

MANATEE COUNTY, FLA.

WATER WORKS PROJECT

SECTION III

PUMPING & TREATMENT FACILITIES

RUSSELL & AXON

CONSULTING ENGINEERS INCORPORATED

DAYTONA BEACH, FLA.

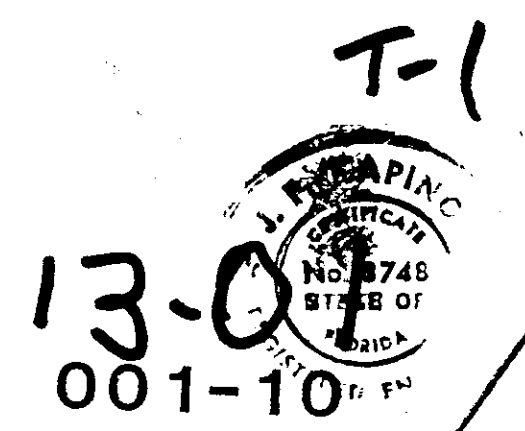
ST. LOUIS, MO.

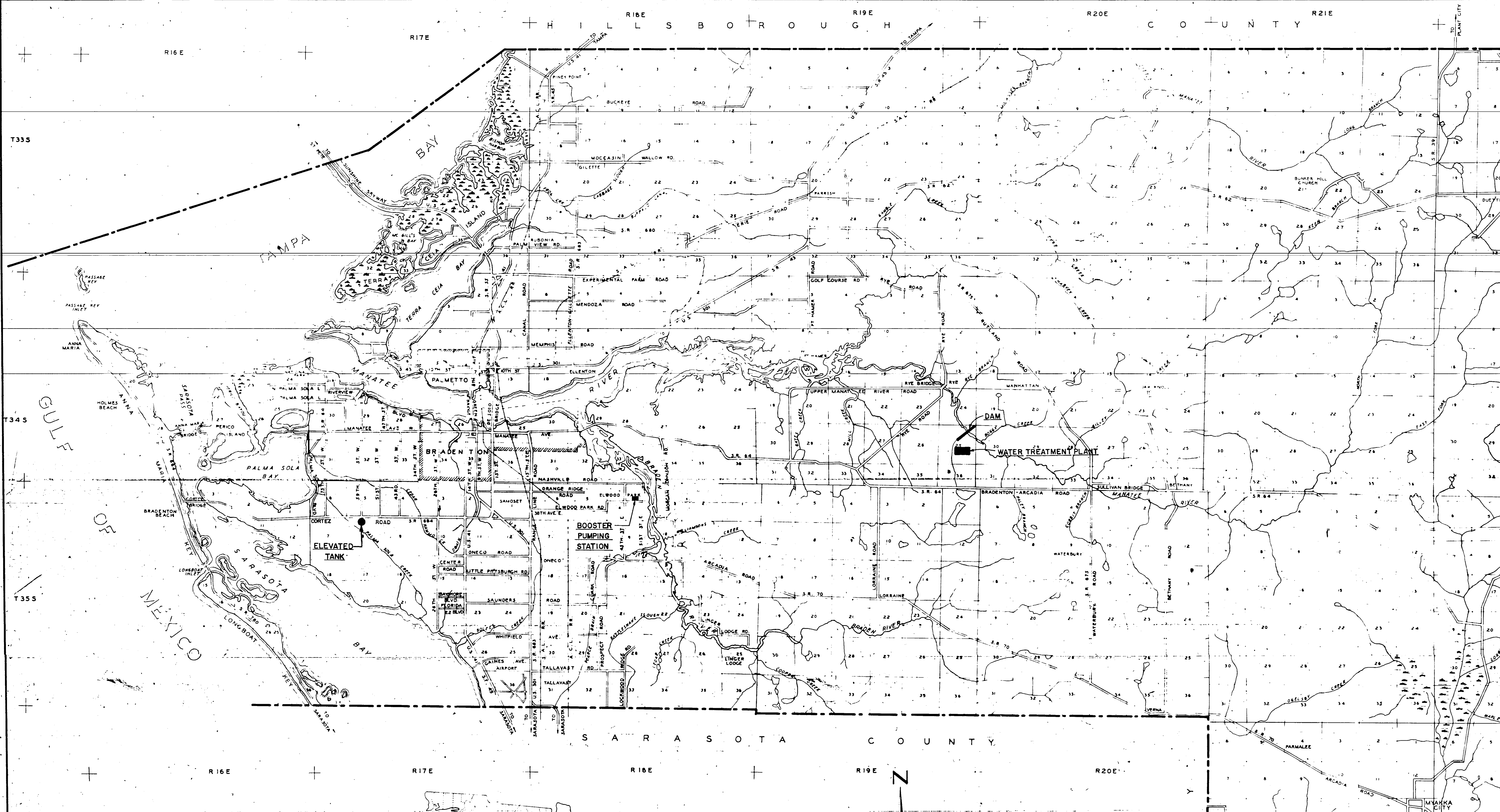
WATER TREATMENT PLANT PART B

INDEX

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A-1	ARCHITECTURAL ELEVATIONS	M-8	" FILTER PIPE GALLERY PLAN
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S-7	" FILTER BUILDING, SECTIONS & DETAILS	E-7	" PLAN SETTLING TANKS
S-8	" CONTROL HOUSE, FOUNDATION PLAN & SECTIONS	E-8	" PLAN AERATOR BLDG. SCHEDULE OF CONTROL CIRCUITS
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M-3	" AERATOR DELETE	E-16	" SCHEDULE FOR BRANCH CKT. & DISTRIBUTION PANEL.
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NOTE
SEE SHEET M-13 FOR PUMP SCHEDULE.
SEE SHEET M-9 FOR PIPE SCHEDULE.
SEE SHEET M-14 FOR VALVE SCHEDULE.





S A R A S O T A C O U N T Y

SCALE: 1" = 1 MILE

NO.	DATE	DESCRIPTION	BY
JAN 67	AS-BUILT		A.J.N. A.J.N.
REVISIONS			

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
LOCATION PLAN

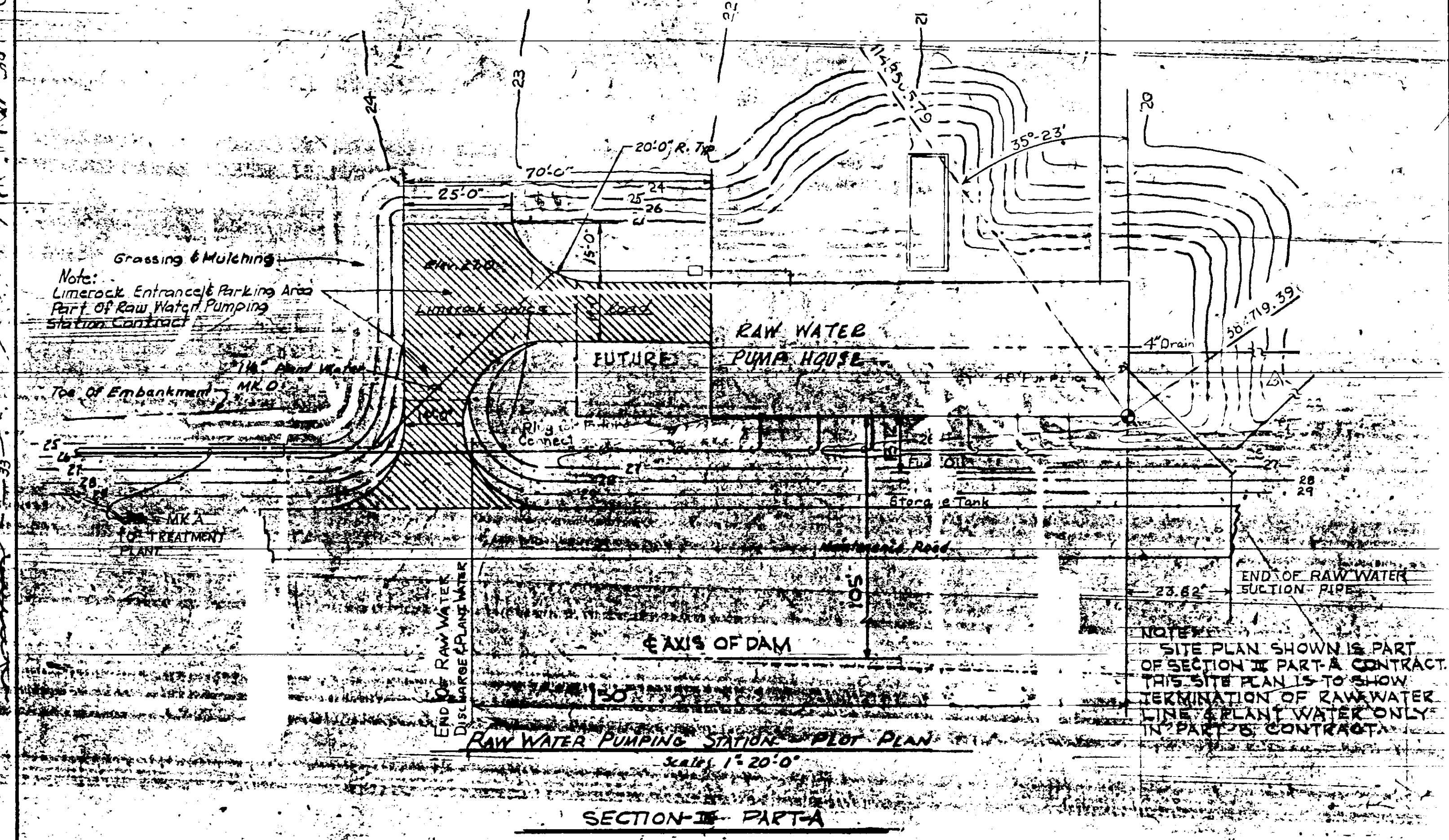
MANATEE COUNTY, FLORIDA **T.2**

DESIGNED BY	FILE NO.
D.M.E.	6353 3 2
CHECKED BY	SHEET
C.E.B. ST.	NO. 2
DATE: Feb. 1965	OF SHEETS
	SCALE AS SHOWN

SHEET 2 OF 55

13-01

WATER TREATMENT PLANT
PART B SECTION III



PRIME COORDINATE POINT
FOR ALL CONSTRUCTION

NOTE:
SITE PLAN SHOWN IS PART
OF SECTION III PART A CONTRACT.
THIS SITE PLAN IS TO SHOW
TERMINATION OF RAW WATER
LINE PLANT ONLY
IN PART B CONTRACT.

SECTION III PART A

NO.		DATE	DESCRIPTION	BY	CHKD.
REVISIONS					

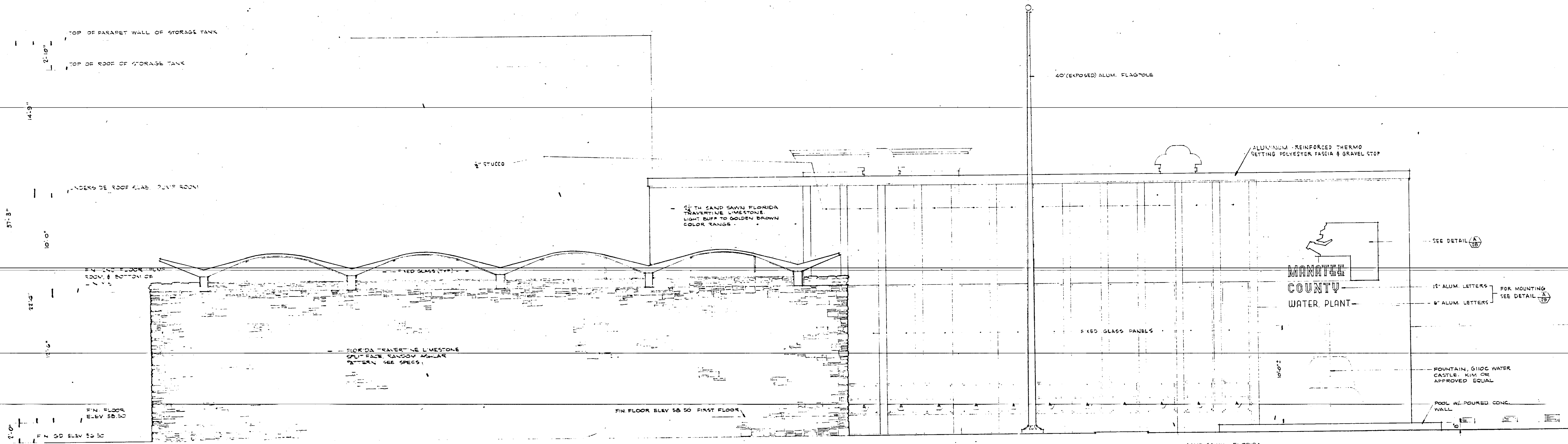
• RUSSELL & AXON • INC. •
 CONSULTING ENGINEERS
 DAYTONA BEACH FLA. ST. LOUIS, MO.
 WATER WORKS PROJECT
 WATER TREATMENT PLANT
 PART B
 AREA MAP

MANATEE COUNTY
 DESIGNED BY J.W.C.
 DRAWN BY J.W.C.
 CHECKED BY CFB
 DATE FEB 1965

FILE NO.
 6353-3-3-III-B
 SHEET
 No. 3 OF SHEETS

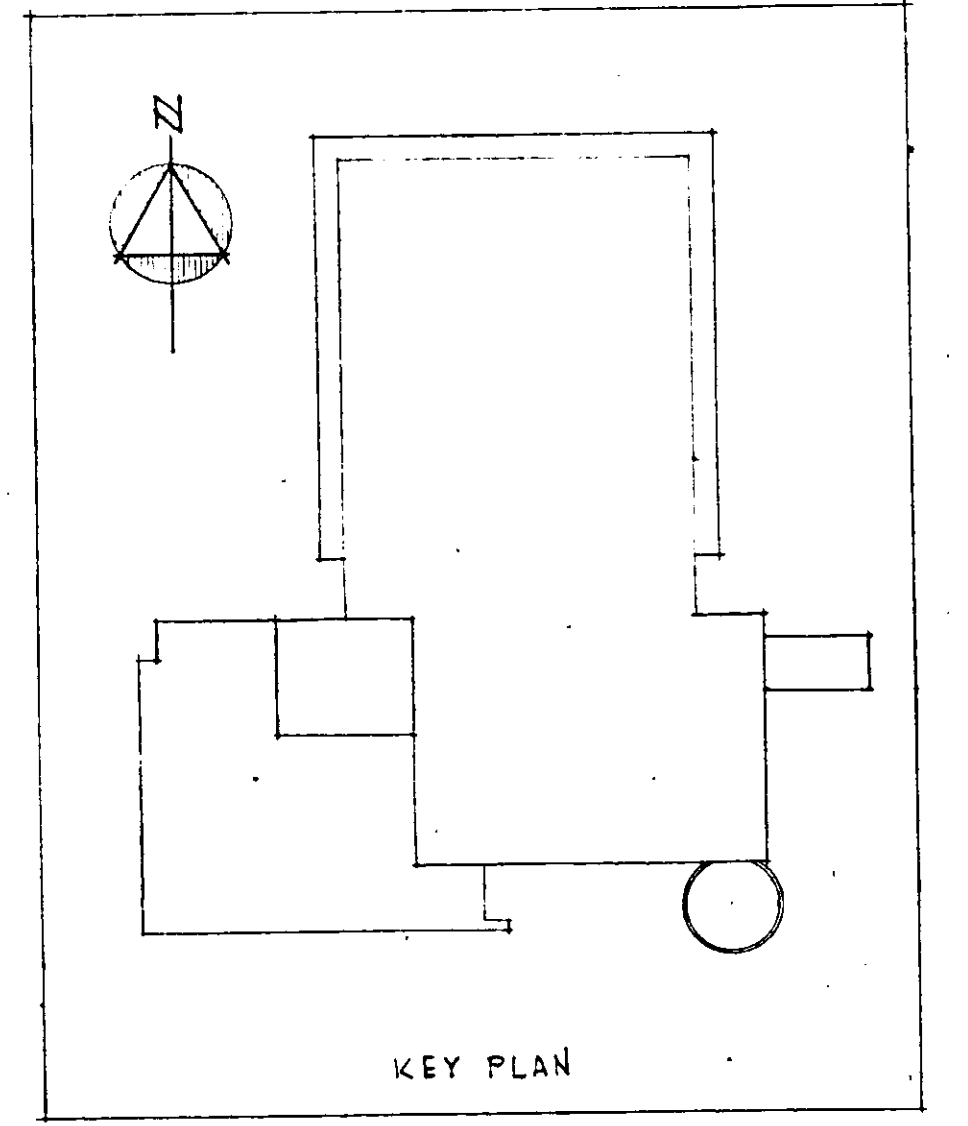
FLORIDA 7-3
 SEAL
 J.P. KAPINO
 No. 3748
 REGISTERED PROFESSIONAL ENGINEER

SCALE: 1" = 100'-0"
 SHEET 3 OF 55

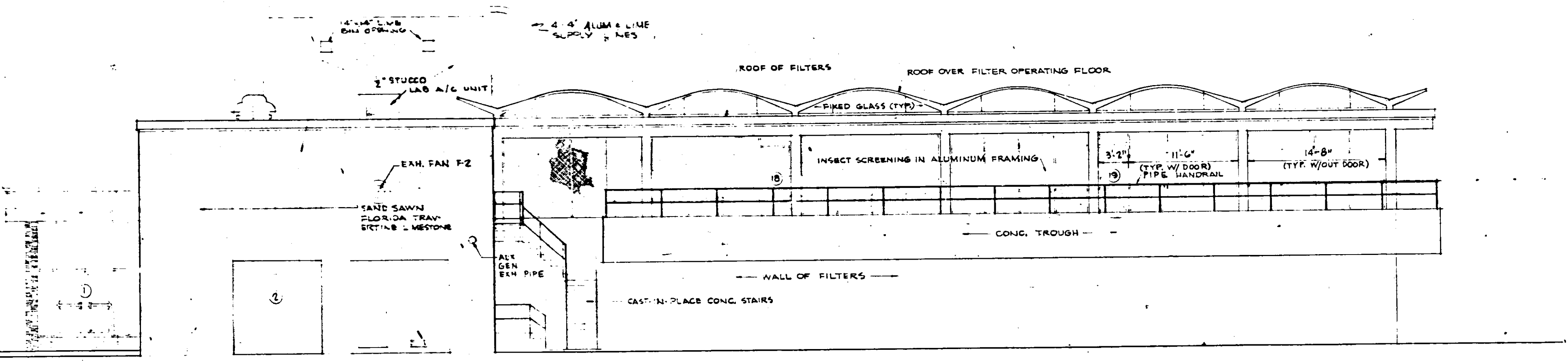


SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

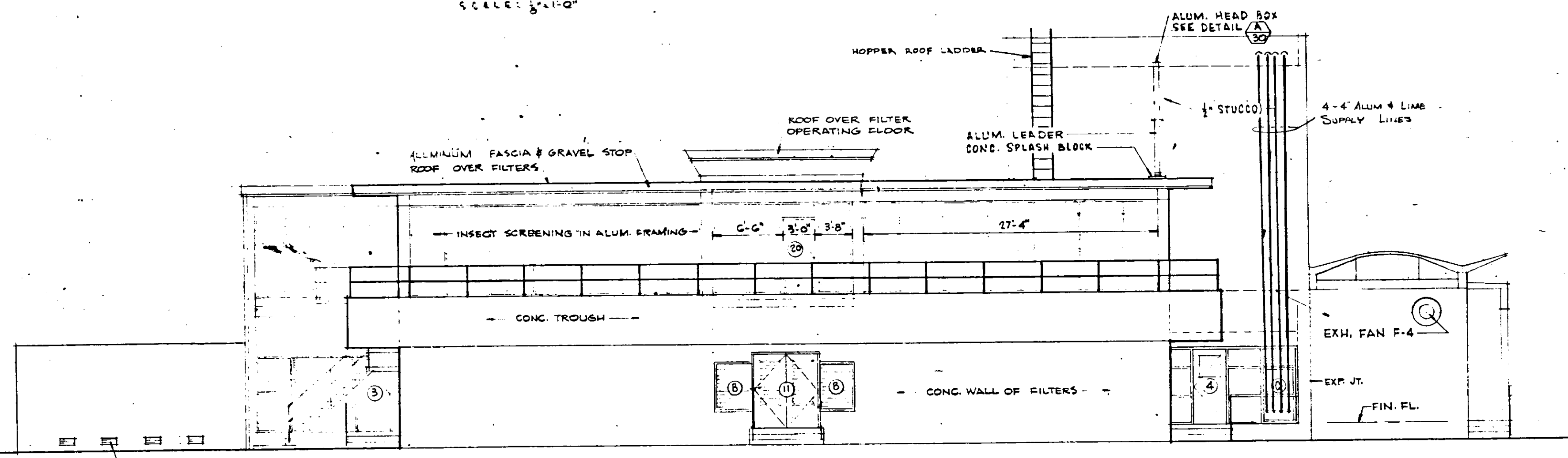
MANATEE COUNTY
WATER PLANT



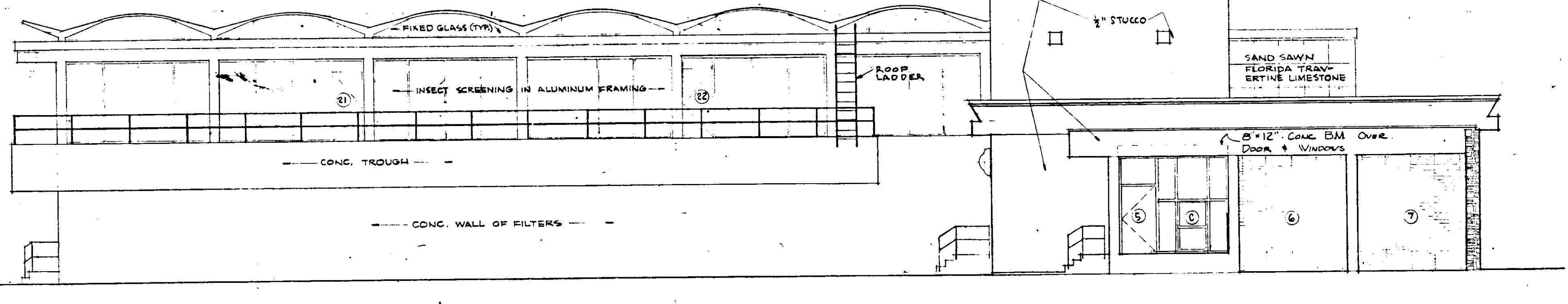
KEY PLAN



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

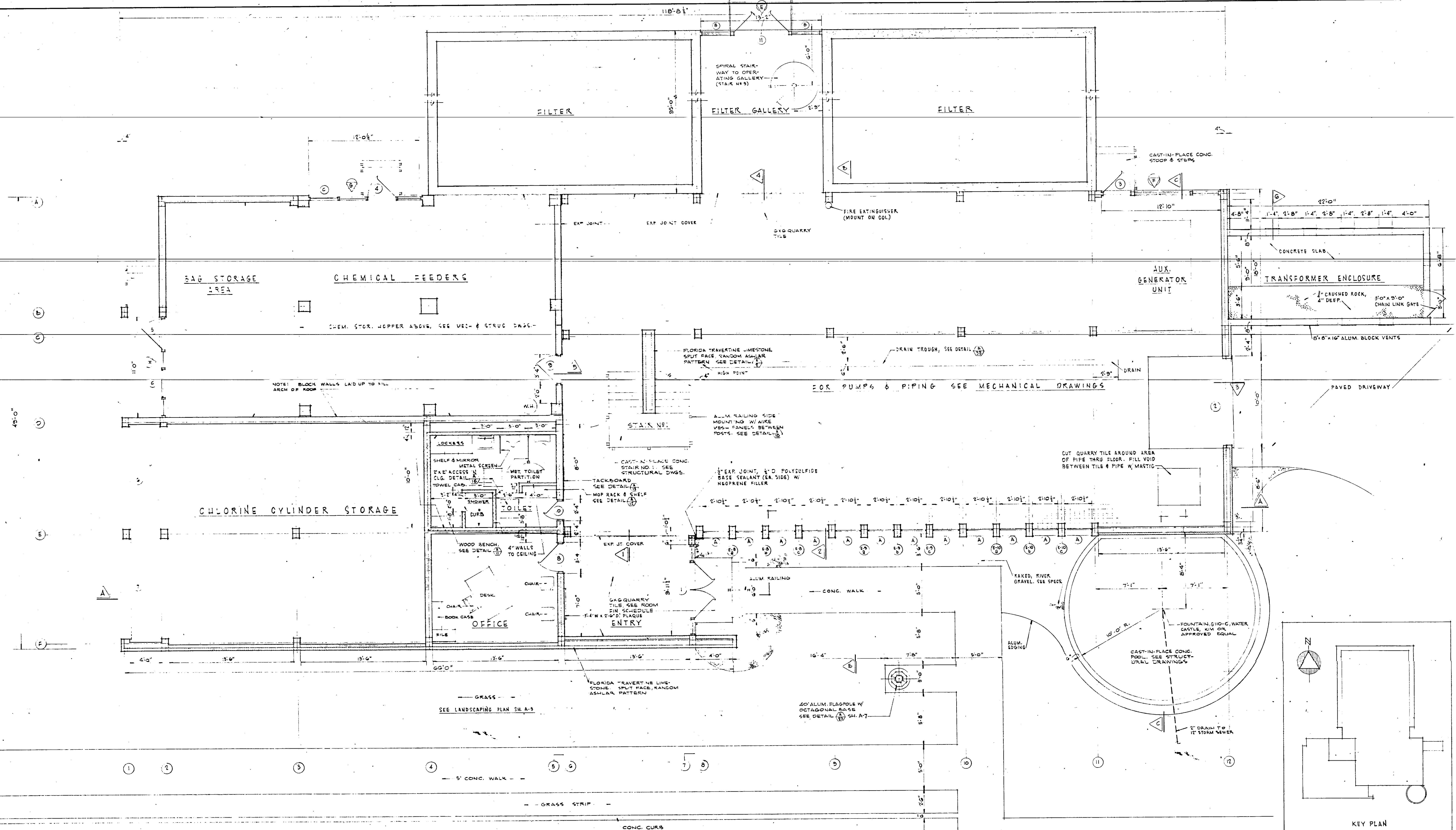


NORTH ELEVATION
SCALE: 1/4" = 1'-0"



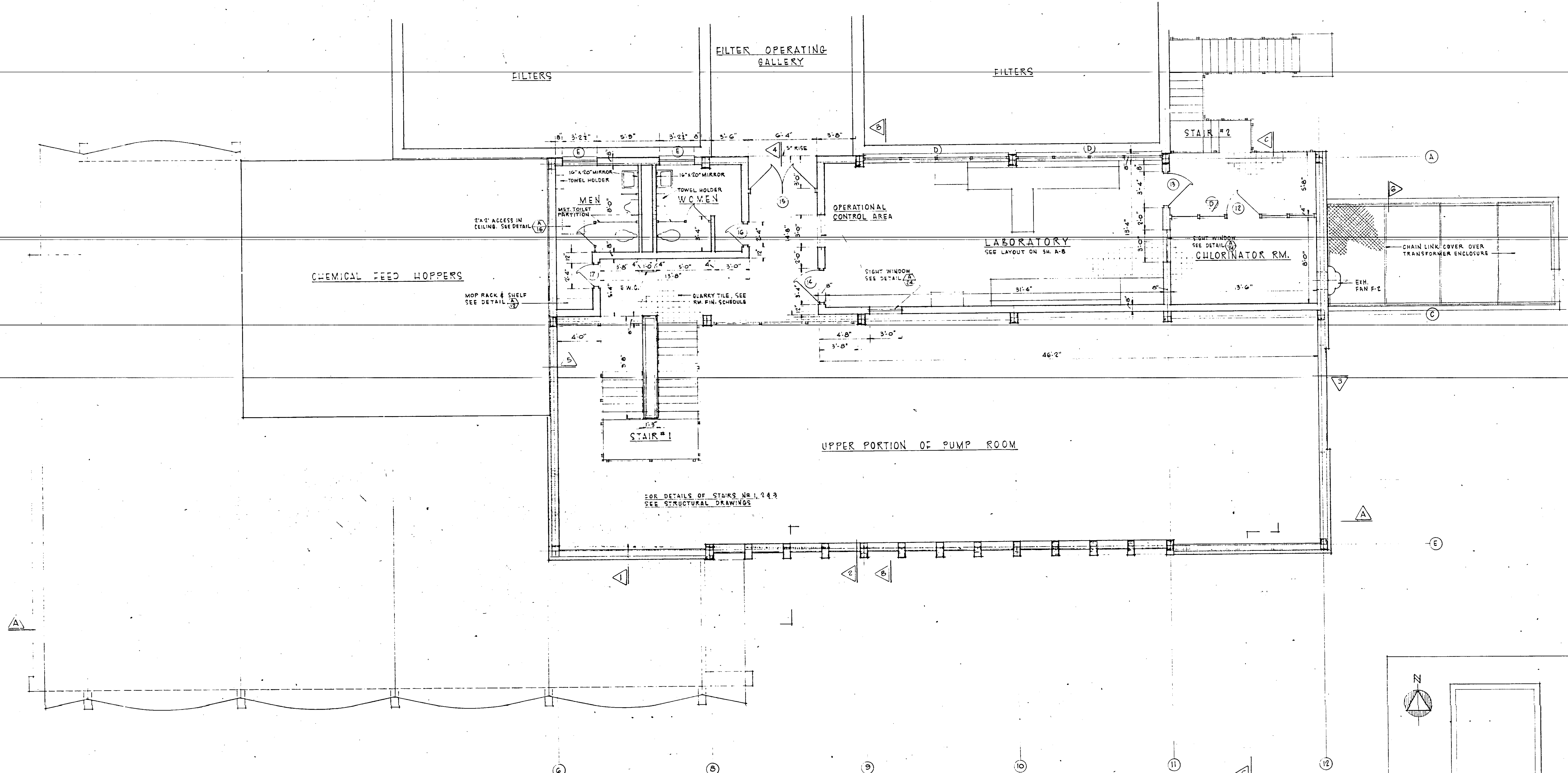
WEST ELEVATION
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY	CHKD.
1	JUN 67	AS-BUILT	A.J.N.	
REVISIONS				
RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B ARCHITECTURAL ELEVATIONS MANATEE COUNTY, FLORIDA				
DESIGNED BY	FILE NO.	SEAL 		
DRAWN BY	6353-3-A-I-III-B			
CHECKED BY	SHEET	NO. A-1	III-B	
DATE	OF 8	SHEETS		
FEB, 1965	SCALE: AS SHOWN			

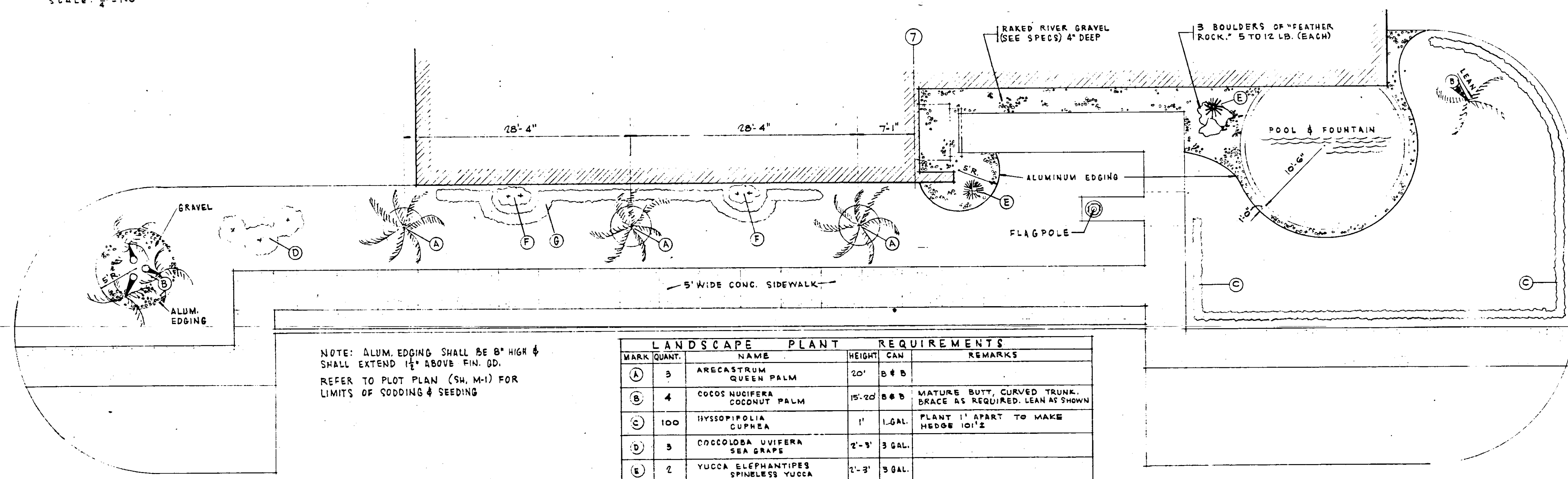
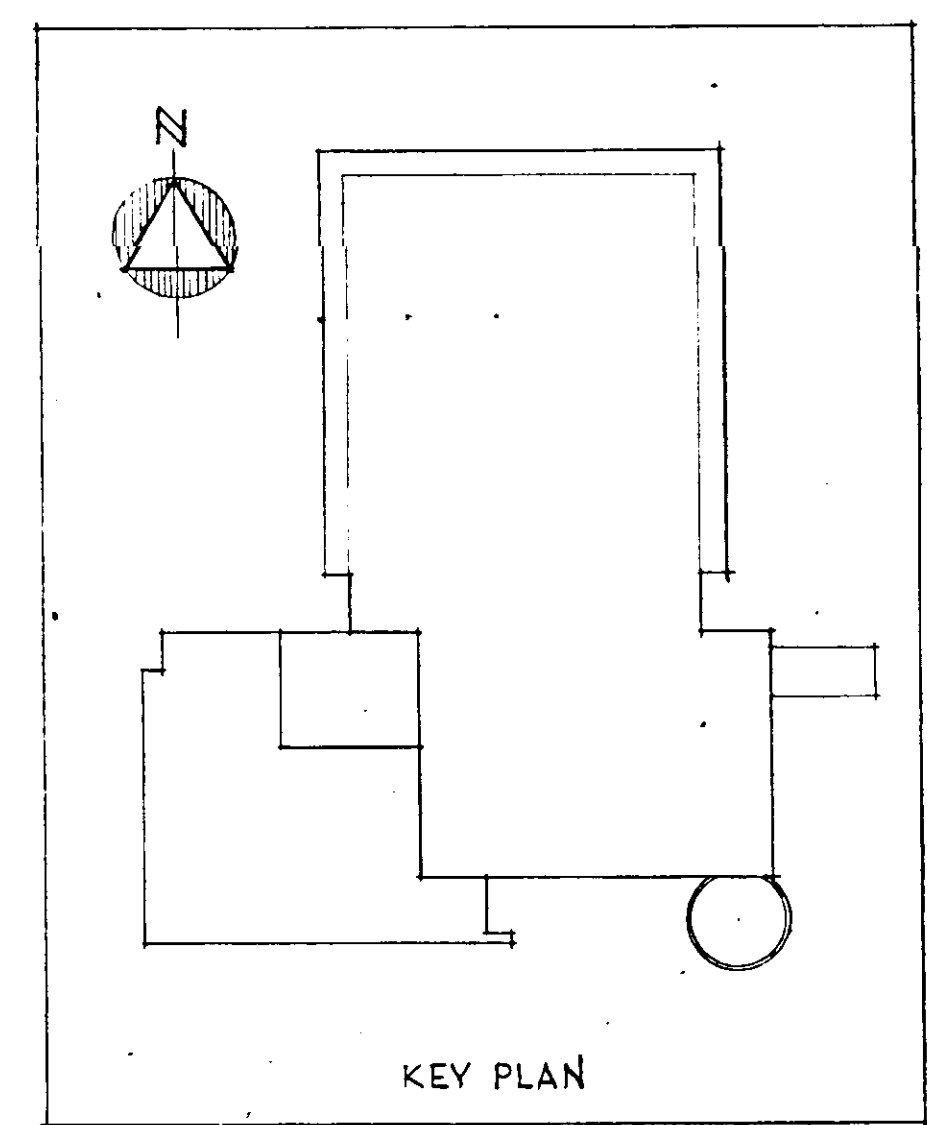


CONTROL HOUSE - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

NO.		DATE	DESCRIPTION	BY	CHKD.
REVISIONS					
<p>RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.</p> <p>WATER WORKS PROJECT WATER TREATMENT PLANT - PART B CONTROL HOUSE FIRST FLOOR PLAN - ARCHITECTURAL MANATEE COUNTY, FLORIDA</p>					
DESIGNED BY	JFH	FILE NO.	6353-3-A-2-III-B	SEAL	
DRAWN BY	RJ	SHEET	A-2 III-B	J. E. KAPINOS No. 743 STATE OF FLORIDA REGISTERED ENGINEER	
CHECKED BY	CEB	OF	8	SHEETS	
DATE	FEB, 1965	SCALE:	AS SHOWN		



CONTROL HOUSE - SECOND FLOOR
SCALE: 1/4" = 1'-0"

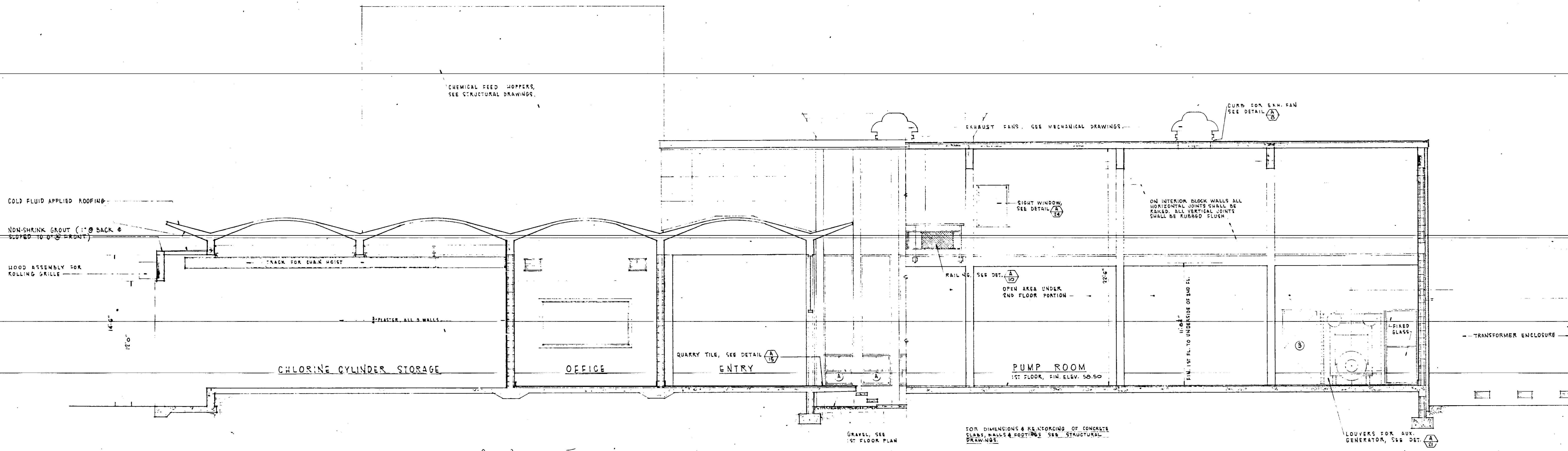


NOTE: ALUM. EDGING SHALL BE 8" HIGH & SHALL EXTEND 1/2" ABOVE FIN. GD.
REFER TO PLOT PLAN (SH. M-1) FOR LIMITS OF SODDING & SEEDING

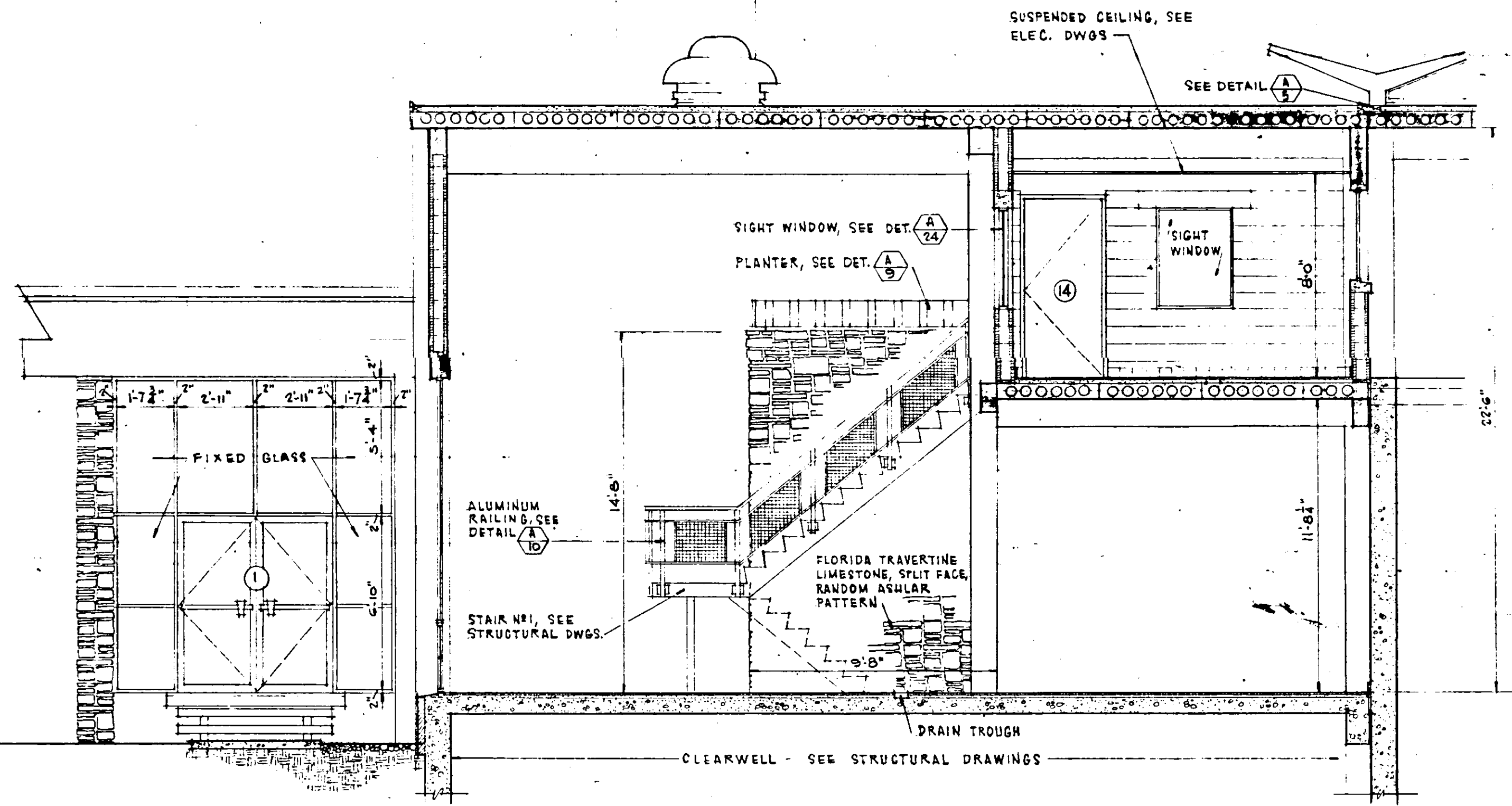
MARK	QUANT.	NAME	HEIGHT	CAN	REMARKS
A	3	ARECASTRUM QUEEN PALM	20'	B & B	
B	4	COCOS UDIFERA COCONUT PALM	15-20'	B & B	MATURE BUTT CURVED TRUNK. BRACE AS REQUIRED. LEAN AS SHOWN
C	100	HYSSOPIFOLIA CUPHEA	1'	1 GAL.	PLANT 1' APART TO MAKE HEDGE 10 1/2'
D	3	COCCOLOBA UVIFERA SEA GRAPES	2'-3'	3 GAL.	
E	2	YUCCA ELEPHANTIPES SPINELESS YUCCA	2'-3'	3 GAL.	
F	4	JATROPHA MULTIFIDA CORAL PLANT	3'-4'	5 GAL.	PLANT IN GROUPS OF 2, @ 9' APART
G	50	CARISSA GRANDIFLORA 'BONSAI' NATAL PLUM	8'-10'	1 GAL.	PLANT 1' APART TO MAKE HEDGE 51' 2"

LANDSCAPING PLAN
SCALE: 3/8" = 1'-0"

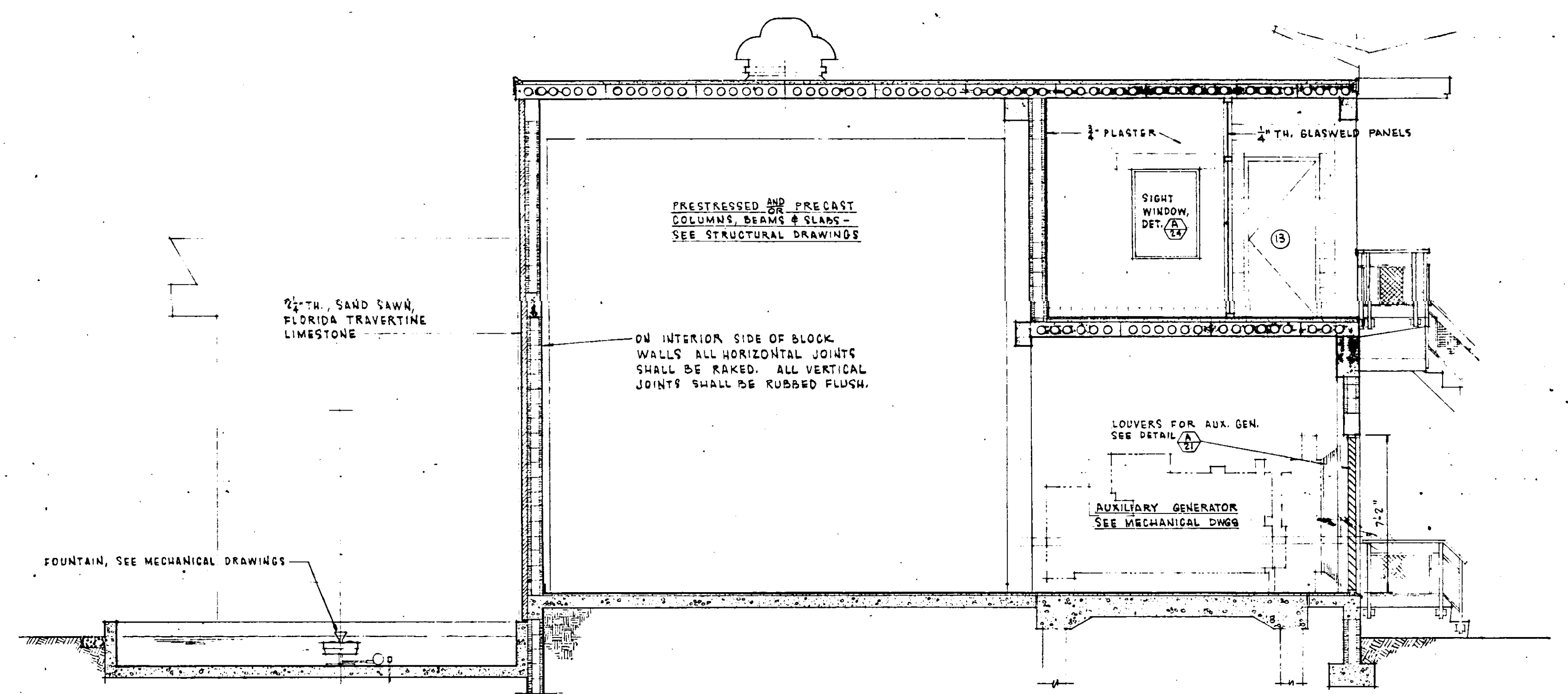
1	MAR 67	BUILT		
NO.	DATE	DESCRIPTION	BY	CKD.
REVISIONS				
RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B CONTROL HOUSE SECOND FLOOR PLAN - ARCHITECTURAL MANATEE COUNTY, FLORIDA				
DESIGNED BY	JFH	FILE NO.	6353-3-A-3-III-B	SCALE
DRAWN BY	Ry	SHEET	No. 4-3 III-B	SEAL
CHECKED BY	CEB	OF 8	SHEETS	
DATE	FEB., 1965	SCALE:	AS SHOWN	



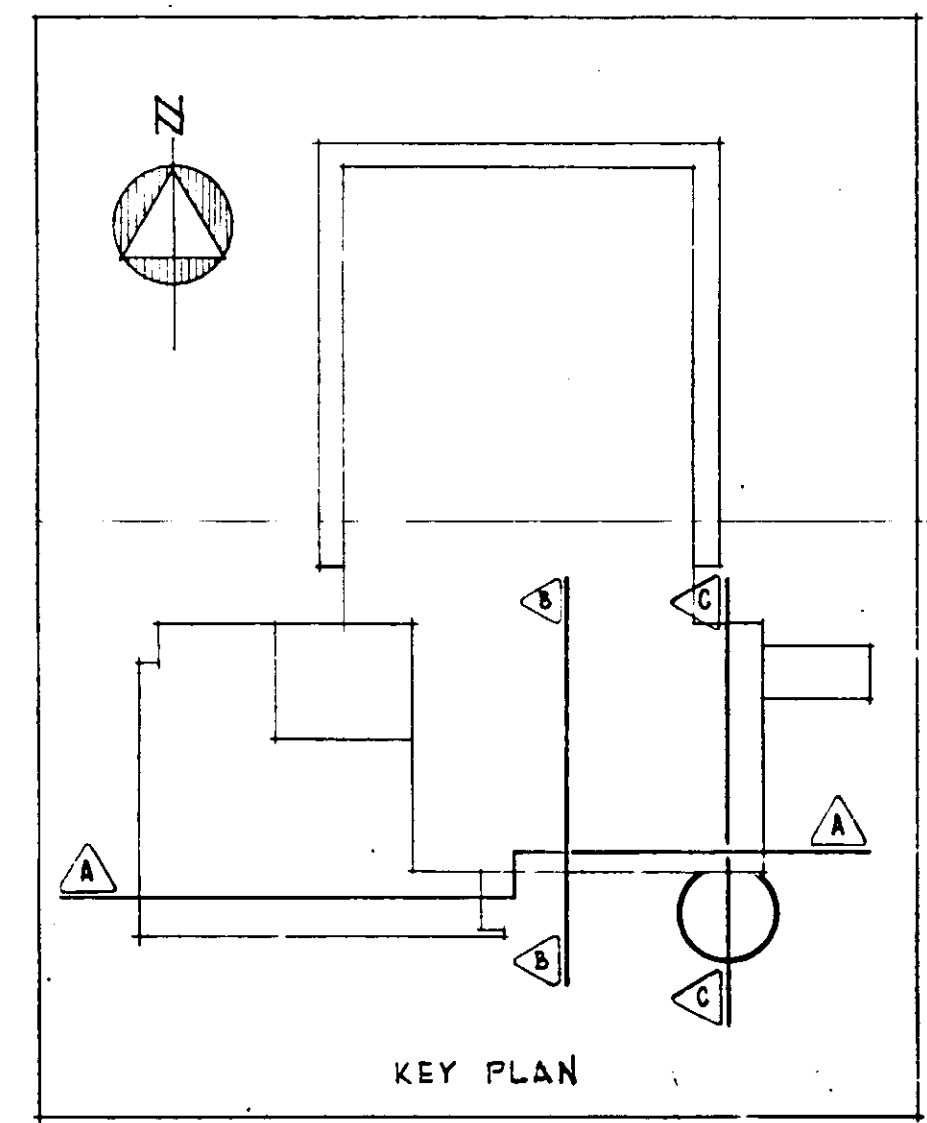
LONGITUDINAL SECTION THRU BUILDING A-A
SCALE: 1/4" = 1'-0"



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



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

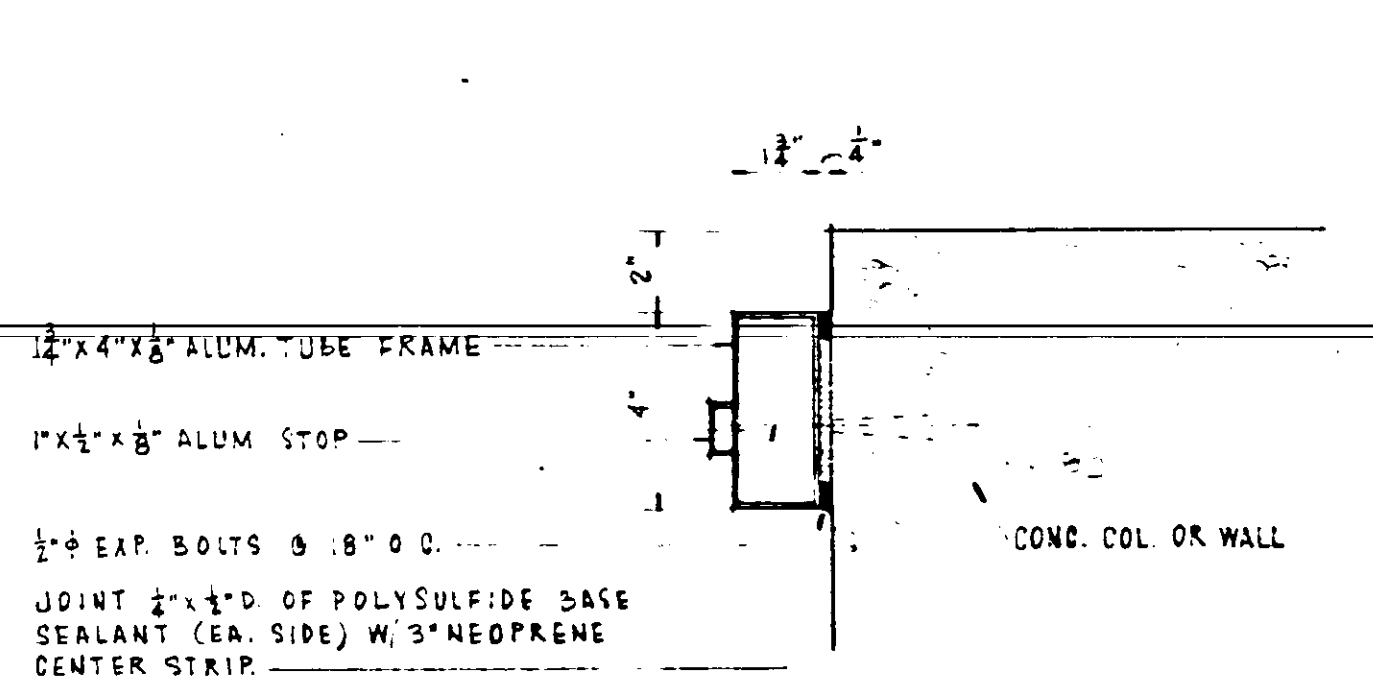


KEY PLAN
SHEET 7 OF 55

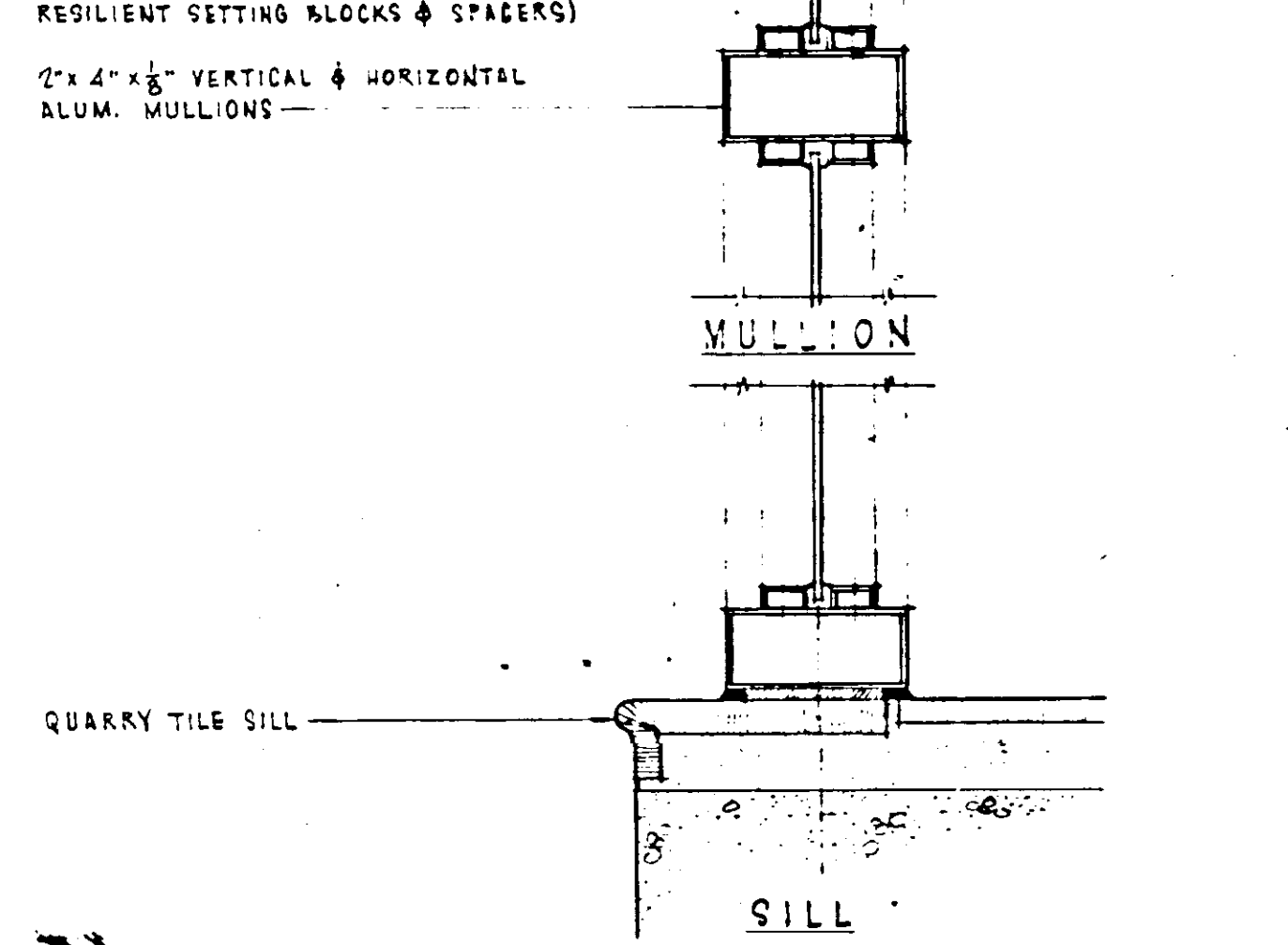
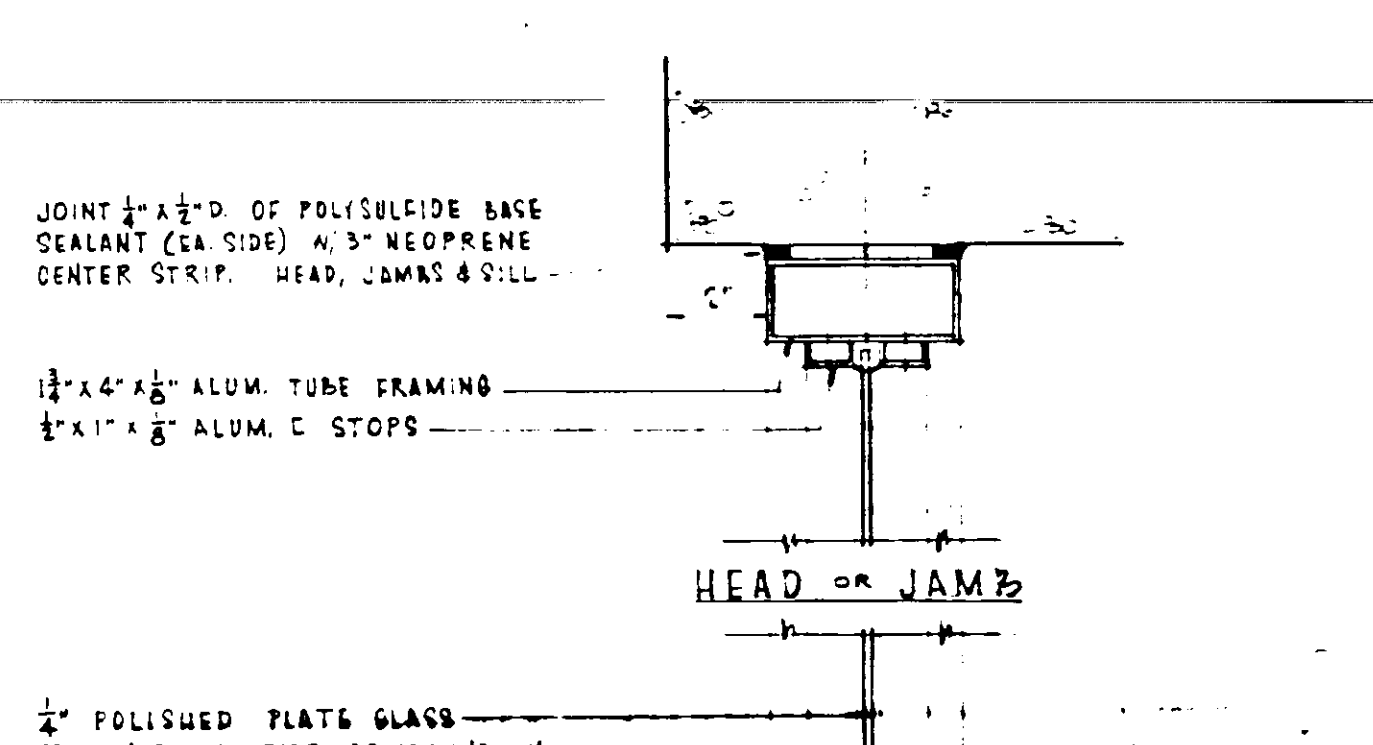
2	MAY 1965	AS BUILT	JFH	
1	MAY 1965	ADDED DRAIN TROUGH TO SECTION B-B	JFH	
NO.	DATE	DESCRIPTION	BY	CHKD.
REVISIONS				
RUSSELL & AXON • INC. •				
CONSULTING ENGINEERS				
DAYTONA BEACH, FLA.			ST. LOUIS, MO.	
WATER WORKS PROJECT				
WATER TREATMENT PLANT				
PART B				
SECTIONS - ARCHITECTURAL				
MANATEE COUNTY,			FLORIDA	
DESIGNED BY	JFH	FILE NO.	6353-3-A-4-III-B	
DRAWN BY	JFH	SHEET	A-A III-B	
CHECKED BY	CEB	OF 8	SHEETS	
DATE	FEB, 1965	SCALE:	AS SHOWN	
			SEAL	

13-01 4-6

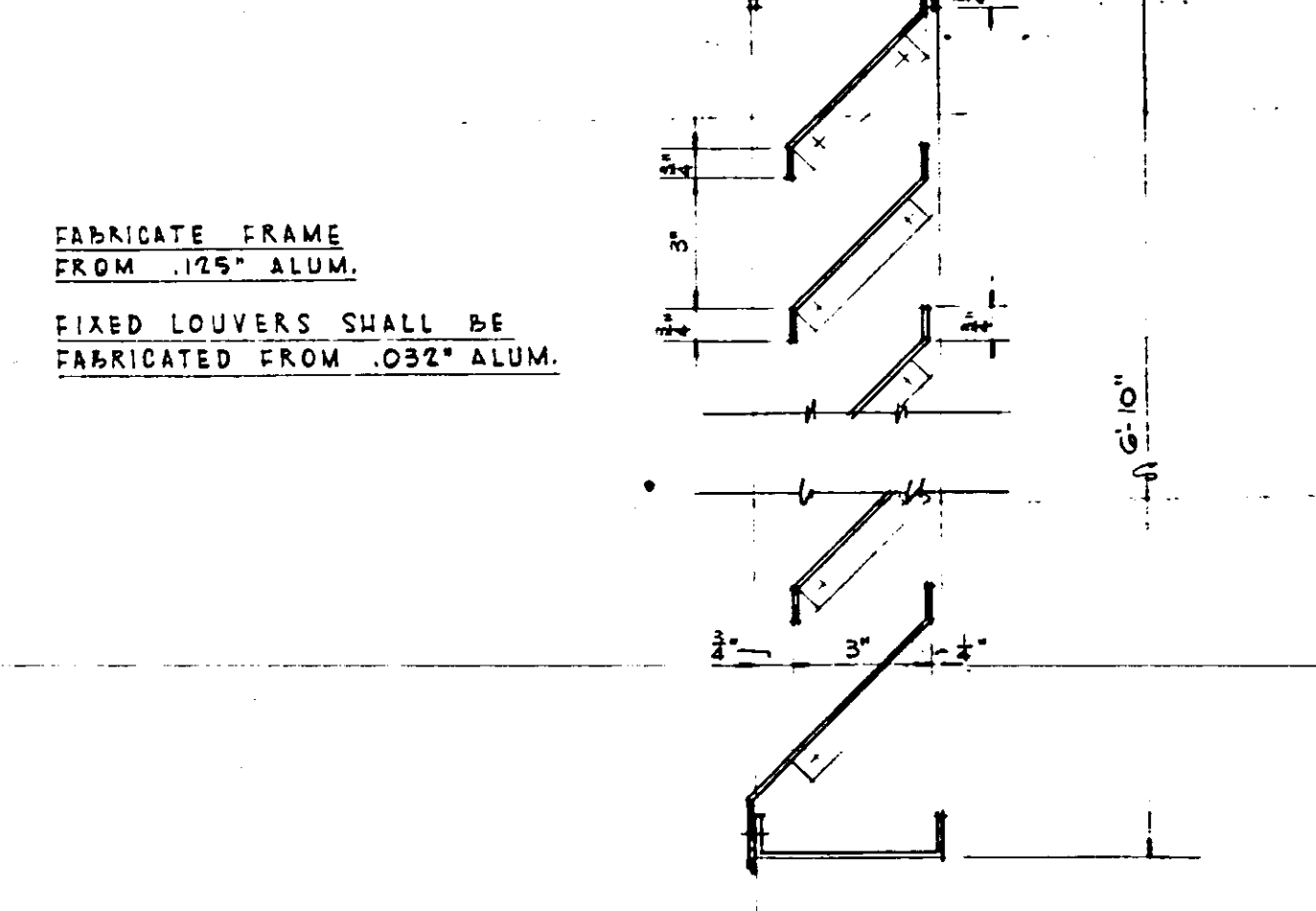
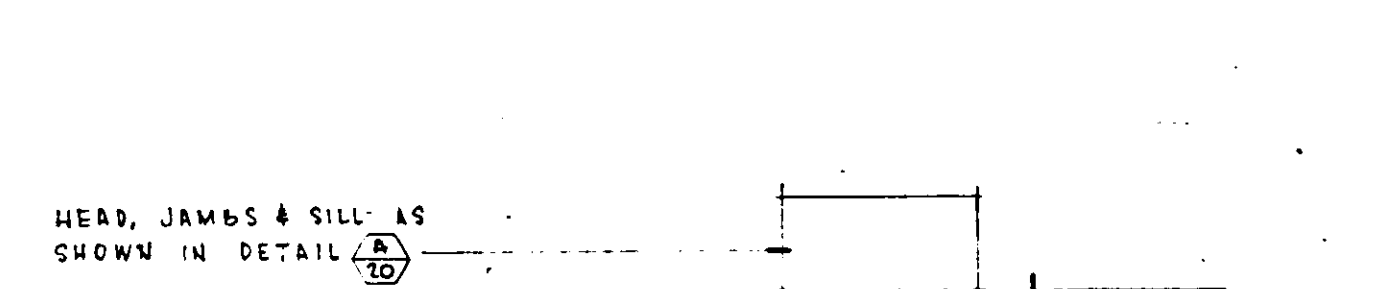
DOOR JAMB - DETAIL (A/18)
SCALE: 3"=1'-0"



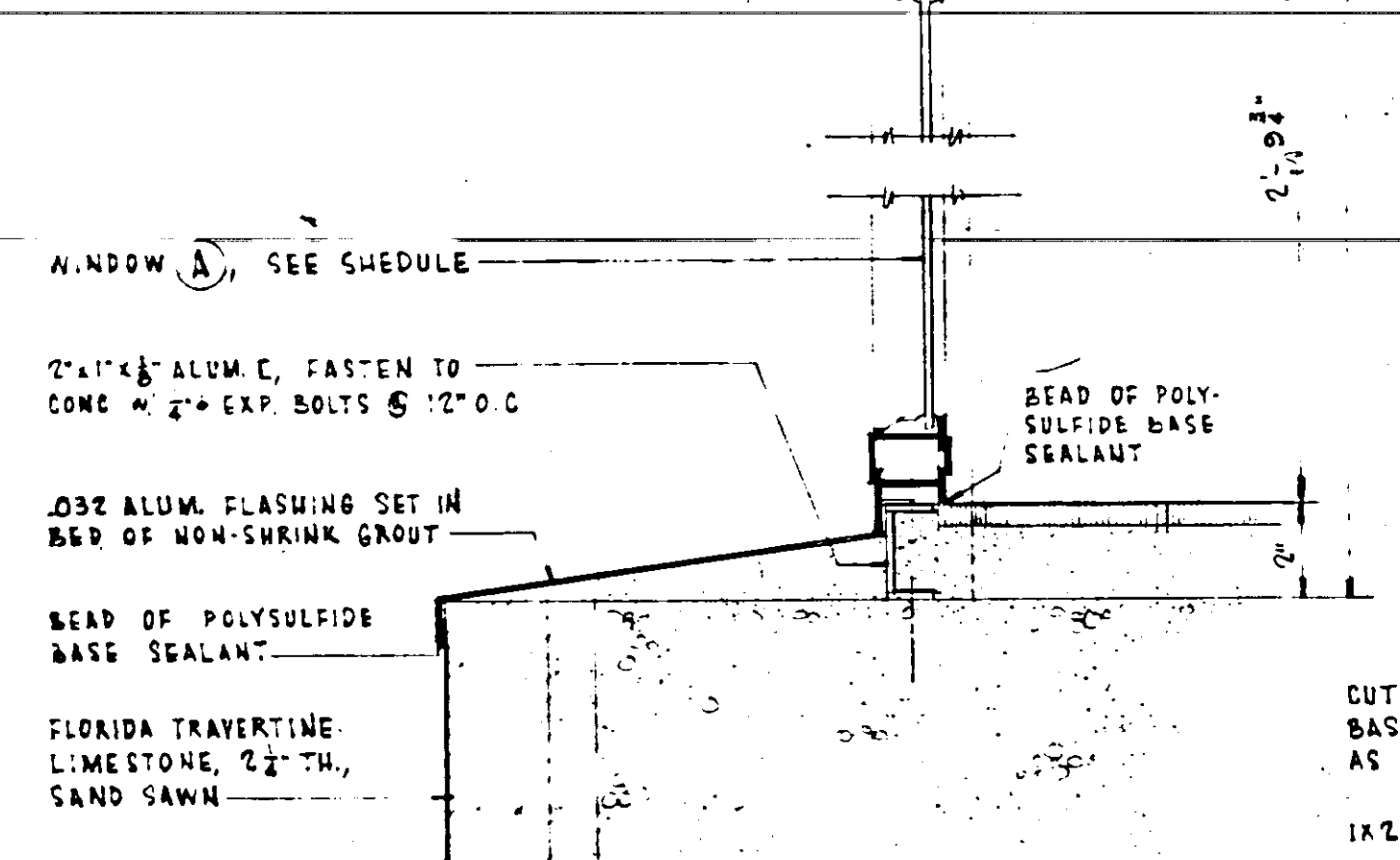
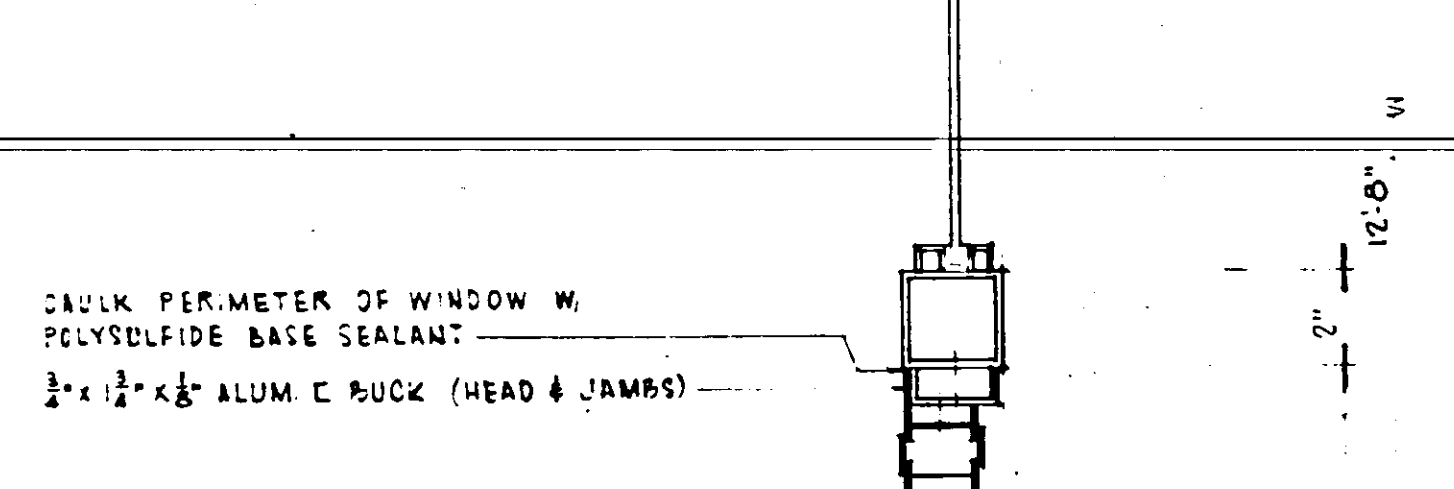
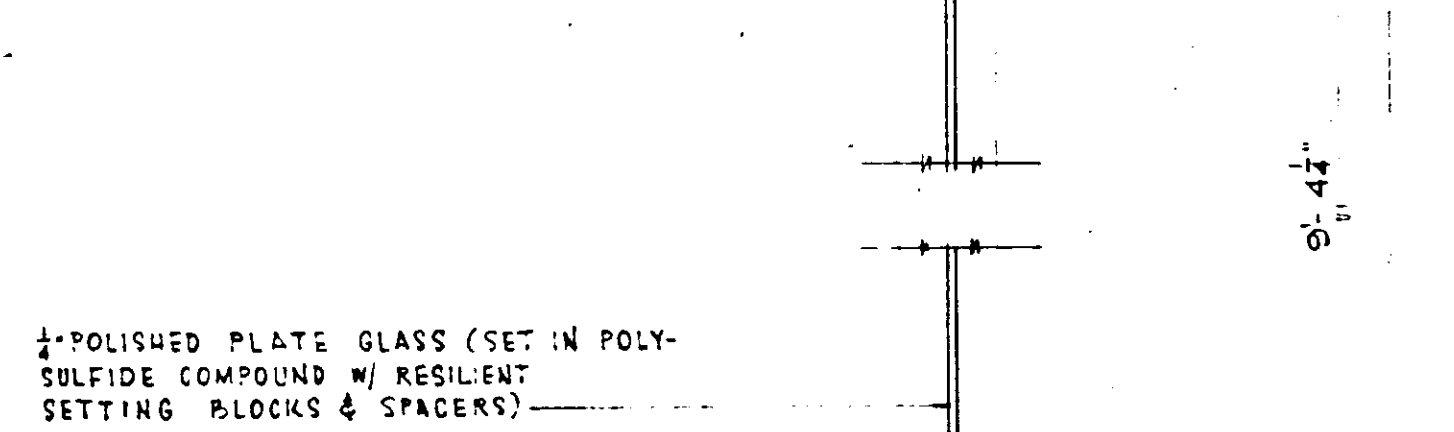
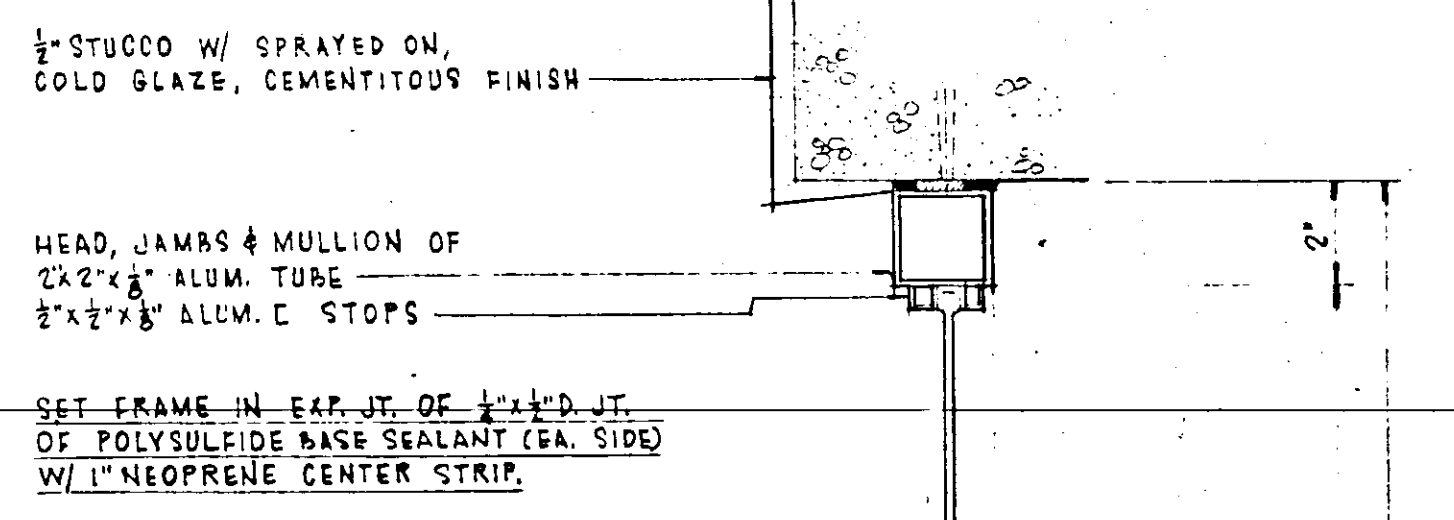
DOOR JAMB - DETAIL (A/19)
SCALE: 3"=1'-0"



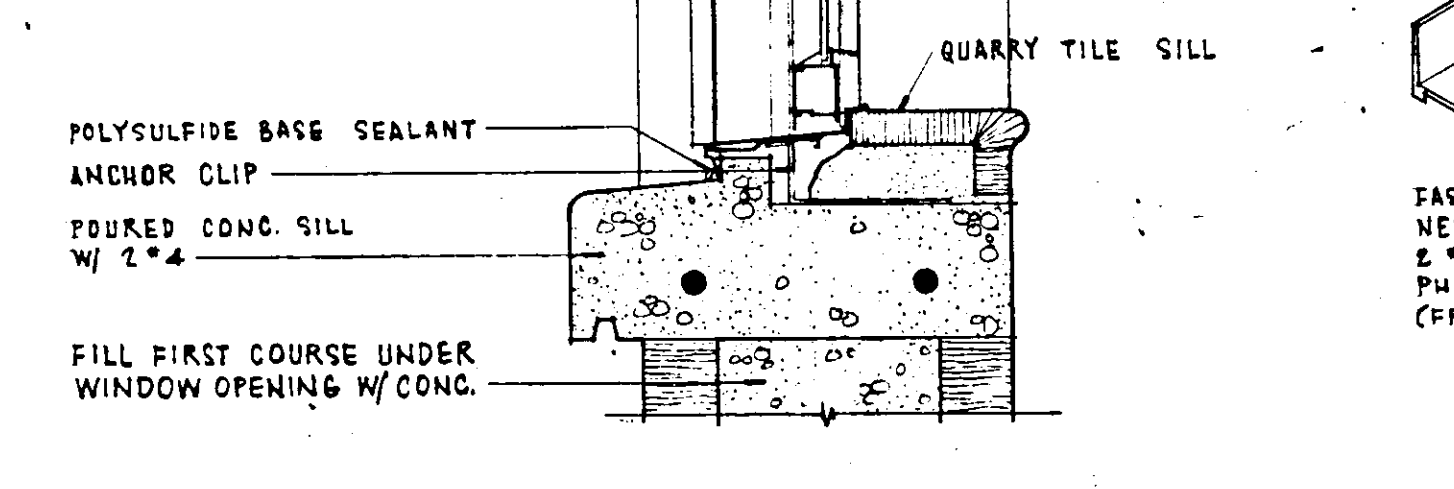
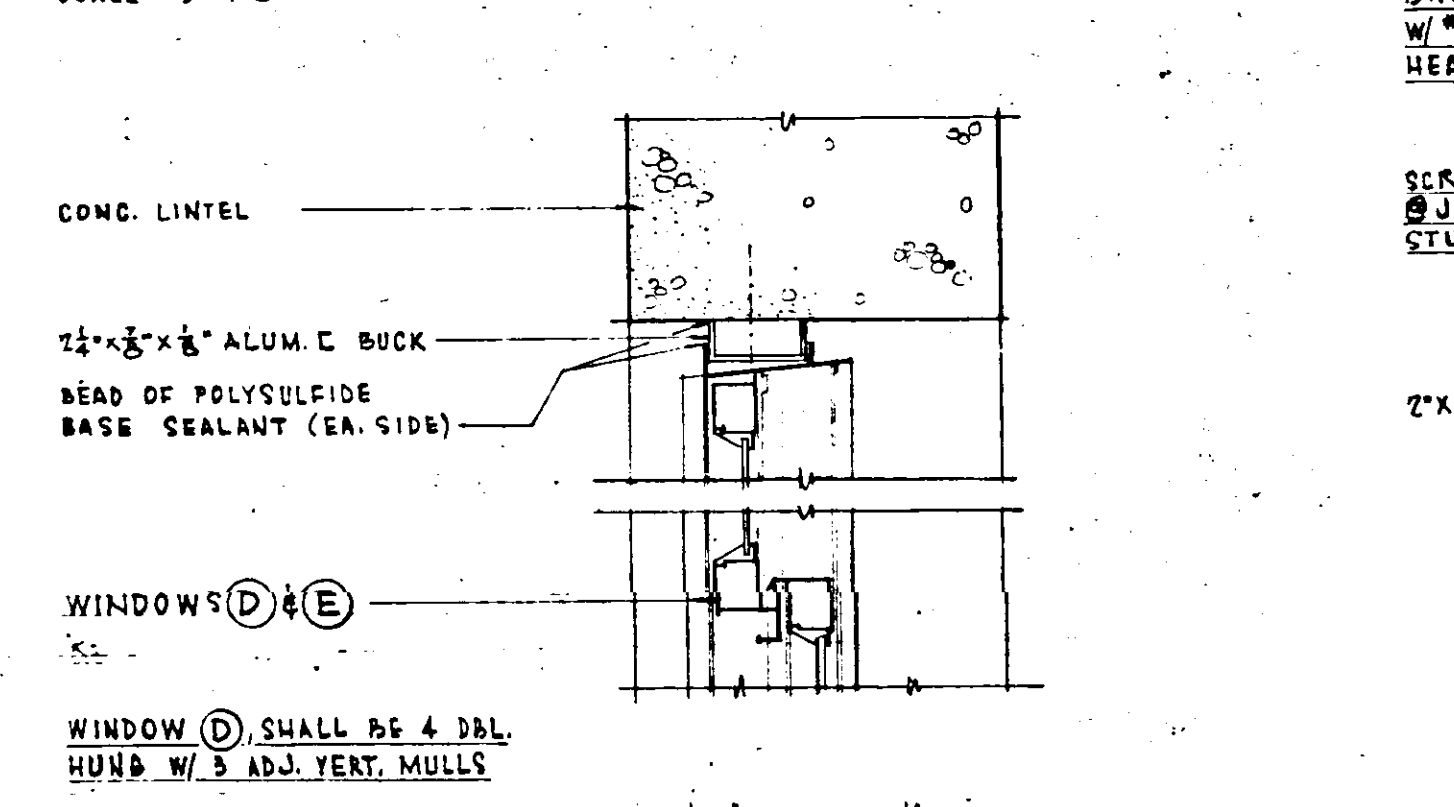
WINDOW WALL - DETAIL (A/20)
SCALE: 3"=1'-0"



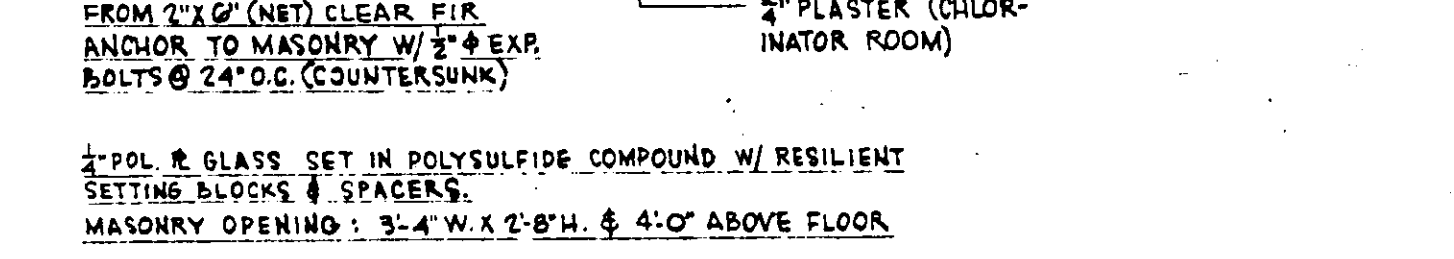
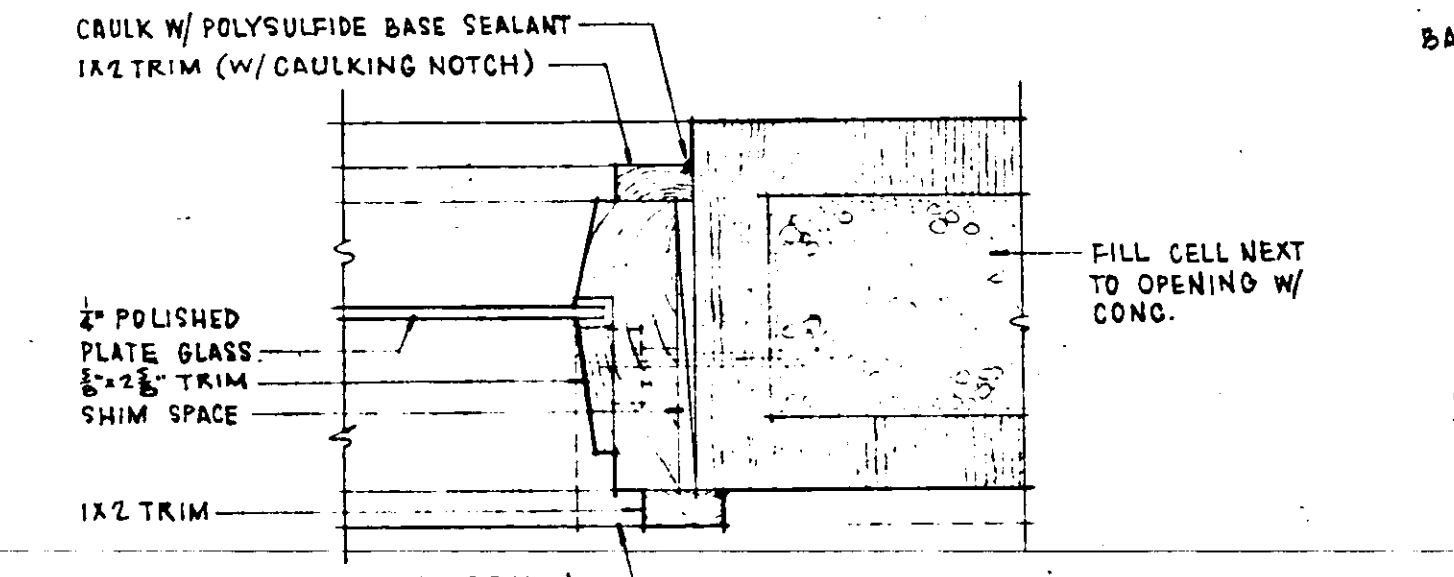
FIXED LOUVER - DETAIL (A/21)
SCALE: 3"=1'-0"



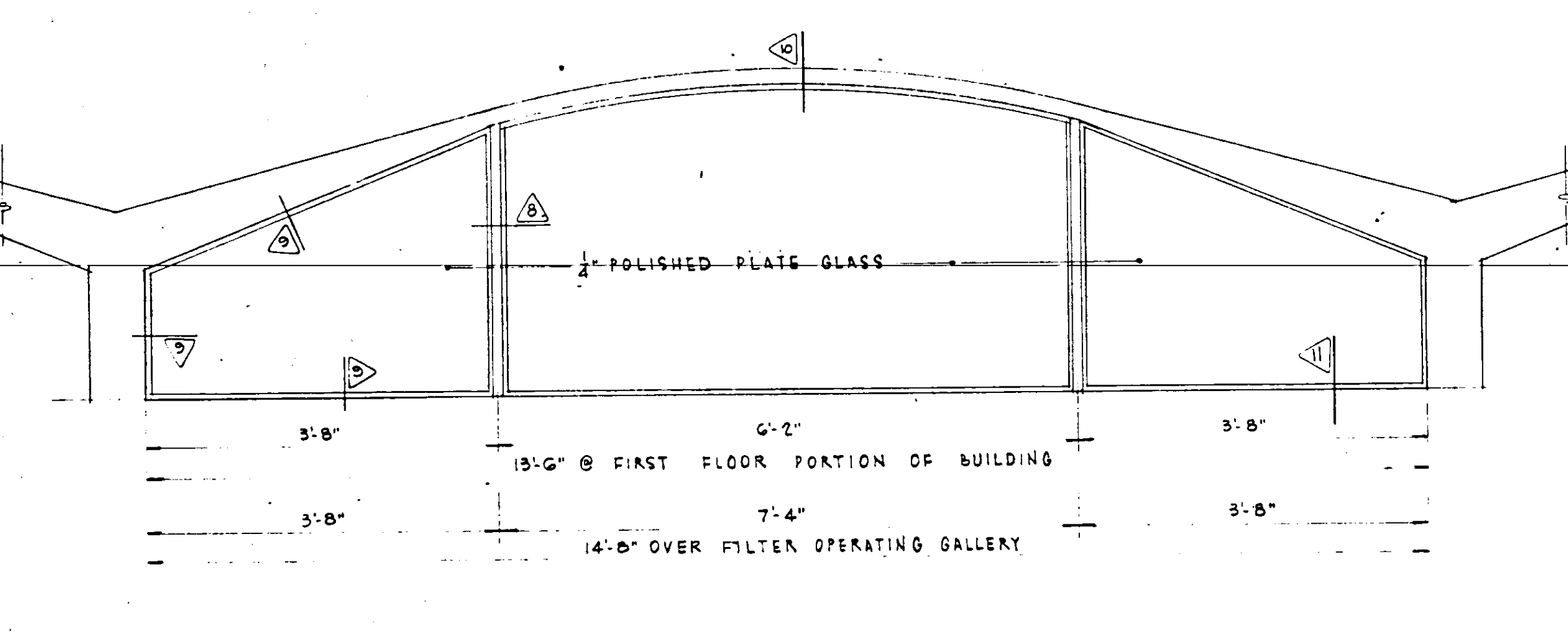
WINDOW WALL - DETAIL (A/22)
SCALE: 3"=1'-0"



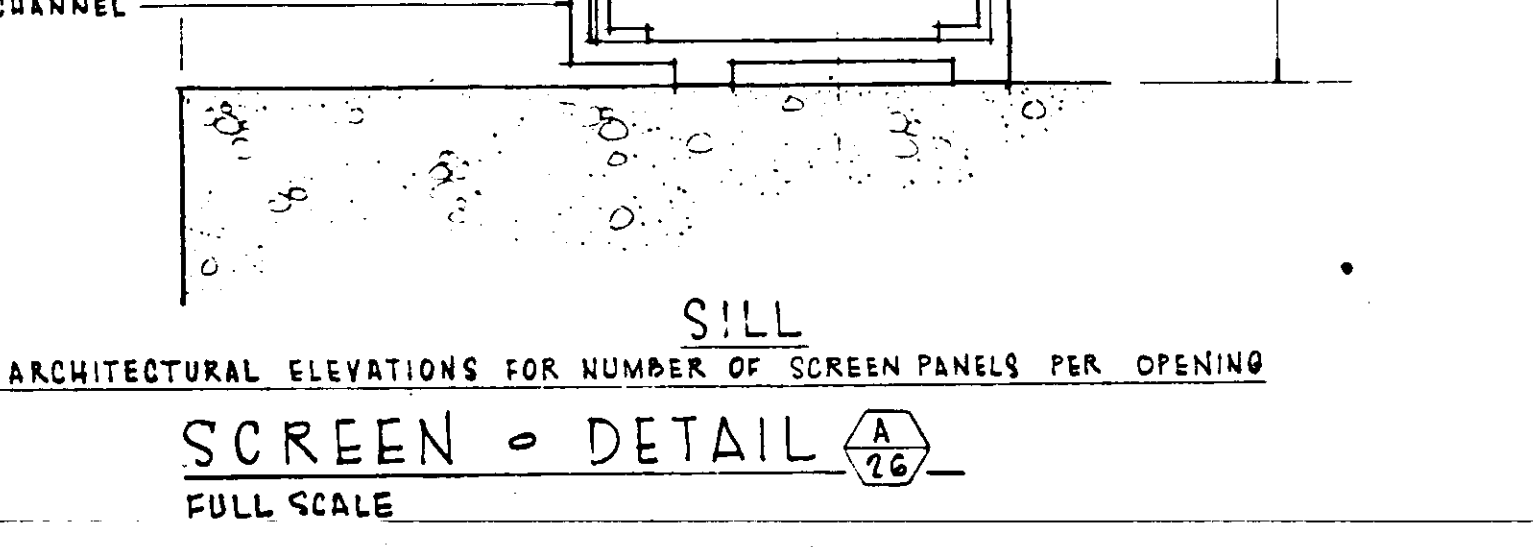
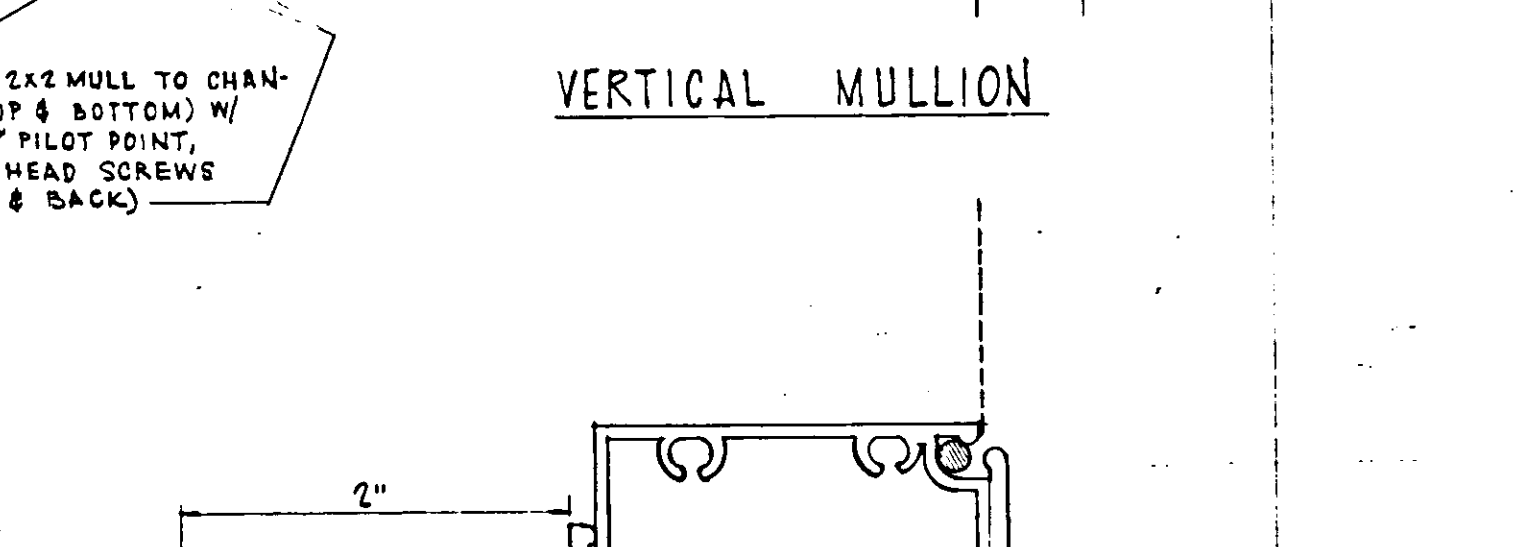
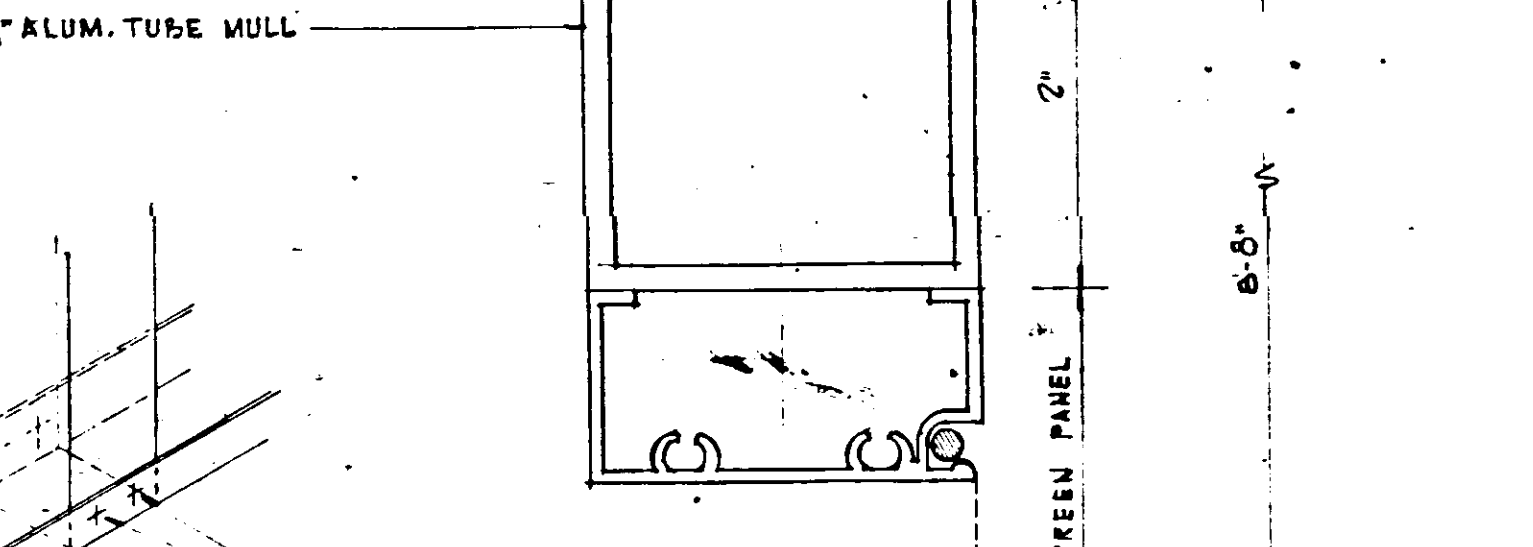
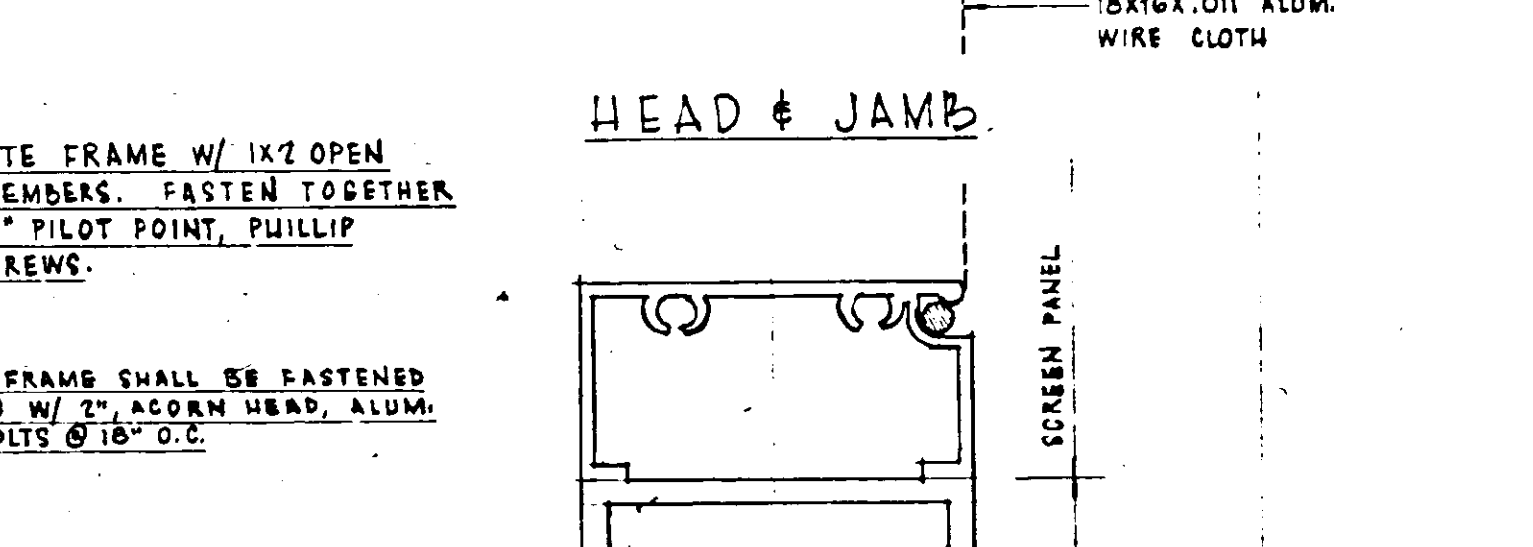
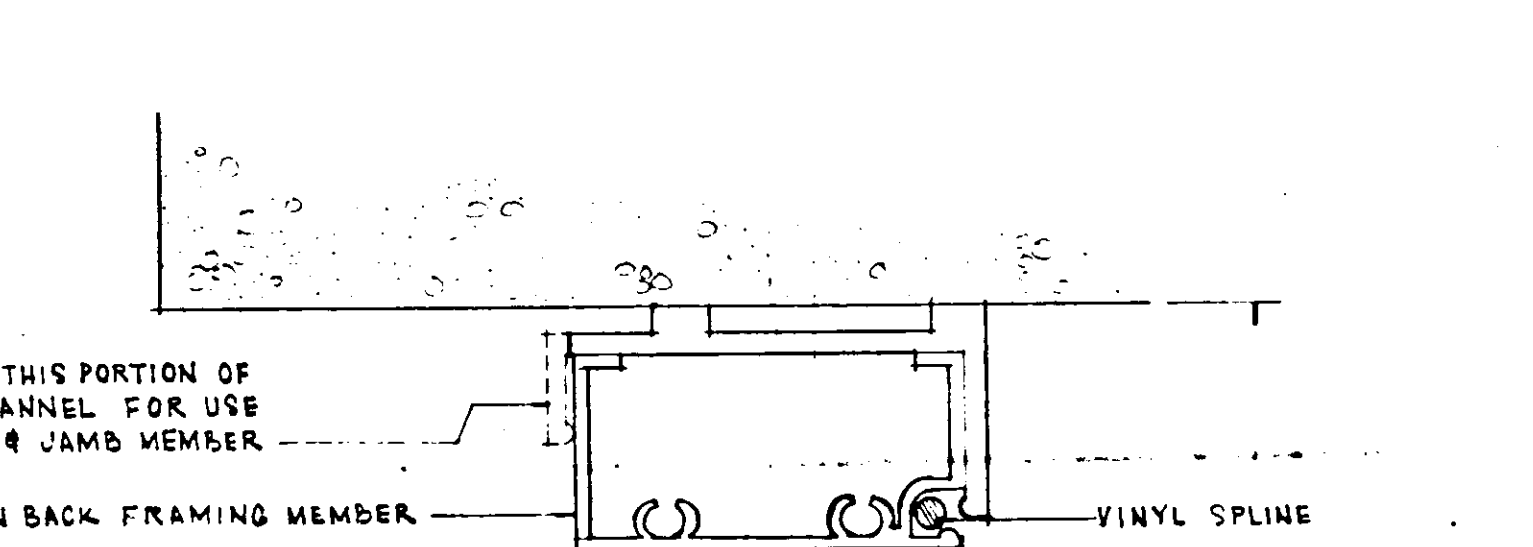
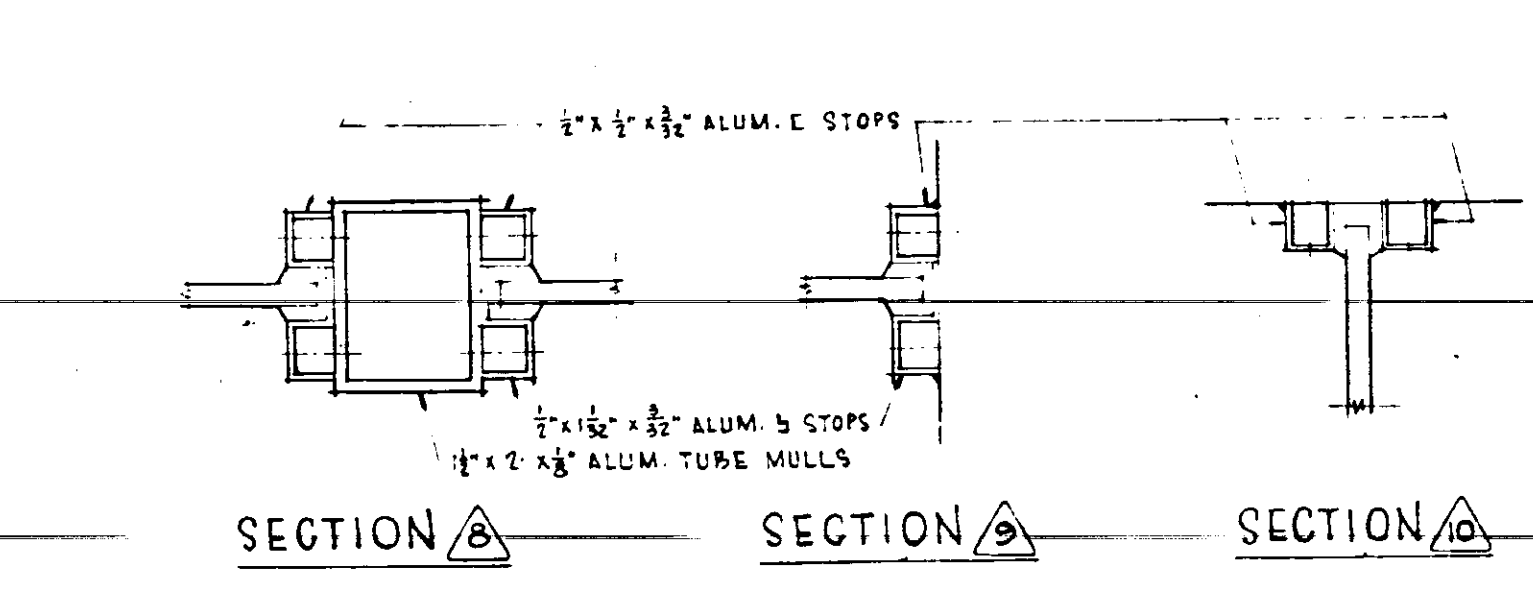
WINDOW DETAIL (A/23)
SCALE: 3"=1'-0"



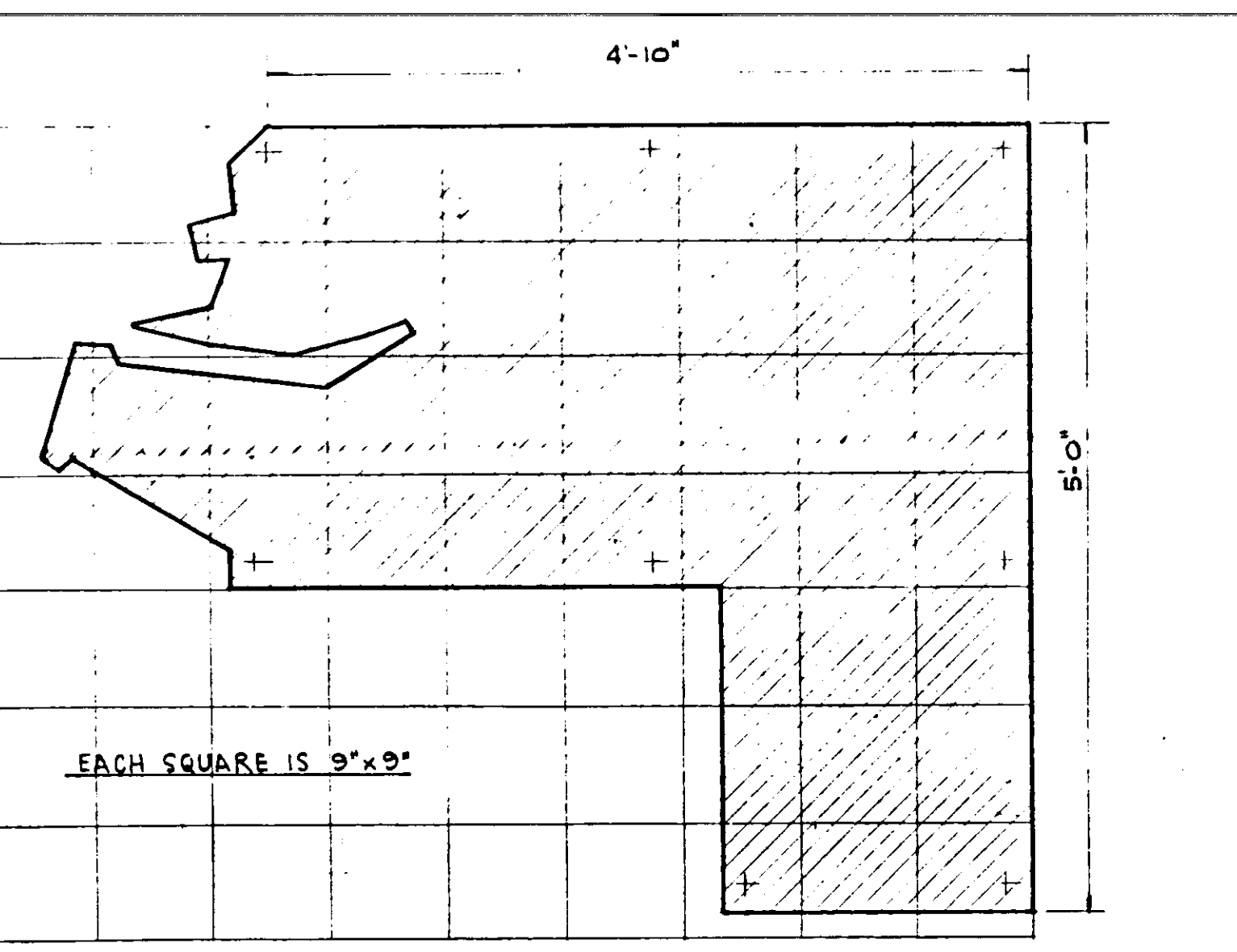
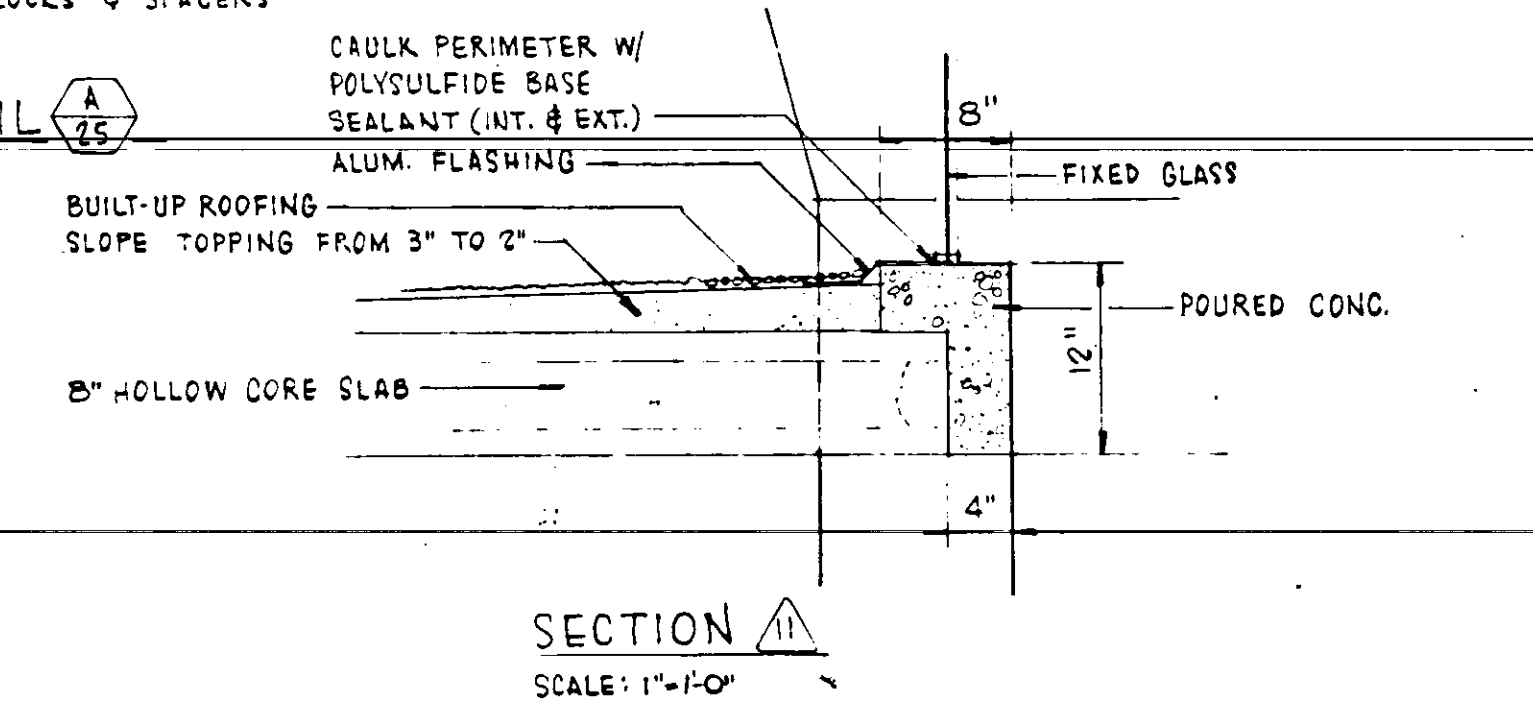
SIGHT WINDOW - DETAIL (A/24)
SCALE: 3"=1'-0"



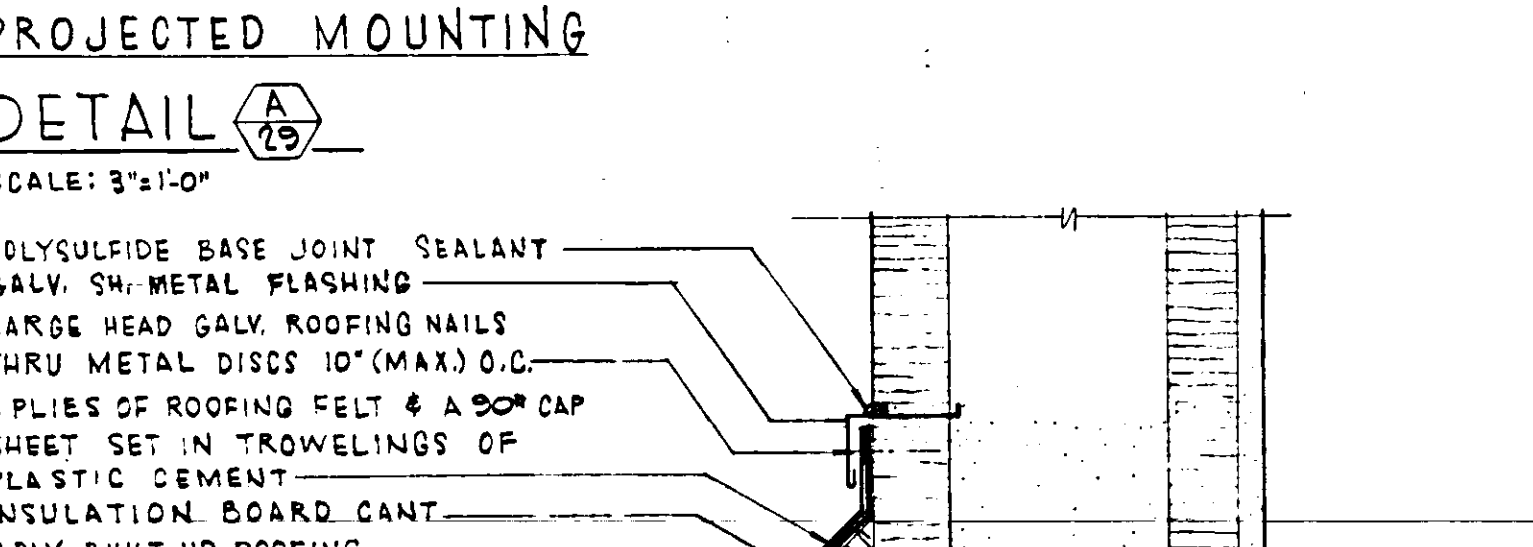
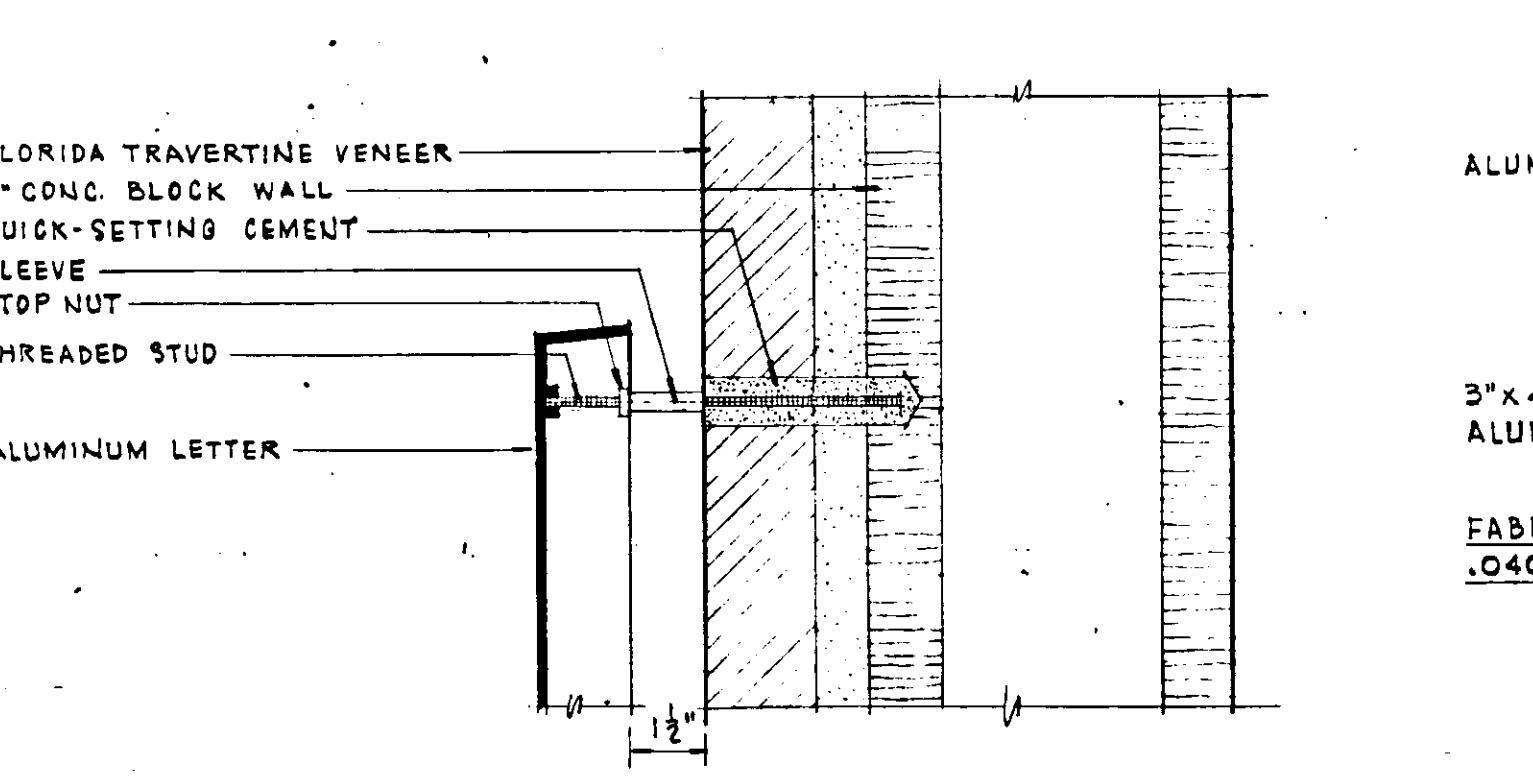
ELEVATION - GLASS BETWEEN LININGS - DETAIL (A/25)
NOT TO SCALE



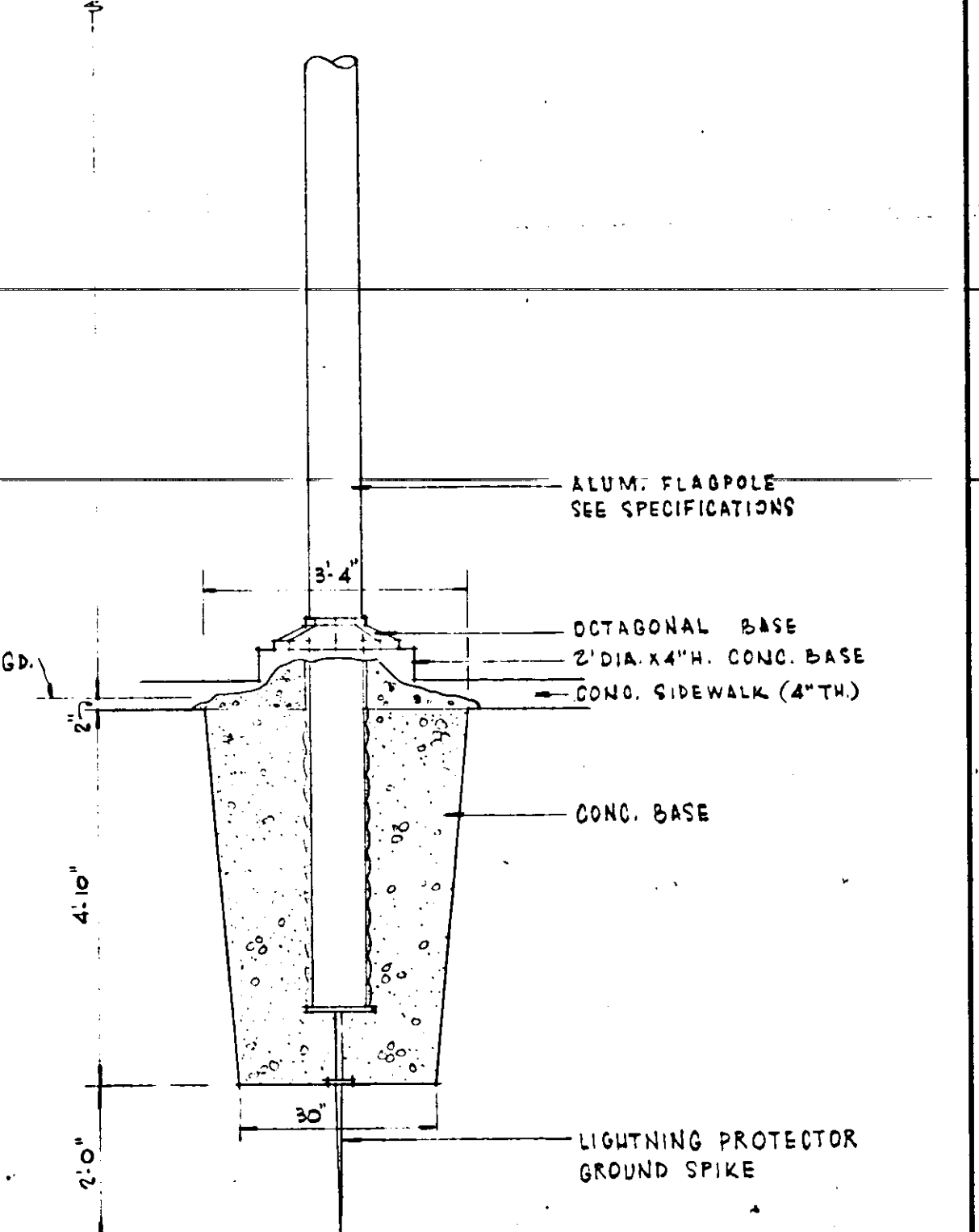
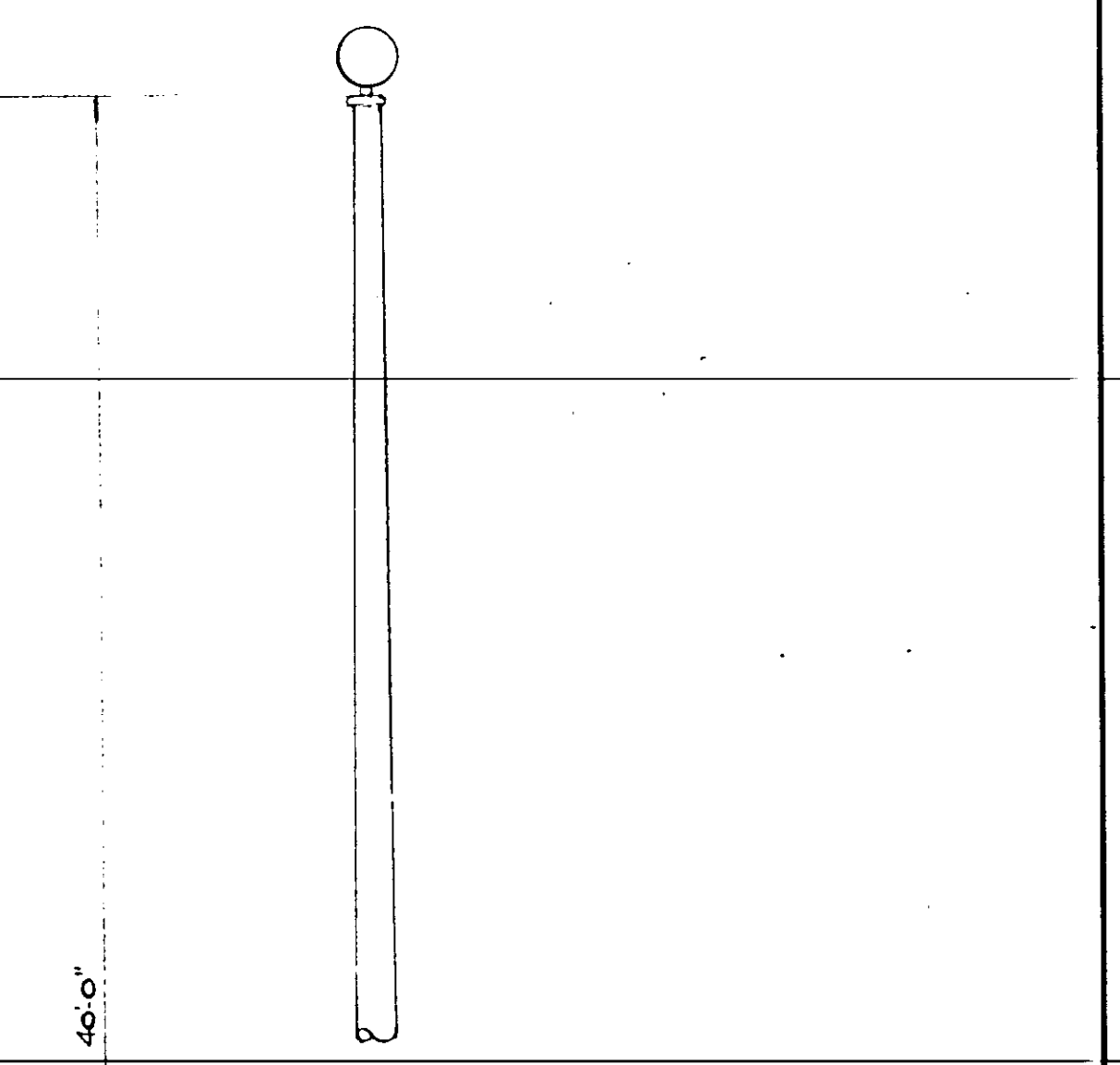
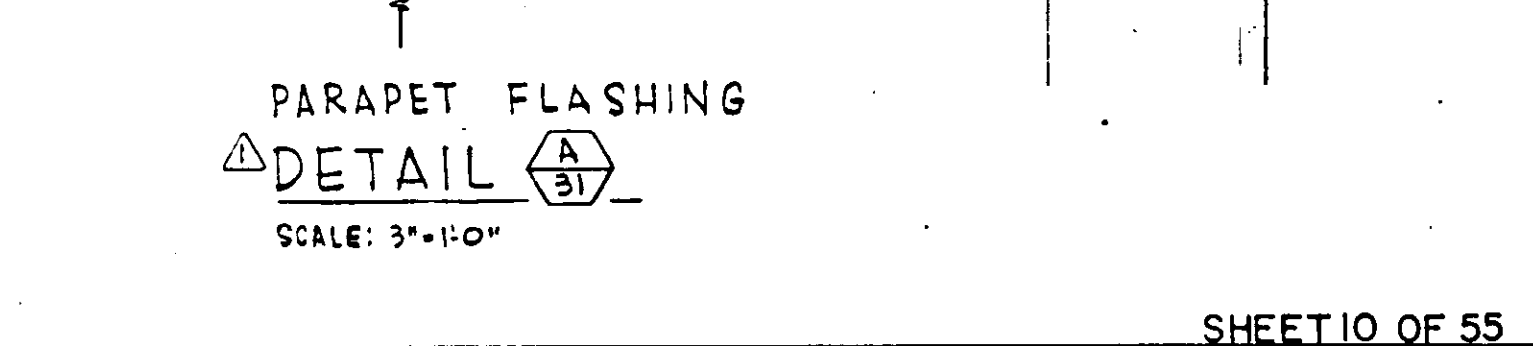
SCREEN - DETAIL (A/26)
FULL SCALE



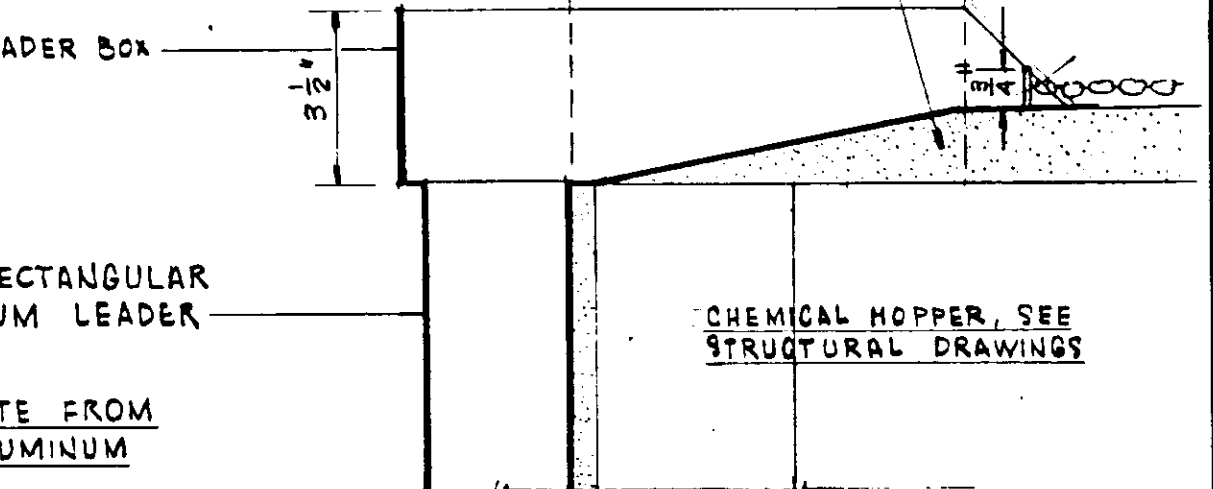
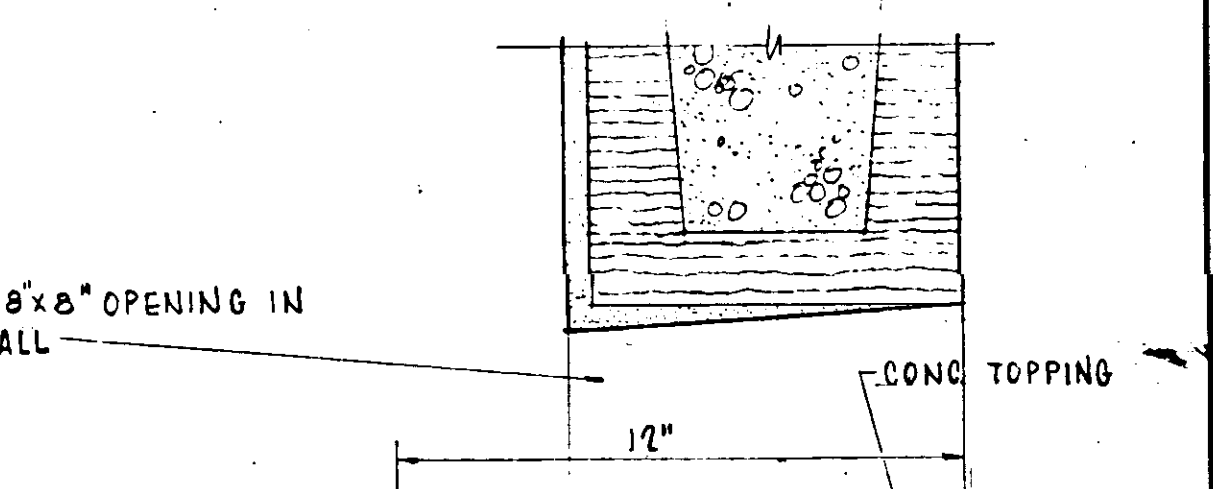
DETAIL (A/28)
SCALE: 1"=1'-0"



PARAPET FLASHING - DETAIL (A/27)
SCALE: 3"=1'-0"



FLAGPOLE - DETAIL (A/27)
SCALE: 1/2"=1'-0"



DETAIL (A/30)
SCALE: 3"=1'-0"

NO.	DATE	DESCRIPTION	BY	CHKD.
1	MAR 67	REVISION		
2	MAY 1965	ADDED DETAIL (A/28) & SECTION (A/27)		

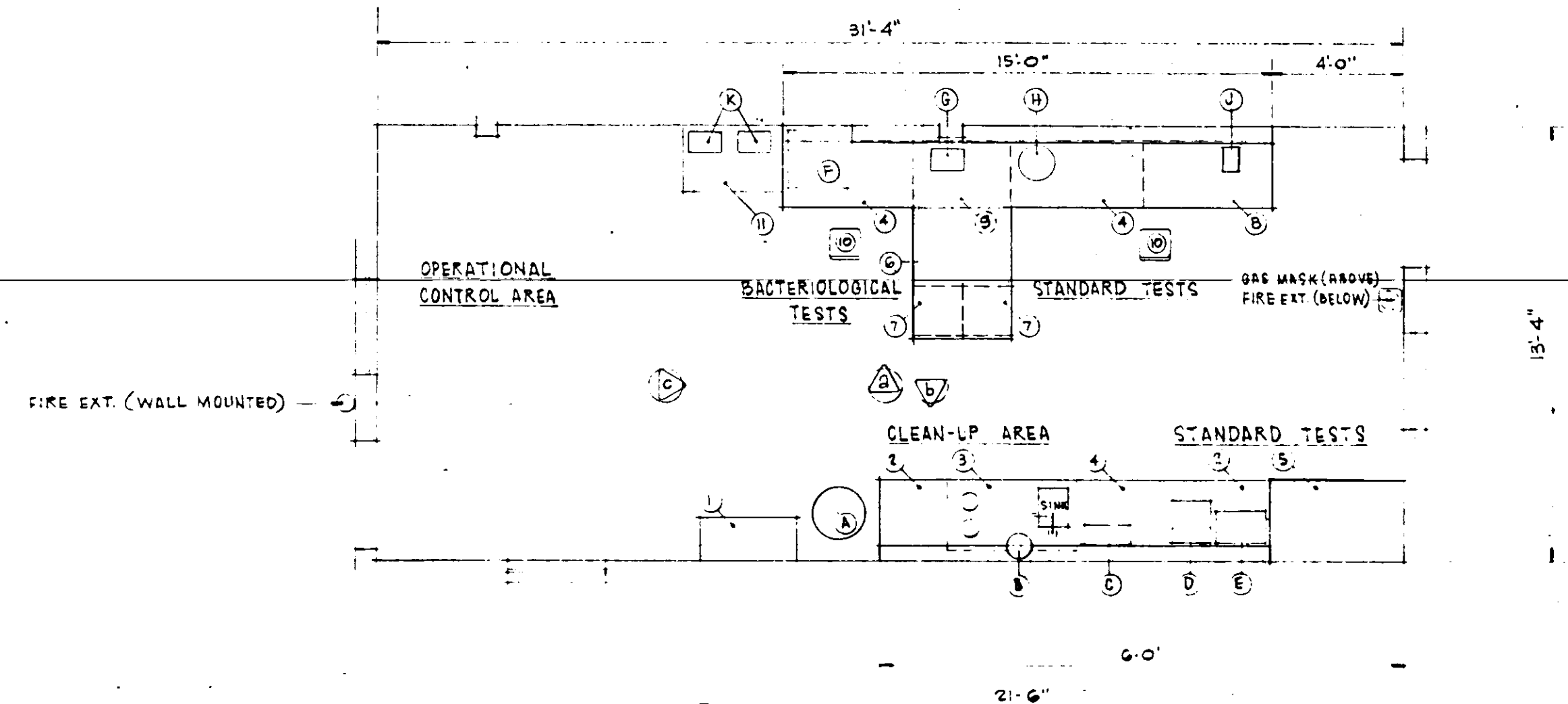
RUSSELL & AXON - INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
MISCELLANEOUS DETAILS - ARCHITECTURAL
MANATEE COUNTY, FLORIDA

DESIGNED BY JFH
DRAWN BY RB
CHECKED BY CEB
DATE FEB., 1965

FILE NO. 6353-3-A-7-III-B
SHEET 8 OF 8
SCALE: AS SHOWN

SEAL
J. F. KAPINS
No. 3748
STATE OF FLORIDA
REGISTERED PROFESSIONAL ENGINEER



LABORATORY LAYOUT

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

LAB FURNITURE

1	SC-523	STORAGE CASE (36")
2	SB-633	4 DRAWER BASE UNIT (24")
3	MS-402	24" S KITCHEN UNIT (48")
4	SB-223	DRAWER & CUPBOARD UNIT (48")
5	SH-782	FUME HOOD W/ SB-GTG BASE (48")
6	ST-192	PLA. APRON FRAME UNIT (29")
7	SB-684	4 DRAWER BASE UNIT (8")
8	SB-618	DRAWER & CUPBOARD UNIT (48")
9	SB-668	CUPBOARD UNIT (36")
10		ADD. LAB STOOL # BACREST
11	TP-400A	OPEN FRAME TABLE (36")

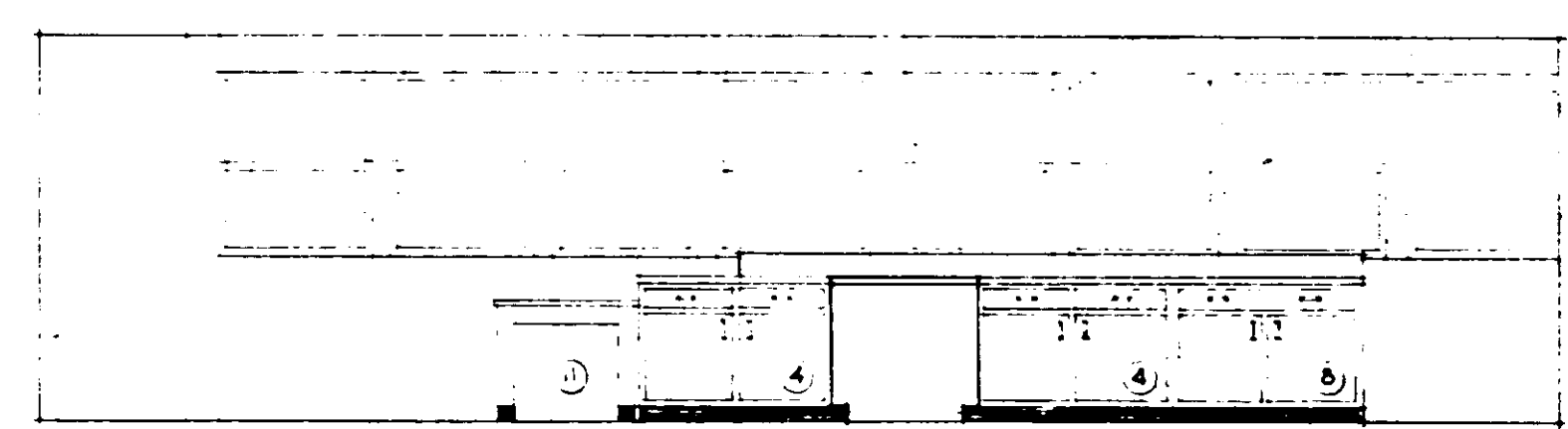
CABINET TOPS SHALL BE 1/2" TH. CHARCOAL GRAY COLOR. THE
SEE SPECIFICATIONS FOR COMPLETE LIST OF LABORATORY
EQUIPMENT, APPARATUS & CHEMICALS
LAB FURNITURE LISTED ABOVE IS WOOD METAL INDUSTRIES, INC. & IS USED FOR
CONFIDENTIALITY & QUALITY. IT DOES NOT LIMIT CONTRACTOR'S CHOICE OF MFR.
WOOD FINISH SHALL BE CACAO MAPLE W/ BLACK JOVE BASE

LAB EQUIPMENT

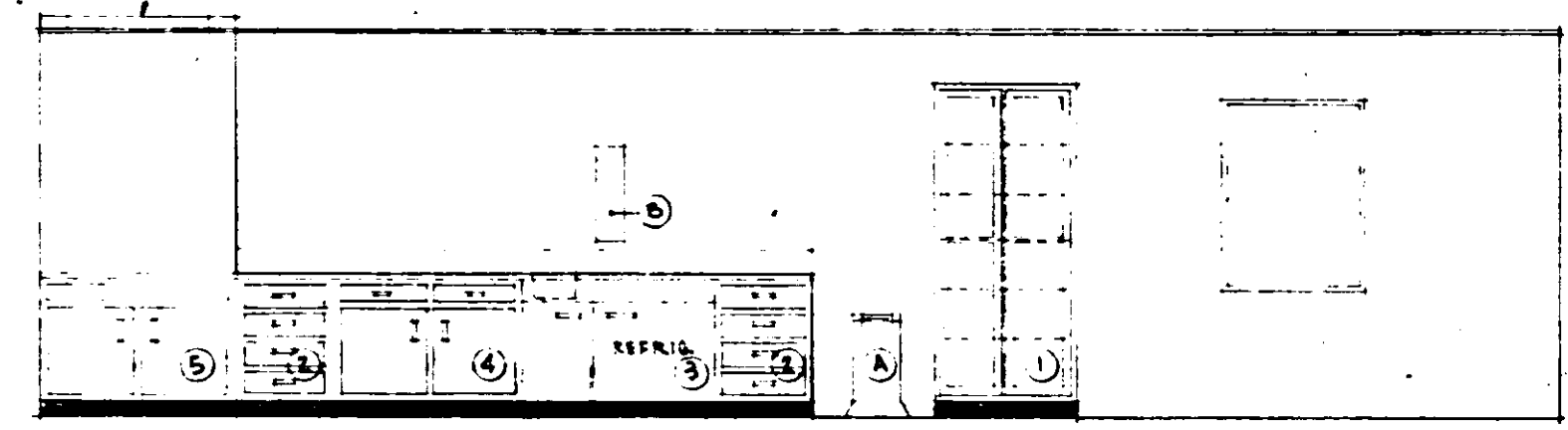
A	AUTOCLAVE
B	DEMINERALIZER
C	DRY LAB SUPPORT
D	MUFFLE FURNACE
E	DRYING OVEN
F	INCUBATOR
G	VACUUM/PRESSURE PUMP
H	CENTRIFUGE
I	PH METER
J	SCALES & BALANCE

NOTES:

- AIR, GAS & WATER FIXTURES USED IN LAB SHALL HAVE PLASTIC COLOR CODED INDICES DESIGNATING SERVICES AS FOLLOWS:
COLD WATER _____ LIGHT BLUE A.R. _____ GREEN
HOT WATER _____ WHITE GAS _____ RED
RAW WATER _____ DARK BLUE
- DAVIS KITCHEN UNIT SHALL BE PURCHASED WITHOUT STAINLESS STEEL TOP & SINK.
- SINK (PF-7) SHALL HAVE A SF-404 SINGLE GOOSENECK FAUCET, DECK TYPE (RAW WATER) & A SF-408 HOT & COLD WATER GOOSENECK FAUCET, DECK TYPE.
- AIR & GAS FIXTURES SHALL BE GROUND KEY TYPE W/ TURRET. SINGLE IN HOOD, DOUBLE (50") ELSEWHERE.
- FUME HOOD SHALL BE INSTALLED COMPLETE W/ LEAD OVAL CUP SINK, LEAD DRUM TRAP-TYPE, REMOTE CONTROLLED SINGLE GAS COCK, REMOTE CONTROLLED SINGLE AIR COCK, REMOTE CONTROLLED COLD WATER GOOSENECK FAUCET, BUILT-IN BLOWER, FLUORESCENT LIGHT FIXTURE & DUPLEX OUTLET.



ELEVATION A

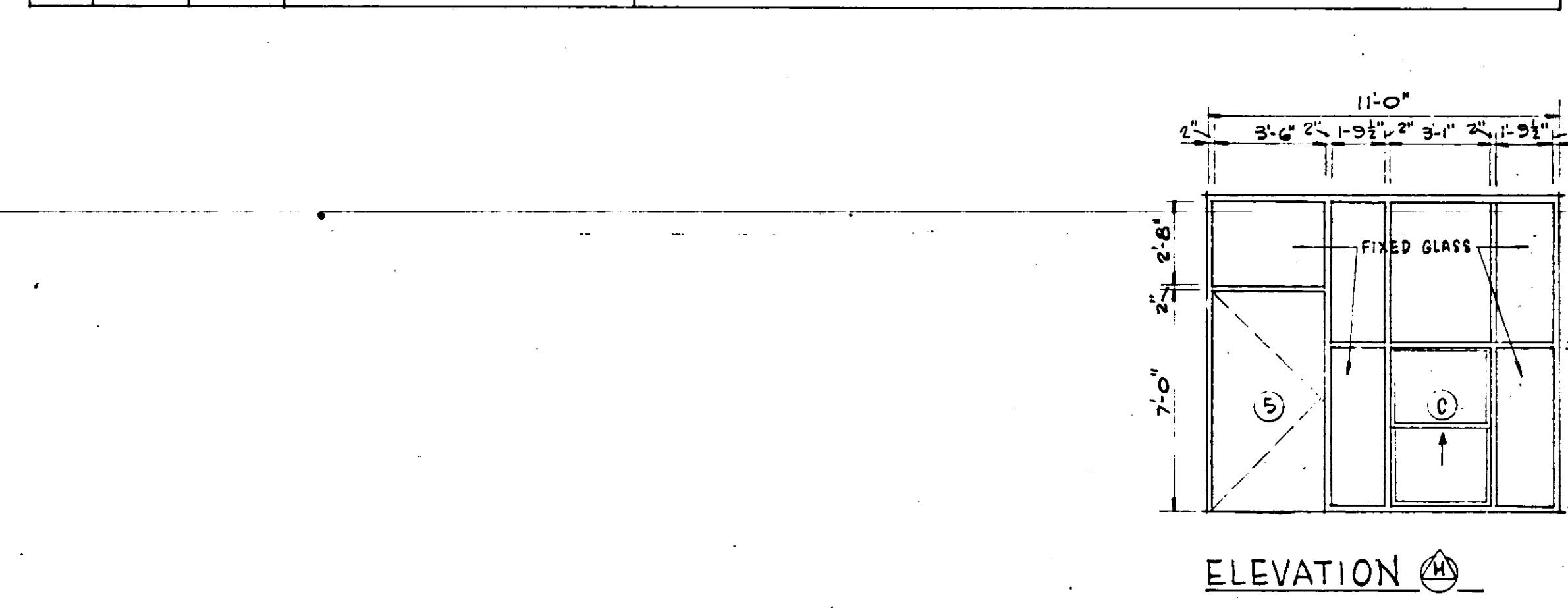


ELEVATION B

LABORATORY ELEVATIONS

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

MARK	WIDTH	HEIGHT	MATERIAL & TYPE	REMARKS	DETAIL
A	2'-0"	2'-9"	ALUM. INTERMEDIATE PROJECTED		A
B	5'-1"	4'-2 1/2"	ALUM. & GLASS SLAT JALOUSIE		B
C	3'-0"	5'-0"	ALUM. SINGLE HUNG		C
D	3'-0"	3'-0"	ALUM. SINGLE HUNG	R 13'-6" CL. OP'NG. CLOSE W/ 4 WINDOWS & VERT. MULLS	D
E	3'-0"	3'-0"	ALUM. SINGLE HUNG		E



WINDOW SCHEDULE

AREA	SPACE FINISH				FLOOR	BASE	CEILING	REMARKS
	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL				
ENTRY	SEE SECT. A	GLASS	SPLIT FACE STONE	CMU-C.G. (304)	Q.T.-	Q.T.-	A.PLSTR-S.	
OFFICE	CMU-C.G. (351)	CMU-C.G. (351)	CMU-C.G. (304)	CMU-C.G. (351)	Q.T.-	Q.T.-	A.PLSTR-S.	
PUMP ROOM (LOWER)	CONC.-C.G. (304)	CMU-C.G. (304)	CMU-C.G. (304)	CMU-C.G. (304)	Q.T.-	Q.T.-	A.PLSTR-S. (2ND FL.)	
PUMP ROOM (UPPER)	CMU-C.G. (379)	CMU-C.G. (379)	CMU-C.G. (379)	CMU-C.G. (379)	---	---	A.PLSTR-S.	
TOILET (FIRST FLOOR)	G.S.U. G75-STARK	G.S.U. G75-STARK	G.S.U. G75-STARK	G.S.U. G75-STARK	Q.T.-	Q.T.-	CMT.PLSTR-SUSP.PTD. 311	
CHEMICAL FEEDER RM. (UNDER HOPPERS)	CMU/CONC.-C.G.	CMU-C.G.	CMU-C.G.	---	Q.T.-	Q.T.-	SYSTEM OF HOPPERS (311)	(304) TO 5'-0" ABOVE FL. # (379) TO CEILING
BAG STORAGE AREA	CMU-C.G.	---	---	CMU-C.G.	Q.T.-	Q.T.-	A.PLSTR-S.	(304) TO 5'-0" ABOVE FL. # (379) TO CEILING
CHLORINE CYLINDER STORAGE	CMU-PLSTR.-C.G. (379)	CMU-PLSTR.-C.G. (379)	CMU-PLSTR.-C.G. (379)	---	CONC.-W/C.	VINYL - BLACK	CONC.-PTD. 311	
FILTER GALLERY	CONC.-C.G. (351)	CONC.-C.G. (351)	---	CONC.-C.G. (351)	Q.T.-	Q.T.-	CONC.-C.G. (311)	
MEN'S TOILET (SECOND FLOOR)	CMU-C.G. (358)	CMU-C.G. (358)	CMU-C.G. (358)	CMU-C.G. (358)	Q.T.-	Q.T.-	CMT.PLSTR-SUSP.PTD. 311	
WOMEN'S TOILET (SECOND FLOOR)	CMU-C.G. (358)	CMU-C.G. (358)	CMU-C.G. (358)	CMU-C.G. (358)	Q.T.-	Q.T.-	CMT.PLSTR-SUSP.PTD. 311	
SECOND FLOOR HALL	CMU-C.G. (304)	CMU-C.G. (304)	---	CMU-C.G. (304)	Q.T.-	Q.T.-	A.PLSTR-S.	
LABORATORY & OPER. CONTROL AREA	CMU-C.G. (379)	CMU-C.G. (379)	CMU-C.G. (379)	CMU-C.G. (379)	Q.T.-	Q.T.-	LUMINOUS CLG. (SEE ELECTRICAL PLANS FOR DET.)	
CHLORINATOR ROOM	GLASS	CMU-PLSTR.-C.G. (379)	CMU-PLSTR.-C.G. (379)	CMU-PLSTR.-C.G. (379)	Q.T.-	Q.T.-	A.PLSTR-S.	
PORCH (2ND FLOOR)	---	CMU-C.G. (358)	GLASS	CMU-C.G. (358)	Q.T.-	Q.T.-	A.PLSTR-S.	
FILTER OPERATING GALLERY	SCREENING	---	---	---	CMU-PTD. 358	---	CONC.-PTD. 311	
FILTER AREAS	SCREENING	SCREENING	---	---	CMU-PTD. 358	SCREENING	CONC.-PTD. 311	

SPACE FINISH LEGEND

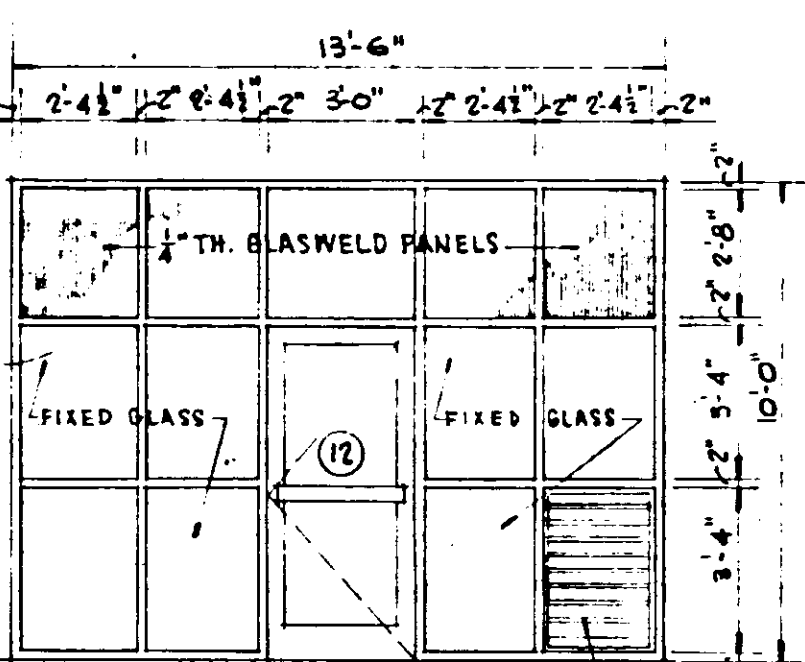
- A.PLSTR-S. ACoustical PLASTER-SPRAYED ON
- C.G. COLD GLAZE CEMENTITIOUS FINISH
- CMT. CEMENT
- CMU CONCRETE MASONRY UNIT
- CONC. CONCRETE
- G.S.U. GLAZED STRUCTURAL UNIT
- PTD. PAINTED
- PLSTR. PLASTER
- Q.T. QUARRY TILE
- SUSP. SUSPENDED

INERTOL'S PAINT - NO. & COLOR

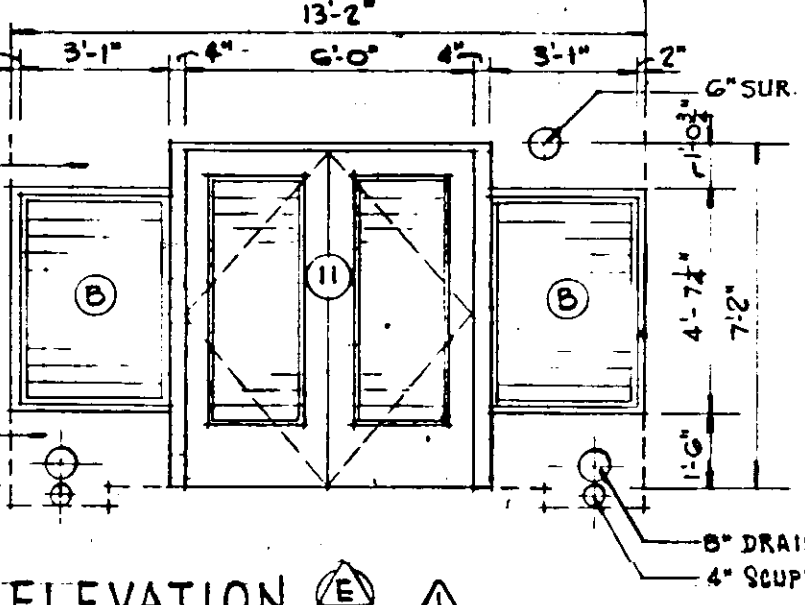
- 304 SEA GREEN
- 311 WHITE
- 351 CANARY
- 358 NORTHERN SKY (BLUE)
- 379 IVORY

EXTERIOR COLORS: COLD GLAZE CEMENTITIOUS FINISH COLOR SHALL MATCH INERTOL'S NO. 358 (NORTHERN SKY) IN A TEXTURED FINISH W/ DIAMOND DUST. EXPOSED CONC., COLUMNS, BEAMS, UNDERSIDE OF ROOFS, ETC. SHALL BE INERTOL'S NO. 311 (WHITE)

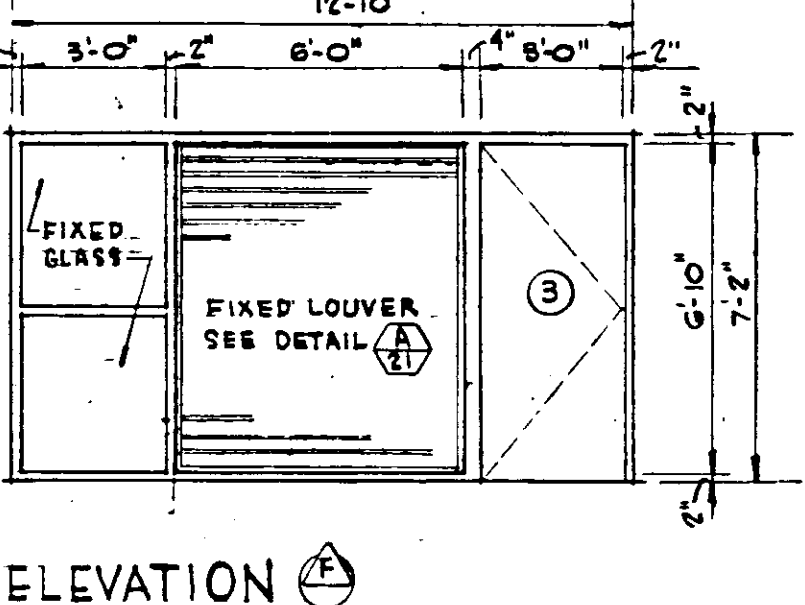
INTERIOR COLORS: COLD GLAZE CEMENTITIOUS FINISH COLOR SHALL MATCH INERTOL'S NUMBERS SHOWN IN PARENTHESES & SHALL HAVE A SMOOTH TILE FINISH. QUARRY TILE & BASE SHALL BE SAHARA (MURRAY QUARRY TILE). FLOOR OF CHLORINE CYLINDER STORAGE SHALL HAVE TERRA COTTA COLOR ADDED TO CONCRETE (MASTER BUILDERS CO). COLOR OF GLAZED STRUCTURAL UNITS SHALL BE NO. 675-BLUE MOTTLED (STARK CERAMICS, INC). ACoustical PLASTER-SPRAYED ON SHALL BE WHITE



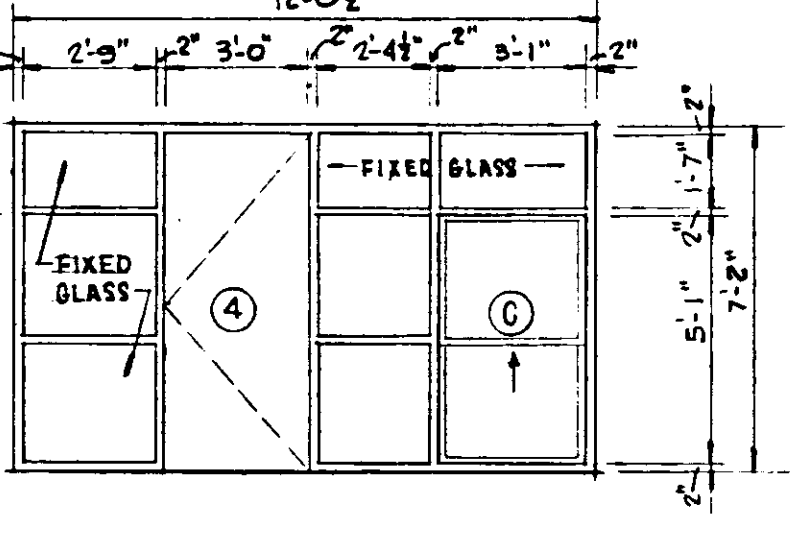
ELEVATION C



ELEVATION D



ELEVATION E

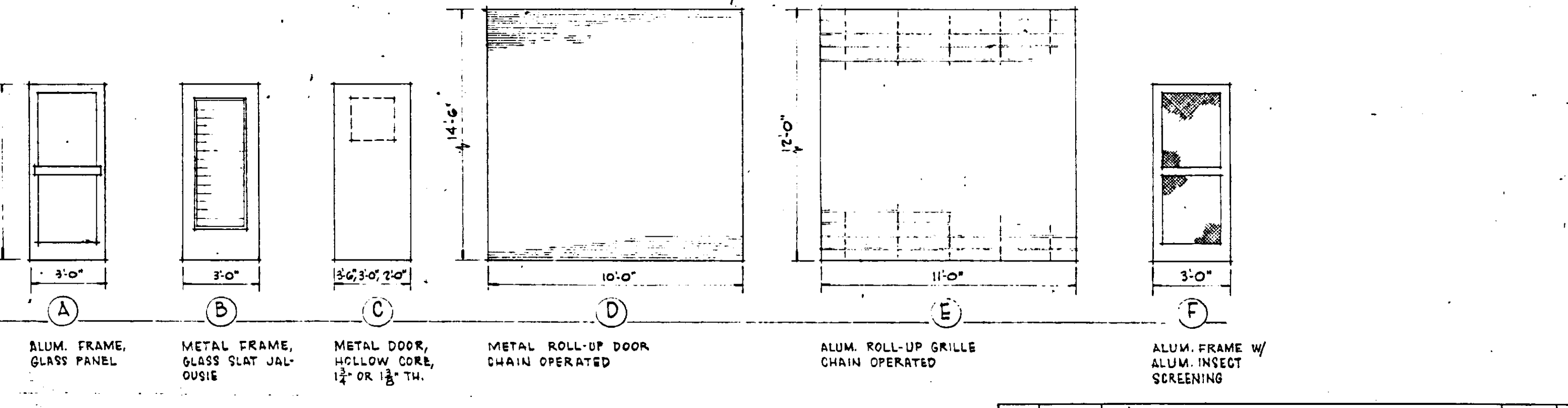


ELEVATION F

WINDOW WALL ELEVATIONS

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

MARK	WIDTH	HEIGHT	THICK	TYPE	MATERIAL	LITE	LOUVER	THK'LD	LOCK	CLOSER	FINISH	DET.	REMARKS
1	2'-3"	7'-0"	1 1/2"	A	GL W/ALUM.FR.	FULL	---	ALUM.	PER MFR	PER MFR	---	---	
2	10'-0"	14'-6"	---	D	METAL	---	---	---	---	---	PAINT	---	
3	3'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	ALUM.	42B	---	PAINT	---	
4	3'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	ALUM.	42B	---	PAINT	---	
5	3'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	ALUM.	42B	---	PAINT	---	
6	11'-0"	12'-0"	---	E	ALUM. GRILLE	---	---	---	---	PER MFR	---	---	
7	11'-0"	12'-0"	---	E	ALUM. GRILLE	---	---	---	---	PER MFR	---	---	
8	3'-0"	7'-0"	1 1/2"	C	H.MET.	12x16	---	---	42B	*70	PAINT	---	
9	3'-0"	7'-0"	1 1/2"	C	H.MET.	20x20	---	---	410	*70	PAINT	---	
10	2'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	---	---	---	PAINT	---	*4449 (PULL) & #2314 (24"x8" KICK PLATE) EA. SIDE
11	2'-3"	7'-0"	1 1/2"	B	GL. SLAT JALOUSIE	---	---	ALUM.	---	*70 A.L.	PAINT	---	*42B A.L.W.*1062
12	3'-0"	7'-0"	1 1/2"	A	GL W/ALUM.FR.	FULL	---	ALUM.	PER MFR	PER MFR	---	---	
13	3'-0"	7'-0"	1 1/2"	C	H.MET.	20x20	---	---	---	*70	PAINT	---	
14	3'-0"	7'-0"	1 1/2"	C	H.MET.	20x20	---	---	---	*70	PAINT	---	
15	2'-3"	7'-0"	1 1/2"	C	H.MET.	20x20	---	---	---	*70 A.L.	PAINT	---	*42B A.L.W.*1062
16	2'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	---	---	*70	PAINT	---	*4449 (PULL) & #2314 (24"x8" KICK PLATE) EA. SIDE
17	2'-0"	7'-0"	1 1/2"	C	H.MET.	---	---	---	---	*70	PAINT	---	
18	3'-0"	7'-0"	---	F	ALUM. FRAME W/ ALUM. SCREENING	---	---	---	---	---	---	---	
19	3'-0"	7'-0"	---	F	---	---	---	---	---	---	---	---	
20	3'-0"	7'-0"	---	F	---	---	---	---	---	---	---	---	
21	3'-0"	7'-0"	---	F	---	---	---	---	---	---	---	---	
22	3'-0"	7'-0"	---	F	---	---	---	---	---	---	---	---	



DOOR HARDWARE SHALL BE P.F. GORDIN (CATALOG 30) OR APPROVED EQUAL. FINISH SHALL BE US-28 UNLESS NOTED OTHERWISE. DESIGN SHALL BE HARMONY DESIGN NO. 006-ALUMINUM HINGES: EXTERIOR DOORS, #222Y, US28D, AWS 4x4, 1 1/2 PR. PER DOOR. INTERIOR DOORS, #220, US26D, AWS 4x4, 1 1/2 PR. PER DOOR.

NO.	DATE	DESCRIPTION	BY	CHK.
1	NOV. 9, 1965	REVISED WINDOWS IN ELEVATION (E)	RS	

RUSSELL & AXON - INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

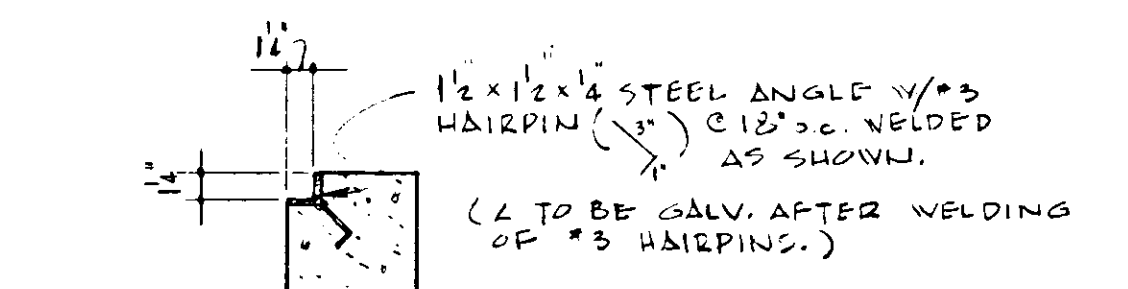
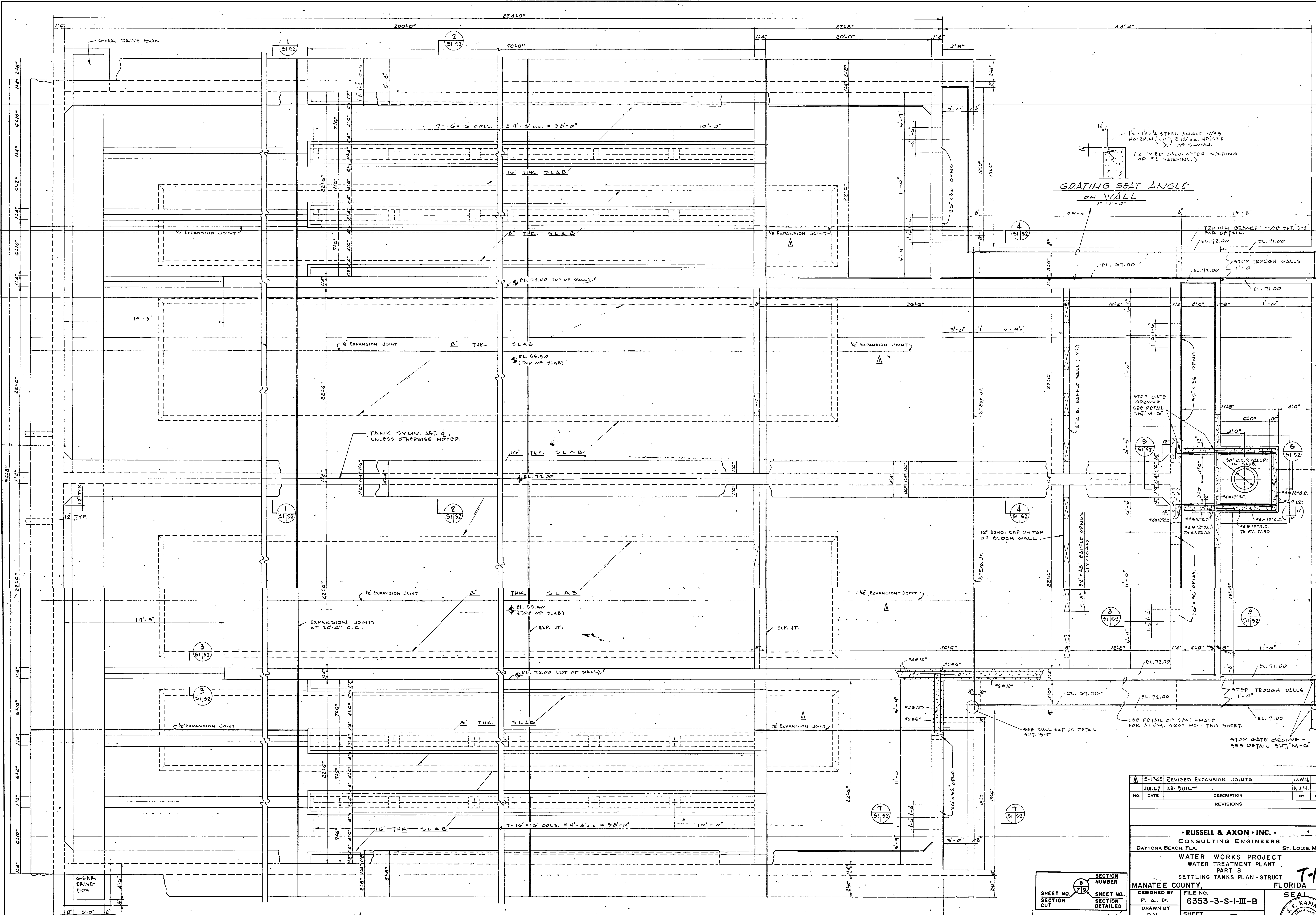
WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
DOOR & WINDOW SCHEDULE - ARCHITECTURAL

DESIGNED BY JFH
DRAWN BY RZ
CHECKED BY CEB
DATE/FEB. 1965

FILE NO. 6353-3-A-8-III-B
SHEET (A-8) II-B
OF 8 SHEETS
SCALE: AS SHOWN

J. F. KAPINS
No. 3748
STATE OF FLORIDA
REGISTERED ENGINEER

SHEET 11 OF 55



GRATING SEAT ANGLE ON WALL

TROUGH BRACKET - SEE SHT. S-2 FOR DETAIL. EL. 72.00

STOP TROUGH WALLS 1'-0\"/>

EL. 71.00

EL. 67.00

EL. 72.00

EL. 71.00

STOP GATE GROOVE SEE DETAIL SHT. M-6

30\"/>

4\"/>

4\"/>

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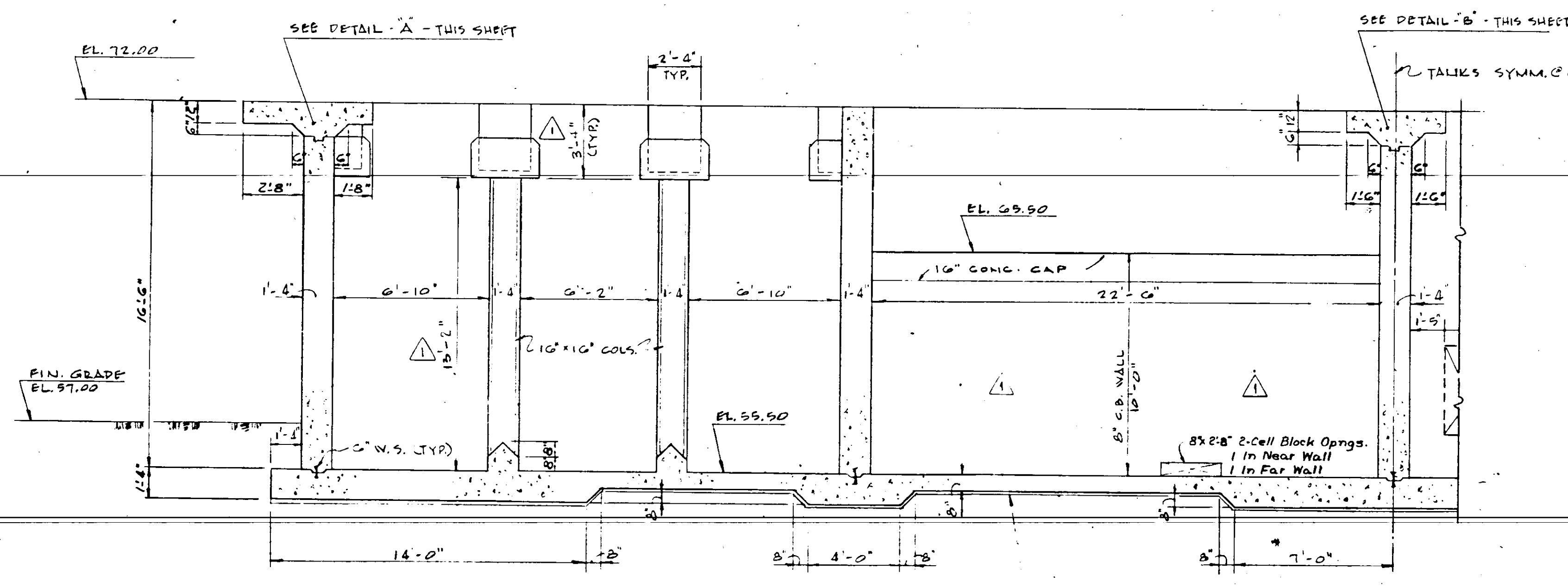
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4\"/>

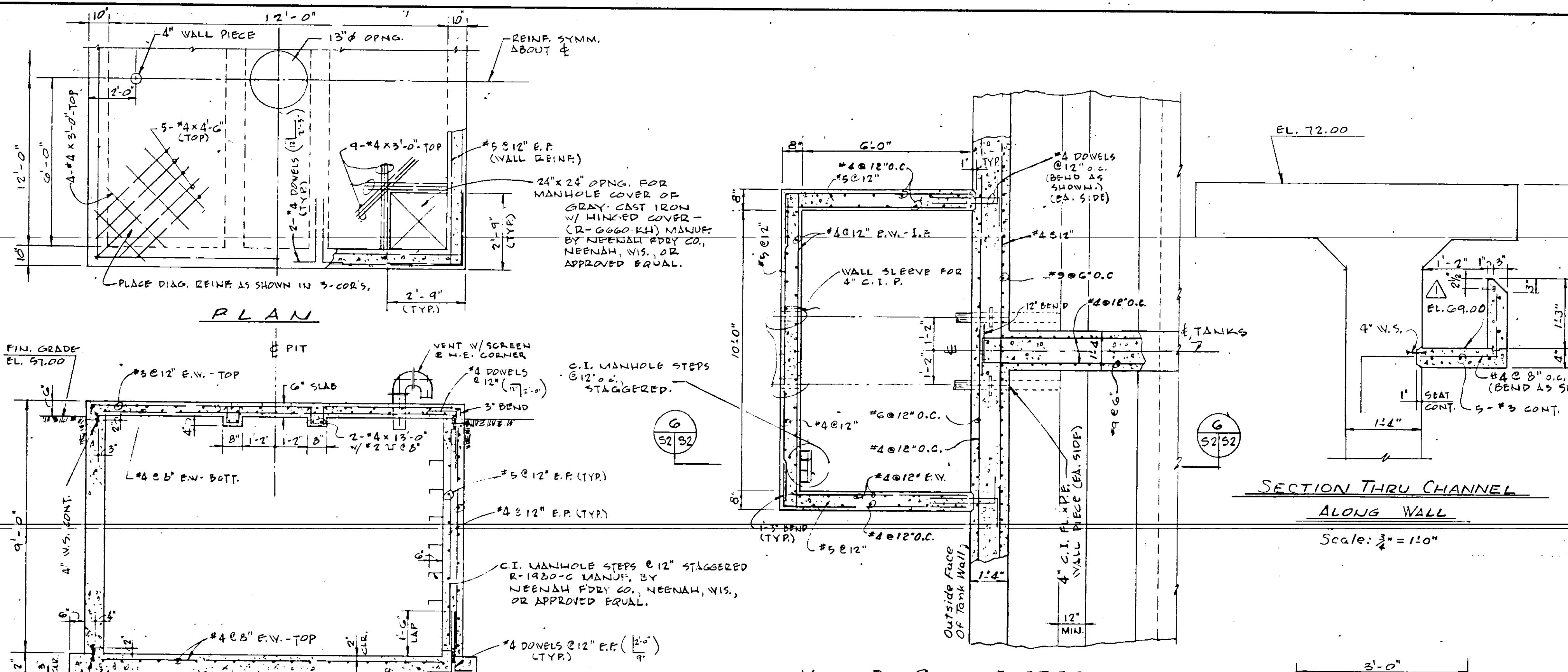
PLAN OF SETTLING TANKS

5-1765	REVISED EXPANSION JOINTS	J.W.H.
11-1-67	AS-BUILT	A.J.N.
NO.	DATE	DESCRIPTION
		BY
		CRK.
		REVISIONS
RUSSELL & AXON • INC. • CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.		
WATER WORKS PROJECT WATER TREATMENT PLANT PART B SETTLING TANKS PLAN-STRUCT.		
MANATEE COUNTY, FLORIDA		T-12
DESIGNED BY	FILE NO.	SEAL
DRAWN BY	6353-3-S-I-III-B	
CHECKED BY	SHEET	
DATE	OF 13 SHEETS	
FEB. 1965	SCALE: AS SHOWN	

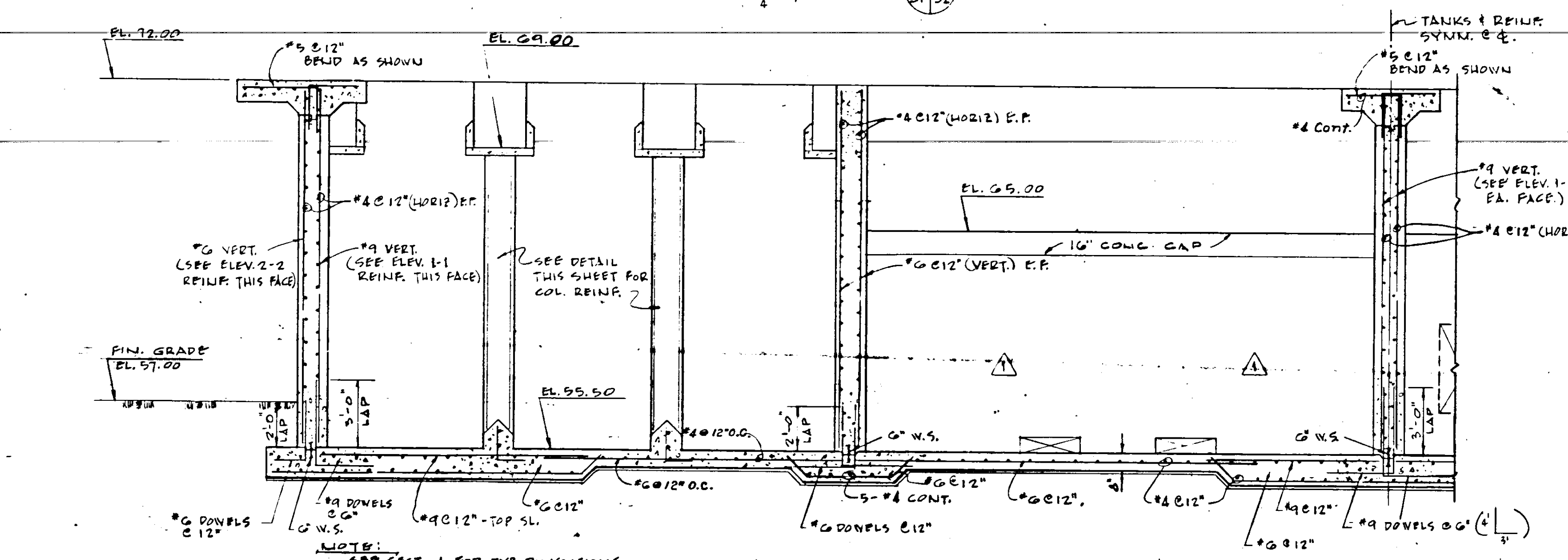
NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.



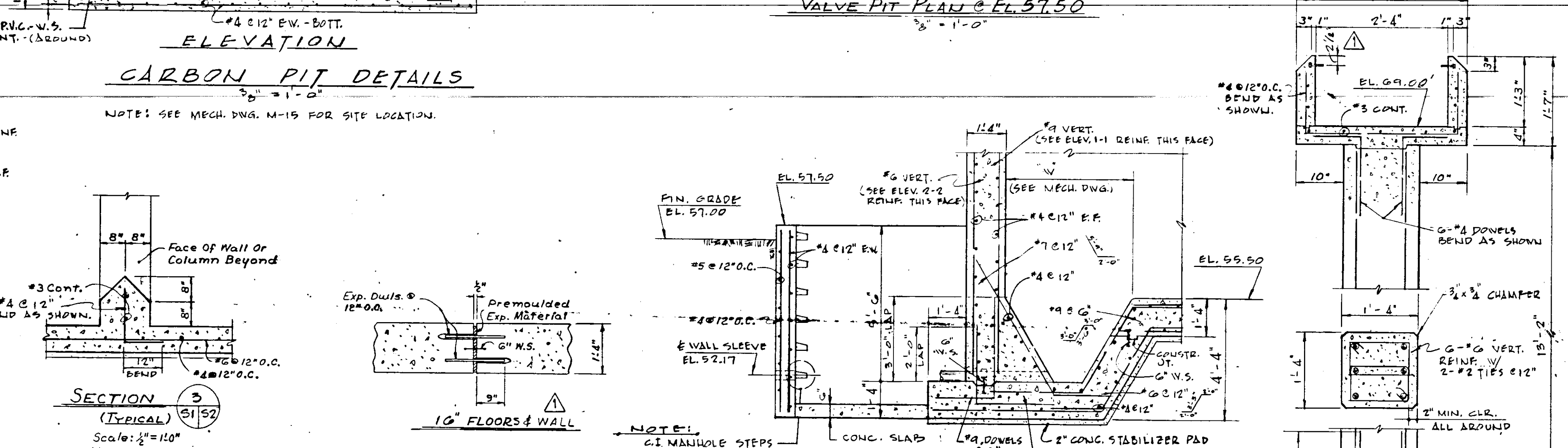
SECTION 1
1" = 1'-0"



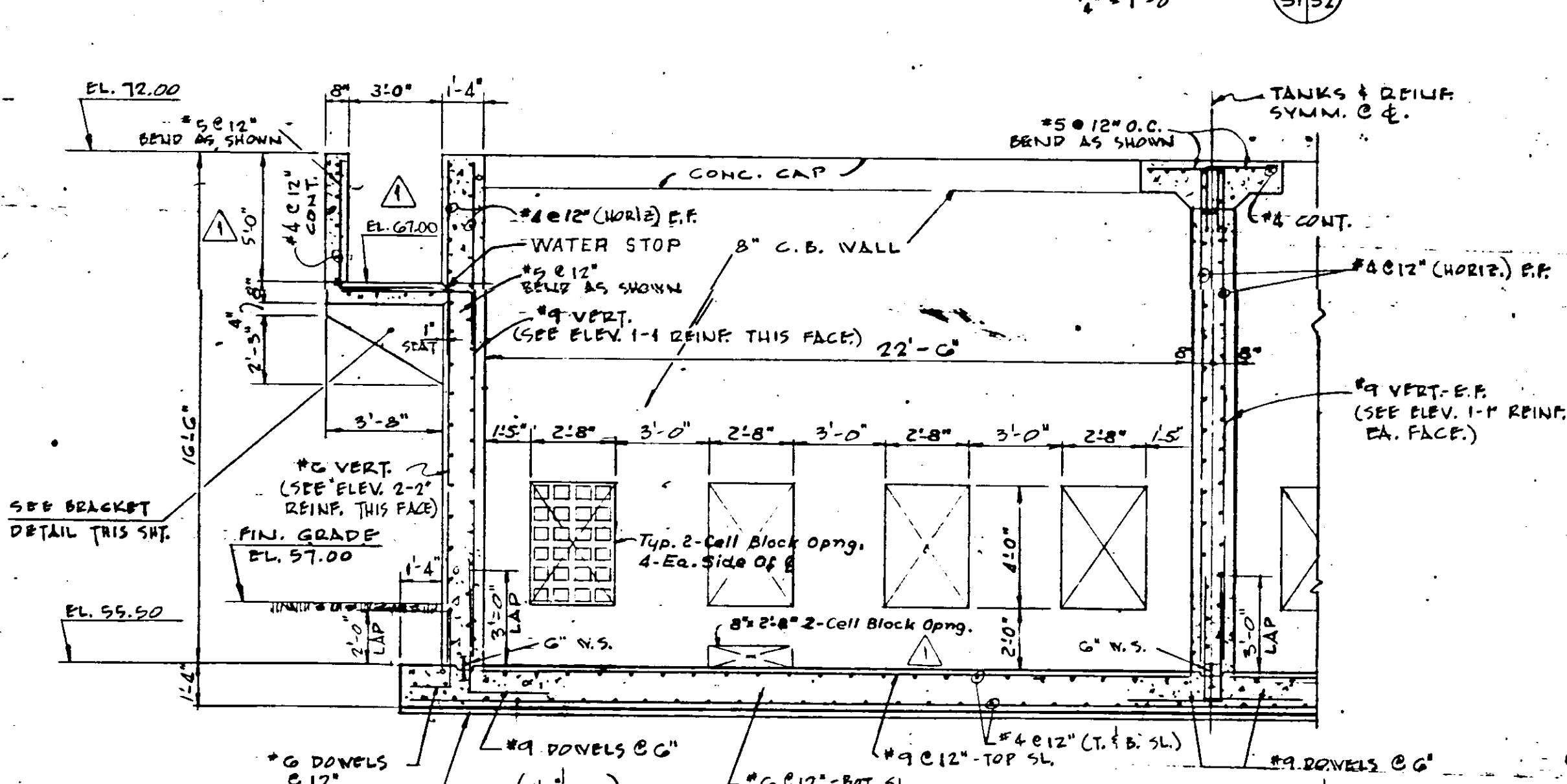
PLAN
ELEVATION
CARBON PIT DETAILS
1" = 1'-0"



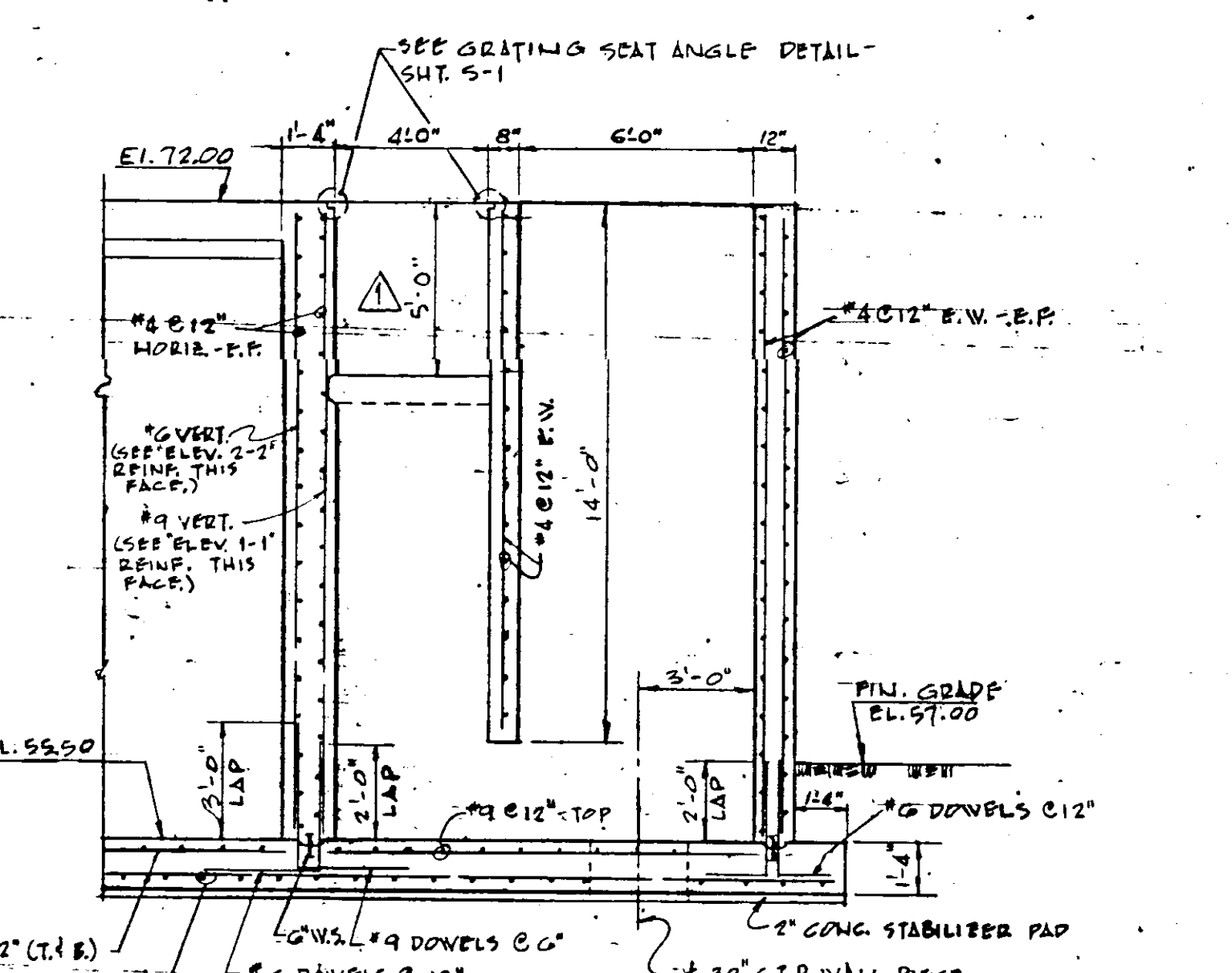
SECTION 2
1" = 1'-0"



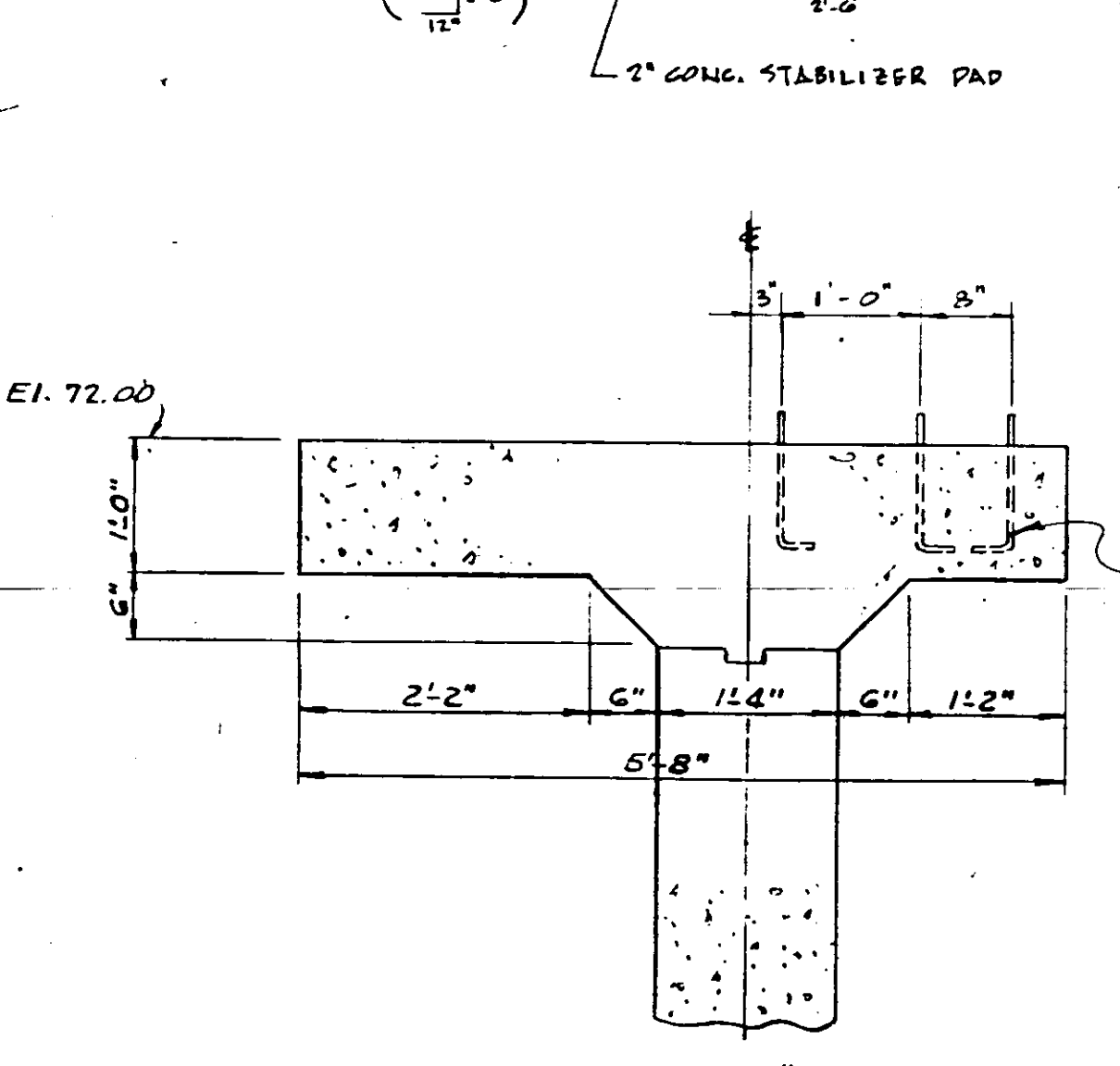
ELEVATION
SECTION 3 (TYPICAL)
Scale: 1/2" = 1'-0"



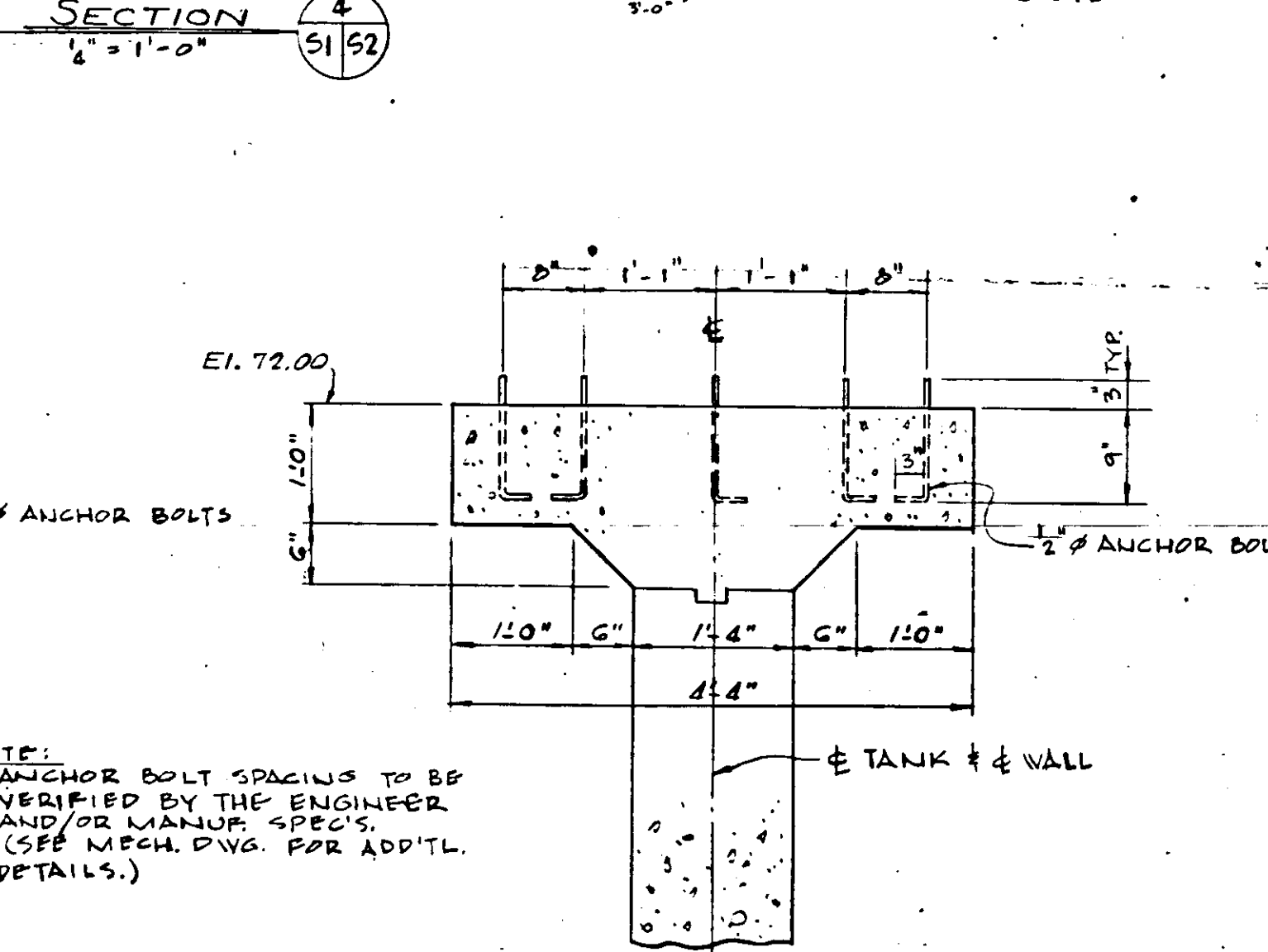
SECTION 4
1" = 1'-0"



SECTION 5
1" = 1'-0"



DETAIL A
Scale: 3/4" = 1'-0"

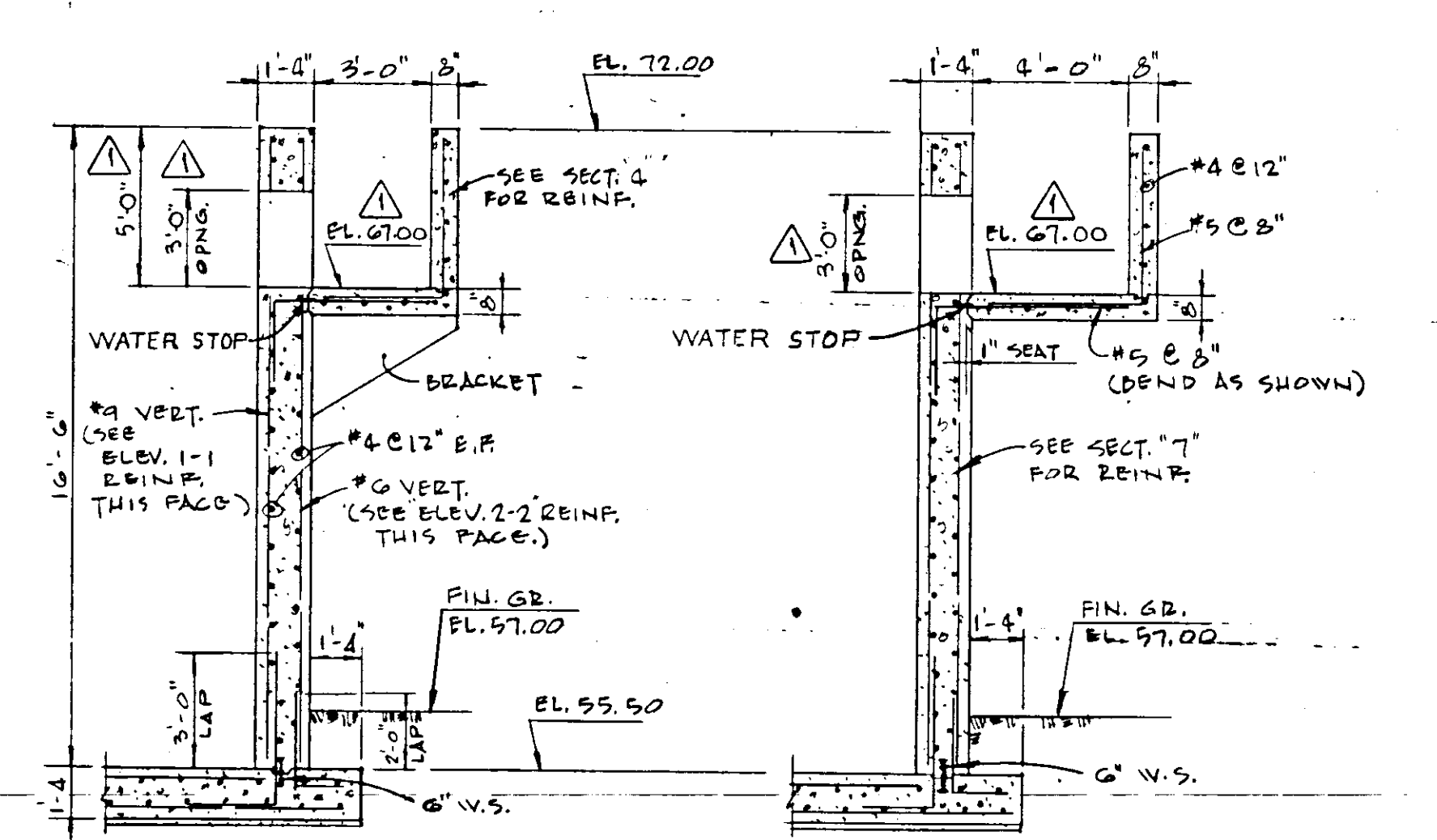


DETAIL B
Scale: 3/4" = 1'-0"

ELEVATION 1-1
ELEVATION 2-2
WALL REINF.
1" = 1'-0"

EXP. JT. DETAILS
1/2" = 1'-0"

NOTE: EXP. JOINTS FOR FLOOR SLAB SHALL BE HOWLAND & BARNARD #505 W/ 10" CAP SLEEVE MANUF. BY HOWLAND & BARNARD, MIAMI, FLA., OR APPROVED EQUAL.



SECTION 7
1/2" = 1'-0"

SECTION 8
1/2" = 1'-0"

SECTION THRU CHANNEL AND COLUMN
1" = 1'-0"

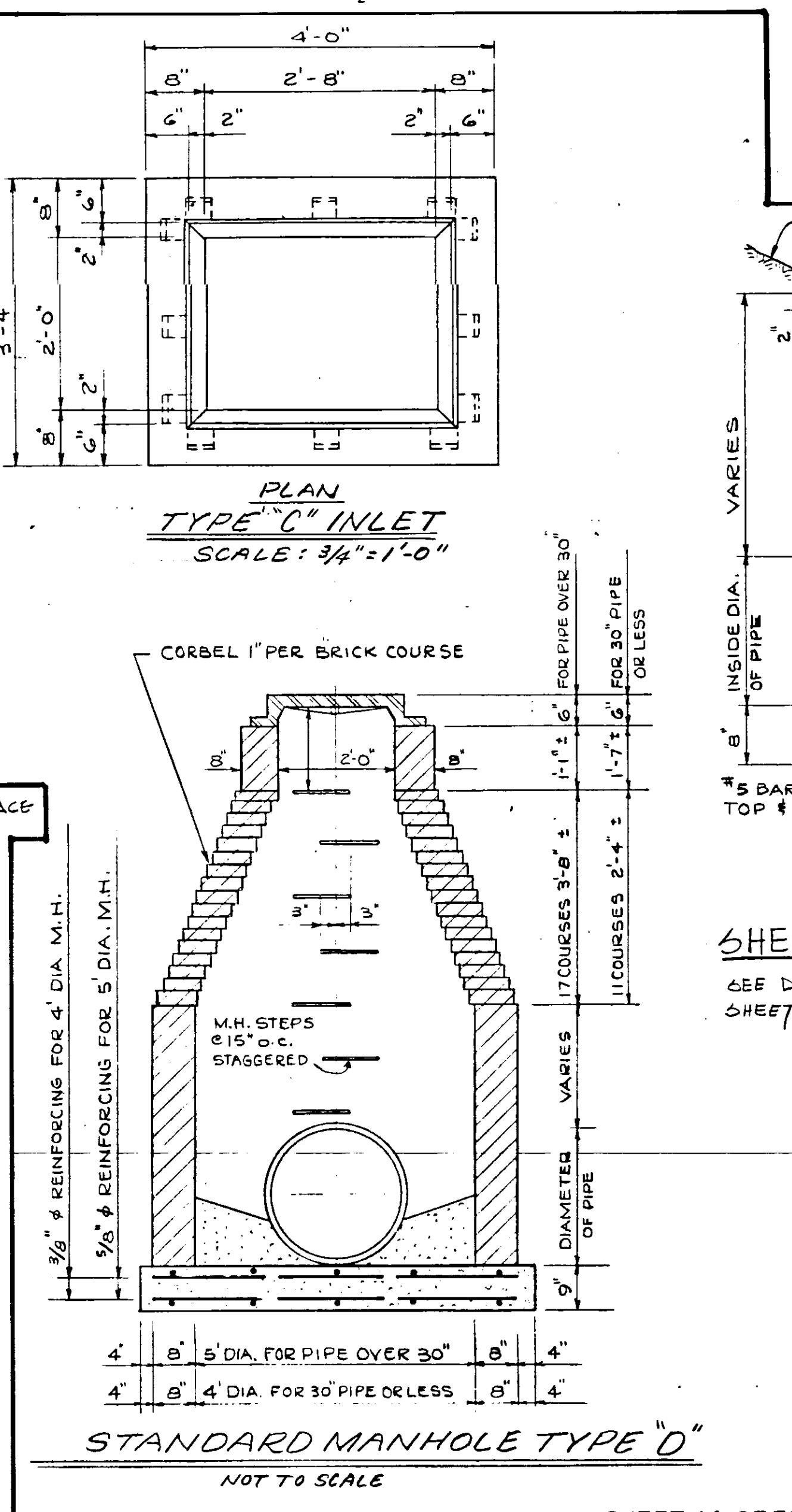
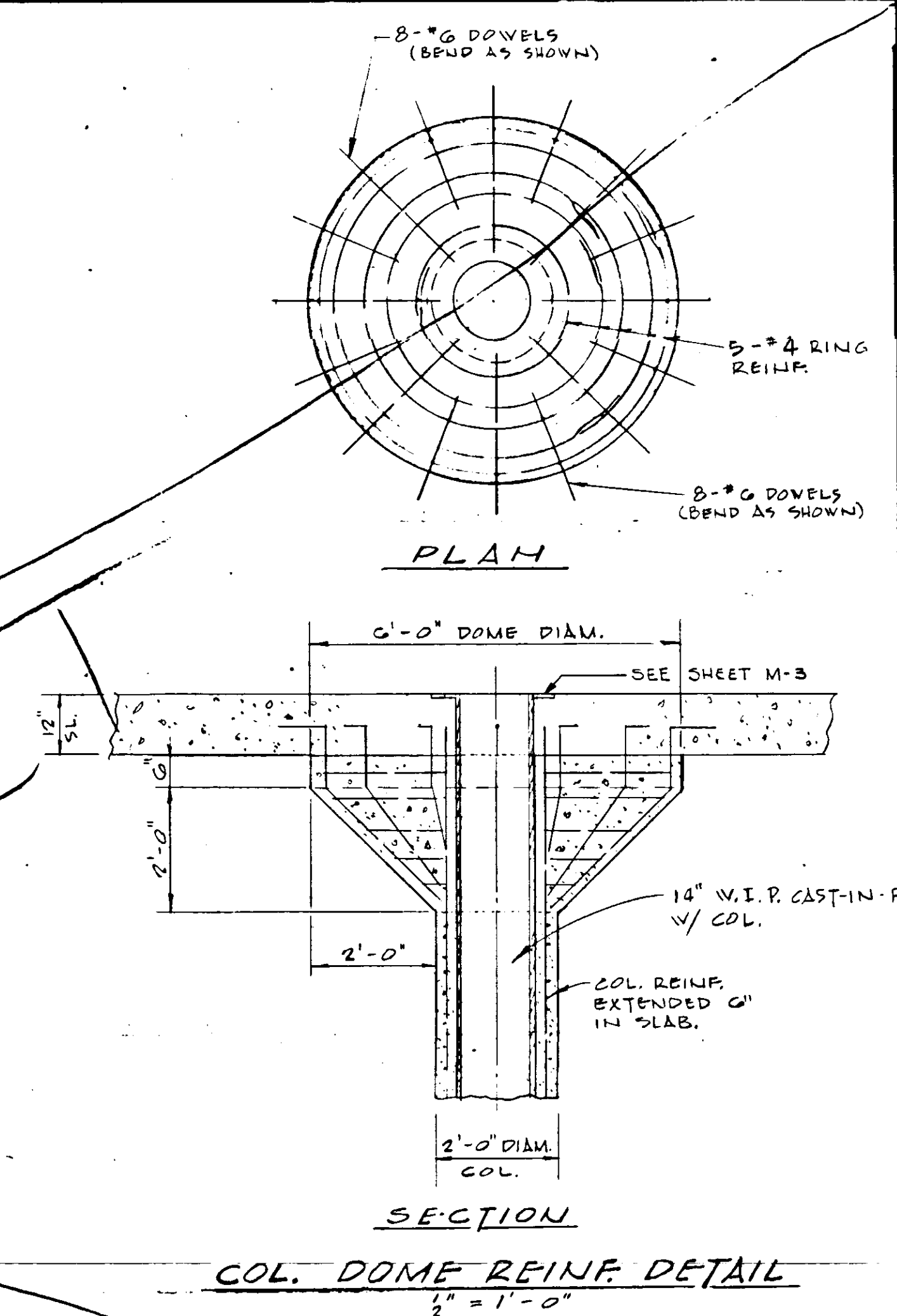
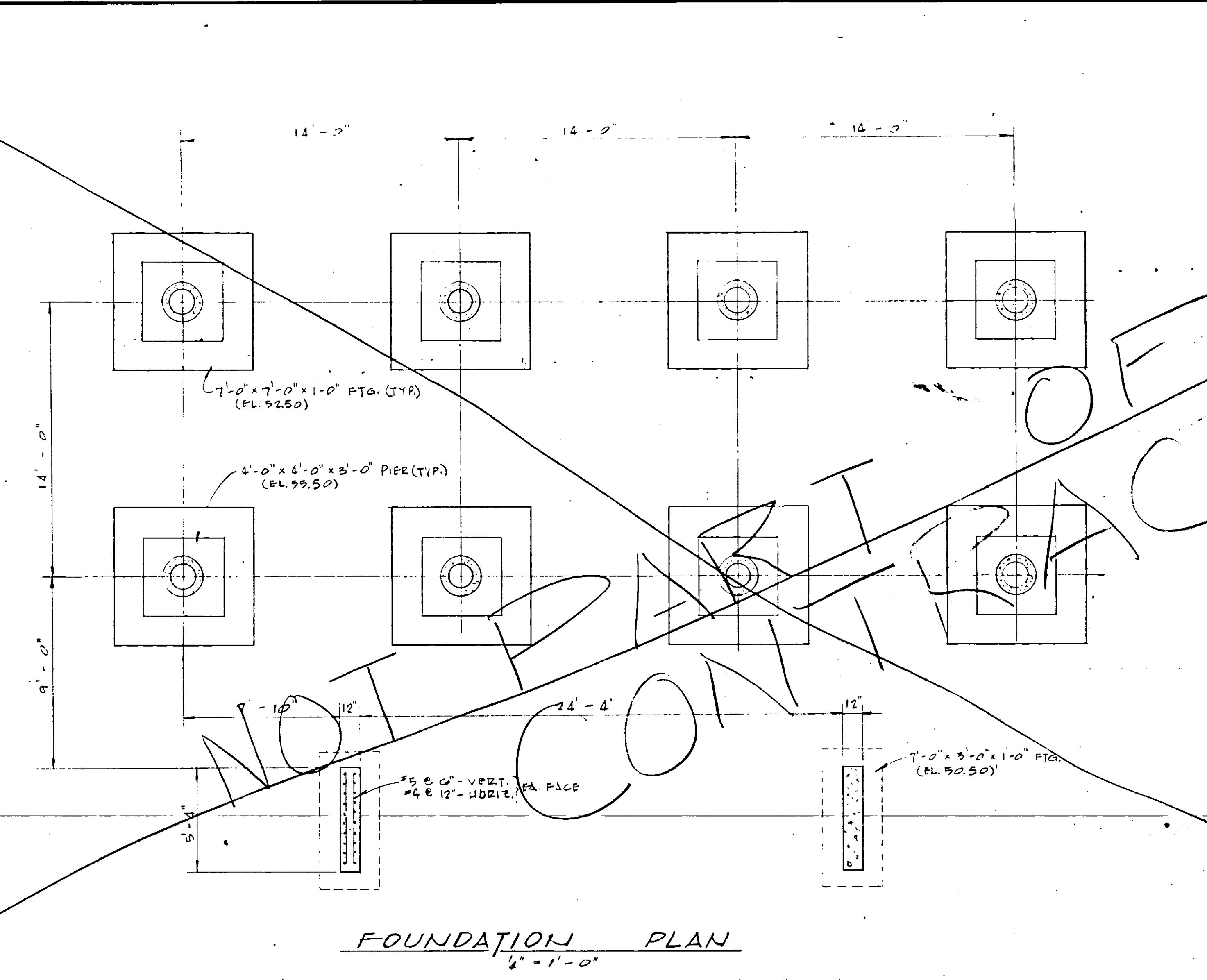
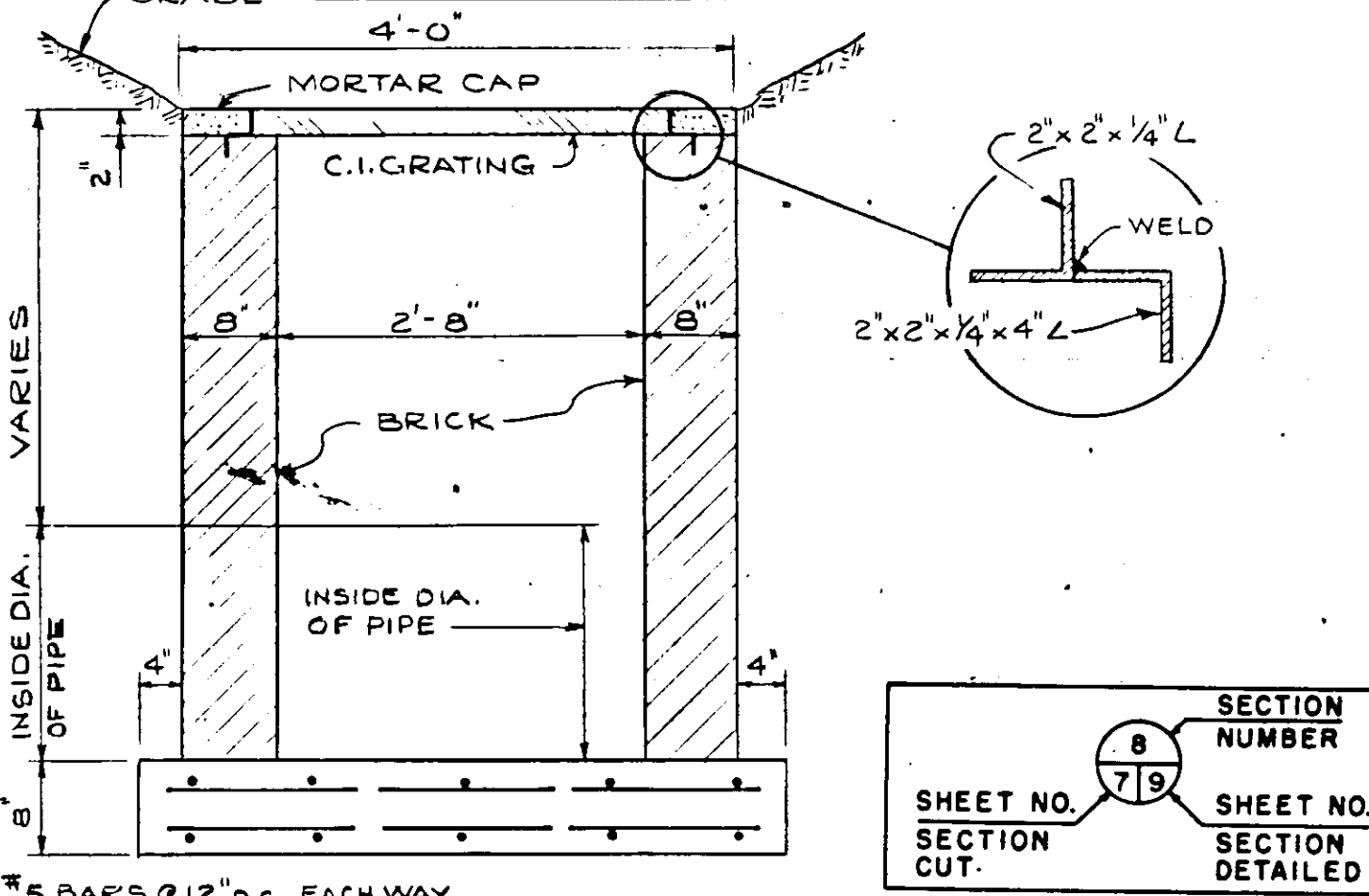
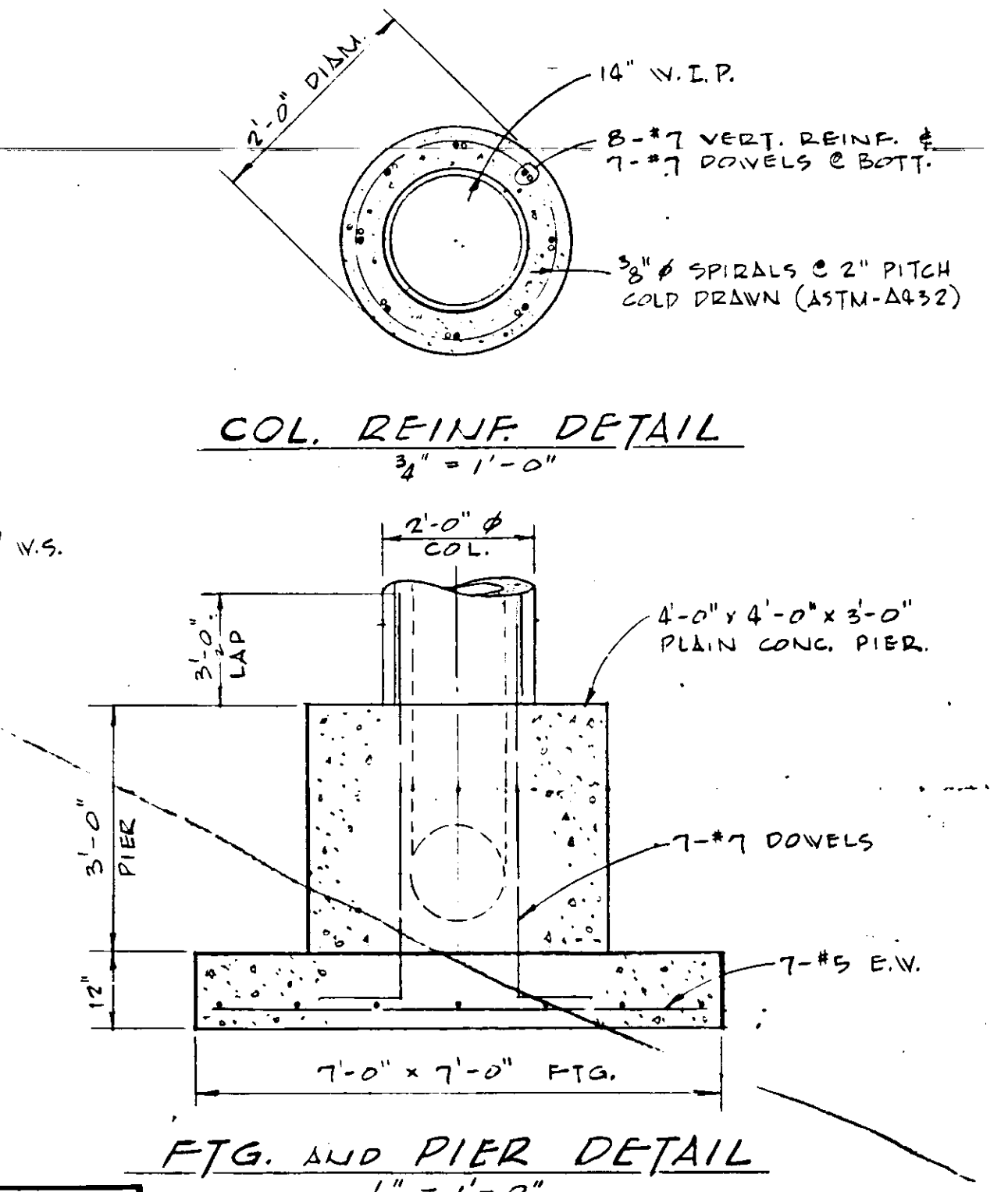
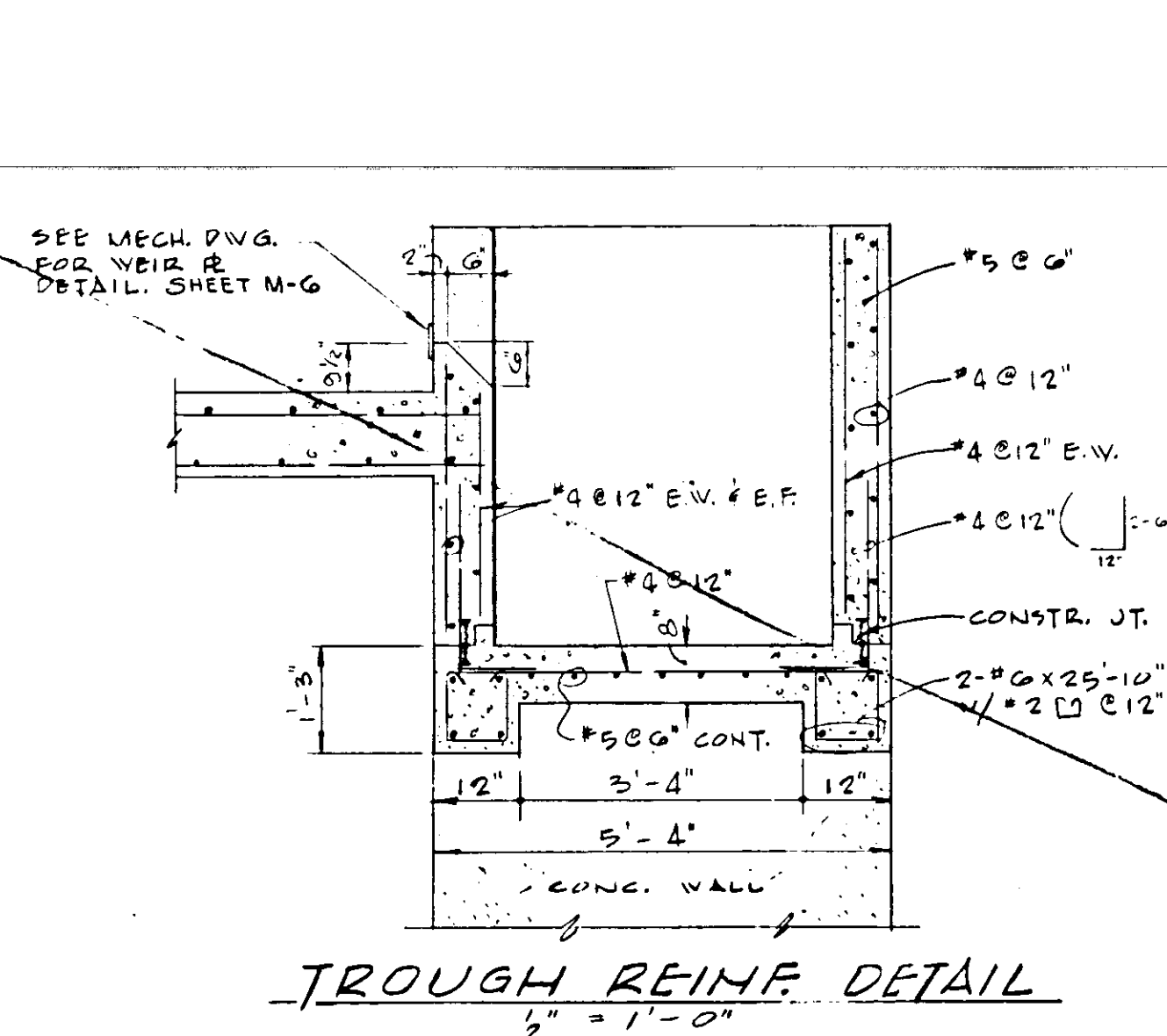
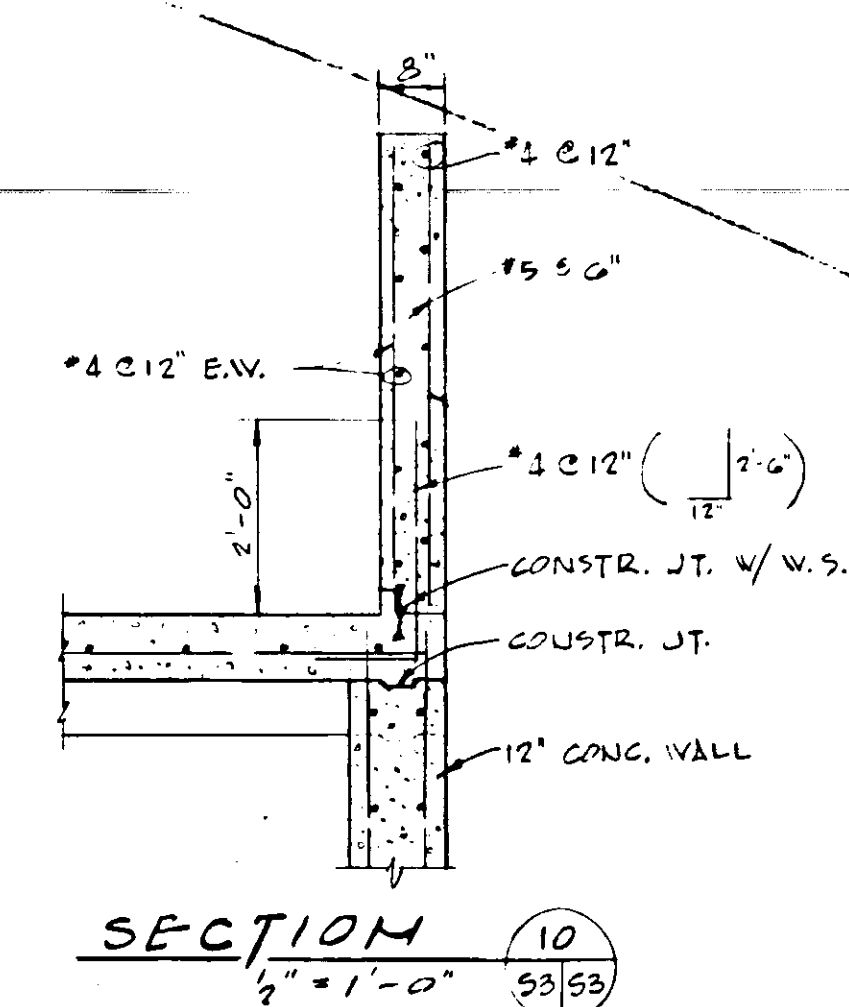
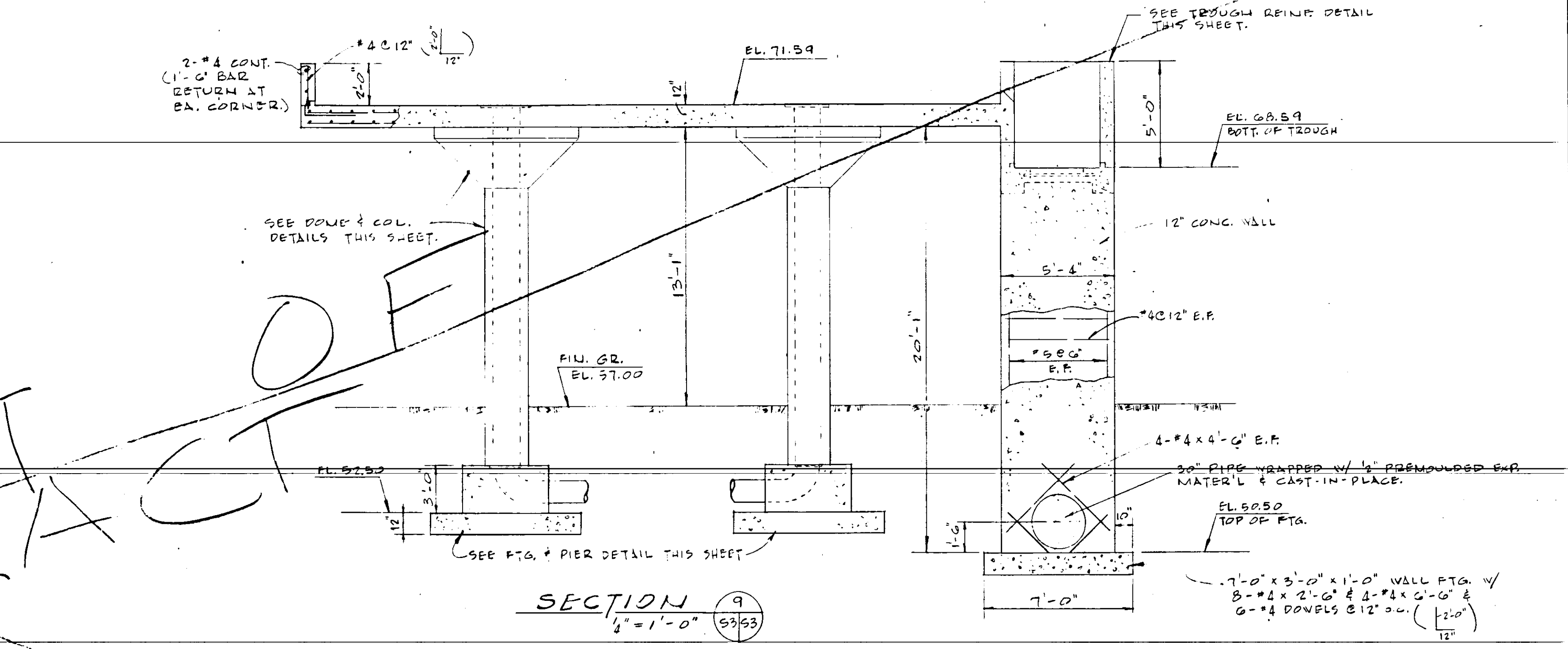
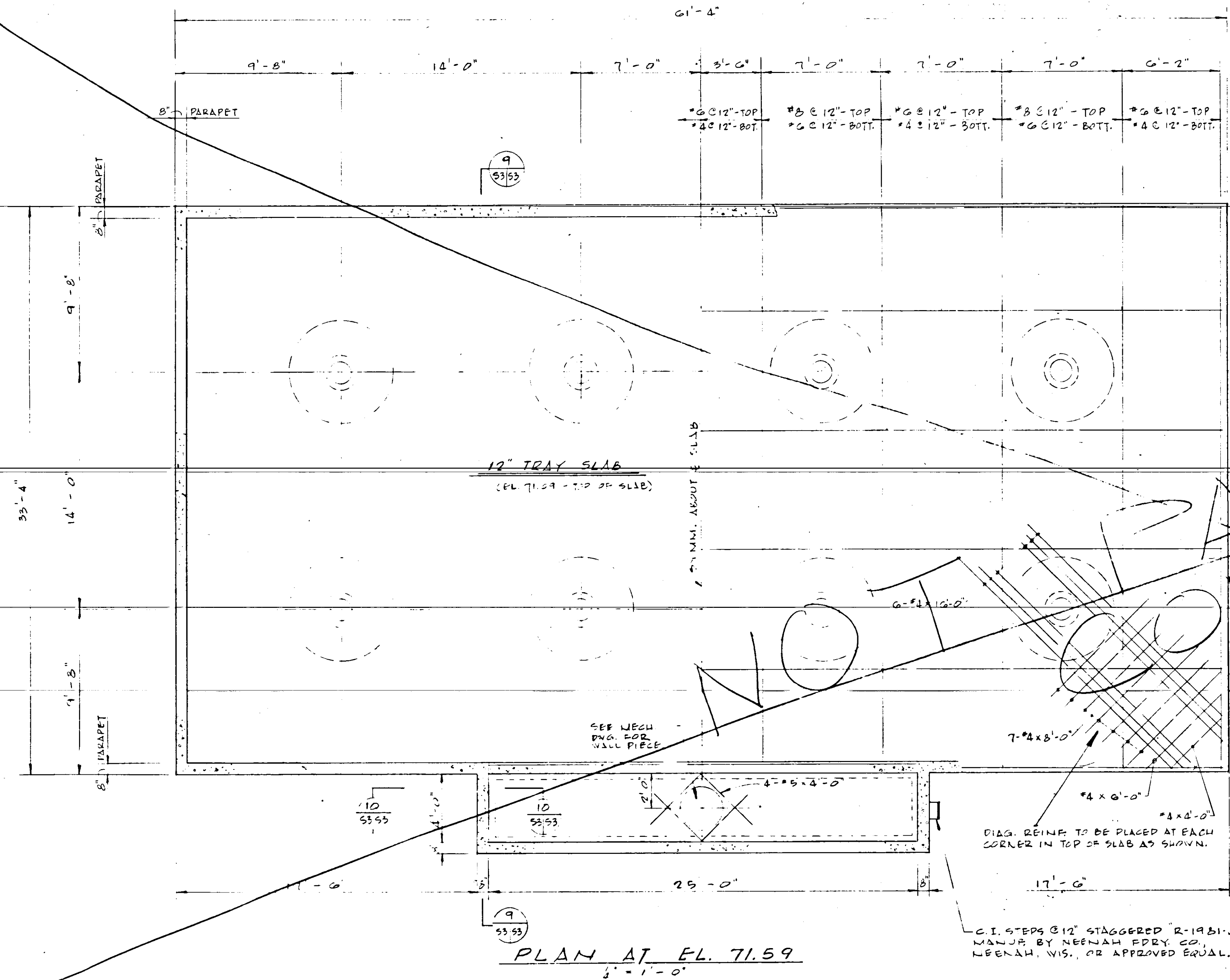
SECTION THRU CHANNEL ALONG WALL
Scale: 3/4" = 1'-0"

SECTION NUMBER	7
SHEET NO.	13
SECTION CUT	SECTION CUT
SECTION DETAILED	SECTION DETAILED

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

DESIGNED BY	P.A.D.	FILE NO.	6353-3-S-2-III-B
DRAWN BY	D.V./R.V.C.	SHEET	No. 5-2 III-B
CHECKED BY	CEB/FR	DATE	FEB. 1965
DATE	FEB. 1965	SCALE	AS SHOWN

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.
WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
SETTLING TANKS, SECTIONS & DETAILS STRUCT.
MANATEE COUNTY, FLORIDA
SHEET 13 OF 55



SECTION NUMBER 8
SHEET NO. 719
SECTION CUT

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

NO.	DATE	DESCRIPTION	BY	CHK.
1	NRGT	AS BUILT		

REVISIONS

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
AERATOR PLANS & DETAILS-STRUCTURAL
MANATEE COUNTY, FLORIDA

DESIGNED BY FILE NO.
P.A.D./R.V.G. 6353-3-S-3-III-B

DRAWN BY
D.V.G.

CHECKED BY
C.E.B.

DATE
FEB. 1965

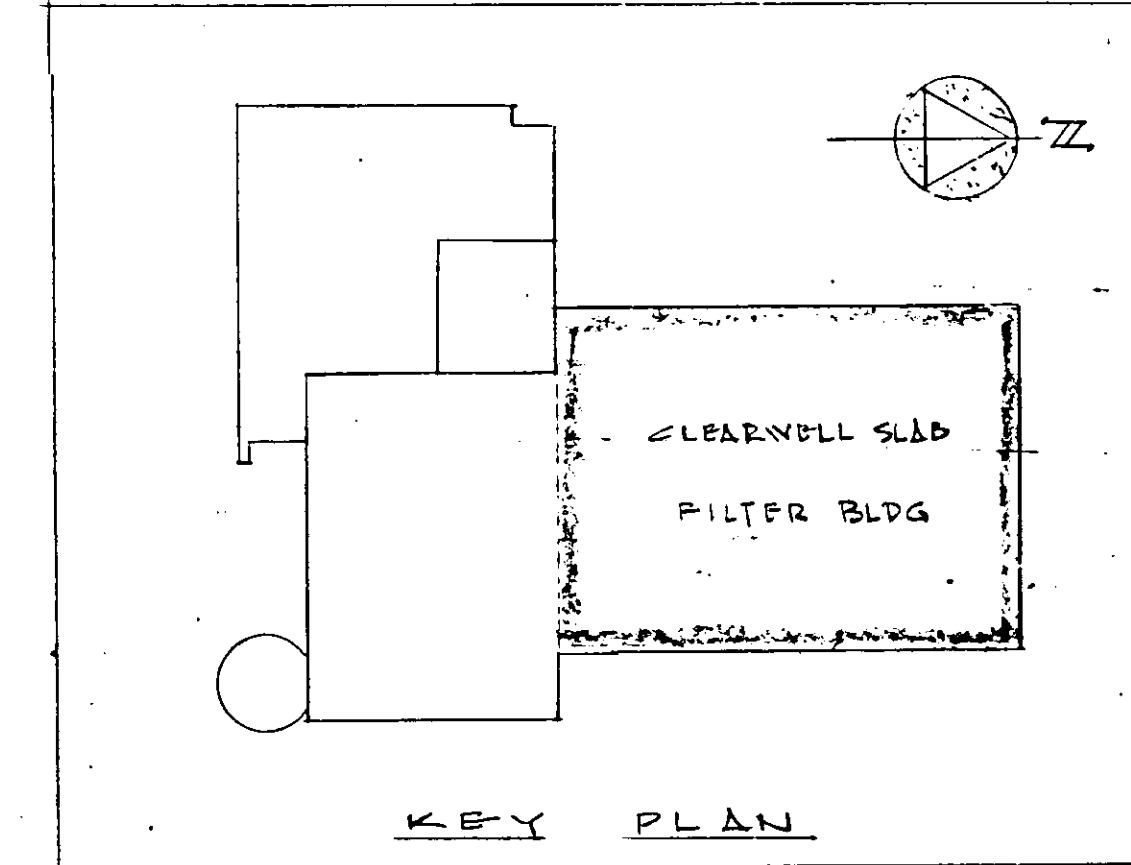
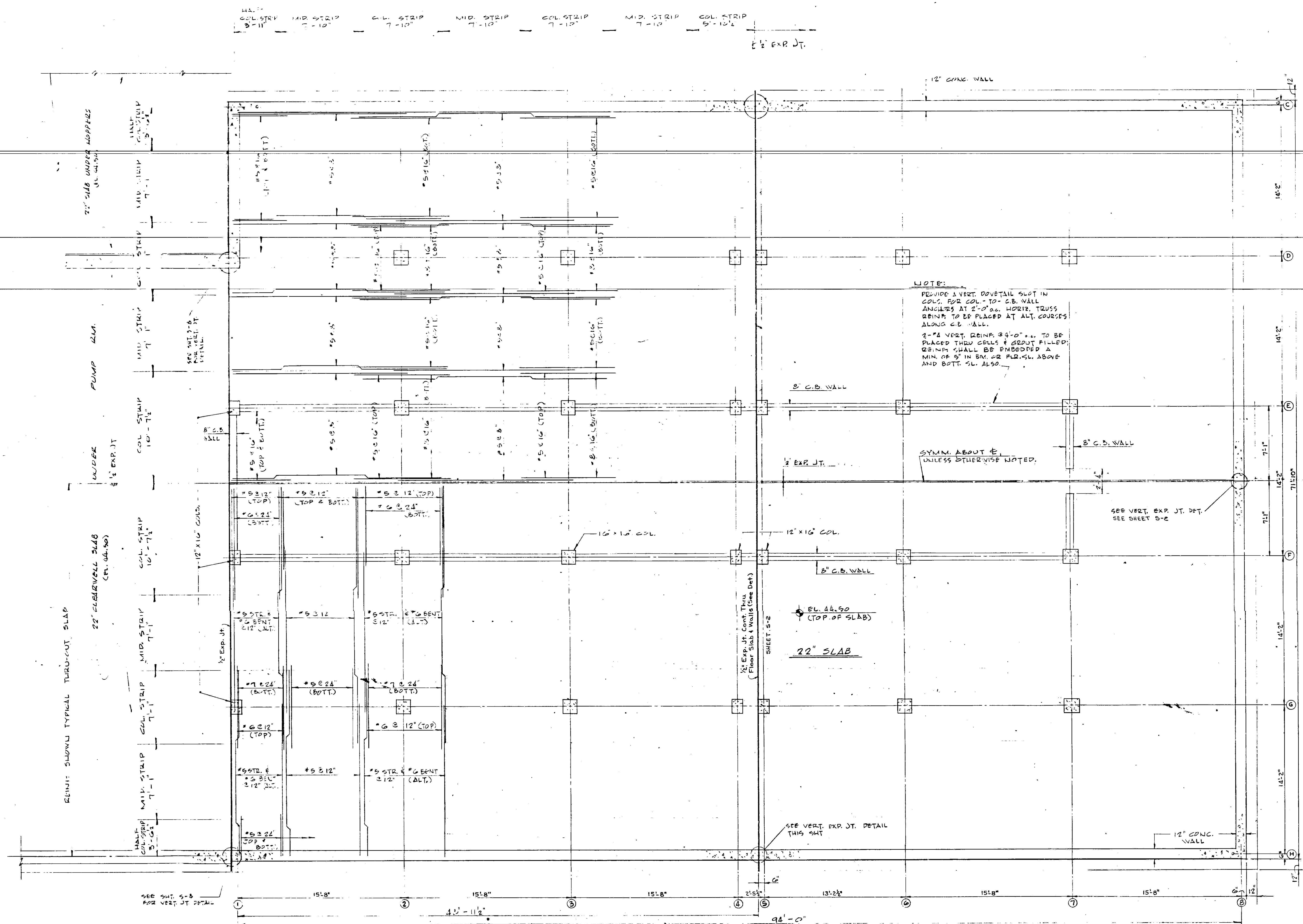
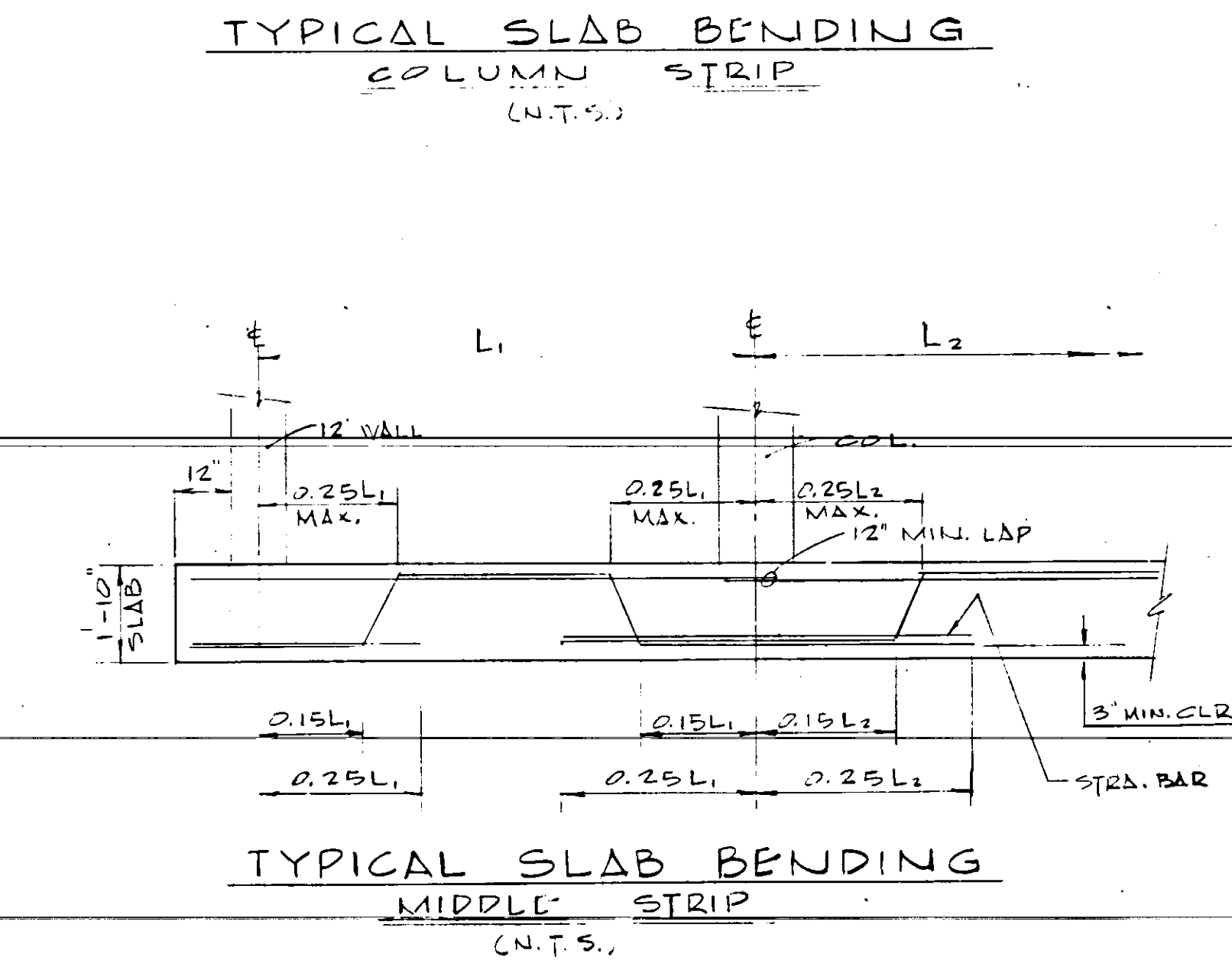
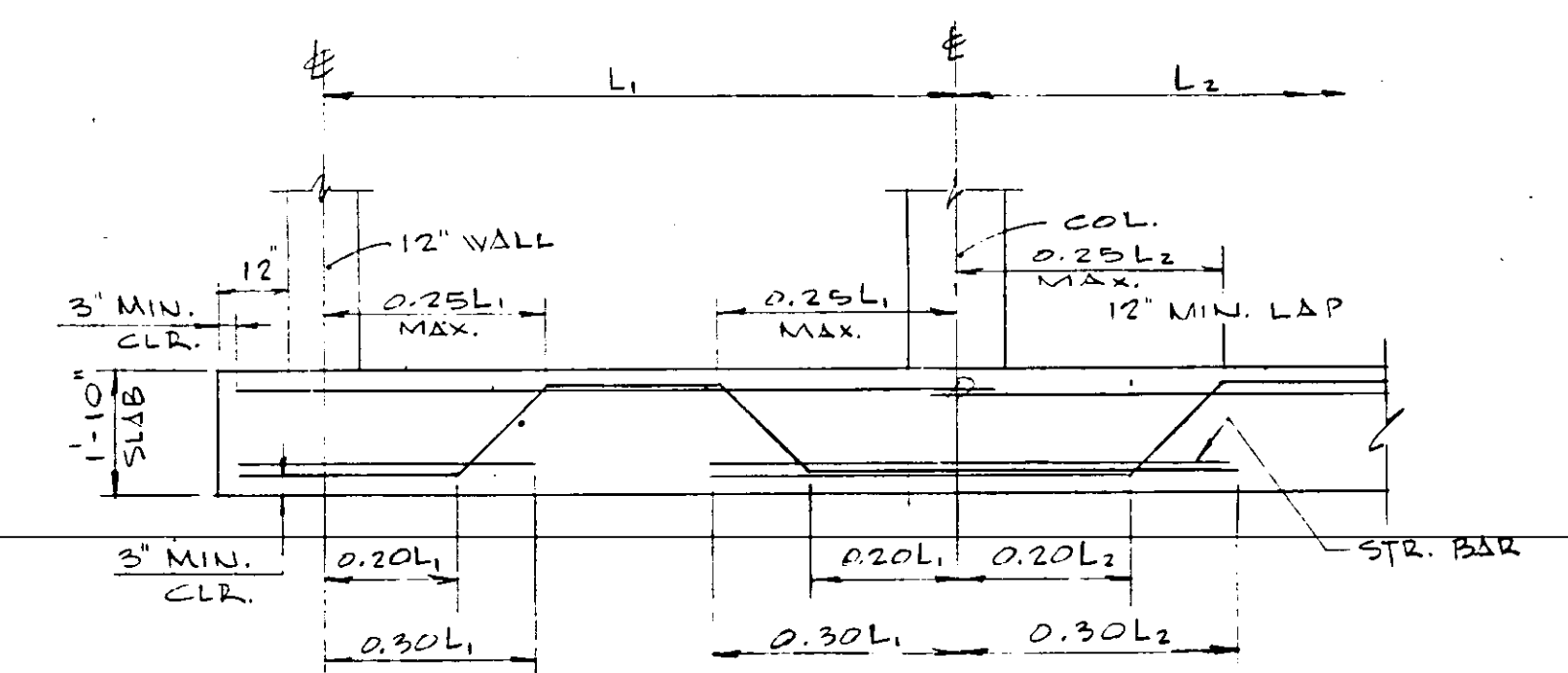
SHEET 5-3 III-B
OF 13 SHEETS

SCALE: AS SHOWN

SEAL
I. F. KAPINOS
No. 3748
STATE OF FLORIDA
REGISTERED ENGINEER

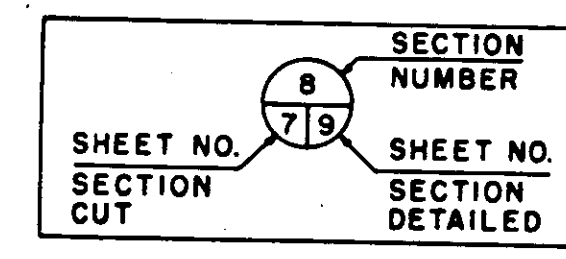
NOT A CONTRACT DRAWING

REIN. SHOWN TYPICAL THRU-OUT SLAB

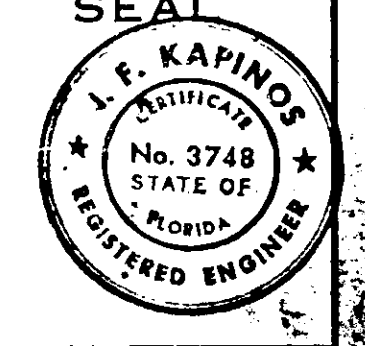


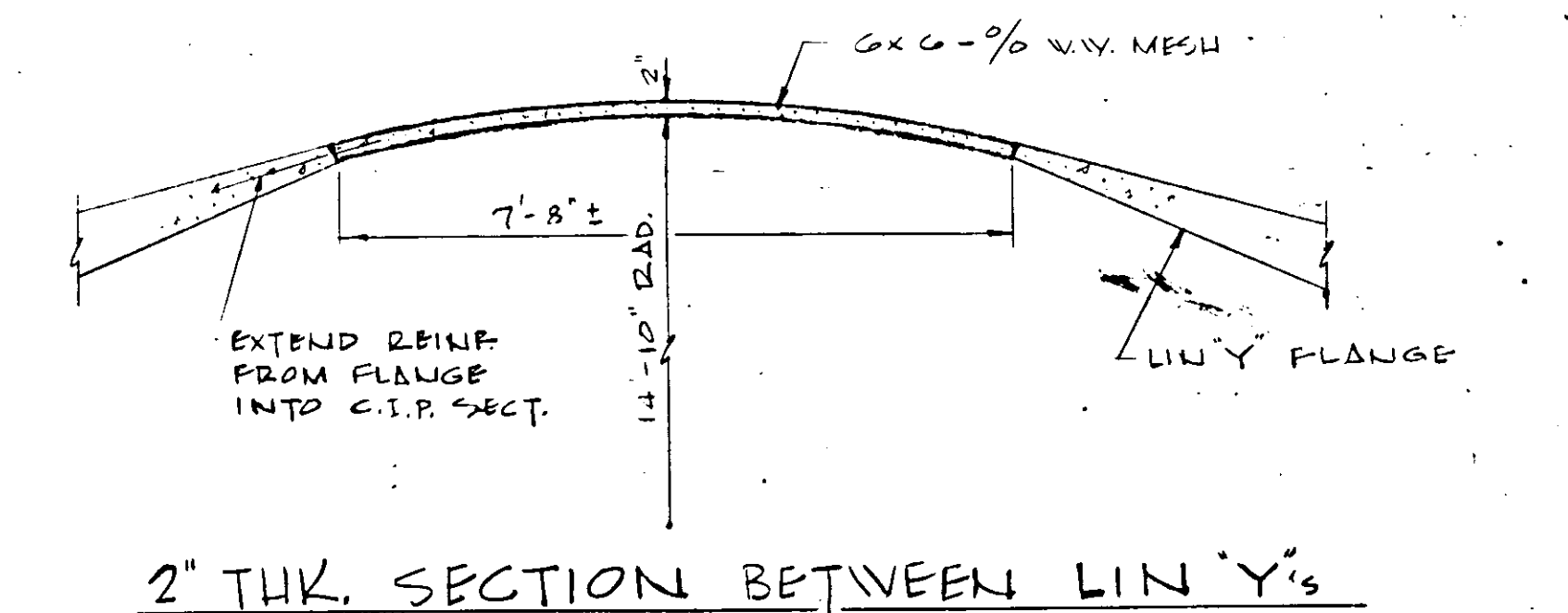
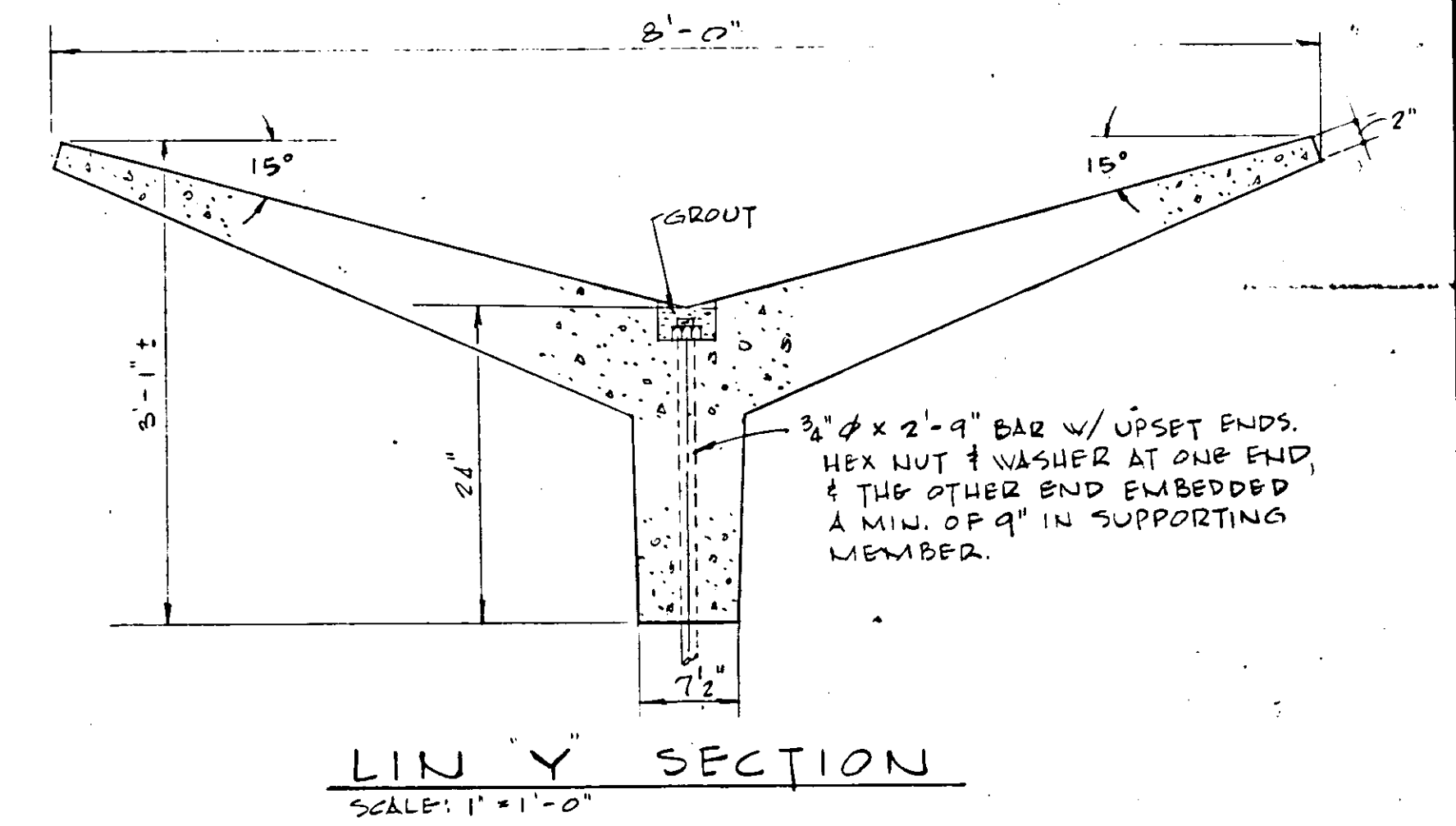
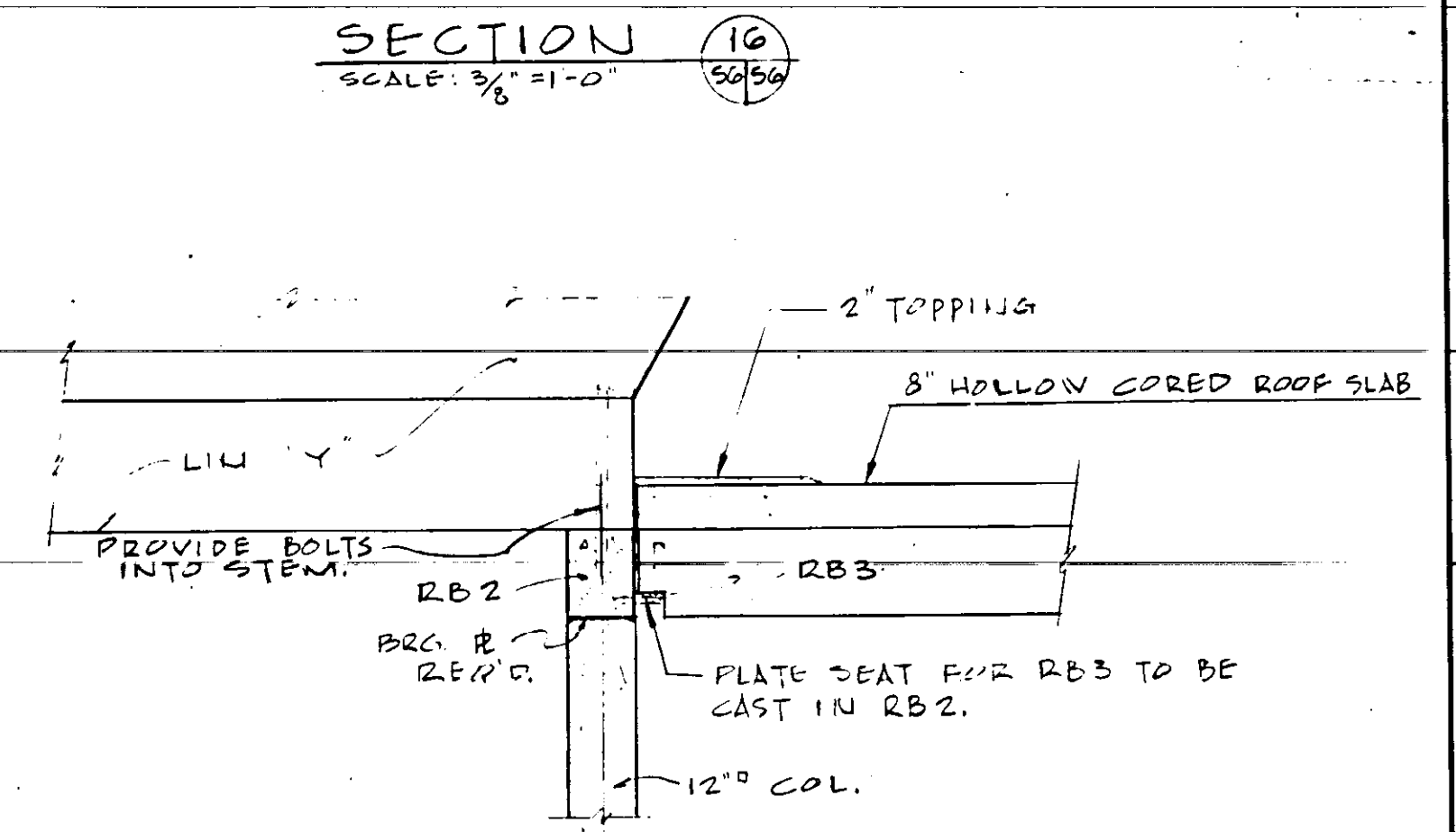
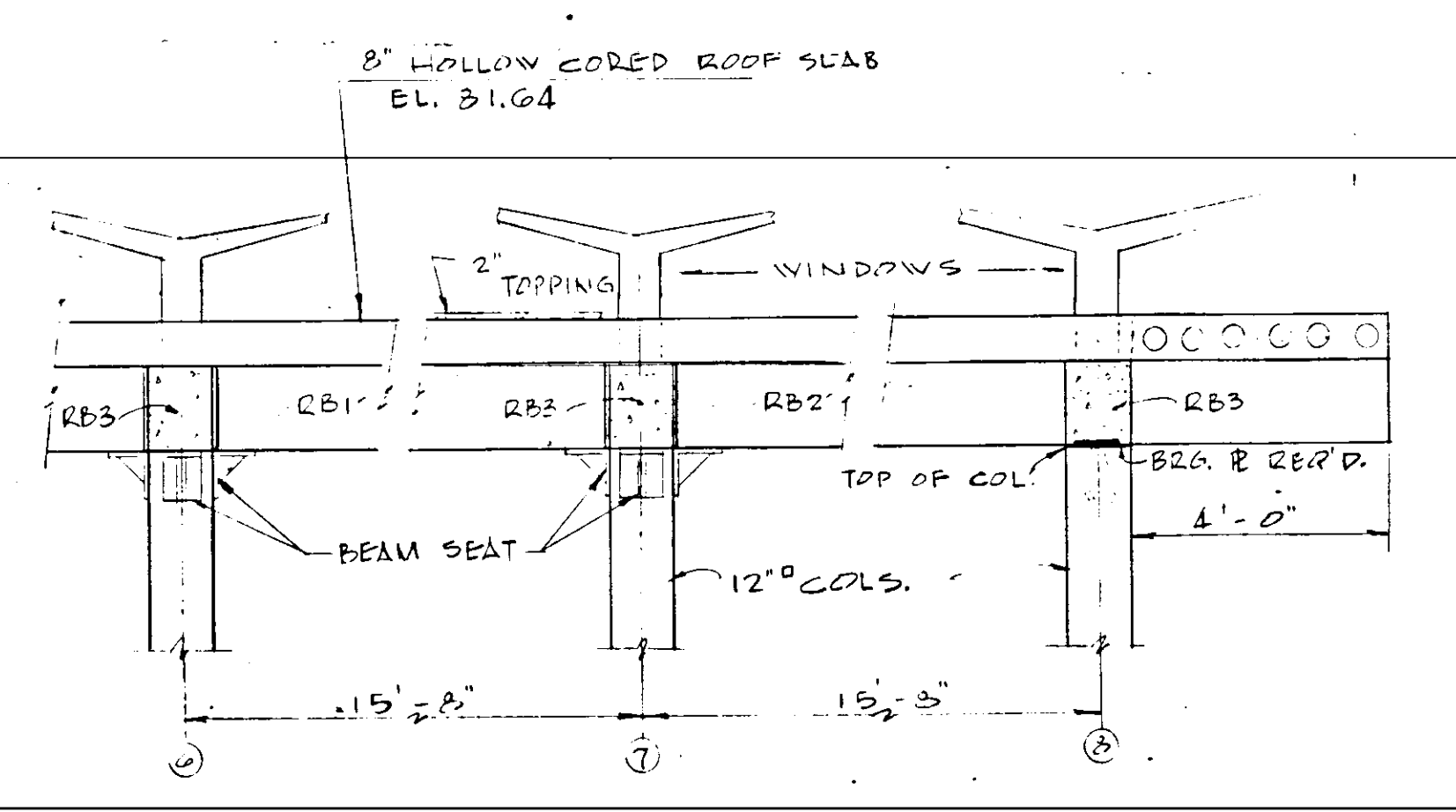
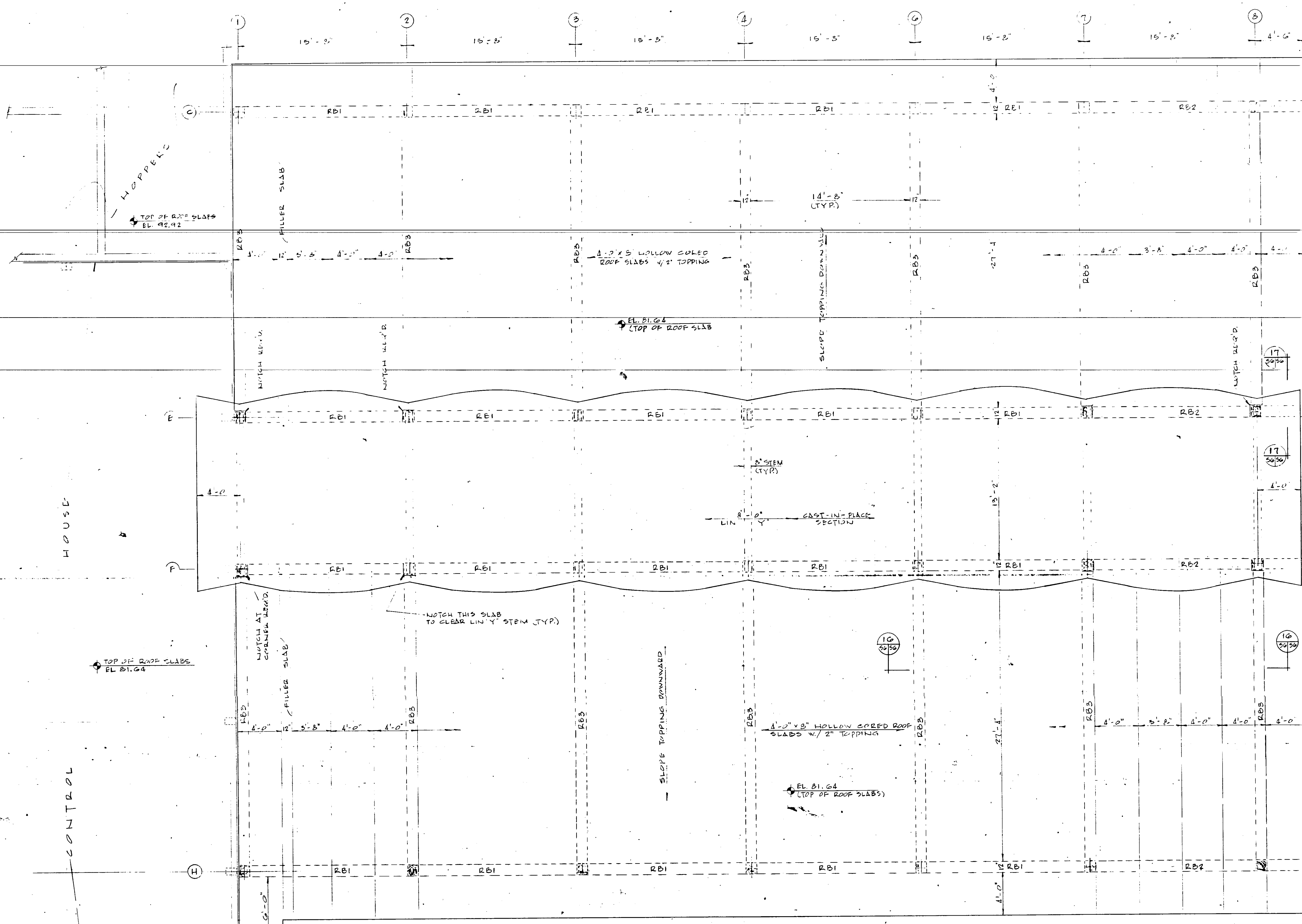
22" CLEARWELL SLAB - PLAN AT EL. 44.50
FILTER BLDG.
1" = 1'-0"

NO.	DATE	DESCRIPTION	BY	CHKD.
1	NR 67	AS BUILT		
REVISIONS				
<p>RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.</p> <p>WATER WORKS PROJECT WATER TREATMENT PLANT PART B FILTER BUILDING-CLEARWELL SLAB PLAN - STRUCT.</p> <p>MANATEE COUNTY, FLORIDA</p> <p>DESIGNED BY: J.P.H./R.V.C. FILE NO. 6353-3-S-4-III-B DRAWN BY: R.V.C. SHEET NO. 6-4 III-B CHECKED BY: C.E.B. OF 13 SHEETS DATE: FEB., 1965 SCALE: AS SHOWN</p>				

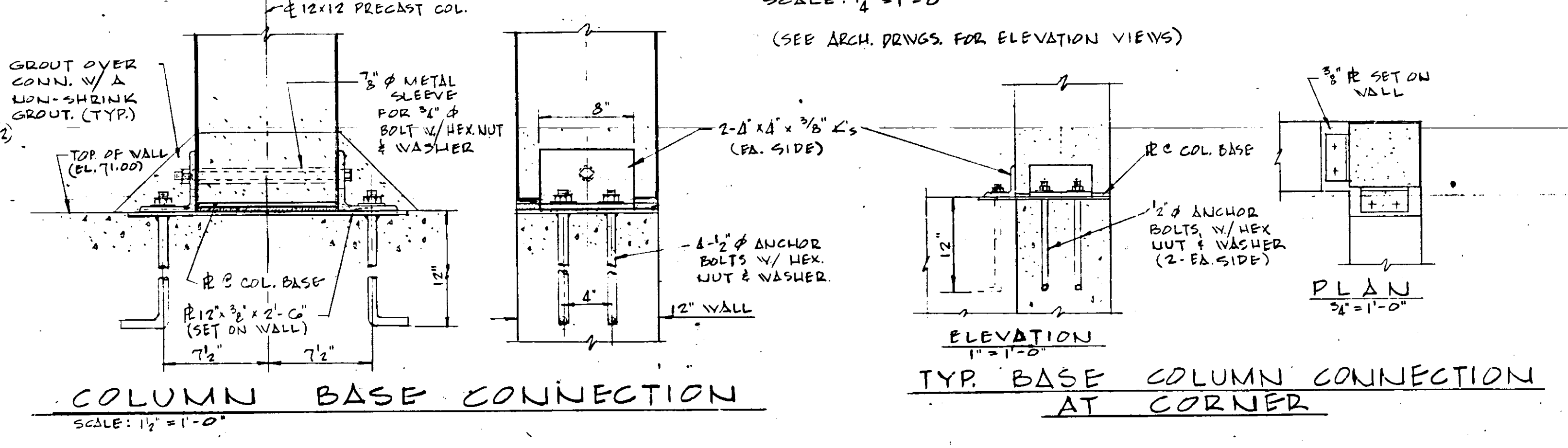


NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.





ROOF FRAMING PLAN - FILTER BLDG.
SCALE: 1/4" = 1'-0"



BEAM SCHEDULE (PRECAST)					
MARK	SIZE		LOADS (psf)		REMARKS
	W	D	D. L.	L. L.	
RB1	12	16	90	30	
RB2	12	16	90	30	SPAN=19'-8"
RB3	12	16	*	20	

* D.L. OF BEAM ONLY.
NOTE: ALL COLS. ARE 12"x12" W/ 1" CHAMFER AND TOP OF COL AT EL. 80.99, EXCEPT COLS. W, CB, EB, FB & HB WHICH ARE AT EL. 79.00.

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

SECTION NUMBER	719
SHEET NO.	8
SHEET NO. SECTION CUT	III-B

DESIGNED BY	R. V. C.	FILE NO.	6353-3-S-6-III-B
DRAWN BY	R. V. C.	SHEET	No. 8-III-B
CHECKED BY	CEB	OF 13	SHEETS
DATE	FEB., 1965	SCALE	AS SHOWN

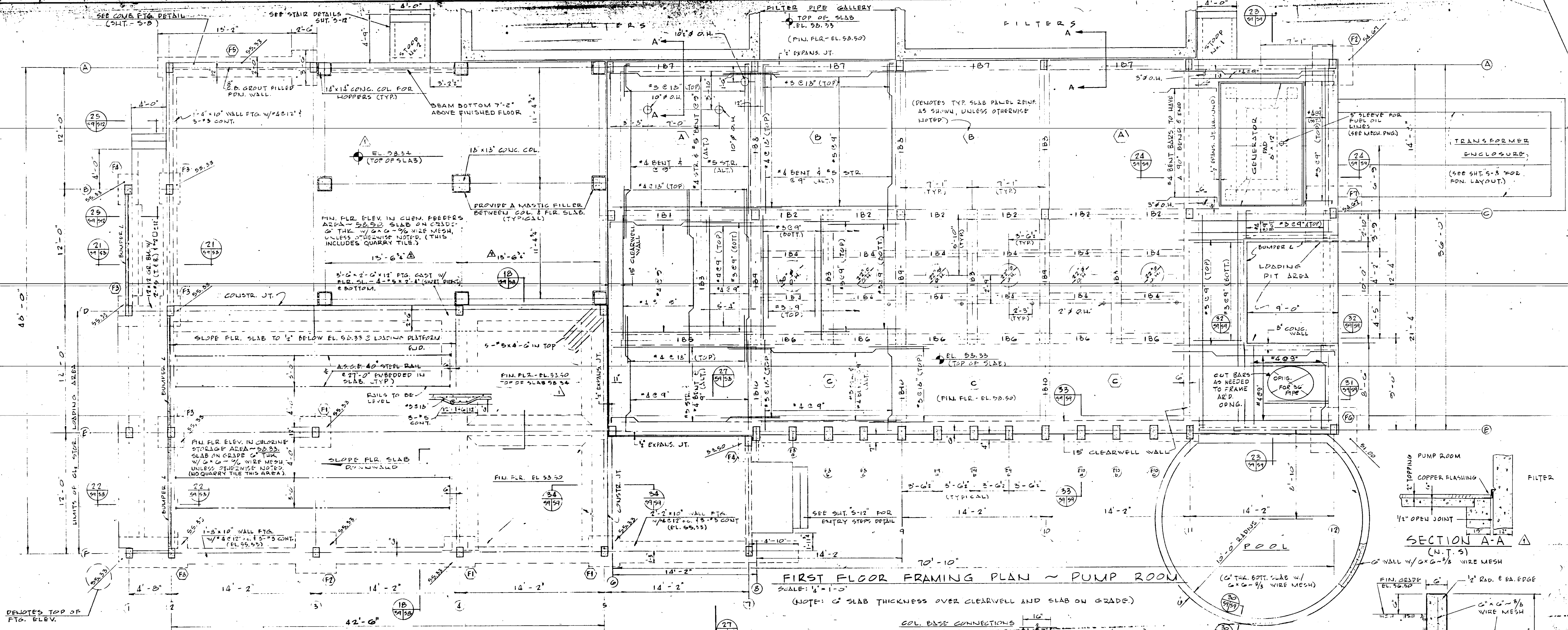
RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
FILTER BUILDING, ROOF FRAMING PLAN-STRUCT.
MANATEE COUNTY, FLORIDA

DESIGNED BY: R. V. C.
DRAWN BY: R. V. C.
CHECKED BY: CEB
DATE: FEB., 1965

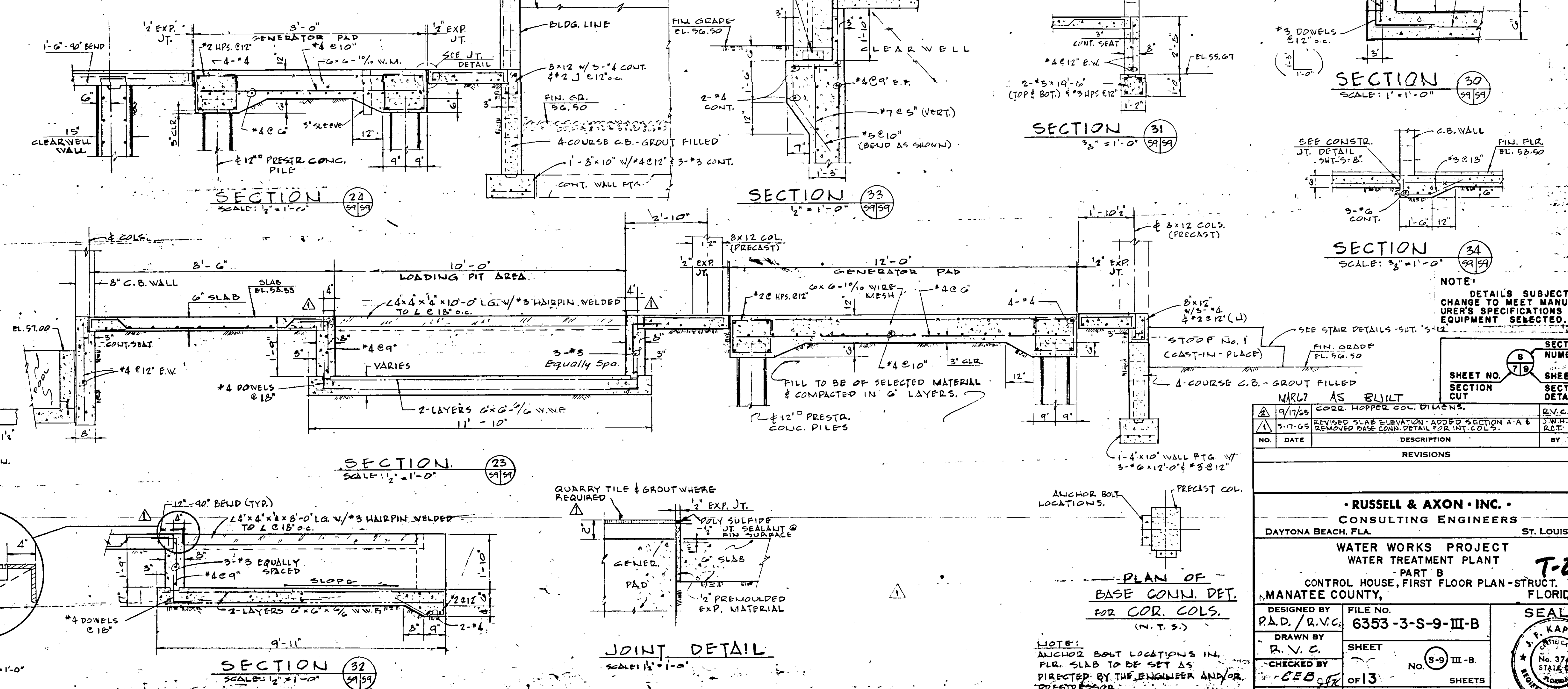
FILE NO.: 6353-3-S-6-III-B
SHEET: No. 8-III-B
OF 13 SHEETS
SCALE: AS SHOWN

SEAL: J. R. KAPINS, LICENSED PROFESSIONAL ENGINEER, STATE OF FLORIDA, No. 3748



GROUND FLR. AND FRN. PLAN - CL₂ CYL. STORAGE AND CHEM. FEEDER AREAS

BEAM SCHEDULE									
MARK	SIZE	STR	TOP	STR	CONT.	TRUSS	STIRRUPS	NO	REMARKS
B1	12 15	2	*B	2	*B	2	*7	13	4" x 8" THRU-OUT.
B2	12 15	2	*B	2	*B	2	*7	13	4" x 8" THRU-OUT.
B3	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B4	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B5	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B6	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B7	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B8	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B9	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.
B10	12 15	2	*C	3	*C	2	*7	13	4" x 8" THRU-OUT.



TYPICAL BEAM & SLAB BENDING (N.T.S.)

PLAN OF BASE CONN. DET. FOR COR. COLS. (N.T.S.)

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD.
1	9/17/65	REVISED SLAB ELEVATION - ADDED SECTION A-A & REMOVED BASE CONN. DETAIL FOR COR. COLS.	R.V.C.	

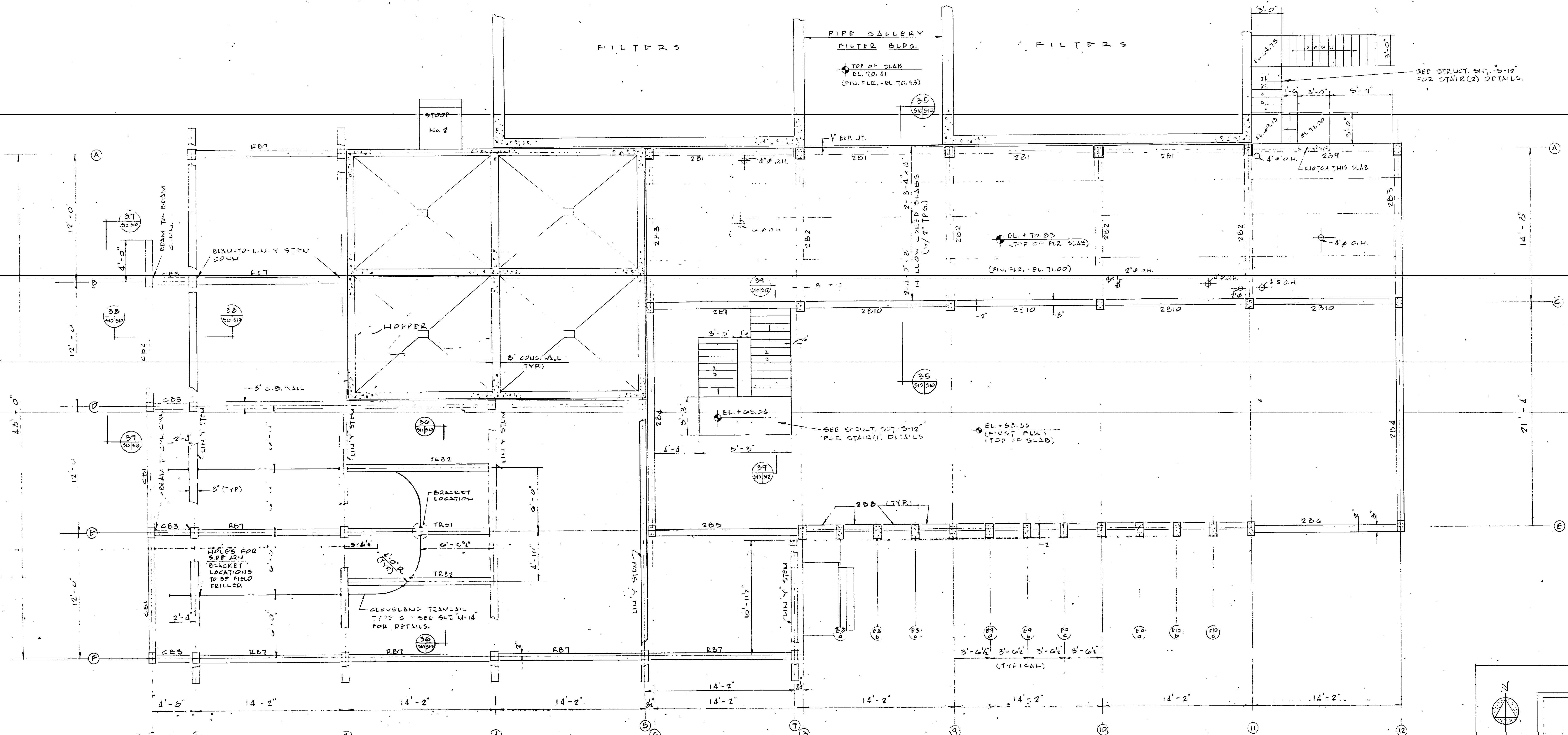
REVISIONS

RUSSELL & AXON • INC. •
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
CONTROL HOUSE, FIRST FLOOR PLAN - STRUCT.
FLORIDA

DESIGNED BY: R.V.C. FILE NO. 6353-3-S-9-III-B
DRAWN BY: R.V.C. SHEET No. 9-III-B
CHECKED BY: C.E.B. OF 13 SHEETS
DATE: FEB. 1965 SCALE: AS SHOWN

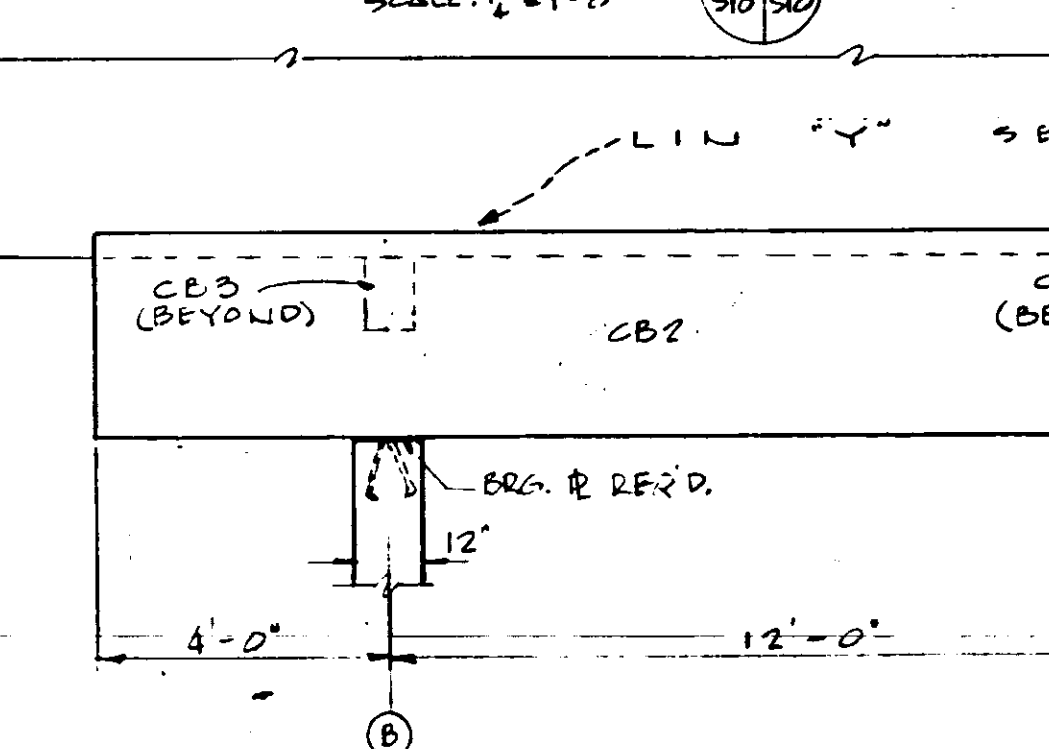
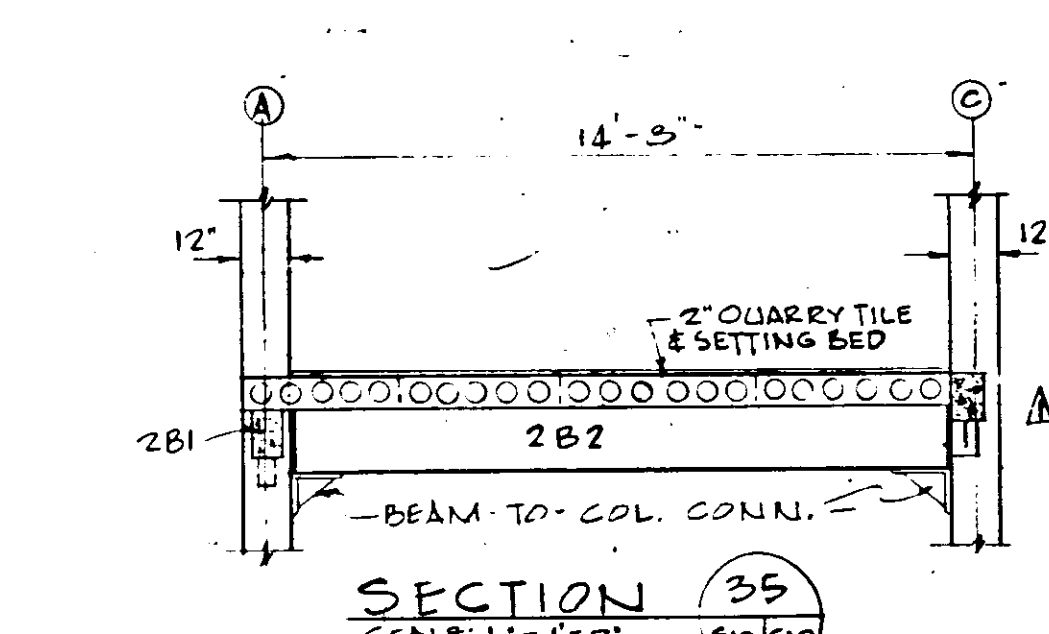
SEAL
R. F. KAPINOS
No. 3748
318 1/2 ST.
DADE COUNTY
REGISTERED PROFESSIONAL ENGINEER



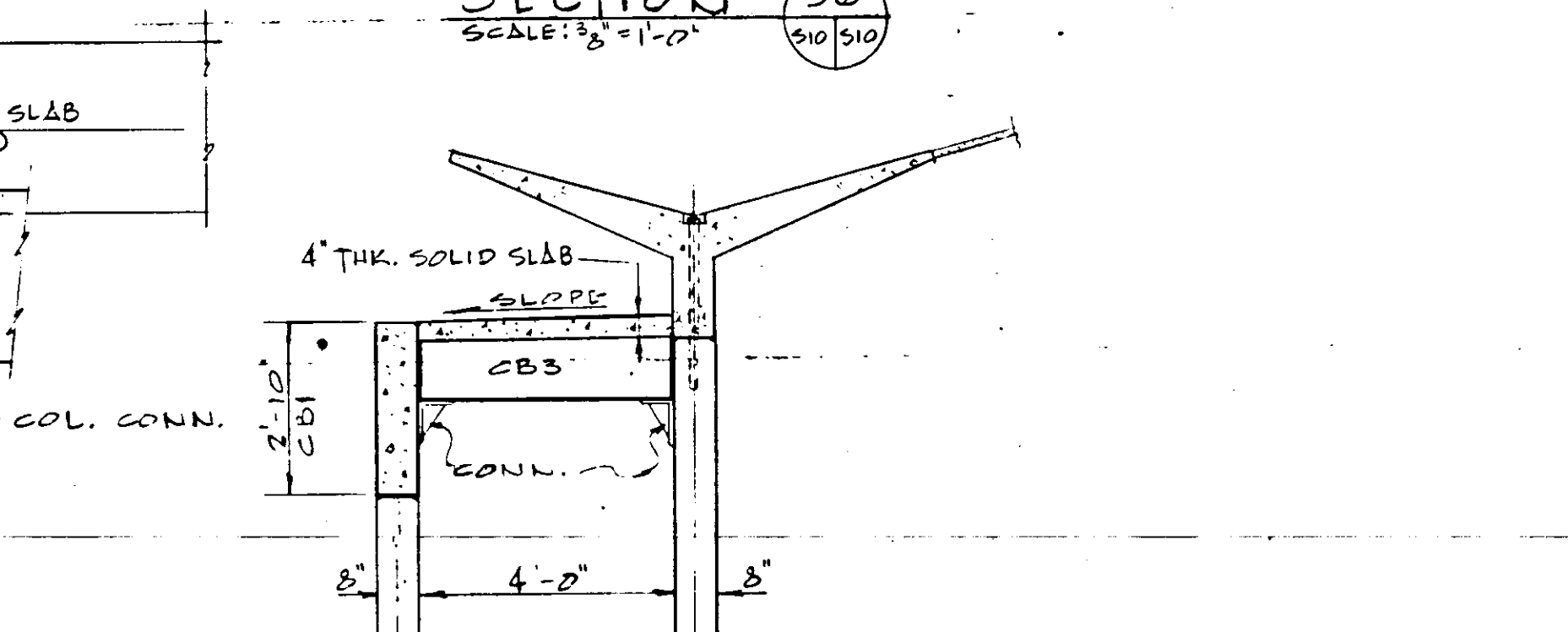
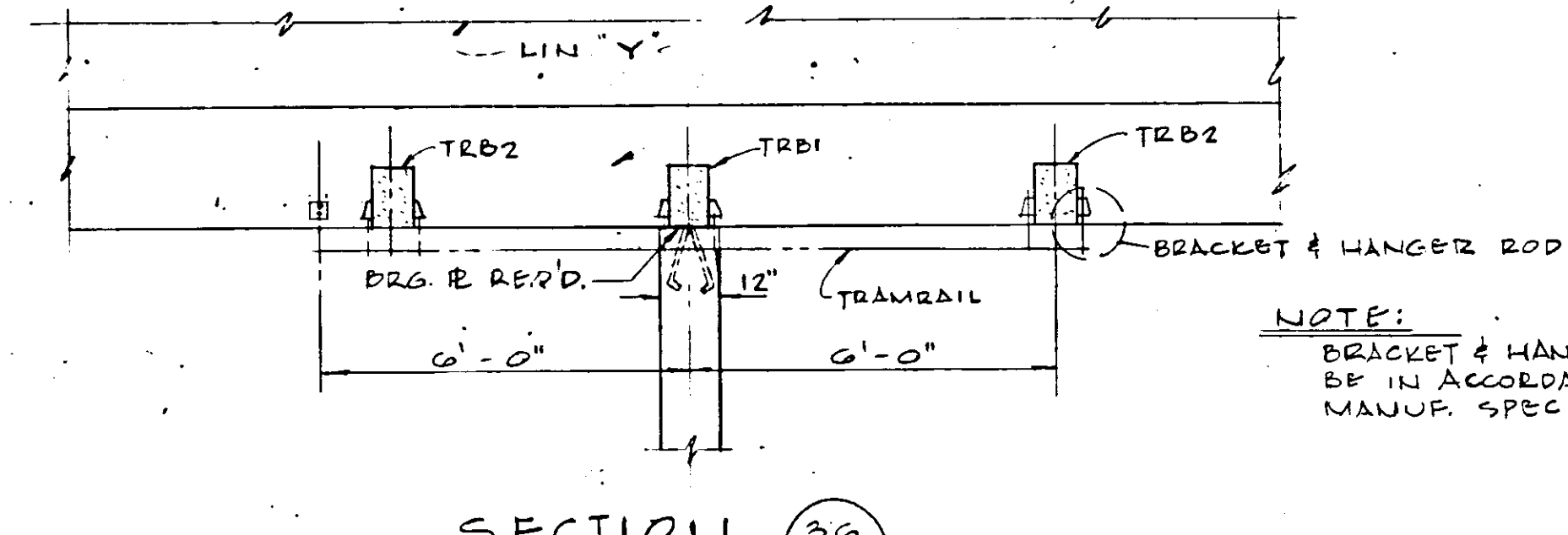
SECOND FLOOR FRAMING PLAN ~ PUMP ROOM - CONTROL HOUSE
SCALE: 1/8" = 1'-0"

BEAM SCHEDULE (PRECAST)									
MARK	SIZE	MON.	SHEAR	CONDITION	LOADS	REMARKS	ELEV.		
	V D	(CONC. SP. (FT.))	(KIPS)		L.L. D.L.		TOP OF BEAM		
2B1	8 12	-	-	SIMPLE BEAM	-	-	70.19		
2B2	8 16	55.0	17.3	"	80 100	-	70.19		
2B3	8 16	33.0	11.2	"	80 100	WALL LD. (50 psf)	70.19		
2B4	8 16	22.4	15.9	"	56	WALL LD. ONLY	72.33		
2B5	8 12	4.5	2.1	"	56	-	72.00		
2B6	8 12	4.5	2.1	"	56	-	72.00		
2B7	8 16	-	-	"	-	-	70.83		
2B8	8 12	-	-	"	56	WALL LD. ONLY	70.83		
2B9	12 22	-	-	"	56	WALL LD. & PARTIAL STAIR LD.	70.19		
2B10	8 12	-	-	"	-	-	70.83		
RB7	8 12	-	-	SIMPLE BEAM	-	-	72.00		
RB1	8 34	-	-	"	-	-	71.33		
CB2	8 34	-	-	"	-	-	71.33		
CB3	8 12	-	-	"	-	-	71.00		
TRB1	8 12	22.5	3.7	SIMPLE BEAM	-	WAP LD.	72.00		
TRB2	8 12	-	-	"	-	-	72.00		

COLUMN SCHEDULE (PRECAST)				
SIZE	MARK	ELEV. AT TOP	ELEV. AT BASE	REMARKS
8 x 12	A2, A3, B2, D2, E2, E3, E7, F1 THRU F5, F7	71.20	55.33	
8 x 12	D4, D5	71.00	55.33	
8 x 12	D1, E1	71.33	55.33	
8 x 12	D1	68.50	55.33	

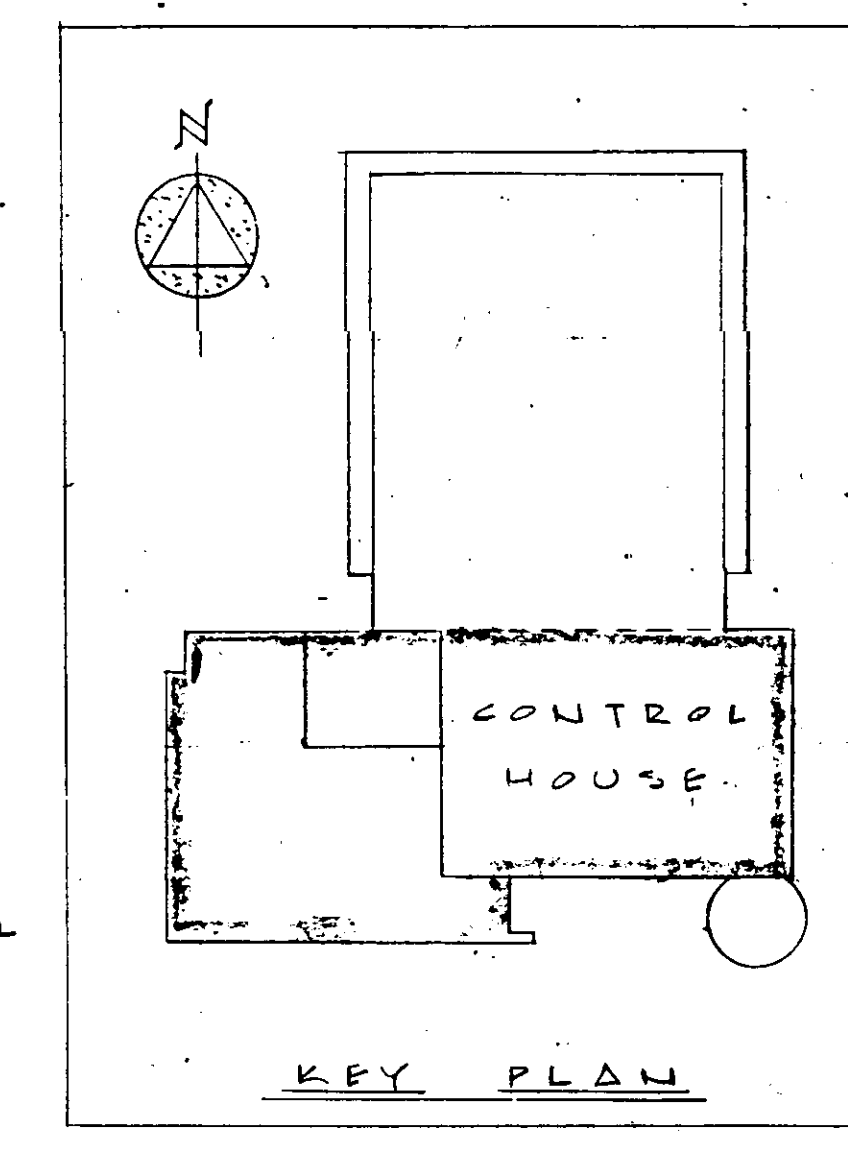


ELEVATION 37
SCALE: 3/8" = 1'-0"

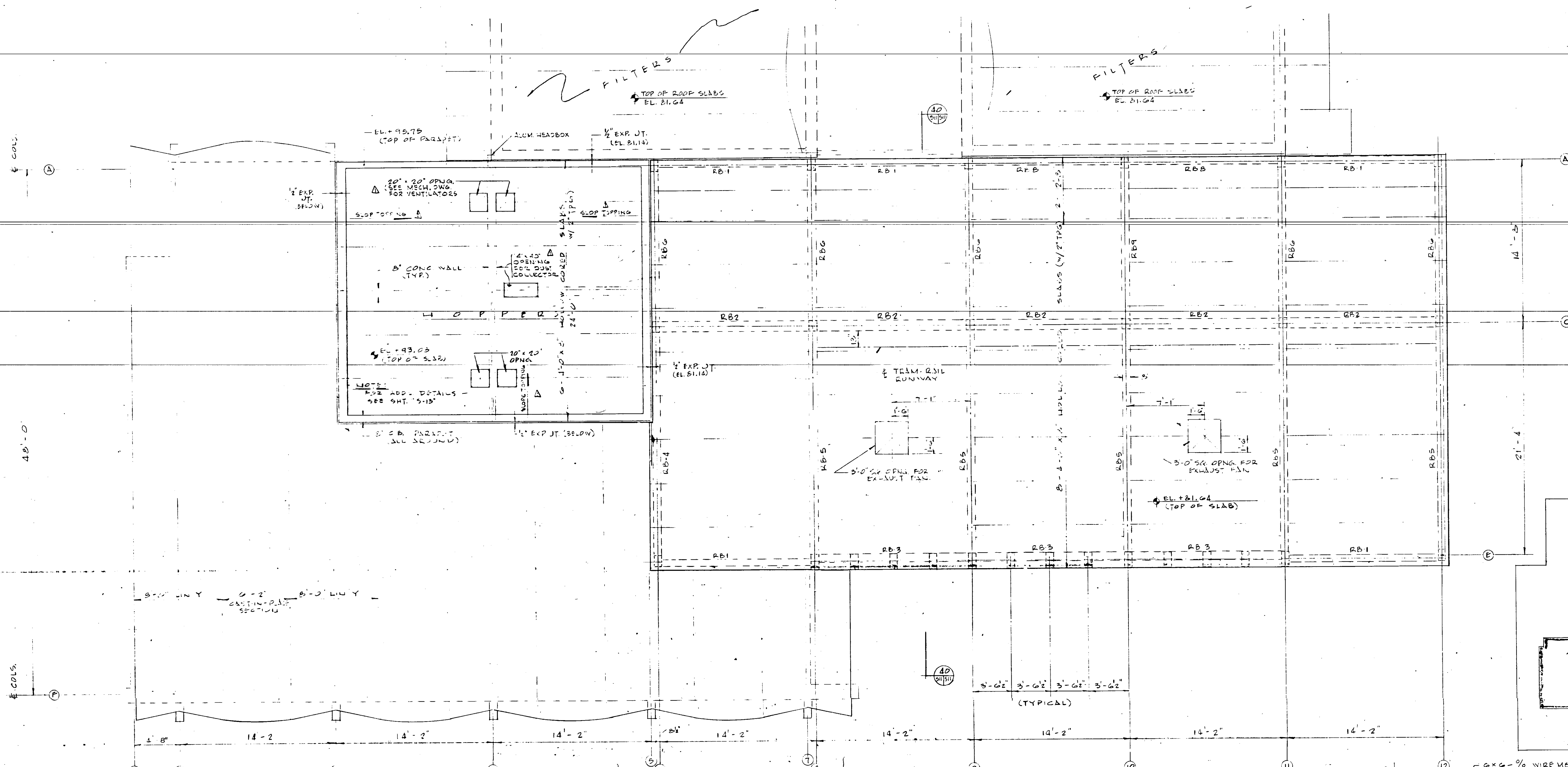


SECTION 38
SCALE: 3/8" = 1'-0"

NOTE:
* - BEAM D.L. NOT INCLUDED.
▲ - BEAM D.L. INCLUDED.



DATE	REVISED SECTION #35 & SCHEDULES	D.W.C.
NO.	AS BUILT	F.S.L.
NO.	DATE	DESCRIPTION
REVISIONS		
<p>RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.</p> <p>WATER WORKS PROJECT WATER TREATMENT PLANT PART B CONTROL HOUSE, SECOND FLOOR PLAN - STRUCT.</p> <p>MANATEE COUNTY, FLORIDA</p>		
DESIGNED BY	FILE NO.	SEAL
DRAWN BY	6353-3-S-10-III-B	
CHECKED BY	SHEET	
DATE	OF 13 SHEETS	
FEB. 1965	SCALE: AS SHOWN	

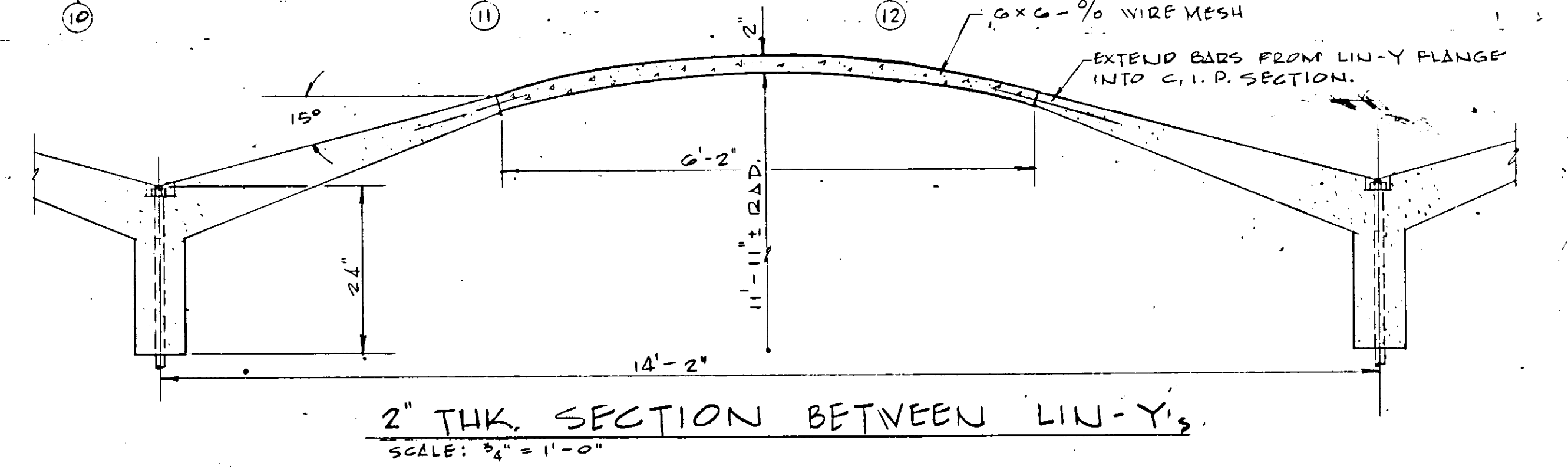


ROOF FRAMING PLAN - CONTROL HOUSE
SCALE: 1/4" = 1'-0"

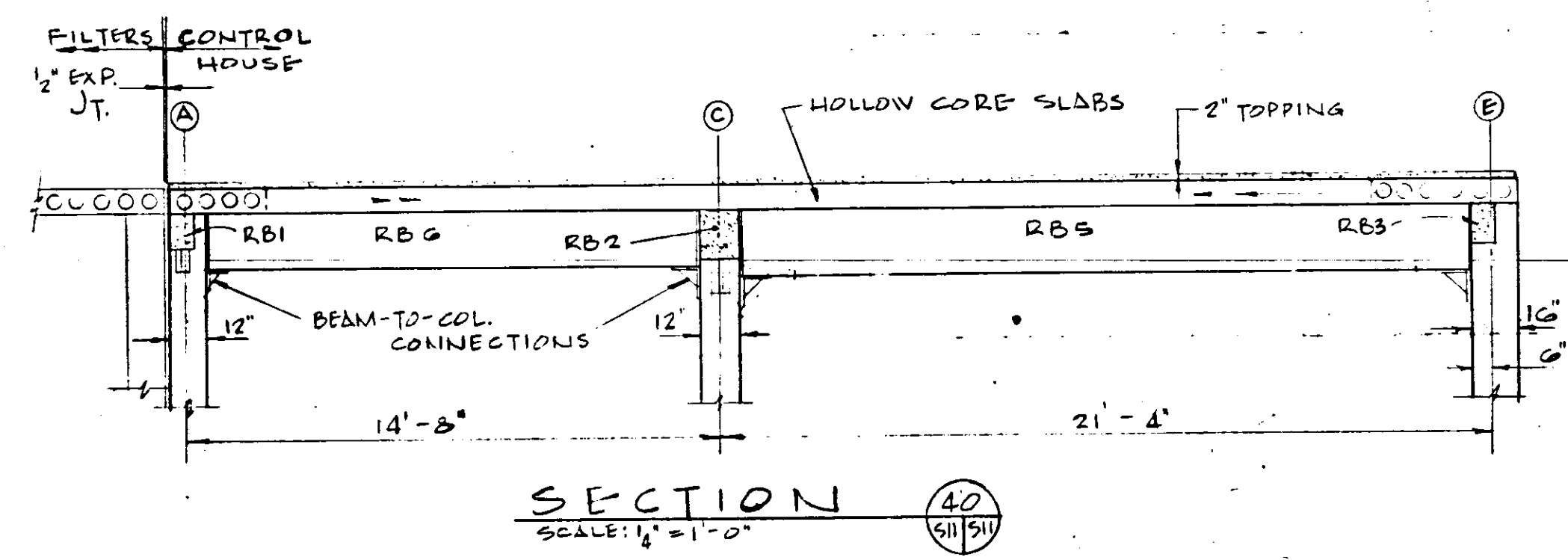
MARK		SIZE	MON. (KIPS)	SHEAR (KIPS)	CONDITION	LOADS (KIP)		REMARKS
		W x D	(FT-KIPS)	(KIPS)		L.L.	D.L.	
RB-1	8	12	-	-	SIMPLY SUPPORT'D.	-	-	
RB-2	12	16	7.0	2.0	"	25	80	
RB-3	8	12	-	-	SIMPLY SUPP. OR CONT.	-	-	
RB-4	8	16	48.3	9.3	SIMPLY SUPPORT'D.	25	80	
RB-5	8	22	93.9	37.2	"	25	80	
RB-6	8	16	68.0	20.0	"	25	80	
RB-7	8	12	-	-	"	-	-	SEE SHT. 'S-10'
RB-8	8	32	-	-	"	-	-	
RB-9	8	12	68.0	20.0	"	25	80	

SIZE	MARK	EL. TOP	EL. BEAM	REMARKS
8 x 12	A6, A8, A9, A10, A11	81.00	58.42	
8 x 12	E6, C6, C8, C9, C10, C11	81.00	58.42	
8 x 16	E8, E9, E10, E11	81.00	56.00	
8 x 12	A12, C12, E12	81.00	54.67	
8 x 16	E8a, b, c, E9a, b, c, E10a, b, c	81.00	56.00	

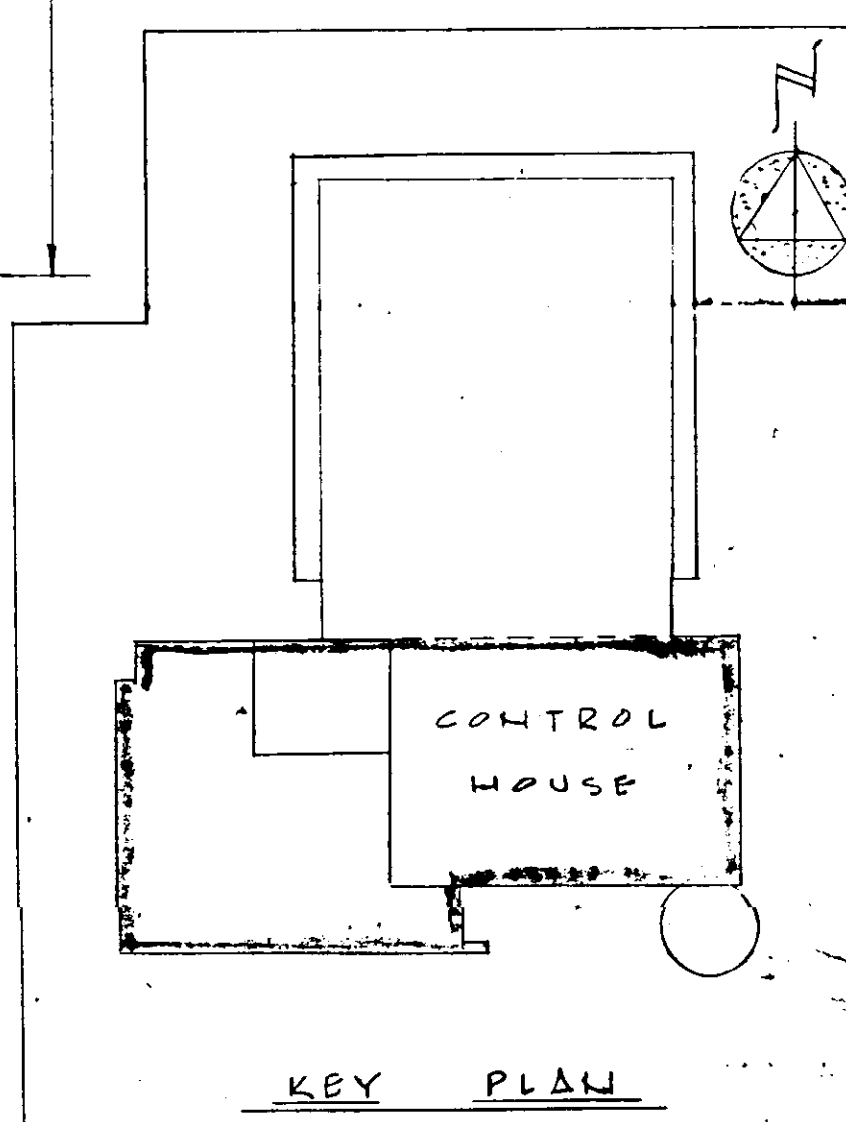
NOTES:
 * BEAM D.L. NOT INCLUDED.
 O BEAM D.L. INCLUDED.
 A TRAM-RAIL CRANE: L.L. - 20.5 kips
 D.L. - 1.2 kip



2" THK. SECTION BETWEEN LIN-Y's
SCALE: 3/4" = 1'-0"



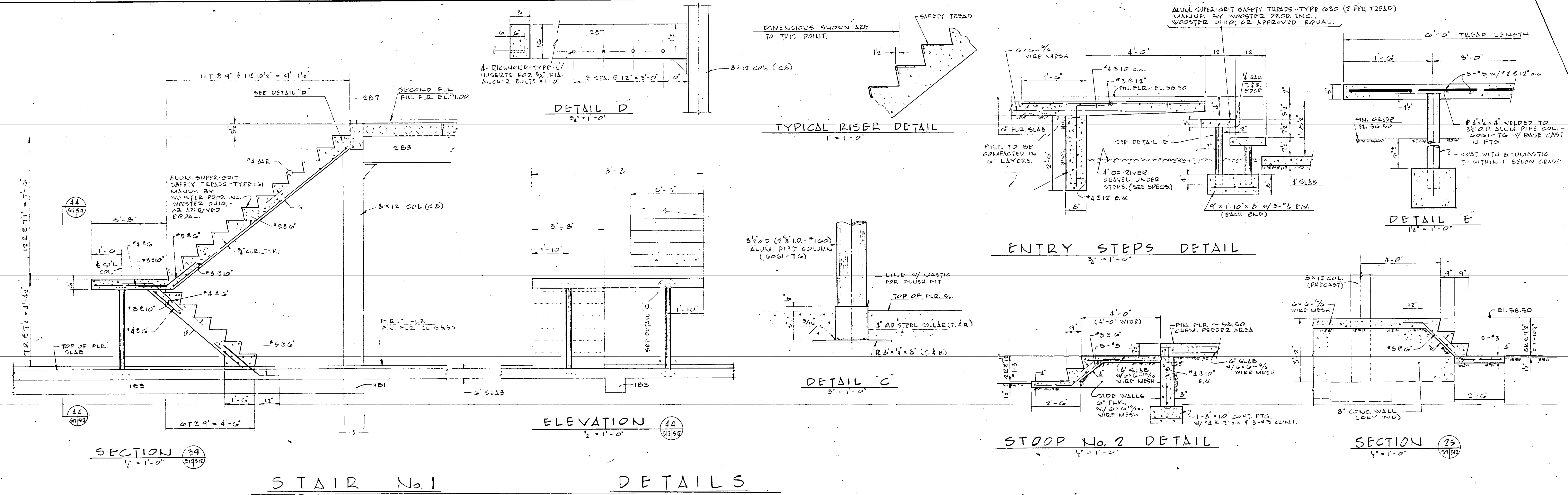
SECTION
SCALE: 1/4" = 1'-0"



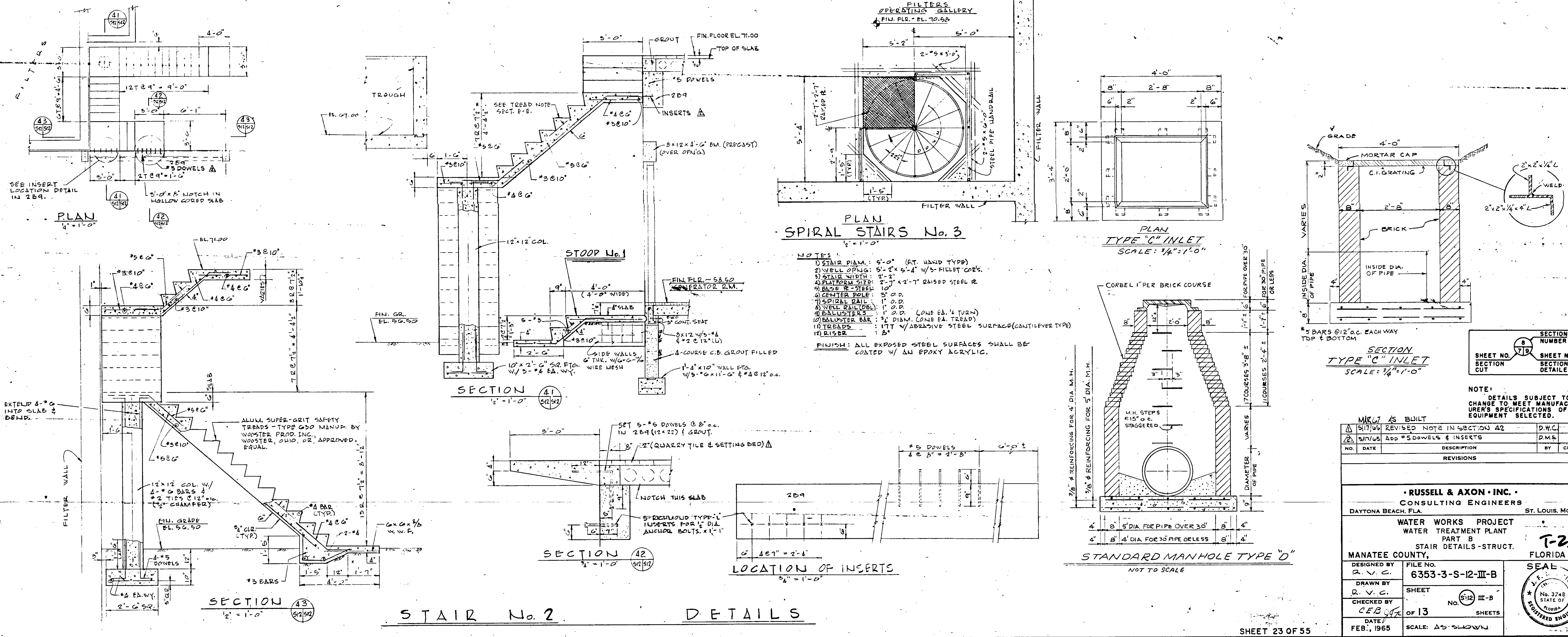
5/17/65 ADDED NOTES & REVISED SCHEDULES		D.W.C.
WORK AS BUILT		F.S.L.
NO.	DATE	DESCRIPTION
		REVISIONS
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.		
WATER WORKS PROJECT WATER TREATMENT PLANT PART B CONTROL HOUSE, ROOF FRAMING PLAN-STRUCT.		
MANATEE COUNTY, FLORIDA		T-22
DESIGNED BY R.V.C.	FILE NO. 6353-3-S-11-III-B	SEAL
DRAWN BY R.V.C.	SHEET OF 13	No. 3748 STATE OF FLORIDA REGISTERED ENGINEER
CHECKED BY C.E.B.	DATE FEB. 1965	No. (S-11) III-B SHEETS
SCALE: AS SHOWN		

NOTE:
 DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

SECTION NUMBER
 SHEET NO. 713
 SECTION CUT



STAIR No. 1 DETAILS



STAIR No. 2 DETAILS

- NOTES:**
- 1) STAIR DIA.: 5'-0" (RT. HAND TYPE)
 - 2) WELL OPNG.: 5'-2" x 5'-4" w/ 3" FILLET COR.
 - 3) STAIR WIDTH: 2'-2"
 - 4) PLATFORM STEPS: 2'-7" x 2'-7" RAISED STEEL R.
 - 5) BASE R-STEEL: 10"
 - 6) CENTER POLE: 3" O.D.
 - 7) SPIRAL RAIL: 1" O.D.
 - 8) WELL RAILING: 1" O.D.
 - 9) BALUSTERS: 1" O.D. (ONE EA. 1/2 TURN)
 - 10) BALUSTER BAR: 1/2" DIA. (ONE EA. TREAD)
 - 11) TREADS: 1 1/2" W/ ABRASSIVE STEEL SURFACE (CANTILEVER TYPE)
 - 12) RISER: 5"
- FINISH:** ALL EXPOSED STEEL SURFACES SHALL BE COATED W/ AN EPOXY ACRYLIC.

SECTION NO.	SECTION CUT	SHEET NO.	SECTION DETAIL
79			

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

NO.	DATE	DESCRIPTION	BY	CHKD.

MIRL AS BUILT

5/17/65 REVISED NOTE IN SECTION 42

5/17/65 Add #5 DOWELS & INSERTS

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
STAIR DETAILS-STRUCT.

MANATEE COUNTY, FLORIDA

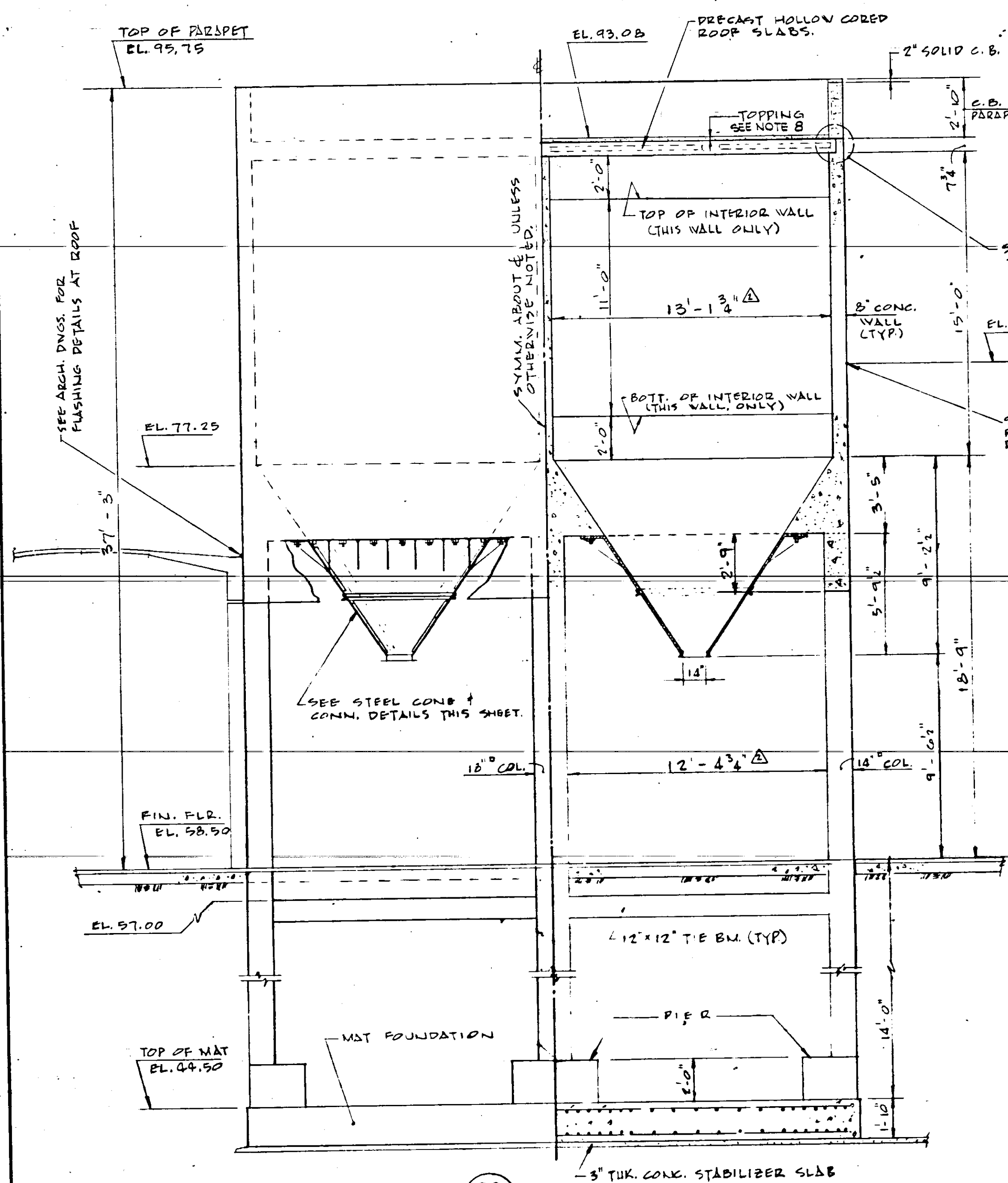
DESIGNED BY: R. V. C. FILE NO.: 6353-3-S-12-III-B

DRAWN BY: R. V. C. SHEET: No. 5-12 III-B

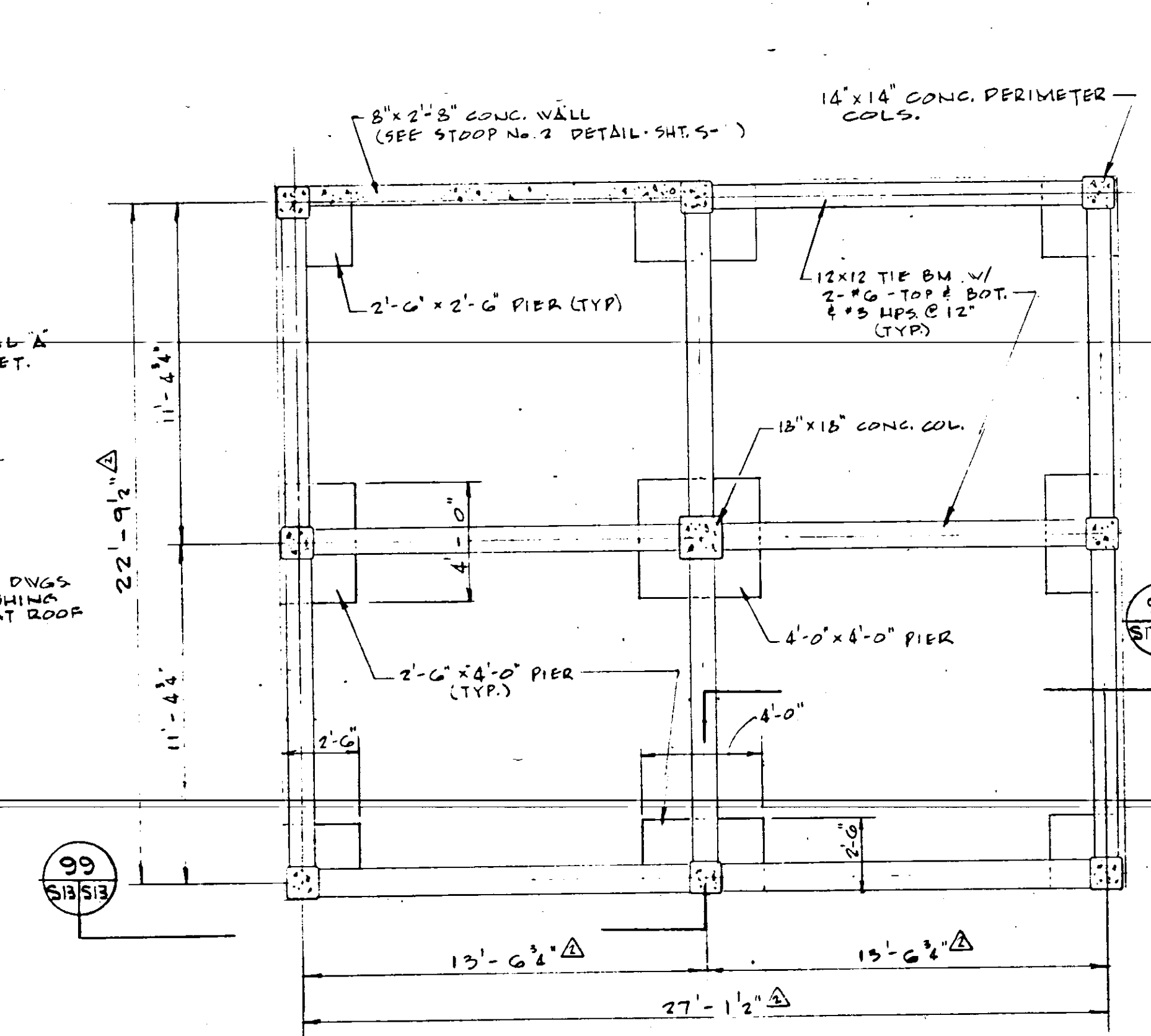
CHECKED BY: CEB OF 13 SHEETS

DATE: FEB., 1965 SCALE: AS SHOWN

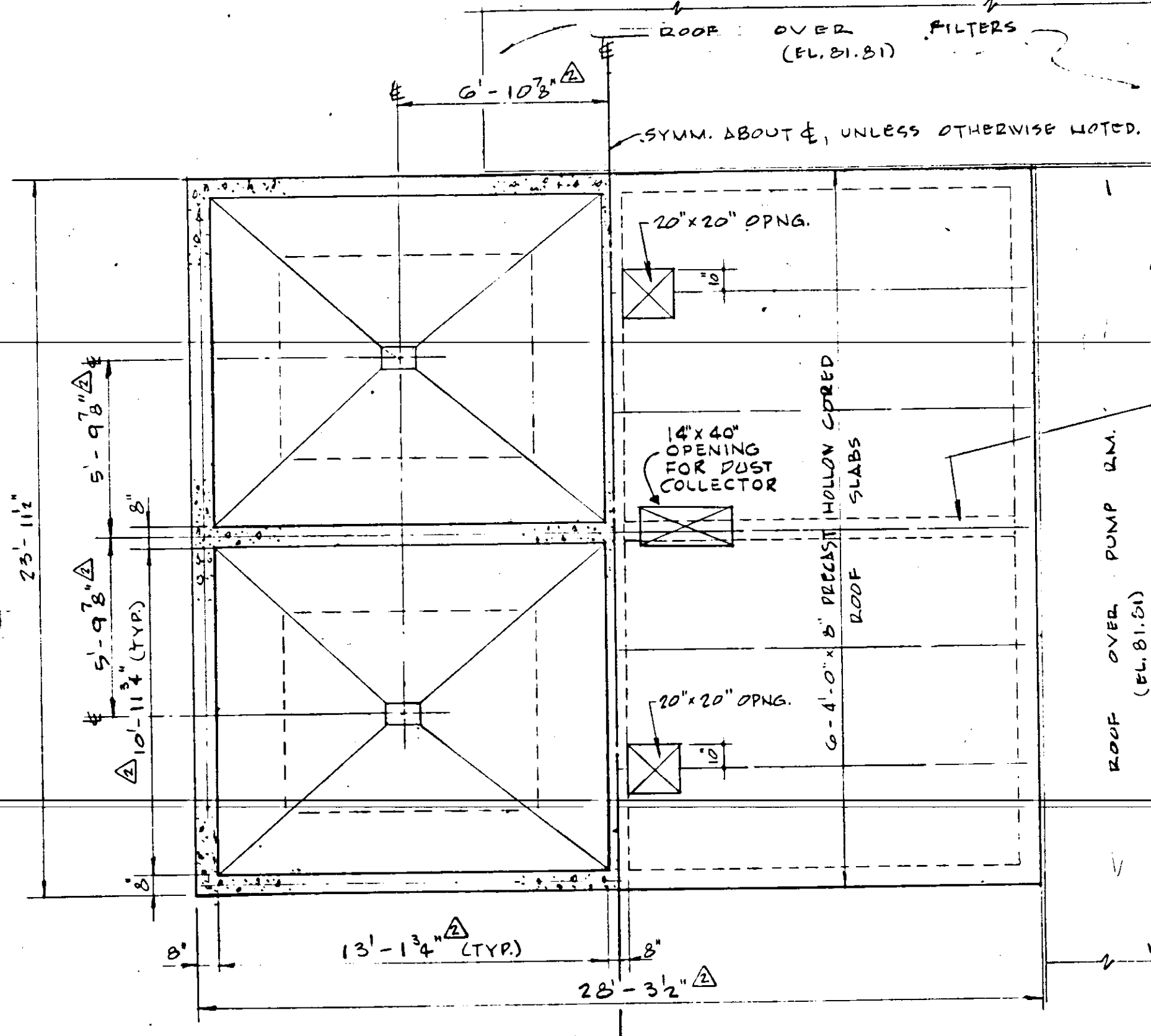
SEAL
No. 3748
STATE OF FLORIDA
REGISTERED ENGINEER



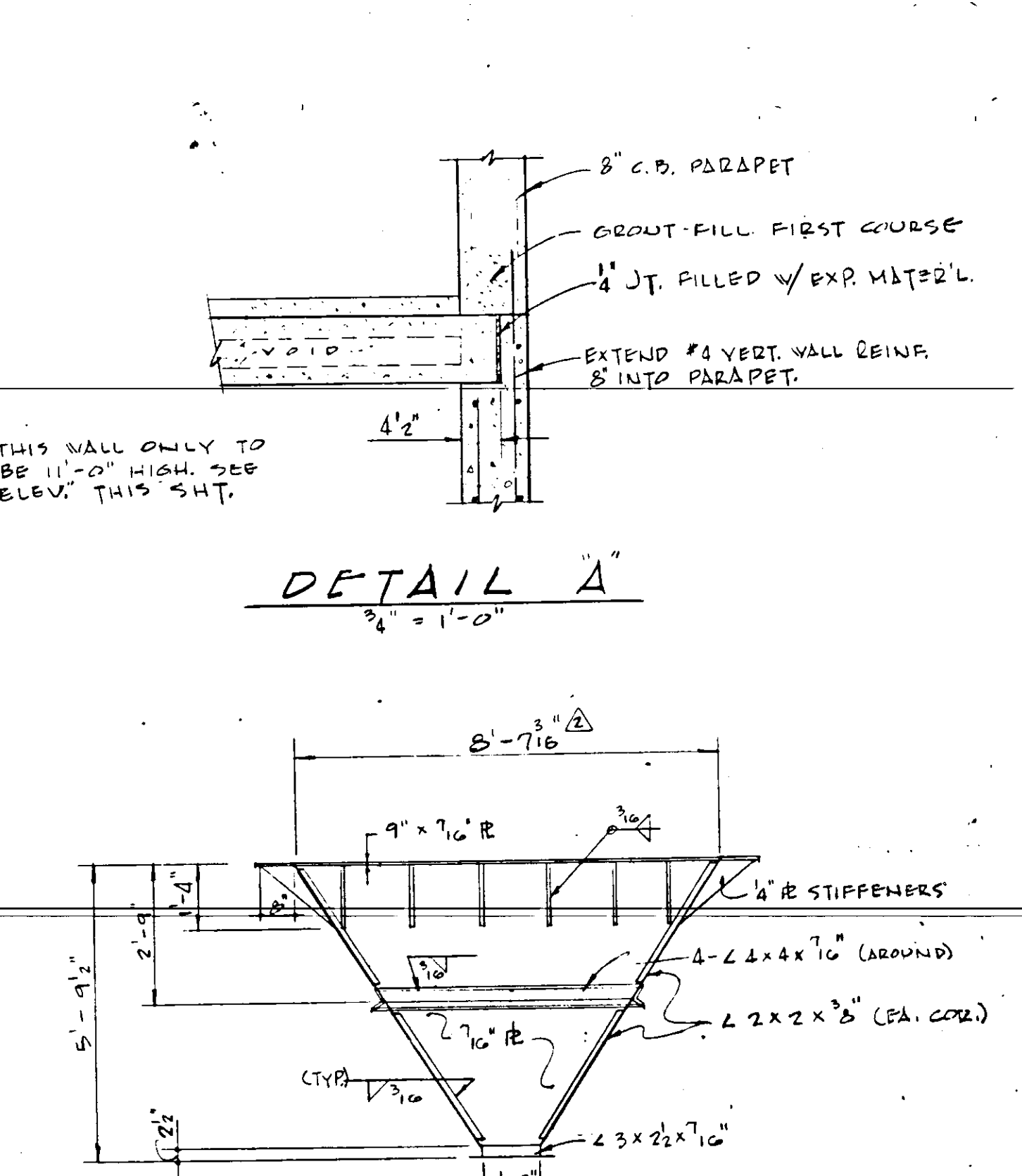
SECTION ~ HOPPERS
1" = 1'-0"



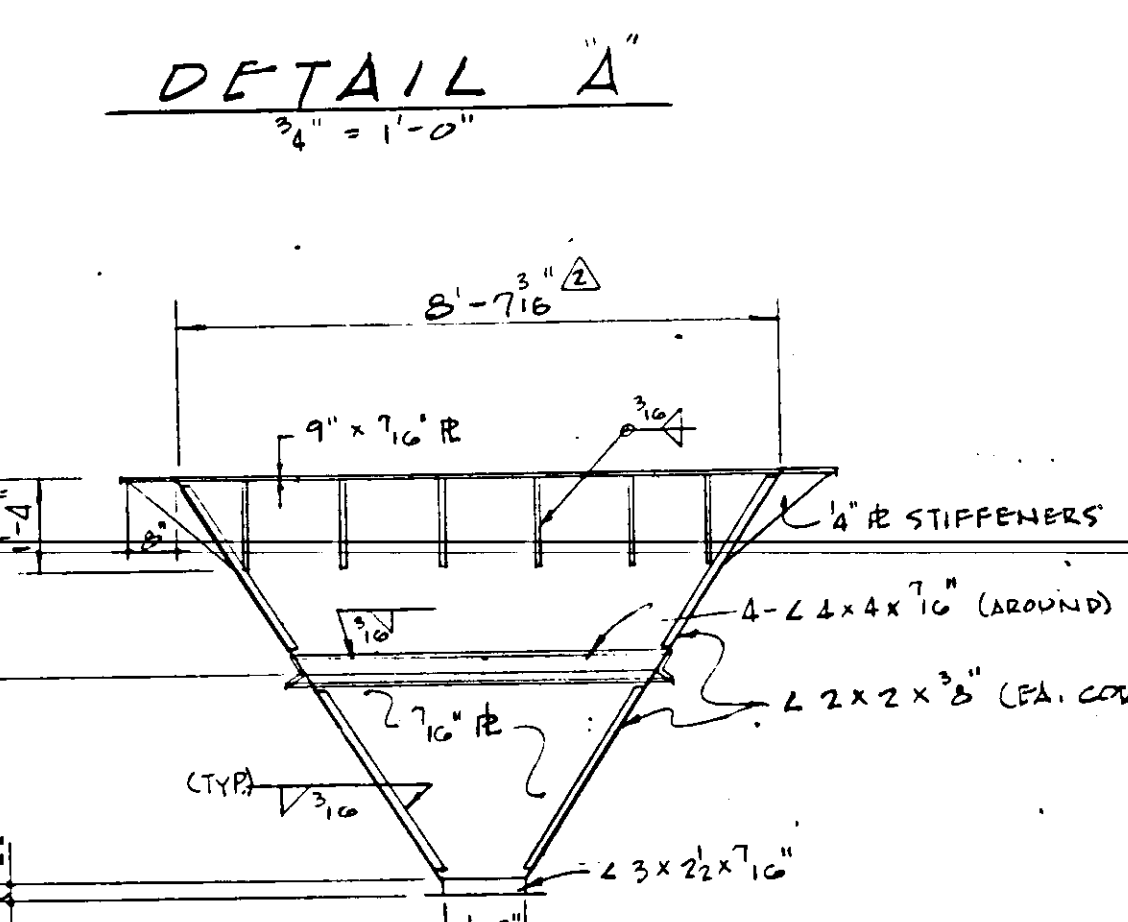
PLAN @ ELEVATION 57.00
1" = 1'-0"



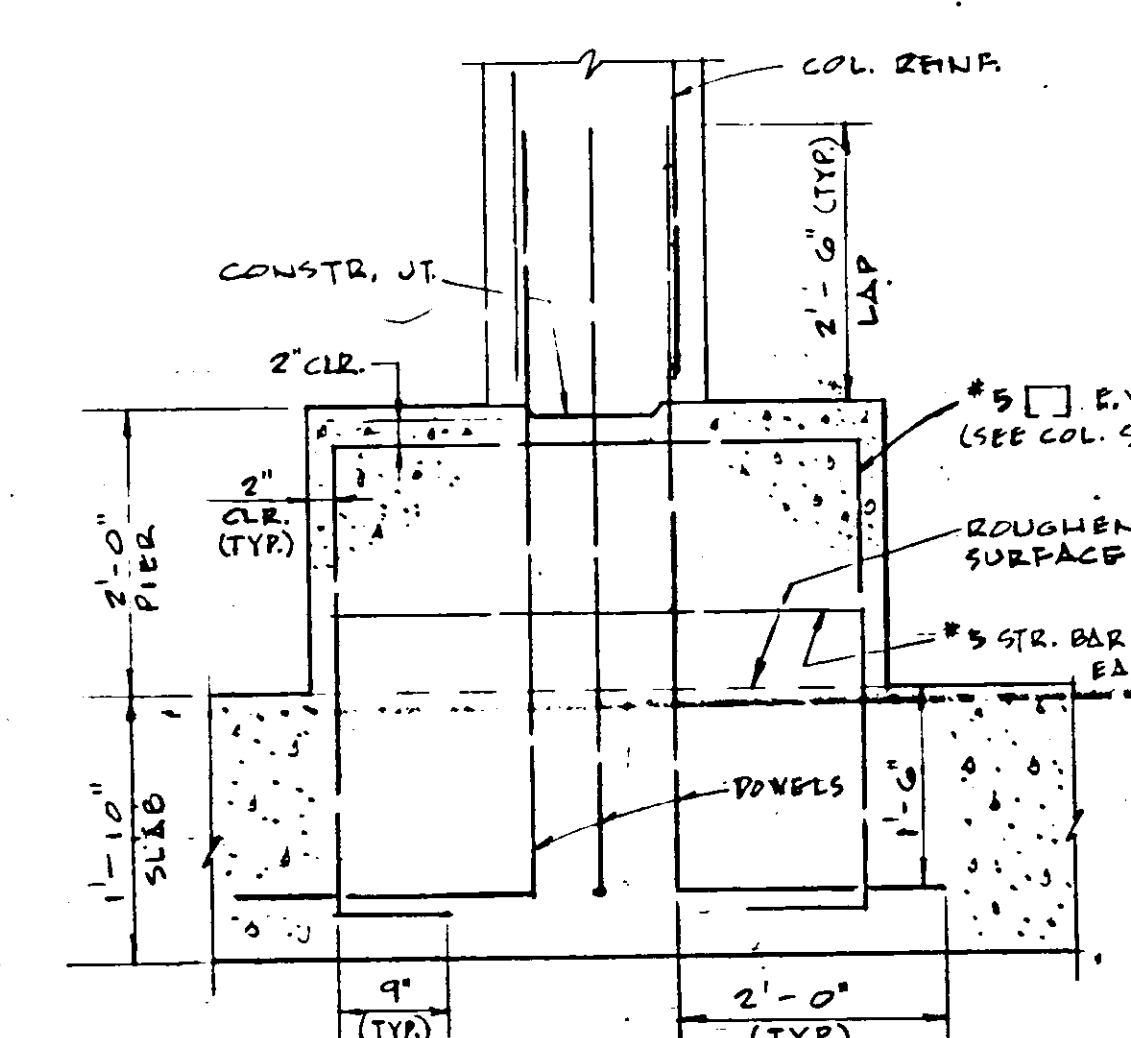
HALF-PLAN AT ELEVATION 77.25
1" = 1'-0"



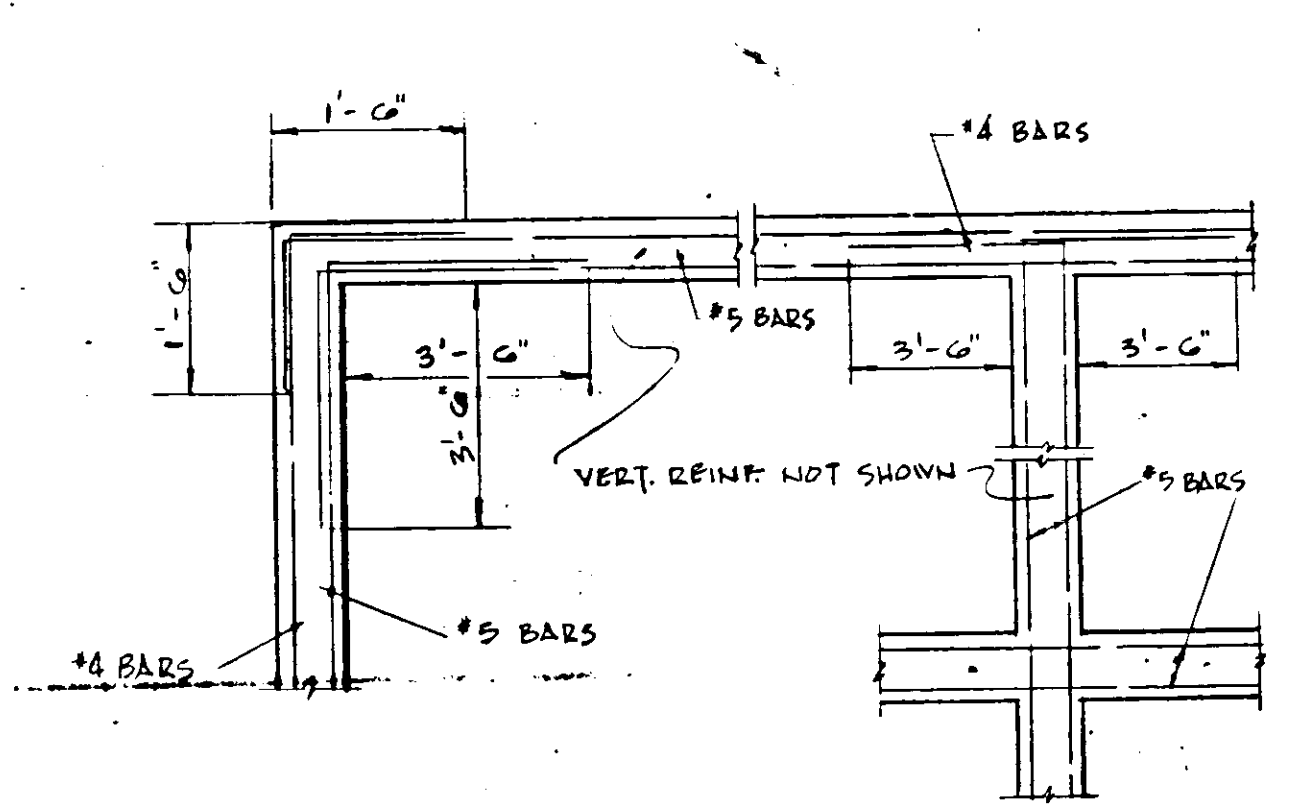
ROOF FRAMING HALF-PLAN
1" = 1'-0"



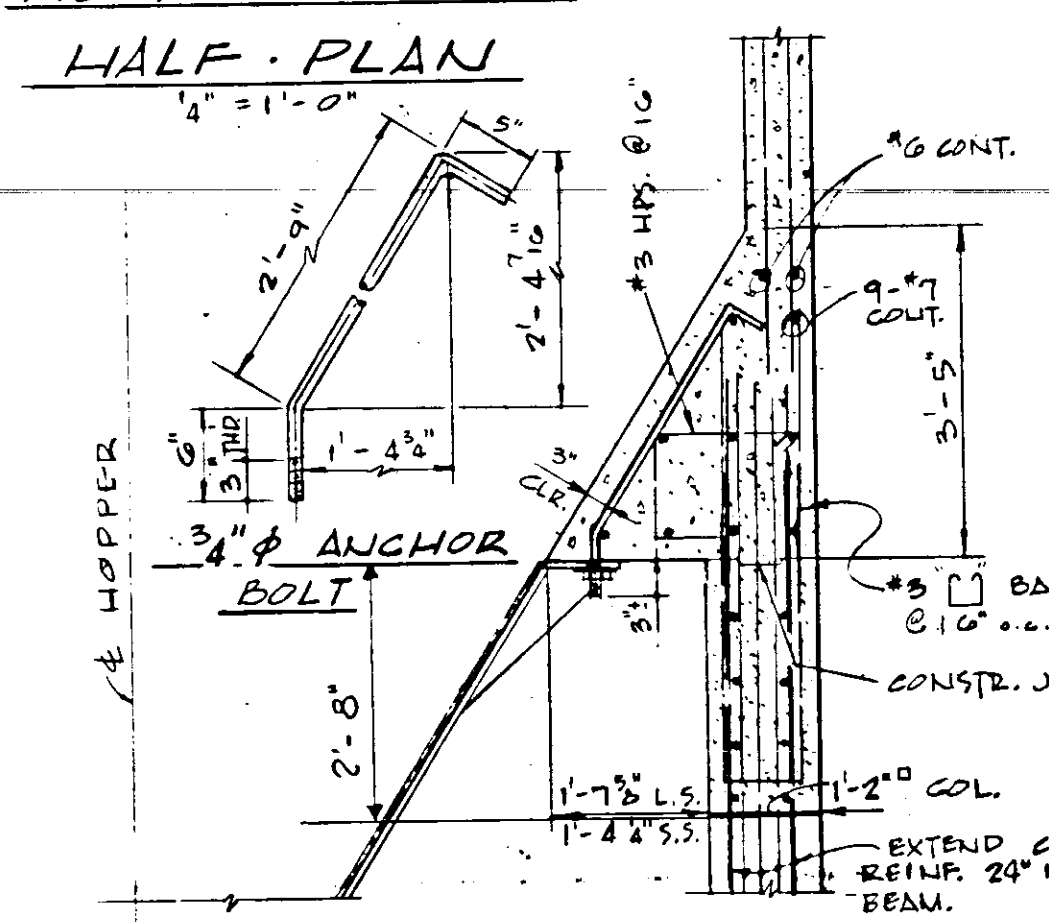
DETAIL A
3/4" = 1'-0"



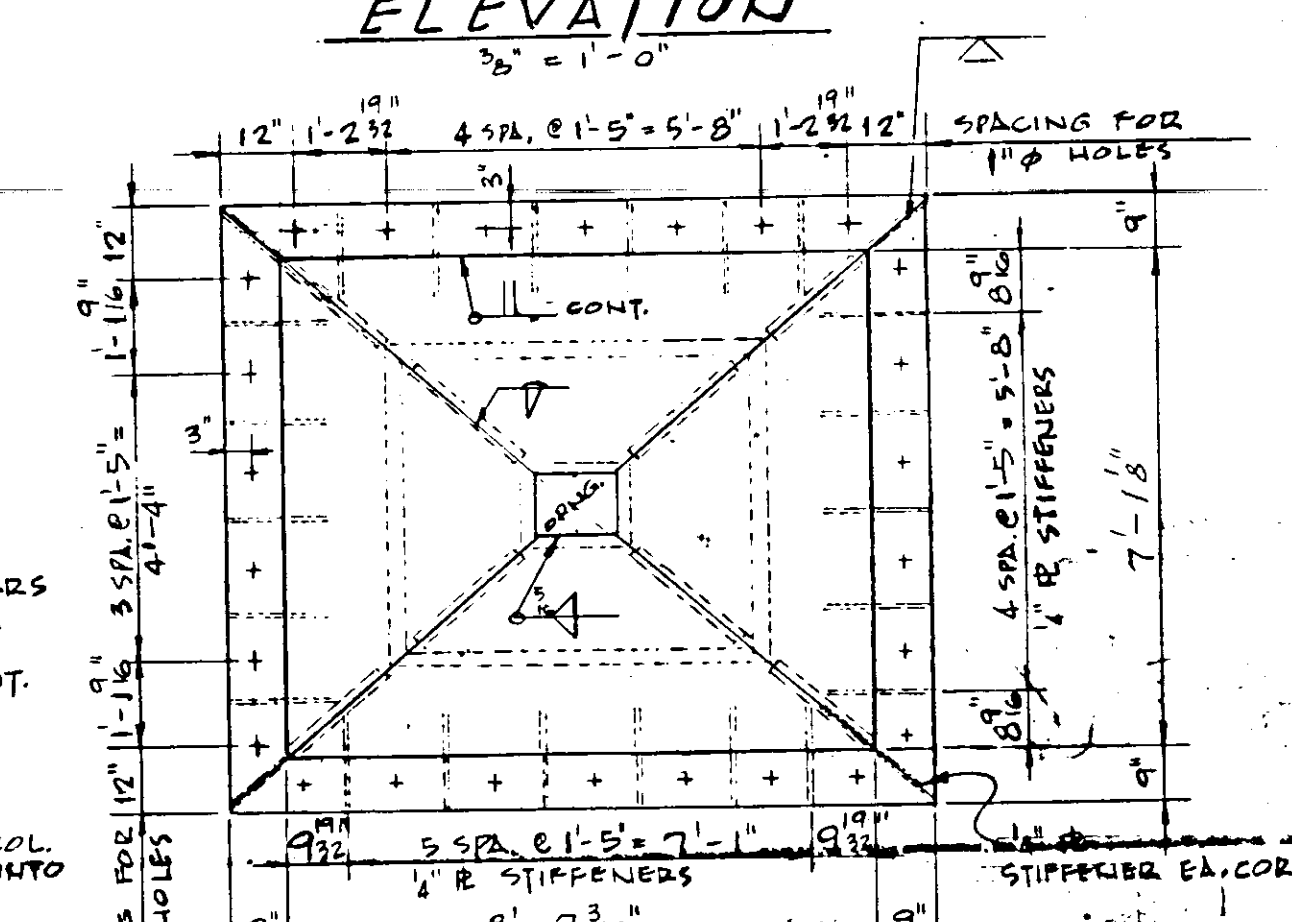
TYP. COLUMN BASE DETAIL
(N.T.S.)



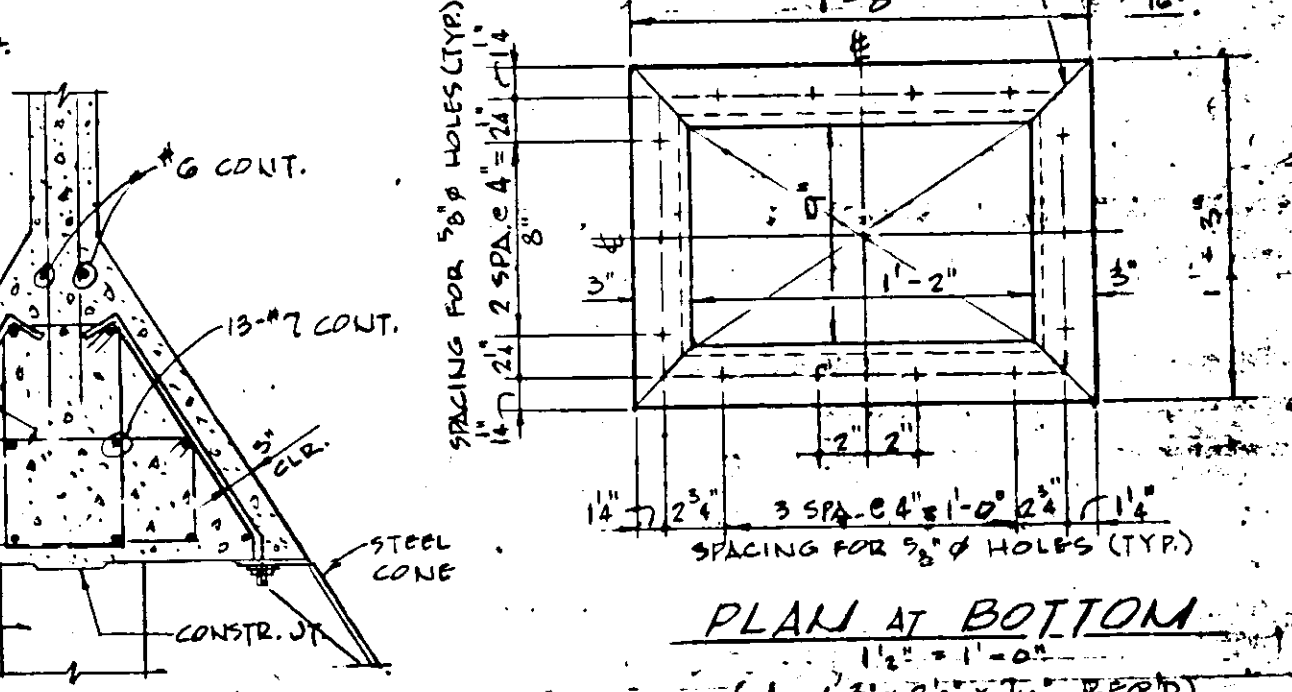
PLAN OF HORIZ. REINF. IN WALLS
(N.T.S.)



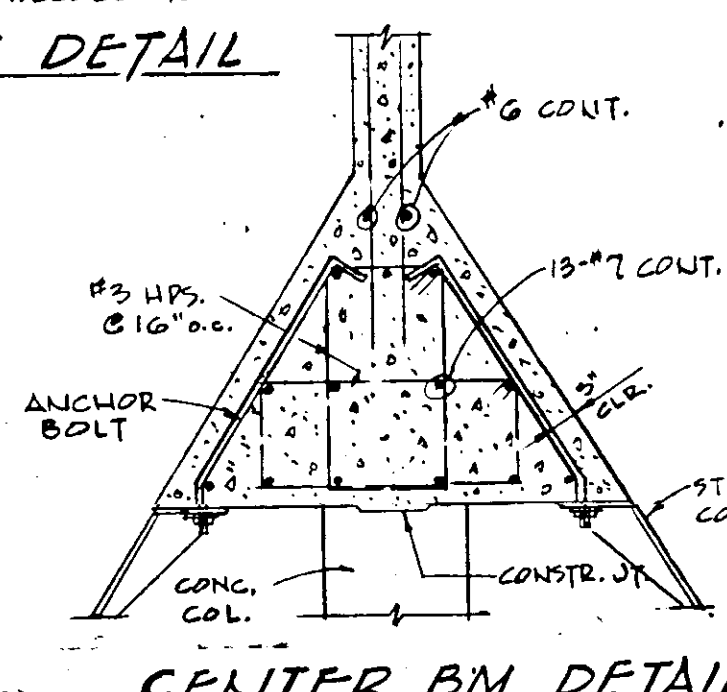
ANCHOR BOLT DETAIL
1" = 1'-0"



PLAN AT TOP
1" = 1'-0"



PLAN AT BOTTOM
(1-1/2" x 2-1/2" = 1" = 1'-0")

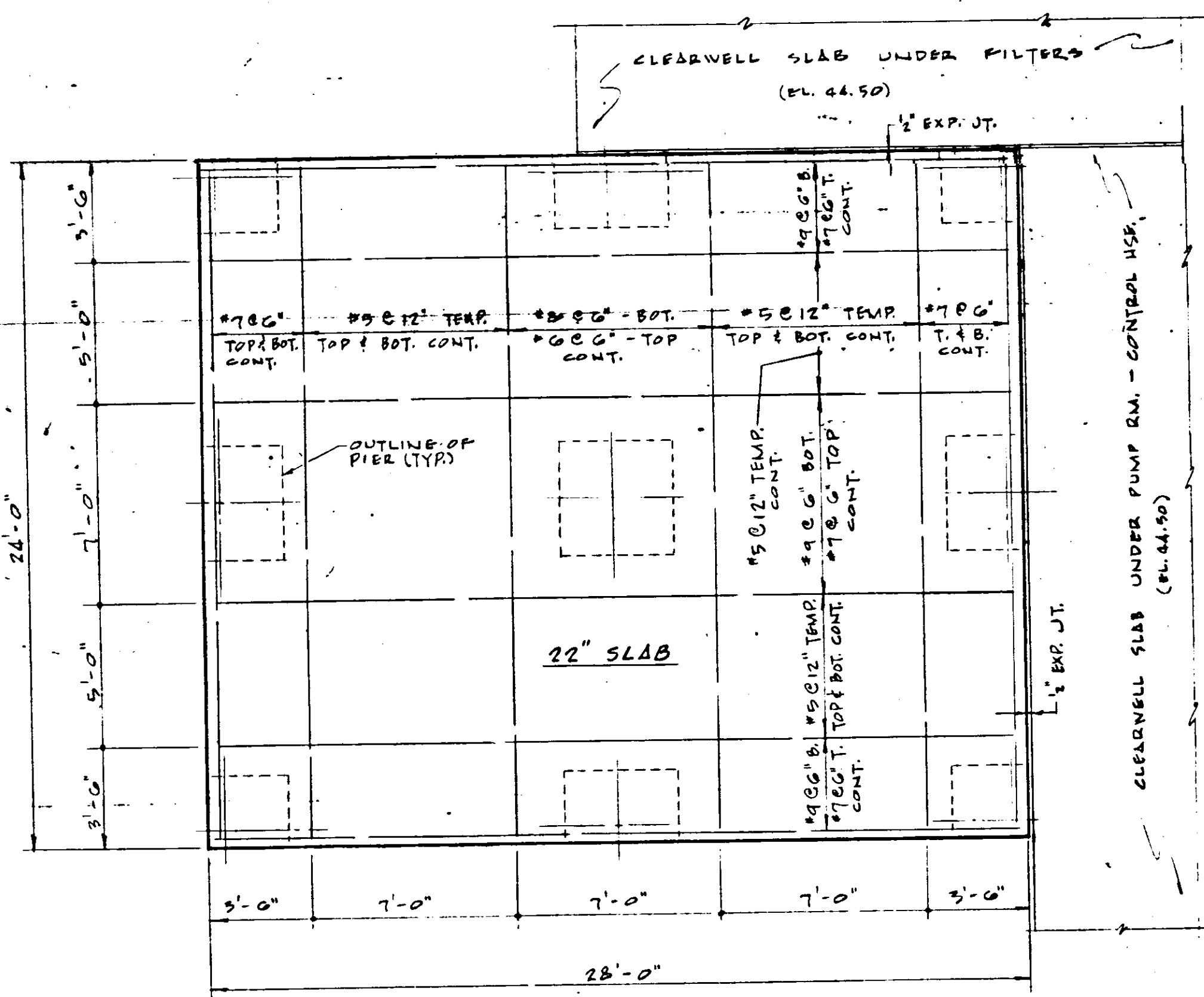


CENTER BM. DETAIL
1" = 1'-0"

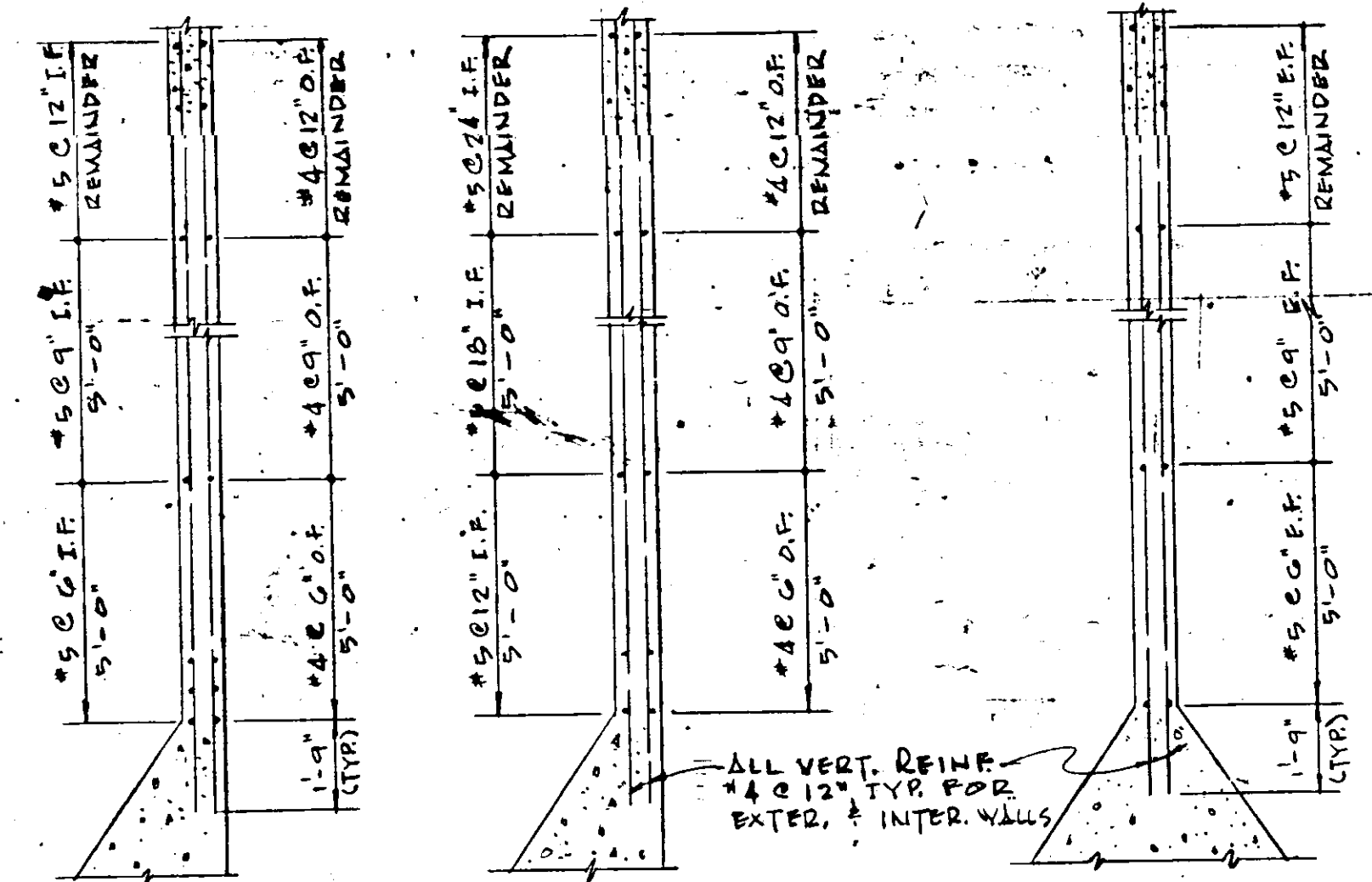
STEEL CONG. DETAILS

NOTE: STRUCTURAL STEEL SHALL CONFORM TO ASTM-A36. TWO (2) STEEL (ALUM.) CONES SHALL BE GIVEN A 1/2" THICK RUBBER LINING TO THE INTERIOR SURFACES ONLY.

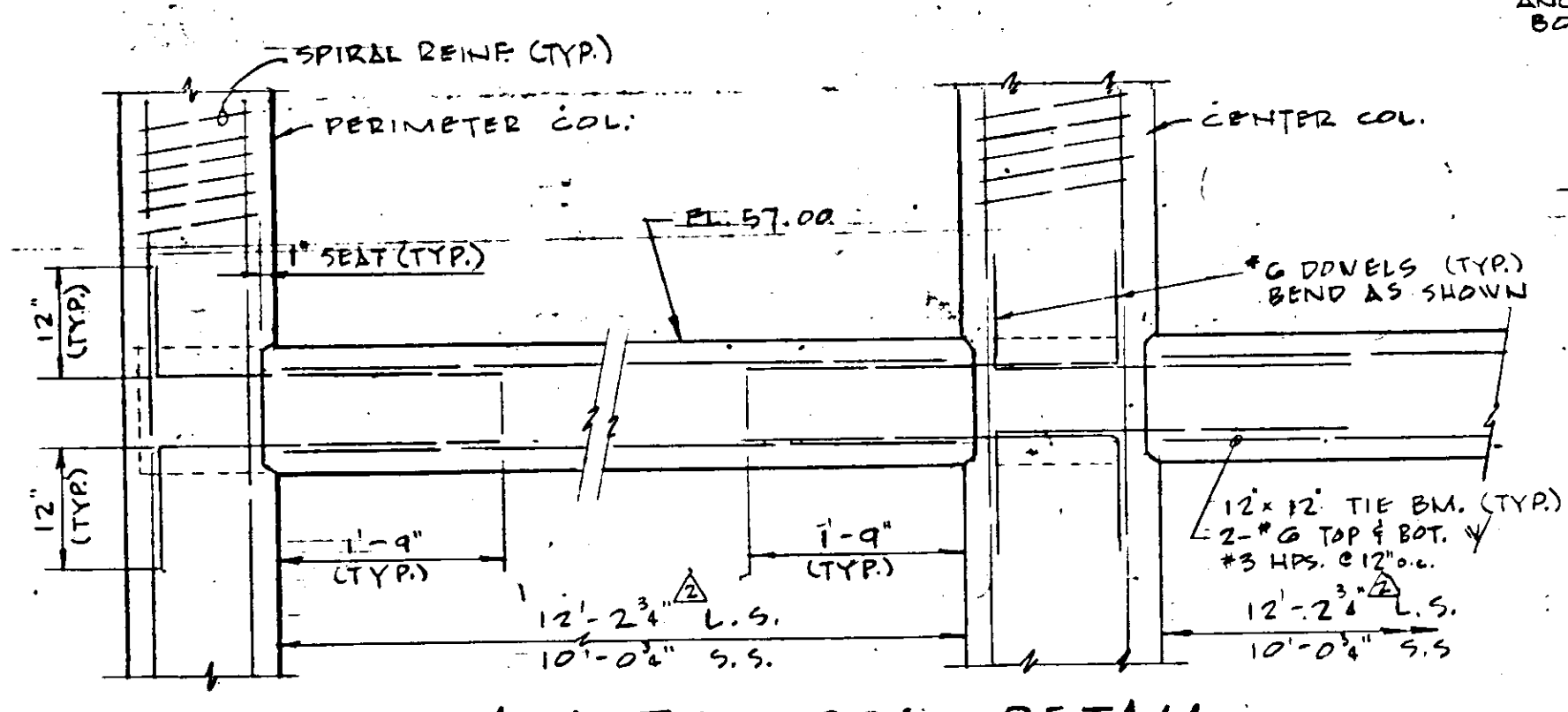
SHEET NO. 718	SECTION CUT	SHEET NO. SECTION DETAILED
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PLAN OF MAT FOUNDATION @ EL. 44.50
1" = 1'-0"

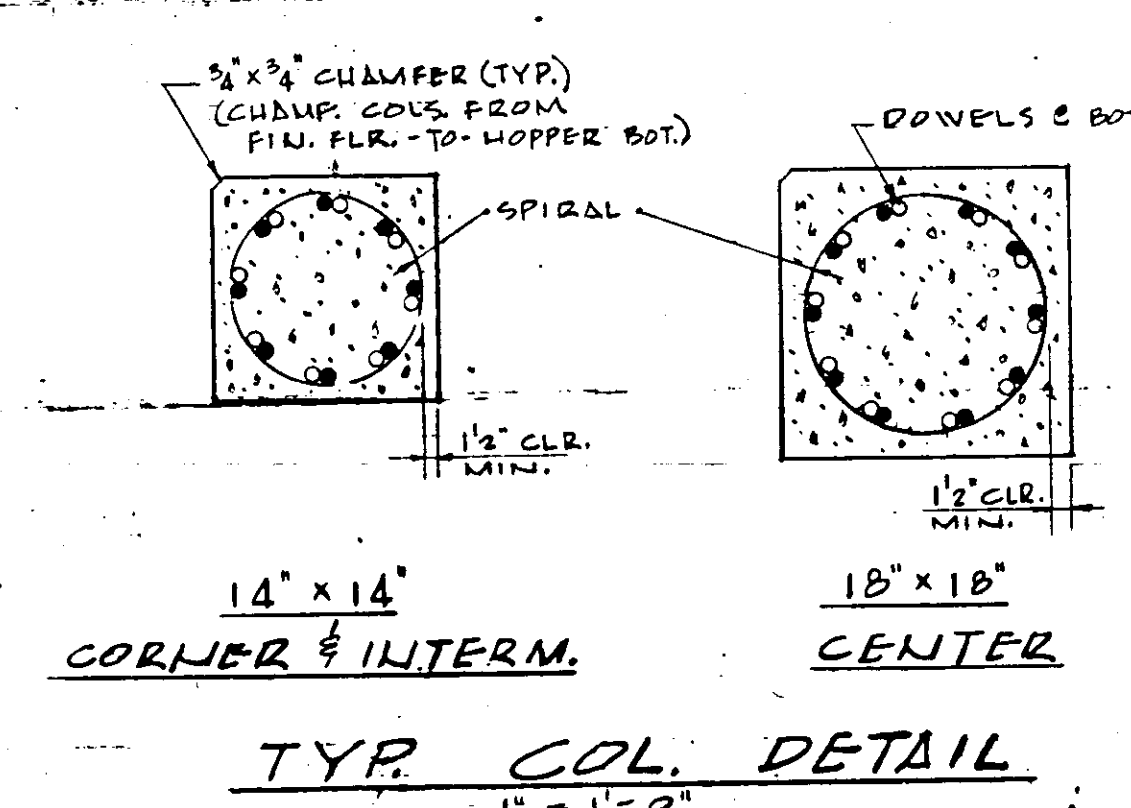


TYP. WALL SECTIONS
(N.T.S.)



TYP. BEAM-TO-COL. DETAIL AT EL. 57.00
3/4" = 1'-0"

COL. LOCATION	CORNER	INTERMEDIATE	CENTER
COL. SIZE	12" x 14"	12" x 14"	18" x 18"
REIN. (VERT.)	8-#5	8-#5	10-#5
SPIRAL REINFR.	3/8" @ 12" PITCH	3/8" @ 12" PITCH	1/2" @ 8" PITCH
PIER SIZE	2'-0" x 2'-0"	2'-0" x 4'-0"	4'-0" x 4'-0"
REINFR.	5-#5 E.W.	5-#5 x 7-#5	7-#5 E.W.
DOWELS FOOTING	8-#5	8-#5	10-#5
	MAT	FOUNDATION	



TYP. COL. DETAIL
1" = 1'-0"

- NOTES:
- ALL CONCRETE SHALL HAVE 3000 P.S.I. COMPRESSIVE STRENGTH IN 28 DAYS.
 - REIN. STEEL SHALL BE INTERMEDIATE GRADE IN ACCORDANCE WITH ASTM-A305 EXCEPT FOR SPIRAL REINFR. IN COLS. WHICH SHALL CONFORM TO ASTM-A432 (F_y = 60,000 P.S.I.).
 - SPIRAL REINFR. IN COLS. TO HAVE 1/2 EXTRA TURNS AT TOP & BOTTOM.
 - LAP VERT. BARS IN COLS. 20 DIAMETERS.
 - LAP WALL BARS 24 DIAMETERS AT SPICES; MIN. LAP = 12"
 - BEND BARS AS SHOWN IN DETAILS.
 - CONCRETE COVER:
 - COLS.: 5" FOR BOTTOM & SIDES.
 - PIERS: 2" MIN.
 - WALLS: 1 1/2" MIN.
 - COLS.: 1 1/2" MIN. FOR SPIRALS.
 - LIGHTWEIGHT CONG. TOPPING SHALL BE 3" THICK @ WALLS & SLOPE TO 2" @ CENTER OF NORTH WALL (HEADER BOX DETAIL (3)) & 4 PLY BUILT-UP ROOF SHALL BE INSTALLED OVER TOPPING.

MARKED AS BUILT

NO.	DATE	DESCRIPTION	BY	CHKD.
1	5/17/65	REVISED HOPPER ELEV. & ADDED NOTE # 8	D.W.C.	
2	9/17/65	CORR. HOPPERS & STEEL CONG. DIMENS.	D.W.C.	J.P.H.

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
CONTROL HOUSE, HOPPER STORAGE-PLAN & DETAILS-STRUCT. FLORIDA

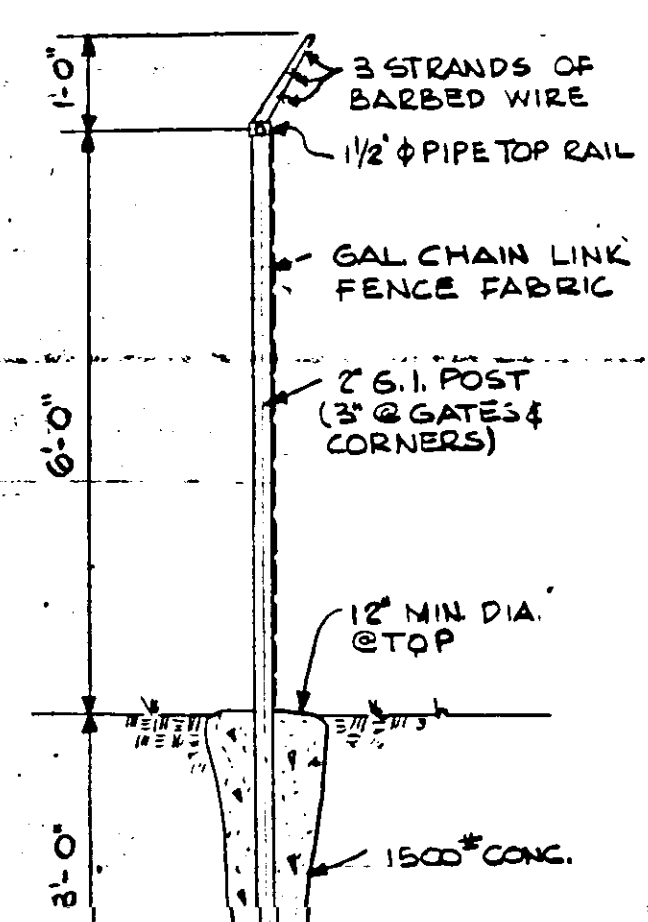
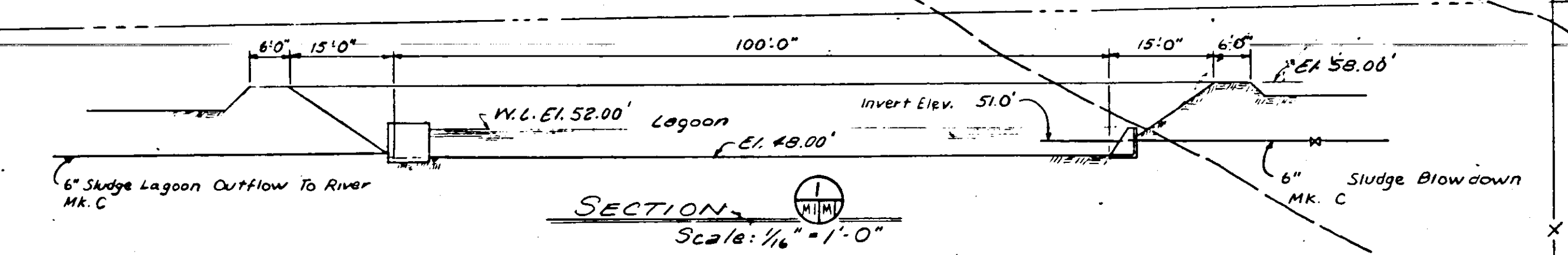
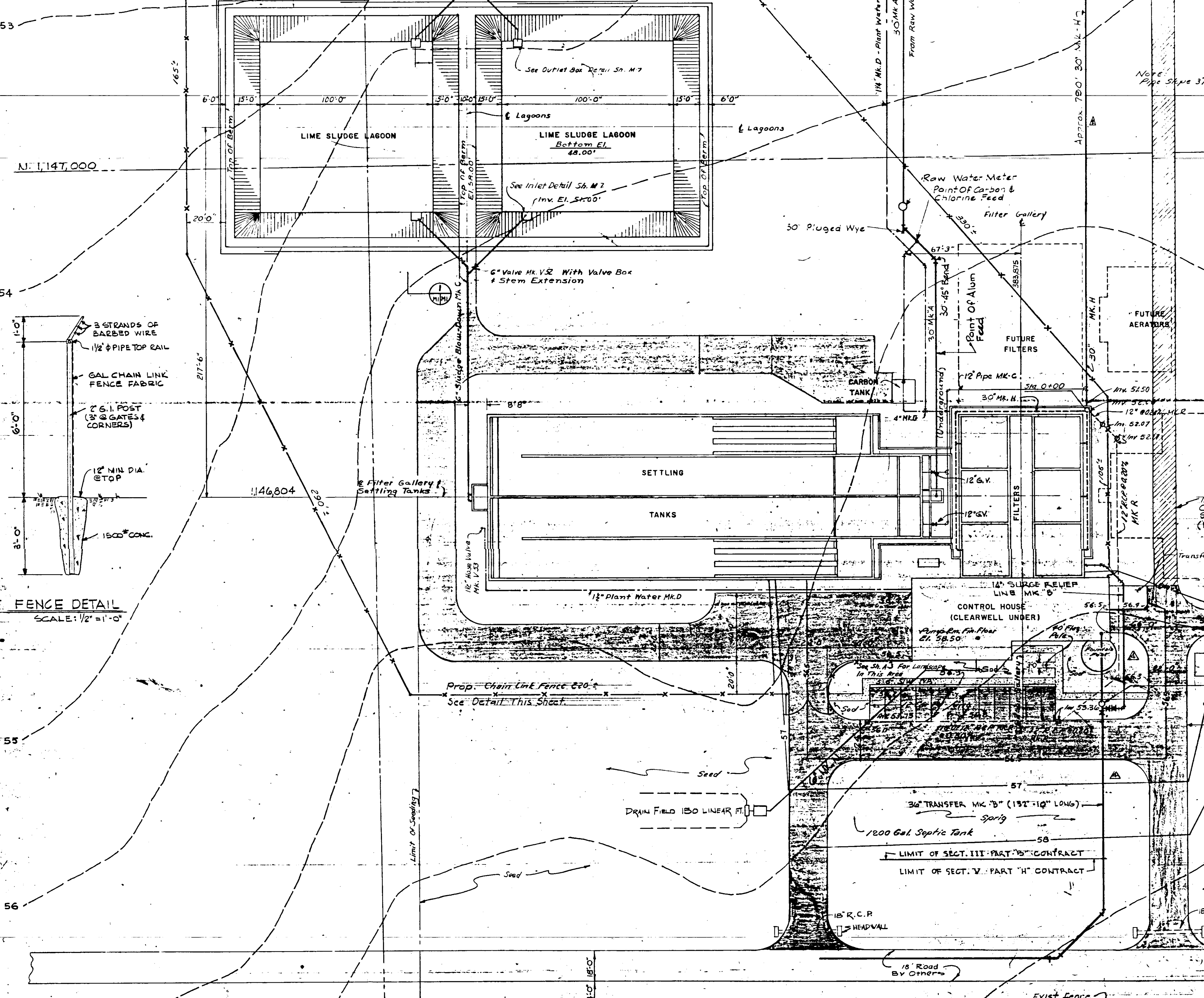
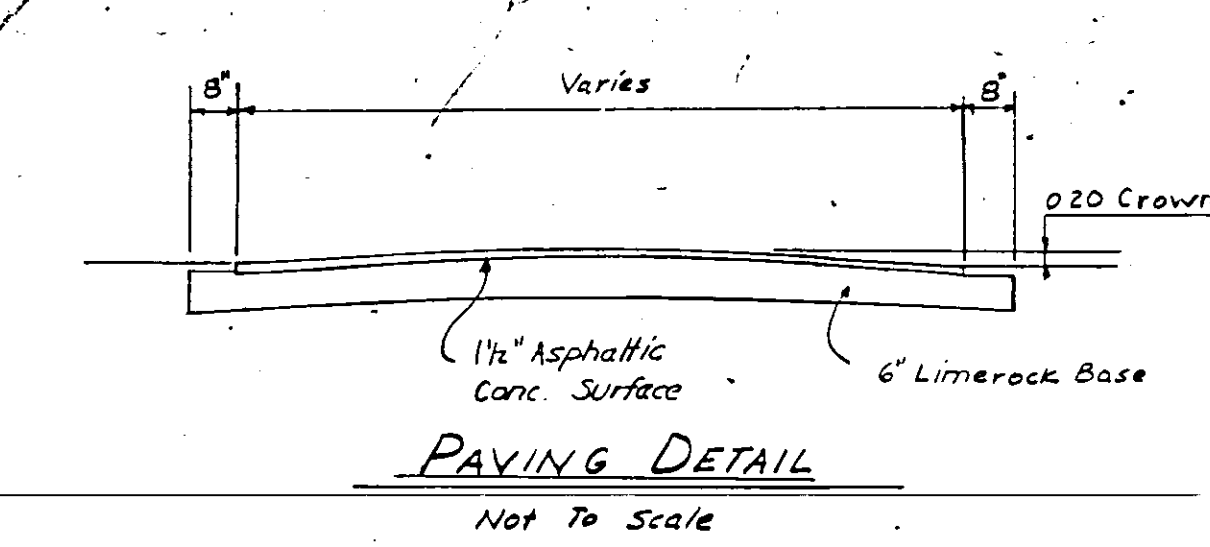
DESIGNED BY: J. P. H./J.W.C.
DRAWN BY: R.V.C.
CHECKED BY: C.E.B.
DATE: FEB, 1965

FILE NO.: 6353-3-S-13-III-B
SHEET: 13 OF 13
SCALE: AS SHOWN

SEAL: No. 3748
REGISTERED PROFESSIONAL ENGINEER
FLORIDA

SYMBOLS AND ABBREVIATIONS

- CL CENTER LINE
- B.S. BLACK STEEL PIPE
- W.I. WROUGHT IRON PIPE
- C.I. CAST IRON
- C.P. COPPER PIPE
- R.C.P. REINFORCED CONCRETE PIPE
- P.V.C. POLYVINYL CHLORIDE PIPE
- X. EXTRA STRONG
- G.I. GALVANIZED IRON OR STEEL PIPE
- H.R. HANGER
- I.P.S. IRON PIPE SIZE
- F.L. FLANGED FOR C.I. OR STL.
- M.J. MECHANICAL JOINTS FOR C.I.
- R.S. RUBBER AND STEEL JOINT FOR R.C.P.
- G.V. GATE VALVE
- B.F. BUTTERFLY VALVE
- P.R.V. PRESSURE REDUCING VALVE
- C.T. CENTERS
- TRANS. TRANSMITTER
- DWG. DRAWING
- V.C. VICTAULIC COUPLING JOINT
- SCR. SCREWED JOINT
- N.R.S. NON-RISING STEM
- O.S. & Y. OUTSIDE SCREW AND YOKE
- L.S. LOW SERVICE
- H.S. HIGH SERVICE
- G.W.I. GALVANIZED WROUGHT IRON



GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND SETTING OF ALL SLEEVES, INSERTS AND/OR ADAPTERS AS MAY BE REQUIRED.
2. DRAWINGS ARE ONLY DIAGNOSTIC AND DO NOT ATTEMPT TO SHOW ALL FITTINGS AND/OR VALVES AS MAY BE REQUIRED.
3. ALL VALVES IN CONCEALED SPACES TO BE PROVIDED WITH ACCESS.
4. COORDINATE ALL WORK WITH OTHER TRADES IN ORDER TO MAINTAIN PROPER SLOPES IF REQUIRED AS WELL AS SPACE REQUIREMENTS FOR OTHER TRADES.
5. NO PIPE, FOOTING OR FOUNDATIONS SHALL BE PLACED ON BACKFILL, WHERE FILL IS REQUIRED USE 1500# CONCRETE.
6. ALL SLEEVES WHERE PIPE PASSES THRU FLOOR OR WALL SHALL BE FLUSH WITH SURFACE, CAULKED WITH OAKUM AND SEALED WITH LEAD. WHERE APPEARANCE DICTATES COVER WITH ESCUTCHEON.
7. ALL PNEUMATIC TUBING SHALL BE CODED WITH NUMBERS TO CORRESPOND WITH CONTROL DIAGRAM. CODE NUMBERS SHALL BE VISIBLE AT ALL JOINTS AND IN JUNCTION BOXES.
8. FOR VALVE SCHEDULE SEE SH. NO. M-14.
9. FOR PIPE SCHEDULE SEE SH. NO. M-9.
10. FOR PLUMBING SCHEDULE SEE SH. NO. M-12.
11. FOR PUMP SCHEDULE SEE SH. NO. M-13.

NO.	DATE	DESCRIPTION	BY	CHKD.
1		RELOCATED TRANSFER & SLUDGE RELIEF LINE		
2		DELETED AERATORS		
3		REVISED OUTFALL & TRANSMISSION MAIN		
4		DELETED GENERAL NOTES, E		

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
PLOT PLAN & INTERCONNECTING PLANT PIPING-MECHANICAL
MANATEE COUNTY, FLORIDA

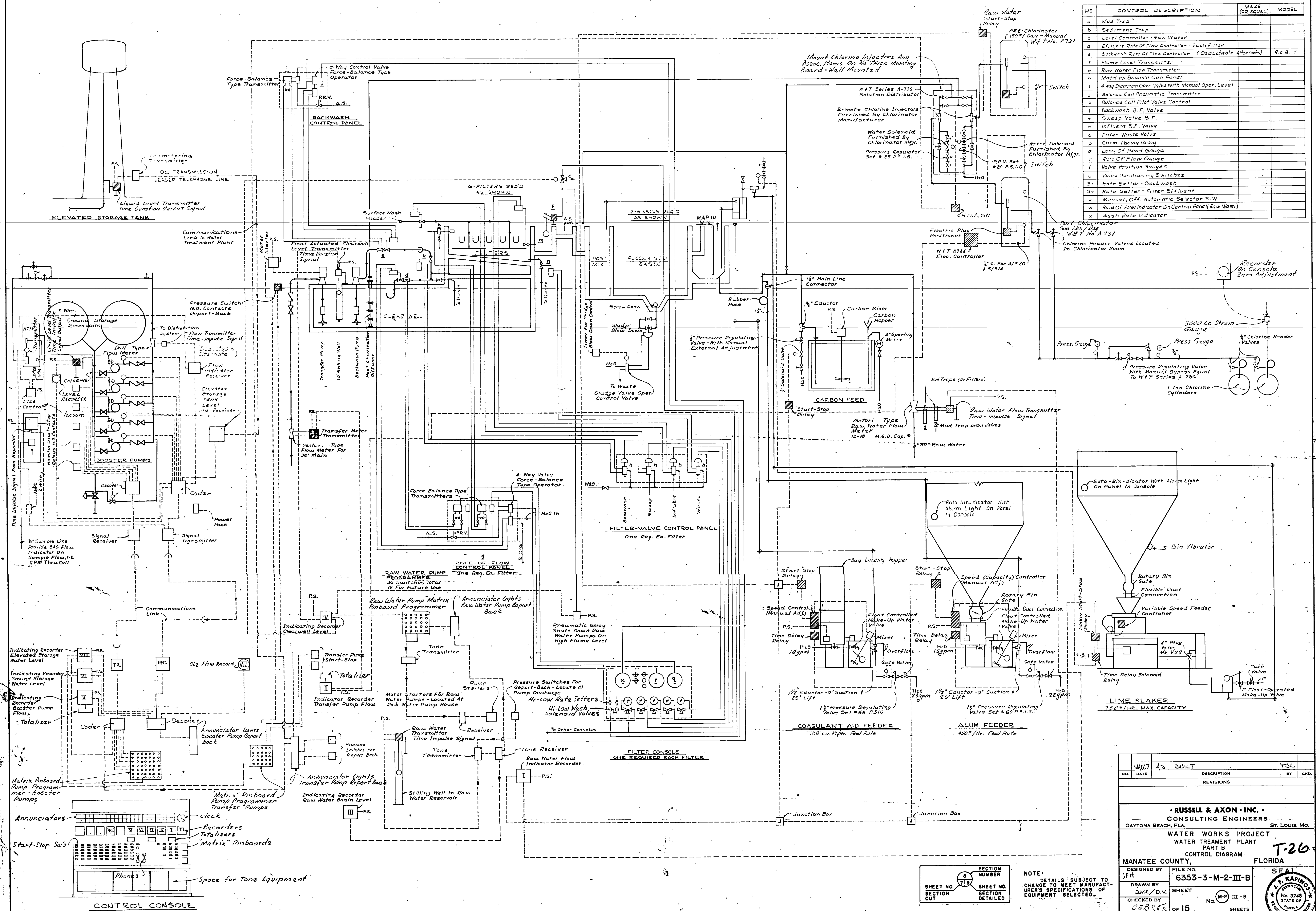
DESIGNED BY: FILE NO. 6353-3-M-I-III-B
DRAWN BY: G.M.L. SHEET NO. 11-11-B
CHECKED BY: DATE: Feb. 1964 OF 15 SHEETS
SCALE: 1" = 30'-0"

SEAL
No. 3726
STATE OF FLORIDA
REGISTERED PROFESSIONAL ENGINEER

SECTION NUMBER: 8
SHEET NO. 8 OF 15
SECTION CUT: DETAILED

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S RECOMMENDATIONS OF EQUIPMENT SELECTED. SHEET 25 OF 55

13.01



NO	CONTROL DESCRIPTION	MAKE (OR EQUAL)	MODEL
a	Mud Trap		
b	Sediment Trap		
c	Level Controller - Raw Water		
d	Effluent Rate of Flow Controller - Each Filter		
e	Backwash Rate of Flow Controller (Deductable Alternate)	R.C.B.T	
f	Flume Level Transmitter		
g	Raw Water Flow Transmitter		
h	Model pp Balance Cell Panel		
i	4-way Diaphragm Oper. Valve With Manual Oper. Level		
j	Balance Cell Pneumatic Transmitter		
k	Balance Cell Pilot Valve Control		
l	Backwash B.F. Valve		
m	Sweep Valve B.F.		
n	Influent B.F. Valve		
o	Filter Waste Valve		
p	Chem Pacing Relay		
q	Loss of Head Gauge		
r	Rate of Flow Gauge		
s	Valve Position Gauges		
t	Valve Positioning Switches		
u	Rate Setter - Backwash		
v	Rate Setter - Filter Effluent		
w	Manual, Off, Automatic Selector S.W		
x	Rate of Flow Indicator On Central Panel (Raw Water)		
y	Wash Rate Indicator		

NO.	DATE	DESCRIPTION	BY	CHKD.
1				

RUSSELL & AXON - INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
CONTROL DIAGRAM

T-26

MANATEE COUNTY, FLORIDA

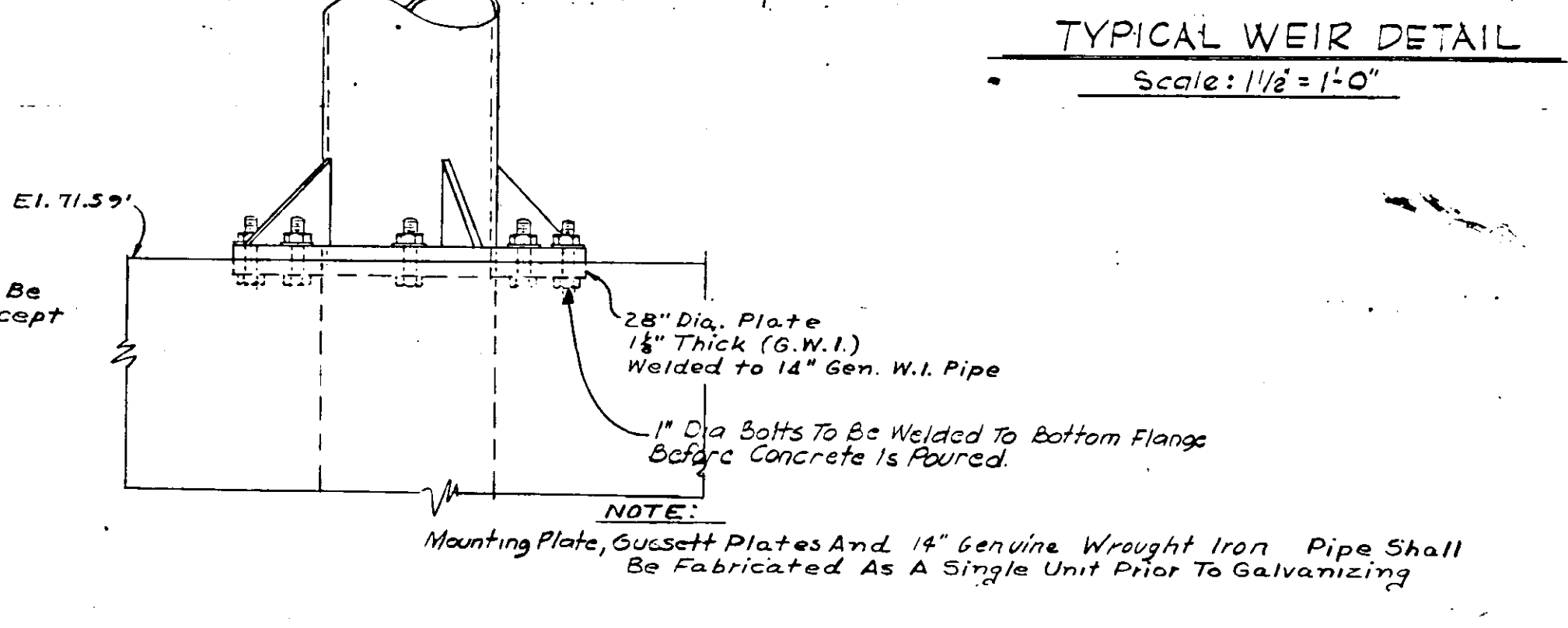
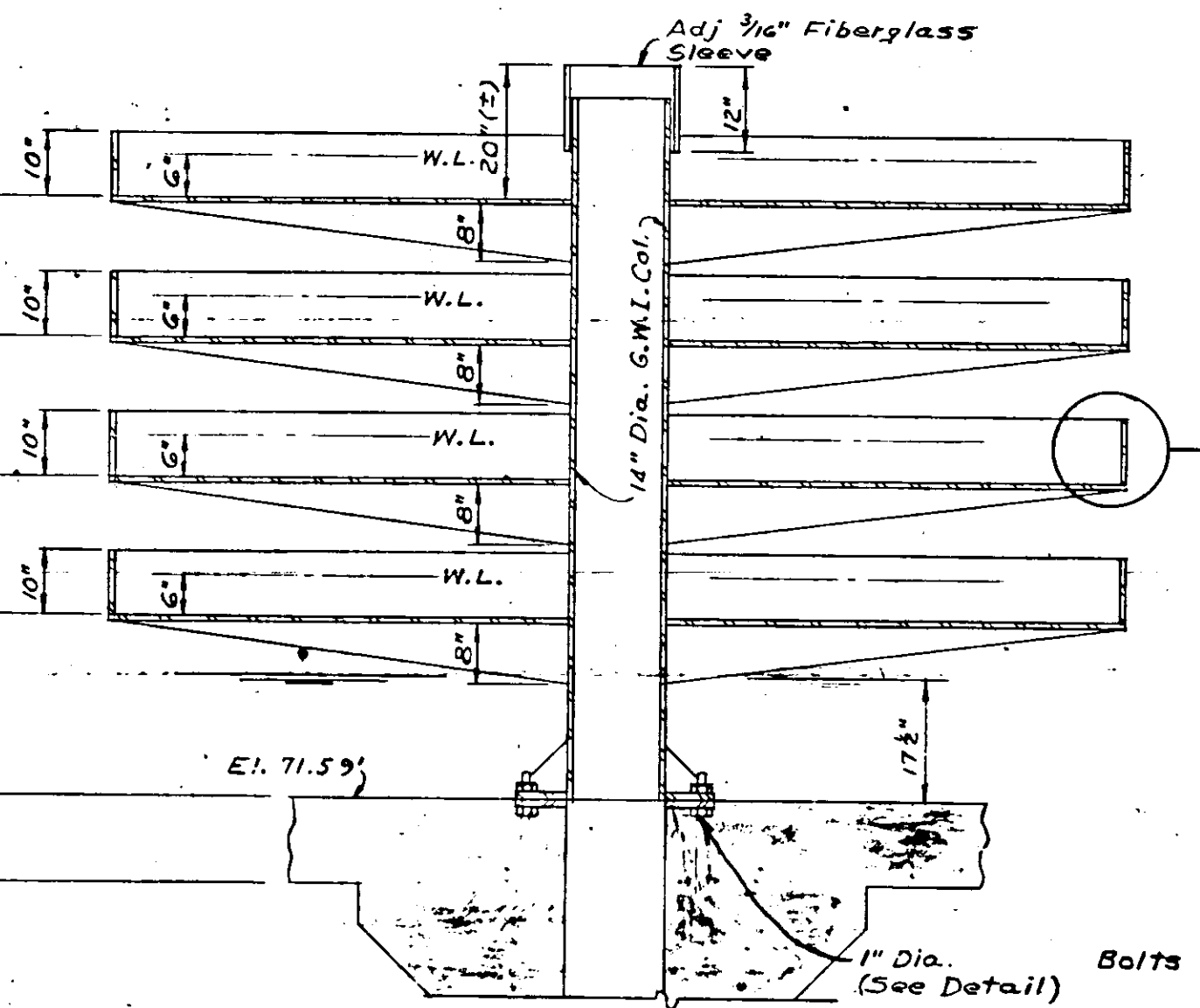
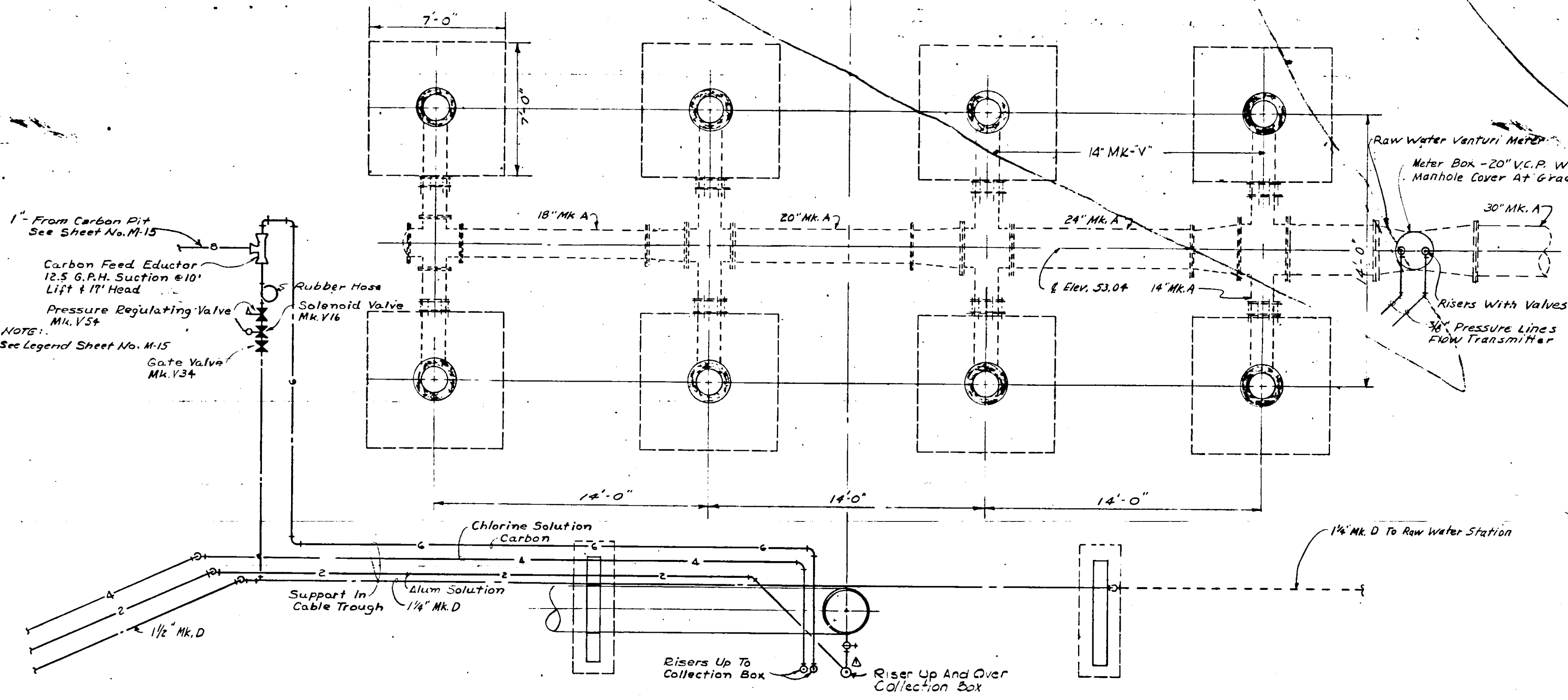
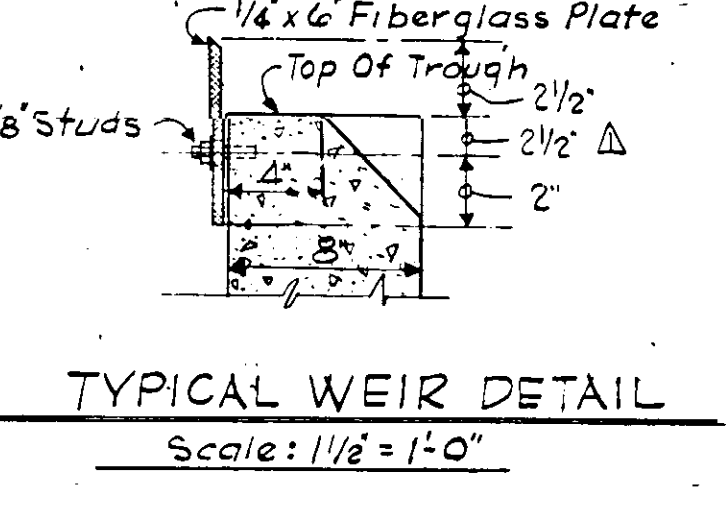
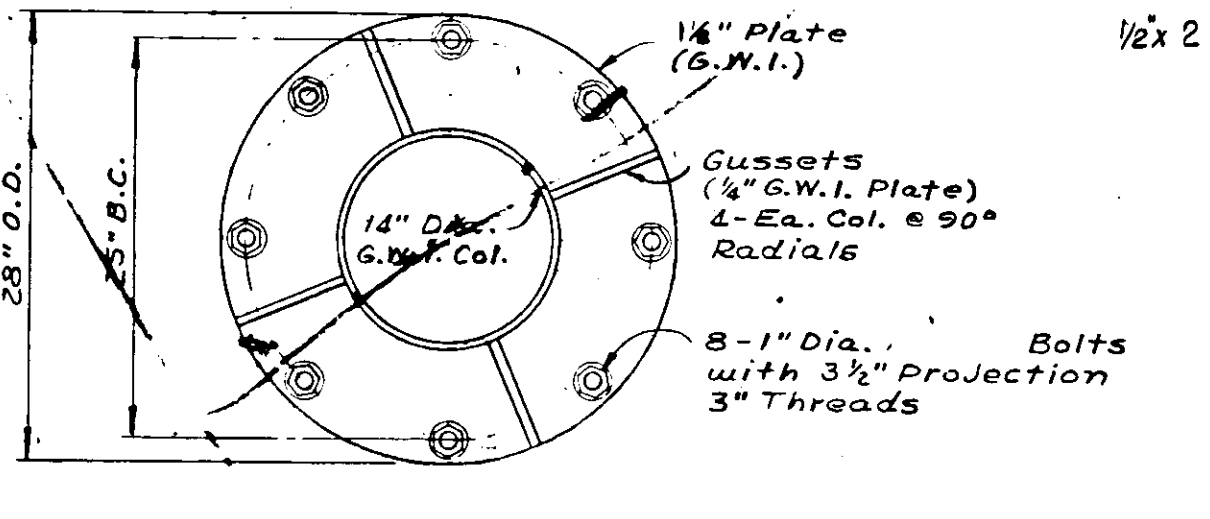
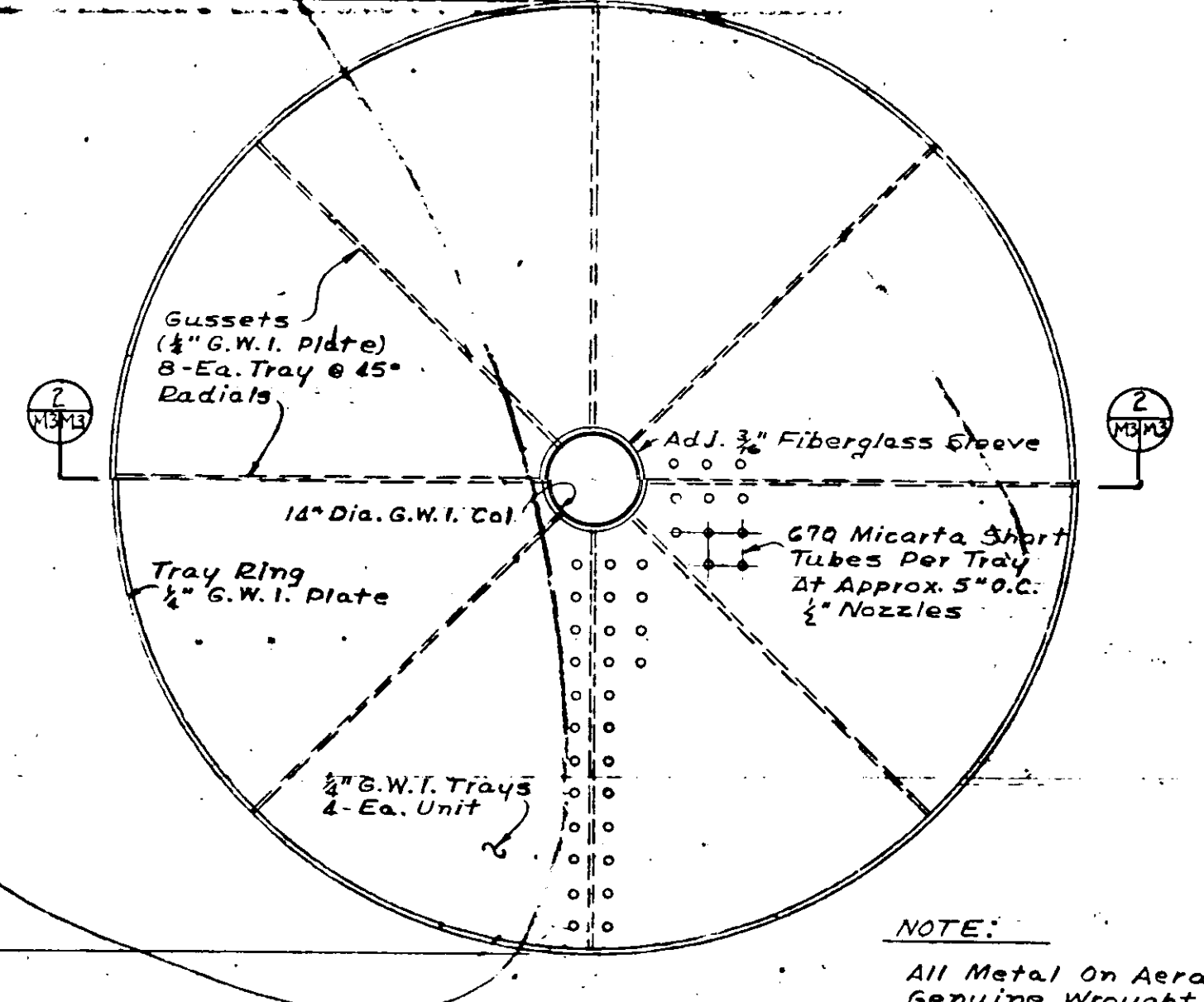
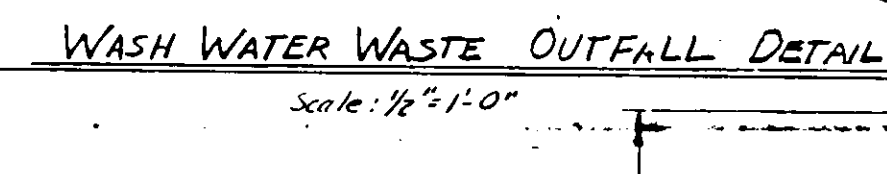
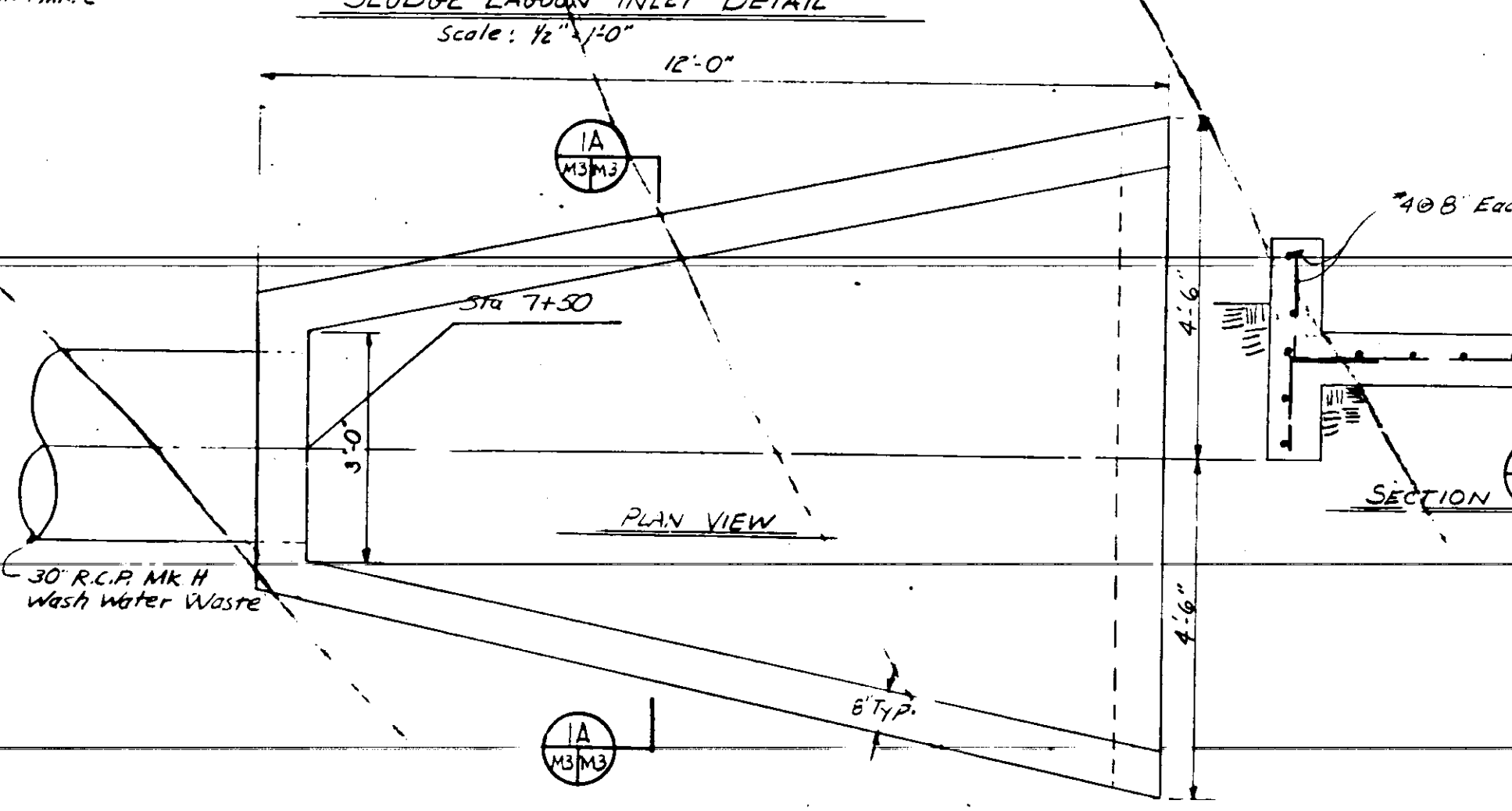
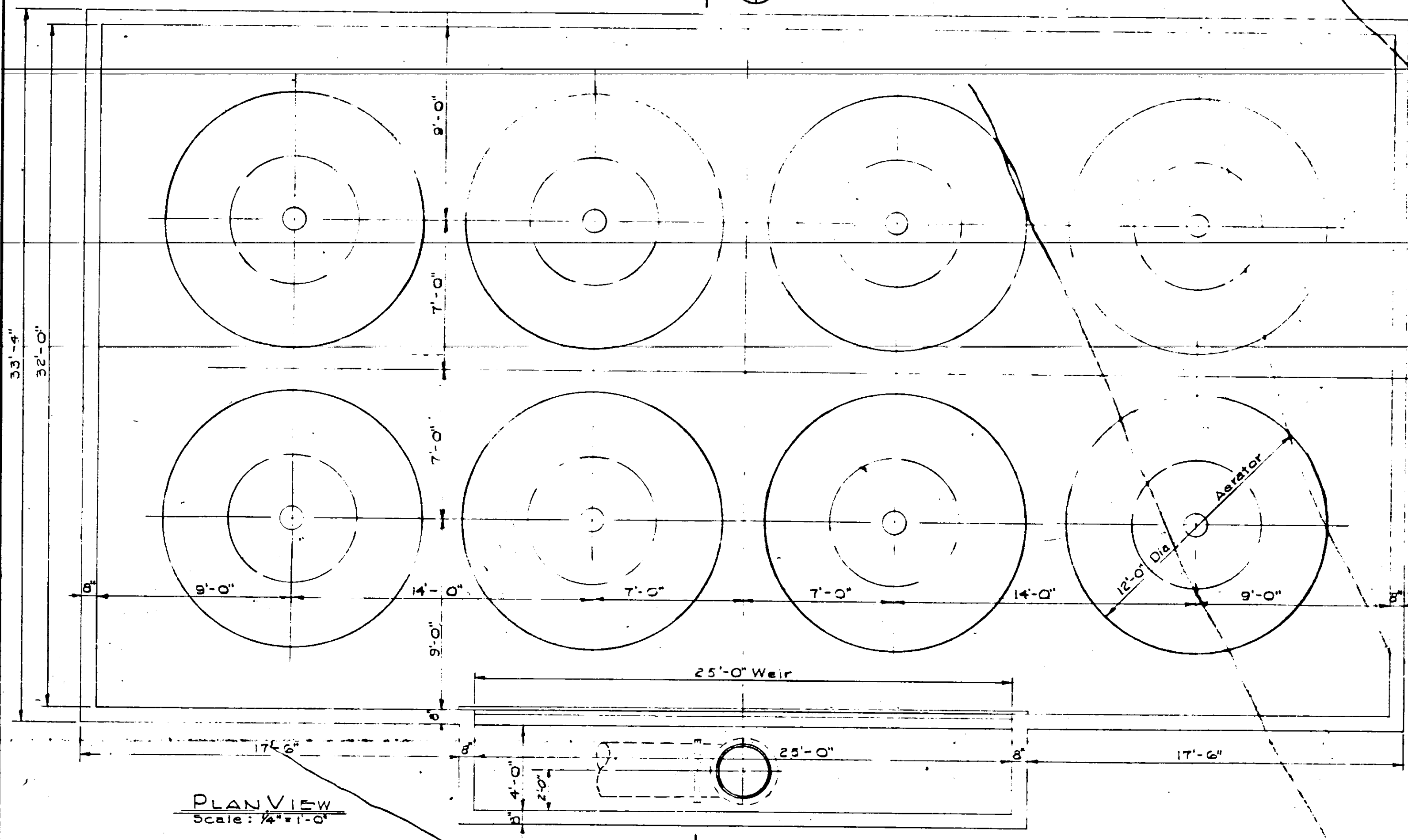
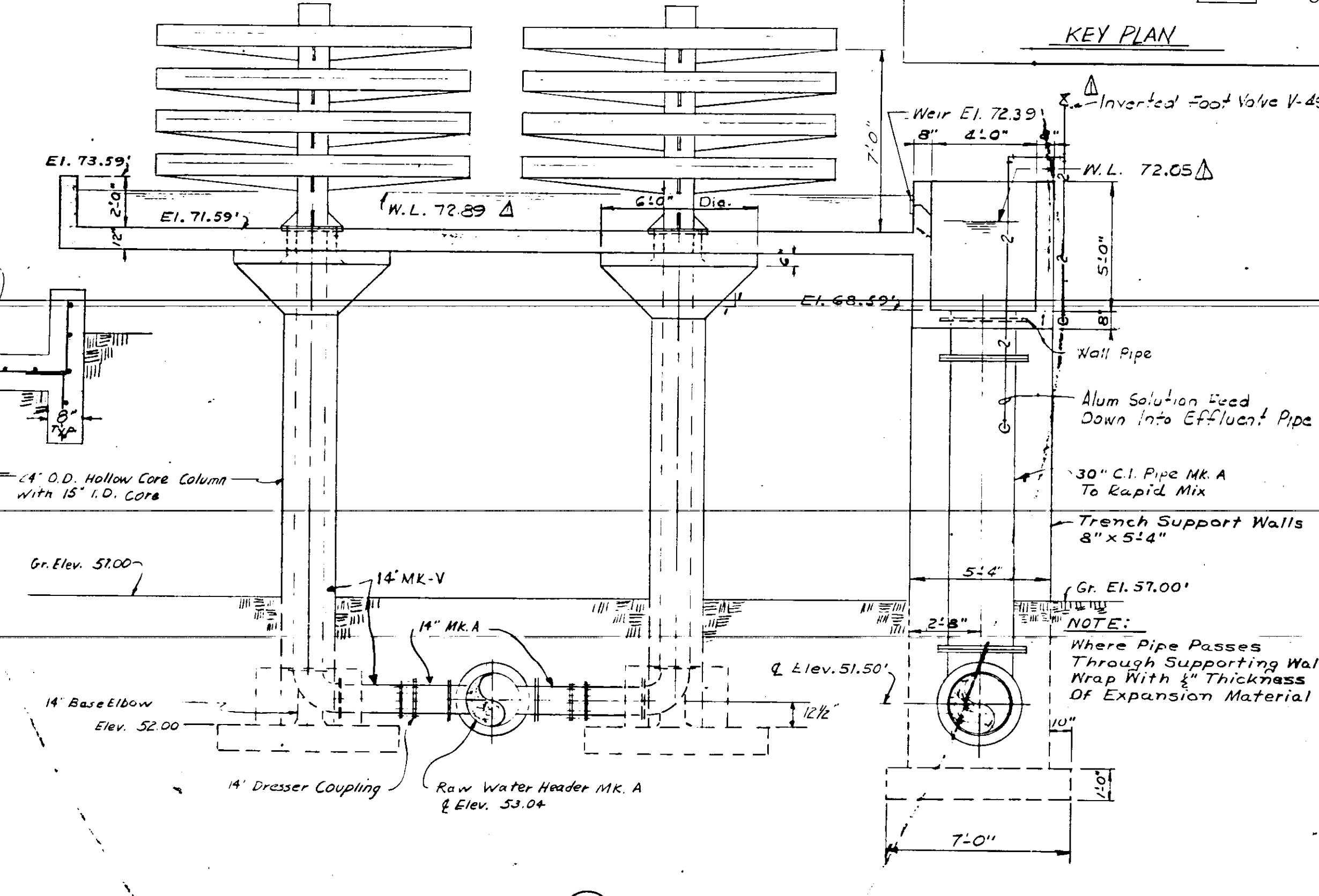
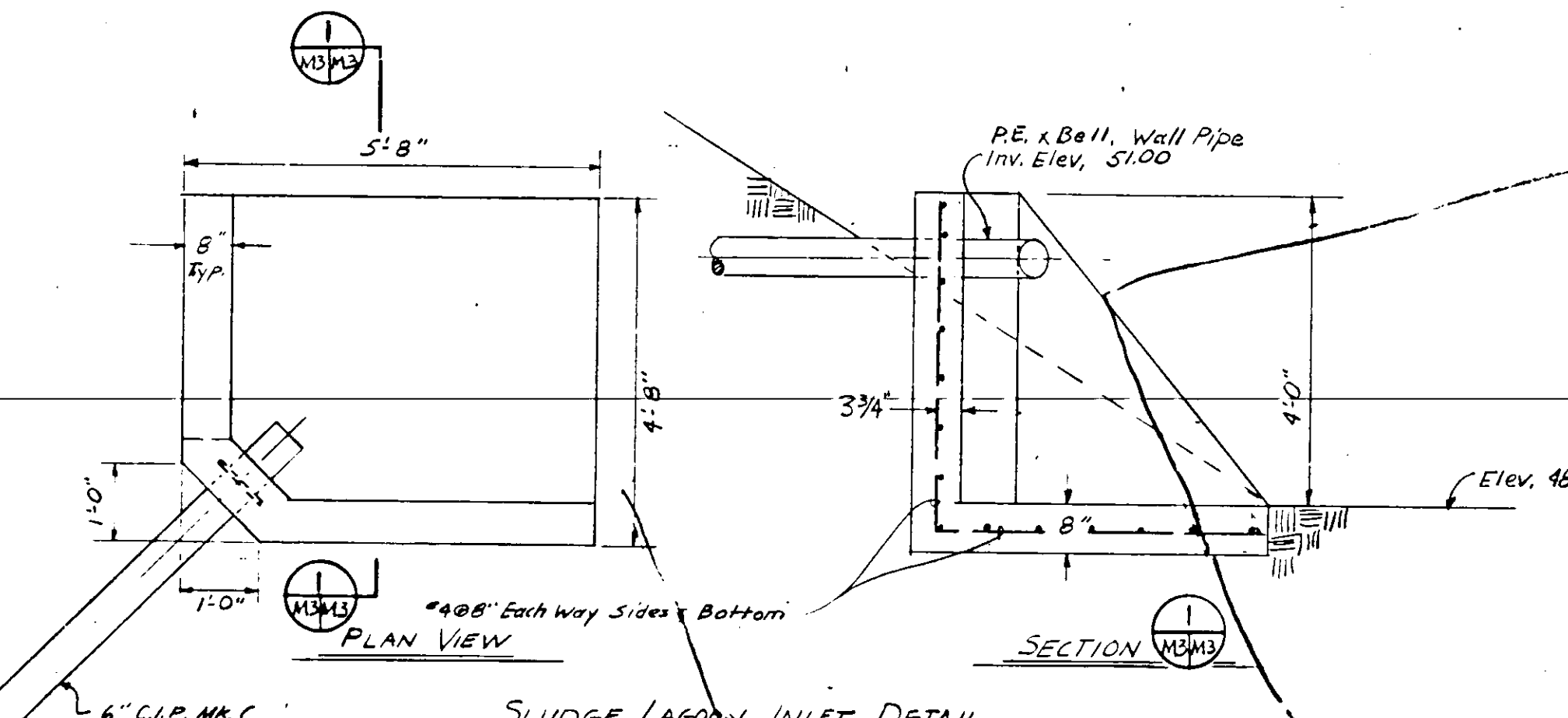
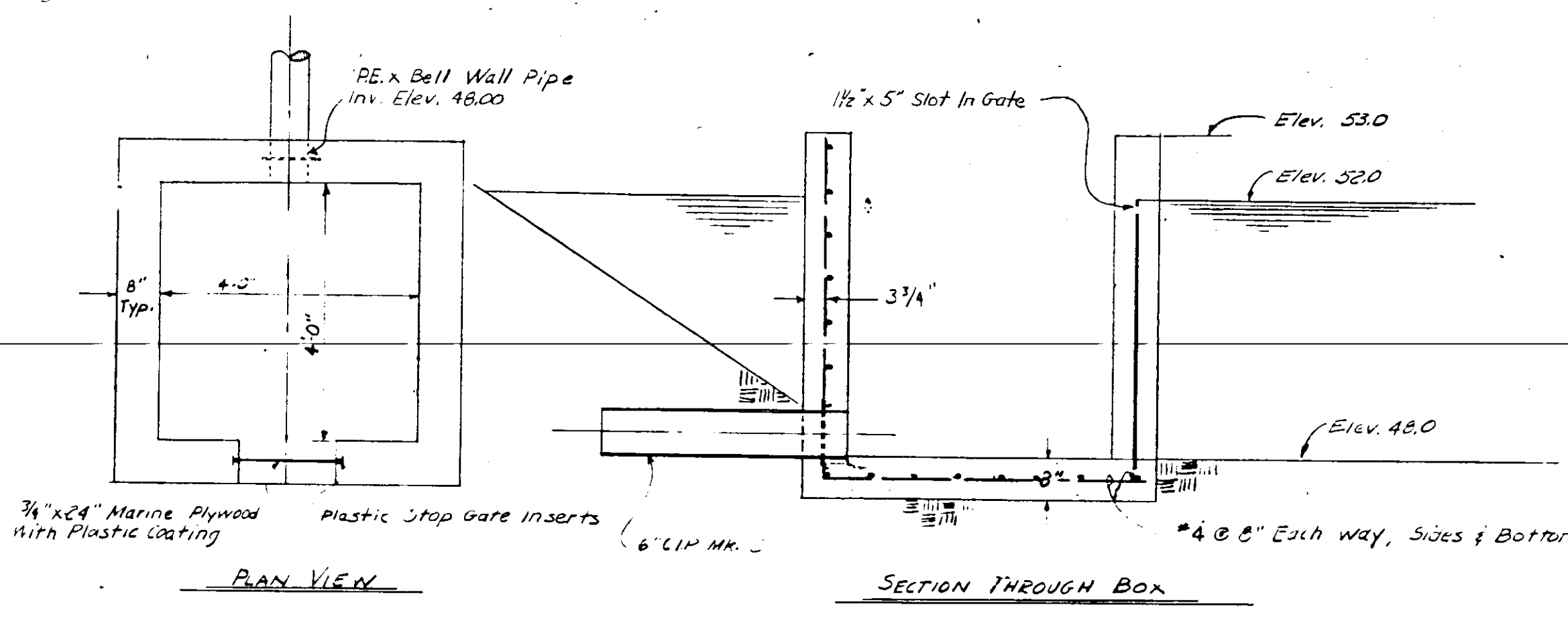
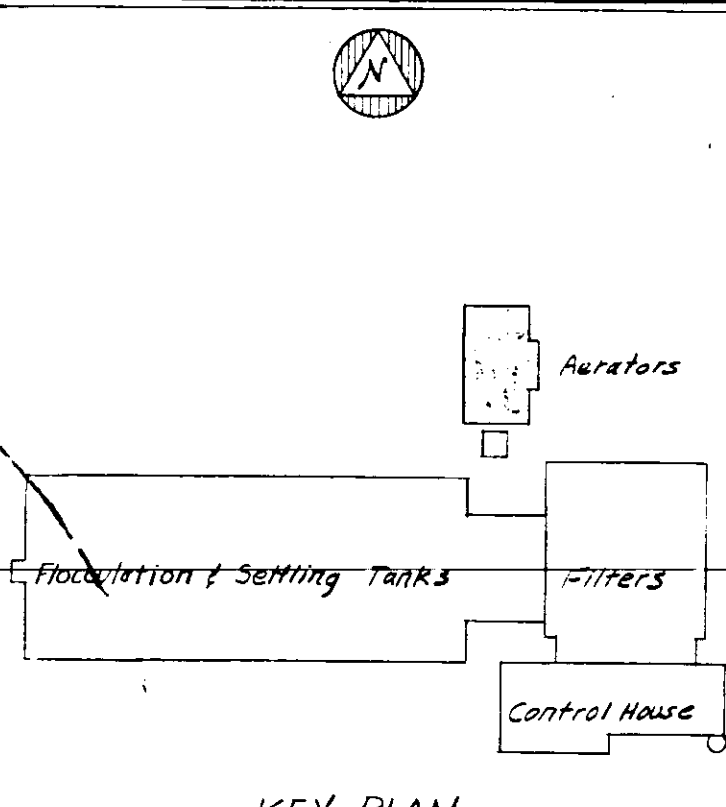
DESIGNED BY: JFH
DRAWN BY: QMR/D.V.
CHECKED BY: CEB/SLDATE: FEB., 1965

FILE NO. 6353-3-M-2-III-B
SHEET 15 OF 15 SHEETS
SCALE: NOT TO SCALE

SEAL
J. S. KAPINOFF
No. 3728
STATE OF FLORIDA
REGISTERED ENGINEER

SECTION NUMBER
SHEET NO. 8 SECTION CUT
SHEET NO. 719 SECTION DETAILED

NOTE:
DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.



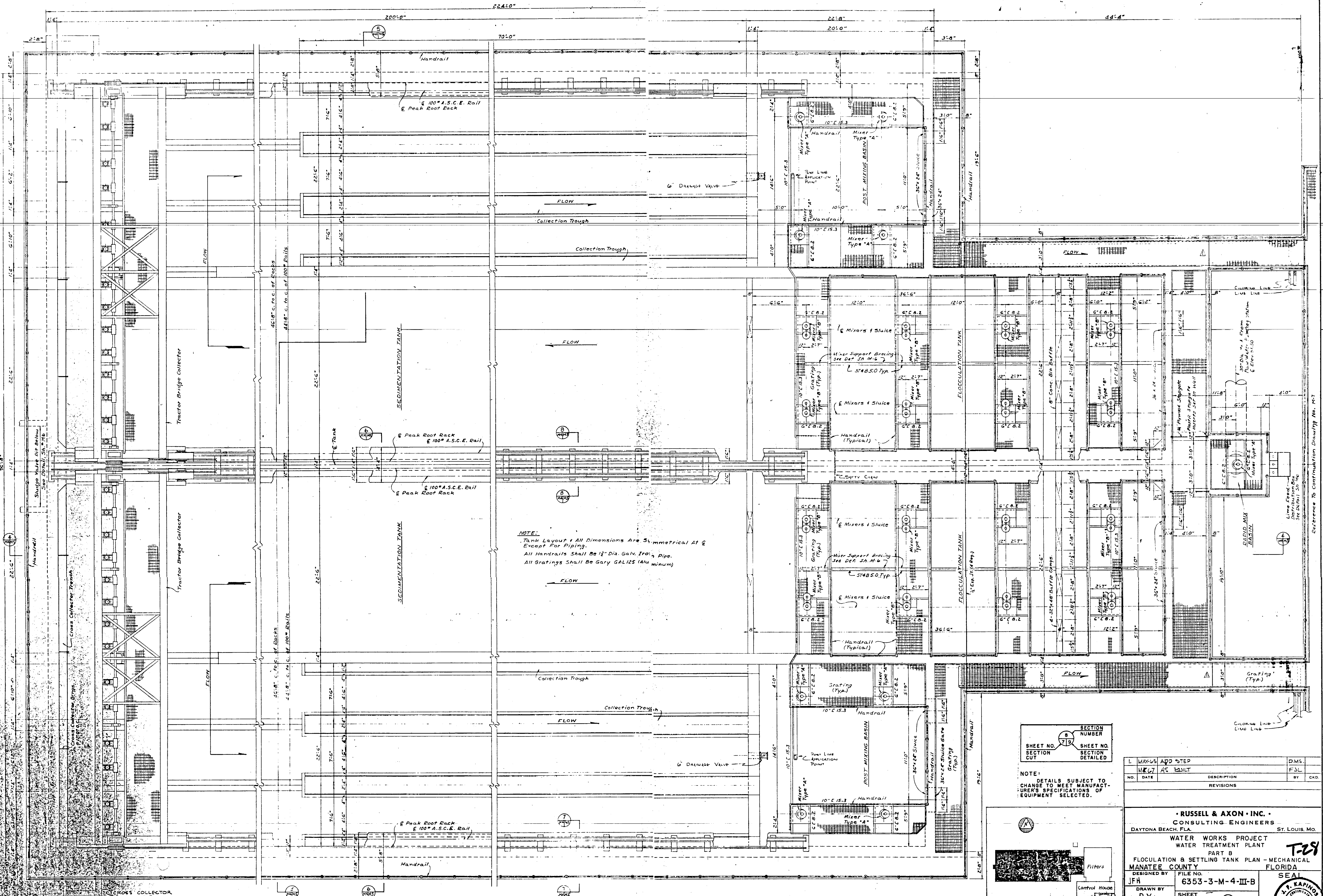
NO.	DATE	DESCRIPTION	BY	CHKD.
1		REVISIONS		

RUSSELL & AXON - INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
AERATOR - MECHANICAL

MANATEE COUNTY, FLORIDA
DESIGNED BY JFH FILE NO. 6353-3-M-3-III-B
DRAWN BY D.V. SHEET 15 OF 15 SHEETS
CHECKED BY CEB DATE FEB, 1965 SCALE: AS SHOWN

SEAL
J. F. KAPINS
No. 3748
STATE OF FLORIDA
REGISTERED ENGINEER

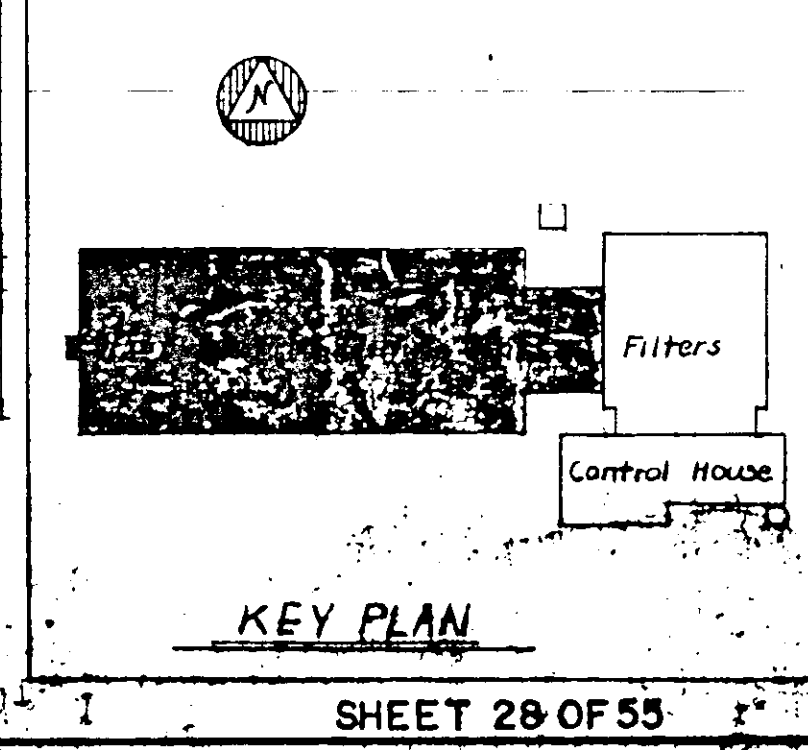


NOTE:
 Tank Layout & All Dimensions Are Symmetrical At &
 Except For Piping.
 All Handrails Shall Be 1 1/2" Dia. Galv. Iron Pipe.
 All Gratings Shall Be Gary GAL125 (Min. min)

FLOCCULATION & SETTLING TANKS - PLAN
 SCALE: 1/4" = 1'-0"

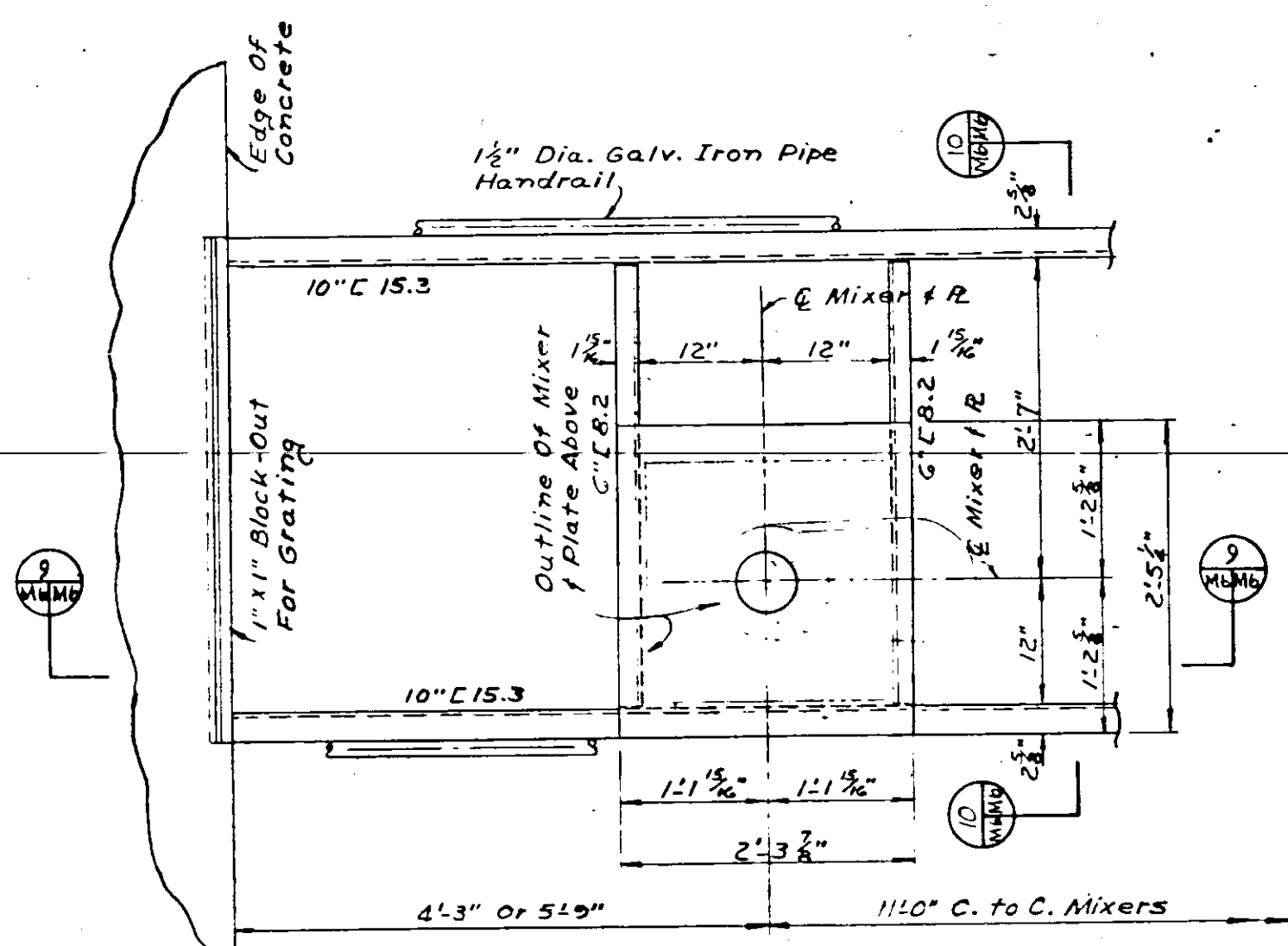
SECTION NUMBER	SECTION CUT
7/9	

NOTE:
 DETAILS SUBJECT TO
 CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF
 EQUIPMENT SELECTED.

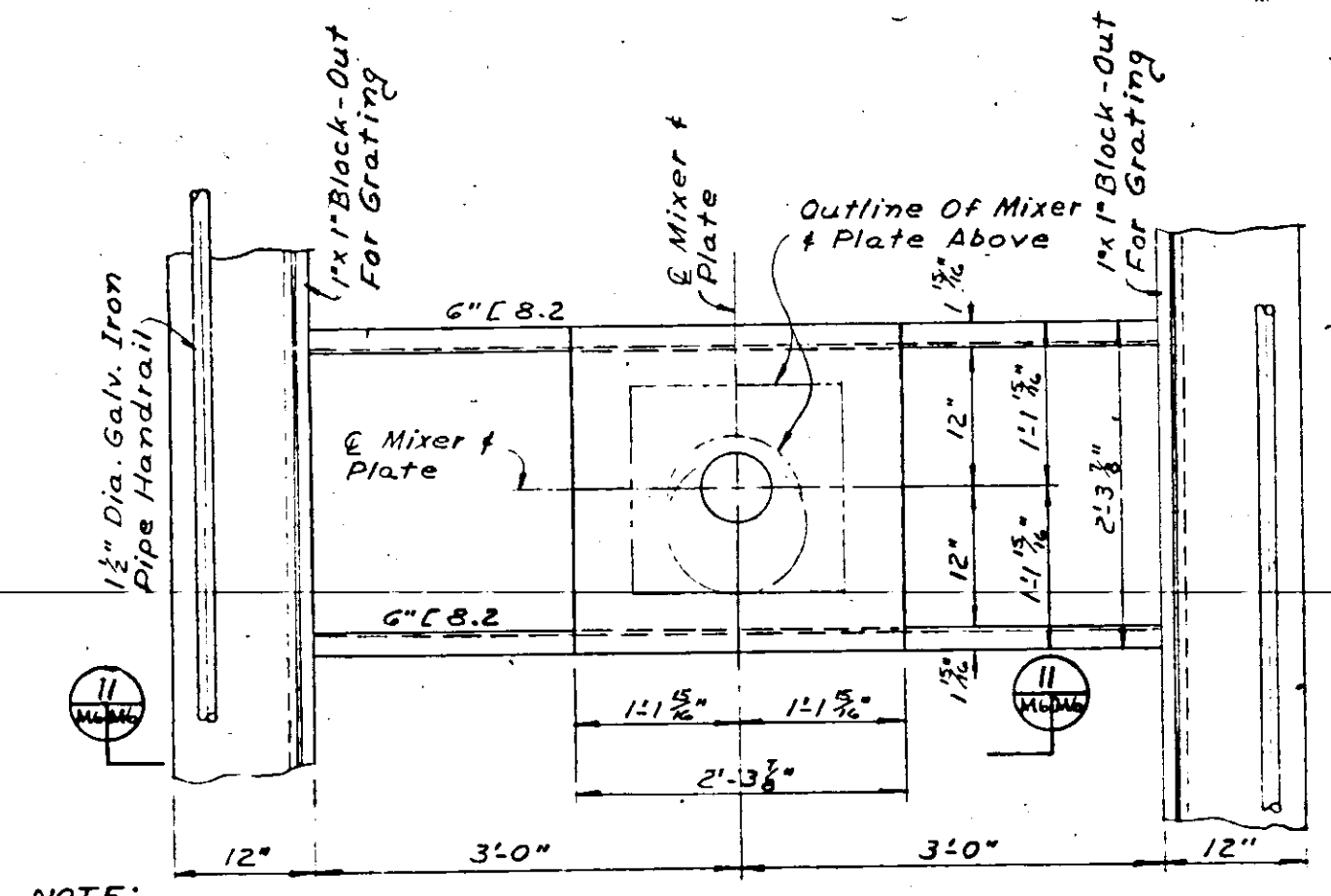


I. MAX-65 ADD STEP		D.M.S.
MK-67 AC BUILD		F.S.L.
NO.	DATE	DESCRIPTION
		REVISIONS
RUSSELL & AXON · INC. ·		
CONSULTING ENGINEERS		
DAYTONA BEACH, FLA.		ST. LOUIS, MO.
WATER WORKS PROJECT		
WATER TREATMENT PLANT		
PART B		
FLOCCULATION & SETTLING TANK PLAN - MECHANICAL		
MANATEE COUNTY FLORIDA		
DESIGNED BY	FILE NO.	T-29
JFH	6353-3-M-4-III-B	
DRAWN BY	SHEET	SEAL
D.V.	11-B	
CHECKED BY	NO.	J. W. KAPINS
CEB/gk	15	
DATE	SHEETS	REGISTERED ENGINEER FLORIDA
FEB 1965	15	
SCALE: AS SHOWN		

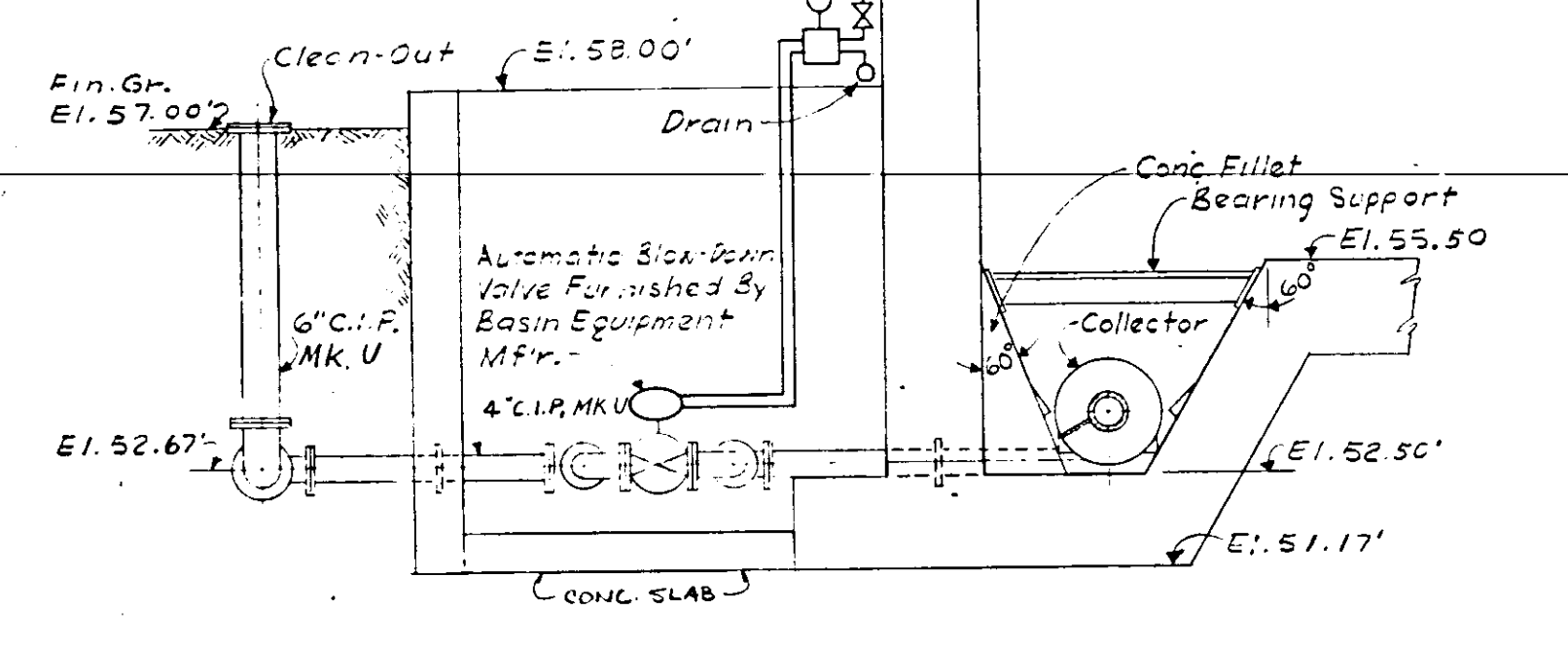
Reference to Continuation Drawing No. M-7



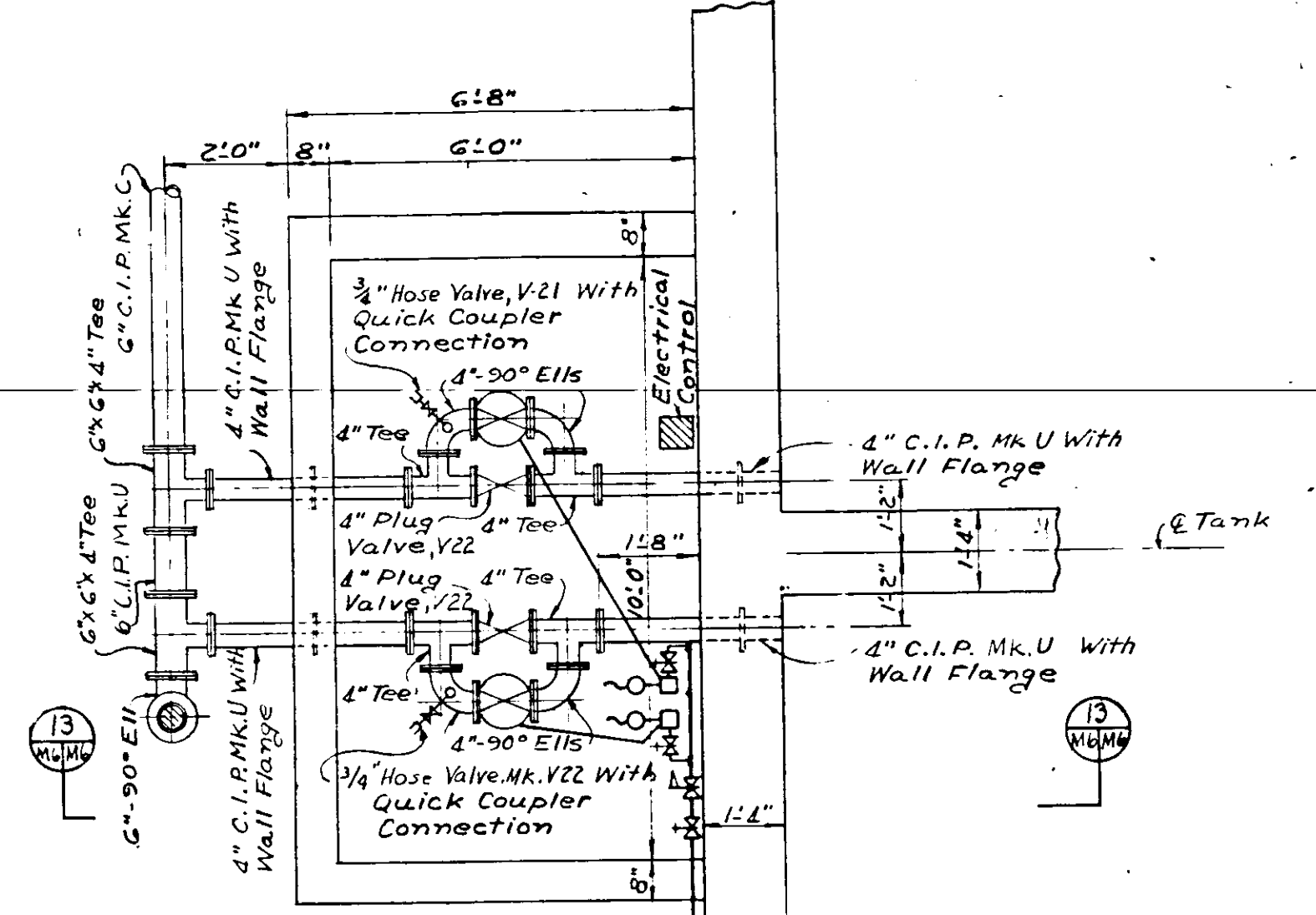
NOTE: Plate Thickness Shall Be As Specified By Equipment Supplier. All Plates Shall Be Supplied As Part Of Mixer Assembly.
MIXER SUPPORT FRAMING AT FLOCCULATION TANKS
 Scale: 3/8" = 1'-0"



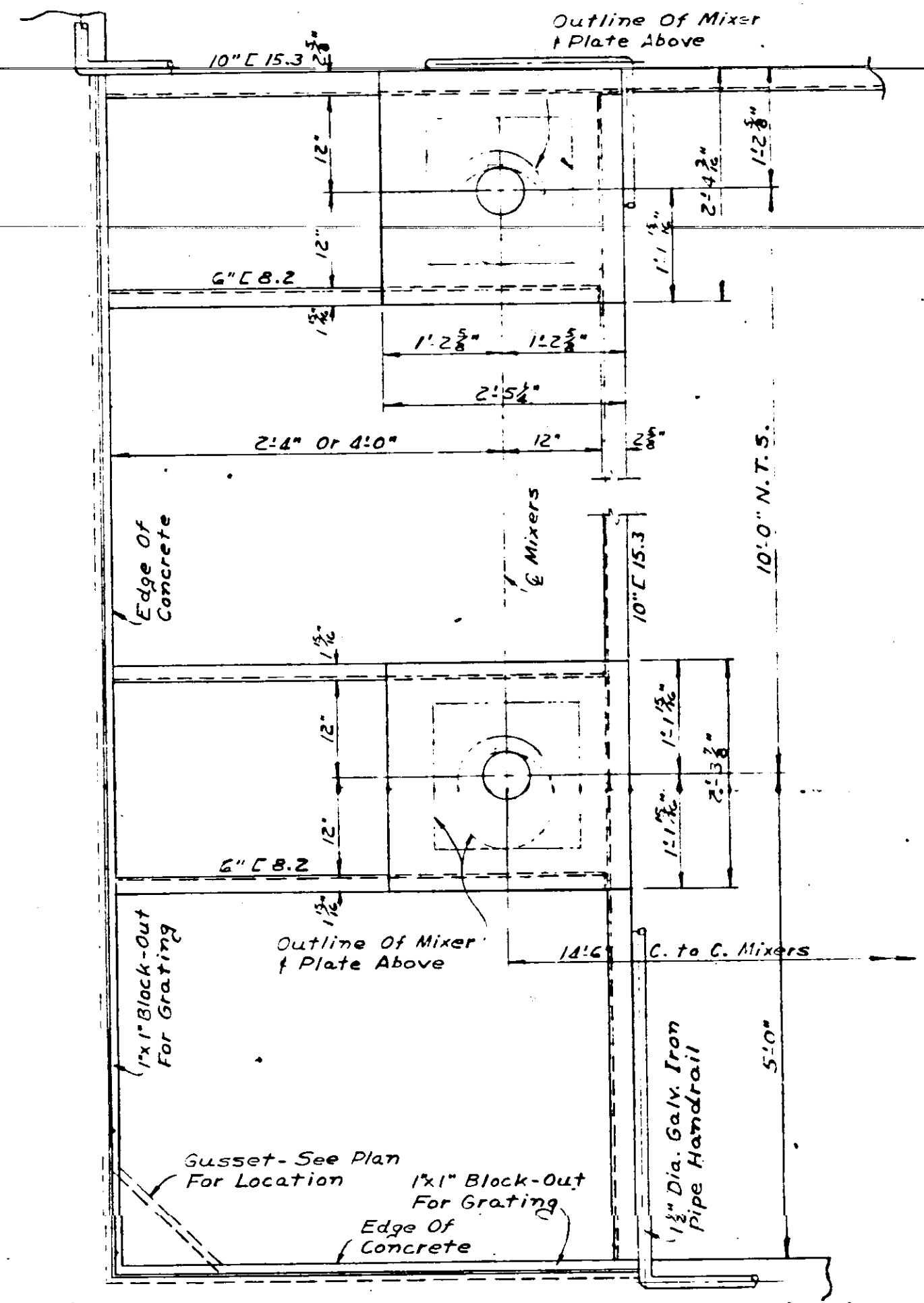
NOTE: Plate Thickness Shall Be As Specified By Equipment Supplier. All Plates Shall Be Supplied As Part Of Mixer Assembly.
MIXER SUPPORT FRAMING AT RAPID MIX BASIN
 Scale: 3/8" = 1'-0"



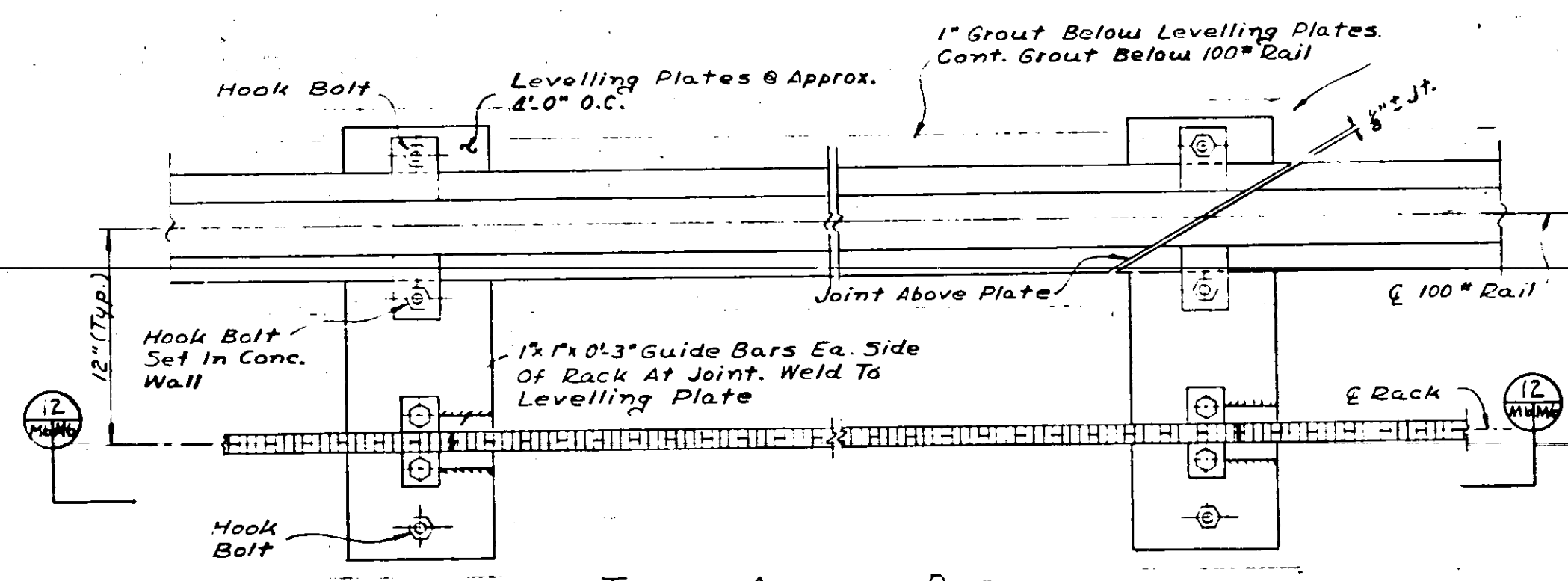
SECTION 13
 Scale: 3/8" = 1'-0"



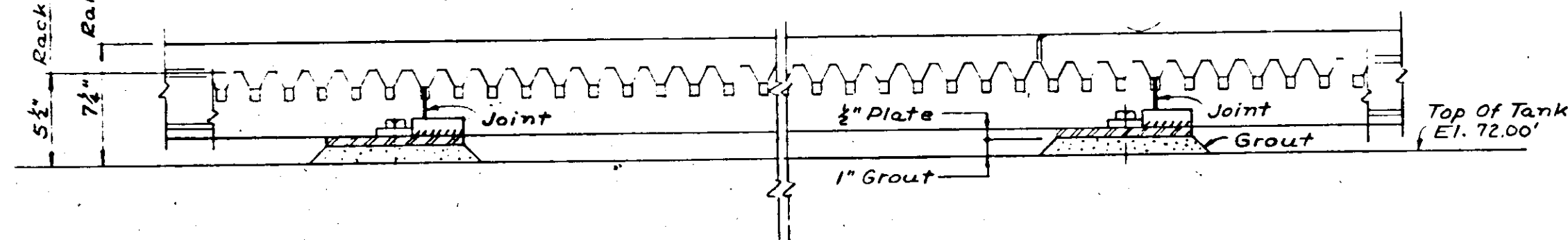
VALVE PIT LAYOUT & PIPING DETAIL
 Scale: 3/8" = 1'-0"



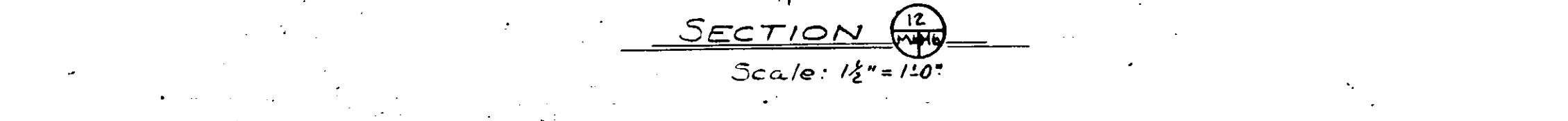
NOTE: Plate Thickness Shall Be As Specified By Equipment Supplier. All Plates Shall Be Supplied As Part Of Mixer Assembly.
MIXER SUPPORT FRAMING AT POST MIXING BASINS
 Scale: 3/8" = 1'-0"



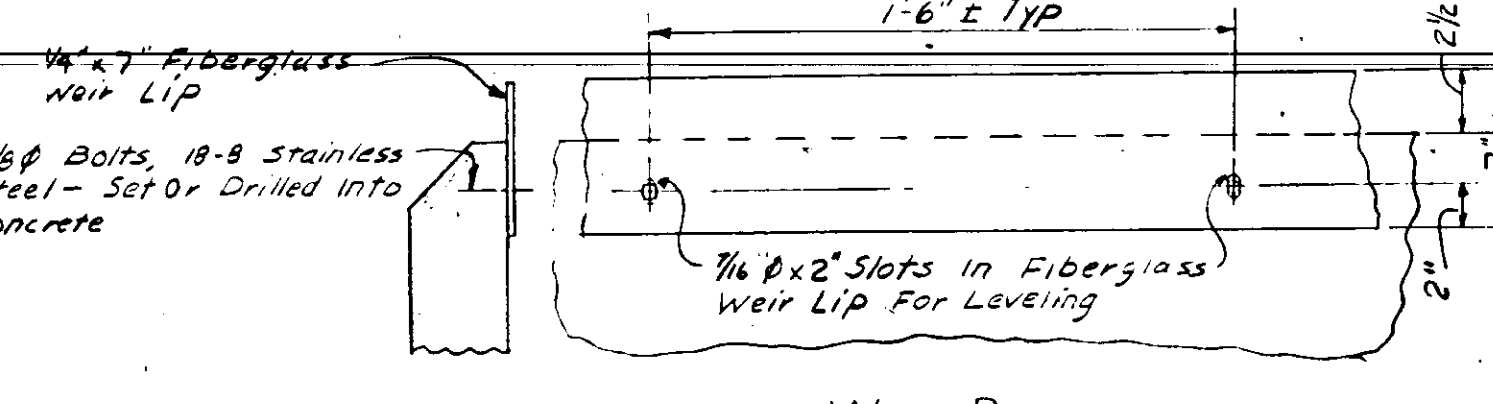
TRACK ANCHOR DETAIL TYPICAL
 Scale: 1/2" = 1'-0"



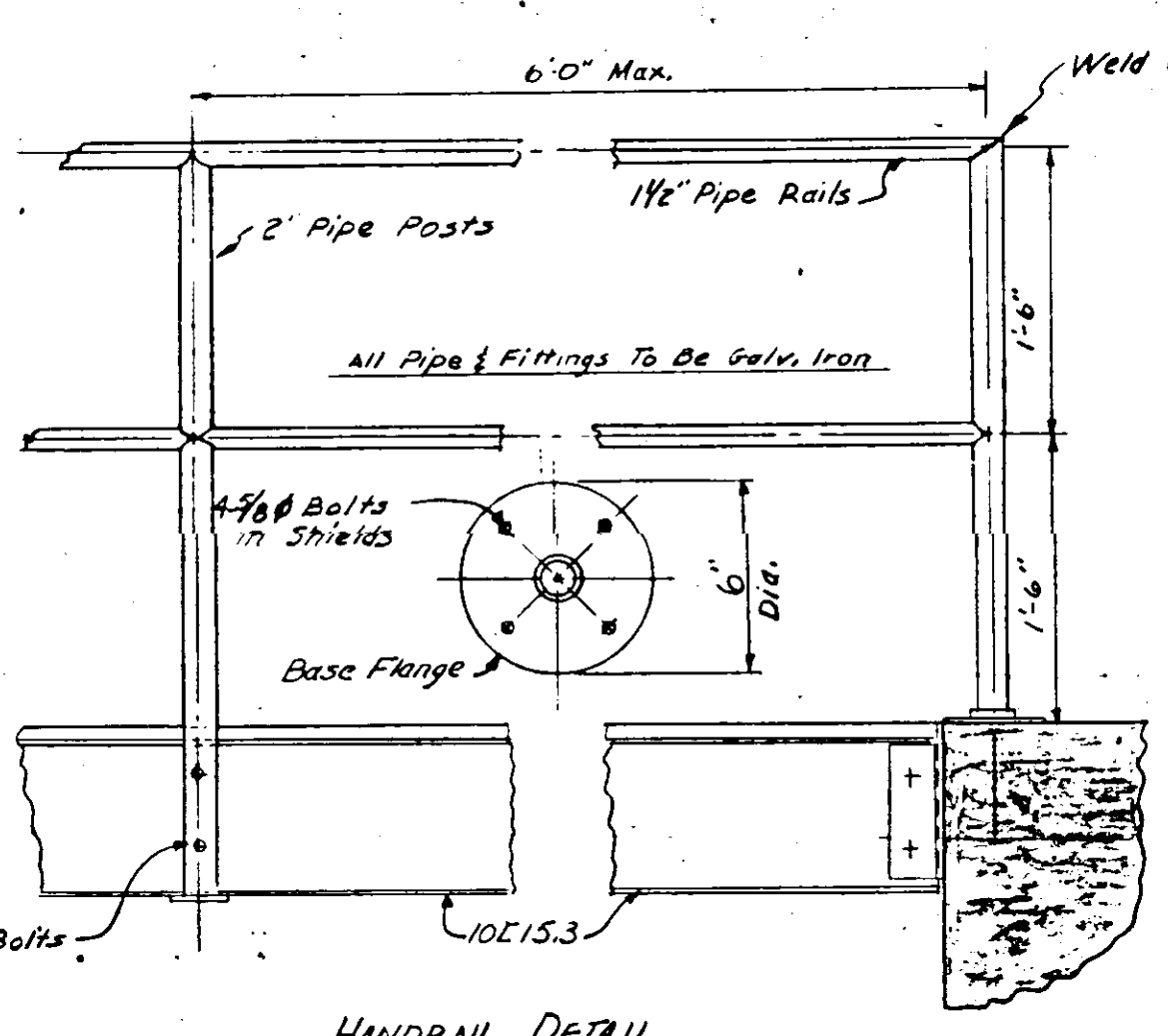
WEIR DETAIL
 Scale: 1/4" = 1'-0"



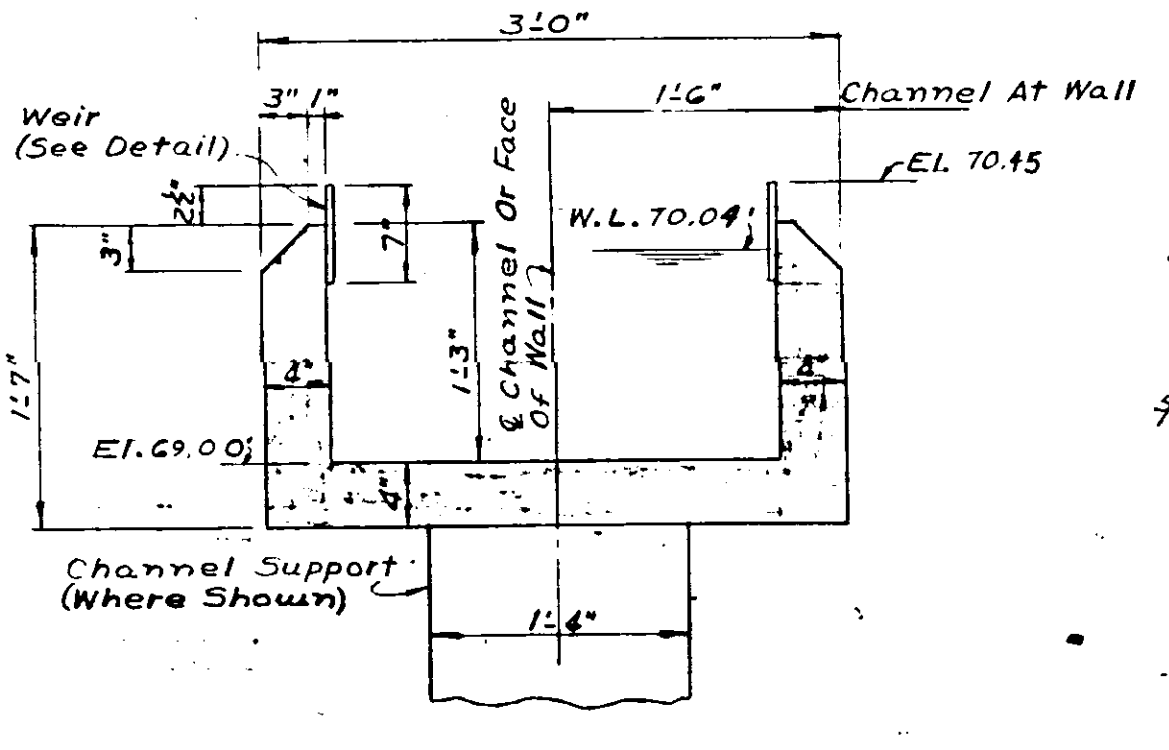
SECTION 14
 Scale: 1/2" = 1'-0"



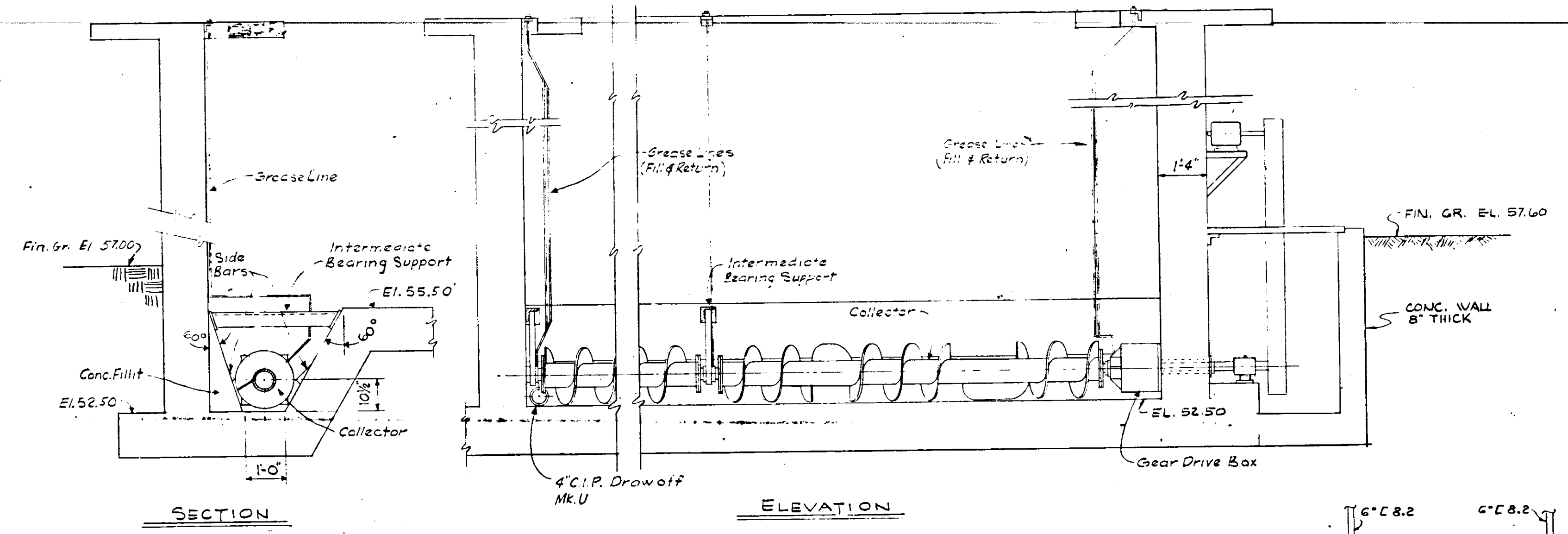
WEIR DETAIL
 Scale: 1/4" = 1'-0"



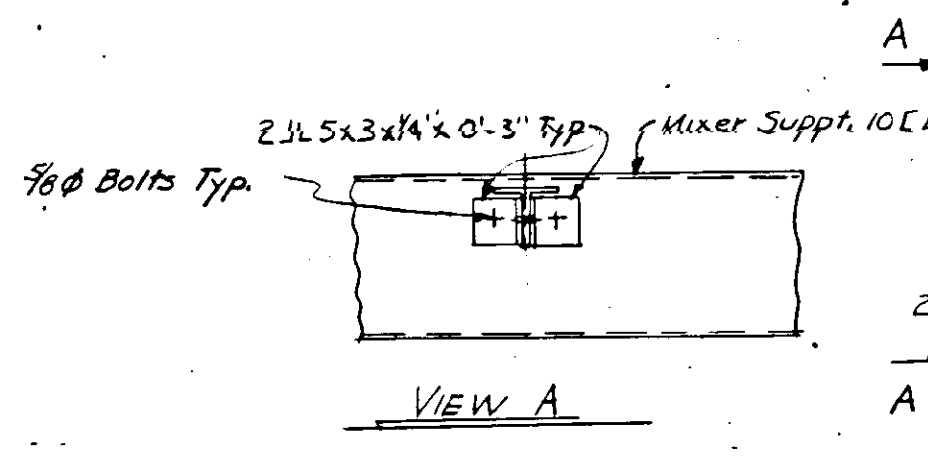
HANDRAIL DETAIL
 Scale: 1/4" = 1'-0"



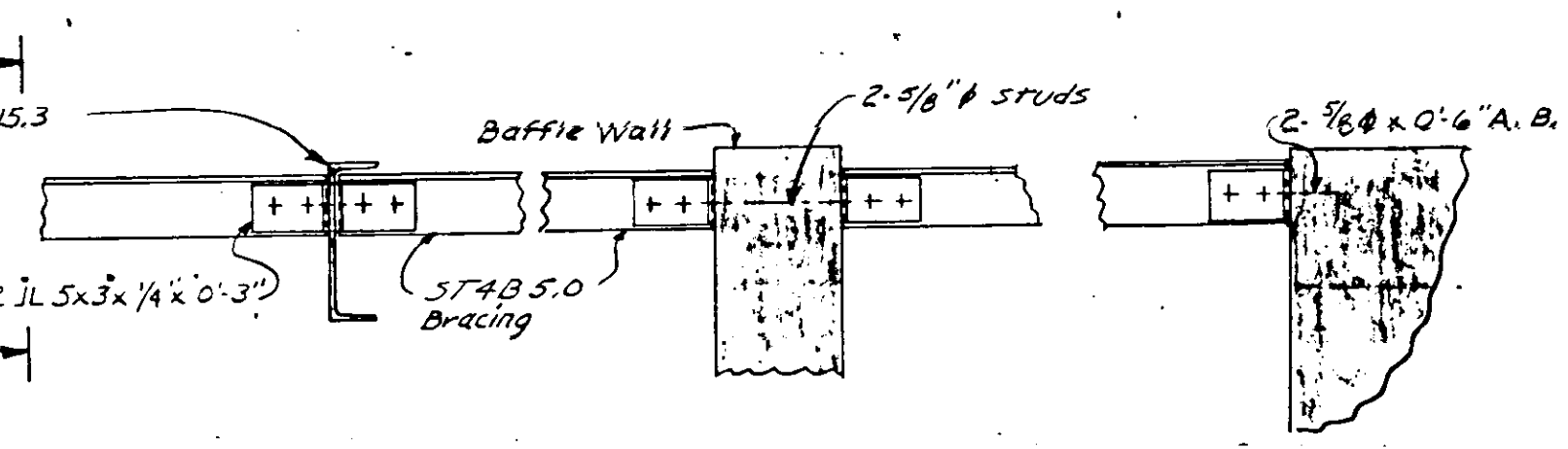
SECTION THRU CHANNEL
 Scale: 1" = 1'-0"



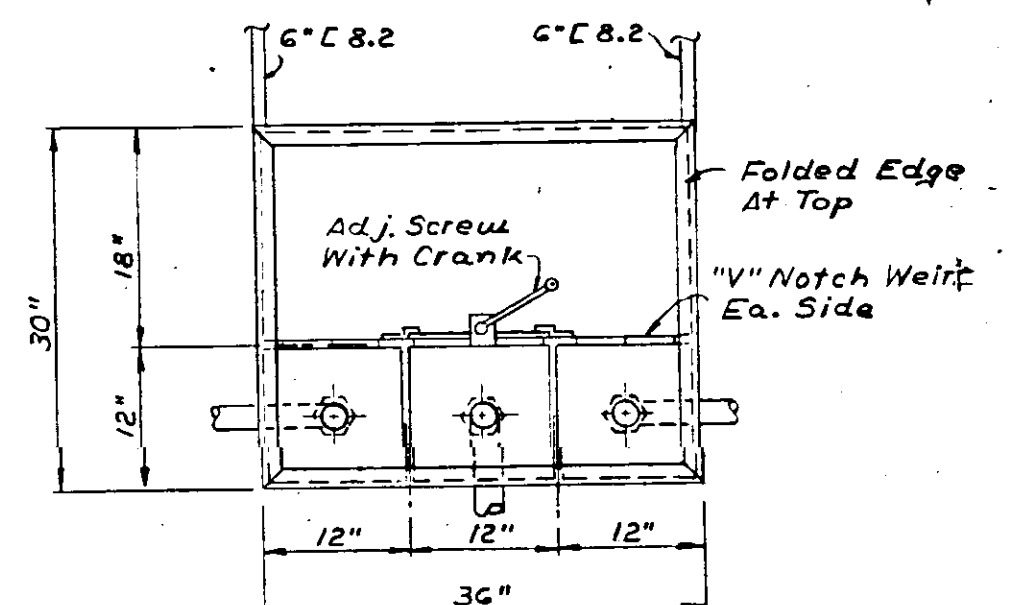
SLUDGE DRAWOFF DETAIL
 Scale: 3/8" = 1'-0"



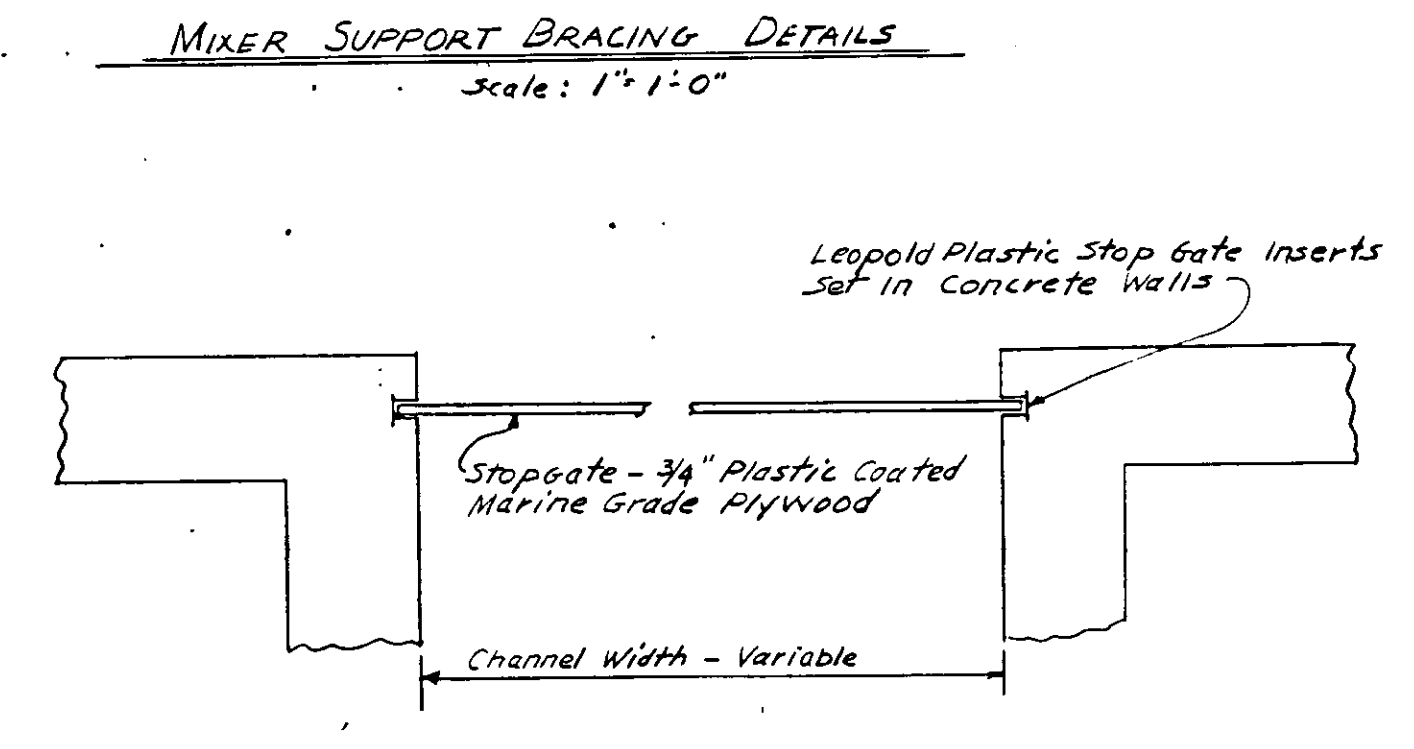
VIEW A



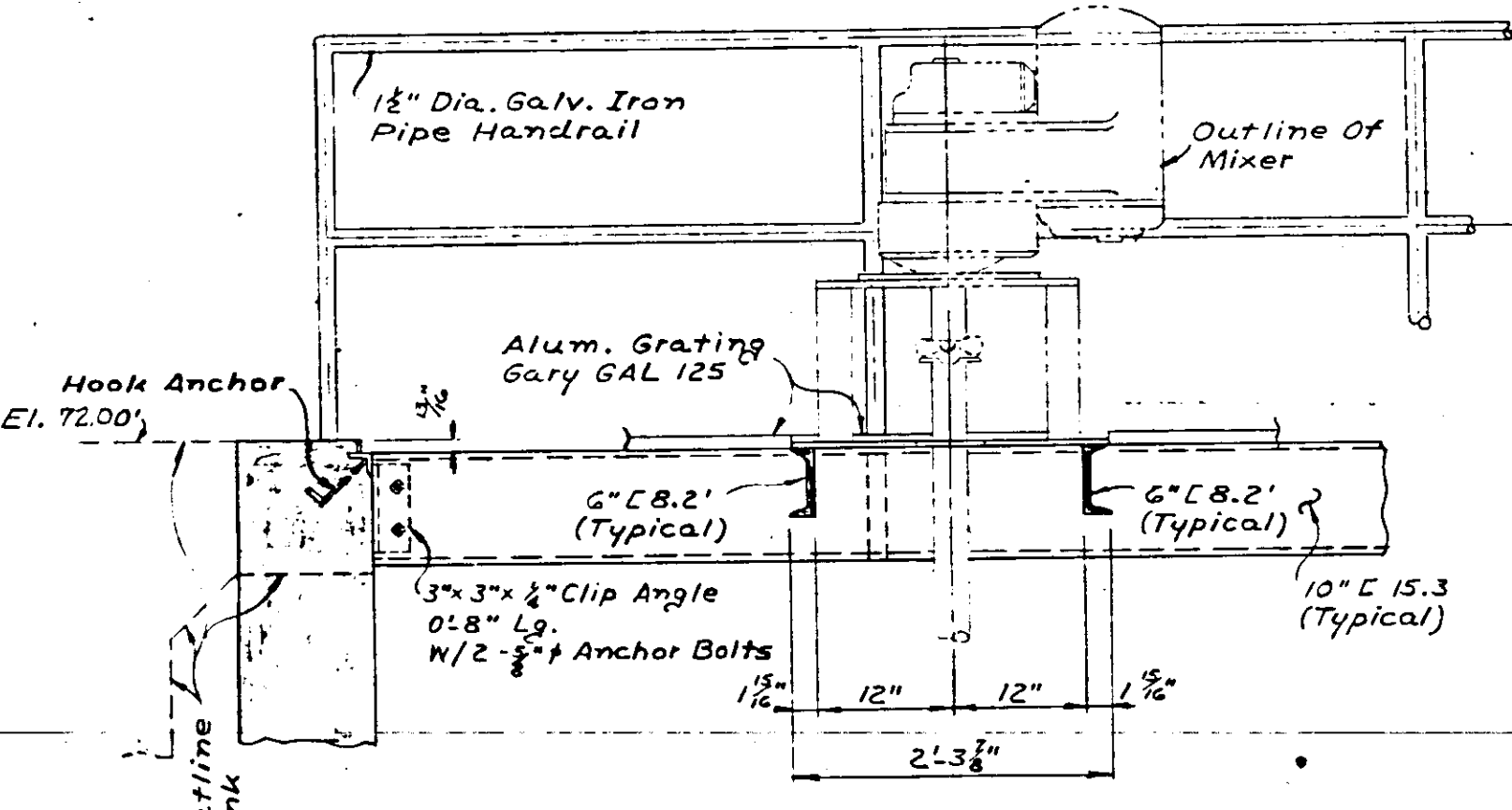
MIXER SUPPORT BRACING DETAILS
 Scale: 1" = 1'-0"



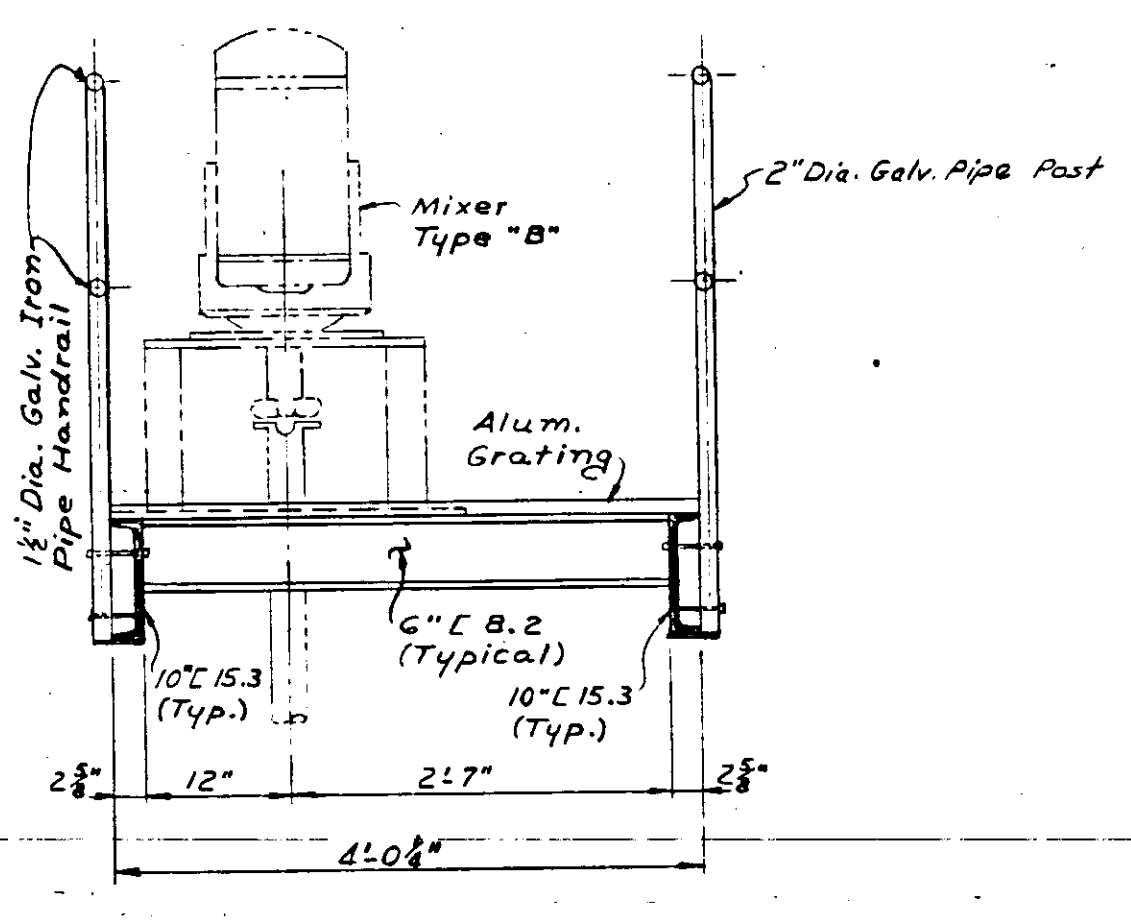
NOTE: Distribution Box To Be Fabricated From 3\"/>
DISTRIBUTION BOX DETAIL
 Not To Scale



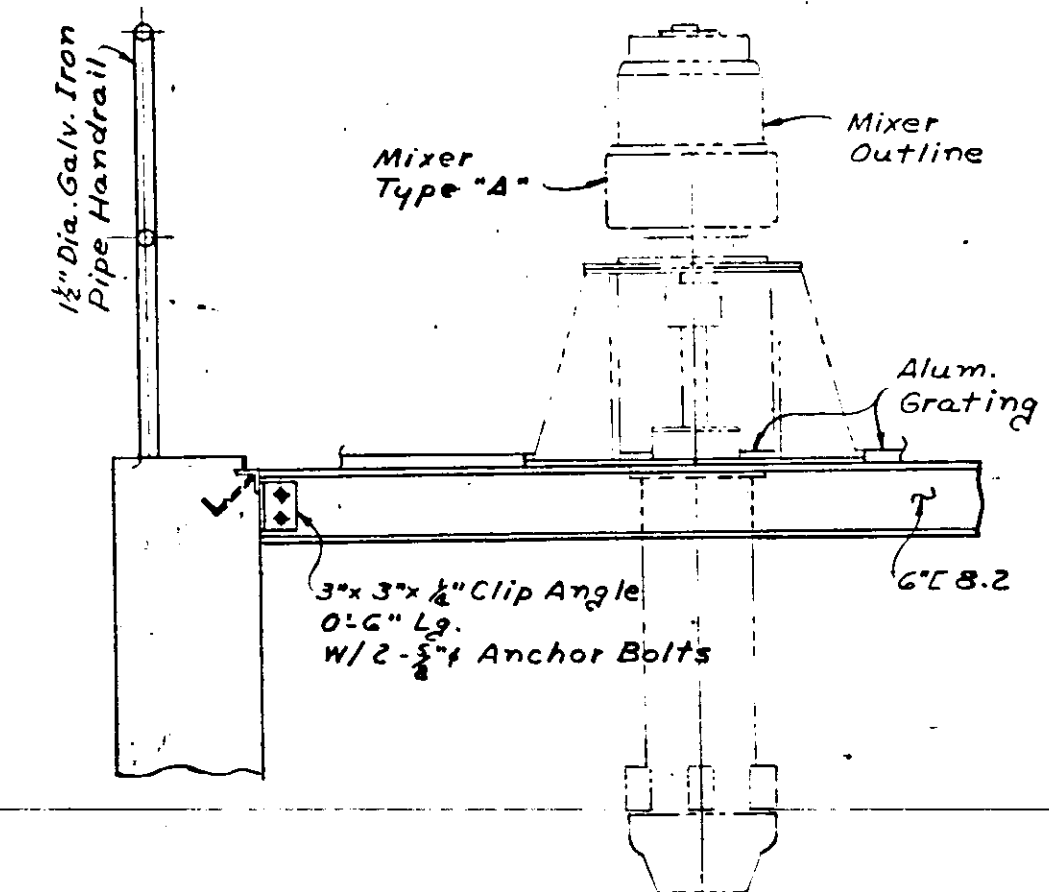
STOPGATE DETAIL
 Scale: None



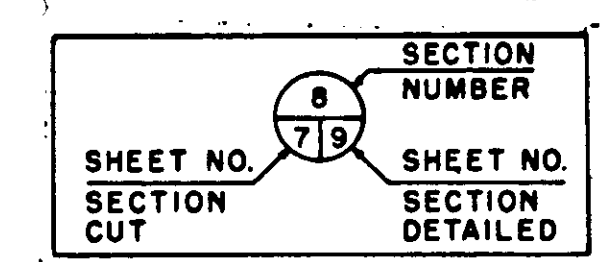
SECTION 9
 Scale: 3/8" = 1'-0"



SECTION 10
 Scale: 3/8" = 1'-0"



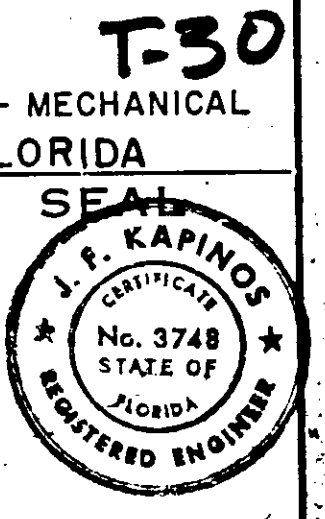
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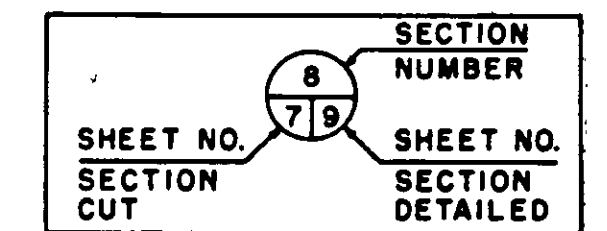
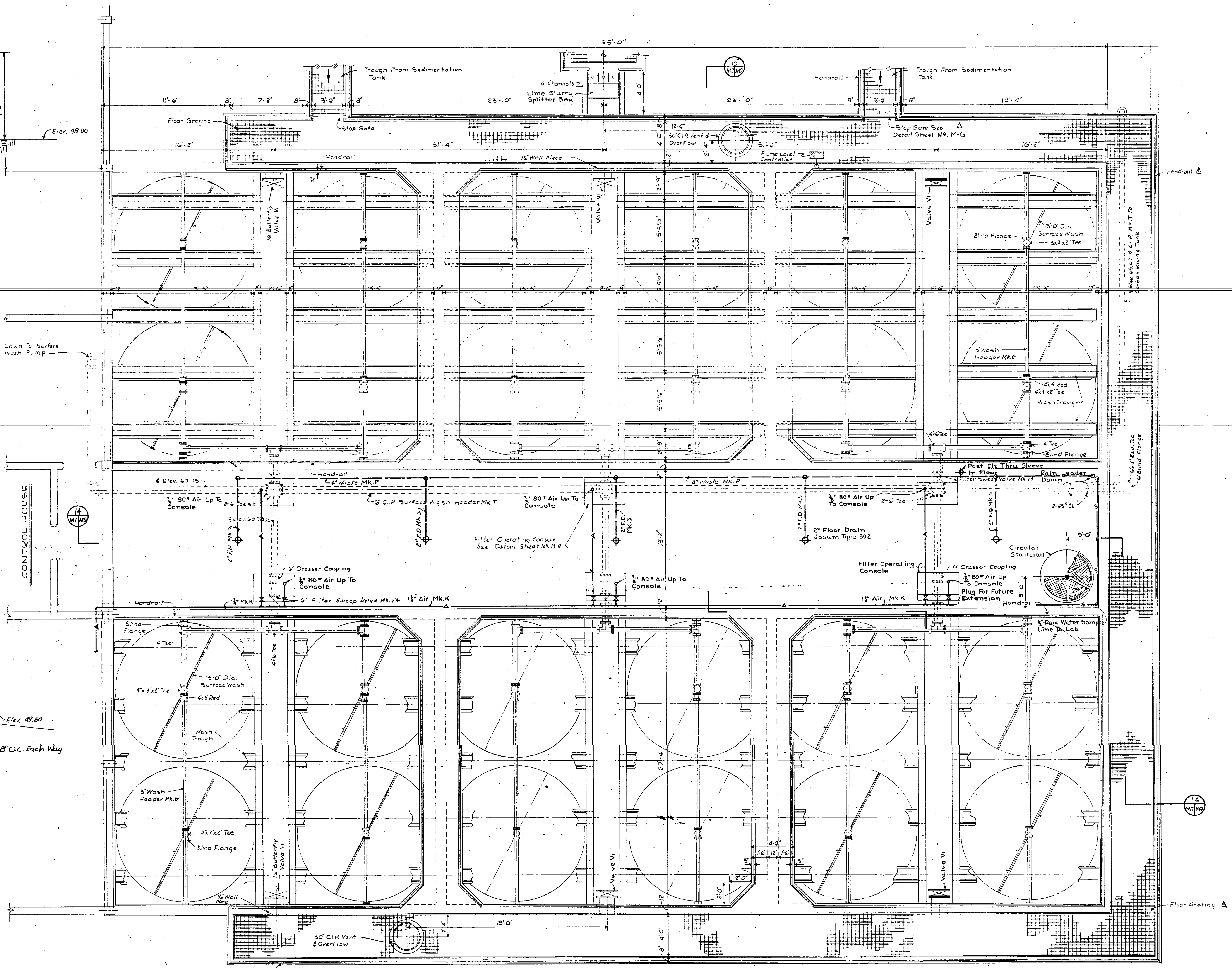
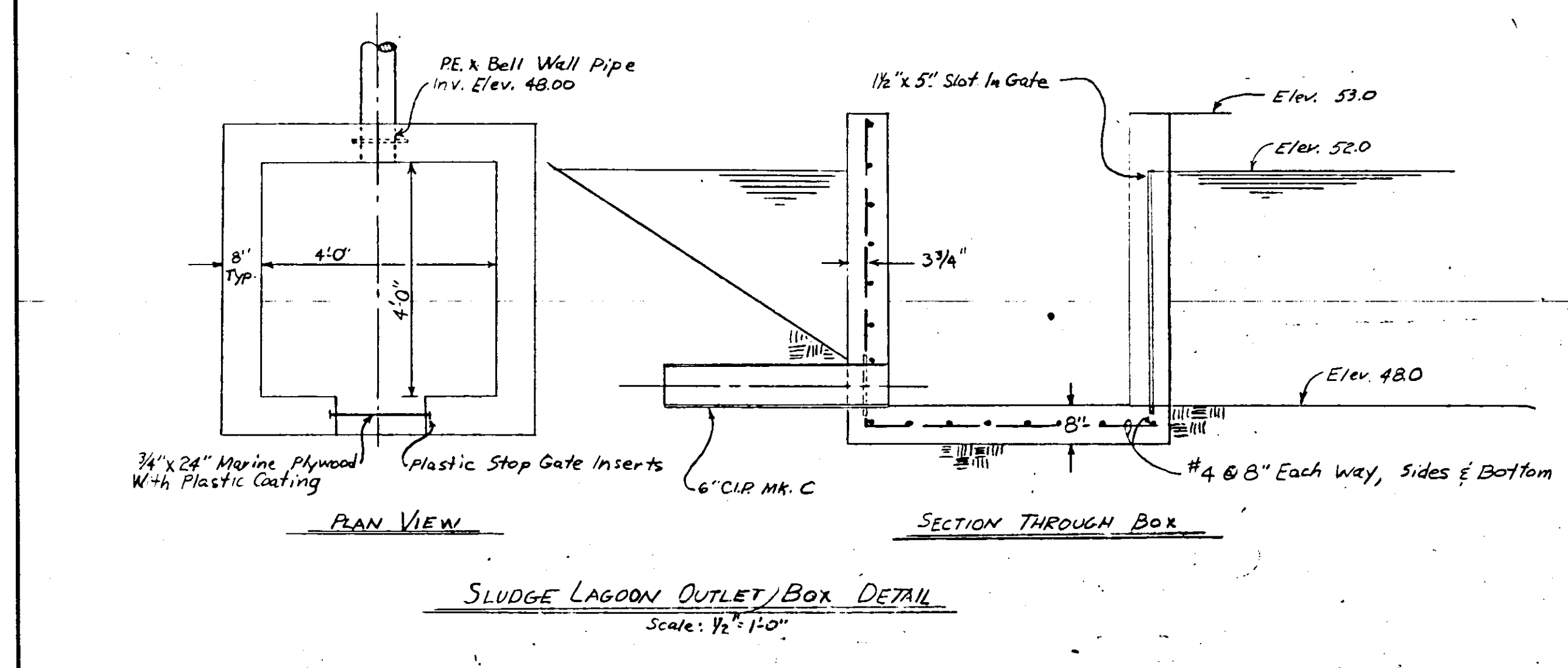
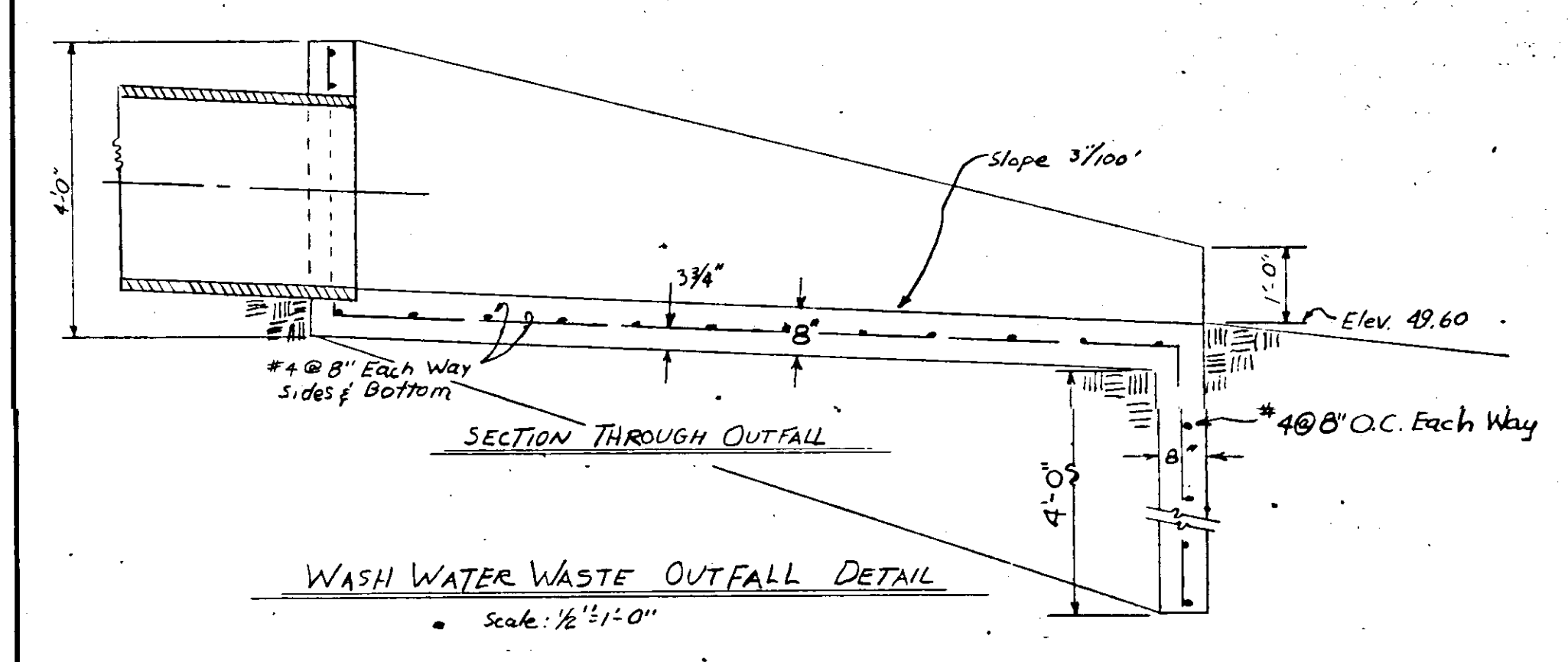
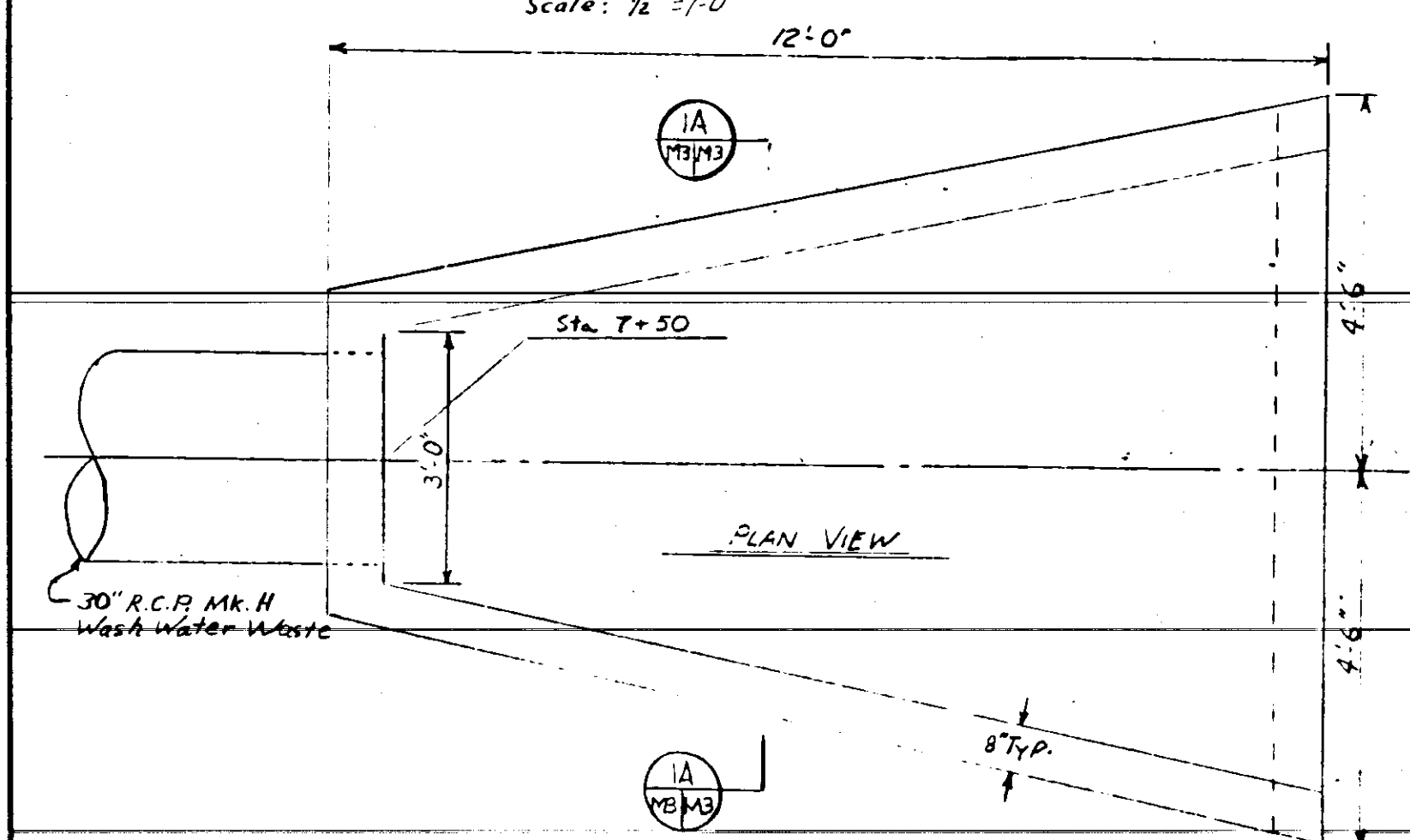
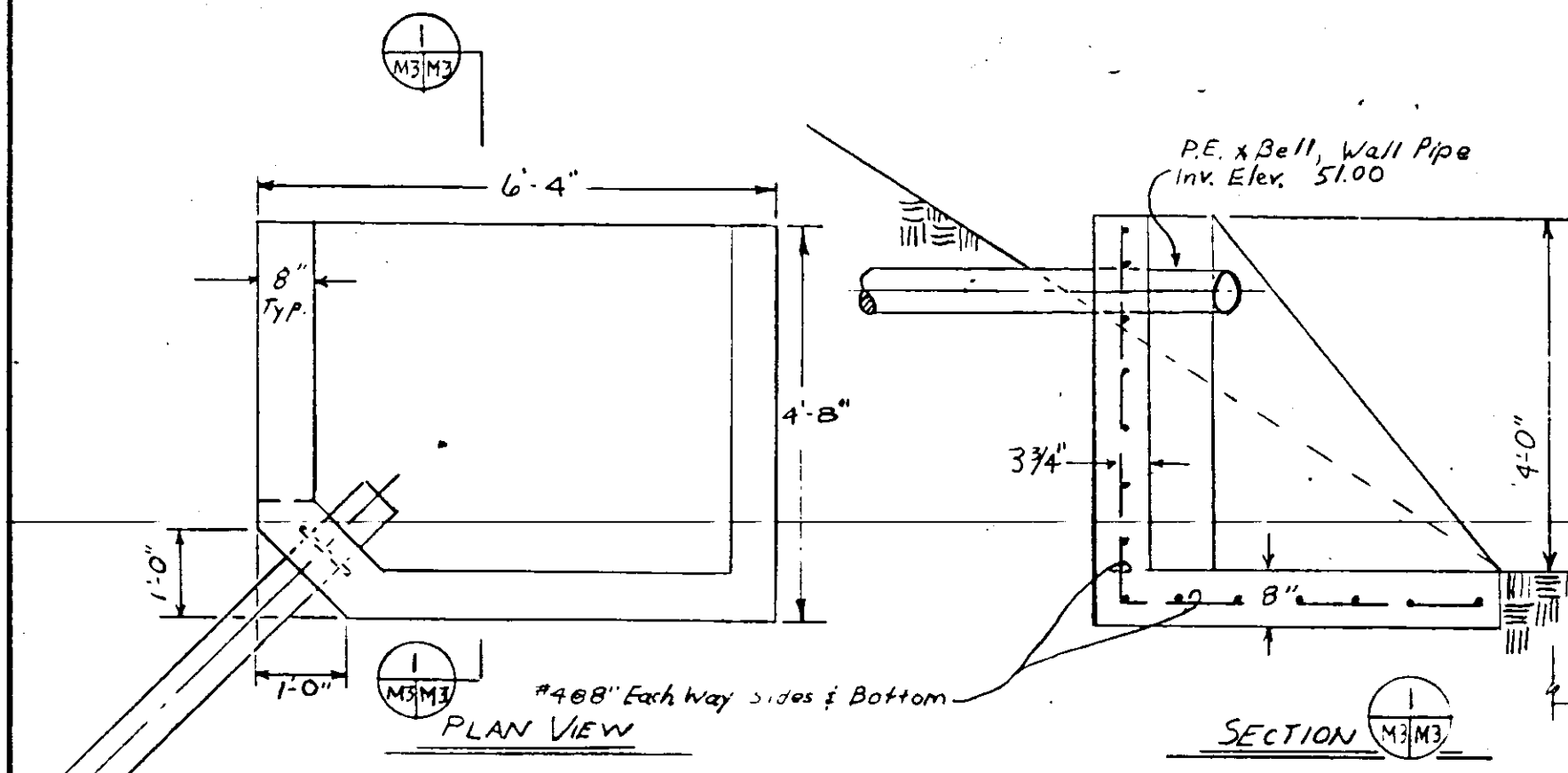


KEY PLAN

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

WK67 AS BUILT		FJL
MAY-05 CHANGE WEIR SIZE		DMG
NO.	DATE	DESCRIPTION
REVISIONS		
RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.		
WATER WORKS PROJECT WATER TREATMENT PLANT PART B FLOCCULATION & SETTLING TANK DETAILS - MECHANICAL MANATEE COUNTY, FLORIDA		
DESIGNED BY	FILE NO.	T-30 SHEET NO. (M-6) III-B OF 15 SHEETS
DRAWN BY	6353-3-M-6-III-B	
CHECKED BY	DATE	SCALE: AS SHOWN FEB. 1965





NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.

SI/6/65	REVISED CALLOFFS	D.N.C.
WR/67	AS BUILT	F.S.L.
NO.	DATE	DESCRIPTION
		REVISIONS
		BY
		CRD.

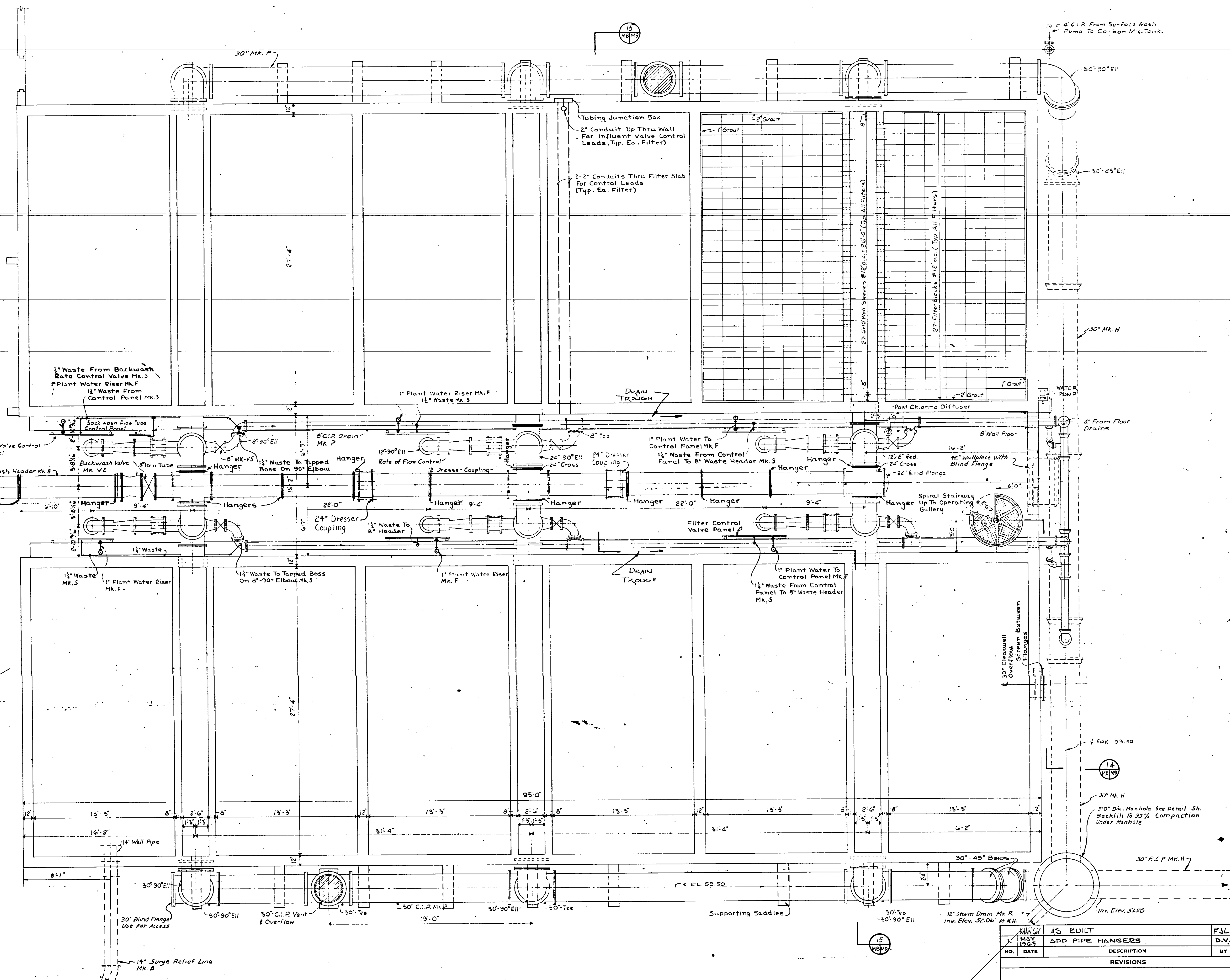
RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
FILTER OPERATING FLOOR PLAN-MECHANICAL
MANATEE COUNTY, FLORIDA

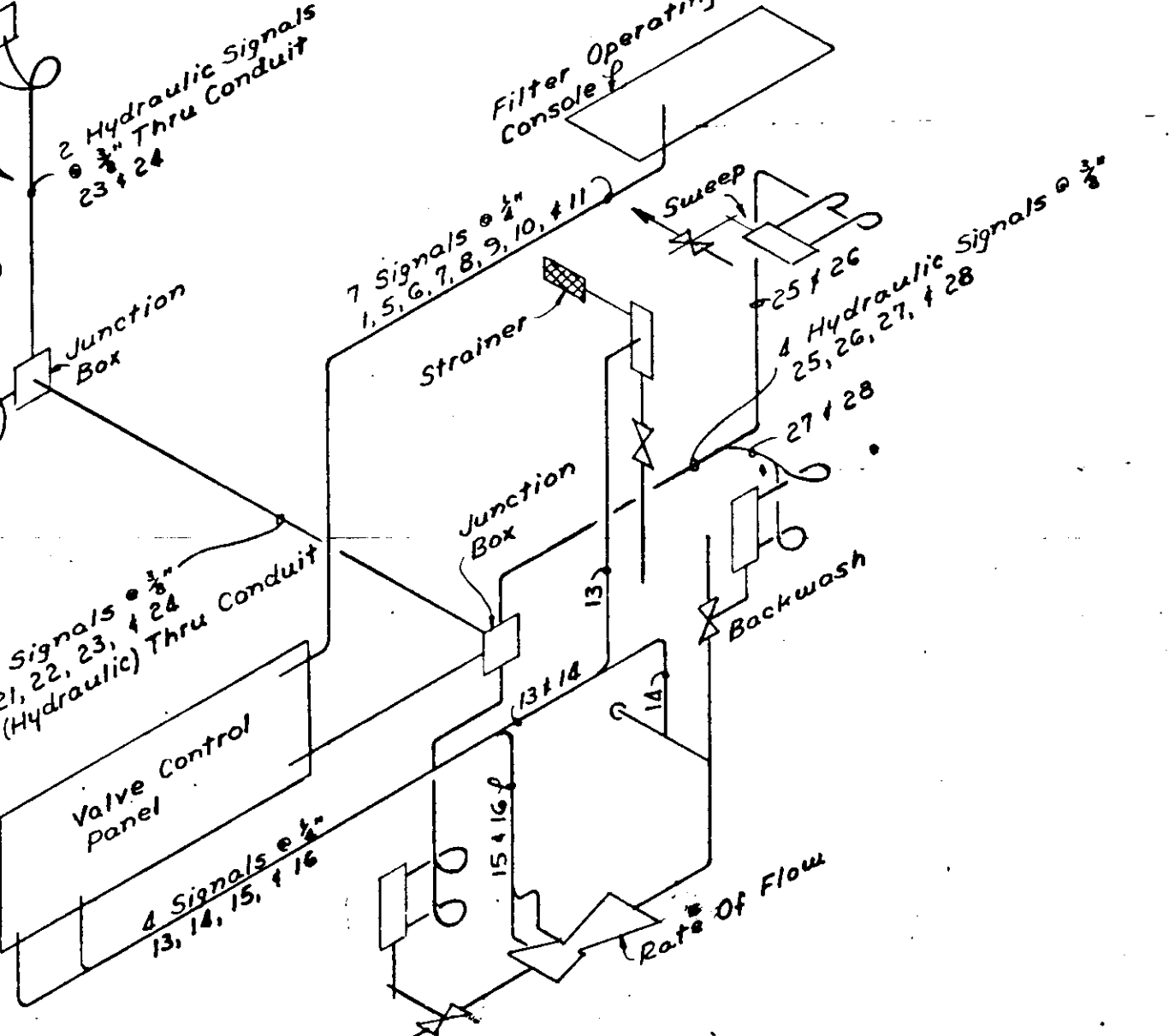
DESIGNED BY: JFH
DRAWN BY: DMG
CHECKED BY: CEB/AR
DATE: FEB. 1965

FILE NO.: 6353-3-M-7-III-B
SHEET: 15 OF 15
SCALE: AS SHOWN

T-31
FLORIDA REGISTERED ENGINEER
No. 3748
STATE OF FLORIDA



INSTRUMENTATION ISOMETRIC
Not To Scale

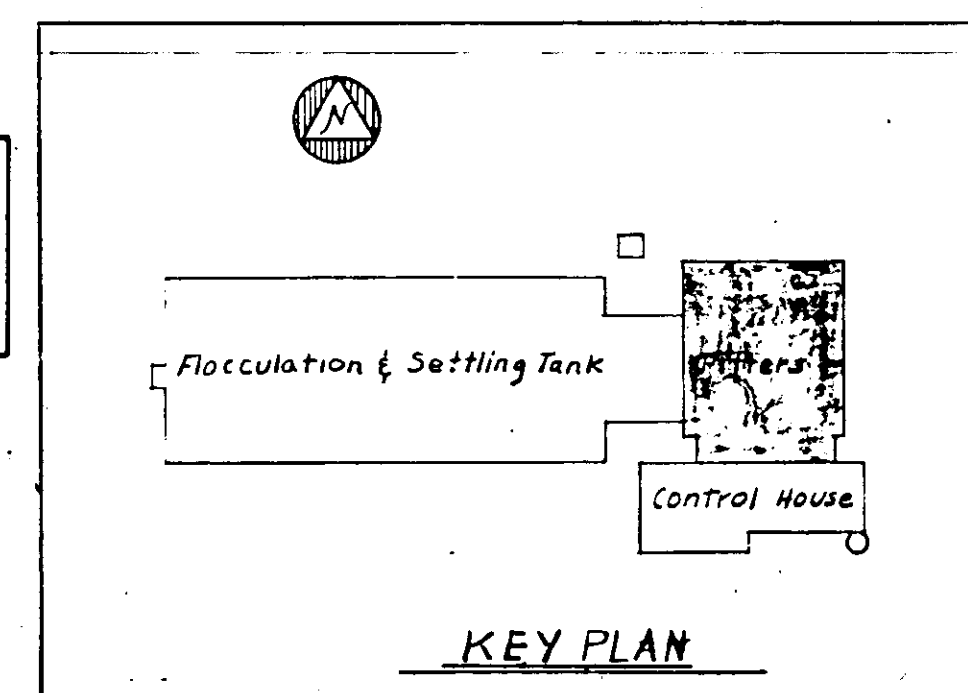


TUBE BUNDLE ISOMETRIC
Not To Scale

FILTER PIPING GALLERY - PLAN
Scale: 1/4" = 1'-0"

SHEET NO.	SECTION	SECTION NUMBER	SHEET NO.	SECTION	SECTION NUMBER
719	CUT	8	719	DETAILED	8

NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.



NO.	DATE	DESCRIPTION	BY	CHKD.
1	AS BUILT			
2	ADD PIPE HANGERS			

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

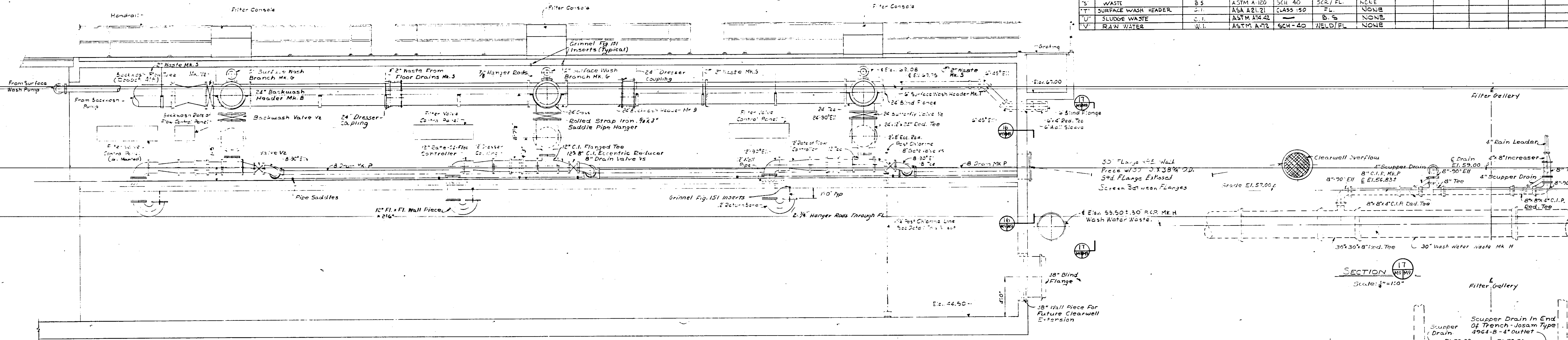
WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
FILTER PIPE GALLERY PLAN MECHANICAL
MANATEE COUNTY, FLORIDA

DESIGNED BY: JFH
DRAWN BY: DWE
CHECKED BY: CEB
DATE: Feb. 1965

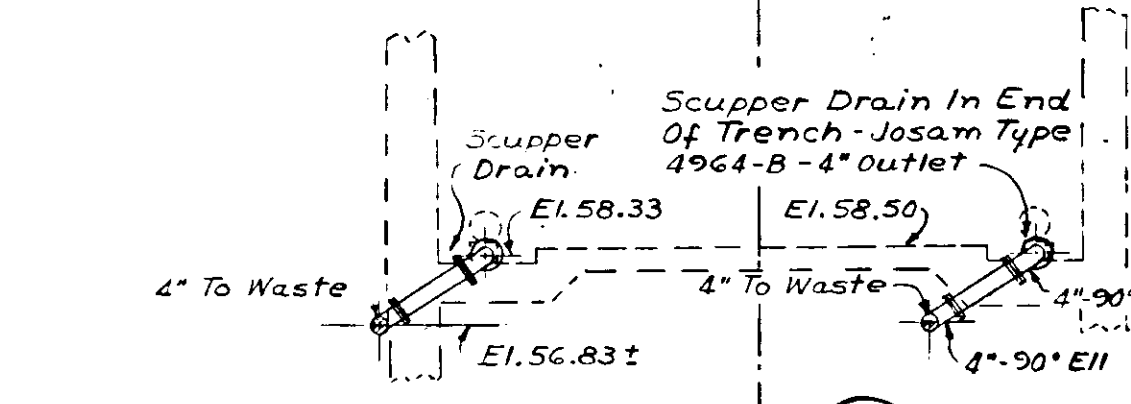
FILE NO.: 6353-3-M-8-III-B
SHEET: 15
OF 15 SHEETS
SCALE: AS SHOWN

SEAL
J. P. KAPINS
No. 3748
STATE OF FLORIDA
REGISTERED ENGINEER

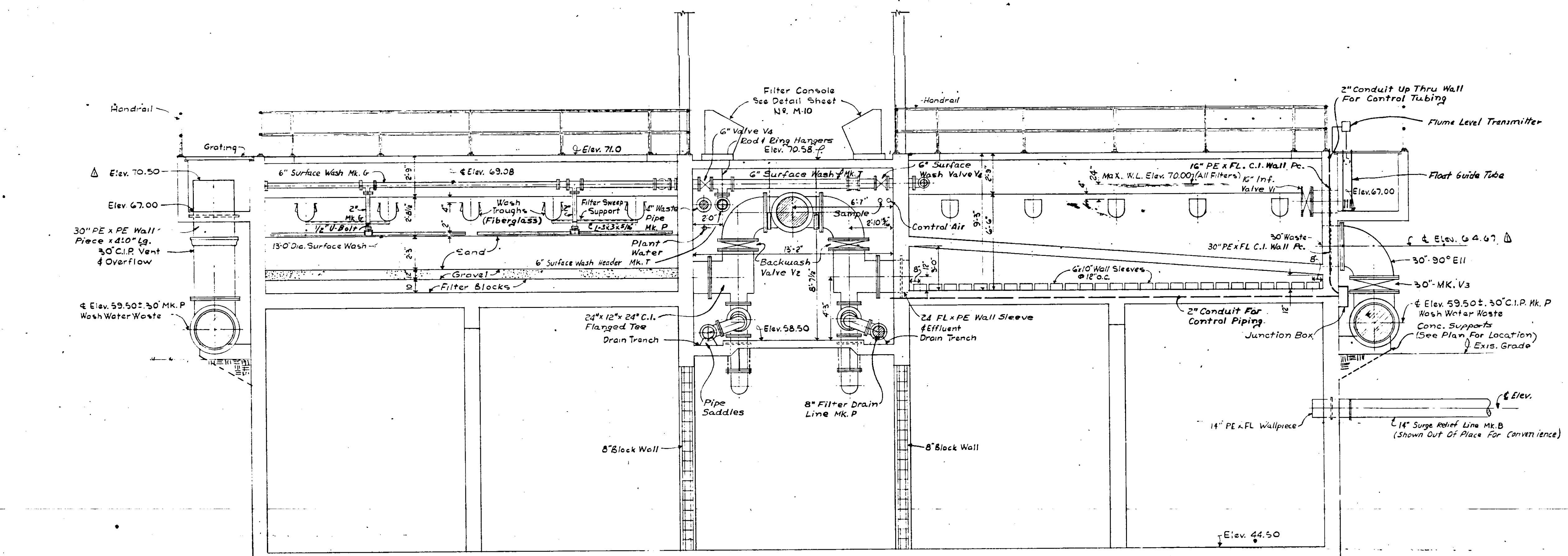
PIPE SCHEDULE						ALTERNATE					
MK.	NOVOMENCLATURE	MATERIAL	SPECS	DESIGN PRESSURE	JOINTS	MATERIAL	SPECS	JOINTS	MATERIAL	SPECS	JOINTS
1A	RAW & FIN. WATER	STEEL	ASTM A200 50T	CLASS 150	PUSH ON	DUCTILE IRON	ASA A21.51	B.S.	R.C.P.	AWWAGS 31	R.F.S.
1B	FIN. & BACK WASH	DUCTILE IRON	ASA A21.51	CLASS 150	FL.	STEEL	ASA 21.1	FL/WELD			
1C	WASTE (EXTERIOR)	C.I.	ASTM A14.42	TK HEAVY	B.S.	V.C.					
1D	PLANT WATER	C.I.	ASTM A120	SCH 40	SCR.	NONE					
1E	PLANT WATER	C.P.	ASTM B88-64		SWEAT/SCR.	NONE					
1F	PLANT WATER	B.S.	ASTM A120	SCH 40	SCR/FL.	NONE					
1G	SWEEP	C.I.	ASTM A72	SCH 40	SCR/FL.	NONE					
1H	WASH WATER WASTE	R.C.P.	C-70-62T	50"	TO RING	NONE					
1I	RAIN LEADERS	W.I.	ASTM A72	SCH 40	SCR.	NONE					
1J	CHLORINE GAS	W.I.	ASTM A72	SCH 80	SCR.	NONE					
1K	AIR	C.P.	ASTM B88-64		SWEAT JT	NONE					
1L	PHOS. CONTROL	P.V.C.		100"	COMPRESSION	NONE					
1M	WASTE	V.C.			PUSH ON	NONE					
1N	SOIL & WASTE	V.I.	ASTM A74-42	TK HEAVY	B.4 S.	COPPER	P.V.C.	SWEAT			
1O	WASTE	B.S.	ASTM A120	SCH 20	SCR.	NONE					
1P	WASTE	C.I.	ASA 21.1		B.S.	NONE					
1Q	FUEL OIL	B.S.	ASTM A120	SCH 40	SCR/JT.	NONE					
1R	STORM DRAIN	R.C.P.	C-70-62T		TO RING	NONE					
1S	WASTE	B.S.	ASTM A120	SCH 40	SCR/FL.	NONE					
1T	SURFACE WASH HEADER	C.I.	ASA 21.1	CLASS 150	FL.	NONE					
1U	SLUDGE WASTE	C.I.	ASTM A74-42		B.S.	NONE					
1V	RAIN WATER	W.I.	ASTM A72	SCH 40	WELD/FL.	NONE					



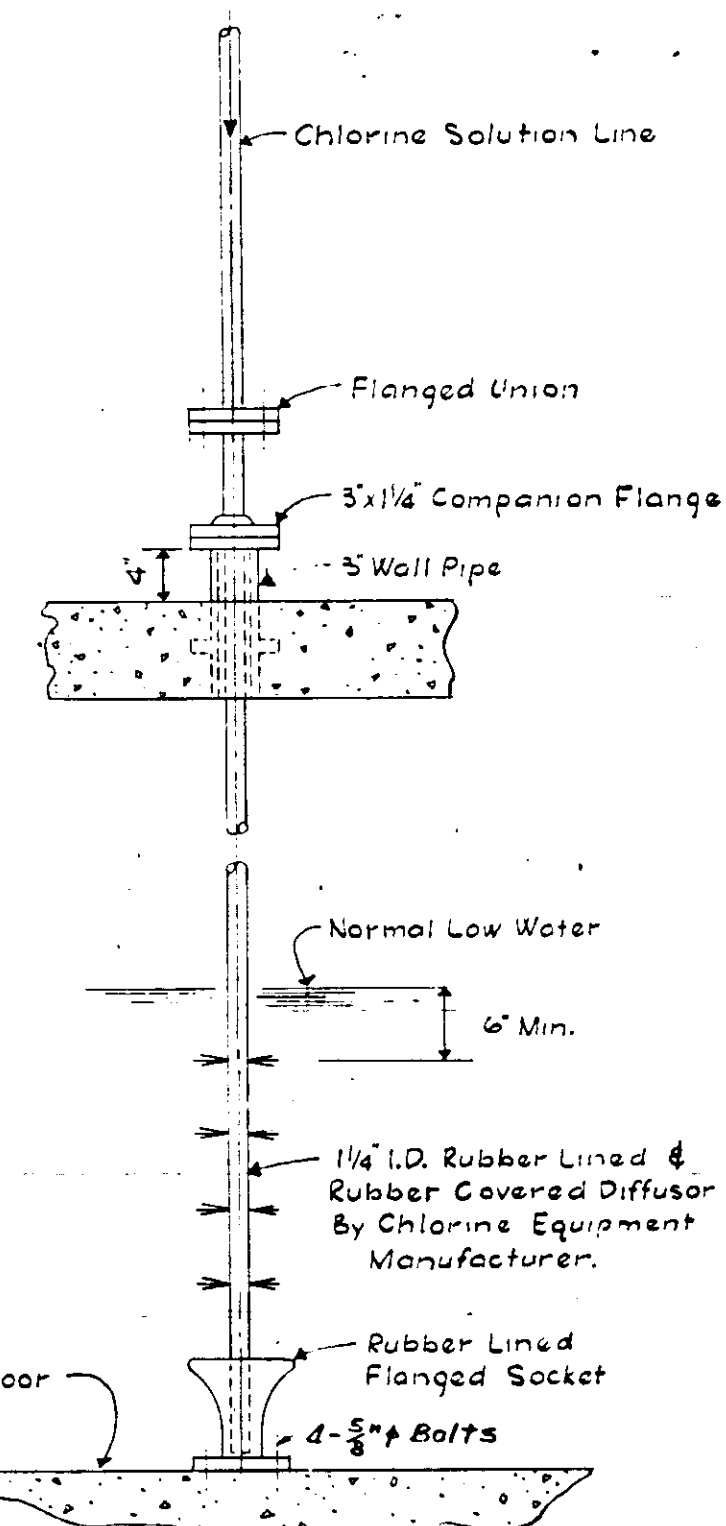
SECTION 14
Scale: 1/4" = 1'-0"



SECTION 17
Scale: 1/4" = 1'-0"



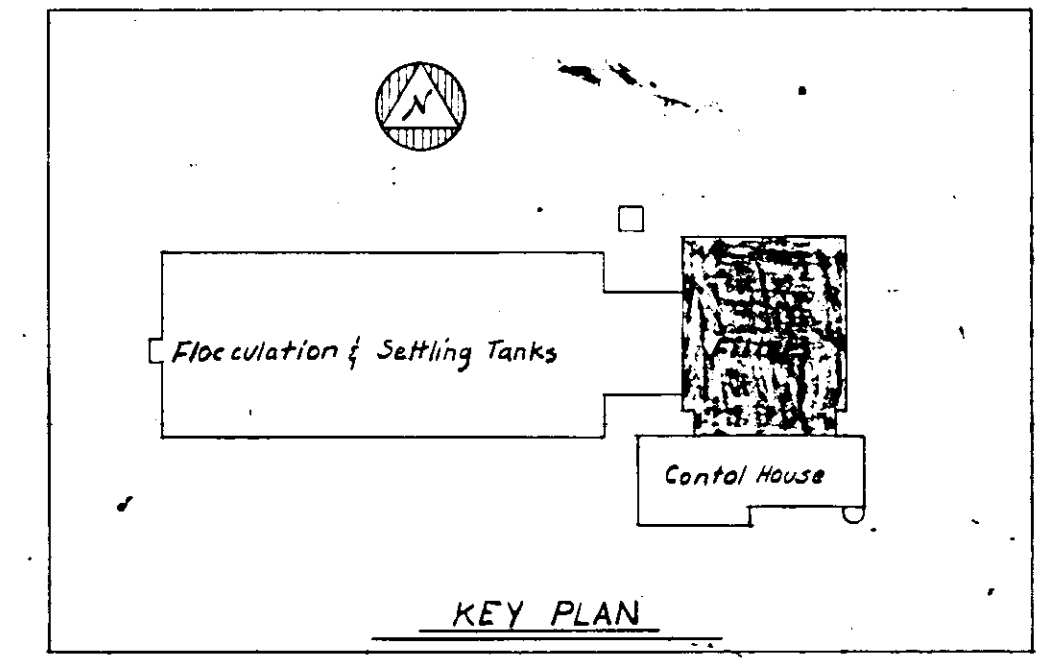
SECTION 15
Scale: 1/4" = 1'-0"



POST CHLORINE DETAIL
Scale: 3/4" = 1'-0"

SECTION NUMBER
SHEET NO. 719
SECTION CUT
SHEET NO. SECTION DETAILED

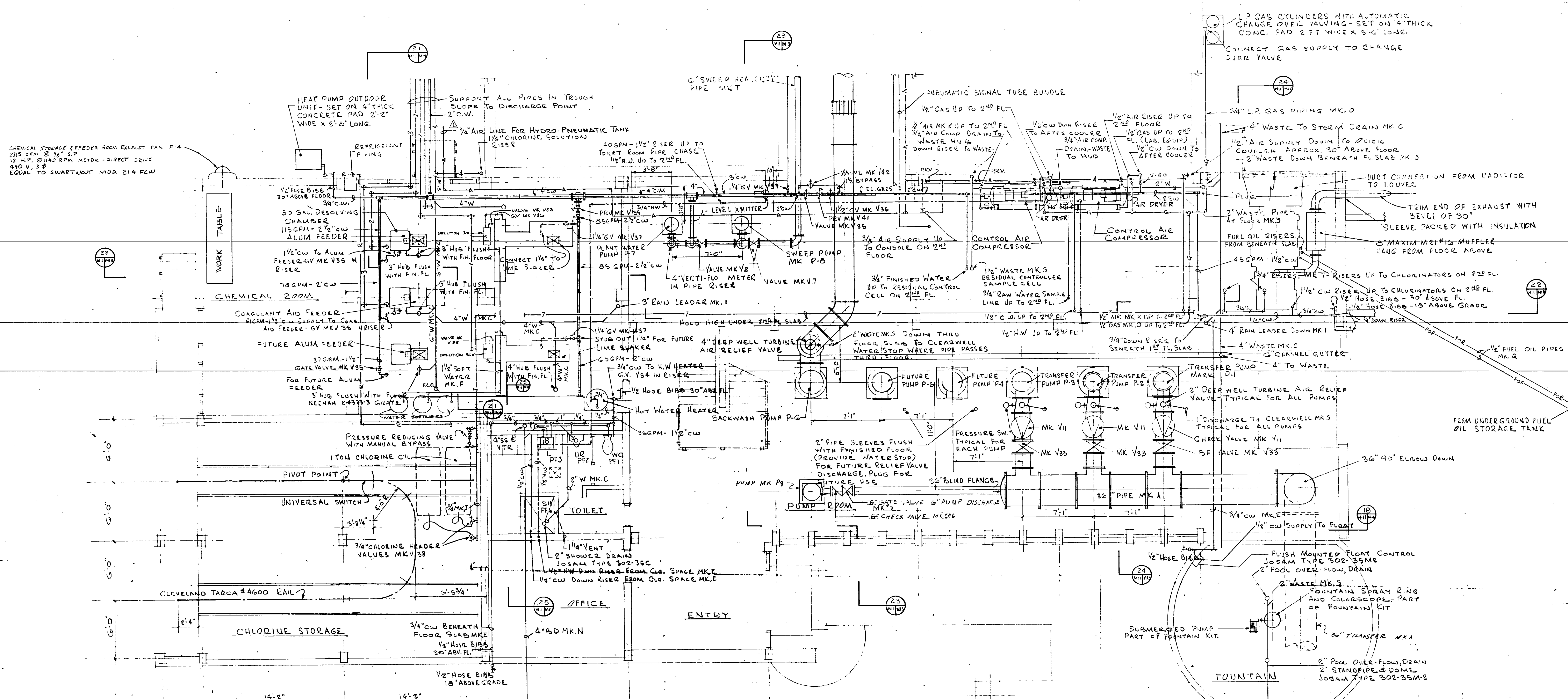
NOTE: DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.



NO.	DATE	DESCRIPTION	BY	CHK.
51816	REVISED ELEV. & PIPE SCHEDULE			
MR67	AC	EDILT		

RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FL. ST. LOUIS, MO.
WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
FILTER SECTIONS & DETAILS-MECHANICAL
MANATEE COUNTY, FLORIDA

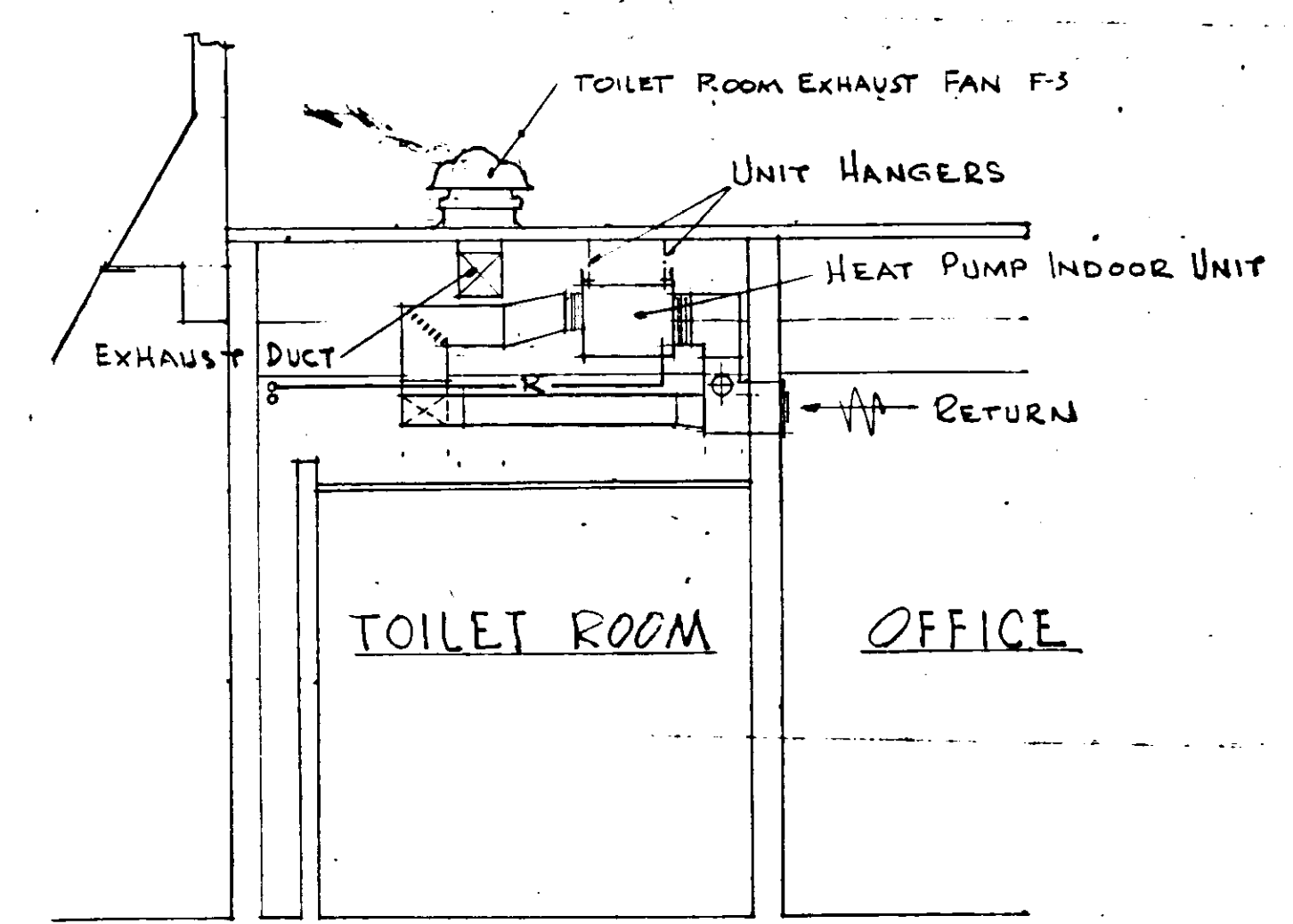
DESIGNED BY JFH	FILE NO. 6355-3-M-9-III-B	SEAL J. F. KAPINOS No. 3745 STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER
DRAWN BY D M E	SHEET No. 4-9 III-B	
CHECKED BY CER	of 15 SHEETS	
DATE Feb 1965	SCALE: As Shown	



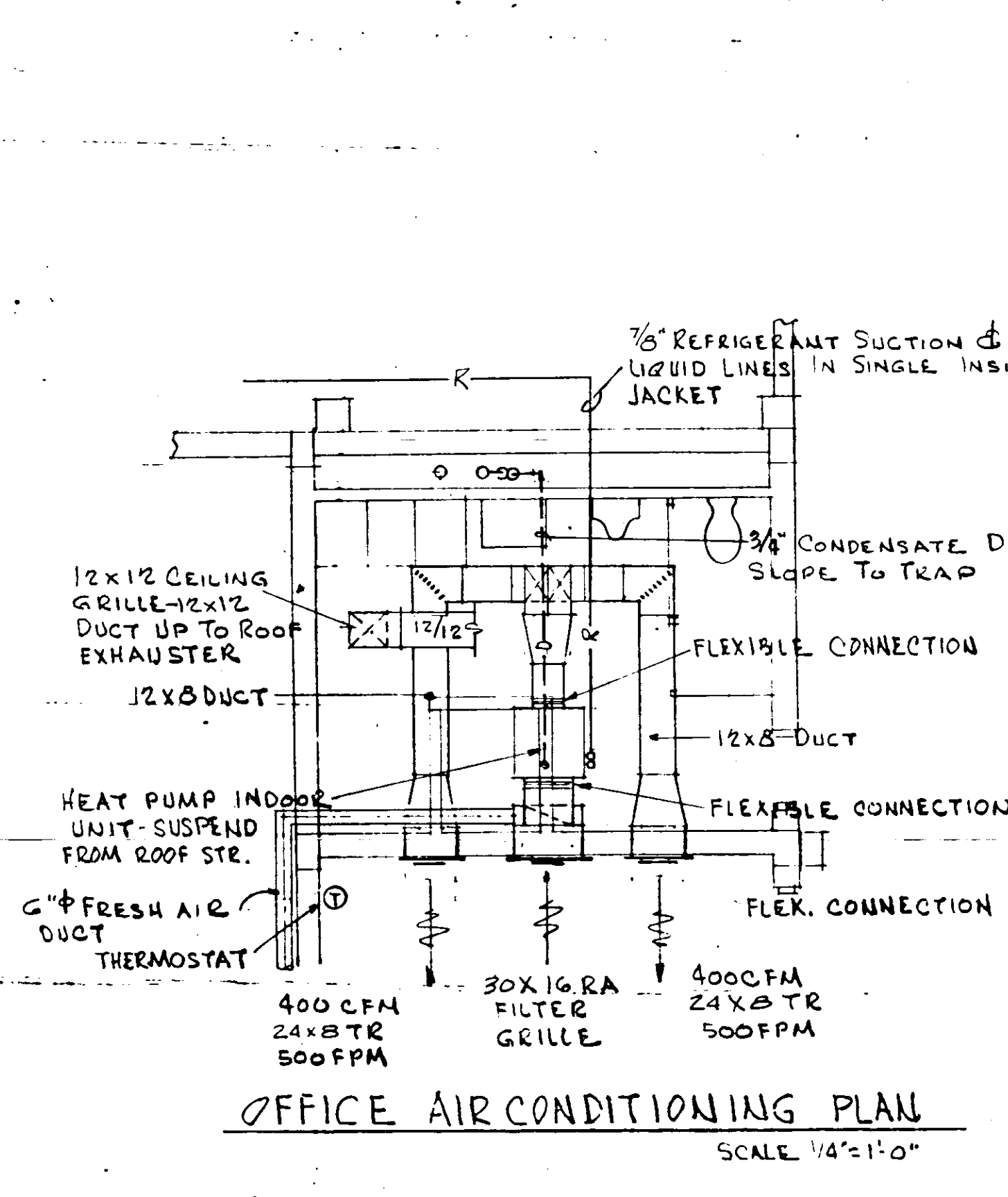
AIR CONDITIONING UNIT SCHEDULE

DESIGN CONDITIONS	INDOOR	OUTDOOR
SUMMER	74° DB + 50% RH	95° DB & 75° WB
WINTER	72° DB	35° DB

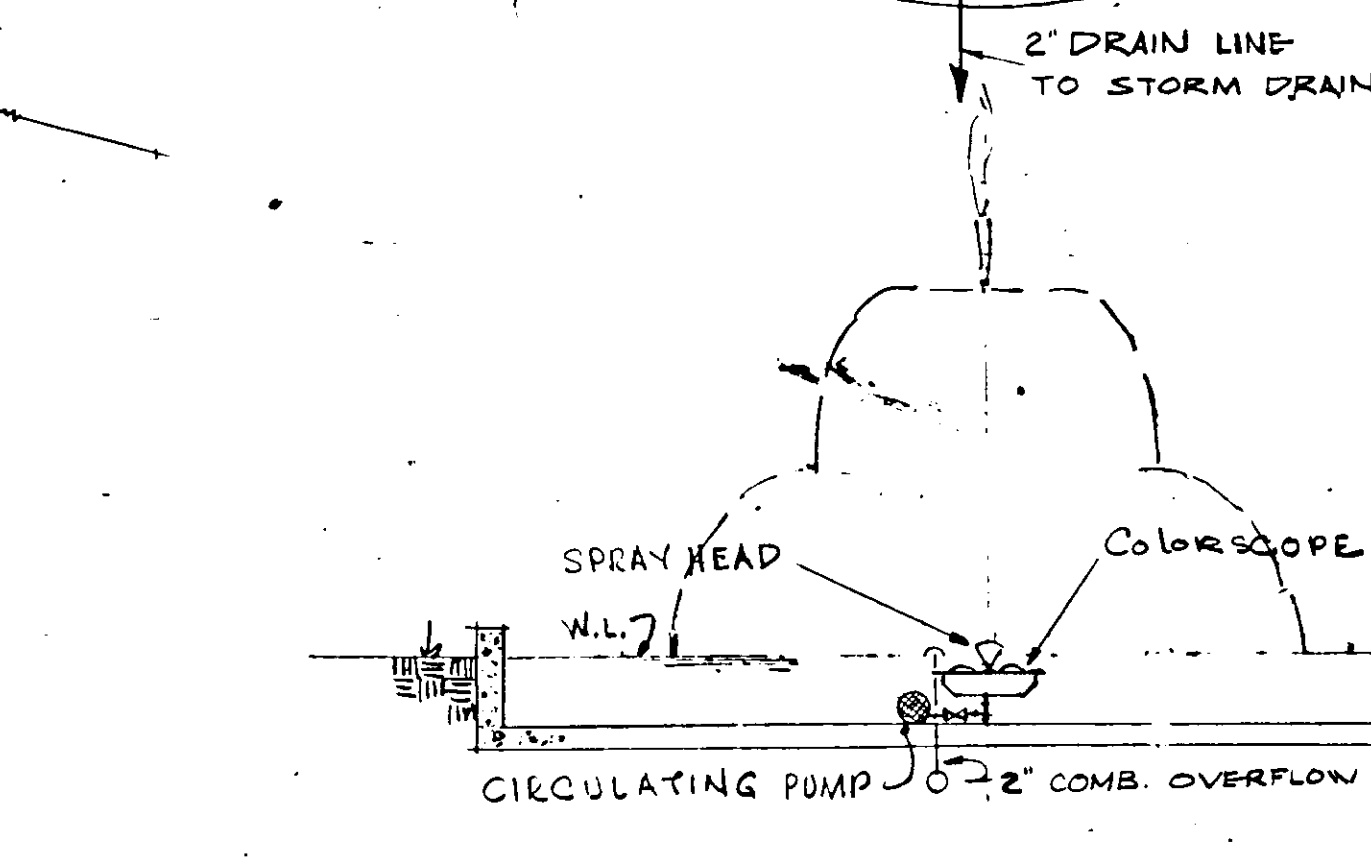
	A.C. UNIT No.1	A.C. UNIT No.2
AIR QUANTITIES		
TOTAL AIR	800 CFM	1920 CFM
FRESH AIR	85 CFM	145 CFM
HEAT LOSSES		
SPACE	13,900 BTUH	20,450 BTUH
TOTAL	17,300 BTUH	26,250 BTUH
HEAT GAINS		
SPACE SEN.	10,800 BTUH	36,800 BTUH
SPACE TOTAL	11,400 BTUH	37,550 BTUH
TOTAL SEN.	12,730 BTUH	40,090 BTUH
GRAND TOTAL	16,500 BTUH	46,290 BTUH
S.H.R. SPACE	9.5%	9.8%
S.H.R. TOTAL	77.5%	85.3%
TEMPERATURES		
AIR ENTERING-HEAT	60.6° DB	64° DB
AIR ENTERING-COOL	76° DB + 63.8° WB	75.7° DB + 63.5° WB
SUPPLY AIR - COOL	61.5° DB + 57° WB	56.3° DB + 55° WB
EQUIPMENT		
INDOOR COIL	1.63 SA. FT. - 2 Row	3.70 SUFF. - 2 Row
INDOOR FAN	3" FC	10" FC
INDOOR FAN H.P.	1/4 H.P. MOTOR	1/2 H.P. MOTOR
OUTDOOR COIL	3.25 SQ. FT. - 2 Row	5.37 SQ. FT. - 2 Row
OUTDOOR FAN	18" M.F. - 1700 CFM	20" B.I. - 3500 CFM
OUTDOOR FAN H.P.	1/2 HP MOTOR	1 HP MOTOR
MIN. COMP. H.P.	2 HP	4 HP
REFRIG. TYPE	R-22	R-22
TYPE SYSTEM	HEAT PUMP-SPLIT SYSTEM	HEAT PUMP-SELF CONTAINED
MANUFACTURER	TRANE	TRANE
MODEL NO.	INDOOR RHP20 & OUTDOOR RAP20	SHP40
CURRENT CHARACT.	208 VOLT, 3φ, 60W	240 VOLT, 3φ, 60W



FIRST FLOOR PLAN SCALE 1/4\"/>



FOUNTAIN SCHEDULE

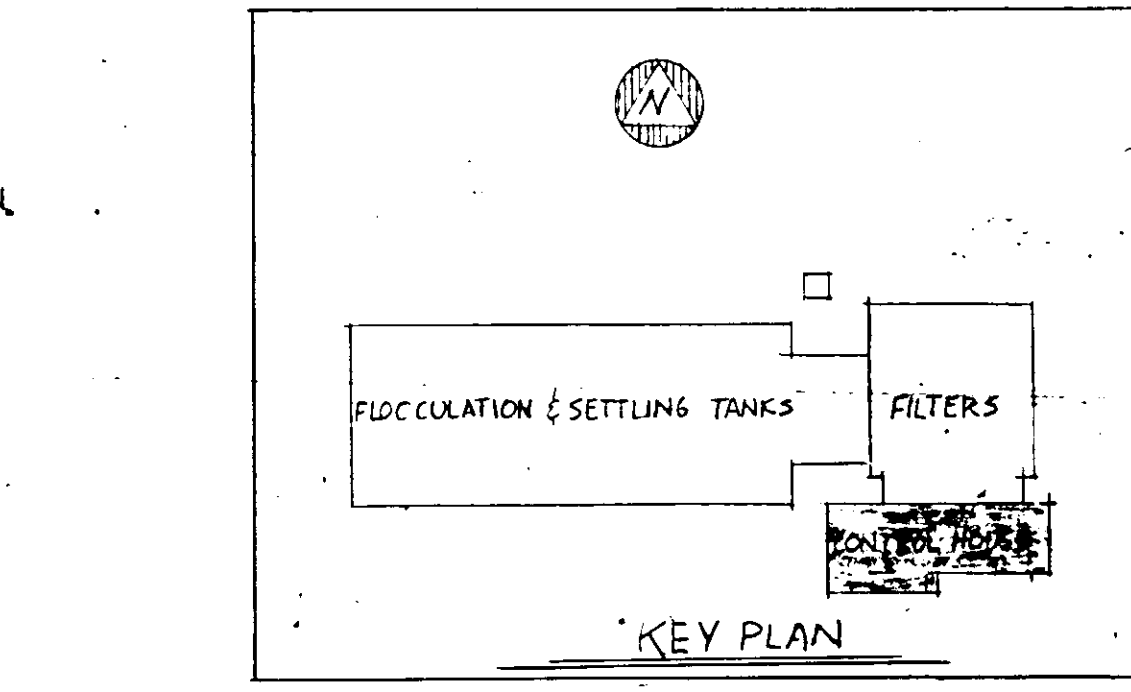


FOUNTAIN SCHEDULE

KIT CONSISTS OF:
 BRONZE WATER CASTLE SPRAY HEAD
 300 WATT BRONZE FOUNTAIN LIGHT (COLORSCOPE)
 1/4 HP SUBMERSIBLE PUMP AND MOTOR (WITH REMOTE STARTER)
 PERFORATED BRASS SECTION SCREEN
 BRONZE REGULATING VALVE
 BRONZE JUNCTION BOX
 COPPER MANIFOLDING AND PIPING FOR COMPLETE ASSEMBLY
 COMPLETE PIPING & ELECTRICAL BLUEPRINTS EQUAL TO KITA LIGHTING & MFG. CO. SERIES G-110C

GENERAL NOTES

1. ALL EXPOSED PLANT WATER PIPING TO BE MK. F



RUSSELL & AXON, INC.
 CONSULTING ENGINEERS
 DAYTONA BEACH, FLA. ST. LOUIS, MO.

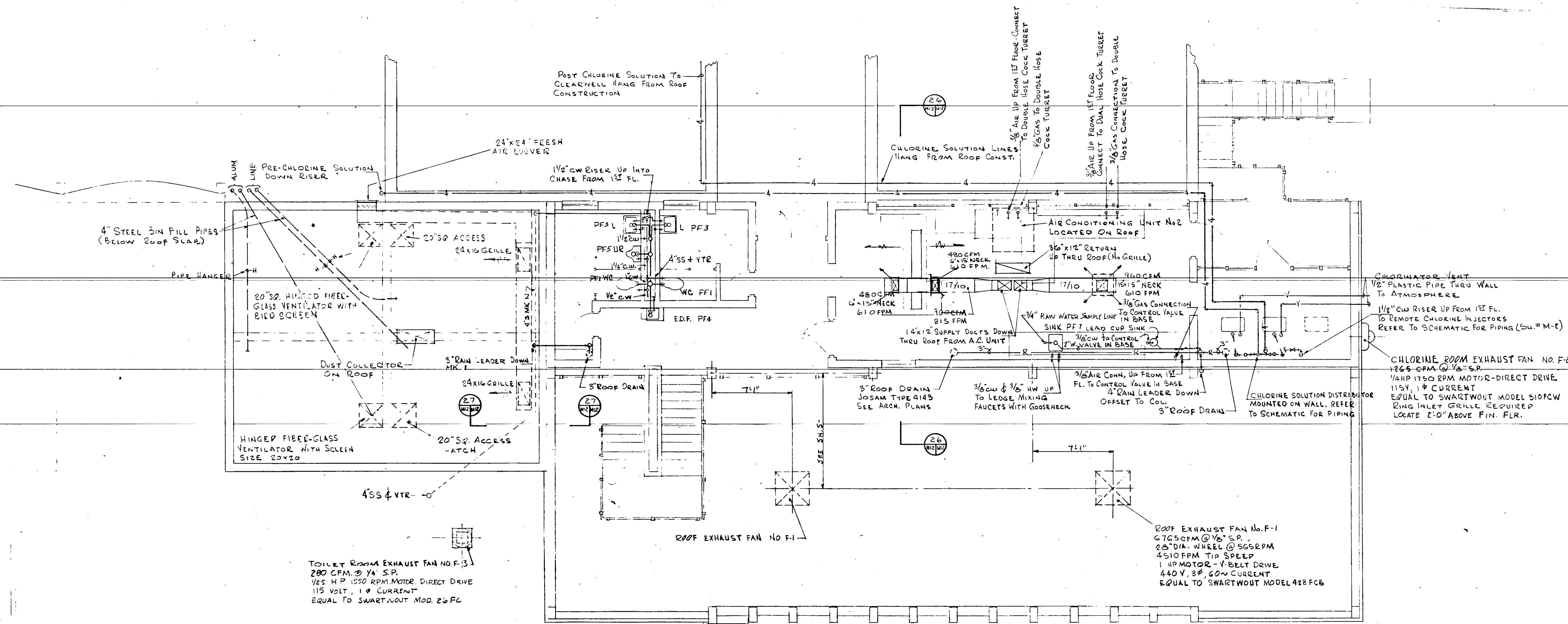
WATER WORKS PROJECT
 WATER TREATMENT PLANT
 PART B
 CONTROL HOUSE FIRST FLOOR PLAN-MECHANICAL
 MANATEE COUNTY, FLORIDA

DESIGNED BY: JFH
 FILE NO.: 6353-3-M-11-III-B
 DRAWN BY: JFH
 SHEET: 8 OF 15
 CHECKED BY: CEB/GR
 DATE: FEB 1968
 SCALE: AS SHOWN

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD.
1		ADD AIR LINE FOR HYDRO-PNEUMATIC TANK, ADD TO A.C. SCHEDULE	D.V.	

SEAL
 J. E. KAPITONOS
 No. 3748
 STATE OF FLORIDA
 REGISTERED ENGINEER

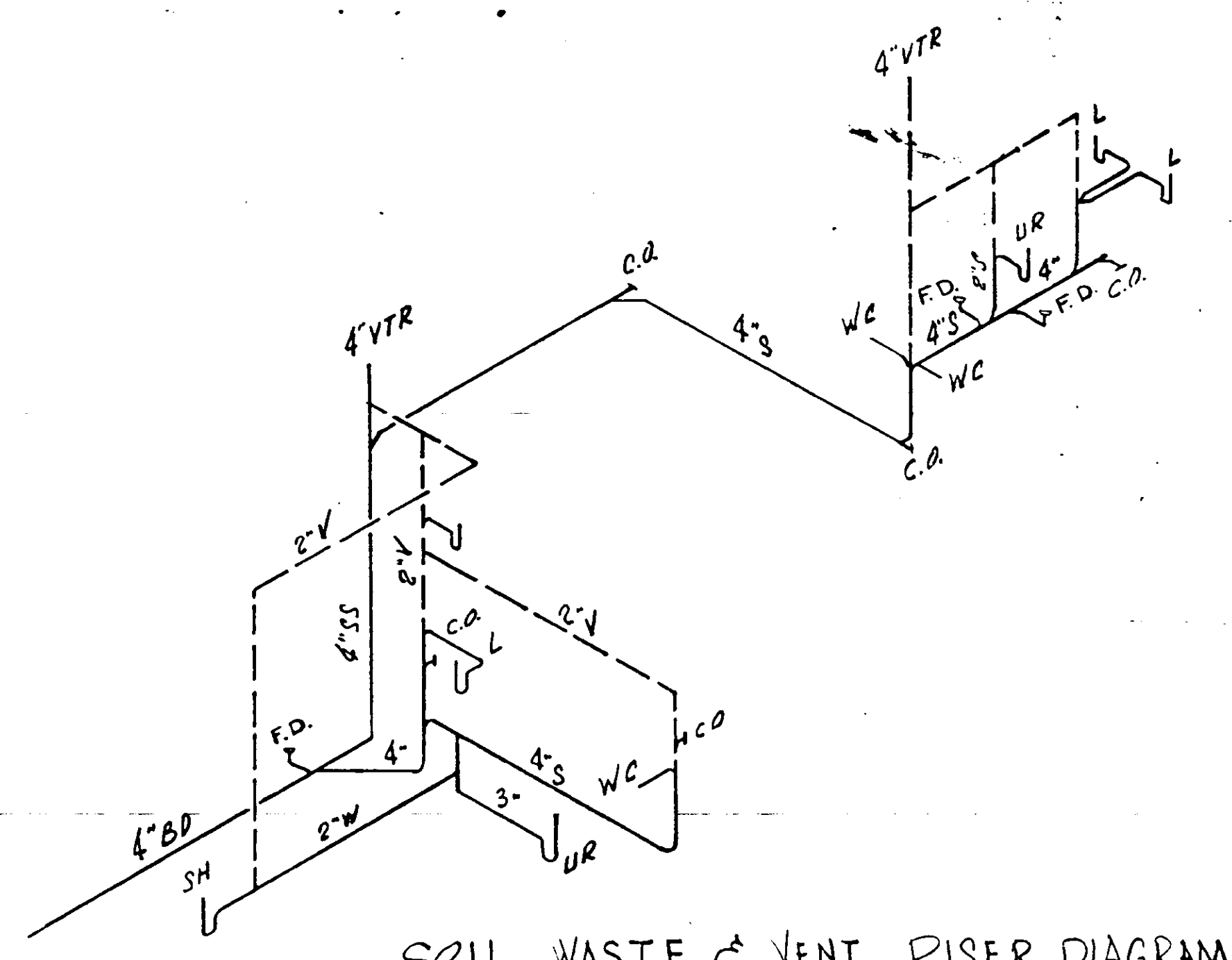


SECOND FLOOR PLAN SCALE 1/4"=1'-0"

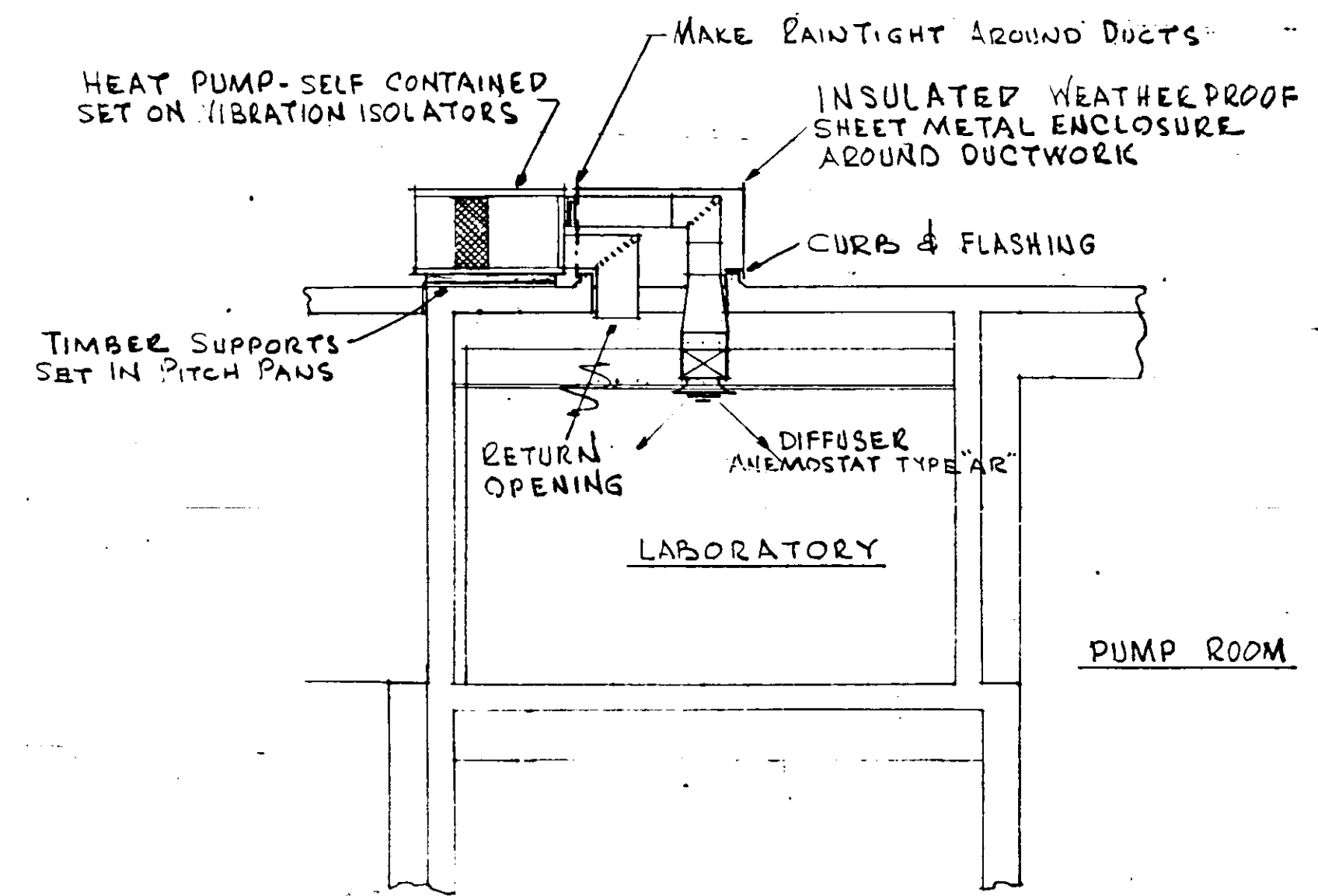
PLUMBING FIXTURE SCHEDULE

MK	FIXTURE	WASTE	C.W.	H.W.	AMERICAN ST. NO.
PF1	WATER CLOSET	4"	1"	-	F 2495
PF2	URINAL	2" FLOOR P-TRAP	3/4"	-	F 4400
PF3	LAN.	1/2" P"	1/2"	1/2"	F 381-40
PF4	ELEC. WATER COOLER	1/4" P"	1/2"	-	*
PF5	URINAL	2" WALL P-TRAP	3/4"	-	F 6500-1
PF6	SHOWER	2" FLOOR P-TRAP	1/2"	1/2"	N-1150
PF7	SINK	1/2" LEAD DRUM P"	1/2"	1/2"	* •

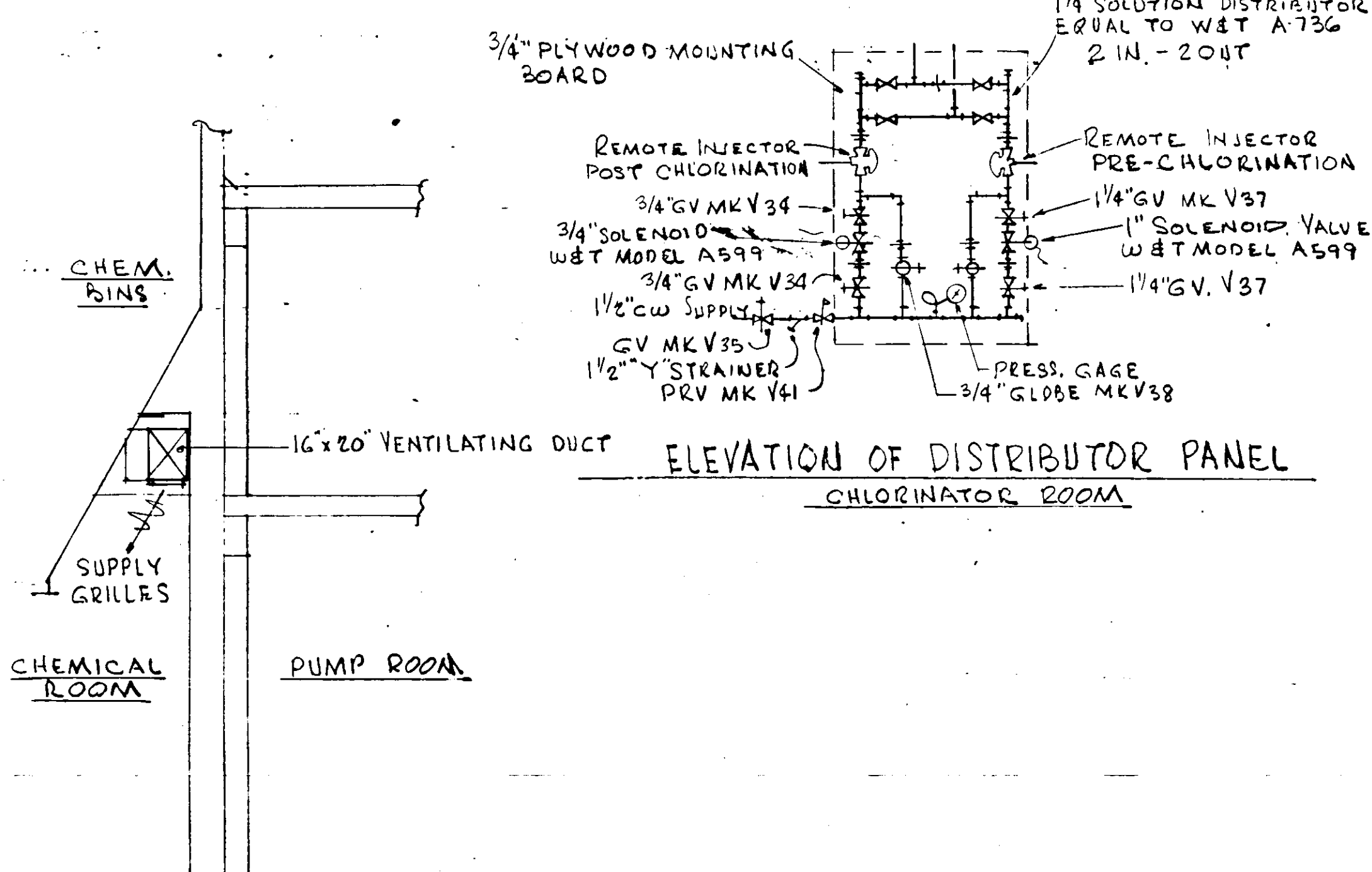
* NOT AMER. STD.
 • ELKAY LR1722, SINGLE COMPARTMENT, LEDGE BACK.



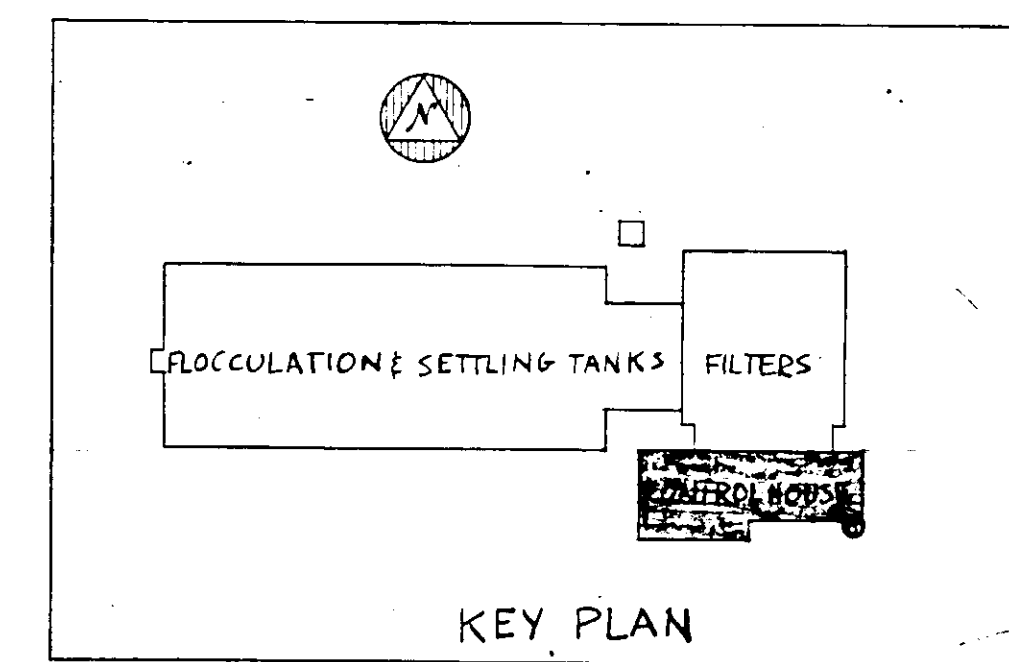
SOIL WASTE & VENT RISER DIAGRAM



SECTION 26 SCALE 1/4"=1'-0"



SECTION 27 SCALE 1/4"=1'-0"



KEY PLAN

NO.	DATE	DESCRIPTION	BY	CHKD.
MAR 7	15	BUILT	FJL	

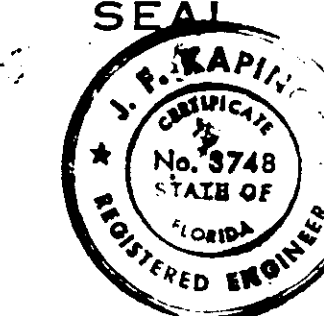
RUSSELL & AXON, INC.
 CONSULTING ENGINEERS
 DAYTONA BEACH, FLA. ST. LOUIS, MO.

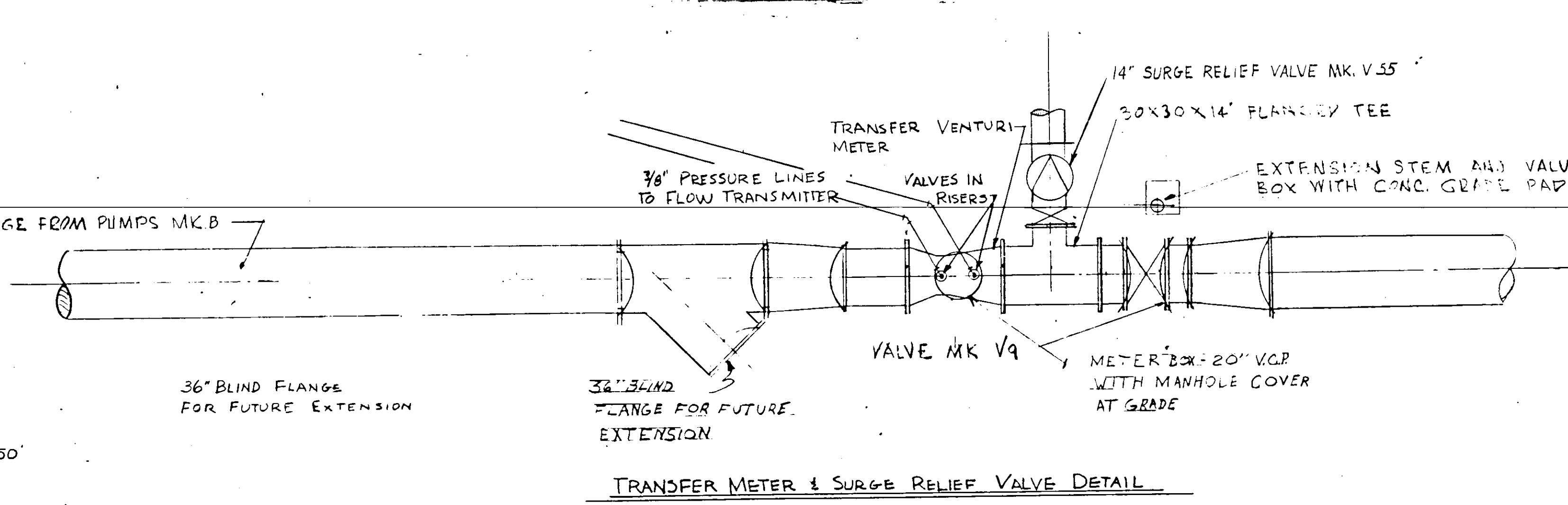
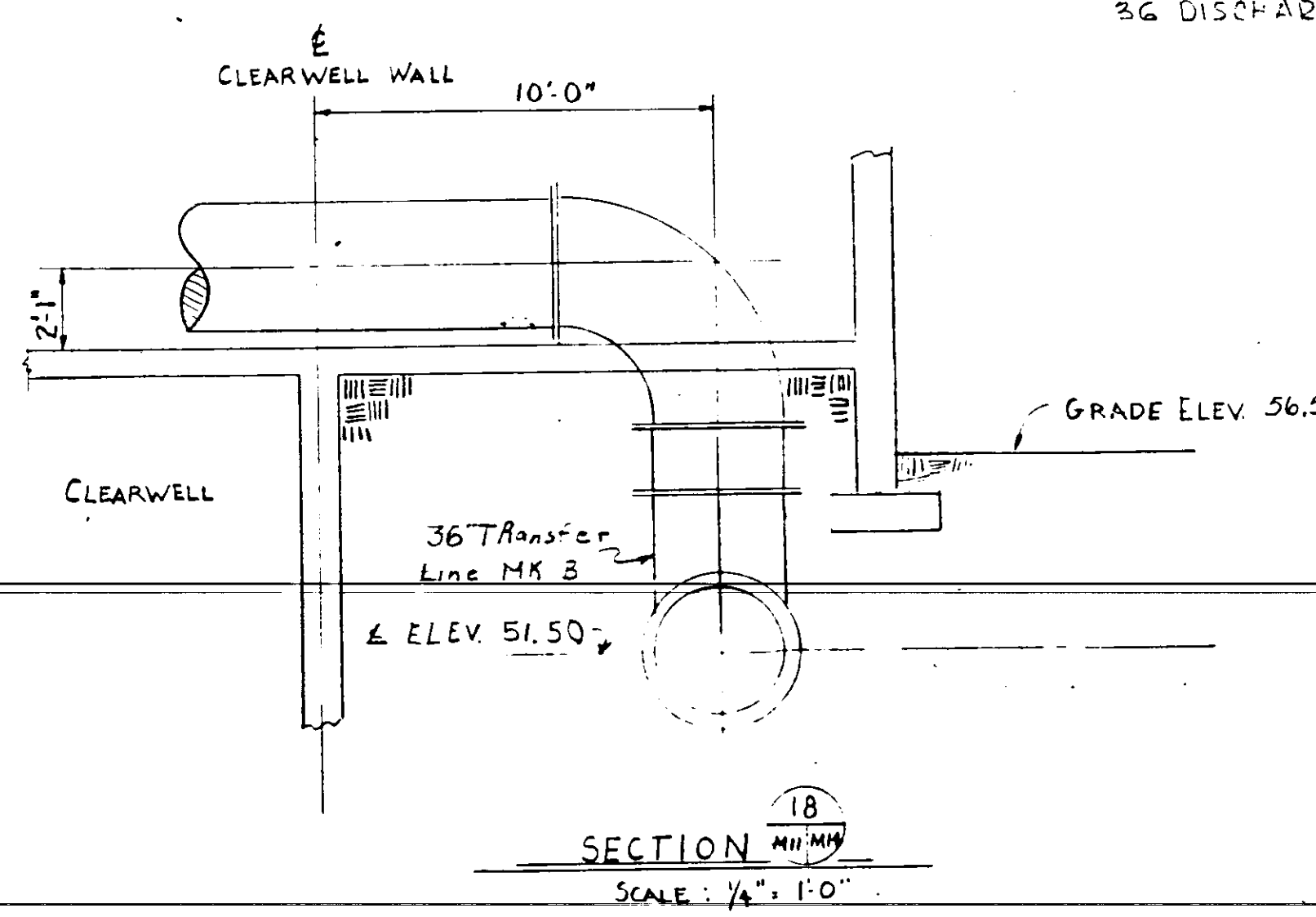
WATER WORKS PROJECT
 WATER TREATMENT PLANT
 PART B
 CONTROL HOUSE SECOND FLOOR PLAN-MECHANICAL
 MANATEE COUNTY, FLORIDA

SECTION NUMBER 26
 SHEET NO. 13
 SECTION CUT

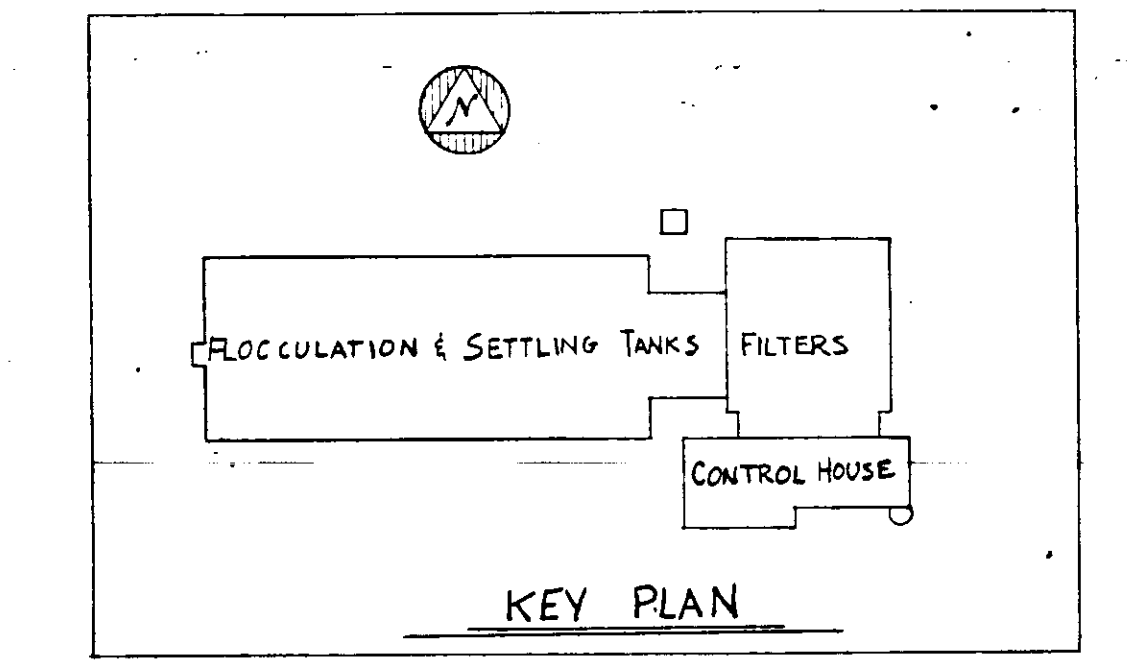
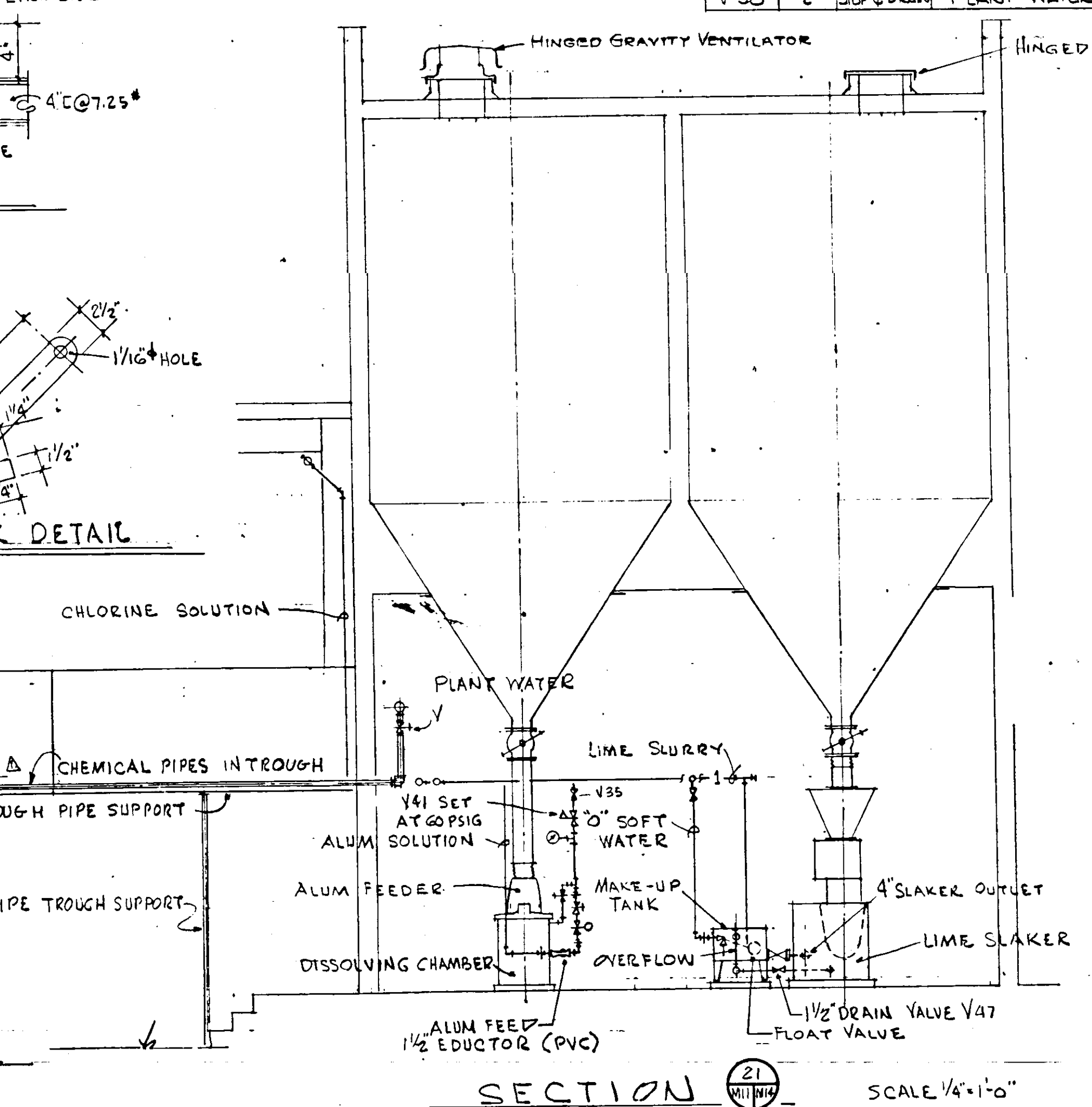
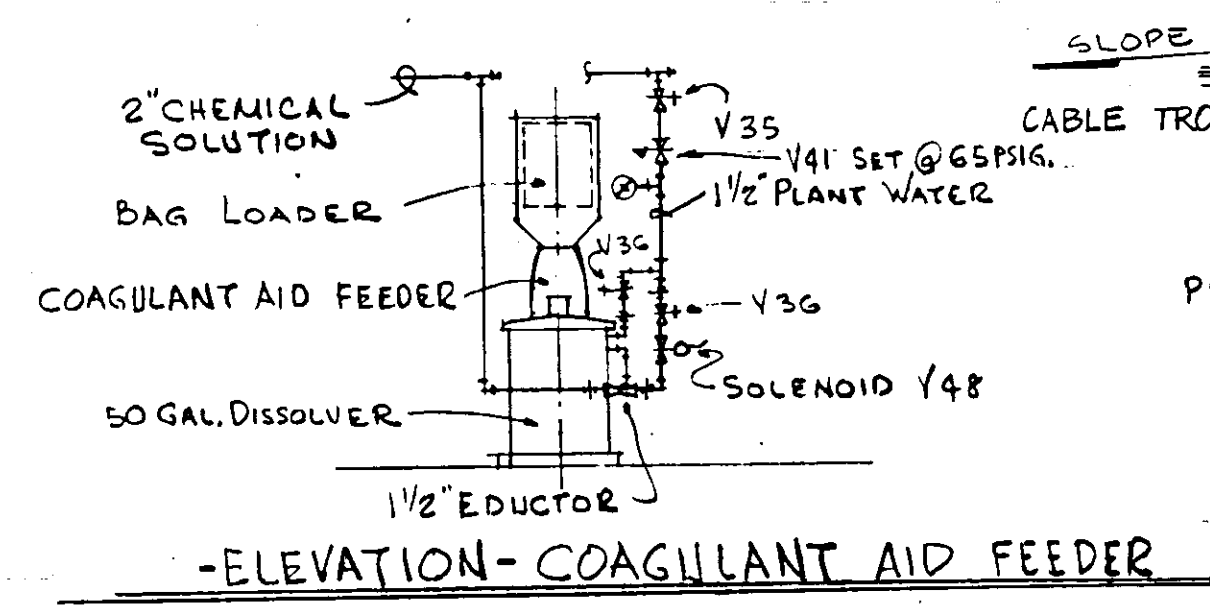
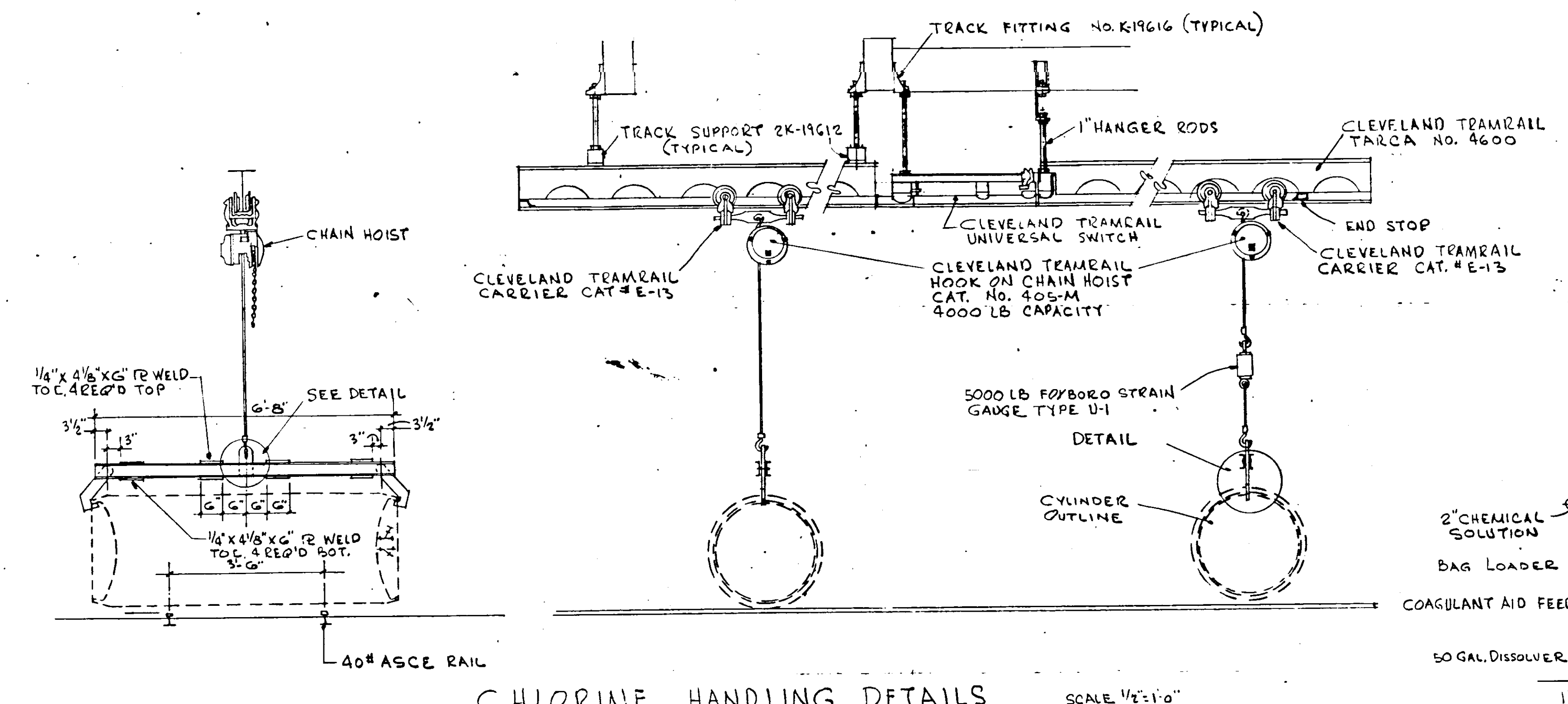
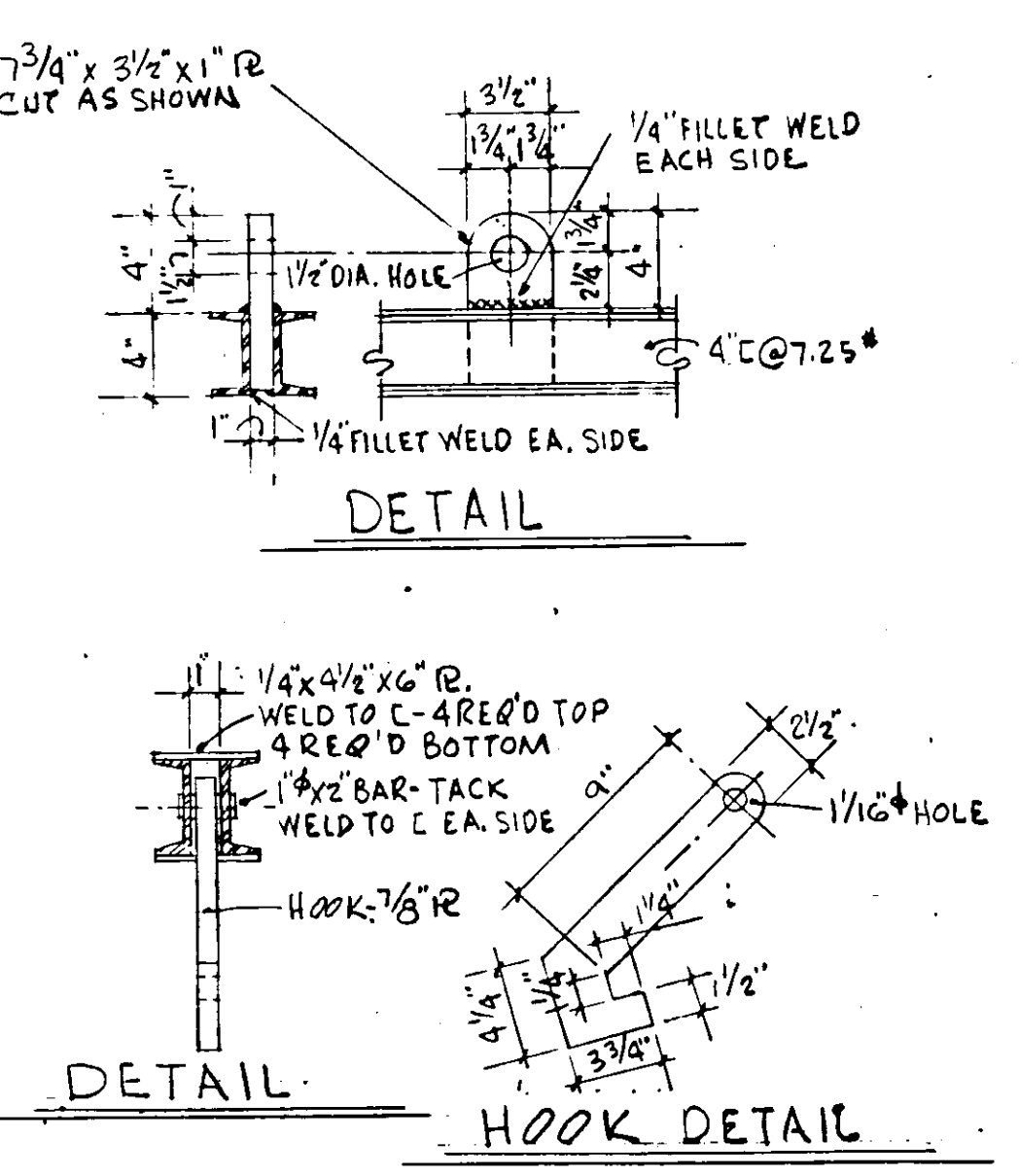
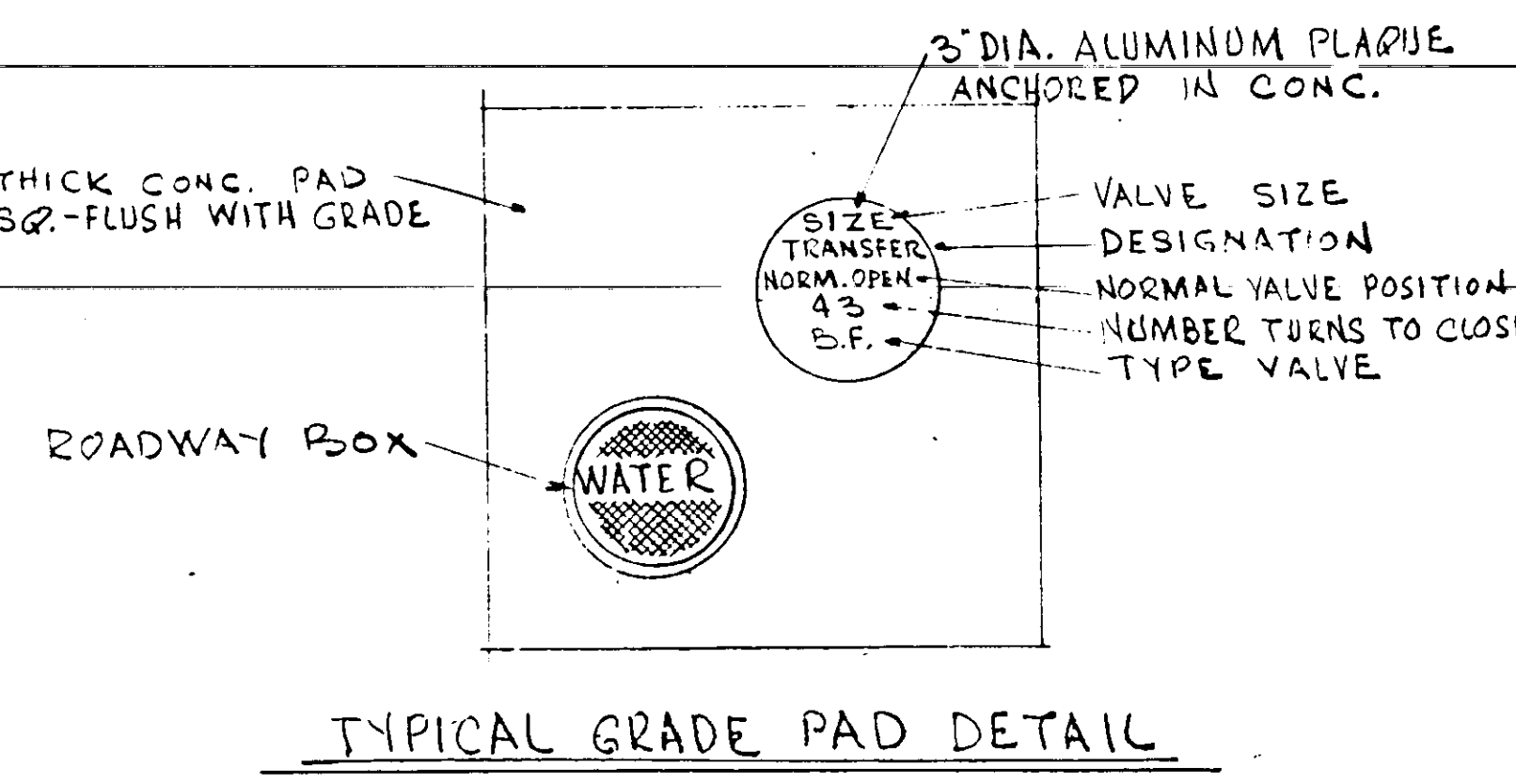
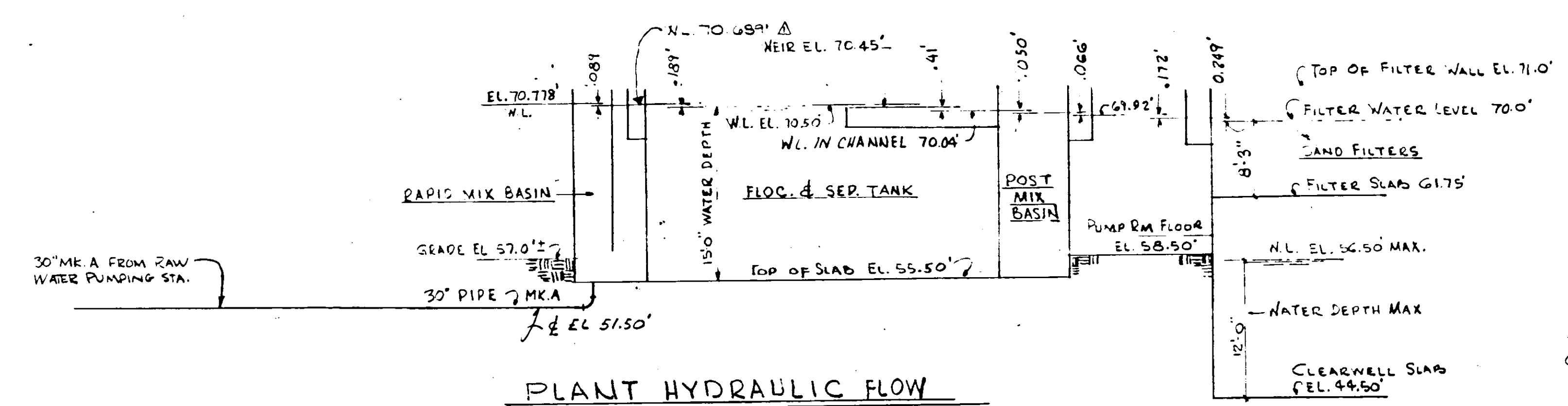
DESIGNED BY JFH
 FILE NO. 6353-3-M-12-III-B
 DRAWN BY JFH
 SHEET No. 12 III-B
 CHECKED BY CEB
 DATE Feb. 1965
 OF 15 SHEETS
 SCALE: AS SHOWN

NOTE:
 DETAILS SUBJECT TO CHANGE TO MEET MANUFACTURER'S SPECIFICATIONS OF EQUIPMENT SELECTED.
 SHEET 36 OF 55





MK	SIZE	TYPE	USE	CLASS	ENDS	MOTIVATION	OPERATOR	REMARKS
V1	16"	BF	INFLUENT	25-B	FL.	HYD. CYL.	PILOT	
V2	24"	BF	BACKWASH	50-16	FL.	HYD. CYL.	PILOT	
V3	30"	BF	WASTE	25-B	FL.	HYD. CYL.	PILOT	
V4	6"	BF	SURFACE WASH	125-16	FL.	HYD. CYL.	PILOT	
V5	6"	GATE	FILTER DRAIN	125#	FL.	HANDWHEEL		N.C.S. FROM FLOW TUBE
V6	30"	BF	RAW WATER	50-B	FL.	HYD. CYL.	PILOT	
V7	6"	GATE	PLANT WATER	125#	FL.	HANDWHEEL		
V8	4"	GATE	do	do	FL.	do		
V9	30"	3.F.	TRANSFER	125-16	M.J.			WORM GEAR BUILT UP SERVICE
V10	4"	DIAPHRAM	SLUDGE	125#	FL.	WATER		SOLENOID PILOT
V11	18"	CHECK	TRANSFER	125#	FL.			ROSS 42 WR SPECIFL WRENCH
V12	14"	PLUG	DRAIN	125#	FL.			
V13	1 1/2"	SOLENOID	EDUCTOR	125#	SCR.			ASCO
V14	3/8"	SOLENOID	EDUCTOR	125#	SCR.			ASCO
V15								
V16	3/4"	SOLENOID	EDUCTOR	125#	SCR.			ASCO
V17	1"	PRV		125#	SCR.	SELF-CONT.		WATTS #223
V18	1 1/4"	PRV		125#	SCR.	SELF-CONT.		WATTS #223
V19	1/2"	PRV		125#	SCR.	do		WATTS #223
V20	2 1/2"	PRV	PLANT WATER	125#	SCR.	do		WATTS #2230
V21	3/4"	HOSE	do	250#	SCR.	HANDWHEEL		CRANE #117
V22	4"	PLUG	LIME SLURRY	FL.		WRENCH		
V23	18"	BF	TRANSFER	125-16	FL.	HANDWHEEL		LEAD-SCREW
V24	3/4"	GATE	do	125#	SCR.	do		ALL 1204
V25	1 1/2"	do	do	do	do	do		ALL 1204
V26	1"	do	do	do	do	do		
V27	1/4"	GATE		125#	SCR.	HANDWHEEL		ALL 1204
V28	3/4"	GLOBE		125#	SCR.			ALL 1204
V29	2"	PRV	PLANT WATER	125#	SCR.	SELF-CONT.		WATTS #223
V30	1/2"	GATE	do	125#	SCR.	HANDWHEEL		
V31	1 1/2"	PRV	do	125#	SCR.	SELF-CONT.		WATTS #223
V32	1 1/2"	GLOBE	do	125#	SCR.	HANDWHEEL		
V33	4"	CHECK	do	125#	FL.	LEVER & WT.		
V34	6"	CHECK	WEEP WATER	125#	FL.	LEVER & WT.		
V35	1 1/2"	PACKLESS	DRAIN	125#	SCR.	HANDWHEEL		GRINNELL-SAUNDERS (PVC)
V36	1"	SOLENOID	FEED	125#	SCR.			ASCO
V37	2"	GATE	LIVE FEED	200#	SCR.			CRANE NO. 97
V38	2"	GATE		125#	SCR.			
V39	3/4"	PACKLESS	CHEM. SOLUTION	125#	SCR.			DIAPHRAM - GRINNELL - SAUNDERS
V40	6"	PLUG	SLUDGE	25#	FL.	HANDWHEEL		
V41	1 1/2"	HOSE	SLUDGE CLEAN-UP	250#	SCR.	HANDWHEEL		
V42	1 1/2"	HOSE	do	250#	SCR.	HANDWHEEL		
V43	3/4"	PRV	EDUCTOR	125#	SCR.	SELF-CONT.		
V44	14"	SURGE RELIEF	TRANSFER	125#	FL.	do		ROSS 50 RWR. FIG. 31
V45	2"	REGULATOR	ENGINE COOLING	125#	SCR.	DIAPHRAM		POWERS #11
V46	12"	GATE	SETTLING TANK DRAIN	125#	FL.	HANDWHEEL		
V47	2"	SOPE & DRAIN	PLANT WATER	125#	SCR.	HANDWHEEL		NONE



NO.	DATE	DESCRIPTION	BY	CHKD.
1.	5/15/65	ADDED CALLOFFS & REVISED CALLOFFS	D.W.C.	
	10/27/65	AS BUILT	F.J.L.	

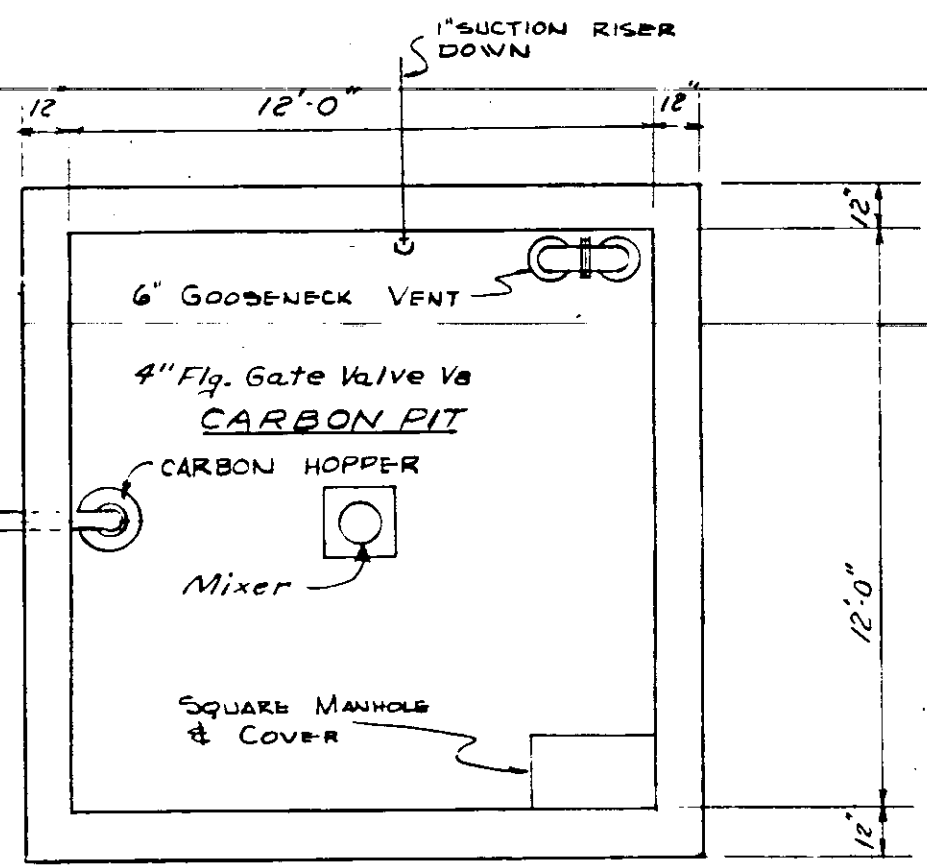
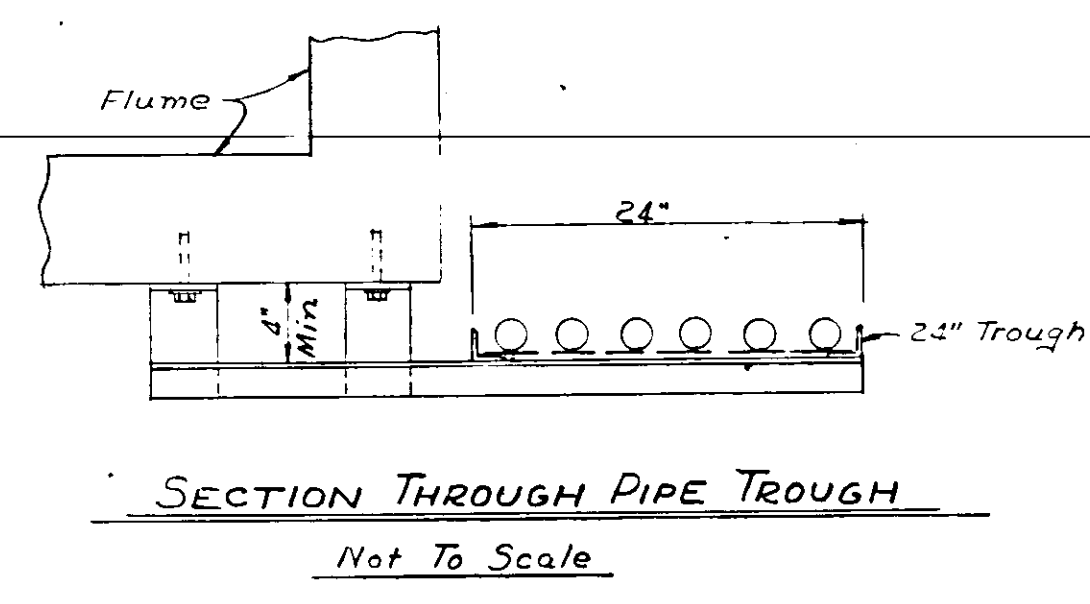
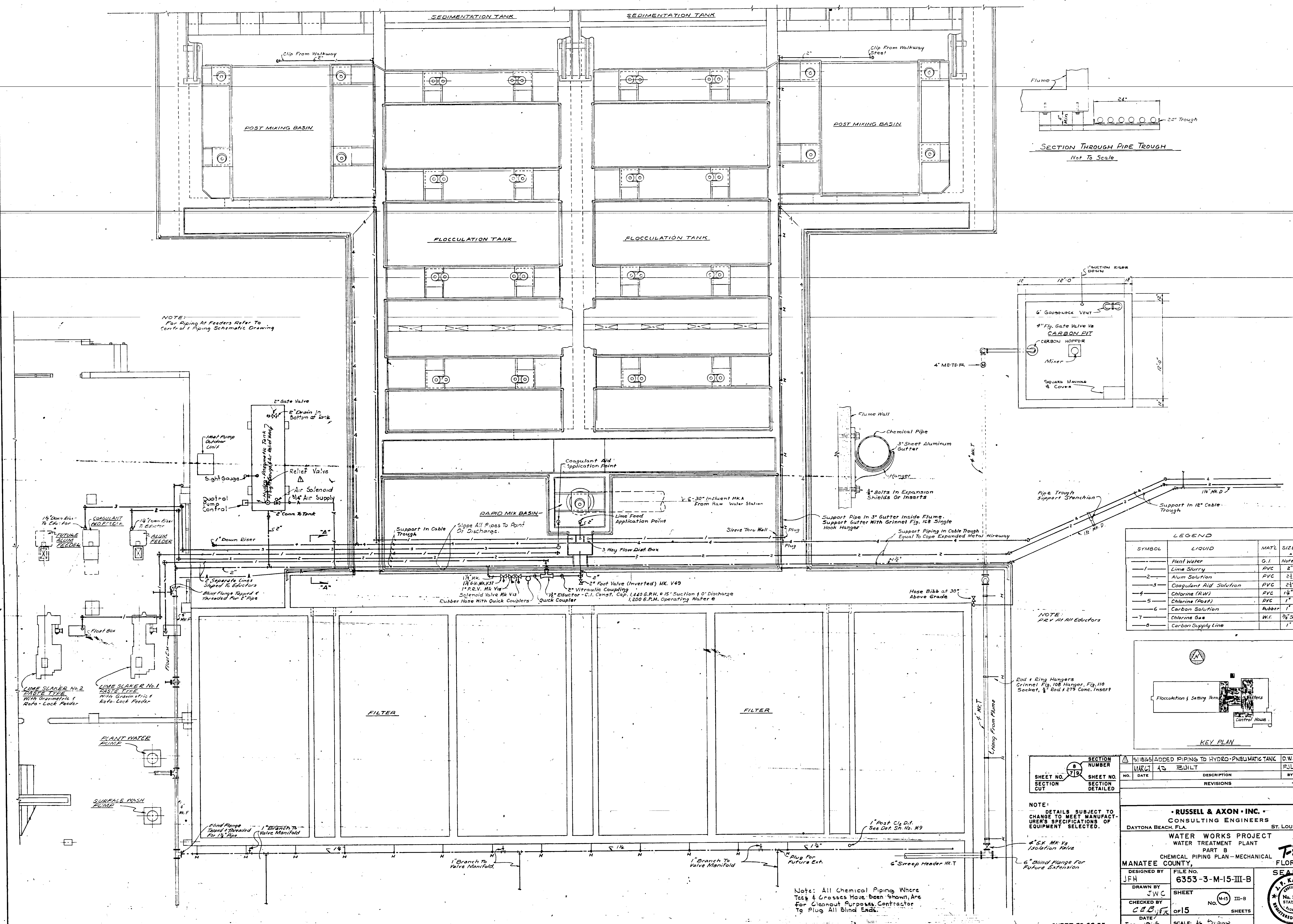
RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
MISCELLANEOUS DETAILS-MECHANICAL
FLORIDA

DESIGNED BY: JFH
DRAWN BY: JFH
CHECKED BY: C.E.B. J.V.A.
DATE: Feb 1965

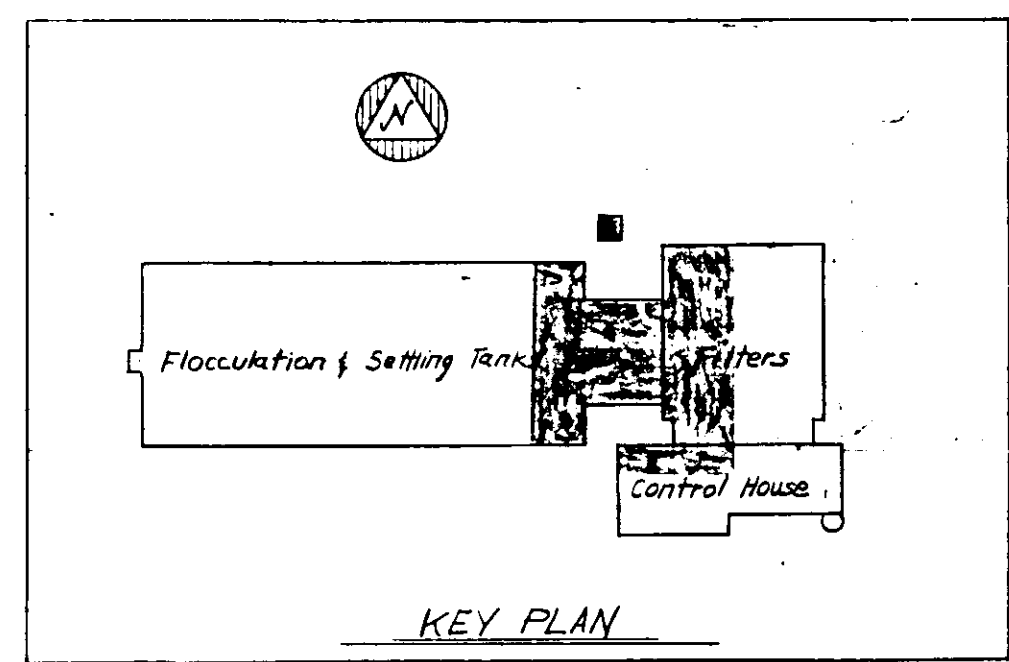
FILE NO.: 6353-3-M-14-III-B
SHEET: 38 OF 15
SCALE: AS SHOWN

SEAL: J.T. KAPINOS, No. 3748, STATE OF FLORIDA, REGISTERED ENGINEER



LEGEND

SYMBOL	LIQUID	MAT'L	SIZE
—	Plant Water	G.I.	Noted
1	Lime Slurry	PVC	2"
2	Alum Solution	PVC	2 1/2"
3	Coagulant Aid Solution	PVC	2 1/2"
4	Chlorine (Raw)	PVC	1 1/2"
5	Chlorine (Post)	PVC	1"
6	Carbon Solution	Rubber	1"
7	Chlorine Gas	W.I.	3/4" Sch 80
8	Carbon Supply Line		1"



NOTE: PRV AT ALL Educators

SECTION NUMBER	NO.	DATE	DESCRIPTION	BY	CHKD.
8	1		ADDED PIPING TO HYDRO-PNEUMATIC TANK	D.W.C.	
719	1		BUILT	F.J.L.	

RUSSELL & AXON, INC.
 CONSULTING ENGINEERS
 DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
 WATER TREATMENT PLANT
 PART B
 CHEMICAL PIPING PLAN - MECHANICAL

MANATEE COUNTY, FLORIDA

DESIGNED BY: JFH
 DRAWN BY: JWC
 CHECKED BY: C.E.D.
 DATE: Feb. 1966

FILE NO.: 6353-3-M-15-III-B
 SHEET: No. 45 of 15
 SHEETS: 15

SCALE: 1/8" = 1'-0"

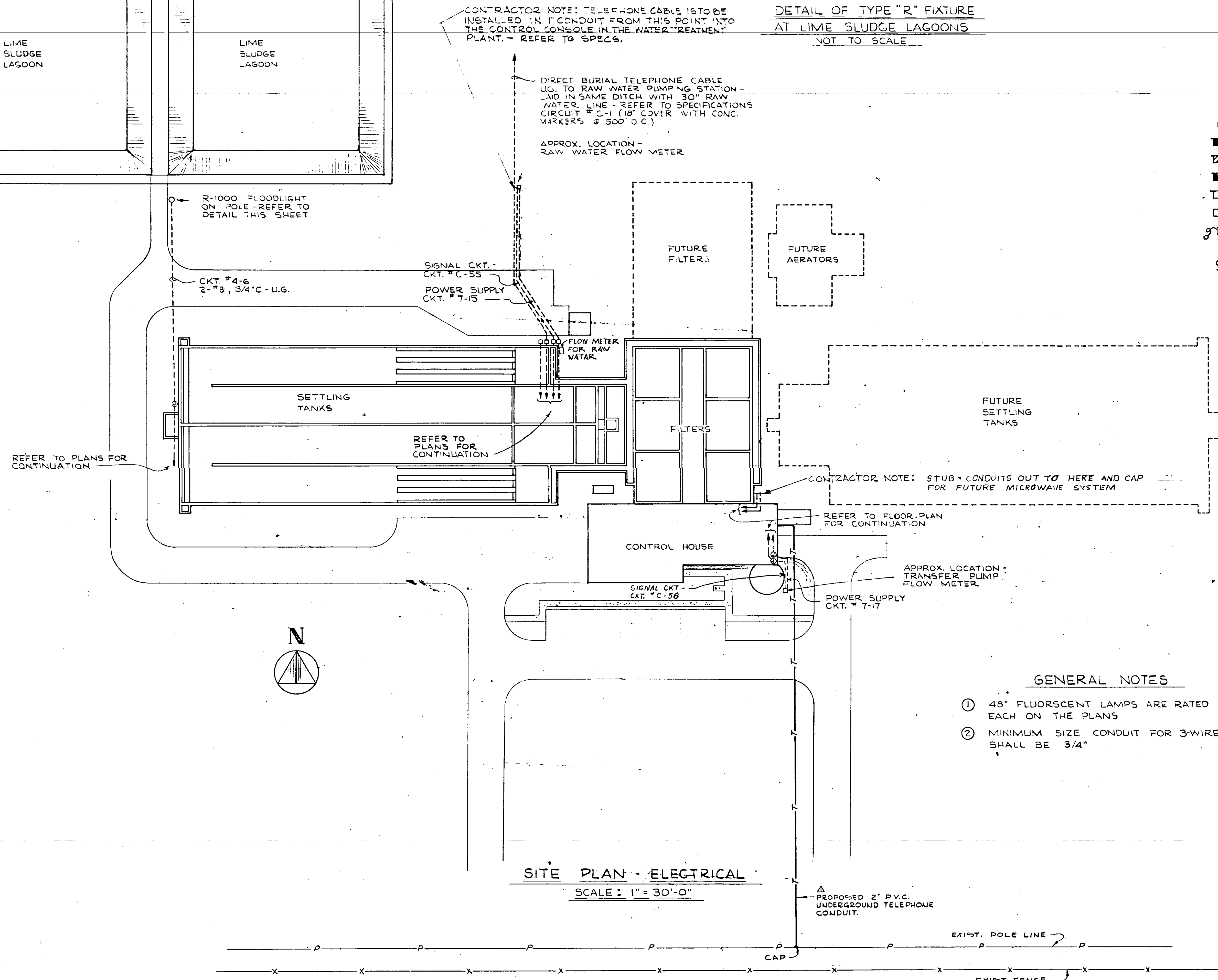
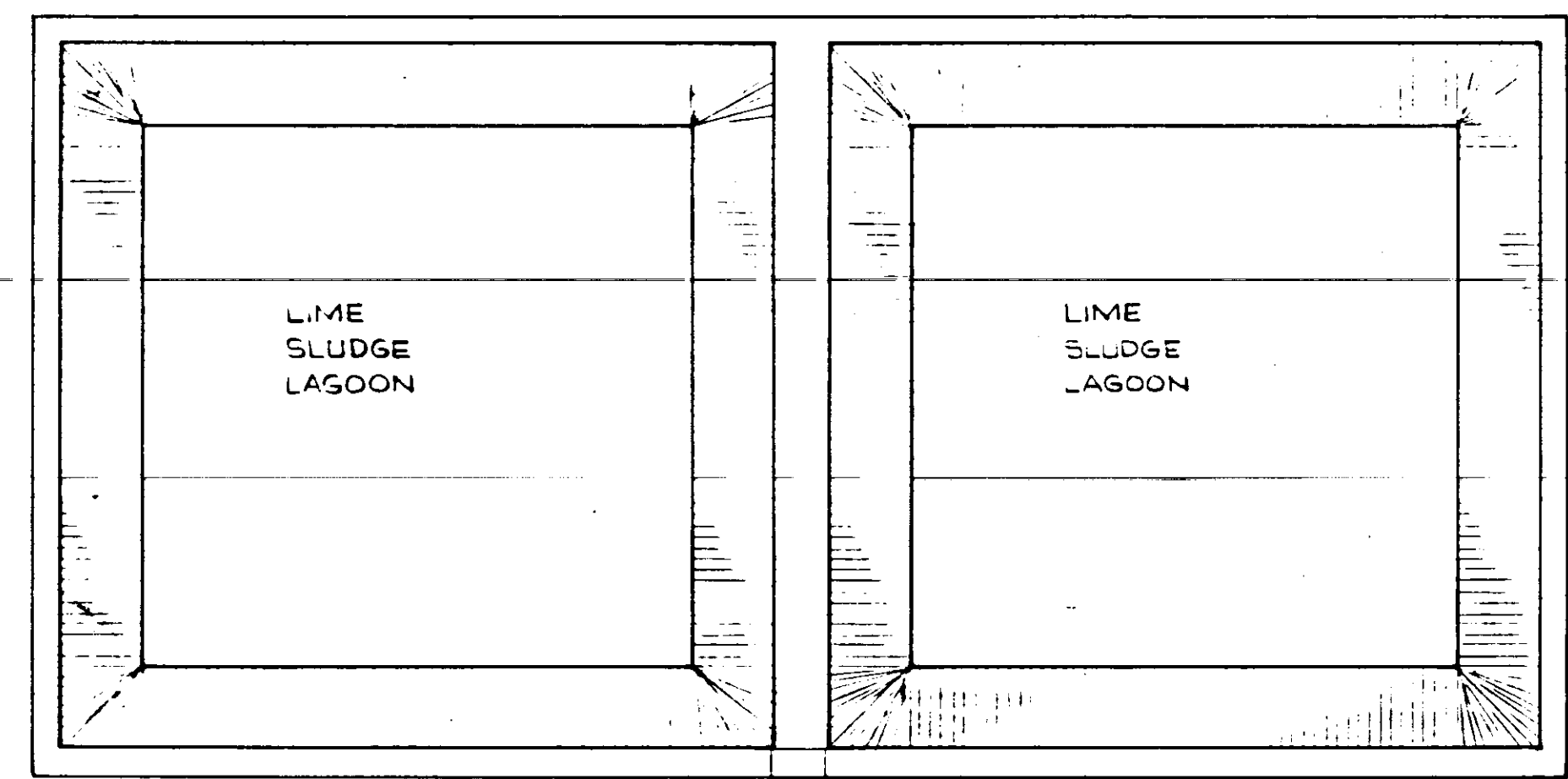
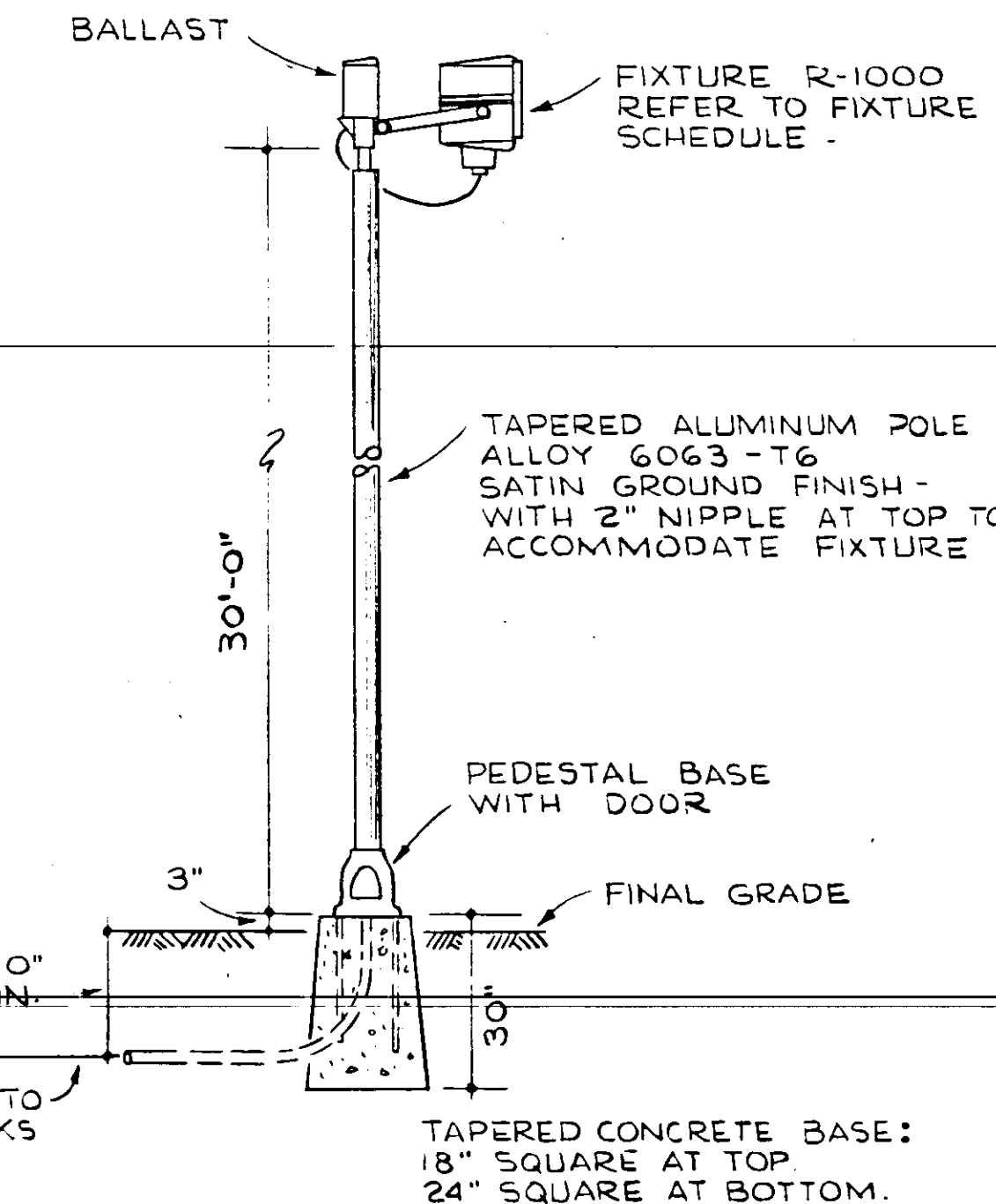
SHEET 39 OF 55

SEAL: I. KAPINOS, LICENSED PROFESSIONAL ENGINEER, No. 3748, STATE OF FLORIDA

Note: All Chemical Piping Where Tees & Crosses Have been Shown, Are For Cleanout Purposes, Contractor To Plug All Blind Ends.

ELECTRICAL LEGEND

- CEILING LIGHTING OUTLET - SURFACE OR STEM MOUNTED FLUORESCENT
- WALL MOUNTED LIGHTING OUTLET - FLUORESCENT
- CEILING LIGHTING OUTLET - INCANDESCENT
- WALL LIGHTING OUTLET - INCANDESCENT
- DUPLEX CONVENIENCE OUTLET WITH GROUND
- WEATHERPROOF DUPLEX CONVENIENCE OUTLET WITH GROUND
- WEATHERPROOF SINGLE CONVENIENCE OUTLET WITH GROUND MOUNTED AT EAVE OR AT CEILING FOR FLOODLIGHTS
- DUPLEX CONVENIENCE OUTLET WITH GROUND MOUNTED 6" ABOVE WORK SPACE, 42" ABOVE FLOOR, OR AS NOTED ON PLANS
- TWO-PHASE, 4-WIRE (ONE POLE GROUND) 120/208 VOLT CONVENIENCE OUTLET WITH GROUND - 30 AMP RATING UNLESS OTHERWISE NOTED ON PLANS.
- FLUSH FLOOR MOUNTED SINGLE CONVENIENCE OUTLET WITH GROUND.
- OUTLET BOX ONLY - FOR TELEPHONE CO. BELL.
- CLOCK OUTLET - WALL MOUNTED
- FAN OUTLET
- JUNCTION BOX { FLUSH - 4" x 1 1/2" SQ. BOX WITH BLANK COVER SURFACE - FD CONDUIT WITH BLANK GASKETED COVER.
- MOTOR CONNECTION
- THERMOSTAT
- VIBRATOR
- TELEPHONE OUTLET - FLUSH WALL MOUNTED
- TELEPHONE OUTLET - FLUSH FLOOR MOUNTED
- CHIMES
- ANNUNCIATOR HORN
- SAFETY SWITCH
- BRANCH CIRCUIT PANELBOARD
- DISTRIBUTION PANELBOARD
- TELEPHONE CABINET
- TIME SWITCH
- MOTOR STARTER
- EMERGENCY LIGHTING UNIT
- SINGLE POLE TUMBLER SWITCH
- 3-WAY, 4-WAY TUMBLER SWITCH
- SINGLE PHASE MANUAL MOTOR STARTER
- SUBSCRIPT LETTERS DENOTE SWITCHING
- SINGLE PHASE MANUAL MOTOR STARTER WITH PILOT LIGHT - NEMA 12 ENCLOSURE
- RACEWAY CONCEALED IN CEILING OR WALL
- RACEWAY CONCEALED IN FLOOR OR WALL
- RACEWAY EXPOSED ON CEILING OR WALL
- HATCHMARKS INDICATE NUMBER OF CONDUCTORS; UN-MARKED MEANS TWO
- HOME-RUN TO PANELBOARD
- TELEPHONE SYSTEM CONDUIT
- CONDUIT STUBBED DOWN
- CONDUIT STUBBED UP
- REPRESENTS TYPE "A" (SEE FIXTURE SCHEDULE) FLUORESCENT LIGHTING FIXTURE WITH 2-48" RS LAMPS SERVED FROM PANELBOARD #1, CIRCUIT #4.



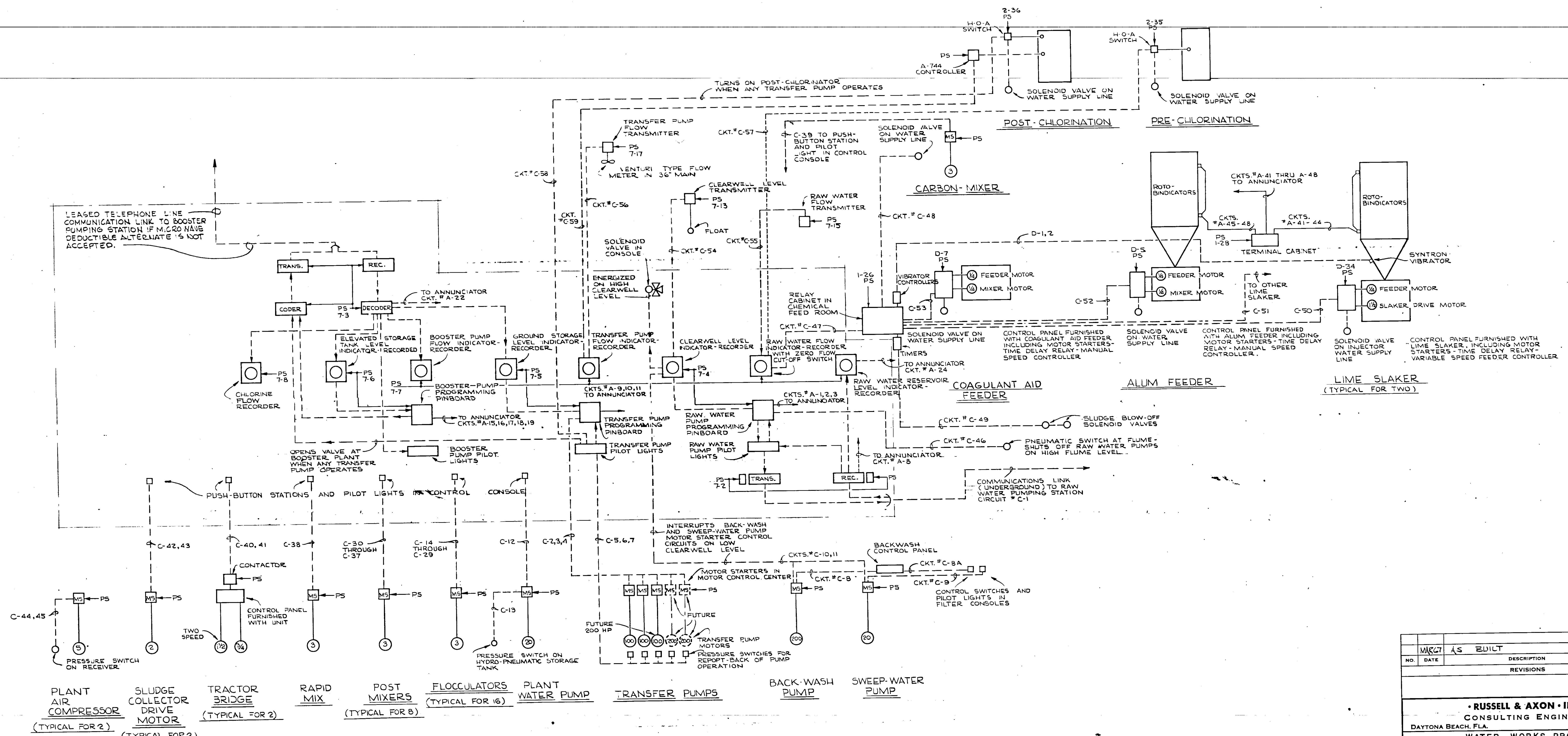
DETAIL OF TYPE "R" FIXTURE AT LIME SLUDGE LAGOONS
NOT TO SCALE

GENERAL NOTES

- ① 48" FLUORESCENT LAMPS ARE RATED 50 WATTS EACH ON THE PLANS
- ② MINIMUM SIZE CONDUIT FOR 3-WIRE HOME-RUNS SHALL BE 3/4"

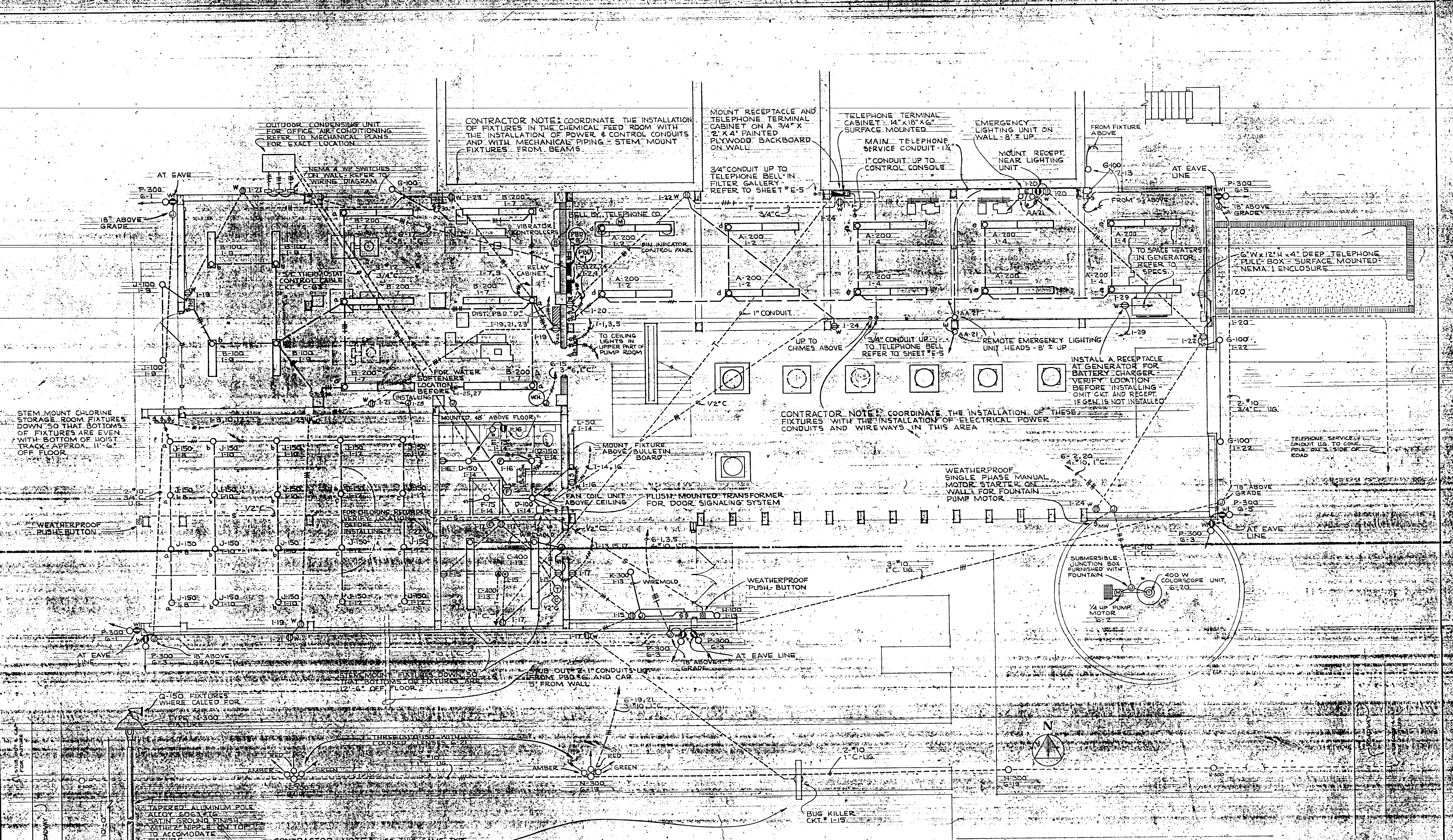
SITE PLAN - ELECTRICAL
SCALE: 1" = 30'-0"

NO.	DATE	DESCRIPTION	BY	CHKD.
MAR 7 1965	AS BUILT		FUL	
8/17/64	AS	ADDED 2" P.V.C. TEL. CONDUIT	SCM	
REVISIONS				
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B ELECTRICAL SITE PLAN & LEGEND				
MANATEE COUNTY, FLORIDA				
DESIGNED BY	FILE NO.	T-40 SEAL R. KAPLAN No. 3748 STATE OF FLORIDA REGISTERED ENGINEER		
DRAWN BY	6353-3-E-1-III-B			
CHECKED BY	SHEET			
DATE	of 16 SHEETS			
SCALE: AS NOTED				



ELECTRICAL CONTROL SCHEMATIC

NO.	DATE	AS	EDULT	DESCRIPTION	BY	CHKD.
REVISIONS						
RUSSELL & AXON · INC. · CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.						
WATER WORKS PROJECT WATER TREATMENT PLANT PART B ELECTRICAL CONTROL SCHEMATIC MANATEE COUNTY, FLORIDA						
DESIGNED BY	JMSG	FILE NO.	6353-3-E-2-III-B			
DRAWN BY	CCR	SHEET	No. (E-2) III-B			
CHECKED BY	CER	OF 16	SHEETS			
DATE	FEB. 1965	SCALE:	NONE			



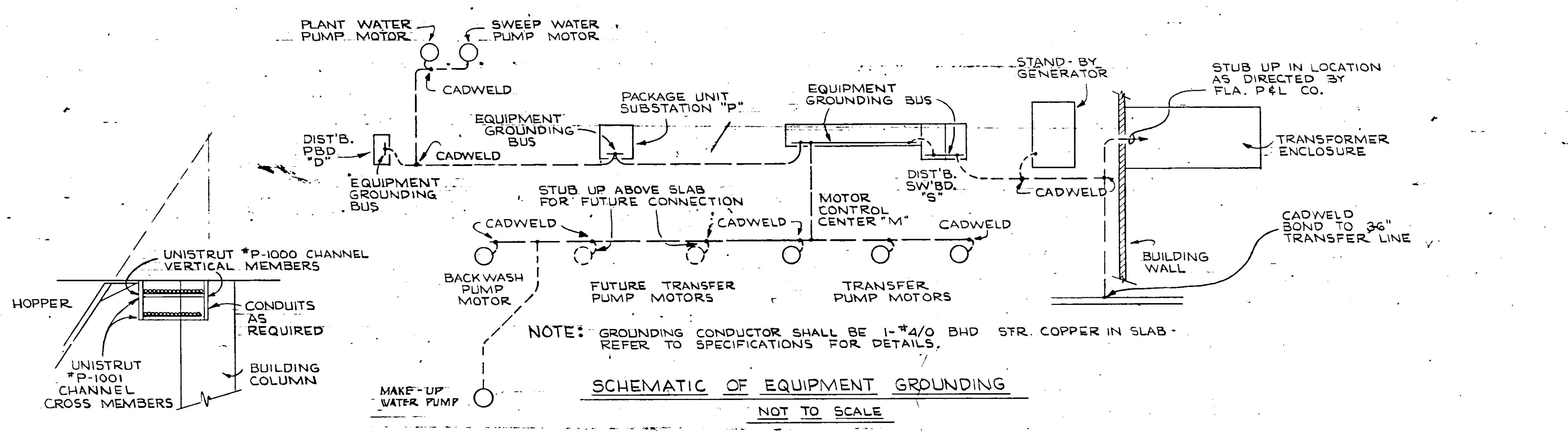
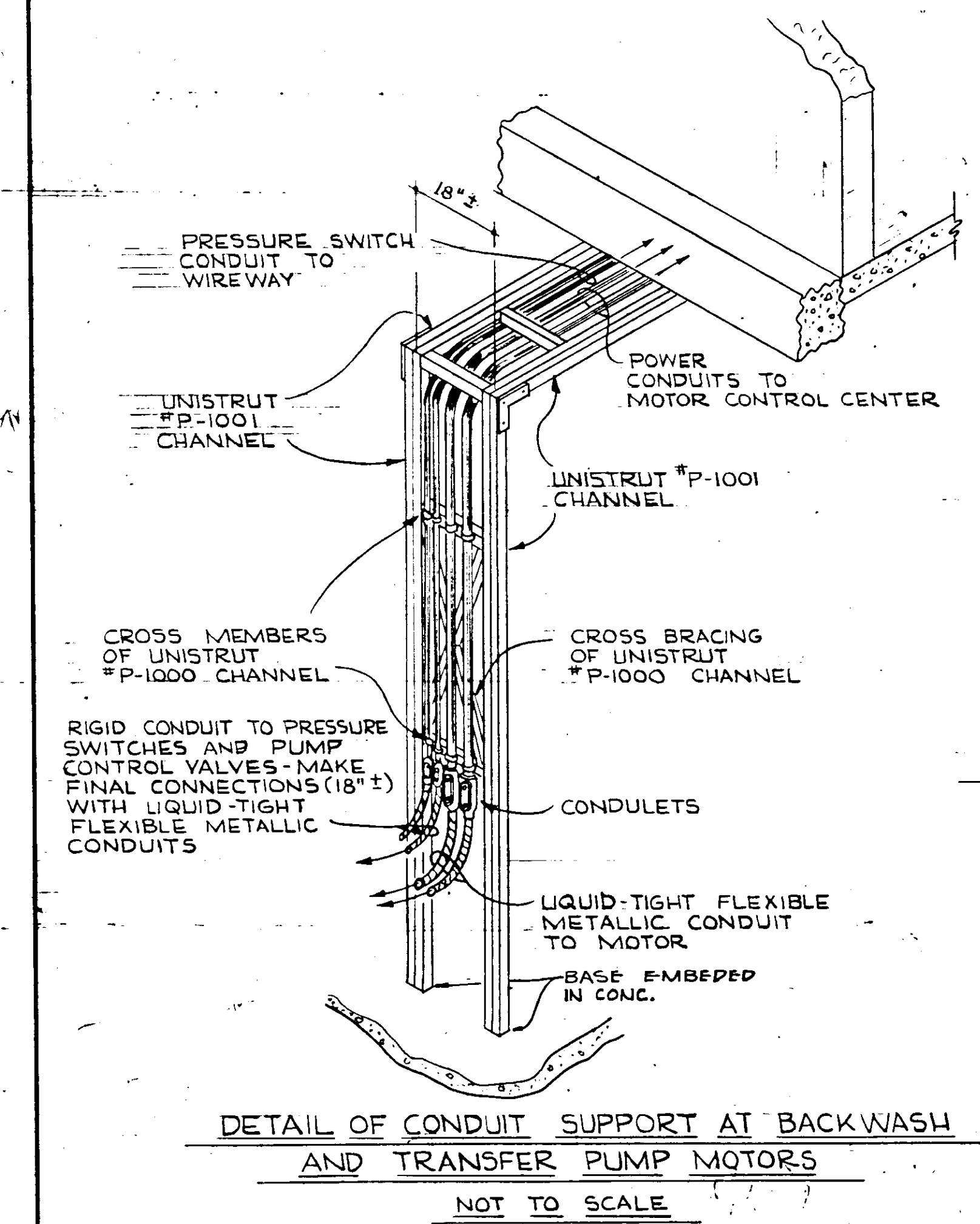
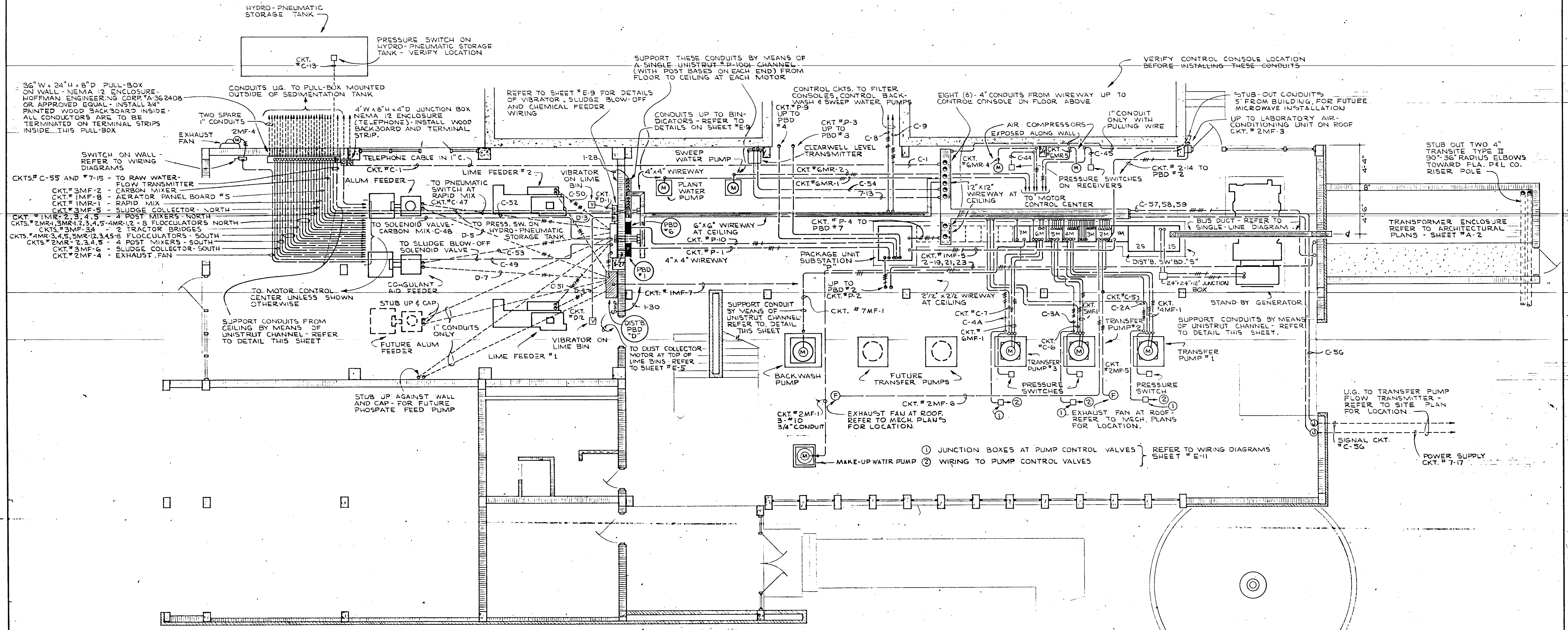
ELECTRICAL FIRST FLOOR PLAN - CONTROL HOUSE - LIGHTING AND RECEPTACLES

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

DETAIL OF N-300 FIXTURES IN FRONT OF CONTROL HOUSE
NOT TO SCALE

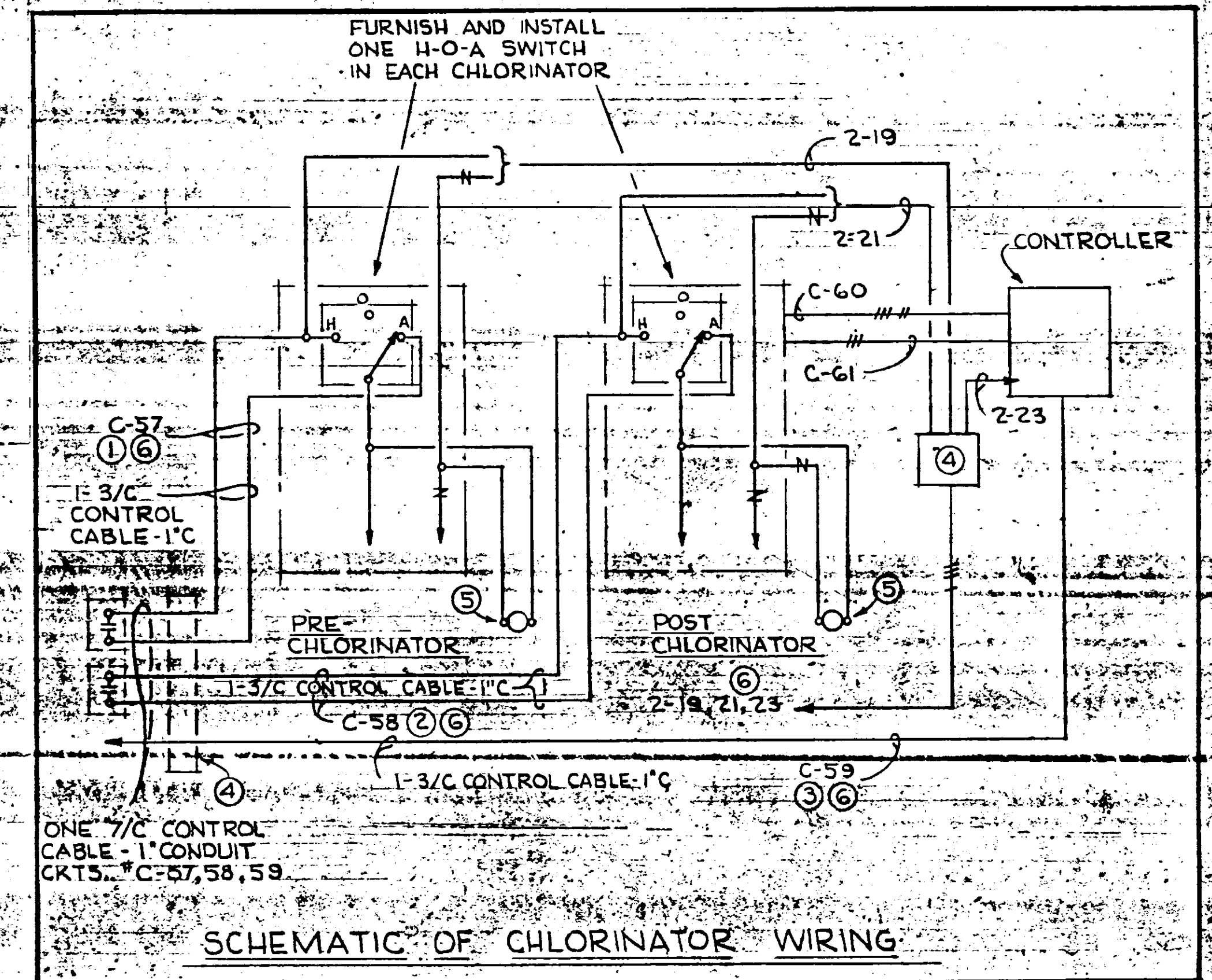
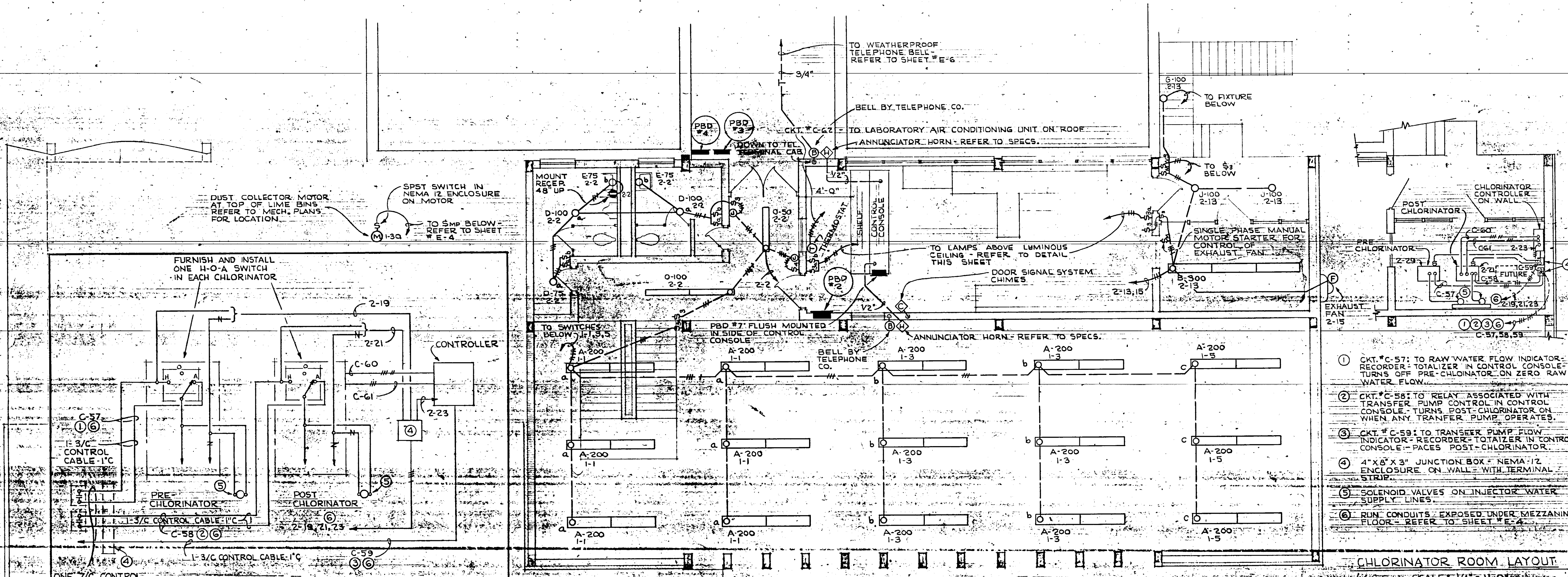
NO.	DATE	DESCRIPTION	BY	CHK.
1	AS BUILT			
REVISIONS				
- RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B ELECTRICAL FIRST FLOOR PLAN - CONTROL HOUSE - LIGHTING & RECEPTACLES - FLORIDA				
DESIGNED BY	FILE NO.			
DRAWN BY	6353-3-E-3-III-B			
CHECKED BY	SHEET			
CEB	16			
DATE	SCALE: AS SHOWN			
FEB 1965				

13-01



ELECTRICAL FIRST FLOOR PLAN - CONTROL HOUSE - POWER AND CONTROL
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY	CHK.
1	MAR 7	AS BUILT		
REVISIONS				
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT T-43 ELECTRICAL FIRST FLOOR PLAN - CONTROL HOUSE POWER & CONTROL				
MANATEE COUNTY, PART B			FLORIDA	
DESIGNED BY JMSG	FILE NO. 6353-3-E-4-III-B			
DRAWN BY CCR	SHEET			
CHECKED BY CEB/gfk	of 16			
DATE Feb. 1965	SCALE: AS SHOWN			

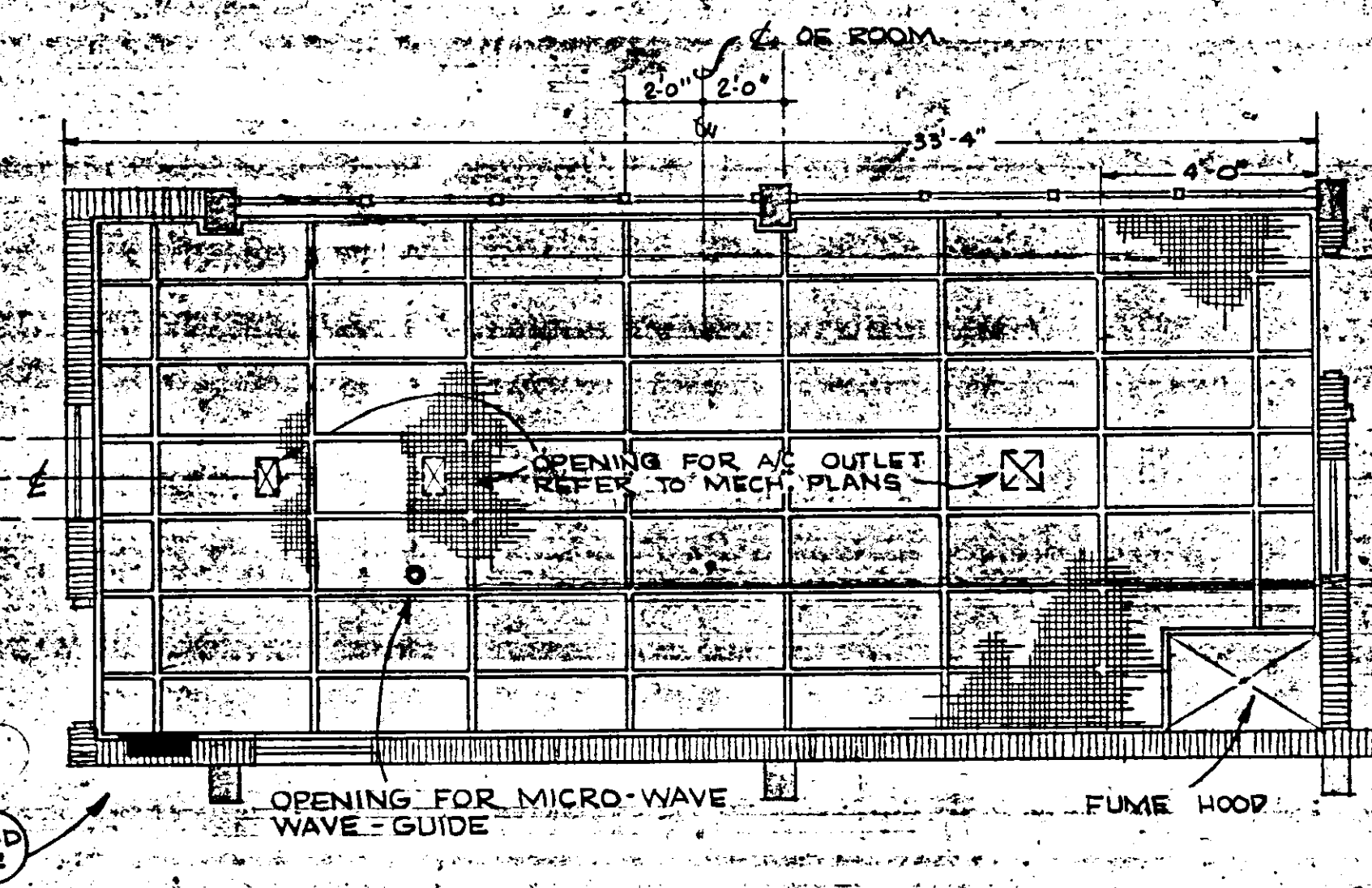


- ① CKT. #C-57: TO RAW WATER FLOW INDICATOR-RECORDER-TOTALIZER IN CONTROL CONSOLE. TURNS OFF PRE-CHLORINATOR ON ZERO RAW WATER FLOW.
- ② CKT. #C-58: TO RELAY ASSOCIATED WITH TRANSFER PUMP CONTROL IN CONTROL CONSOLE. TURNS POST-CHLORINATOR ON WHEN ANY TRANSFER PUMP OPERATES.
- ③ CKT. #C-59: TO TRANSFER PUMP FLOW INDICATOR-RECORDER-TOTALIZER IN CONTROL CONSOLE-PACES POST-CHLORINATOR.
- ④ 4" X 8" X 3" JUNCTION BOX - NEMA 12 ENCLOSURE ON WALL - WITH TERMINAL STRIP.
- ⑤ SOLENOID VALVES ON INJECTOR WATER SUPPLY LINES.
- ⑥ RUN CONDUITS EXPOSED UNDER MEZZANINE FLOOR - REFER TO SHEET #E-4.

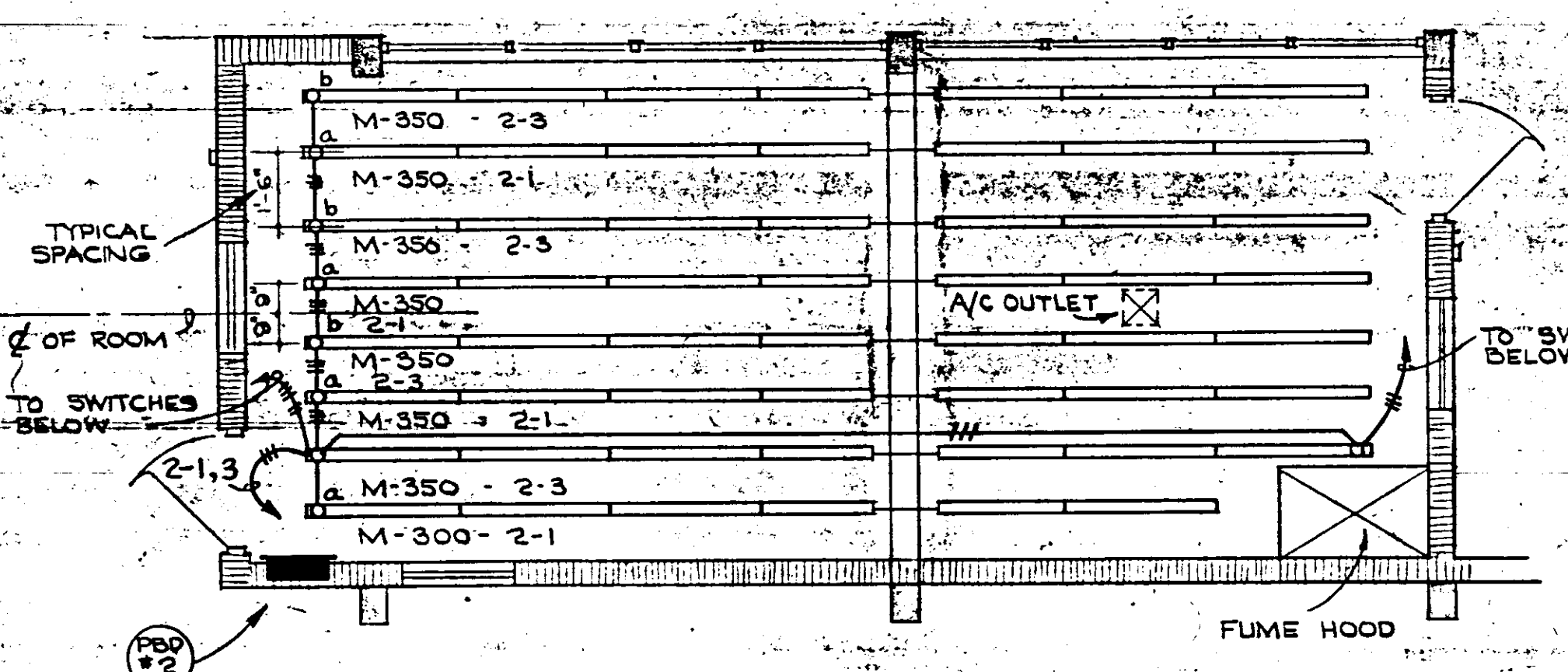
ELECTRICAL SECOND FLOOR PLAN - CONTROL HOUSE
SCALE: 1/4" = 1'-0"



RECEPTACLE PLAN OF LABORATORY
SCALE: 1/4" = 1'-0"

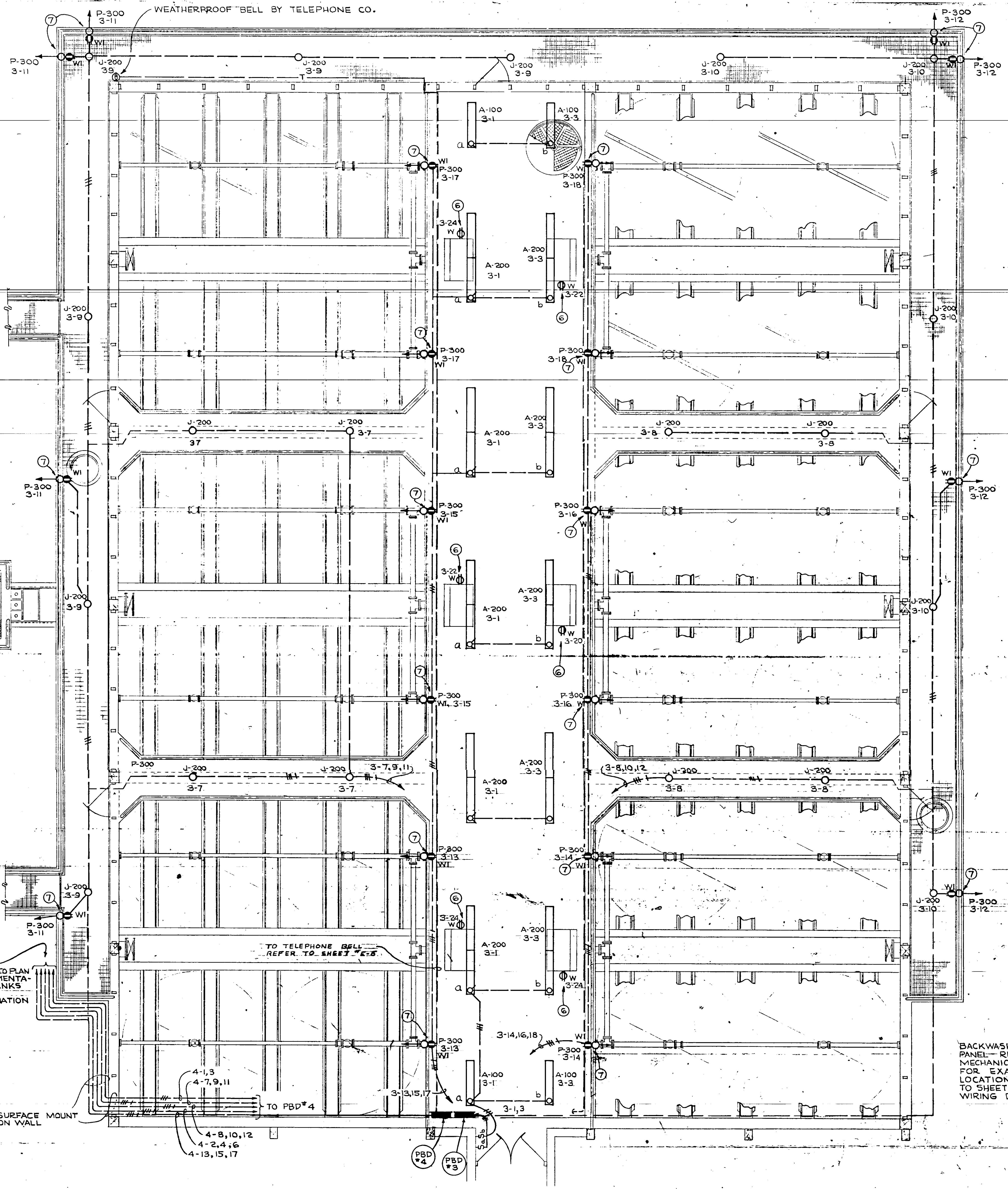


REFLECTED CEILING PLAN OF LABORATORY
SCALE: 1/4" = 1'-0"

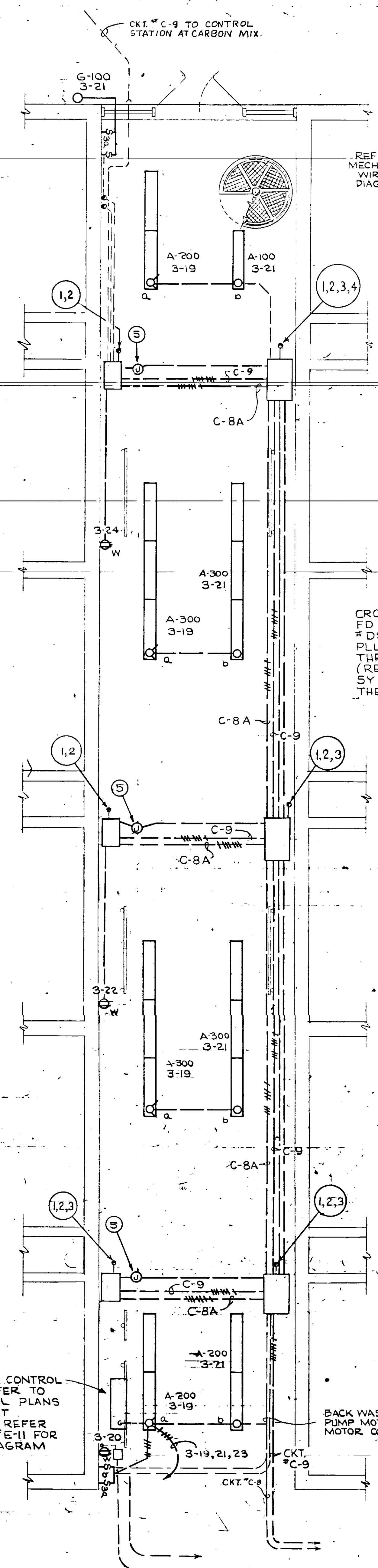


LAYOUT OF LAMP ABOVE LUMINOUS CEILING IN LABORATORY
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY	CHKD.
1	MAR 7 45	BUILT		
REVISIONS:				
<p>RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.</p> <p>WATER WORKS PROJECT WATER TREATMENT PLANT PART B</p> <p>ELECTRICAL SECOND FLOOR PLAN - CONTROL HOUSE MANATEE COUNTY, FLORIDA</p>				
DESIGNED BY	FILE NO.	SEAL		
DRAWN BY	6353-3-E-5-III-B	J. V. KAPINGS No. 3748 STATE OF FLORIDA REGISTERED ENGINEER		
CHECKED BY	SHEET	No. E-5 III-B		
DATE	OF 16	SHEETS		
FEB 1965	SCALE: AS SHOWN			



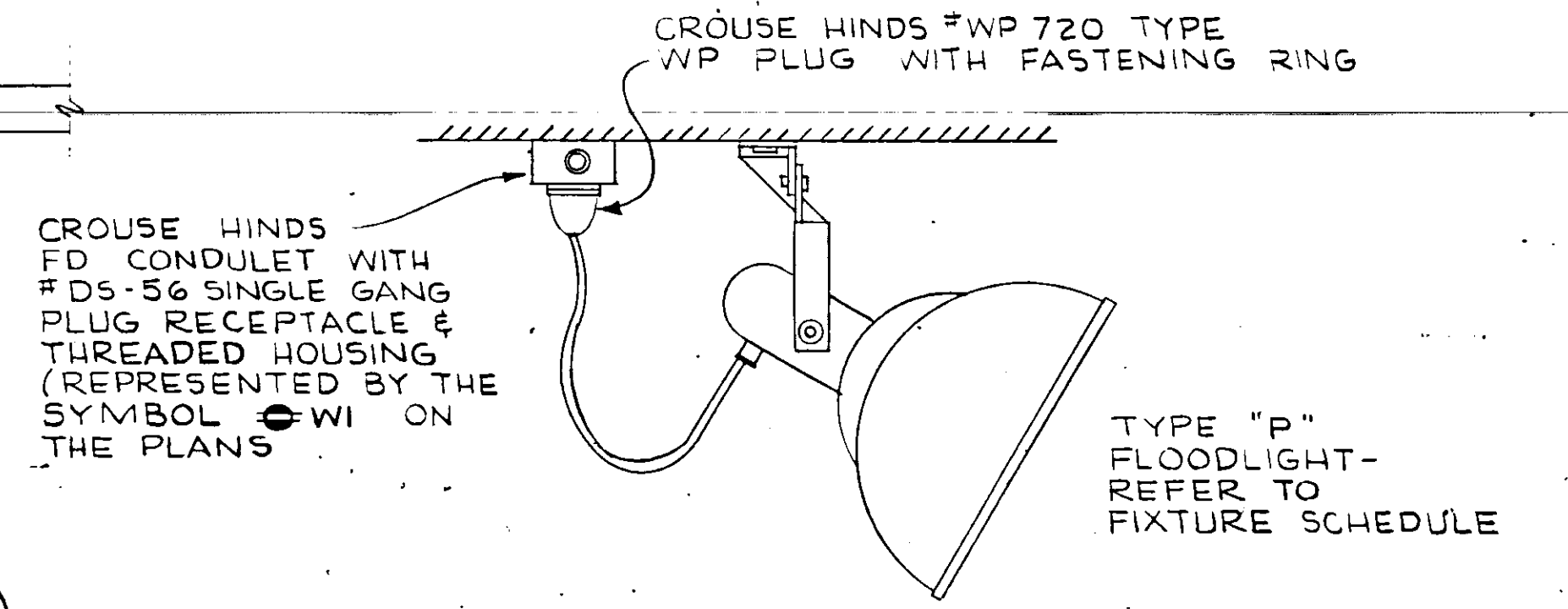
ELECTRICAL PLAN - FILTER BUILDING - OPERATING GALLERY
(SECOND FLOOR)
SCALE: 1/4" = 1'-0"



ELECTRICAL PLAN - FILTER BUILDING - PIPE GALLERY
(FIRST FLOOR)
SCALE: 1/4" = 1'-0"

NOTES:

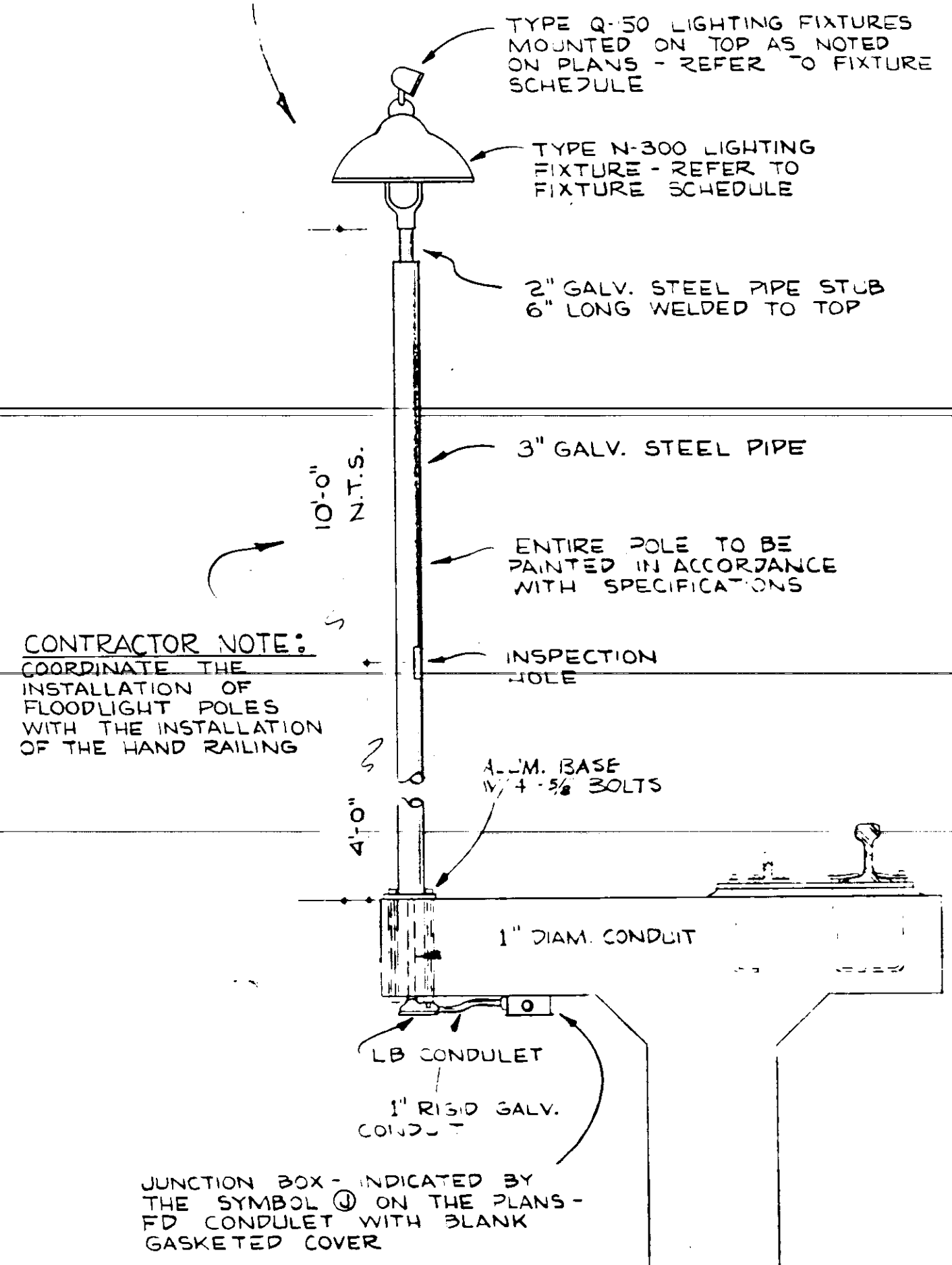
- ① UP TO RECEPTACLE MOUNTED IN FILTER CONSOLE ON FLOOR ABOVE
- ② BACKWASH AND FILTER SWEEP WATER PUMP CONTROL CIRCUITS UP TO CONTROL SWITCH AND PILOTS LIGHTS MOUNTED IN FILTER CONSOLE ON FLOOR ABOVE
- ③ BACKWASH AND FILTER SWEEP WATER PUMP CONTROL CIRCUITS DOWN FROM FILTER CONSOLE ON FLOOR ABOVE
- ④ INSTALL SLEEVES IN FLOOR UNDER FILTER CONSOLE FOR FUTURE EXTENSION OF BACKWASH AND FILTER SWEEP WATER PUMP CONTROL CIRCUITS
- ⑤ SURFACE MOUNTED TYPE FD CONDULET WITH BLANK GASKETED COVER
- ⑥ FURNISH AND INSTALL A WEATHERPROOF DUPLEX RECEPTACLE WITH GROUND IN EACH FILTER CONSOLE - SERVE FROM BELOW - REFER TO FLOOR PLAN OF AREA BELOW
- ⑦ MOUNT FLOODLIGHTS IN A LOCATION WHERE THEY CAN BE CONVENIENTLY RE-LAMPED



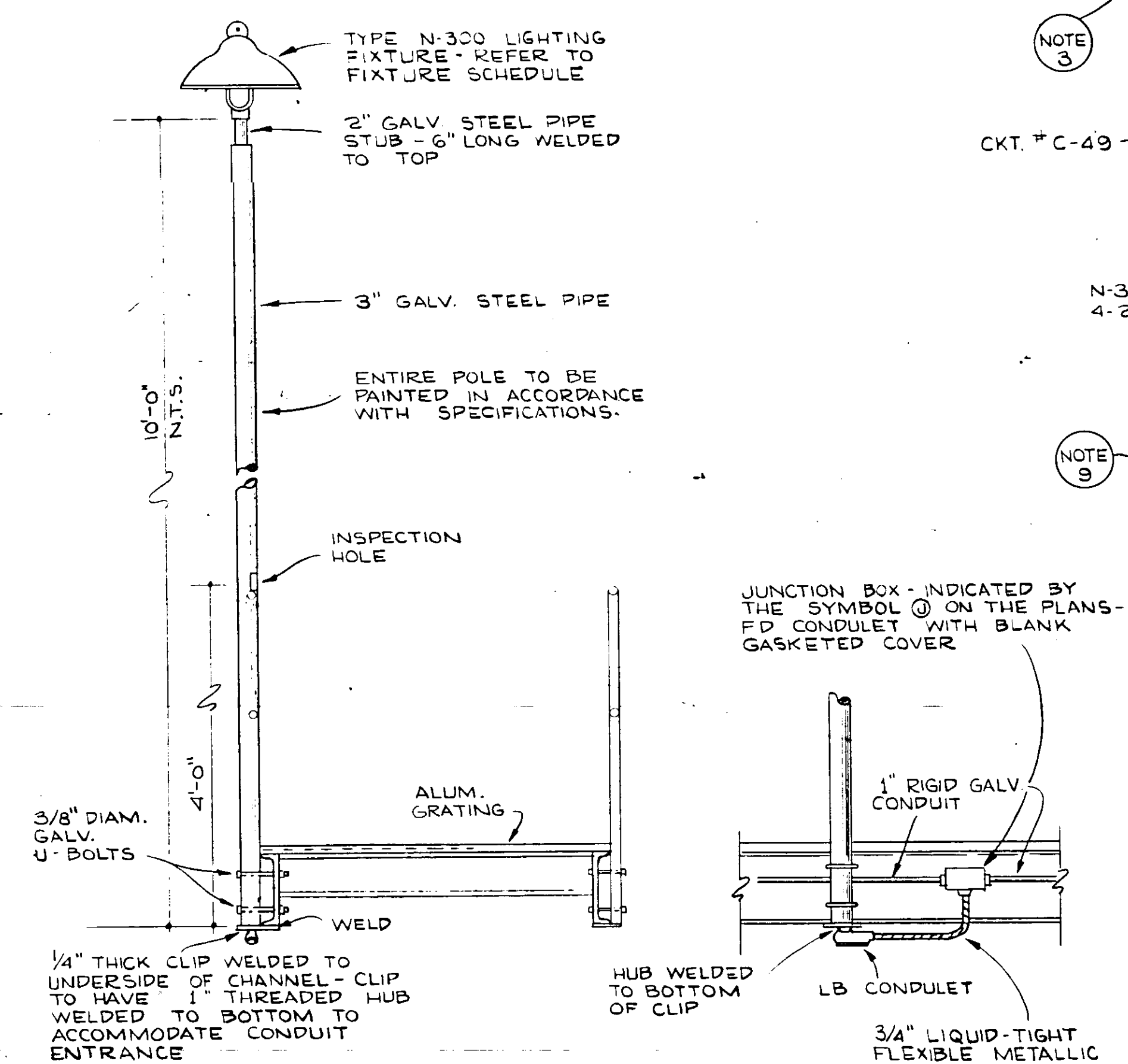
MOUNTING DETAIL FOR TYPE "P" FLOODLIGHTS
NOT TO SCALE

NO.	DATE	DESCRIPTION	BY	CHKD.
MAR 7	AS	BUILT	FJL	
REVISIONS				
<p>RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.</p> <p>WATER WORKS PROJECT WATER TREATMENT PLANT PART B</p> <p>ELECTRICAL FIRST & SECOND FLOOR PLANS-FILTER BUILDING MANATEE COUNTY, FLORIDA</p>				
DESIGNED BY	JMSG	FILE NO.	6353-3-E-6-III-B	
DRAWN BY	CCR	SHEET	No. E-6 III-B	
CHECKED BY	CEB	OF 16	SHEETS	
DATE	FEB. 1965	SCALE:	A6 SHOWN	

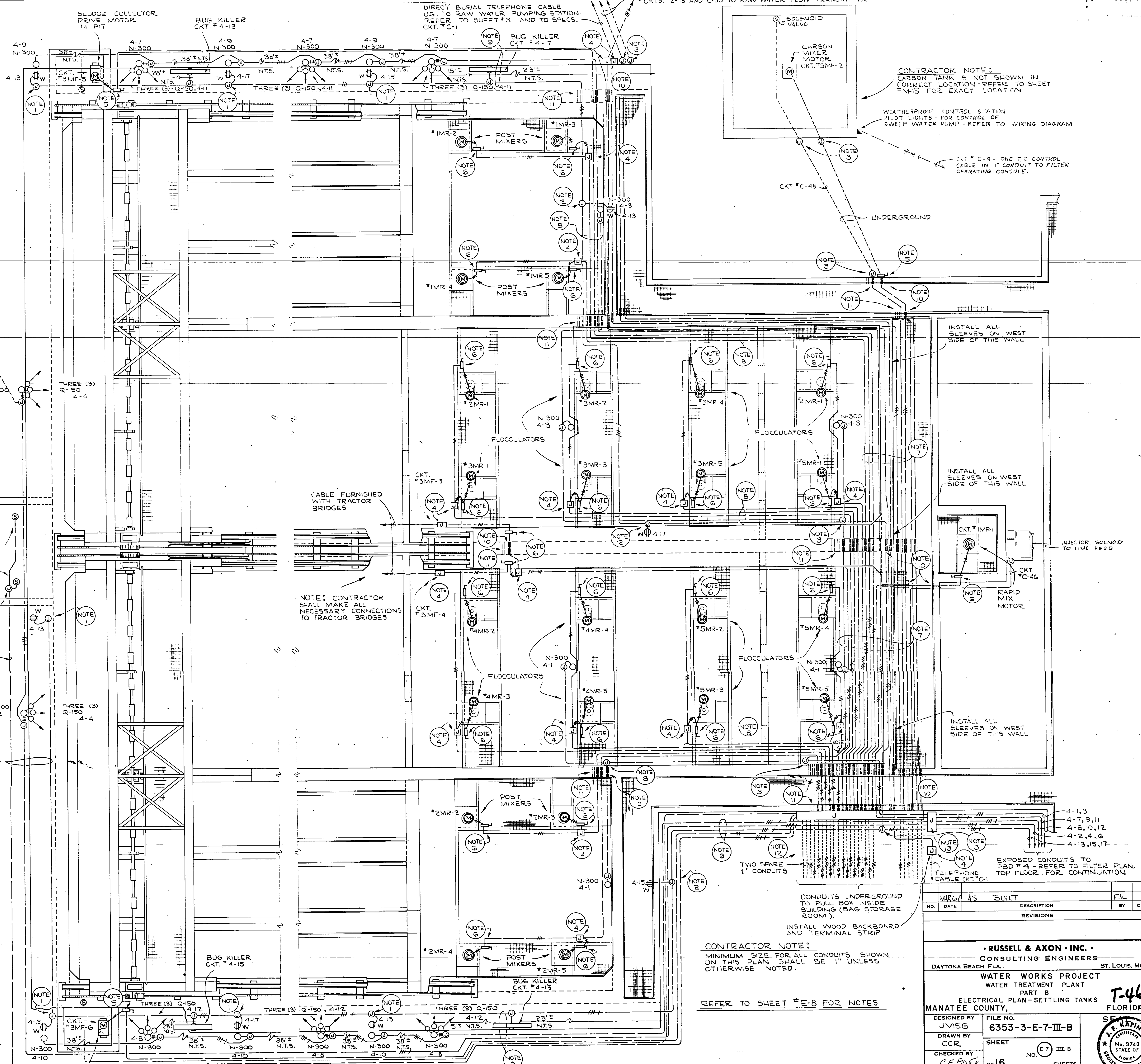
CONTRACTOR NOTE: USE THIS SAME TYPE POLE AND BASE FOR SUPPORTING BUG-KILLERS AROUND SETTLING TANKS.



MOUNTING DETAIL OF FLOODLIGHT POLES AROUND EDGE OF SEDIMENTATION TANKS
NOT TO SCALE



DETAIL OF FLOODLIGHT POLES AROUND FLOCCULATION TANKS
NOT TO SCALE



ELECTRICAL PLAN - SETTLING TANKS - SCALE: 1/4" = 1'-0"

CONTRACTOR NOTE:
MINIMUM SIZE FOR ALL CONDUITS SHOWN ON THIS PLAN SHALL BE 1" UNLESS OTHERWISE NOTED.
REFER TO SHEET #E-8 FOR NOTES

CONTRACTOR NOTE:
CARBON TANK IS NOT SHOWN IN CORRECT LOCATION - REFER TO SHEET #M-15 FOR EXACT LOCATION

WEATHERPROOF CONTROL STATION PILOT LIGHTS FOR CONTROL OF SWEEP WATER PUMP - REFER TO WIRING DIAGRAM

CKT # C-9 - ONE T.C. CONTROL CABLE IN 1" CONDUIT TO FILTER OPERATING CONSOLE.

INSTALL ALL SLEEVES ON WEST SIDE OF THIS WALL

INSTALL ALL SLEEVES ON WEST SIDE OF THIS WALL

INSTALL ALL SLEEVES ON WEST SIDE OF THIS WALL

NO.	DATE	DESCRIPTION	BY	CHKD.
1				

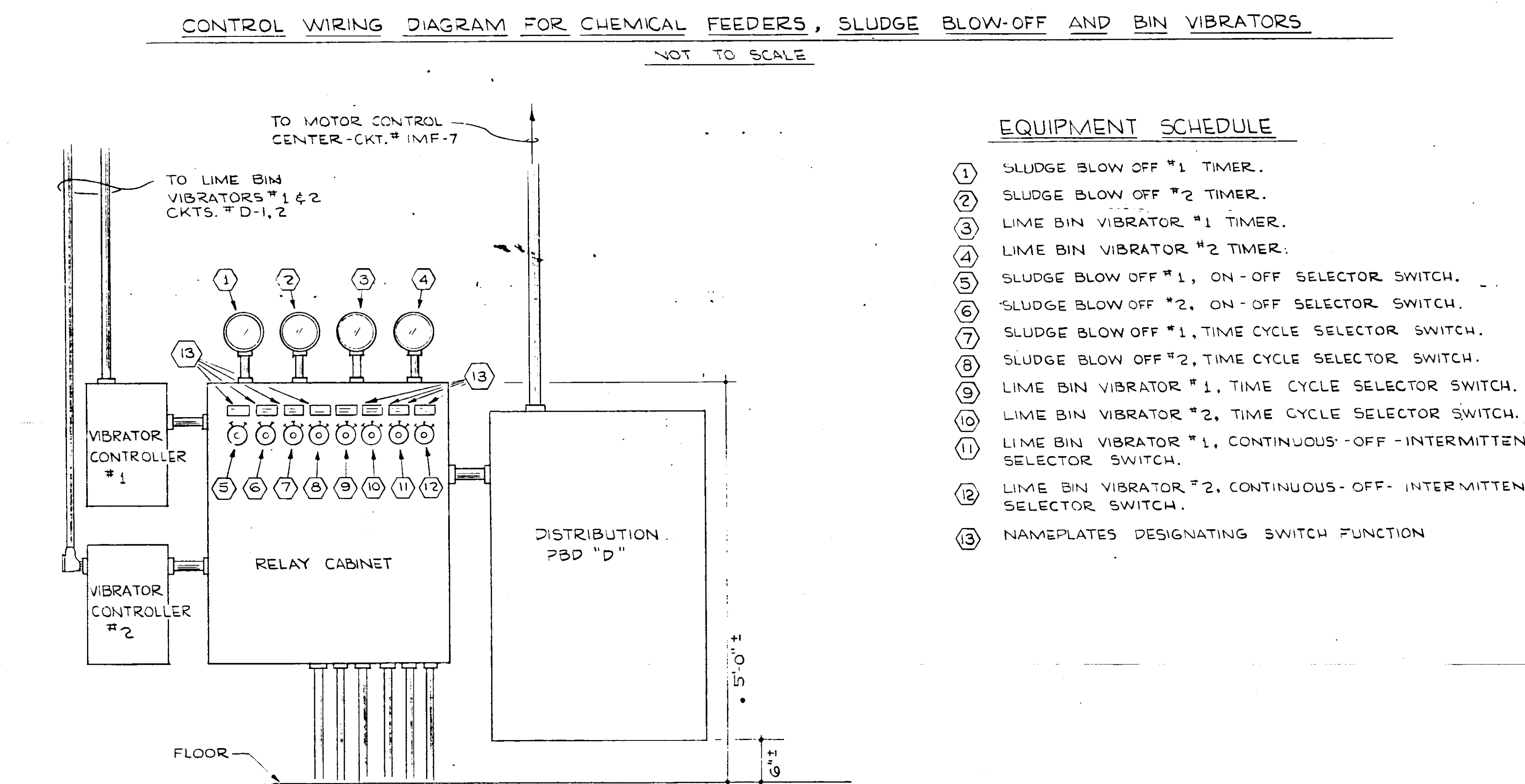
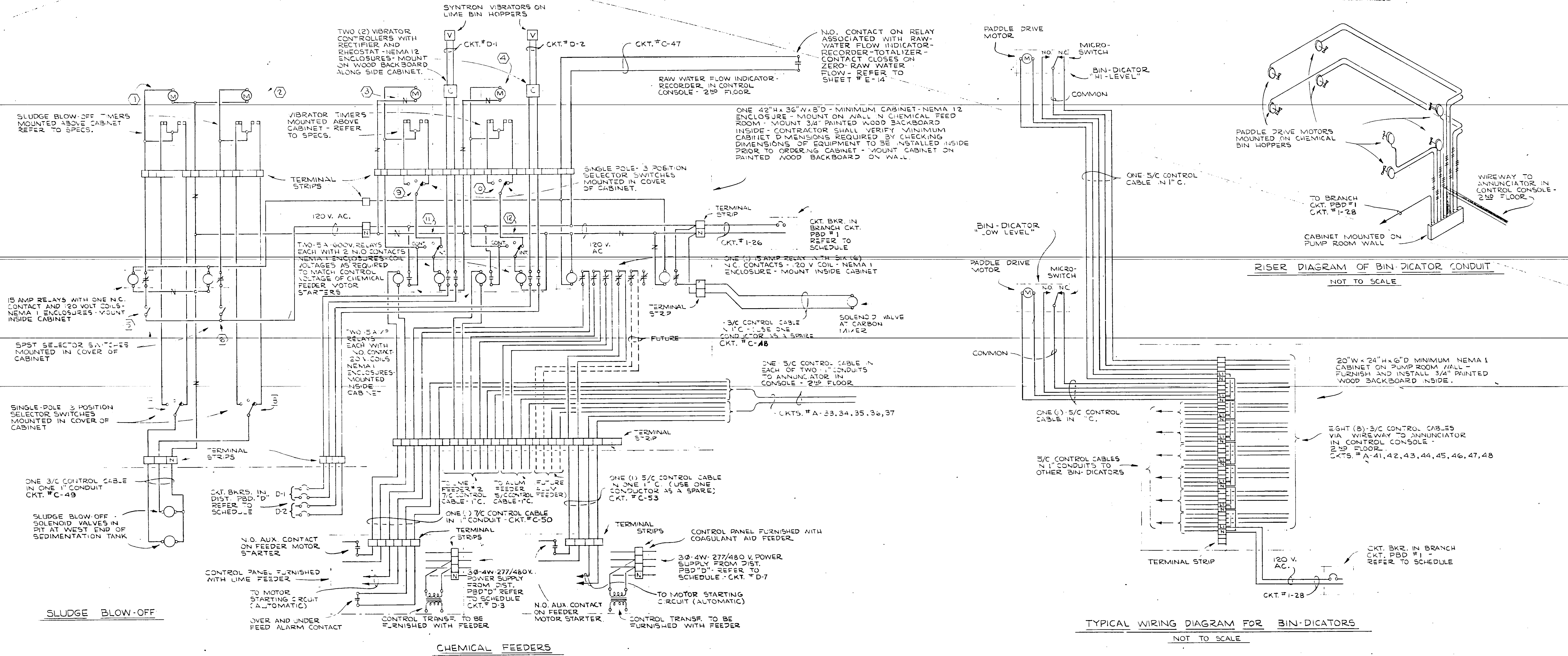
RUSSELL & AXON, INC.
CONSULTING ENGINEERS
DAYTONA BEACH, FLA. ST. LOUIS, MO.

WATER WORKS PROJECT
WATER TREATMENT PLANT
PART B
ELECTRICAL PLAN - SETTLING TANKS
MANATEE COUNTY, FLORIDA

FILE NO. 6353-3-E-7-III-B
SHEET No. 16 of 16
No. E-7 III-B
SCALE: AS SHOWN

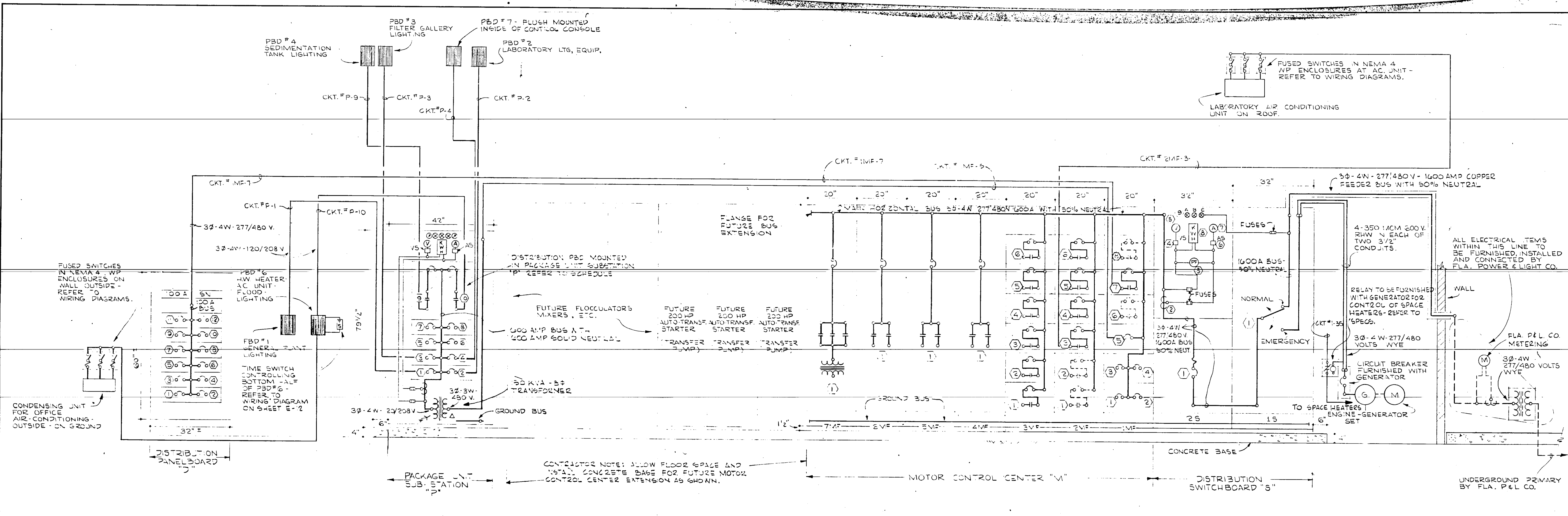
DESIGNED BY JMSG
DRAWN BY CCR
CHECKED BY CEB/TK
DATE Feb. 1965

REGISTERED ENGINEER
No. 3743
STATE OF FLORIDA



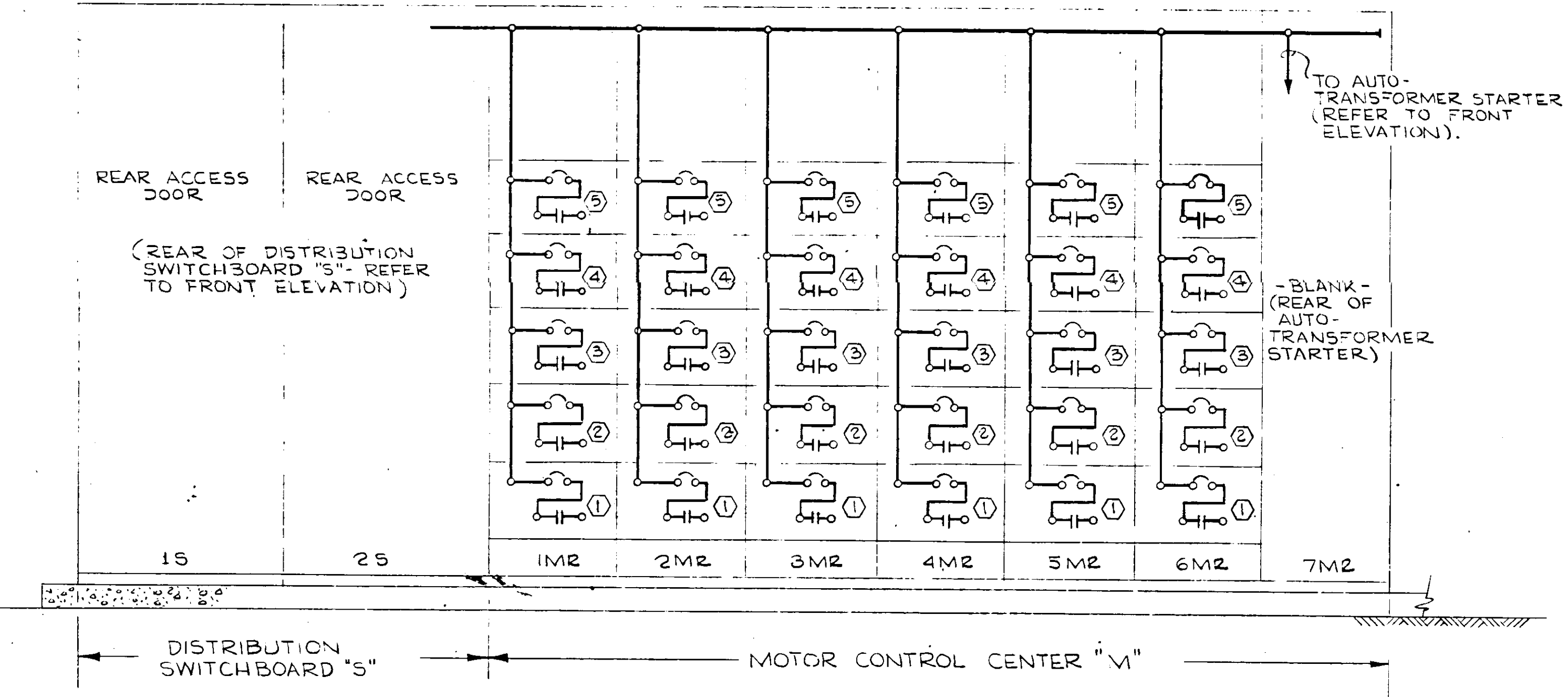
- EQUIPMENT SCHEDULE**
- ① SLUDGE BLOW OFF #1 TIMER.
 - ② SLUDGE BLOW OFF #2 TIMER.
 - ③ LIME BIN VIBRATOR #1 TIMER.
 - ④ LIME BIN VIBRATOR #2 TIMER.
 - ⑤ SLUDGE BLOW OFF #1, ON-OFF SELECTOR SWITCH.
 - ⑥ SLUDGE BLOW OFF #2, ON-OFF SELECTOR SWITCH.
 - ⑦ SLUDGE BLOW OFF #1, TIME CYCLE SELECTOR SWITCH.
 - ⑧ SLUDGE BLOW OFF #2, TIME CYCLE SELECTOR SWITCH.
 - ⑨ LIME BIN VIBRATOR #1, TIME CYCLE SELECTOR SWITCH.
 - ⑩ LIME BIN VIBRATOR #2, TIME CYCLE SELECTOR SWITCH.
 - ⑪ LIME BIN VIBRATOR #1, CONTINUOUS-OFF-INTERMITTENT SELECTOR SWITCH.
 - ⑫ LIME BIN VIBRATOR #2, CONTINUOUS-OFF-INTERMITTENT SELECTOR SWITCH.
 - ⑬ NAMEPLATES DESIGNATING SWITCH FUNCTION

MURKIN AS BUILT		FILE
NO.	DATE	DESCRIPTION
REVISIONS		
RUSSELL & AXON - INC.		
CONSULTING ENGINEERS		
DAYTONA BEACH, FLA.	ST. LOUIS, MO.	
WATER WORKS PROJECT		
WATER TREATMENT PLANT		
PART B		
WIRING DIAGRAMS FOR CHEMICAL FEEDERS, SLUDGE BLOW-OFF, BIN VIBRATORS & BIN-DICATORS		
DESIGNED BY	FILE NO.	SEAL
DRAWN BY	6353-3-E-9-III-B	
CHECKED BY	SHEET	
DATE	OF 16 SHEETS	
FEB. 1963	SCALE: NONE	



FRONT ELEVATION VIEW AND SINGLE LINE DIAGRAM OF DIST'B. SWITCHBOARD "S", MOTOR CONTROL CENTER "M", PACKAGE UNIT SUBSTATION "P" AND DIST'B. PBD "D"
NOT TO SCALE

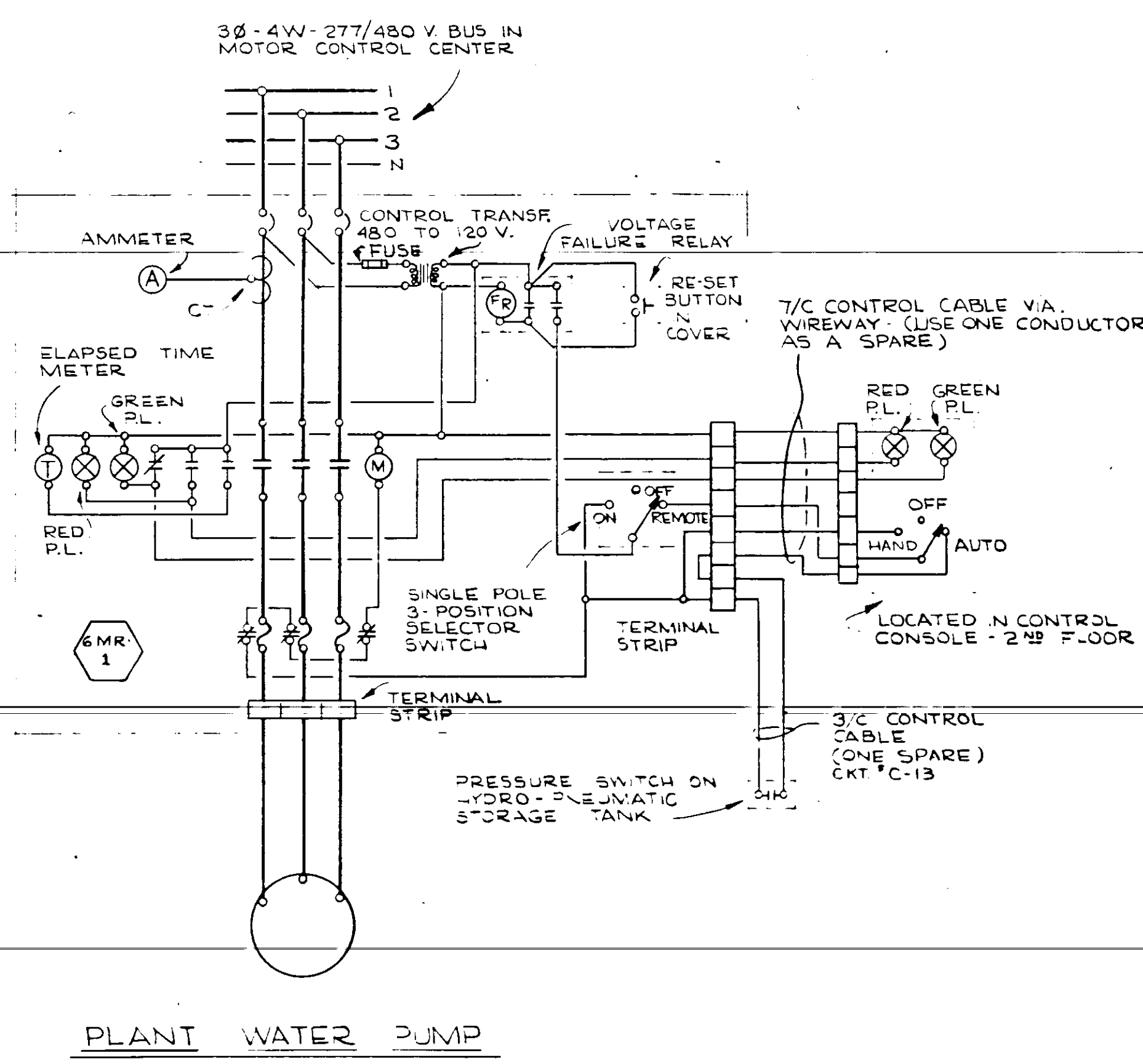
SCHEDULE FOR DISTRIBUTION SWITCHBOARD "S"		
FOR 30-4W 277/480 VOLT SERVICE		
SECTION NO.	ITEM NO.	DESCRIPTION
15	15-1	30-4W-600VOLT-1600AMP-1600AMP- FUSED DOUBLE THROW BOLTED PRESSURE CONTACT SWITCH
25	25-1	30-4W-600VOLT-1600AMP FRAME WITH 1600 AMP TRIP TYPE K-1600 MANUALLY OPERATED CIRCUIT BREAKER
	25-2	THREE (3) 1600/5 CURRENT TRANSFORMERS WITH TERMINAL BLOCK AND FUSE
	25-3	POWER FACTOR METER
	25-4	3 POSITION VOLTMETER SWITCH
	25-5	VOLTMETER - 0 TO 500 VOLTS
	25-6	3- POSITION AMMETER SWITCH
	25-7	AMMETER 0 TO 2000 AMP
	25-8	KILOWATT-HOUR METER WITH INDICATING DEMAND ATTACHMENT - 2 1/2 ELEMENT WITH 277 VOLT DOT COIL AND TEST BLOCK
	25-9	THREE (3) RED PILOT LIGHTS SERVED FROM MAIN BUS AHEAD OF TRANSFER SWITCH - TO INDICATE "UTILITY POWER ONLY"



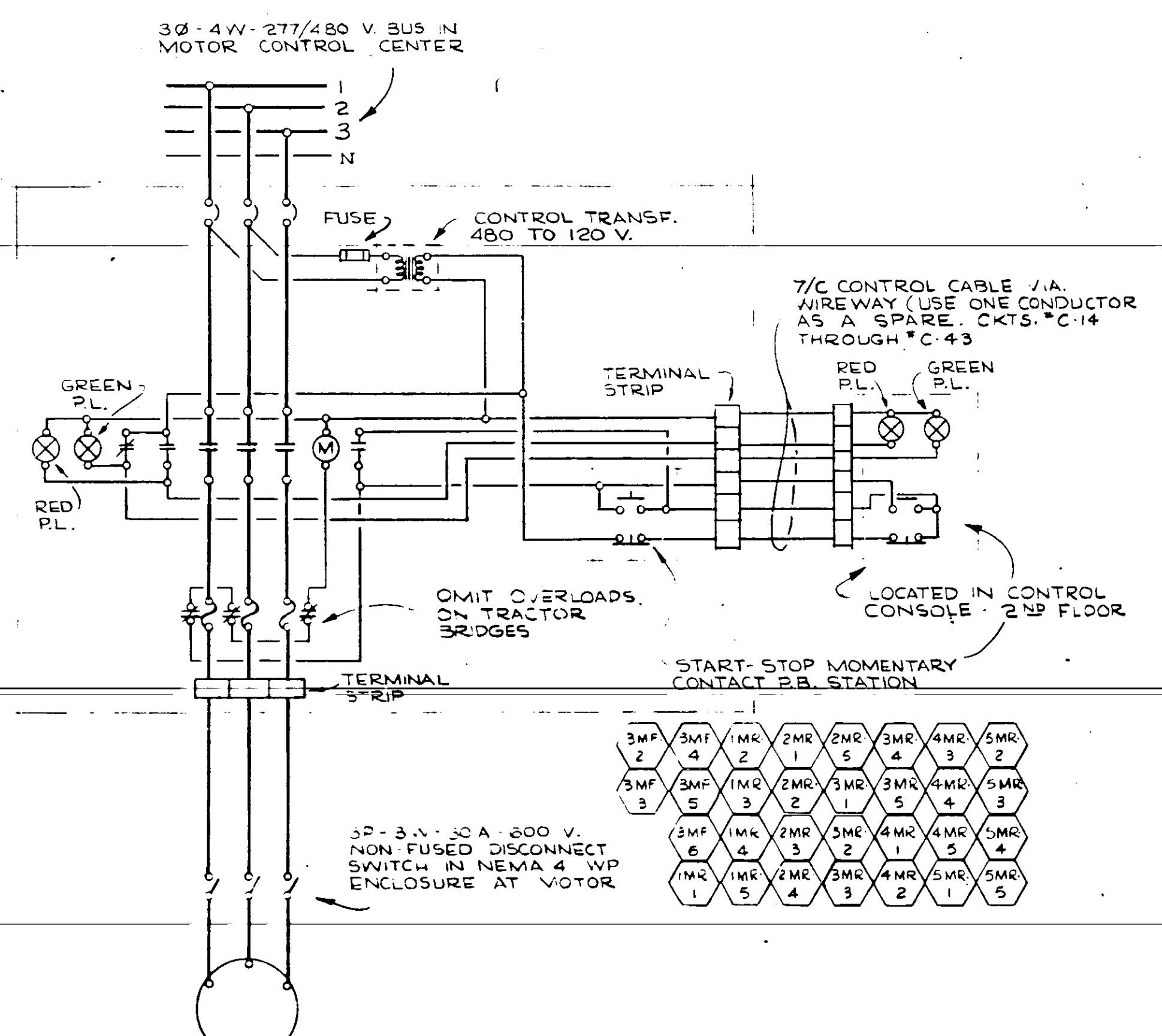
REAR ELEVATION VIEW AND SINGLE-LINE DIAGRAM OF MOTOR CONTROL CENTER "M"
NOT TO SCALE

- NOTES:
- REFER TO SHEET NO. E-15 FOR MOTOR CONTROL CENTER "M" SCHEDULE.
 - REFER TO SHEET NO. E-16 FOR DISTRIBUTION PANELBOARD "D" AND UNIT SUBSTATION "P" SCHEDULES.

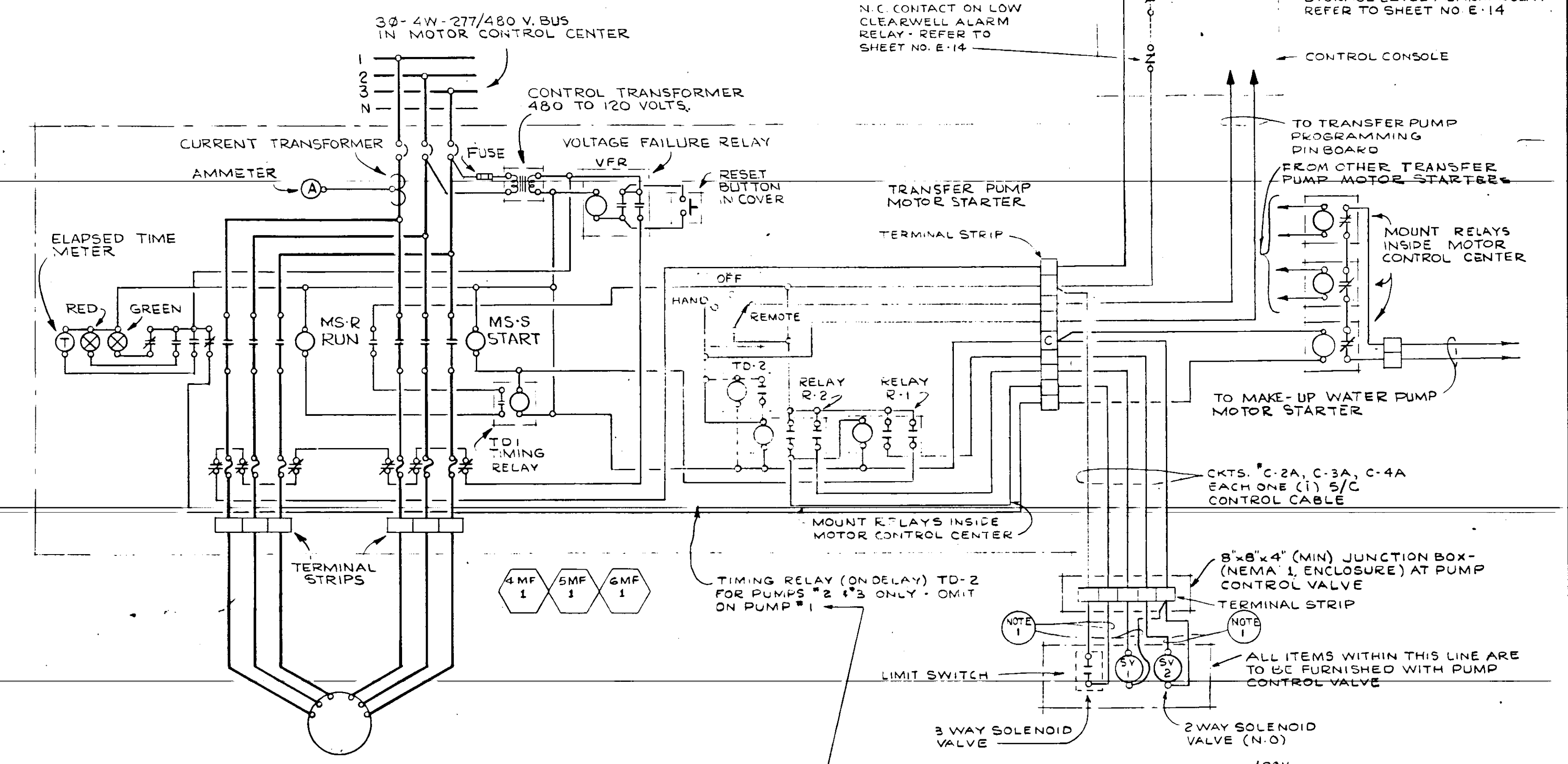
NO.	DATE	AS	EDULT	BY	CKD.
REVISIONS					
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.					
WATER WORKS PROJECT WATER TREATMENT PLANT PART B ELECTRICAL SINGLE-LINE DIAGRAM AND SCHEDULES MANATEE COUNTY, FLORIDA					
DESIGNED BY	JMS:SG	FILE NO.	6353-3-E-10-III-B		
DRAWN BY	CCR	SHEET	16	No. 10 III-B OF 16 SHEETS	
CHECKED BY	CEB:SG	DATE	FEB 1965	SCALE: NONE	



PLANT WATER PUMP

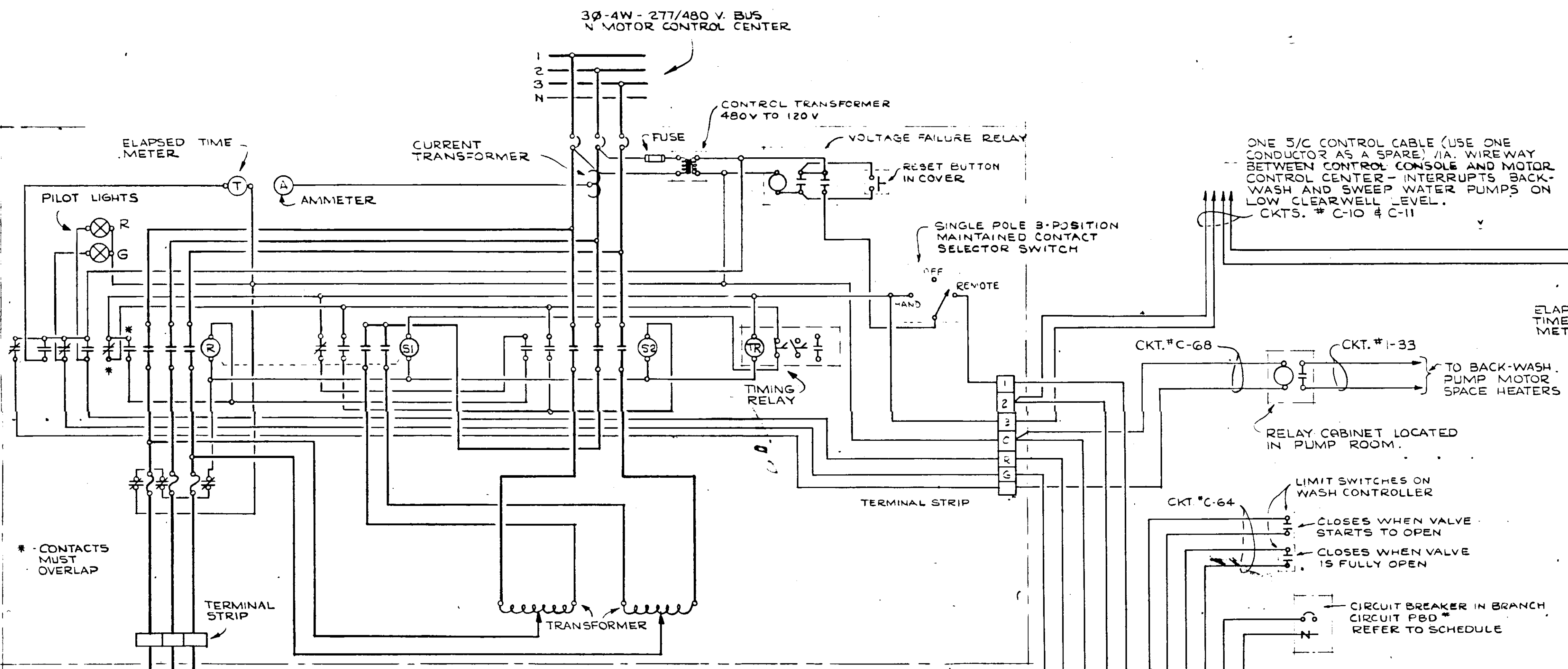


TYPICAL FOR 6 FLOCCULATOR MOTORS,
3 POST MIXER MOTORS, 1 RAPID MIX MOTOR,
2 SLUDGE COLLECTOR DRIVE MOTORS, CARBON
MIXER MOTOR, AND 2 TRACTOR BRIDGES



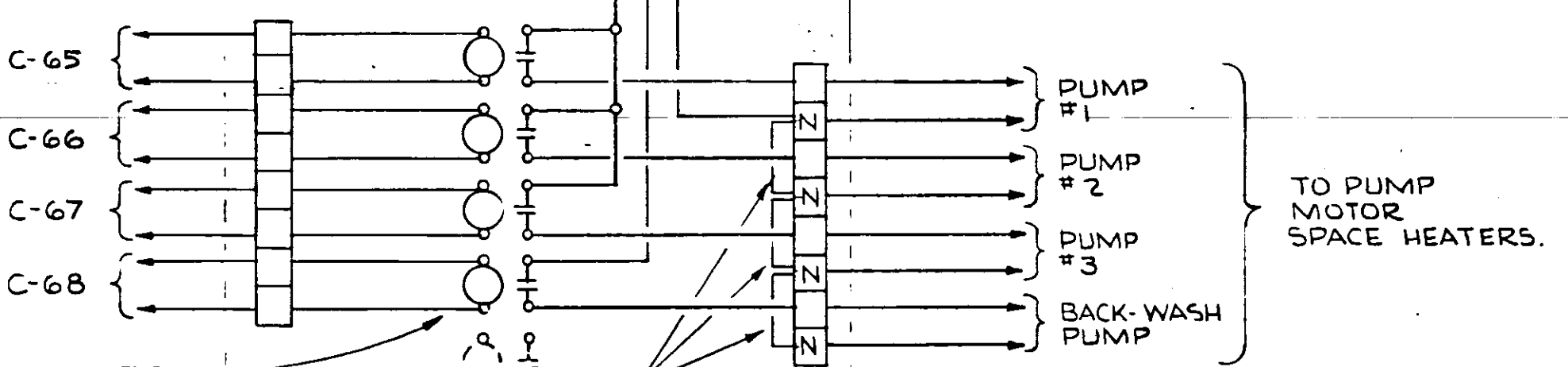
TYPICAL FOR TRANSFER PUMPS # 1, 2, & 3

NOTES:
2-#14 STRANDED 24RW 600 VOLT IN 3/4" LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT

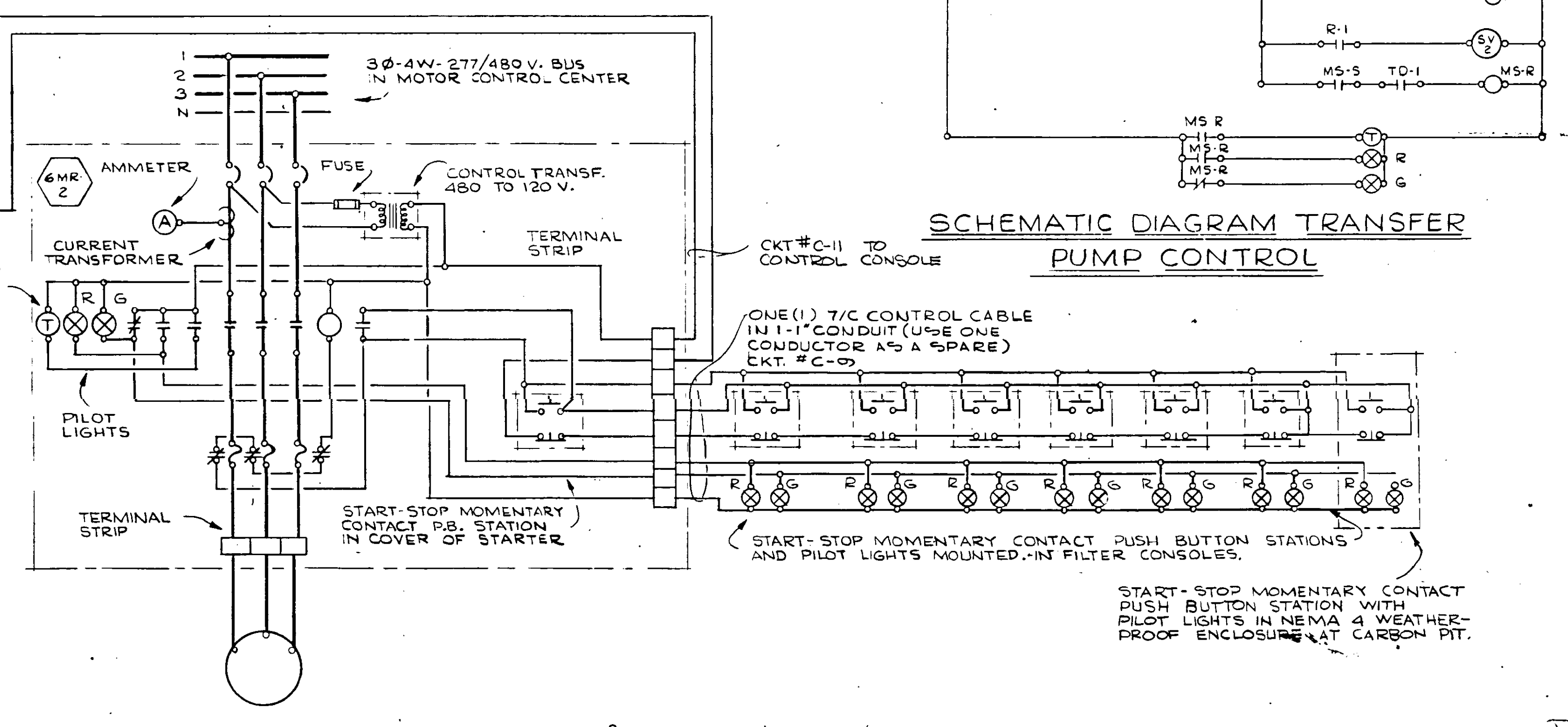


BACKWASH PUMP

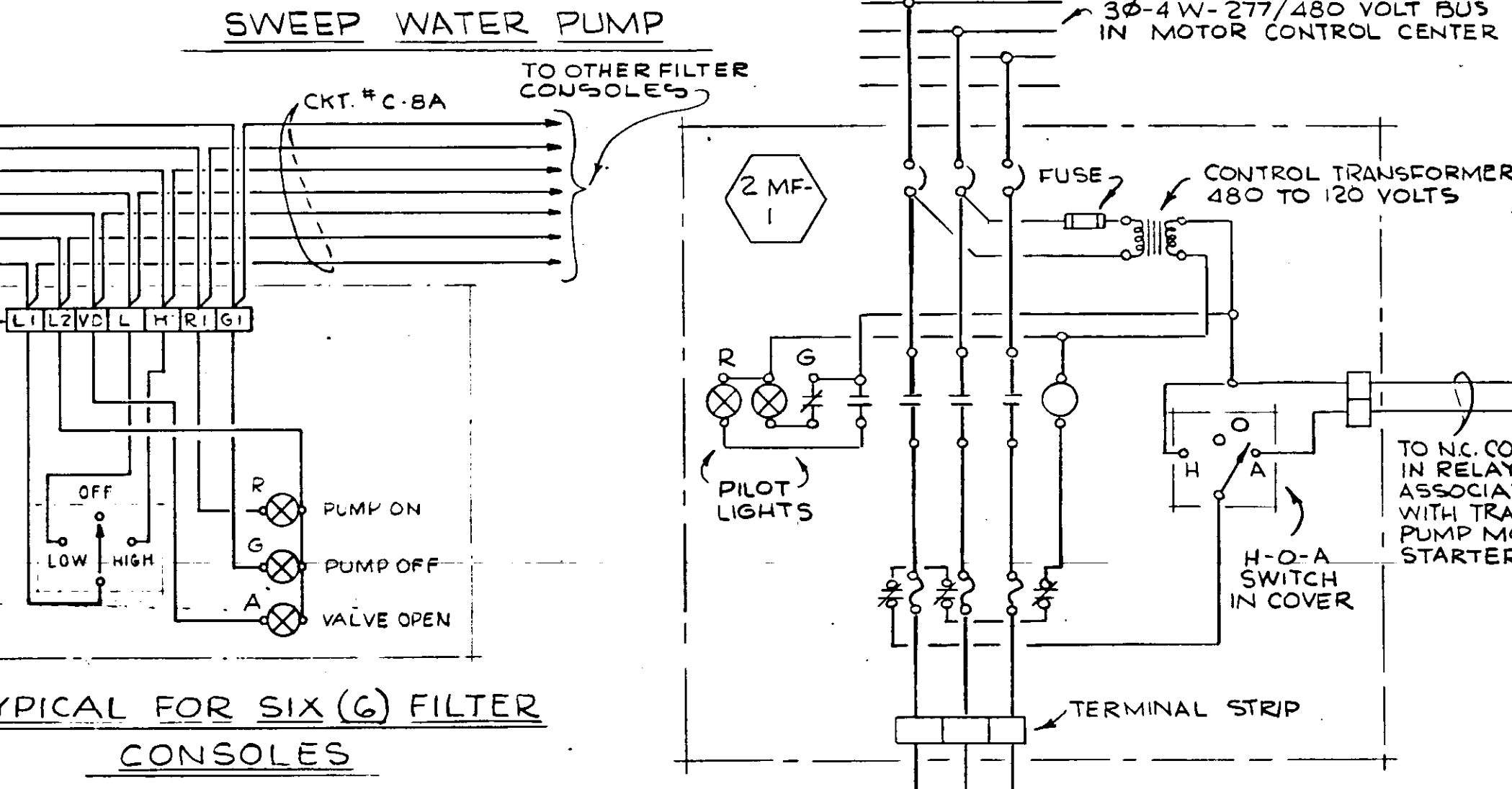
24" W x 42" H x 8" D (MINIMUM) RELAY CABINET-NEMA I ENCLOSURE-SURFACE MOUNTED ON COLUMN UNDERNEATH MEZZANINE FLOOR-INSTALL 3/4" WOOD BACKBOARD INSIDE-CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL ITEMS TO BE INSTALLED INSIDE CABINET, AND SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING A CABINET OF SUFFICIENT DIMENSIONS TO ACCOMMODATE ALL ITEMS INCLUDING FUTURE ITEMS.



WIRING DIAGRAM OF RELAY CABINET-
FOR CONTROL OF MOTOR SPACE HEATERS.



SCHEMATIC DIAGRAM TRANSFER
PUMP CONTROL



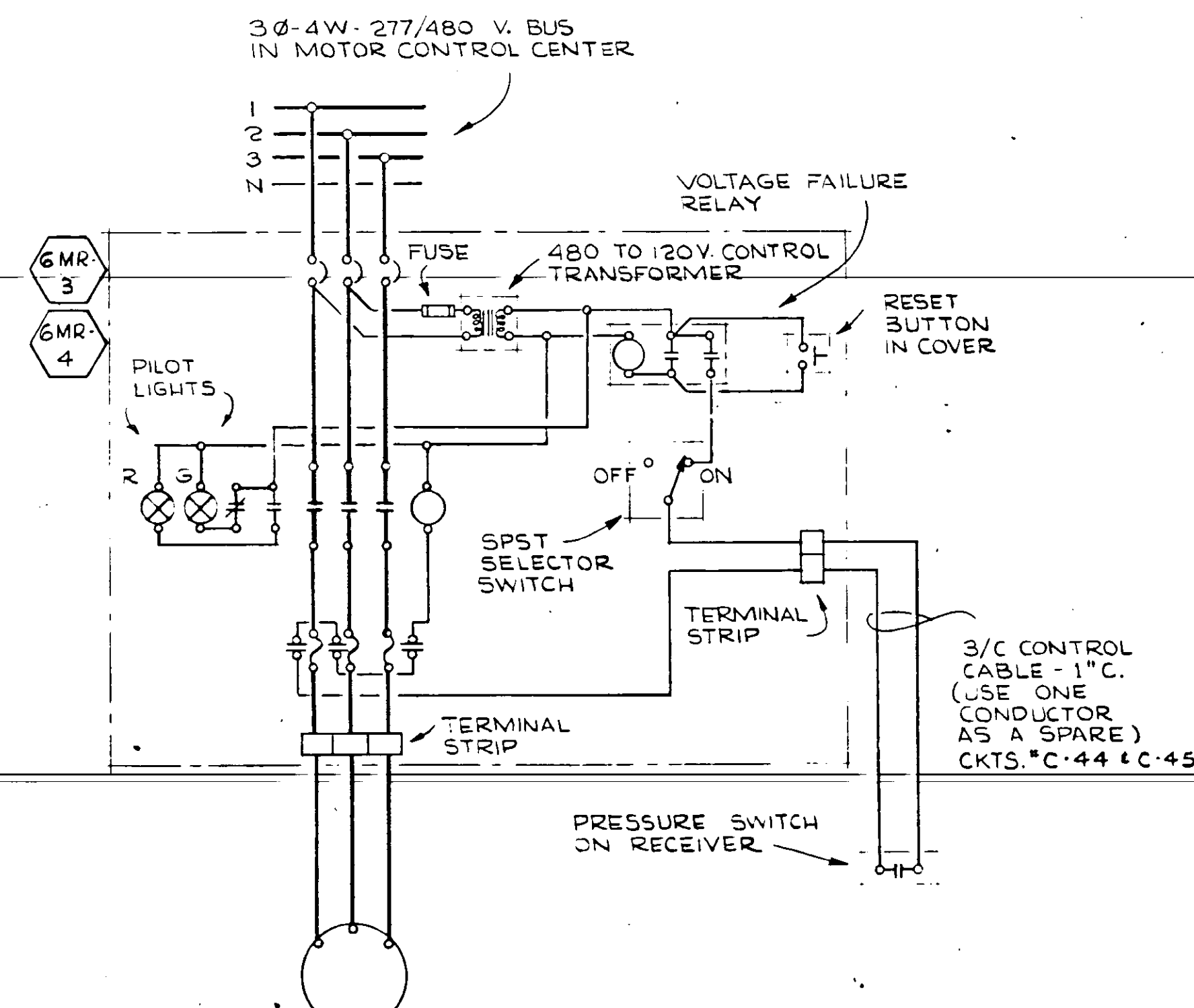
SWEEP WATER PUMP

TYPICAL FOR SIX (6) FILTER
CONSOLES

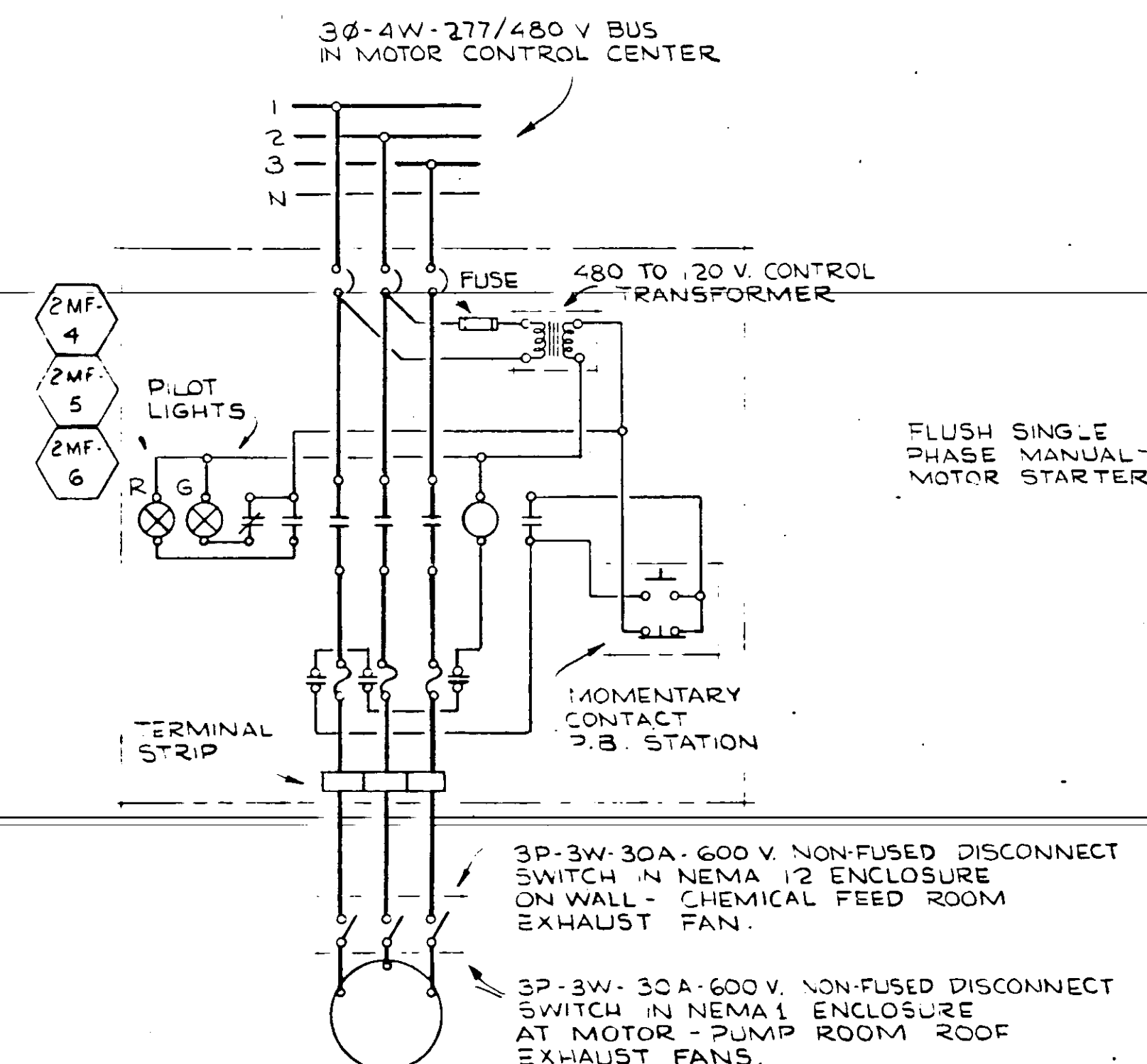
BACKWASH CONTROL PANEL
LOCATED IN PIPE GALLERY
ADJACENT TO WASH CONTROLLER

CONTRACTOR NOTE:
THE BACKWASH CONTROL PANEL IS UNDER A DEDUCTIBLE ALTERNATE-REFER TO SPECS.-IN THE EVENT THIS PANEL IS NOT INSTALLED, RUN CKT # 8 DIRECTLY FROM MOTOR STARTER TO EACH OF THE FILTER CONSOLES. INSTALL WIRE A 3-POST ON-OFF SELECTOR SWITCH, A RED PILOT LIGHT AND A GREEN PILOT LIGHT IN EACH FILTER CONSOLE FOR BACKWASH PUMP MOTOR CONTROL.

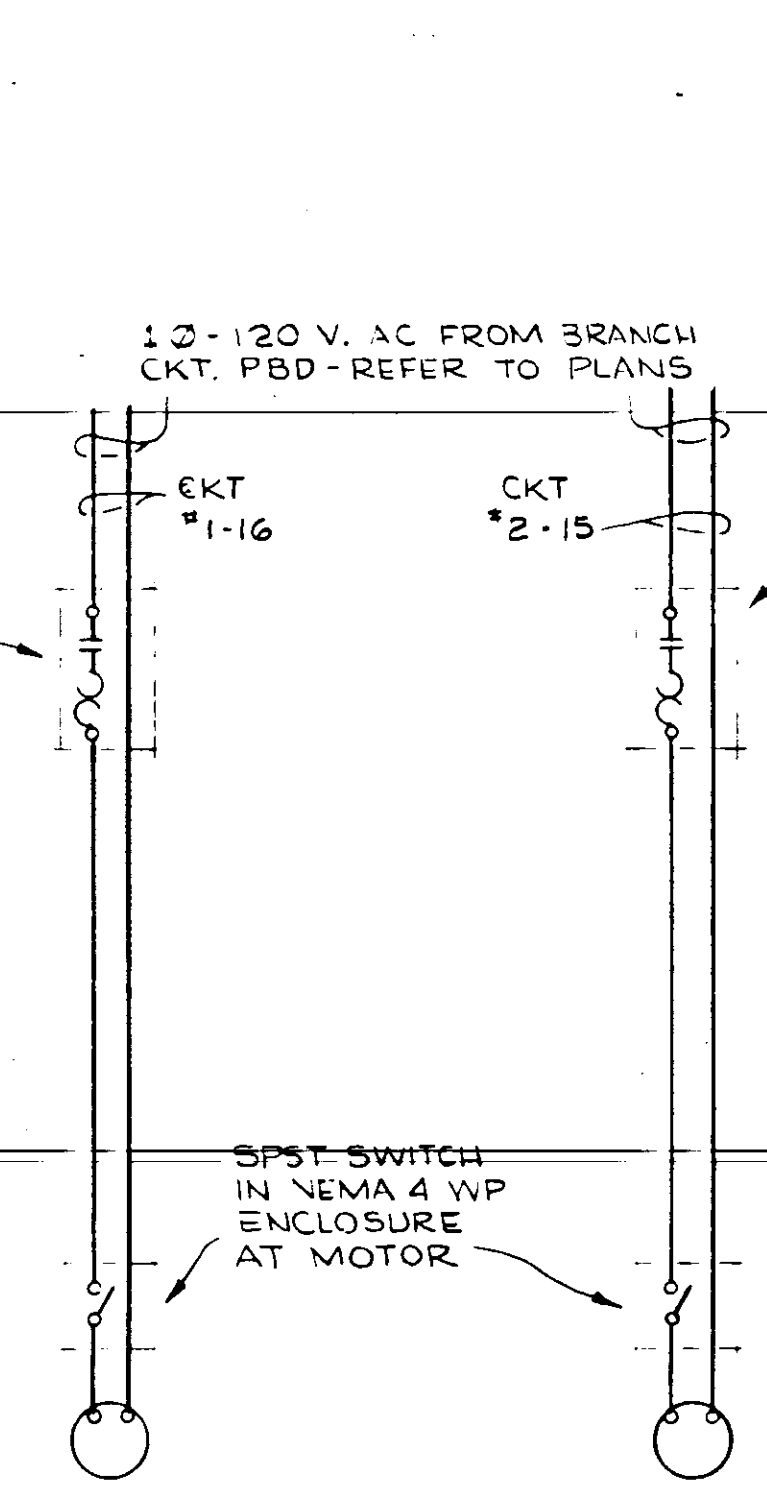
NO.	DATE	DESCRIPTION	BY	CHKD.
1	4/5	BUILT	FJL	
REVISIONS				
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B				
MECHANICAL EQUIPMENT WIRING DIAGRAMS FLORIDA				
DESIGNED BY	FILE NO.	750 No. 3748 STATE OF FLORIDA REGISTERED ENGINEER		
DRAWN BY	6353-3-E-11-III-B			
CHECKED BY	SHEET	No. (E-11) III-B of 16 SHEETS		
CHECKED BY	16			
DATE	SCALE	None		
FEB. 1965	None			



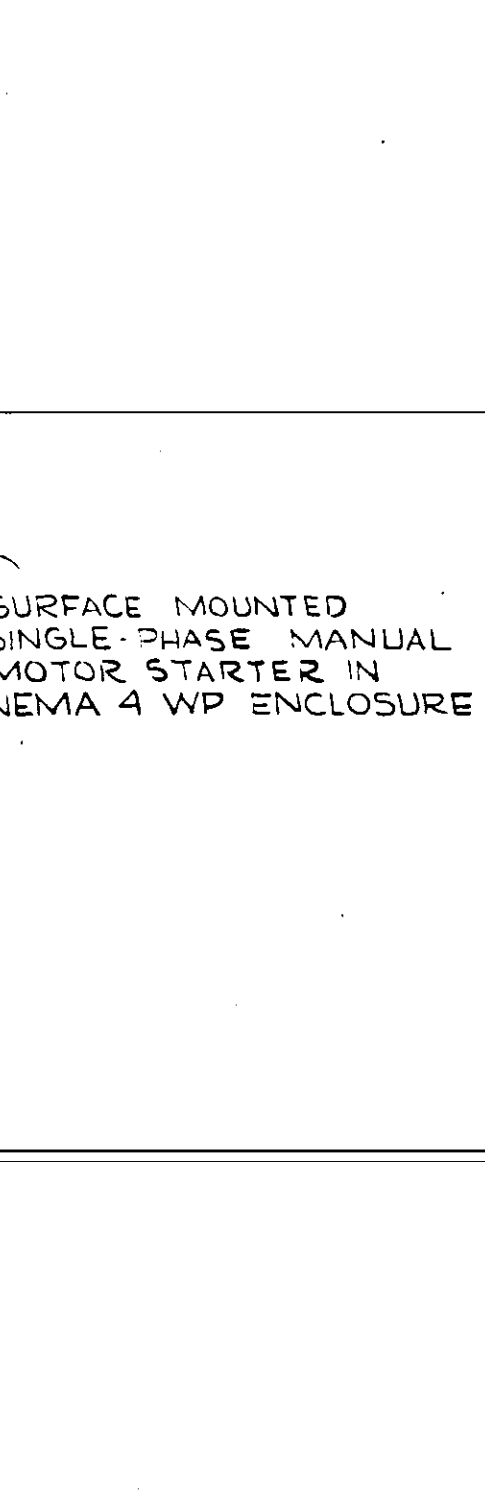
AIR COMPRESSOR
(TYPICAL FOR TWO)



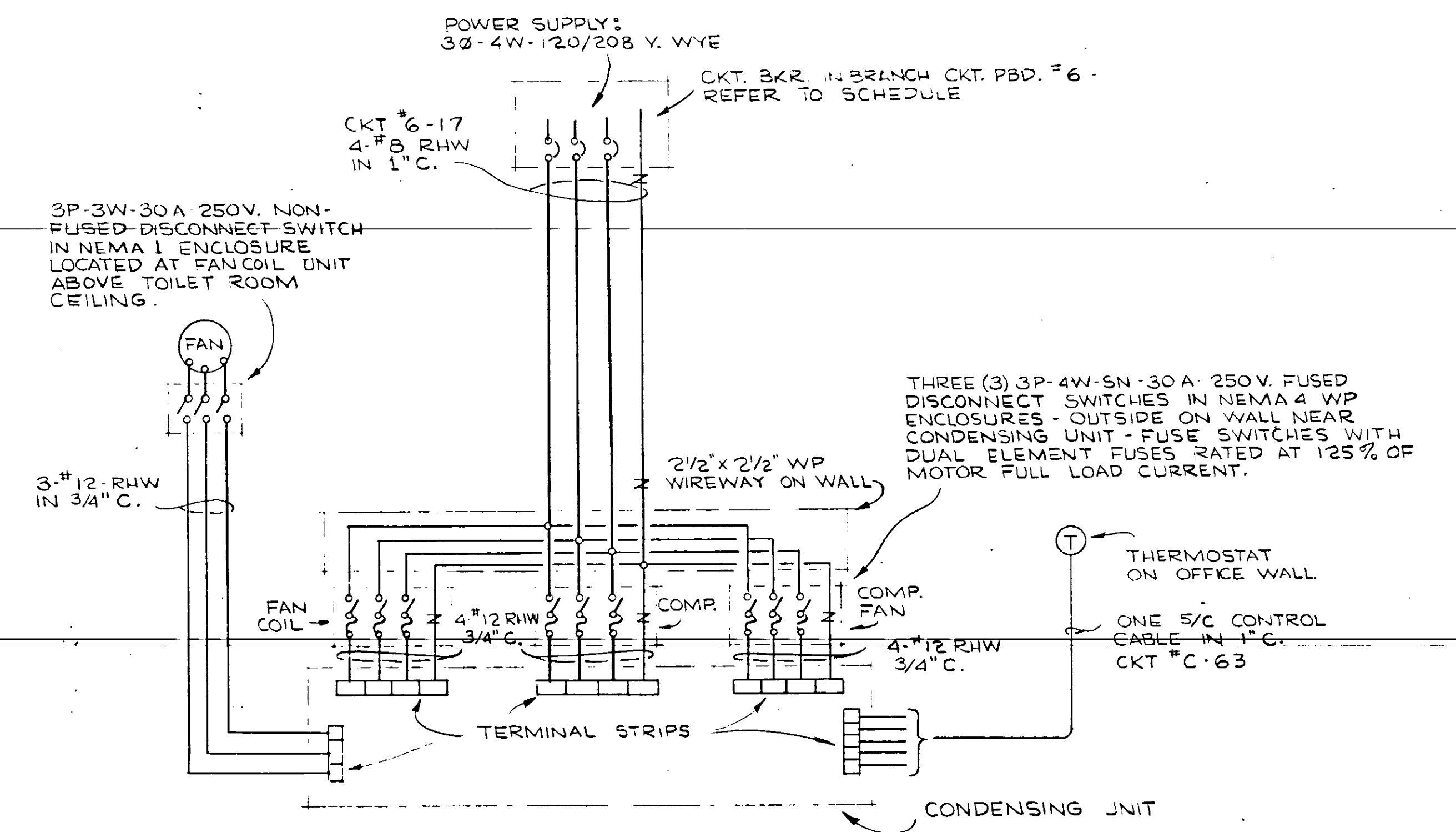
TYPICAL FOR CHEMICAL FEED ROOM AND PUMP ROOM EXHAUST FANS



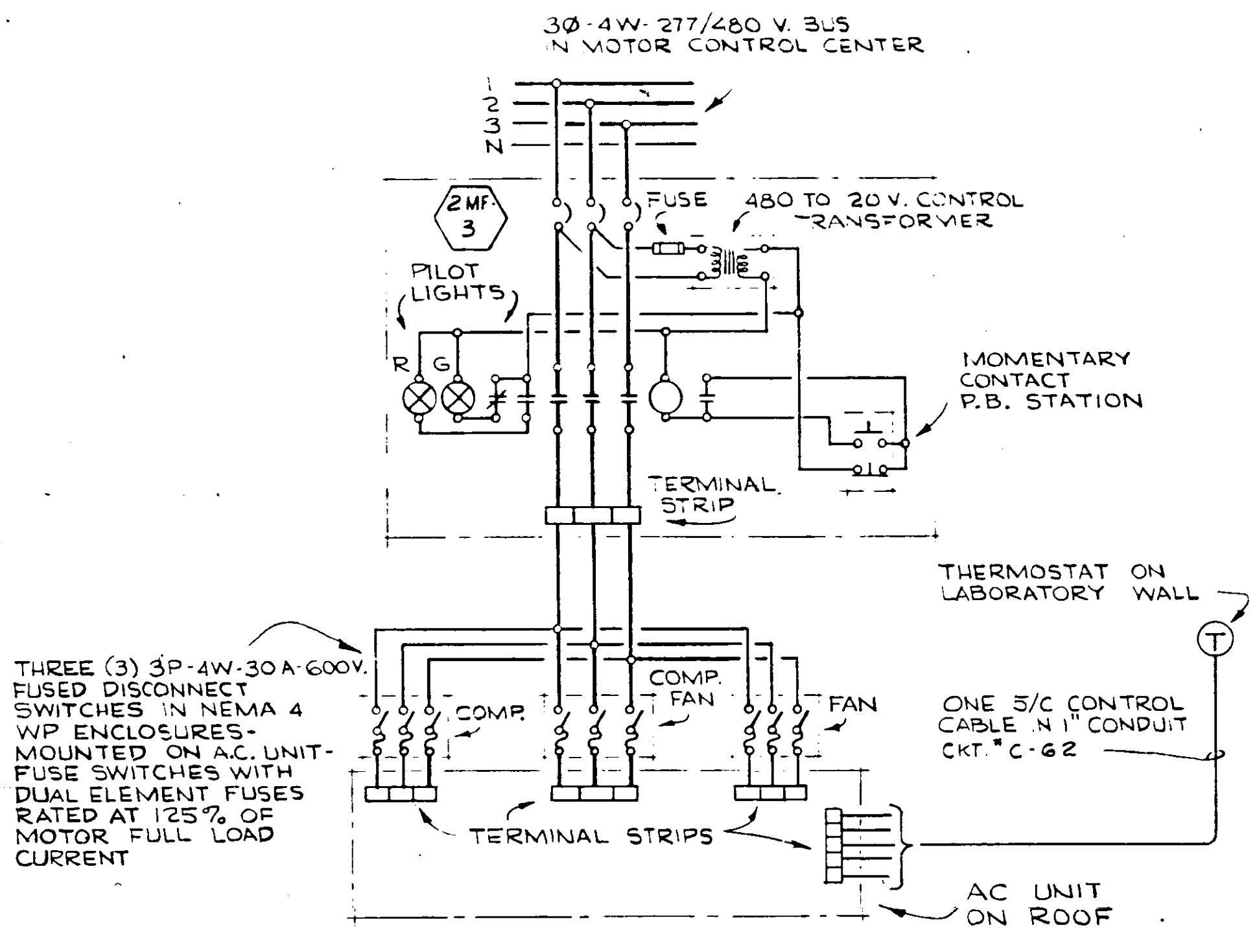
TOILET ROOM EXHAUST FAN



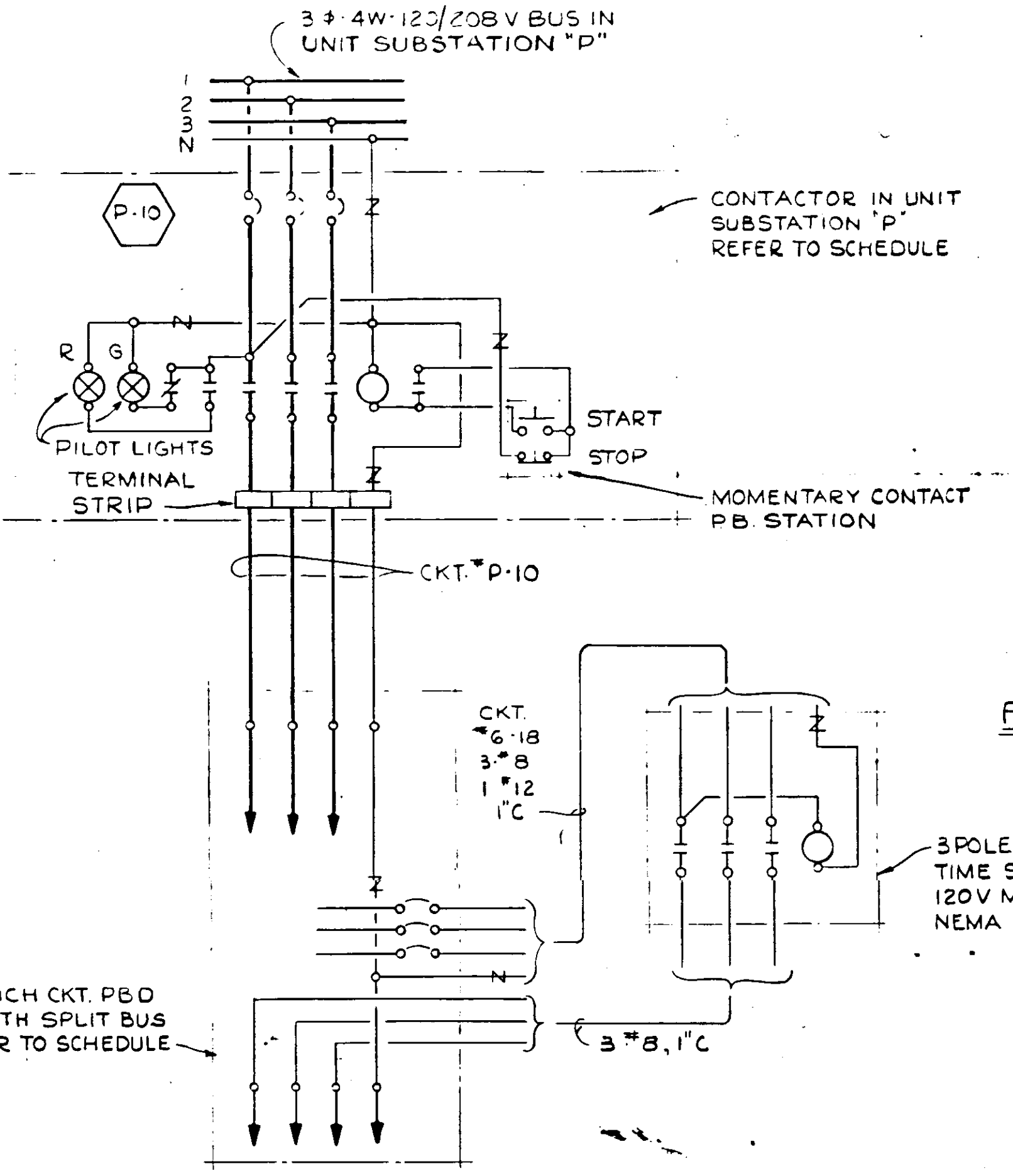
CHLORINATION ROOM EXHAUST FAN



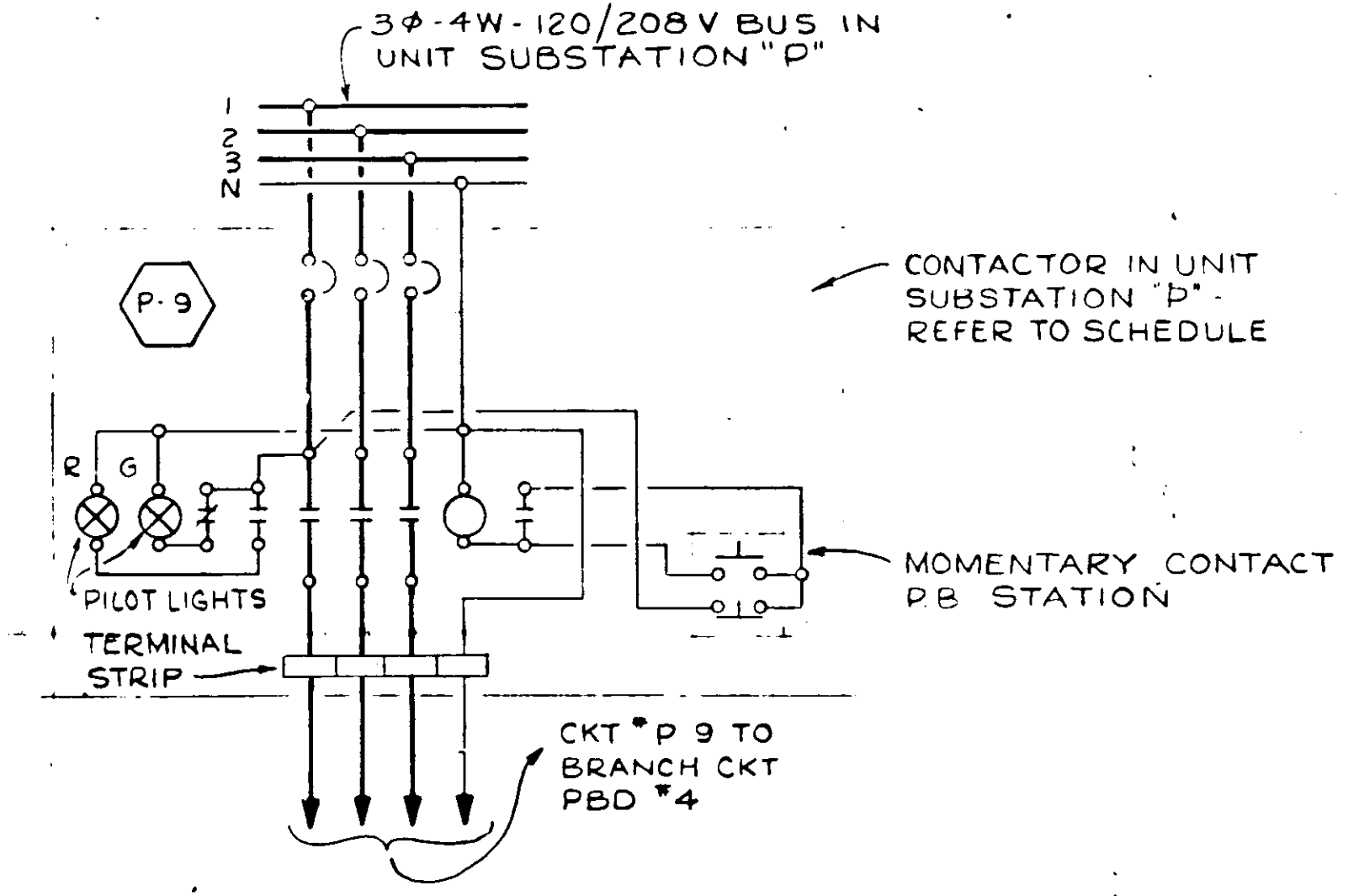
OFFICE AIR CONDITIONING



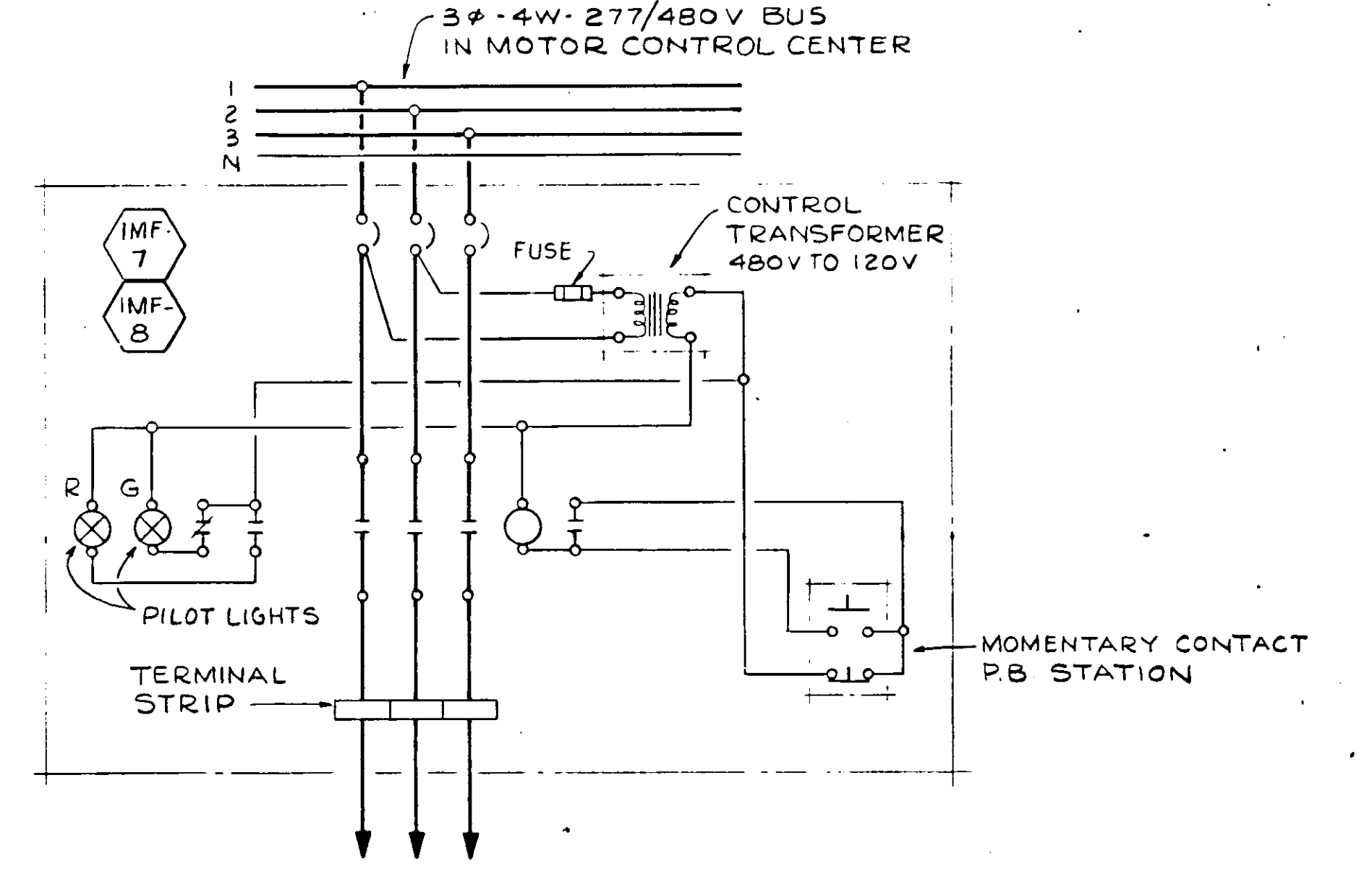
LABORATORY AIR CONDITIONING



FEEDER TO BRANCH CIRCUIT PBD #6

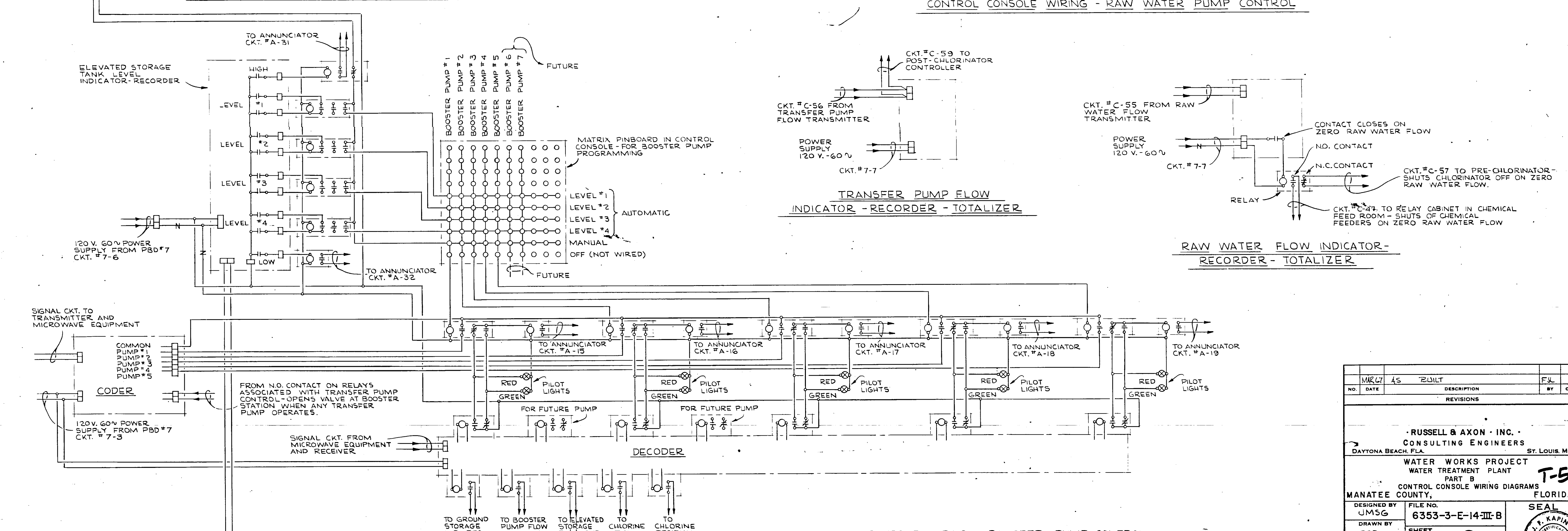
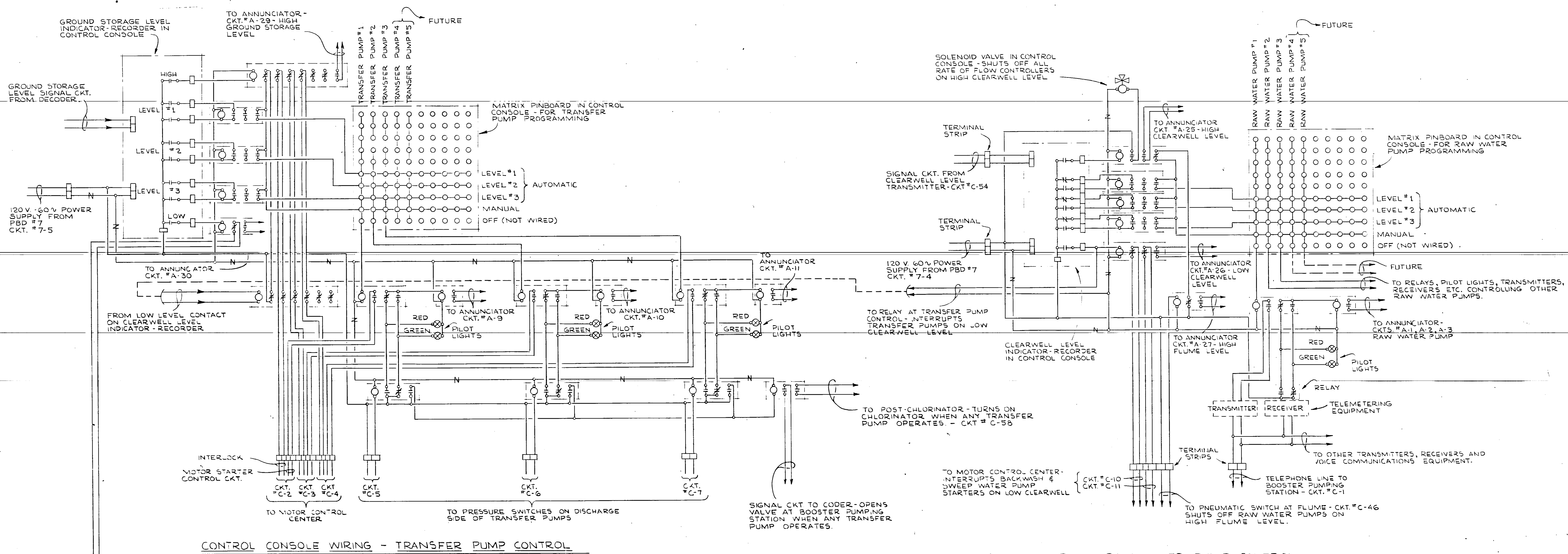


FEEDER TO BRANCH CIRCUIT PBD #4

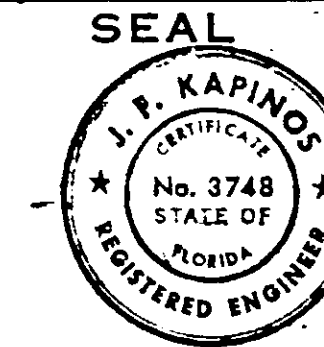


TYPICAL FOR FEEDERS TO DISTRIBUTION PBD #0 AND BRANCH CIRCUIT PBD #5

NO.	DATE	DESCRIPTION	BY	CKD.
REVISIONS				
RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.				
WATER WORKS PROJECT WATER TREATMENT PLANT PART B WIRING DIAGRAMS MANATEE COUNTY, FLORIDA				
DESIGNED BY	FILE NO.	SEAL		
JMSG	6353-3-E-12-III-B			
DRAWN BY	SHEET			
CCR	16			
CHECKED BY	DATE			
CEB	FEB. 1965	SCALE NONE		



NO.	DATE	AS	REVISION	DESCRIPTION	BY	CHKD.
REVISIONS						
RUSSELL & AXON - INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.						
WATER WORKS PROJECT WATER TREATMENT PLANT PART B CONTROL CONSOLE WIRING DIAGRAMS MANATEE COUNTY, FLORIDA						
DESIGNED BY	JMSG	FILE NO.	6353-3-E-14-III-B			
DRAWN BY	CCR	SHEET	No. 14 of 16			
CHECKED BY	CEB	DATE	FEB. 1965			
SCALE:	NONE					



SCHEDULE FOR MOTOR CONTROL CENTER "M"

FOR 3φ-4W-277/480 VOLT SERVICE (SEE NOTE ①)

BACK-TO-BACK CONSTRUCTION

NEMA CLASS 1, TYPE B WIRING

SECTION NUMBER	CIRCUIT OR ITEM NUMBER	CIRCUIT BREAKER			STARTER MODIFICATIONS														CABLE	CONDUIT	SERVING		
		POLES	FRAME AMPS	TRIP AMPS	NO. OF POLES	NEMA SIZE	TYPE	COIL VOLT	PILOT LIGHT		CONTROL	TOTAL NO. OF INTERLOCKS	CONTROL TRANSF. 480 TO 120V ②	VOLTAGE FAILURE RELAY	TIME DELAY RELAY	ELAPSED TIME METER	AMMETER	TOTAL NO. OF OVERLOADS			OTHER	DESCRIPTION	APPROX. LOAD (CONNECTED)
									RED	GREEN													
1MF	1MF-1	3	50	20																SPARE BREAKER			
	1MF-2			20																SPARE BREAKER			
	1MF-3			30																"			
	1MF-4			40																"			
	1MF-5		225	225																UNIT SUBSTATION "P" (LIGHTING)	106.7 KVA + 33.1 KVA FUTURE		
	1MF-6			50	3	1	FVNR	120												SPACE ONLY FOR CKT. BKR. & STARTER DISTRIBUTION PANELBOARD "D" (CHEMICAL FEEDERS)	146 KVA + 24 KVA FUTURE		
	1MF-7			40						P.B.	2	1	1							BRANCH CKT. PBD. #5 (AT AERATORS)	111 KVA		
	1MF-8			20						P.B.	2	1	1										
2MF	2MF-1	3	50	15	3	1	FVNR	120												MAKE-UP WATER PUMP	7 1/2 HP		
	2MF-2																			"			
	2MF-3			30		1		120	1	1	P.B.	2	1							AIR CONDITIONING-LABORATORY	5HP + 3/4HP + 1/2HP		
	2MF-4			15		1					P.B.	2	1							EXHAUST FAN-CHEMICAL FEED ROOM	1/3 HP		
	2MF-5			15		1					P.B.	2	1							EXHAUST FAN-PUMP ROOM	1HP		
	2MF-6			15		1					P.B.	2	1							"	1HP		
3MF	3MF-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					SPARE CKT. BKR. & STARTER			
	3MF-2			15																CARBON MIX	3HP		
	3MF-3			20		1														TRACTOR BRIDGE #1-NORTH	1/2HP + 3/4HP		
	3MF-4			20		1														" #2-SOUTH	1/2HP + 3/4HP		
	3MF-5			15																SLUDGE COLLECTOR #1-NORTH	2HP		
	3MF-6			15																" #2-SOUTH	2HP		
4MF	4MF-1	3	225	200	6	3PW	PART-WINDING	120				H-O-R ③	4	1	1	1	1	1	6	6" #1	2-2"	TRANSFER PUMP #1	100HP
5MF	5MF-1	3	225	200	6	3PW	PART-WINDING	120				H-O-R ③	4	1	1	2	④	1	6	6" #1	2-2"	TRANSFER PUMP #2	100HP
6MF	6MF-1	3	225	200	6	3PW	PART-WINDING	120				H-O-R ③	4	1	1	2	④	1	6	6" #1	2-2"	TRANSFER PUMP #3	100HP-200HP FUTURE
7MF	7MF-1	3	400	400	8	5	CLOSED TRANSF. AUTO TRANSF.	120				H-O-R ③	6	3	1	1	1	1	3	3-350 #4	3"	BACKWASH PUMP	200HP ②
1MR	1MR-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					3" #12	1"	RAPID MIX	3HP
	1MR-2																			3" #12	1"	POST MIXER #1	3HP
	1MR-3																			3" #12	1"	POST MIXER #2 NORTH	3HP
	1MR-4																			3" #12	1"	POST MIXER #3	3HP
	1MR-5																			3" #12	1"	POST MIXER #4	3HP
2MR	2MR-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					3" #12	1"	FLOCCULATOR #1	3HP
	2MR-2																			3" #12	1"	POST MIXER #5	3HP
	2MR-3																			3" #12	1"	POST MIXER #6 SOUTH	3HP
	2MR-4																			3" #12	1"	POST MIXER #7	3HP
	2MR-5																			3" #12	1"	POST MIXER #8	3HP
3MR	3MR-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					3" #12	1"	FLOCCULATOR #2	3HP
	3MR-2																			3" #12	1"	" #3	3HP
	3MR-3																			3" #12	1"	" #4	3HP
	3MR-4																			3" #12	1"	" #5	3HP
	3MR-5																			3" #12	1"	" #6	3HP
4MR	4MR-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					3" #12	1"	FLOCCULATOR #12	3HP
	4MR-2																			3" #12	1"	" #8	3HP
	4MR-3																			3" #12	1"	" #9	3HP
	4MR-4																			3" #12	1"	" #10	3HP
	4MR-5																			3" #12	1"	" #11	3HP
5MR	5MR-1	3	50	15	3	1	FVNR	120				P.B.	2	1	1					3" #12	1"	FLOCCULATOR #12	3HP
	5MR-2																			3" #12	1"	" #13	3HP
	5MR-3																			3" #12	1"	" #14	3HP
	5MR-4																			3" #12	1"	" #15	3HP
	5MR-5																			3" #12	1"	" #16	3HP
6MR	6MR-1	3	50	50	3	2	FVNR	120				H-O-R ③	2	1	1	1	1	1	3	3" #6	1 1/4"	PLANT WATER PUMP	20HP
	6MR-2			50		2						P.B.	3							3" #6	1 1/4"	SWEEP WATER PUMP	20HP
	6MR-3			15		1						SPST	1							3" #10	3/4"	AIR COMPRESSOR #1	7 1/2HP
	6MR-4			15		1						SPST	1							3" #10	3/4"	" #2	7 1/2HP
	6MR-5			15		1						P.B.	2									SPARE CKT. BKR. & STARTER	
7MR	7MR-1	REAR OF AUTO-TRANSFORMER STARTER-BLANK																					

- NOTES**
- CONTACTOR ONLY-NO OVERLOAD RELAYS
 - VERIFY HORSEPOWER RATING OF BACKWASH PUMP MOTOR BEFORE ORDERING CKT. BKR. - 400 AMP TRIP IS FOR 200 HP; IF MOTOR IS 150 HP, INSTALL 300 AMP TRIP.
 - HAND-OFF-REMOTE MAINTAINED CONTACT 3 POSITION SELECTOR SWITCH.
 - REFER TO WIRING DIAGRAM FOR TRANSFER PUMPS FOR WIRING OF SECOND TIMING RELAY-SHEET #E-II.
 - MOTOR OVERLOAD HEATERS SHALL NOT BE ORDERED UNTIL THE MOTORS HAVE BEEN DELIVERED TO THE JOB SITE. HEATERS SHALL BE OF A SIZE RECOMMENDED BY THE MANUFACTURER OF THE STARTER, BASED UPON ACTUAL MOTOR NAME-PLATE FULL-LOAD AMPERES.
 - ALL CONTROL TRANSFORMERS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
 - SUFFICIENT VOLT-AMPERE CAPACITY TO HANDLE THE SEALED-IN VOLT-AMPERE LOAD OF ALL CONTROL DEVICES (STARTER COILS, RELAYS, PILOT LIGHTS) WHICH IT SERVES.
 - SUFFICIENT VOLT-AMPERE CAPACITY SO THAT THE TOTAL INRUSH CURRENT OF ALL CONTROL DEVICES (STARTER COILS, RELAYS, PILOT LIGHTS) WHICH IT SERVES WILL NOT CAUSE THE SECONDARY VOLTAGE TO DROP BELOW 85% OF RATED VOLTAGE WHEN THE PRIMARY VOLTAGE HAS BEEN REDUCED TO 90% OF RATED VOLTAGE.
 - MOTOR CONTROL CENTER "M" SHALL BE FURNISHED WITH A 50% NEUTRAL BUS AND A 1/8" X 1" (MINIMUM) COPPER GROUND BUS.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

VAR 7 15 BUILT	DESCRIPTION	FJL
NO. DATE	REVISIONS	BY CRD.
RUSSELL & AXON, INC. CONSULTING ENGINEERS DAYTONA BEACH, FLA. ST. LOUIS, MO.		
WATER WORKS PROJECT WATER TREATMENT PLANT PART B SCHEDULE FOR MOTOR CONTROL CENTER "M" MANATEE COUNTY, FLORIDA		
DESIGNED BY JMSG	FILE NO. 6353-3-E-15-III-B	SEAL J. P. RAPINOS No. 3748 STATE OF FLORIDA REGISTERED ENGINEER
DRAWN BY R.C.T.	SHEET 16	NO. ① III-B
CHECKED BY G.E.B.	DATE Feb. 1965	SCALE: NONE

PANEL BOARD #	CKT. NO.	BRANCH CKT. BKRS.		SERVING	CABLE	CONDUIT	APPROX. CONNECTED LOAD - VA			CKT. NO.	BRANCH CKT. BKRS.		SERVING	CABLE	CONDUIT	APPROX. CONNECTED LOAD - VA		
		POLES	AMPS				PHASE				POLES	AMPS				PHASE		
							A	B	C							A	B	C
PANEL BOARD #1 MAINS: 3+ 4W 120/208 V. 22.5 AMP. MAIN BKR: NONE TYPE OF MOUNTING SURFACE ENCLOSURE NEMA 1	1-1	1	20	LIGHTING - PUMP ROOM	4-1/2"	3/4"	1200			1-2	1	20	LIGHTING - PUMP ROOM	3-1/2"	3/4"	800		
	1-3			"			1200			1-4			"			1200		
	1-5			"					600	1-6			SPARE					
	1-7			LIGHTING - CHEMICAL FEED RM.	3-1/2"	3/4"	1300			1-8			LIGHTING - CHLORINE STOR. RM.	4-1/2"	3/4"	600		
	1-9			"			600			1-10			"			1200		
	1-11			SPARE						1-12			"					1200
	1-13			LIGHTING - OFFICE & ENTRY	4-1/2"	3/4"	1200			1-14			LIGHTING - TOILET ROOM AREA	3-1/2"	3/4"	600		
	1-15			RECEPTACLES (4) & BUG KILLER	4-1/2"	3/4"		900		1-16			RECEP. (3) + EXHAUST FAN	4-1/2"	3/4"		900	
	1-17			" (4)				800		1-18			SPARE					
	1-19			RECEPTACLES - CHEM. FEED RM. (3)	4-1/2"	3/4"	500			1-20			RECEPTACLES - PUMP RM. (3)	4-1/2"	3/4"	600		
	1-21			" (3)			600			1-22			RECEP. (1) + LTG. (200 W) PUMP RM	4-1/2"	3/4"		400	
	1-23			" (7)				400		1-24			RECEPTACLES - PUMP ROOM (2)	4-1/2"	3/4"		400	
	1-25			WATER SOFTENERS	3-1/2"	3/4"	500±			1-26			SLUDGE BLOW-OFF SOLENOID VALVES	2-1/2"	1/2" C	100±		
	1-27			CHLORINE RECORDER	3-1/2"	3/4"		100±		1-28			SPARE					
1-29			SPACE HEATER IN GENERATOR	2-1/2"	1/2"		700±		1-30			SPARE						
1-31			WATER TANK CONTACT	2-1/2"	1/2"		3000	3000	1-32			SPARE						
TOTAL NO. OF POLES INCLUDING SPACES ONLY: 42	1-33	1	20	"					1-34			"						
	1-35		20	"					1-36			"						
	1-37			SPACE ONLY					1-38			"						
	1-39			"					1-40			"						
	1-41			"					1-42			"						
PANEL BOARD #2 MAINS: 3+ 4W 120/208 V. 22.5 AMP. MAIN BKR: NONE TYPE OF MOUNTING SURFACE ENCLOSURE NEMA 1	2-1	1	20	LIGHTING - LABORATORY AREA	3-1/2"	3/4"	1500			2-2	1	20	LIGHTING (TOIL. RM. - 575) + 1 REC	3-1/2"	3/4"	775		
	2-3			"			1500			2-4			RECEPTACLES - LABORATORY (3)	3-1/2"	3/4"		600	
	2-5			SPARE						2-6			" (2)	3-1/2"	3/4"		400	
	2-7			RECEPTACLE - LABORATORY (1)	4-1/2"	3/4"	200			2-8			RECEP. (1) + INCUBATOR (300)	4-1/2"	3/4"	500		
	2-9			"			200			2-10			RECEP. (1) + VACUUM PUMP	4-1/2"	3/4"		720±	
	2-11			RECEP. - LAB. DRYING OVEN)				150		2-12			RECEP. (1) + CENTRIFUGE (100)	4-1/2"	3/4"		300	
	2-13			LIGHTING - CHLORINATION RM.	3-1/2"	3/4"	900			2-14			SPARE					
	2-15			EX. FAN - CHLORINATION RM.	3-1/2"	3/4"		720		2-16			"					
	2-17			SPARE						2-18			"					
	2-19			PRE-CHLORINATOR	3-1/2"	3/4"	500±			2-20			"					
	2-21			POST-CHLORINATOR	3-1/2"	3/4"		500±		2-22			"					
	2-23			POST-CHLORINATOR CONTROLLER				500±		2-24			"					
	2-25			AC FAN					2-26				FLUME HOOD	3-1/2"	3/4"	500±		500±
	2-27	2	20	AUTOCLAVE	3-1/2"	3/4"	875	875	2-28	2	20		MUFFLE FURNACE	3-1/2"	3/4"	720	720	
2-29			SPACE ONLY					2-30	2	20		KITCHED UNIT						
2-31	2	20	SPACE					2-32				SPACE						
2-33	2	50	SPACE					2-34				SPACE						
2-35	2	20	SPACE					2-36				SPACE						
PANEL BOARD #3 MAINS: 3+ 4W 120/208 V. 22.5 AMP. MAIN BKR: NONE TYPE OF MOUNTING SURFACE ENCLOSURE NEMA 1	3-1	1	20	LIGHTING - FILTER CONSOLE AREA	3-1/2"	3/4"	1200			3-2	1	20	SPARE					
	3-3			"			1200			3-4			"					
	3-5			SPARE						3-6			"					
	3-7			LIGHTING - FILTER WALKWAYS	4-1/2"	3/4"	800			3-8			LIGHTING - FILTER WALKWAYS	4-1/2"	3/4"	800		
	3-9			"			1200			3-10			"			1000		
	3-11			EXTERIOR FLOODLIGHTING				1200		3-12			EXTERIOR FLOODLIGHTING				1200	
	3-13			FILTER FLOODLIGHTING	4-1/2"	3/4"	600			3-14			FILTER FLOODLIGHTING	4-1/2"	3/4"	600		
	3-15			"			600			3-16			"			600		
	3-17			"				600		3-18			"				600	
	3-19			LTG. - 1ST FLR. - FILTER AREA	4-1/2"	3/4"	1000			3-20			RECEP. - FILTER AREA (3)	4-1/2"	3/4"	600		
	3-21			"			1000			3-22			" (3)	4-1/2"	3/4"		600	
	3-23			BACKWASH CONTROL PANEL				100±		3-24			" (3)				600	
	3-25 THRU 3-41			SPACE ONLY FOR FUTURE FILTER LTG.					3-26 THRU 3-42				SPACE ONLY FOR FUTURE FILTER LTG.					
	PANEL BOARD #4 MAINS: 3+ 4W 120/208 V. 22.5 AMP. MAIN BKR: NONE TYPE OF MOUNTING SURFACE ENCLOSURE NEMA 1	4-1	1	20	LIGHTING - SEDIMENTATION TANK EAST	3-1/2"	1"	900			4-2	1	20	LIGHTING - SEDIMENTATION TANK WEST	4-1/2"	1"	600	
4-3				"			900			4-4			"			900		
4-5				SPACE						4-6			FLOODLIGHTING - LIME SLUDGE LAGOON	4-1/2"	1"		1000±	
4-7				LIGHTING - SEDIMENTATION TANK NORTH	4-1/2"	1"	900			4-8			LIGHTING - SEDIMENTATION TANK SOUTH	4-1/2"	1"	900		
4-9				"			900			4-10			"			900		
4-11				"				1350		4-12			"				1350	
4-13				RECEPTACLES - SEDIMENTATION TANK (4) AND BUG KILLERS (2)	4-1/2"	1"	1000			4-14			SPARE					
4-15				RECEPTACLES (3) AND BUG KILLER (1)	4-1/2"	1"		700		4-16			"					
4-17				RECEPTACLES (3) AND BUG KILLER (1)				700		4-18			"					
4-19 THRU 4-41				SPACE ONLY FUTURE SEDIMENTATION TANK LIGHTING					4-20 THRU 4-42				SPACE ONLY FUTURE SEDIMENTATION TANK LIGHTING					

PANEL BOARD #	CKT. NO.	BRANCH CKT. BKRS.		SERVING	CABLE	CONDUIT	APPROX. CONNECTED LOAD - VA			CKT. NO.	BRANCH CKT. BKRS.		SERVING	CABLE	CONDUIT	APPROX. CONNECTED LOAD - VA		
		POLES	AMPS				PHASE				POLES	AMPS				PHASE		
							A	B	C							A	B	C
PANEL BOARD #6 MAINS: 3+ 4W 120/208 V. 100 AMP. TOP & BOT. MAIN BKR: NONE TYPE OF MOUNTING SURFACE ENCLOSURE NEMA 1	6-1	1	20	EXT. FLOODLIGHTING WEST	4-1/2"	1"	600			6-2	1	20	FOUNTAIN PUMP	2-1/2"	1"	720		
	6-3			"			1200			6-4			SPARE					
	6-5			"				600		6-6	2	40	AIR COND. FAN (OFFICE)					
	6-7	2	50	A/C OFFICE	4-1/2"	1"	1000	1000	1000	6-8	2	50	WATER HEATER					
	6-9	3	40	'SOS' FEEDS' BOTTOM HALF PANEL & TIME CLOCK	4-1/2"	1"				6-10			SPACE ONLY					
	6-11			SPACE						6-12			"					
	6-13			"						6-14			"					
	6-15			"						6-16	2	30	SPARE					
	6-17			"						6-18	3	40	SPARE					
	SPLIT BUS HERE																	
	6-11	1	20	EXT. FLOODLIGHTING FRONT	3-1/2"	1"	900			6-20	1	20	COLORSCOPE IN FOUNTAIN	2-1/2"	1"	400		
	6-13			"			900			6-22			SPARE					
	6-15			SPACE						6-24			"					
	6-15			EXT. FLOOD LIGHT FRONT						6-26			SPACE ONLY					
6-27			SPACE ONLY						6-28			"						
6-29			"						6-30			"						
SPLIT BUS HERE																		
7-1	1	20	SPARE						7-2	1	20	TELEMETERING	2-1/2"	1"	500±			
7-3			CODER AND DECODER	2-1/2"	1"	100±			7-4			RAW WATER PUMP CONTROL & CLEARWELL LEVEL IND.-REC.	2-1/2"	1"	100±			
7-5			TRANSFER PUMP CONTROL & GROUND STORAGE LEVEL IND.-REC.	2-1/2"	1"	100±			7-6			BOOSTER PUMP CONTROL & ELEVATED STORAGE TANK LEVEL IND.-REC.	2-1/2"	1"	100±			
7-7			RAW WATER FLOW IND.-REC. TOTAL RAW WATER RESER. LEVEL IND.-REC. TRANS. PUMP FLOW IND.-REC. TOTAL BOOSTER PUMP FLOW IND.-REC. TOTAL	2-1/2"	1"	200±			7-8			CHLORINE FLOW RECORDER	2-1/2"	1"	100±			
7-9			SPACE						7-10			RECEP. IN CONTROL CONSOLE	2-1/2"	1"	200±			
7-11			ANNUNCIATOR				500±		7-12			SPACE						
7-13			CLEARWELL LEVEL TRANSM.	2-1/2"	3/4"	100±			7-14			"						
7-15			RAW WATER FLOW TRANSM.	2-1/2"	3/4"	100±			7-16			"						
7-17			TRANSF. PUMP FLOW TRANSM.	2-1/2"	3/4"	1												