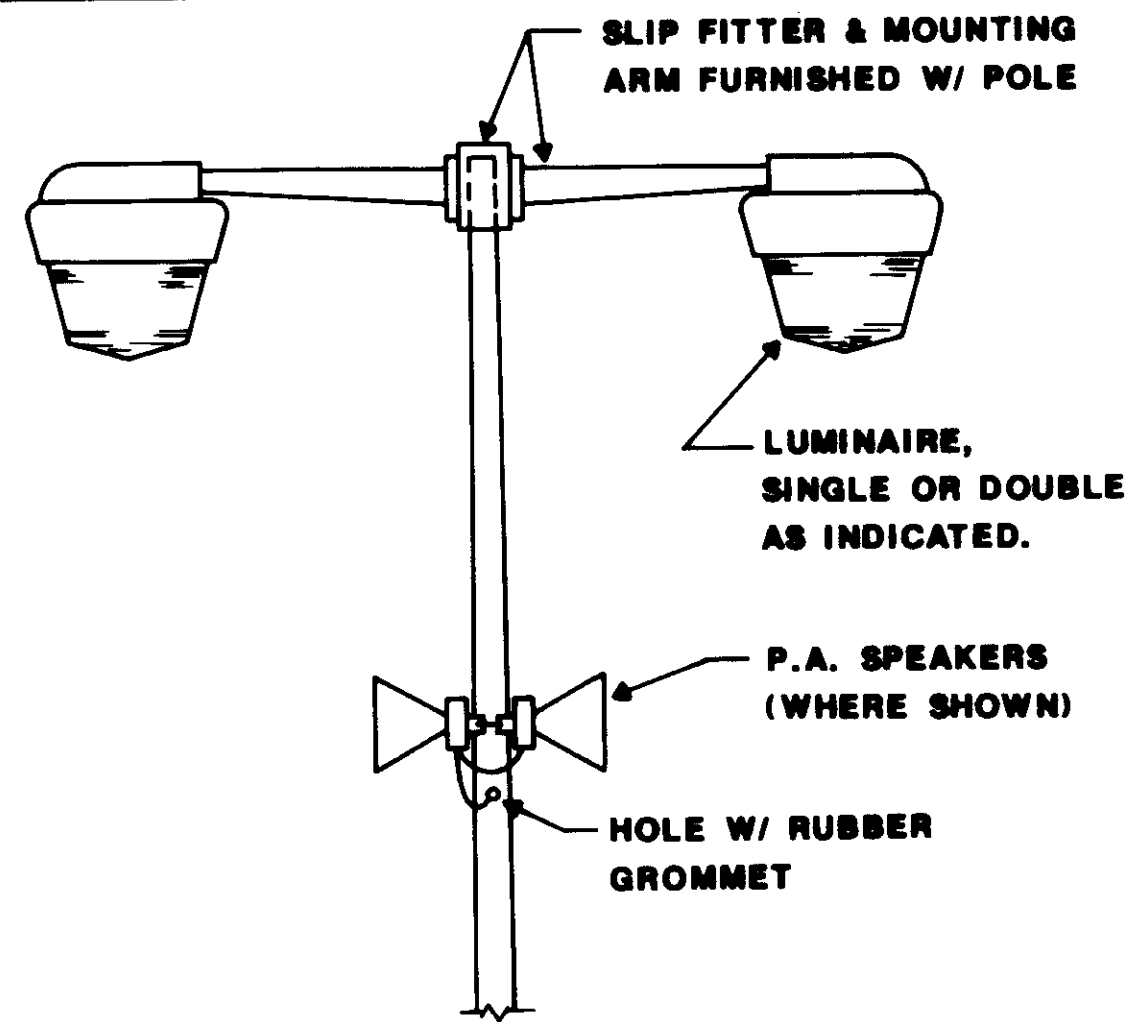




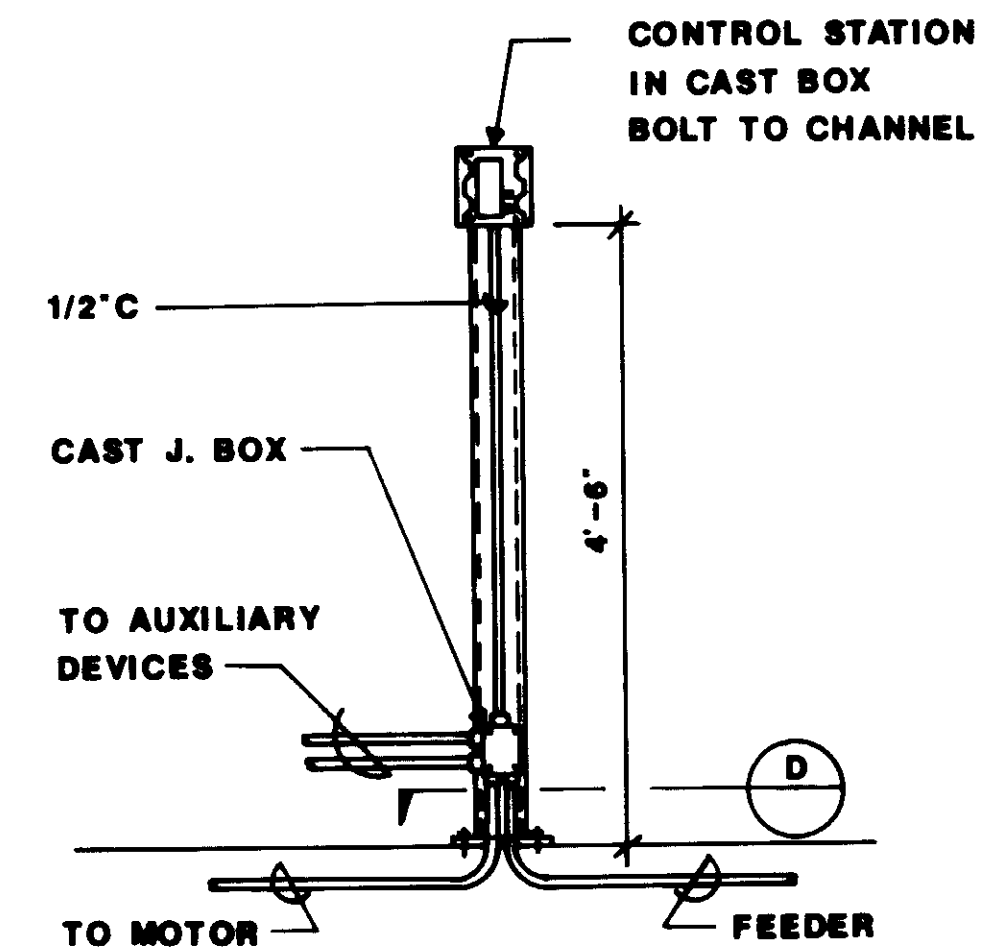
SECTION 1  
1 1/2" = 1'-0"



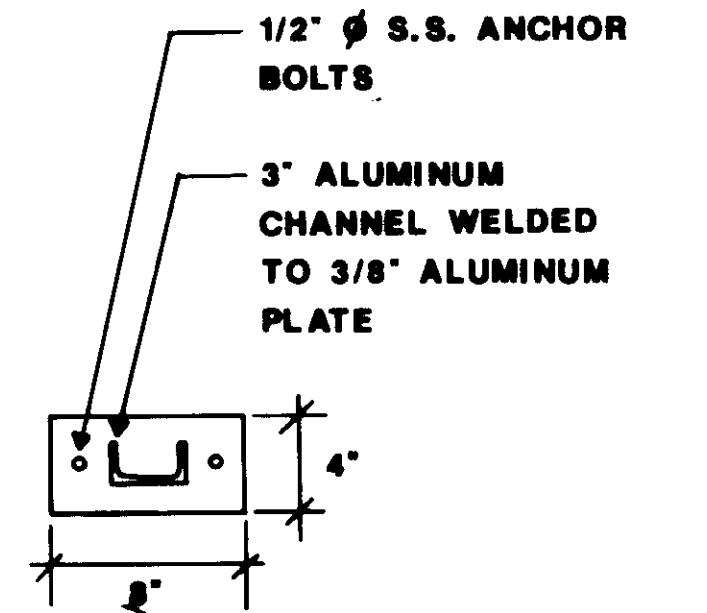
SECTION B  
1 1/2" = 1'-0"



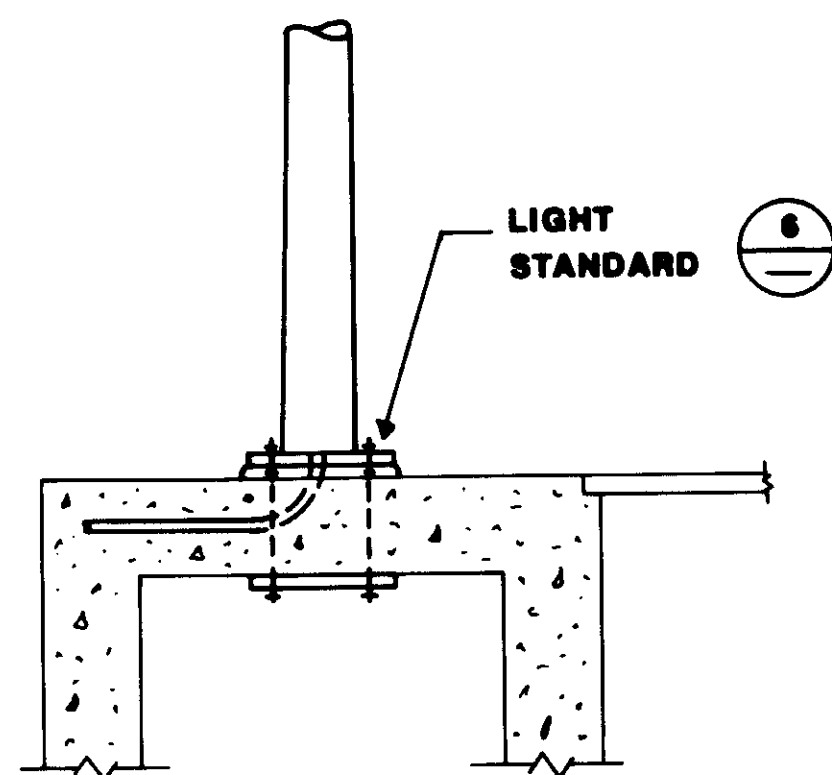
TYPICAL LIGHT POLE 5  
3/4" = 1'-0"



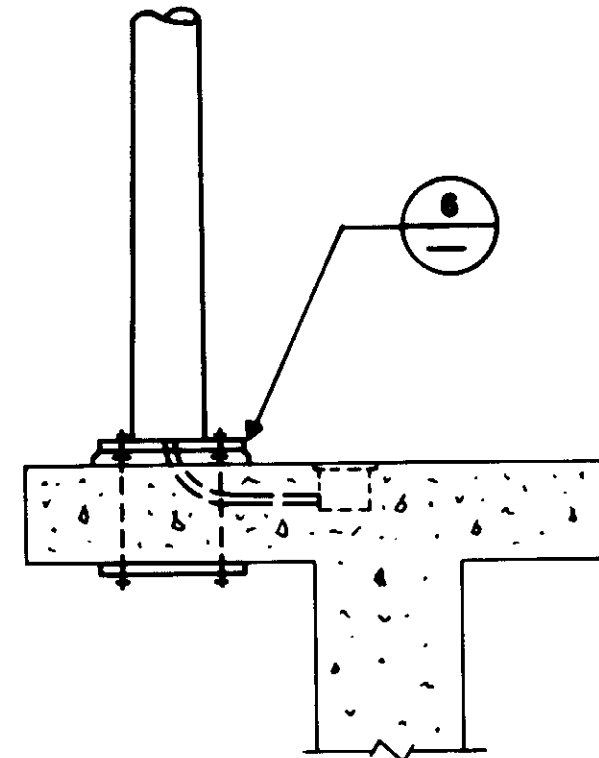
DETAIL 7  
3/4" = 1'-0"



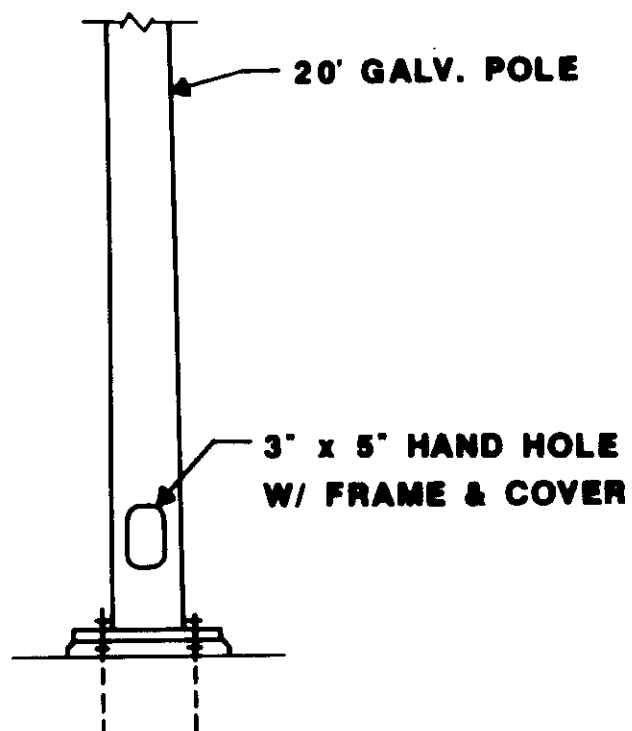
SECTION D  
1 1/2" = 1'-0"



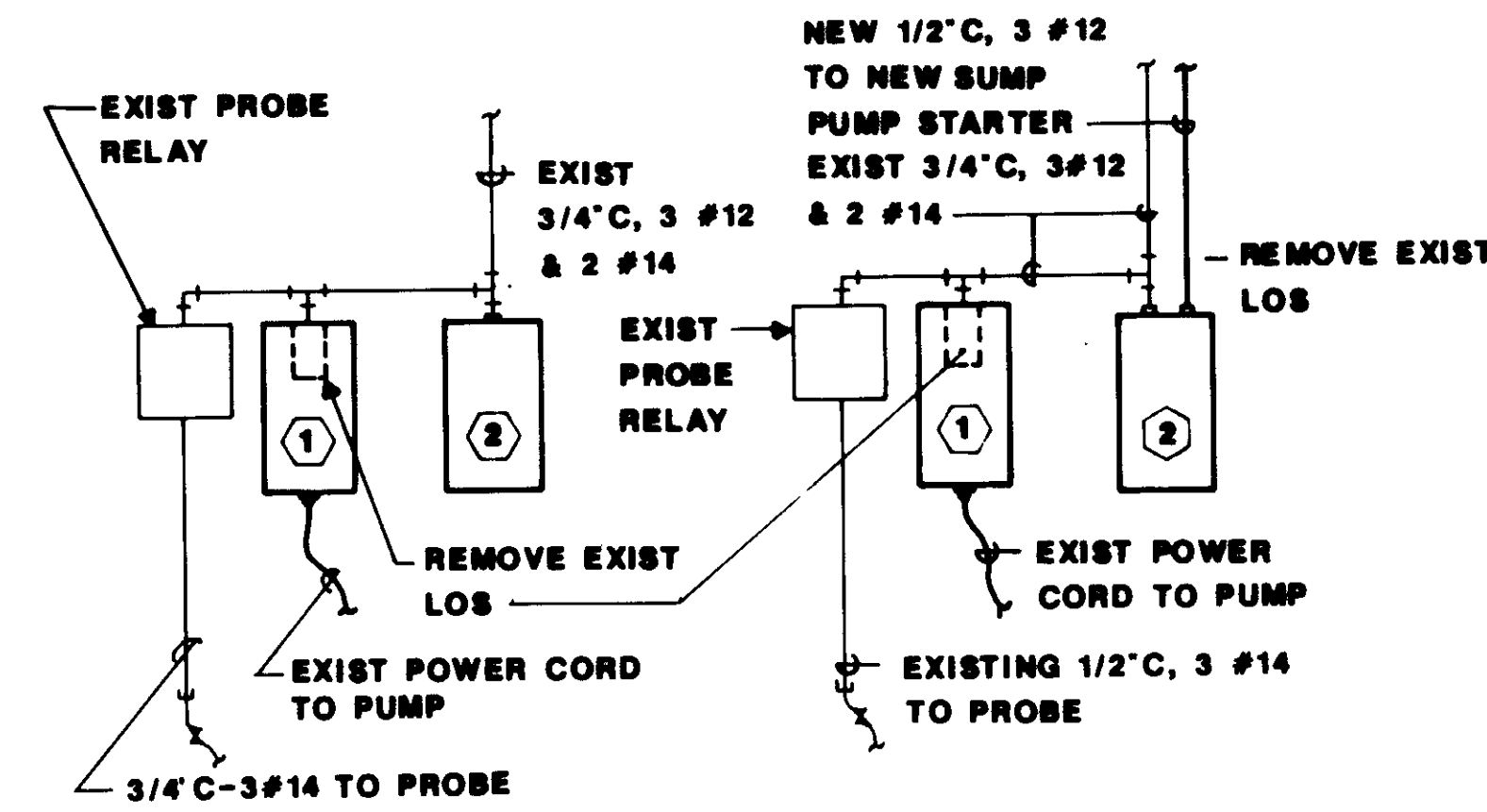
SECTION A  
3/4" = 1'-0"



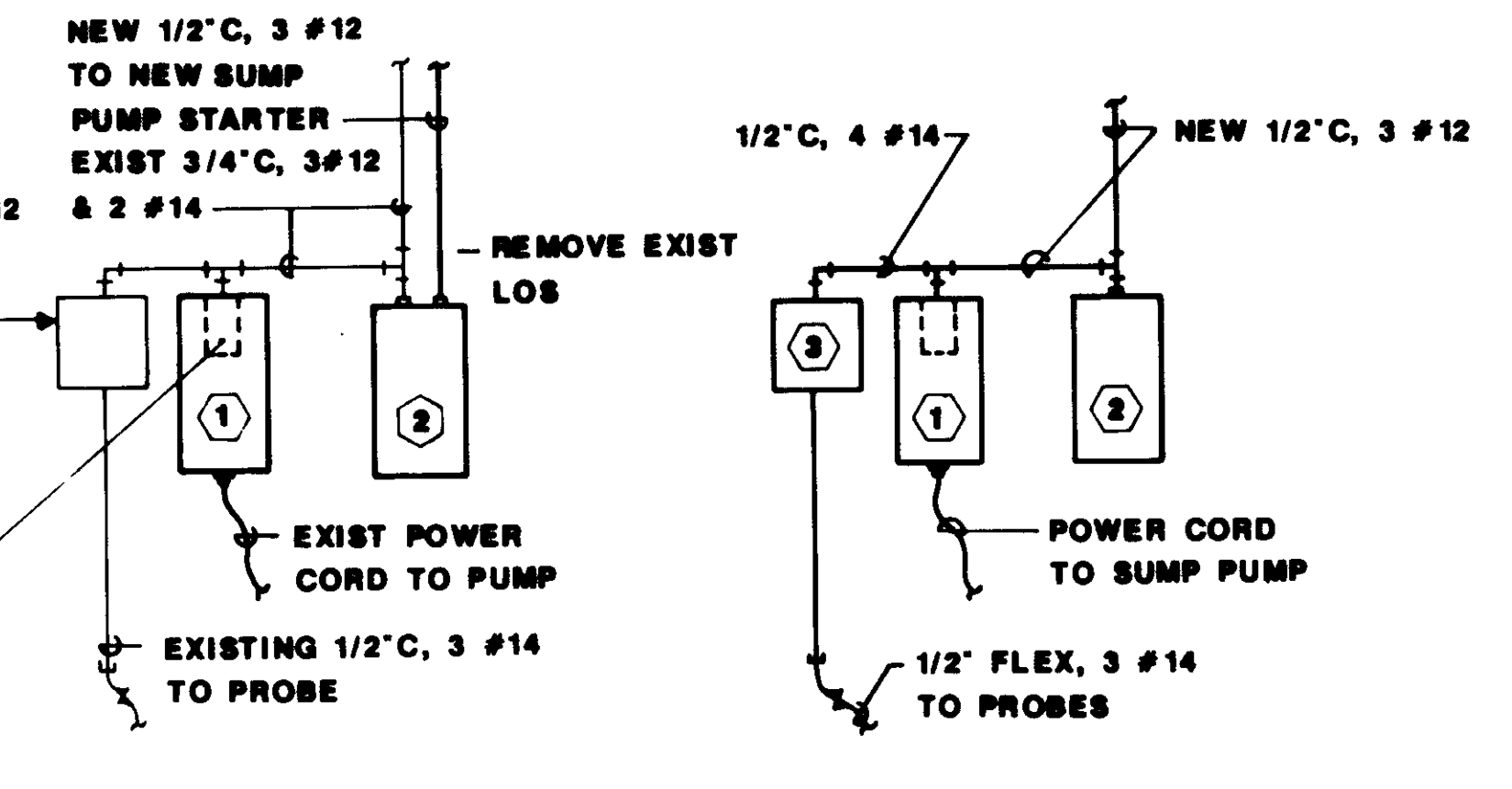
SECTION C  
3/4" = 1'-0"



TYPICAL LIGHT POLE 5  
3/4" = 1'-0"

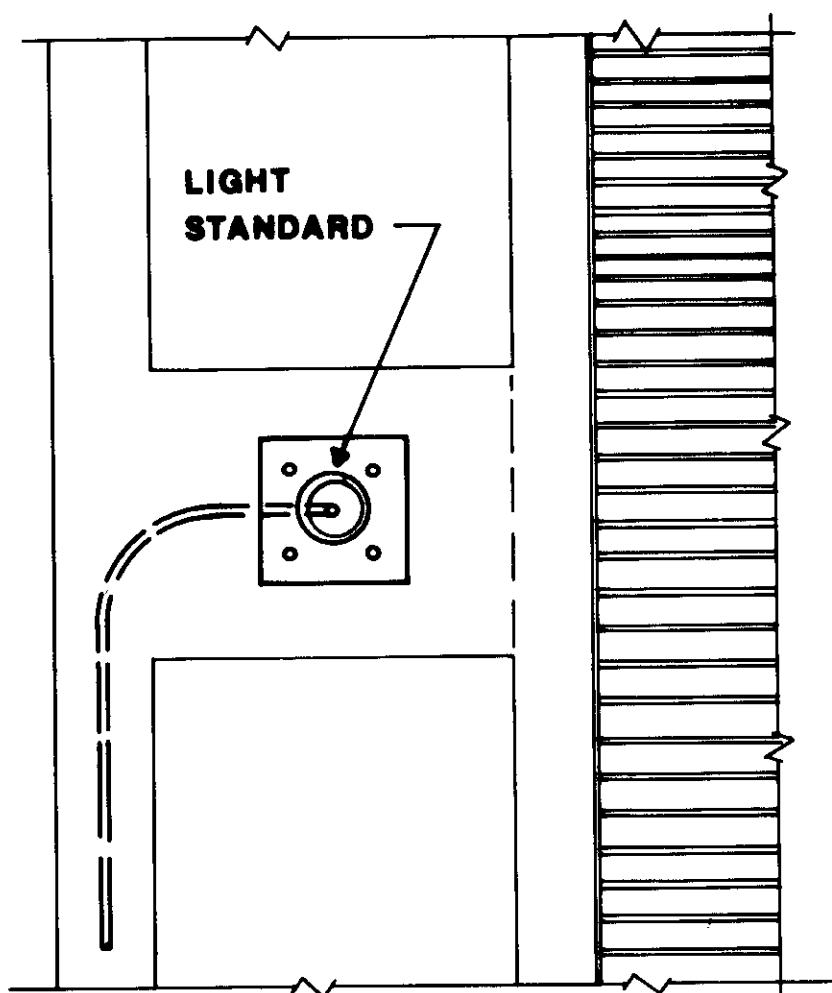


ELEVATION DETAIL E  
1" = 1'-0"

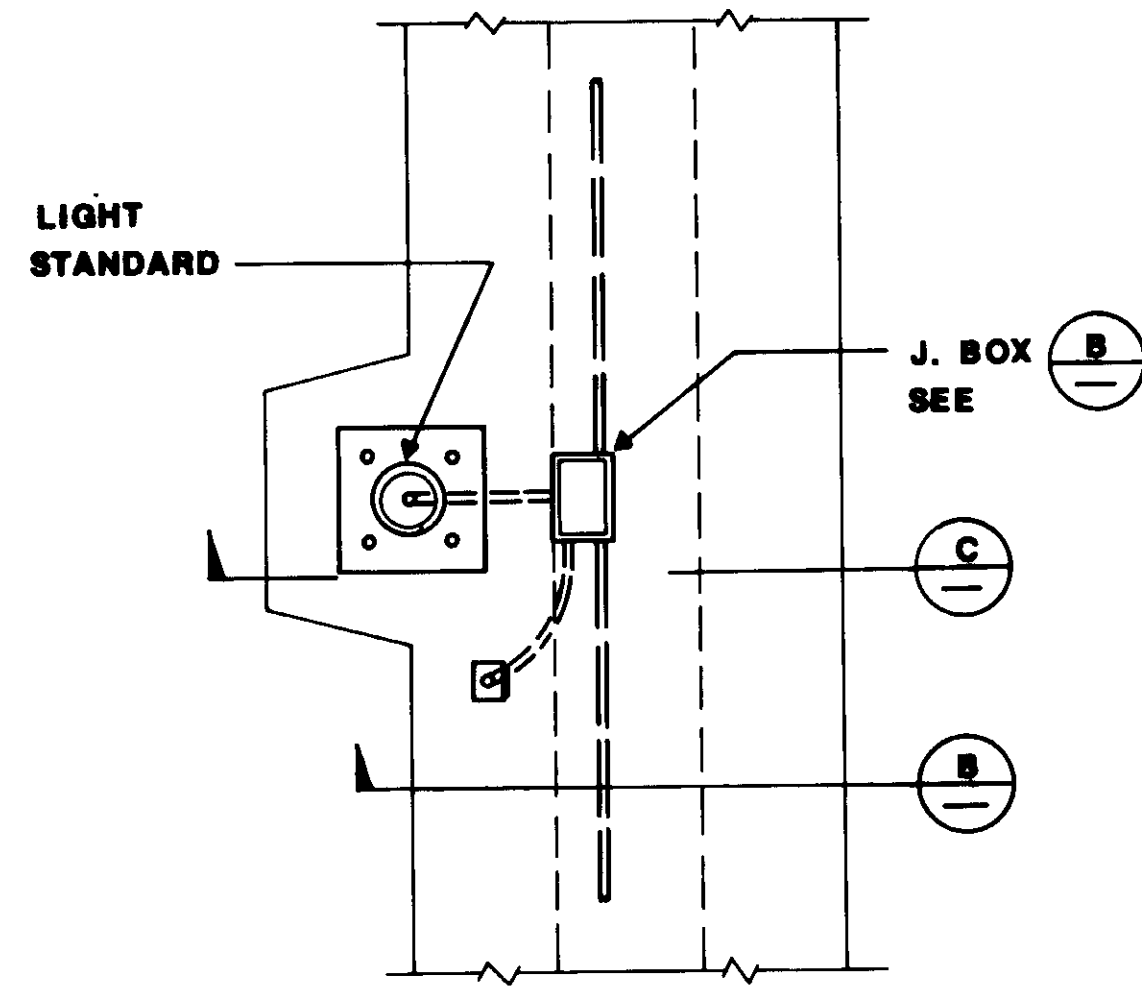


ELEVATION DETAIL F  
1" = 1'-0"

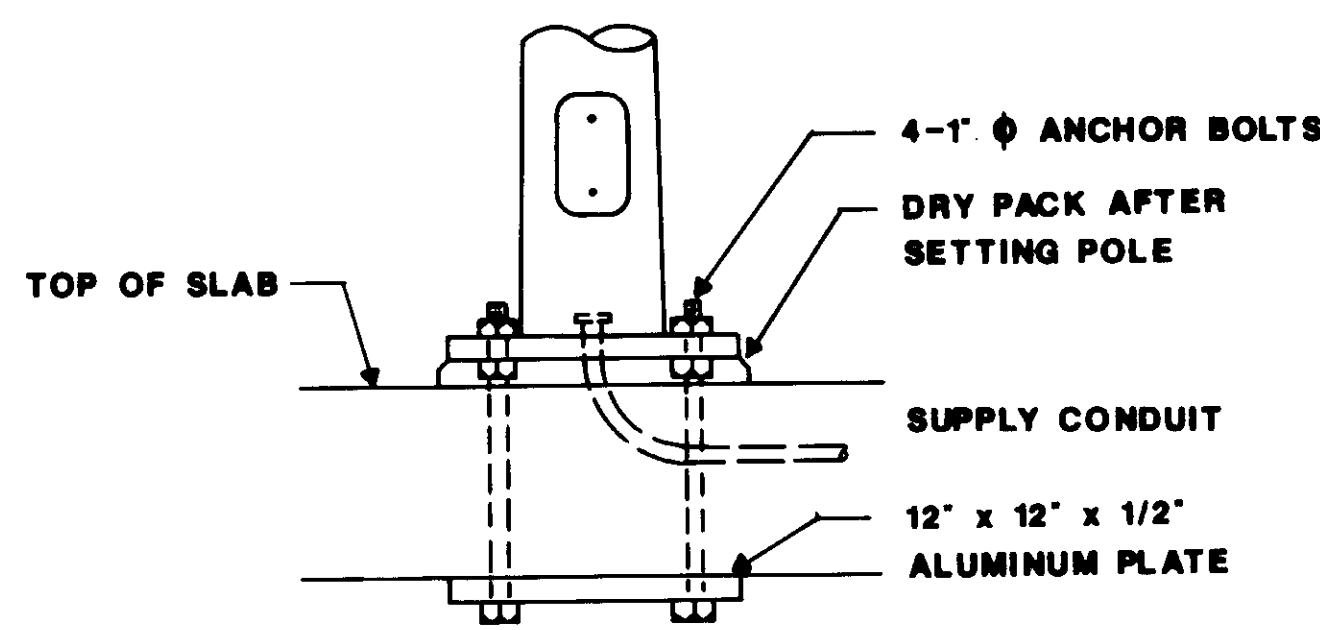
ELEVATION DETAIL G  
1" = 1'-0"



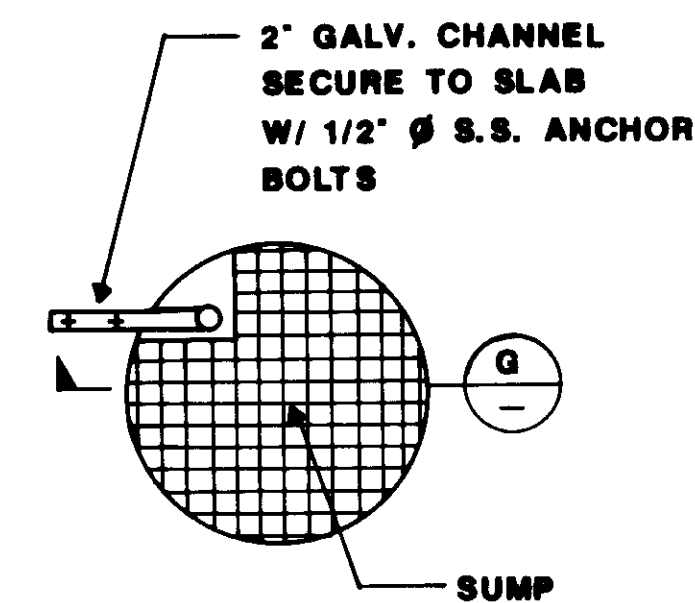
DETAIL 3  
3/4" = 1'-0"



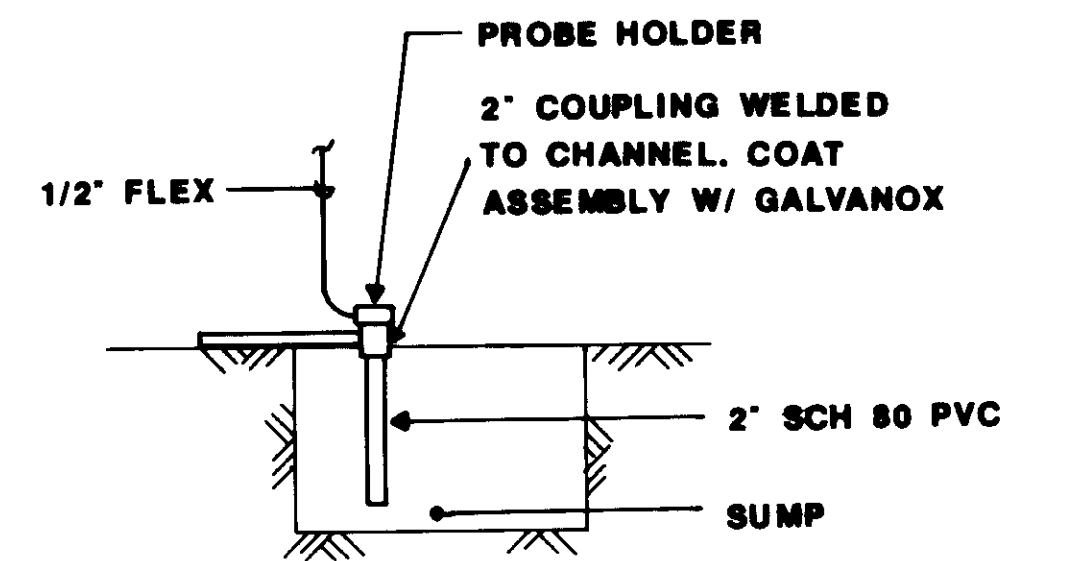
DETAIL 4  
3/4" = 1'-0"



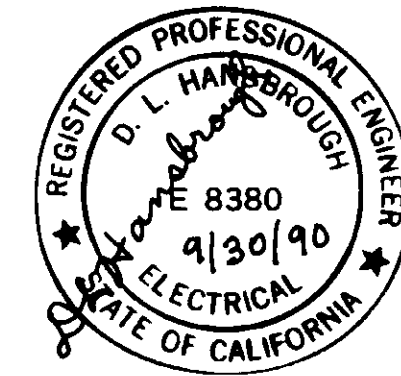
POLE BASE DETAIL 6  
1 1/2" = 1'-0"



PLAN VIEW 8  
NO SCALE



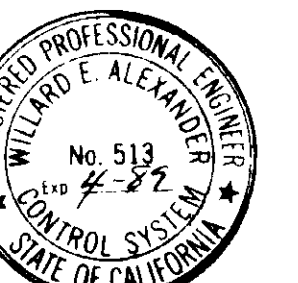
SECTION G  
NO SCALE



- 1 NEW SIZE 1 MAGNETIC STARTER IN NEMA 4X S.S. ENCLOSURE
- 2 NEW 15A, 3P, BREAKER IN NEMA 4X S.S. ENCLOSURE
- 3 NEW INDUCTION PROBE RELAY IN NEMA 4X ENCLOSURE

RECORD DRAWING

04192



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
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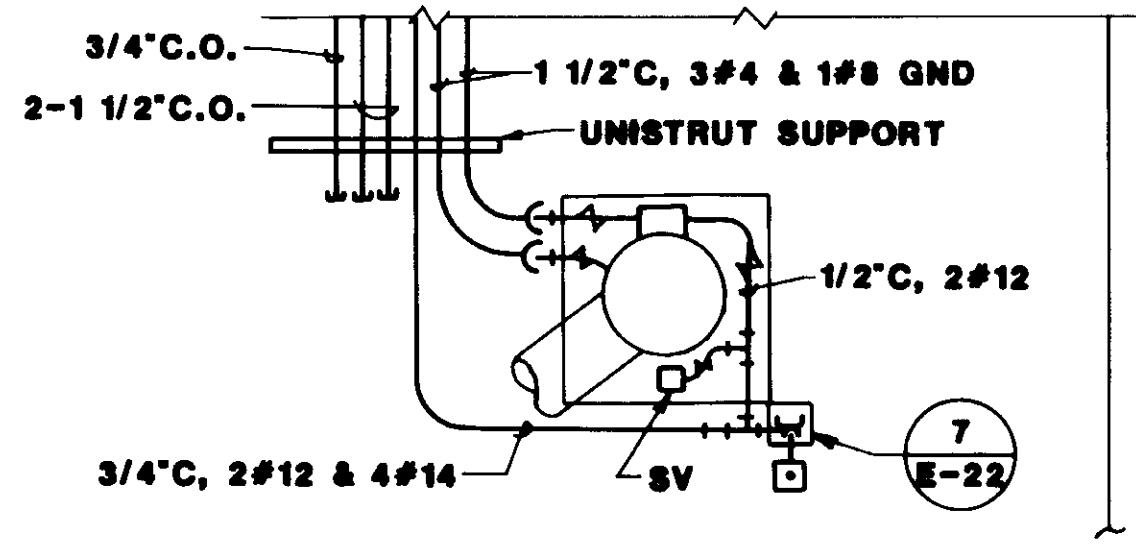
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W.A. DESIGNED	S.A. DRAWN
W.A. CHECKED	

SUBMITTED	14038
KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
Willard Alexander	513 6-30-87
ALEXANDER ENGINEERS	R.C.E. NO. DATE

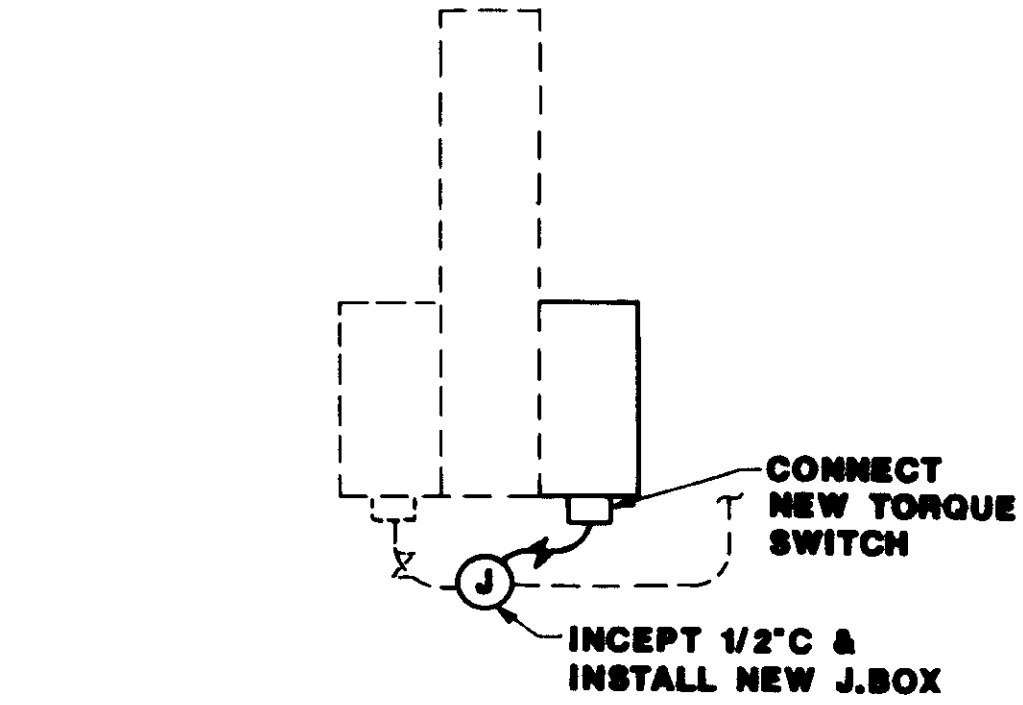
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ELECTRICAL DETAILS AND SECTIONS

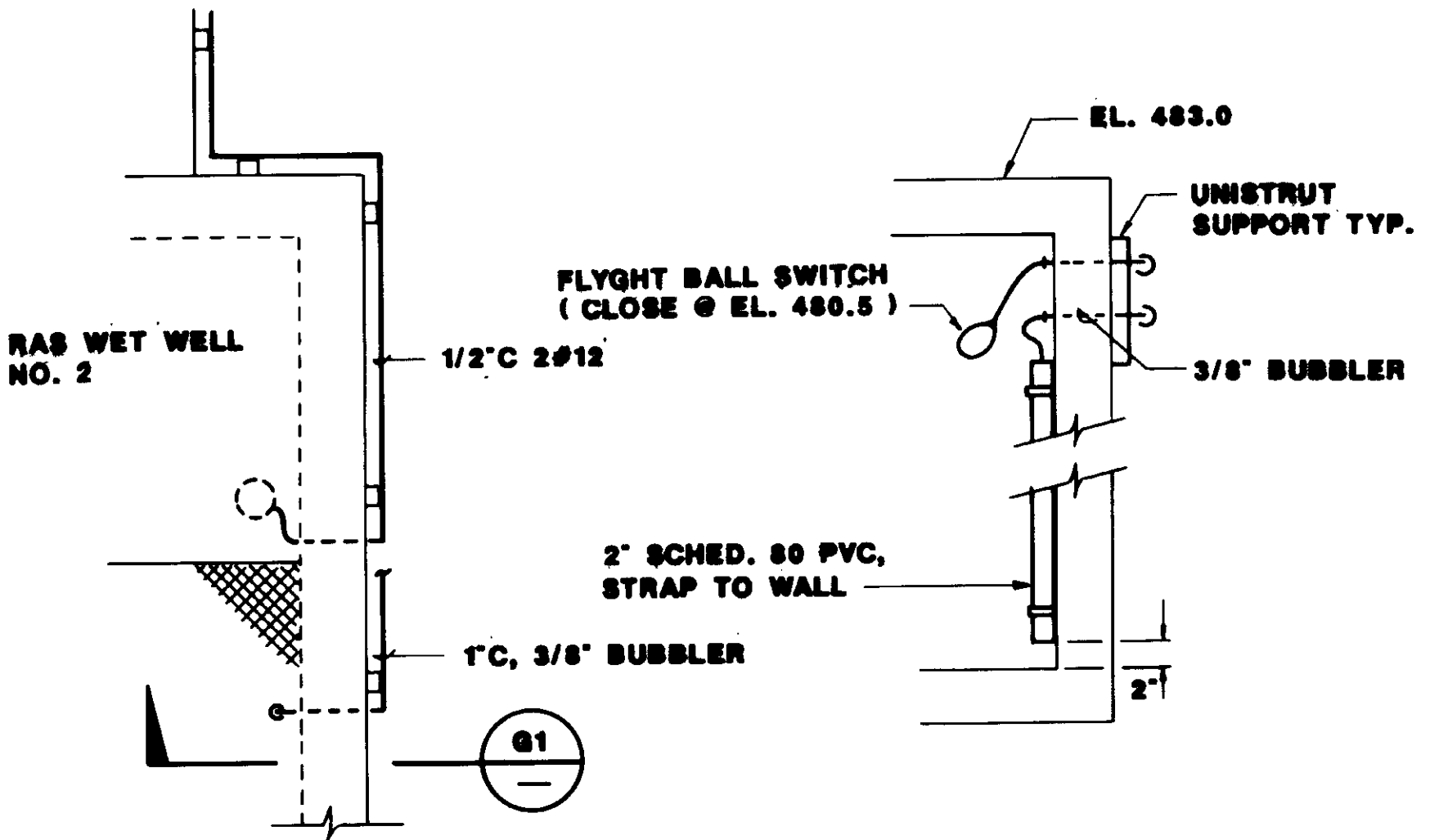
SHEET E-22



**RAS PUMP NO. 4**  
NTS

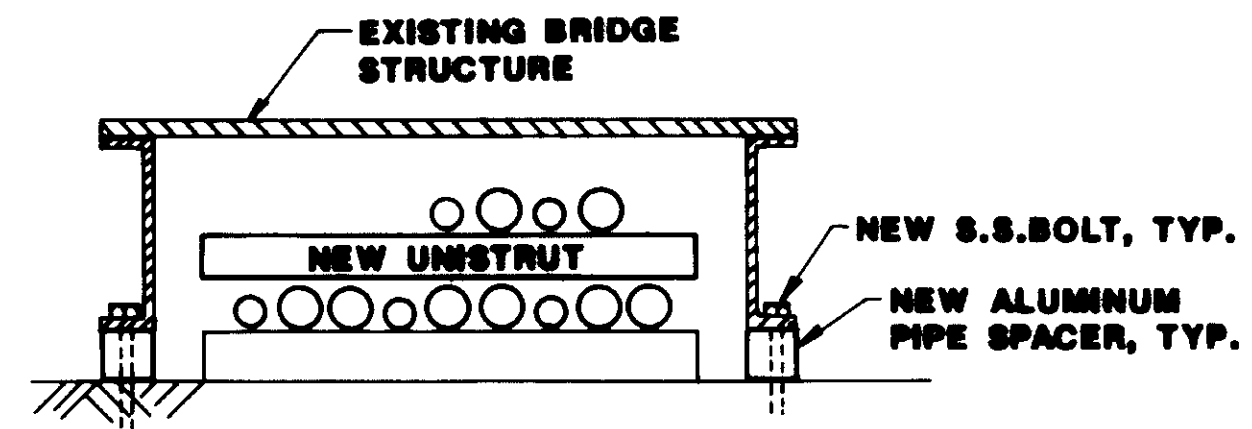


**EXISTING CLARIFIER DRIVES**  
TYPICAL FOR PRIMARY & FINAL  
SIMILAR FOR SKIMMER

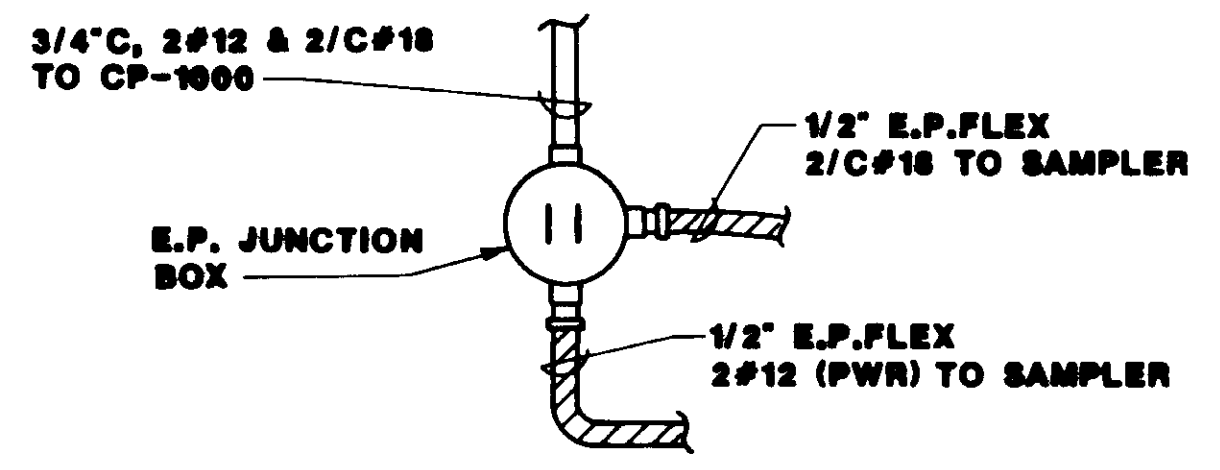


**DETAIL** 1/2"-1'-0"  
**SECTION** G1  
NTS  
SIMILAR FOR H E-15

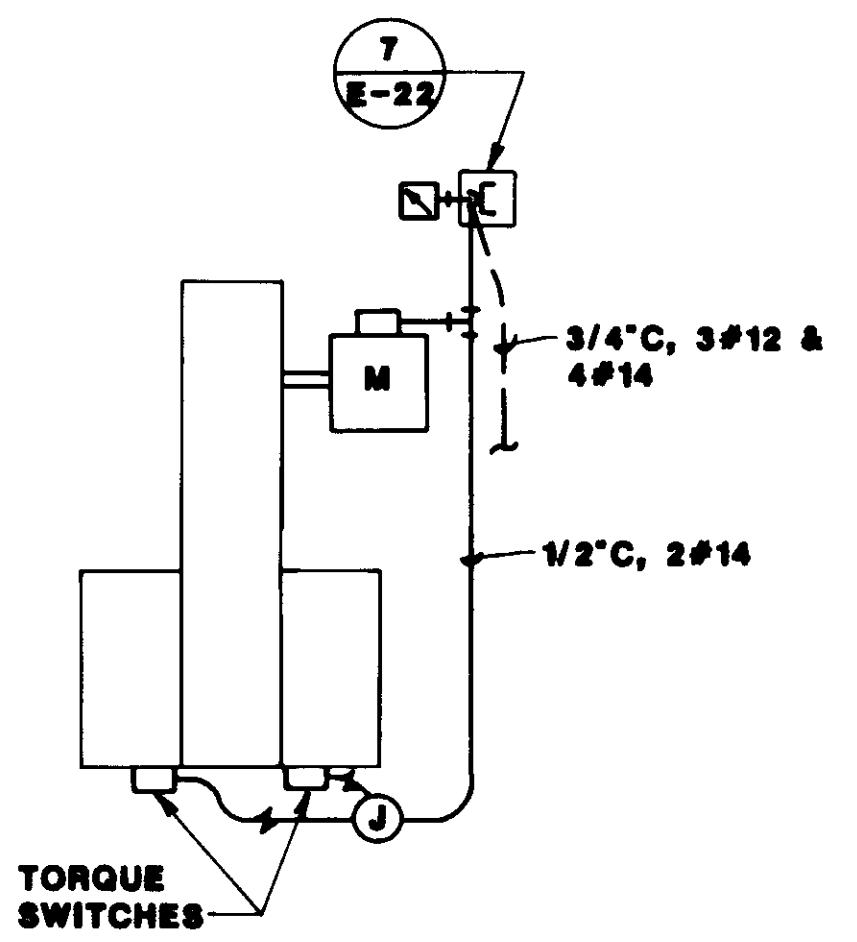
FIXTURE SCHEDULE				
TYPE	DESCRIPTION	MOUNTING	WATTS	LAMPS
A	FLUORESCENT: OPEN, INDUSTRIAL, 2 LAMP WITH PORCELAMIZED DIE FORMED HOUSING & REFLECTOR.	SURFACE PENDANT	100	2-F40 CW
B	MERCURY VAPOR: WALL BRACKET, CAST ALUMINUM WITH 120V CONSTANT WATTAGE BALLAST, PRISMATIC GLASS REFRACTOR & INTEGRAL GUARD.	WALL BRACKET	100	75W M.V. COLOR CORR.
C	INCANDESCENT: CAST METAL VAPOR-TIGHT WITH CASTMETAL GUARD.	SURFACE BRACKET	150	150W I.F.
D	FLUORESCENT: ENCLOSED FIXTURE WITH NON-METALLIC REINFORCED HOUSING & CLEAR ACRYLIC LENS, GASKETED.	WALL SURFACE	100	2-F40 CW
E	EMERGENCY LIGHT.			
F	FLUORESCENT: ENCLOSED FIXTURE WITH REINFORCED NON-METALLIC HOUSING & CLEAR ACRYLIC LENS, GASKETED FOR DUST & MOISTURE RESISTANT.	PENDANT & SURFACE	100	2-F40 CW
G	MERCURY VAPOR: POLE MOUNTED DOUBLE LUMINAIRE WITH 240V CONSTANT WATTAGE BALLAST PRISMATIC GLASS REFRACTOR TO MATCH EXISTING, HOLD PHASE OLP-455MY-240V WITH GLARE SHIELD, 20' HIGH, SQUARE HINGED STEEL POLE, UNION METAL #72017-Y16.	POLE	400	2-175 MERC. VAPOR COLOR CORR.
H	MERCURY VAPOR: BOLLARD TYPE, ANADIZED NATURAL FINISH ALUMINUM KIM #30-212		100	75W MV COLOR CORR.



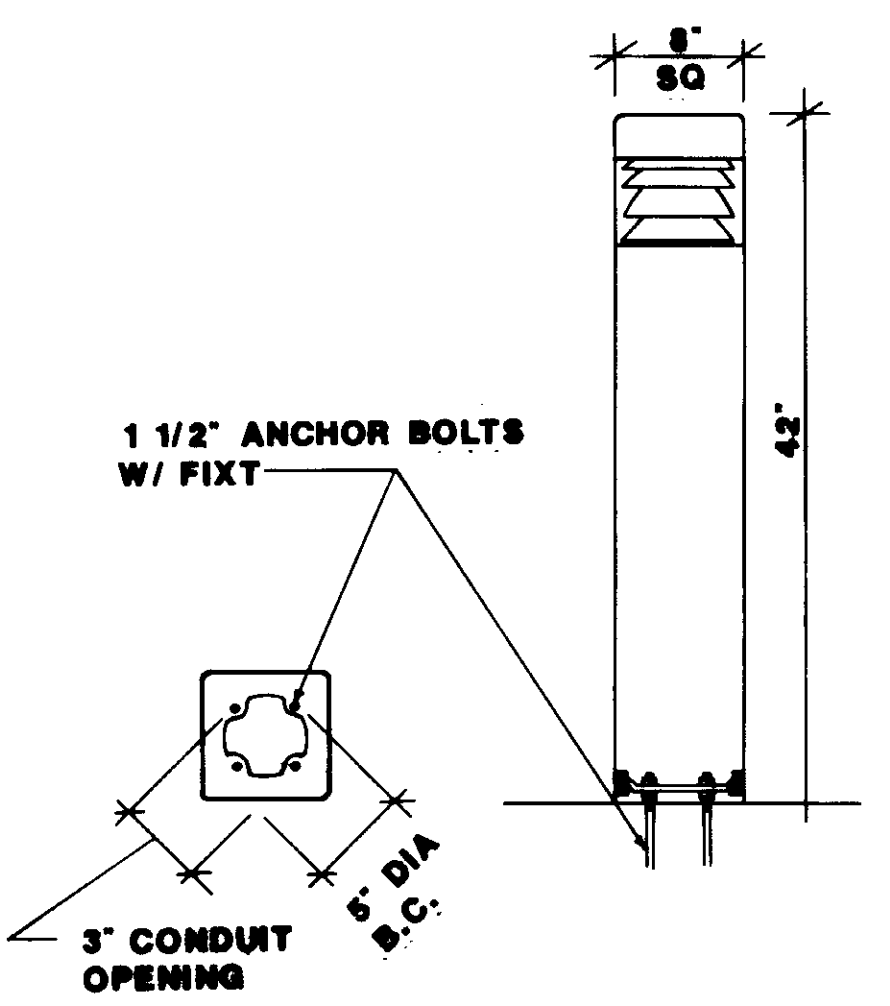
**SECTION** B  
NTS



**DETAIL** E

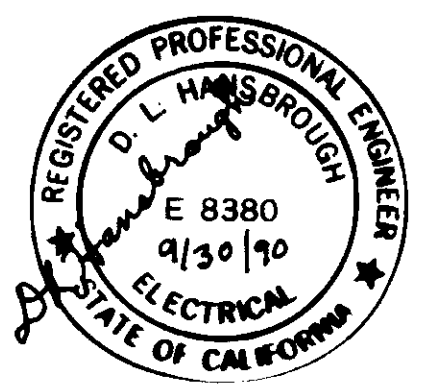


**CLARIFIER DRIVES**  
NTS



**FIXTURE TYPE 'H'**  
NTS

VOLTS		480V		PANEL		PP-1		MAIN CB		70A	
AMPS		100, 3 WIRE		LOCATION		CONTR. CONT. ROOM B		FEEDER		#4	
PHASE		3		MOUNTING		SURFACE		NEUTRAL BUS		#8	
A.I.C. SYMM.				ENTER AT		BOTTOM		GROUND		#8	
IDENTIFICATION	WATTS	OUTLET	CKT	ABC	NO. BKR	MIS RECLTG	WATTS	IDENTIFICATION	WATTS	OUTLET	CKT
DIQ. IA VALVE	500		15 1		2 15		500	DIQ. III VALVE	500		4
											6
DIQ. HA VALVE	500		15 7		8 15		500	DIQ. IV VALVE	500		10
											12
DIQ. IB VALVE	500		15 13		14 15		500	DIQ. V VALVE	500		16
											18
DIQ. HB VALVE	500		15 19		20 19		500	DIQ. VI VALVE	500		22
											24
CP-101	1000		70 25				500	SPACE			26
								SPACE			28
SPACE								SPACE			30
								SPACE			32
											34
											36
											38
											40
											42
SUBTOTAL WATTS								SUBTOTAL WATTS			
A Ø	5000	WATTS			CKT BKR		1 POLE		REMARKS:		
B Ø	5000	WATTS					2 POLE		<b>RECORD DRAWING</b>		
C Ø	4000	WATTS					3 POLE				
TOTAL	14,000	WATTS	22		AMPS						



04193

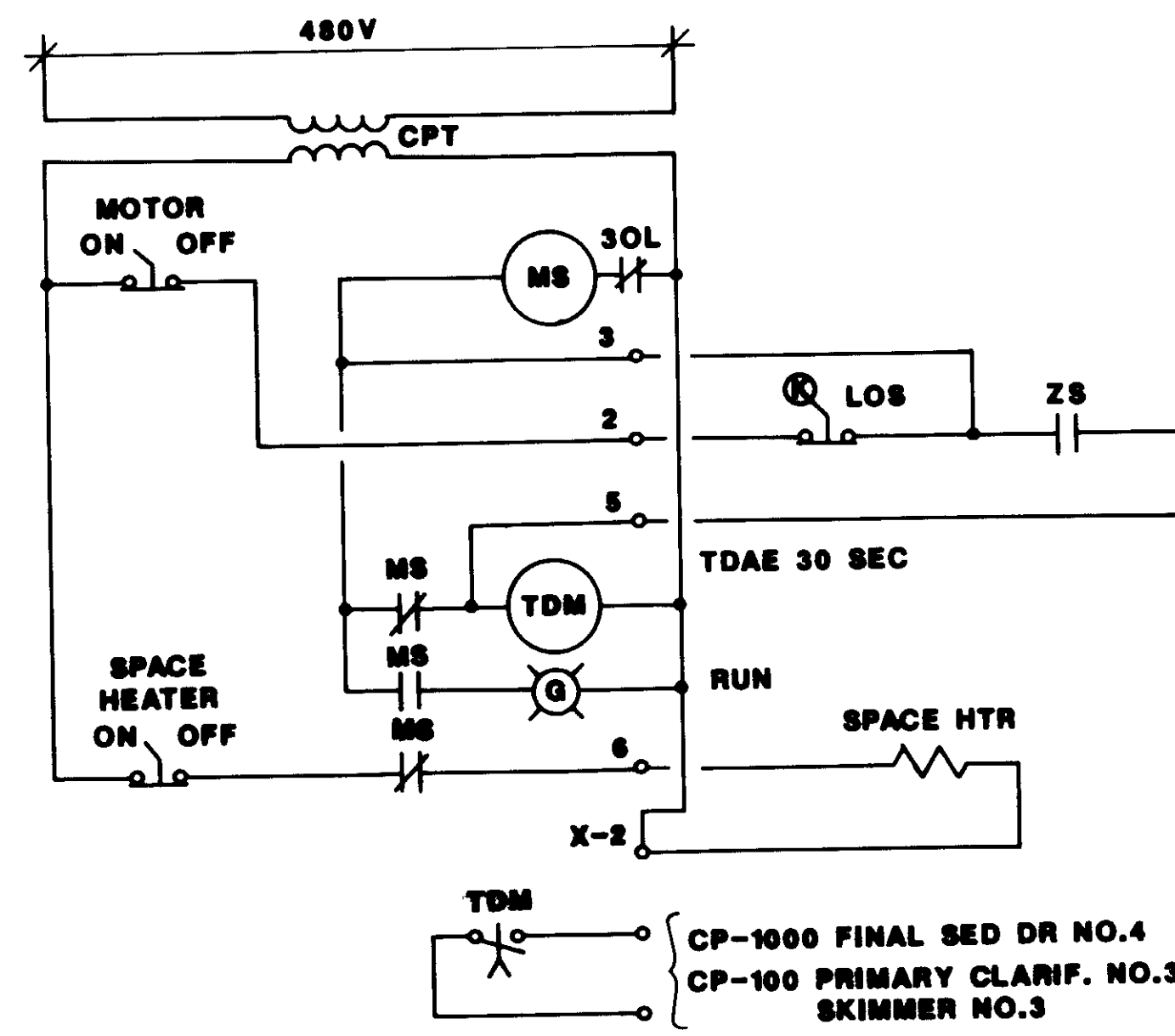


REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	0-00	WA	REVISED FOR RECORD				

SCALE:	AS SHOWN	DESIGNED:	W.A.	SUBMITTED:	14030
		DRAWN:	S.A.	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
		CHECKED:	W.A.	<i>Willard Alexander</i>	612 6-30-87
				ALEXANDER ENGINEERS	R.C.E. NO. DATE

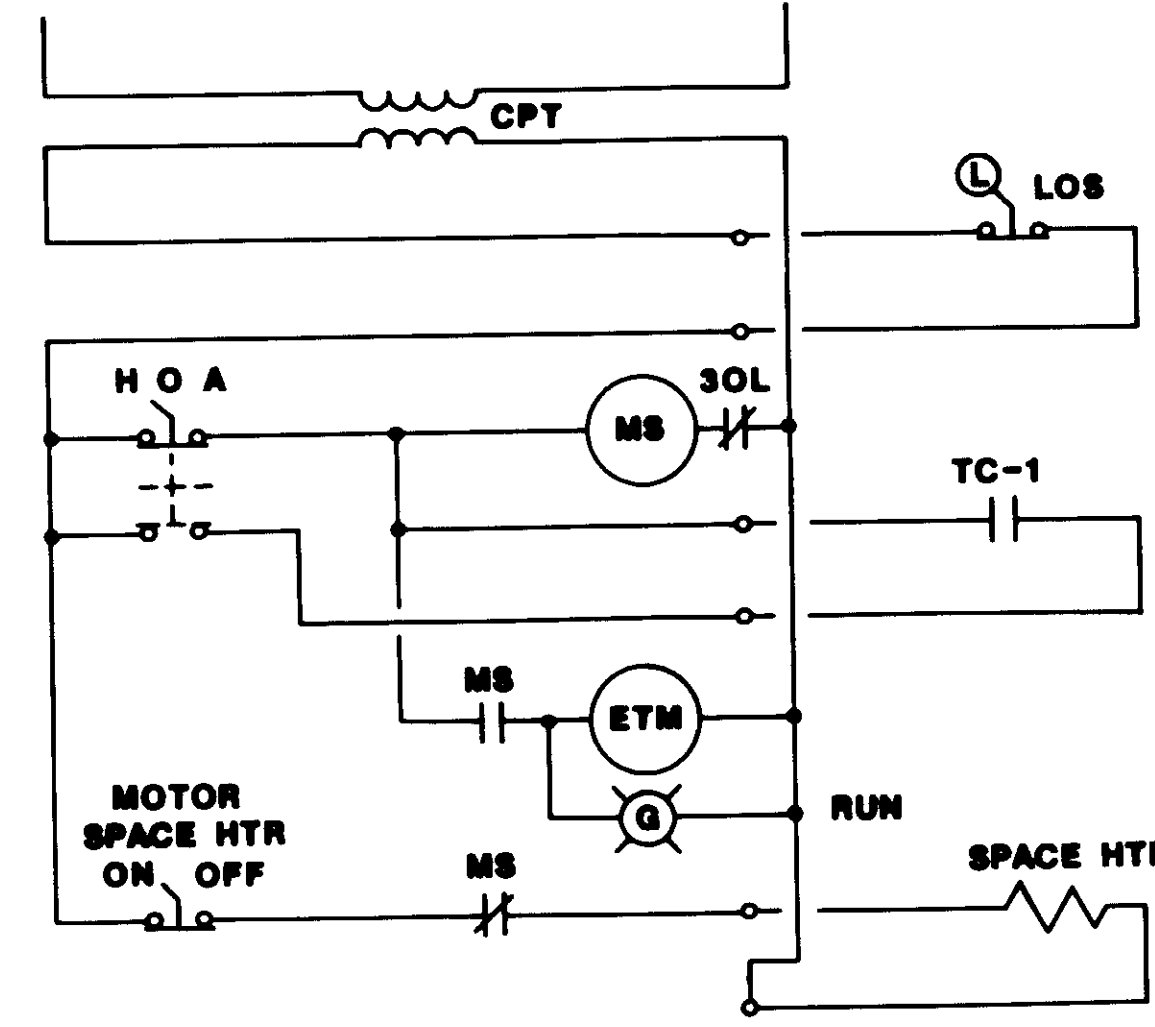
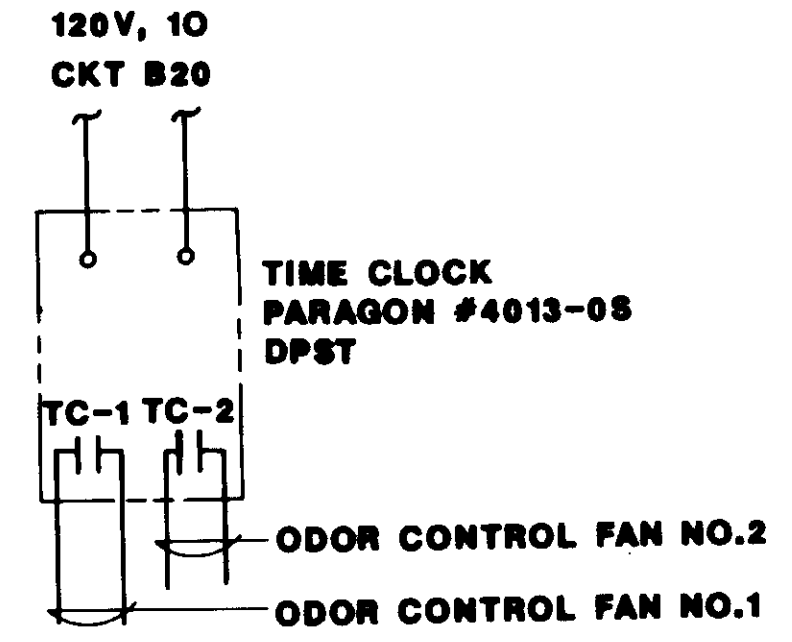
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ELECTRICAL DETAILS & SCHEDULES



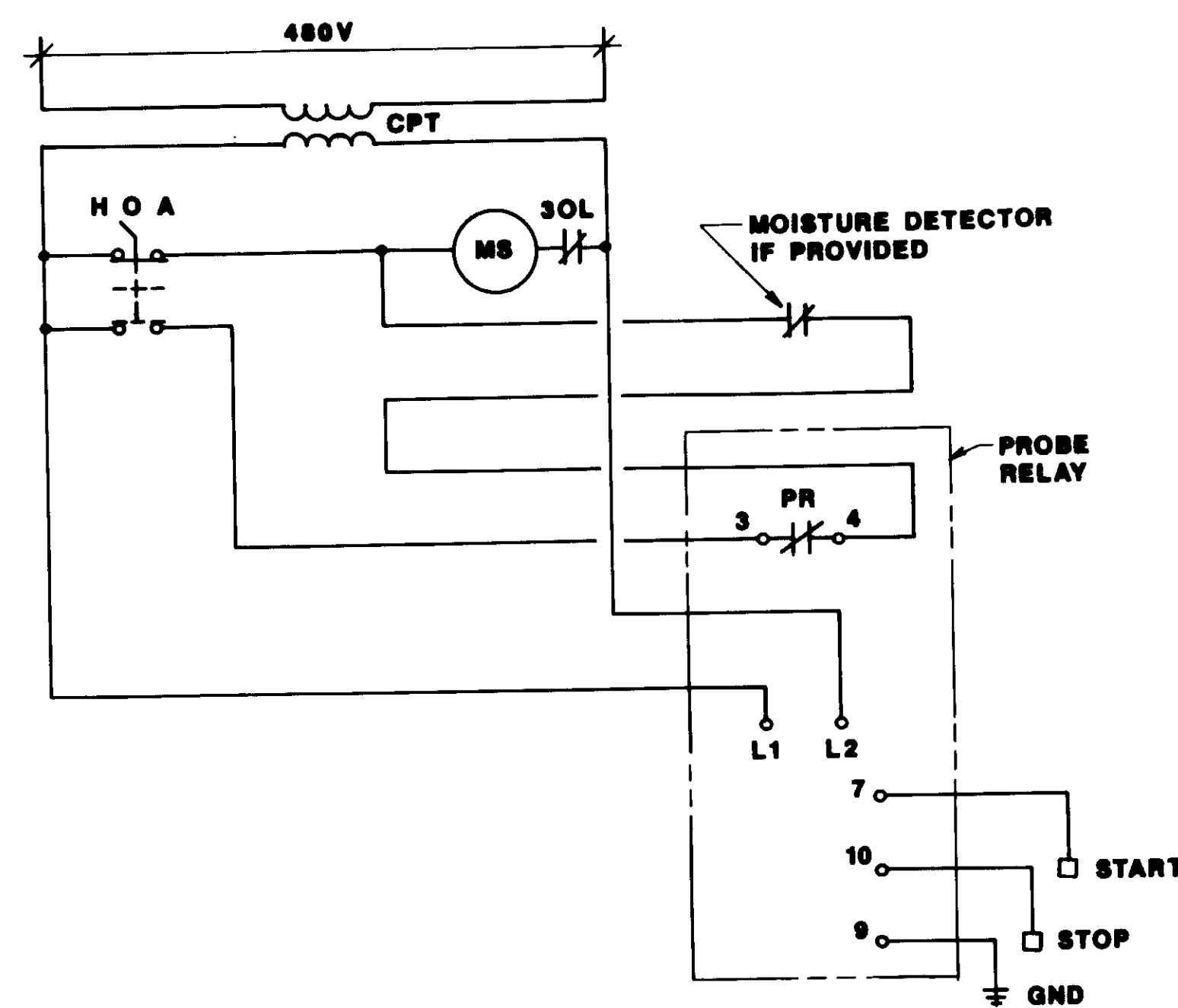
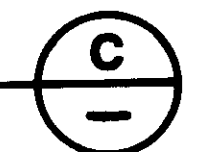
**MOTOR CONTROL SCHEMATIC**

TYPICAL FOR:  
 PRIMARY CLARIF. DR NO.3  
 PRIMARY SKIMMER DR. NO.3  
 FINAL SED TANK DR NO.4



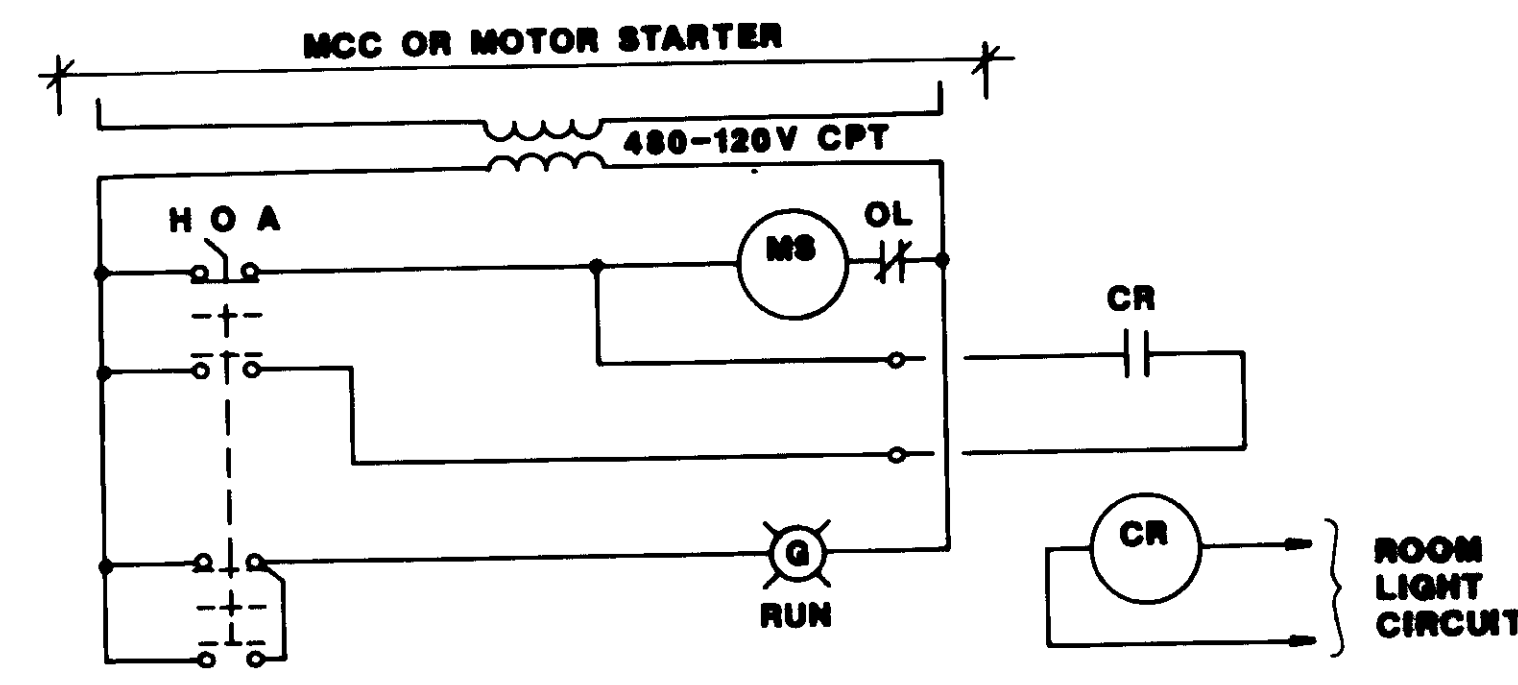
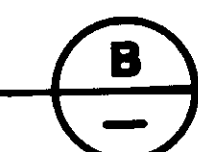
**MOTOR CONTROL SCHEMATIC**

TYPICAL FOR:  
 ODOR CONTROL FAN NO.1  
 ODOR CONTROL FAN NO.2



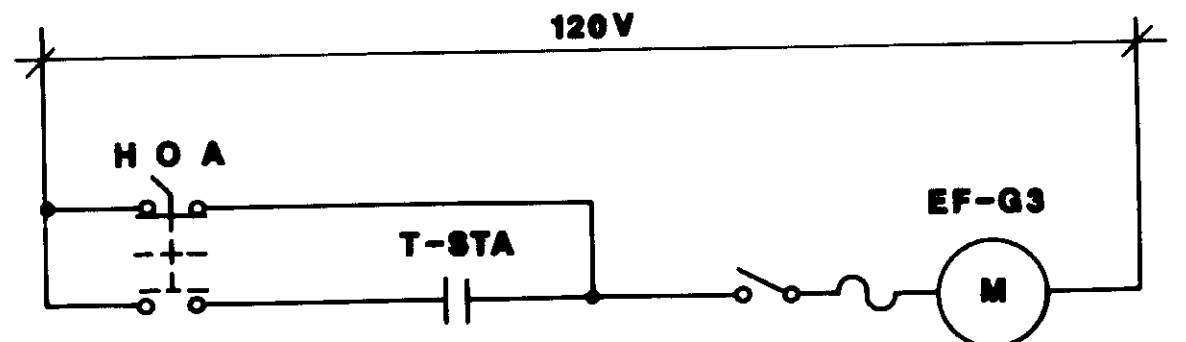
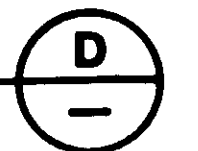
**MOTOR CONTROL SCHEMATIC**

TYPICAL FOR SUMP PUMPS:  
 GALL NO.1 - SP #3  
 GALL NO.2 - SP #1, SP #2 & SP #3  
 GALL NO.3 - SP #1, SP #2 & SP #3



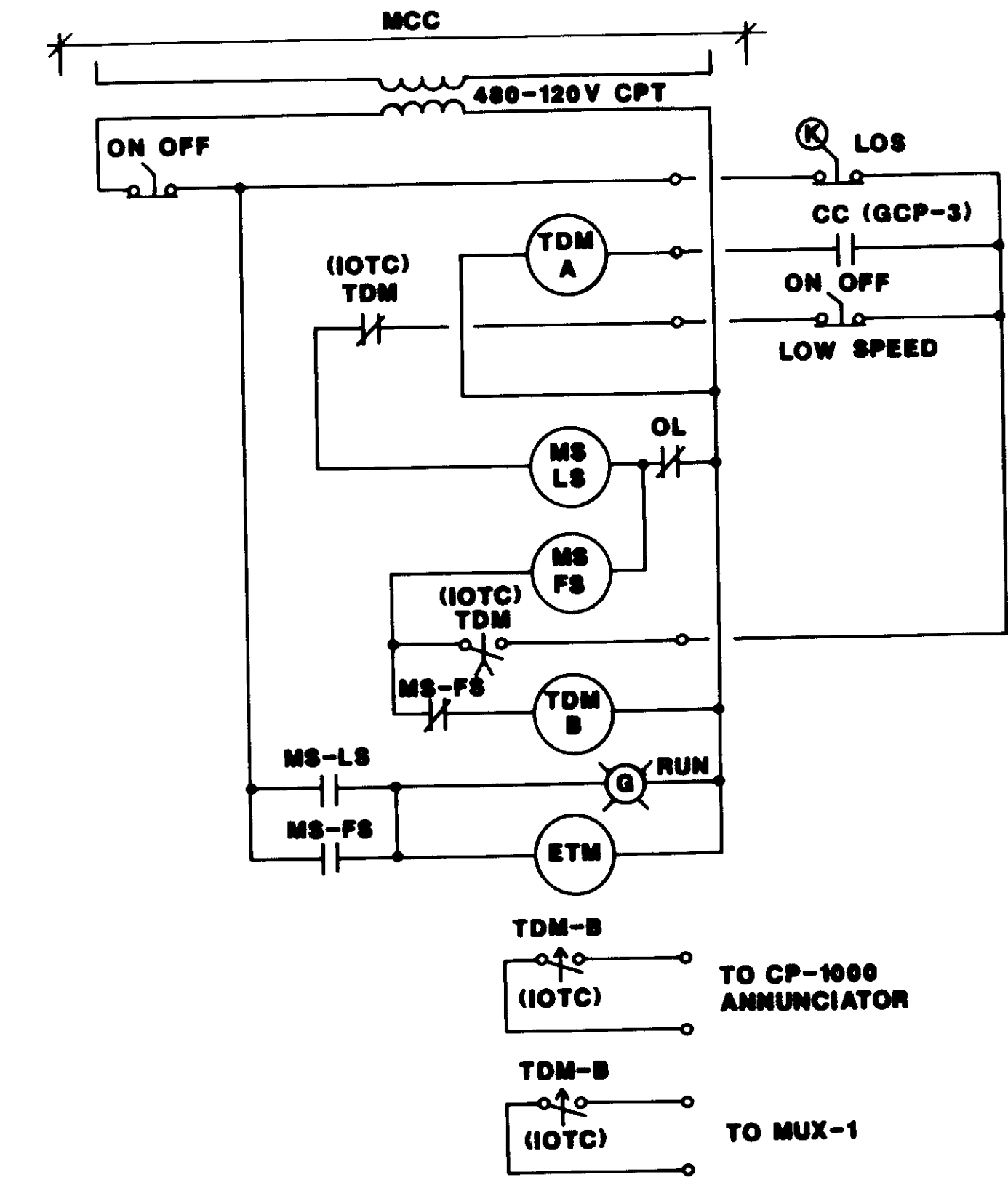
**VENT FAN CONTROL SCHEMATIC**

TYPICAL FOR: VF-1/1, VF-1/2, VF-1/3  
 VF-2/1, VF-3/1 & VF-3/2

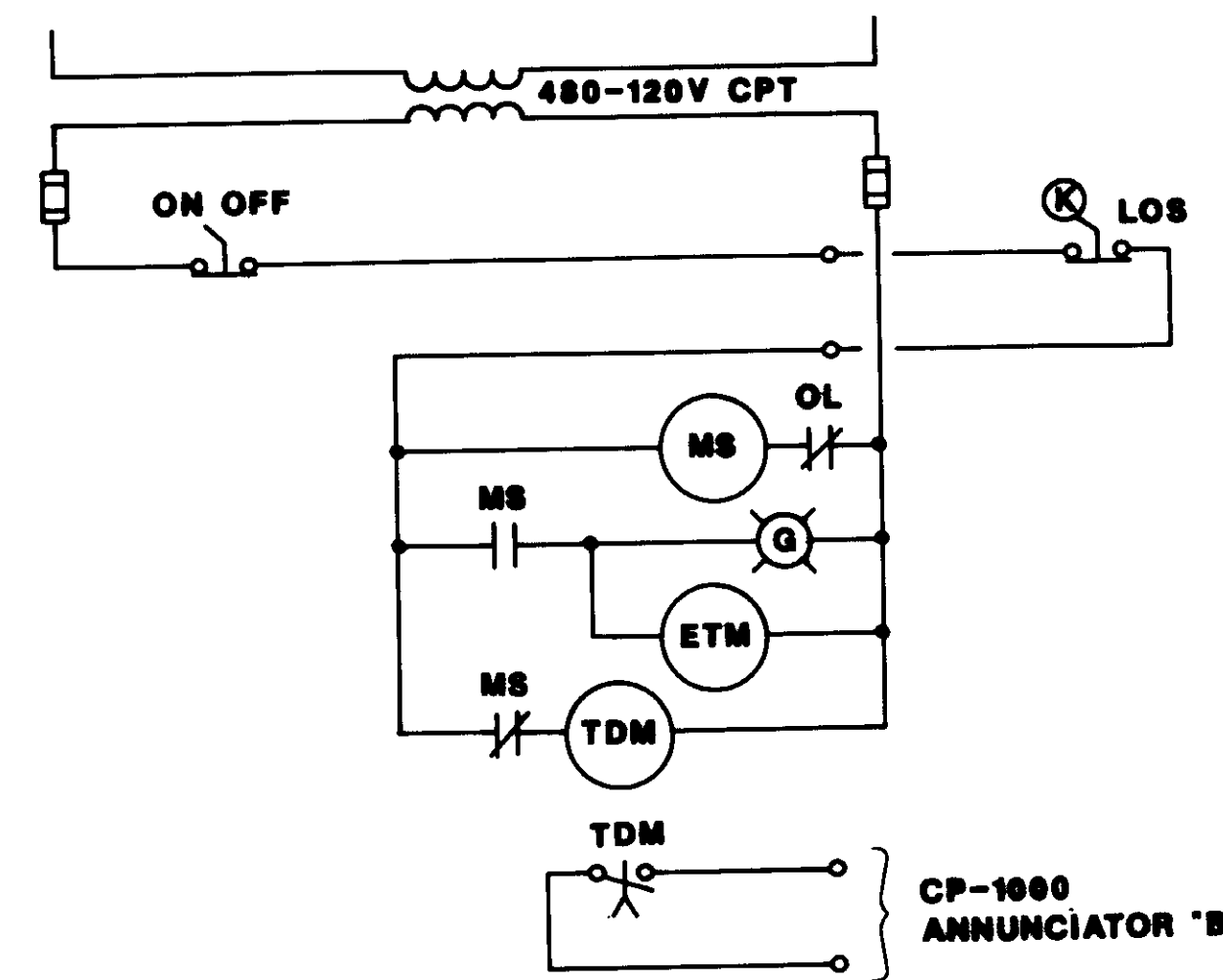
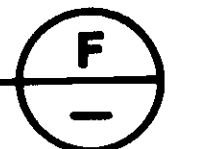


**EXHAUST FAN CONTROL**

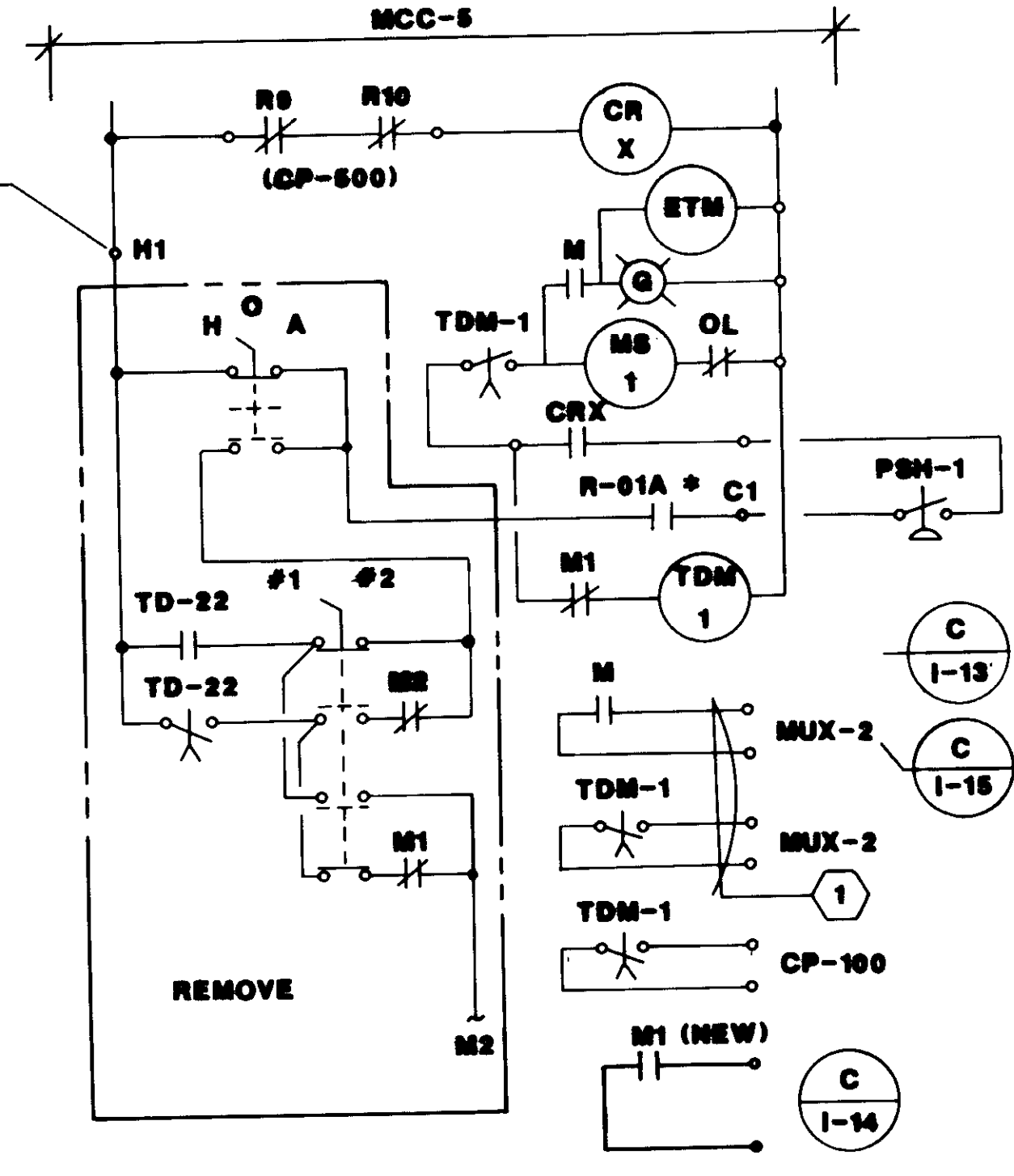
GEN. NO. 3 CONTROL ROOM



**GEN. NO. 3 VENT FAN SCHEMATIC**

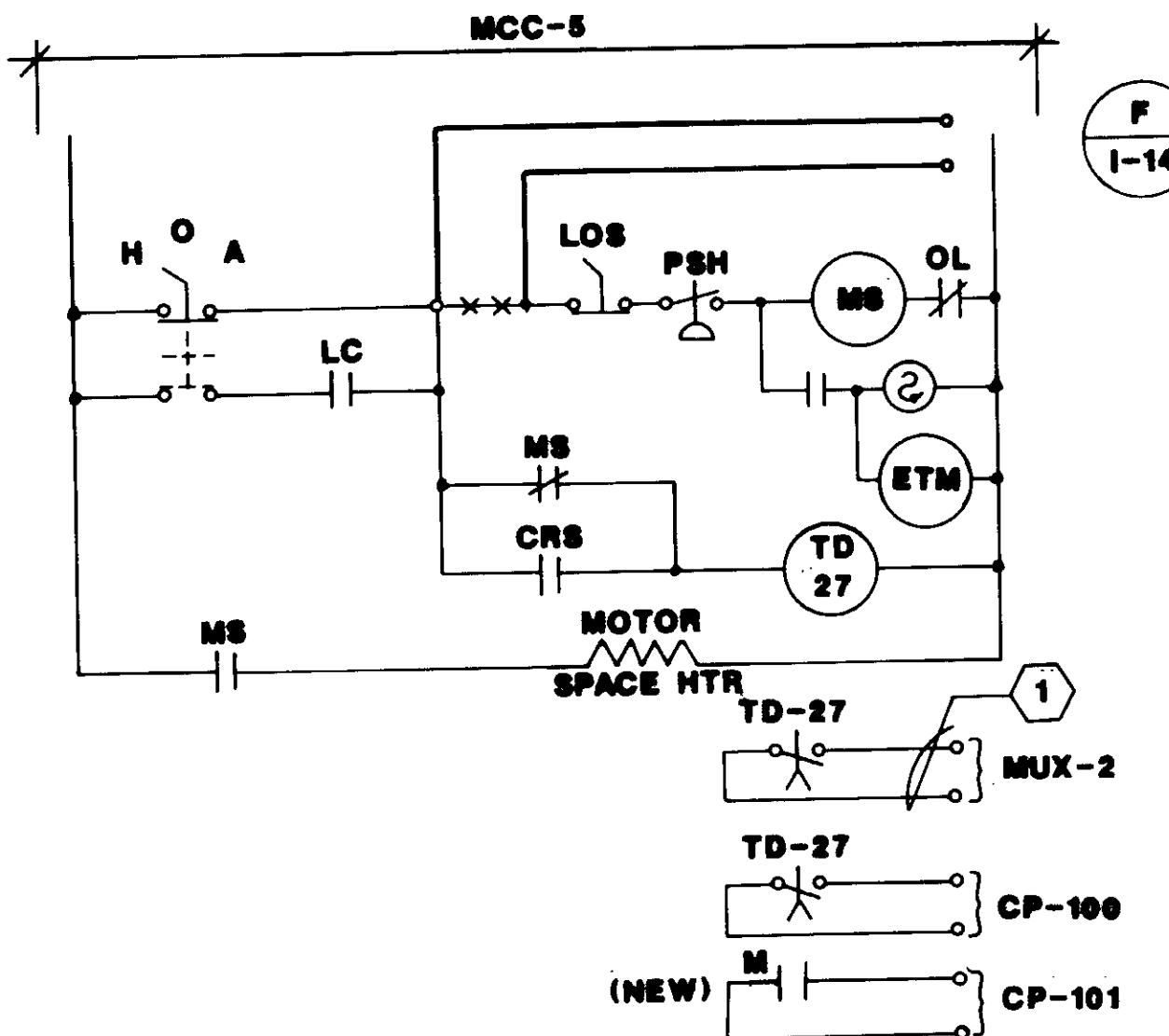


**GRIT WASHER SCHEMATIC**



**PRIMARY SLUDGE PUMP**

TYPICAL FOR M1 & M2  
 INSTALL COVERS ON ALL OPENINGS  
 \* R-02A FOR PUMP NO. 2



**EXIST SKUM PUMP**

1 REROUTE TO CP-101 & TAG WITH  
 PUMP IDENTITY & RTU-2



04194

RECORD DRAWING



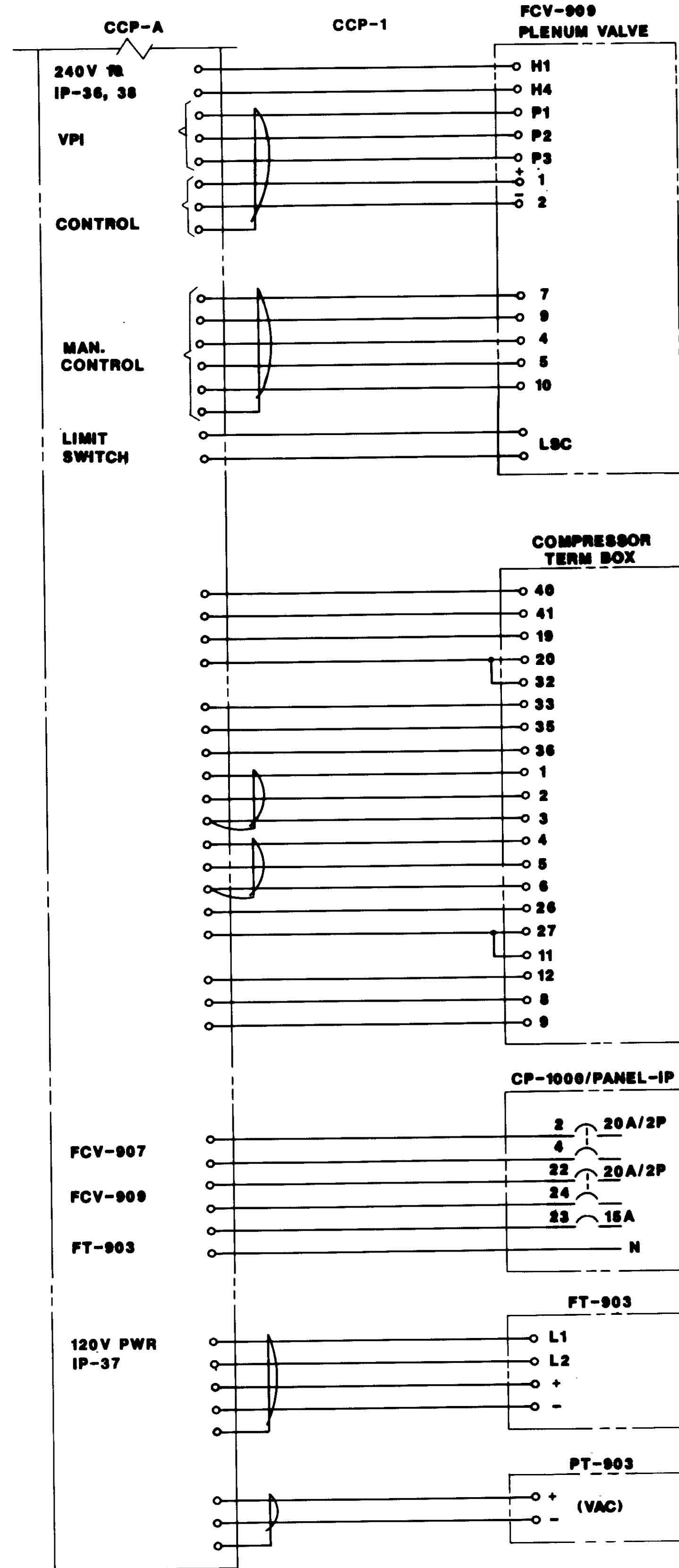
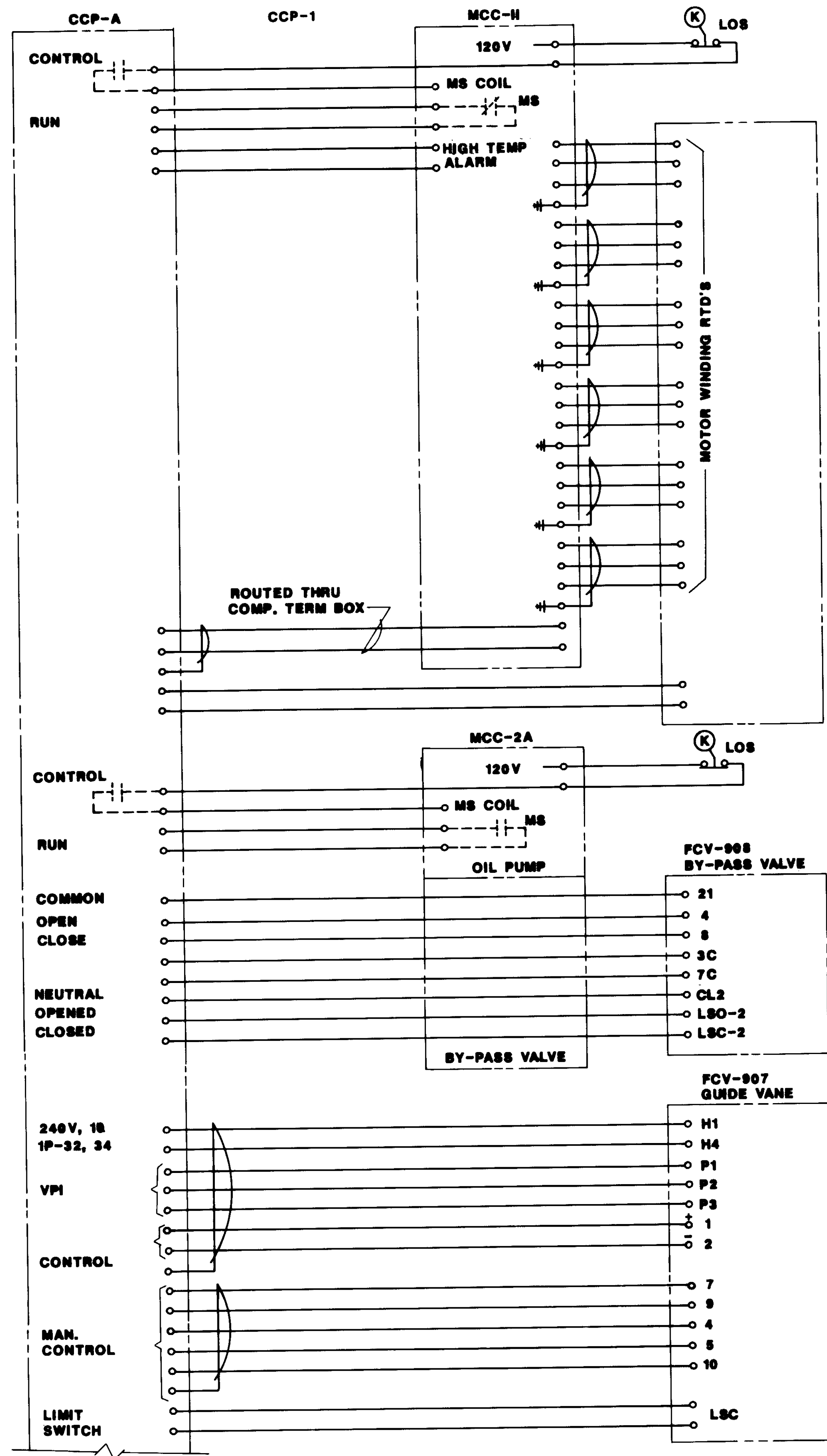
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1	6-30-87	W.A.	REVISED FOR RECORD				

SCALE:	NONE	DESIGNED:	W.A.	SUBMITTED:	14038
CHECKED:	W.A.	DRAWN:	W.A.	DATE:	6-30-87
				DESIGNED BY:	WILLARD ALEXANDER
				CHECKED BY:	WILLARD ALEXANDER

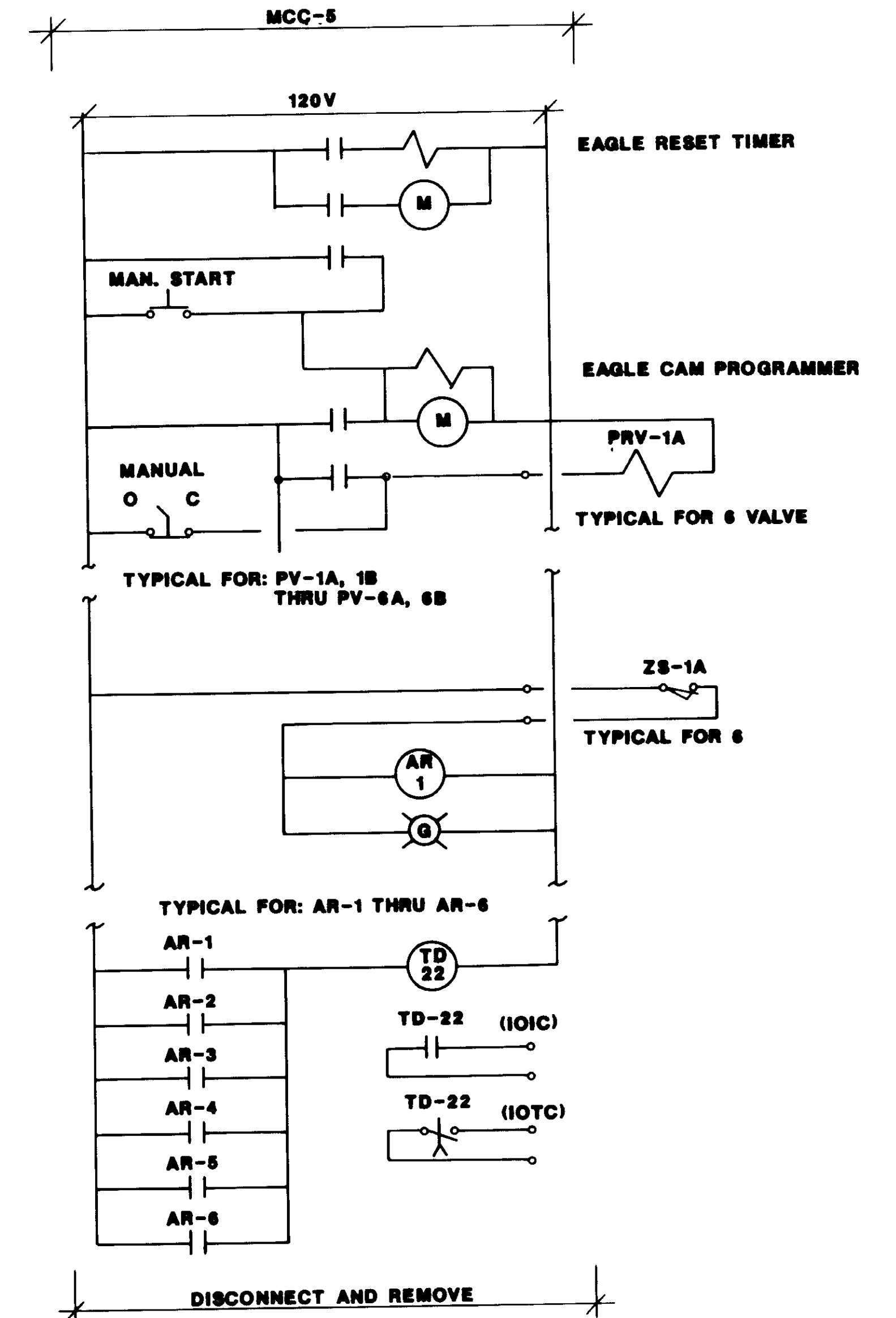
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 SCHEMATIC WIRING DIAGRAMS

SHEET  
**E-24**



PAC - 3A INTERFACE WIRING DIAGRAM



EXISTING PRIMARY VALVE CONTROL  
REPLACE CUBICLE DOOR ON MCC-5

NOTE:  
① SHOP AND CONNECTION DRAWINGS WILL BE PROVIDED FOR CCP-A, MCC-11 & COMPRESSOR

04195



RECORD DRAWING

REV	DATE	BY	DESCRIPTION
1	6-68	WA	REVISED FOR RECORD

SCALE: NONE

DESIGNED BY: W.A. KATSUBA

DRAWN BY: W.A. KATSUBA

CHECKED BY: W.A. KATSUBA

SUBMITTED 14020

KATSUBA CONSULTING ENGINEERS R.C.E. NO. DATE

Willard Alexander 513 6-30-87

ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**

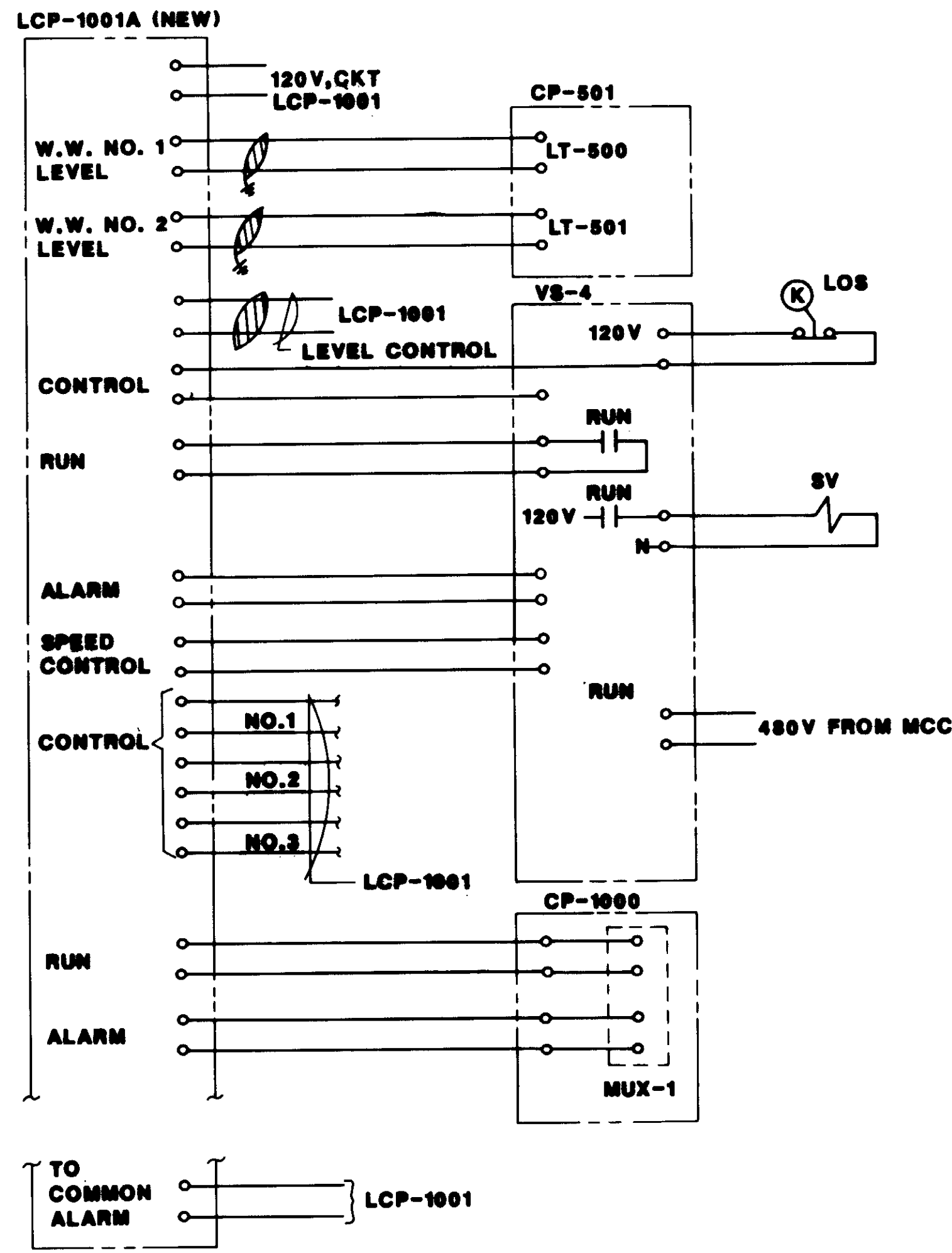
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California      Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III

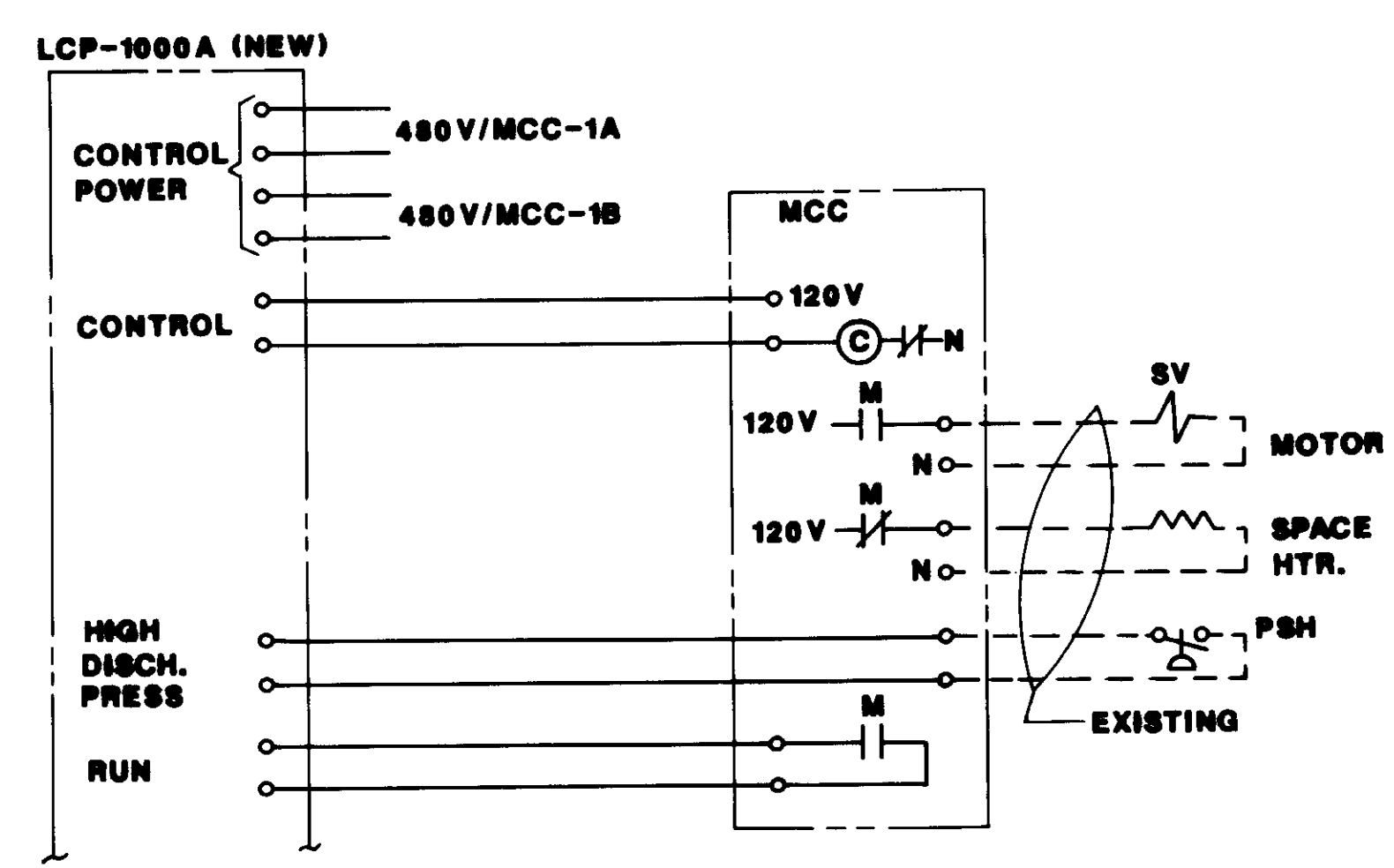
INTERFACE WIRING DIAGRAM

SHEET E-25

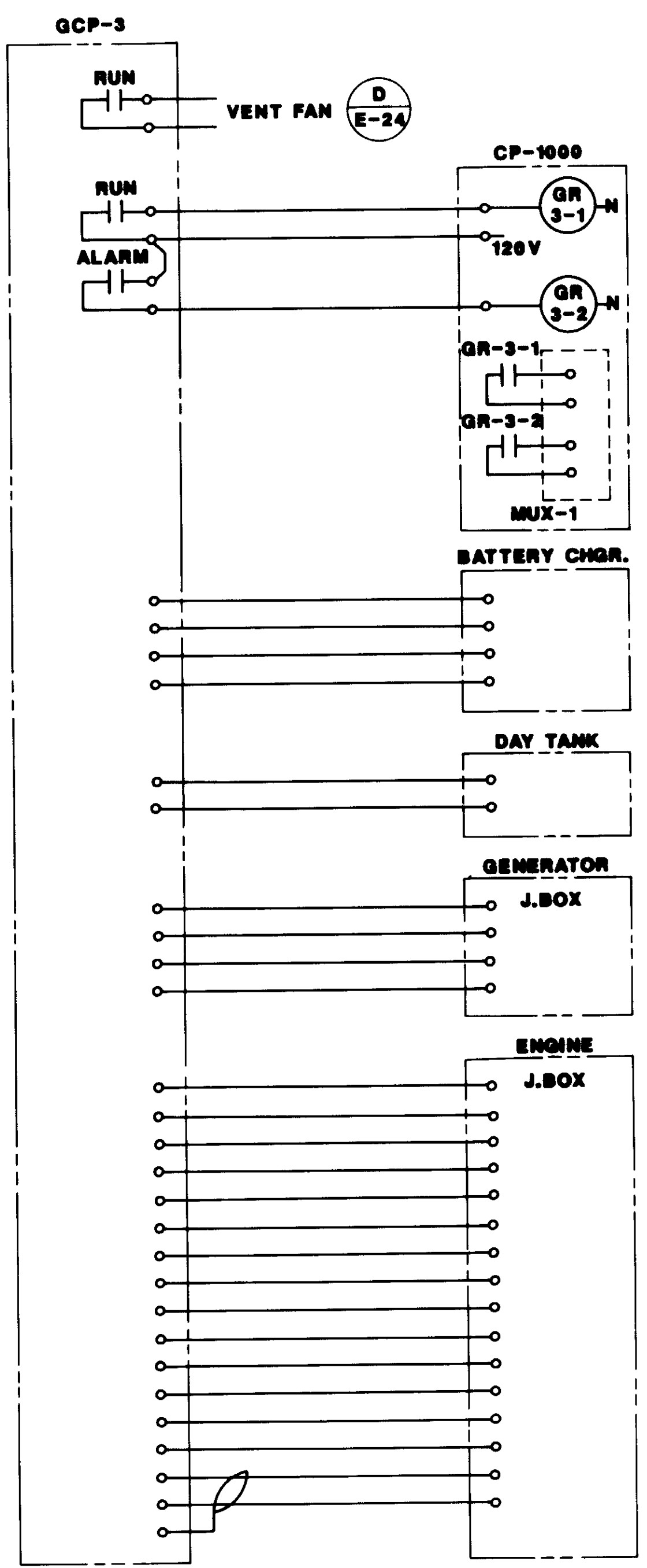
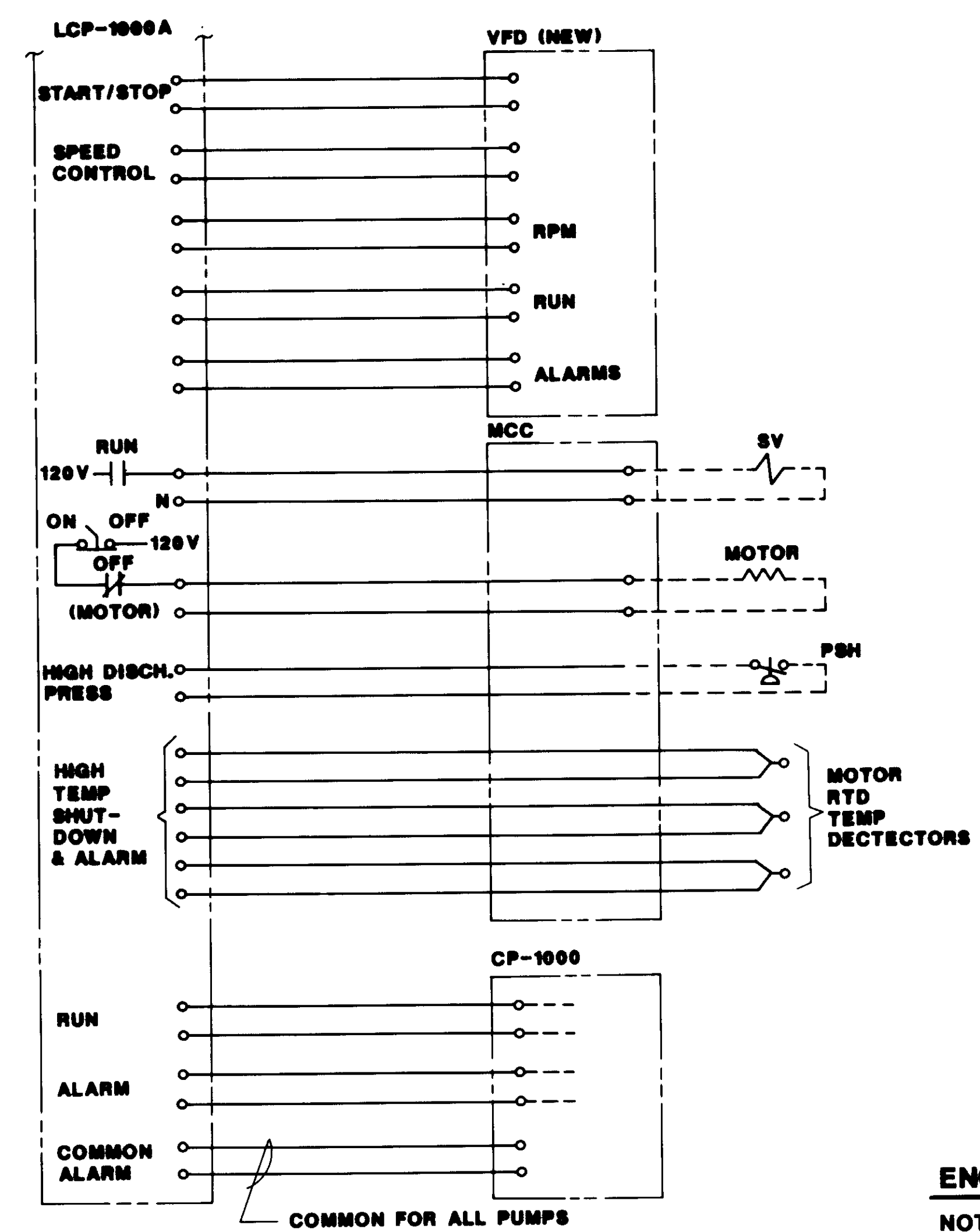
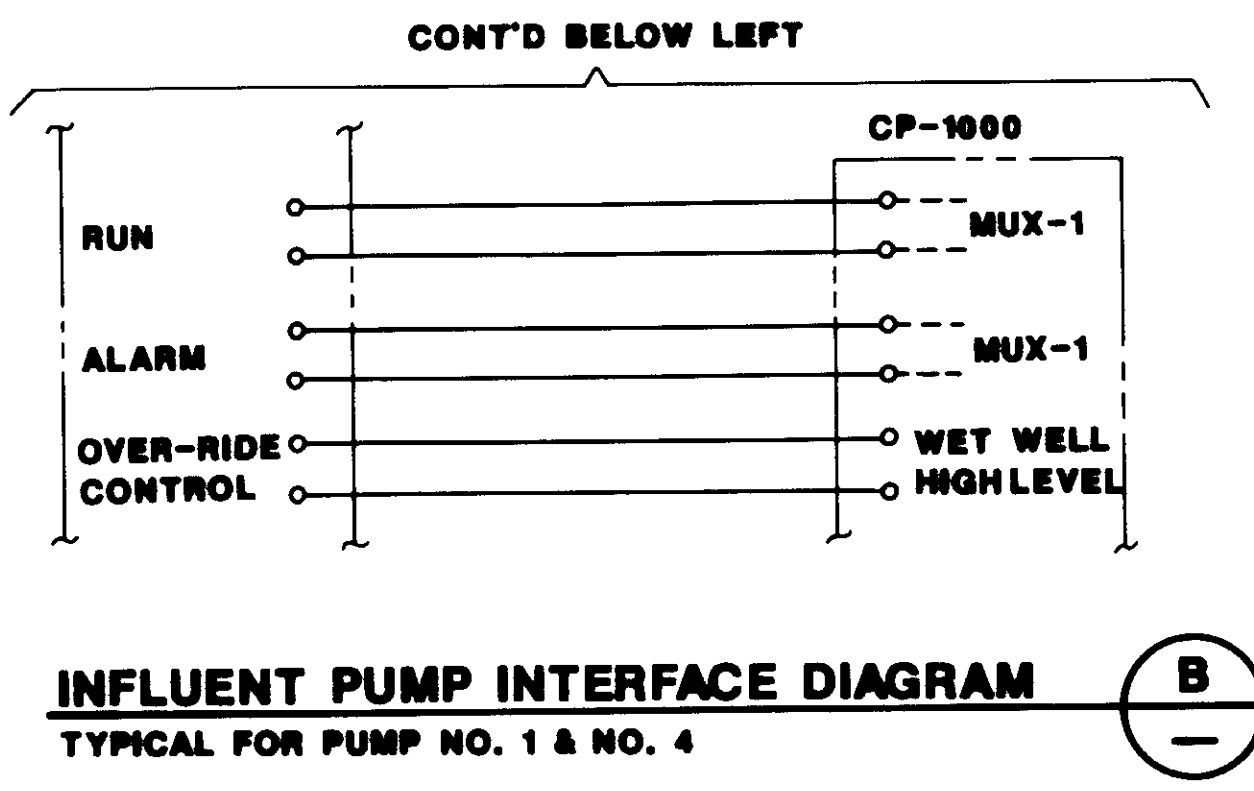




**RAS PUMP NO. 4 - INTERFACE DIAGRAM** (A)



CONT'D ABOVE RIGHT



**ENGINE GENERATOR INTERFACE DIAGRAM** (D)

NOTE: SHOP & CONNECTION DRAWINGS WILL PROVIDED.

04196



RECORD DRAWING

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	6-30	WA	REVISED FOR RECORD				

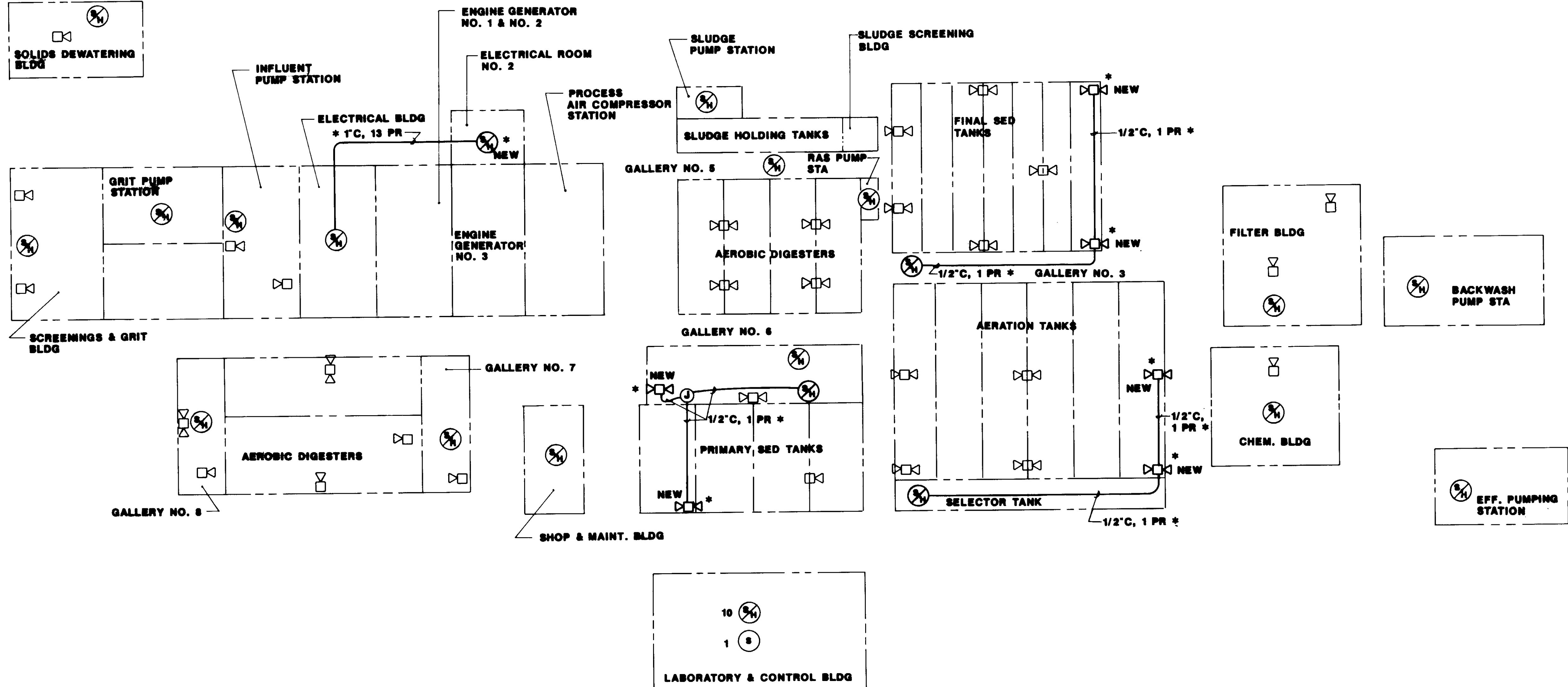
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	W.A. CHECKED	Willard Alexander	613 6-30-87
		ALEXANDER ENGINEERS	R.C.S.E. NO. DATE

**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**

INTERFACE WIRING DIAGRAMS



**INTERCOMMUNICATION SYSTEM - BLOCK DIAGRAM**



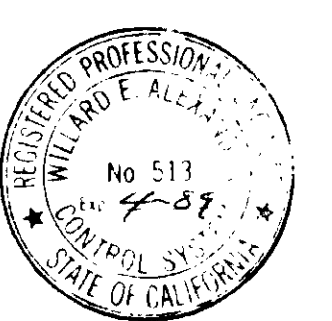
- SYMBOLS**
- TWIN P.A. SPEAKER, POLE MTD
  - SPEAKER HANDSET, WALL MTD

**NOTES**

1. I.C./P.A. SYSTEM IS EXISTING  
 NEW ADDITIONS ARE NOTED \*

04197

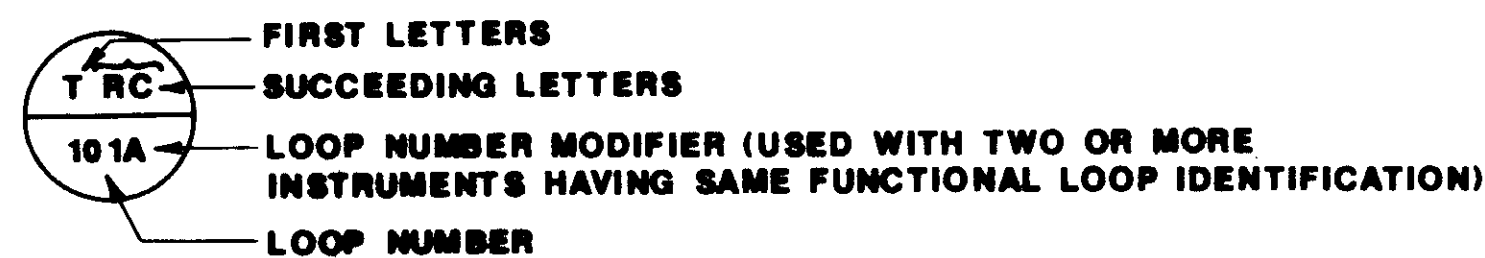
RECORD DRAWING



				SCALE: NONE	W.A. DESIGNED J.A. DRAWN W.A. CHECKED	SUBMITTED 14036 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE <i>Willard Alexander</i> 613 6-30-87 ALEXANDER ENGINEERS R.C.S.E. NO. DATE	<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California	<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> <b>SCHEMATIC DIAGRAMS &amp; DETAILS</b>	SHEET <b>E-27</b>	
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION			
1	6-30	WA	REVISED FOR RECORD							

INSTRUMENT IDENTIFICATION

TAG NUMBER



INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTERS		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME				
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	GAUGE		GLASS	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME/TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY				MIDDLE
N	VIBRATION				NORMAL
O	(USERS CHOICE)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECT)		
Q	QUANTITY OR EVENT		INTEGRATE		
R	RATIO		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY				
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	(USERS CHOICE)			RELAY OR COMPUTE	
Z	POSITION		DRIVE ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT		

\* USERS CHOICE

CONVERTERS

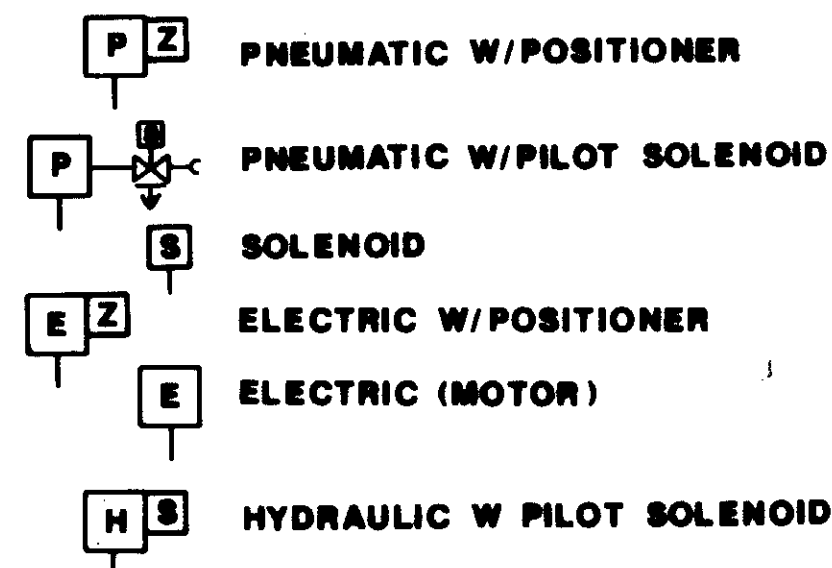
- A ANALOG
- D DIGITAL
- E VOLTAGE
- F FREQUENCY
- I CURRENT
- P PNEUMATIC
- PF PULSE FREQUENCY
- PD PULSE DURATION
- M MAGNETIC

EXAMPLE CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

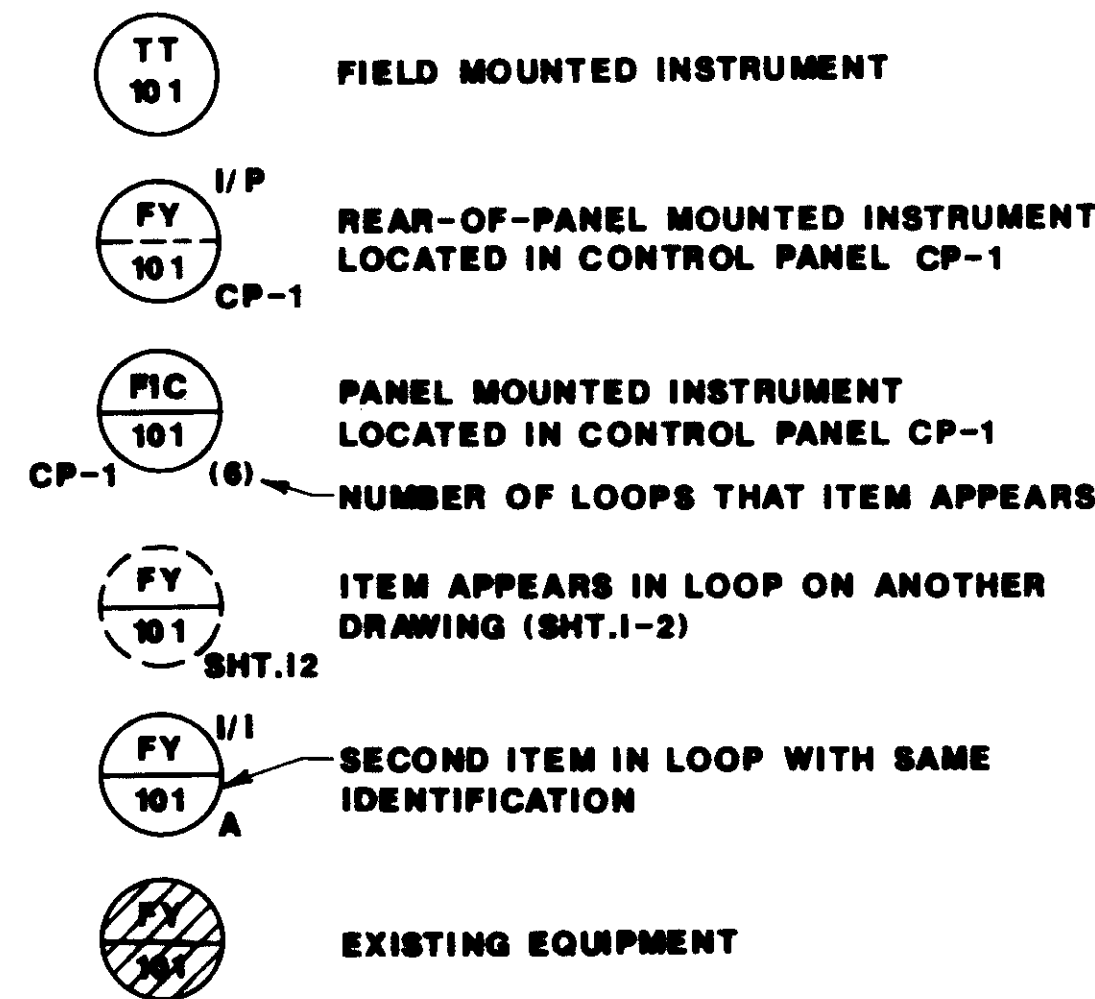
ACTUATORS OR OPERATORS

NOTE: ON LOSS OF PRIMARY POWER (PNEUMATIC OR ELECTRICAL)

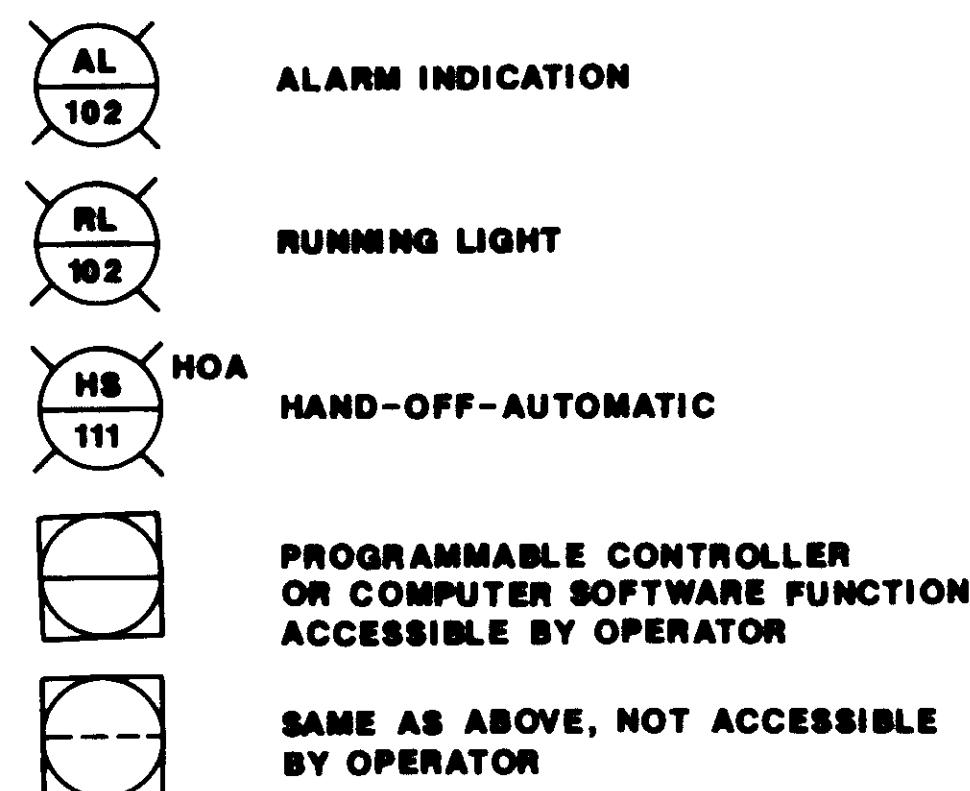
- XX - FO FAIL OPEN
- OO - FC FAIL CLOSED
- XO - FLP FAIL TO LAST POSITION



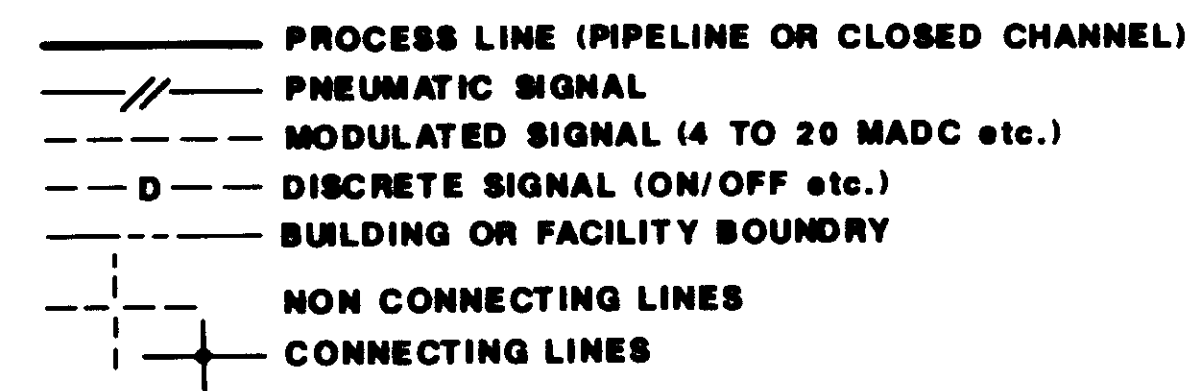
EXAMPLE SYMBOLS



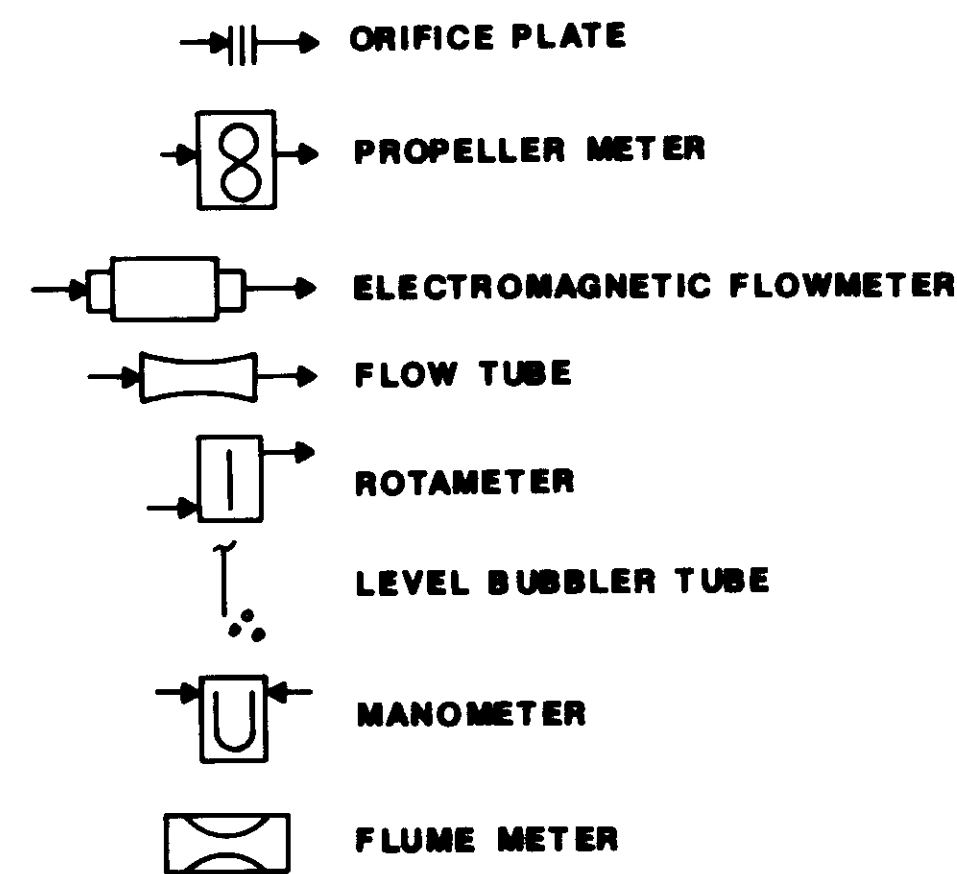
SPECIAL CASES



LINE LEGEND



PRIMARY ELEMENTS



ABBREVIATIONS & LETTER SYMBOLS

- P & ID PROCESS AND INSTRUMENTATION DIAGRAM
- DC DIRECT CURRENT
- AC ALTERNATING CURRENT
- PS DC POWER SUPPLY
- LR LOCAL-REMOTE
- SS START-STOP
- OO ON-OFF
- MCC-X MOTOR CONTROL CENTER NO.X
- LOS LOCKOUT-STOP
- HOA HAND-OFF-AUTO
- OOA ON-OFF-AUTO
- MOC MANUAL OPEN CLOSE
- AM AUTO MANUAL
- OOR ON-OFF-REMOTE
- LOR LOCAL-OFF-REMOTE
- O OPEN
- C CLOSE
- EO ENERGIZED OPEN
- EC ENERGIZED CLOSE
- FTU FORMAZIN TURBIDITY UNIT
- Cl<sub>2</sub> CHLORINE
- Δ DIFFERENCE
- Σ SUM
- F(X) CHARACTERIZED
- I/I REPEAT OR BOOST
- > SELECT HIGHEST SIGNAL
- < SELECT LOWEST SIGNAL
- TURB TURBIDITY
- ◇ GENERALIZED-FOR UNDEFINED INTERLOCK LOGIC
- CCP COMPRESSOR CONTROL PANEL
- CP CONTROL PANEL
- LCP LEVEL CONTROL PANEL
- MUX-1 INPUT TO MULTIPLEXER NO. 1
- D.O. DISSOLVED OXYGEN

04198



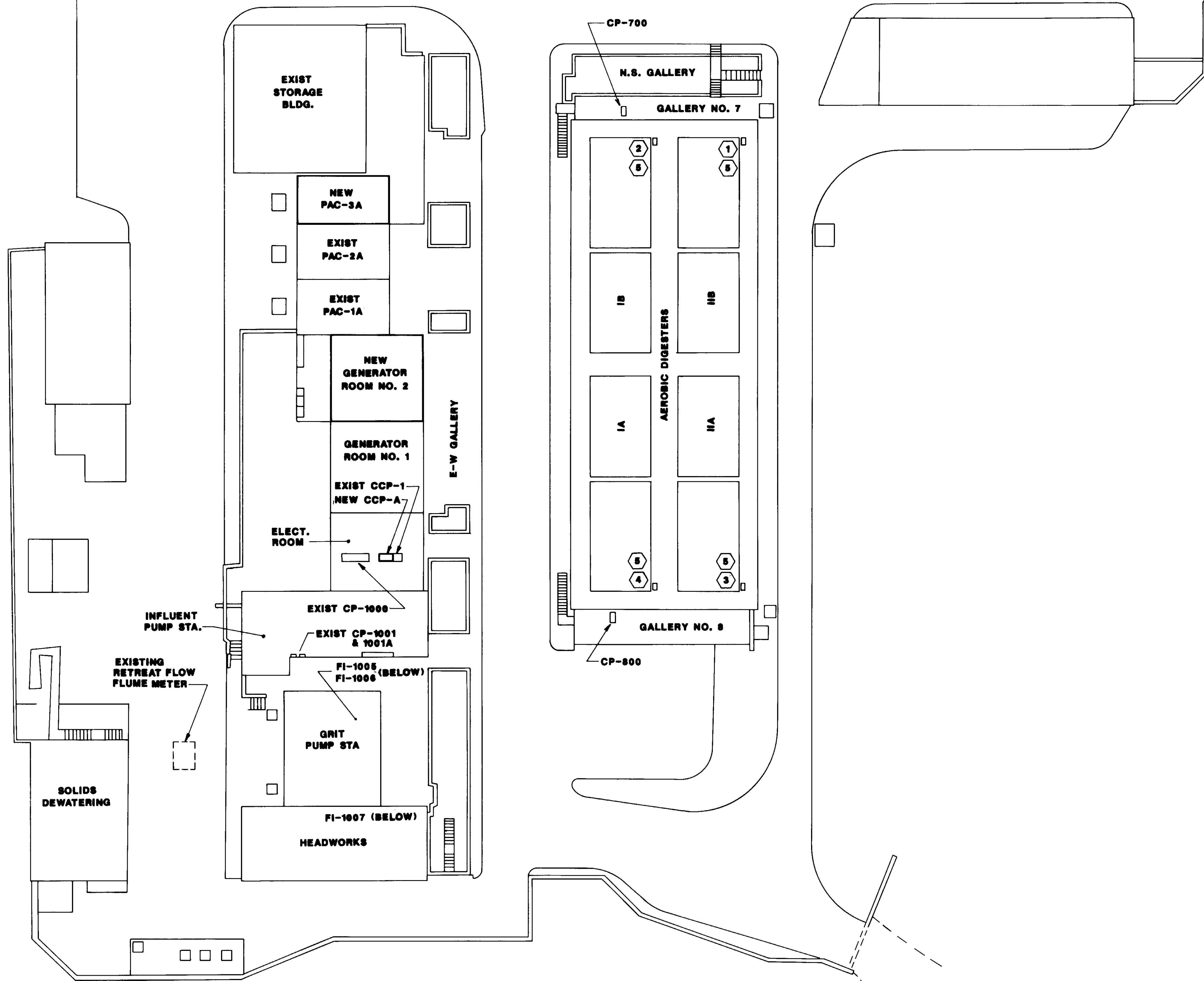
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NONE	S.A. DRAWN	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	W.A. CHECKED	Willard Alexander	6-30-87
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 P & ID SYMBOLS AND ABBREVIATIONS

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

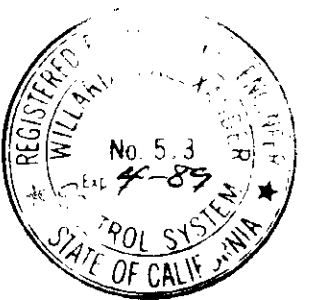
MATCHLINE DWG I-3



**NOTES:**

- ① EXISTING J. BOX. MOUNT NEW FLOW INDICATOR (FI-701) IN COVER. CONNECT TO EXISTING 2/C#188H & RECONNECT 2/C#18 IN CP-700 TO NEW FY-701.
- ② SAME AS NOTE 1 EXCEPT FI-702 CONNECTS TO FY-702.
- ③ SAME AS NOTE 1 EXCEPT FI-801 CONNECTS TO FY-801 IN CP-800.
- ④ SAME AS NOTE 3 EXCEPT FI-802 CONNECTS TO FY-802.
- ⑤ CONNECT 8#14 INSTALLED BY ELECTRICAL FOR CP-800 GRAPHCS (NEW VALVES)

04199



REV	DATE	BY	DESCRIPTION

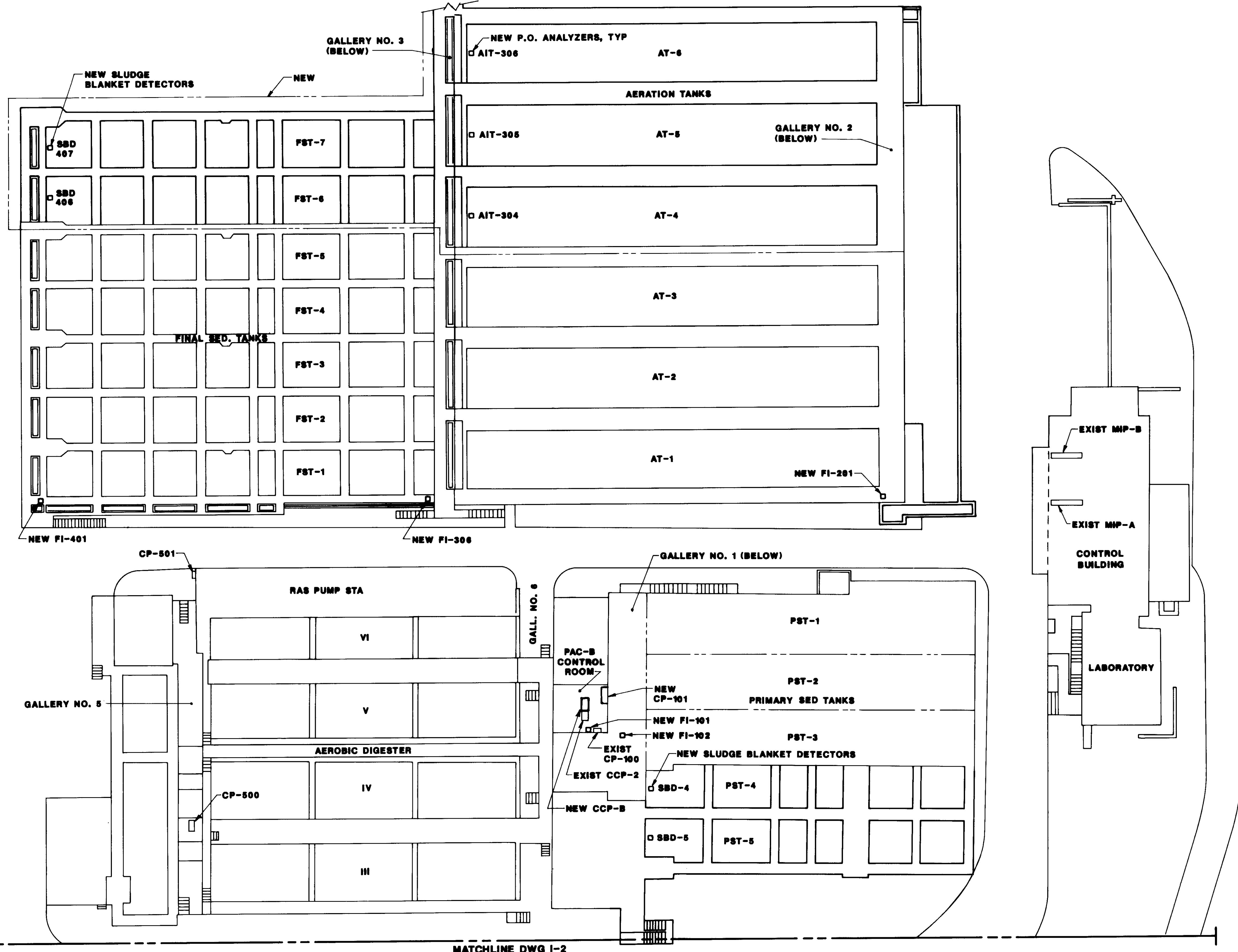
SCALE: 1" = 20'	W.A. DESIGNED S.A. DRAWN W.A. CHECKED	SUBMITTED 10038 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE <i>William Alexander</i> 813 6-30-87 ALEXANDER ENGINEERS R.C.E. NO. DATE
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 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 I & C SITE PLAN

SHEET  
I-2





04200



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: 1" = 20'

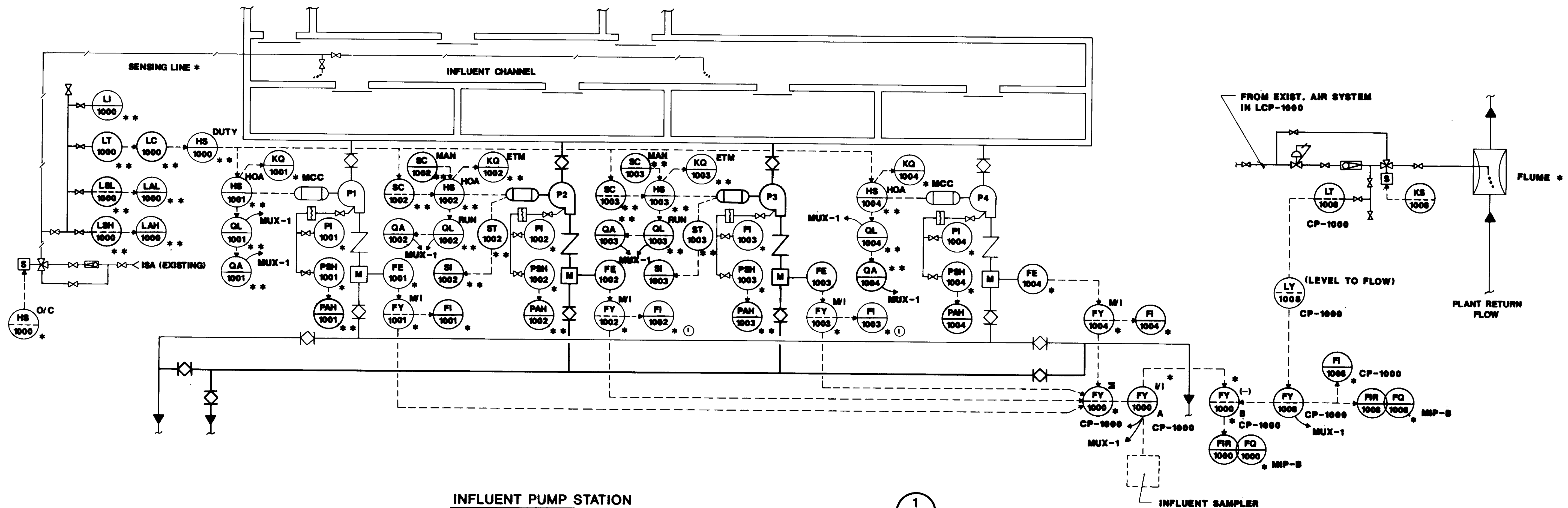
DESIGNED: W.A.  
 DRAWN: S.A.  
 CHECKED: W.A.

SUBMITTED: 14098  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 513 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

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 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

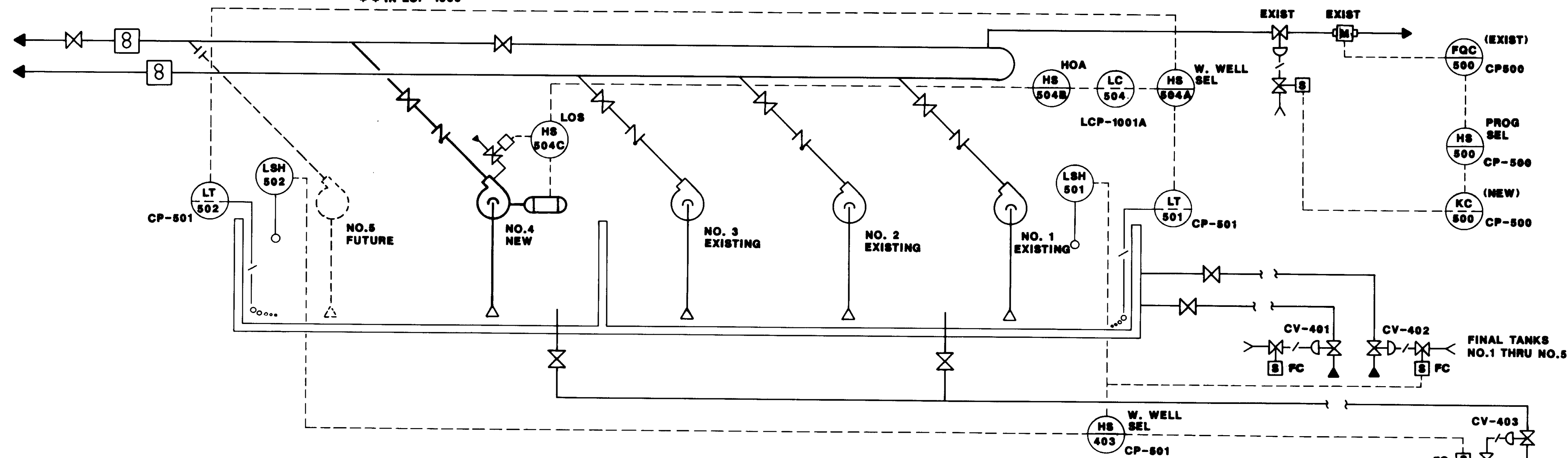
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 I & C SITE PLAN

SHEET 1-3



INFLUENT PUMP STATION

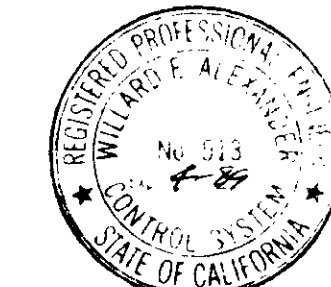
\*EXISTING  
① NEW SCALE  
\*\* IN LCP-1000



RAS PUMP STATION

②

04201

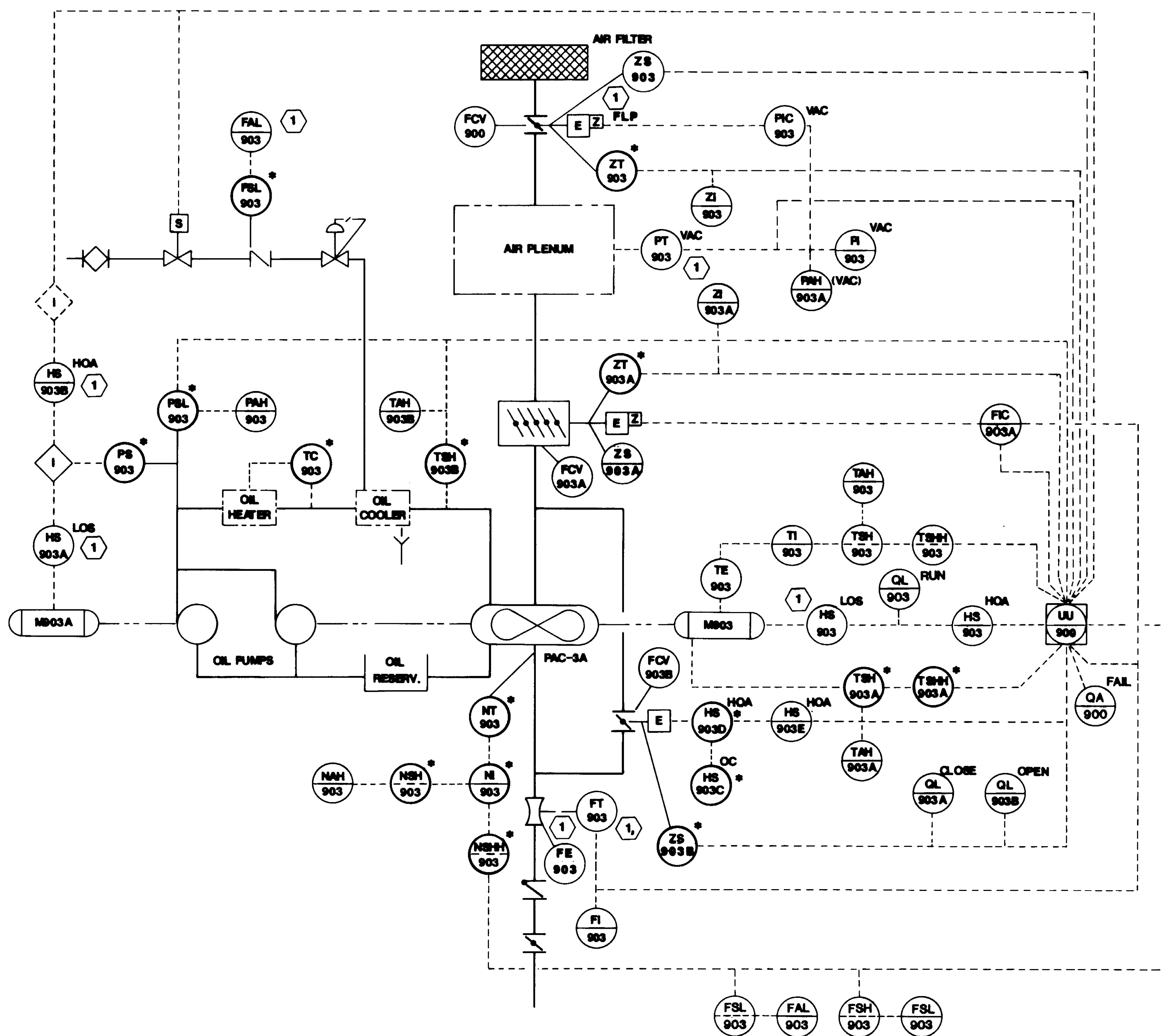


REV	DATE	BY	DESCRIPTION

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CHECKED:	W.A.	DRAWN:	W.A.	DESIGNED BY:	W.A.

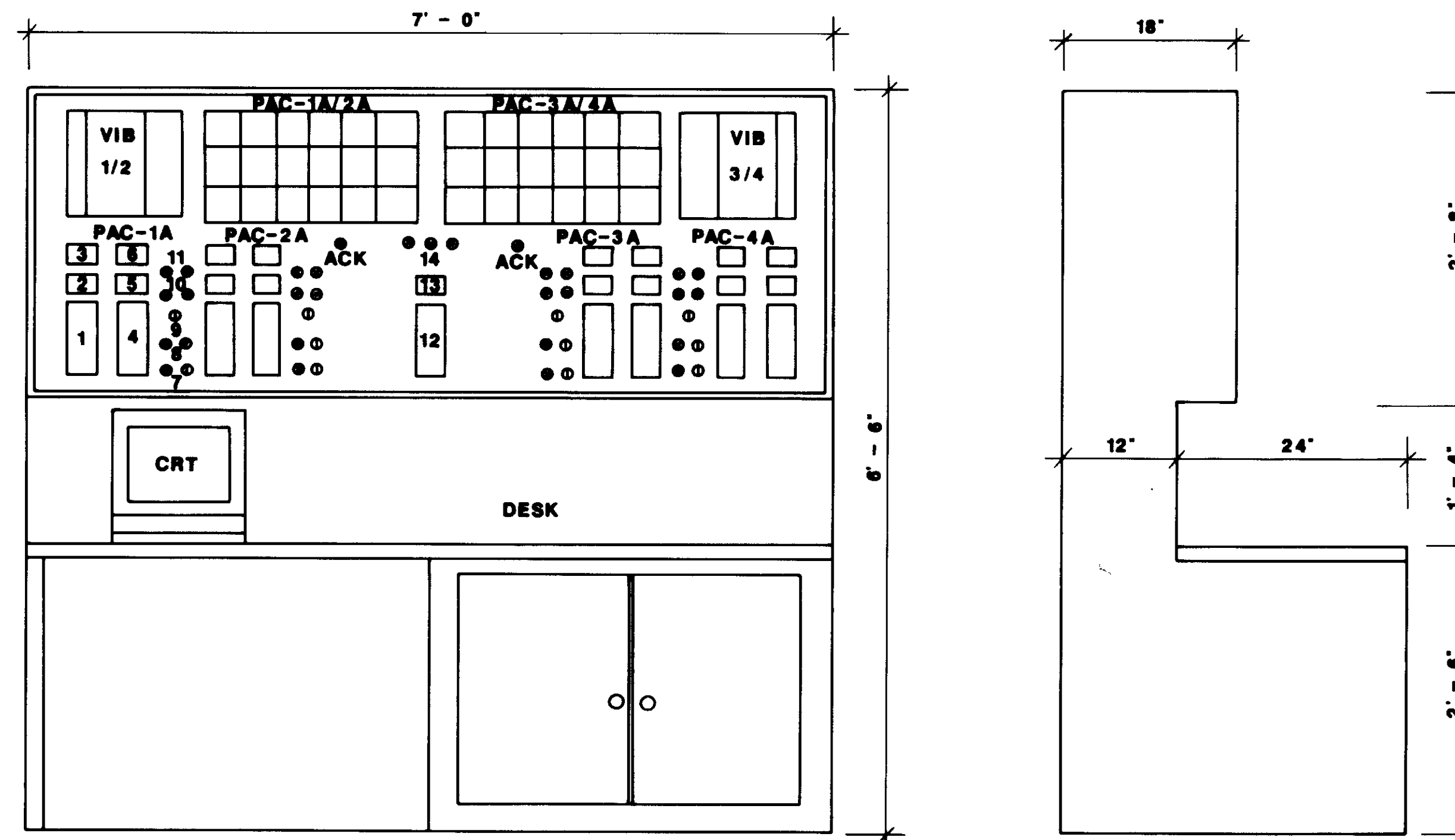
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS & INSTRUMENTATION DIAGRAM  
 INFLUENT & RAS PUMP STATIONS



PAC-3A P & ID A

\* CONTROL AND MONITORING ITEMS BY COMPRESSOR MFG.



FRONT ELEVATION

LEFT SIDE ELEVATION

- |                     |                              |                        |
|---------------------|------------------------------|------------------------|
| 1. INLET GUIDE VANE | 7. PAC-1A HOA-RUN            | 12. PRESSURE CONT.     |
| 2. FLOW IND.        | 8. OIL PUMP HOA-RUN          | 13. SYSTEM PRESS       |
| 3. VALVE POS.       | 9. BY-PASS V HOA-            | 14. LAG COMP. REQ'D    |
| 4. PLENUM VALVE     | 10. BY-PASS V OPEN/CLOSE PBN | 15. COMP. DUTY SELECT. |
| 5. VACUUM           | 11. BY-PASS V O/C LIGHT      |                        |
| 6. VALVE POS.       |                              |                        |

COMPRESSOR CONTROL PANEL CCP-A

1' - 1'-0" FOR REFERENCE ONLY. TO BE PROVIDED UNDER SEPARATE CONTRACT.

- |   |   |
|---|---|
| 1 | ITEMS PROVIDED UNDER THIS CONTRACT            |
| 2 | * BY COMPRESSOR CONTRACTOR                    |
| 3 | OTHER ITEMS FURNISHED UNDER SEPARATE CONTRACT |

04202



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
NONE

DESIGNED: W.A.  
DRAWN: J.L.  
CHECKED: W.A.

SUBMITTED: 14038  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
W. Alexander 513 6-30-87  
ALEXANDER ENGINEERS R.C.E. NO. DATE

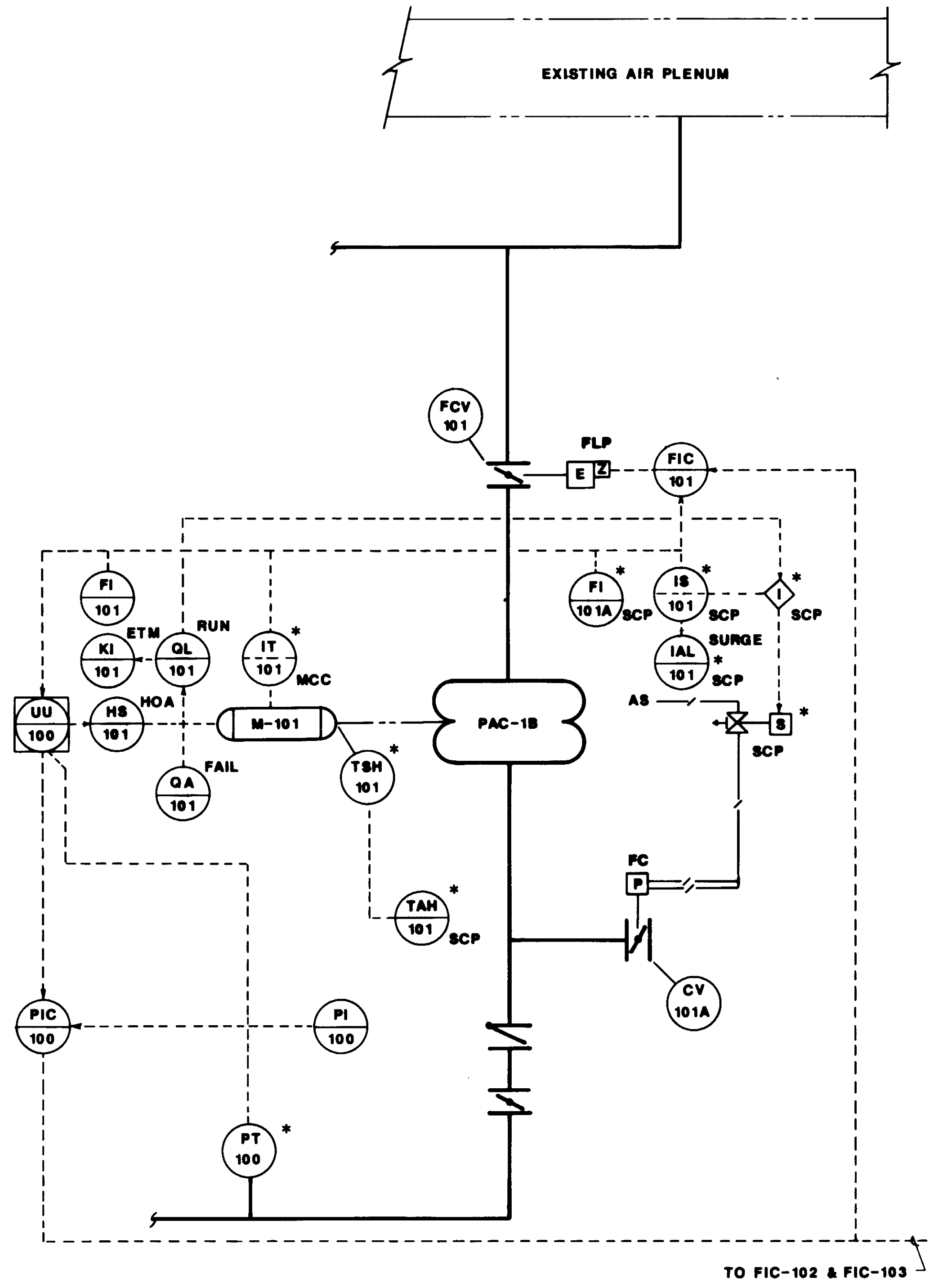
**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

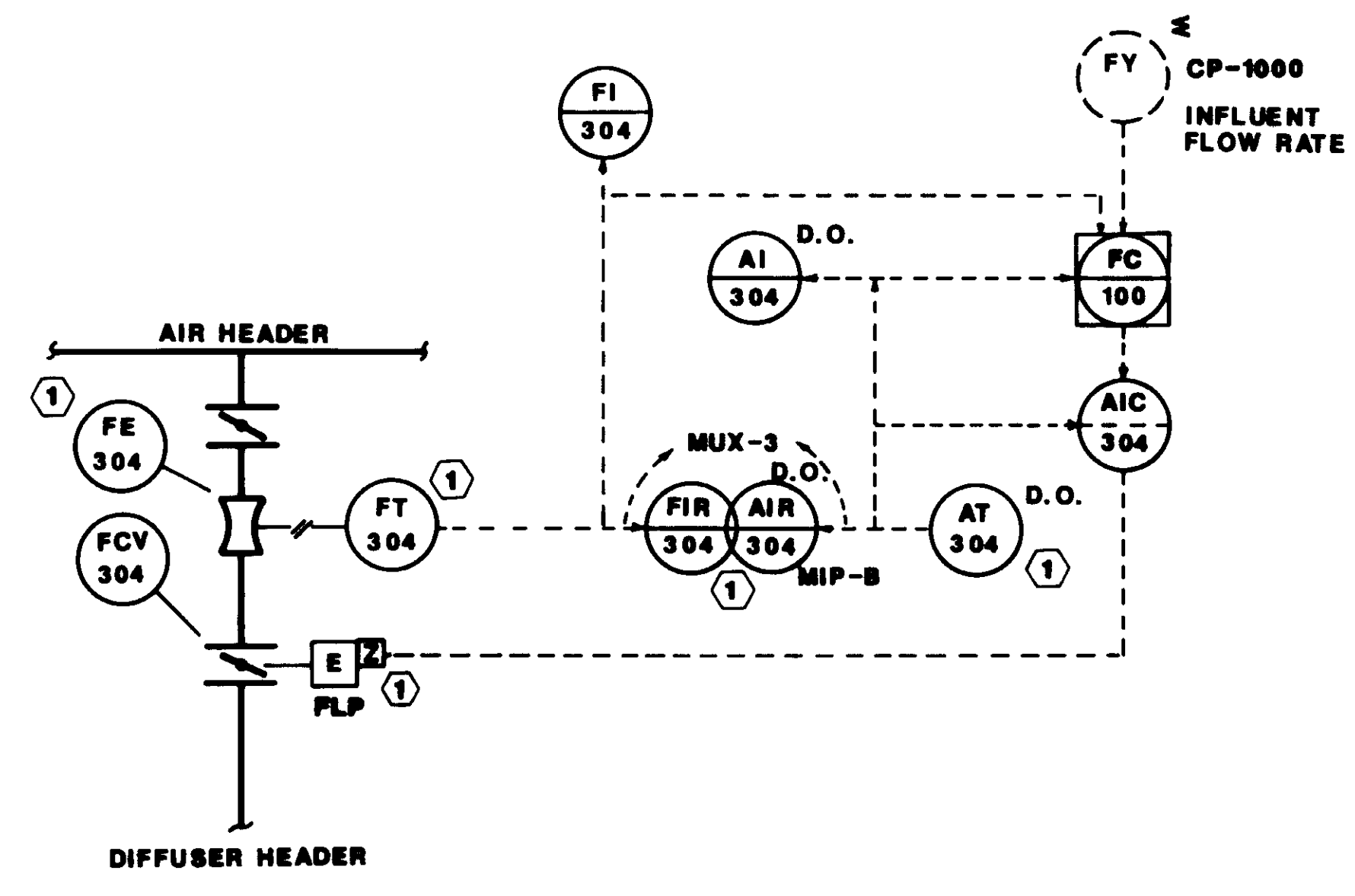
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III

PROCESS AIR COMPRESSOR

SHEET  
1-5

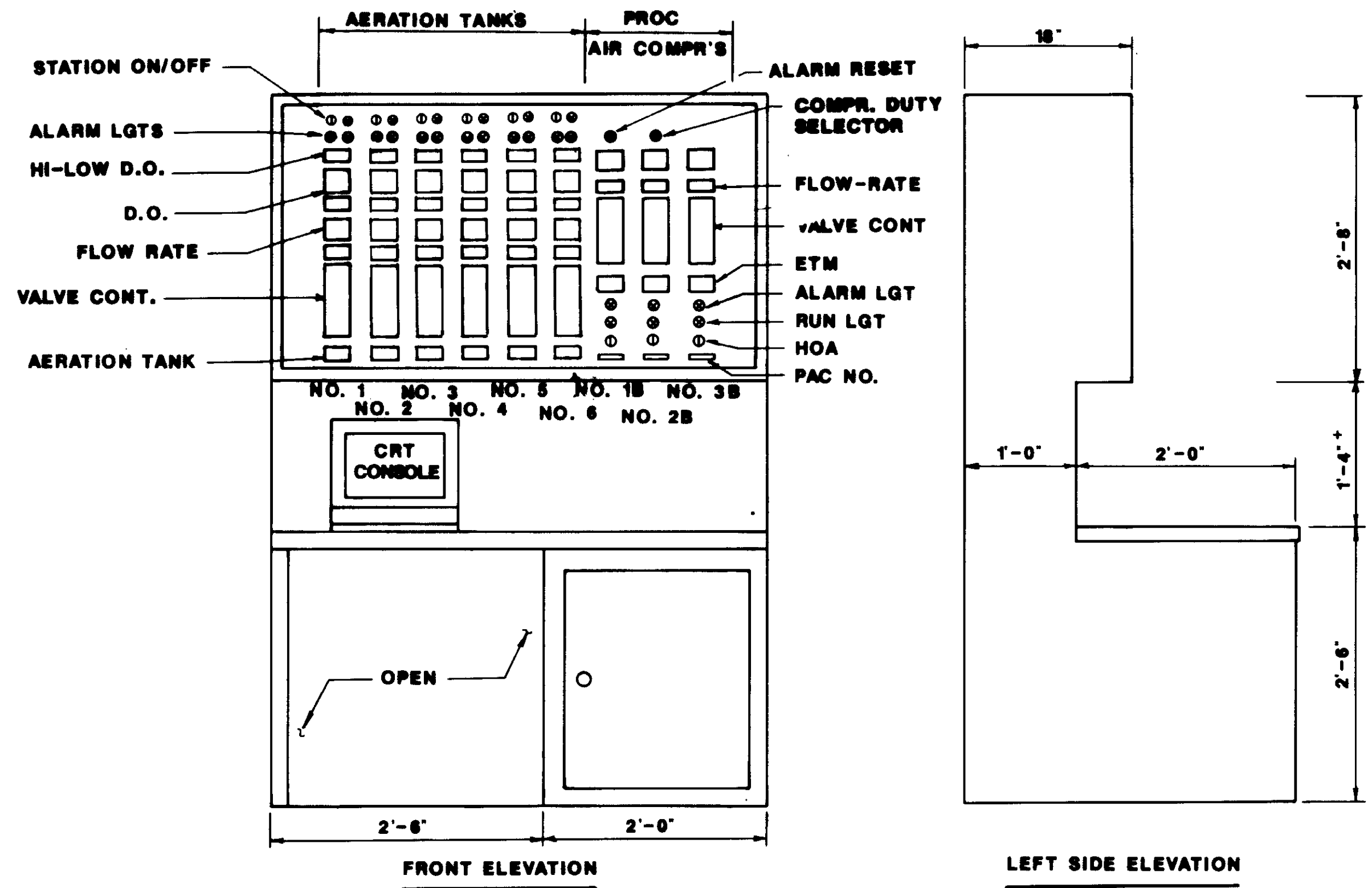


**EXISTING PAC-1B**  
 TYPICAL FOR PAC-2B & 3B SYSTEMS 102 & 103  
 \* EXISTING CONTROLS SCP : SURGE CONTROL PANEL  
 UNLESS NOTED ALL ITEMS LOCATED IN CCP-B



**AERATION TANK NO. 4 - AIR CONTROL**  
 TYPICAL FOR: NEW AERATION TANK NO. 5 & NO. 6  
 EXISTING TANKS NO. 1, NO. 2 & NO. 3  
 NOTE: EXCEPT AS NOTED, ALL ITEMS LOCATED IN CCP-B

- NOTES**
- 1 ITEMS FURNISHED UNDER THIS CONTRACT
  - 2 \* EXISTING
  - 3 OTHER ITEMS FURNISHED UNDER SEPERATE CONTRACT



**COMPRESSOR CONTROL PANEL CCP-B**  
 REFERENCE ONLY

04203



REV	DATE	BY	DESCRIPTION

SCALE:  
AS NOTED

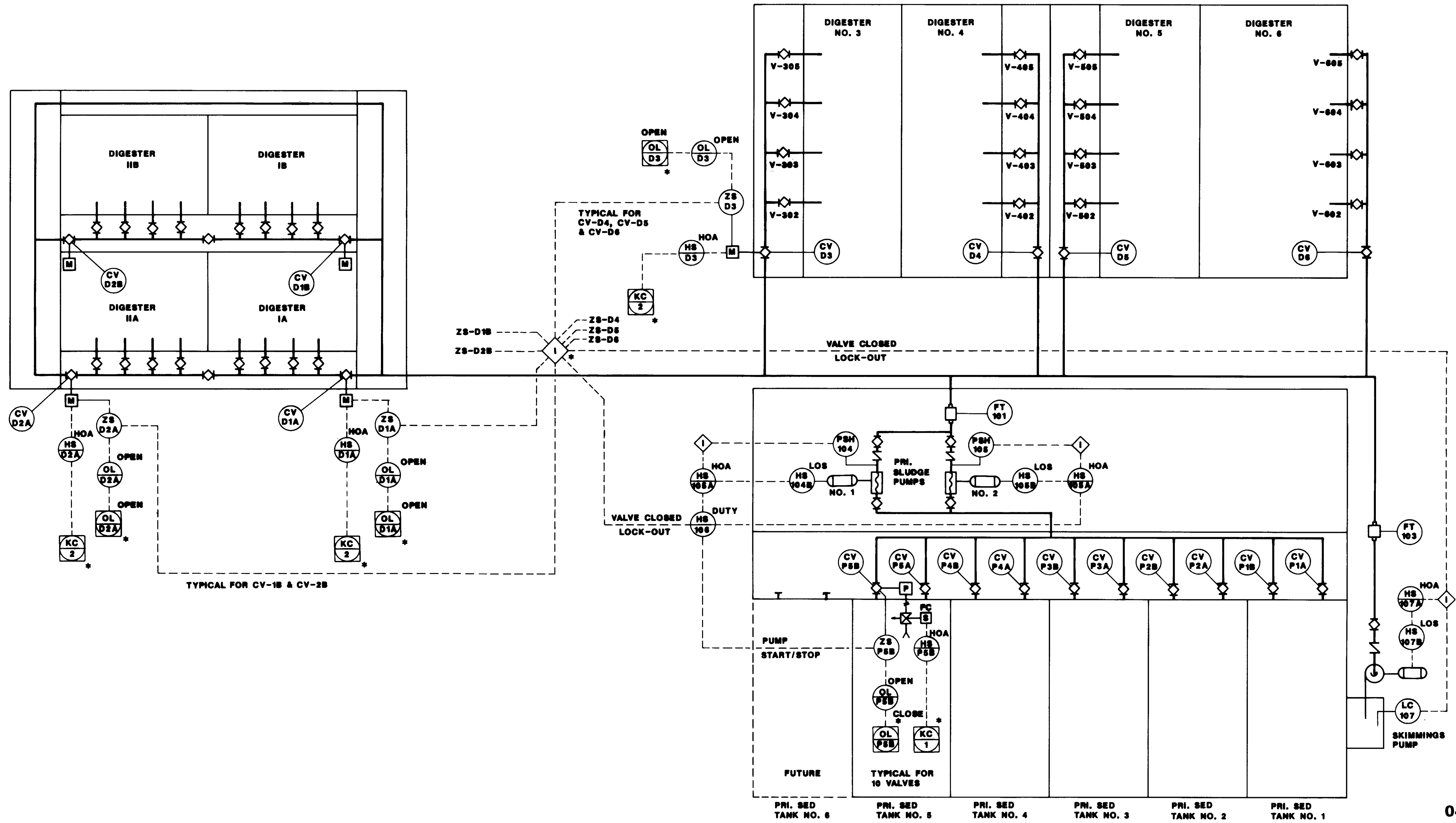
W.A. DESIGNED  
 W.A. DRAWN  
 W.A. CHECKED

SUBMITTED 14036  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 513 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS & INSTRUMENTATION DIAGRAMS & DETAILS  
 PAC STATION 'B' AND AERATION TANKS





04204

\* PROVIDED UNDER SEPERATE CONTRACT.

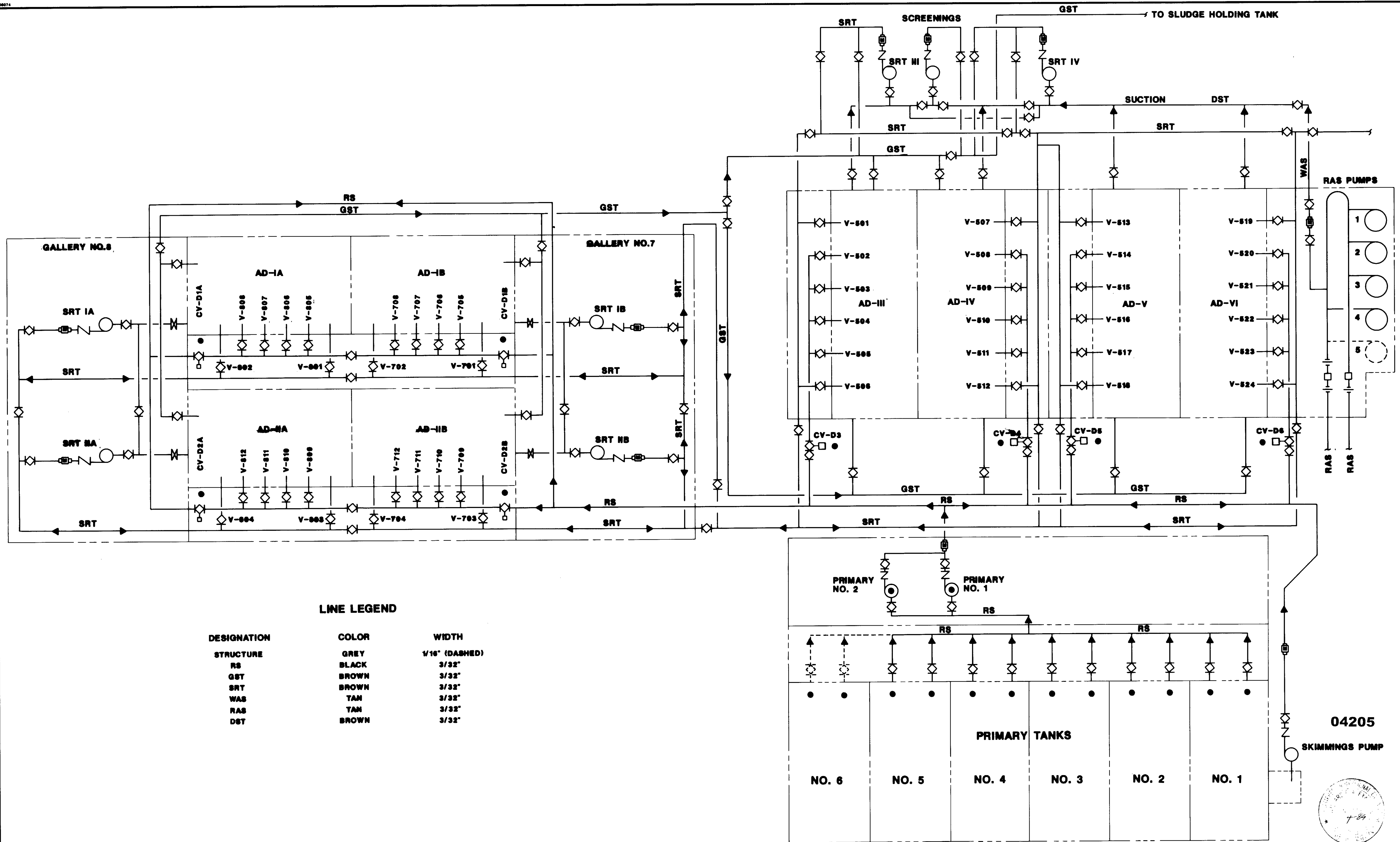


REV	DATE	BY	DESCRIPTION

SCALE: NONE	DESIGNED S.A. DRAWN W.A. CHECKED	SUBMITTED 14006 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE <i>Walter Alexander</i> 515 6-20-87 ALEXANDER ENGINEERS R.C.E. NO. DATE
----------------	--	---

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Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III  
P & ID RAW SLUDGE SYSTEM**



**LINE LEGEND**

DESIGNATION	COLOR	WIDTH
STRUCTURE	GREY	1/16" (DASHED)
RS	BLACK	3/32"
GST	BROWN	3/32"
SRT	BROWN	3/32"
WAS	TAN	3/32"
RAS	TAN	3/32"
DST	BROWN	3/32"

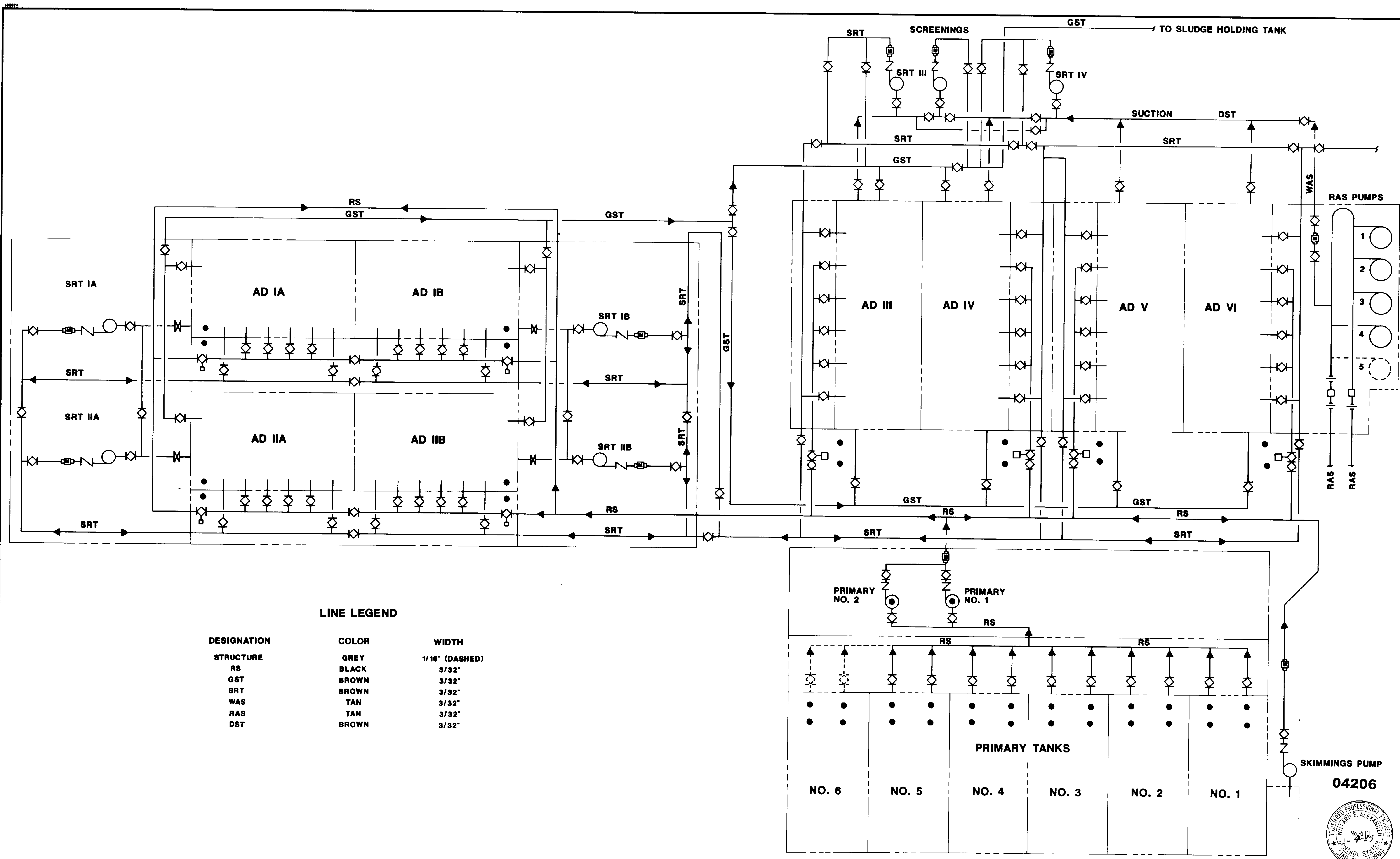
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: **W.A.**  
 DESIGNED **J.A.**  
 DRAWN **W.A.**  
 CHECKED

SUBMITTED 14036  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
*Willard Alexander* 513 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 MP-A GRAPHIC DISPLAY



**LINE LEGEND**

DESIGNATION	COLOR	WIDTH
STRUCTURE	GREY	1/16" (DASHED)
RS	BLACK	3/32"
GST	BROWN	3/32"
SRT	BROWN	3/32"
WAS	TAN	3/32"
RAS	TAN	3/32"
DST	BROWN	3/32"

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: **V.A.**  
 DESIGNED **J.A.**  
 FULL SIZE DRAWN **V.A.**  
 CHECKED

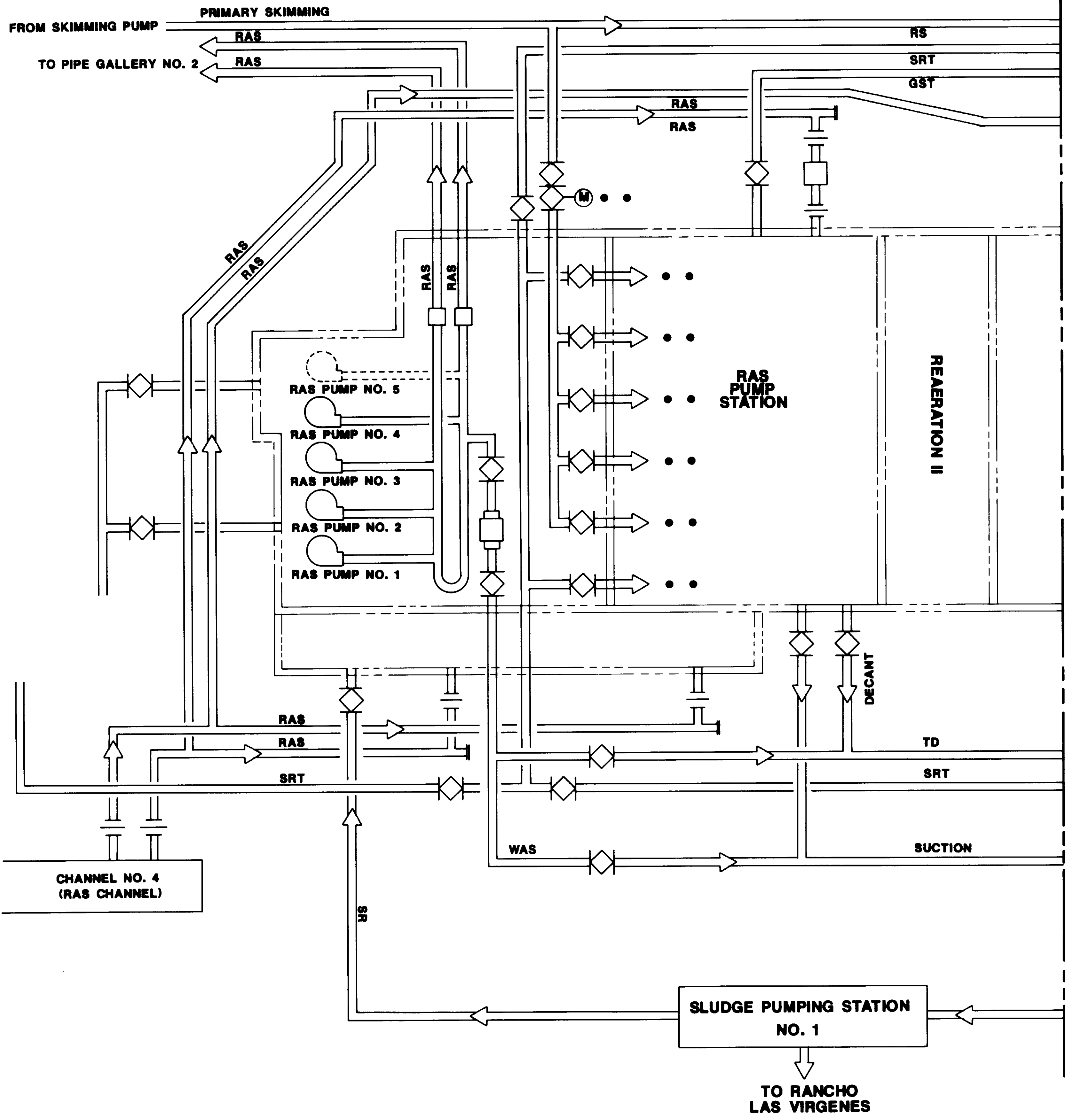
SUBMITTED 14036  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
*Willard Alexander* 513 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CP-101 GRAPHIC DISPLAY

SHEET  
 1-9





**LINE LEGEND**

DESIGNATION	COLOR
STRUCTURE	GRAY
RS	BLACK
GST	BROWN
SRT	BROWN
WAS	TAN
RAS	TAN
DST	BROWN

04207



REV	DATE	BY	DESCRIPTION

SCALE: **W.A.**  
 FULL SCALE  
 DESIGNED **J.L.**  
 DRAWN **W.A.**  
 CHECKED

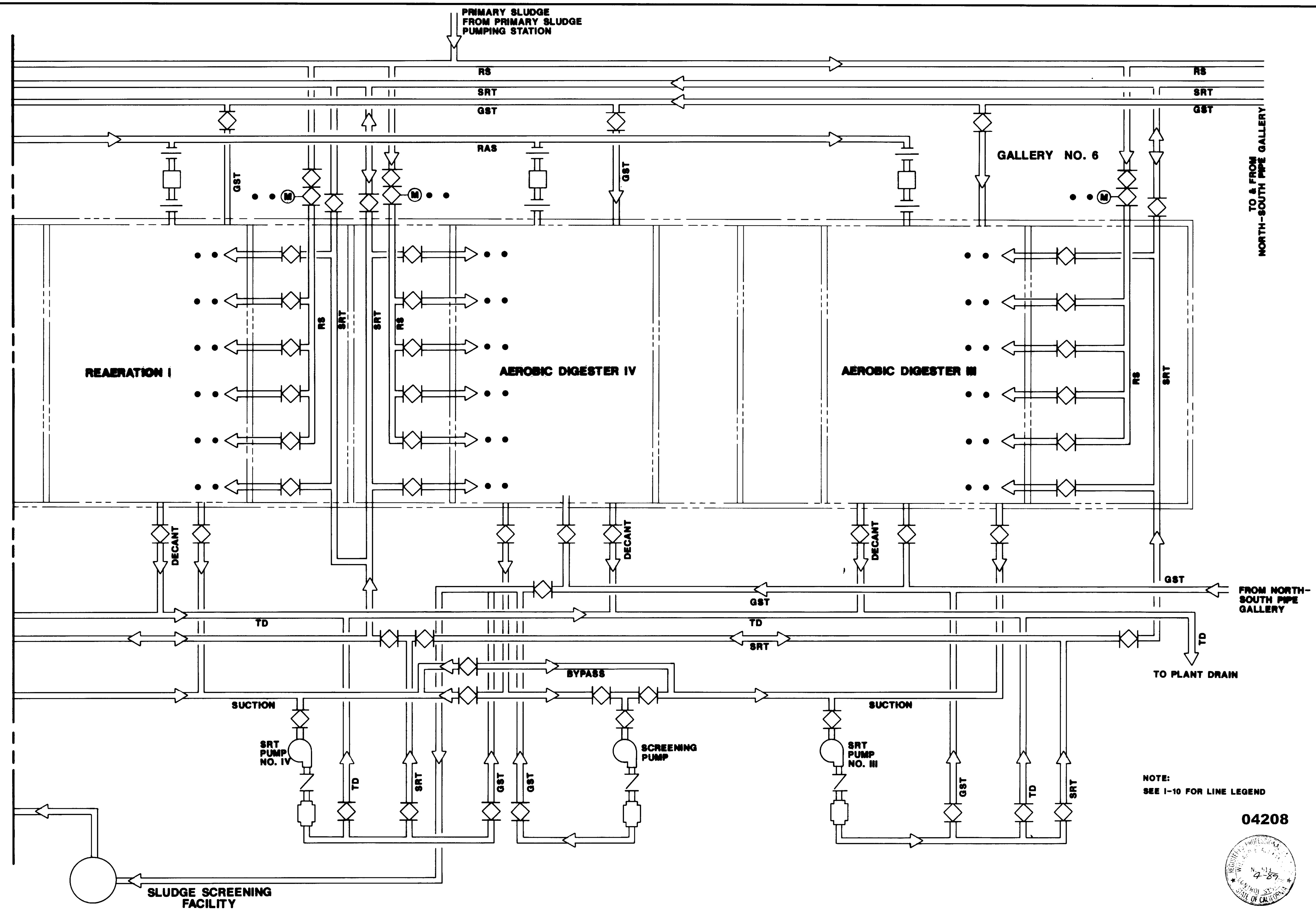
SUBMITTED 14000  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 513 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CP-500 GRAPHIC DISPLAY  
 SHEET 1 OF 2

SHEET  
 I-10





04208



REV	DATE	BY	DESCRIPTION

SCALE:	W.A.
FULL	DESIGNED
SCALE	J.L.
	DRAWN
	W.A.
	CHECKED

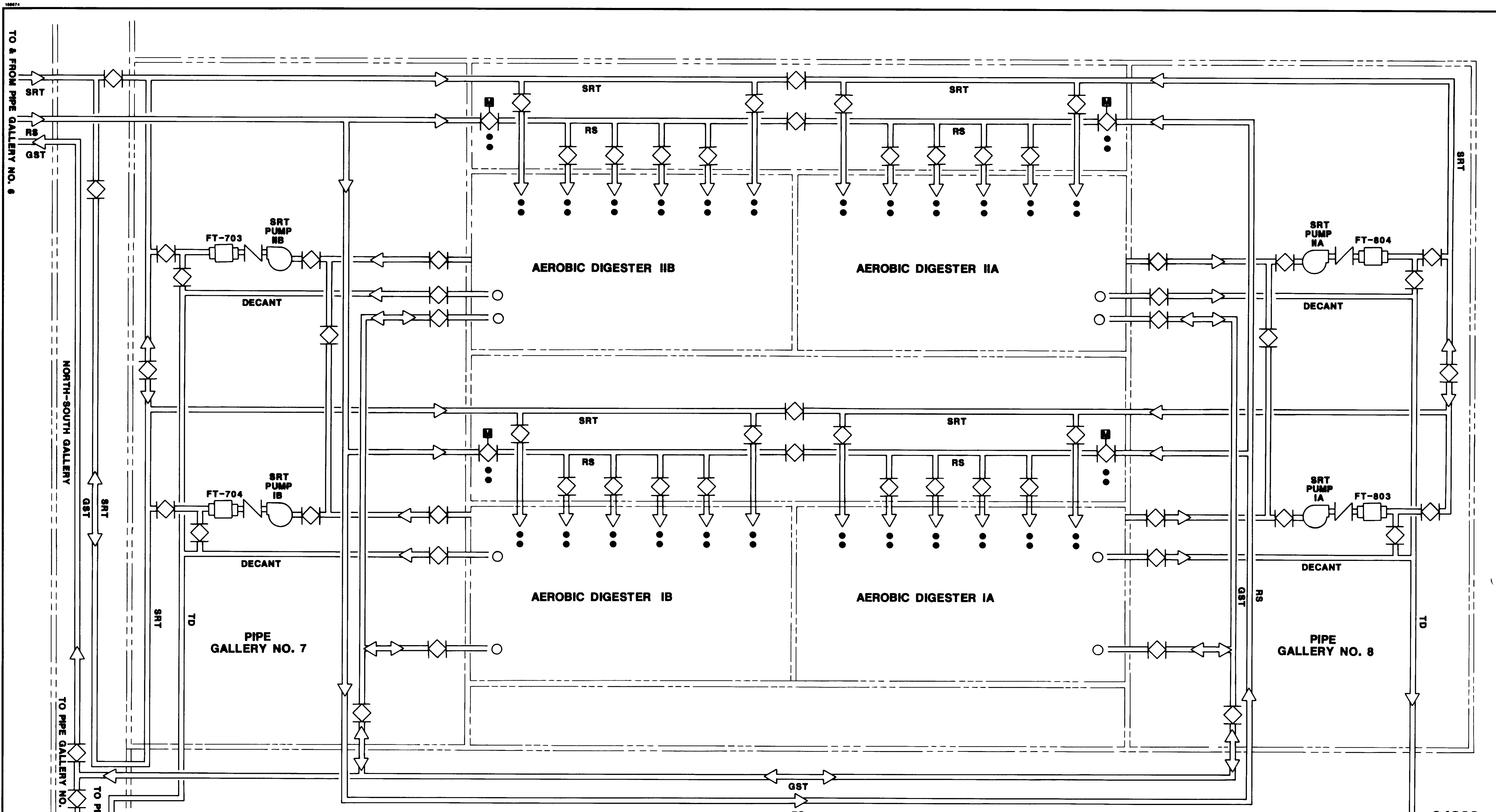
SUBMITTED	14036
KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
<i>Willard Alexander</i>	513 6-30-87
ALEXANDER ENGINEERS	R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CP-500 GRAPHIC DISPLAY  
 SHEET 2 OF 2

SHEET  
I-11

168274  
TO & FROM PIPE GALLERY NO. 6



LINE COLORS : STRUCTURE GRAY  
 RS BLACK  
 GST BROWN  
 SRT BROWN  
 TD/DECANT LIGHT GRAY

04209



TO & FROM EAST WEST PIPE GALLERY

REV	DATE	BY	DESCRIPTION

SCALE: FULL SCALE  
 W.A. DESIGNED  
 S.A. CHECKED  
 DRAWN  
 W.A.

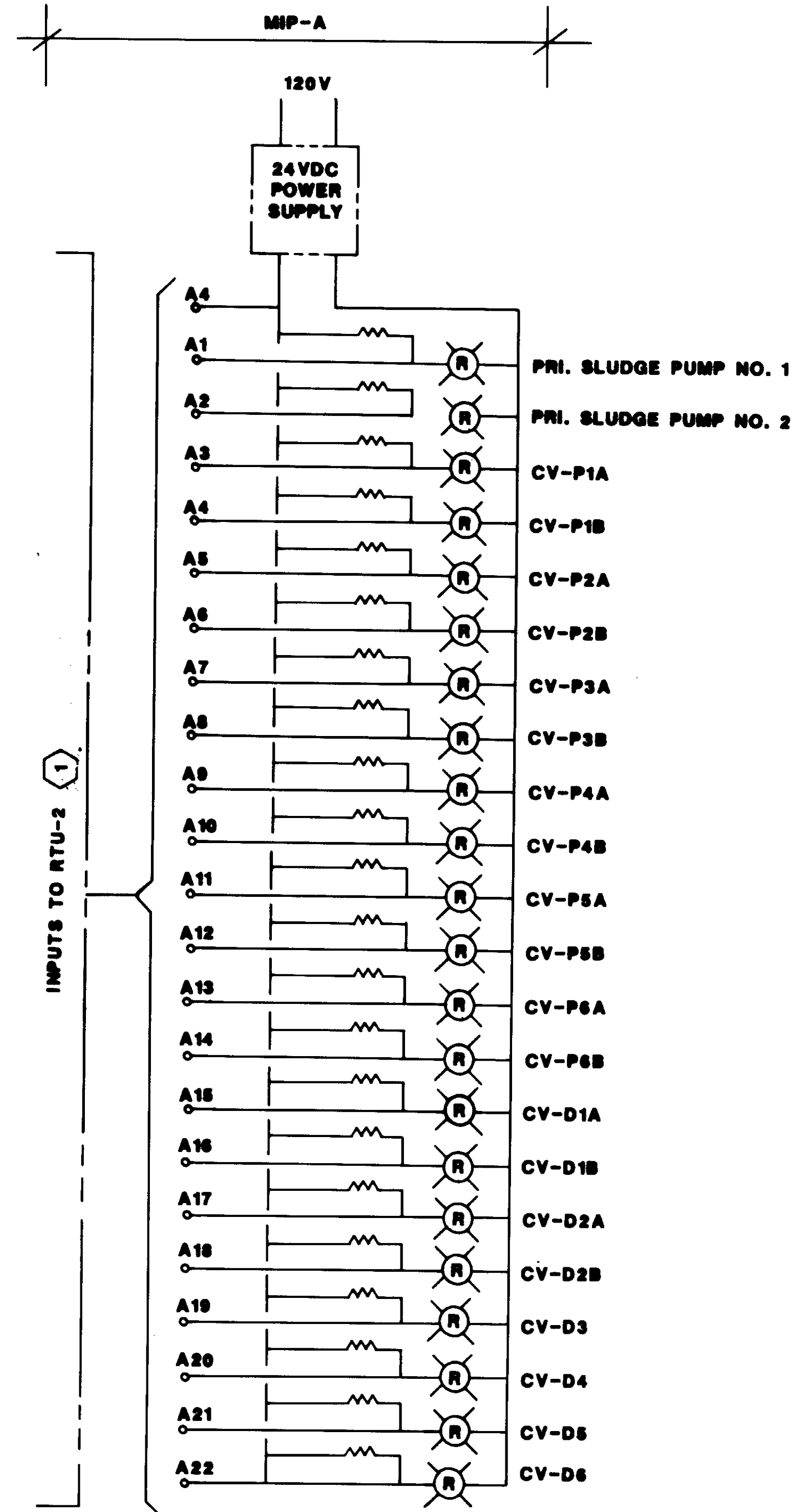
SUBMITTED 14038  
 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
 Willard Alexander 819 6-30-87  
 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

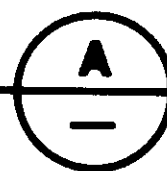
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 CP-700 & CP-800 GRAPHIC DISPLAY

SHEET I-12

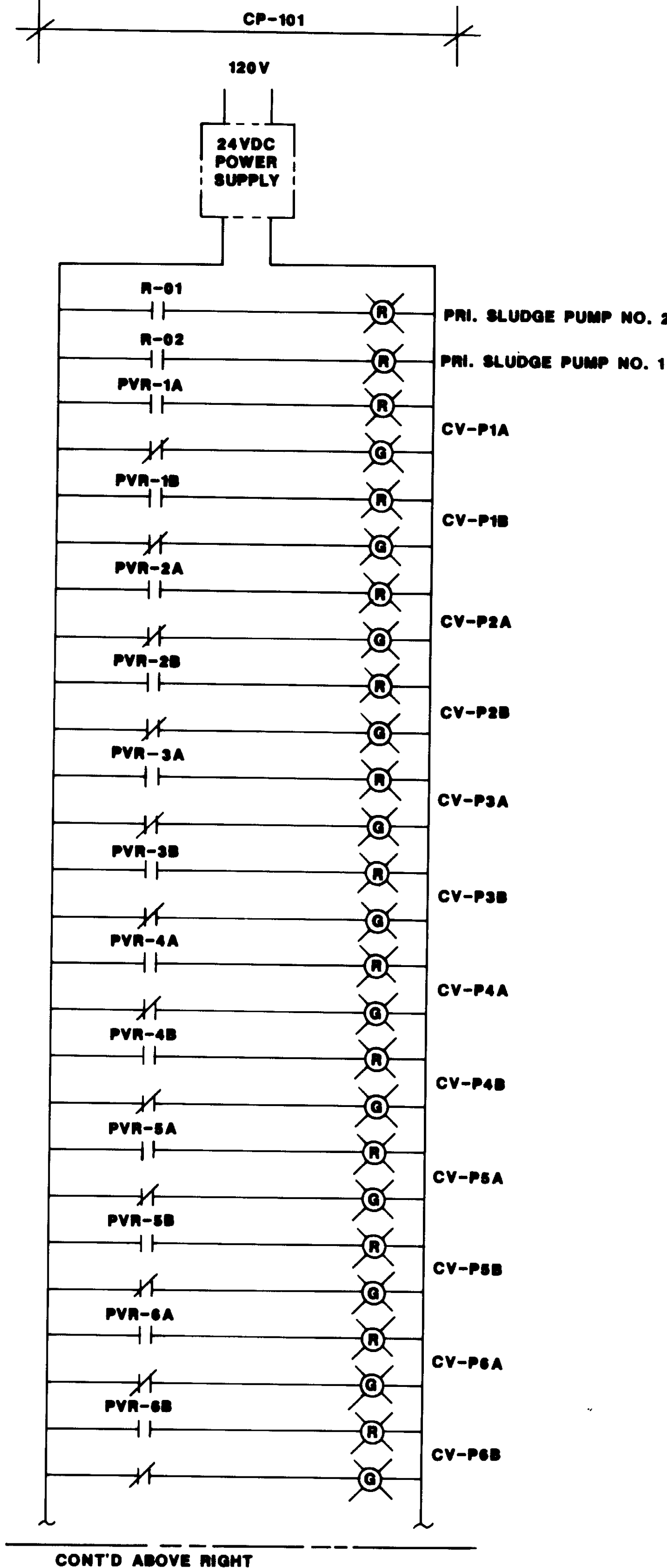
NOTES:  
1. REFER TO DWG I-15 FOR VALVE IDENTIFICATION.



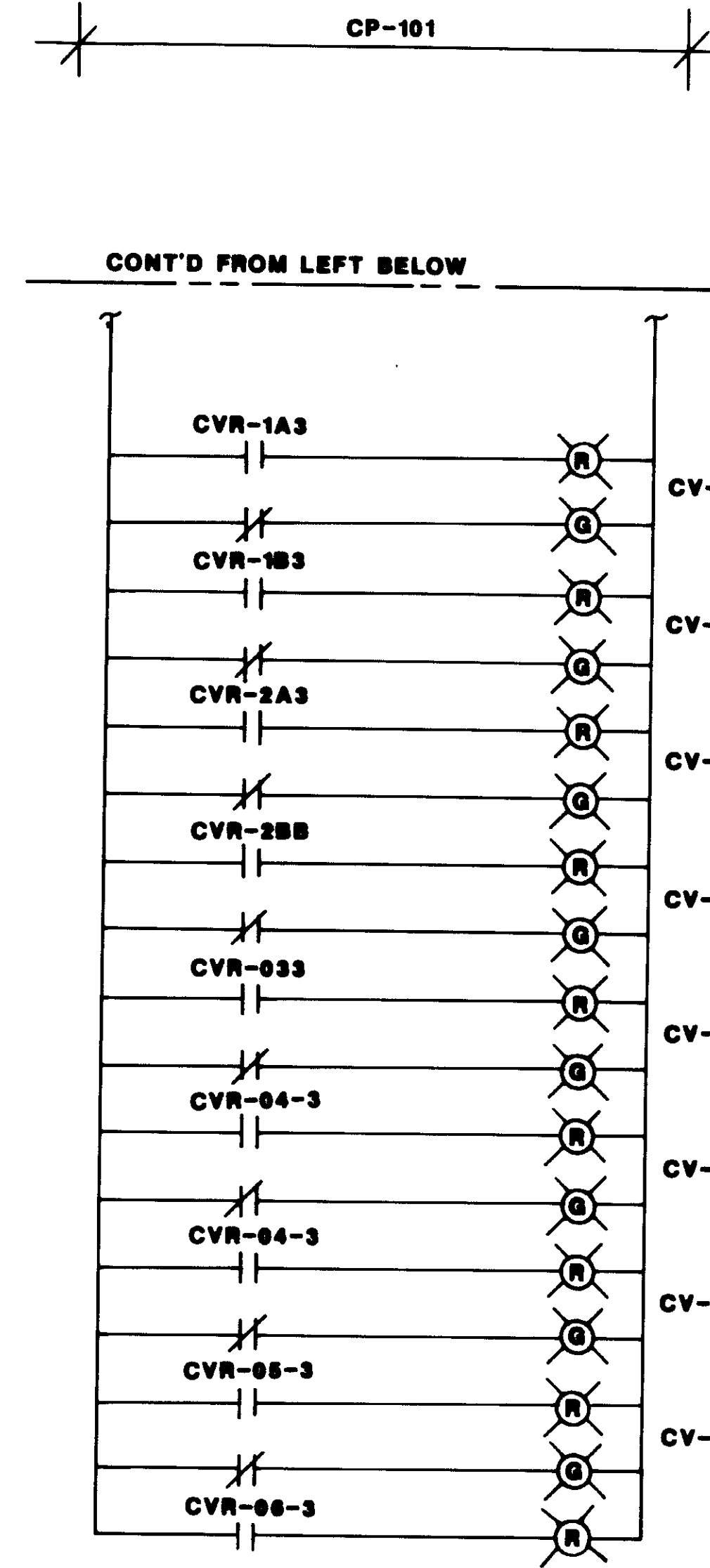
MIP-A GRAPHIC WIRING



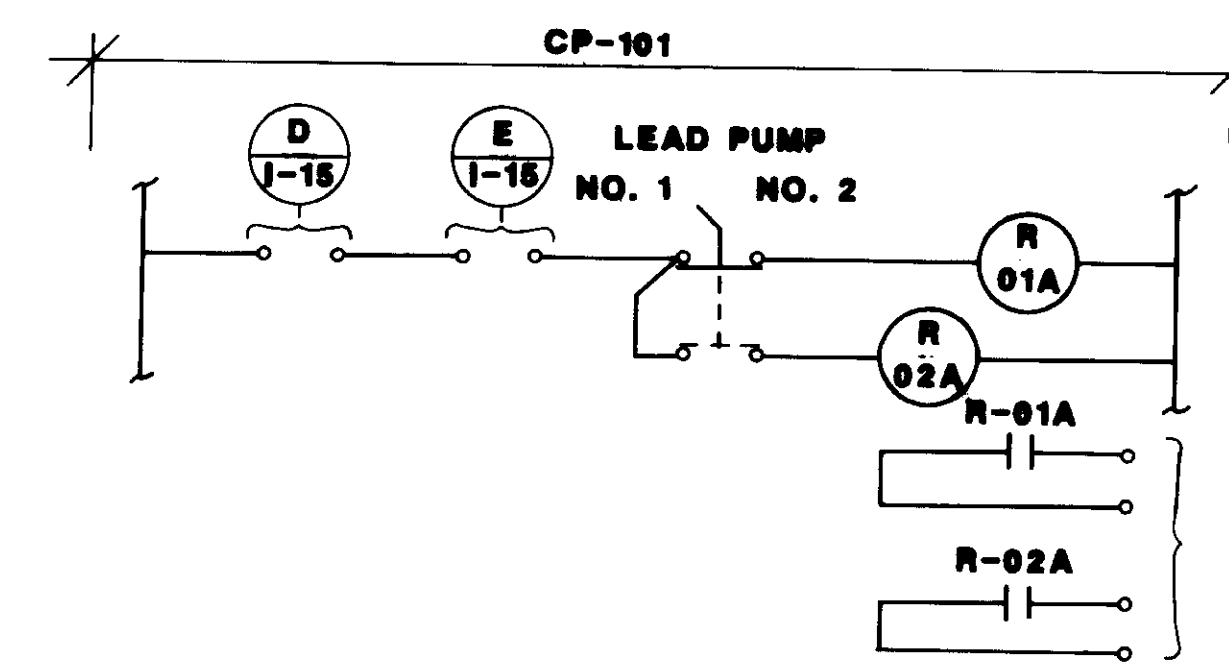
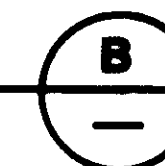
1 TO BE PROVIDED UNDER THIS CONTRACT C-3



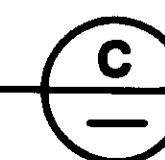
CONT'D ABOVE RIGHT



CP-101 GRAPHIC WIRING



PRIMARY SLUDGE PUMPS  
INITIATING CONTROL



PANEL "10"		120/240V, 1 PHASE CIRCUIT IN CP-101		
CKT NO.	DESCRIPTION	BREAKER WATTAGE		
		AMP-POLE	1A	1B
1	CP-101 GRAPHIC	15	1	500
2	CONTROL-DIG. I, A, B, C & D	15	1	200
3	CONTROL-DIG. M, V, V & VI	15	1	200
4	CONTROL PNL VALVES	15	1	200
5	CCP-B PCV-304	20	1	500
6	CCP-B PCV-305	20	1	500
7	CCP-B PCV-306	20	1	500
8	CCP-B CONTROL	15		200
9	CCP-B ALARM	15		200
10	SPACE	15		200
11	SPACE			
12	SPACE			
		TOTAL		1000 1000

PROVIDE 480-120V, 1 PHASE, 3 KVA TRANSF. MOUNTED IN CP-101

NOTE:  
REFER TO GEN DWG# 4338-127

04210



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
NONE

W.A. DESIGNED  
J.A. DRAWN  
W.A. CHECKED

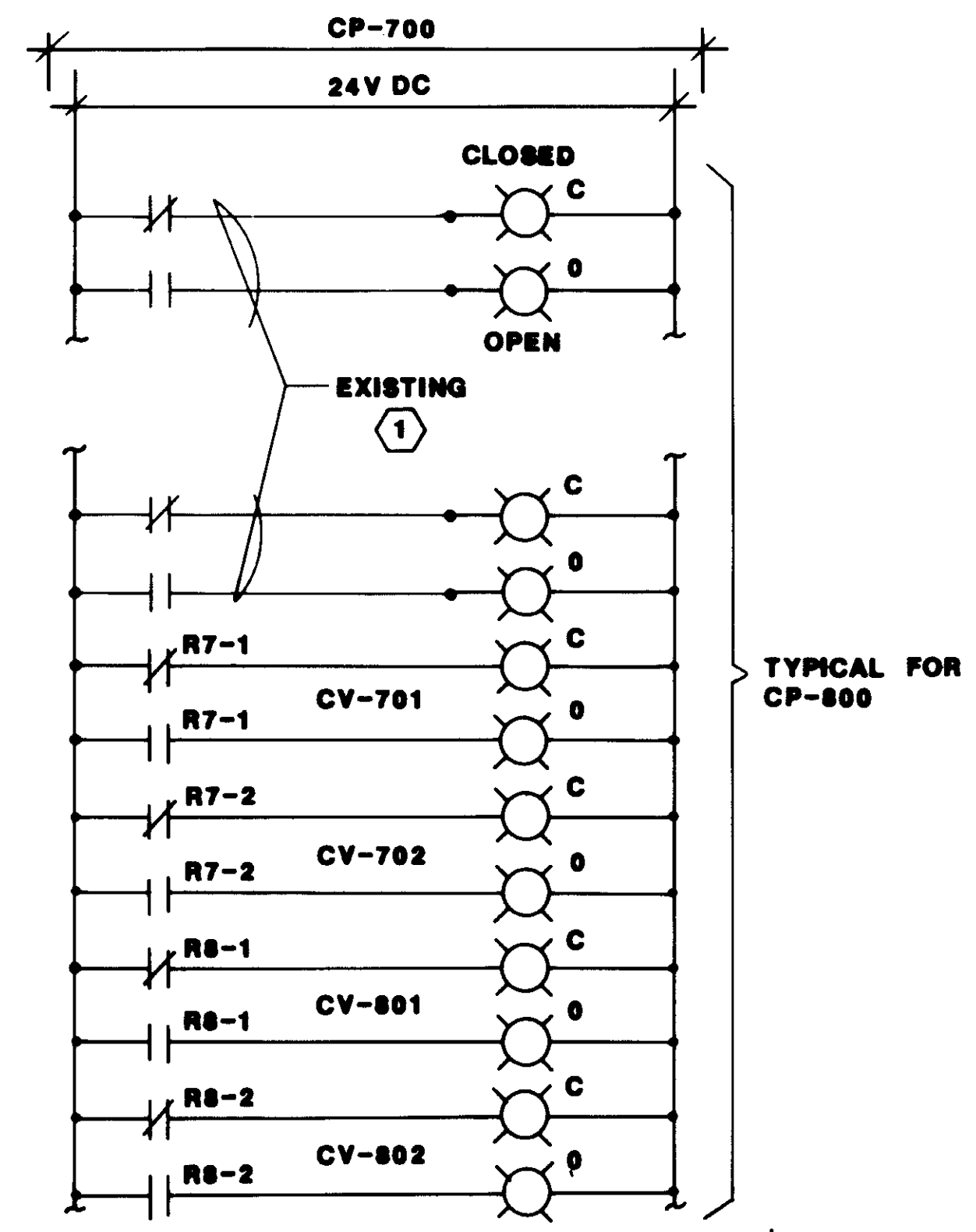
SUBMITTED  
14038  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
*Wilfredo Alexander* 818 6-30-87  
ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

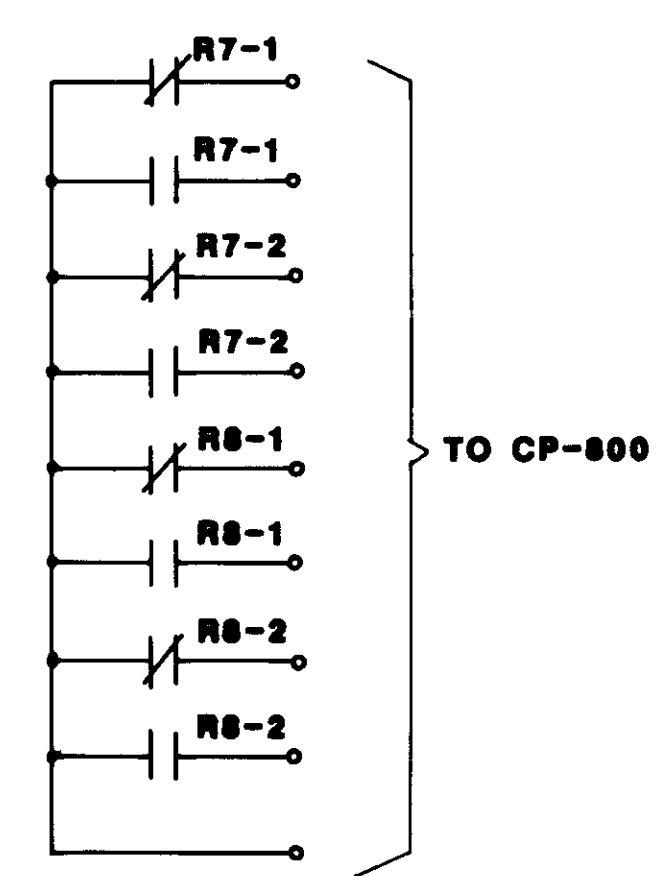
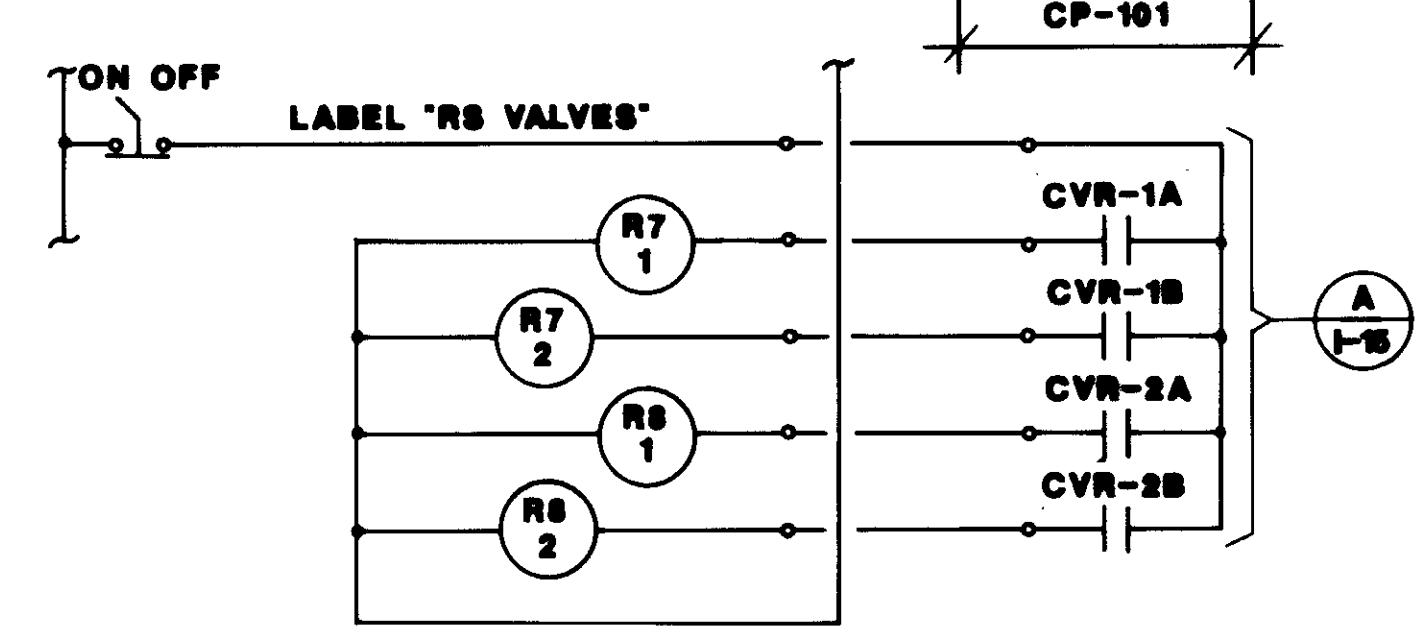
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III

SCHEMATIC WIRING DIAGRAMS

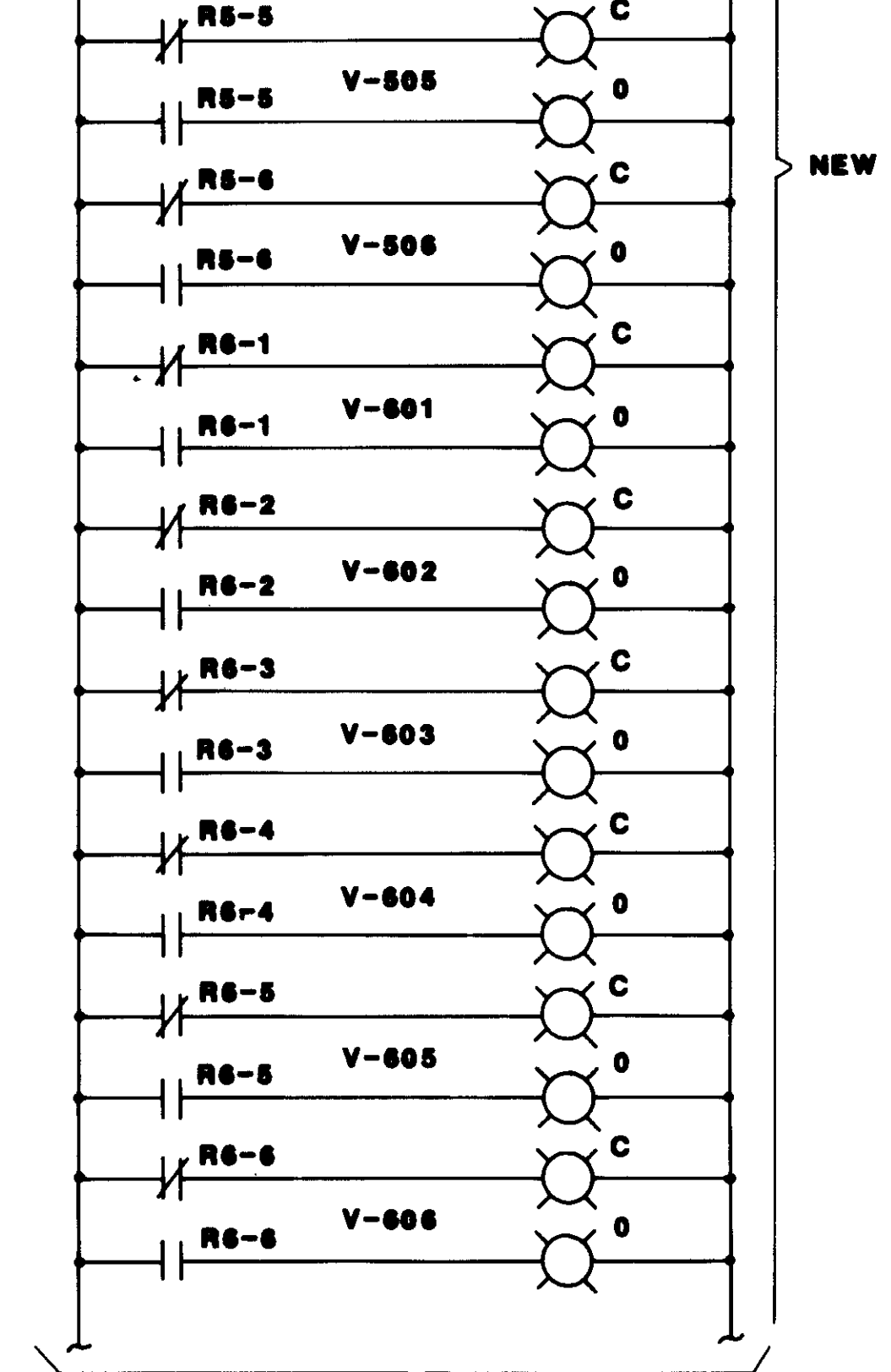
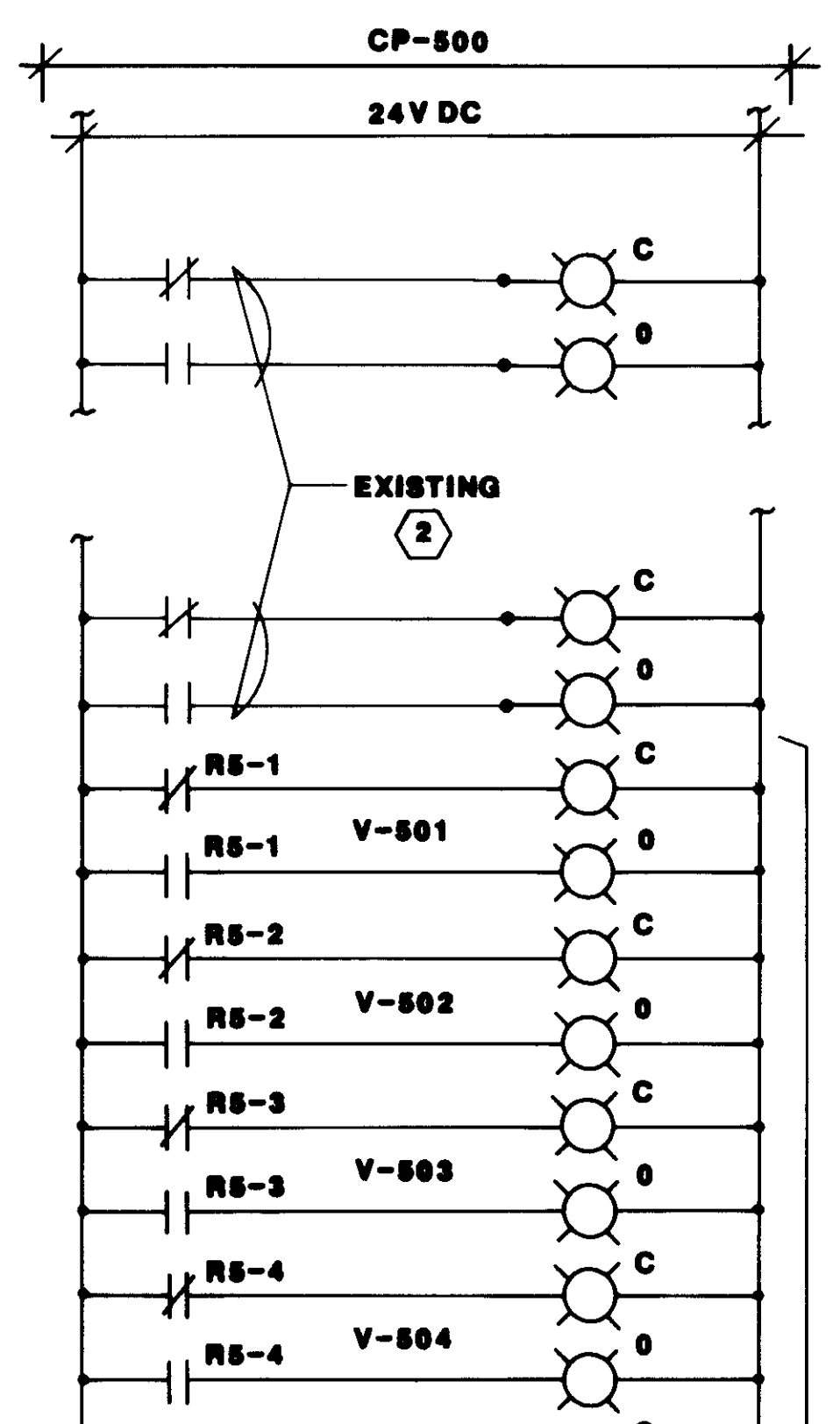
SHEET  
I-13



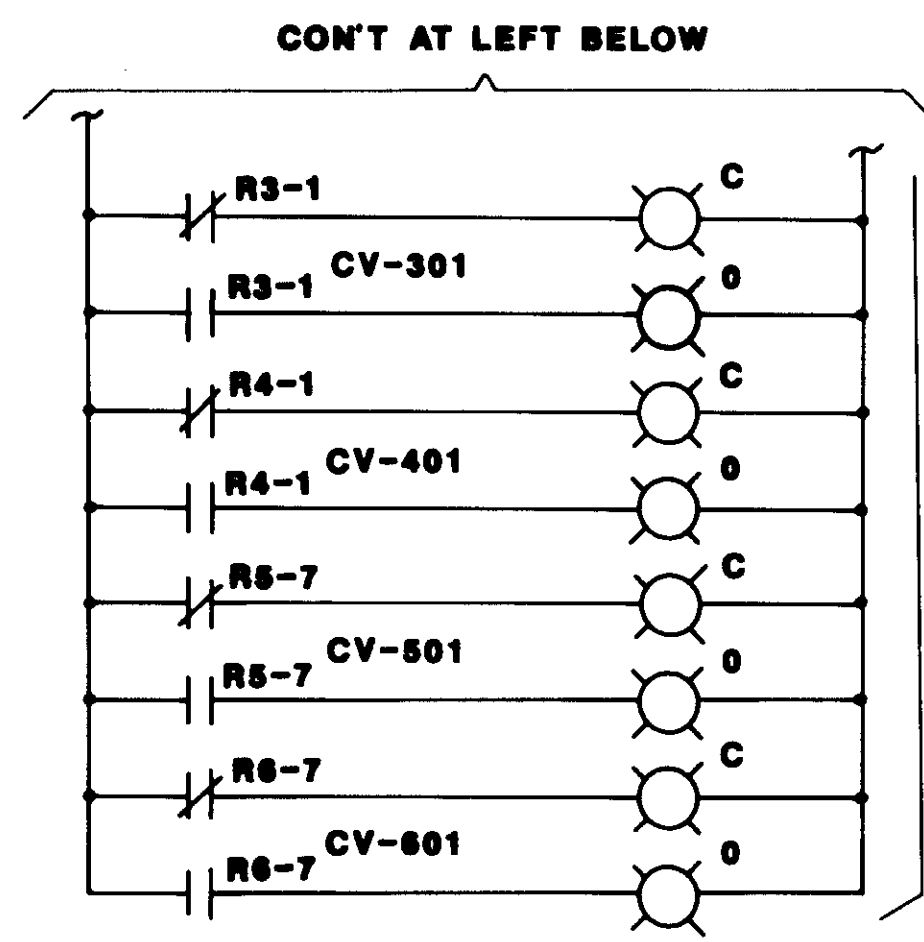
TYPICAL FOR CP-800



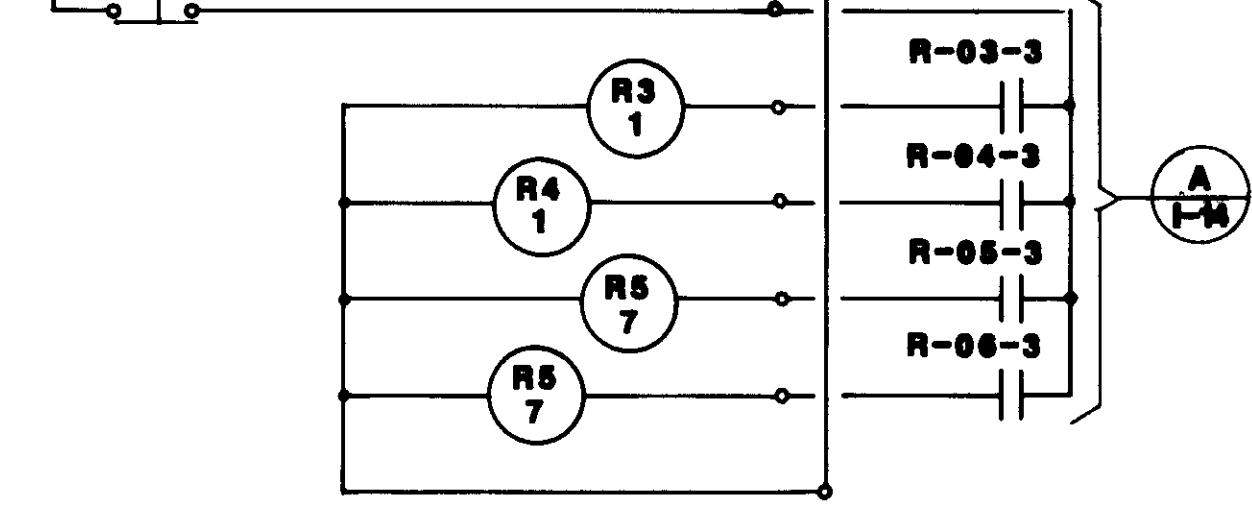
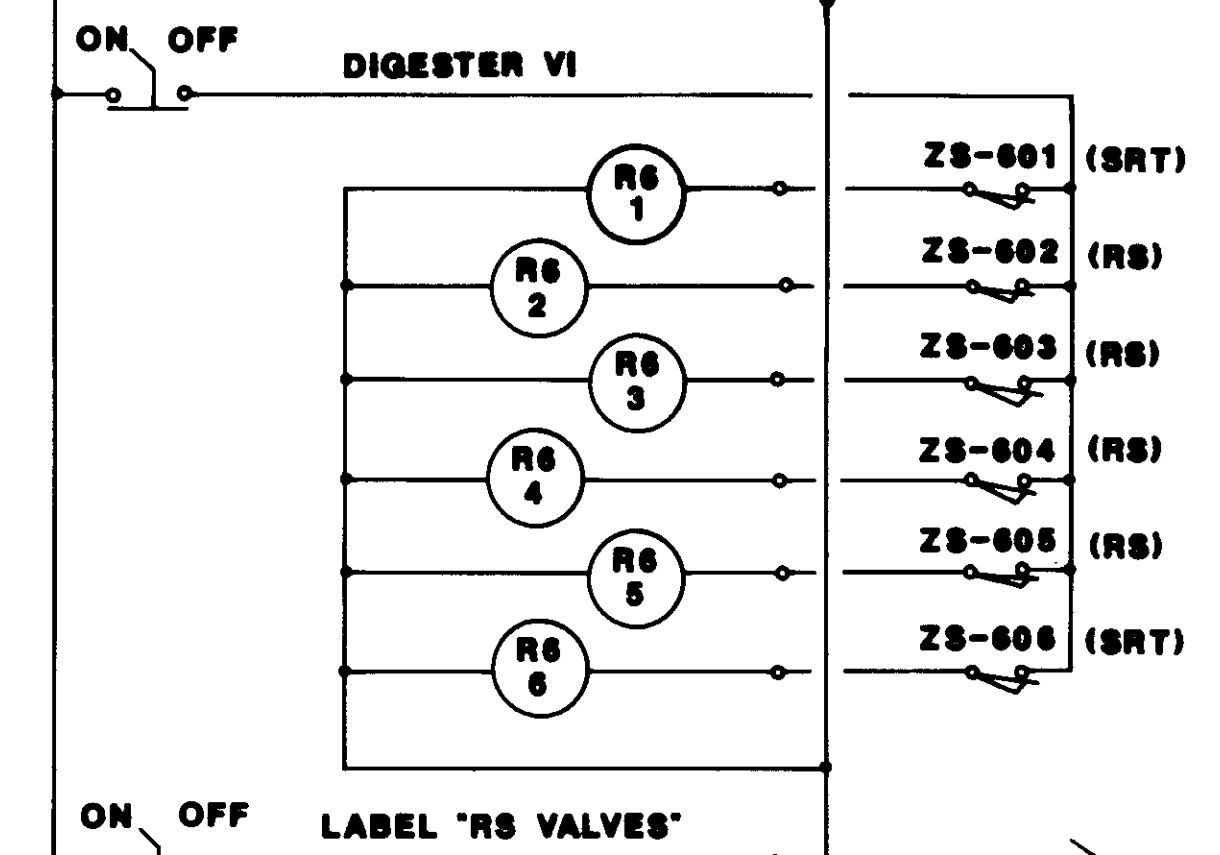
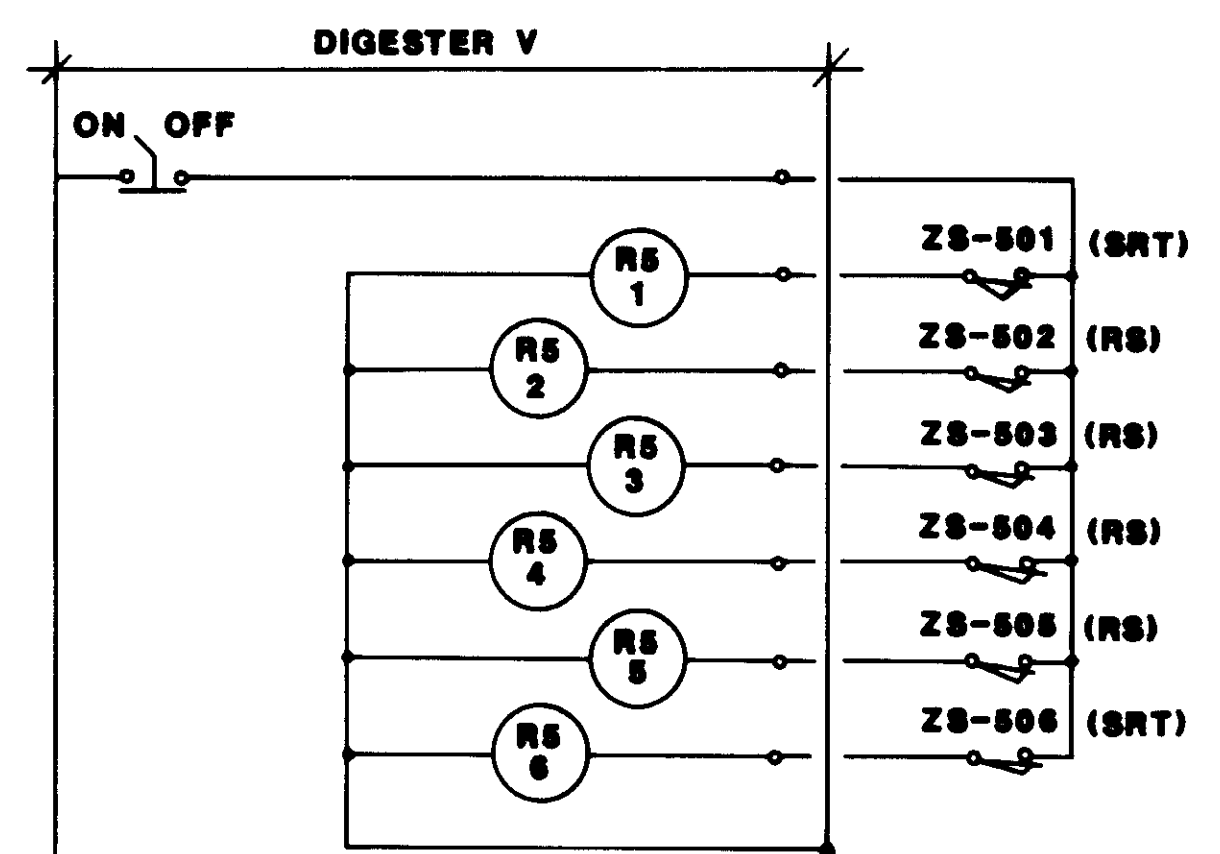
**CP-700 GRAPHIC PANEL WIRING**  
TYPICAL FOR CP-800 AS NOTED



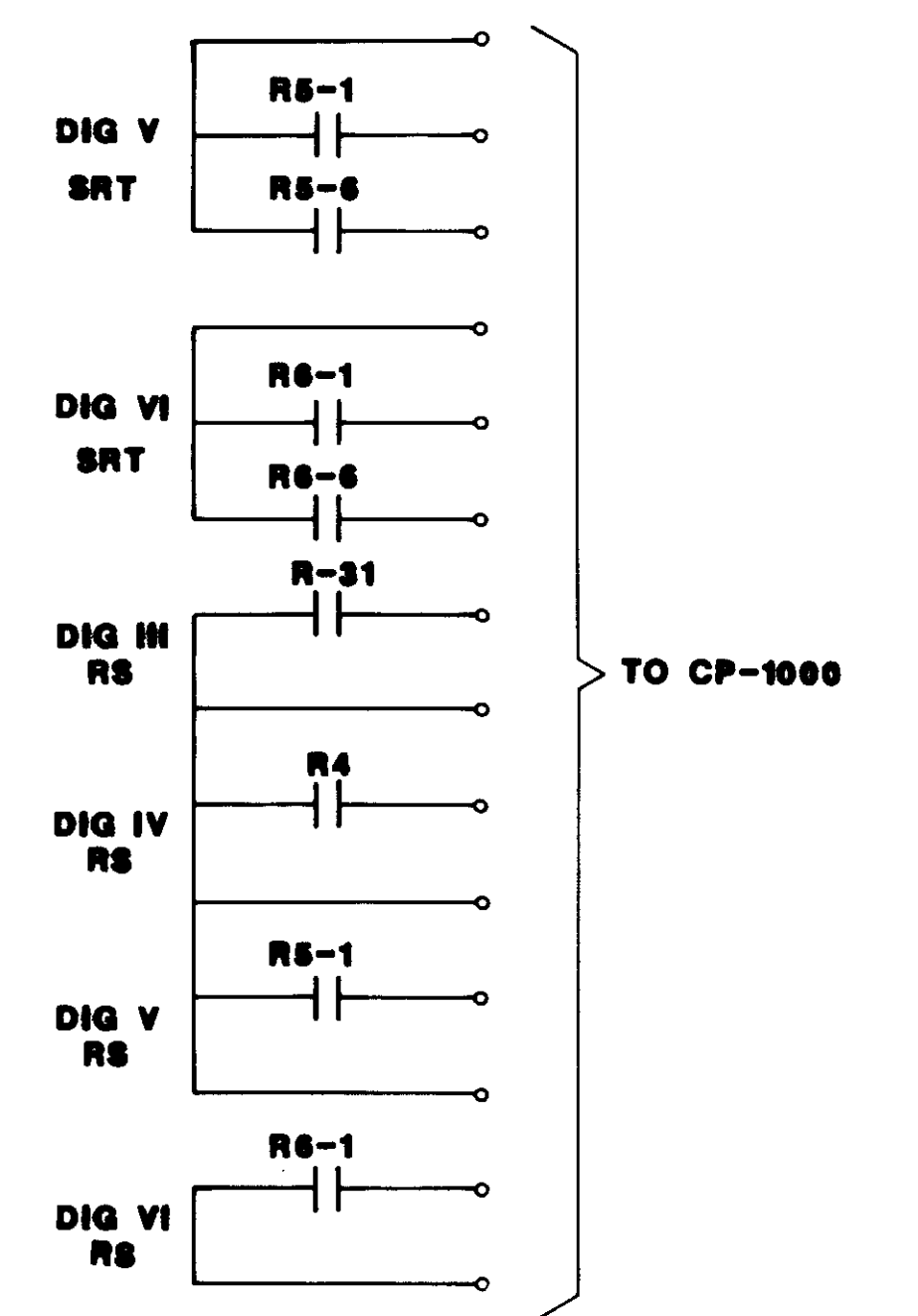
CONT' AT RIGHT ABOVE



CONT' AT LEFT BELOW



**CP-500 GRAPHIC PANEL WIRING**



**MUX-1 INPUTS**  
CONNECTIONS BY OTHERS

- NOTES:
- 1 TYPICAL FOR 24 EXISTING. REMOVE & RECONNECT EXISTING LGTS FOR NEW GRAPHIC DISPLAY. REPLACE ALL DEFECTIVE LGTS.
  - 2 TYPICAL FOR 24 EXISTING. REMOVE & RECONNECT EXISTING LGTS FOR NEW GRAPHIC DISPLAY. REPLACE ALL DEFECTIVE LGTS.

NOTE:  
REFER TO QM DWG# 4336-127



04211

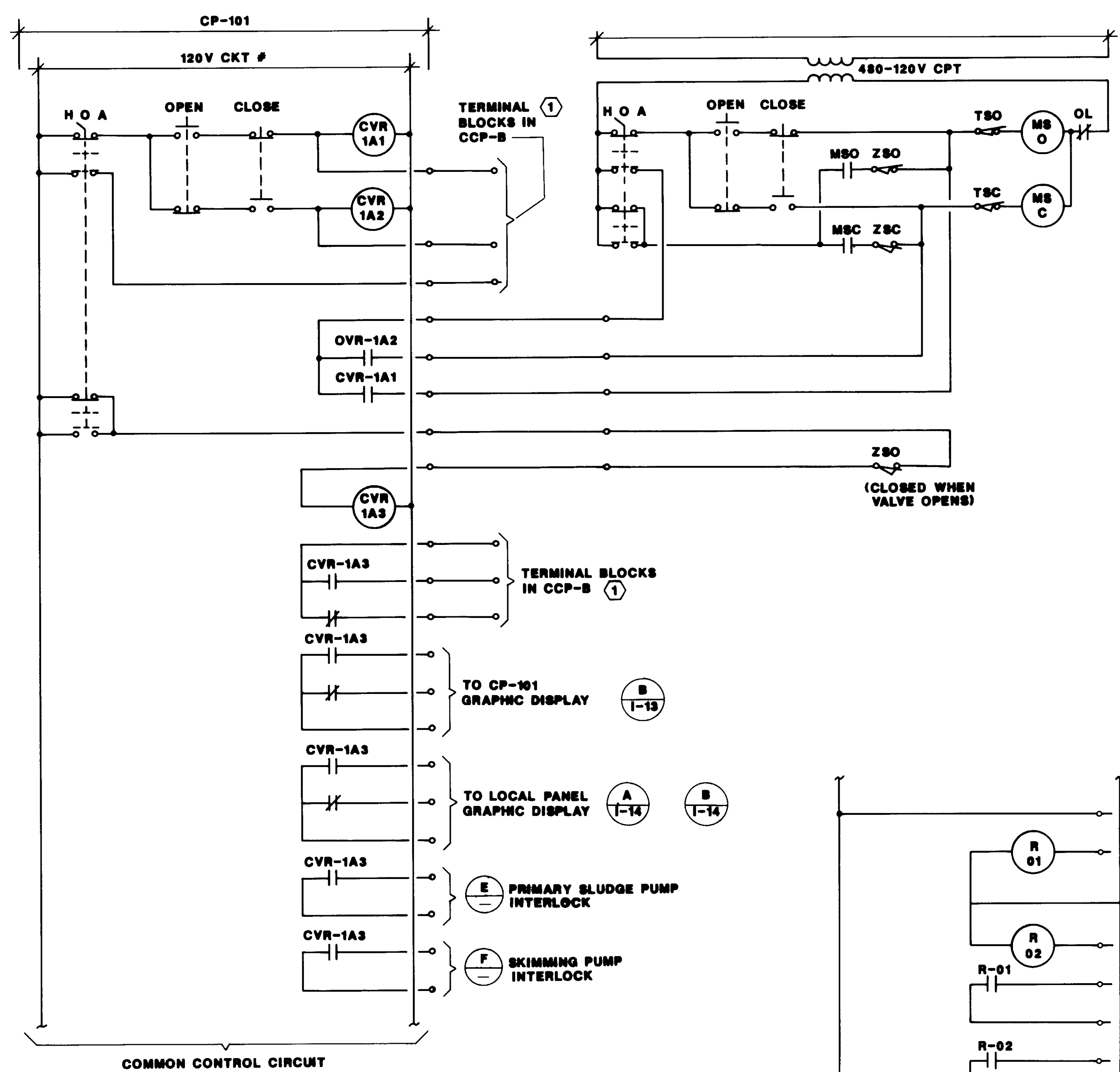
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	NONE	DESIGNED:	W.A.	SUBMITTED:	14038
CHECKED:	W.A.	DATE:	6-30-87	R.C.E. NO.:	

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

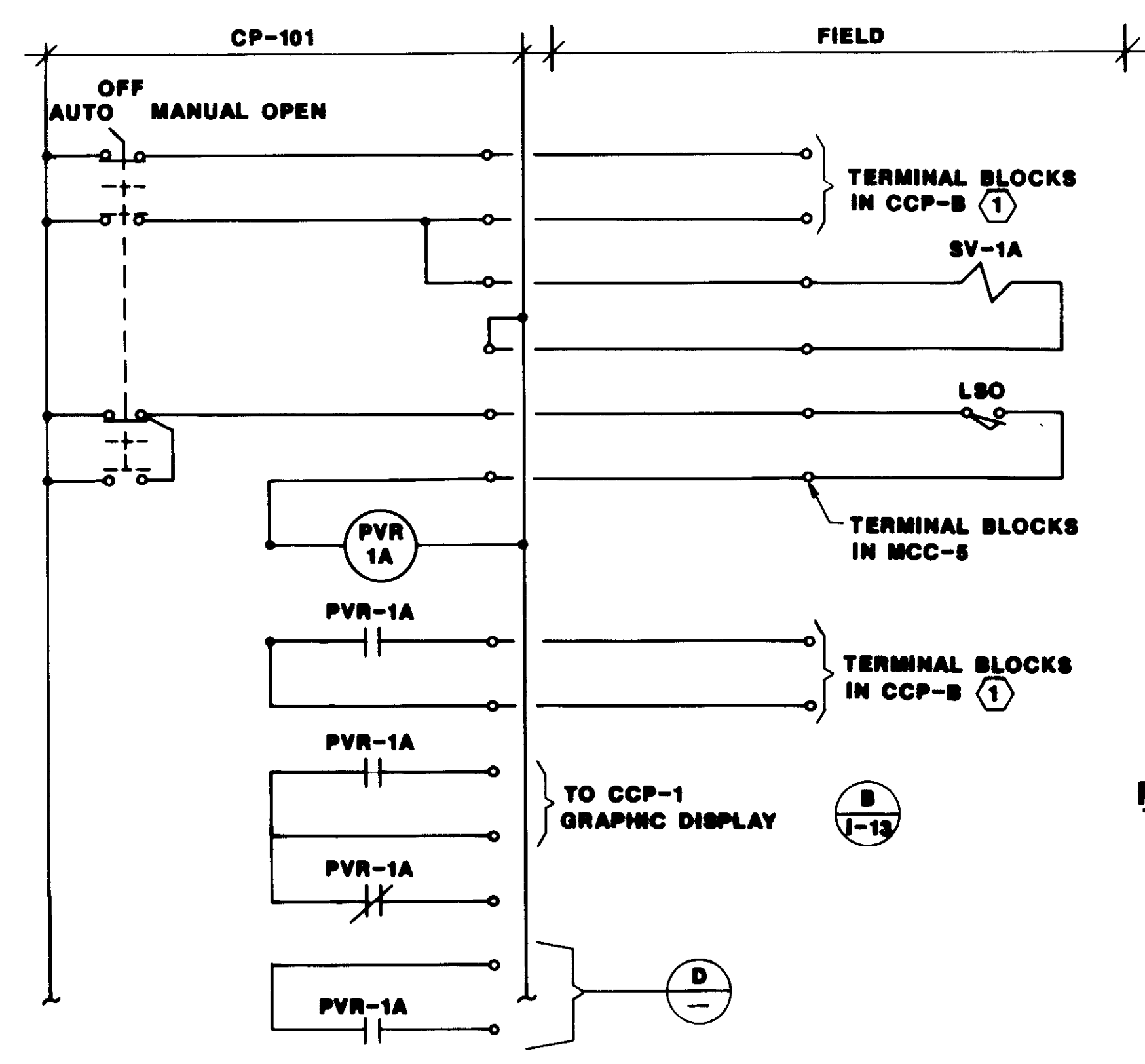
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
SCHEMATIC WIRING DIAGRAMS





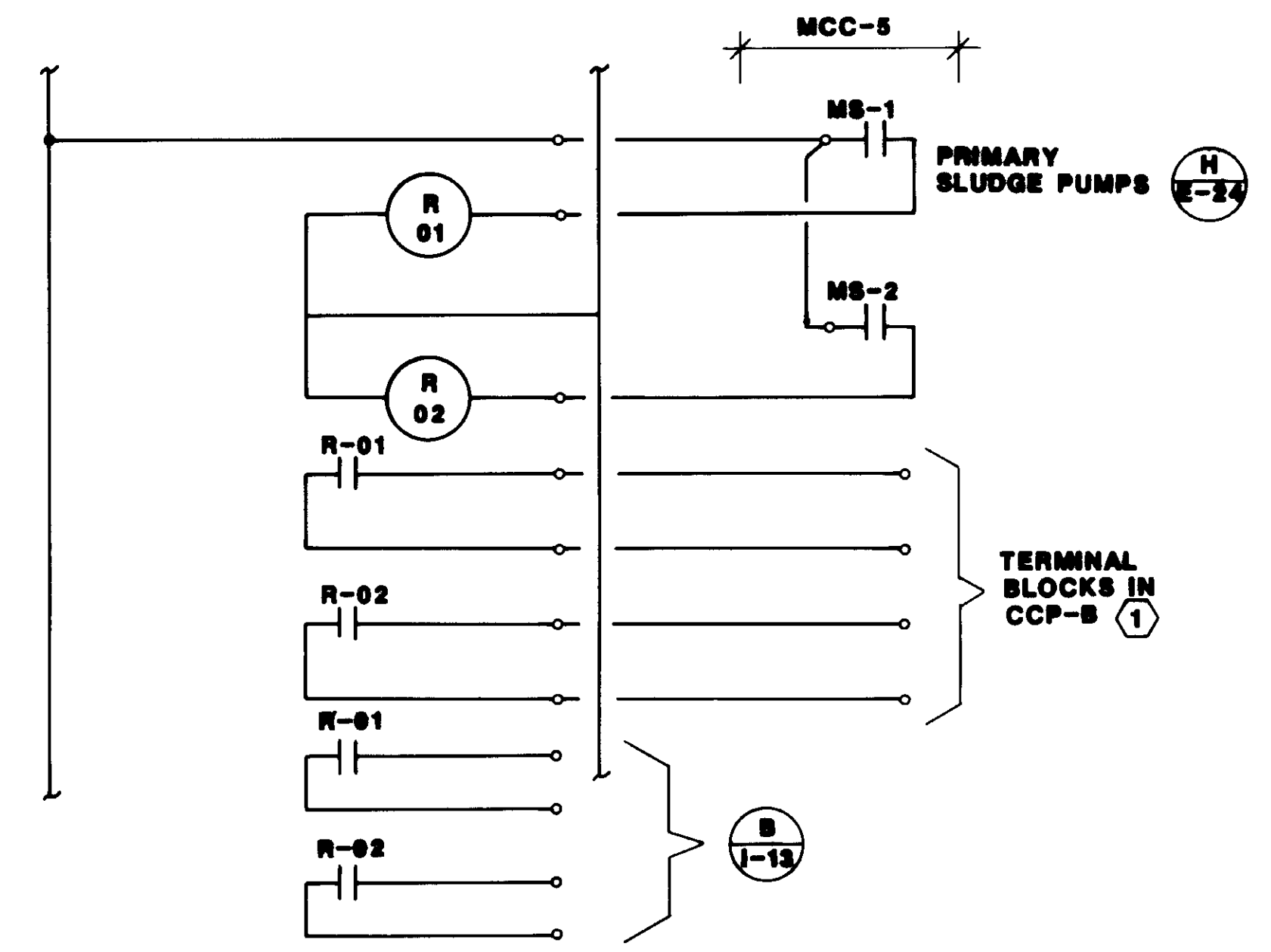
**DIGESTER RAW SLUDGE VALVE CONTROL** (A)

SHOWN FOR CV-1A  
 TYPICAL FOR: CV-1B, CV-2A, CV-2B,  
 CV-03, CV-04, CV-05 & CV-06  
 NOTE: RELAY NO. SAME AS VALVE NO.

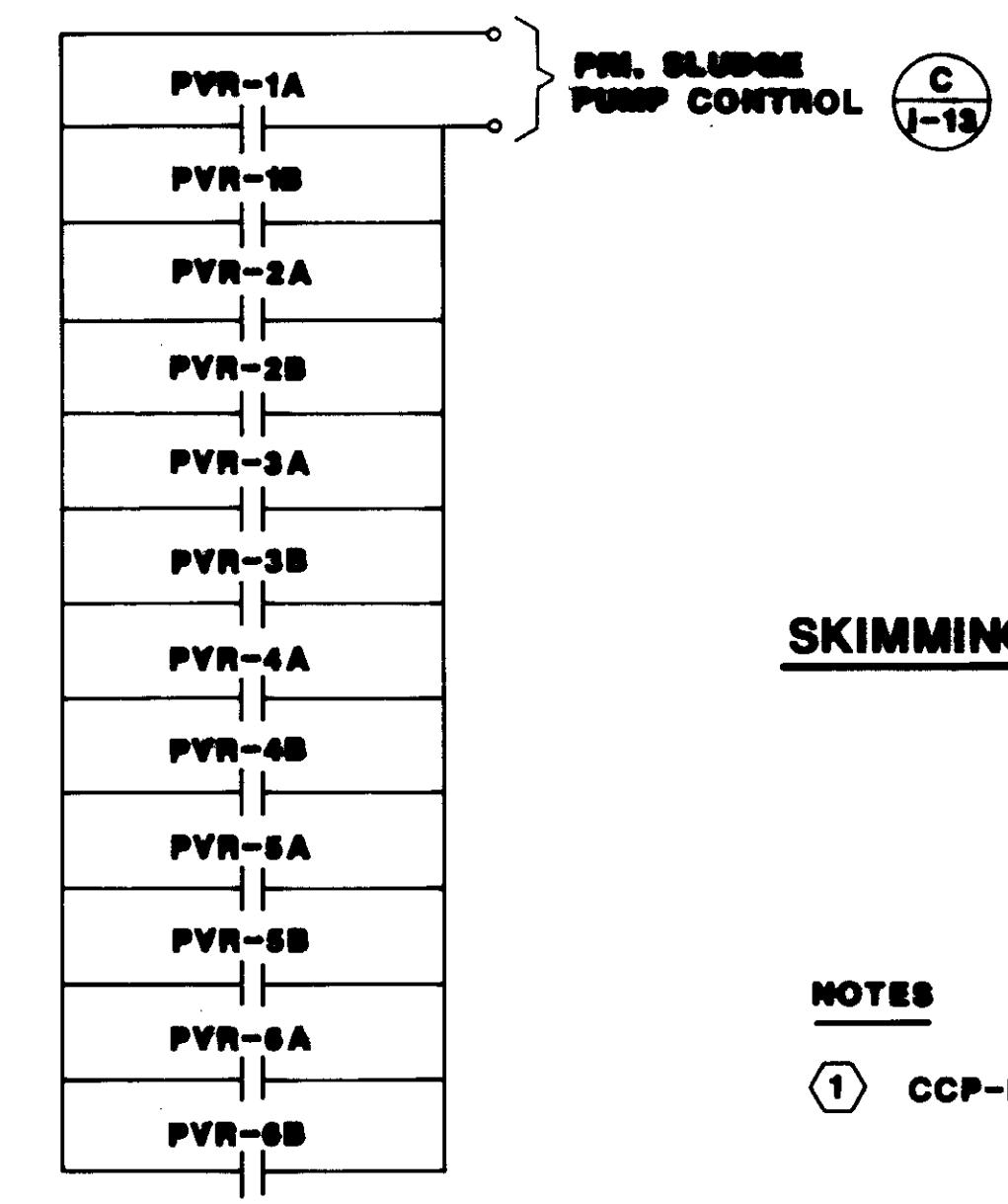


**PRIMARY SLUDGE VALVE CONTROL** (B)

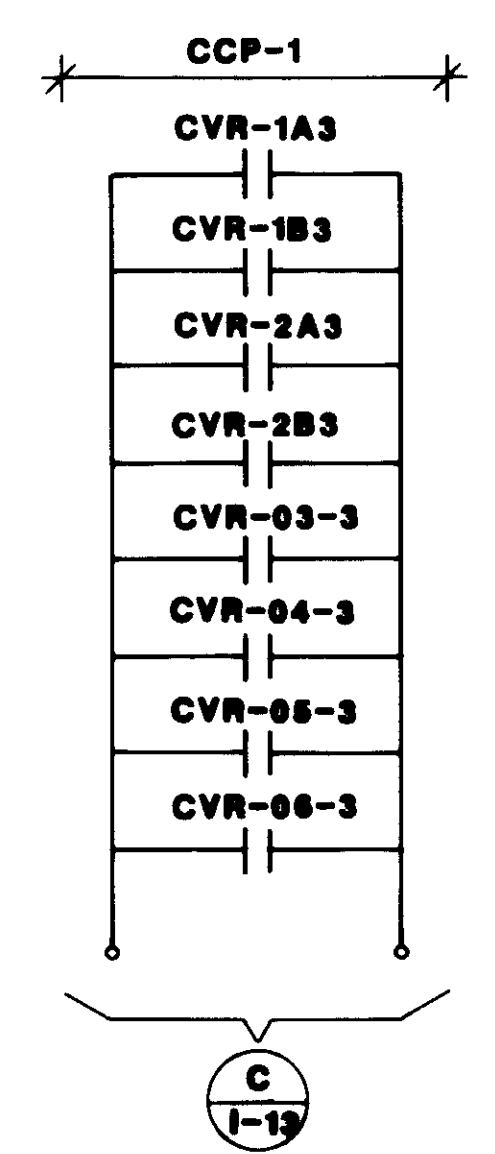
SHOWN FOR PRIMARY VALVE CV-101  
 TYPICAL FOR: CV-102 THRU CV-110  
 & FUTURE CV-111 & CV-112.



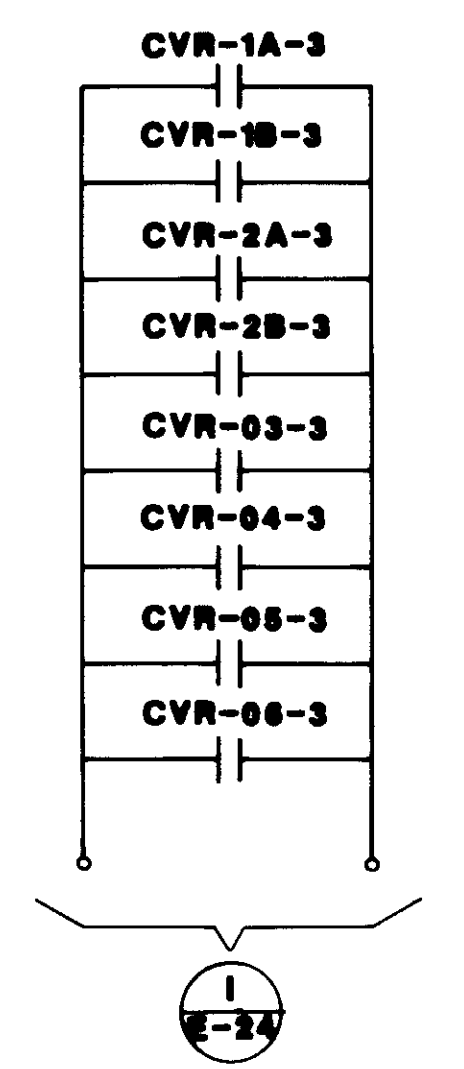
**PRI. SLUDGE PUMP-INDICATION** (C)



**PRI. SLUDGE PUMP CONTROL** (D)



**PRI. SLUDGE PUMP INTERLOCK** (E)



**SKIMMINGS PUMP INTERLOCK** (F)

**NOTES**  
 (1) CCP-B PROVIDED UNDER SEPARATE CONTRACT.

**NOTE:**  
 REFER TO QM DWG# 4330-127



04212

SCALE: NONE		W.A. DESIGNED S.A. DRAWN W.A. CHECKED		SUBMITTED 14038 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE		KALEX ENGINEERS Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California		LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III		SHEET 1-15	
REV DATE BY DESCRIPTION		REV DATE BY DESCRIPTION		WILLARD ALEXANDER 513 6-30-87 ALEXANDER ENGINEERS R.C.E. NO. DATE				SCHEMATIC WIRING DIAGRAMS			

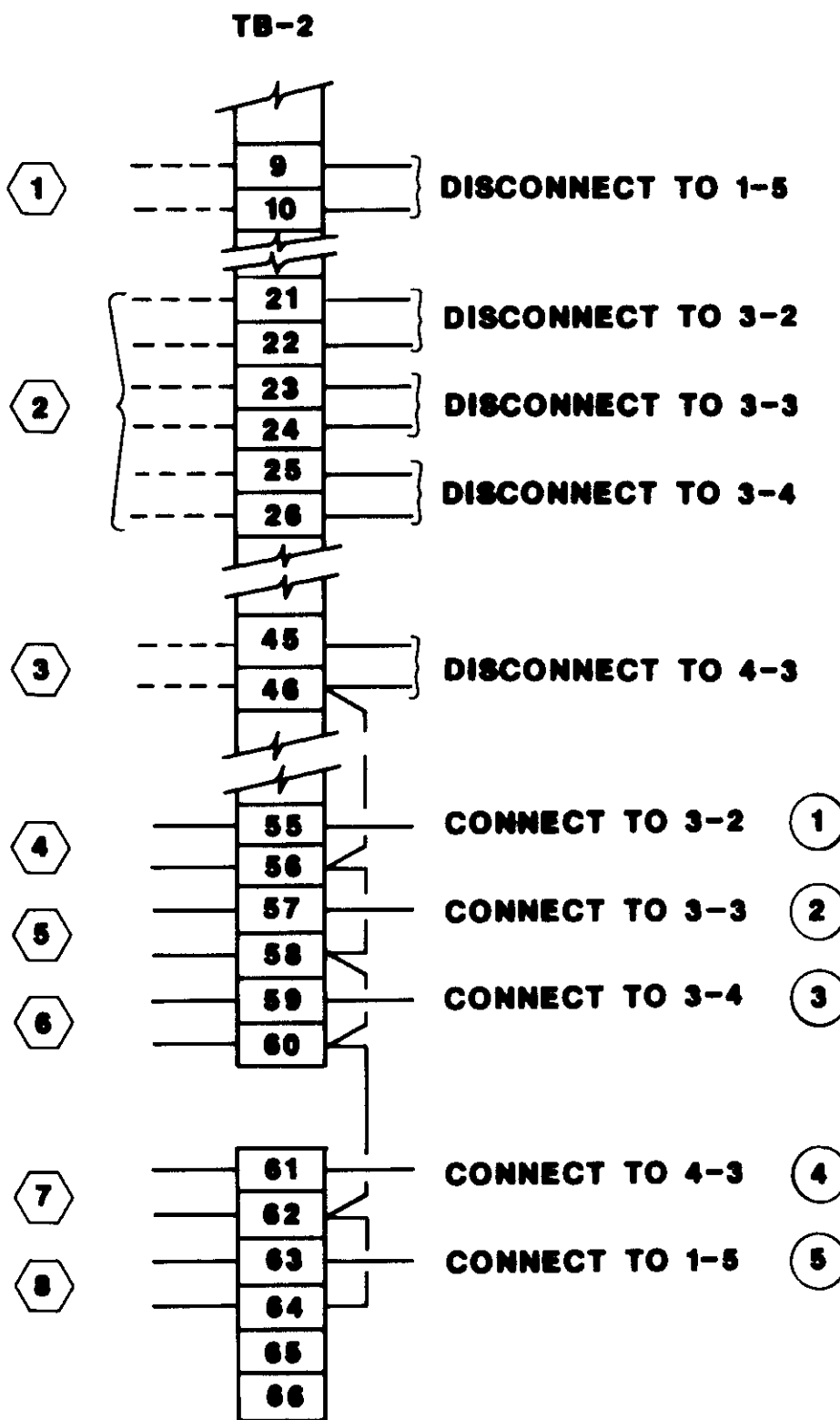
51	52	53	54	55	56	57					
						67	68	69	70		
71		(K)									

1-1	1-2	1-3	1-4	1-5
2-1	2-2	2-3	2-4	2-5
3-1	3-2	3-3	3-4	3-5
4-1	4-2	4-3		

- 51 PROVIDE NEW WINDOW "HI-LEVEL AEROBIC DIG."
- 52 DISCONNECT WIRING TO TERM BLKS. (A)
- 53 DISCONNECT WIRING TO TERM BLKS. (B)
- 54 RECONNECT TO UNIT 71 (C)
- 55 RECONNECT TO UNIT 71 (D)
- 56 RECONNECT TO UNIT 71 (E)
- 57 RECONNECT TO UNIT 71 (F)
- 67 RECONNECT TO UNIT 69 (G)
- 68 RECONNECT TO UNIT 69 (H)
- 69 PROVIDE NEW WINDOW "H.V. BUS A"
- 70 RECONNECT TO UNIT 69 (I)
- 71 RECONNECT TO UNIT 69 (J)

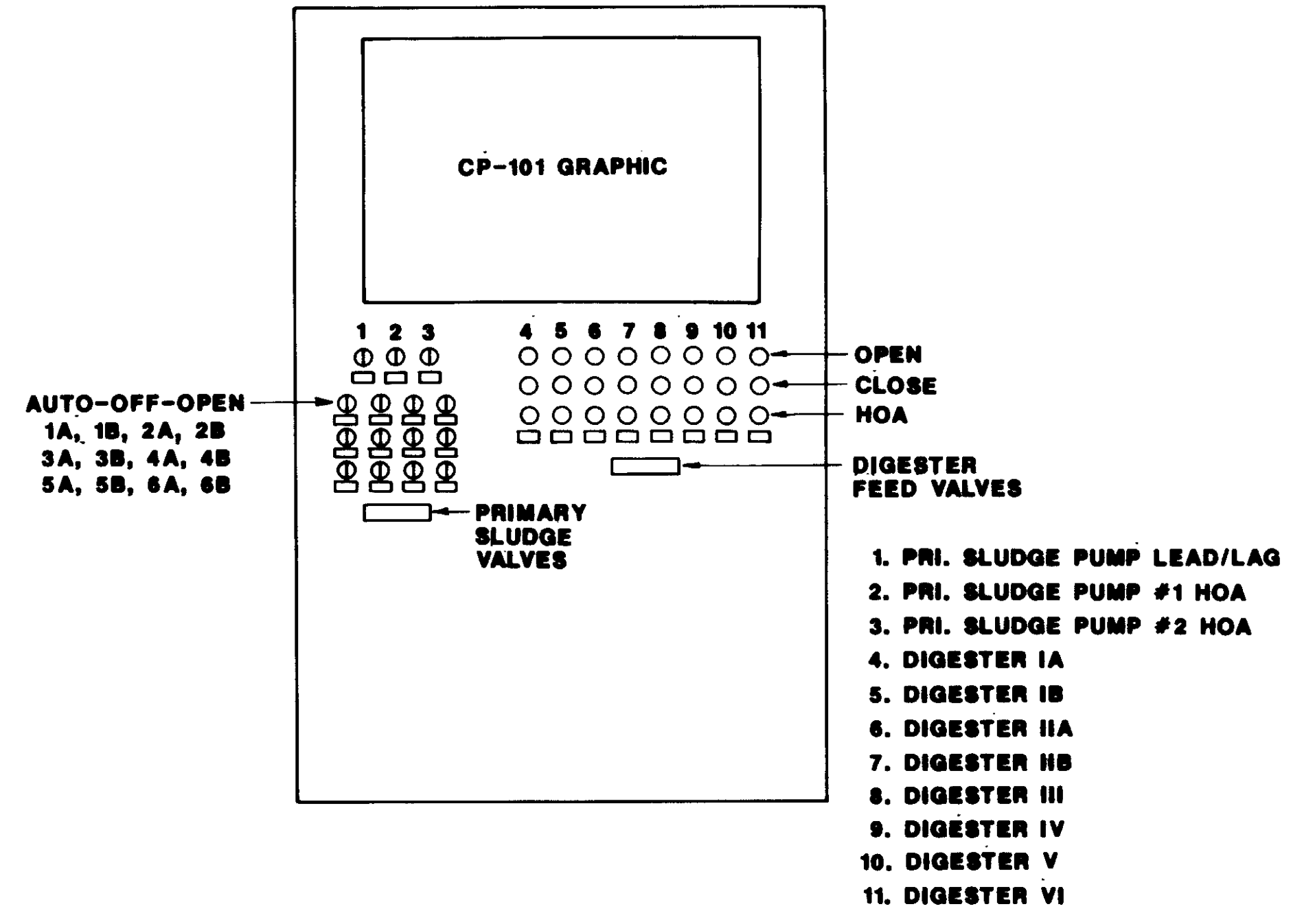
- (A) PROVIDE NEW WINDOW "FINAL SED TANK DR NO. 6"
- (B) PROVIDE NEW WINDOW "FINAL SED TANK DR NO. 7"
- (C) PROVIDE NEW WINDOW "FINAL SED TANK SBD NO. 7"
- (D) PROVIDE NEW WINDOW "FINAL SED TANK SBD NO. 8"
- (E) PROVIDE NEW WINDOW "FINAL SED TANK NO. 9"
- (F) PROVIDE NEW WINDOW "FINAL SED TANK NO. 10"
- (G) PROVIDE NEW WINDOW "FINAL SED DR. NO. 4"
- (H) PROVIDE NEW WINDOW "FINAL SED DR. NO. 5"
- (I) PROVIDE NEW WINDOW "HV BUS A1"
- (J) PROVIDE NEW WINDOW "HV BUS B"
- (K) PROVIDE NEW WINDOW & ALARM UNIT "COMPR. NO. 3 COOLING WTR"

CP-1000 ANNUNCIATOR (A)



- (1) PROVIDE NEW WINDOW "PRI. SED DR #3"
- (2) PROVIDE NEW WINDOW "SKIMMER DR #3"
- (3) PROVIDE NEW WINDOW "PRI. TANK SBD #5"
- (4) PROVIDE NEW WINDOW "PRI. TANK SBD #5"
- (1) DISCONNECT TO MCC-5 CUBICLE
- (2) DISCONNECT TO CCP-B
- (3) DISCONNECT TO MCC-5 CUBICLE
- (4) CONNECT TO PRI DRIVE NO. 3
- (5) CONNECT TO PRI SKIMMER NO. 3
- (6) CONNECT TO SBD #5
- (7) CONNECT TO SBD #6
- (8) CONNECT TO CCP-2 (COMMON ALARM)

CP-100 ANNUNCIATOR (B)



CP-101 ELEVATION (C)

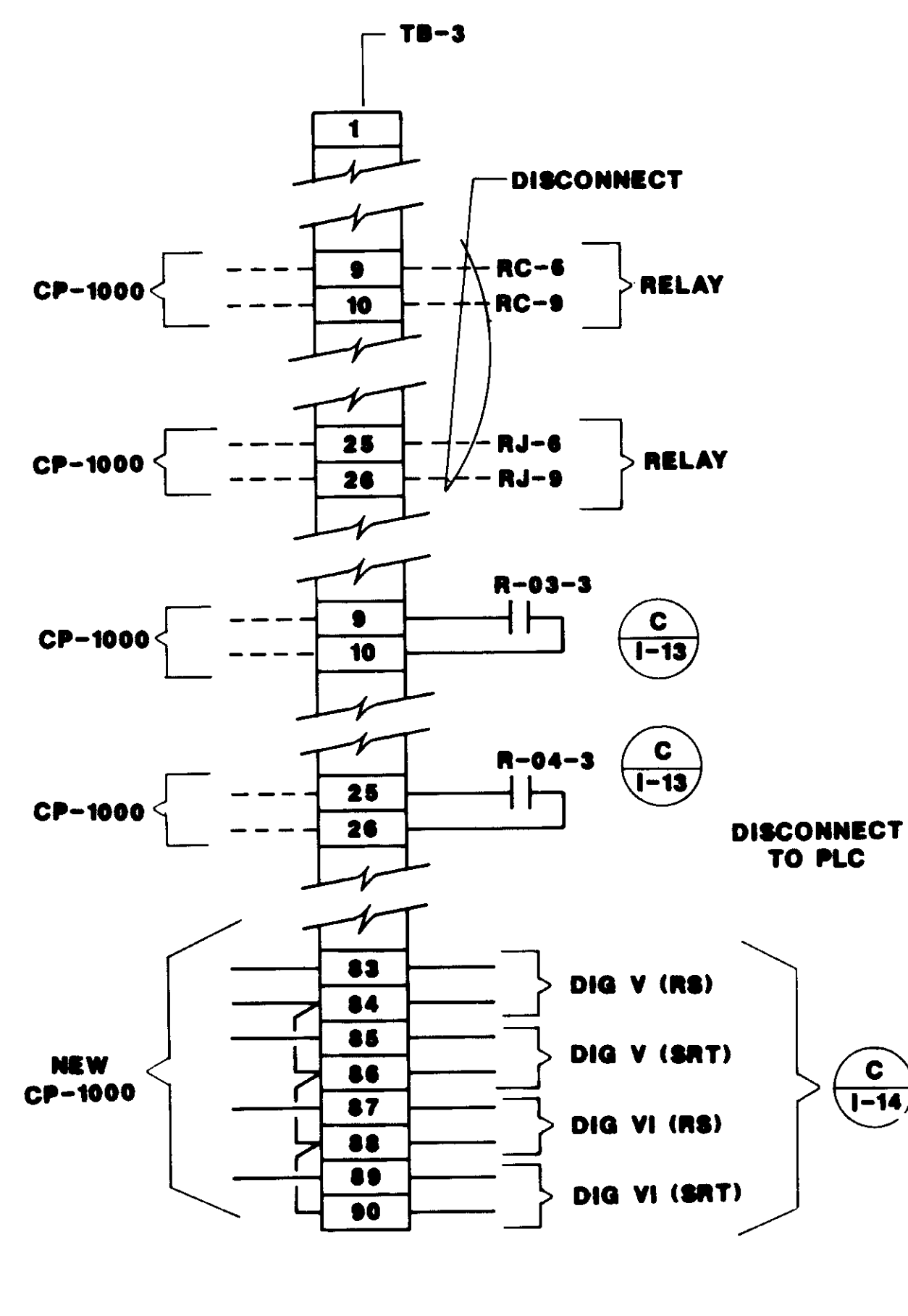
NOTE: REFER TO QM DWG# 4338-127

04213

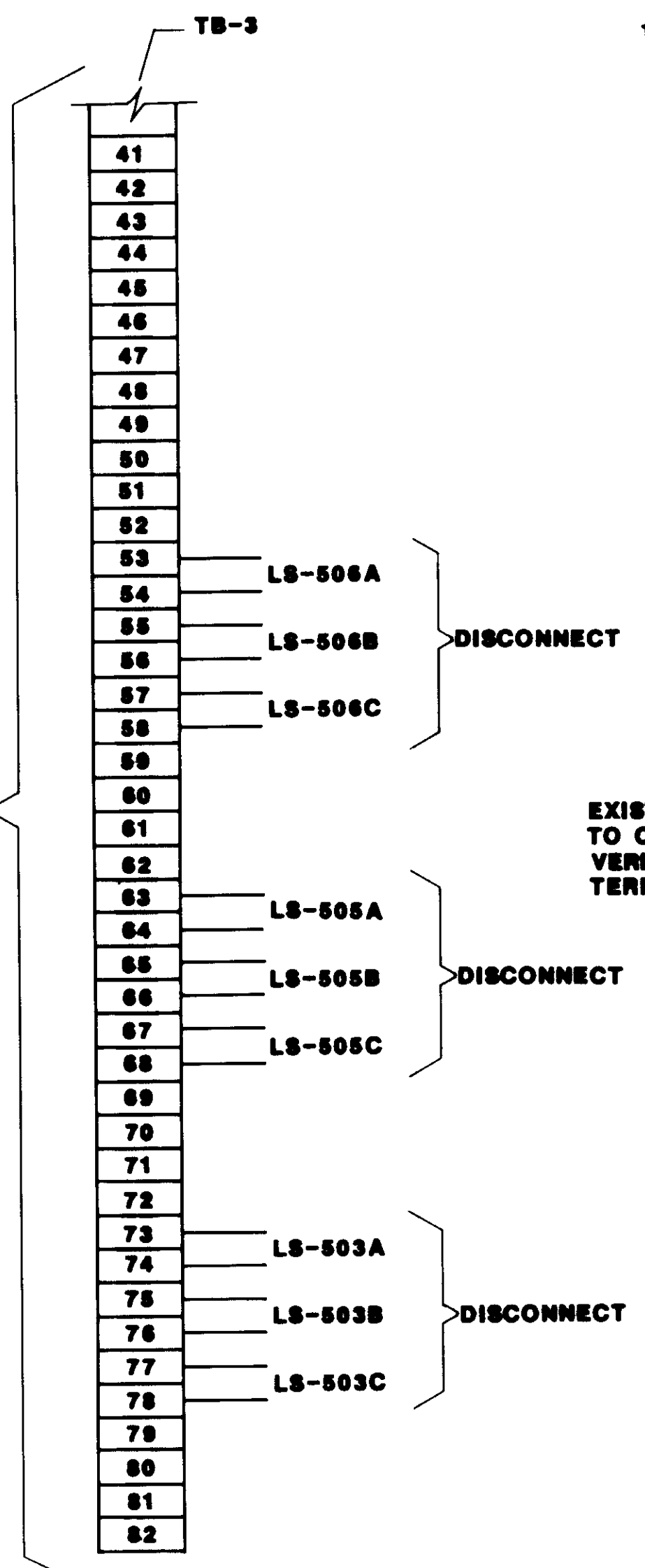


SCALE: NONE				W.A. DESIGNED S.A. DRAWN W.A. CHECKED				SUBMITTED 14028 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE <i>Heleard Alexander</i> E13 6-30-87 ALEXANDER ENGINEERS R.C.E. NO. DATE				<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California				<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b>				SHEET I-16			
REV DATE BY DESCRIPTION												REV DATE BY DESCRIPTION											

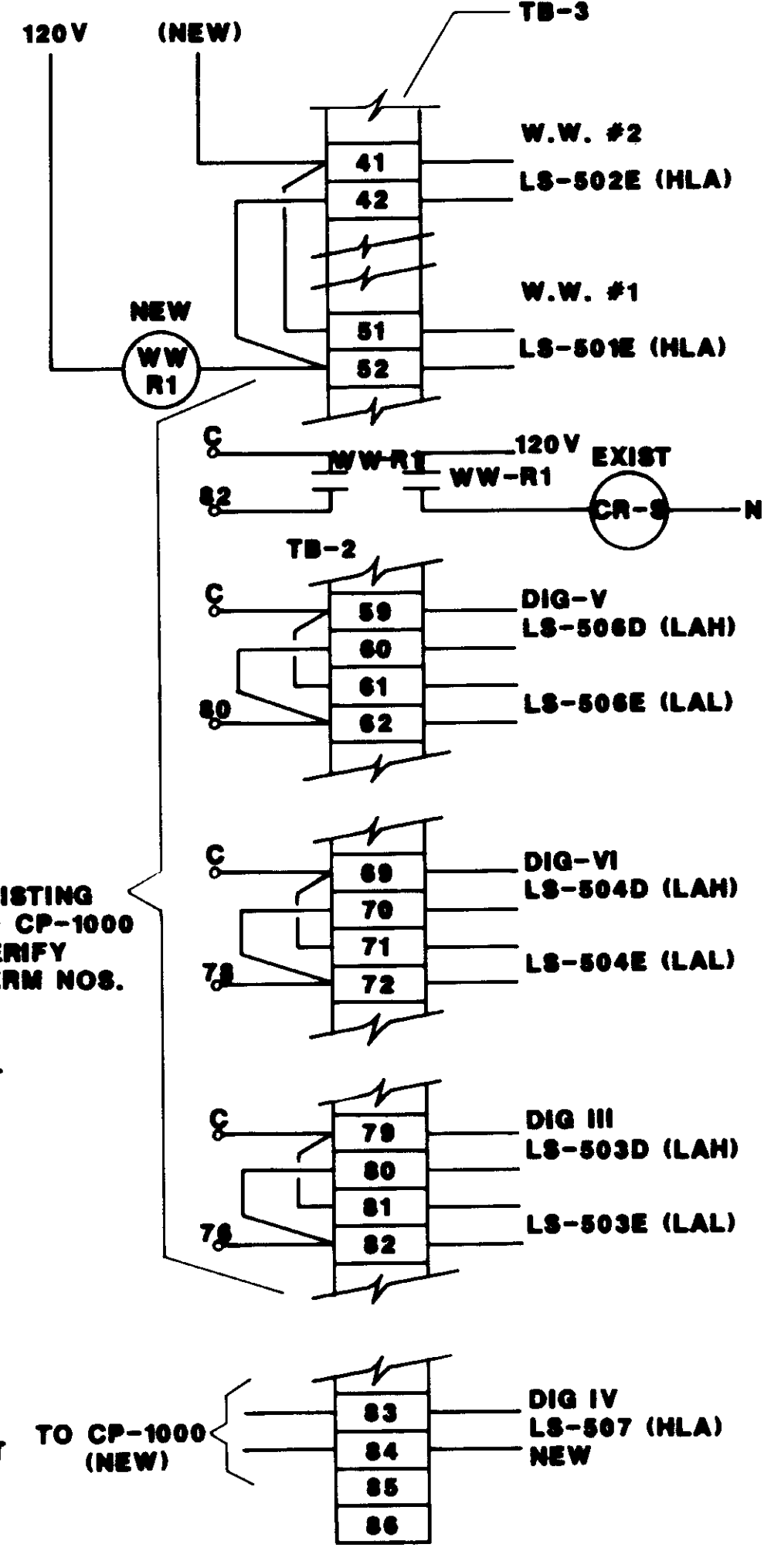
SCHMATIC WIRING DIAGRAMS & DETAILS



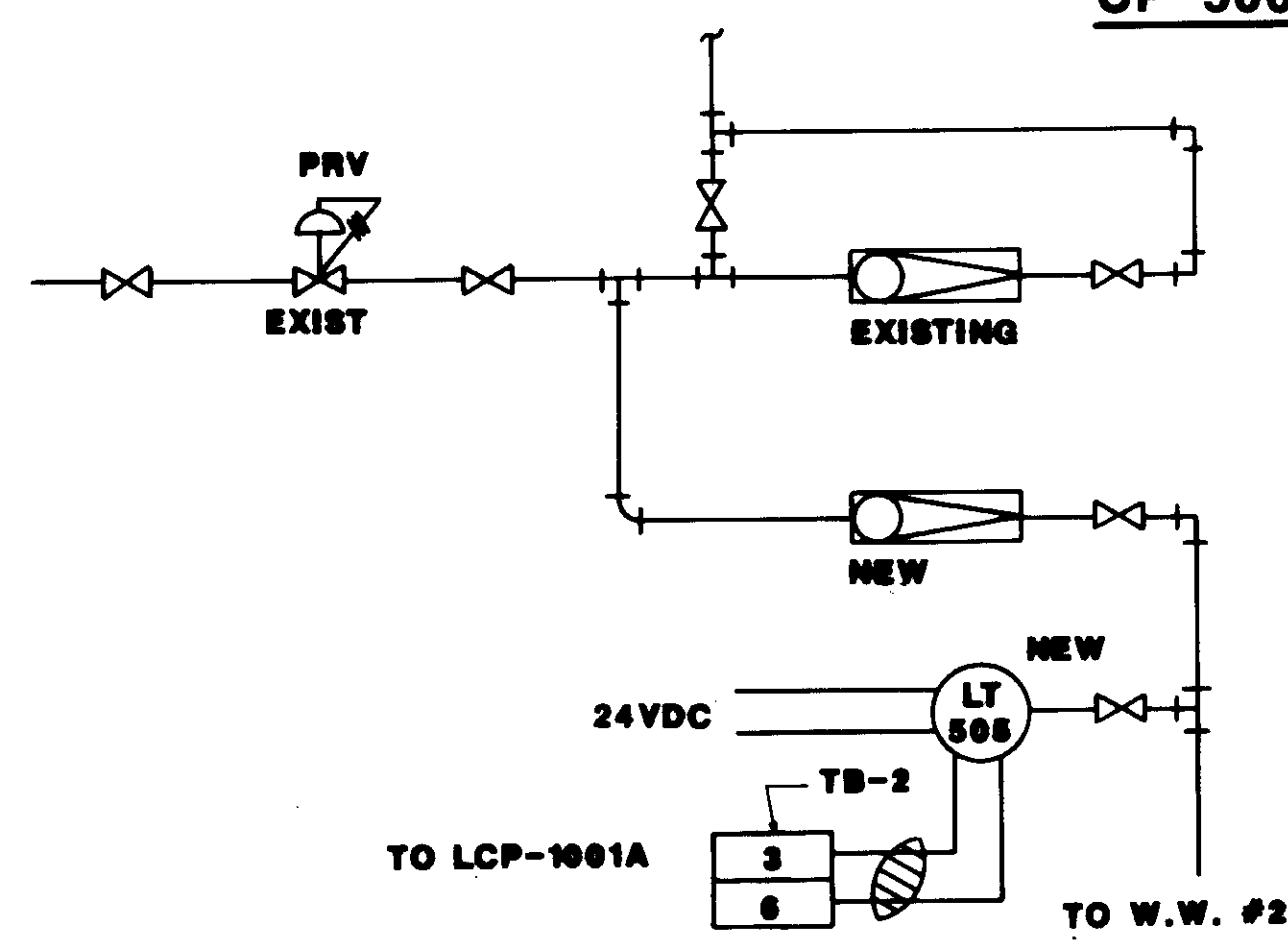
**CP-500 INPUT TO MUX-1**  
CONN. BY OTHERS



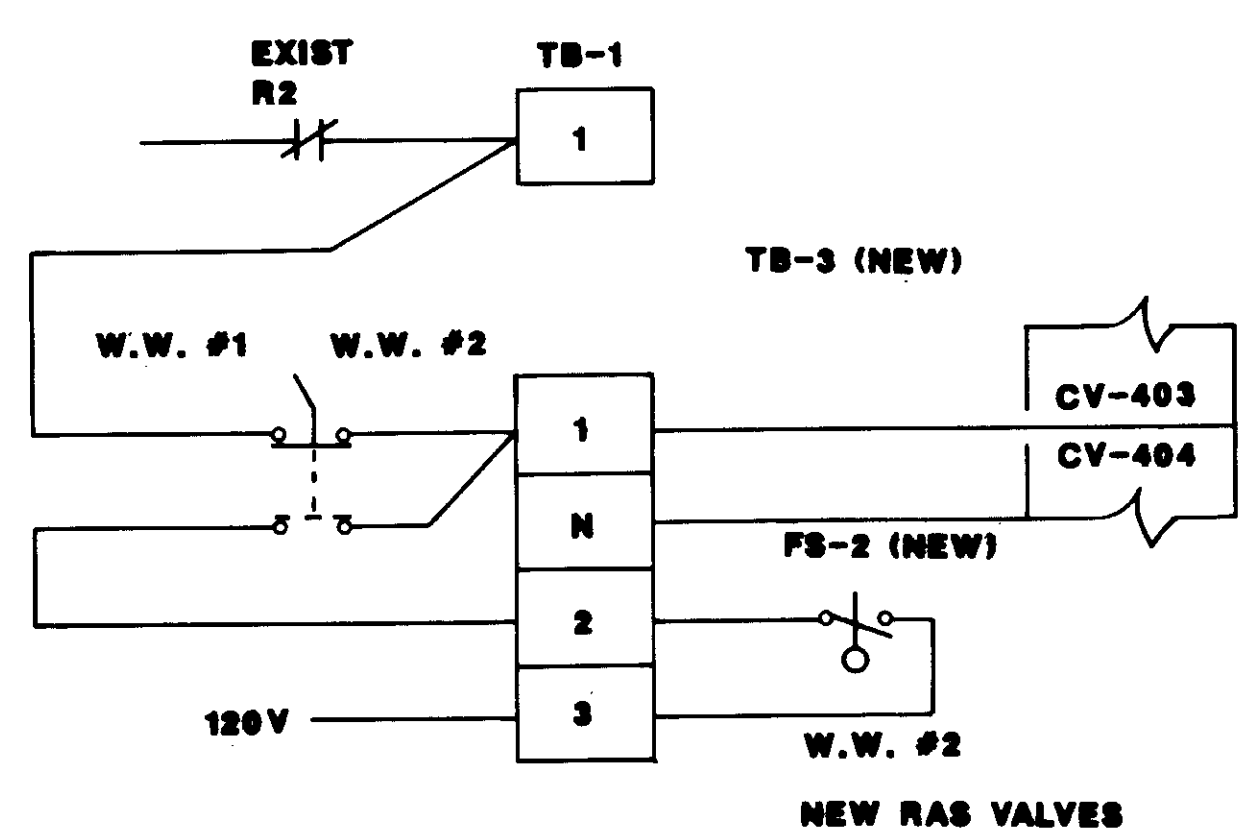
**CP-500 TB-3 REVISIONS**



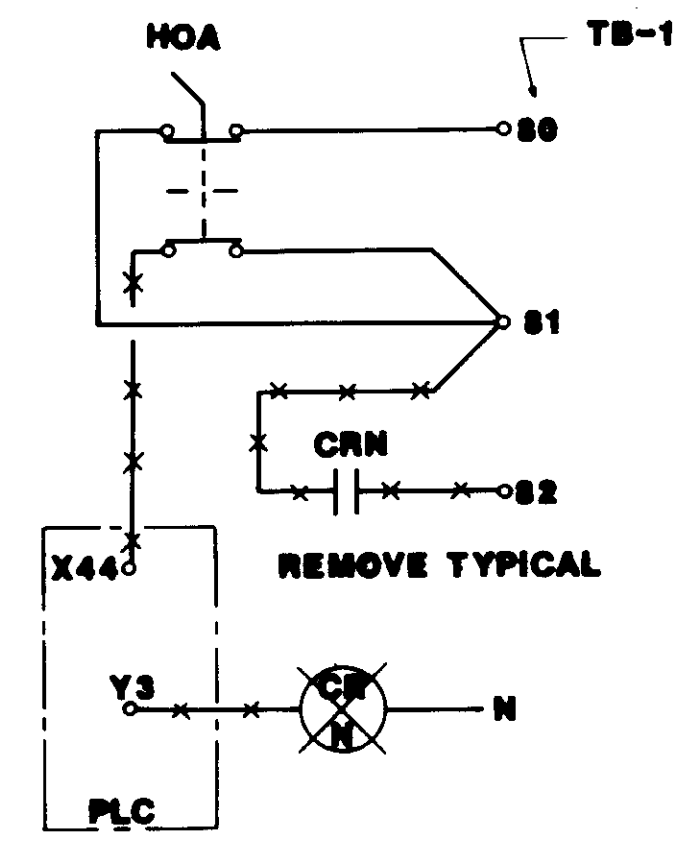
**CP-500 LEVEL ALARMS**



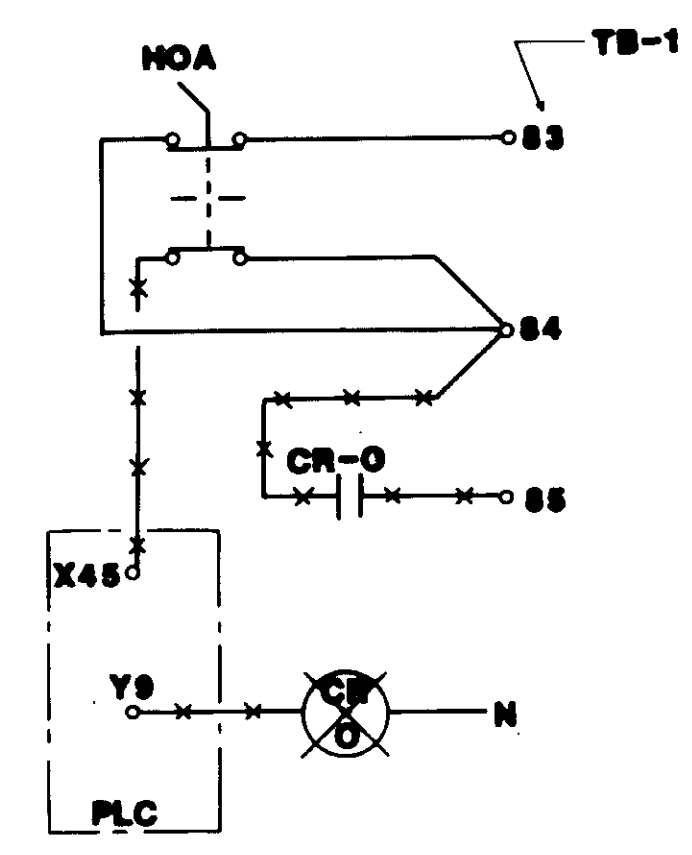
**CP-501 RAS W.W. #2**



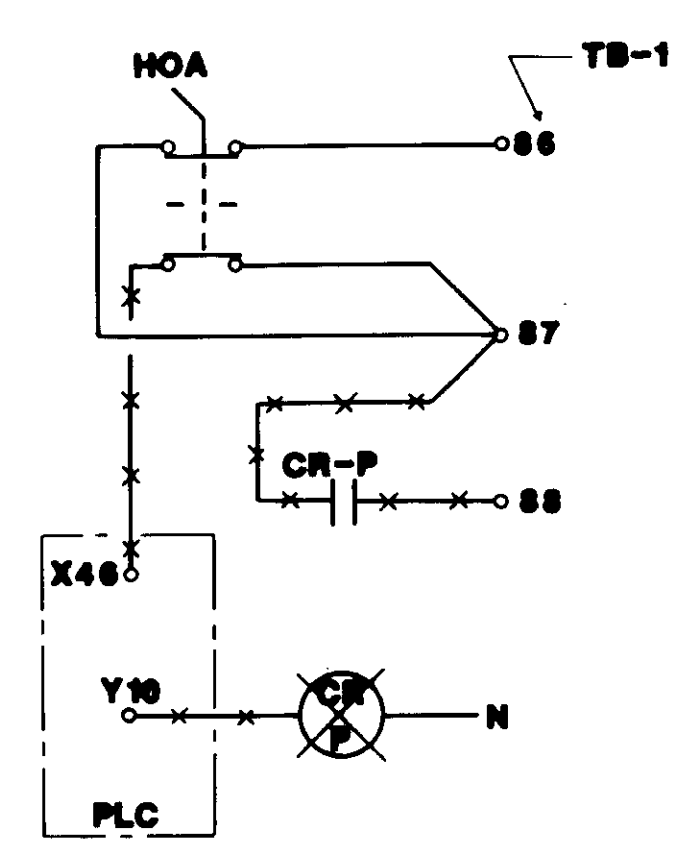
**CP-501/RAS VALVES CV-403 & CV-404**



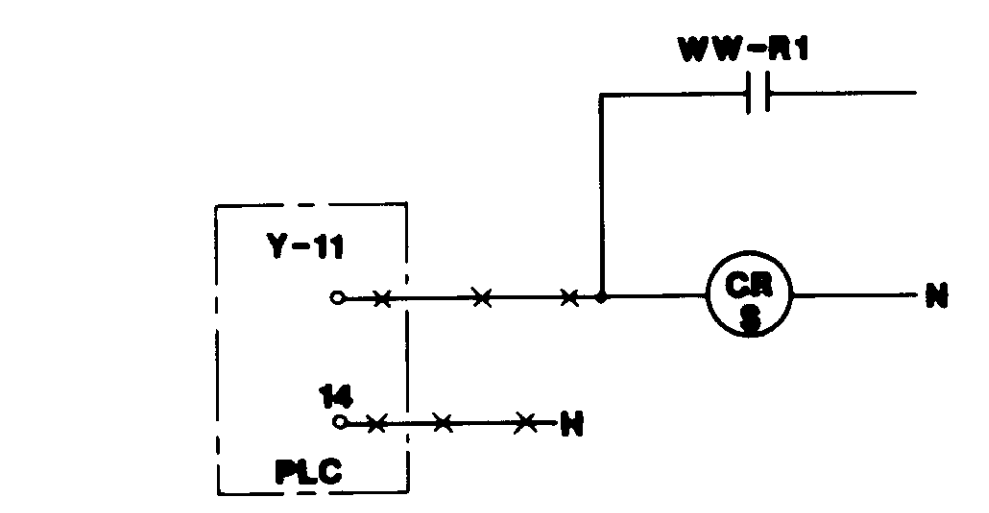
**SRT PUMP NO. 3**



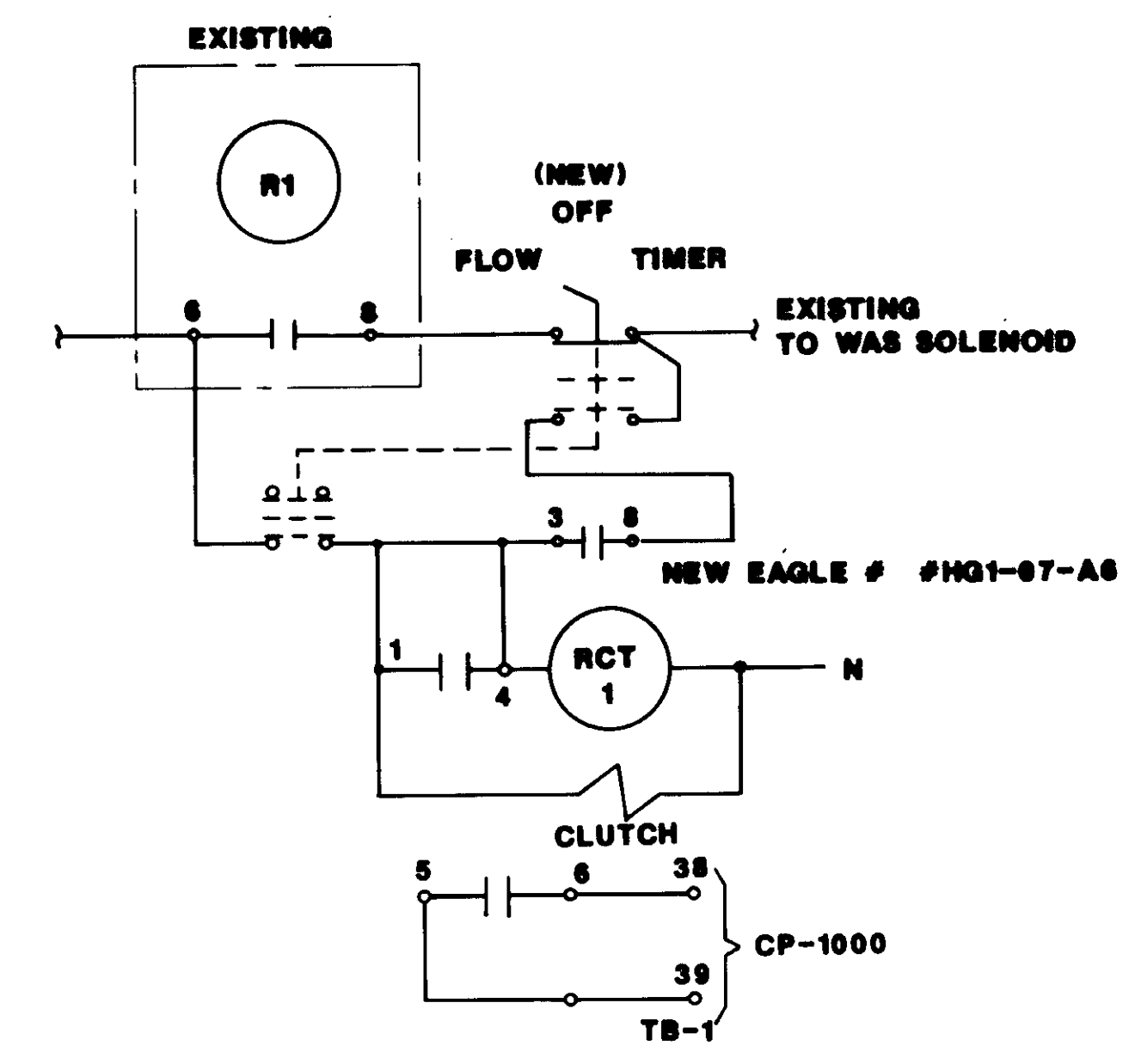
**SRT PUMP NO. 4**



**SCREENINGS PUMP**



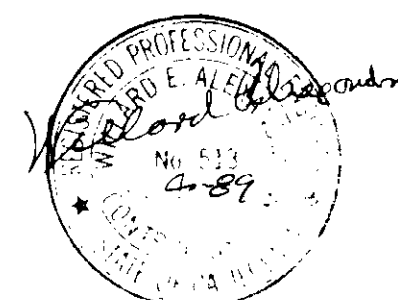
**PRI. SLUDGE & SKIMMINGS PUMP**  
W.W. HIGH LEVEL LOCK-OUT



**CP-500/WAS CONTROL**

**NOTE:**  
REFER TO O&M DWG# 4338-127

**04214**



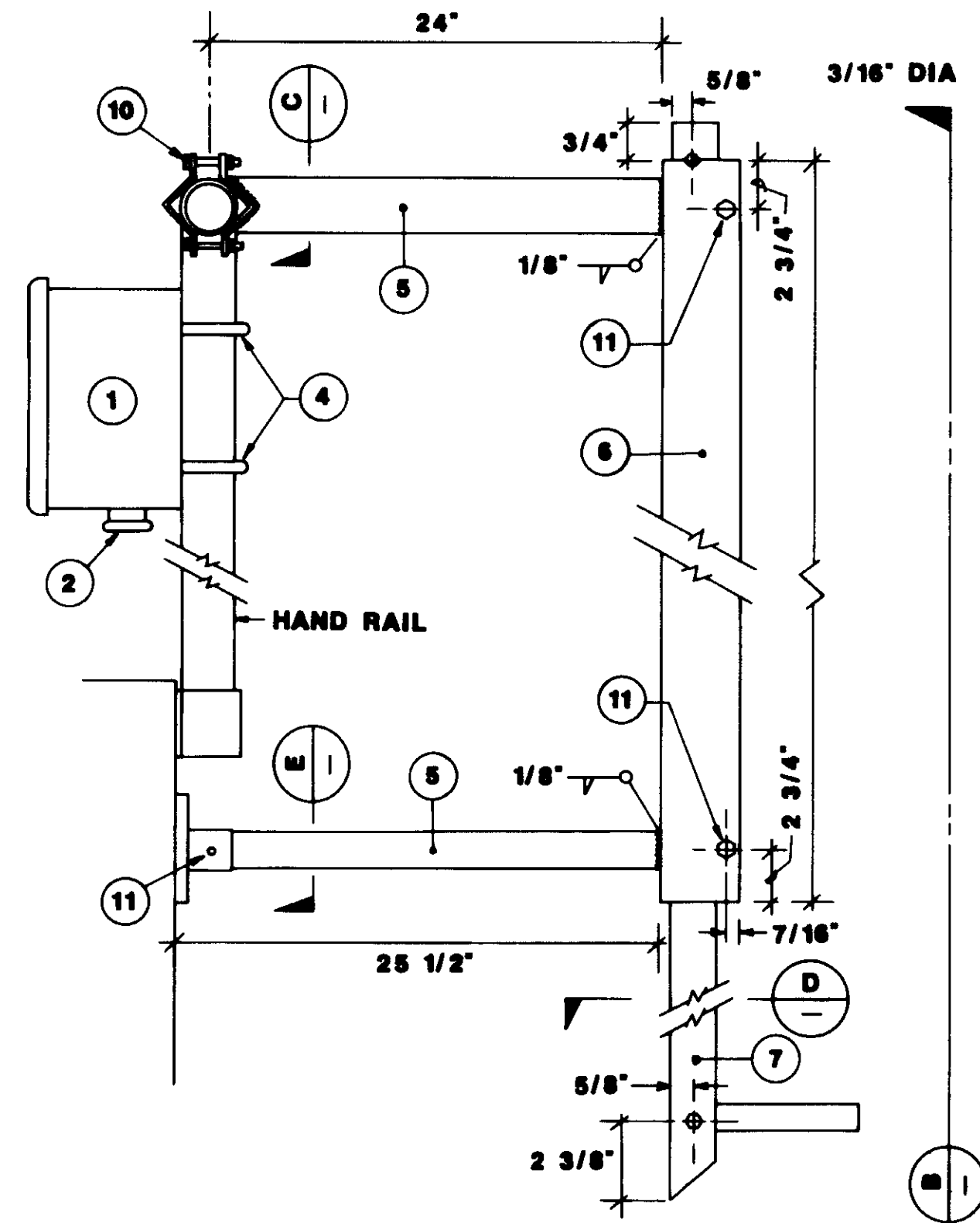
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	W.A. DESIGNED	SUBMITTED	14038
NONE	J.L. DRAWN	KATSURA CONSULTING ENGINEERS	R.C.E. NO. DATE
	W.A. CHECKED	<i>Willard Alexander</i>	6-30-87
		ALEXANDER ENGINEERS	R.C.E. NO. DATE

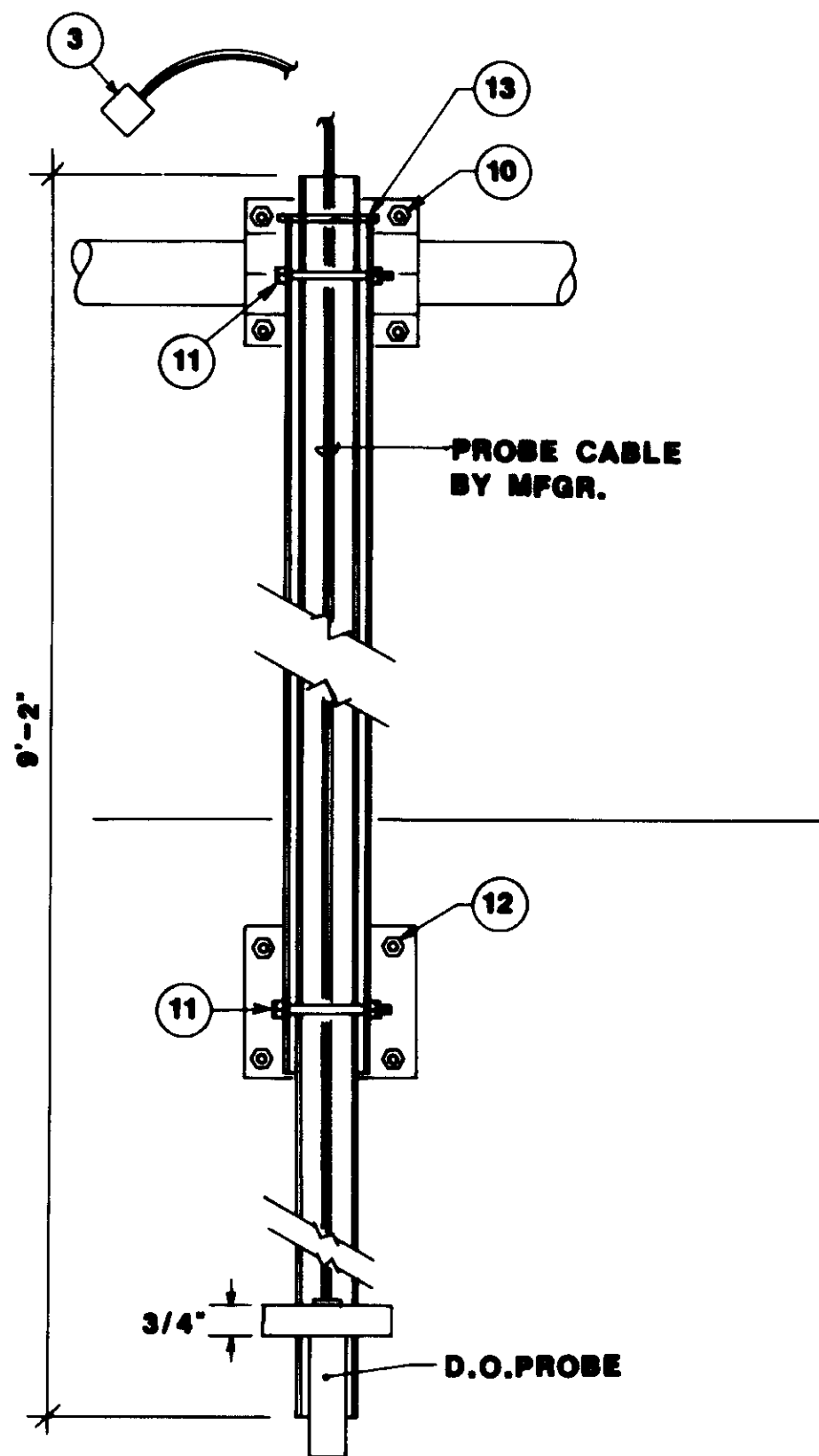
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**SCHEMATIC WIRING DIAGRAMS & DETAILS**

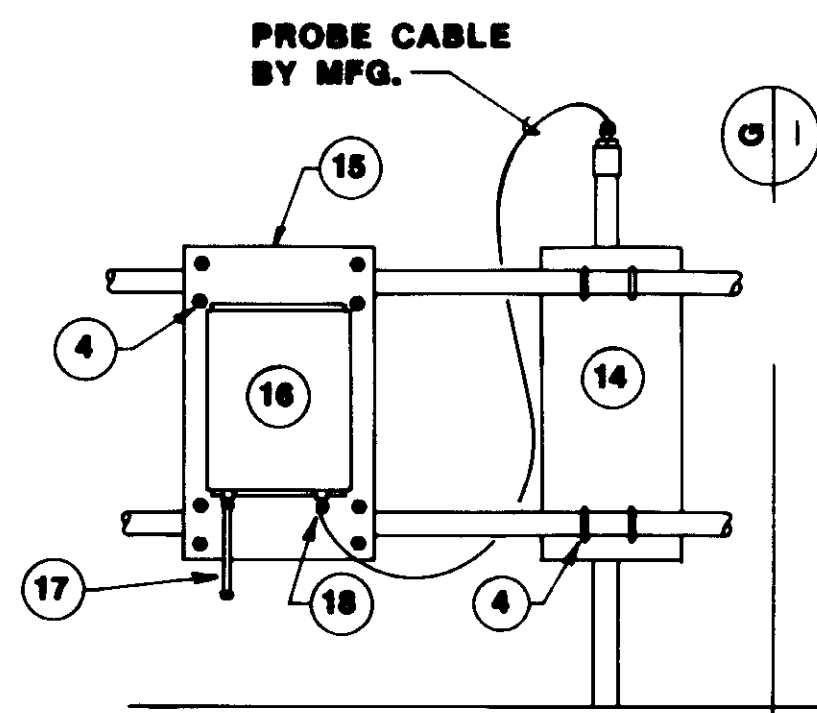
SHEET  
**I-17**



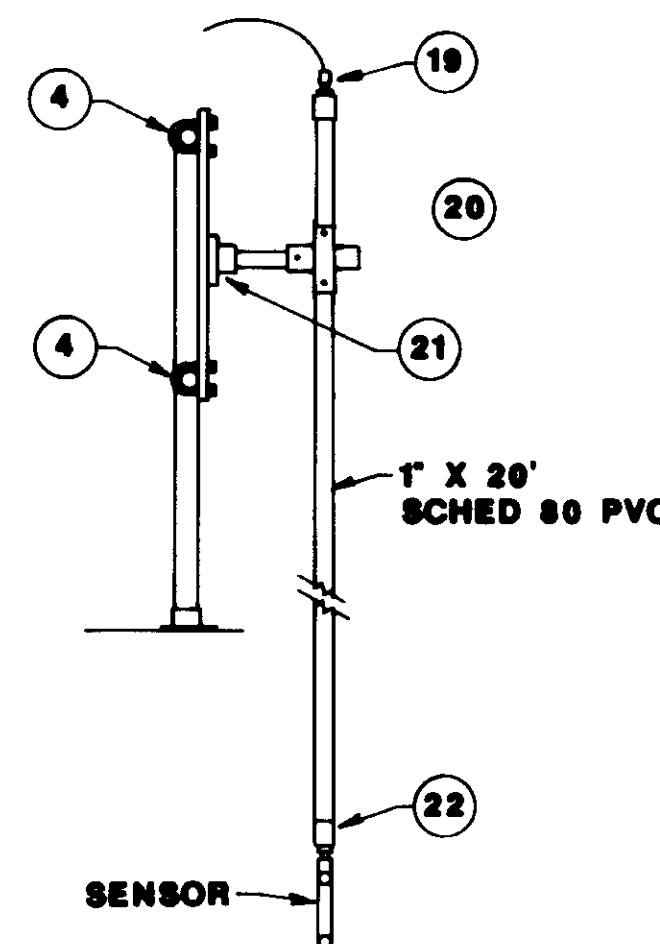
**D.O. PROBE DETAIL** **A**  
3' = 1'-0"



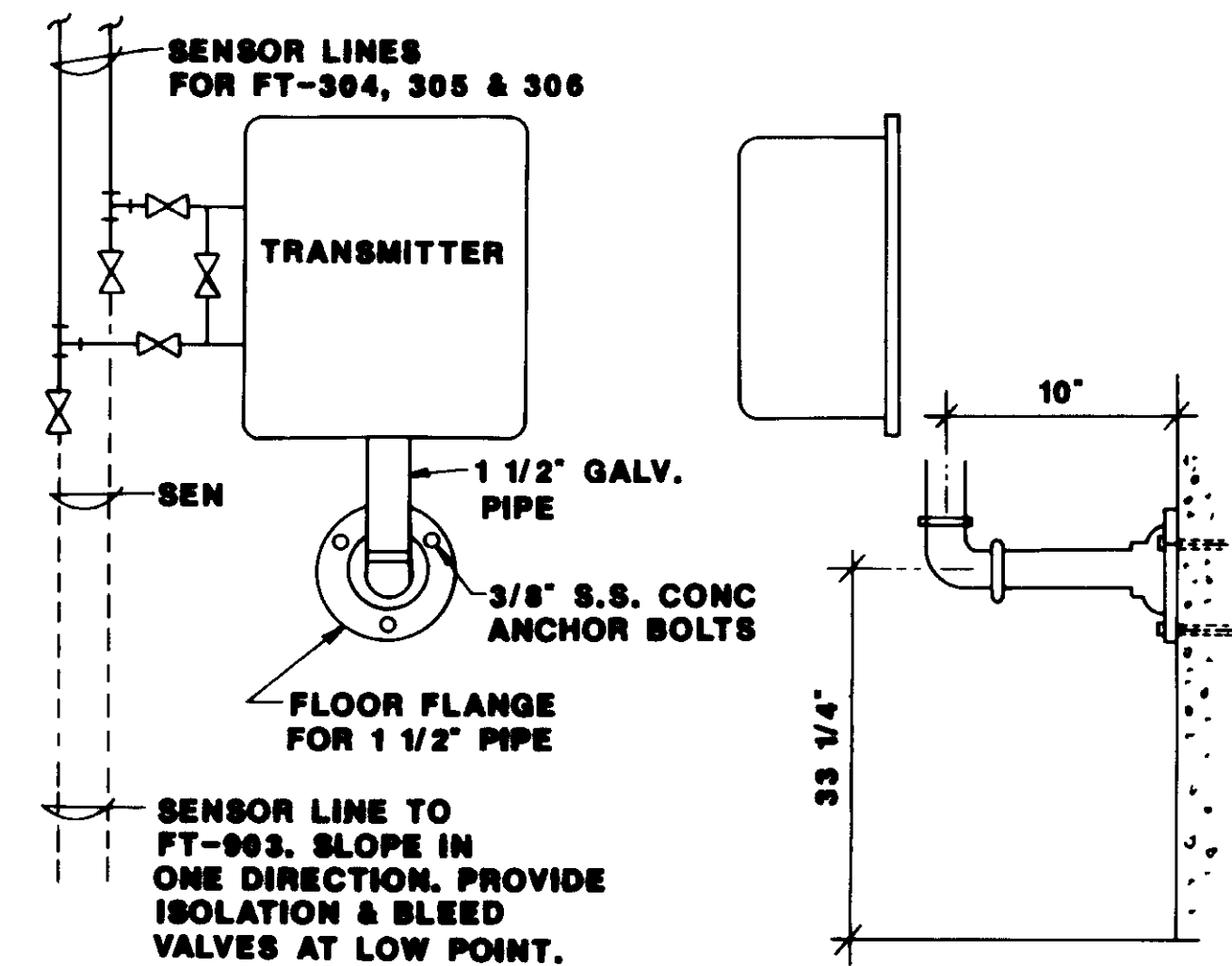
**ELEVATION DETAIL** **B**  
3' = 1'-0"



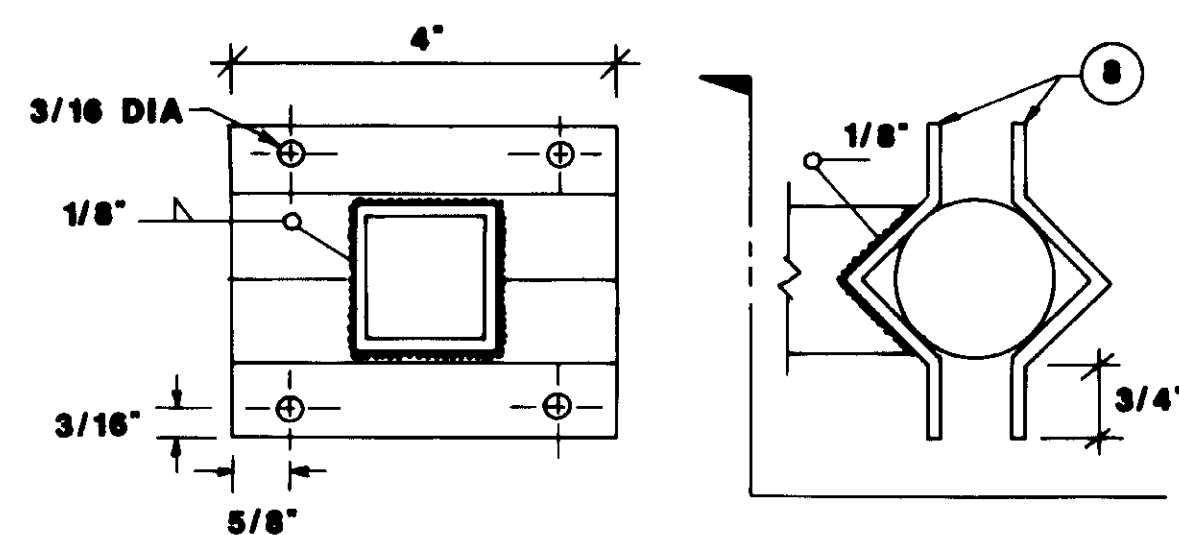
**SBD MOUNTING DETAIL** **F**  
3/4" = 1'-0"



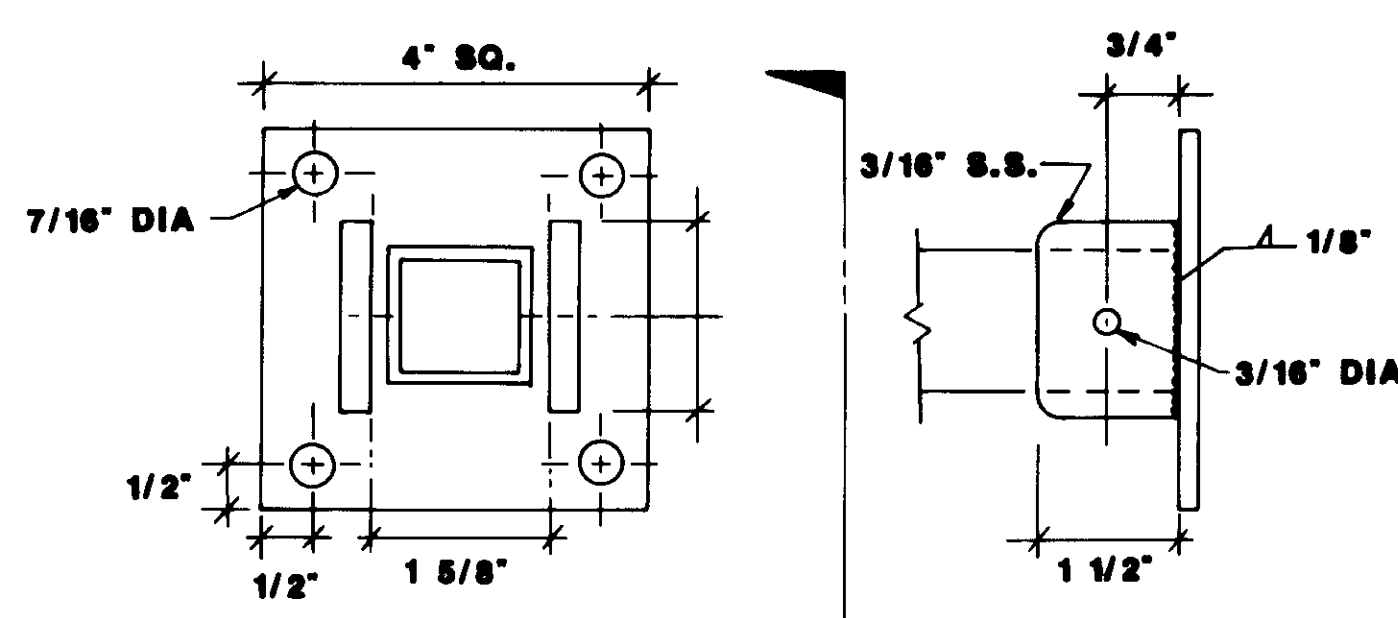
**ELEVATION DETAIL** **G**  
3/4" = 1'-0"



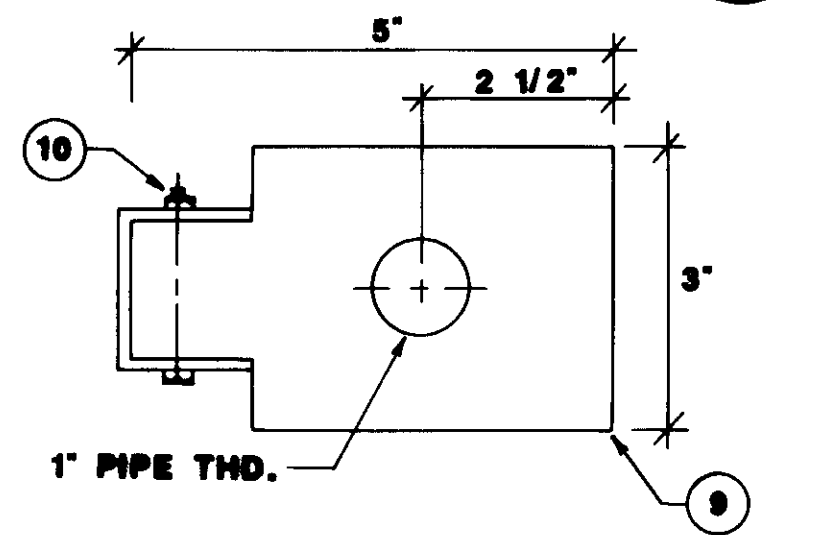
**FLOW TRANSMITTER MOUNTING DETAIL** **H**  
TYPICAL FOR FT-304, FT-305, FT-306 & FT-903



**SECTION** **C**  
HALF SIZE



**SECTION** **E**  
HALF SIZE



**SECTION** **D**  
HALF SIZE

**MATERIALS LEGEND**

- 1. 6" X 6" X 4"D FIBERGLASS J.BOX W/S.S. SCREWS
- 2. RECEPTABLE, CANNON SERIES MS 3102
- 3. PLUG, CANNON SERIES MS3106
- 4. 3/16" X 2" S.S. U-BOLTS
- 5. 1 1/2" X 1/8" SQ. TUBING, S.S.
- 6. 2" X 2" X 1/8" CHANNEL, S.S.
- 7. 1 1/4" X 1 3/4" X 1/8" CHANNEL, S.S.
- 8. 2" X 2" X 316" S.S. ANGLE, BENT TO SHAPE
- 9. PVC PROBE HOLDER
- 10. 1/4" X 2" S.S. BOLT W/S.S. LOCK WASHER
- 11. 1/4" X 2 1/2" S.S. BOLT W/S.S. LOCK WASHER
- 12. 3/8" S.S. CONC. ANCHOR BOLTS
- 13. 1/4" X 3" S.S. PIN, SHRINK FIT
- 14. 12" X 26" X 1/4" ALUMINUM PLATE
- 15. 16" X 26" X 1/4" ALUMINUM PLATE
- 16. SLUDGE BLANKET DETECTOR (SBD) ALARM UNIT
- 17. W.P. FLEX CONDUIT
- 18. W.P. SQUEEZE TYPE CONNECTOR
- 19. 1" COUPLING, 1" X 1/2" REDUCER & 1/2" W.P. SQUEEZE CONNECTOR
- 20. 1" ALUMINUM CROSS
- 21. 1" ALUMINUM FLANGE
- 22. 1" COUPLING & 1" X 3/4" REDUCER

04215

*Willard Alexander*  
4 89

REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
AS SHOWN

W.A.  
DESIGNED  
S.A.  
DRAWN  
CHECKED

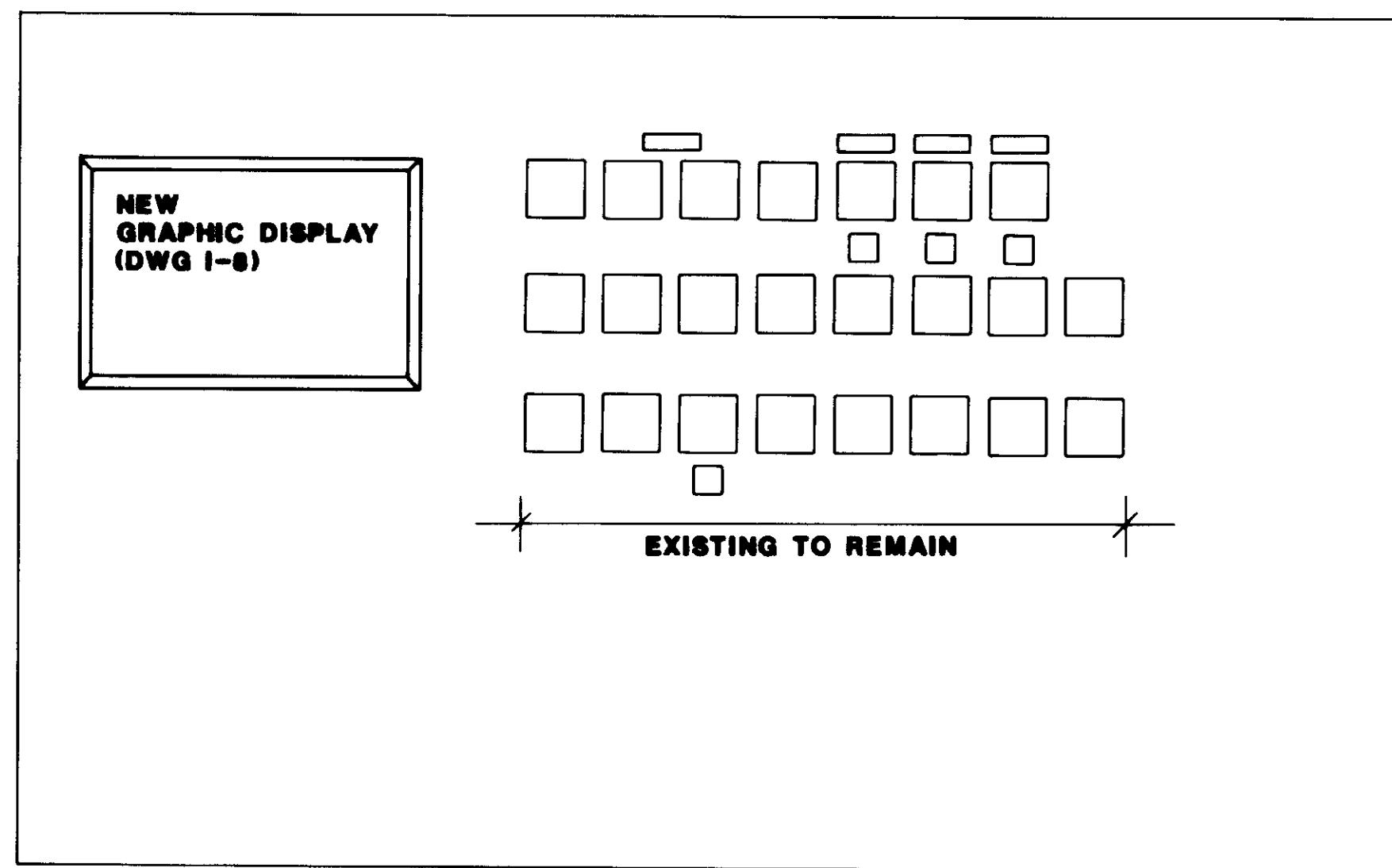
SUBMITTED 14026  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
*Willard Alexander* 613 6-30-87  
ALEXANDER ENGINEERS R.C.S.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

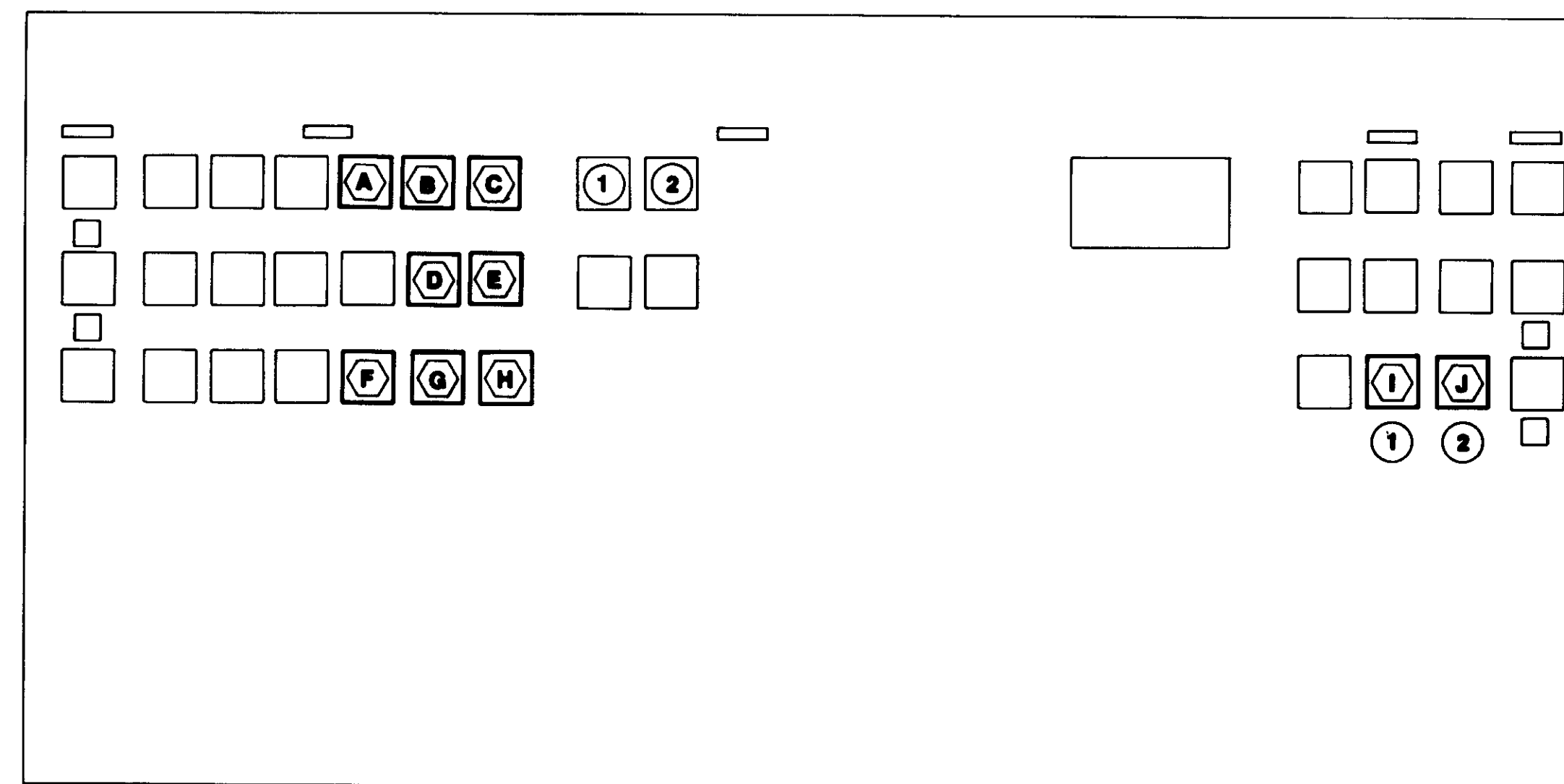
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
INC. DETAILS & SECTIONS

SHEET  
I-18

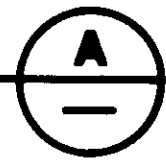




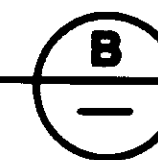
- A. FIR-304A/2PEN A.T. #4 AIR/DO
- B. FIR-305/2PEN A.T. #5 AIR/DO
- C. FIR-306/2PEN A.T. #6 AIR/DO
- D. FIR-207 RAS A.T. #4
- E. FIR-208 RAS A.T. #4
- F. FIR-209 RAS A.T. #4
- G. FIR-210 RAS A.T. #5
- H. FIR-211 RAS A.T. #6
- I. FIR-603 AIR DIG V
- J. FIR-604 AIR DIG VI



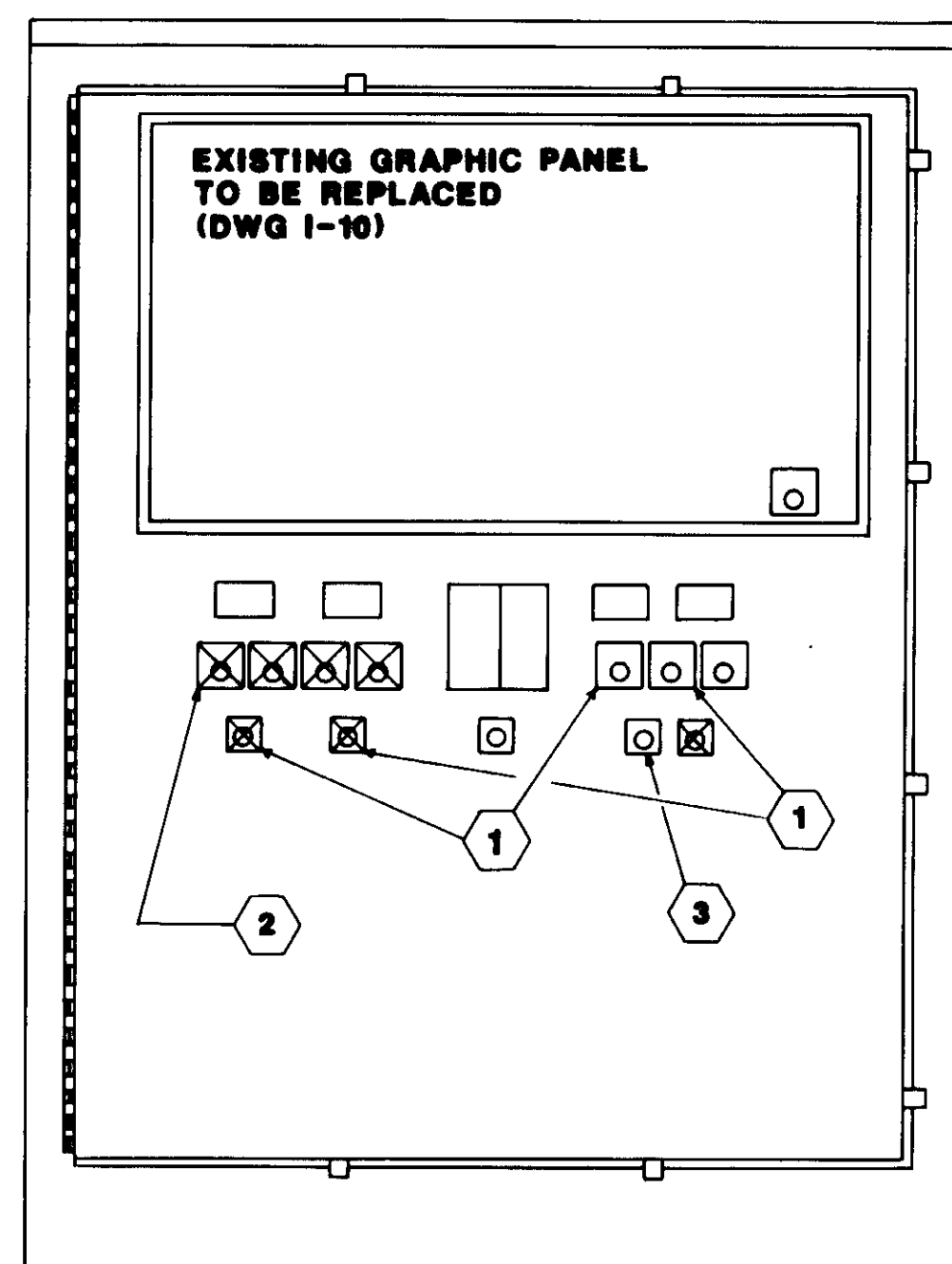
**EXISTING PANEL MIP-A**  
3/4" = 1'-0"



**EXISTING PANEL MIP-B**  
3/4" = 1'-0"

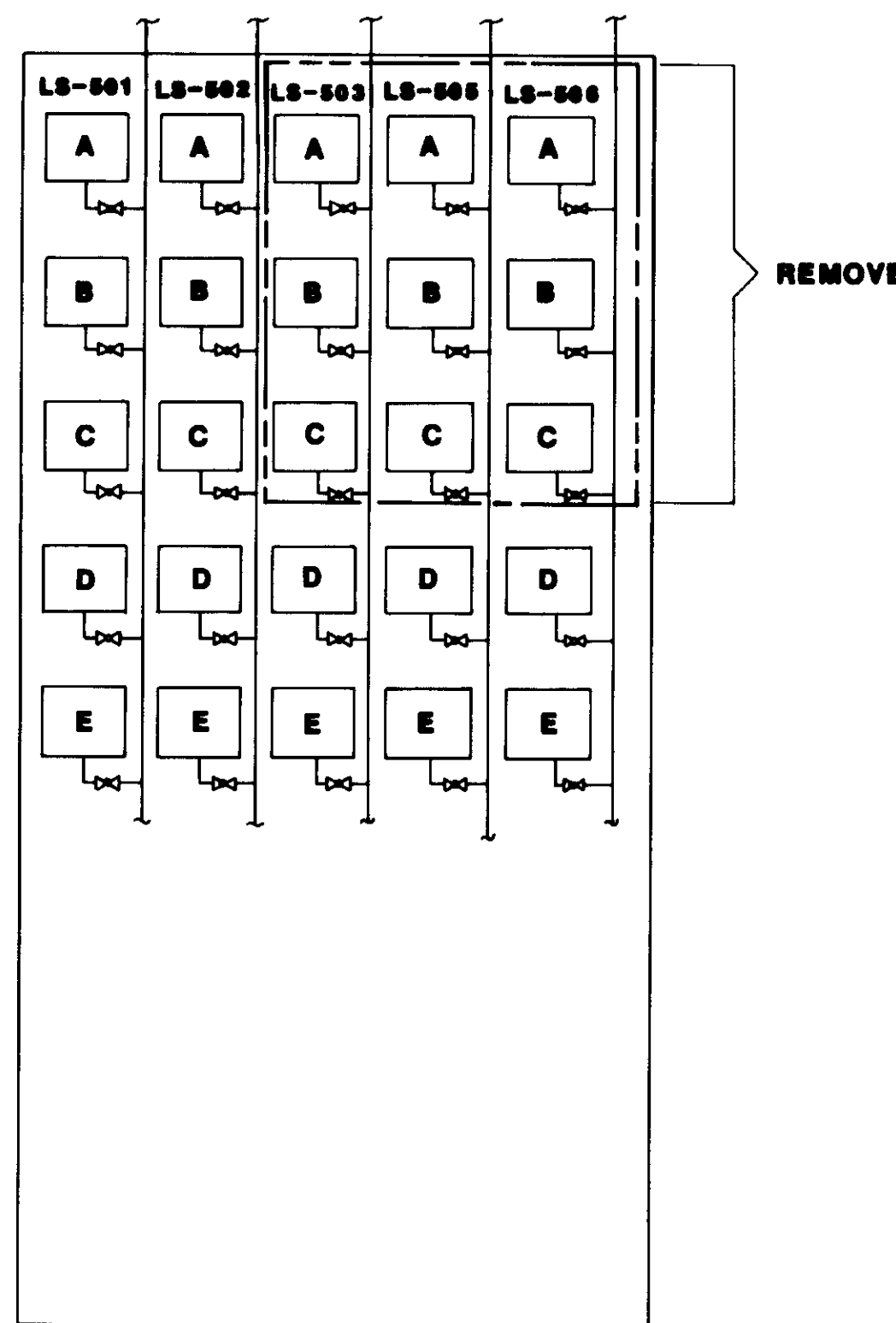
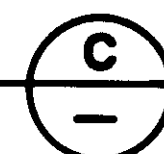


- ① RECONNECT EXISTING CIRCUIT TO I
- ② RECONNECT EXISTING CIRCUIT TO J

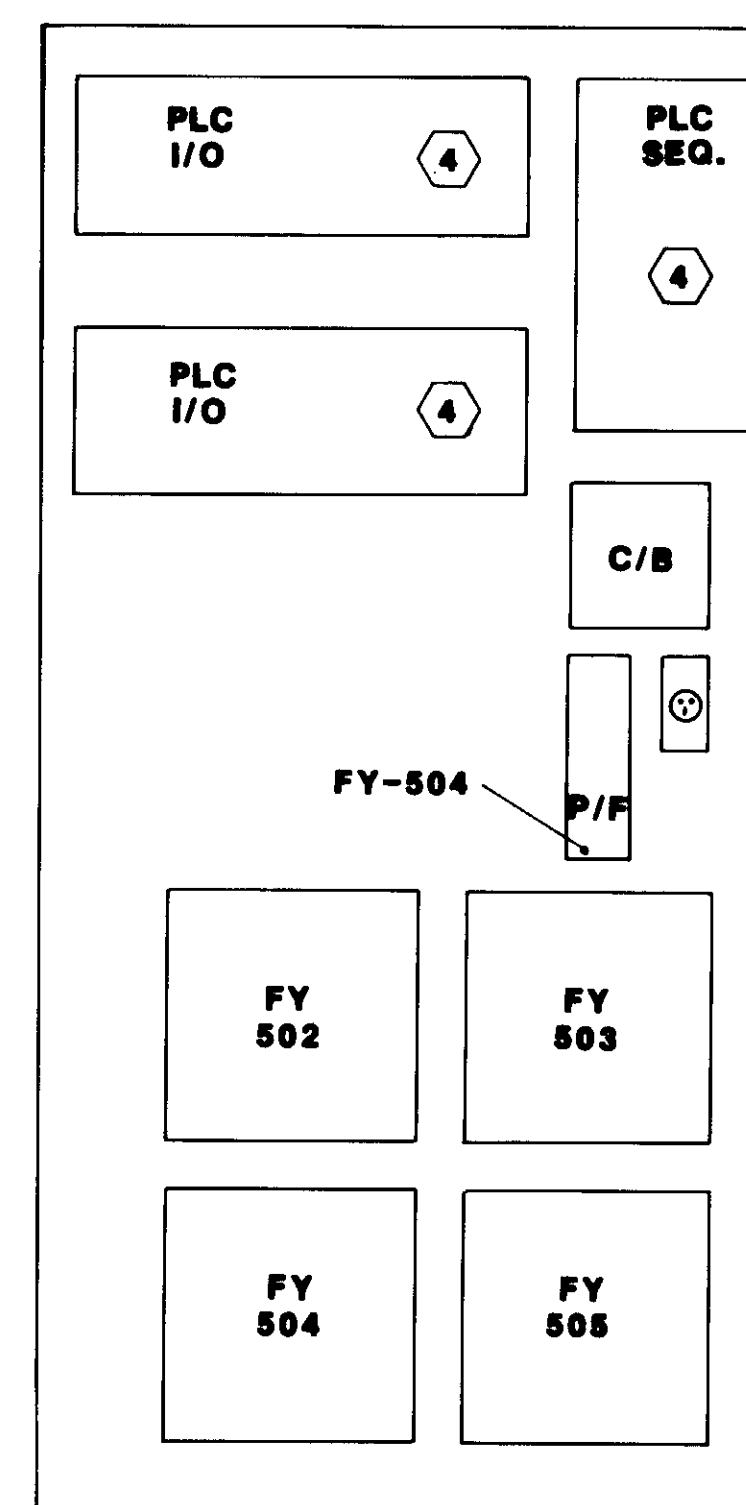
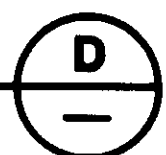


- ① RELOCATE HOA SWITCHES & NAMEPLATES.
- ② REMOVE DEVICES & INSTALL COVER PLATES.
- ③ REUSE FOR "WAS CONTROL SELECTOR".
- ④ REMOVE INTACT & DELIVER TO DISTRICT.
- ⑤ LAH, REUSE LS-505B.
- ⑥ LAL, REUSE LS-505C.

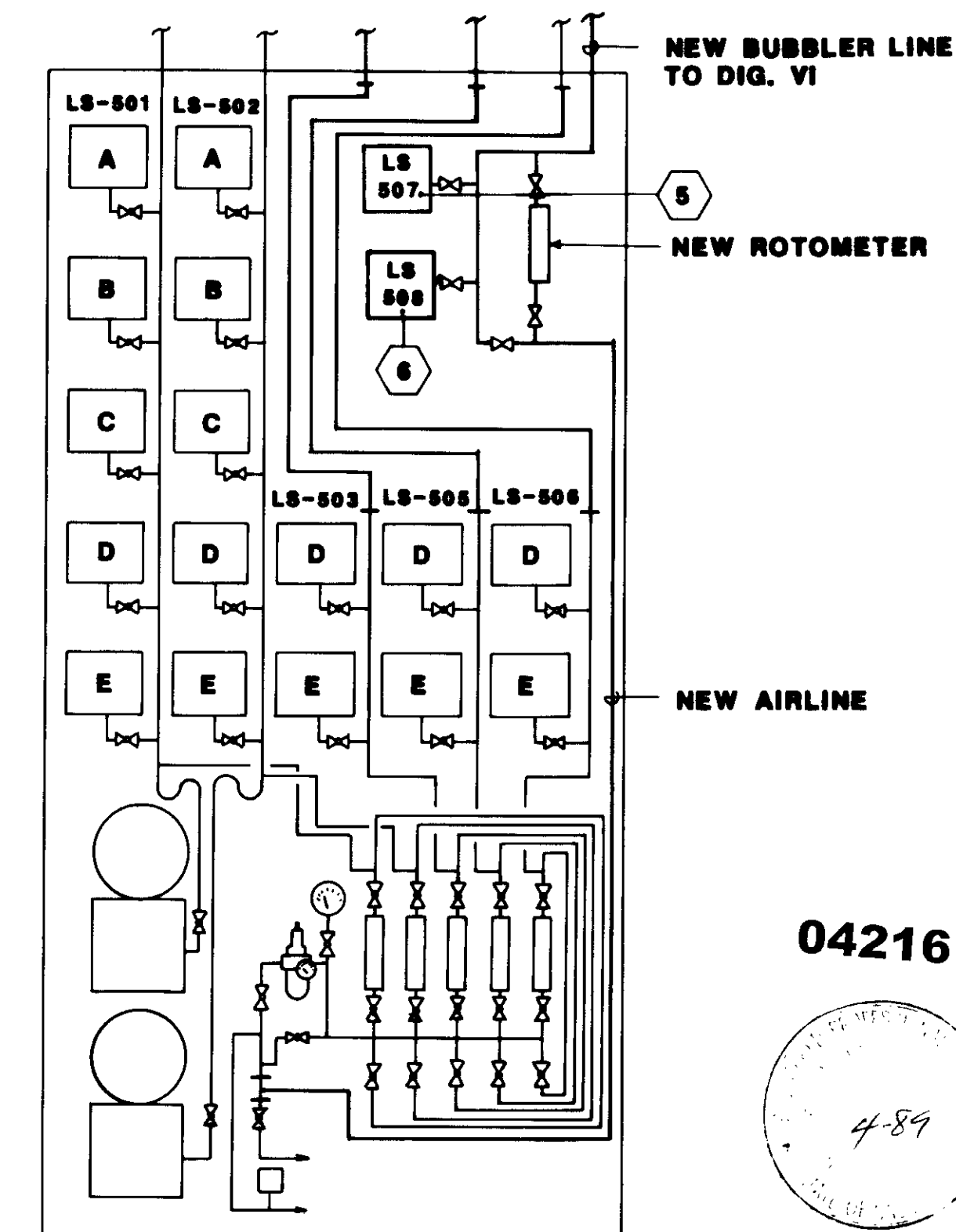
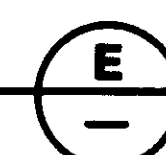
**EXISTING CP-500**  
1" = 1'-0"



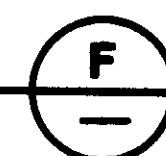
**CP-500-LS REVISIONS**



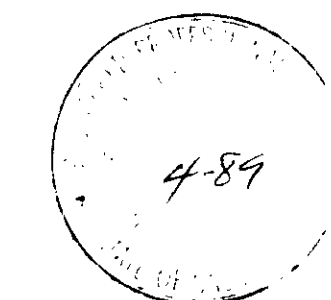
**CP-500-PLC REMOVAL**



**CP-500-BUBBLER SENSOR REVISIONS**



04216



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:  
AS SHOWN

W.A.  
DESIGNED  
J.L.  
DRAWN  
W.A.  
CHECKED

SUBMITTED 14028  
KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE  
*Willard Alexander* 513 6-20-87  
ALEXANDER ENGINEERS R.C.S.E. NO. DATE

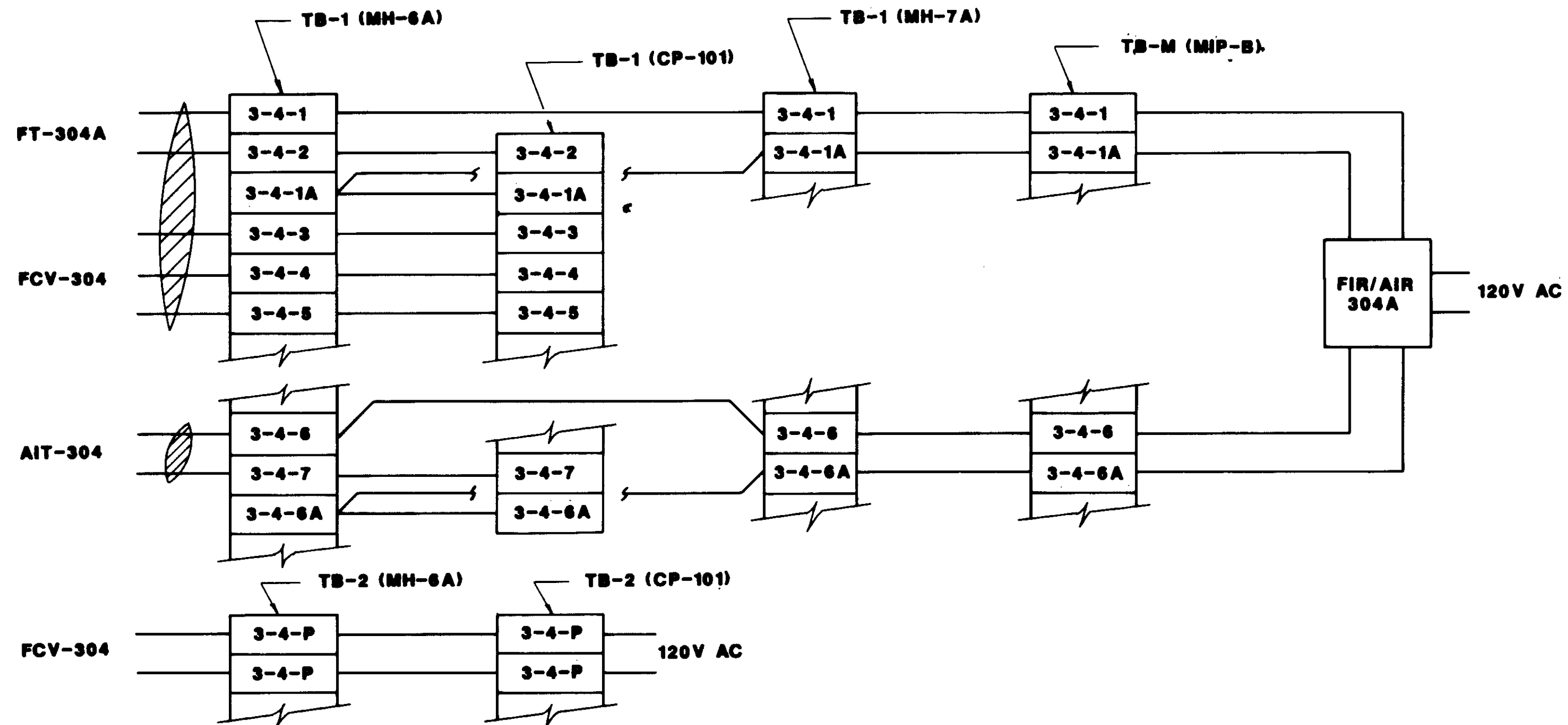
**KALEX ENGINEERS**

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA WATER RECLAMATION FACILITY EXPANSION III**

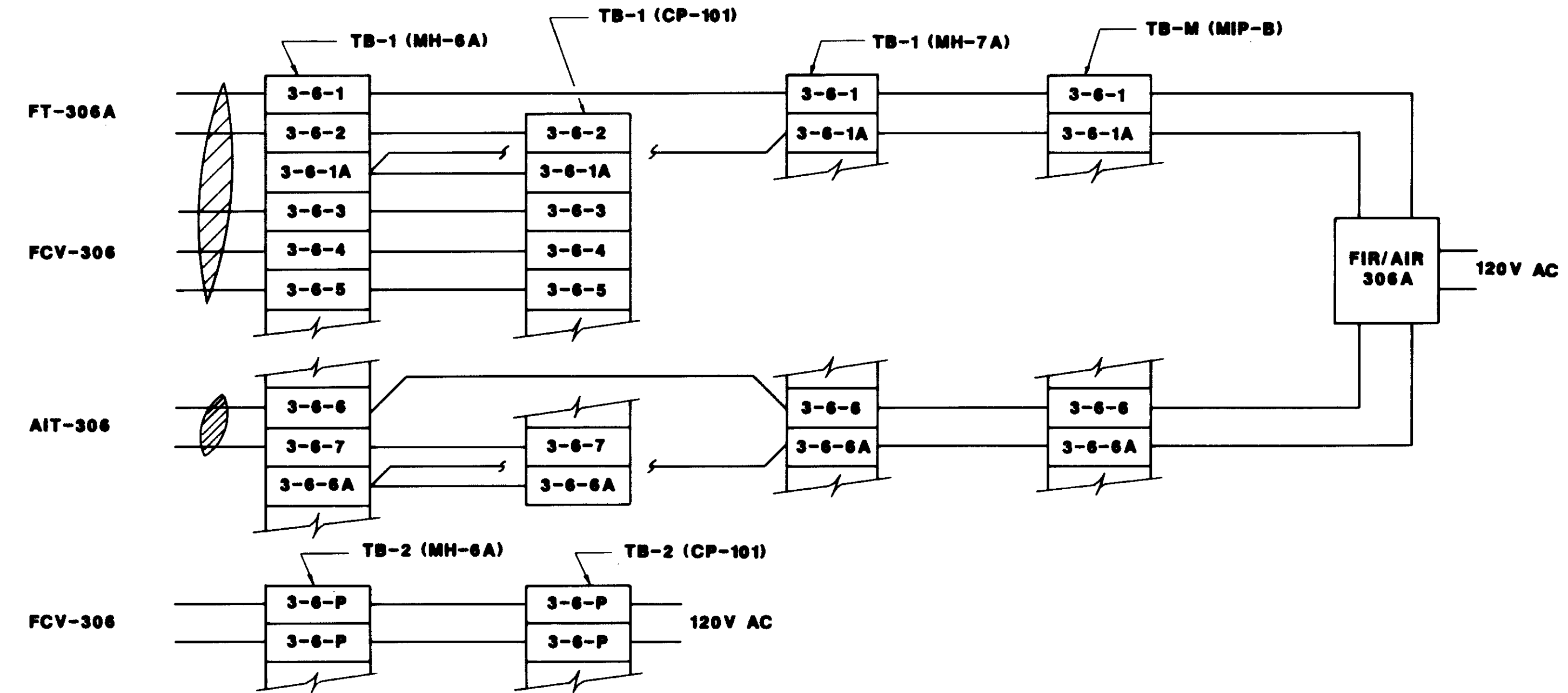
**PANEL ELEVATIONS & DETAILS**

SHEET  
1-19



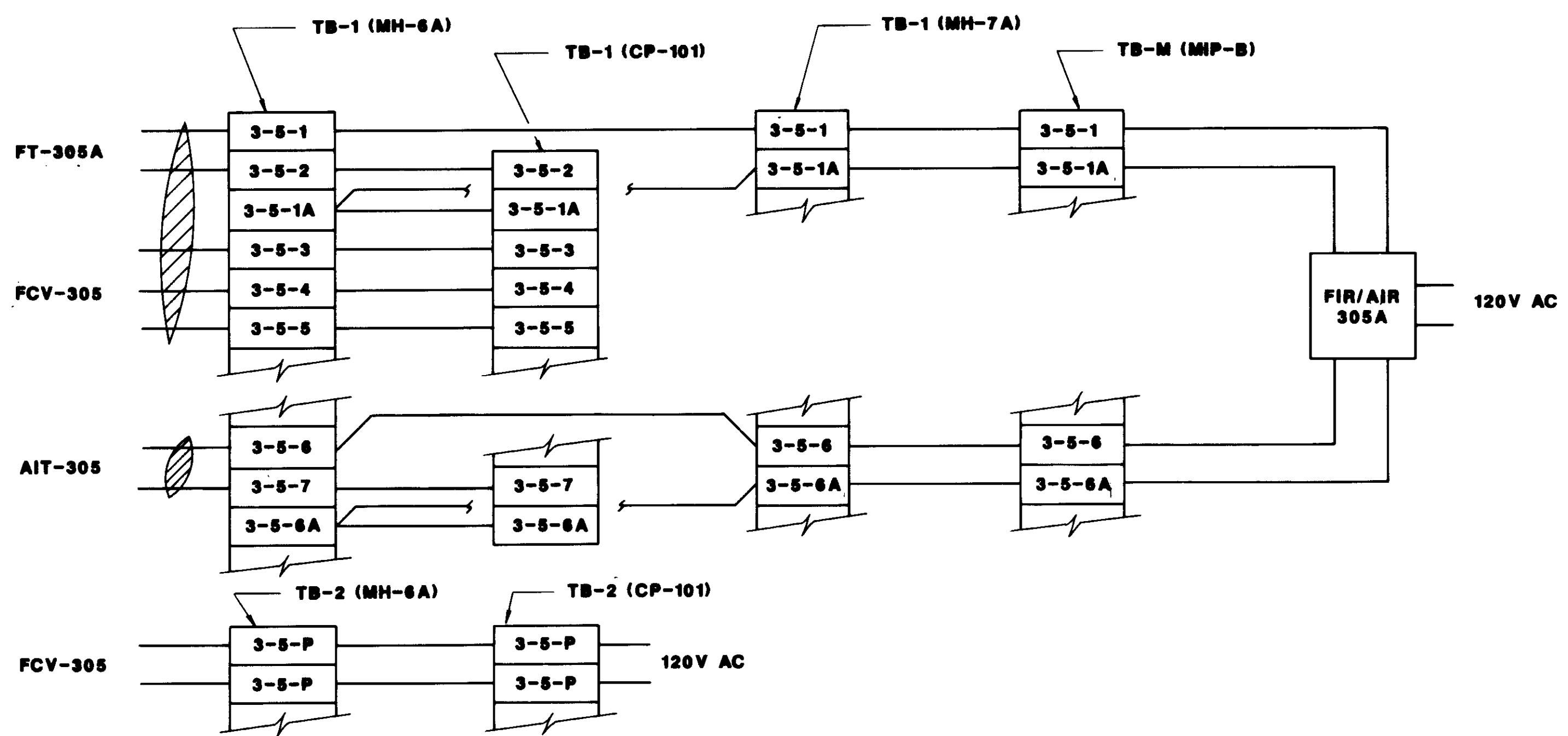
AERATION TANK NO. 4

1



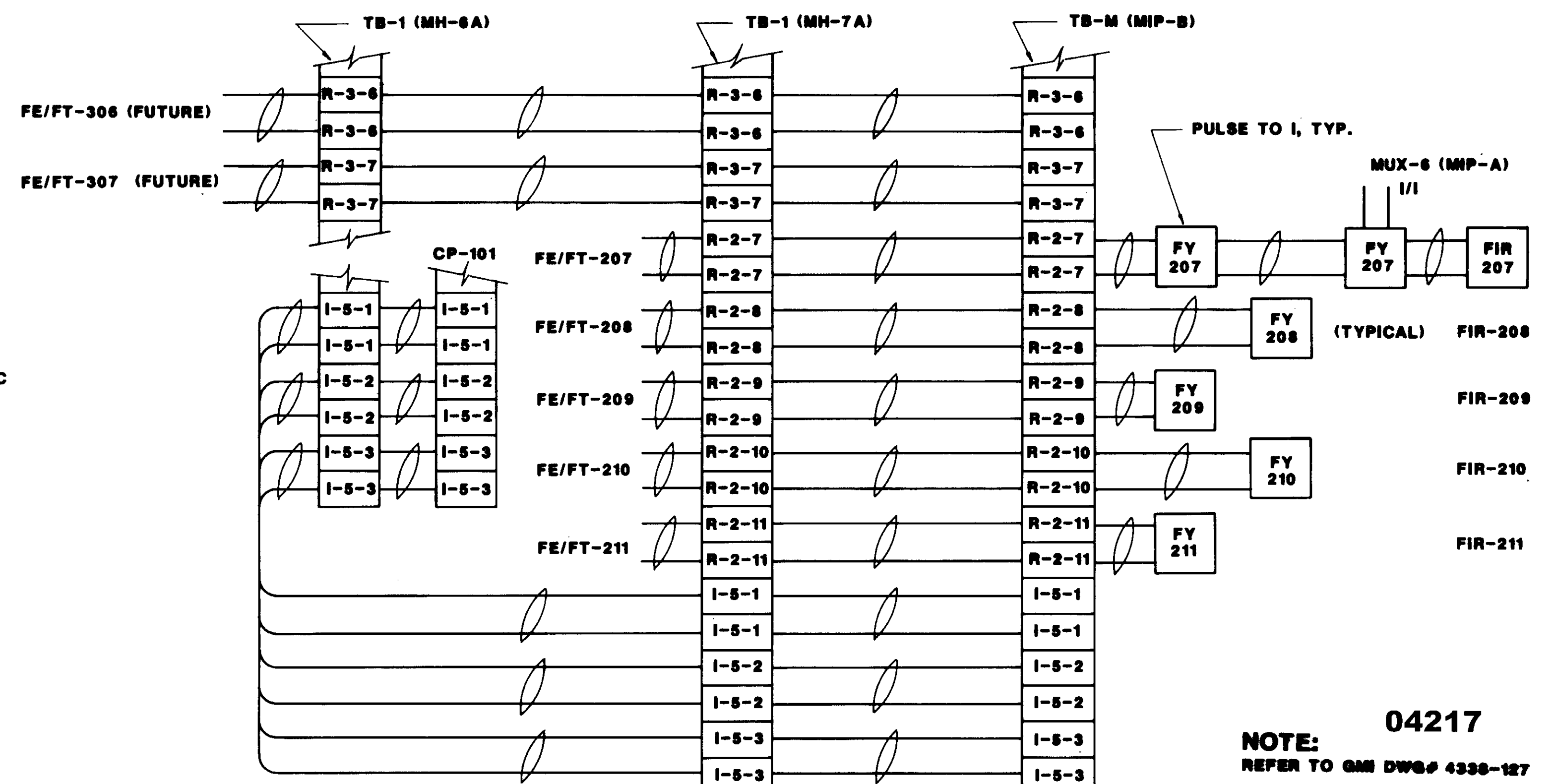
AERATION TANK NO. 6

3



AERATION TANK NO. 5

2



TERMINAL CONNECTION DIAGRAM

4

NOTE: 04217  
REFER TO GMM DWG# 4338-127



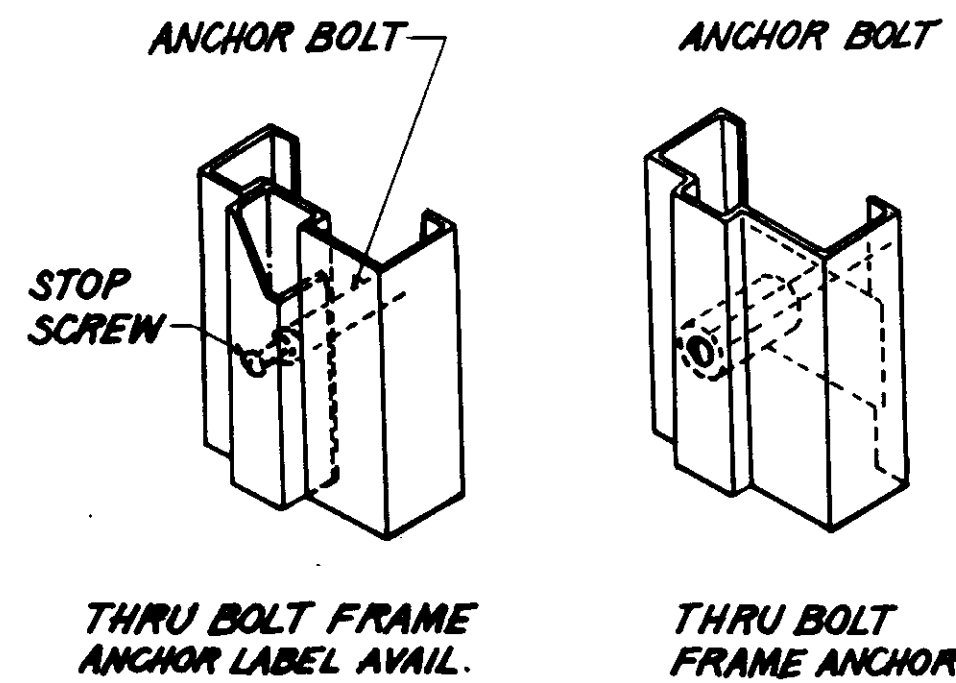
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE: NONE	W.A. DESIGNED J.L. DRAWN W.A. CHECKED	SUBMITTED 14038 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE <i>Willard Alexander</i> 613 6-30-87 ALEXANDER ENGINEERS R.C.E. NO. DATE
----------------	--	---

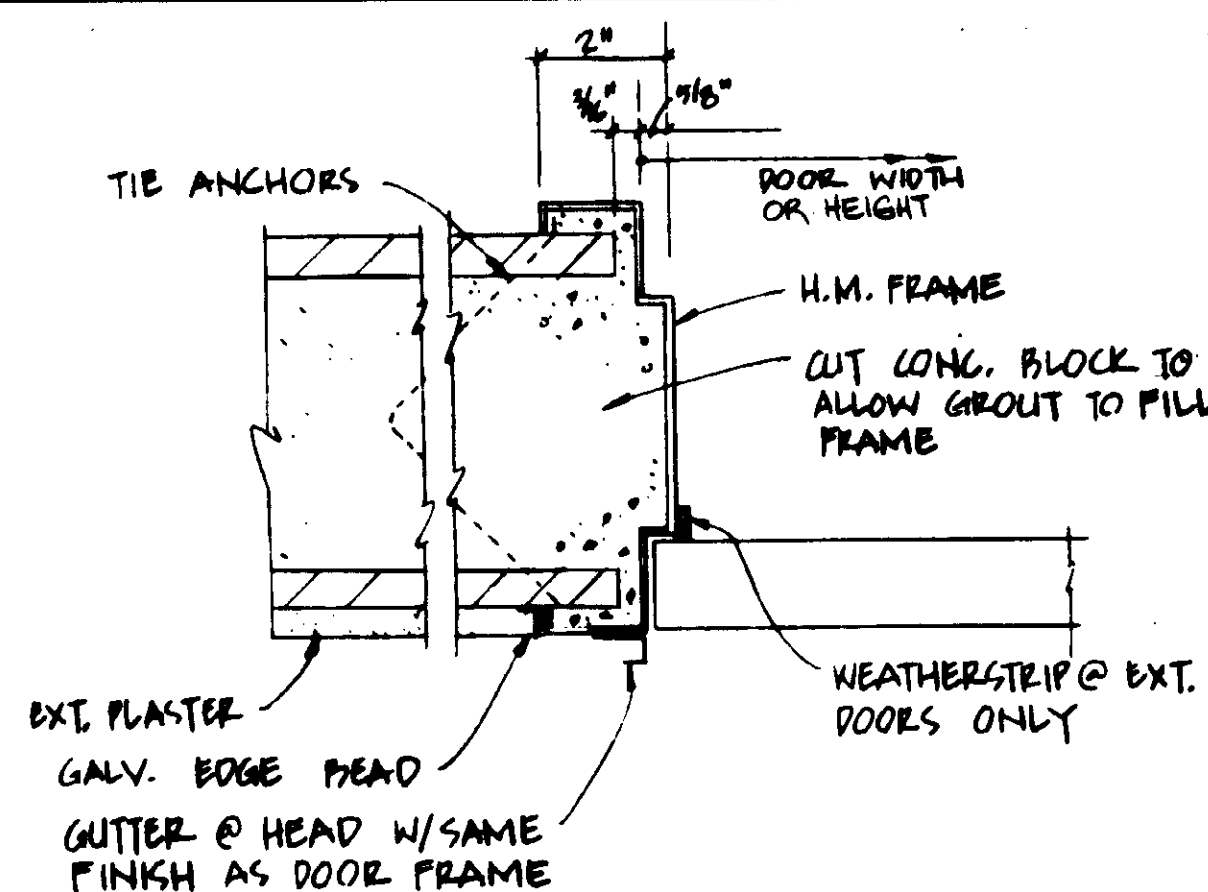
**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
WIRING CONNECTION DIAGRAMS

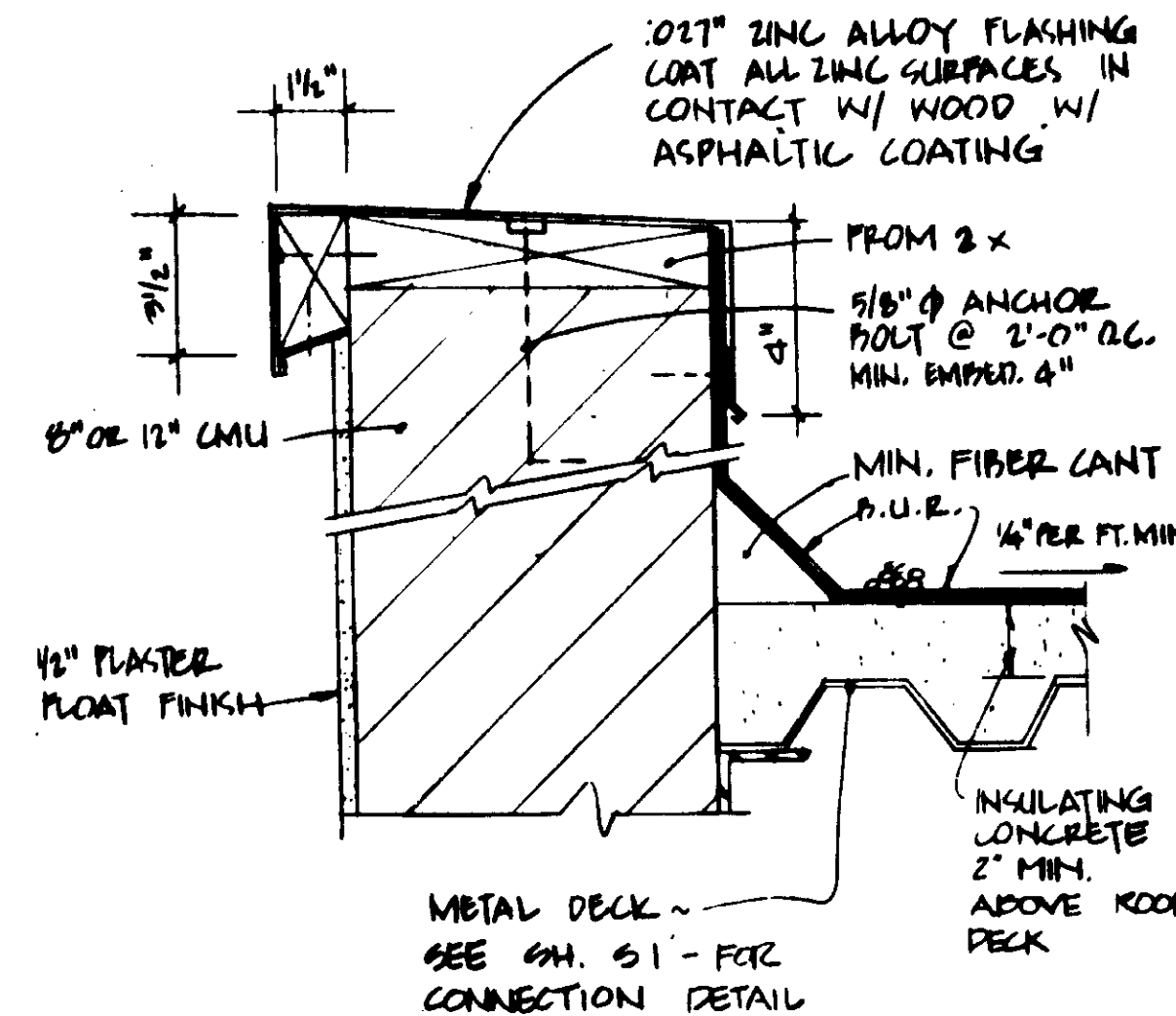
SHEET  
I-20



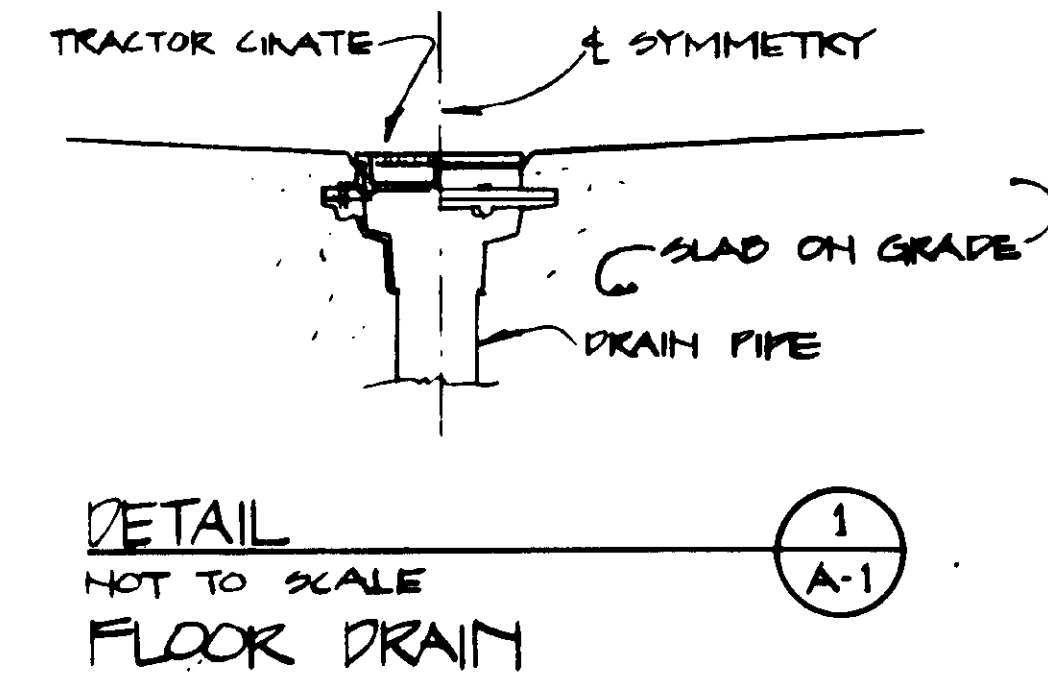
**DETAIL RFI-54A**  
NOT TO SCALE



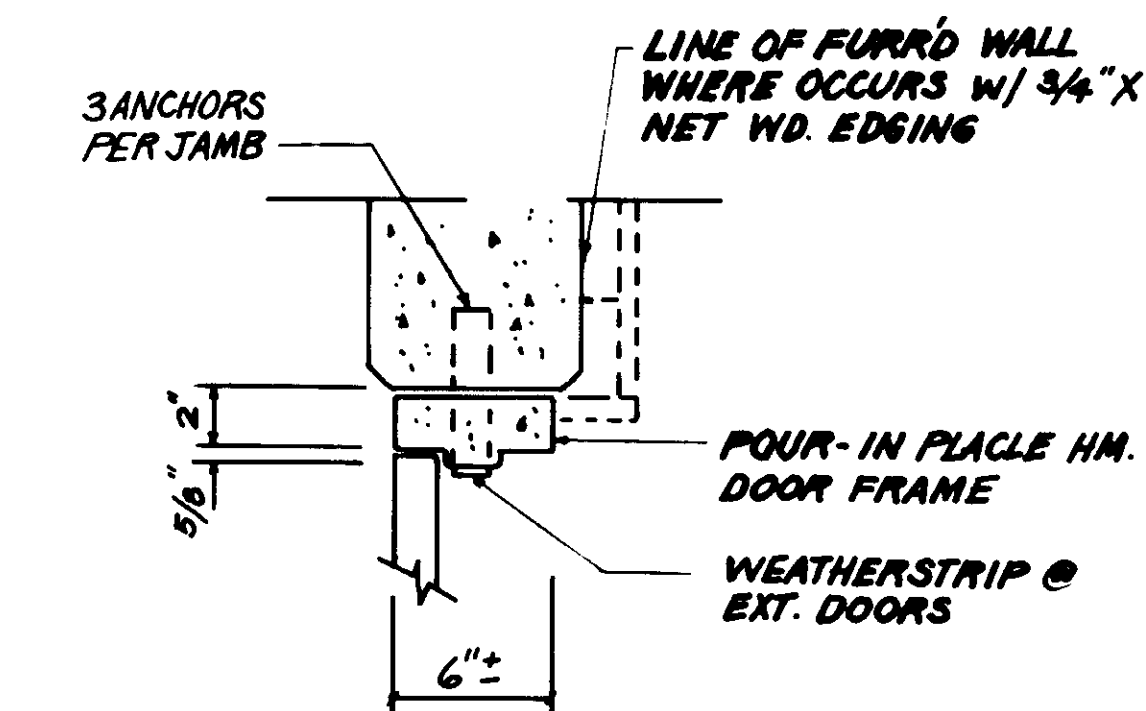
**DETAIL 11**  
3" = 1'-0" A-1  
H.M. DOOR FRAME



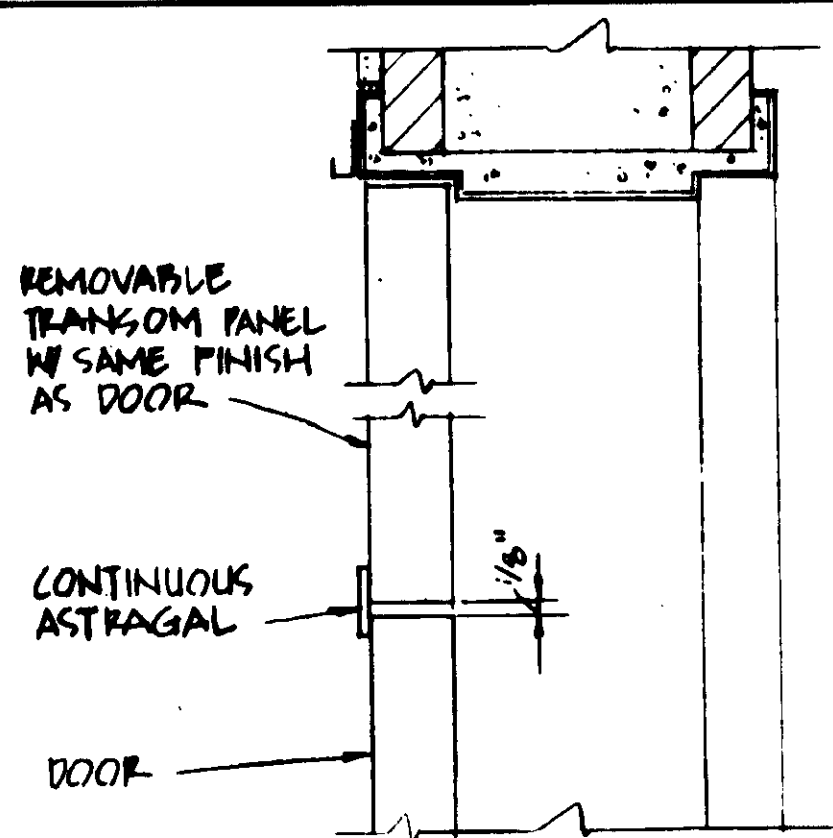
**DETAIL 5**  
NOT TO SCALE  
ROOF DRAIN



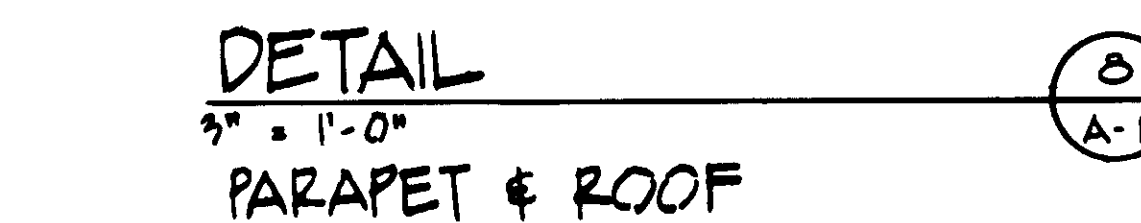
**DETAIL 1**  
NOT TO SCALE  
FLOOR DRAIN



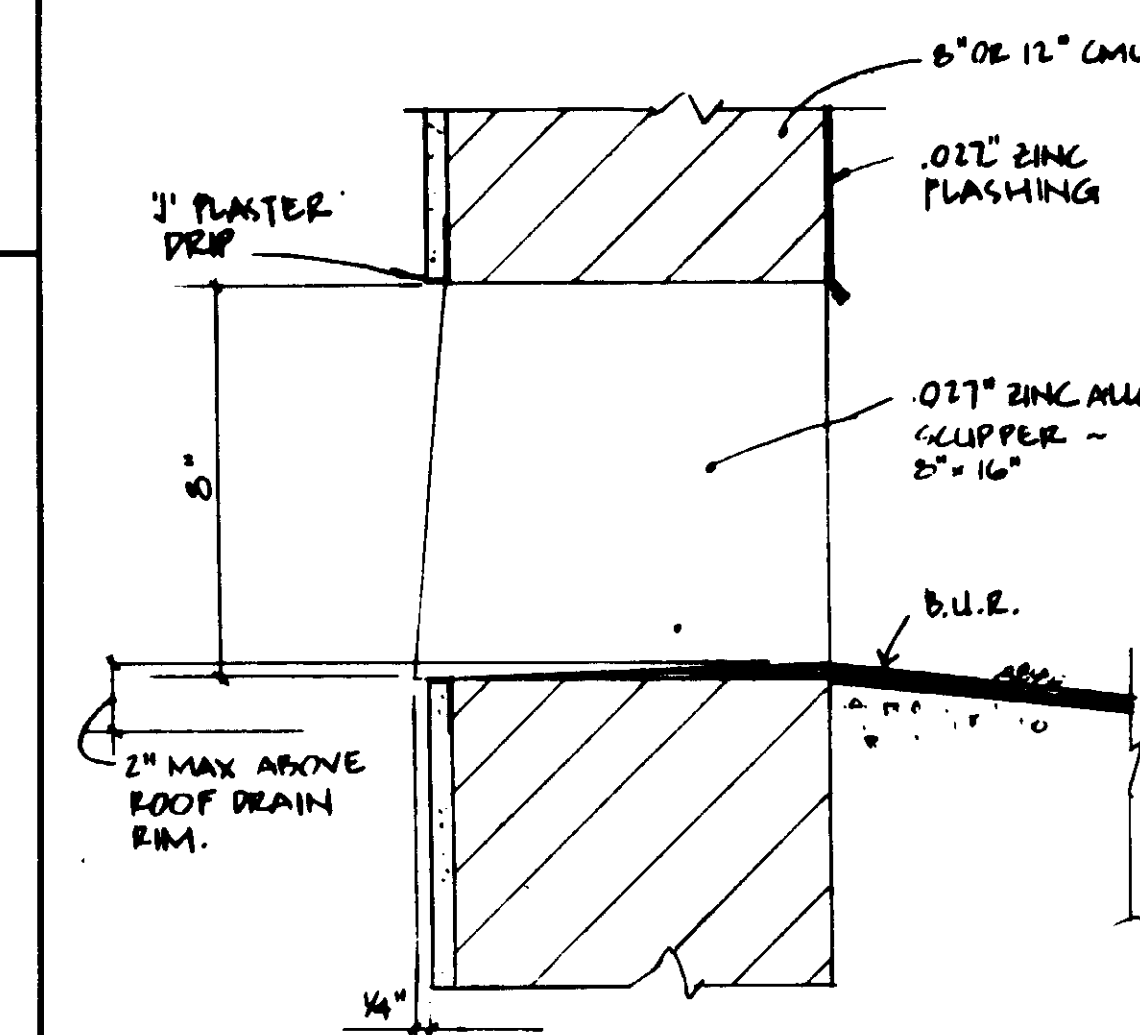
**DOOR FRAME FOR CONCRETE WALLS DET. SKA-1**  
NOT TO SCALE



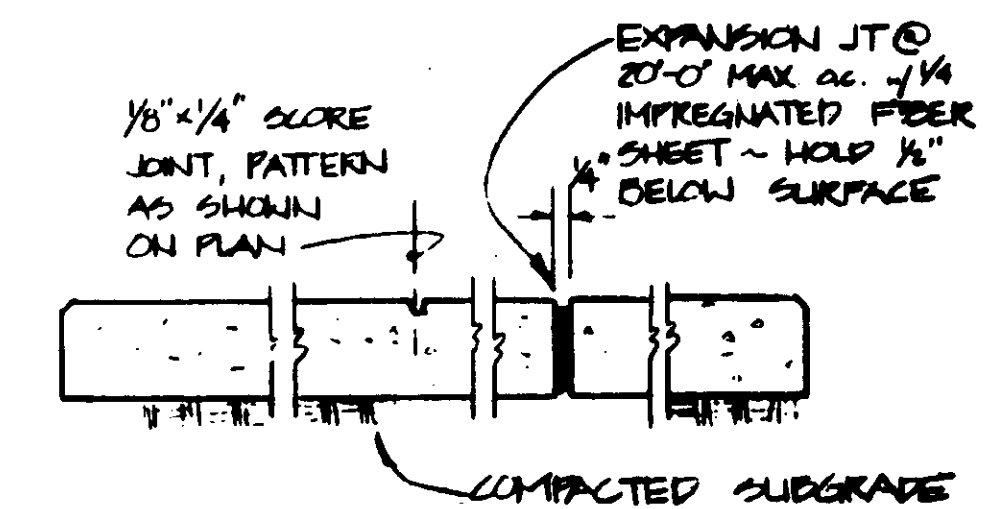
**DETAIL 12**  
3" = 1'-0" A-1  
REMOVABLE TRANSOM



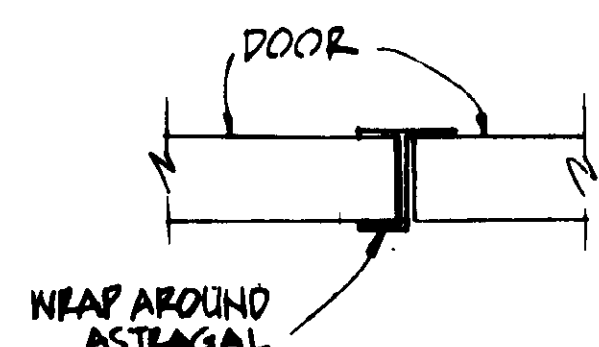
**DETAIL 8**  
3" = 1'-0" A-1  
PARAPET & ROOF



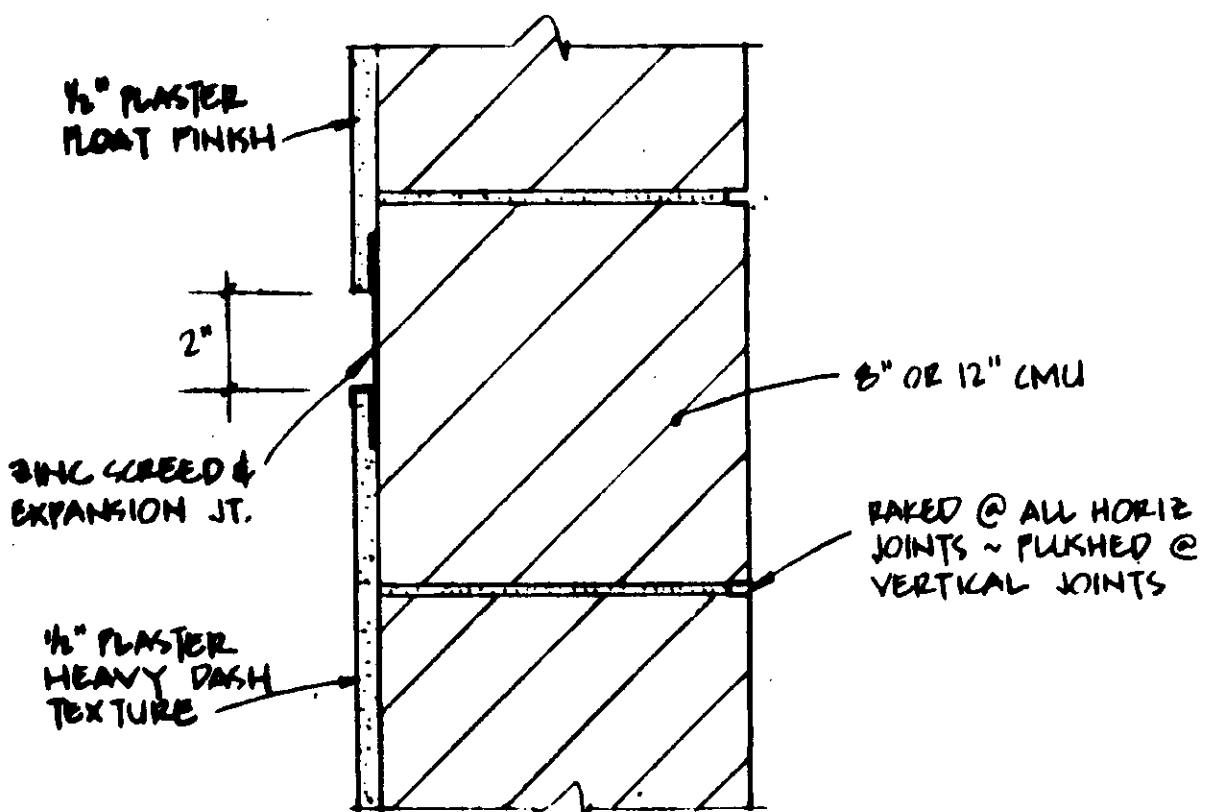
**DETAIL 6**  
3" = 1'-0" A-1  
OVERFLOW SCUPPER



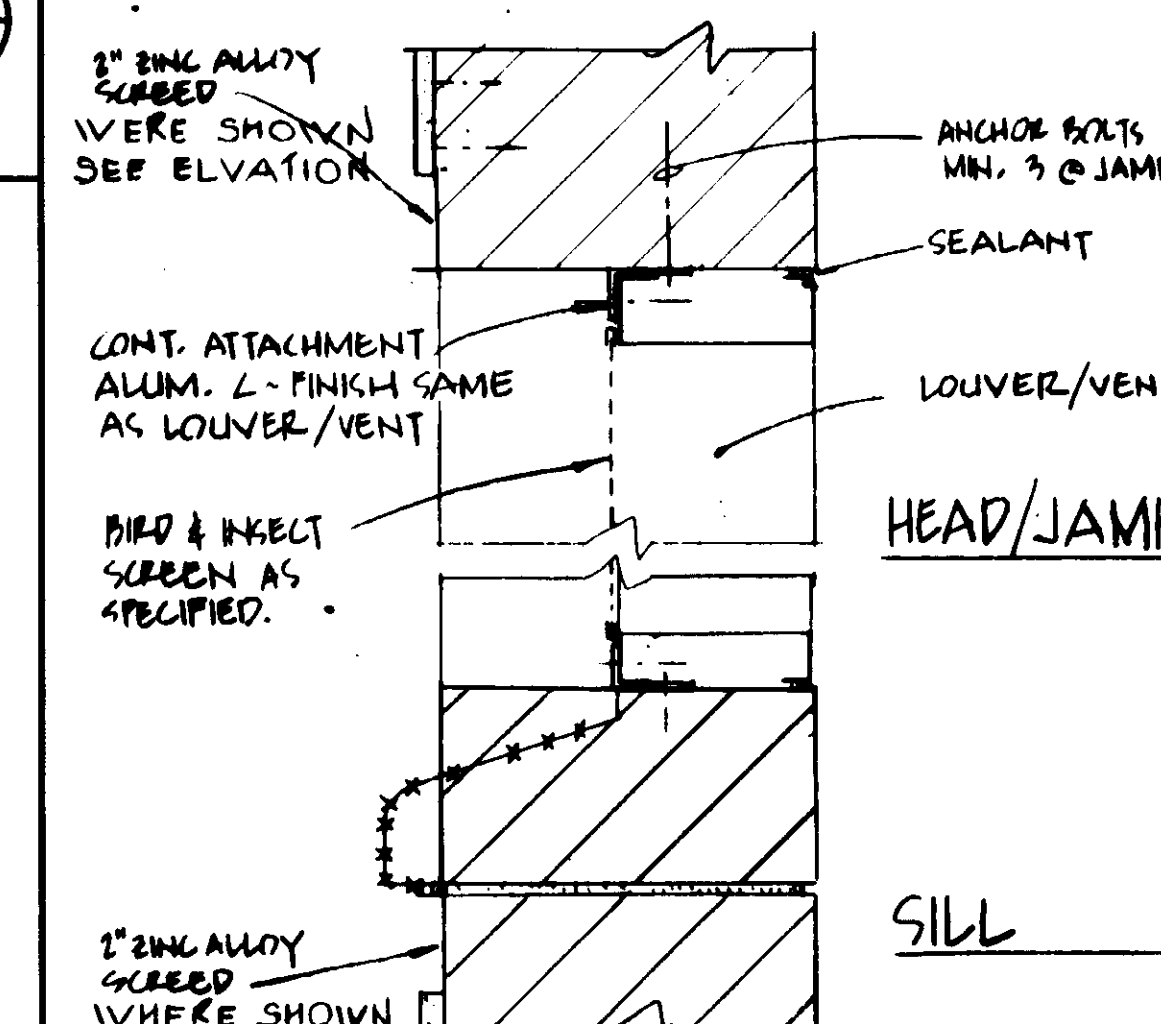
**DETAIL 2**  
1/2" = 1'-0" A-1  
TYPICAL CONCRETE WALK



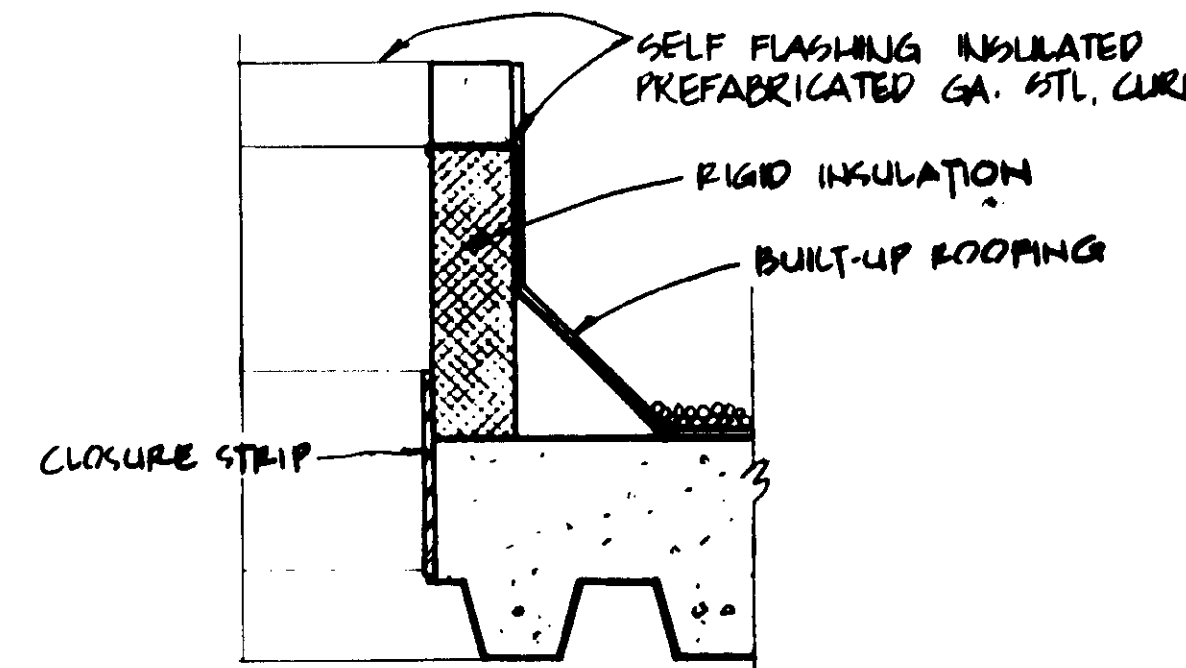
**DETAIL 13**  
3" = 1'-0" A-1  
WEAP AROUND ASTRAGAL



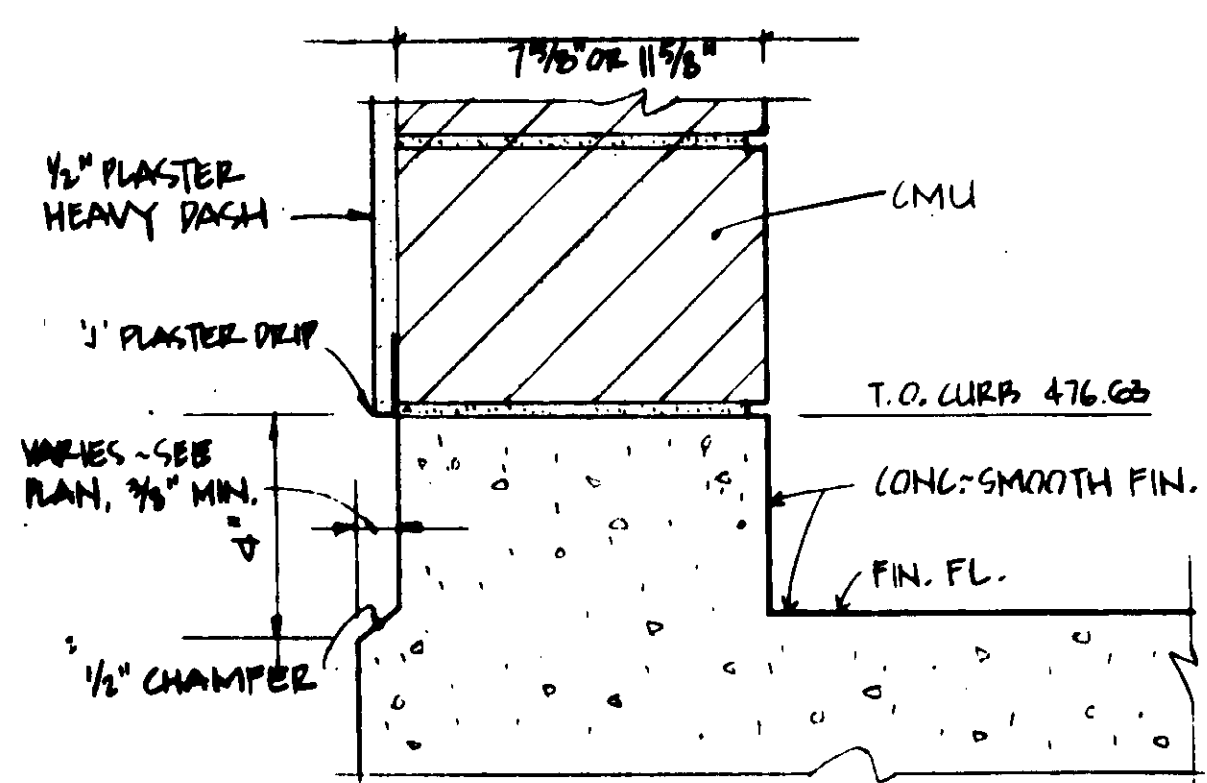
**DETAIL 9**  
3" = 1'-0" A-1  
2" SCREED & WALL SECTION



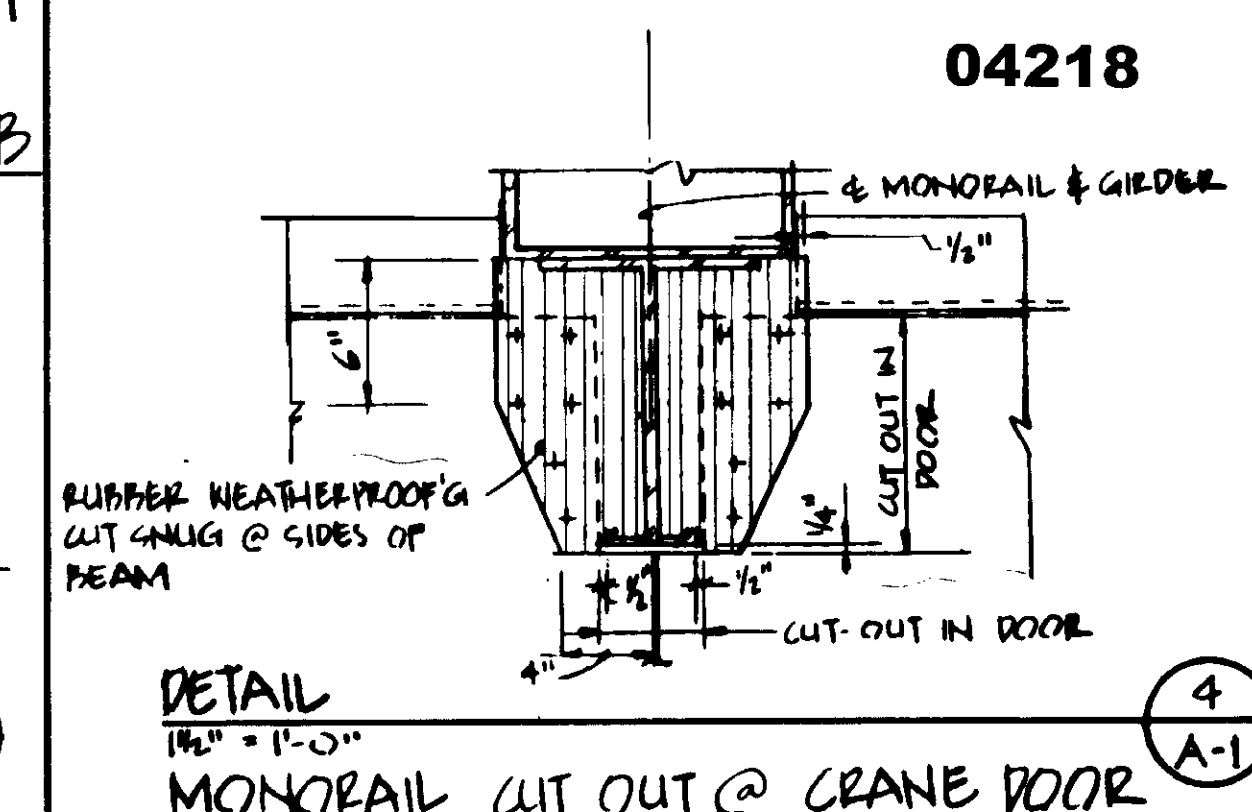
**DETAIL 7**  
3" = 1'-0" A-1  
LOUVER/VENT



**DETAIL 3**  
N.T.S. A-1  
EQUIPMENT CURB @ ROOF



**DETAIL 10**  
3" = 1'-0" A-1



**DETAIL 4**  
1/4" = 1'-0" A-1  
MONORAIL CUT OUT @ CRANE DOOR



RECORD DRAWING  
DESIGNED BY: R. LEE  
DRAWN BY: K. BENUSKA  
CHECKED BY: K. BENUSKA  
KALEX ENGINEERS

SCALE:  
AS NOTED

DESIGNED: R. LEE  
DRAWN: K. BENUSKA  
CHECKED: K. BENUSKA

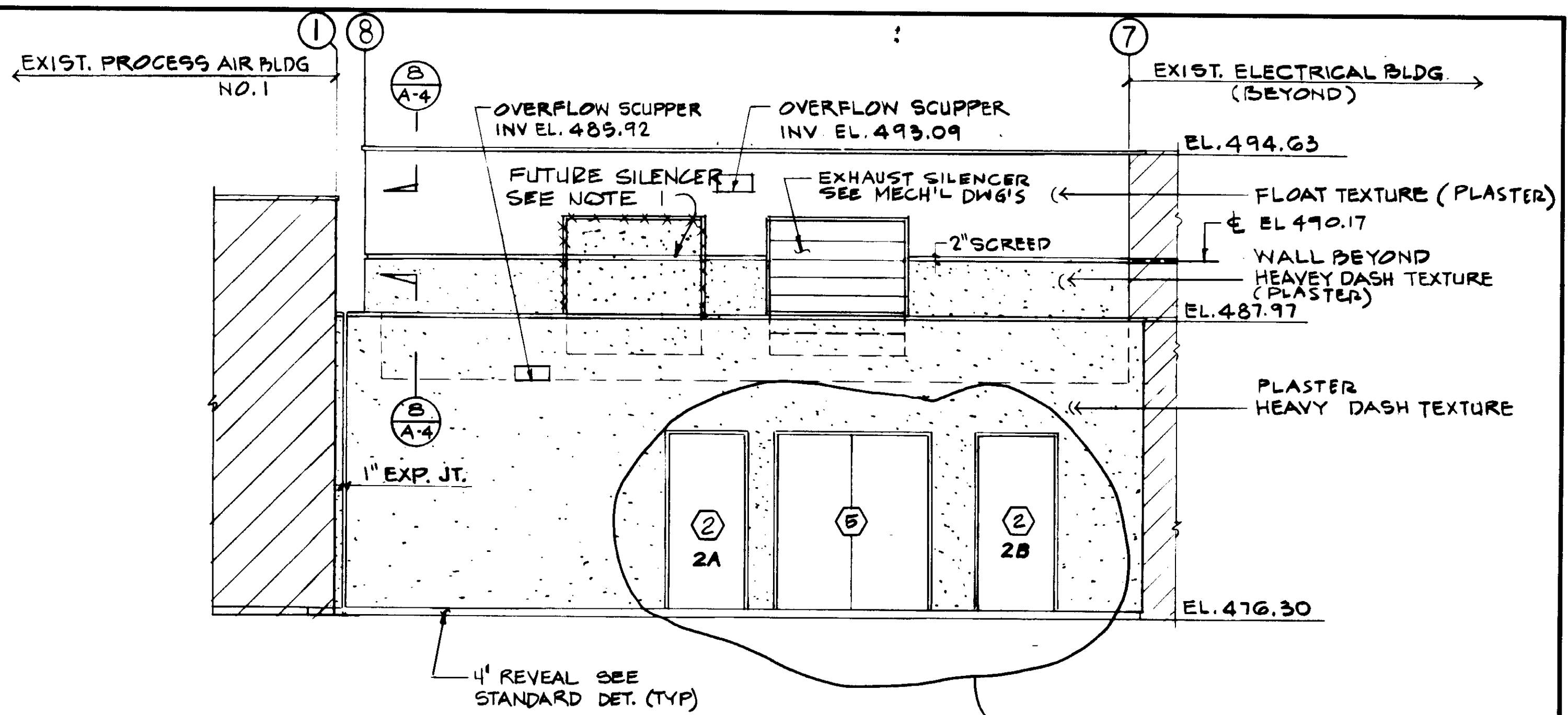
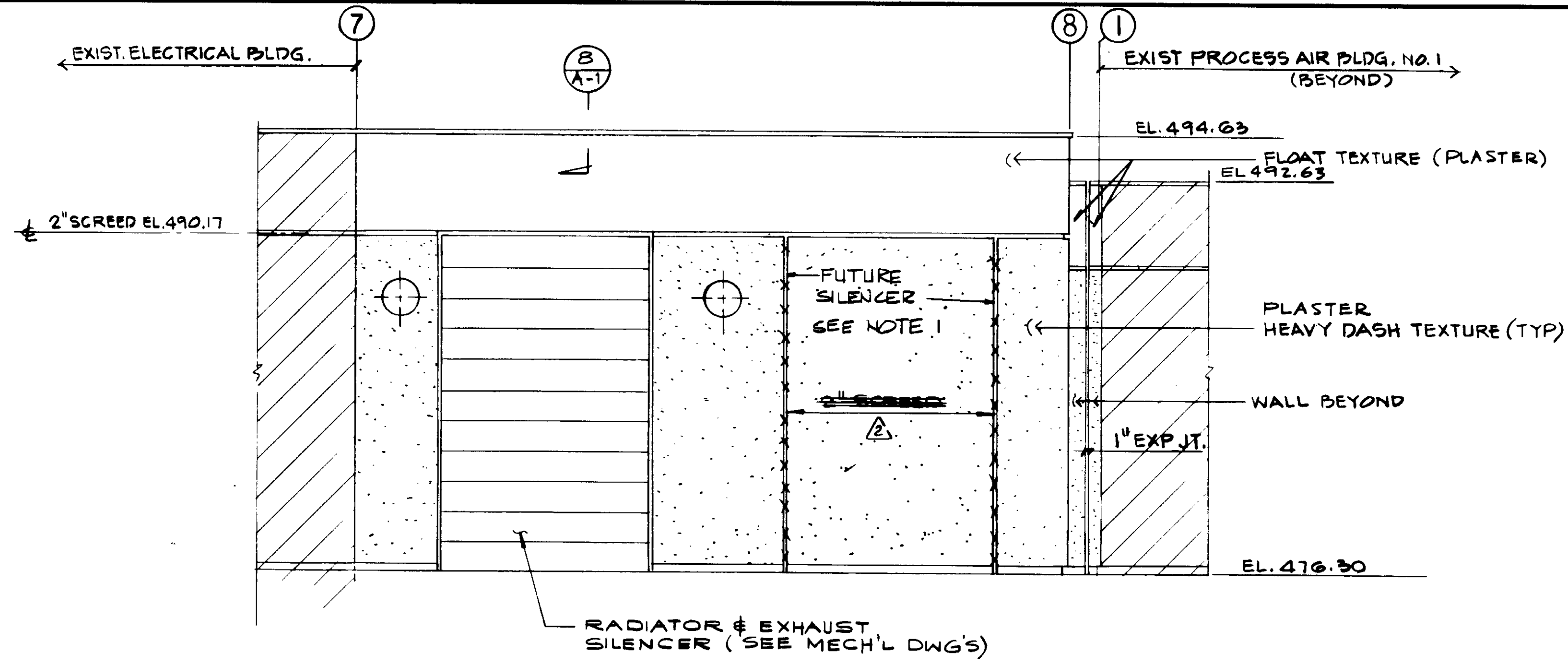
SUBMITTED: 5-10-07  
DATE: 5-10-07  
R.C.E. NO. 513  
DATE: 5-10-07

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
TYPICAL ARCHITECTURAL DETAILS

SHEET  
A-1

REV	DATE	BY	DESCRIPTION
5-10-07	A.B.	REV. PER K.P.C.	
5-10-07	A.B.	REV. PER K.P.C.	

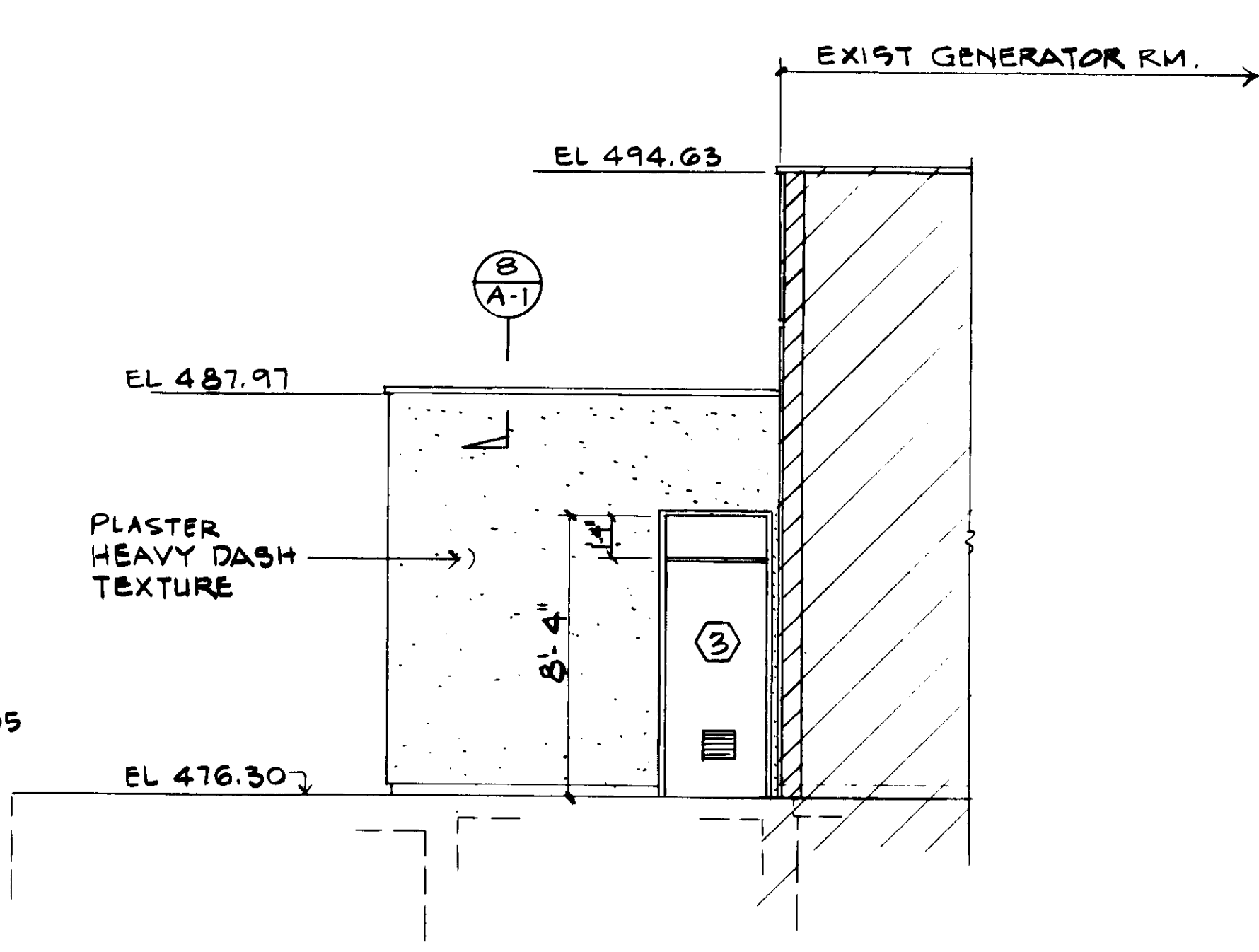
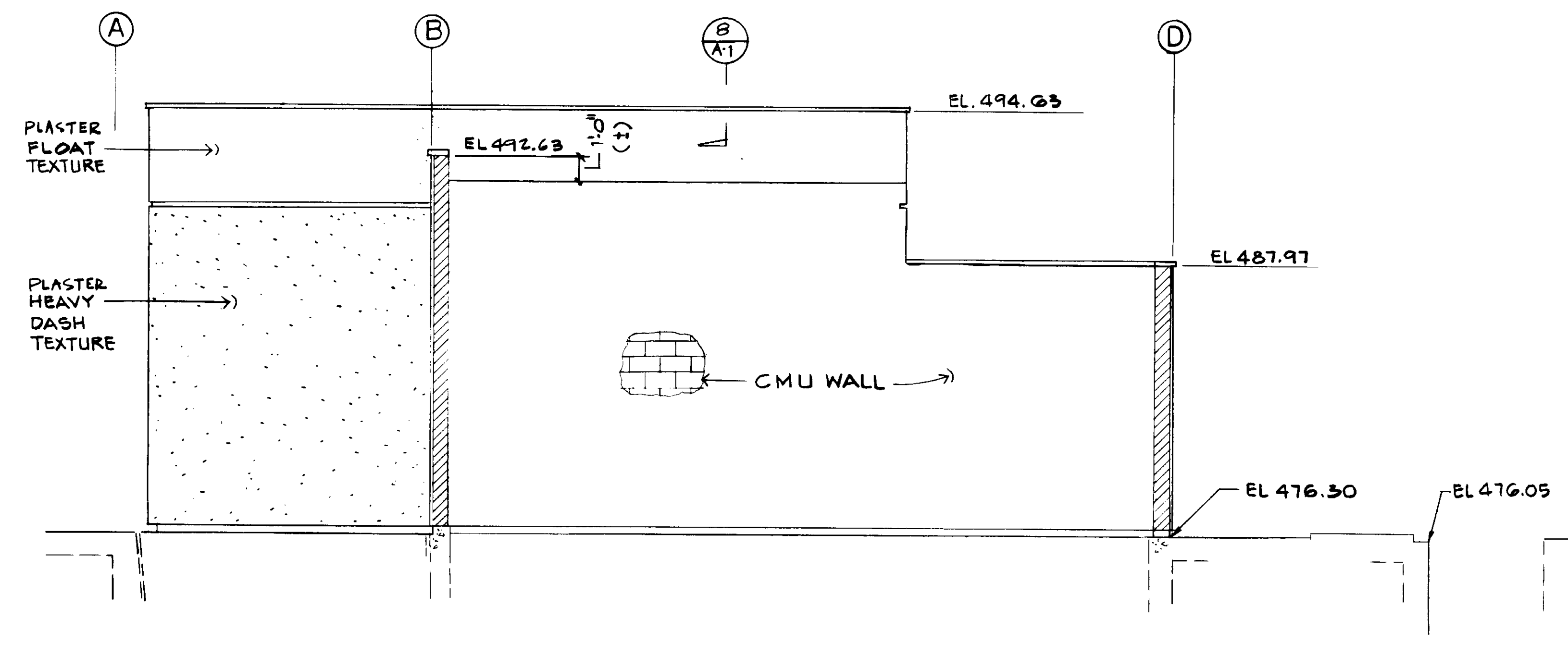


NOTE:  
1. SEE MB-1 FOR ACOUSTICAL TREATMENT

SEE PCH-6 SEE SHEET S5.4

ELEVATION  
1/4" = 1'-0"  
SOUTH WALL  
ELECTRICAL BLDG.

ELEVATION  
1/4" = 1'-0"  
NORTH WALL  
ELECTRICAL BLDG.



ELEVATION  
1/4" = 1'-0"  
EAST WALL  
ELECTRICAL BLDG.

ELEVATION  
1/4" = 1'-0"  
WEST WALL  
ELECTRICAL BLDG.

04219

RECORD DRAWING  
FOR THIS PROJECT BY KALEX ENGINEERS  
KALEX CONSULTING ENGINEERS JUNE 1999



REV	DATE	BY	DESCRIPTION

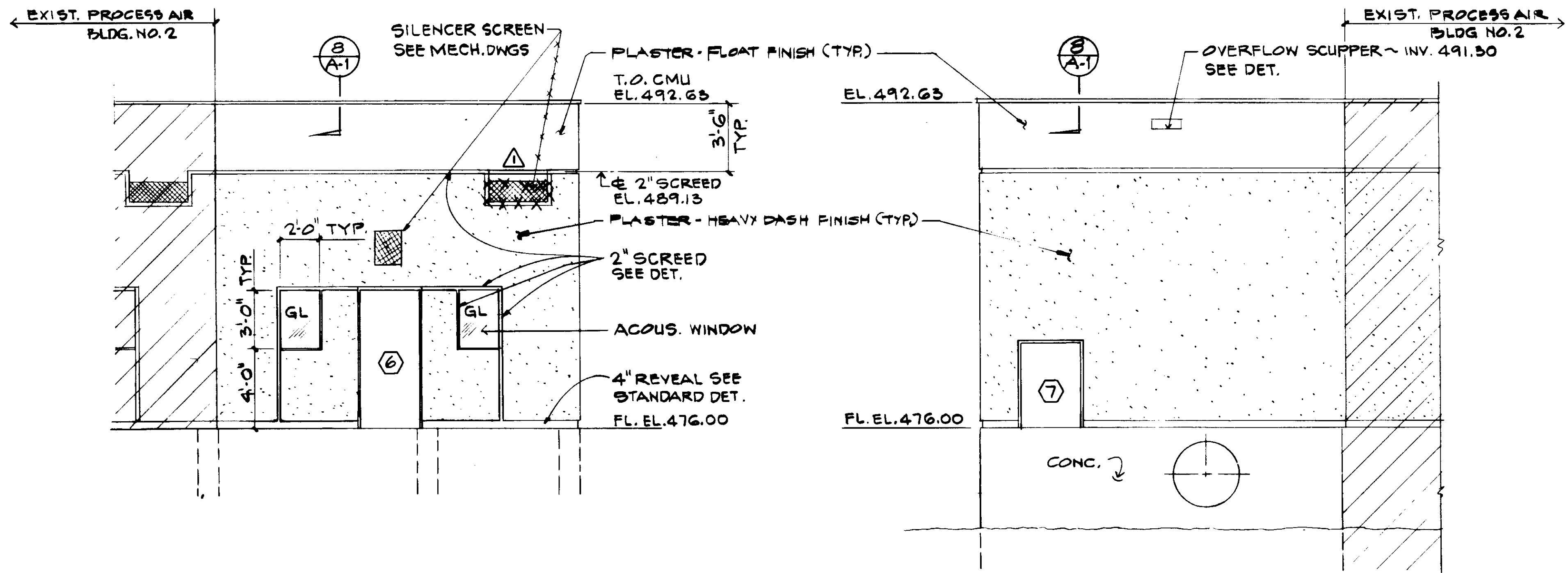
SCALE: AS NOTED	DESIGNED R-LEE	SUBMITTED Katsura Consulting Engineers
	DRAWN K. BENUSKA	14038 8-10-97 R.C.E. NO. DATE
	CHECKED	513 ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
**ELECTRICAL BUILDING**  
**ARCHITECTURAL ELEVATIONS**

SHEET  
A-2





**ELEVATION 1**  
 1/4" = 1'-0"  
 SOUTH WALL  
 PROCESS AIR BLDG

**ELEVATION 2**  
 1/4" = 1'-0"  
 NORTH WALL  
 PROCESS AIR BLDG.

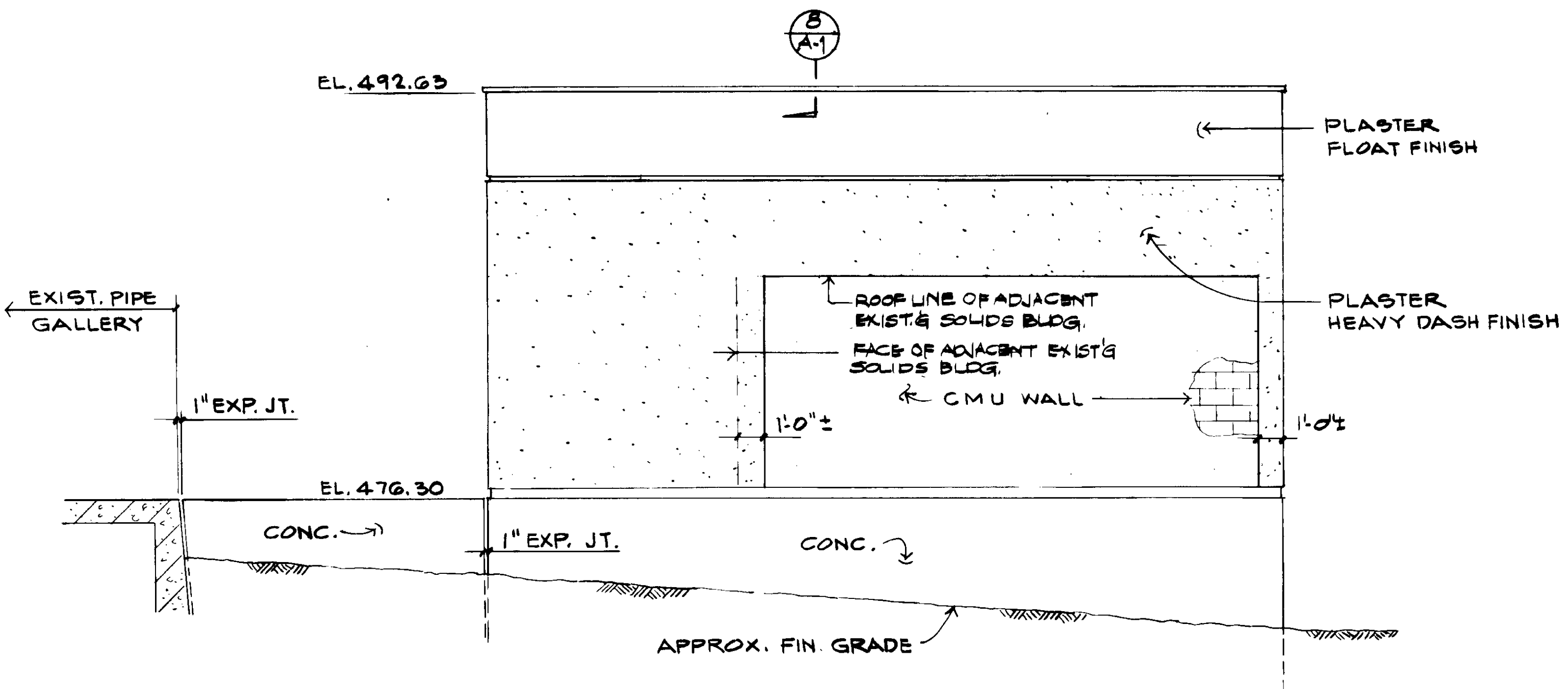
STRUCTURE	DOOR & HARDWARE SCHEDULE											
	OPENING						FRAME					
	NO.	SIZE	THK	MATL	TYPE	FINISH	COLOR	MATL	TYPE	FINISH	COLOR	DETAIL
GALLERY NO. 2	1	5'-0" x 7'-0"	1 3/4"	HM	HH	NN	2	HM	2			9A-1 9A-1
	2*	3'-0" x 7'-0"	1 3/4"	HM	S4.5	A	2	HM	2			9A-1 9A-1
ELECTRICAL BUILDING	3	3'-0" x 7'-0"	1 3/4"	HM	S4.5	V	2	HM	2			9A-1 9A-1
	4	3'-0" x 7'-0"	1 3/4"	HM	S4.4	A	2	HM	2			9A-1 9A-1
	5	6'-0" x 7'-0"	1 3/4"	HM	S4.5	HH	2	HM	2			9A-1 9A-1
PROCESS AIR BUILDING	6	3'-0" x 7'-0"	1 3/4"	HM	S4.4	A	2	HM	2			9A-1 9A-1
	7	3'-0" x 4'-4"	1 3/4"	HM	S4.4	A	2	HM	2			9A-1 9A-1

\* 3 REQ'D (2A, 2B USE FRAME DETAIL 1/A-1; 2C USE FRAME DETAIL 1/A-1)

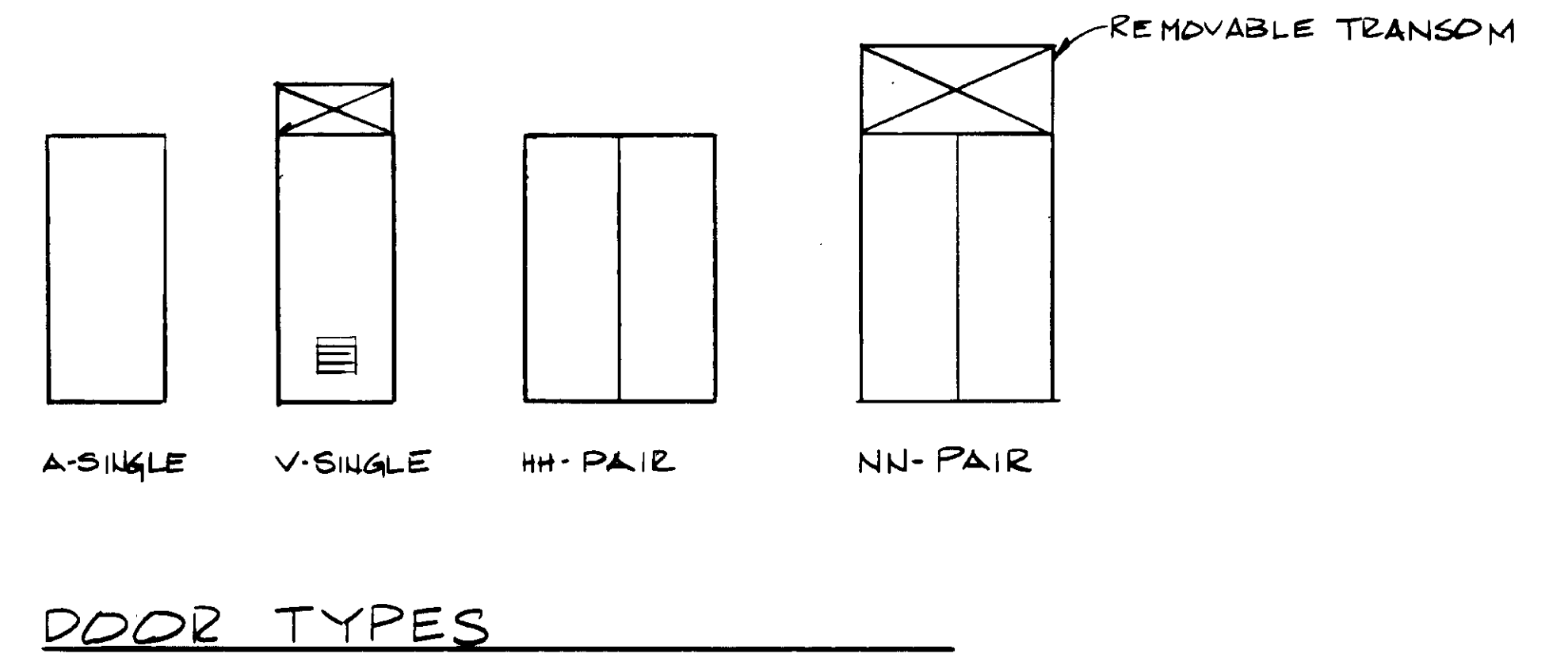
STRUCTURE	HARDWARE										REMARKS	
	HINGE	LOCK	KEY	DRIVE	PULL	STOP	BOLT	KICK	THRESH	WETH.		
GALLERY NO. 2	H-2	L-3		C-3		S-2		K-1	T-2	W-2		W/REMOVABLE TRANSOM
ELECTRICAL BUILDING	H-2	L-3		C-3		S-1		K-1	T-2	W-2		12" x 18" LOWER
	H-2	L-3				S-1		K-1	T-2	W-2		
	H-2	L-3						K-1	T-2	W-2		
PROCESS AIR BUILDING	H-4	L-1		C-4				K-2	T-1	W-1		672 RATING 35
	H-4	L-1						K-2	T-1	W-1		672 RATING 42 RAISED BILL

+ DOOR 6 TO HAVE 4 HINGES @ 3 3/4" B.S. PER RFI 218

BUILDING	ROOM	FLOOR	CEILING				WALLS				NOTES
			CONCRETE FINISH	STEEL STPL FINN	METAL DECK FINN	CEILING COLOR	WEST	EAST	SOUTH	NORTH	
ELECTRICAL BLDG	MCC RM	2M	CONCRETE	2	7	7	7	7	7		
	GEN. RM	DD	2	7	7	7	7	7			
PROCESS AIR	PAC 3	DD	2	7	7	7	7	7			



**ELEVATION 3**  
 1/4" = 1'-0"  
 EAST WALL  
 PROCESS AIR BLDG.



DOOR TYPES

04220

RECORD DRAWINGS  
 PREPARED BY: ALEXANDER ENGINEERS  
 DATE: 08-10-07



REV	DATE	BY	DESCRIPTION
1	5-20-07	A.B.	REV. PER K.P.C.
2	5-20-07	A.B.	REV. PER K.P.C.

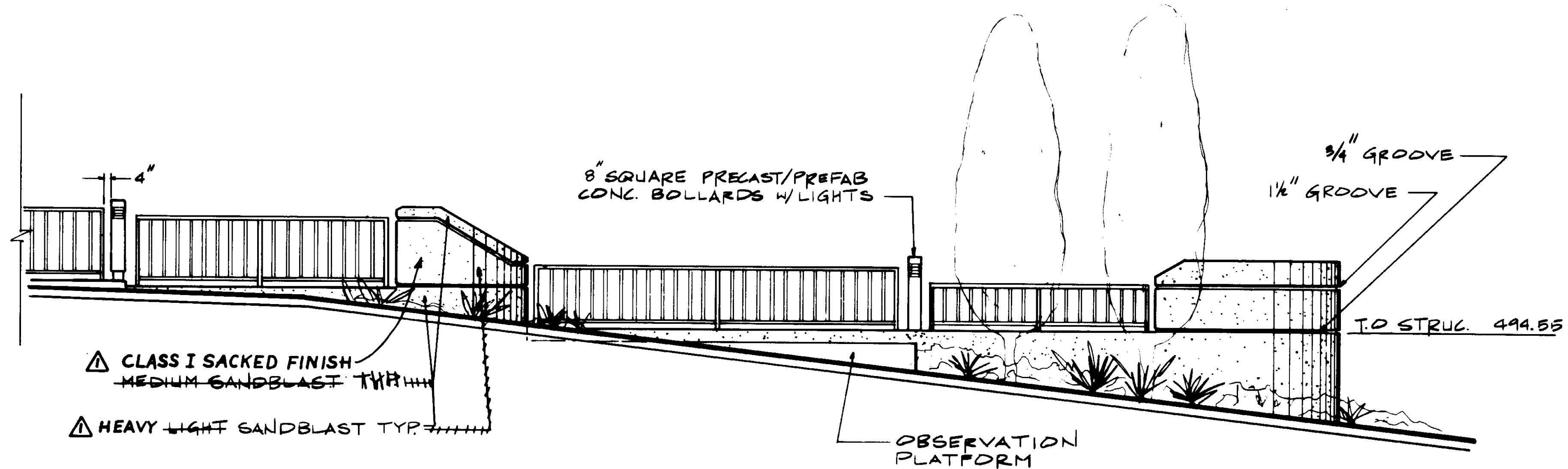
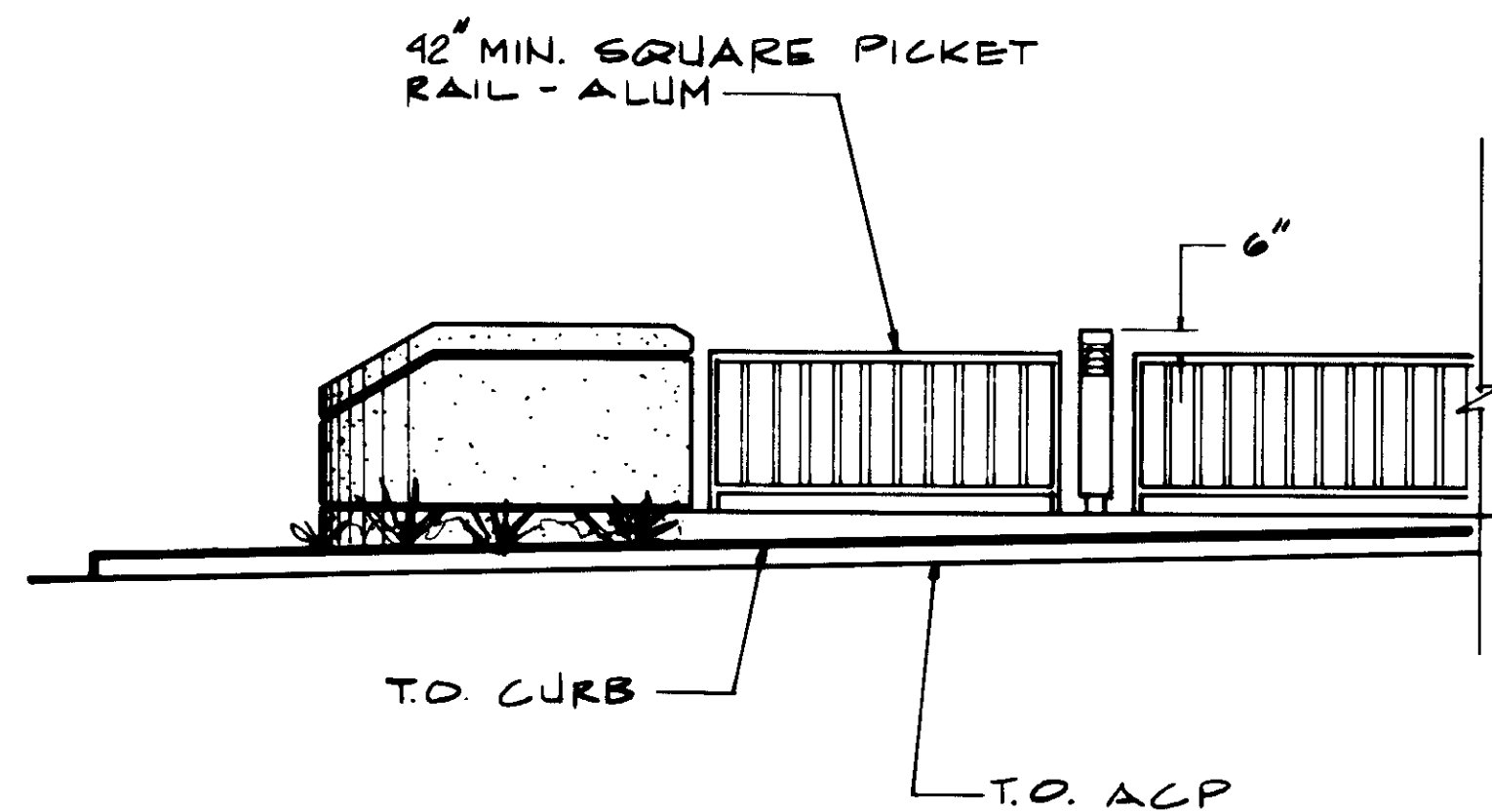
SCALE: AS NOTED	DESIGNED: R. LEE	SUBMITTED: [Signature]
	DRAWN: R. OKUDA	14038 08-10-07
	CHECKED: E. BENUSKA	R.C.E. NO. DATE
		513
		ALEXANDER ENGINEERS R.C.E. NO. DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

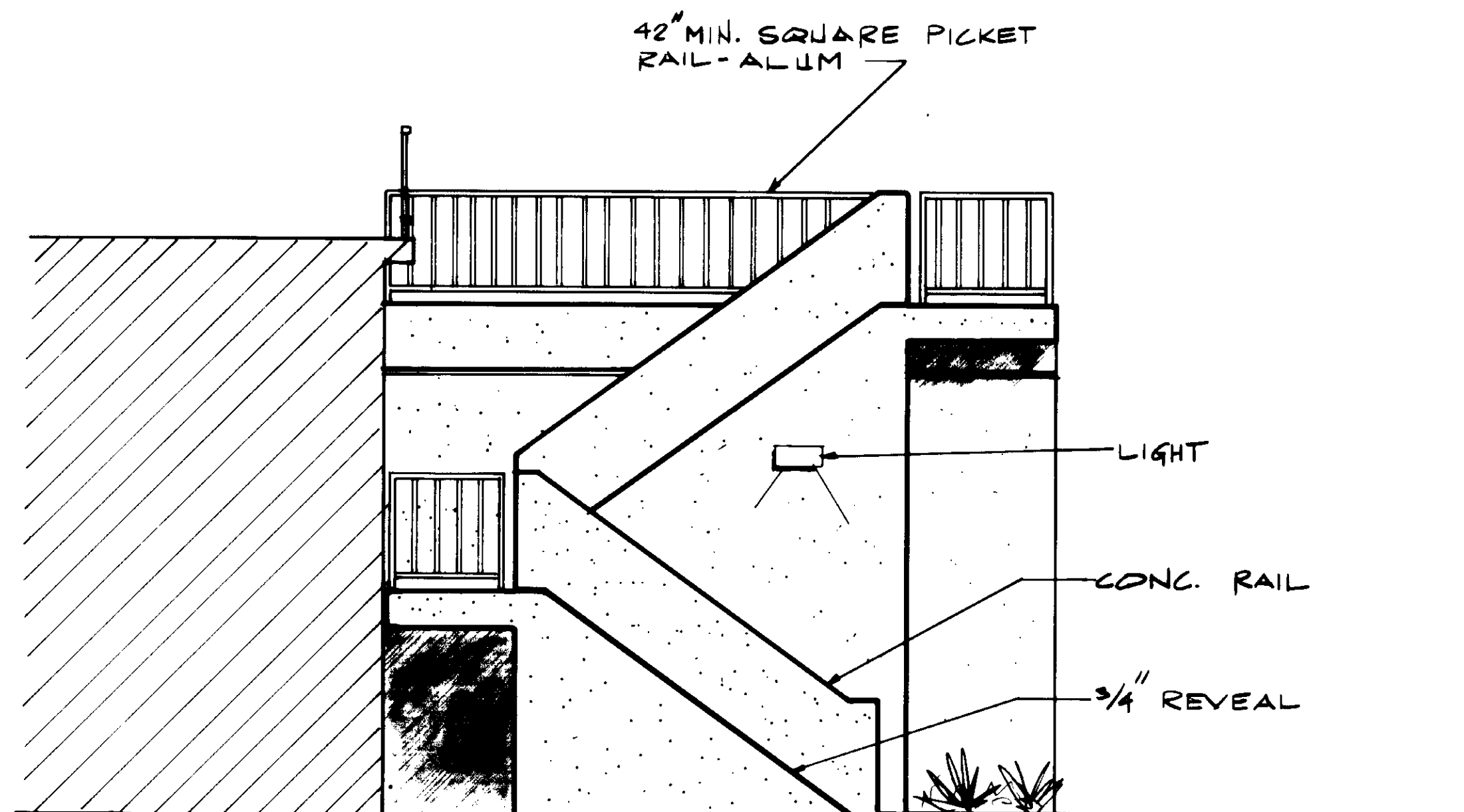
**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 PROCESS AIR BUILDING  
 ARCHITECTURAL ELEVATIONS

SHEET A-3

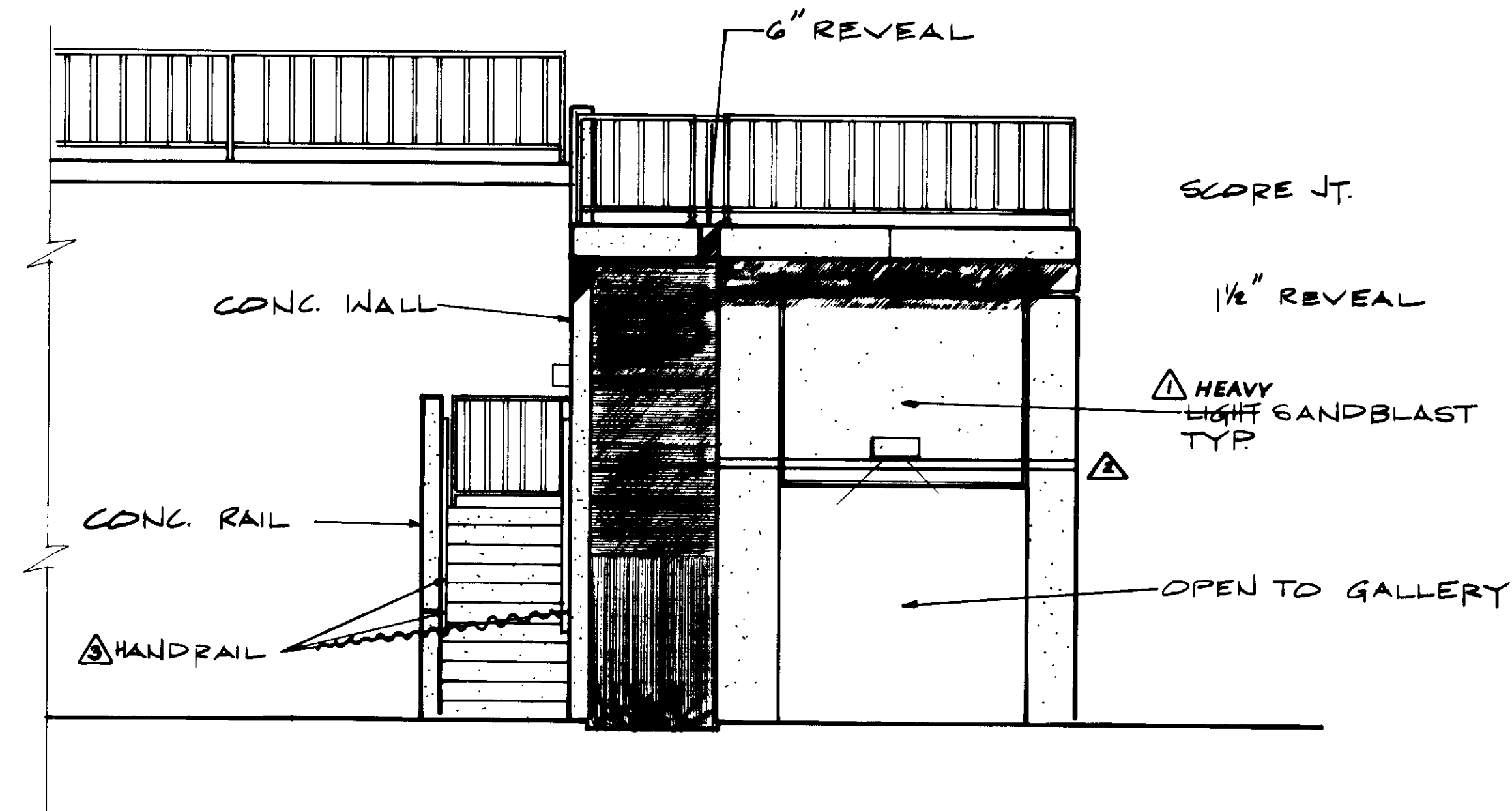




SELECTOR CHANNEL - SOUTH ELEVATION



SOUTH ELEV.



EAST ELEV.

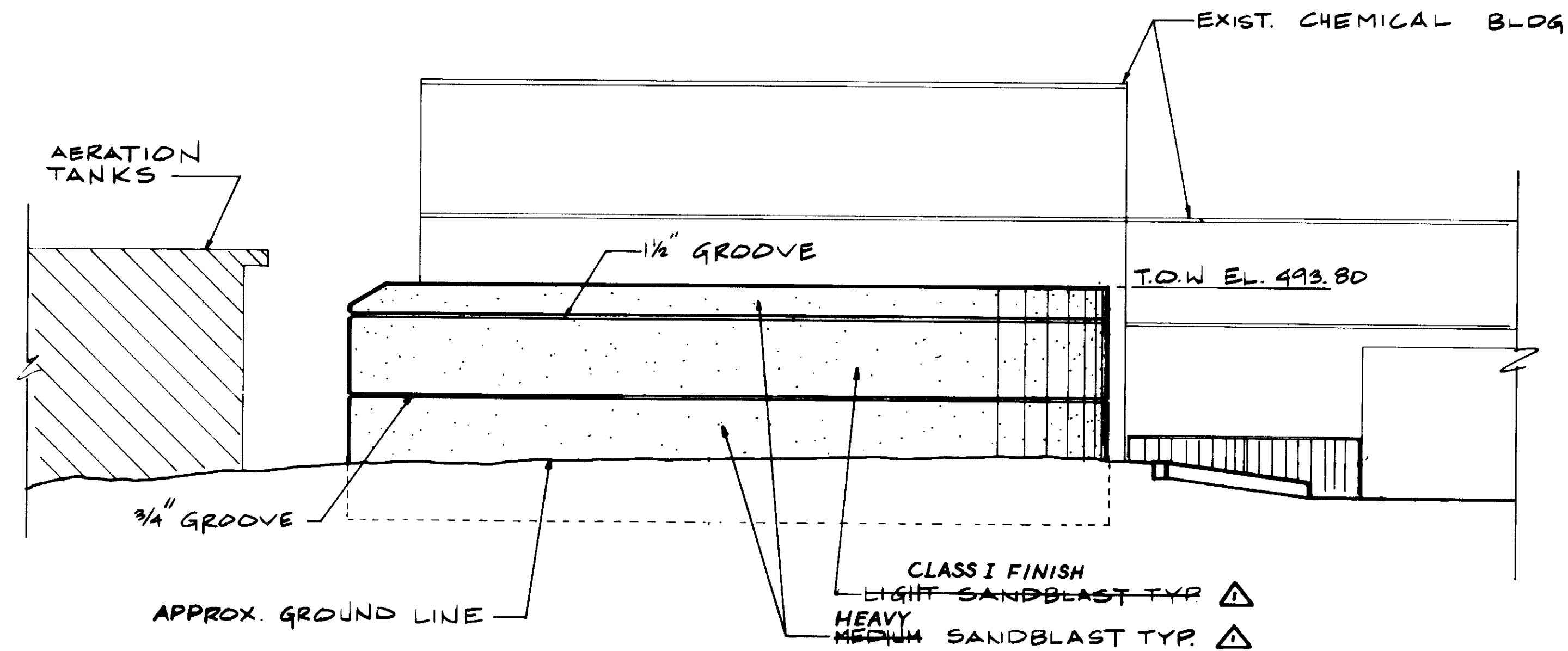
04221

STAIRS & GALLERY NO. 3 - ELEVATIONS

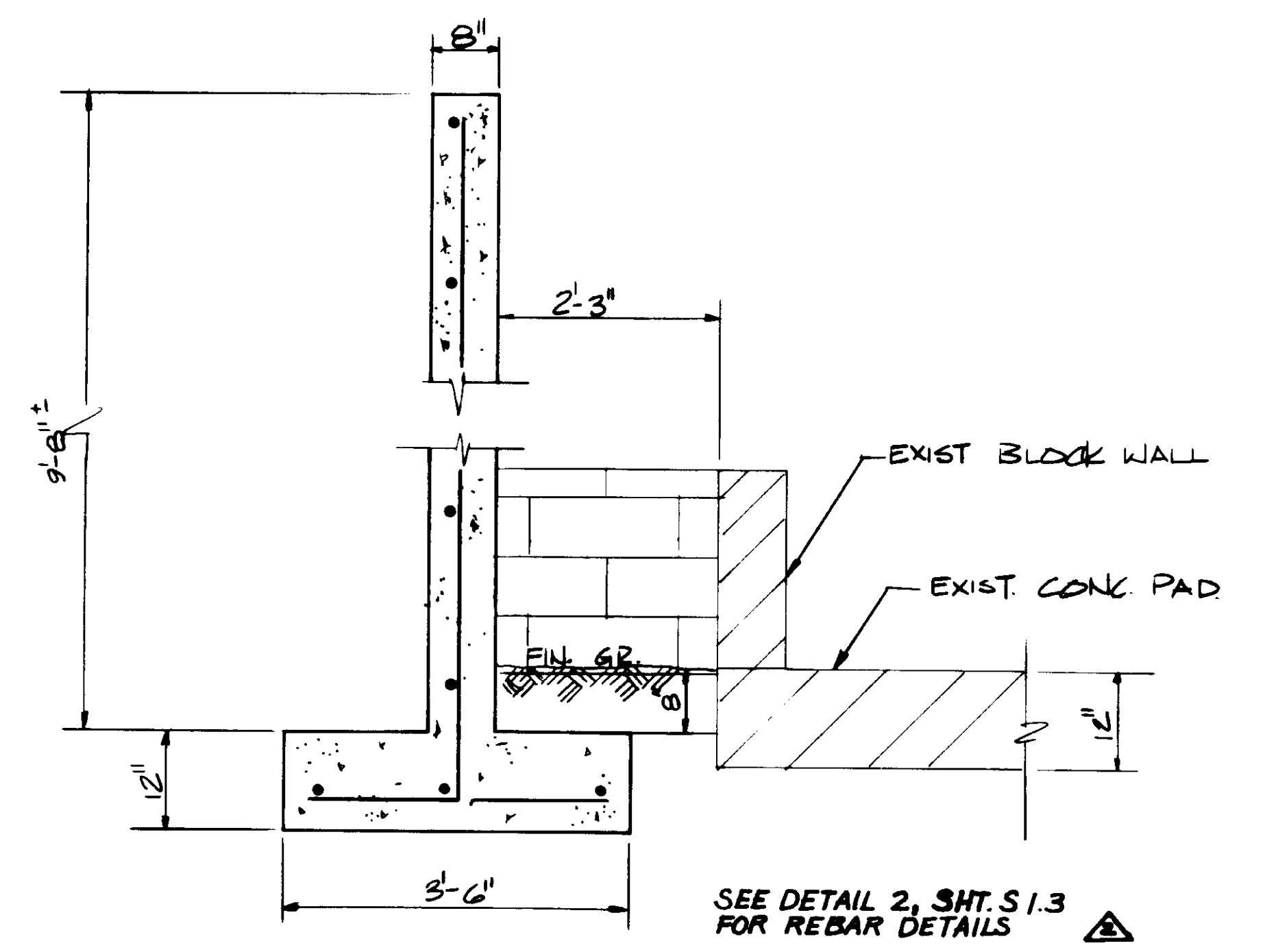
RECORD DRAWINGS  
 FOR FILE MAINTAINED BY CLIENT PERMITS DEPT.  
 KATSUMA CONSULTING ENGINEERS JUNE 1988



REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION	SCALE:	AD/R/L	SUBMITTED	DESIGNED	DRAWN	CHECKED	513	KALEX ENGINEERS	LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III	SHEET
								1/4" = 1'-0"	AD/R/L	14038 8-7-87	C.L.	Y.K.			Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California	ARCHITECTURAL ELEVATIONS	A-4
										KATSUMA CONSULTING ENGINEERS							
										ALEXANDER ENGINEERS							

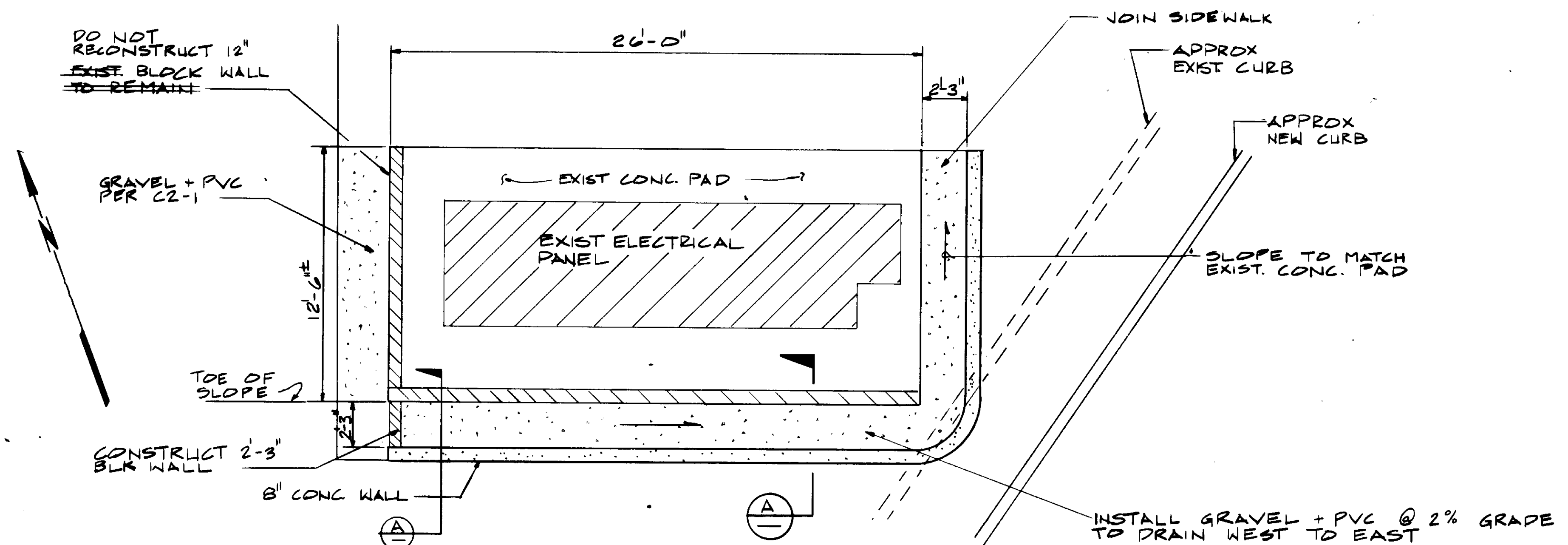


CONC. ENCLOSURE AT SUBSTATION  
SOUTH ELEVATION



SECTION A-A  
3/4" = 1'-0"

SEE DETAIL 2, SHT. S1.3  
FOR REBAR DETAILS



CONC. ENCLOSURE AT SUBSTATION  
PLAN

04222

RECORD DRAWINGS  
KATSUMI CONSULTING ENGINEERS



REV	DATE	BY	DESCRIPTION

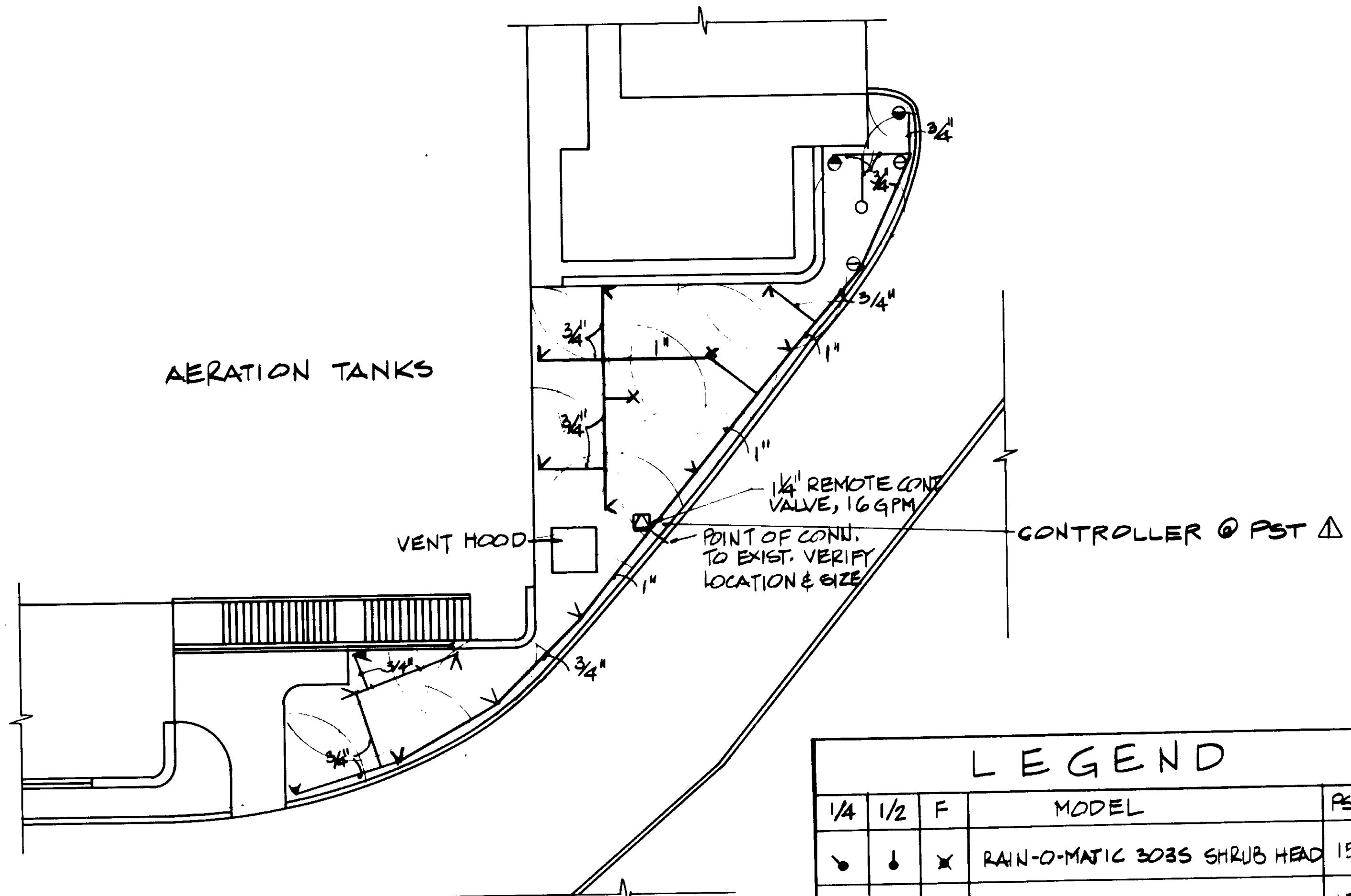
SCALE:	AD/R.L.
1/4" = 1'-0"	DESIGNED C.L.
	DRAWN Y.K.
	CHECKED

SUBMITTED	14038	8-7-87
KATSUMI CONSULTING ENGINEERS	R.C.E. NO.	DATE
	513	
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
Katsura Consulting Engineers / Alexander Engineers  
Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
ARCHITECTURAL ELEVATIONS AND DETAILS

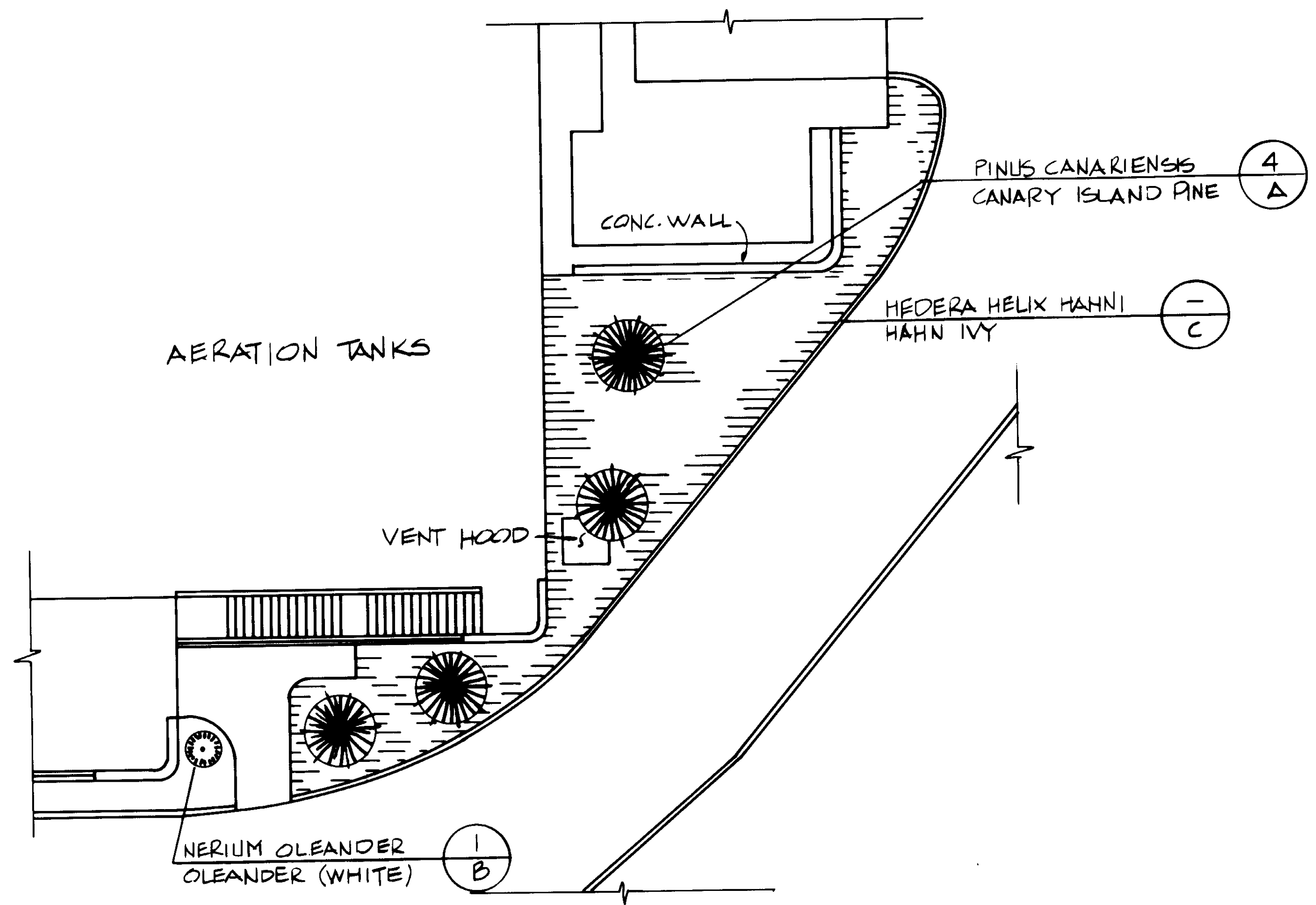
SHEET  
A-5



IRRIGATION PLAN

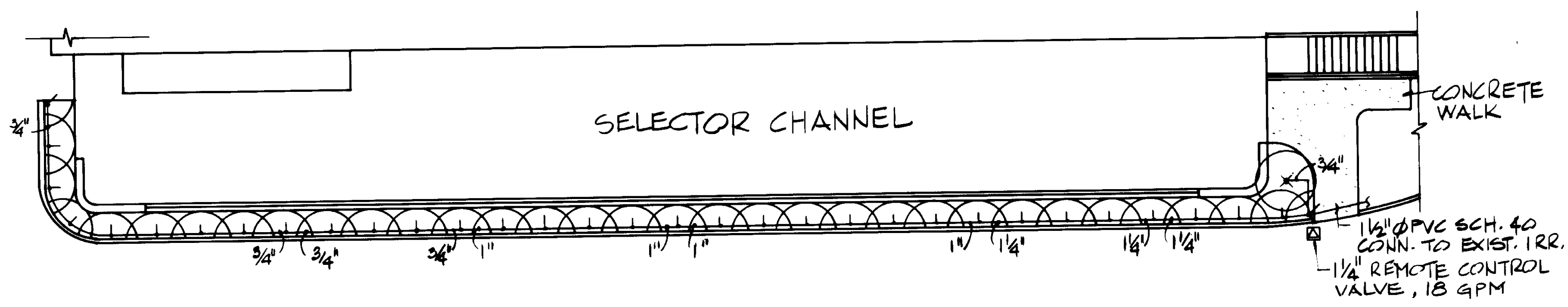
- NOTES:
1. ALL IRRIGATION PIPING SHALL BE PVC SCH.40
  2. SEE CIVIL & MECHANICAL DRAWINGS FOR OTHER AREAS TO BE REPLANTED TO MATCH EXISTING & REPLACE IRRIGATION PIPING AS REQ'D.

LEGEND						
1/4"	1/2"	F	MODEL	PSI	RAD	GPM
•	•	X	RAIN-O-MATIC 303S SHRUB HEAD	15	3'	3-5
V	V	X	RAIN-O-MATIC 310 G SHRUB HEAD	15	8'	8-10
⊙	⊙	○	RAIN-O-MATIC 310S SHRUB HEAD	15	6'	5-7
⊠	REMOTE CONTROL VALVE (SIZE SHOWN)					



PLANTING PLAN

PLANT LIST			
SYMBOL	BOTANICAL NAME	COMMON NAME	REMARKS
A	PINUS CANARIENSIS	CANARY ISLAND PINE	RELOCATE FROM EXISTING
B	NERIUM OLEANDER	OLEANDER (WHITE)	TRIM TO 5' HEIGHT RELOCATE FROM EXISTING
C	HEPERA HELIX HAHNI	HAHN IVY	GROUND COVER RELOCATE FROM EXISTING



IRRIGATION PLAN

04223

RECORD DRAWING  
KATSURA CONSULTING ENGINEERS



SCALE: 1" = 10' DESIGNED: CS/YK DRAWN: YK CHECKED:			SUBMITTED: <i>[Signature]</i> 14038 8-10-87 KATSURA CONSULTING ENGINEERS R.C.E. NO. DATE 513 ALEXANDER ENGINEERS R.C.E. NO. DATE			<b>KALEX ENGINEERS</b> Katsura Consulting Engineers / Alexander Engineers Ventura, California Glendora, California			<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> LANDSCAPING			SHEET L-1
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION					
				5-13-87		A.R.	REV. PER K.P.C.					

LAS VIRGENES MUNICIPAL  
WATER DISTRICT  
LOS ANGELES COUNTY

TRIUNFO COUNTY  
SANITATION DISTRICT  
VENTURA COUNTY

CONTRACT DOCUMENTS  
FOR CONSTRUCTION OF

FINAL SEDIMENTATION TANK FOUNDATION IMPROVEMENTS

CONTRACT NO. C-1

LAS VIRGENES MUNICIPAL WATER DISTRICT

BOARD OF DIRECTORS  
ANN DORGELLO — PRESIDENT  
A. MACNEIL STELLE                      HAROLD V. HELSLEY  
GEORGE R. LONG                         GLEN PETERSON

Approved by the Board of Directors  
on this 23<sup>RD</sup> day of FEBRUARY, 1987

BY: Ann Dorgello  
ANN DORGELLO — PRESIDENT

BY: George R. Long  
GEORGE R. LONG — SECRETARY

RECOMMENDED  
BY: Edward E. McCombs  
EDWARD E. MCCOMBS

BY: H. W. Stokes  
H. W. STOKES

APPROVED AS TO FORM  
BY: Raymond J. Jemmel  
COUNSEL

TAPIA WATER RECLAMATION FACILITY  
EXPANSION III

 KALEX ENGINEERS

Katsura Consulting Engineers / Alexander Engineers  
Ventura, California                      Glendora, California

TRIUNFO COUNTY SANITATION DISTRICT

BOARD OF DIRECTORS  
RONALD STARK — CHAIRMAN  
NORMA CALLERO                      ALEX FIORE  
MADGE SCHAEFER                      JOHN FLYNN

Approved by the Board of Directors  
on this 23<sup>rd</sup> day of February, 1987

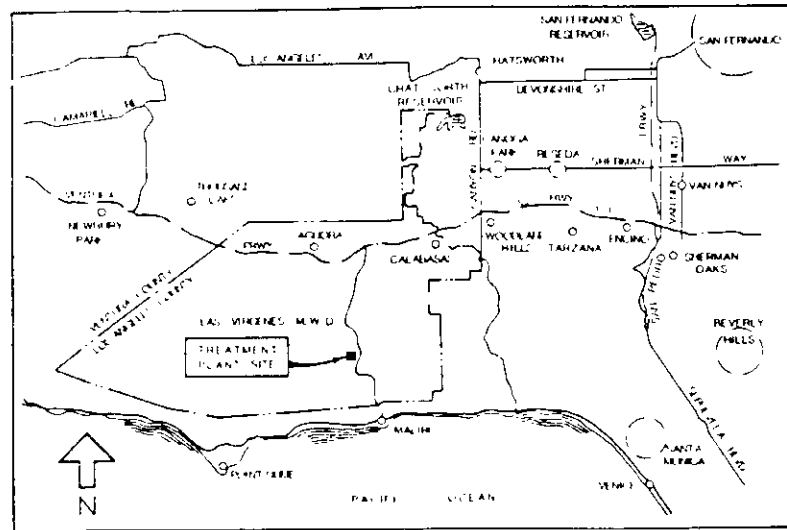
CHAIRMAN  
BY: Ronald Stark  
RONALD STARK

ATTEST  
BY: Sherrill Smith  
SHERRILL SMITH

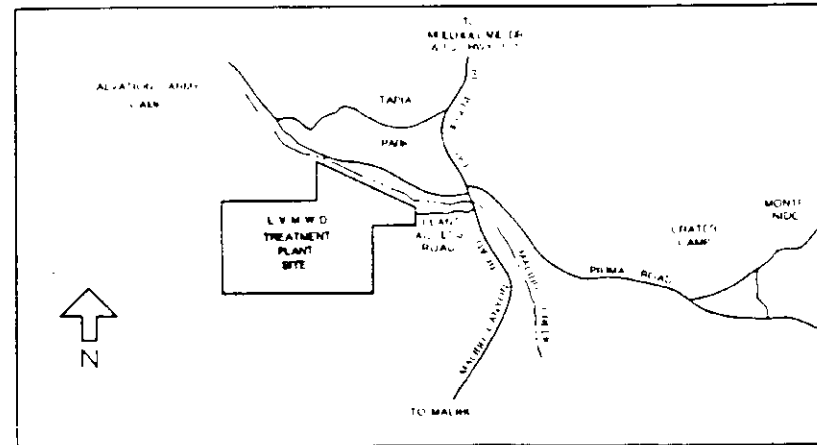
RECOMMENDED  
BY: Wayne A. Bruce  
WAYNE A. BRUCE

LEGAL COUNSEL TO TRIUNFO  
BY: John M. Matthews  
JOHN M. MATTHEWS

04224



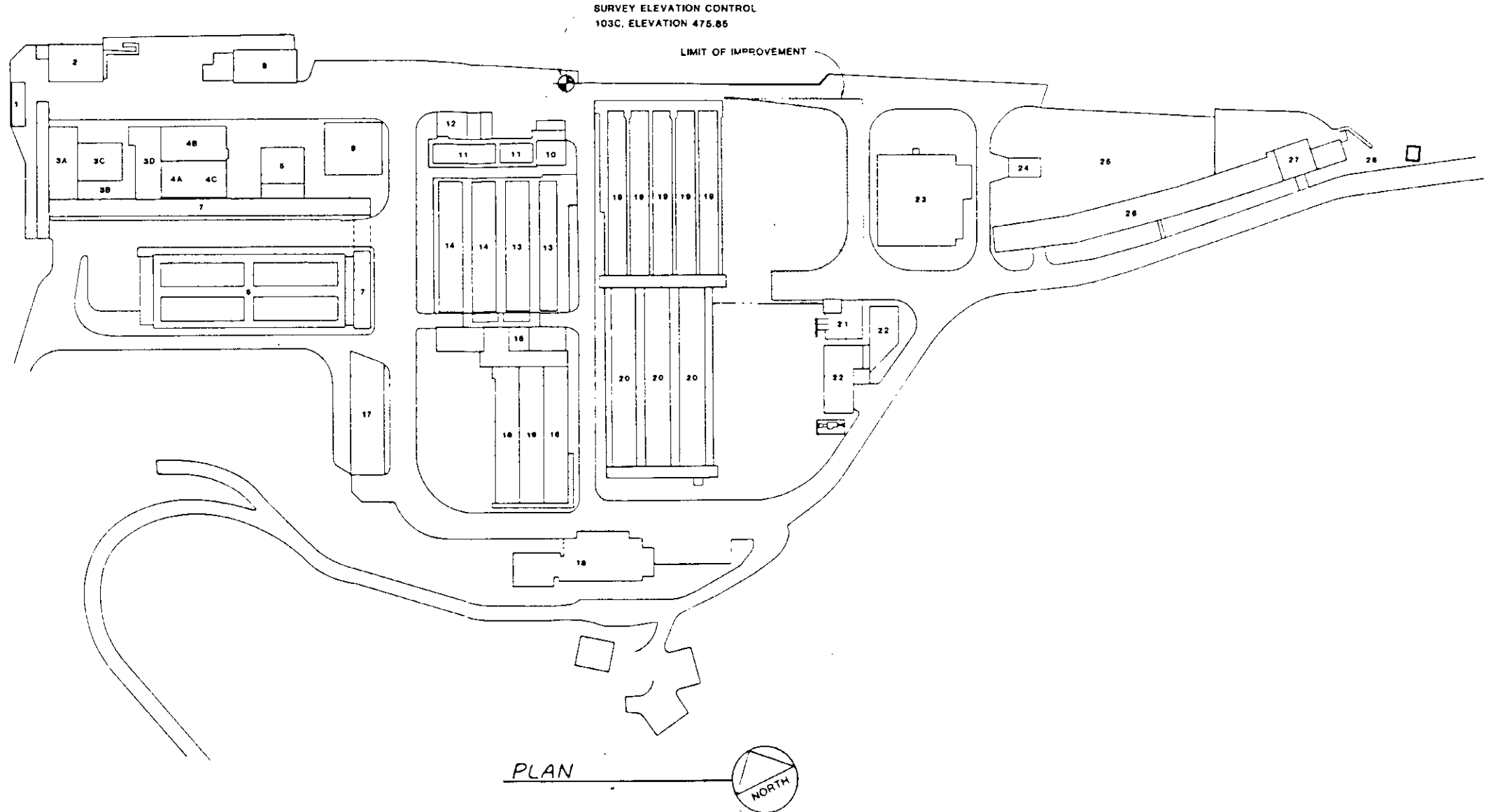
VICINITY MAP



LOCATION MAP

KEY TO STRUCTURES

- |                                   |  |
|-----------------------------------|--|
| (1) S.C.E. SUBSTATION             | (12) SLUDGE PUMPING STATION NO. 1                |
| (2) SLUDGE DEWATERING FACILITY    | (13) REAERATION TANK NO. 1 & 2                   |
| (3) HEADWORKS                     | (14) AEROBIC DIGESTER'S NO. III & IV             |
| (A) SCREENING                     | (15) STANDBY PAC & ELECTRICAL/CONTROLS           |
| (B) GRIT CHAMBER                  | (16) PRIMARY SEDIMENTATION TANKS NO. 1, 2 & 3    |
| (C) GRIT PUMPS                    | (17) SHOP & MAINTENANCE BUILDING                 |
| (D) INFLUENT PUMPS                | (18) CONTROL BUILDING                            |
| (4) ELECTRICAL                    | (19) FINAL SEDIMENTATION TANKS 1, 2, 3, 4 & 5    |
| (A) ELECTRICAL ROOM               | (20) AERATION TANKS NO. 1, 2 & 3                 |
| (B) ELECTRICAL SUBSTATION         | (21) WASTE WASHWATER HOLDING TANK & PUMP STATION |
| (C) EMERGENCY GENERATORS          | (22) CHEMICAL BUILDING & STORAGE                 |
| (5) PROCESS AIR COMPRESSORS (PAC) | (23) EFFLUENT FILTERS                            |
| (6) AEROBIC DIGESTER'S NO. I & II | (24) FILTER INFLUENT PUMP                        |
| (7) PIPE GALLERIES                | (25) BALANCING POND                              |
| (8) STORAGE BUILDING              | (26) CHLORINE CONTACT TANK                       |
| (9) CHEM AND LUBE STORAGE         | (27) EFFLUENT PUMP STATION                       |
| (10) SLUDGE SCREENING FACILITY    | (28) OVERFLOW STRUCTURE                          |
| (11) SLUDGE WET WELL              | (29) EFFLUENT POND                               |



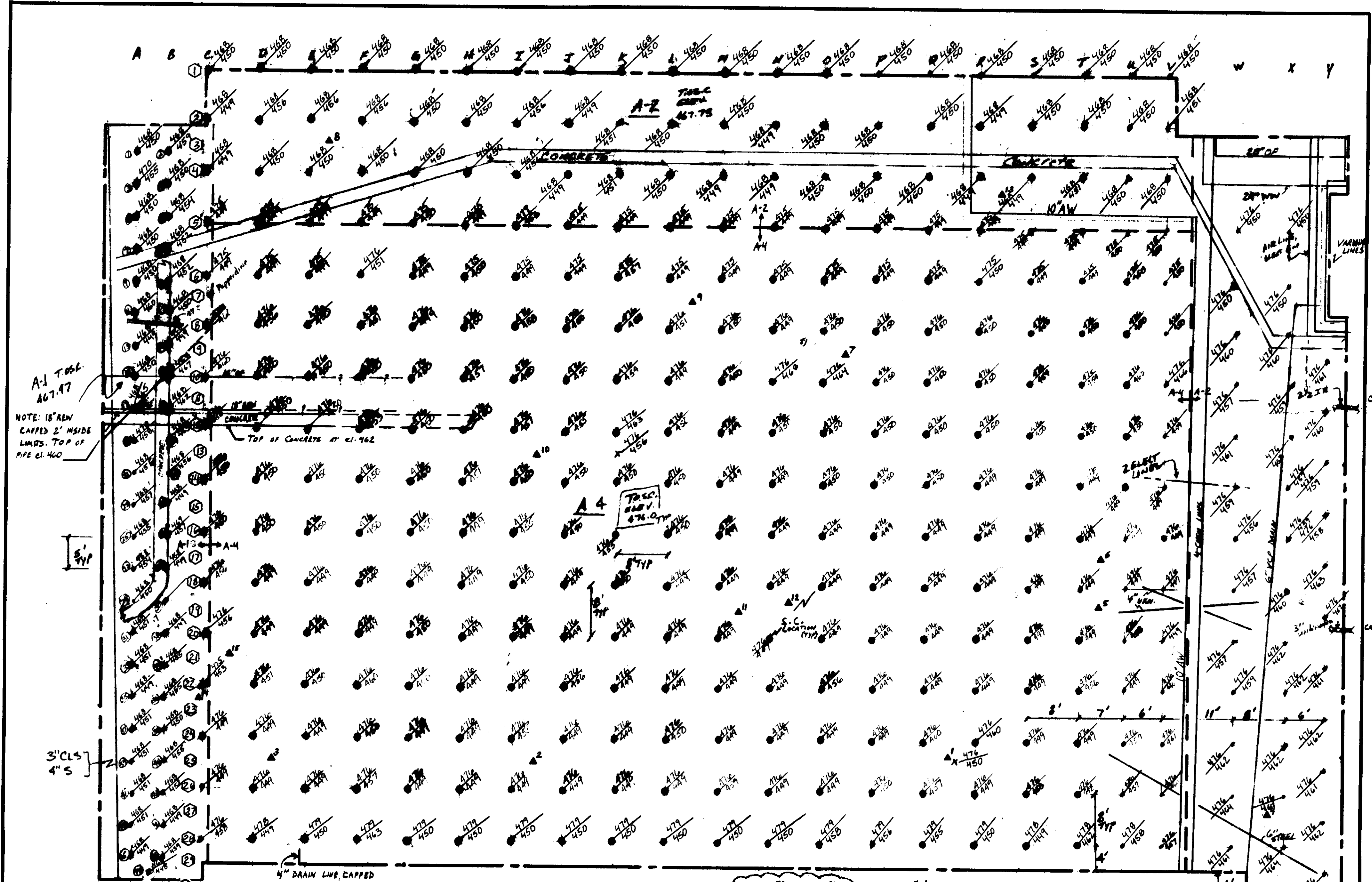
PLAN

DRAWING INDEX	
SHEET NO	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN
3	SECTIONS - I
4	SECTIONS - II
5	SECTIONS - III

04225

SCALE: NONE DESIGNED: YK DRAWN: YK CHECKED: YK	SUBMITTED: <i>[Signature]</i> 14038 2-23-87 KALEX CONSULTING ENGINEERS R.C.E. NO. DATE REVIEWED: <i>[Signature]</i> 512 2-23-87 KALEX CONSULTING ENGINEERS R.C.S.E. NO. DATE	<b>KALEX ENGINEERS</b> KALEX CONSULTING ENGINEERS - ASSOCIATE ENGINEERS Ventura, California	<b>LAS VIRGENES MUNICIPAL WATER DISTRICT</b> <b>TAPIA WATER RECLAMATION FACILITY EXPANSION III</b> FINAL SEDIMENTATION TANKS FOUNDATION IMPROVEMENT TITLE SHEET	SHEET 1 OF 6
---	---	---	--	--------------



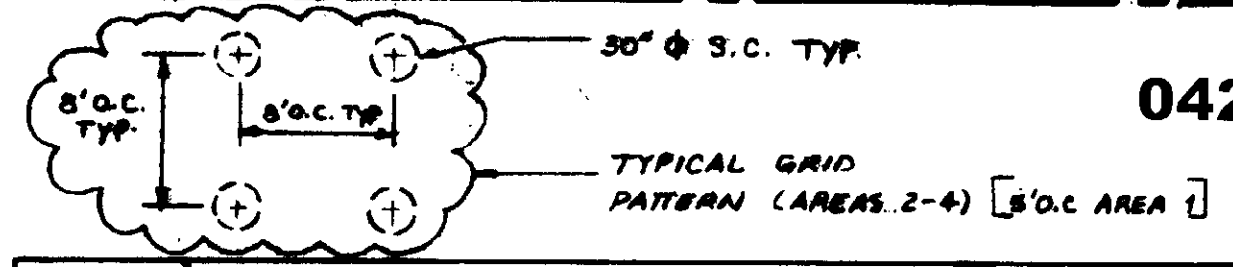


A-1 T.O.S.C.  
467.47

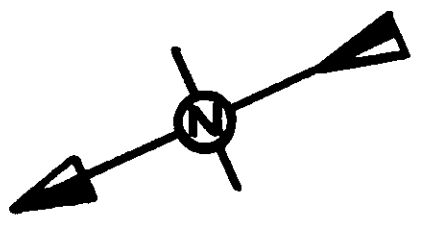
NOTE: 18" AEW  
CAPPED 2' INSIDE  
LIMITS. TOP OF  
PIPE EL. 460

**LEGEND:** T.O.S.C. = TOP OF STONE COLUMNS  
 ▲ = CONE PENETRATION TEST LOCATION  
 475 APPROXIMATE EXIST. GRADE

**NOTE:** - SEPARATE NUMBERING SCHEME FOR AREA 1 (A-1).  
 - STONE COLUMNS GO TO A DEPTH OF ELV. 460.00 UNLESS BEDROCK IS ENCOUNTERED FIRST.



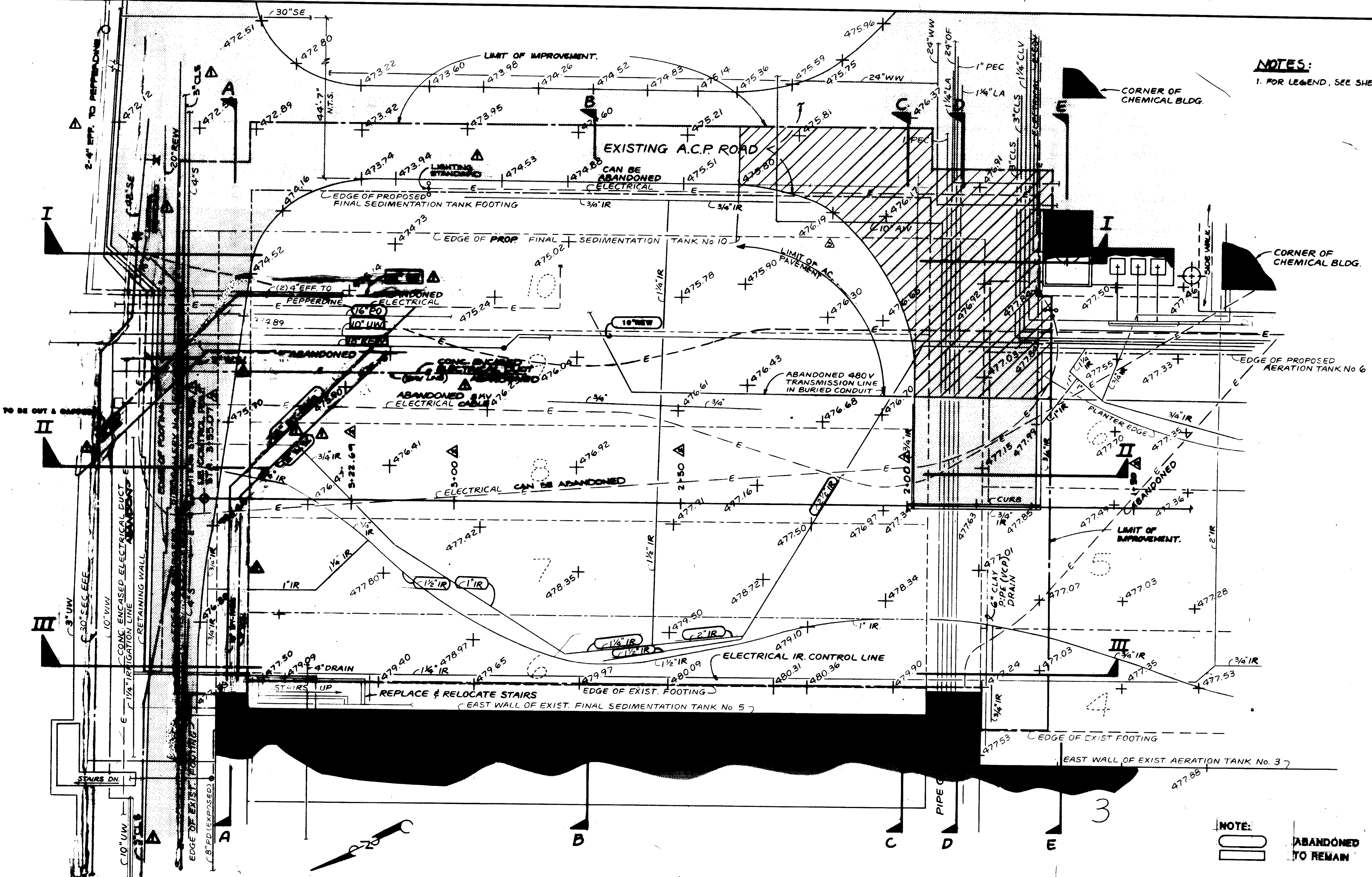
04226



DWN. BY: T.D.S.	PROJECT: TAPIA W.T.F. (CONSTRUCTION DRAWING)	DATE: 7-7-87 (REV. 7-22-87)	DWG. NO.: J2530
CHKD. BY: B.M.V.	DRAWING TITLE: S.C. LAYOUT (-410 PTS.)	SCALE: 1" = 10'	SHT. NO.: 1

GKN Hayward Baker

**NOTES:**  
1. FOR LEGEND, SEE SHEET NO. 3



**NOTE:**  
[Symbol] ABANDONED TO REMAIN

04227

REV	DATE	BY	DESCRIPTION
6/11	Y.K.	ADD A.C.P.	
5/7	D.U.	REVISIONS TO THE	
5/7	Y.K.	REVISIONS TO THE	

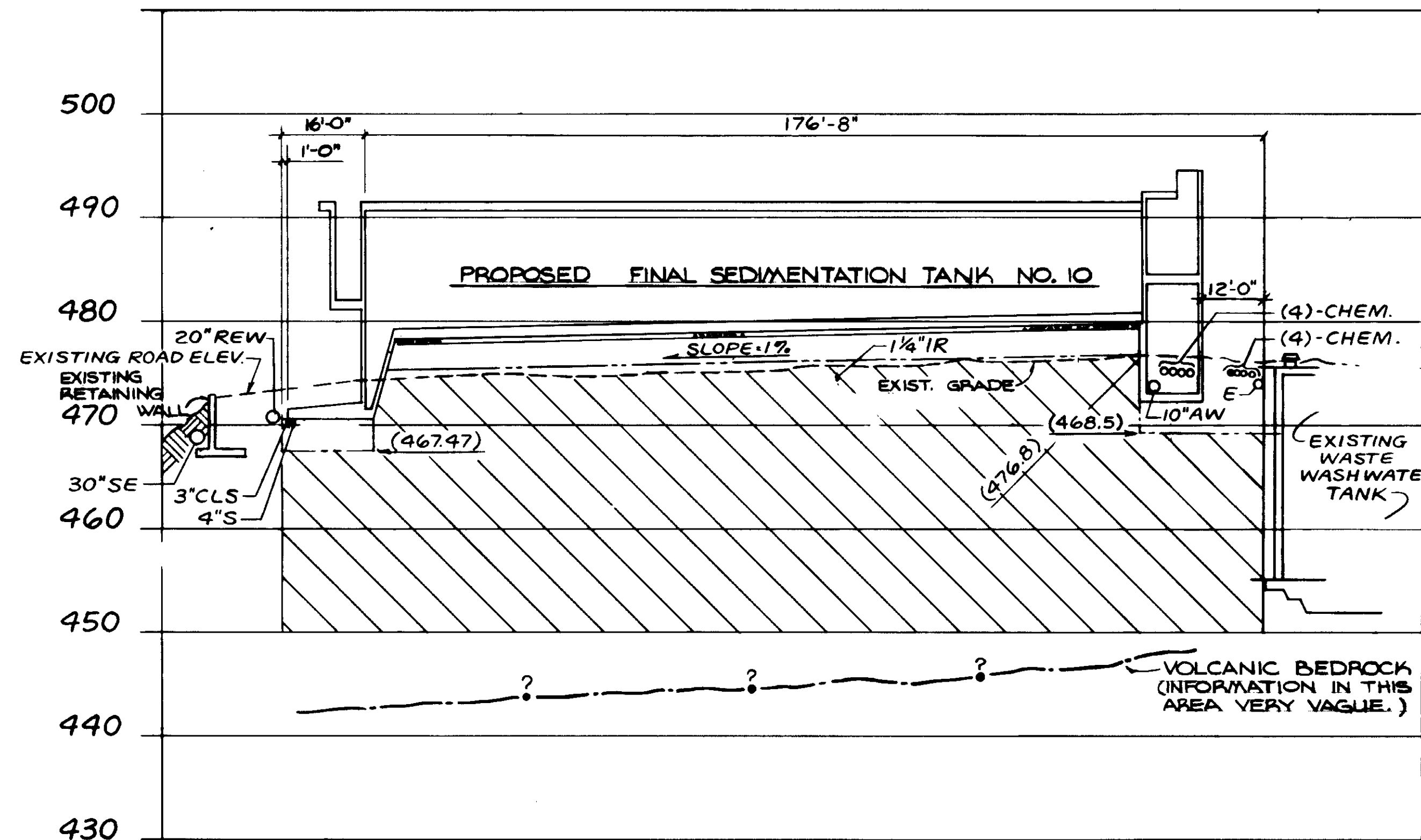
SCALE:	1"=10'
DESIGNED:	Y.K.
DRAWN:	J.K.
CHECKED:	Y.K.
DATE:	2-23-87
DATE:	2-23-87

**KALEX ENGINEERS**  
Kalex Consulting Engineers / Alexander Engineers  
Vero Beach, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
FINAL SEDIMENTATION TANKS FOUNDATION IMPROVEMENT  
SITE PLAN

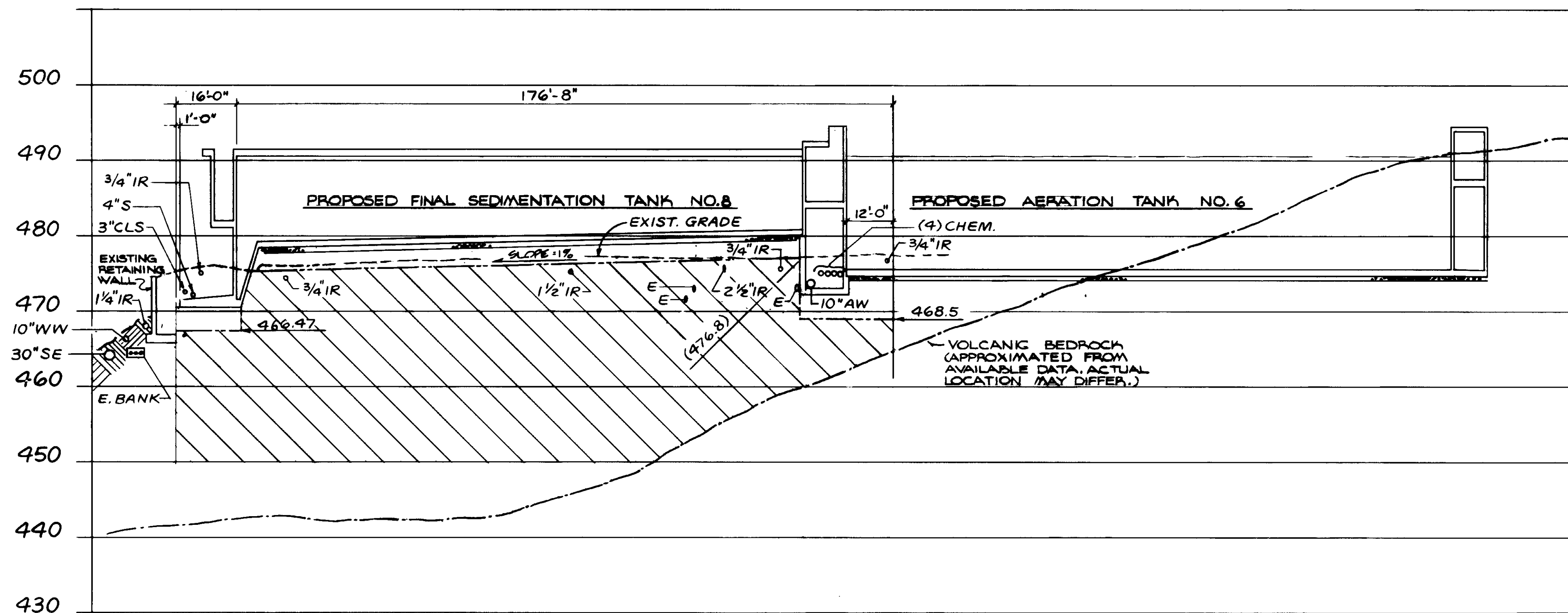
SHEET  
2





SECTION I

LEGEND:	
AW	FILTER AIR WASH .
CLS	CHLORINE SOLUTION .
CLV	CHLORINE GAS UNDER VACUUM .
E	ELECTRICAL .
EFF	EFFLUENT .
FE	FINAL EFFLUENT .
IR	IRRIGATION .
OF	OVERFLOW OR OUTFALL .
PD	PLANT DRAIN .
PEC	POLYMER - CATIONIC .
PO	PLANT OVERFLOW .
REW	RECLAIMED WATER .
SE	SECONDARY EFFLUENT .
SO	SULFUR DIOXIDE .
SOV	SULFUR DIOXIDE GAS UNDER VACUUM .
UW	UTILITY WATER .
WW	FILTER WASTE WASHWATER OR WASH WATER .
LA	LIQUID ALUM .
S	SCUM
---	
EXISTING BELOW GRADE STRUCTURE	
---	
PROPOSED STRUCTURE	
---	
LIMIT OF IMPROVEMENT	



SECTION II

( ) APPROX. ELEV. TOP OF COLUMN  
 MAX. TOP OF COLUMN  
 ~ LIMITS OF FOUNDATION IMPR.

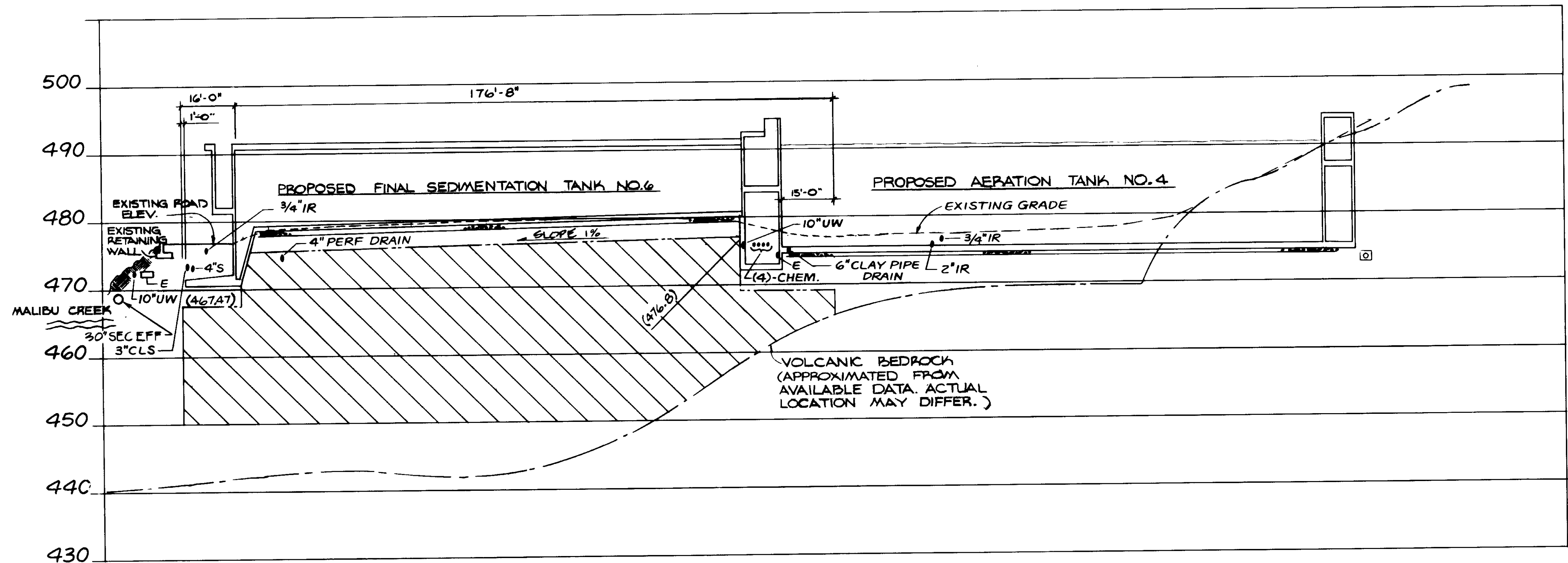
04228

REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED	Y.K.	SUBMITTED	14038	2-23-87
3"=10' VERT	J.K.		KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
1"=20' HORIZ	DRAWN	Y.K.	W. Alexander	613	2-23-87
	CHECKED		ALEXANDER ENGINEERS	R.C.E. NO.	DATE

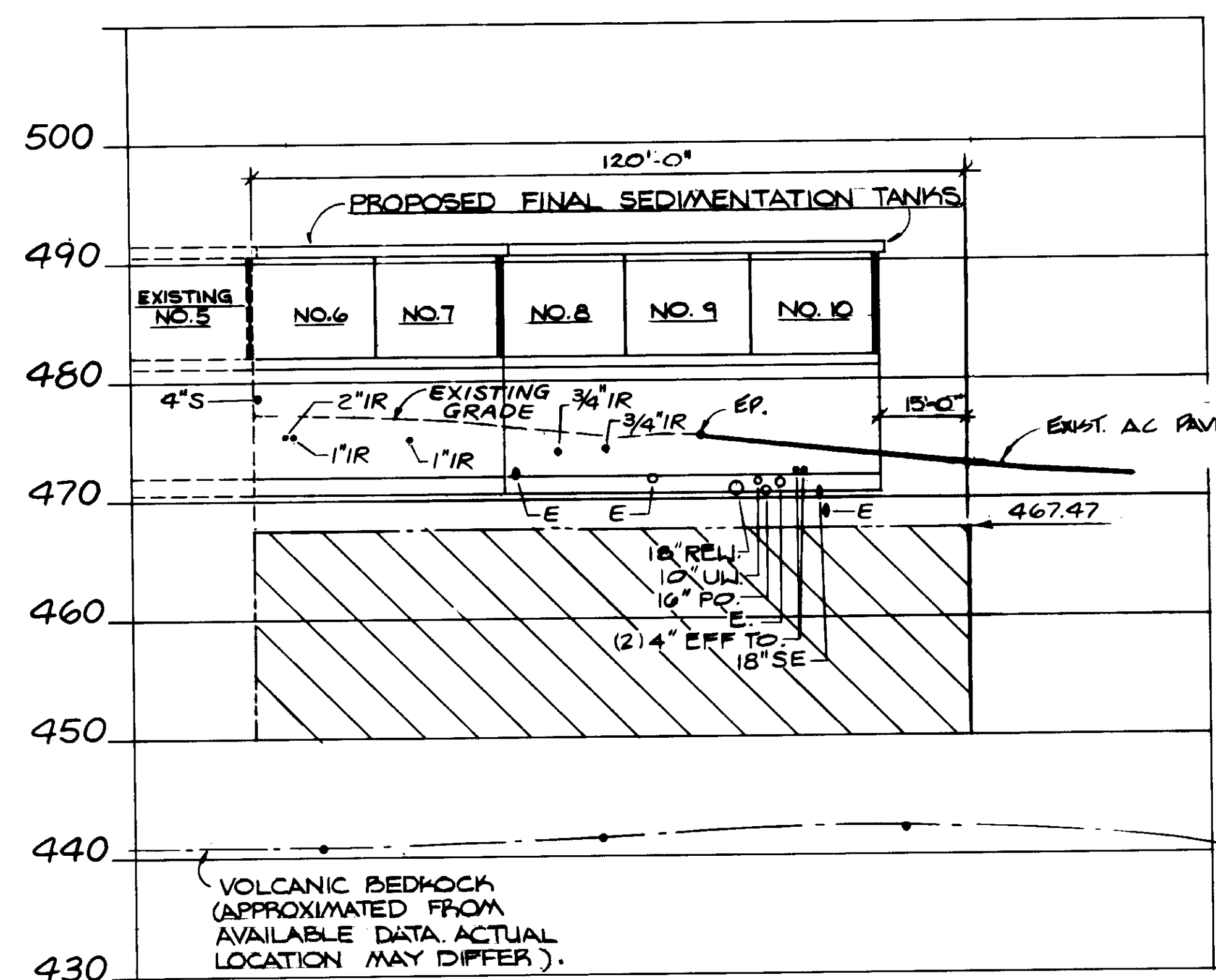
**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA WATER RECLAMATION FACILITY EXPANSION III FINAL SEDIMENTATION TANKS FOUNDATION IMPROVEMENT SECTIONS - I	SHEET <b>3</b>
---	-------------------

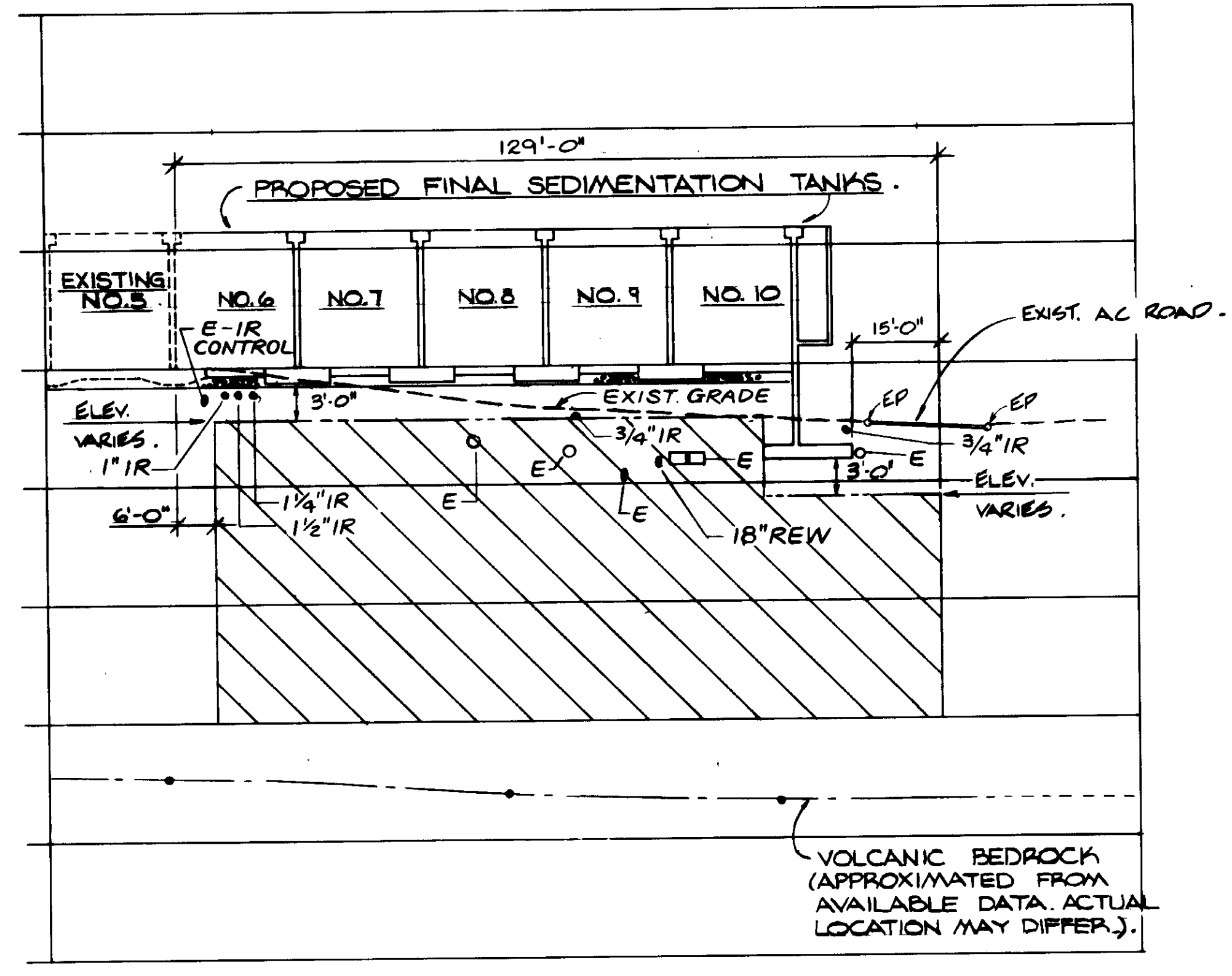


SECTION III

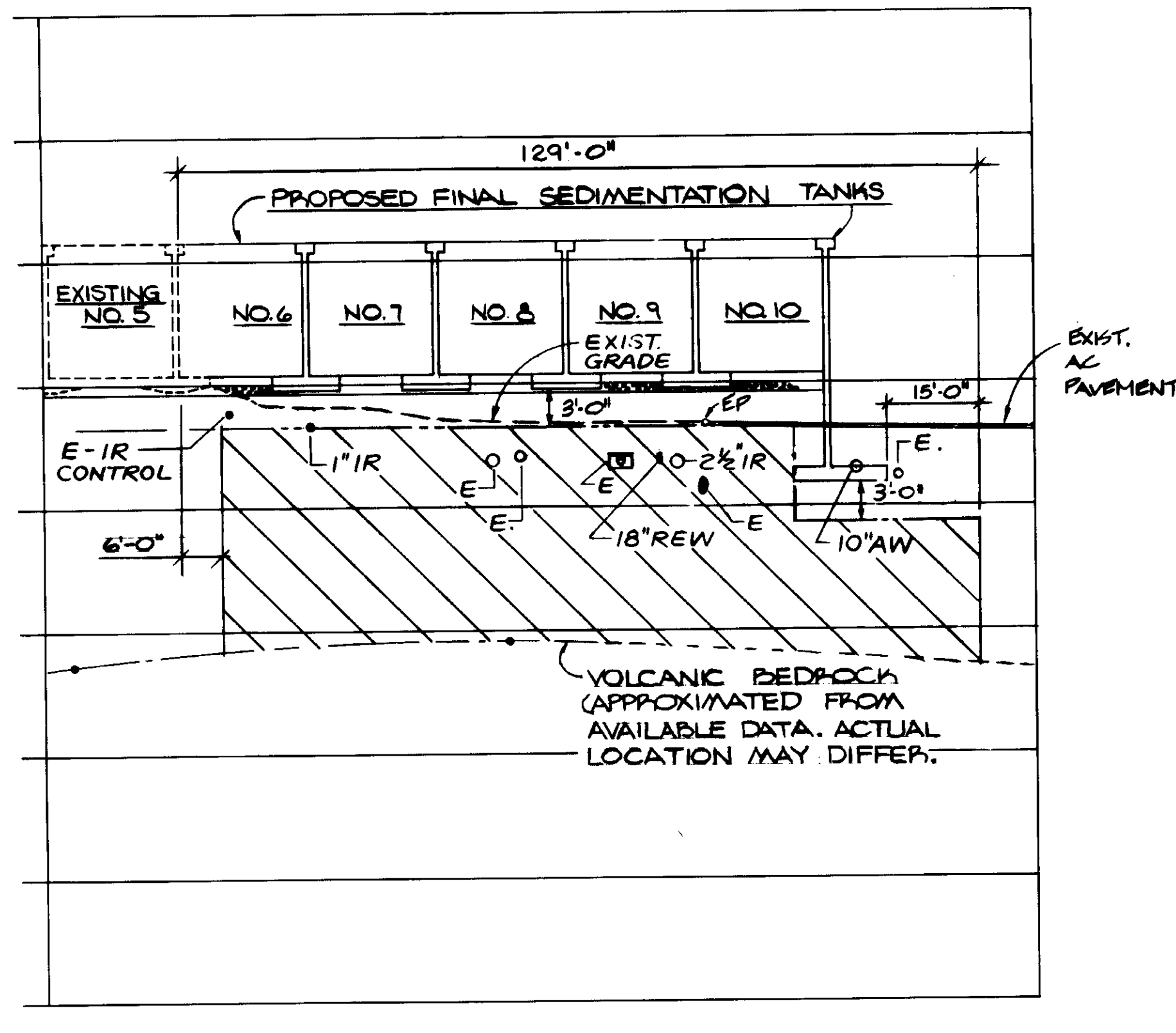
( ) APPROX. ELEV. TOP OF COLUMN  
 MAX. TOP OF COLUMN  
 ~ LIMITS OF FOUNDATION IMPR.



SECTION A



SECTION B



SECTION C

04229

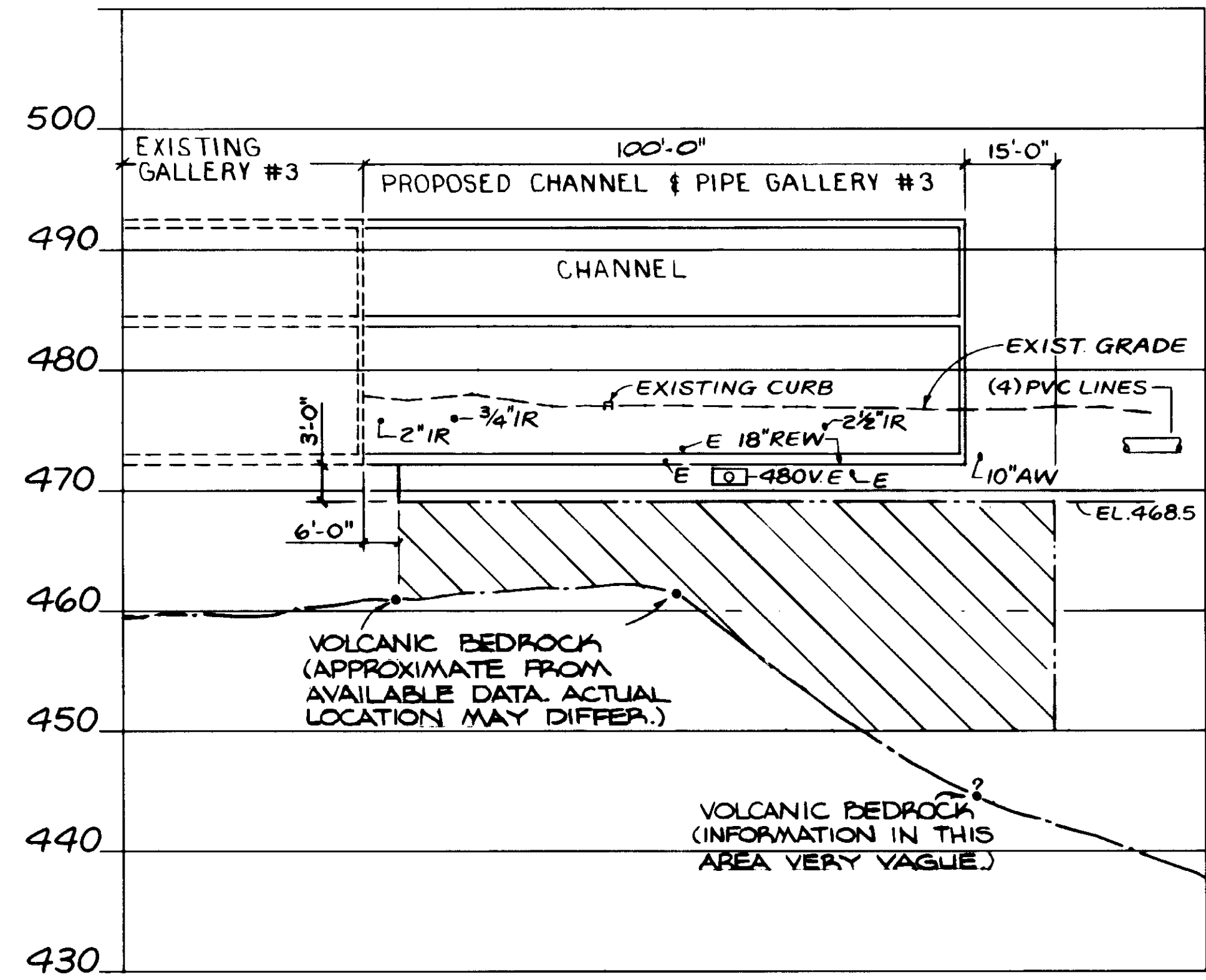
REV	DATE	BY	DESCRIPTION	REV	DATE	BY	DESCRIPTION

SCALE:	DESIGNED	SUBMITTED	14088	2-23-87
1"=10' VERT	J.K.	KASURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
1"=20' HORIZ	J.K.	Willard Alexander	513	2-23-87
	DRAWN	ALEXANDER ENGINEERS	R.C.E. NO.	DATE
	Y.K.			
	CHECKED			

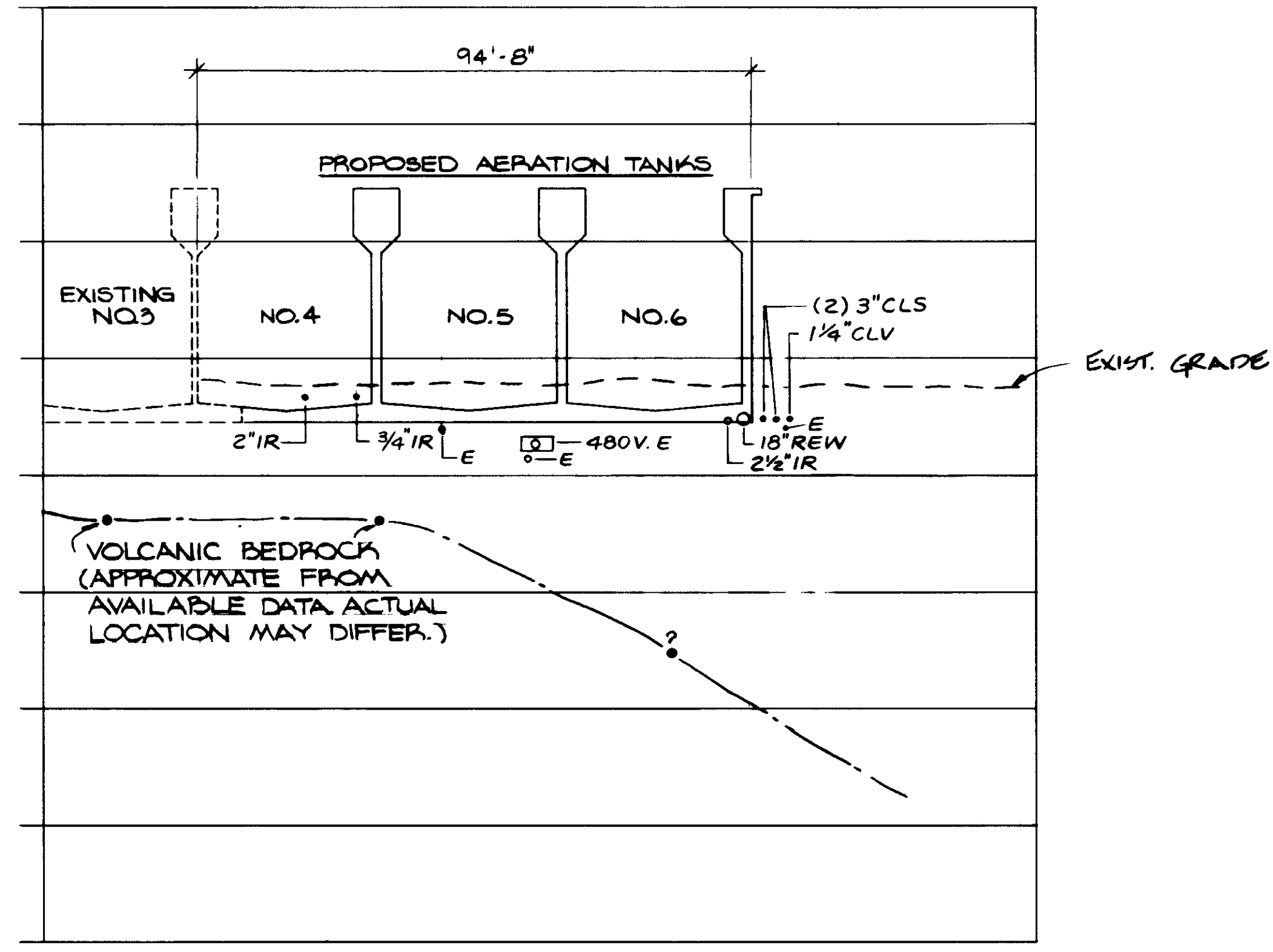
**KALEX ENGINEERS**  
 Katura Consulting Engineers / Alexander Engineers  
 Ventura, California Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 FINAL SEDIMENTATION TANKS FOUNDATION IMPROVEMENT  
 SECTIONS - II

SHEET  
**4**



SECTION D

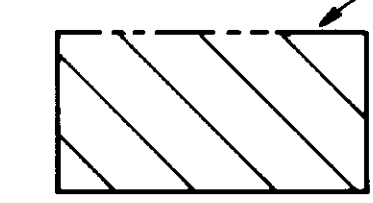


SECTION E

( ) APPROX. ELEV. TOP OF COLUMN

MAX. TOP OF COLUMN

~ LIMITS OF FOUNDATION IMPR.



04230

REV	DATE	BY	DESCRIPTION

SCALE:	1"=10' VERT	1"=20' HORIZ
DESIGNED	Y.K.	J.K.
DRAWN	Y.K.	
CHECKED		

SUBMITTED	14038	2-23-87
KATSURA CONSULTING ENGINEERS	R.C.E. NO.	DATE
W. Alexander	513	2-23-87
ALEXANDER ENGINEERS	R.C.E. NO.	DATE

**KALEX ENGINEERS**  
 Katsura Consulting Engineers / Alexander Engineers  
 Ventura, California / Glendora, California

**LAS VIRGENES MUNICIPAL WATER DISTRICT**  
**TAPIA WATER RECLAMATION FACILITY EXPANSION III**  
 FINAL SEDIMENTATION TANKS FOUNDATION IMPROVEMENT  
 SECTIONS - III



COMPUTER & CONTROL SYSTEM UP-GRADE

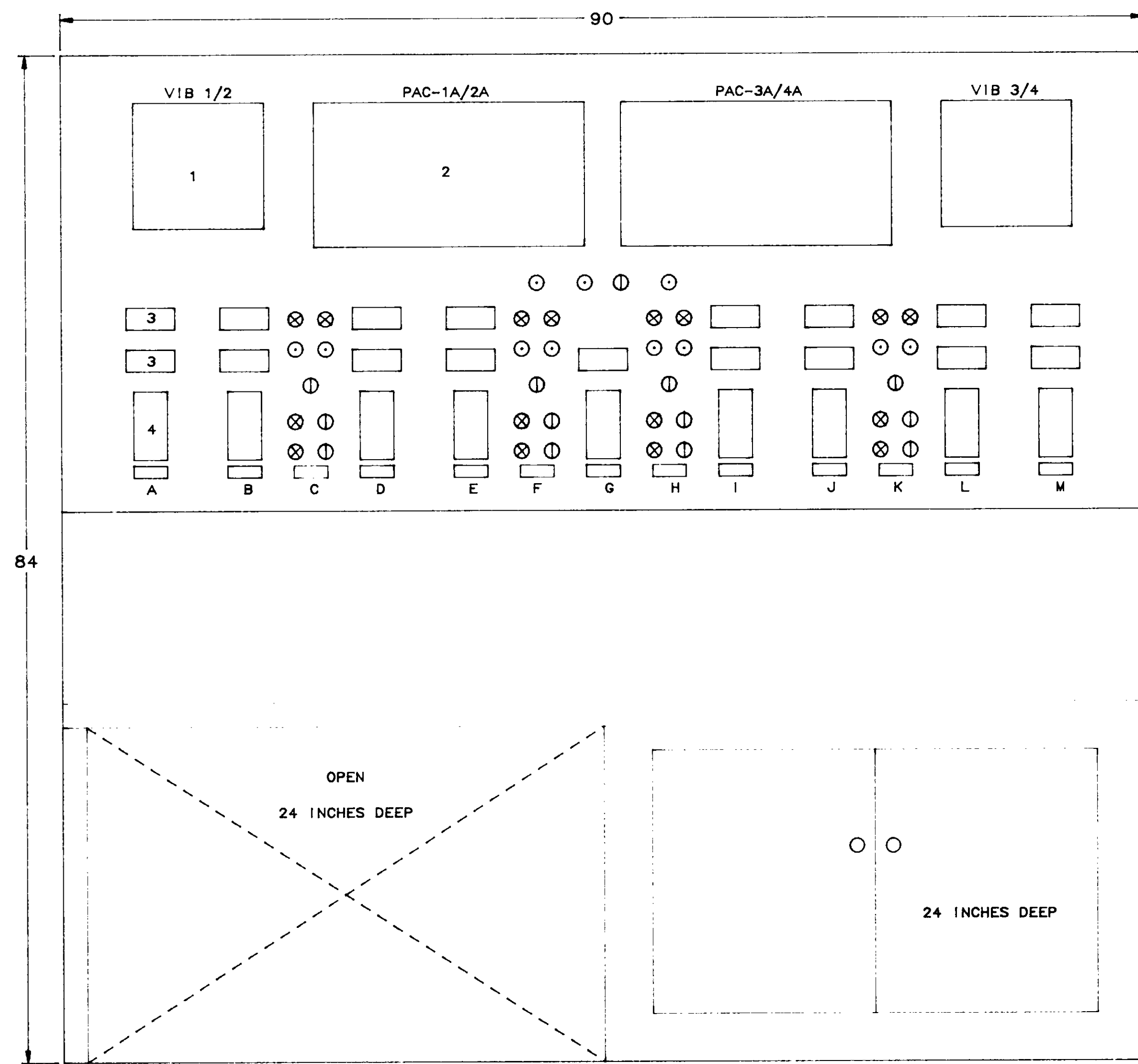
CONTRACT NO. C-3

TAPIA WATER RECLAMATION FACILITY  
EXPANSION III

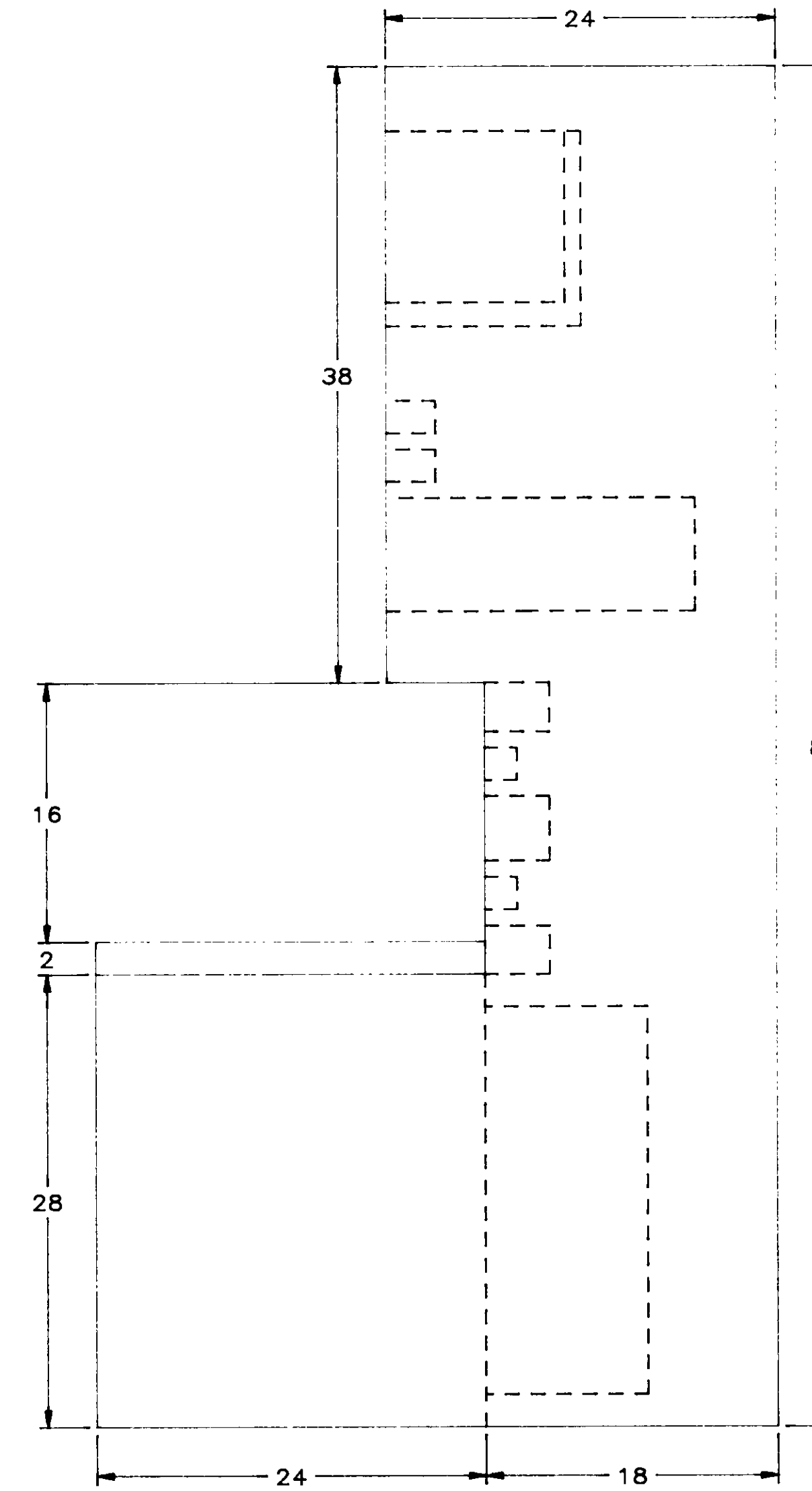
AS BUILTS

## INDEX OF DRAWINGS

NUMBER	TITLE	DESCRIPTION	NUMBER	TITLE	DESCRIPTION
1 OF 5	8002-MD-A	CCP-A PANEL LAYOUT, FRONT	1 OF 1	8002-AD	DIGITAL SYSTEM BLOCK DIAGRAM
2 OF 5	8002-MD-A	CCP-A PANEL LAYOUT, REAR	1 OF 1	8002-ID-A/B	MISC. DETAILS
3 OF 5	8002-MD-A	CCP-A PANEL FAB, FRONT	1 OF 14	8002-ID-A	COMP. INITIATING CTRL LEAD COMP GUIDE
4 OF 5	8002-MD-A	CCP-A PANEL FAB, REAR	2 OF 14	8002-ID-A	PAC- 1A COMP. SEQUENCE
5 OF 5	8002-MD-A	CCP-A PANEL FAB, DETAILS	3 OF 14	8002-ID-A	PAC- 2A COMP. SEQUENCE
1 OF 5	8002-MD-B	CCP-B PANEL LAYOUT, FRONT	4 OF 14	8002-ID-A	PAC- 3A COMP. SEQUENCE
2 OF 5	8002-MD-B	CCP-B PANEL LAYOUT, REAR	5 OF 14	8002-ID-A	PAC- 4A COMP. SEQUENCE
3 OF 5	8002-MD-B	CCP-B PANEL FAB, FRONT	6 OF 14	8002-ID-A	PAC- 1A OIL PUMP/BY-PASS/AIR PLENUM
4 OF 5	8002-MD-B	CCP-B PANEL FAB, REAR	7 OF 14	8002-ID-A	PAC- 2A OIL PUMP/BY-PASS/AIR PLENUM
5 OF 5	8002-MD-B	CCP-B PANEL FAB, DETAILS	8 OF 14	8002-ID-A	PAC- 3A OIL PUMP/BY-PASS/AIR PLENUM
1 OF 7	8002-ID-B	INITIATING & COMPRESSOR CTRL	9 OF 14	8002-ID-A	PAC- 4A OIL PUMP/BY-PASS/AIR PLENUM
2 OF 7	8002-ID-B	MODULAR CTRL FOR FCV-101, 102, 103	10 OF 14	8002-ID-A	PAC- 1A COMP. GUIDE VANE CTRL
3 OF 7	8002-ID-B	AERATION TANK CTRL FCV-301 & FCV-302	11 OF 14	8002-ID-A	PAC- 2A COMP. GUIDE VANE CTRL
4 OF 7	8002-ID-B	AERATION TANK CTRL FCV-303 & FCV-304	12 OF 14	8002-ID-A	PAC- 3A COMP. GUIDE VANE CTRL
5 OF 7	8002-ID-B	AERATION TANK CTRL FCV-305 & FCV-306	13 OF 14	8002-ID-A	PAC- 4A COMP. GUIDE VANE CTRL
6 OF 7	8002-ID-B	DIGESTER RAW SLUDGE VLV CTRL	14 OF 14	8002-ID-A	CCP-A ANNUNCIATORS PAC-1A/2A/3A/4A
7 OF 7	8002-ID-B	PRIMARY TNK SLUDGE / AERATION TNKS ALARM			



FRONT ELEVATION



RIGHT SIDE ELEVATION

- EQUIPMENT
1. VIBRATION MONITOR, BENTLEY NEVADA 90060-02
  2. ANNUNCIATOR, RONAN MODEL X11-1000
  3. PANEL METER, ACTION INSTRUMENTS, MODEL V508
  4. ANALOG CONTROLLER, FOXBORO MODEL 760CNA

NAMEPLATE SCHEDULE

ITEM	1	2	3
A	VALVE POSITION FCV-901A	AIR FLOW	INLET GUIDE VANE FCV-901A
B	FALVE POSITION FCV-901	VACUUM	PLENUM VALVE FCV-901
C	BY-PASS VALVE PCV-901B	OIL PUMP	PAC-1A
D	VALVE POSITION FCV-902A	AIR FLOW	INLET GUIDE VANE FCV-902A
E	VALVE POSITION FCV-902	VACUUM	PLENUM VALVE FCV-902
F	BY-PASS VALVE FCV-902B	OIL PUMP	PAC-1A
G	SYSTEM PRESSURE	LEAD COMPRESSOR GUIDE VANE	

ITEM	1	2	3
H	BY-PASS VALVE FCV-903B	OIL PUMP	PAC-3A
I	VALVE POSITION FCV-903A	AIR FLOW	INLET GUIDE VANE FCV-903A
J	VALVE POSITION FCV-903	VACUUM	PLENUM VALVE FCV-903
K	BY-PASS VALVE FCV-904B	OIL PUMP	PAC-904
L	VALVE POSITION FCV-904A	AIR FLOW	INLET GUIDE VANE FCV-904A
M	VALVE POSITION PCV-904	VACUUM	PLENUM VALVE PCV-904

04233

NO.	DATE	BY	REMARKS
1	10/12/88	DBS	GENERAL REVISION AFTER FAT
0	5/31/88	DBS	INITIAL ISSUE

REVISIONS

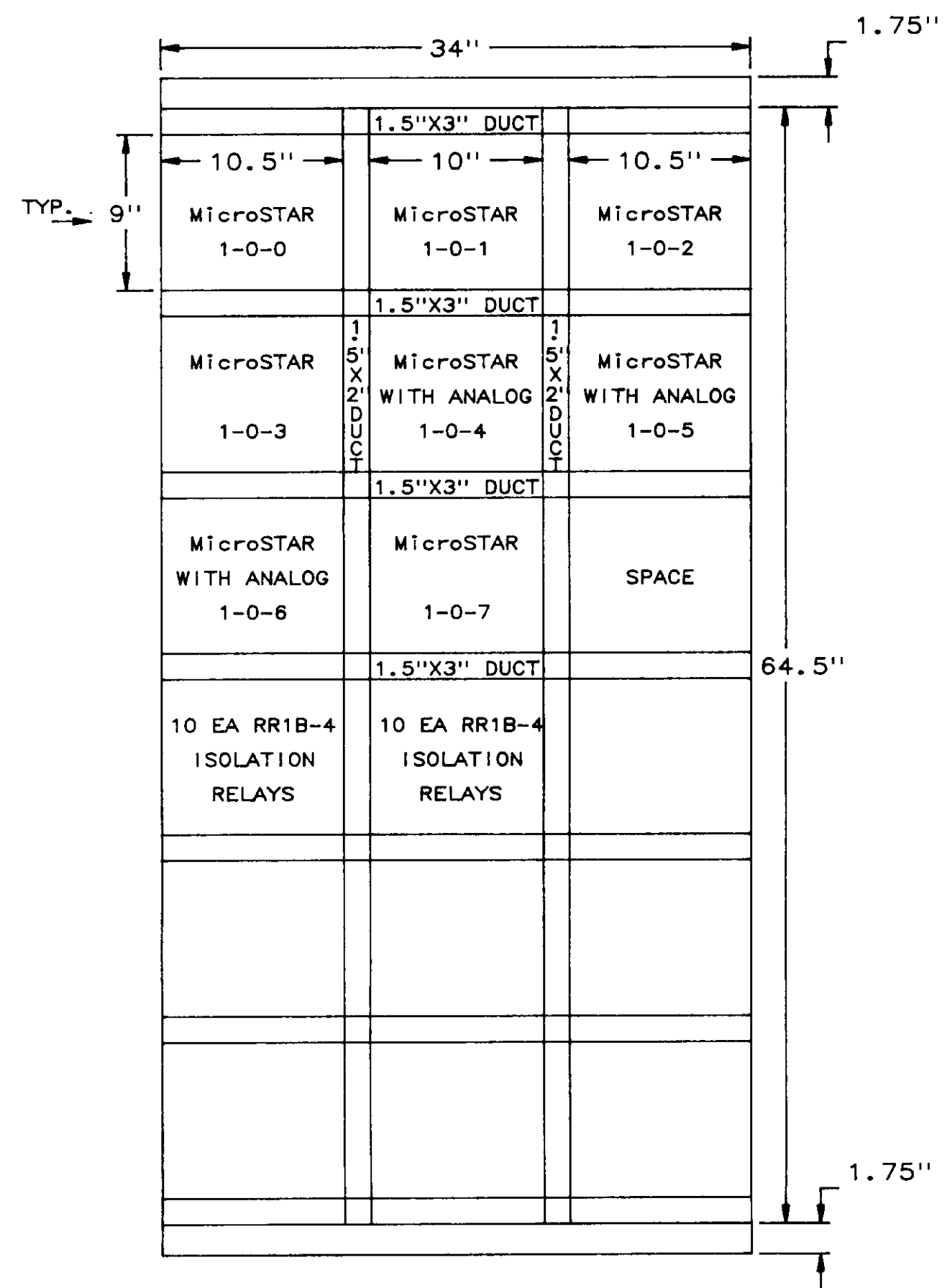
**B**  
**C****S** BARRCOM SYSTEMS LTD.  
22775 SAVI RANCH PARKWAY, SUITE D  
YORBA LINDA, CALIFORNIA 92686

SCALE: 1"=8" DATE: 5/31/88 DRAWN BY: DBS

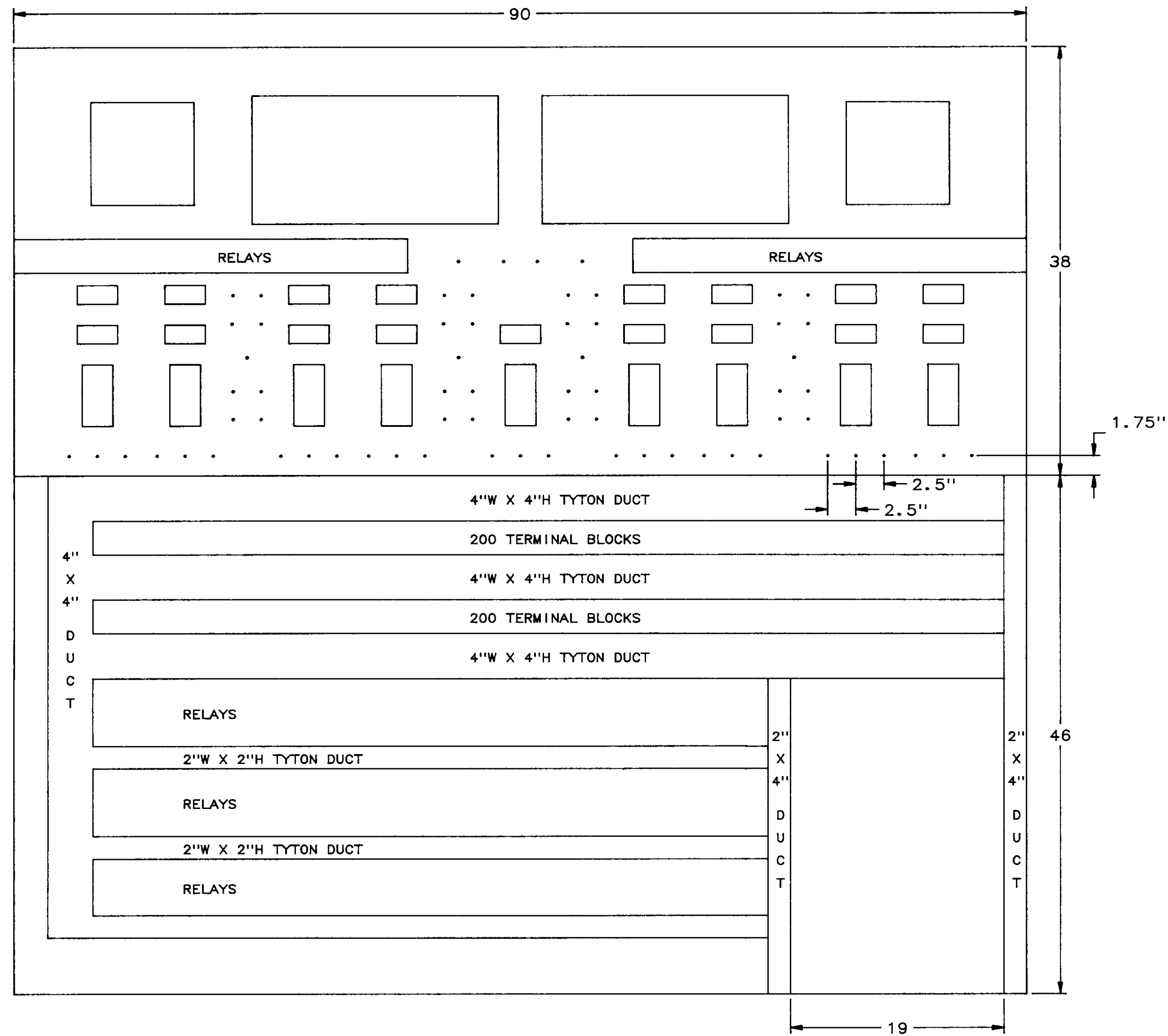
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

CCP-A PANEL LAYOUT, FRONT

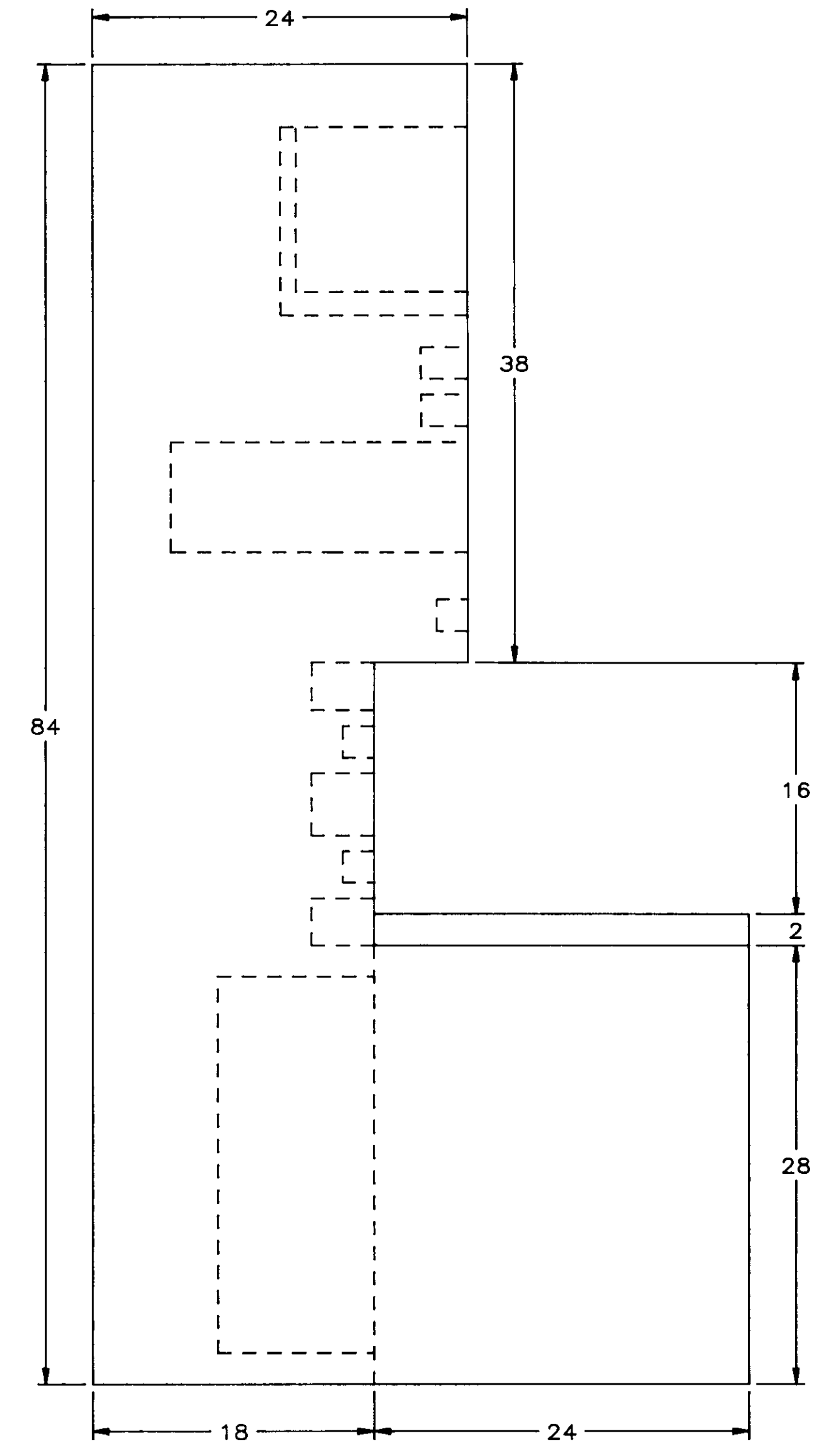
FILING NAME FRNTVIEW	DRAWING NUMBER 8002-MD-A	SHEET NUMBER 1 OF 5
-------------------------	-----------------------------	------------------------



EQUIPMENT LAYOUT  
RIGHT DOOR MOUNTING PAN  
FACING REAR OF PANEL



REAR, DOORS REMOVED



RIGHT SIDE  
(FROM REAR VIEW)

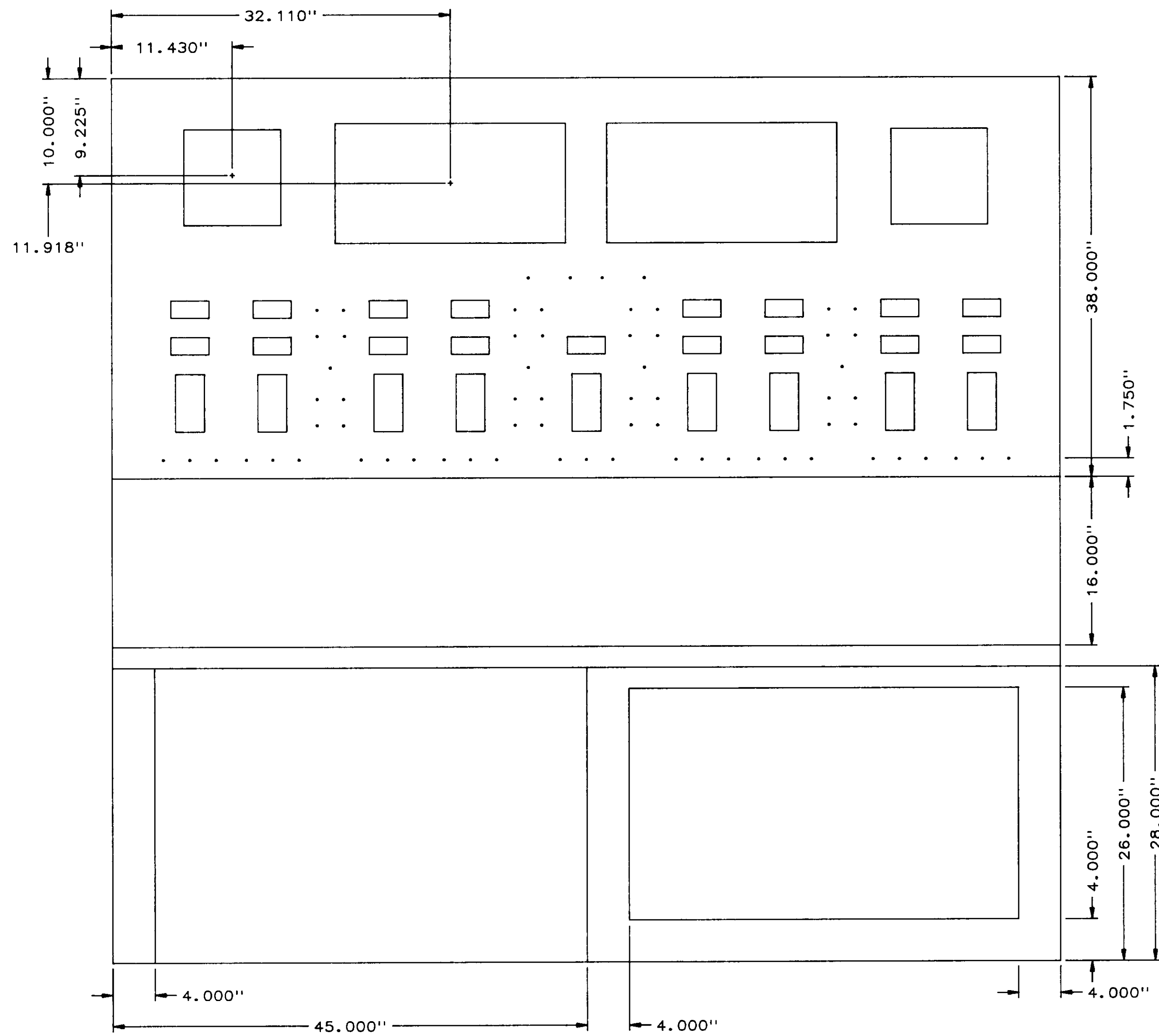
04234

NO.	DATE	BY	REMARKS
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0	5/31/88	DBS	INITIAL ISSUE

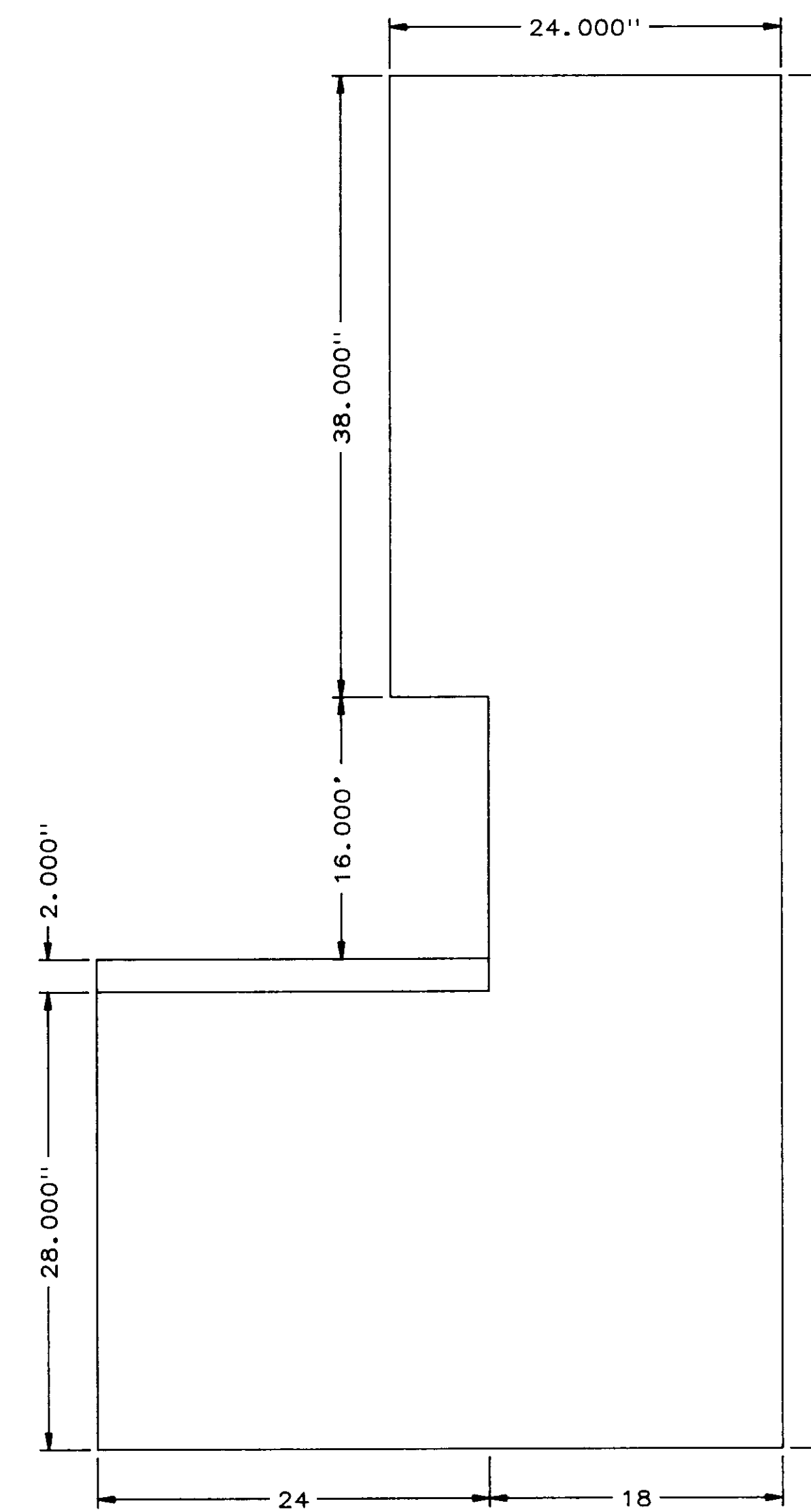
REVISIONS

BARRCOM SYSTEMS LTD. 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686		
SCALE: 1"=6"	DATE: 5/31/88	DRAWN BY: DBS
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-A PANEL LAYOUT, REAR		
FILING NAME REARVIEW	DRAWING NUMBER 8002-MD-A	SHEET NUMBER 2 OF 5





FRONT VIEW



RIGHT SIDE  
(FROM FRONT)

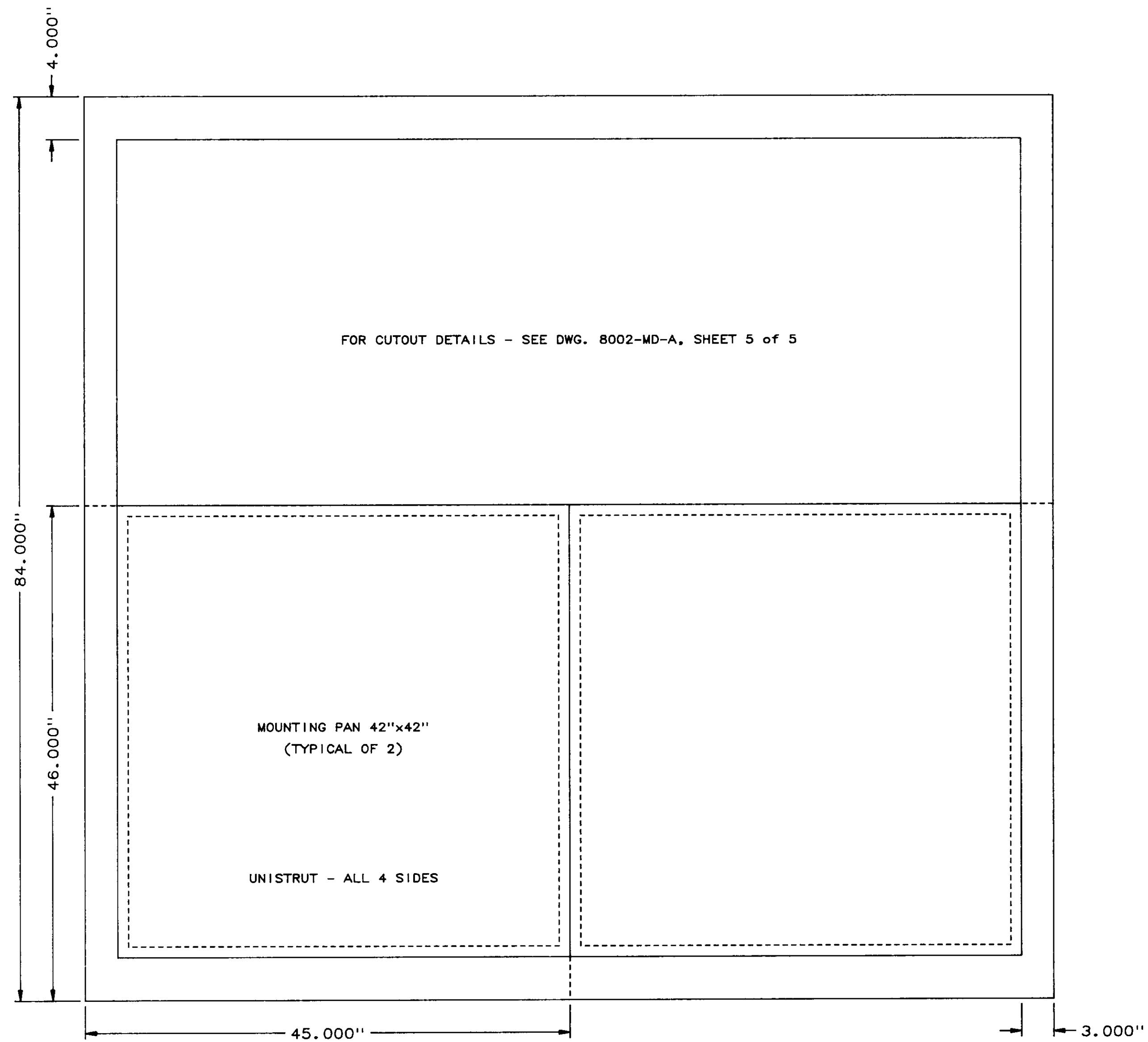
FOR CUTOUT DETAILS - SEE DWG. 8002-MD-A, SHEET 5 of 5

04235

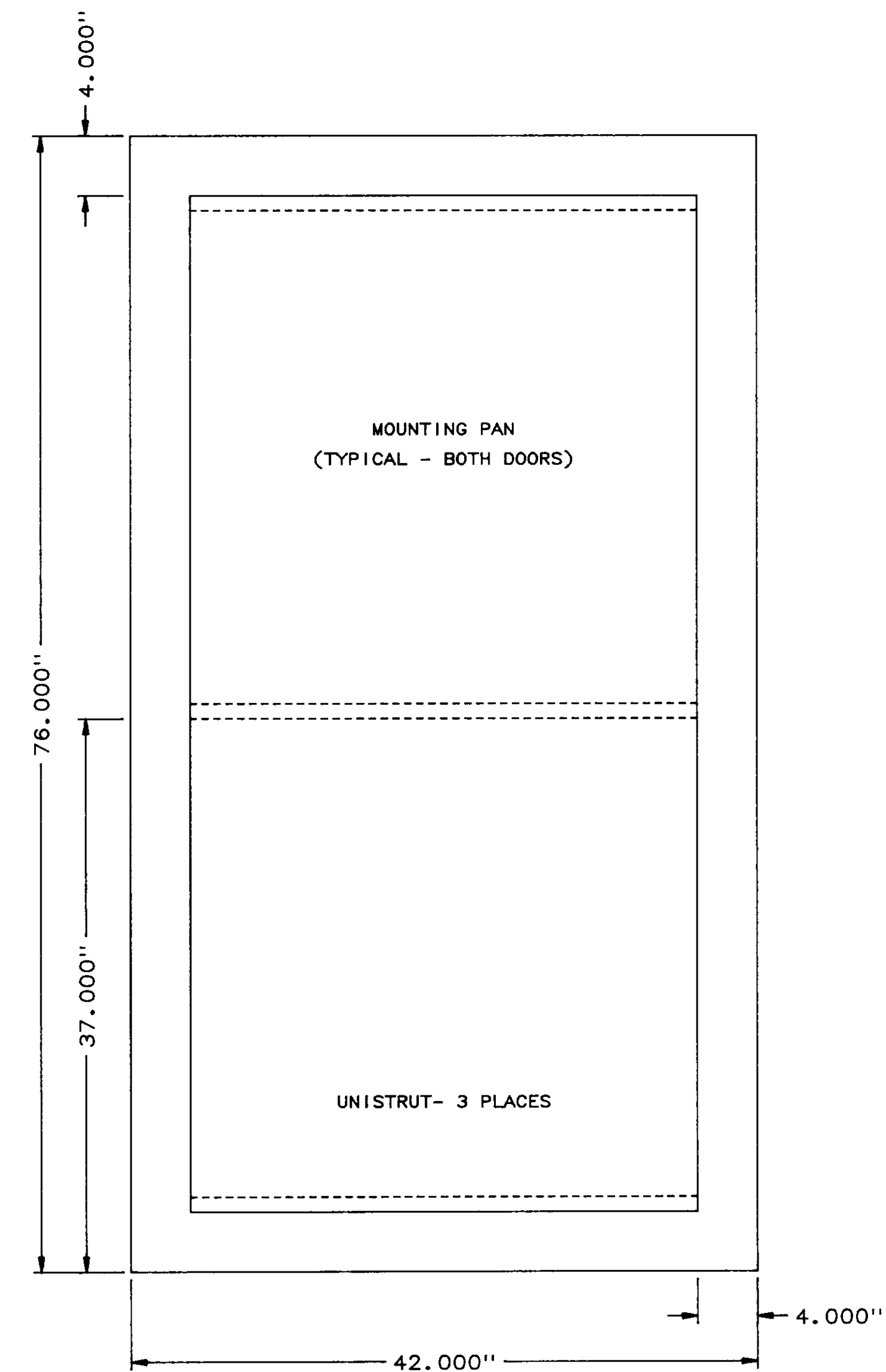
NO.	DATE	BY	REMARKS
1	3/7/88	DBS	GENERAL REVISION
0	5/31/88	DBS	INITIAL ISSUE

REVISIONS

		<b>BARRCOM SYSTEMS LTD.</b> 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686
SCALES: 1"=8"	DATE: 5/31/88	DRAWN BY: DBS
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-A PANEL FAB, FRONT		
FILING NAME FRNTFAB	DRAWING NUMBER 8002-MD-A	SHEET NUMBER 3 OF 5



REAR VIEW



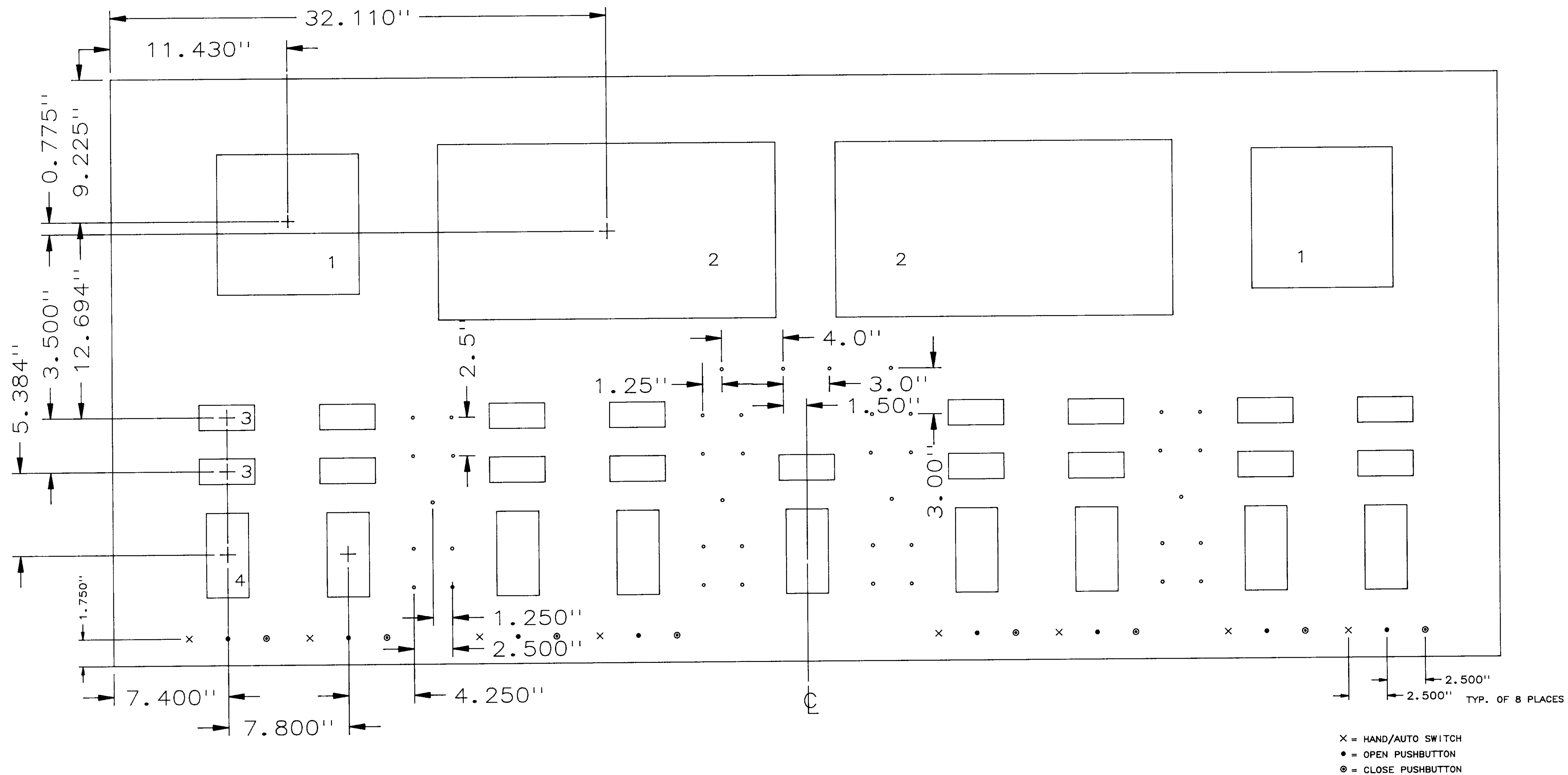
REAR DOOR  
 (TYPICAL OF 2)  
 DOOR SIZE 76"x42"  
 MOUNTING PAN 68"x34"  
 (3-POINT ROLLER LATCH NOT SHOWN)

04236

NO.	DATE	BY	REMARKS
0	5/31/88	DBS	INITIAL ISSUE
REVISIONS			

	<b>BARRCOM SYSTEMS LTD.</b> 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686	
	SCALES: 1"=8"	DATE: 5/31/88
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-A PANEL FAB, REAR		
FILING NAME REARFAB	DRAWING NUMBER 8002-MD-A	SHEET NUMBER 4 OF 5



- EQUIPMENT
1. VIBRATION MONITOR, BENTLEY NEVADA 90060-02  
CUTOUT SIZE = 9.12"H x 9.18"W
  2. ANNUNCIATOR, RONAN MODEL X11-1000  
CUTOUT SIZE = 11.38"H x 21.88"W
  3. PANEL METER, ACTION INSTRUMENTS, MODEL V508  
CUTOUT SIZE = 1.65"H x 3.595"W
  4. ANALOG CONTROLLER, FOXBORO MODEL 760CNA  
CUTOUT SIZE = 5.47"H x 2.74"W

CUTOUT DETAILS - PANEL FRONT

SEE DRAWING 8002-MD-A, SHEET 3 of 5

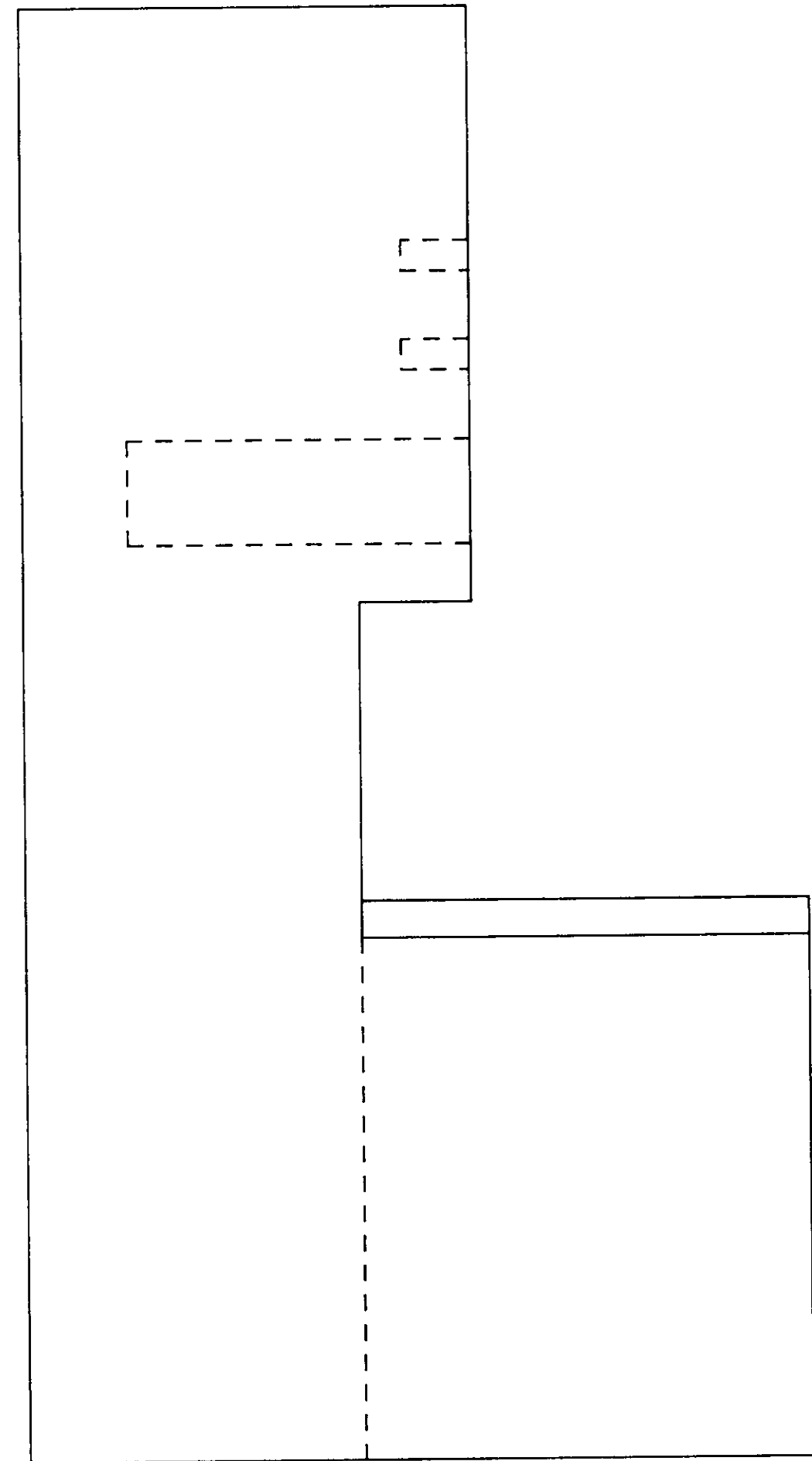
PANEL CUTOUTS ARE SYMETRICAL AROUND VERTICAL CENTERLINE  
DIMENSIONS SHOWN ARE TYPICAL FOR ALL CUTOUTS

**04237**

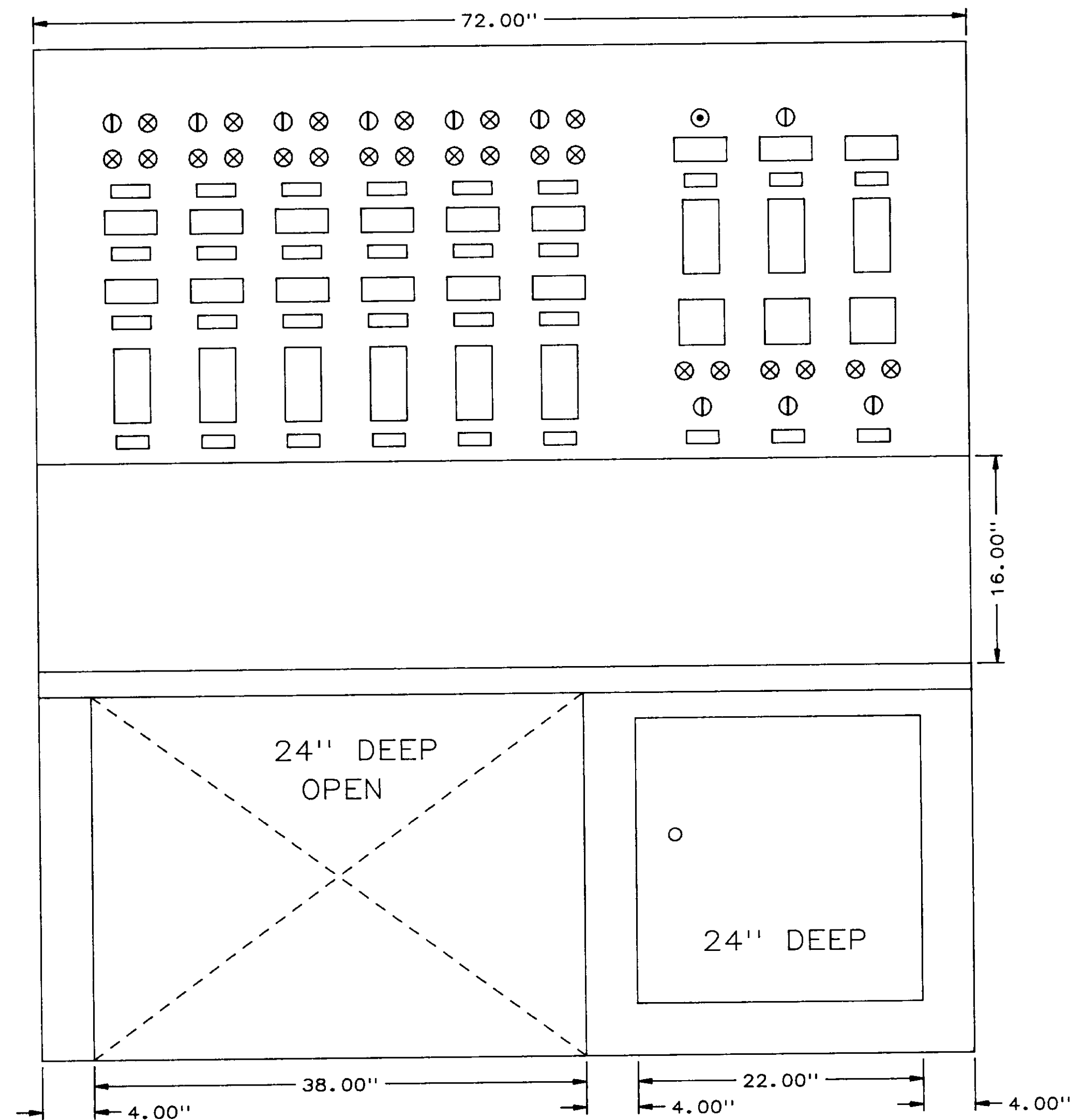
NO.	DATE	BY	REMARKS
1	2/21/88	DBS	GENERAL REVISIONS
0	5/31/88	DBS	INITIAL ISSUE

REVISIONS

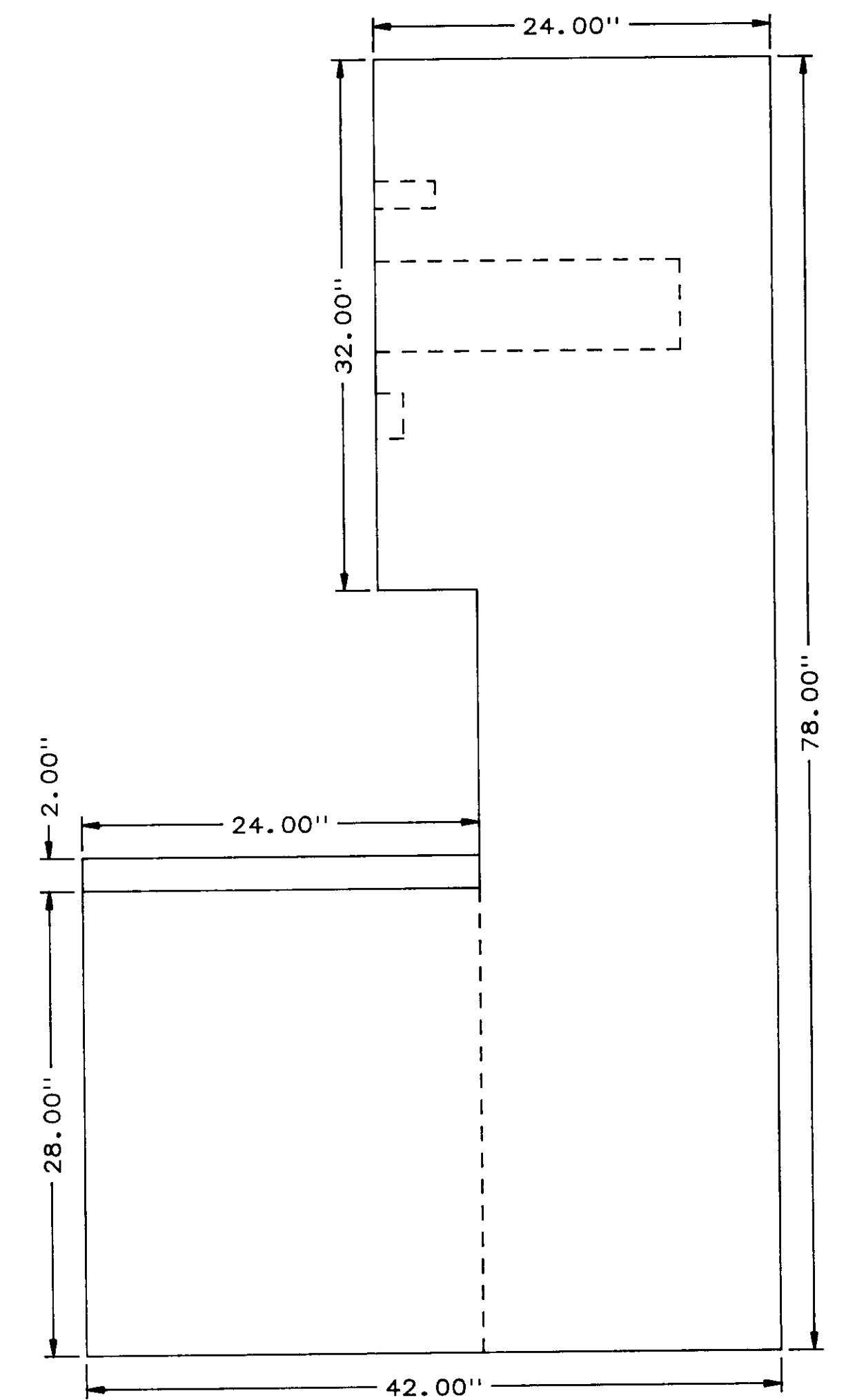
BARRCOM SYSTEMS LTD. 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686		
SCALE: 1"=8"	DATE: 5/31/88	DRAWN BY: DBS
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-A PANEL FAB, DETAILS		
FILING NAME DETAILS	DRAWING NUMBER 8002-MD-A	SHEET NUMBER 5 OF 5



LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION

04238

NO.	DATE	BY	REMARKS
0	5/31/88	DBS	INITIAL ISSUE

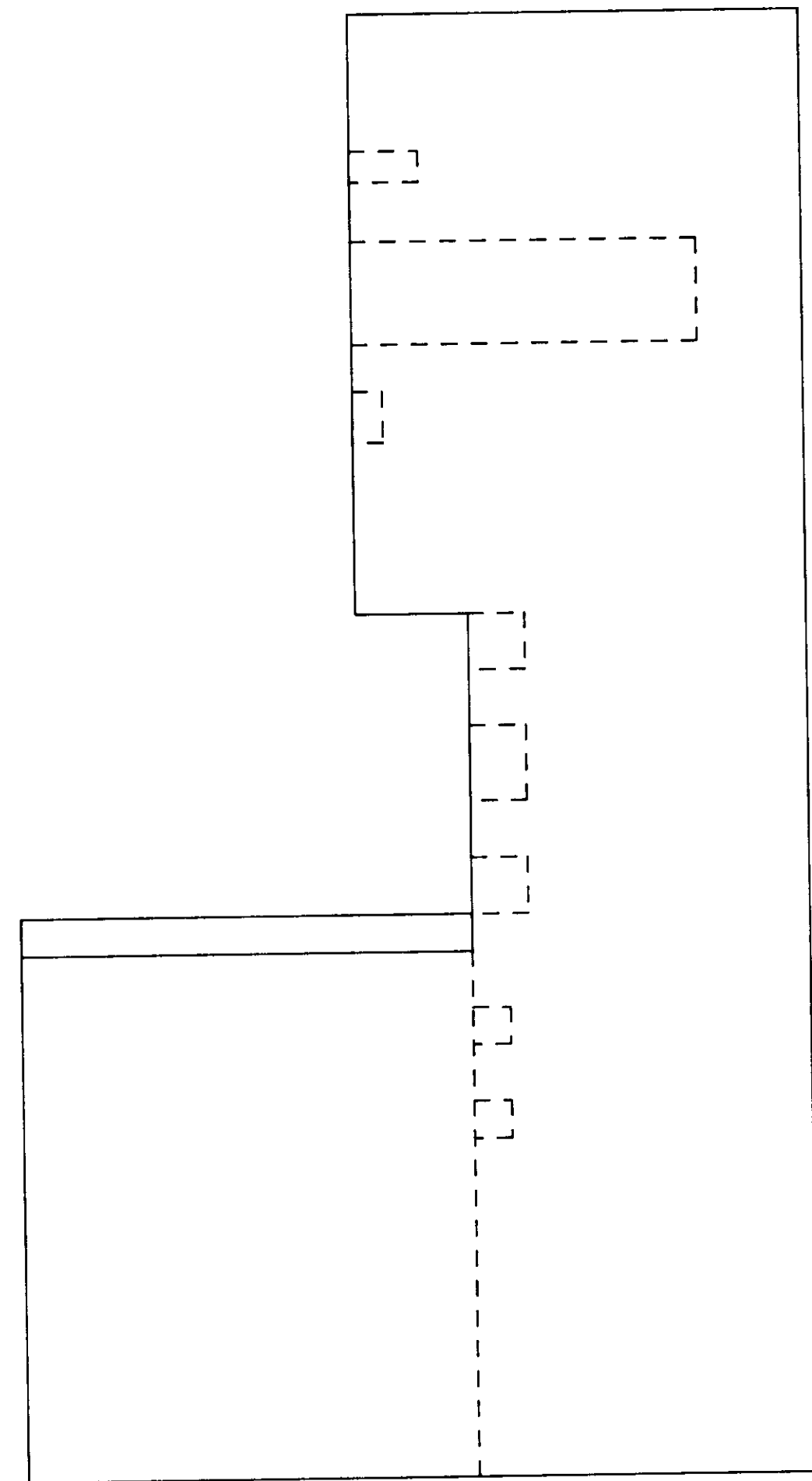
REVISIONS

**BCS** BARRCOM SYSTEMS LTD.  
 22775 SAVI RANCH PARKWAY, SUITE D  
 YORBA LINDA, CALIFORNIA 92686  
 SCALES: 1"=8" DATE: 5/31/88 DRAWN BY: DBS

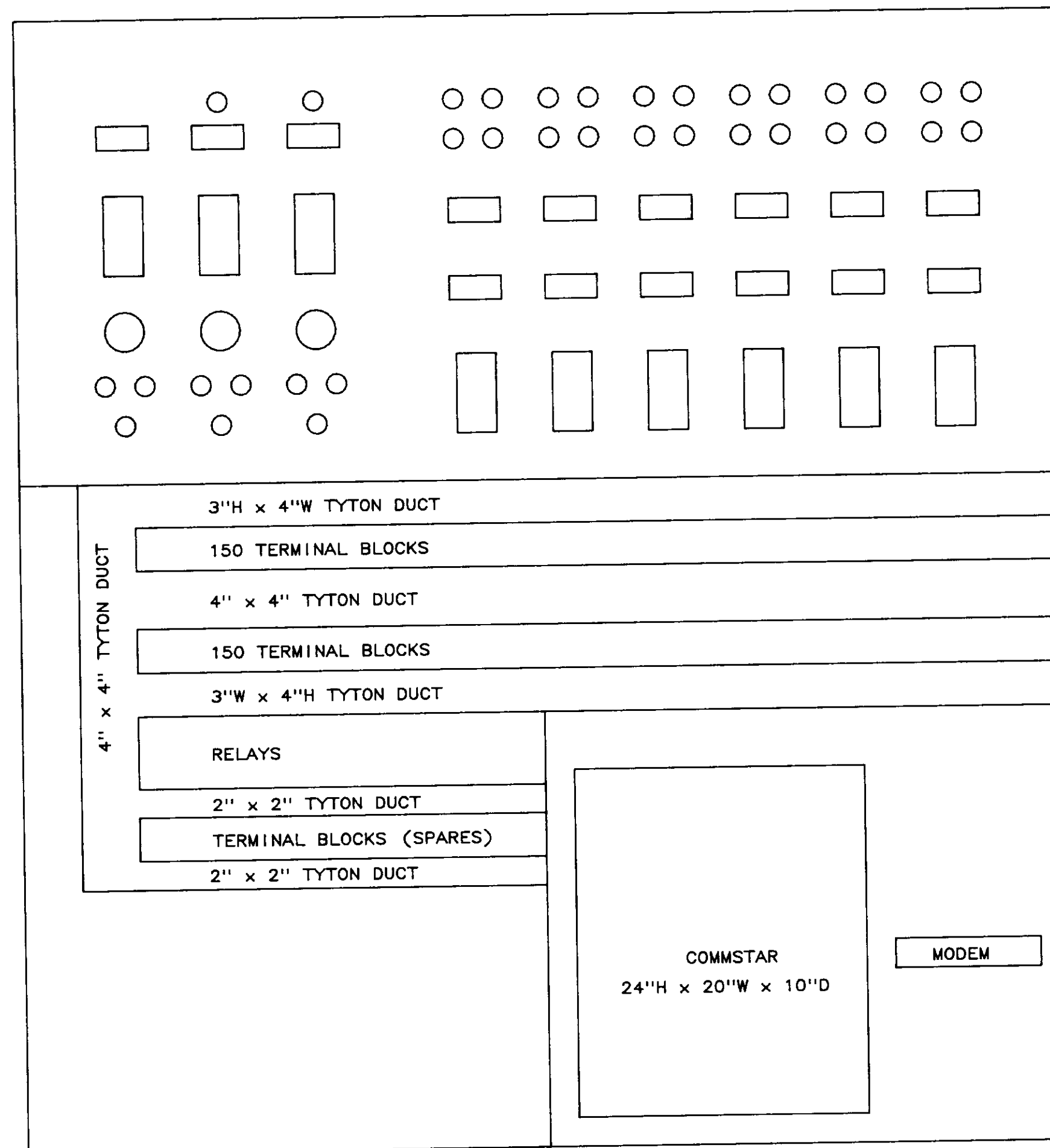
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

CCP-B PANEL LAYOUT, FRONT

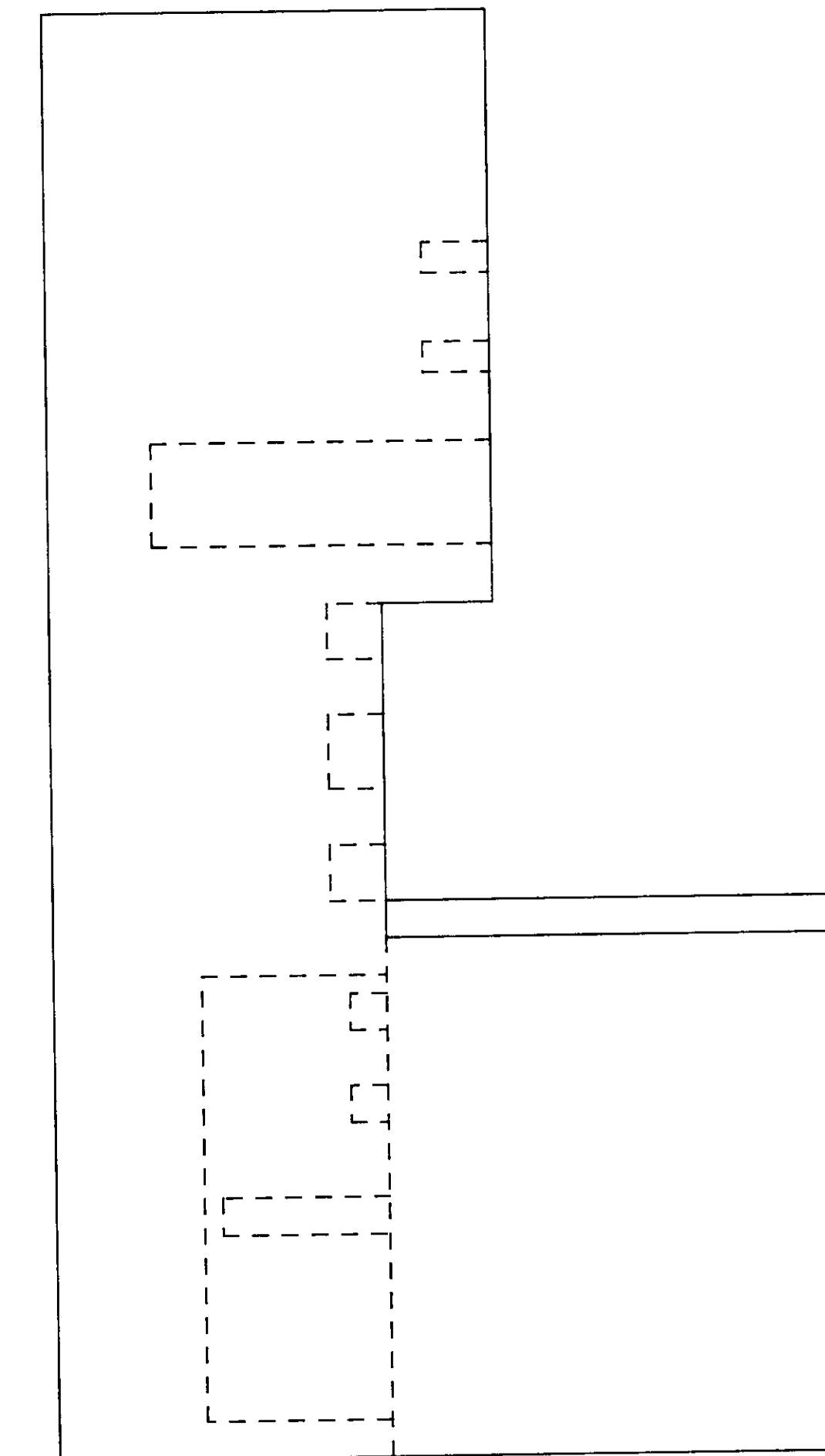
FILING NAME FRNTVIEW	DRAWING NUMBER 8002-MD-B	SHEET NUMBER 1 OF 5
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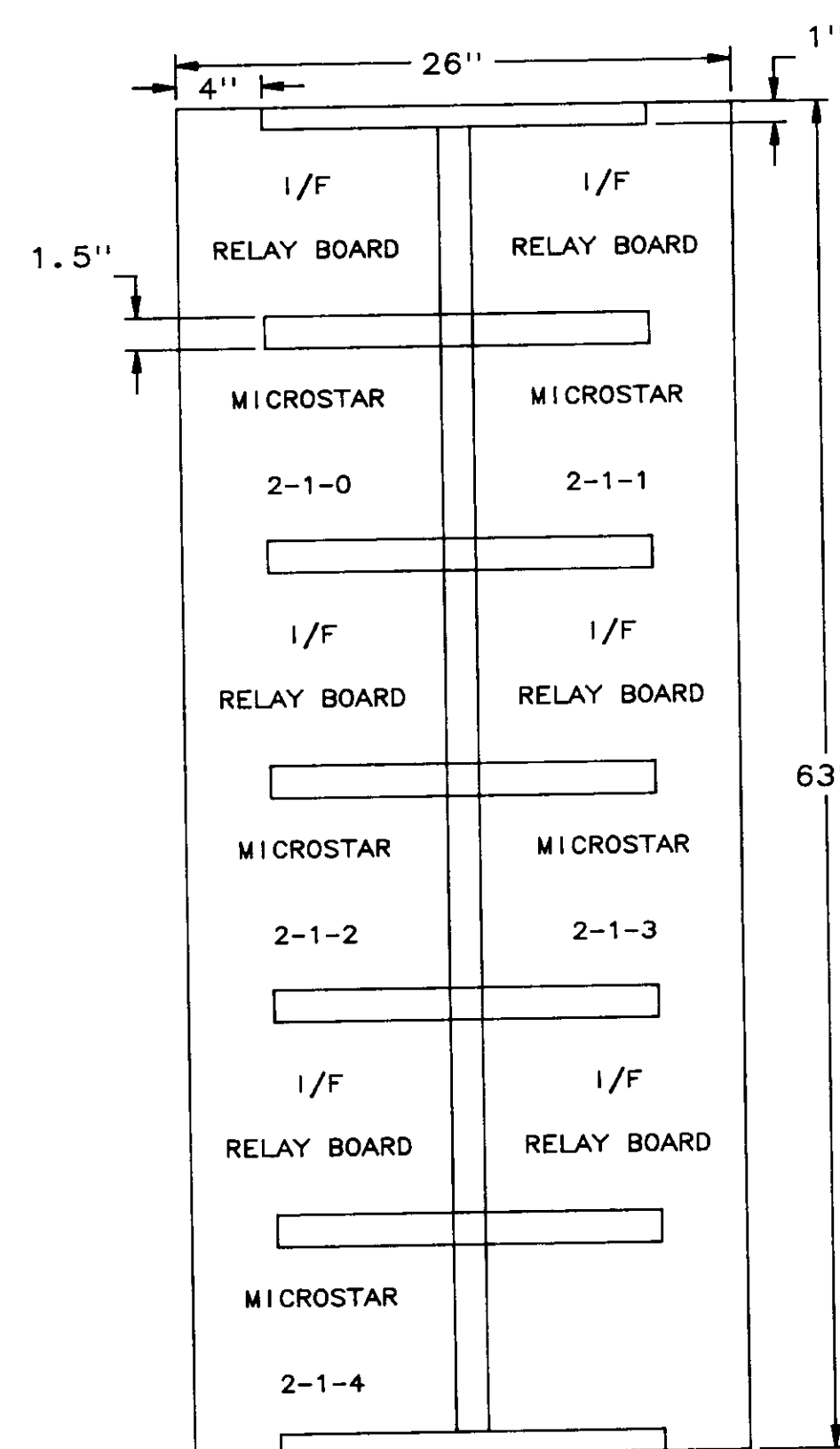
LEFT SIDE ELEVATION



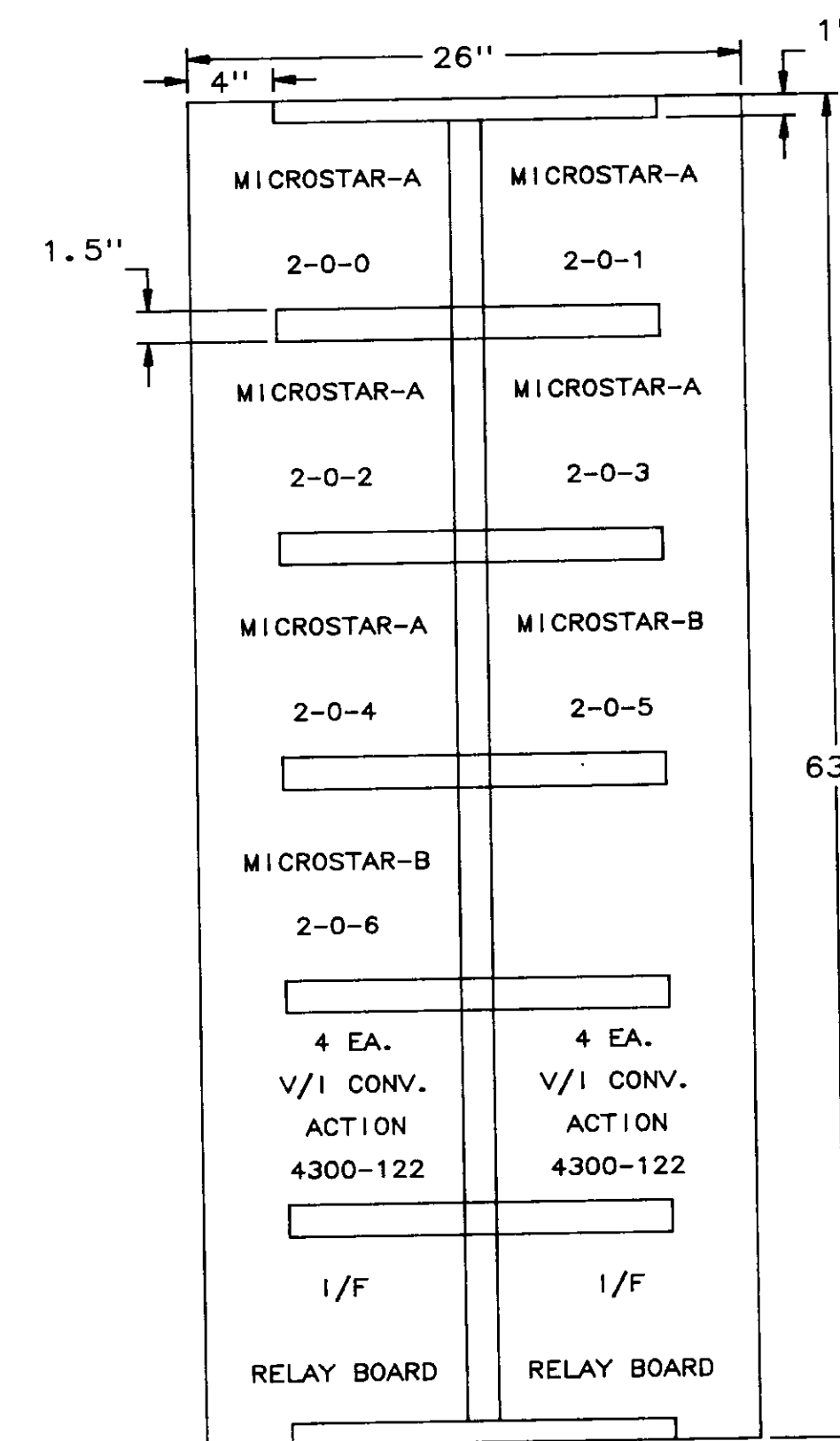
REAR ELEVATION



RIGHT SIDE ELEVATION



LEFT DOOR MOUNTING PAN  
FACING REAR OF PANEL



RIGHT DOOR MOUNTING PAN  
FACING REAR OF PANEL

04239

NO.	DATE	BY	REMARKS
1	3/7/88	DBS	GENERAL REVISION
0	5/31/88	DBS	INITIAL ISSUE

REVISIONS

**B**  
**C**  
**S** **BARRCOM SYSTEMS LTD.**  
22775 SAVI RANCH PARKWAY, SUITE D  
YORBA LINDA, CALIFORNIA 92686

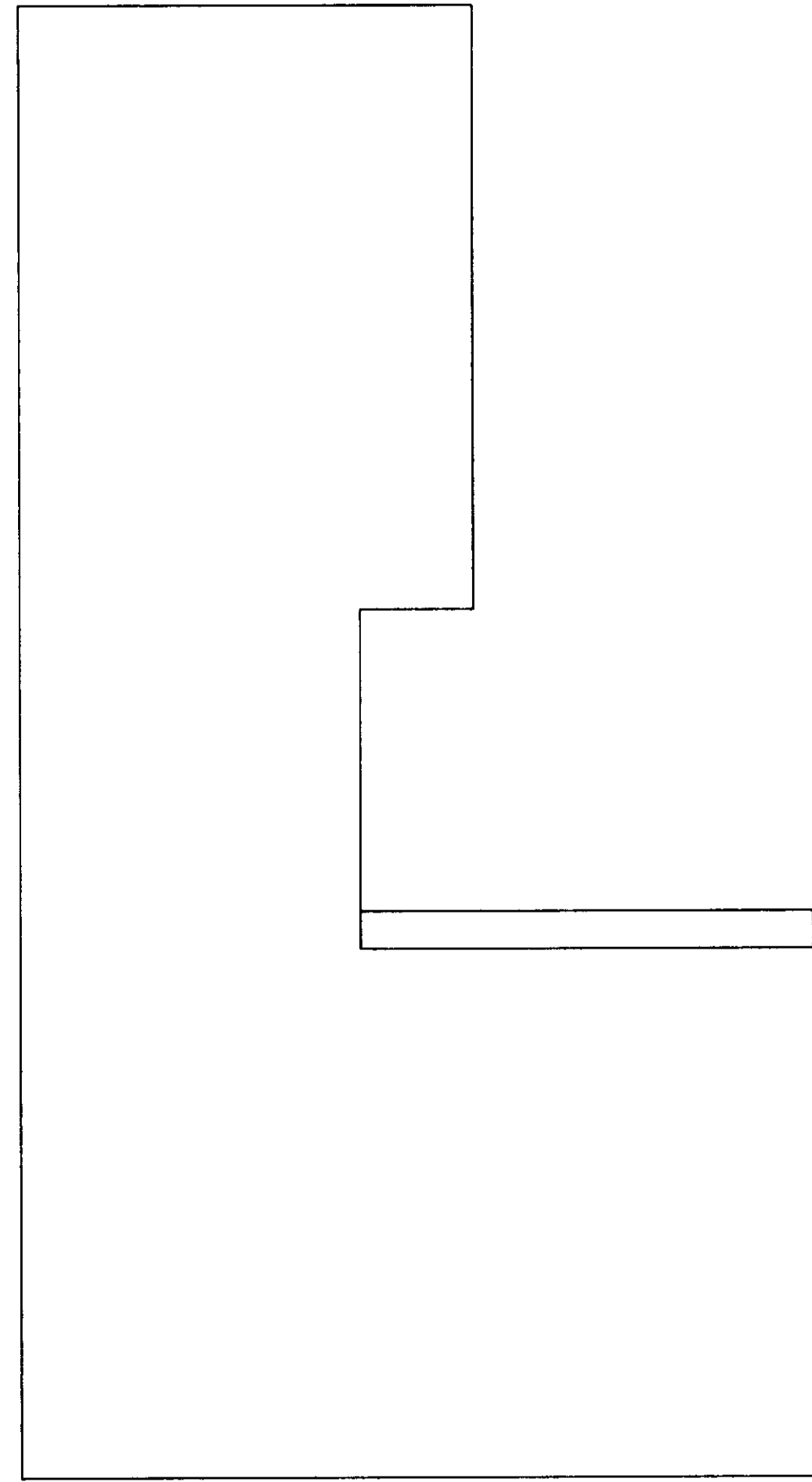
SCALES: 1"=8" DATE: 5/31/88 DRAWN BY: DBS

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

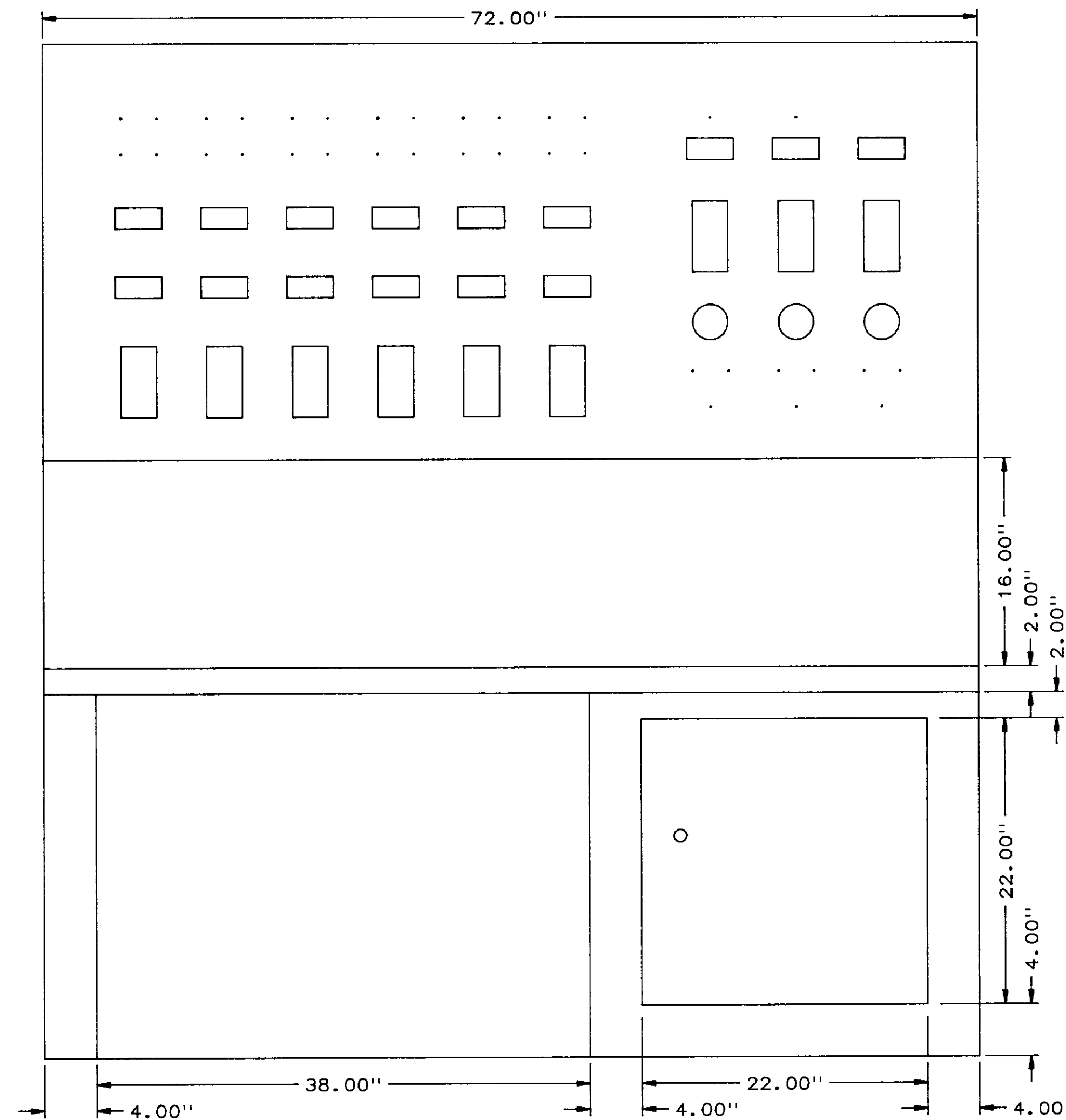
CCP-B PANEL LAYOUT, REAR

FILING NAME	DRAWING NUMBER	SHEET NUMBER
REARVIEW	8002-MD-B	2 OF 5

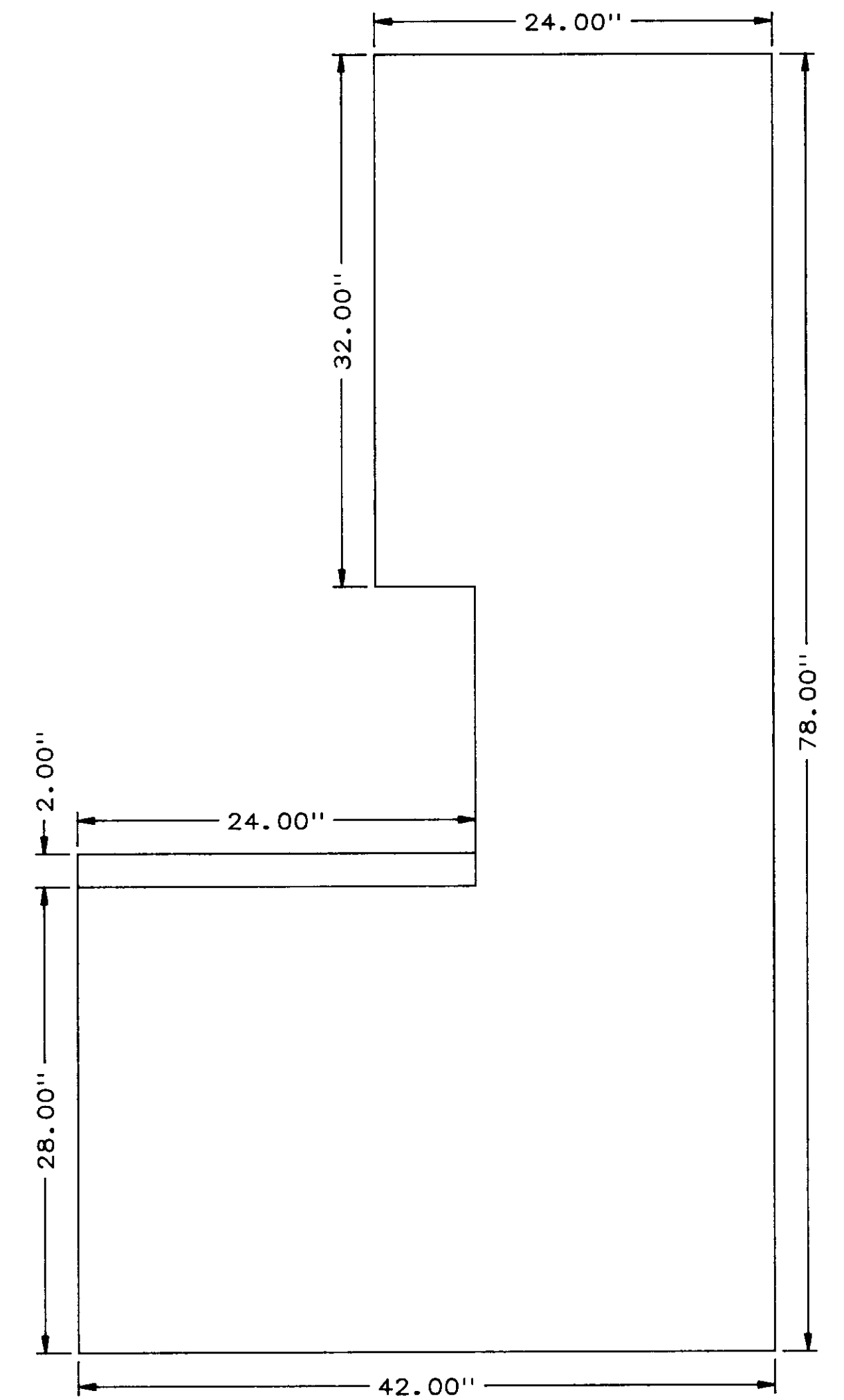




LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION

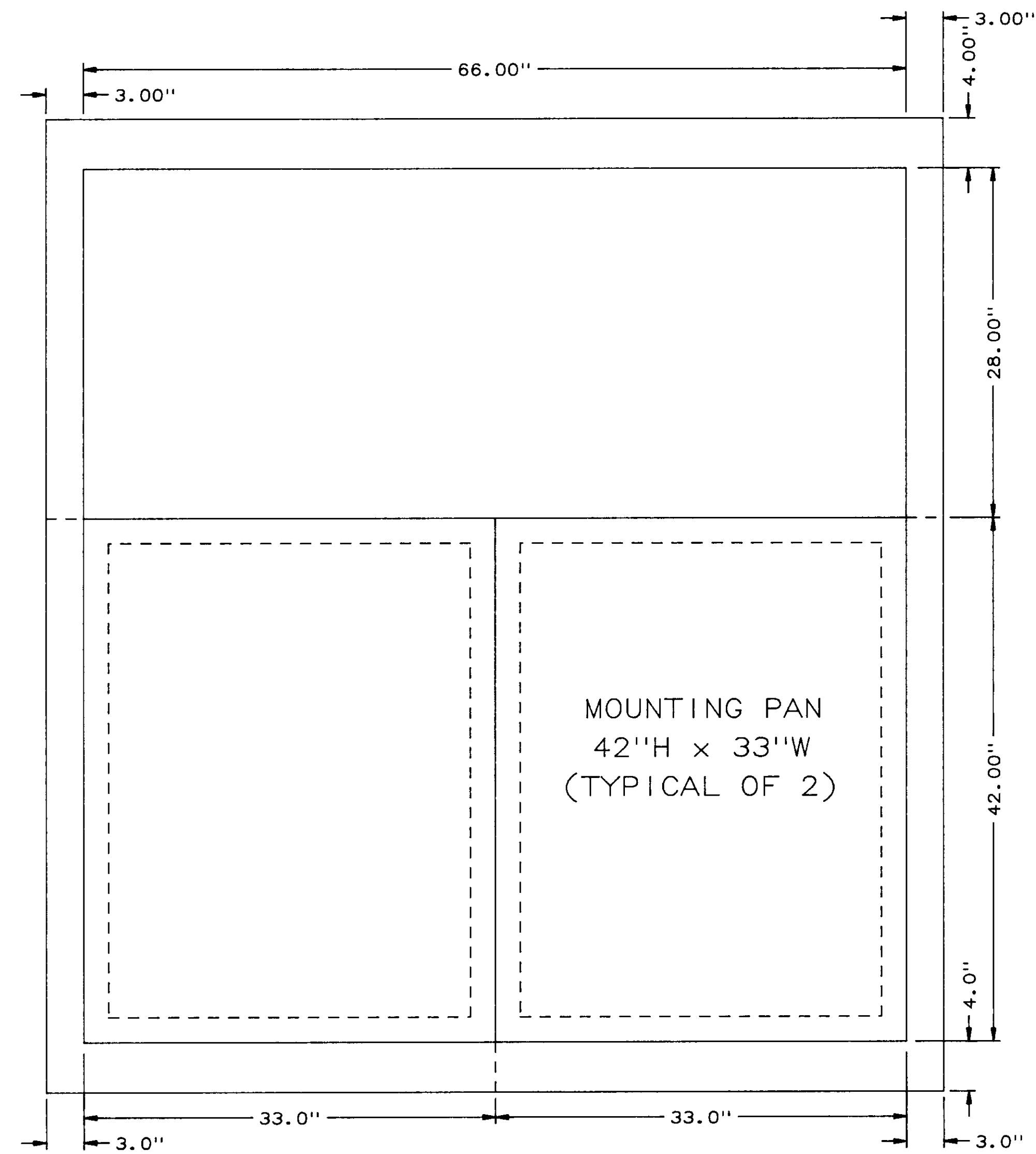
NOTE: FOR INSTRUMENT CUTOUT DETAILS  
SEE DWG. 8002-MD-B, SHEET 5 of 5

04240

NO.	DATE	BY	REMARKS
0	5/31/88	DBS	INITIAL ISSUE

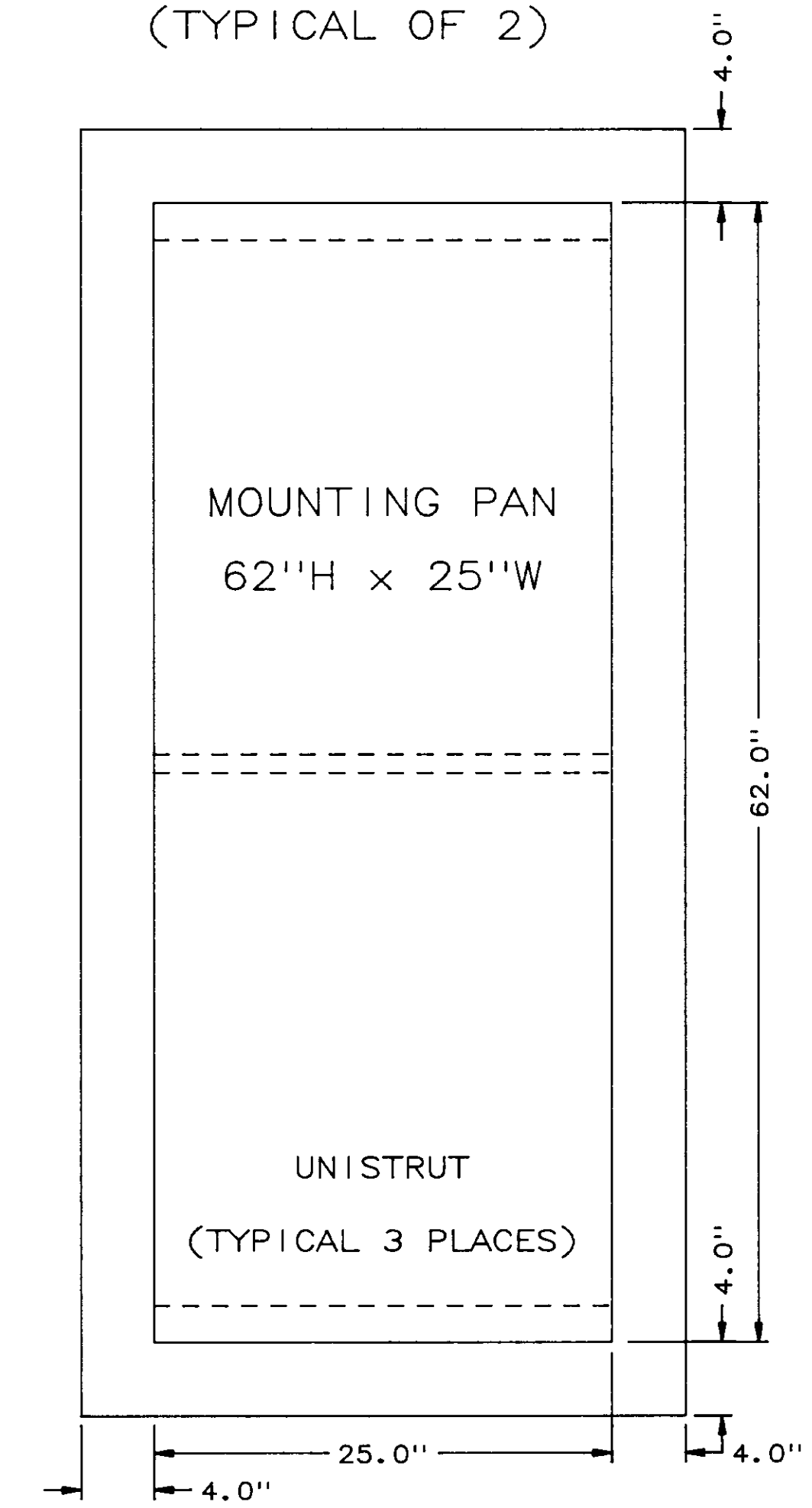
REVISIONS

		<b>BARRCOM SYSTEMS LTD.</b> 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686
SCALES: 1"=8"	DATE: 5/31/88	DRAWN BY: DBS
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-B PANEL FAB, FRONT		
FILING NAME FRONTFAB	DRAWING NUMBER 8002-MD-B	SHEET NUMBER 3 OF 5



REAR ELEVATION

REAR PANEL DOOR  
(TYPICAL OF 2)



DOOR DETAIL

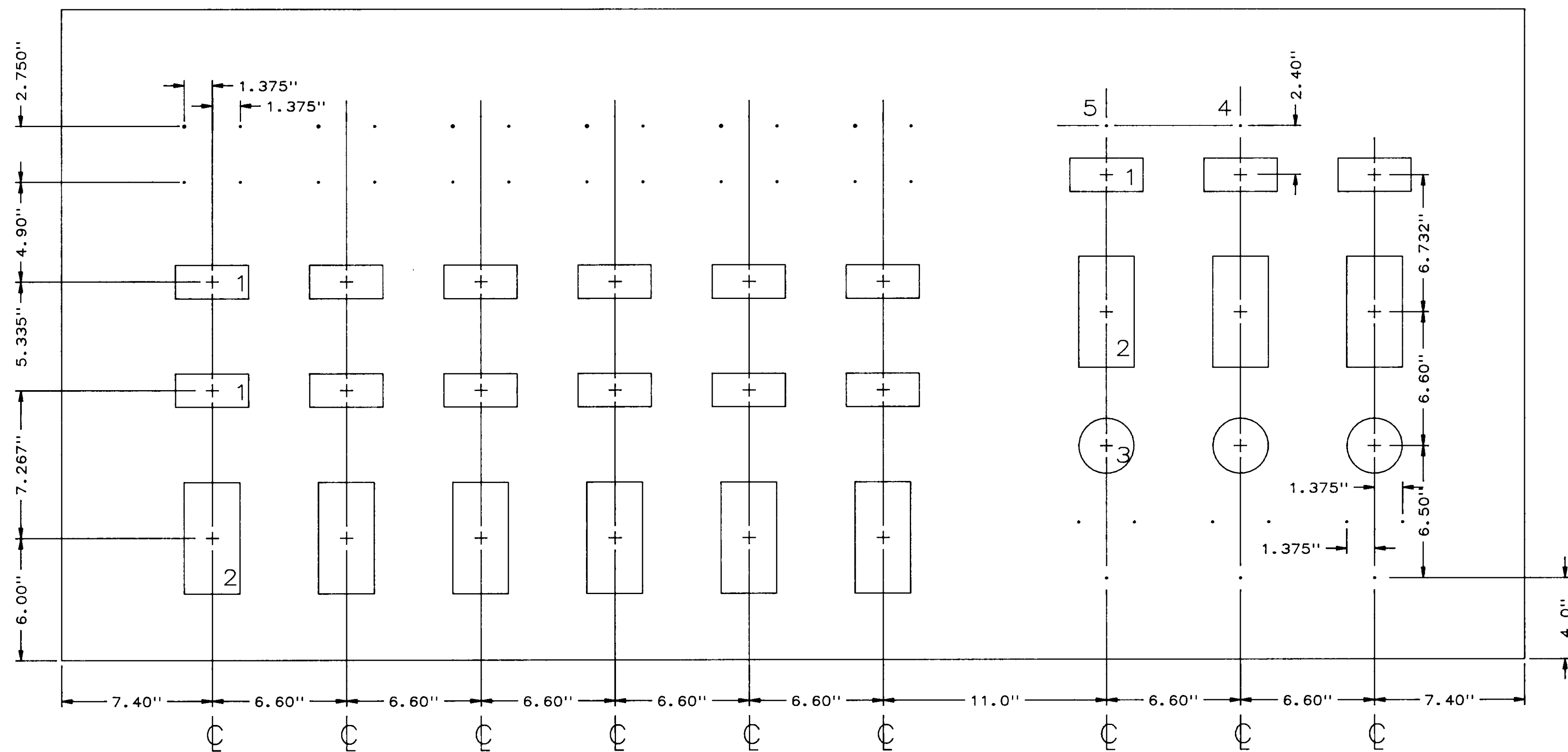
DOOR SIZE = 70"H x 33"W  
 MOUNTING PAN SIZE = 62"H x 25"W  
 (3-POINT ROLLER LATCH NOT SHOWN)

**04241**

NO.	DATE	BY	REMARKS
0	5/31/88	DBS	INITIAL ISSUE

REVISIONS

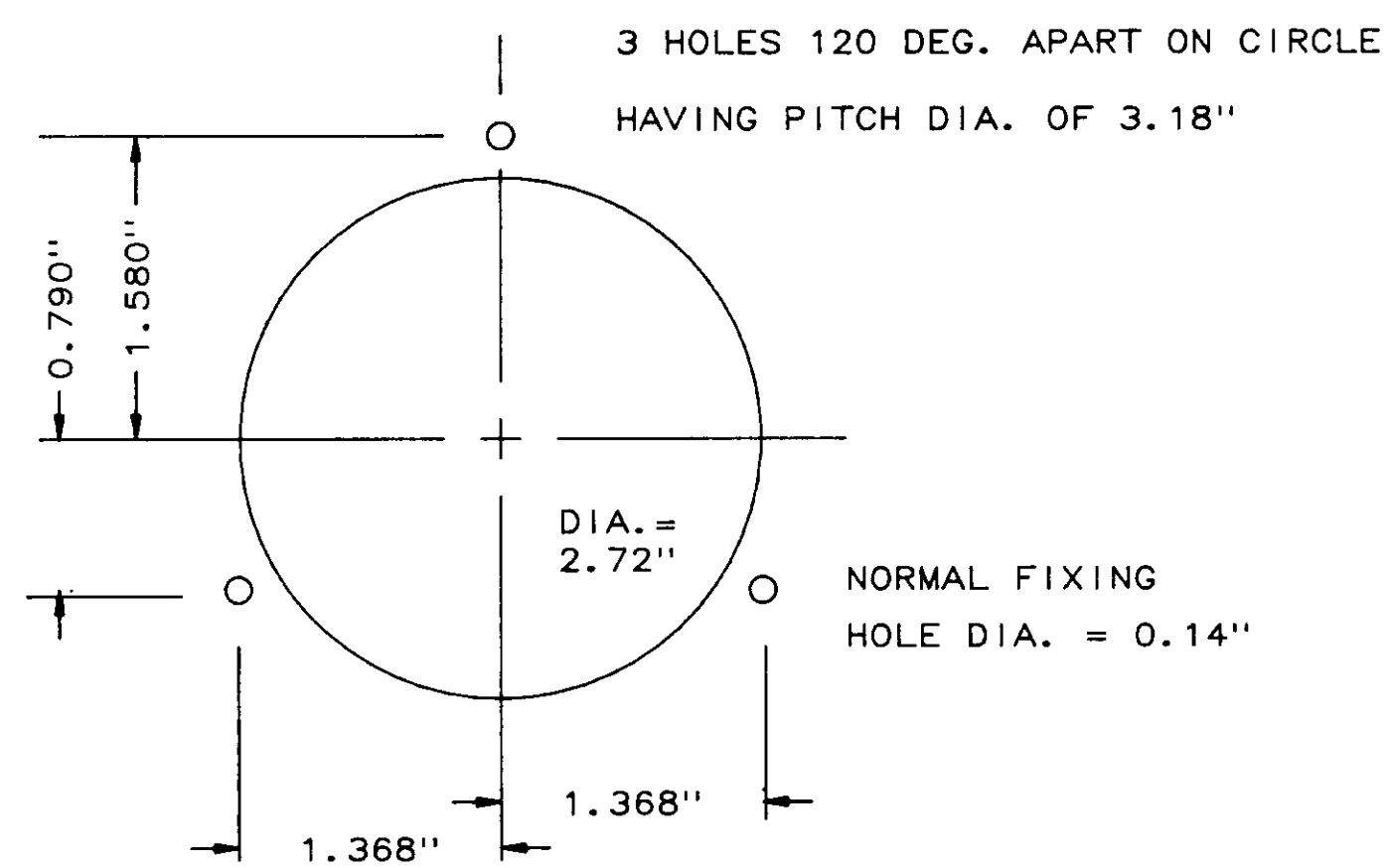
		<b>BARRCOM SYSTEMS LTD.</b> 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686
SCALE: 1"=8"	DATE: 5/31/88	DRAWN BY: DBS
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-B PANEL FAB, REAR		
FILING NAME REARFAB	DRAWING NUMBER 8002-MD-B	SHEET NUMBER 4 OF 5



- EQUIPMENT
1. PANEL METER, ACTION INSTRUMENTS MODEL V508  
CUTOUT SIZE = 1.65"H x 3.595"W
  2. ANALOG CONTROLLER, FOXBORO MODEL 760CNA  
CUTOUT SIZE = 5.47"H x 2.74"W
  3. ELAPSED TIME METER, CROMPTON TYPE 15  
CUTOUT DIAMETER = 2.72"  
SEE DETAIL 1 FOR MOUNTING HOLE DRILLING PLAN
  4. SALZER SWITCH, 1 REQUIRED, 0.50" DIA.
  5. STANDARD MOUNTING HOLE FOR SWITCHES/LIGHTS  
TYPICAL OF 34

### FRONT PANEL CUTOUT DETAILS

SEE DWG. 8002-MD-B, SHEET 3 of 5 FOR PANEL ELEV.



### DETAIL - ELAPSED TIME METER

SCALE: 1" = 1"

04242

NO.	DATE	BY	REMARKS
0	5/31/88	DBS	INITIAL ISSUE

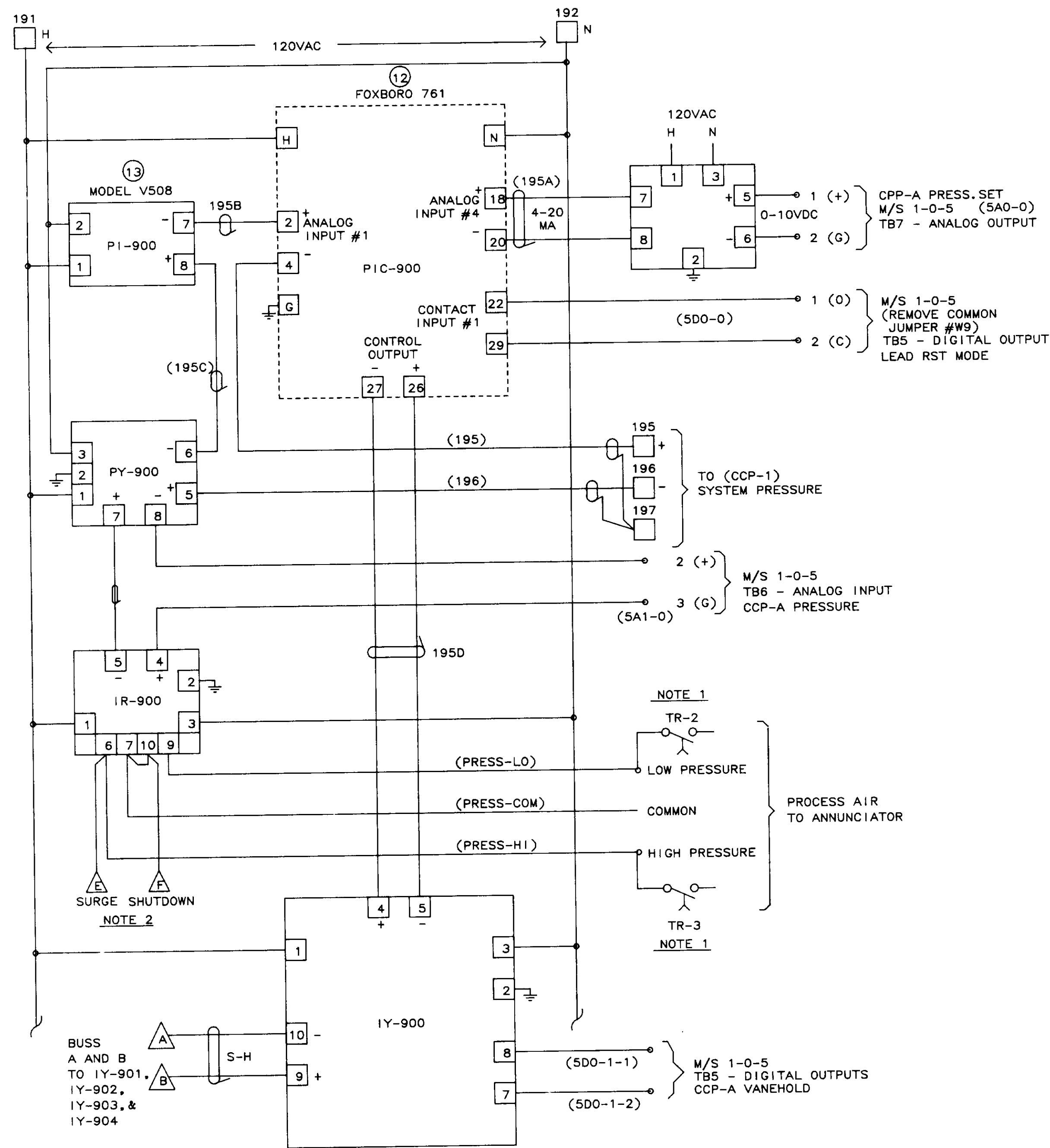
#### REVISIONS

B C S	BARRCOM SYSTEMS LTD. 22775 SAVI RANCH PARKWAY, SUITE D YORBA LINDA, CALIFORNIA 92686	
SCALE: 1" = 4"	DATE: 5/31/88	DRAWN BY: DBS

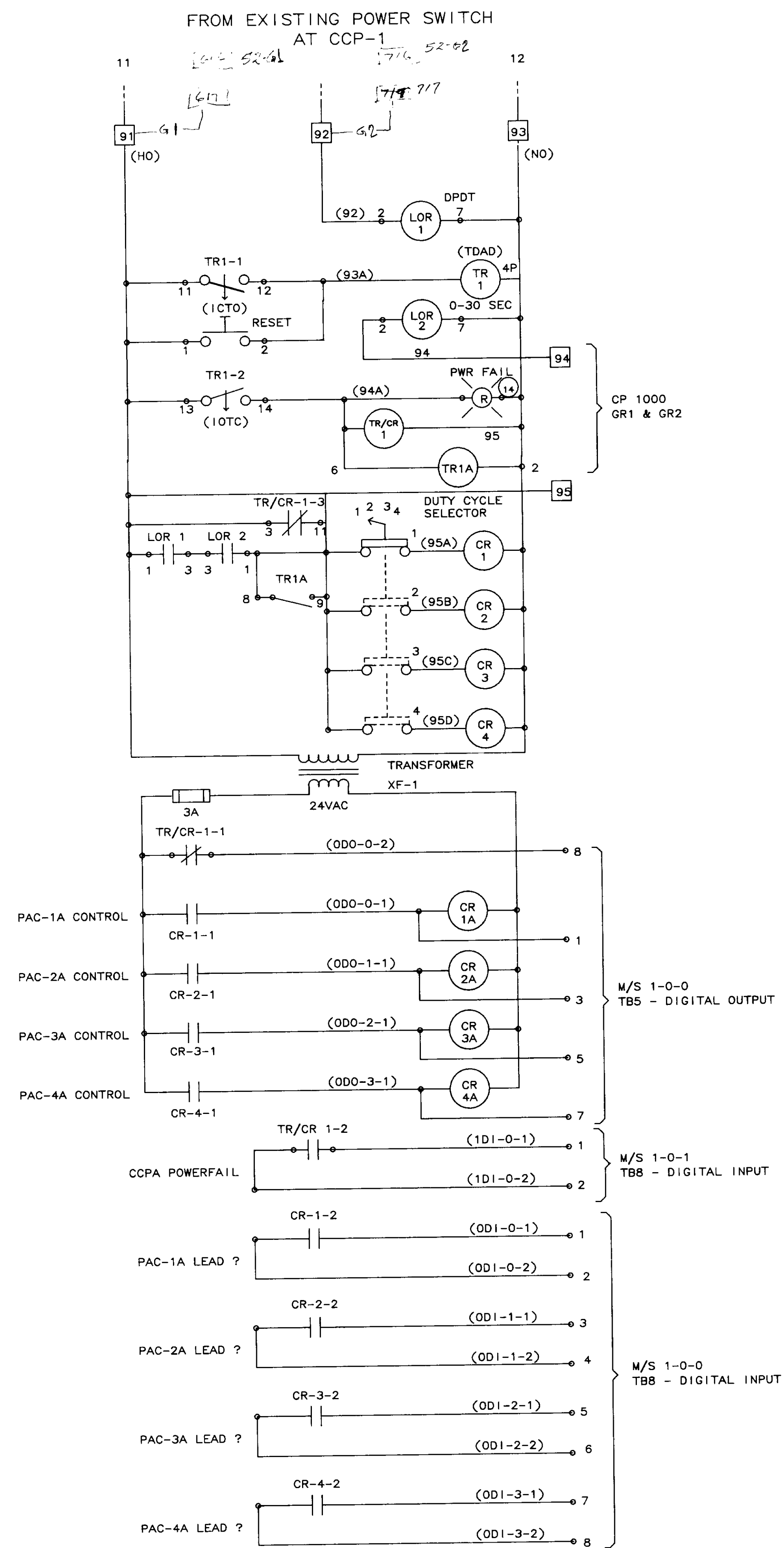
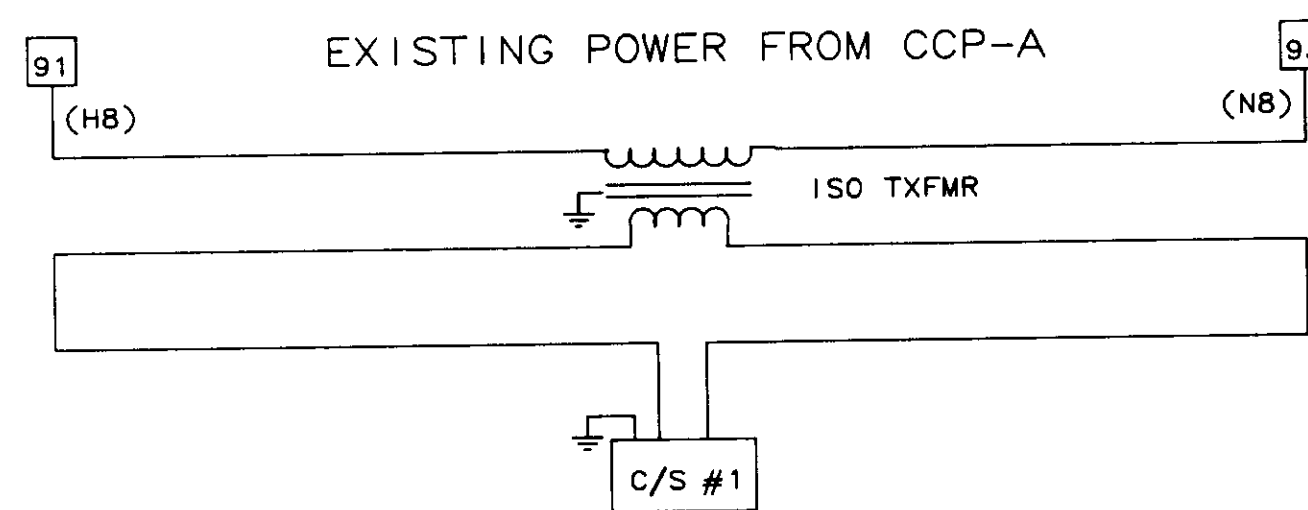
LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

#### CCP-B PANEL FAB, DETAILS

FILING NAME DETAILS	DRAWING NUMBER 8002-MD-B	SHEET NUMBER 5 OF 5
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LEAD COMPRESSOR GUIDE VANE CONTROL



NOTE 1: TIME DELAY RELAYS SET @ 96 SEC. ARTISAN CONTROLS CORP. "TIME CAPSULE"

NOTE 2: DISCONNECTED AND TAPED.

04243

NO.	DATE	BY	REMARKS
3	02/08/90		ADDED TIME DELAY RELAYS - DELETED SURGE SHUTDOWN
2	01/31/90		AS-BUILT
1	10/17/88	DBS	GENERAL REVISIONS AFTER FAT

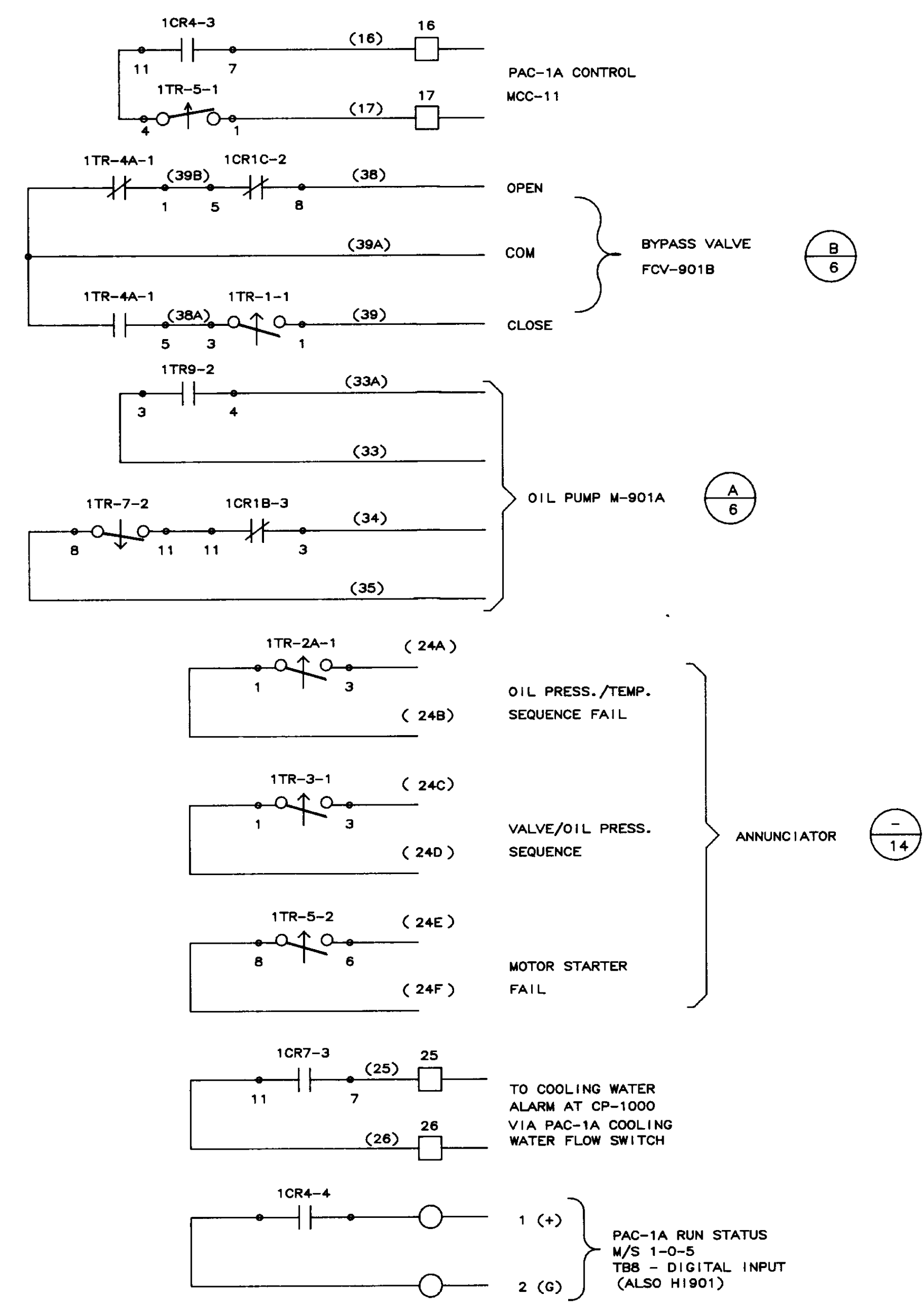
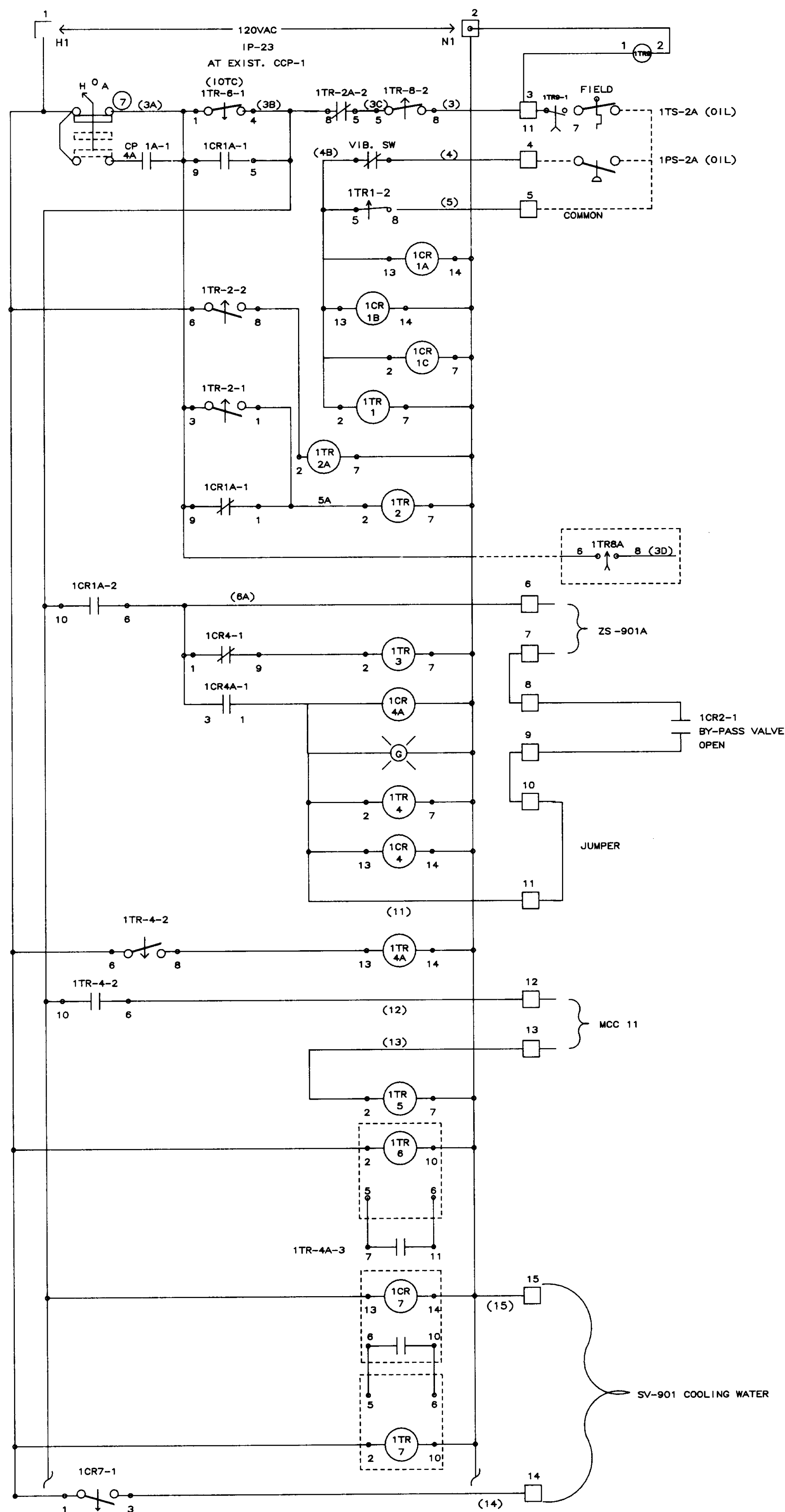
BARRCOM SYSTEMS  
22775 SAVI RANCH PARKWAY, #D  
YORBA LINDA, CALIFORNIA 92686

SCALES: APPROVED BY: DRAWN BY: DBS  
DATE: 9/16/88 REV.

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

COMPRESSOR INITIATING CONTROL  
LEAD COMPRESSOR GUIDE VANE CONTROL

FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-1	8002-1D-A	1 OF 14



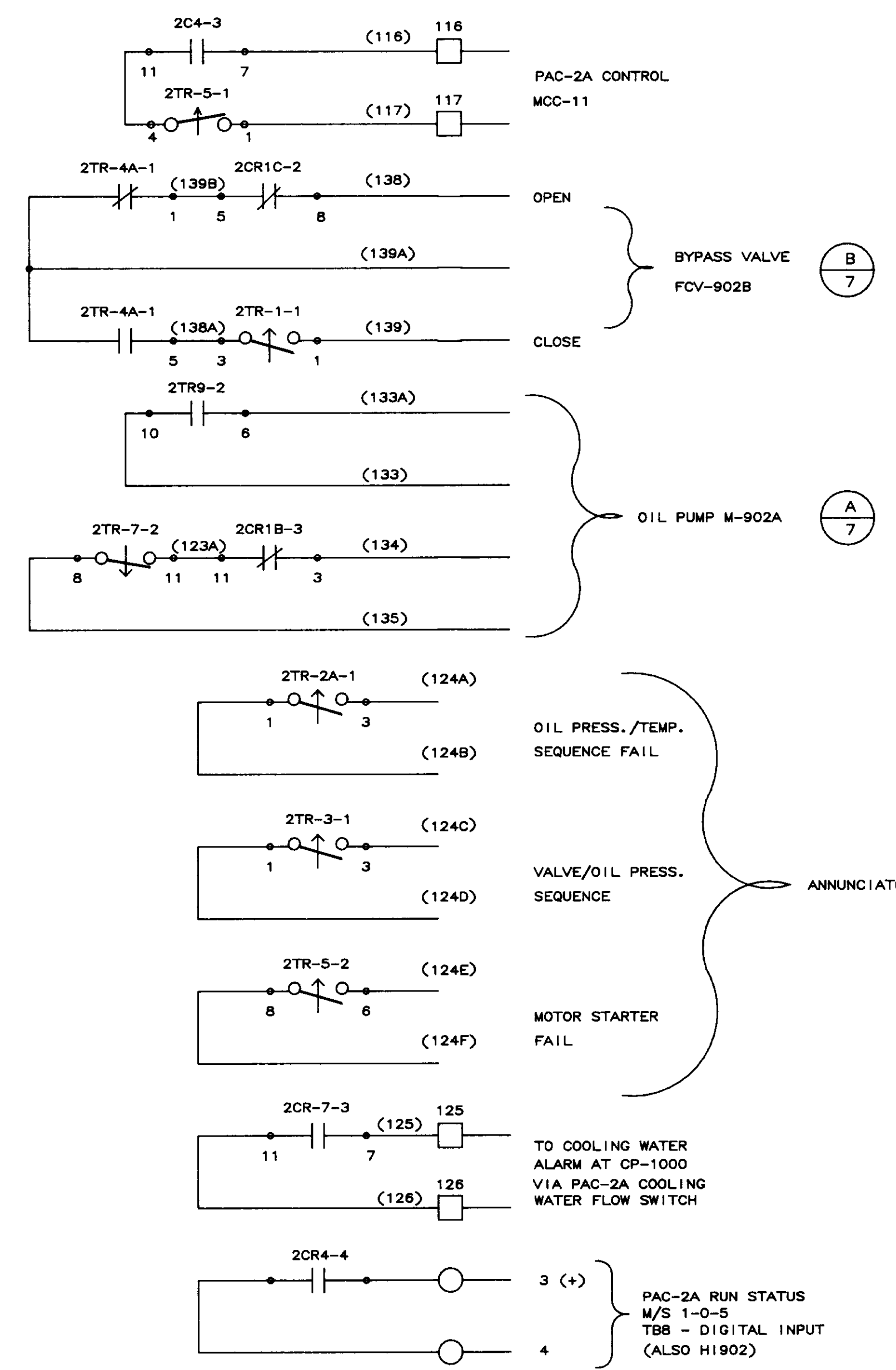
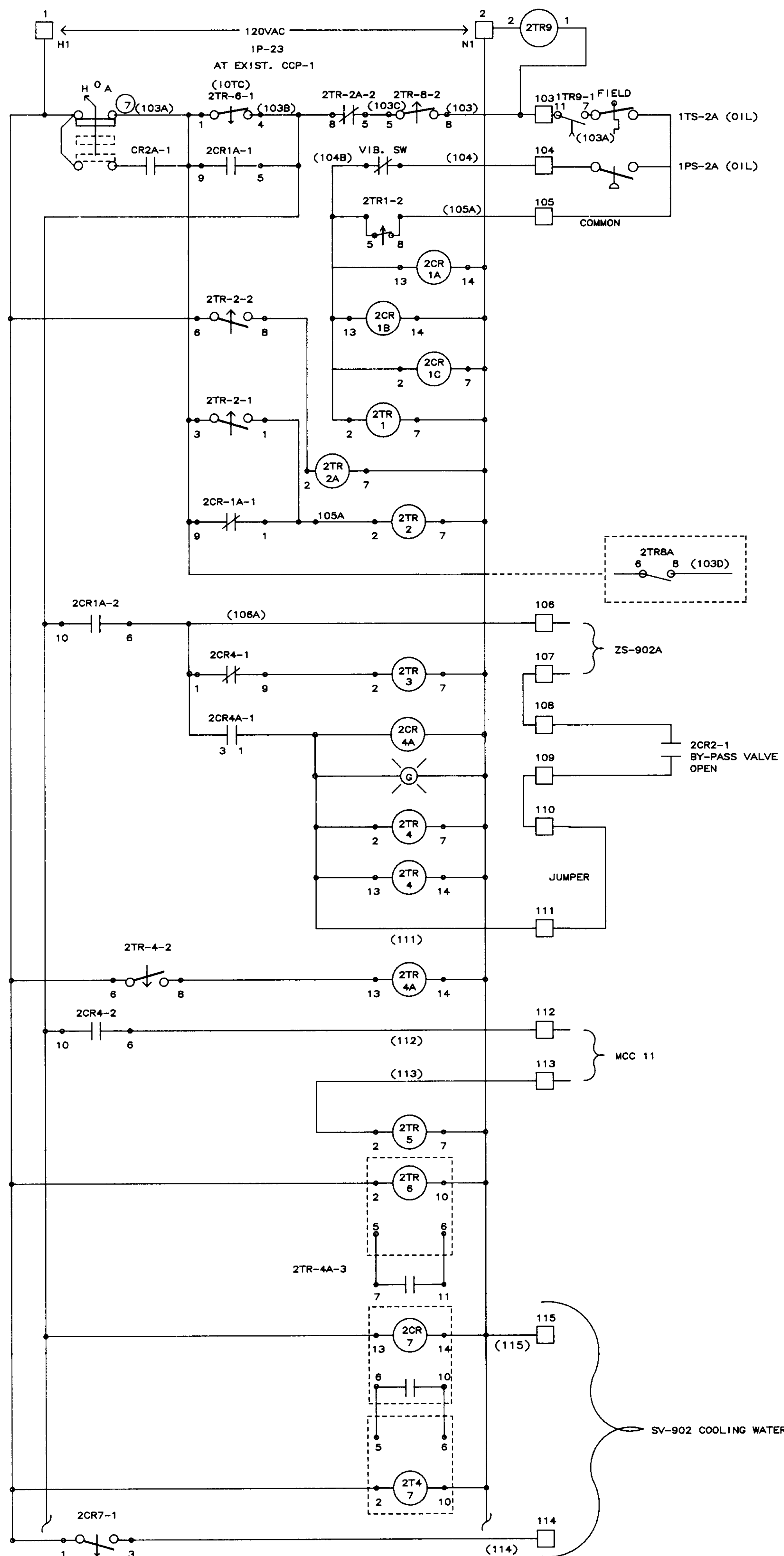
04244

NO.	DATE	BY	REMARKS
2	01/31/90	AS-BUILT	
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

REVISIONS

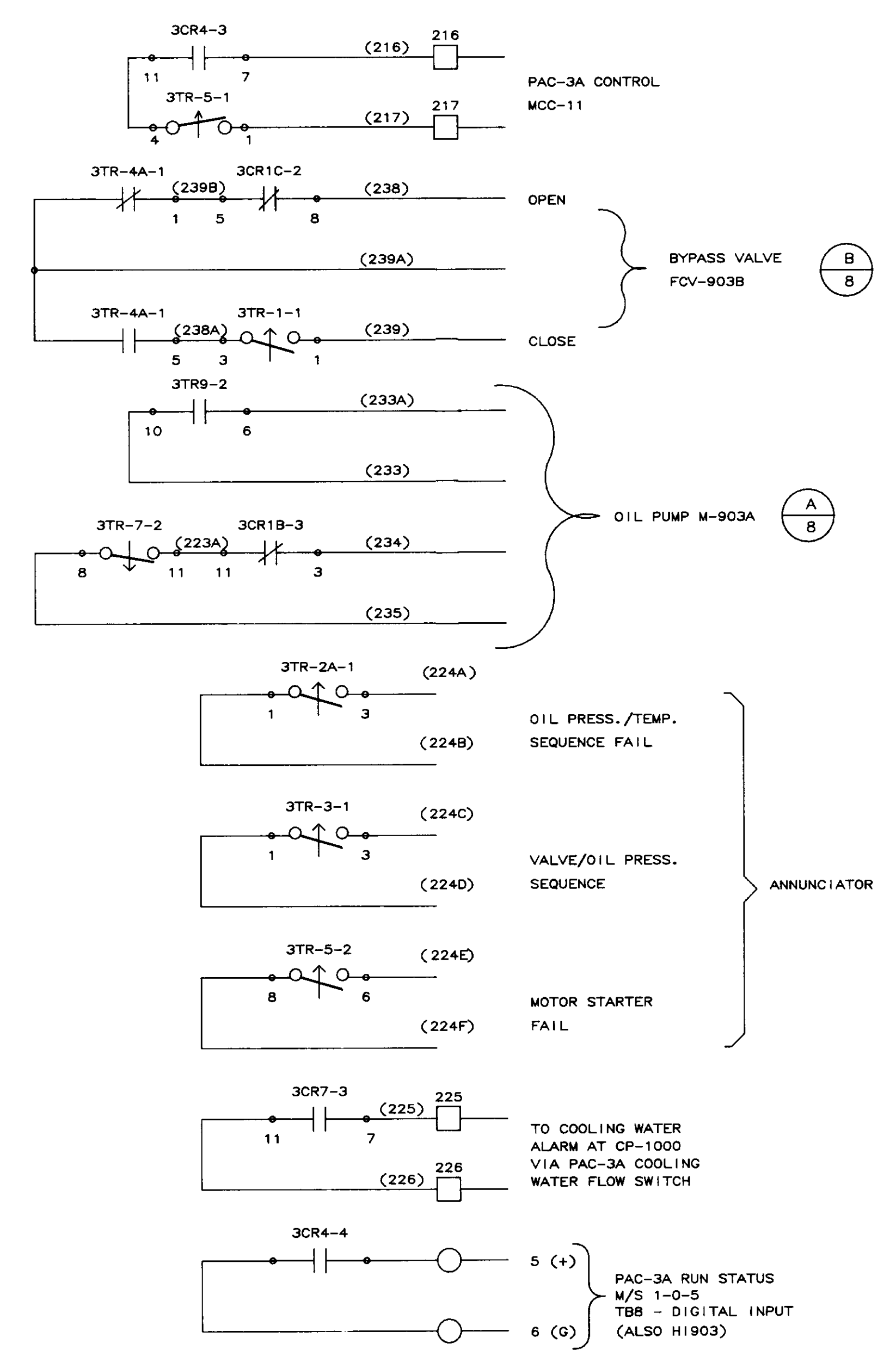
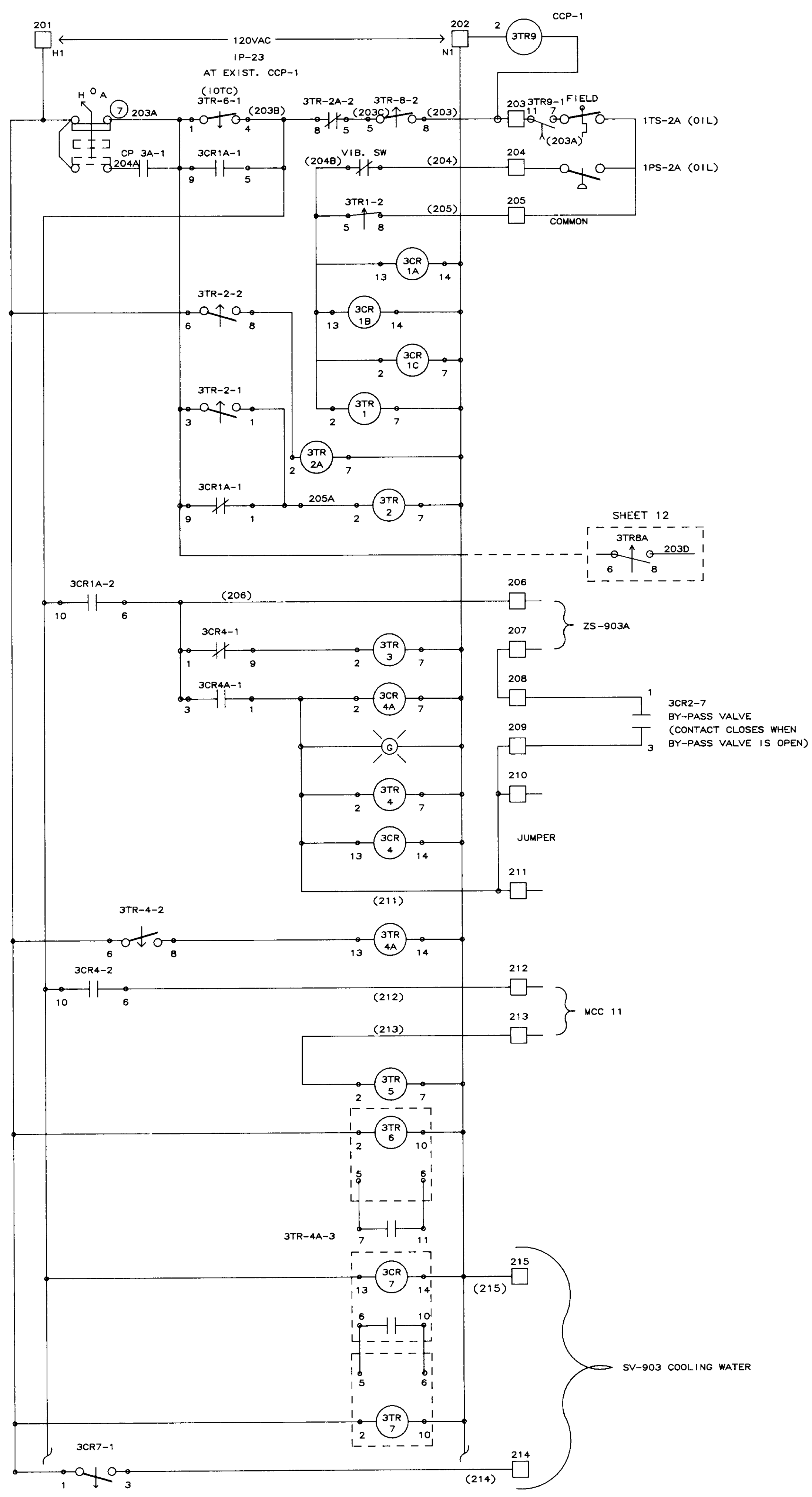
<b>B C S</b>		<b>BARRCOM SYSTEMS</b>	
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686			
SCALES:	APPROVED BY:	DRAWN BY: DBS	
DATE: 9/16/88		REV.	
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III			
PAC-1A COMPRESSOR SEQUENCE			
FILING NAME	DRAWING NUMBER	SHEET NUMBER	
SCHEM-21	8002-1D-A	2 OF 14	





04245

2	01/31/90	AS-BUILT	
1	10/12/88	DBS GENERAL REVISIONS AFTER FAT	
NO.	DATE	BY	REMARKS
REVISIONS			
<b>B C S</b> <b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686			
SCALE:	APPROVED BY:	DRAWN BY: DBS	
DATE: 9/16/88		REV.	
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III			
PAC-2A COMPRESSOR SEQUENCE			
FILING NAME	DRAWING NUMBER	SHEET NUMBER	
SCHEM-22	8002-ID-A	3 OF 14	

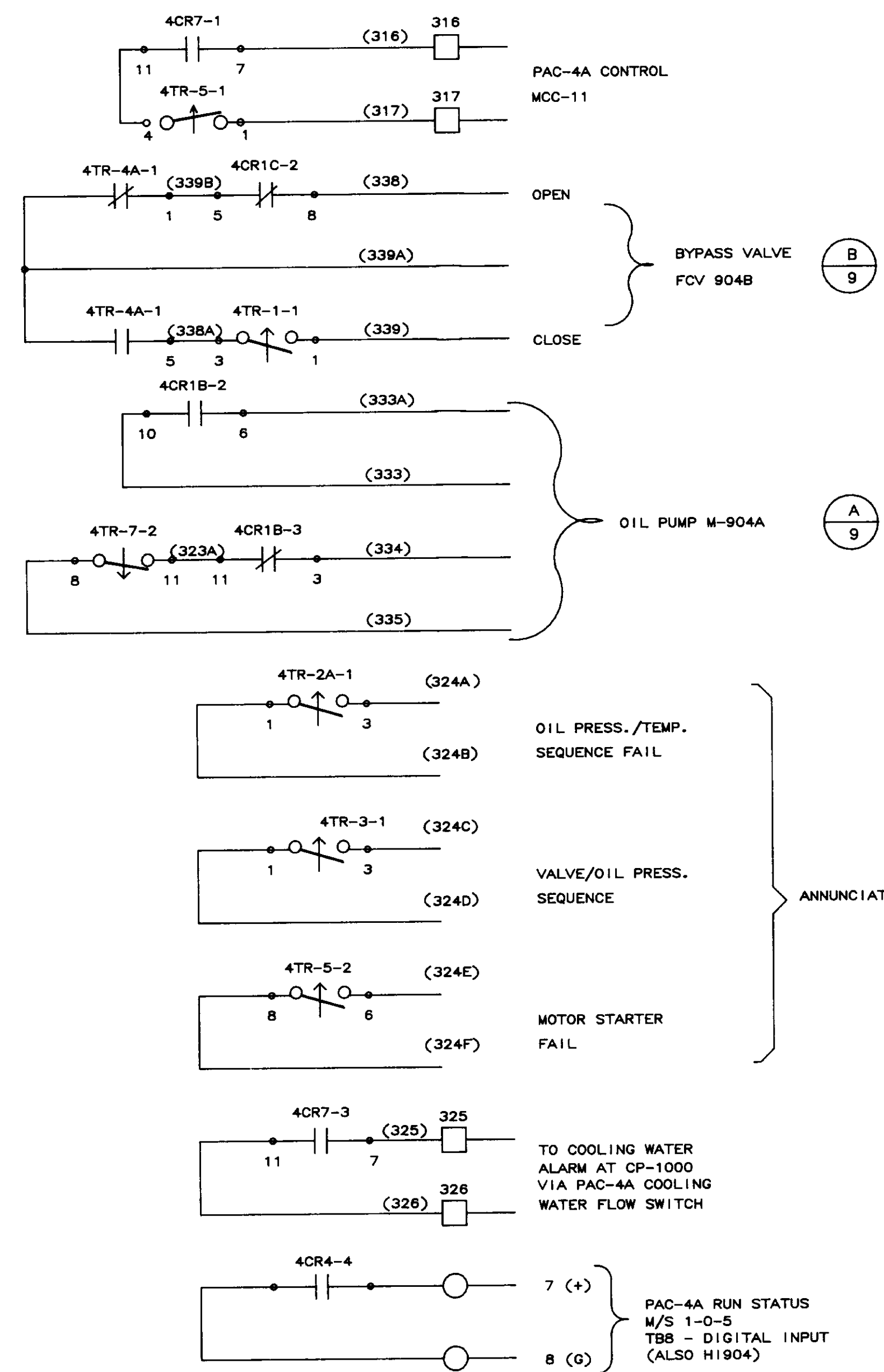
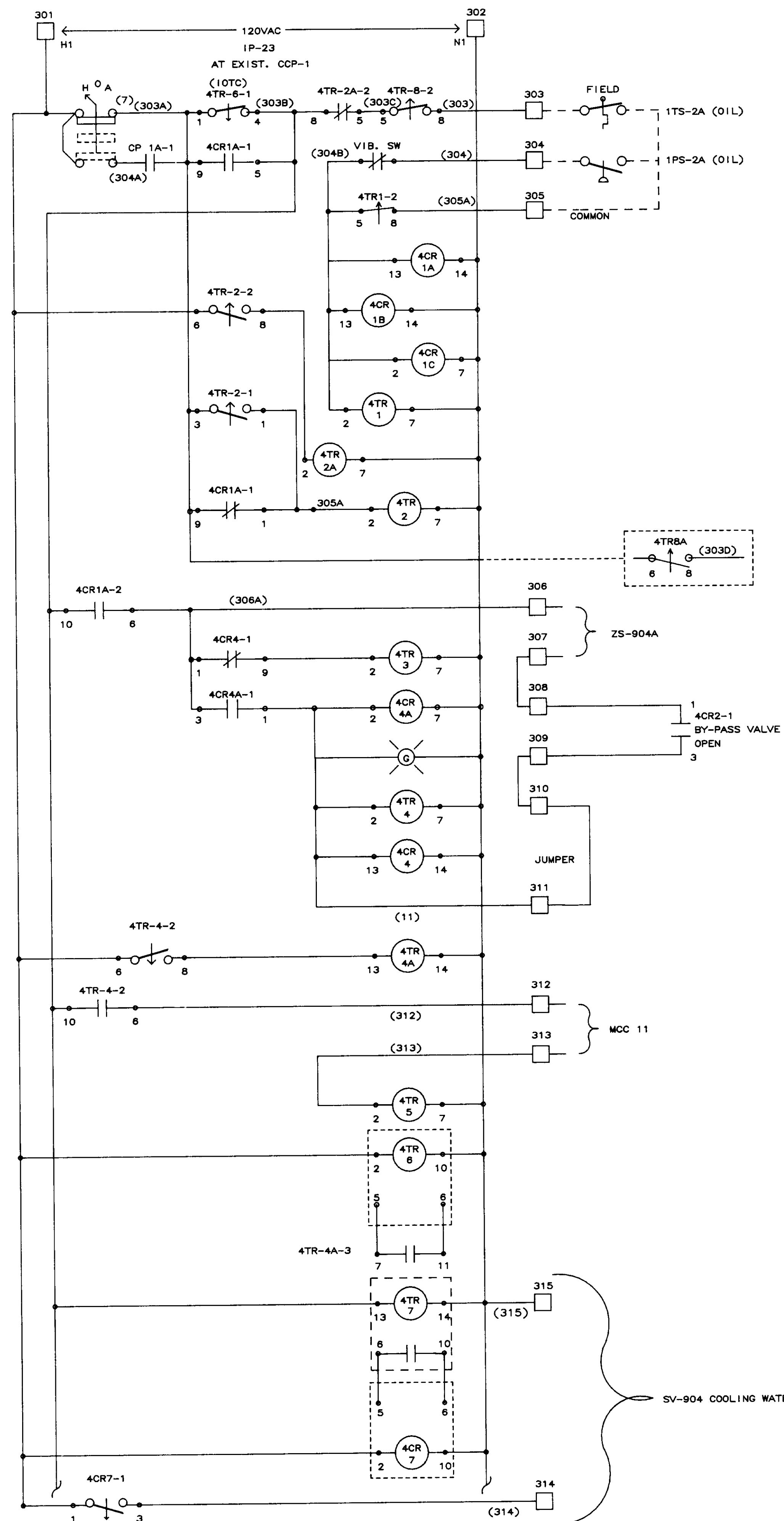


04246

NO.	DATE	BY	REMARKS
3	01/08/90		REMOVED 3TD AND 3CR
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

REVISIONS

<b>B C S</b>		
<b>BARRCOM SYSTEMS</b>		
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-3A COMPRESSOR SEQUENCE		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-23	8002-1D-A	4 OF 14

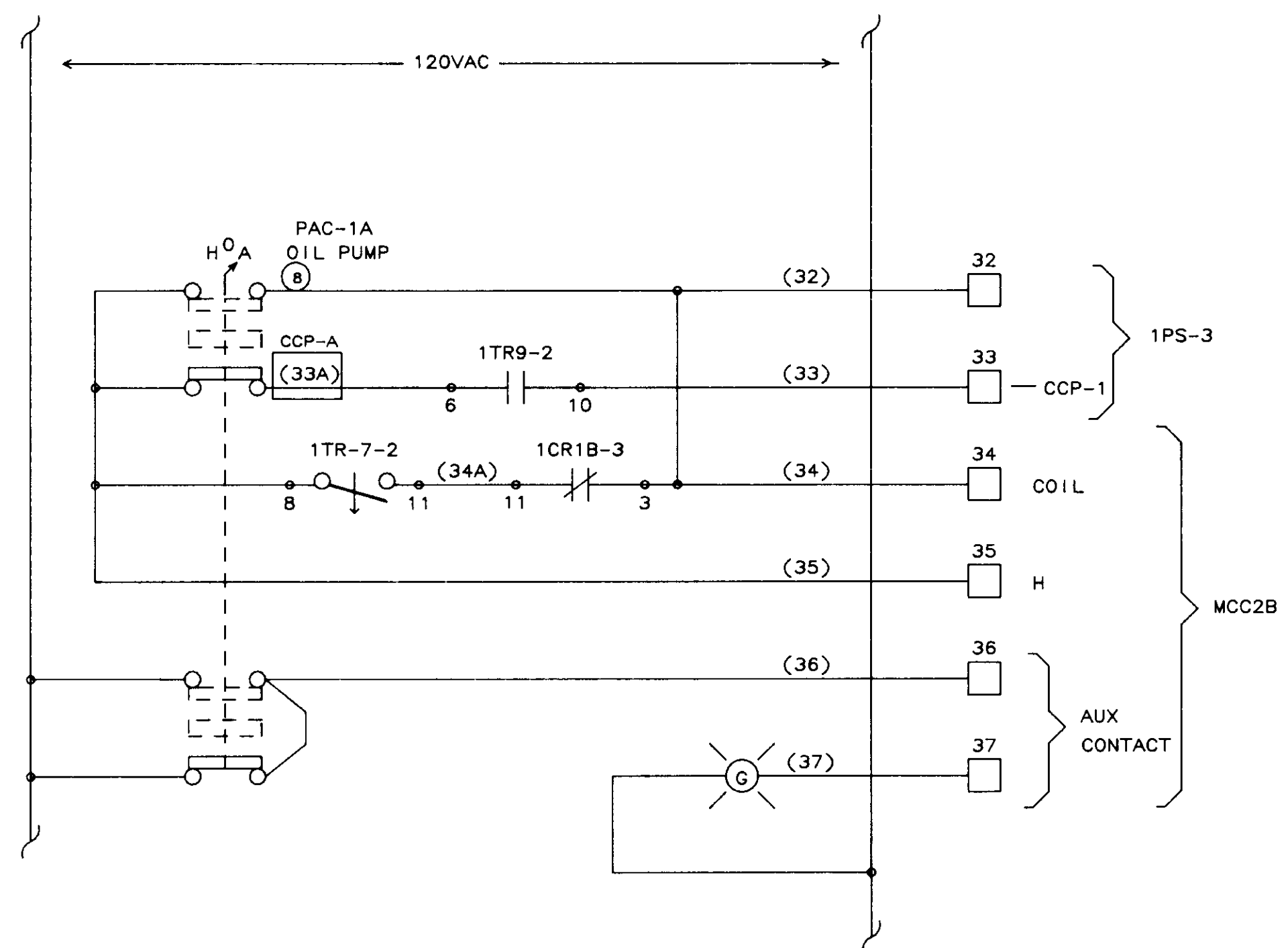


04247

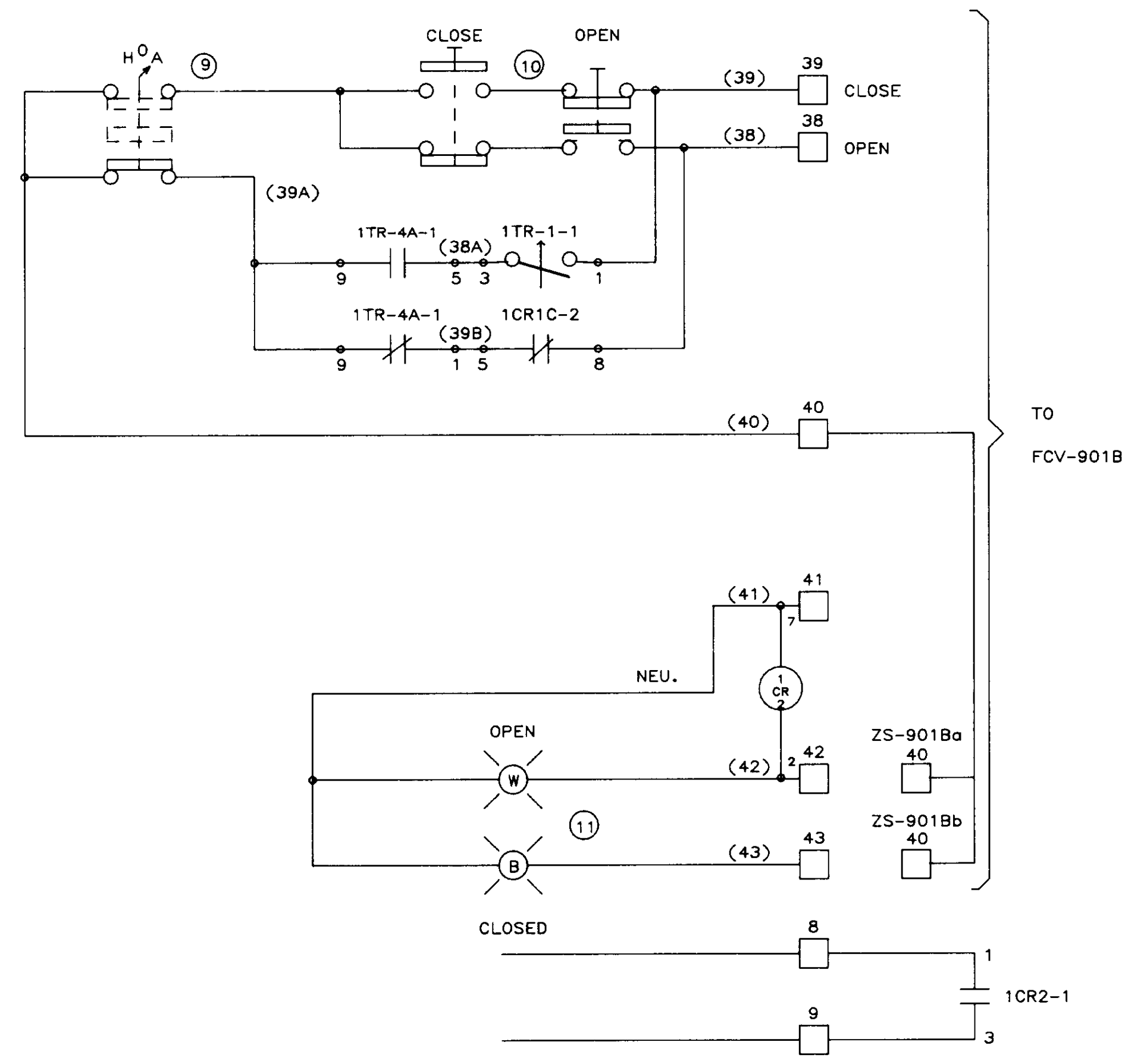
NO.		DATE	BY	REMARKS
2	01/31/90			AS-BUILT
1	10/12/88	DBS		GENERAL REVISIONS AFTER FAT

REVISIONS

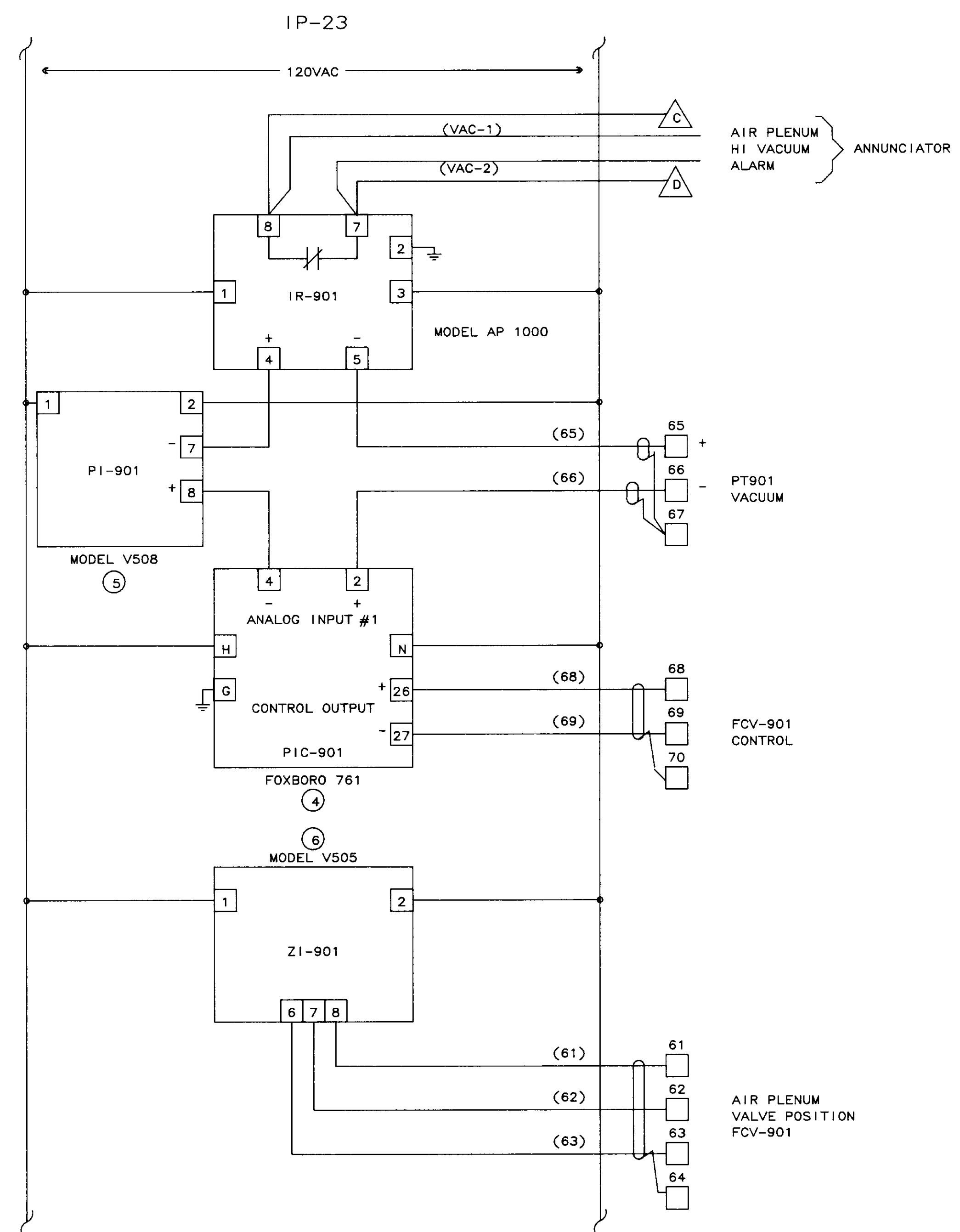
<b>B C S</b>		<b>BARRCOM SYSTEMS</b>	
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686			
SCALE:	APPROVED BY:	DRAWN BY: DBS	
DATE: 9/18/88		REV.	
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III			
PAC-4A COMPRESSOR SEQUENCE			
FILING NAME	DRAWING NUMBER	SHEET NUMBER	
SCHEM-24	8002-1D-A	5 OF 14	



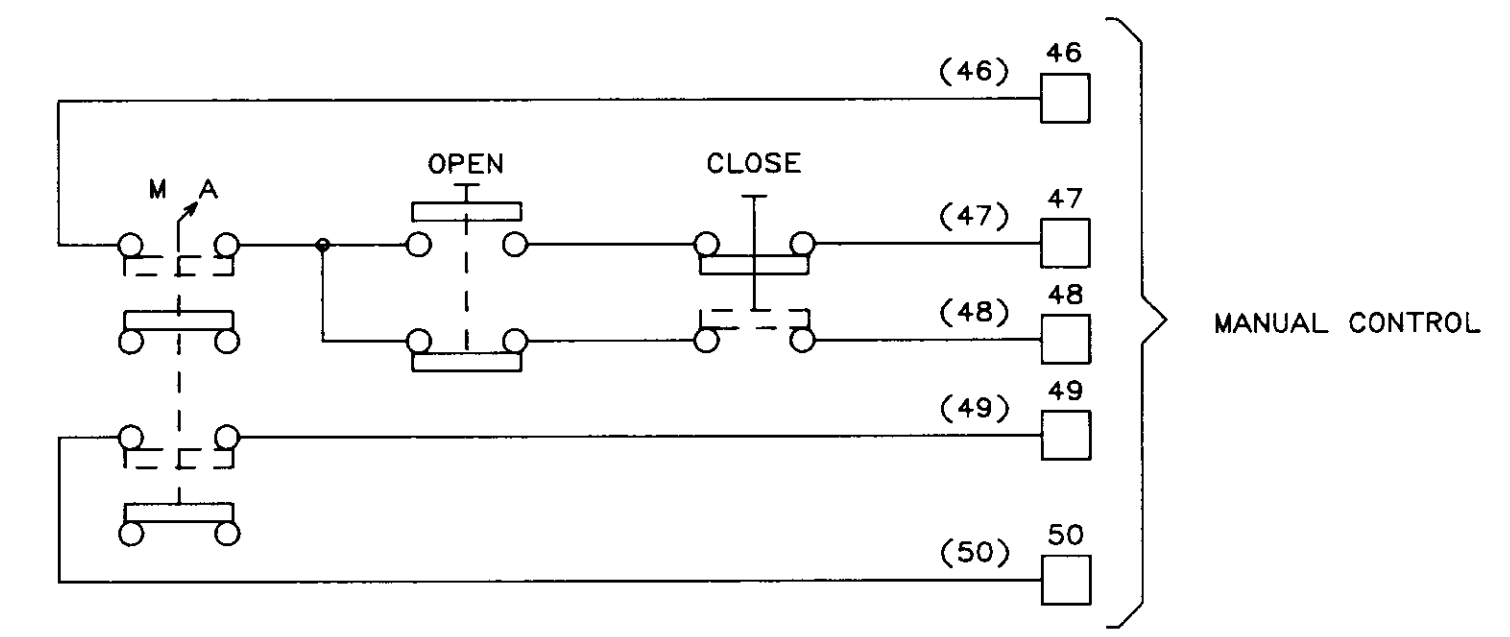
(A) PAC-1A OIL PUMP CONTROL



(B) BY-PASS VALVE CONTROL PCV-901B



NOTE: FCV-901 NOT CONNECTED.  
(NO POT AVAILABLE IN VALVE.)

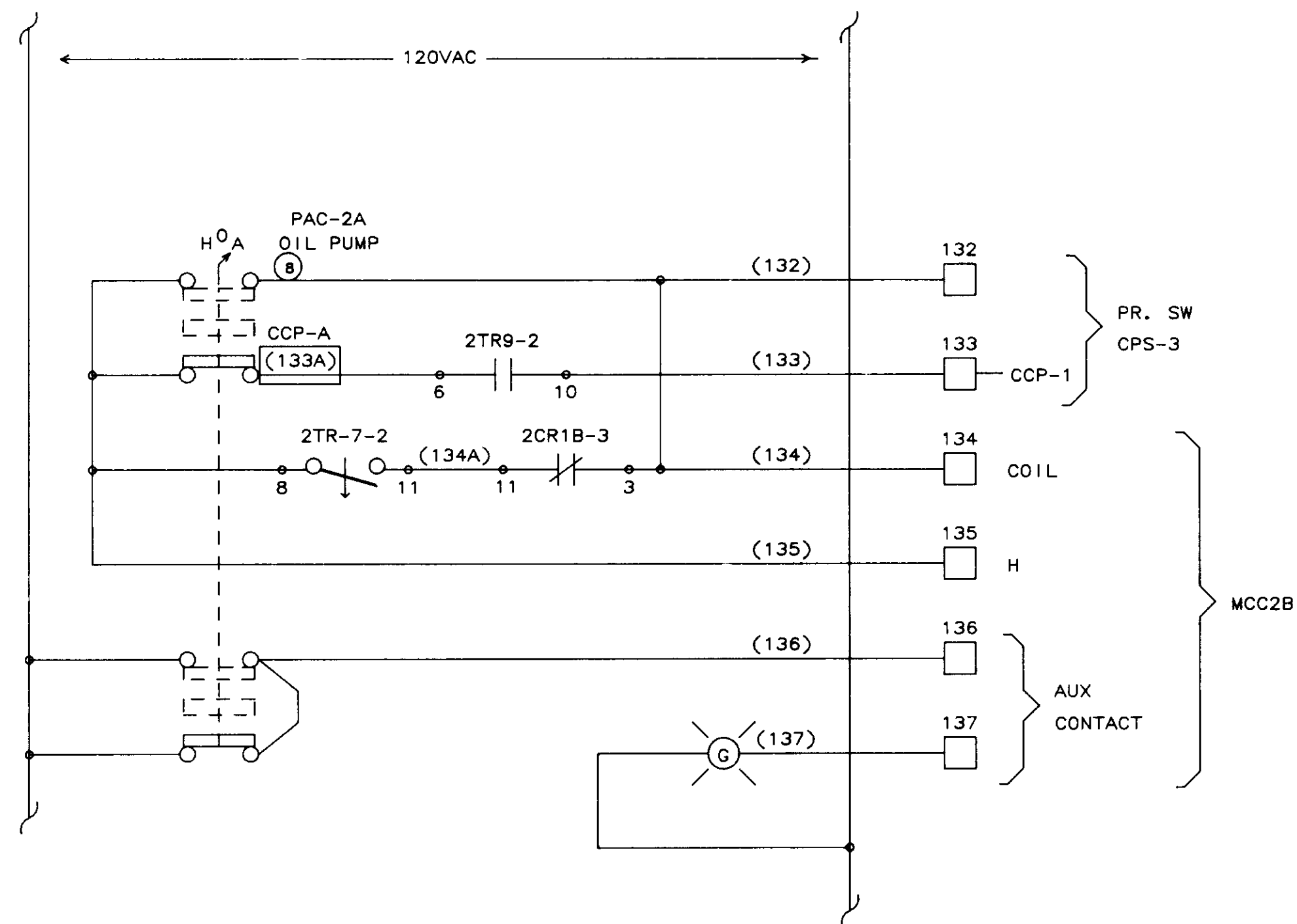


AIR PLENUM VALVE CONTROL

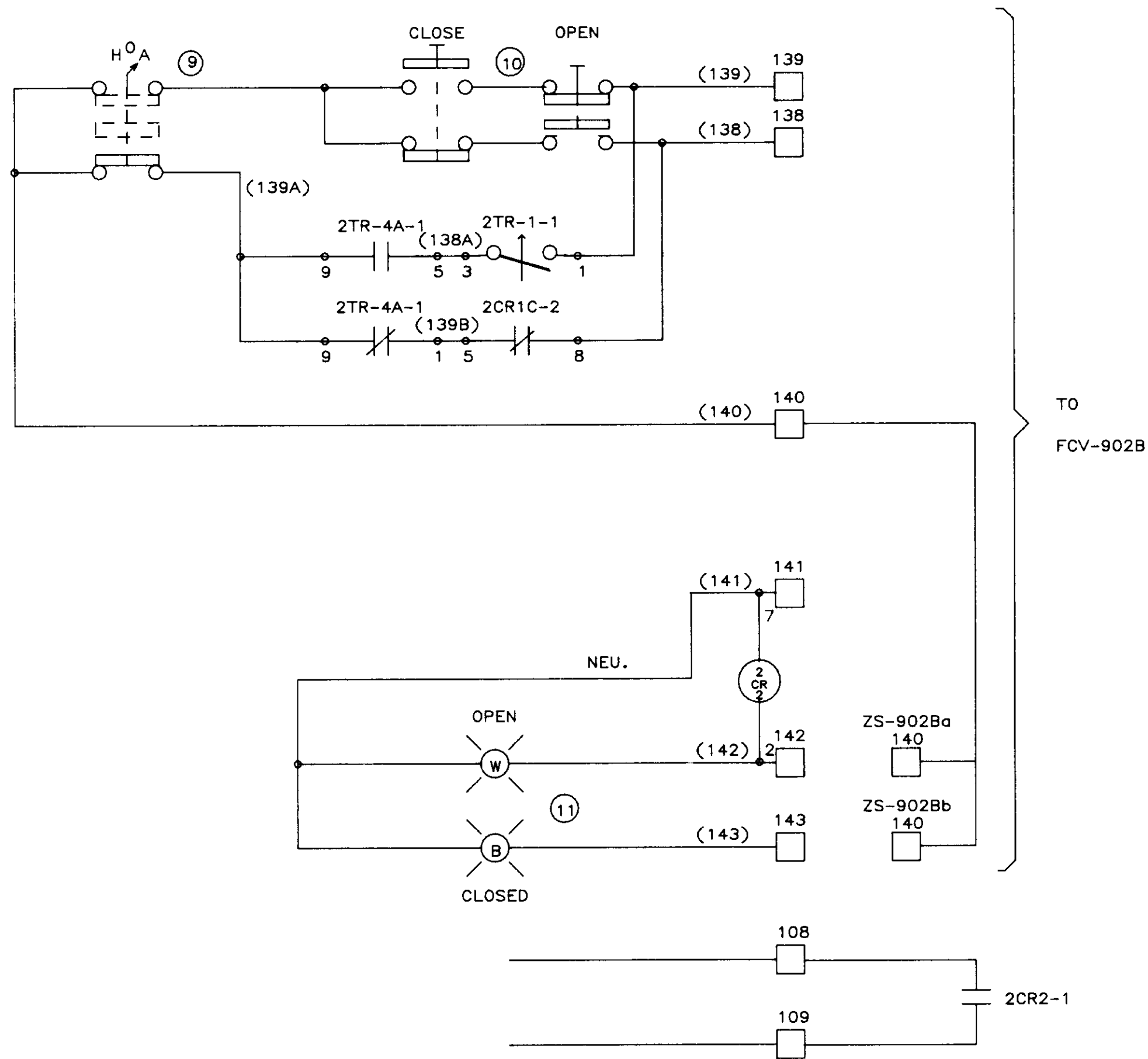
04248

NO.	DATE	BY	REMARKS
3	02/08/90		ADDED NOTE
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

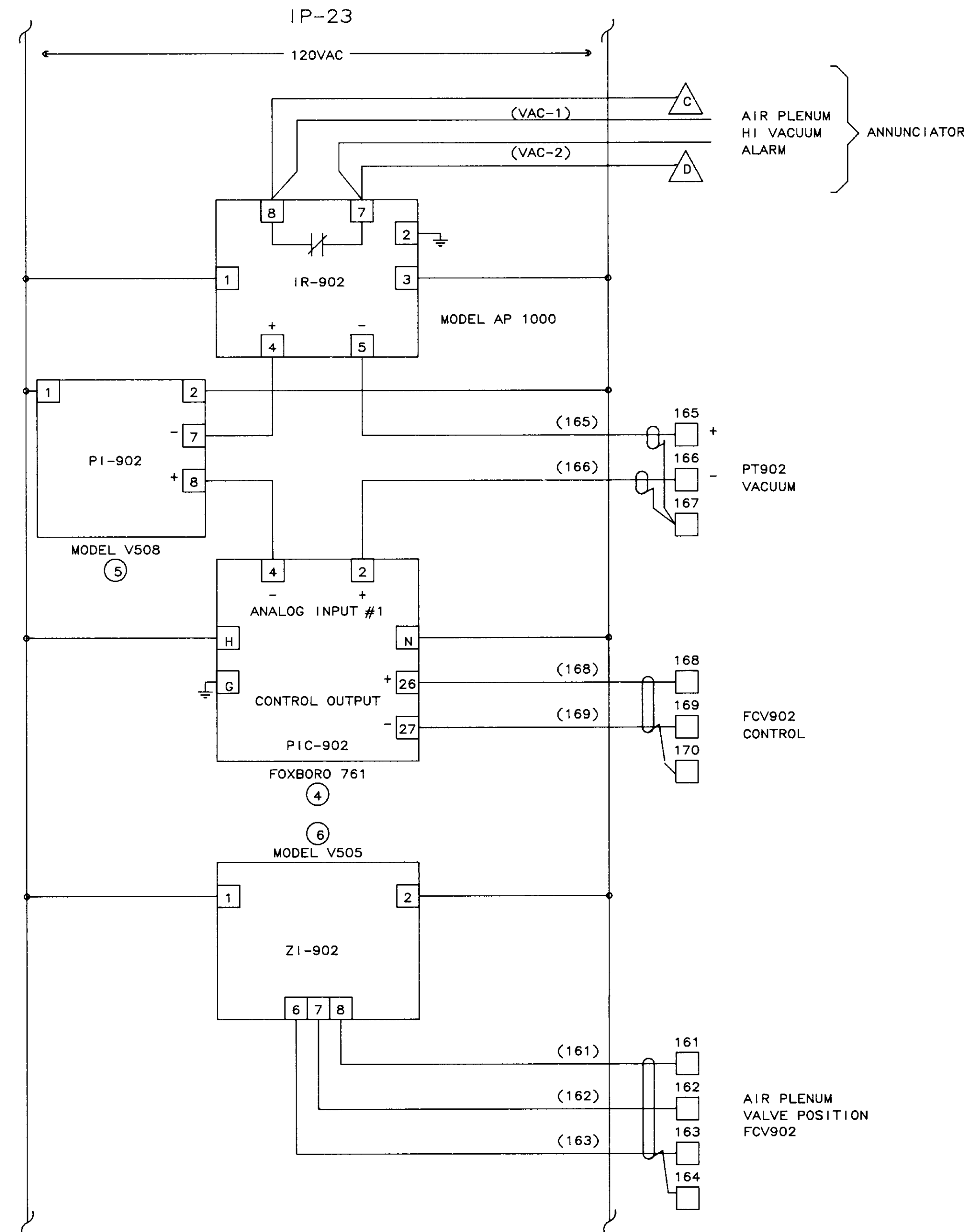
<b>BARRCOM SYSTEMS</b>		
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-1A OIL PUMP/BY-PASS VALVE/ AIR PLENUM VALVE		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-31	8002-1D-A	6 OF 14



**A** PAC-2 OIL PUMP CONTROL



**B** BY-PASS VALVE CONTROL FCV-902B



AIR PLENUM VALVE CONTROL

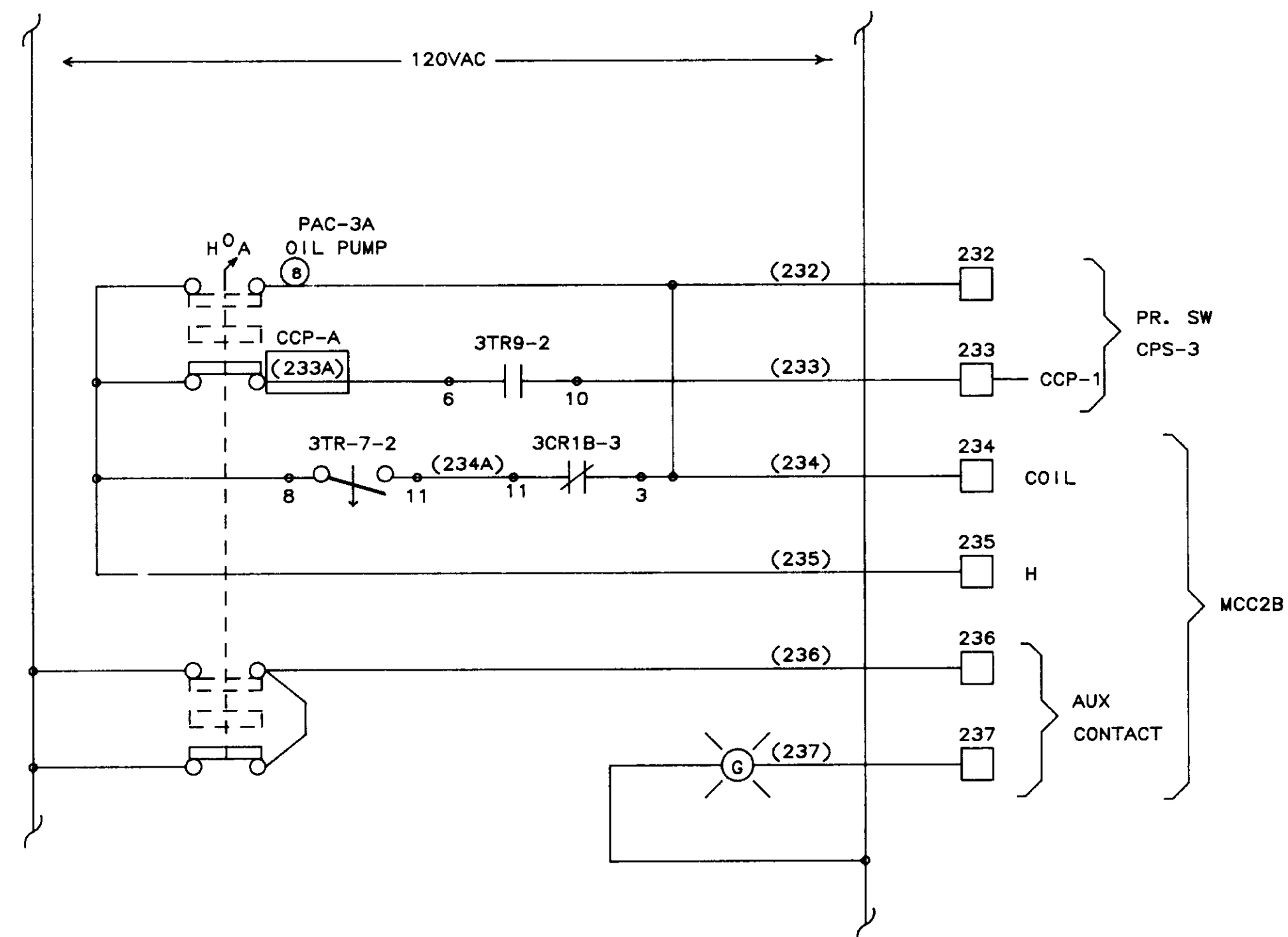
NOTE: FCV-902 NOT CONNECTED.  
(NO POT AVAILABLE IN VALVE.)

**04249**

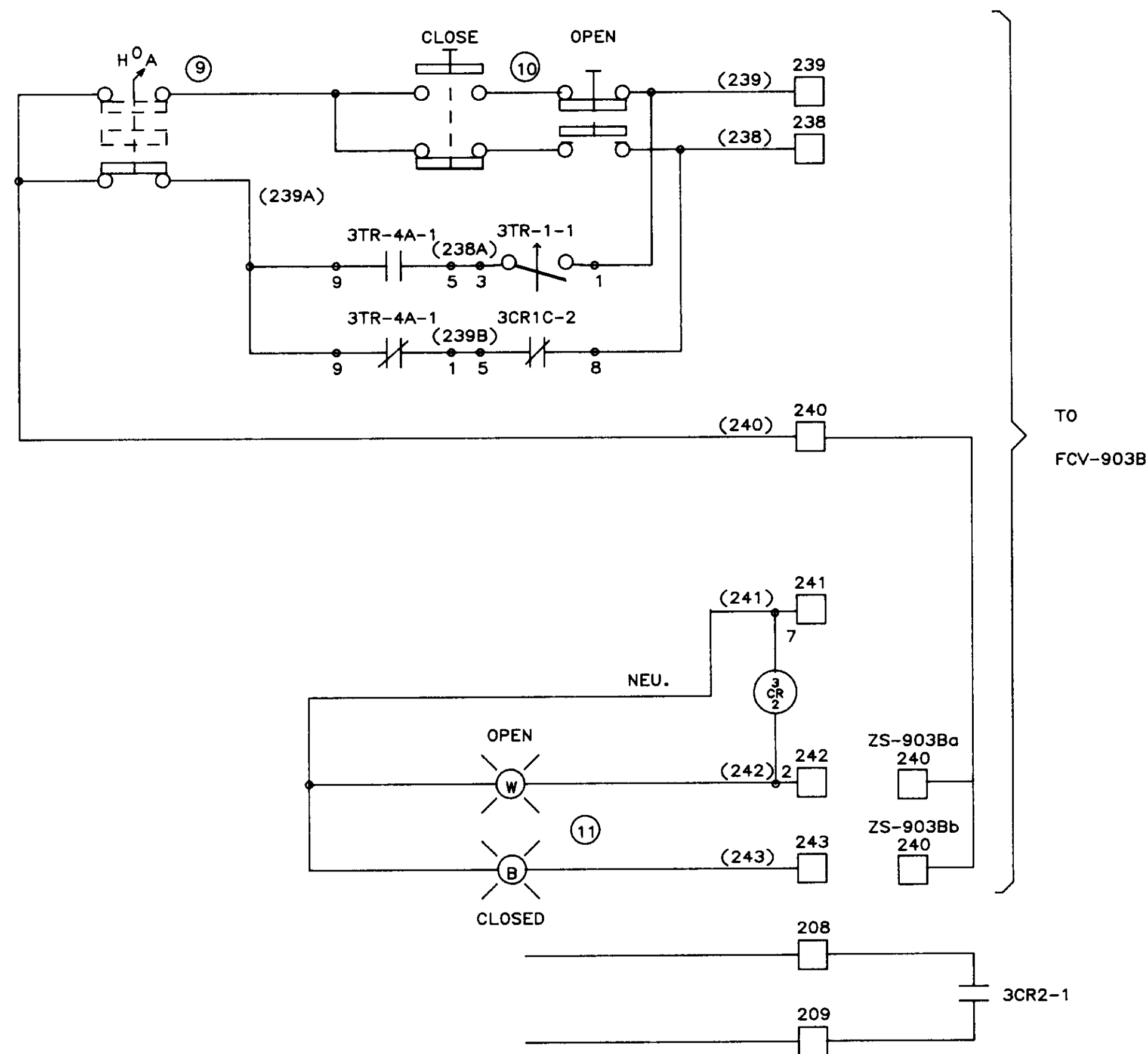
NO.	DATE	BY	REMARKS
3	02/08/90		ADDED NOTE
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

<b>BCS BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-2A OIL PUMP/BY-PASS VALVE/ AIR PLENUM VALVE		
FILING NAME SCHEM-32	DRAWING NUMBER 8002-1D-A	SHEET NUMBER 7 OF 14

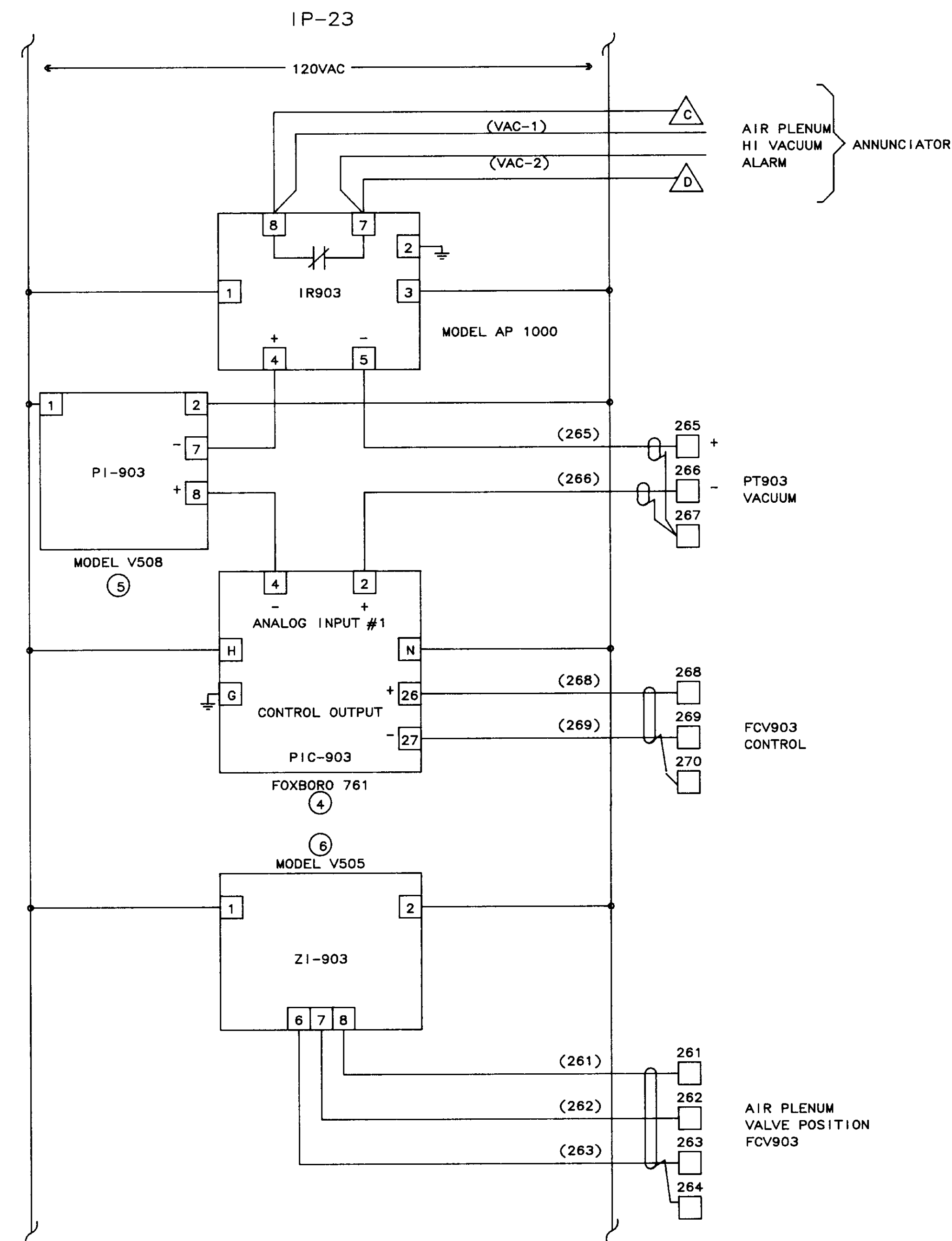




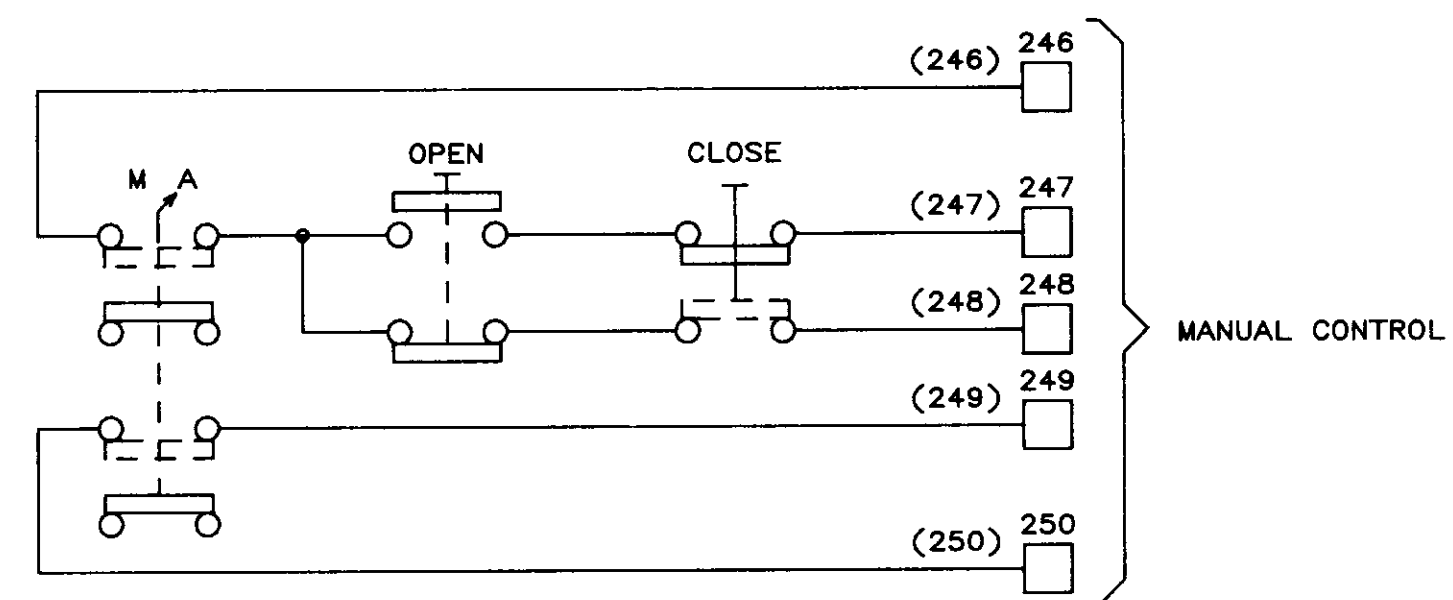
**A** PAC-3A OIL PUMP CONTROL



**B** BY-PASS VALVE CONTROL FCV 903B



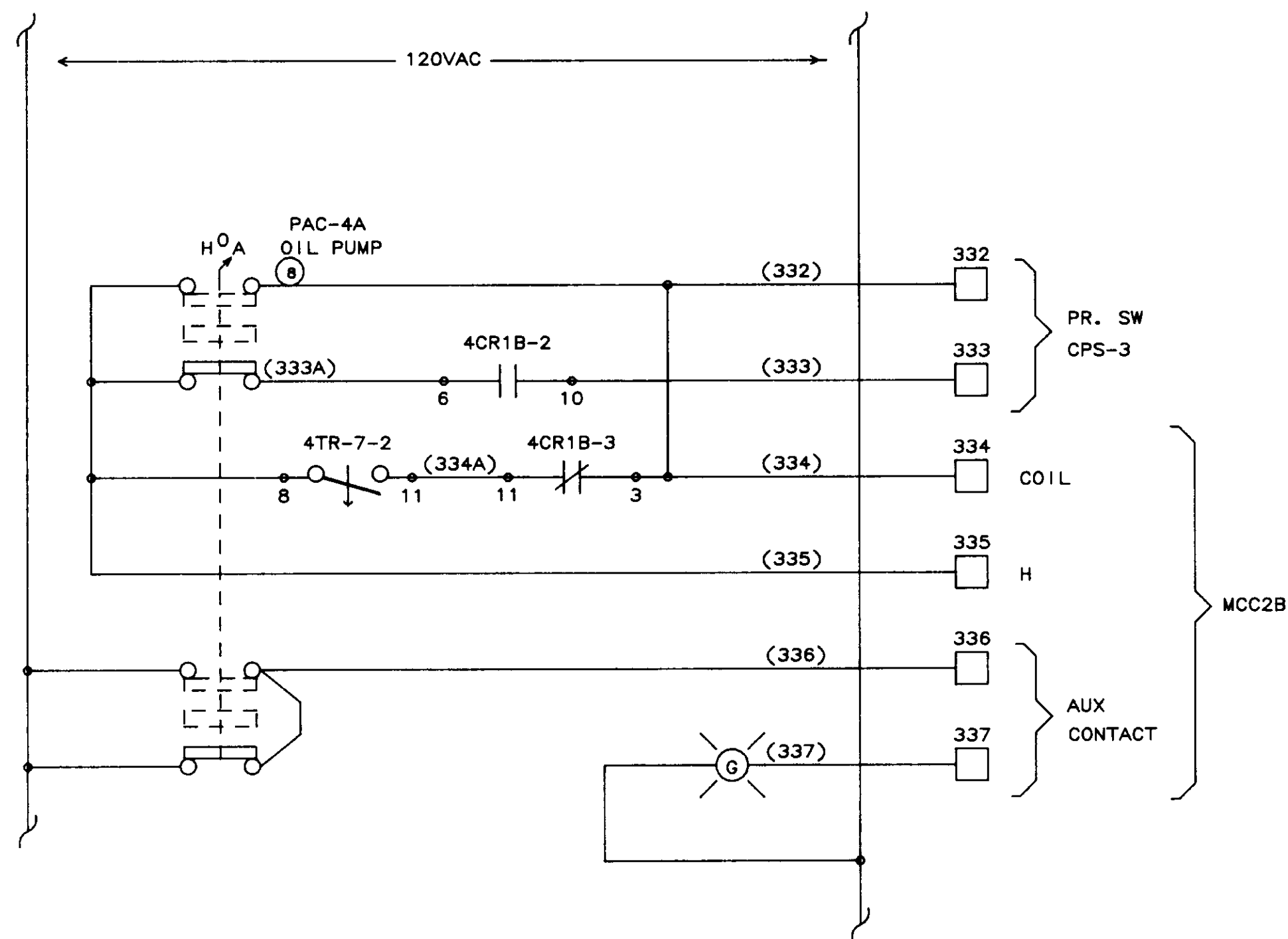
AIR PLENUM VALVE CONTROL



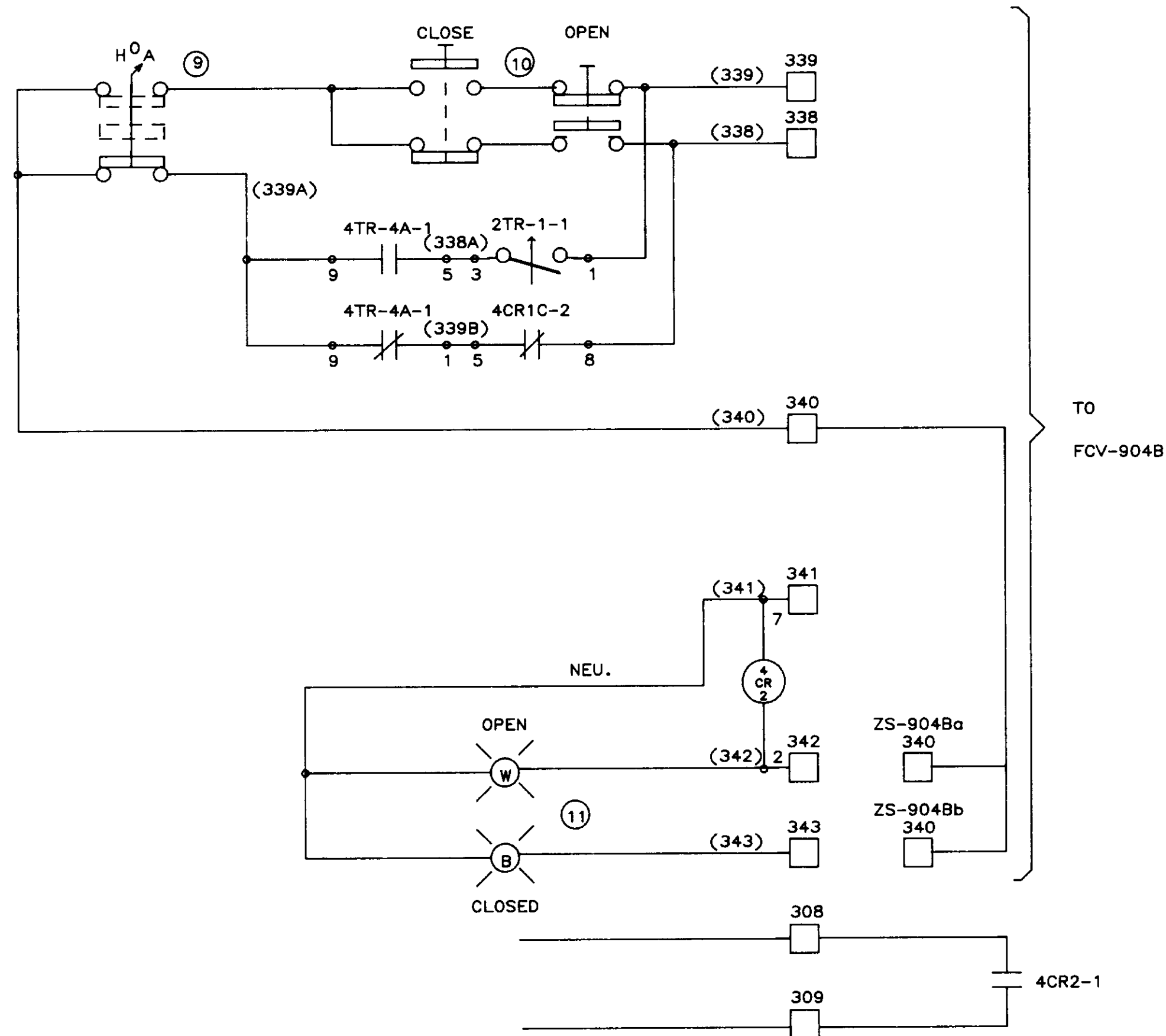
04250

NO.	DATE	BY	REMARKS
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

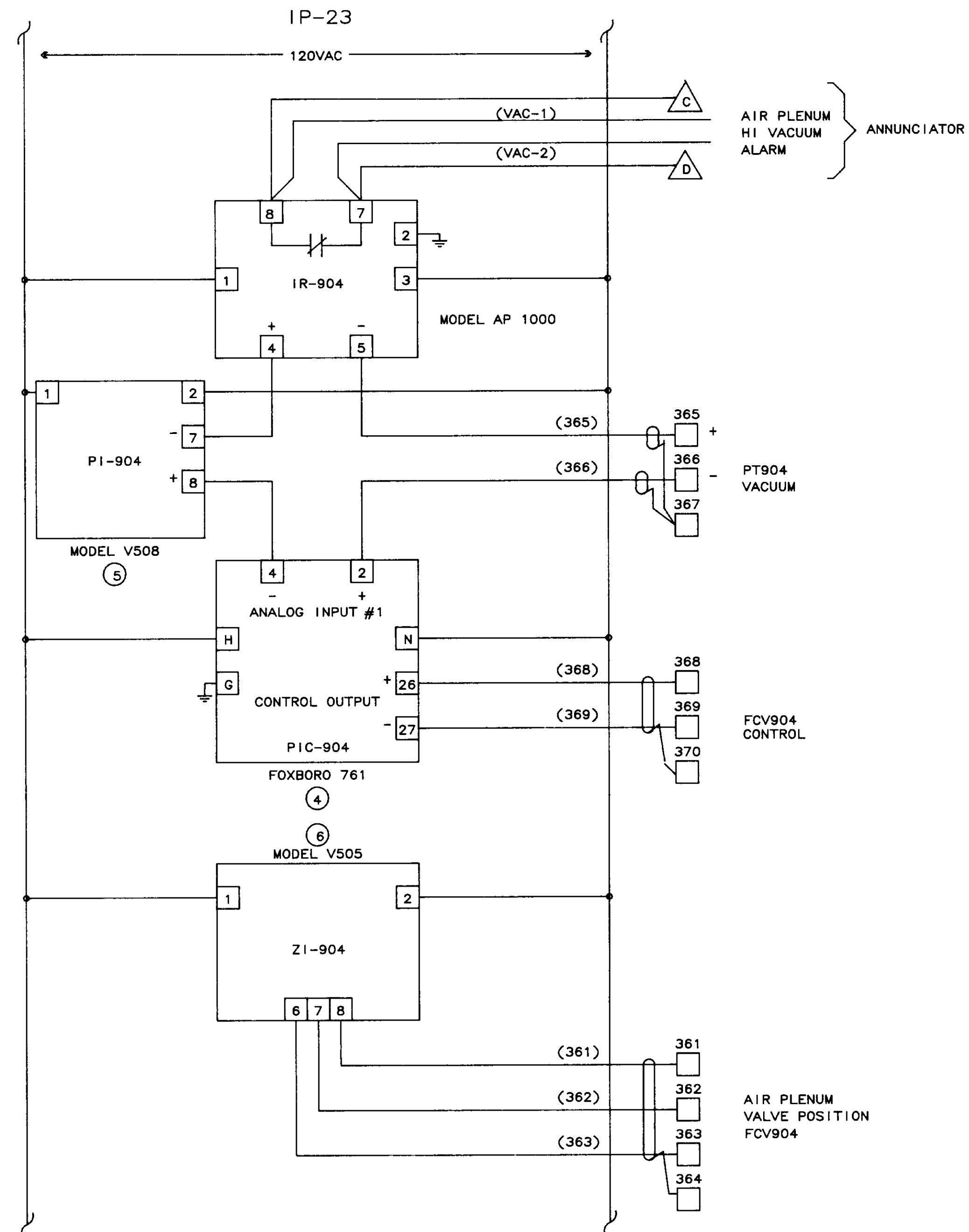
REVISIONS		
<p><b>B</b> <b>C</b> <b>S</b> <b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686</p>		
SCALE:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88	REV.	
<p>LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III</p>		
<p>PAC-3A OIL PUMP/BY-PASS VALVE/ AIR PLENUM VALVE</p>		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-33	8002-1D-A	8 OF 14



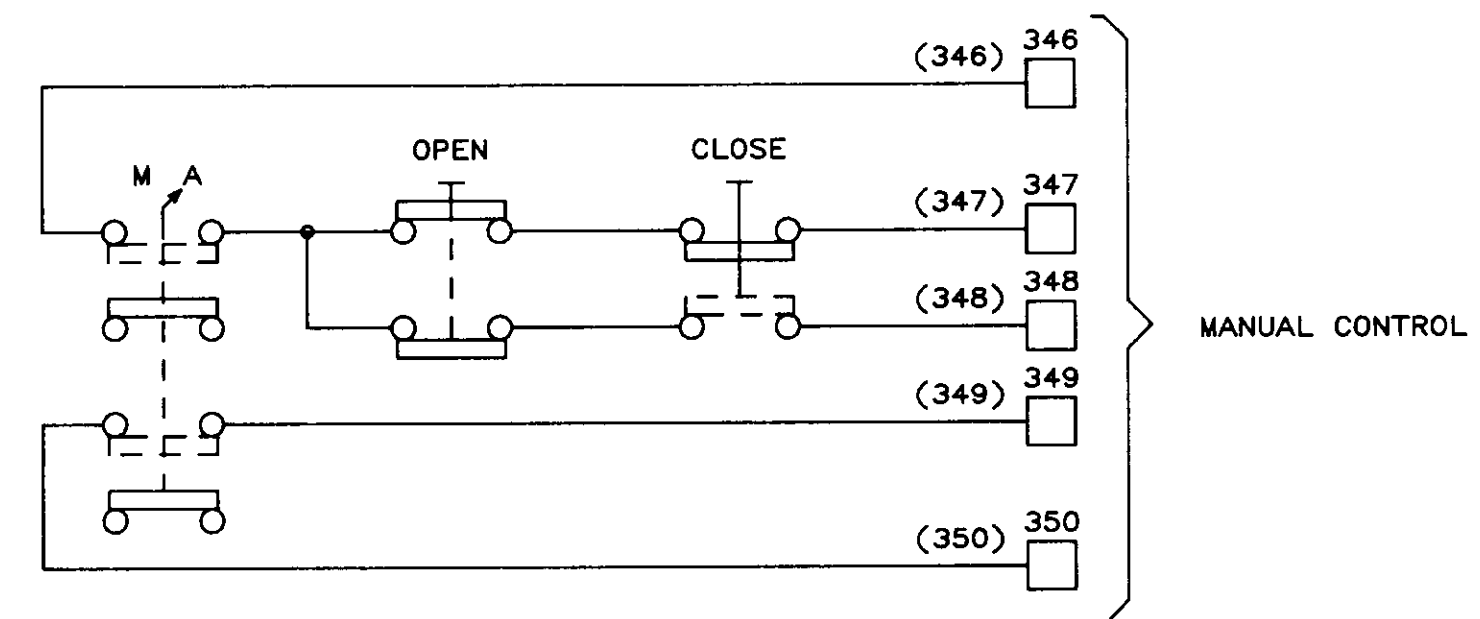
**A** PAC-4A OIL PUMP CONTROL



**B** BY-PASS VALVE CONTROL FCV-904B



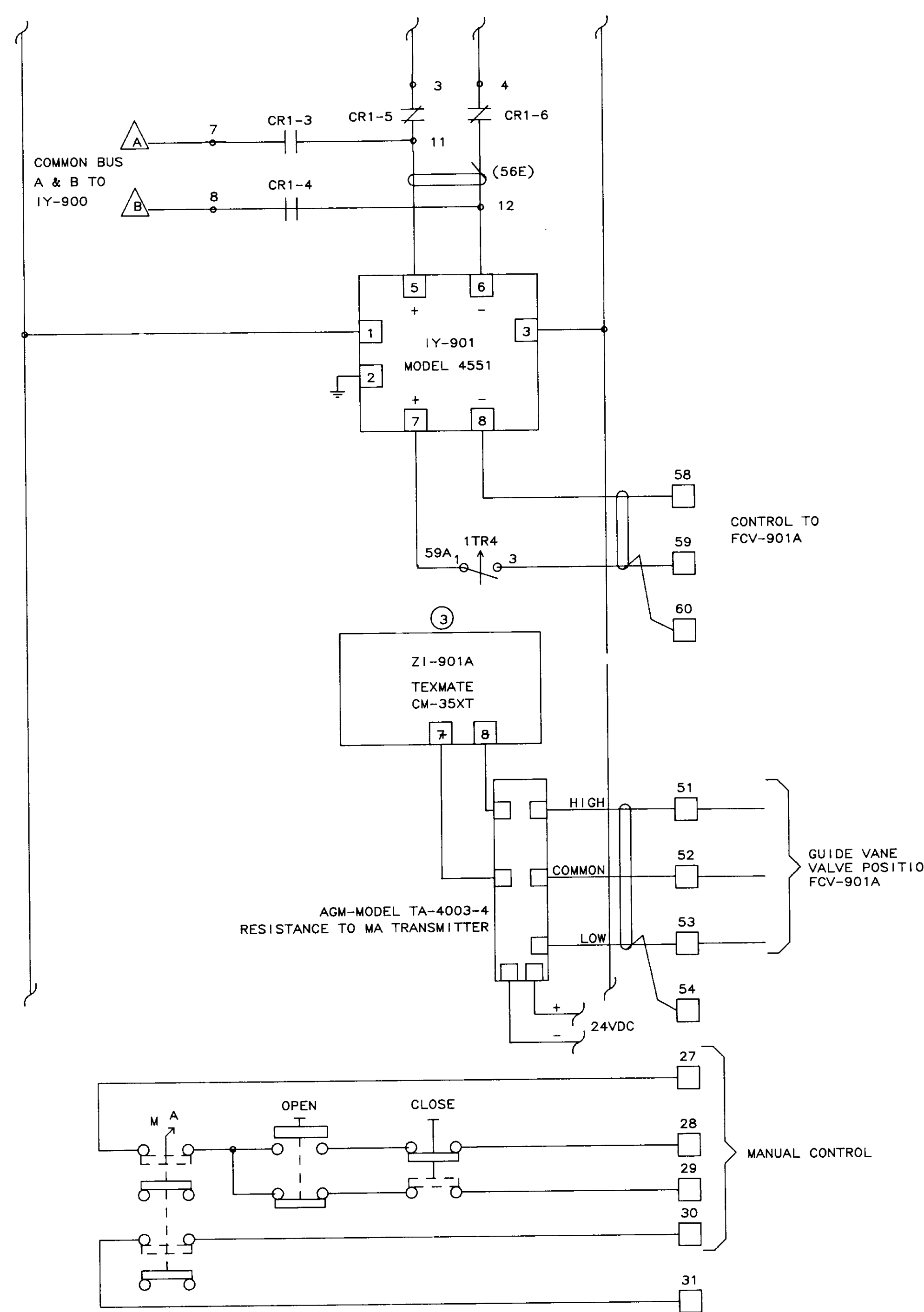
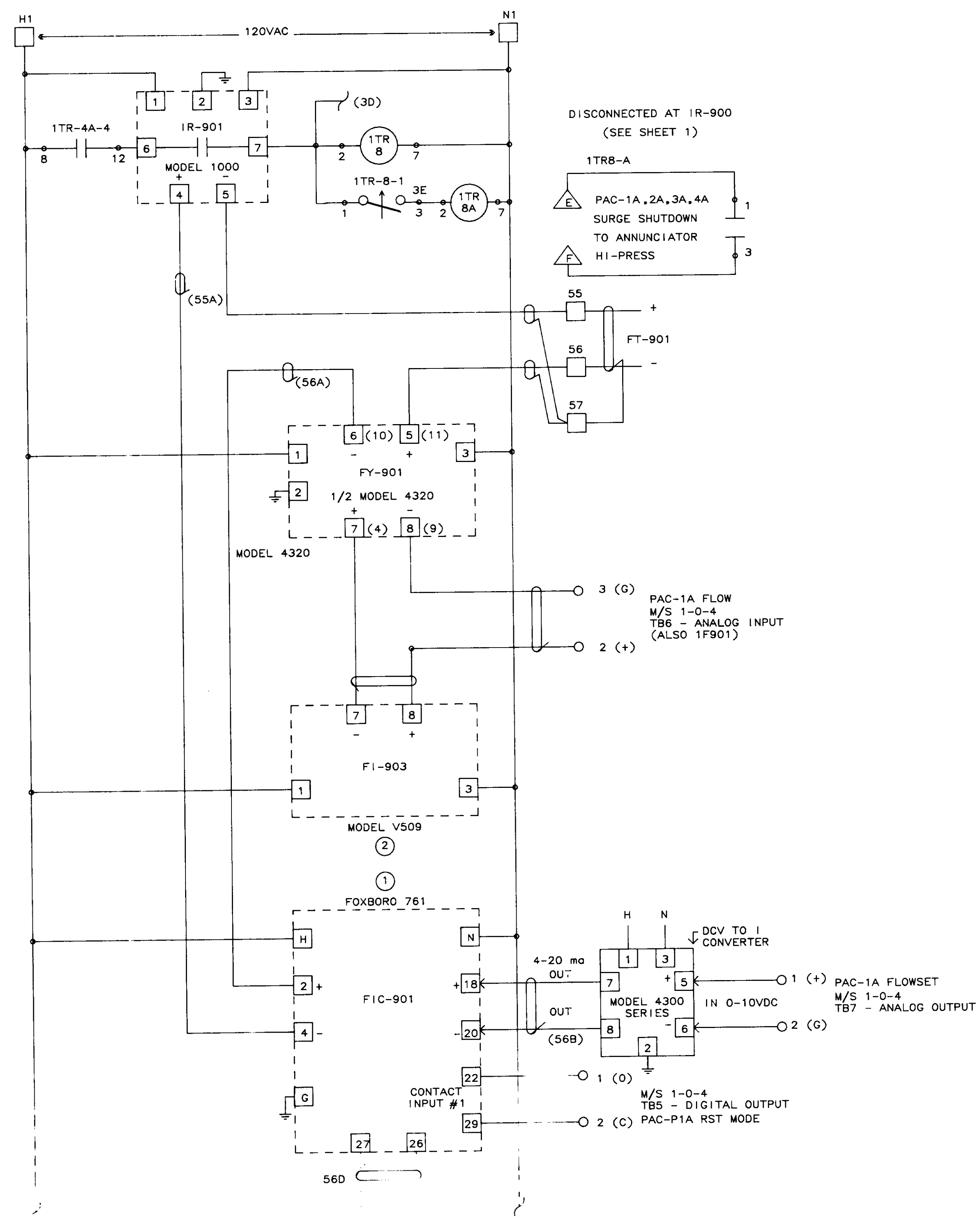
AIR PLENUM VALVE CONTROL



04251

NO.	DATE	BY	REMARKS
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

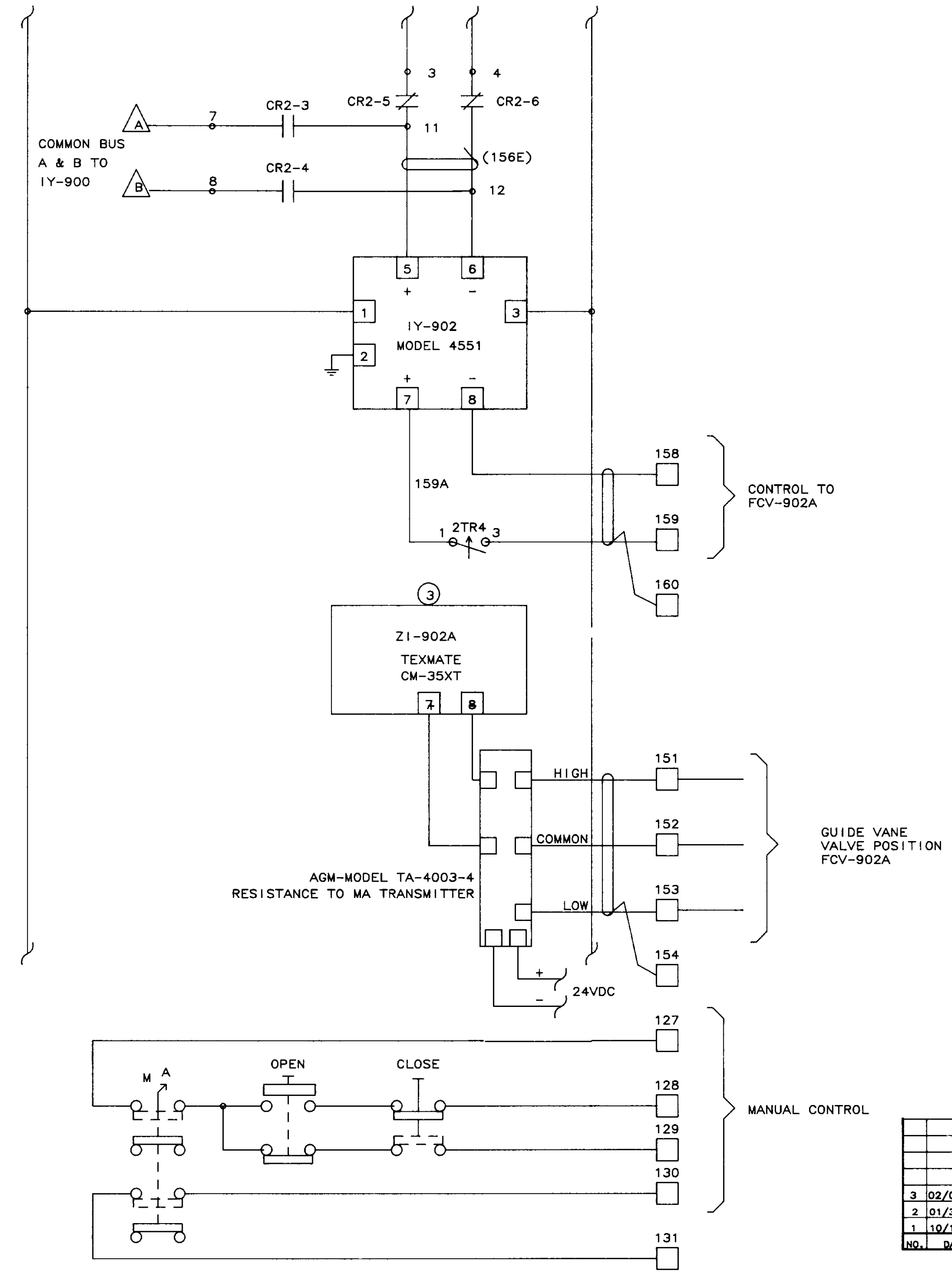
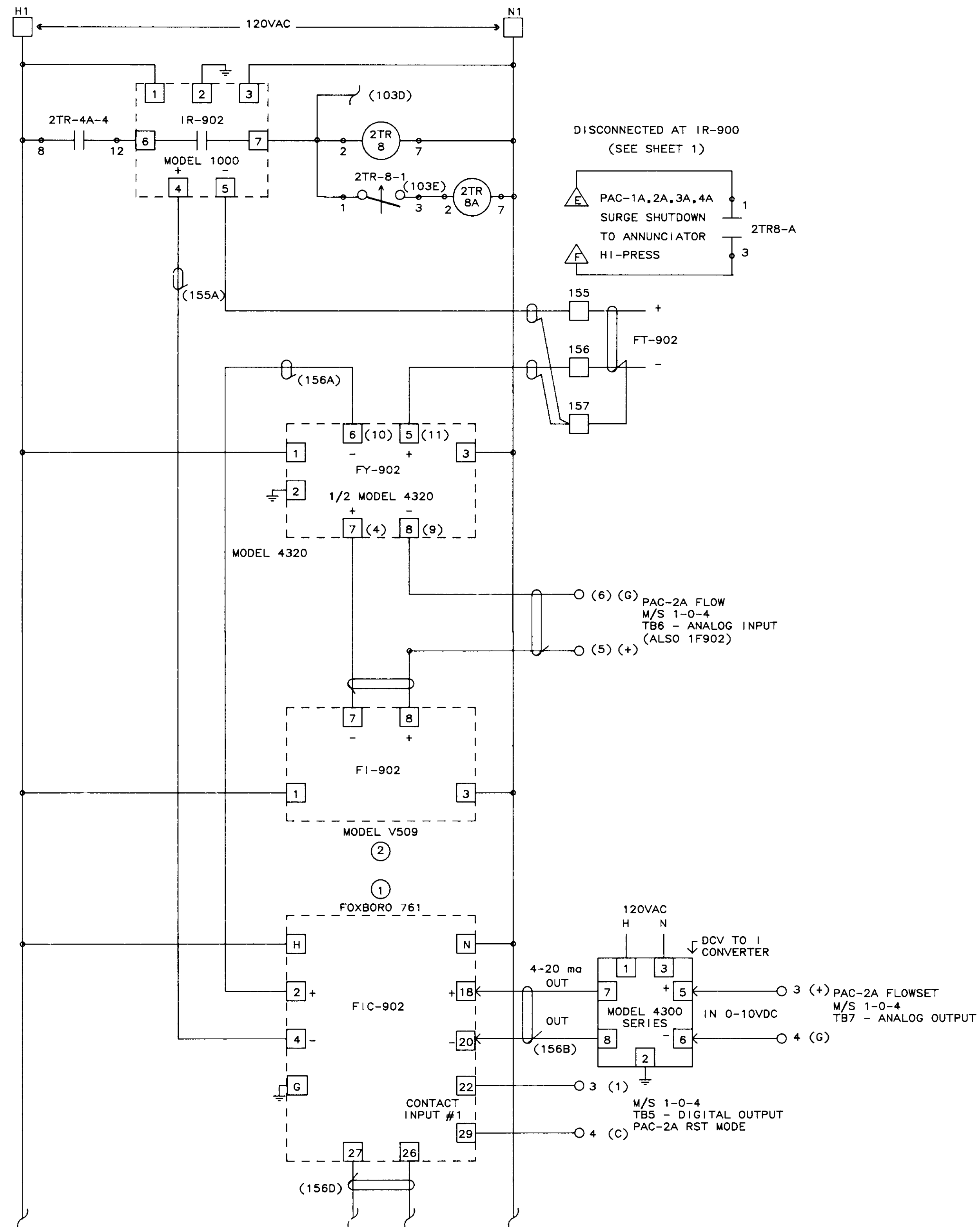
REVISIONS		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-4A OIL PUMP/BY-PASS VALVE/ AIR PLENUM VALVE		
FILING NAME SCHEM-34	DRAWING NUMBER 8002-1D-A	SHEET NUMBER 9 OF 14



04252

NO.	DATE	BY	REMARKS
3	02/08/90		REVISED Z1-901A
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

<b>B C S</b>		
<b>BARRCOM SYSTEMS</b>		
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-1A COMPRESSOR GUIDE VANE CONTROL		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-41	8002-1D-A	10 OF 14

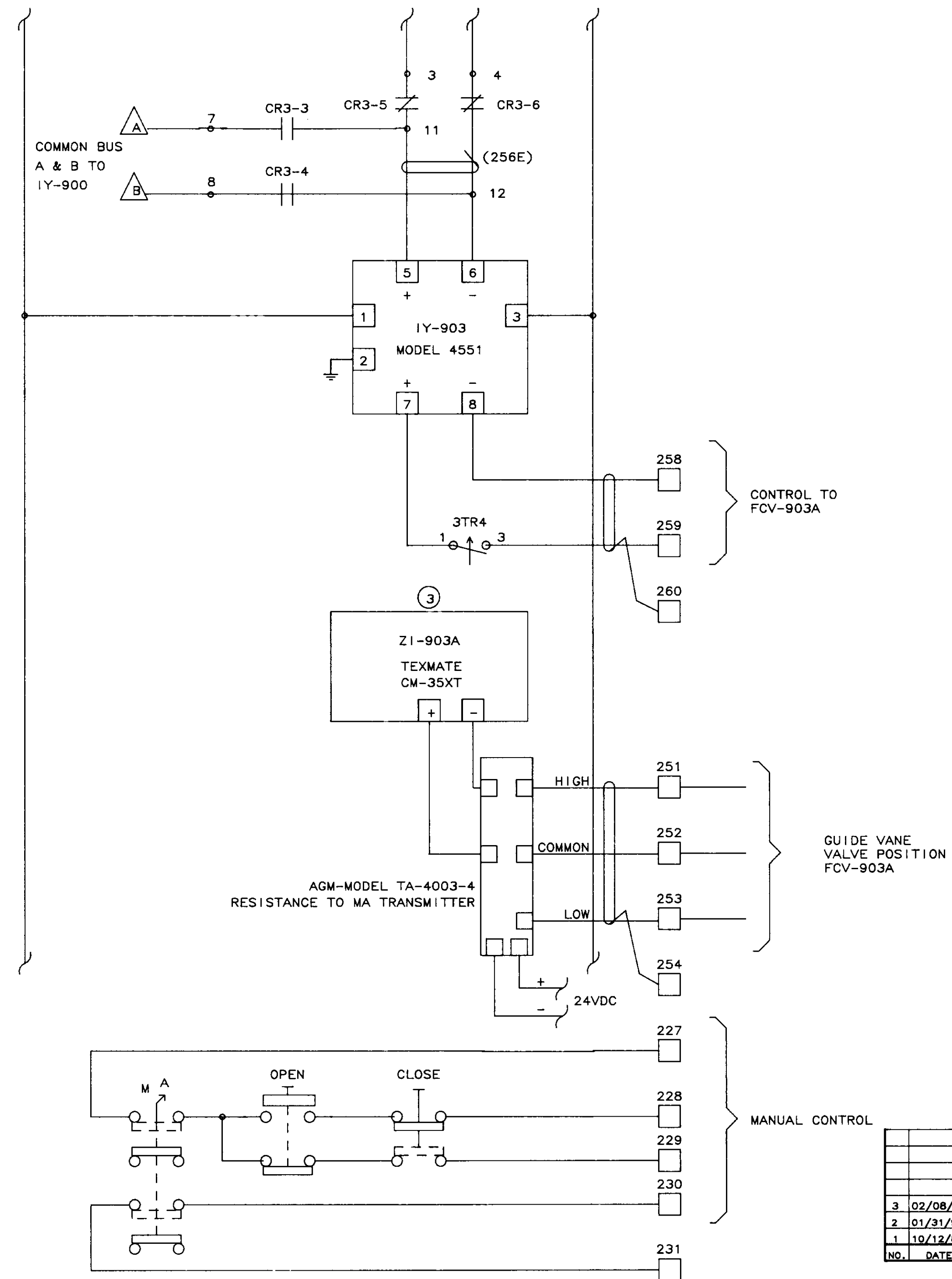
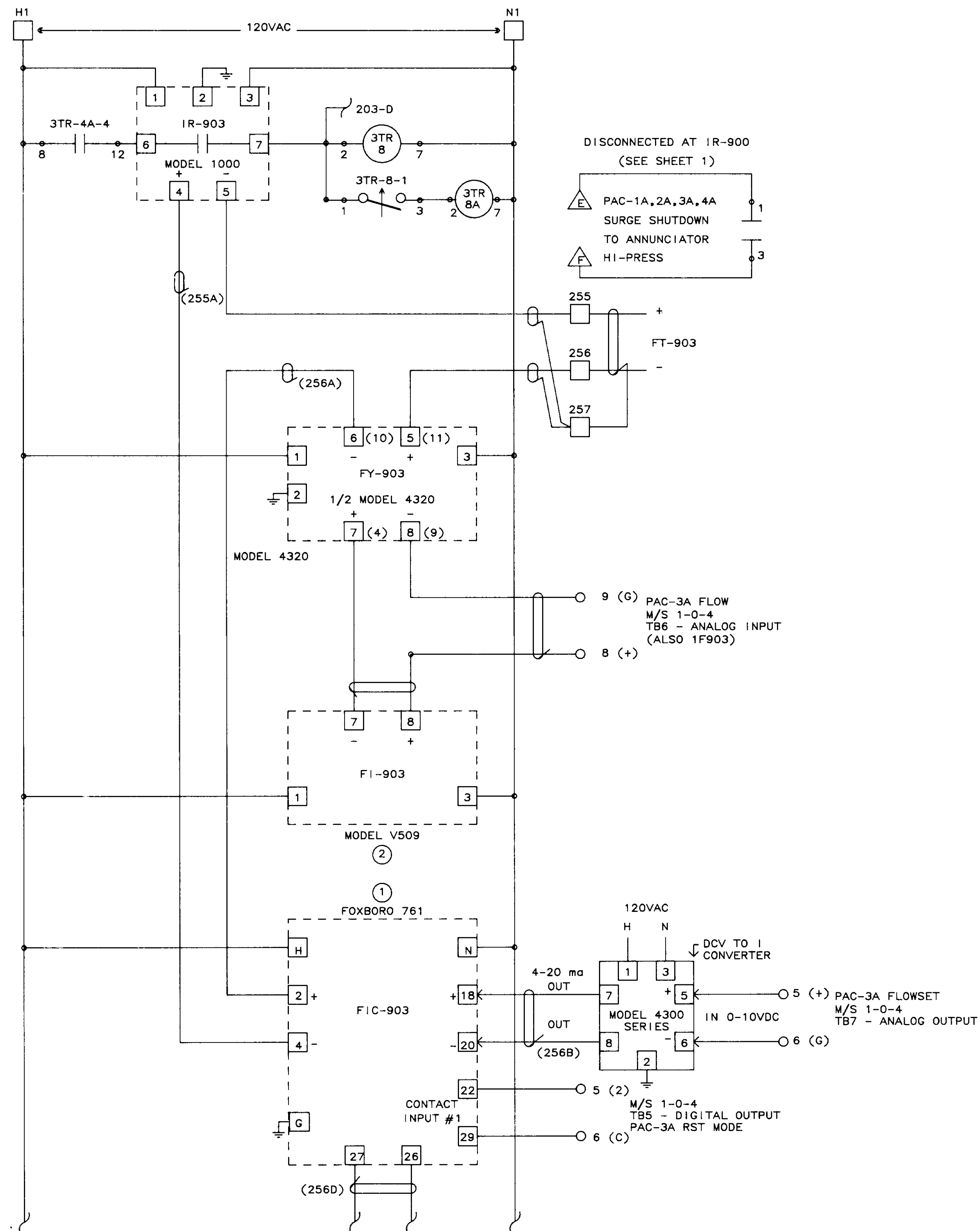


04253

NO.	DATE	BY	REMARKS
3	02/08/90		REVISED Z1-902A
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

REVISIONS

<b>B C S</b>		<b>BARRCOM SYSTEMS</b>	
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686			
SCALE:	APPROVED BY:	DRAWN BY: DBS	
DATE: 9/16/88		REV.	
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III			
PAC-2A COMPRESSOR GUIDE VANE CONTROL			
FILING NAME	DRAWING NUMBER	SHEET NUMBER	
SCHEM-42	8002-1D-A	11 OF 14	



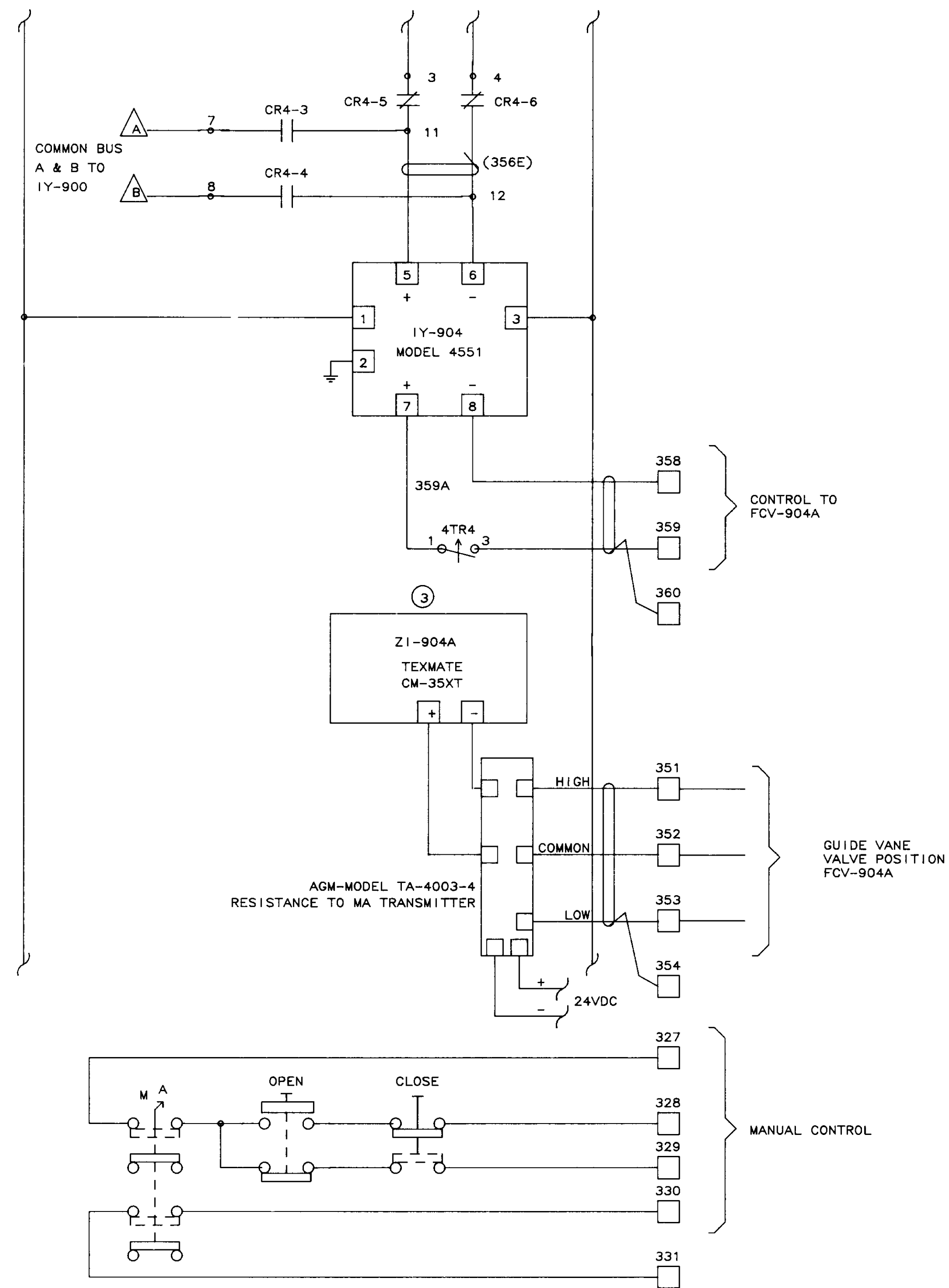
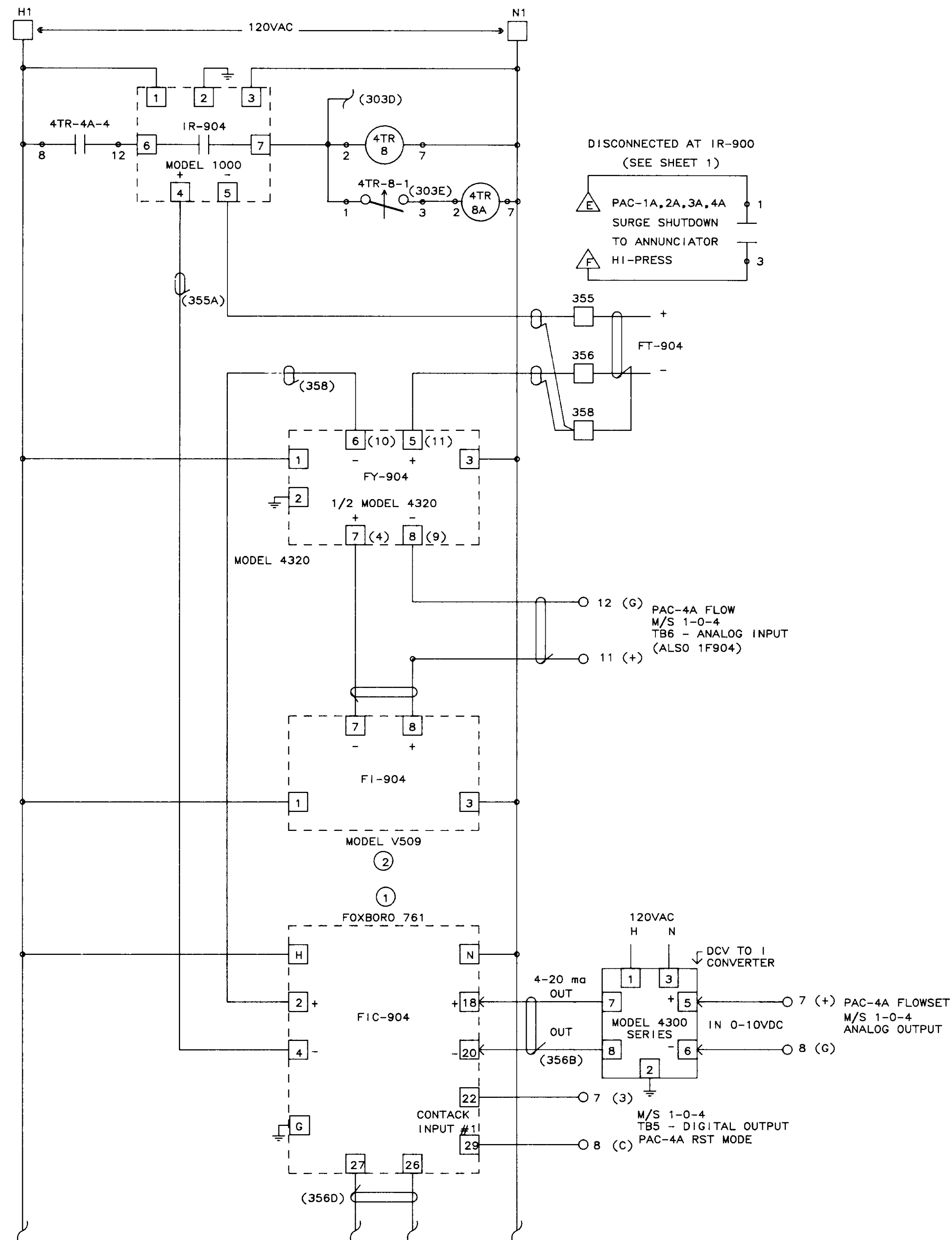
04254

NO.	DATE	BY	REMARKS
3	02/08/90		REVISED Z1-903A
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

REVISIONS

<b>B C S</b> <b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES: DATE: 9/16/88	APPROVED BY: _____	DRAWN BY: DBS REV. _____
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-3A COMPRESSOR GUIDE VANE CONTROL		
FILING NAME SCHEM-43	DRAWING NUMBER 8002-ID-A	SHEET NUMBER 12 OF 14



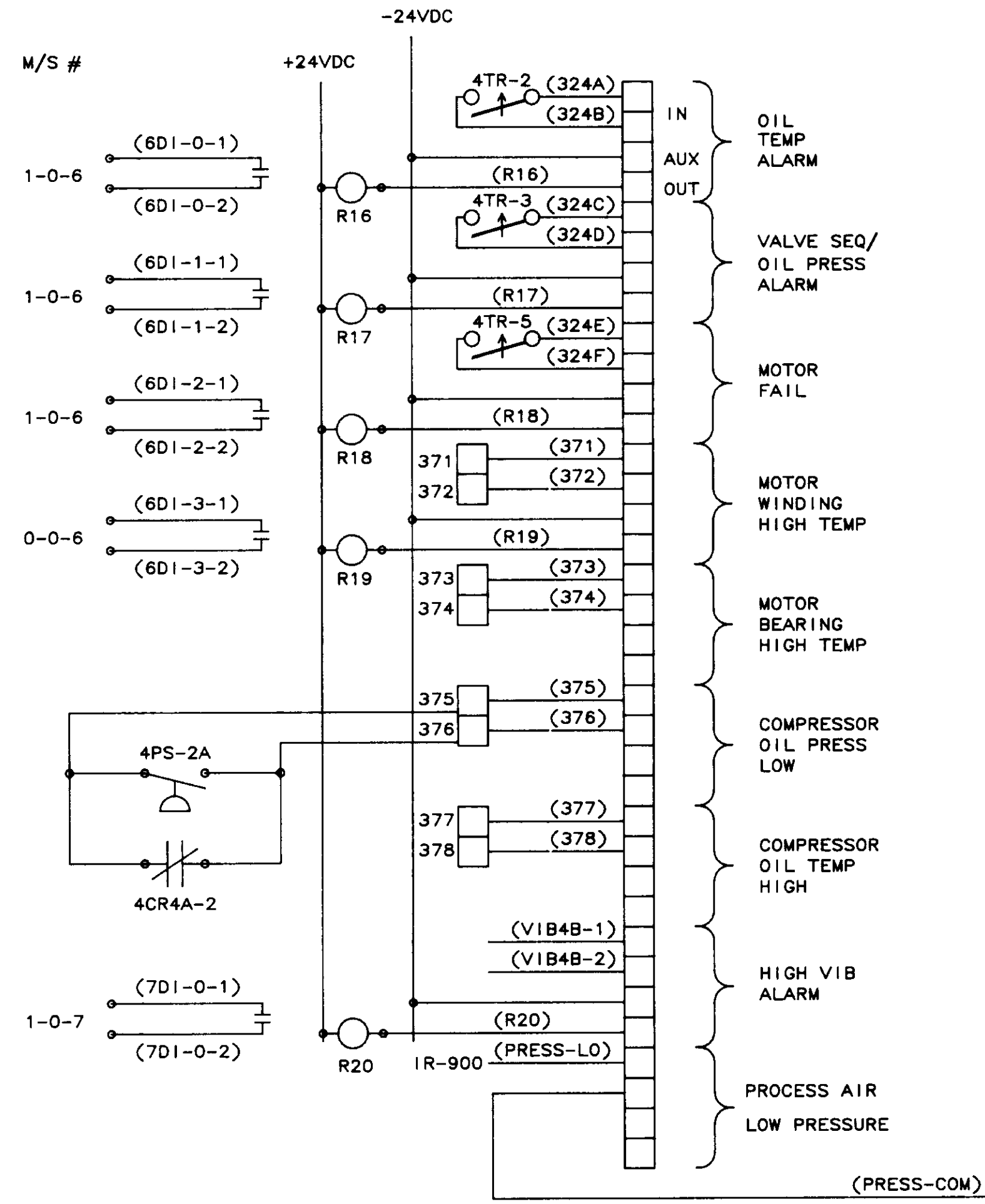
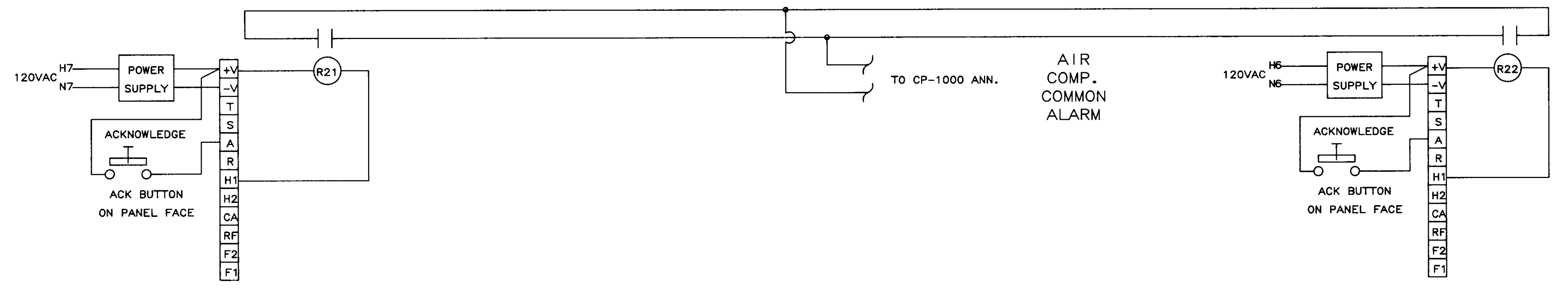


04255

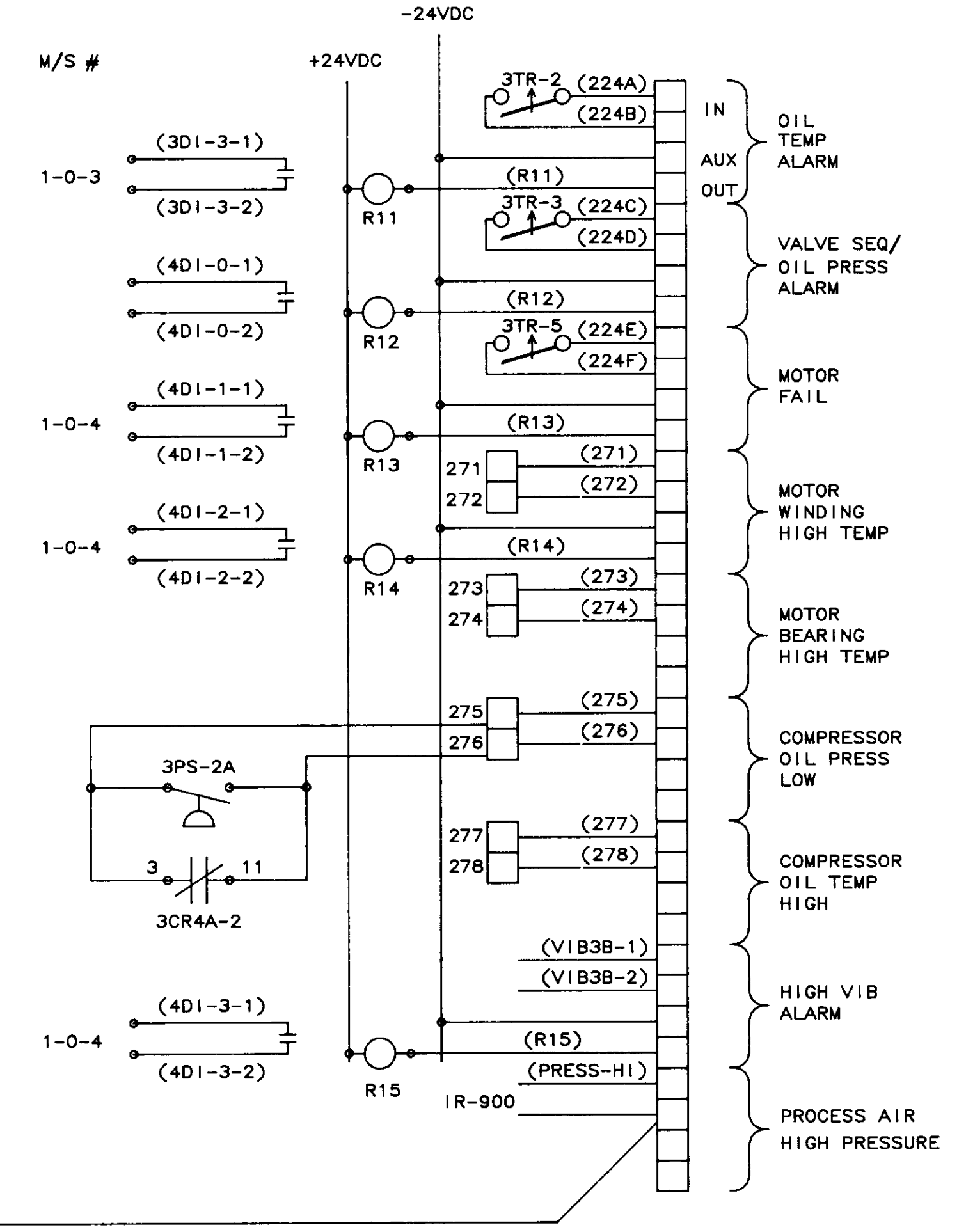
NO.	DATE	BY	REMARKS
3	01/08/90		REVISED ZI-904A
2	01/31/90		AS-BUILT
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

REVISIONS

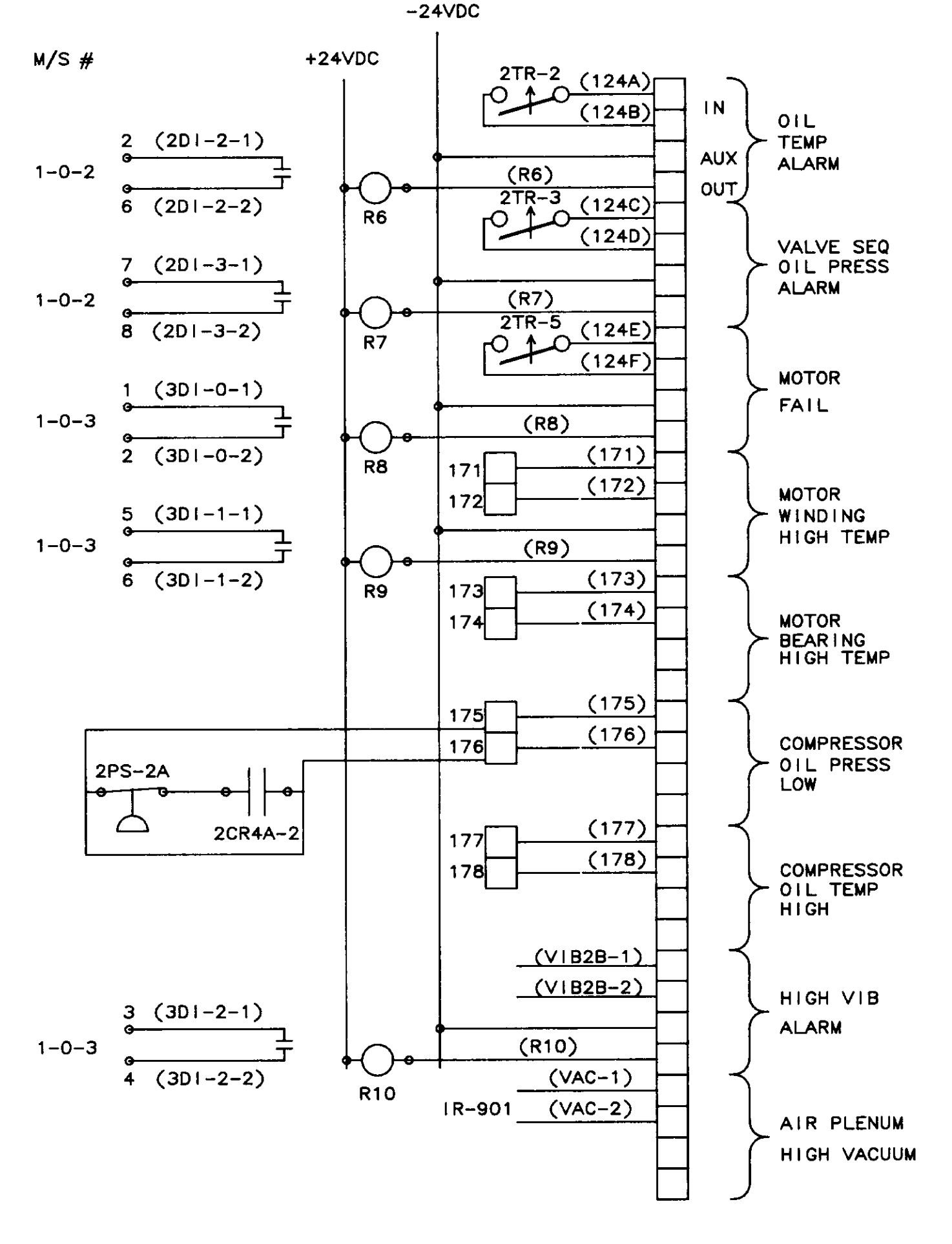
<b>B C S</b>		
<b>BARRCOM SYSTEMS</b>		
22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
PAC-4A COMPRESSOR GUIDE VANE CONTROL		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SCHEM-44	8002-1D-A	13 OF 14



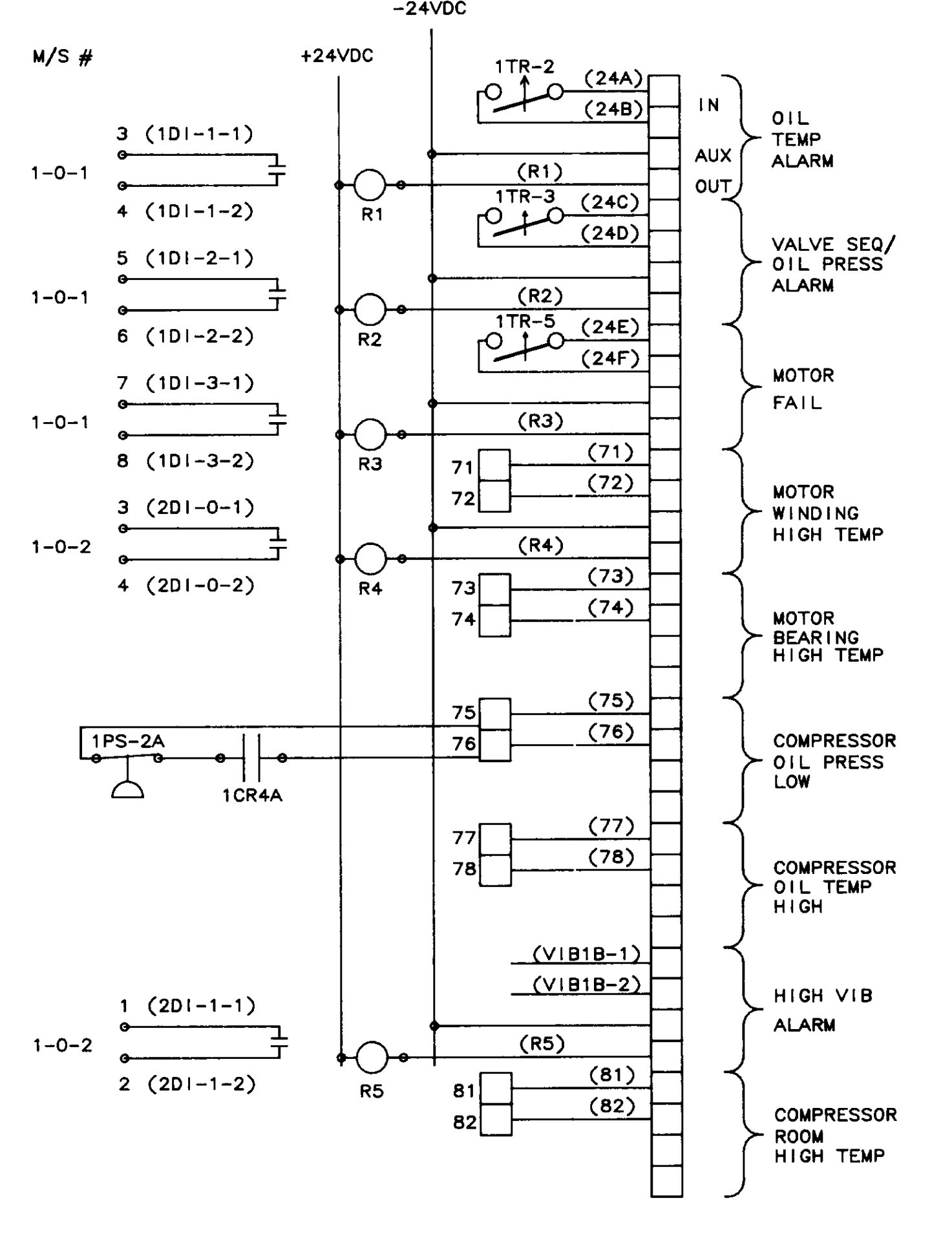
PAC-4A



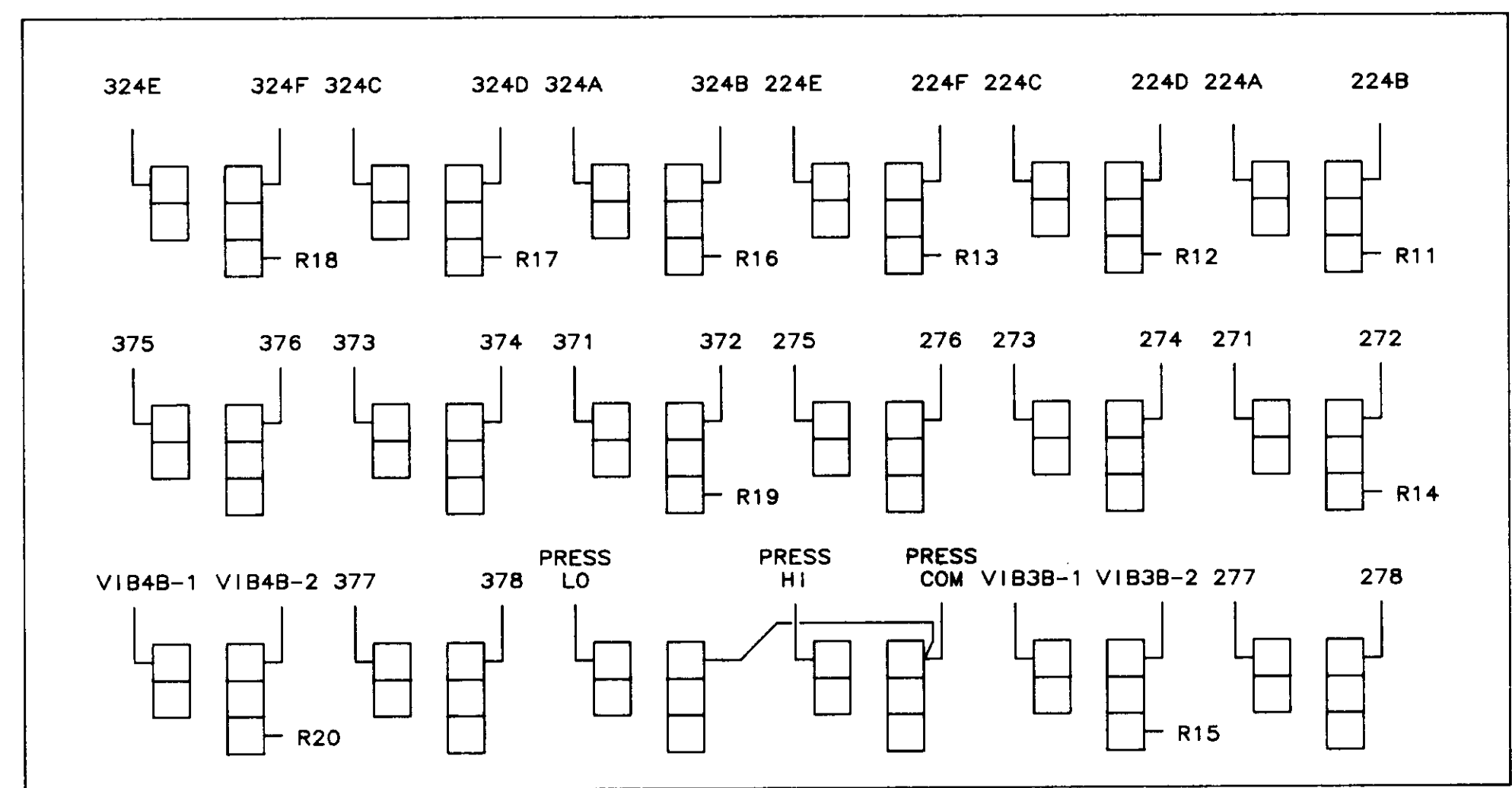
PAC-3A



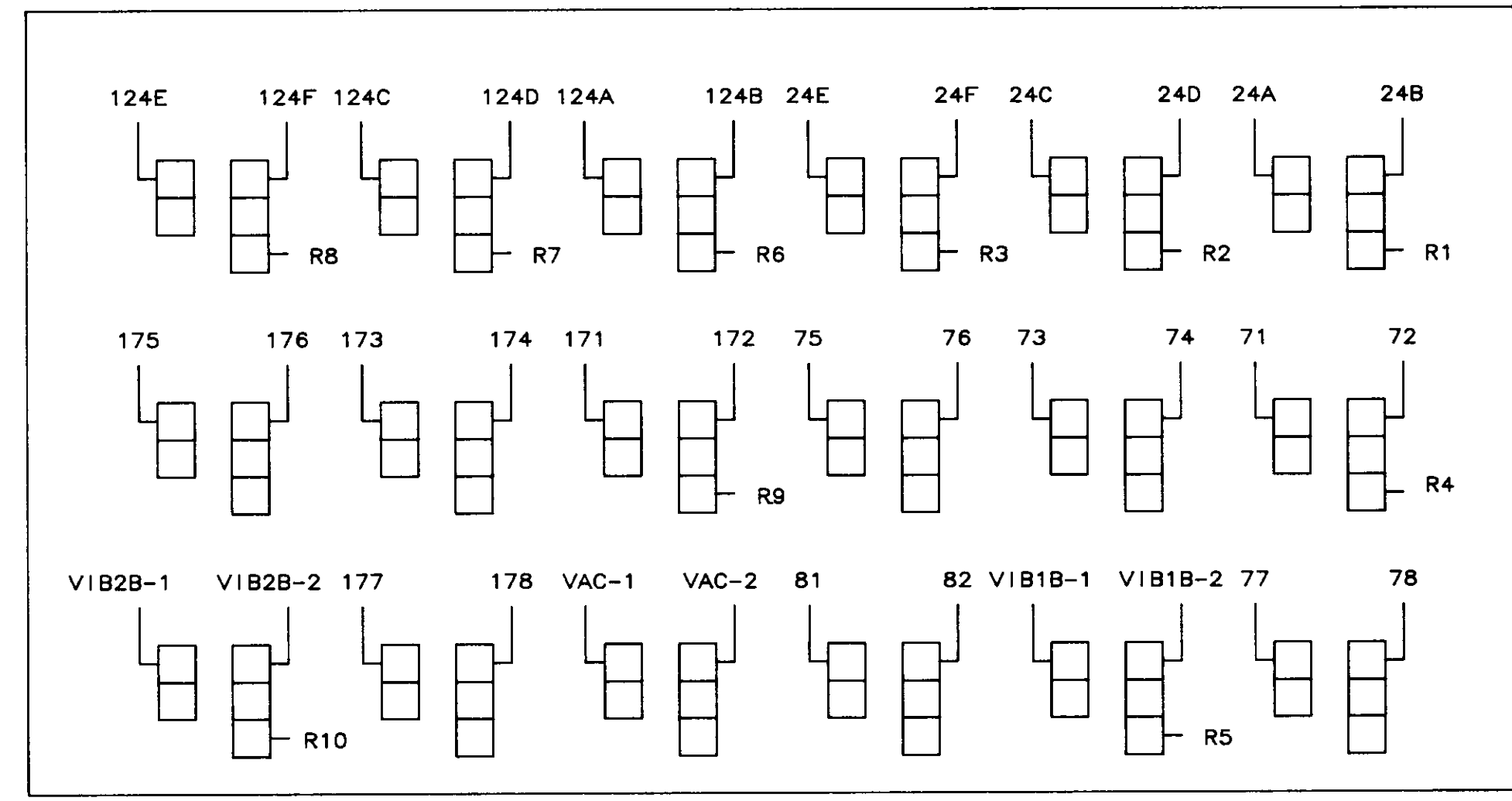
PAC-2A



PAC-1A



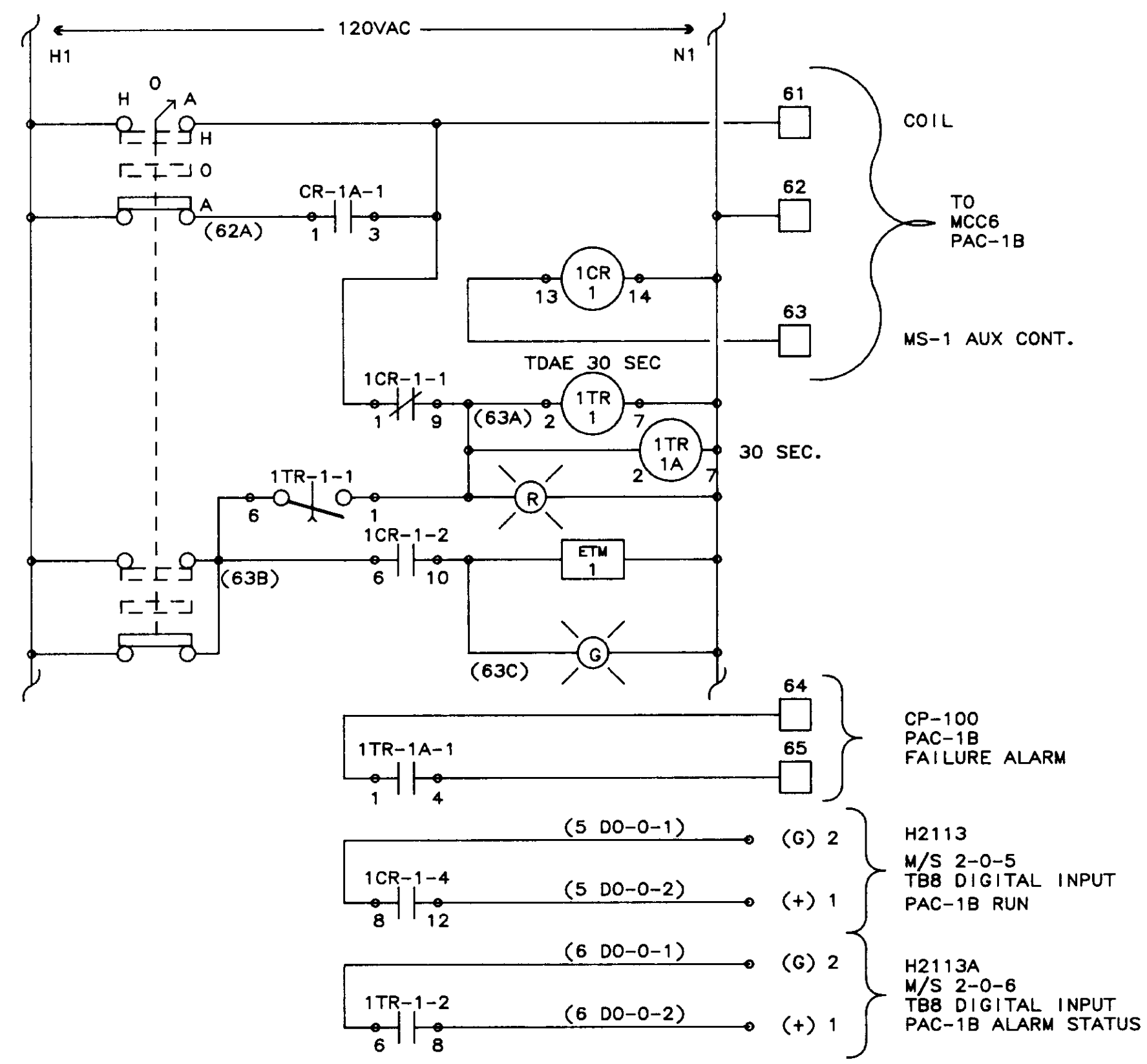
REAR VIEW - ANNUNCIATOR FOR PAC-3A & PAC-4A



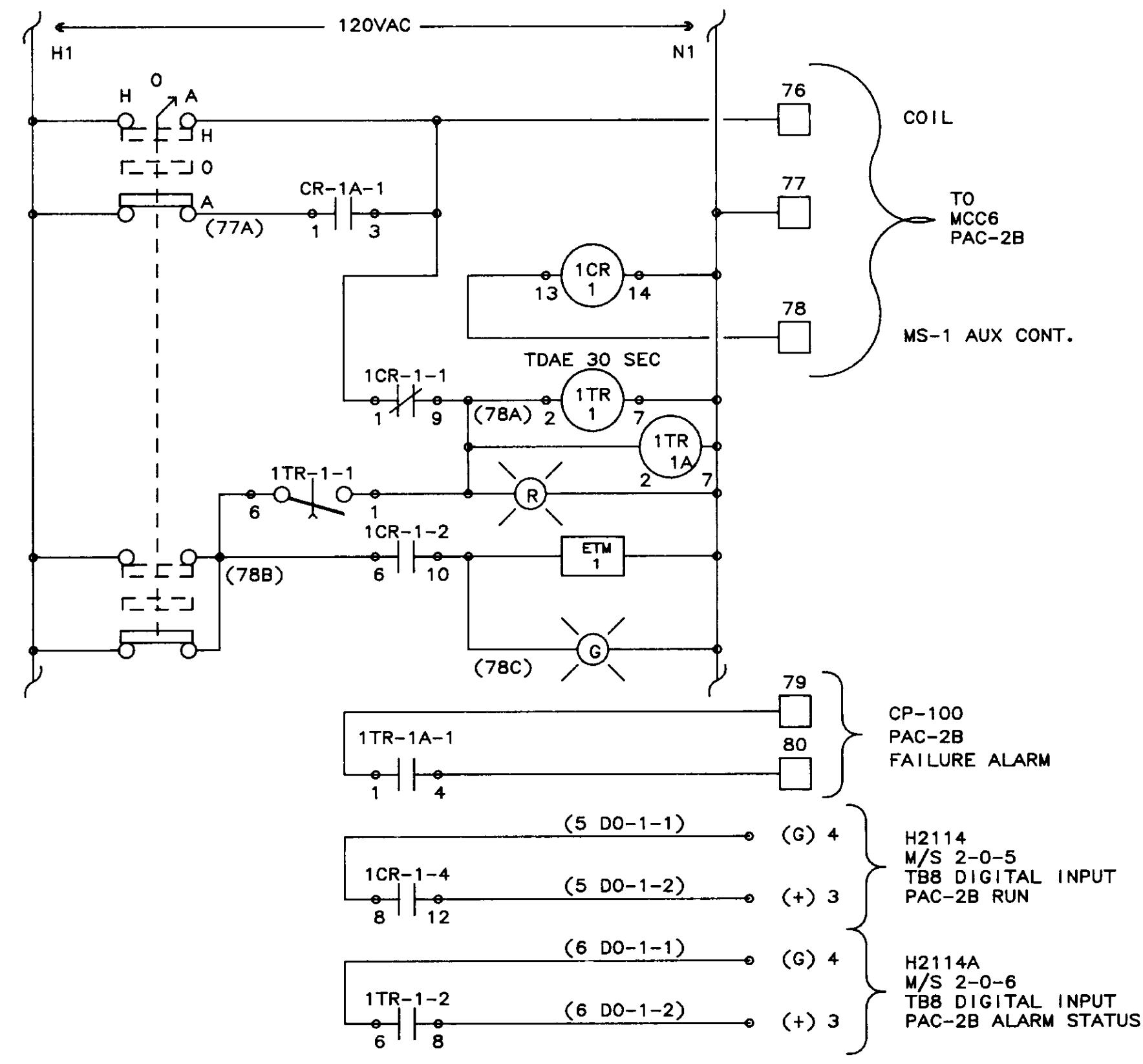
REAR VIEW - ANNUNCIATOR FOR PAC-1A & PAC-2A

04256

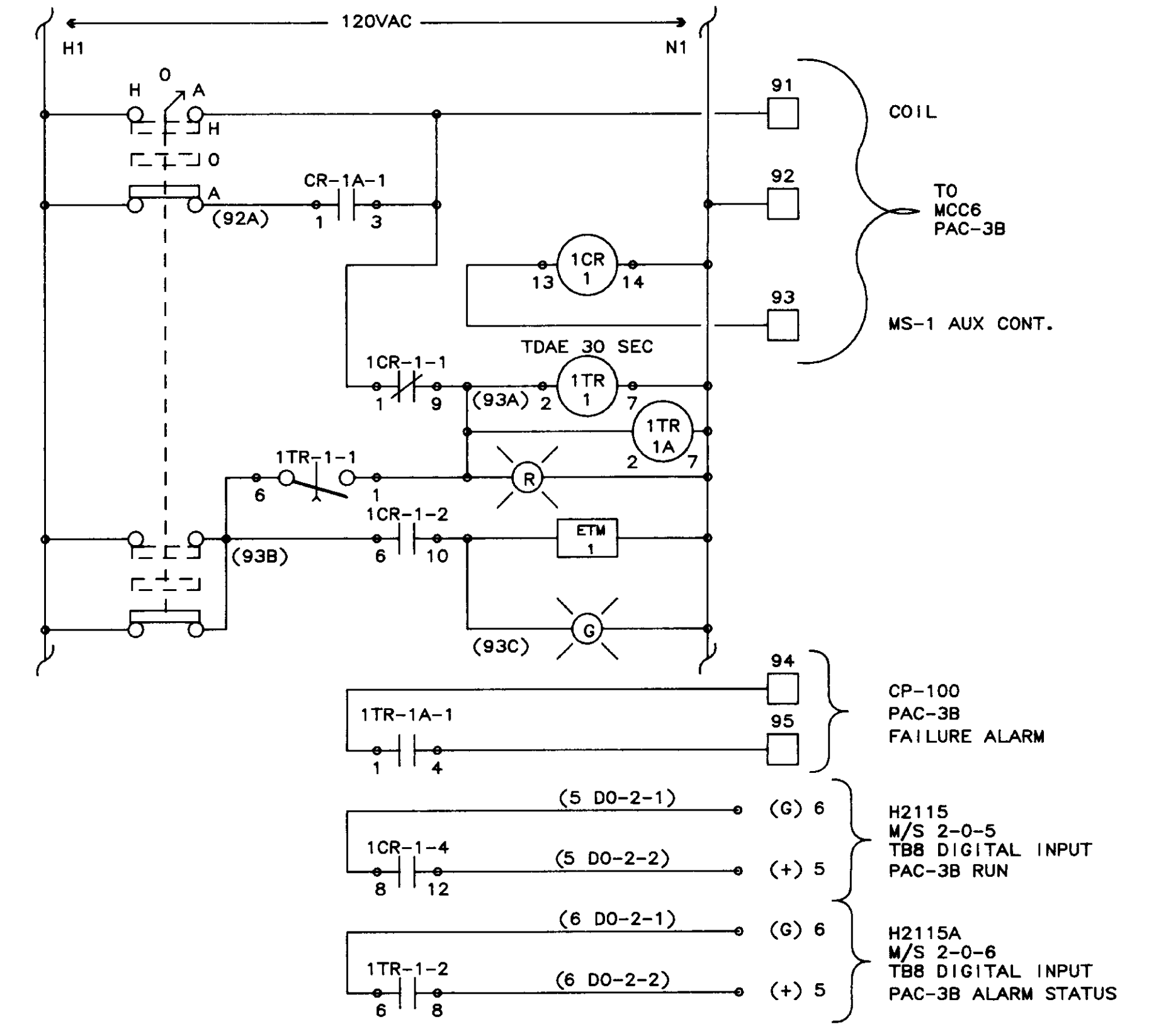
2 01/31/90 AS-BUILT		
1 10/12/88 DBS GENERAL REVISIONS AFTER FAT		
NO.	DATE	BY/REMARKS
REVISIONS		
<b>BCS</b>		
<b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALE: 1/16" = 1"	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
CCP-A ANNUNCIATORS PAC-1A/2A & PAC-3A/4A		
FILING NAME SCHEM-5	DRAWING NUMBER 8002-ID-A	SHEET NUMBER 14 OF 14



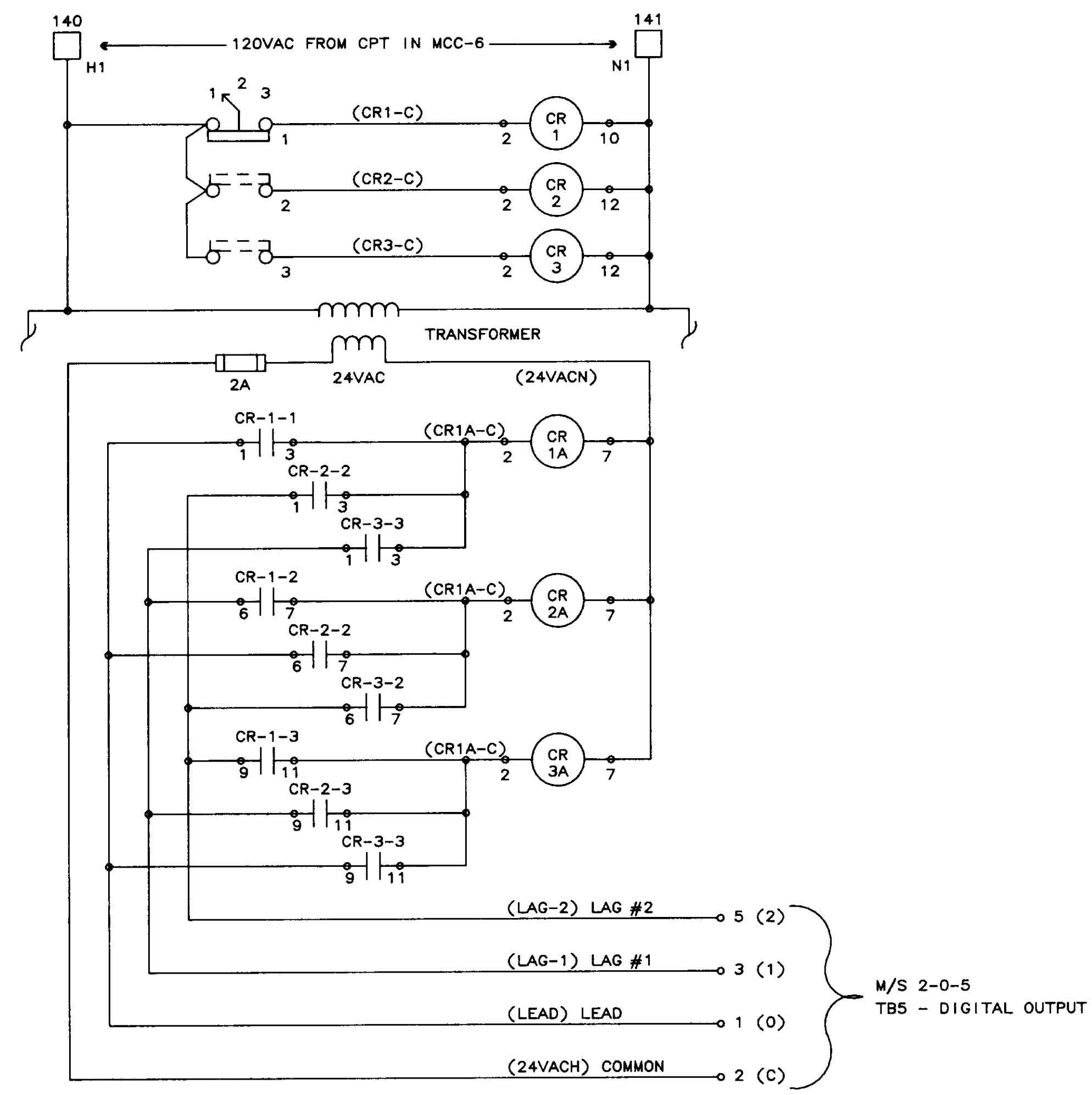
INITIATING & PAC-1B CONTROL



INITIATING & PAC-2B CONTROL



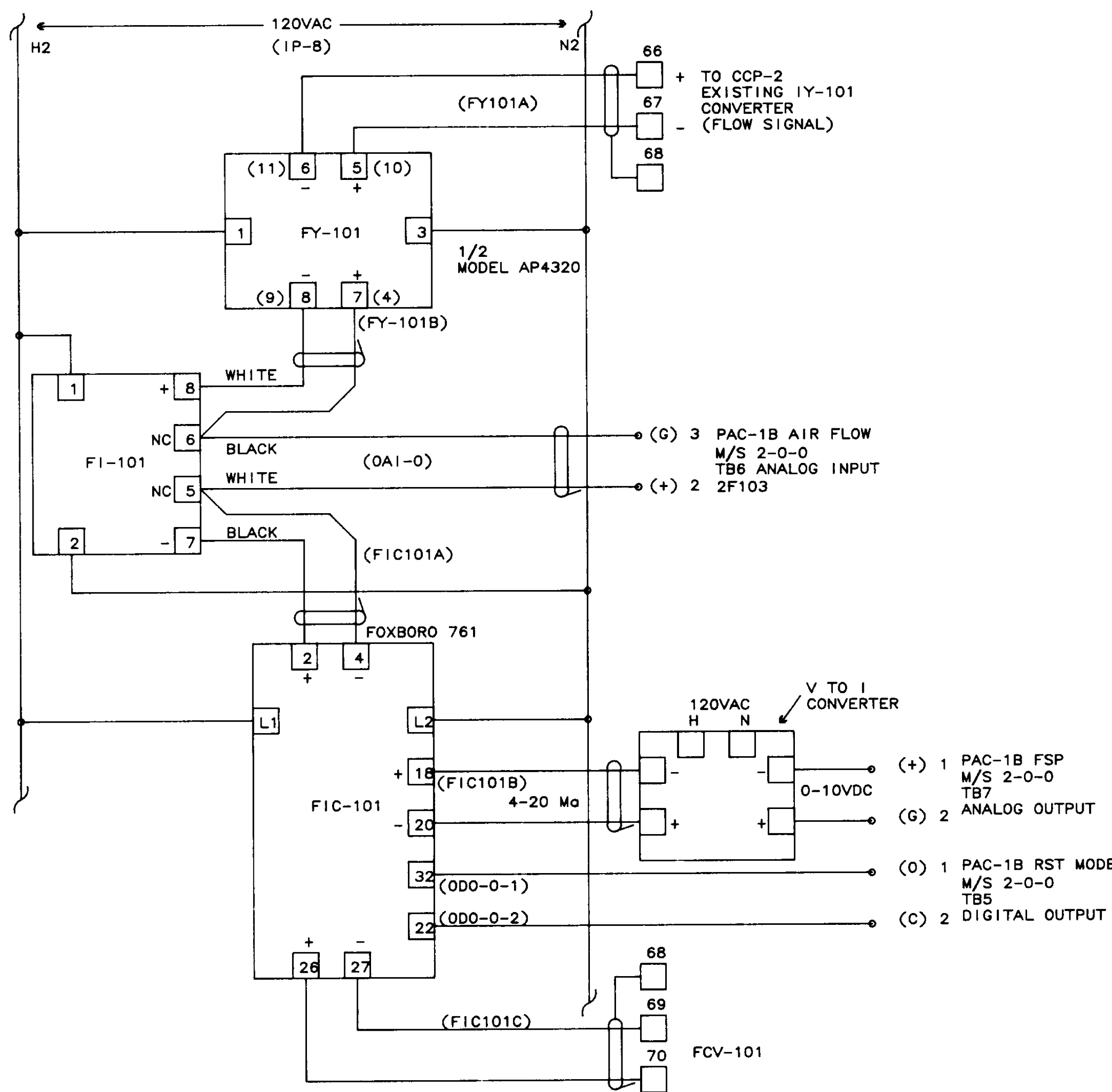
INITIATING & PAC-3B CONTROL



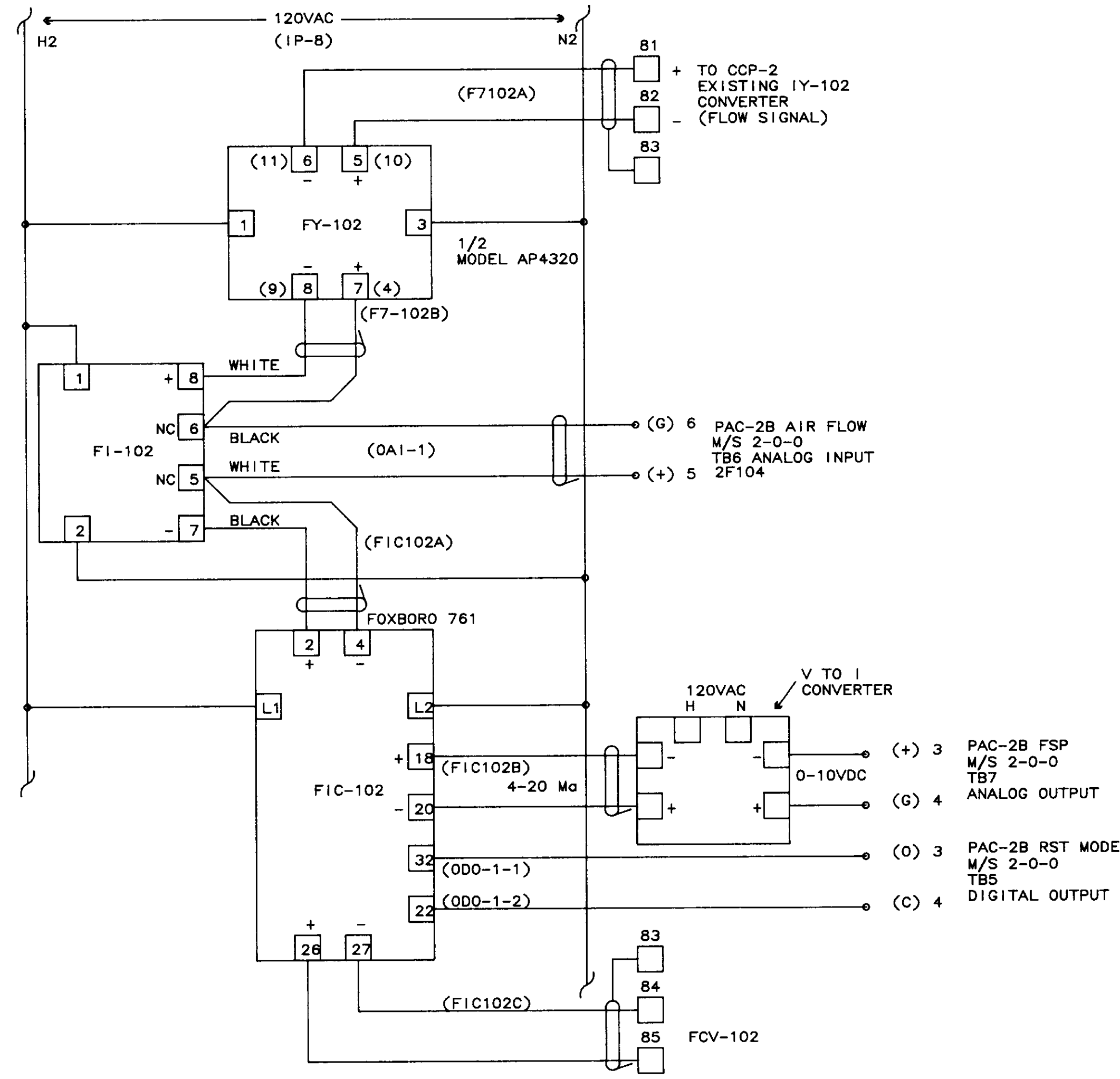
INITIATING CONTROL - STATION "B"

04257

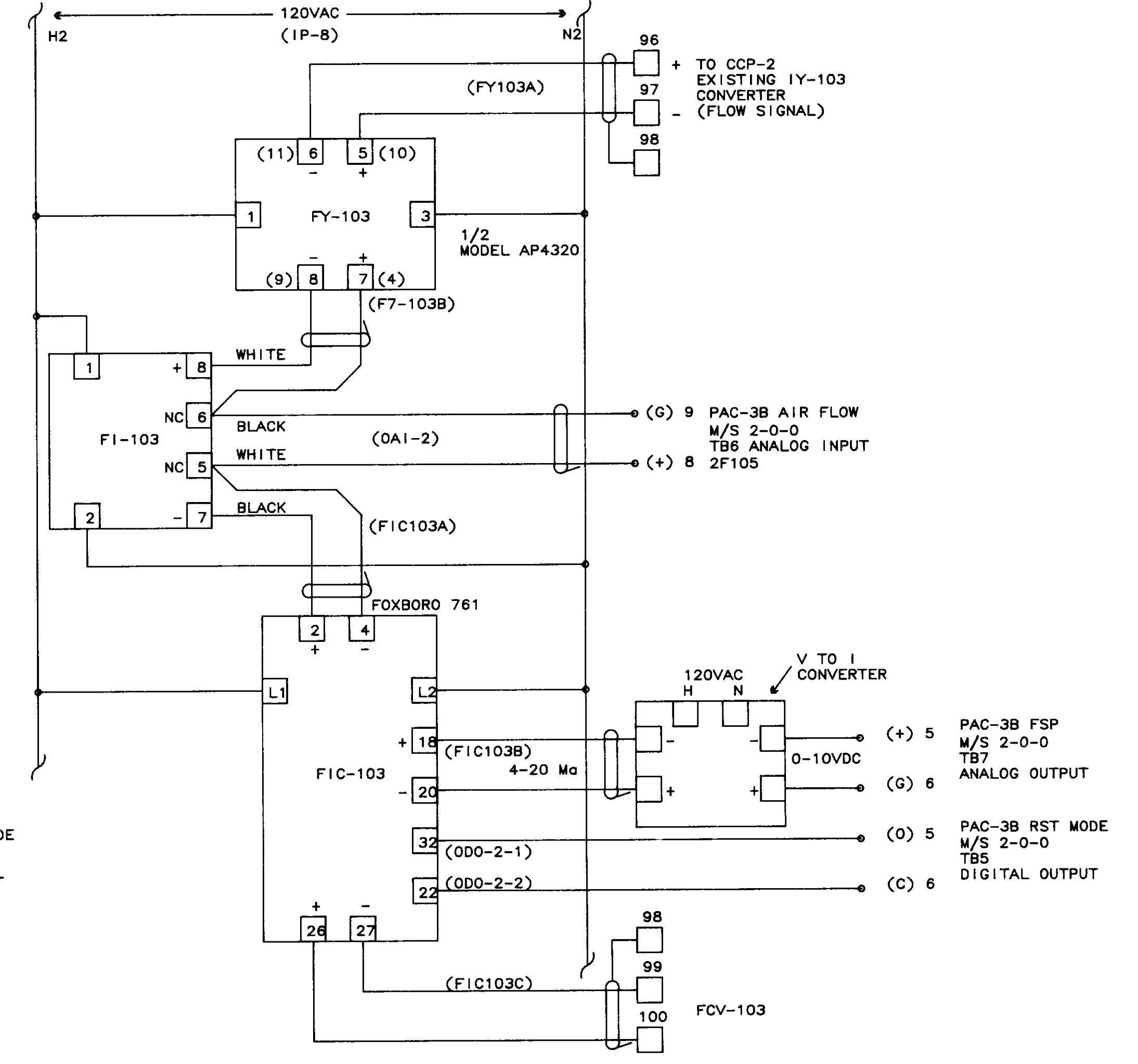
1	01/31/90	AS-BUILT	
0	10/20/88	DBS ISSUED AS TESTED AT FAT.	
NO.	DATE	BY	REMARKS
REVISIONS			
<b>BCS</b>		<b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686	
SCALES:	APPROVED BY:	DRAWN BY: DBS	
DATE: 9/16/88		REV.	
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III			
INITIATING & COMPRESSOR CONTROL			
FILING NAME	DRAWING NUMBER	SHEET NUMBER	
SKEM-1	8002-1D-B	1 OF 7	



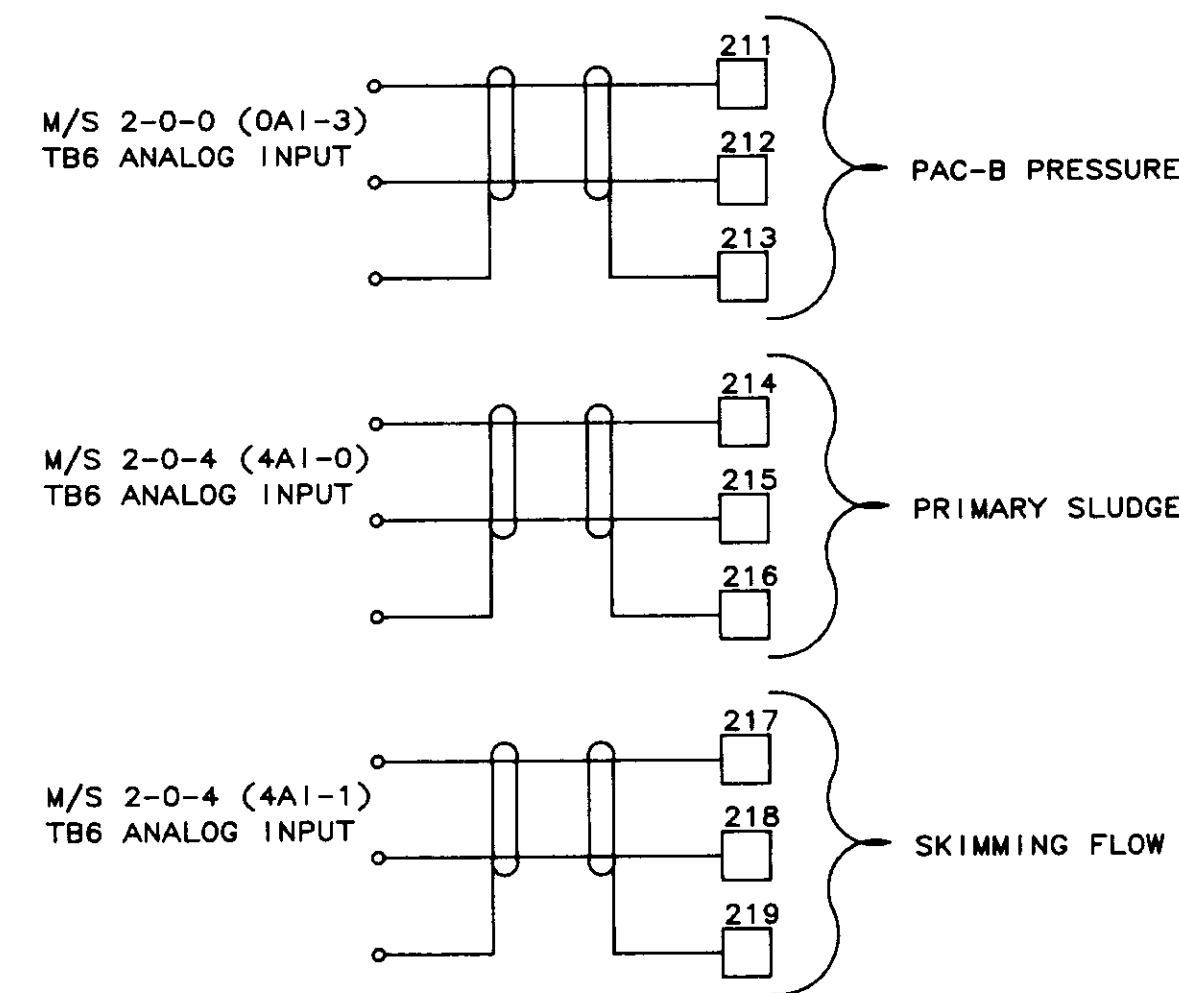
PAC-1B MODULATING CONTROL FOR FCV-101



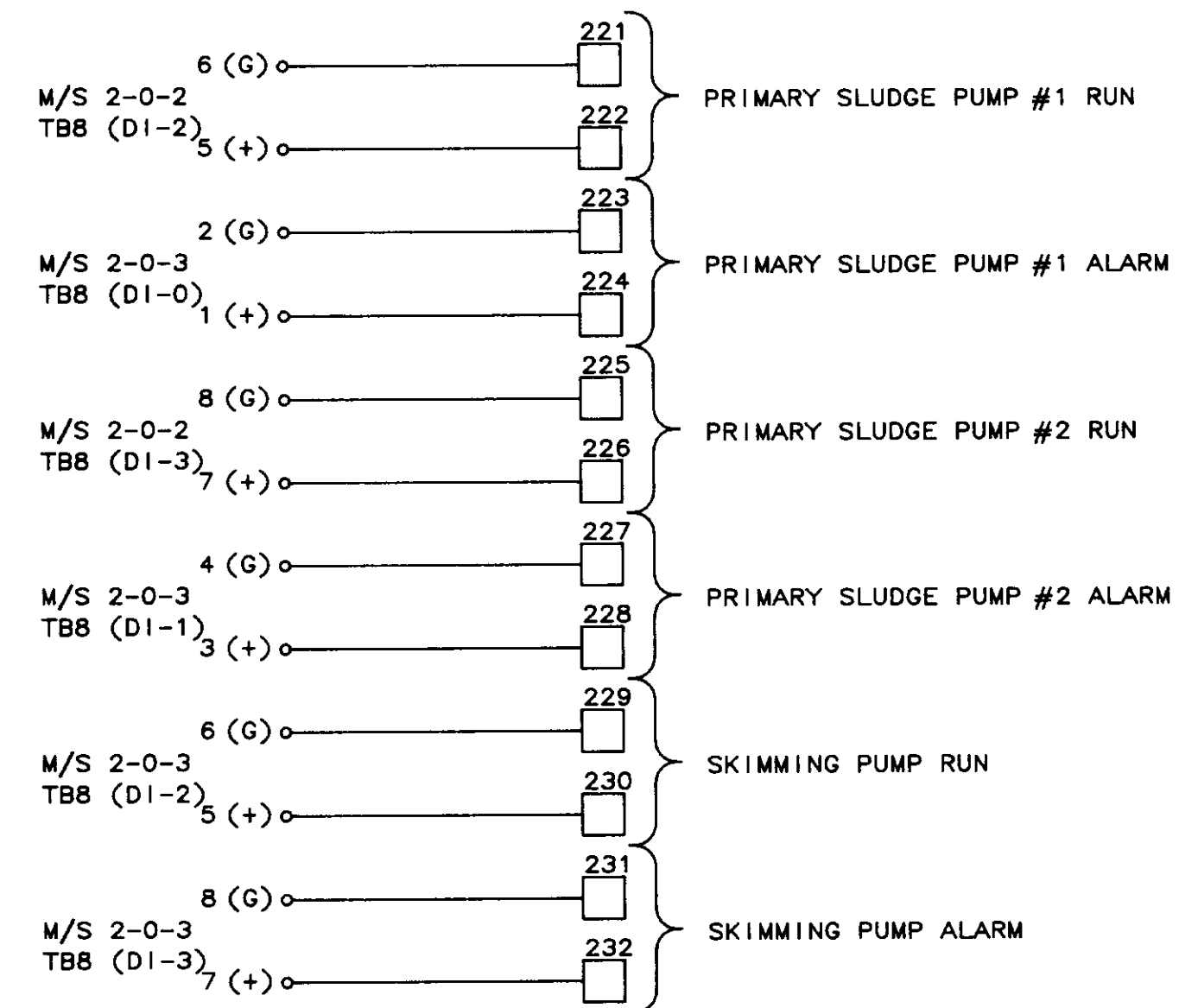
PAC-2B MODULATING CONTROL FOR FCV-102



PAC-3B MODULATING CONTROL FOR FCV-103



MISCELLANEOUS RTU-2 INPUTS



04258

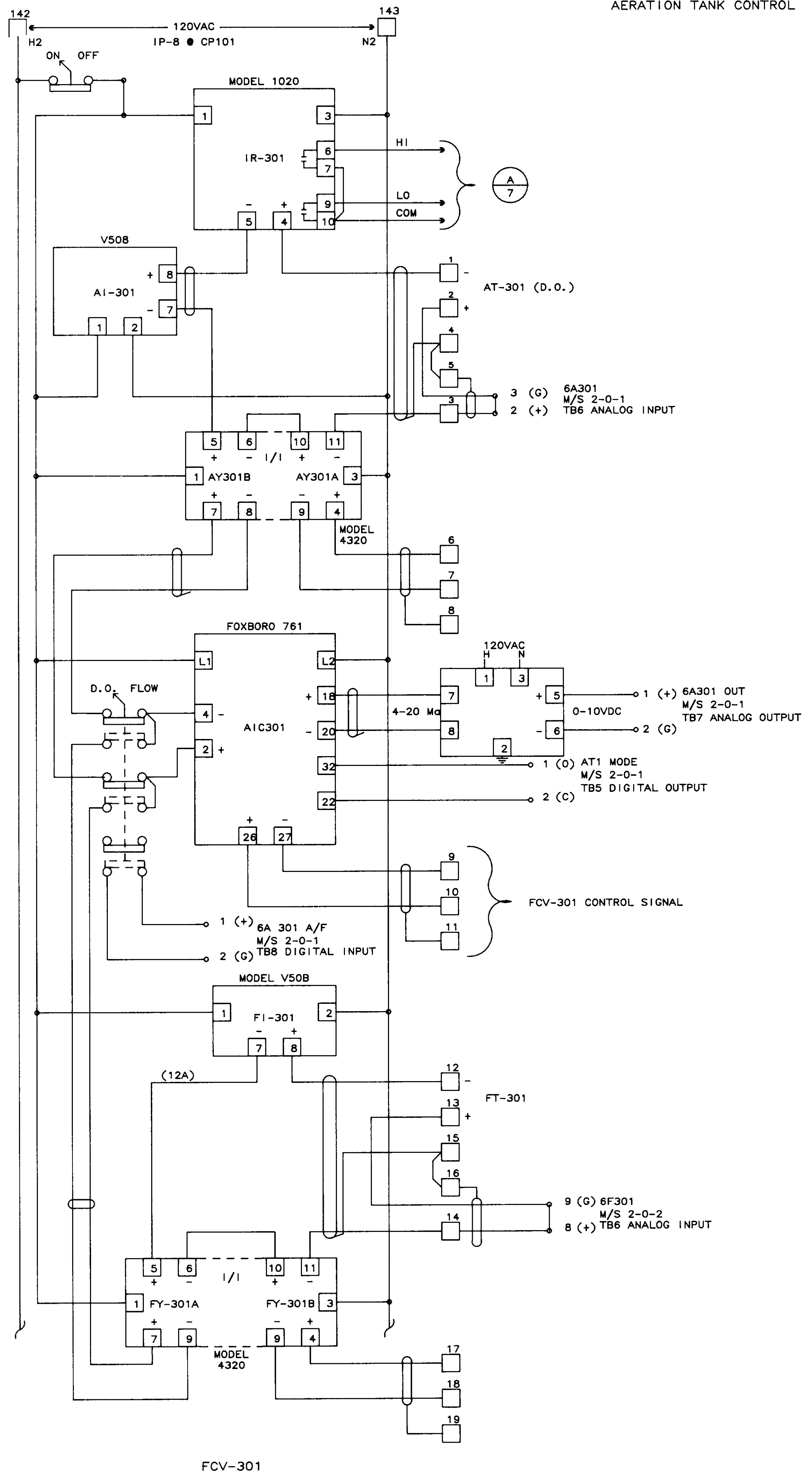
NO.	DATE	BY	REMARKS
1	01/31/80		AS-BUILT
0	10/20/88	DBS	ISSUED AS TESTED AT FAT.

REVISIONS

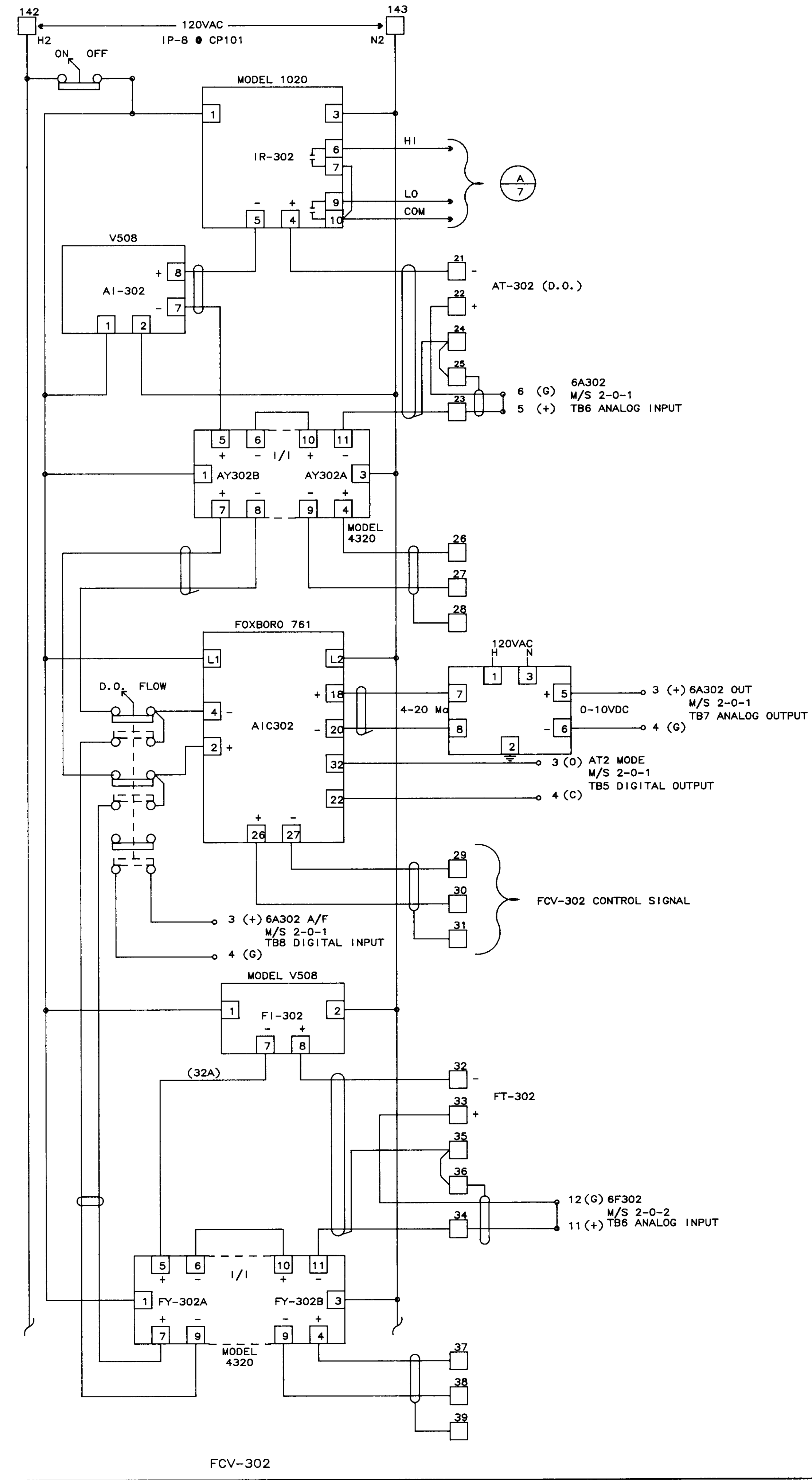
<b>B C S</b> BARRCOM SYSTEMS 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES: DATE: 9/16/88	APPROVED BY: REV.	DRAWN BY: DBS REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
MODULATING CONTROL FOR FCV-101, 102, 103 MISCELLANEOUS RTU-2 INPUTS		
FILING NAME SKEM-2	DRAWING NUMBER 8002-ID-B	SHEET NUMBER 2 OF 7

405H

AERATION TANK CONTROL



FCV-301



FCV-302

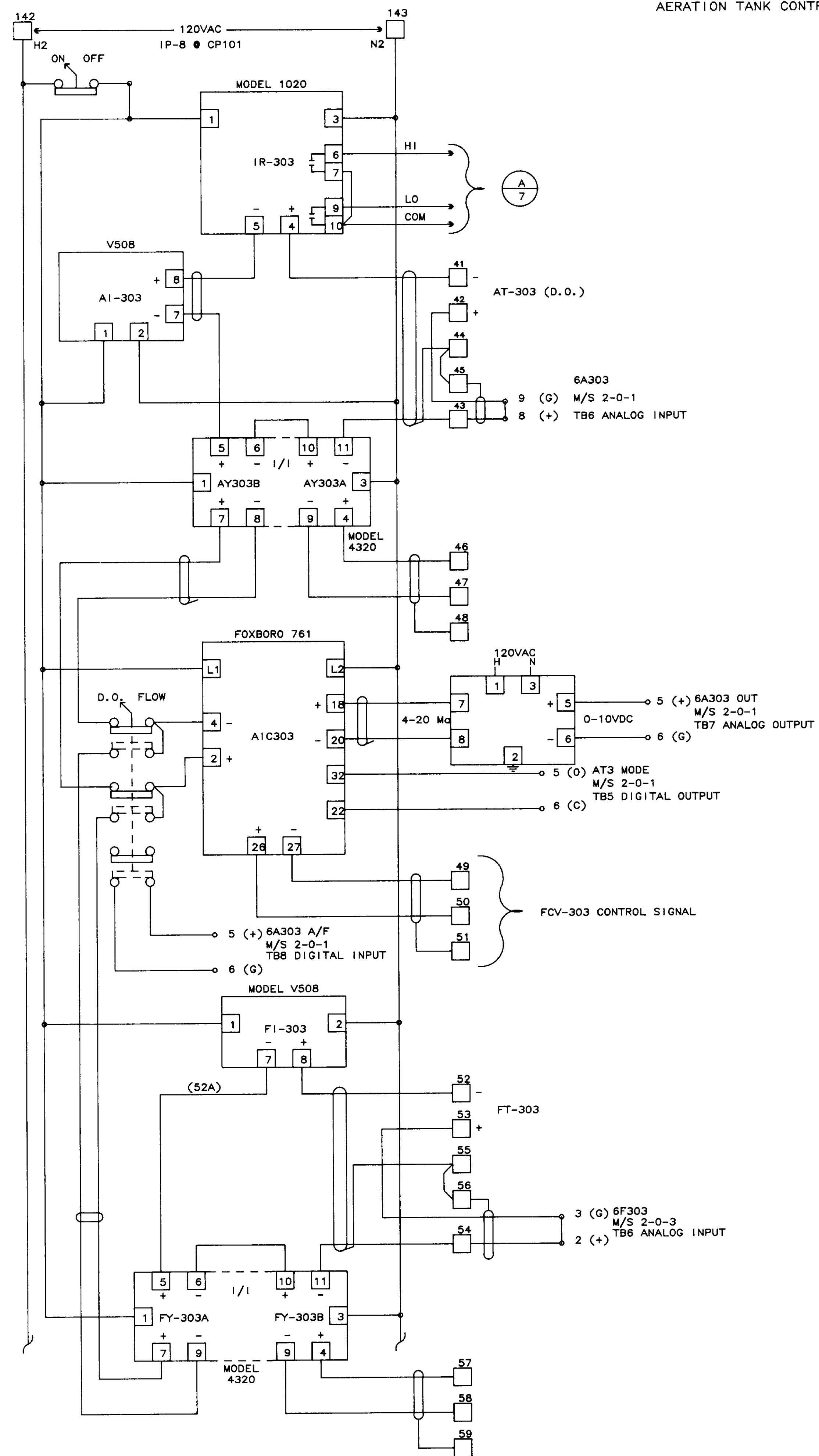
04259

1	01/31/80	AS-BUILT
2	10/20/86	DBS ISSUED AS TESTED AT FAT
NO.	DATE	BY

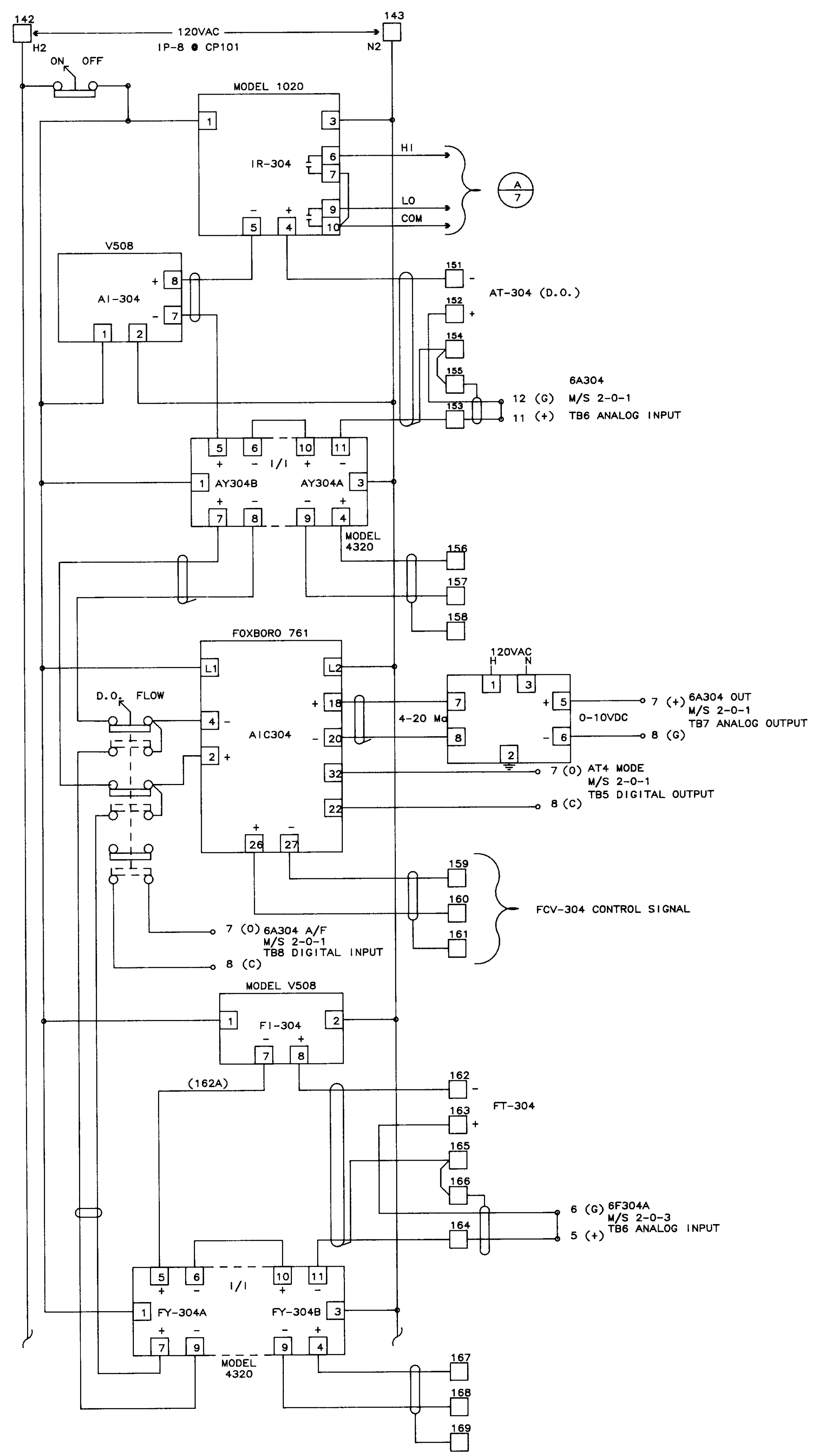
REVISIONS		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
AERATION TANK CONTROL FCV-301 & FCV-302		
FILING NAME	DRAWING NUMBER	SHEET NUMBER
SKEM-3	8002-10-B	3 OF 7



AERATION TANK CONTROL



FCV-303



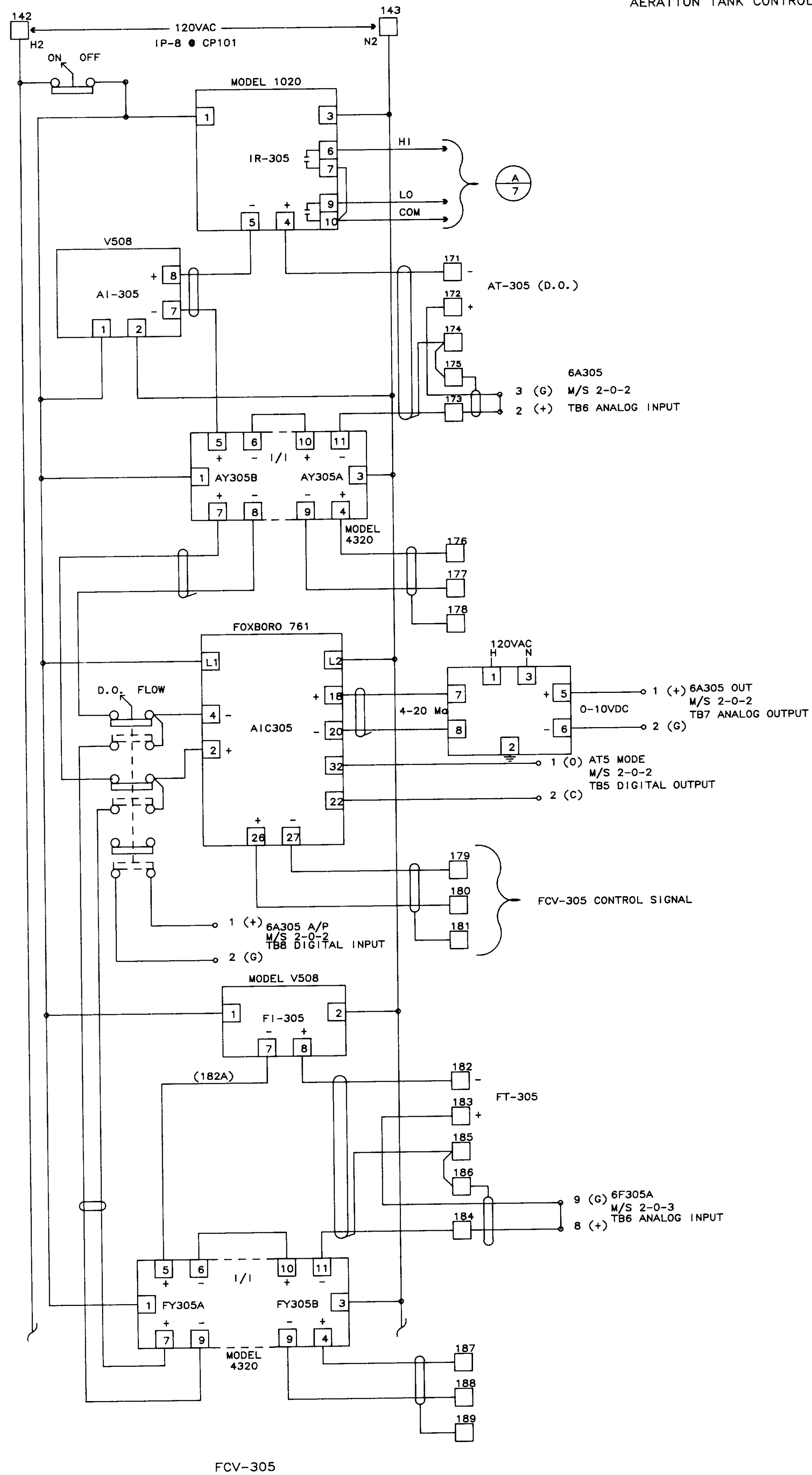
FCV-304

04260

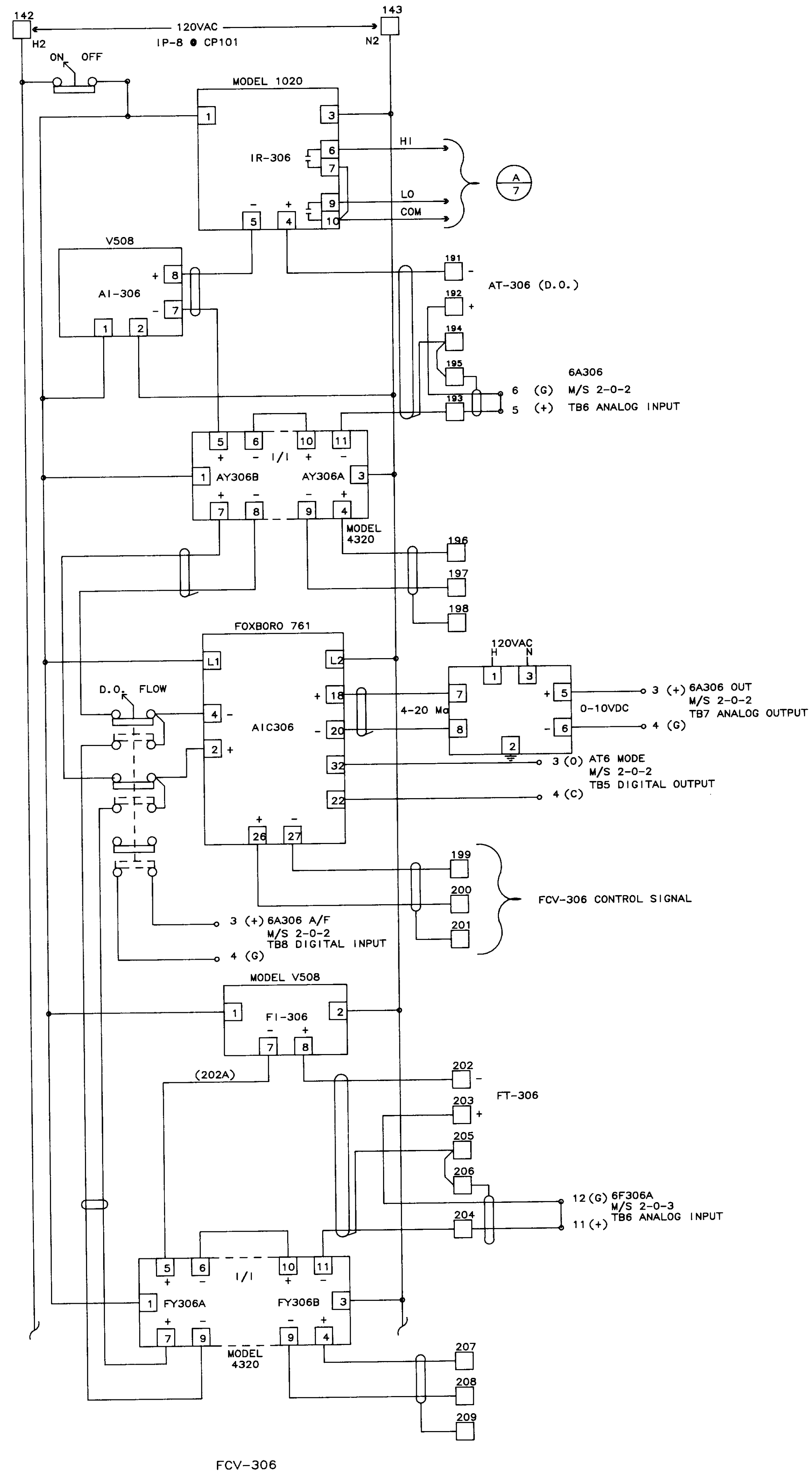
NO.	DATE	BY	REMARKS
1	01/31/80	AS-BUILT	
0	10/20/88	DBS	ISSUED AS TESTED AT FAT

REVISIONS		
<p><b>B C S</b> BARRCOM SYSTEMS 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686</p>		
<p>SCALES:</p>	<p>APPROVED BY:</p>	<p>DRAWN BY: DBS</p>
<p>DATE: 9/16/88</p>		<p>REV.</p>
<p>LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III</p>		
<p>AERATION TANK CONTROL FCV-303 &amp; FCV-304</p>		
<p>FILING NAME SKEM-4</p>	<p>DRAWING NUMBER 8002-1D-B</p>	<p>SHEET NUMBER 4 OF 7</p>

AERATION TANK CONTROL



FCV-305



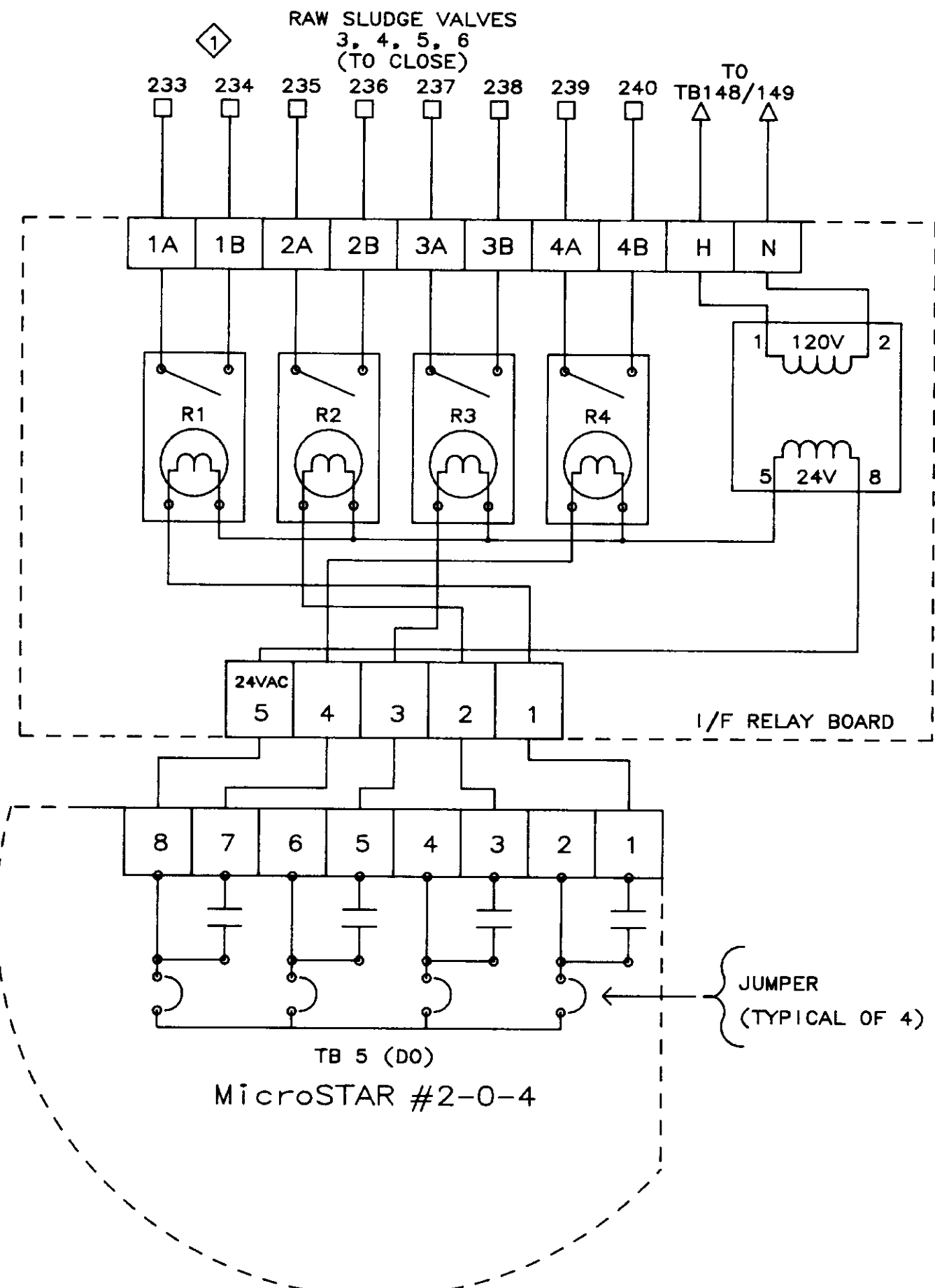
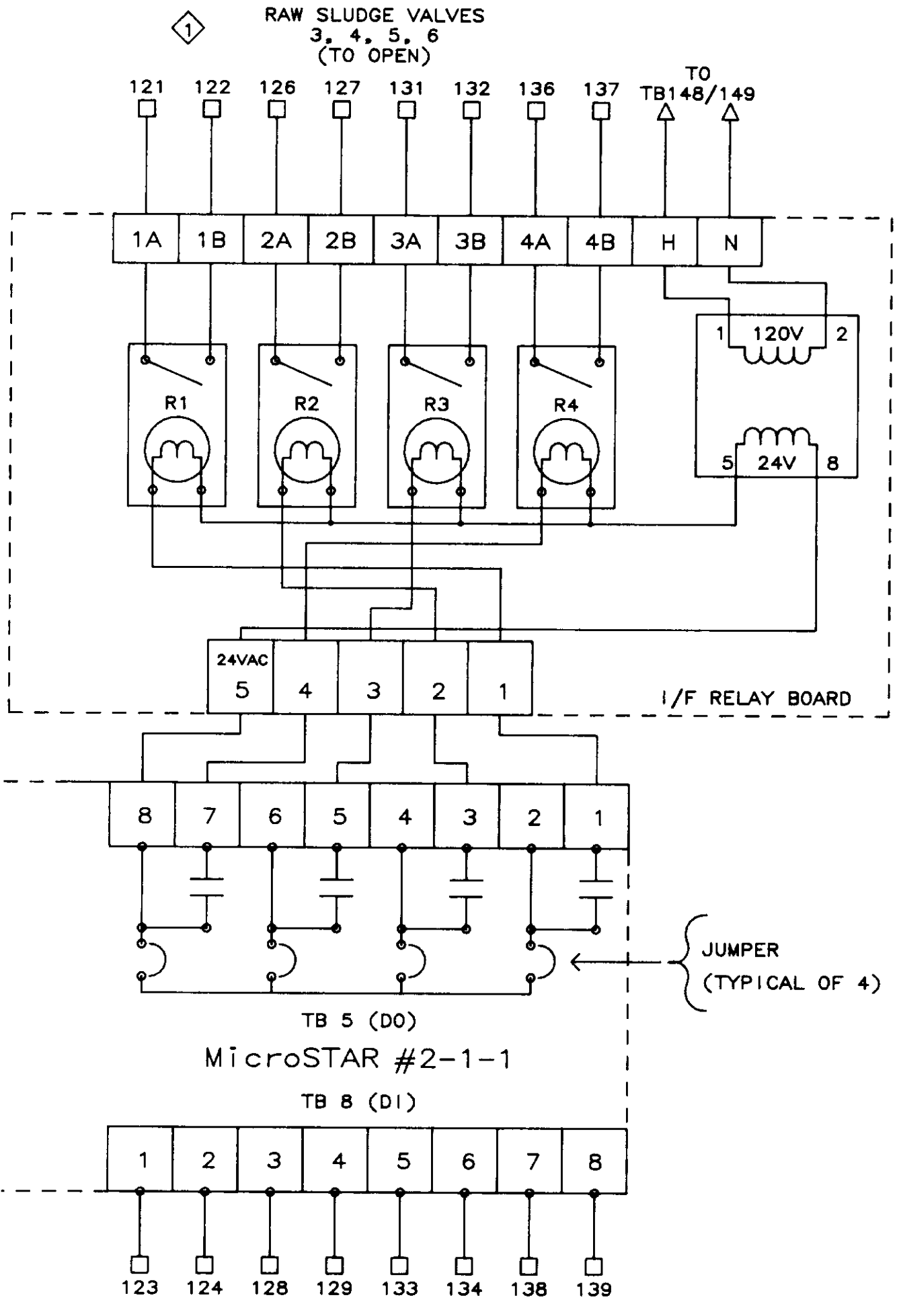
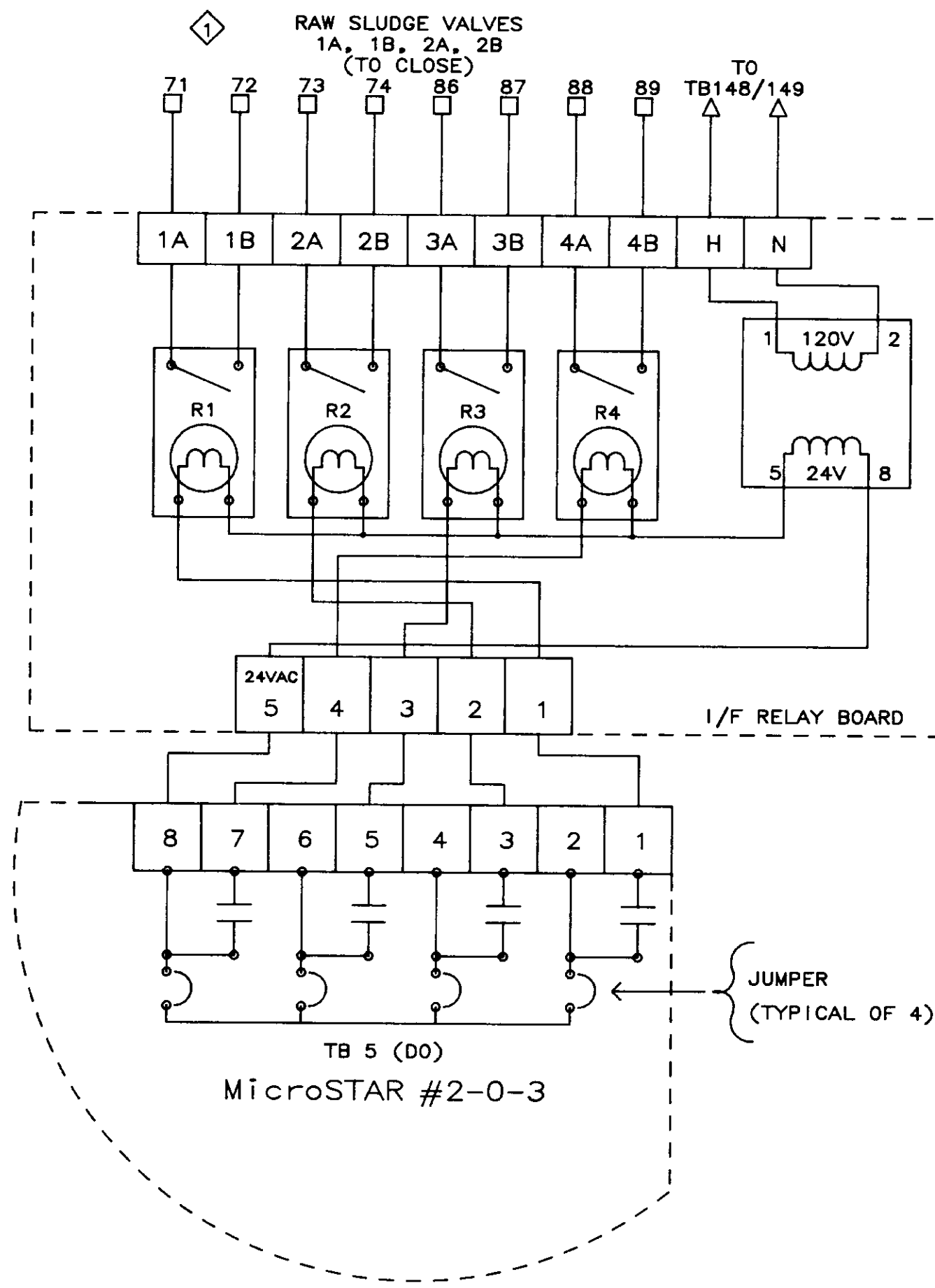
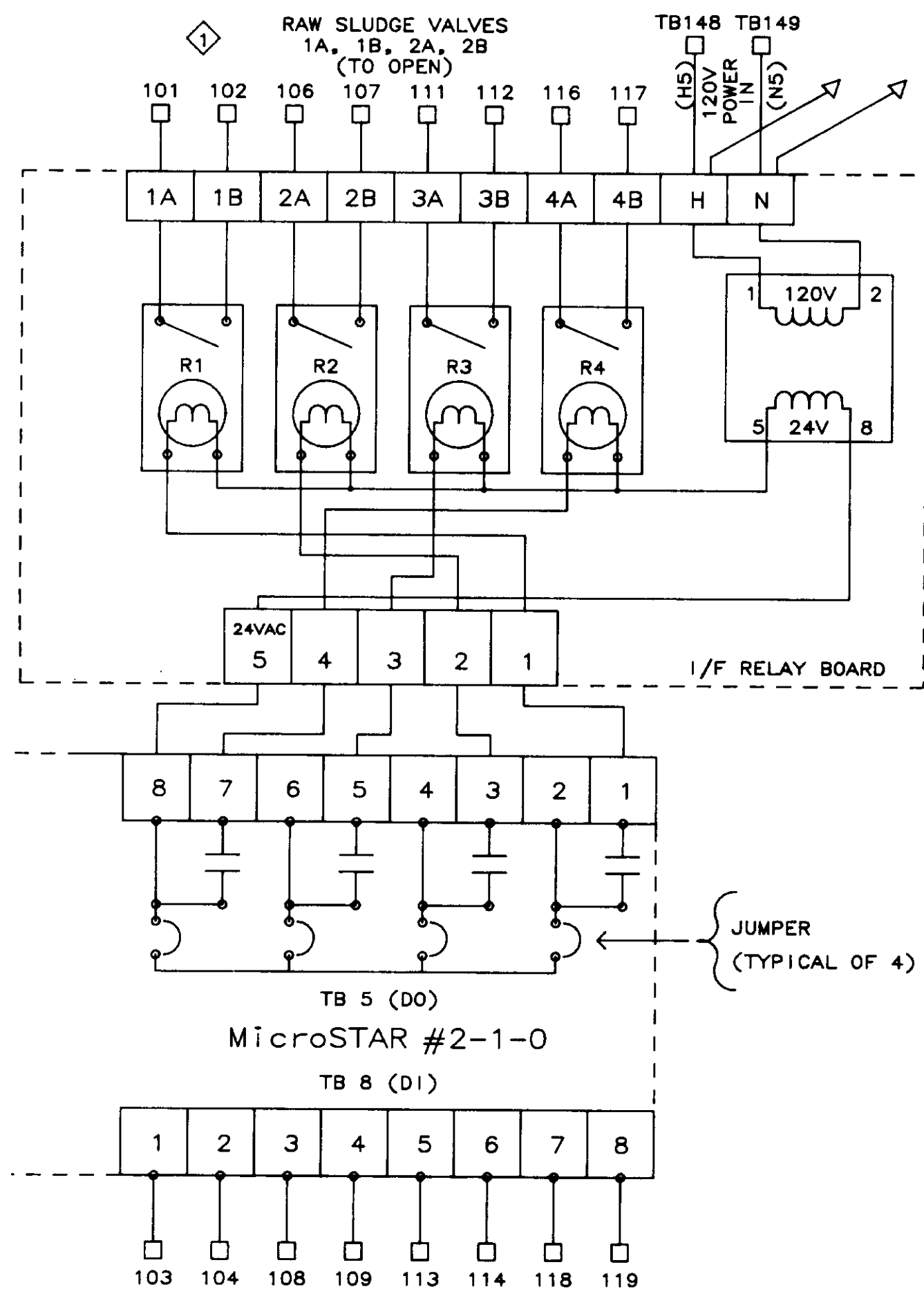
FCV-306

04261

NO.	DATE	BY	REMARKS
1	01/31/80		AS-BUILT
0	10/20/88	DBS	ISSUED AS TESTED AT FAT

REVISIONS

<b>BCS BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686		
SCALES:	APPROVED BY:	DRAWN BY: DBS
DATE: 9/16/88		REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
AERATION TANK CONTROL FCV-305 & FCV-306		
FILING NAME SKEM-5	DRAWING NUMBER 8002-10-B	SHEET NUMBER 5 OF 7



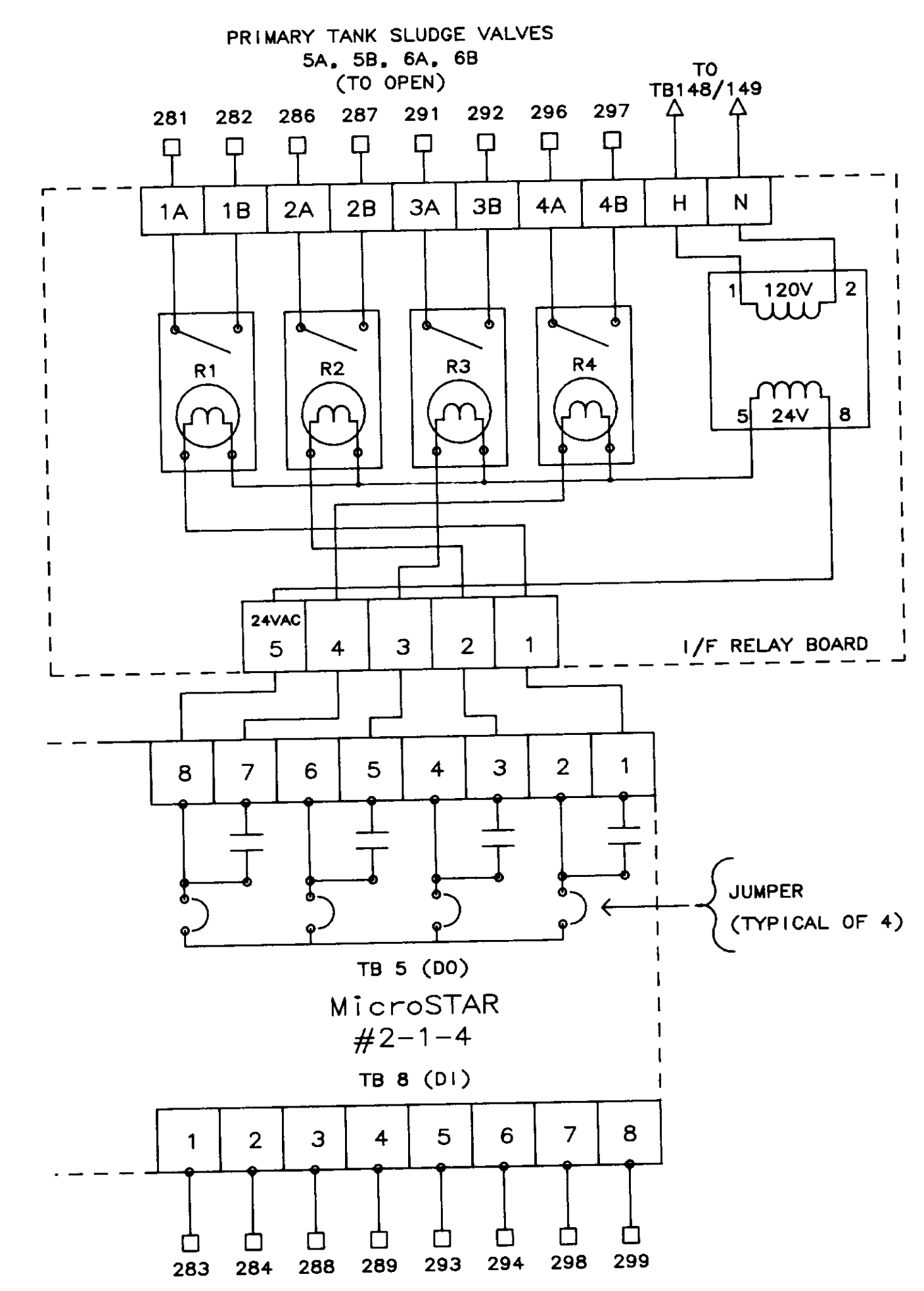
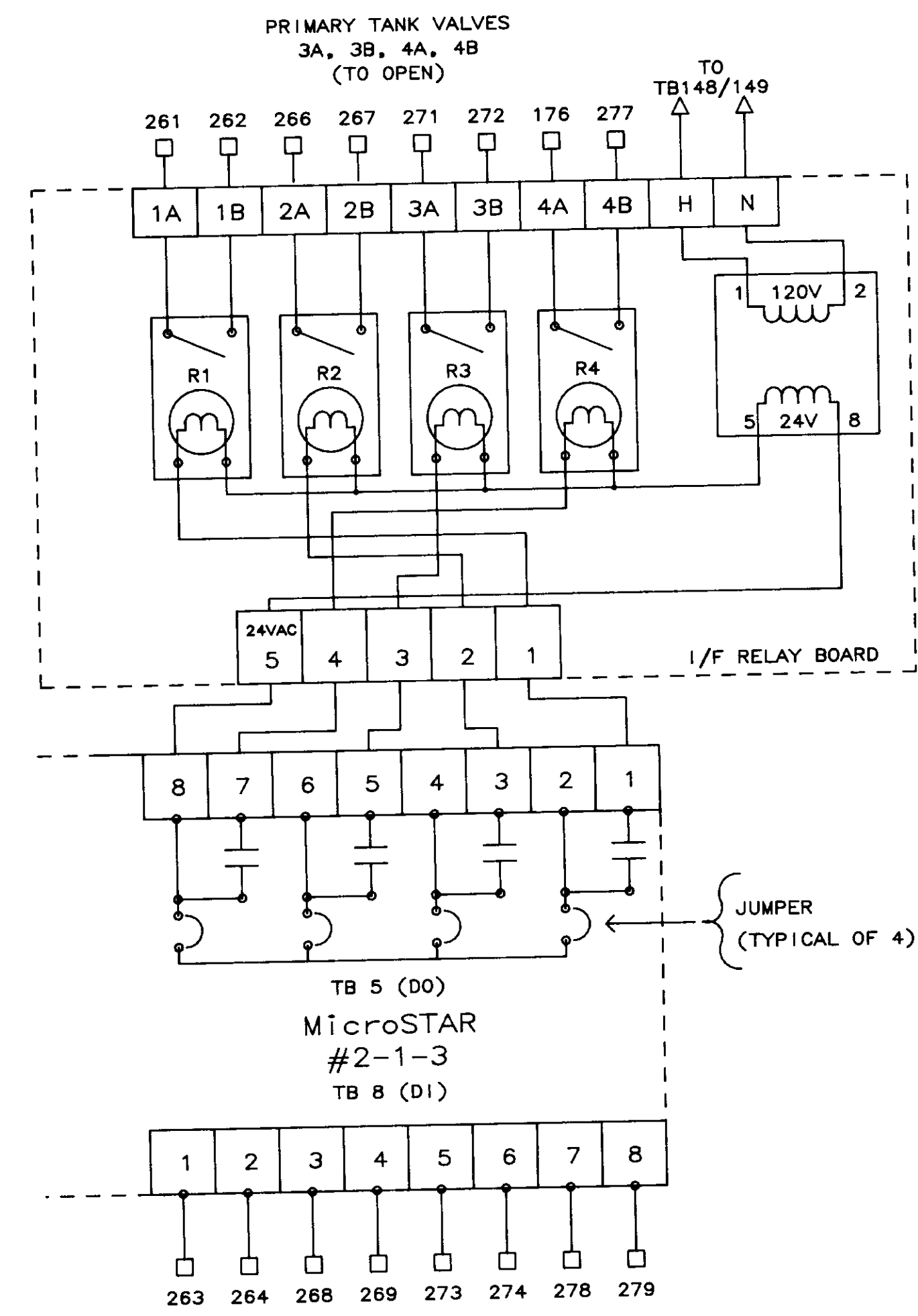
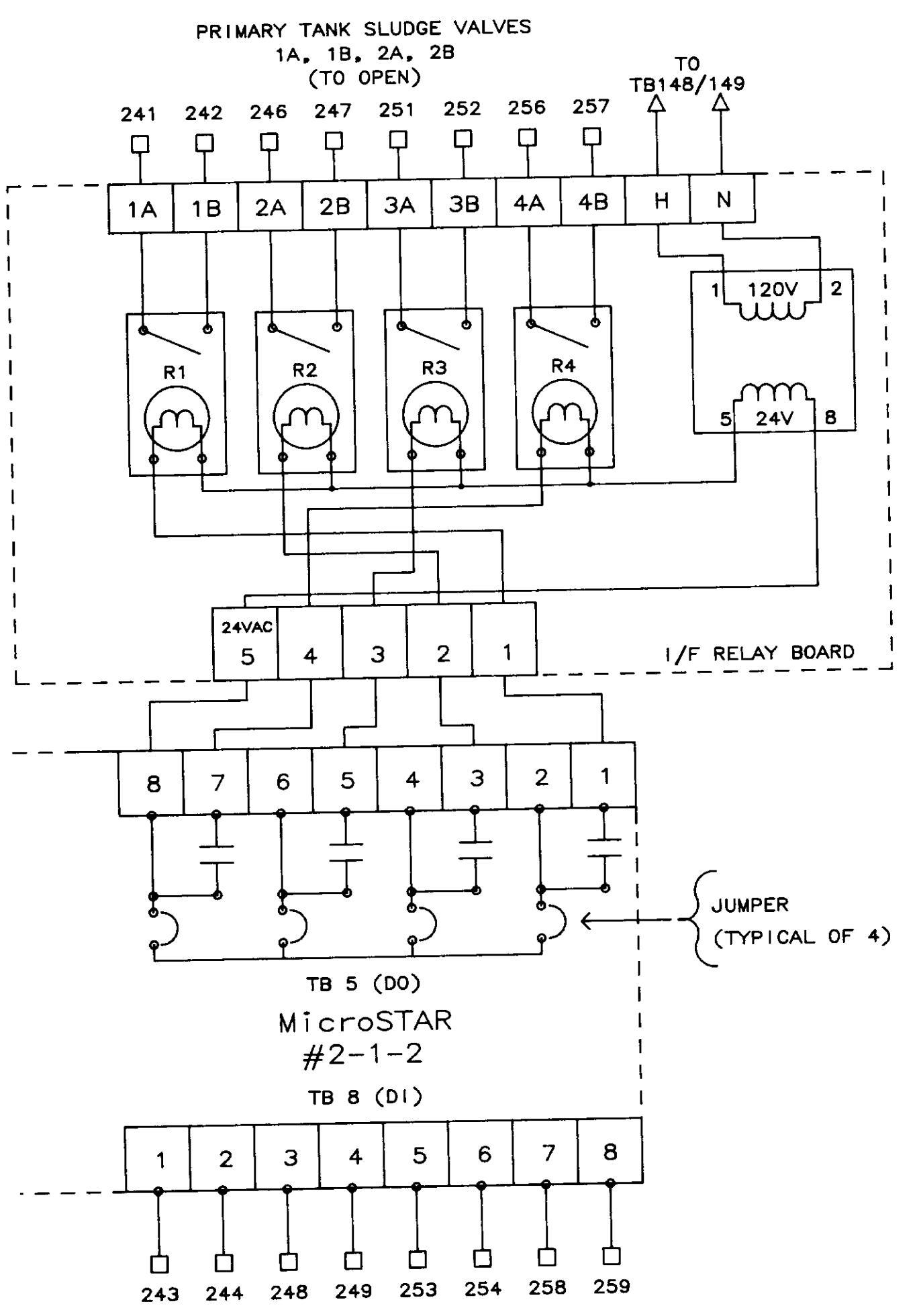
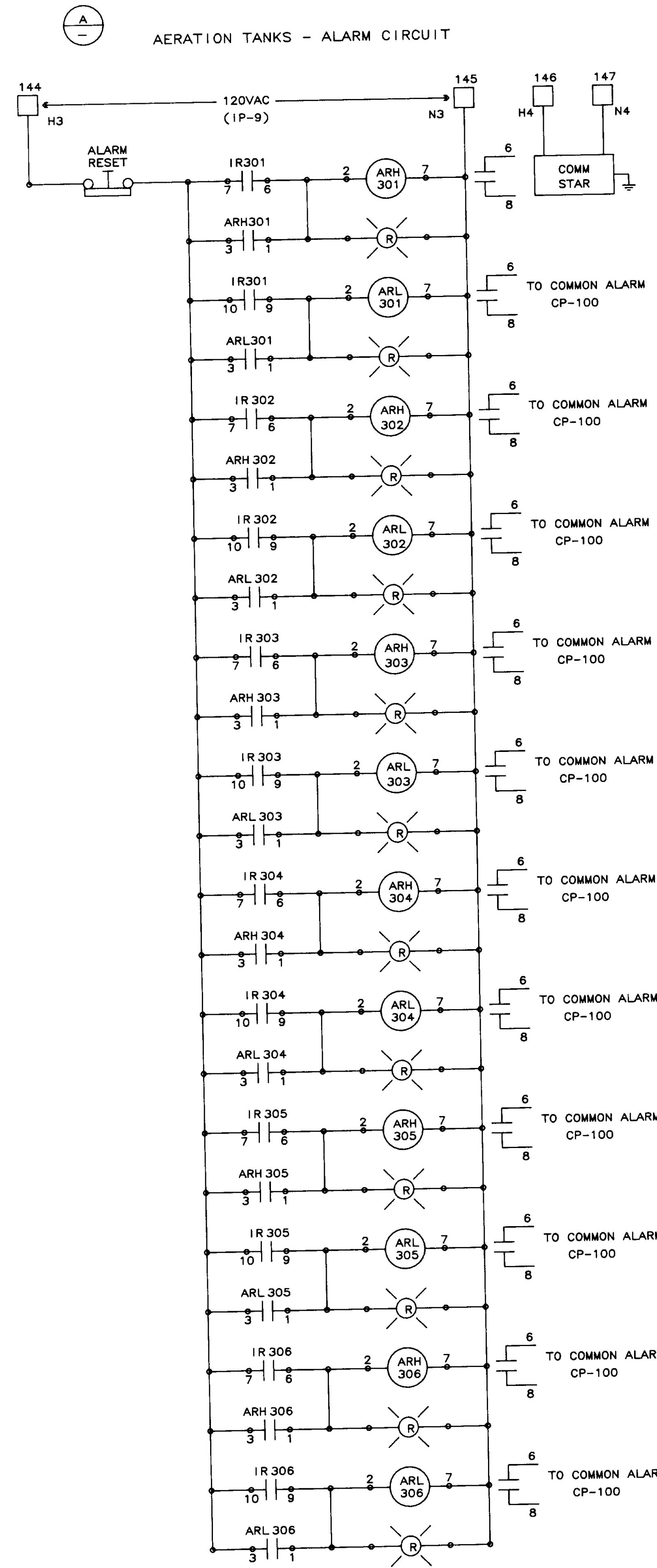
◇ 71 & 101 COMMON } ETC. TO TB1-101  
73 & 106 COMMON }  
JUMPER AT CCP-B

□ = TERMINAL BLOCK IN PANEL CCP-B WIRE #'S  
AND TERMINAL #'S ARE IDENTICAL.

04262

REVISIONS	
NO.	DATE
1	01/31/80
0	10/20/88

<p><b>B C S</b> BARRCOM SYSTEMS 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686</p>		
<p>SCALES:</p>	<p>APPROVED BY:</p>	<p>DRAWN BY: DBS</p>
<p>DATE: 9/16/88</p>	<p>REV.</p>	
<p>LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III</p>		
<p>DIGESTER RAW SLUDGE VALVE CONTROL</p>		
<p>FILING NAME</p> <p>SKEM-6</p>	<p>DRAWING NUMBER</p> <p>8002-1D-B</p>	<p>SHEET NUMBER</p> <p>6 OF 7</p>



□ = TERMINAL BLOCK IN PANEL CCP-B  
WIRE #'s AND TERMINAL #'s ARE IDENTICAL

04263

NO.	DATE	BY	REMARKS
1	01/31/00		AS-BUILT
0	10/20/88	DBS	ISSUED AS TESTED AT FAT.

REVISIONS

**B C S BARRCOM SYSTEMS**  
22775 SAVI RANCH PARKWAY, #D  
YORBA LINDA, CALIFORNIA 92686

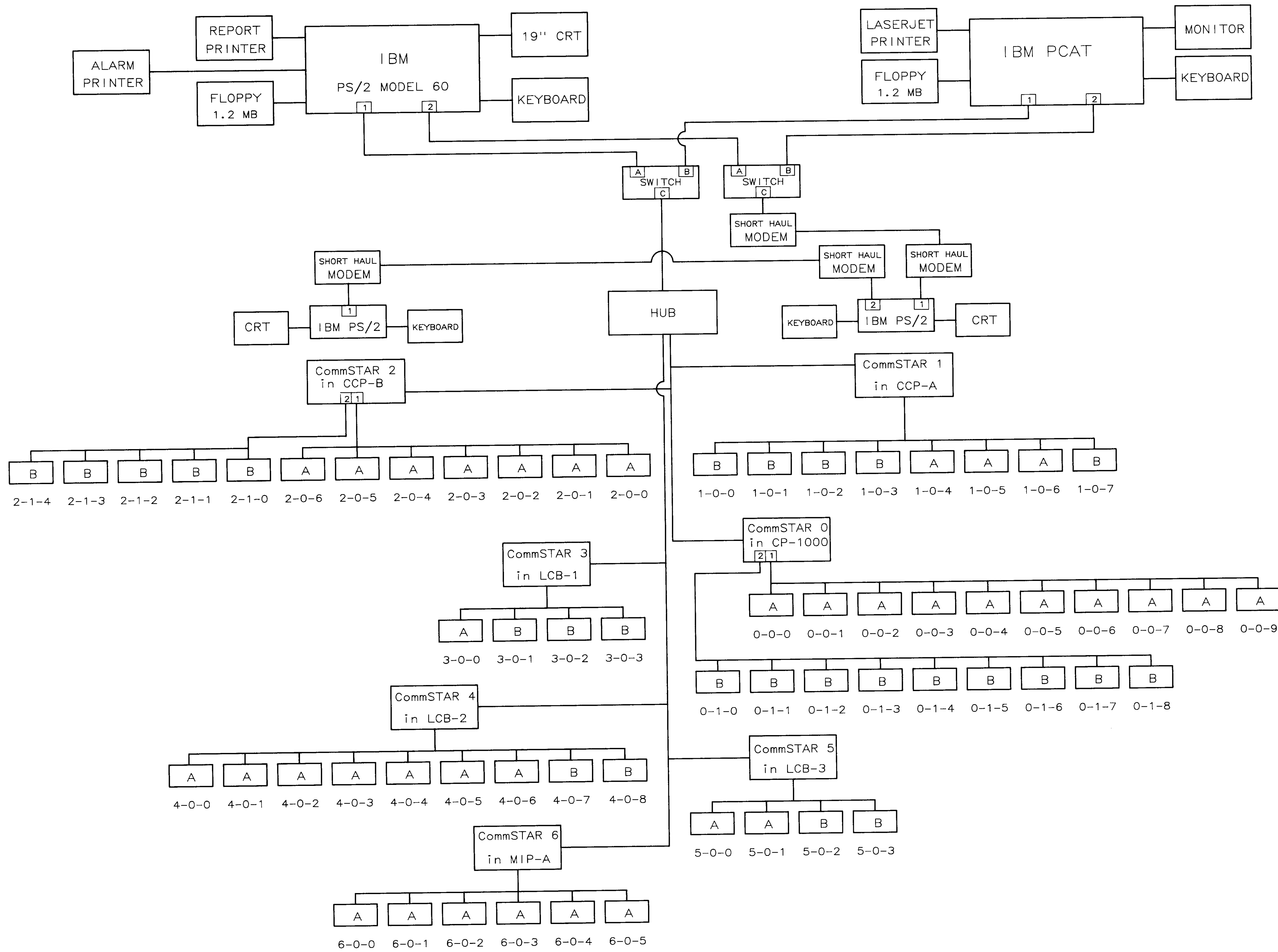
SCALE: DATE: 9/16/88 APPROVED BY: DRAWN BY: DBS REV.

LAS VIRGENES MUNICIPAL WATER DISTRICT  
TAPIA W R F - EXPANSION III

PRIMARY TANK SLUDGE VALVE CONTROL  
AERATION TANKS - ALARM CIRCUIT

FILING NAME	DRAWING NUMBER	SHEET NUMBER
SKEM-7	8002-ID-B	7 OF 7

# TAPIA WRF DIGITAL SYSTEMS BLOCK DIAGRAM



**LEGEND**

A = MicroSTAR MODEL 8611  
 B = MicroSTAR MODEL 8617  
 0-0-0 = MicroSTAR ADDRESS (TYP)  
 [1] = COM 1  
 [2] = COM 2  
 [A] = PROCESS COMPUTER SWITCH PORT  
 [B] = BACKUP COMPUTER SWITCH PORT  
 [C] = COMMON SWITCH PORT

**04264**

NO.	DATE	BY	REMARKS
4	5/1/80	DBS	AS-BUILT
3	1/31/80	DBS	AS-BUILT
2	1/23/80	DBS	GENERAL REVISIONS
1	10/12/88	DBS	GENERAL REVISIONS AFTER FAT

**B C S** **BARRCOM SYSTEMS**  
 22775 SAVI RANCH PARKWAY, #D  
 YORBA LINDA, CALIFORNIA 92686

SCALE: N/A    APPROVED BY:    DRAWN BY: DBS  
 DATE: 9/16/88    REV.:

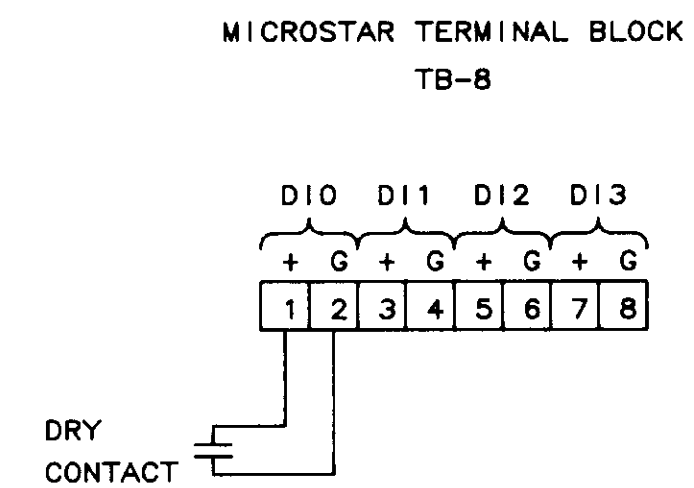
LAS VIRGENES MUNICIPAL WATER DISTRICT  
 TAPIA W R F - EXPANSION III

DIGITAL SYSTEM BLOCK DIAGRAM

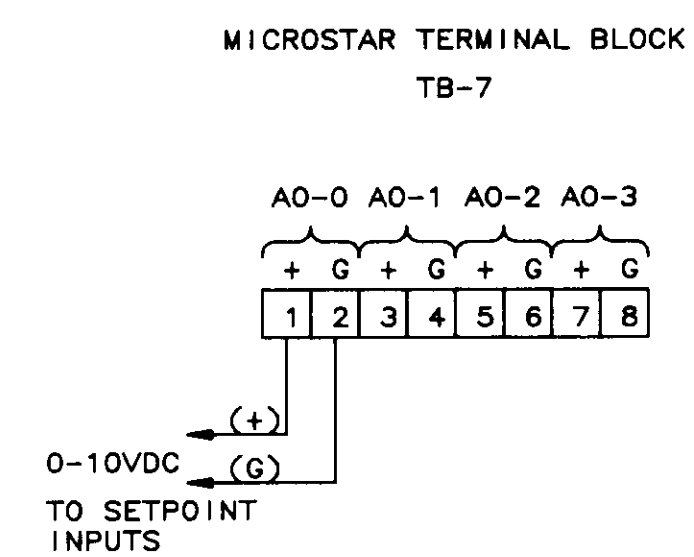
FILING NAME BLOCK-1	DRAWING NUMBER 8002-AD	SHEET NUMBER 1 OF 1
------------------------	---------------------------	------------------------



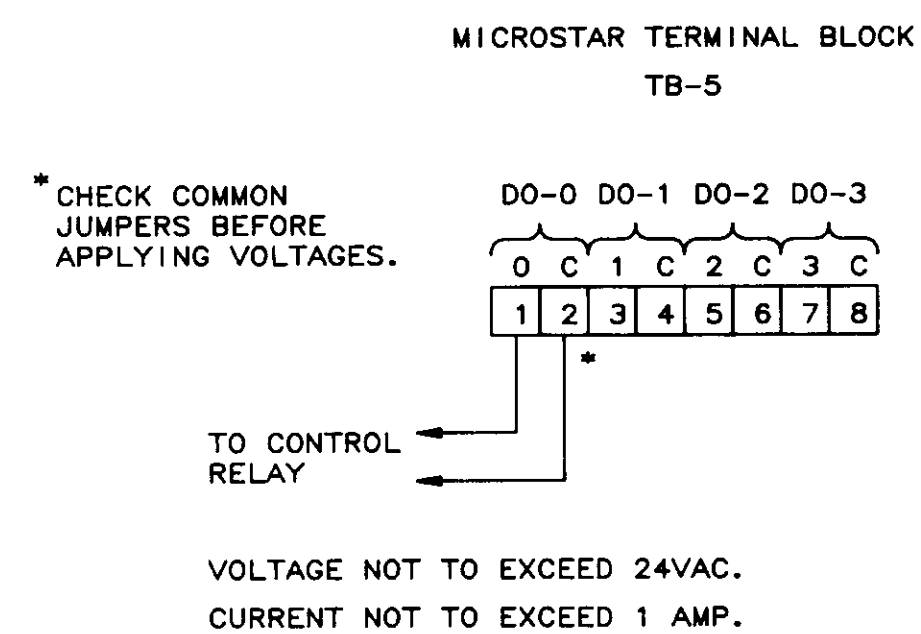
DIGITAL INPUT DETAIL  
DI-A



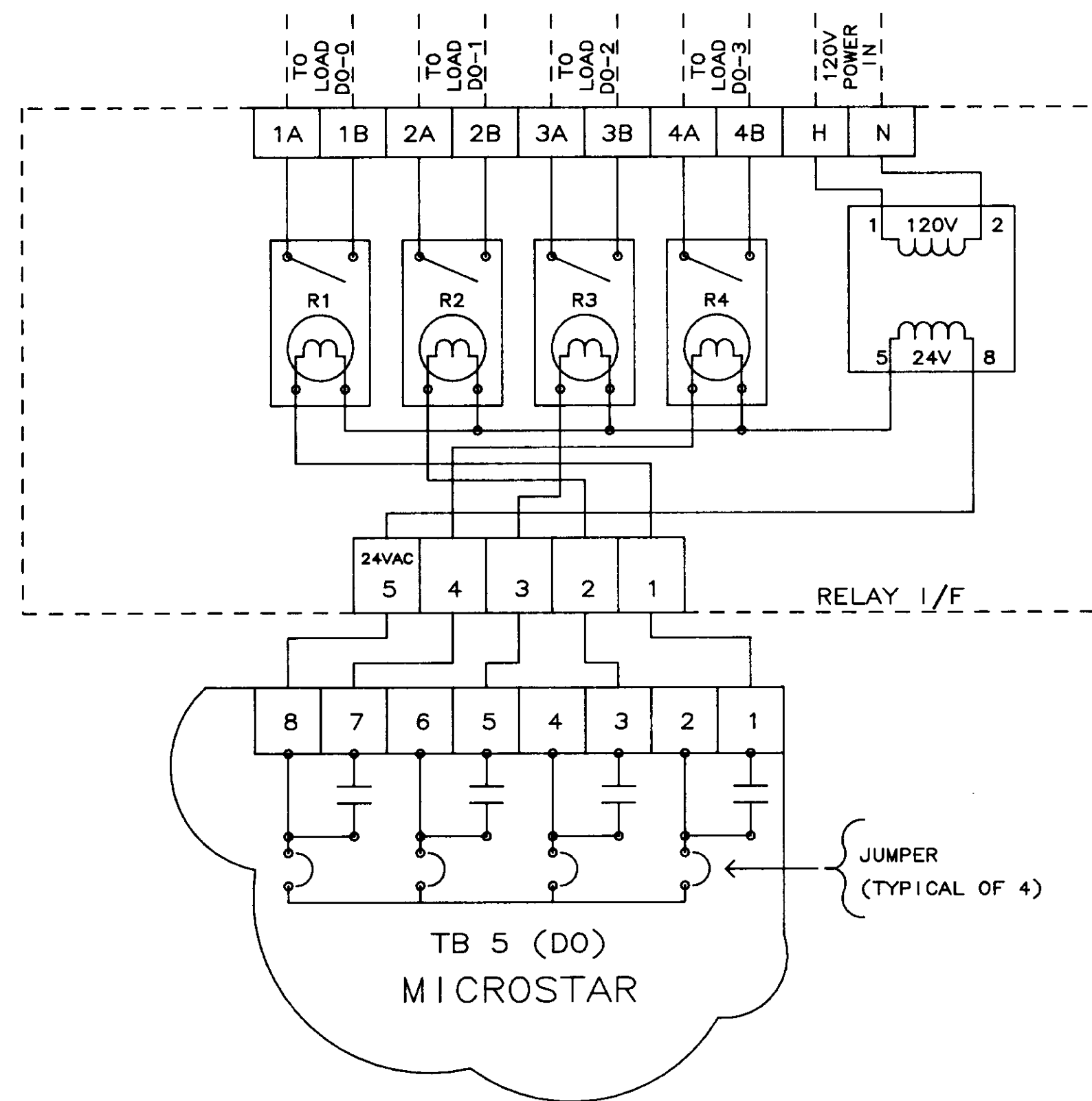
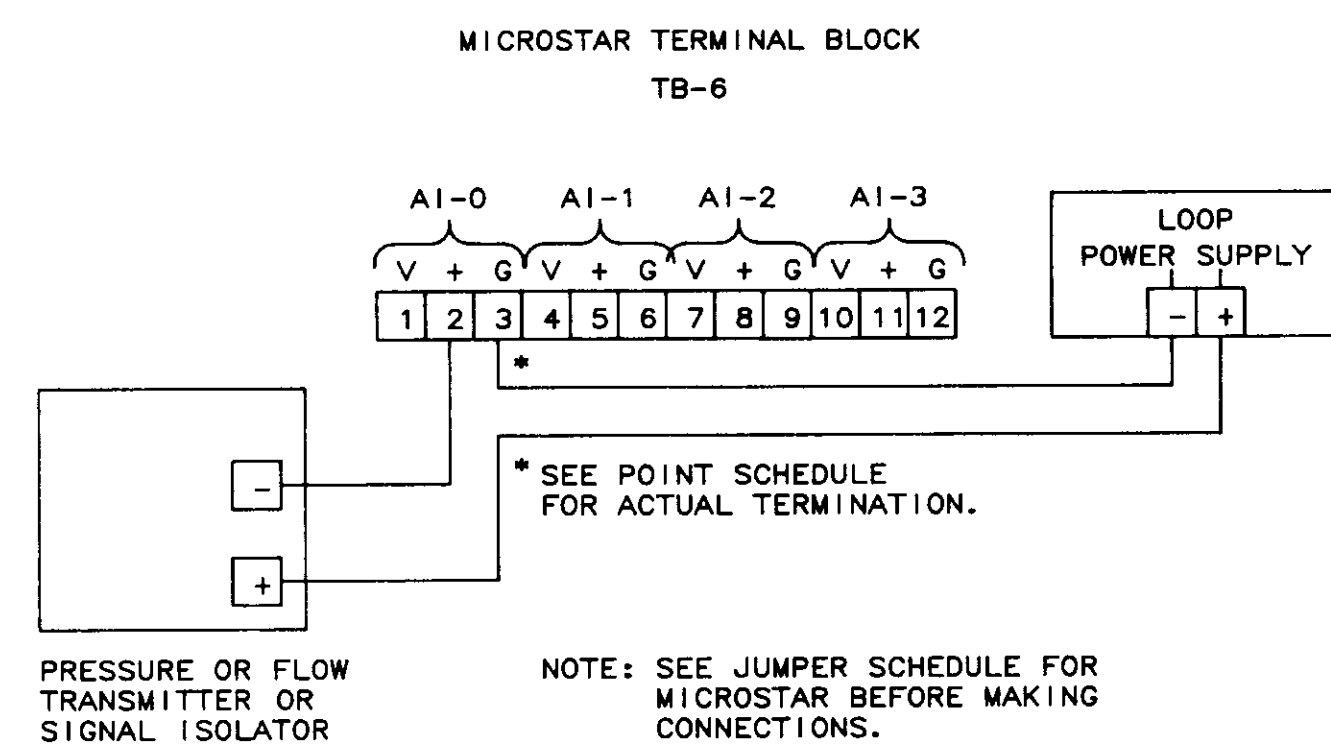
ANALOG OUTPUT DETAIL  
AO-A



DIGITAL OUTPUT DETAIL  
DO-A



PRESSURE OR FLOW TRANSMITTER WIRING DIAGRAM DETAIL  
AI-A



GENERAL NOTES

1. NUMBER IN CIRCLE REFERS TO PANEL LOCATION. SEE DWGS. 8002-MD-A and -B.
2. MicroSTAR NUMBERING IS 0-0-0 (TYP.).
3. MULTIPLE NUMBERS IN ( ) ARE WIRE NUMBERS.
4. SINGLE NUMBER IN ( ) IS M/S CHANNEL NUMBER.

ABBREVIATIONS

1. M/S = MicroSTAR
2. C/S = CommSTAR
3. AI = ANALOG INPUT
4. DI = DIGITAL (OR DISCRETE) INPUT
5. AO = ANALOG OUTPUT
6. DO = DIGITAL (OR DISCRETE) OUTPUT
7. D.O. = DISSOLVED OXYGEN

04265

NO.	DATE	BY	REMARKS
2	01/31/80		AS-BUILT
1	10/20/88	DBS	ISSUED AS TESTED AT FAT.

REVISIONS

		<b>BARRCOM SYSTEMS</b> 22775 SAVI RANCH PARKWAY, #D YORBA LINDA, CALIFORNIA 92686
SCALES: DATE: 9/16/88	APPROVED BY:	DRAWN BY: DBS REV.
LAS VIRGENES MUNICIPAL WATER DISTRICT TAPIA W R F - EXPANSION III		
MISCELLANEOUS DETAILS		
FILING NAME SKEM-GEN	DRAWING NUMBER 8002-ID-A/B	SHEET NUMBER 1 OF 1