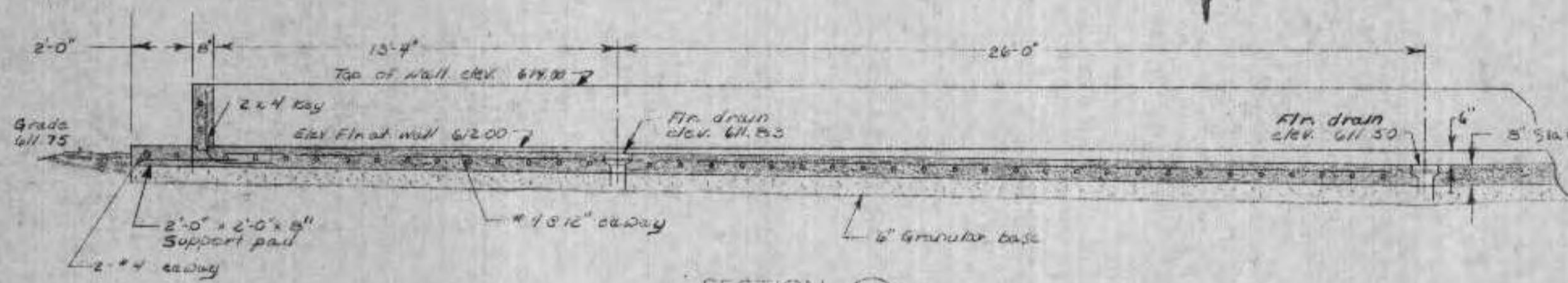
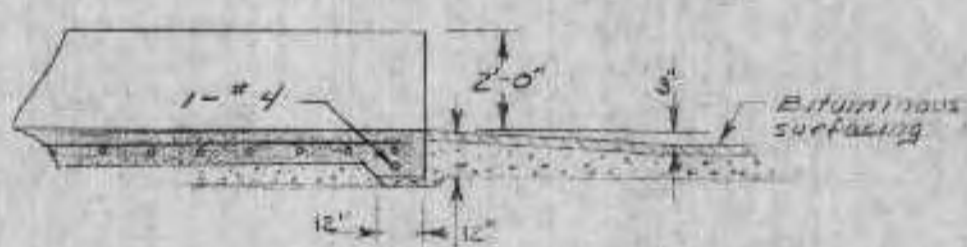


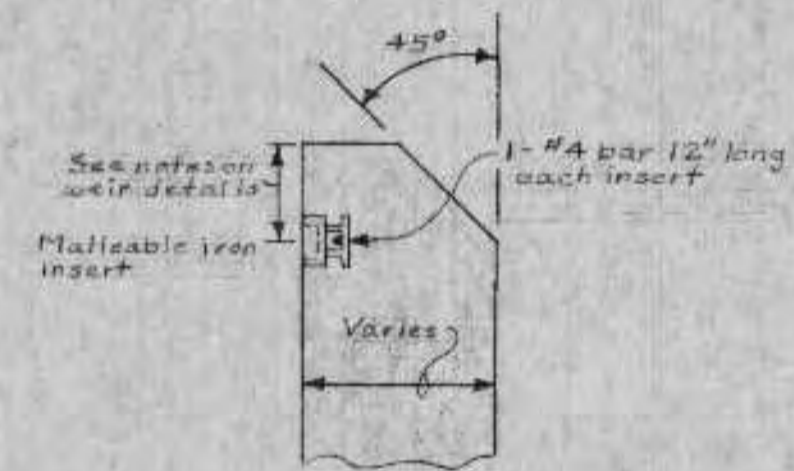
PLAN  
SCALE 1/4"=1'-0"



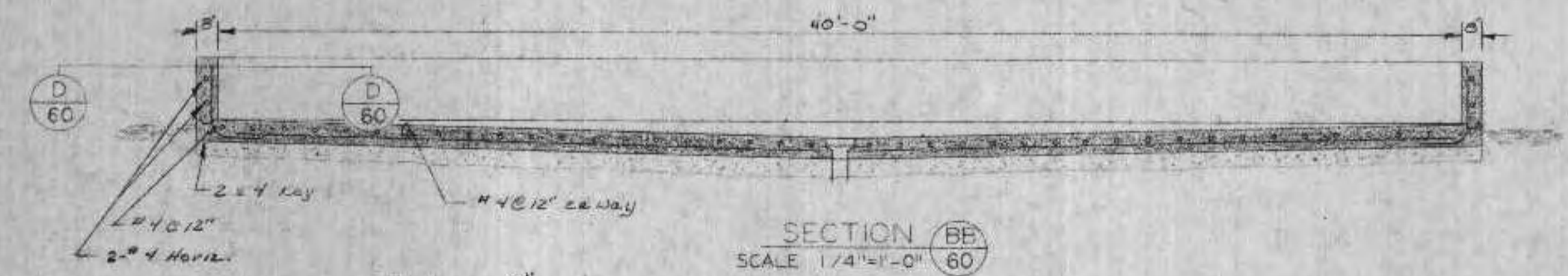
SECTION AA  
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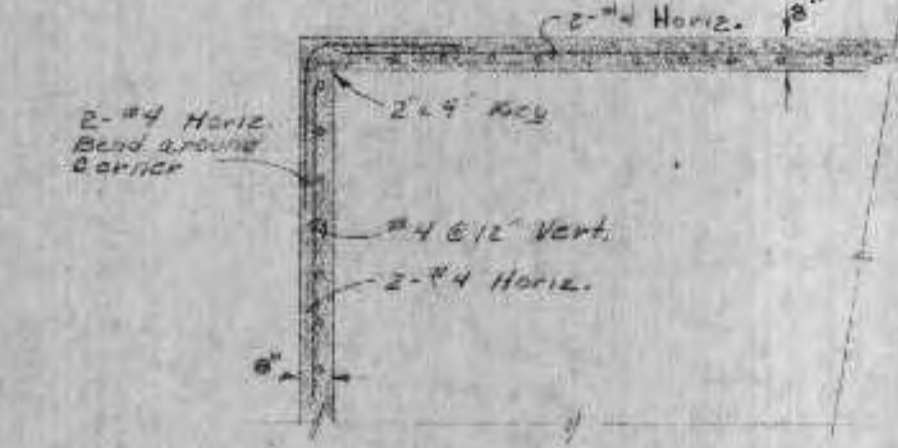
SECTION CC  
SCALE 1/4"=1'-0"



WEIR DETAIL



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



CORNER DETAIL  
SECTION DD  
SCALE 1/4"=1'-0"



SIDE WALK DETAIL

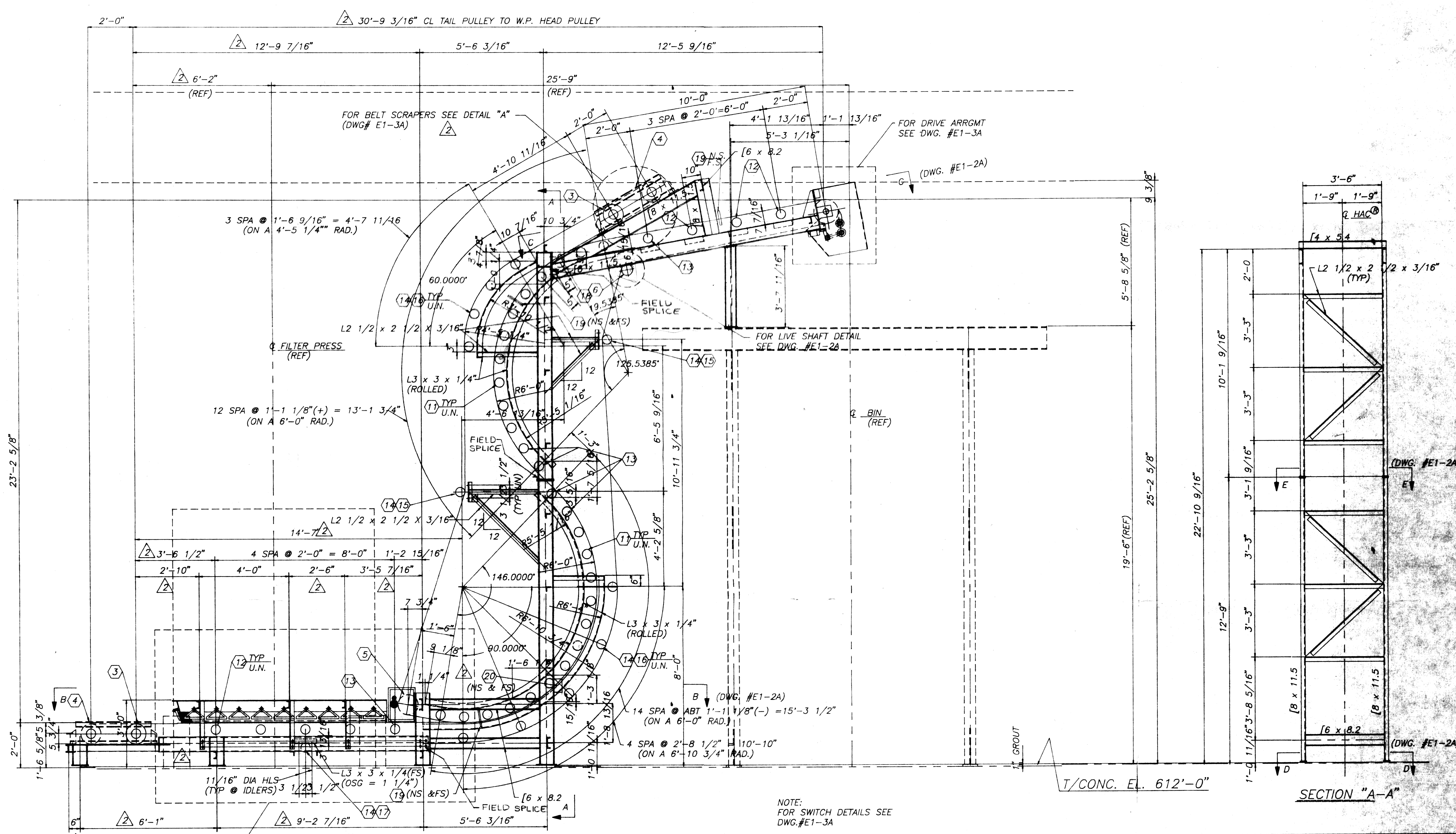
REVIEWED AND APPROVED BY THE  
DIR. OF ENVIRONMENTAL PROTECTION,  
DEPT. NATURAL RESOURCES,  
IN ACCORDANCE WITH SEC. 144.04,  
WIS. STATS. SUBJECT TO THE CON-  
DITIONS SET FORTH IN THE LETTER  
OF APPROVAL.  
THOMAS G. FRANGOS  
ADMINISTRATOR

APPROVAL NO.  
72 355

DATE: FEB 4 '74

Notes: Continue reinforcing through  
contraction joints. Place 2x4  
expansion joint a maximum of  
40 feet o.c.

DNR JAN 3 1974



**GENERAL ARRANGEMENT of 24" B.W. HAC TO HANDLE FILTER CAKE SEWAGE SLUDGE**  
**MAT'L DENSITY: 40 PCF**  
**MAT'L SIZE: 2" MINUS**  
**CONV. RATE: 10 TPH**  
**CONV. SPEED: 240 FPM**  
**CONV. DRIVE: 10 HP(BOTT BELT ONLY)**

T/CONC. EL. 612'-0"  
 SECTION "A-A"  
 NOTE: FOR SWITCH DETAILS SEE DWG. #E1-3A

BY	DATE	REVISIONS	NO.
Morgan	7-14-92	APPROVAL CHANGES	
Morgan	6-18-92	APPROVAL CHANGES	

CONTINENTAL CONVEYOR & EQUIPMENT COMPANY, INC.  
 A NESCO Company

post office box 400  
 Winfield, Ia 53594  
 (205)487-6492


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DRAWN BY Morgan  
 CHECKED BY JK  
 APPROVED BY  
 SCALE: 1/2"=1'-0"  
 DO NOT SCALE PRINT

GENERAL ARRANGEMENT for 24" B.W. HAC WASTE WATER TREATMENT PLANT SUPERIOR, WISCONSIN  
 W-10393  
 DRAWING NUMBER  
 E1-1A 2

**EQUIPMENT LIST -24" B.W. HAC®**

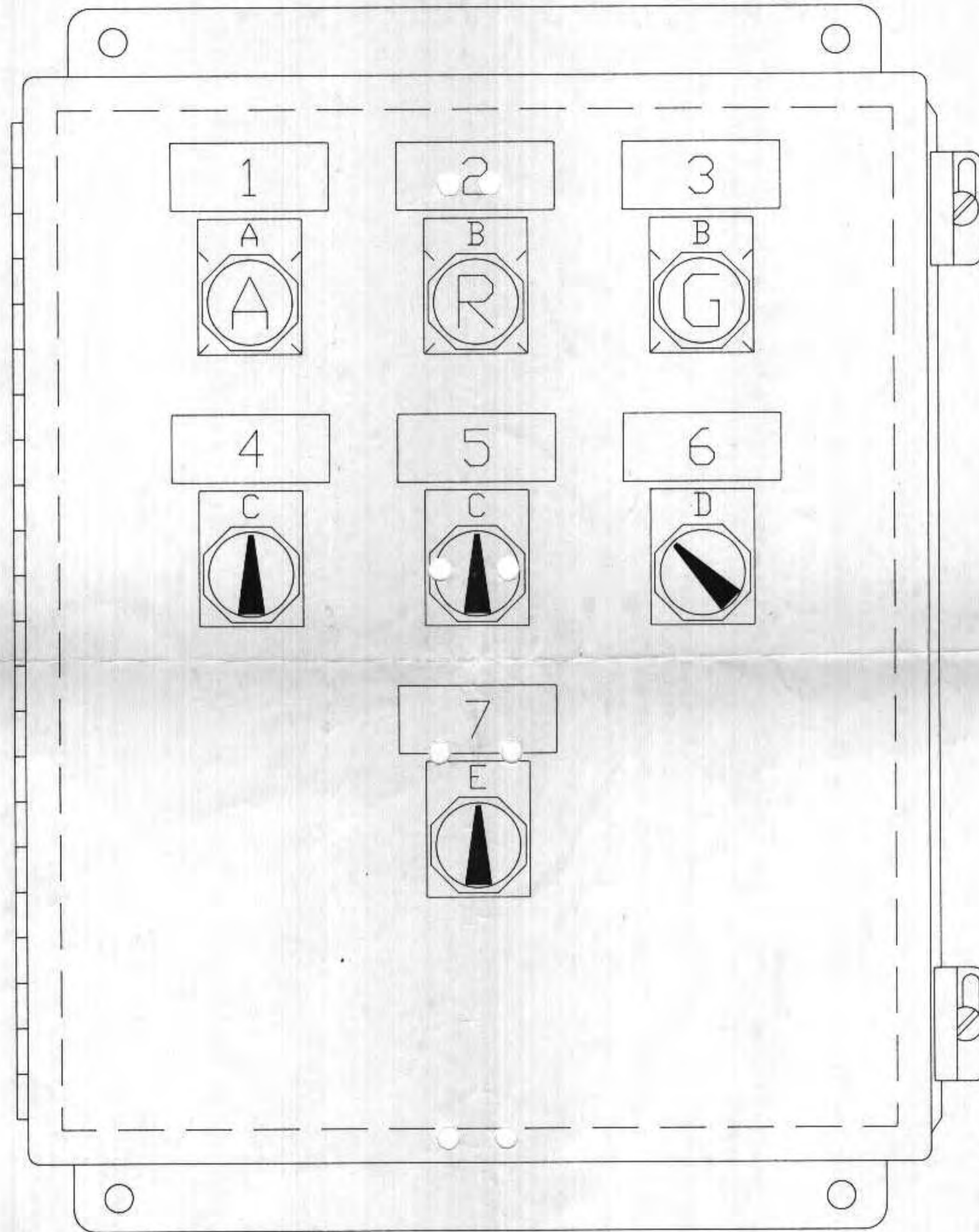
ASSEMBLY	ITEM NO.	QUANTITY	DESCRIPTION	ASSEMBLY	ITEM NO.	QUANTITY	DESCRIPTION		ITEM NO.	QUANTITY	DESCRIPTION
DRIVE	①	1	DODGE SHAFT-MOUNT REDUCER, QD-TYPE TAPERED BUSHED BORE, CAT. #TXT425, COMPLETE WITH TORQUE ARM ASS'Y AND HOLDBACK, CLASS II, 1.4 S.F., 2.4375 DIA. BORE. MOTOR MOUNT # TA-4M, 1 - 8" DIA. DRIVER SHEAVE (1.375 BORE), 1 - 8" DIA. DRIVEN SHEAVE (1.4375 BORE), 2 DYNA V-BELTS # 3VX-800 10 HP, HOSTILE ENVIRONMENT-RIGID BASE, 1750 RPM TYPE 0940M, NEMA FRAME #215T 3/80/460 VOLT NEMA "B" DESIGN	IDLERS (BY CCECO)	⑪	24	10 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT# 78AK8283-24SW (B.W. + 15)	SPARE PARTS		1	DODGE FASF-XT22520 3.4375" DIA. BORE PILLOW BLOCK
					⑫	7	20 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT# 78AK8286-24SW (B.W. + 15)		1	DODGE FASF-XT 2.4375" DIA. BORE PILLOW BLOCK	
					⑬	6	5 - 20 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT# 78AK6989 (B.W. + 15)		1	PILLOW BLOCK SKF-SYR115-3 1.9375" DIA. BORE	
⑭	13	6" DIA. FLAT RETURN IDLERS PT# 78AK7920-3300 (B.W. + 15)	1	10 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT#78AK8283-24SW (B.W. + 15)							
⑮	8	4 1/4" DROP BRACKET PT#72A3602	1	20 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT#78AK8286-24SW (B.W. + 15)							
⑯	28	4 1/4" RISE BRACKET PT#72A4622	1	5 - 20 DEGREE 5" DIA. OFFSET STEEL ROLL H-PLUS TROUGHING IDLERS 24" B.W. PT##78AK6989 (B.W. + 15)							
⑰	2	2 1/8" DROP BRACKET PT#72A3606 (ALL IDLER BRACKETS PAINTED STEEL) (ALL IDLERS LAGGED WITH 1/8" THK URETHANE)	1	6" DIA. FLAT RETURN IDLERS PT#78AK7920-3300 (B.W. + 15)							
DRIVE SHAFT (BY CCECO)	②	1	C1045 SHAFT 3.4375" DIA. x APPROX. 60" LONG, NECKED TO 2.4375" DIA. FOR DRIVE WITH 3 KEYWAYS 12" DIA. x 30" STRAIGHT FACE PULLEY W/ BROWNING XT-35 HUBS & HERRINGBONE RUBBER LAGGING MACHINED TO 13,000 DIA. ASSEMBLED WITH DODGE FASF-XT22520 3.4375" DIA. BORE PILLOW BLOCKS	ELECTRICAL	⑱	1	ZERO-SPEED SWITCH. CONVEYOR COMPONENTS #MS STUB SHAFT # MS-3, FLEXIBLE COUPLING # MS-4, & COUPLING GUARD # MS-5		NOTE: 1. ENTIRE FRAME AND SUPPORT ASSEMBLY HOT DIPPED GALVANIZED. 2. ALL FASTENERS ON HAC STAINLESS STEEL.		
TAKE-UP SHAFT	③	2	C1045 SHAFT 2.9375" DIA. X 47" LONG, NECKED TO 2.4375" DIA. 10" DIA. X 30" STRAIGHT FACE PULLEY W/ BROWNING XT-30 HUB & .375" PLAIN RUBBER LAGGING		⑲	6	BELT MIS-ALIGNMENT SWITCH. SQUARE-D SERIES 9007 MODEL C54J				
TAKE-UP ASS'Y (BY CCECO)	④	4	SCREW TAKE-UP ASS'Y #TX207-24 W/2.4375" DIA. BORE BEARING WITH 24" TAKE-UP TRAVEL		⑳	2	EMERGENCY PULL CHORD SWITCH CONVEYOR COMPONENTS #RS-1				
BEND PULLEY (BY CCECO)	⑤	1	C1045 SHAFT 2.9375" DIA. x APPROX. 48" LONG, NECKED TO 2.4375" DIA. 10" DIA. x 30" S.F. CONV. PULLEY W/ XT-30 HUBS & .375 PLAIN RUBBER LAGGING. PILLOW BLOCKS DODGE FASF-XT 2.4375 DIA. BORE		㉑		ITEM OF SAFETY PULL CHORD, NO. 6, 3/32" DIA. (7 X 7) PREFORMED GALV. AIRCRAFT CABLE COATED W/ RED NYLON TO 3/16" DIA.				
LIVE SHAFT (BY CCECO)	⑥	1	C1045 SHAFT 1.9375" DIA. X 43" LONG. (DRILLED & TAPPED ONE END FOR .625" STUB SHAFT) 6" DIA. x 30" S.F. CONV. PULLEY W/ XT-20 HUBS & .25 PLAIN RUBBER LAGGING. PILLOW BLOCKS SKF - SYR115-3 1.9375 DIA. BORE (SHIPPED LOOSE)		㉒		LOT OF EYEBOLTS, 1/2" X 1 X 3 1/4" LG. (PLATED)				
CONV. BELT	⑦	APPROX. 180 LINEAR FEET	24" WIDE BELT, 2 PLY MP150 PIW, WITH 1/8" x 1/32" OMEGA COVERS, GOODYEAR OR EQUAL W/TWO (2) VULCANIZED BELT SPLICE KITS FOR FIELD VULCANIZING OF BELT		㉓		ITEM OF WIRE CLIPS, 3/16" DIA. (GALV.)				
					㉔		ITEM OF WIRE THIMBLES 3/16" DIA. (GALV.)				
BELT CLEANERS	⑧	1	24" B.W. GORDON PRECLEANER	SKIRT BOARD	㉕		MARTIN "DURT SEAL" SKIRT SYSTEM COMPLETE WITH 19 CLAMPS AND 1 ROLL SPECIAL SKIRT RUBBER				
	⑨	1	24" B.W. GORDON URETHANE SECONDARY CLEANER								
	⑩	1	24" B.W. STAINLESS STEEL BLADE CLEANER								

ddc	7/20/92	Approval Changes	1
BY	DATE	REVISIONS	NO.
CONTINENTAL CONVEYOR & EQUIPMENT COMPANY, INC. A NESCO Company			
post office box 400 winfield, ill 35594 (205)487-6492			JOB NUMBER <b>W-10393</b>
EQUIPMENT LIST for <b>24" B.W. HAC®</b> WASTE WATER TREATMENT PLANT SUPERIOR, WISCONSIN			DRAWING NUMBER <b>E-2A</b>

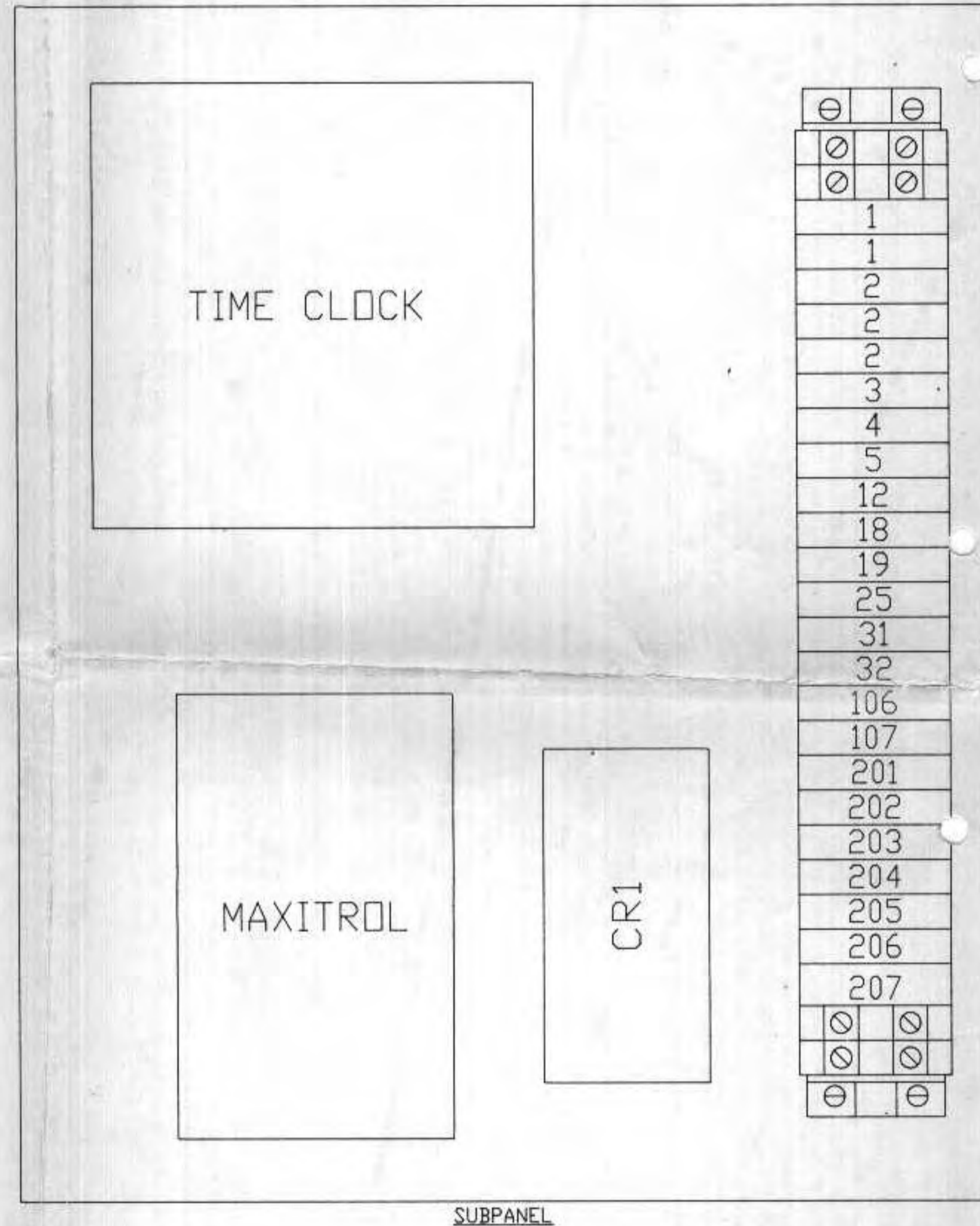
TOLERANCES NOT OTHERWISE SPECIFIED  
 STEEL WORK "AISI"  
 FRACTIONAL ± 1/32  
 DECIMAL ± 1/64  
 ANGULAR DO NOT SCALE PRINT

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DRAWN BY Morgan  
 CHECKED BY  
 APPROVED  
 SCALE NONE  
 DO NOT SCALE PRINT



ENCLOSURE: 12"H x 10"W x 8.0"D  
 JIC CONSTRUCTION  
 W/ONE 10.75"H x 8.88"W SUBPANEL



SUBPANEL

RINGTAG SPECIFICATIONS :  
 TYPE : CR080PXN2  
 LETTER SIZE : 0.125  
 CUTTER : 0.020  
 DEPTH : 0.008

RINGTAG SCHEDULE	
RTG	DESCRIPTION
A	RUN
B	DN
C	HAND - OFF - AUTO
D	OFF - AUTO
E	SUMMER - OFF - WINTER

NAMEPLATE SPECIFICATIONS :  
 MATERIAL : GRAVOPLY II, WHT W/BLK LETTERS  
 LETTER SIZE : .156  
 CUTTER : .020  
 DEPTH : 5

NAMEPLATE SCHEDULE		
NP#	SIZE	DESCRIPTION
1	A	BLOWER
2	A	BURNER ALARM
3	A	MAIN FLAME
4	A	EXHAUST FAN #1
5	A	EXHAUST FAN #2
6	A	EXHAUST FAN #3
7	A	MUA CONTROL

APPROVED  
 DATE 7/20/92  
 BY JSL/A

PANEL SHALL BE CONSTRUCTED PER  
 UL 508 REQ. AND COMPLETE ASSEMBLY  
 SHALL BEAR A SERIALIZED UL LABEL

CITY OF SUPERIOR - WWTP  
 MAIN PLANT BENT FILTER PRESS BARS

07/09/92 13:00 C5077A01

No.	DATE	BY	DESCRIPTION
A	7/9/92	RJB	REVISED PER CUSTOMER

SCALE 1=1 APPR  
 DR RJB DATE 5/26/92  
 CK DATE  
 SHOP ISSUE DATE

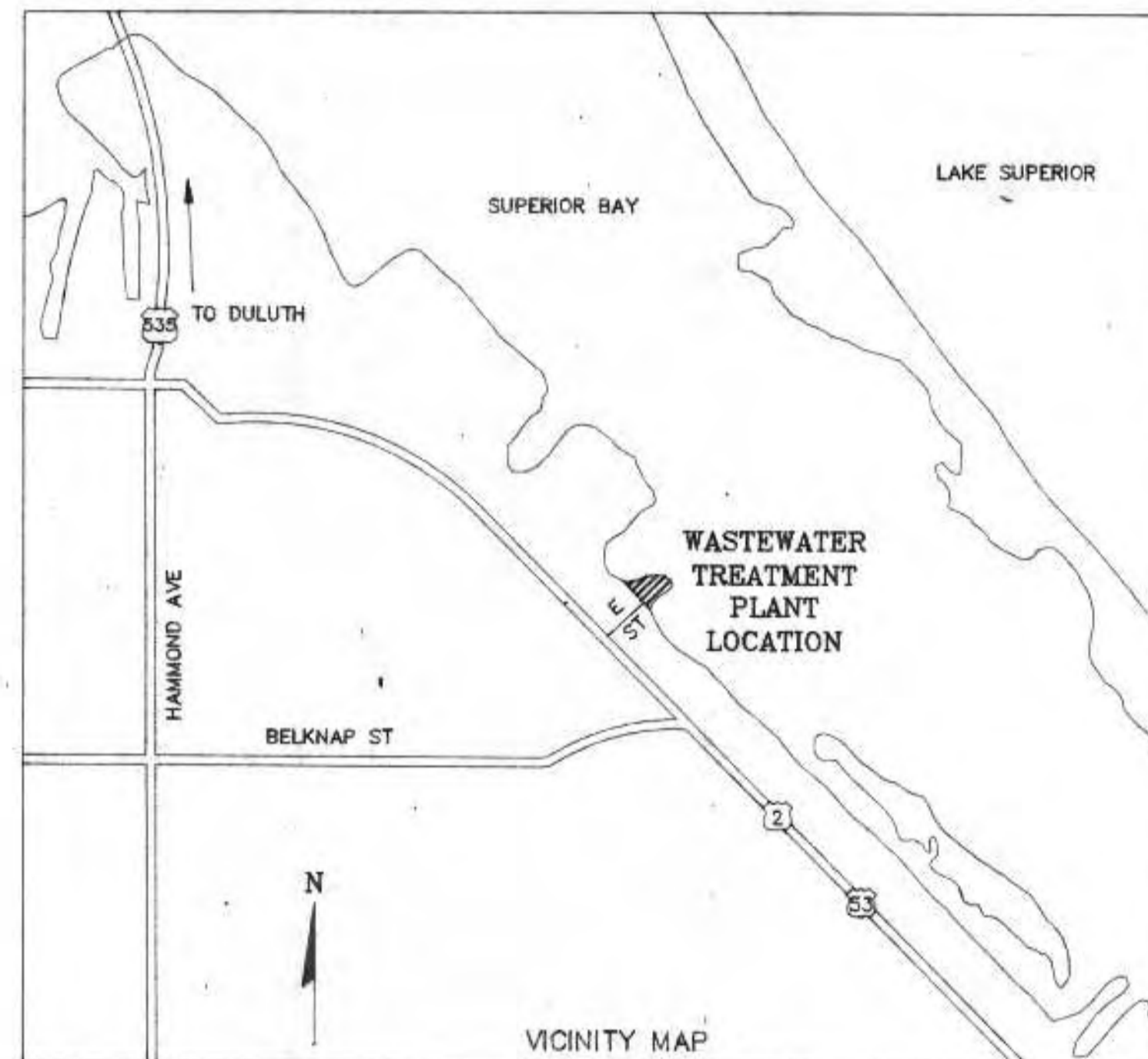
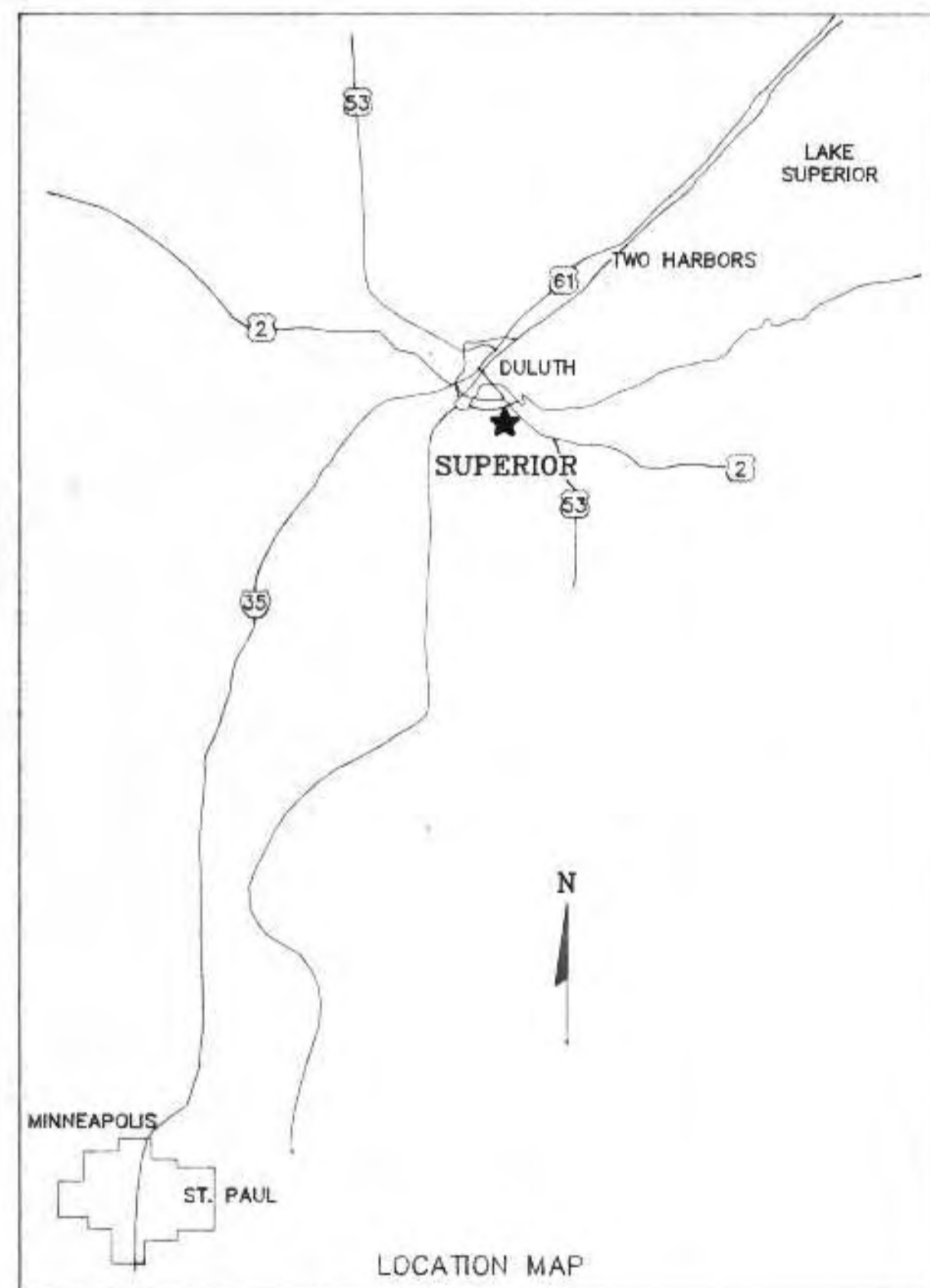
**Control Assemblies Co.**  
 Factory Automation Specialists  
 Minneapolis, Minnesota

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DESCRIPTION:  
 REMOTE BURNER  
 CONTROL PANEL  
 PANEL LAYOUT

FOR: L.E. RIBAR CO.  
 DRAWING NO. C5077  
 SHEET 1 OF 2

PLANS FOR CONSTRUCTION OF  
 SLUDGE DEWATERING/HANDLING FACILITIES  
 SUPERIOR WASTE WATER  
 TREATMENT PLANT  
 CITY OF  
 SUPERIOR, WISCONSIN



INDEX TO PLANS

TITLE	SHEET NO.
SITE PLAN	C-1
DEWATERING BUILDING FOUNDATION PLAN	S-1
DEWATERING BUILDING ROOF AND WALL SYSTEMS	S-2
DEWATERING BUILDING ELEVATIONS	S-3
DEWATERING BUILDING STRUCTURAL DETAILS	S-4
DEWATERING BUILDING MECHANICAL PLAN	M-1
DEWATERING BUILDING MECHANICAL SECTIONS	M-2
DIGESTER CONTROL BUILDING MODIFICATIONS	M-3
SLUDGE CAKE STORAGE BIN	M-4
MECHANICAL DETAILS	M-5
MECHANICAL DETAILS	M-6
DEWATERING BUILDING HVAC	H-1
ELECTRICAL SITE PLAN AND DISTRIBUTION	E-1
ELECTRICAL PLANS- DEWATERING & DIGESTER BLDGS	E-2
ELECTRICAL DETAILS	E-3

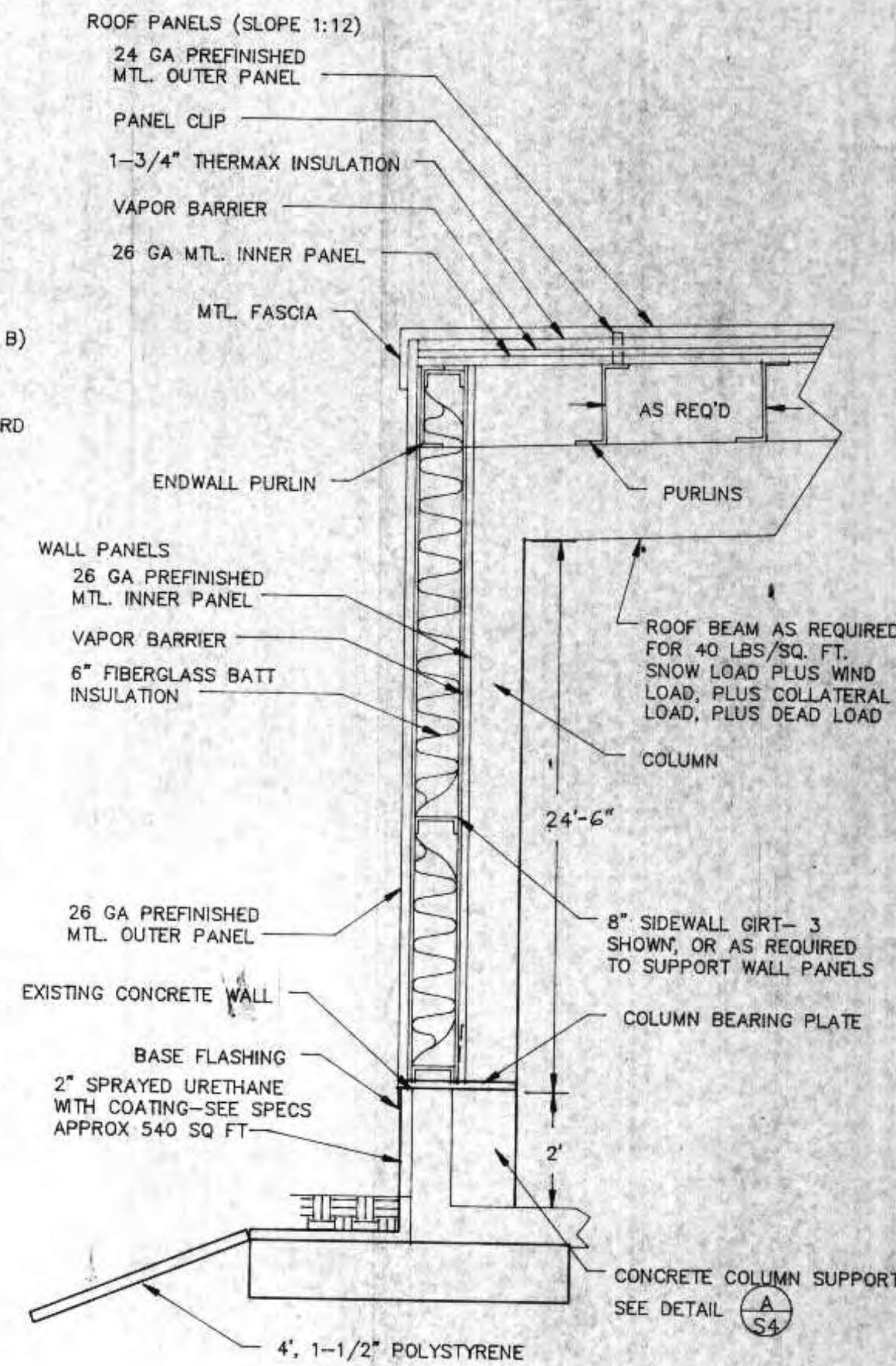
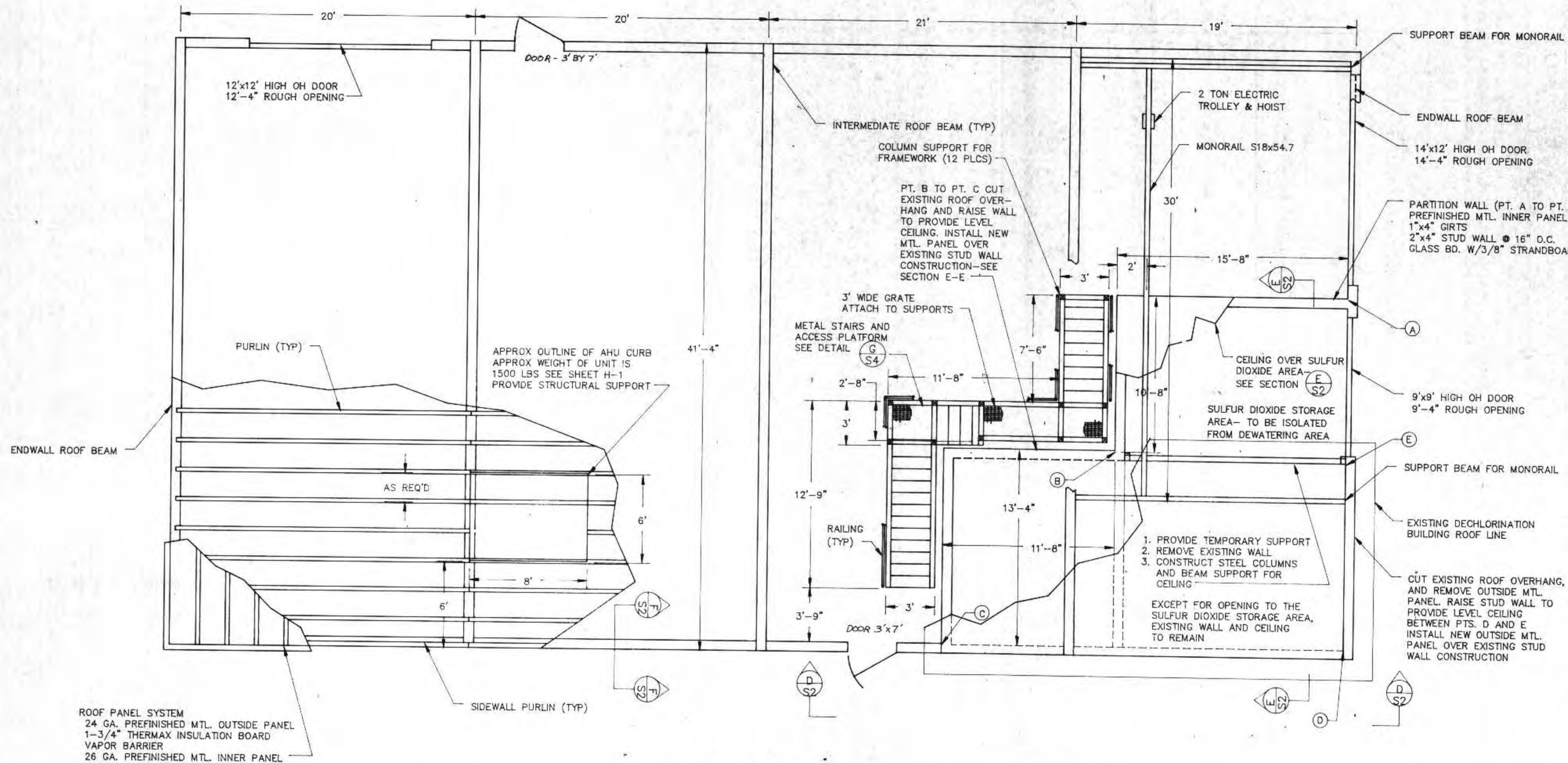
REVISED 8/22/91  
 5/15/92  
 9/21/92

ENGINEER  
 RMA ENGINEERING CO.  
 DULUTH, MN

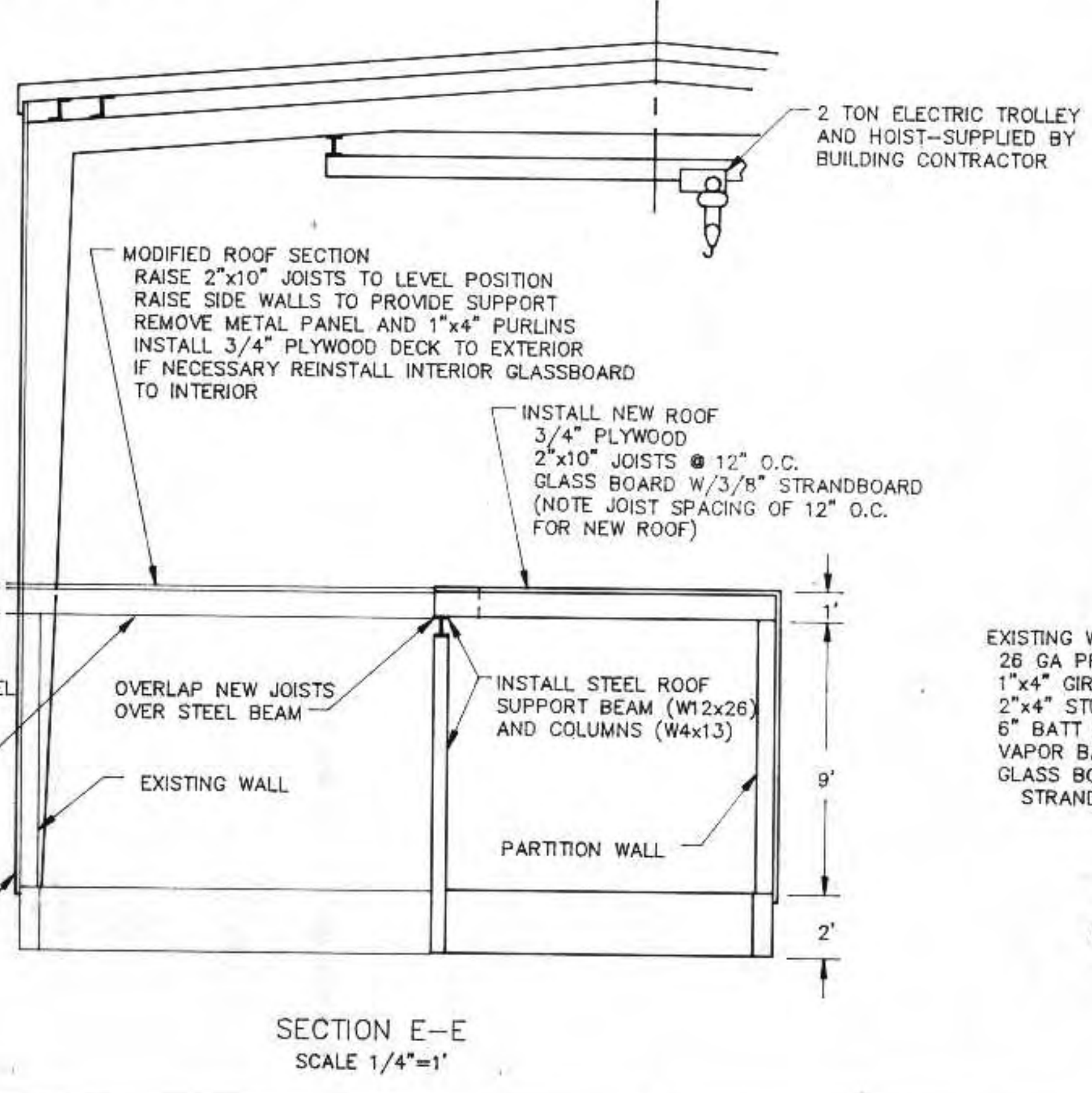
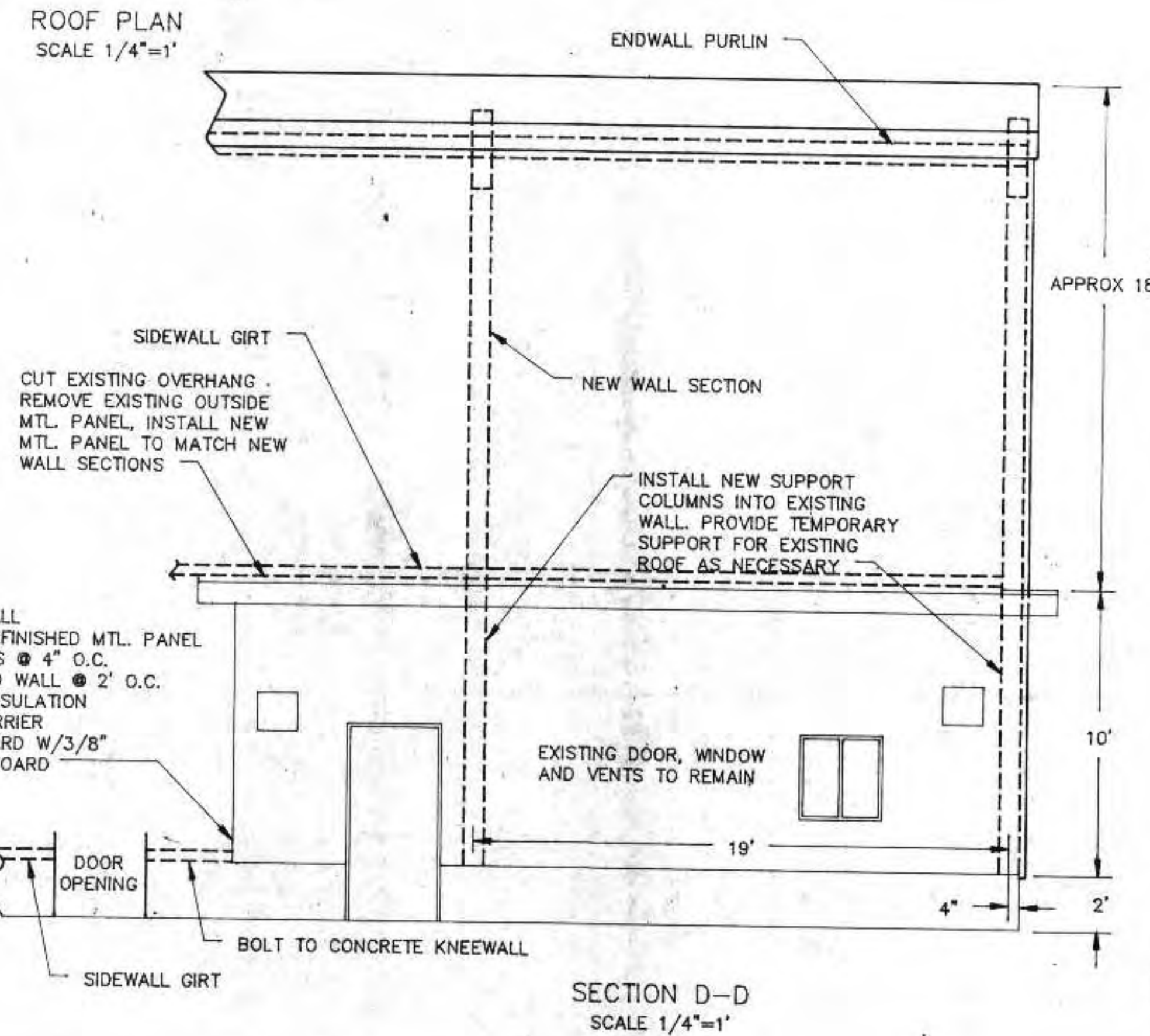
SLUDGE DEWATERING  
 HANDLING FACILITY  
 1991-92







SECTION F-F  
NOT TO SCALE



- NOTES:
1. ROOF SYSTEM: PROVIDE BEAMS, COLUMNS AND PURLINS TO SUPPORT 40 PSF SNOW LOAD, AND 20 PSF WIND LOAD, 3 PSF COLLATERAL LOAD AND DEAD LOAD
  2. PURLIN AND WALL GIRT SPACING CAN BE VARIED DEPENDING ON STRUCTURAL AND MANUFACTURING REQUIREMENTS
  3. EXISTING DECHLORINATION BUILDING TO BE KEPT INTACT WHILE DEWATERING BUILDING IS BEING CONSTRUCTED
  4. OUTSIDE METAL PANEL AROUND EXISTING BUILDING IS TO BE REMOVED AND REPLACED WITH NEW PANEL TO MATCH THE REST OF THE BUILDING
  5. FOR METAL BUILDING STRUCTURAL DETAILS- SEE BUTLER BUILDING PLANS

NOTE: THIS BUILDING DOES NOT HAVE A PERMANENT WORK SPACE. IT WILL BE OCCUPIED INTERMITTENTLY ONLY WHEN THE SLUDGE DEWATERING EQUIPMENT IS OPERATING OR BEING SERVICED. WORK STATIONS AND RESTROOM FACILITIES ARE LOCATED IN THE OPERATIONS BUILDING.

REVISIONS		
NO.	BY	DATE
1	RMA	8/23/91
2	RMA	6/13/92

DEWATERING BUILDING  
ROOF AND WALL SYSTEMS

CITY OF SUPERIOR, WISCONSIN  
WASTE WATER TREATMENT PLANT  
SLUDGE DEWATERING/HANDLING  
FACILITIES

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

*Richard A. ...*

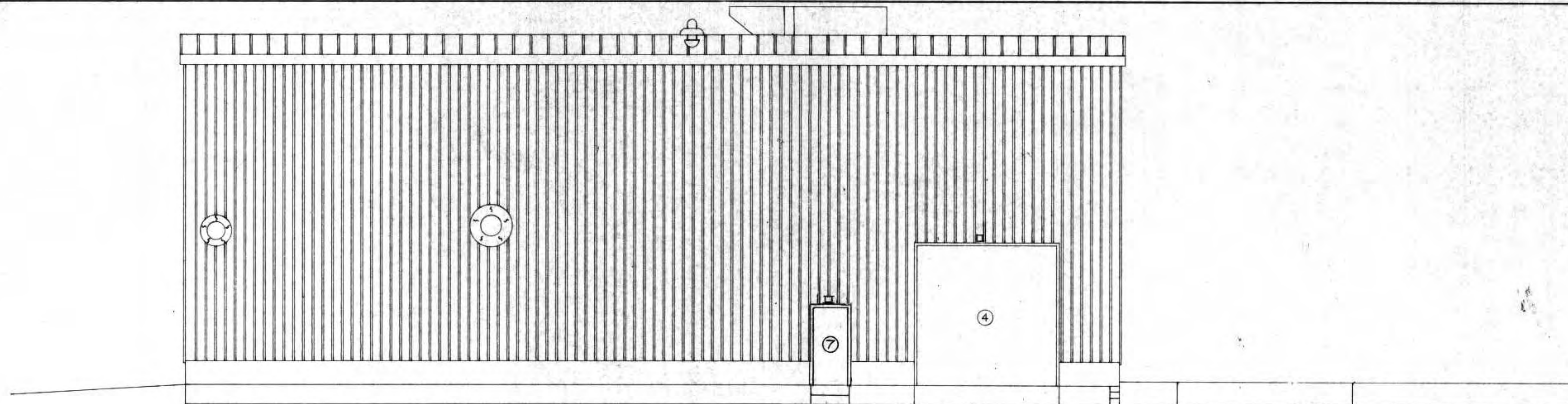
DATE: 6/24/91 REG. NO.: 25488

DESIGNED BY RMA  
DRAWN BY GB  
CHECKED BY  
APPROVED BY

RMA ENGINEERING COMPANY  
CONSULTING ENGINEERS

SCALE  
DATE  
JOB NO.  
SHEET S-2

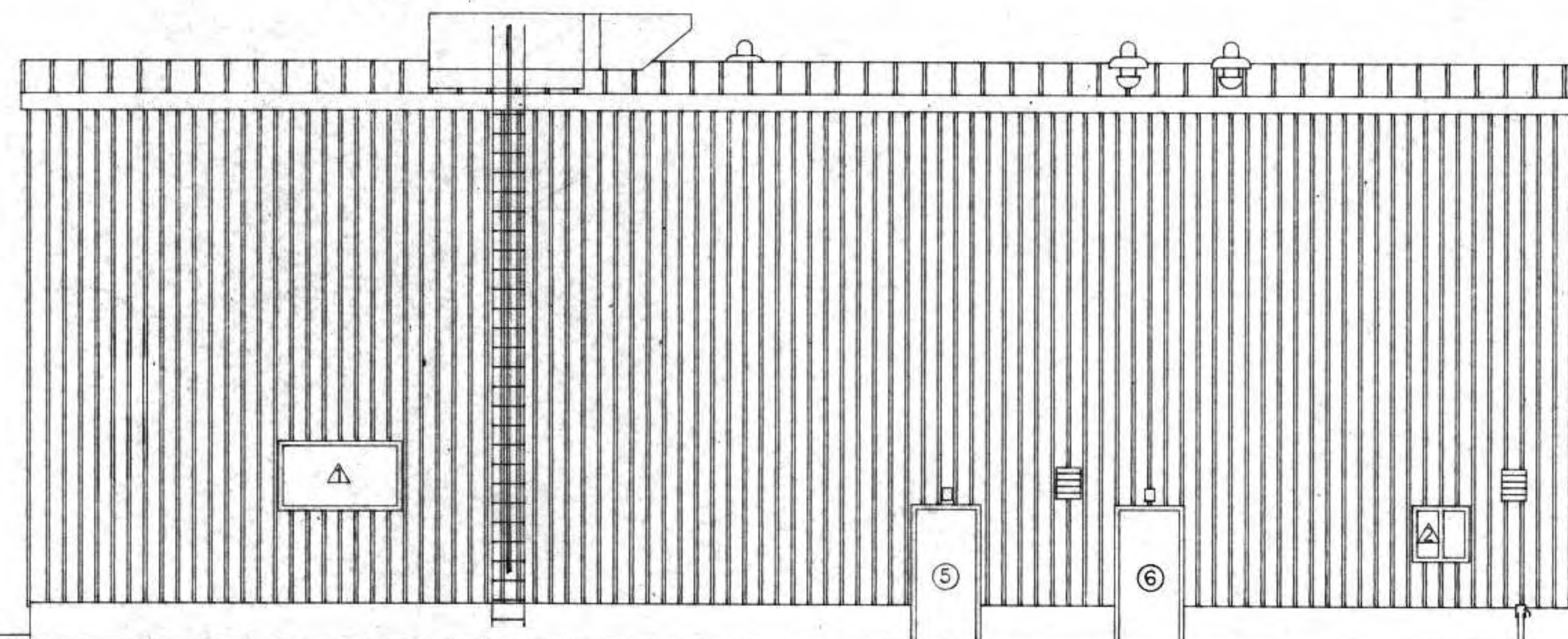




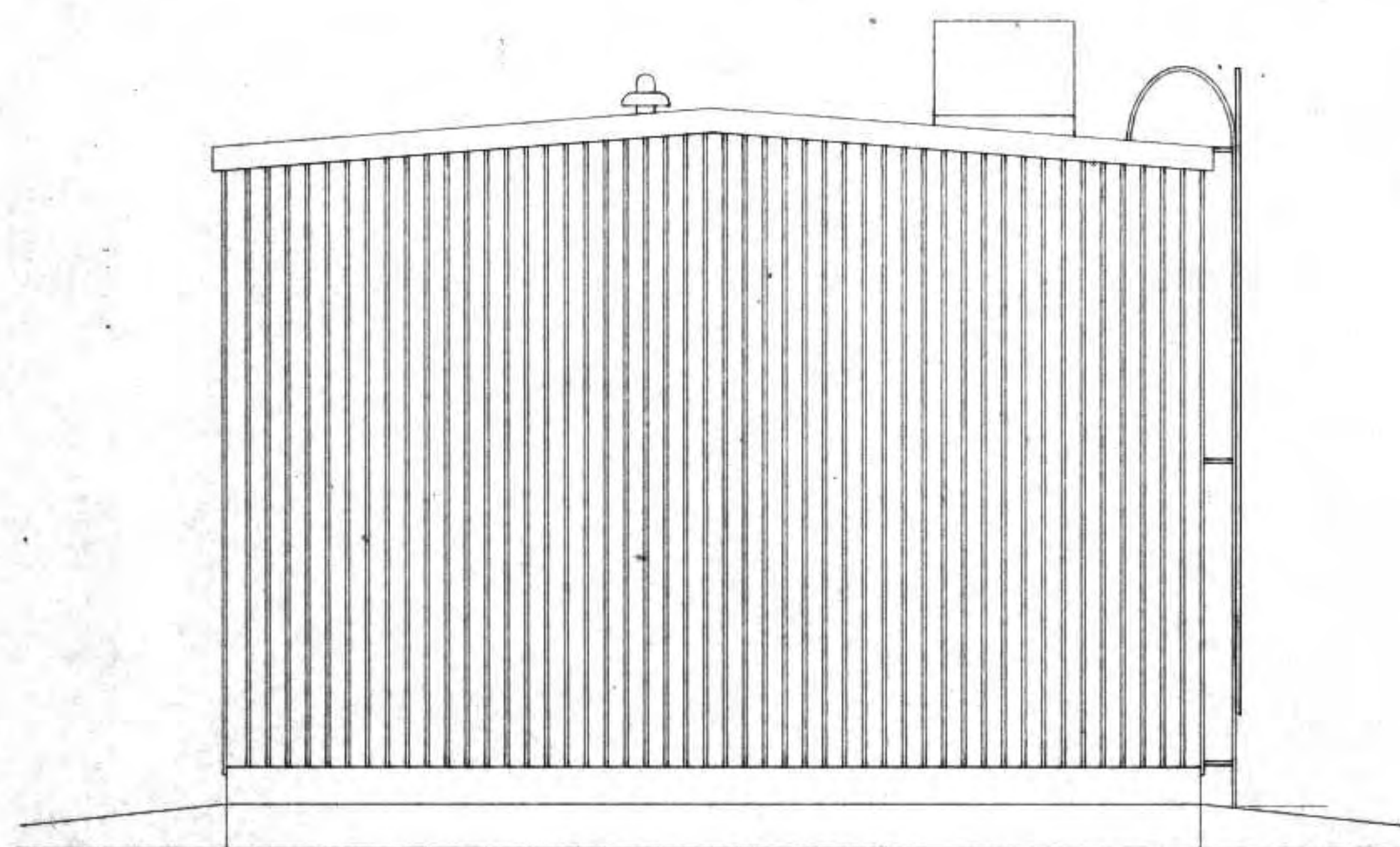
NORTH ELEVATION  
SCALE 3/16"=1'

DOOR SCHEDULE					
LOCATION	TYPE	ROUGH OPENING	SIZE	THRESHOLD	REMARKS
① OH DOOR					EXISTING
② OH DOOR	INSULATED STEEL	9'-4" x 9'-2"	9' x 9'	NONE	POWER DOOR OPENER
③ OH DOOR	INSULATED STEEL	14'-4" x 12'-2"	14' x 12'	NONE	POWER DOOR OPENER
④ OH DOOR	INSULATED STEEL	12'-4" x 12'-2"	12' x 12'	NONE	POWER DOOR OPENER
⑤ DOOR	INSULATED STEEL	3'-4" x 7'-2"	3' x 7'	ALUMINUM	
⑥ DOOR					EXISTING
⑦ DOOR	INSULATED STEEL	3'-4" x 7'-2"	3' x 7'	ALUMINUM	

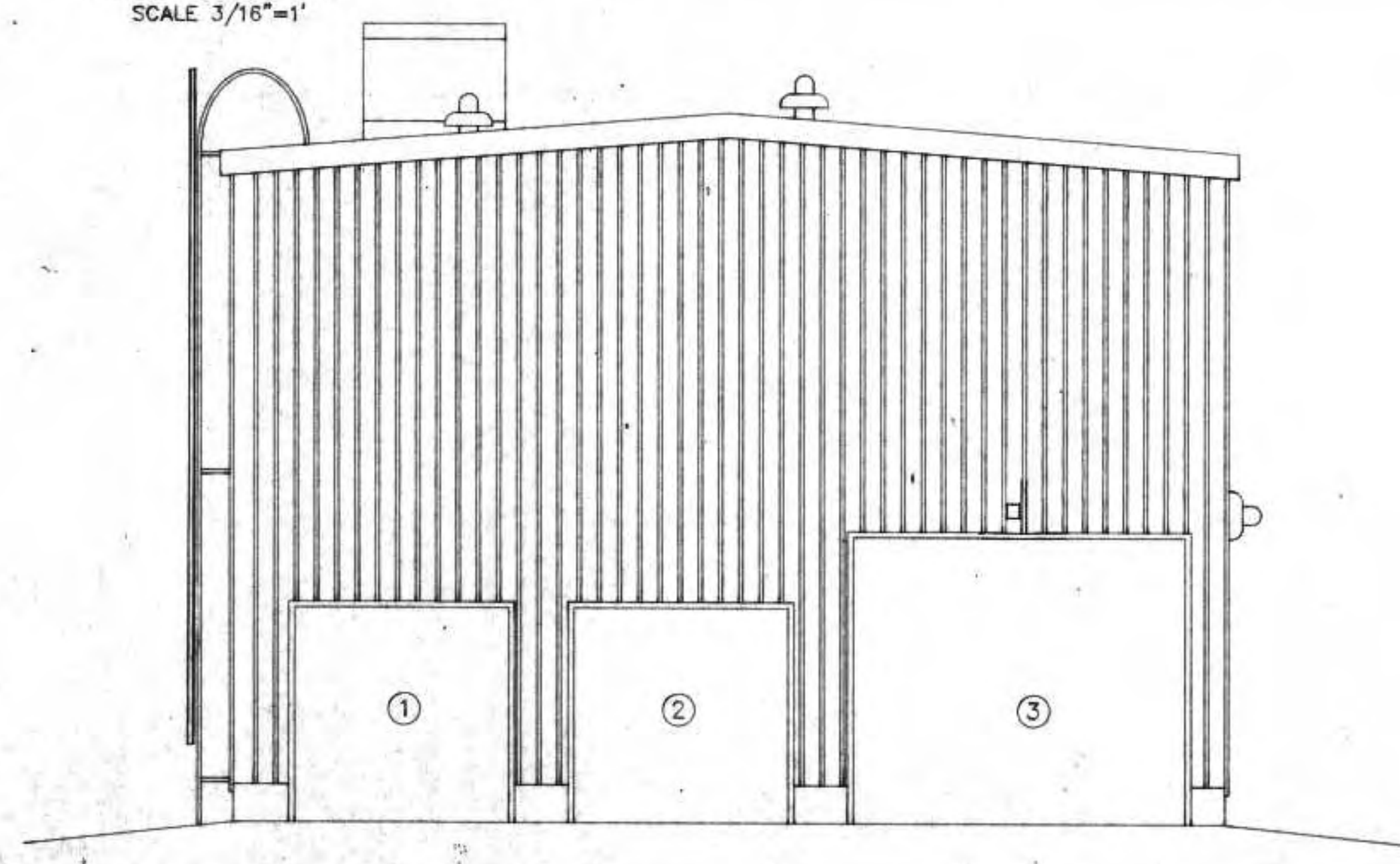
WINDOW SCHEDULE				
LOCATION	ROUGH OPENING	SIZE	GLASS	REMARKS
△	3'-4" x 6'-4"	3' x 6'	DBLE GLAZED INSULATION	
△				EXISTING



SOUTH ELEVATION  
SCALE 3/16"=1'



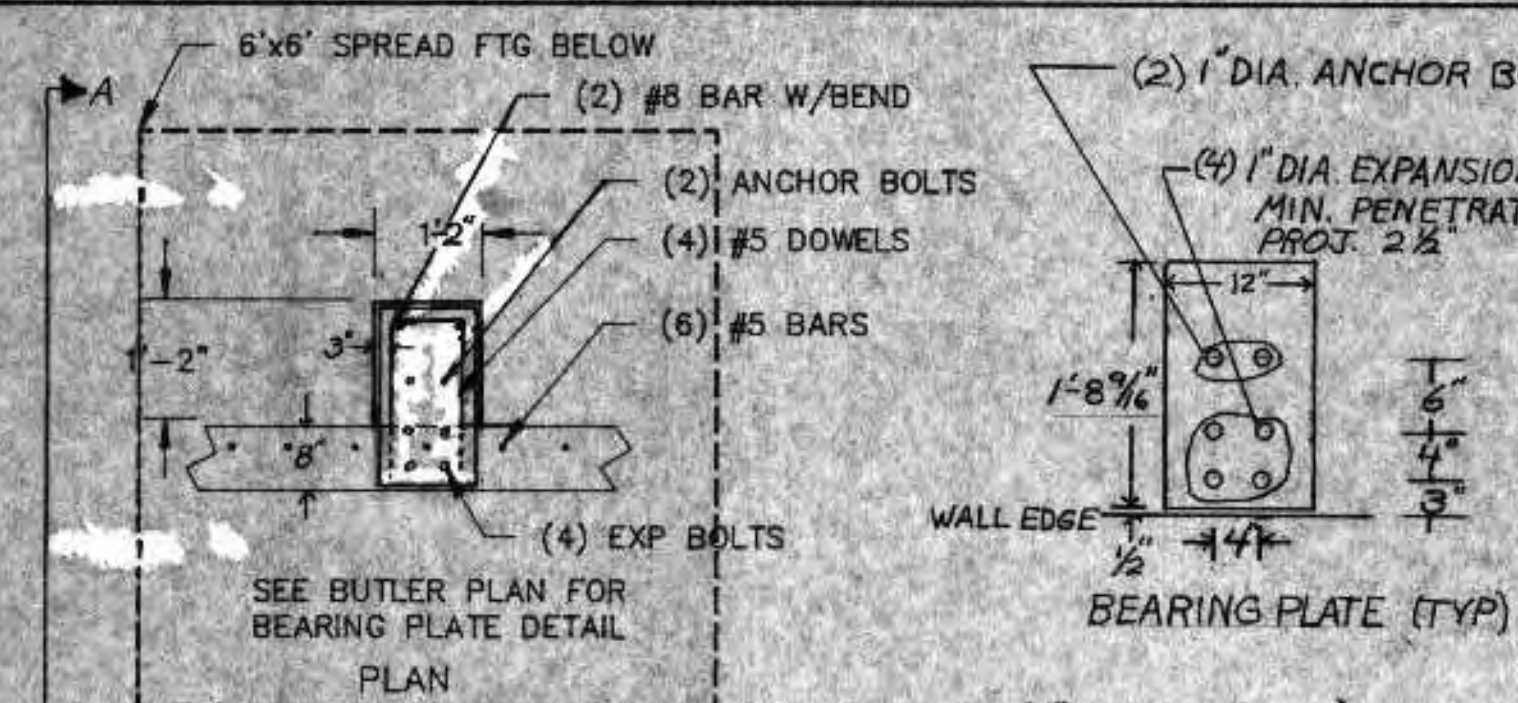
WEST ELEVATION  
SCALE 3/16"=1'



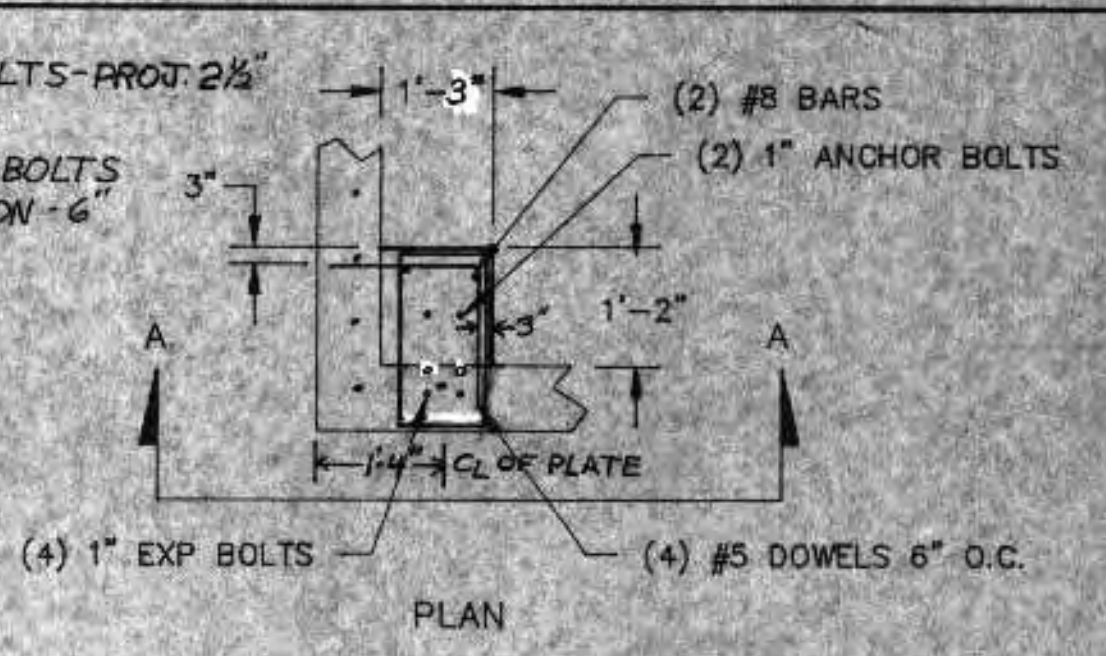
EAST ELEVATION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
*Richard Anthony*  
DATE: 6/24/91 REG. NO.: 25488

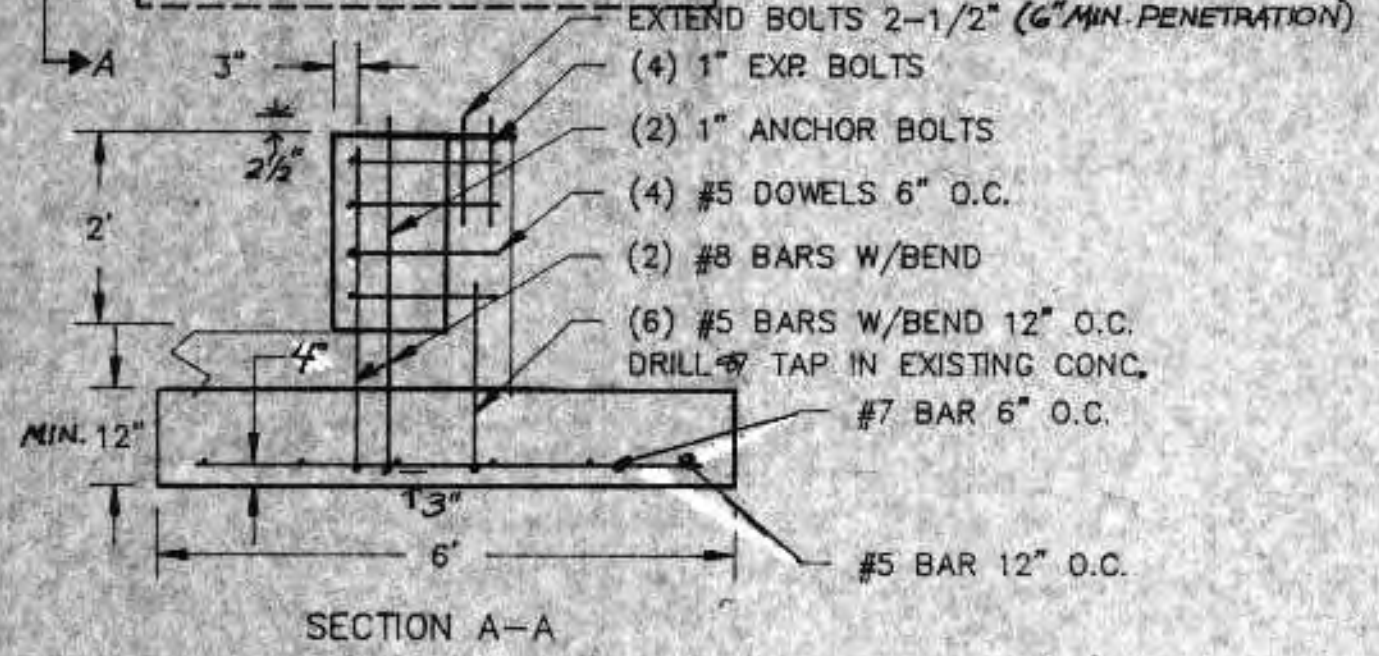
REVISIONS			DEWATERING BUILDING ELEVATIONS	
NO.	BY	DATE		
1	RMA	8/22/91	CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES	
2	RMA	5/15/92		
			RMA ENGINEERING COMPANY CONSULTING ENGINEERS	
DESIGNED BY RMA			SCALE 3/16"=1'	JOB NO.
DRAWN BY GB			DATE	
CHECKED BY			SHEET	S-3
APPROVED BY				



BEARING PLATE (TYP)

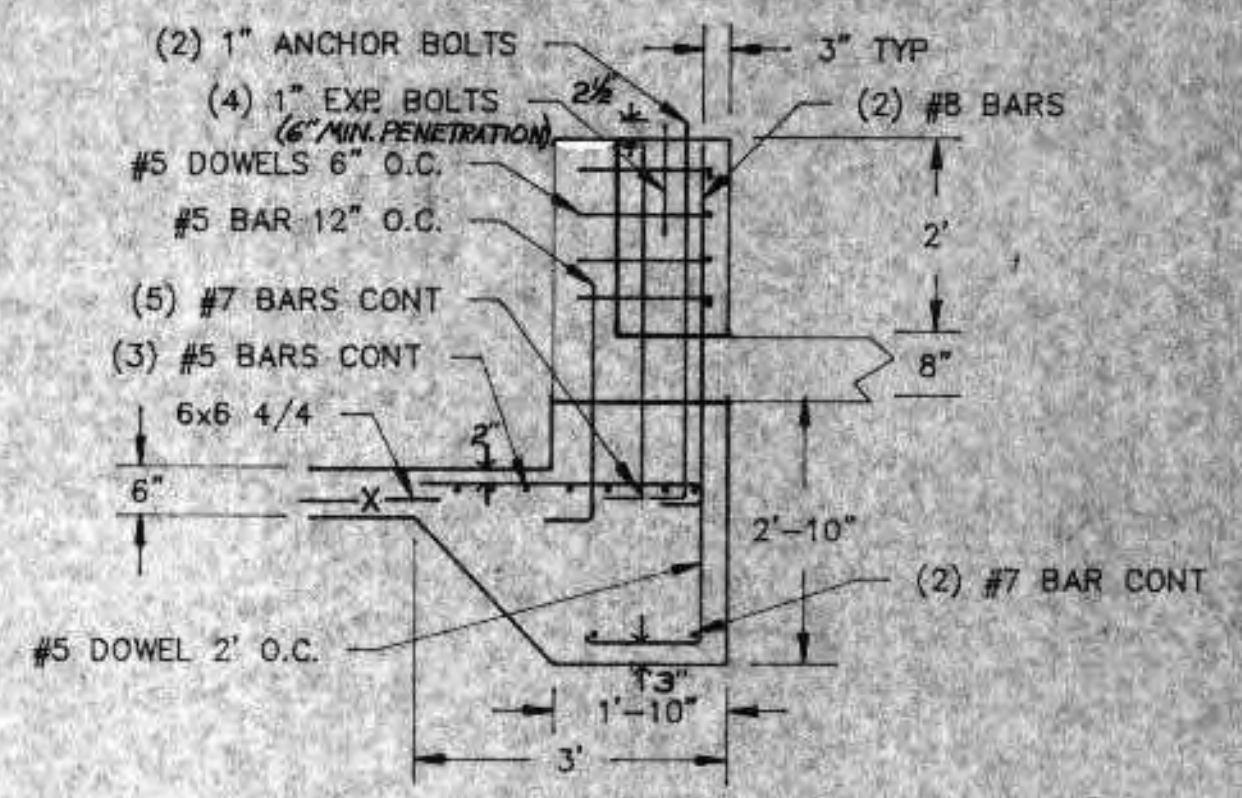


PLAN



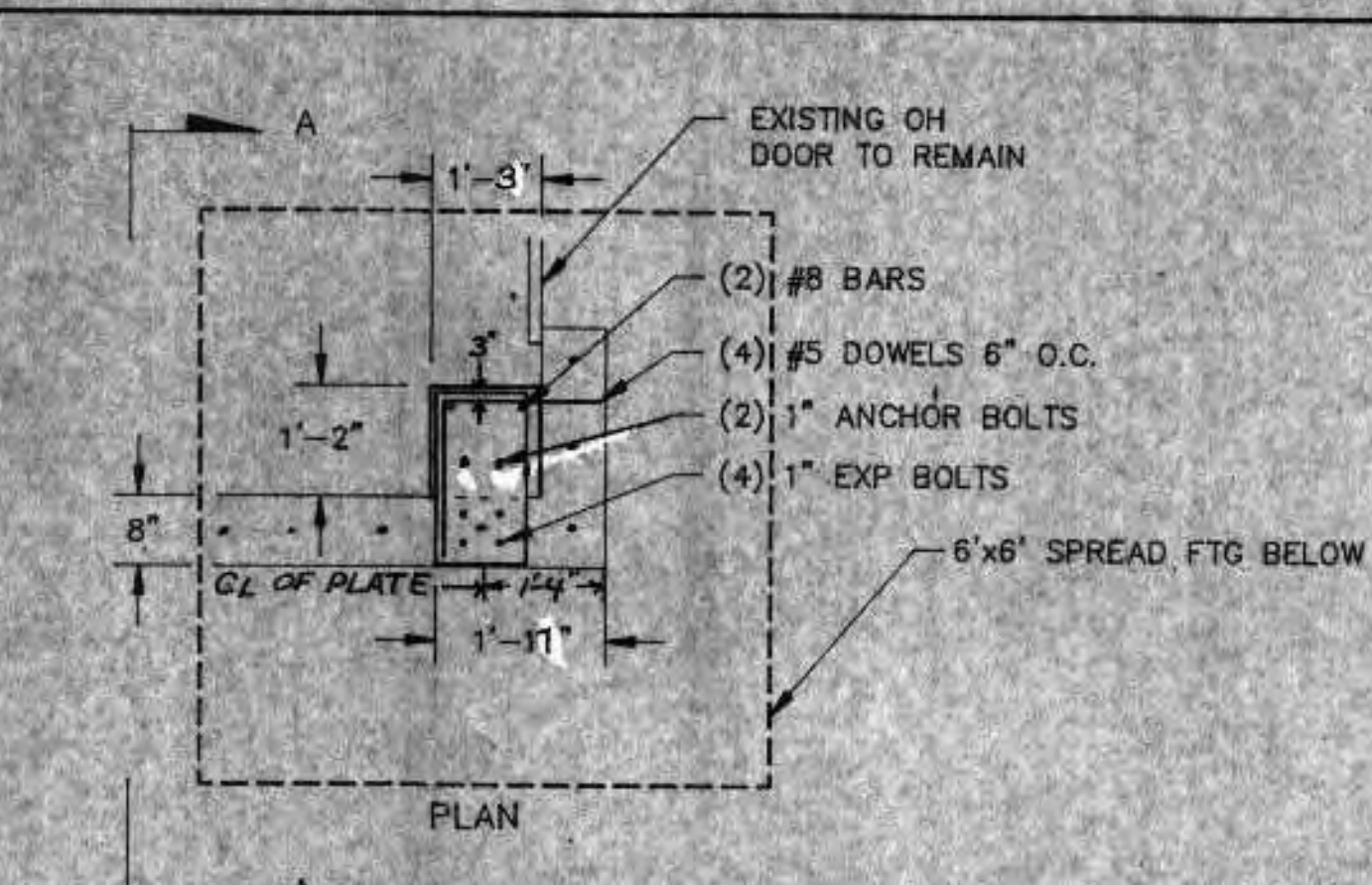
SECTION A-A

DETAIL A S4  
NOT TO SCALE  
SEE NOTES 1 AND 2

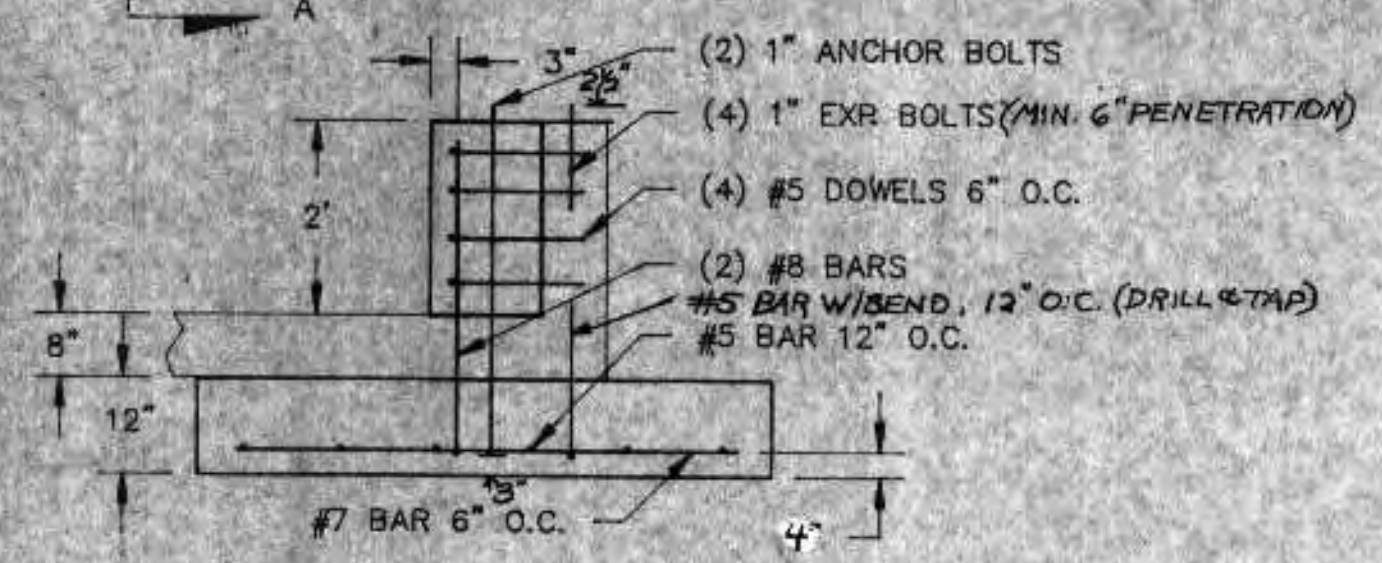


SECTION DETAIL B S4

NOT TO SCALE  
SEE NOTES 1 AND 2

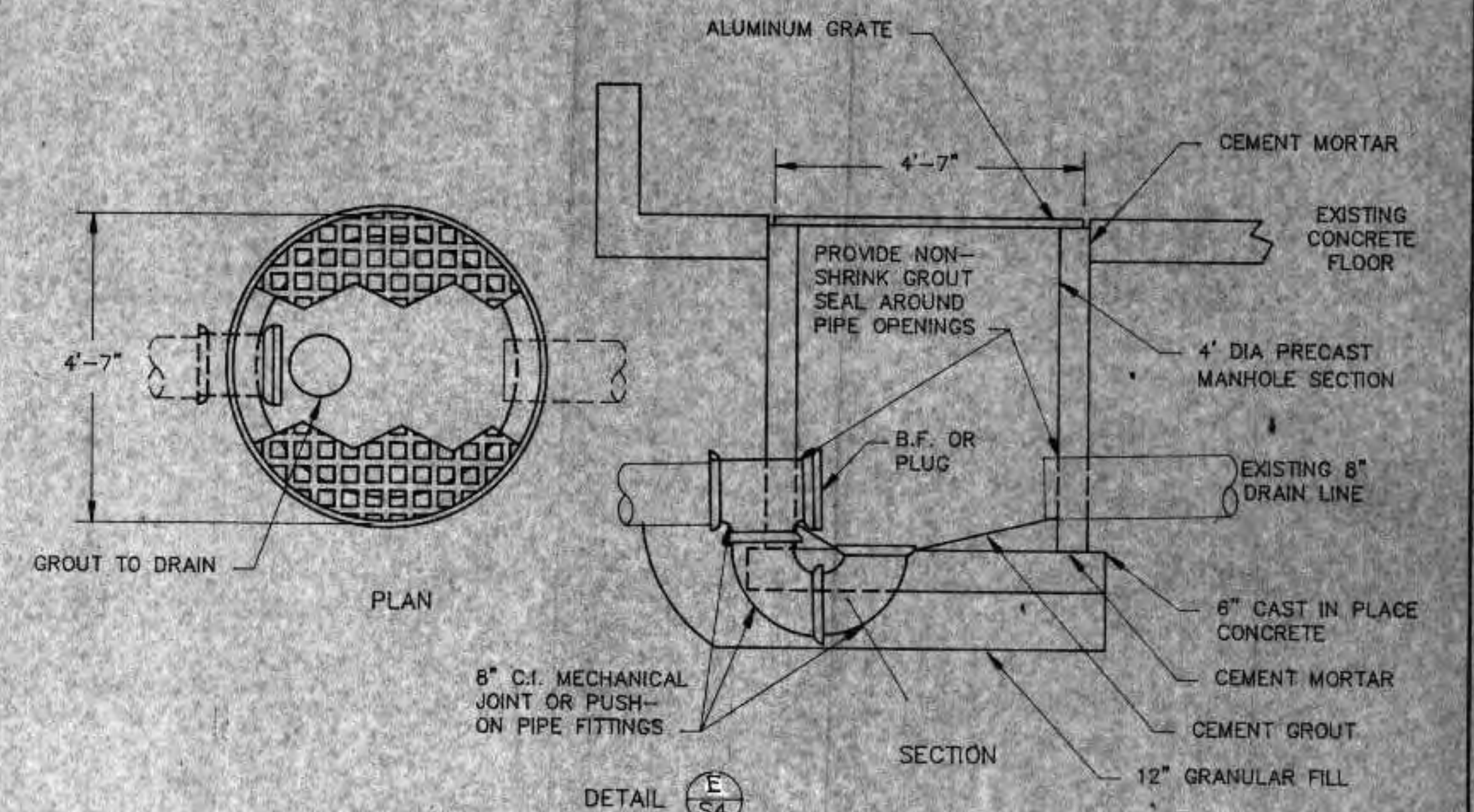


PLAN



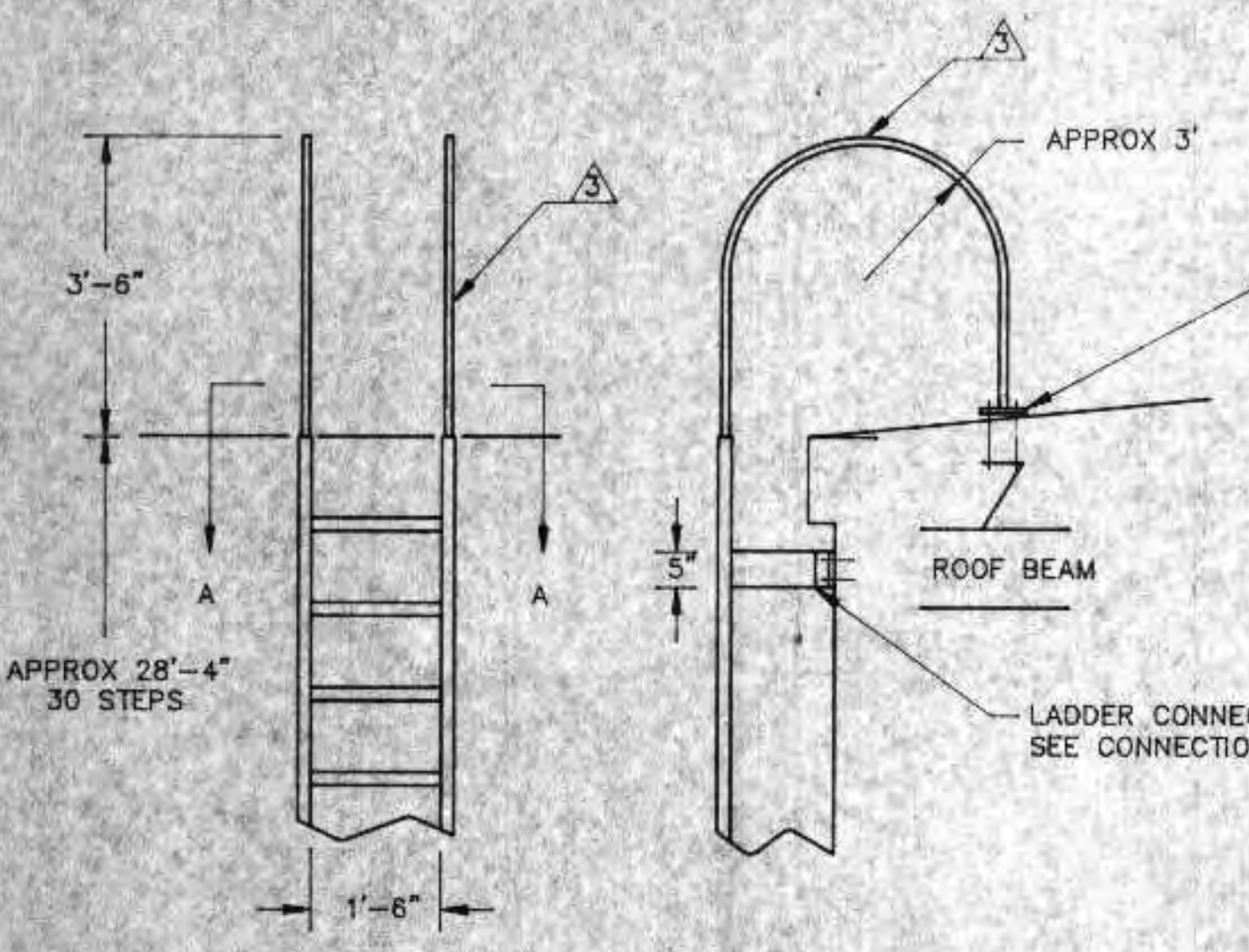
SECTION A-A

DETAIL C S4  
NOT TO SCALE  
SEE NOTES 1 AND 2



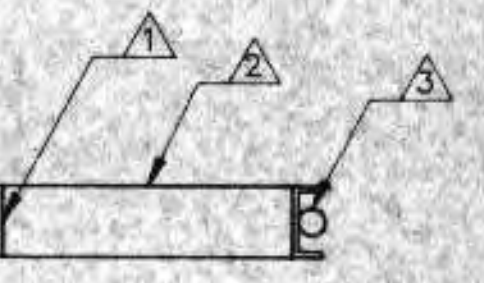
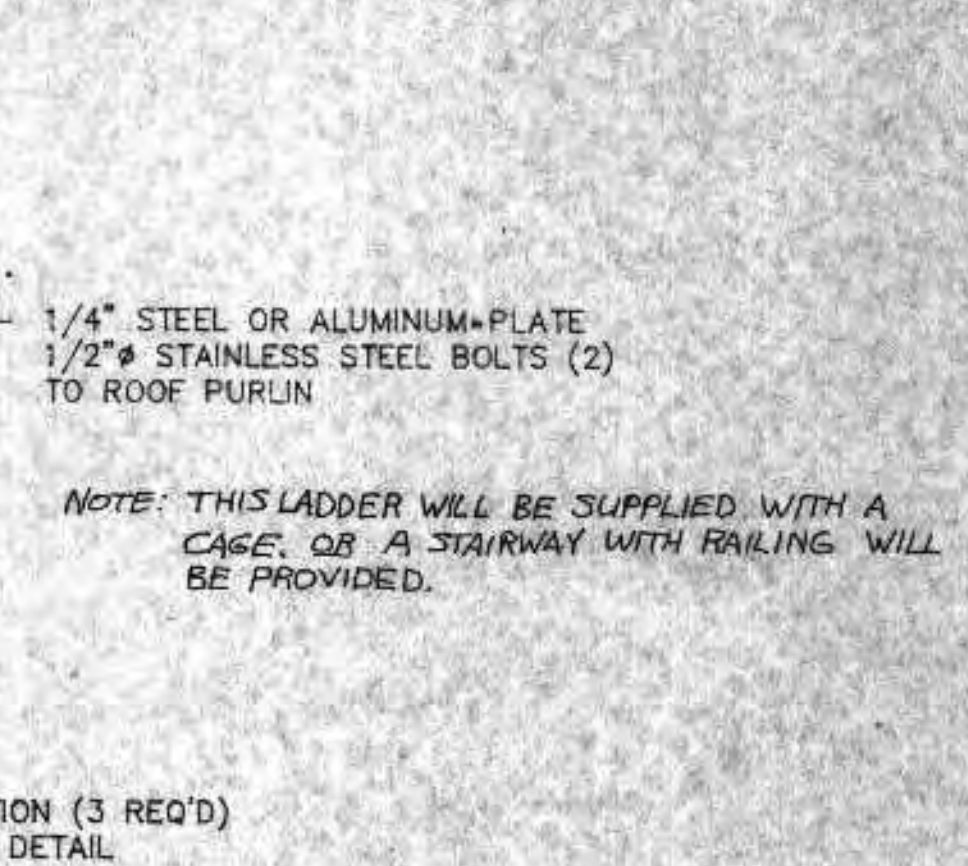
DETAIL E S4

NOT TO SCALE  
SEE NOTE 1

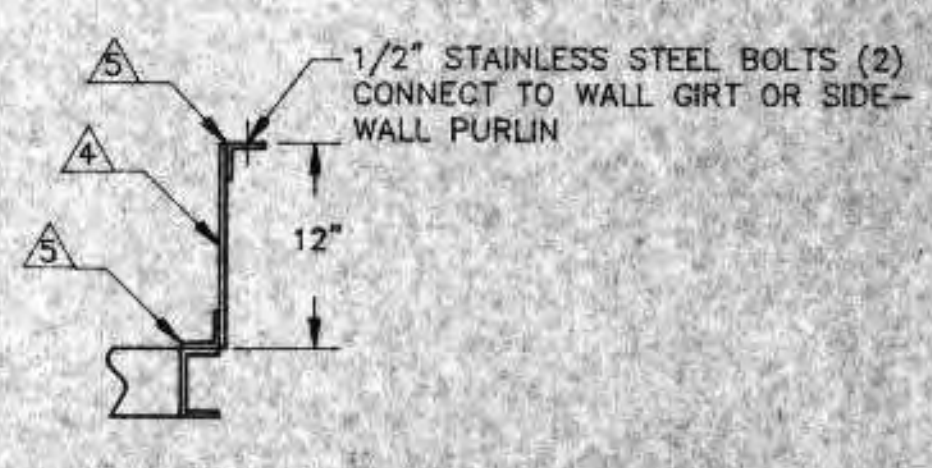


DETAIL F S4

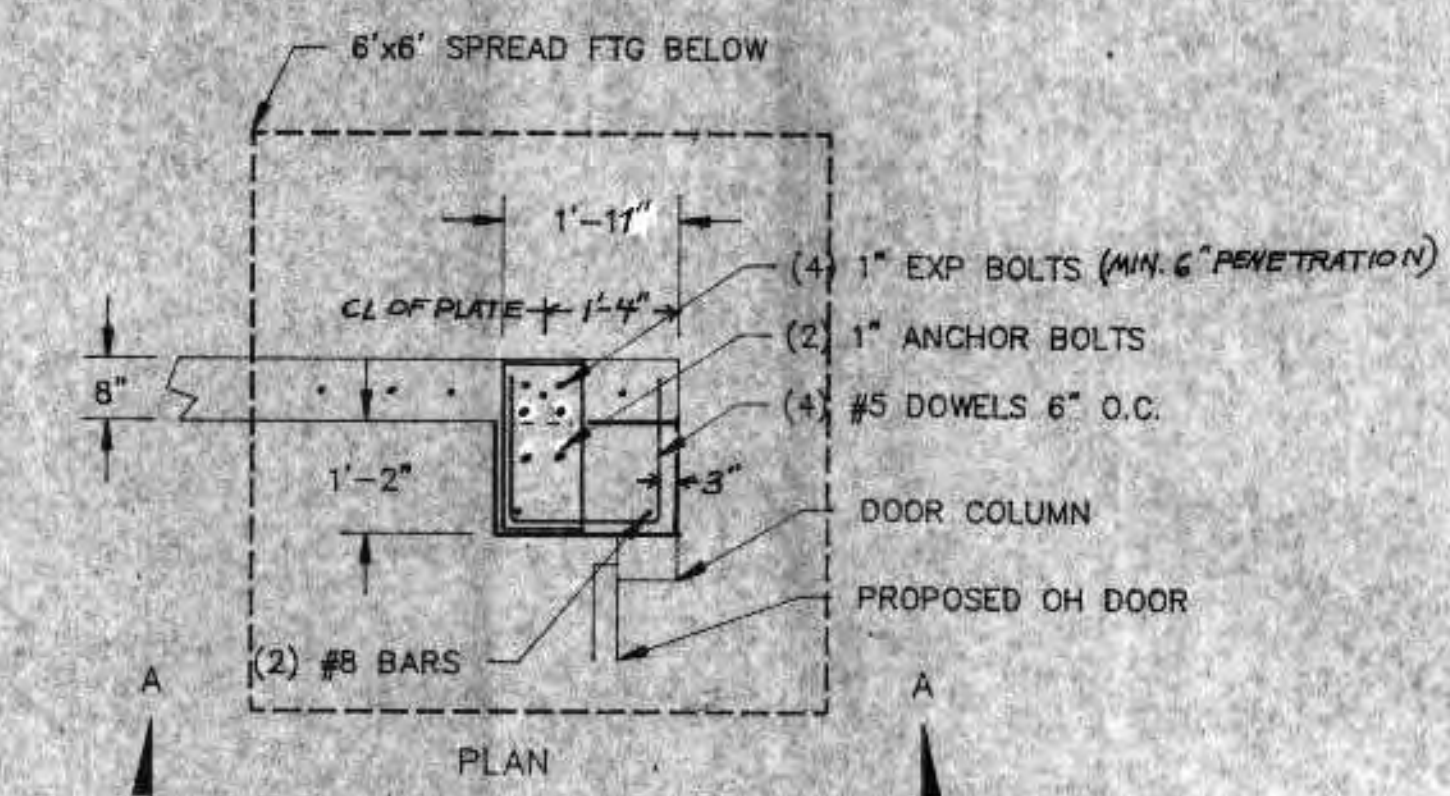
DEWATERING BUILDING ROOF LADDER  
NO SCALE



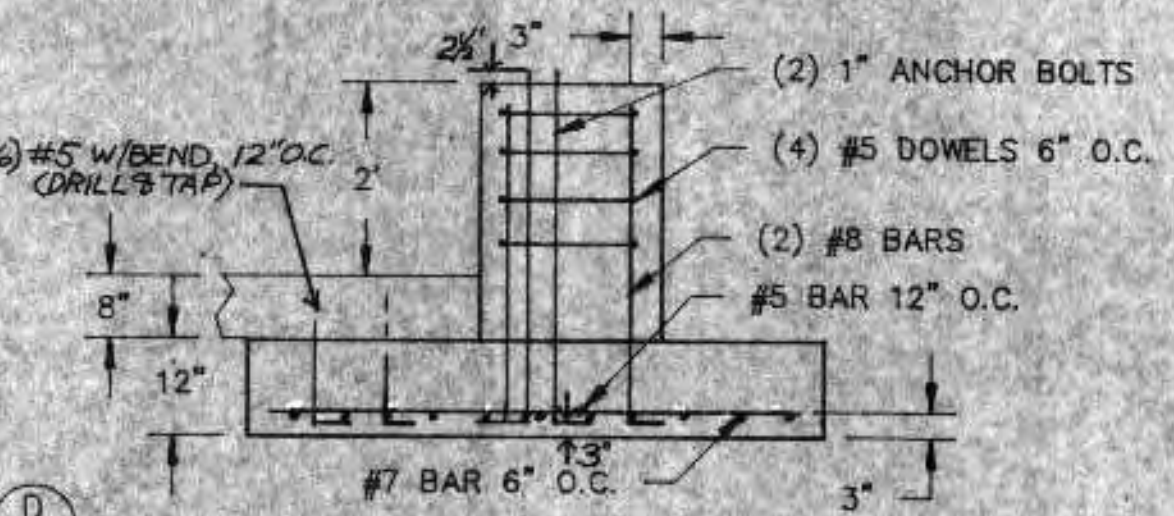
SECTION A-A



CONNECTION DETAIL PLAN



PLAN



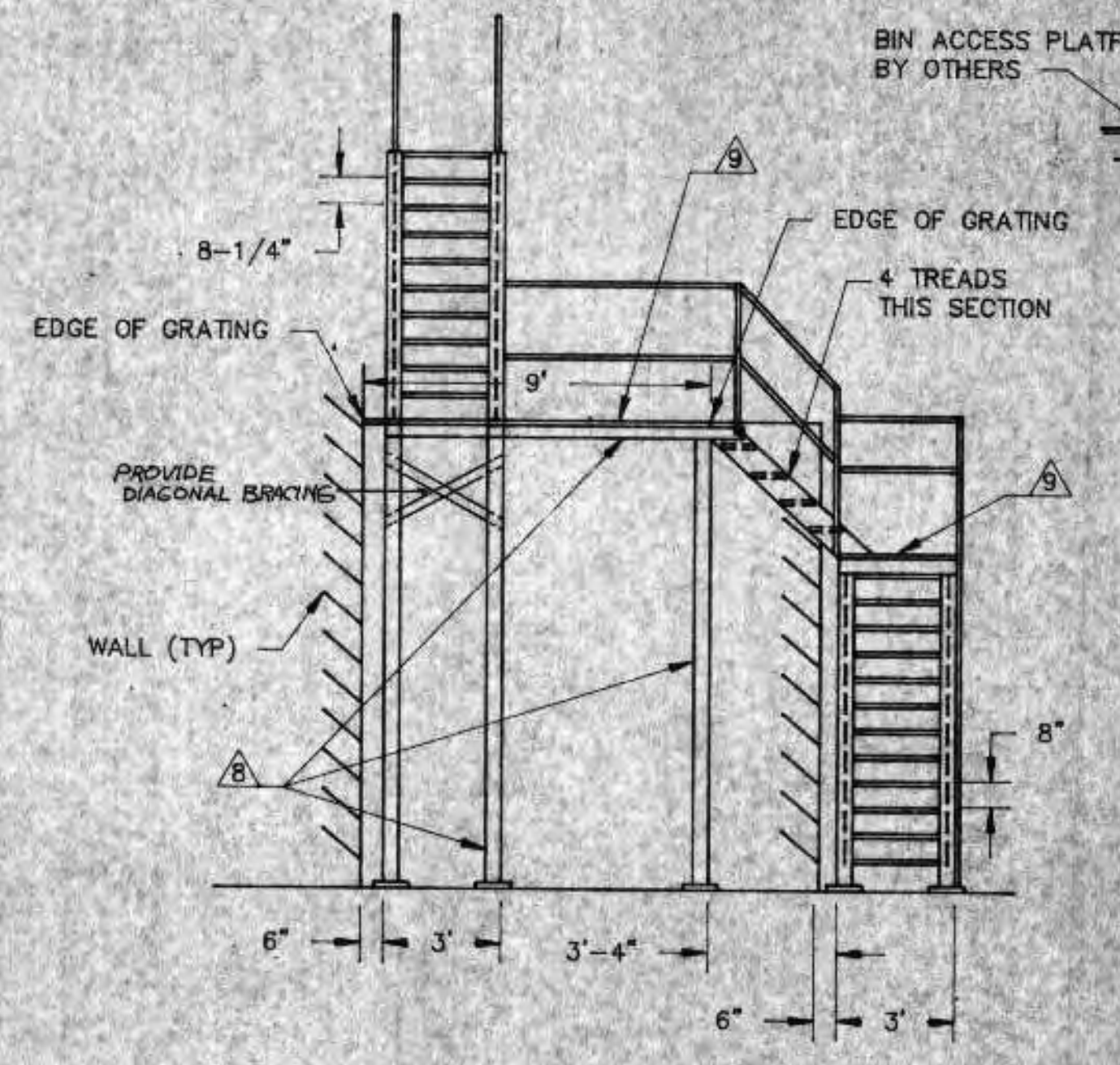
SECTION A-A

DETAIL D S4  
NOT TO SCALE  
SEE NOTES 1 AND 2

LADDER AND STAIRWAY SCHEDULE

- ▲ 4" STEEL OR ALUMINUM C CHANNEL RISER
- ▲ 4" STEEL OR ALUMINUM C CHANNEL STEPS WELD TO RISER
- ▲ 1" STEEL OR 1-1/2" ALUMINUM RAILS
- ▲ 5" x 12" x 3/8" STEEL OR ALUMINUM PLATE WELD TO RISER
- ▲ 5" LONG, 3" STEEL OR ALUMINUM ANGLE WELD TO PLATE
- ▲ STEEL OR ALUMINUM CHANNEL STAIR TREAD SUPPORTS AS REQUIRED
- ▲ STEEL OR ALUMINUM STAIR TREAD WELDED WITH NOSE PLATE- 300 LB DESIGN LOAD 9-3/4" TREAD WIDTH
- ▲ 4" STEEL OR ALUMINUM CHANNEL STRUCTURAL SUPPORTS
- ▲ STEEL OR ALUMINUM GRATING- 36" SPAN 200 LBS PER SQUARE FOOT

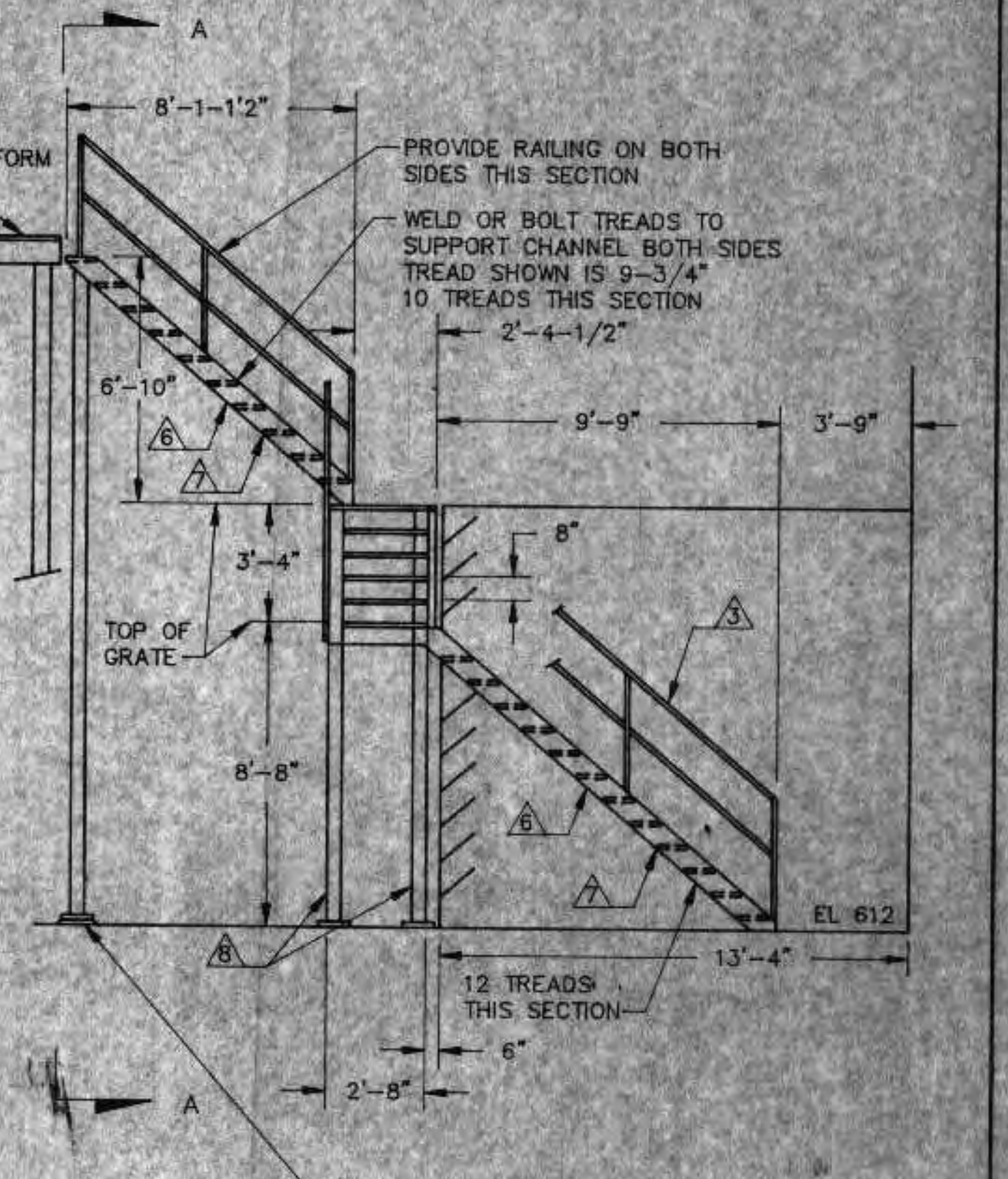
COATINGS  
ALUMINUM- NOT REQUIRED  
ALL STEEL- HOT DIP GALVANIZED



SECTION A-A

- NOTES:
1. DRILL AND GROUT REBAR INTO EXISTING CONCRETE. SANDBLAST AND CLEAN EXISTING CONCRETE TO BE IN CONTACT WITH NEW CONCRETE. BEFORE NEW CONCRETE IS DEPOSITED THE SURFACE SHOULD BE COATED WITH 1/2" OF MORTAR.
  2. CORE DRILL REBAR AS SHOWN INTO EXISTING CONCRETE FLOOR AND KNEEWALL AND GROUT
  3. PROVIDE STAINLESS STEEL CONNECTIONS FOR ALL STAIRWAYS AND GRATINGS
  4. EXISTING CONCRETE KNEEWALL MAY VARY SLIGHTLY IN TOP ELEVATION. CONSTRUCT CONCRETE SUPPORTS FOR BUILDING COLUMNS TO HAVE IDENTICAL TOP ELEVATION
  5. BUILDING COLUMN ANCHOR PLATE DETAILS ARE SHOWN IN BUTLER BUILDING DRAWINGS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
*Richard Anthony*  
DATE: 6/24/91 REG. NO.: 23488



DETAIL G S4

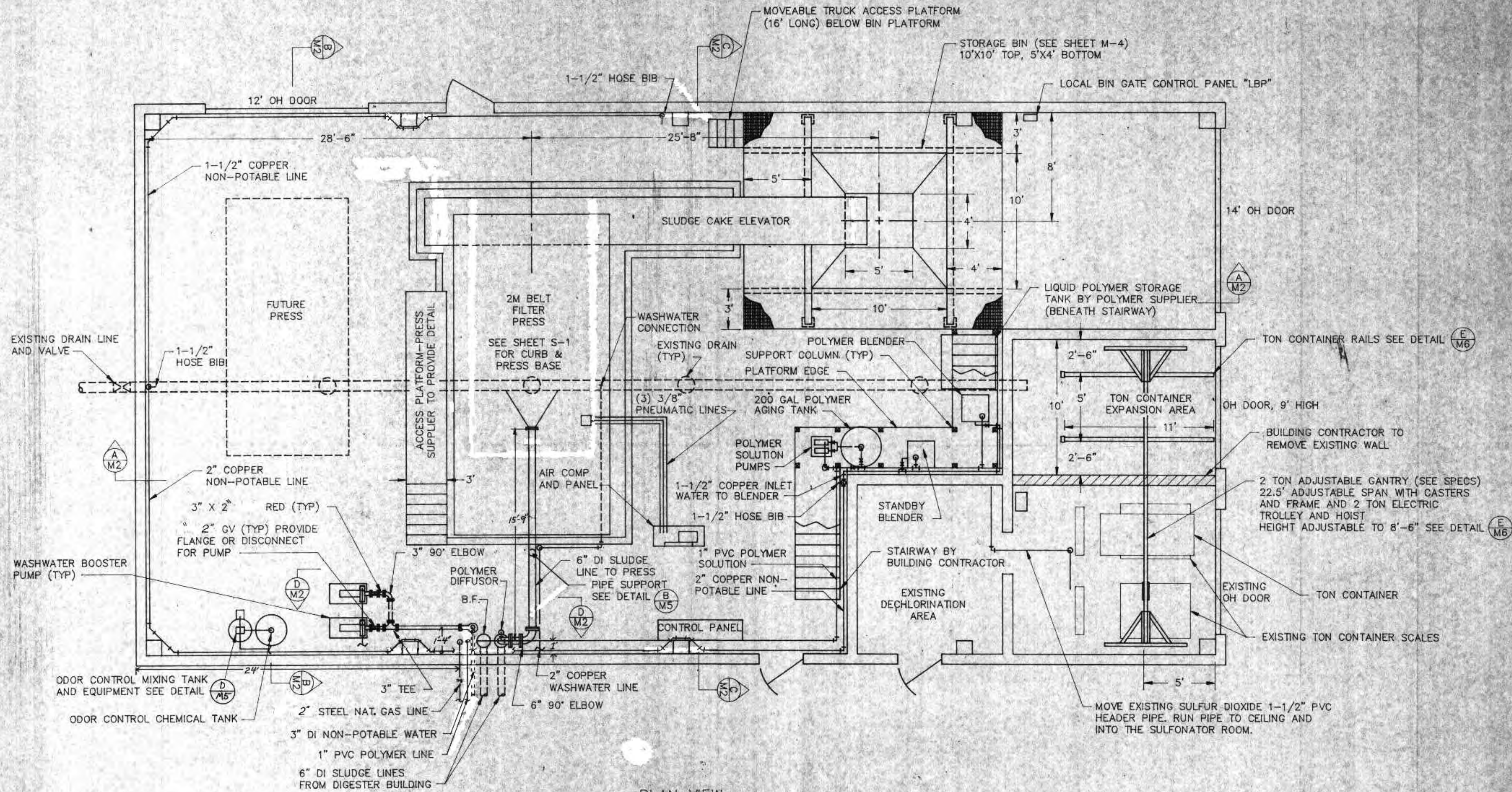
STAIRWAY  
SCALE: 1/4"=1'

REVISIONS		
NO.	BY	DATE
1	RMG	5/22/91
2	RMG	6/15/92

DESIGNED BY RMG		SCALE	JOB NO.
DRAWN BY GB		DATE	
CHECKED BY		RMA ENGINEERING COMPANY	
APPROVED BY		CONSULTING ENGINEERS	
		SHEET S-4	

DEWATERING BUILDING  
STRUCTURAL DETAILS  
  
CITY OF SUPERIOR, WISCONSIN  
WASTE WATER TREATMENT PLANT  
SLUDGE DEWATERING/HANDLING  
FACILITIES



PLAN VIEW  
 SLUDGE DEWATERING BUILDING  
 SCALE 1/4"=1'

- NOTES:
1. FOR POLYMER SYSTEM INCLUDING VALVES SEE DETAIL (A M5)
  2. SEE SHEET M-4 FOR CAKE BIN AND ACCESS PLATFORM

REVISIONS		
NO.	BY	DATE
1	RWA	8/22/91
2	RWA	7/6/92

DEWATERING BUILDING  
 MECHANICAL PLAN

CITY OF SUPERIOR, WISCONSIN  
 WASTE WATER TREATMENT PLANT  
 SLUDGE DEWATERING/HANDLING  
 FACILITIES

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

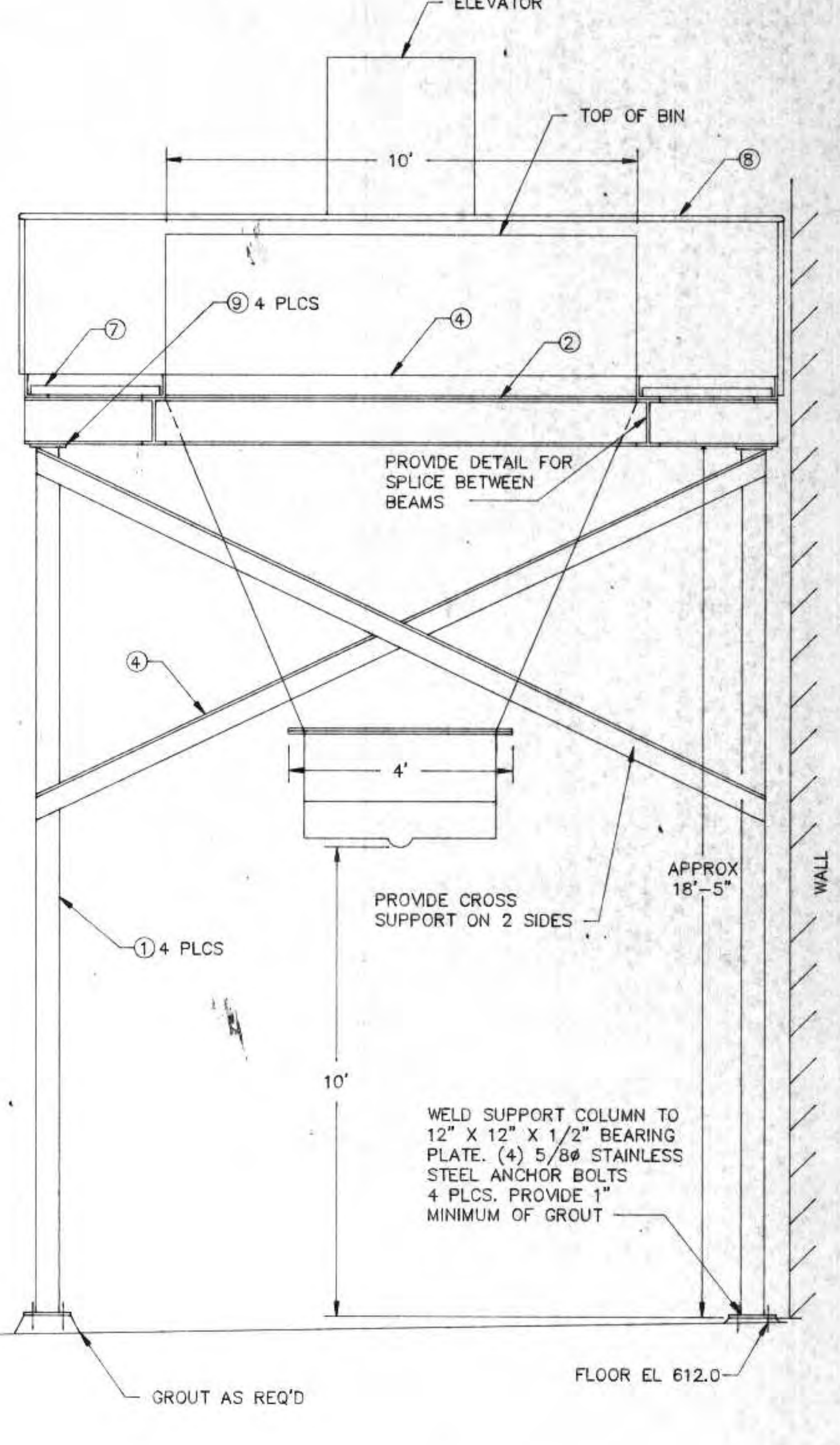
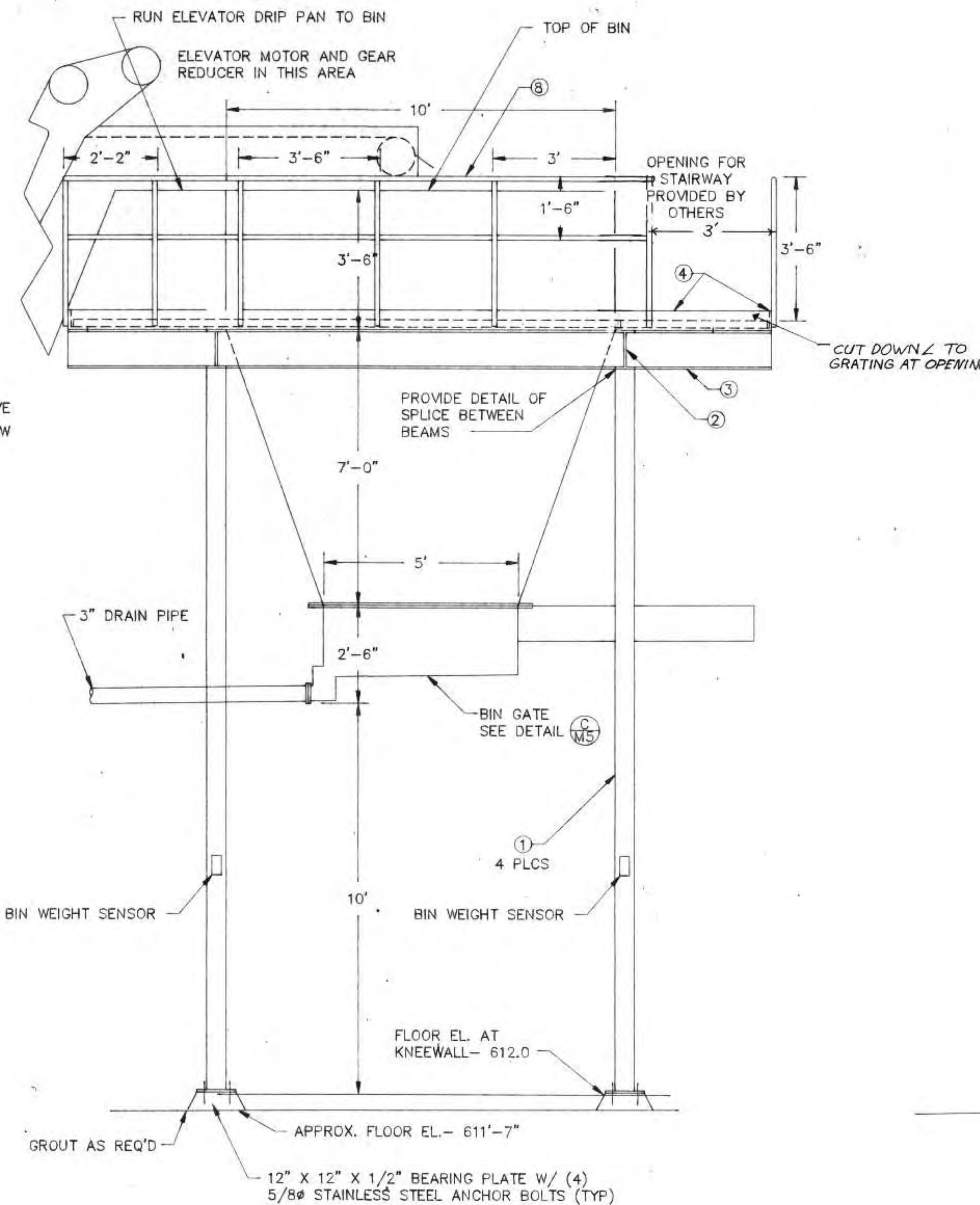
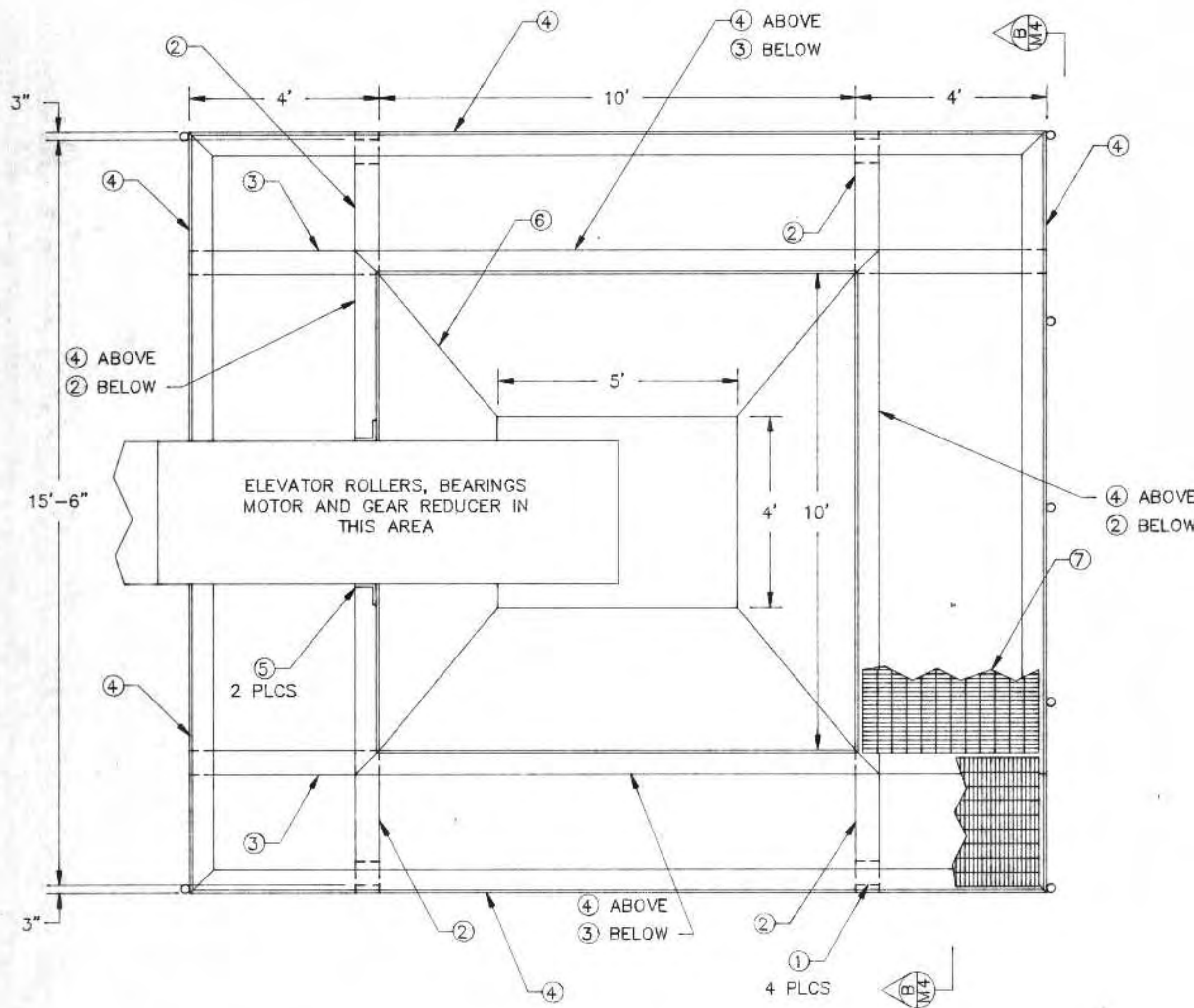
*Richard Auckony*

DATE: 6/24/91 REG. NO.: 25488

DESIGNED BY RWA	RMA ENGINEERING COMPANY CONSULTING ENGINEERS	SCALE 1/4"=1'	JOB NO.	
DRAWN BY GB		DATE		
CHECKED BY				
APPROVED BY			SHEET M-1	







**STRUCTURAL SCHEDULE**

- ① COLUMN, W6x15 OR EQUIVALENT, MOUNT WEIGHT SENSORS (2) COLUMNS
- ② WIDE FLANGE STRUCTURAL BEAM, W12x26 OR EQUIVALENT
- ③ WIDE FLANGE STRUCTURAL BEAM, W12x16 OR EQUIVALENT
- ④ STRUCTURAL ANGLE 6"x6"x3/8" OR EQUIVALENT
- ⑤ 4" STRUCTURAL ANGLE
- ⑥ 1/4" STEEL PLATE- SEE SPECIFICATIONS FOR COATING
- ⑦ GRATING- HOT DIP GALVANIZED STEEL OR ALUMINUM DESIGN FOR 200 LBS/SQ FT
- ⑧ 1" STEEL OR 1-1/2" ALUMINUM RAILING
- ⑨ 6"x6"x1/2" PLATE- BOLT TO BEAM

- NOTES:
1. MAX BIN LOAD EXCLUDING STRUCTURAL COMPONENTS- 50,000 POUNDS
  2. BIN SUPPLIER TO PROVIDE SHOP DRAWINGS SHOWING ALL STRUCTURAL SHAPES, COMPONENTS AND COATINGS
  3. THIS PLAN IS DIAGRAMATIC AND IS NOT INTENDED FOR FABRICATION SUPPLIER MAY MODIFY STRUCTURAL COMPONENTS FOR APPROVAL BY ENGINEER AS LONG AS STRUCTURAL AND PROJECT REQUIREMENTS ARE MET PROVIDE DETAILS OF SPLICES BETWEEN WIDE FLANGE STRUCTURAL BEAMS
  4. STRUCTURAL STEEL AND GRATING SHALL BE HOT DIP GALVANIZED
  5. SEE SPECIFICATIONS FOR INTERIOR AND EXTERIOR COATINGS FOR BIN

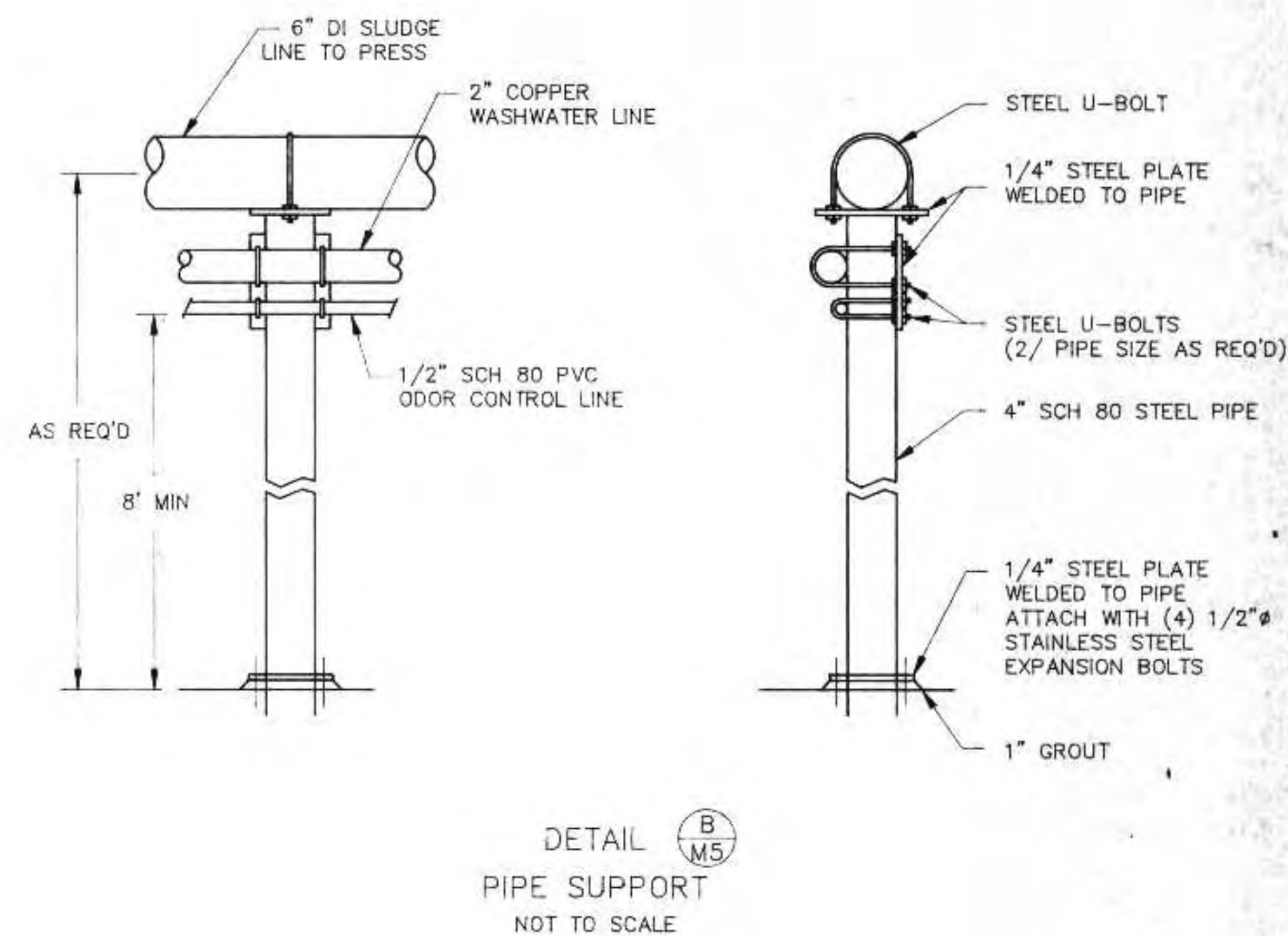
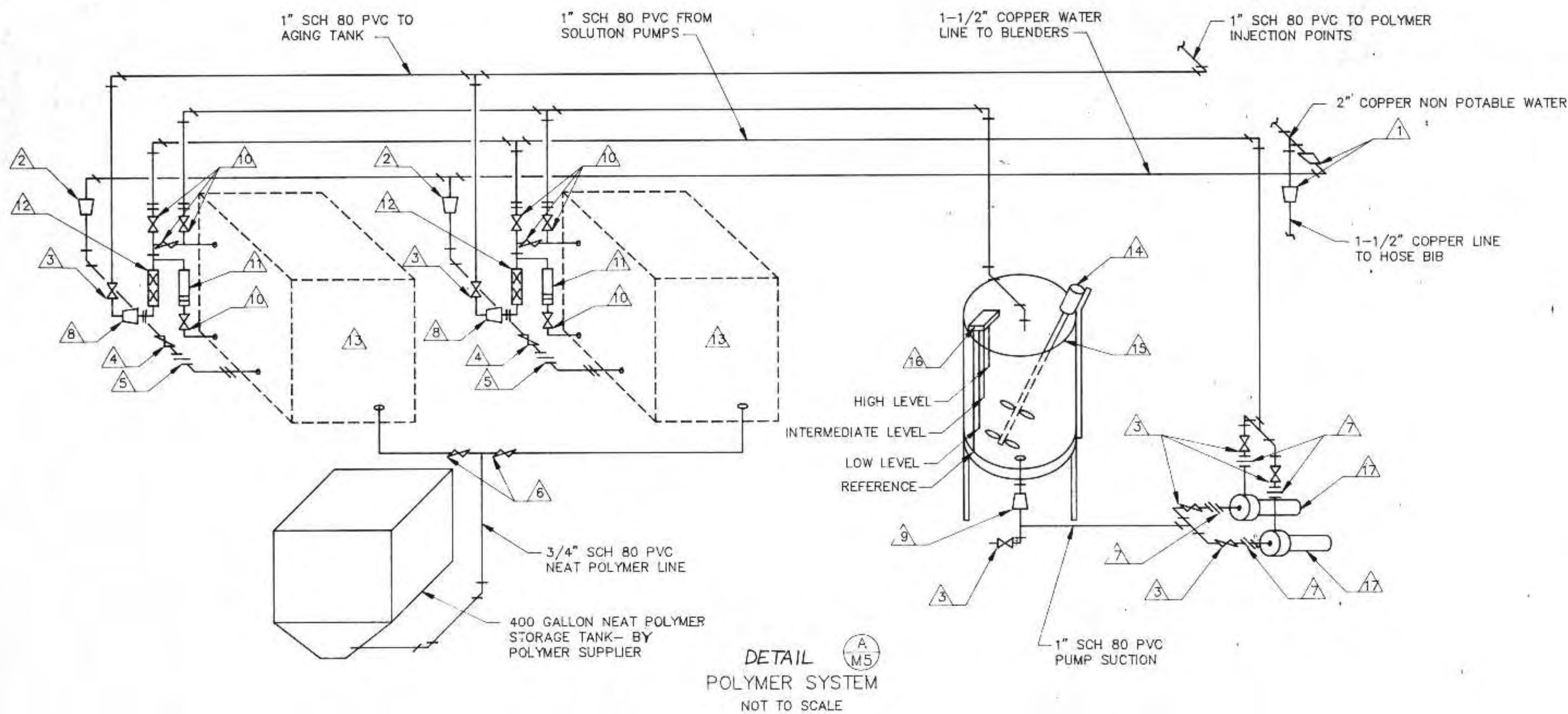
NOTE: SEE FABRICATOR'S SHOP DRAWINGS FOR AS-BUILTS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
*Richard Anthony*  
 DATE: 6/24/91 REG. NO.: 25488

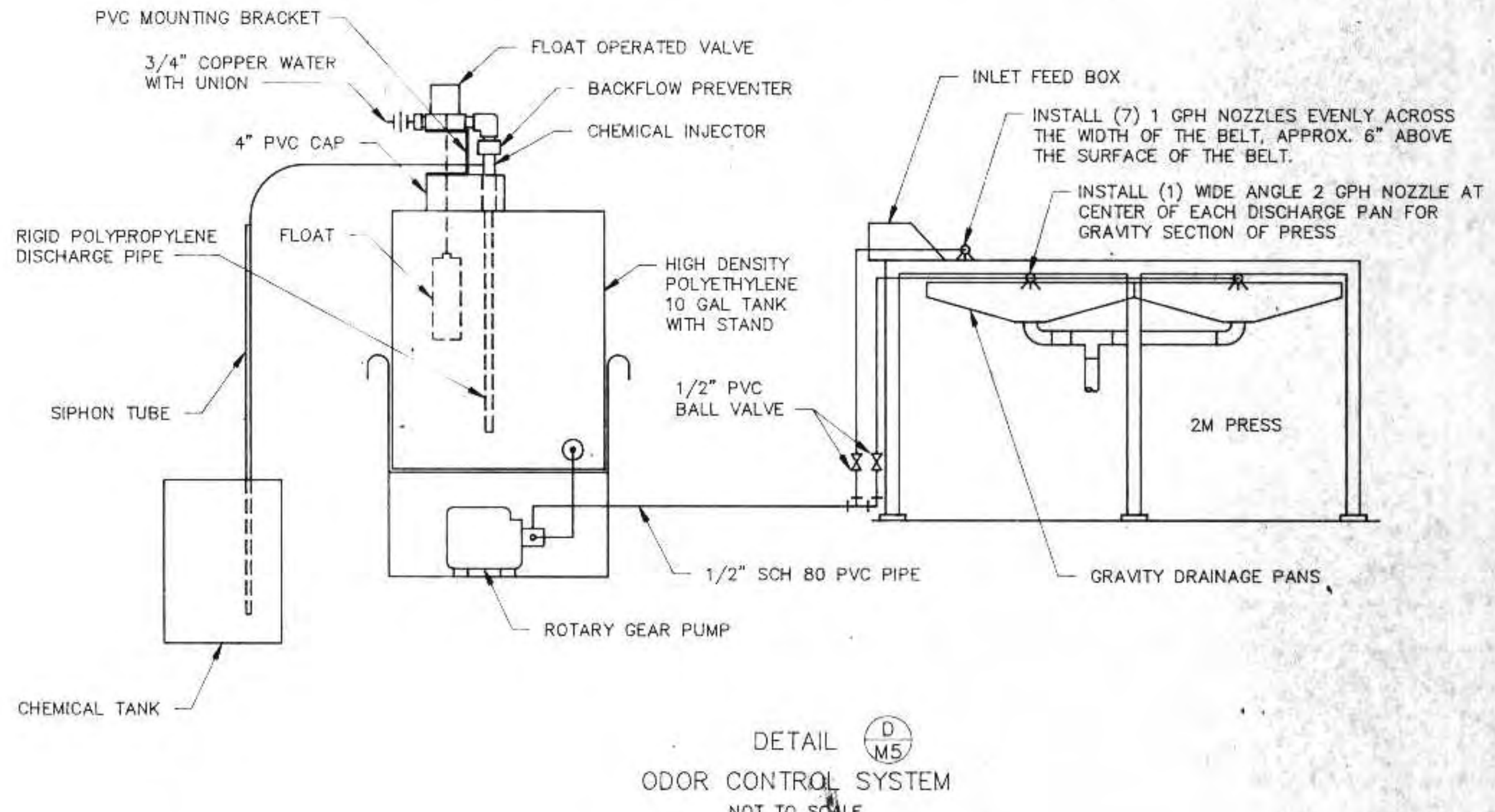
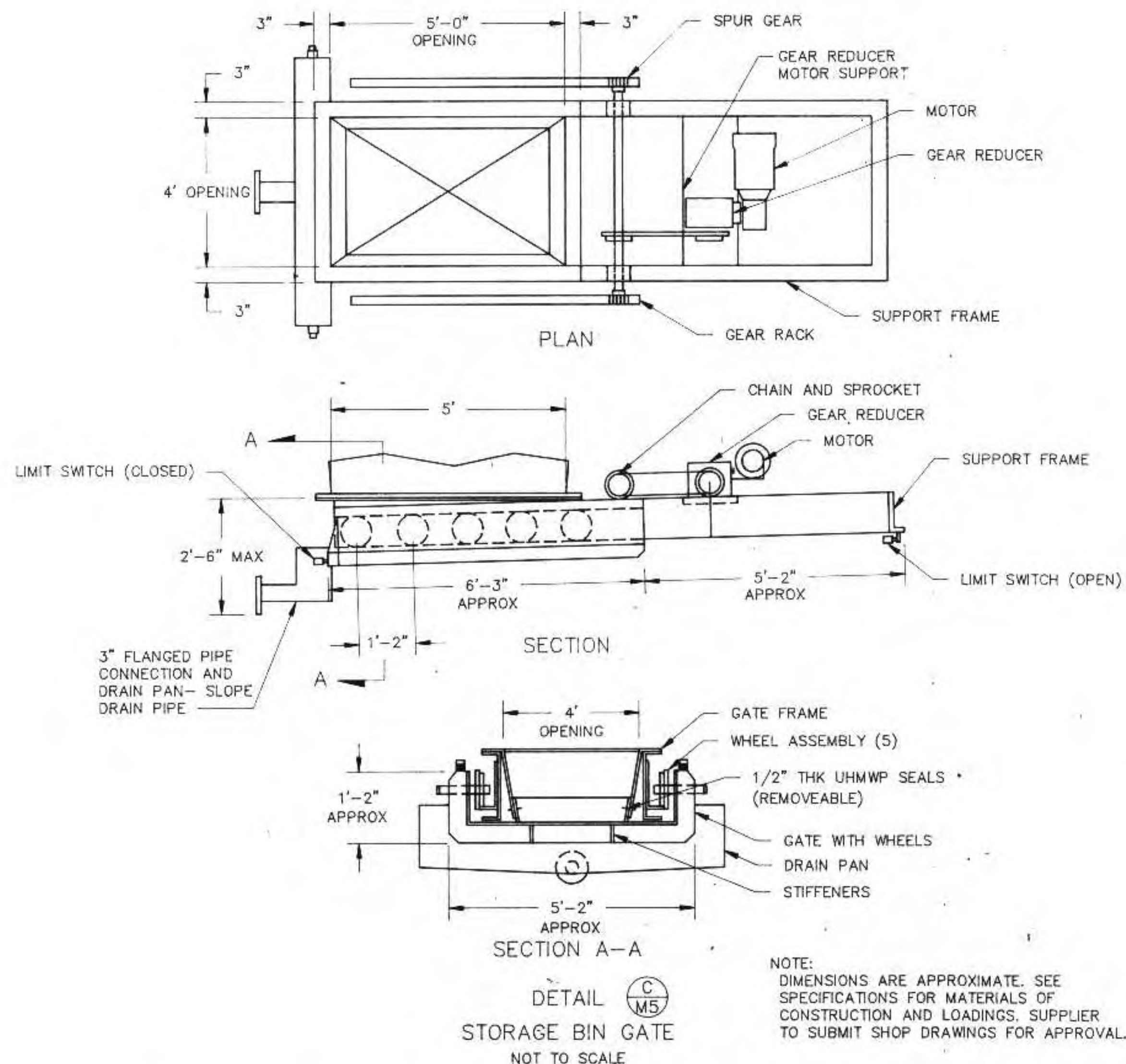
REVISIONS			SLUDGE CAKE STORAGE BIN	
NO.	BY	DATE		
1	RMA	8/22/91		

CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES			SCALE: 1/2"=1'	JOB NO.
DESIGNED BY: <i>RMA</i>	RMA ENGINEERING COMPANY		DATE	
DRAWN BY: <i>GB</i>	CONSULTING ENGINEERS			
CHECKED BY:				
APPROVED BY:				
			SHEET	M-4



POLYMER SYSTEM SCHEDULE		
ITEM	DESCRIPTION	FURNISHED BY
1	2" X 1-1/2" COPPER REDUCER	CONTRACTOR
2	1-1/2" X 1" COPPER REDUCER	CONTRACTOR
3	1" PVC BALL VALVE	CONTRACTOR
4	1" BRONZE GLOBE VALVE	CONTRACTOR
5	1" UNION	CONTRACTOR
6	3/4" PVC BALL VALVE	CONTRACTOR
7	1" DISCONNECT	CONTRACTOR
8	1-1/4" X 1" PVC REDUCER	CONTRACTOR
9	1" X 3/4" PVC REDUCER	CONTRACTOR
10	PVC VALVES	SYSTEM SUPPLIER
11	DILUTION WATER ROTOMETER	SYSTEM SUPPLIER
12	STATIC MIXER	SYSTEM SUPPLIER
13	BLENDER UNIT	SYSTEM SUPPLIER
14	SOLUTION TANK MIXER	SYSTEM SUPPLIER
15	200 GALLON TANK AND STAND	SYSTEM SUPPLIER
16	4-PROBE TANK LEVEL CONTROL	SYSTEM SUPPLIER
17	POLYMER SOLUTION PUMP	SYSTEM SUPPLIER



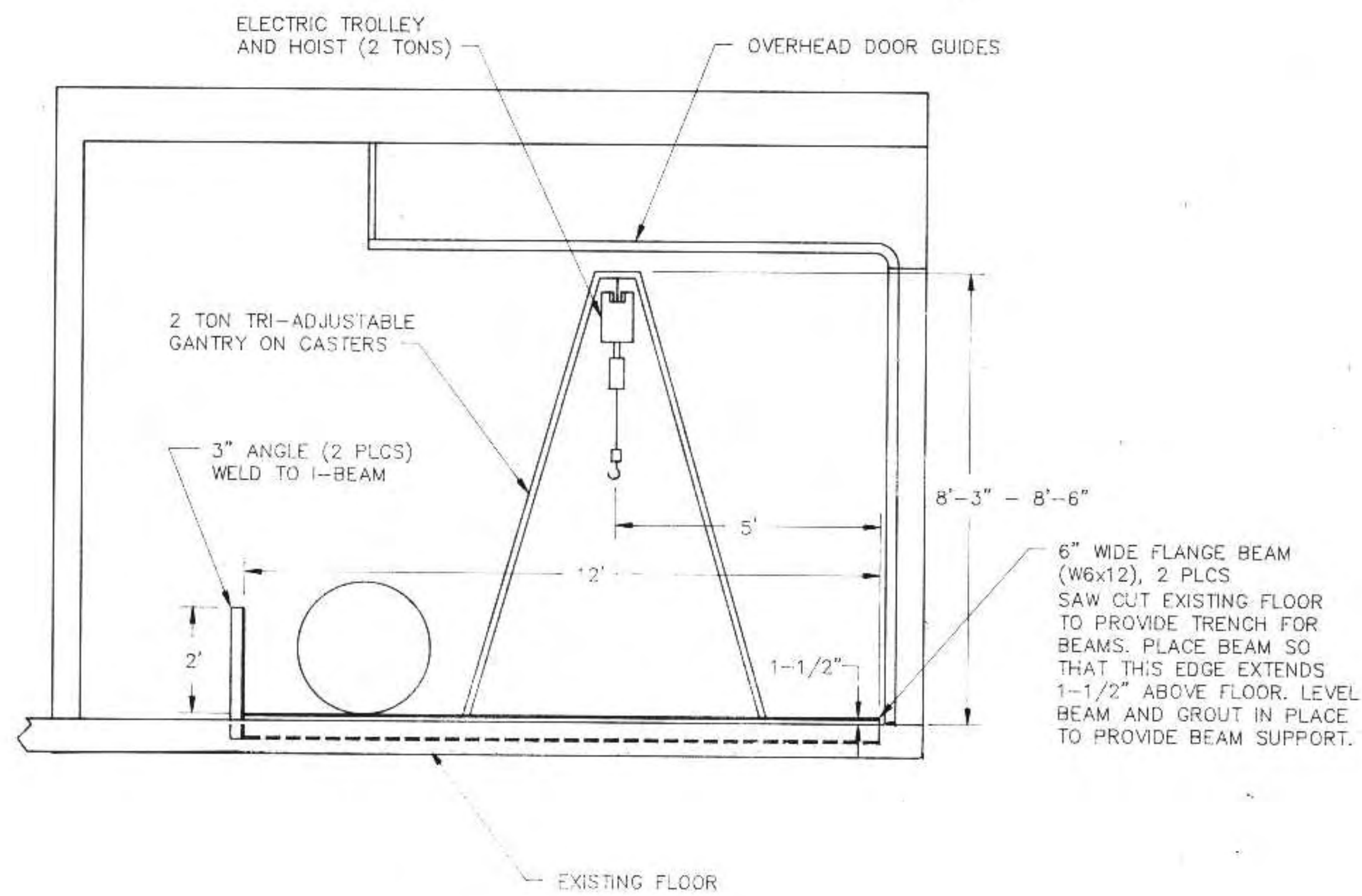
- NOTES:
- ITEM 13 INCLUDES PRESSURE GAUGES, MIXING WATER ROTOMETER, NEAT POLYMER PUMP, SOLENOID SWITCH AND MIXING TANK.
  - || DESIGNATES CONNECTIONS BETWEEN PIPING BY CONTRACTOR AND BLENDING EQUIPMENT BY SYSTEM SUPPLIER.
  - MOUNTING PLATFORM BY SYSTEM SUPPLIER - TO BE BOLTED TO WALL.

NOTE: DIMENSIONS ARE APPROXIMATE. SEE SPECIFICATIONS FOR MATERIALS OF CONSTRUCTION AND LOADINGS. SUPPLIER TO SUBMIT SHOP DRAWINGS FOR APPROVAL.

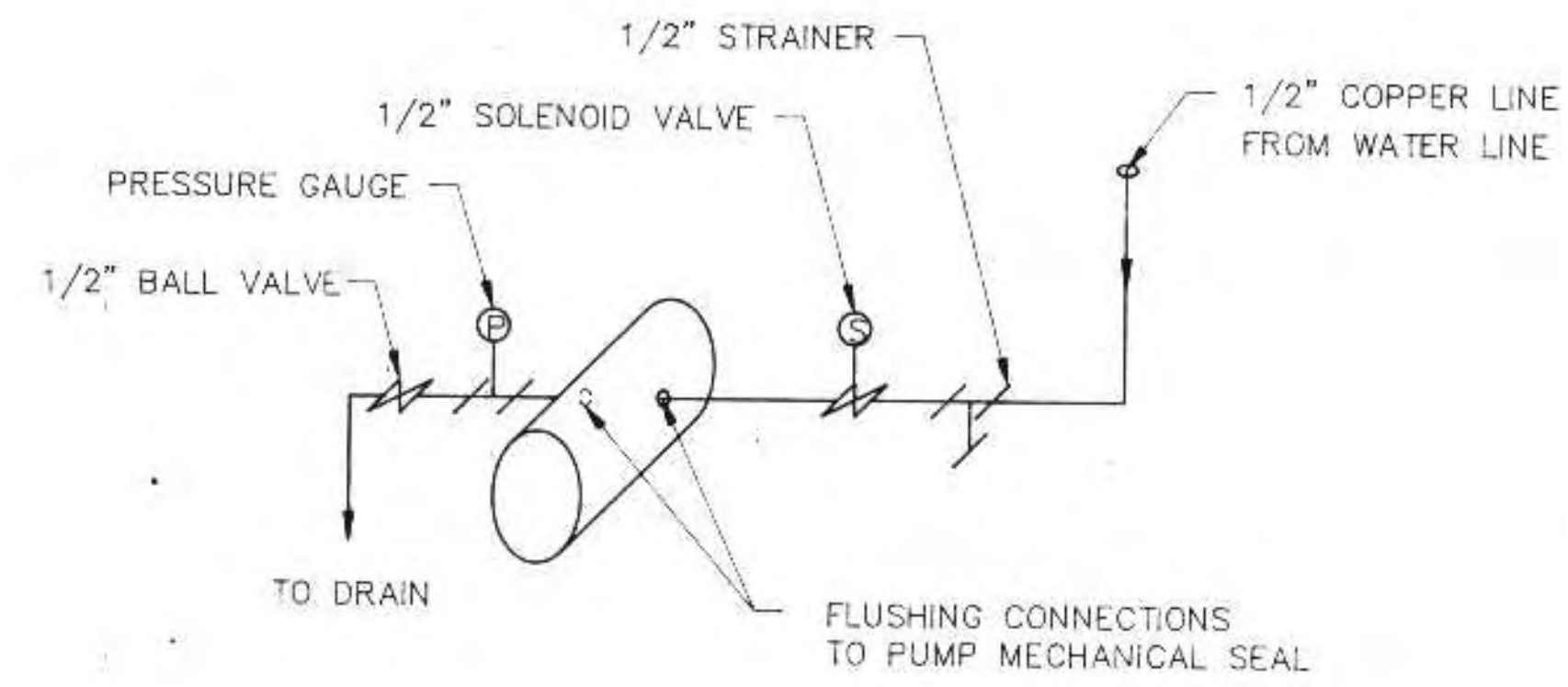
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
*Richard Anthony*  
 DATE: 6/24/91 REG. NO.: 25488

REVISIONS		
NO.	BY	DATE
1	Rua	8/22/91
2	Rua	7/21/92

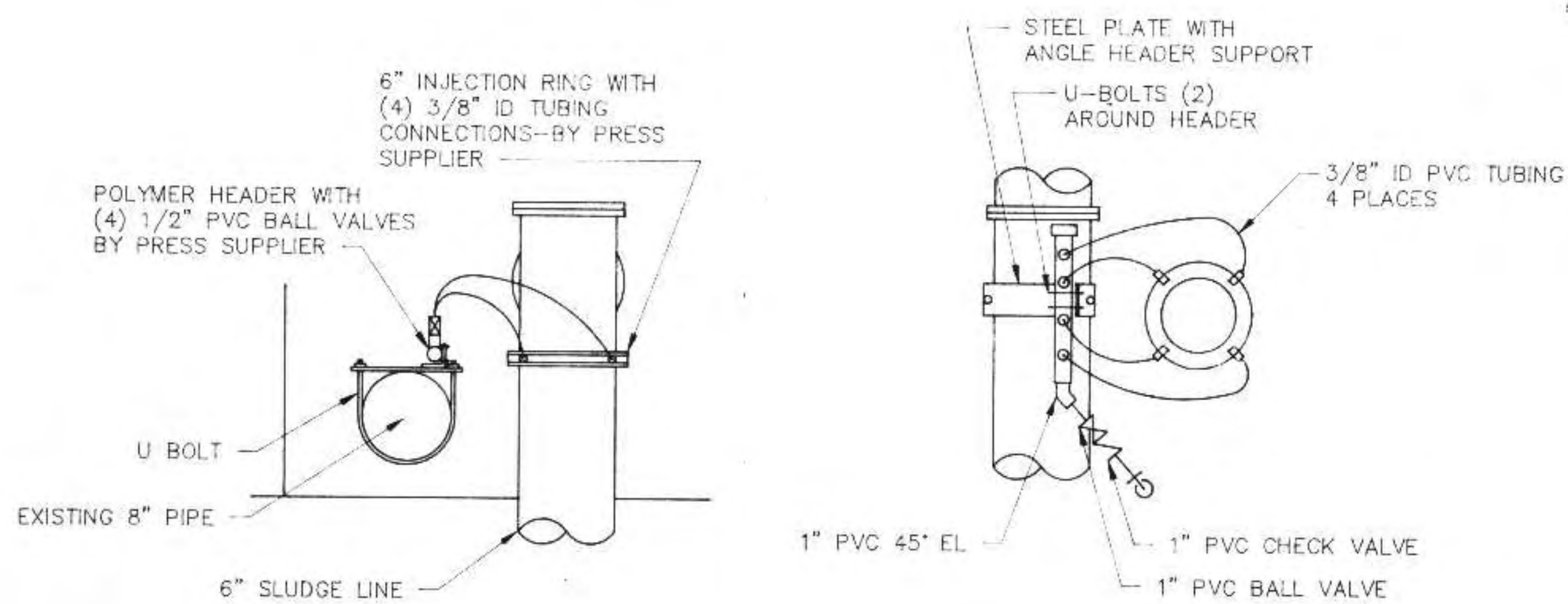
MECHANICAL DETAILS		SCALE	NTS	JOB NO.
CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES		DATE		
DESIGNED BY	Rua	RMA ENGINEERING COMPANY CONSULTING ENGINEERS		SHEET
DRAWN BY	GB			
CHECKED BY				
APPROVED BY				M-5



DETAIL (E)  
TON CONTAINERS RAILS AND HOIST  
SCALE: 1/2"=1'



DETAIL (F)  
SLUDGE PUMP FLUSHING  
WATER CONNECTION



SECTION

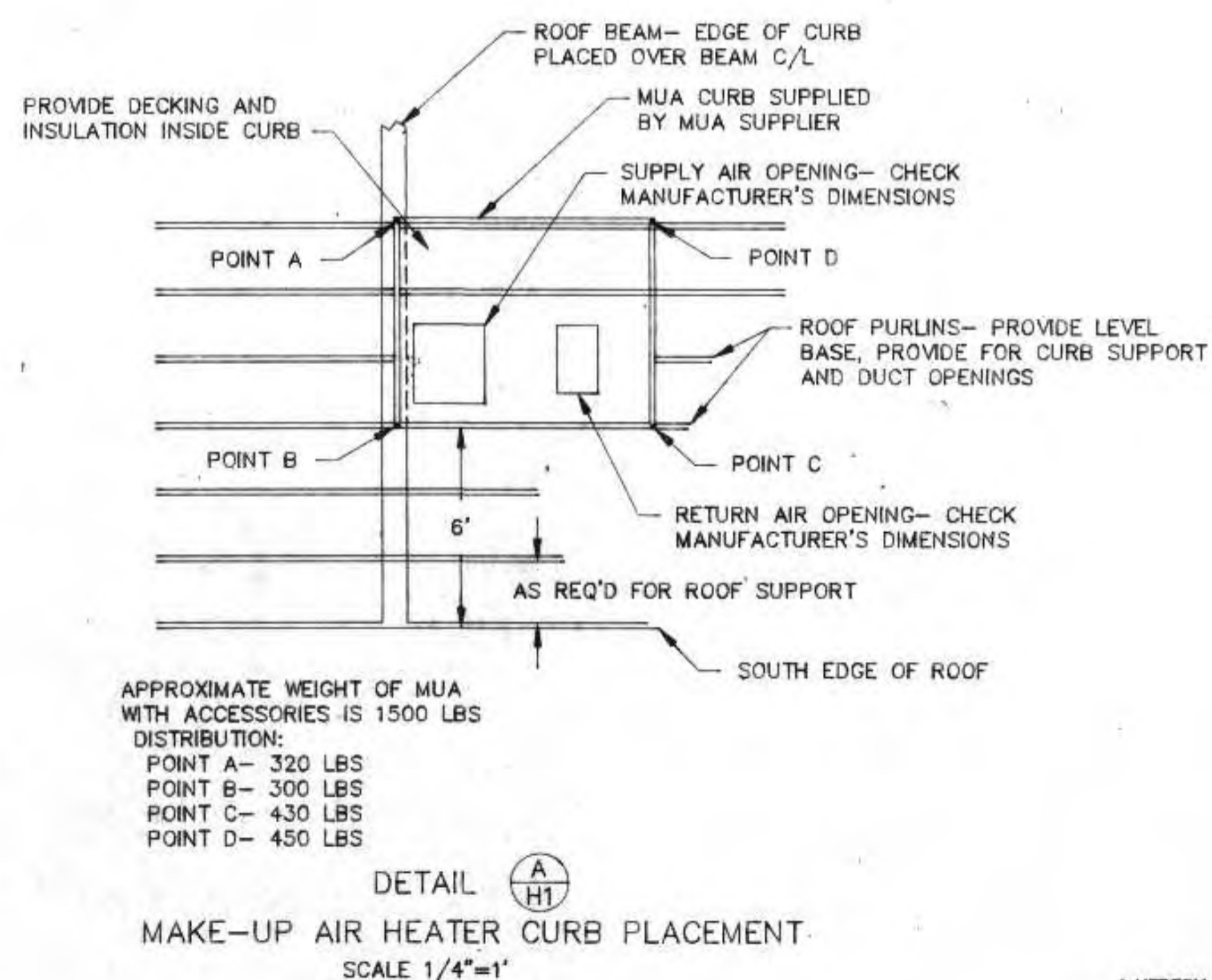
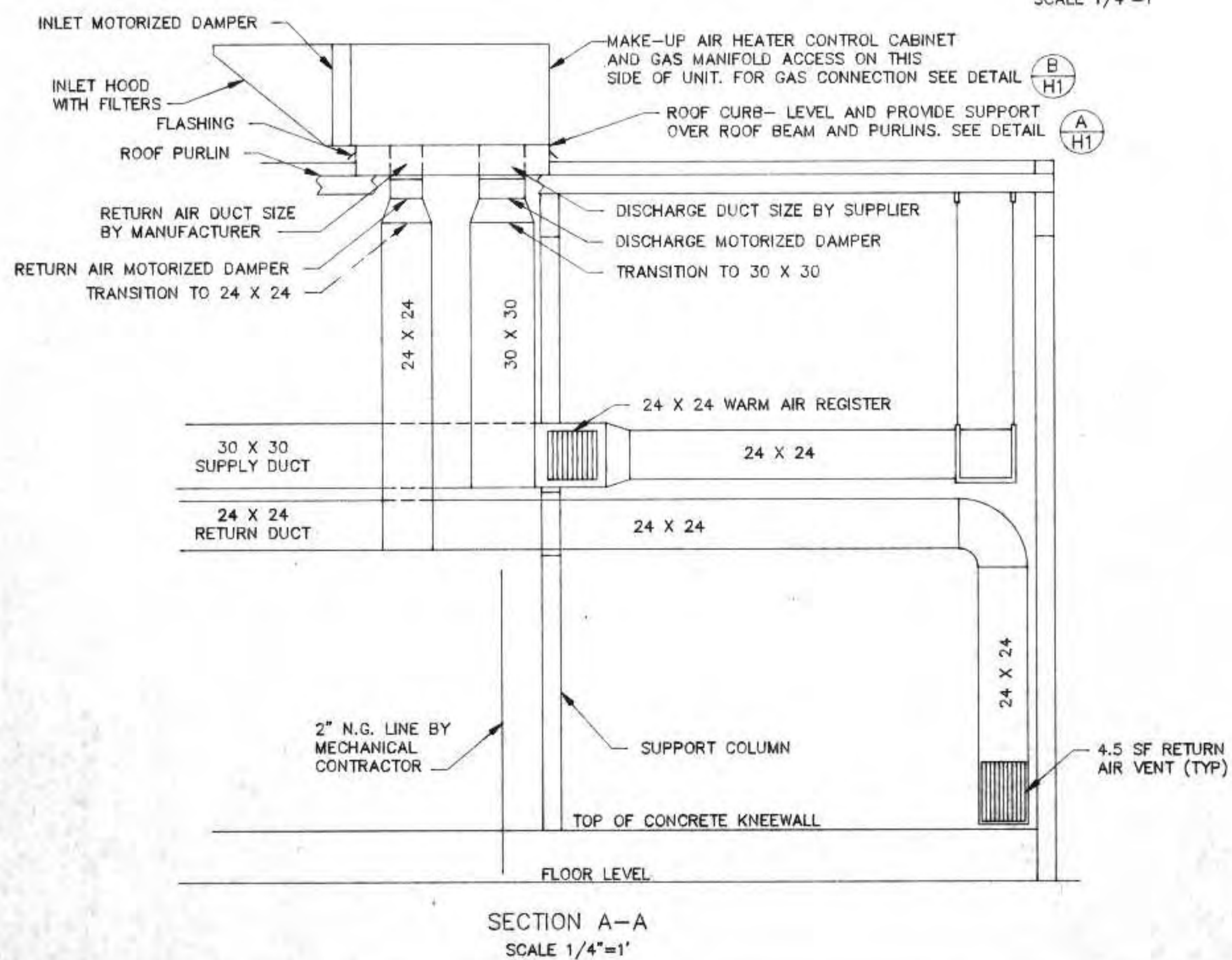
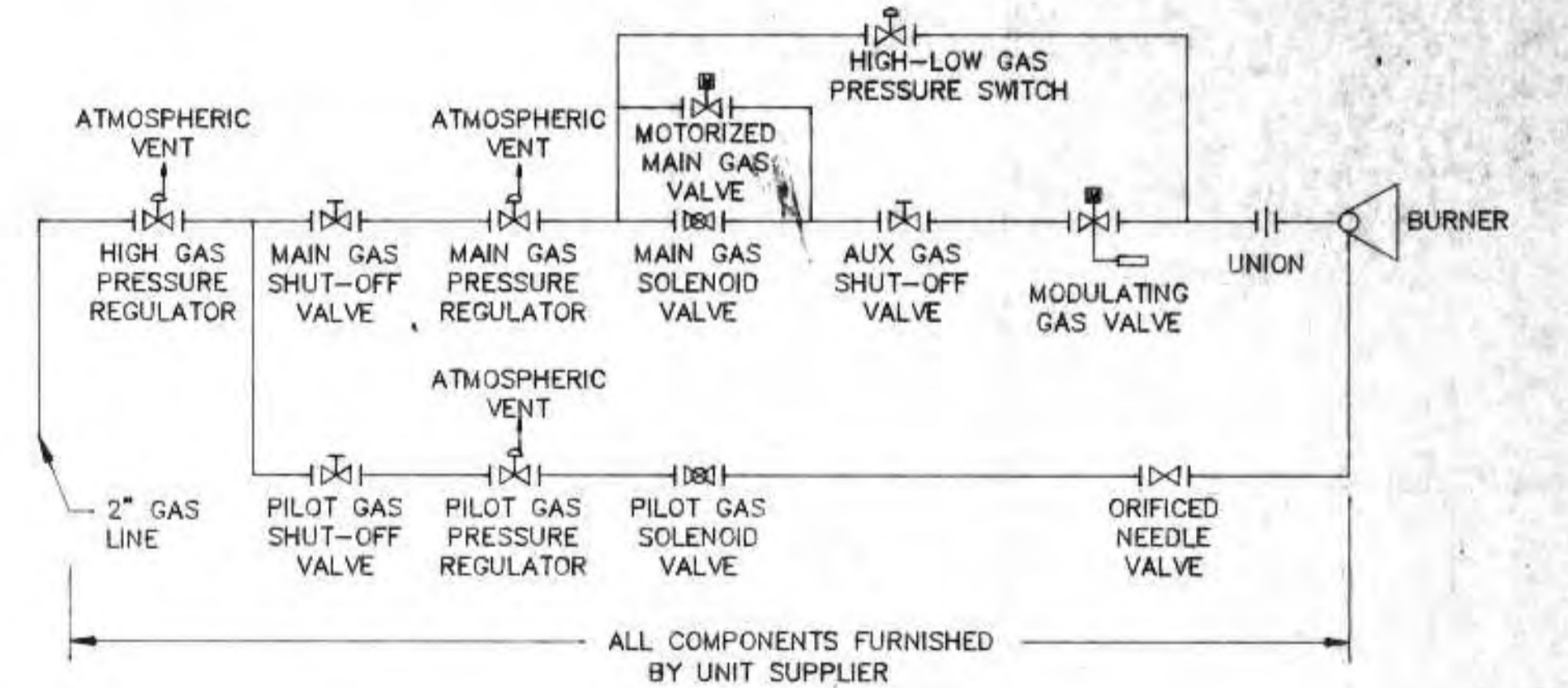
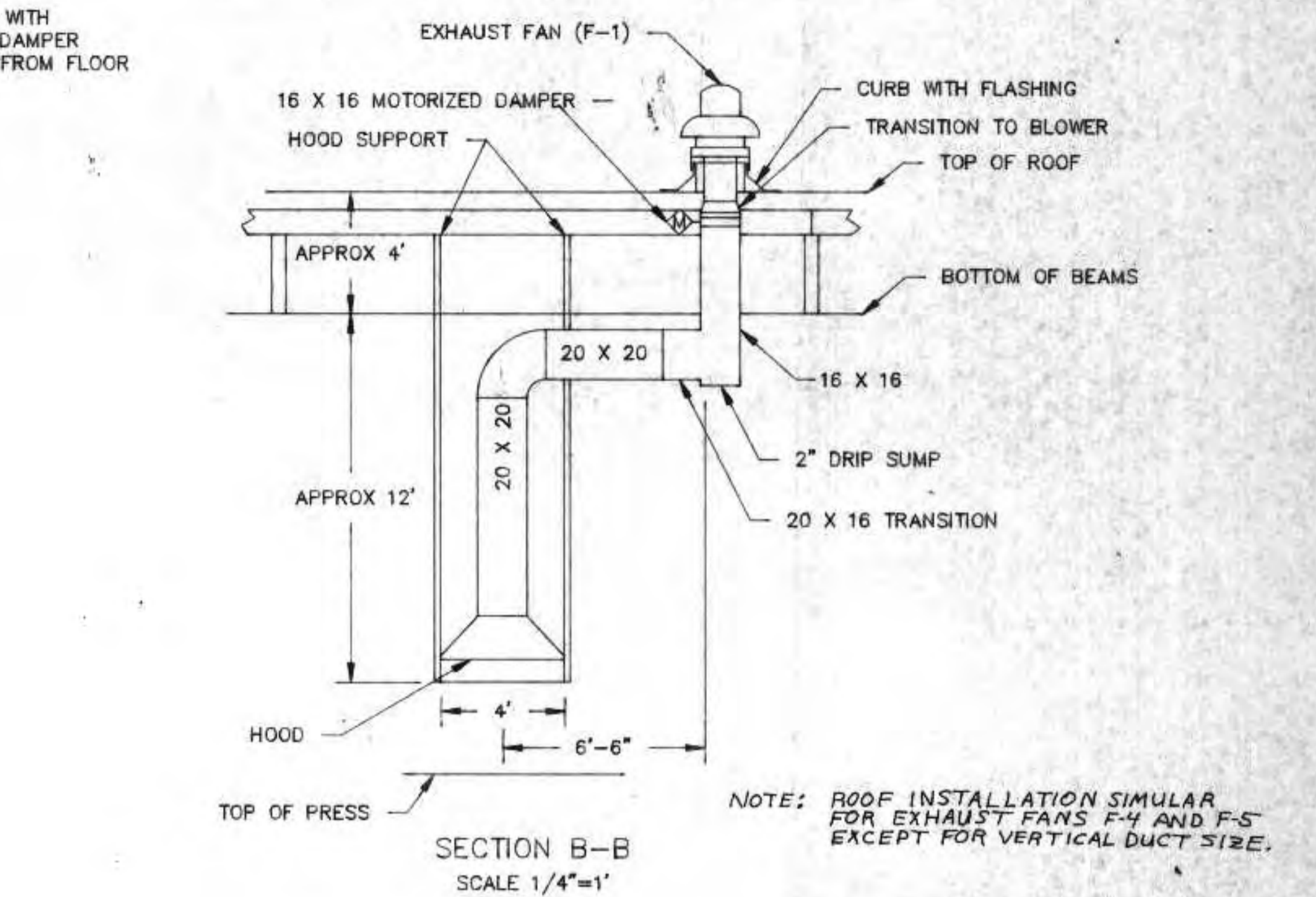
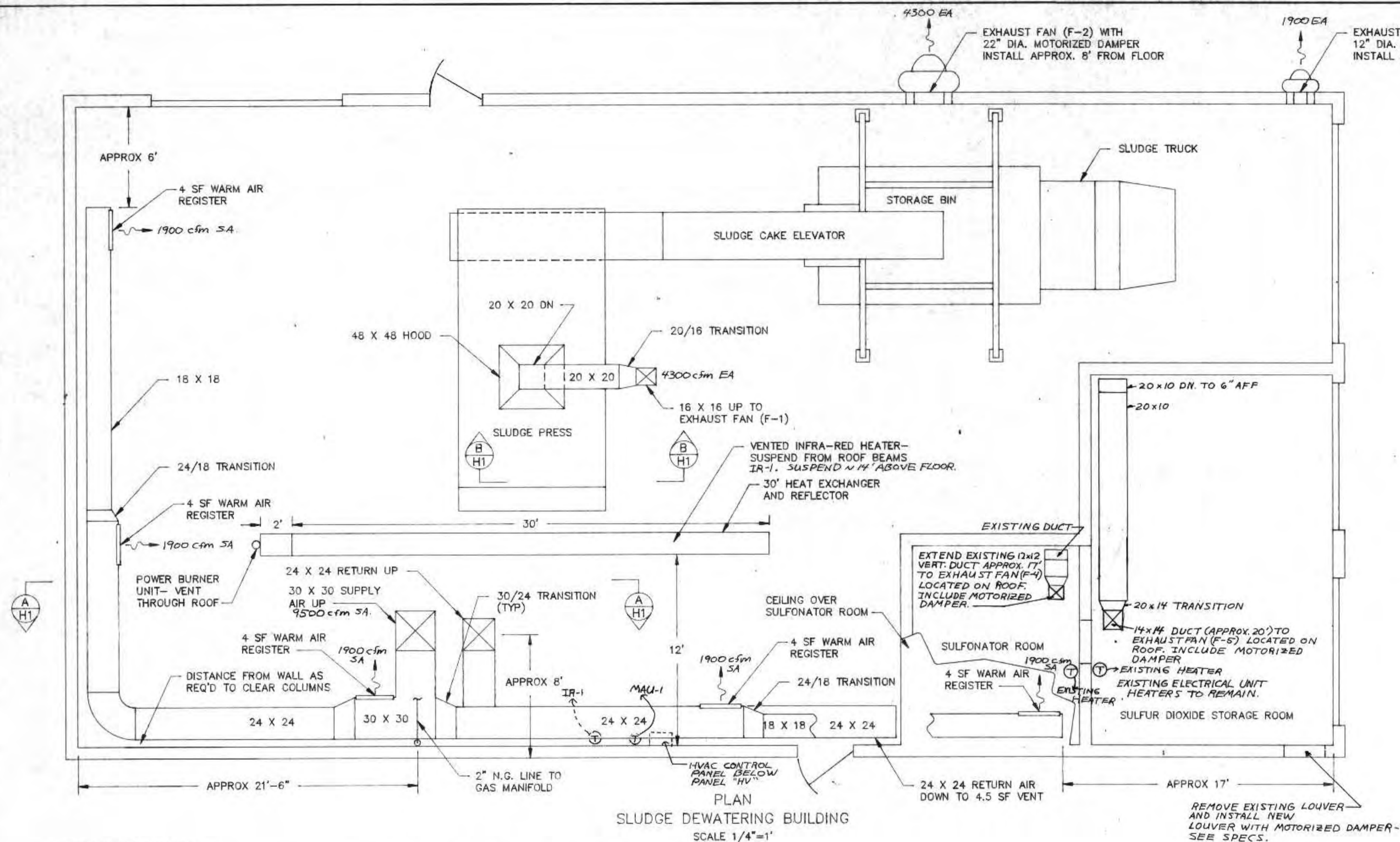
PLAN

DETAIL (G)  
POLYMER INJECTION IN  
DIGESTER CONTROL BUILDING

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
*Richard Anthony*  
DATE: 6/24/91 REG. NO.: 25488

REVISIONS			MECHANICAL DETAILS		
NO.	BY	DATE			
1	RMC	8/22/91	CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES		
2	RMC	9/18/92			
DESIGNED BY RMC			SCALE	NTS	JOB NO.
DRAWN BY GB			RMA ENGINEERING COMPANY		
CHECKED BY			CONSULTING ENGINEERS		
APPROVED BY			SHEET	M-6	





EXHAUST FAN SCHEDULE									
UNIT	LOCATION	MANUFACTURER MODEL OR EQUIV	C.F.M.	S.P. IN.	R.P.M.	ARRANGEMENT	HP VOLT/PH	COMMENTS	
F-1	DEWATERING BLDG ROOF	LOREN COOK 195 C6B	4300	.25	985	P.R. VENTLR	3/4 460/3		
F-2	DEWATERING BLDG N. WALL	LOREN COOK 195 W6B	4300	.25	985	P.W. VENTLR	3/4 460/3		
F-3	DEWATERING BLDG N. WALL	LOREN COOK 135 W4B	1900	.25	1330	P.W. VENTLR	1/3 120/1		
F-4	SULFONATOR ROOM ROOF	LOREN COOK 120 C2B	1000	.25	1100	P.R. VENTLR	1/8 120/1	SEE SECTION B-B	
F-5	SULFUR DIOXIDE ROOF	LOREN COOK 135 C4B	1900	.25	1330	P.R. VENTLR	1/3 120/1	SEE SECTION B-B	

MAKE-UP AIR HEATER/IR HEATER									
UNIT	LOCATION	MANUFACTURER MODEL OR EQUIV	C.F.M.	S.P. IN.	R.P.M.	BTU/HR	FUEL	HP VOLT/PH	ARRANGEMENT
MUA-1	DEWATERING BLDG ROOF	INDUSTRIAL AIR SYSTEMS DACR-120	9500	1.0	1035	925,000	N.G.	7.5 460/3	HORIZONTAL
IR-1	DEWATERING BLDG	SOLARONICS MODEL 100-30A				100,000	NG	120/1	30' TUBE LENGTH

REVISIONS		
NO.	BY	DATE
1	RMR	8/22/91
2	RMR	5/15/92

DEWATERING BUILDING  
HVAC

CITY OF SUPERIOR, WISCONSIN  
WASTE WATER TREATMENT PLANT  
SLUDGE DEWATERING/HANDLING  
FACILITIES

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*Richard Anthony*

DATE: 6/24/91 REG. NO.: 25488

DESIGNED BY RMR

DRAWN BY GB

CHECKED BY

APPROVED BY

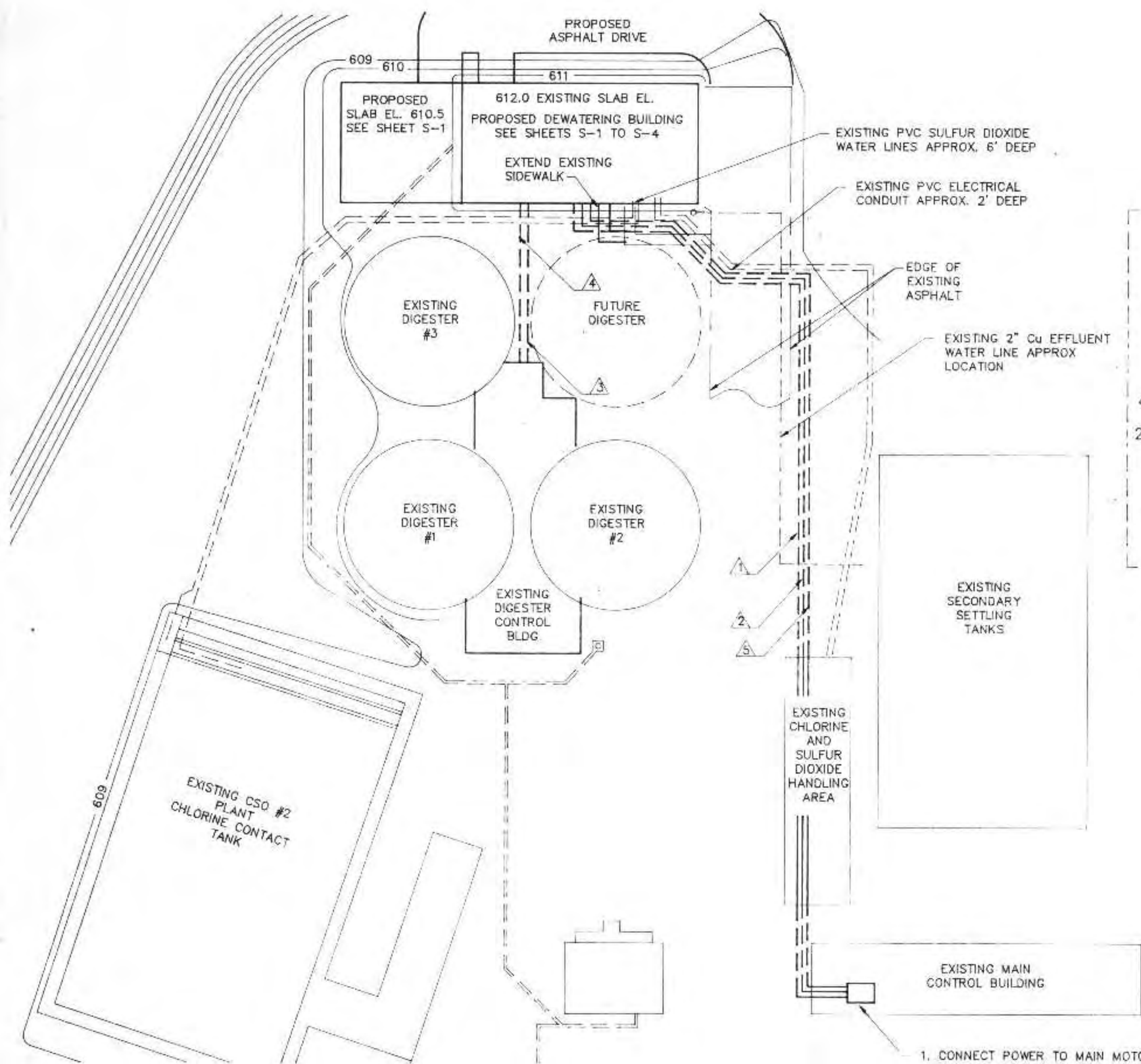
RMA ENGINEERING COMPANY  
CONSULTING ENGINEERS

SCALE 1/4"=1'

JOB NO.

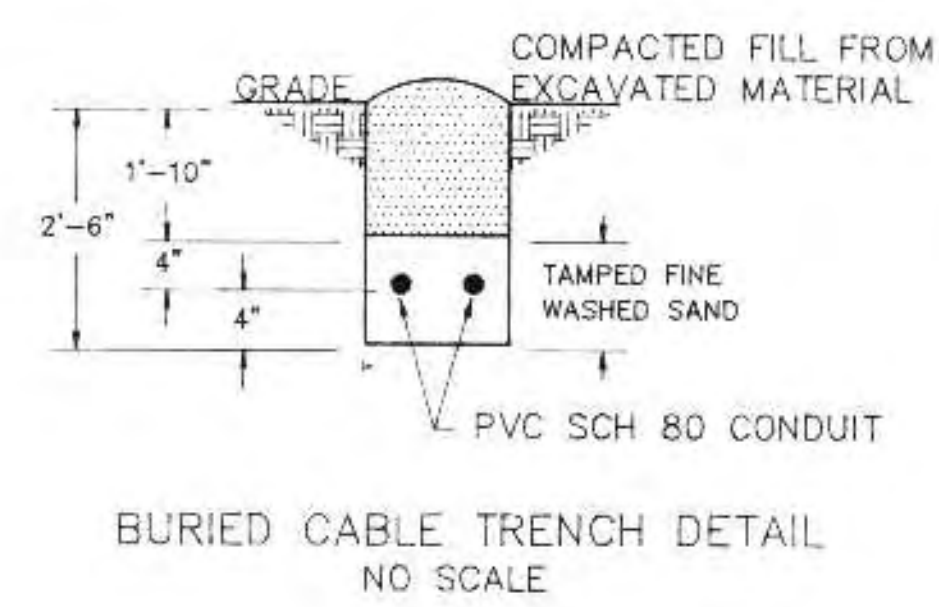
DATE

SHEET H-1



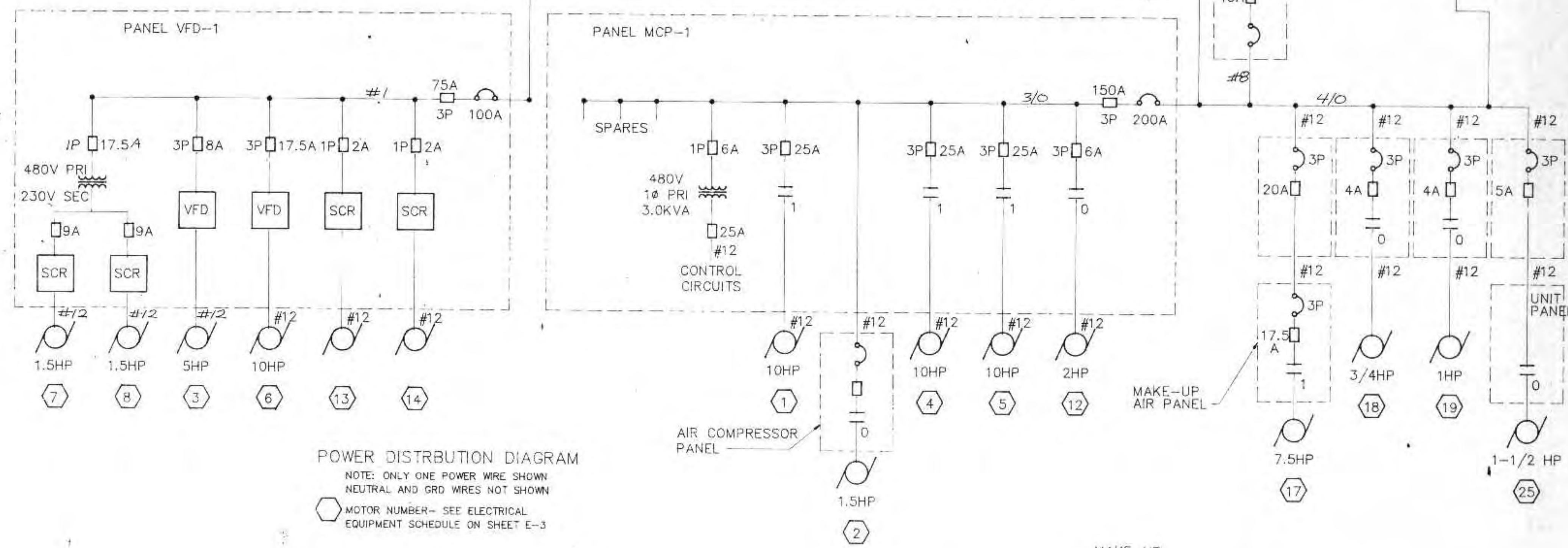
ELECTRICAL SITE PLAN  
SCALE: 1"=30'

- CONNECT POWER TO MAIN MOTOR CONTROL CENTER USING 225A FUSED DISCONNECT
- CONNECT ALARM CIRCUITS TO ALARM PANEL. HORN TO ACTIVATED UPON ALARM
- INSTALL THREE ALARM LIGHTS (RED) WITH PUSH-TO-TEST PUSHBUTTON ALARM LIGHTS FOR THE FOLLOWING CONDITIONS:
  - EMERGENCY STOP
  - CATEGORY ONE ALARM
  - CATEGORY TWO ALARM

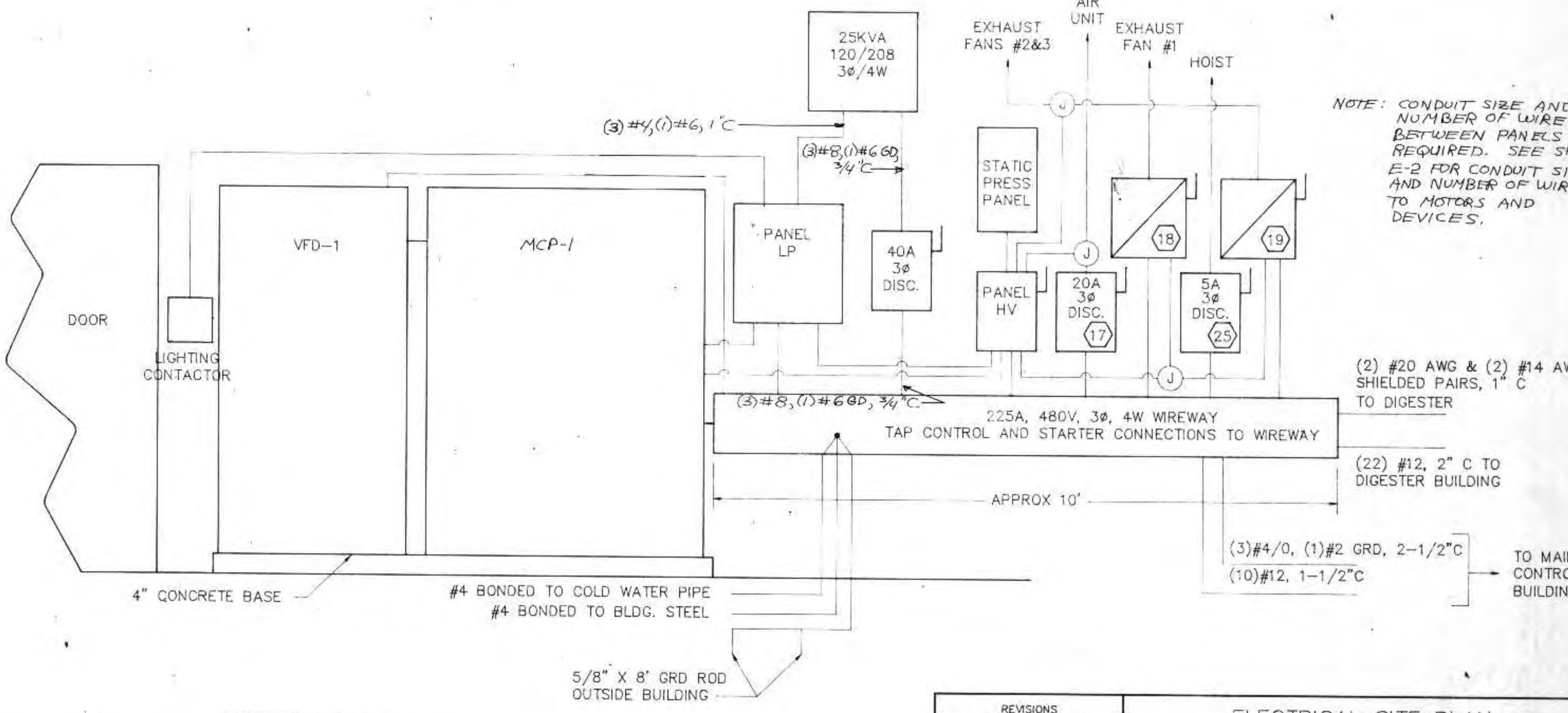
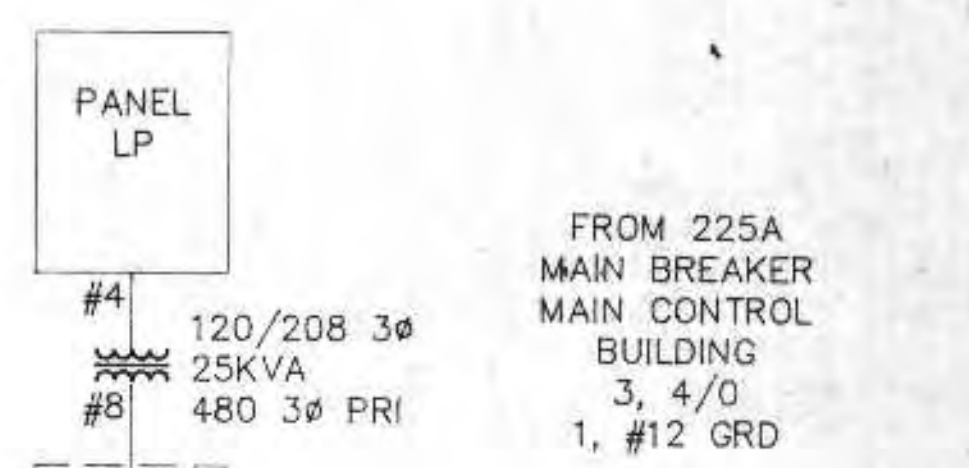


UNDERGROUND FEEDER SCHEDULE		
SYMBOL	CONDUCTORS	PVC 80
△	(3) #4/0 AND (1) #2 GRD	2-1/2"
△	(10) #12	1-1/2"
△	(2) #20 AWG AND (2) #14 AWG SHIELDED PAIRS	1"
△	(2) #12 AND (1) #12 GRD	2"
△	(25) PAIR SHIELDED PHONE CABLE (2) SHIELDED, (2) NON-SHIELDED SPEAKER CABLE	1-1/2"

- ELECTRICAL NOTES
- PROVIDE RIGID GALVANIZED CONDUIT SLEEVE WHEN PASSING UNDER ROADWAY AS SHOWN
  - SEE SHEET E-3 FOR ELECTRICAL EQUIPMENT SCHEDULE
  - RUN CONDUIT THROUGH TON CONTAINER STORAGE BUILDING- USE METAL CONDUIT ABOVE GROUND
  - FOR RISER DIAGRAM- WIRE MAY BE RUN IN CONDUIT CONNECTING PANELS OR IN WIREWAY
  - INSTEAD OF COMBINATION STARTERS FOR MOTORS 17, 18 AND 19, MAGNETIC STARTERS AND FUSES CAN BE PROVIDED BY THE HEATING/VENTILATION SYSTEM SUPPLIER AS PART OF PANEL HV



NOTE:  
PANEL LP PROVIDES 120 VOLT POWER FOR LIGHTS, ODOR CONTROL SYSTEM, ODOR BLENDERS #1 & #2, POLYMER TANK MIXER, IR HEATER, MAG METER AND EXHAUST FAN #3.



DEWATERING BUILDING POWER RISER DIAGRAM  
NO SCALE

NOTE: CONDUIT SIZE AND NUMBER OF WIRES BETWEEN PANELS AS REQUIRED. SEE SHEET E-2 FOR CONDUIT SIZE AND NUMBER OF WIRES TO MOTORS AND DEVICES.

REVISIONS		
NO.	BY	DATE
1	RMA	8/22/91
2	RMA	9/21/91

ELECTRICAL SITE PLAN AND POWER DISTRIBUTION

CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

*Richard C. ...*

DATE: 6/24/91 REG. NO.: 25488

DESIGNED BY RMA

DRAWN BY GB

CHECKED BY

APPROVED BY

RMA ENGINEERING COMPANY  
CONSULTING ENGINEERS

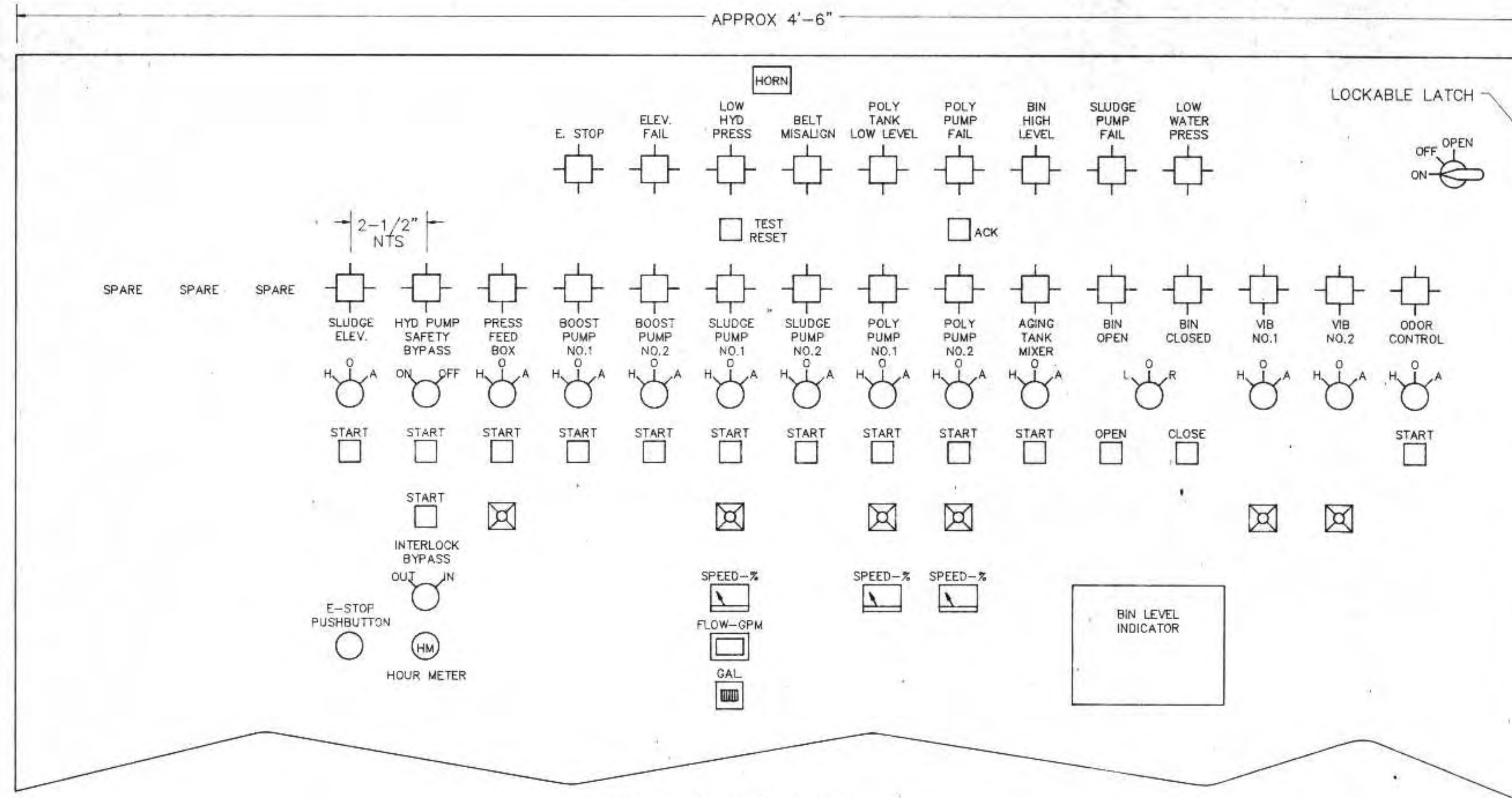
SCALE 1"=30'

JOB NO.

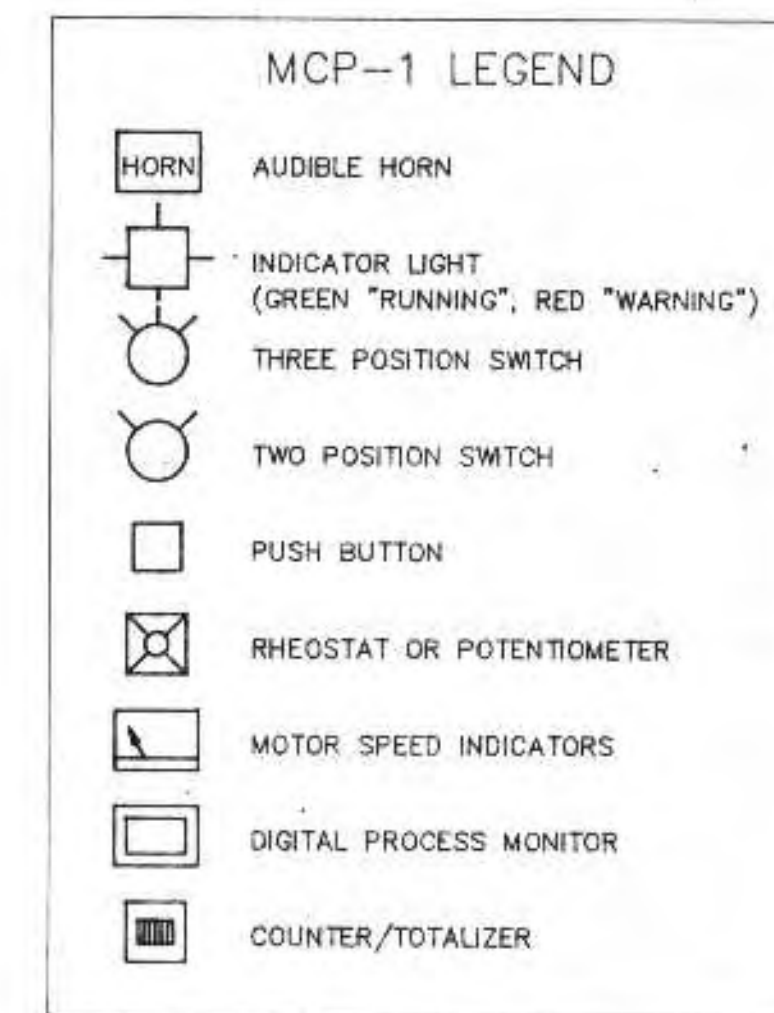
DATE

SHEET E-1





MOTOR CONTROL PANEL MCP-1  
NO SCALE  
NOTE: SEE MCP-1 SHOP DRAWINGS FOR PANEL LAYOUT



PANEL SCHEDULE						
PANEL	ENCLOSURE	VOLT	AMP	PHASE	FURNISHED BY	MANUFACTURERS DESIGNATION
MCP-1	NEMA 4	480	200	3	ELECT	
VFD-1	NEMA 1	480	40	3	ELECT	
HV	NEMA 2	120	---	1	BUILDING	
LSP	NEMA 2	120	---	1	ELECT	
LBP	NEMA 2	120	---	1	ELECT	
LP	NEMA 2	208/120	90	3	ELECT	CUTLER HAMMER PB4ML125

ELECTRICAL EQUIPMENT SCHEDULE																
NO.	DESCRIPTION	LOCATION	HP/KW	VOLT	PH	TYPE	SIZE	FURNISHED	STARTER		CONTROL PANEL		POWER PANEL		REMARKS	
									PANEL	PANEL	SWITCH	FURNISHED	PANEL	FURNISHED		WIRE
1	SLUDGE ELEVATOR DR #1	DEWATERING BLDG	10 HP	480	3	MAG	1	ELECT	MCP-1	MCP-1	HOA	ELECT	MCP-1	ELECT	12	
2	AIR COMPRESSOR	DEWATERING BLDG	1.5 HP	480	3	MAG	0	PRESS	MCP-1	MCP-1	HOA	ELECT	AIR	PRESS	12	
3	PRESS DRIVE	DEWATERING BLDG	5 HP	480	3	VFD	-	PRESS	VFD-1	MCP-1	HOA	ELECT	VFD-1	ELECT	12	
4	WASHWATER PUMP #1	DEWATERING BLDG	10 HP	480	3	MAG	1	ELECT	MCP-1	MCP-1	HOA	ELECT	MCP-1	ELECT	12	
5	WASHWATER PUMP #2	DEWATERING BLDG	10 HP	480	3	MAG	1	ELECT	MCP-1	MCP-1	HOA	ELECT	MCP-1	ELECT	12	
6	SLUDGE PUMP	DEWATERING BLDG	10 HP	480	3	VFD	-	ELECT	VFD-1	MCP-1	HOA	ELECT	VFD-1	ELECT	12	
7	POLYMER SOLUTION PUMP #1	DEWATERING BLDG	1-1/2 HP	230	1	SCR	-	PRESS	VFD-1	MCP-1	HOA	ELECT	VFD-1	ELECT	12	
8	POLYMER SOLUTION PUMP #2	DEWATERING BLDG	1-1/2 HP	230	1	SCR	-	PRESS	VFD-1	MCP-1	HOA	ELECT	VFD-1	ELECT	12	
9	AGING TANK MIXER	DEWATERING BLDG	1/3 HP	120	1	MAN	-	UNIT	UNIT	MCP-1	HOA	ELECT	LP-6	ELECT	12	
10	POLYMER BLENDER #1	DEWATERING BLDG	---	120	1	MAN	-	UNIT	UNIT	UNIT	PRESS	LP-7	ELECT	12		
11	POLYMER BLENDER #2	DEWATERING BLDG	---	120	1	MAN	-	UNIT	UNIT	UNIT	PRESS	LP-8	ELECT	12		
12	STORAGE BIN GATE	DEWATERING BLDG	2 HP	480	3	MAG	0	ELECT	MCP-1	MCP-1	PB	ELECT	MCP-1	ELECT	12	
13	STORAGE BIN VIBRATOR #1	DEWATERING BLDG	---	480	-	SCR	-	ELEVATOR	VFD-1	MCP-1	HOA	ELECT	MCP-1	ELECT	12	
14	STORAGE BIN VIBRATOR #2	DEWATERING BLDG	---	480	-	SCR	-	ELEVATOR	VFD-1	MCP-1	HOA	ELECT	MCP-1	ELECT	12	
15	STORAGE BIN LEVEL SENSOR	DEWATERING BLDG	---	120	-	---	-	UNIT	UNIT	CONVEYOR	MCP-1	ELECT	MCP-1	ELECT	12	
16	MAG METER	DIGESTER BLDG	---	120	-	---	-	UNIT	UNIT	MECH	LP-10	ELECT	12			
17	MAKE-UP AIR HEATER	DEWATERING BLDG	7.5 HP	480	3	COMB	1	BUILDING	UNIT	HV	UNIT	BUILDING	UNIT	BUILDING	12	DISCONNECT BY ELECT.
18	EXHAUST FAN #1	DEWATERING BLDG	3/4 HP	480	3	COMB	0	ELECT	COMB	HV	HOA	BUILDING	COMB	ELECT	12	
19	EXHAUST FAN #2	DEWATERING BLDG	1 HP	480	3	COMB	0	ELECT	COMB	HV	HOA	BUILDING	COMB	ELECT	12	
20	EXHAUST FAN #3	DEWATERING BLDG	1/3 HP	120	1	MAN	-	BUILDING	HV	O-A	BUILDING	LP-17	ELECT	12		
21	IR BURNER	DEWATERING BLDG	---	120	1	---	-	UNIT	UNIT	UNIT	BUILDING	LP-18	ELECT	12		
22	14' DOOR OPENER	DEWATERING BLDG	1/2 HP	120	1	MAN	-	UNIT	UNIT	UNIT	BUILDING	LP-19	ELECT	12		
23	12' DOOR OPENER	DEWATERING BLDG	1/2 HP	120	1	MAN	-	UNIT	UNIT	UNIT	BUILDING	LP-20	ELECT	12		
24	ODOR CONTROL SYSTEM	DEWATERING BLDG	---	120	1	---	-	---	MCP-1	MCP-1	MECH	LP-21	ELECT	12		
25	HOIST AND TROLLEY	DEWATERING BLDG	2 HP	480	3	MAG	0	BUILDING	UNIT	UNIT	UNIT	BUILDING	---	---	12	DISCONNECT BY ELECT
26	9' DOOR OPENER	SULFUR DIOXIDE RM	1/3 HP	120	1	MAN	-	UNIT	UNIT	UNIT	BUILDING	EC-13	EXISTING	12		
27	HOIST AND TROLLEY	SULFUR DIOXIDE RM	2 HP	480	3	MAG	0	BUILDING	UNIT	UNIT	UNIT	BUILDING	---	---	12	DISCONNECT BY ELECT
28	EXHAUST FAN #4	SULFONATOR ROOM	1/6 HP	120	1	MAN	-	BUILDING	UNIT	UNIT	UNIT	BUILDING	EC-6	EXISTING	12	WIRE TO LIGHT SWITCH
29	EXHAUST FAN #5	SULFUR DIOXIDE RM	1/3 HP	120	1	MAN	-	BUILDING	UNIT	UNIT	UNIT	BUILDING	EC-7	EXISTING	12	WIRE TO LIGHT SWITCH

- NOTES:
- RESPONSIBLE PARTIES:  
 BID ITEM #1- BUILDING CONTRACTOR (BUILDING)  
 \* HEATING/VENTILATION SYSTEM SUPPLIER  
 BID ITEM #2- BELT FILTER PRESS SUPPLIER (PRESS)  
 \* POLYMER SYSTEM SUPPLIER  
 BID ITEM #3- SLUDGE ELEVATOR AND BIN SUPPLIER (ELEVATOR)  
 BID ITEM #4- INSTALLATION/MECHANICAL CONTRACTOR (MECH)  
 \* ELECTRICAL SUBCONTRACTOR (ELECT)

\* SUBCONTRACTOR OR SUBSUPPLIER

2. MCP-1 BELT FILTER PRESS CONTROLS MAY BE ALTERED DEPENDING ON PRESS SUPPLIED

REVISIONS			ELECTRICAL PANELS AND SCHEDULE	
NO.	BY	DATE		
1	Rwa	8/22/91		
2	Rwa	7/21/92		
			CITY OF SUPERIOR, WISCONSIN WASTE WATER TREATMENT PLANT SLUDGE DEWATERING/HANDLING FACILITIES	
DESIGNED BY	Rwa	SCALE	JOB NO.	
DRAWN BY	GB	DATE	RMA ENGINEERING COMPANY	
CHECKED BY			CONSULTING ENGINEERS	
APPROVED BY			SHEET E-3	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.  
 Richard Anthony  
 DATE: 6/24/91 REG. NO.: 25488