



LOCATION PLAN  
SCALE: 1" = 2000'

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# Contract Drawings

# MEADOWBROOK LIMESTONE WASTEWATER TREATMENT PLANT IMPROVEMENTS

CONTRACT NO. 1A - GENERAL  
 CONTRACT NO. 1B - ELECTRICAL  
 CONTRACT NO. 1C - HEATING & VENTILATING  
 CONTRACT NO. 1D - PLUMBING

PROJECT NO. 587920

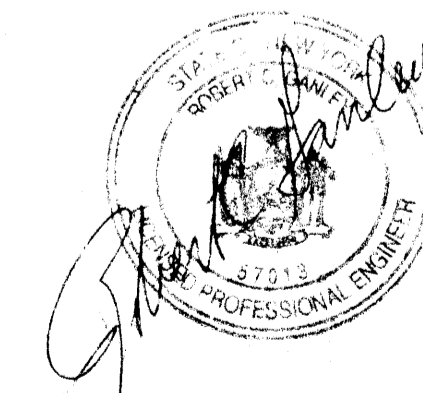
ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE & SANITATION  
 SYRACUSE, NEW YORK

JUNE 1993



**O'BRIEN & GERE**  
ENGINEERS INC.

IF IT IS A VIOLATION OF LAW FOR ANY PERSON  
UNLESS HE IS ACTING UNDER THE DIRECTION OF  
A LICENSED PROFESSIONAL ENGINEER TO ALTER  
THIS DOCUMENT



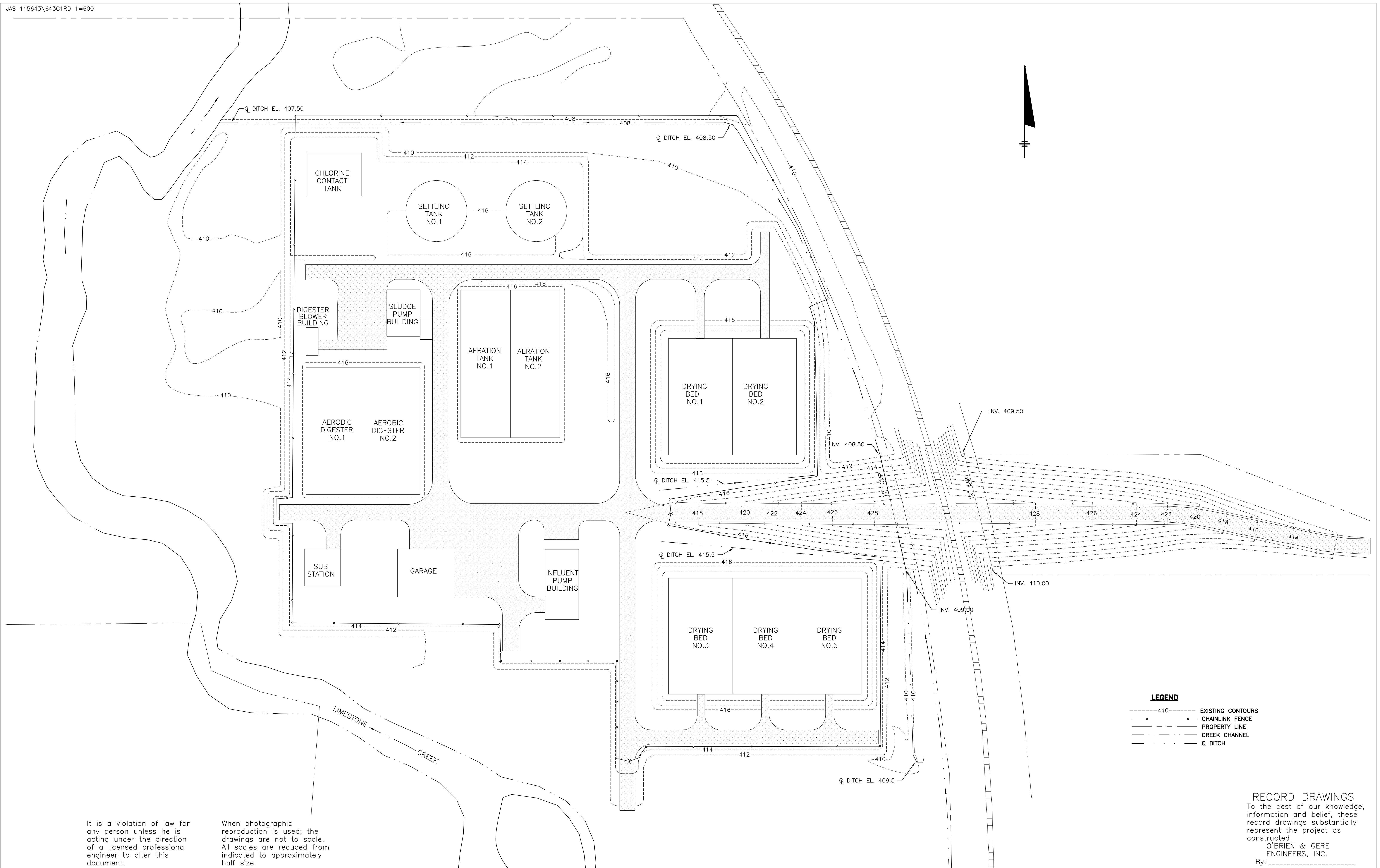
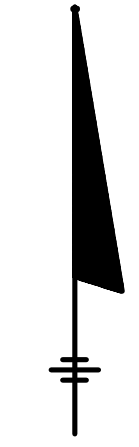
JOHN M. KARANIK  
COMMISSIONER

DATE

RECORD DRAWINGS  
TO THE BEST OF OUR KNOWLEDGE,  
INFORMATION AND BELIEF, BASED ON  
INFORMATION PROVIDED BY OTHERS, THESE  
RECORD DRAWINGS SUBSTANTIALLY REPRESENT  
THE PROJECT AS CONSTRUCTED.

O'BRIEN & GERE  
ENGINEERS, INC.  
BY: *[Signature]*

**NOTE:**  
VISIONS MADE FOR  
ORD DRAWINGS ARE  
DATED BY CLOUD.



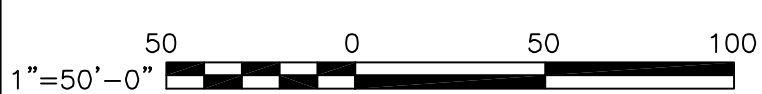
- LEGEND**
- 410 --- EXISTING CONTOURS
  - CHAINLINK FENCE
  - PROPERTY LINE
  - CREEK CHANNEL
  - DITCH

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**RECORD DRAWINGS**  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

In charge of \_\_\_\_\_  
 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_



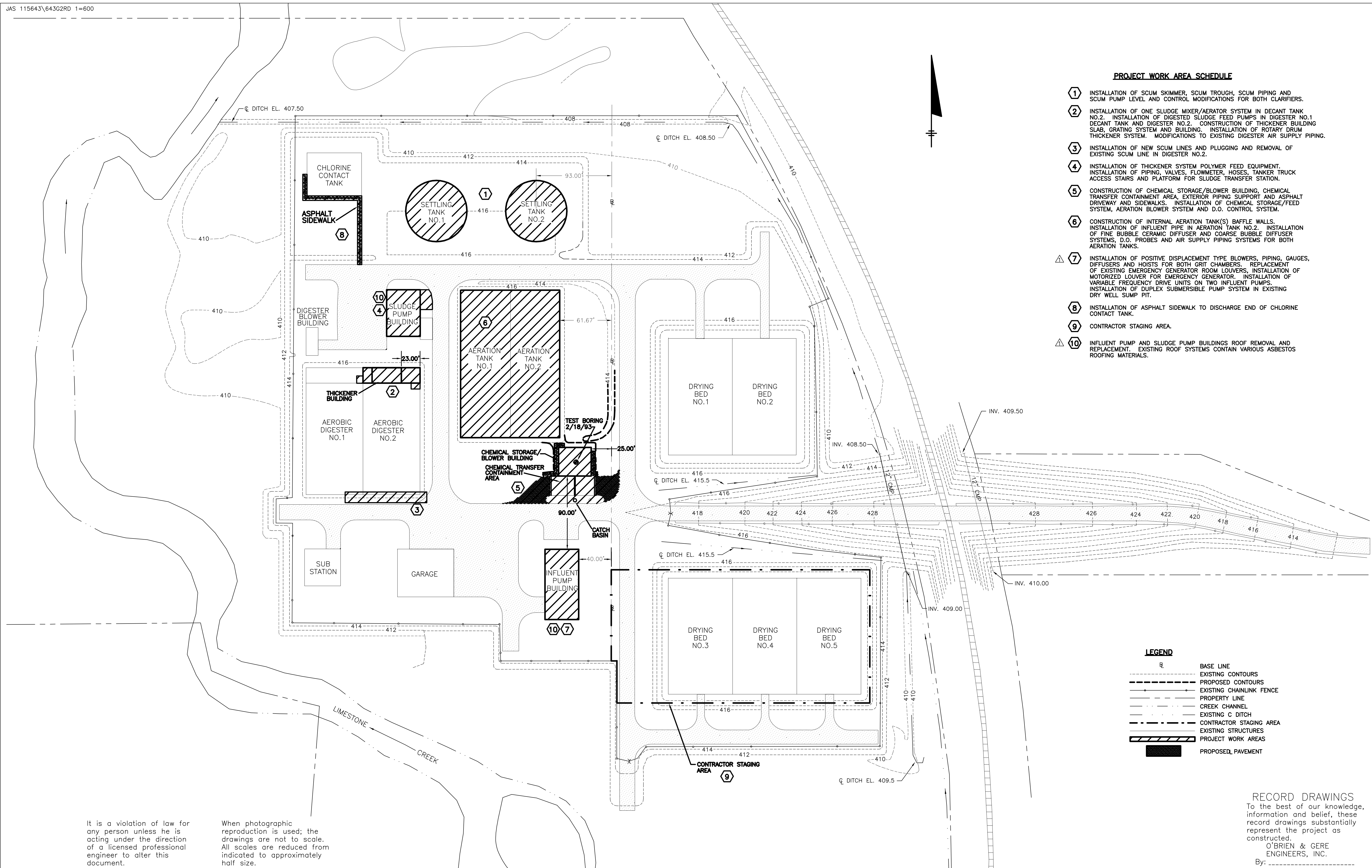
NO.	DATE	REVISION	INIT.
0	2/9/96	RECORD DRAWINGS	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

GENERAL  
**EXISTING SITE PLAN**

FILE NO. 115.643-02RD	G-1
DATE JUNE 1993	R-0



**PROJECT WORK AREA SCHEDULE**

- ① INSTALLATION OF SCUM SKIMMER, SCUM TROUGH, SCUM PIPING AND SCUM PUMP LEVEL AND CONTROL MODIFICATIONS FOR BOTH CLARIFIERS.
- ② INSTALLATION OF ONE SLUDGE MIXER/AERATOR SYSTEM IN DECANT TANK NO.2. INSTALLATION OF DIGESTED SLUDGE FEED PUMPS IN DIGESTER NO.1 DECANT TANK AND DIGESTER NO.2. CONSTRUCTION OF THICKENER BUILDING SLAB, GRATING SYSTEM AND BUILDING. INSTALLATION OF ROTARY DRUM THICKENER SYSTEM. MODIFICATIONS TO EXISTING DIGESTER AIR SUPPLY PIPING.
- ③ INSTALLATION OF NEW SCUM LINES AND PLUGGING AND REMOVAL OF EXISTING SCUM LINE IN DIGESTER NO.2.
- ④ INSTALLATION OF THICKENER SYSTEM POLYMER FEED EQUIPMENT. INSTALLATION OF PIPING, VALVES, FLOWMETER, HOSES, TANKER TRUCK ACCESS STAIRS AND PLATFORM FOR SLUDGE TRANSFER STATION.
- ⑤ CONSTRUCTION OF CHEMICAL STORAGE/BLOWER BUILDING, CHEMICAL TRANSFER CONTAINMENT AREA, EXTERIOR PIPING SUPPORT AND ASPHALT DRIVEWAY AND SIDEWALKS. INSTALLATION OF CHEMICAL STORAGE/FEED SYSTEM, AERATION BLOWER SYSTEM AND D.O. CONTROL SYSTEM.
- ⑥ CONSTRUCTION OF INTERNAL AERATION TANK(S) Baffle WALLS. INSTALLATION OF INFLUENT PIPE IN AERATION TANK NO.2. INSTALLATION OF FINE BUBBLE CERAMIC DIFFUSER AND COARSE BUBBLE DIFFUSER SYSTEMS, D.O. PROBES AND AIR SUPPLY PIPING SYSTEMS FOR BOTH AERATION TANKS.
- ⚠️ ⑦ INSTALLATION OF POSITIVE DISPLACEMENT TYPE BLOWERS, PIPING, GAUGES, DIFFUSERS AND HOISTS FOR BOTH GRIT CHAMBERS. REPLACEMENT OF EXISTING EMERGENCY GENERATOR ROOM LOUVERS. INSTALLATION OF MOTORIZED LOUVER FOR EMERGENCY GENERATOR. INSTALLATION OF VARIABLE FREQUENCY DRIVE UNITS ON TWO INFLUENT PUMPS. INSTALLATION OF DUPLEX SUBMERSIBLE PUMP SYSTEM IN EXISTING DRY WELL SUMP PIT.
- ⑧ INSTALLATION OF ASPHALT SIDEWALK TO DISCHARGE END OF CHLORINE CONTACT TANK.
- ⑨ CONTRACTOR STAGING AREA.
- ⚠️ ⑩ INFLUENT PUMP AND SLUDGE PUMP BUILDINGS ROOF REMOVAL AND REPLACEMENT. EXISTING ROOF SYSTEMS CONTAIN VARIOUS ASBESTOS ROOFING MATERIALS.

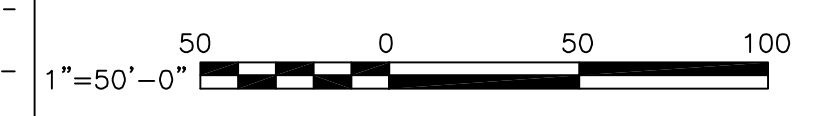
**LEGEND**

- BASE LINE
- - - EXISTING CONTOURS
- - - PROPOSED CONTOURS
- - - EXISTING CHAINLINK FENCE
- - - PROPERTY LINE
- - - CREEK CHANNEL
- - - EXISTING C DITCH
- - - CONTRACTOR STAGING AREA
- - - EXISTING STRUCTURES
- - - PROJECT WORK AREAS
- ▨ PROPOSED PAVEMENT

**RECORD DRAWINGS**  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_



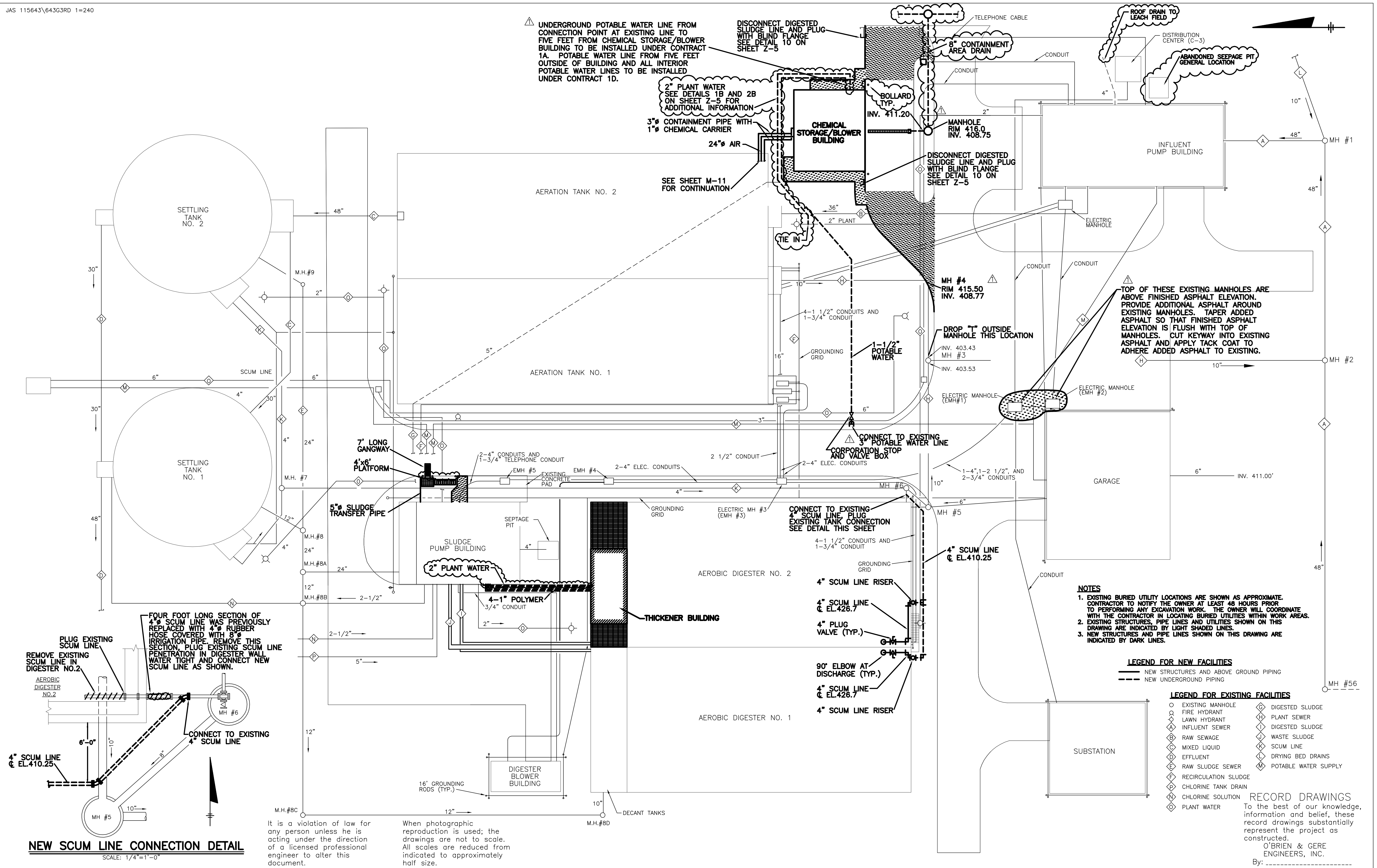
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	REVISED NOTE 7, ADDED NOTE 10	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

GENERAL  
**PROPOSED SITE PLAN**

FILE NO.	115.643-03RD	G-2
DATE	JUNE 1993	R-2



UNDERGROUND POTABLE WATER LINE FROM CONNECTION POINT AT EXISTING LINE TO FIVE FEET FROM CHEMICAL STORAGE/BLOWER BUILDING TO BE INSTALLED UNDER CONTRACT 1A. POTABLE WATER LINE FROM FIVE FEET OUTSIDE OF BUILDING AND ALL INTERIOR POTABLE WATER LINES TO BE INSTALLED UNDER CONTRACT 1D.

2" PLANT WATER SEE DETAILS 1B AND 2B ON SHEET Z-5 FOR ADDITIONAL INFORMATION  
 3" CONTAINMENT PIPE WITH 1" CHEMICAL CARRIER  
 24" AIR  
 SEE SHEET M-11 FOR CONTINUATION

DISCONNECT DIGESTED SLUDGE LINE AND PLUG WITH BLIND FLANGE SEE DETAIL 10 ON SHEET Z-5  
 8" CONTAINMENT AREA DRAIN  
 TELEPHONE CABLE  
 CONDUIT  
 CONDUIT  
 ROOF DRAIN TO LEACH FIELD  
 DISTRIBUTION CENTER (C-3)  
 ABANDONED SEEPAGE PIT GENERAL LOCATION

MANHOLE RIM 416.0 INV. 408.75  
 DISCONNECT DIGESTED SLUDGE LINE AND PLUG WITH BLIND FLANGE SEE DETAIL 10 ON SHEET Z-5

MH #4 RIM 415.50 INV. 408.77  
 DROP 1" OUTSIDE MANHOLE THIS LOCATION  
 INV. 403.43  
 INV. 403.53

TOP OF THESE EXISTING MANHOLES ARE ABOVE FINISHED ASPHALT ELEVATION. PROVIDE ADDITIONAL ASPHALT AROUND EXISTING MANHOLES. TAPER ADDED ASPHALT SO THAT FINISHED ASPHALT ELEVATION IS FLUSH WITH TOP OF MANHOLES. CUT KEYWAY INTO EXISTING ASPHALT AND APPLY TACK COAT TO ADHERE ADDED ASPHALT TO EXISTING.

CONNECT TO EXISTING 3" POTABLE WATER LINE CORPORATION STOP AND VALVE BOX

CONNECT TO EXISTING 4" SCUM LINE PLUG EXISTING TANK CONNECTION SEE DETAIL THIS SHEET

- NOTES**
- EXISTING BURIED UTILITY LOCATIONS ARE SHOWN AS APPROXIMATE. CONTRACTOR TO NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION WORK. THE OWNER WILL COORDINATE WITH THE CONTRACTOR IN LOCATING BURIED UTILITIES WITHIN WORK AREAS.
  - EXISTING STRUCTURES, PIPE LINES AND UTILITIES SHOWN ON THIS DRAWING ARE INDICATED BY LIGHT SHADED LINES.
  - NEW STRUCTURES AND PIPE LINES SHOWN ON THIS DRAWING ARE INDICATED BY DARK LINES.

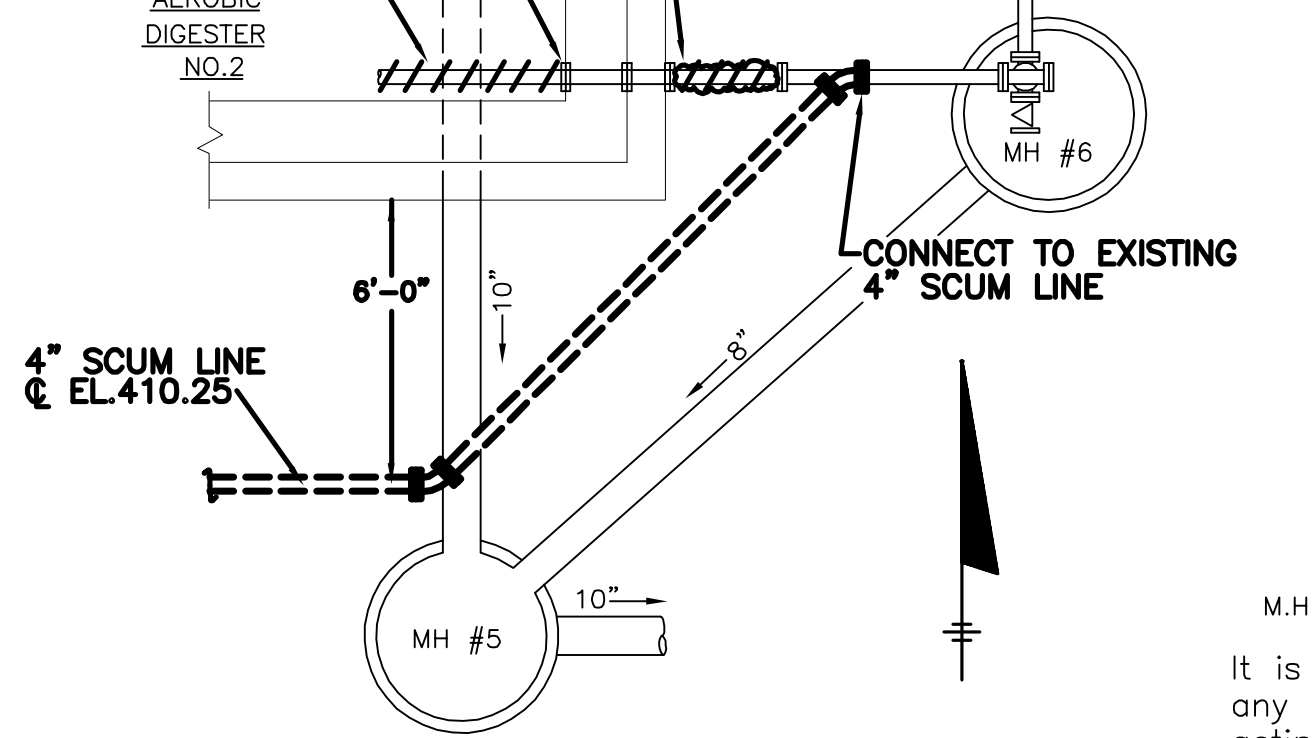
**LEGEND FOR NEW FACILITIES**

- NEW STRUCTURES AND ABOVE GROUND PIPING
- NEW UNDERGROUND PIPING

- LEGEND FOR EXISTING FACILITIES**
- EXISTING MANHOLE
  - FIRE HYDRANT
  - LAWN HYDRANT
  - INFLUENT SEWER
  - RAW SEWAGE
  - MIXED LIQUID
  - EFFLUENT
  - RAW SLUDGE SEWER
  - RECIRCULATION SLUDGE
  - CHLORINE TANK DRAIN
  - CHLORINE SOLUTION
  - PLANT WATER
  - DIGESTED SLUDGE
  - PLANT SEWER
  - DIGESTED SLUDGE
  - WASTE SLUDGE
  - SCUM LINE
  - DRYING BED DRAINS
  - POTABLE WATER SUPPLY

**RECORD DRAWINGS**  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

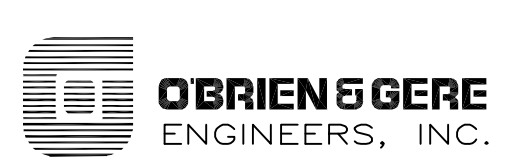
REMOVE EXISTING SCUM LINE IN DIGESTER NO.2  
 PLUG EXISTING SCUM LINE  
 FOUR FOOT LONG SECTION OF 4" SCUM LINE WAS PREVIOUSLY REPLACED WITH 4" RUBBER HOSE COVERED WITH 8" IRRIGATION PIPE. REMOVE THIS SECTION. PLUG EXISTING SCUM LINE PENETRATION IN DIGESTER WALL WATER TIGHT AND CONNECT NEW SCUM LINE AS SHOWN.



**NEW SCUM LINE CONNECTION DETAIL**  
 SCALE: 1/4"=1'-0"

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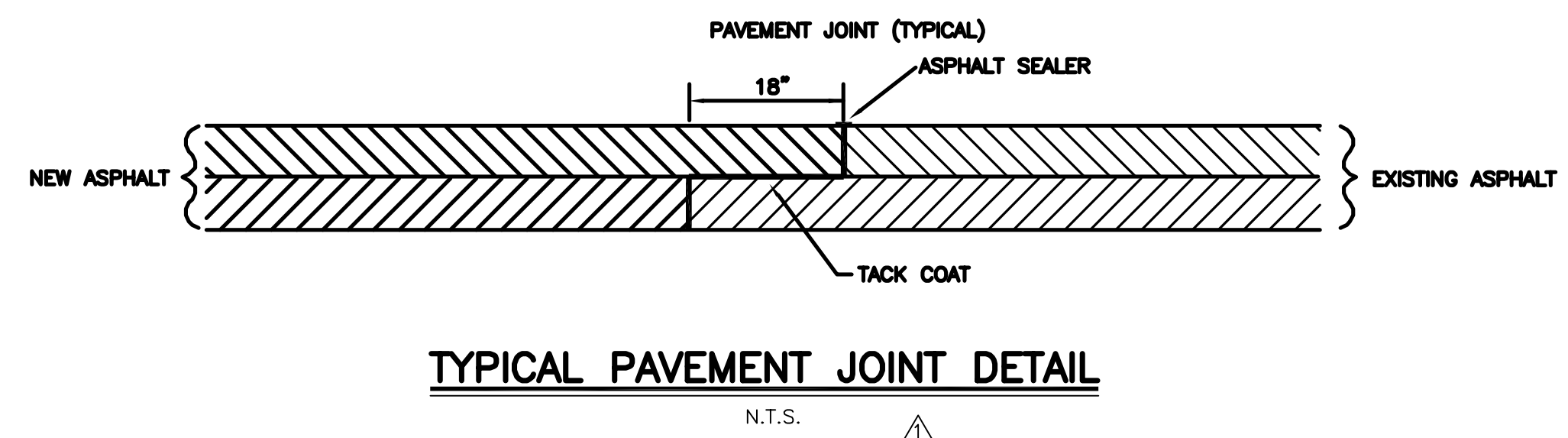
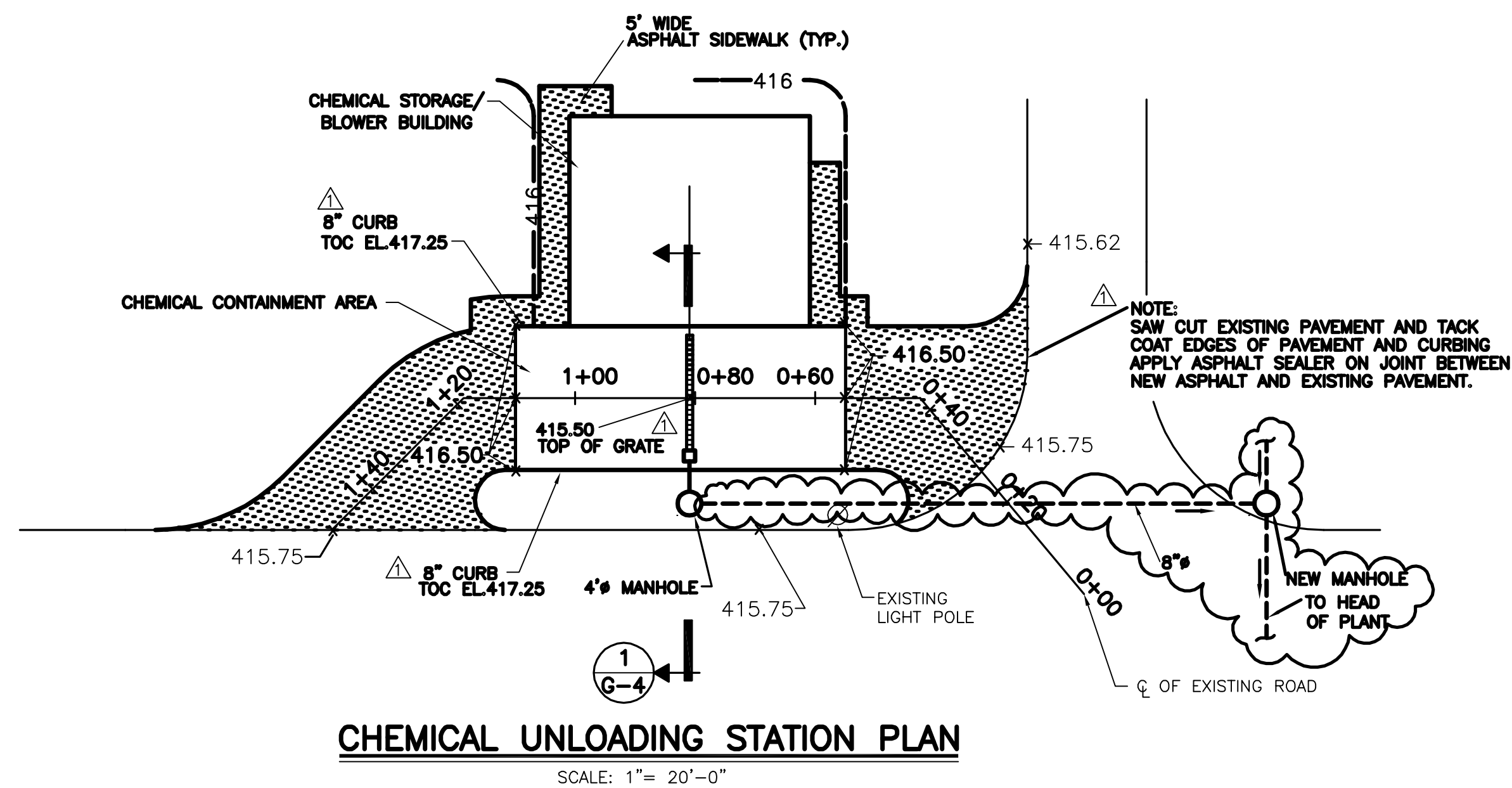
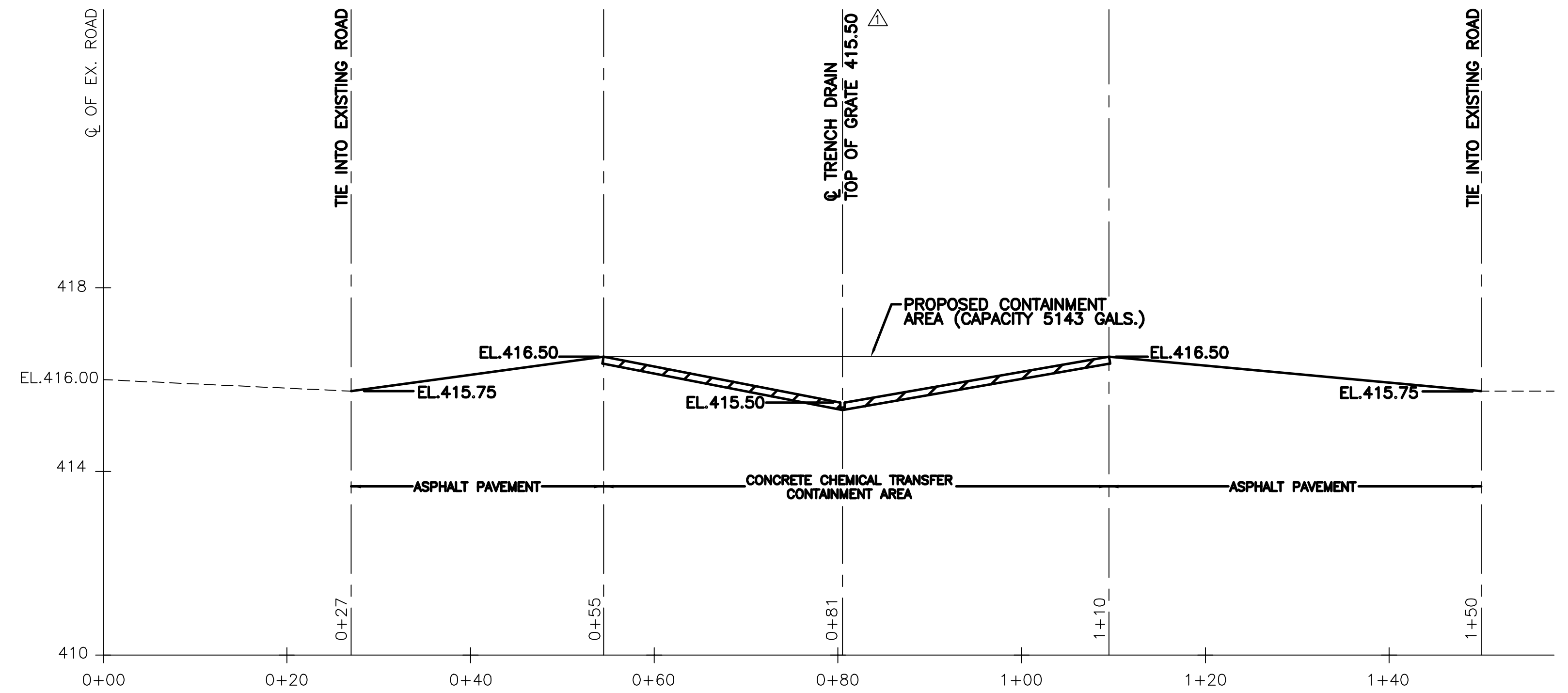
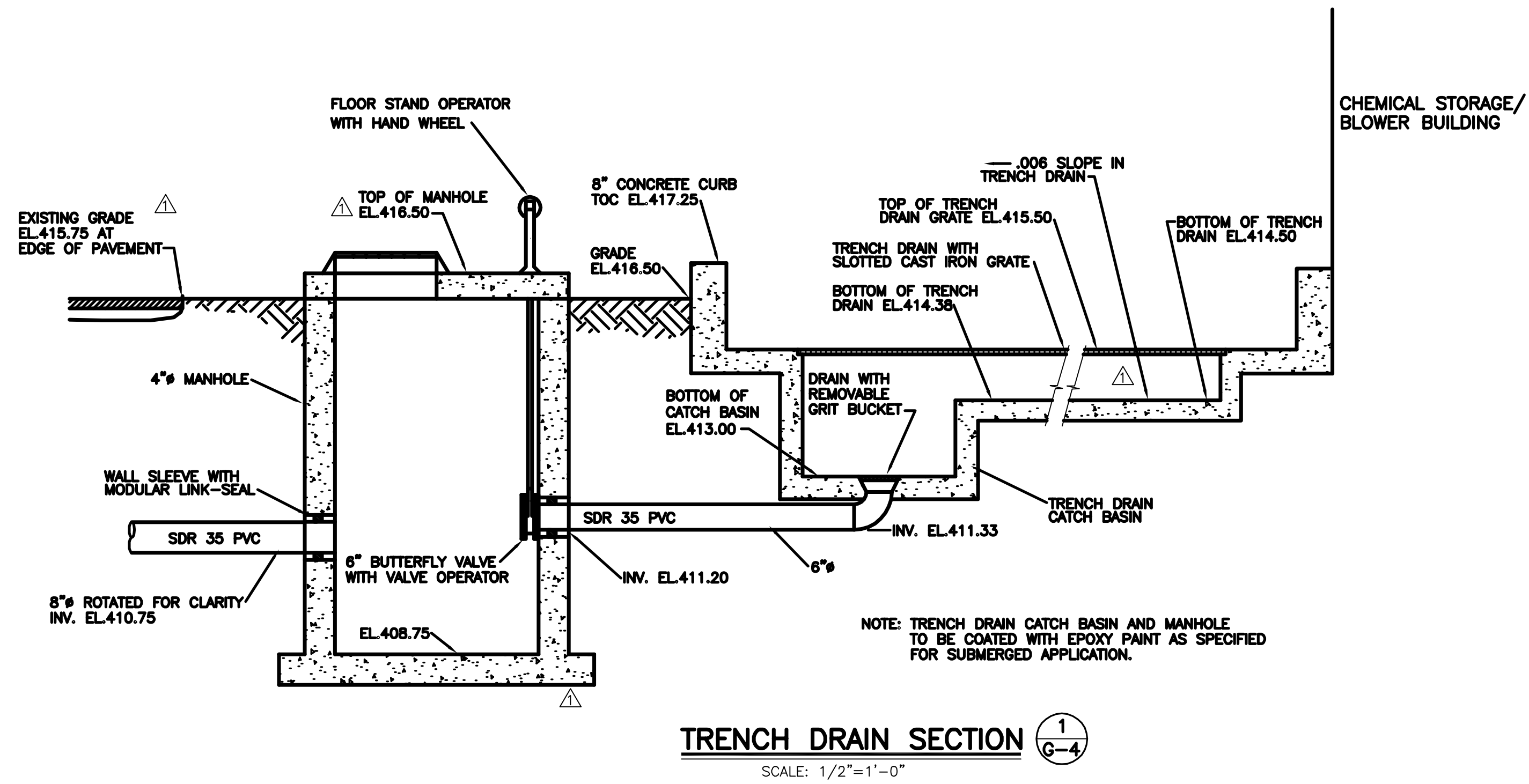
In charge of.....	2	2/9/96	RECORD DRAWINGS	
Designed by.....Checked by.....	1	8/93	GENERAL REVISIONS	
Drawn by.....	NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

GENERAL  
 OUTSIDE PIPING PLAN

FILE NO.	115.643-04RD	G-3
DATE	JUNE 1993	R-2



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RECORD DRAWINGS  
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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

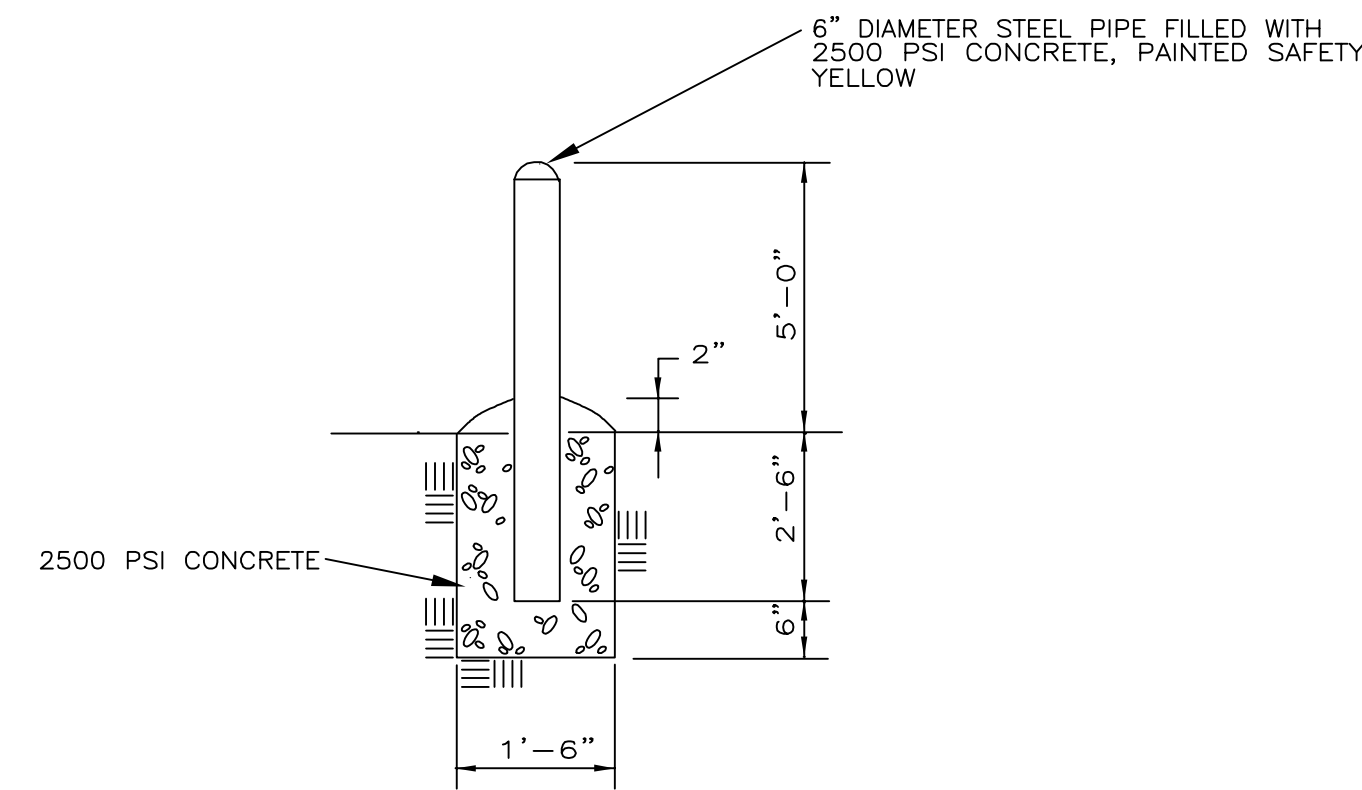
In charge of.....	AS SHOWN			
Designed by.....Checked by.....				
Drawn by.....				
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		1	8/93	GENERAL REVISIONS, ADDED DETAIL
		NO.	DATE	REVISION
				INIT.



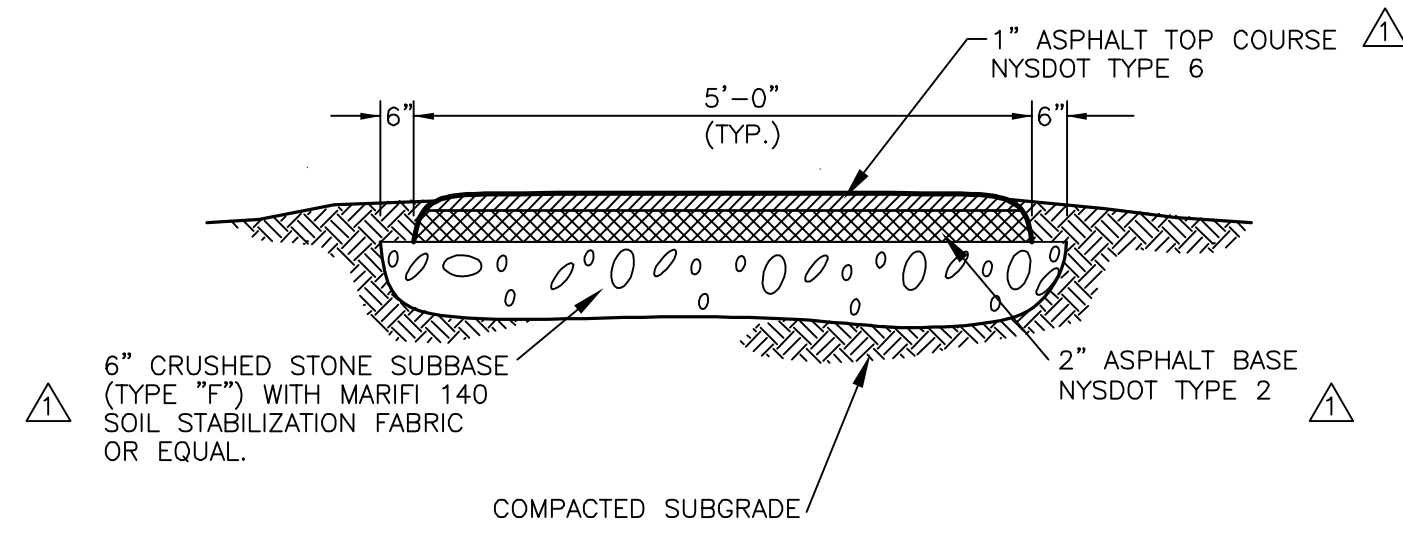
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

GENERAL  
CHEMICAL UNLOADING STATION  
PLAN AND PROFILE

FILE NO. 115.643-05RD	G-4
DATE JUNE 1993	R-2

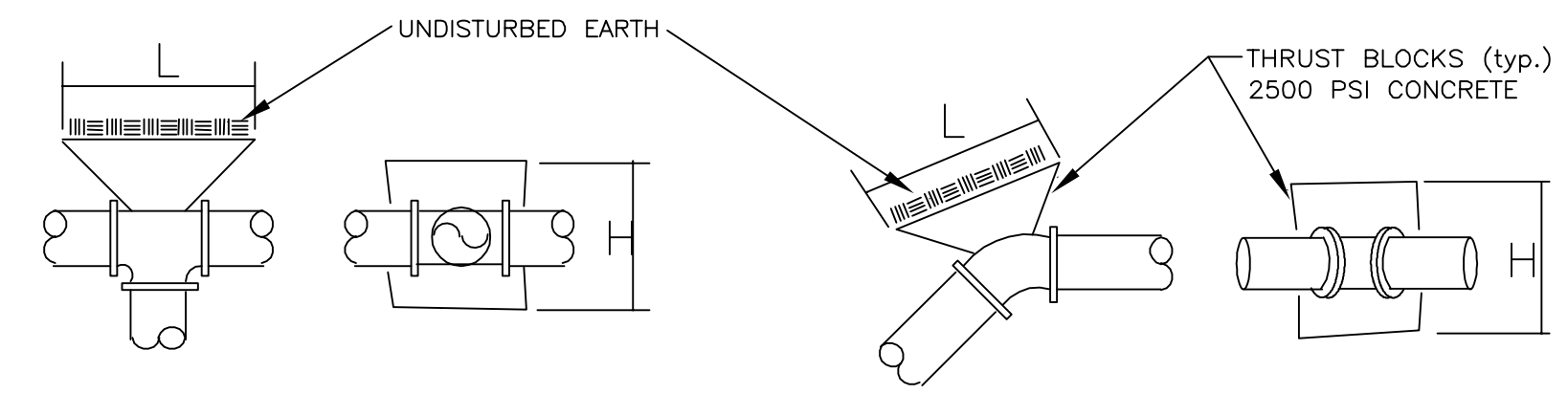


**FIXED BOLLARD DETAIL**  
N.T.S.



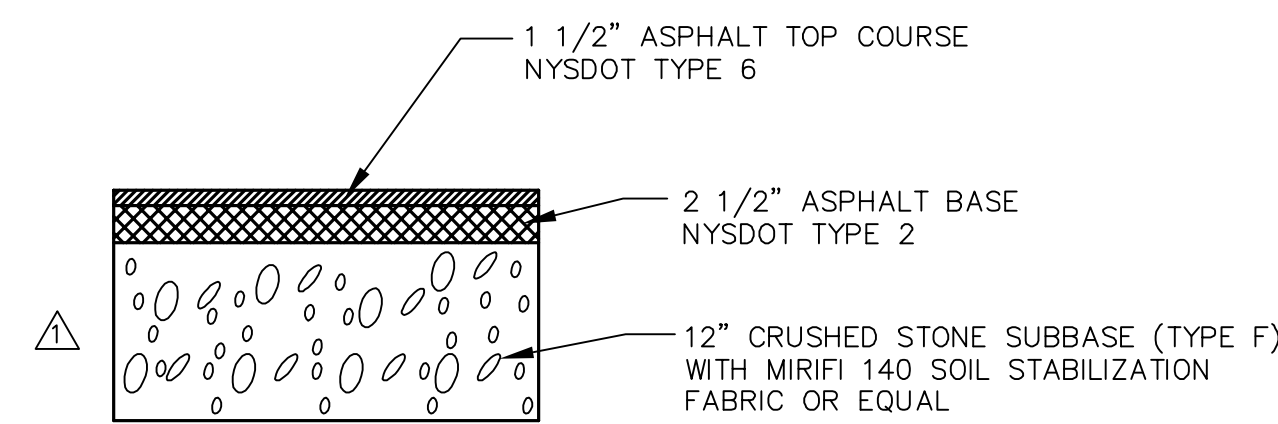
**ASPHALT SIDEWALK DETAIL**  
N.T.S.

NOTE: ASPHALT PAVEMENT AND SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE NYSDOT STANDARD SPECIFICATIONS, SECTION 608.

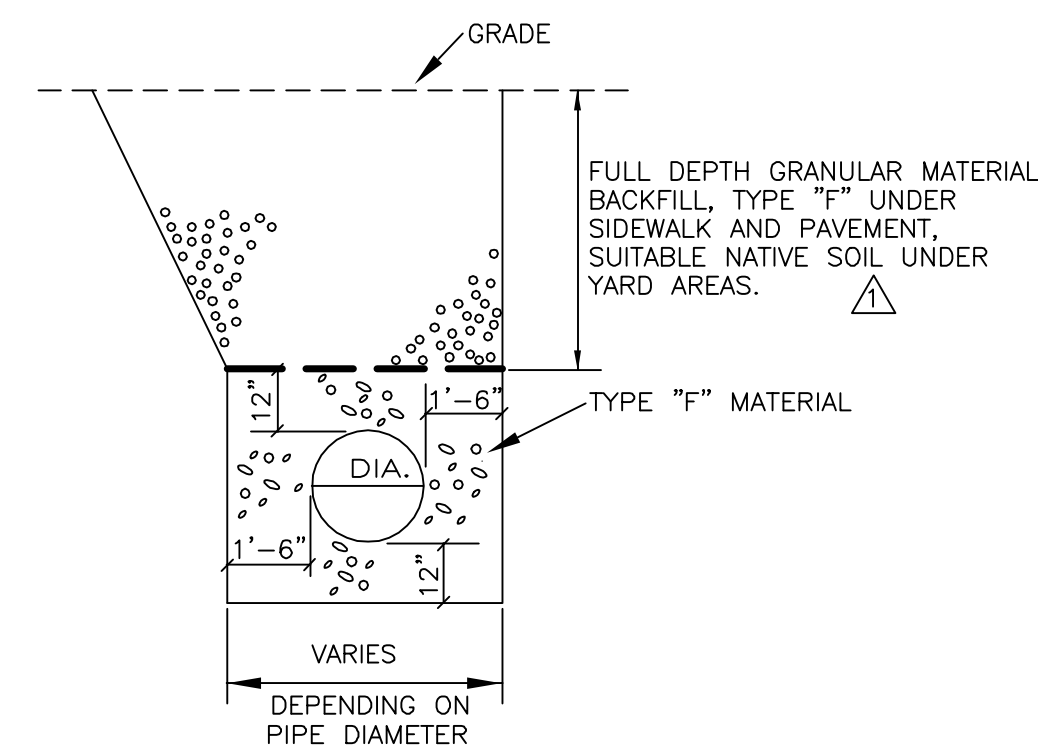


PIPE SIZE (INCHES)	TEE OR TAPPING SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
4"	1.5'	2.5'	2.0'	2.5'	1.5'	2.0'	1.0'	1.5'	1.0'	1.5'
6"	1.5'	2.5'	2.0'	2.5'	1.5'	2.0'	1.0'	1.5'	1.0'	1.5'
8"	1.5'	3.5'	2.5'	3.5'	2.0'	2.5'	1.5'	1.5'	1.0'	2.0'
10"	2.5'	3.5'	3.0'	4.5'	2.5'	3.0'	1.5'	2.5'	1.0'	2.5'
12"	3.5'	3.5'	3.5'	5.5'	3.0'	3.5'	2.5'	3.0'	1.5'	2.5'

**THRUST BLOCK DIMENSION SCHEDULE**  
N.T.S.



**HEAVY DUTY PAVEMENT DETAIL**  
N.T.S.



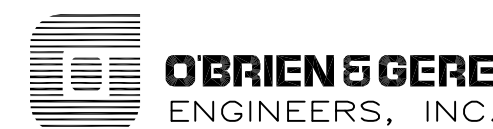
**PIPE TRENCH BEDDING**  
N.T.S.

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By: \_\_\_\_\_

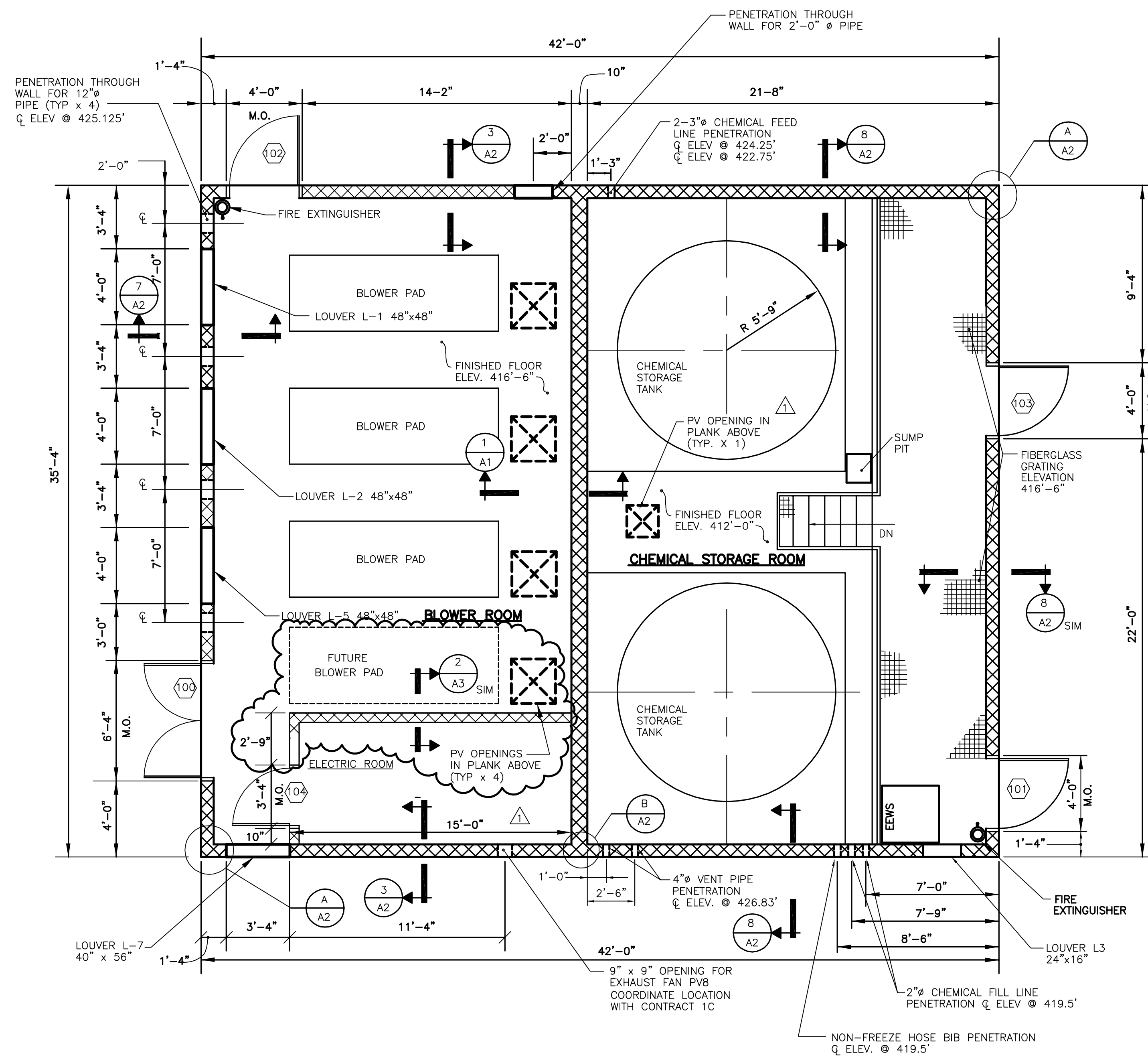
In charge of_____	<b>NO SCALE</b>					
Designed by_____Checked by_____						
Drawn by_____		2	2/9/96	RECORD DRAWINGS		
		1	8/93	GENERAL REVISIONS		
	NO.	DATE	REVISION	INIT.		



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

GENERAL  
MISCELLANEOUS DETAILS

FILE NO. 115.643-28RD	G-5
DATE JUNE 1993	R-2



**CHEMICAL STORAGE/BLOWER BUILDING PLAN**

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

**ABBREVIATIONS**

M.O.	MASONRY OPENING	CONC.	CONCRETE
ELEV.	ELEVATION	PT.	PAINT
SIM.	SIMILAR	MAT'L.	MATERIAL
Ø	DIAMETER	FIN	FINISH
PSI	POUNDS PER SQUARE INCH	HGT	HEIGHT
CMU	CONCRETE MASONRY UNIT	BLK	BLOCK
W/	WITH	RM	ROOM
CL	CENTERLINE	ALUM	ALUMINUM
TYP.	TYPICAL	ST	STEEL
Ø	AT	O.C.	ON CENTER
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM

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In charge of.....	1/8"=1'-0"	0 4 8 12 16
Designed by.....Checked by.....	1/4"=1'-0"	0 2 4 6 8 10
Drawn by.....	1"=1'-0"	0 1 2
	1 1/2"=1'-0"	0 1

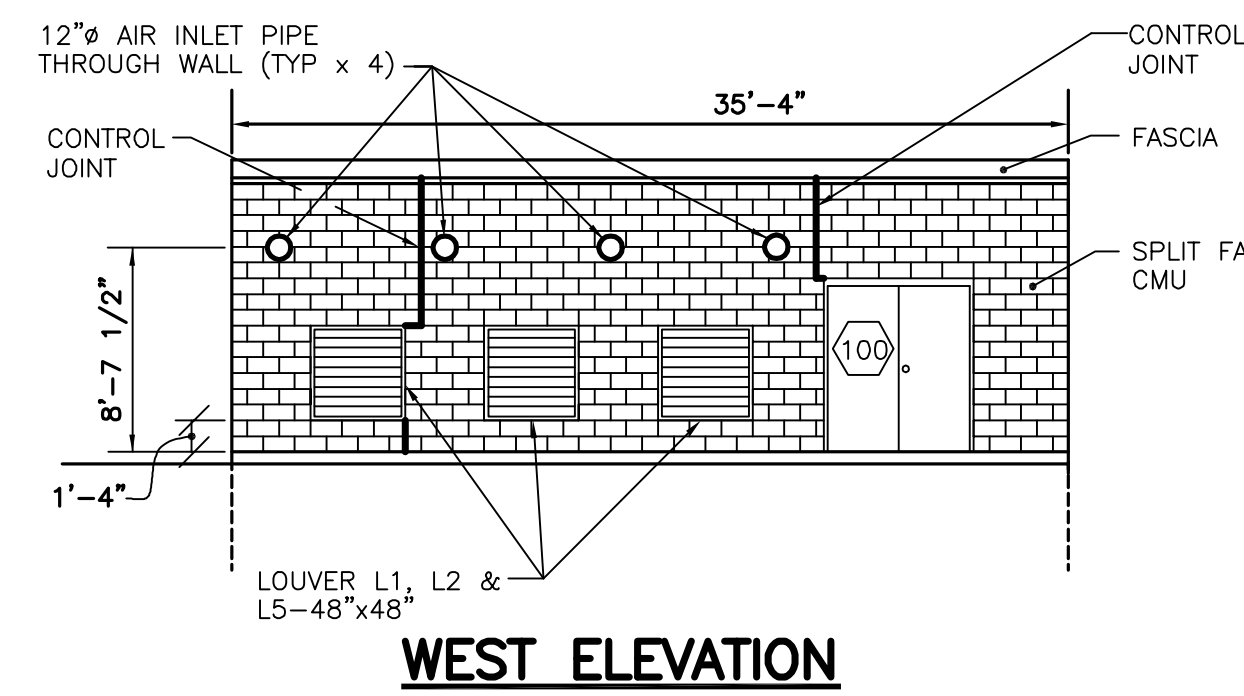
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ARCHITECTURAL  
CHEMICAL STORAGE/BLOWER BUILDING  
PLAN, SECTIONS AND DETAILS

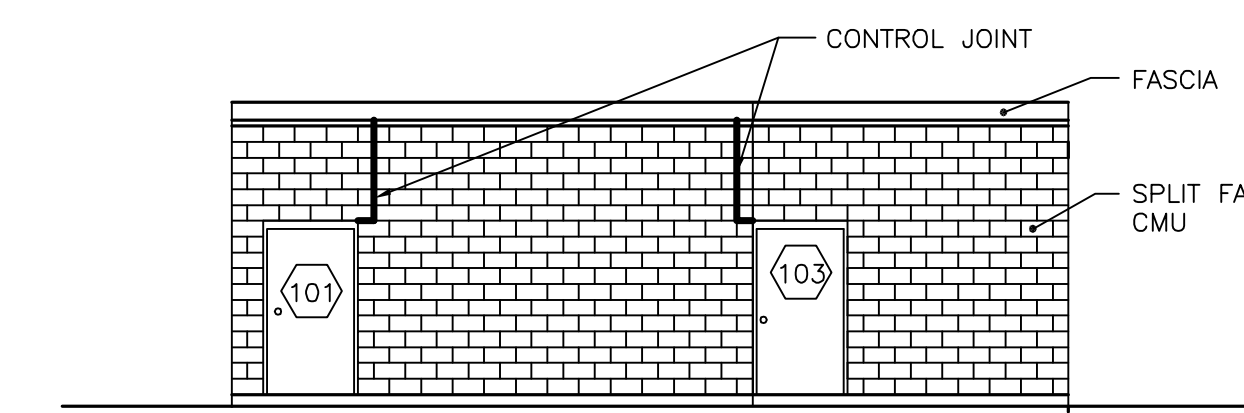
FILE NO.	115.643-07RD	A-1
DATE	JUNE 1993	R-2



**WEST ELEVATION**

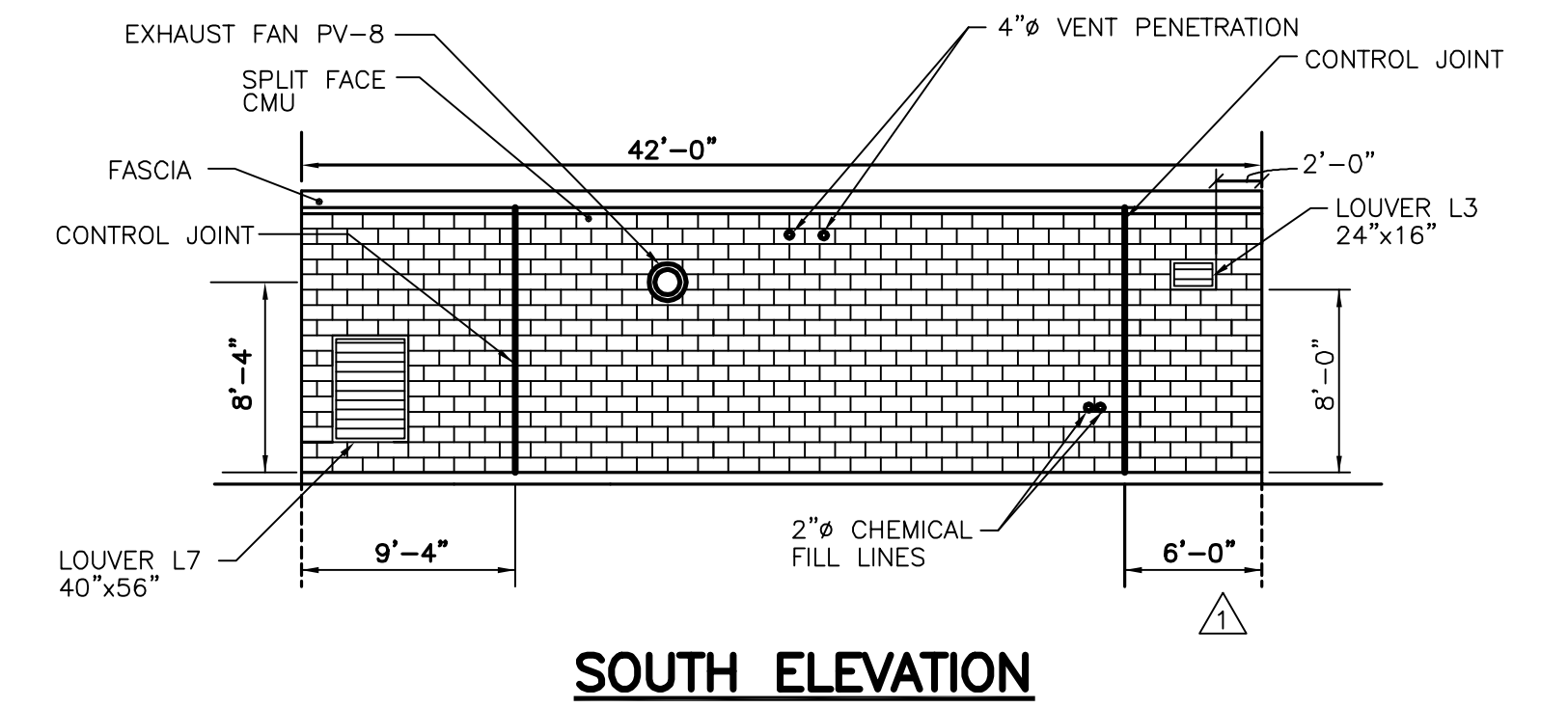
SCALE: 1/8"=1'-0"

NOTE: AIR INLET FILTER ACCESS PLATFORMS AND LADDERS NOT SHOWN FOR CLARITY. SEE SHEET S-1.



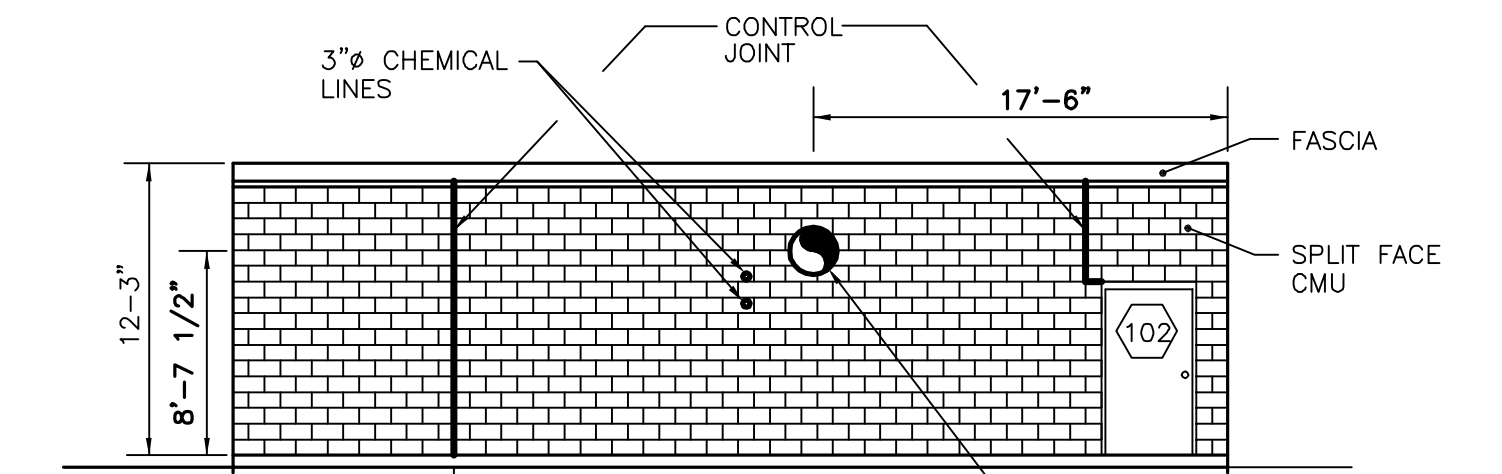
**EAST ELEVATION**

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



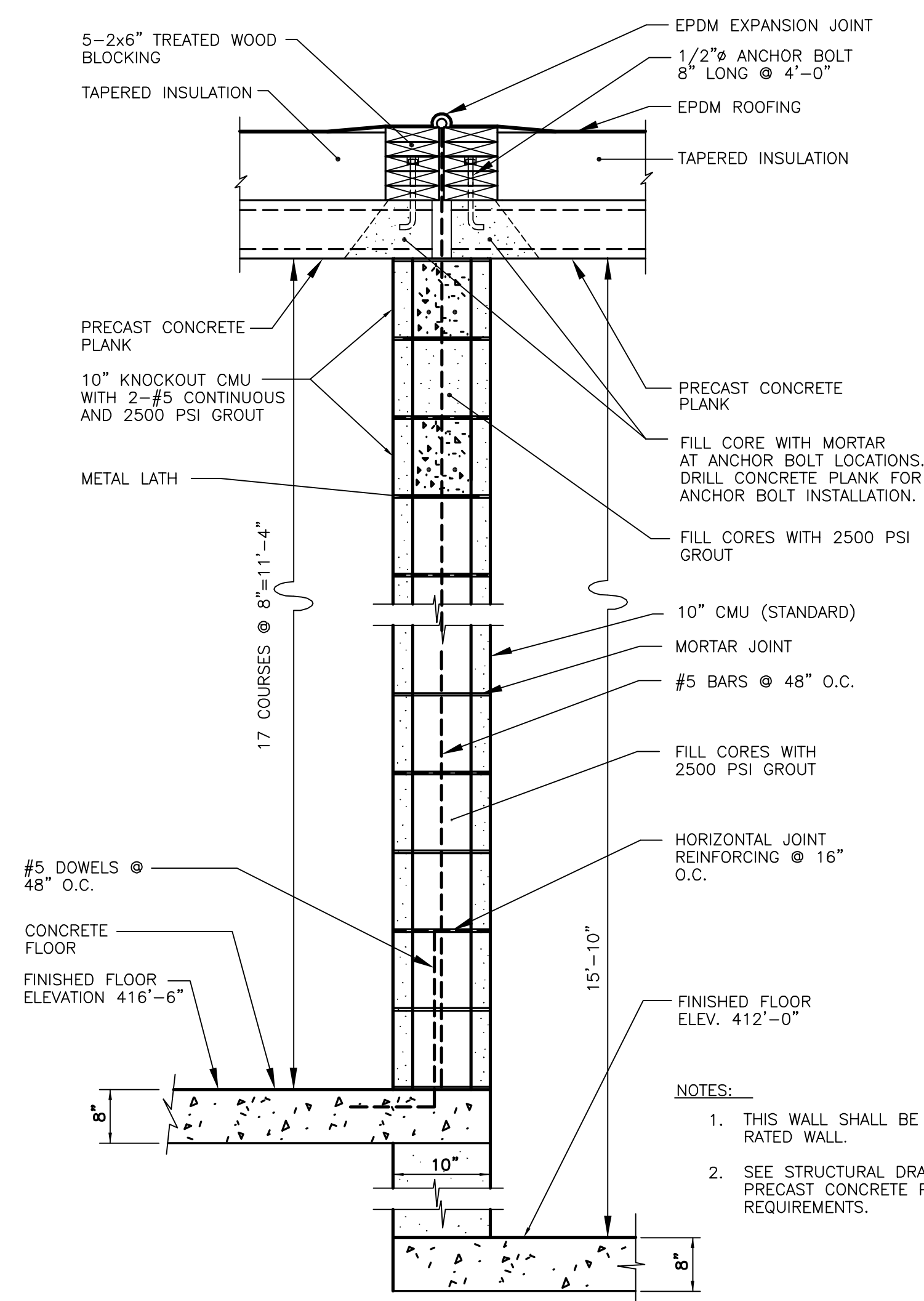
**SOUTH ELEVATION**

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



**NORTH ELEVATION**

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



**SECTION 1**

SCALE: 1"=1'-0"

- NOTES:**
- THIS WALL SHALL BE A 4-HOUR RATED WALL.
  - SEE STRUCTURAL DRAWINGS FOR PRECAST CONCRETE PLANK REQUIREMENTS.

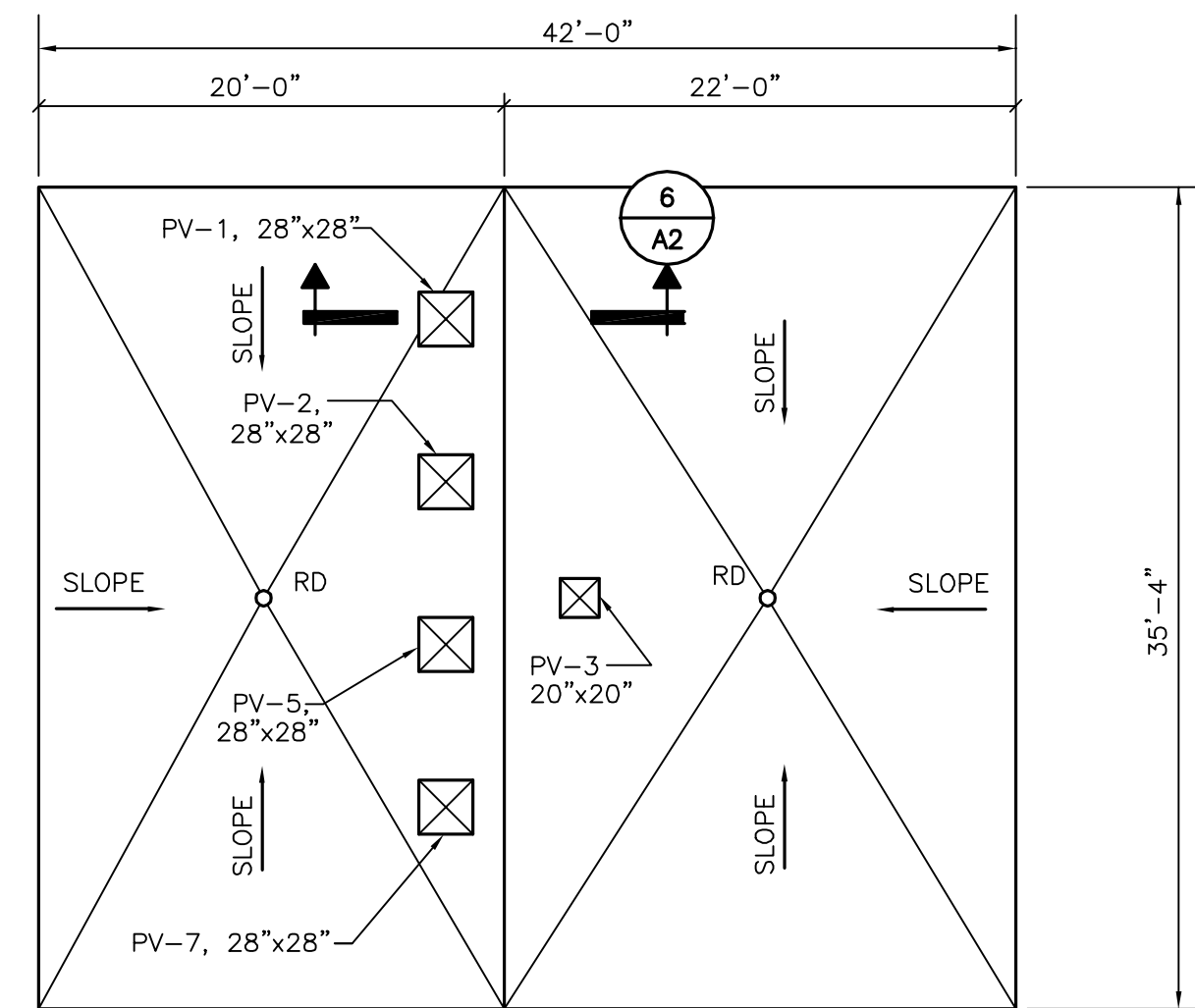
**TYPICAL LOUVER DETAIL**

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

NOTE: OVER LOUVER L-1, L-2, L-5, PROVIDE CONTINUOUS LINTEL 16" HIGH WITH 2#5 TOP AND BOTTOM.

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

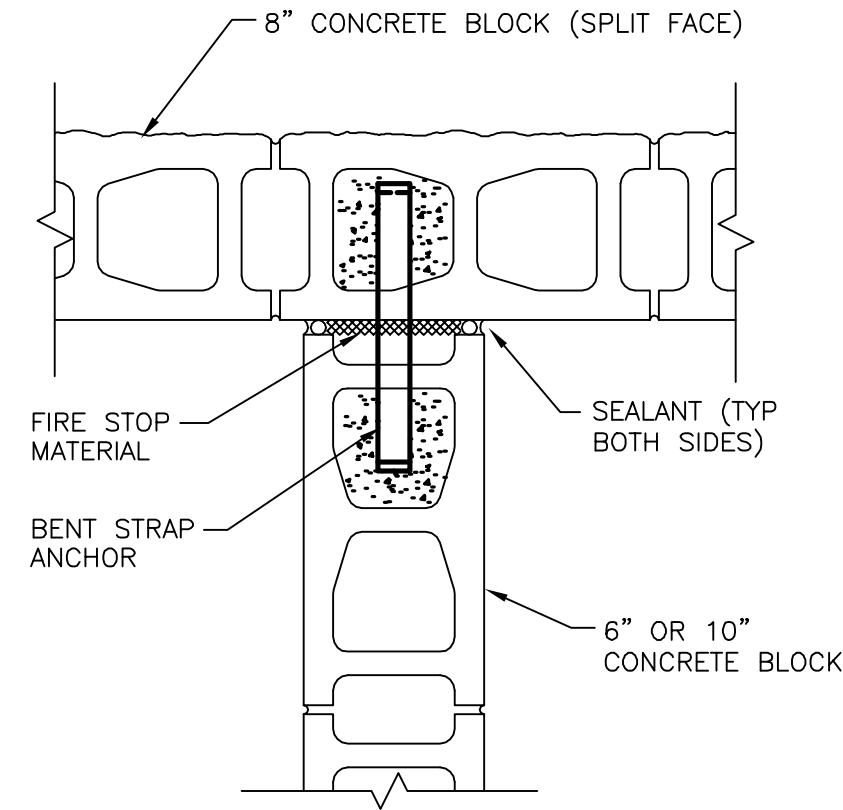
O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_



**ROOF PLAN**

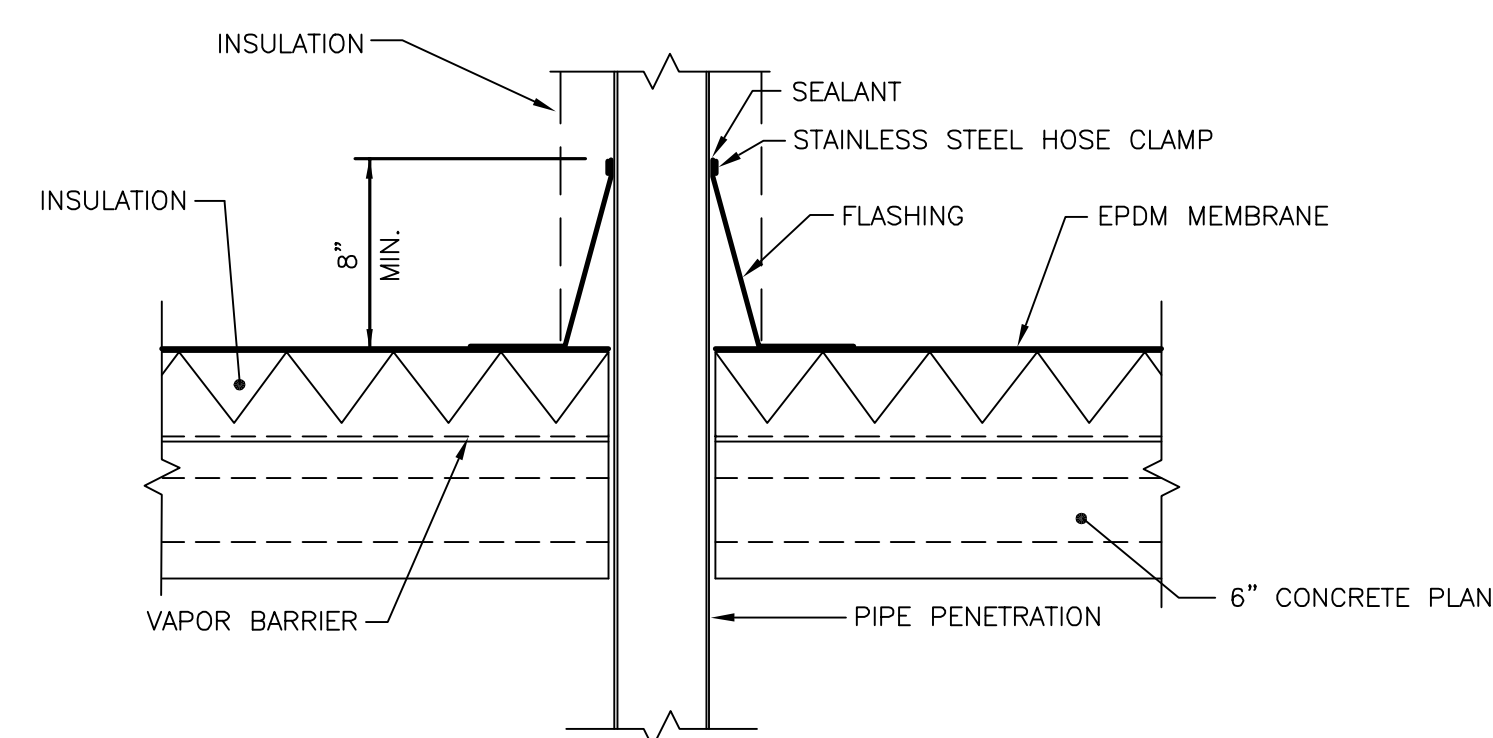
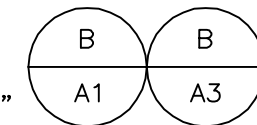
(CHEMICAL/ST. BLOWER BLDG.)

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



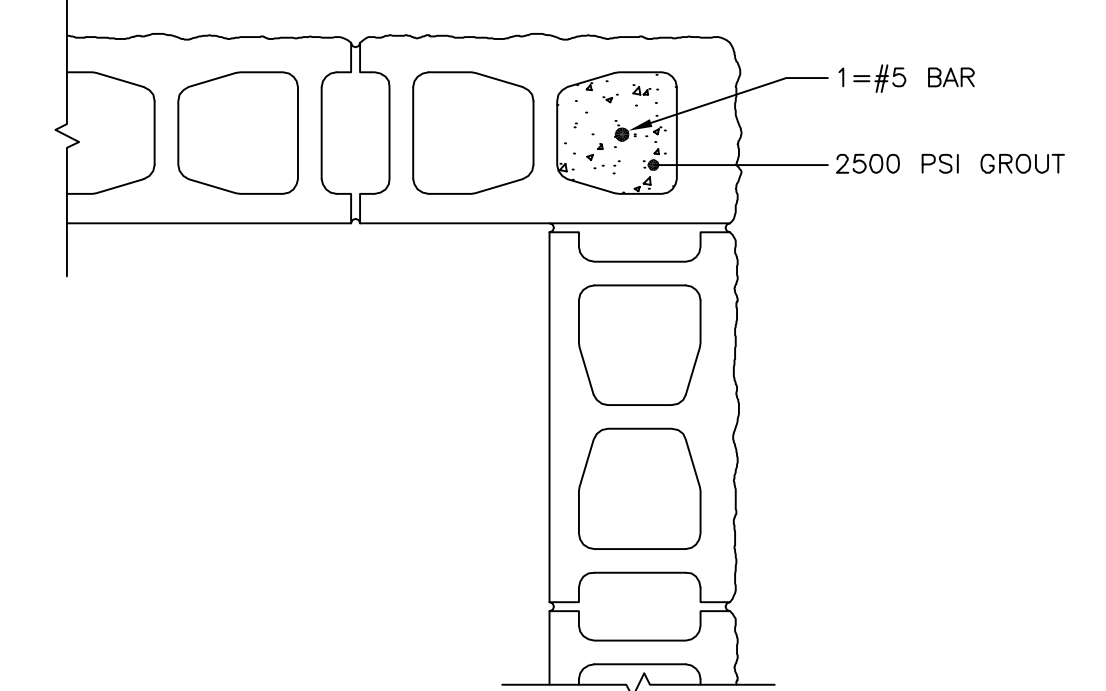
**DETAIL**

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



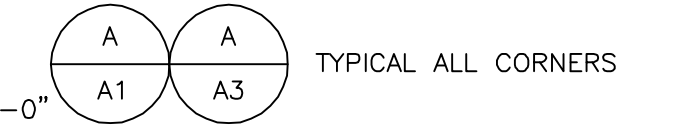
**TYPICAL PIPE PENETRATION DETAIL**

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

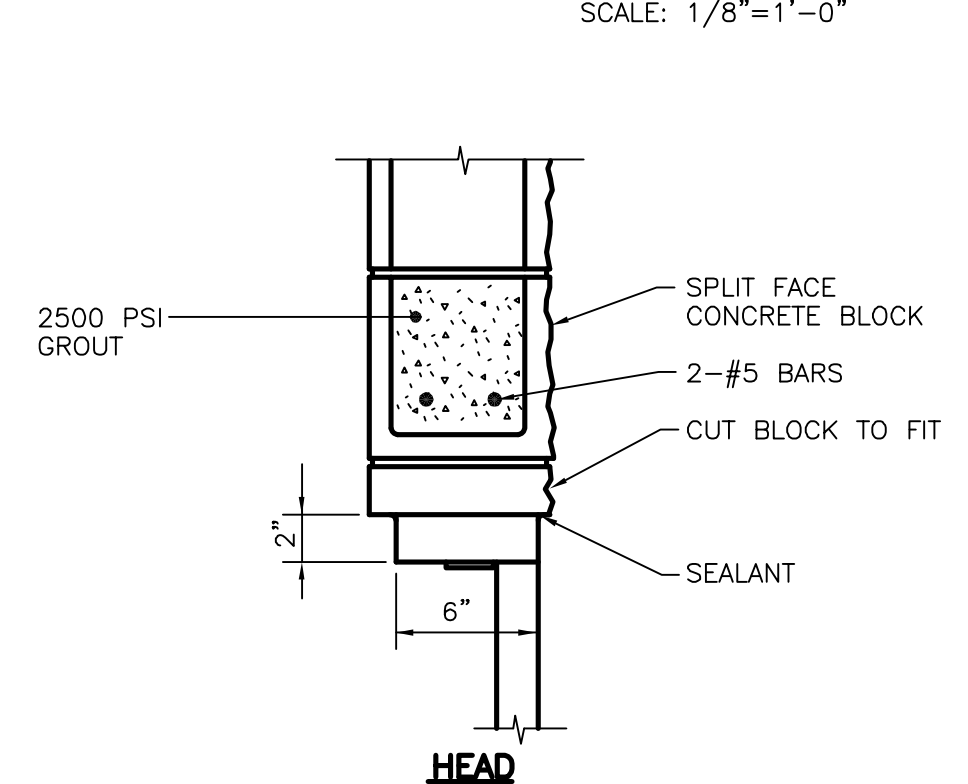


**DETAIL**

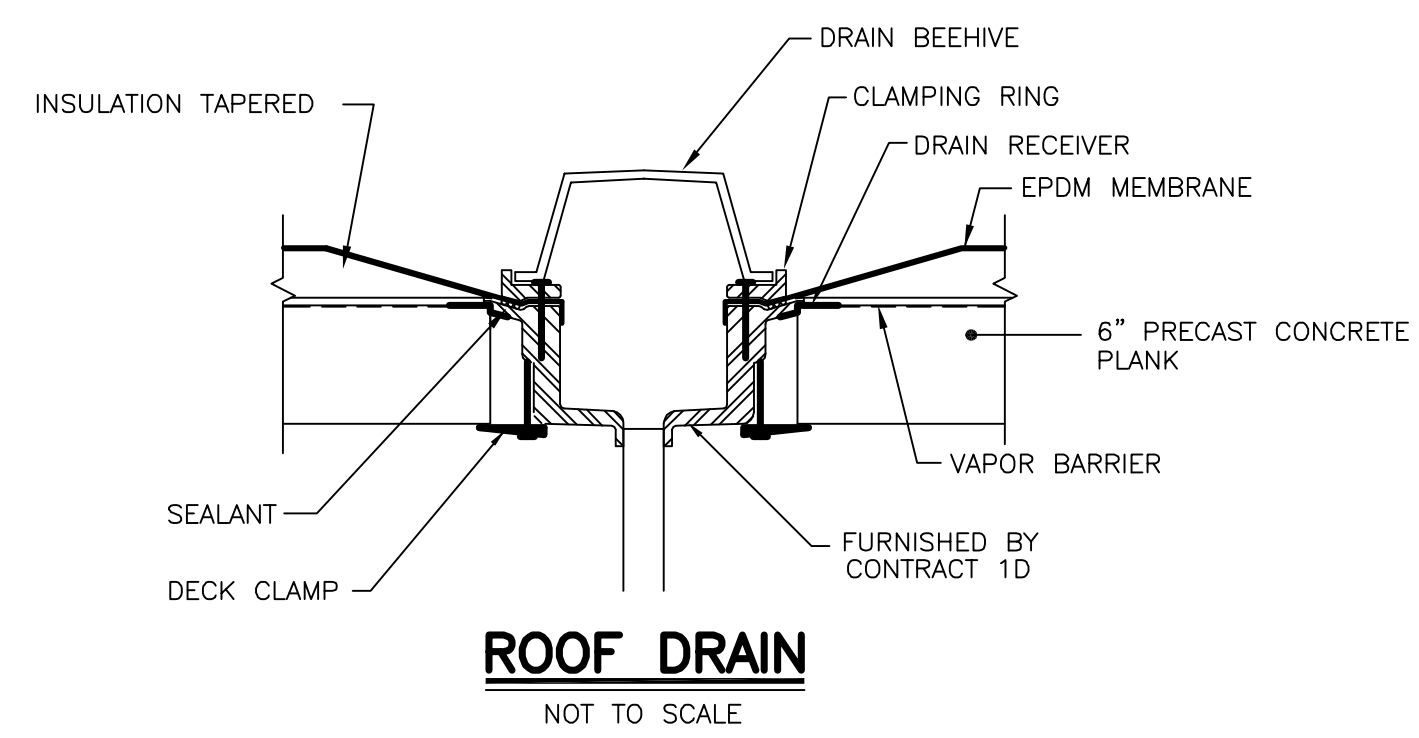
SCALE: 1-1/2"=1'-0"



TYPICAL ALL CORNERS

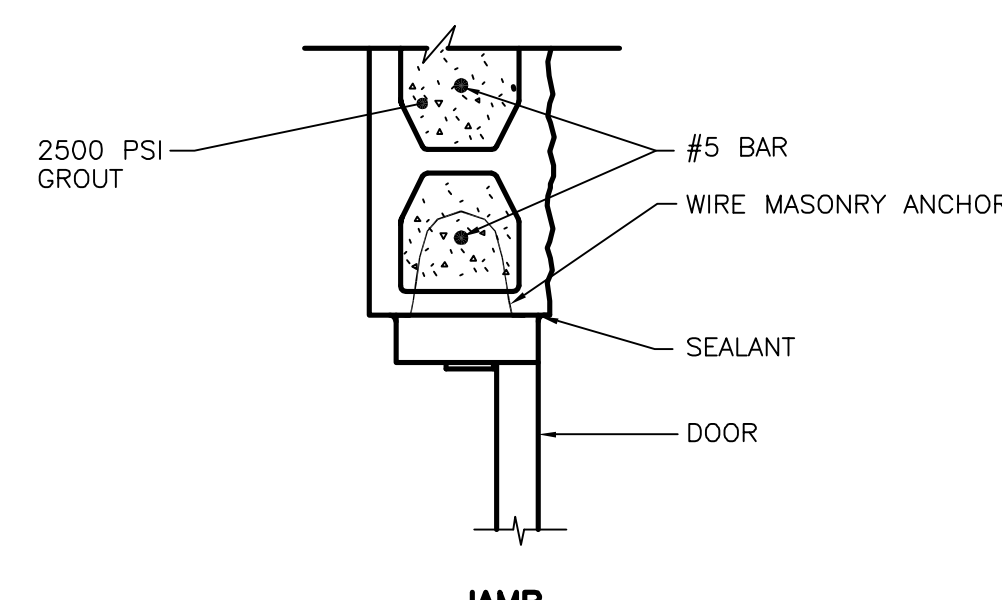


**HEAD**

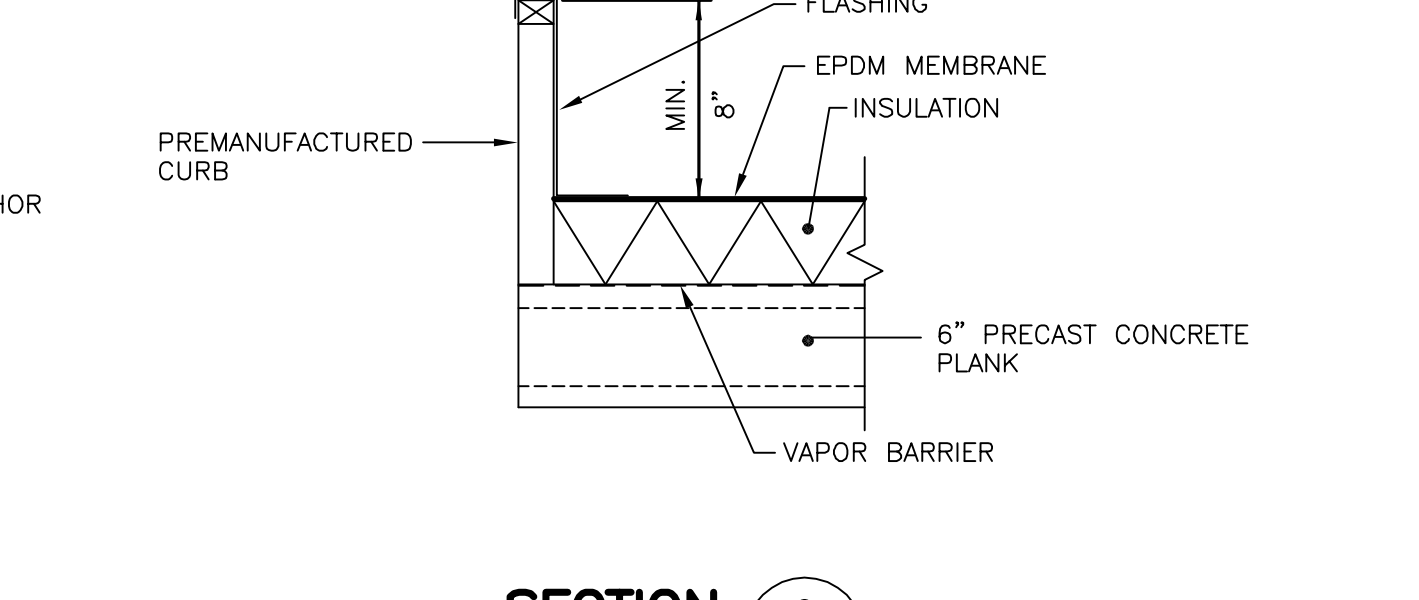


**ROOF DRAIN**

NOT TO SCALE

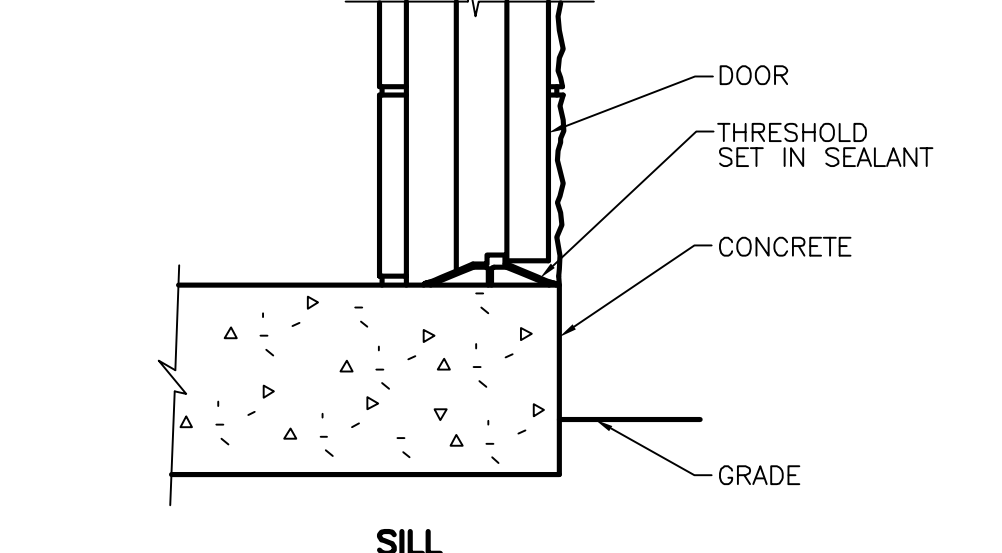
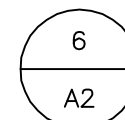


**JAMB**



**SECTION**

NOT TO SCALE



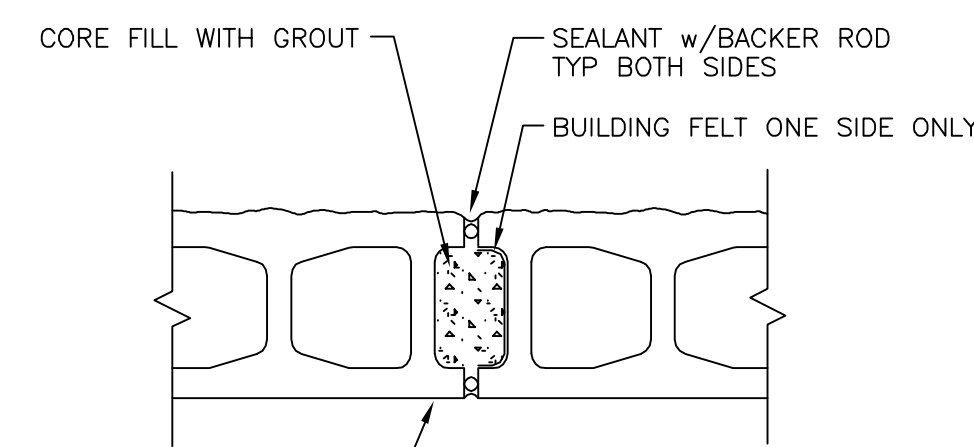
**SILL**

**DOOR DETAILS**

SCALE: 1 1/2"= 1'-0"  
(TYPICAL ALL NEW DOORS)

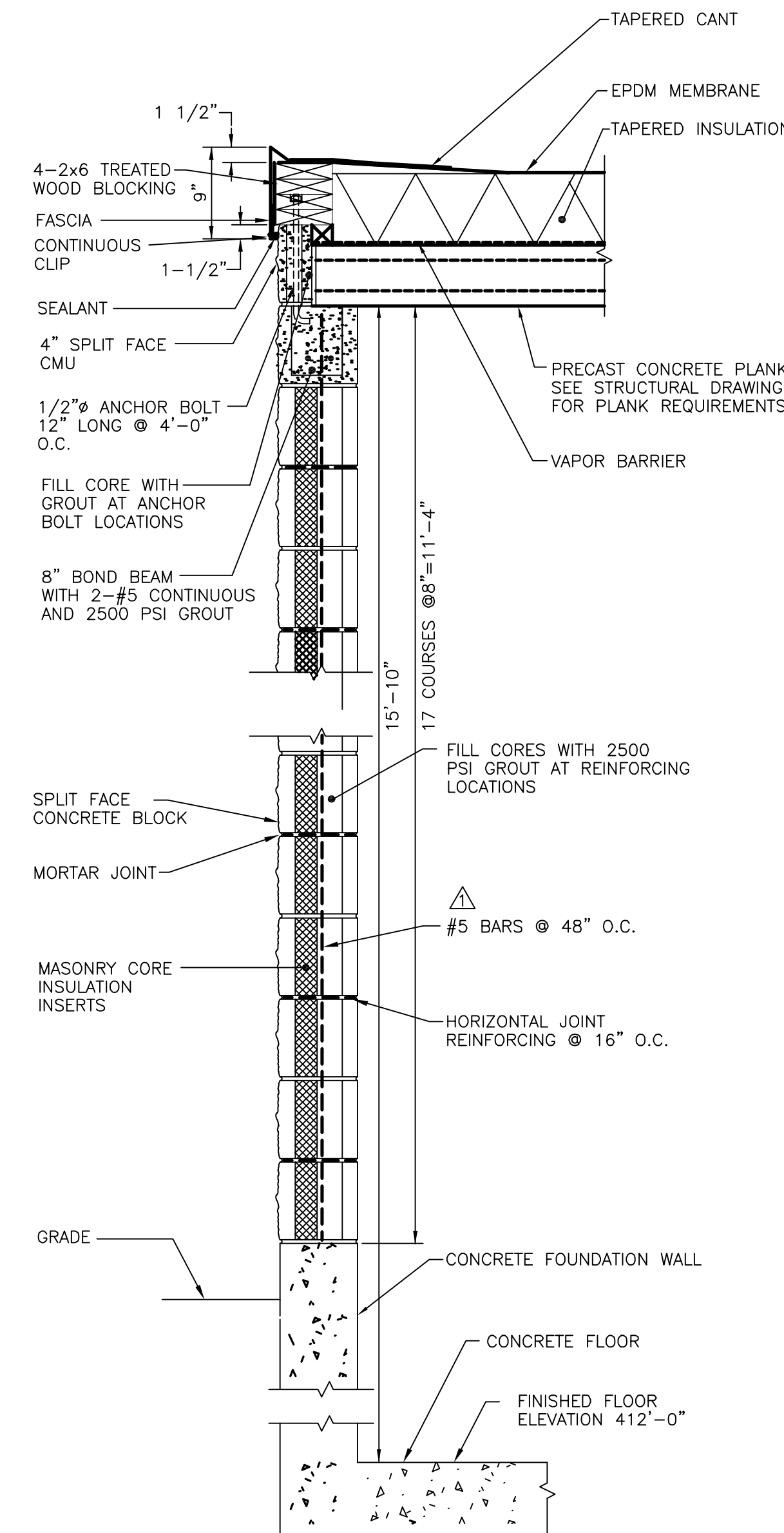
**NOTE:**

OVER DOOR 100, PROVIDE 16" HIGH LINTEL WITH 2#8.



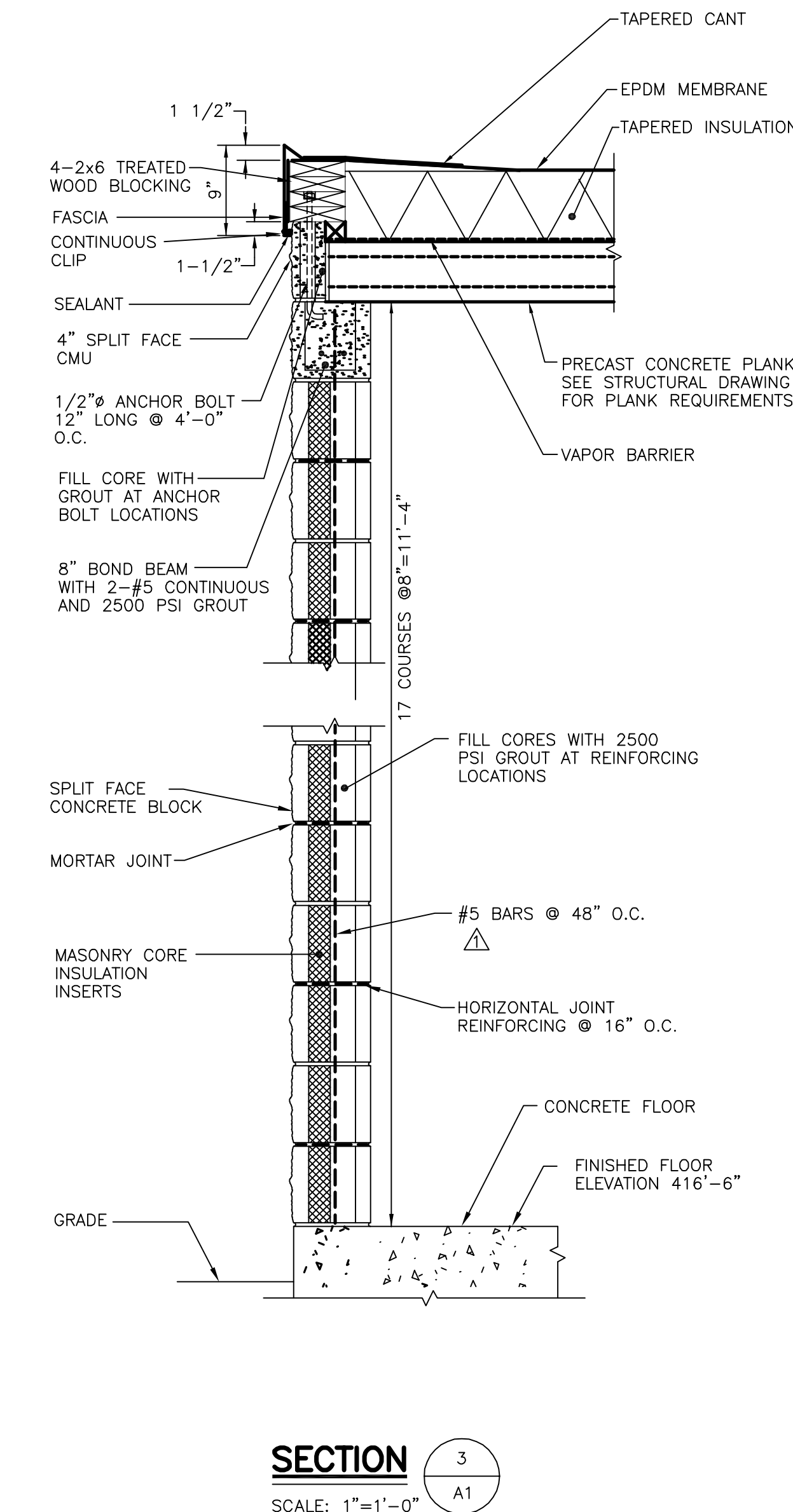
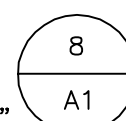
**TYPICAL CONTROL JOINT**

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



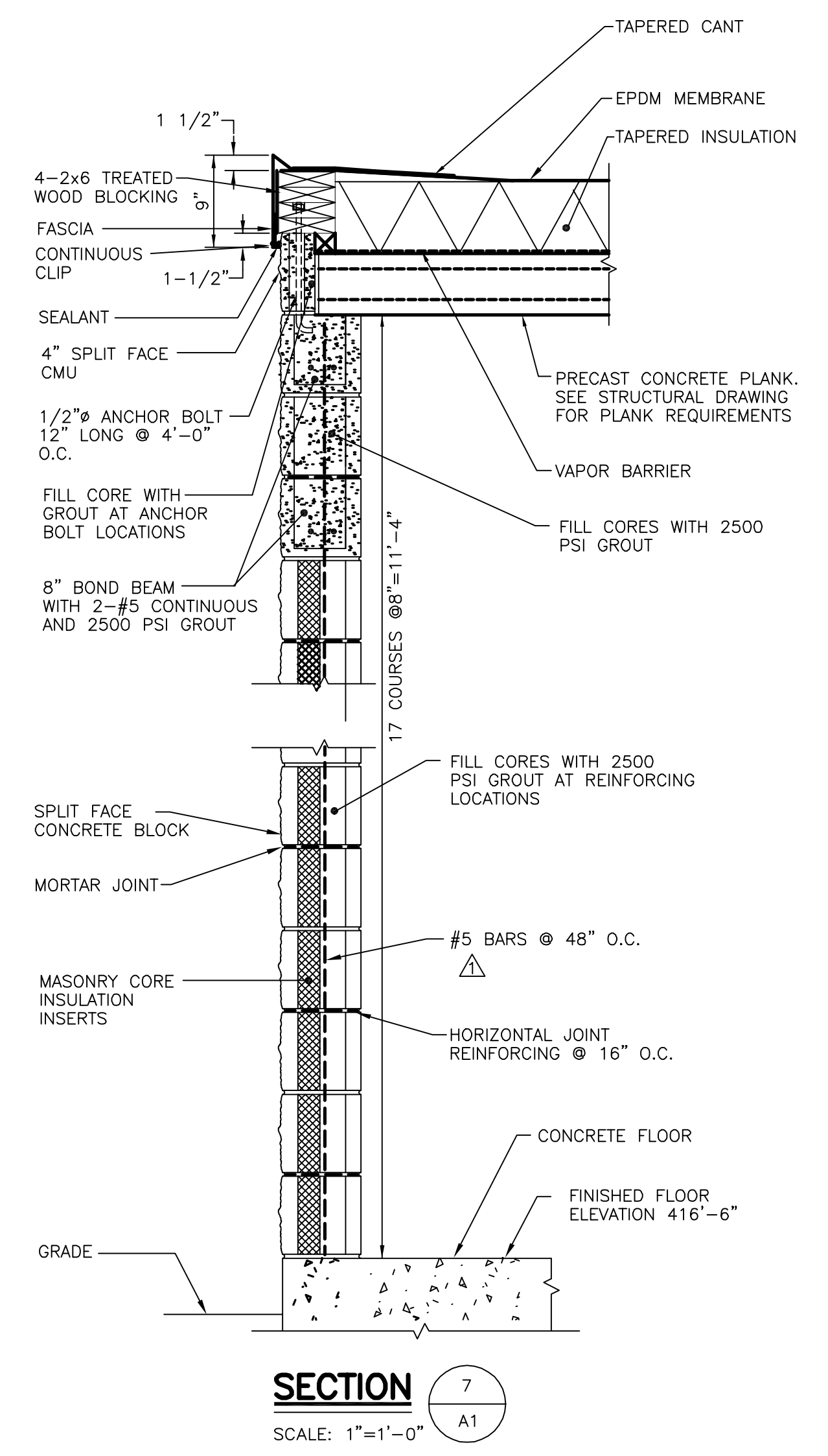
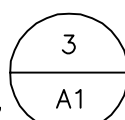
**SECTION**

SCALE: 1"=1'-0"



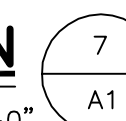
**SECTION**

SCALE: 1"=1'-0"



**SECTION**

SCALE: 1"=1'-0"



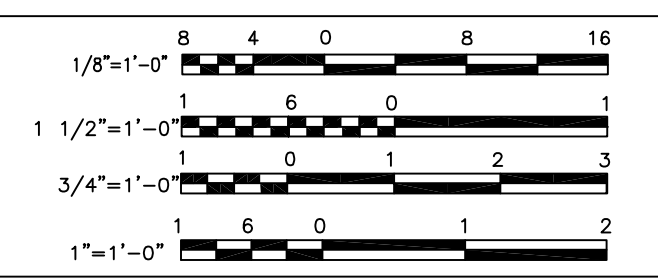
**RECORD DRAWINGS**

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

O'BRIEN & GERE ENGINEERS, INC.

By: \_\_\_\_\_

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	

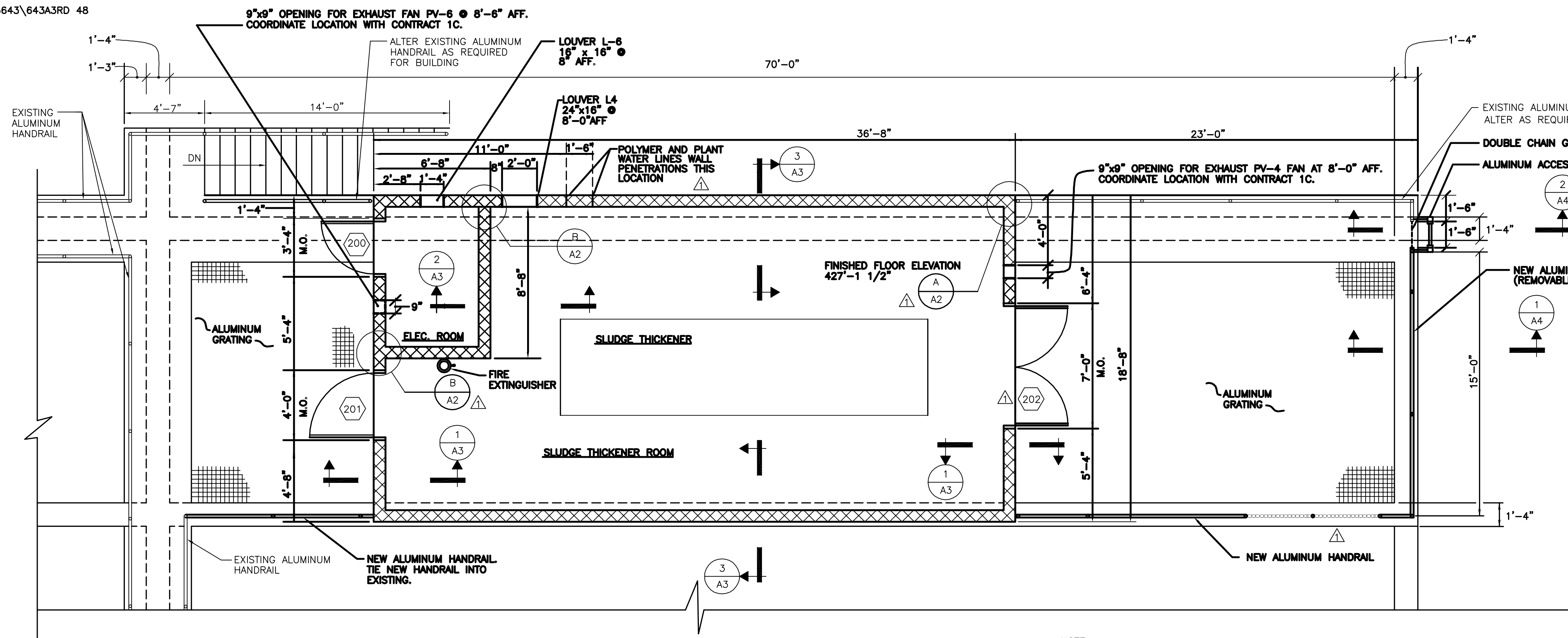


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ARCHITECTURAL  
CHEMICAL STORAGE/BLOWER BUILDING  
PLANS, SECTIONS & DETAILS

FILE NO.	115.643-08RD	A-2
DATE	JUNE 1993	R-2



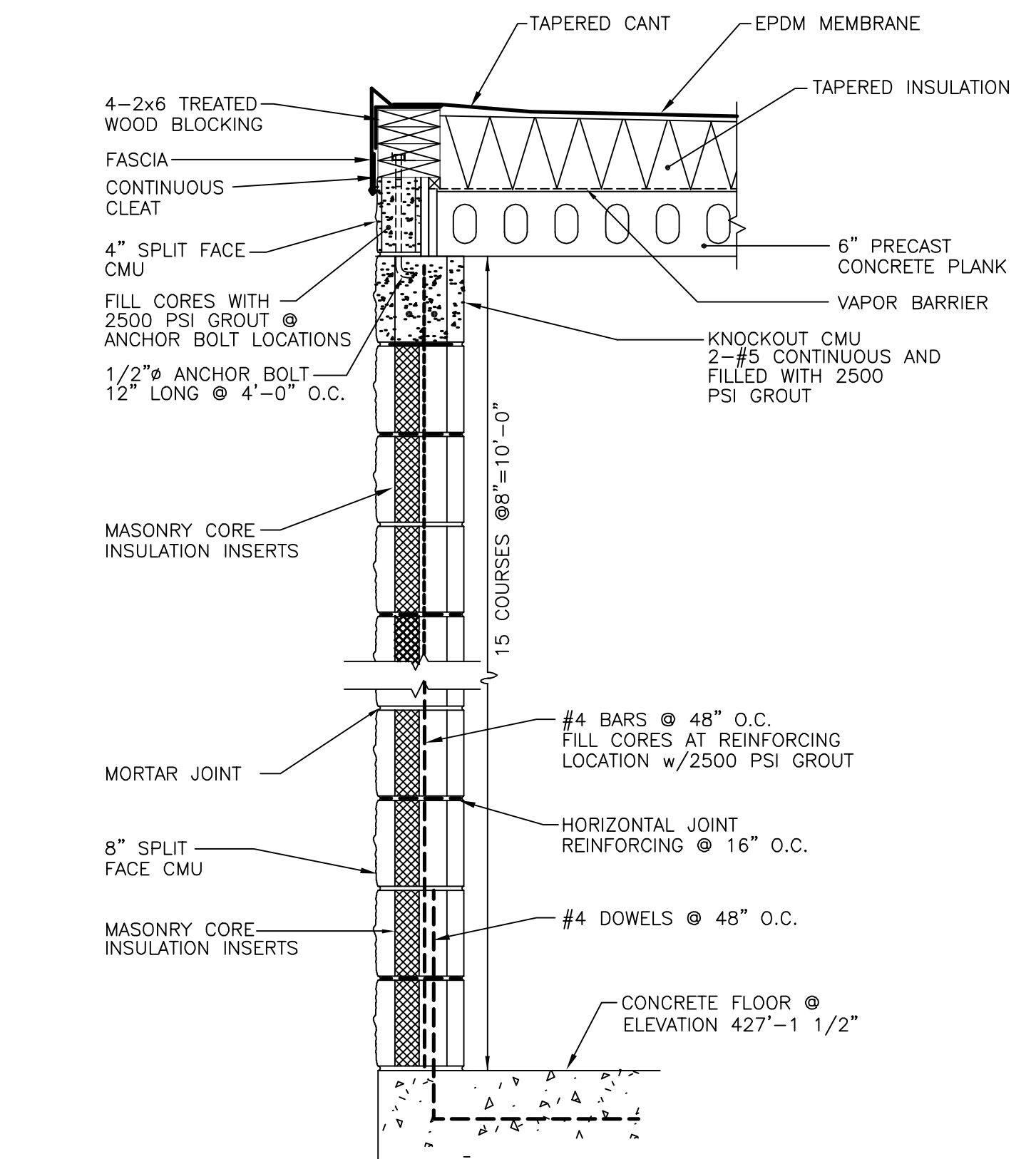


**SLUDGE THICKENER BUILDING PLAN**

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

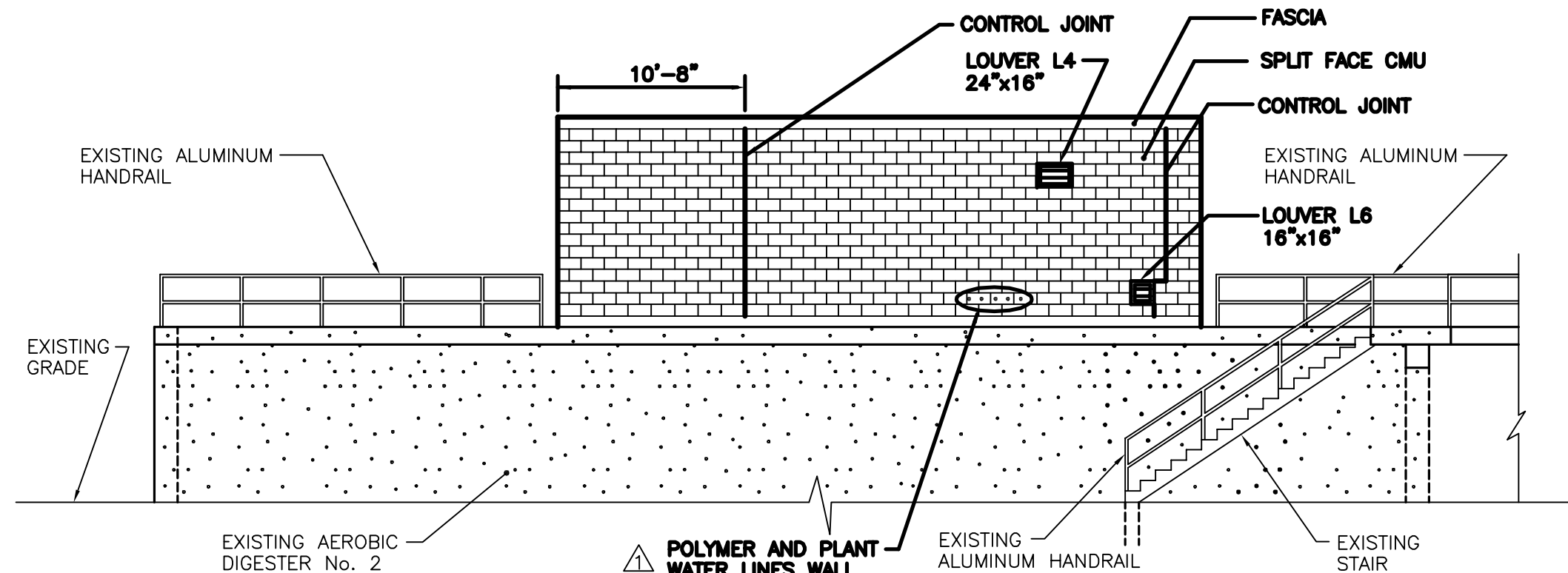
NOTE

ALTER ALL EXISTING ALUMINUM HANDRAILS AS REQUIRED FOR INSTALLATION OF BUILDING. REMOVE EXISTING HANDRAILS WHERE NO LONGER REQUIRED. PATCH CONCRETE AS REQUIRED.



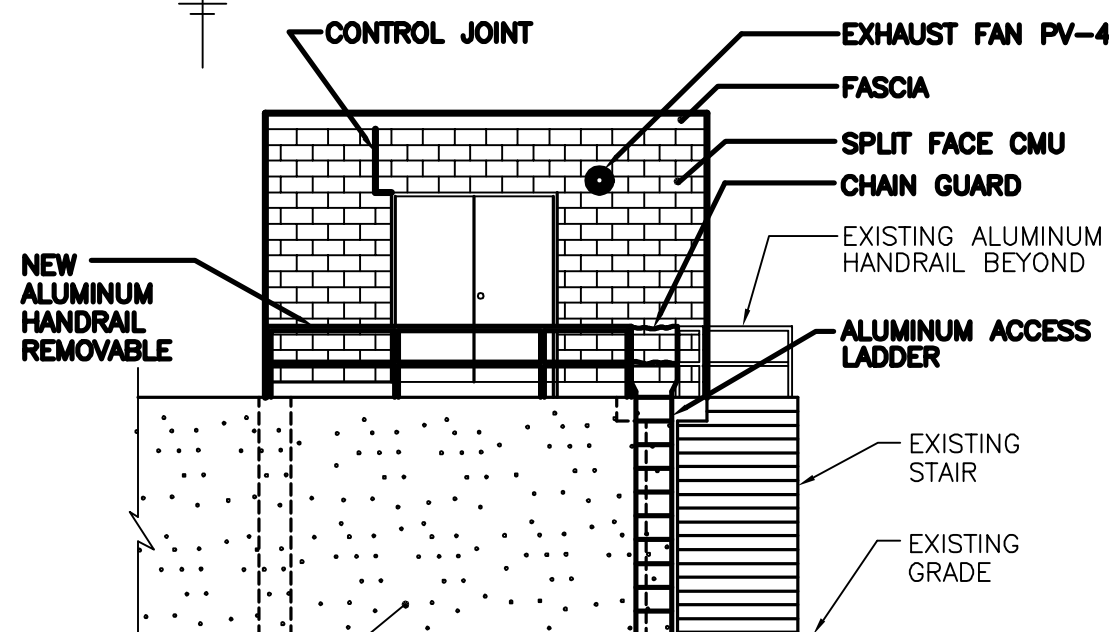
**SECTION 1**  
A3

SCALE: 1"=1'-0"



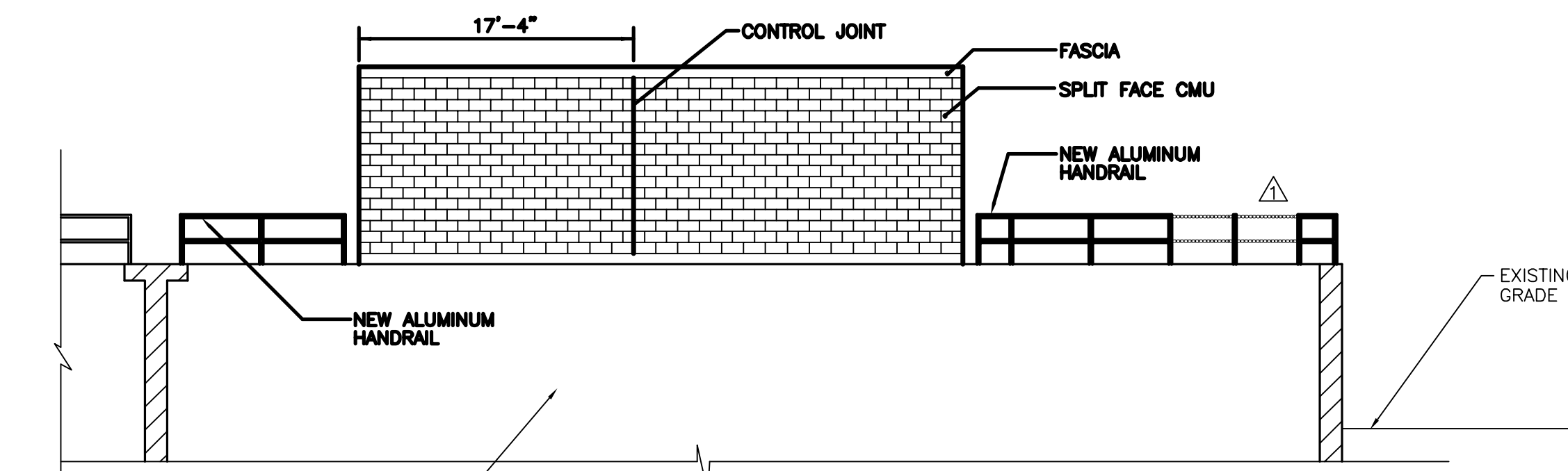
**NORTH ELEVATION**

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



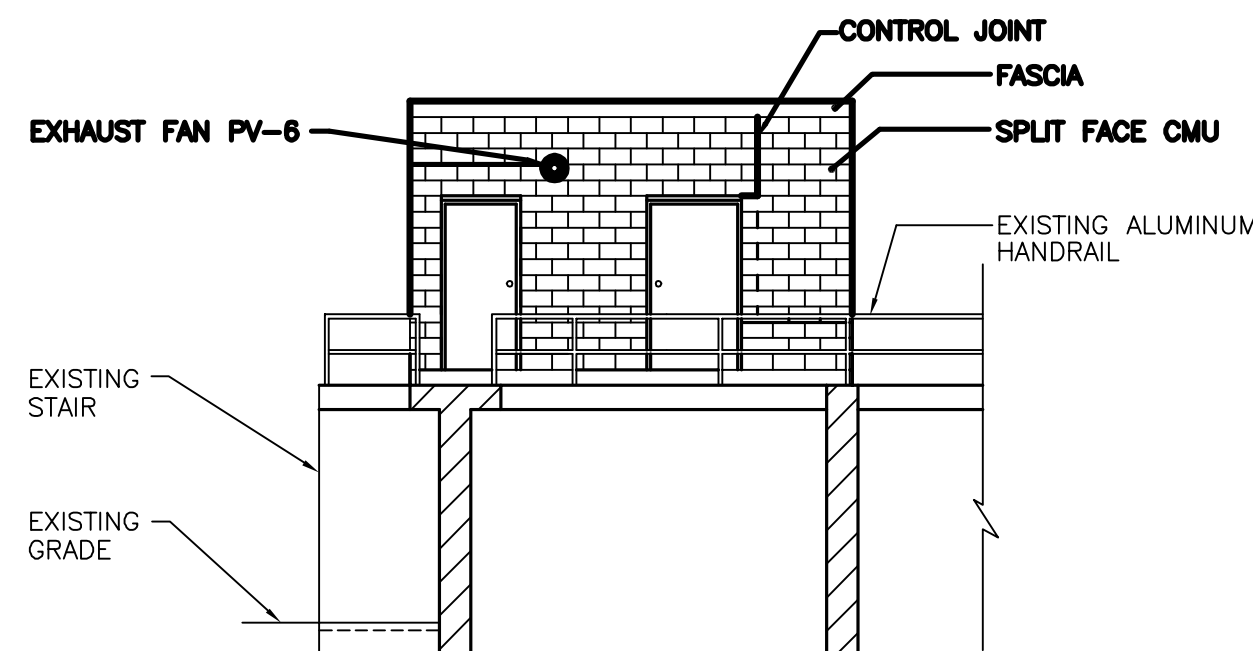
**EAST ELEVATION**

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



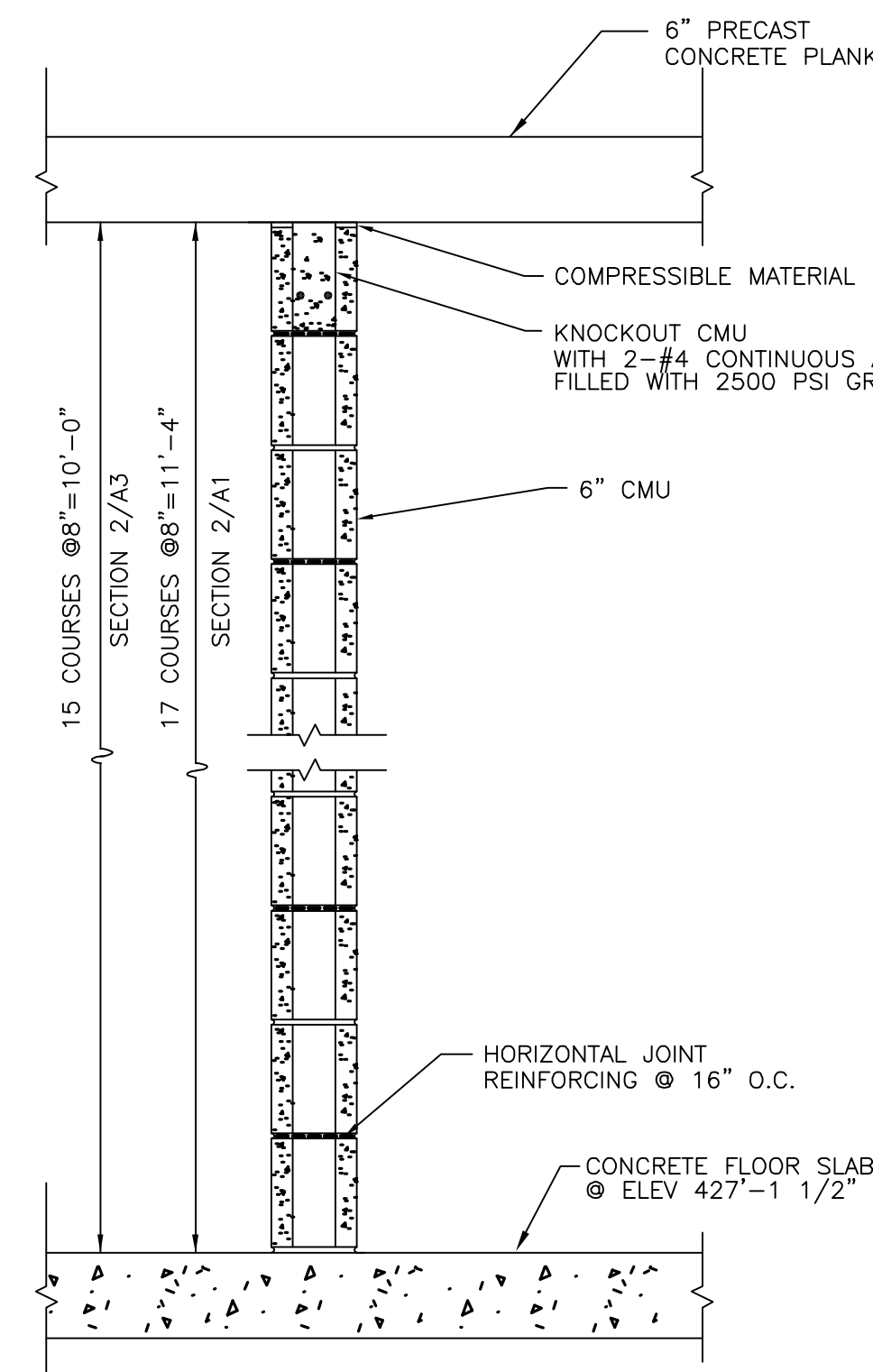
**SOUTH ELEVATION**

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



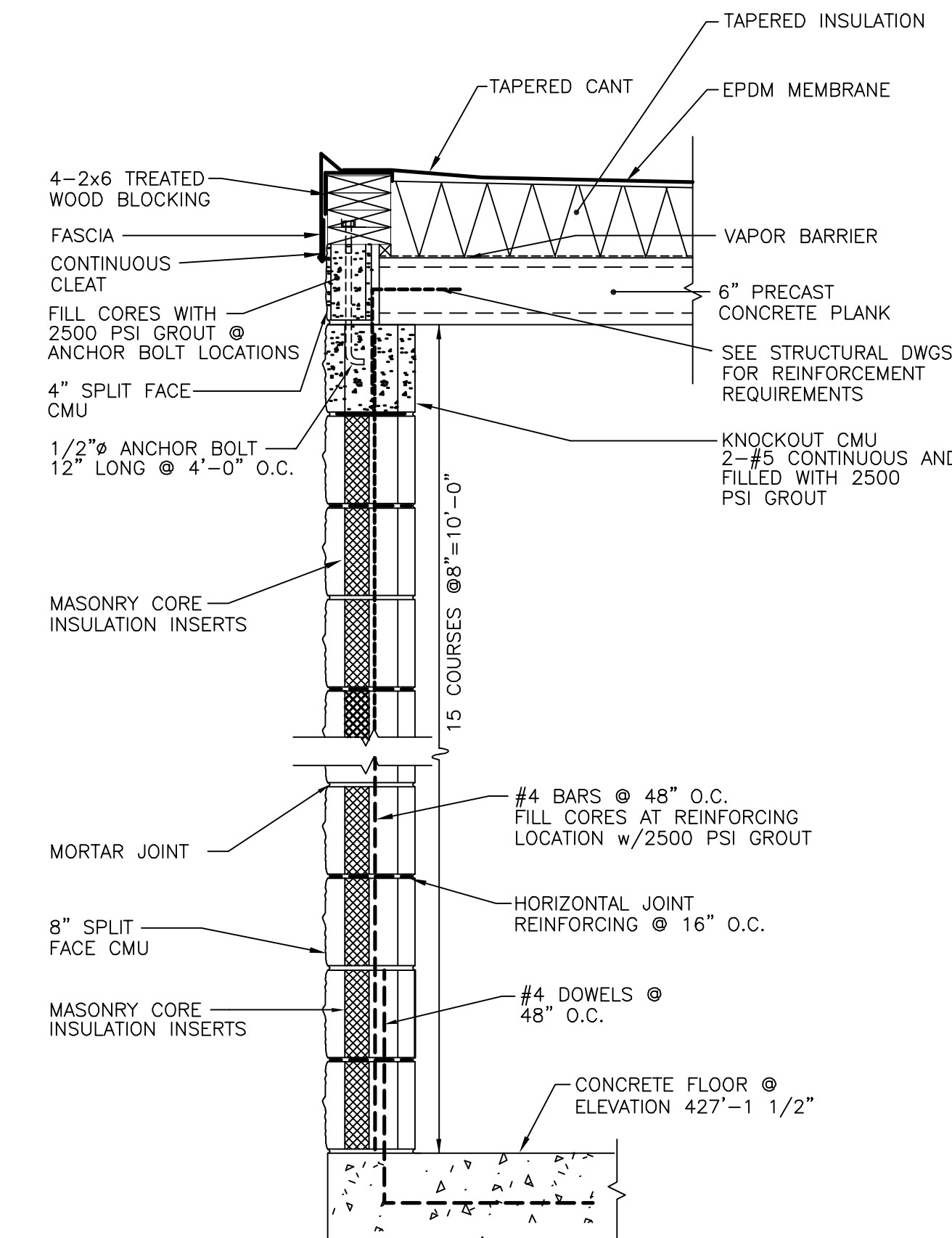
**WEST ELEVATION**

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



**SECTION 2**  
A3 A1 SIM

SCALE: 1"=1'-0"



**SECTION 3**  
A3

SCALE: 1"=1'-0"

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

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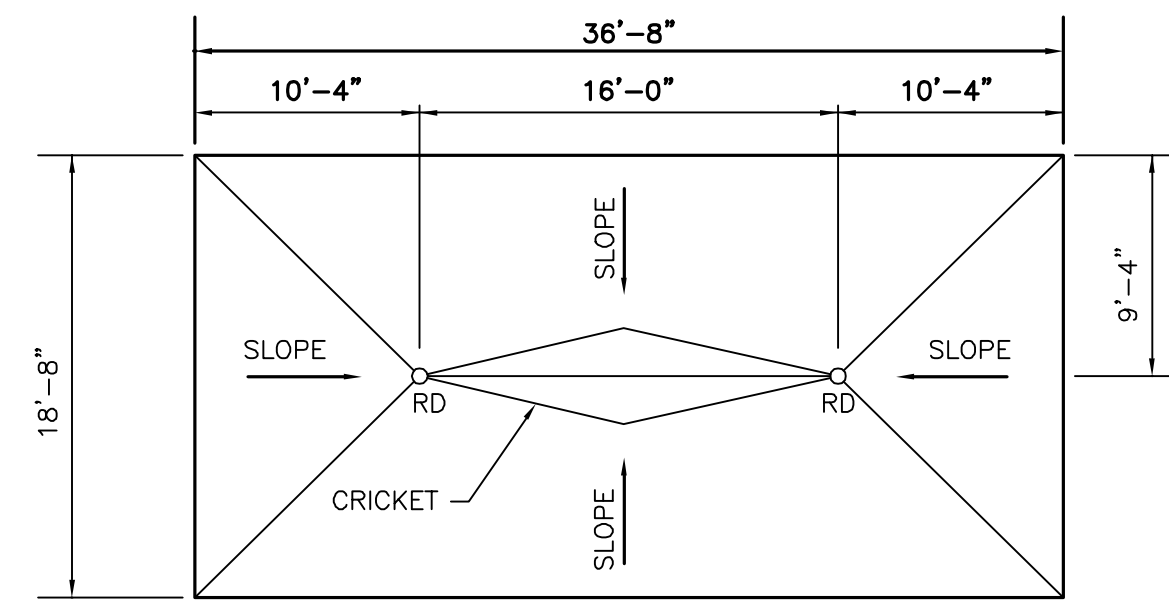
In charge of.....	1/8"=1'-0"	8 4 0 8 16			
Designed by.....Checked by.....	1"=1'-0"	1 6 0 1 2	2	2/9/96	RECORD DRAWINGS
Drawn by.....	1/4"=1'-0"	2 0 2 4 6 8 10	1	8/93	GENERAL REVISIONS
			NO.	DATE	REVISION
					INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

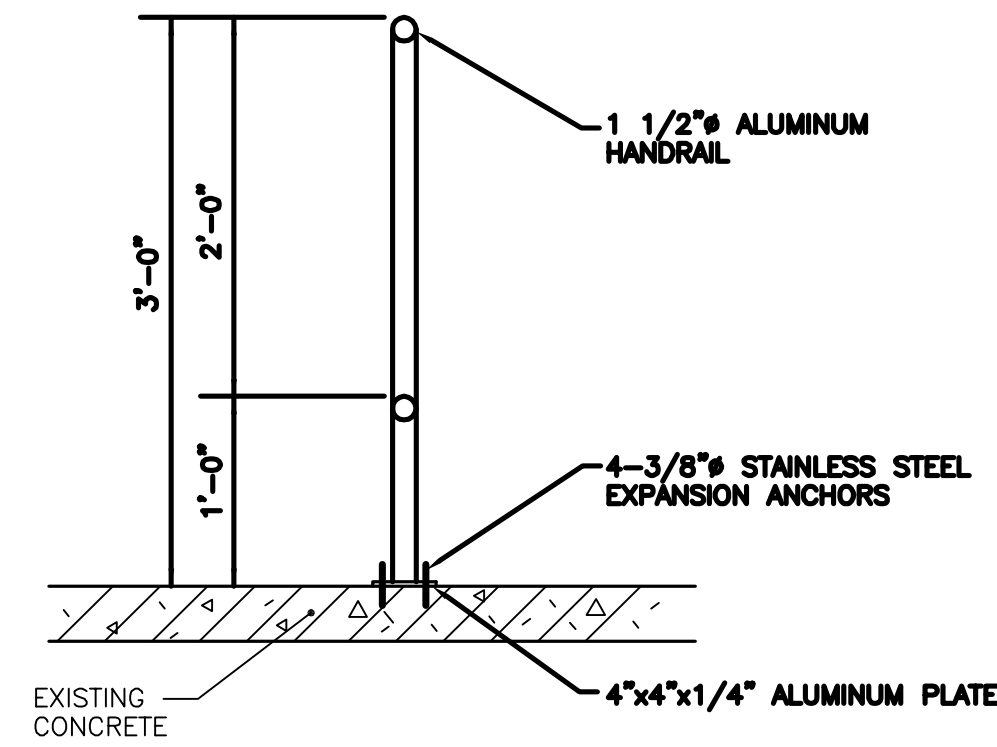
ARCHITECTURAL  
SLUDGE THICKENER BUILDING  
PLAN, SECTIONS AND DETAILS

FILE NO.	115.643-09RD	A-3
DATE	JUNE 1993	R-2



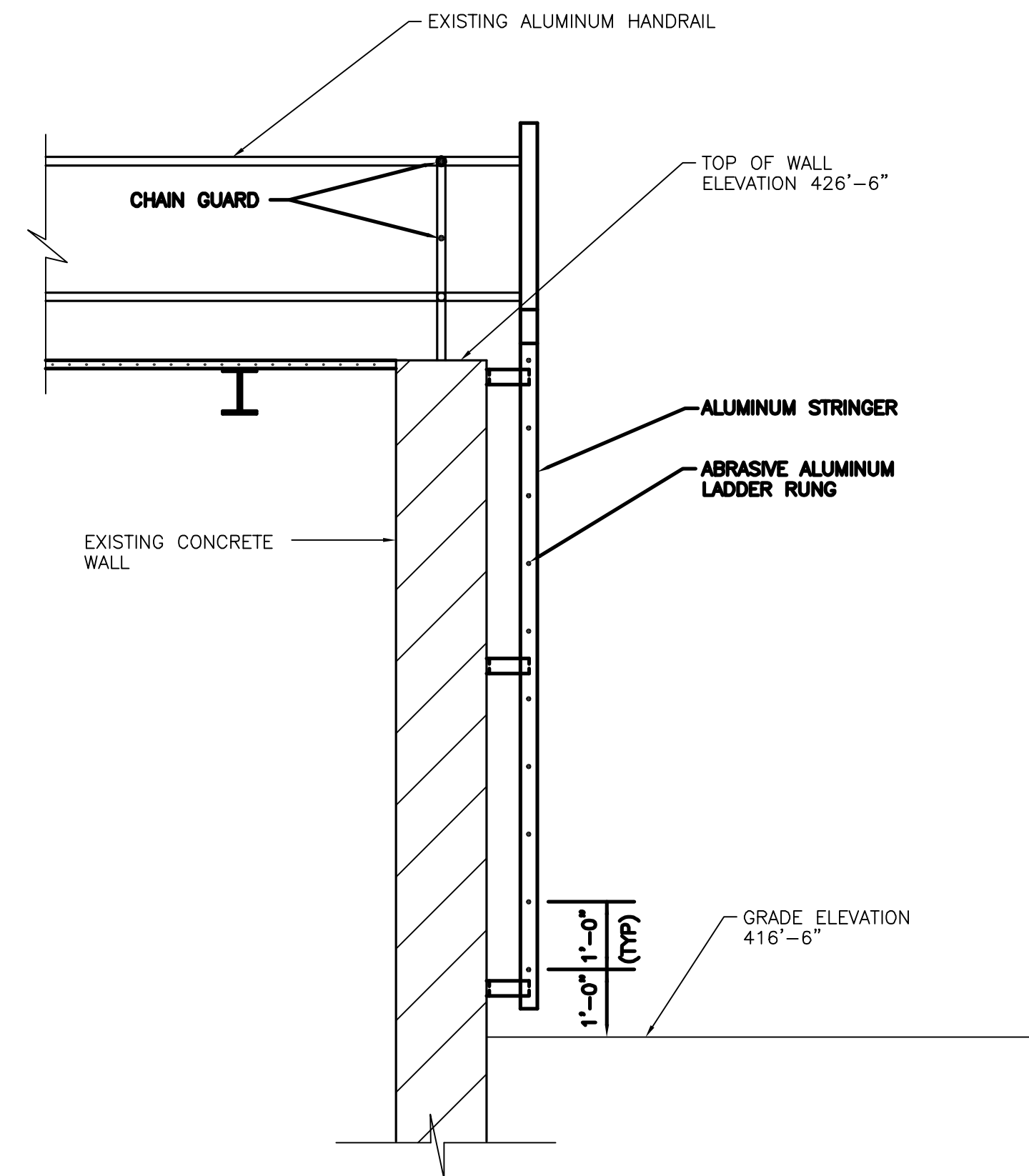
**ROOF PLAN**  
(SLUDGE THICKENER BLDG.)

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



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

ROOM FINISH SCHEDULE													
ROOM NO.	NAME	FLOOR			BASE		WALLS-ALL			CEILING			REMARKS
		Mat'l	Fin.	Color	Mat'l	Color	Mat'l	Fin.	Color	Mat'l	Fin.	Color	
CHEMICAL STORAGE/BLOWER BUILDING													
-	Blower Rm.	Conc.	Cure & Seal	-	-	Conc. Block	Pt	White	Conc.	None	-	11'-4"	
-	Chemical Rm.	Conc.	Pt	Lt. Gray	-	Conc. Conc. Blk.	Pt	White	Conc.	None	-	15'-10"	Paint tank pads before tank installation.
-	Elec. Rm.	Conc.	Cure & Seal	-	-	Conc. Block	Pt	White	Conc.	Pt	White	11'-4"	
SLUDGE THICKENER BUILDING													
-	Sludge Thick. Rm.	Conc.	Cure & Seal	-	-	Conc. Block	Pt	White	Conc.	None	-	10'-0"	
-	Elec. Rm.	Conc.	Cure & Seal	-	-	Conc. Block	Pt	White	Conc.	Pt	White	10'-0"	

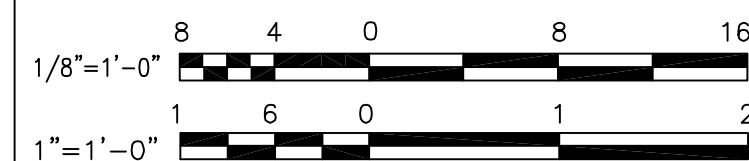


**SECTION 2**  
SCALE: 1/2" = 1'-0"

DOOR SCHEDULE														
No.	DOOR				FRAME				HDWR.		REMARKS			
	Mat	Type	Width	Hgt.	Thk.	Fin	Color	Mat	Type	Depth		Fin.	Color	GROUP LABEL
CHEMICAL STORAGE/BLOWER BUILDING														
100	Fiber glass		2'-3'-0"	7'-0"	1-3/4"		B	Alum		6"		Blk	3	
101	Fiber glass		3'-8"	7'-0"	1-3/4"		B	Alum		6"		Blk	1	
102	Fiber glass		3'-8"	7'-0"	1-3/4"		B	Alum		6"		Blk	1	
103	Fiber glass		3'-8"	7'-0"	1-3/4"		B	Alum		6"		Blk	1	
104	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum		6"		Blk	1	INSTALL 12" x 12" LOUVER IN DOOR
SLUDGE THICKENER BUILDING														
200	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum		6"		Blk	2	
201	Fiber glass		3'-8"	7'-0"	1-3/4"		B	Alum		6"		Blk	1	
202	Fiber glass		2'-3'-4"	7'-8"	1-3/4"		B	Alum		6"		Blk	3	
INFLUENT PUMP STATION														
AE3	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	4	
SLUDGE PUMP STATION														
BE2	Fiber glass		2'-3'-10"	10'-10"	1-3/4"		B	St.	Exist ing			Blk	5	Notched for steel beam
BE3	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	4	
BE4	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	4	
BE5	Fiber glass		2'-3'-10"	10'-10"	1-3/4"		B	St.	Exist ing			Blk	5	Notched for steel beam
GARAGE														
CE5	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	6	
SCUM PUMP ROOM No. 1 SETTLING TANK														
YE1	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	6	
SCUM PUMP ROOM No. 2 SETTLING TANK														
YE2	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	6	
AERATION TANK ELECTRIC CONTROL ROOM														
XE2	Fiber glass		3'-0"	7'-0"	1-3/4"		B	Alum	Exist ing			Blk	6	Install 18" X 12" Louver

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When photographic reproduction is used; the drawings are not to scale. All scales are reduced from indicated to approximately half size.



NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	

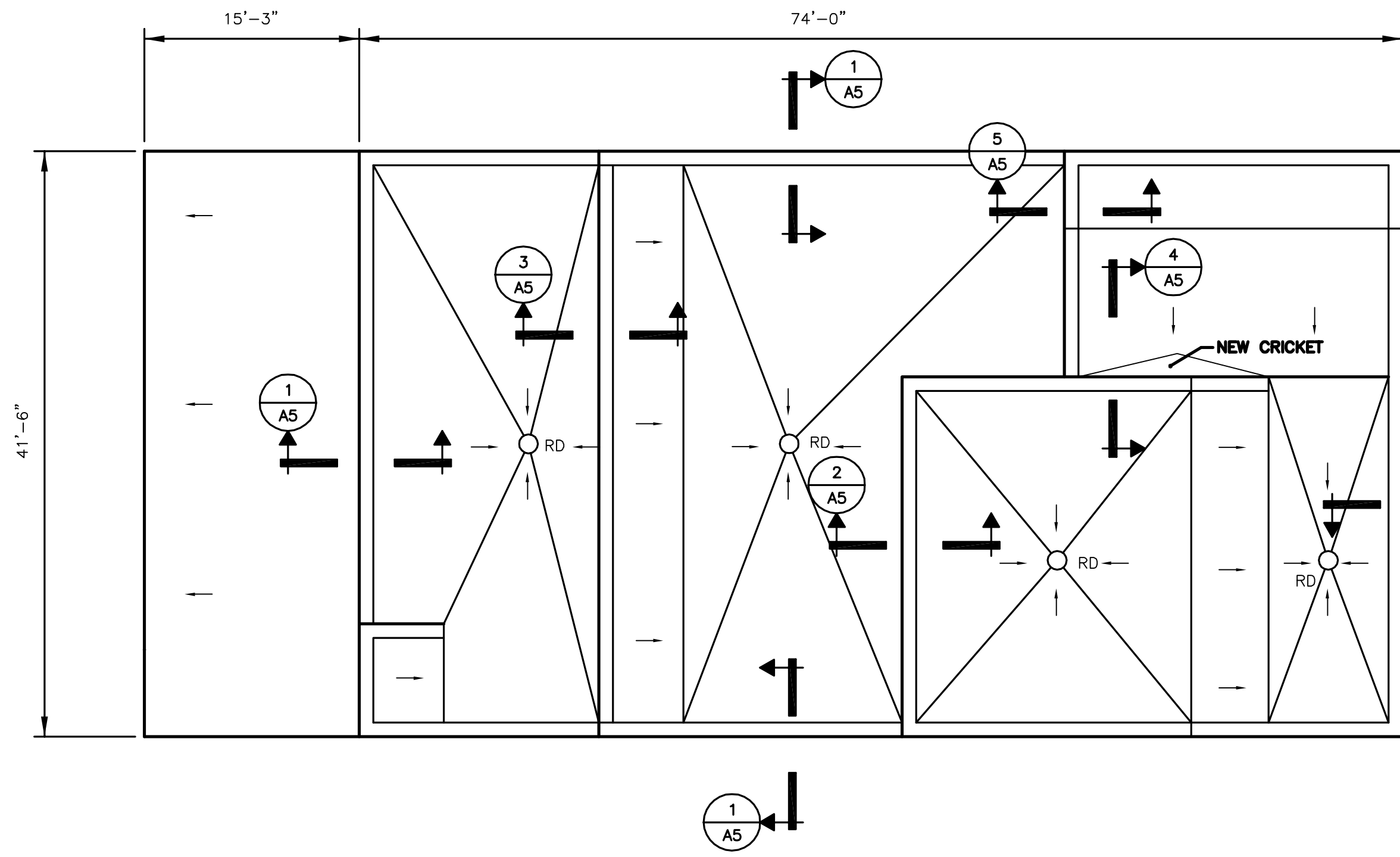


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ARCHITECTURAL  
SLUDGE THICKENER BUILDING  
PLAN, SCHEDULES & DETAILS

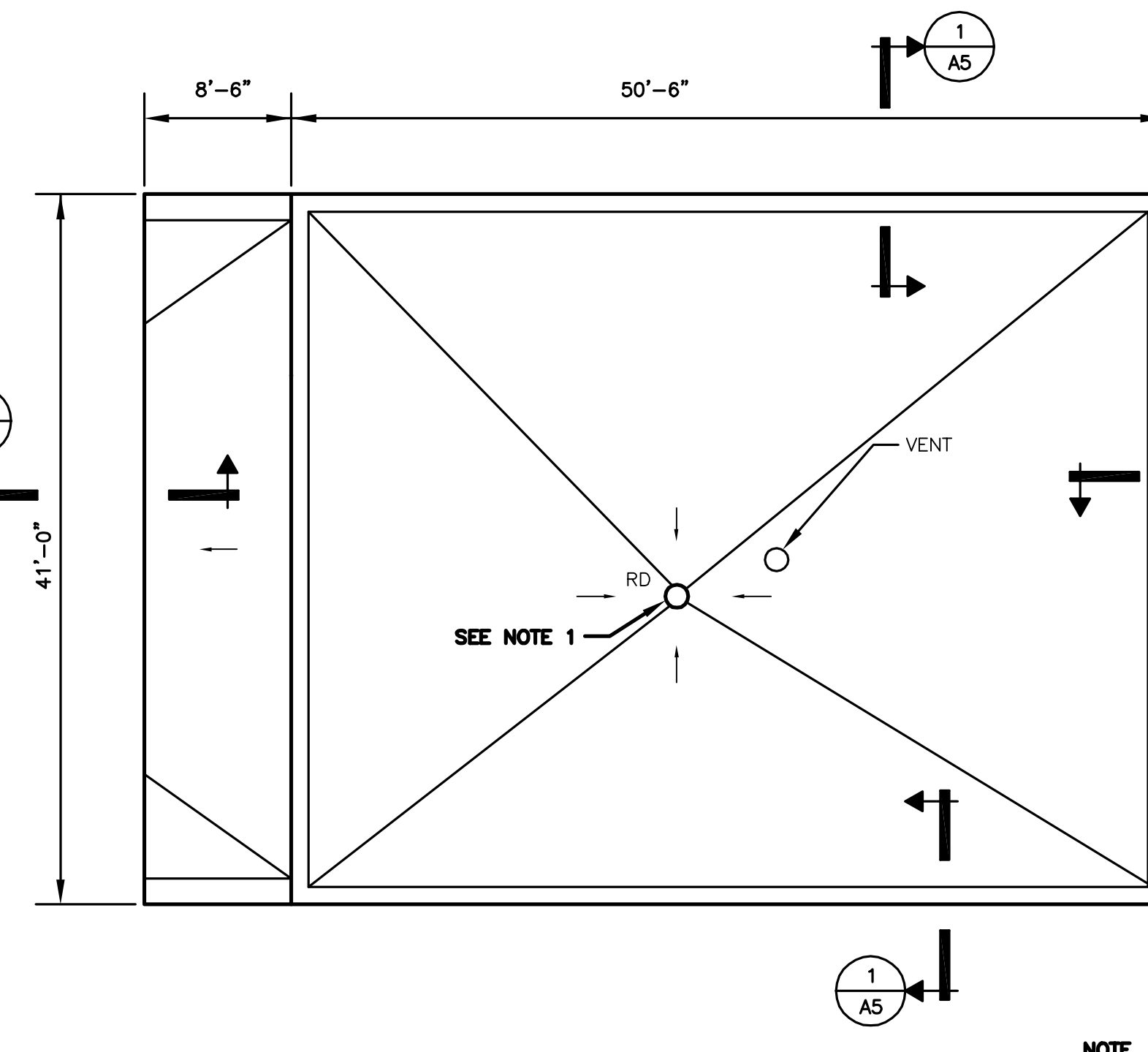
FILE NO. 115.643-10RD	A-4
DATE JUNE 1993	R-2

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_



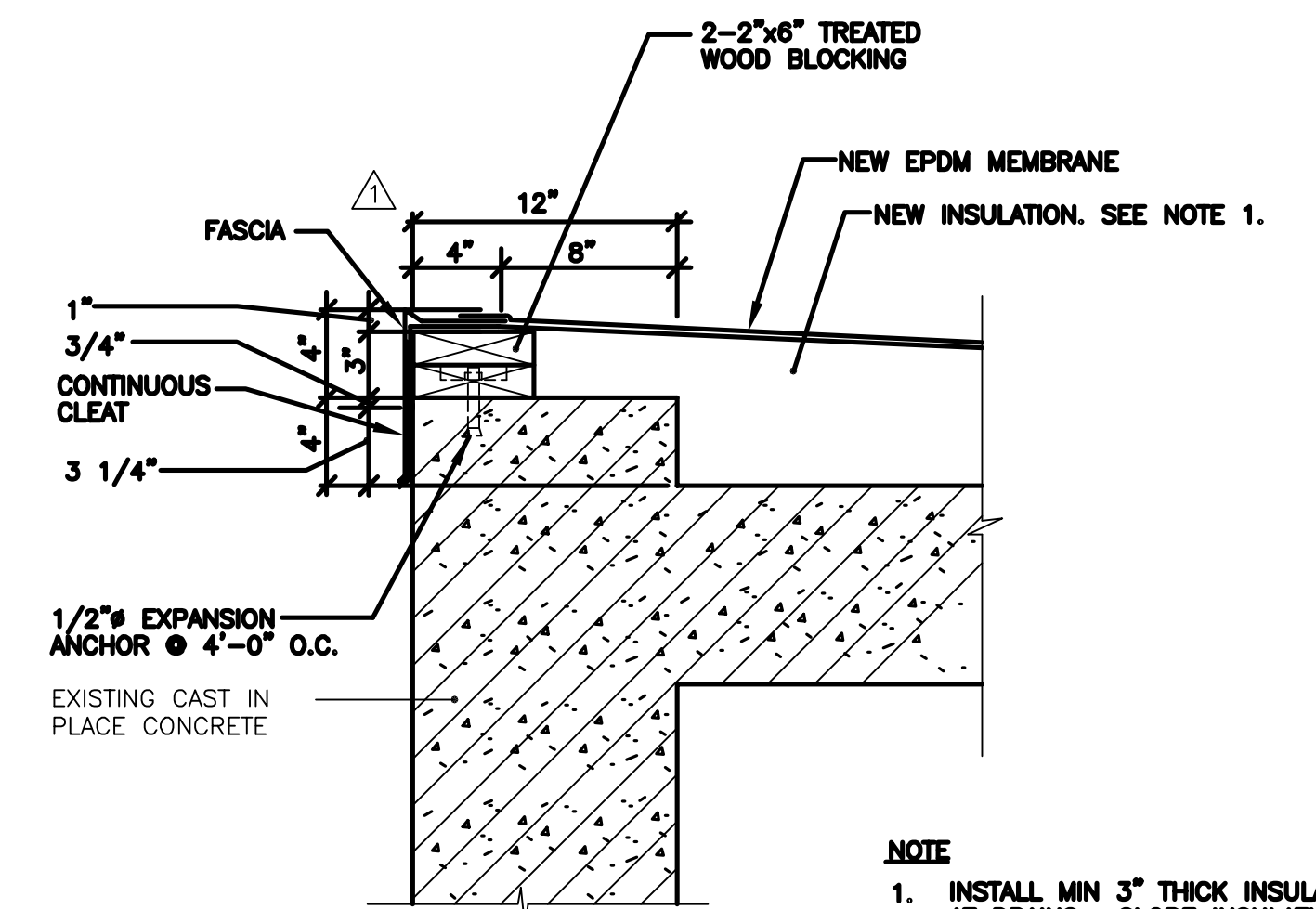
**INFLUENT PUMP STATION ROOF PLAN**

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



**SLUDGE PUMP STATION ROOF PLAN**

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

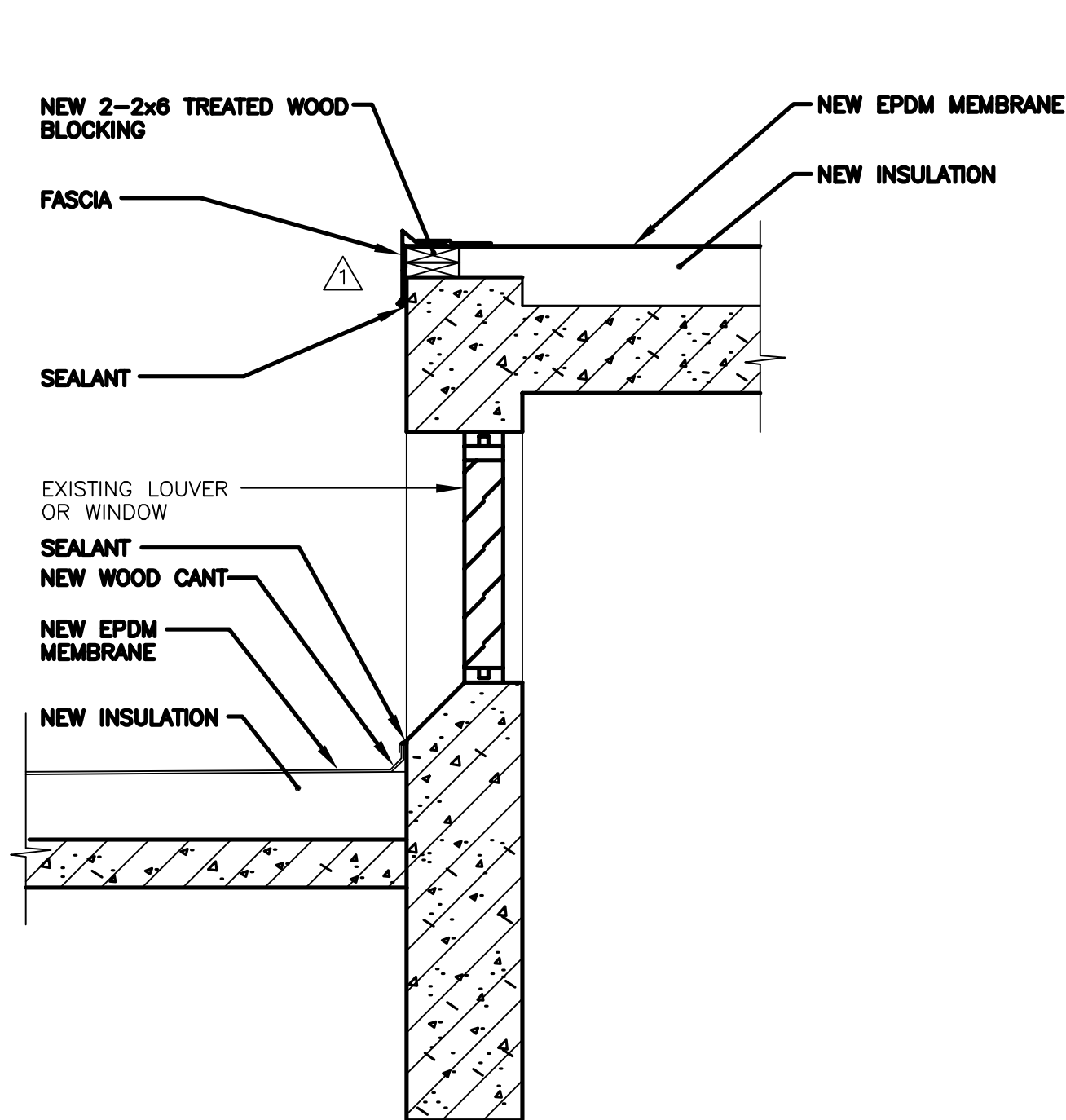


**SECTION 1**

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

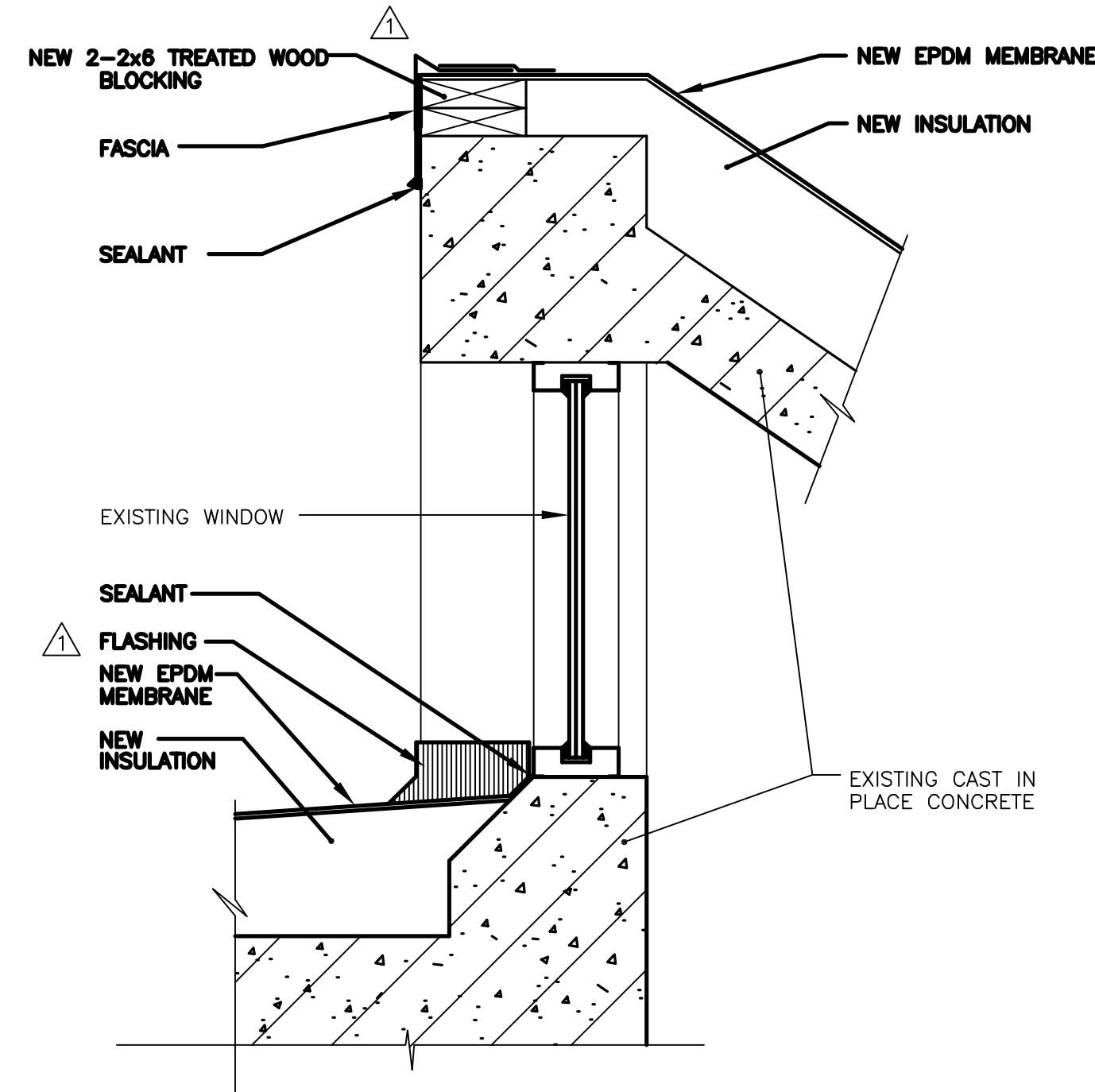
**NOTE**  
1. INSTALL MIN 3" THICK INSULATION AT DRAINS. SLOPE INSULATION TOWARD DRAINS.

**NOTE**  
1. THIS CONTRACTOR SHALL REPAIR EXISTING ROOF DRAINS AND REPLACE DRAINAGE GRATES. FIELD VERIFY MAKE AND MANUFACTURER OF DRAINS FOR PART REPLACEMENT.



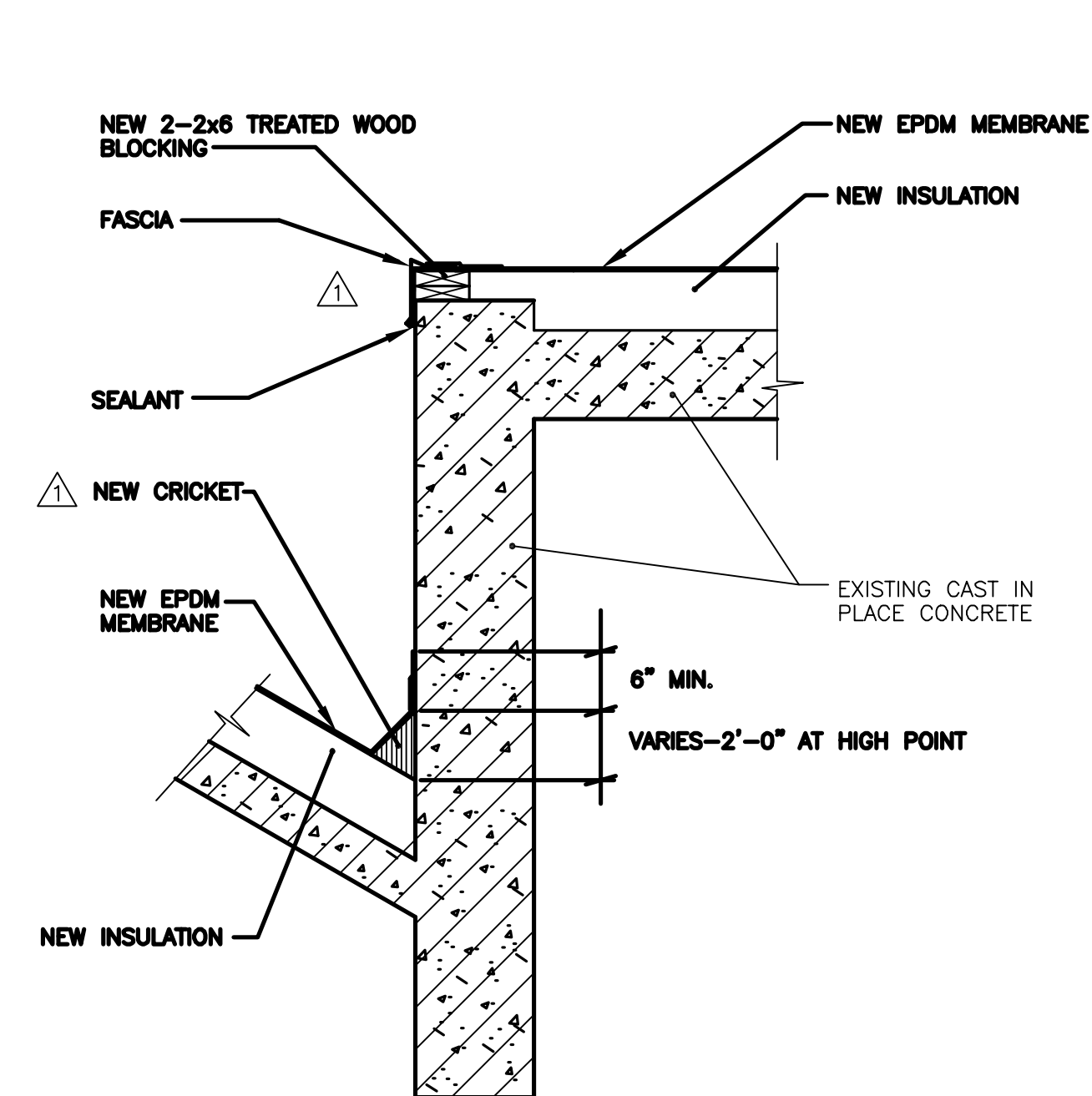
**SECTION 2**

SCALE: 3/4"=1'-0"



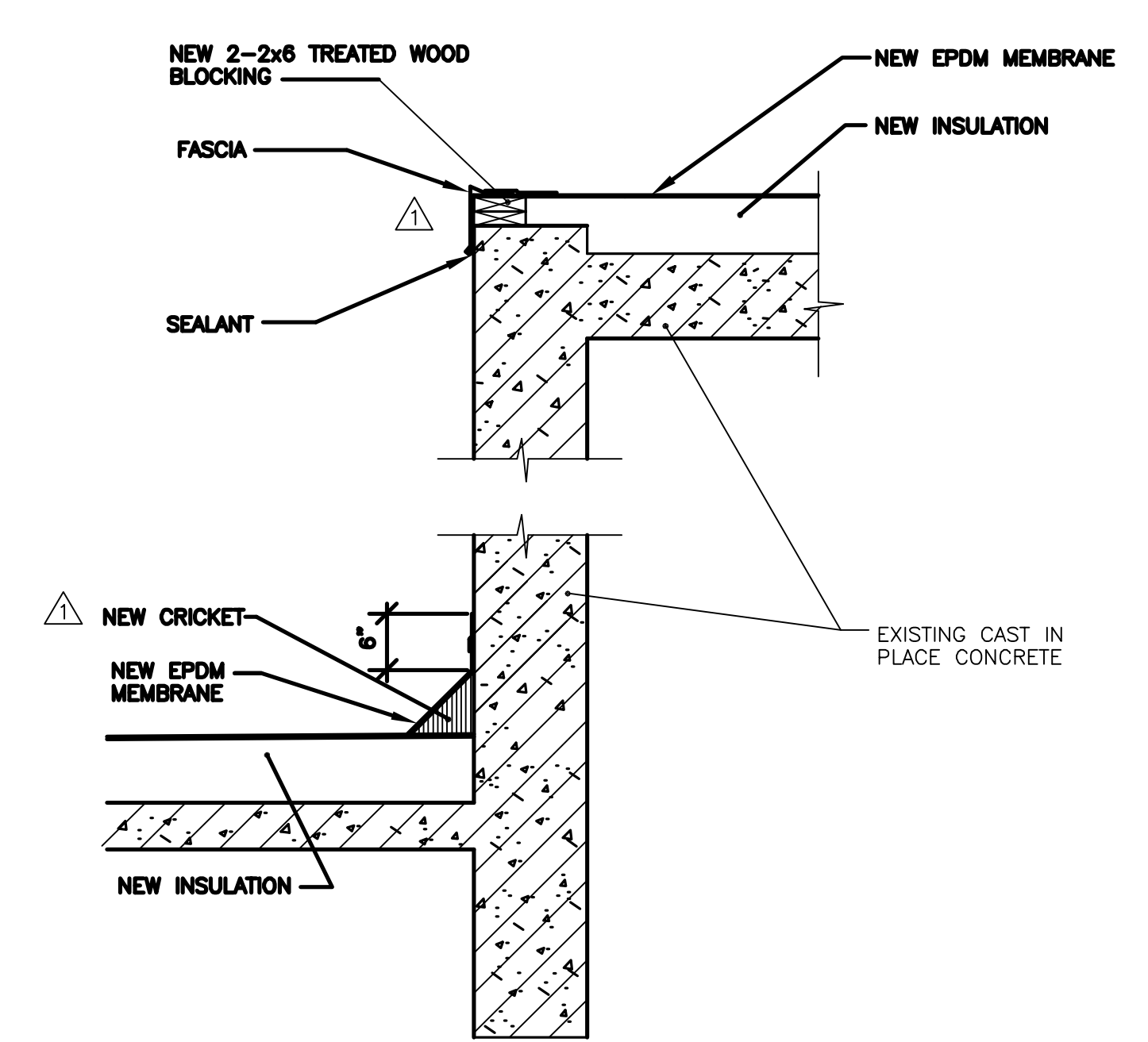
**SECTION 3**

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



**SECTION 4**

SCALE: 3/4"=1'-0"



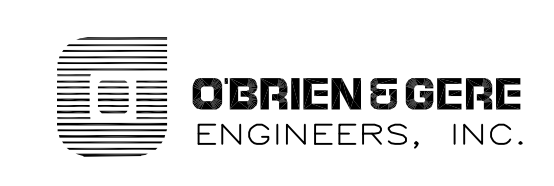
**SECTION 5**

SCALE: 3/4"=1'-0"

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of.....	1/8"=1'-0"	8 4 0 8 16
Designed by.....Checked by.....	3/4"=1'-0"	1 0 1 2 3
Drawn by.....	1/2"=1'-0"	1 6 0 1

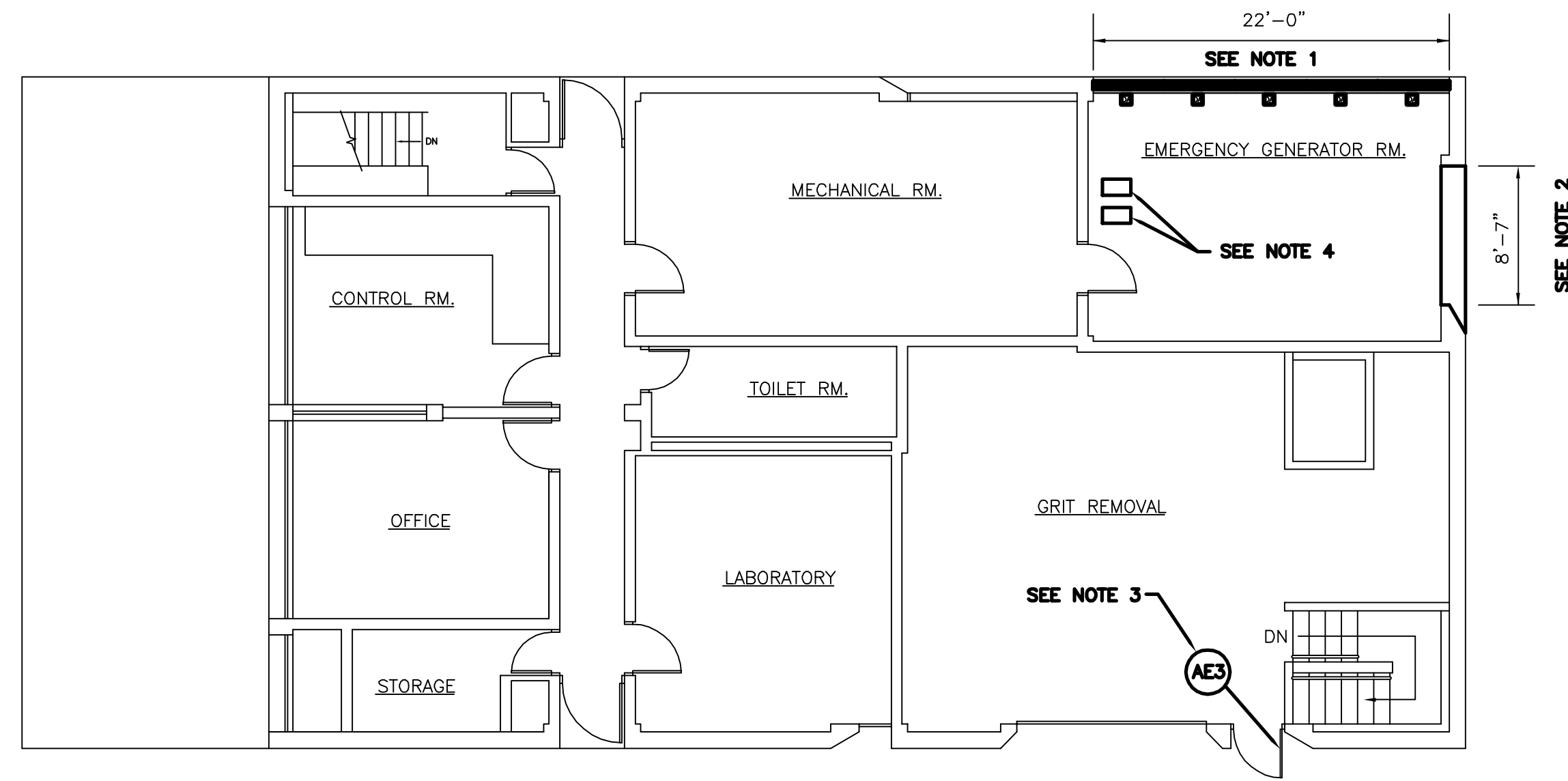
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ARCHITECTURAL  
INFLUENT PUMP/SLUDGE PUMP BUILDINGS  
ROOF PLANS AND SECTIONS

FILE NO.	115.643-11RD	A-5
DATE	JUNE 1993	R-2

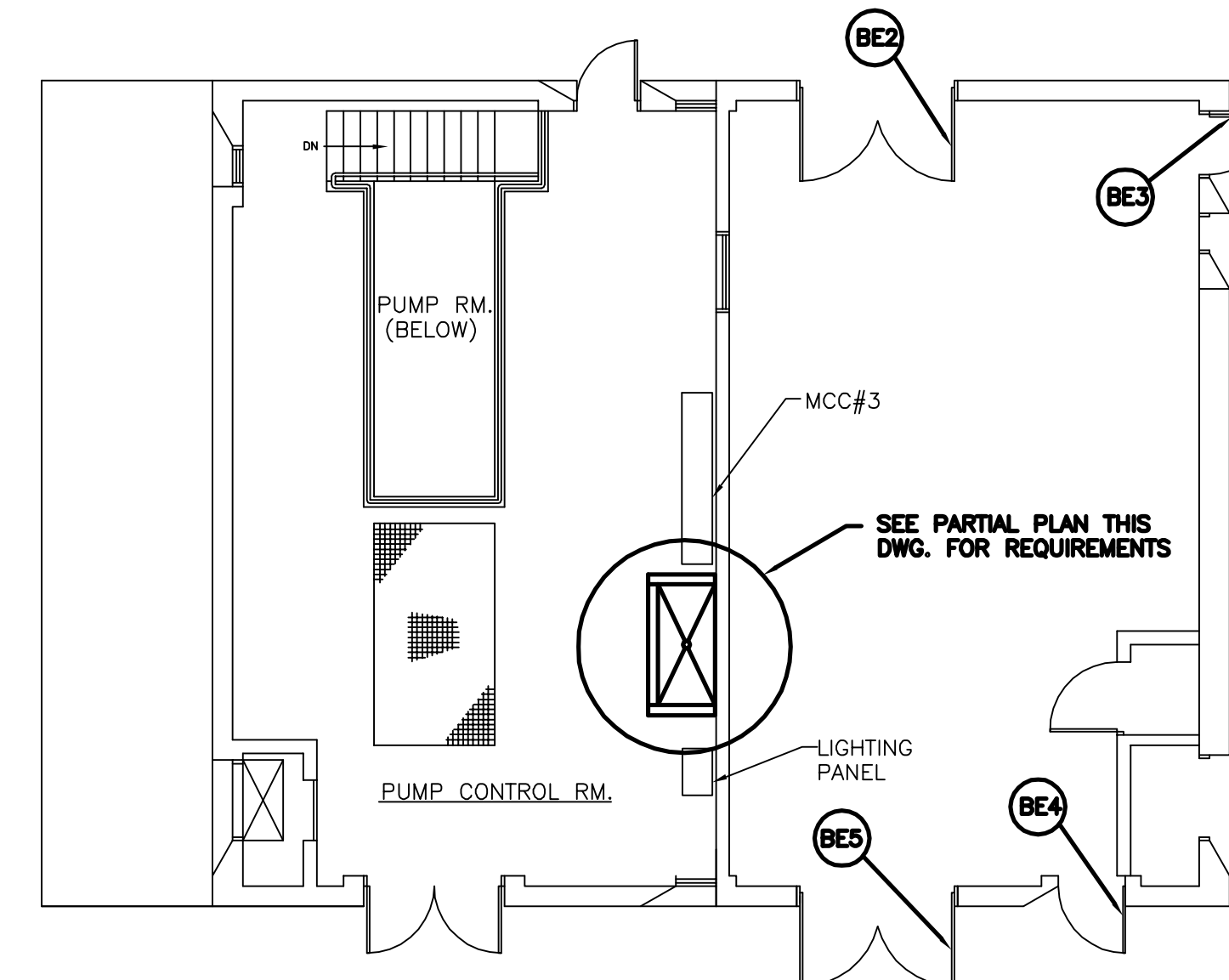


**INFLUENT PUMP STATION  
MAIN FLOOR PLAN**

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

**NOTES**

1. REMOVE AND SCRAP FIVE (5) EXISTING LOUVERS. INSTALL FIVE (5) NEW COMBINATION LOUVERS. FIELD VERIFY EXISTING OPENING SIZE BEFORE ORDERING. COORDINATE INSTALLATION WITH CONTRACT 1C.
2. REMOVE AND SCRAP THE ONE (1) 7'-9" x 8'-7" LOUVER. INSTALL NEW COMBINATION LOUVER IN OPENING. FIELD VERIFY EXISTING OPENING SIZE BEFORE ORDERING. COORDINATE REMOVAL AND INSTALLATION WITH CONTRACT 1C.
3. REMOVE AND SCRAP EXISTING METAL DOOR AND HARDWARE NOTED. FRAME TO REMAIN. INSTALL NEW FIBERGLASS DOOR AND HARDWARE.
4. REMOVE AND SCRAP CONCRETE PADS. FIELD VERIFY LOCATION AND SIZE OF PADS. THE PAD REMOVAL SHALL BE FLUSH WITH FINISHED FLOOR.

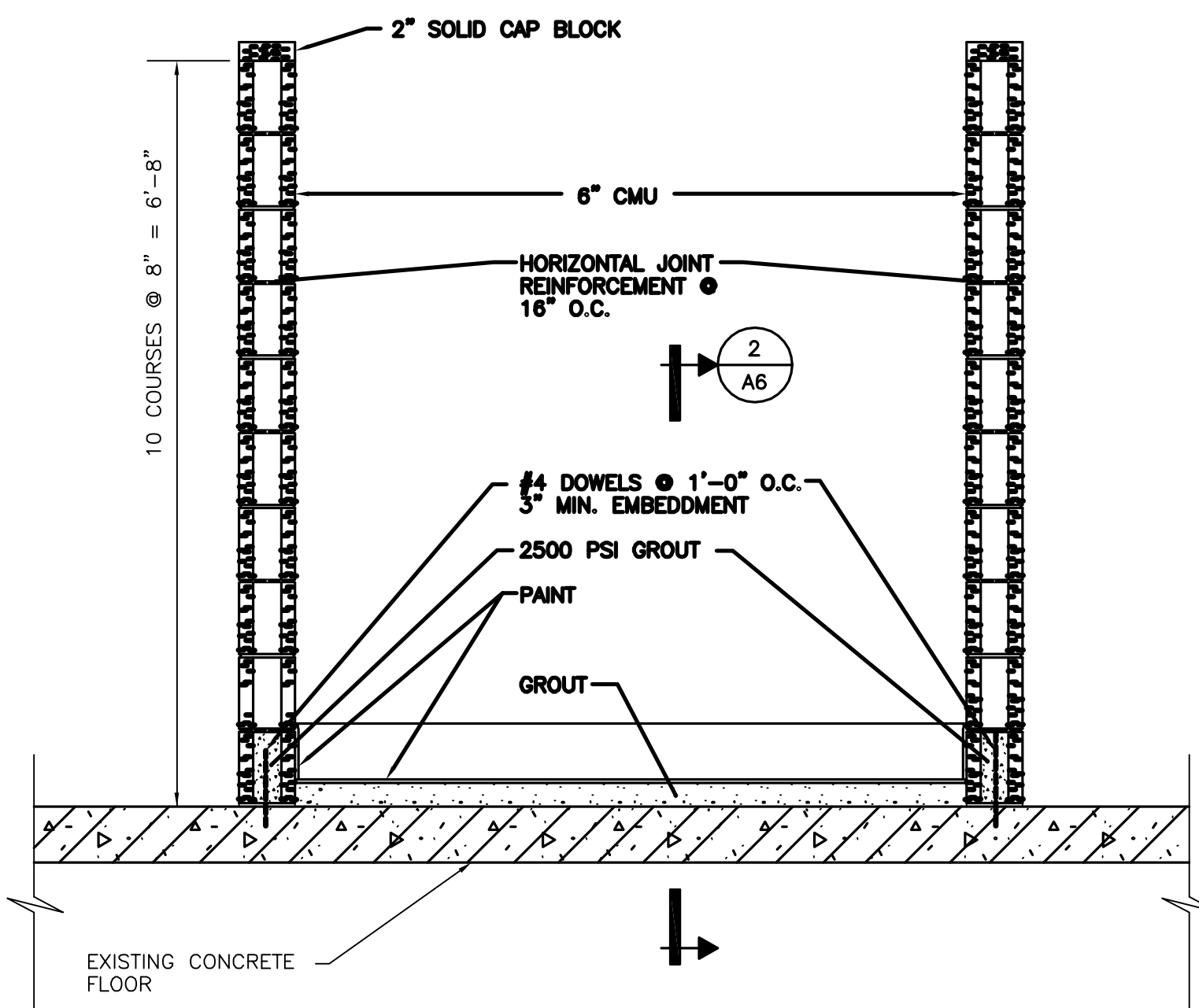


**SLUDGE PUMP STATION  
FLOOR PLAN**

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

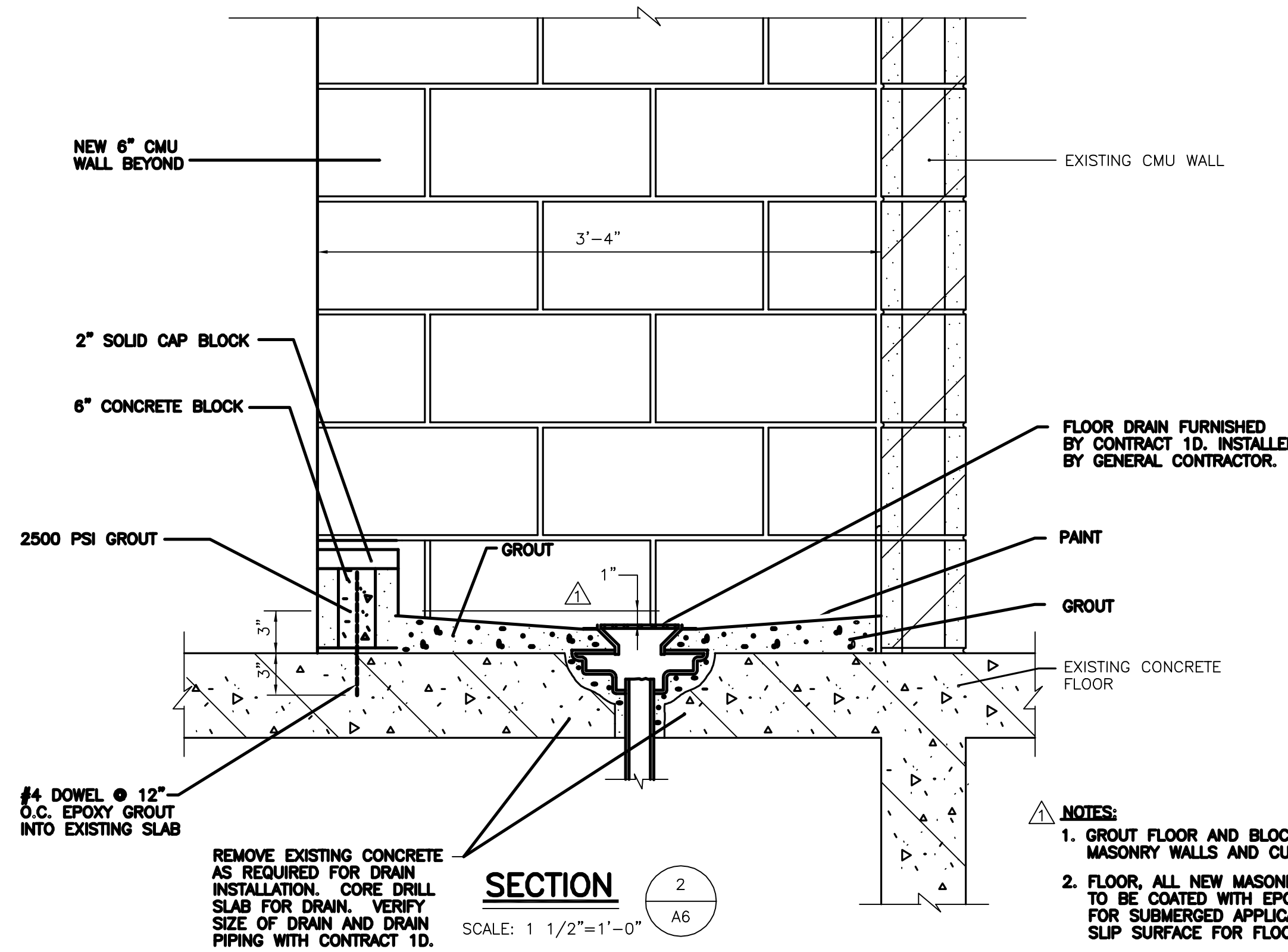
**NOTES**

1. REMOVE AND SCRAP EXISTING METAL DOORS AND HARDWARE NOTED. FRAME TO REMAIN. INSTALL NEW FIBERGLASS DOORS AND HARDWARE.



**SECTION 1**

SCALE: 3/4"=1'-0"



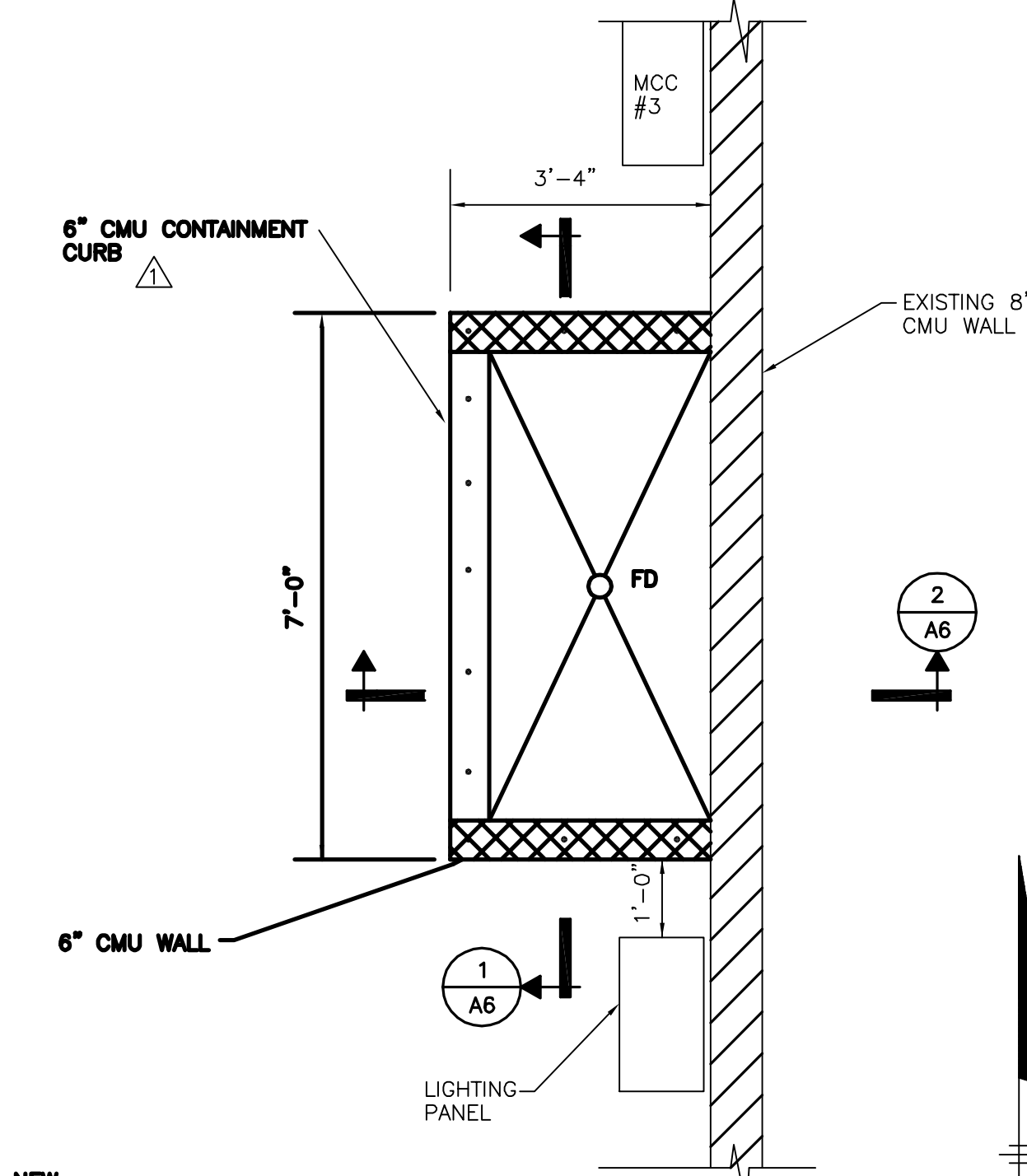
**SECTION 2**

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

REMOVE EXISTING CONCRETE AS REQUIRED FOR DRAIN INSTALLATION. CORE DRILL SLAB FOR DRAIN. VERIFY SIZE OF DRAIN AND DRAIN PIPING WITH CONTRACT 1D.

**NOTES:**

1. GROUT FLOOR AND BLOCK FILL ALL NEW MASONRY WALLS AND CURB (BOTH SIDES)
2. FLOOR. ALL NEW MASONRY WALLS AND CURB TO BE COATED WITH EPOXY PAINT AS SPECIFIED FOR SUBMERGED APPLICATION. PROVIDE NON SLIP SURFACE FOR FLOOR.



**PARTIAL PLAN**

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

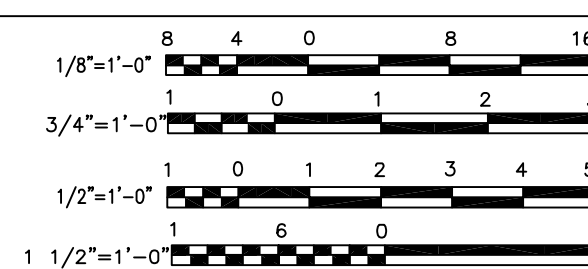
**RECORD DRAWINGS**  
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O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

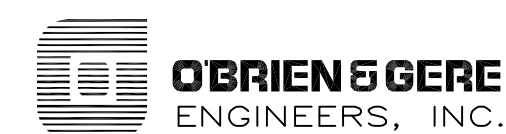
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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	

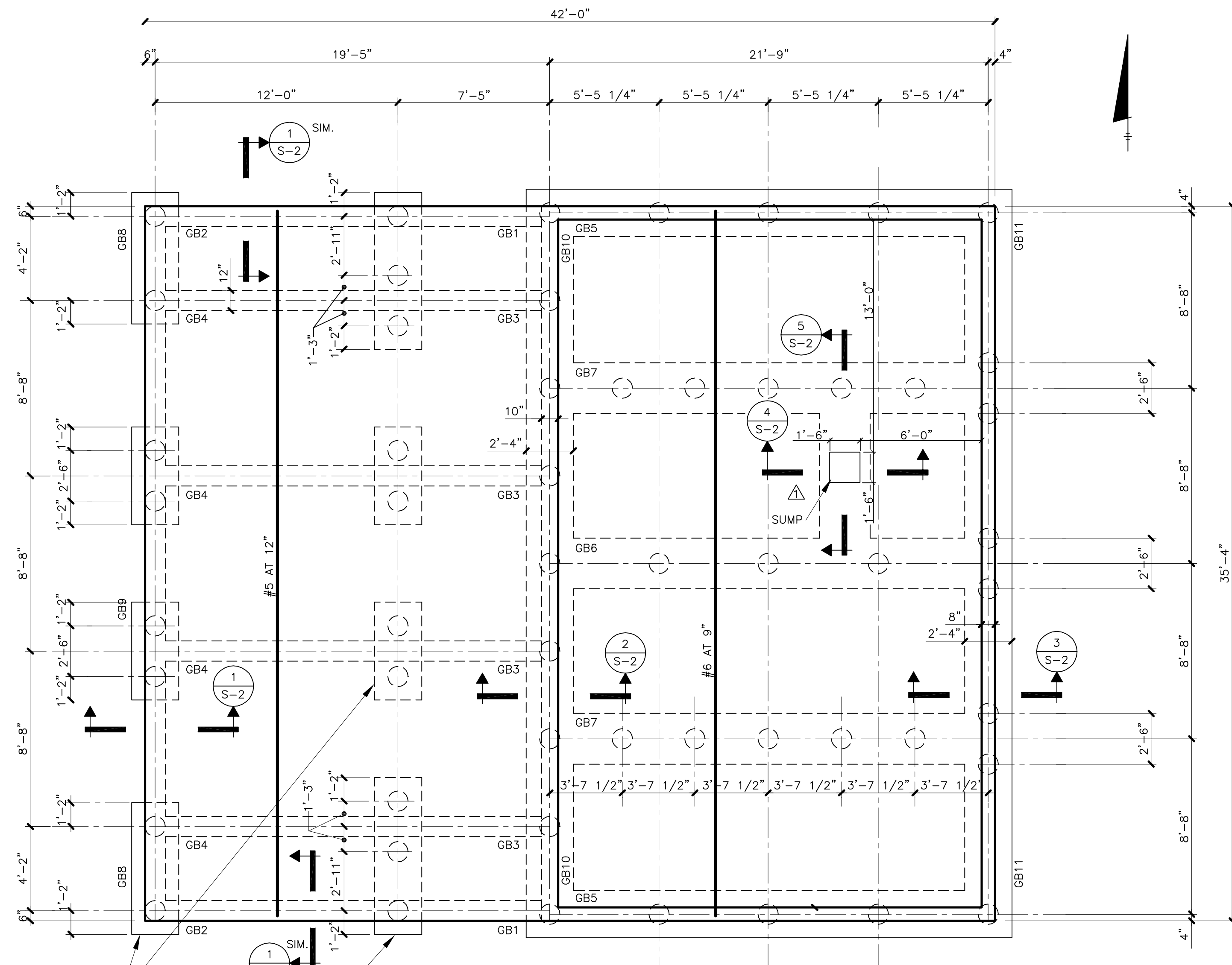


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ARCHITECTURAL  
INFLUENT PUMP/SLUDGE PUMP BUILDINGS  
PLANS, SECTIONS AND DETAILS

FILE NO. 115.643-46RD	A-6
DATE JUNE 1993	R-2

JAS 115643 643S1RD 48

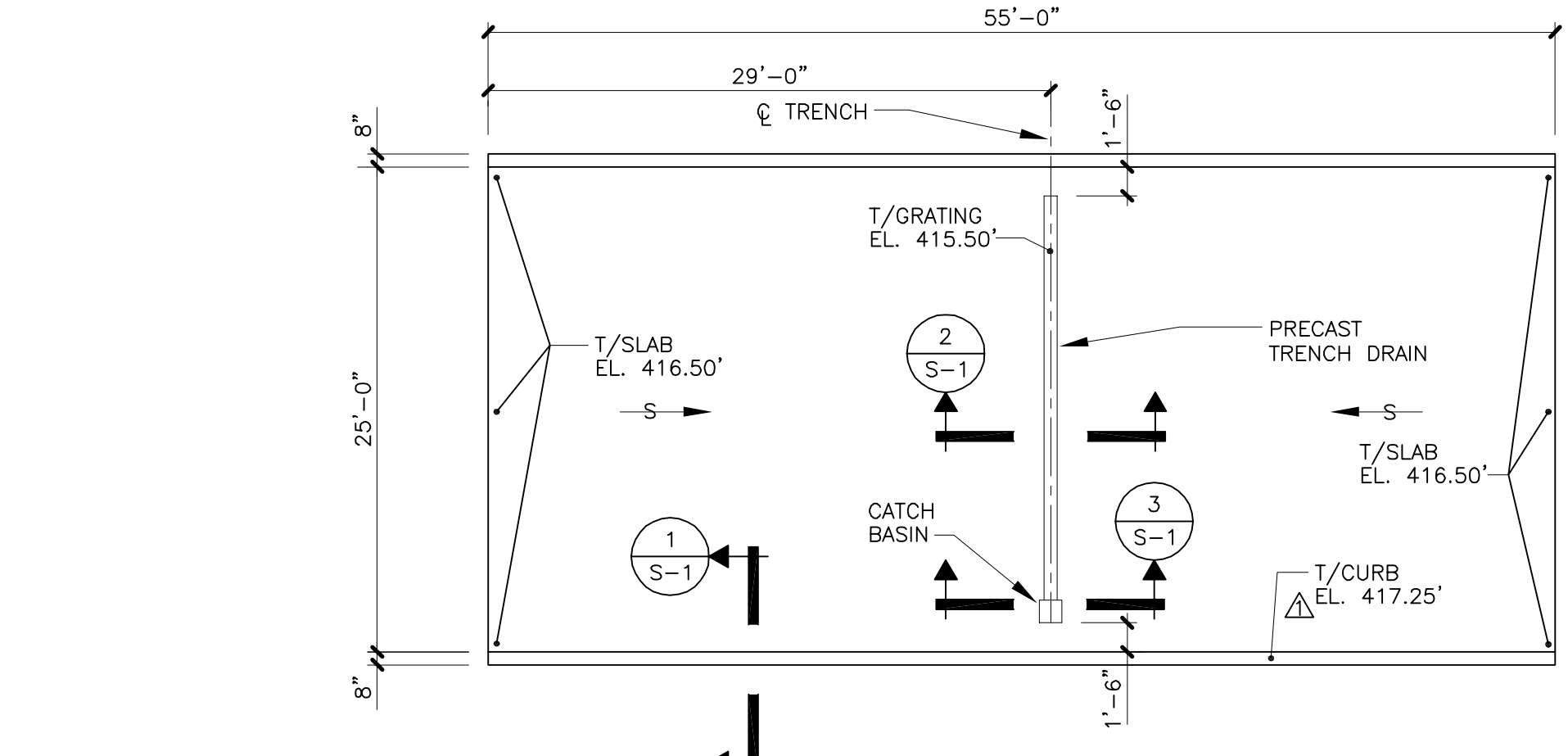


**FOUNDATION PLAN**

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

**NOTES:**

- 1.)  $\odot$  DENOTES 12" DIA. DRIVEN TIMBER FRICTION PILES
- 2.) PILE CUT OFF ELEVATIONS: 409.67'
- 3.) PILES ARE ON GRADE BEAM (GB) CENTERLINES UNLESS OTHERWISE NOTED.
- 4.) SLAB TOP BARS: LAP AT MID SPAN  
SLAB BOTTOM BARS: CONT. OR TERMINATE 6" INTO SUPPORT.



**CONTAINMENT AREA PLAN**

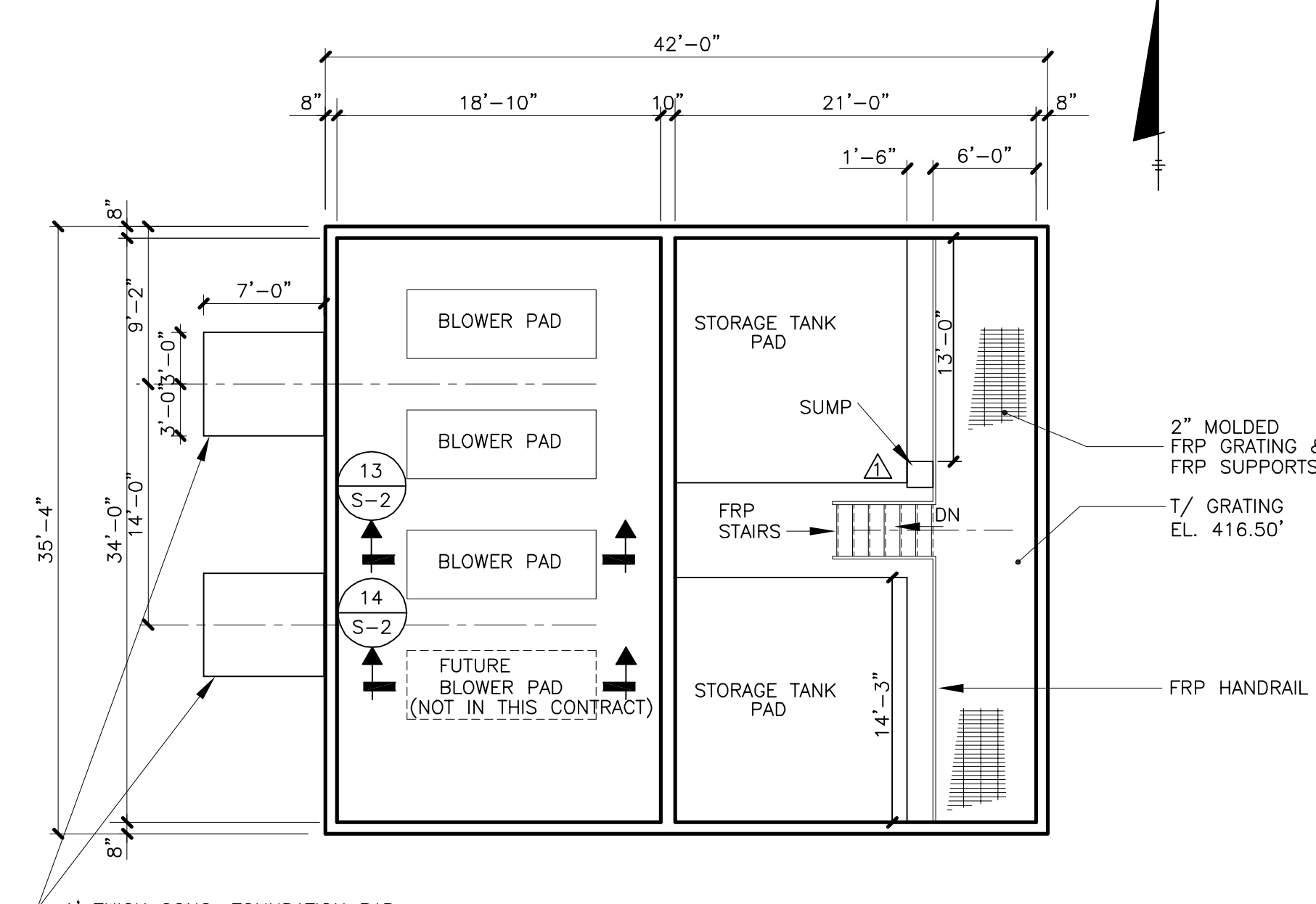
SCALE: 1/8" = 1'-0"

**NOTE:**

- 1.) CONTAINMENT AREA SLAB - 10" THICK W/ #4 AT 1'-0" E.W. T & B.

It is a violation of law for any person unless he is acting under the direction of a licensed professional engineer to alter this document.

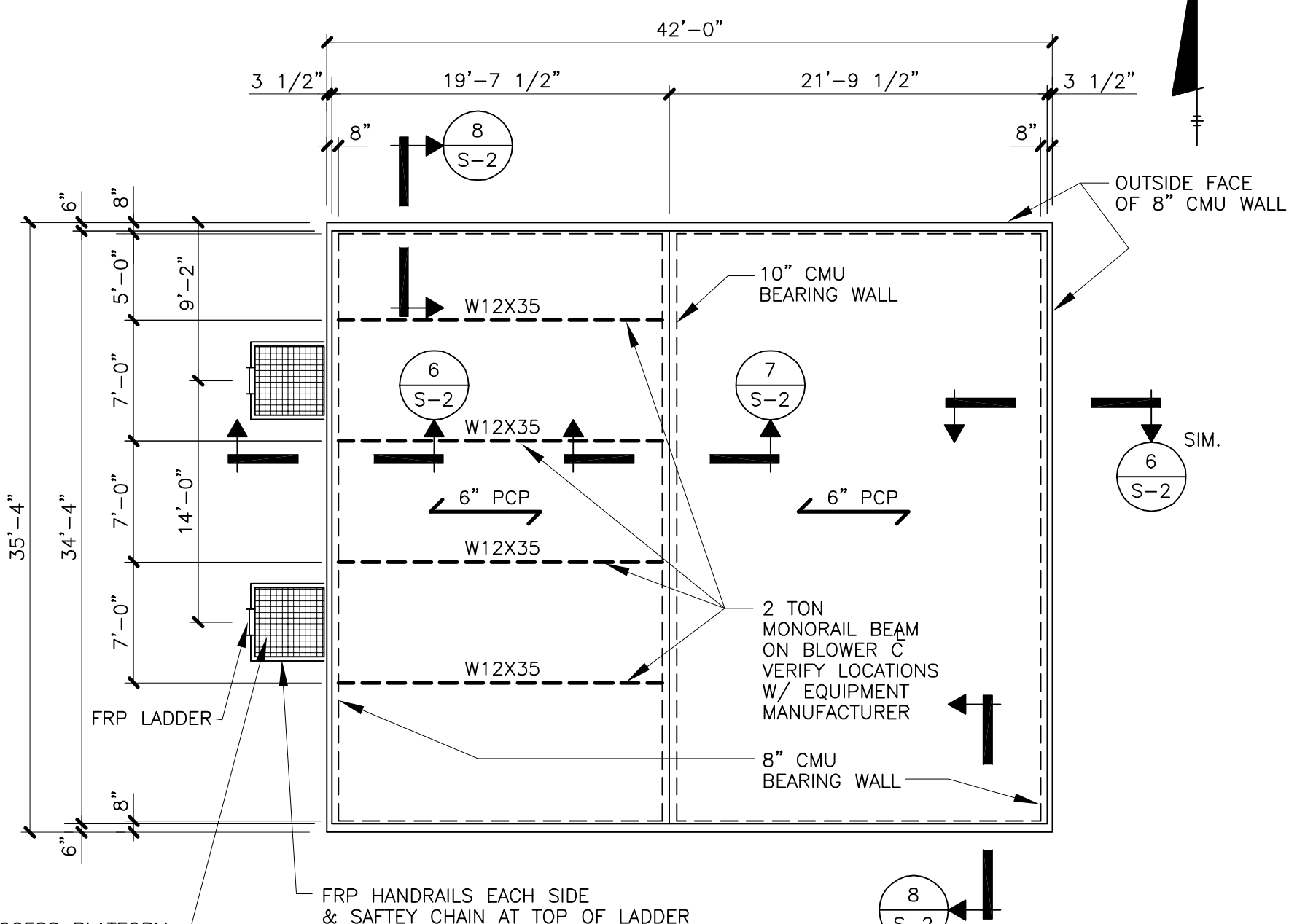
When photographic reproduction is used; the drawings are not to scale. All scales are reduced from indicated to approximately half size.



**FLOOR PLAN**

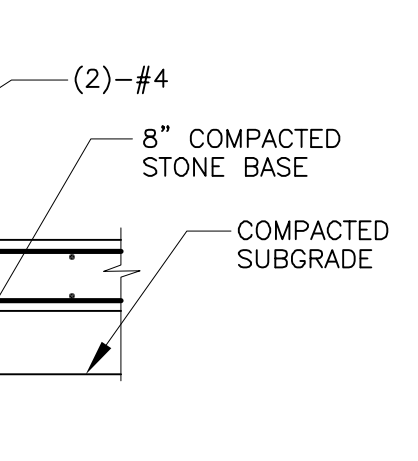
SCALE: 1/8" = 1'-0"

1" THICK CONC. FOUNDATION PAD W/ #5 E.W. T & B AND 1" THICK COMPACTED STONE BASE. 1/7" PAD EL. 416.0'



**ROOF FRAMING PLAN**

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



**CONTAINMENT CURB SECTION**

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

FOR SLAB EL. & CURB EL. SEE PLAN THIS DWG. FIN. GRADE VARIES

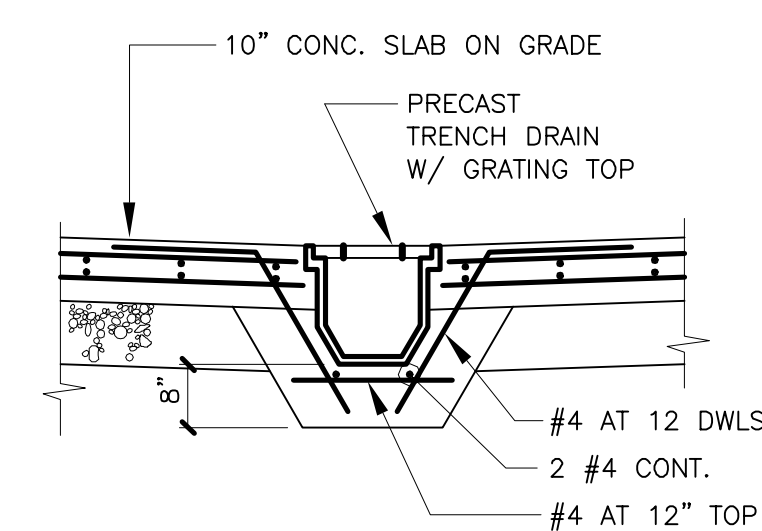
(2)-#4

8" COMPACTED STONE BASE

COMPACTED SUBGRADE

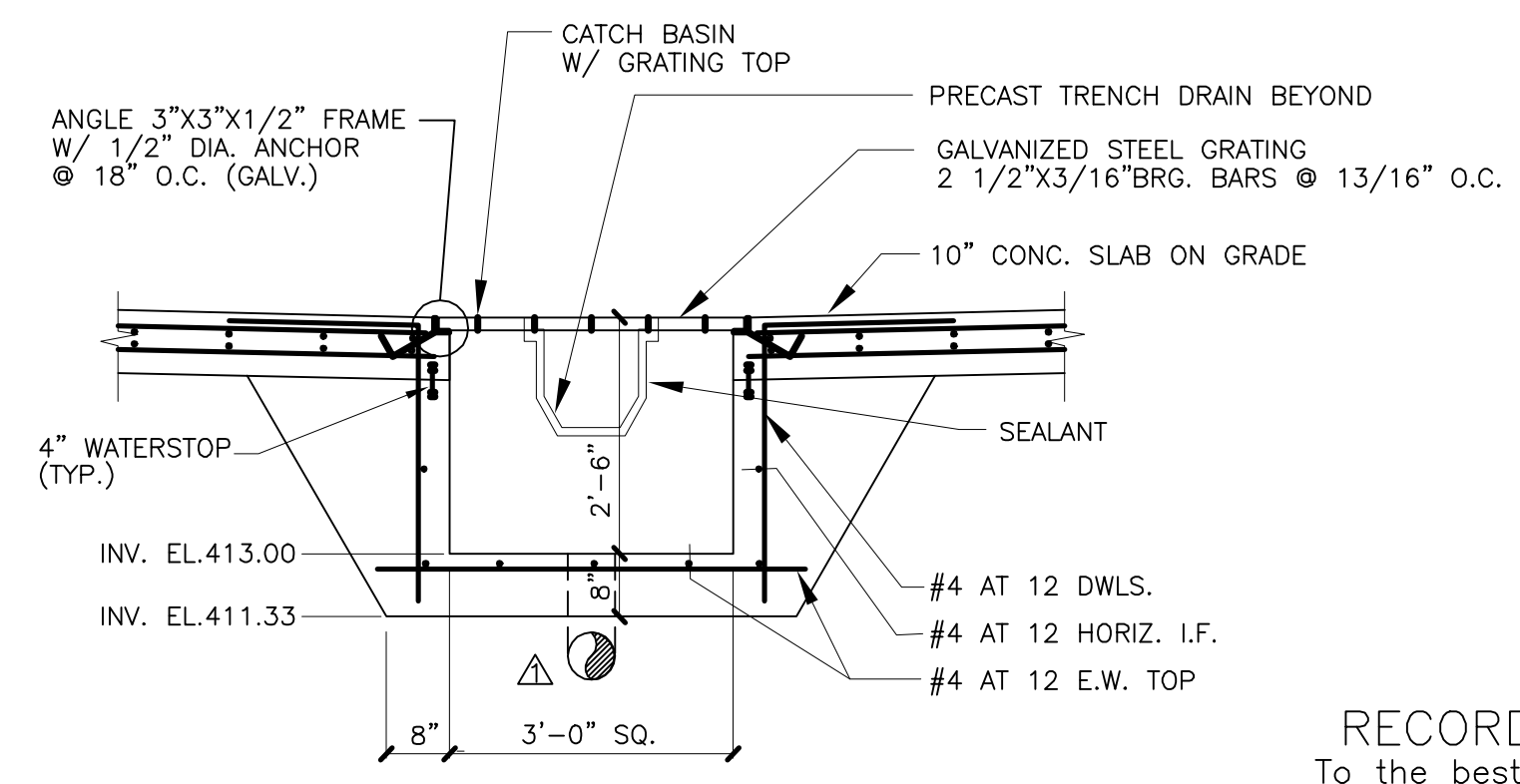
#4 DOWELS AT 1'-0" O.C.

6" WATERSTOP, TIE TO REBAR AT 24" O.C.



**TRENCH DRAIN SECTION**

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



**CATCH BASIN SECTION**

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

**STRUCTURAL GENERAL NOTES:**

THE FOLLOWING NOTES APPLY, UNLESS OTHERWISE NOTED OR SHOWN ON PLANS.

- 1.) ALL SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE TYPICAL. USE SIMILAR CONSTRUCTION AT LOCATIONS NOT SPECIFICALLY DETAILED.
- 2.) VERIFY AND COORDINATE DIMENSIONS ON THE STRUCTURAL DRAWINGS WITH WHAT IS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS.
- 3.) DESIGN LIVE LOADS:  
WIND 15 P.S.F.  
ROOF SUPERIMPOSED 65 P.S.F.  
GRATINGS & SUPPORTS 100 P.S.F.  
BLOWER ROOM FLOOR 200 P.S.F.  
CHEMICAL STORAGE ROOM FLOOR 100 P.S.F.  
STORAGE TANKS 500 P.S.F.  
SLUDGE THICKENER BLDG. FLOOR 150 P.S.F.

**FOUNDATION NOTES:**

- 1.) FOUNDATION DESIGN IS BASE ON AN ALLOWABLE DESIGN VALUE OF:  
SINGLE PILE 15 TONS  
2 PILE GROUP 28 TONS
- 2.) SEE FOUNDATION PLAN FOR PILE TYPE, LOCATIONS & PILE CUTOFF ELEVATION.

**CONCRETE NOTES:**

- 1.) FOLLOW A.C.I. 301 FOR CONCRETE WORK.  
FOLLOW A.C.I. 315 FOR CONCRETE REINFORCING & ACCESSORIES.
- 2.) MINIMUM 28-DAY CONCRETE COMPRESSIVE STRENGTH: 4,000 P.S.I.
- 3.) CHAMFER EXPOSED CORNERS OF CONCRETE 3/4".
- 4.) CONCRETE REINFORCING SHALL BE DEFORMED BARS, A.S.T.M. DESIGNATION A-615, GRADE 60.
- 5.) CAST IN PLACE CONCRETE COVER FOR REINFORCING U.O.N. ON DETAILS:  
CONCRETE CAST AGAINST EARTH ..... 3"  
WALLS ..... 2"
- 6.) IN ANY APPROVED CONSTRUCTION JOINT, PROVIDE A SHEAR KEY 1 1/2" DEEP x 1/3 THE JOINT WIDTH, AND A 32 BAR DIAMETER (16" MIN) LAP OF REINFORCING.
- 7.) CAST INTO THE CONCRETE ALL ACCESSORIES REQUIRED BY ARCHITECTURAL FINISHES, AND MECHANICAL EQUIPMENT. COORDINATE DIMENSIONS WITH ARCHITECTURAL & MECHANICAL DRAWINGS.
- 8.) AT WALL OPENINGS PROVIDE A MINIMUM OF 2 #6 BARS ABOVE OPENING AND 1 #4 x 3'-0" E.F. DIAGONAL AT CORNERS OF OPENING.

**MASONRY NOTES:**

- 1.) C.M.U. MINIMUM COMPRESSIVE STRENGTH  $f_m = 1,500$  P.S.I.
- 2.) PROVIDE #9 GAUGE WIRE MIN. HORIZONTAL TRUSS TYPE WALL REINFORCING AT 16" O.C. FOR WALLS.  
ADD HORIZONTAL REINFORCING AT TWO COURSES ABOVE AND BELOW OPENINGS EXTENDING 2'-0" BEYOND EDGES OF OPENINGS.
- 3.) VERTICAL REBAR & DOWELS IN SAME GROUTED CELL.

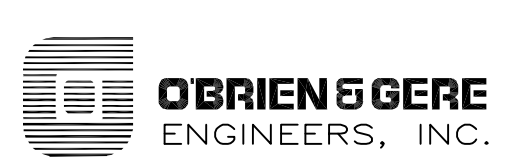
**STEEL NOTES:**

- 1.) DESIGN, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH A.I.S.C. STANDARD SPECIFICATIONS, AND CODE OF STANDARD PRACTICE.
- 2.) STRUCTURAL STEEL SHALL BE A.S.T.M. A36.
- 3.) PROVIDE STRUCTURAL STEEL SHOWN IN ARCHITECTURAL & MECHANICAL DRAWINGS.
- 4.) WELDING SHALL BE PERFORMED BY WORKERS CERTIFIED BY THE A.W.S.

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of.....	1/4"=1'-0"	0 2 4 6 8 10
Designed by.....Checked by.....	1/8"=1'-0"	0 4 8 16
Drawn by.....	1/2"=1'-0"	0 1 2 3 4 5

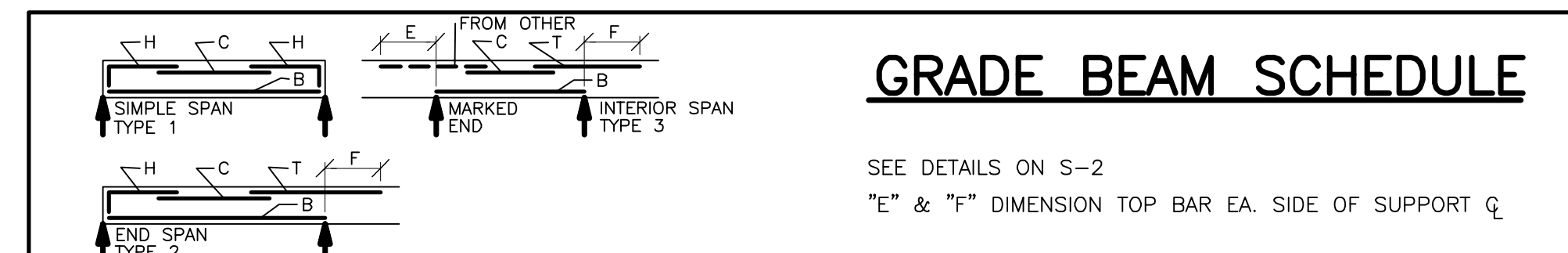
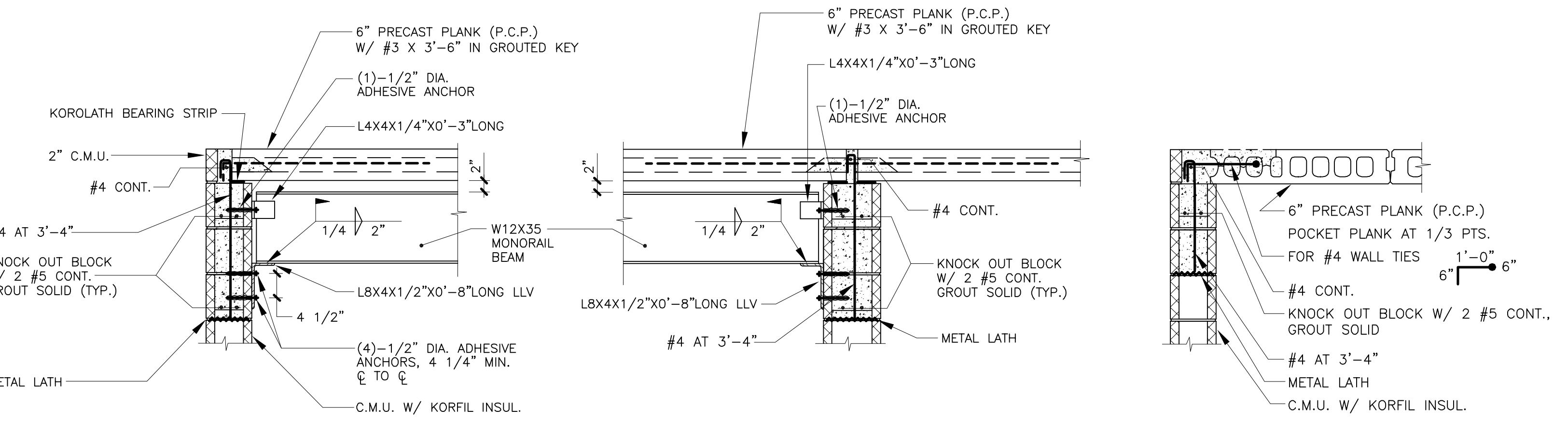
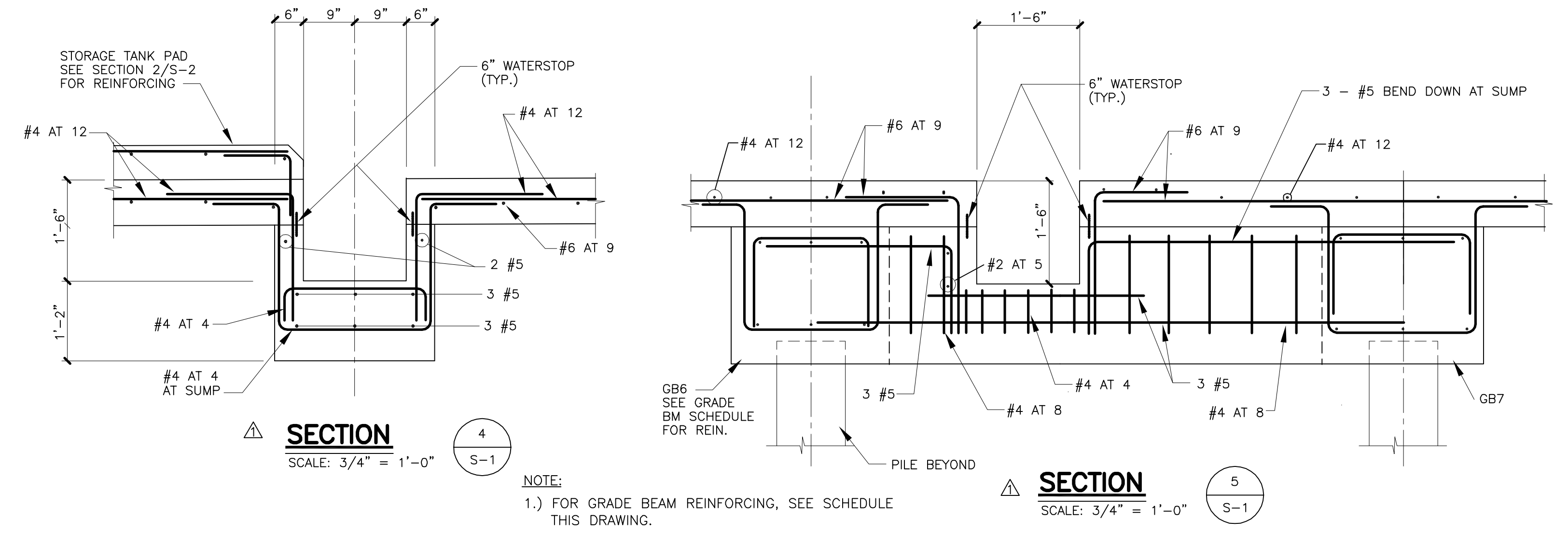
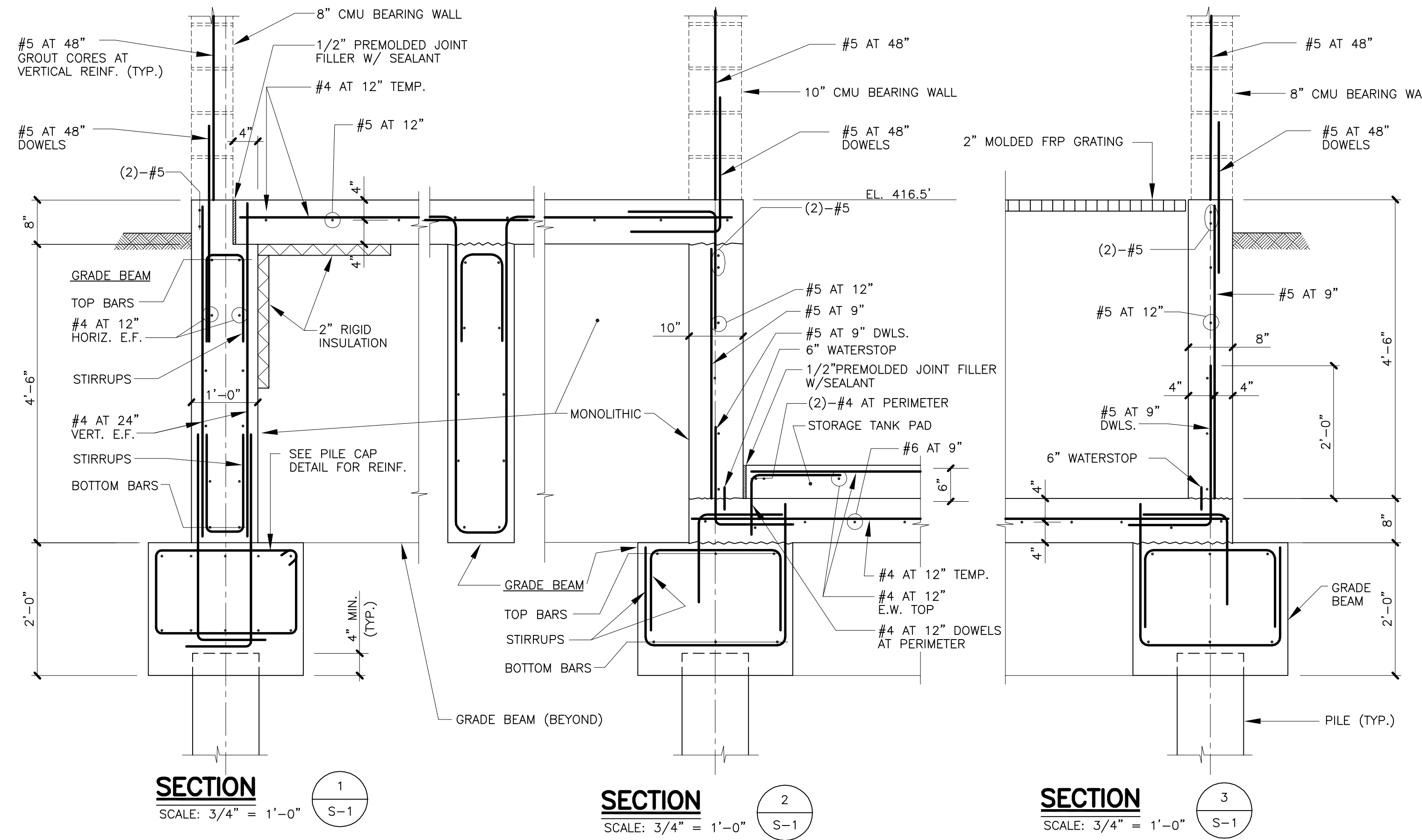
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	RELOCATED SUMP & GENERAL REV.	



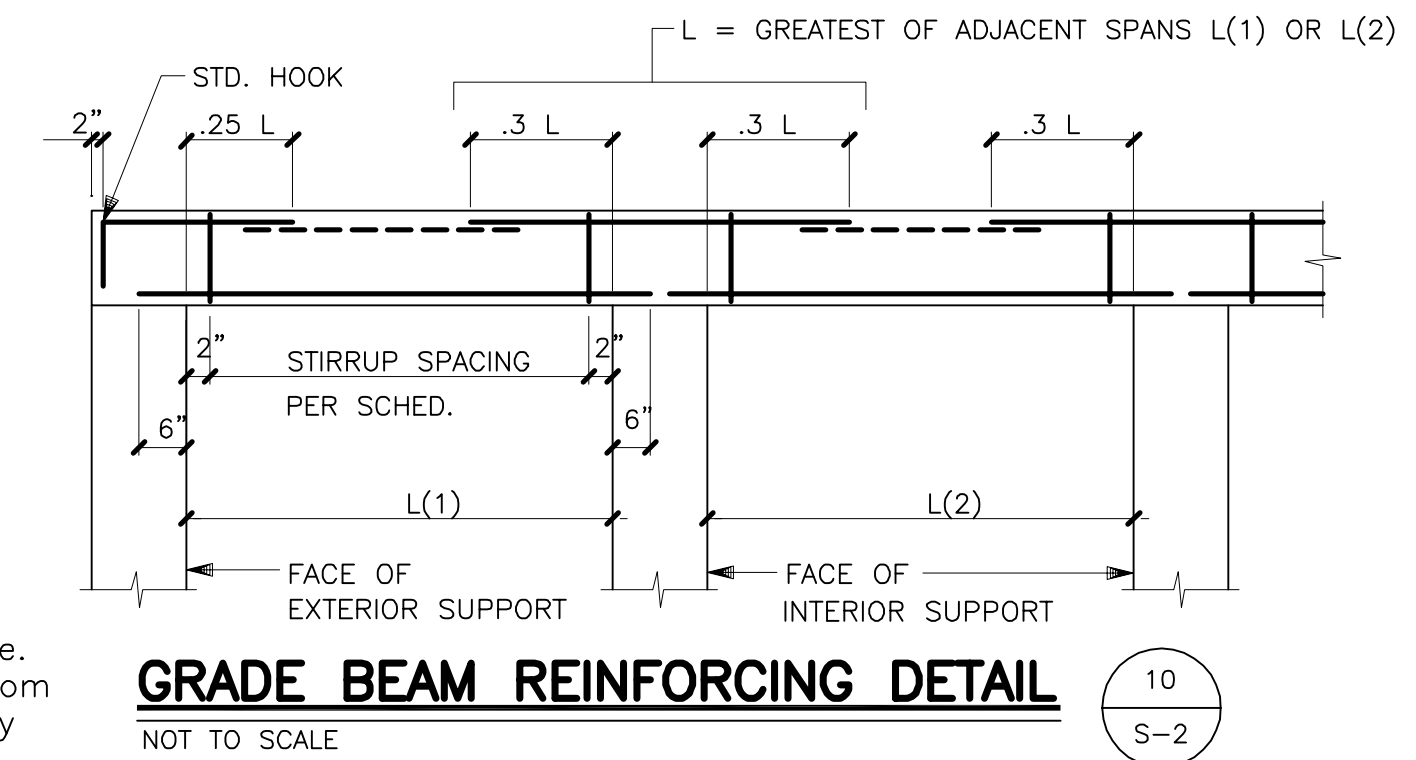
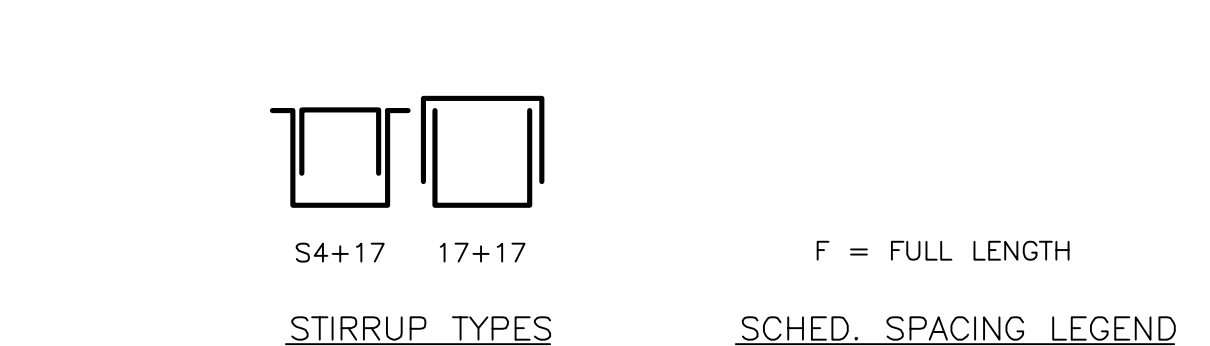
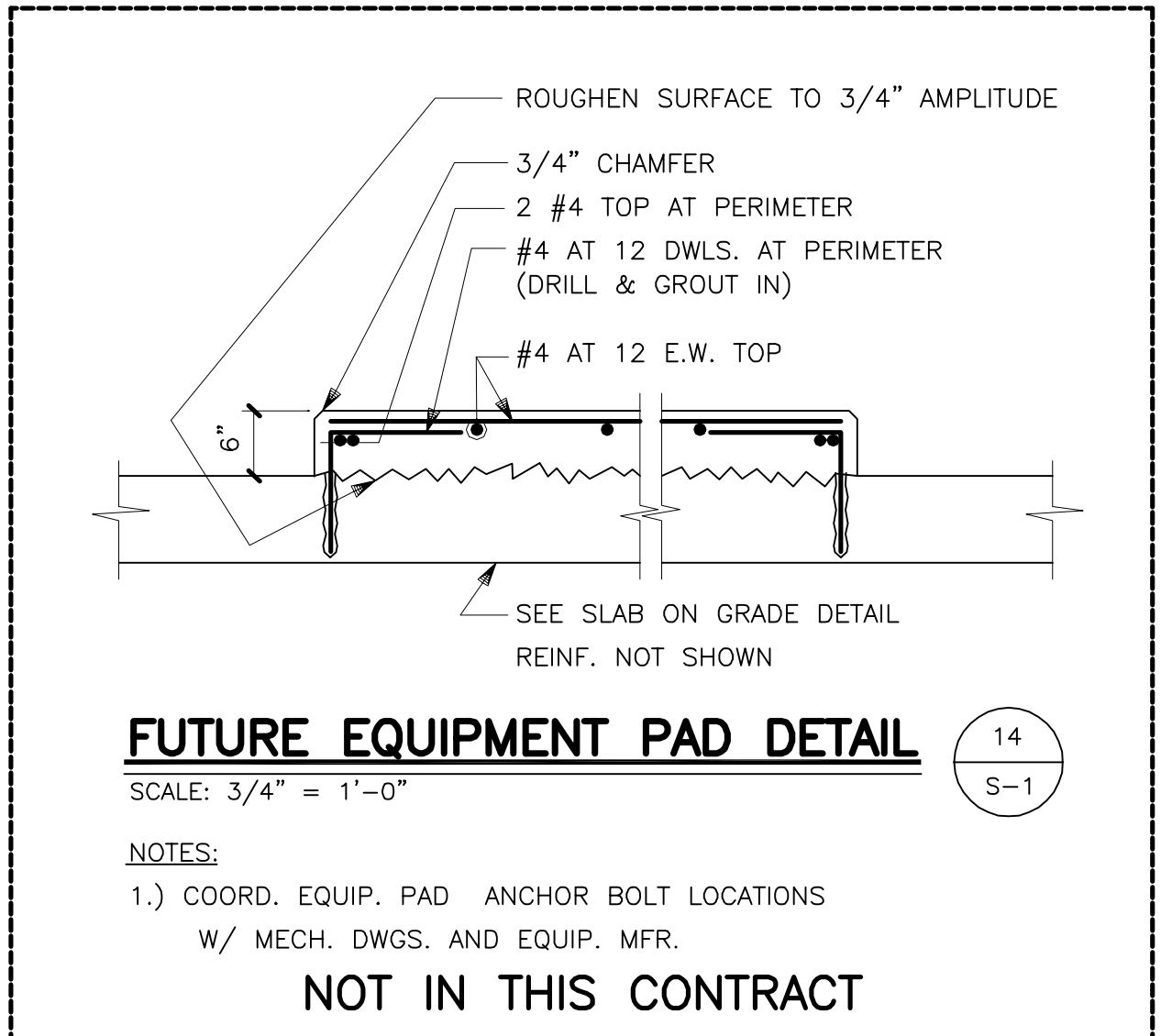
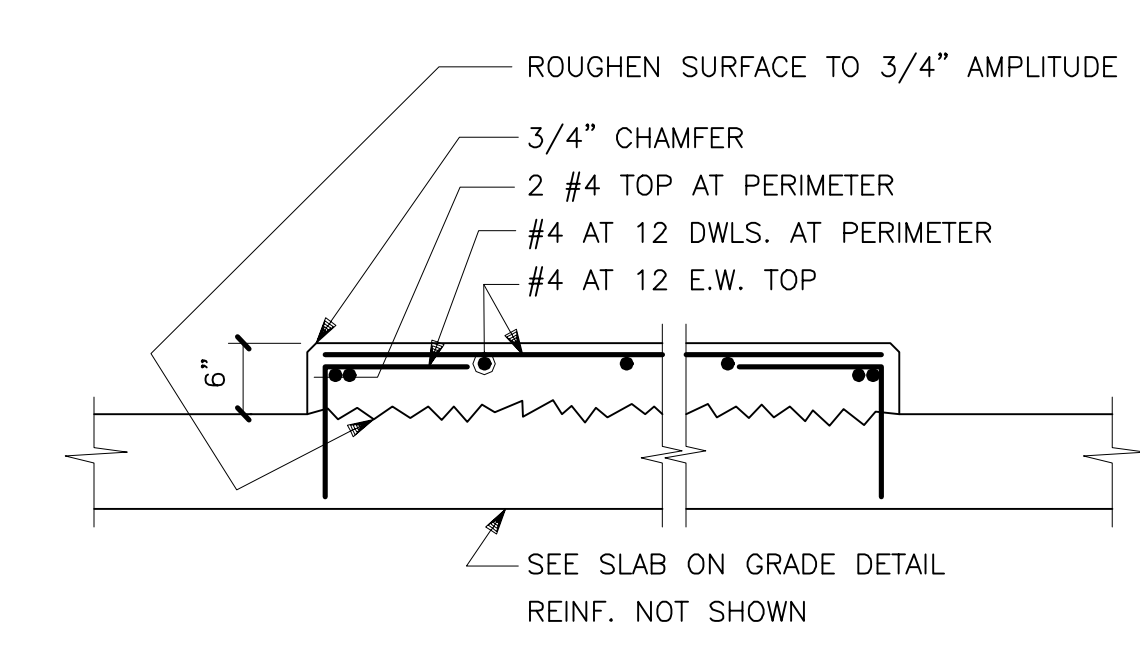
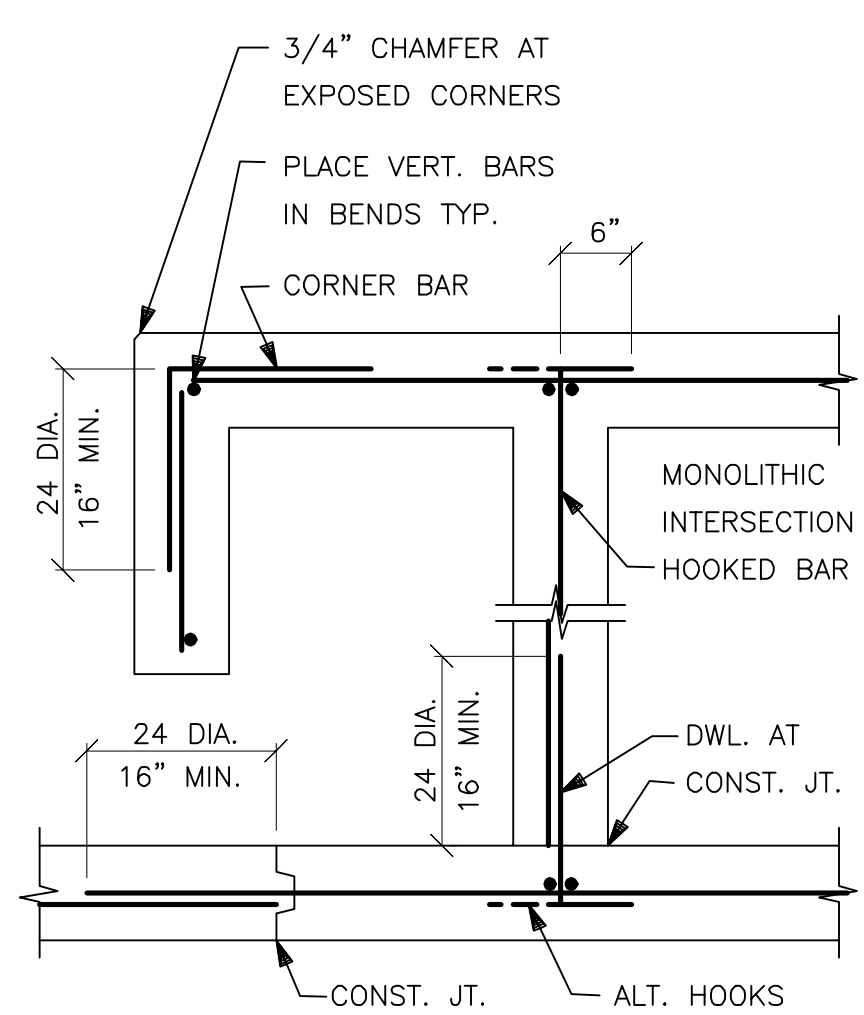
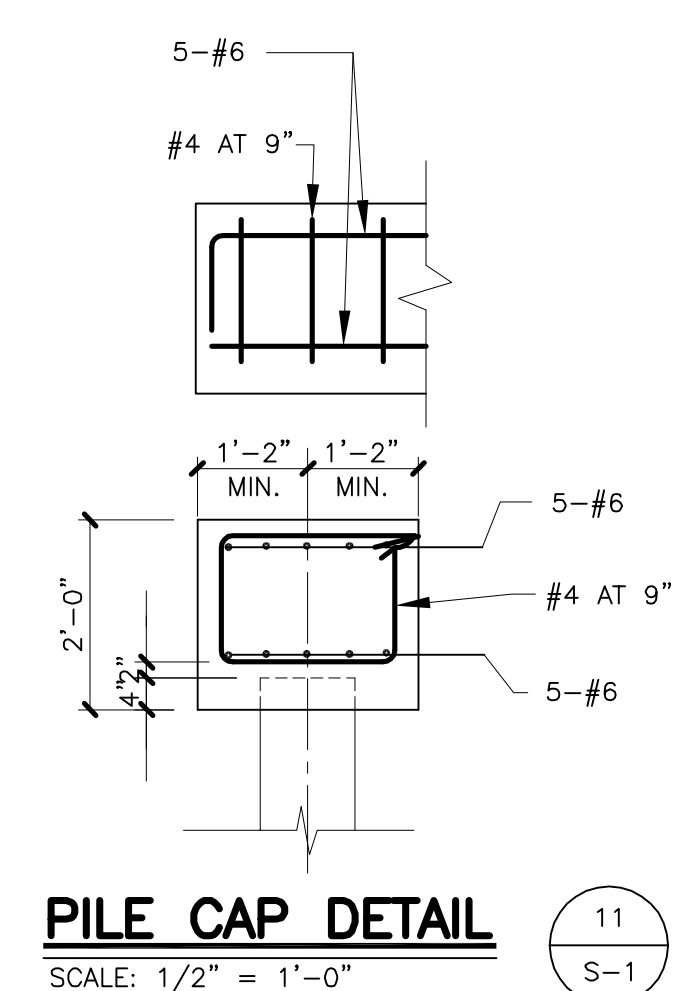
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

STRUCTURAL  
CHEMICAL STORAGE/BLOWER BUILDING  
PLANS, SECTIONS & NOTES

FILE NO.	115.643-12RD	S-1
DATE	JUNE 1993	R-2



MARK	SIZE		REINFORCING				E	F	TYPE	SECTION		STIRRUPS		REMARKS	
	WIDTH	DEPTH	B	T	C	H				℄	℄	SIZE	SPACING		TYPE
GB1	12"	54"	(2)-#5	-	-	(2)-#5	-	-	2			#4	F AT 24"	17+17	-
GB2	12"	54"	(2)-#5	-	-	(2)-#5	-	-	2			#4	F AT 24"	17+17	-
GB3	12"	54"	(2)-#5	-	-	(2)-#5	-	-	2			#4	F AT 24"	S4+17	-
GB4	12"	54"	(2)-#5	-	-	(2)-#5	-	-	2			#4	F AT 24"	S4+17	-
GB5	28"	24"	(3)-#5	-	-	(3)-#5	-	-	2			#4	F AT 8"	17+17	-
GB6	28"	24"	(3)-#5	-	-	(3)-#5	-	-	3			#4	F AT 8"	S4+17	-
GB7	28"	24"	(3)-#5	-	-	(3)-#5	-	-	1			#4	F AT 8"	S4+17	-
GB8	12"	52"	(2)-#5	-	-	(2)-#5	-	-	2			#4	F AT 24"	17+17	-
GB9	12"	52"	(2)-#5	-	-	(2)-#5	-	-	3			#4	F AT 24"	17+17	-
GB10	28"	24"	(3)-#5	-	-	(3)-#5	-	-	2			#4	F AT 8"	17+17	-
GB11	28"	24"	(3)-#5	-	-	(3)-#5	-	-	2			#4	F AT 8"	17+17	-



**NOTES:**  
 1.) CORNER, INTERSECTION, AND END WALL REINF. SHALL BE SAME SIZE AND SPACING AS HORIZ. REINF.  
 2.) REINF SHOWN IS A MINIMUM FOR ALL BLDG. WALLS. INSTALL ADDITIONAL REINF WHERE NOTED ON DWGS  
 3.) STAGGER WALL & FTG. CONST. JTS. 4'-0" MIN. WALL PLACEMENTS SHALL NOT EXCEED 60' IN LENGTH

**NOTES:**  
 1.) COORD. EQUIP. PAD ANCHOR BOLT LOCATIONS W/ MECH. DWGS. AND EQUIP. MFR.

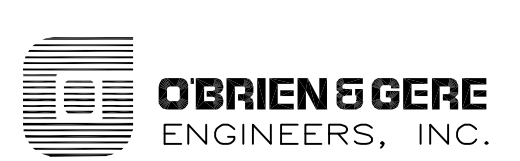
**NOTES:**  
 1.) COORD. EQUIP. PAD ANCHOR BOLT LOCATIONS W/ MECH. DWGS. AND EQUIP. MFR.

**RECORD DRAWINGS**  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

In charge of \_\_\_\_\_  
 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_

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

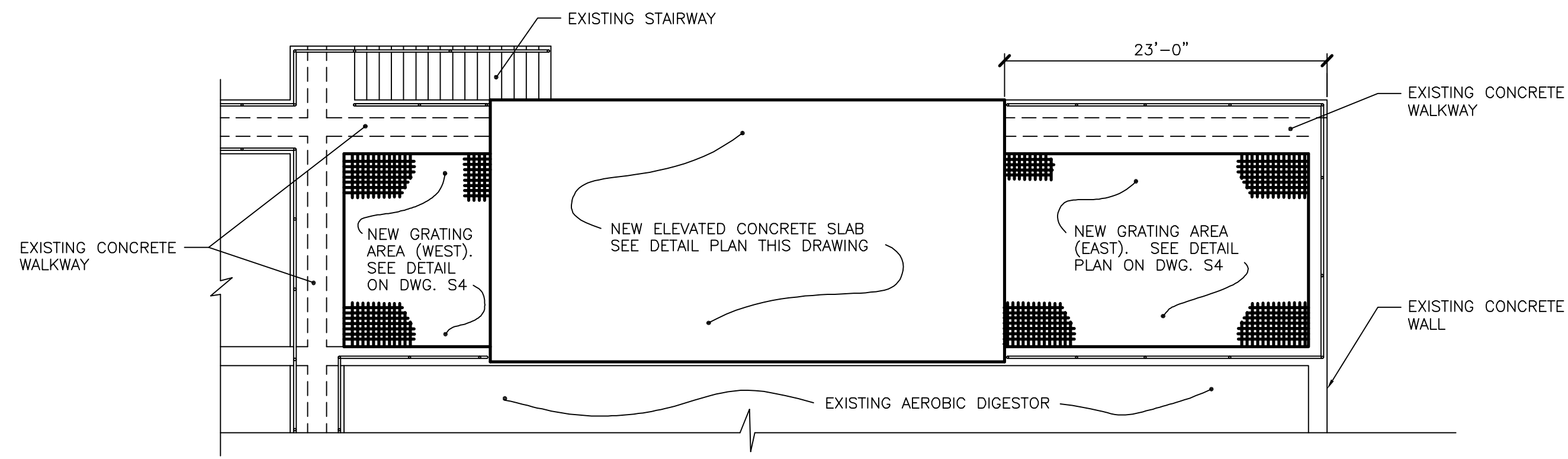
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

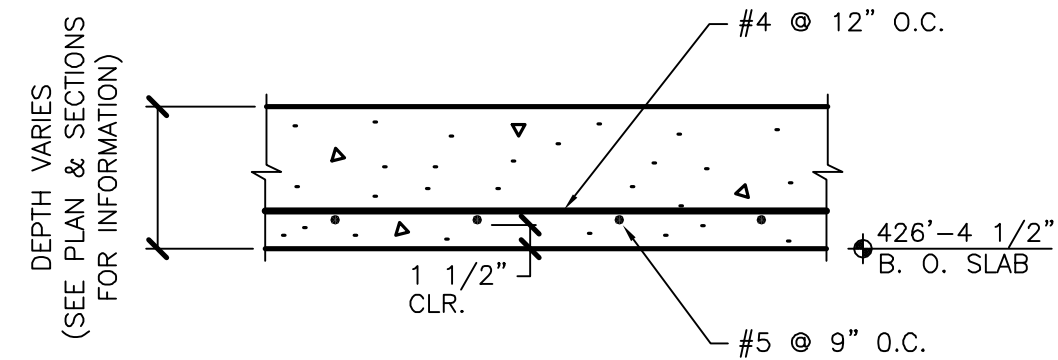
STRUCTURAL  
 CHEMICAL STORAGE/BLOWER BUILDING  
 SECTIONS, DETAILS & SCHEDULE

FILE NO. 115.643-13RD  
 DATE JUNE 1993  
 S-2  
 R-2



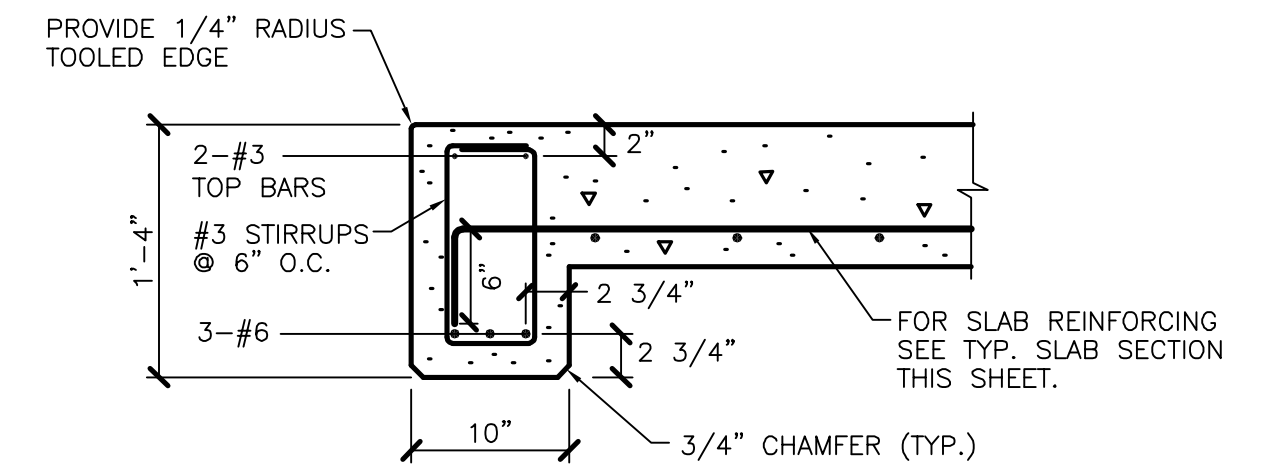
**LOCATION PLAN**

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



**TYP. SLAB SECTION**

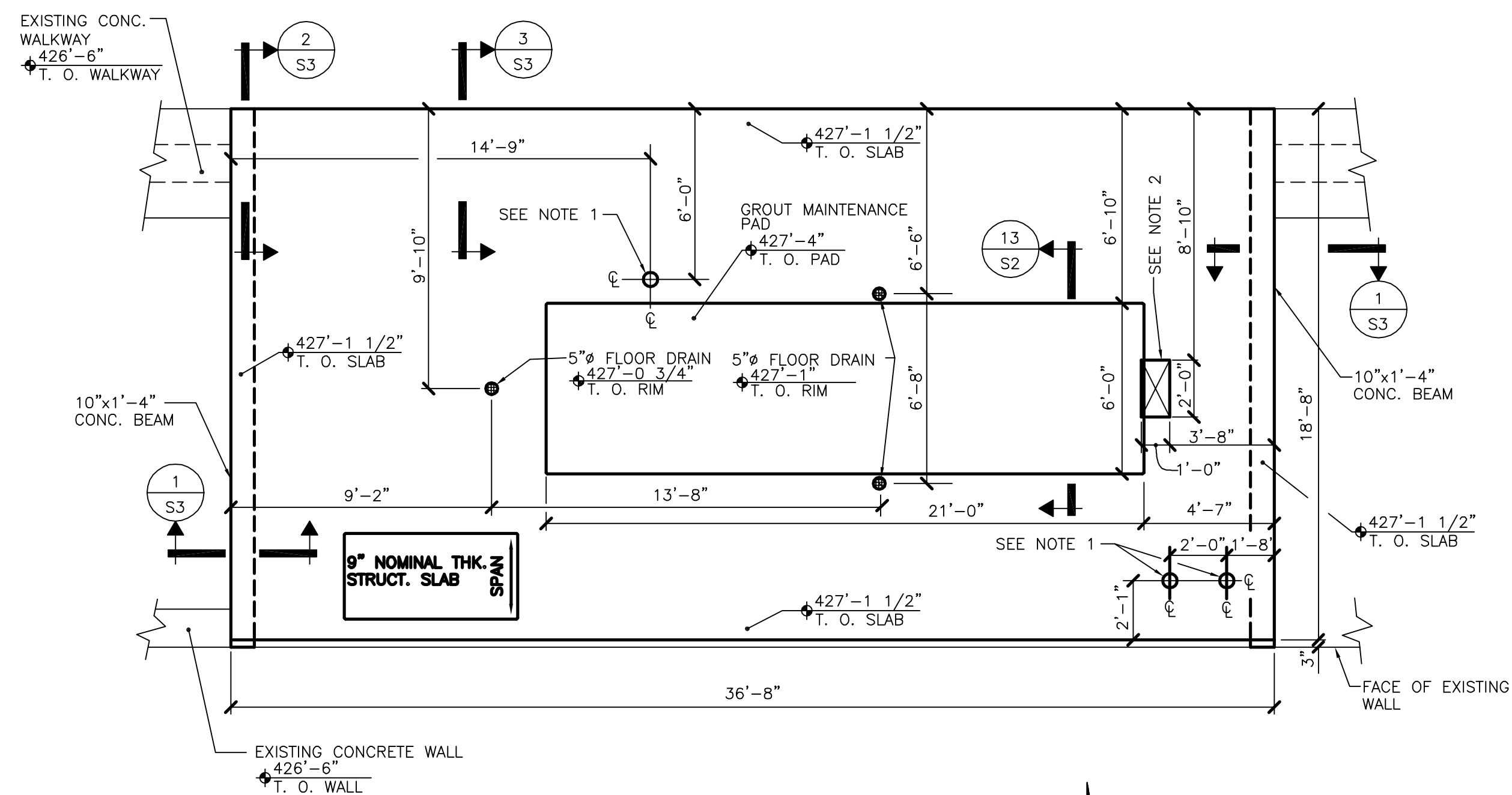
SCALE: 1"=1'-0"



**SECTION 1**

SCALE: 1"=1'-0"

NOTE: REFERENCE DRAWING A3 FOR LOCATION AND SIZING OF #4 DOWELS PLACED IN TOP PORTION OF CONCRETE BEAM FOR BLOCK WALL ANCHORAGE



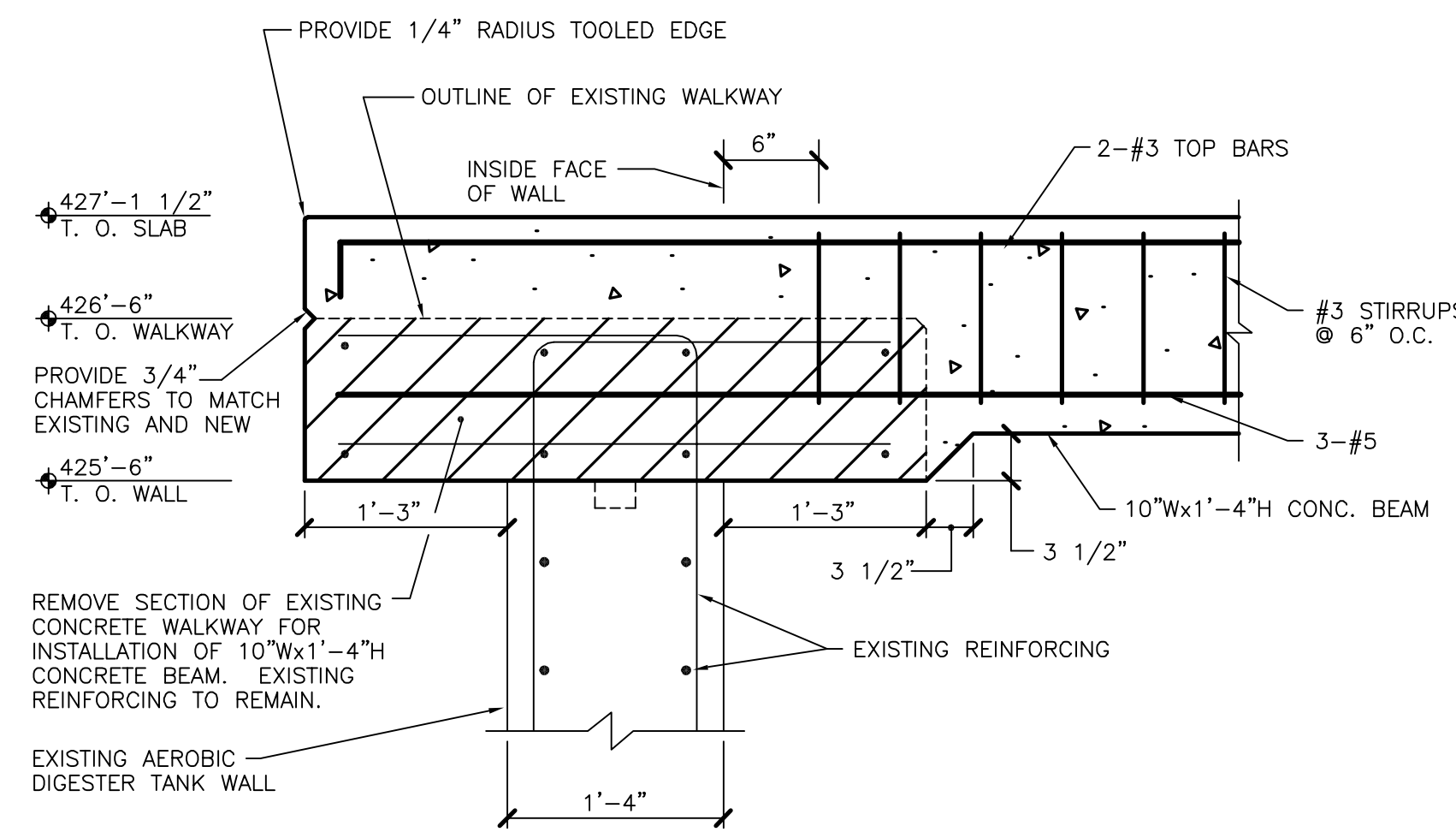
**ELEV. CONCRETE SLAB DETAIL PLAN**

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

- NOTES:
- 6" PIPE PENETRATION. SEE DETAIL (A) FOR ADDITIONAL REINFORCING REQUIRED AT PENETRATION. PROVIDE STAINLESS STEEL FLOOR SLEEVE WITH INTEGRAL WATERSTOP/ANCHORING RING AND RUBBER LINK SEALS AS MANUFACTURED BY THUNDERLINE OR APPROVED EQUAL. COORDINATE WITH CONTRACT No. X FOR SIZING. COORDINATE LOCATION OF PENETRATION WITH EQUIPMENT MANUFACTURER.
  - 2'-0"x1'-0" SLAB PENETRATION. SEE DETAIL (B) FOR ADDITIONAL REINFORCING REQUIRED AT PENETRATION. CONTRACTOR TO COORDINATE LOCATION OF PENETRATION WITH EQUIPMENT MANUFACTURER.

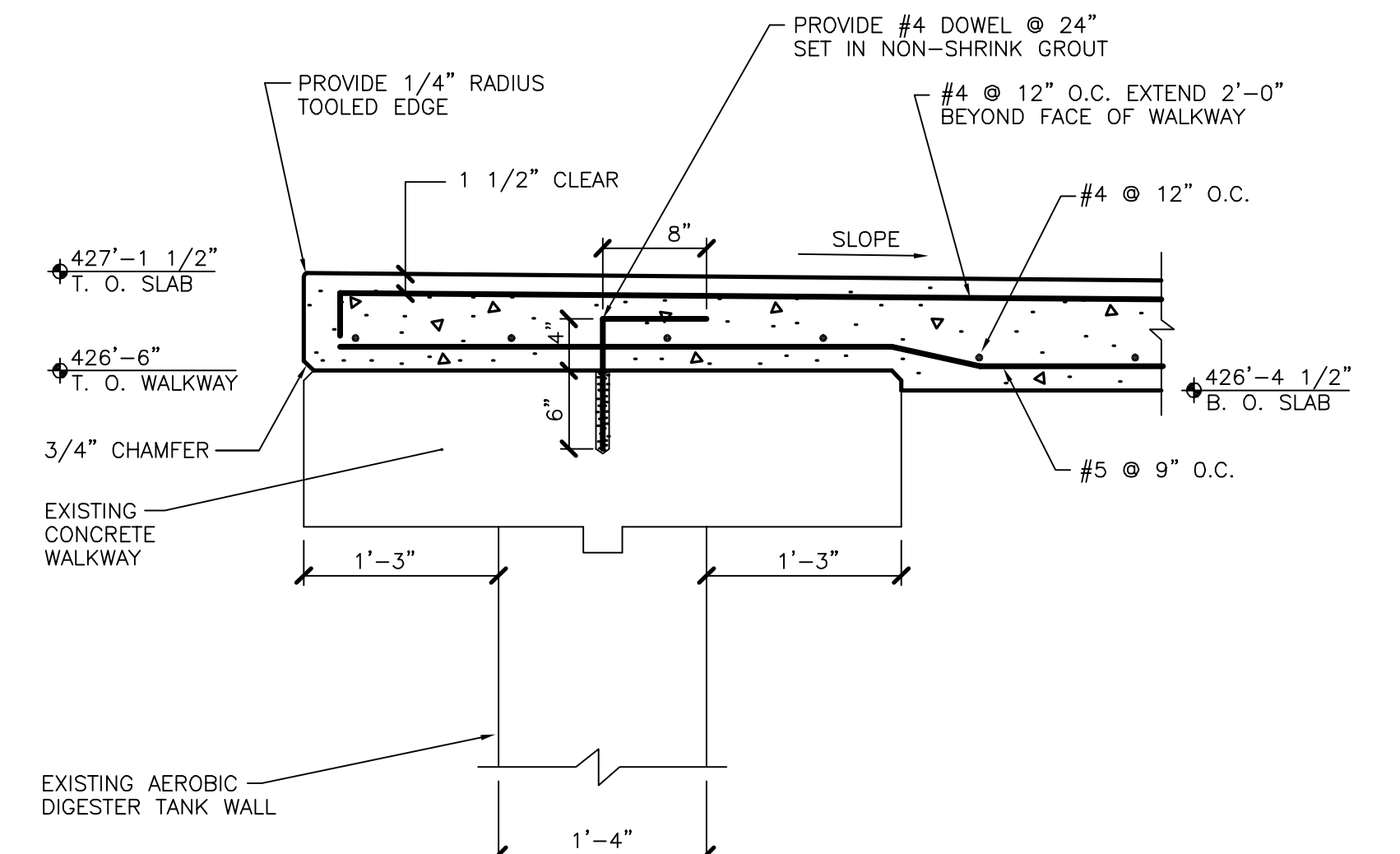
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**SECTION 2**

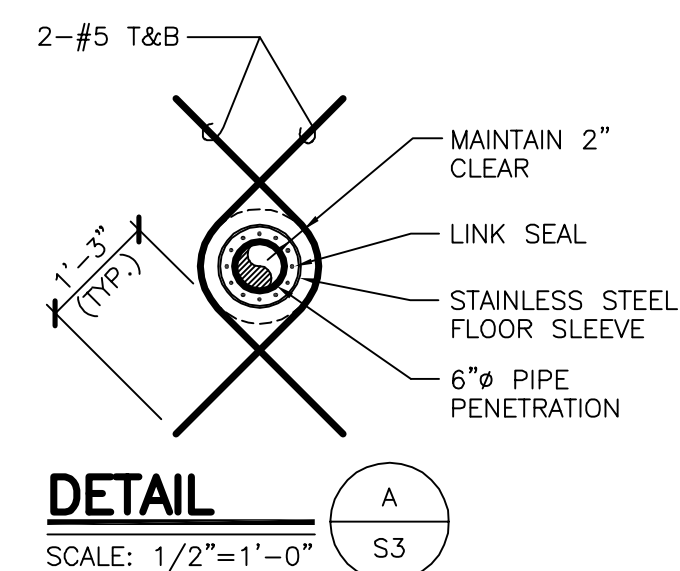
SCALE: 1"=1'-0"



**SECTION 3**

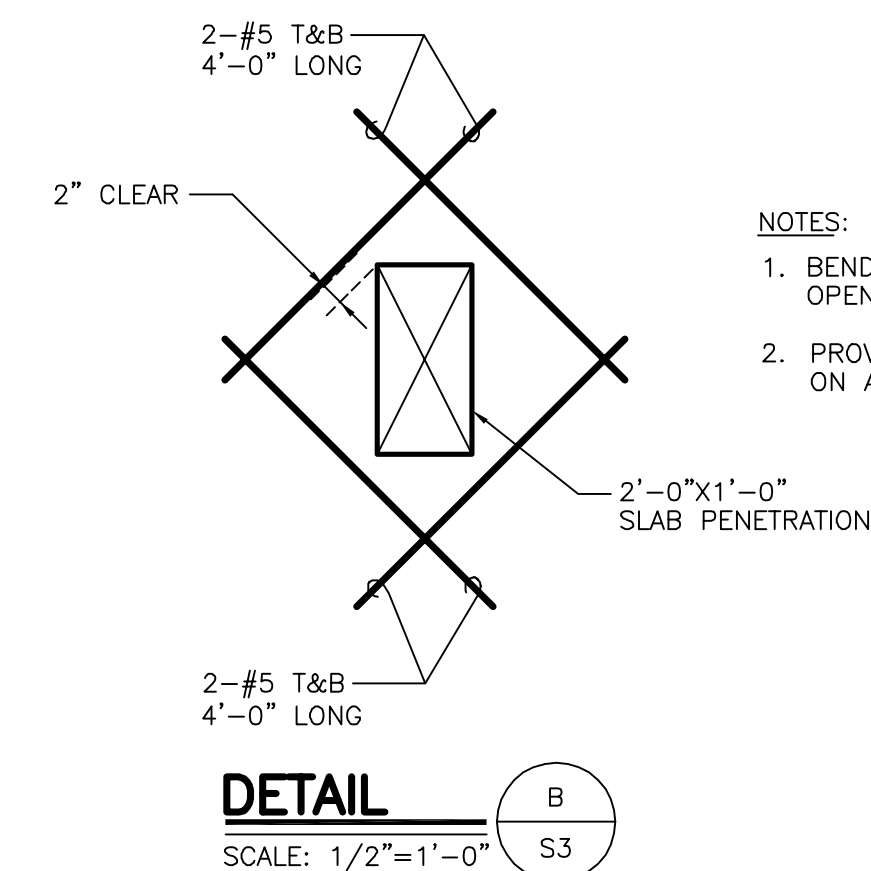
SCALE: 1"=1'-0"

NOTE: REFERENCE DRAWING A3 FOR LOCATION AND SIZING OF #4 DOWELS PLACED IN OUTER PORTION OF CONCRETE SLAB FOR BLOCK WALL ANCHORAGE



**DETAIL A**

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



**DETAIL B**

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

- NOTES:
- BEND NORMAL REINFORCING AROUND OPENING. DO NOT CUT OR OMIT
  - PROVIDE 1/4" RADIUS TOOLED EDGE ON ALL PENETRATION EDGES

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

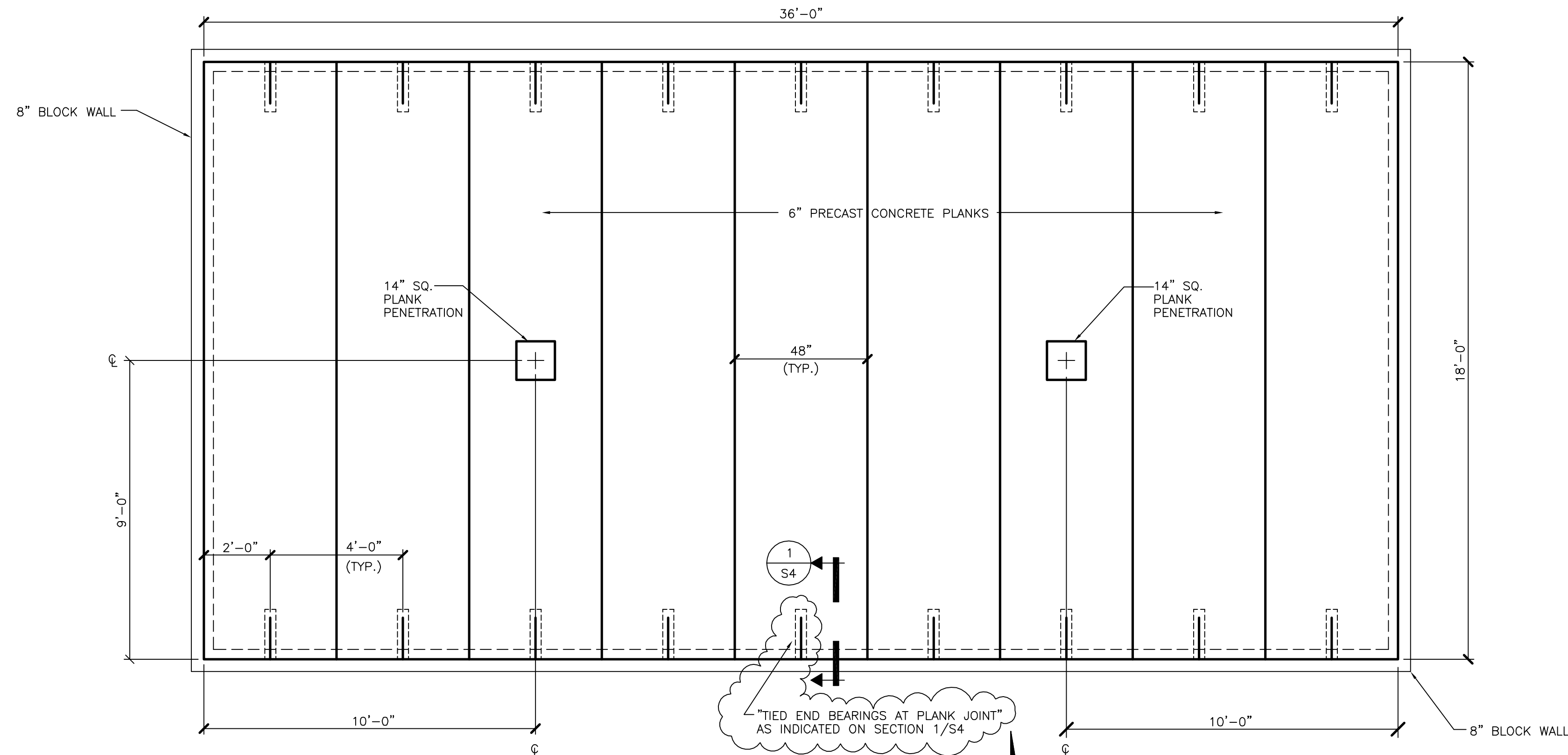
In charge of.....	1/8"=1'-0"	8 4 0 8 16			
Designed by.....Checked by.....	1/4"=1'-0"	2 0 2 4 6 8 10			
Drawn by.....	1"=1'-0"	1 6 0 1 2	0	2/9/96	RECORD DRAWINGS
			NO.	DATE	REVISION
					INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

STRUCTURAL  
SLUDGE THICKENER BUILDING  
FLOOR PLANS AND SECTIONS

FILE NO.	115.643-14RD	S-3
DATE	JUNE 1993	R-0

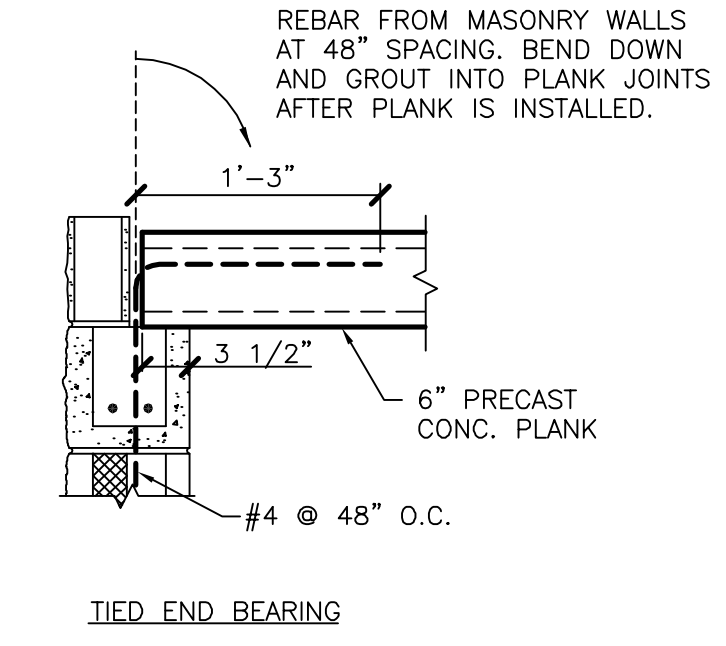


**NOTES:**

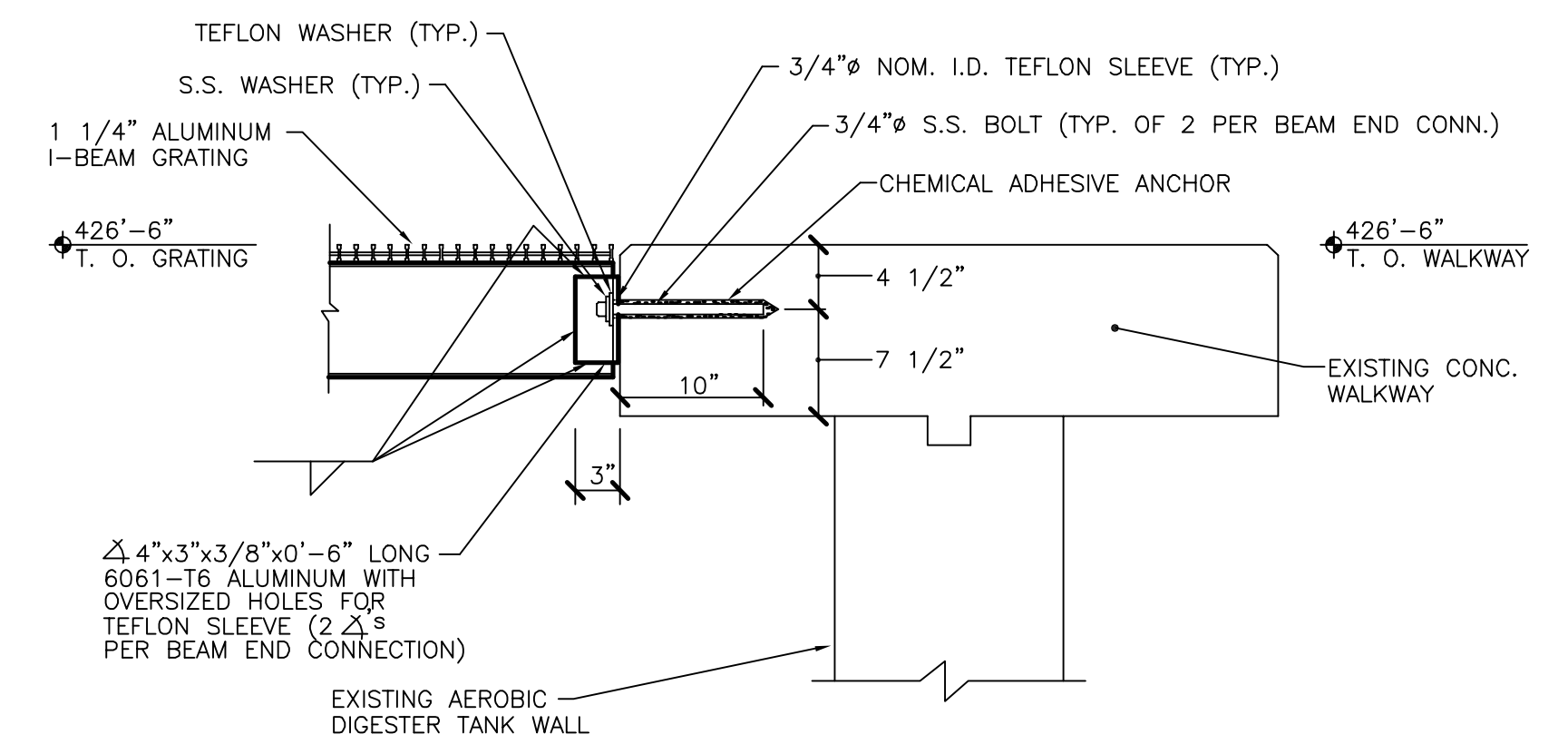
1. PRECAST PRESTRESSED CONCRETE PLANKS SHALL BE 6" THICK. EACH 48" WIDE CONCRETE PLANK SHALL HAVE AN ALLOWABLE SUPERIMPOSED LOAD OF 75 PSF, BASED ON AN 18' SPAN (LOAD IN EXCESS OF PLANK WEIGHT).

**ROOF PLAN**

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



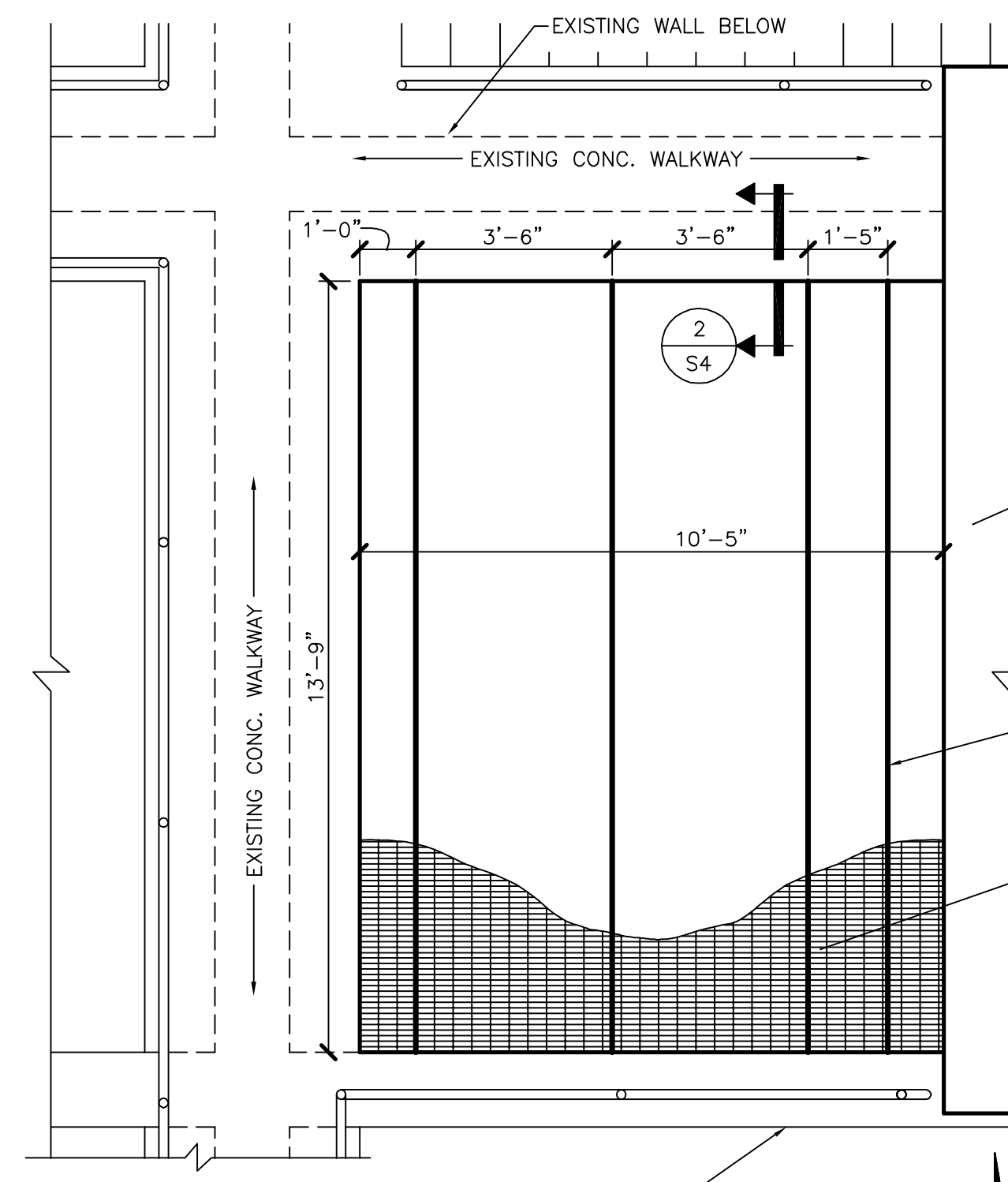
**SECTION 1**  
SCALE: 1"=1'-0"



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

**NOTES:**

1. MAXIMUM BEAM END REACTION IS 3.0 KIPS
2. ANCHORS SHALL BE CHEMICAL TYPE AND CONSIST OF A THREADED ROD, NUT, AND WASHER OF 304 STAINLESS STEEL AND SEALED GLASS CAPSULE CONTAINING A POLYESTER RESIN AND QUARTZ AGGREGATE FILLER. THE THREADED RODS MUST HAVE A MINIMUM YIELD STRESS OF 43 KSI. THE THREADED RODS SHALL BE CUT-OFF AT AN ANGLE AT ONE END TO FACILITATE MIXING OF THE COMPONENTS WITHIN THE CAPSULE DURING INSTALLATION OF THE ANCHORS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION. CHEMICAL ANCHORING SYSTEM SHALL BE "CHEMSET" AS MANUFACTURED BY RAMSET FASTENING SYSTEMS OR APPROVED EQUAL.
3. PROVIDE A MINIMUM OF 5 1/4" HORIZONTAL SPACING BETWEEN 3/4" CHEMICAL CONCRETE ANCHORS



**GRATING DETAIL PLAN (WEST)**

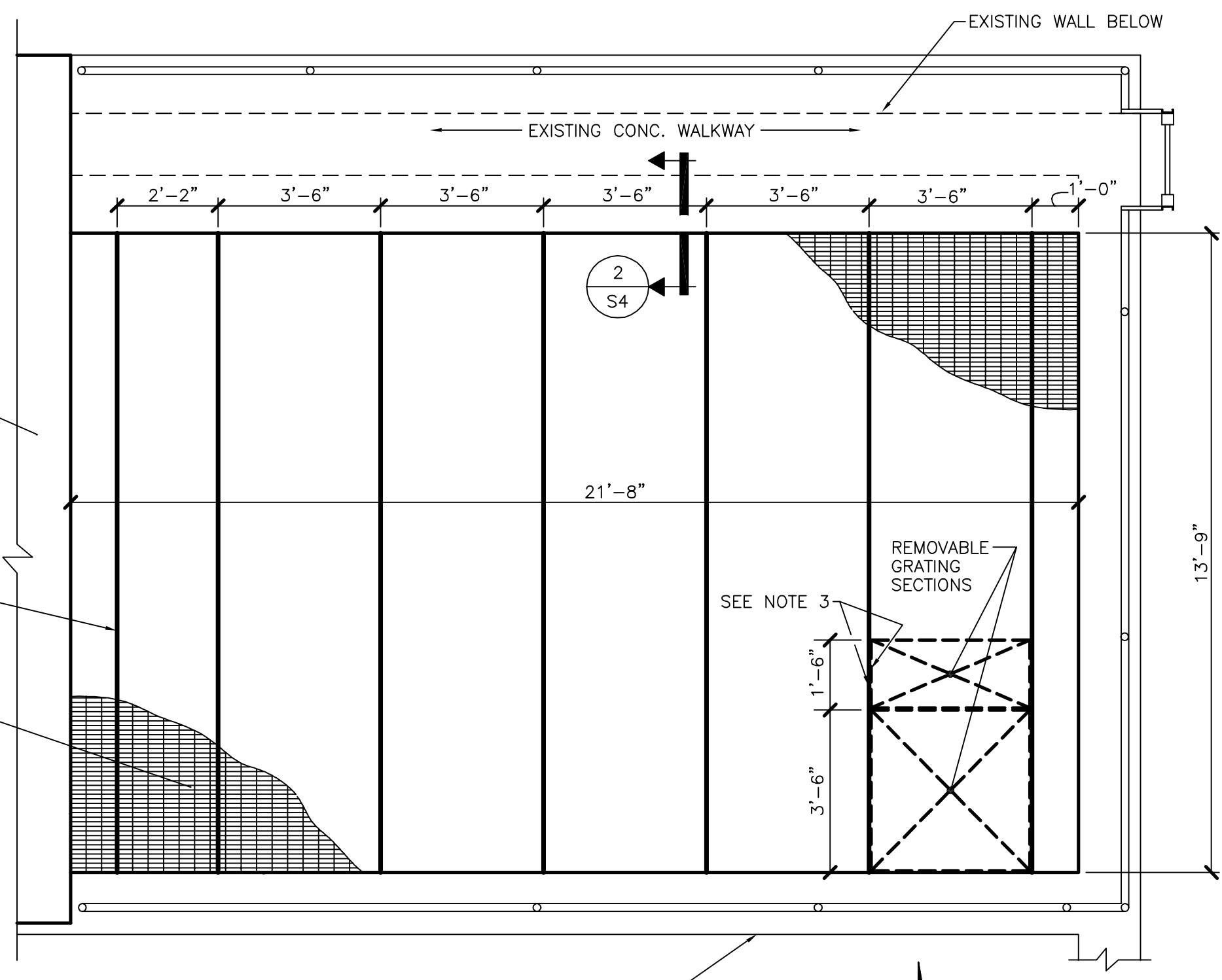
SCALE: 3/8"=1'-0"

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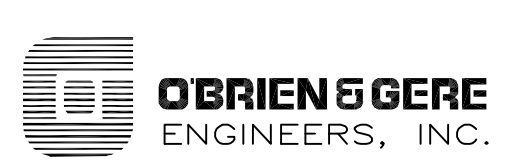
**NOTES:**

1. 8"x5 1/4" ALUMINUM I-BEAM W/ 0.230 WEB THK. 6061-T6
2. 1 1/4" I-BEAM ALUMINUM GRATING, 2.4 PSF, BEARING BARS @ 3 1/16" O.C., CROSS BARS @ 4" O.C.
3. PROVIDE WELDED EDGE BANDING AROUND ALL SIDES OF REMOVABLE GRATING SECTIONS AND SIDES OF ABUTTING OPENINGS. USE 1"x3/16" ALUMINUM BAR STOCK FOR EDGE BANDING



**GRATING DETAIL PLAN (EAST)**

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



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

STRUCTURAL  
SLUDGE THICKENER BUILDING  
ROOF PLANS AND SECTIONS

FILE NO.	115.643-15RD	S-4
DATE	JUNE 1993	R-1

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of.....	3/8"=1'-0"	1 0 1 2 3 4 5 6 7
Designed by.....Checked by.....	1"=1'-0"	1 6 0 1 2
Drawn by.....		

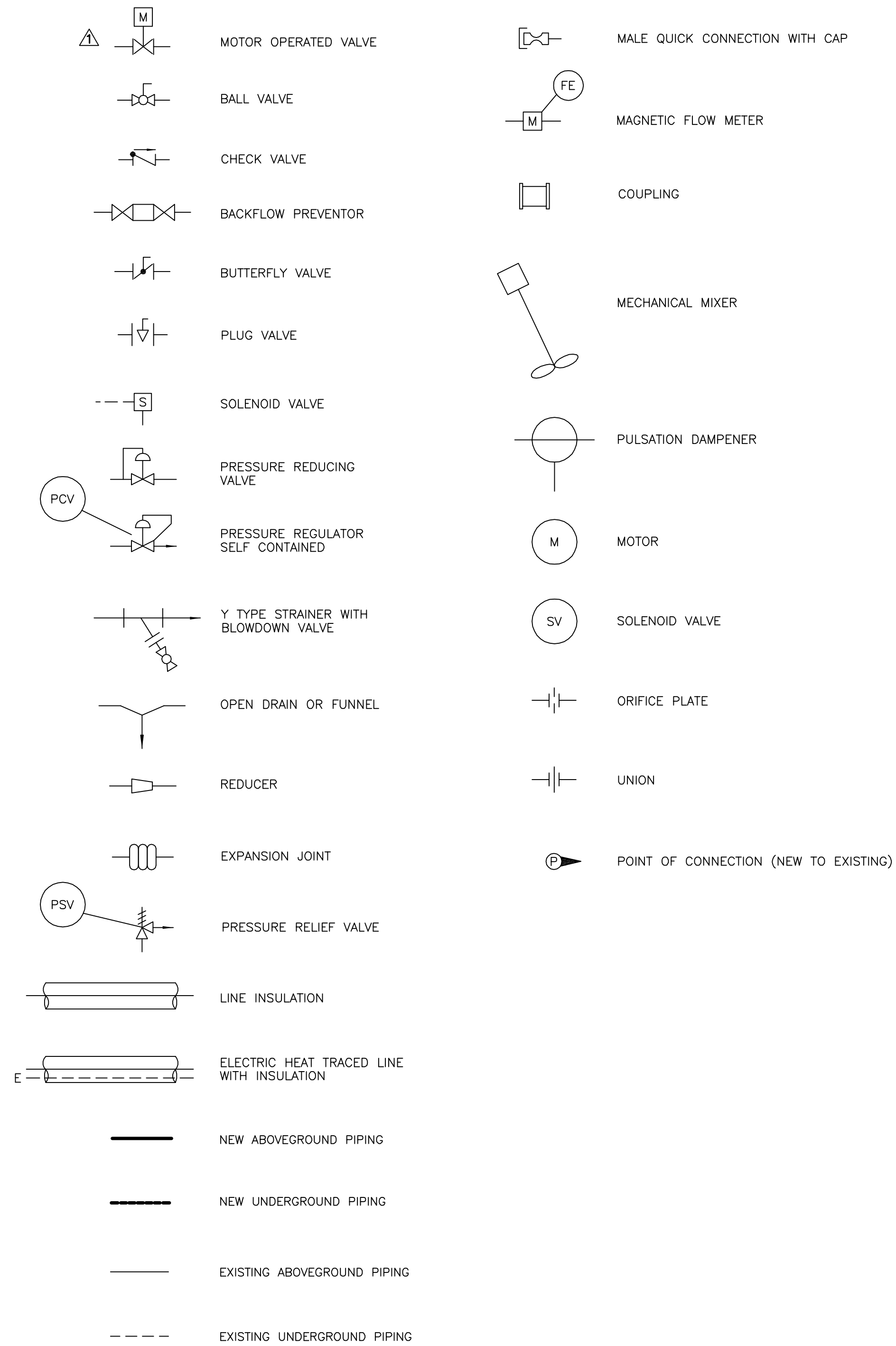
NO.	DATE	REVISION	INIT.
1	2/9/96	RECORD DRAWINGS	





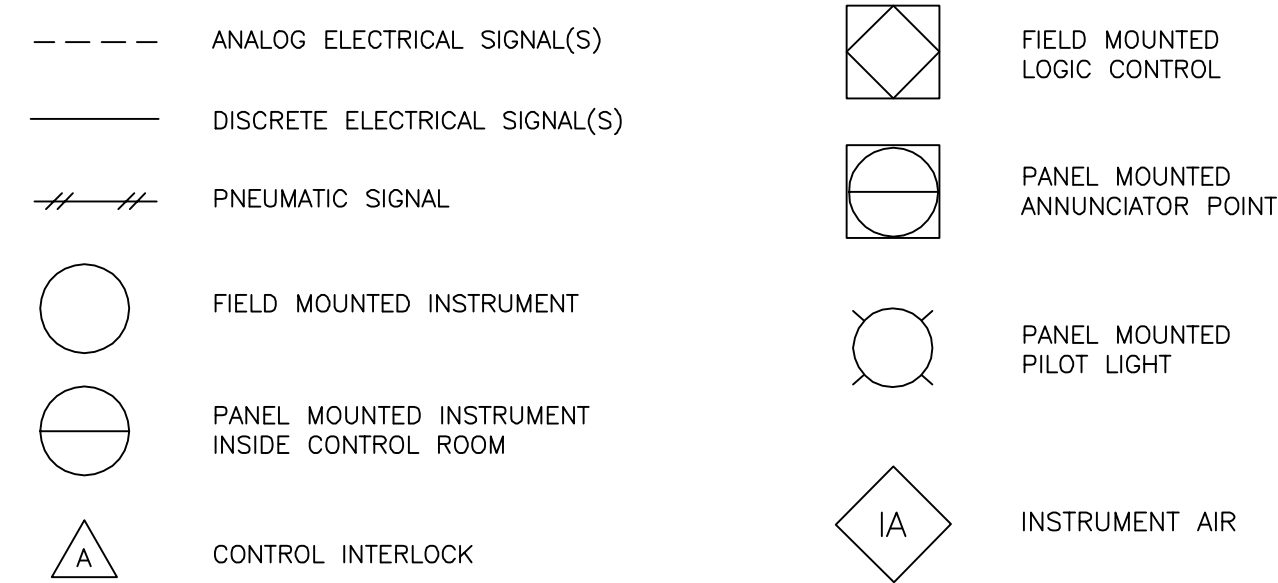
**LEGEND**

**PROCESS PIPING**



INSTRUMENT LEGEND (NOTE: FIELD MOUNTED INSTRUMENTS ARE SHOWN. DESIGNATIONS SHALL ALSO APPLY TO ALL PANEL INSTRUMENTS AND ALL PLC FUNCTIONS.)	TRANSMITTER	INDICATOR/INDICATING TRANSMITTER	PRIMARY OR SENSOR ELEMENT	HIGH	LOW	HIGH/OPEN	LOW/CLOSED	RECORDER/INDICATING RECORDER	RELAY	TOTALIZER	INDICATING CONTROLLER	CONTROL VALVE	THERMOWELL	OPEN	CLOSED	CURRENT/PNEUMATIC CONVERTOR	GENERIC ALARM AND SWITCH	STATUS INDICATOR AND SWITCH	SPEED CONTROLLER (DC DRIVE) (SMC)
				ALARM	SWITCH	LIGHT													
FLOW	FT	FI FIT	FE	FA	FS	FR FIR					FQ	FIC	FCV			FY			
PRESSURE	PT	PI PIT		PA	PS	PR					PIC	PCV							
LEVEL	LT	LI LIT		LA	LS	LR					LIC	LCV		LL	LY				
TEMPERATURE	TT	TI TIT	TE	TA	TS	TR TIR					TIC	TCV	TW	YT					
PRESSURE DIFFERENTIAL	DPT	DPI DPIT		DPA	DPS	DPR													
OXYGEN O2			OE			OI													
POSITION		ZI ZIT			ZS									ZL					
MISCELLANEOUS		AI	VE		HS				QY					YL	IP	GA GS	YI YS	SC	
CURRENT	CT	CIT	CE	CA							CIC								

**INSTRUMENTATION**



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RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

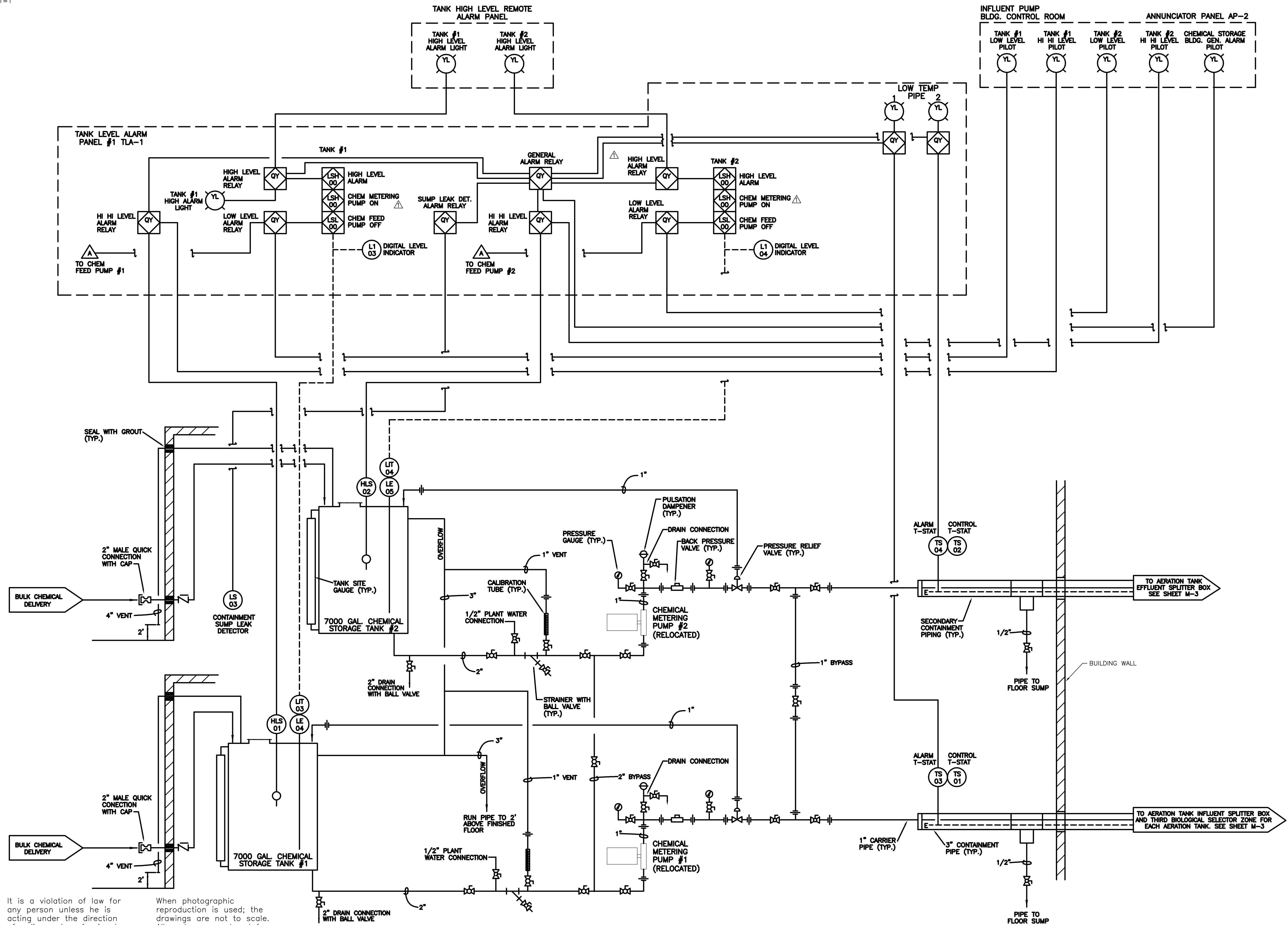
In charge of.....				
Designed by.....Checked by.....				
Drawn by.....				
	2	2/9/96	RECORD DRAWINGS	
	1	8/93	GENERAL REVISIONS	
	NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
ABBREVIATIONS AND SYMBOLS

FILE NO. 115.643-47RD	M-1
DATE JUNE 1993	R-2



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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_

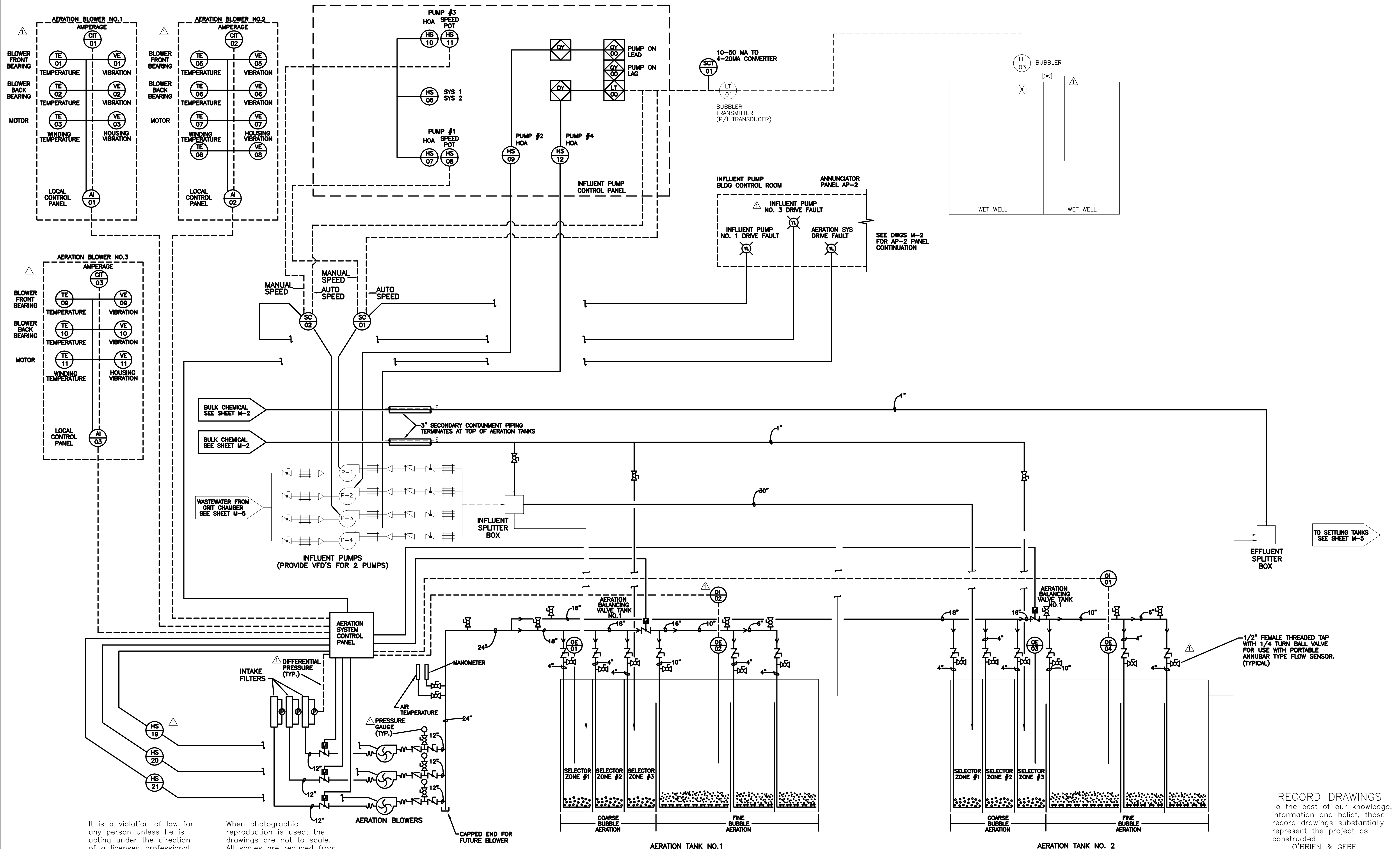
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
CHEMICAL STORAGE/FEED SYSTEM  
P&ID

FILE NO. 115.643-17RD	M-2
DATE JUNE 1993	R-2



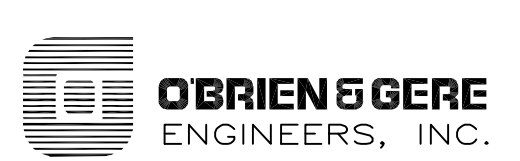
RECORD DRAWINGS  
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 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

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 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_

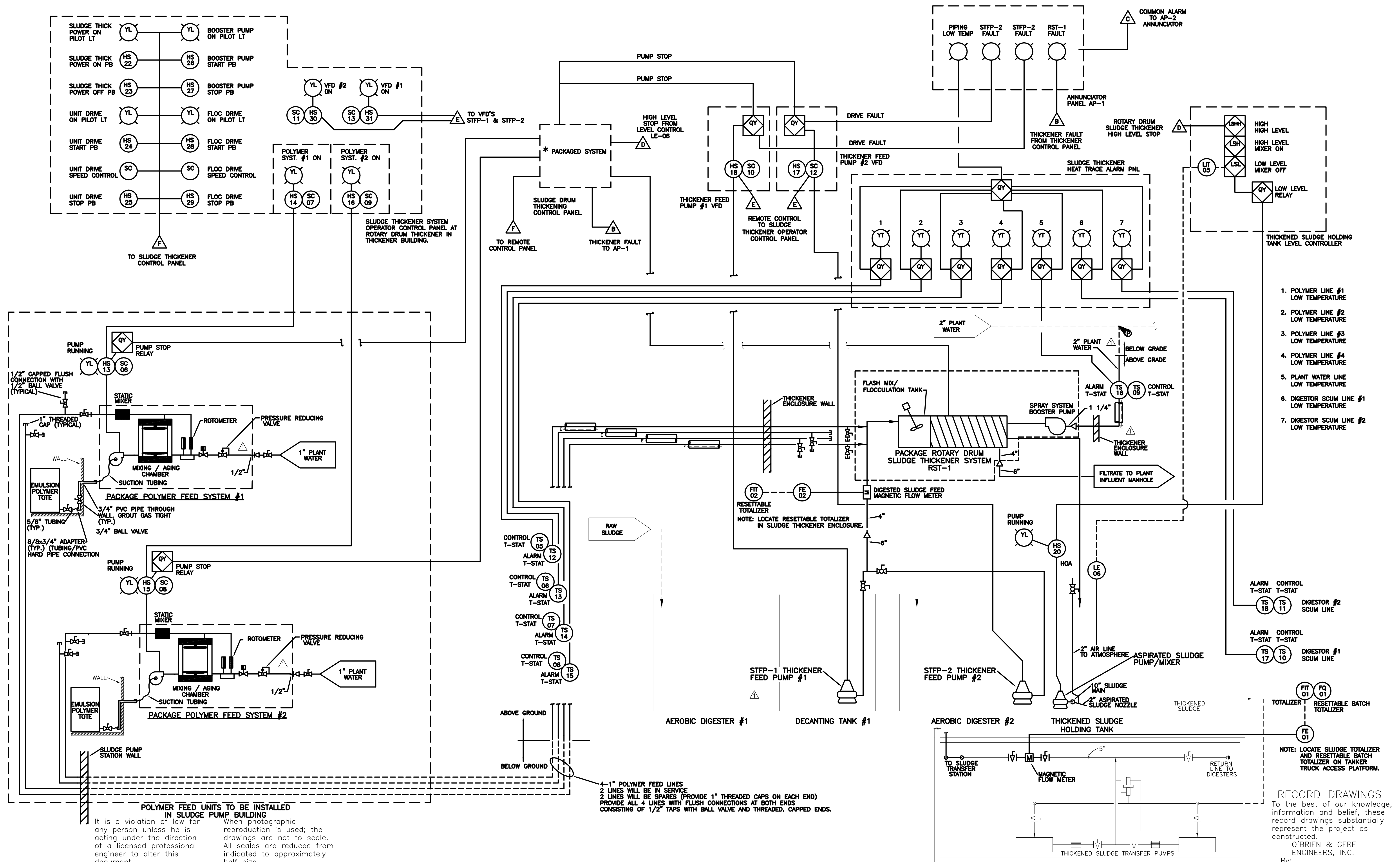
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	CHANGED NO.2 TO NO.3	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
 DIFFUSED AERATION SYSTEM  
 P&ID

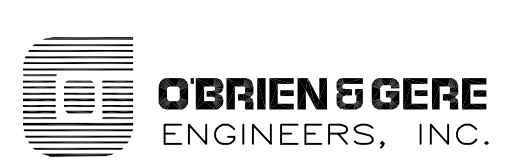
FILE NO.	115.643-18RD	M-3
DATE	JUNE 1993	R-2



1. POLYMER LINE #1 LOW TEMPERATURE
2. POLYMER LINE #2 LOW TEMPERATURE
3. POLYMER LINE #3 LOW TEMPERATURE
4. POLYMER LINE #4 LOW TEMPERATURE
5. PLANT WATER LINE LOW TEMPERATURE
6. DIGESTOR SCUM LINE #1 LOW TEMPERATURE
7. DIGESTOR SCUM LINE #2 LOW TEMPERATURE

In charge of.....  
Designed by.....Checked by.....  
Drawn by.....

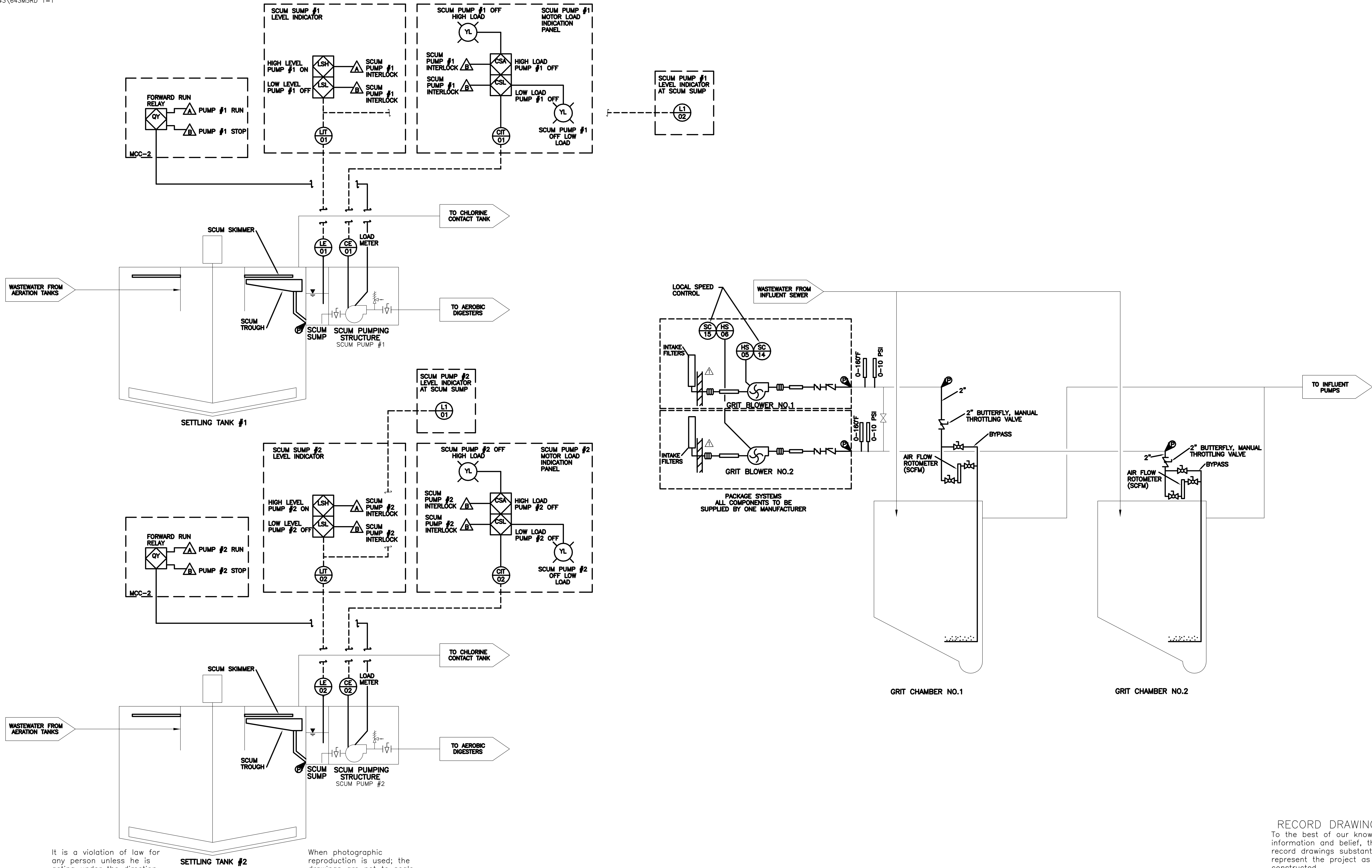
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
SLUDGE THICKENING SYSTEM  
P&ID

FILE NO. 115.643-19RD	M-4
DATE JUNE 1993	R-2

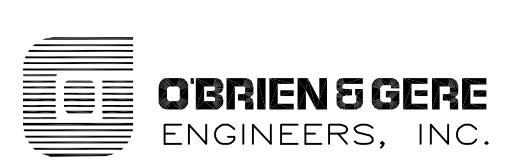


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By: \_\_\_\_\_

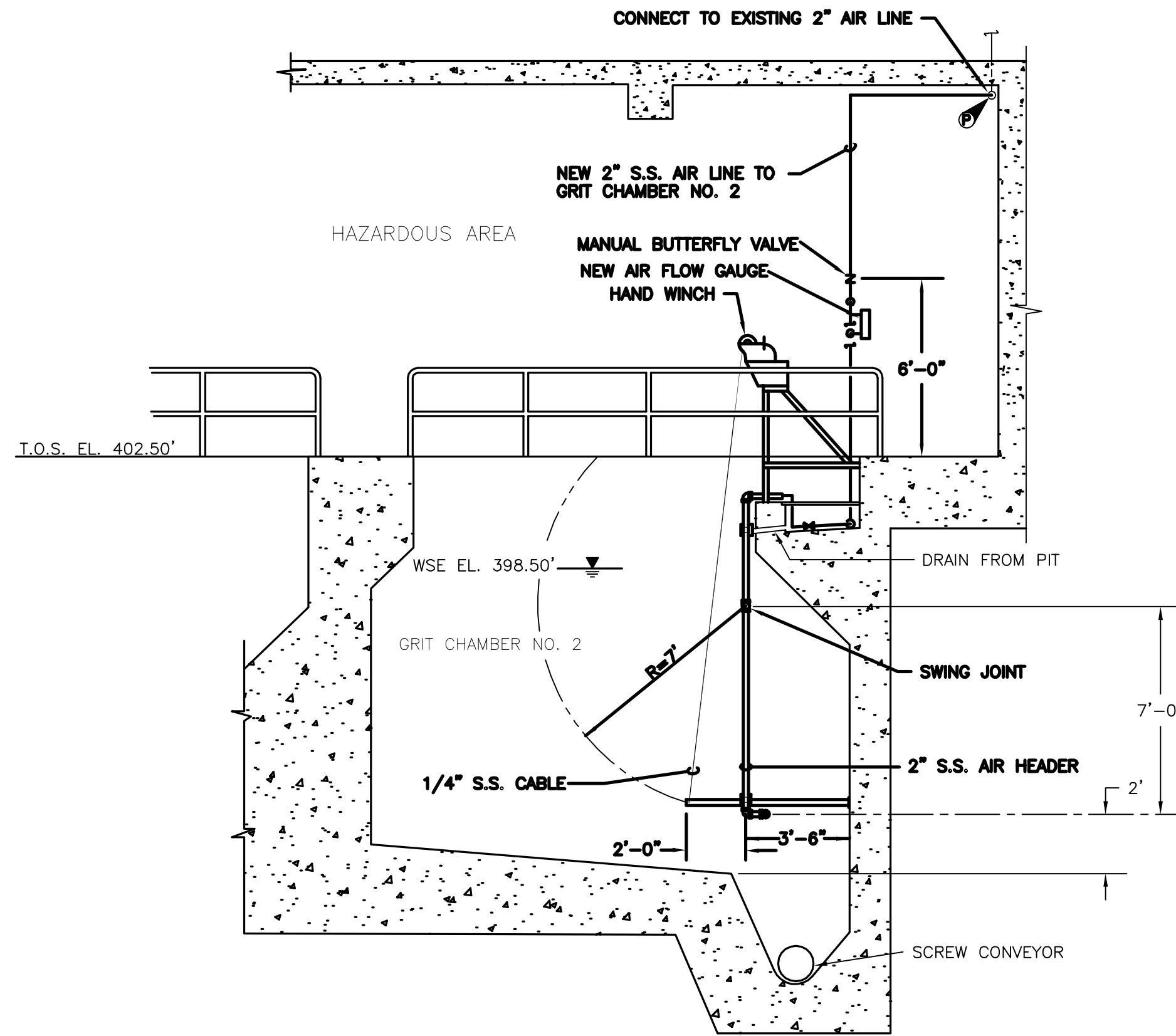
In charge of.....			
Designed by.....Checked by.....			
Drawn by.....			
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	1	8/93	GENERAL REVISIONS
NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

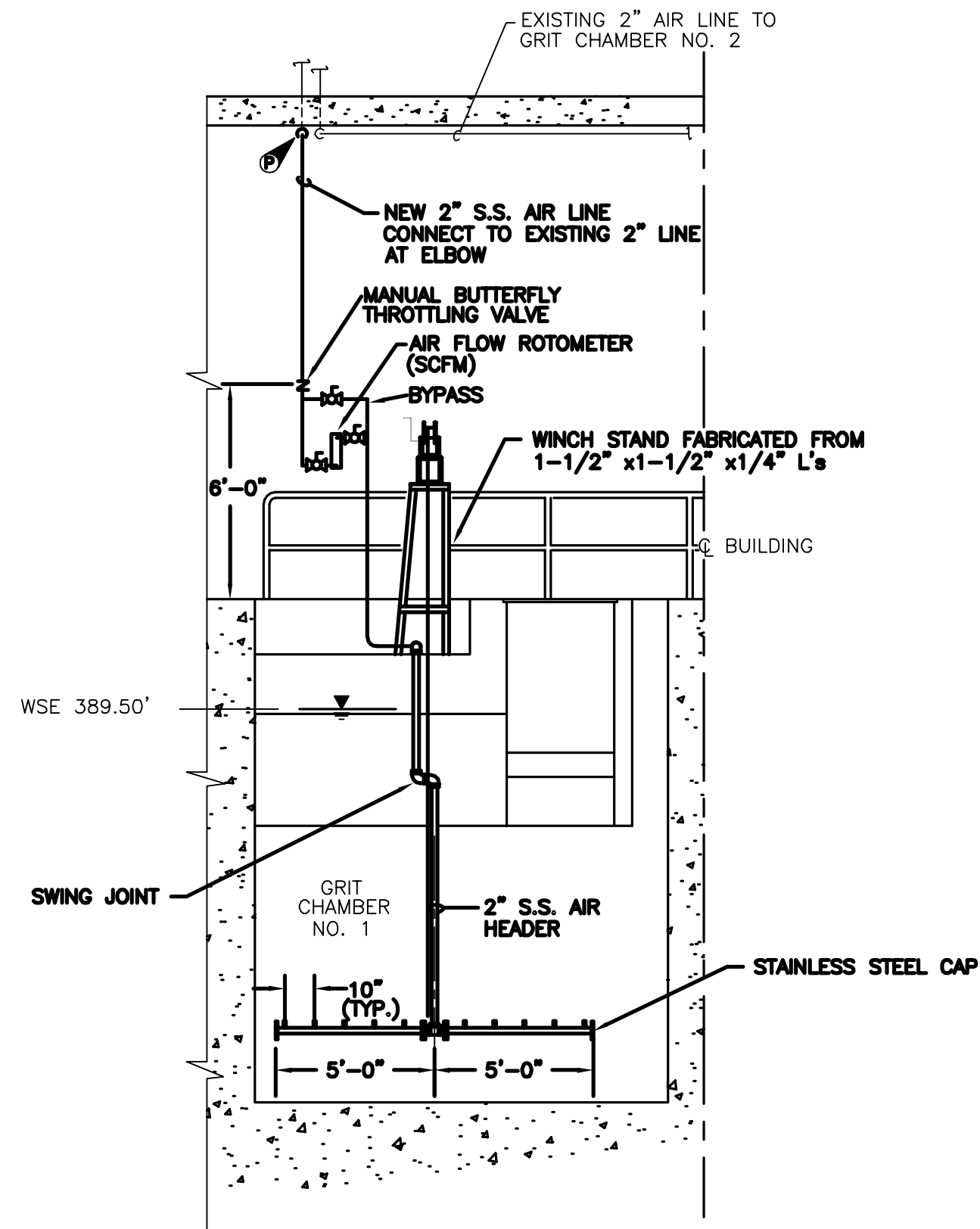
MECHANICAL  
GRIT CHAMBERS/CLARIFIERS  
P&ID

FILE NO.	115.643-20RD	M-5
DATE	JUNE 1993	R-2

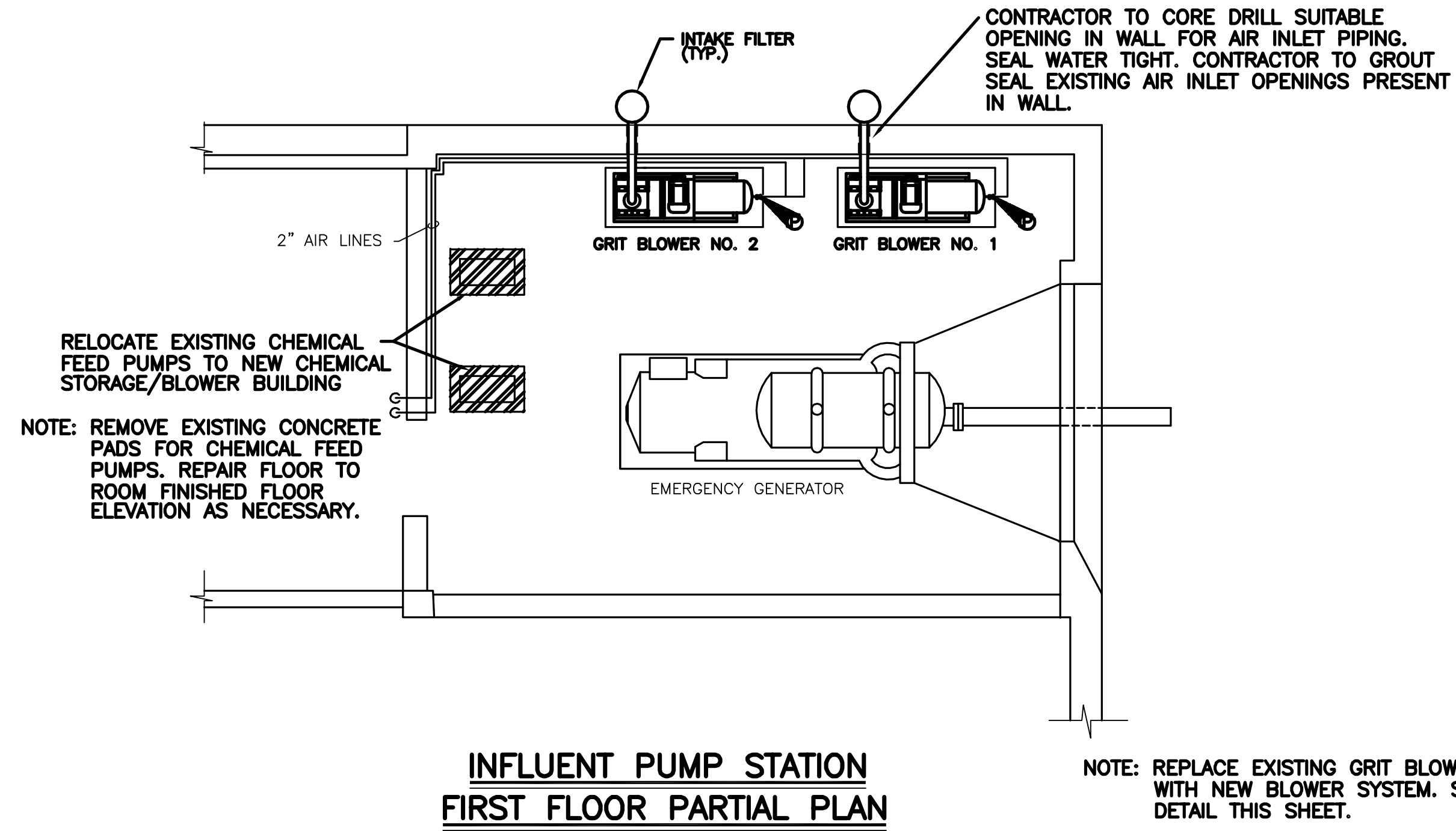


**SECTION 1**  
1/4"=1'-0"

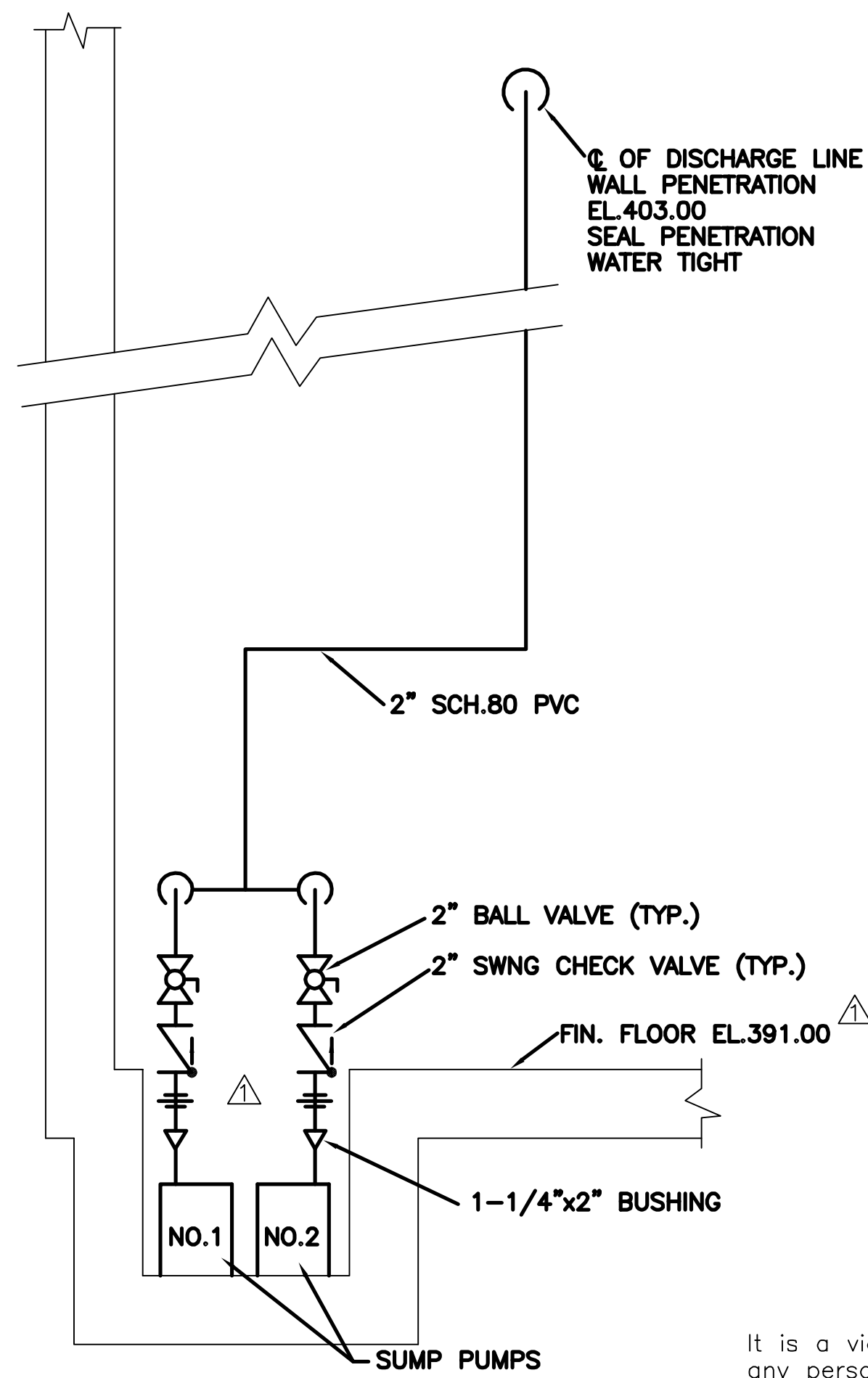
NOTE: REPLACE EXISTING FMC DIFFUSERS, HEADER PIPING, AND HOIST CABLE WITH ALL NEW STAINLESS STEEL COMPONENTS.



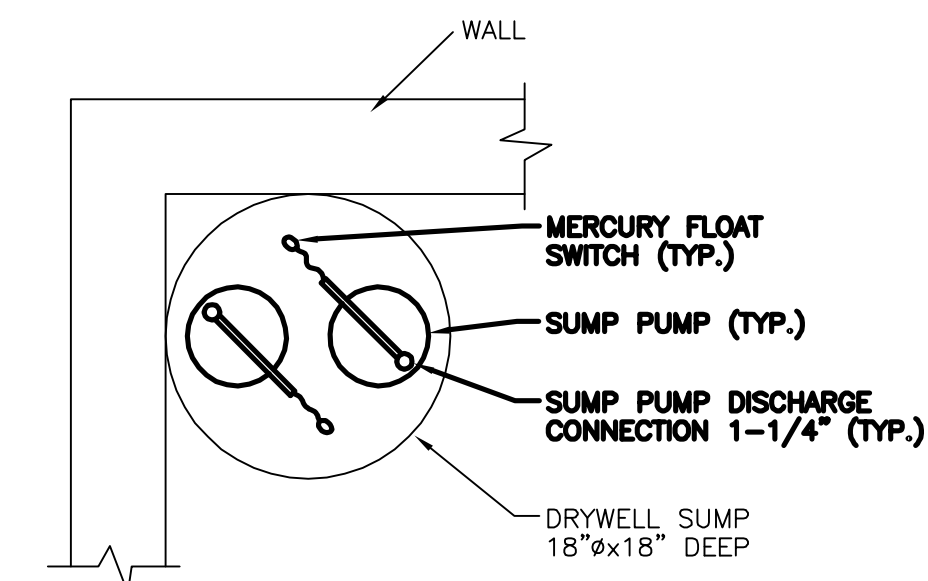
**SECTION 2**  
1/4"=1'-0"



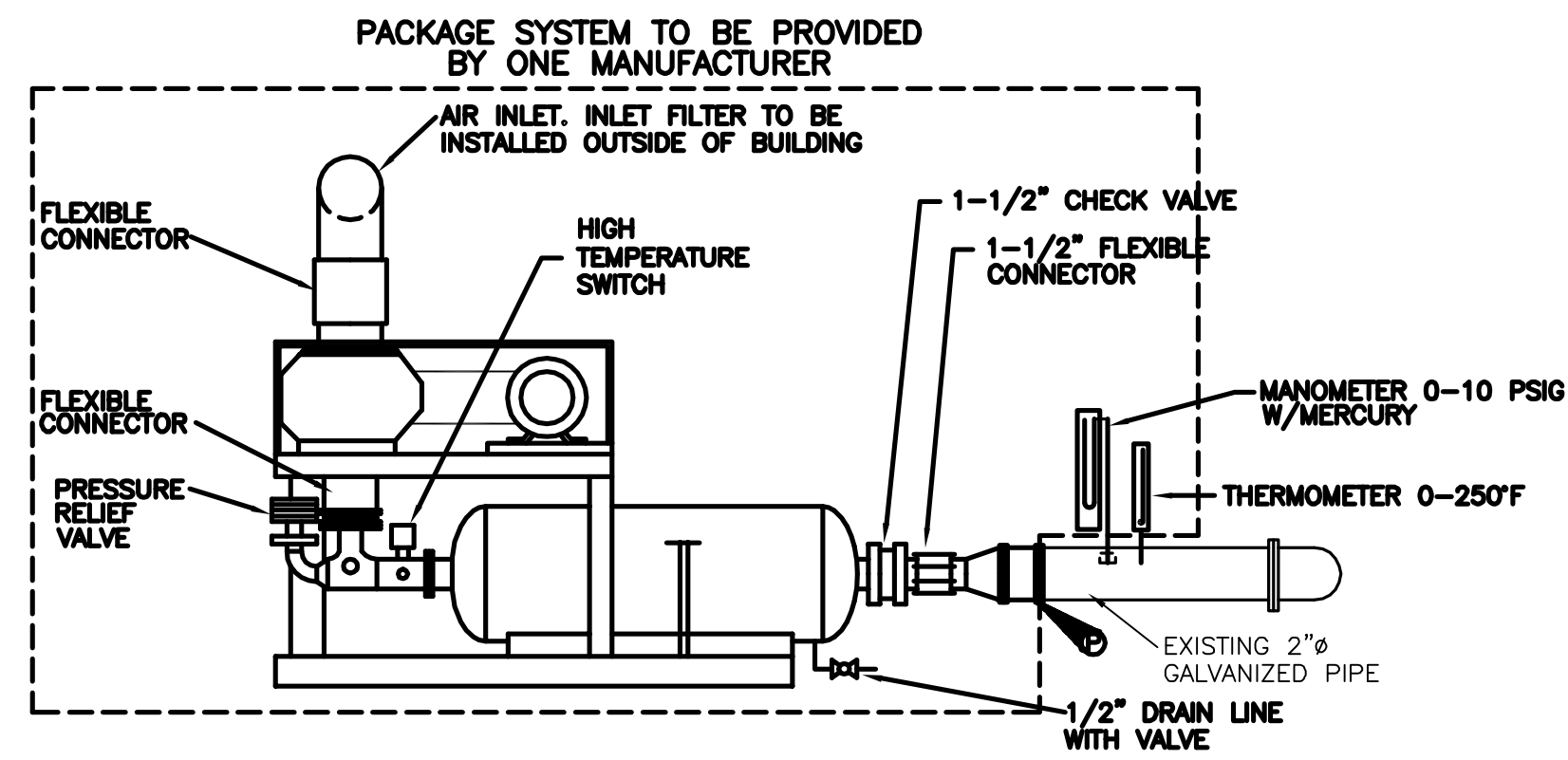
**INFLUENT PUMP STATION  
FIRST FLOOR PARTIAL PLAN**  
SCALE: 1/4"=1'-0"



**DRY WELL SUMP SECTION**  
SCALE: 1/4"=1'-0"

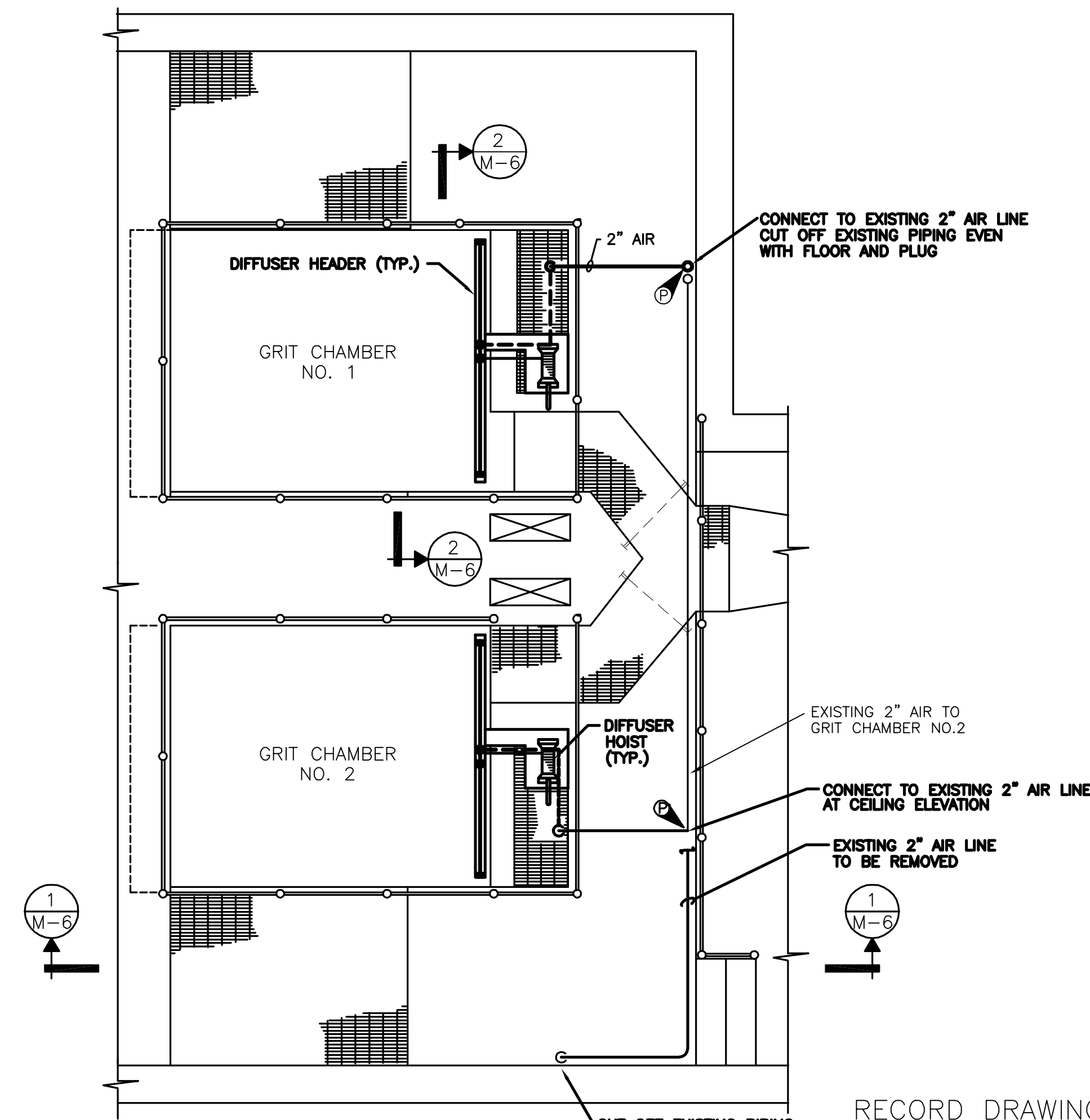


**DRY WELL SUMP PLAN**  
SCALE: 1/4"=1'-0"



**GRIT CHAMBER BLOWER DETAIL**  
N.T.S.

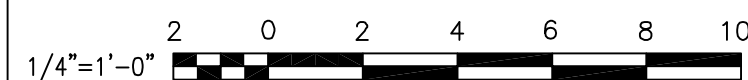
NOTE: REPLACE EXISTING GRIT BLOWERS WITH NEW BLOWER SYSTEM. PROVIDE NEW MONOMETER AND THERMOMETER TYPICAL FOR BOTH BLOWERS.



**INFLUENT PUMP STATION  
BASEMENT PLAN**  
SCALE: 1/4"=1'-0"

RECORD DRAWINGS  
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O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



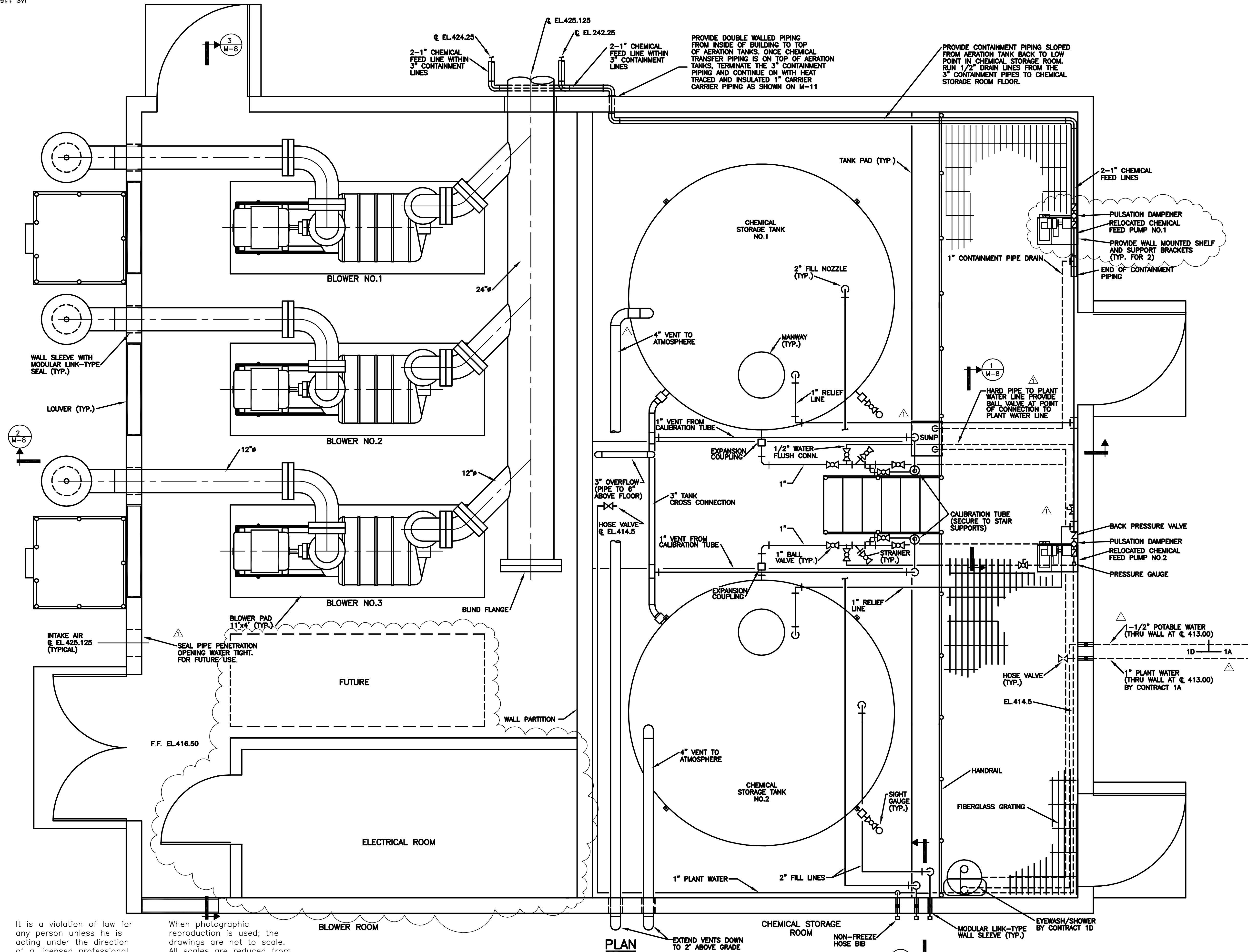
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
GRIT AERATION SYSTEM  
PLANS, SECTIONS AND DETAIL

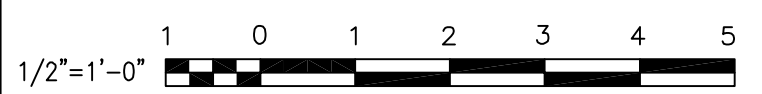
FILE NO. 115.643-21RD	M-6
DATE JUNE 1993	R-2



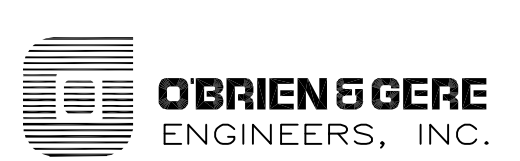
- NOTES:**
- CHEMICAL SUCTION AND DISCHARGE PIPING SHOWN ON THIS DRAWING IS FOR REFERENCE ONLY. SEE SHEETS M-2 AND M-8 FOR ADDITIONAL DETAILS.
  - PROVIDE 12" TO 18" LONG EXPANSION COUPLINGS AT ALL CONNECTIONS TO FRP CHEMICAL STORAGE TANKS.

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NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
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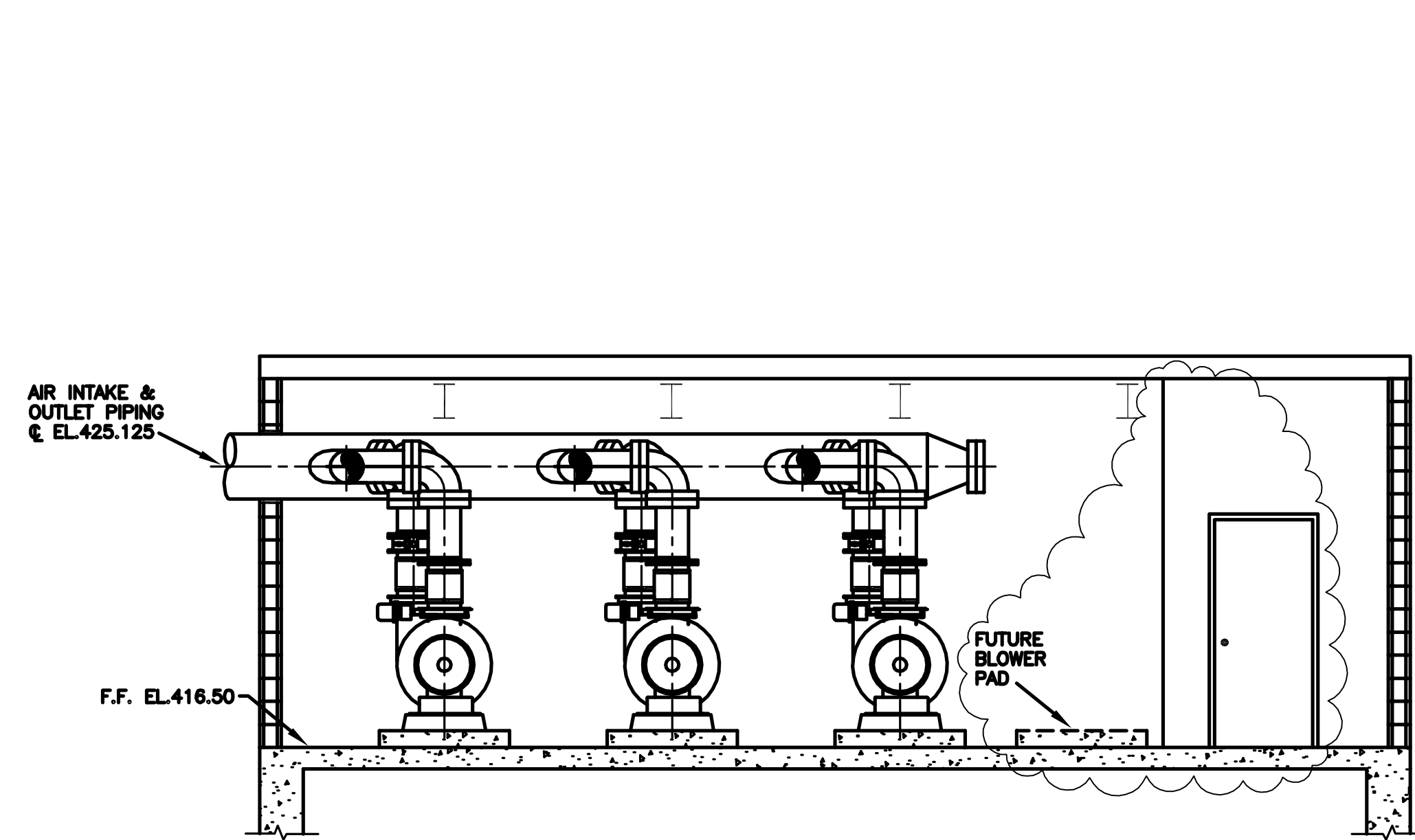
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
CHEMICAL STORAGE/BLOWER BUILDING  
PLAN

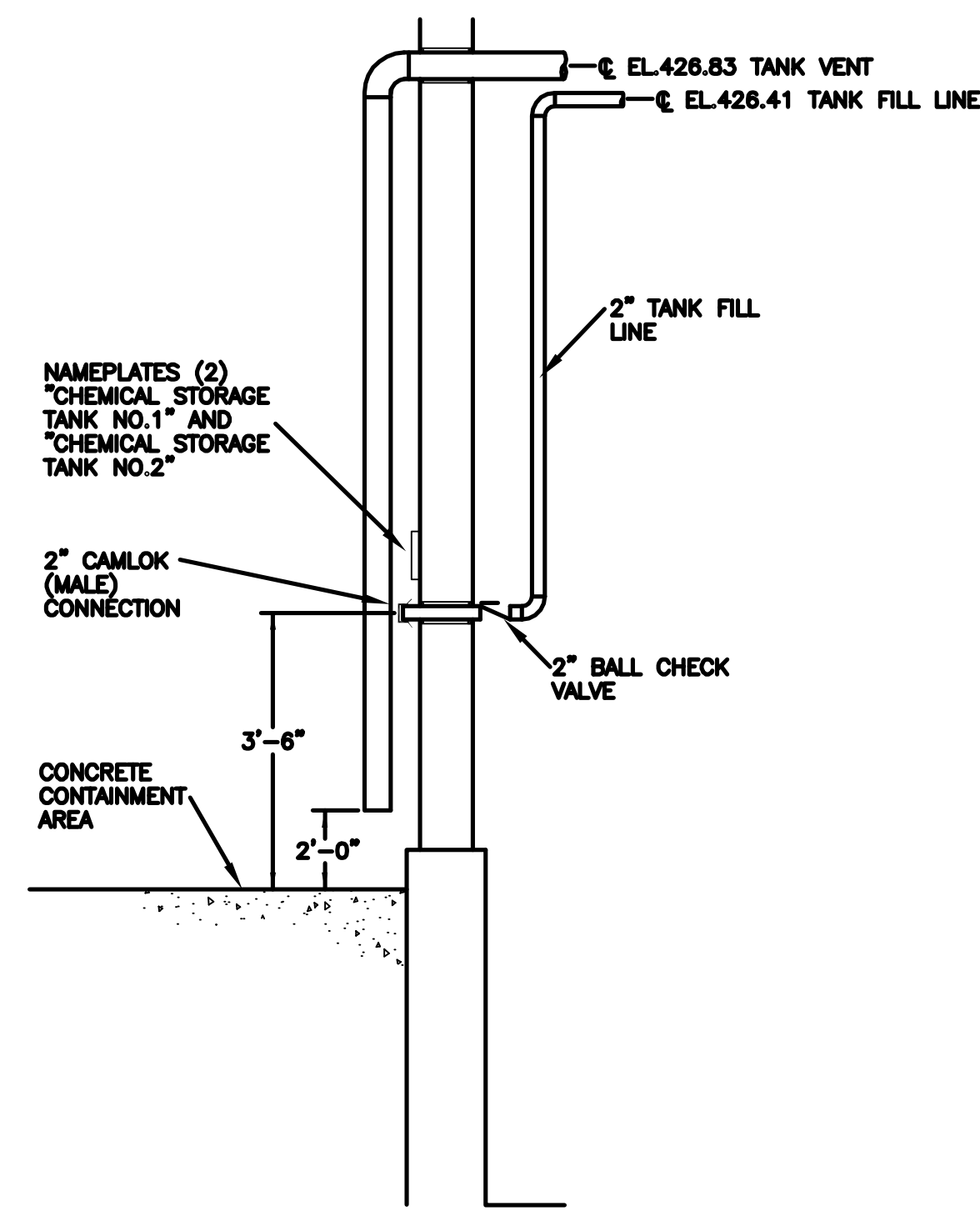
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O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

FILE NO.	115.643-22RD	M-7
DATE	JUNE 1993	R-2



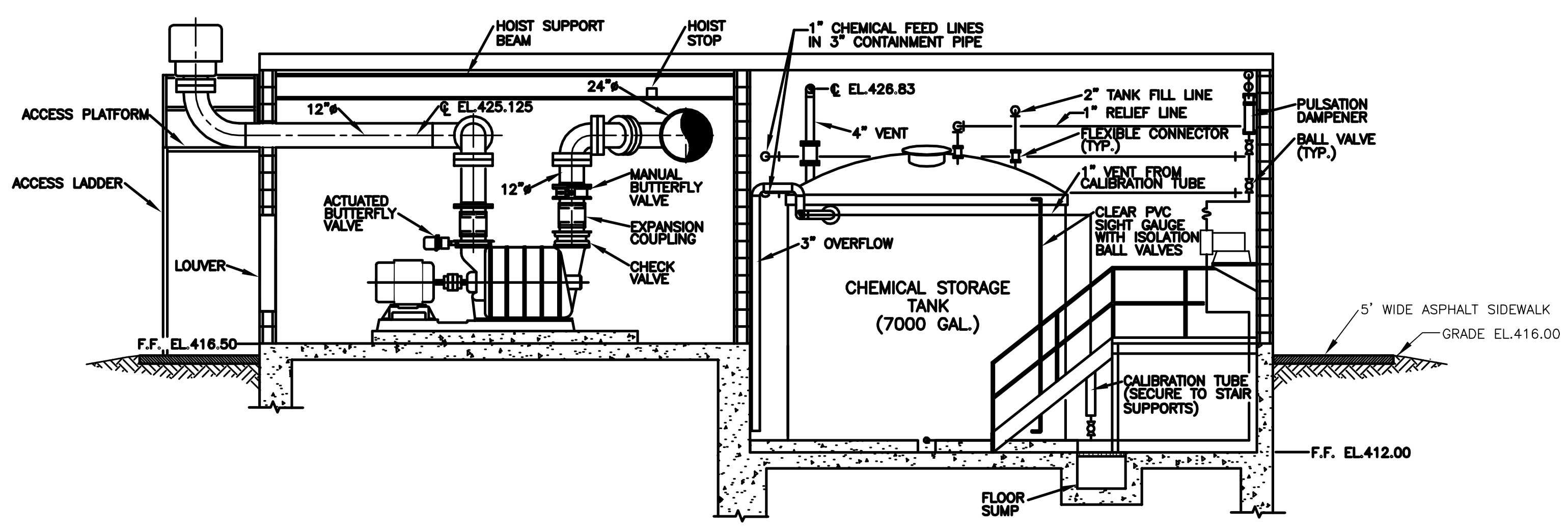


**SECTION 3**  
1/4"=1'-0" M-7

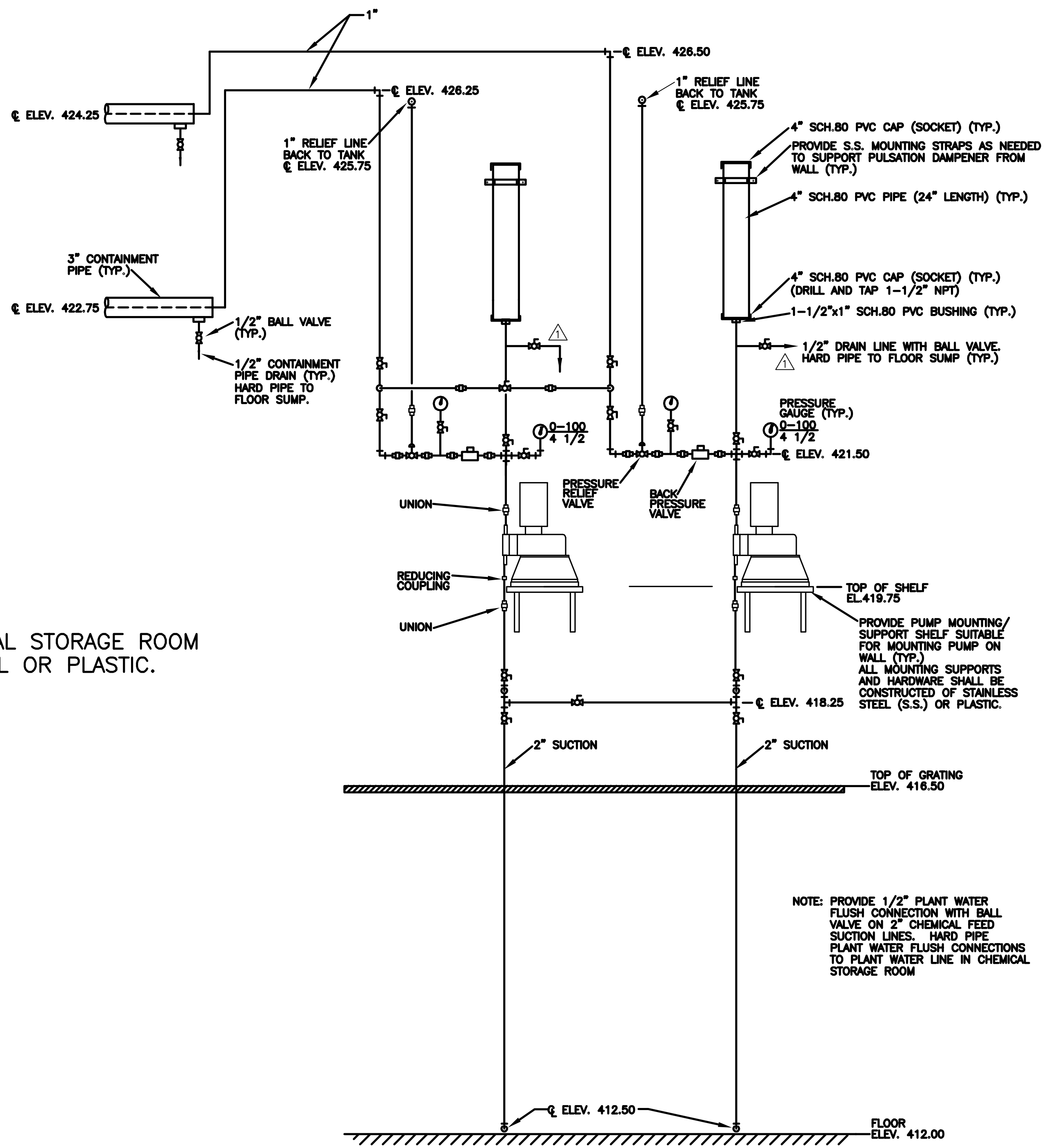


**SECTION 4**  
1/2"=1'-0" M-7

**NOTE:**  
ALL HARDWARE IN CHEMICAL STORAGE ROOM SHALL BE STAINLESS STEEL OR PLASTIC.



**SECTION 2**  
1/4"=1'-0" M-7



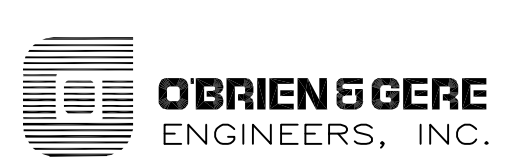
**SECTION 1**  
1"=1'-0" M-7

**NOTE:** PROVIDE 1/2" PLANT WATER FLUSH CONNECTION WITH BALL VALVE ON 2" CHEMICAL FEED SUCTION LINES. HARD PIPE PLANT WATER FLUSH CONNECTIONS TO PLANT WATER LINE IN CHEMICAL STORAGE ROOM

**RECORD DRAWINGS**  
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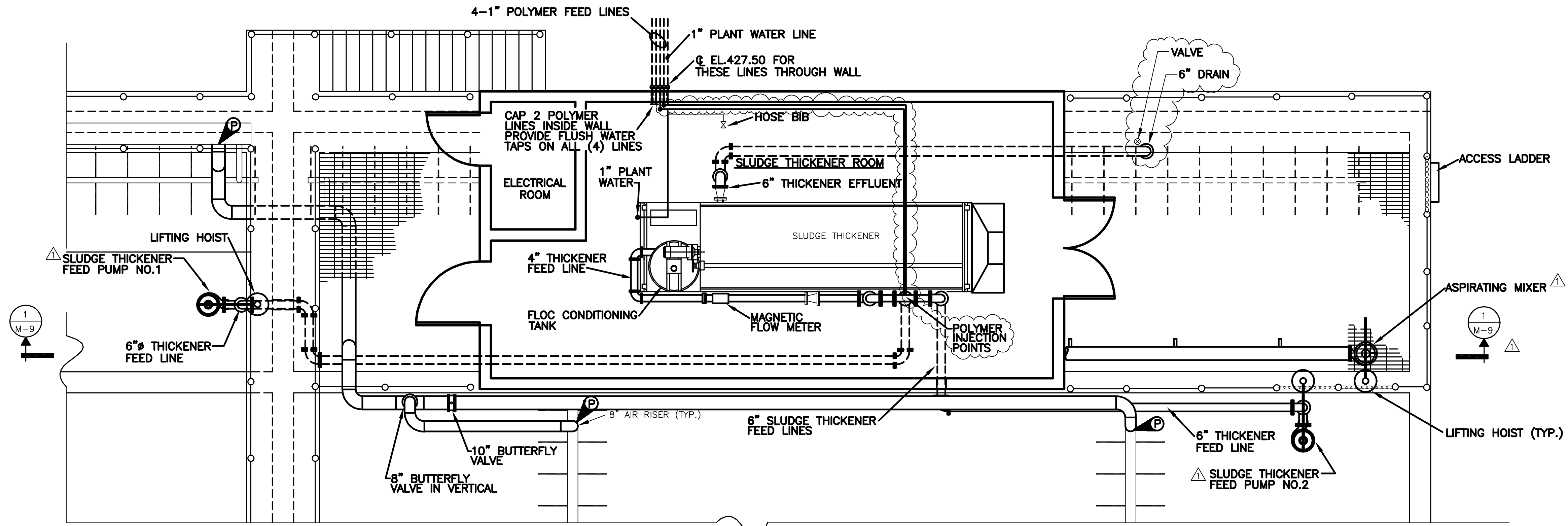
In charge of.....				
Designed by.....Checked by.....				
Drawn by.....				
	2	2/9/96	RECORD DRAWINGS	
	1	8/93	ADDED NOTE	
NO.	DATE	REVISION		INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

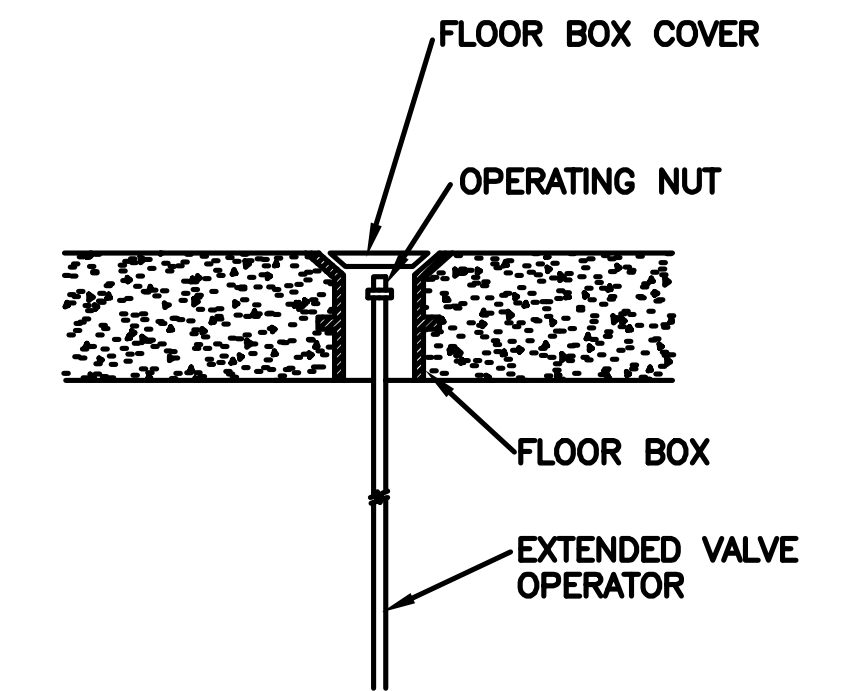
MECHANICAL  
CHEMICAL STORAGE/BLOWER BUILDING  
SECTIONS

FILE NO. 115.643-23RD	M-8
DATE JUNE 1993	R-2



**SLUDGE THICKENER BUILDING PLAN**

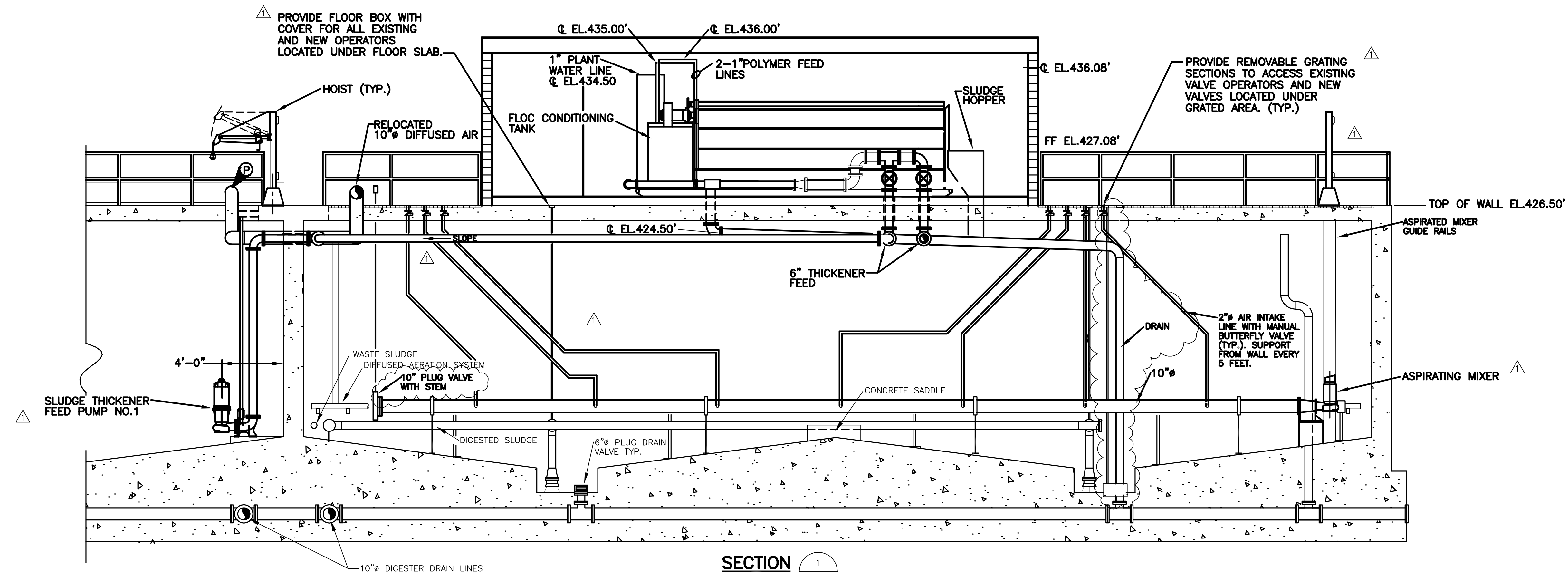
SCALE: 1/4"=1'-0"



**VALVE NUT OPERATED FLOOR BOX**

DETAIL

N.T.S.



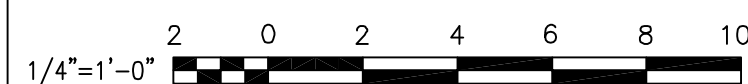
**SECTION 1**

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

NOTE: CONTRACTOR TO COORDINATE AND VERIFY LOCATIONS OF EXISTING INTERNAL TANK PIPING AND EQUIPMENT. ALSO, CONTRACTOR TO VERIFY WITH THE OWNER WHAT IF ANY EXISTING PIPING AND EQUIPMENT IS TO BE REMOVED.

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Designed by.....Checked by.....  
Drawn by.....

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1	8/93	GENERAL REVISIONS	

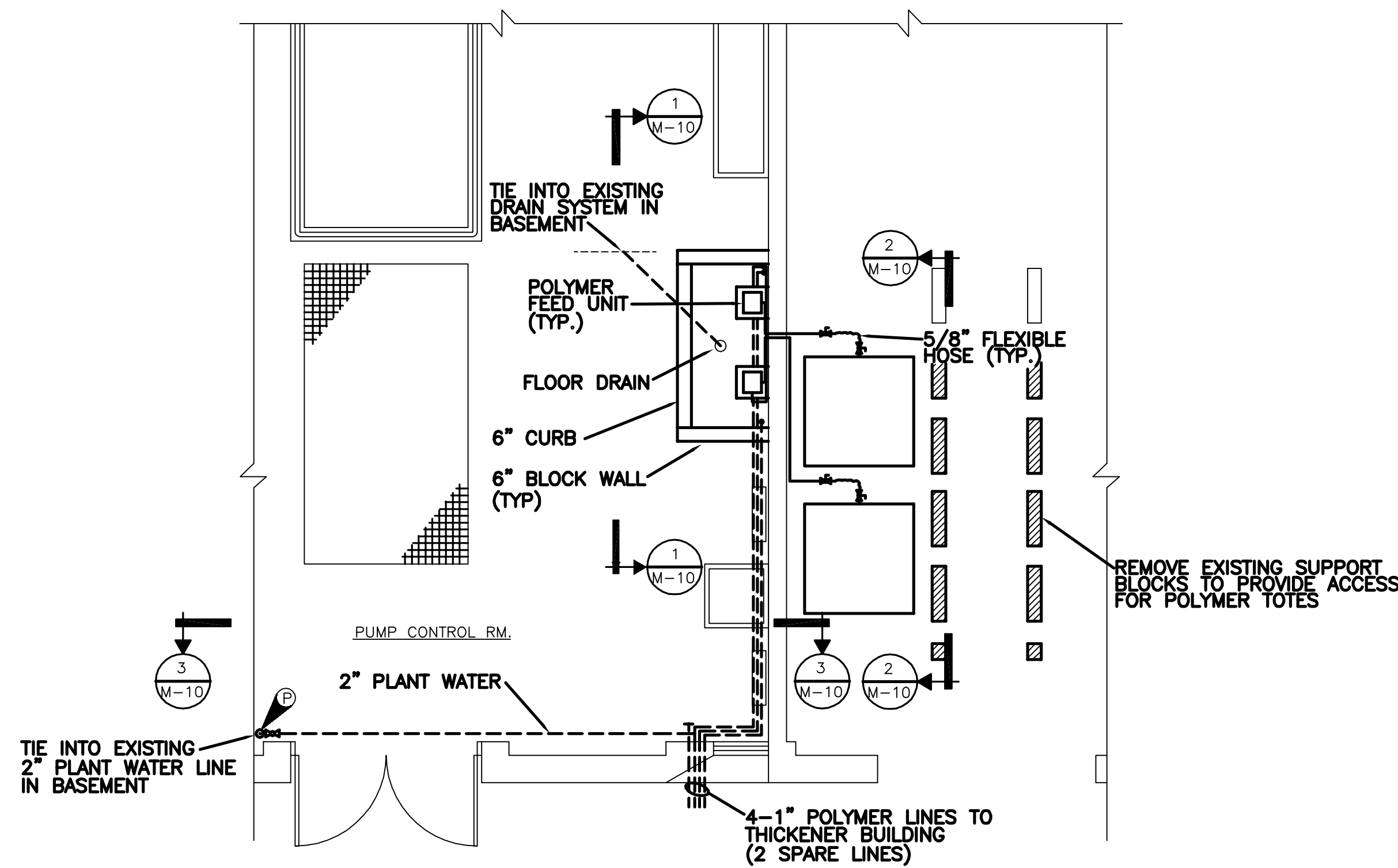


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DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

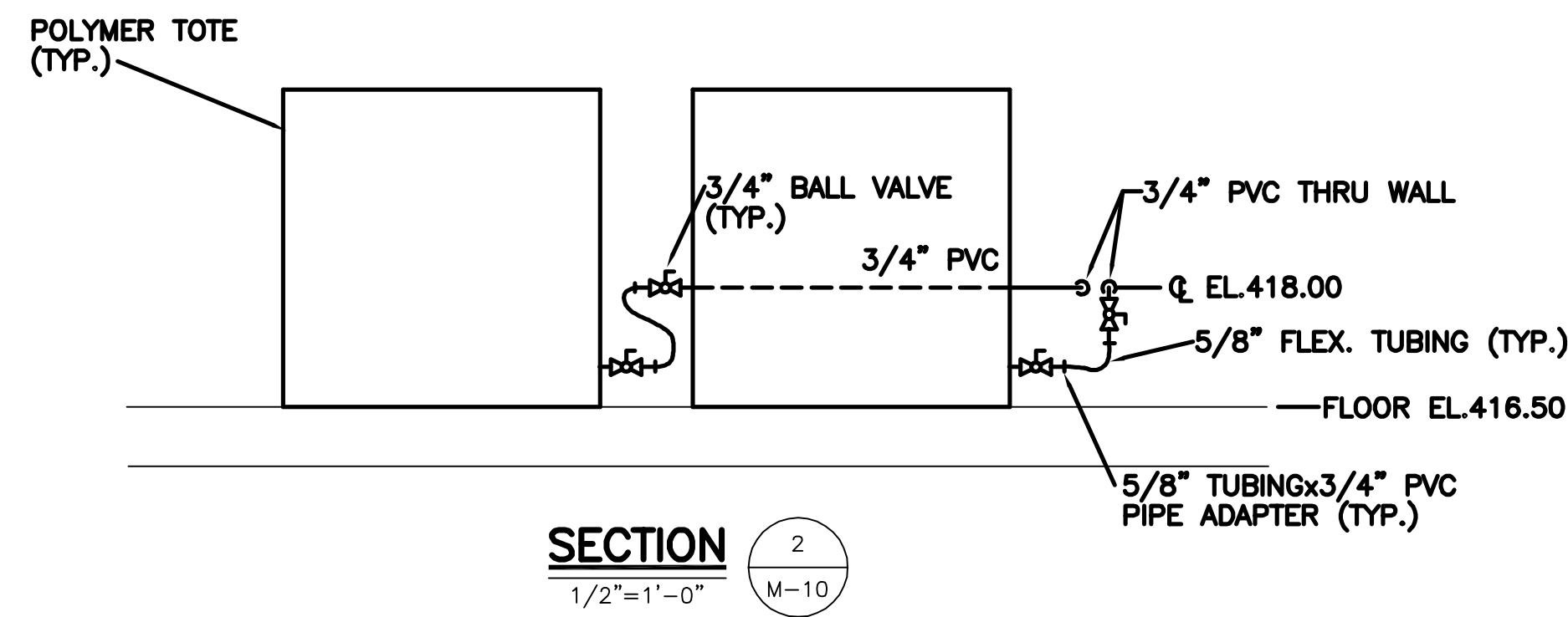
MECHANICAL  
SLUDGE THICKENER BUILDING  
PLAN AND SECTION

FILE NO. 115.643-24RD	M-9
DATE JUNE 1993	R-2

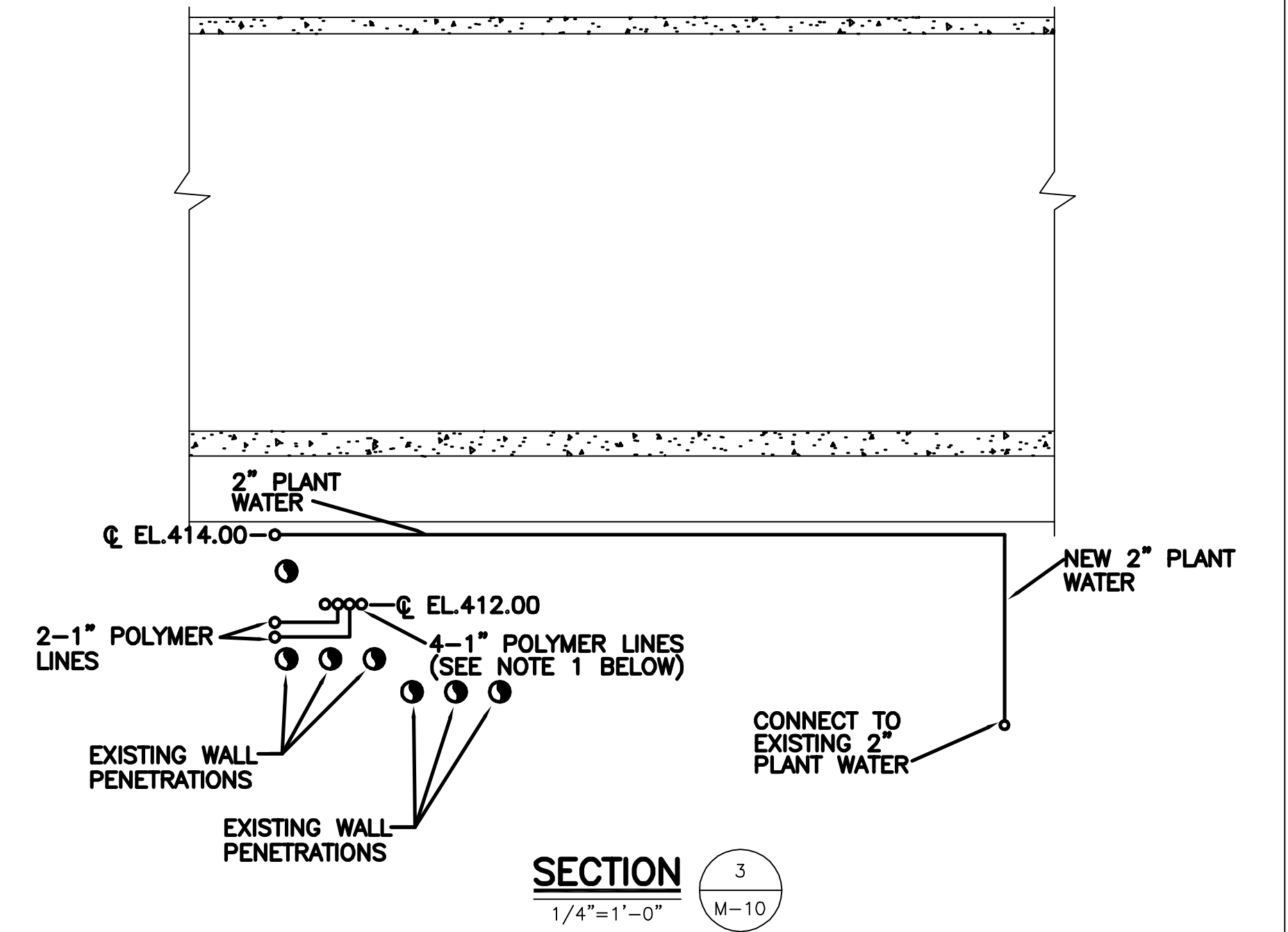
RECORD DRAWINGS  
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O'BRIEN & GERE ENGINEERS, INC.  
By: .....



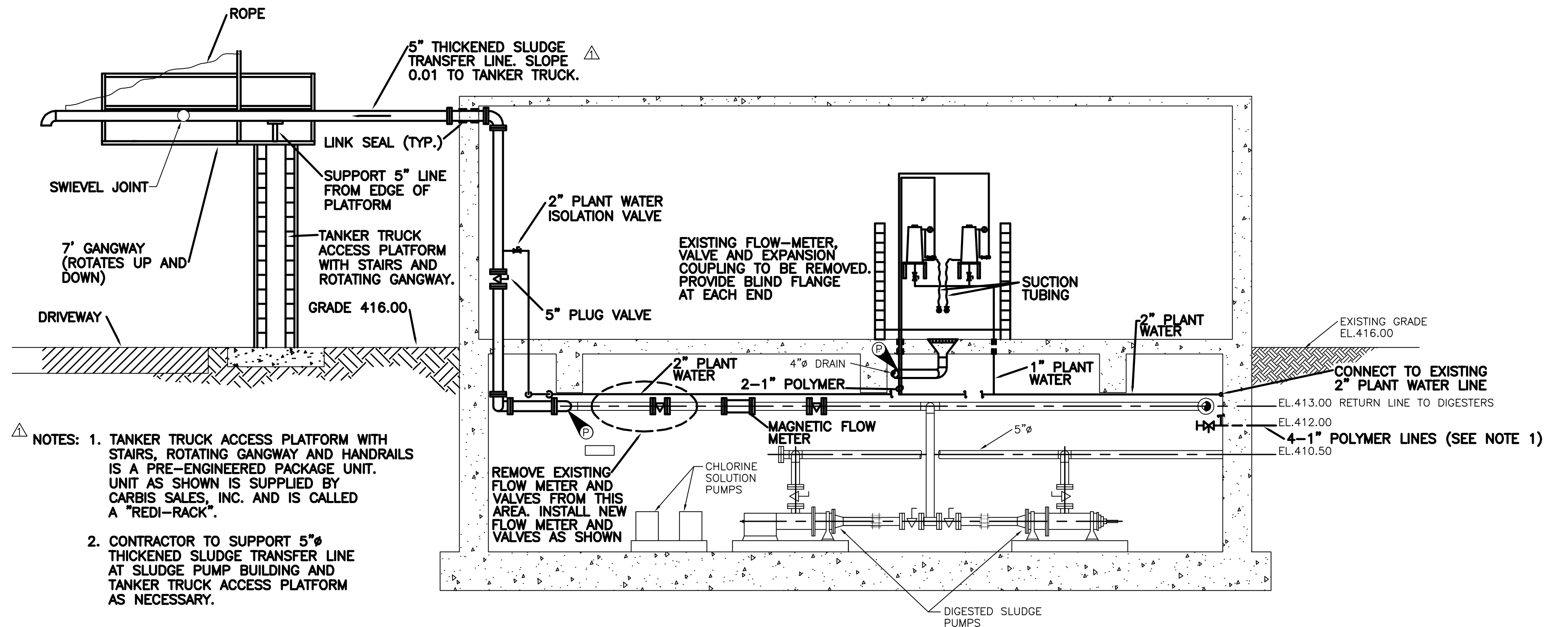
**SLUDGE PUMP STATION  
PARTIAL FLOOR PLAN**  
SCALE: 1/4"=1'-0"



**SECTION 2**  
1/2"=1'-0" M-10

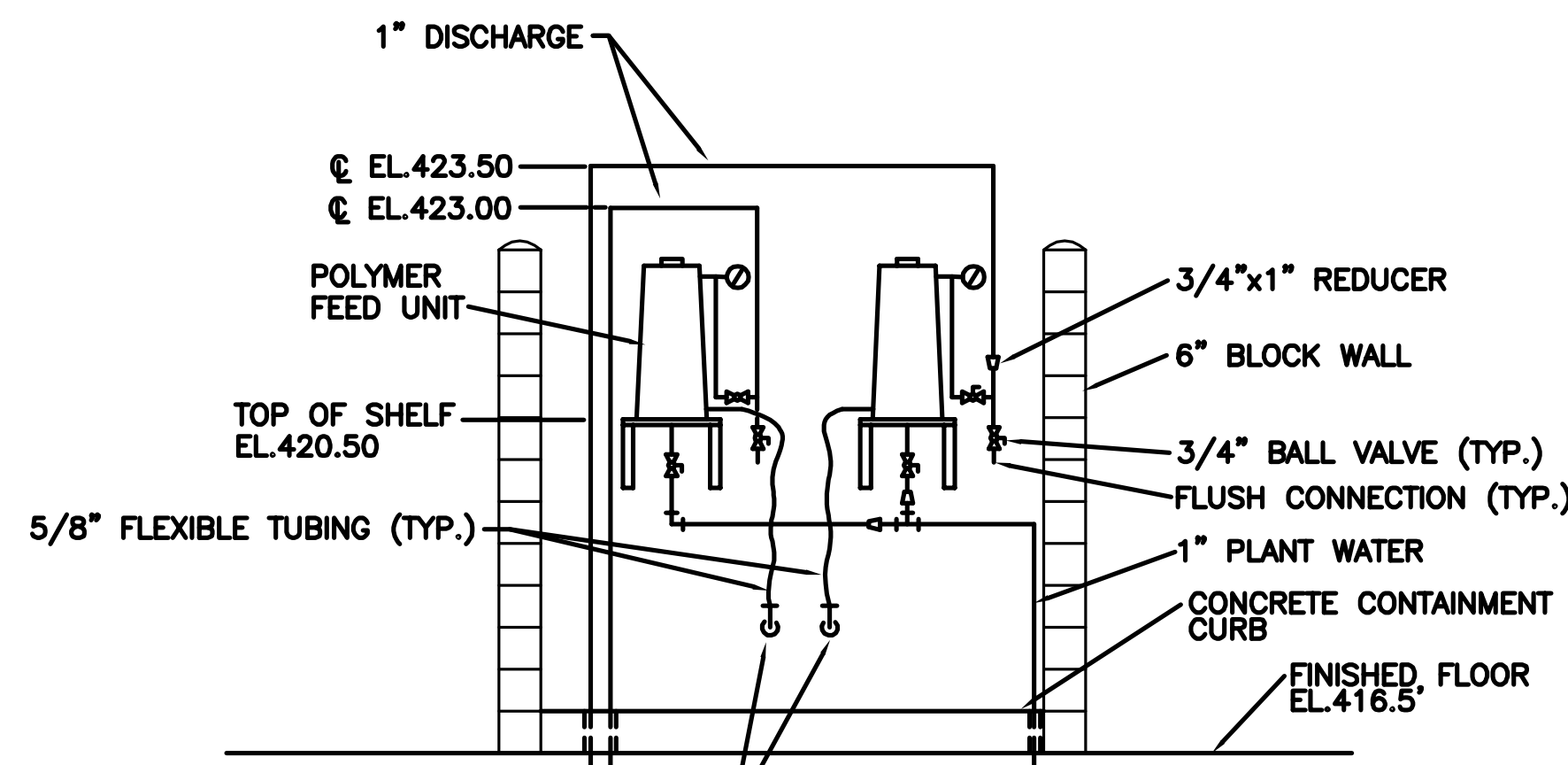


**SECTION 3**  
1/4"=1'-0" M-10



**SLUDGE PUMP STATION SECTION**  
SCALE: 1/4"=1'-0"

- NOTES:**
1. TANKER TRUCK ACCESS PLATFORM WITH STAIRS, ROTATING GANGWAY AND HANDRAILS IS A PRE-ENGINEERED PACKAGE UNIT. UNIT AS SHOWN IS SUPPLIED BY CARBIS SALES, INC. AND IS CALLED A "REDI-RACK".
  2. CONTRACTOR TO SUPPORT 5" THICKENED SLUDGE TRANSFER LINE AT SLUDGE PUMP BUILDING AND TANKER TRUCK ACCESS PLATFORM AS NECESSARY.



**SECTION 1**  
1/2"=1'-0" M-10

- NOTE:**
1. CONNECT 5/8" POLYMER SUCTION TUBING TO PVC PIPE WITH 3/4" x 5/8" ADAPTER

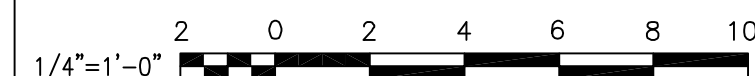
- NOTES:**
1. TWO OF FOUR 1" POLYMER LINES TO BE CAPPED INSIDE BASEMENT WALL. ALL (4) POLYMER LINES TO BE PROVIDED WITH 1/2" HOSE CONNECTION AND VALVE FOR FLUSHING.
  2. REMOVE EXISTING FLOW METER FROM 5" THICKENED SLUDGE TRANSFER LINE. INSTALL NEW MAGNETIC FLOW METER WITH FLANGED CONNECTIONS IN THIS LINE AS SHOWN AND SPECIFIED. CONTRACTOR TO PROVIDE FLANGED SPOOL PIECE THE SAME SIZE AS THE NEW MAGNETIC FLOW METER. THIS SPOOL PIECE WILL BE USED BY THE OWNER IN THE EVENT THE FLOW METER MUST BE REMOVED SO THAT SLUDGE TRANSFER ACTIVITIES MAY CONTINUE.

**RECORD DRAWINGS**  
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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



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1	8/93	GENERAL REVISIONS	

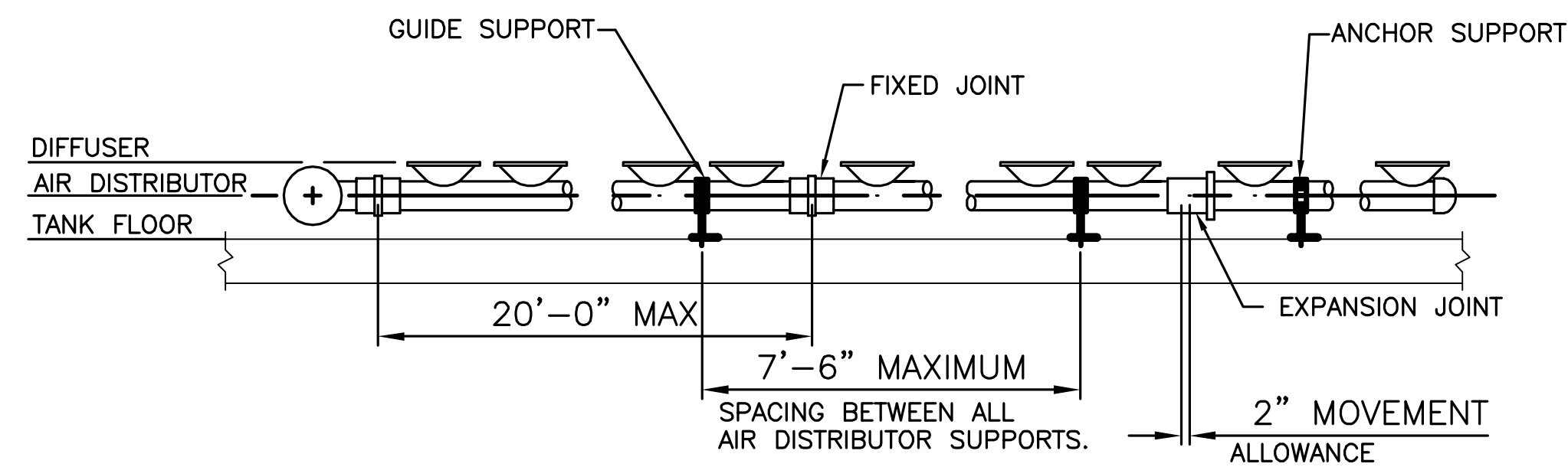


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

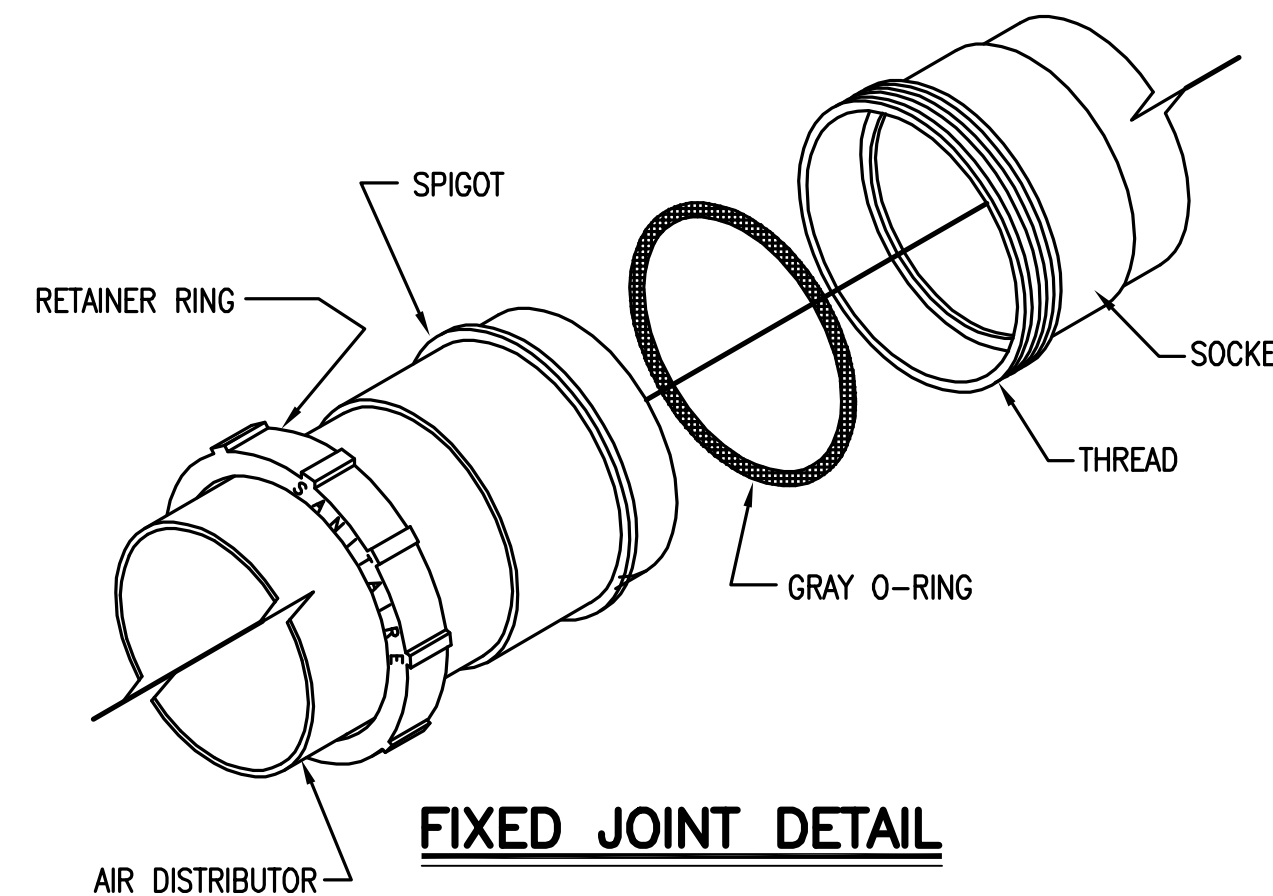
MECHANICAL  
SLUDGE PUMP STATION  
PLANS AND SECTIONS

FILE NO. 115.643-25RD	M-10
DATE JUNE 1993	R-2

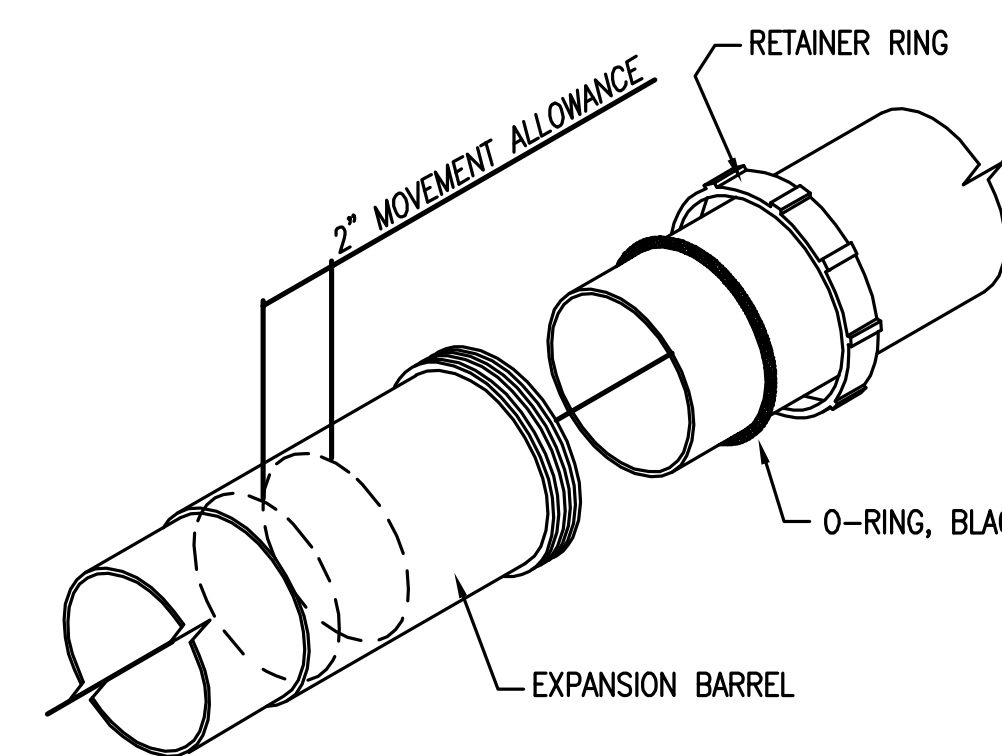




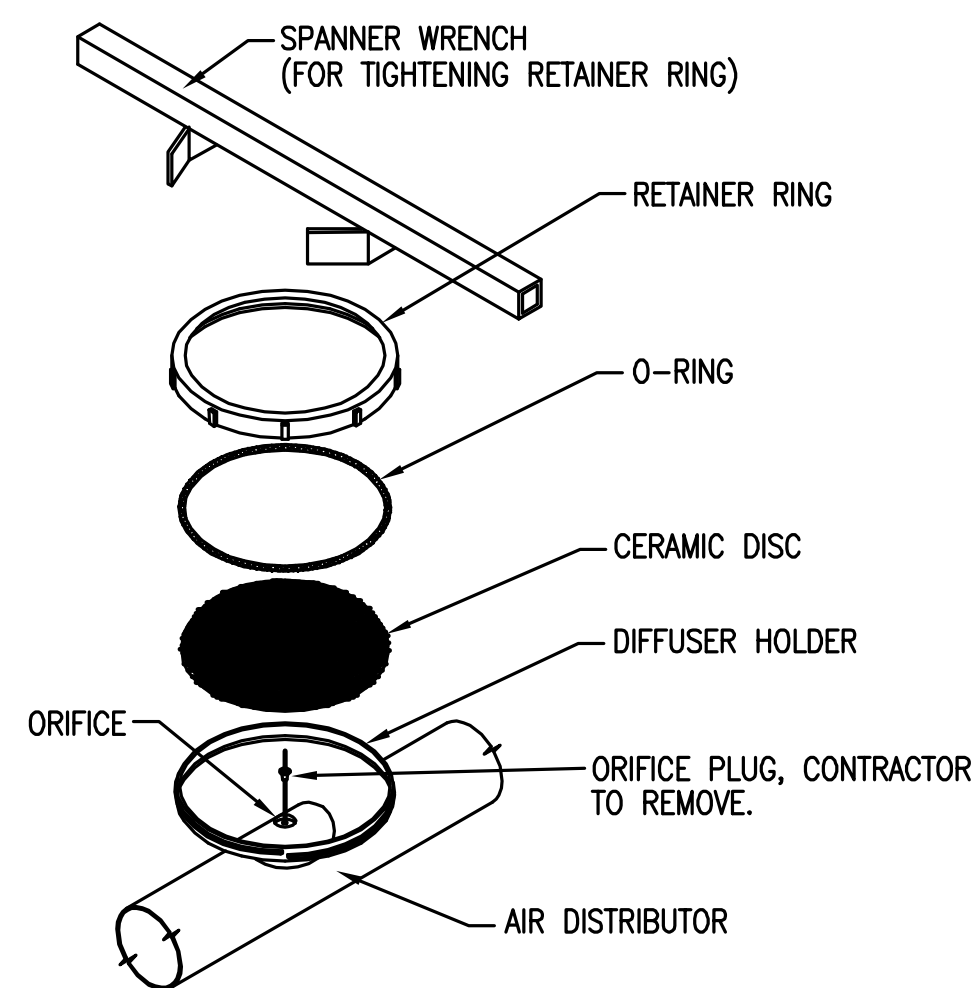
**AIR DISTRIBUTOR SECTION**



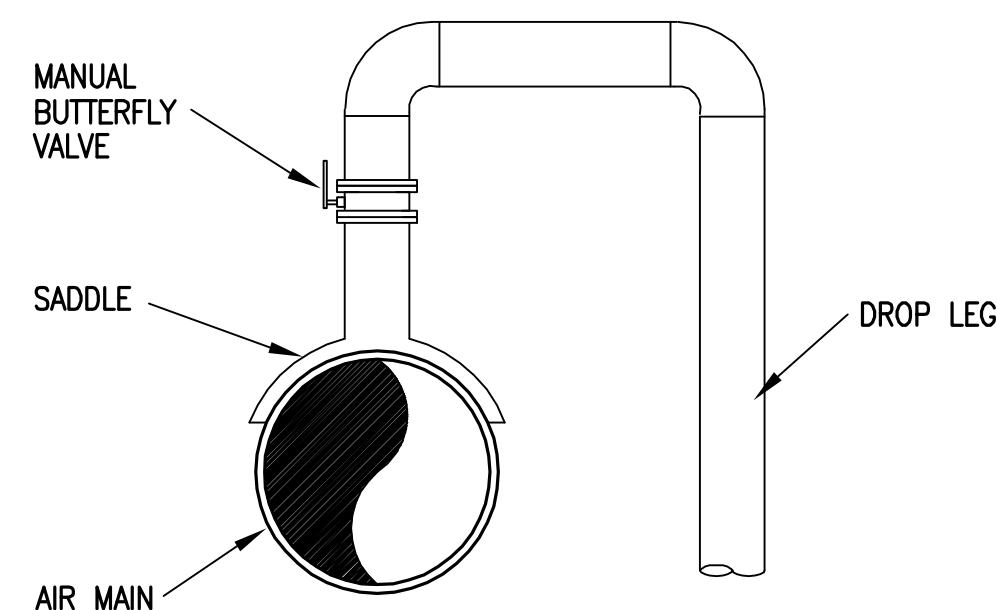
**FIXED JOINT DETAIL**



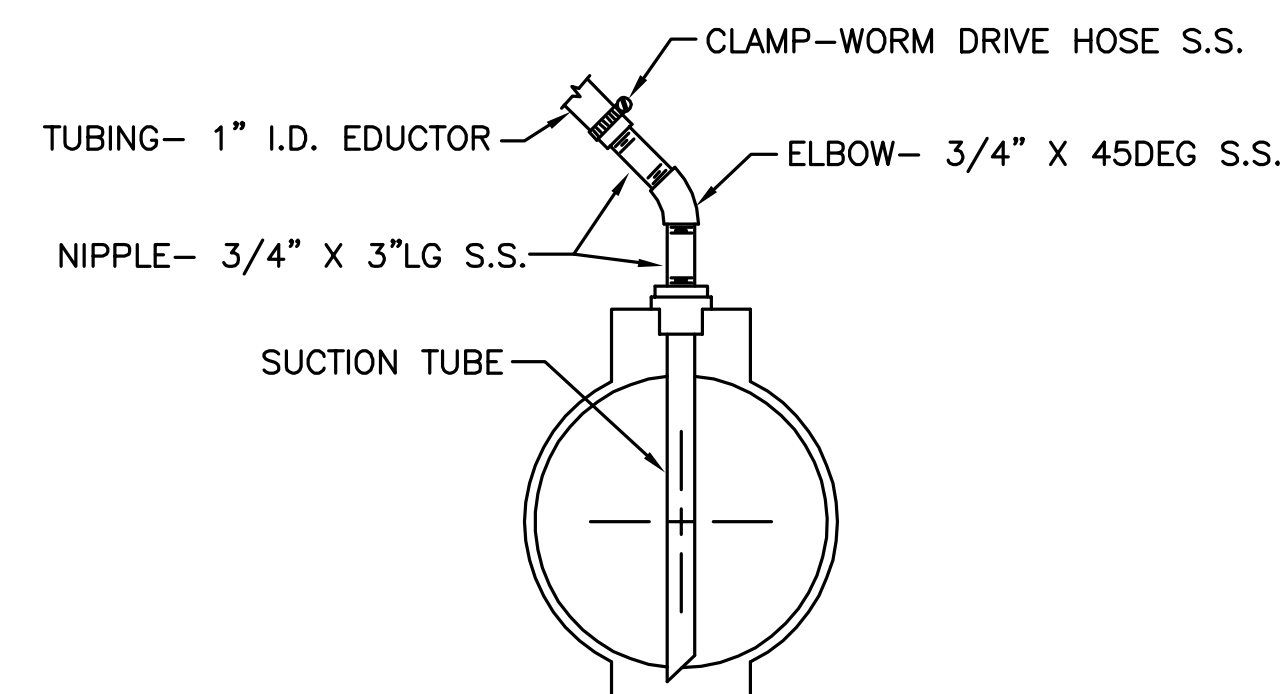
**EXPANSION JOINT DETAIL**



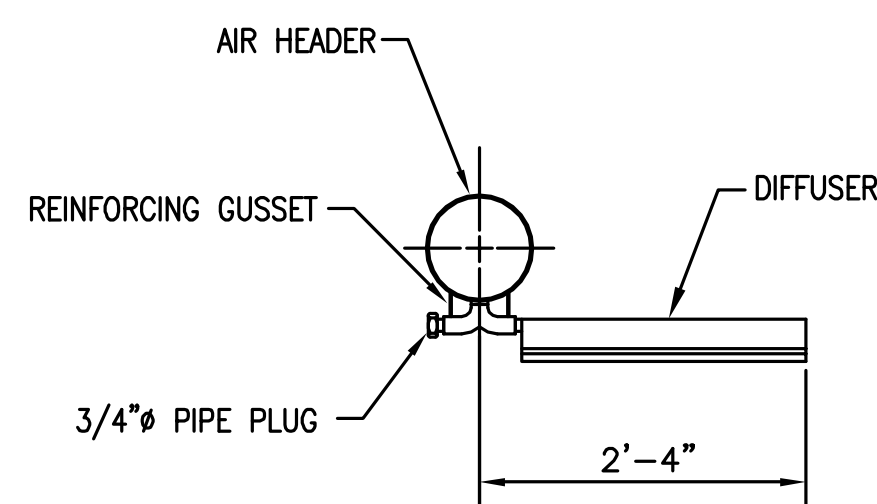
**(9") NOM. DIA. DIFFUSER ASSEMBLY DETAIL**



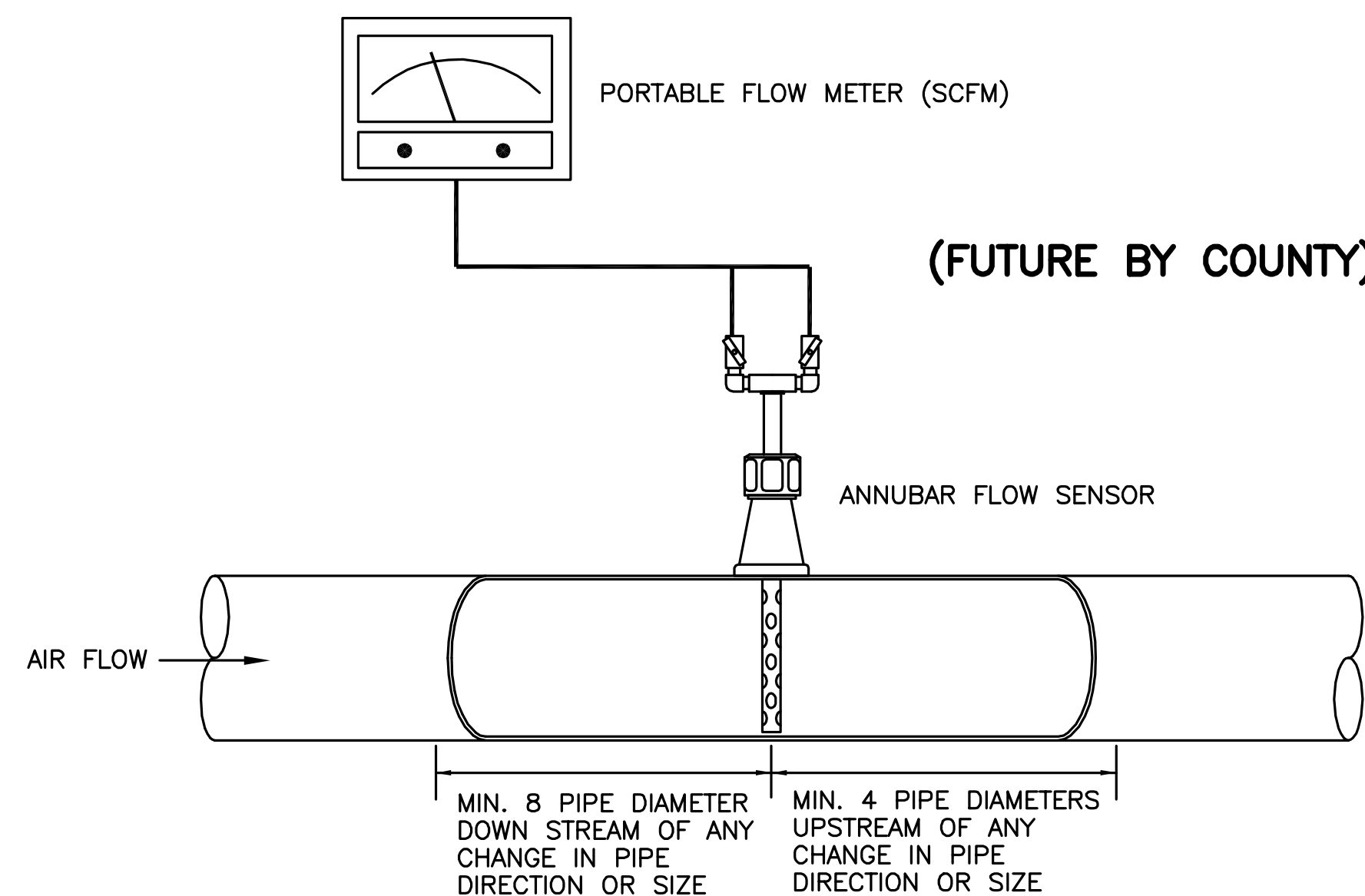
**TYPICAL DROPLEG DETAIL**



**PURGE SUMP DETAIL**



**DIFFUSER BANK**



**TYPICAL FLOW SENSOR LOCATION DETAIL**

NOTE: INSTALL FLOW SENSOR CENTERED ON TOP OF AIR MAIN.

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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

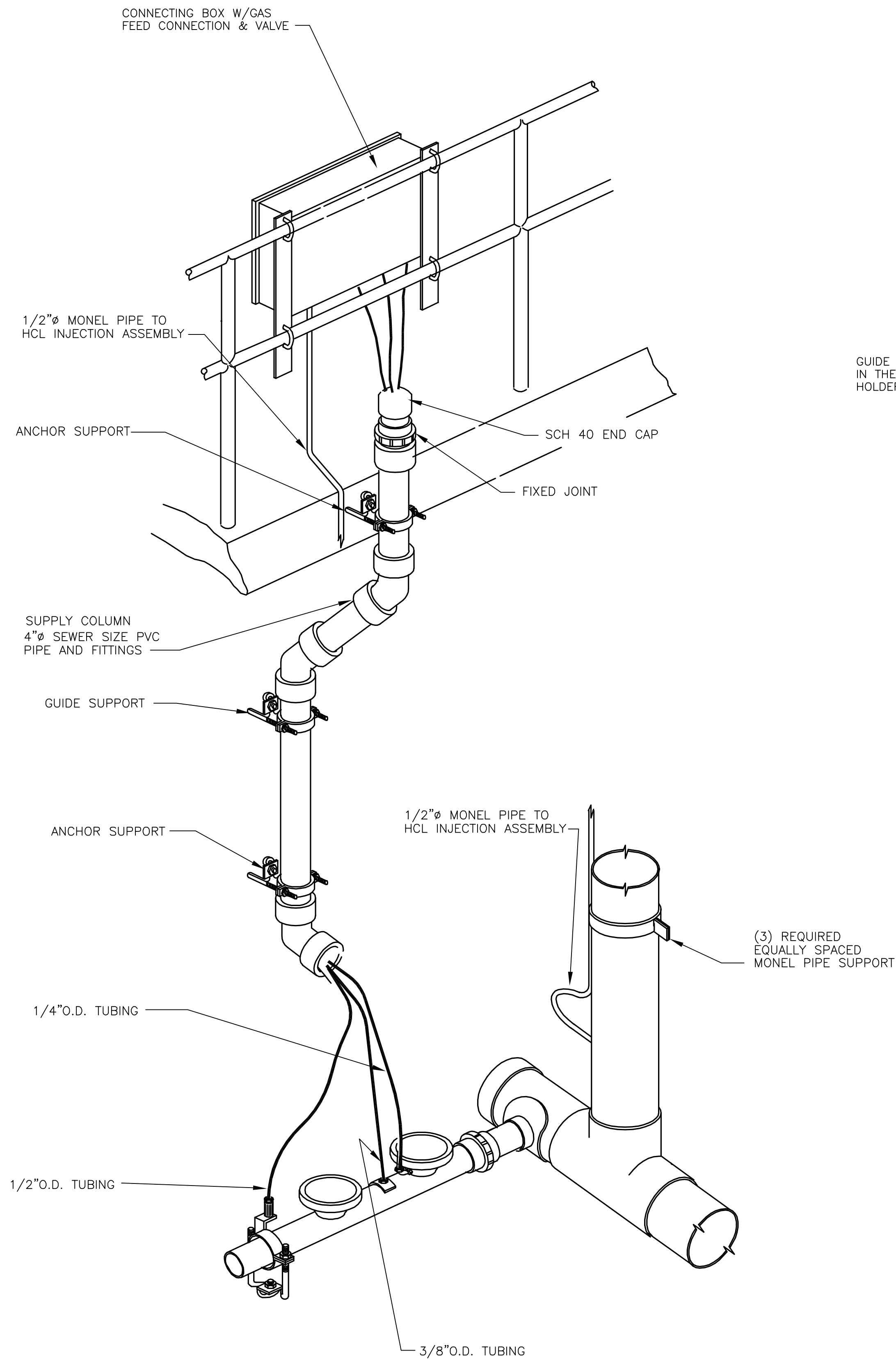
In charge of.....				
Designed by.....Checked by.....				
Drawn by.....				
	2	2/9/96	RECORD DRAWINGS	
	1	8/93	GENERAL REVISIONS	
	NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
AERATION TANKS  
MISCELLANEOUS DETAILS

FILE NO. 115.643-49RD	M-12
DATE JUNE 1993	R-2

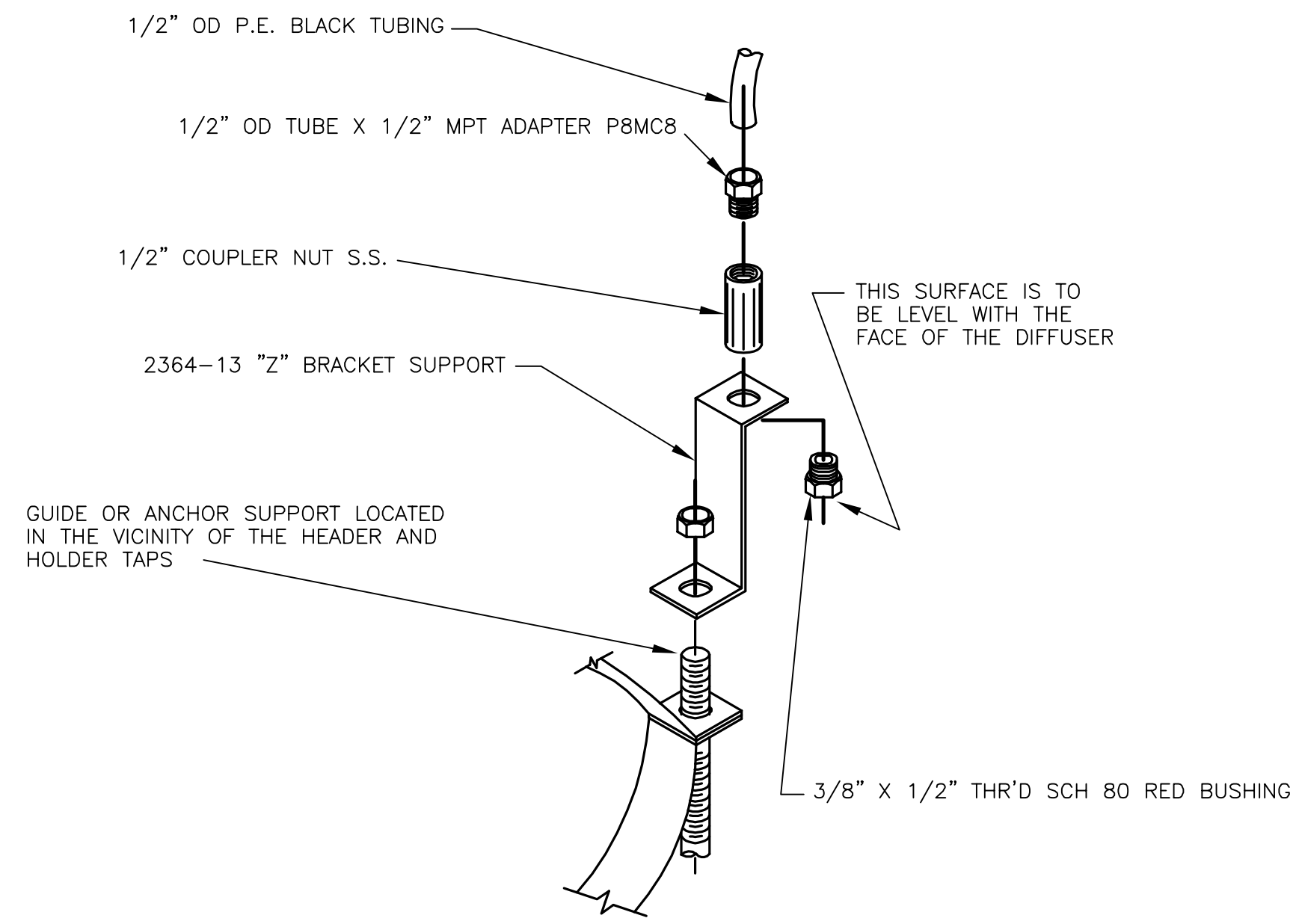


**PRESSURE MONITORING AND GAS FEED ASS'Y DETAIL**

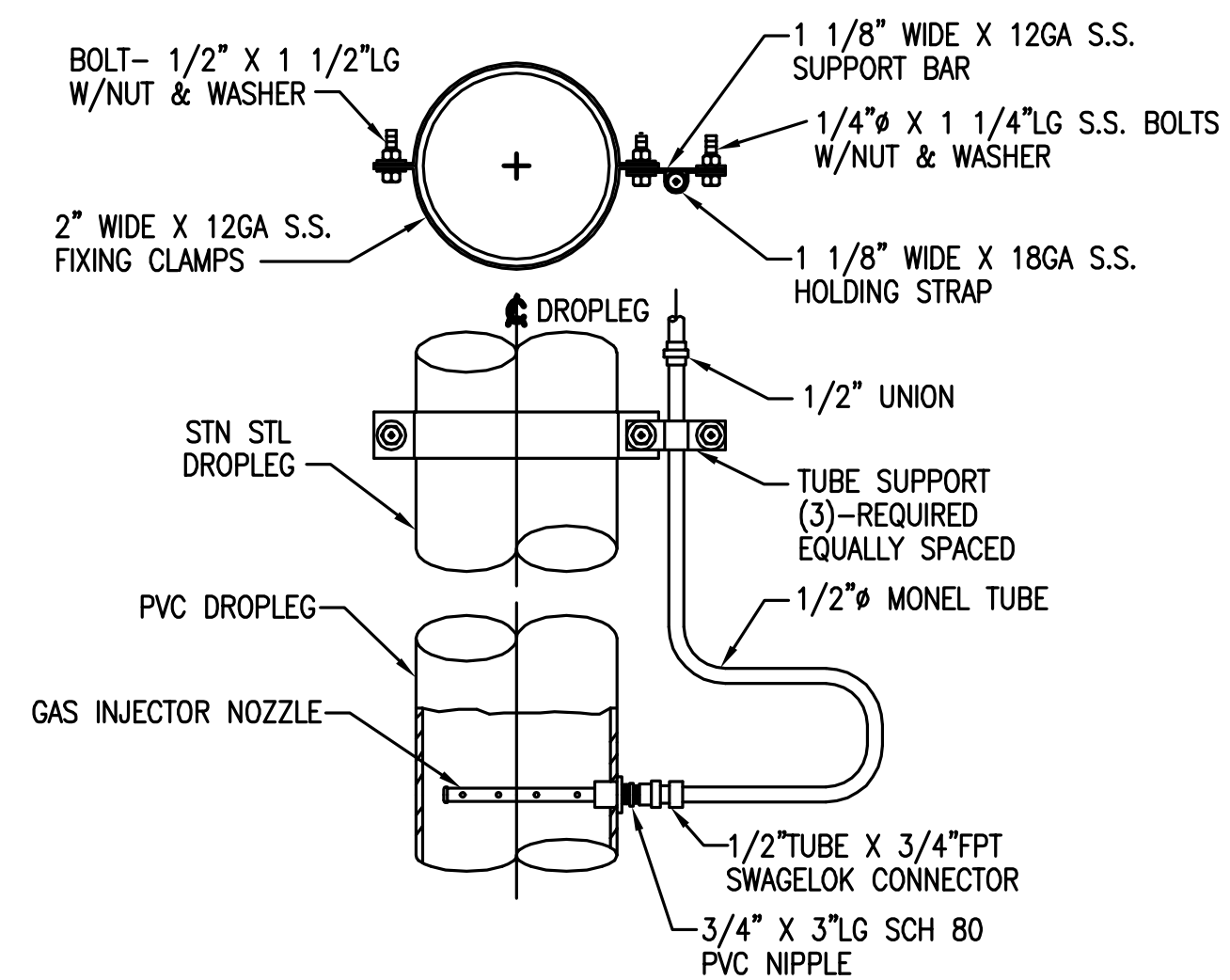
NOTE:  
PROVIDE ONE PRESSURE MONITORING AND GAS FEED ASSEMBLY AT EACH DROP LEG IN AERATION TANKS ZONES D, E, AND F.

It is a violation of law for any person unless he is acting under the direction of a licensed professional engineer to alter this document.

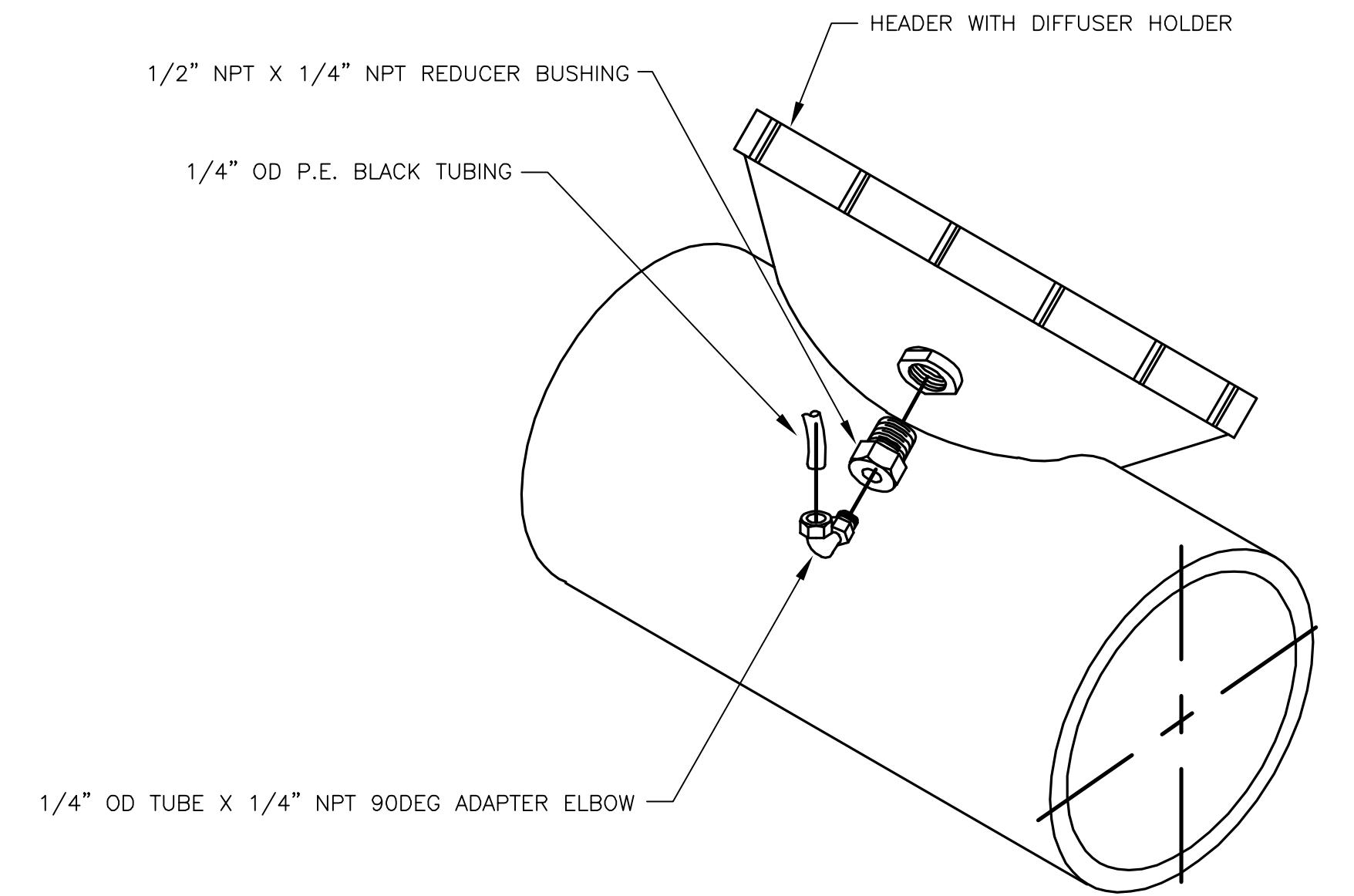
When photographic reproduction is used; the drawings are not to scale. All scales are reduced from indicated to approximately half size.



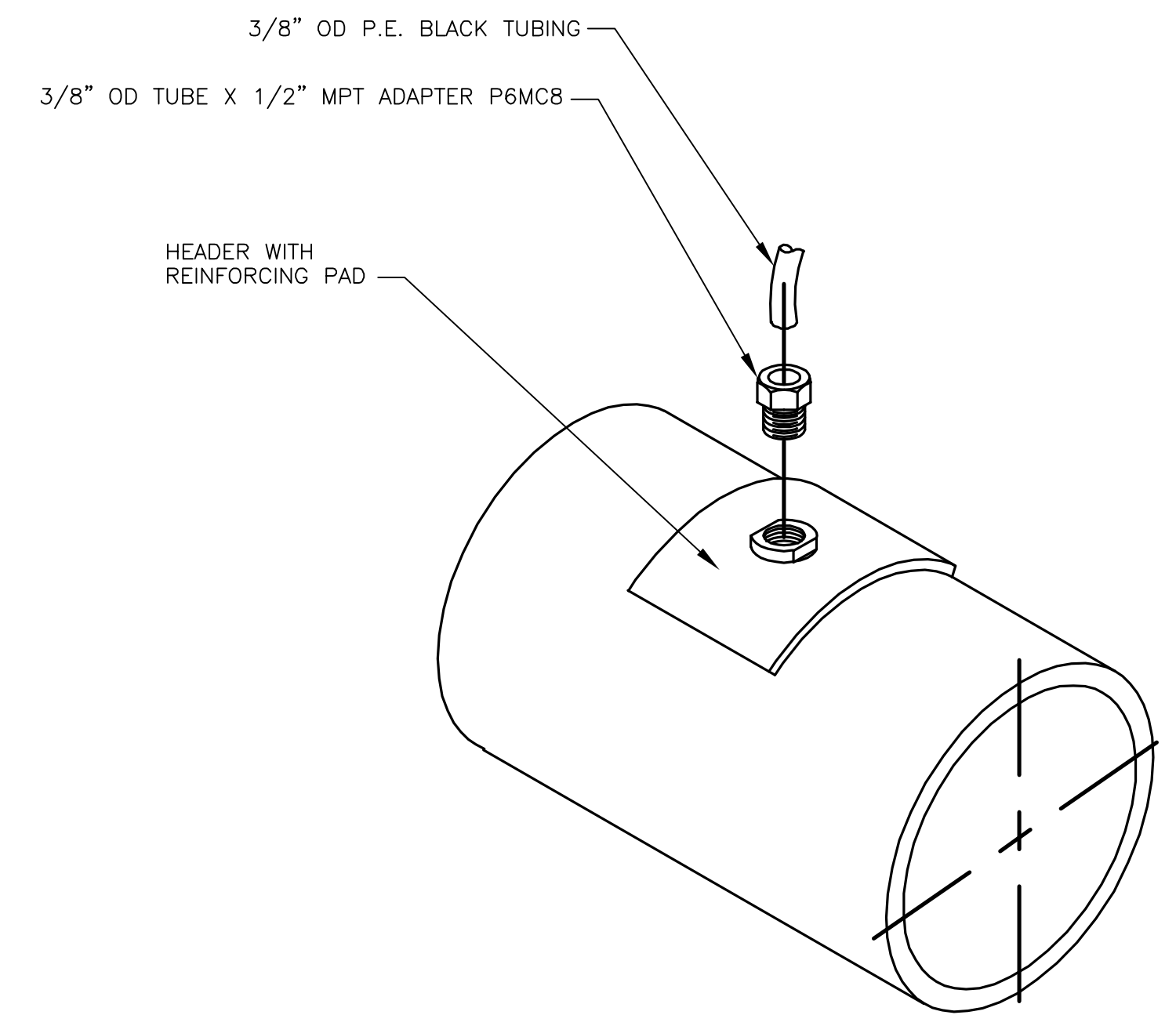
**BUBBLER LINE ASSEMBLY**



**GAS INJECTOR ASSEMBLY DETAIL**



**HOLDER TAP ASSEMBLY**



**HEADER TAP ASSEMBLY**

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

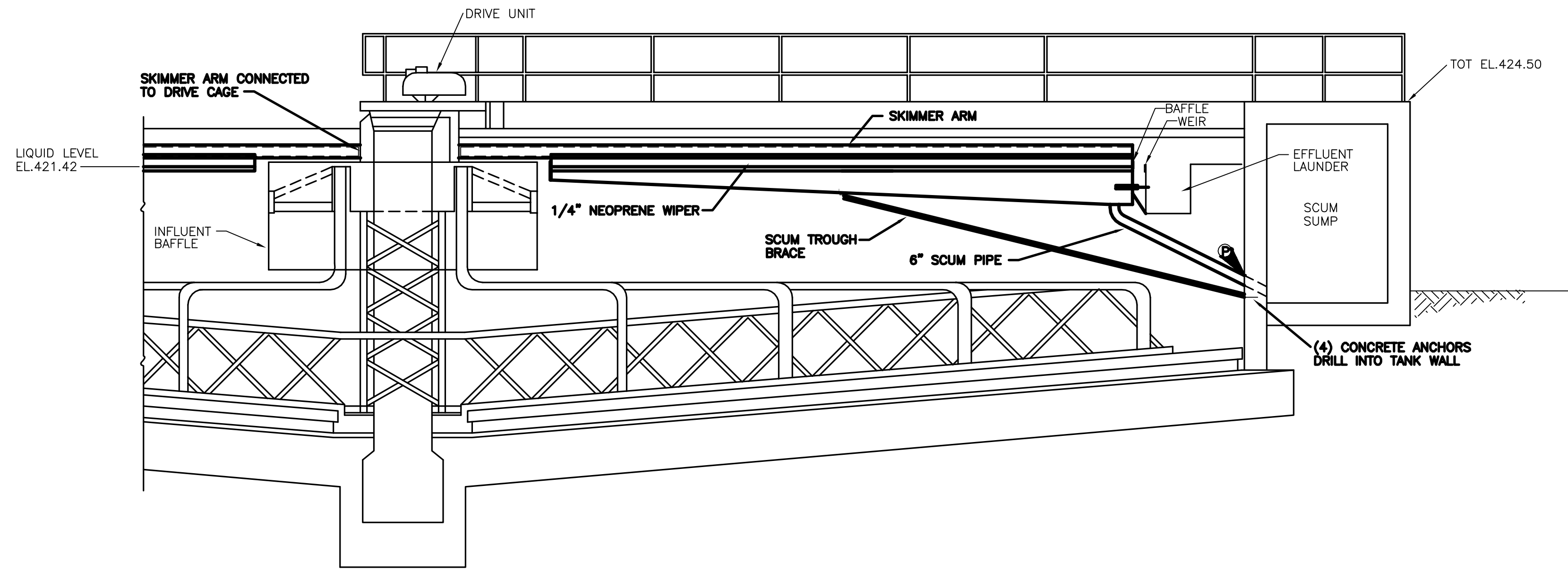
In charge of.....				
Designed by.....Checked by.....				
Drawn by.....				
	2	2/9/96	RECORD DRAWINGS	
	1	8/93	GENERAL REVISIONS	
	NO.	DATE	REVISION	INIT.



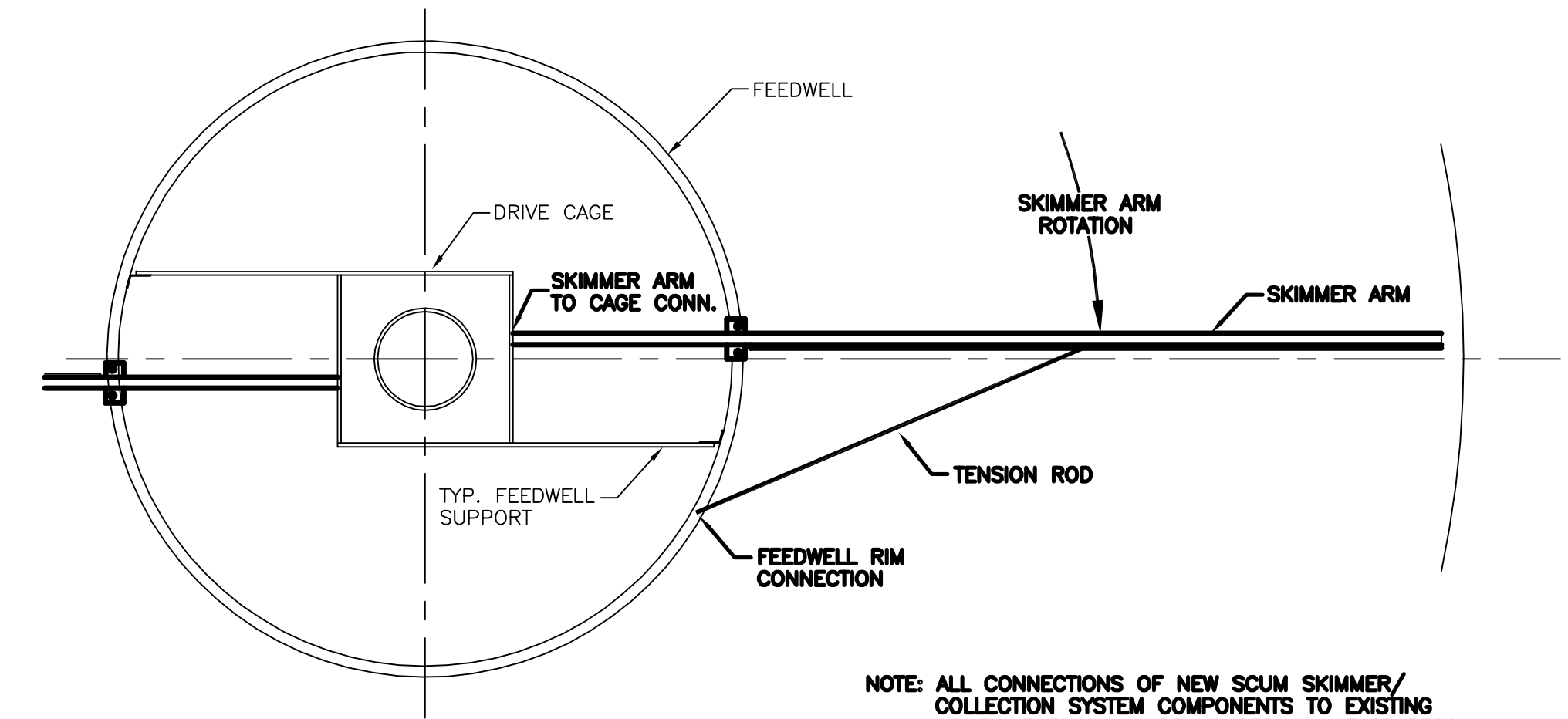
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
PRESSURE MONITORING ASSEMBLIES & DETAILS  
(3-VALVE CONNECTING BOX)

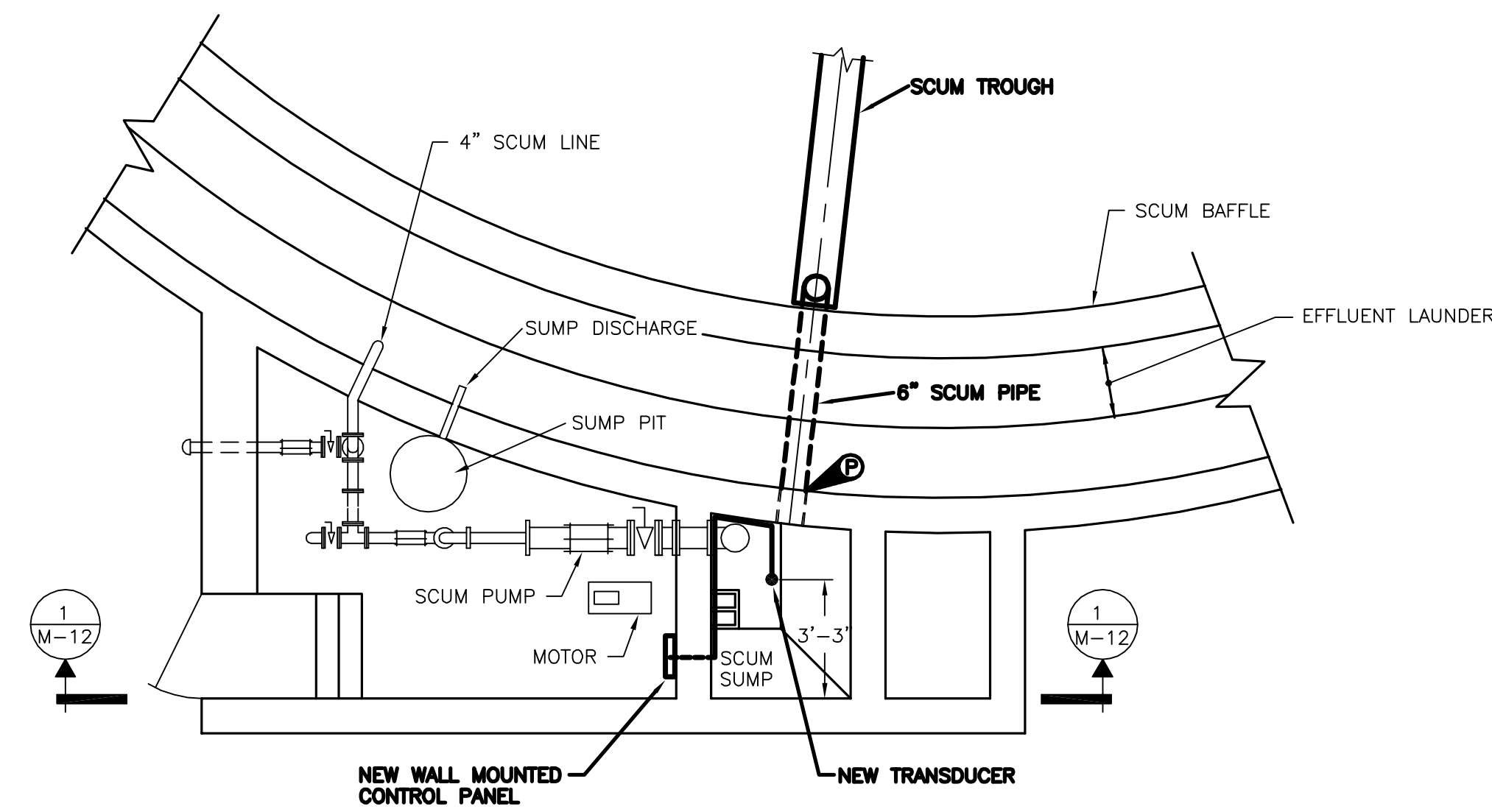
FILE NO. 115.643-50RD	M-14
DATE JUNE 1993	R-2



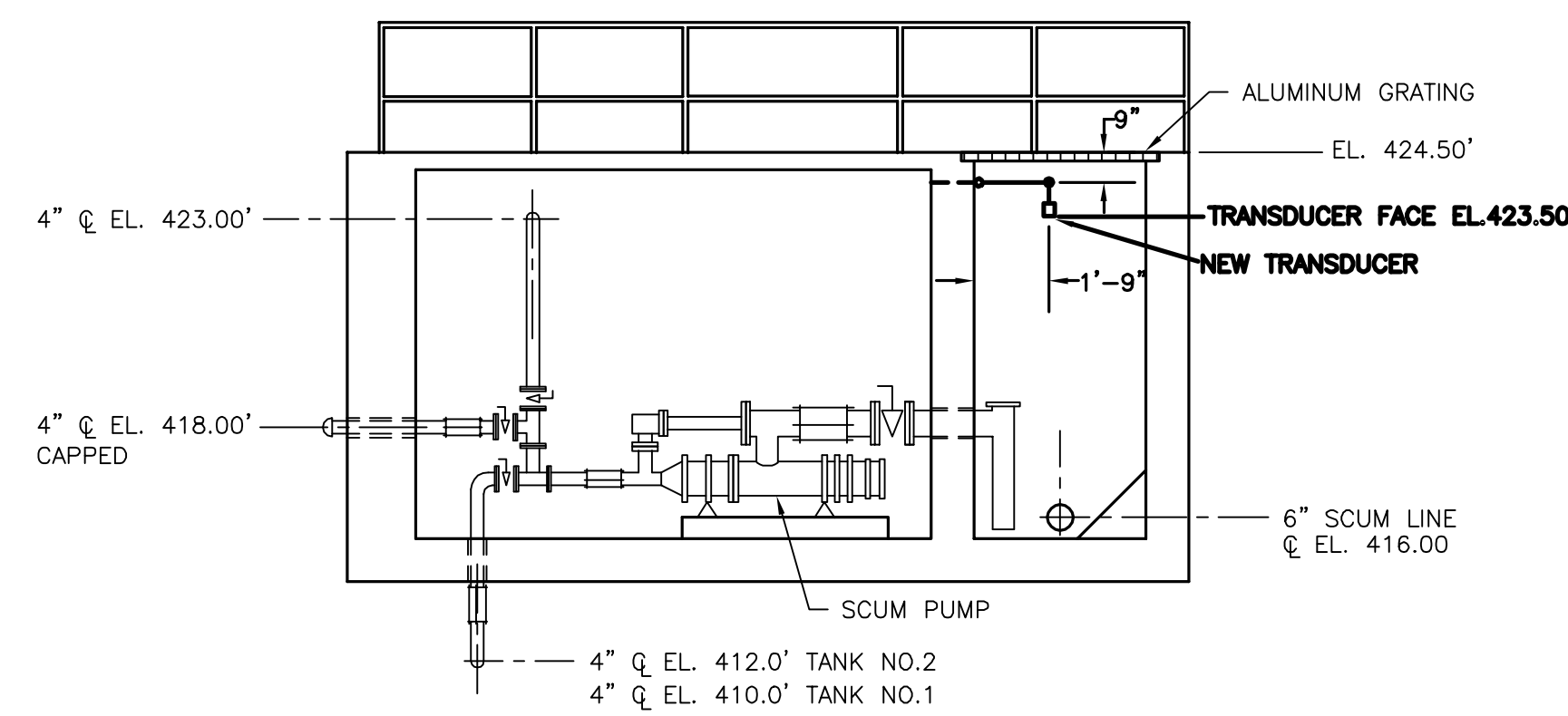
**SETTLING TANK SECTION**  
NOT TO SCALE



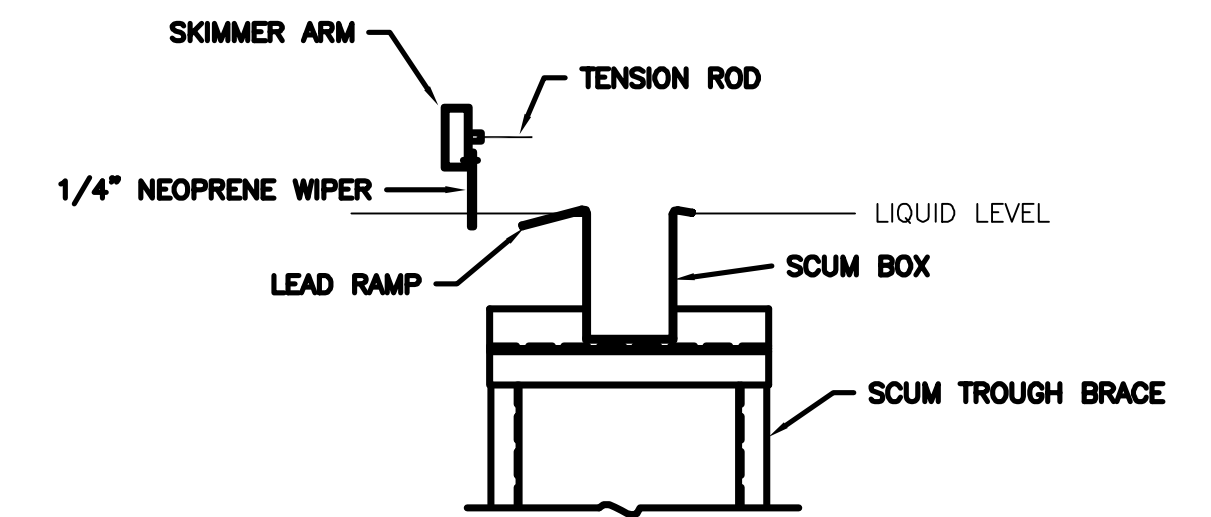
**SKIMMER ARM PLAN (TYP. FOR 2)**  
NOT TO SCALE



**SCUM PUMPING STRUCTURE**  
SCALE: 1/4" = 1'-0"



**SECTION 1**  
1/4"=1'-0" M-12



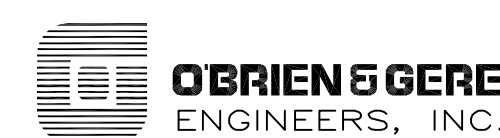
**SKIMMER ARM DETAIL**  
NOT TO SCALE

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RECORD DRAWINGS  
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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of.....				
Designed by.....Checked by.....				
Drawn by.....				
	2	2/9/96	RECORD DRAWINGS	
	1	8/93	RECORD DRAWINGS	
	NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

MECHANICAL  
CLARIFIERS  
PLAN, SECTIONS, AND DETAILS

FILE NO. 115.643-27RD	M-15
DATE JUNE 1993	R-2

**ABBREVIATIONS**

<b>A</b>	<b>H</b>	<b>R</b>
AC ALTERNATING CURRENT	HOA HAND-OFF-AUTOMATIC	RECP T RECEPTACLE
A AMMETER OR AMPERE	HZ HERTZ	R RED
AS AMMETER SWITCH	HP HORSEPOWER	
ANN ANNUNCIATOR		<b>S</b>
AA AUTOMATIC ALTERNATOR	<b>I</b>	SS SELECTOR SWITCH
MX AUXILIARY RELAY	ID IDENTIFICATION NUMBER	SPDT SINGLE POLE, DOUBLE THROW
	IF INFRARED HEATER	STP SHIELDED TWISTED PAIR
<b>B</b>	IC INPUT CONTROLLER OR INCREMENTAL CONDITIONERS	SV SOLENOID VALVE
BKR BREAKER	IT INTERCHANGEABLE TRIP OR INSTANTANEOUS	S/S START/STOP
		S/SL START/STOP LOCKOUT
<b>C</b>	<b>J</b>	SL STOP LOCKOUT
CL CENTERLINE	JB JUNCTION BOX	SYM SYMMETRICAL
CL <sub>2</sub> CHLORINE		
CB CIRCUIT BREAKER	<b>K</b>	<b>T</b>
CF(P OR L) CLOSE ON FALLING (PRESSURE OR LEVEL)	KVA KILOVOLT AMPERE	TEMP TEMPERATURE
CR(P OR L) CLOSE ON RISING (PRESSURE OR LEVEL)	KW KILOWATT	T THERMOSTAT
CH CONVECTION HEATER		TS TEMPERATURE SWITCH
COMPT COMPARTMENT	<b>L</b>	TC TIME-CLOSE CONTACT
COND CONDUCTOR	L LEVEL	TO TIME-OPEN CONTACT
CDT CONDUIT	LP( )-( ) LIGHTING CIRCUIT ( )	TR TIMING RELAY
C-( ) CONTRACT-( ) ID	LP( ) LIGHTING PANELBOARD	TRI SHIELDED TRIPLE CABLE
CC-( ) CONTROL CONDUIT-( ) ID	LS LIMIT SWITCH	TYP TYPICAL
CPT CONTROL POWER TRANSFORMER	LC LOUVER CONTROLLER	
CR-( ) CONTROL RELAY-( ) ID	LM LOUVER MOTOR	<b>U</b>
I/I CURRENT TO CURRENT TRANSDUCER	<b>M</b>	UH UNIT HEATER
I/P CURRENT TO PNEUMATIC TRANSDUCER	M MAIN CONTACTOR	
CT CURRENT TRANSFORMER	MCM THOUSAND CIRCULAR MILS	<b>V</b>
	MF-( ) MAIN FEEDER-( ) ID	V VOLT OR VOLTMETER
	MGD MILLION GALLONS PER DAY	VAC VOLTS ALTERNATING CURRENT
	MCP MOTOR CIRCUIT PROTECTOR	VDC VOLTS DIRECT CURRENT
	MCC MOTOR CONTROL CENTER	VS VOLTMETER SWITCH
	MTR MOTORIZED TIMING RELAY	
	<b>N</b>	<b>W</b>
	NP NAMEPLATE	W WATT
	N.C. NORMALLY CLOSED	WP WEATHERPROOF
	N.O. NORMALLY OPEN	
	No. NUMBER	<b>O</b>
		( ) OL OVERLOAD ( ) NUMBER OF
		<b>P</b>
		Ø PHASE
		TR PNEUMATIC TIMING RELAY
		P/I PNEUMATIC TO CURRENT TRANSDUCER
		( ) P POLES ( ) NO OF POLES
		PT POTENTIAL TRANSFORMER
		PC( )-( ) POWER AND CONTROL CIRCUIT ( ) MCC ID/ ( ) ID
		P( )-( ) POWER CIRCUIT ( ) MCC ID/ ( ) ID
		PF-( ) POWER FEEDER ( ) ID
		PRE POWER ROOF EXHAUSTER
		P PRESSURE
		PS PRESSURE SWITCH
		PWV POWER WALL VENTILATOR

**ELEMENTARY**

	FUSE
	GROUND
	MAINTAINED PUSHBUTTON(S)
	MOMENTARY PUSHBUTTON
	DISCONNECT SWITCH (SPDT)
	SELECTOR SWITCH
	TEMPERATURE ACTUATED SWITCH
	PRESSURE ACTUATED SWITCH
	FLOW ACTUATED SWITCH
	TORQUE ACTUATED SWITCH
	LIMIT SWITCH
	TIME ACTUATED CONTACTS (ENERGIZED)
	TIME ACTUATED CONTACTS (DE-ENERGIZED)
	LEVEL ACTUATED SWITCH
	CONTACTOR OR RELAY CLOSURE OR OPENING
	MAIN CONTACTOR OR RELAY CONTACT CLOSURE OR OPENING
	RELAY OR CONTACTOR COIL
	RED OR GREEN INDICATING LIGHT
	RED OR GREEN PUSH-TO-TEST LIGHT

**LEGEND**

<b>ONE LINE</b>	<b>POWER</b>
	POTENTIAL TRANSFORMER (PT)
	CURRENT TRANSFORMER (CT)
	MOLDED CASE CIRCUIT BREAKER (OPEN OR ENCLOSED)
	DRAW-OUT FEATURE
	CPT (120 VAC SECONDARY, 10 WITH FUSED PRIMARY)
	THERMAL OVERLOAD
	COMBINATION FULL VOLTAGE NON-REVERSING MOTOR STARTER WITH CPT AND OVERLOAD
	COMBINATION FULL VOLTAGE TWO SPEED-TWO WINDING MOTOR STARTER WITH CPT AND OL
	DISCONNECT SWITCH (OPEN OR ENCLOSED)
	TWO WINDING TRANSFORMER
	CONTROL STATION OR INDICATING LIGHT
	SELECTOR SWITCH
	SQUIRREL CAGE INDUCTION MOTOR WITH HORSEPOWER
	VARIABLE FREQUENCY DRIVE
	COMBINATION STARTER
	EXPOSED CONDUIT
	CONDUIT ROUTED IN OR UNDER SLAB OR ABOVE FINISHED GRADE
	CONDUIT ROUTED DOWN
	CONDUIT ROUTED UP
	JUNCTION BOX
	ELECTRICAL CONNECTION
	LIGHTNING AIR TERMINAL
	INSTRUMENT SIGNAL (TWISTED PAIR)
	PNEUMATIC SIGNAL
	480V PANELBOARD
	120/208V PANELBOARD

**SECURITY, FIRE ALARM AND COMMUNICATIONS**

	MANUAL FULL STATION
	SMOKE DETECTOR
	THERMO DETECTOR RATE OF RISE 190° DETECTOR
	KEY SWITCH
	DOOR TYPE LIMIT SWITCH
	AUDIO VISUAL FIRE ALARM DEVICE
	SECURITY SYSTEM HORN
	TELEPHONE OUTLET

**INSTRUMENTATION**

	FLOW TRANSMITTER
	JUNCTION BOX
	LEVEL FLOAT SWITCH
	LEVEL TRANSMITTER
	PRESSURE SWITCH
	PRESSURE TRANSMITTER
	STOP LOCKOUT
	TEMPERATURE SWITCH

**SITE LEGEND**

	UNDERGROUND TELEPHONE
	UNDERGROUND ELECTRIC
	12" WATER MAIN
	6" FORCE MAIN
	8" SANITARY
	MH 6 SANITARY MANHOLE
	WATER LINE w/HYDRANT
	STORM SEWER
	PROPERTY LINE / UTILITY EASEMENT
	ELECTRIC MANHOLE (SEE DETAIL)
	SITE LIGHTING FIXTURE (1 OR 2 FIXTURES)

**LIGHTING**

	CEILING MOUNTED INCANDESCENT FIXTURE
	WALL MOUNTED INCANDESCENT FIXTURE
	FLUORESCENT FIXTURE
	NIGHT LIGHT (EMERGENCY LIGHT)
	SURFACE RACEWAY w/ RECEPTACLES AS SHOWN. PROVIDE ALL FITTINGS FOR COMPLETE SYSTEM.
	DUPLEX RECEPTACLE PER SPECIFICATION
	DUPLEX RECEPTACLE w/ FLUSH BOX & WEATHERPROOF PLATE

	DUPLEX GFI RECEPTACLE PER SPECIFICATION
	DOUBLE DUPLEX RECEPTACLE w/SINGLE PLATE
	CLOCK (RECESSED) RECEPTACLE MOUNTED + 15" BELOW CEILING (COORDINATE ACTUAL HEIGHT IN FIELD)
	MANUAL STARTER (ENCLOSURE & HP AS REQUIRED)
	SINGLE POLE SWITCH PER SPECIFICATIONS
	3-WAY SWITCH PER SPECIFICATIONS
	4-WAY SWITCH PER SPECIFICATIONS
	HOME RUN TO PANEL - CIRCUIT AS SHOWN 3/4" COND. w/ 2, 3, OR 4 #12 & #16 AS SHOWN OR SCHEDULED. (UNLESS OTHERWISE SHOWN)

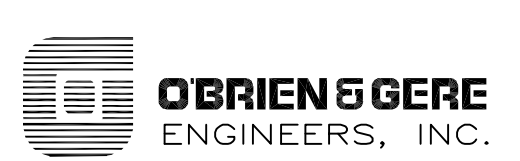
**RECORD DRAWINGS**

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

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In charge of.....			
Designed by.....Checked by.....			
Drawn by.....			
NO.	DATE	REVISION	INIT.
0	2/9/96	RECORD DRAWINGS	

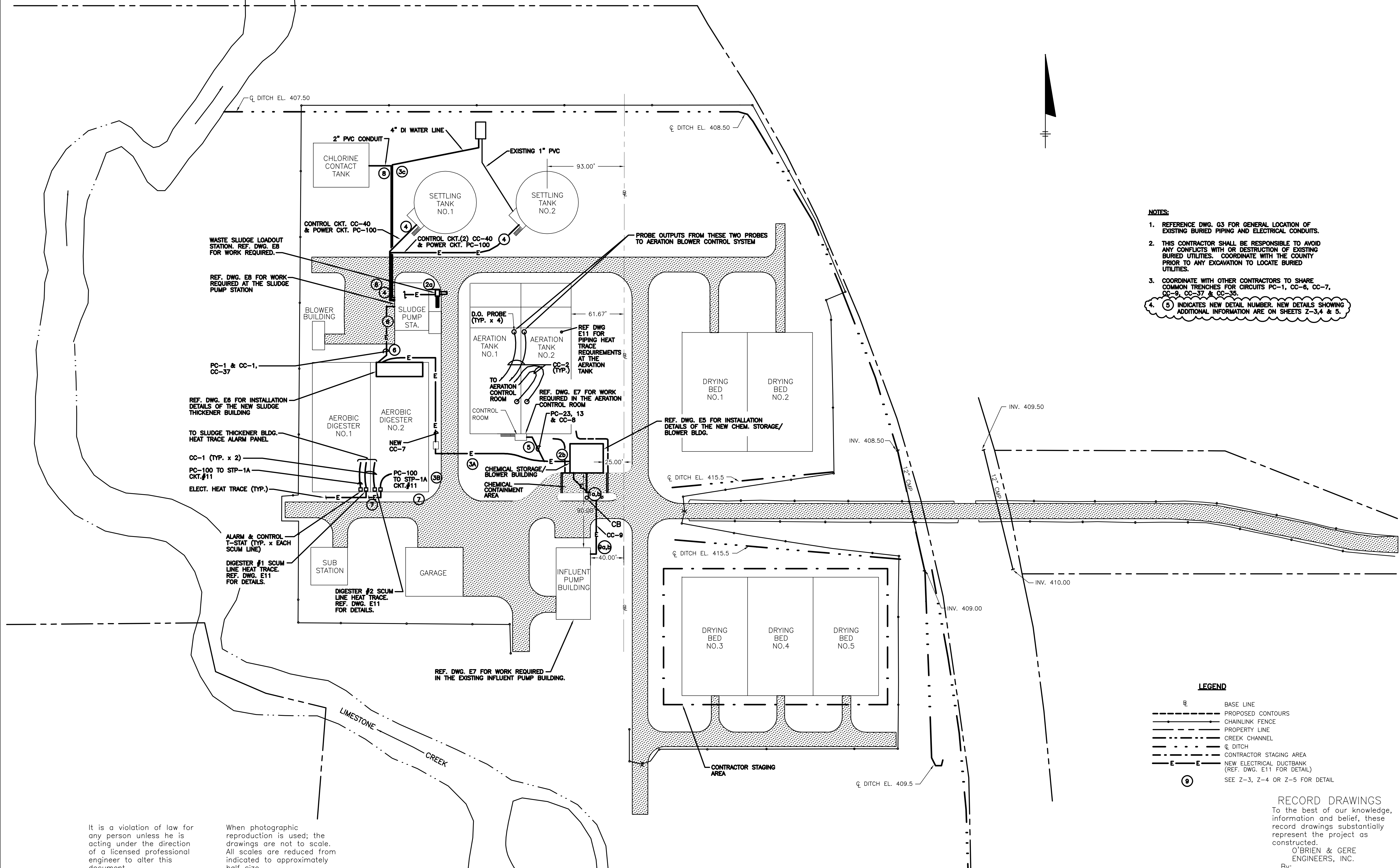


ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
 ABBREVIATIONS AND SYMBOLS

FILE NO.	E-1
115.643-29RD	
DATE	R-0
AUGUST 1993	





- NOTES:**
1. REFERENCE DWG. G3 FOR GENERAL LOCATION OF EXISTING BURIED PIPING AND ELECTRICAL CONDUITS.
  2. THIS CONTRACTOR SHALL BE RESPONSIBLE TO AVOID ANY CONFLICTS WITH OR DESTRUCTION OF EXISTING BURIED UTILITIES. COORDINATE WITH THE COUNTY PRIOR TO ANY EXCAVATION TO LOCATE BURIED UTILITIES.
  3. COORDINATE WITH OTHER CONTRACTORS TO SHARE COMMON TRENCHES FOR CIRCUITS PC-1, CC-6, CC-7, CC-9, CC-37 & CC-35.
  4. (5) INDICATES NEW DETAIL NUMBER. NEW DETAILS SHOWING ADDITIONAL INFORMATION ARE ON SHEETS Z-3, 4 & 5.

**LEGEND**

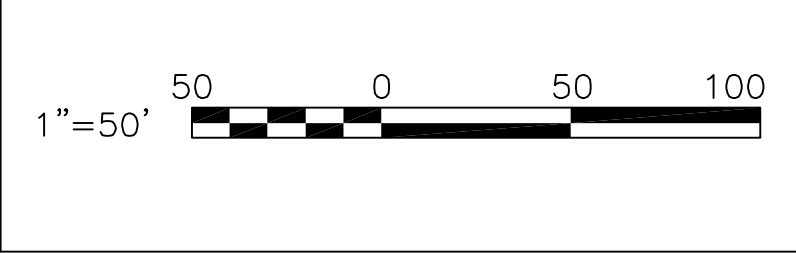
	BASE LINE
	PROPOSED CONTOURS
	CHAINLINK FENCE
	PROPERTY LINE
	CREEK CHANNEL
	☉ DITCH
	CONTRACTOR STAGING AREA
	NEW ELECTRICAL DUCTBANK (REF. DWG. E11 FOR DETAIL)
	(5) SEE Z-3, Z-4 OR Z-5 FOR DETAIL

**RECORD DRAWINGS**  
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 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

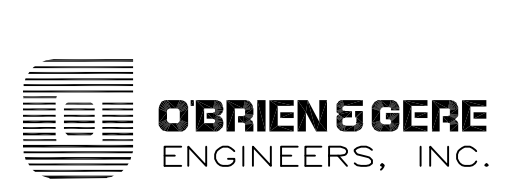
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In charge of \_\_\_\_\_  
 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_



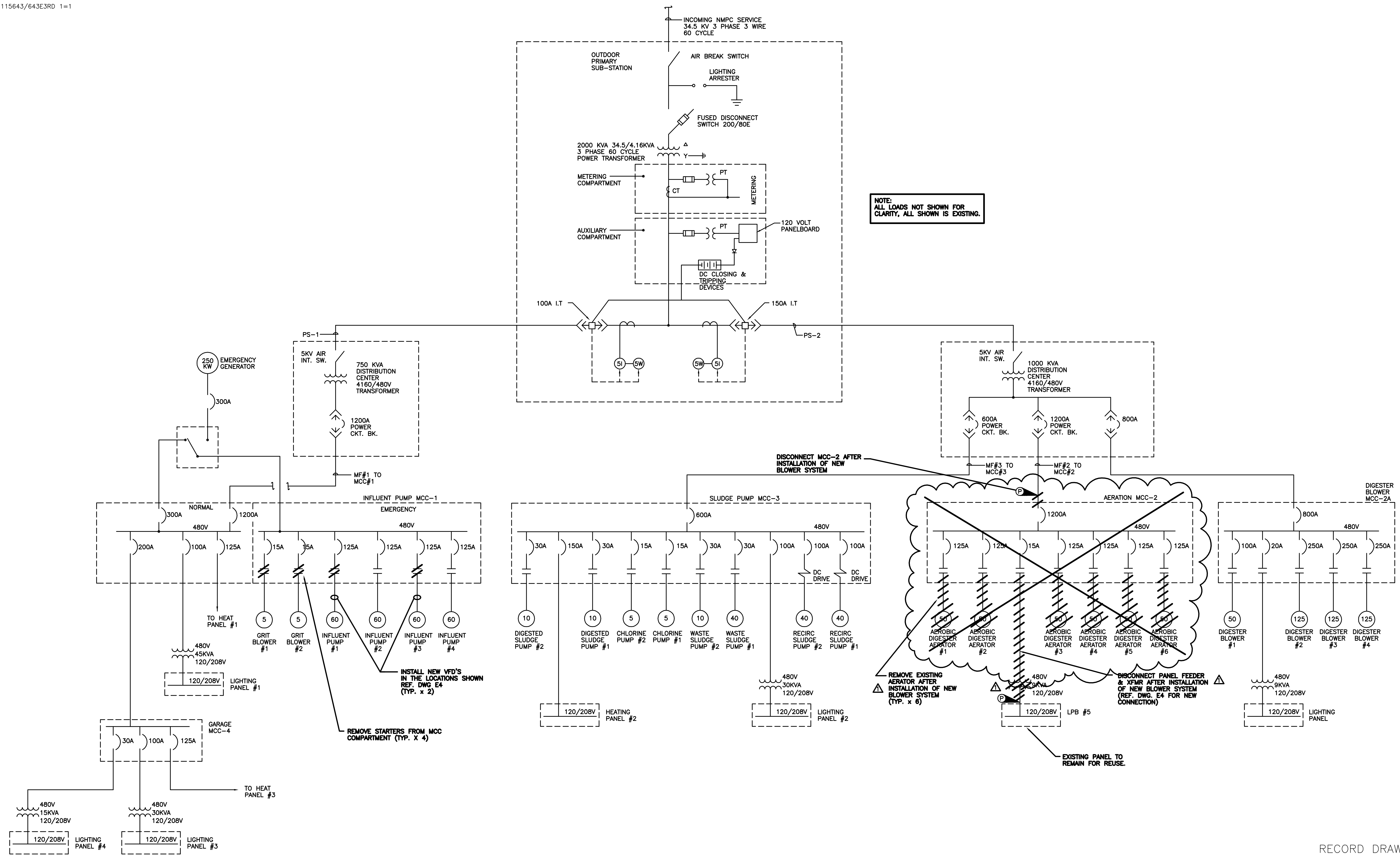
NO.	DATE	REVISION	INIT.
0	2/96	RECORD DRAWINGS	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
 SITE PLAN

FILE NO. 115.643-30RD	E-2
DATE AUGUST 1993	R-0



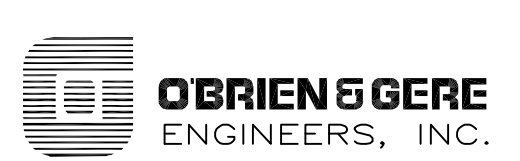
NOTE:  
ALL LOADS NOT SHOWN FOR  
CLARITY, ALL SHOWN IS EXISTING.

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ENGINEERS, INC.  
By: \_\_\_\_\_

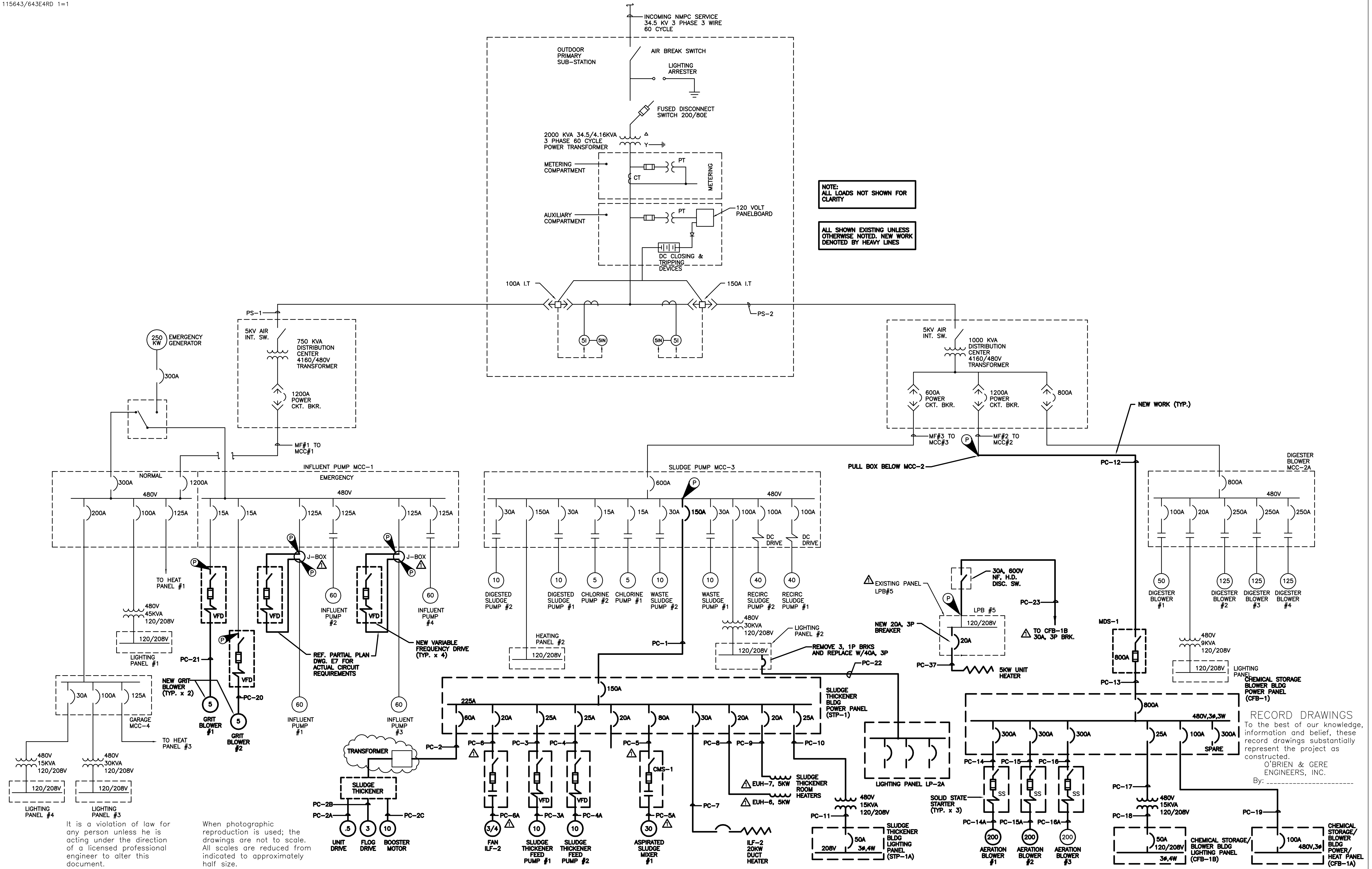
In charge of.....	NOT TO SCALE			
Designed by.....Checked by.....				
Drawn by.....				
		2	2/9/96	RECORD DRAWINGS
		1	8/93	GENERAL REVISION
		NO.	DATE	REVISION
				INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
EXISTING  
ONE LINE DIAGRAM

FILE NO.	115.643-31RD	E-3
DATE	AUGUST 1993	R-2



NOTE:  
ALL LOADS NOT SHOWN FOR  
CLARITY

ALL SHOWN EXISTING UNLESS  
OTHERWISE NOTED. NEW WORK  
DENOTED BY HEAVY LINES

NEW WORK (TYP.)

RECORD DRAWINGS  
To the best of our knowledge,  
information and belief, these  
record drawings substantially  
represent the project as  
constructed.  
O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

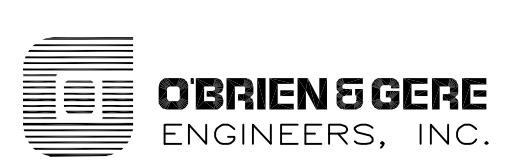
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reproduction is used; the  
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indicated to approximately  
half size.

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_

NOT TO SCALE

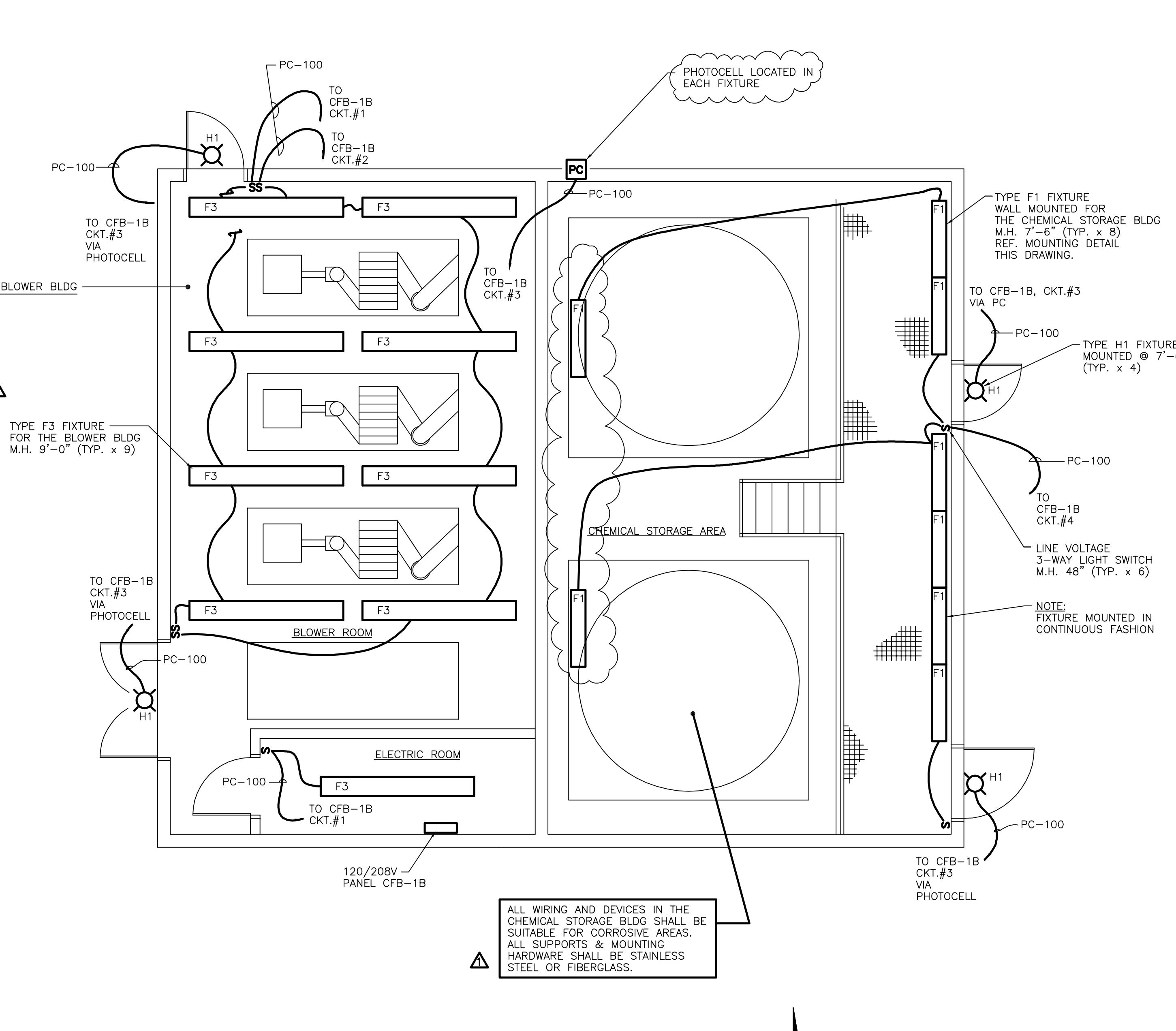
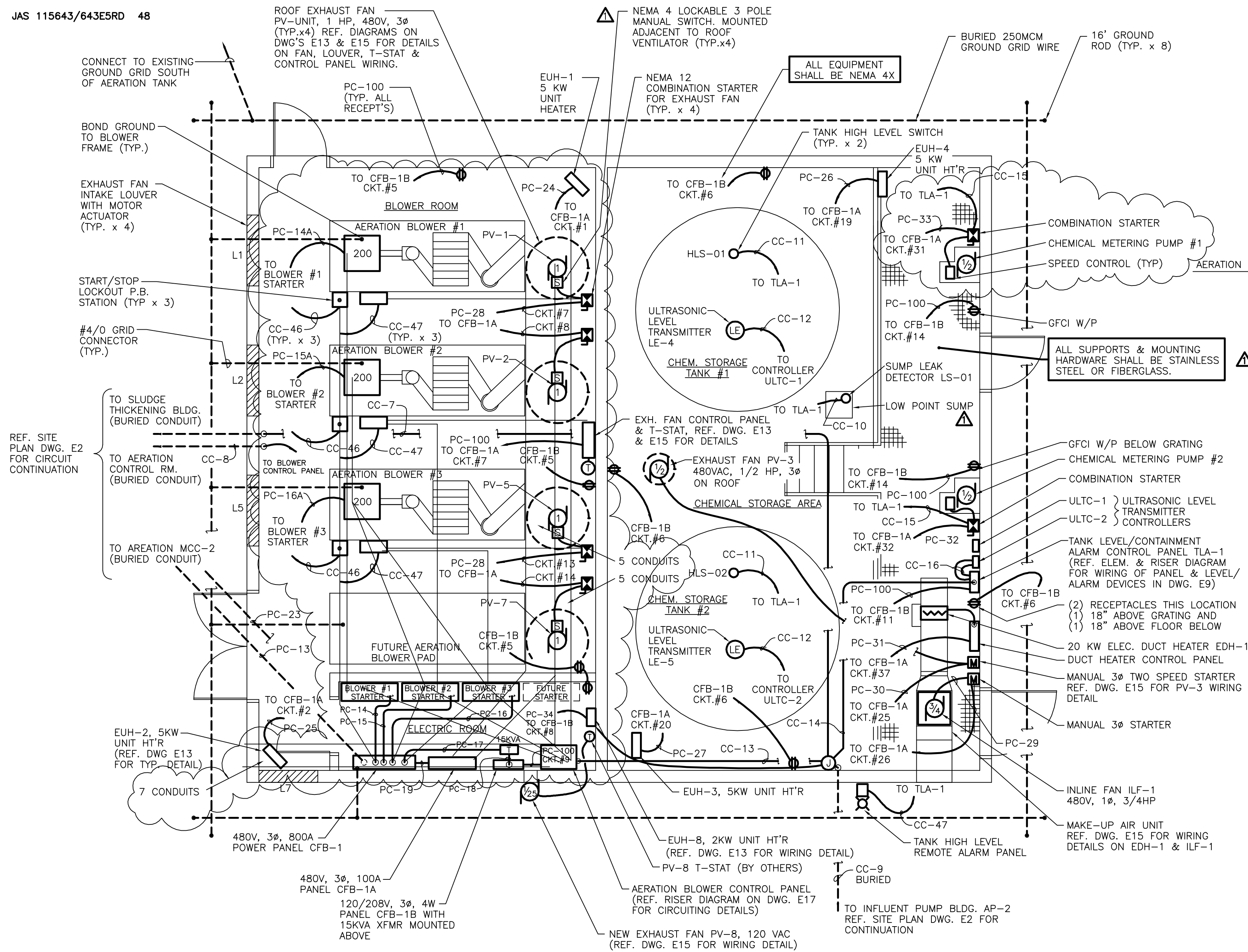
NO.	DATE	REVISION
2	2/9/96	RECORD DRAWINGS
1	8/93	GENERAL REVISION



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
NEW  
ONE LINE DIAGRAM

FILE NO. 115.643-32RD	E-4
DATE AUGUST 1993	R-2



**CHEMICAL STORAGE / BLOWER BLDG. POWER AND CONTROL PLAN**

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

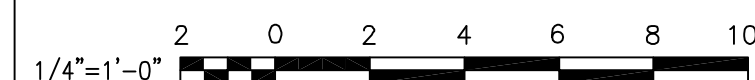
**LIGHTING FIXTURE SCHEDULE**

TYPE	DESCRIPTION	TYPICAL APPLICATION (FOR INFORMATION ONLY)	LAMPS		VOLTAGE	MANUFACTURER #1 - MODEL	REMARKS
			QUANTITY	TYPE			
F1	STAINLESS STEEL NEMA 4X W/BACKET	ANGLE BRACKET WALL MOUNT	2	60W H.O.	120	RIG-A-LITE #46715 OR EQUAL	WALL MOUNT PER DETAIL DWG E-5
F2	ENCLOSED INDUSTRIAL	SURFACE WALL MOUNT	2	F40	120	KEENE # STD240 OR EQUAL	-
F3	ENCLOSED INDUSTRIAL	SURFACE OR SUSP MOUNT	2	110 H.O.	120	KEENE # STD296HO OR EQUAL	-
H1	INDUSTRIAL OUTDOOR HID	SMALL AREA LIGHT	1	50W H.P.S.	120	KEENE # UL050NLXL OR EQUAL	MOUNT OVER DOORWAYS AS SHOWN

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In charge of.....  
Designed by.....Checked by.....  
Drawn by.....



NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISION	



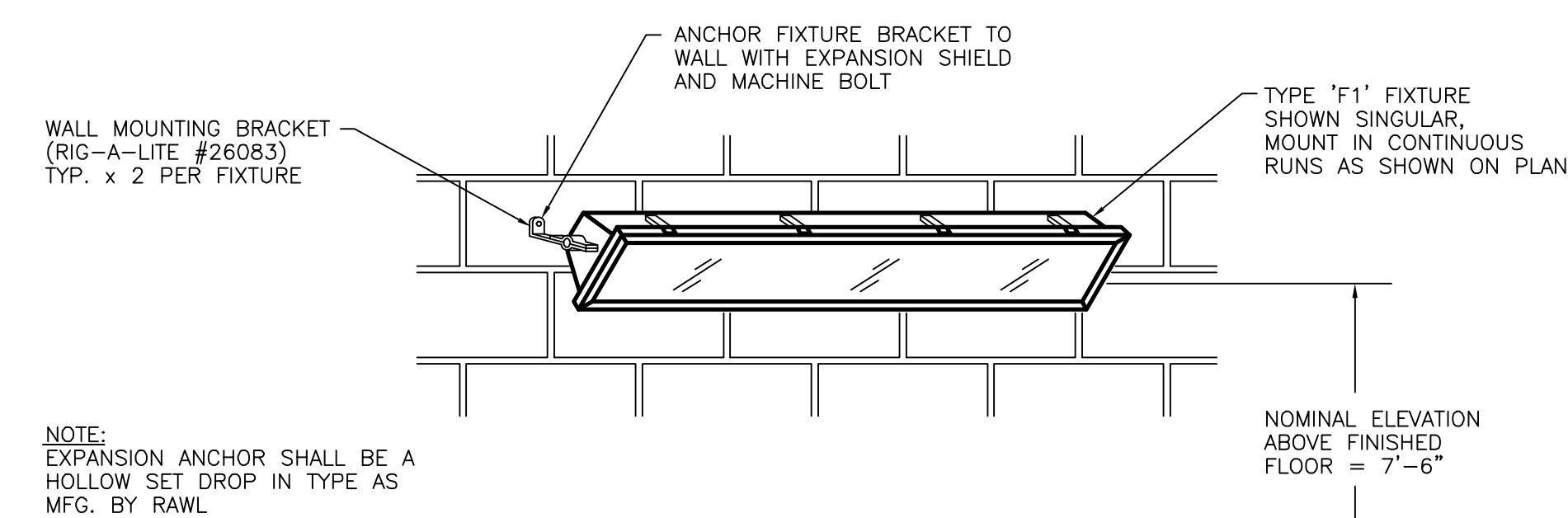
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
CHEMICAL STORAGE / BLOWER BUILDING  
POWER AND LIGHTING PLANS

FILE NO.	115.643-33RD	E-5
DATE	AUGUST 1993	R-2

**CHEMICAL STORAGE / BLOWER BLDG. LIGHTING PLAN**

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

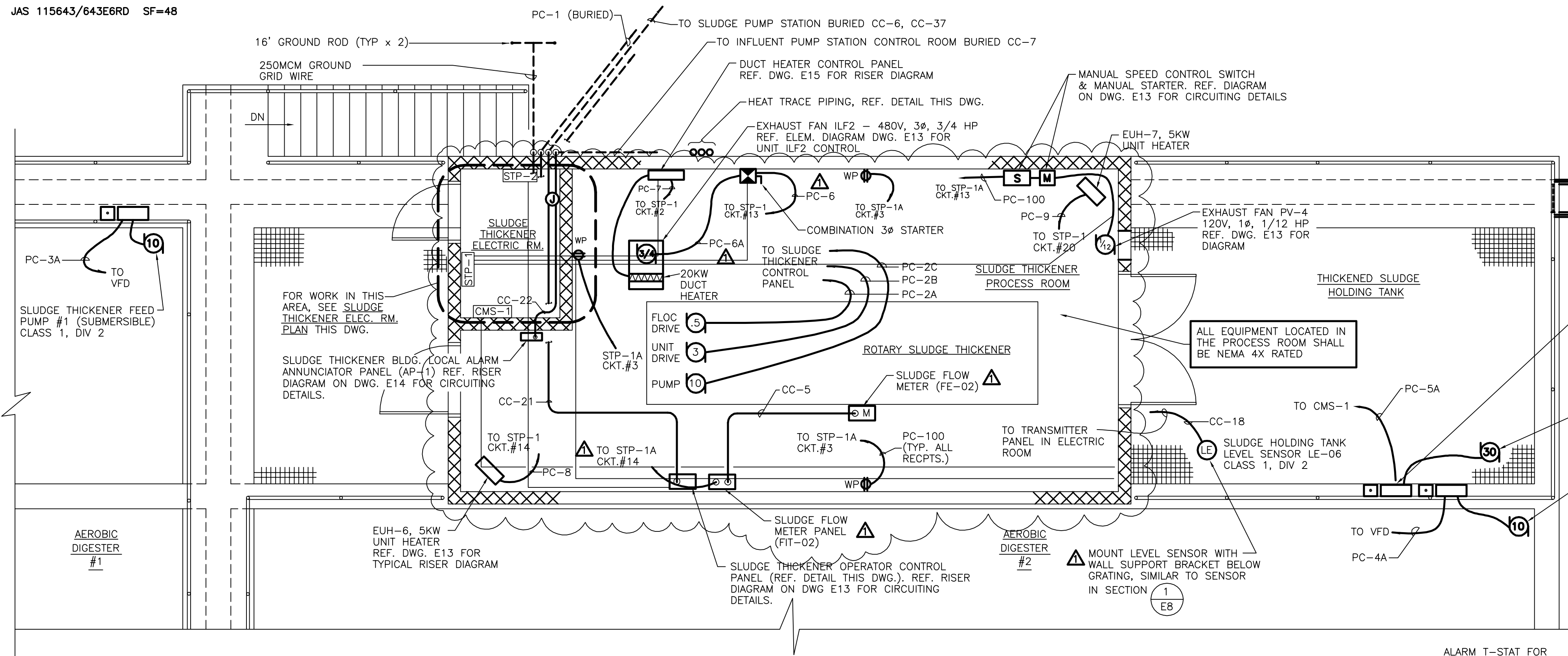


**FIXTURE TYPE 'F1' MOUNTING DETAIL**

NO SCALE

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

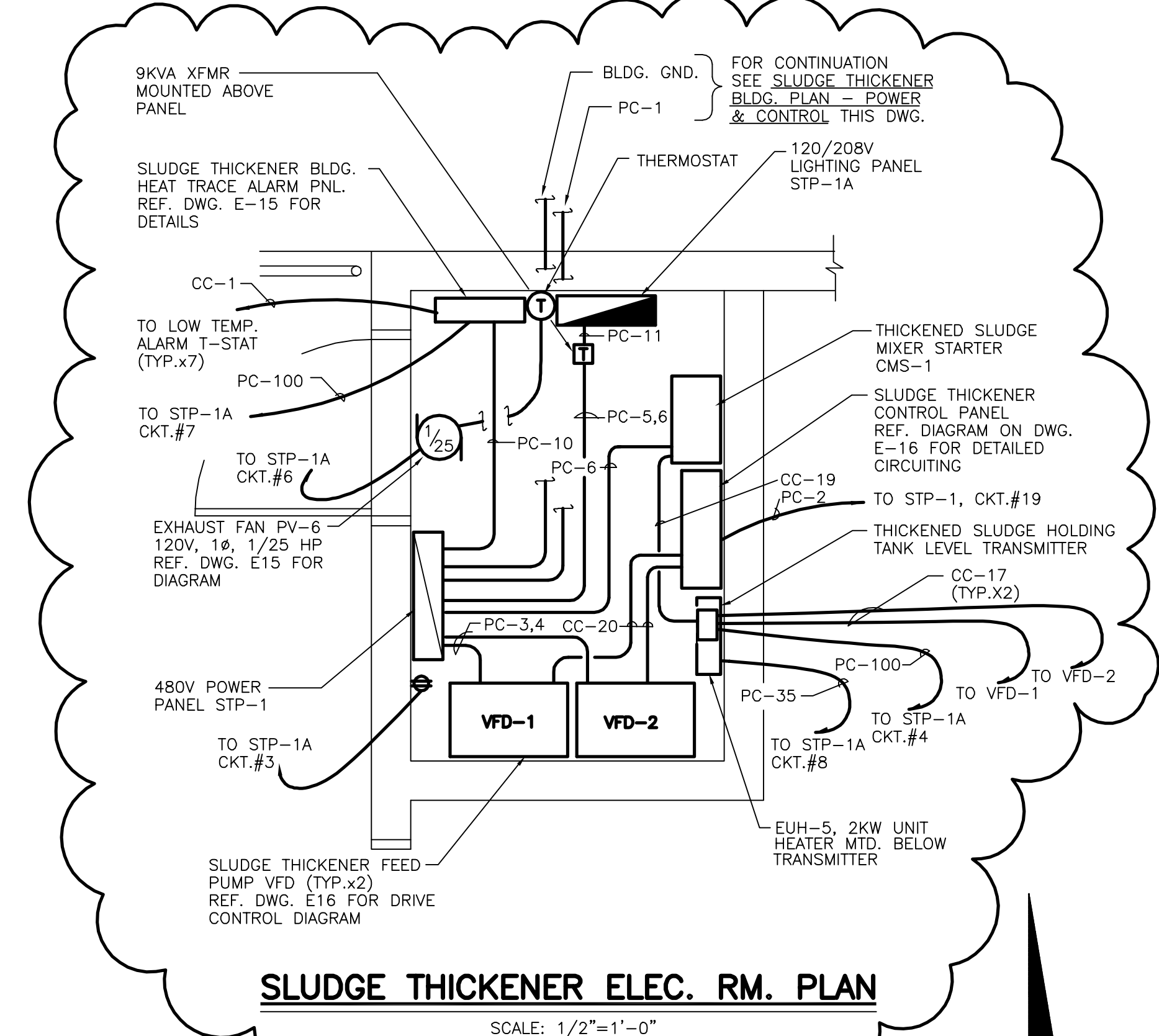
O'BRIEN & GERE ENGINEERS, INC.  
By:.....



**SLUDGE THICKENER BUILDING PLAN**

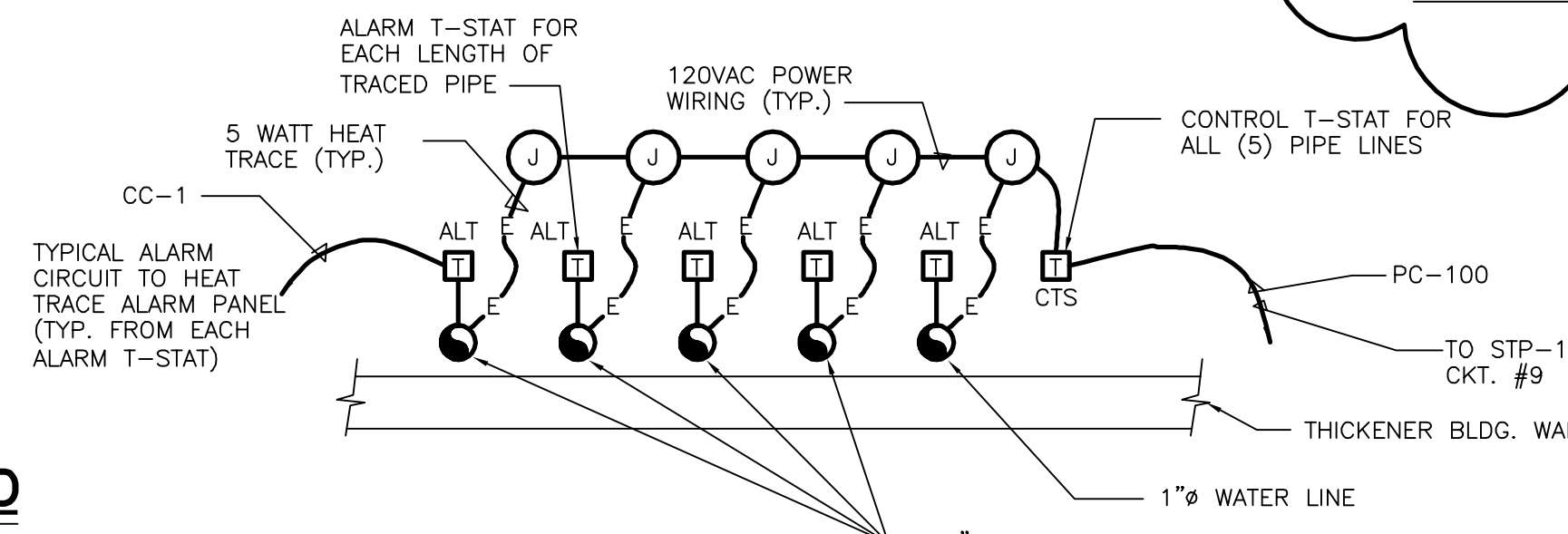
**POWER AND CONTROL**

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



**SLUDGE THICKENER ELEC. RM. PLAN**

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



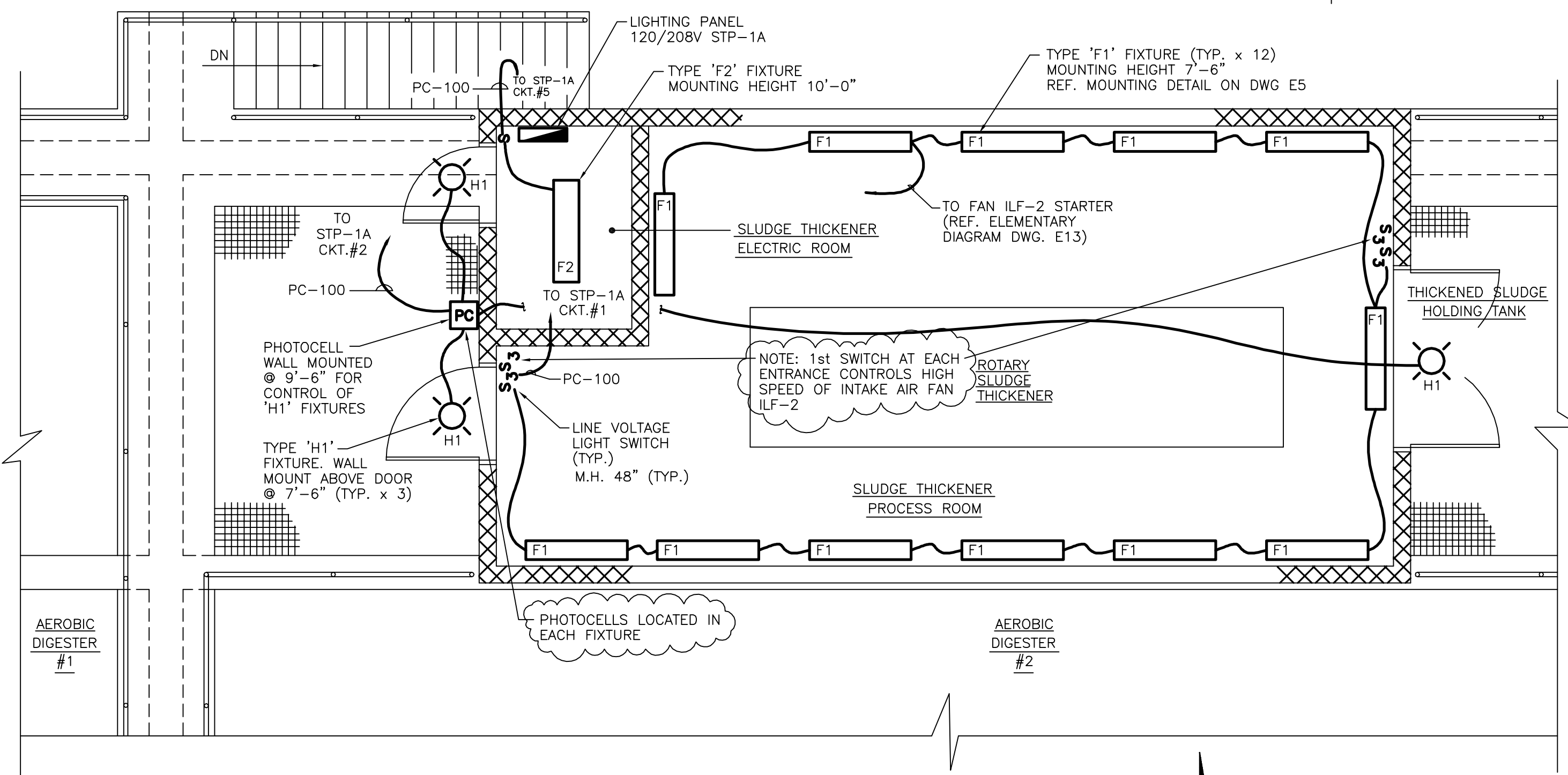
NOTES:  
1) HEAT TRACE ENTIRE EXPOSED LENGTH OF PIPING FROM BLDG. WALL PENETRATION TO 5' BELOW FINISHED GRADE.  
2) REF. HEAT TRACE DETAILS ON DRAWING E11

**PIPING HEAT TRACE DETAIL**

NOT TO SCALE

**LEGEND**

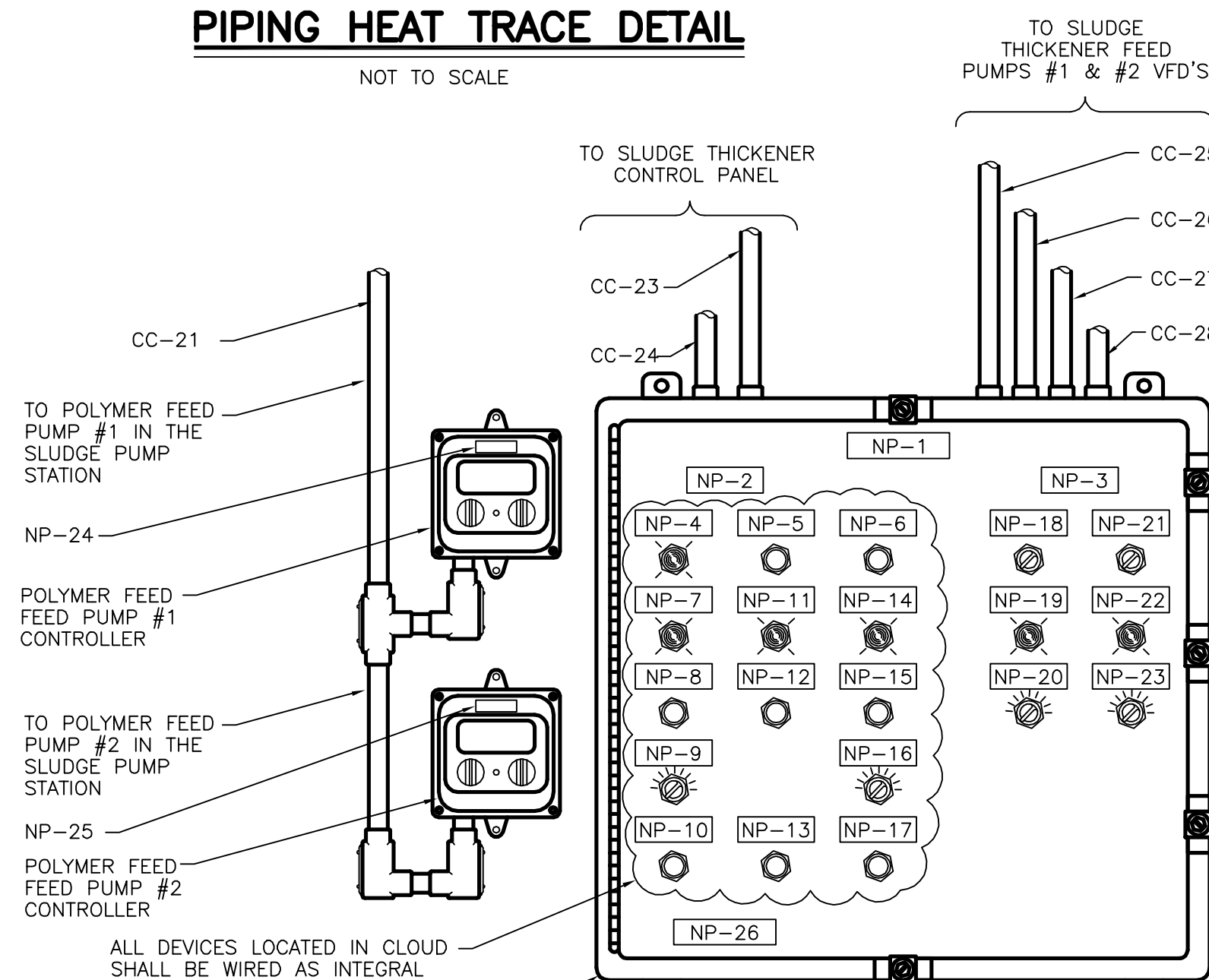
- E — INDICATES HEAT TRACE CABLE
- ALT INDICATES ALARM ONLY T-STAT
- CTS INDICATES CONTROL T-STAT



**SLUDGE THICKENER BUILDING PLAN**

**LIGHTING**

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



**SLUDGE THICKENER OPERATOR CONTROL PANEL**

N.T.S.

**NAMEPLATE SCHEDULE**

NP-1	SLUDGE THICKENER OPERATOR PANEL
NP-2	ROTARY SLUDGE THICKENER
NP-3	SLUDGE THICKENER FEED PUMPS
NP-4	SLUDGE THICKENER POWER ON
NP-5	SLUDGE THICKENER POWER ON
NP-6	SLUDGE THICKENER POWER OFF
NP-7	UNIT DRIVE ON
NP-8	UNIT DRIVE START
NP-9	UNIT DRIVE SPEED CONTROL
NP-10	UNIT DRIVE STOP
NP-11	BOOSTER PUMP ON
NP-12	BOOSTER PUMP START
NP-13	BOOSTER PUMP STOP
NP-14	FLOCCULATOR DRIVE ON
NP-15	FLOCCULATOR DRIVE START
NP-16	FLOCCULATOR DRIVE SPEED CONTROL
NP-17	FLOCCULATOR DRIVE STOP
NP-18	THICKENER FEED PUMP #1 OFF ON
NP-19	THICKENER FEED PUMP #1 ON
NP-20	THICKENER FEED PUMP #1 SPEED
NP-21	THICKENER FEED PUMP #2 OFF ON
NP-22	THICKENER FEED PUMP #2 ON
NP-23	THICKENER FEED PUMP #2 SPEED
NP-24	POLYMER FEED PUMP #1
NP-25	POLYMER FEED PUMP #2
NP-26	CAUTION MULTIPLE POWER SOURCE PRESENT

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

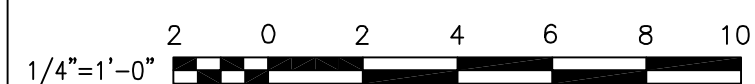
O'BRIEN & GERE ENGINEERS, INC.

By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



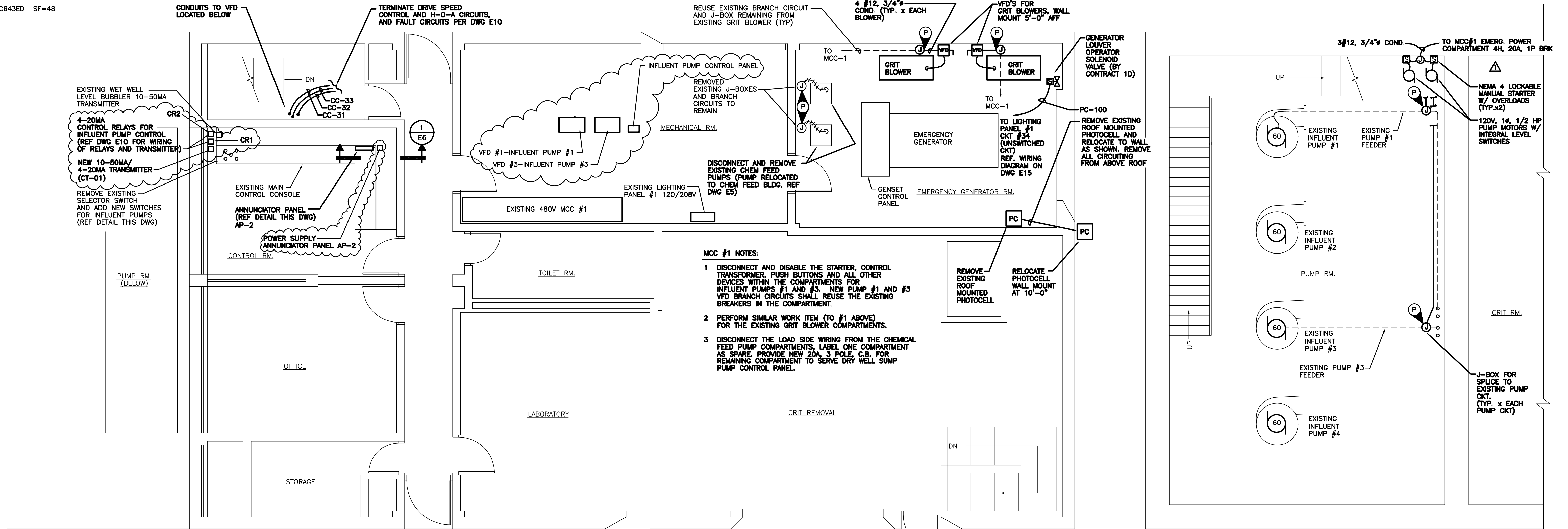
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISION	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
SLUDGE THICKENER BUILDING  
POWER AND LIGHTING PLANS

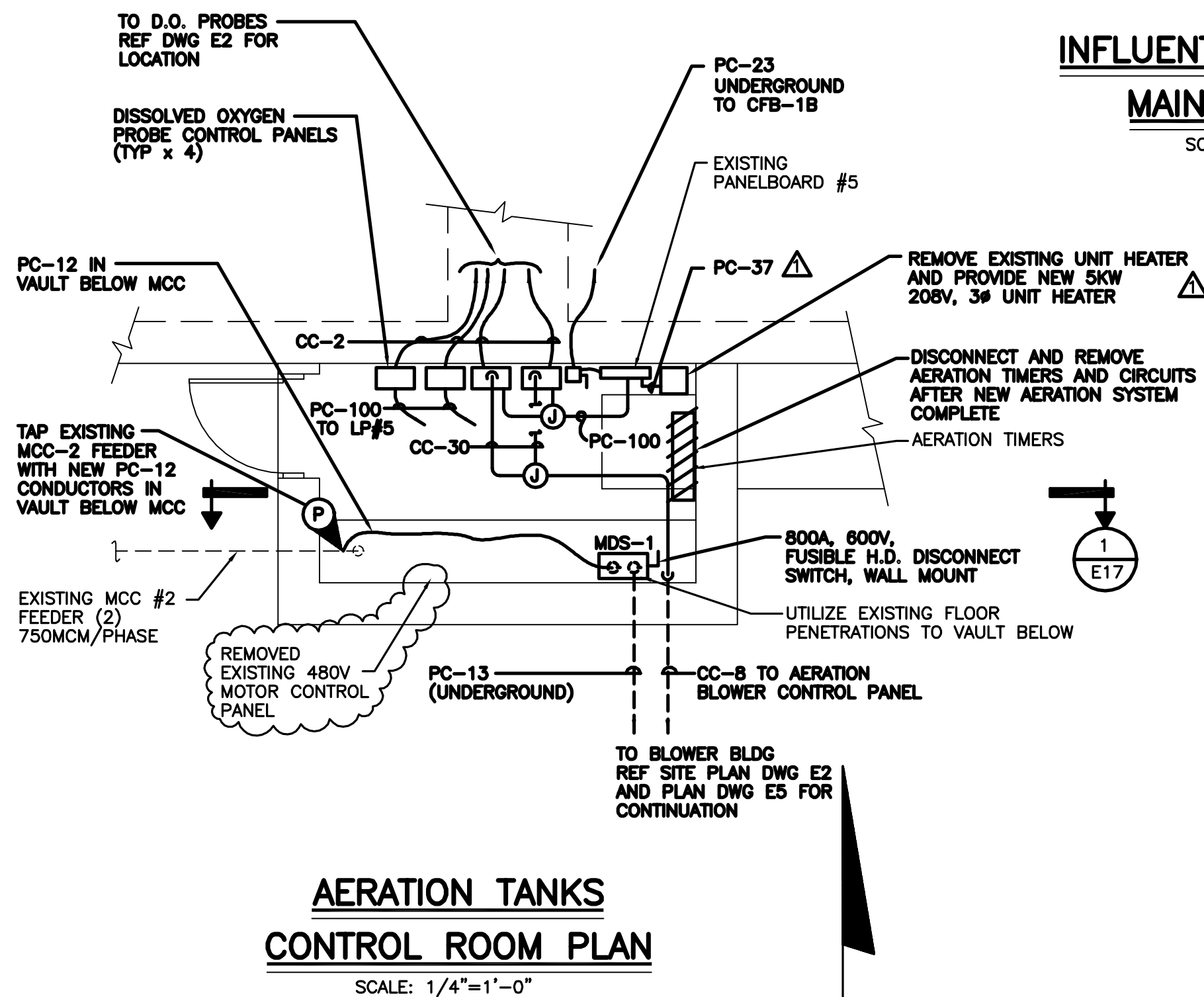
FILE NO.	115.643-34RD	E-6
DATE	AUGUST 1993	R-2



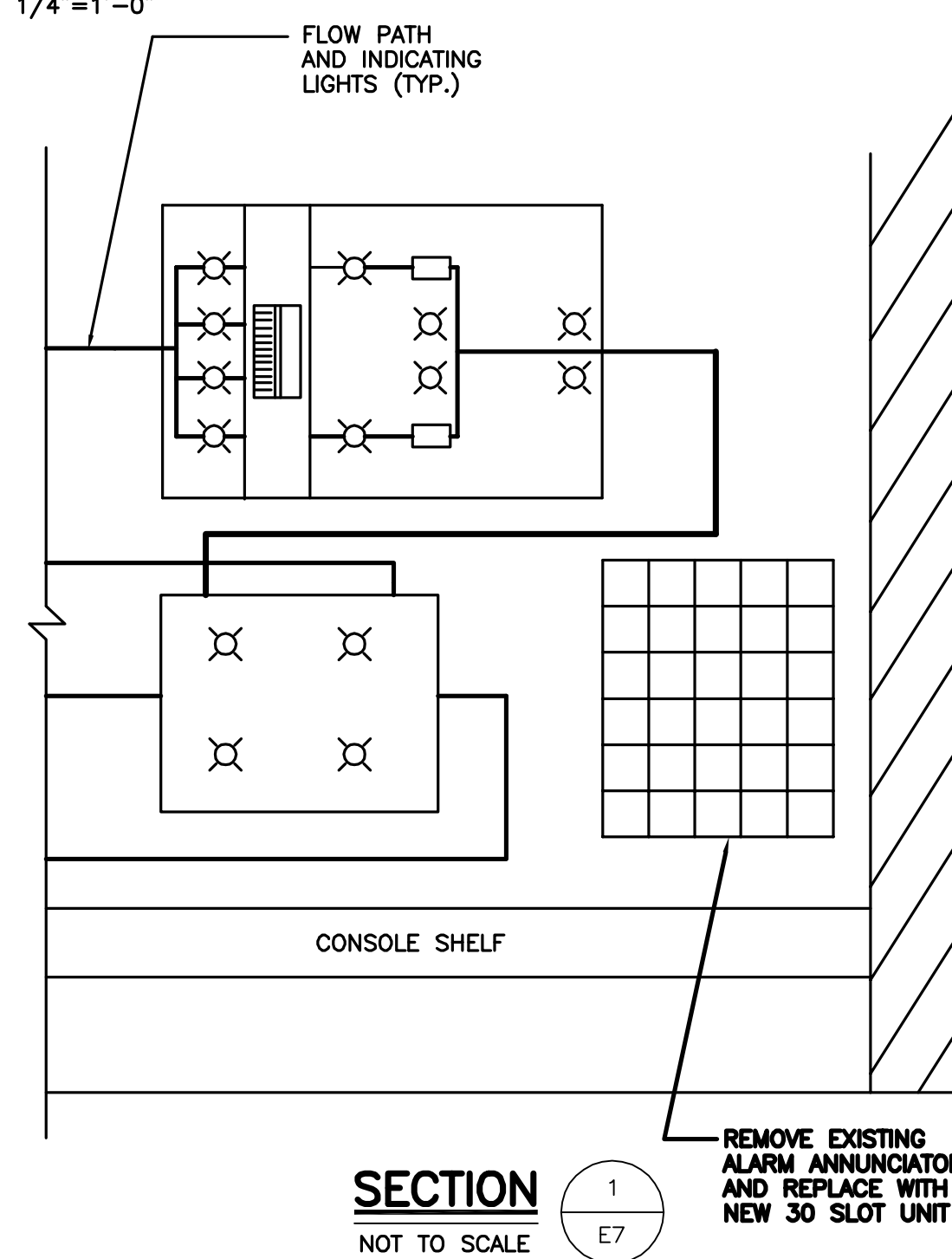
- MCC #1 NOTES:**
- 1 DISCONNECT AND DISABLE THE STARTER, CONTROL TRANSFORMER, PUSH BUTTONS AND ALL OTHER DEVICES WITHIN THE COMPARTMENTS FOR INFLUENT PUMPS #1 AND #3. NEW PUMP #1 AND #3 VFD BRANCH CIRCUITS SHALL REUSE THE EXISTING BREAKERS IN THE COMPARTMENT.
  - 2 PERFORM SIMILAR WORK ITEM (TO #1 ABOVE) FOR THE EXISTING GRIT BLOWER COMPARTMENTS.
  - 3 DISCONNECT THE LOAD SIDE WIRING FROM THE CHEMICAL FEED PUMP COMPARTMENTS, LABEL ONE COMPARTMENT AS SPARE. PROVIDE NEW 20A, 3 POLE, C.B. FOR REMAINING COMPARTMENT TO SERVE DRY WELL SUMP PUMP CONTROL PANEL.

**INFLUENT PUMP BUILDING  
MAIN FLOOR PLAN**  
SCALE: 1/4"=1'-0"

**INFLUENT PUMP BUILDING  
PARTIAL BASEMENT PLAN**  
SCALE: 1/4"=1'-0"



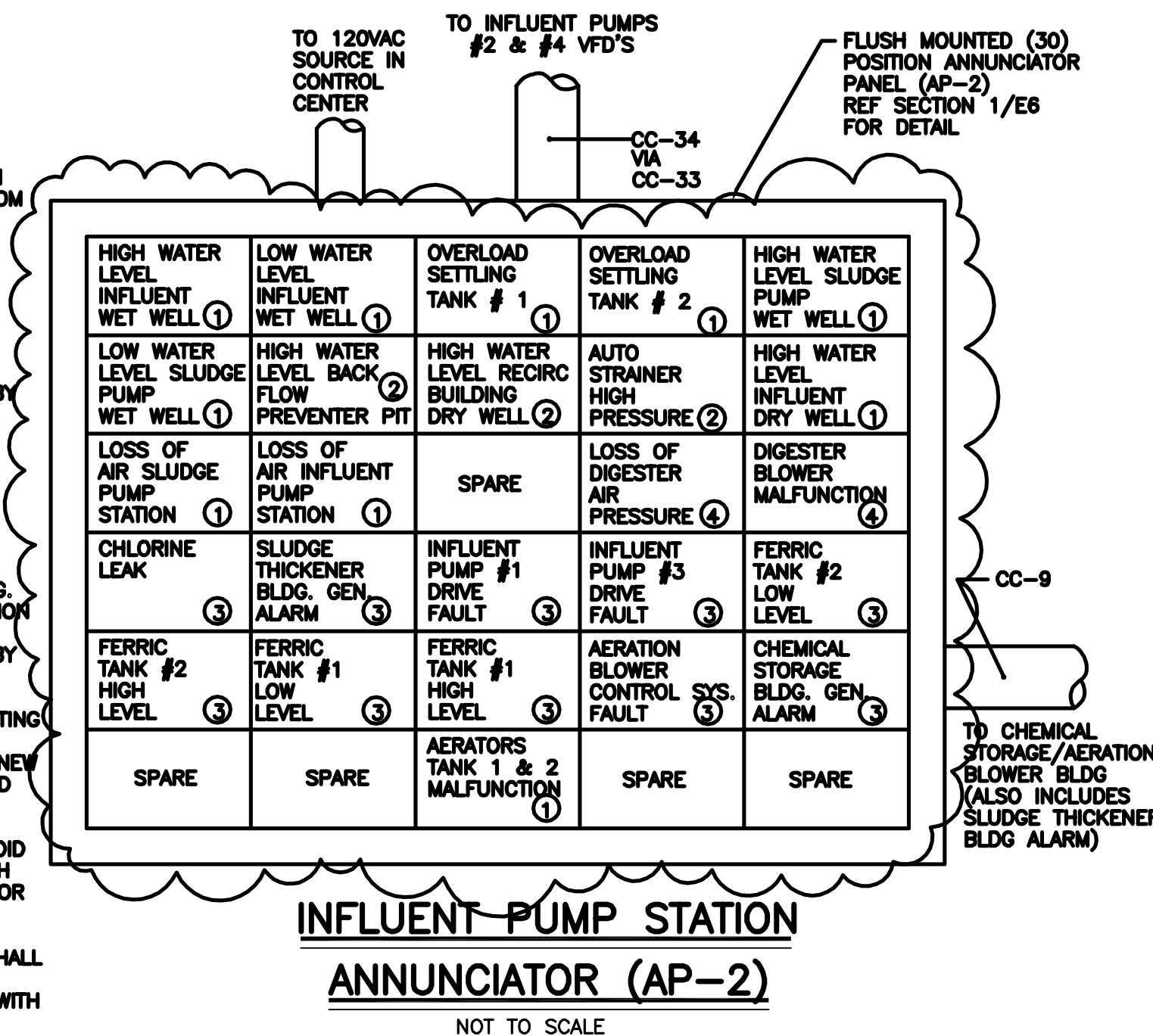
**AERATION TANKS  
CONTROL ROOM PLAN**  
SCALE: 1/4"=1'-0"



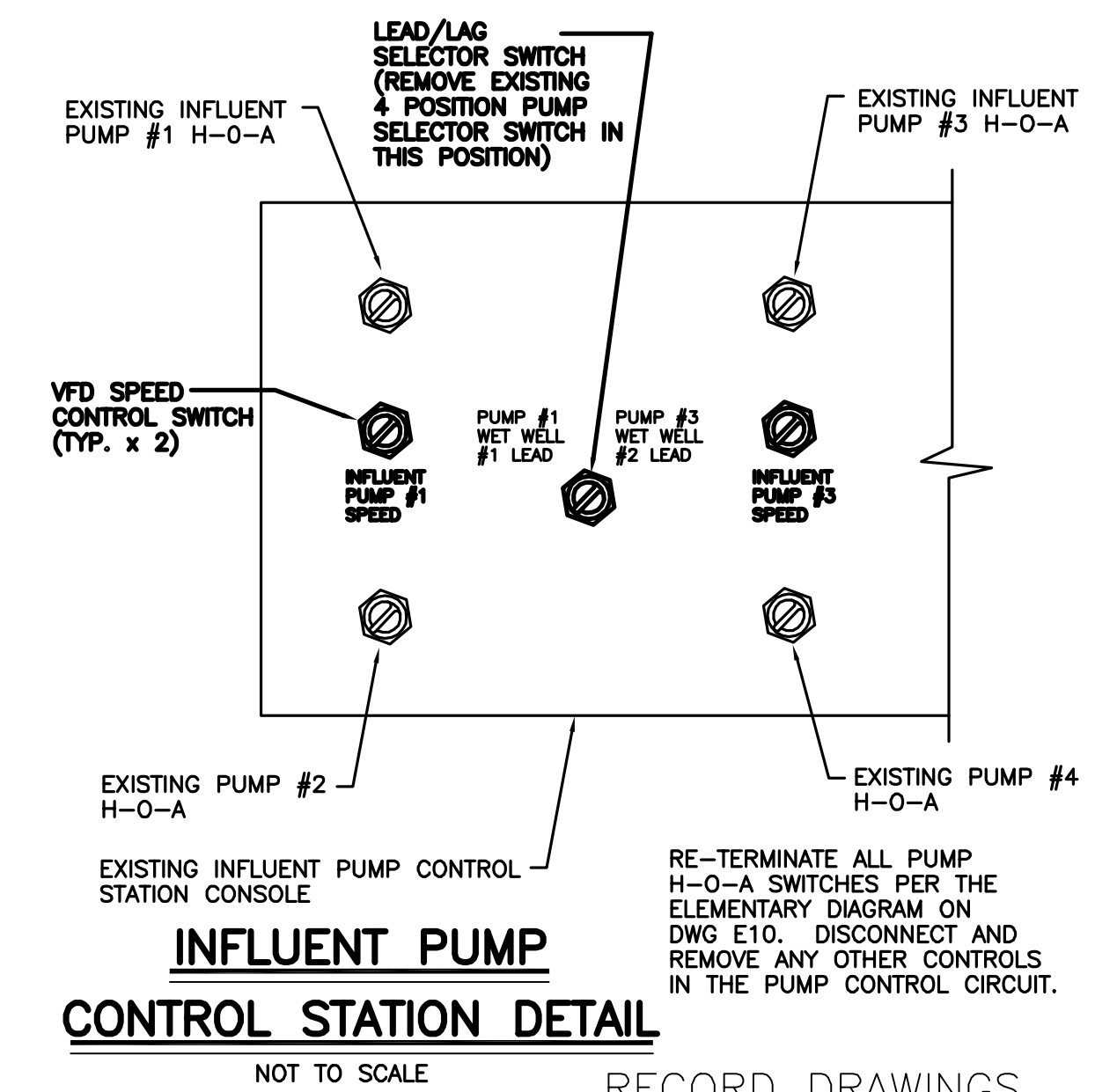
**SECTION 1**  
NOT TO SCALE

ALL SHOWN NEW UNLESS OTHERWISE NOTED AS EXISTING

- NOTES:**
- 1 REUSE EXISTING ALARM CIRCUIT REMAINING FROM REMOVAL OF OLD ANNUNCIATOR.
  - 2 PROVIDE ADDITIONAL ALARM WIRING TO THE RECIRC. BUILDING TO ENABLE ANNUNCIATION OF THESE INDIVIDUAL POINTS AS DIRECTED BY THE COUNTY.
  - 3 NEW ALARM POINTS INCLUDED IN THIS CONTRACT.
  - 4 PROVIDE ADDITIONAL ALARM WIRING TO THE EXISTING BLOWER BLDG. TO ENABLE ANNUNCIATION OF THESE INDIVIDUAL POINTS AS DIRECTED BY THE COUNTY.
  5. REMOVAL OF THE EXISTING ANNUNCIATOR, AND INSTALLATION OF THE NEW SHALL BE COORDINATED WITH THE COUNTY (POSSIBLE WEEKEND CHANGE-OVER) TO AVOID PERIODS DURING WHICH THE ALARM ANNUNCIATOR IS NOT FUNCTIONING.
  6. THE "SPARE" SLOTS SHALL BE FULLY FUNCTIONAL ANNUNCIATOR POINTS WITH BLANK COVERS.



**INFLUENT PUMP STATION  
ANNUNCIATOR (AP-2)**  
NOT TO SCALE



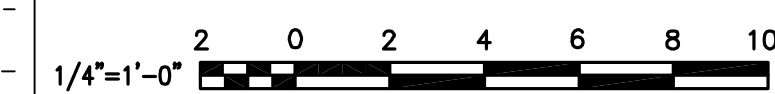
**INFLUENT PUMP  
CONTROL STATION DETAIL**  
NOT TO SCALE

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



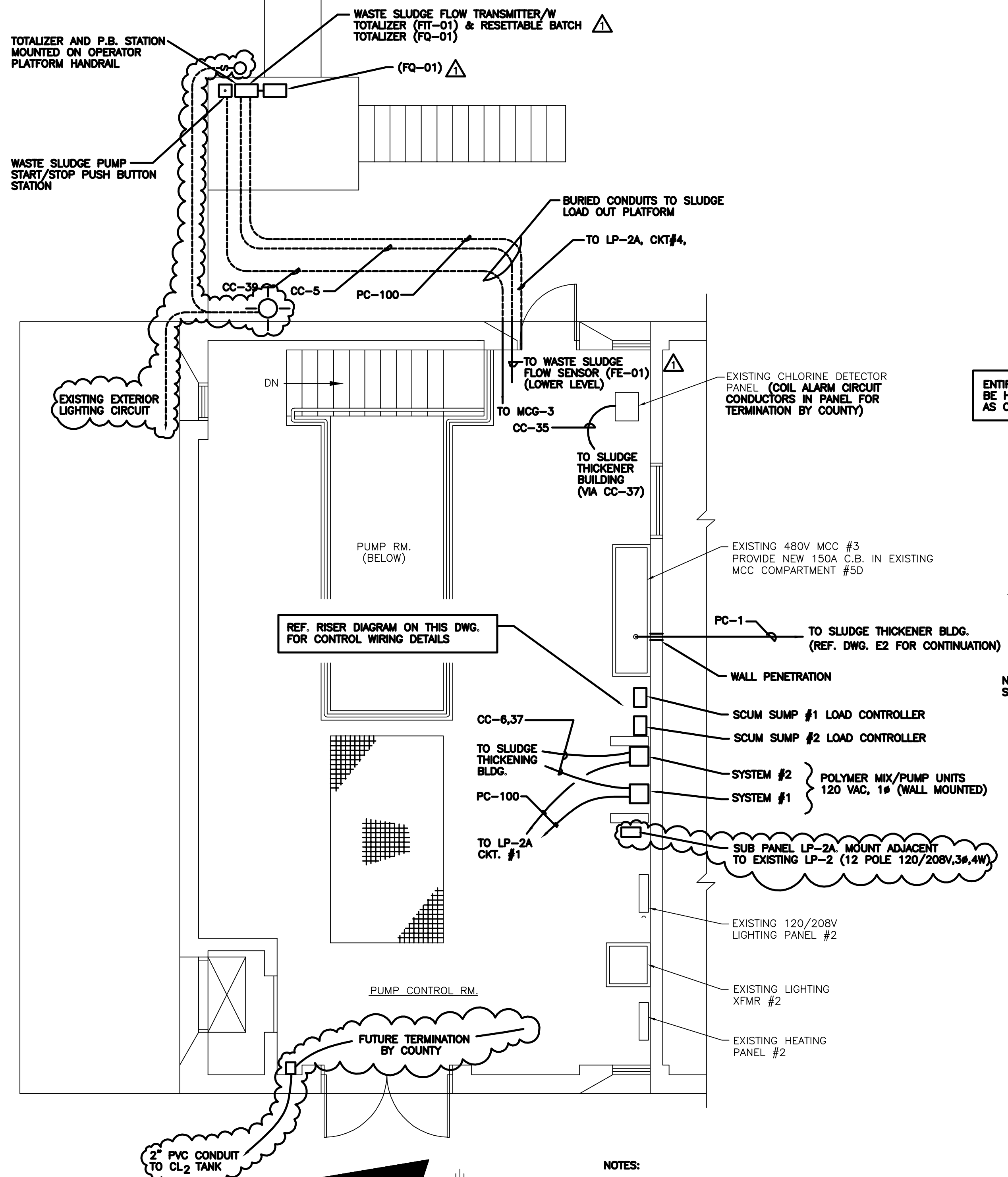
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISIONS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
INFLUENT PUMP BLDG. & AERATION CONTROL RM  
PLANS AND DETAILS

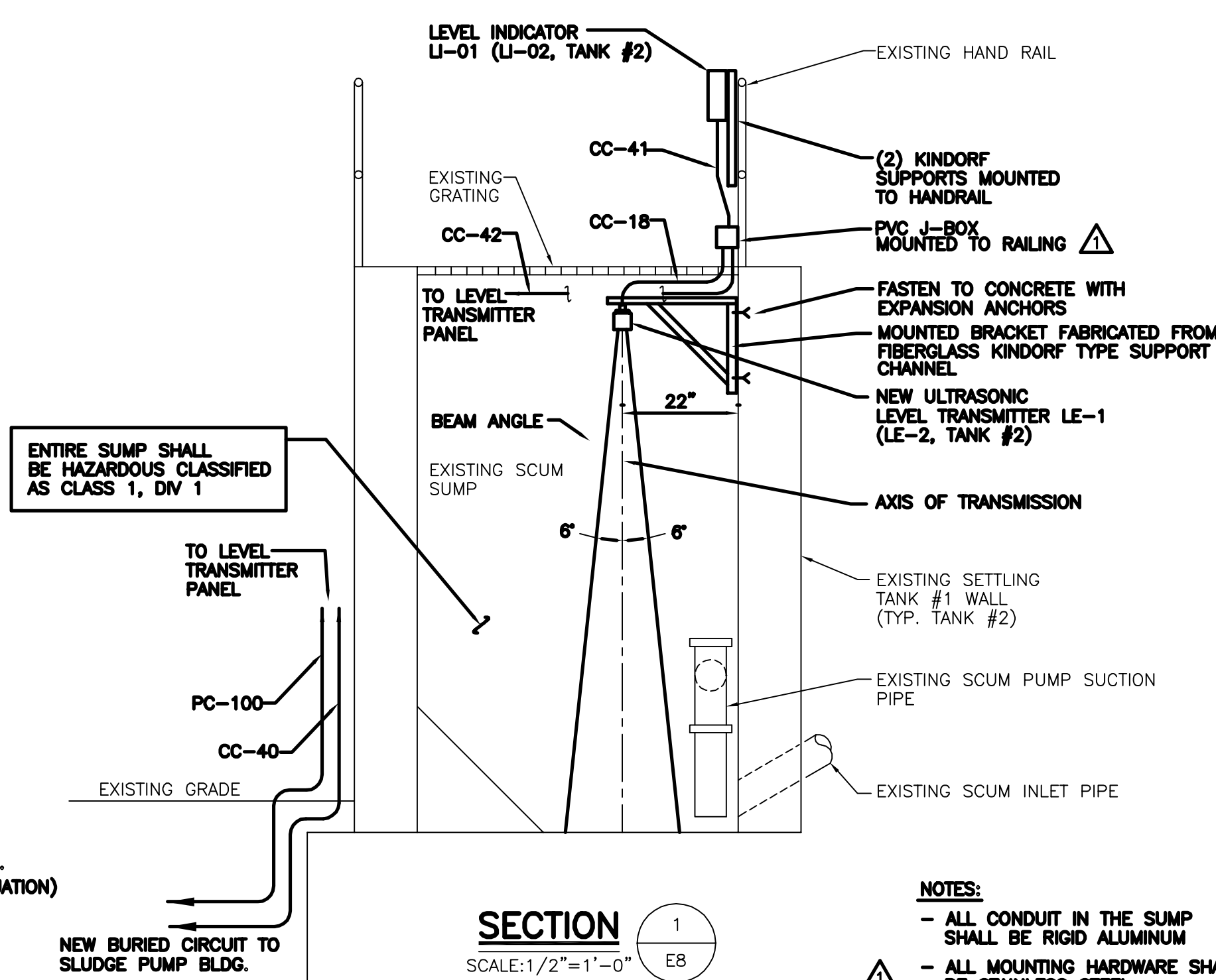
FILE NO.	115.643-35RD	E-7
DATE	AUGUST 1993	R-2



**SLUDGE PUMP BUILDING  
PARTIAL FLOOR PLAN**

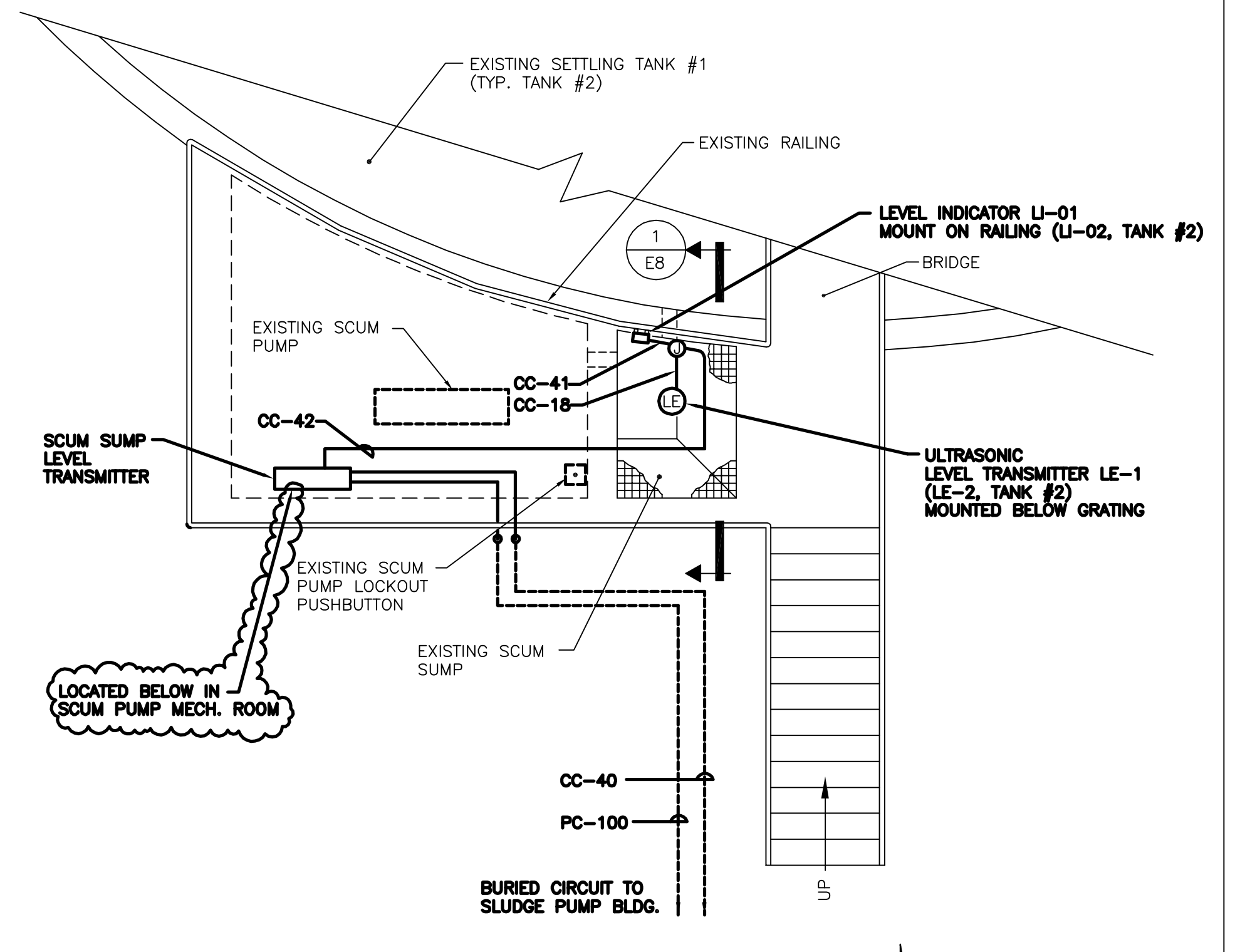
SCALE: 1/4"=1'-0"

- NOTES:**
- 1 MOUNT EXTERIOR SLUDGE PUMP CONTROL STATION AND FLOWTOTALIZER TO HANDRAIL ON WASTE SLUDGE LOADOUT PLATFORM. REF. DWG. M-10 FOR DETAILED LAYOUT.
  - 2 WORK NOT SHOWN IN THE SLUDGE PUMP STATION BASEMENT LEVEL TO INCLUDE:
    - a) DISC. REMOVE AND SCRAP ALL POWER AND CONTROL WIRING TO THE EXISTING WASTE SLUDGE FLOW METER, TRANSMITTER AND CONTROL PANEL.
    - b) PROVIDE NEW POWER AND CONTROL CIRCUITS TO THE NEW WASTE SLUDGE MAGNETIC FLOW TRANSMITTER (REF DWG M-10 FOR LOCATION)



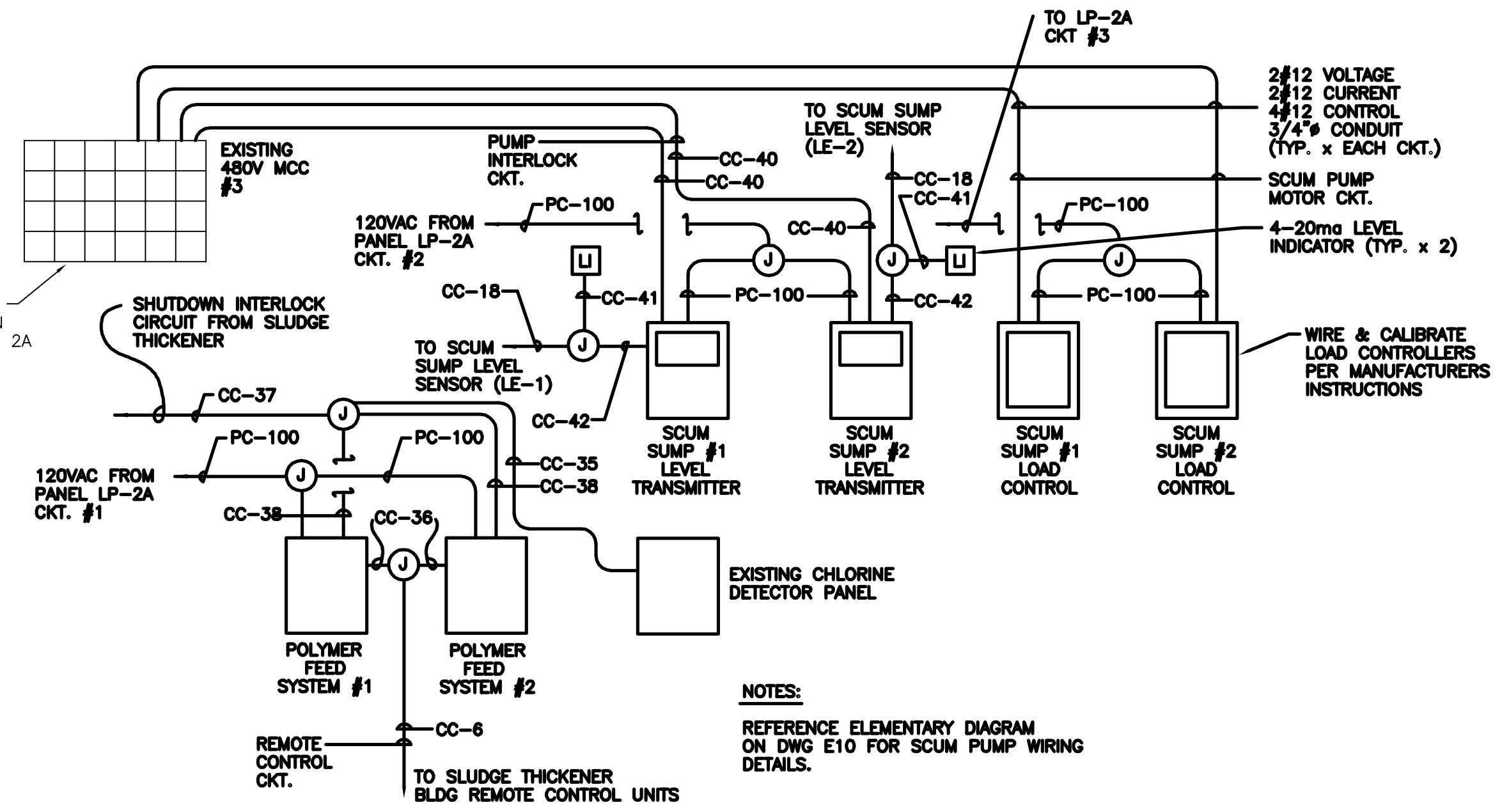
**SECTION 1**  
SCALE: 1/2"=1'-0"

- NOTES:**
- ALL CONDUIT IN THE SUMP SHALL BE RIGID ALUMINUM
  - ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL



**TYPICAL SCUM PUMPING STRUCTURE  
FLOOR PLAN**

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



**SLUDGE PUMP/POLYMER SYSTEM  
RISER DIAGRAM**

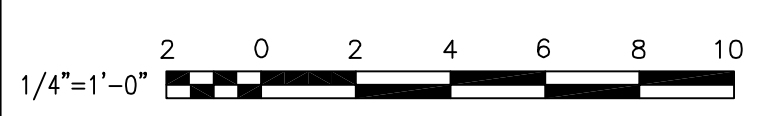
NOT TO SCALE

- NOTES:**
- REFERENCE ELEMENTARY DIAGRAM ON DWG E10 FOR SCUM PUMP WIRING DETAILS.

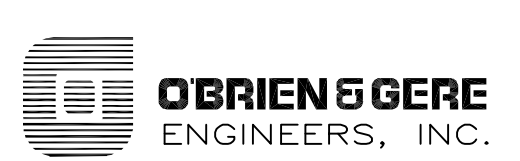
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1	8/93	GENERAL REVISION	

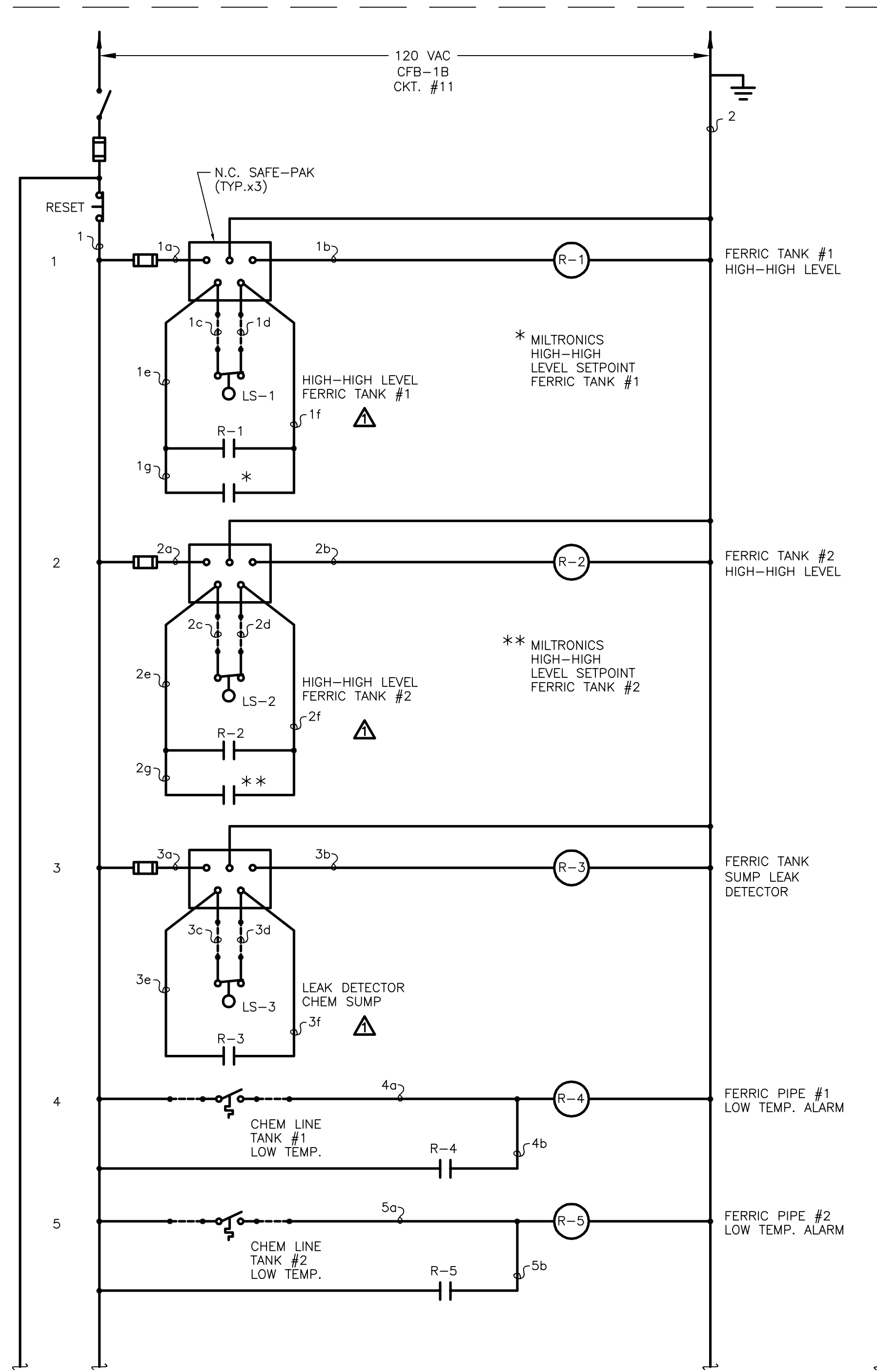


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

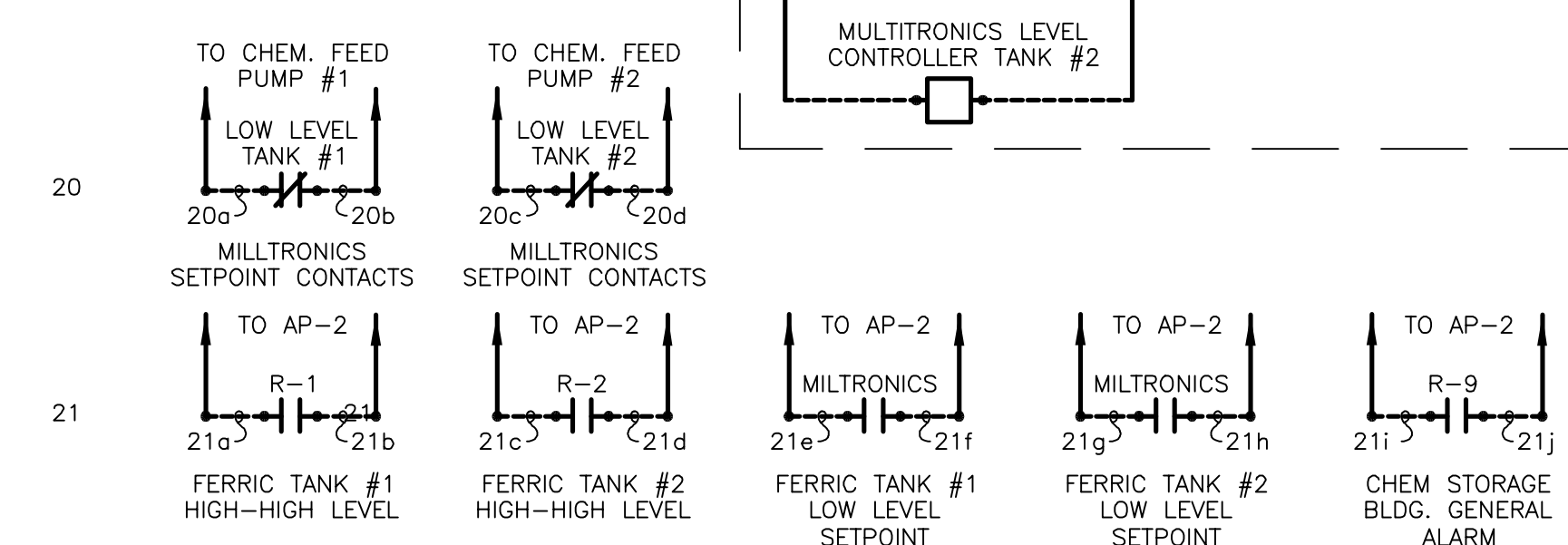
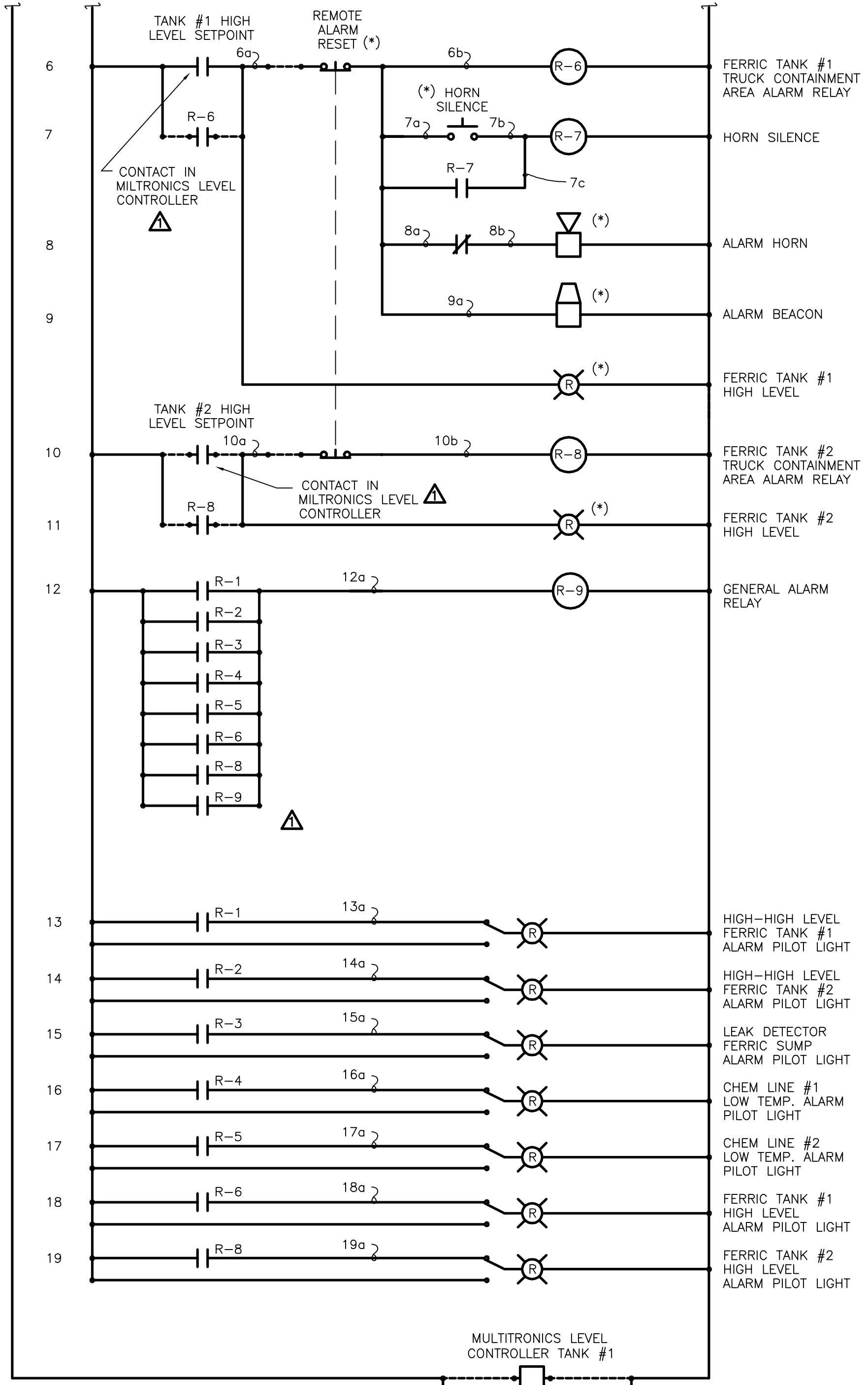
ELECTRICAL  
SLUDGE PUMP BLDG. & SCUM PUMP STRUCTURE  
PLANS AND DETAILS

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE  
ENGINEERS, INC.  
By: .....

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DATE	AUGUST 1993	R-2

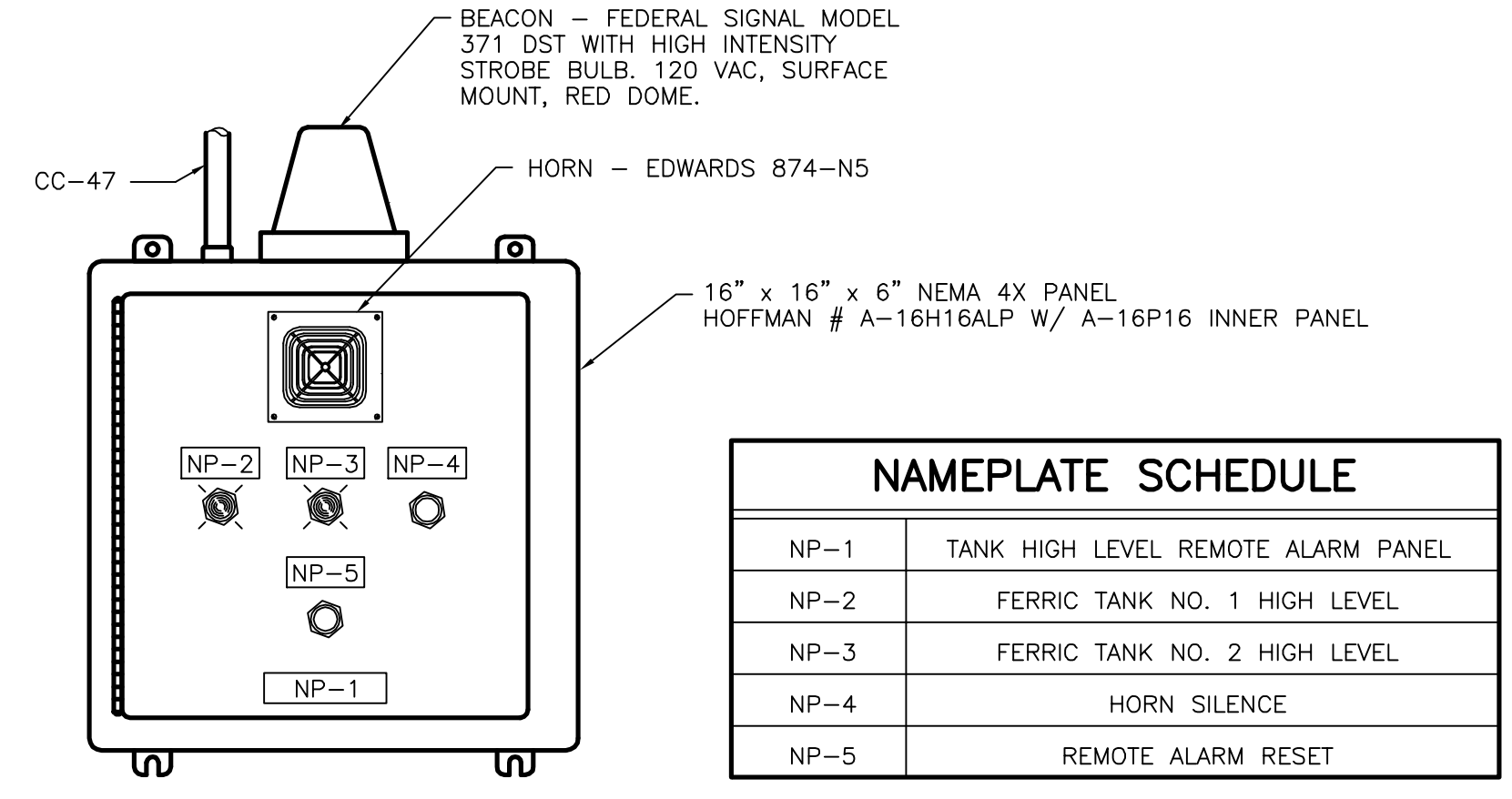


ELEMENTARY CONTINUED AT RIGHT



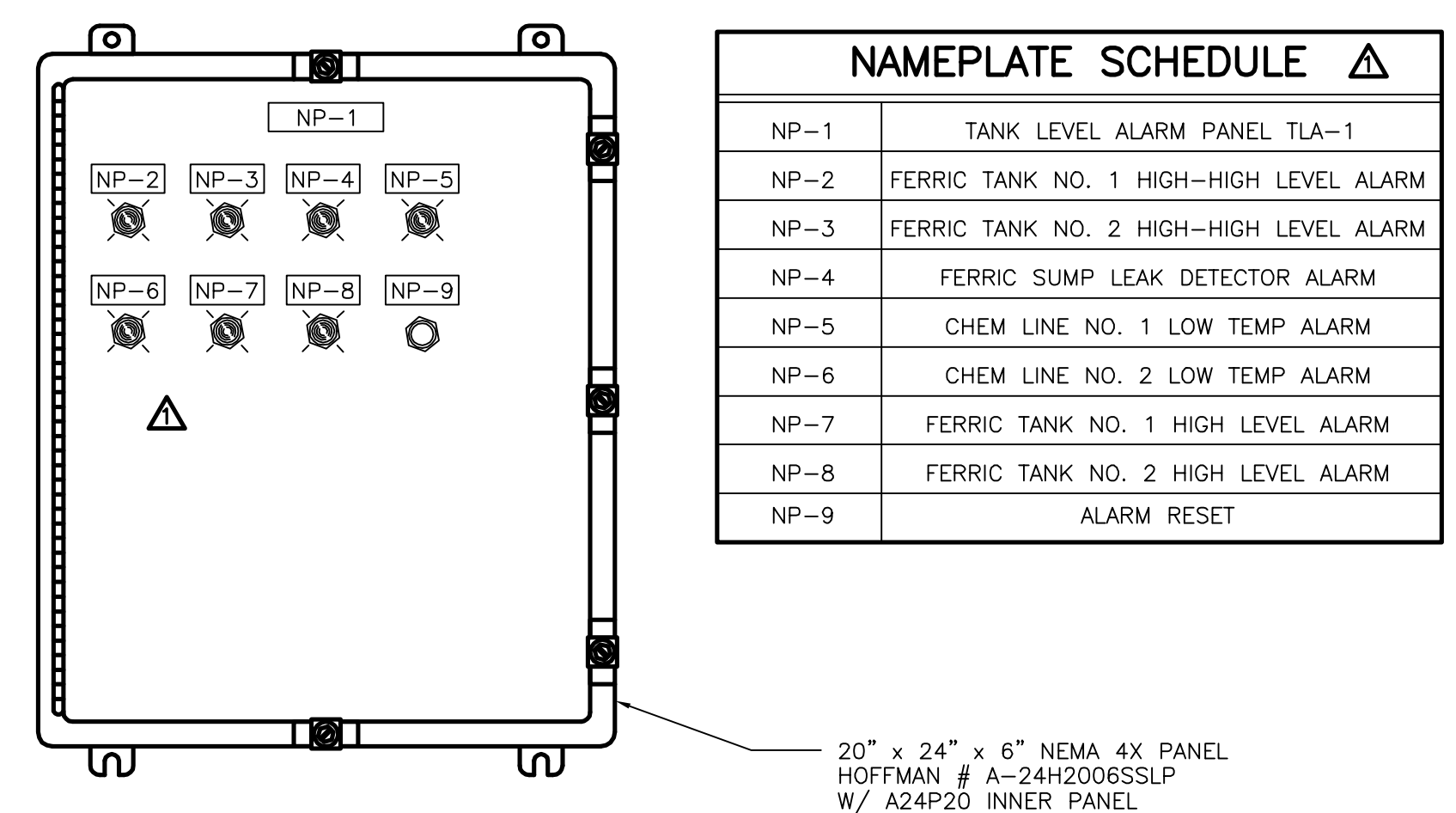
**TANK LEVEL ALARM PANEL NO. 1 (TLA-1)**  
**CONTROL/ALARM ELEMENTARY**  
NOT TO SCALE

(\*) - DENOTES ITEMS LOCATED IN REMOTE ALARM PANEL



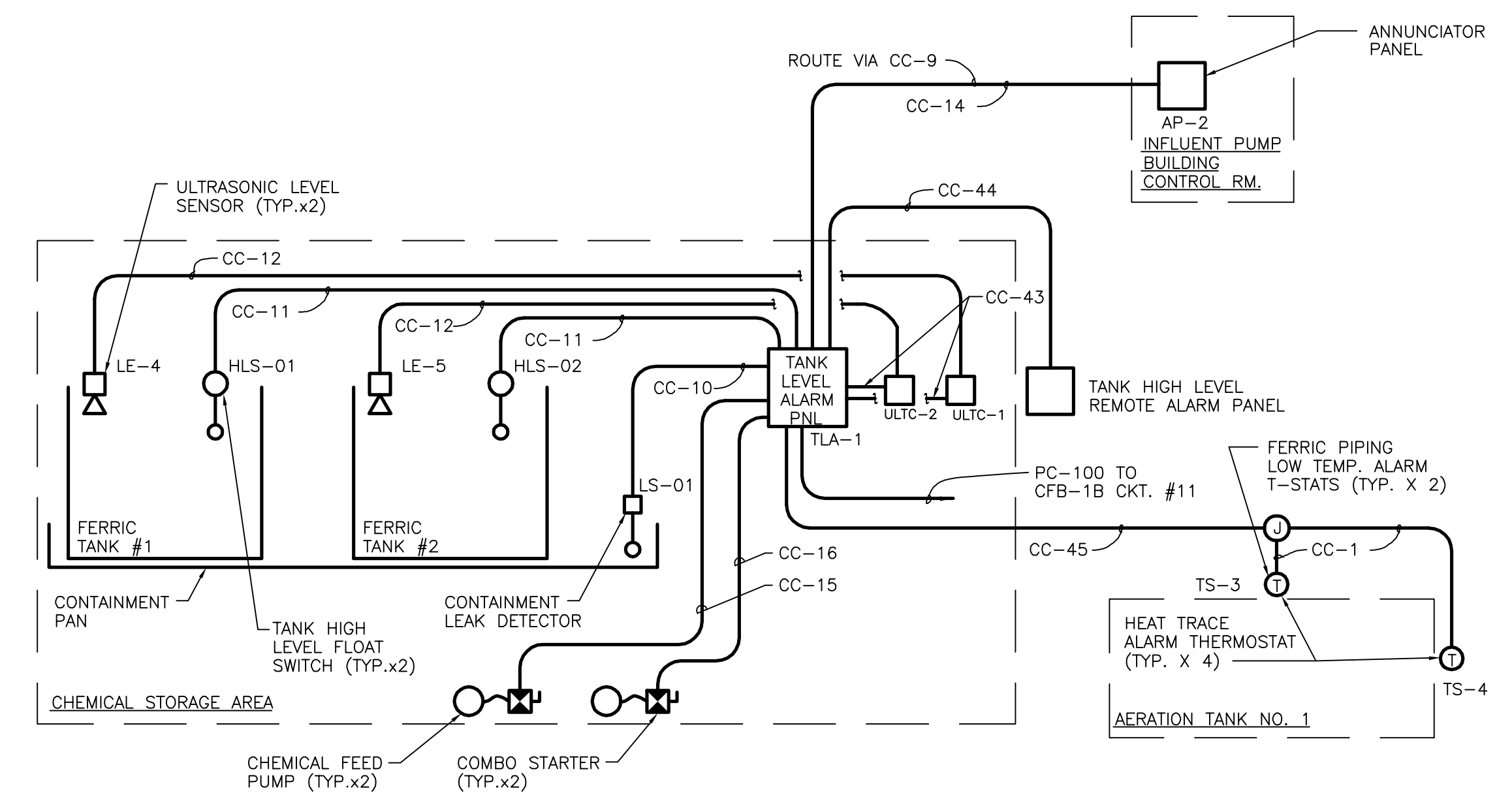
**TANK HIGH LEVEL REMOTE ALARM PANEL FACE DETAIL**  
NOT TO SCALE

NAMEPLATE SCHEDULE	
NP-1	TANK HIGH LEVEL REMOTE ALARM PANEL
NP-2	FERRIC TANK NO. 1 HIGH LEVEL
NP-3	FERRIC TANK NO. 2 HIGH LEVEL
NP-4	HORN SILENCE
NP-5	REMOTE ALARM RESET



**TANK LEVEL ALARM PANEL FACE DETAIL**  
NOT TO SCALE

NAMEPLATE SCHEDULE	
NP-1	TANK LEVEL ALARM PANEL TLA-1
NP-2	FERRIC TANK NO. 1 HIGH-HIGH LEVEL ALARM
NP-3	FERRIC TANK NO. 2 HIGH-HIGH LEVEL ALARM
NP-4	FERRIC SUMP LEAK DETECTOR ALARM
NP-5	CHEM LINE NO. 1 LOW TEMP ALARM
NP-6	CHEM LINE NO. 2 LOW TEMP ALARM
NP-7	FERRIC TANK NO. 1 HIGH LEVEL ALARM
NP-8	FERRIC TANK NO. 2 HIGH LEVEL ALARM
NP-9	ALARM RESET



**TANK LEVEL ALARM PANEL (TLA-1) RISER DIAGRAM**  
NOT TO SCALE

RECORD DRAWINGS  
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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

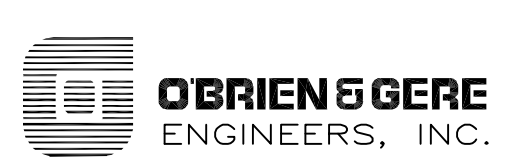
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Designed by.....Checked by.....  
Drawn by.....

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1	8/93	GENERAL REVISION	

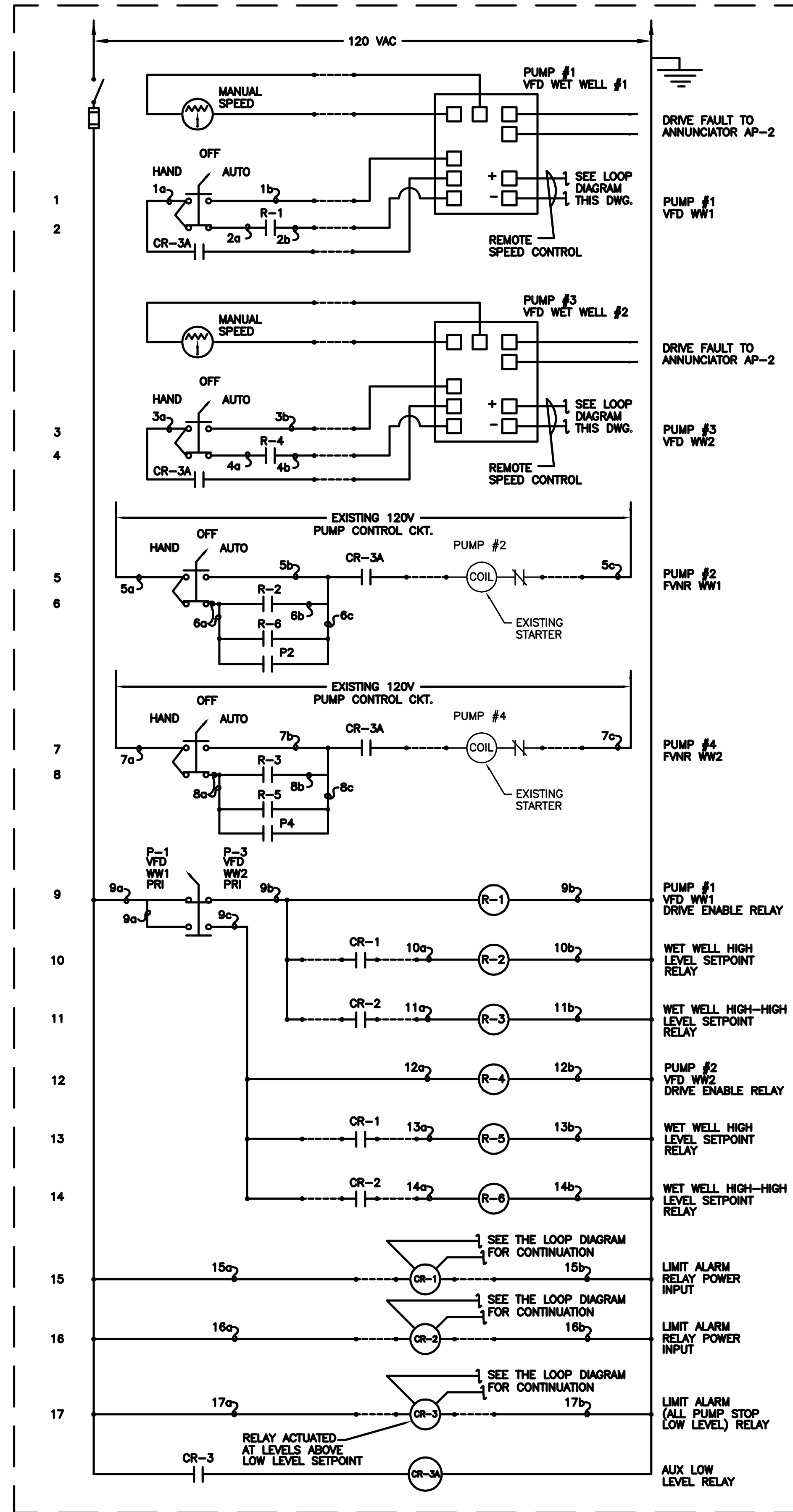


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
ELEMENTARIES & DETAILS

FILE NO.	E-9
115.643-37RD	
DATE	R-2
AUGUST 1993	





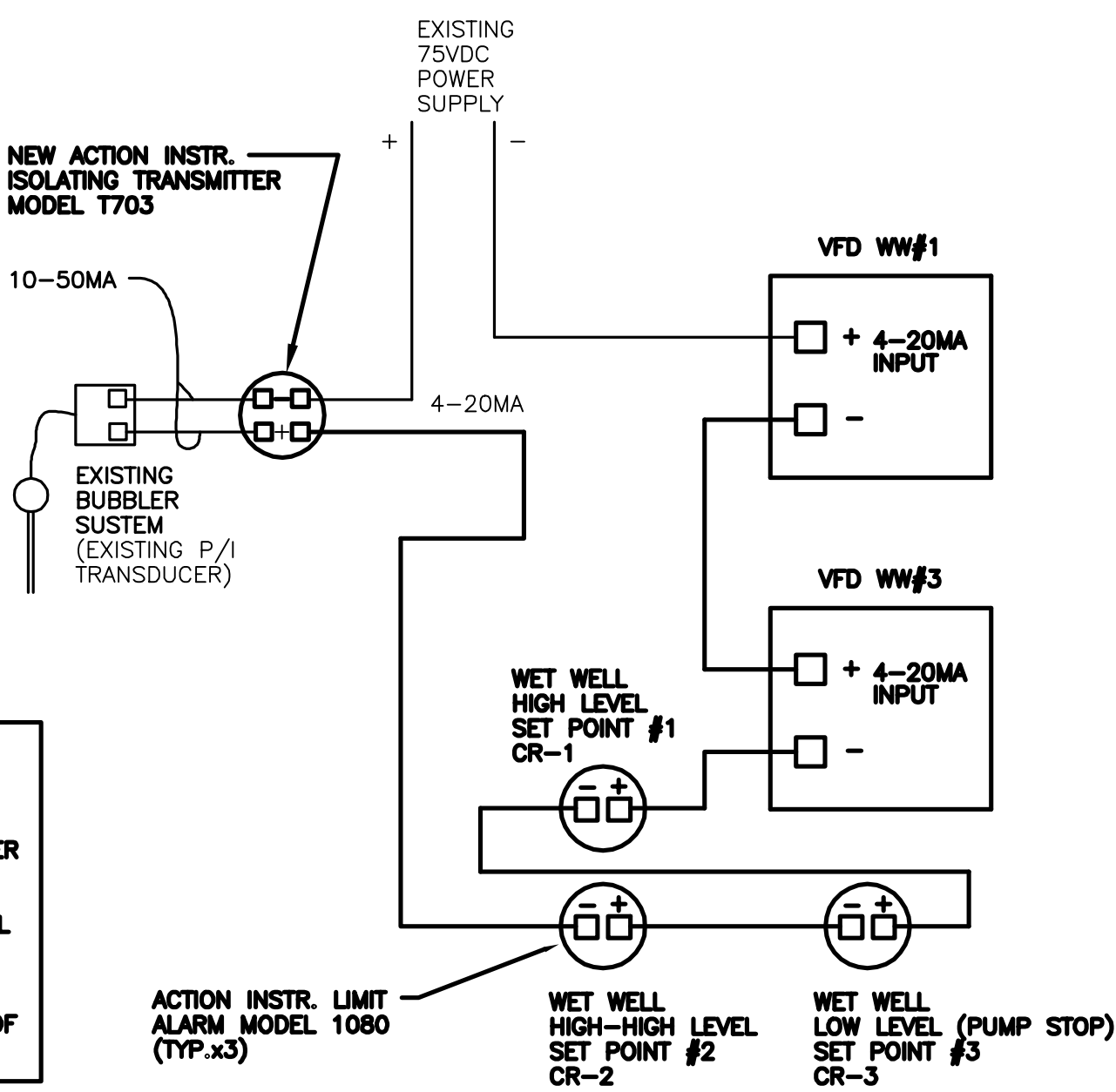
**INFLUENT PUMPS ELEMENTARY DIAGRAM**

NOT TO SCALE

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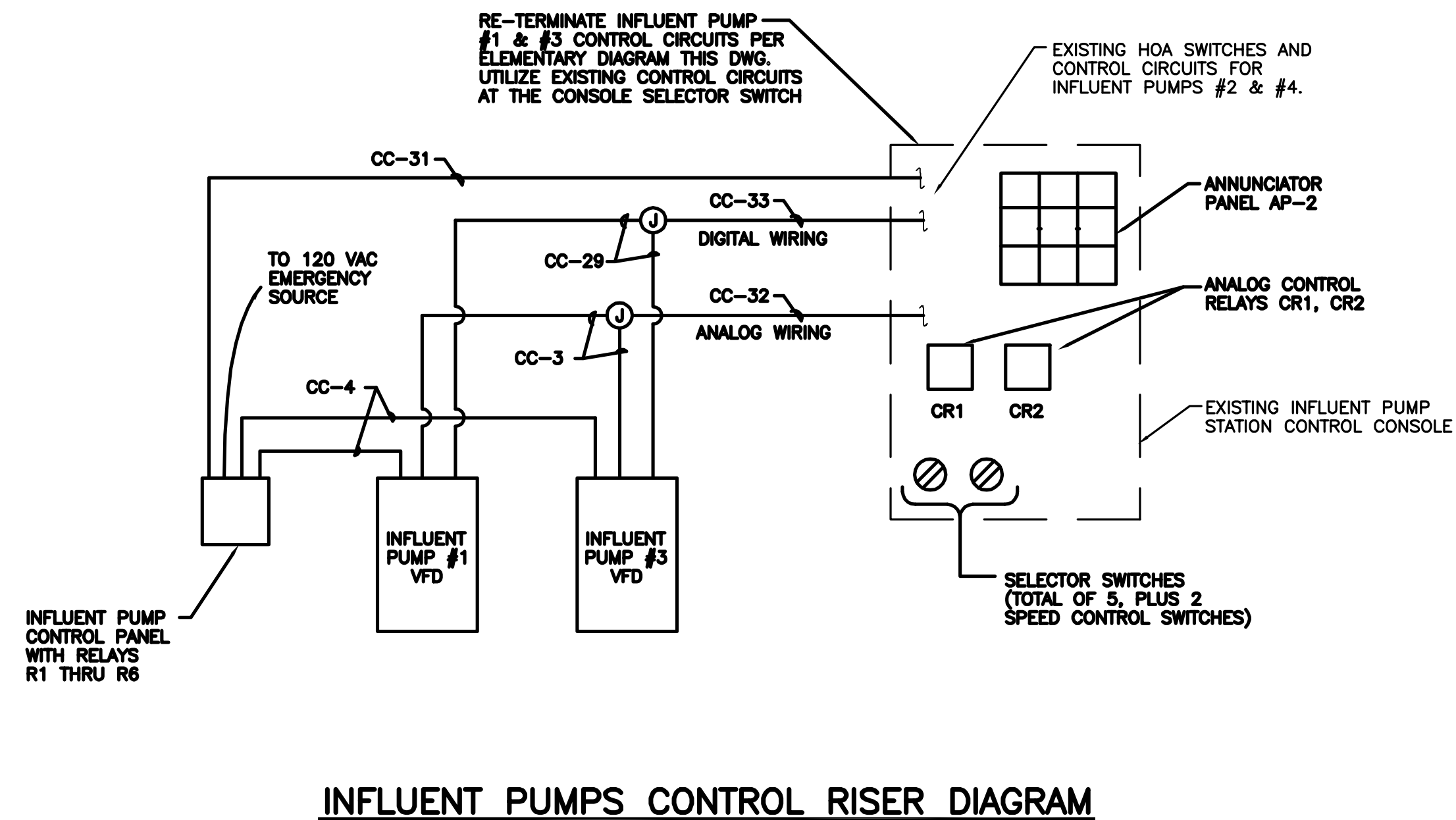
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**DRIVE/LEVEL CONTROL ADJUSTMENT NOTE:**  
EACH VARIABLE FREQUENCY DRIVE SHALL HAVE AN ADJUSTABLE MINIMUM START SPEED VS SIGNAL FOLLOWER VALUE. THE MINIMUM START SPEED SHALL BE FIELD ADJUSTED BY THE DRIVE REPRESENTATIVE TO THE SATISFACTION OF THE ENGINEER AND THE OWNER. LEVEL SIGNAL SETPOINTS IN THE INFLUENT WET WELL FOR BACKUP PUMP #1 ON, BACKUP PUMP #2 ON, PUMP OFF LEVELS, AND DRIVE RUN RANGES SHALL BE FIELD ADJUSTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND THE OWNER.



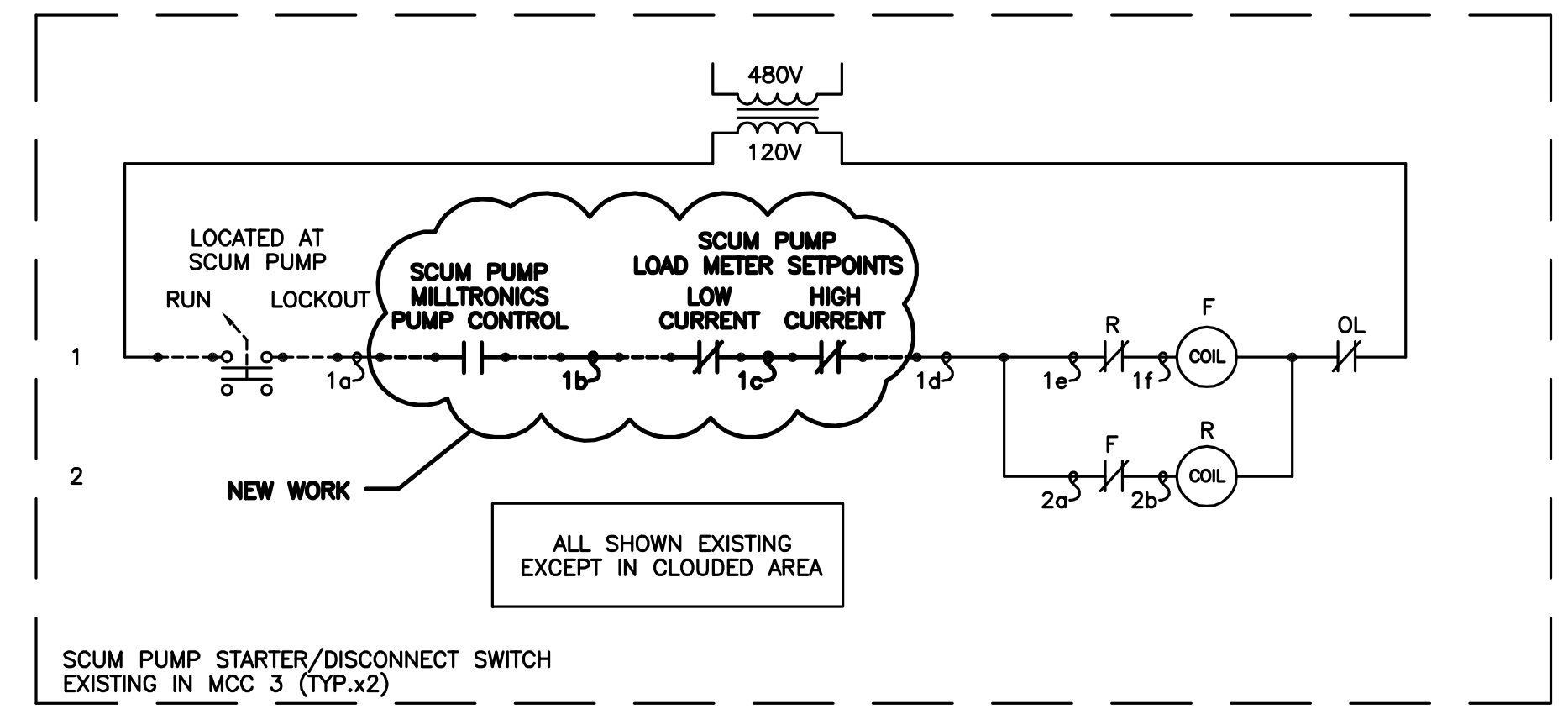
**INFLUENT PUMPS LOOP DIAGRAM**

NOT TO SCALE



**INFLUENT PUMPS CONTROL RISER DIAGRAM**

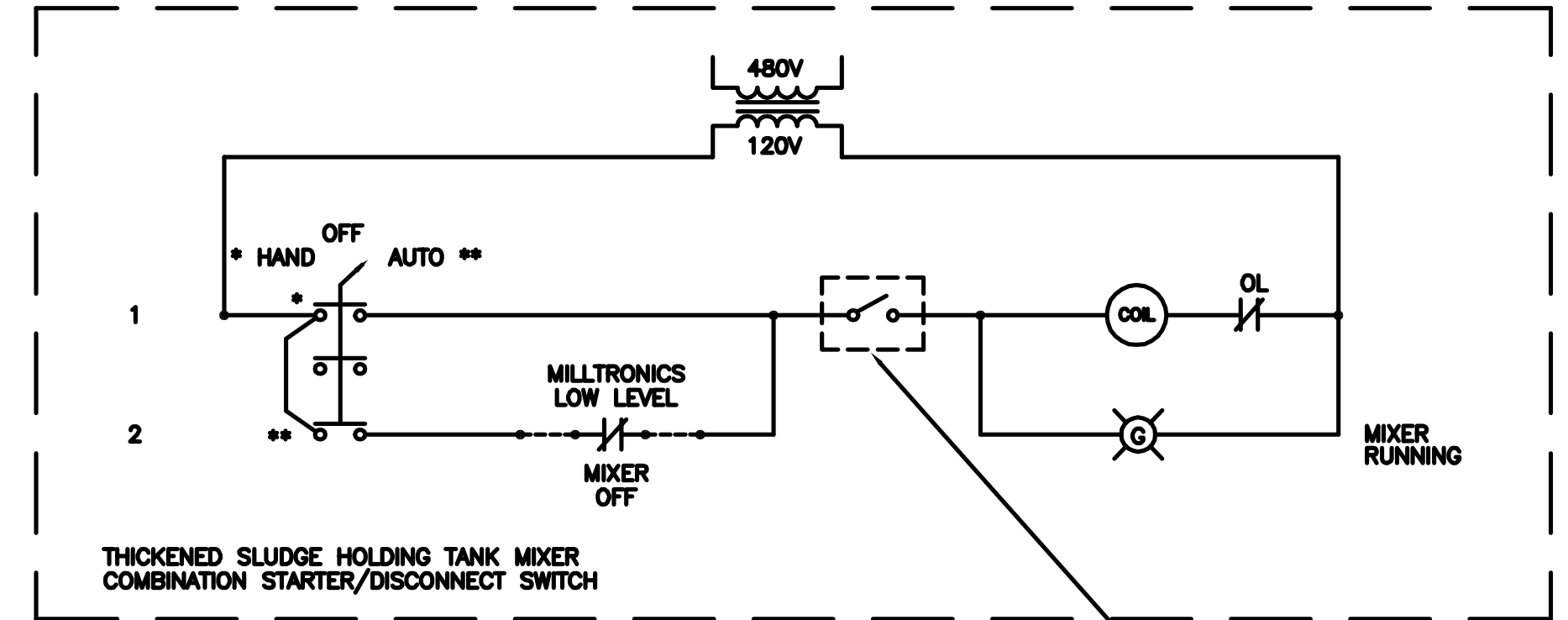
NOT TO SCALE



**SCUM PUMP CONTROL ELEMENTARY**

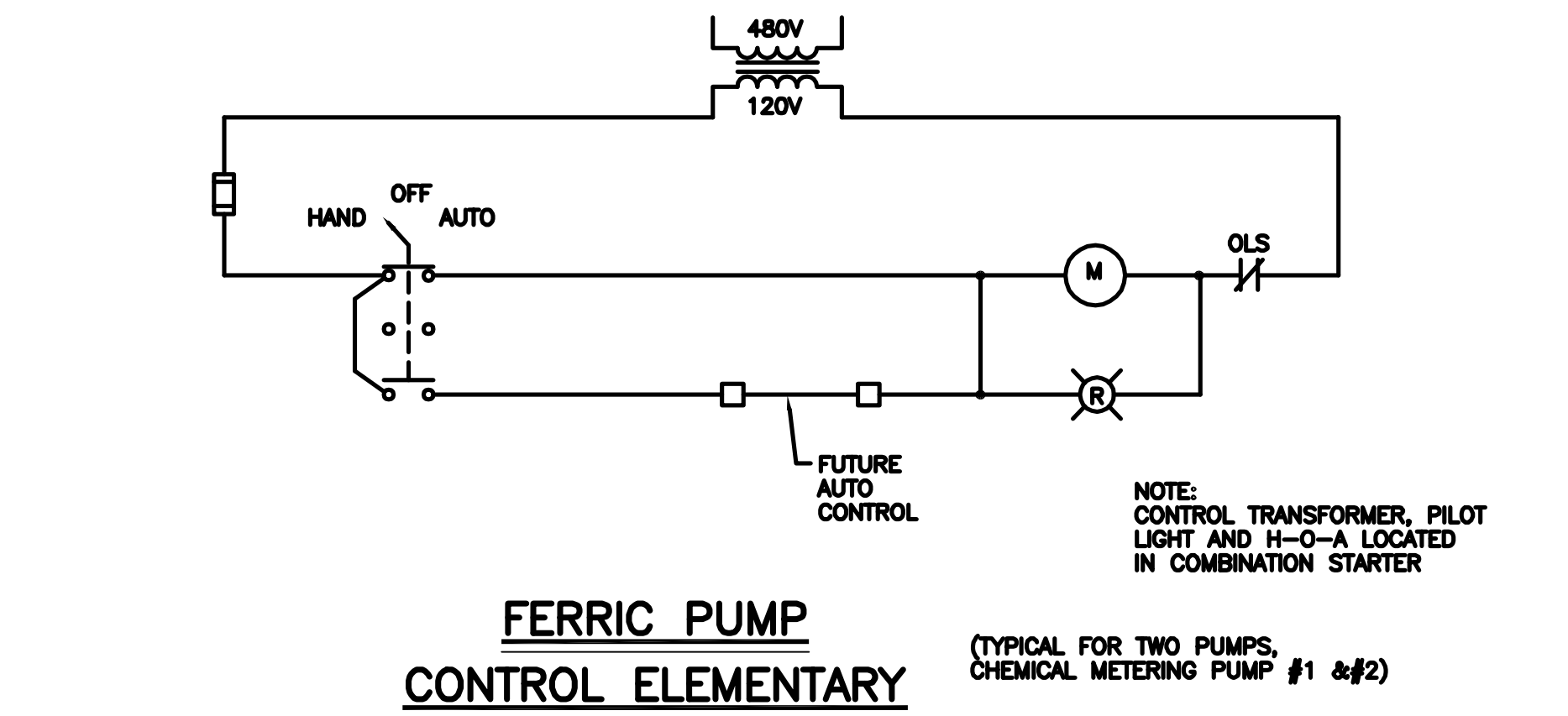
NOT TO SCALE

TYPICAL FOR SETTLING TANKS 1 AND 2.



**THICKENED SLUDGE HOLDING TANK ASPIRATED MIXER ELEMENTARY**

NOT TO SCALE



**FERRIC PUMP CONTROL ELEMENTARY**

NOT TO SCALE

(TYPICAL FOR TWO PUMPS, CHEMICAL METERING PUMP #1 & #2)

**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_

NOT TO SCALE

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1	8/93	GENERAL REVISION	

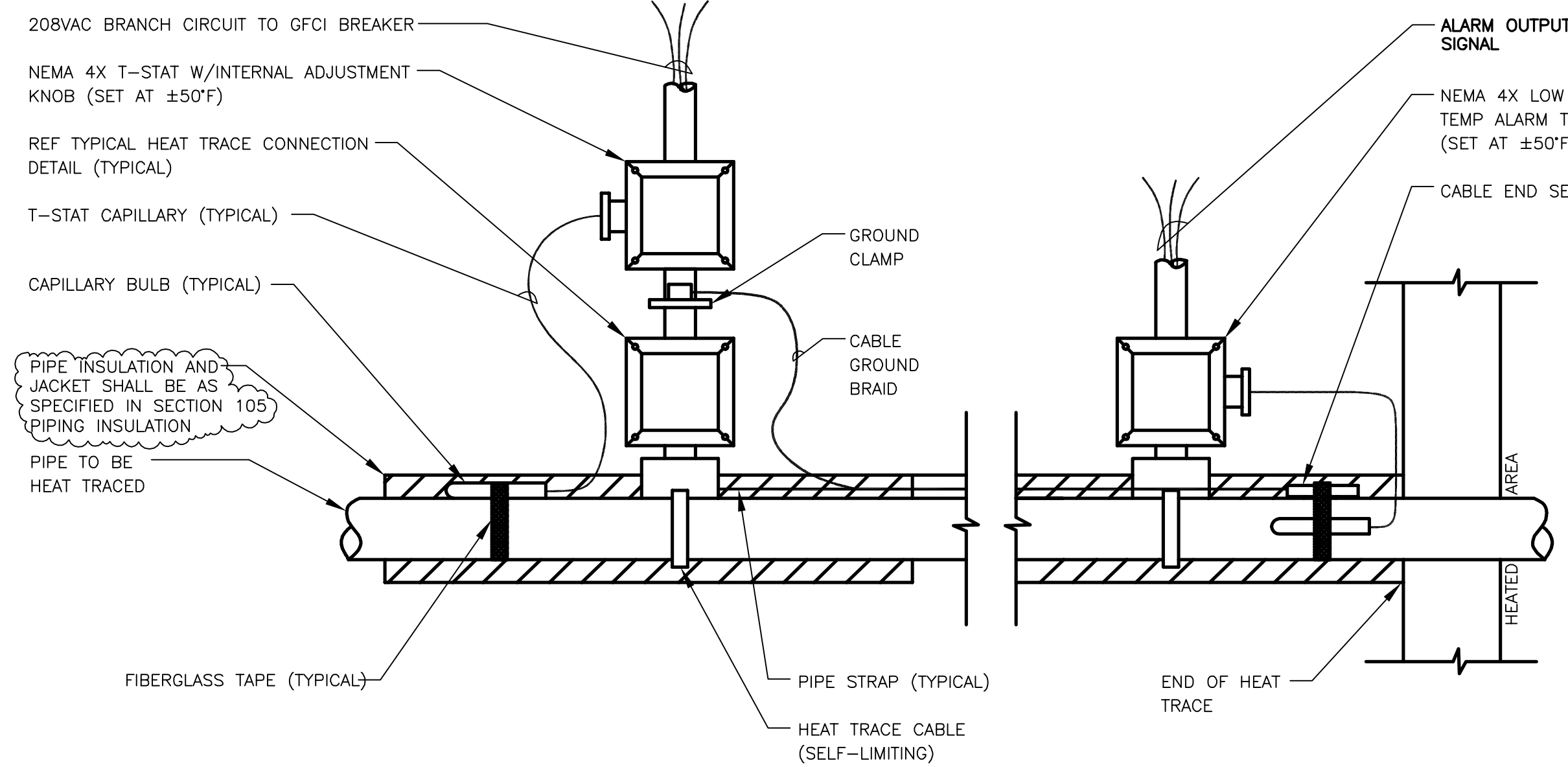


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
ELEMENTARIES & DIAGRAMS

FILE NO. 115.643-38RD	E-10
DATE AUGUST 1993	R-2

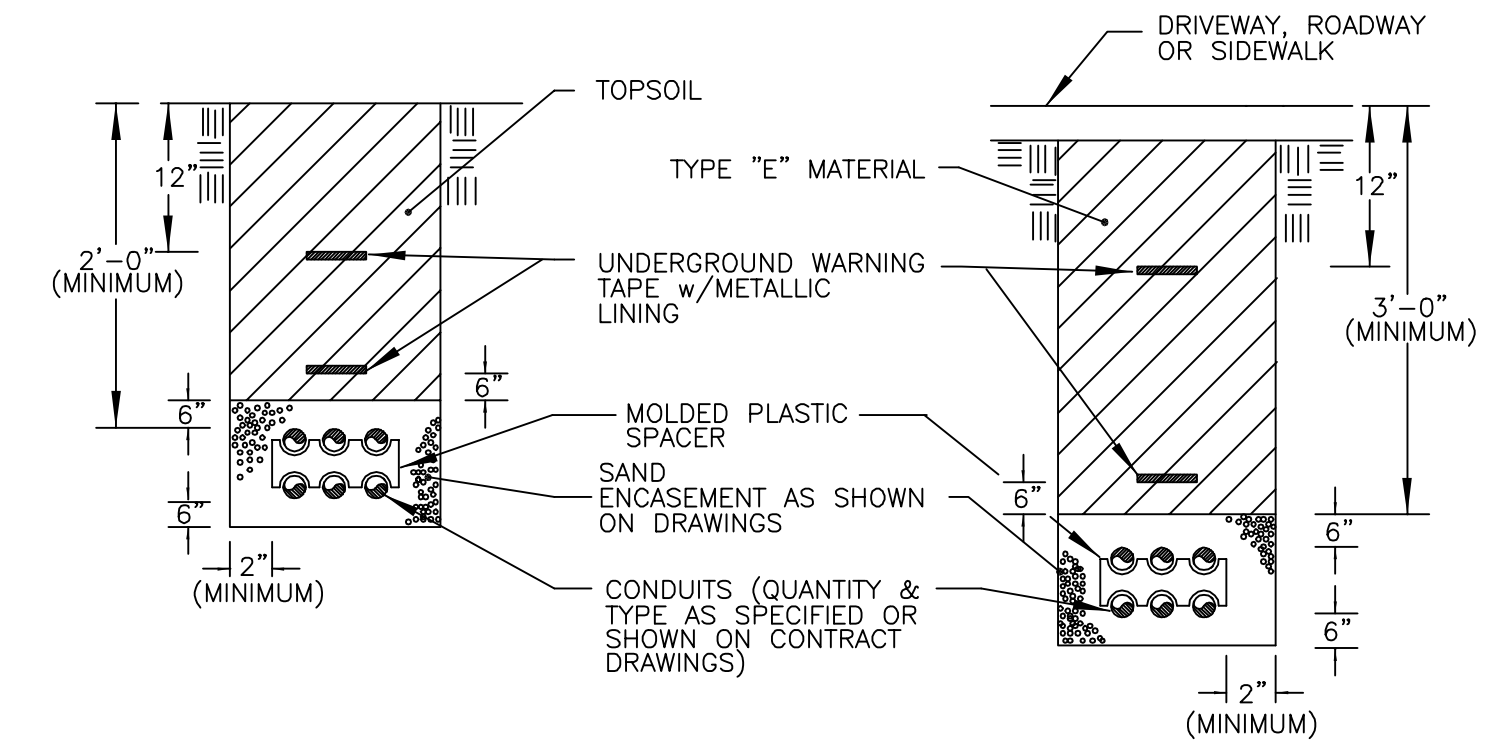
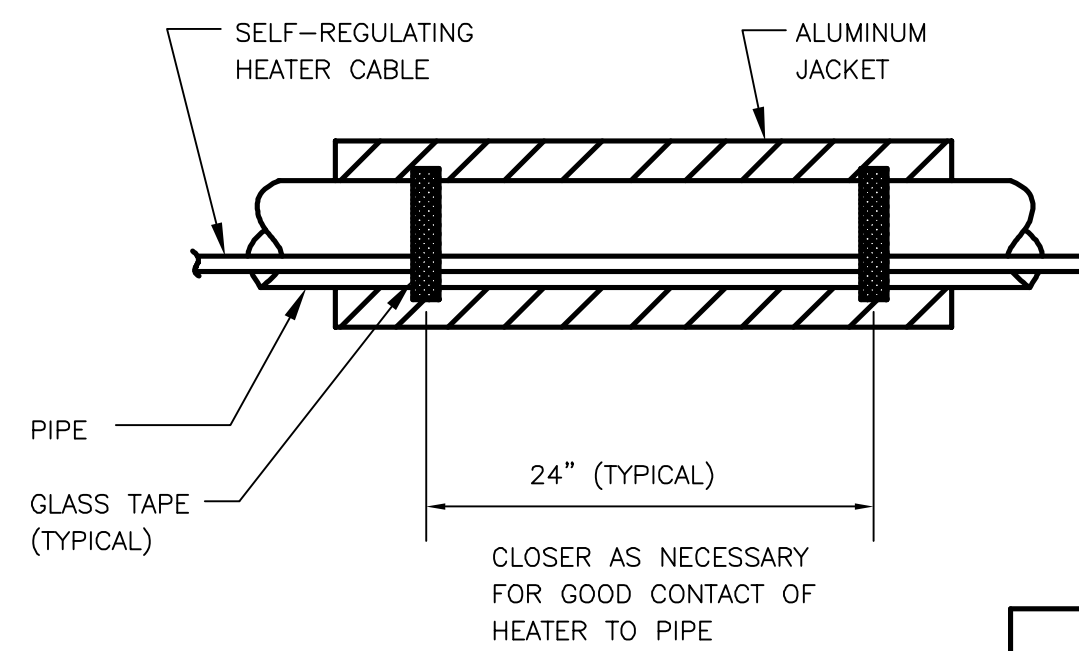
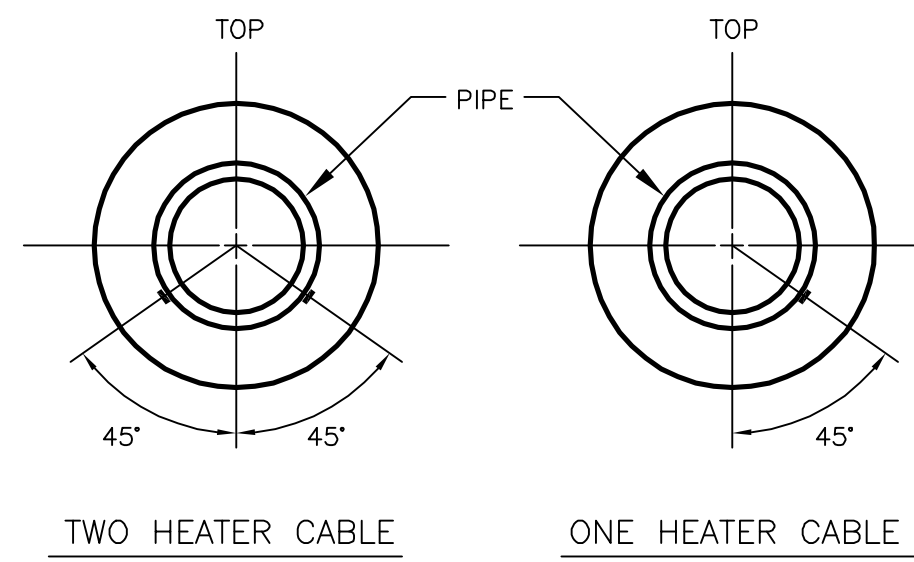
**NOTE:**  
 LOW TEMP T-STAT SHALL BE LOCATED AT THE OPPOSITE END OF A TRACED PIPE FROM THE TRACE CONNECTION POINT. LOW TEMP ALARM T-STAT REQ'D ON ALL HEAT TRACE. REF SCHEDULE FOR CIRCUITS REQUIRING ALARM T-STATS.



**TYPICAL HEAT TRACE INSTALLATION DETAIL**

NOT TO SCALE

**HEATER CABLE LOCATION.**  
 LOCATE MULTIPLE CABLES  
 90° APART OR EQUALLY SPACED



**DUCTBANKS UNDER UNLOADED SURFACES**

**DUCTBANKS UNDER LOADED SURFACES**

**DUCTBANK DETAIL**

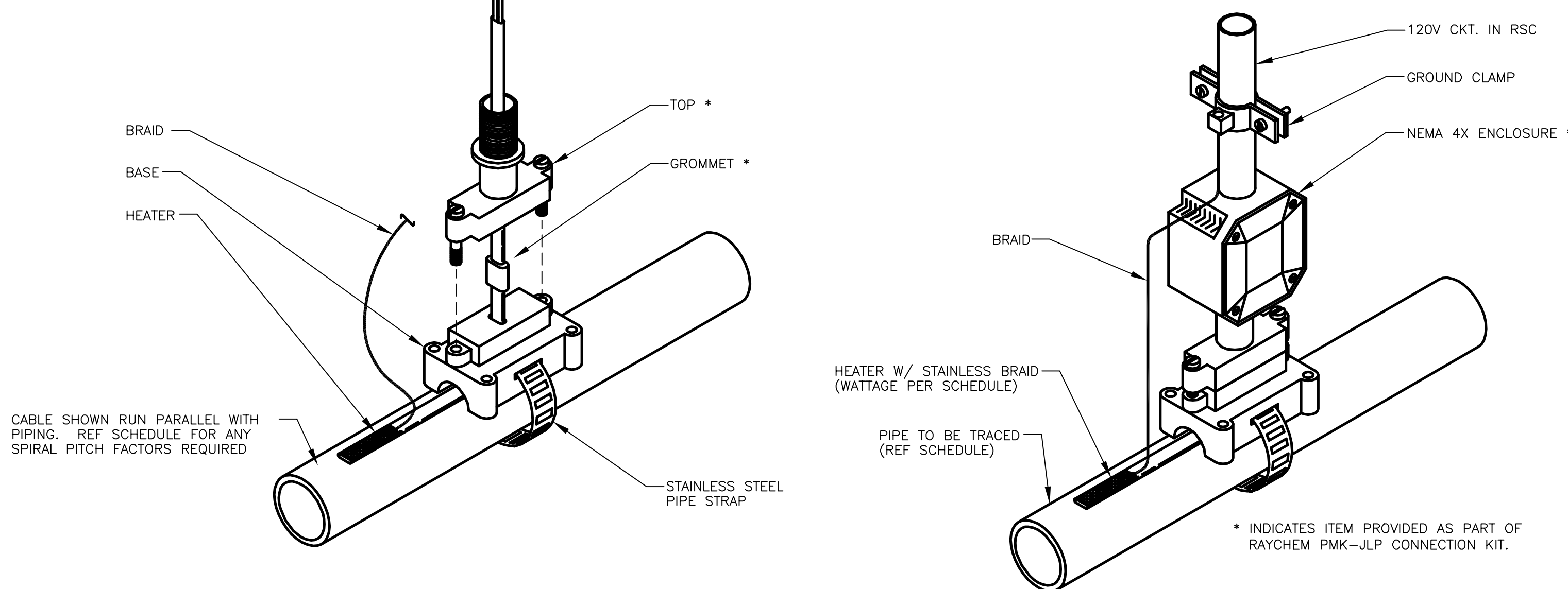
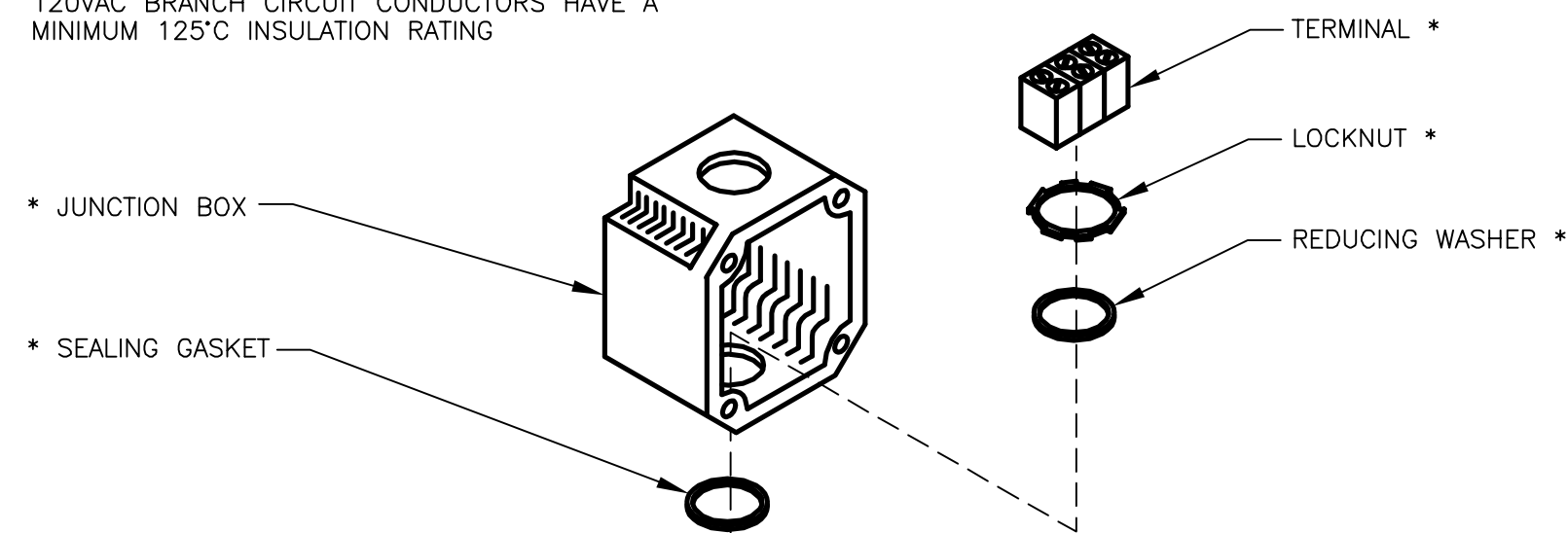
NOT TO SCALE

PIPING HEAT TRACE SCHEDULE							
PIPE NAME	PIPE LENGTH	PIPE SIZE	HEAT TRACE CABLE WATT, TYPE & VOLT	T-STAT	POWER CIRCUIT	TOTAL APPROX. WATTAGE	COMMENTS
FERRIC LINE NO. 1	350 LF	3" TO 1"	5 WATT/FT BTV 208 VAC	CONTROL AND ALARM BOTH REQ'D	PANEL CFB-1B CKT #15	1750	CONTAINMENT PIPE SET CONTROL T-STAT @ 60°F
FERRIC LINE NO. 2	150 LF	3"	5 WATT/FT BTV 208 VAC	CONTROL AND ALARM BOTH REQ'D	PANEL CFB-1B CKT #16	750	CONTAINMENT PIPE SET CONTROL T-STAT @ 60°F
POLYMER FEED AT THICKENER BLDG.	25 LF EA.	4-1"	5 WATT/FT BTV 120 VAC	SINGLE CONTROL T-STAT AND (4) INDIVIDUAL ALARM T-STATS	PANEL STP-1A CKT #9	500	TRACE ALL EXPOSED PIPING FROM 4' BELOW GRADE TO WALL PENETRATION
PLANT WATER AT THICKENER BLDG.	25 LF	1"	5 WATT/FT BTV 120 VAC	CONTROL AND ALARM BOTH REQ'D			
SCUM RETURN AT DIGESTER NO.1	35 LF	4"	5 WATT/FT BTV 120 VAC	CONTROL AND ALARM BOTH REQ'D	PANEL STP-1A CKT #11	450	TRACE ALL EXPOSED PIPING FROM GRADE TO VERTICAL DROP TO TANK
SCUM RETURN AT DIGESTER NO.2	55 LF	4"	5 WATT/FT BTV 120 VAC	CONTROL AND ALARM BOTH REQ'D			

**HEAT TRACE NOTES:**

- HEAT TRACE SHALL BE SELF-LIMITING TYPE SUITABLE FOR HIGH TEMP. W/OVERALL METALLIC BRAID. RAYCHEM TYPE BTV PER SCHEDULE
- HEAT TRACE TO BE INSTALLED ON ALL EXPOSED PORTIONS OF PIPE RUNS INDICATED IN SCHEDULE. TRACE SHALL NOT EXTEND BELOW GRADE OR BE SUBMERGED.
- ALL HEAT TRACE CABLE SHALL BE INSTALLED IN CONTINUOUS LENGTHS NO SPLICES ARE ACCEPTABLE.
- ALL CABLE SHALL BE INSTALLED PER MFG'S INSTALLATION INSTRUCTIONS. THIS SHALL INCLUDE METHODS FOR INSTALLATIONS BENDS, VALVES, PUMP BODIES, ETC..
- ALL TRACED PIPE SHALL BE INSULATED WITH 2" FIBERGLASS PIPE INSULATION WITH OUTER JACKET.
- LENGTHS OF PIPE INDICATED IN THE SCHEDULE ARE APPROXIMATE FIELD VERIFICATION OF ACTUAL LENGTH IS REQUIRED.
- NON-METALLIC PIPING SHALL BE WRAPPED 100% WITH ALUMINUM TAPE BOTH UNDER AND OVER HEATER CABLE.

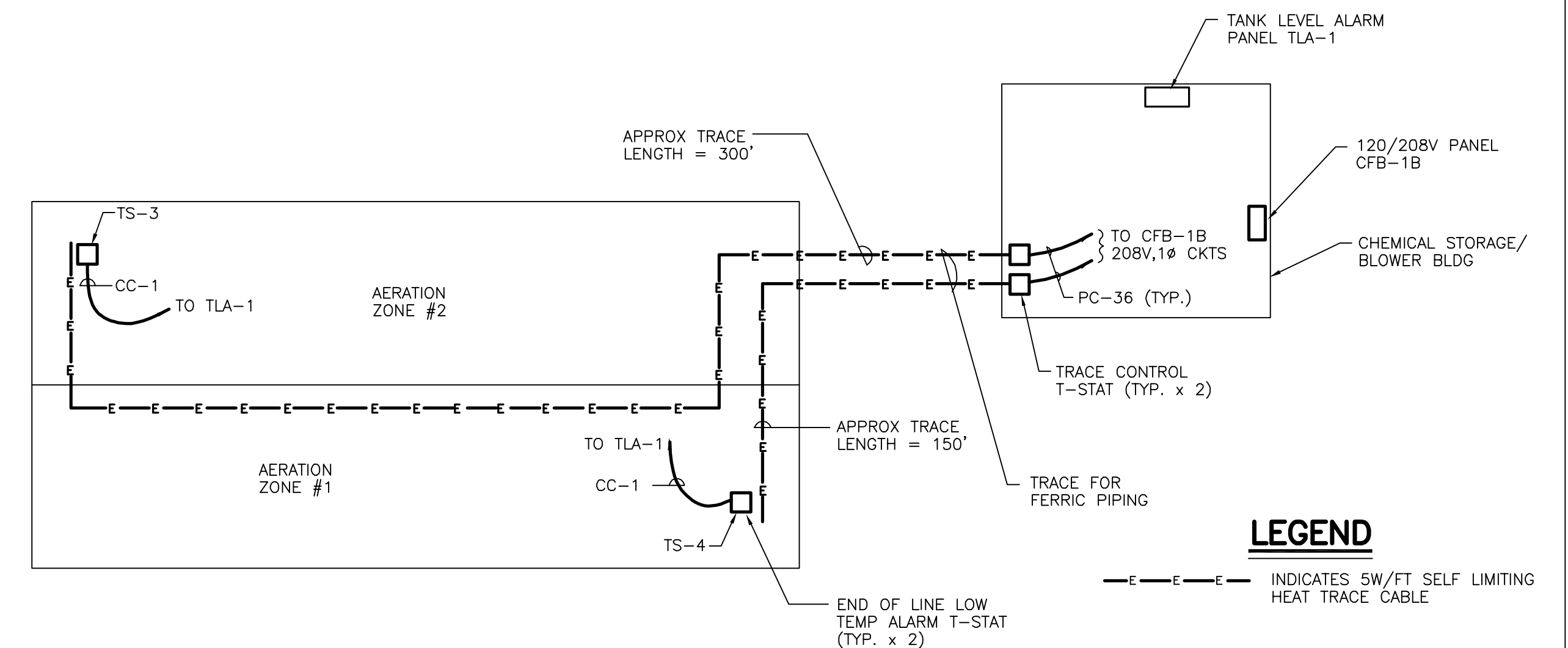
120VAC BRANCH CIRCUIT CONDUCTORS HAVE A MINIMUM 125°C INSULATION RATING



**TYPICAL HEAT TRACE CONNECTION DETAIL**

NOT TO SCALE

**NOTE: ABOVE GRADE INSULATION SHALL BE FIBERGLASS TYPE. BELOW GRADE INSULATION SHALL BE FOAM GLASS TYPE.**



REF. DWG M-9 FOR PIPING LAYOUT.

**AERATION TANK PIPING HEAT TRACE SCHEMATIC**

NOT TO SCALE

**RECORD DRAWINGS**  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

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Designed by.....Checked by.....				
Drawn by.....				
		2	2/9/96	RECORD DRAWINGS
		1	8/93	GENERAL REVISION
		NO.	DATE	REVISION
				INIT.

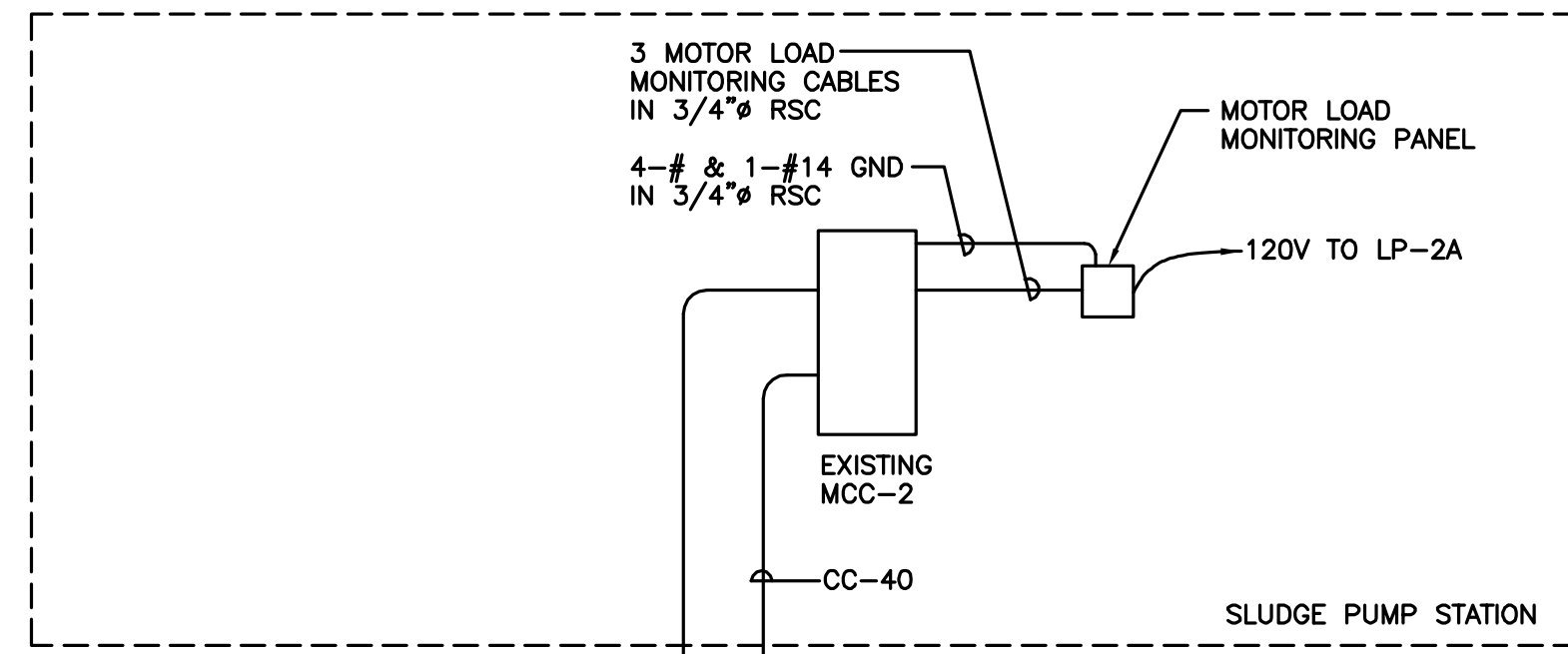


ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

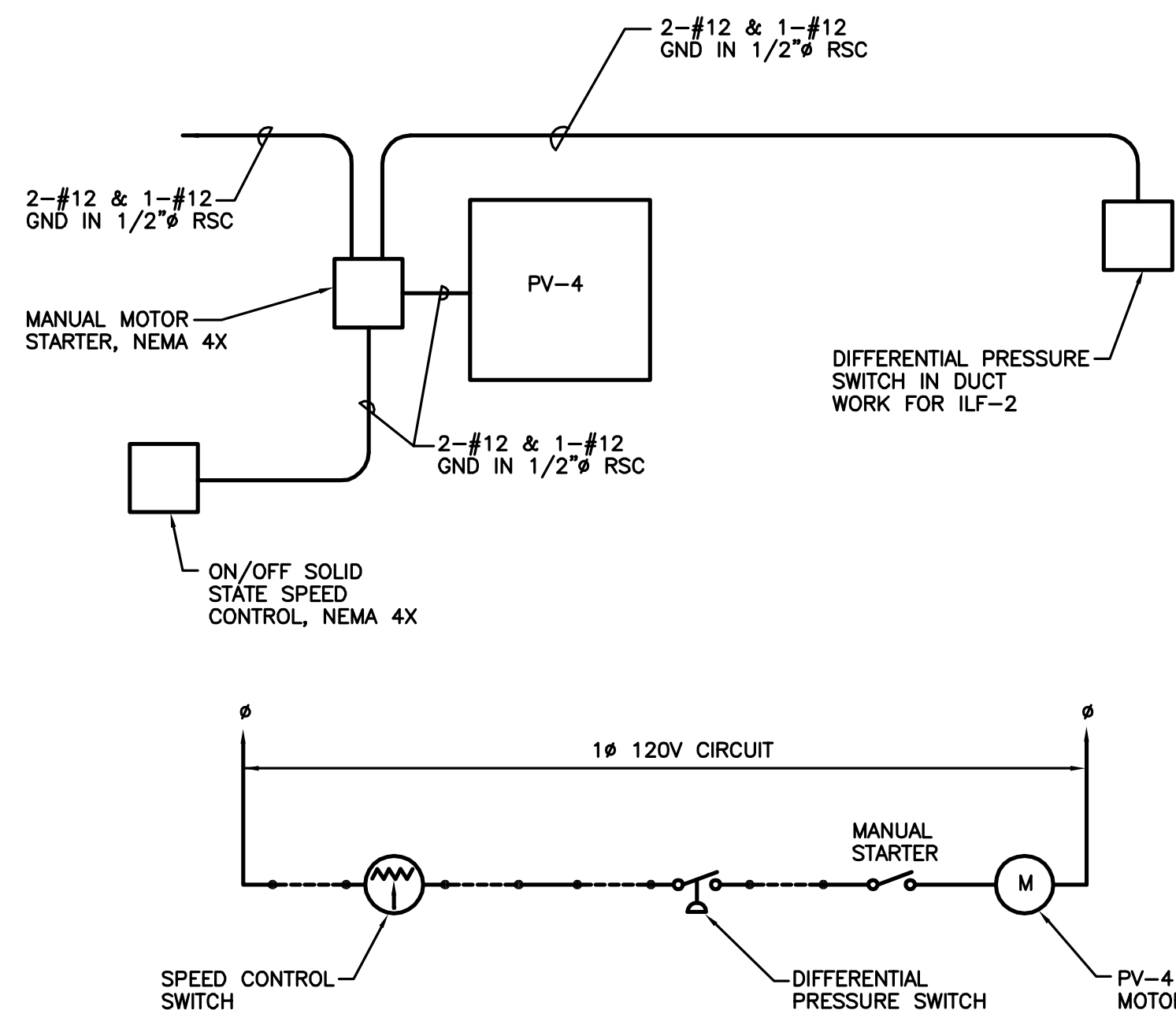
ELECTRICAL  
 DETAILS AND SCHEDULE

FILE NO.	E-11
115.643-39RD	
DATE	R-2
AUGUST 1993	





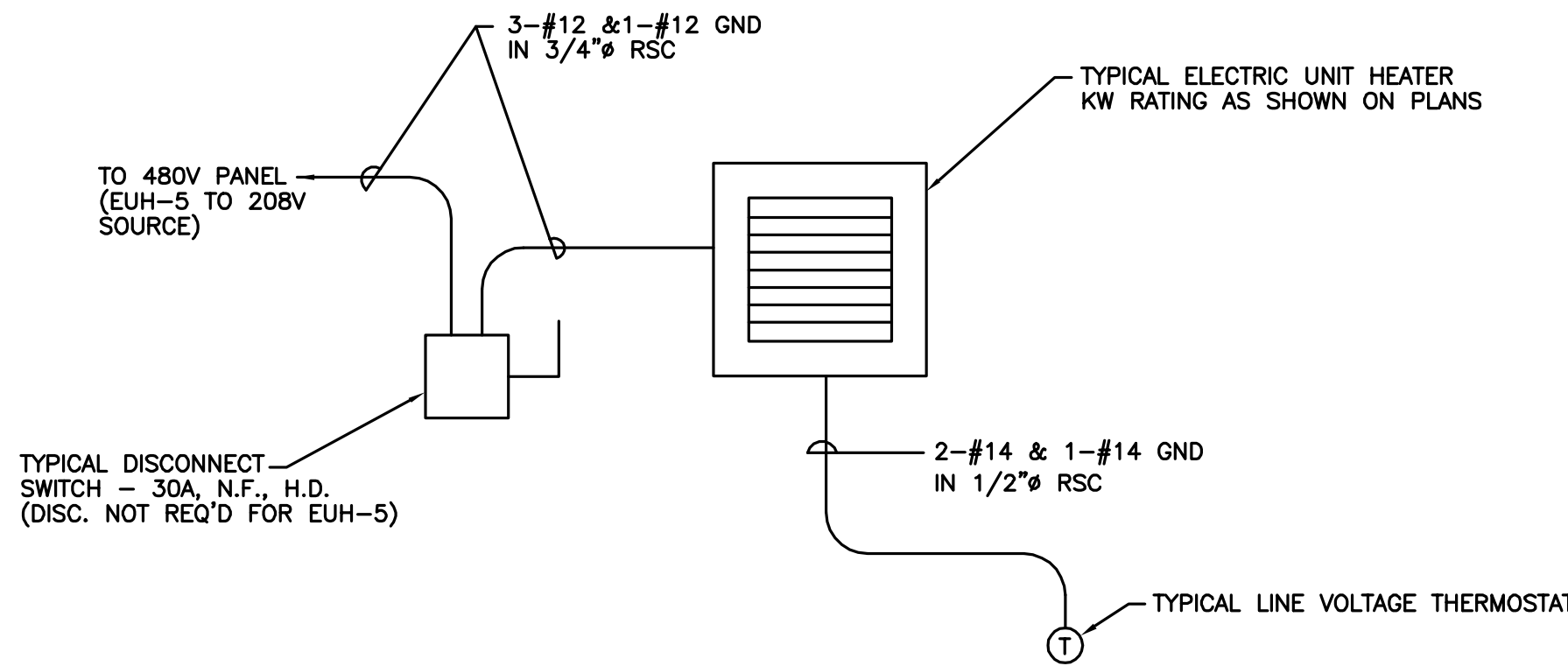
**TYPICAL SCUM PUMP SYSTEM RISER DIAGRAM**  
NOT TO SCALE  
(TYP. FOR SCUM PUMPS #1 & #2)



**PV-4 RISER AND ELEMENTARY DIAGRAM**  
NOT TO SCALE

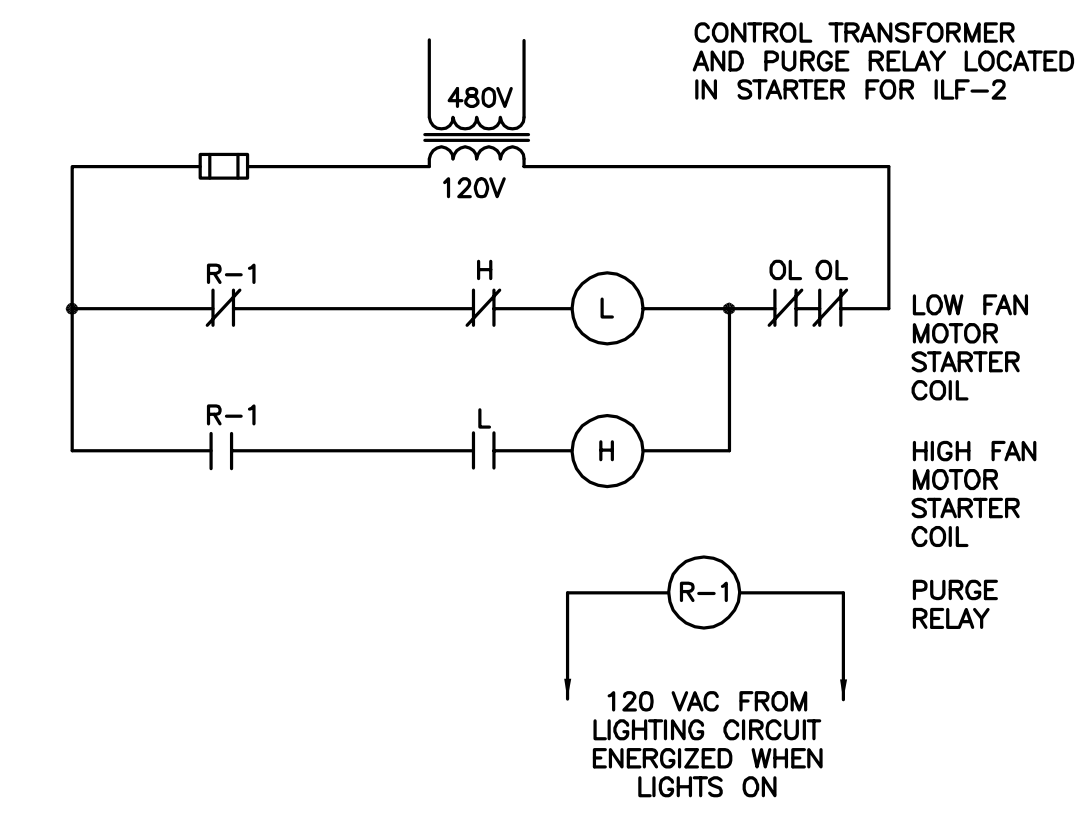
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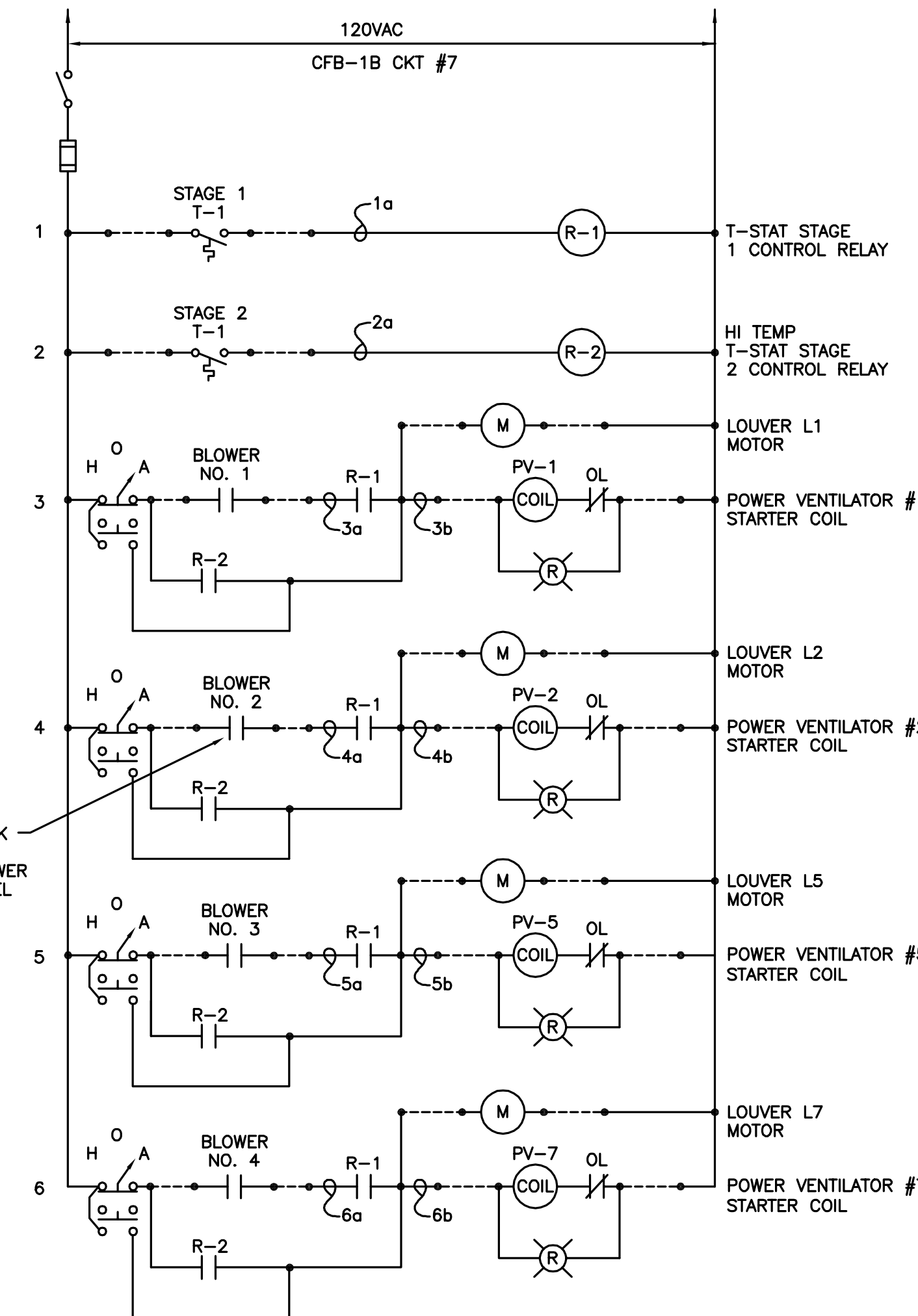


**TYPICAL UNIT HEATER RISER DIAGRAM**  
NOT TO SCALE

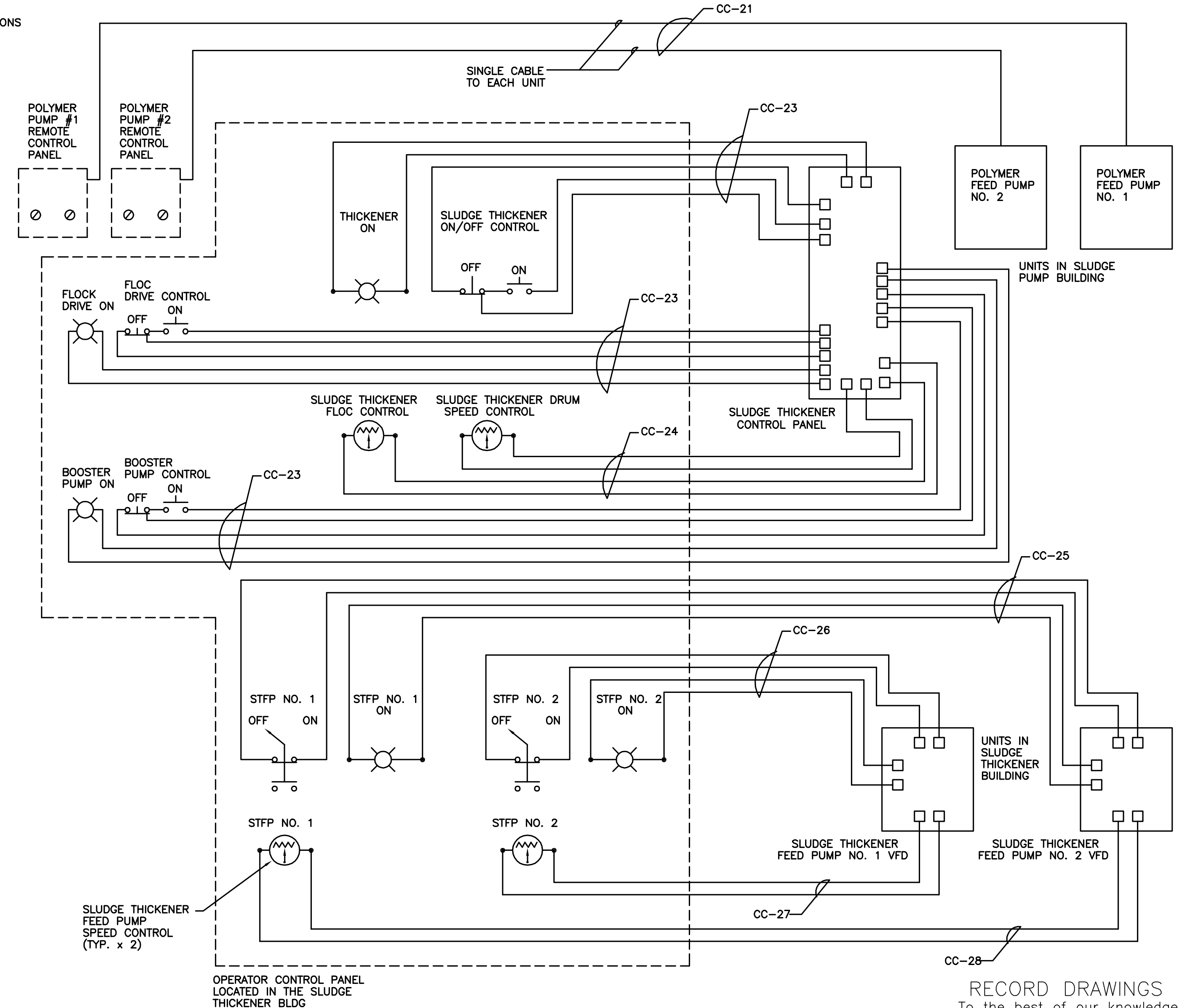
NOTE:  
ALL EQUIPMENT ENCLOSURE CLASSIFICATIONS SHALL BE IN ACCORDANCE WITH THOSE INDICATED ON THE PLAN DWGS.



**ILF-2 CONTROL ELEMENTARY**  
NOT TO SCALE



**BLOWER BLDG. EXHAUST FAN LOUVER CONTROL ELEMENTARY**  
NOT TO SCALE

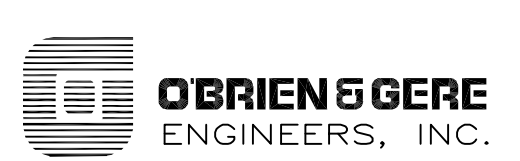


**POLYMER FEED/SLUDGE THICKENING CONTROL PANEL**  
NOT TO SCALE

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of.....	NOT TO SCALE		
Designed by.....Checked by.....			
Drawn by.....			
NO.	DATE	RECORD DRAWINGS REVISION	INIT.
0	2/9/96		



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
ELEMENTARIES AND DIAGRAMS

FILE NO.	E-13
115.643-41RD	
DATE	R-0
AUGUST 1993	

INSTRUMENT SCHEDULE $\Delta$										
TAG NO.	SERVICE	DESCRIPTION	SIGNAL		RANGE	UNITS	SIGNAL	MFG. & MODEL NO.	REMARKS	
			TO	FROM						
HS-05	GRIT BLOWER No. 1	MANUAL SPEED CONTROLLER	-	-	-	-	MODULATE DRIVE		-	
HS-06	INFLUENT PUMPS	PUMP SEQUENCING SELECTOR SWITCH	-	-	-	-	SELECT PUMP SEQUENCE		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-07	INFLUENT PUMP No.1	H-O-A SELECTOR SWITCH	-	-	-	-	HAND-OFF-AUTO		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-08	INFLUENT PUMP No.1	SPEED POTENTIOMETER	-	-	-	-	-		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-09	INFLUENT PUMP No. 2	H-O-A SELECTOR SWITCH	-	-	-	-	HAND-OFF-AUTO		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-10	INFLUENT PUMP No. 3	H-O-A SELECTOR SWITCH	-	-	-	-	HAND-OFF-AUTO		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-11	INFLUENT PUMP No. 3	SPEED POTENTIOMETER	-	-	-	-	MODULATE DRIVE		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-12	INFLUENT PUMP No. 4	H-O-A SELECTOR SWITCH	-	-	-	-	HAND-OFF-AUTO		LOCATED IN THE INFLUENT PUMP CONTROL PANEL	
HS-13	POLYMER FEED PUMP No. 1	SPEED POTENTIOMETER-LOCAL	-	-	-	-	MODULATE PUMP		LOCATED IN THE LOCAL POLYMER FEED SYSTEM	
HS-14	POLYMER FEED PUMP No. 1	SPEED POTENTIOMETER-REMOTE	-	-	-	-	MODULATE PUMP		LOCATED IN THE REMOTE POLYMER FEED PANEL	
HS-15	POLYMER FEED PUMP No. 2	SPEED POTENTIOMETER-LOCAL	-	-	-	-	MODULATE PUMP		LOCATED IN THE LOCAL POLYMER FEED SYSTEM	
HS-16	POLYMER FEED PUMP No. 2	SPEED POTENTIOMETER-REMOTE	-	-	-	-	MODULATE PUMP		LOCATED IN THE REMOTE POLYMER FEED SYSTEM	
HS-17	THICKENER FEED PUMP No. 2	SPEED POTENTIOMETER	-	-	-	-	MODULATE DRIVE		-	
HS-18	THICKENER FEED PUMP No. 1	SPEED POTENTIOMETER	-	-	-	-	MODULATE DRIVE		-	
LE-01	SCUM SUMP No.1	LEVEL SENSOR	LIT-01	LE-01	0-100%	-	-		SCUM SUMP No. 1 LEVEL CONTROL	
LE-02	SCUM SUMP No. 2	LEVEL SENSOR	LIT-02	LE-02	0-100%	-	-		SCUM SUMP No. 2 LEVEL CONTROL	
LE-03	WET WELL No.1 & No. 2	LEVEL SENSOR	LT-01	LE-03	0-100%	-	-		EXISTING	
LE-04	CHEM STORAGE TANK No. 1	LEVEL SENSOR	LIT-03	LE-04	0-100%	-	-		CHEM STORAGE TANK No. 1 LEVEL CONTROL	
LE-05	CHEM STORAGE TANK No. 2	LEVEL SENSOR	LIT-04	LE-05	0-100%	-	-		CHEM STORAGE TANK No. 2 LEVEL CONTROL	
LE-06	THICKEN SLUDGE HOLDING TANK	LEVEL SENSOR	LIT-05	LE-06	0-100%	-	-		THICKEN SLUDGE HOLDING TANK LEVEL CONTROL	
CE-01	SCUM PUMP No.1	CURRENT SENSOR (LOAD)	CIT-01	CE-01	-	-	-		SCUM PUMP No. 1 LOAD MONITOR	
CE-02	SCUM PUMP No.2	CURRENT SENSOR (LOAD)	CIT-02	CE-02	-	-	-		SCUM PUMP No. 2 LOAD MONITOR	
OE-01	AERATION TANK No. 1	OXYGEN SENSOR	AERATION PANEL	OE-01	-	-	-		-	
OE-02	AERATION TANK No. 2	OXYGEN SENSOR	AERATION PANEL	OE-02	-	-	-		-	
LIT-01	SCUM SUMP No. 1	LEVEL IND TRANSMITTER	SCUM SUMP#1 PANEL	-	-	-	SCUM SUMP#1 LEVEL		SCUM SUMP No. 1 LEVEL INDICATOR PANEL	
LIT-02	SCUM SUMP No. 2	LEVEL IND TRANSMITTER	SCUM SUMP#2 PANEL	-	-	-	SCUM SUMP#2 LEVEL		SCUM SUMP No. 2 LEVEL INDICATOR PANEL	
LIT-03	CHEM STORAGE TANK No. 1	LEVEL IND TRANSMITTER	CHEM TANK PANEL	-	0-100%	-	CHEM PUMP CONTROL & ALARM		CHEM STORAGE TANK ALARM PANEL	
LIT-04	CHEM STORAGE TANK No. 2	LEVEL IND TRANSMITTER	CHEM TANK PANEL	-	0-100%	-	CHEM PUMP CONTROL & ALARM		CHEM STORAGE TANK ALARM PANEL	
LIT-05	THICKENED SLUDGE HOLDING TANK	LEVEL IND TRANSMITTER	THICKENED SLUDGE HLD. TANK	-	0-100%	-	-		THICKENED SLUDGE HOLDING TANK LEVEL CONTROLLER	
LI-01	SCUM SUMP No. 1	LEVEL IND	SCUM SUMP#1	-	0-100%	-	-		DIGITAL INDICATOR AT SCUM PUMPING STRUCTURE	
LI-02	SCUM SUMP No. 2	LEVEL IND	SCUM SUMP#2	-	0-100%	-	-		DIGITAL INDICATOR AT SCUM PUMPING STRUCTURE	
LT-01	WET WELL No. 1 & #2	LEVEL TRANSMITTER	WET WELL	-	-	-	-		EXISTING BUBBLER	
HLS-01	CHEM STORAGE TANK No. 1	FLOAT SWITCH	CHEM STORAGE #1	-	-	-	-		CHEMICAL STORAGE TANK LEVEL CONTROL PANEL	
HLS-02	CHEM STORAGE TANK No. 2	FLOAT SWITCH	CHEM STORAGE #2	-	-	-	-		CHEMICAL STORAGE TANK LEVEL CONTROL PANEL	
LS-01	CONTAINMENT PAN LEAK DETECTOR	FLOAT SWITCH	TANK ALARM	-	-	-	-		CONTAINMENT PAN LEAK DETECTOR	
TS-01	CHEMICAL PIPING HEAT TRACE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		CHEM TANK No.1 PIPING HEAT TRACE CONTROL THERMOSTAT	

INSTRUMENT SCHEDULE										
TAG NO.	SERVICE	DESCRIPTION	SIGNAL		RANGE	UNITS	SIGNAL	MFG. & MODEL NO.	REMARKS	
			TO	FROM						
TS-02	CHEMICAL PIPING HEAT TRACE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		CHEM TANK No.2 PIPING HEAT TRACE CONTROL THERMOSTAT	
TS-03	CHEMICAL PIPING HEAT TRACE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		CHEM TANK No.1 PIPING HEAT TRACE ALARM THERMOSTAT (LOW TEMP)	
TS-04	CHEMICAL PIPING HEAT TRACE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		CHEM TANK No.2 PIPING HEAT TRACE ALARM THERMOSTAT (LOW TEMP)	
TS-05 THRU TS-08	POLYMER FEED LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		POLYMER LINE PIPING HEAT TRACE CONTROL T-STAT	
TS-09	PLANT WATER LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		PLANT WATER PIPING HEAT TRACE CONTROL T-STAT	
TS-10	DIGESTOR #1 SCUM LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		DIGESTOR #1 SCUM PIPING HEAT TRACE CONTROL T-STAT	
TS-11	DIGESTOR #2 SCUM LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		DIGESTOR #2 SCUM PIPING HEAT TRACE CONTROL T-STAT	
TS-12 THRU TS-15	POLYMER FEED LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		POLYMER LINE PIPING HEAT TRACE ALARM T-STAT (LOW TEMP)	
TS-16	PLANT WATER LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		PLANT WATER PIPING HEAT TRACE ALARM T-STAT (LOW TEMP)	
TS-17	DIGESTOR #1 SCUM LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		DIGESTOR #1 SCUM PIPING HEAT TRACE ALARM T-STAT (LOW TEMP)	
TS-18	DIGESTOR #2 SCUM LINE	TEMP SWITCH	PIPE HEAT TRACE	-	-	-	-		DIGESTOR #2 SCUM PIPING HEAT TRACE ALARM T-STAT (LOW TEMP)	
OI-01	AERATION TANK #1	DISSOLVED OXYGEN INDICATOR	OI-01	AERATION PANEL	-	-	-		DIGITAL INDICATOR AT AERATION TANK #1	
OI-02	AERATION TANK #2	DISSOLVED OXYGEN INDICATOR	OI-02	AERATION PANEL	-	-	-		DIGITAL INDICATOR AT AERATION TANK #2	
HS-19	AERATION BLOWER #1	H-O-A SELECTOR SWITCH	-	-	-	-	-		LOCATED IN AERATION BLOWER SMC	
HS-20	AERATION BLOWER #2	H-O-A SELECTOR SWITCH	-	-	-	-	-		LOCATED IN AERATION BLOWER SMC	
HS-21	AERATION BLOWER #3	H-O-A SELECTOR SWITCH	-	-	-	-	-		LOCATED IN AERATION BLOWER SMC	
HS-22	SLUDGE THICKENER	POWER - ON PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-23	SLUDGE THICKENER	POWER - ON PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-24	SLUDGE THICKENER	UNIT DRIVE START PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-25	SLUDGE THICKENER	UNIT DRIVE STOP PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-26	SLUDGE THICKENER	BOOSTER PUMP START PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-27	SLUDGE THICKENER	BOOSTER PUMP STOP PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-28	SLUDGE THICKENER	FLOC DRIVE START PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-29	SLUDGE THICKENER	FLOC DRIVE STOP PUSHBUTTON	-	-	-	-	-		THICKENER SYSTEM OPERATOR CONTROL PANEL	
HS-30	SLUDGE THICKENER OPER. CNL. PNL. VFD-1	ON/OFF SELECTOR	-	-	-	-	-		ON/OFF SELECTOR ON OPERATOR CONTROL PANEL VFD-1	
HS-31	SLUDGE THICKENER OPER. CNL. PNL. VFD-2	ON/OFF SELECTOR	-	-	-	-	-		ON/OFF SELECTOR ON OPERATOR CONTROL PANEL VFD-2	
TE-01 THRU TE-04	AERATION BLOWER SKID #1	RTD	TE-01 THRU TE-04	AI-01	-	-	-		RTD ON AERATION BLOWER SKID #1	
TE-05 THRU TE-08	AERATION BLOWER SKID #2	RTD	TE-05 THRU TE-08	AI-02	-	-	-		RTD ON AERATION BLOWER SKID #2	
TE-09 THRU TE-12	AERATION BLOWER SKID #3	RTD	TE-09 THRU TE-12	AI-03	-	-	-		RTD ON AERATION BLOWER SKID #3	
VE-01 THRU VE-04	AERATION BLOWER SKID #1	VIBRATION MONITOR	VE-01 THRU VE-04	AI-01	-	-	-		VIBRATION MONITOR ON AERATION BLOWER SKID #1	
VE-05 THRU VE-08	AERATION BLOWER SKID #2	VIBRATION MONITOR	VE-05 THRU VE-08	AI-02	-	-	-		VIBRATION MONITOR ON AERATION BLOWER SKID #2	
VE-09 THRU VE-12	AERATION BLOWER SKID #3	VIBRATION MONITOR	VE-09 THRU VE-12	AI-03	-	-	-		VIBRATION MONITOR ON AERATION BLOWER SKID #3	
CIT-01	AERATION BLOWER SKID #1	CURRENT XFMR	CIT-01	AI-01	-	-	-		CURRENT XFMR ON AERATION BLOWER SKID #1	
CIT-02	AERATION BLOWER SKID #2	CURRENT XFMR	CIT-02	AI-02	-	-	-		CURRENT XFMR ON AERATION BLOWER SKID #2	
CIT-03	AERATION BLOWER SKID #3	CURRENT XFMR	CIT-03	AI-03	-	-	-		CURRENT XFMR ON AERATION BLOWER SKID #3	
AI-01	LOCAL METAL PANEL AERATION BLOWER SKID #1	LOCAL METAL PANEL	AI-01	AERATOR CONTROL PANEL	-	-	-		PANEL ON AERATION BLOWER SKID #1	

INSTRUMENT SCHEDULE										
TAG NO.	SERVICE	DESCRIPTION	SIGNAL		RANGE	UNITS	SIGNAL	MFG. & MODEL NO.	REMARKS	
			TO	FROM						
AI-02	LOCAL METAL PANEL AERATION BLOWER SKID #2	LOCAL METAL PANEL	AI-02	AERATOR CONTROL PANEL	-	-	-		PANEL ON AERATION BLOWER SKID #2	
AI-03	LOCAL METAL PANEL AERATION BLOWER SKID #3	LOCAL METAL PANEL	AI-03	AERATOR CONTROL PANEL	-	-	-		PANEL ON AERATION BLOWER SKID #3	
SC-01	INFLUENT PUMP #1	VSD INFLUENT PUMP #1	SC-01	INFLUENT PUMP #1	-	-	-		VSD FOR INFLUENT PUMP #1	
SC-02	INFLUENT PUMP #3	VSD INFLUENT PUMP #3	SC-02	INFLUENT PUMP #3	-	-	-		VSD FOR INFLUENT PUMP #3	
SC-03 THRU SC-05	AERATION BLOWERS 1, 2 & 3	SMC AERATION BLOWERS 1,2&3	SC-03, 04&05	AERATION BLOWERS 1, 2 & 3	-	-	-		SMART MOTOR CONTROLLERS FOR AERATION BLOWERS 1, 2 & 3	
SC-06	POLYMER FEED PUMP #1	POTENTIOMETER PUMP #1	SC-06	POLYFEED PUMP #1	-	-	-		POTENTIOMETER FOR POLYMER FEED PUMP #1 CONTROL PANEL	
SC-07	POLYMER FEED PUMP #1	POTENTIOMETER PUMP #1	SC-07	POLYFEED PUMP #1	-	-	-		POTENTIOMETER FOR POLYMER FEED PUMP #1 REMOTE PANEL	
SC-08	POLYMER FEED PUMP #2	POTENTIOMETER PUMP #1	SC-08	POLYFEED PUMP #2	-	-	-		POTENTIOMETER FOR POLYMER FEED PUMP #2 CONTROL PANEL	
SC-09	POLYMER FEED PUMP #2	POTENTIOMETER PUMP #1	SC-09	POLYFEED PUMP #2	-	-	-		POTENTIOMETER FOR POLYMER FEED PUMP #2 REMOTE PANEL	
SC-10	STFP #1	VSD STFP #1	SC-10	STFP #1	-	-	-		VSD FOR STFP #1	
SC-11	STFP #1	POTENTIOMETER VSD STFP #1	SC-11	SC-10	0-100%	-	-		POTENTIOMETER FOR VSD FOR STFP #1	
SC-12	STFP #2	VSD STFP #2	SC-12	STFP #2	-	-	-		VSD FOR STFP #2	
SC-13	STFP #2	POTENTIOMETER VSD STFP #1	SC-13	SC-12	0-100%	-	-		POTENTIOMETER FOR VSD FOR STFP #2	
CT-01	INFLUENT PUMPS	SIGNAL CONVERTER	INFLUENT PUMPS	LT-01	0-100%	-	4-20ma		10-50ma TO 4-20ma CONVERTER	
FE-01	WASTE SLUDGE	FLOW METER	FIT-01	FE-01	-	GPM	LOCAL ONLY		-	
FIT-01 FQ-01	WASTE SLUDGE	FLOW TRANSMITTER	-	FE-01	-	GPM	LOCAL ONLY		FIT-01 SHALL CONSIST OF (2) TRANSMITTERS,(1) CAPABLE OF RUNNING TOTALIZATION & (1) CAPABLE OF INDIVIDUAL RE-SETTABLE BATCH OPERATIONS.	
FE-02	DIGESTED SLUDGE	FLOW METER	FIT-02	FE-02	-	GPM	LOCAL ONLY		-	
FIT-02 FQ-02	DIGESTED SLUDGE	FLOW TRANSMITTER	-	FE-02	-	GPM	LOCAL ONLY		TOTALIZER W/RESETTING FEATURE.	

RECORD DRAWINGS  
 To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
 O'BRIEN & GERE ENGINEERS, INC.  
 By: \_\_\_\_\_

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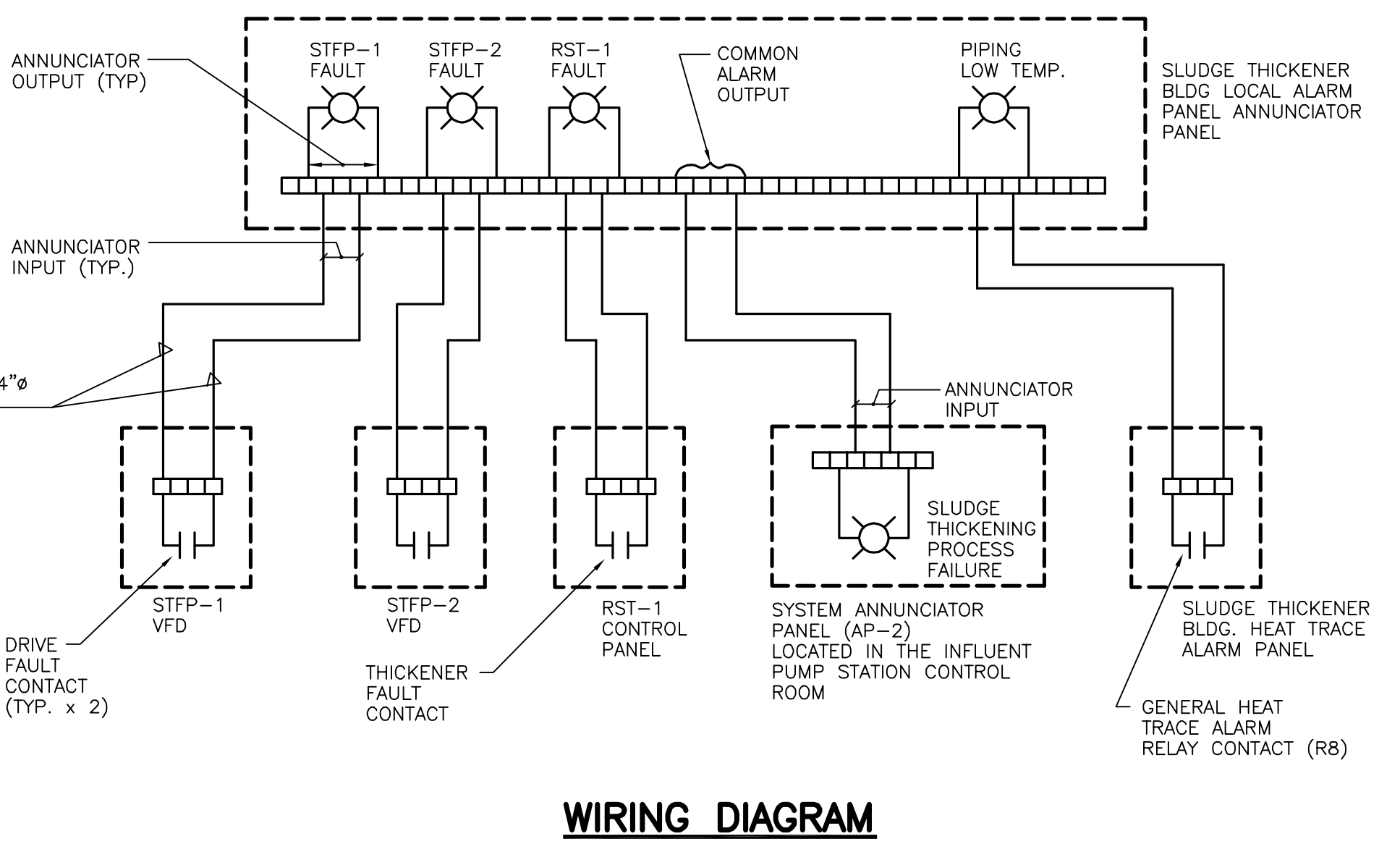
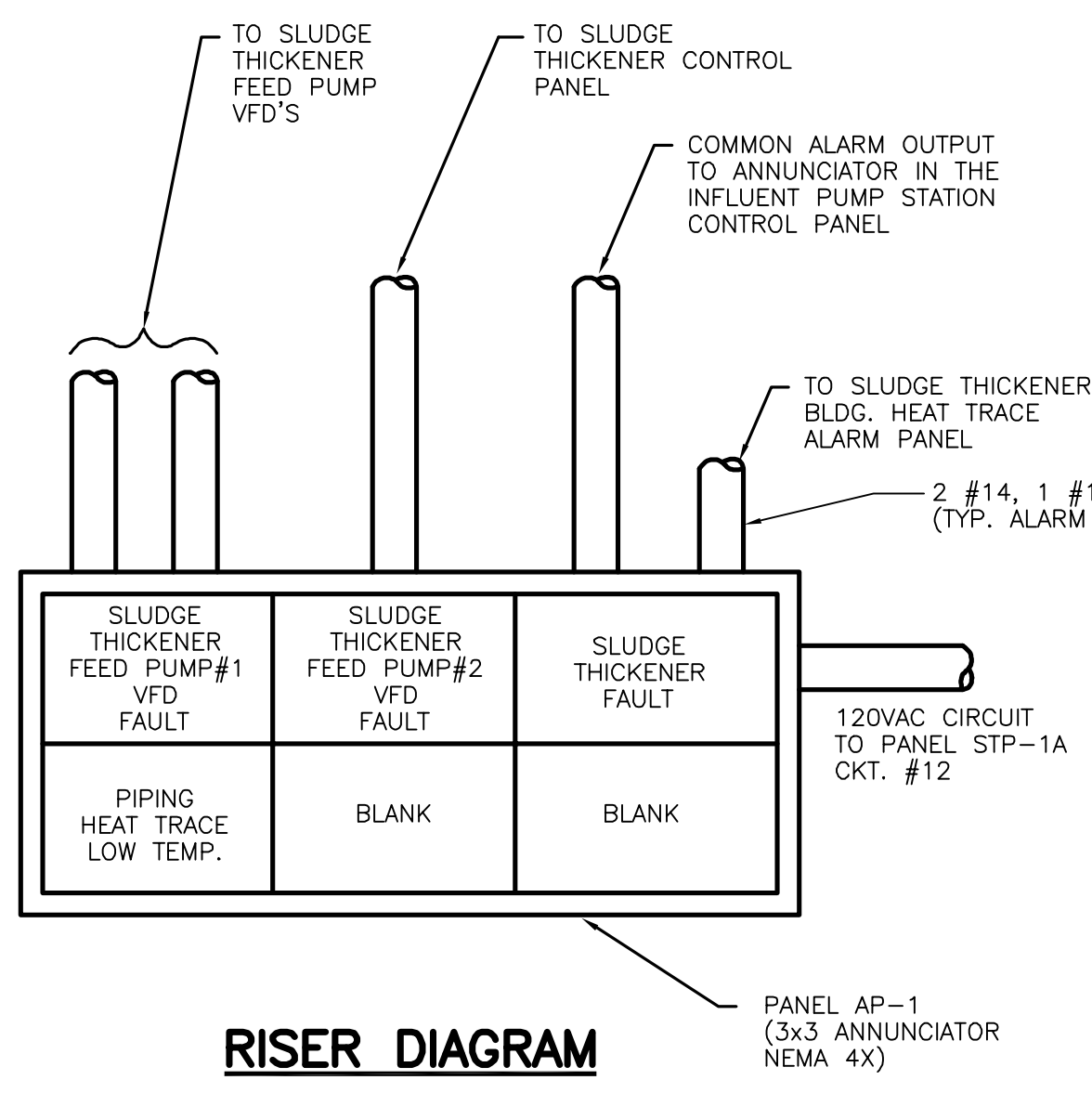
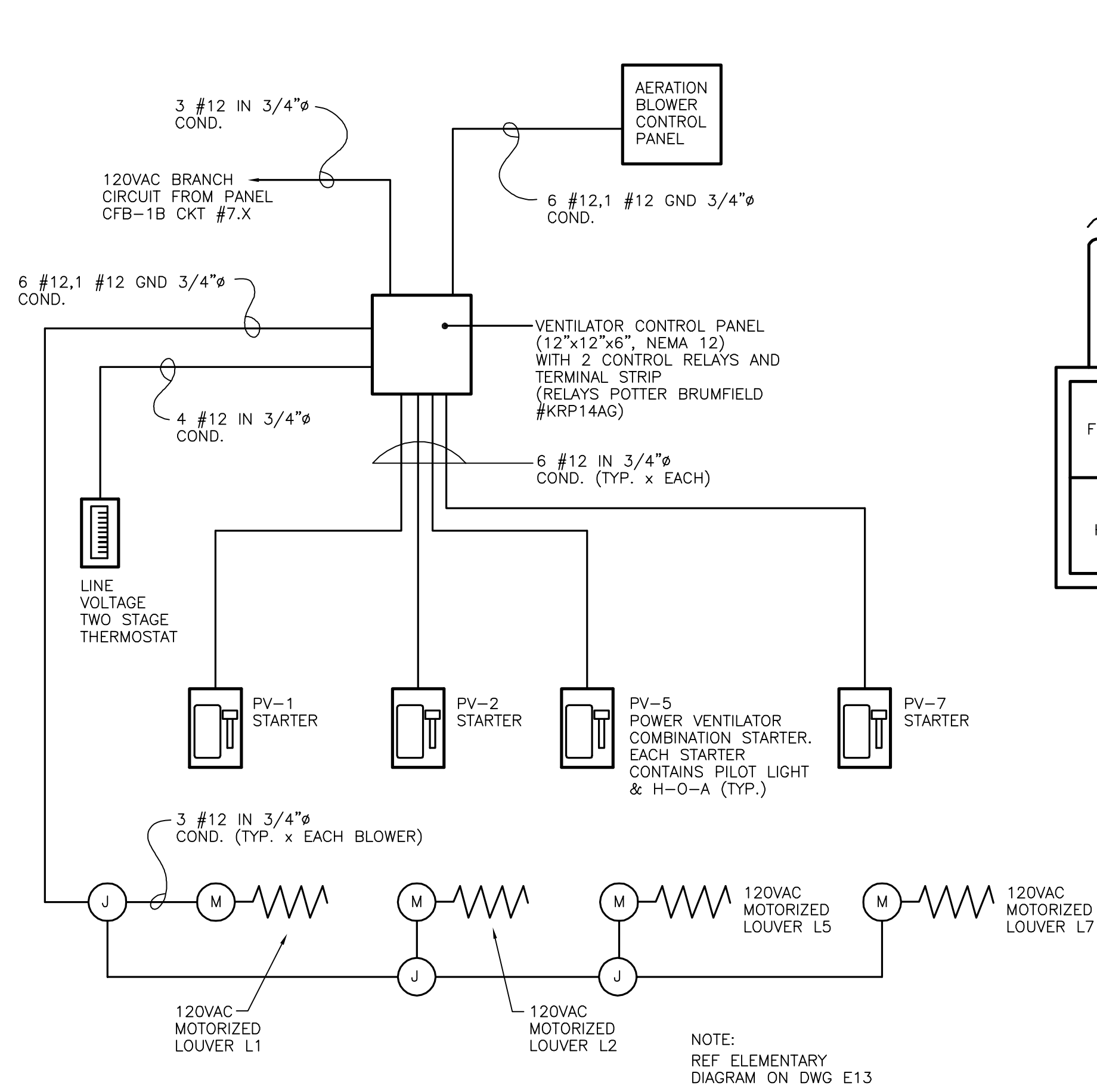
In charge of.....	NOT TO SCALE				
Designed by.....Checked by.....					
Drawn by.....					
		2	2/9/96	RECORD DRAWINGS	
		1	8/93	GENERAL REVISION	
		NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
 SCHEDULE

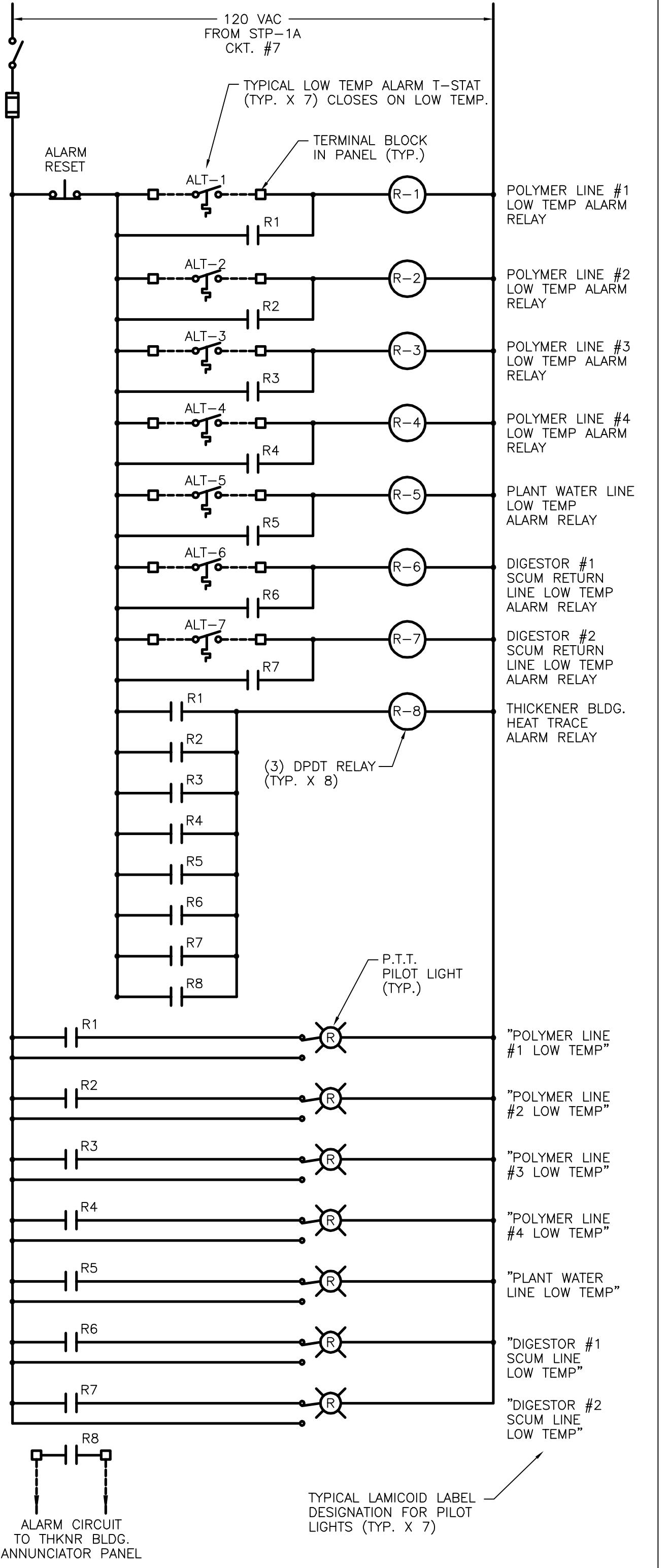
FILE NO.	115.643-48RD	E-14
DATE	AUGUST 1993	R-2



**SLUDGE THICKENER BUILDING ALARM ANNUNCIATOR DETAIL**

NOT TO SCALE

NOTES:  
- VERIFY TERMINATION INFORMATION WITH ANNUNCIATOR, VFD INFO, SLUDGE THICKENER VENDORS, AND HEAT TRACE PANEL DETAIL.  
- BLANK ANNUNCIATOR SLOTS SHALL BE FULLY FUNCTIONAL POINTS WITH BLANK COVERS.

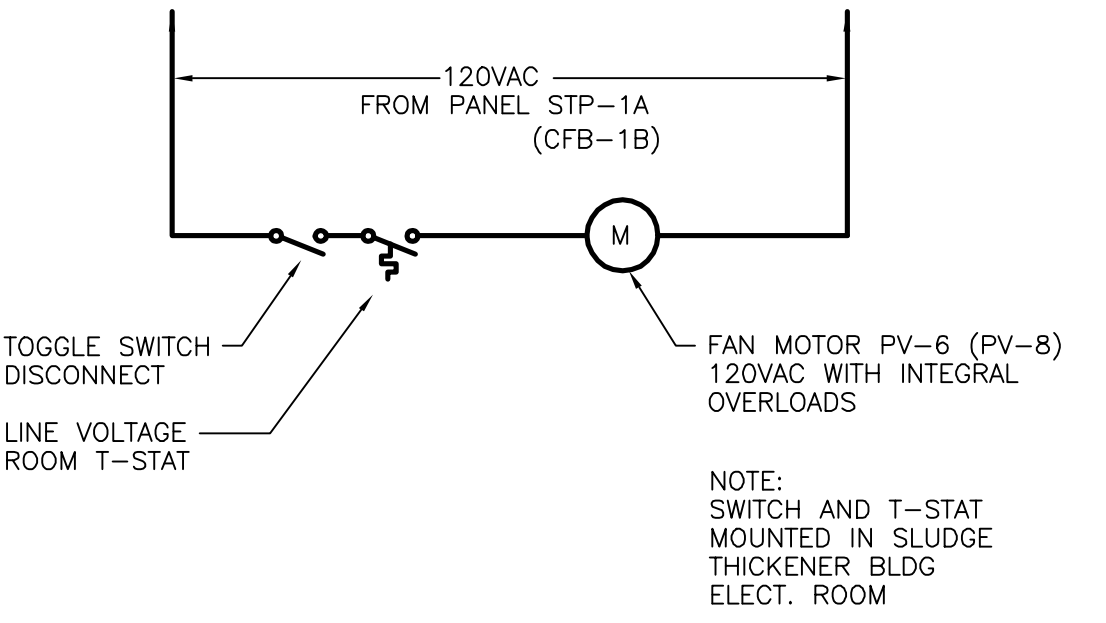
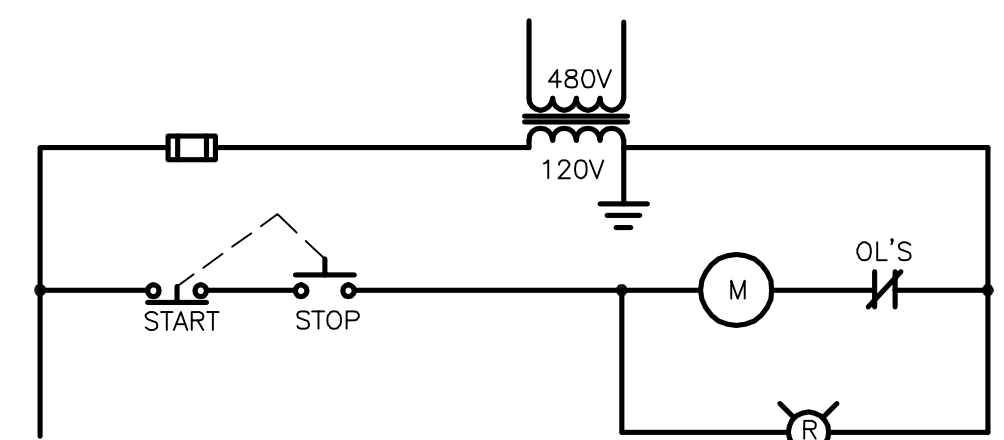


NOTES:  
1. RELAYS R1 THRU R8, PILOT LIGHTS, AND THE ALARM RESET PUSHBUTTON LOCATED IN SLUDGE THICKENER BUILDING HEAT TRACE ALARM PANEL.  
2. LOW TEMP. ALARM T-STATS LOCATED ON EACH TRACED PIPE SECTION.  
3. ALARM PANEL SHALL BE 16" X 20" X 6" NEMA 12.

**SLUDGE THICKENER BUILDING HEAT TRACE ALARM PANEL ELEMENTARY DIAGRAM**

NOT TO SCALE

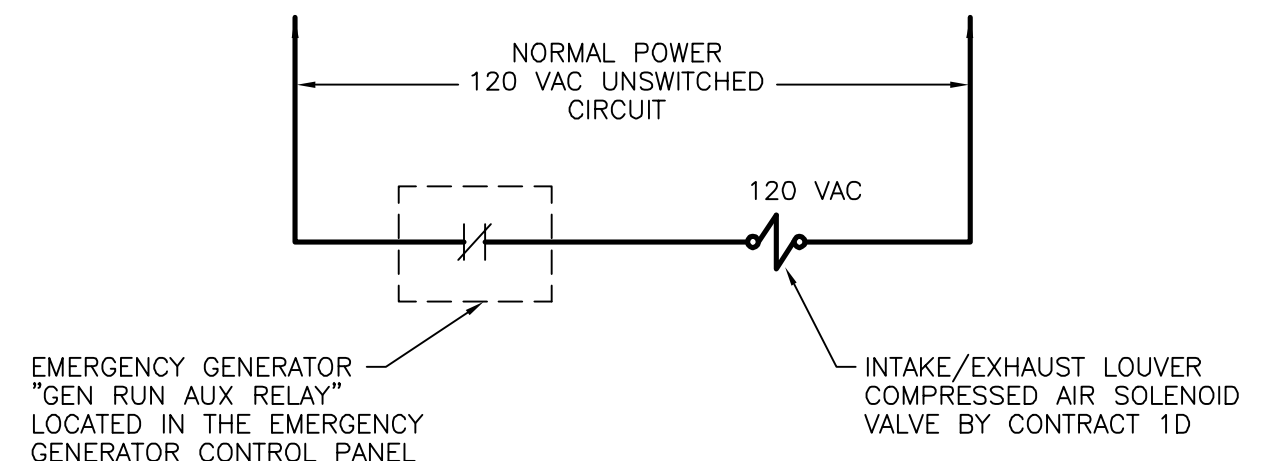
**RECORD DRAWINGS**  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_



**TYPICAL ELECTRIC ROOM VENTILATOR CONTROL ELEMENTARY**

NOT TO SCALE

TYPICAL FOR BOTH FANS PV-6, AND PV-8 (PV-8) ITEMS SHOWN BY ( ).



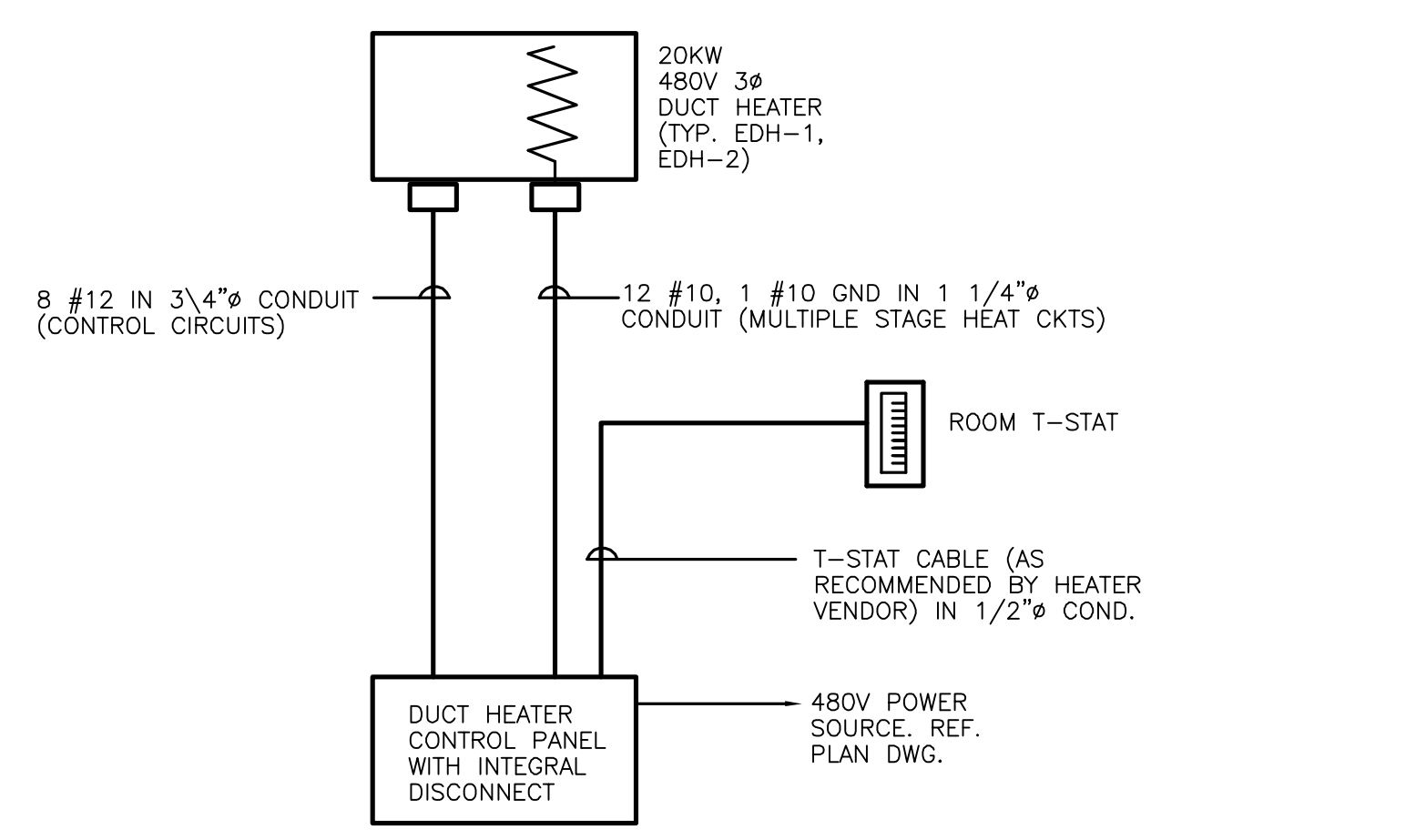
**EMERGENCY GENERATOR ROOM LOUVER OPERATOR CONTROL ELEMENTARY**

NOT TO SCALE

NOTES:  
1. ALL LOUVERS ARE SPRING OPEN, AIR TO CLOSE.  
2. NORMAL OPERATION IS LOUVERS HELD CLOSED BY AIR VIA SOLENOID.  
3. LOSS OF NORMAL POWER, OR COMPRESSED AIR WILL CAUSE LOUVERS TO OPEN.

**BLOWER BUILDING EXHAUST VENTILATION RISER DIAGRAM**

NOT TO SCALE

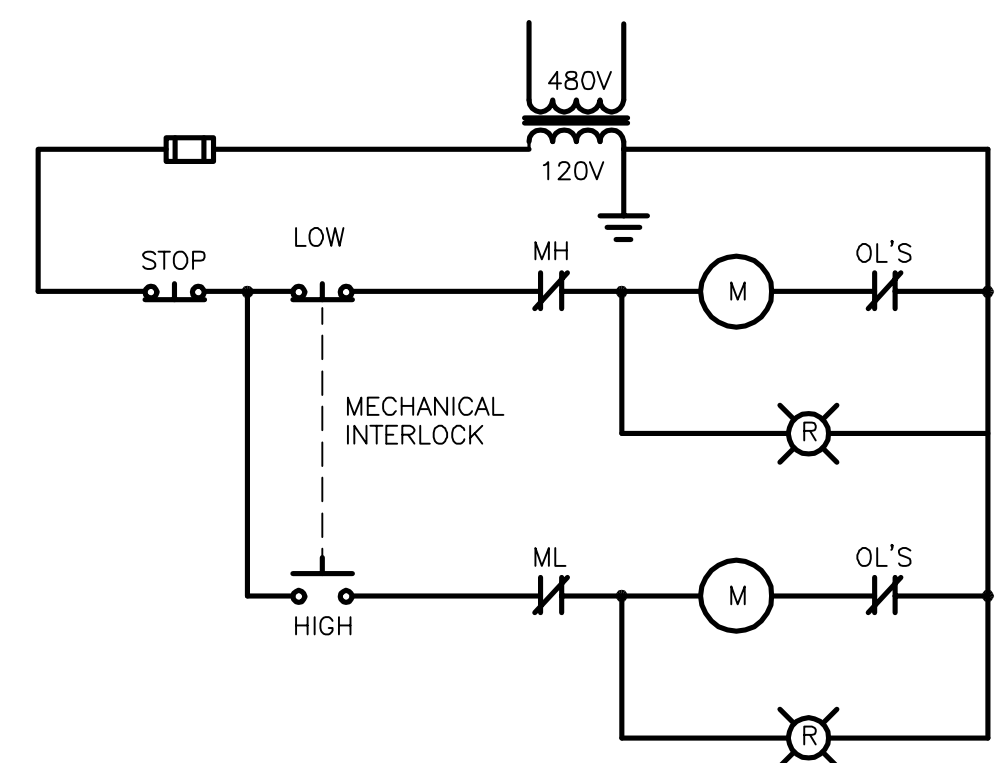


**TYPICAL ELECTRICAL DUCT HEATER RISER DIAGRAM**

NOT TO SCALE

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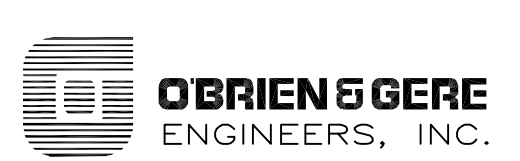


**VENTILATOR PV-3 CONTROL ELEMENTARY**

NOT TO SCALE

In charge of.....	NOT TO SCALE
Designed by.....Checked by.....	
Drawn by.....	

NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISION	

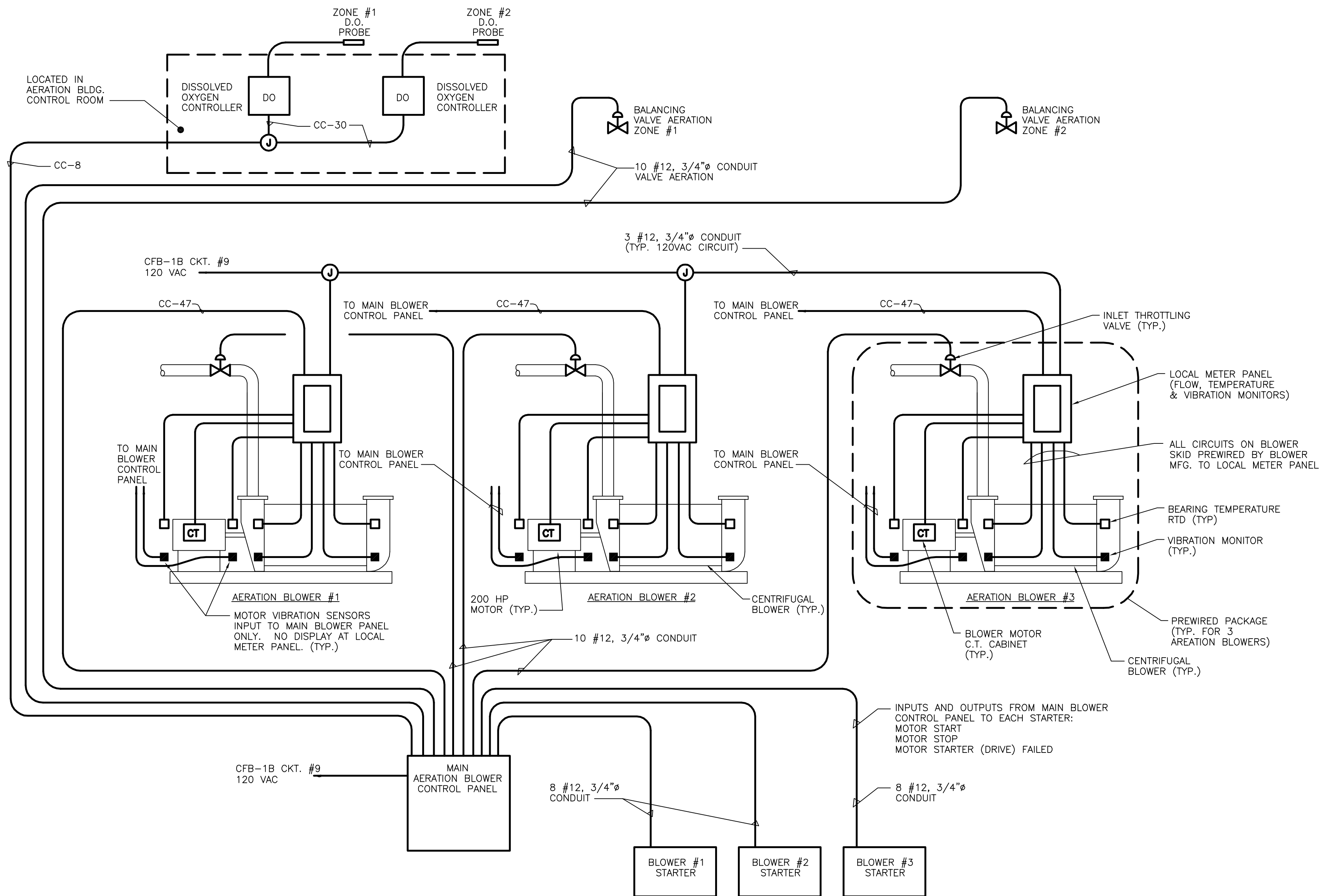


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
ELEMENTARIES & DIAGRAMS

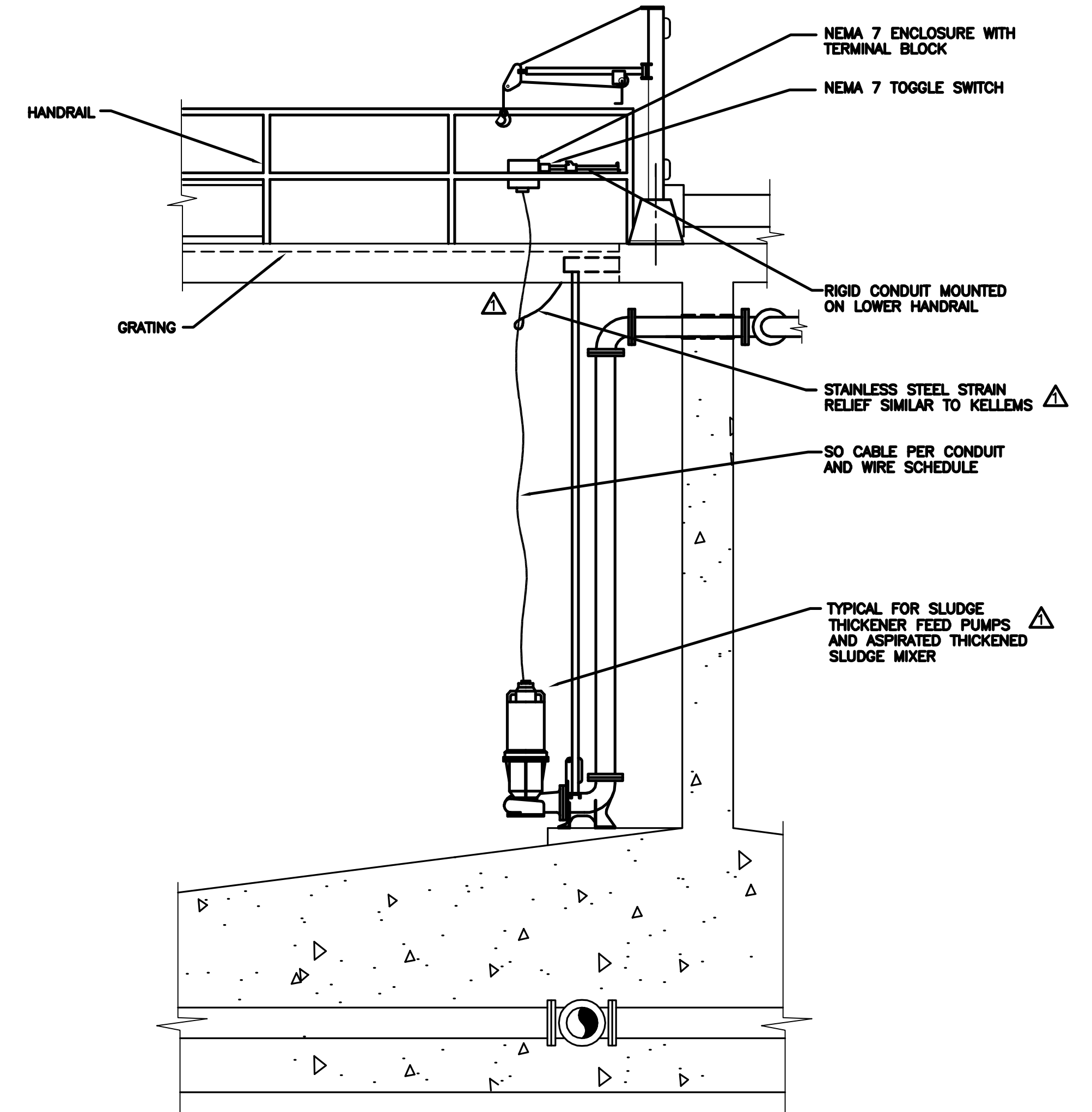
FILE NO. 115.643-52RD	E-15
DATE AUGUST 1993	R-2





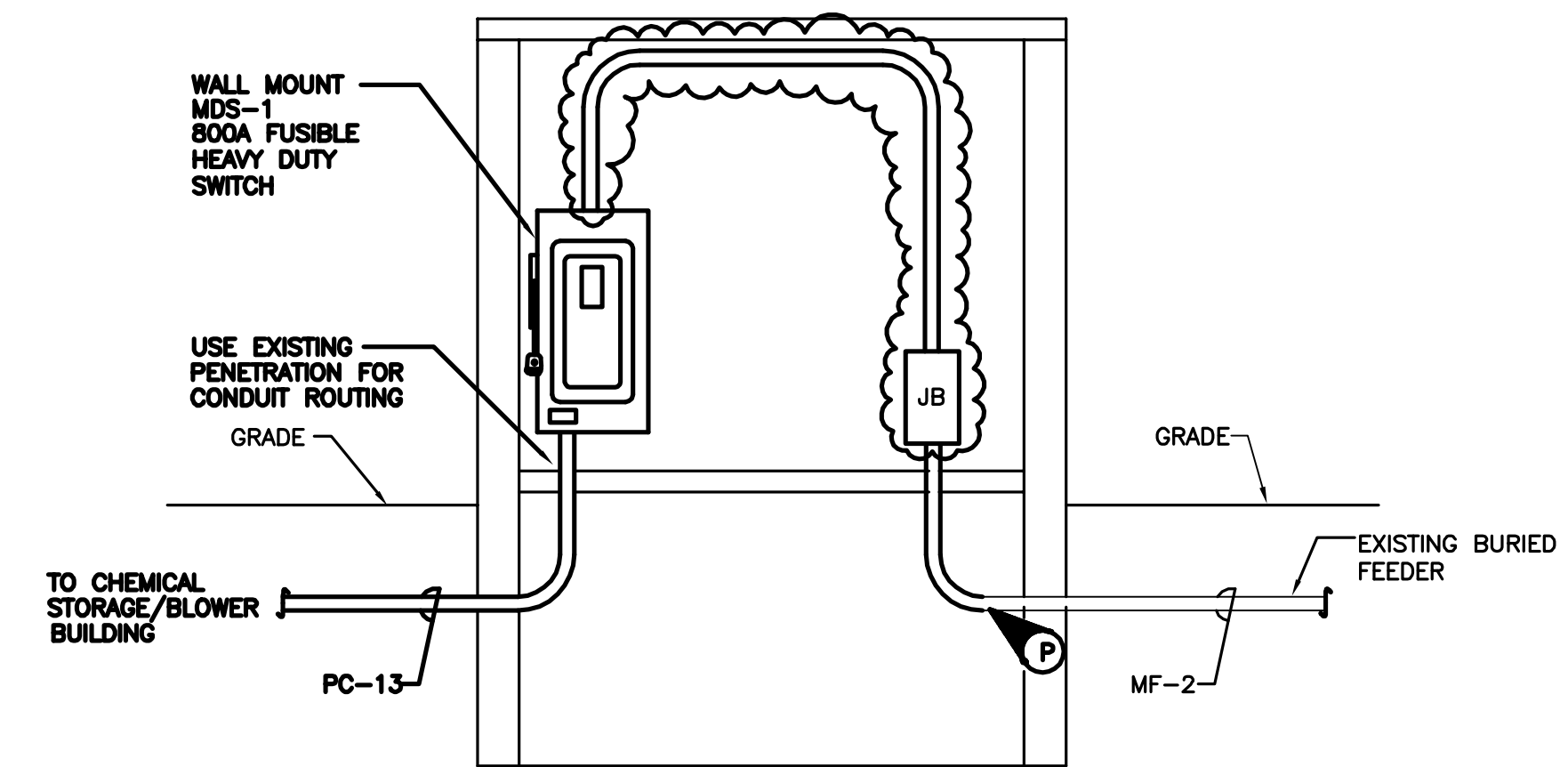
**AERATION BLOWER CONTROL RISER DIAGRAM**

N.T.S.



**SLUDGE THICKENING TANK SUBMERSIBLE PUMP/  
ASPIRATED THICKENED SLUDGE MIXER INSTALLATION DETAIL**

N.T.S.



**SECTION 1**  
NOT TO SCALE **E7**

RECORD DRAWINGS  
To the best of our knowledge,  
information and belief, these  
record drawings substantially  
represent the project as  
constructed.  
O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

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acting under the direction  
of a licensed professional  
engineer to alter this  
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Drawn by \_\_\_\_\_

NOT TO SCALE

NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	GENERAL REVISION	

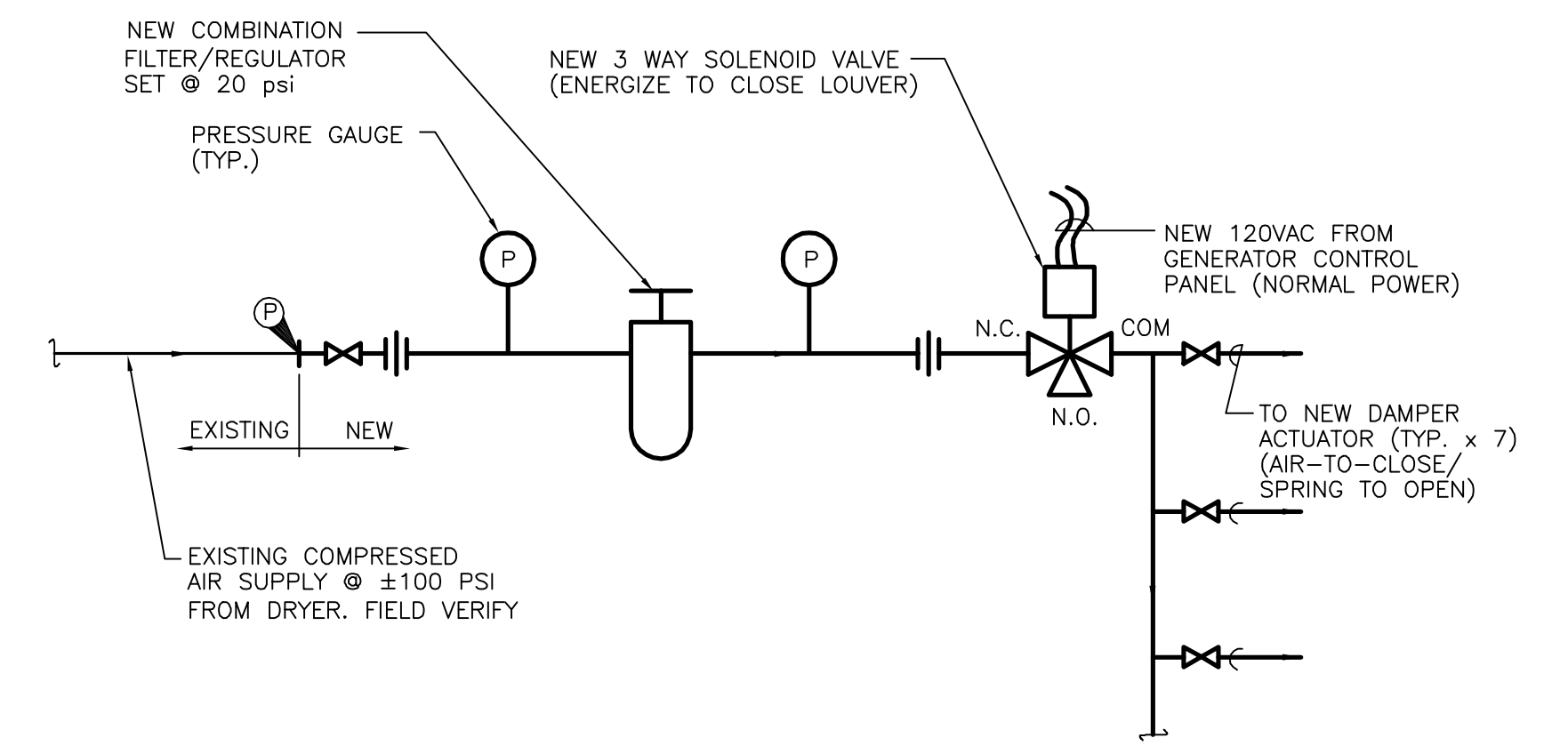
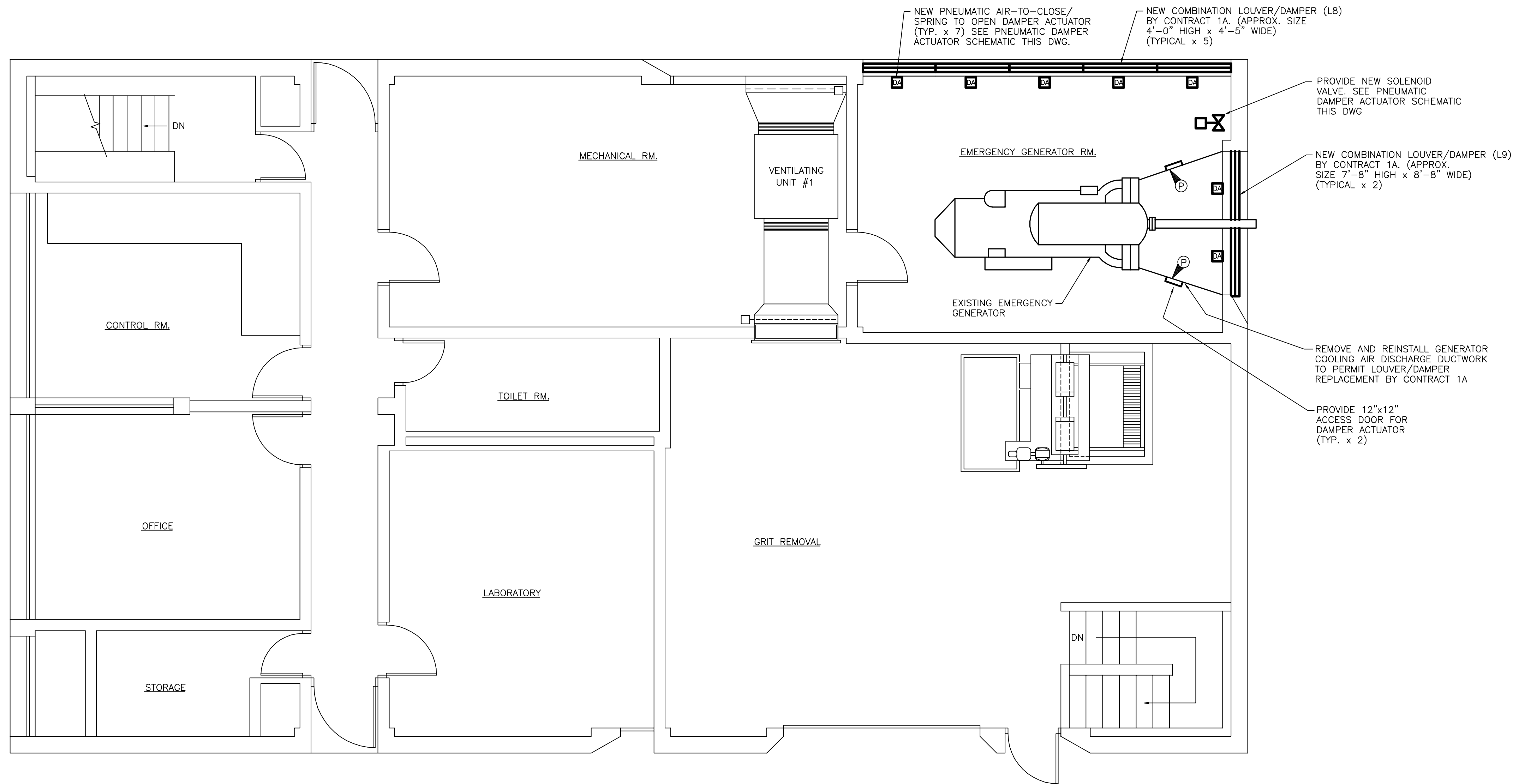


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
DIAGRAMS & DETAILS

FILE NO. 115.643-54RD	E-17
DATE AUGUST 1993	R-2





**PNEUMATIC DAMPER ACTUATOR SCHEMATIC**

NOT TO SCALE

**NOTES:**

1. REMOVE EXISTING DAMPER ACTUATORS, SOLENOID VALVE, ETC., AND MISCELLANEOUS TUBING AND REPLACE WITH NEW.
2. COORDINATE SOLENOID OPERATION WITH EXISTING GENERATOR RUN RELAY AND CONTRACT 1B.
  - a. UNDER NORMAL POWER THE SOLENOID VALVE WILL BE ENERGIZED ALLOWING COMPRESSED AIR TO HOLD ALL DAMPERS CLOSED.
  - b. WITH A LOSS OF NORMAL POWER TO THE SOLENOID VALVE THE COMPRESSED AIR TO THE ACTUATORS WILL BE VENTED AND THE SPRING RETURN ACTUATORS WILL OPEN ALL DAMPERS
  - c. THE GENERATOR "RUN-RELAY" WILL MAINTAIN THE SOLENOID VALVE IN A DE-ENERGIZED POSITION (DAMPERS OPEN) AS LONG AS THE GENERATOR IS OPERATIONAL.
3. VERIFY THAT DAMPER ACTUATORS HAVE BEEN CORRECTLY ADJUSTED TO AVOID LINKAGE DAMAGE.

**INFLUENT PUMP STATION  
MAIN FLOOR PLAN**

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



**ABBREVIATIONS**

- AFF ABOVE FINISHED FLOOR
- EUH ELECTRIC UNIT HEATER
- ILF INLINE FAN
- PV POWER VENTILATOR
- EDH ELECTRIC DUCT HEATER
- FRP FIBERGLASS REINFORCED PLASTIC
- N.O. NORMALLY OPEN
- N.C. NORMALLY CLOSED
- COM. COMMON
- DA DAMPER ACTUATOR
- POINT OF CONNECTION/REMOVAL
- TYP TYPICAL

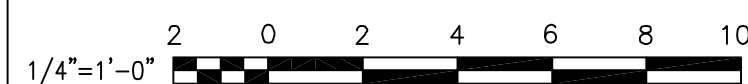
**RECORD DRAWINGS**

To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
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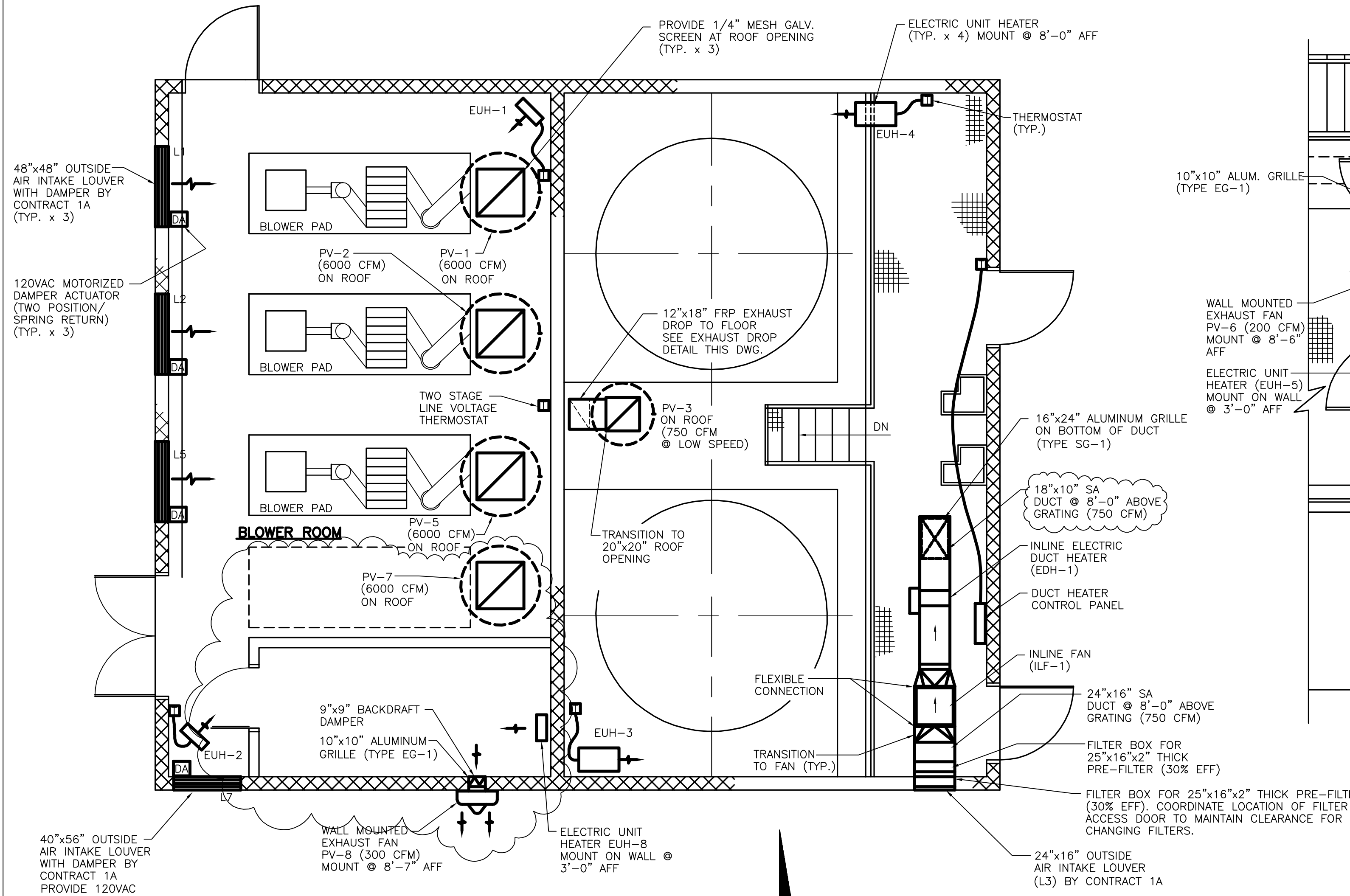
NO.	DATE	RECORD DRAWINGS REVISION	INIT.
0	2/9/96	RECORD DRAWINGS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

HEATING & VENTILATION  
INFLUENT PUMP STATION  
PLAN AND SCHEMATIC

FILE NO. 115.643-42RD	HV-1
DATE JUNE 1993	R-0

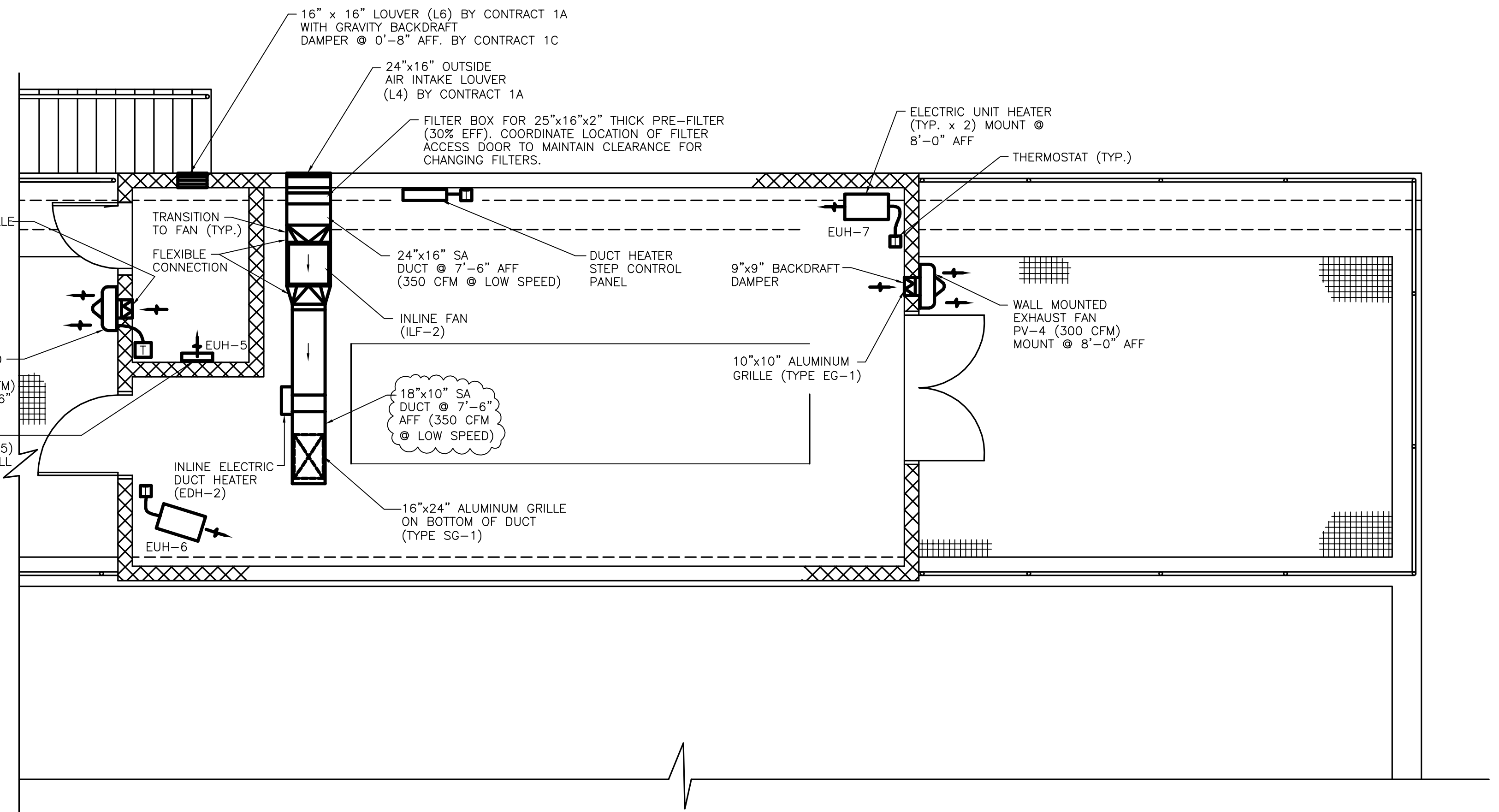


**CHEMICAL STORAGE/BLOWER BUILDING PLAN**

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

**NOTES:**

1. ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK AND ACCESSORIES SHALL BE ALUMINUM.

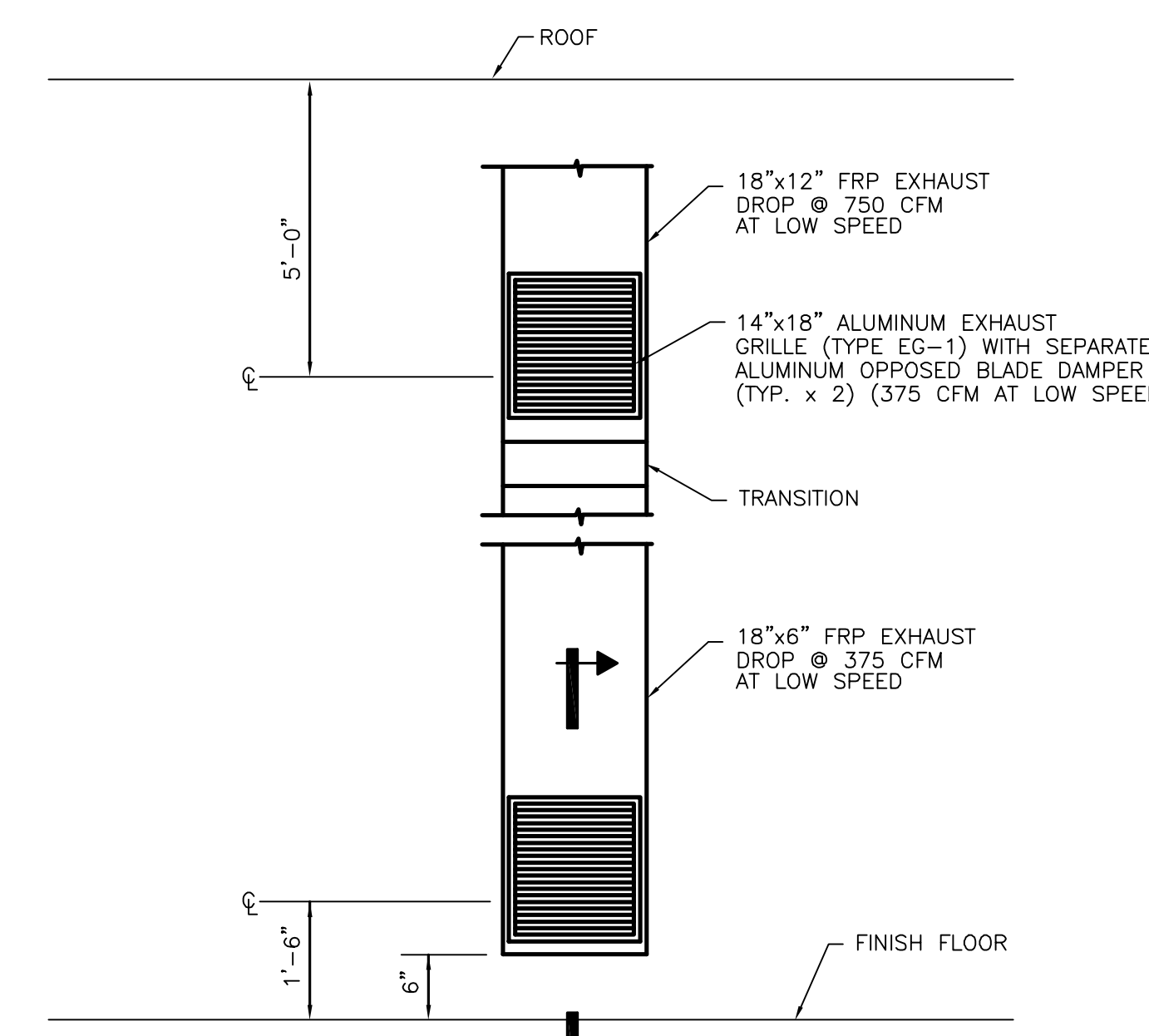


**SLUDGE THICKENER BUILDING PLAN**

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

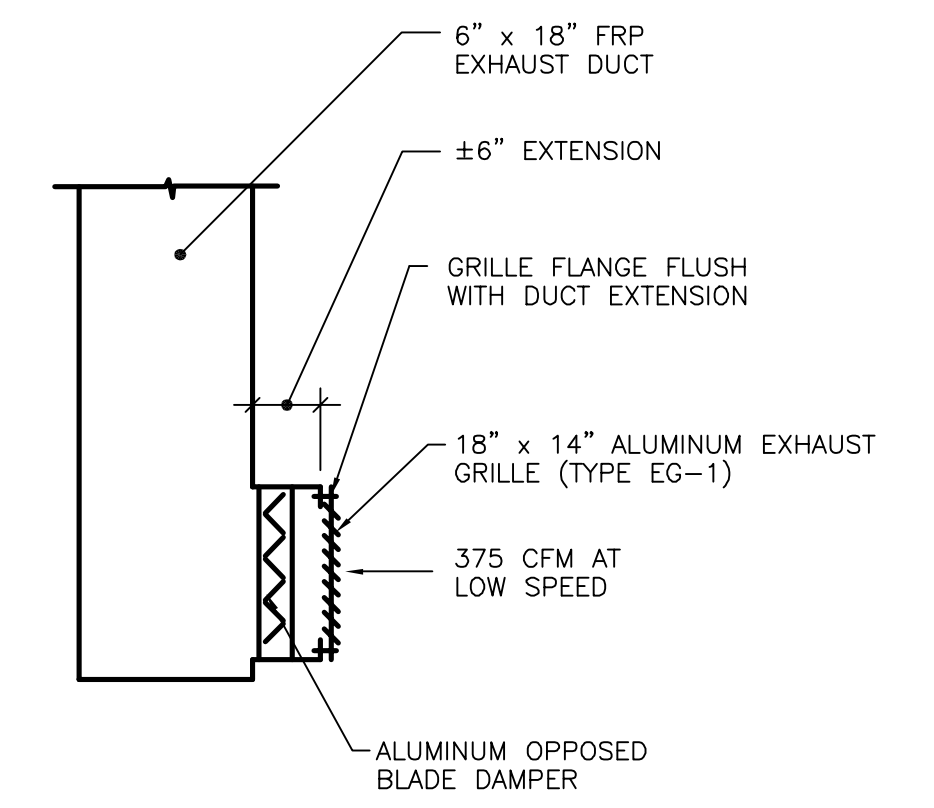
**NOTES:**

1. BALANCE PV-4 AND ILF-2 (LOW SPEED) TO MAINTAIN POSITIVE PRESSURIZATION IN THICKENER BUILDING.
2. ALL SUPPLY AIR AND OUTSIDE AIR DUCTWORK AND ACCESSORIES SHALL BE ALUMINUM.



**EXHAUST DROP DETAIL**

NOT TO SCALE



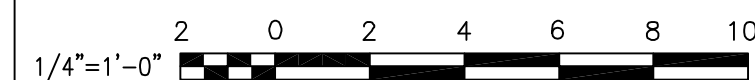
**SECTION 1 HV2**  
NOT TO SCALE

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By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



NO.	DATE	REVISION	INIT.
0	2/9/96	RECORD DRAWINGS	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

HEATING & VENTILATION  
BLOWER BUILDING/THICKENER BUILDING  
PLANS AND DETAILS

FILE NO. 115.643-43RD	HV-2
DATE JUNE 1993	R-0

POWER VENTILATOR (PV) SCHEDULE												
DESIGNATION	FAN				MOTOR				DISCHARGE CONFIGURATION	MINIMUM WALL/ROOF OPENING SIZE *	MOUNTING	REMARKS
	AIRFLOW (CFM)	SP (" WC)	SPEED (RPM)	WHEEL DIAMETER	SIZE (HP)	VOLTAGE/PHASE	TYPE	DRIVE				
PV-1	6000	1/4"	460	30"	1	480V/3Ø	TEFC	BELT	DOME TYPE	28"x28"	ROOF	1,3,4
PV-2	6000	1/4"	460	30"	1	480V/3Ø	TEFC	BELT	DOME TYPE	28"x28"	ROOF	1,3,4
PV-3	750	3/8"	730	14"	1/2	480V/3Ø	TEFC	BELT	UPBLAST	20"x20"	ROOF	1,2,3,4,6
PV-4	300	1/8"	1000	9"	1/12	120V/1Ø	TENV	DIRECT	AWAY FM. WALL	9"x9"	WALL	1,2,4,5
PV-5	6000	1/4"	460	30"	1	480V/3Ø	TEFC	BELT	DOME TYPE	28"x28"	ROOF	1,3,4
PV-6	200	1/8"	1550	6"	1/25	120V/1Ø	TENV	DIRECT	AWAY FM. WALL	9"x9"	WALL	1,2,4
PV-7	6000	1/4"	460	30"	1	480V/3Ø	TEFC	BELT	DOME TYPE	28"x28"	ROOF	1,3,4
PV-8	300	1/8"	1000	9"	1/12	120V/1Ø	TENV	DIRECT	AWAY FM. WALL	9"x9"	WALL	1,4,5

- REMARKS:
- BACKDRAFT DAMPER
  - CORROSION RESISTANT COATING
  - PREFABRICATED, INSULATED ALUMINUM ROOF CURB, 16" HIGH.
  - UNIT MOUNTED DISCONNECT SWITCH
  - REMOTE SOLID STATE ON/OFF SPEED CONTROL
  - TWO SPEED/SINGLE WINDING MOTOR (900/1800 RPM)  
NOTE: PERFORMANCE LISTED IS FOR LOW SPEED

\* COORDINATE ACTUAL ROOF AND WALL OPENING SIZES AND LOCATIONS WITH CONTRACT 1A.

INLINE FAN (ILF) SCHEDULE											
NO.	LOCATION	FAN				MOTOR				REMARKS	
		TYPE	AIR FLOW (CFM)	S.P. ("WC)	SPEED RPM	WHEEL DIA.	HP	VOLTS/PHASE	TYPE		
ILF-1	CHEMICAL STORAGE BUILDING	CENTRIFUGAL	750	1.25	1325	16.5	3/4	480V/3Ø	TEFC	1, 2, 3, 5	
ILF-2	THICKENER BUILDING	CENTRIFUGAL	350/750	1.25	1325	16.5	3/4	480V/3Ø	TEFC	1, 2, 3, 4, 5	

- REMARKS:
- BACKDRAFT DAMPER
  - UNIT MOUNTED DISCONNECT SWITCH
  - BELT DRIVE
  - TWO SPEED/SINGLE WINDING MOTOR (900/1800 RPM)
  - ALUMINUM HOUSING AND WHEEL.

ELECTRIC UNIT HEATER (EUH) SCHEDULE									
DESIGNATION	KW	HEATER ELECTRICAL REQ.		BTUH	CFM	FAN ELECTRICAL REQ.		REMARKS	
		VOLTS	PHASE			VOLTS	PHASE		
EUH-1	5	480	3Ø	17065	400	480	1Ø	1	
EUH-2	5	480	3Ø	17065	400	480	1Ø	1	
EUH-3	5	480	3Ø	17065	300	480	1Ø	2	
EUH-4	5	480	3Ø	17065	700	480	1Ø	2	
EUH-5	2	208	1Ø	6826	245	480	1Ø	3	
EUH-6	5	480	3Ø	17065	700	480	1Ø	2	
EUH-7	5	480	3Ø	17065	700	480	1Ø	2	
EUH-8	2	208	1Ø	6826	245	480	1Ø	3	

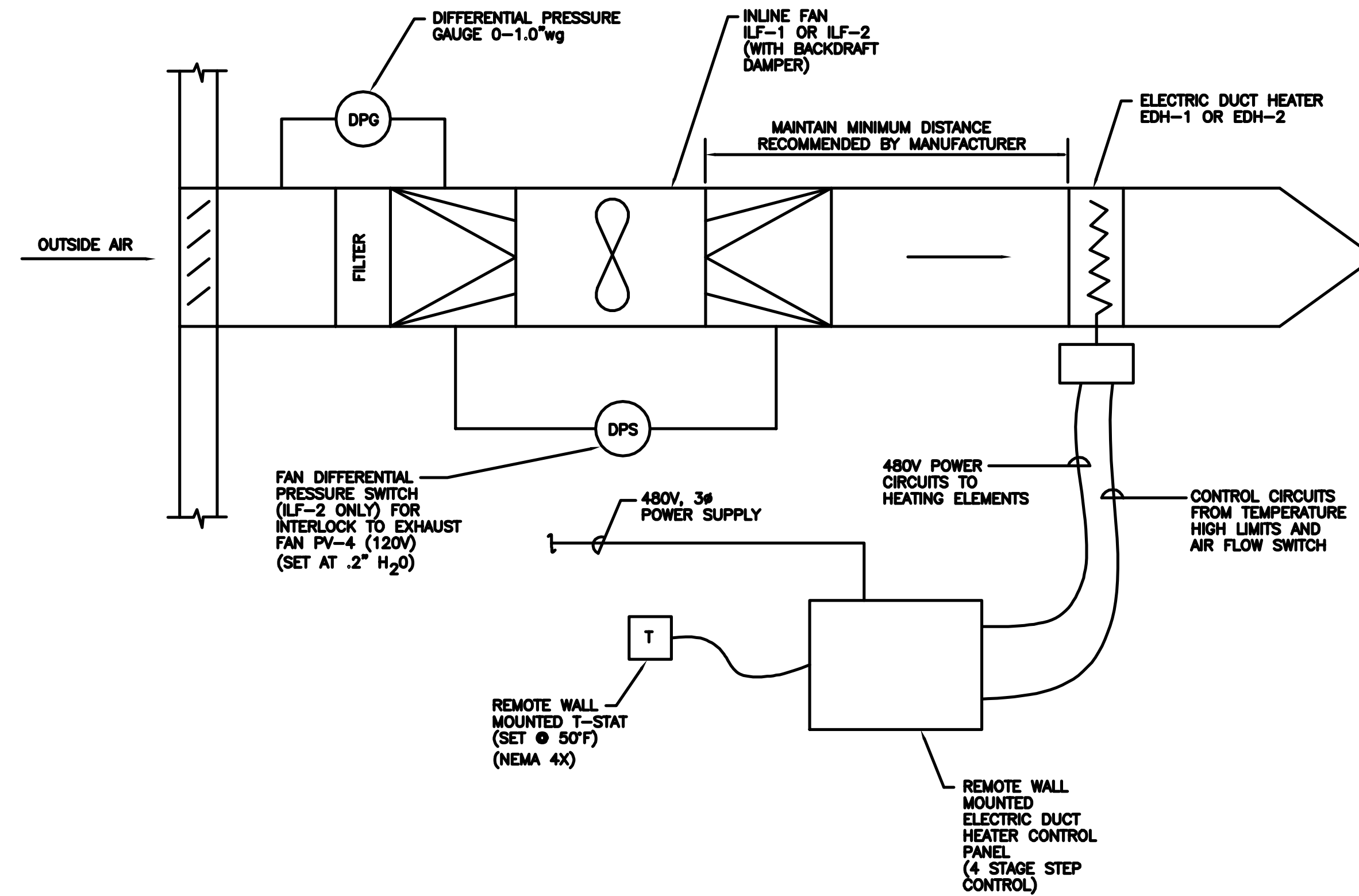
- REMARKS:
- LINE VOLTAGE REMOTE WALL MOUNTED THERMOSTAT.
  - CORROSION RESISTANT TYPE UNIT HEATER WITH REMOTE MOUNTED ROOM T-STAT IN NEMA 4X ENCLOSURE.
  - HEAVY-DUTY WALL-MOUNTED FORCED AIR UNIT HEATER WITH INTEGRAL THERMOSTAT.

ELECTRIC DUCT HEATER (EDH) SCHEDULE								
DESIGNATION	KW	ELECTRICAL REQ.		MIN CFM	SIZE	CONTROL TYPE	NO. OF ELEMENTS	COMMENTS
		VOLTS	PHASE					
EDH-1	20	480V	3Ø	750	18"x18"	STEP	4	1,2,3
EDH-2	20	480V	3Ø	±400	18"x18"	STEP	4	1,2,3,4

- REMARKS:
- REMOTE WALL MOUNTED NEMA 4 PANEL FOR STEP CONTROLS WITH PILOT LIGHT TO INDICATE COIL ENERGIZED
  - REMOTE MOUNTED OPEN FACE LOW VOLTAGE FROM THERMOSTAT.
  - UNIT MOUNTED DISCONNECT SWITCH
  - COORDINATE MINIMUM CFM (AIR FLOW SWITCH SETTING) WITH LOW SPEED SETTING ON ILF-2.

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**MAKE-UP AIR CONTROL SCHEMATIC (ILF-1 AND ILF-2)**

NOT TO SCALE

RECORD DRAWINGS  
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O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_

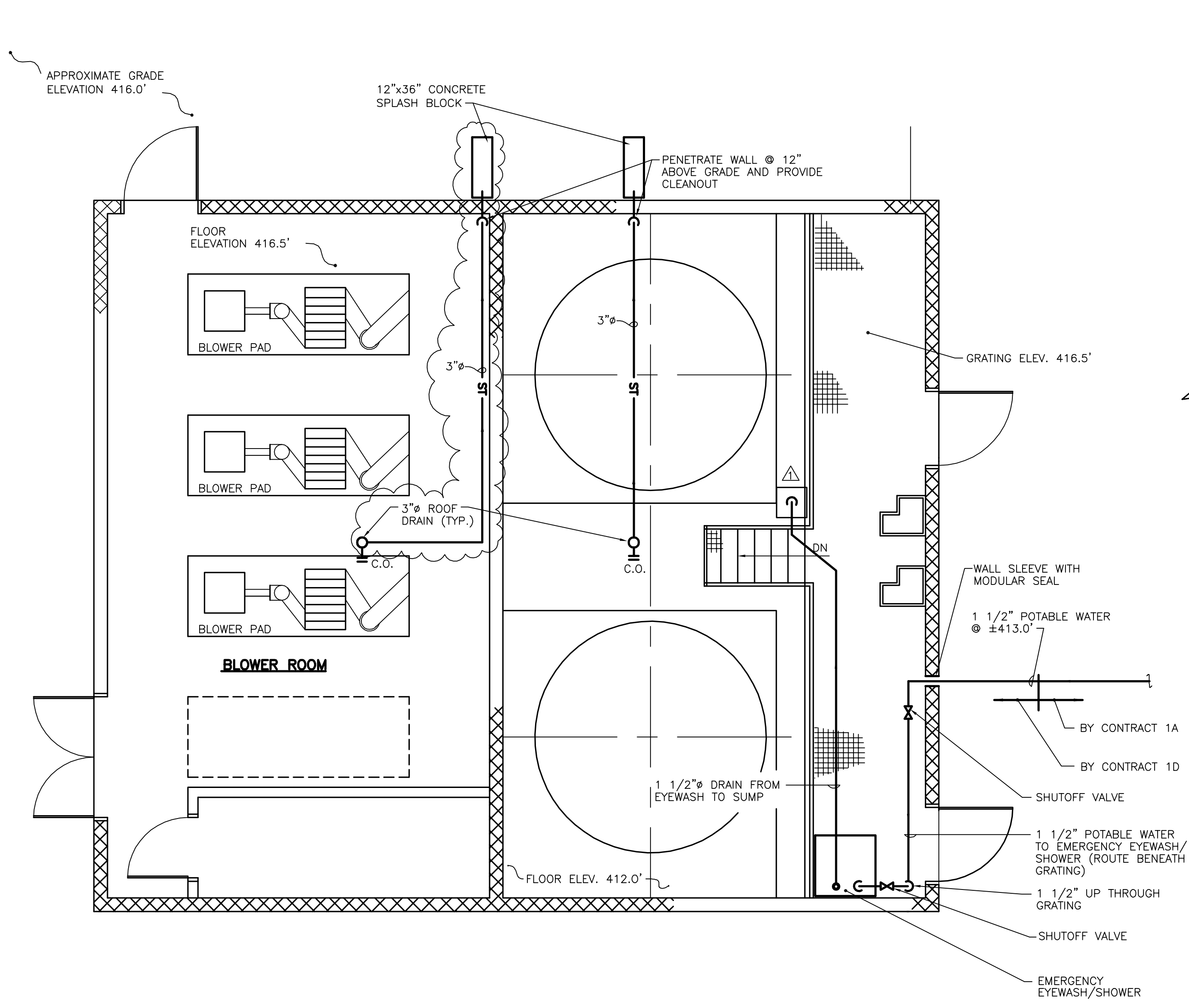
In charge of _____				
Designed by _____ Checked by _____				
Drawn by _____				
	0 2/9/96	RECORD DRAWINGS		
	NO.	DATE	REVISION	INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

HEATING & VENTILATION  
BLOWER BUILDING/THICKENER BUILDING  
SCHEDULES & SCHEMATICS

FILE NO. 115.643-44RD	HV-3
DATE JUNE 1993	R-0



**CHEMICAL STORAGE/BLOWER BUILDING PLAN**  
SCALE: 1/4"=1'-0"

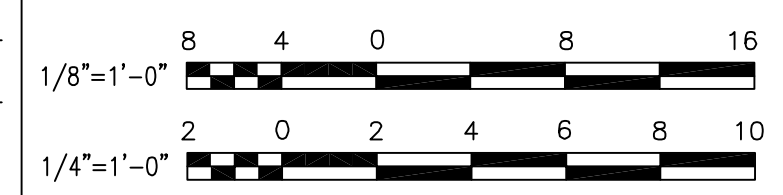
ALL SHOWN ON THIS PLAN IS NEW

**ABBREVIATIONS**

- ST STORM
- FD FLOOR DRAIN
- C.O. CLEANOUT
- TYP TYPICAL

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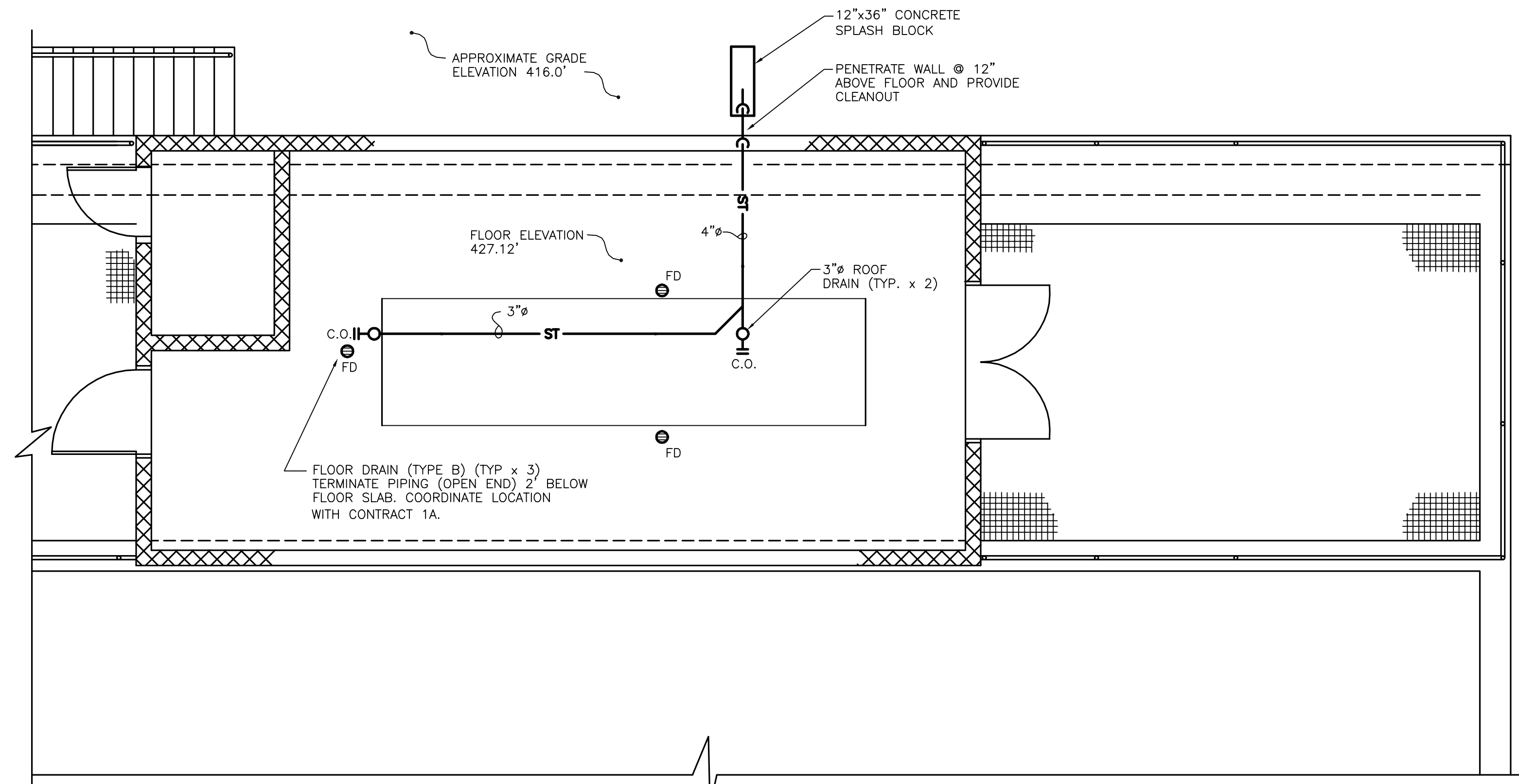
NO.	DATE	REVISION	INIT.
2	2/9/96	RECORD DRAWINGS	
1	8/93	MOVED SUMP LOCATION	



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

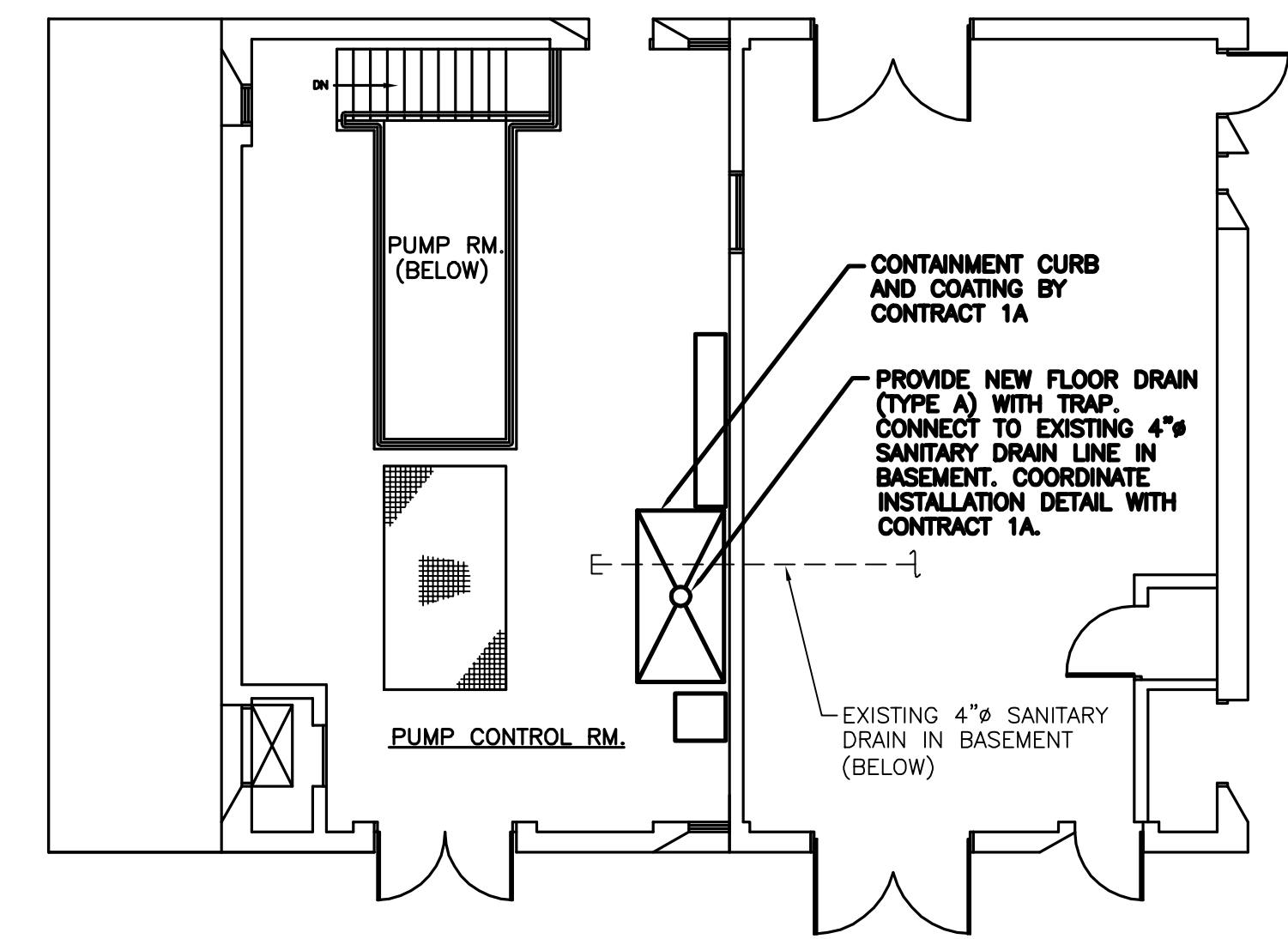
PLUMBING  
BLOWER BUILDING/THICKENER BUILDING  
PLANS

FILE NO.	115.643-45RD	P-1
DATE	JUNE 1993	R-2



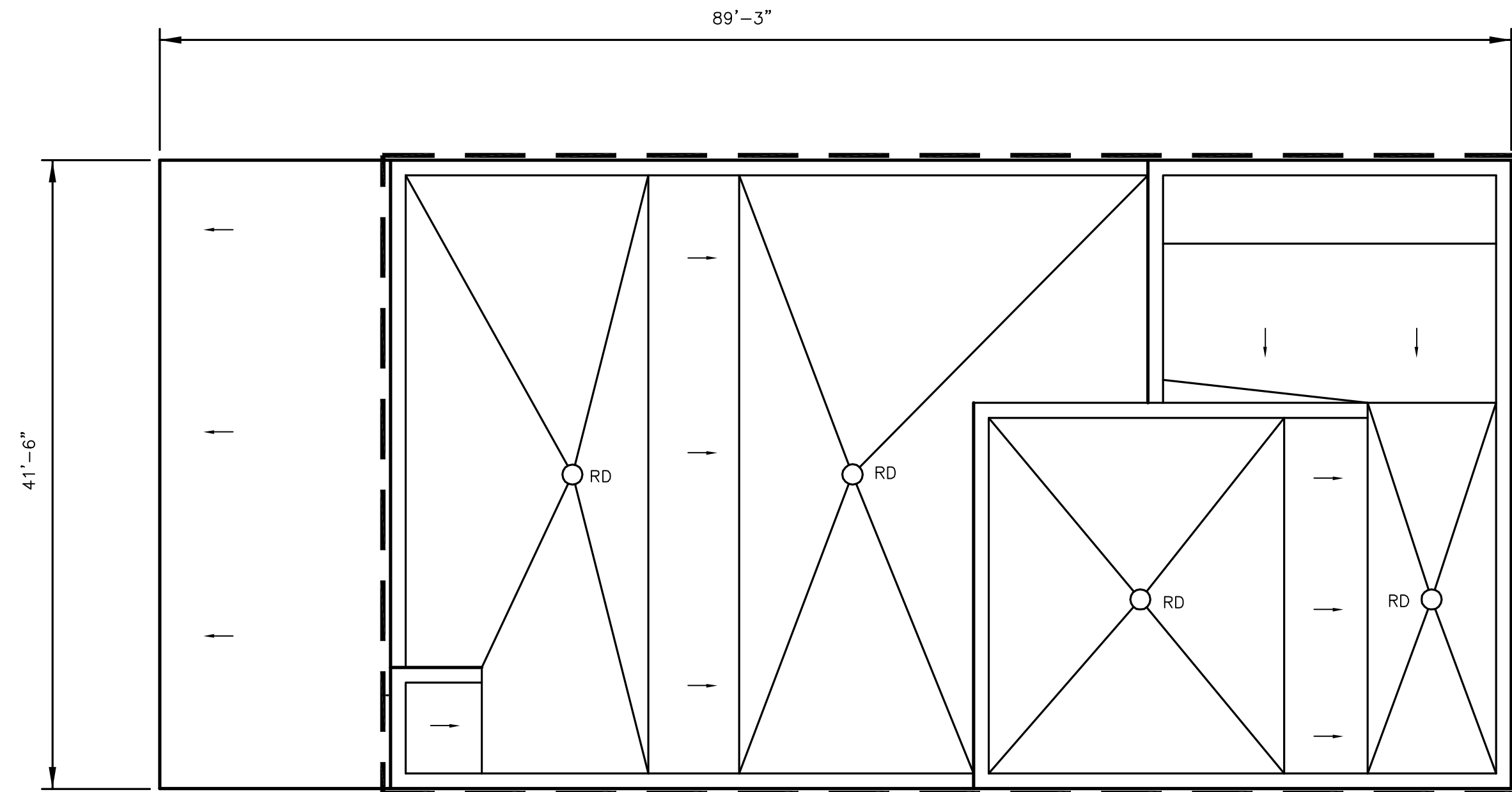
**SLUDGE THICKENER BUILDING PLAN**  
SCALE: 1/4"=1'-0"

ALL SHOWN ON THIS PLAN IS NEW



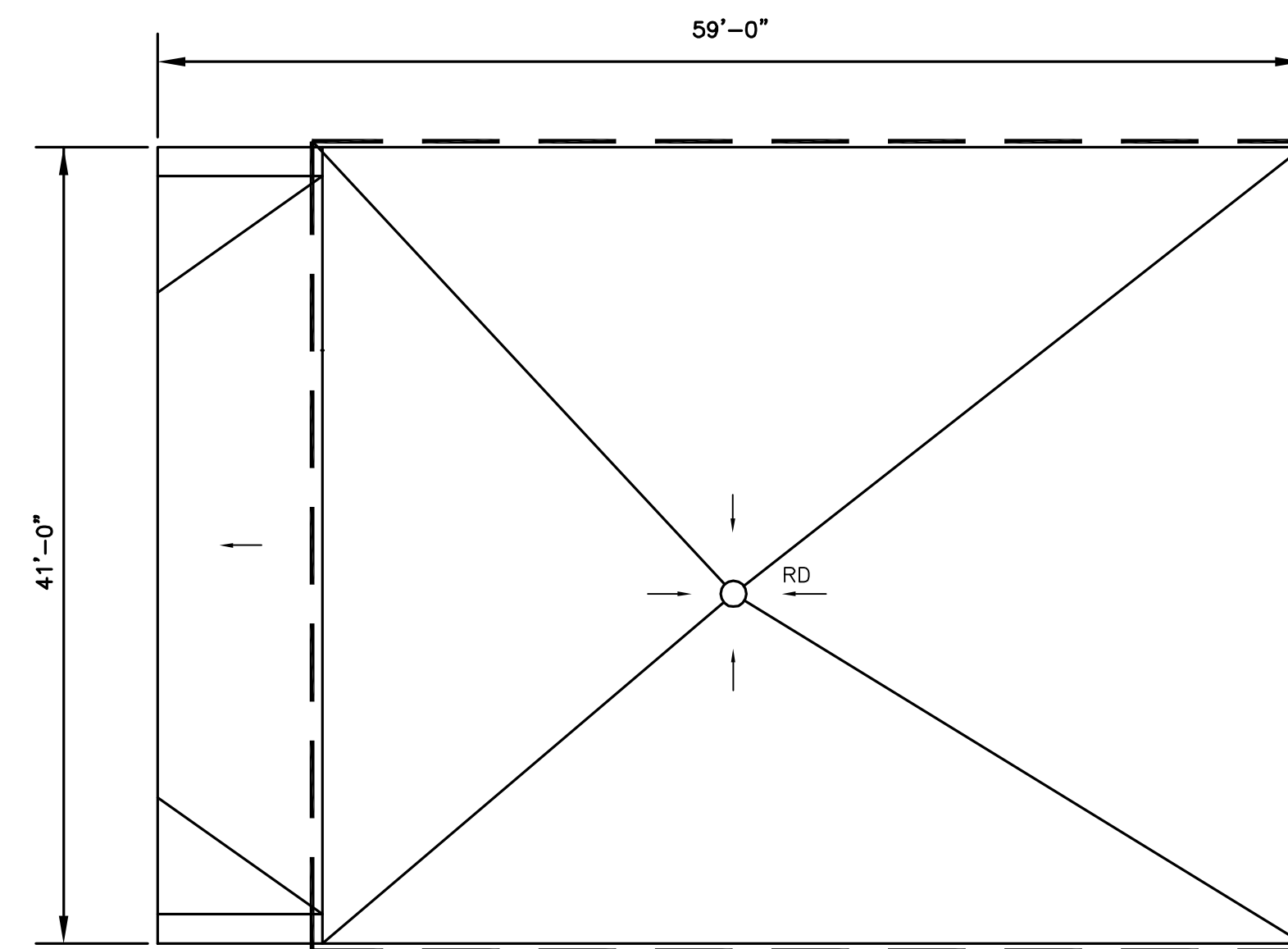
**SLUDGE PUMP STATION  
FIRST FLOOR PLAN**  
SCALE: 1/8"=1'-0"

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: \_\_\_\_\_



**INFLUENT PUMP STATION ROOF PLAN**

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



**SLUDGE PUMP STATION ROOF PLAN**

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

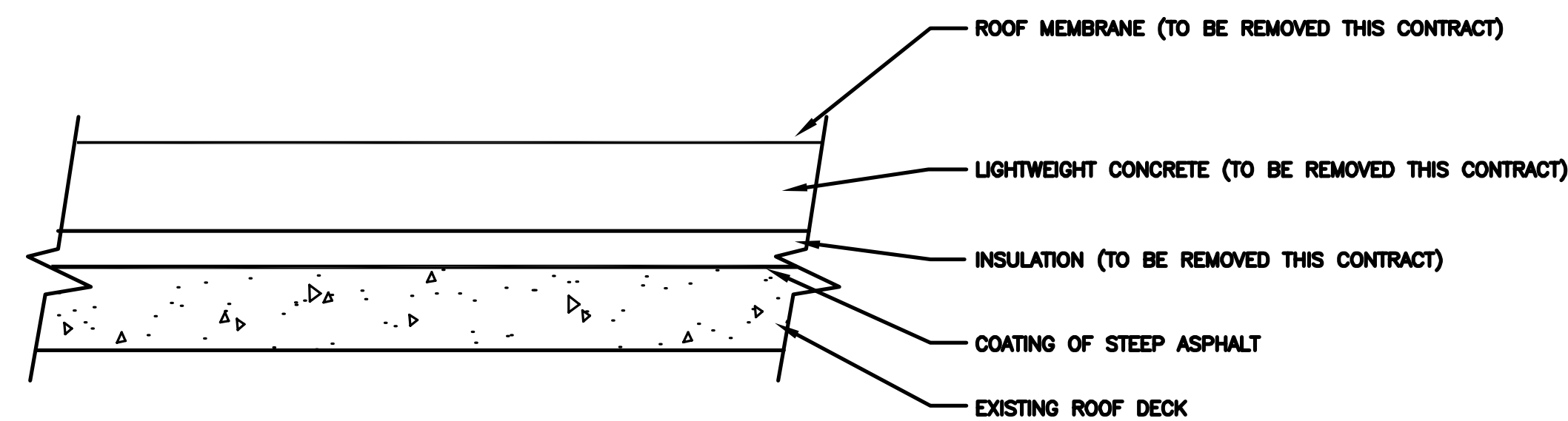


**LEGEND**

- RD - ROOF DRAIN
- - - - - WORK ZONE BOUNDARY

**ASBESTOS ROOF REMOVAL NOTES:**

1. REMOVE AND DISPOSE OF ASBESTOS-CONTAINING ROOFING MATERIALS AS NOTED AND SHOWN ON THE DRAWING INCLUDING BUT NOT LIMITED TO MAIN FIELD ROOF MEMBRANES, ALL PERIMETER AND APPURTENANCE FLASHINGS, LIGHTWEIGHT CONCRETE AND INSULATION BELOW ROOF MEMBRANES DOWN TO EXISTING CAST-IN-PLACE CONCRETE ROOF DECK. REMOVAL AND DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS, DRAWING AND APPLICABLE REGULATIONS.
2. PROVIDE NON-ASBESTOS-CONTAINING TEMPORARY ROOFING PROTECTION AS NECESSARY TO PROTECT REMAINING ROOFING, EXPOSED ROOFING DECKS, AND BUILDING INTERIOR FROM MOISTURE DURING ASBESTOS REMOVAL OPERATIONS AND UNTIL NEW ROOFING SYSTEM IS INSTALLED.
3. FIELD VERIFY QUANTITIES AND LOCATIONS OF ASBESTOS-CONTAINING MATERIALS TO BE REMOVED, AS WELL AS, ROOFING PENETRATIONS.



**EXISTING ROOF DETAIL**

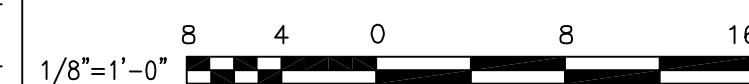
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O'BRIEN & GERE  
ENGINEERS, INC.  
By: \_\_\_\_\_

In charge of \_\_\_\_\_  
Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
Drawn by \_\_\_\_\_



NO.	DATE	REVISION	INIT.
0	2/9/96	RECORD DRAWINGS	



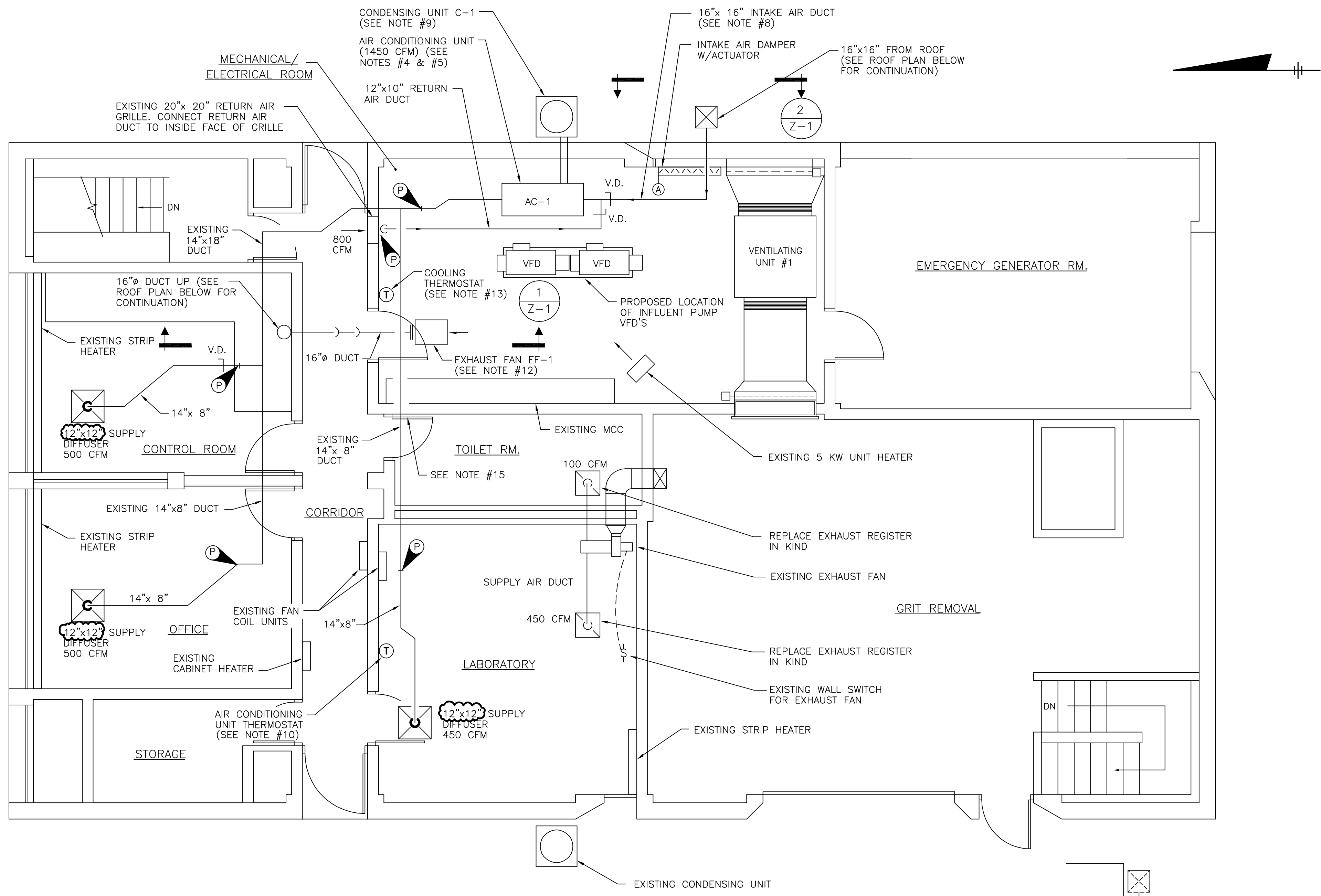
ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ASBESTOS REMOVAL  
INFLUENT PUMP/SLUDGE PUMP BUILDING  
ASBESTOS ROOF REMOVAL PLANS

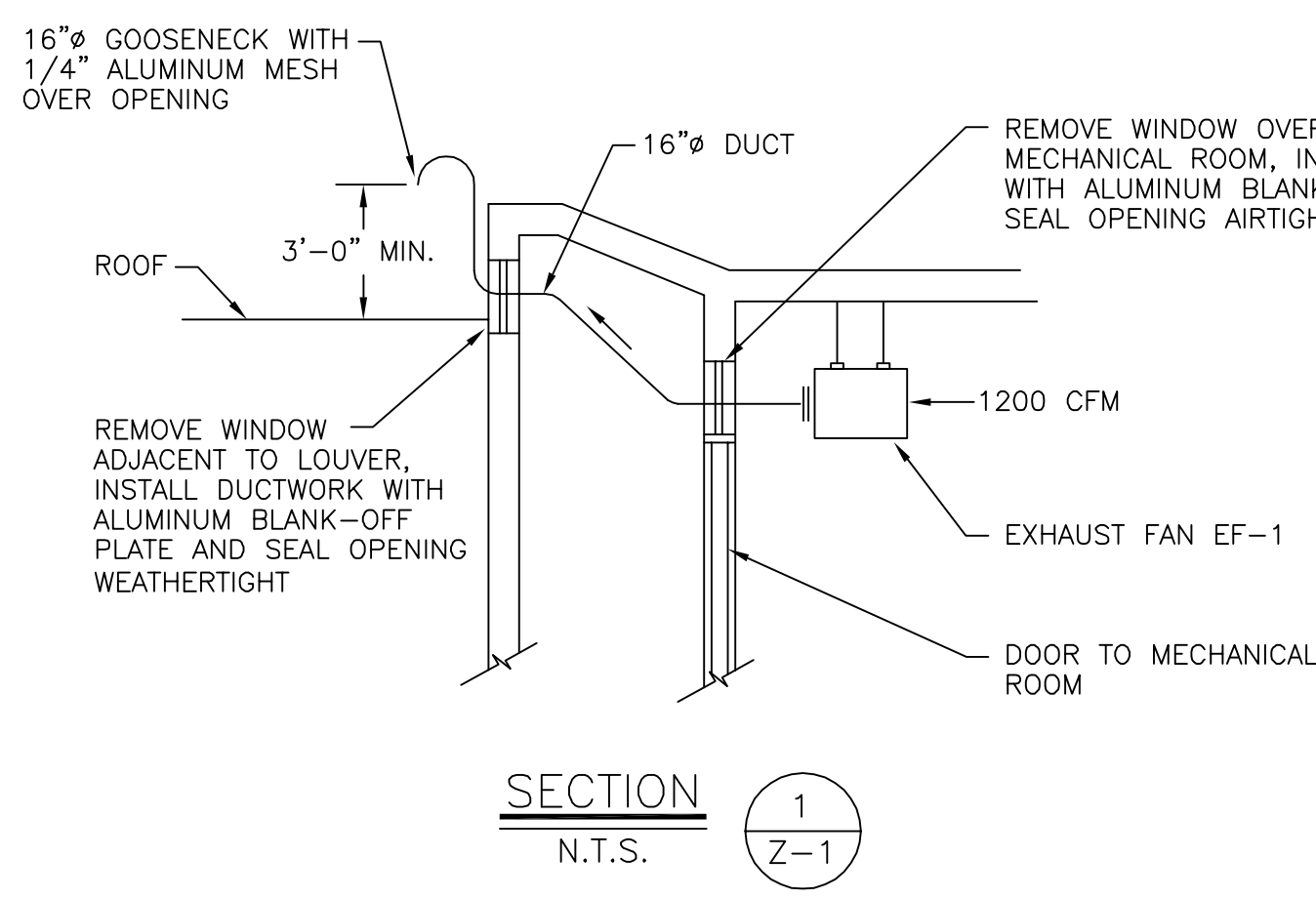
FILE NO. 115.643-06RD	ASB-1
DATE JUNE 1993	R-0

NOTES:

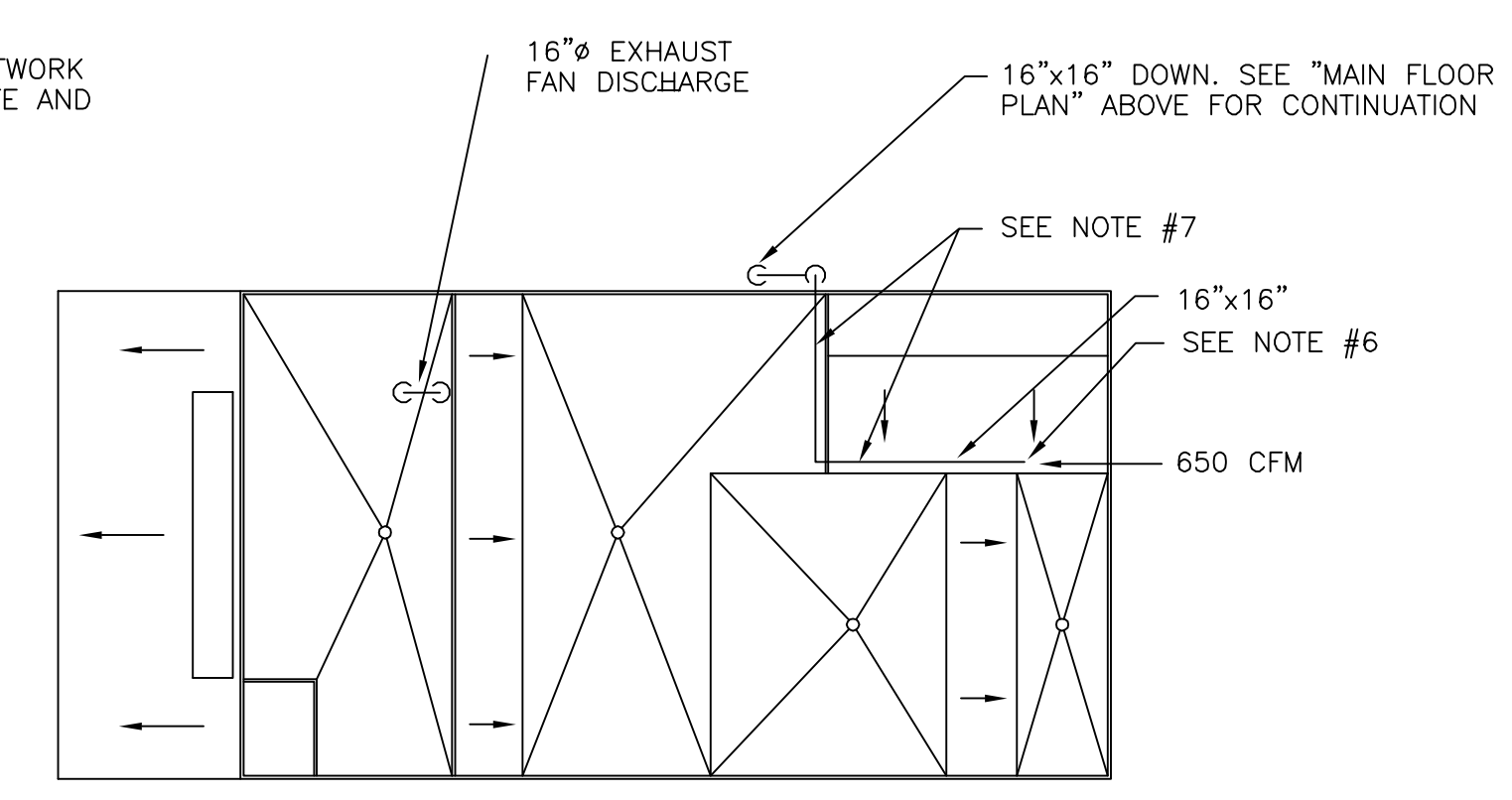
- CONTRACTOR SHALL DEVELOP EQUIPMENT AND DUCTWORK LAYOUT DRAWINGS COMPLETE WITH ELEVATION VIEWS INDICATING EQUIPMENT AND DUCT LOCATIONS, SIZING INFORMATION, WALL PENETRATION DETAILS AND SUPPORT DETAILS. LAYOUT DRAWINGS SHALL BE DRAWN AT 1/4" = 1'-0" SCALE. DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION OF EQUIPMENT AND DUCTWORK. CONTRACTOR SHALL PROVIDE TESTING AND BALANCING REPORT FOR AIR CONDITIONING SUPPLY AND LABORATORY/TOILET EXHAUST SYSTEMS
- CONTRACTOR SHALL REMOVE ALL EXISTING DUCTWORK LOCATED WITHIN THE MECHANICAL/ELECTRICAL ROOM ASSOCIATED WITH ORIGINAL AIR CONDITIONING UNIT UNLESS OTHERWISE INDICATED ON THIS DRAWING.
- ALL NEW DUCTWORK SHALL BE CONSTRUCTED OF HEAVY GAUGE ALUMINUM.
- AIR CONDITIONING FAN UNIT AC-1 SHALL BE A MODEL FC4B AS MANUFACTURED BY CARRIER OR EQUAL. UNIT SHALL BE SUITABLE FOR HORIZONTAL INSTALLATION. UNIT SHALL HAVE AN AIRFLOW CAPACITY OF 1450 CFM @ .25 S.P. OPERATING ON 208 V, 1 PHASE POWER. UNIT SHALL BE PROVIDED WITH A REFRIGERANT COOLING COIL HAVING A NOMINAL COOLING CAPACITY OF 3.5 TONS. UNIT SHALL ALSO BE PROVIDED WITH A TWO-STAGE ELECTRIC HEATING COIL HAVING A NOMINAL HEATING CAPACITY OF 11.3 KW @ 208 V, 3 PHASE POWER.
- AC-1 SHALL BE SUPPORTED FROM THE CEILING OF THE MECHANICAL/ELECTRICAL ROOM AND PROVIDED WITH VIBRATION ISOLATORS. UNIT SHALL BE INSTALLED SUCH THAT ALL COMPONENTS ARE EASILY ACCESSIBLE FOR MAINTENANCE. UNIT SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 7'-0" BELOW THE HOUSING. UNIT SHALL BE PROVIDED WITH FLEXIBLE CONNECTORS ON BOTH THE INLET AND DISCHARGE CONNECTIONS. ALL DRAIN CONNECTIONS SHALL BE PIPED TO DRAIN.
- INLET FOR AC-1 (LOCATED ON THE ROOF NEAR THE SOUTH END OF THE FACILITY) SHALL BE BEVELED AT A 45 DEGREE ANGLE BACK FROM THE TOP TO PREVENT RAIN AND SNOW ENTERING. INLET OPENING SHALL BE COVERED WITH 1/4" ALUMINUM MESH.
- INTAKE AIR DUCTWORK FOR AC-1 LOCATED ON THE ROOF SHALL BE SUPPORTED FROM THE CONCRETE WALLS ONLY (NOT FROM ROOF). DUCTWORK SHALL BE INSTALLED WITH BOTTOM OF DUCT 1'-6" ABOVE ROOF. ALL EXTERIOR SUPPORTS SHALL BE OF ALUMINUM OR STAINLESS STEEL CONSTRUCTION.
- INTAKE AIR DUCTWORK FOR AC-1 LOCATED WITHIN THE MECHANICAL/ELECTRICAL ROOM SHALL BE INSULATED WITH 2" THICK FIBERGLASS DUCT INSULATION.
- CONDENSING UNIT C-1 SHALL BE A MODEL 38TKB AS MANUFACTURED BY CARRIER OR EQUAL. UNIT SHALL HAVE A NOMINAL COOLING CAPACITY OF 42,000 BTU AT 208 V, 1 PHASE POWER. C-1 SHALL BE INSTALLED ON A 6" THICK CONCRETE PAD LOCATED WITHIN 3'-0" OF EXTERIOR WALL OF MECHANICAL/ELECTRICAL ROOM.
- A 24 VOLT PROGRAMMABLE THERMOSTAT SHALL CONTROL HEATING AND COOLING REQUIREMENTS OF AC-1. THERMOSTAT SHALL HAVE TWO STAGE HEATING AND SINGLE STAGE COOLING CONTROL. THERMOSTAT SHALL ALSO HAVE AUTOMATIC, MANUAL AND OFF CONTROL FOR FAN OPERATION. THERMOSTAT SHALL BE A HONEYWELL TRADELINE MODEL T7300 SERIES OR EQUAL. THERMOSTAT SHALL BE MOUNTED 5'-0" ABOVE FLOOR WHERE SHOWN ON DRAWING.
- SUPPLY AIR DIFFUSERS SHALL BE 12" X 12" STYLE E WITH 10" NECK AS MANUFACTURED BY ANEMOSTAT OR EQUAL. DIFFUSERS SHALL BE PROVIDED WITH VOLUME CONTROL DAMPER.
- EXHAUST FAN EF-1 SHALL HAVE A CAPACITY OF 1200 CFM @ .10" S.P. WITH 1/6 H.P., 120 V, 1 PHASE MOTOR. EXHAUST FAN SHALL BE A MODEL 13SSQ10D AS MANUFACTURED BY LOREN COOK COMPANY OR EQUAL. EXHAUST FAN SHALL BE MOUNTED WITH A MINIMUM OF 7'-0" CLEARANCE FROM FLOOR. UNIT SHALL BE PROVIDED WITH VIBRATION ISOLATORS, INLET GUARD, AND FLEXIBLE CONNECTION ON DISCHARGE.
- A 120 VOLT SINGLE-STAGE COOLING THERMOSTAT HONEYWELL TRADELINE MODEL T42B OR EQUAL SHALL CONTROL MECHANICAL/ELECTRICAL ROOM EXHAUST FAN EF-1. THERMOSTAT SHALL BE MOUNTED 5'-0" ABOVE FLOOR WHERE SHOWN ON DRAWING.
- INTAKE AIR DAMPER AND ACTUATOR FOR EXHAUST FAN SHALL BE INSTALLED ON INSIDE FACE OF LOWER PORTION OF EXISTING LOUVER (ADJACENT TO INTAKE LOUVER FOR EXISTING VENTILATING UNIT #1). DAMPER SHALL HAVE A MINIMUM FREE AREA OF 2.5 SQUARE FEET. DAMPER ACTUATOR SHALL BE A LINE VOLTAGE TWO-POSITION POWER-OPEN/SPRING-CLOSE MODEL M836 AS MANUFACTURED BY HONEYWELL OR EQUAL.
- CONTRACTOR SHALL PROVIDE AND INSTALL LOUVER IN TOILET ROOM DOOR. LOUVER SHALL HAVE A MINIMUM OF .5 SQUARE FEET FREE AREA.
- CONTRACTOR SHALL INTERLOCK AC-1 FAN AND EXISTING LABORATORY/TOILET ROOM FAN SO BOTH UNITS OPERATE SIMULTANEOUSLY. ALSO, MANUAL OPERATION OF EXISTING LABORATORY/TOILET ROOM FAN IS STILL REQUIRED.
- CONTRACTOR SHALL RESTORE ALL ACOUSTIC TILE CEILING INSTALLATIONS TO ORIGINAL CONDITION OR BETTER FOLLOWING COMPLETION OF PROJECT.
- SEQUENCE OF OPERATION FOR THE AIR CONDITIONING UNIT AC-1 SHALL BE AS FOLLOWS:  
 HEATING MODE:  
 1. AS THE LABORATORY SPACE TEMPERATURE DECREASES TO THE THERMOSTAT'S HIGHER HEATING SETPOINT, THE FIRST STAGE OF THE ELECTRIC HEATING COIL WILL BE ENERGIZED. IF THE LABORATORY ROOM TEMPERATURE CONTINUES TO DECREASE AND REACHES THE THERMOSTAT'S LOWER HEATING SETPOINT, THE SECOND STAGE OF THE ELECTRIC HEATING COIL WILL BE ENERGIZED. HEATING COIL STAGES WILL BE DE-ENERGIZED UPON RISE OF LABORATORY ROOM TEMPERATURE TO SETPOINTS.  
 COOLING MODE:  
 1. LABORATORY ROOM TEMPERATURE IS CONTROLLED BY THE THERMOSTAT'S SINGLE-STAGE COOLING SETPOINT. CONDENSING UNIT SHALL BE ENERGIZED/DE-ENERGIZED AS REQUIRED FOR AIR CONDITIONING UNIT COOLING COIL TO MAINTAIN ROOM TEMPERATURE.  
 FAN CONTROL:  
 1. THERMOSTAT SHALL PROGRAMMED TO ENERGIZE THE FAN CONTINUOUSLY WHEN BUILDING IS EXPECTED TO BE OCCUPIED. THERMOSTAT SHALL ENERGIZE FAN DURING UNOCCUPIED TIMES ONLY WHEN ROOM HEATING IS REQUIRED.



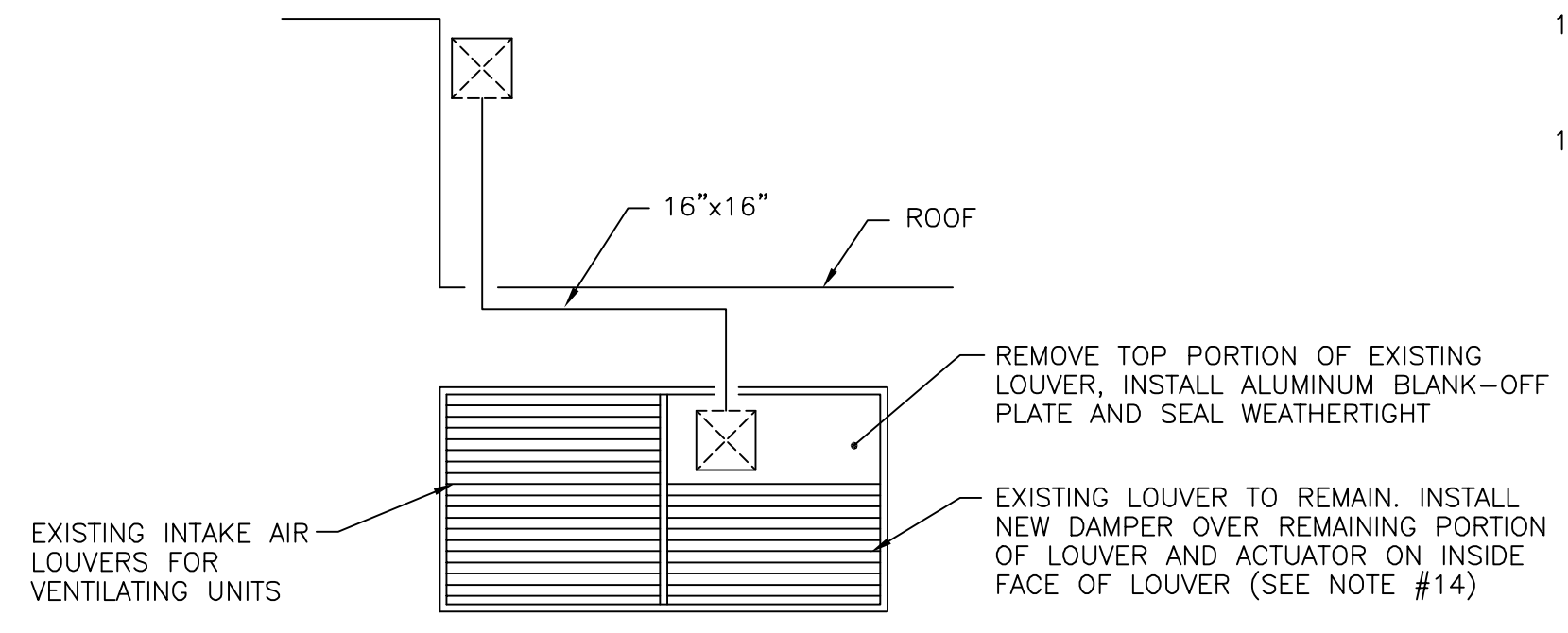
MAIN FLOOR PLAN  
SCALE: 1/4"=1'-0"



SECTION 1  
N.T.S. Z-1



ROOF PLAN  
SCALE: 1/16"=1'-0"



SECTION 2  
N.T.S. Z-1

- LEGEND
- EXISTING DUCTWORK
  - NEW DUCTWORK
  - V.D. VOLUME DAMPER
  - T THERMOSTAT
  - A DAMPER ACTUATOR
  - P POINT OF REMOVAL/CONNECTION
  - SUPPLY DUCT TOWARDS VIEWER
  - SUPPLY DUCT AWAY FROM VIEWER
  - SUPPLY AIR DIFFUSER (SEE NOTE #11)
  - EXHAUST AIR REGISTER

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In charge of.....	1/4"=1'-0"	0 2 4 6 8 10
Designed by.....Checked by.....	1/16"=1'-0"	0 8 16 32
Drawn by.....		

NO.	DATE	REVISION	INIT.
1	2/09/96	RECORD DRAWINGS	
0	11/16/94	PER HVAC CHANGE ORDER	

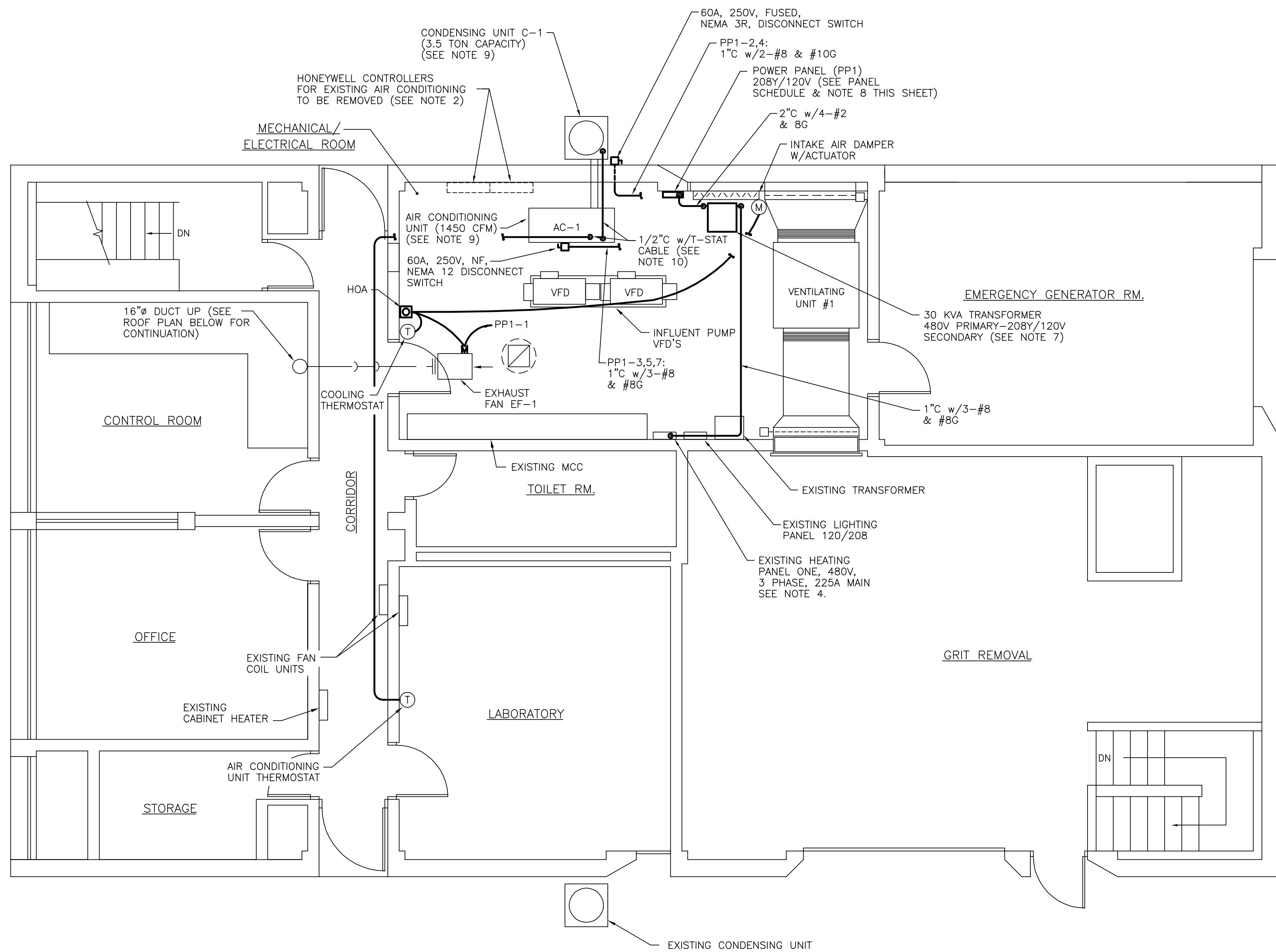


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

HEATING AND VENTILATING  
INFLUENT PUMP STATION  
PLANS, SECTION & NOTES

FILE NO.	115.643-55RD	Z-1
DATE	NOV. 16, 1994	R-1

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE ENGINEERS, INC.  
By: .....

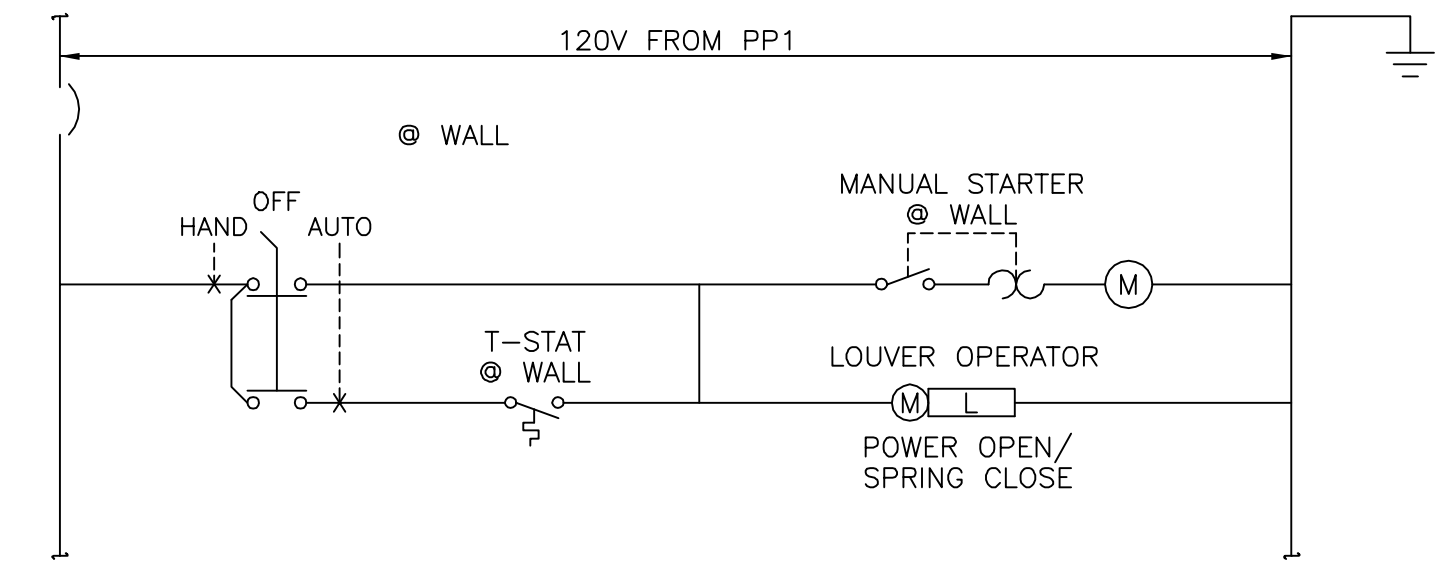


MAIN FLOOR PLAN

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

LEGEND

- HOA (HAND/OFF/AUTO)
- MANUAL MOTOR STARTER (SQUARE D CLASS 2510 OR EQUAL)
- DISCONNECT SWITCH (SIZE AND NEMA RATING AS SHOWN ON PLANS)
- HOMERUN TO PANELBOARD (2-#12 & 1-#12G UNLESS OTHERWISE NOTED) CIRCUIT NUMBER AS SHOWN



EXHAUST FAN EF-1 ELEMENTARY

PANEL SCHEDULE											
PANELBOARD		PP1		LOCATION		MECHANICAL/ELECTRIC ROOM		INSTALLATION		SURFACE	
RATINGS		100 AMPS, 120/208 VOLTS, 3 PH, 4 WIRE, 60 HZ., GRD BAR X		MAIN LUGS		-		BKR INTERRUPTING RATING		-	
RMS. SYMM. AMPS		-		CONNECTED LOAD		-		KW		-	
MAIN CIRCUIT BREAKER		100 AMPS,		PANEL SIZE		20 SPACES					
DESCRIPTION	LOAD W-KW-HP	BKR AMPS	CKT	A	B	C	CKT	BKR AMPS	LOAD W-KW-HP	DESCRIPTION	
EXHAUST FAN EF-1	-	20	1				2	40	-	CONDENSING UNIT C-1	
AC-1	-	50	3				4	2P			
			5				6	20		SPARE	
			3P				7				
SPARE		20	9				10				
							11				
							12				
							13				
							14				
							15				
							16				
							17				
							18				
							19				
							20				

NOTES:

- CONTRACTOR SHALL DEVELOP EQUIPMENT LAYOUT DRAWINGS COMPLETE WITH EQUIPMENT LOCATIONS, ELEMENTARIES, AND SUPPORT DETAILS.
- CONTRACTOR SHALL REMOVE ALL EXISTING ELECTRICAL EQUIPMENT LOCATED WITHIN MECHANICAL/ELECTRIC ROOM ASSOCIATED WITH THE ORIGINAL AIR CONDITIONING UNIT. THIS SHALL INCLUDE THE HONEYWELL CONTROLLERS, CONDUIT, CONDUCTOR AND CONTROLS BACK TO POWER SOURCE. CIRCUIT BREAKER DIRECTORY SHALL BE UPDATED AND LABEL UNUSED CIRCUIT BREAKERS AS SPARE.
- ALL EQUIPMENT REMOVED SHALL BE TURNED OVER TO OWNER.
- AT EXISTING HEATER PANEL ONE (480/277V WESTINGHOUSE, AMB1G355, WEHB 3P/4W 225A MAIN) CONTRACTOR SHALL REMOVE CIRCUIT BREAKER NO.7 - DUCT HTRS. 5 & 6 AND REPLACE WITH A 40A, 3P CIRCUIT BREAKER FOR POWER TO 30 KVA 480-208/120V TRANSFORMER. RELABEL PANEL DIRECTORY AS REQUIRED.
- ALL CONDUIT SHALL BE RIGID STEEL UNLESS OTHERWISE NOTED.
- CONDUIT ROUTINGS SHOWN ARE SCHEMATIC ONLY, CONTRACTOR SHALL ROUTE CONDUITS BASED ON ACTUAL FIELD CONDITIONS AND IN COORDINATION WITH ALL OTHER EQUIPMENT BEING INSTALLED UNDER THIS CONTRACT.
- TRANSFORMER SHALL BE 480V DELTA PRIMARY-208Y/120V SECONDARY, SQUARED D CLASS 7430, ENERGY SAVING WATCHDOG TRANSFORMER OR EQUAL. PROVIDE HOUSEKEEPING PAD AS REQUIRED.
- POWER PANEL PP1 SHALL BE 208/120V, 3 PHASE, 4 WIRE, 20 SPACE, 100A MAIN. PANEL SHALL BE SURFACE MOUNTED, SQUARE D, CLASS 1630, NOOD MAIN LUG INTERIOR OR EQUAL.
- ALL CONTROLS, CONTROL WIRING, CONDUIT, ETC. FOR THE AIR CONDITIONING UNIT AC-1 AND CONDENSING UNIT C-1 TO BE PROVIDED & INSTALLED BY THE SUPPLIER/CONTRACTOR PROVIDING AND INSTALLING UNIT.
- PROVIDE CONTROL CIRCUIT AS SHOWN BETWEEN CONDENSING UNIT, AIR CONDITIONING UNIT AC-1, AND THERMOSTAT LOCATION AS SHOWN. PROVIDE T-STAT CONDUCTORS AS REQUIRED BY EQUIPMENT MANUFACTURER.

RECORD DRAWINGS

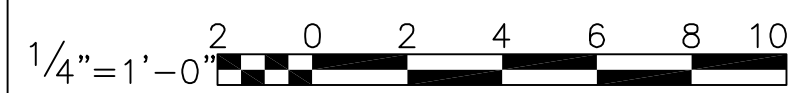
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.

O'BRIEN & GERE ENGINEERS, INC.

By: \_\_\_\_\_

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In charge of \_\_\_\_\_  
 Designed by \_\_\_\_\_ Checked by \_\_\_\_\_  
 Drawn by \_\_\_\_\_

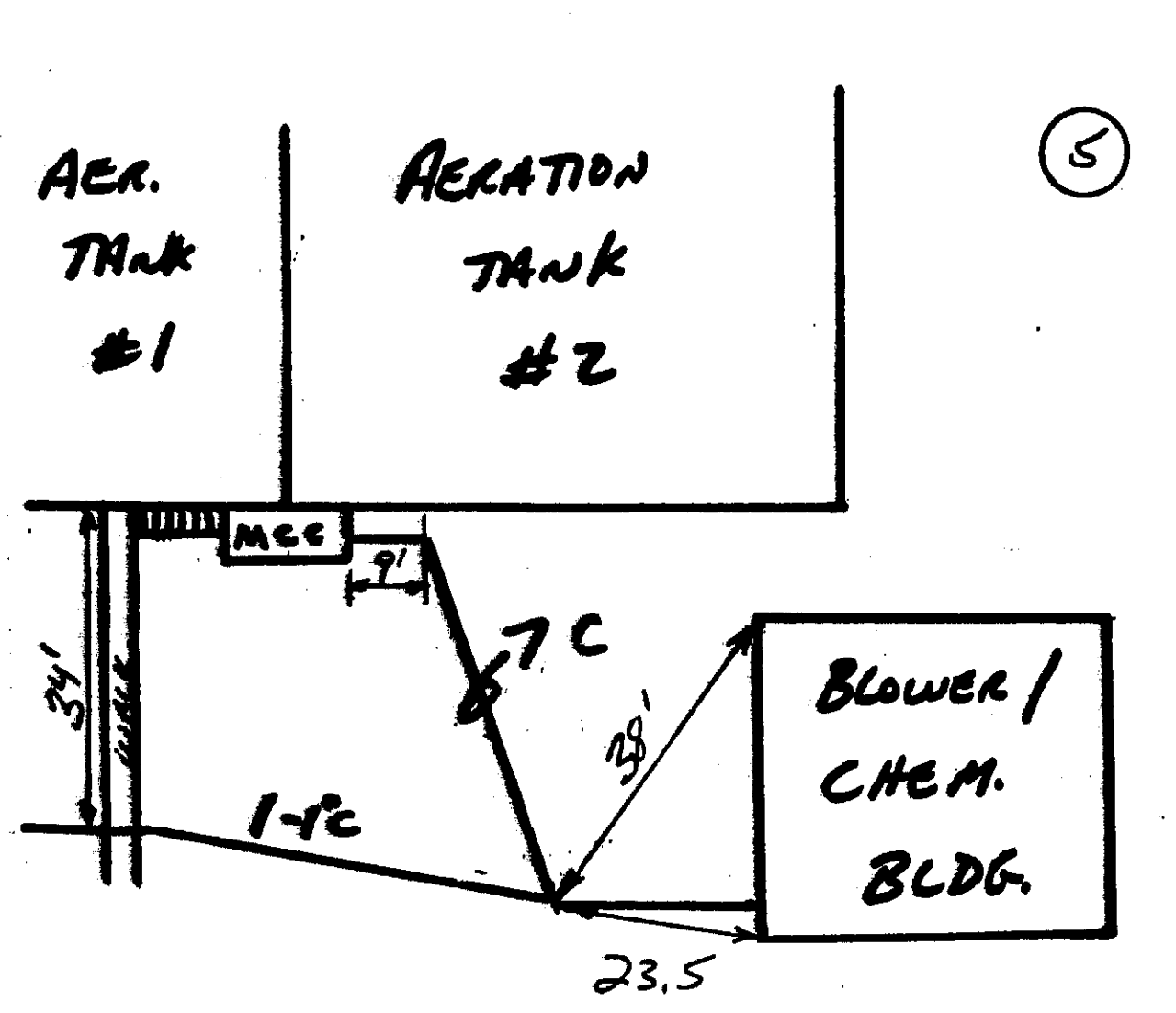
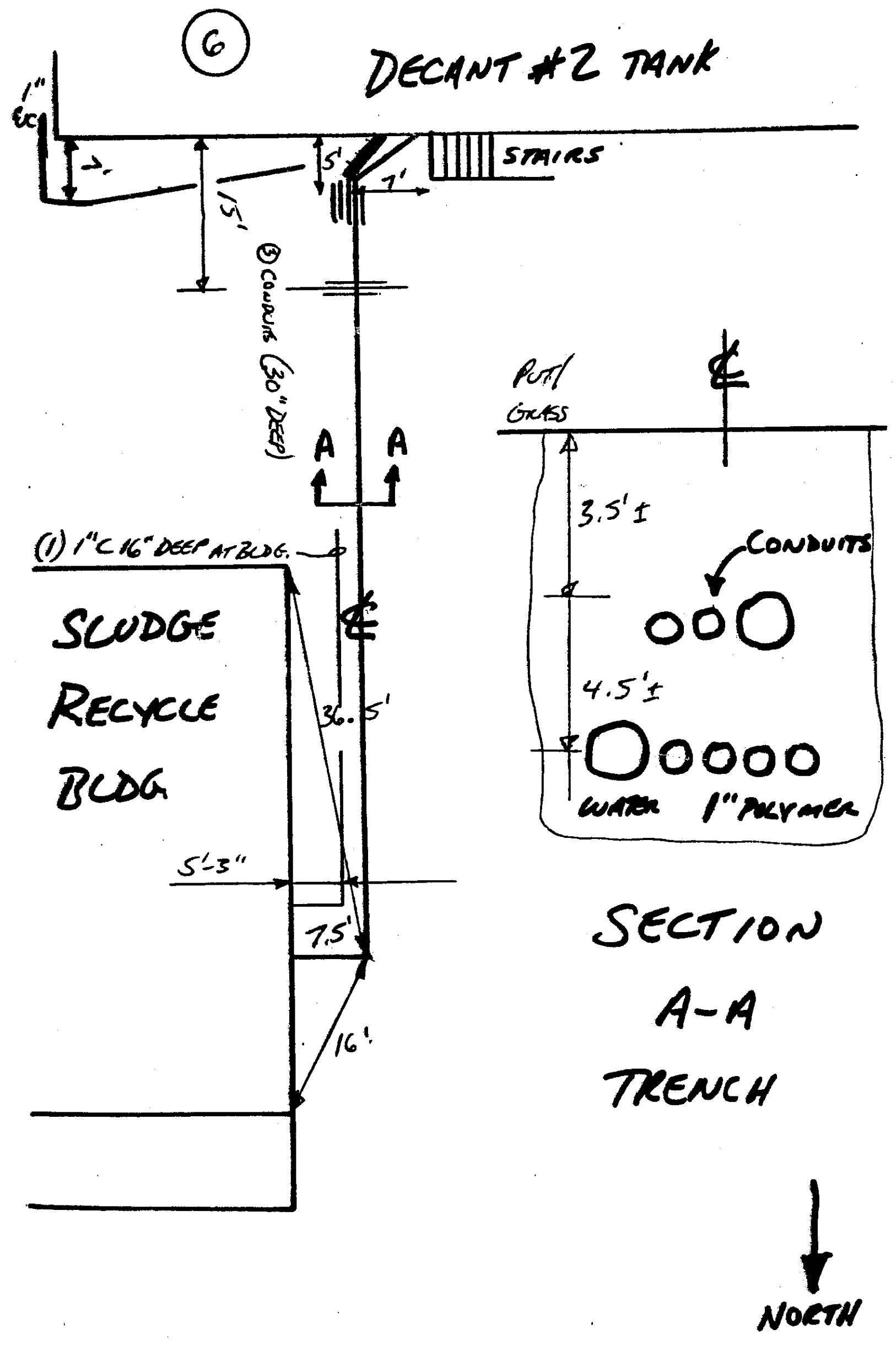
NO.	DATE	REVISION	INIT.
1	2/9/96	RECORD DRAWINGS	
0	11/16/94	PER HVAC CHANGE ORDER	



ONONDAGA COUNTY  
 DEPARTMENT OF DRAINAGE AND SANITATION  
 MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
 INFLUENT PUMP STATION  
 PLAN & ELEMENTARY

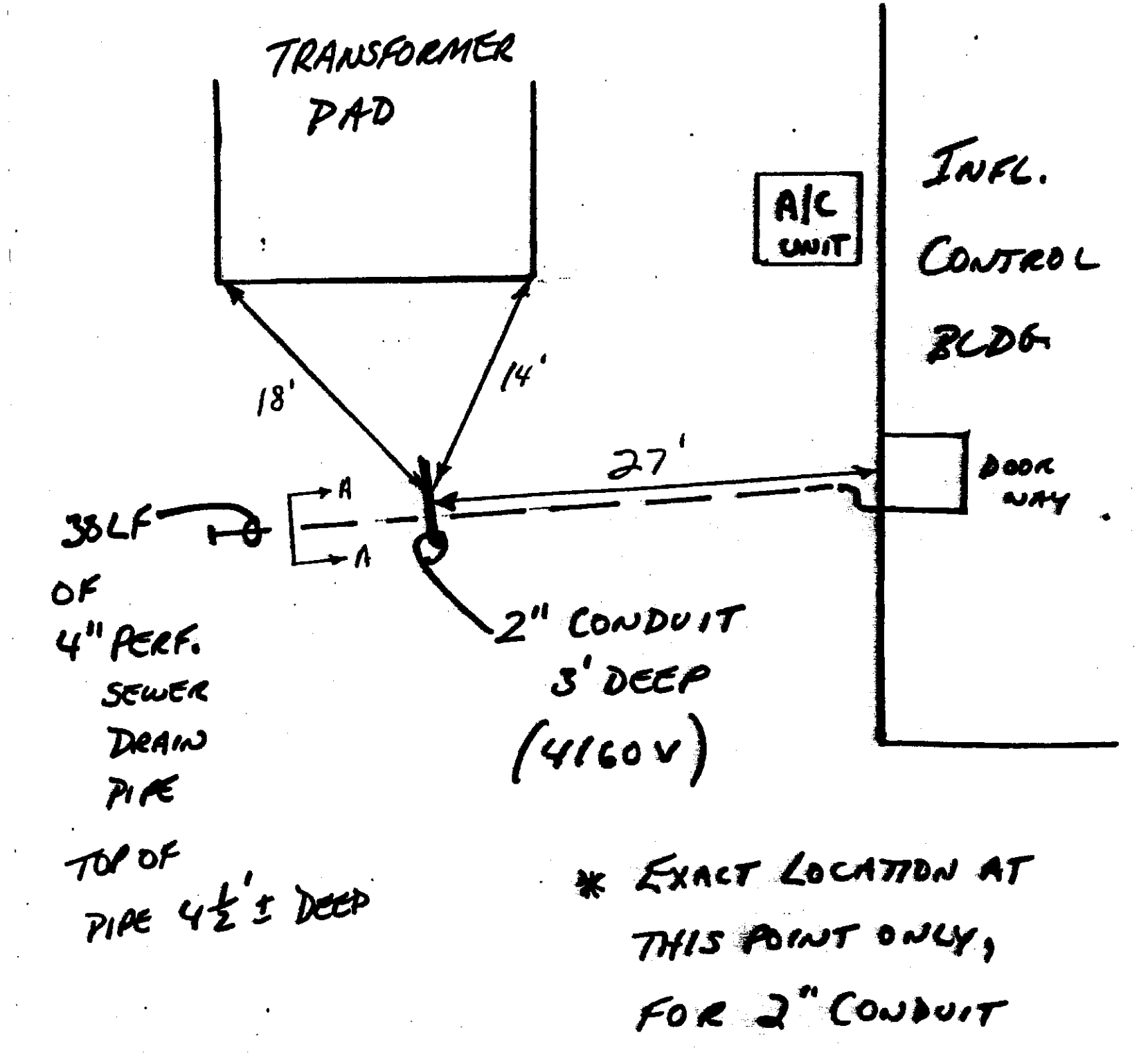
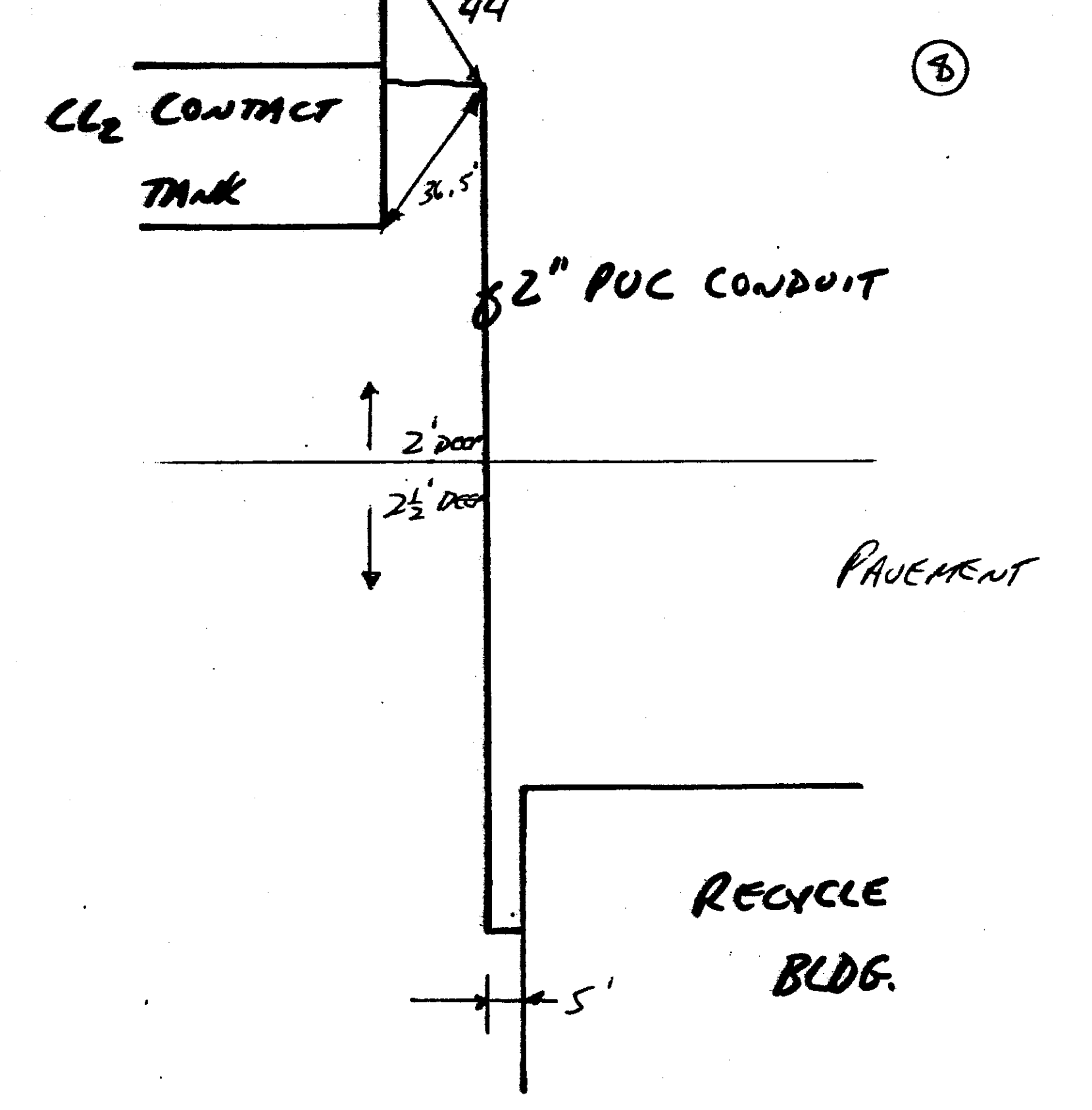
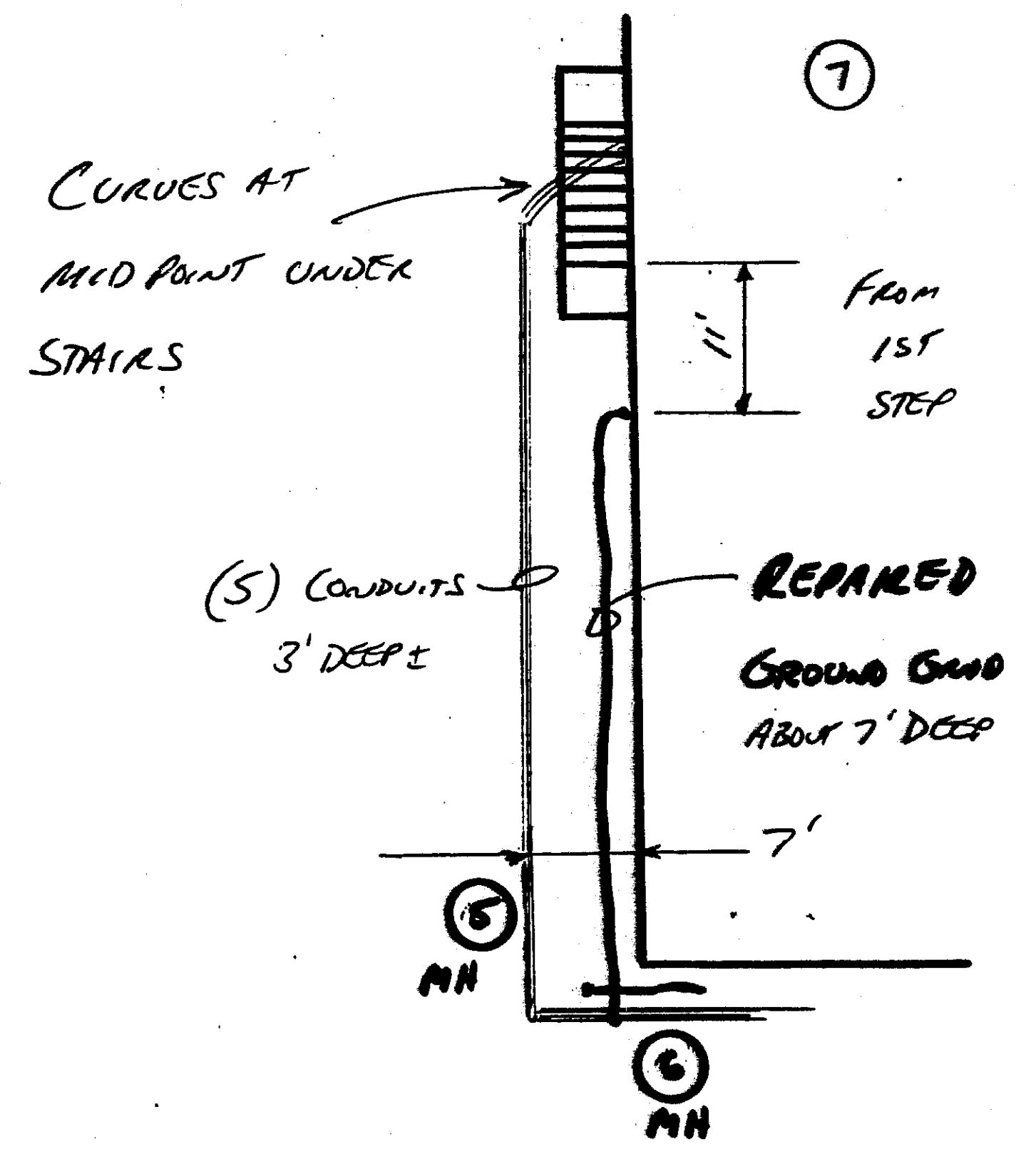
FILE NO.	115.643-56RD	Z-2
DATE	NOV. 16, 1994	R-1



7 CONDUITS

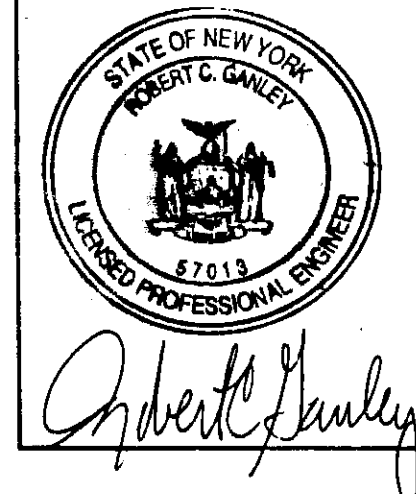
- 3 - 1" C
- 1 - 1 1/2" C
- 1 - 2" C
- 2 - 4" C

30" WIDE TRENCH  
30" TO 36" DEEP



RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, BASED ON INFORMATION PROVIDED BY OTHERS, THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE PROJECT AS CONSTRUCTED.

O'BRIEN & GERE ENGINEERS, INC.  
BY: *[Signature]*



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In charge of *Terry L. Woodward*  
Designed by *.....* Checked by *AMZ*  
Drawn by *JASCH*

NOT TO SCALE

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0	2/96	RECORD DRAWINGS	RGG

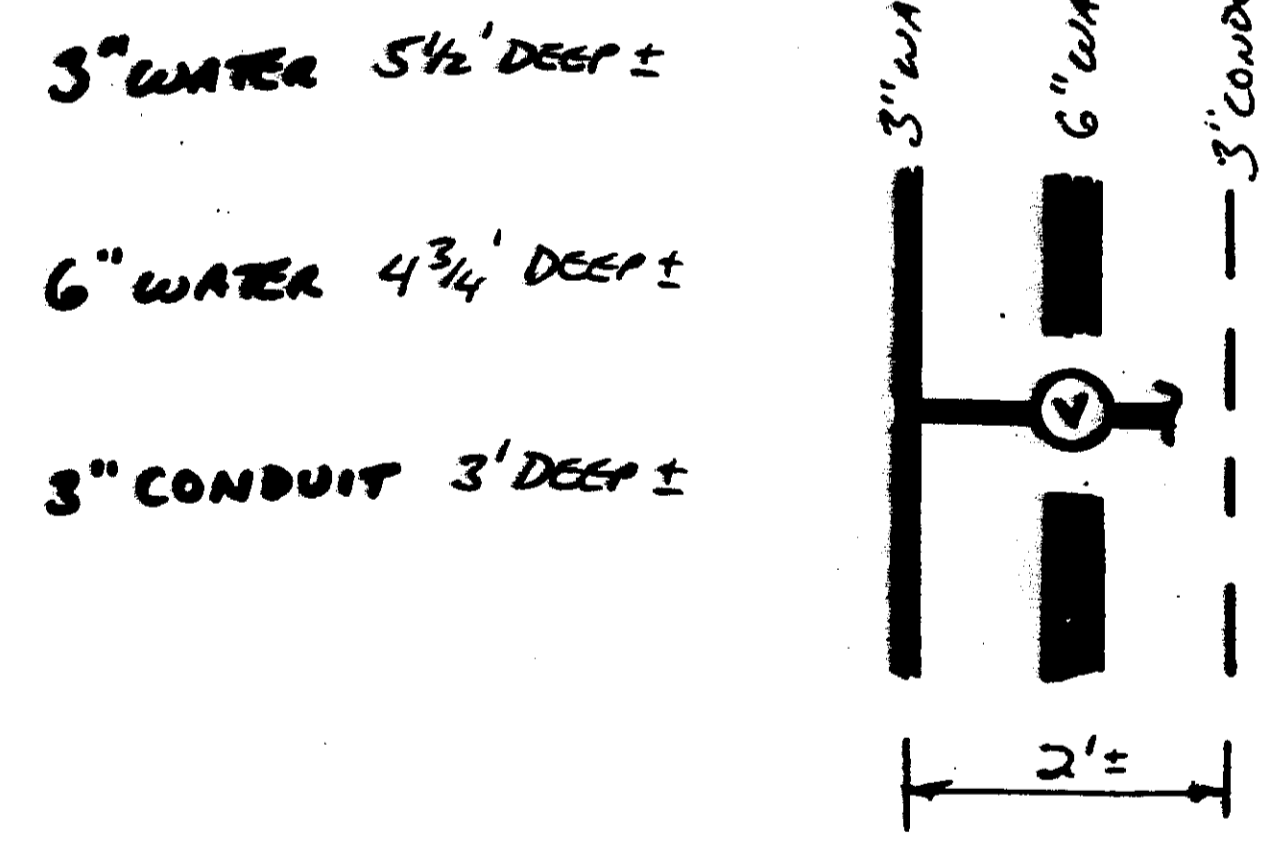
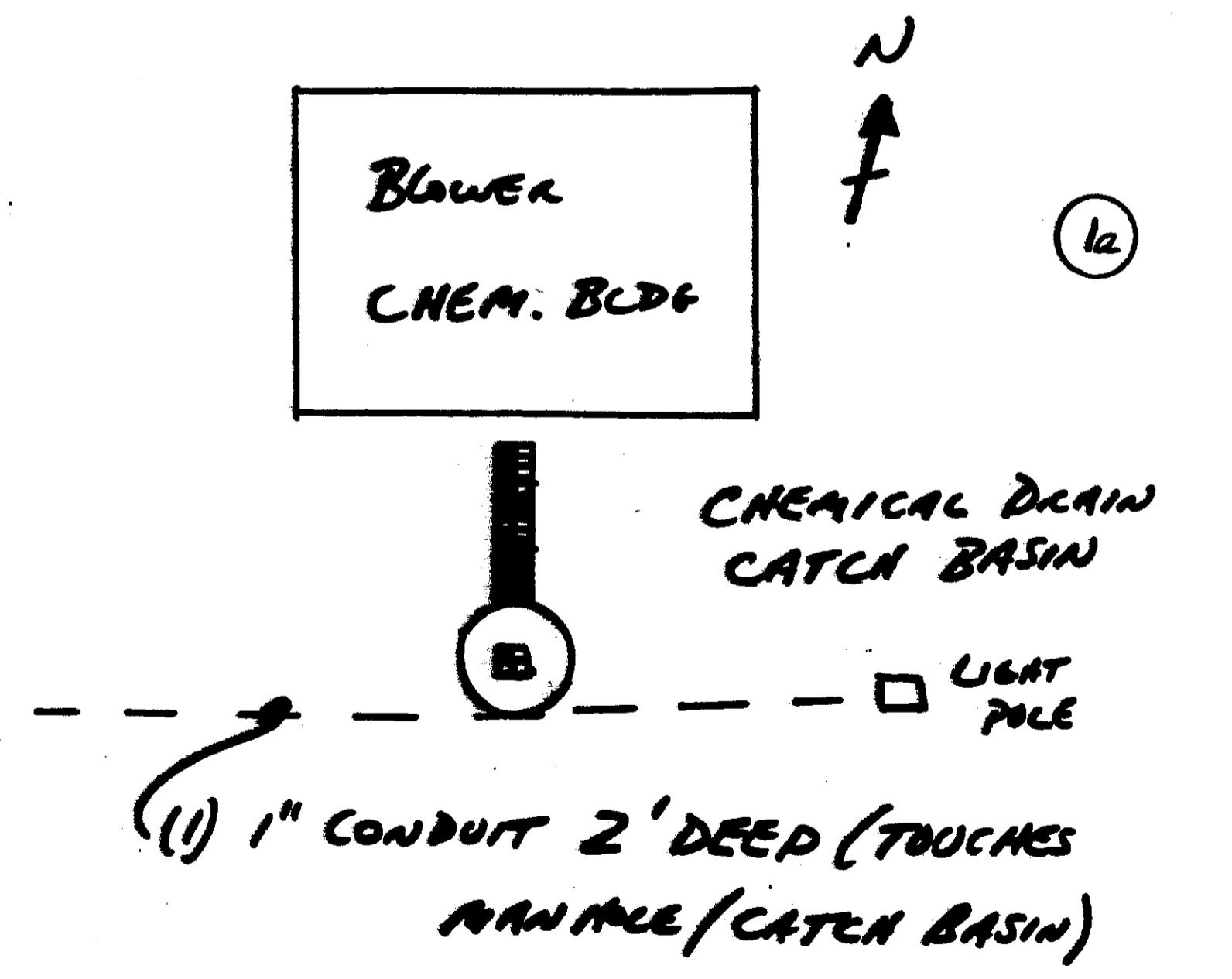
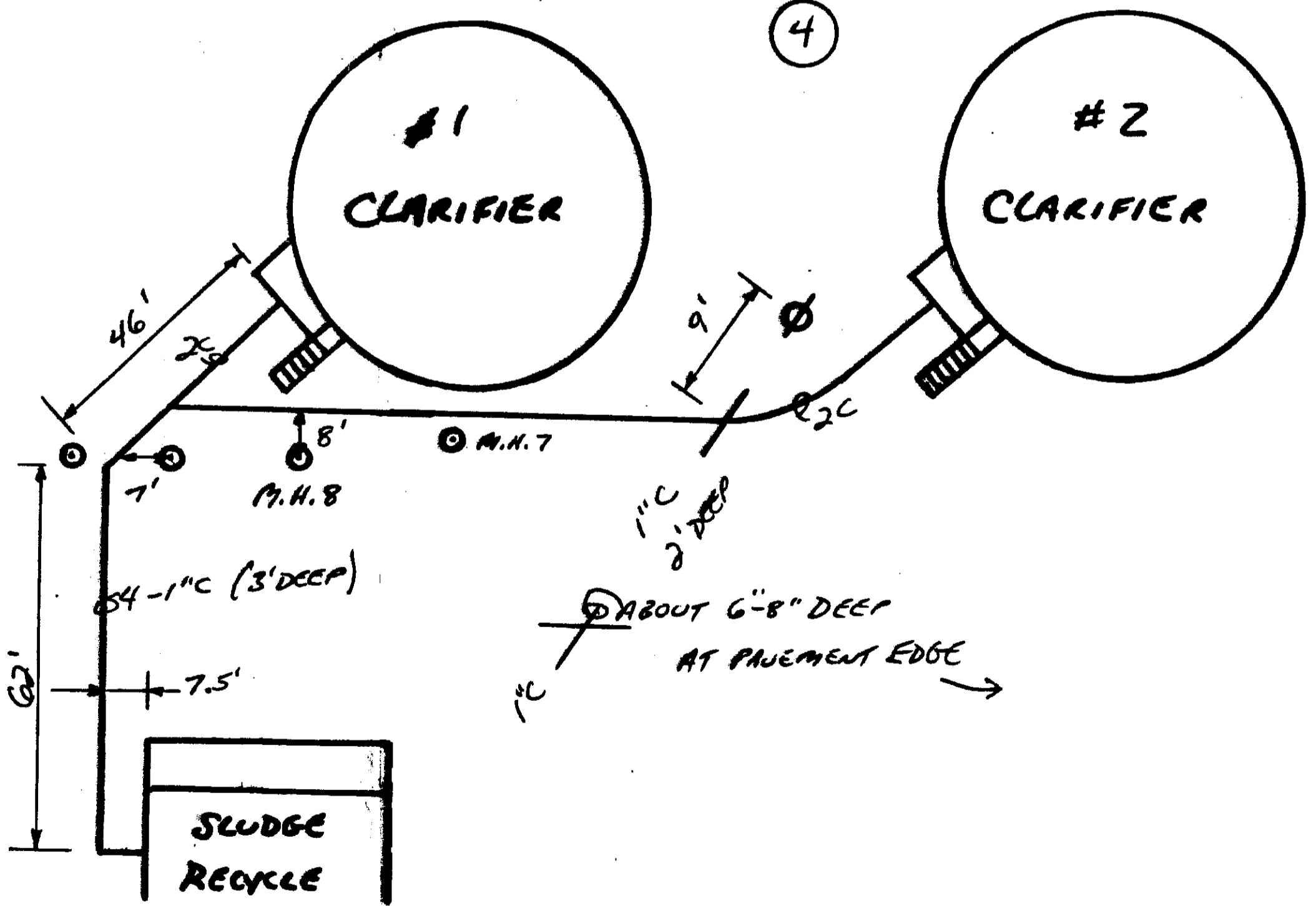
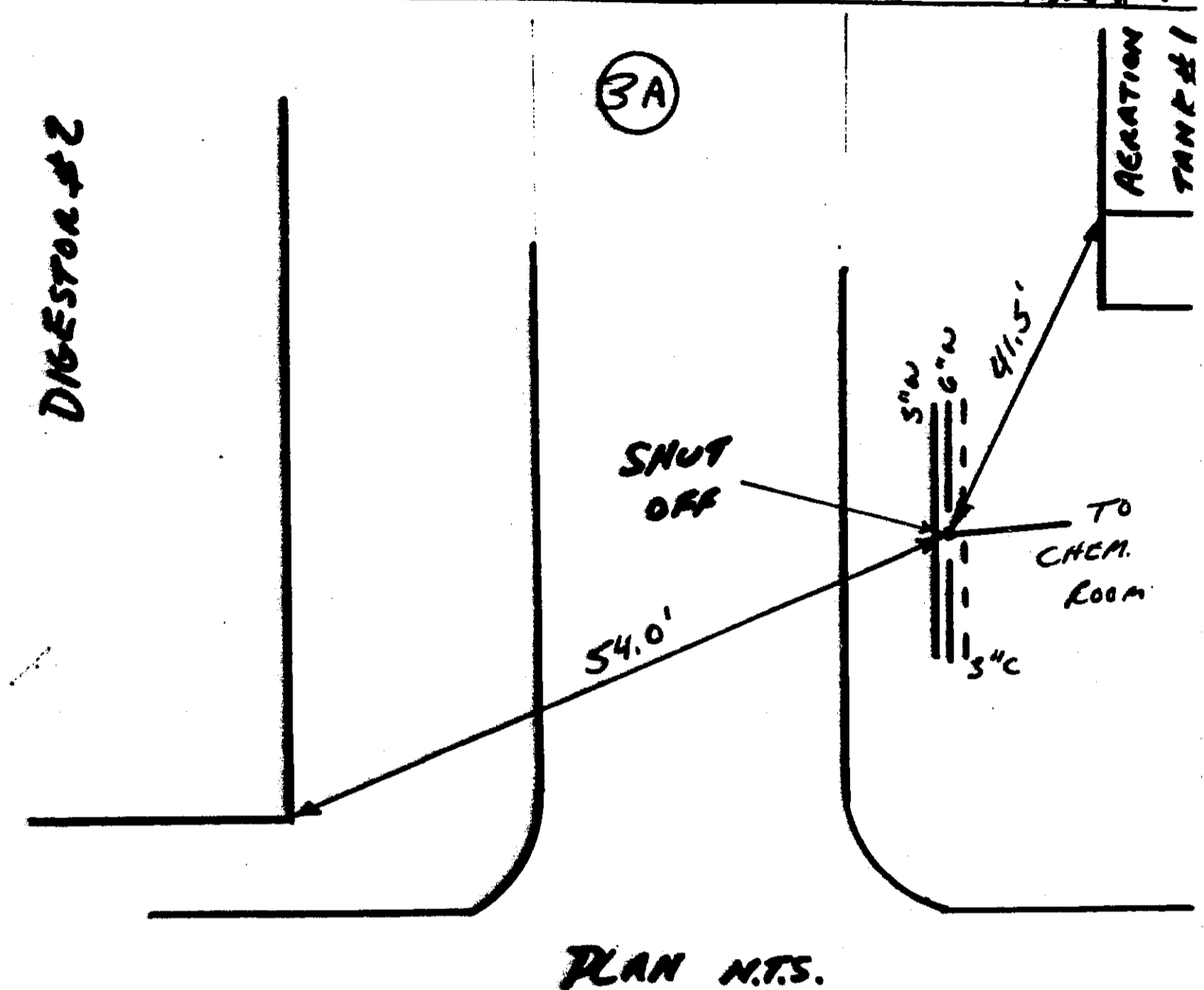
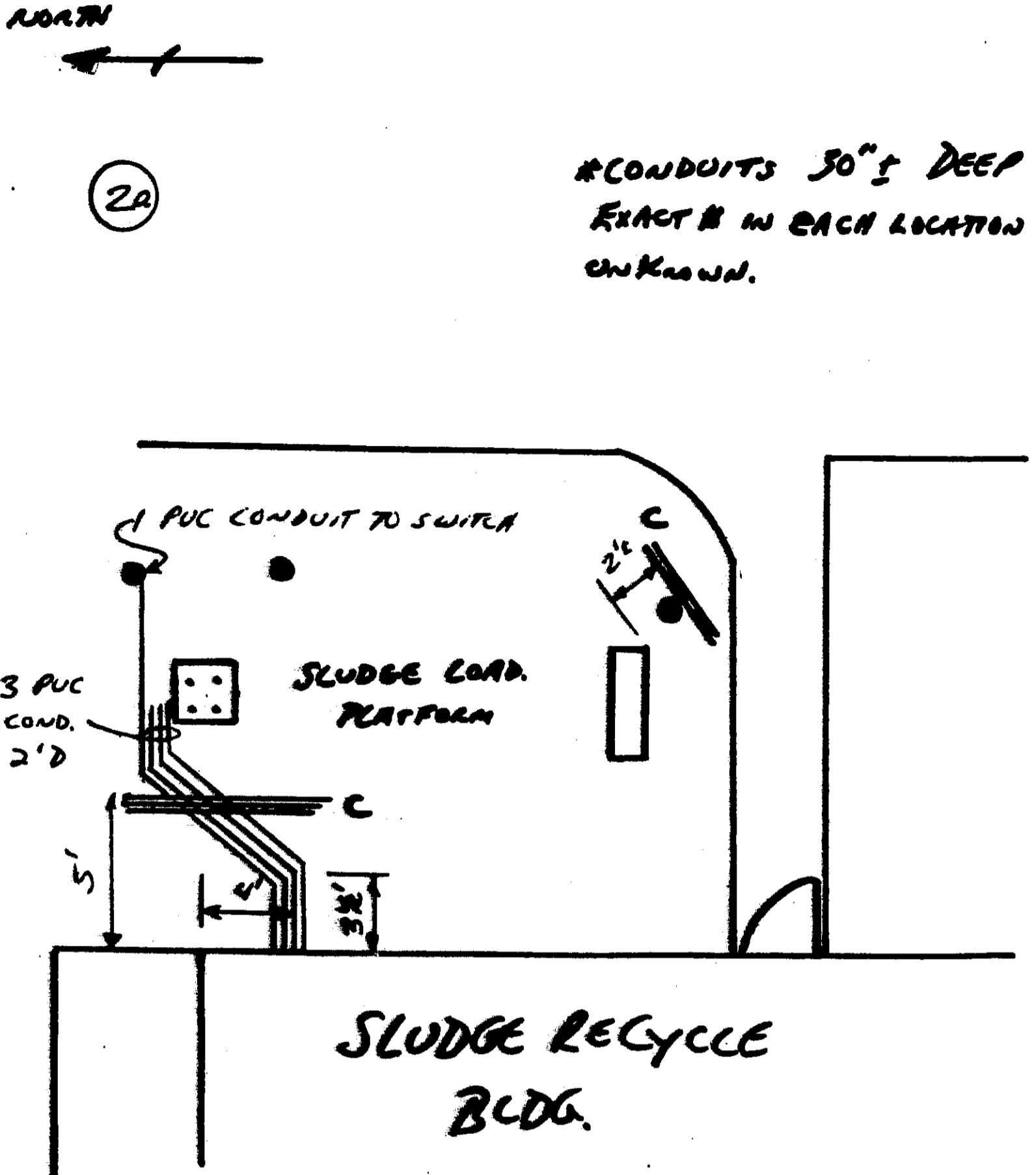
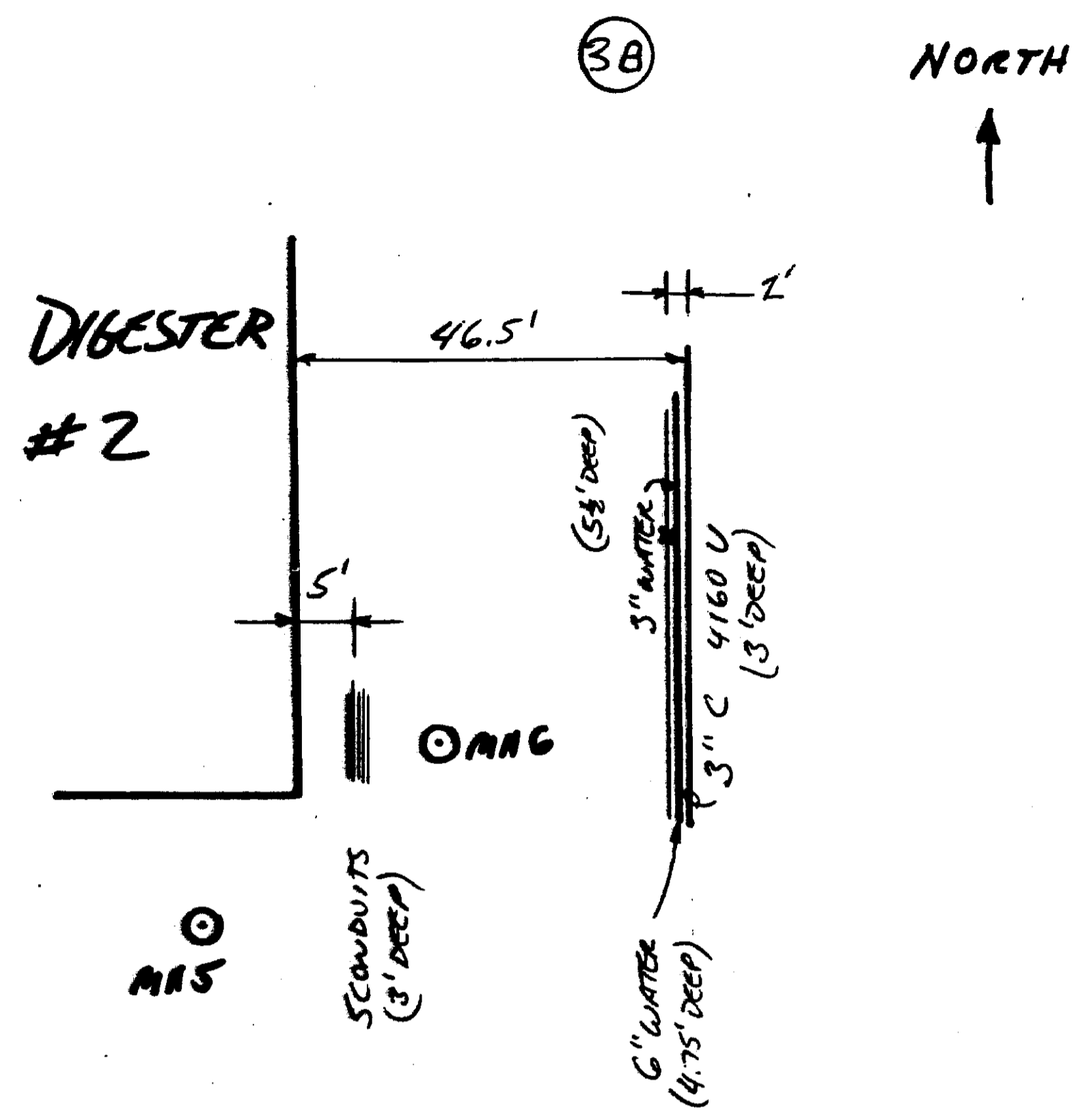


ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
MISC. TIES

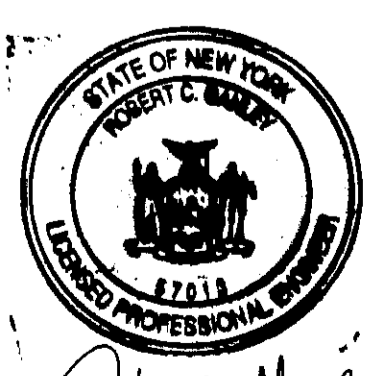
FILE NO. 115.643-70RD	Z-3
DATE AUGUST 1993	R-0





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O'BRIEN & GERE ENGINEERS, INC.  
BY: *[Signature]*



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In charge of *Terry L. Woodward*  
Designed by *[Signature]* Checked by *[Signature]*  
Drawn by *JASCH.*

NOT TO SCALE

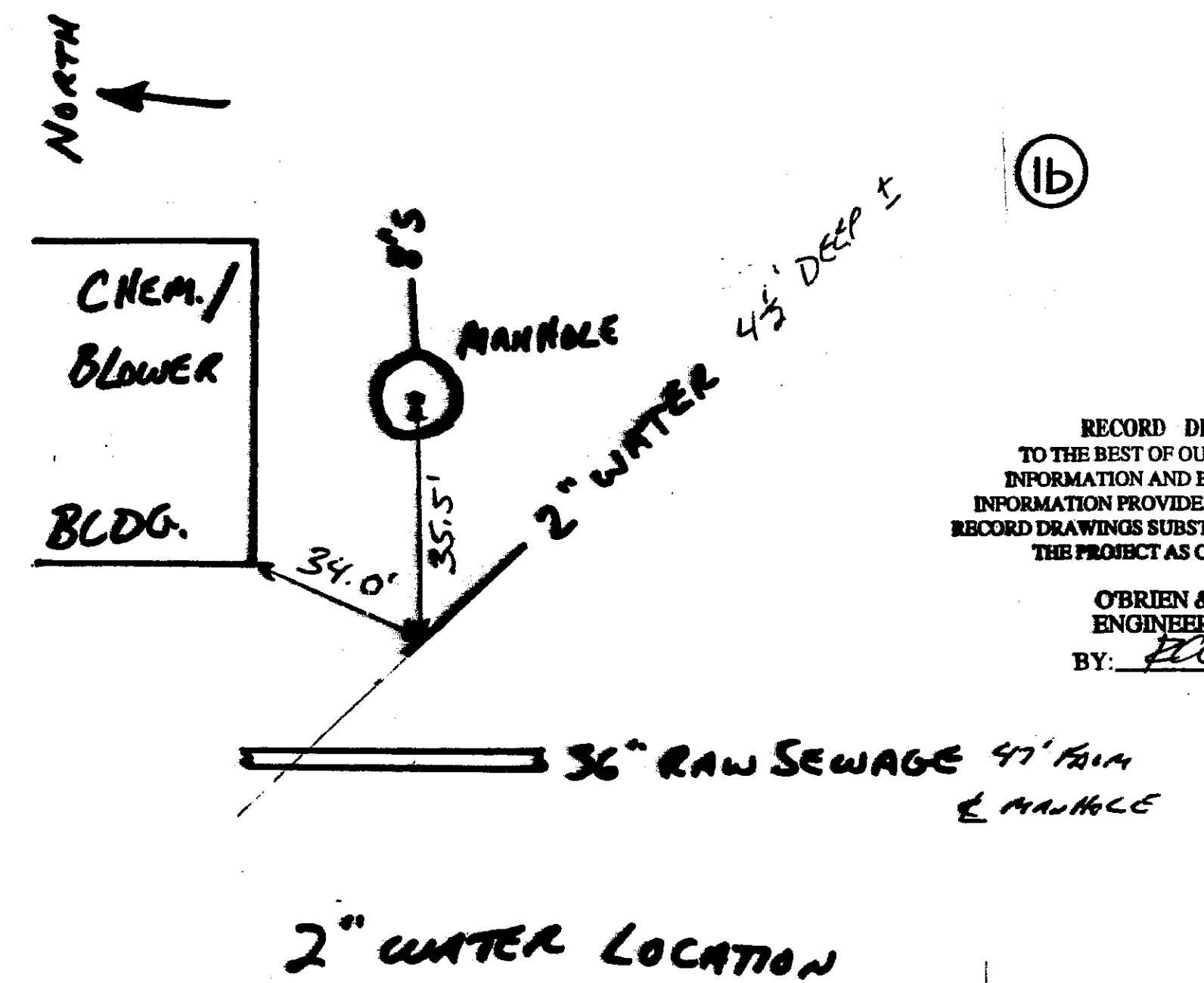
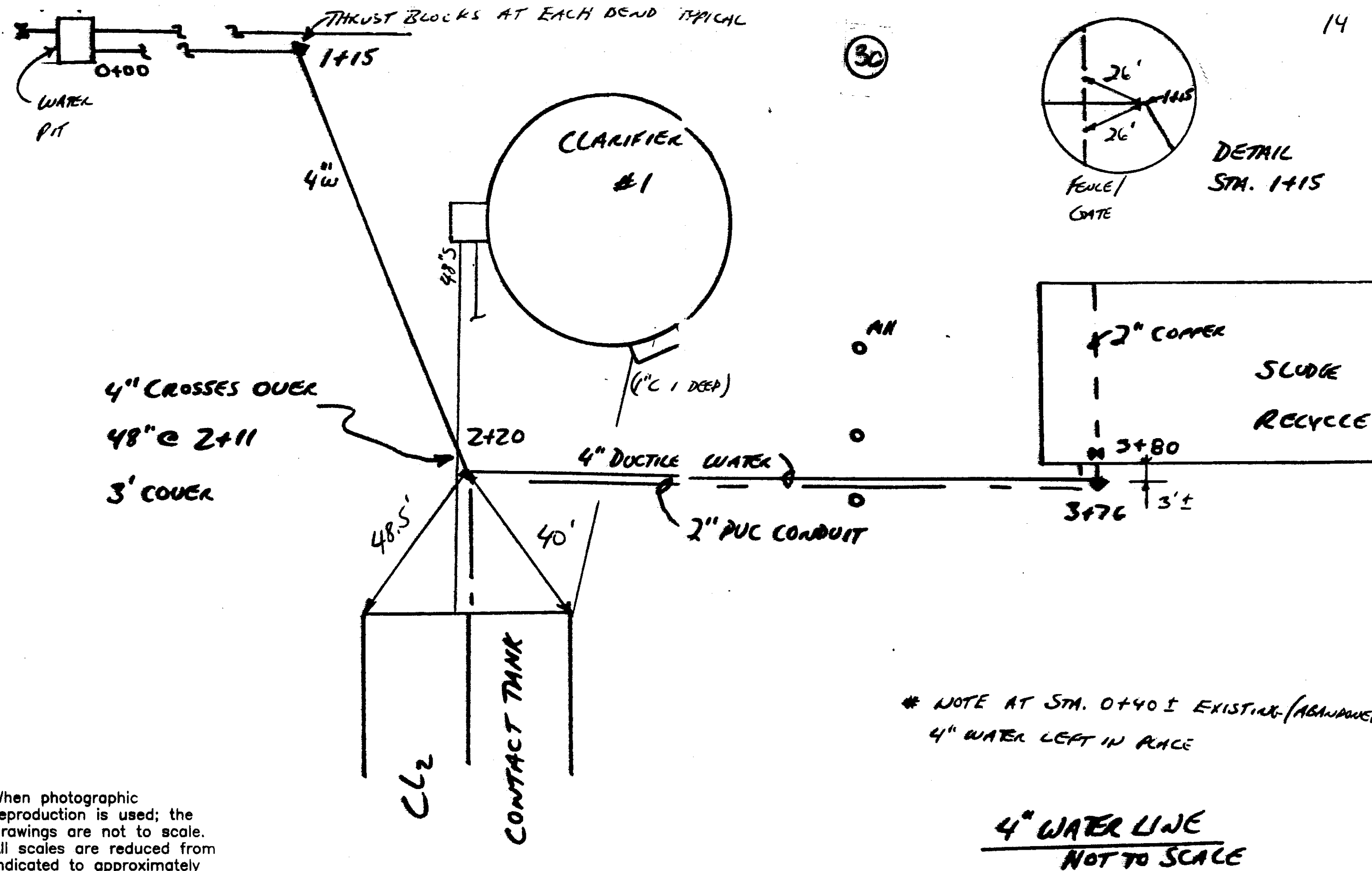
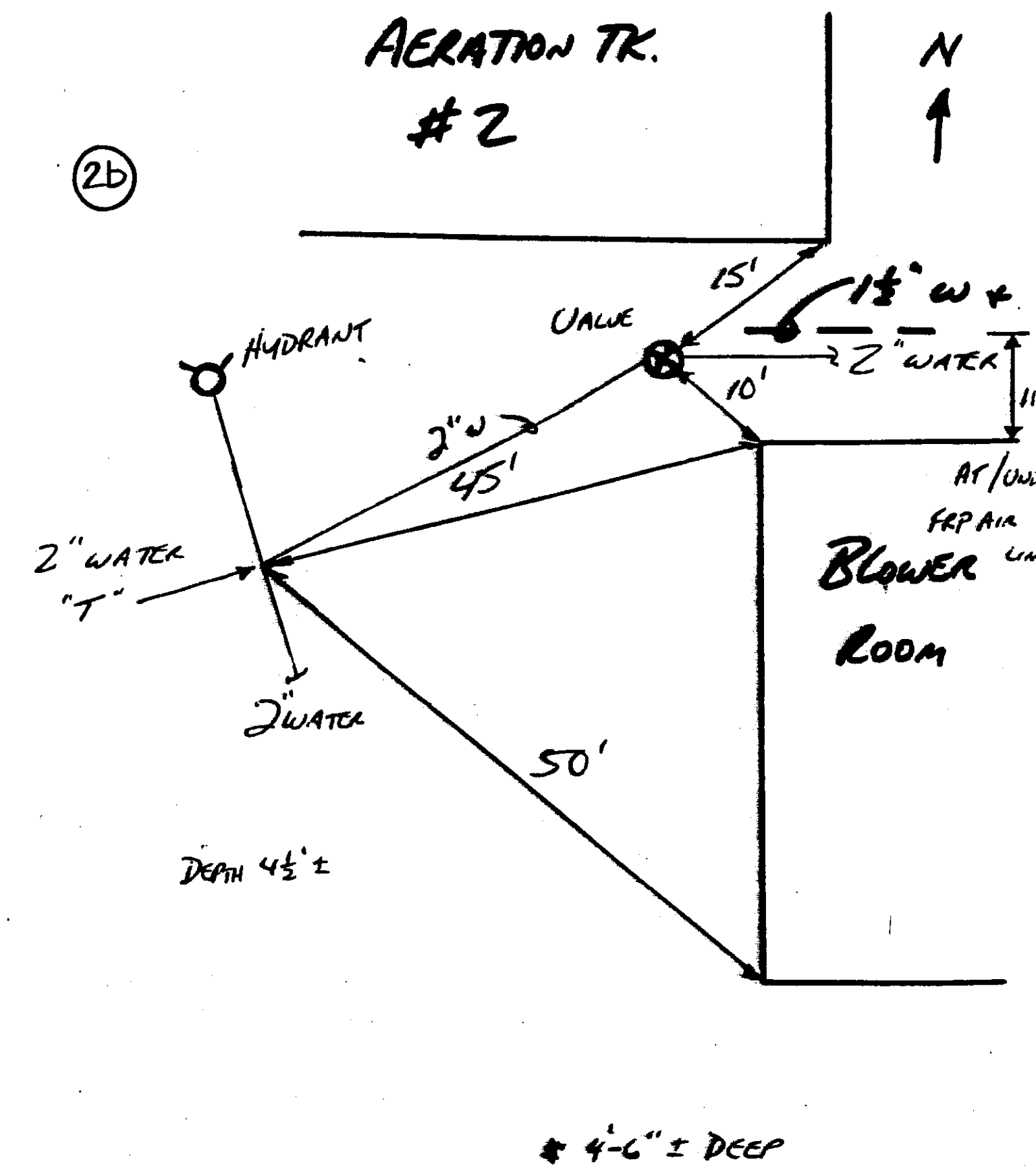
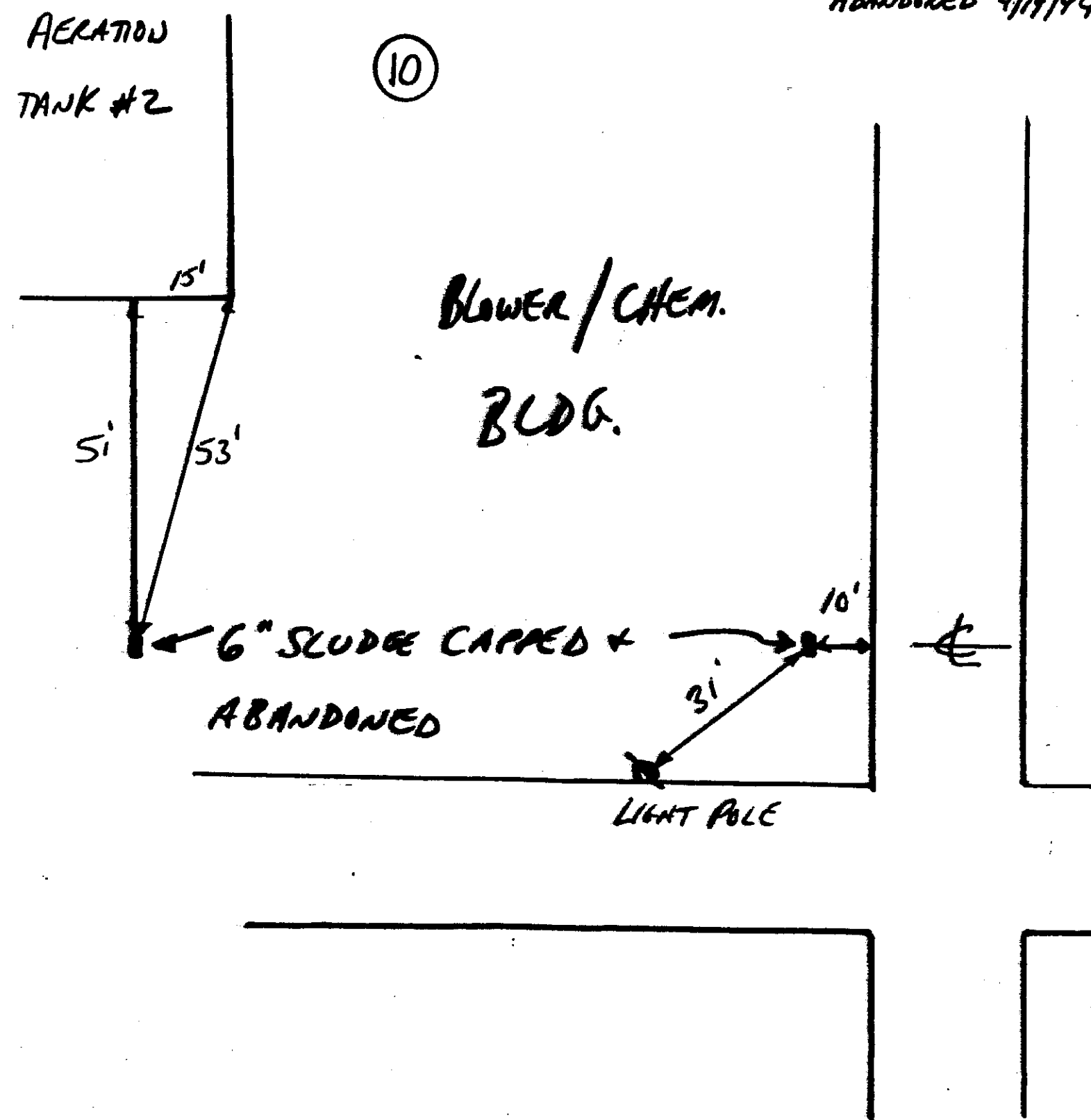
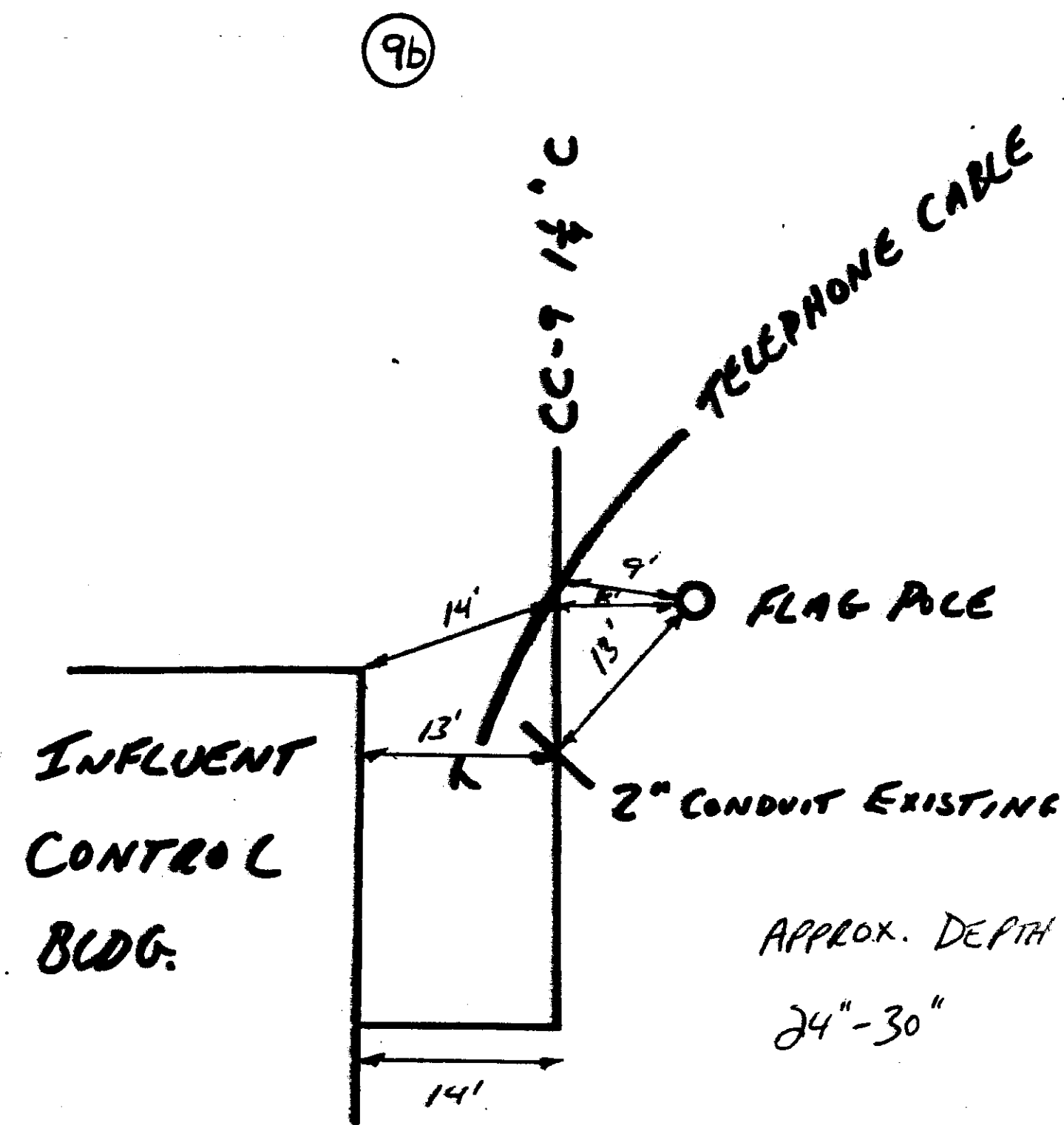
NO.	DATE	RECORD DRAWINGS REVISION	BY/INIT.
0	2/96	RECORD DRAWINGS	BY/INIT.



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
MISC. TIES

FILE NO. 115.643-71RD	Z-4
DATE AUGUST 1993	R-0



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O'BRIEN & GERE ENGINEERS, INC.  
BY: *ELG*



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In charge of *Terry L. Woodward*  
Designed by \_\_\_\_\_ Checked by *AMS*  
Drawn by *JASGLH*

NOT TO SCALE

NO.	DATE	REVISION	INIT.
0	2/96	RECORD DRAWINGS	RCG



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
MISC. TIES

FILE NO. 115.643-72RD	Z-5
DATE AUGUST 1993	R-0

CONDUCTOR AND CONDUIT SCHEDULE $\Delta$					
DESIGNATION	FROM	TO	CONDUIT SIZE	CONDUCTORS QTY/SIZE	REMARKS
PC-1	MCC-3	STP-1	2" $\phi$	3#2/0,1#6GND	UNDERGROUND CIRCUIT
PC-2	STP-1	SLUDGE THICKENER	1" $\phi$	3#6,1#10GND	
PC-2A	SLUDGE THICKENER CONTROL PANEL	UNIT DRIVE	3/4" $\phi$	2#8,2#12 2#14,1#12GND	PER MFG. INSTRUCTIONS
PC-2B	SLUDGE THICKENER CONTROL PANEL	FLOC. DRIVE	3/4" $\phi$	4#14,1#12GND	PER MFG. INSTRUCTIONS
PC-2C	SLUDGE THICKENER CONTROL PANEL	BOOSTER PUMP	3/4" $\phi$	3#12,1#12GND	PER MFG. INSTRUCTIONS
* PC-3	STP-1	STFP-1	3/4" $\phi$	3#10,1#10GND 3#12	- POWER - CONTROL
* PC-4	STP-1	STFP-2	3/4" $\phi$	3#10,1#10GND 3#12	- POWER - CONTROL
* PC-5	STP-1	ASPIRATED SLUDGE MIXER #1	3/4" $\phi$	3#6,1#10GND 3#12	- POWER - CONTROL
* PC-6	STP-1	ILF-2 FAN	3/4" $\phi$	3#12,1#12GND	
PC-7	STP-1	DUCT HEATER ILF-2	3/4" $\phi$	3#12,1#12GND	
PC-8	STP-1	UNIT HEATER EUH-6	3/4" $\phi$	3#12,1#12GND	
PC-9	STP-1	UNIT HEATER EUH-7	3/4" $\phi$	3#12,1#12GND	
PC-10	STP-1	15KVA XFMR	3/4" $\phi$	3#10,1#10GND	XFMR PRIM
PC-11	15KVA XFMR	STP-1A	3/4" $\phi$	3#8,1#10GND	XFMR SEC
PC-12	MCC-2	MDS-1	(2) 4" $\phi$	2 SETS 3 #600 MCM, 1#3GND	FEEDER TAP CIRCUIT
PC-13	MDS-1	CFB-1	(2) 4" $\phi$	2 SETS 3 #600 MCM, 1#3GND	CFB-1 FEEDER
* PC-14	CFB-1	AERATION BLOWER #1	3" $\phi$	3#350MCM,1#3GND	PC-14A BURIED IN FLOOR SLAB
* PC-15	CFB-1	AERATION BLOWER #2	3" $\phi$	3#350MCM,1#3GND	PC-15A BURIED IN FLOOR SLAB
* PC-16	CFB-1	AERATION BLOWER #3	3" $\phi$	3#350MCM,1#3GND	PC-16A BURIED IN FLOOR SLAB
PC-17	CFB-1	15KVA XFMR	3/4" $\phi$	3#10,1#10GND	XFMR PRIM
PC-18	15KVA XFMR	CFB-1B	1" $\phi$	4#8,1#10GND	XFMR SEC
PC-19	CFB-1	CFB-1A	1 1/4" $\phi$	3#2,1#6GND	
PC-20	GRIT BLOWER #2 VFD	GRIT BLOWER #2	3/4" $\phi$	3#12,1#12GND	
PC-21	GRIT BLOWER #1 VFD	GRIT BLOWER #1	3/4" $\phi$	3#12,1#12GND	
PC-22	LIGHTING PANEL #2	LIGHTING PANEL LP-2A	1" $\phi$	3#8,1#10GND	
PC-23	CFB-1B	LPB-5	3/4" $\phi$	4#10,1#10GND	UNDERGROUND CIRCUIT
PC-24	CFB-1A	EUH-1 UNIT HEATER	3/4" $\phi$	3#12,1#12GND	
PC-25	CFB-1A	EUH-2 UNIT HEATER	3/4" $\phi$	3#12,1#12GND	
PC-26	CFB-1A	EUH-4 UNIT HEATER	3/4" $\phi$	3#12,1#12GND	
PC-27	CFB-1A	EUH-3 UNIT HEATER	3/4" $\phi$	3#12,1#12GND	
PC-28	CFB-1A	TYPICAL POWER VENTILATOR PV-1,PV-2,PV-5, PV-7	3/4" $\phi$	3#12,1#12GND	
PC-29	CFB-1A	FAN ILF-1	3/4" $\phi$	3#12,1#12GND	
PC-30	CFB-1A	FAN PV-3	3/4" $\phi$	3#12,1#12GND	
PC-31	CFB-1A	DUCT HEATER EDH-1	1" $\phi$	3#10,1#10GND	
PC-32	CFB-1A	CHEM. PUMP #2	3/4" $\phi$	3#12,1#12GND	
PC-33	CFB-1A	CHEM. PUMP #1	3/4" $\phi$	3#12,1#12GND	
PC-34	CFB-1B	EUH-8	3/4" $\phi$	3#12,1#12GND	
PC-35	STP-1A	EUH-5	3/4" $\phi$	3#12,1#12GND	
PC-36	CFB-1B	FERRIC PIPE TRACE	3/4" $\phi$	2#12,1#12GND	208V,1 $\phi$ TRACE
PC-37	LPB #5	5KW UNIT HEATER	3/4" $\phi$	3#12,1#12GND	208V,3 $\phi$
PC-38					

\* PC NUMBERS W/"A" POSTSCRIPT ARE IDENTICAL TO THE BASE PC SHOWN

NOTE: NEW 2" PVC CONDUIT, FUTURE POWER TO CL<sub>2</sub> TANK PUMPS TERMINATION AT EACH END BY COUNTY.

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In charge of.....  
Designed by.....Checked by.....  
Drawn by.....

NOT TO SCALE

NO.	DATE	RECORD DRAWINGS	REVISION	INIT.
0	2/9/96			

PANEL SCHEDULE											
PANEL BOARD		CFB-1		LOCATION		CHEM STORAGE/BLOWER BLDG		INSTALLATION		SURFACE	
RATINGS		800		AMPS		480		VOLTS		3	
PH		4		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING		25,000		RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER		800		AMPS		CONNECTED LOAD		KW		PANEL SIZE 63" OF BRK SPACE	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
PANEL CFB-1A										BLOWER #1	
TRANSFORMER FOR CFB-1B										BLOWER #2	
										BLOWER #3	
										SPARE	

PANEL SCHEDULE											
PANEL BOARD		CFB-1A		LOCATION		CHEM STORAGE/BLOWER BLDG		INSTALLATION		SURFACE	
RATINGS		100		AMPS		480		VOLTS		3	
PH		3		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING		18,000		RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER		100		AMPS		CONNECTED LOAD		KW		PANEL SIZE 42 SPACES	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
PV1 POWER VENTILATOR										EUH BLOWER BUILDING #1	
PV2										EUH #2 BLOWER BUILDING	
PV5										TRANSFORMER IN DO LEVEL RM.	
PV7										EUH #4 CHEMICAL RM.	
EUH #3 CHEMICAL RM.										PWR. FOR INLINE HEATER CHEMICAL RM.	
EXHAUST FAN CHEMICAL BLDG										CHEMICAL PUMP #2	
INTAKE AIR FAN - CHEMICAL BLDG.										CHEMICAL PUMP #1	

PANEL SCHEDULE											
PANEL BOARD		LP-2		LOCATION				INSTALLATION			
RATINGS				AMPS		120/208		VOLTS		3	
PH		4		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING				RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER				AMPS		CONNECTED LOAD		KW		PANEL SIZE	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
SCUM PUMP LEV. CONTR. CLAR. #1										LIGHTS CONTROL RM.	
POLYMER PUMPS										LIGHTS CONTROL RM.	
SCUM PUMP LEV. CONTR. CLAR. #2										PLUGS PUMP RM.	
TOTALIZER HEATERS										MAG METER	

PANEL SCHEDULE $\Delta$											
PANEL BOARD		STP-1A		LOCATION		SLUDGE THICKENER BLDG		INSTALLATION		SURFACE	
RATINGS		100		AMPS		240/120		VOLTS		3	
PH		4		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING		10,000		RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER		50		AMPS		CONNECTED LOAD		KW		PANEL SIZE 30 SPACES	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
HEAT TRACE PANEL										ANNUNCIATOR PANEL	
INTERIOR LIGHTING										MAG METER	
EXTERIOR LIGHTING										HEAT TRACE	
INTERIOR LIGHTING										EXHAUST FAN SLUDGE THICKENER	
SPARE										HIGH LEVEL	
EXHAUST FAN ELEC. ROOM										OUTLETS	
OUTLETS WALKWAY										SPARE	
SCUM RETURN LINE HEAT TRACE (TANK1)										SPARE	
SCUM RETURN LINE HEAT TRACE (TANK 2)										SPARE	
SPARE										ELECTRIC ROOM HEATER	
SPARE										ELECTRIC ROOM HEATER	

PANEL SCHEDULE $\Delta$											
PANEL BOARD		CFB-1B		LOCATION		CHEM STORAGE/BLOWER BLDG		INSTALLATION		SURFACE	
RATINGS		100		AMPS		120/208		VOLTS		3	
PH		4		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING		10,000		RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER		50		AMPS		CONNECTED LOAD		KW		PANEL SIZE 30 SPACES	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
INTERIOR LIGHTING										PV-CONTROL PANEL	
RECEPTACLES										RECEPT. POWER IN CHEMICAL BUILDING	
OXYBORD PANEL										RECEPT. POWER IN CHEMICAL BUILDING	
SPARE										ALARM PANEL CHEMICAL ROOM	
SPARE										SPARE	
EXHAUST FAN PV-8										LIGHTS CHEMICAL ROOM	
SPARE										SPARE	
SPARE										SPARE	
SPARE										SPARE	
ELECTRICAL ROOM HEATER										SPARE	
ELECTRICAL ROOM HEATER										HEAT TRACE	
SPARE 3 POLE										HEAT TRACE	
SPARE 3 POLE										HEAT TRACE	
SPARE 3 POLE										HEAT TRACE	

PANEL SCHEDULE											
PANEL BOARD		STP-1		LOCATION		SLUDGE THICKENER BLDG		INSTALLATION		SURFACE	
RATINGS		225		AMPS		480		VOLTS		3	
PH		4		WIRE		60		HZ.		GRD. BAR	
X											
MAIN LUGS				CB. INTERRUPTING RATING		18,000		RMS. SYMM. AMPS			
MAIN CIRCUIT BREAKER		150		AMPS		CONNECTED LOAD		KW		PANEL SIZE 54" OF BRK SPACE	
DESCRIPTION	LOAD W-KW-HF	CB. AMPS	CIR	A	B	C	CIR	CB. AMPS	LOAD W-KW-HF	DESCRIPTION	
ASPIRATED MIXER										SLUDGE THICKENER CONTROL PANEL	
ILF-2										SLUDGE THICKENER FEED PUMP #2	
SLUDGE THICKENER FEED PUMP #1										DUCT HEATER FOR ILF-7	
UNIT HEATER #6										SPARE	
UNIT HEATER #7											
TRANSFORMER FOR PANEL STP-1A											

RECORD DRAWINGS  
To the best of our knowledge, information and belief, these record drawings substantially represent the project as constructed.  
O'BRIEN & GERE  
ENGINEERS, INC.  
By:.....



ONONDAGA COUNTY  
DEPARTMENT OF DRAINAGE AND SANITATION  
MEADOWBROOK LIMESTONE TREATMENT PLANT

ELECTRICAL  
SCHEDULES

FILE NO.	115.643-73RD	Z-6
DATE	AUGUST 1993	R-0