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E600	ELECTRICAL SCHEDULES
E800	ELECTRICAL DETAILS

**FLOOD NOTE:**  
THE ACCURACY OF ANY FLOOD HAZARD DATA SHOWN ON THESE PLANS IS SUBJECT TO MAP SCALE UNCERTAINTY AND TO ANY OTHER UNCERTAINTY IN LOCATION OR ELEVATION ON THE REFERENCED FLOOD INSURANCE RATE MAP. THE WITHIN DESCRIBED TRACT OF LAND LIES OUTSIDE OF A FLOOD HAZARD ZONE AS SAID TRACT PLOTS BY SCALE ON COMMUNITY PANEL NUMBER 1804220175C DATED 02/15/1985 FOR THE FLOOD INSURANCE RATE MAPS FOR KNOX COUNTY, INDIANA.

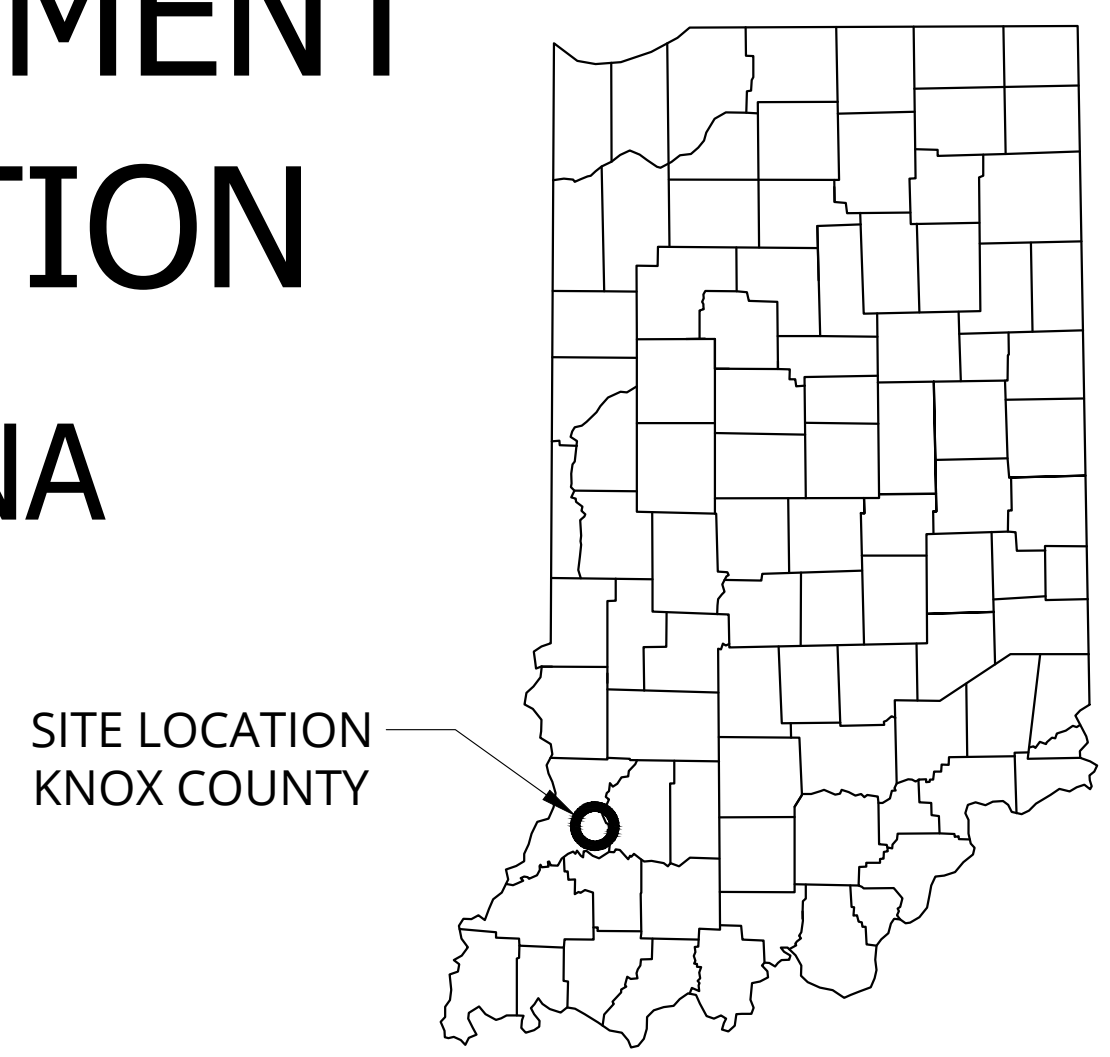
**DISCLAIMER:**  
CONTRACTOR TO FIELD VERIFY LOCATION AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONTACT ENGINEER AND OWNER IF DISCREPANCIES OCCUR.

REVISIONS :		
REVISION #	REVISION DESCRIPTION	DATE

# CONSTRUCTION PLANS FOR: WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION WHEATLAND, KNOX COUNTY, INDIANA

## PLANS PREPARED FOR:

TOWN OF WHEATLAND  
121 IN-550  
WHEATLAND, INDIANA 47597  
TELEPHONE: (812) 321-2340  
CONTACT PERSON: BRETT DAWSON,  
TOWN COUNCIL PRESIDENT  
BDAWSON@TOWNOFWHEATLAND.IN



SITE LOCATION  
KNOX COUNTY

## SITE VICINITY MAP

NOT TO SCALE

## OPERATING AUTHORITIES

**ELECTRIC**  
DUKE ENERGY  
1000 E. MAIN ST.  
PLAINFIELD, IN 46168  
(800) 521-2232  
CONTACT: CINDY ROWLAND

**COMMUNICATIONS**  
FRONTIER COMMUNICATIONS  
3401 US-41  
TERRE HAUTE, IN 47802  
(812) 235-3520  
CONTACT: JOE SARLL

**ELECTRIC**  
WIN ENERGY REMC  
3981 US-41  
VINCENNES, IN 47591  
(800) 882-5140  
CONTACT: GREGORY WOLVEN

**COMMUNICATIONS**  
SPARKLIGHT  
102 N. 5TH STREET  
VINCENNES, IN 47591  
(844) 546-3278  
CONTACT: MORGAN FOSTER

**COMMUNICATIONS**  
NEW WAVE COMMUNICATIONS  
102 NORTH FIFTH STREET  
VINCENNES, IN 47591  
(812) 895-7676  
CONTACT: DAVID McCALL

**NATURAL GAS**  
CENTERPOINT ENERGY  
1 VECTREN SQUARE  
EVANSVILLE, IN 47708  
(800) 227-1376  
CONTACT: N/A

**NATURAL GAS**  
MIDWESTERN GAS TRANSMISSION  
1275 N C.R. 550 E  
WINSLOW, IN 47598  
(812) 354-6620  
CONTACT: BRIAN DOBBS

**SEWER & WATER**  
WHEATLAND WATER DEPARTMENT  
121 IN-550  
WHEATLAND, IN 47597  
(812) 321-2340  
CONTACT: ERIKA GOBLE (WATER  
OFFICE)



PER INDIANA STATE LAW IC8-1-26.  
IT IS AGAINST THE LAW TO EXCAVATE WITHOUT  
NOTIFYING THE UNDERGROUND LOCATION SERVICE  
TWO (2) WORKING DAYS BEFORE COMMENCING  
WORK.



SITE LOCATION  
WHEATLAND

## SITE LOCATION MAP

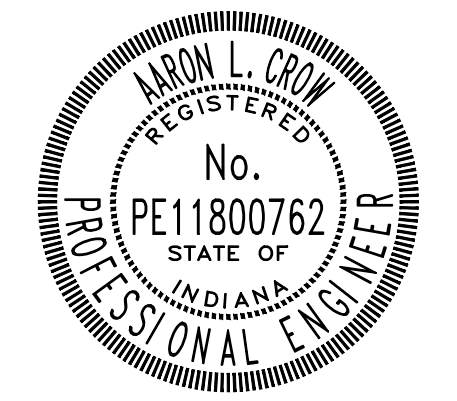
NOT TO SCALE

BENCH MARK:  
1000 B.M. "GEODETIC"  
STAMPED: US COAST GEODETIC SURVEY  
BM G314 1965  
NORTHING 1244387.030  
EASTING 2886880.520  
ELEV. = 486.18'

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: WMW  
Drawn By: RLH  
Checked By: ALG  
Date: 01/04/2023



*Aaron Crow*

## TITLE SHEET

# G001

**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: WMW  
 Drawn By: R LH  
 Checked By: ALC  
 Date: 01/04/2023



**GENERAL NOTES**

# G002

GENERAL NOTES	
1.	ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR THIS PROJECT. ADDITIONS, DELETIONS, AND/OR REVISIONS SHALL NOT BE MADE WITHOUT PRIOR APPROVAL BY THE ENGINEER. KEEP AND MAINTAIN IN GOOD CONDITION A COMPLETE SET OF THE CONTRACT DOCUMENTS ON THE JOB SITE AT ALL TIMES.
2.	ALL WORK SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL CODES, ORDINANCES, RULES, REGULATIONS, ORDERS, AND OTHER LEGAL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
3.	IN THE EVENT THAT THE CONTRACTOR DISCOVERS A DISCREPANCY IN THE CONTRACT DOCUMENTS OR POTENTIAL UTILITY CONFLICT, NOTIFY THE ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE PORTION OF THE WORK IN QUESTION. FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. VERTICAL AND HORIZONTAL LOCATIONS TO BE CONFIRMED. ANY NECESSARY PIPE MODIFICATIONS SHALL BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4.	CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL LOCAL NECESSARY PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
5.	ALL RIGHT-OF-WAY AND PROPERTY LINES AND EASEMENTS ARE APPARENT AND WERE DETERMINED BASED UPON AVAILABLE INFORMATION. VERIFY ALL RIGHT-OF-WAY AND PROPERTY LINES. STAKE ALL RIGHT-OF-WAY, PROPERTY, AND EASEMENT LINES THROUGHOUT THE DURATION OF CONSTRUCTION.
6.	PROTECT ALL EXISTING UTILITIES FROM DAMAGE, IN A MANNER APPROVED BY THE UTILITY COMPANIES AND THE ENGINEER. COORDINATE WITH UTILITY COMPANIES AS NECESSARY TO COMPLETE THE WORK. PROTECT BENCH MARKS, SURVEY CONTROL POINTS, AND EXISTING STRUCTURES FROM UNNECESSARY DAMAGE OR DISPLACEMENT.
7.	PROVIDE ALL AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY FEDERAL, STATE, OR LOCAL AGENCIES. THE AMOUNT, LOCATION, AND SIZE SHALL BE AS REQUIRED IN ACCORDANCE WITH MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
8.	DURING CONSTRUCTION IT MAY BE NECESSARY TO TRIM OR REMOVE A TREE WITHIN THE RIGHT-OF-WAY OR AN EASEMENT. NOTIFY THE ENGINEER, OWNER, AND ANY AFFECTED PROPERTY OWNER PRIOR TO ANY REQUIRED TREE REMOVAL. TREE TRIMMING AS REQUIRED WITHIN THE RIGHT-OF-WAY OR EASEMENT SHALL BE MINIMIZED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR TREE REMOVAL OR TRIMMING.
9.	ALL DISTURBED AREAS, INCLUDING, BUT NOT LIMITED TO, STREETS, DRIVES, WALKS, LAWNS, FENCES, RETAINING WALLS, ETC. SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
10.	IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL MUD, DIRT, GRAVEL, AND ANY OTHER MATERIALS TRACKED ONTO ANY PUBLIC OR PRIVATE STREETS, PARKING LOTS, OR WALKS. THIS MATERIAL REMOVAL OR SWEEPING OF THE STREETS SHALL BE DONE AS FREQUENTLY AS NECESSARY TO MAINTAIN AREAS REASONABLY CLEAN. AIRBORNE DUST SHALL BE KEPT TO A MINIMUM BY USING WATER OR OTHER METHODS AS NECESSARY.
11.	PROVIDE TEMPORARY GRASS SEED WITHIN 7-DAYS OF ALL EARTH DISTURBING ACTIVITIES.
12.	PROVIDE AND MAINTAIN ALL NECESSARY STRAW BALES, FILTER FENCE, INLET PROTECTION ETC. IN EXISTING AND PROPOSED DITCHES, CULVERTS, STORM PIPES, AND DRAINAGE STRUCTURES TO PREVENT DAMAGE. BIO-DEGRADABLE EROSION CONTROL DEVICES SHOULD BE PLACED IN ALL DISTURBED DRAINAGE DITCHES WITH DEPTHS GREATER THAN 12".
13.	REGRADE AREAS AS NECESSARY WITHIN THE CONSTRUCTION LIMITS TO ALLOW PROPER DRAINAGE TO EXISTING STORM SEWER STRUCTURES.
14.	MAINTAIN 10'-0" HORIZONTAL AND 1'-6" VERTICAL SEPARATION FROM STORM AND WATER MAIN, UNLESS SPECIFICALLY NOTED IN THE PLANS.
15.	PROVIDE FILL AROUND PROPOSED AND EXISTING PIPING AT ALL OPEN-CUT UTILITY CROSSINGS TO ADEQUATELY SUPPORT AND PROTECT EACH CONDUIT.
16.	PRESERVE EXISTING RIGHT-OF-WAY MARKERS. IF RIGHT-OF-WAY MARKERS ARE DISTURBED, RESET MARKERS AT NO ADDITIONAL COST TO THE OWNER.
17.	CALL LOCAL UTILITY LINE INFORMATION SERVICE NOT LESS THAN THREE WORKING DAYS BEFORE PERFORMING WORK. REQUEST UNDERGROUND UTILITIES TO BE LOCATED AND MARKED WITHIN AND SURROUNDING CONSTRUCTION AREAS. IDENTIFY REQUIRED LINES, LEVELS, CONTOURS, AND DATUM LOCATIONS.
18.	ESTABLISH TEMPORARY TRAFFIC CONTROL LAND DETOURS WHEN TRENCHING IS PERFORMED IN PUBLIC RIGHT-OF-WAY. RELOCATE CONTROLS AND REROUTE TRAFFIC AS REQUIRED DURING PROGRESS OF WORK.
19.	DO NOT LEAVE MORE THAN 50 FEET OF TRENCH OPEN AT END OF WORKING DAY. PROTECT OPEN TRENCH TO PREVENT DANGER TO THE PUBLIC.
20.	STOCKPILE EXCAVATED AND FILL MATERIALS ON SITE AT LOCATIONS APPROVED BY OWNER. STOCKPILE IN SUFFICIENT QUANTITIES TO MEET PROJECT SCHEDULE AND REQUIREMENTS. SEPARATE DIFFERENT AGGREGATE MATERIALS WITH DIVIDERS OR STOCKPILE QUANTITIES TO MEET PROJECT SCHEDULE AND REQUIREMENTS, SEPARATE DIFFERENT AGGREGATE MATERIALS WITH DIVIDERS OR STOCKPILE INDIVIDUALLY TO PREVENT MIXING. DIRECT SURFACE WATER AWAY FROM STOCKPILE SITE TO PREVENT EROSION OR DETERIORATION OF MATERIALS. STOCKPILE CLEANUP: REMOVE STOCKPILE, AND LEAVE AREA IN CLEAN AND NEAT CONDITION. GRADE SITE SURFACE TO PREVENT FREE STANDING SURFACE WATER.
21.	SOIL STOCKPILE SHALL BE LOCATED WITHIN THE TEMPORARY EASEMENTS ALONG THE PROJECT.
22.	FINAL CONTOURS: PERFORM FINISH GRADING AND BLEND INTO CONFIRMATION WITH REMAINING NATURAL GROUND SURFACES. LEAVE ALL FINISHED GRADING SURFACES SMOOTH AND FIRM TO DRAIN. FINISH GRADES TO ELEVATIONS WITHIN PLUS OR MINUS 0.10 FOOT OF EXISTING OR CONTOUR SHOWN.
23.	ALL ELEVATIONS AT CONSTRUCTION LIMITS SHALL MATCH EXISTING GRADE. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT STACKED GRADES MATCH DESIGN ELEVATIONS AND POSITIVE DRAINAGE TO STORMWATER MANAGEMENT SYSTEM IS ACHIEVED. CONTACT ENGINEER IF DESIGN ELEVATIONS DO NOT PROVIDE POSITIVE DRAINAGE.

LINE TYPE	CIVIL TYPE
	CONSTRUCTION LIMITS
	SET BACK
	RIGHT OF WAY
	SILT FENCE
	HAY BALE CHECK DAM
	EASEMENT
	PROPERTY LINE
	EXISTING INDEX CONTOURS
	EXISTING INTERMEDIATE CONTOURS
	UNDERGROUND FIBER OPTIC
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATER MAIN
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	GAS LINE
	EXISTING FENCE
	TREE LINE
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATER MAIN
	PROPOSED INDEX CONTOURS
	PROPOSED INTERMEDIATE CONTOURS
	ELECTRICAL CONDUIT
	COMMUNICATIONS CABLE
LINE TYPE	PROCESS TYPE
	SLUDGE BLOWDOWN
	RAW WATER
	FINISHED WATER
	BACKWASH SUPPLY
	FILTERED WASTEWATER

ABBREVIATIONS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	FCO	FLOOR CLEANOUT
ATR	ALL THREAD ROD	GV	GATE VALVE
AS	AQUASTAT	GLV	GLOBE VALVE
AAV	AIR ADMITTANCE VALVE	HSP	HIGH SERVICE PUMP
AC	AIR COMPRESSOR	HB	HOSE BIBB
ARV	AIR RELEASE VALVE	HWRP	HOT WATER RETURN PUMP
AP	ACCESS PANEL	MV	MANUAL AIR VENT
AD	AREA DRAIN	M	MOTOR - OPERATED VALVE
AV	ANGLE VALVE	ORD	OVERFLOW ROOF DRAIN
AV	AUTOMATIC AIR VENT	PTU	PACKAGED TREATMENT UNIT
BV	BALL VALVE	PV	PLUG VALVE
BFV	BUTTERFLY VALVE	PA	PIPE ANCHOR
BFPA	BACKFLOW PREVENTER ASSEMBLY	PG	PIPE GUIDE
BS	BASKET STRAINER	PS	PIPE SLEEVE
CTLV	CONTROL VALVE, 2-WAY	PRV	PRESSURE RELIEF VALVE
CV	CHECK VALVE	PIV	POST INDICATOR VALVE
CR	CONCENTRIC REDUCER/INCREASER	PG	PRESSURE GAUGE WITH GAUGE COOK
DU	DIELECTRIC UNION	PS	PRESSURE SWITCH
DBL	DOUBLE	ROW	RIGHT OF WAY
ECO	EXTERIOR CLEANOUT (TO GRADE)	RD	ROOF DRAIN
EL	EXPANSION LOOP (SIZE AS NOTED)	SV	SOLENOID VALVE
EC	ECCENTRIC REDUCER/INCREASER	TPV	TEMPERATURE-PRESSURE RELIEF VALVE
EJ	EXPANSION JOINT	T	THERMOMETER (SPECIFY TYPE)
FFE	FINISHED FLOOR ELEVATION	U	UNION
F	FLANGE	WCO	WALL CLEANOUT
FS	FLOW SWITCH	WHA	WATER HAMMER ARRESTOR
FM	FLOW METER	WS	WYE STRANNER
FC	FLEXIBLE CONNECTOR	WH	WALL HYDRANT
FD	FLOOR DRAIN	YB	YARD BOX

5

4

3

2

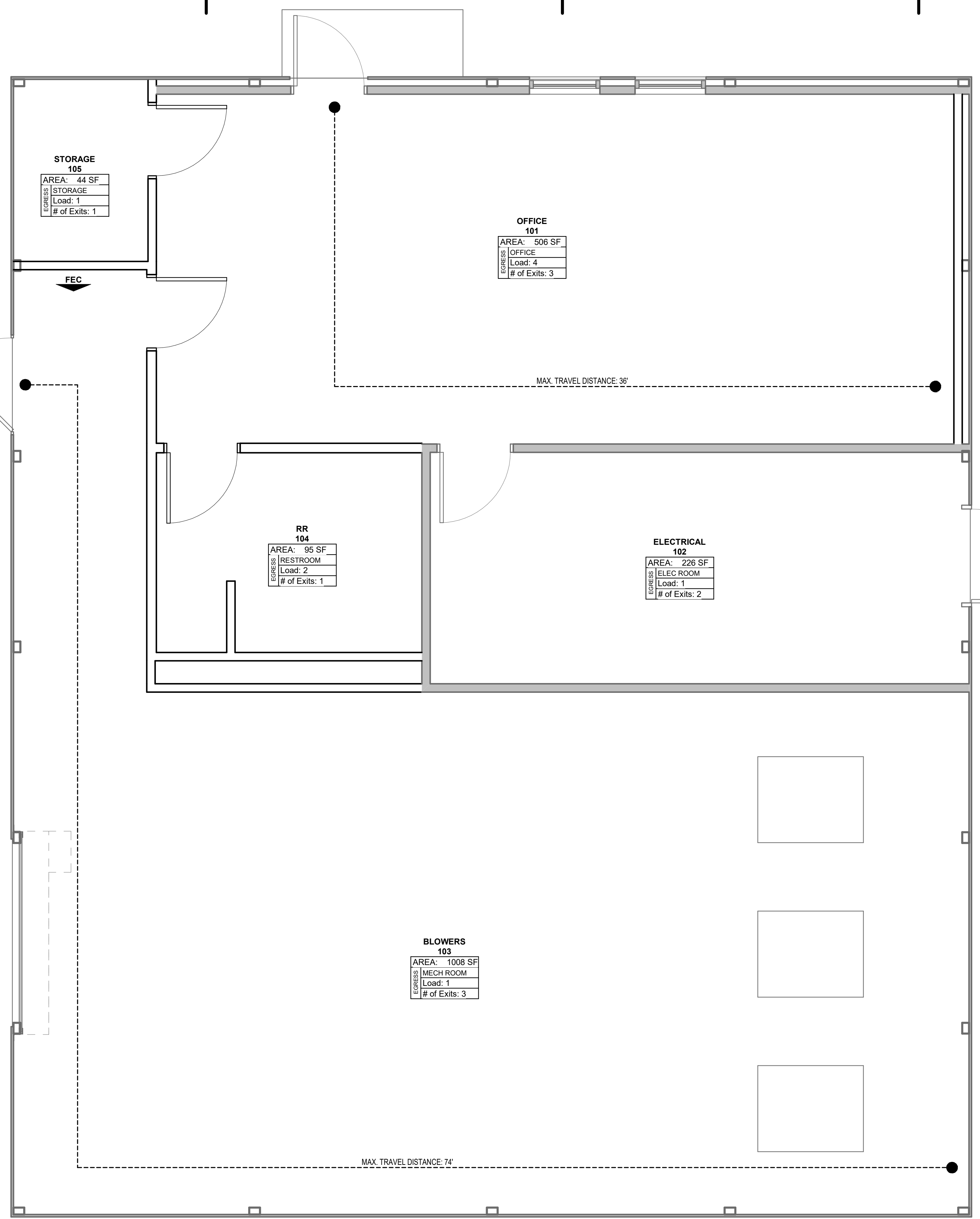
1

D

C

B

A



### CODE SUMMARY

WHEATLAND WASTEWATER OFFICE 11.21.2022	
APPLICABLE CODES:	2014 INDIANA BUILDING CODE 2014 INDIANA MECHANICAL CODE 2014 INDIANA FIRE CODE 2012 INDIANA PLUMBING CODE NATIONAL ELECTRICAL CODE 2017 OF OHIO 2010 INDIANA ENERGY CONSERVATION CODE
PROJECT SCOPE:	THIS PROJECT INVOLVES THE CONSTRUCTION OF A NEW OFFICE AREAS IN AN EXISTING WOOD FRAMED (TYPE V-B) POLE BARN FACILITY AND ASSOCIATED EQUIPMENT AREA
OCCUPANCY TYPE BY AREA PER PLAN:	304.1 / 306.2 B-OCCUPANCY: 715 SF AND F-1 OCCUPANCY: 1,272 SF
CODE STRATEGY:	SEC. 406.3.4 THE BUILDING IS AN EXISTING POLE BARN WHICH WILL HAVE NEW EQUIPMENT AND AN OFFICE PLACED WITHIN THERE IS AN EXISTING ELECTRICAL ROOM. A NEW OFFICE RESTROOM AND STORAGE ROOM WILL BE CONSTRUCTED
POTENTIAL VARIANCE(S):	NONE AT THIS TIME
CONSTRUCTION TYPE:	SEC. 602.5 TYPE V-B CONSTRUCTION (EXISTING)
ALLOWABLE AREA FOR B OCCUP., TYPE V-B CONST:	TABLE 503 2-STORIES (40-FEET), 9,000 SF
ALLOWABLE AREA FOR F-1 OCCUP., TYPE V-B CONS:	TABLE 503 1-STORY (40-FEET), 8,500 SF
ACTUAL AREA:	1,987 SF
ACTUAL HEIGHT:	1-STORY: 17'-9-1/2"
ACTUAL HEIGHT:	1-STORY AT GRADE PLANE
SPRINKLER SYSTEM:	NON-SPRINKLERED
OCCUPANCY SEPARATIONS:	TABLE 508.4 NO SEPARATION REQUIRED BETWEEN PRIMARY OCCUPANCY AND ACCESSORY OCCUPANCIES
BUILDING ELEMENTS FOR TYPE II-B CONSTRUCTION:	TABLE 601 PRIMARY STRUCTURAL FRAME 0 hours BEARING WALLS: 0 hours EXTERIOR: 0 hours INTERIOR: 0 hours NONBEARING WALLS AND PARTITIONS, NONBEARING WALLS AND PARTITIONS, 0 hours FLOOR ASSEMBLIES: 0 hours ROOF ASSEMBLIES: 0 hours TABLE 705.8 UNLIMITED EXTERIOR OPENINGS PERMITTED BASED ON FIRE SEPARATION DISTANCE OF AT LEAST 30 FEET OR GREATER, UNPROTECTED & NON-SPRINKLERED
SHAFT ENCLOSURES:	SEC. 713.4 1 HOUR CONNECTING LESS THAN 4-STORIES; 2-HOURS CONNECTING 4-STORIES OR MORE. PROVIDE 1-HOUR
FIRE AND SMOKE DAMPERS:	SEC. 909.18.3 RATED DAMPERS SHALL MEET THE RATED INSTALLATIONS AS REQUIRED
OCCUPANT LOAD BY AREA:	TABLE 1004.1.2 B OCCUPANCY: 8 OCCUPANTS (100 SF/OCCUP. - GROSS) F-1 OCCUPANCY: 13 OCCUPANTS (100 SF/OCCUP. - GROSS)
CORRIDORS:	SEC. 1020.2 MINIMUM WIDTH: 44-INCHES
MAX. EXIT TRAVEL DISTANCE:	SEC. 1020.4 DEAD END: 20 FEET MAXIMUM. 200 FEET WITHOUT SPRINKLER.
ACTUAL TRAVEL DISTANCE:	TABLE 1016.2 B: 37- FEET, 4-34-INCHES F-1: 74- FEET, 3-34-INCHES
COMMON PATH OF TRAVEL:	TABLE 1014.3 B: 100- FEET (OCCUP LOAD LESS THAN 30) F-1: 75- FEET (OCCUP LESS THAN 30) B: F-1: 75- FEET (OCCUP LOAD GREATER THAN 30)
FIRE ALARM SYSTEM:	SEC. 907.2 FIRE ALARM & SMOKE ALARM SYSTEM REQUIRED THROUGHOUT.

FIRE AND LIFE SAFETY PLANS ARE FOR SCOPING PURPOSES. CONTRACTOR TO COORDINATE ALL RATED WALL LOCATIONS AND ASSEMBLIES WITH ALL DISCIPLINES. ANY DISCREPANCIES ARE TO BE DIRECTED TO THE DESIGN TEAM IMMEDIATELY. PROVIDE COORDINATION DRAWINGS PRIOR TO INSTALLATION OF ALL SYSTEMS TO SHOW COMPLIANCE WITH ALL CONTRACT DOCUMENTS.

### LIFE SAFETY PLAN LEGEND

RR 13	EGRESS INFORMATION
AREA: 150 SF OCCUPANCY LOAD: ## # of Exits: #	
FEC	FIRE EXTINGUISHER (NOT REQUIRED)



CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS

DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION

WHEATLAND, IN 47597

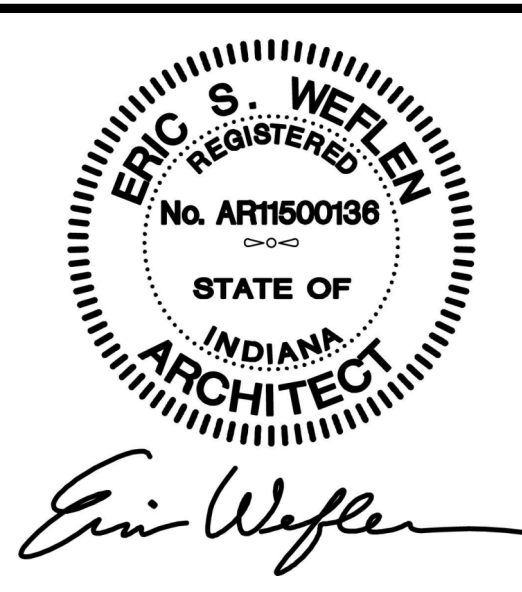
#	Revision	Date

Project #: 21-400-194-1

Designed By: LD

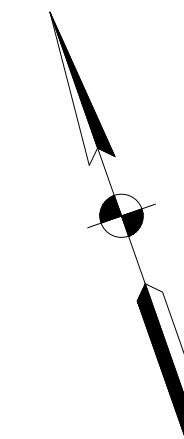
Drawn By: AB, WD

Checked By: VW



FIRE AND LIFE SAFETY PLAN

G101



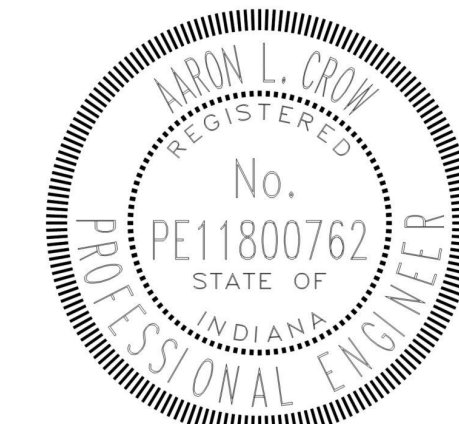
**CONSTRUCTION SET**

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: MTR  
Drawn By: KLB  
Checked By: ALC  
Date: 1/6/2023



*Aaron Crow*



**EXISTING SITE  
LAYOUT**

**C100**

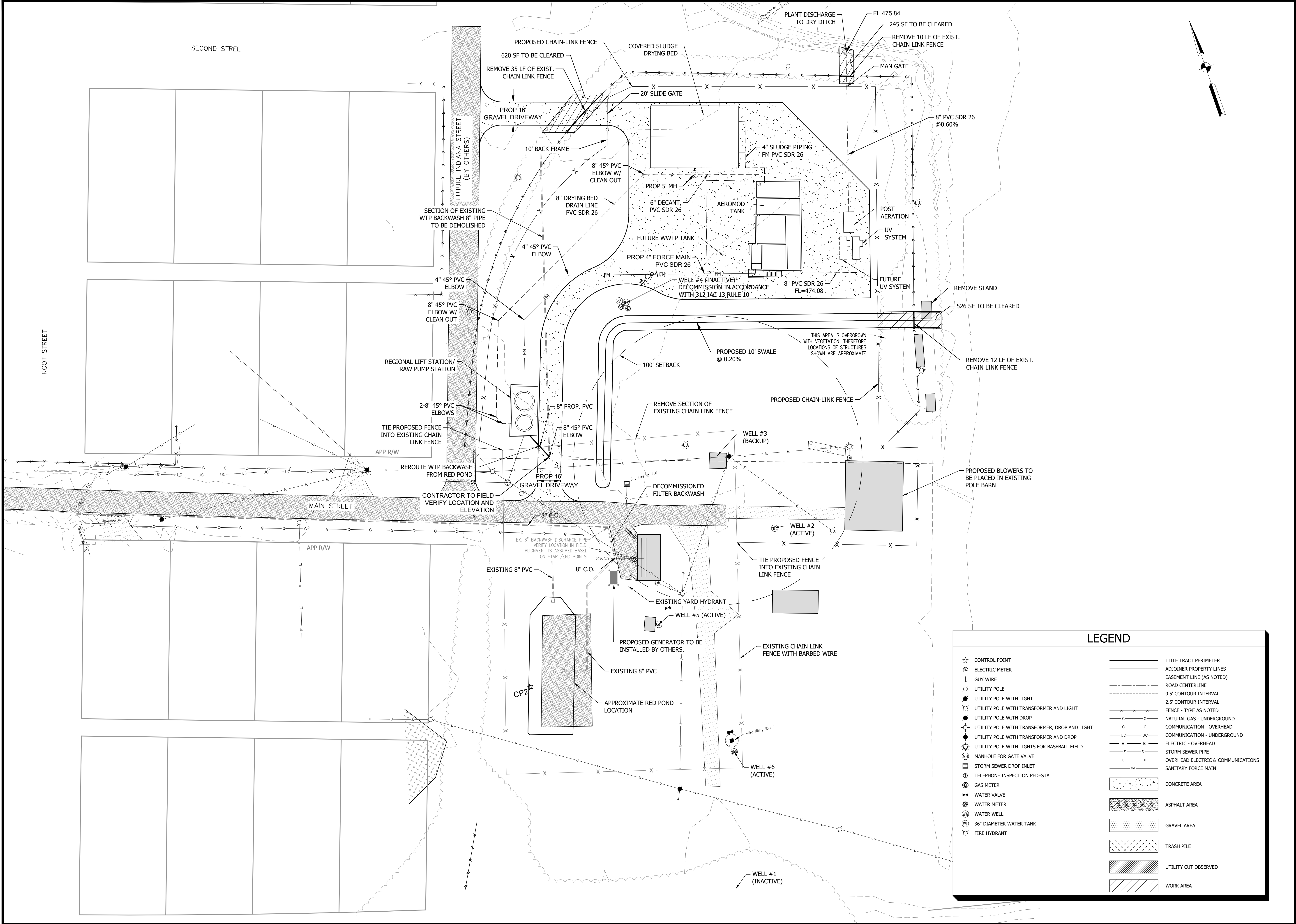


**LEGEND**

- XXX --- 0.5' CONTOUR INTERVAL
- - - XXX - - - 1.0' CONTOUR INTERVAL
- VEGETATION
- x x x x x FENCE - TYPE AS NOTED
- - - - - NATURAL GAS - UNDERGROUND
- - - - - UC - UC COMMUNICATION - UNDERGROUND
- - - - - S - S STORM SEWER PIPE
- - - - - OVERHEAD ELECTRIC & COMMUNICATIONS
- ☆ CONTROL POINT
- ☼ UTILITY POLE WITH TRANSFORMER AND LIGHT
- ☼ UTILITY POLE WITH LIGHTS FOR BASEBALL FIELD
- ⊙ WATER METER
- ⊙ WATER WELL
- ASPHALT AREA
- GRAVEL AREA
- TRASH PILE

PRINT DATE: 1/6/23  
PLOT SCALE: 1:186.91  
EDIT DATE: 1/4/23 - 1:32 PM  
DRAWING FILE: M:\049686.000 WHEATLAND WWTPL\ADD\DWG\02-04968- EXISTING SITE PLANDWG

**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
WHEATLAND, IN 47597



#	Revision	Date

Project #: 21-400-194-1  
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Drawn By: KLB  
Checked By: ALC  
Date: 1/6/2023



*Aaron Crow*



**LEGEND**

☆	CONTROL POINT	—	TITLE TRACT PERIMETER
⊕	ELECTRIC METER	—	ADJOINER PROPERTY LINES
⊥	GUY WIRE	- - -	EASEMENT LINE (AS NOTED)
⊙	UTILITY POLE	—	ROAD CENTERLINE
⊙	UTILITY POLE WITH LIGHT	- - -	0.5' CONTOUR INTERVAL
⊙	UTILITY POLE WITH TRANSFORMER AND LIGHT	- - -	2.5' CONTOUR INTERVAL
⊙	UTILITY POLE WITH DROP	- - -	FENCE - TYPE AS NOTED
⊙	UTILITY POLE WITH TRANSFORMER, DROP AND LIGHT	- - -	NATURAL GAS - UNDERGROUND
⊙	UTILITY POLE WITH TRANSFORMER AND DROP	- - -	COMMUNICATION - OVERHEAD
⊙	UTILITY POLE WITH LIGHTS FOR BASEBALL FIELD	- - -	COMMUNICATION - UNDERGROUND
⊙	MANHOLE FOR GATE VALVE	- - -	ELECTRIC - OVERHEAD
⊙	STORM SEWER DROP INLET	- - -	STORM SEWER PIPE
⊙	TELEPHONE INSPECTION PEDESTAL	- - -	OVERHEAD ELECTRIC & COMMUNICATIONS
⊙	GAS METER	- - -	SANITARY FORCE MAIN
⊙	WATER VALVE	■	CONCRETE AREA
⊙	WATER METER	■	ASPHALT AREA
⊙	WATER WELL	■	GRAVEL AREA
⊙	36" DIAMETER WATER TANK	■	TRASH PILE
⊙	FIRE HYDRANT	■	UTILITY CUT OBSERVED
		■	WORK AREA

PRINT DATE: 1/6/23  
 PLOT SCALE: 1:1  
 DRAWING FILE: H:\049688.000 WHEATLAND WWTP\CAD\DWG\01-049688-PROPOSED SITE PLANNING  
 EDIT DATE: 1/6/23 8:53 AM  
 EDITED BY: NSMITH

**PROPOSED SITE LAYOUT**  
**C200**

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

CONSTRUCTION SET

#	Revision	Date

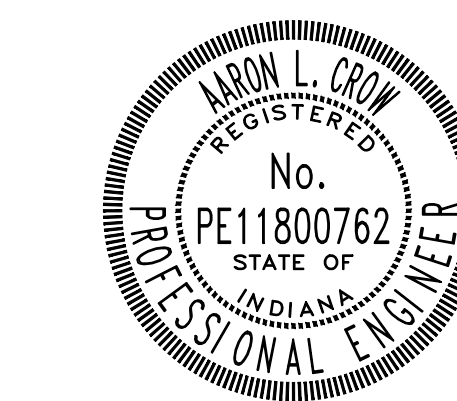
Project #: 21-400-194-1

Designed By: WMW

Drawn By: RLH

Checked By: ALC

Date: 01/04/2023

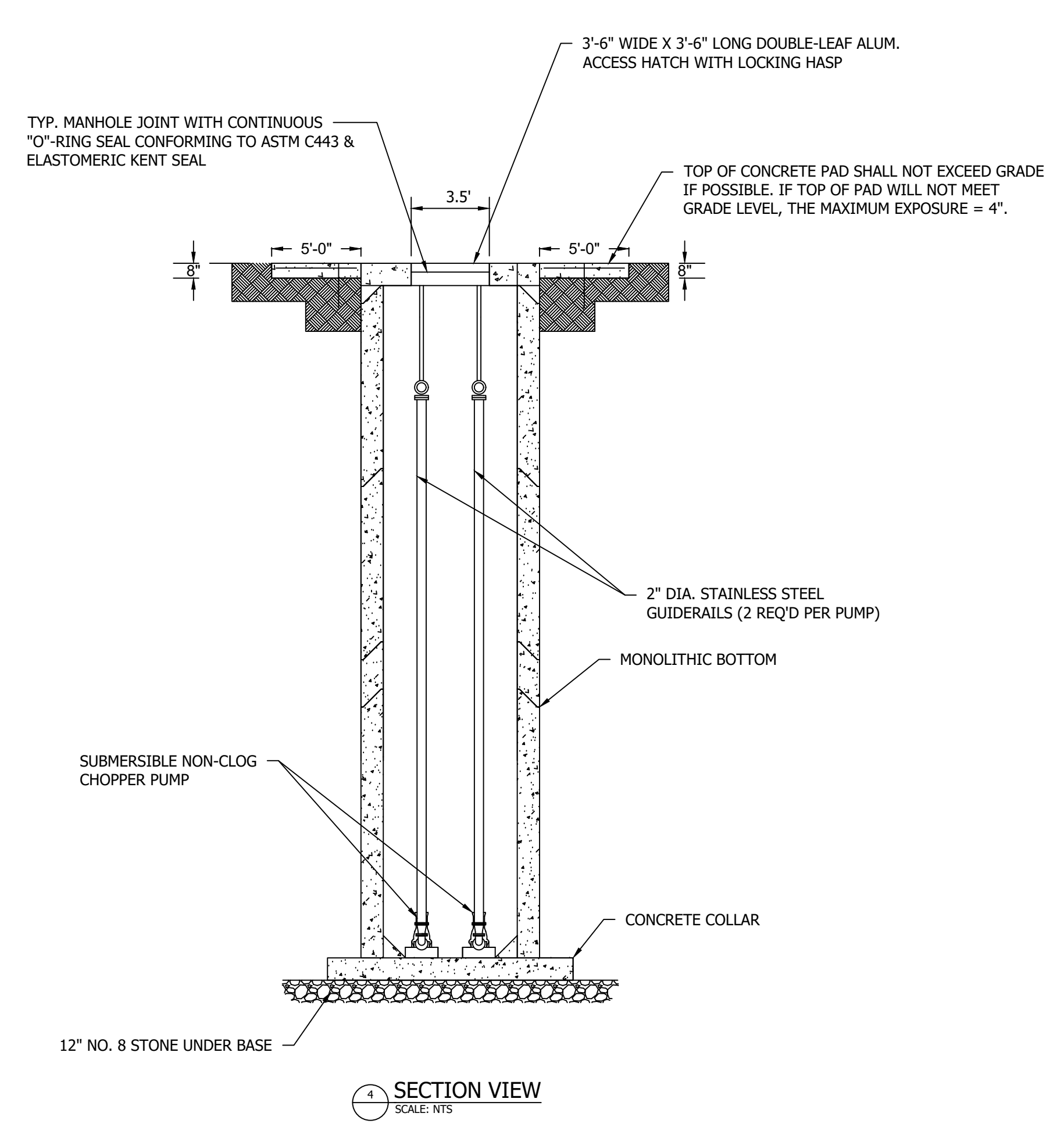
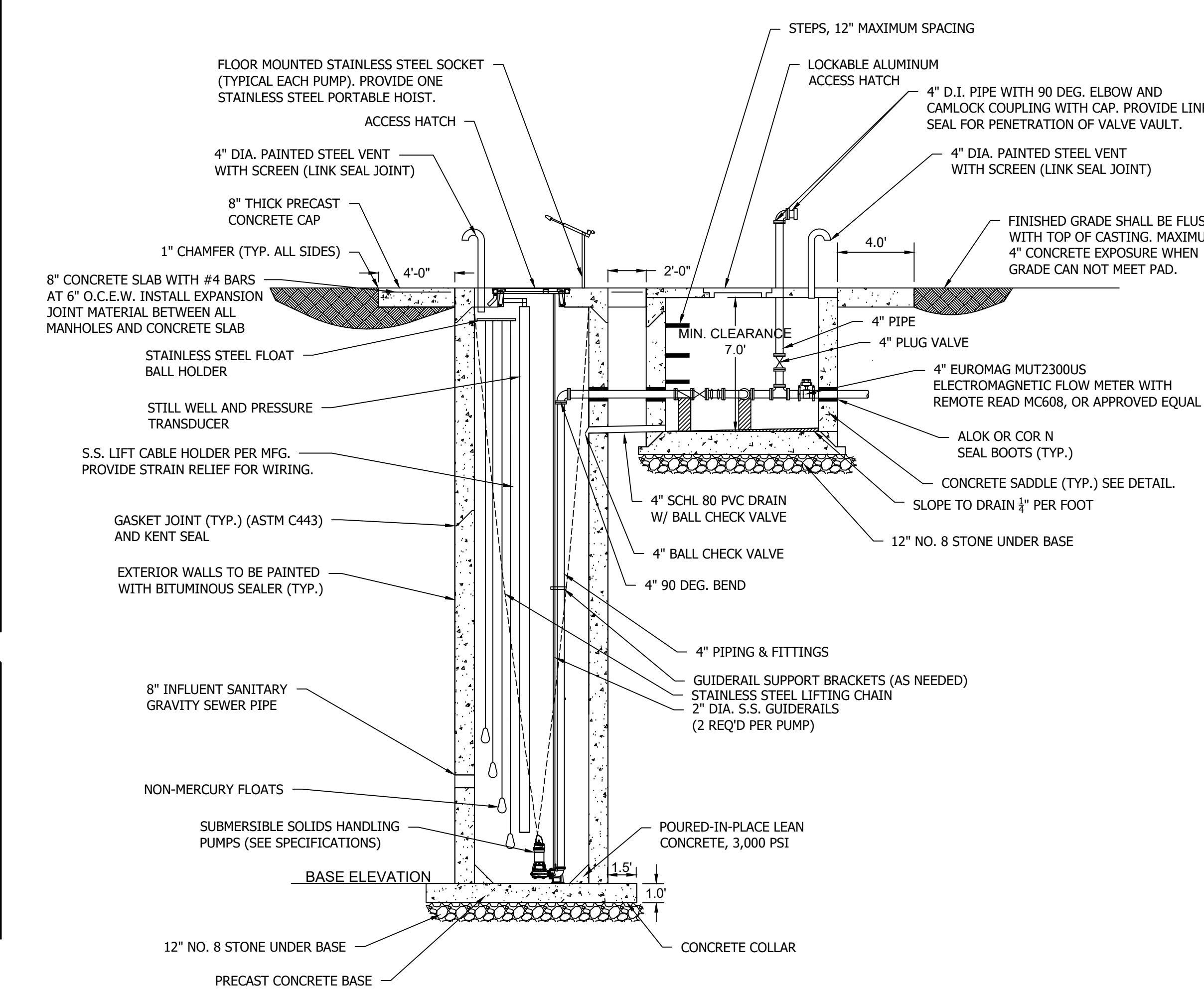
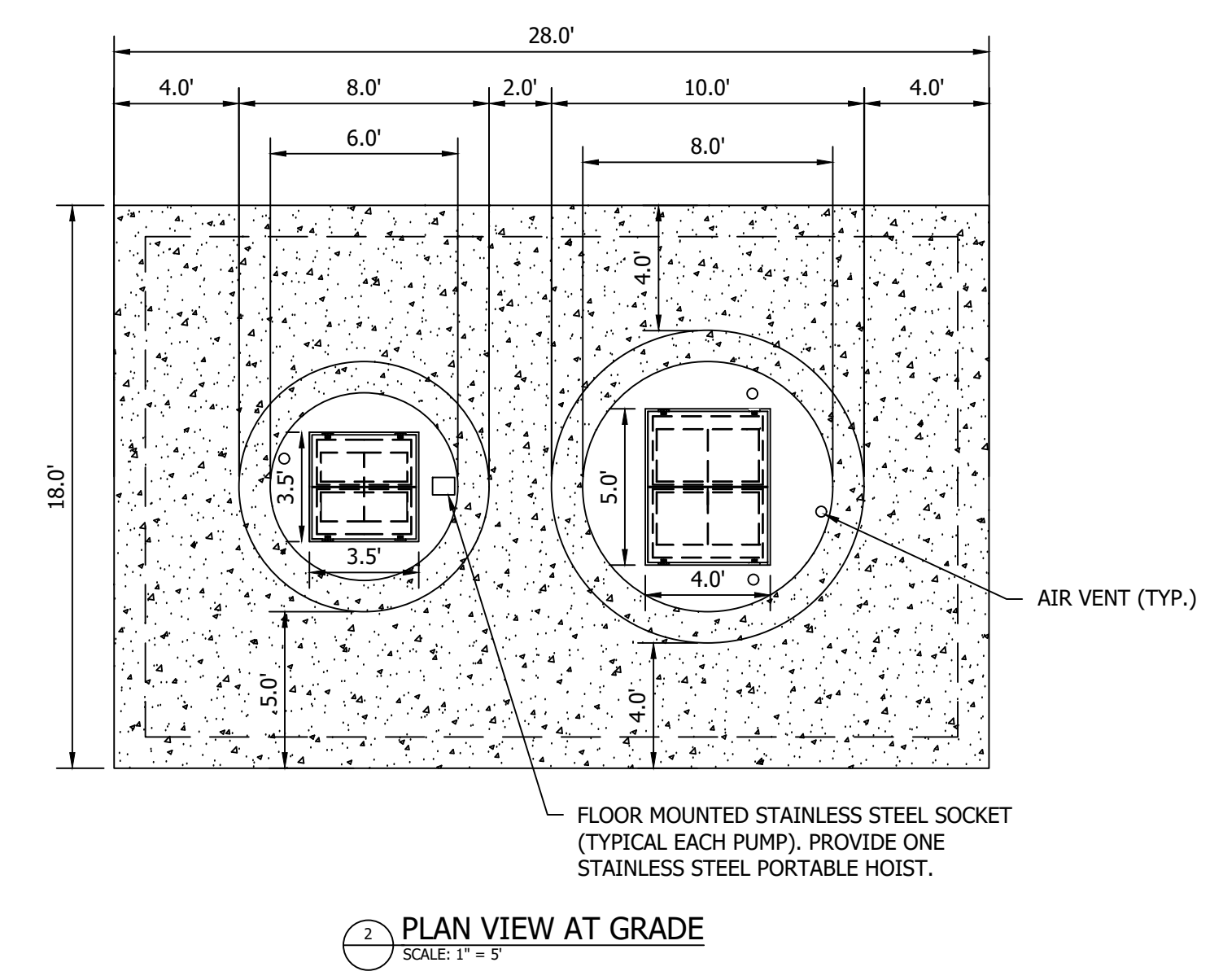
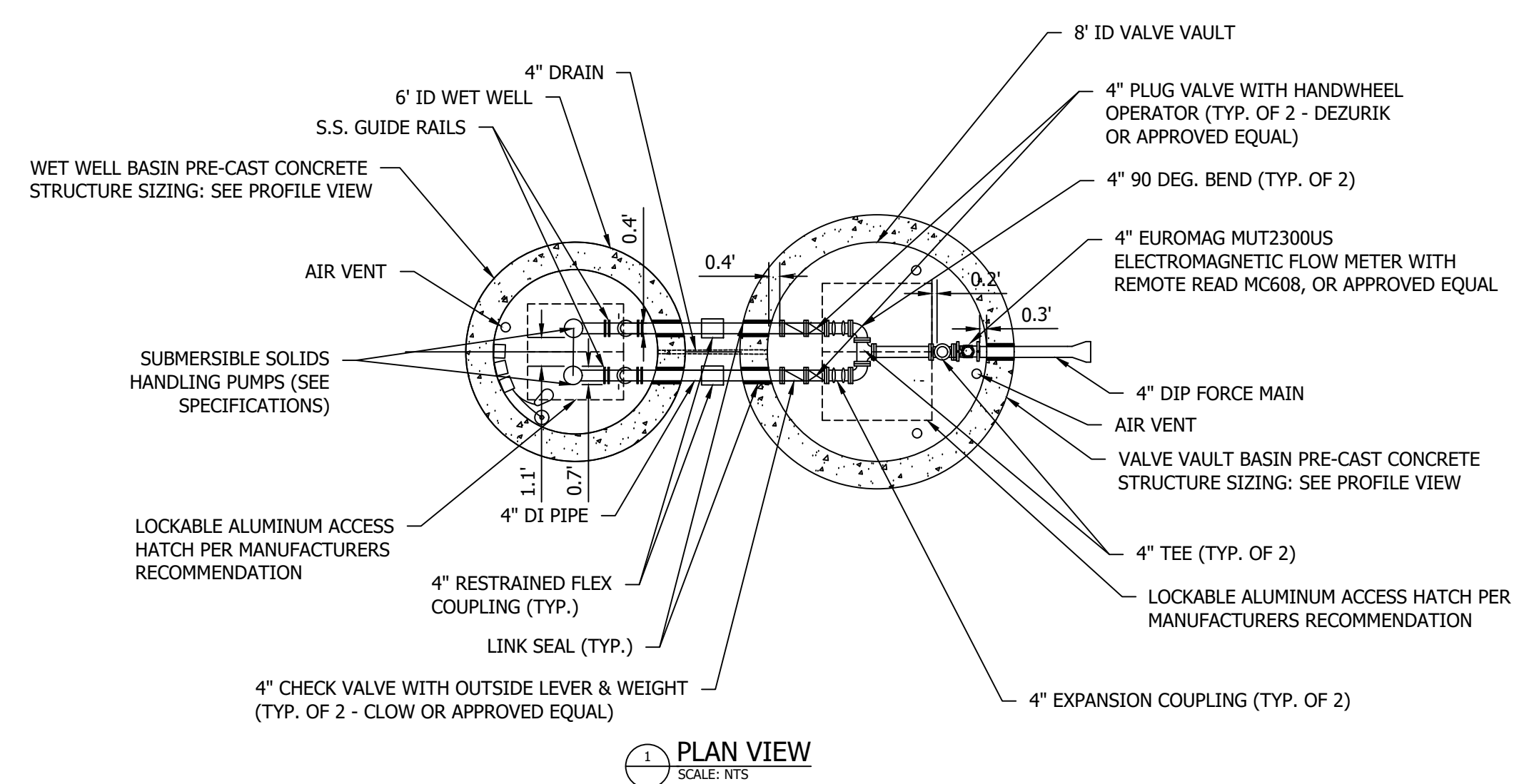


*Aaron Crow*

**LIFT STATION  
SECTION AND DETAIL**

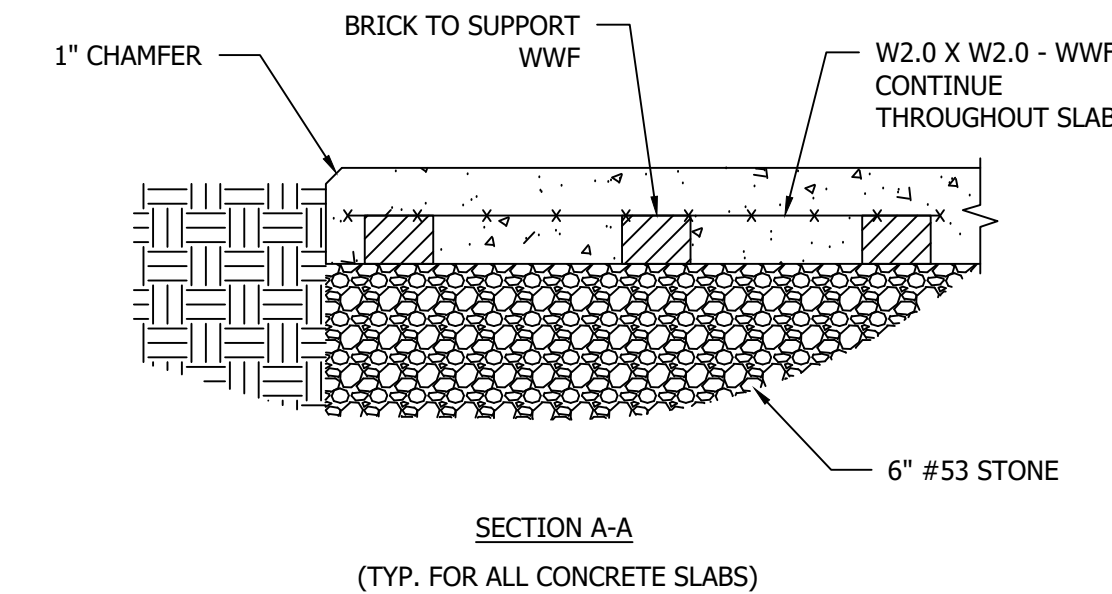
**C301**

- ### LIFT STATION NOTES
- RAIL SYSTEM SHALL ENABLE THE EASY REMOVAL OF THE PUMPS WITHOUT THE NEED FOR A PERSON TO ENTER THE WET WELL. THE GUIDE RAIL SHALL BE SUPPORTED AT THE BOTTOM BY THE DISCHARGE ELBOW, ALIGNED PERFECTLY PLUMB AND SECURELY AFFIXED TO ACCESS FRAME. ONE INTERMEDIATE GUIDE RAIL SUPPORT IS REQUIRED FOR EACH 6' OF GUIDE RAIL LENGTH.
  - CHECK VALVE SHALL BE BRONZE SEATED, SHALL BE PROVIDED WITH BOLTED COVERS FOR EASY ACCESS TO THE DISCS, AND SHALL BE OUTSIDE ADJUSTABLE WEIGHT AND LEVER AS APPROVED BY OWNER. PLUG VALVE SHALL BE AN ECCENTRIC BUNA N RUBBER FACED PLUG WITH HAND LEVER OPERATION IN-LINE AND GEAR OPERATION ON BY-PASS, AND SHALL BE AS APPROVED BY OWNER.
  - PROVIDE SUFFICIENT FLOAT CHAIN, FLOAT MOUNTING CABLE, AND PUMP POWER & SENSOR CABLE TO ENABLE NON-SPLICED FIELD ADJUSTMENT. LIFT CHAIN SHALL HAVE A MINIMUM WORK LOAD LIMIT OF 1100 POUNDS. FLOAT MOUNTING CABLE SHALL BE HELD IN PLACE BY WEIGHT. FLOATS SHALL BE FASTENED TO CABLE WITH STAINLESS STEEL CLAMPS AT EACH FLOAT LOCATION.
  - PIPING IN AND WITHIN 2 FEET OF WET WELL AND VALVE VAULT SHALL BE CLASS 51 FLANGED DUCTILE IRON PIPE. PIPING, VALVES AND FITTINGS IN WET WELL AND VALVE PIT SHALL BE FACTORY PRIMED TNEPEC SERIES 140-POTA-POX PLUS TO A DRY FILM THICKNESS OF 6.0 TO 8.0 MILS AND SHALL BE FIELD PAINTED WITH TNEPEC SERIES 69-HI-BUILD EPOXOLINE II TO A DRY FILM THICKNESS OF 2.0 TO 3.0 MILS. PROVIDE FINISH COLOR AS SELECTED BY OWNER.
  - LIFT STATION AND VALVE PIT MANHOLES SHALL BE PRE-CAST CONCRETE IN ACCORDANCE WITH ASTM C-478, WITH RUBBER GASKETS EQUAL TO ASTM C-443 WITH 3/8" HAMILTON KENT-SEAL EXTRUDABLE PREFORMED GASKET MATERIAL OR OWNER APPROVED EQUAL. DAMP PROOF ALL EXTERIOR VERTICAL SURFACES WHICH ARE BACKFILLED AGAINST WITH BITUMINOUS COATING, HYDROCID 700 MASTIC.
  - CONSULT WITH OWNER FOR CAM LOCK COUPLING MODEL NUMBER.
  - ALUMINUM HATCHES SHALL BE BILCO OR OWNER APPROVED EQUAL. LEAF SHALL BE 1/2" ALUMINUM DIAMOND PLATE. CHANNEL FRAME SHALL BE 1/2" EXTRUDED ALUMINUM WITH A MILL FINISH AND BITUMINOUS COATING ON EXTERIOR SURFACES. HATCH SHALL BE PROVIDED WITH 316 STAINLESS STEEL HARDWARE THROUGHOUT, COMPRESSION SPRING OPERATORS, AUTOMATIC HOLD-OPEN ARM WITH RELEASE HANDLE, RECESSED LOCK HASP WITH FLUSH COVER, SLAM LOCK WITH REMOVABLE HANDLE, FALL PROTECTION GRATING AND 1-1/2" DRAIN COUPLING.
  - SEWER CONNECTION TO WET WELL SHALL BE KOR-N-SEAL, A-LOK, DURA-SEAL, OR OWNER APPROVED EQUAL. FOR INVERTS GREATER THAN 30' BELOW GRADE, CONNECTION WILL BE LINK-SEAL OR APPROVED EQUAL.
  - FORCE MAIN PENETRATIONS OF WET WELL AND VALVE PIT SHALL BE WATERTIGHT THROUGH THE USE OF PORTLAND CEMENT GROUT.



### LIFT STATION SCHEDULE

PHASE	FULL BUILDOUT
GRADE/TOP OF CASTING ELEV.	479.65
BASE ELEV.	448.27
DEPTH	30.91
INTERNAL DIAMETER	6.0
HI ALARM LEVEL 2	452.77
HI ALARM LEVEL 1	452.27
LAG PUMP ON	451.77
LEAD PUMP ON	451.27
PUMP OFF	449.27
FORCE MAIN I.E. DISCHARGE	494.75
GRAVITY SEWER LOWEST I.E.	453.27



PRINT DATE: 1/11/23 PLOT SCALE: 1:186.91 EDIT DATE: 1/11/23 - 9:37 AM EDITED BY: GREYSON DRAWING FILE: P:\21-400-194-1 WHEATLAND WASTEWATER DESIGN\ACAD\PLAN SHEETS & WORKING DRAWINGS\C301 LIFT STATION SECTION AND DETAIL.DWG

CONSTRUCTION SET

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

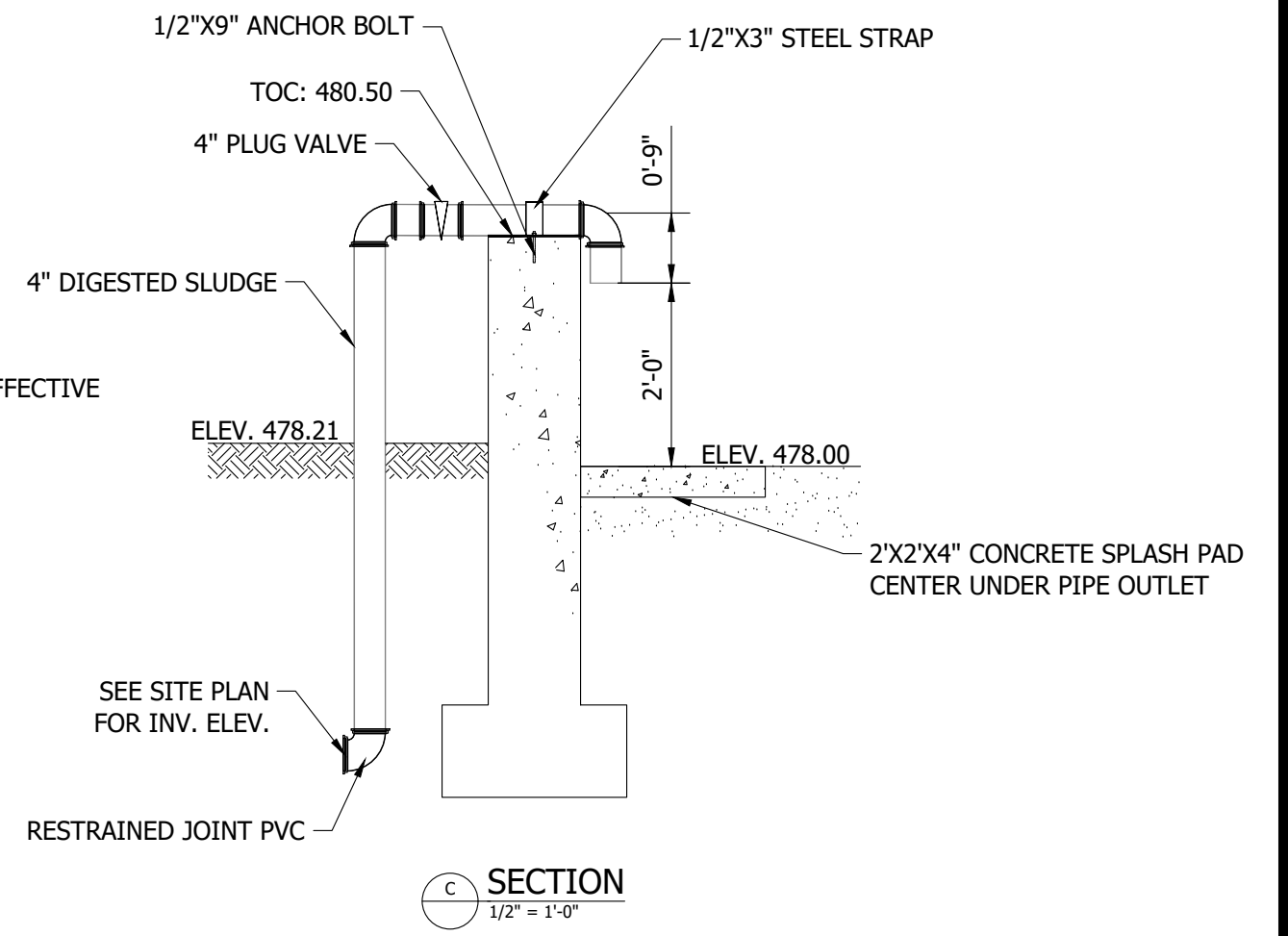
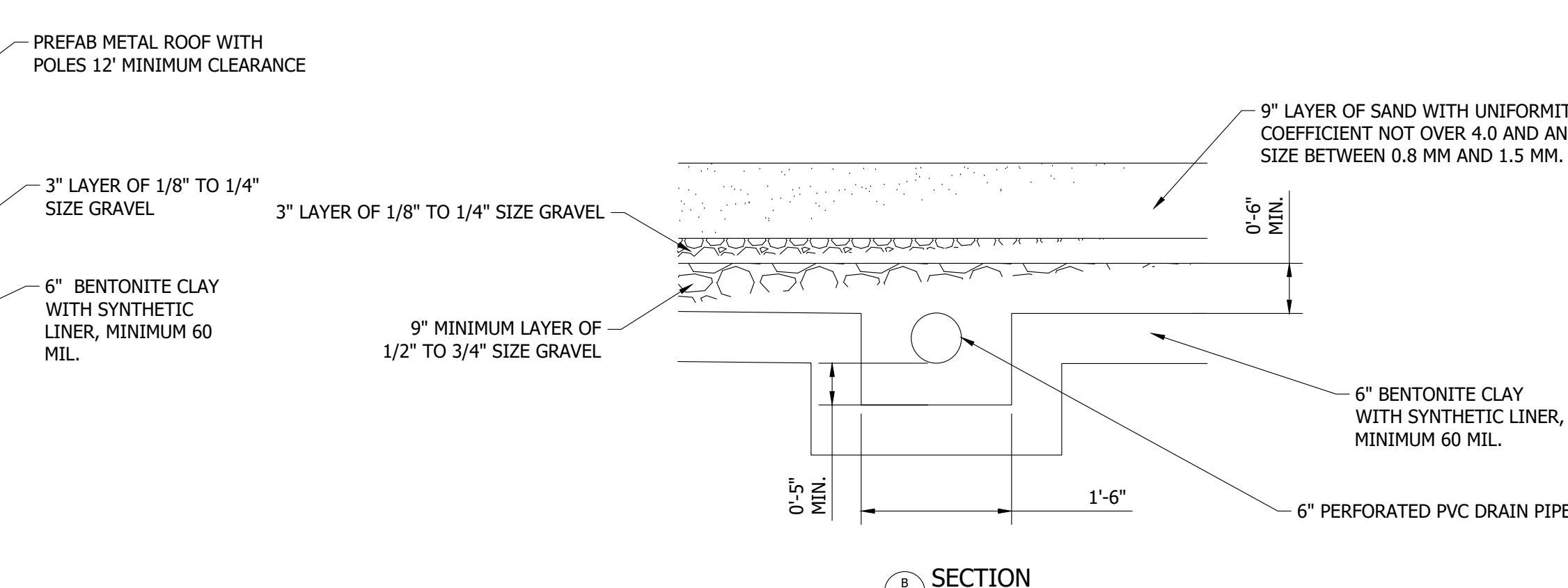
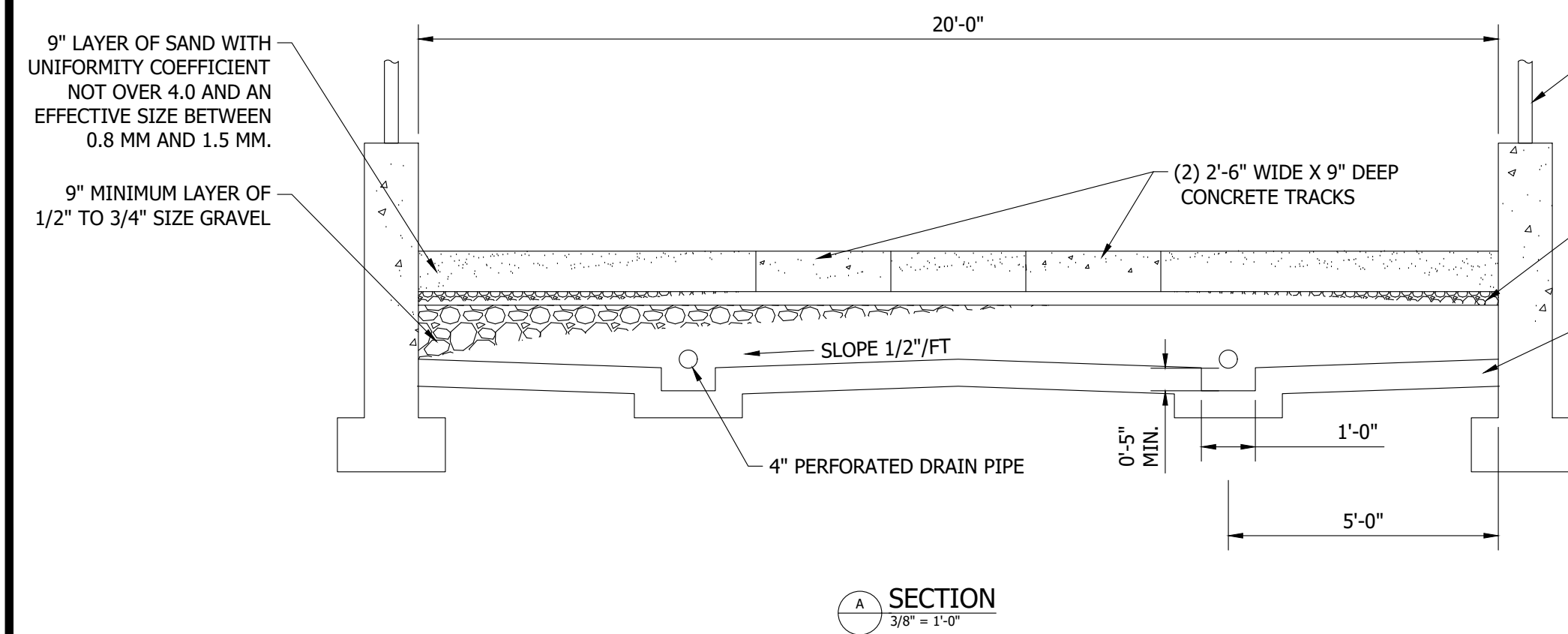
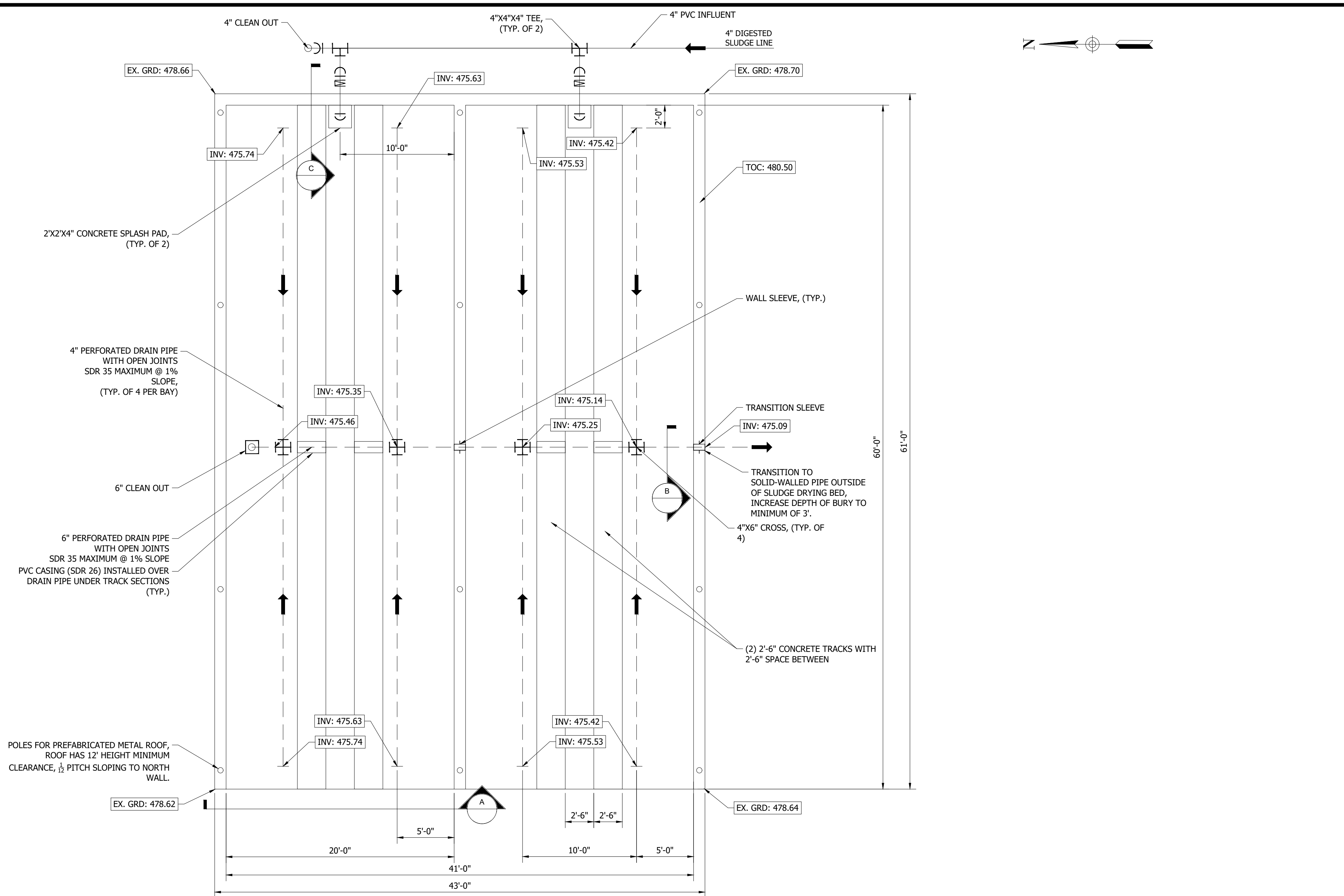
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: WMW  
Drawn By: RLH  
Checked By: ALC  
Date: 01/04/2023

*Aaron Crow*

**SLUDGE DRYING BED  
PLAN AND SECTIONS -  
ALT. 3  
C302**



PRINT DATE: 1/9/23 11:16 AM EDITED BY: GRIESTON DRAWING FILE: P:21-400-194-1 WHEATLAND WASTEWATER DESIGN5 ACAD/PLAN SHEETS & WORKING DRAWINGS/C302 SLUDGE DRYING BED PLAN AND SECTIONS.DWG PLOT SCALE: 1:1

CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT  
 PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

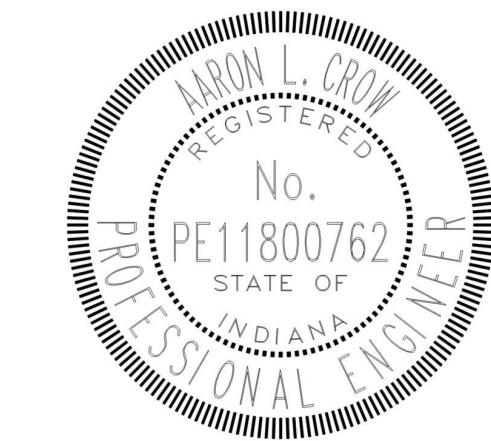
Project #: 21-400-194-1

Designed By: MTR

Drawn By: KLB

Checked By: ALC

Date: 1/6/2023

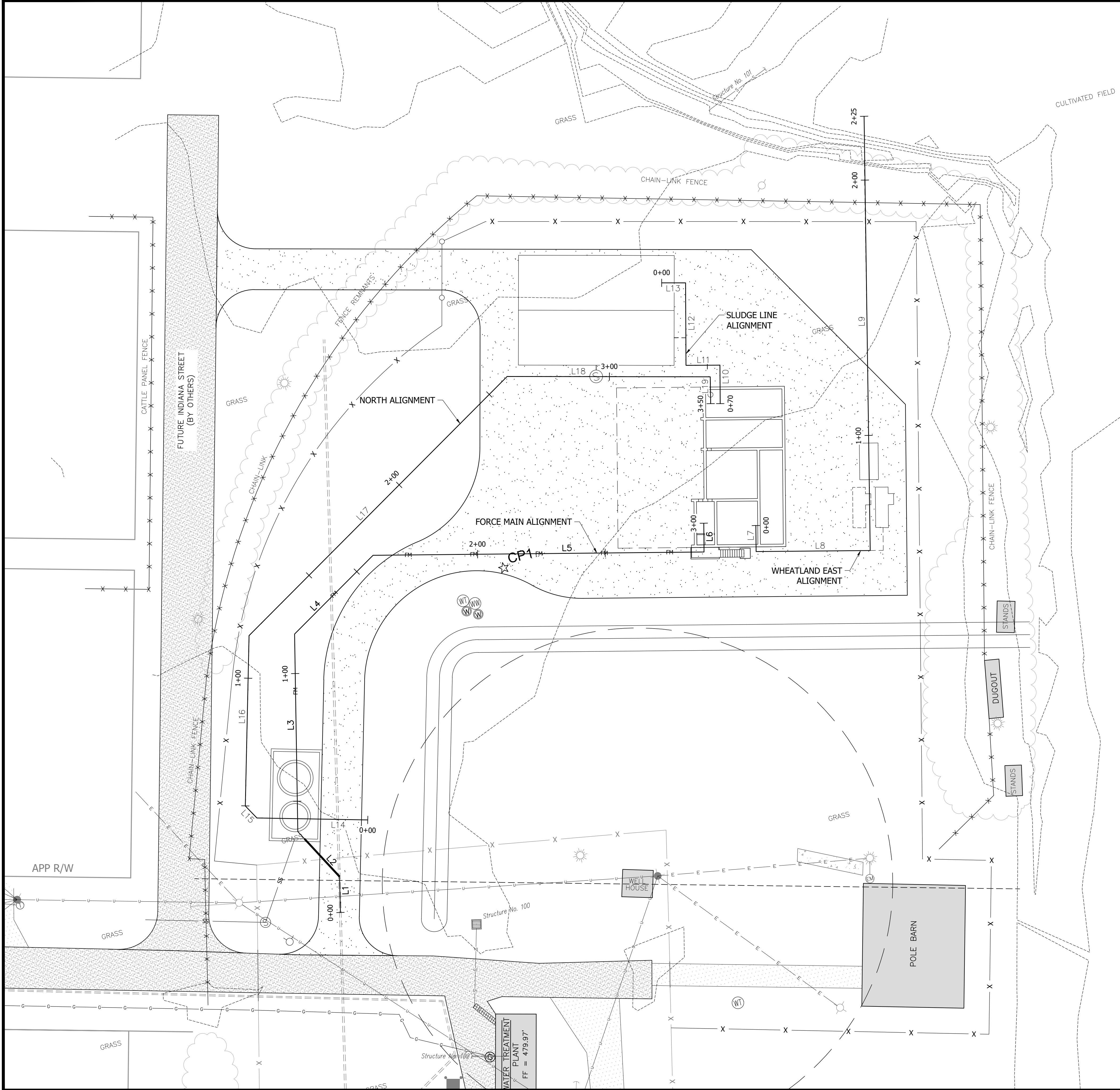


*Aaron Crew*



**ALIGNMENT LAYOUT**

**C400**



FORCE MAIN				
NO.	LENGTH	DIRECTION	START POINT	END POINT
L1	14.11	N12° 10' 07.82"E	2891020.8846,1243740.2430	2891023.8583,1243754.0328
L2	23.99	N29° 07' 00.39"W	2891023.8583,1243754.0328	2891012.1856,1243774.9901
L3	77.39	N12° 49' 33.73"E	2891012.1856,1243774.9901	2891029.3654,1243850.4485
L4	43.54	N58° 39' 26.81"E	2891029.3654,1243850.4485	2891066.5541,1243873.0975
L5	129.70	S76° 48' 05.44"E	2891066.5541,1243873.0975	2891192.8301,1243843.4832
L6	11.27	N13° 13' 56.08"E	2891192.8301,1243843.4832	2891195.4091,1243854.4509

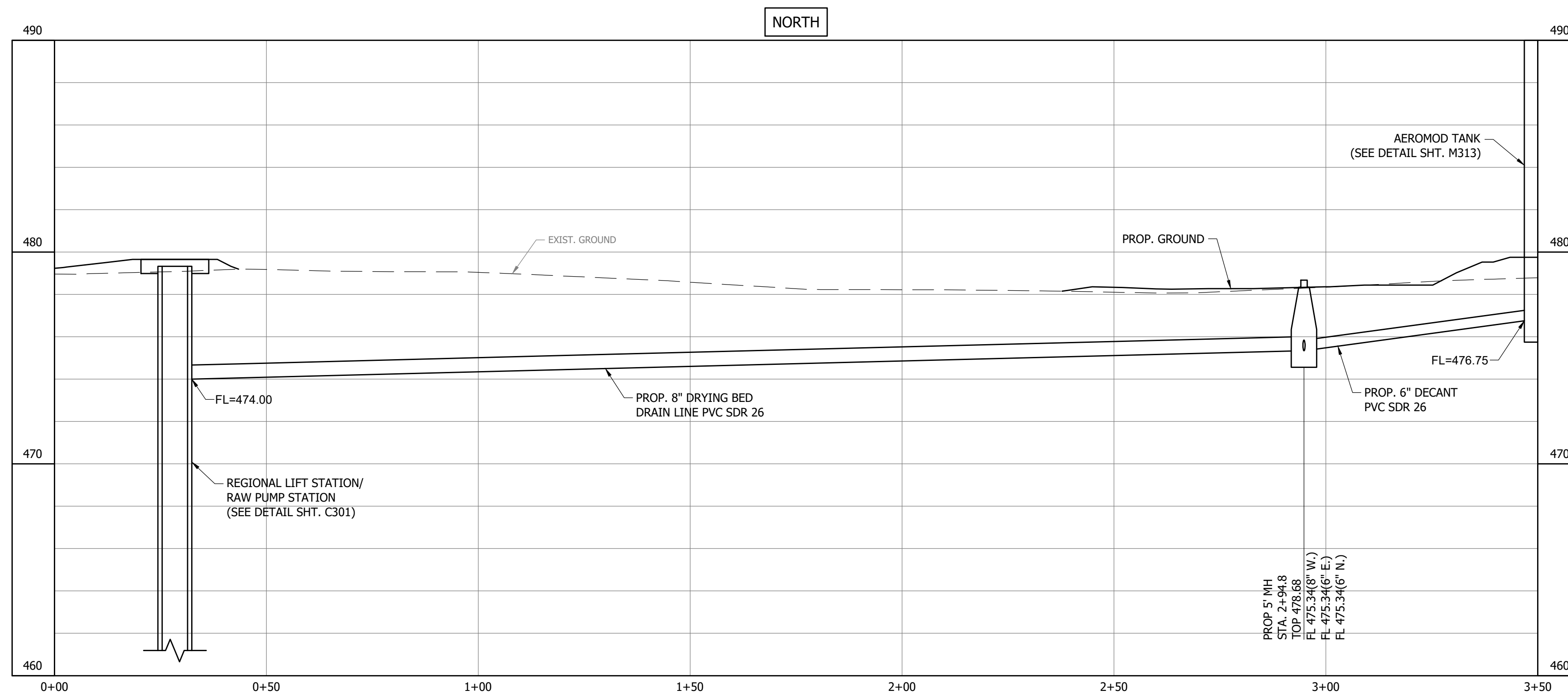
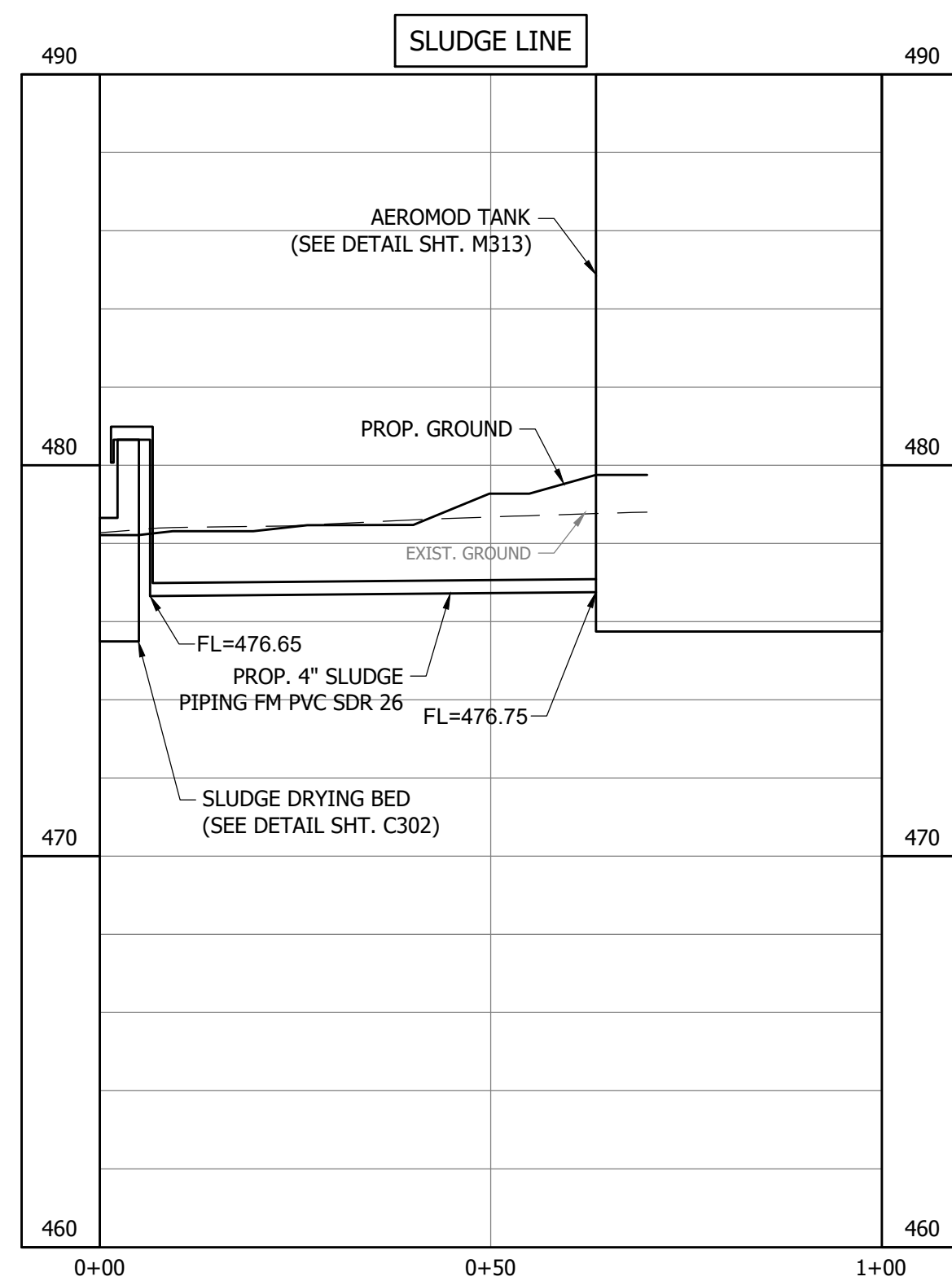
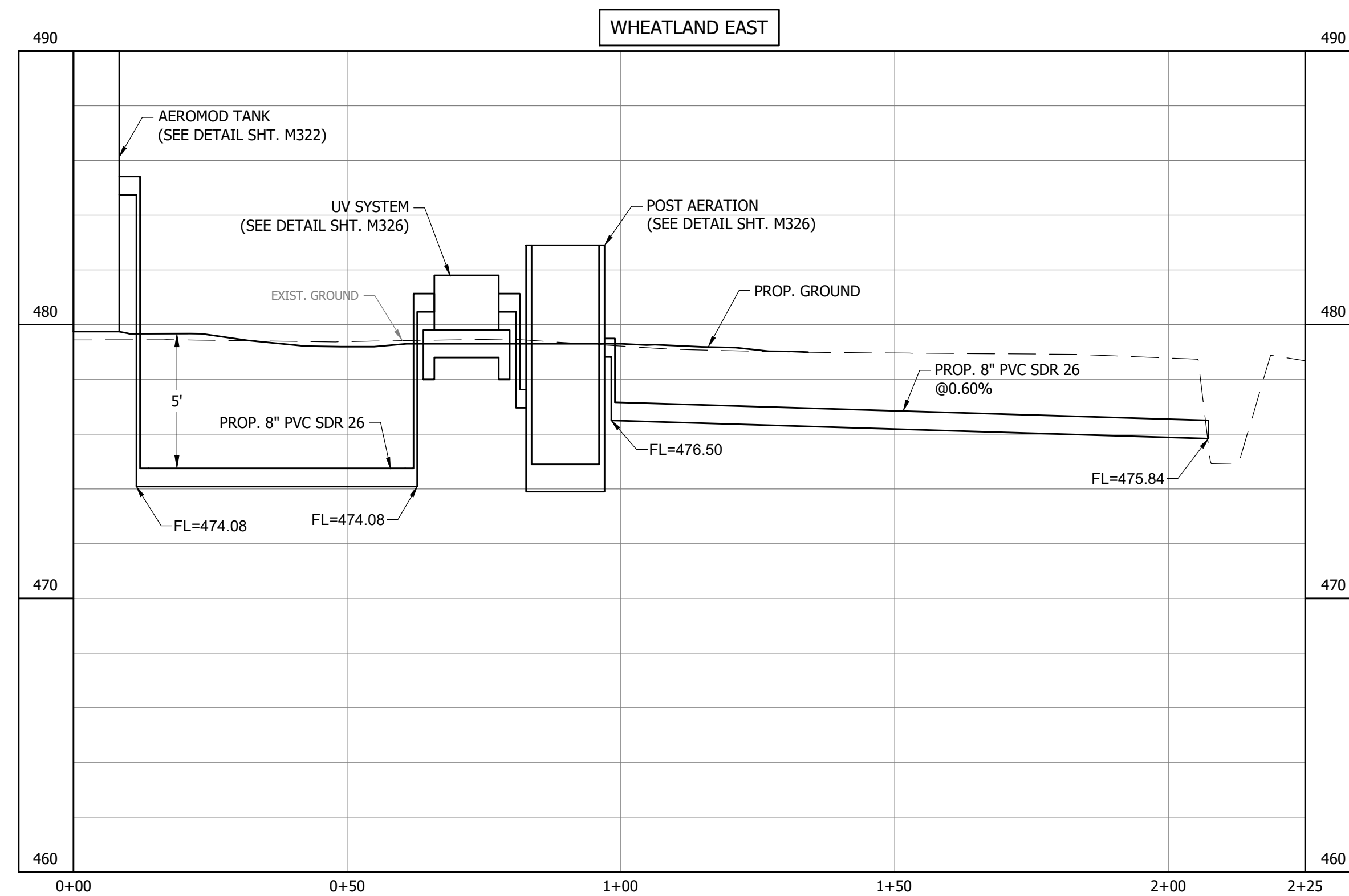
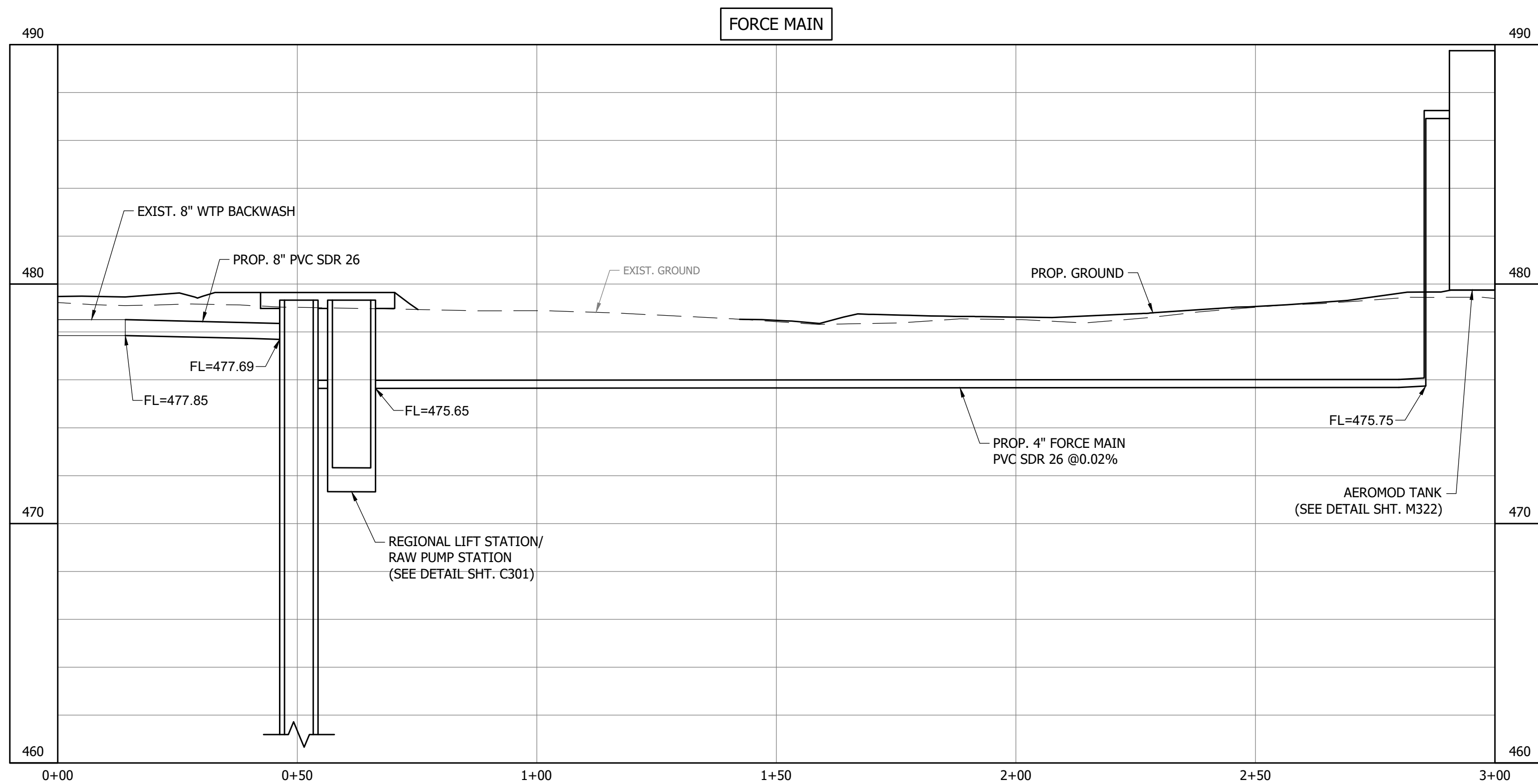
WHEATLAND EAST				
NO.	LENGTH	DIRECTION	START POINT	END POINT
L7	10.20	S13° 15' 18.37"W	2891214.9998,1243848.7143	2891212.6606,1243838.7844
L8	44.72	S76° 46' 12.01"E	2891212.6606,1243838.7844	2891256.1948,1243828.5495
L9	170.07	N12° 56' 56.51"E	2891256.1948,1243828.5495	2891294.3054,1243994.2974

SLUDGE LINE				
NO.	LENGTH	DIRECTION	START POINT	END POINT
L10	15.07	S13° 28' 56.24"W	2891216.2916,1243913.0665	2891212.7786,1243898.4138
L11	13.30	S76° 31' 03.76"E	2891203.3586,1243916.1672	2891216.2916,1243913.0665
L12	32.29	S13° 26' 17.09"W	2891210.8627,1243947.5738	2891203.3586,1243916.1672
L13	9.35	S76° 08' 13.10"E	2891201.7894,1243949.8131	2891210.8627,1243947.5738

NORTH				
NO.	LENGTH	DIRECTION	START POINT	END POINT
L14	43.45	N75° 11' 54.13"W	2891039.8997,1243772.9121	2890997.8885,1243784.0132
L15	6.51	N30° 11' 54.13"W	2890997.8885,1243784.0132	2890994.6124,1243789.6424
L16	66.74	N15° 02' 07.67"E	2890994.6124,1243789.6424	2891011.9260,1243854.0978
L17	143.23	N58° 39' 26.81"E	2891011.9260,1243854.0978	2891134.2524,1243928.5979
L18	79.56	S76° 07' 40.99"E	2891134.2524,1243928.5979	2891211.4921,1243909.5232
L19	10.50	S12° 46' 00.24"W	2891211.4921,1243909.5232	2891209.1709,1243899.2788

PRINT DATE: 1/6/23  
 PLOT SCALE: 1:1  
 EDIT DATE: 12/28/22 - 8:24 AM  
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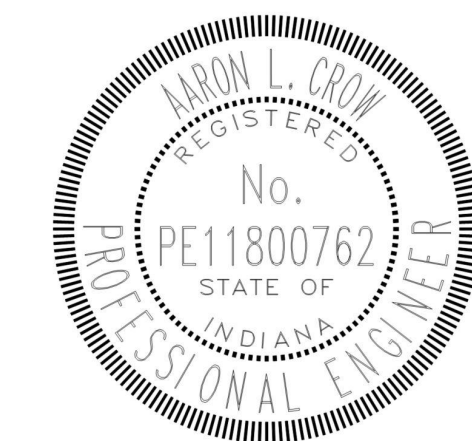
CONSTRUCTION SET

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: MTR  
Drawn By: KLB  
Checked By: ALC  
Date: 1/6/2023



*Aaron Crow*



PROFILE LAYOUT

**C401**

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

**LEGEND**

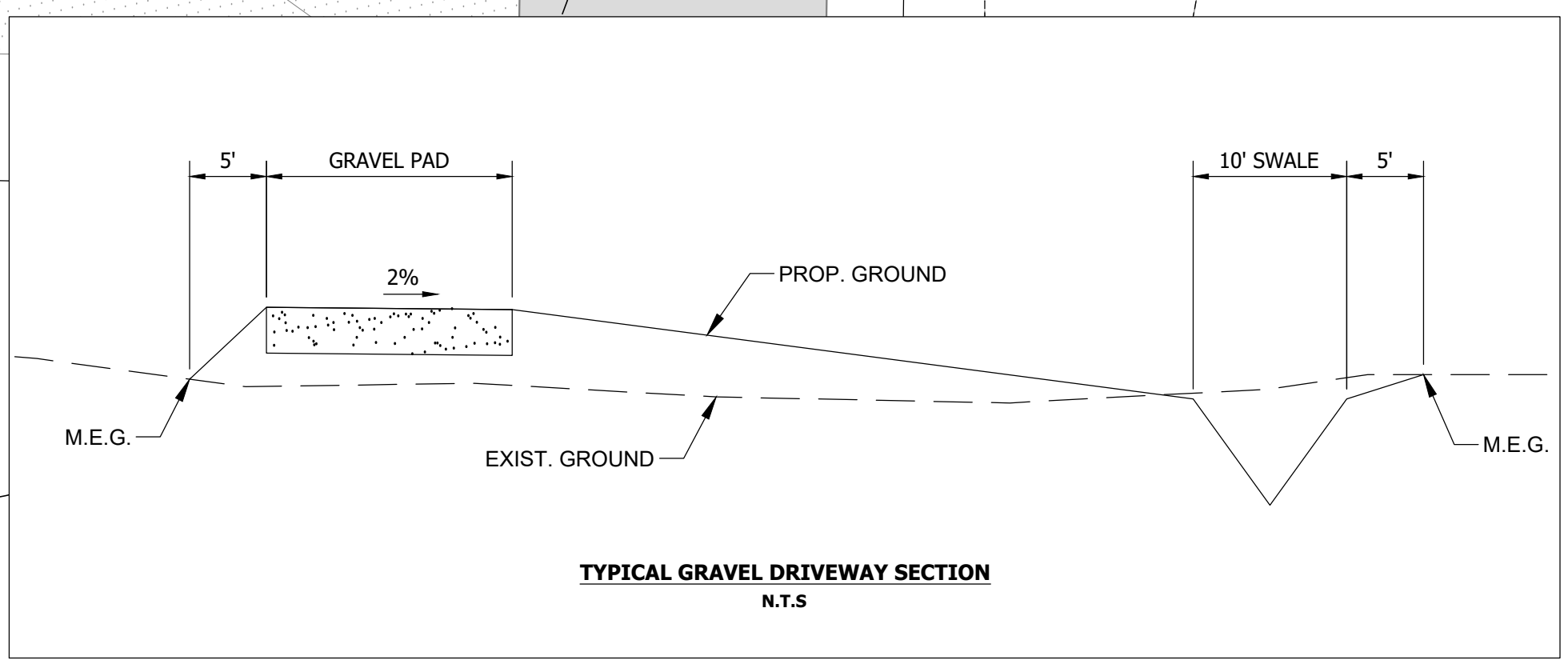
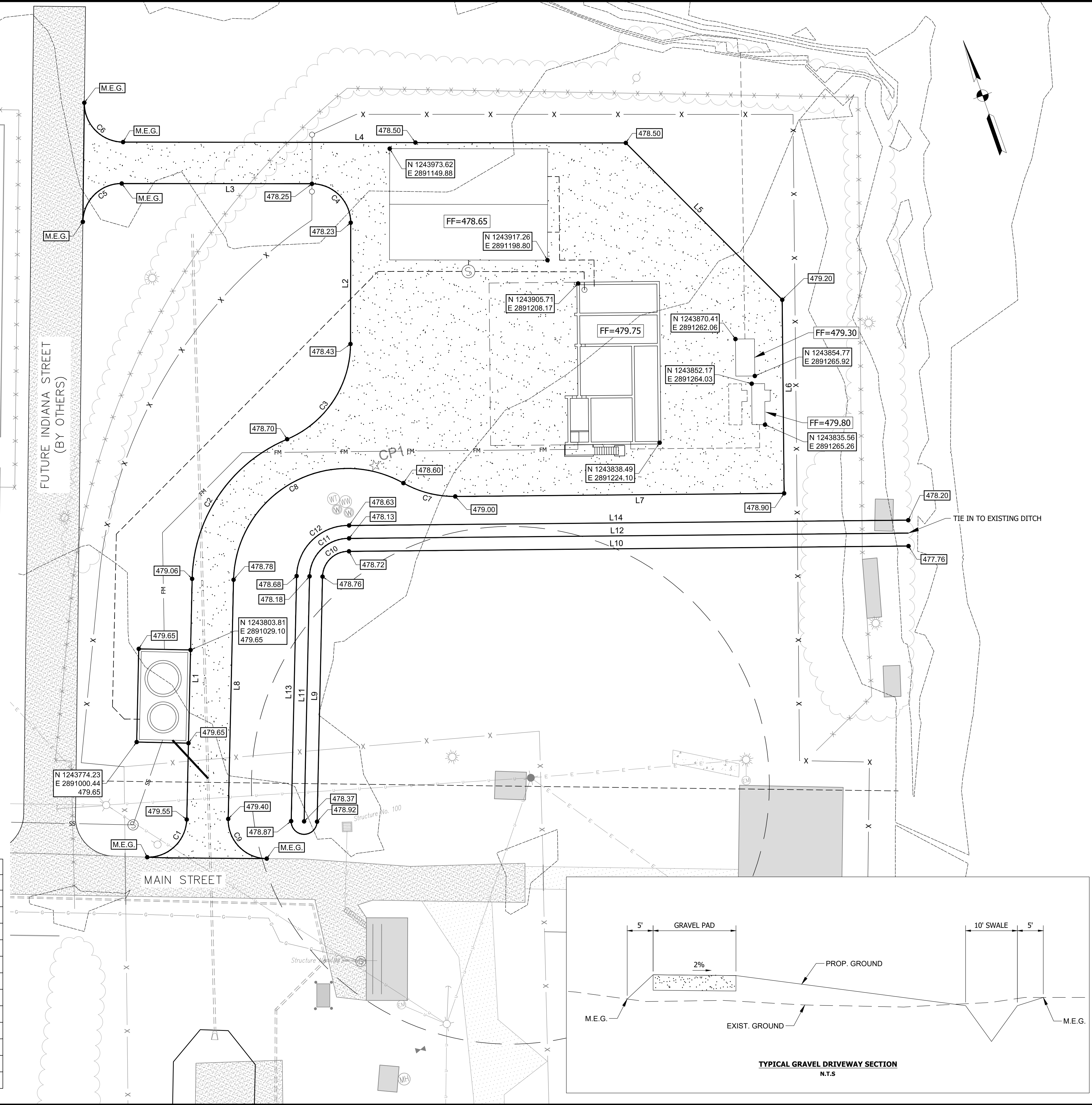
☆ CONTROL POINT	— TITLE TRACT PERIMETER
⊕ ELECTRIC METER	- - - ADJOINER PROPERTY LINES
⊥ GUY WIRE	- - - EASEMENT LINE (AS NOTED)
○ UTILITY POLE	— ROAD CENTERLINE
● UTILITY POLE WITH LIGHT	- - - 0.5' CONTOUR INTERVAL
⊗ UTILITY POLE WITH TRANSFORMER AND LIGHT	- - - 2.5' CONTOUR INTERVAL
⊙ UTILITY POLE WITH DROP	- - - FENCE - TYPE AS NOTED
⊕ UTILITY POLE WITH TRANSFORMER, DROP AND LIGHT	- - - NATURAL GAS - UNDERGROUND
⊗ UTILITY POLE WITH TRANSFORMER AND DROP	- - - COMMUNICATION - OVERHEAD
⊙ UTILITY POLE WITH LIGHTS FOR BASEBALL FIELD	- - - COMMUNICATION - UNDERGROUND
⊕ MANHOLE FOR GATE VALVE	- - - ELECTRIC - OVERHEAD
⊗ STORM SEWER DROP INLET	- - - STORM SEWER PIPE
⊕ TELEPHONE INSPECTION PEDESTAL	- - - OVERHEAD ELECTRIC & COMMUNICATIONS
⊕ GAS METER	- - - OVERHEAD ELECTRIC & COMMUNICATIONS
⊕ WATER VALVE	XXX.XX FINISH GRADE ELEVATION
⊕ WATER METER	CONCRETE AREA
⊕ WATER WELL	ASPHALT AREA
⊕ 36" DIAMETER WATER TANK	GRAVEL AREA
⊕ FIRE HYDRANT	TRASH PILE
	UTILITY CUT OBSERVED

**LINE TABLE**

NO.	LENGTH	DIRECTION	START POINT	END POINT
L1	92.99	N15° 03' 11.27"E	1243740.558, 2891012.092	1243830.359, 2891036.243
L2	46.84	N13° 51' 54.38"E	1243903.936, 2891117.232	1243949.415, 2891128.458
L3	73.44	N76° 08' 13.10"W	1243967.572, 2891117.489	1243985.168, 2891046.189
L4	194.12	S76° 08' 13.10"E	1244000.584, 2891050.501	1243954.073, 2891238.967
L5	85.56	S31° 08' 13.10"E	1243954.073, 2891238.967	1243880.842, 2891283.208
L6	74.78	S13° 12' 18.74"W	1243880.842, 2891283.208	1243808.040, 2891266.125
L7	127.00	N76° 46' 12.12"W	1243808.040, 2891266.125	1243837.105, 2891142.493
L8	92.41	S15° 03' 11.27"W	1243826.204, 2891051.694	1243736.965, 2891027.694
L9	94.69	N15° 02' 33.91"E	1243727.766, 2891060.767	1243819.213, 2891085.343
L10	216.06	S76° 46' 12.12"E	1243826.272, 2891097.598	1243776.824, 2891307.924
L11	94.69	S15° 02' 33.91"W	1243820.511, 2891080.515	1243729.064, 2891055.938
L12	215.99	N76° 46' 12.12"W	1243781.692, 2891309.069	1243831.123, 2891098.812
L13	94.69	S15° 02' 33.91"W	1243821.810, 2891075.686	1243730.362, 2891051.110
L14	215.93	N76° 46' 12.12"W	1243786.559, 2891310.213	1243835.976, 2891100.015

**CURVE TABLE**

NO.	LENGTH	RADIUS	CHORD DIRECTION	START POINT	END POINT
C1	23.38	15.0	N60° 05' 43.66"E	1243730.043, 2890993.809	1243740.558, 2891012.092
C2	68.97	60.0	N47° 59' 09.44"E	1243830.359, 2891036.243	1243874.022, 2891084.712
C3	46.81	40.0	N47° 23' 27.16"E	1243874.022, 2891084.712	1243903.936, 2891117.232
C4	23.56	15.0	N31° 08' 09.36"W	1243949.415, 2891128.458	1243967.572, 2891117.489
C5	23.40	15.0	S59° 10' 11.51"W	1243985.168, 2891046.189	1243974.355, 2891028.071
C6	23.72	15.0	S30° 49' 48.49"E	1244018.897, 2891039.571	1244000.584, 2891050.501
C7	20.90	40.0	N61° 48' 09.69"W	1243837.105, 2891142.493	1243846.868, 2891124.284
C8	90.70	44.0	S74° 06' 35.64"W	1243846.868, 2891124.284	1243826.204, 2891051.694
C9	23.78	15.0	S30° 21' 46.96"E	1243736.965, 2891027.694	1243718.529, 2891038.495
C10	15.71	10.0	N60° 03' 21.55"E	1243819.213, 2891085.343	1243826.272, 2891097.598
C11	23.47	15.0	S59° 53' 17.99"W	1243831.123, 2891098.812	1243820.511, 2891080.515
C12	31.23	20.0	S59° 47' 18.20"W	1243835.976, 2891100.015	1243821.810, 2891075.686



#	Revision	Date

Project #: 21-400-194-1  
Designed By: MTR  
Drawn By: KLB  
Checked By: ALC  
Date: 1/6/2023



*Aaron Crow*



**GRADING PLAN**

**C500**

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023



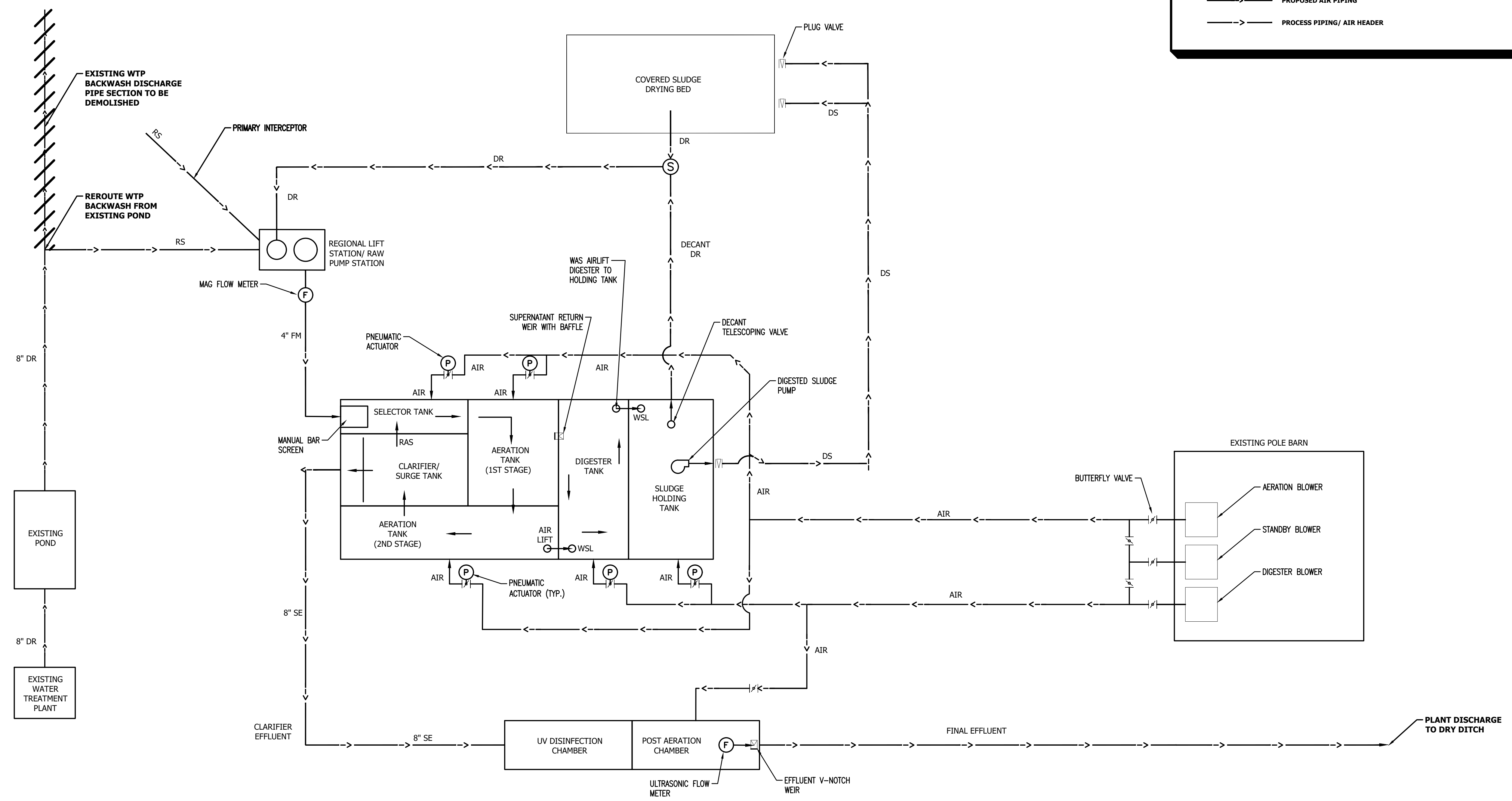
*L.I. Chung Chen*

SCALE: NTS

PROCESS FLOW  
DIAGRAM

**C501**

LEGEND	
	GATE VALVE
	CHECK VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	MANHOLE STRUCTURE
	PNEUMATIC ACTUATOR
	FLOW METER
	WEIR (GATE)
	PROPOSED AIR PIPING
	PROCESS PIPING/ AIR HEADER
AIR	AIR
CE	CHLORINATED EFFLUENT
DR	DRAIN
DS	DIGESTED SLUDGE
GR	GRIT
SLW	SEAL WATER
RS	RAW SEWAGE
RSL	RETURN SLUDGE
SC	SCUM
SE	SECONDARY EFFLUENT
SW	SLUDGE WITHDRAWAL
WSL	WASTE SLUDGE
W	POTABLE WATER

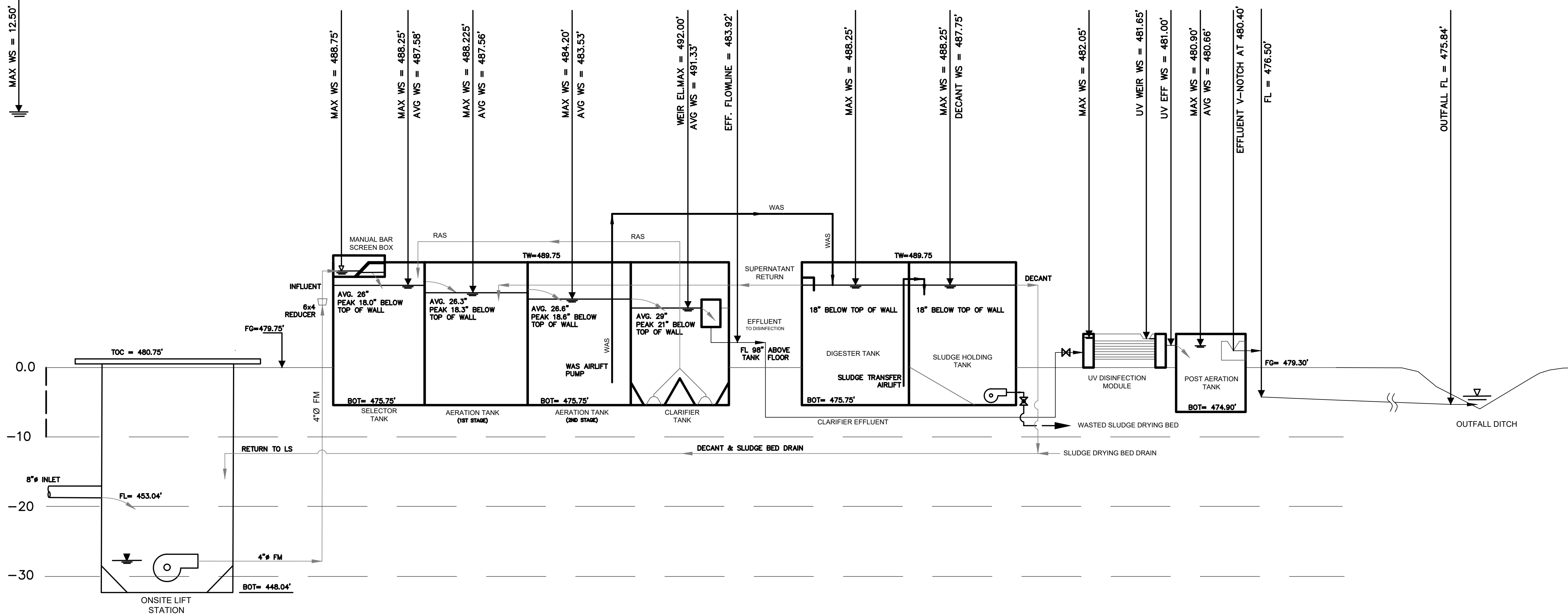


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CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

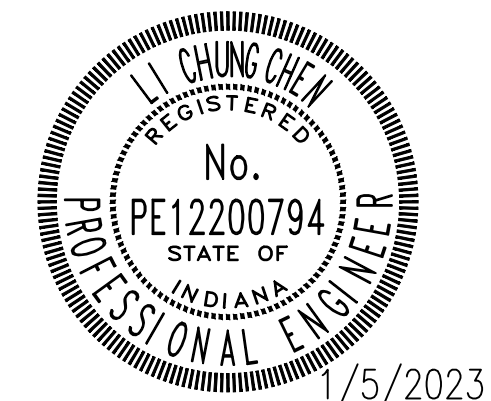
PHASE	I	II
AVERAGE DAILY FLOW (GPD)	58,900	--
PEAK FLOW (GPD)	235,600	--

LEGEND  
INDICATES WATER SURFACE  
ELEVATION @ PEAK FLOW  
UNLESS NOTED OTHERWISE



#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023



SCALE: NTS

HYDRAULIC PROFILE

**C502**

#	Revision	Date

Project #: 21-400-194-1  
Designed By: MTR  
Drawn By: KLB  
Checked By: ALC  
Date: 1/6/2023

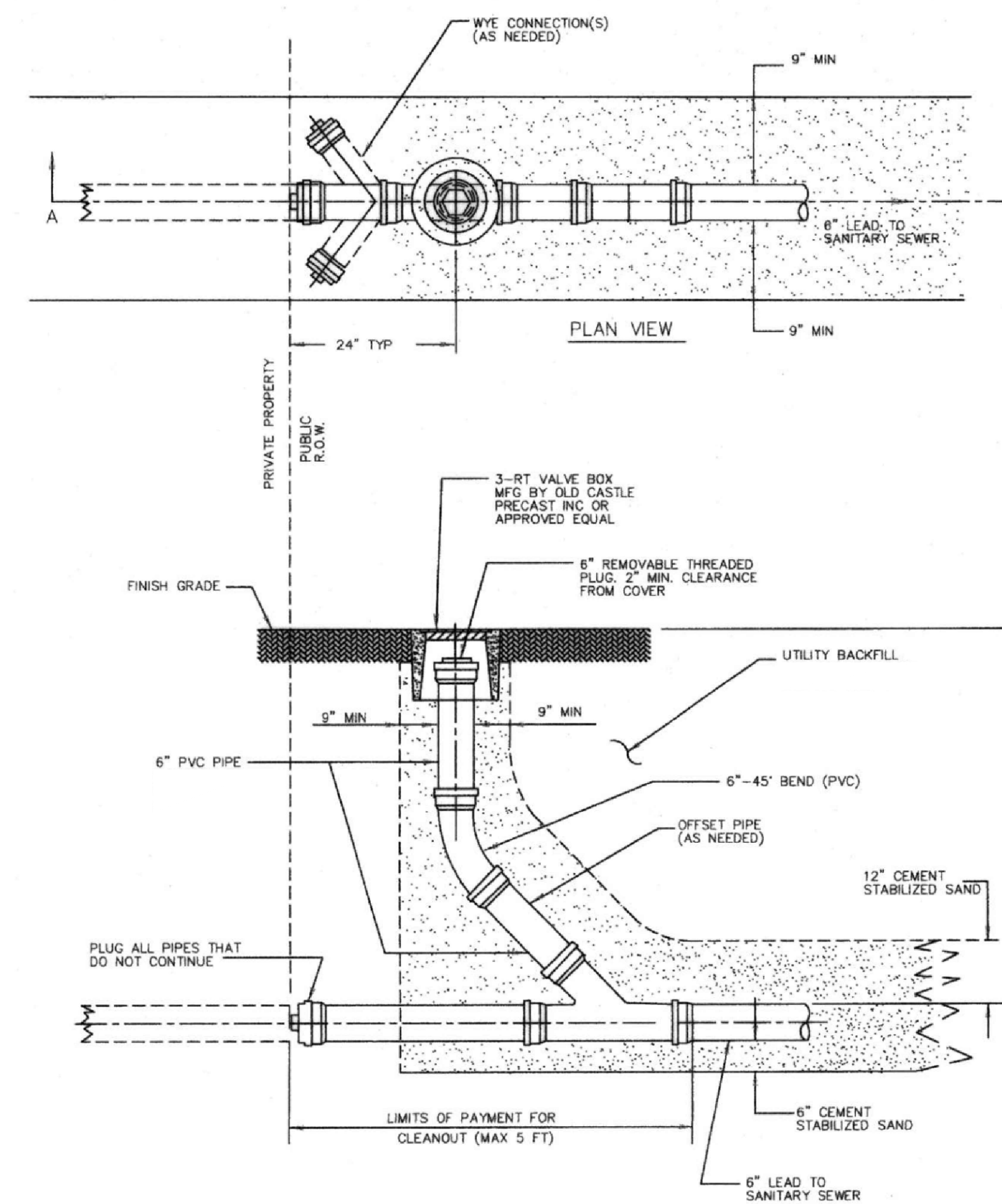


*Aaron Crow*

NTS

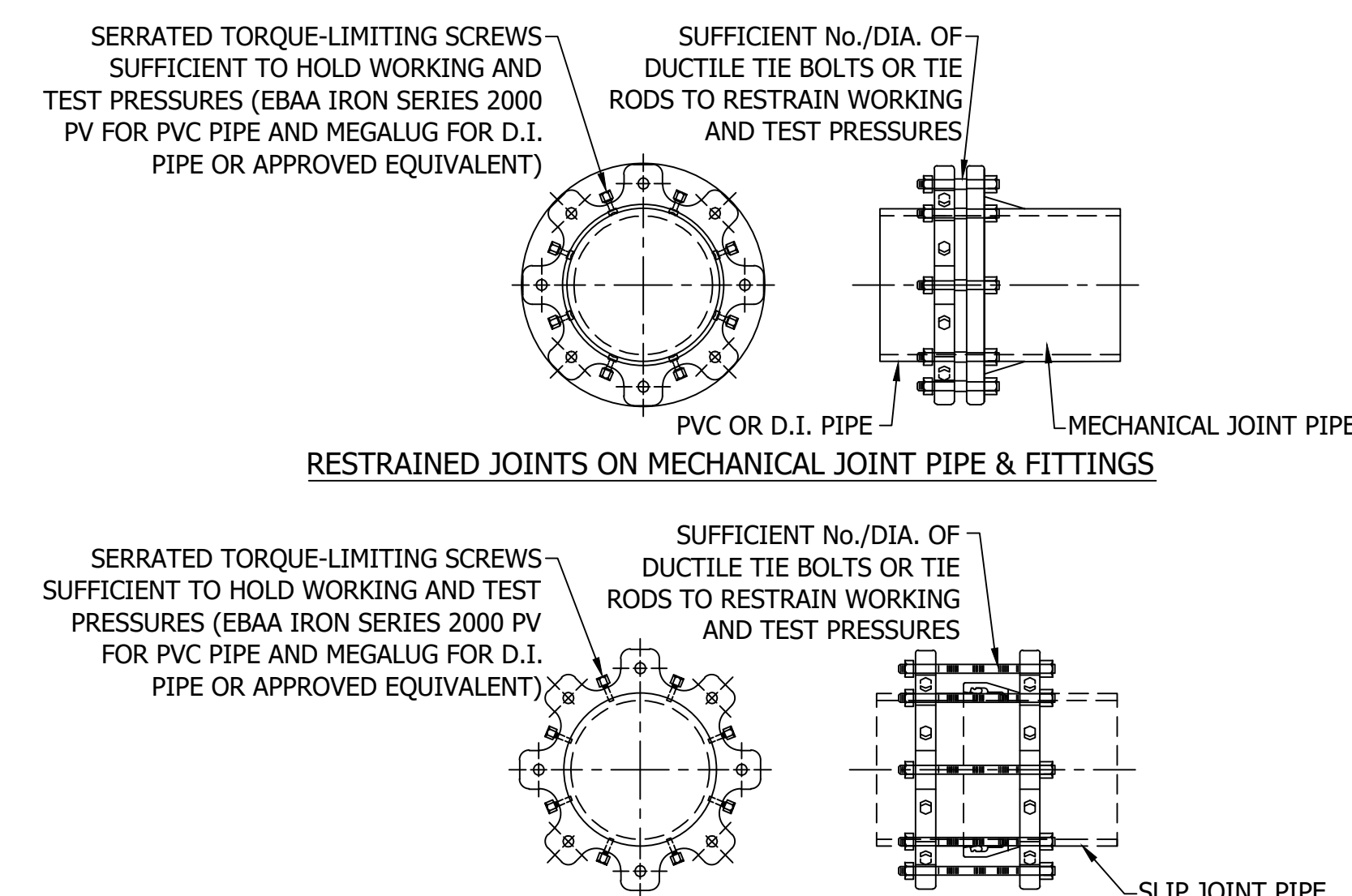
**CIVIL DETAILS**

**C600**



**STANDARD CLEANOUT DETAIL**

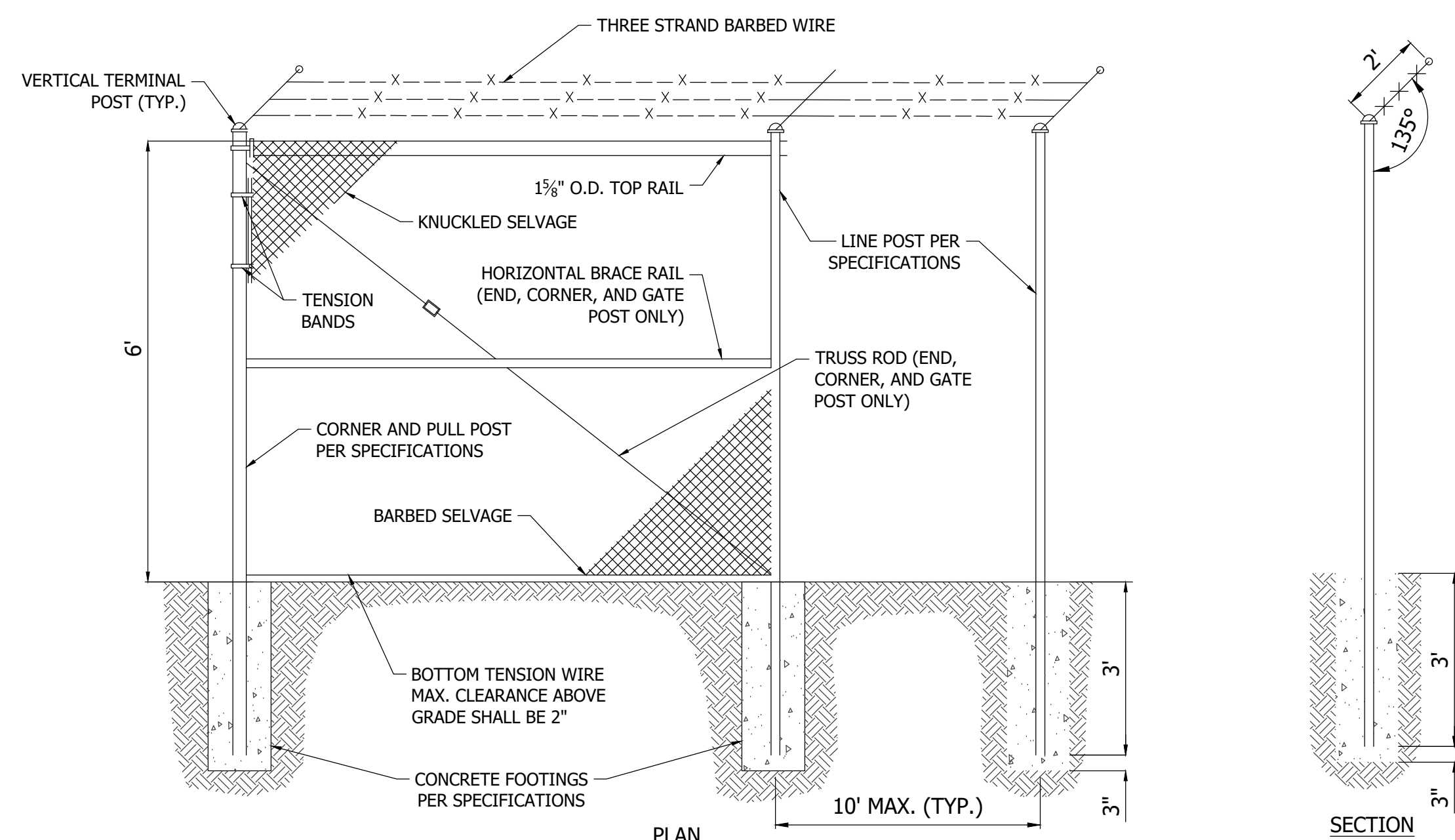
N.T.S.



RESTRAINED LENGTHS FOR 4" DIA. PIPE

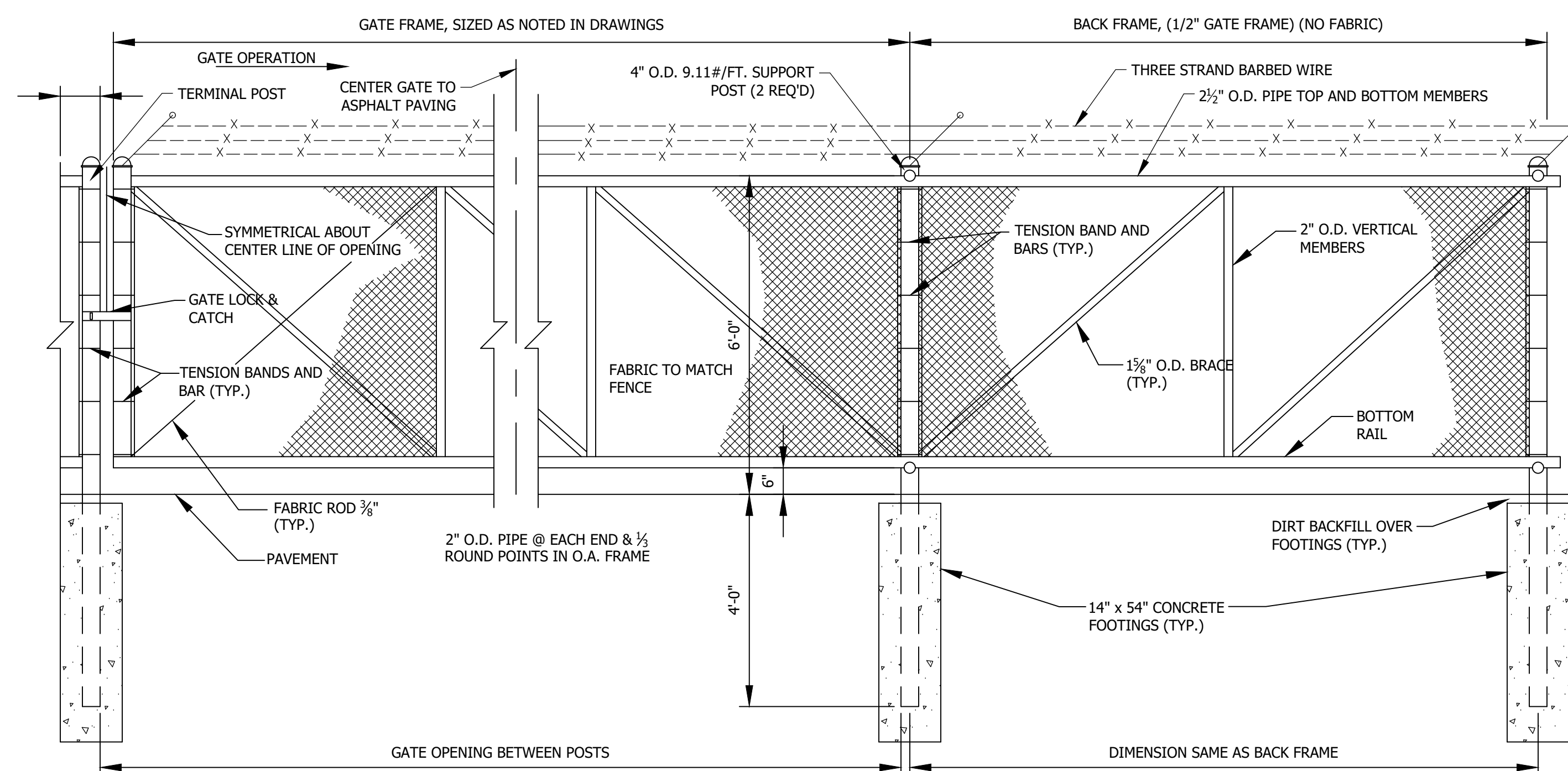
DEPTH OF PIPE	4'	4'	4'	4'	5'	5'	5'	5'	10'	10'	10'	10'
BEND ANGLE	11.25°	22.5°	45°	90°	11.25°	22.5°	45°	90°	11.25°	22.5°	45°	90°
RESTRAINED LENGTH	1'	1'	2'	5'	1'	1'	2'	4'	1'	1'	1'	3'

**FORCE MAIN PIPE JOINT RESTRAINT DETAIL**  
NOT TO SCALE



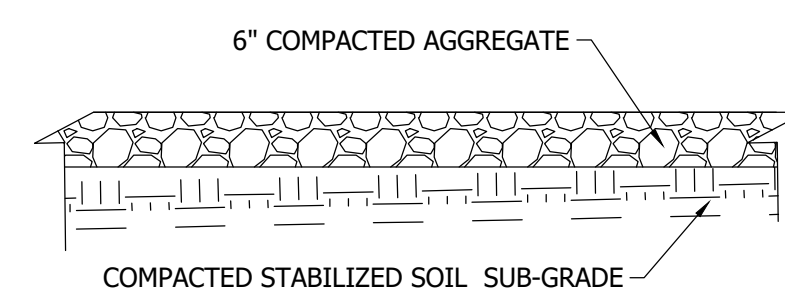
**19 CHAIN LINK FENCE DETAIL (BID ALTERNATIVE)**

NOT TO SCALE



**20 CANTILEVER SLIDE GATE DETAIL (BID ALTERNATIVE)**

NOT TO SCALE



**CROSS SECTION OF STONE PARKING AREA**

N.T.S.

CONSTRUCTION SET

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

#	Revision	Date

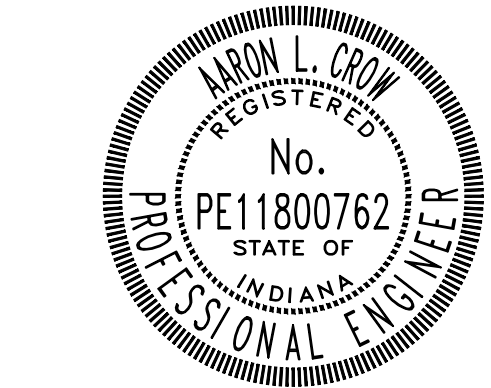
Project #: 21-400-194-1

Designed By: WMW

Drawn By: RLH

Checked By: ALC

Date: 01/04/2023



*Aaron Crow*

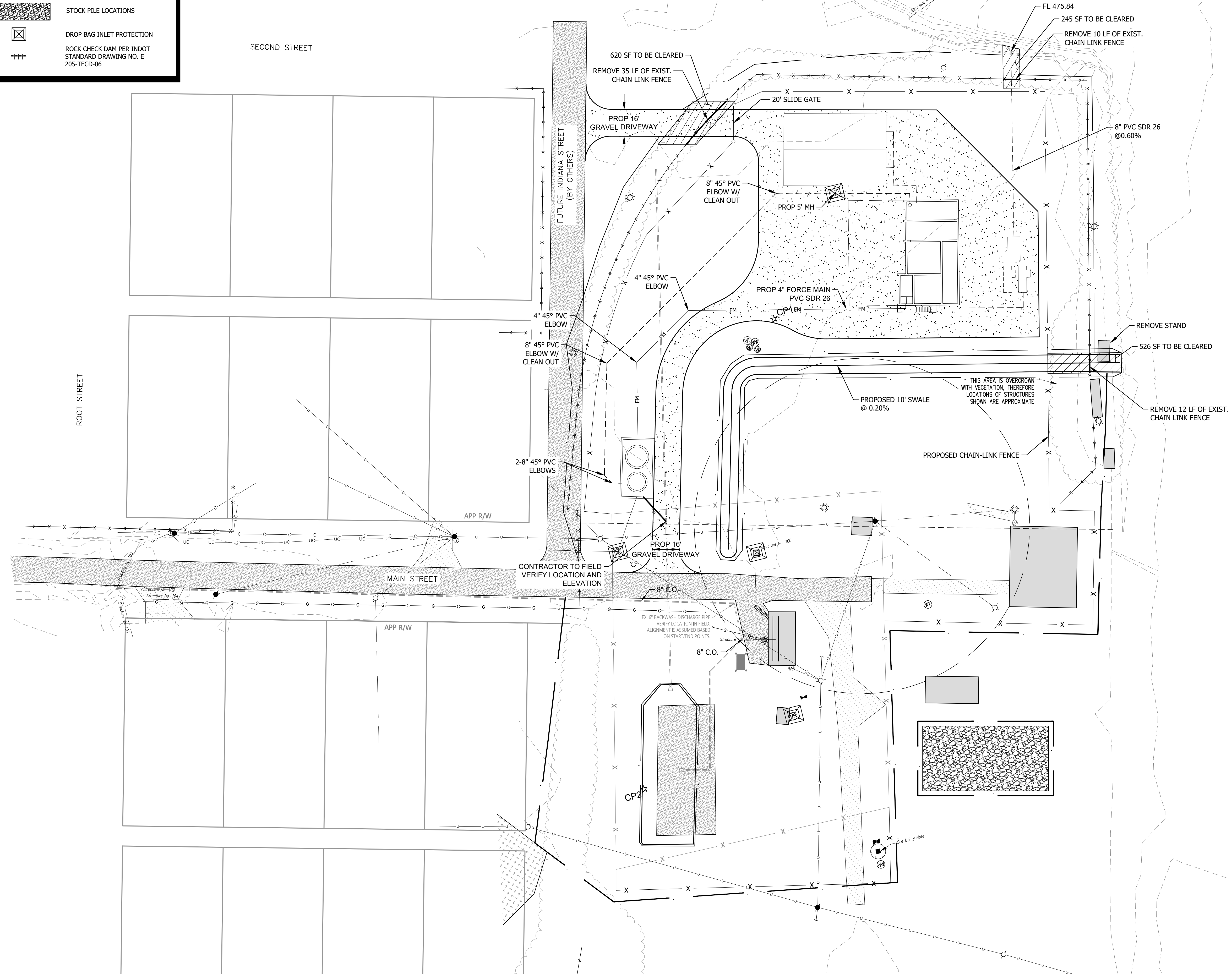


**EROSION CONTROL  
PLAN**

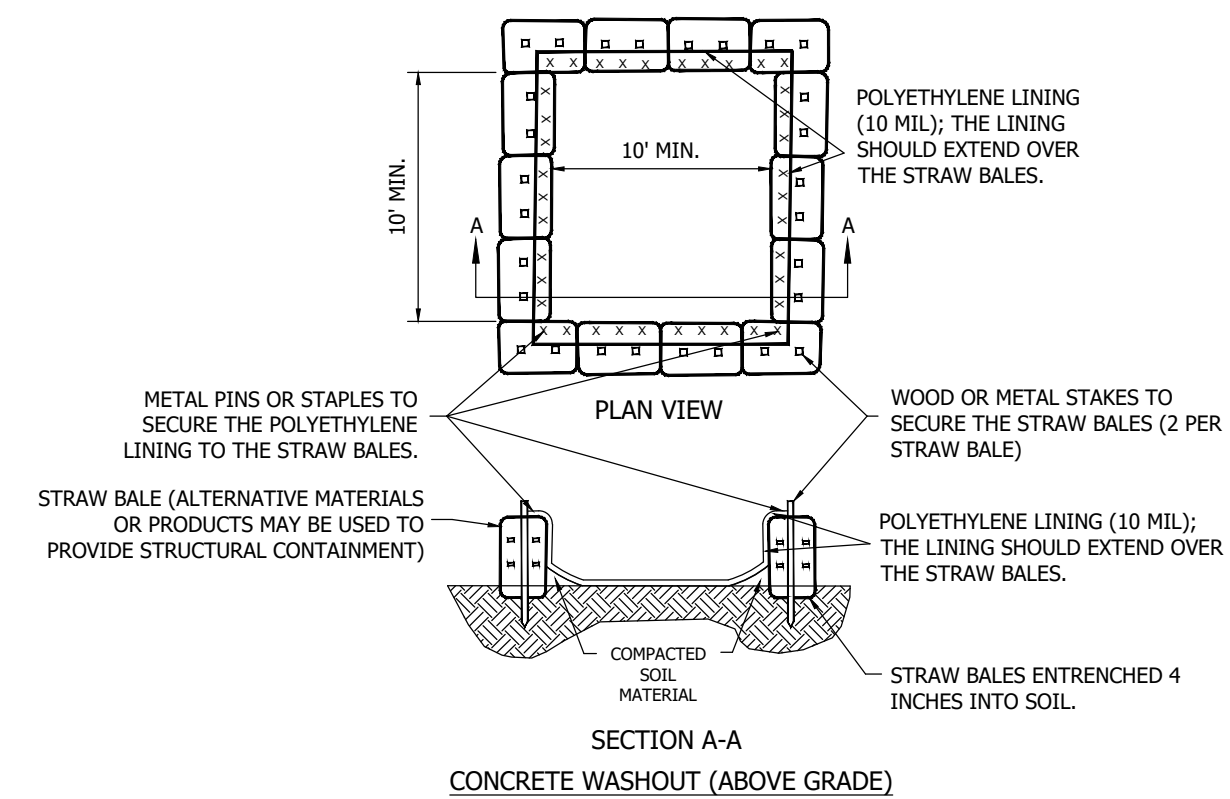
**C801**

**LEGEND**

- EASEMENT LIMITS
- PROPOSED CONSTRUCTION LIMITS
- PERMANENT SEEDING
- STOCK PILE LOCATIONS
- DROP BAG INLET PROTECTION
- ROCK CHECK DAM PER INDOT STANDARD DRAWING NO. E 205-TECD-06



PRINT DATE: 1/9/23  
 PLOT SCALE: 1:1  
 EDIT DATE: 1/6/23 - 1:09 PM  
 EDITED BY: MLVDY  
 DRAWING FILE: P:\21-400-194-1 WHEATLAND WASTEWATER DESIGN\ACAD\PLAN SHEETS & WORKING DRAWINGS\C801 EROSION CONTROL PLAN.DWG



**INSTALLATION:**

**PREFABRICATED WASHOUT SYSTEMS/CONTAINERS:**

1. INSTALL AND LOCATE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

**DESIGNED AND INSTALLED SYSTEMS:**

2. UTILIZE AND FOLLOW THE DESIGN IN THE STORM WATER POLLUTION PREVENTION PLAN TO INSTALL THE SYSTEM.
3. DEPENDENT UPON THE TYPE OF SYSTEM, EITHER EXCAVATE THE PIT OR INSTALL THE CONTAINMENT SYSTEM.
4. A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE LINING.
5. INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS, THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION, THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS.
6. PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC.
7. PLACE A NON-COLLAPSING, NON-WATER HOLDING COVER OVER THE WASHOUT FACILITY PRIOR TO A PREDICTED RAINFALL EVENT TO PREVENT ACCUMULATION OF WATER AND POSSIBLE OVERFLOW OF THE SYSTEM (OPTIONAL).
8. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.
9. POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.
10. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD FOR CONCRETE WASHOUT SYSTEMS.

**MAINTENANCE:**

11. INSPECT DAILY AND AFTER EACH STORM EVENT.
12. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
13. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
14. INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
15. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
16. EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. PREFABRICATED SYSTEMS SHOULD ALSO UTILIZE THIS CRITERION, UNLESS THE MANUFACTURER HAS ALTERNATE SPECIFICATIONS.
17. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE, REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
18. DISPOSE OF ALL CONCRETE IN A LEGAL MANNER, REUSE THE MATERIAL ON SITE, RECYCLE, OR HAIL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY.
19. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
20. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
21. CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NOT EVAPORATE AND THE SYSTEM IS NEAR CAPACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY CONTAINMENT SYSTEM OR BASIN FOR FURTHER DEWATERING.
22. PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE.
23. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION.
24. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.
25. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

**01 CONCRETE WASHOUT DETAIL**  
NOT TO SCALE

**SILT FENCE**

**LOCATION**

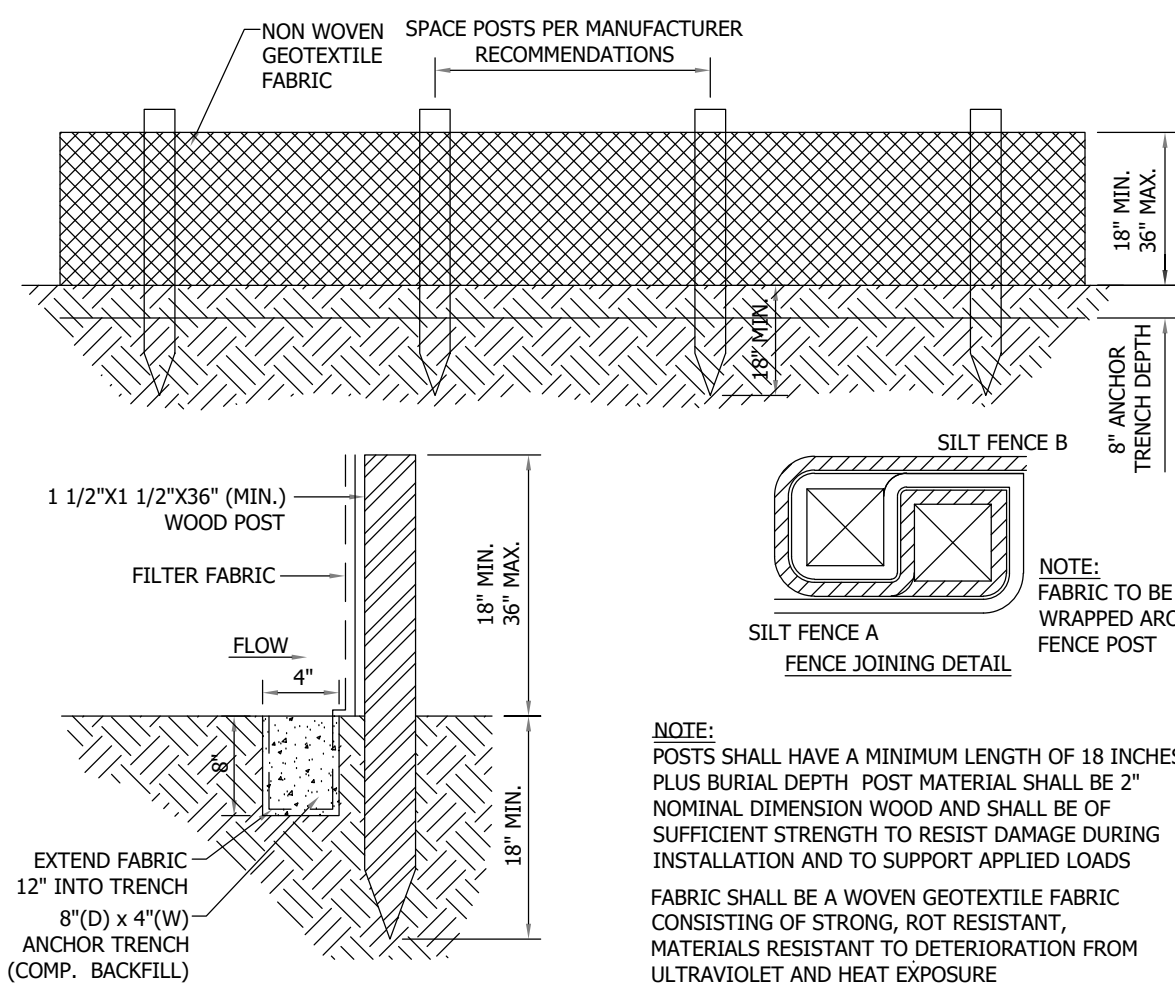
- INSTALLED PARALLEL TO THE SLOPE CONTOUR
- MINIMUM 10 FEET BEYOND THE TOE OF SLOPE TO PROVIDE A BROAD, SHALLOW SEDIMENT POOL.
- ACCESSIBLE FOR MAINTENANCE (REMOVAL OF SEDIMENT AND SILT FENCE REPAIR)

**INSTALLATION**

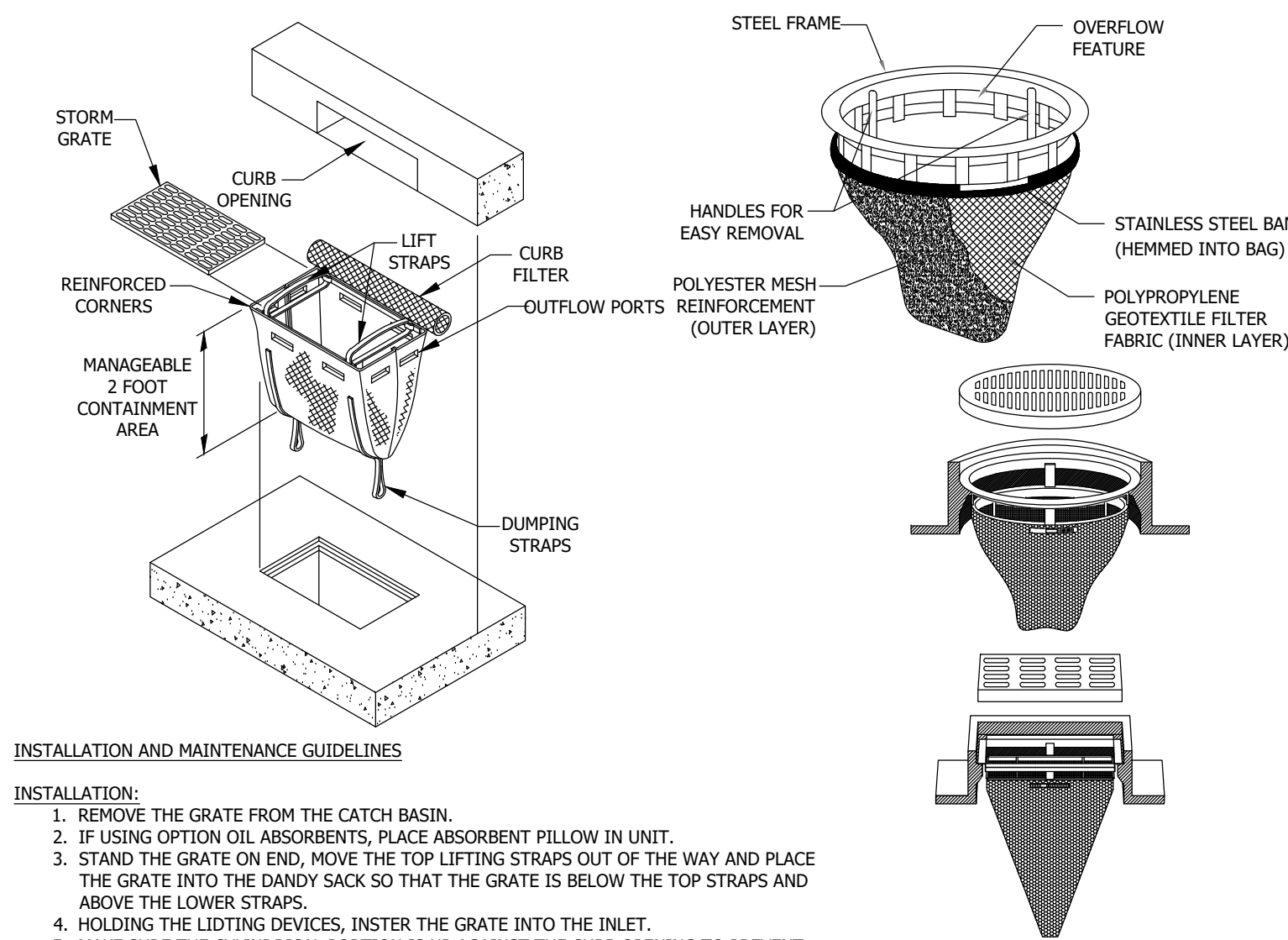
1. LAYOUT THE LOCATION OF THE FENCE SO THAT IT IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST POINT.
2. EXCAVATE AN EIGHT-INCH DEEP BY FOUR-INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY FLOWING IS ALSO ACCEPTABLE.
3. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP-SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN-SLOPE SIDE OF THE TRENCH.
4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH. (IF IT IS NECESSARY TO JOIN THE ENDS OF THE TWO FENCE, USE THE WRAP JOINT METHOD SHOWN.)
5. LAY THE LOWER FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP-SLOPE SIDE OF THE TRENCH.
6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

**MAINTENANCE**

- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ONE-HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.



**04 SILT FENCE DETAIL**  
NOT TO SCALE



**INSTALLATION AND MAINTENANCE GUIDELINES**

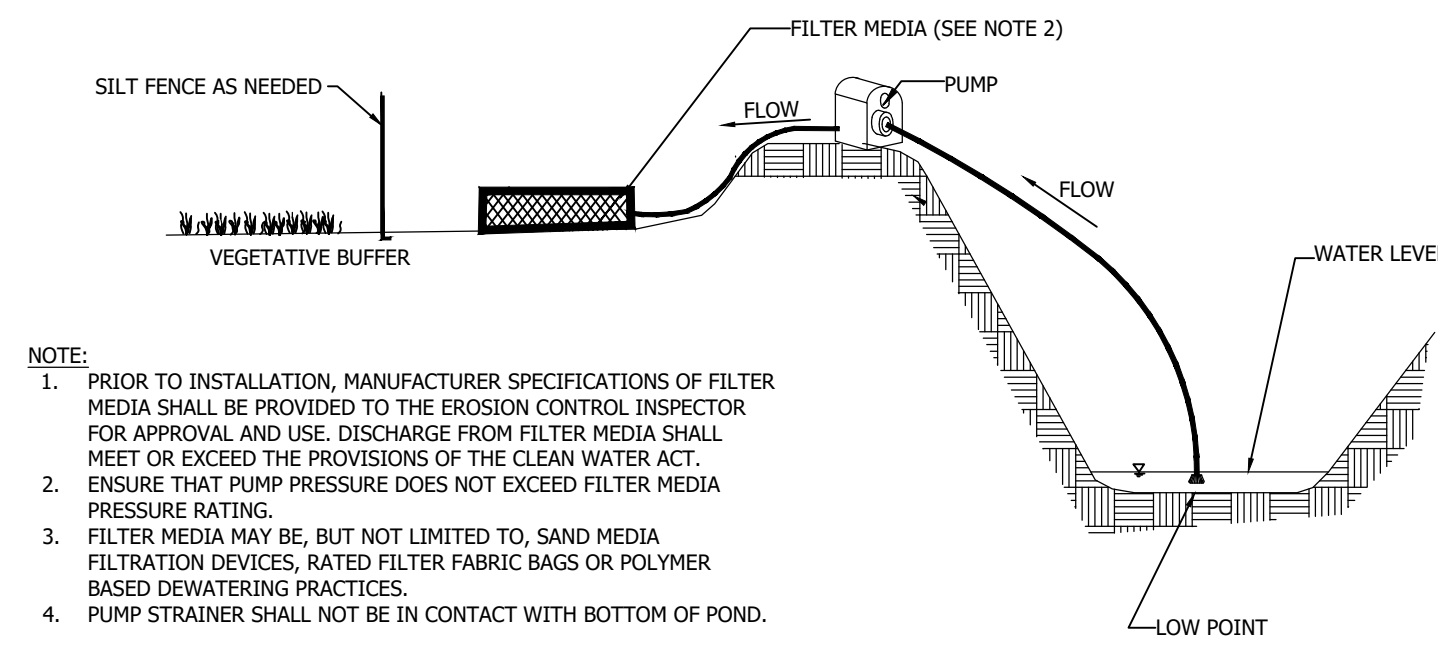
**INSTALLATION:**

1. REMOVE THE GRATE FROM THE CATCH BASIN.
2. IF USING OPTION OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT.
3. STAND THE GRATE ON END, MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY SACK SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS.
4. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.
5. MAKE SURE THE CYLINDRICAL PORTION IS UP AGAINST THE CURB OPENING TO PREVENT SILT AND DEBRIS FROM ENTERING THE INLET.

**MAINTENANCE:**

- INSPECT DAILY.
- REMOVE ALL ACCUMULATED SEDIMENT AFTER EACH STORM EVENT. DISPOSE OF SEDIMENT IN AN AREA WHERE IT WILL NOT REENTER THE PAVED AREA OR STORM DRAINS, TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET BY USING THE LIFTING STRAPS AND REMOVE THE GRATE.
- WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE INLET PROTECTION.

**02 DROP BAG INLET PROTECTION**  
NOT TO SCALE

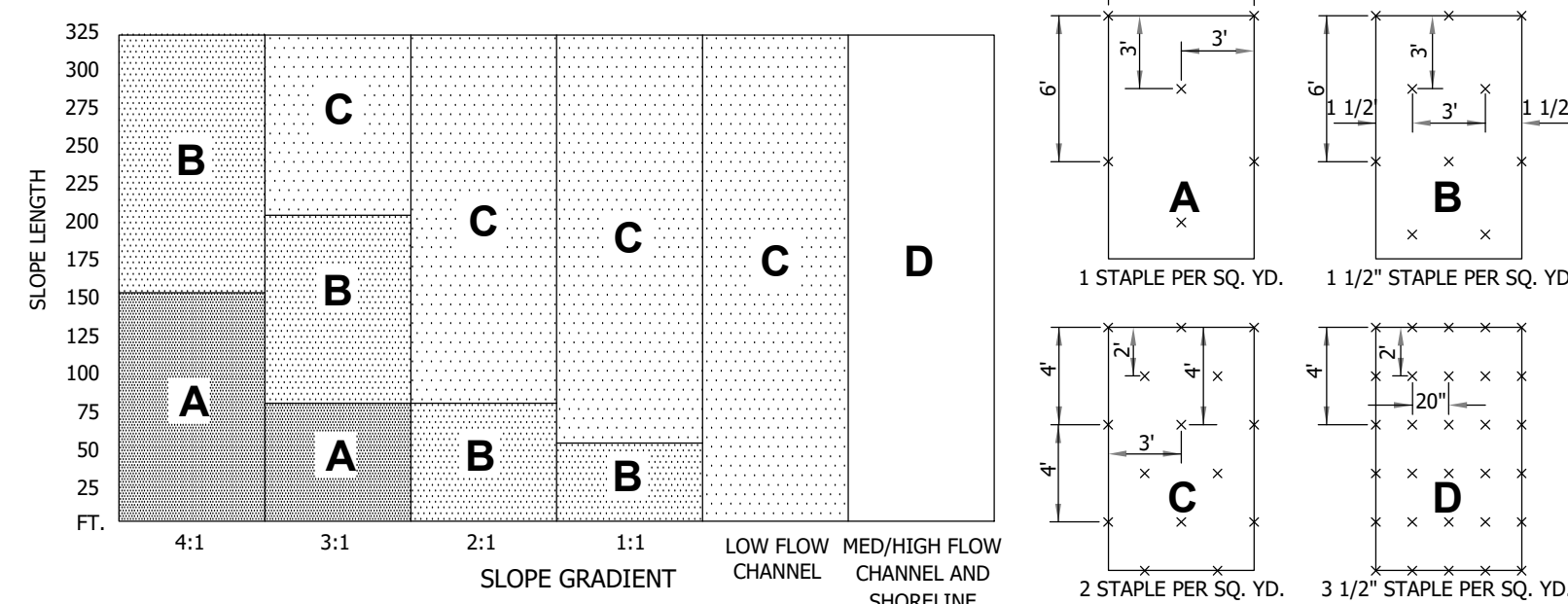


**NOTE:**

1. PRIOR TO INSTALLATION, MANUFACTURER SPECIFICATIONS OF FILTER MEDIA SHALL BE PROVIDED TO THE EROSION CONTROL INSPECTOR FOR APPROVAL AND USE. DISCHARGE FROM FILTER MEDIA SHALL MEET OR EXCEED THE PROVISIONS OF THE CLEAN WATER ACT.
2. ENSURE THAT PUMP PRESSURE DOES NOT EXCEED FILTER MEDIA PRESSURE RATING.
3. FILTER MEDIA MAY BE, BUT NOT LIMITED TO, SAND MEDIA FILTRATION DEVICES, RATED FILTER FABRIC BAGS OR POLYMER BASED DEWATERING PRACTICES.
4. PUMP STRAINER SHALL NOT BE IN CONTACT WITH BOTTOM OF POND.

**03 TEMPORARY DEWATERING**  
NOT TO SCALE

**GENERAL STAPLE RECOMMENDATIONS**



**TEMPORARY SEEDING SPECIFICATIONS**

SEED SPECIES	RATE PER ACRE	PLANTING DEPTH	OPTIMUM DATES
WHEAT OR RYE	150 LBS	1 TO 1-1/2 INCHES	SEPT. 15 - OCT. 30
SPRING OATS	100 LBS	1 INCH	MAR. 1 - APR. 15
ANNUAL RYEGRASS	40 LBS	1/4 INCH	MAR. 1 - MAY 1    AUG. 1 - SEPT. 1
GERMAN MILLET	40 LBS	1 TO 2 INCHES	MAY 1 - JUNE 1
SUDANGRASS	35 LBS	1 TO 2 INCHES	MAY 1 - JULY 30
BUCKWHEAT	60 LBS	1 TO 2 INCHES	APR. 15 - JUNE 1
CORN (BROADCAST)	300 LBS	1 TO 2 INCHES	MAY 11 - AUG. 10
SORGHUM	35 LBS	1 TO 2 INCHES	MAY 1 - JULY 15

**NOTE:**

1. CHANNEL LINING UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.
2. STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL.
3. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.

**05 EROSION CONTROL MAT INSTALLATION AND DETAIL**  
NOT TO SCALE

#	Revision	Date

Project #: 21-400-194-1

Designed By: WMW

Drawn By: RHL

Checked By: ALC

Date: 01/04/2023



*Aaron Crow*

**EROSION CONTROL DETAILS**

**C810**

**SITE NAME**  
The area scheduled for construction is known as "Wheatland Wastewater Treatment Plant and Regional Lift Station" (hereinafter referred to as the "Project")

**PROJECT LOCATION**  
The project is located in the Town of Wheatland, IN and includes properties outside of the town's property line.

**OWNER'S INFORMATION**  
Name: Town of Wheatland, Indiana  
Address: 121 IN-550, Wheatland, IN 47597  
Contact: Brett Dawson  
Title: President of Town Council  
Telephone:  
Email: bdawson@townofwheatland.in

**OPERATOR'S INFORMATION**  
Name: Wheatland Water Department  
Address: 121 IN-550 Wheatland, IN 47597  
Contact: Erka Goble  
Title: Town of Wheatland Deputy Clerk and Water Operator Apprentice  
Telephone: (812) 291-0713  
Email:  
Note: Wastewater Operator will be secured at a later date.

**NOTICE OF INTENT**  
All parties defined as owners must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOI's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an owner is defined as any party meeting either of the following requirements:  
1) The party has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.  
2) The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

**A2 11" x 17" PLAT**  
Refer to the Site Layout Plan.

**A3 PROJECT NARRATIVE**  
The Town of Wheatland Wastewater Improvements Division I project involves installation of a new packaged WWTP that includes an aeration treatment facility with a manual influent bar screen, activated sludge aeration tanks, secondary clarifiers, ultraviolet disinfection, and post aeration. Solids management includes aerobic digestion and a sludge holding tank, along with a covered drying bed. A regional lift station will also be included to pump collections and decant.

**A4 VICINITY MAP**  
Refer to the Cover Sheet

**A5 LEGAL DESCRIPTION OF THE PROJECT SITE**  
Section: 14  
Township: Steen  
Range:

**A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS**  
The site is not subdivided into lots; therefore, all proposed site improvements are shown on the included plans.

**A7 HYDROLOGIC UNIT CODE (HUIC)**  
0512020290

**A8 STATE AND FEDERAL WATER QUALITY PERMITS**  
Indiana Department of Environmental Management (IDEM) Rule 5

**A9 SPECIFIC POINTS WHERE STORMWATER DISCHARGE WILL LEAVE THE SITE**  
Stormwater drainage from the Town of Wheatland drains via roadside stormpiles and vegetated drainage ditches to Steen Ditch for the south side of the town and the Opossum branch on the north side of the town. Both the Opossum Branch and Steen Ditch outlet into Pond Creek.

**A10 LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON AND ADJACENT TO THE SITE**  
Steen Ditch runs through the south side of town. There are no ponds or stormwater detention reservoirs within the limits of the town of Wheatland except for the red pond for the town's water treatment plant. This pond is meant for red water detention from the WTP and only collects sheet flow directly around the outside edge of the pond.

**A 11 IDENTIFICATION OF ALL RECEIVING WATERS**  
White River is the ultimate receiving water for this project. Temporary stormwater storage is done in Pond Creek and in Kessinger Ditch, which are upstream of White River and Steen Ditch flows into Pond Creek.

**A12 IDENTIFICATION OF ALL POTENTIAL DISCHARGES TO GROUNDWATER**  
There are no locations on site where surface water may be discharged into groundwater.

**A13 100 YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES**  
The project site is located in an unshaded Zone X as indicated on the Hancock County, IN Flood Insurance Rate Map 1804220175C dated 02/15/1985.

**A14 PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK DISCHARGE**

PRE-DEVELOPMENT	POST-DEVELOPMENT
Q2 = 0.342 CFS	Q2 = 0.342 CFS
Q10 = 0.488 CFS	Q10 = 0.488 CFS
Q25 = 0.578 CFS	Q25 = 0.578 CFS
Q100 = 0.733 CFS	Q100 = 0.733 CFS

**A15 ADJACENT LAND USE**  
North: Agricultural  
South: Agricultural  
East: Agricultural  
West: Agricultural

**A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS**  
Approximate boundaries of disturbed areas are as identified on the Erosion Control Plan.

**A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER**  
Approximate areas of existing vegetative cover are as shown on the Existing Conditions Plan or Topographic Survey.

**A18 SOILS MAP INCLUDING SOIL DESCRIPTION AND LIMITATIONS**  
The Natural Resources Conservation Service (NRCS) Web Soil Survey of Knox County, Indiana indicates Ragdsdale silt loam (Ra), and Reesville silt loam (ReA) are located within the project site.  
The on-site soil will be treated as recommended by the geotechnical engineer if the conditions are unsuitable for the proposed construction.

**A19 LOCATIONS, SIZE, AND DIMENSIONS FOR THE PROPOSED STORMWATER SYSTEMS**  
Locations of stormwater systems: Refer to the Site Utility Plan  
Size of storm sewers: Refer to the Site Utility Plan or Storm Sewer Profiles  
Details of storm inlets and manholes: Refer to the Construction Details

**A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT**  
No projects directly adjacent to the town limits of the Town of Wheatland, IN are to occur during the construction of the new packaged WWTP and regional Lift Station

**A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL**  
Excess soil shall be immediately stockpiled, surrounded with silt fence, and seeded and/or removed from the project site in accordance with all applicable laws. If topsoil stockpiles are anticipated for this project, they are shown on the Erosion Control Plan.

**A22 EXISTING SITE TOPOGRAPHY**  
Refer to the Existing Conditions Plan or Topographic Survey

**A23 PROPOSED FINAL SITE TOPOGRAPHY**  
Refer to the Site Grading Plan

**B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES**  
The following potential pollutant sources may be associated with construction activities on site:  
1. Material storage areas  
2. Construction waste material  
3. Fuel storage areas and fueling stations  
4. Exposed soils  
5. Leaking vehicles and equipment  
6. Sanitary waste from temporary toilet facilities  
7. Litter  
8. Windblown dust  
9. Soil tracking off site from construction equipment

The following materials may be staged or stored on site at various points during construction:  
1. Structural fill  
2. Pavement base stone  
3. HDPE, PVC, RCP, or Ductile Iron Pipe  
4. Precast concrete, HDPE, or PVC drainage and sanitary structures  
5. Riprap

**B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES**  
Pre-construction Activity  
1. The exact locations of all existing utilities within the project limits are to be verified prior to construction.  
2. Schedule pre-construction meeting with local stormwater authority 48 hours prior to start of construction.  
3. Install protection fencing for existing trees to remain in place within the project limits

Construction Site Access  
1. Install gravel construction entrance  
2. Post the NOI and contact information at the construction entrance. NOI to remain posted for duration of the project.  
3. Install construction staging pads, fueling station, material storage areas, concrete washout, construction parking areas, and stabilize construction routes

Perimeter Controls  
1. Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed.

Initial Land Clearing and Grading Activities  
1. Add protection measures to existing inlets.  
2. Strip the topsoil and stabilize the topsoil stockpile.

Secondary Land Grading Activities  
1. Begin site grading/construction of detention basins (if applicable) and stabilize any soil stockpiles that will be left dormant for more than 10 days.  
2. Complete the cut and fills on the site. Final grade and seed the pond slopes (if applicable). Stabilize slopes with erosion control blanket.  
3. Install storm sewer system and install inlet protection immediately upon complete of the inlet and install rip-rap outlet protection prior to installing outlets.

Surface Stabilization  
1. Apply temporary seeding and stabilize slopes in areas where rough grading has been completed.  
2. Apply permanent seeding and stabilize slopes in areas where final grading has been completed.

Building Construction  
1. Prior to building construction install stone surface for paved areas.  
2. Building pads left dormant for more than 10 days, must be temporarily seeded.  
3. Start building construction. Install staging area for building materials and stabilize.

Final Shaping/Landscaping  
1. Utilize topsoil salvage in applicable areas and apply permanent seeding.  
2. Apply permanent seeding around the perimeter of the site.  
3. Complete utility installation, curbs, paving, and building construction.  
4. Install landscaping plant material and stabilize all disturbed areas.  
5. Remove all erosion and sediment control practices when areas have a uniform grass cover.

**B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS**  
Construction entrances will be in place prior to any site construction or demolition. Entrances are shown on the Erosion Control Plan. Refer to the Erosion Control Details for details.

**B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS**  
Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 4:1 (horizontal to vertical). Silt fencing will be utilized to prevent sedimentation from leaving the site. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

**B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS**  
Proposed swales will be stabilized with erosion control blankets. Straw bales and silt fences will not be allowed as concentrated flow protection measures. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

**B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS**  
The contractor shall install appropriate inlet protection measures at each inlet. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details. Straw bales will not be allowed as inlet protection measures. These inlet protection measures should be installed as soon as the inlets are installed or shortly thereafter.

**B7 RUNOFF CONTROL MEASURES**  
N/A

**B8 STORMWATER OUTLET PROTECTION MEASURES**  
NA

**B9 GRADE STABILIZATION STRUCTURE LOCATIONS**  
N/A

**B10 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE**  
Refer to the Erosion Control Plan for locations of each stormwater quality measure and the Erosion Control Details and Site Construction Details.

**B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON**  
Surface stabilization is required on any bare or thinly vegetated areas that is scheduled or likely to remain inactive for a period of 10 days or more. Refer to the Temporary Seeding Detail within the Erosion Control Details for specifics on soil amendments, seed mixtures, and mulching. The surface stabilization for the lots needs to be established as soon as possible to prevent dirt wash-out into the streets. If this is not possible, then silt fencing will need to be installed along the back of curbs.

**B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS**  
1) Loosen lawn area to a minimum depth of 6 inches. Mix soil amendments and fertilizers with topsoil at rates specified. Organic soil amendments such as peat, compost, or manure shall be applied at 2" depth evenly over soil and incorporated into the top 6" of topsoil. Provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 square feet of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. At least 50 percent of nitrogen to be organic form. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.  
2) Fertilizer for lawns: provide a fast release fertilizer with a composition of 1 lb per 1,000 square feet of actual nitrogen, 4 percent phosphorus, and 2 percent potassium by weight.  
3) Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus and potassium made up of a composition by weight of 5 percent.  
4) Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Limit fine grading to areas that can be planted within immediate future. Remove trash, debris, stones larger than 1 inch diameter, and other objects that may interfere with planting or maintenance operations. Sow seed using a spreader of seeding machine. Do not seed when wind velocity exceeds 5 miles per hour.  
5) Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to each other.  
6) Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with a fine spray.  
7) Install erosion control blankets as indicated on the Erosion Control Plan.  
8) Protect seeded areas against erosion by spreading clean, seed-free straw mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not less than 1-1/2 inches loose measurements over seeded areas.  
9) Water newly planted lawn areas and keep moist until new grass is established. Immediately repair any lawn areas disturbed by construction activities including tree and shrub installation.  
10) Refer to the Permanent Seeding Details within the Erosion Control Detail Sheet, for timing of permanent seeding, grass seed specifications and mulching specifications.

**B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN**  
Solid Waste Disposal  
No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to construction activity, must be collected in containers or closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.  
A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.  
Hazardous Waste  
Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.  
Use containment berms in fueling and maintenance areas and where potential for spills is high.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.  
Dust Control/Off-Site Vehicle Tracking  
During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should be stabilized to reduce dust.  
Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked onto existing street. If sediment escapes the construction site, off-site accumulations of sediment must be removed a frequency sufficient to minimize off-site impacts.  
Sanitary/Septic  
Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.  
Water Source  
Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.  
Equipment Fueling and Storage Areas  
Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed areas). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.  
Equipment wash-down (except wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.  
Hazardous Material Storage  
Chemicals, paint, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resealable, store the products in a clearly labeled, waterproof container). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal state, and local regulations.  
As may be required by federal, state or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill and Response Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.  
Material Handling and Spill Prevention  
Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spill) to the local governing authority. The SWPPP must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications minimize the possibility of future occurrences. Each contractor and subcontractor is responsible for complying with these reporting requirements.  
Concrete Washout  
All concrete trucks waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes.  
Spill Response Plan  
Minor - Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc. can be controlled by the first responder at the discovery of the spill.  
• Contain spill to prevent material from entering storm or groundwater. Do not flush with water or bury.  
• Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly.  
• Significant Spills - Approximately ten gallons or less of pollutants with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:  
• Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.  
• Use absorbent material to clean-up spills and dispose of properly. Spills on impervious surfaces should be disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.  
• Contact 911 if the spill could be a safety issue  
• Contact supervisors and designated site inspectors, including MS4 personnel, immediately.  
• Contaminated solids are to be removed to an approved landfill.  
Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals, or has the potential for surface or groundwater pollution.  
• Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system  
• Immediately contact the local Fire Department at 911 to report any hazardous material spill.  
• Contact supervisors and designated site inspectors immediately. Governing authorities, including MS4 personnel, responsible for stormwater facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible.  
• As soon as possible but within 2 hours of discovery, contact the local agency responsible for spill management. The following information should be noted for future reports to the agency:  
• Name, address and phone number of person making the spill report  
• The location of the spill  
• The time of the spill  
• Identification of the spilled substance  
• Approximate quantity of the substance that has been spilled or may be further spilled  
• The duration and source of the spill  
• Name and location of the damaged waters  
• Name of spill response organization  
• What measures were taken in the spill response  
• Other information that may be significant  
Additional regulations or requirement may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is given by the appropriate agency.  
B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE  
Inspection Schedule/Reporting  
All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rainfall of 0.5 inch or greater. Where sites have been fine or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g. site is covered with snow, ice, or frozen ground), such inspections shall be conducted at least once every month.  
Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, this SWPPP, and the Project.  
Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether the site was in compliance or identify and incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local governing authority.  
Construction Entrance  
Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWPPP.  
Material Storage Inspections  
Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely by the subject project are considered to be part of the project and must be included in the erosion control plans and site inspection reports.  
Soil Stabilization Inspections  
Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.  
Erosion and Sediment Control Inspections  
All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls:  
1. Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored.  
2. Inlet Protection: If silt fence inlet protection is to be used, sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.  
3. Mulching: Inspect for thin or bare spots caused by natural decomposition or weather-related events. Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection.  
4. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of the fence.  
5. Stabilized Construction Entrance: Periodic re-grading and top dressing with additional stone.  
6. Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish a watering and fertilizing schedule.  
7. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter.  
In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to user of public street.

Modifications/Revisions to SWPPP  
Based on inspection results, any necessary modification to this SWPPP shall be implemented within seven (7) calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions showing seven (7) calendar days of the inspection.  
It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more control than were originally planned. For example, localized concentrations of surface runoff or unusually steep areas could require additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved. Contractors and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update this SWPPP in order to accomplish the intended goals.  
Notice of Termination  
Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.  
All permittees must submit an NOI within thirty (30) days after one or more of the following conditions have been met:  
1. Final stabilization has been achieved on all portions of the site for which the permittee was responsible.  
2. Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.  
3. In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.  
B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS  
The site is not currently subdivided, therefore the entire site is on this plan's Erosion Control Plan.  
C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE  
The proposed land use is for the construction of the Wheatland Wastewater System Improvements Division II - Gravity Sewer System Project which involves constructing new 8 in. gravity sanitary sewer in residential and commercial areas. The pollutants and sources of each pollutant normally expected from the types of land use within the town are as follows:  
Pollutant Source: Passenger vehicles, delivery vehicles.  
Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.  
Pollutant Source: Building  
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.  
Pollutant Source: Trash Dumpster  
Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), uneaten food products, bacteria.  
Pollutant Source: Parking Lot  
Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing, and patching), pavement de-icing materials, paint fragments from parking stall striping, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.  
Pollutant Source: Lawn and Landscape Areas  
Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)  
C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION  
The grass-lined channels and swales will serve as the permanent water quality features after construction is complete. The purpose of these features is to filter pollutants and sediment.  
C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES  
Vegetated Swale  
Vegetated swales are designed to reduce pollutant and sediment loads in stormwater runoff. Stormwater runoff is directed into the swale which conveys the runoff from the site. While moving through the swale, runoff velocity is greatly decreased allowing infiltration (uptake of nutrients by plants), infiltration (percolation of water through the swale's porous soil substrate), and sedimentation (settling of later suspended particles).  
Permanent Vegetation  
Topsoil will be placed in lawn areas and seeded with grass, and graded not to exceed 3:1 slopes. Proposed landscape trees and shrubs will also be added. These bio areas will act as a natural filter strip to help improve stormwater quality. The vegetated areas will slow the velocities of stormwater runoff, reduce sediment runoff, and reduce problems associated with mud or dust from bare soils.  
Good Housekeeping Measures  
Good housekeeping measures such as regular street or pavement sweeping, installation of trash receptacles, and reduction in fertilizer overspray can be incorporated by the owner and/or occupant.  
C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE  
Refer to the Erosion Control Plans for locations and Erosion Control Details for details.  
C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES  
Maintenance requirements for the stormwater quality measures which will remain in place after construction is complete, are described below.  
Vegetated Swale  
Vegetated swales require little maintenance if properly designed. Mow as needed during the growing season; inspect for erosion control problems twice during the first year, annually thereafter; and removed sediment, trash and debris annually or more frequently if needed.  
Wet Detention Pond  
Remove debris and sediment from entire pond when necessary. Inspect perimeter of basin annually and after major storm events. Regrade soil if gullies form and replant ground. Inspect inlet and outlet devices and structures annually and after major storm events.



**KNOX COUNTY SOILS CHARACTERISTICS AND LIMITATIONS**  
• Ra - RAGSDALE SILT LOAM  
• ReA - REESVILLE SILT LOAM, 0 TO 2 % SLOPES

#	Revision	Date
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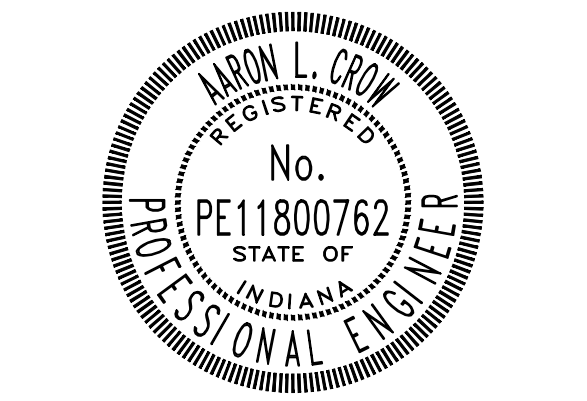
Project #: 21-400-194-1

Designed By: WMW

Drawn By: R LH

Checked By: AL C

Date: 01/04/2023



*Aaron Crow*

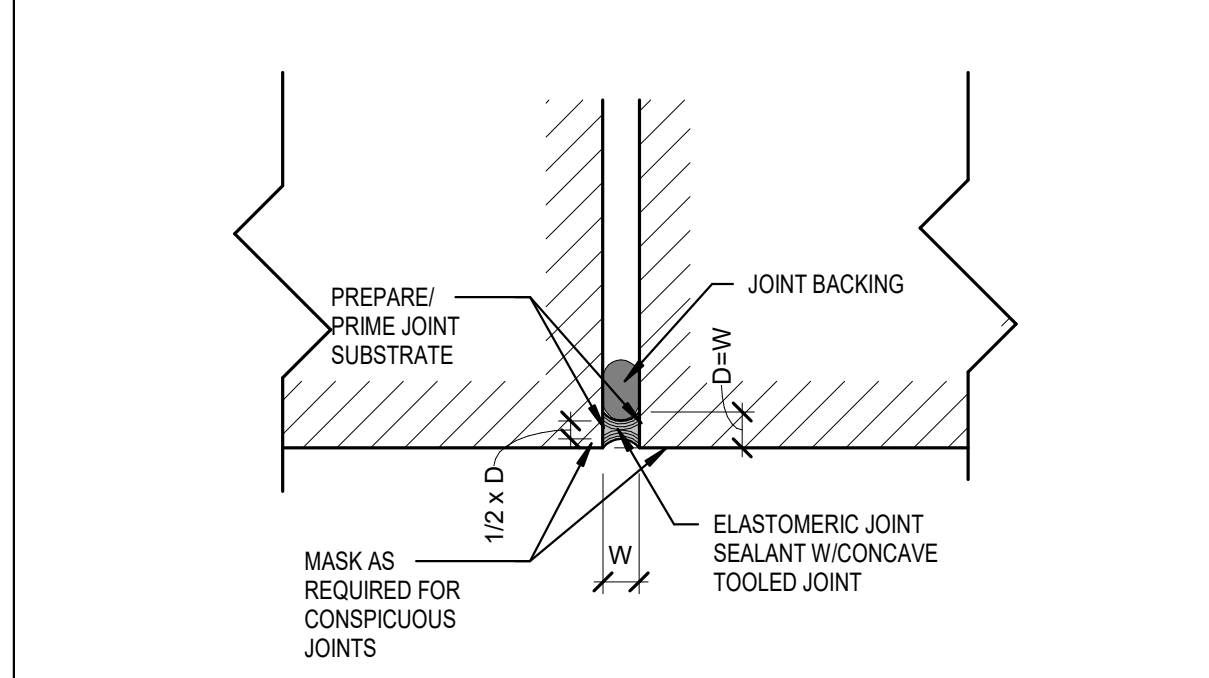
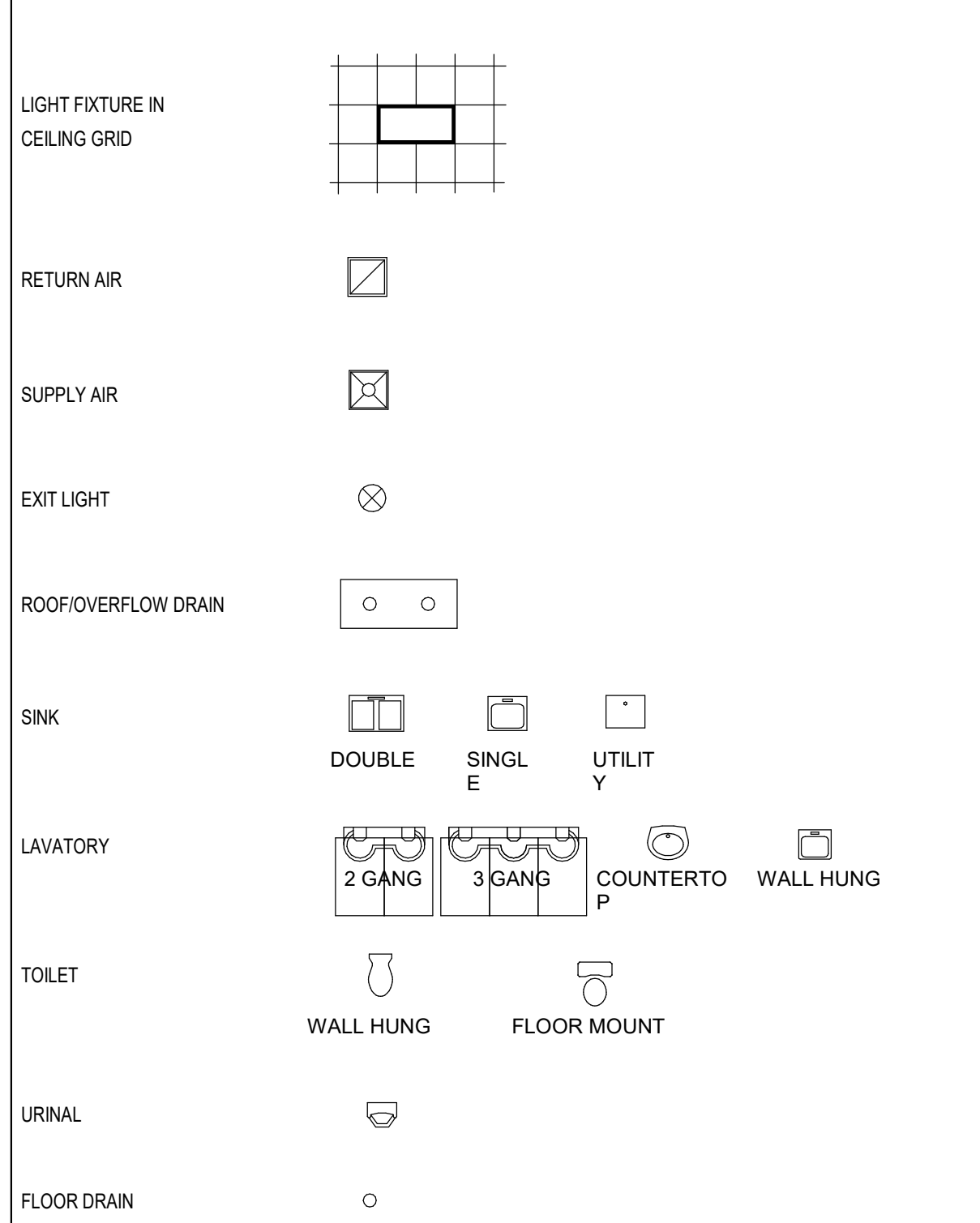
**STORMWATER POLLUTION PREVENTION PLAN C811**



### ABBREVIATIONS

<b>A LABEL</b> AIE ADA ADD ADMIN AFF ALUM AMT APPROX APT ARCH ASI ASSN ASSY ASTM AVE AVG AWI	Class A door architect/engineer Americans with Disabilities Act addendum administration above finished floor aluminum amount approximate apartment Architect Architect's Supplemental Instruction association assembly American Society for Testing and Materials avenue average Architectural Woodworking Institute	<b>B LABEL</b> BD BFC BFF BITUM BLDG BLKHD BLVD BOCA BOT BRG BRG PL BSMT CAB CB CB CCTV CD CD CEM PLAS CEM PLAS CLG CIP CJ CL CLG CLO HT CLO CLR CMU CNTR CNTRTP COL CONC CONC FLR CON CONSTR COORD CORR CPT CSI CSMT CSWK CT CTB CTF CTR CU FT CU IN CUB CUST	Class B door board below finished ceiling below finish floor bituminous building bulkhead boulevard Building Officials and Code Administrators Association International bottom bearing plate basement cabinet chalk board ceramic base closed circuit television construction documents contract documents cement plaster cast-in-place construction joint control joint center line ceiling ceiling height closet clear concrete masonry unit counter countertop column concrete concrete floor conference construction coordinate corridor carpet Construction Specifications Institute casement casework ceramic tile ceramic tile base ceramic tile floor center cubic feet cubic inch custodian	<b>D LABEL</b> DAT db DBL DBL ACT DR DBL GLZ DEG DEG C DEG F DEL DEMO DEPT DET DF DH DIA DIFF DIM DIR DISP DIV DJ DN DS DWG DWR	Class D door datum decibel double double acting door double glaze degree degrees Celsius degrees Fahrenheit delete demolition department detail drinking fountain double hung (door, window) diameter diagonal diffuser dimension direction dispenser division double joist down door down spout drawing drawer	<b>E LABEL</b> EAC EC EFS EIFS EJ EU/ELEV ELEC ELEV EMER ENAM ENCLOS ENTR EOS EPDM EQ EQUIP EQUIV ESCAL ESMT EST ECT EXIST EXP JT FAB FAS FAS BD FC FD FDTN FE FEC FED FH FH FHC FIG FIN FIN FLR FIN GR FIN WD FIXT FLASH FLG FLMT FLR FLR FIN FLUT CMU FOC FOF FORM FOS FOUND FOW	Class E door each Electrical Contractor exterior finish system exterior insulation and finish system expansion joint elevation electric elevator emergency enamel enclosure entrance edge of slab ethylene propylene diene monomer equal equipment equivalent escalator easement estimate et cetra existing expansion joint fabric fascia file cabinet floor drain foundation fire extinguisher fire extinguisher cabinet federal fire hose fire hydrant fire hose cabinet figure finish finish floor finish grade finish wood fixture flashing flooring flush mount floor floor finish fluted concrete masonry unit face of concrete face of finish face of masonry face of slab foundation face of wall	<b>FPC</b> FR FRG FRP FRZ FT FTG FTR FURG FURN FWC	Fire Protection Contractor fire resistant fiber reinforced concrete fiber reinforced gypsum fiberglass reinforced plastic freezer feet, foot footing finned tube radiation furring furniture fabric wall covering	<b>GAL</b> GALV GC GFRG GFRP GL BLK GLU LAM GOVT GWB HAZ HAZ MAT HC HC HCWD HD HDBD HDO HDW HDWD HM HORIZ HQ HR HT HTR HWY HVAC	gauge galvanized General Contractor glass-fiber-reinforced concrete glass-fiber-reinforced gypsum glass-fiber-reinforced plaster glass-fiber-reinforced plastic glass block glue laminated wood government gypsum wallboard hazard hazardous materials handicap hose cabinet hollow core wood door hand dryer heavy duty hardwood high density overlay hardware hardwood hollow metal horizontal headquarters height heater highway heating, ventilation and air conditioning	<b>IBC</b> ID ID IN INSTL INSTR INSUL INT JAN JAN CLO KD KIT KO LAM LAM GL LAC LAU LAV LC LDG LED LF LF INS LH LHR LIB LKR RM LN LOC LQG L LT GA LVDR	International Building Code inside diameter inside dimension inch/ inches install instrument insulation, (e), (ed) interior janitor janitor closet knock down kitchen knockout laminate laminated glass lacquer laundry lavatory laundry chute landing light emitting diode linear feet (foot) loose fill insulation left hand left hand reverse library locker room lane location large light light gauge louver door	<b>MAINT</b> MAN MATL MAX MB MC MCH MD MDO MEAS MECH MECH RM MED MEMB MEZZ MFG MFR MFR REC MGT MIN MIR MISC ML MLDG MLWK MO MT MTD MTG MTL MULL	maintenance manual material maximum marker board Mechanical Contractor mail chute metal deck medium density overlay measure mechanical mechanical room medium melamine membrane mezzanine manufactured manufacturing manufacturer manufacturer's recommendation management minimum mirror miscellaneous metal lath molding (moulding) milwork masonry opening mount mounted mounting metal mullion	<b>NA</b> NBC NECS NFC NIBS NIC NO NOM NTS	not applicable National Building Code National Electric Code National Fire Code National Institute of Building Sciences not in contract number nominal not to scale	<b>OIO</b> OC OD OD OFC OFD OPNG OPP ORD ORIG OSHA	out to out on center outside diameter outside dimension office overflow drain opening opposite overflow roof drain original Occupational Safety and Health Administration	<b>PARG</b> PART PBD PCT PERF PKG PLAS LAM PLYWD PNL PORC PR	paring partial particleboard percent perforated package plastic laminate plywood panel porcelain pair	<b>PREFAB</b> PREFIN PREFMD PREP PRVG PROJ PT PT CONC	prefabricated prefinish preformed preparation parking project paint post-tensioned concrete	<b>R</b> RB RCP RD REBAR RECD RECPT REF REF REINF REQ REQD REQD RFI RFP RH RH RHR RM RO RTG RTU	radius resilient base reflected ceiling plan roof drain reinforcing steel bars reference refrigerator reinforced require required restroom request for information request for proposal right hand roof hatch right hand reverse room rough opening rating roof top unit	<b>SAT</b> SATC SCD SCH SCHED SCHM SCWD SD SD SECT SF SFTWD SHR SHT SIM SLNT SM SPEC SPKLR SQR SQ SQ IN SQ YD SS ST STA STD STL STL JST STL LNTL STL PL STL PL DK STL TUB STL TR STR STR STRUCT STRUCT SURF SURRE SURV SUSP SUSP CLG SV SVC SWR SYS	suspended acoustical tile suspended acoustical tile ceiling seal cover dispenser school schedule schematic solid core wood door soop dispenser section square foot (feet) softwood shower sheet similar sealant small specification sprinkler speaker square square inch square yard stainless steel street station standard steel steel joist steel lintel steel plate steel roof deck steel tube steel truss storage stairs structural STL structural steel supplement surface surround survey suspend suspended ceiling sheet vinyl service sewer system	<b>T&amp;G</b> T/O TAN TB TB TC TD TECH TEL TEMP TEMP TEMP TER TFA TFB TFF THK THRES THRU THRUOUT TOS TOM TPD TR TRANS TRANS TS TV TYP	tongue and groove top of tangent tack board towel bar terra colta towel dispenser technical telephone temperature temporary tempered glass terrazzo to floor above to floor below top of finish floor thickness threshold through throughout tapered insulation top of steel top of masonry toilet paper dispenser towel rack transom transparent tube steel television typical	<b>UBC</b> UFC UL UMC UNO UPC UPS UTIL	Uniform Building Code Uniform Fire Code Underwriters Laboratories Uniform Mechanical Code unless noted otherwise Uniform Plumbing Code uninterruptible power supply utility	<b>VAR</b> VAR VB VCT VCT VEH VERT VEST VIF VOL VP VR VTR WVC WVF W/CAB W/ W/O WB WC WD WH WHSE WO WP W/SCT WT	variation varies vinyl base vinyl composition tile vitrified clay tile vehicle vertical vestibule verify in field volume vener plaster vapor retarder vent through roof vinyl wall covering vinyl wall fabric wall cabinets with without wood base wall covering wood weep hole warehouse where occurs working point weight
---	---	---	--	--	--	---	---	--	--	---	--	---	--	---	--	--	---	--	---	--	---	--	--	--	---	---	---	--	--	---	--	--	--

### COMPONENT SYMBOLS

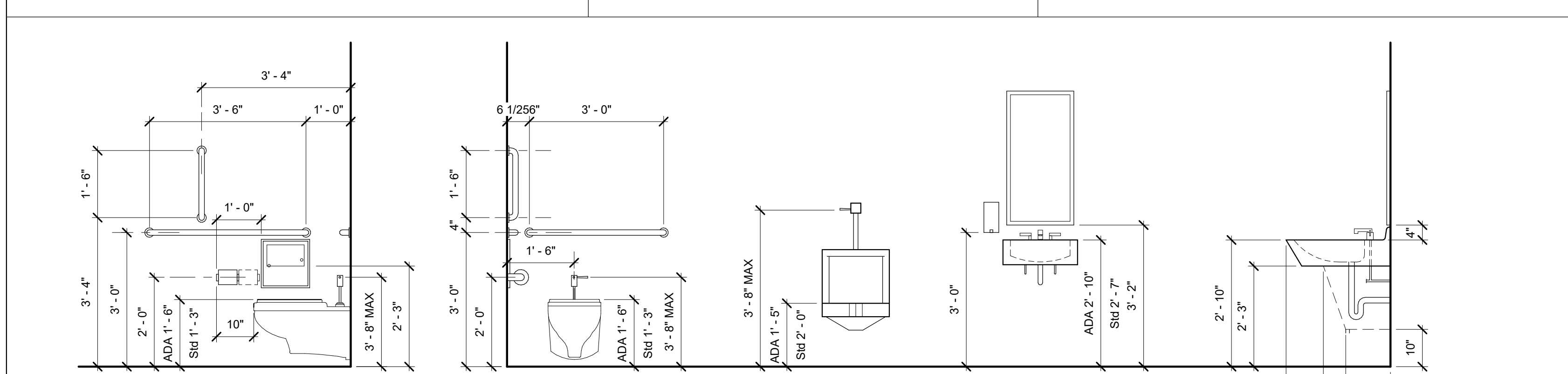


**NOTE:**  
3-POINT ADHESION IS UNACCEPTABLE

1. CYLINDER JOINT BACKING DIAMETER SHOULD BE 1.5 - 2 x JOINT WIDTH.
2. TOOL SEALANT WHEN THUMB PRINT HARD.
3. CLEAN OFF ANY EXCESS MASKING MATERIALS, SEALANT OR PRIMER FROM ADJACENT CONSTRUCTION.

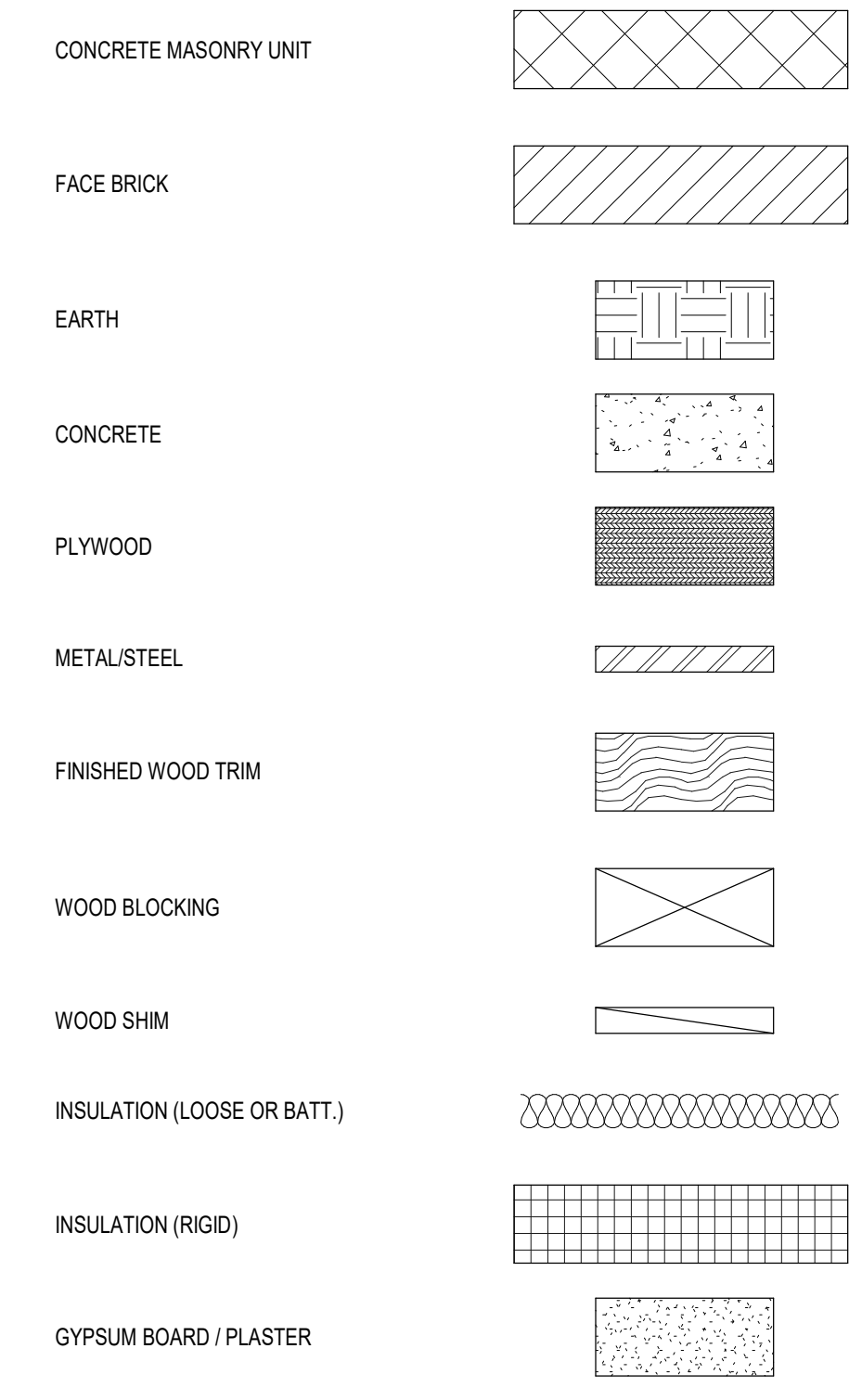
W = WIDTH  
D = DEPTH

**3B ELASTOMERIC SEALANT JOINT W/BACKING**  
6" = 1'-0"

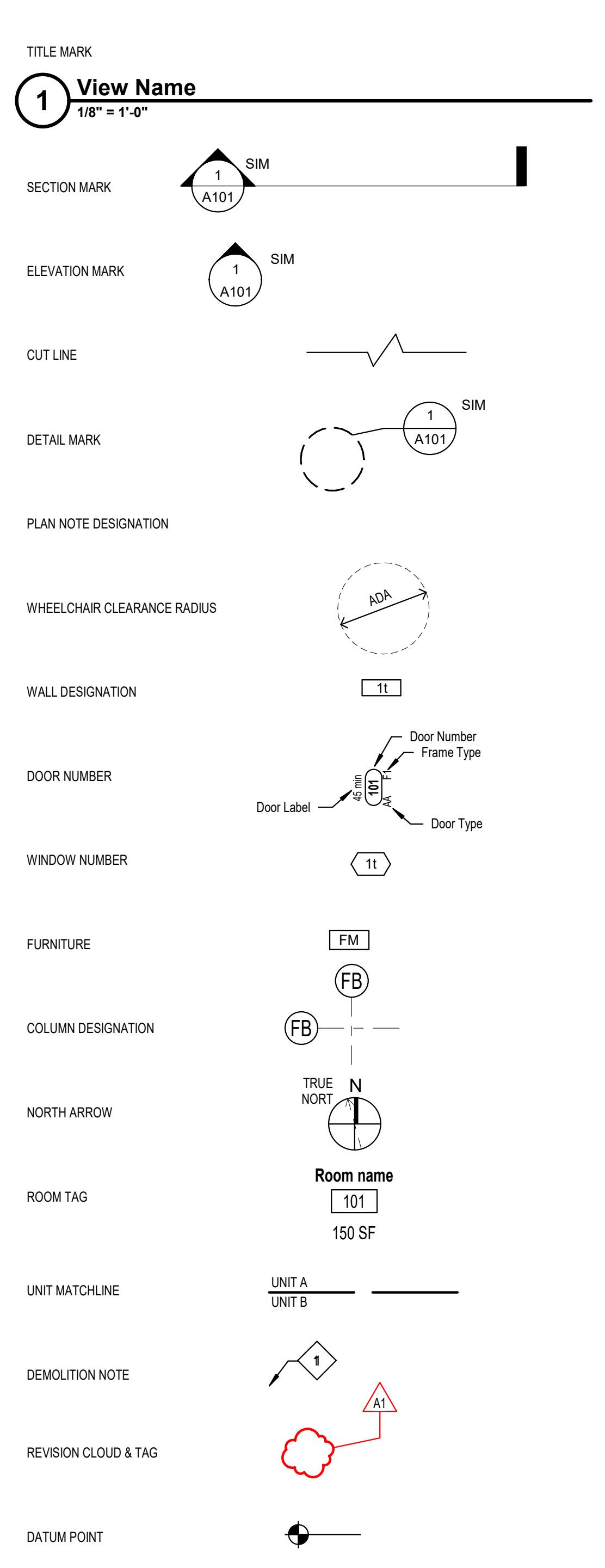


**3A STANDARD RESTROOM ELEVATIONS**  
1/2" = 1'-0"

### MATERIAL SYMBOLS



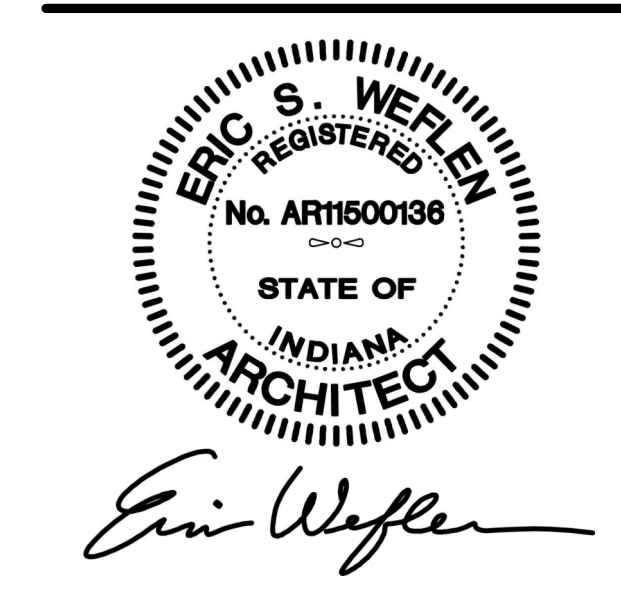
### REFERENCE SYMBOLS



**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD



ARCHITECTURAL GENERAL NOTES AND ABBREVIATIONS  
**A001**

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#	Revision	Date

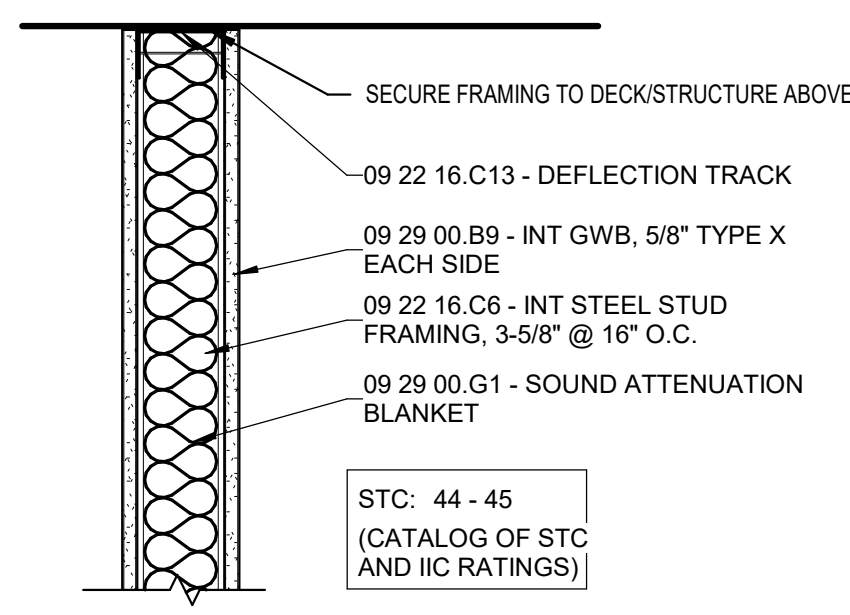
Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD



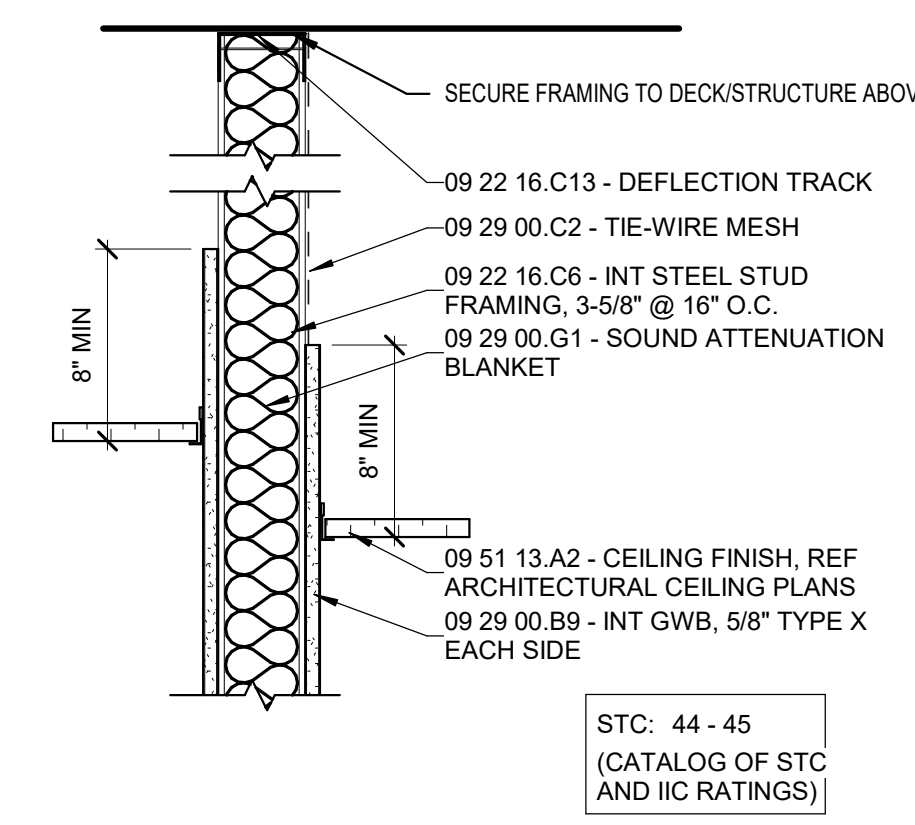
*Eric Weflen*

WALL TYPES

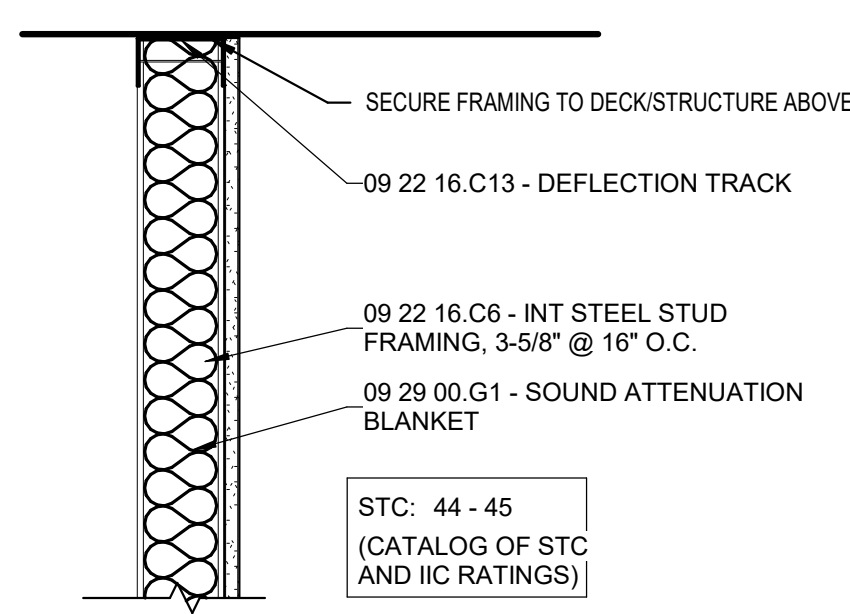
## A002



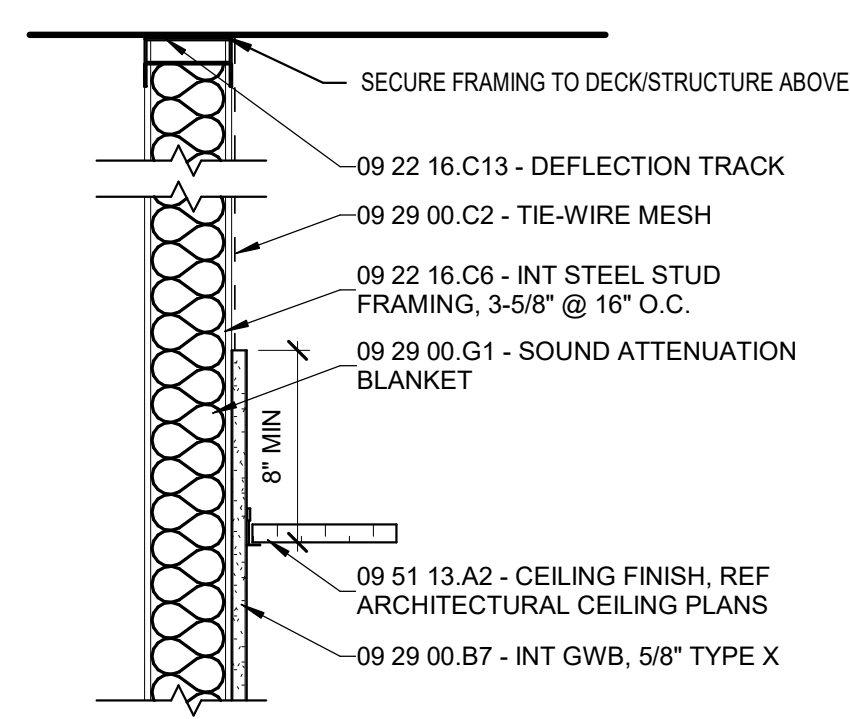
**3B S4iD WALL TYPE**  
 1 1/2" = 1'-0"



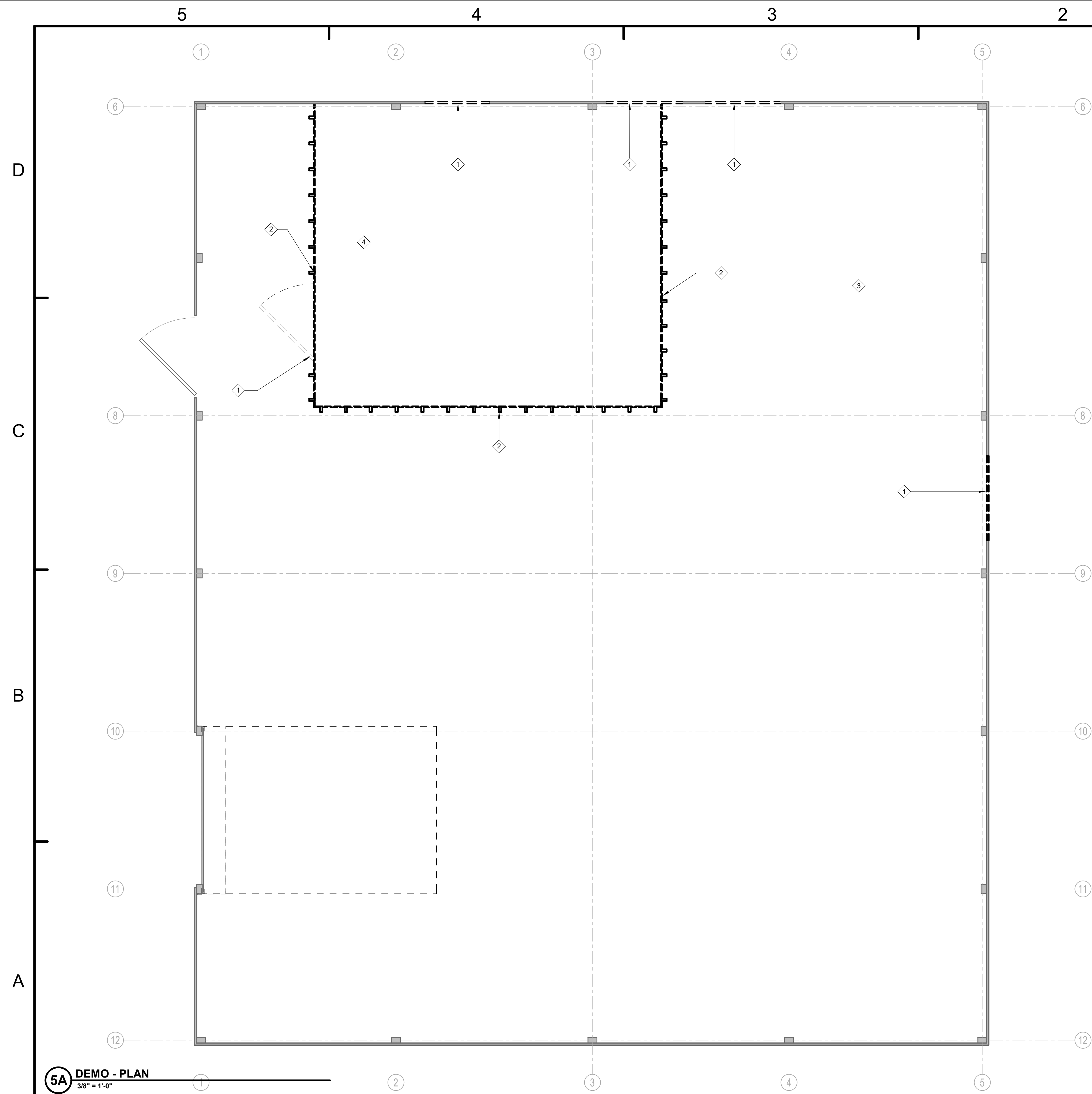
**2B S4iC WALL TYPE**  
 1 1/2" = 1'-0"



**3A S4iD' WALL TYPE**  
 1 1/2" = 1'-0"



**2A S4iC' WALL TYPE**  
 1 1/2" = 1'-0"



**GENERAL DEMOLITION NOTES**

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTING FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES/LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
4. ALL EXISTING EQUIPMENT AND FIXTURES SHALL REMAIN PROPERTY OF OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION OPERATIONS SHALL BE RETAINED FOR OWNER'S INSPECTION. ONLY ITEMS SO INSPECTED AND REJECTED BY OWNER SHALL BE DISPOSED. ALL OTHER SUCH ITEMS SHALL BE TURNED OVER TO OWNER FOR DISPOSITION.
5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO CLEANLY RECEIVE NEW WORK.
6. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO REMAIN EXPOSED AFTER COMPLETION OF NEW CONST. SHALL BE REPAIRED AND PATCHED AS REQUIRED TO RECEIVE NEW FINISHES.
7. OWNER WILL BE RESPONSIBLE FOR REMOVAL/REARRANGEMENT OF ALL EXISTING LOOSE FURNISHINGS DURING CONSTRUCTION, UNLESS NOTED OTHERWISE.
8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.

**5.4.092 - DEMO FLOOR PLAN NOTES**

Key	Note
1	REMOVE PORTION OF WALL. PREP FOR NEW OPENING. PRICED IN BASE BID
2	REMOVE EXISTING INTERIOR WALL CONSTRUCTION TO LIMITS INDICATED INCLUDING, BUT NOT LIMITED TO DOORS, FRAMES AND MISCELLANEOUS FRAMING. FIELD VERIFY ALL EXISTING WALL CONSTRUCTION AND CONDITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR FINISH CONDITIONS AND DIMENSIONS. PATCH AND REPAIR EXISTING SURFACES TO REMAIN. PRICED IN BASE BID
3	REMOVE EXISTING ROOF IN ITS ENTIRETY. PRICED IN ALT. 1
4	EXISTING EQUIPMENT (ELECTRONICS) TO BE REMOVED BY OTHERS

**5A DEMO - PLAN**  
3/8" = 1'-0"

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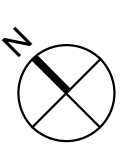
**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD

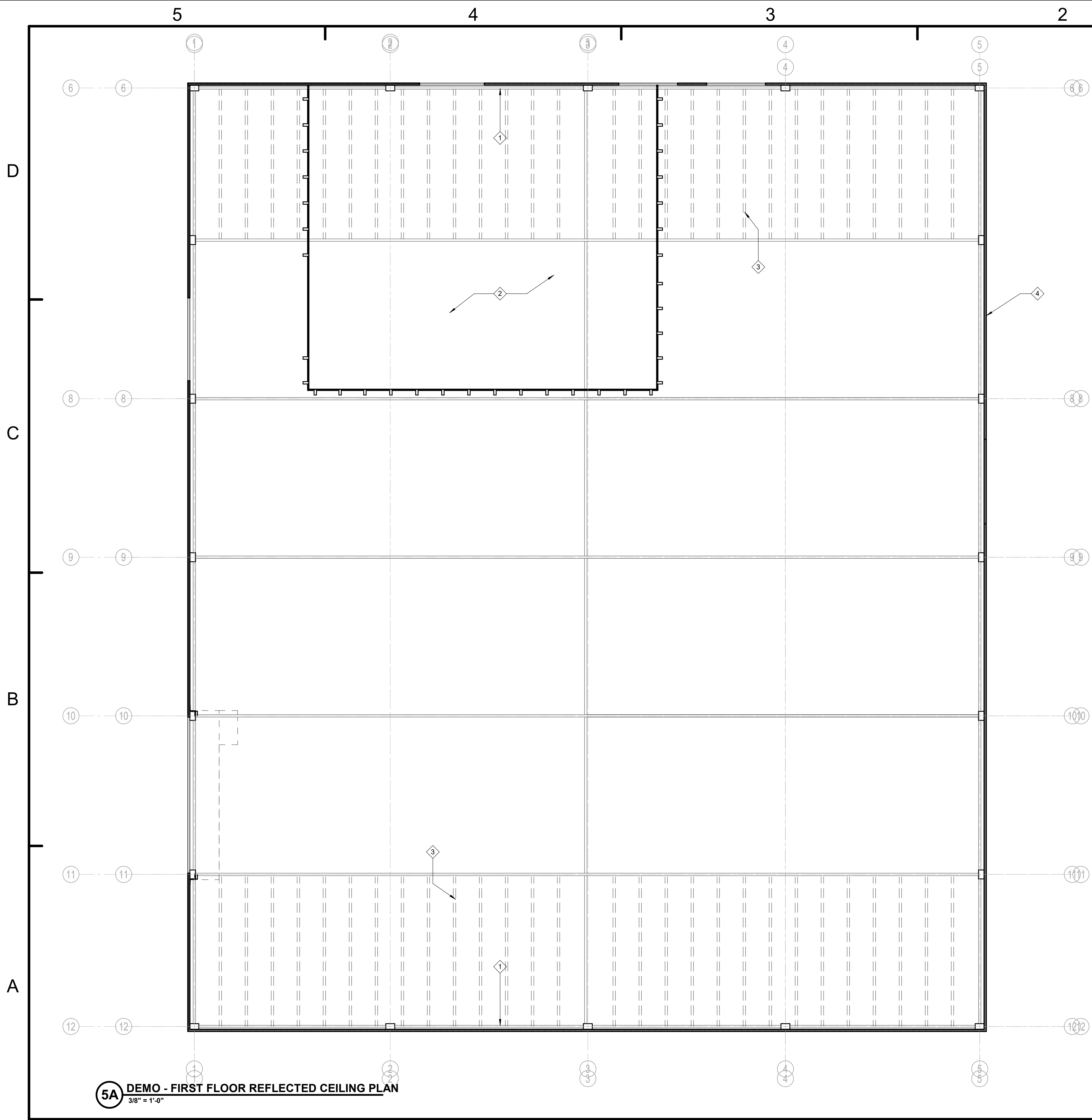


*Eric Weffler*



DEMOLITION PLAN - BASE BID

**AD100**



**GENERAL DEMOLITION NOTES**

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ARRANGEMENTS.
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURFACES, MATERIALS, AND COMPONENTS TO REMAIN OR BE RELOCATED. DAMAGE TO THESE RESULTING FROM PERFORMANCE OF WORK SHALL BE REPAIRED BY CONTRACTOR TO SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL EXPENSE TO OWNER.
3. CONTRACTOR SHALL PROVIDE TEMPORARY DUST PROTECTION AS REQUIRED TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM MIGRATING OUT OF PROJECT AREA. OWNER/ARCHITECT SHALL CONFIRM ALL DUST PREVENTION MEASURES LOCATIONS AND SHALL DETERMINE CHANGES TO THESE MEASURES.
4. ALL EXISTING EQUIPMENT AND FIXTURES SHALL REMAIN PROPERTY OF OWNER. ALL REUSABLE ITEMS SALVAGED DURING DEMOLITION OPERATIONS SHALL BE RETAINED FOR OWNER'S INSPECTION. ONLY ITEMS SO INSPECTED AND REJECTED BY OWNER SHALL BE DISPOSED. ALL OTHER SUCH ITEMS SHALL BE TURNED OVER TO OWNER FOR DISPOSITION.
5. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO RECEIVE NEW CONSTRUCTION SHALL BE PATCHED AND REPAIRED AS REQUIRED TO CLEANLY RECEIVE NEW WORK.
6. ALL EXISTING SURFACES LOCATED ADJACENT TO, OR EXPOSED BY DEMOLITION WORK AND SCHEDULED TO REMAIN EXPOSED AFTER COMPLETION OF NEW CONST. SHALL BE REPAIRED AND PATCHED AS REQUIRED TO RECEIVE NEW FINISHES.
7. OWNER WILL BE RESPONSIBLE FOR REMOVAL/REARRANGEMENT OF ALL EXISTING LOOSE FURNISHINGS DURING CONSTRUCTION, UNLESS NOTED OTHERWISE.
8. REFER TO MECH./ELEC. DRAWINGS FOR ADDITIONAL PATCHING AND PREPARATION WORK RELATED TO M.E.P. DEMOLITION ITEMS.
9. EXISTING SLEEVES, HOLES, AND OTHER PENETRATIONS OR NEW DAMAGE OF EXISTING BUILDING STRUCTURE ABOVE GRADE EXPOSED BY DEMOLITION AND REMOVAL OF PIPING, APPURTENANCES, EQUIPMENT SHALL BE PATCHED AND REPAIRED AS PART OF THE WORK. MAINTAIN FIRE RATINGS OF ALL AND ADJACENT CONSTRUCTION AFFECTED.
10. CAP ALL PIPING TO REMAIN OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH ALL LOCAL AND STATE PLUMBING AND HEALTH CODES. UTILIZE ONLY PRE-MANUFACTURED AND APPROVED FITTINGS TO CAP EXISTING PIPING.
11. EACH CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED OR NOTED FOR INSTALLATION OF NEW WORK. DEMOLITION MAY INCLUDE ASSOCIATED DISTRIBUTION SYSTEMS, APPURTENANCES, EQUIPMENT SUPPORTING CONTROLS, AND MISCELLANEOUS SUPPORTS, UNLESS NOTED OTHERWISE.
12. COORDINATE ALL DEMOLITION WITH PROJECT SEQUENCING AS DIRECTED BY GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.

**5.4.093 - DEMO CEILING PLANS**

Key	Note
1	REMOVE EXISTING TRUSS AND ITS ENTIRETY. PREP FOR NEW STRUCTURAL TRUSS INTALL PRICING IN ALTERNATE 1.
2	REMOVE EXISTING SHEATHING CEILING IN ITS ENTIRETY. PRICING IN BASE BID.
3	FIELD VERIFY AND REMOVE DECAYING RAFTERS. PRICING IN ALTERNATE 1.
4	REMOVE EXISTING METAL ROOF. PRICING IN ALTERNATE 1.



**CONSTRUCTION SET**  
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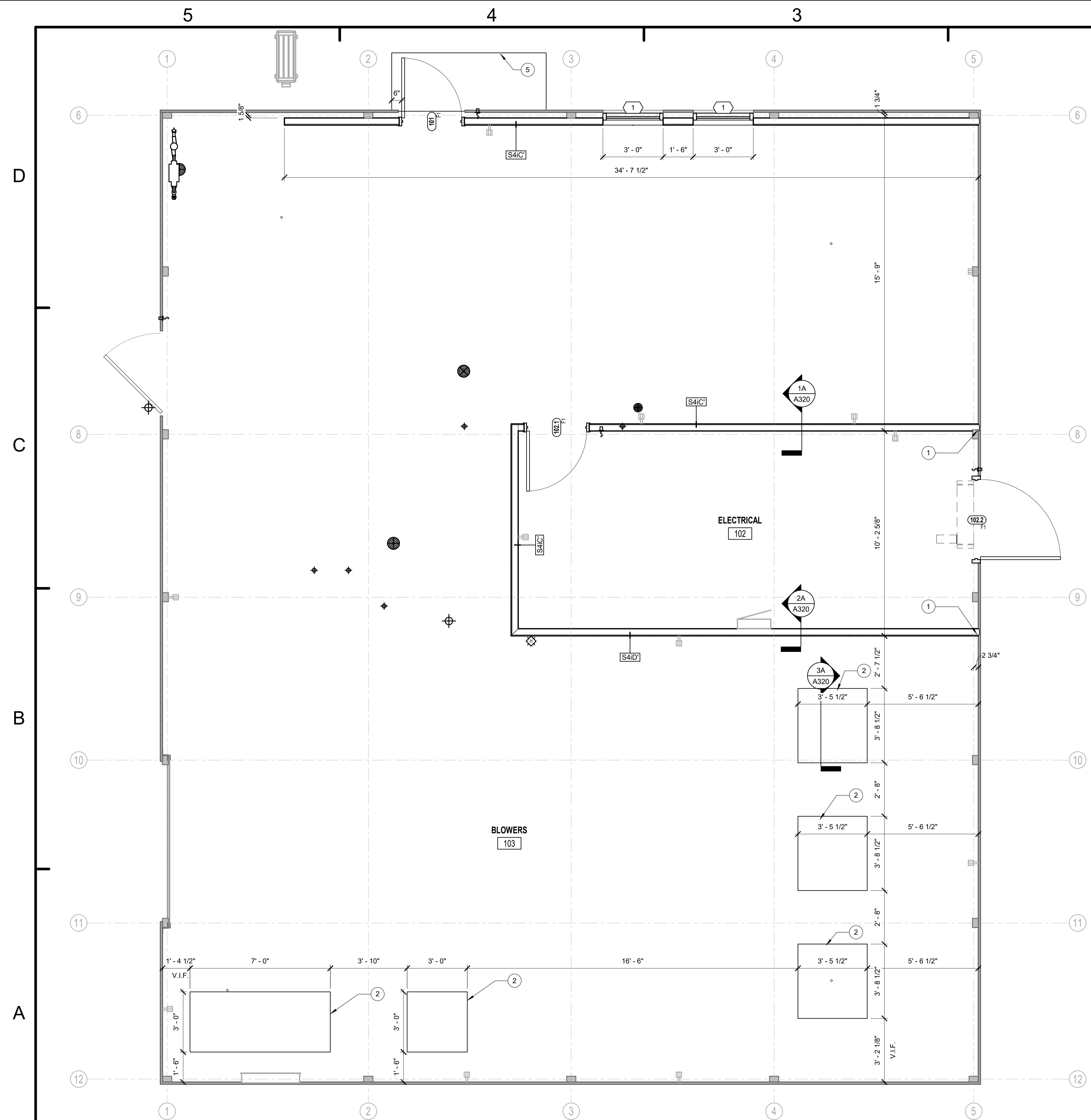


*Eric Weflen*

FIRST FLOOR  
 REFLECTED DEMOLITION  
 CEILING PLAN - ALT. 1

**AD101**

**5A DEMO - FIRST FLOOR REFLECTED CEILING PLAN**  
3/8" = 1'-0"



### GENERAL PLAN NOTES

1. PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION.
3. DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL SHALL BE FIRE STOPPED AT EACH FLOOR AND RATED WALL PENETRATION.
4. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.
5. ALL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.
6. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.
7. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.
8. ALL EXTERIOR WALLS ARE TYPE "ES6B", UNLESS NOTED OTHERWISE.
9. ALL INTERIOR WALLS ARE TYPE "S6ID" (6" METAL STUD TO DECK, WITH SOUND ATTENUATION BATT INSULATION WITH TYPE "X" GYPSUM WALLBOARD ON BOTH SIDES), UNLESS NOTED OTHERWISE.
10. BASE ELEVATION IS 0'-0" = XXX.XX" (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS.
11. HATCHING WITHIN WALLS SHOWN IN PLANS AND SECTIONS INDICATES NEW CONSTRUCTION.
12. ALL WALLS THAT HAVE THE DESIGNATION "C", AND ARE IN A SPACE WITH NO CEILING WILL BE 10FT TALL.
13. DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.
14. CONTRACTORS SHALL BE RESPONSIBLE FOR CHECKING THE CONTRACT DOCUMENTS FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND LANDSCAPING. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS AND FOR VERIFYING THEM WITH THE CONTRACT DOCUMENTS. ANY DISCREPANCY IN THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO ANY FABRICATION OR CONSTRUCTION.
15. ALL CORRIDOR SURFACES SHALL BE FLUSH. AT JUNCTIONS OF MASONRY AND STUD WALLS, MASONRY WALL LOCATIONS SHALL HOLD TRUE AND MTL STUDS SHALL BE MOVED AS REQUIRED TO PROVIDE FLUSH CONNECTION BETWEEN GYP. BD. AND MASONRY. VERIFY NO. OF LAYERS OF GYP. BD. W/ WALL TYPES. RELOCATION OF WALL SHALL BE APPROVED BY ARCHITECT PRIOR TO CONST. AT TRANSITIONS FROM 1 LAYER GYP. BD. TO 2 LAYERS OF GYP. ON MTL. STUDS A MIN. CORRIDOR WIDTH OF 5'-0" FROM FACE OF STUDS SHALL BE MAINTAINED.
16. ALL BUILDING MATERIALS (INCLUDING BUT NOT LIMITED TO METAL FLASHING, VAPOR BARRIERS, AIR/WATER RESISTANT BARRIERS, THRU-WALL FLASHING, ETC.) SHALL BE LAPPED TO SHED WATER TO THE OUTSIDE OF THE BUILDING ENVELOPE.
17. WHEREVER POSSIBLE KEEP MINIMUM SIZE OF CUT MASONRY TO 4" OR GREATER.
18. ALL DIAGONAL WALLS SHALL BE AT 45° (U.N.O.).
19. SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/16" MIN. PER FT.
20. ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
21. ALL EXTERIOR WINDOWS ARE TYPE "XX", UNLESS NOTED OTHERWISE.
22. SUFFIXES WITHIN SPECIFICATION REFERENCES (i.e. 10 11 33.XX or 10 11 33.A1) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.
23. ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.
24. 34. ALL CONSTRUCTION AROUND PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.
25. BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (I.E. ROOF TO WALL, CURTAINWALL TO EXTERIOR WALL, ETC) SHALL INCLUDE CONTINUOUS AIRTIGHT AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT.

### 5.4.110 - FLOOR PLAN NOTES

Key	Note
1	ALIGN NEW WALL CONSTRUCTION FLUSH WITH EXISTING
2	4" CONCRETE HOUSEKEEPING PAD
3	COORDINATE WALL PLACEMENT WITH SHOWER INSERT
4	EYEWASH STATION. SEE PLUMBING DRAWINGS FOR DETAILS.
5	EXISTING CONCRETE STOOP TO REMAIN



**CONSTRUCTION SET**  
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**IMPROVEMENTS**  
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**AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

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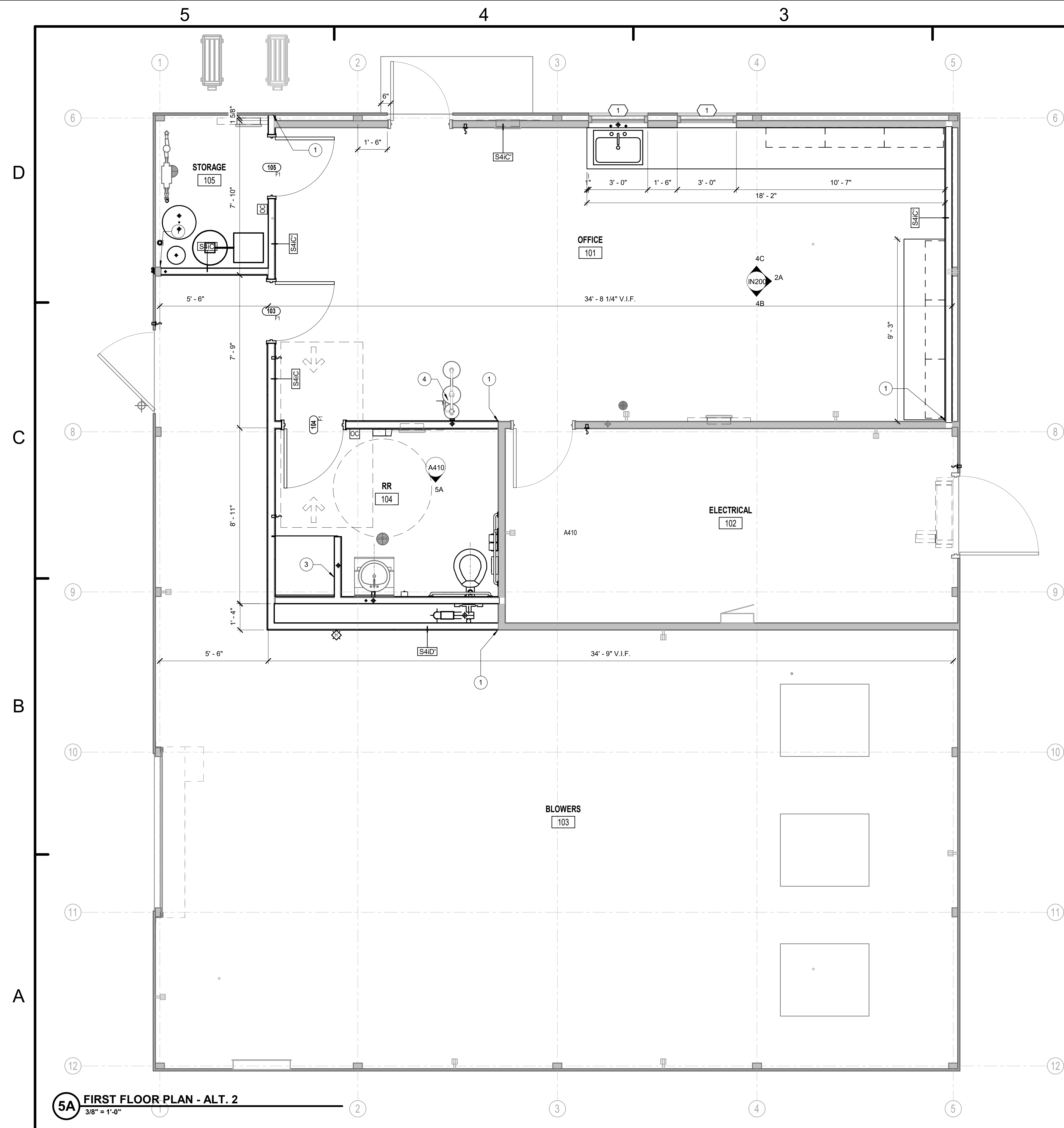


*Eric Wepler*

FIRST FLOOR PLAN - BASE BID

AF101

**5A** FIRST FLOOR PLAN - BASE BID  
3/8" = 1'-0"



**5A** FIRST FLOOR PLAN - ALT. 2  
3/8" = 1'-0"

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**GENERAL PLAN NOTES**

1. PLAN NOTES INDICATE ONE GRAPHIC REPRESENTATION TYPICAL. THE CONTRACTOR SHALL USE THE GRAPHIC REPRESENTATIONS FOR THE COUNT, NOT THE KEYED PLAN NOTES. THE ABSENCE OF A KEYED PLAN NOTE ON THE PLAN DOES NOT ABSOLVE THE CONTRACTOR FROM PROVIDING THE FEATURE GRAPHICALLY REPRESENTED ON THE DRAWING.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD OR MASONRY, UNLESS NOTED OTHERWISE. DIMENSIONS DESIGNATED AS "CLR OR "CLEAR" INDICATE A CLEAR DIMENSION FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS OF EXTERIOR WALLS ARE TO OUTSIDE EDGE OF FOUNDATION.
3. DIMENSIONS FOR ALL OPENINGS FOR MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL SHALL BE FIRE STOPPED AT EACH FLOOR AND RATED WALL PENETRATION.
4. PROVIDE BRACING AND BLOCKING AS REQUIRED IN WALLS SUPPORTING CASEWORK, TACKBOARDS, MARKERBOARDS, AND RESTROOM ACCESSORIES.
5. ALL DOOR FRAMES ARE LOCATED 4" FROM ADJACENT WALL, UNLESS NOTED OTHERWISE.
6. SEAL ALL JOINTS BETWEEN DISSIMILAR MATERIALS.
7. ALL GYPSUM WALLBOARD IS 5/8" TYPE "X", UNLESS NOTED OTHERWISE.
8. ALL EXTERIOR WALLS ARE TYPE "ES6B", UNLESS NOTED OTHERWISE.
9. ALL INTERIOR WALLS ARE TYPE "S6D" (6" METAL STUD TO DECK, WITH SOUND ATTENUATION BATT INSULATION WITH TYPE "X" GYPSUM WALLBOARD ON BOTH SIDES), UNLESS NOTED OTHERWISE.
10. BASE ELEVATION IS 0'-0" = XXXXX' (UNITED STATES GEOLOGICAL SURVEY DATA). COORDINATE WITH CIVIL DRAWINGS.
11. HATCHING WITHIN WALLS SHOWN IN PLANS AND SECTIONS INDICATES NEW CONSTRUCTION.
12. ALL WALLS THAT HAVE THE DESIGNATION "C", AND ARE IN A SPACE WITH NO CEILING WILL BE 10FT TALL.
13. DRAWINGS ESTABLISH THE DESIGN INTENT OF WORK TO BE PERFORMED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST INDUSTRY STANDARDS. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL TRADES SHALL CAREFULLY COORDINATE WORK OF ALL OTHER TRADES. ANY DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND THE OWNER PRIOR TO FABRICATION OR INSTALLATION.
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17. WHEREVER POSSIBLE KEEP MINIMUM SIZE OF CUT MASONRY TO 4" OR GREATER.
18. ALL DIAGONAL WALLS SHALL BE AT 45° (U.N.O.)
19. SLOPE CONCRETE SLABS TO FLOOR DRAINS AT 1/16" MIN. PER FT.
20. ALL INTERIOR AND EXTERIOR EXPOSED STEEL TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
21. ALL EXTERIOR WINDOWS ARE TYPE "XX", UNLESS NOTED OTHERWISE.
22. SUFFIXES WITHIN SPECIFICATION REFERENCES (i.e. 10 11 33.XX or 10 11 33.A1) IN THE DRAWINGS CAN BE IGNORED. THESE SUFFIXES ARE A SORTING MECHANISM USED IN PREPARING THESE DRAWINGS.
23. ALL ROUGH OPENINGS (R.O.) SHALL BE VERIFIED WITH SELECTED WINDOW AND DOOR MANUFACTURER. ANY CHANGES FROM THE BASIS OF DESIGN WILL BE COORDINATED WITH ALL TRADES AND ROUGH OPENINGS ADJUSTED AS REQUIRED. ANY DISCREPANCIES FOUND WILL BE BROUGHT TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.
24. 34. ALL CONSTRUCTION AROUND PLUMBING FIXTURES IS REQUIRED TO BE COORDINATED WITH SELECTED MANUFACTURERS. ADJUST WALLS AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE SELECTED MANUFACTURERS PLUMBING FIXTURES. ANY CHANGES AND REVISIONS WILL BE DONE AT CONTRACTORS EXPENSE.
25. BUILDING ENVELOPE CONTINUITY WILL BE MONITORED BY A COMMISSIONING AGENT. TRANSITIONS BETWEEN BUILDING SYSTEMS (I.E. ROOF TO WALL, CURTAINWALL TO EXTERIOR WALL, ETC) SHALL INCLUDE CONTINUOUS AIRTIGHT AIR BARRIER SYSTEM. ALL PENETRATIONS IN THE BUILDING ENVELOPE (INCLUDING WINDOWS, DOORS, STOREFRONT, ETC.) SHALL BE SEALED WITH AIR TIGHT WEATHER SEALS. AT ANY LOCATION WHERE MASONRY TIES OR OTHER MATERIALS PENETRATE THE AIR BARRIER, EACH PENETRATION SHALL BE SEALED AIRTIGHT.

**5.4.110 - FLOOR PLAN NOTES**

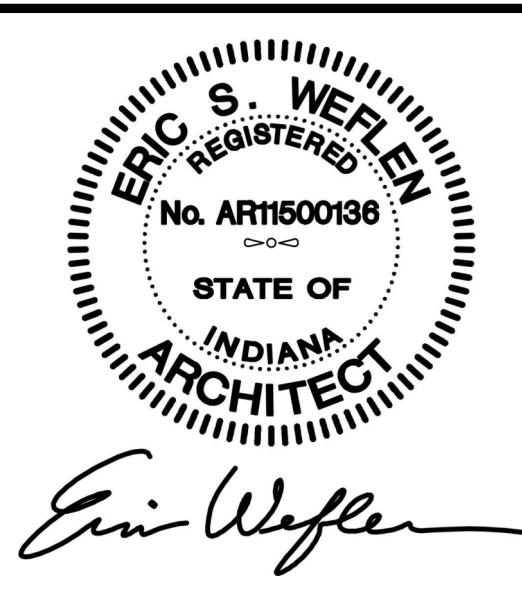
Key	Note
1	ALIGN NEW WALL CONSTRUCTION FLUSH WITH EXISTING
2	4" CONCRETE PAD FOR BLOWER
3	COORDINATE WALL PLACEMENT WITH SHOWER INSERT
4	EYEWASH STATION. SEE PLUMBING DRAWINGS FOR DETAILS.
5	EXISTING CONCRETE STOOP TO REMAIN



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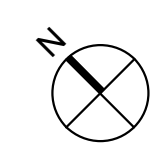
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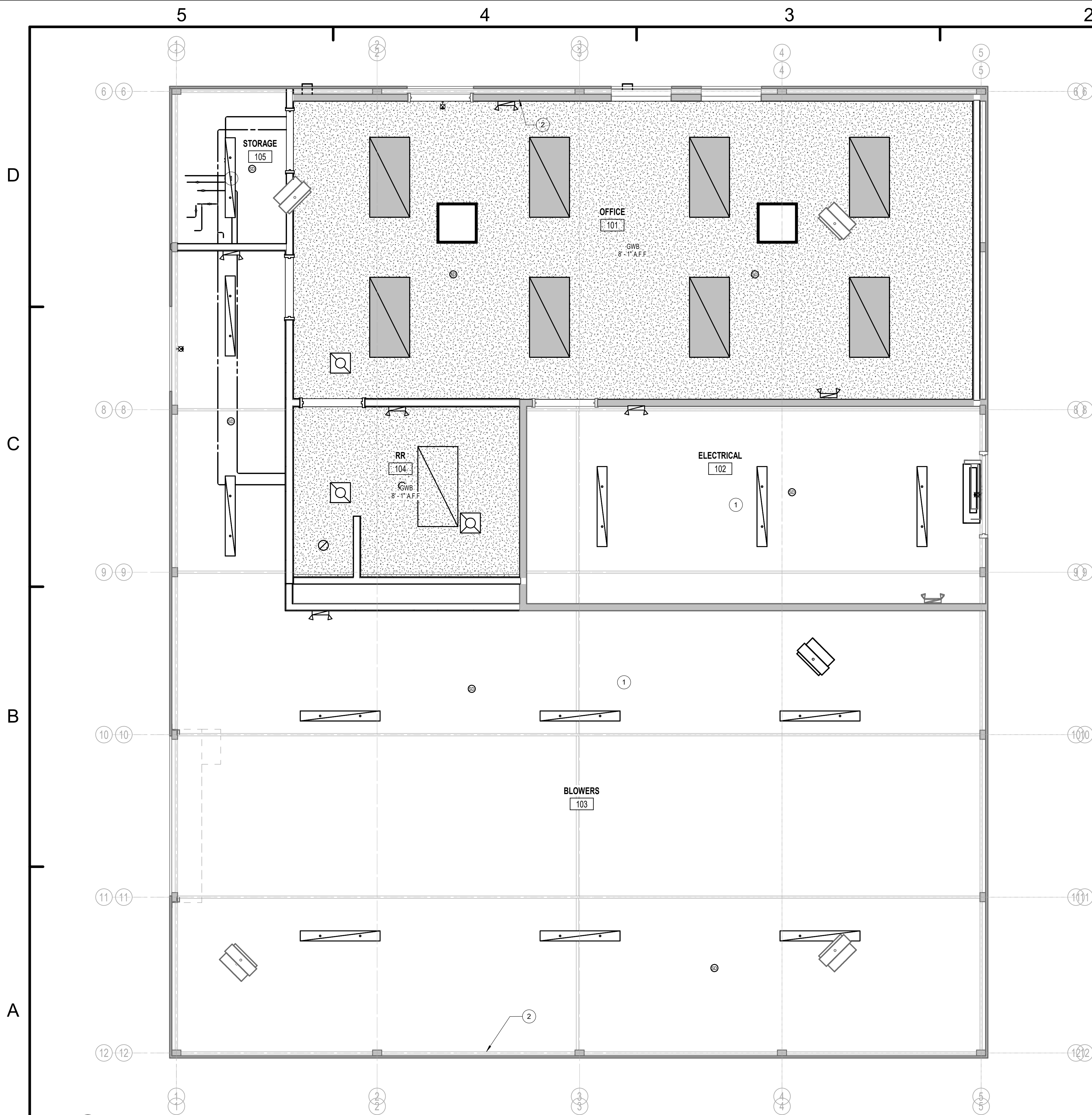
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 Designed By: Designer  
 Drawn By: Author  
 Checked By: Checker



FIRST FLOOR PLAN - ALT. 2

**AF103**





**REFL. CEILING PLAN NOTES**

1. REFER TO MEP DRAWINGS FOR CEILING FIXTURES/EQUIPMENT AND COORDINATE W/ ALL TRADES.
2. ALL EXPOSED DUCTWORK, PIPING ETC. SHALL BE PAINTED. COLOR SELECTED BY ARCHITECT.
3. ALL CEILINGS ARE AT 8'-1" AFF, UNLESS NOTED OTHERWISE.
4. ALL NEW GRID SHALL BE GWB UNLESS NOTED OTHERWISE.

**REFLECTED CEILING PLAN LEGEND**

<b>GWB</b> 5/8" TYPE-X GYPSUM WALL BOARD ON 3-5/8" METAL STUD (09 22 16)		<b>LIGHT FIXTURE</b> (REFERENCE E-SERIES DWGS)	
<b>Walls to Deck</b>		<b>RETURN AIR</b> (REFERENCE M-SERIES DWGS)	
<b>RECESSED LIGHT FIXTURE SUSPENDED FIXTURE IN AREAS WITH EXPOSED CEILINGS</b> (REFERENCE E-SERIES DWGS)		<b>SUPPLY AIR</b> (REFERENCE M-SERIES DWGS)	
<b>SOUND SYSTEM SPEAKER</b> (REFERENCE E-SERIES/T-SERIES DWGS)		<b>EXIT LIGHT</b> (REFERENCE E-SERIES DWGS)	

**5.4.120 - CEILING PLAN NOTES**

Key	Note
1	EXPOSED TO STRUCTURE
2	NEW, WOODEN WARREN TRUSS TO MATCH EXISTING. REPLACE RAFTERS, VERIFY IN FIELD. PRICING IN ALTERNATE 1.

**5A** FIRST FLOOR REFLECTED CEILING PLAN - ALT. 1  
3/8" = 1'-0"

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**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
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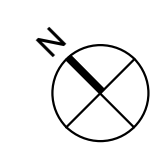
Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD



*Eric Weflen*

FIRST FLOOR CEILING PLAN - ALT. 2

**AC101**



5

4

3

2

1

1

2

3

4

5

6

6

D

22' - 4 1/4" V.I.F.

22' - 4 1/4" V.I.F.

C

8

8

B

9

9

49' - 0" V.I.F.

4' / 12" V.I.F.

4' / 12" V.I.F.

1

2

A

10

10

11

11

12

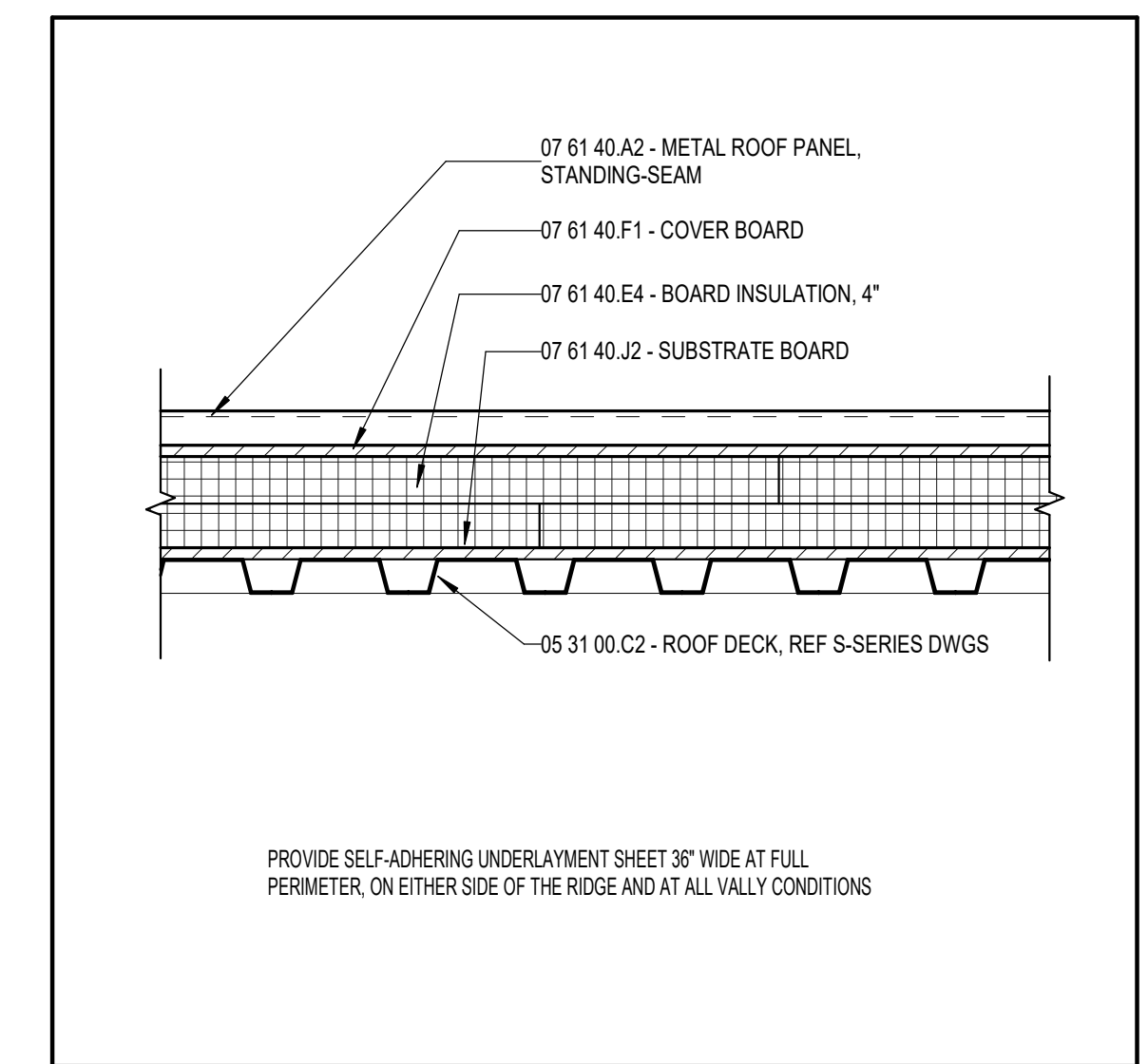
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### GENERAL ROOF PLAN NOTES

1. ROOF PENETRATIONS AND EQUIPMENT SHOWN SHALL NOT BE CONSIDERED ALL INCLUSIVE. COORDINATE WITH MECHANICAL, PLUMBING AND ELECTRICAL DOCUMENTS TO CONFIRM PENETRATIONS AND EQUIPMENT LOCATIONS. FLASH ALL ROOF PENETRATIONS IN ACCORDANCE WITH ROOFING MANUFACTURER'S RECOMMENDATIONS. PROVIDE CRICKETS TO ALLOW FOR PROPER DRAINAGE AROUND UNITS.

### 5.4.140 - ROOF PLAN NOTES

Key	Note
1	REPLACE METAL ROOF. PRICING IN ALTERNATE 1.
2	RT-A ROOF TYPE.



**2B** ROOF TYPE - RT-A  
1 1/2" = 1'-0"

**5A** ARCHITECTURAL ROOF PLAN - ALT. 1  
3/8" = 1'-0"



CONSTRUCTION SET

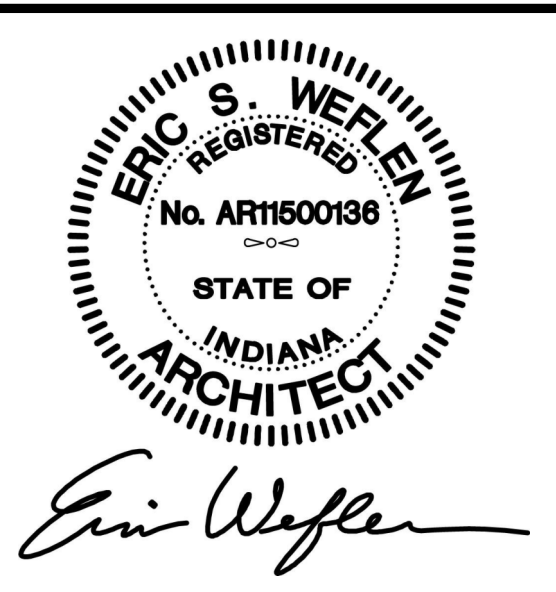
WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS

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Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD



ARCHITECTURAL ROOF PLAN - ALT. 1

AR101



#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: VW



*Eric Wehlen*

OVERALL BUILDING  
 ELEVATIONS

A200

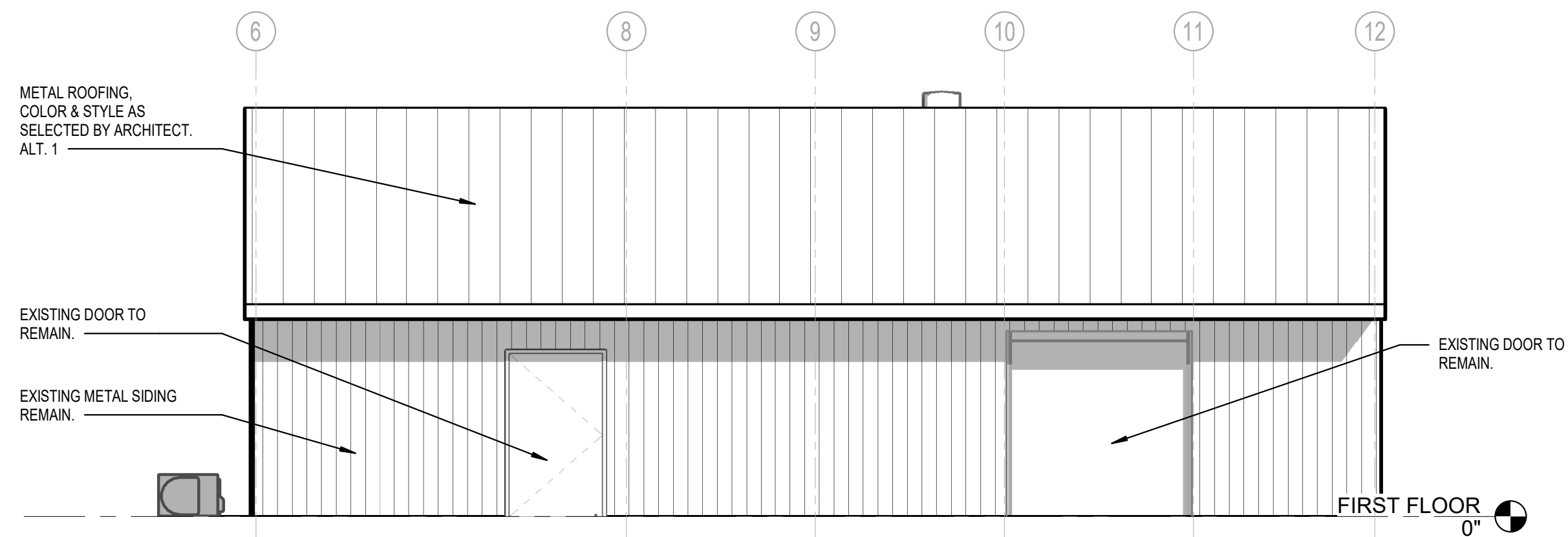
D

C

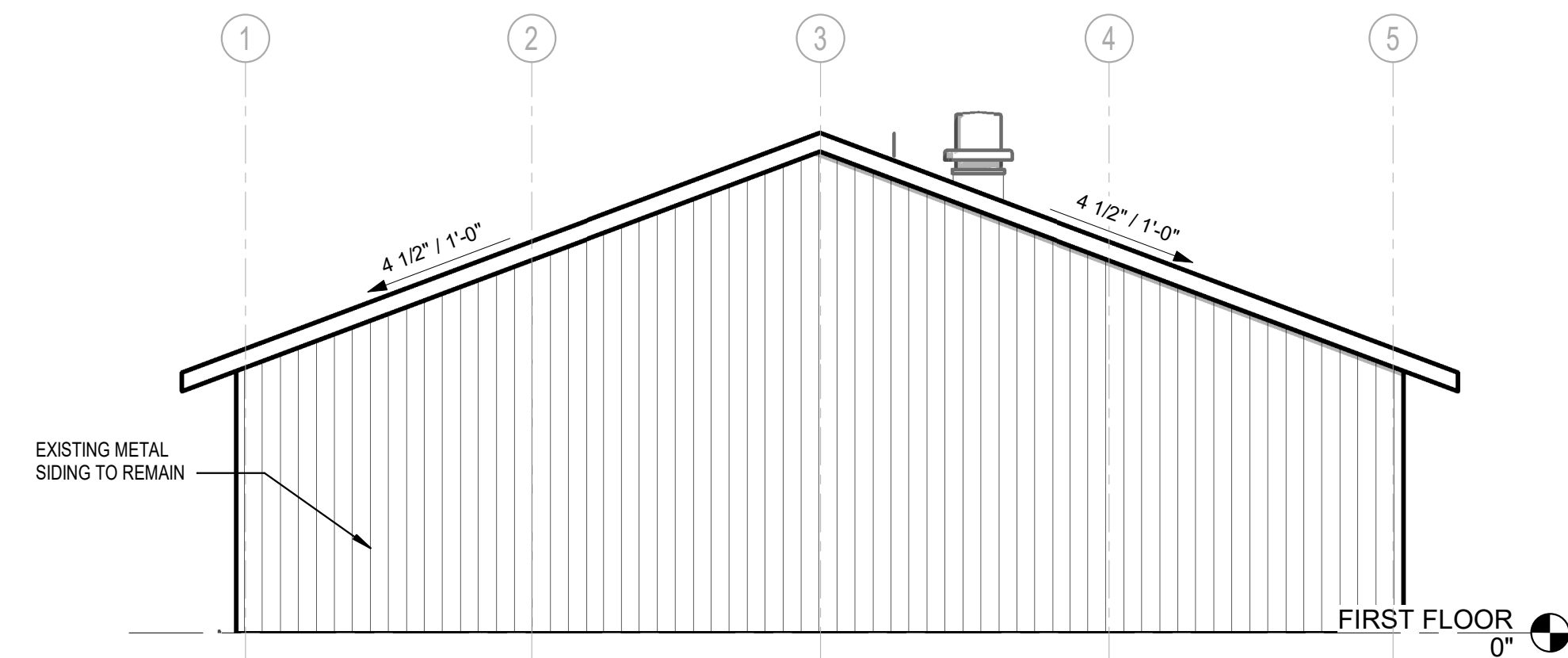
B

A

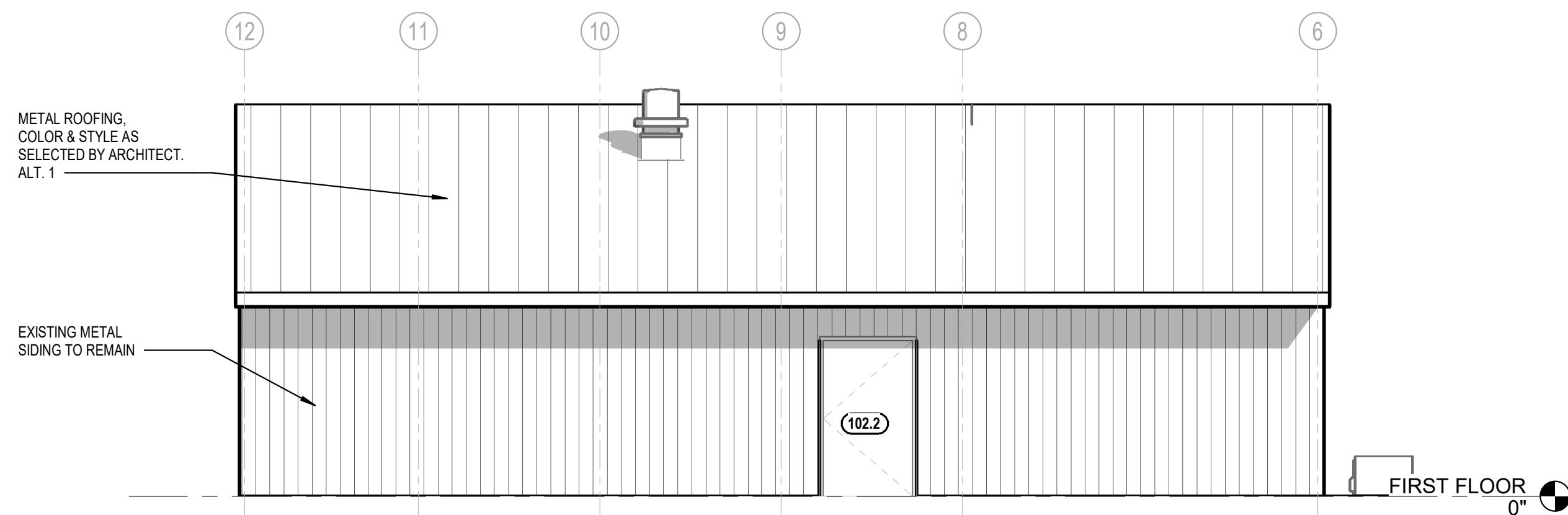
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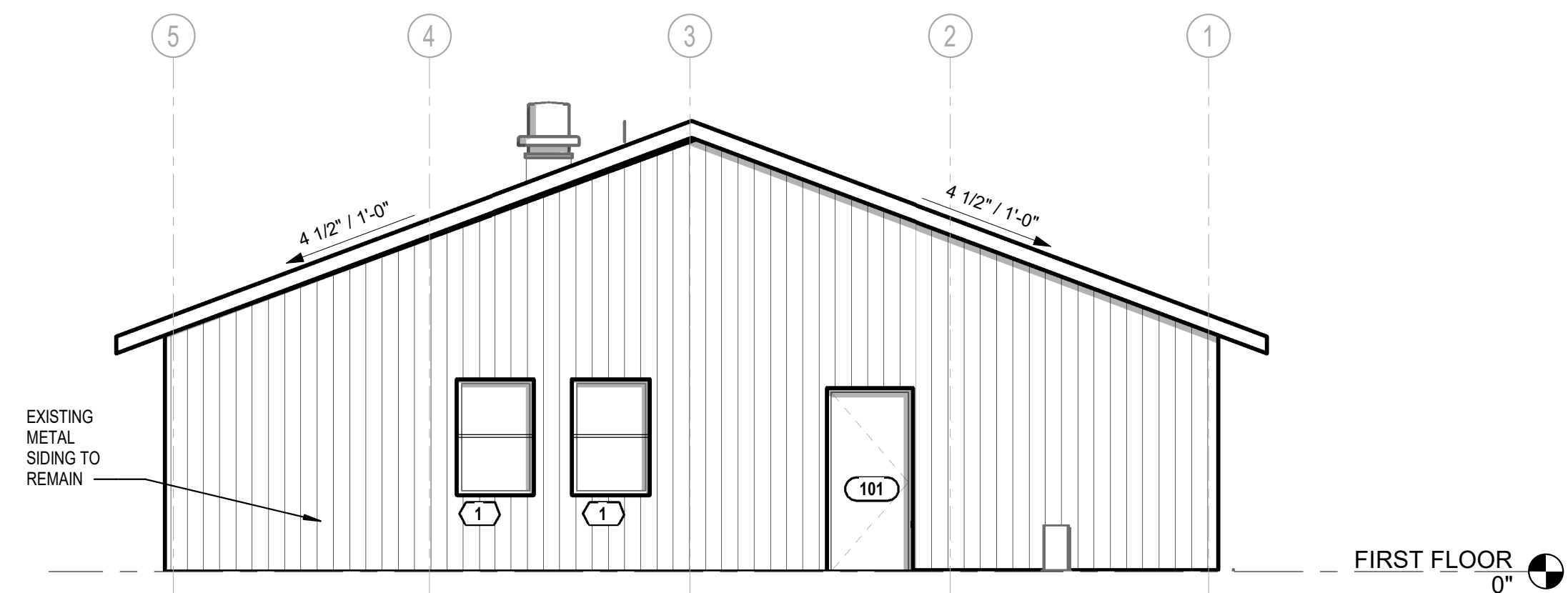
**5B WEST ELEVATION1**  
 3/16" = 1'-0"



**3B SOUTH ELEVATION1**  
 3/16" = 1'-0"



**5A EAST ELEVATION1**  
 3/16" = 1'-0"



**3A NORTH ELEVATION1**  
 3/16" = 1'-0"

5

4

3

2

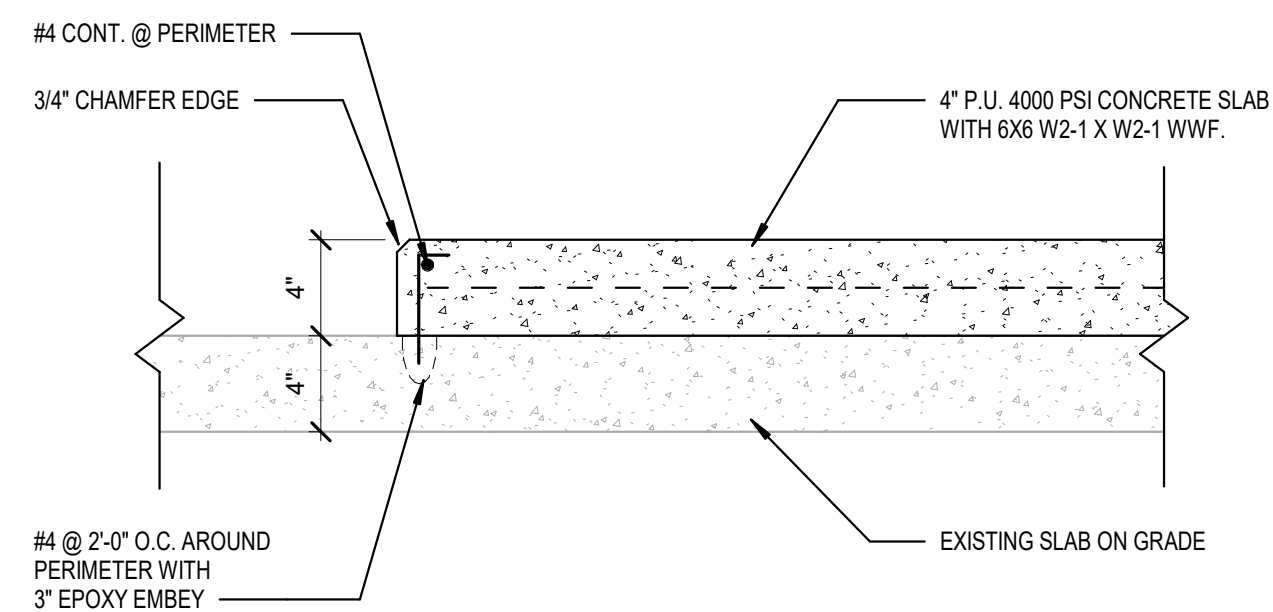
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D

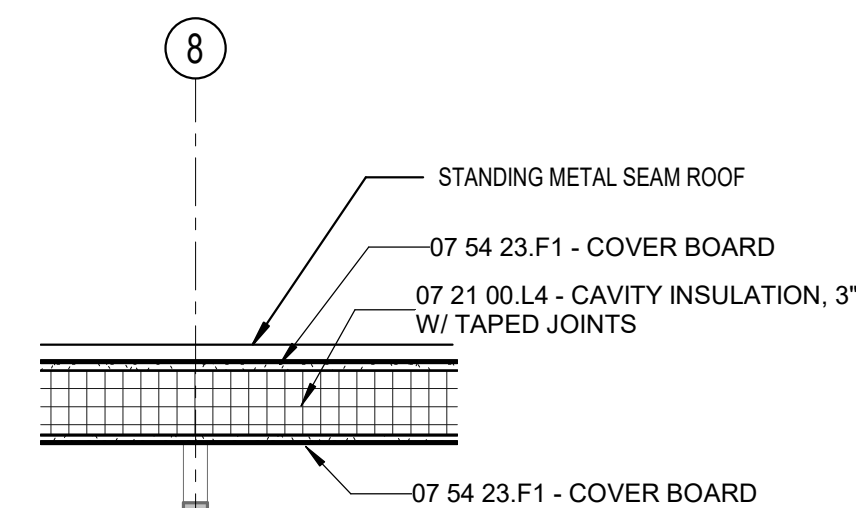
C

B

A



**3A CONCRETE HOUSEKEEPING PAD**  
1 1/2" = 1'-0"

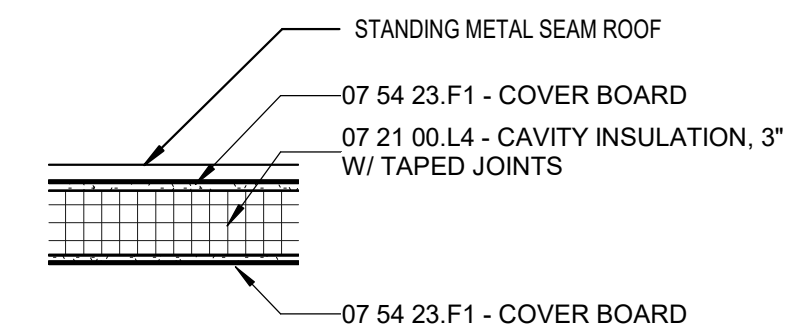


EXISTING WOODEN TRUSS

09 22 16.C6 - INT STEEL STUD FRAMING, 3-5/8" @ 16" O.C.  
09 29 00.G1 - SOUND ATTENUATION BLANKET  
09 29 00.B7 - INT GWB, 5/8" TYPE X

FIRST FLOOR  
0"

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



09 22 16.C6 - INT STEEL STUD FRAMING, 3-5/8" @ 16" O.C.  
09 29 00.G1 - SOUND ATTENUATION BLANKET  
09 29 00.B7 - INT GWB, 5/8" TYPE X

FIRST FLOOR  
0"

**2A WALL SECTION 2**  
1" = 1'-0"



CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT PLANT  
AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1

Designed By: LD

Drawn By: AB, WD

Checked By: LD



*Eric Weffler*

WALL SECTION DETAILS

A320

5

4

3

2

1

### 5.4.401 - RESTROOM ACCESSORY SCHEDULE

Type Mark	Keynote	Description	Mounting	Furnished By	Installed By
A1	10 28 00	GRAB BAR - 18" VERTICAL	BOTTOM @ 40" AFF	CONTRACTOR	CONTRACTOR
A2	10 28 00	GRAB BAR - 36" HORIZONTAL	TOP @ 2'-11" AFF	CONTRACTOR	CONTRACTOR
A3	10 28 00	GRAB BAR - 42" HORIZONTAL	TOP @ 2'-11" AFF	CONTRACTOR	CONTRACTOR
A4	10 28 00	TOILET TISSUE DISPENSER - DOUBLE	BOTTOM @ 4" AFF	CONTRACTOR	CONTRACTOR
A5	10 28 13	MIRROR - 24" X 36"	BOTTOM @ 4" ABOVE FIXTURE	CONTRACTOR	CONTRACTOR
A6	10 28 00	SANITARY NAPKIN DISPOSAL - SURFACE	TOP @ 30" AFF	CONTRACTOR	CONTRACTOR
A7	10 28 00	HAND DRYER - SLIM	BOTTOM @ 42" AFF	CONTRACTOR	CONTRACTOR
A8	10 28 00	SOAP DISPENSER	BOTTOM @ 4" ABOVE FIXTURE	CONTRACTOR	CONTRACTOR



CONSTRUCTION SET

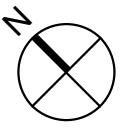
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT PLANT  
AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LD  
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Checked By: LD



*Eric Weffler*



ENLARGED RESTROOM  
PLAN

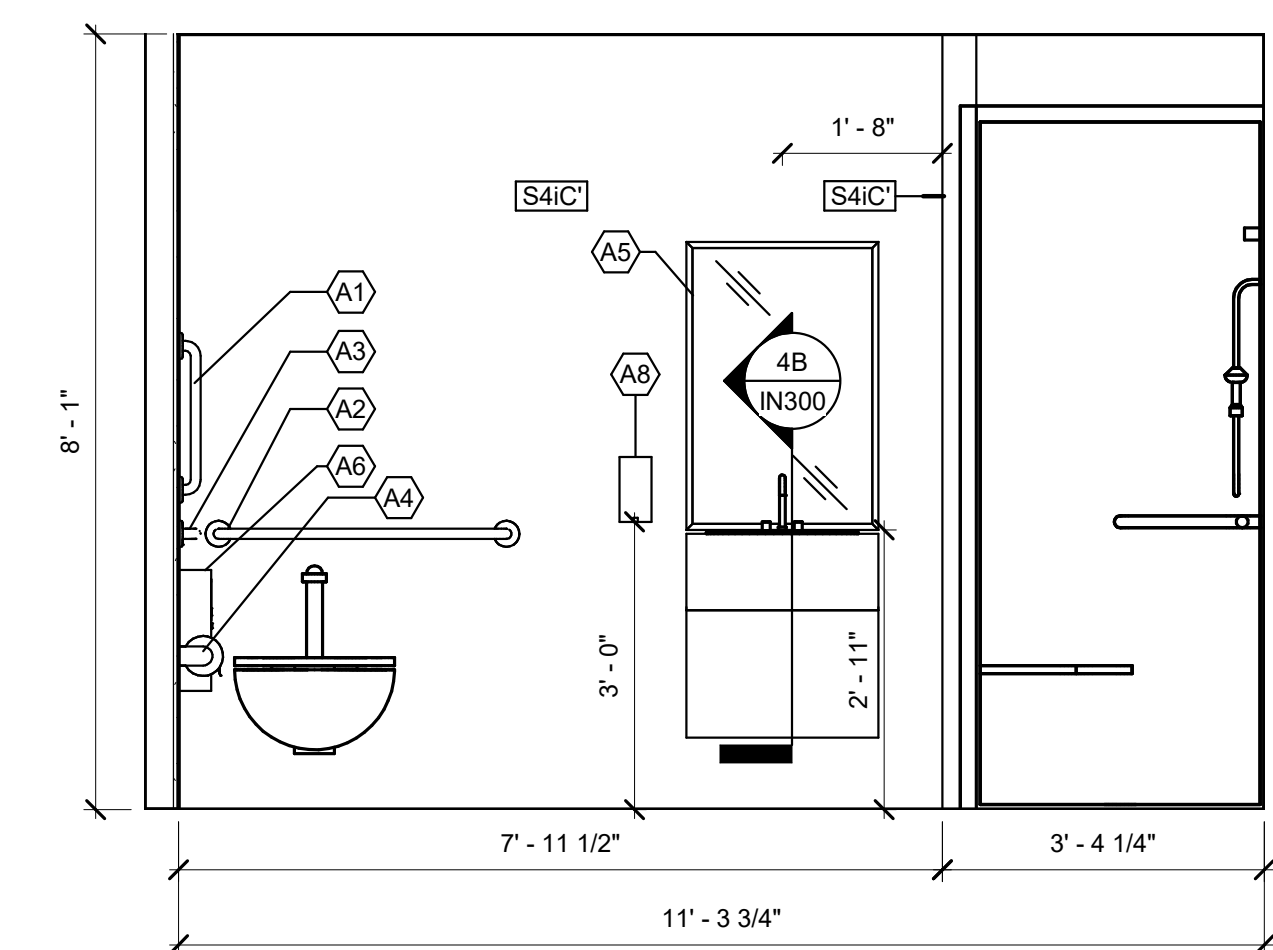
# A410

D

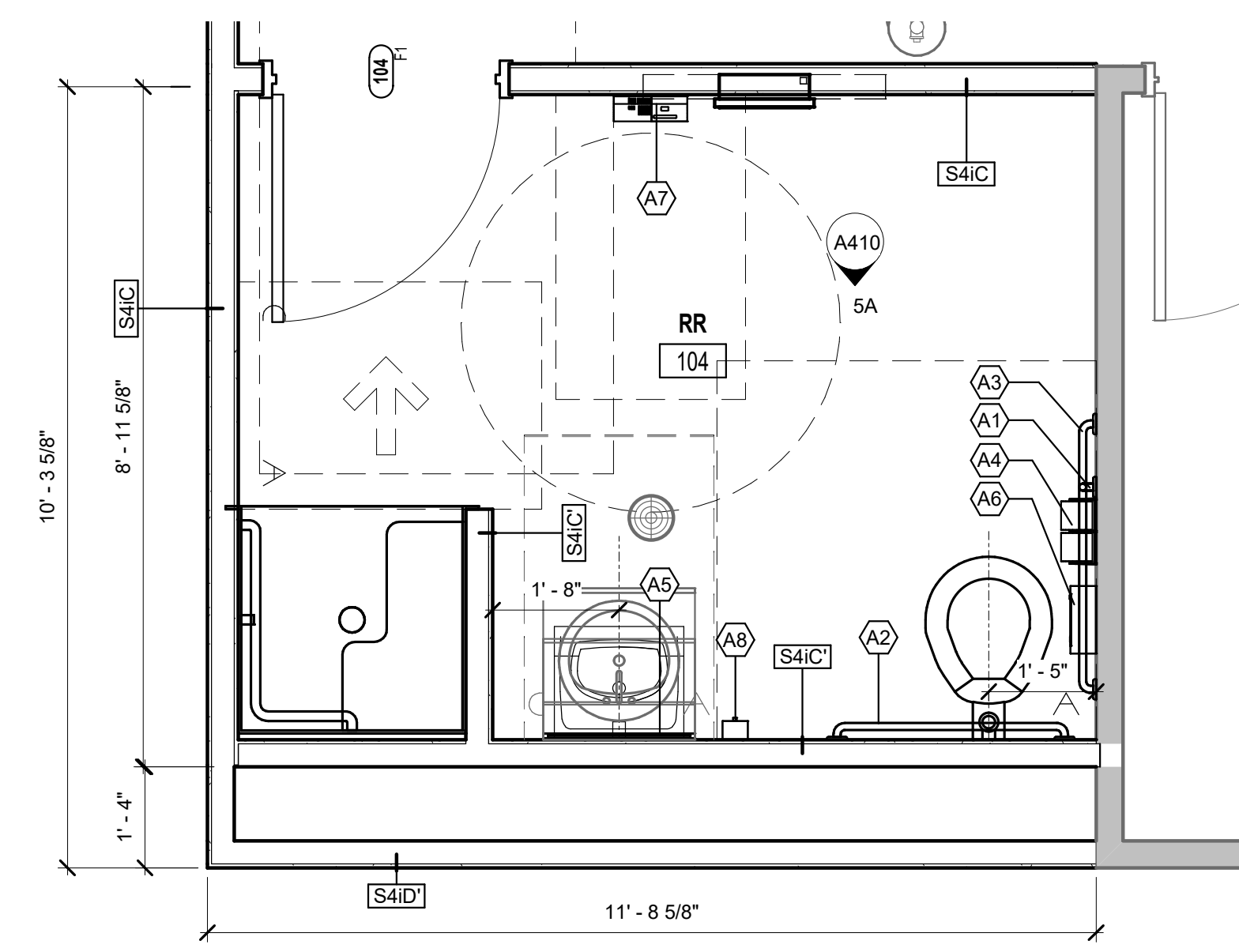
C

B

A



**5A RR ELEVATION - SOUTH**  
1/2" = 1'-0"



**5C RESTROOM - ENLARGED PLAN**  
1/2" = 1'-0"

5

4

3

2

1

D

C

B

A

DOOR & FRAME SCHEDULE															
MARK	DOOR PANEL					SIZE			FRAME			LABEL	HDWR SET	NOTES	MARK
	TYPE	QTY	MATL	GLAZ	GLAZ	H	W	TH	MARK	MATL	GLAZ				
101	F	1	HM	-	-	7'-0"	3'-0"	1 3/4"	F1	HM	-	-	2.0		101
102.1	F	1	HM	-	-	7'-0"	3'-0"	1 3/4"	F1	HM	-	-	3.0		102.1
102.2	F	1	HM	-	-	7'-0"	4'-0"	1 3/4"	F1	HM	-	-	1.0		102.2

DOOR & FRAME SCHEDULE															
MARK	DOOR PANEL					SIZE			FRAME			LABEL	HDWR SET	NOTES	MARK
	TYPE	QTY	MATL	GLAZ	GLAZ	H	W	TH	MARK	MATL	GLAZ				
103	F	1	HM	-	-	7'-0"	3'-0"	1 3/4"	F1	HM	-	-	4.0		103
104	F	1	HM	-	-	7'-0"	3'-0"	1 3/4"	F1	HM	-	-	5.0		104
105	F	1	HM	-	-	7'-0"	3'-0"	1 3/4"	F1	HM	-	-	4.0		105

GENERAL NOTES

A. THIS DOOR SCHEDULE(S) IS FURNISHED FOR WHATEVER ASSISTANCE IT MAY AFFORD THE CONTRACTOR. DO NOT CONSIDER IT AS ENTIRELY INCLUSIVE. CAREFULLY EXAMINE THE DRAWINGS (ESPECIALLY THE FLOOR PLANS) AND THE SPECIFICATIONS TO DETERMINE THE EXTENT OF DOOR AND FRAME QUANTITIES REQUIRED (INCLUDING INTERIOR BORROWED LITE OR SIDELITE OPENINGS). SHOULD ANY PARTICULAR DOOR, FRAME, OR INTERIOR BORROWED LITE OR SIDELITE SHOWN ON THE DRAWINGS BE INADVERTENTLY OMITTED FROM THIS SCHEDULE, SUPPLY SAME AS REQUIRED FOR SIMILAR OPENINGS.

B. THE "DOOR TYPE" COLUMN DESIGNATES BOTH THE DOOR ELEVATION AND THE NUMBER OF LEAVES IN THE OPENING (E.G. A = 1 LEAF, AA = 2 LEAVES). THE "DOOR WIDTH" COLUMN DESIGNATES THE TOTAL WIDTH OF ALL LEAVES. IN MULTIPLE LEAF CONDITIONS, THE LEAVES SHALL EQUALLY DIVIDE THE "DOOR WIDTH" UNLESS NOTED OTHERWISE. A "D" MODIFIER DESIGNATES A DOUBLE EGRESS FRAME (E.G. AA-D = AA DOOR TYPE IN A DOUBLE EGRESS FRAME).

C. DOOR TYPE "X" DENOTES A FRAME WITH NO DOOR SUCH AS A BORROWED LITE, REFERENCE FRAME ELEVATIONS.

D. AN ASTERISK (\*) IN A DIMENSION DENOTES A WIDTH THAT VARIES, REFERENCE PLANS, ELEVATIONS, DETAILS AND SCHEDULES.

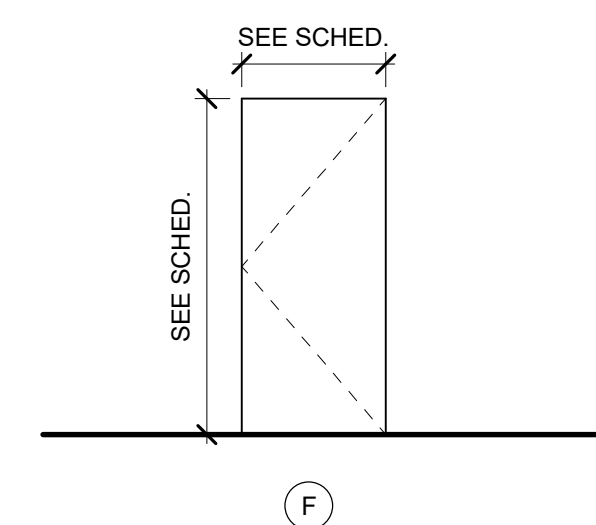
E. VERIFY LOCKSETS WITH THE OWNER DURING SUBMITTALS.

ABBREVIATIONS

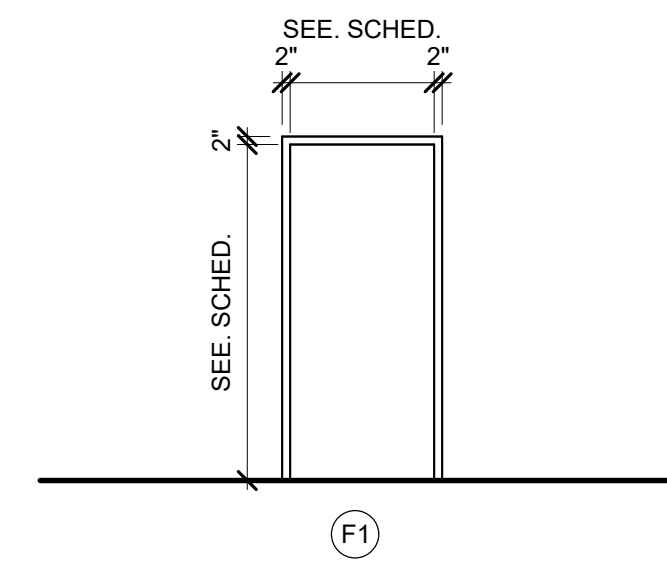
- AL ALUMINUM
- HM HOLLOW METAL
- ST STEEL
- WD WOOD
- TG TEMPERED GLAZING
- IG INSULATED GLAZING
- LG LAMINATED GLAZING
- FG FROSTED GLAZING
- SP SPANDREL PANEL

REMARKS

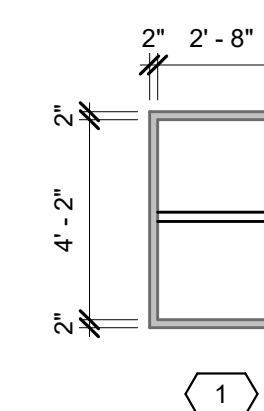
SEE DOOR SCHEDULE



5.4.601 - DOOR PANEL ELEVATIONS  
1/4" = 1'-0"



5.4.601 - HOLLOW METAL FRAME ELEVATIONS  
1/4" = 1'-0"



1 5.4.602 - WINDOW SCHEDULE  
1/4" = 1'-0"

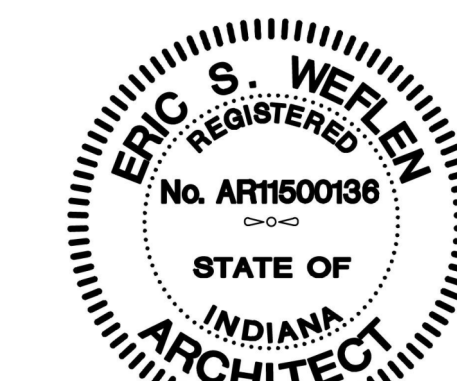


CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT PLANT  
AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LD  
Drawn By: AB, WD  
Checked By: LD



*Eric Wefler*

DOOR AND FRAME SCHEDULE

A600

5

4

3

2

1

D

C

B

A

### INTERIORS GENERAL NOTES

REFERENCE A-001 FOR GENERAL PLAN NOTES. ALL NOTES MAY NOT APPLY TO THIS SHEET

1. APPLIANCES ARE TO BE PROVIDED BY THE OWNER.
2. FURNITURE IS NOT PROVIDED IN THIS CONTRACT, LAYOUTS AND FINAL DESIGN WILL BE DETERMINED BY THE OWNER.
3. REFERENCE ARCHITECTURAL CEILINGS PLANS FOR CEILING HEIGHTS AND BULKHEAD COLOR DESIGNATIONS. PAINT ALL BULKHEADS TO MATCH ADJACENT WALLS UNLESS SPECIFICALLY NOTED OTHERWISE. BULKHEADS THAT ARE FLUSH WITH WALLS PROVIDE COLOR TO MATCH ADJACENT WALL COLOR.
4. PAINT INTERIOR HOLLOW METAL DOOR FRAMES "P2".
5. APPLIANCES AND TV DISPLAYS ARE NOT PROVIDED IN THIS CONTRACT.
6. ALL EXPOSED CEILINGS TO BE PAINTED "P1" UNLESS SPECIFICALLY NOTED OTHERWISE.
7. PROVIDE SAMPLES OF ALL FINISHES TO ARCHITECT/DESIGNER FOR REVIEW INCLUDING INSTALLATION, JOINT AND SEAM LAY-OUTS.
8. REFERENCE INTERIOR ELEVATIONS, WHERE PROVIDED, FOR ADDITIONAL FINISH INFORMATION.
9. PAINT ALL EXPOSED METAL SURFACES (I.E. GRILLS, HEATERS, AND FIRE EXTINGUISHER CABINETS) TO MATCH ADJACENT SURFACE.
10. ALL DRYWALL CEILINGS ARE TO BE PAINTED "P1" UNLESS NOTED OTHERWISE ON REFLECTED CEILING PLANS.
11. ALTERNATES WILL NOT BE ACCEPTED WITHOUT WRITTEN APPROVAL OF ARCHITECT/DESIGNER. SAMPLES, WHEN APPLICABLE, SHALL BE SUBMITTED FOR REVIEW.
12. FLOOR FINISHES ARE TO EXTEND UNDER BUILT-IN MILLWORK AND CASEWORK.
13. UNLESS SPECIFICALLY NOTED, USE GENERAL WALL FINISHES NOTED IN ROOM.
14. GENERAL CONTRACTOR IS RESPONSIBLE FOR INSPECTING FLOOR SUBSTRATE PRIOR TO INSTALLATION OF ANY FLOOR FINISH AND IS TO PERFORM NECESSARY REPAIRS AS REQUIRED FOR FULL INSTALLATION OF FLOOR FINISHES.
15. CAULK/SEALANT COLOR TO BE TRANSLUCENT CLEAR.

### INTERIORS FINISH LEGEND

SEALED CONCRETE	
SC1	SEE NOTE ON SHEET IN101 FINISH PLAN
PAINT	
P1	MFR: SHERWIN WILLIAMS COLOR: SW 7007 CEILING BRIGHT WHITE FINISH: MATTE
P2	MFR: SHERWIN WILLIAMS COLOR: SW 6223 STILL WATER FINISH: SATIN
P3	MFR: SHERWIN WILLIAMS COLOR: SW 6214 UNDERSEAS FINISH: SATIN
P4	MFR: SHERWIN WILLIAMS COLOR: SW 6204 SEA SALT FINISH: SATIN
LABORATORY CASEWORK	
LC1	MFR: LF SYSTEMS COLOR: STANDARD- PEARL WHITE FINISH: PAINTED STEEL NOTE: ALTERATE 2
PHENOLIC RESIN COUNTER TOP	
PR1	MFR: LF SYSTEMS COLOR: BLACK MATERIAL: PHENOLIC RESIN NOTE: ALTERNATE 2

### 5.5.110 - INTERIOR PLAN NOTES

Key	Note
1	EXISTING CONCRETE TO BE SITE EVALUATED TO DETERMINE IF SEALANT IS REQUIRED



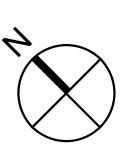
CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD

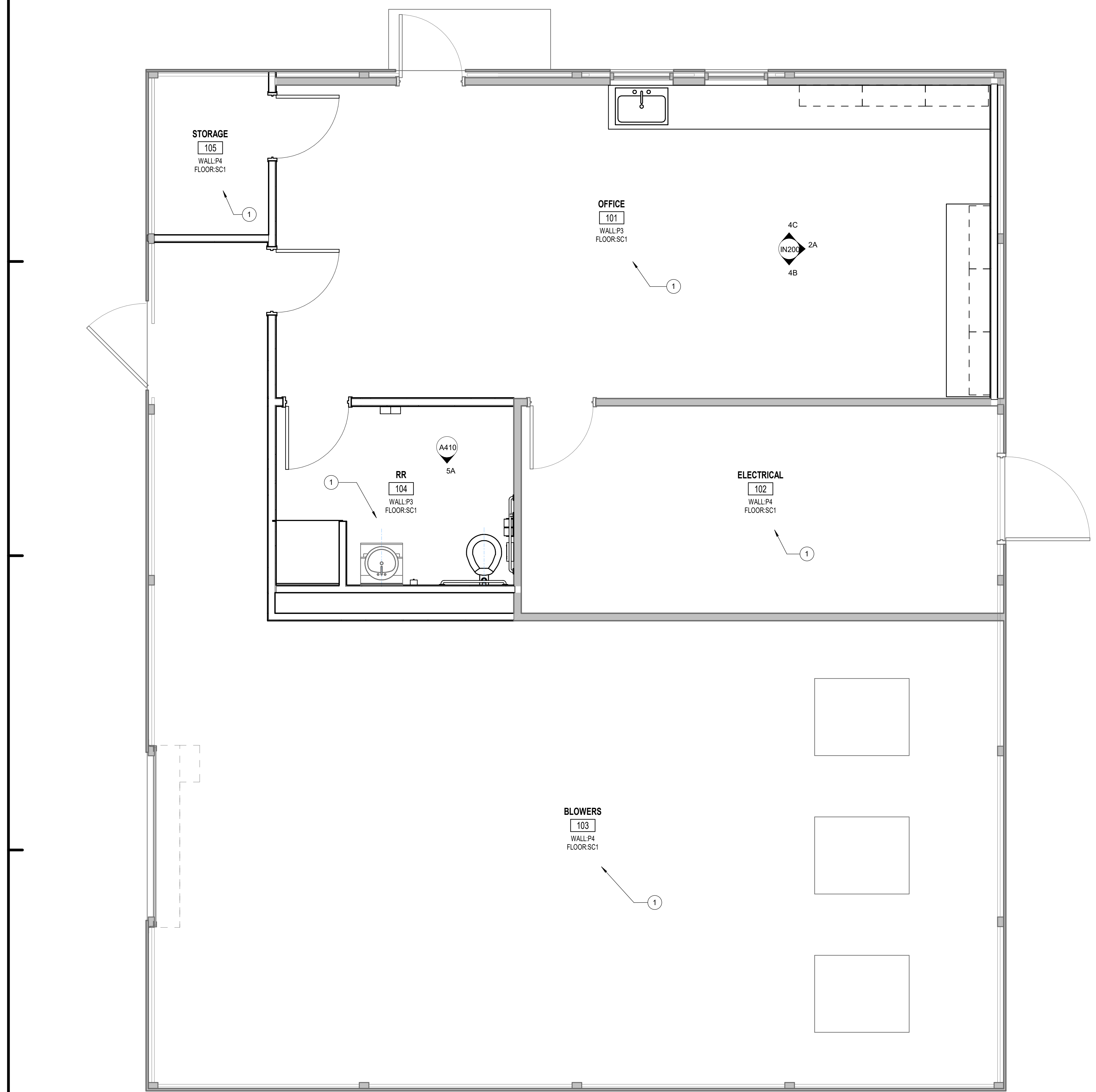


*Eric Weffler*



INTERIOR FINISH PLANS

# IN101



**4A** INTERIOR FINISH PLAN  
3/8" = 1'-0"

5

4

3

2

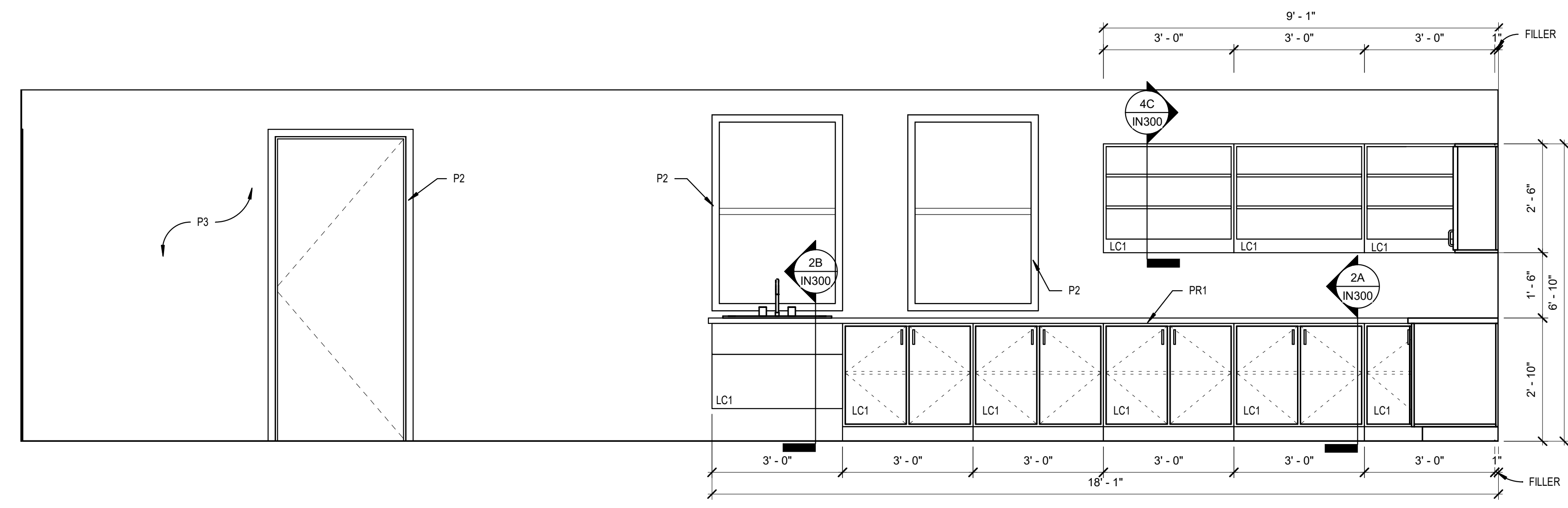
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D

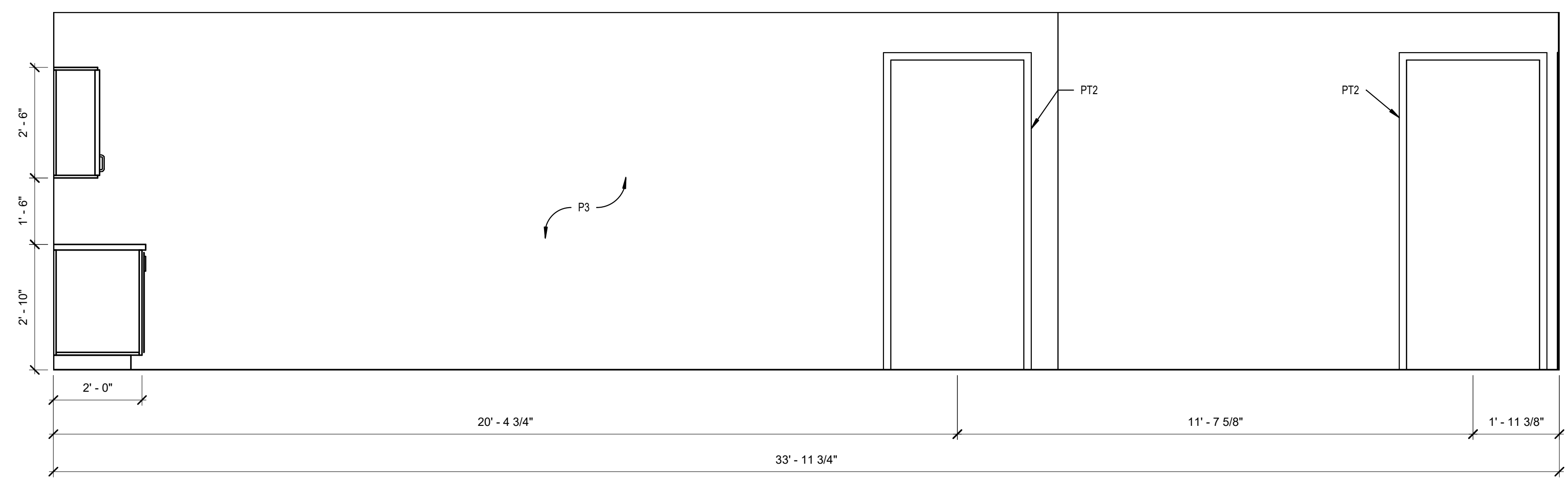
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B

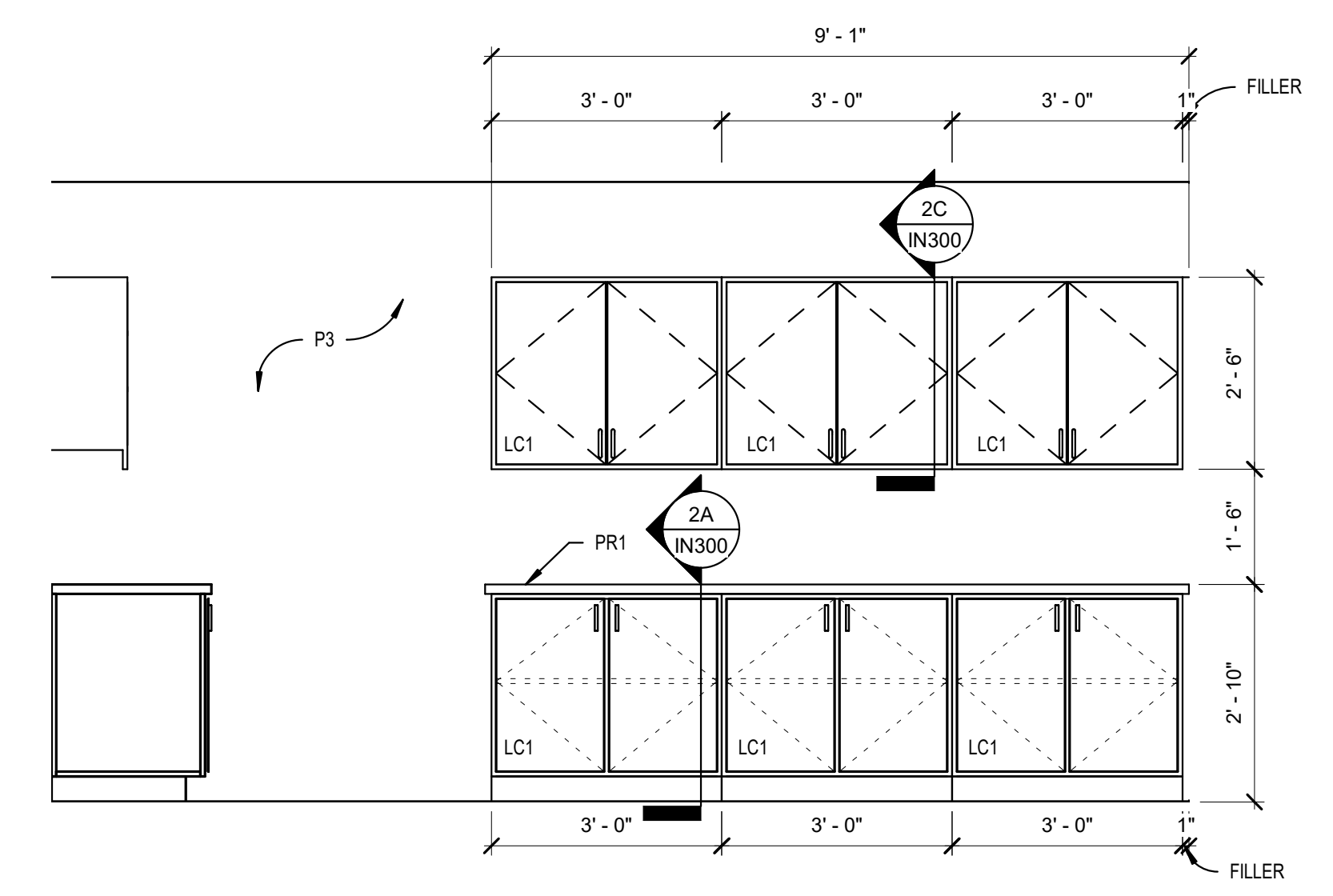
A



**4C OFFICE ELEVATION - NORTH**  
1/2" = 1'-0"



**4B OFFICE ELEVATION - SOUTH**  
1/2" = 1'-0"



**2A OFFICE ELEVATION - EAST**  
1/2" = 1'-0"



CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LD  
 Drawn By: AB, WD  
 Checked By: LD



*Eric Wefler*

INTERIOR ELEVATIONS

IN200

5

4

3

2

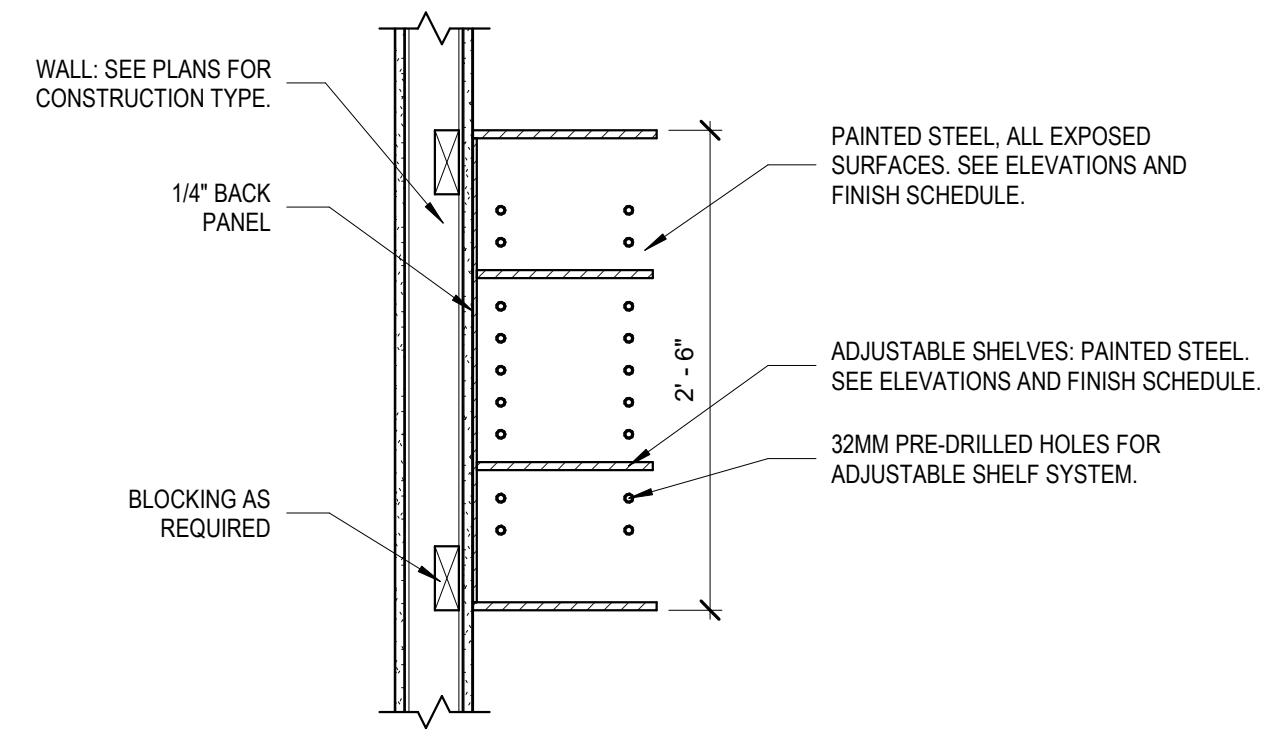
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D

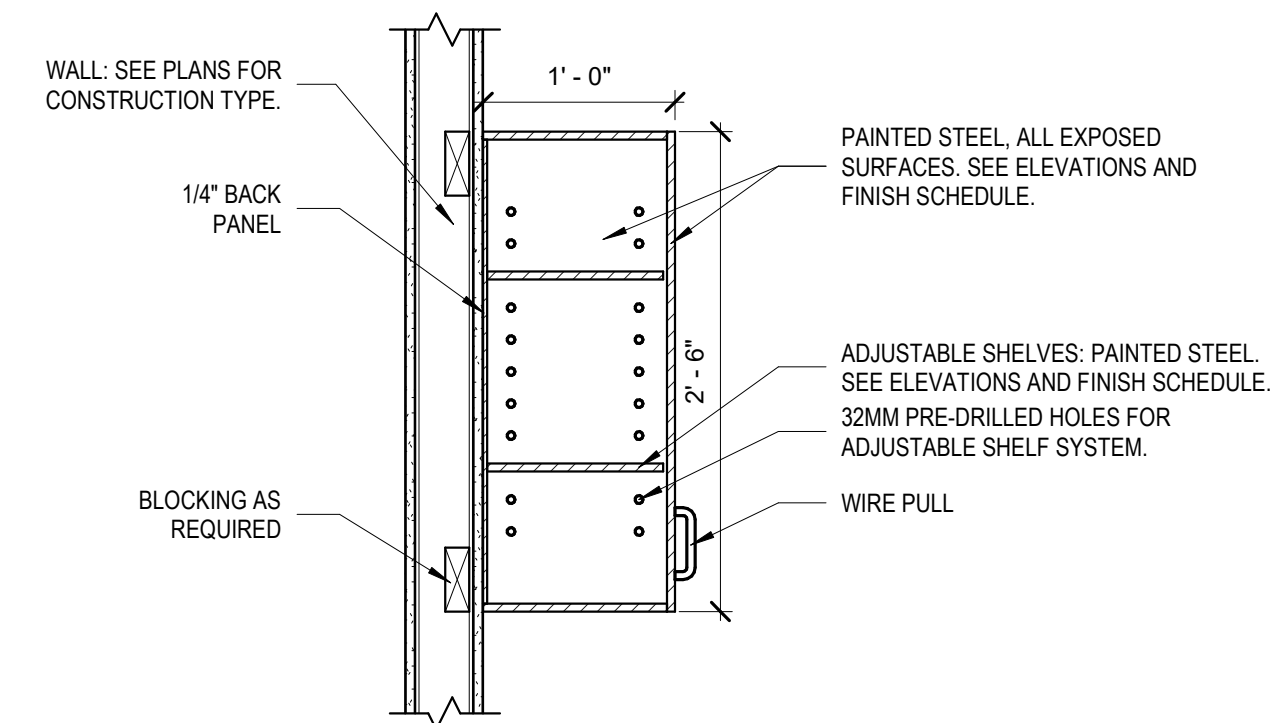
C

B

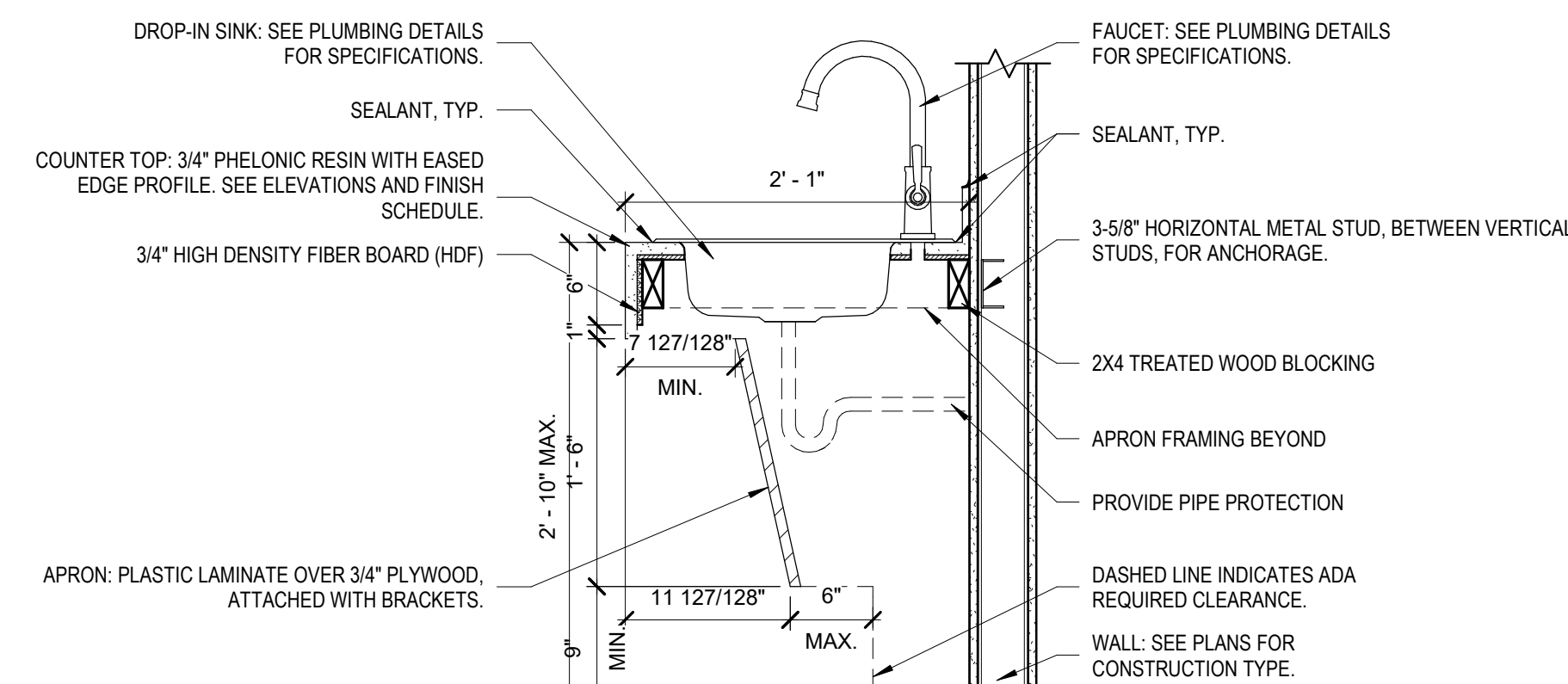
A



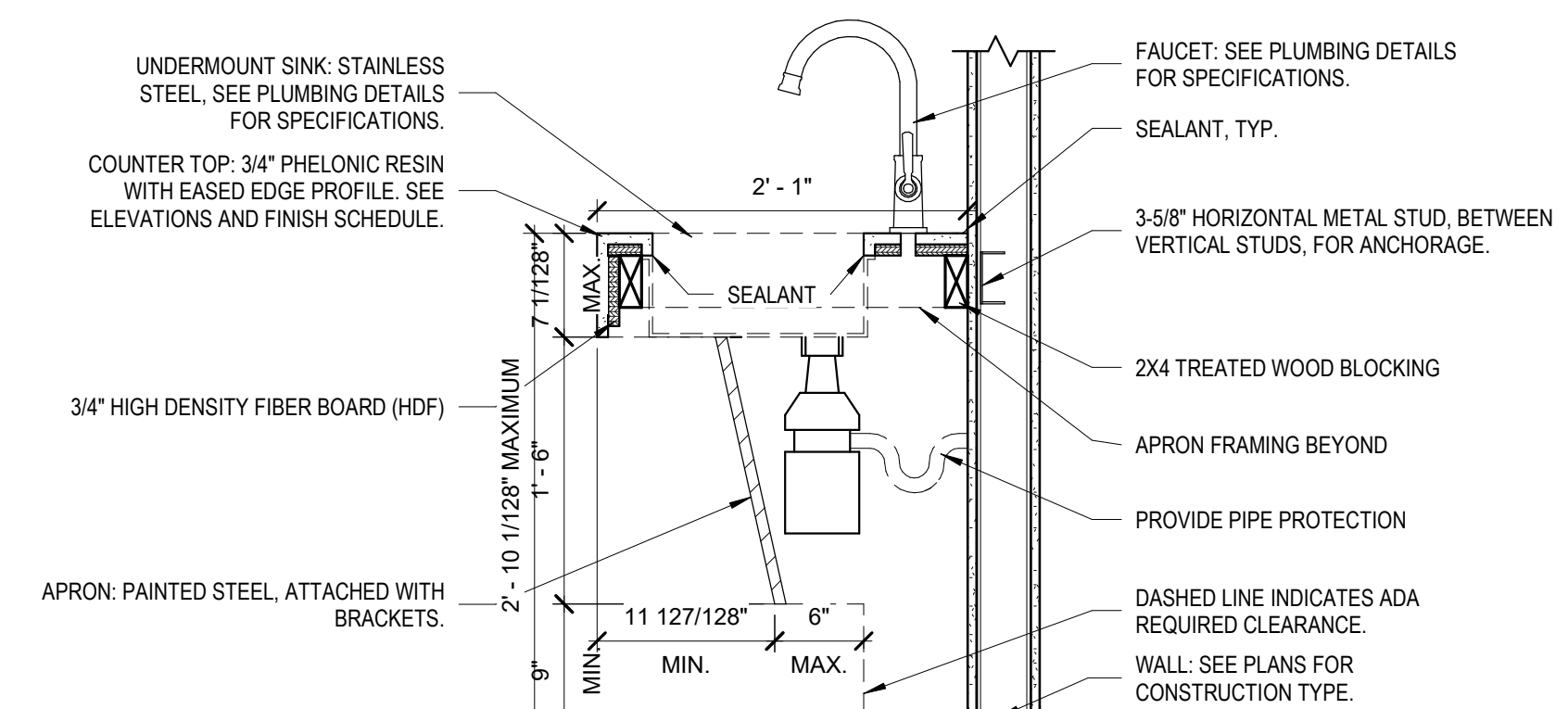
**4C CASEWORK (UPPER) - 2'6" OPEN SHELVING**  
1" = 1'-0"



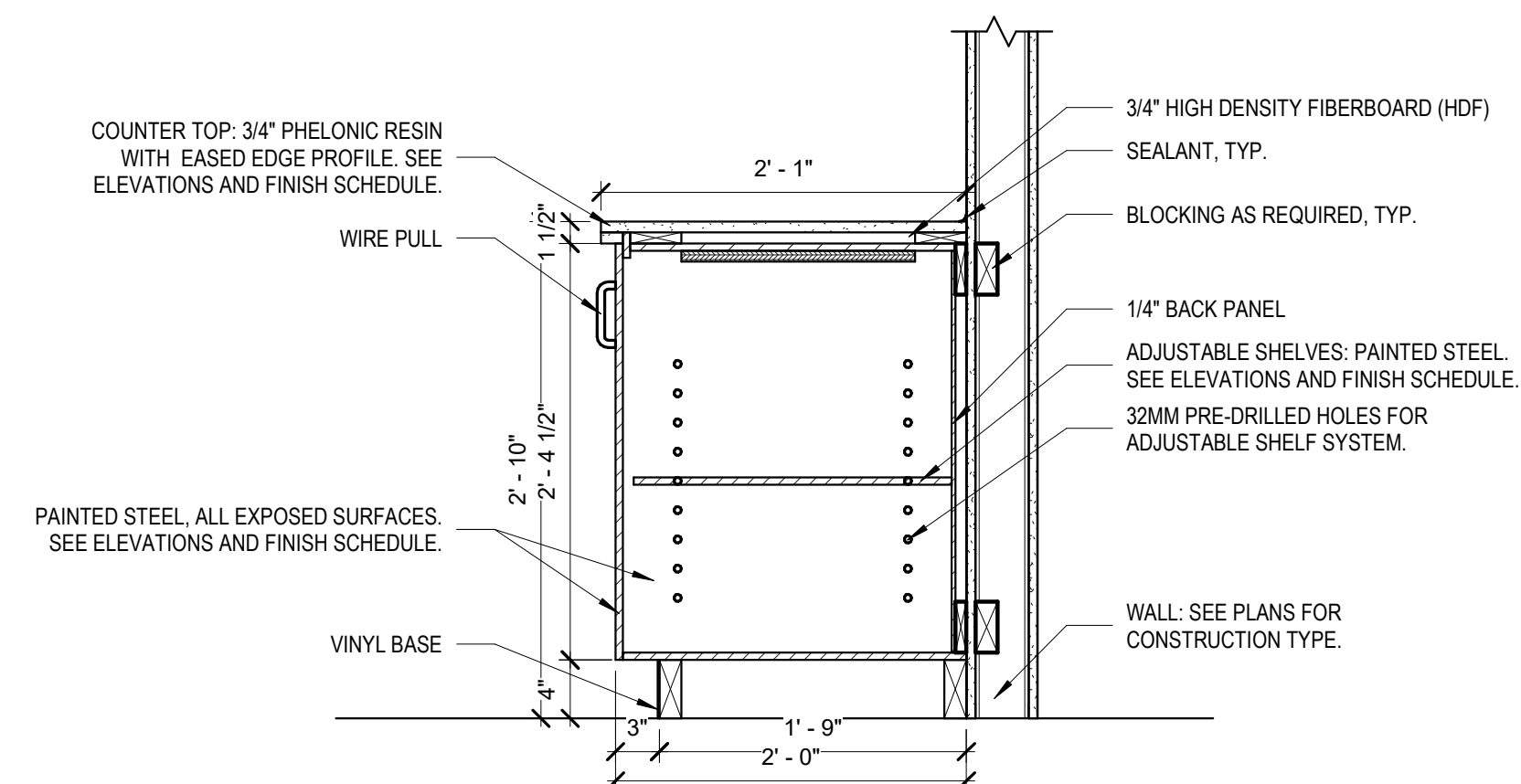
**2C CASEWORK (UPPER) - 2'6"**  
1" = 1'-0"



**4B CASEWORK (BASE) - DROP-IN SINK (ADA)**  
1" = 1'-0"



**2B CASEWORK (BASE) - UNDERMOUNT SINK W/ GARBAGE DISPOSAL (ADA)**  
1" = 1'-0"



**2A CASEWORK (BASE) - DOORS**  
1" = 1'-0"

#	Revision	Date
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Project #: 21-400-194-1

Designed By: LD

Drawn By: AB, WD

Checked By: LD



*Eric Weffler*

**GENERAL NOTES:**

- Building Code: Indiana Building Code, 2014 Edition
- Design Loads:
  - A. Access Stair and Platform: Live Load = 150 psf  
Dead Load = 4.8 psf (Grating)  
2.8 plf (Handrail)
  - B. Manual Bar Screen: Dead Load = 4.8 psf (Grating)  
120 pcf (Soil)
- Contractor to install all equipment in complete accordance with all manufacturer's recommendations.
- All fasteners, supports etc. to be Stainless Steel.
- Refer to specifications for further information.
- All concrete to be min.  $F_c = 4,000$  psi  
All reinforcing steel to be min.  $F_y = 60,000$  psi
- See Structural detail sheets and Electrical/Mechanical sheets for further detail.
- See Plant Control/Monitor specifications for necessary equipment coordination.
- All Ferrous metal surfaces to be prepared and painted in accordance with the specifications.
- Contractor to coordinate with all other applicable plan sheets and specifications.
- Contractor to verify equipment mounting elevations and dimensions prior to construction.
- Reinforcing details shown represent minimum requirements. Alternate but equal methods are acceptable, but they shall not be used without prior approval of the engineer.
- "L" Represents the minimum development according to ACI 318, based on grade 60 steel reinforcing and 4,000 psi (211 kg/mm) 28-day concrete.
- All dowels shall be of the same size and spacing as the bar being doweled or as shown elsewhere on the drawings.
- The reinforcing details shown on this drawing are intended to establish basic reinforcing requirements for various general types of horizontal and vertical joints in reinforced concrete structures. Details designated as "Plan" are horizontal joints and details designated as "Section" are vertical joints. Other details are self explanatory. When the condition exists in a structure that conforms to one of these details, the reinforcing requirements shown on the applicable detail shall be incorporated into the structure unless the condition is specifically detailed elsewhere on the drawings.
- The following concrete cover shall be provided for reinforcement unless otherwise indicated:
  - A. Concrete cast against and permanently exposed to earth: 3" (bottom mat and sides of slabs or other concrete cast against the earth).
  - B. Concrete exposed to earth, weather or fluid surfaces: 2" (tank walls, beams, slabs, columns).
  - C. Concrete not exposed to earth in contact with ground: 1 1/2".
- An undimensioned bend represents a standard hook.
- Where one grid of reinforcing is required in a wall or slab, the grid shall be centered in the element unless otherwise located on the plans with a clear distance to either side of the element.
- All reinforcing splices to meet ACI requirements.
- Max. "A" for walls = 4'-0", Max. "A" and "B" for slabs = 4'-0". Larger Openings require special treatment.
- Chamfer all exposed edges 3/4" (Typical)

**FOUNDATION NOTES:**

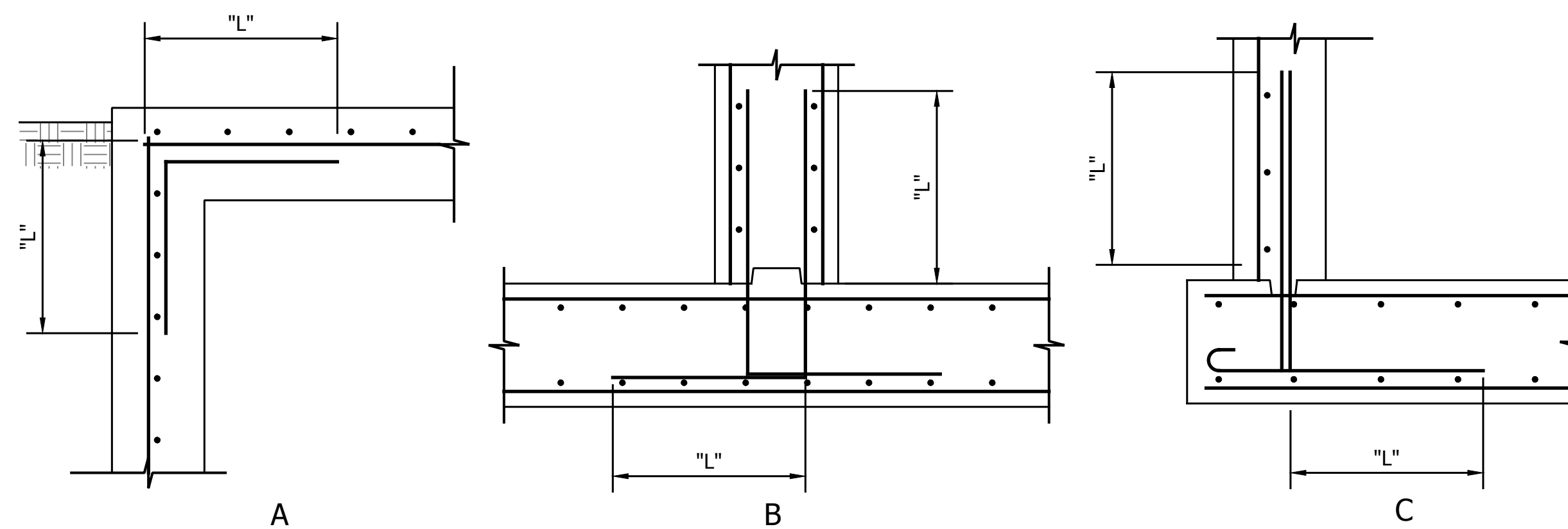
- Design soil bearing Pressure = 2,000 psf
- Backfilling along walls and grade beams shall be placed simultaneously where walls have fill on each side. Backfilling of cantilevered retaining walls shall be with clean sand and gravel placed with a minimum amount of tamping or compacting once concrete has attained full strength. Walls to be tied into slab on grade shall be braced until the concrete slab on grade and adjacent wall have attained full strength.
- No horizontal construction joints are permitted in walls unless noted.
- All anchor bolts shall be furnished by the Structural Steel Contractor and installed by the Foundation Contractor.
- Footings and slabs shall be poured on firm, undisturbed soil or on engineered fill. Engineered fill shall be free-draining and compacted to a minimum dry density of 100% of the maximum standard proctor dry density (ASTM-D698) placed in 6" to 8" lifts.
- Undercutting of the soil for foundation and/or slab placement may be required. These drawings do not indicate the entire scope of the undercutting, fill or bad soil removal that may be required to attain the design soil bearing pressures. It is the responsibility of the Contractor to obtain a soils investigation report, before bidding, to assess the extent of excavation and compaction that may be required to meet the design criteria.
- The Geotechnical Representative shall be retained to monitor all backfilling operations and to inspect footing bearing materials. A Report certified by the soils engineer shall be furnished to the Architect/Engineer verifying that all foundations were placed on a material capable of sustaining the design bearing pressures.
- The bottoms of all foundations shall be protected from moisture damage and/or freezing if the foundation cannot be cast immediately.
- If dewatering is required, sumps shall not be placed within the foundation excavation.

**REINFORCED CONCRETE:**

- Unless otherwise noted, cover, laps, splices and embedment lengths shall conform to ACI 318-2019 (22).
- No horizontal construction joints shall be permitted in grade beams or walls unless specifically shown on the drawings. Horizontal reinforcement in perimeter walls shall be continuous with a lap of 1'-9" minimum.
- All horizontal bars in walls or grades beams shall be bent at coners or intersections in such a way that continuity is provided through the joint.

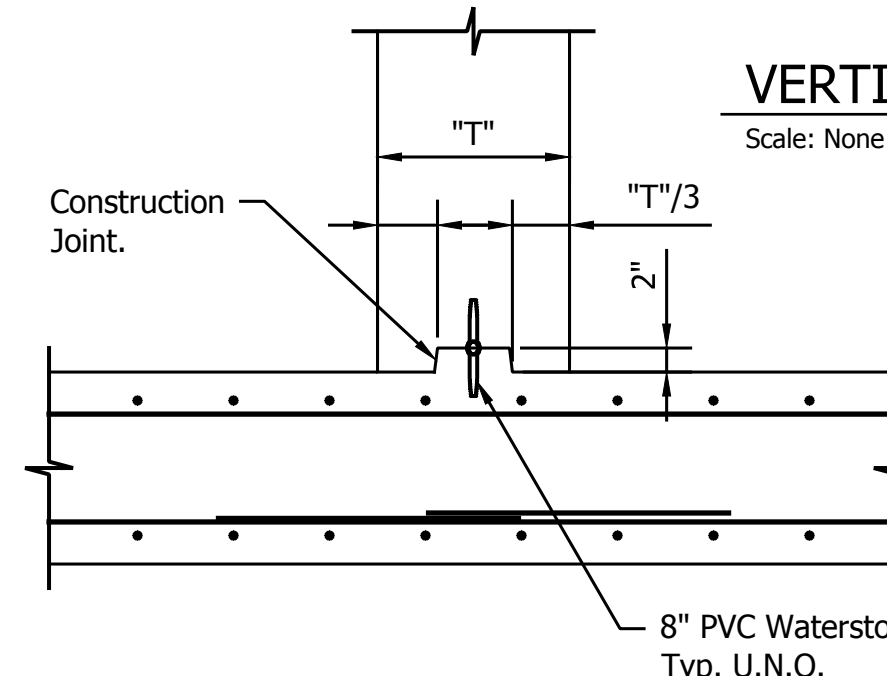
**STRUCTURAL STEEL:**

- All beam end connections shall be designed for 0.5Wc/L (kips). Beam end connections shall be single angle framed beam connections. Wc = uniform load constant (kip-ft) for the beam as shown in the AISC Manual 15th Edition. L = Beam span in feet.
- All welding shall be done by the electric arc method in accordance with the AWS Structural Welding Code D1.1 E70XX electrodes conforming to AWS A5.1 or A5.5 shall be used for the shielded metal arc method and E70XX flux-electrode combination conforming to AWS5.17 for the submerged arc method.
- All Rolled structural steel shall conform to ASTM A50 U.N.O. All structural steel tube shall conform to ASTM A500.
- All field connections shall be made with 3/4" diameter ASTM A325N bearing type bolts with threads assumed in the shear plane U.N.O. in the specifications. Connections for horizontal and vertical bracing shall develop 50% of the member strength.
- All connections shall be a minimum of two (2) 3/4" diameter A325 bolts, or a weld developing a minimum force of 10 kips.
- Weld all floor plates to beam with 3/16" x 2" long at 2'-8" on centers.
- All Structural steel shall be detailed, fabricated, installed and erected in accordance with the latest AISC "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings".
- See the specifications regarding the painting of steel.
- Steel framing connections shall be tightened and columns shall be leveled and grouted in place before decking is placed.
- Burning of holes in structural steel is not permitted without prior approval of the structural engineer.
- All steel floor plates shall span continuously over a minimum of 3 spans. All floor plates shall butt into a continuous 1/4" bent toe plate around platform perimeter.



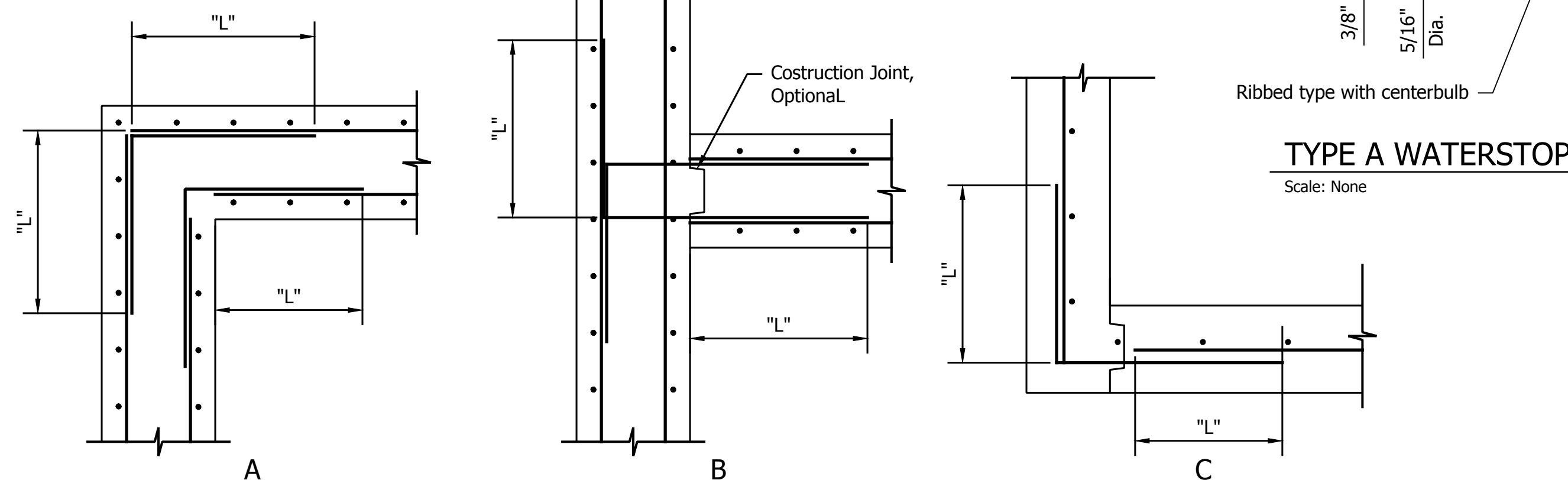
**VERTICAL REINFORCING CORNER DETAILS**

Scale: None



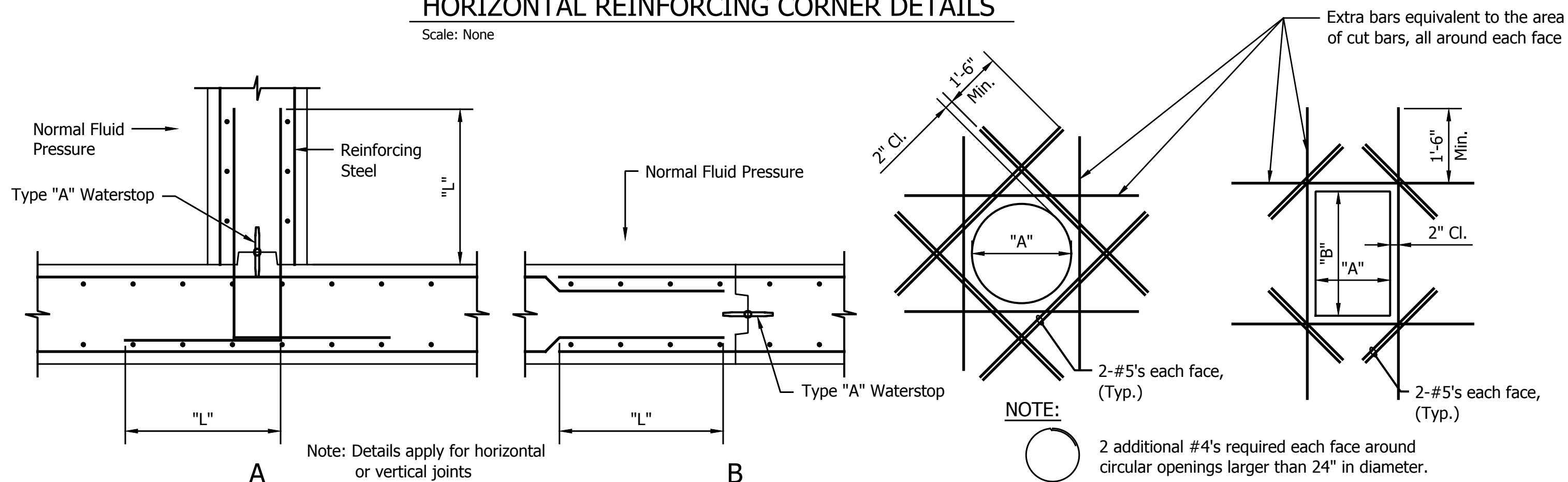
**KEYWAY DETAIL**

Scale: None



**HORIZONTAL REINFORCING CORNER DETAILS**

Scale: None



**WATERPROOF CONSTRUCTION JOINT DETAILS**

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

**TYPICAL OPENING REINFORCEMENT DETAILS**

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

#	Revision	Date

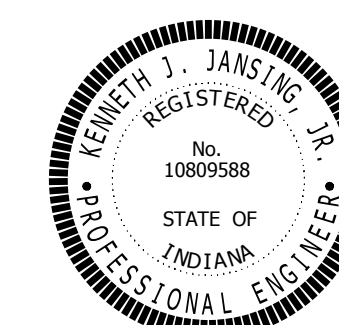
Project #: 21-400-194-1

Designed By: KJJ

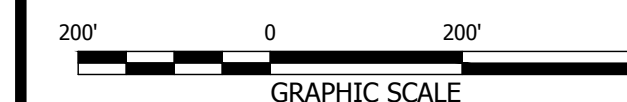
Drawn By: DRD

Checked By: KJJ

Date: 01/05/2023



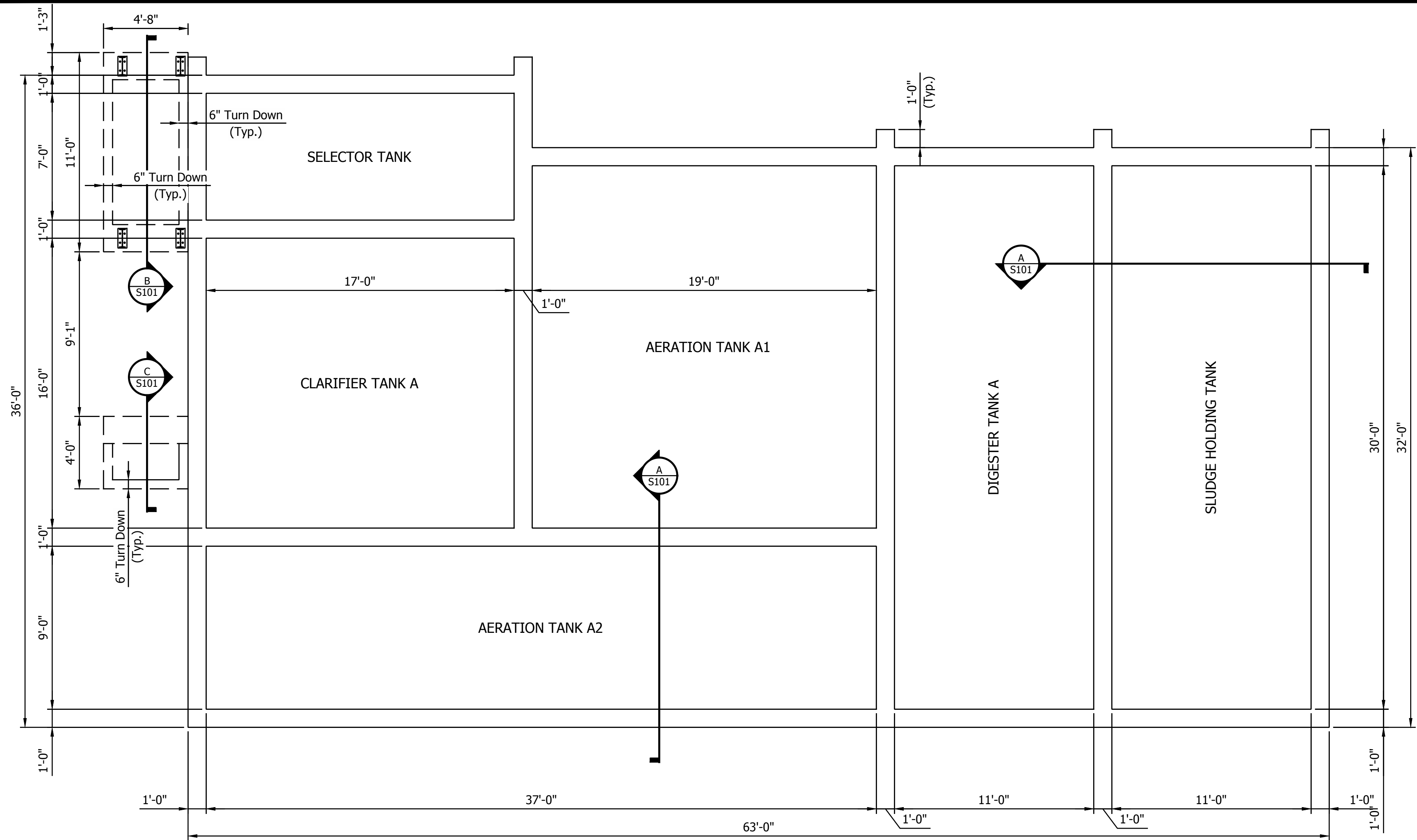
*Kenneth J. Jansing*



**STRUCTURAL  
DETAILS**

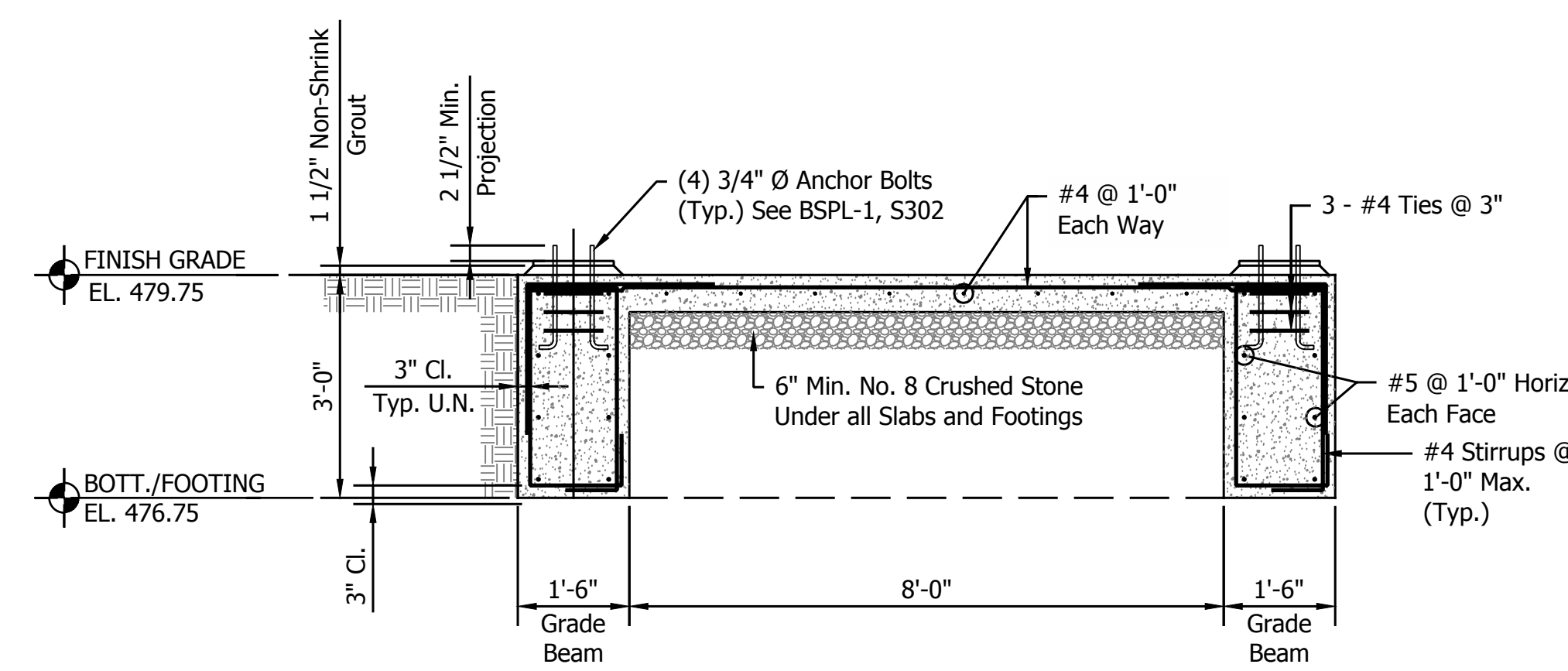
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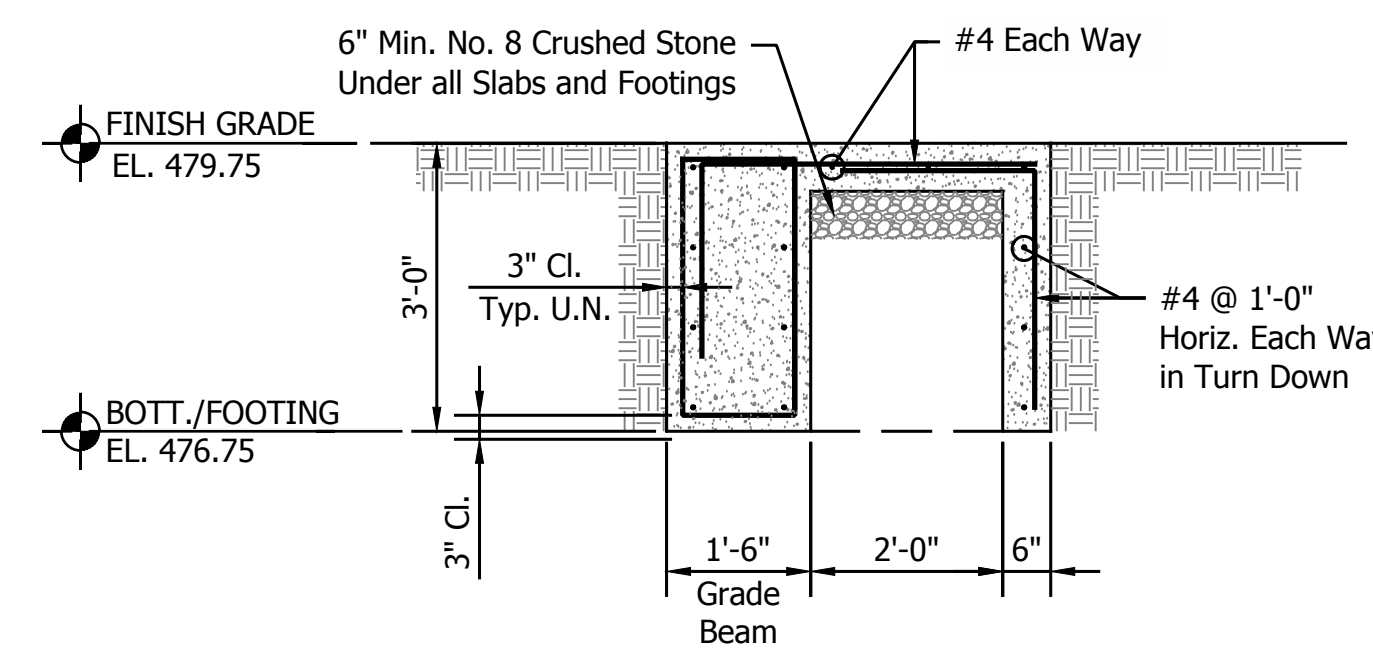


**ENLARGED PLAN - AERATION TANK BUILDING**

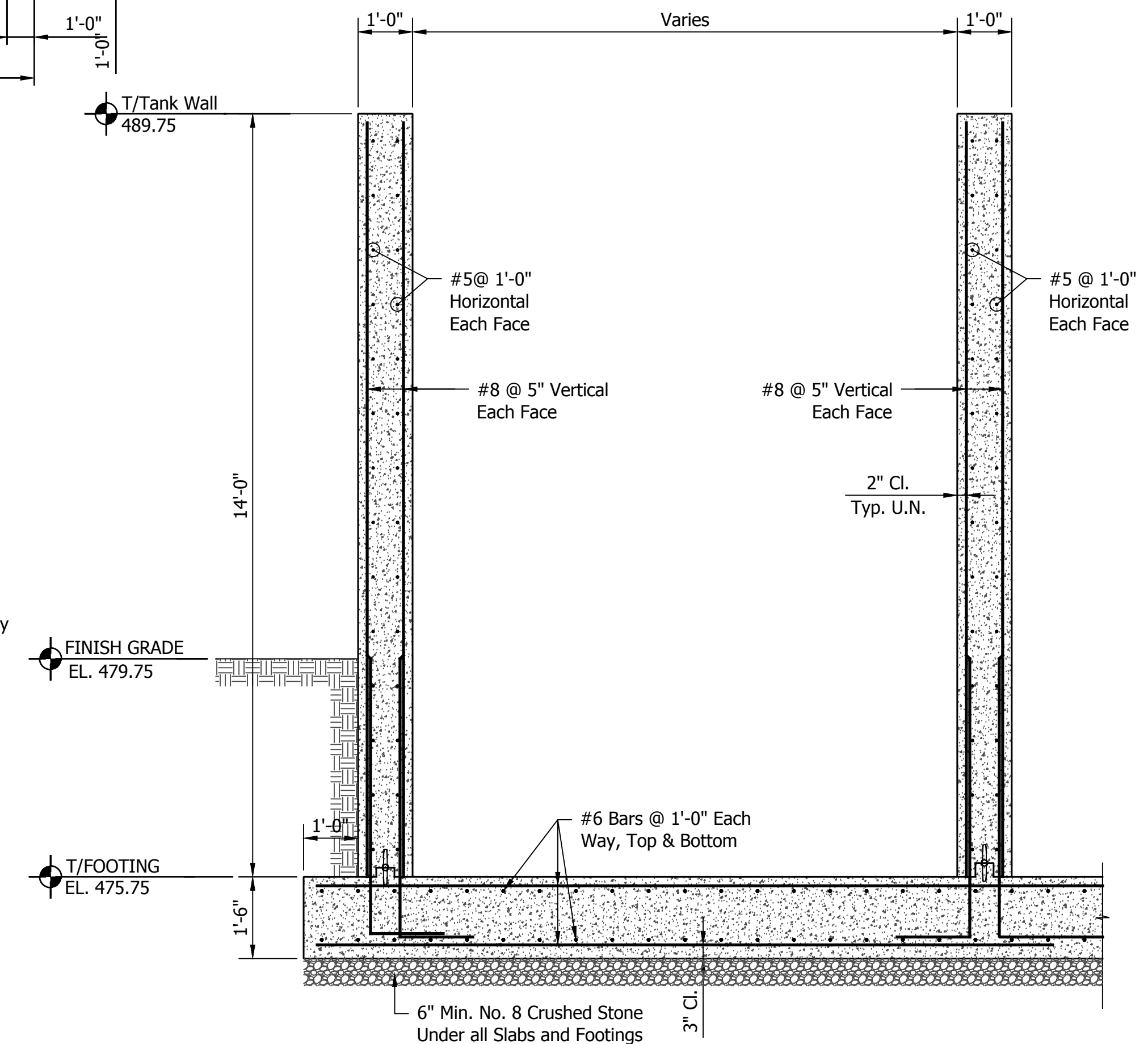
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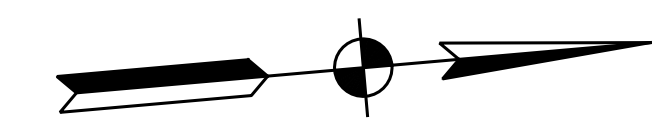
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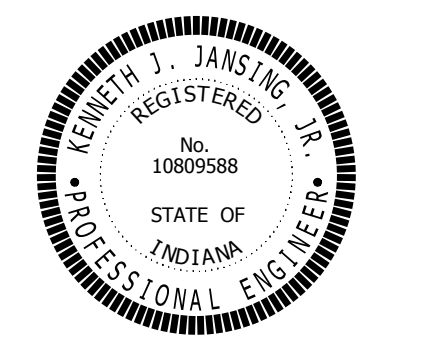
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**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: KJJ  
Drawn By: DRD  
Checked By: KJJ  
Date: 01/05/2023



*Kenneth J. Jansing*



**STRUCTURAL DETAILS**

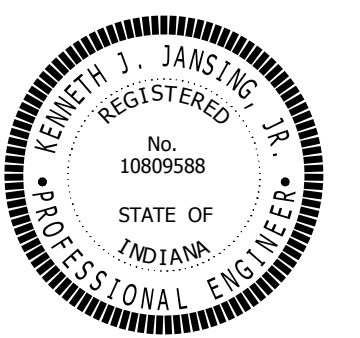
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**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**  
WHEATLAND, IN 47597

CONSTRUCTION SET

#	Revision	Date

Project #: 21-400-194-1  
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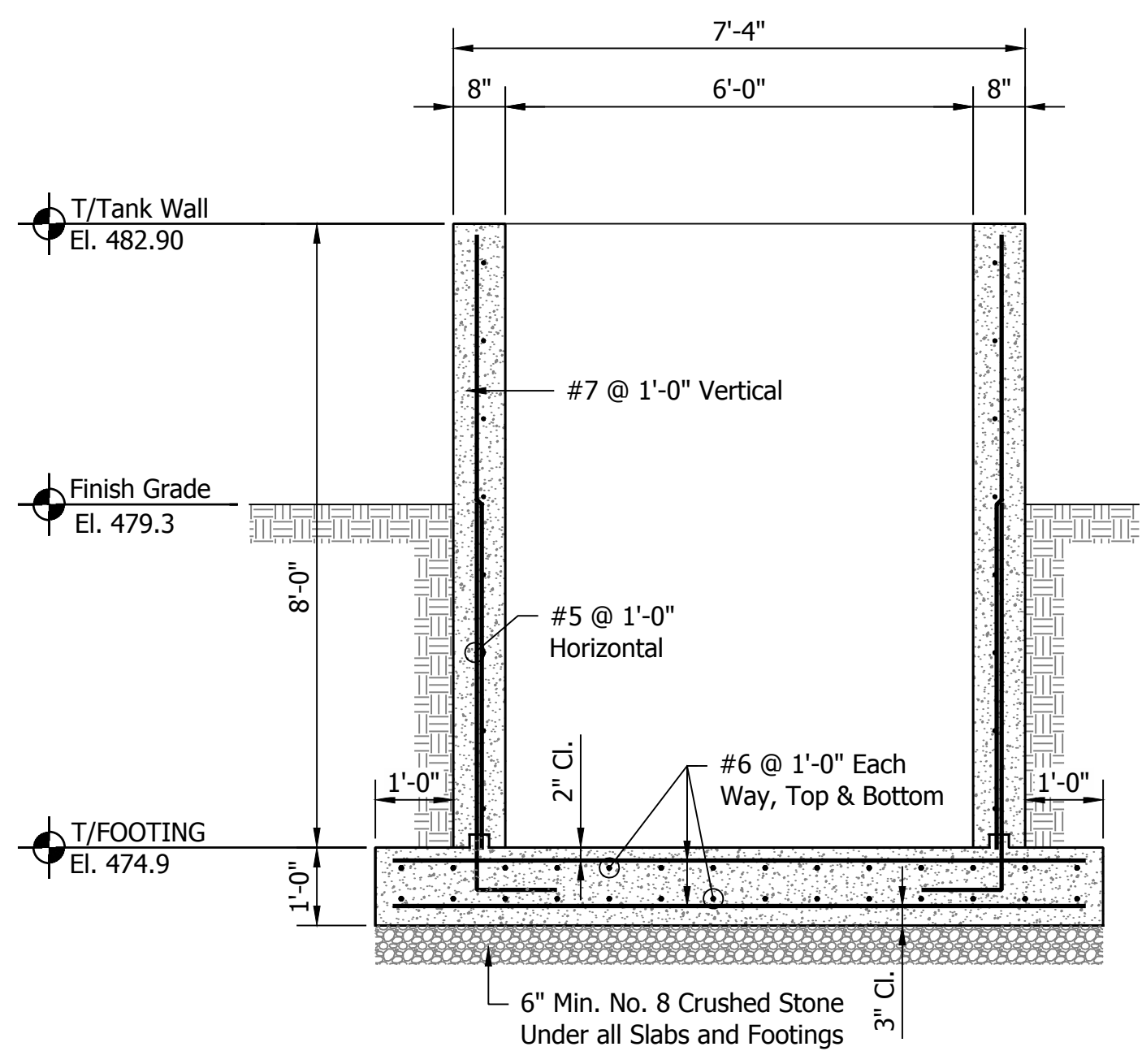
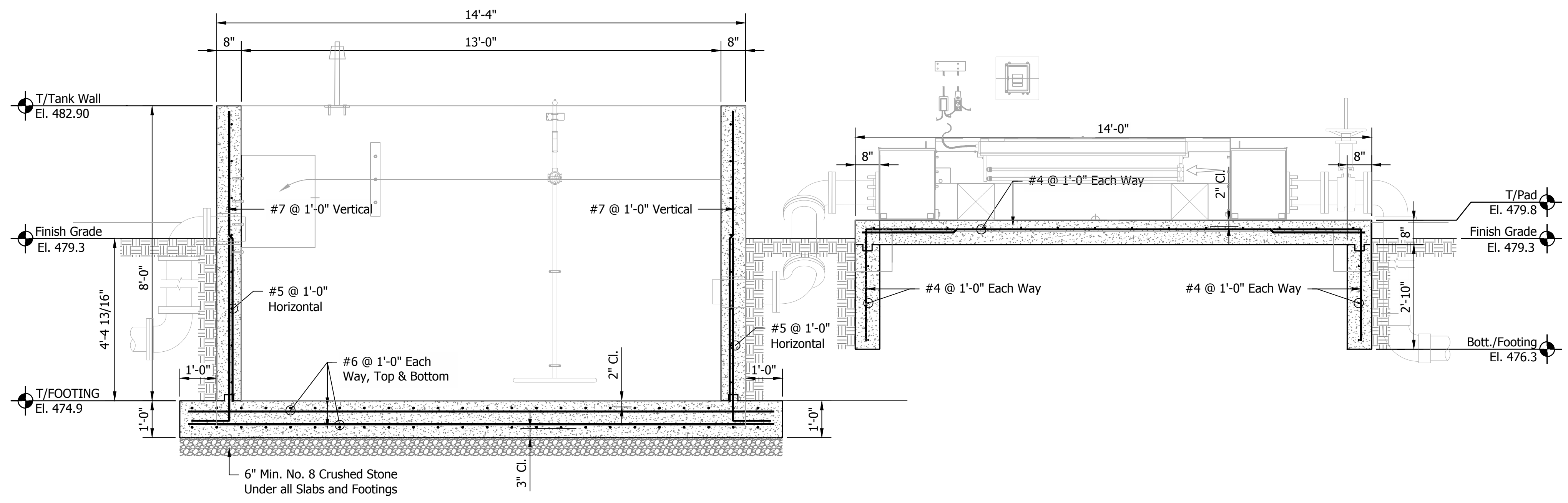
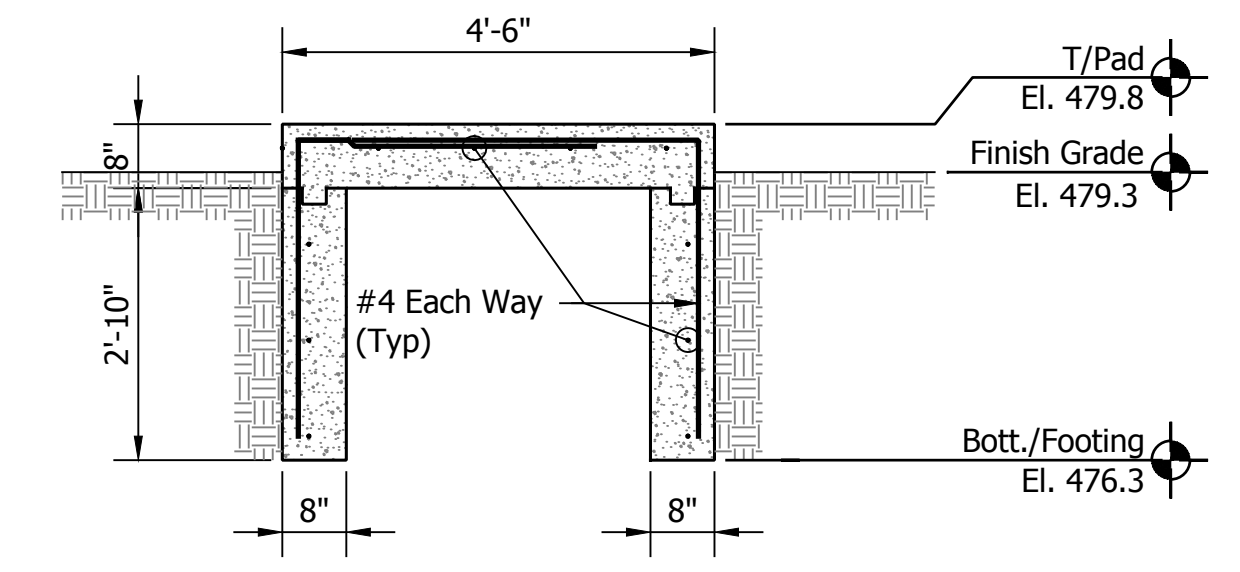
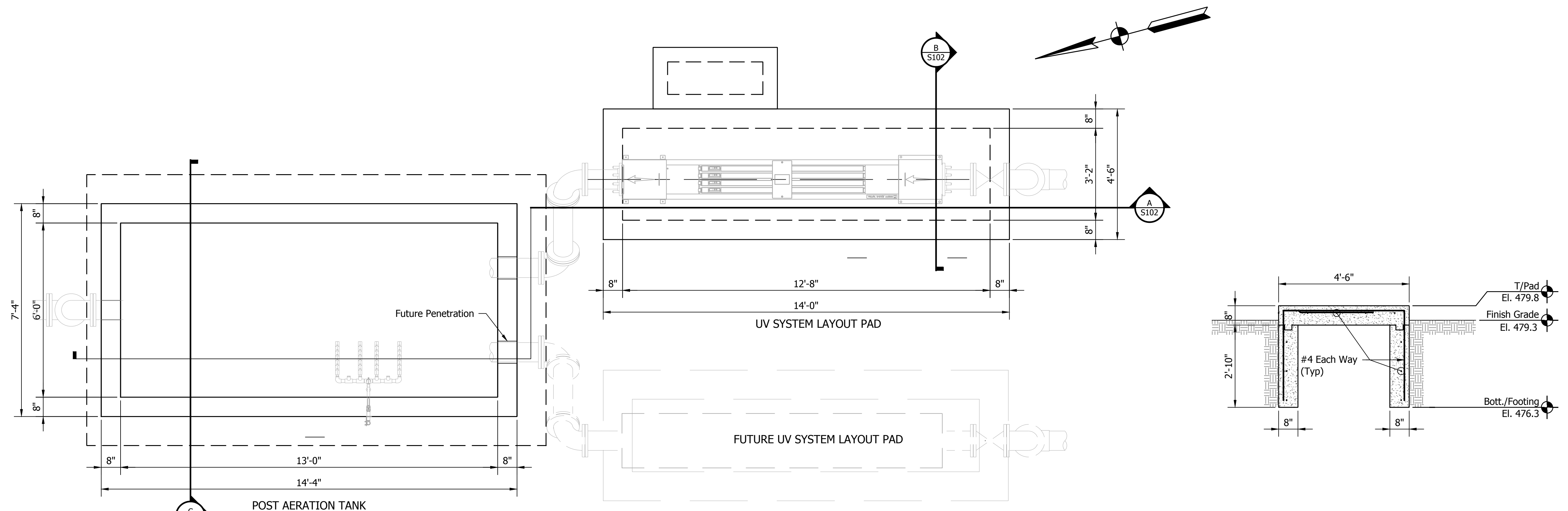


*Kenneth J. Jansing*



**STRUCTURAL  
DETAILS**

**S102**



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

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

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

**CONSTRUCTION SET**

#	Revision	Date

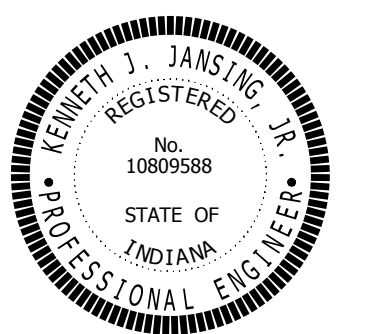
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Designed By: KJJ

Drawn By: DRD

Checked By: KJJ

Date: 01/05/2023

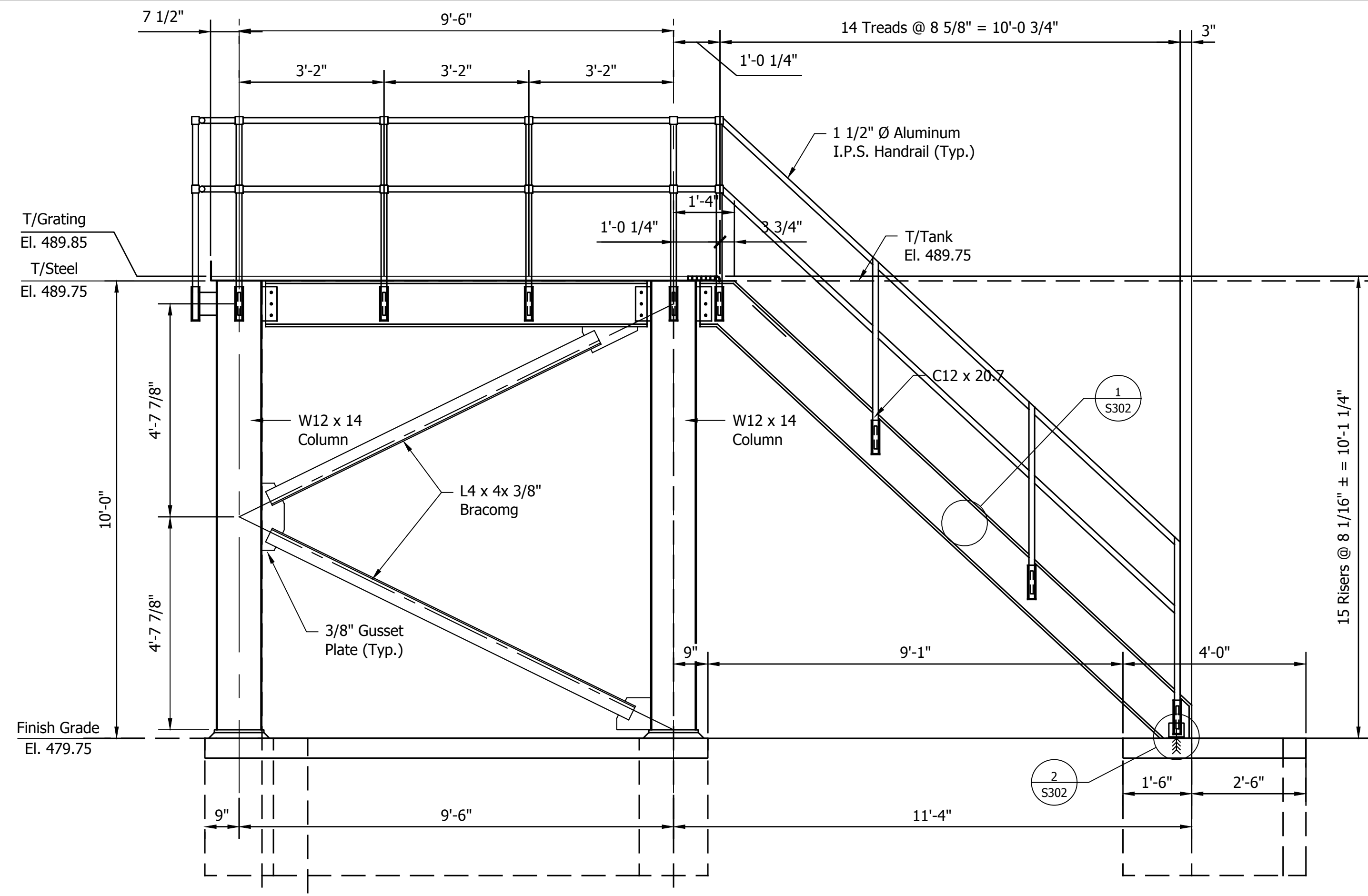


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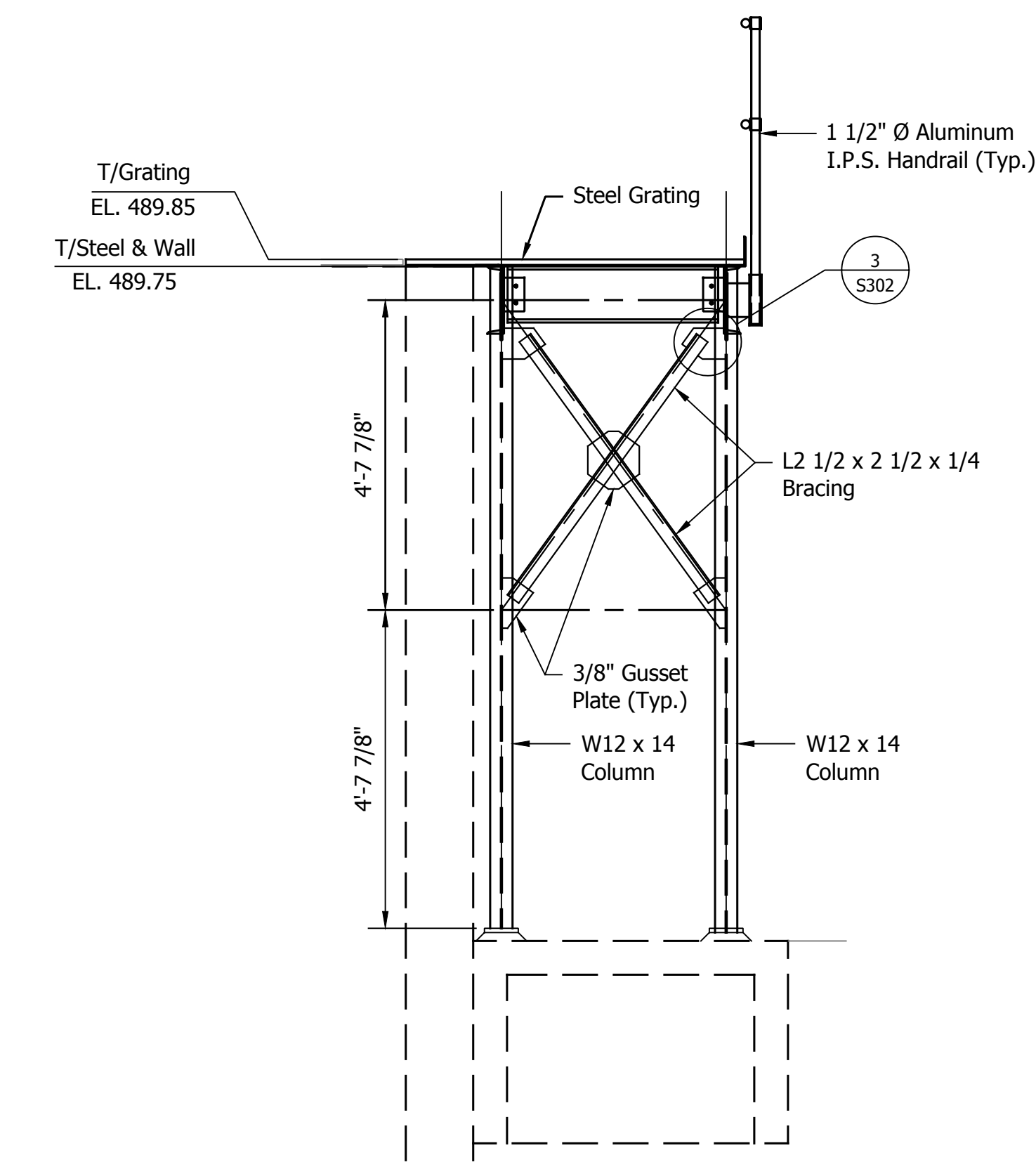


**STRUCTURAL STEEL  
DETAILS**

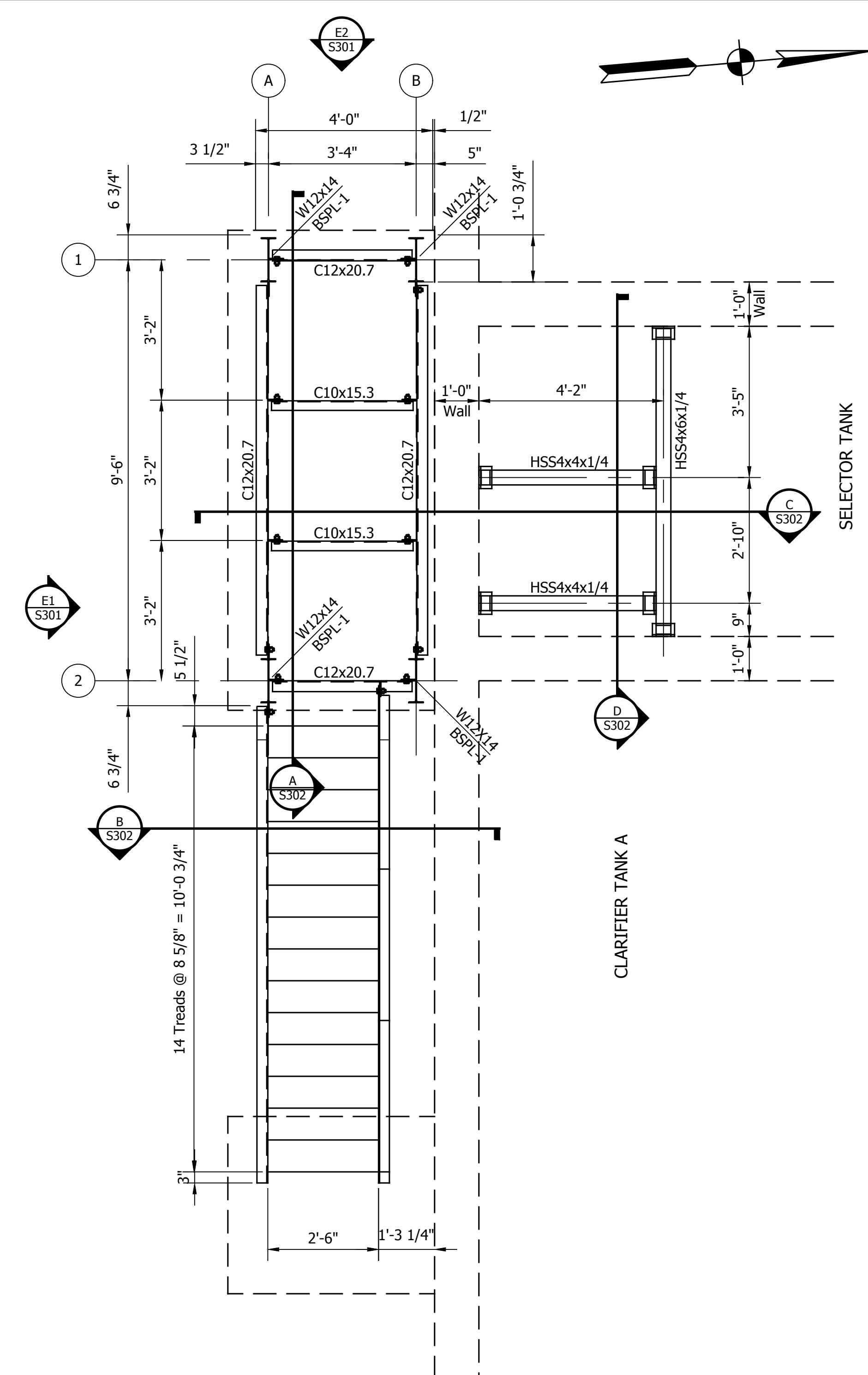
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S103



**ELEVATION**  
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E2  
S103



**ACCESS STAIR & PLATFORM FRAMING PLAN**  
Scale: 1/2" = 1'-0"

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

**CONSTRUCTION SET**

#	Revision	Date

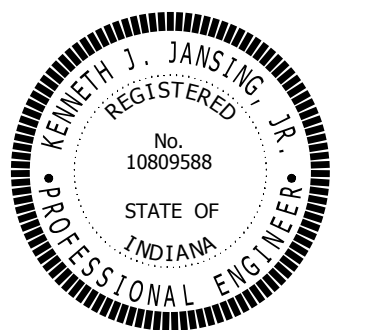
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Designed By: KJJ

Drawn By: DRD

Checked By: KJJ

Date: 01/05/2023

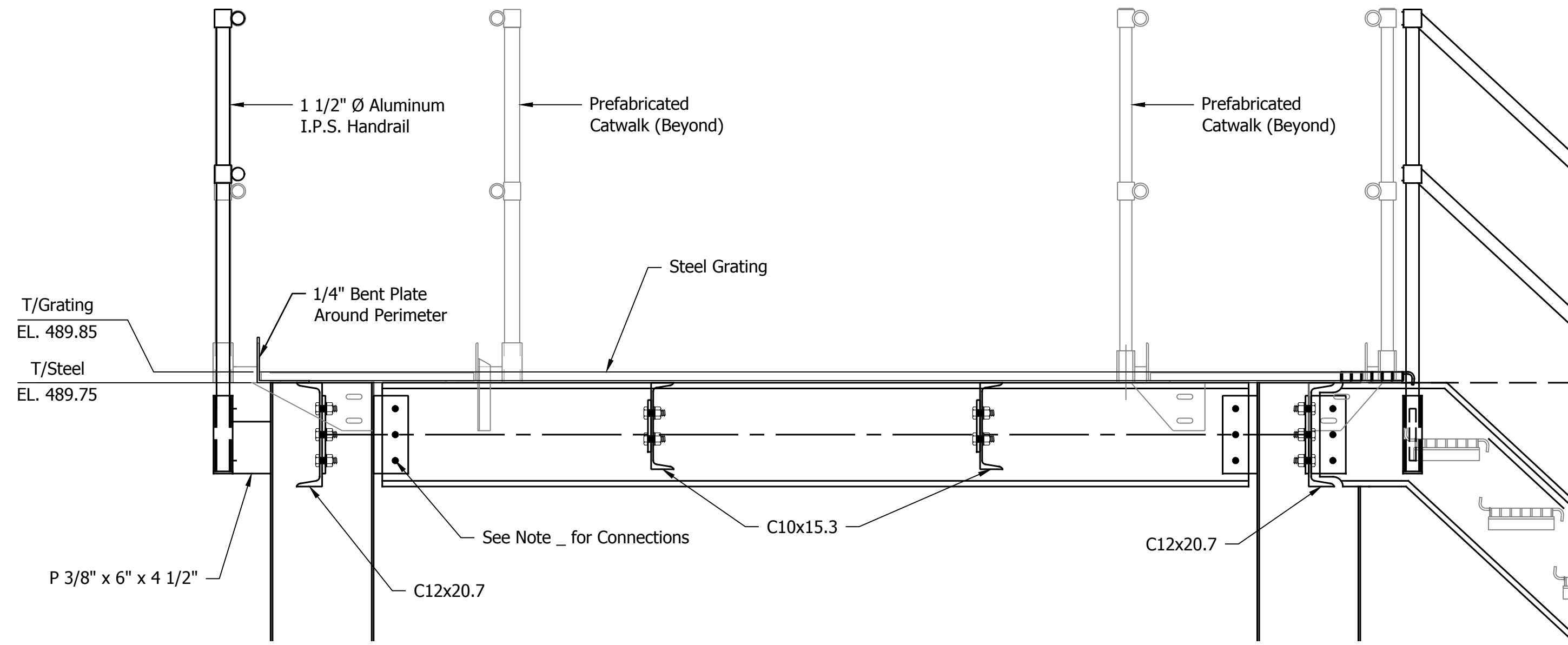


*Kenneth J. Jansing*

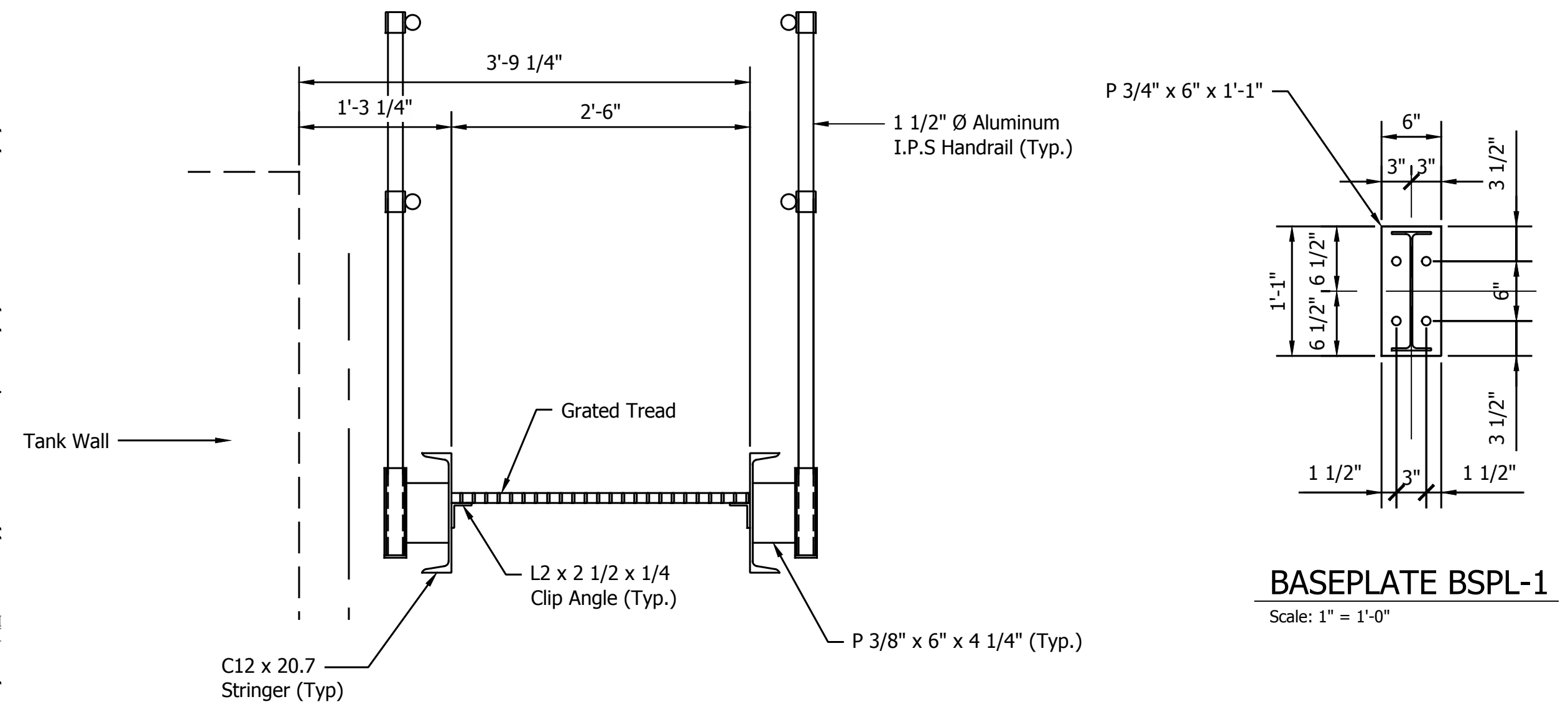


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DETAILS**

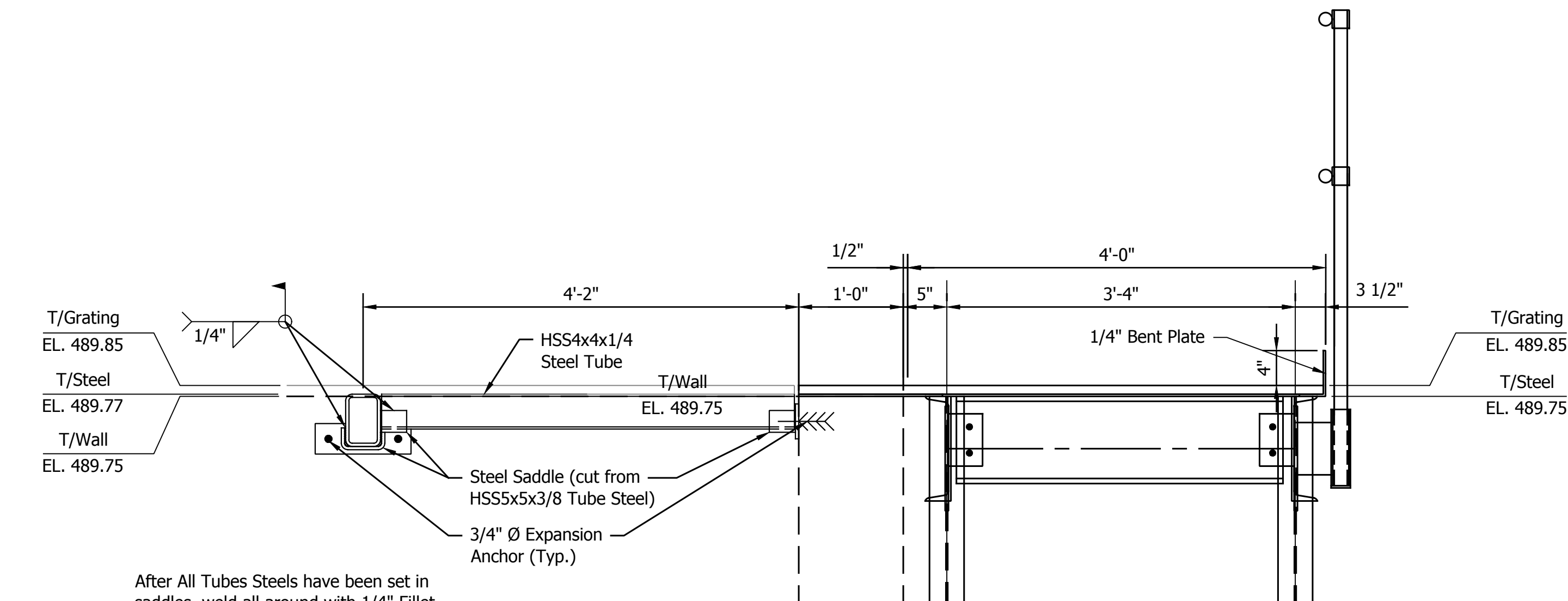
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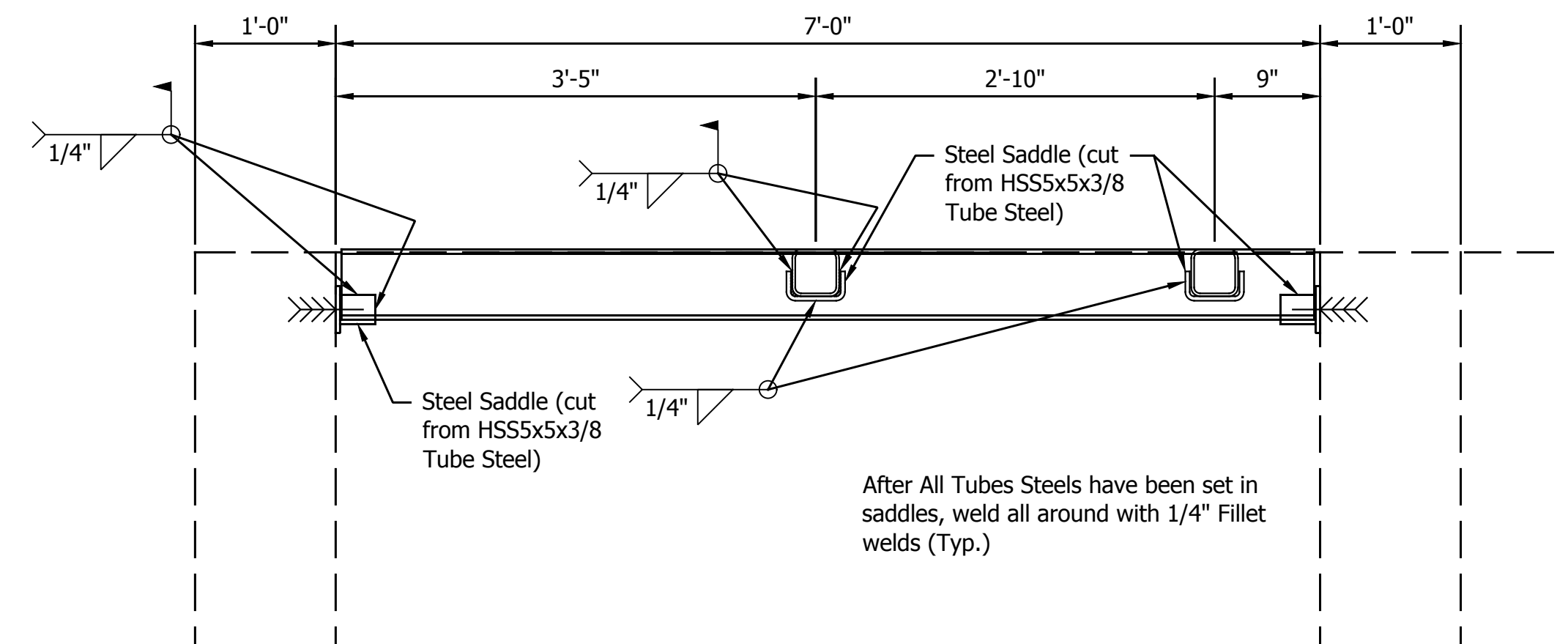
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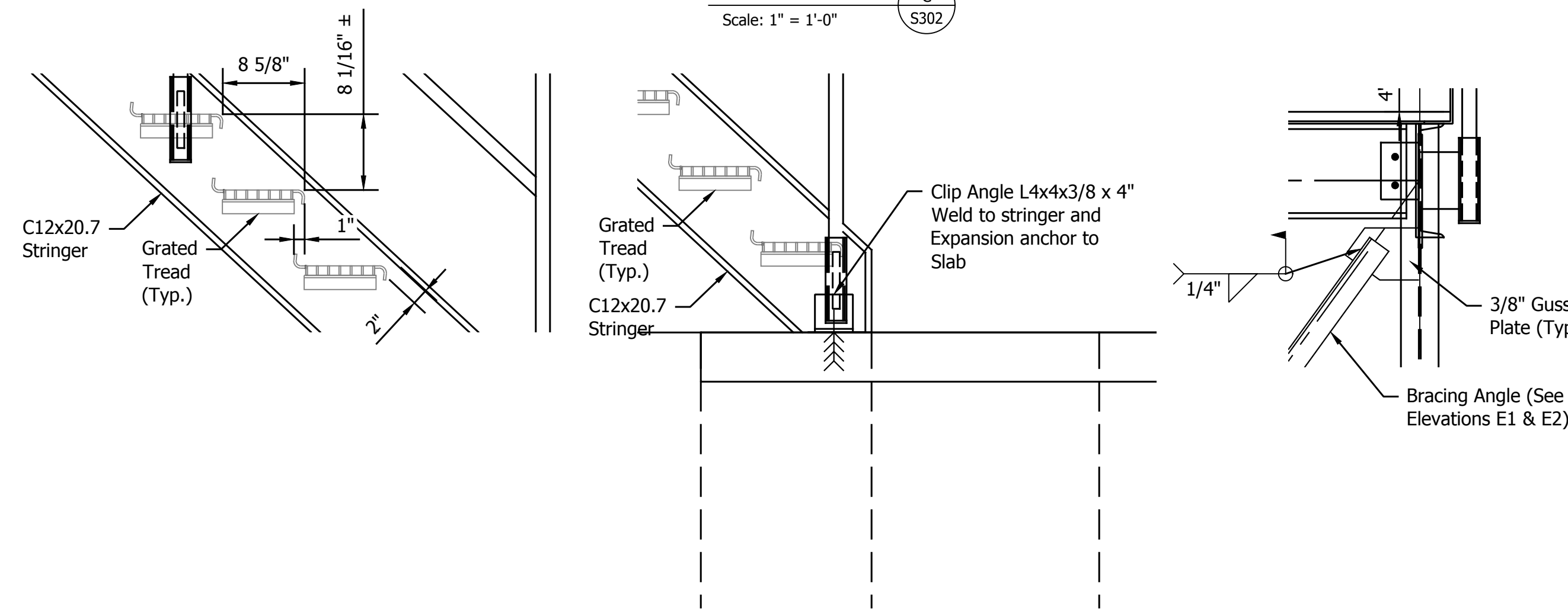
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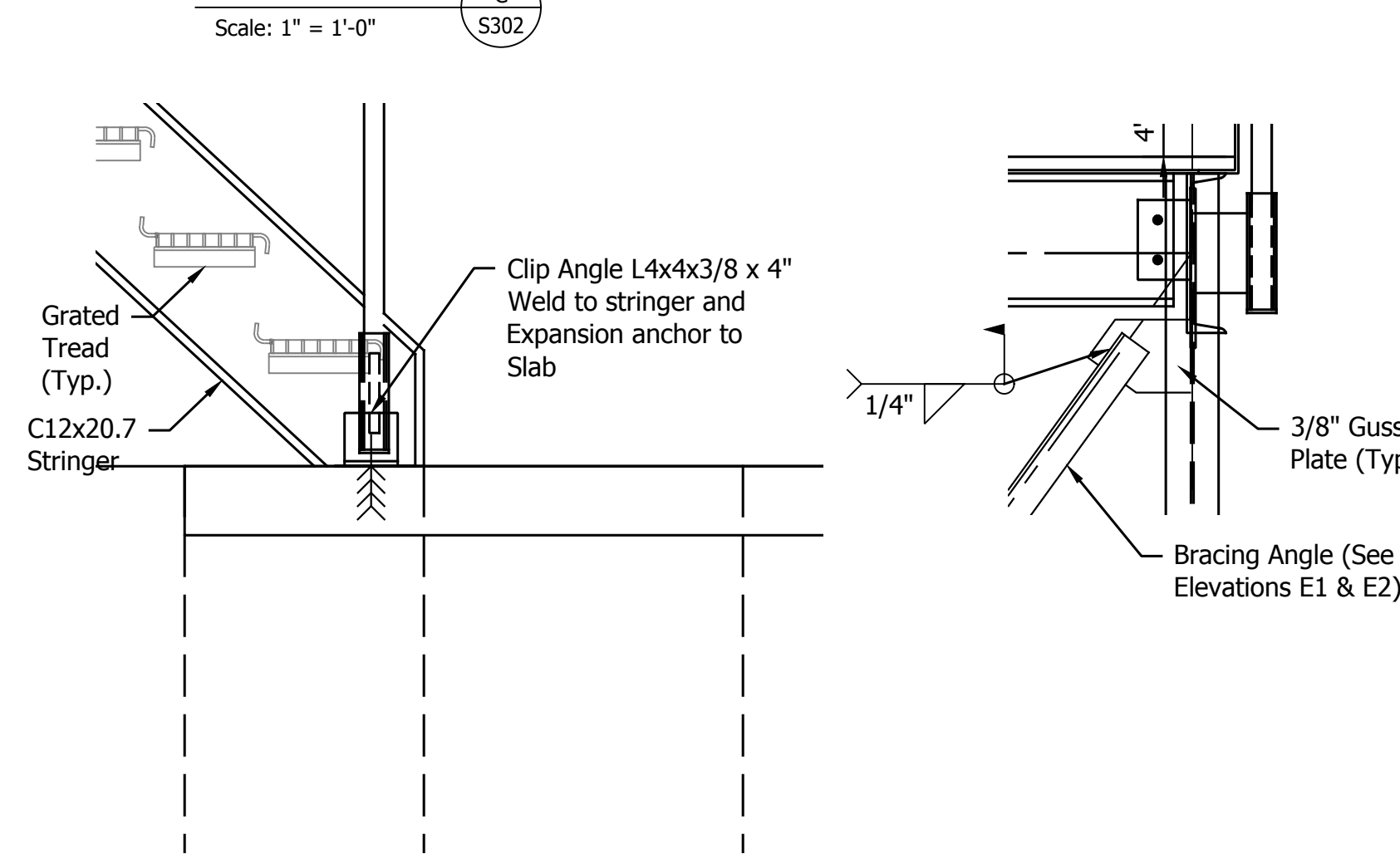
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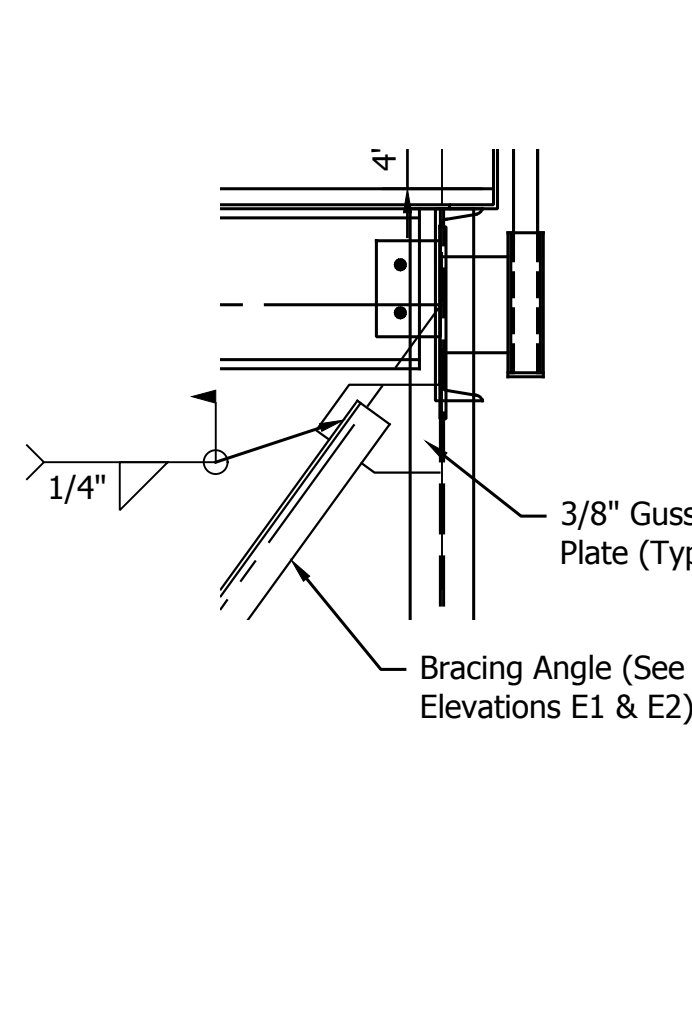
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**DETAIL 1**  
Scale: 1" = 1'-0"



**DETAIL 2**  
Scale: 1" = 1'-0"



**DETAIL 3**  
Scale: 1" = 1'-0"

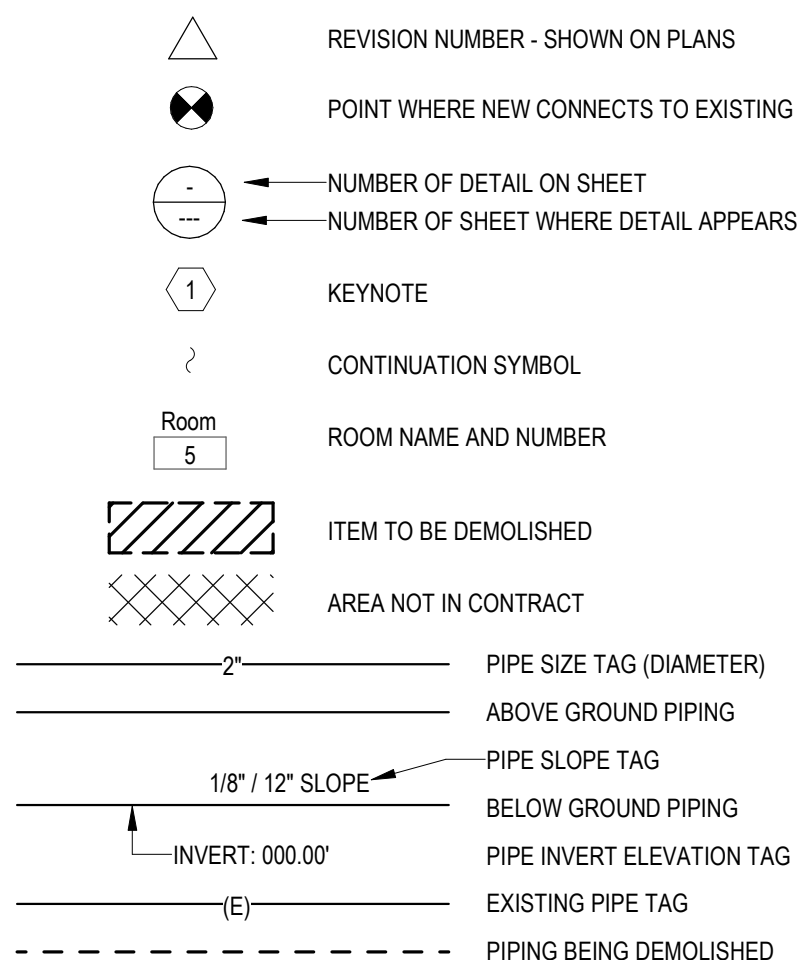
INSTRUCTIONS FOR CONTRACTORS

- A. THE ARCHITECT/ENGINEER DOES NOT DEFINE THE SCOPE OF INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS, OR VENDORS. ANY SHEET NUMBERING SYSTEMS USED, WHICH IDENTIFIES DISCIPLINES, IS SOLELY FOR THE ARCHITECT/ENGINEER'S CONVENIENCE, AND IS NOT INTENDED TO DEFINE A SUBCONTRACTOR'S SCOPE OF WORK. INFORMATION REGARDING INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS, AND VENDORS MAY BE DETAILED, DESCRIBED AND INDICATED AT DIFFERENT LOCATIONS THROUGHOUT THESE DOCUMENTS. NO CONSIDERATION WILL BE GIVEN TO REQUESTS FOR CHANGE ORDERS FOR FAILURE TO OBTAIN AND REVIEW THE COMPLETE SET OF DRAWINGS AND SPECIFICATIONS WHEN PREPARING BIDS, PRICES, AND QUOTATIONS.
- B. THE DRAWINGS ARE A SMALL-SCALE REPRESENTATION OF COMPLEX CONSTRUCTION ASSEMBLIES AND COMPONENTS, AND NOT EVERY ELEMENT OF THE PROJECT CAN BE INDICATED IN THESE SMALL SCALE REPRESENTATIONS. THE DRAWINGS ARE NOT AN INSTRUCTION MANUAL, NOR ARE THEY ASSEMBLY INSTRUCTIONS. THEY ARE MEANT FOR USE BY EXPERIENCED, COMPETENT CONSTRUCTION PROFESSIONALS WITH THE ABILITY TO READ, INTERPRET, COORDINATE, INTERPOLATE, AND INFER FROM THEM. THE DRAWINGS DO NOT INDICATE EVERY COMPONENT AND ASSEMBLY NECESSARY TO CONSTRUCT THE PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL COMPONENTS AND ASSEMBLIES NECESSARY TO PROVIDE A SAFE, COMPLETE, FINISHED PROJECT, WHICH IS REASONABLY FIT FOR ITS INTENDED PURPOSE, WHETHER OR NOT SUCH COMPONENTS AND ASSEMBLIES ARE DETAILED ON THE DRAWINGS.

PLUMBING DEMOLITION NOTES

- DASHED LINES INDICATE PIPING TO BE REMOVED, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION AND RELATED CONDITIONS AND REPORT ALL DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
- REMOVE ANY ITEMS NOT SPECIFICALLY IDENTIFIED TO BE REMOVED WHICH MUST OBVIOUSLY BE DEMOLISHED FOR CONSTRUCTION AND REMODELING TO TAKE PLACE. VERIFY WITH ARCHITECT.
- REMOVE ALL MISCELLANEOUS EQUIPMENT SUCH AS ARCHITECTURAL, MECHANICAL AND ELECTRICAL ITEMS ATTACHED TO WALLS, FLOORS AND CEILINGS TO BE DEMOLISHED.
- PROTECT EXISTING FINISHES AND OTHER ITEMS TO REMAIN. WHERE DAMAGE OCCURS, PATCH, REPAIR OR OTHERWISE RESTORE TO ITS ORIGINAL CONDITION.
- WHERE DEMOLITION LEAVES HOLES OR DAMAGED SURFACES THAT WILL BE EXPOSED IN THE FINISHED WORK, THESE HOLES OR DAMAGED SURFACES SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT CONSTRUCTION.
- WHERE DEMOLITION IS REQUIRED, THE CONTRACTOR SHALL REMOVE ITEMS COMPLETE WITH FASTENERS, ANCHORS, CAULKING, ADHESIVES, ETC. ADJACENT REMAINING CONSTRUCTION SHALL BE PATCHED/REPAIRED IN WORKMANLIKE CONDITION TO MATCH EXISTING FINISH OR PREPARED TO RECEIVE NEW FINISH PER ROOM FINISH SCHEDULE.
- THE DEMOLITION DRAWINGS INDICATE MAJOR ELEMENTS OF EXISTING CONSTRUCTION TO BE REMOVED. CONTRACTOR SHALL COORDINATE DEMOLITION WITH CONSTRUCTION PLANS, SECTIONS AND DETAILS TO DETERMINE THE FINAL EXTENT OF DEMOLITION WORK. QUESTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE COMMENCEMENT OF WORK.
- SEE SPECIFICATIONS FOR ASSIGNMENT OF RESPONSIBILITIES PERTAINING TO PATCHING REQUIRED BY EACH TRADE.
- THE OWNER SHALL REMOVE ALL FURNISHINGS, AND LOOSE EQUIPMENT TO REMAIN THE OWNERS. ALL REMAINING ITEMS SHALL BE DEMOLISHED, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL REMOVE AND/OR DEMOLISH ITEMS INDICATED. DEMOLISHED ITEMS SHALL BE REMOVED FROM THE SITE IMMEDIATELY BY THE CONTRACTOR UNLESS NOTED OTHERWISE. ALL ITEMS TO REMAIN PROPERTY OF THE OWNER SHALL BE STORED ON SITE AS INDICATED BY THE OWNER.
- IF HAZARDOUS MATERIALS ARE UNCOVERED CONTACT THE ARCHITECT/ENGINEER. ALL HAZARDOUS MATERIALS SHALL BE REMOVED BY THE OWNER SEPARATE FROM THIS CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THESE DEMOLITION SHEETS SHALL SERVE TO AID THE CONTRACTOR IN HIS EVALUATION OF THE EXTENT OF DEMOLITION, BUT SHALL NOT BE HELD TO BE ALL INCLUSIVE.
- THE CONTRACTOR SHALL FIELD INSPECT ALL DEMOLITION WORK, PRIOR TO REMOVAL TO VERIFY ALL EXISTING STRUCTURAL BEARING CONDITIONS AND TO ENSURE SUCH REMOVAL DOES NOT IMPAIR STRUCTURAL INTEGRITY OF EXISTING BUILDINGS. IF FIELD INSPECTION INDICATES STRUCTURAL INTEGRITY MAY BE IMPAIRED, NOTIFY ARCHITECT/ENGINEER IMMEDIATELY. CONTRACTOR IS RESPONSIBLE TO SHORE THE EXISTING STRUCTURE AS REQUIRED TO ALLOW FOR DEMOLITION AND/OR NEW WORK.
- CONTRACTOR TO FILL ALL VOIDS IN CONCRETE FLOOR SLAB AS REQUIRED BY HIS WORK DUE TO REMOVAL OF PIPING. MATCH EXISTING ADJACENT FLOOR FINISH ELEVATION.
- PROVIDE THE NECESSARY MEANS TO PROTECT AND MAINTAIN THE STRUCTURAL INTEGRITY OF THE EXISTING FACILITY DURING ALL PHASES OF CONSTRUCTION.

GENERAL SYMBOLS



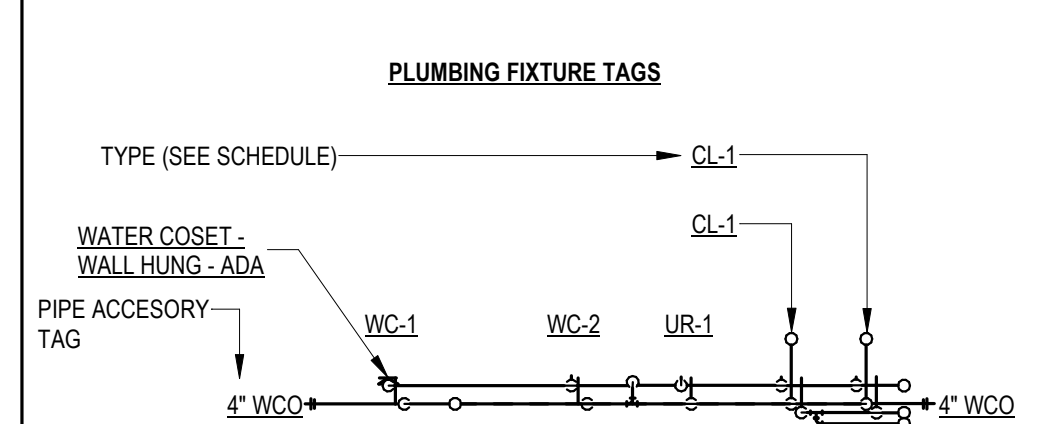
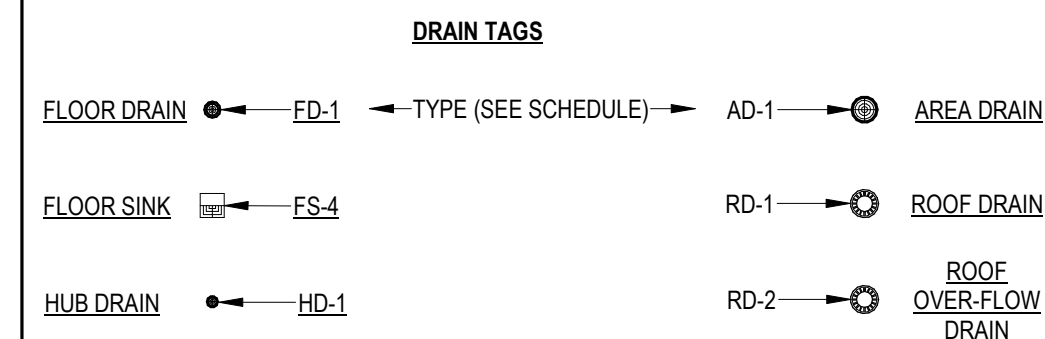
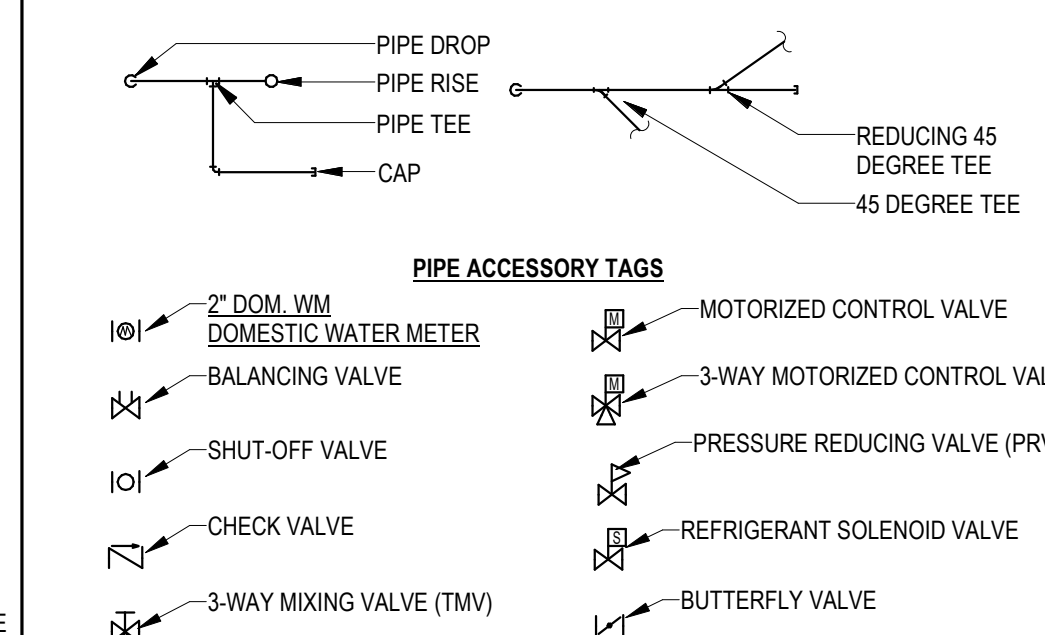
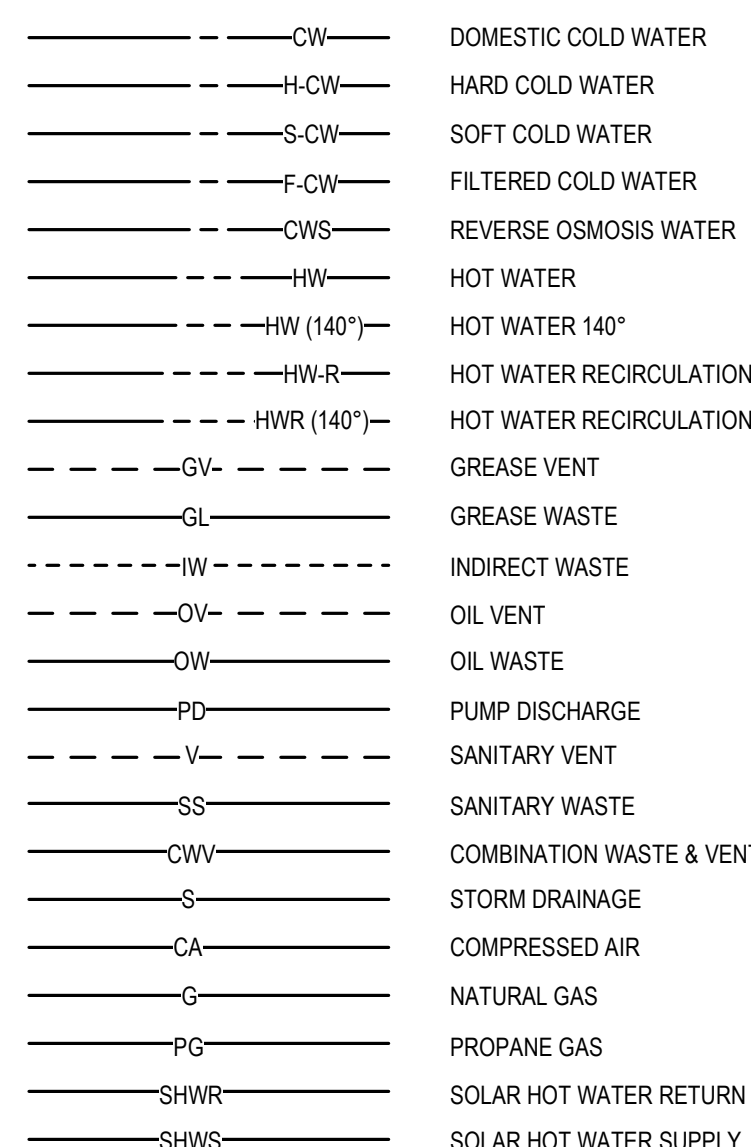
ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MUA	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FH	FIRE DAMPER	RH	RELATIVE HUMIDITY
FDV	FIRE DEPARTMENT VALVE	RJA	RELIEF AIR
FL	FLOOR	RM	ROOM
FO	FUEL OIL	RPM	REVOLUTIONS PER MINUTE
FOV	FUEL OIL VENT	RW	RAIN WATER
FOR	FUEL OIL RETURN	SF	SQUARE FOOT
FOS	FUEL OIL SUPPLY	S/A	SUPPLY AIR
FFM	FEET PER MINUTE	SAN	SANITARY
FS	FLOOR SINK	SF	SQUARE FOOT
FT	FOOT/FEET	SD	SMOKE DAMPER
FTR	FIN TUBE RADIATION	SM	SURFACE MOUNT
GAL	GALLON	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HURU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

PLUMBING AND PIPING SYMBOLS



PROJECT GENERAL NOTES

- A. DO NOT SCALE FROM THESE DRAWINGS. THE DRAWINGS ARE DIAGRAMMATIC IN SCOPE. SHOW THE APPROXIMATE LOCATION OF EQUIPMENT, FIXTURES, PIPING, ETC. AND INDICATE GENERAL PIPING ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND COORDINATE WITH ALL TRADES TO VERIFY SPACE CONDITIONS. THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF EQUIPMENT TO A REASONABLE EXTENT WITHOUT EXTRA COST TO THE OWNER. EXACT ROUTING OF PIPING AND INSTALLATION OF VALVES, ACCESS DOORS, CLEAN OUTS, ETC. SHALL BE COORDINATED IN FIELD AS DICTATED BY THE CONDITIONS ENCOUNTERED.
- B. THE CONTRACTOR SHALL DETERMINE THE TYPE, SIZE AND QUANTITY OF SEISMIC PROTECTION DEVICES, HANGERS AND BRACING NECESSARY TO MEET THE CODE REQUIRED SEISMIC REQUIREMENTS FOR ALL MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION SYSTEM COMPONENTS.
- C. REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
- D. THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVES AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS, VALVES AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.
- E. WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
- F. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
- G. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
- H. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
- I. COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
- J. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
- K. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
- L. ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
- M. REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
- N. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
- O. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
- P. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
- Q. LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
- R. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
- S. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
- T. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

GENERAL NOTES

- ALL DOMESTIC HOT WATER, COLD WATER AND HOT WATER RETURN PIPING SHALL BE INSULATED.
- COORDINATE PLUMBING PIPING ROUTED WITH ALL OTHER TRADES.
- ALL PIPING BRANCH LINES SHALL BE CONTROLLED BY A BALL-TYPE ISOLATION VALVE.
- INSTALL IN-LINE (LINE SIZE) DOUBLE CHECK, BACKFLOW PREVENTORS WHEN REQUIRED BY PLUMBING CODE AND LOCAL JURISDICTION.
- INSTALL DRAIN PANS BELOW ALL HVAC AND PLUMBING EQUIPMENT THAT HAS A DRAIN CONNECTION. ROUTE DRAIN PAN PIPING TO NEAREST FLOOR DRAIN OR MOP SINK.
- FURNISH AND INSTALL WALL MOUNTED ACCESS PANELS TO ALL PLUMBING DEVICES AND VALVES THAT REQUIRE SERVICE AND INSPECTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE EQUIPMENT BASES FOR THEIR WORK.
- INSTALLATION OF NEW FLOOR DRAINS TO HAVE THE SURROUNDING CONCRETE SLOPED TOWARD DRAIN. SEE STRUCTURAL DRAWINGS FOR FLOOR DRAIN DETAIL.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR GENERAL CONSTRUCTION WORK.
- FURNISH AND INSTALL BELLOWS TYPE WATER HAMMER ARRESTORS ON ALL HOT AND COLD WATER BRANCH LINES SERVING PLUMBING FIXTURES. SEE SCHEDULE FOR SIZES.
- PROVIDE FIRESTOP MATERIAL AT PIPING PASSING THRU FIRE RATED WALLS AND OR FLOORS.
- EACH HOT WATER RETURN LINE SHALL HAVE A BALANCING STATION (HWBS-3) TO REGULATE WATER FLOW. BALANCING STATION SHALL CONSIST OF A BALL VALVE, CHECK VALVE, THERMAL WELL, THERMOMETER AND BALANCING VALVE. MINIMUM FLOW RATE SHALL BE 1.0 GPM. SEE PLUMBING DETAIL.
- SEE DRAWING P-001 FOR GENERAL PROJECT NOTES, GENERAL PLUMBING NOTES, SYMBOLS AND ABBREVIATIONS.

\*NOTE\*

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.



CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

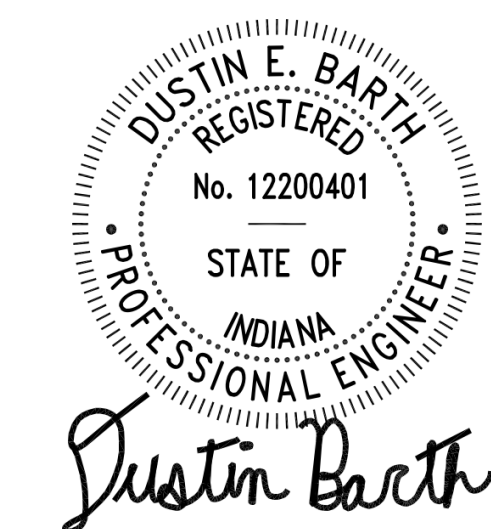
Project #: 21-400-194-1

Designed By: RH

Drawn By: RH

Checked By: KI

Date: 12/28/22



NOT FOR CONSTRUCTION

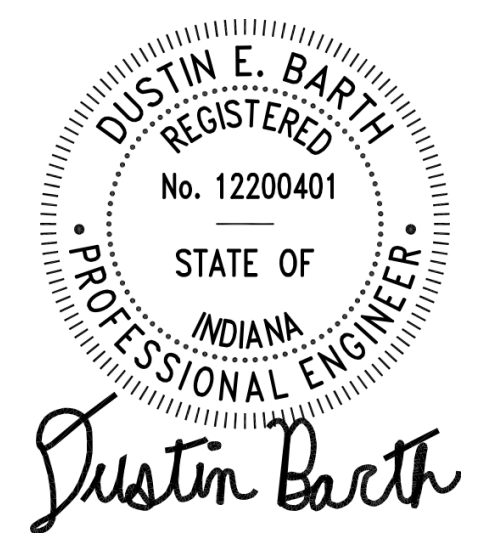
PLUMBING SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

P001

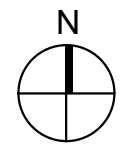
#	NOTE
1	2" WASTE UP TO FUTURE SINK. CAP 6" ABOVE A.F.F.
2	2" WASTE UP TO FUTURE SHOWER. CAP WITH CLEANOUT A.F.F.
3	4" WASTE UP TO FUTURE WATER CLOSET. CAP WITH CLEANOUT A.F.F.
4	2" WASTE UP TO FUTURE LAVATORY. CAP WITH CLEANOUT A.F.F.
5	2" WASTE UP TO FUTURE EYE WASH STATION. CAP WITH CLEANOUT A.F.F.
6	3" WASTE UP TO FLOOR DRAIN.
7	1 1/2" DCW UP A.F.F.
8	4" WASTE UP TO CLEAN OUT.
9	4" WASTE UP TO EXTERIOR CLEAN OUT.
10	2" VENT UP.
11	1 1/2" DOMESTIC WATER TO SITE WATER SYSTEM. COORDINATE EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.
12	4" SANITARY SEWER TO SITE SANITARY SYSTEM. COORDINATE EXACT SIZE, LOCATION AND INVERT PRIOR TO CONSTRUCTION.
13	1 1/2" DOMESTIC WATER METER AND PIT. PLUMBING CONTRACTOR TO PROVIDE PIT AND SETTER. TOWN TO PROVIDE METER.
14	EXISTING 3/4" DOMESTIC WATER TO BE CUT BACK AND CAPPED B.F.F. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.

#	Revision	Date

Project #: 21-400-194-1  
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 Drawn By: RH  
 Checked By: KI  
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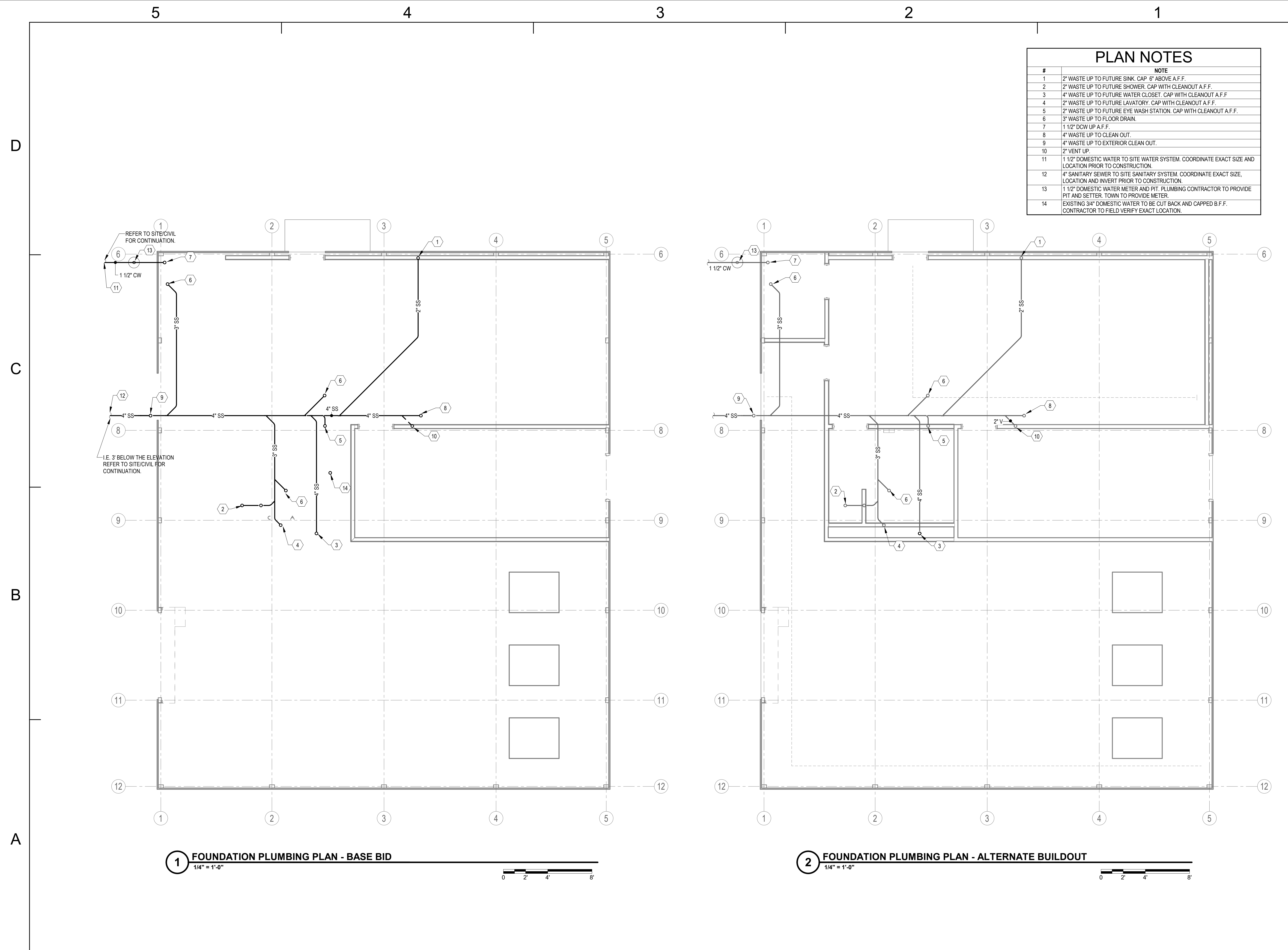


NOT FOR CONSTRUCTION



FOUNDATION PLUMBING PLANS

P110



**1 FOUNDATION PLUMBING PLAN - BASE BID**  
1/4" = 1'-0"

**2 FOUNDATION PLUMBING PLAN - ALTERNATE BUILDOUT**  
1/4" = 1'-0"



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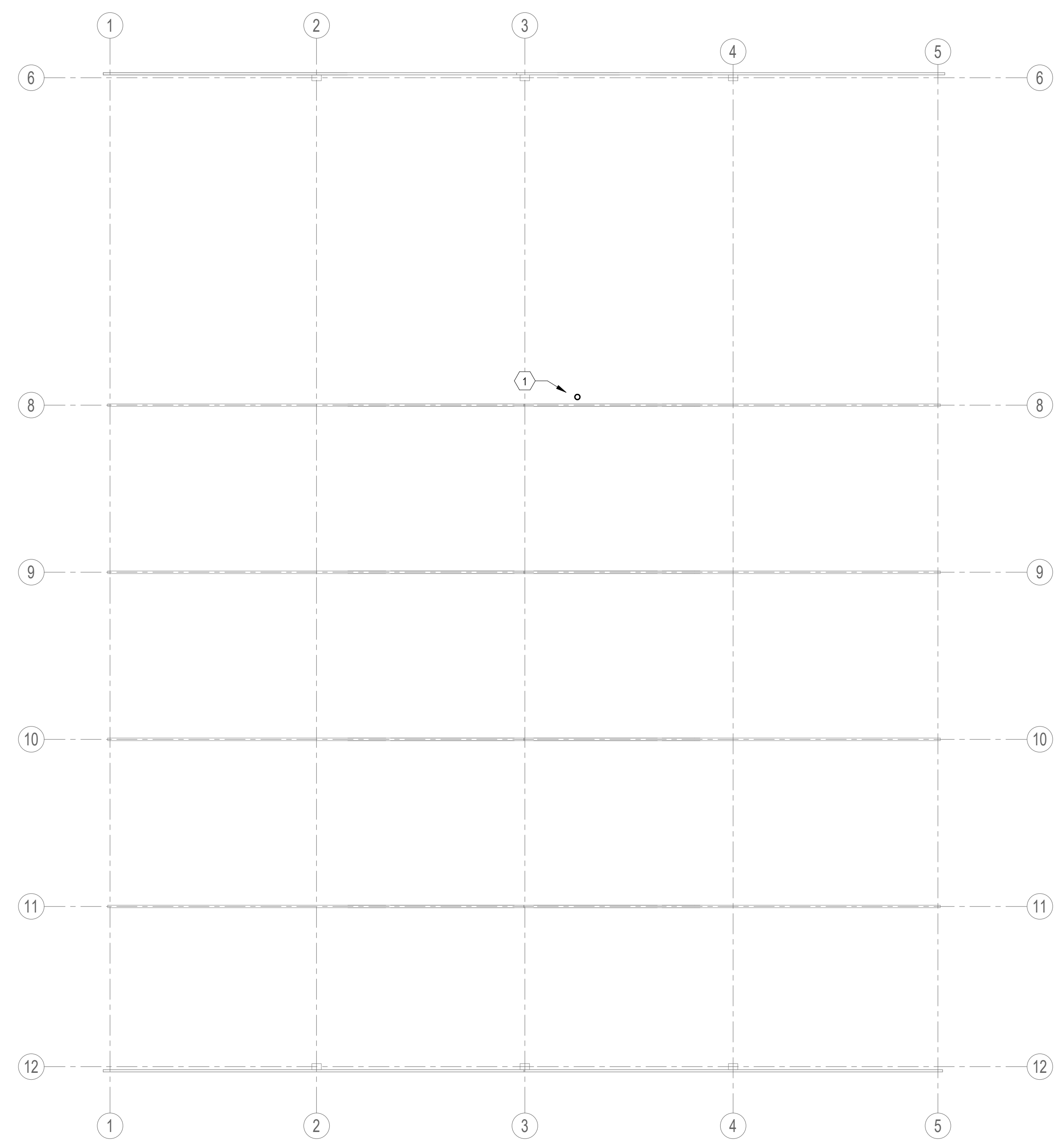
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PLAN NOTES	
#	NOTE
1	3" VENT THROUGH ROOF



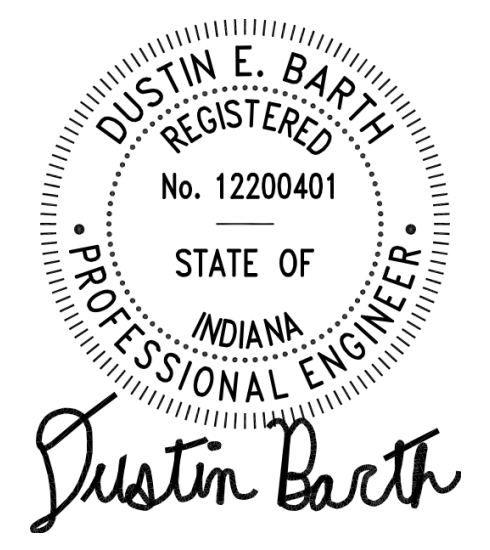
**1 ROOF PLUMBING PLAN**  
 1/4" = 1'-0"  
 0 2 4 8



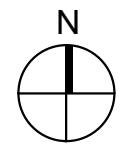
CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date
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Project #: 21-400-194-1  
 Designed By: RH  
 Drawn By: RH  
 Checked By: KI  
 Date: 12/28/22



NOT FOR CONSTRUCTION



ROOF PLUMBING PLAN

P220



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PLUMBING FIXTURE SCHEDULE

Table with columns: TAG, FIXTURE DESCRIPTION, MANUFACTURER, MODEL #. Includes items like WC-1 (Water Closet), LV-1 (Lavatory), SK-1 (Sink), SH-1 (Shower), WH-1 (Wall Hydrant), and ESEW-1 (Emergency Shower).

WATER SOFTENER SCHEDULE

Table with columns: TAG, LOCATION, MAX. EXCHANGE CAP. (GRAINS), MIN. EXCHANGE CAP. (GRAINS), CONT. FLOW RATE (GPM), PEAK FLOW RATE (GPM), BACK WASH FLOW RATE (GPM), CU.FT. OF RESIN PER TANK, SALT STORAGE (LBS), PIPE SIZE, MANUFACTURER, MODEL #, NOTES.

PLUMBING FIXTURE ROUGH-IN...

Table with columns: FIXTURE, WASTE, TRAP, VENT, COLD, HOT. Lists rough-in requirements for WC-1, LV-1, SK-1, and ESEW-1.

WATER HAMMER ARRESTOR...

Table with columns: PDI SYMBOL, FIXTURE UNITS CONNECTED, CONNECTION SIZE. Lists hammer arrestor requirements for fixtures A through F.

EXPANSION TANK SCHEDULE

Table with columns: TAG, TOTAL TANK VOLUME (GALLONS), LOCATION, INLET, ACCEPTANCE VOLUME GALLONS, MANUFACTURER, MODEL #, NOTES.

WATER HEATER SCHEDULE

Table with columns: MARK, MANUFACTURER, MODEL NUMBER, FUEL, VOLTAGE / PH / AMPS, INPUT, EFFICIENCY / PF, GALLONS STORAGE, GPH RECOVERY @ 80 F RISE, TEMP SETTING, FLUE TYPE, EXPANSION, CIRCULATOR GPM/H, REMARKS.

FLOOR DRAIN SCHEDULE

Table with columns: TAG, DRAIN DESCRIPTION, MANUFACTURER, MODEL. Lists floor drain details for FD-1 and FD-2.

BACKFLOW PREVENTOR SCHEDULE

Table with columns: TAG, SERVICE, SIZE, TYPE, MANUFACTURER, MODEL #, LOCATION, NOTES.

THERMOSTATIC MIXING VALVE SCHEDULE

Table with columns: TAG, MAXIMUM GPM, PRESSURE DROP (PSI), COLD INLET SIZE, HOT INLET SIZE, MIXED OUTLET SIZE, MANUFACTURER, MODEL #, NOTES.

PUMP SCHEDULE

Table with columns: TAG, LOCATION, ELECTRIC (VOLT, PHASE, POWER), GPM, FEET OF HEAD, MANUFACTURER, MODEL #, NOTES.

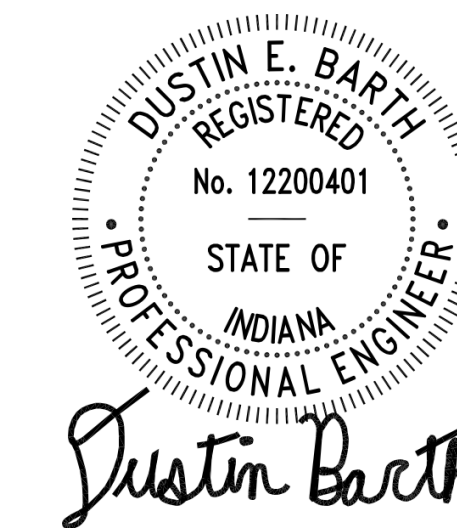


CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION WHEATLAND, IN 47597

Table with columns: #, Revision, Date

Project #: 21-400-194-1
Designed By: RH
Drawn By: RH
Checked By: KI
Date: 12/28/22



NOT FOR CONSTRUCTION

PLUMBING SCHEDULES

P600

CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

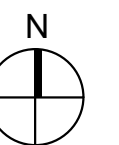
#	Revision	Date

Project #: 21-400-194-1  
 Designed By: RH  
 Drawn By: RH  
 Checked By: KI  
 Date: 12/28/22



*Dustin Barth*

NOT FOR CONSTRUCTION



PLUMBING WASTE AND  
 VENT PIPING ISOMETRIC

P700

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 B  
 C  
 D

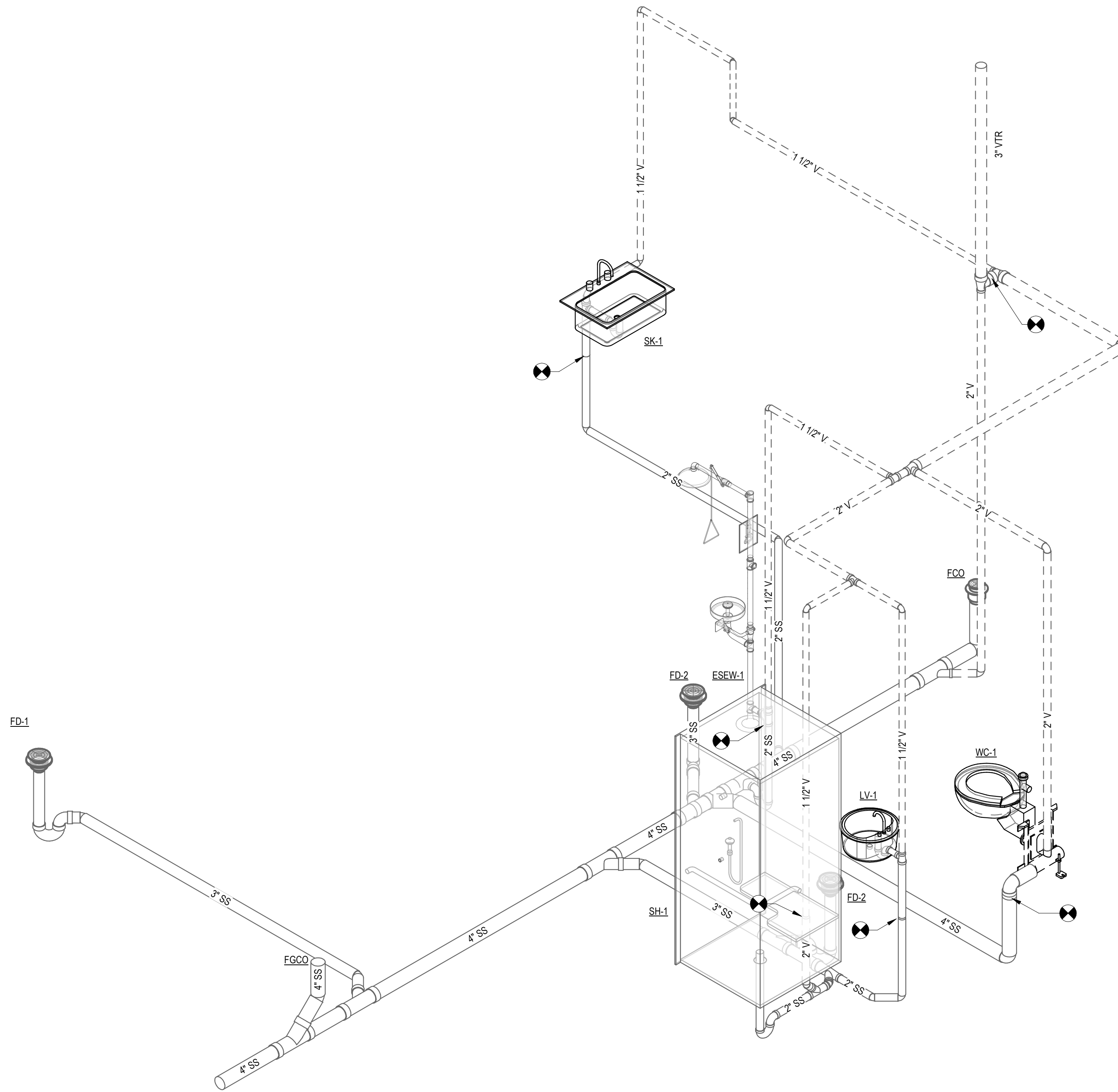
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1 WASTE & VENT RISER DIAGRAM

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: RH  
 Drawn By: RH  
 Checked By: KI  
 Date: 12/28/22



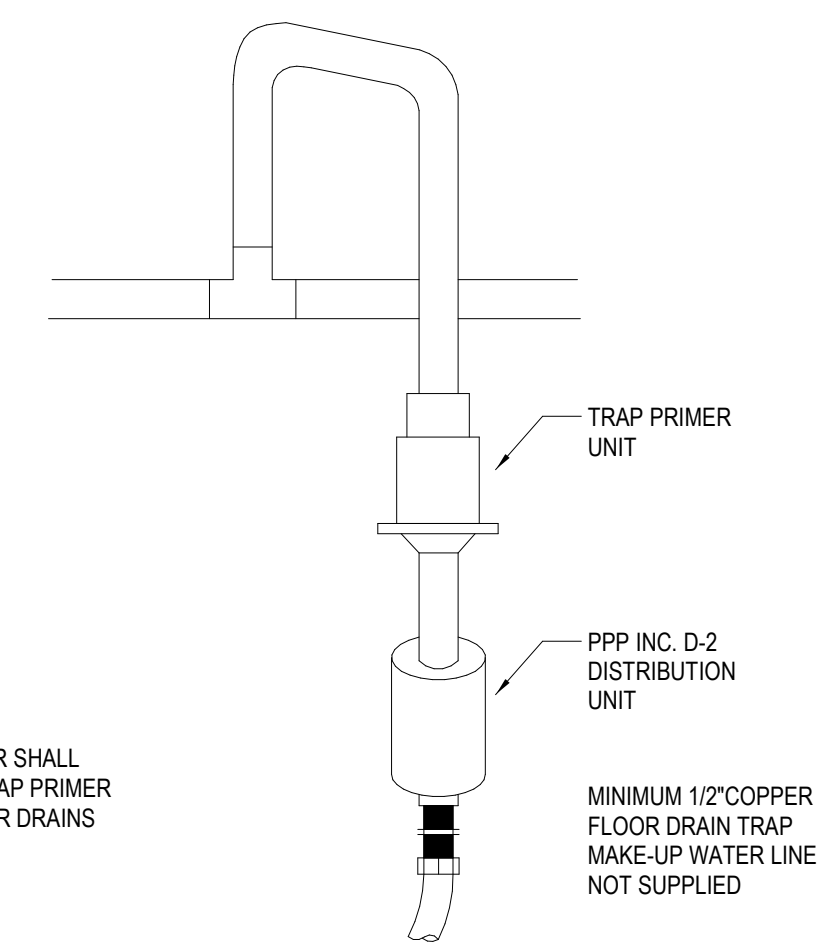
NOT FOR CONSTRUCTION

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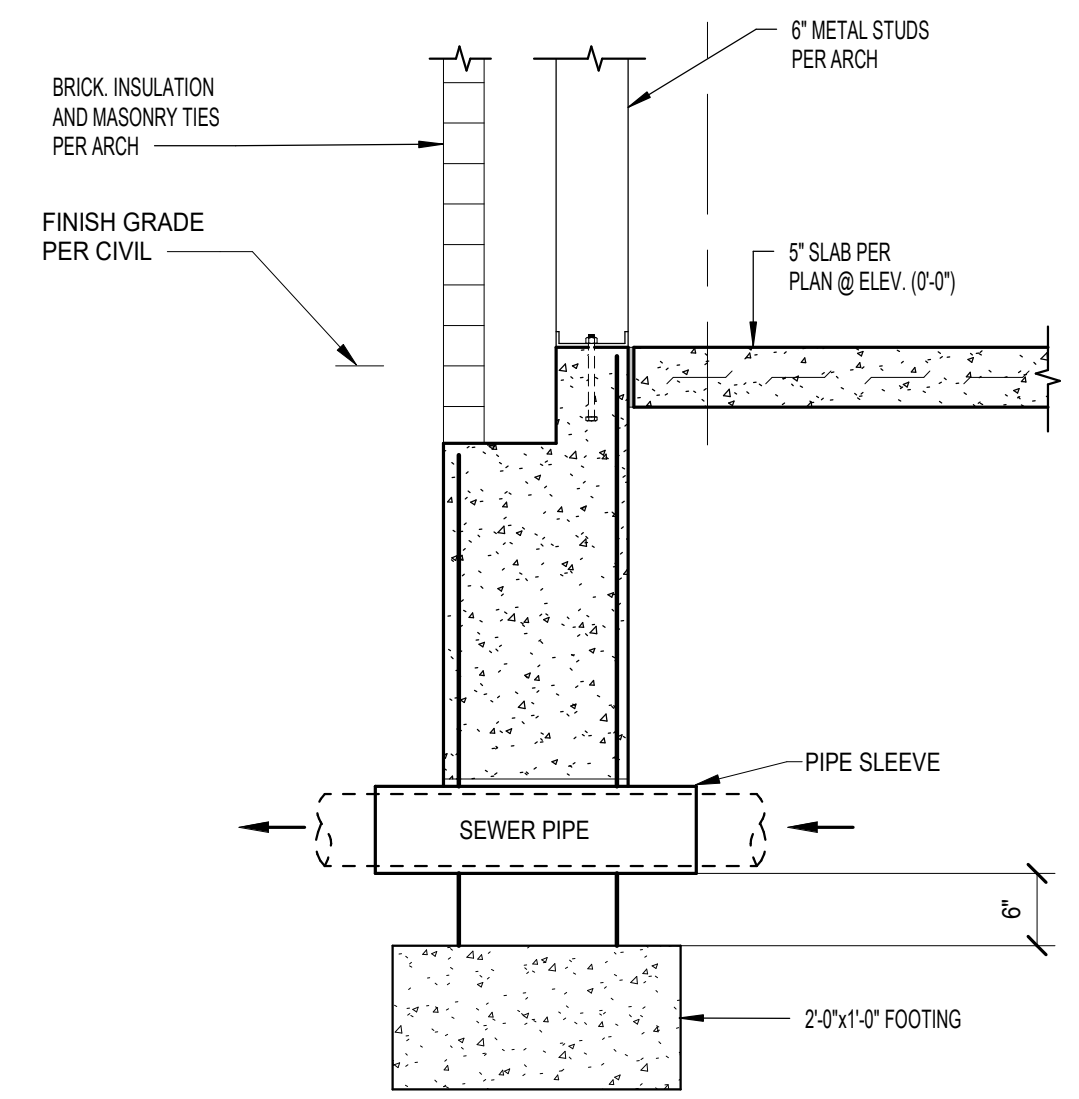
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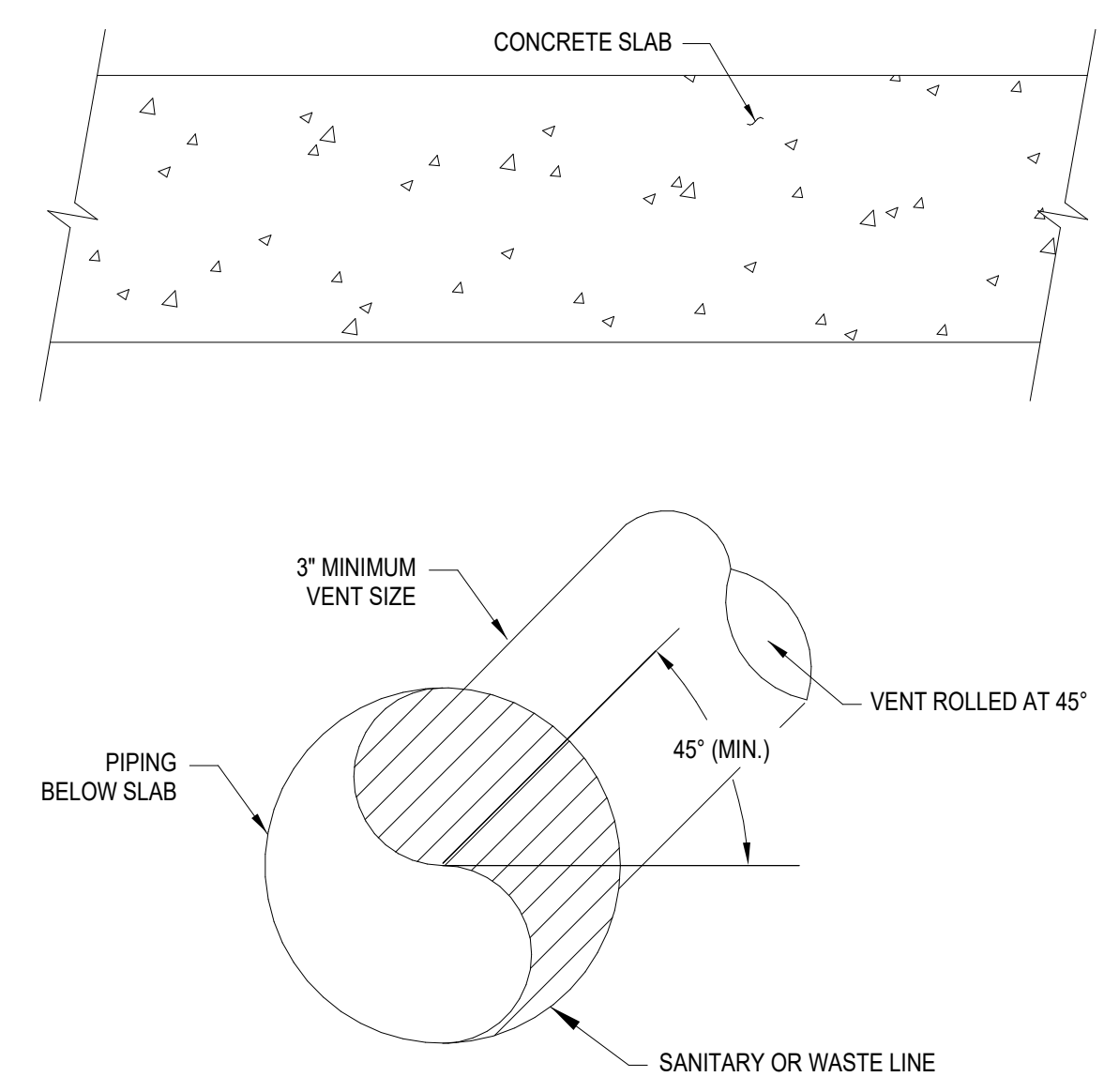


**1 TRAP PRIMER DETAIL**  
NOT TO SCALE

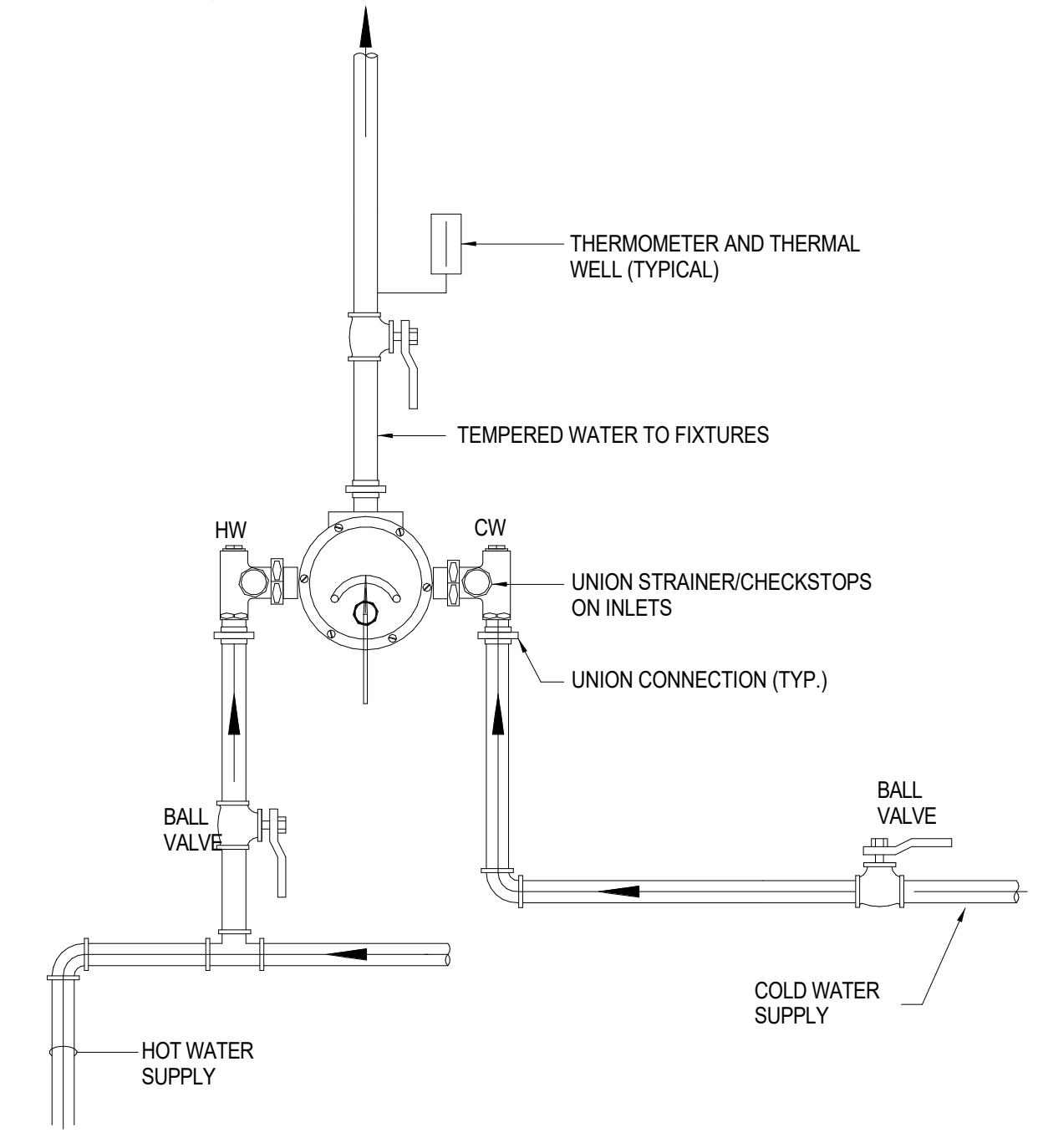
NOTE:  
CONTRACTOR SHALL  
SUPPLY A TRAP PRIMER  
TO ALL FLOOR DRAINS



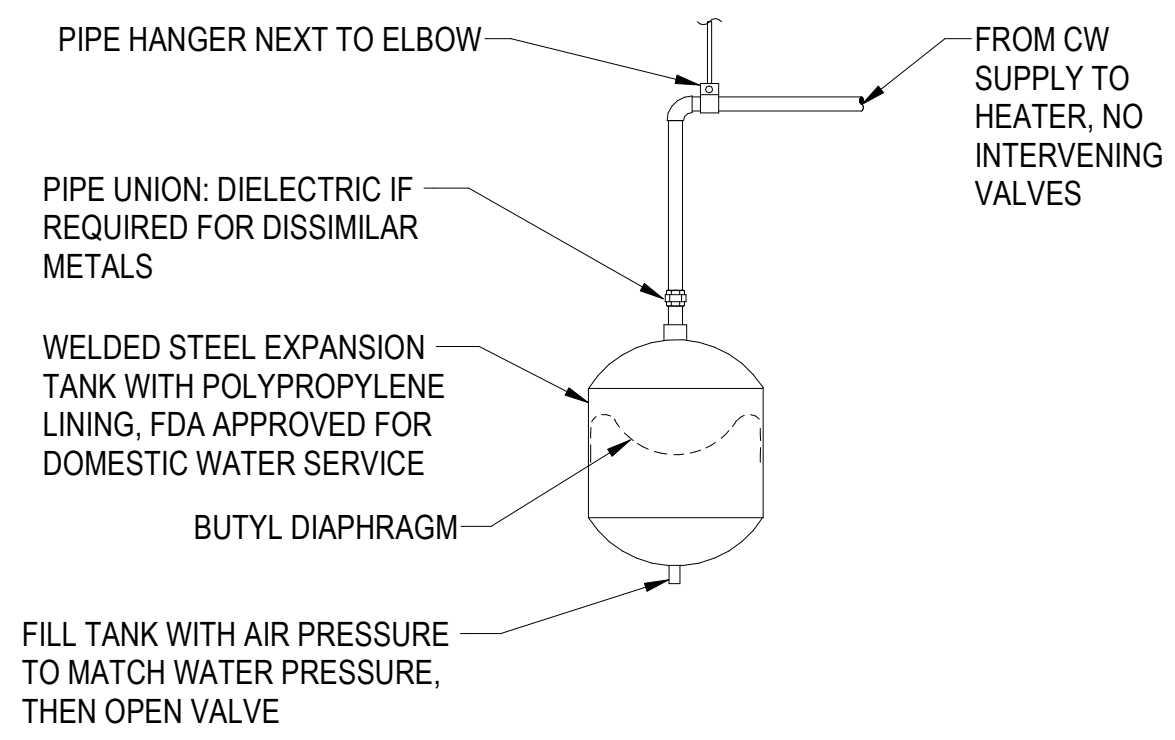
**2 PIPING AT FOUNDATION WALL**  
NOT TO SCALE



**3 MAIN VENT PIPING DETAIL**  
NOT TO SCALE

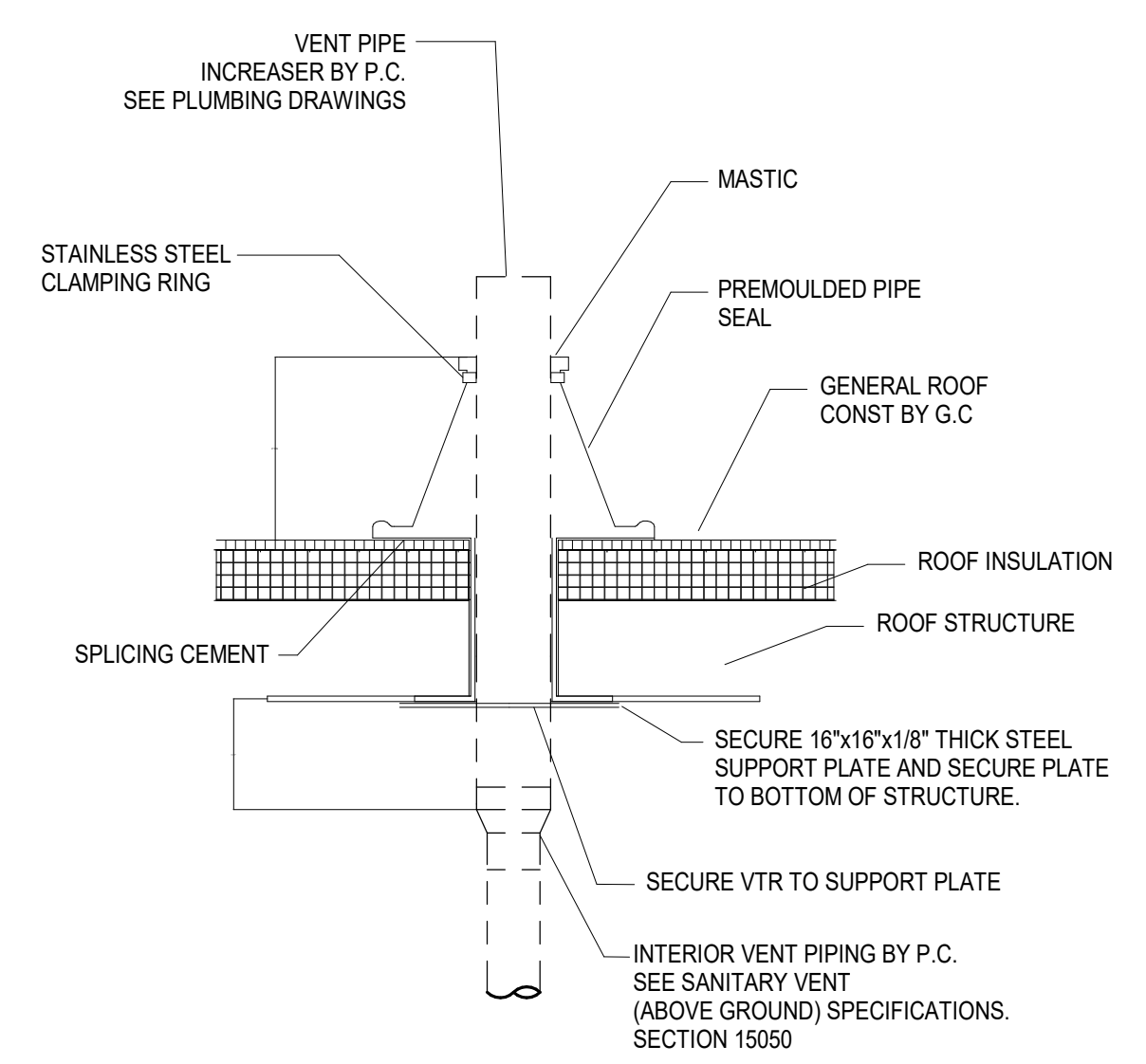


**4 MIXING VALVE DETAIL**  
NOT TO SCALE

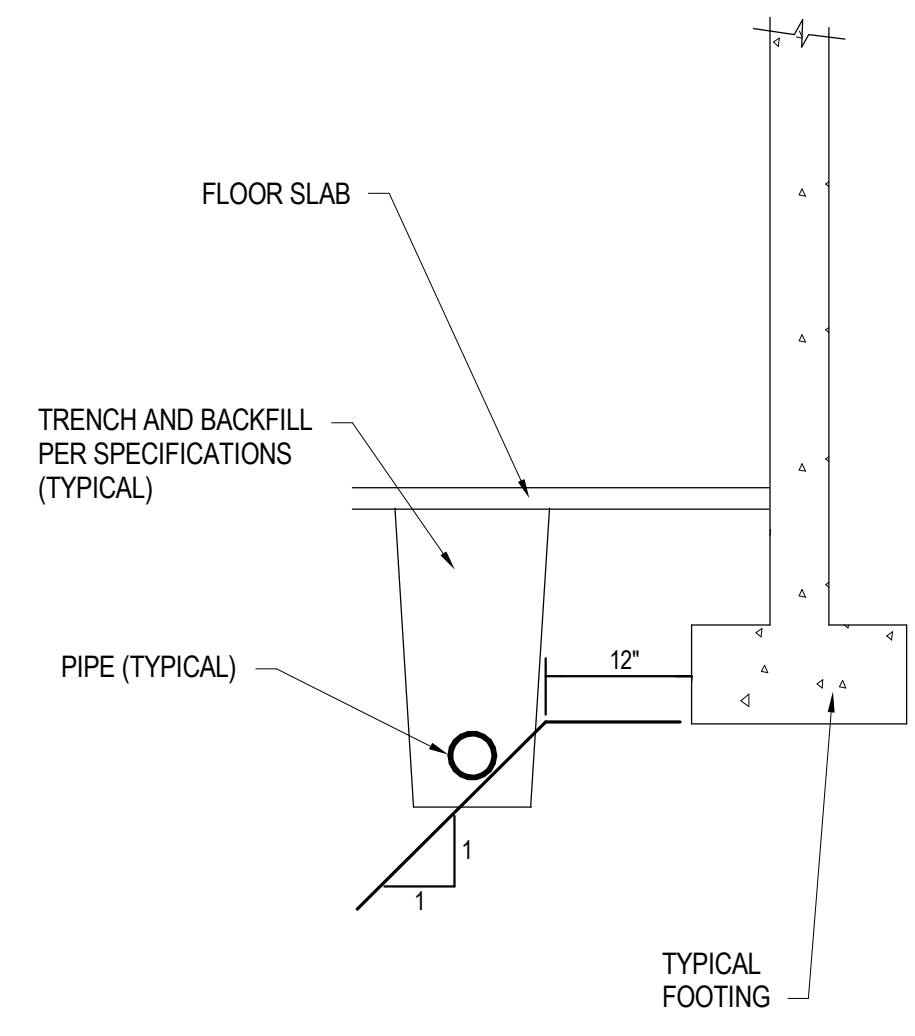


**5 TYPICAL EXPANSION TANK DETAIL**  
NOT TO SCALE

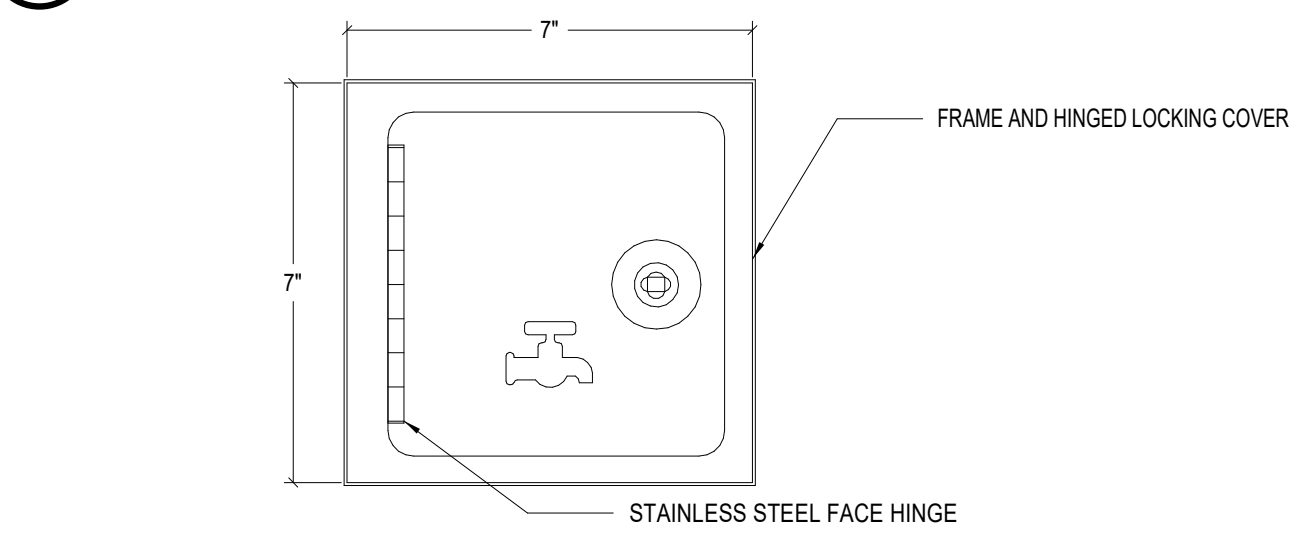
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. MAKE PIPE SAME SIZE AS TANK FITTING. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION PROCEDURE. VERIFY PROPER OPERATION WHEN INSTALLED.



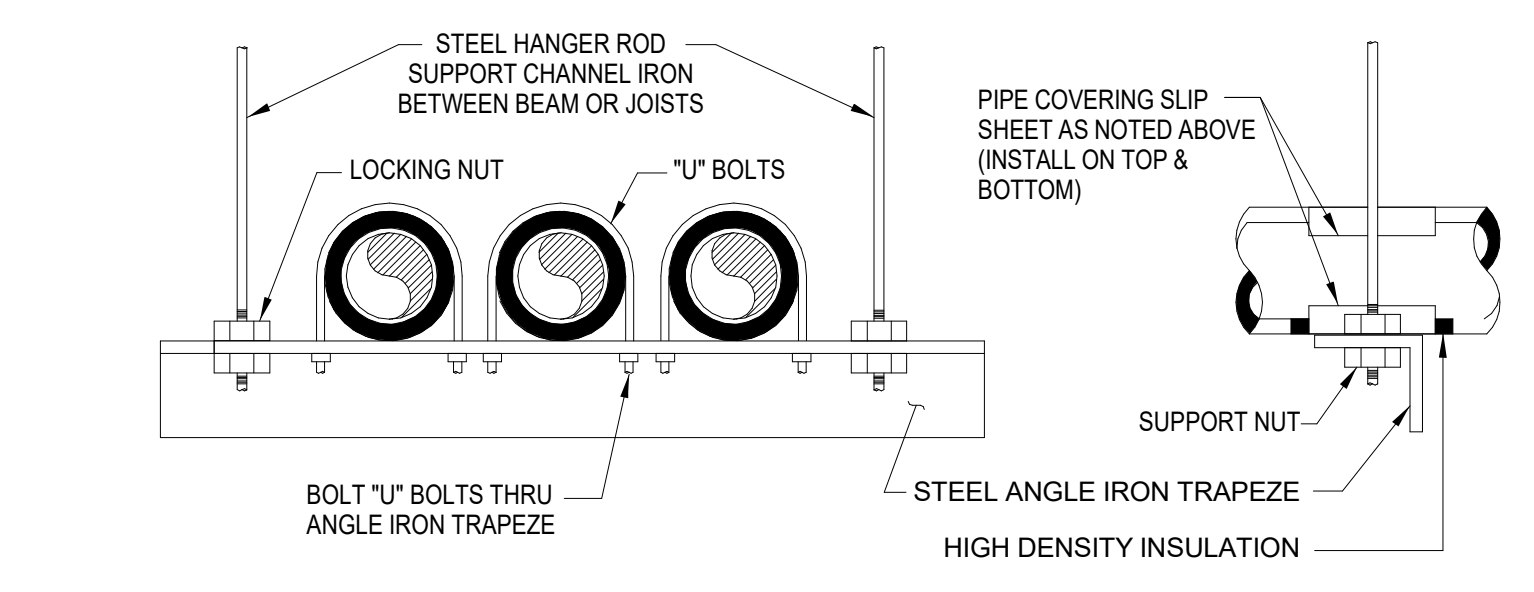
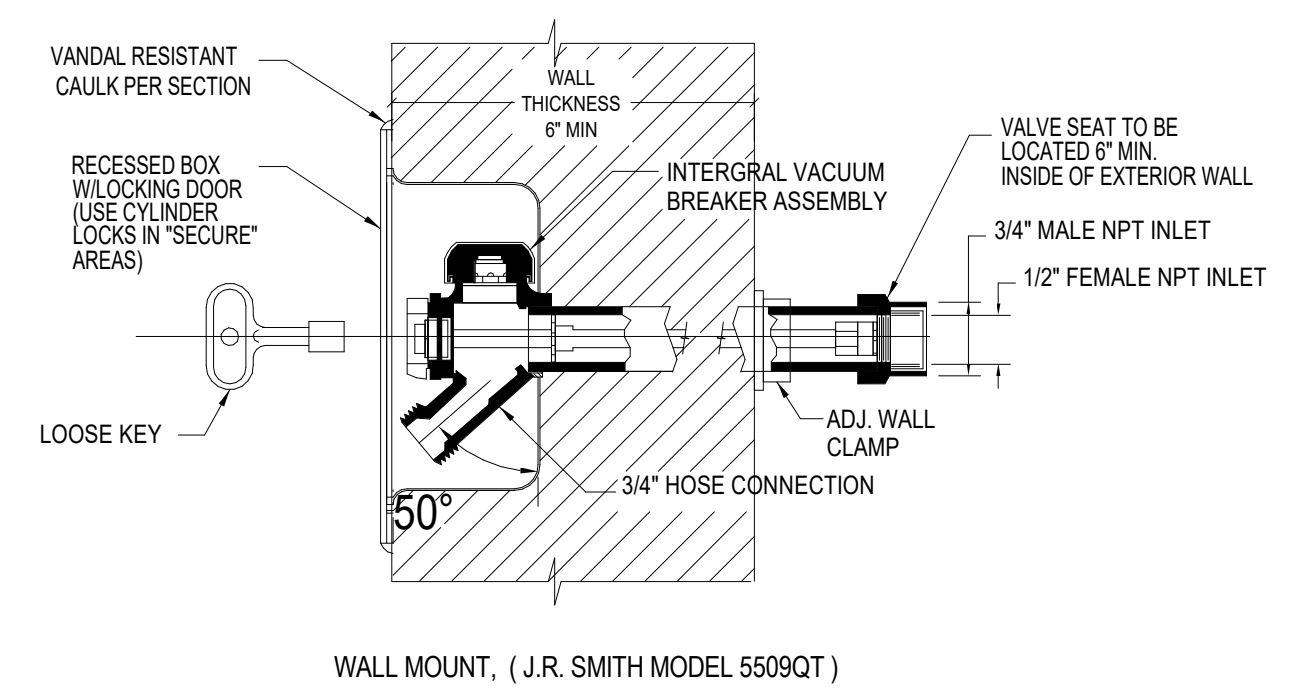
**6 VENT THRU ROOF**  
NOT TO SCALE



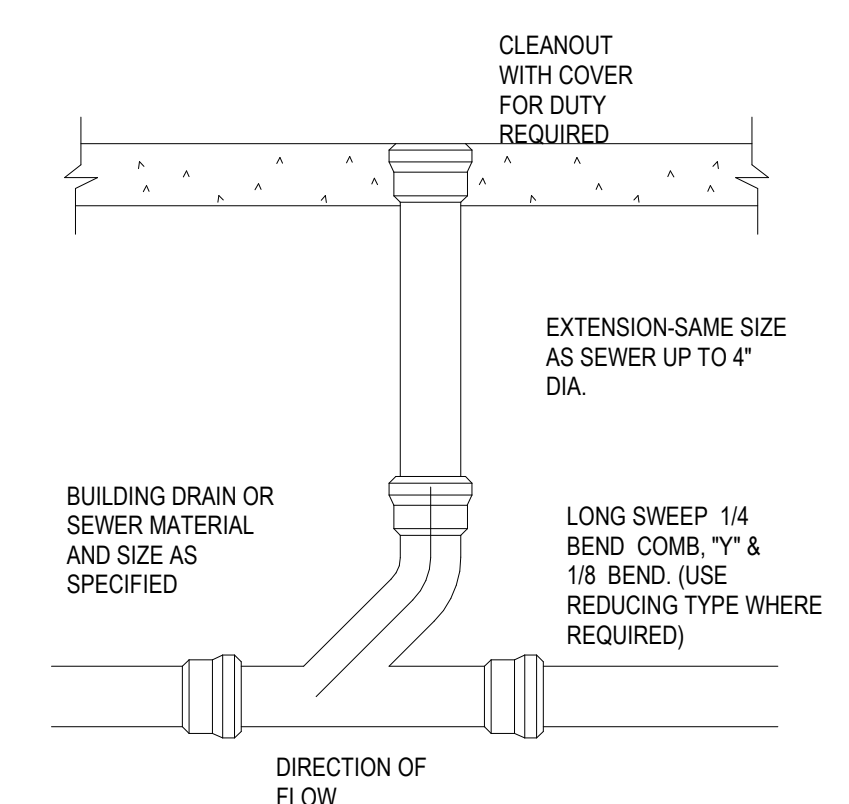
**7 PIPE TRENCH DETAIL**  
NOT TO SCALE



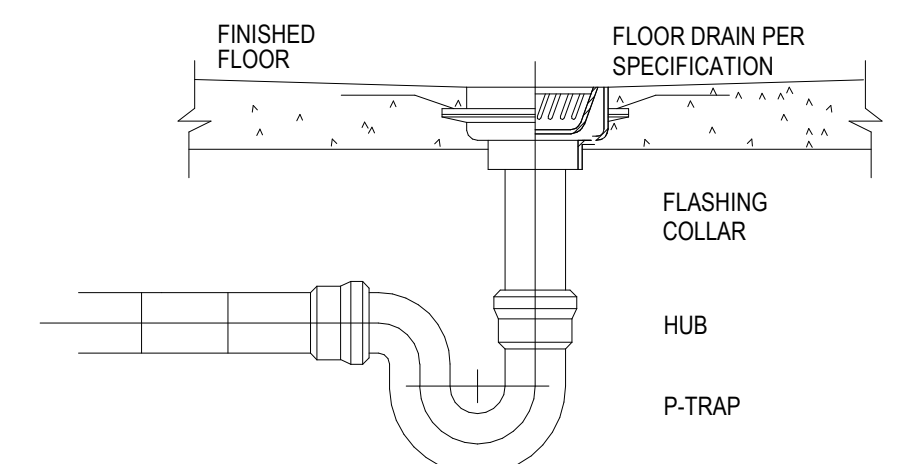
**8 WALL HYDRANT DETAIL**  
NOT TO SCALE



**9 TRAPEZE HANGER DETAIL**  
NOT TO SCALE



**10 FLOOR CLEANOUT**  
NOT TO SCALE



**11 FLOOR DRAIN DETAIL 1**  
NOT TO SCALE

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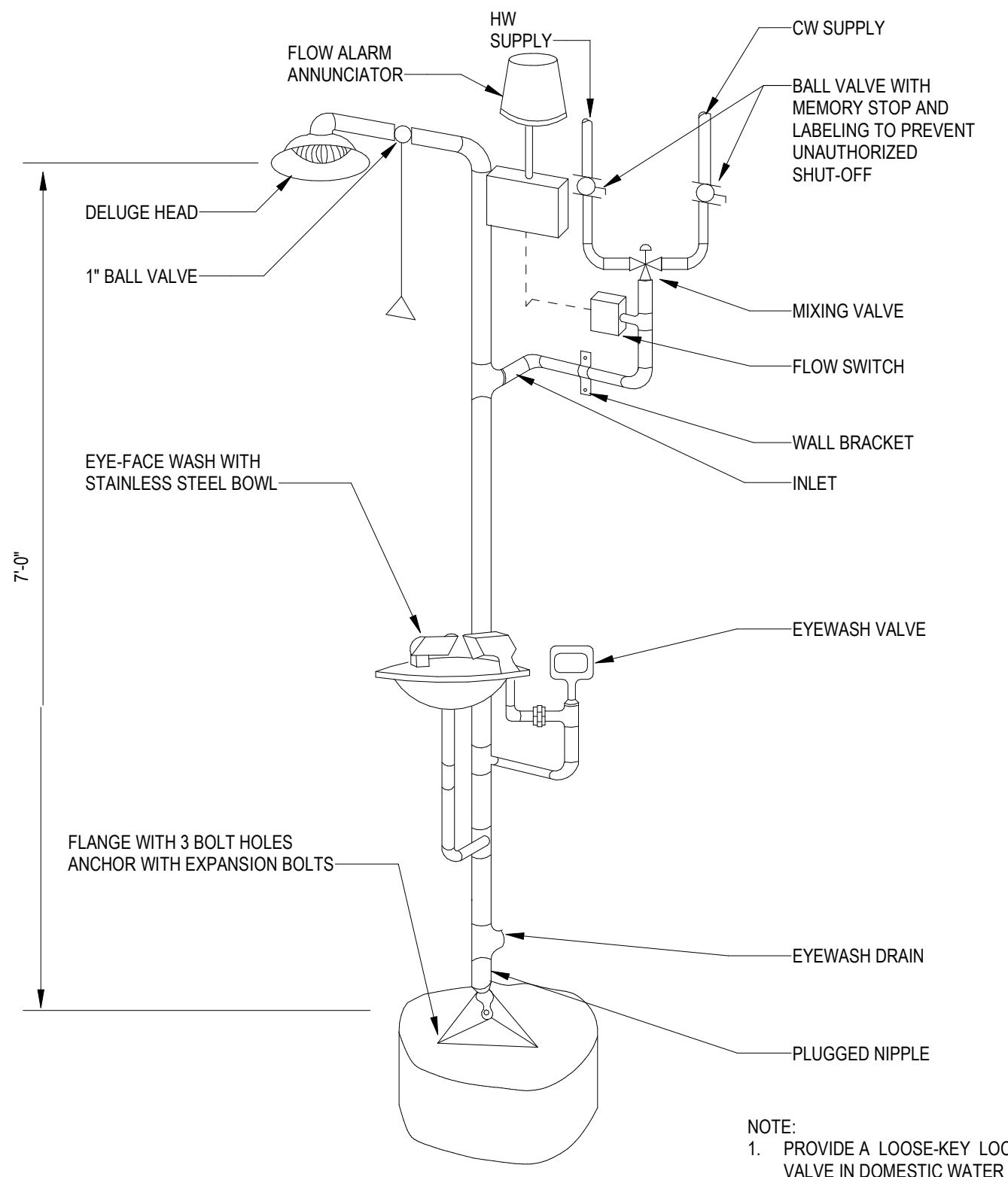
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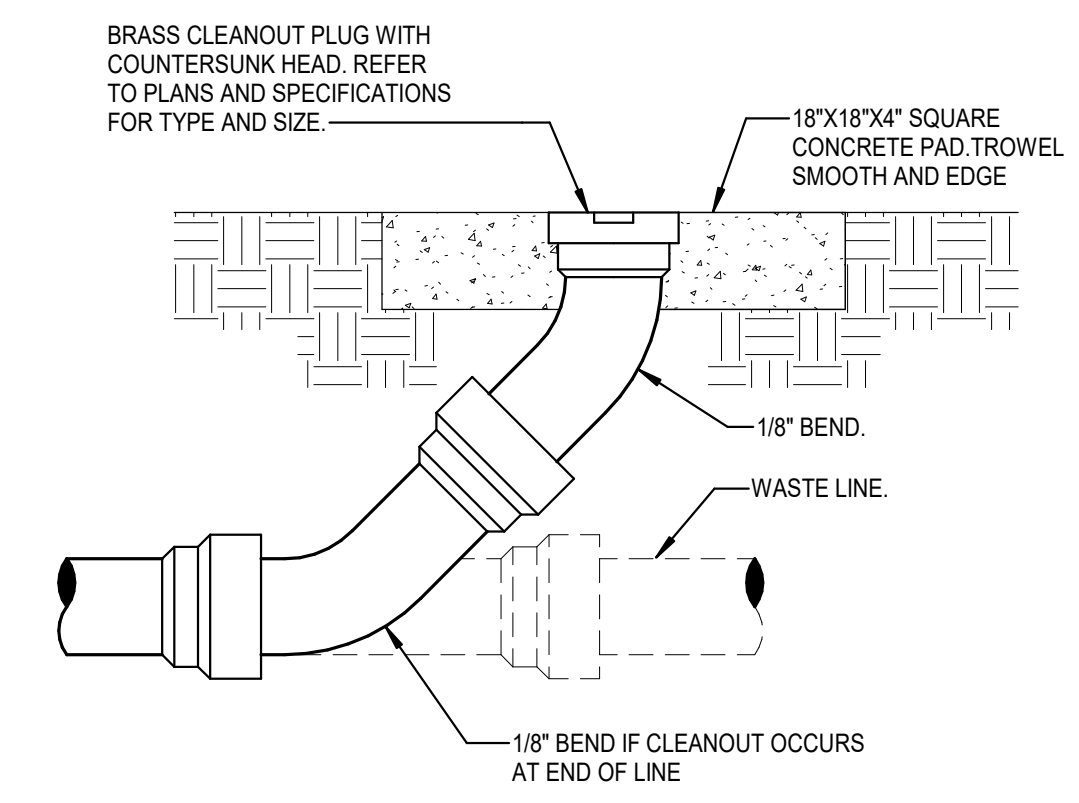
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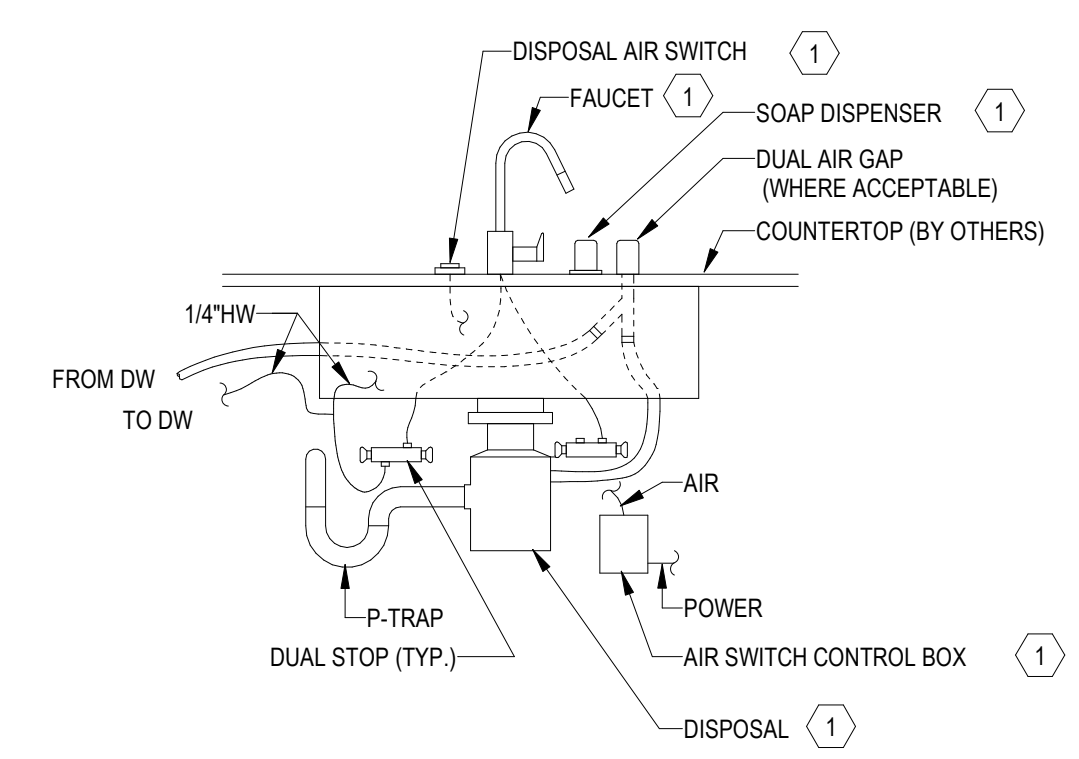


NOTE:  
1. PROVIDE A LOOSE-KEY LOCKSHIELD TYPE SHUT-OFF VALVE IN DOMESTIC WATER SUPPLY DROP TO EYEWASH. LABEL VALVE TO PREVENT UNAUTHORIZED SHUT-OFF.

**1 EMERGENCY EYEWASH PIPING DETAIL**  
NOT TO SCALE

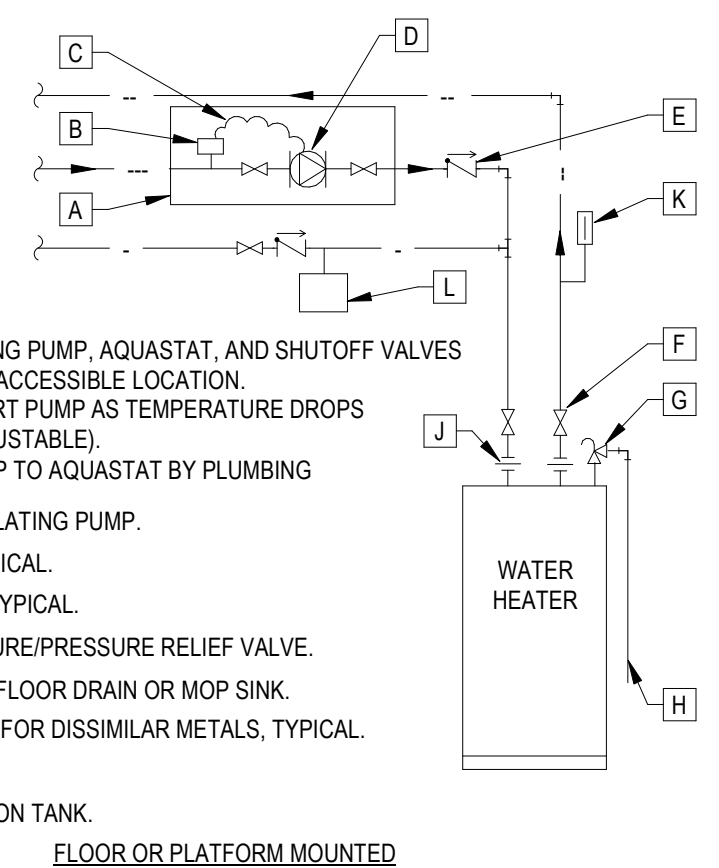


**2 EXTERIOR CLEANOUT DETAIL**  
NOT TO SCALE



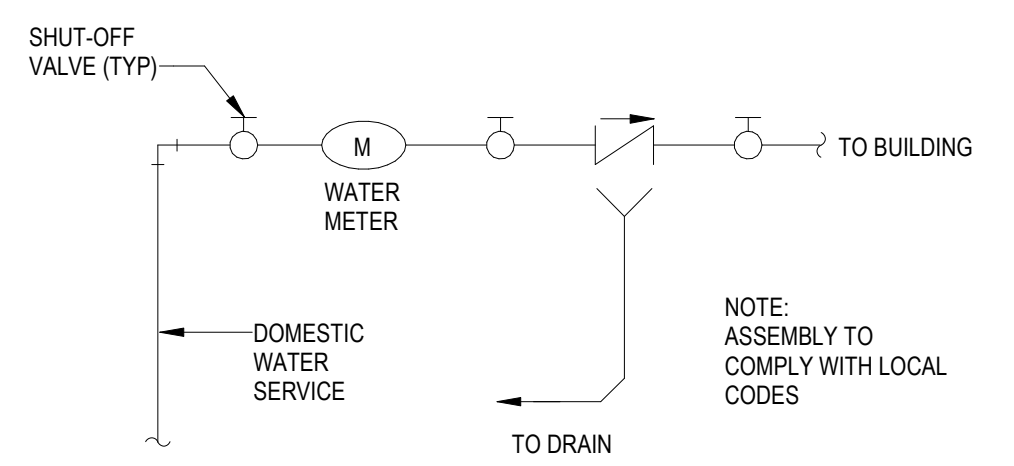
NOTES:  
1. SPECIFIED BY INTERIOR DESIGNER. INSTALLED BY MECHANICAL CONTRACTOR. REFER TO INTERIOR DESIGN DOCUMENTS.  
2. REFER TO PLUMBING FIXTURE SCHEDULE FOR SINK.

**3 KITCHEN SINK CONNECTION DETAIL**  
NOT TO SCALE



KEYNOTES:  
A MOUNT CIRCULATING PUMP, AQUASTAT, AND SHUTOFF VALVES BELOW CEILING IN ACCESSIBLE LOCATION.  
B AQUASTAT TO START PUMP AS TEMPERATURE DROPS BELOW 100 °F (ADJUSTABLE).  
C WIRING FROM PUMP TO AQUASTAT BY PLUMBING CONTRACTOR.  
D HOT WATER CIRCULATING PUMP.  
E CHECK VALVE. TYPICAL.  
F SHUTOFF VALVE. TYPICAL.  
G 125 PSI TEMPERATURE/PRESSURE RELIEF VALVE.  
H PIPE FULL SIZE TO FLOOR DRAIN OR MOP SINK.  
J DIELECTRIC UNION FOR DISSIMILAR METALS. TYPICAL.  
K THERMOMETER.  
L THERMAL EXPANSION TANK  
FLOOR OR PLATFORM MOUNTED

**4 HOT WATER CIRCULATING PUMP PIPING DETAIL**  
NOT TO SCALE



NOTE:  
ASSEMBLY TO COMPLY WITH LOCAL CODES

**5 WATER SERVICE PIPING DETAIL**  
NOT TO SCALE



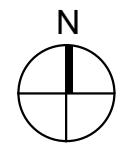
CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT PLANT  
AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date
---	----------	------

Project #: 21-400-194-1  
Designed By: Designer  
Drawn By: Author  
Checked By: Checker  
Date: 12/28/22



NOT FOR CONSTRUCTION



DETAILS - PLUMBING

P801

CONTROL SYMBOLS

Table of control symbols including Airflow Measuring Station, Air Flow Switch, Alarm, Backdraft Damper, CO2 Sensor, Current Sensor, Disconnect Switch, Duct Detector, Current to Pneumatic Transducer, Damper End Switch, Differential Pressure Sensor, Differential Pressure Switch, Differential Pressure Switch (High Limit), Differential Pressure Switch (Low Limit), Electro-Pneumatic Switch, Electro-Pneumatic Transducer, Exhaust Air Damper, Face & By-Pass Damper, Fan Discharge Damper, Fan Inlet Damper, Flow Controller, Flow Sensor, Hand-Off-Auto Switch, Humidity Controller, Humidity High Limit, Humidity Sensor, Humidity Transmitter, Low Limit Safety Thermostat, Magnetic Inductive Flow Meter Sensor, Manual Switch, Modem, Motor Control Center, Motor Starter, Occupancy Sensor, Operator's Work Station, Outdoor Air Damper, Outdoor Air Volume Probe, Pneumatic Relay, Pressure-Electric Switch, Pressure Controller, Pressure Sensor, Pressure Transmitter, Return Air Damper, Smoke Detector, Start/Stop Switch, Steam Flow Measurement Orifice Plate & Mass Flow Computer, Supply Air Damper, Override Timer, Temperature Controller, Temperature Sensor, Temperature Transmitter, Terminal Box Actuator, Turbine Meter, Variable Frequency Controller, Uninterrupted Power, Velocity Pressure Sensor, Vibration Switch, Volume Damper, Vortex Shedding Air Flow Transmitter, Vortex Shedding Flow Meter, 20 PSIG Main Control Air, Pressure Gauge, Holding Coil, Humidistat, Switch, Thermostat, Thermostat (Space), Thermostat (Space) Night Cycle, 0-30 PSIG Air Gauge, Local Area Network, Temperature Control Contractor, Environmental Control Contractor, Electrical Contractor, Pneumatic, Electrical Wiring, Analog Input, Analog Output, Binary Input, Binary Output.

GENERAL SYMBOLS

Table of general symbols including Revision Number, Point where new connects to existing, Number of detail on sheet, Number of sheet where detail appears, Plan Note, Continuation Symbol, Room Name and Number, Item to be demolished, Area not in contract, General Note, Plan Note List, Thermostat, Humidistat, Pressure Monitor, Co2 Monitor.

LINE SYMBOLS

Table of line symbols including Light/Screened Solid or Dashed Lines, Heavy Dashed Lines, Heavy Continuous Lines, Light Dot Lines.

ABBREVIATIONS

Table of abbreviations including Round, Above, Air Conditioning, Area Drain, Addendum, Aff, Above Finished Floor, AFUE, Alt, Access Panel, Architect/Architectural, Below Finished Floor, Below, British Thermal Units, British Thermal Units per Hour, Capacity, Catch Basin, CFM, CW, Degree, Dry Bulb, Diameter, Down, Distilled Water, Each, Entering Air Temperature, Electrical Equipment, Electric Water Cooler, Entering Water Temperature, Exhaust Air, Existing, Degrees Fahrenheit, Floor Clean Out, Fire Damper, Fire Department Valve, Floor, Fuel Oil, Fuel Oil Vent, Fuel Oil Return, Fuel Oil Supply, Feet per Minute, Floor Sink, Footfeet, Fin Tube Radiation, Gallon, General Contractor, Gallons per Minute, Grease Waste, Hose Bib, Horse Power, Heating, Heater, Hot Water, Hydrant, Indirect, Inch, Invert, LB, Pounds per Hour, Leaving Air Temperature, Low Pressure, Liquefied Petroleum Gas, Louver, Leaving Water Temperature, Mixed Air, Maximum, One Thousand BTU per Hour, One Thousand Cubic Feet, Motorized Damper, Mechanical, Manufacturer, Minimum, Miscellaneous, Motor, Make-Up Air, Noise Criteria, Normally Closed, Not in Contract, Number, Normally Open, Not to Scale, Oxygen, Outside Air, Overflow Roof Drain, Pressure Drop, Post Indicator Valve, Plumbing, Pressure, Pressure Reducing Valve, PSI, Pounds per Square Inch, Power, Duct Riser, Return Air, Radiant Ceiling Panel, Roof Drain, Recessed, Reducer, Relative Humidity, Relief Air, Room, Revolutions per Minute, Rain Water, Square Foot, Supply Air, Sanitary, Square Foot, Smoke Damper, Surface Mount, Standpipe, Static Pressure, Steam, Thermostat, Temperature Drop, Trench Drain, Temperature, Typical, Underground, Vacuum, Vent, Variable Air Volume, Vent Through Roof, Waste, Wet Bulb, Wall Clean Out, Wall Hydrant.

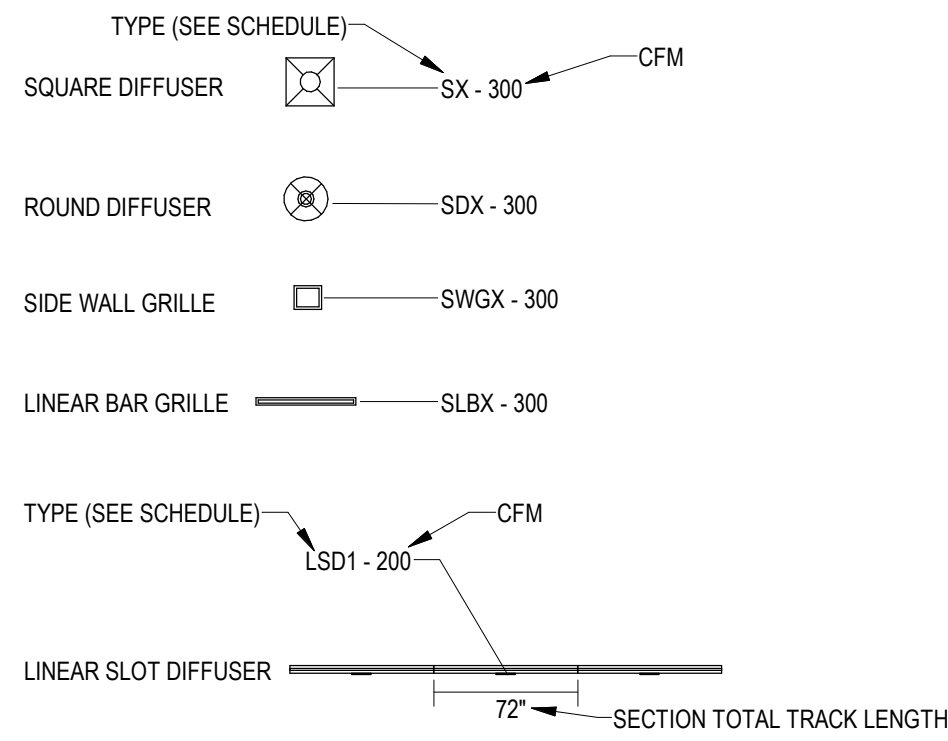
HVAC SYMBOLS

Table of HVAC symbols including Square Duct Size Tag, Oval Duct Size Tag, Round Duct Size Tag, Existing Duct Tag, Duct Being Demolished, Supply Air, Conditioned Outside Air, Outside Air, Return Air, Transfer Air, Exhaust Air, Relief Air, Grease Exhaust Air, Smoke Exhaust Air, Combustion Air, Flex Duct, Rectangular Supply/Outside Air Duct Rise, Round Supply/Outside Air Duct Rise, Rectangular Return/Transfer Air Duct Rise, Round Return/Transfer Air Duct Rise, Rectangular Exhaust/Relief Air Duct Rise, Round Exhaust/Relief Air Duct Rise, Air Flow Measuring Station, Insulated Metal Panel, Boot Tap or 45 Degree Entry Fitting, R (Rise), D (Drop) Arrow, Access Door, 90 Degree Elbow with Turning Vanes, Standard Radius Elbow, Flat Oval Duct, Round Duct, Retangular Duct, Spin-in Fitting, Conical Fitting, Square-to-Round Transition.

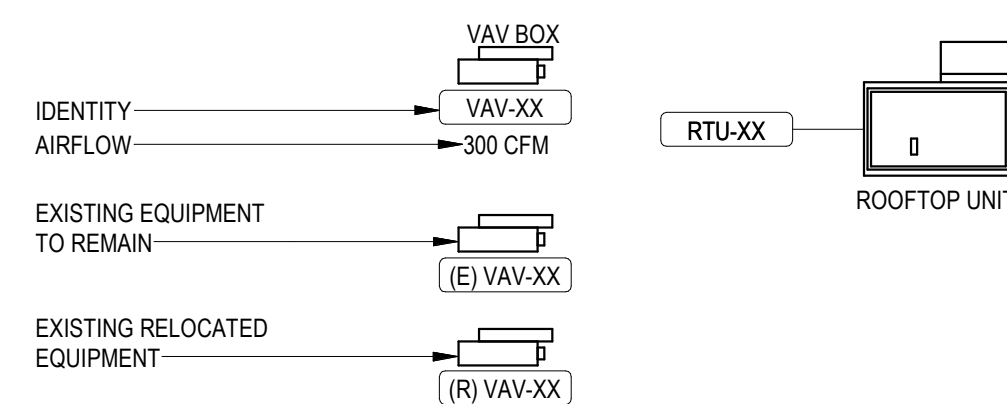
EQUIPMENT ABBREVIATIONS

Table of equipment abbreviations including Air Conditioning Unit, Air Cooling Condensing Unit, Air Handling Unit, Air Separator, Boiler, Chiller, Cooling Tower, Cabinet Unit Heater, Chilled Water Pump, Domestic Water Booster Pump, Duct Mounted Coil, Domestic Water Circulating Pump, Exhaust Fan, Electric Duct Coil, Expansion Tank, Electric Water Heater, Fan Coil Unit, Fire Pump, Grease Interceptor, Gravity Roof Ventilator, Heating Water Pump, Heat Recovery Unit, Power Roof Ventilator, Return/Exhaust Fan, Rooftop Unit, Sump Pump, Unit Heater, Water Heater.

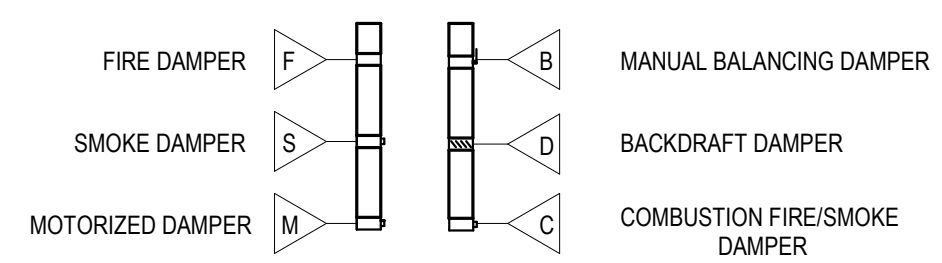
GRILLES, REGISTERS & DIFFUSERS TAGS



MECHANICAL EQUIPMENT TAGS



DAMPER TAGS



MECHANICAL PIPING SYMBOLS

Table of mechanical piping symbols including Chilled Water Return, Chilled Water Supply, Condensate Drainage, Condenser Water Return, Condenser Water Supply, Geothermal Water Return, Geothermal Water Supply, Heating Water Return, Heating Water Supply, Natural Gas, Propane Gas, Refrigerant-Liquid, Refrigerant-Suction, Refrigerant-Hot Gas, Steam, Condensate Return, Pipe Size Tag, Above Ground Piping, Pipe Slope Tag, Below Ground Piping, Pipe Invert Elevation Tag, Existing Pipe Tag, Piping Being Demolished, Pipe Drop, Pipe Rise, Pipe Tee, Reducing 45 Degree Tee, 45 Degree Tee, Pipe Accessory Tags (2" DOM. WM, 2" Balancing, 2" Shutoff, 2" Check, 2" TMV, 2" M-CNTRL, 2" 3-WAY CNTRL, 2" PRV, 3/8" Solenoid, 2" Butterfly).

PROJECT GENERAL NOTES

- A WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSAL DRAINS AT COMPLETION OF CONSTRUCTION.
B COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
C THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
D FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
E LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
F ALL ROOF MOUNTED VENTS AND DRAINS SHALL BE A MINIMUM 4'-0" FROM EDGE OF ROOF.
G LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
H FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS, REFER TO SPECIFICATION.
I PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
J ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
K REFER TO PLUMBING SERIES DRAWINGS FOR GAS AND A.C. CONDENSATE DRAIN PIPING.
L PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
M FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
N INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
O LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
P INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.
Q ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.

HVAC GENERAL NOTES

- A SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.
B CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 46" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH.
C REFER TO PIPING DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.
D CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER.
E PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
F ALL SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE RATED TO MEET THE APPLICATION BASED PRESSURE CLASSES INDICATED IN THE METAL DUCTS SPECIFICATION 23 31 13
G THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.
H NEW WORK SHOWN ON DRAWINGS IS CONCEPTUAL IN NATURE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL TRADES. CONTRACTOR SHALL PERFORM FINAL COORDINATION OF ALL TRADES AFTER CEILING REMOVAL ALLOWS FURTHER SITE INVESTIGATION ON EXISTING BUILDINGS.
I UNLESS NOTED OTHERWISE ON THE DRAWINGS, REFER TO SCHEDULES FOR DIFFUSER, GRILLE, TERMINAL BOX, AND OTHER TERMINAL EQUIPMENT RUNOUT SIZES.
J WHERE EQUIPMENT REQUIRING ACCESS MUST BE INSTALLED ABOVE GYPSUM CEILING, CONTRACTOR SHALL COORDINATE ADEQUATE ACCESS WITH ALL TRADES AND PROVIDE THE REQUIRED ACCESS PANELS.

\*NOTE\* ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.



CONSTRUCTION SET
WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS
DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION
WHEATLAND, IN 47597

Table with 3 columns: #, Revision, Date

Project #: 21-400-194-1
Designed By: N.H.
Drawn By: N.H.
Checked By: D.B.
Date: 12/28/22



NOT FOR CONSTRUCTION

MECHANICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

M001

D

C

B

A

5

4

3

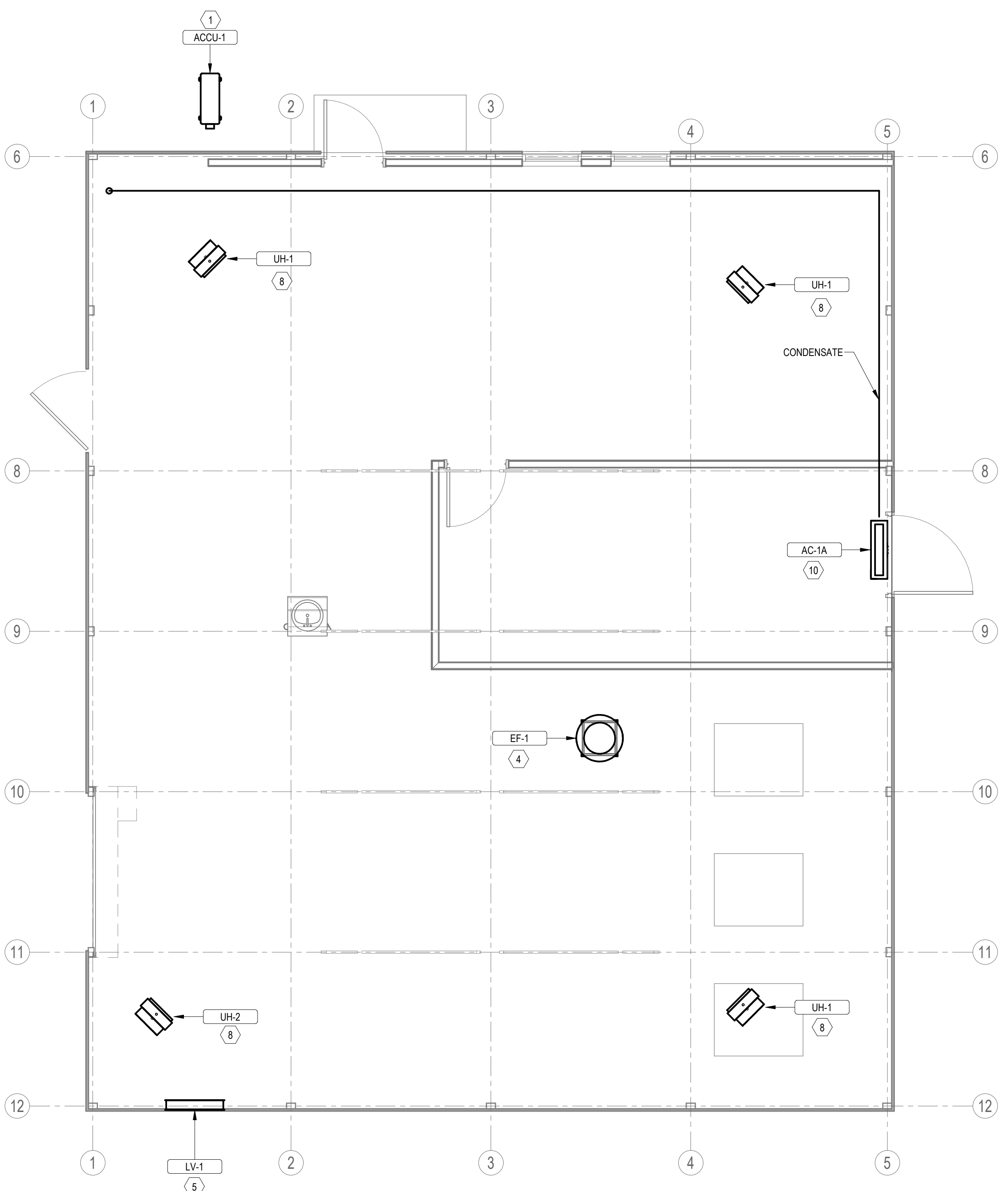
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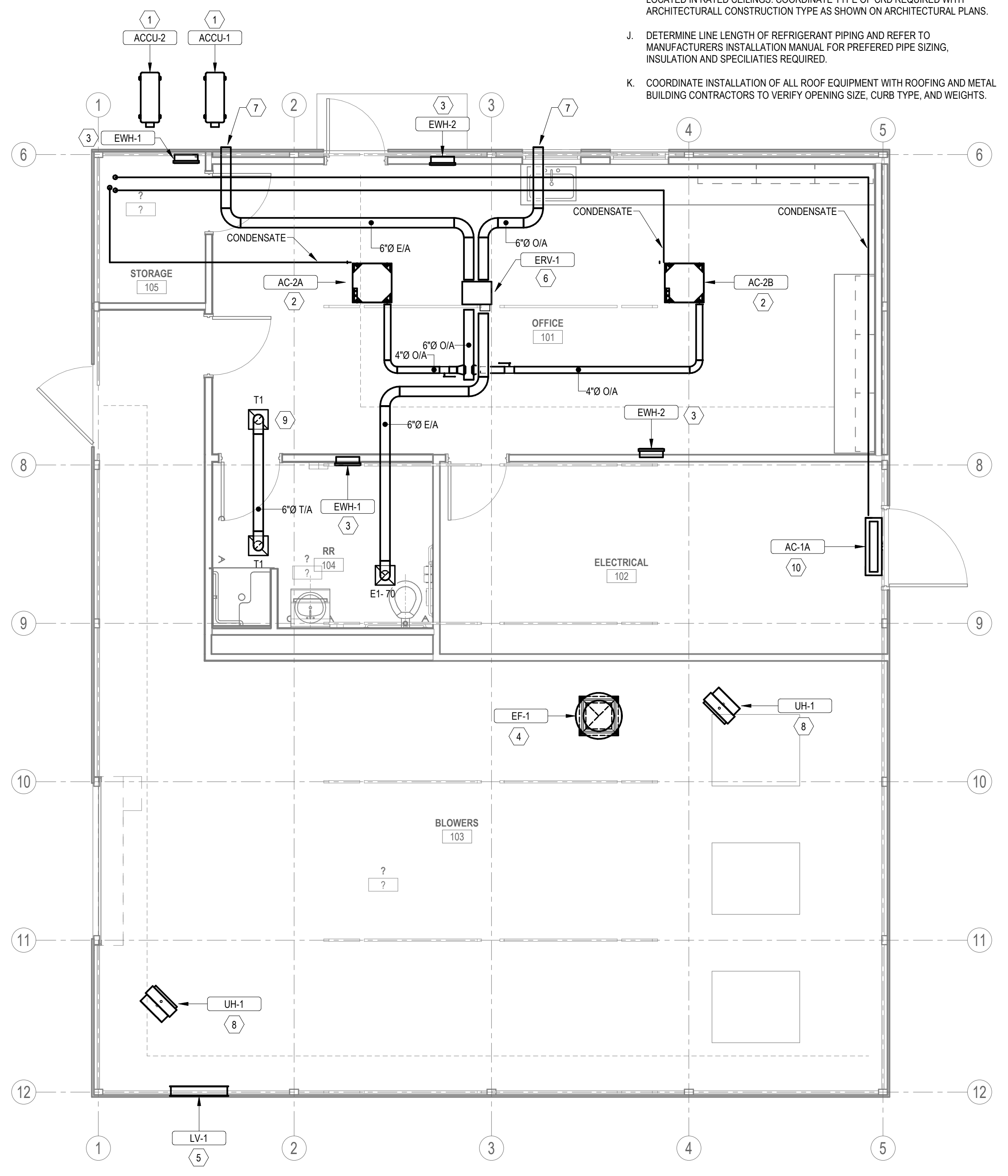
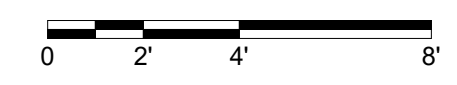
D  
C  
B  
A

#	NOTE
1	INSTALL CONDENSING UNIT IN LOCATION SHOWN. ROUTE REFRIGERANT PIPING AND CONTROL POWER WIRING TO ASSOCIATED INDOOR UNIT. ALL SUCTION/HOT GAS PIPING MUST HAVE INSULATION. OUTDOOR PIPING MUST HAVE UV RESISTANT PVC JACKET. CONTROL/POWER WIRING SHALL BE INSTALLED IN CONDUIT.
2	INSTALL AC UNIT IN CEILING. ROUTE PUMPED CONDENSATE TO FLOOR DRAIN IN STORAGE ROOM. CONNECT VENTILATION DUCT TO OUTSIDE AIR INTAKE OF UNIT.
3	INSTALL WALL UNIT HEATER AT APPROXIMATELY 18" AFF. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES.
4	INSTALL EF-1 ON ROOF. COORDINATE FINAL LOCATION WITH STRUCTURE. ROUTE 16"X16" DUCT DOWN THROUGH ROOF AND TRANSITION TO A 24"X24" DUCT. TERMINATE WITH A 1'X1' EXPANDED METAL GRILLE A MINIMUM OF 18" BELOW ROOF.
5	INSTALL LOUVER AT APPROXIMATELY 3'-0" AFF.
6	INSTALL ERV ABOVE CEILING.
7	PROVIDE VENT CAP WITH BACKDRAFT DAMPER AT PENETRATION.
8	INSTALL UNIT HEATER AT APPROXIMATELY 7'-0" AFF. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES.
9	PROVIDE DUCTED TRANSFER AIR SYSTEM BETWEEN BATHROOM AND OFFICE.
10	INSTALL AC UNIT ABOVE DOOR. ROUTE PUMPED CONDENSATE TO FLOOR DRAIN IN STORAGE ROOM.

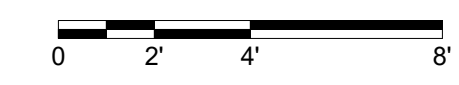
- GENERAL NOTES:
- A. ALL DUCT DIMENSIONS GIVEN ARE INSIDE DIMENSIONED, UNLESS NOTED OTHERWISE.
  - B. COORDINATE ALL OPENINGS IN FLOORS, ROOF AND WALLS WITH THE GENERAL AND STRUCTURAL CONTRACTORS.
  - C. RUN ALL DUCTS AS HIGH AS POSSIBLE WITH RETURN AND EXHAUST ABOVE SUPPLY AS OFTEN AS POSSIBLE.
  - D. PROVIDE HARD DUCT CONNECTIONS TO DIFFUSERS.
  - E. PROVIDE TURNING VANES IN ALL SQUARE THROATED ELBOWS.
  - F. ALL RECTANGULAR SUPPLY AIR BRANCH CONNECTIONS SHALL BE 45° TAKE-OFF FITTINGS AND ROUND SUPPLY AIR BRANCH CONNECTIONS SHALL BE BELLMOUTH FITTINGS.
  - G. REFER TO DIFFUSER SCHEDULE FOR DUCT RUNOUT SIZE UNLESS NOTED OTHERWISE. ALL FLEXIBLE DUCTS TO DIFFUSERS MAXIMUM LENGTH 5'-0". FLEXIBLE DUCTS ARE NOT TO BE USED AS ELBOWS.
  - H. ALL ABOVE FINISH FLOOR (A.F.F.) DIMENSIONS ARE TO BE MEASURED TO BOTTOM OF EQUIPMENT OR DUCTWORK UNLESS NOTED OTHERWISE.
  - I. PROVIDE CEILING RADIATION DAMPERS (CRD) FOR ALL DIFFUSERS/GRILLES LOCATED IN RATED CEILINGS. COORDINATE TYPE OF CRD REQUIRED WITH ARCHITECTURAL CONSTRUCTION TYPE AS SHOWN ON ARCHITECTURAL PLANS.
  - J. DETERMINE LINE LENGTH OF REFRIGERANT PIPING AND REFER TO MANUFACTURERS INSTALLATION MANUAL FOR PREFERRED PIPE SIZING, INSULATION AND SPECIFICATIONS REQUIRED.
  - K. COORDINATE INSTALLATION OF ALL ROOF EQUIPMENT WITH ROOFING AND METAL BUILDING CONTRACTORS TO VERIFY OPENING SIZE, CURB TYPE, AND WEIGHTS.



**1** FIRST FLOOR MECHANICAL PLAN - BASE BID  
1/4" = 1'-0"



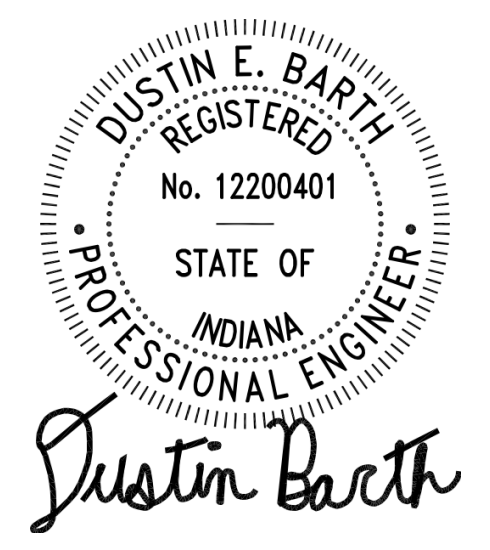
**2** FIRST FLOOR MECHANICAL PLAN - ALTERNATE BUILDOUT  
1/4" = 1'-0"



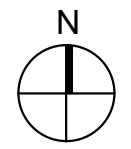
CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: N.H.  
 Drawn By: N.H.  
 Checked By: D.B.  
 Date: 12/28/22



NOT FOR CONSTRUCTION



FIRST FLOOR  
 MECHANICAL PLANS

M210

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

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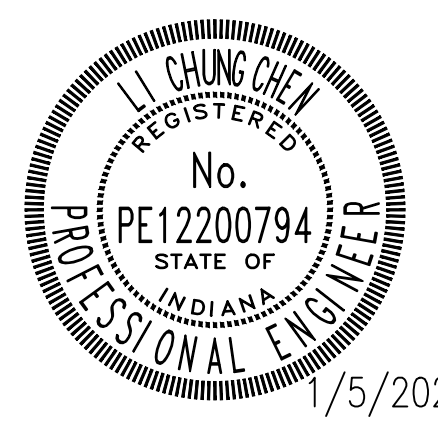
Project #: 21-400-194-1

Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

Date: **1/5/2023**

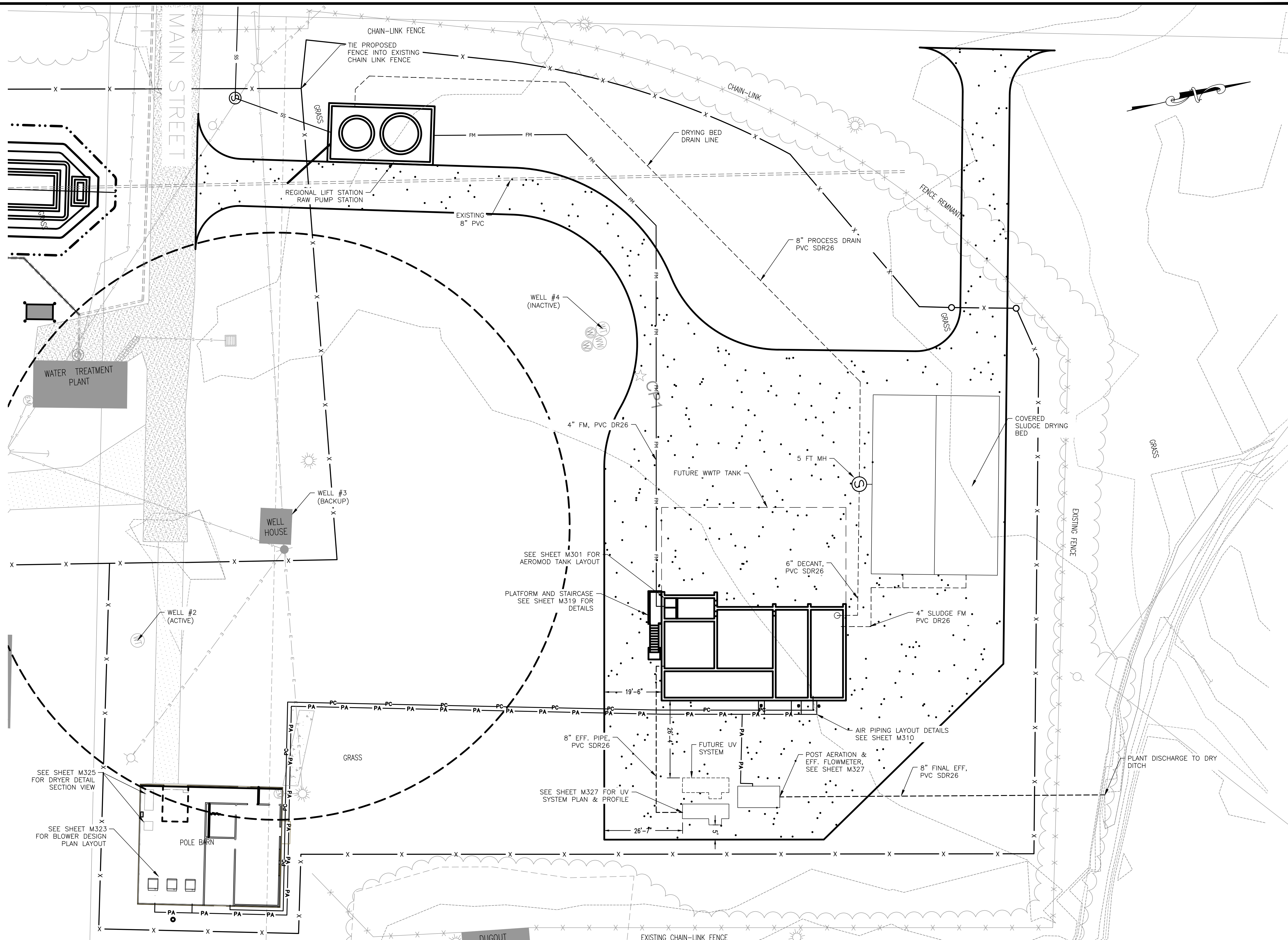


*Li Chung Chen*



**WWTP SITE PLAN**

**M300**

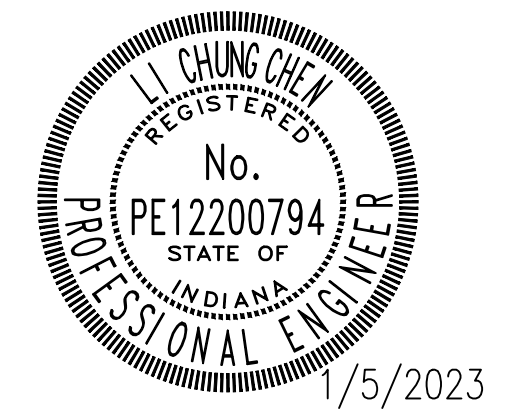


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CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023

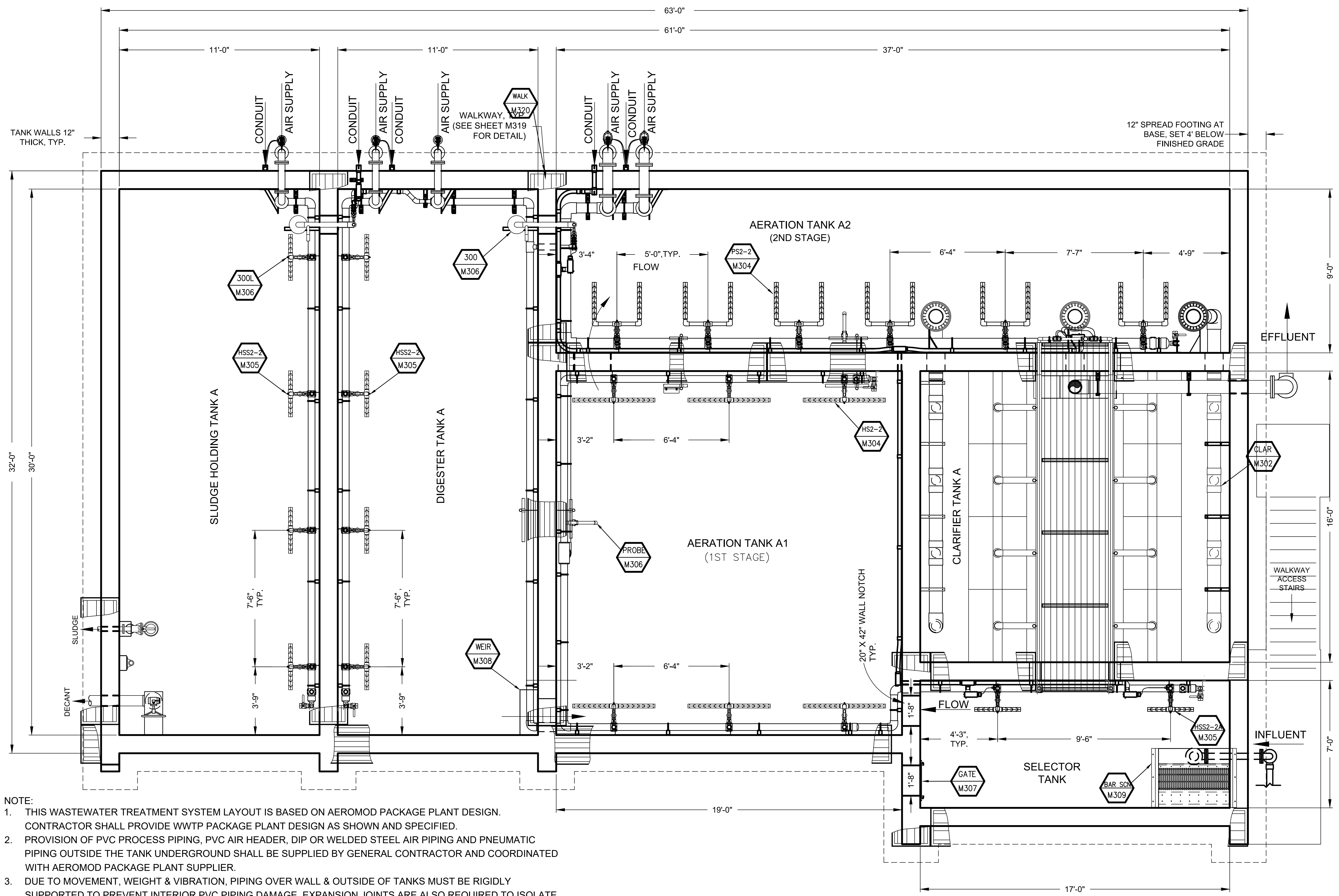


*L.L. Chung Chen*

SCALE: NTS

**AEROMOD TANK LAYOUT**

**M301**

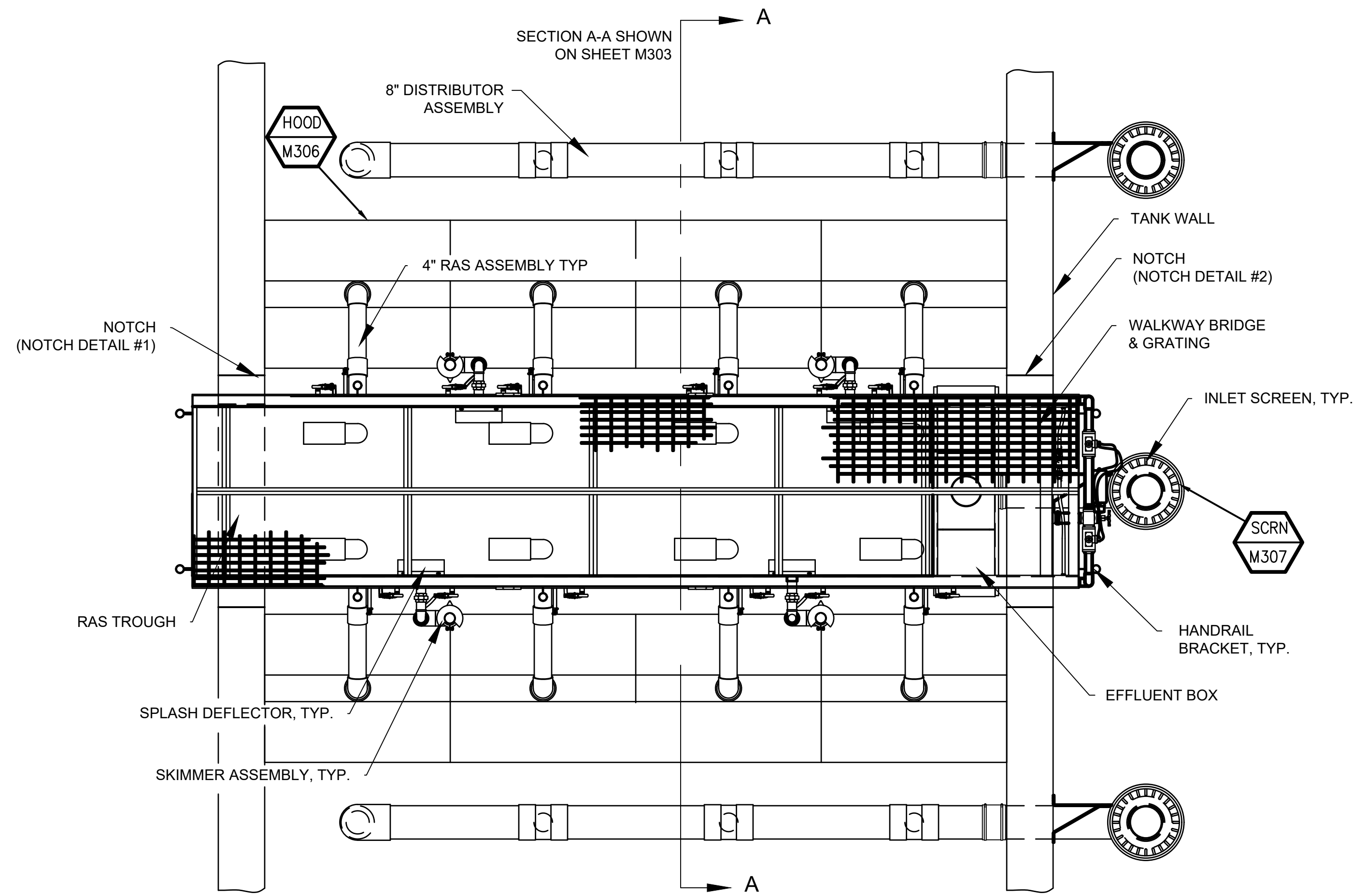


- NOTE:**
1. THIS WASTEWATER TREATMENT SYSTEM LAYOUT IS BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE WWTP PACKAGE PLANT DESIGN AS SHOWN AND SPECIFIED.
  2. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC PIPING OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR AND COORDINATED WITH AEROMOD PACKAGE PLANT SUPPLIER.
  3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND DIP OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
  4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN AND SCOPE.

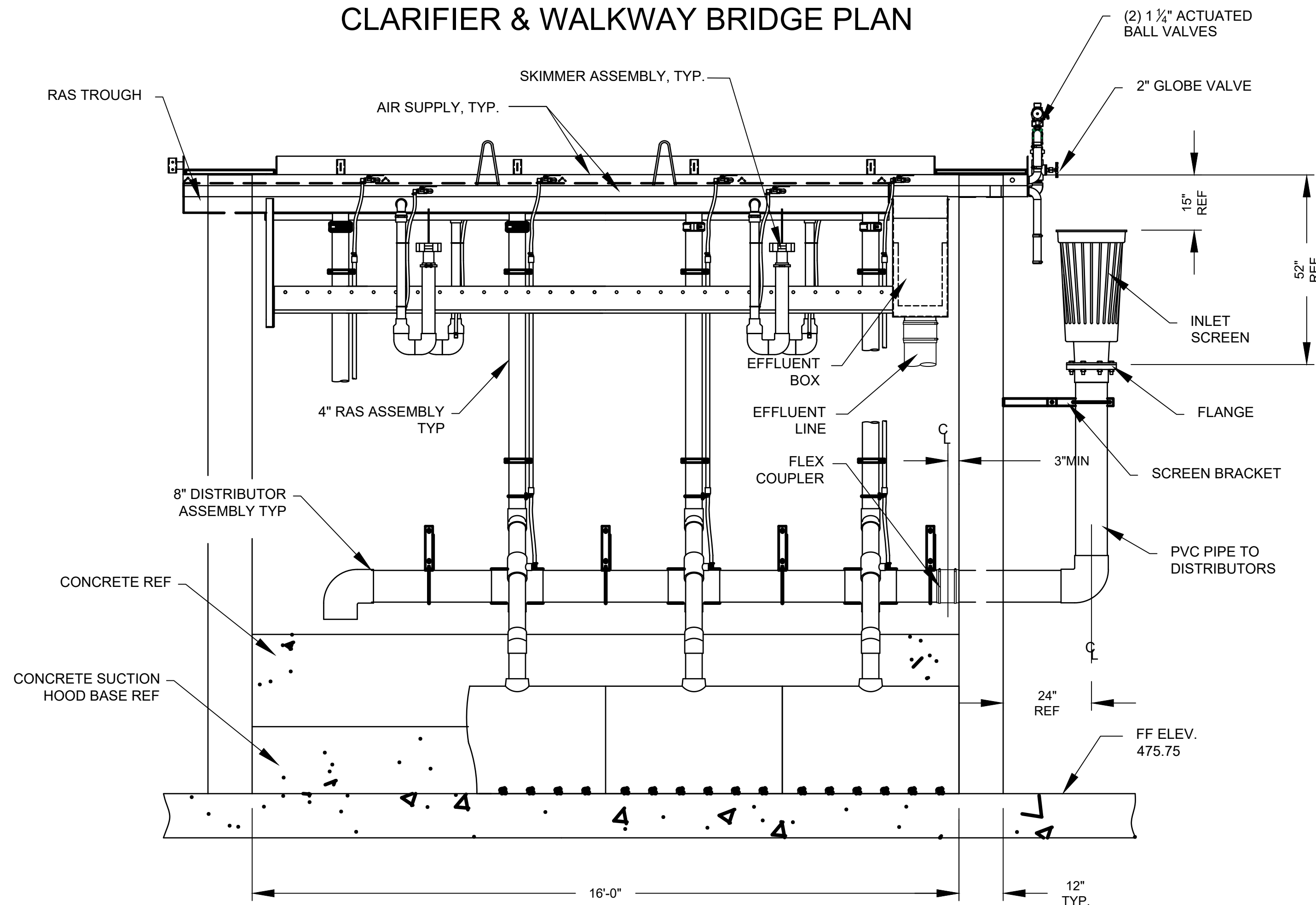
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 PLOT SCALE: 1:1



NOTE:  
1. WATER LEVEL FROM DOWNSTREAM TREATMENT CAN NOT BACK UP ABOVE 40" BELOW TOP OF WALL.



CLARIFIER & WALKWAY BRIDGE PLAN



CLARATOR MODEL #16272 ELEVATION

NOTE:

1. THIS WASTEWATER TREATMENT SYSTEM LAYOUT IS BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE WWTP PACKAGE PLANT DESIGN AS SHOWN AND SPECIFIED.
2. ALL WASTEWATER TREATMENT EQUIPMENT SHOWN HEREIN SHALL BE PROVIDED BY THE PACKAGE PLANT SUPPLIER FOR SYSTEM INTEGRITY.
3. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC PIPING OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN

CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

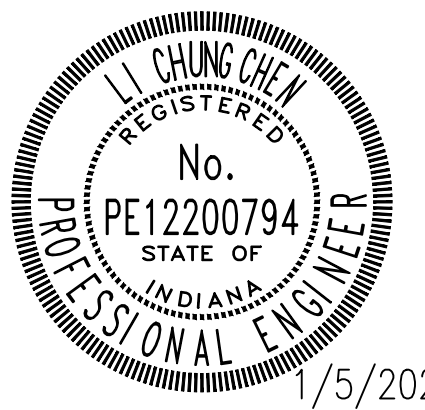
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Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

Date: **1/5/2023**



*L.I. Chung Chen*

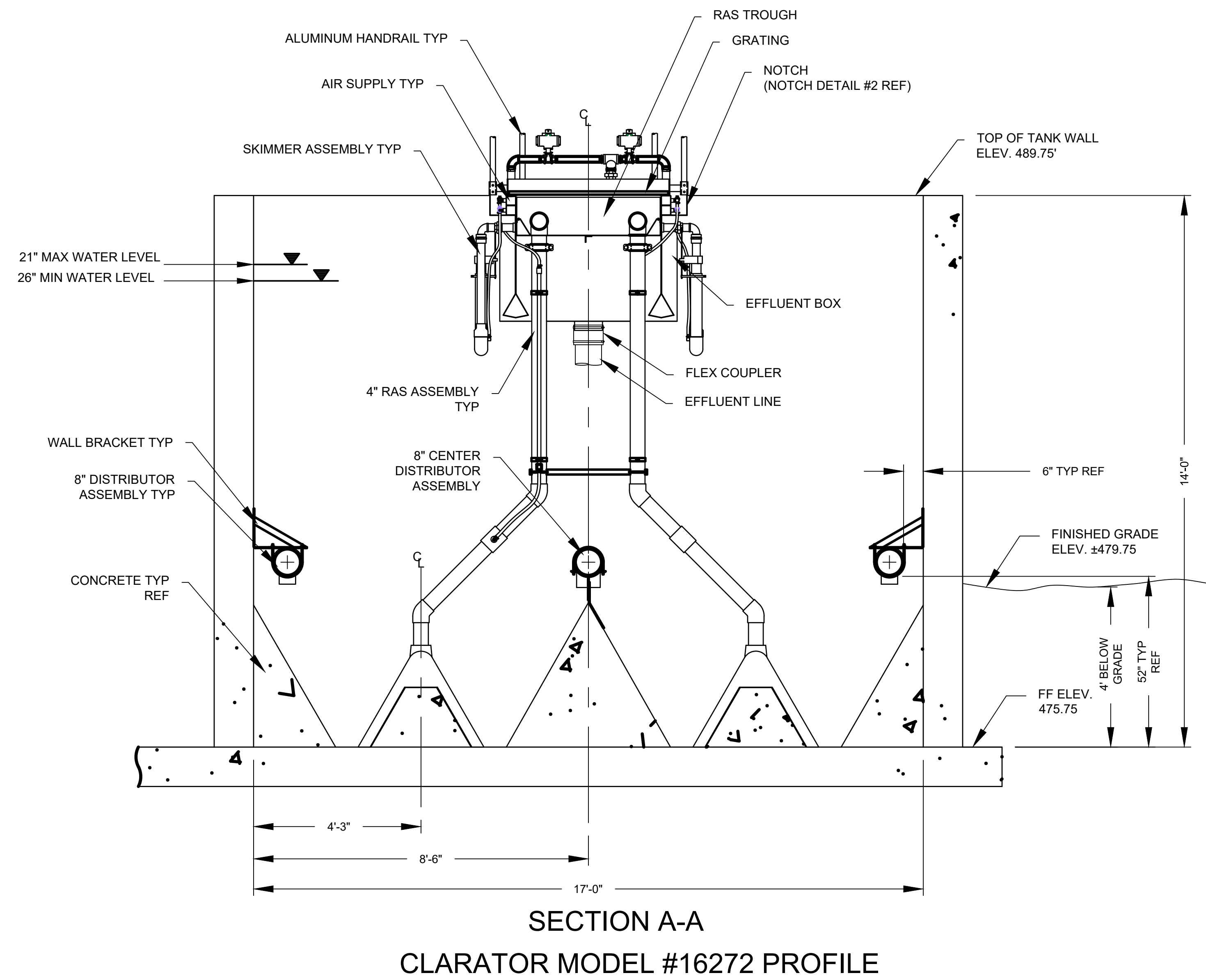
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CLARIFIER DETAIL

**M302**

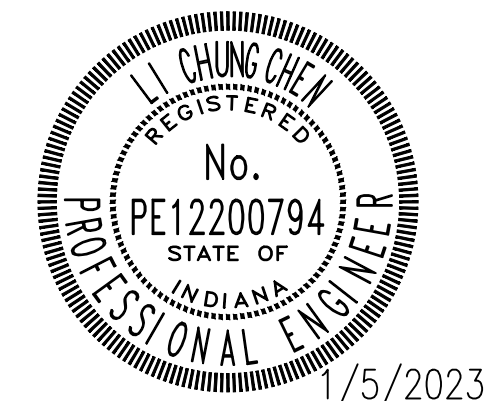
CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

- NOTE:
1. THIS WASTEWATER TREATMENT SYSTEM LAYOUT IS BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE WWTP PACKAGE PLANT DESIGN AS SHOWN AND SPECIFIED.
  2. ALL WASTEWATER TREATMENT EQUIPMENT SHOWN HEREIN SHALL BE PROVIDED BY THE PACKAGE PLANT SUPPLIER FOR SYSTEM INTEGRITY.
  3. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC PIPING OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
  4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN



#	Revision	Date

Project #: 21-400-194-1  
 Designed By: **LC**  
 Drawn By: **JM**  
 Checked By: **LC**  
 Date: **1/5/2023**



*L.I. Chung Chen*

SCALE: NTS

**CLARIFIER DETAIL  
SECTION VIEW A-A**

**M303**

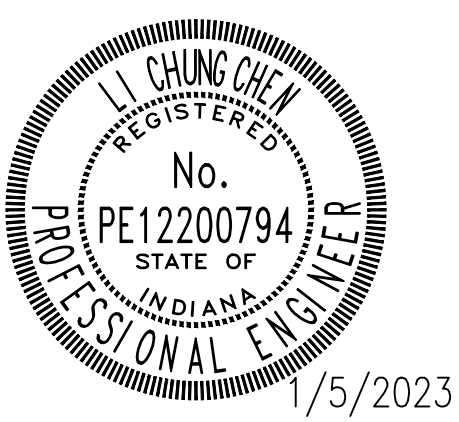
CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
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WHEATLAND, IN 47597

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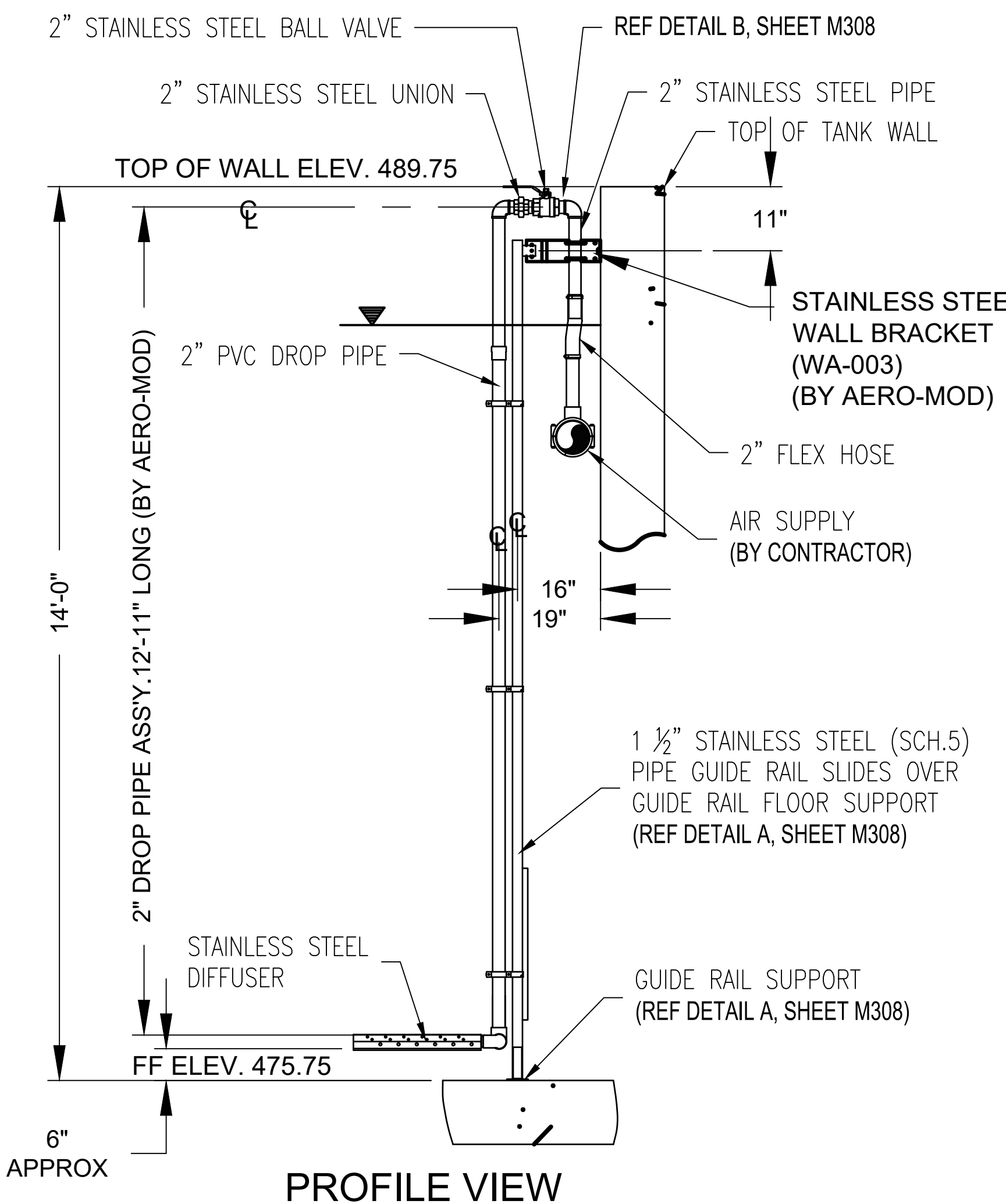
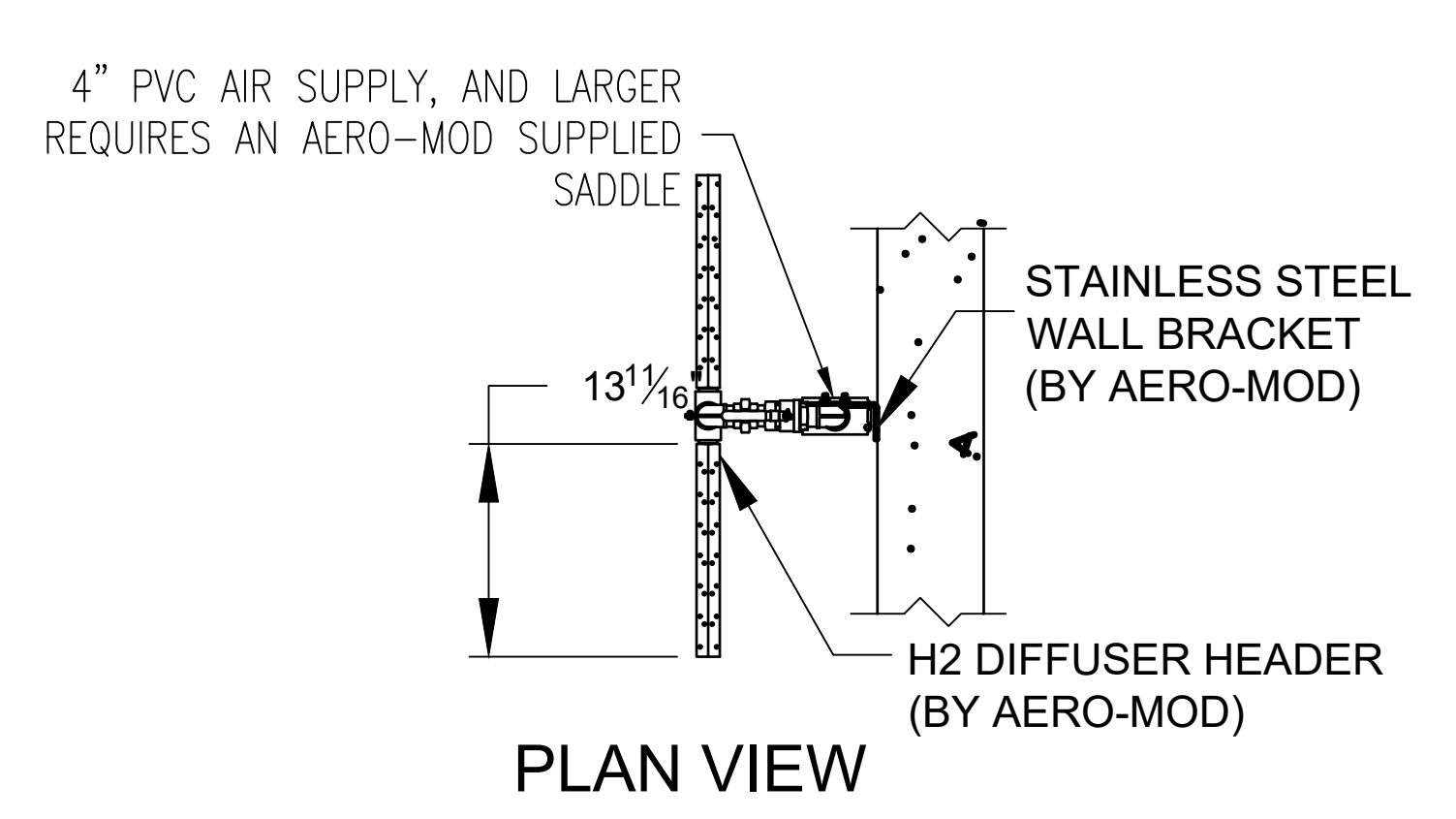
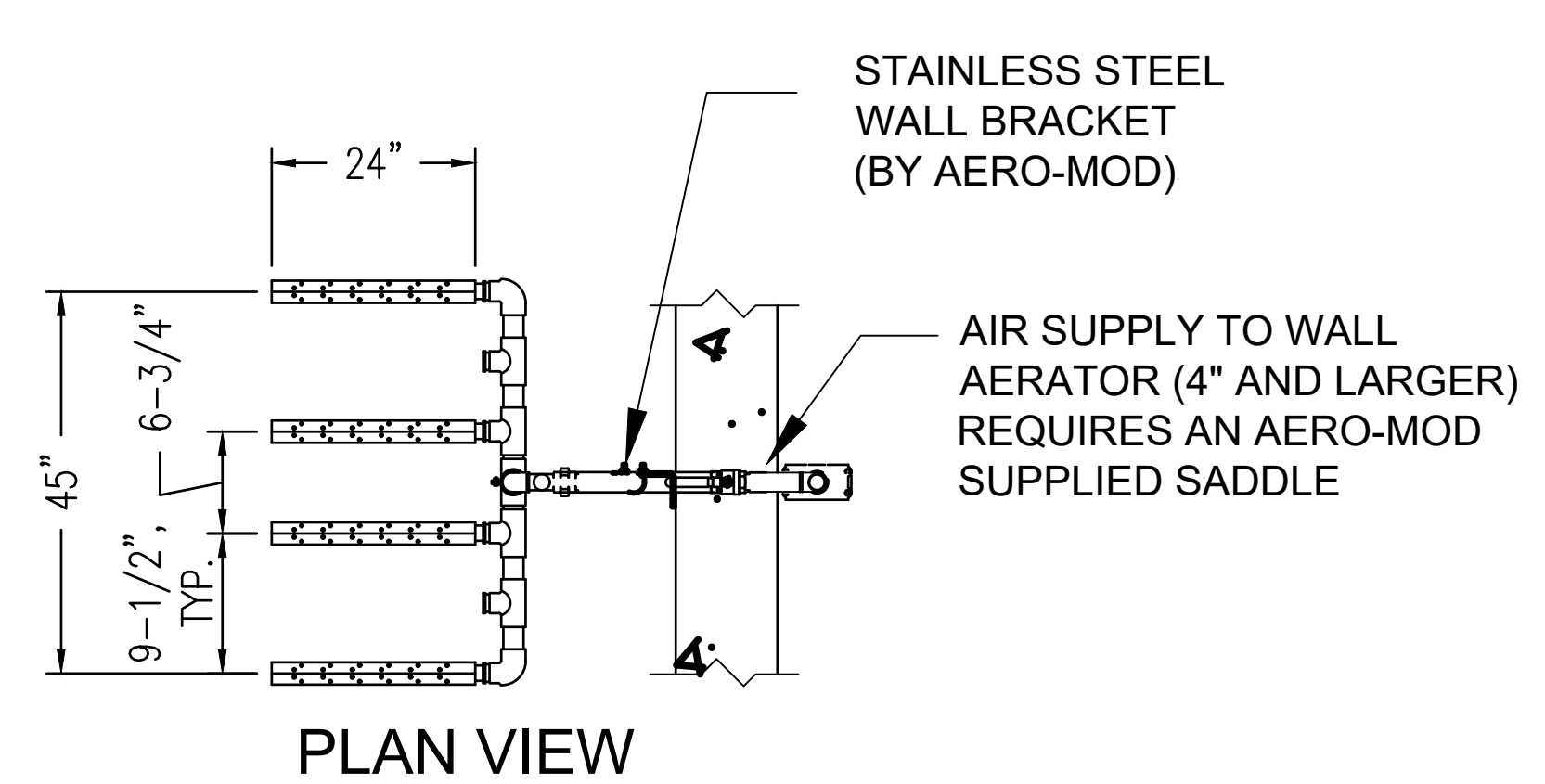
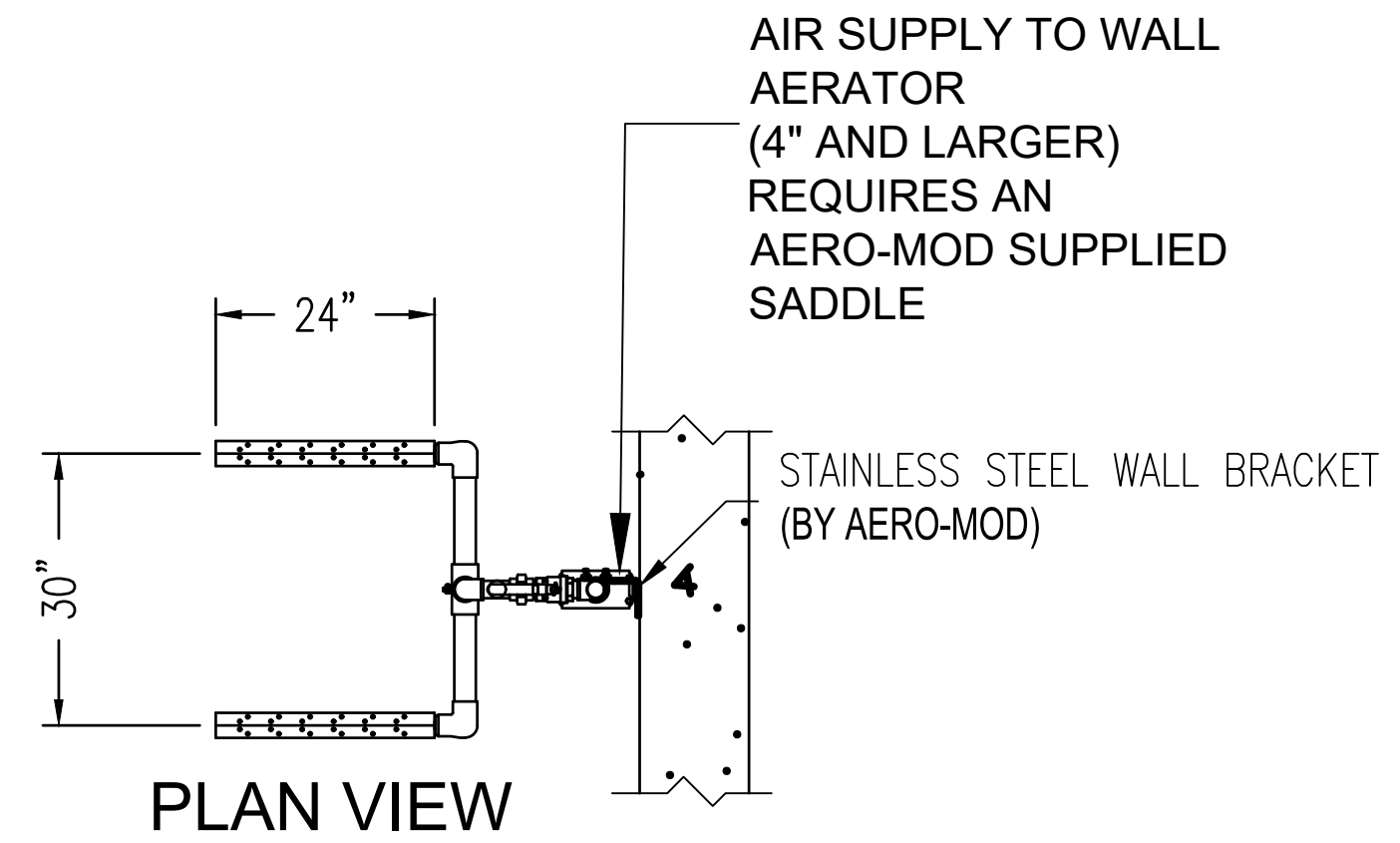


*L.I. Chung Chen*

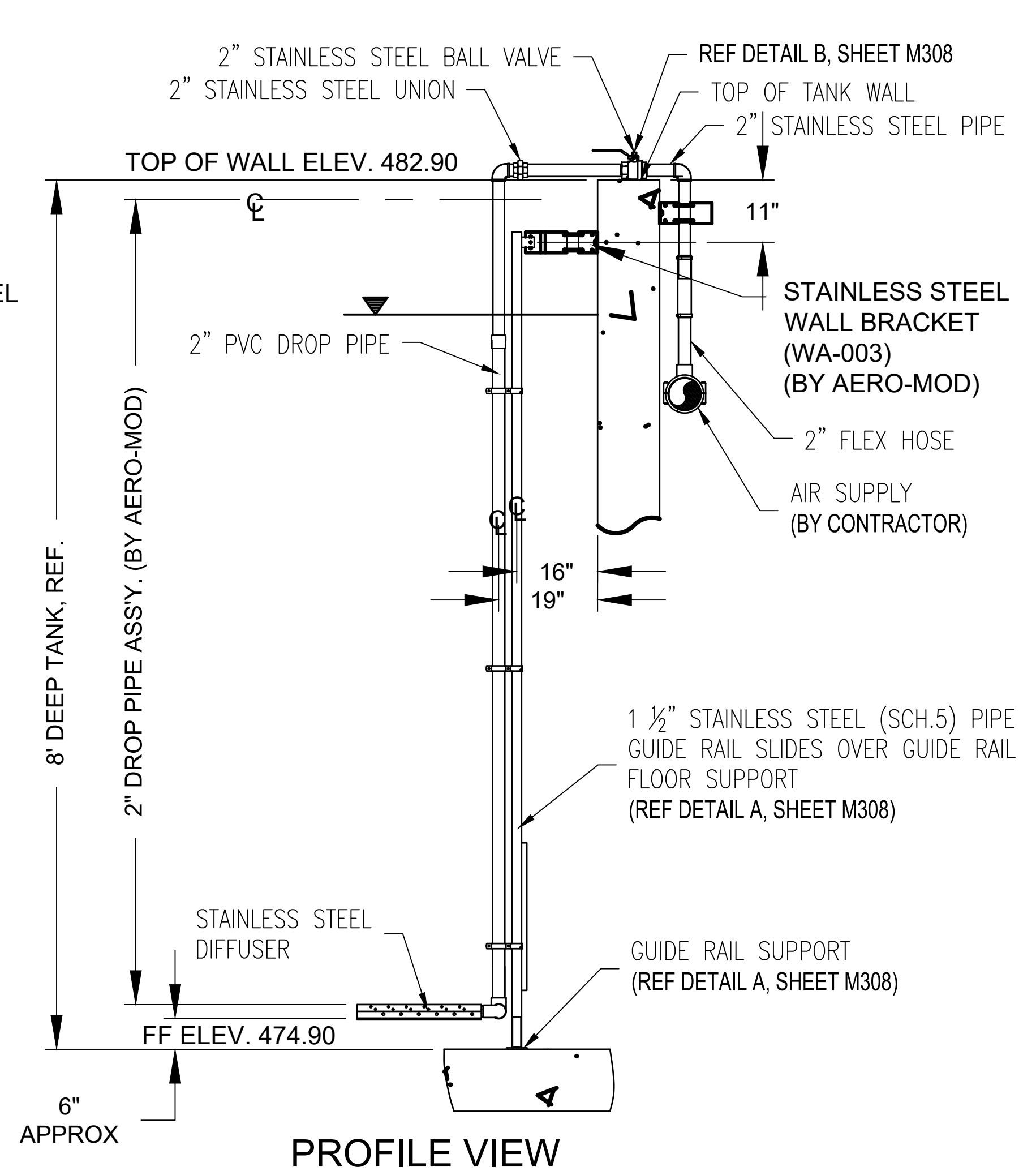
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**WALL AERATOR  
WA-PF46-2 & HS2-2  
EQUIPMENT DETAIL**

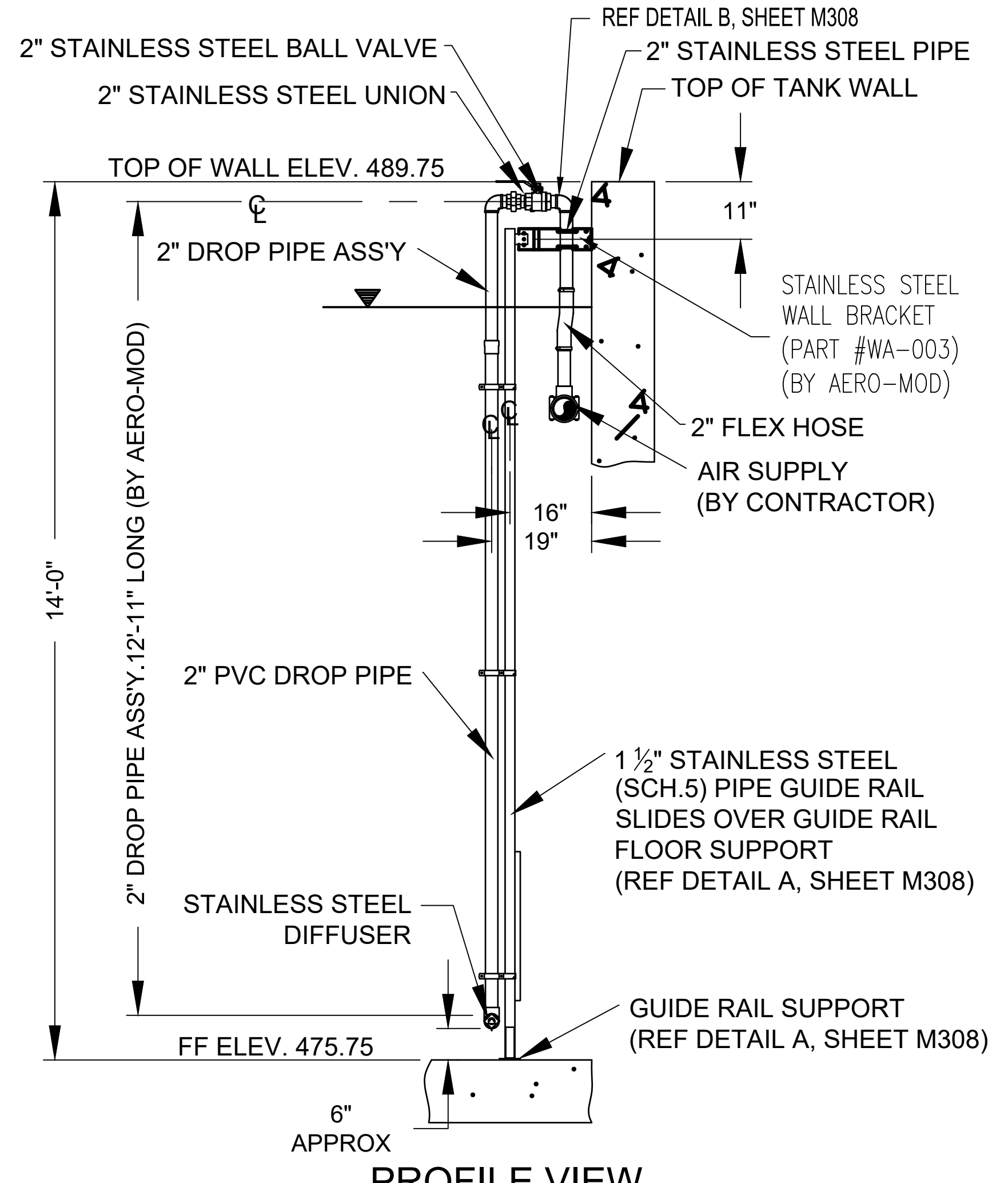
**M304**



TYP. AERATION TANK AERATOR  
WA-PS2-2



POST AERATION TANK AERATOR  
WA-PF4/6-2



TYPICAL WALL AERATOR  
WA-HS2-2

PRINT DATE: 1/5/23 PLOT SCALE: 1:1 DRAWING FILE: J:\TOWHEATLAND\2200000401.000\_RQAW - WHEATLAND WWTP\6.00\_CADD\6.03\_DRAWINGS\22-0401-PD-PLAN-EQUIPMENT LAYOUT.DWG

#	Revision	Date

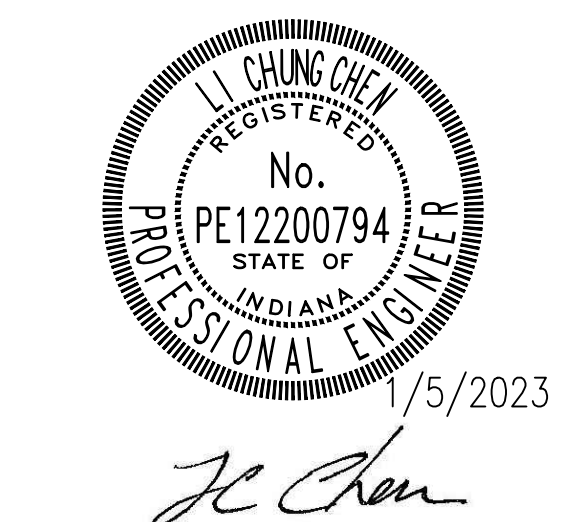
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Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

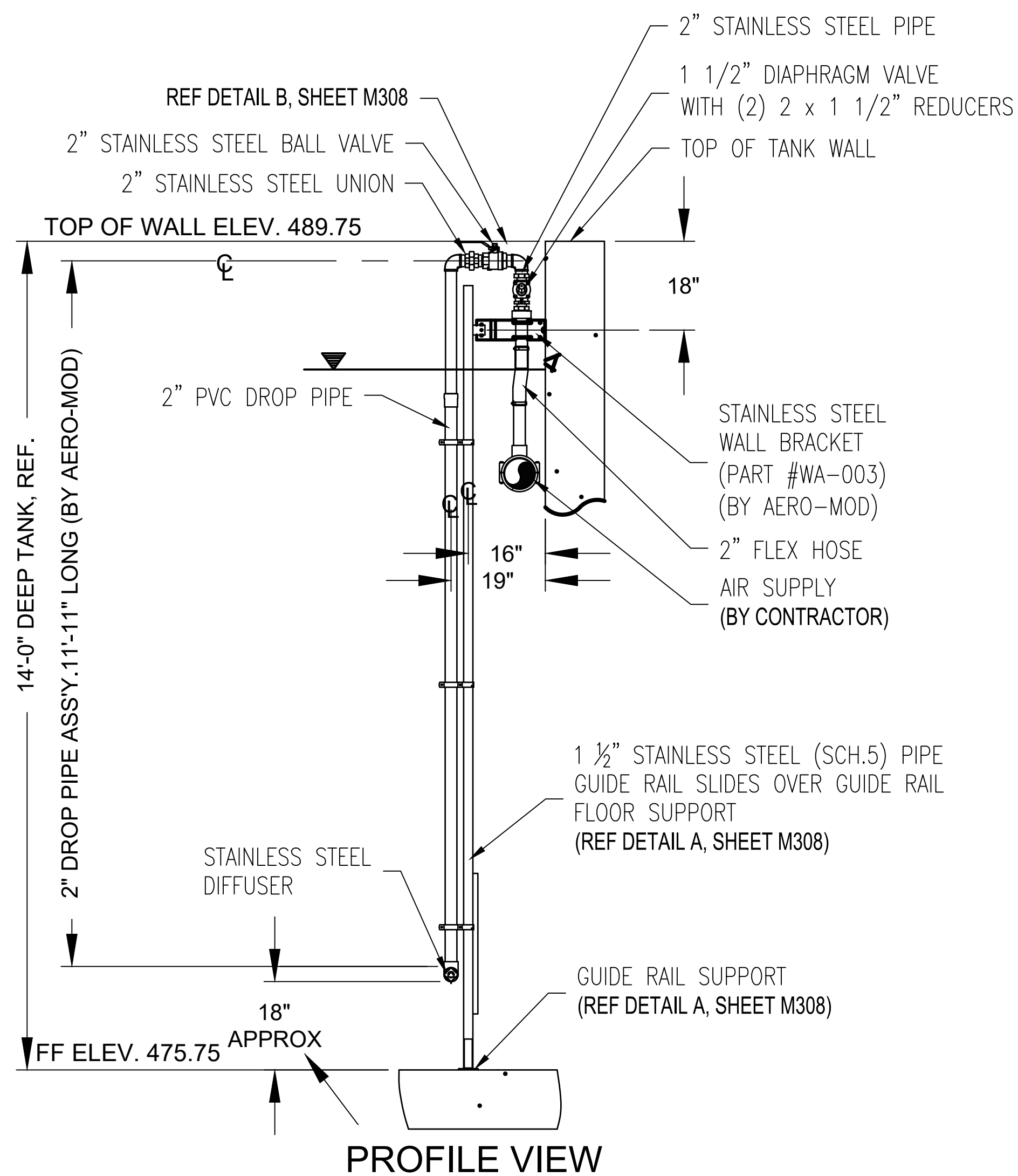
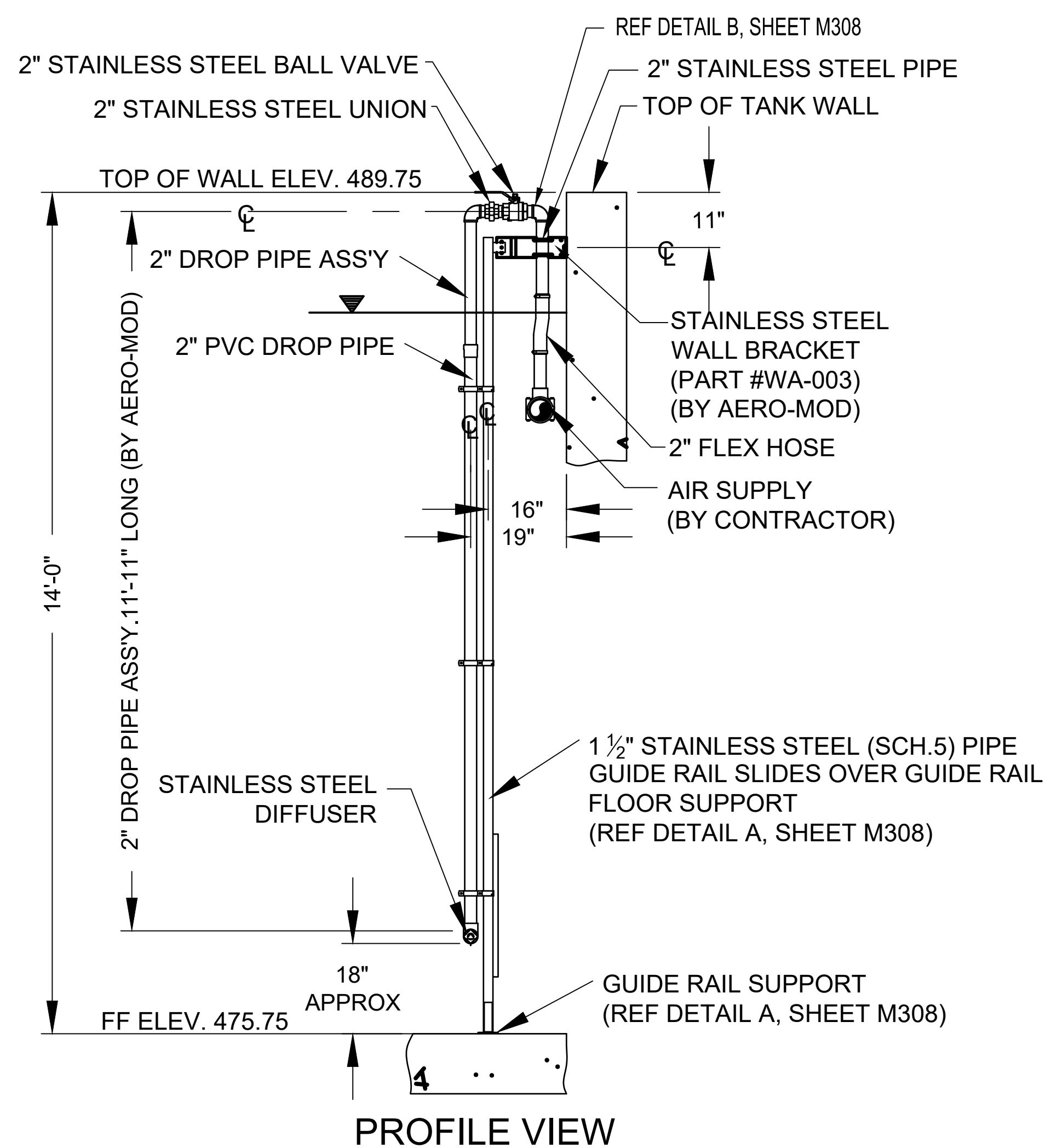
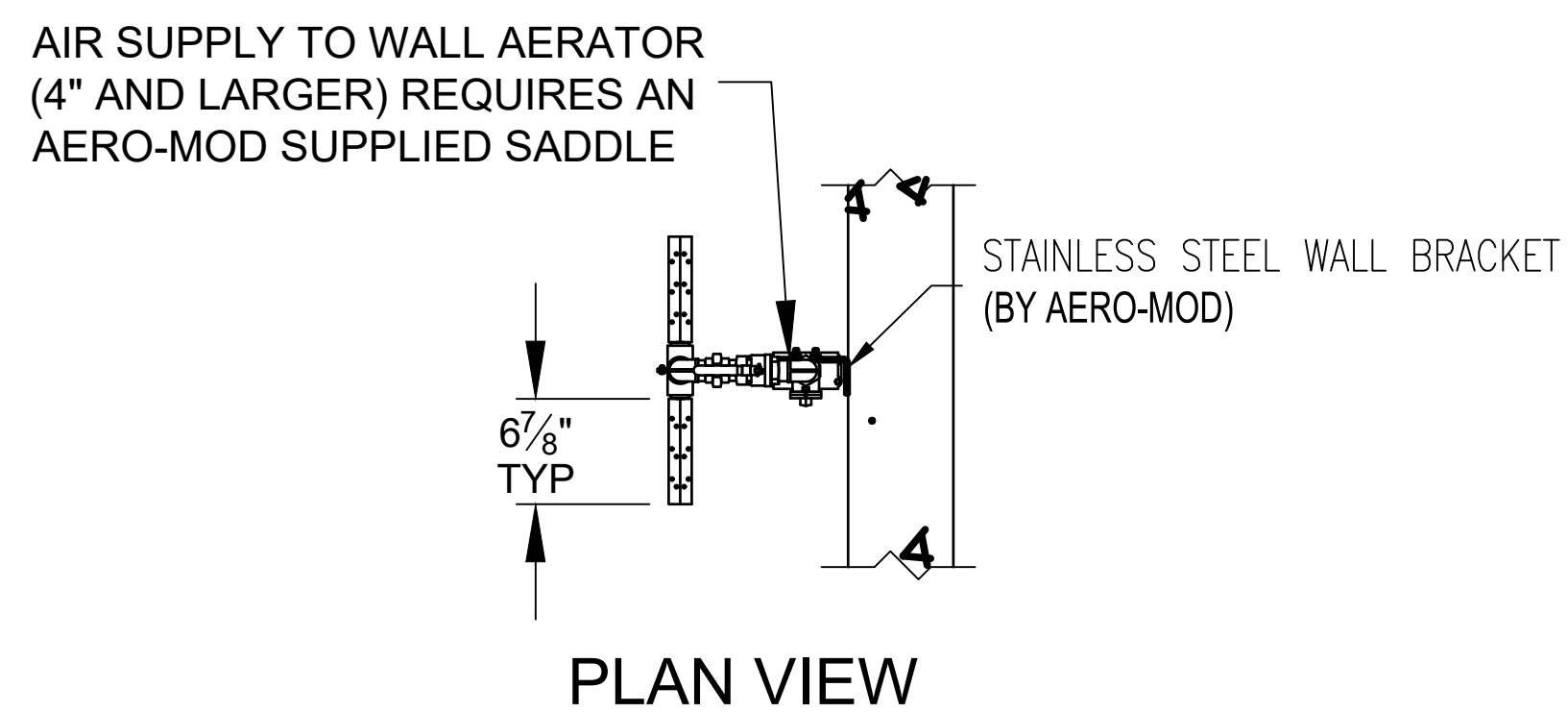
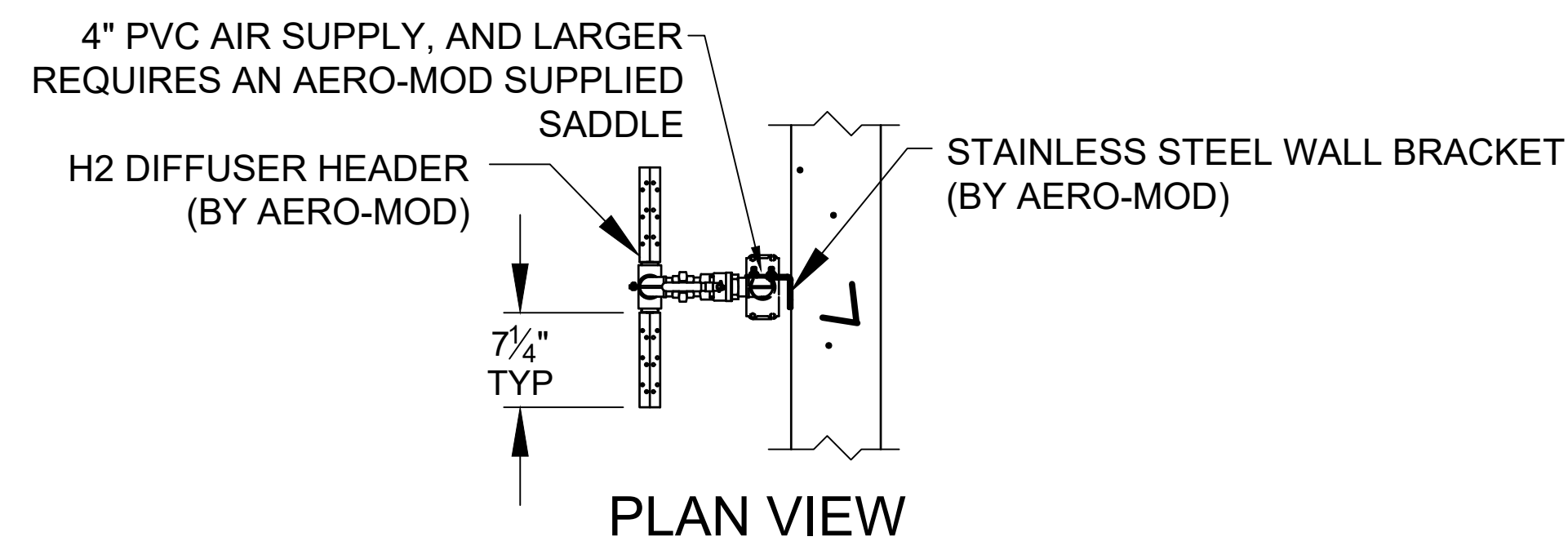
Date: **1/5/2023**



SCALE: NTS

**WALL AERATOR  
WAD-HSS2-2 & 2A  
EQUIPMENT DETAIL**

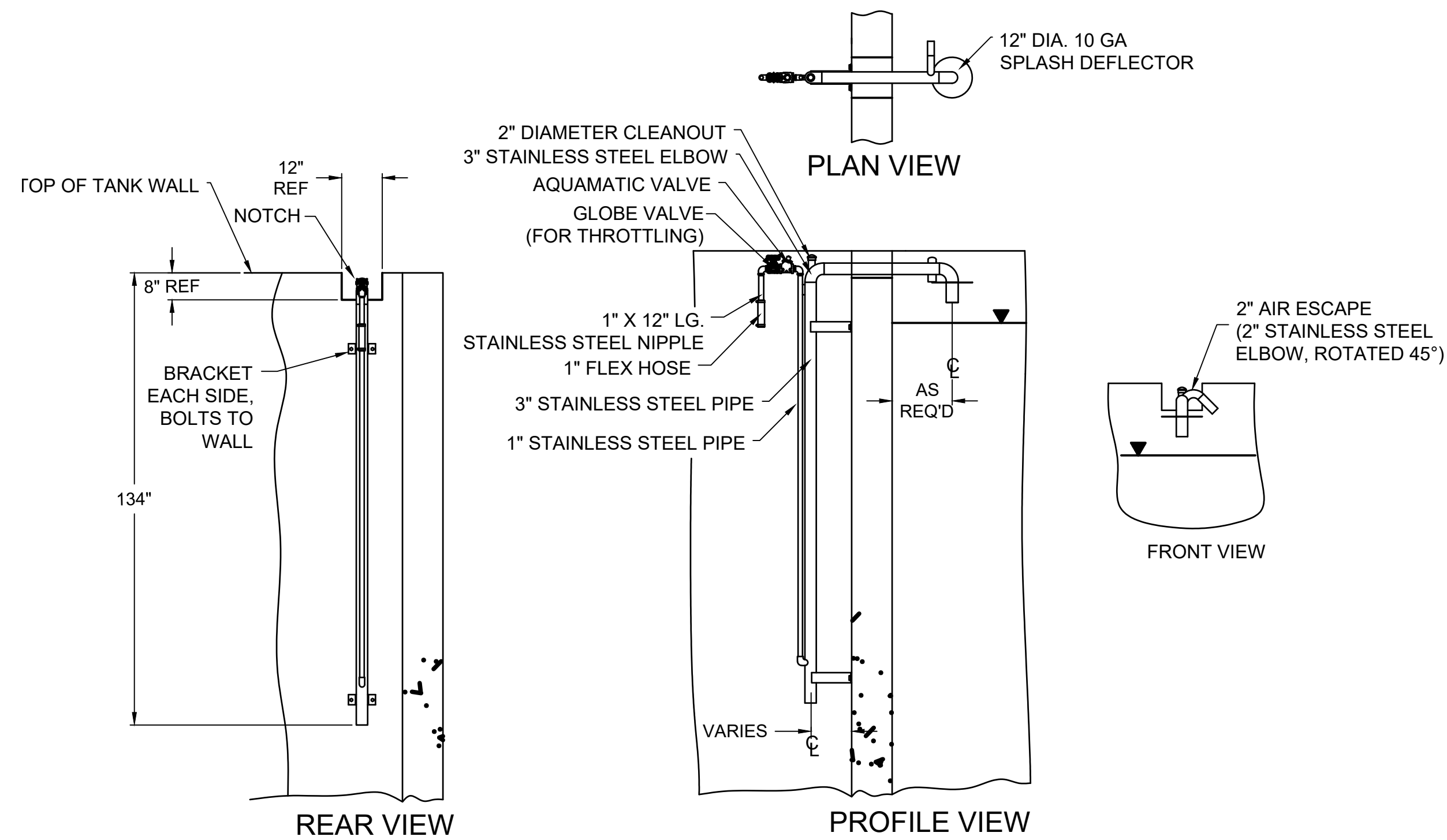
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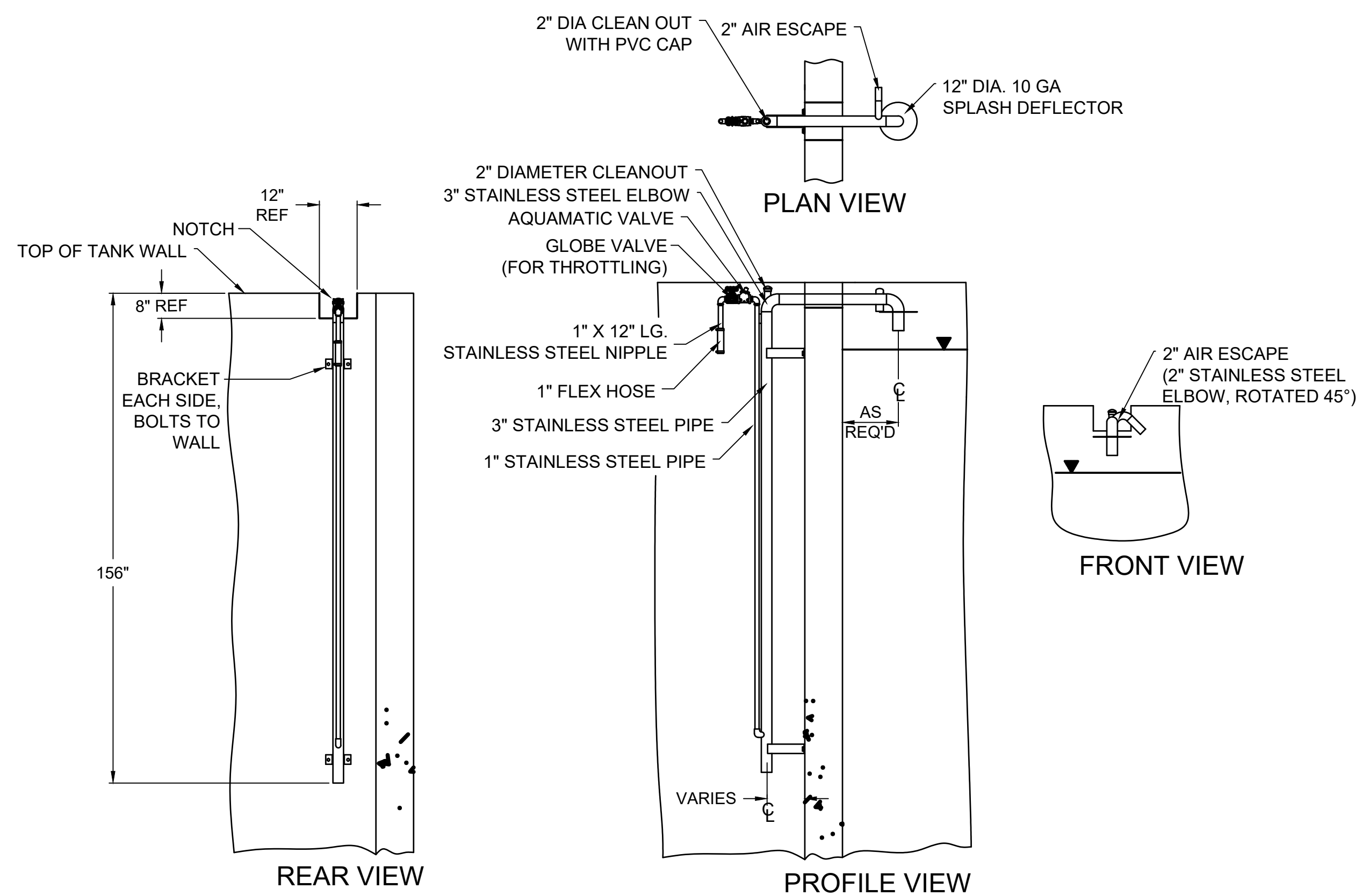
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TYPICAL WALL AERATOR, WAD-HSS2-2A

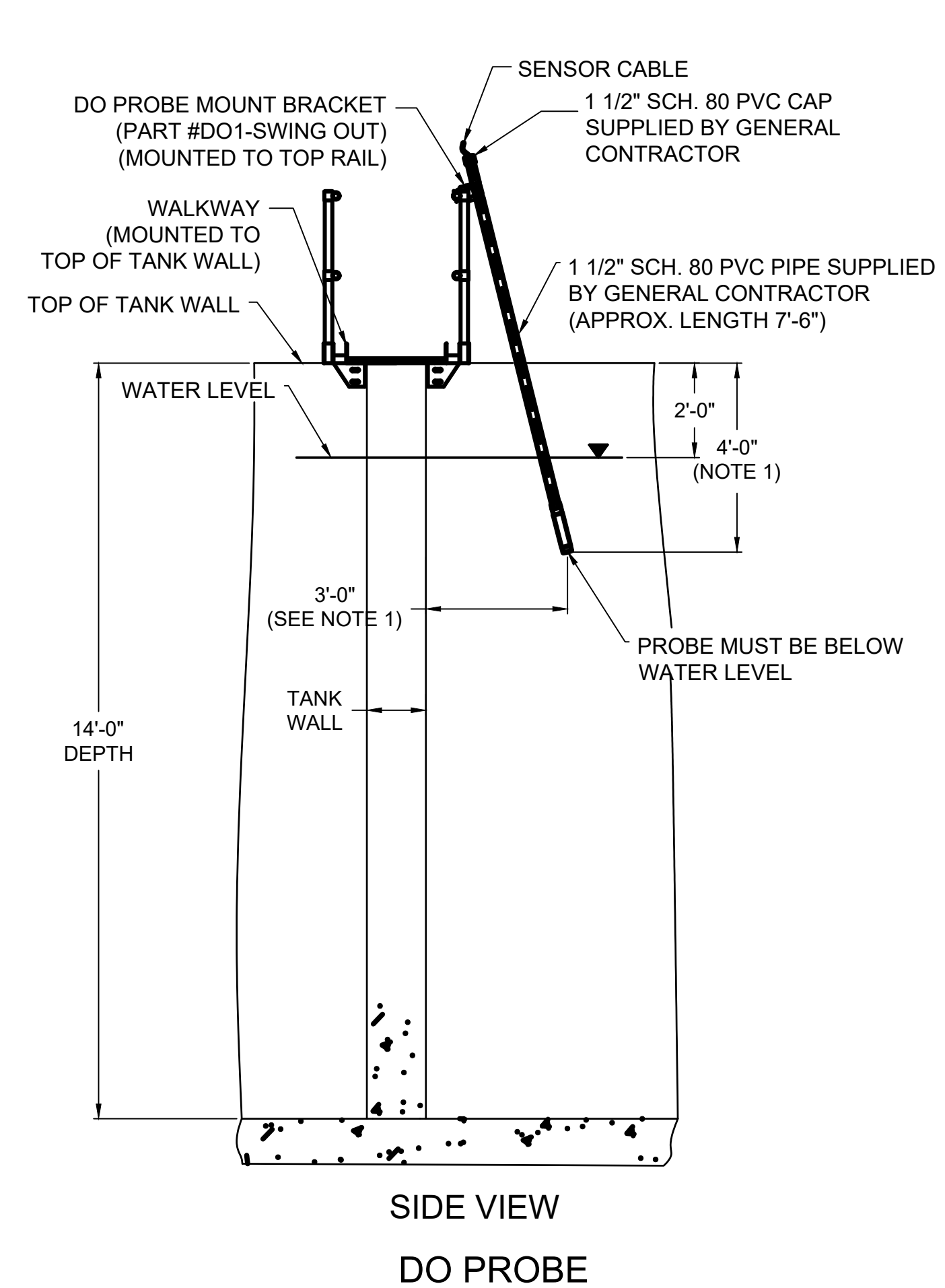
CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597



MODEL AL-300  
SOLIDS WASTING AIRLIFT



MODEL AL-300L  
SOLIDS WASTING AIRLIFT



NOTE:

- FOR BEST ACCURACY DISSOLVED OXYGEN MEASUREMENTS, THE PROBE SHOULD BE TAKEN 2'-0" BELOW THE WATER SURFACE, AND 3'-0" AWAY FROM THE TANK WALL.
- THE DO PROBE, MOUNTING BRACKET AND SENSOR CABLE CONNECTION TO THE DO ANALYZER SHOULD BE PROVIDED BY WWTP PACKAGE SYSTEM SUPPLIER.

#	Revision	Date

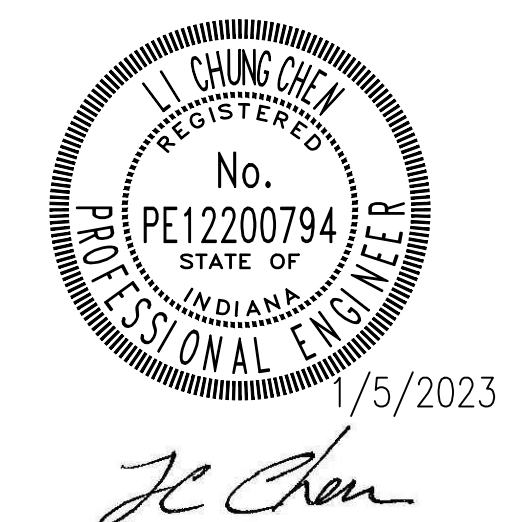
Project #: 21-400-194-1

Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

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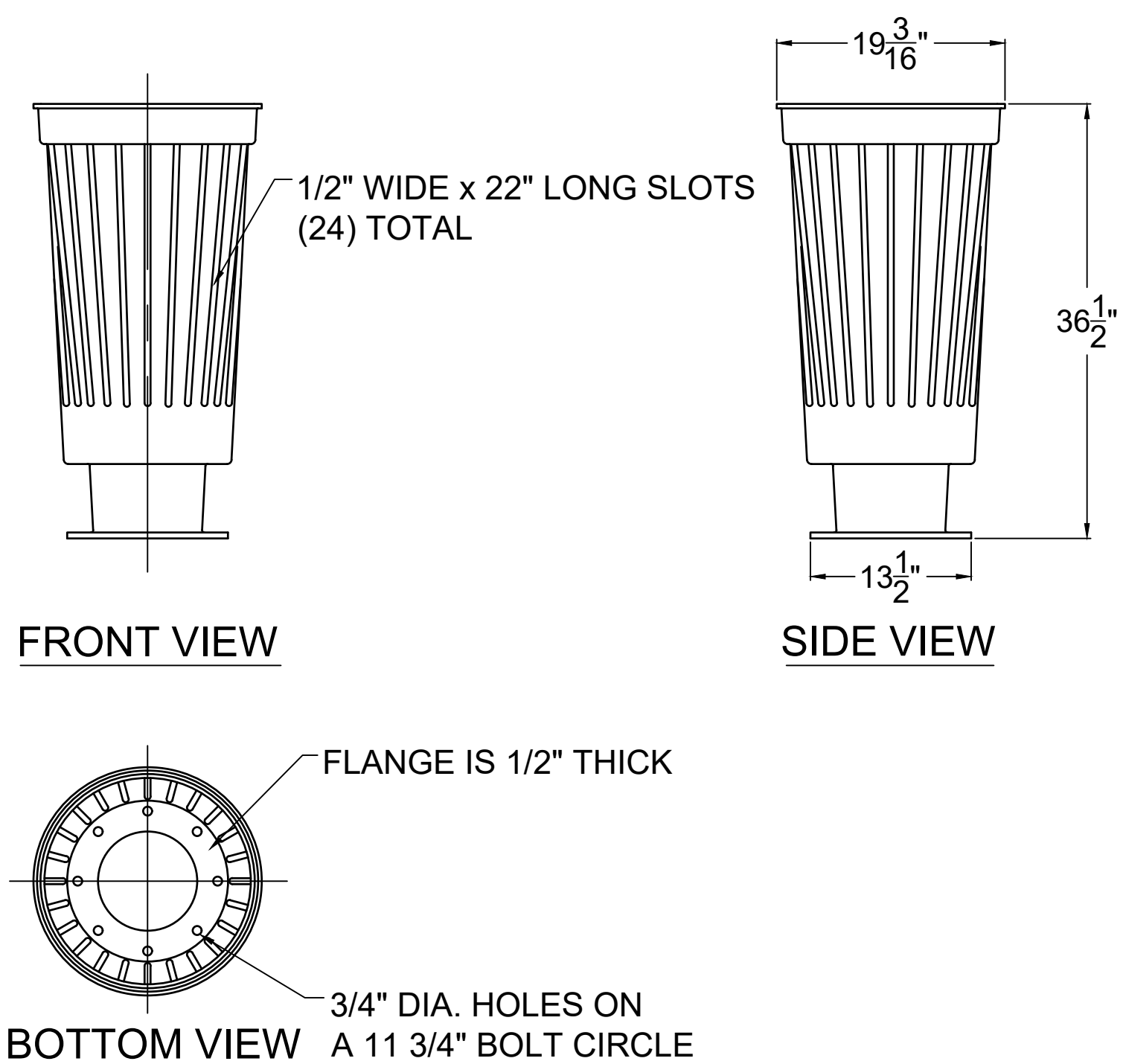


SCALE: NTS

AIR LIFT & DO PROBE  
DETAILS

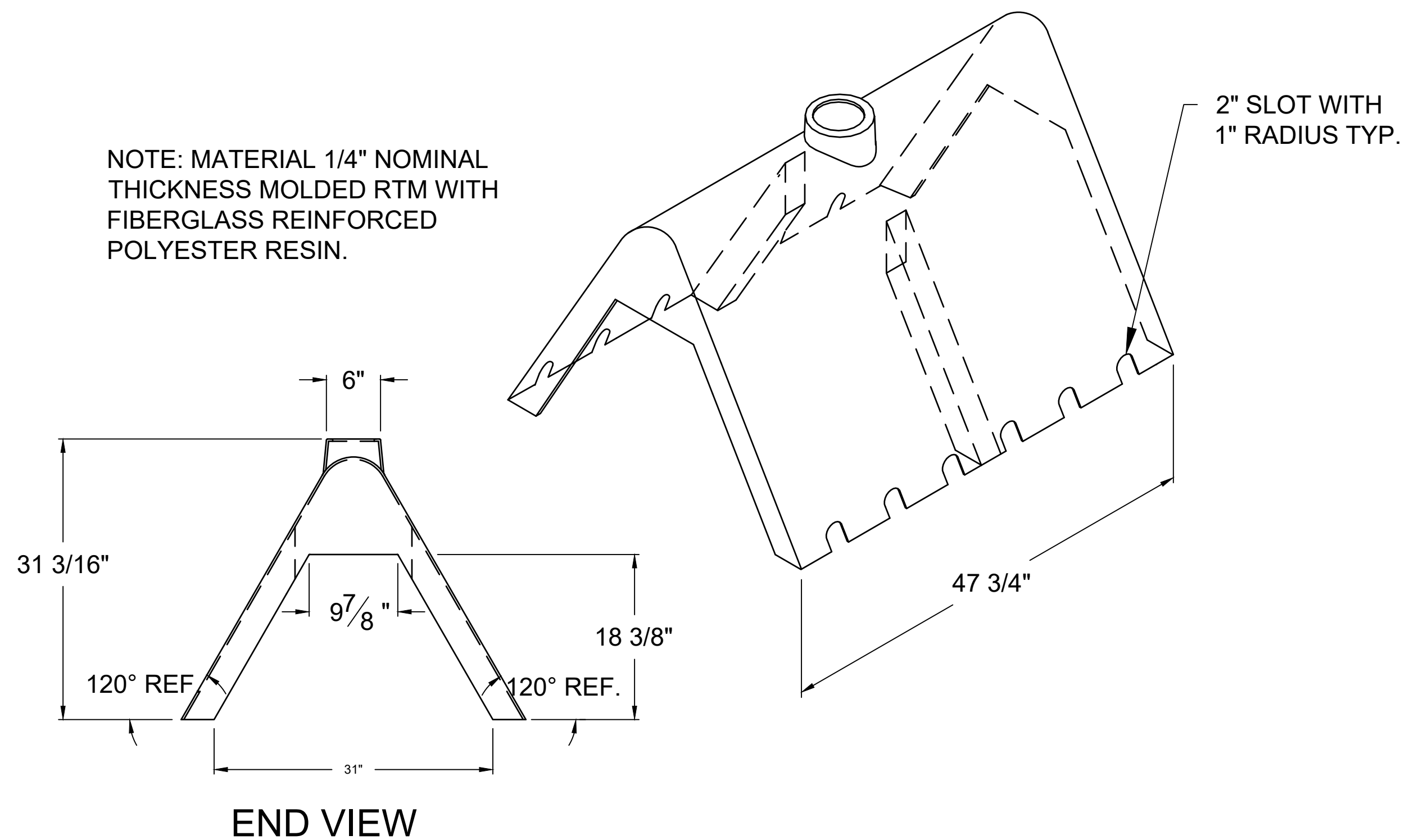
**M306**

NOTE:  
1. MATERIAL IS .038 NOMINAL THICKNESS,  
PRESSURE MOLDED TELENE.

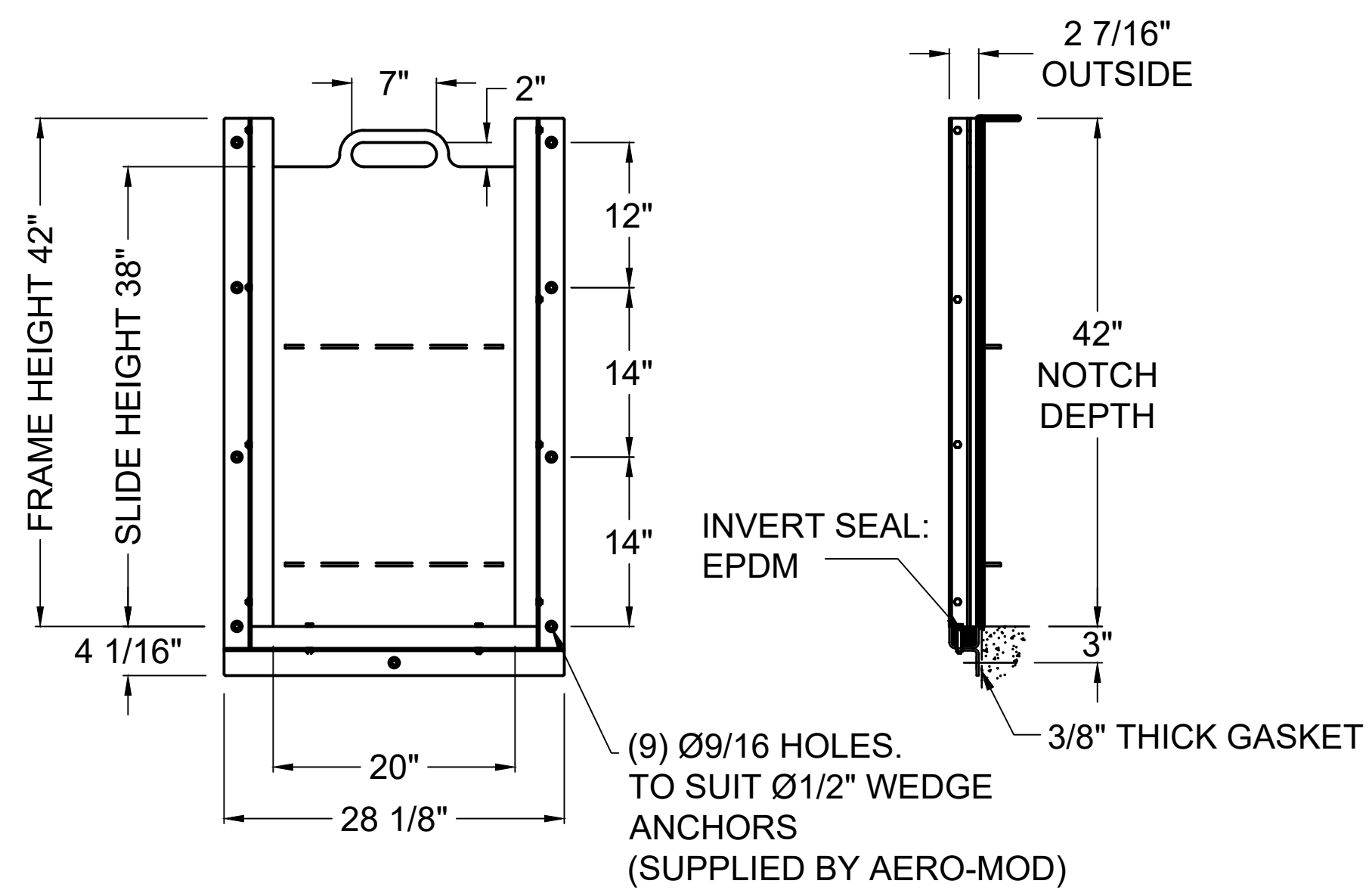
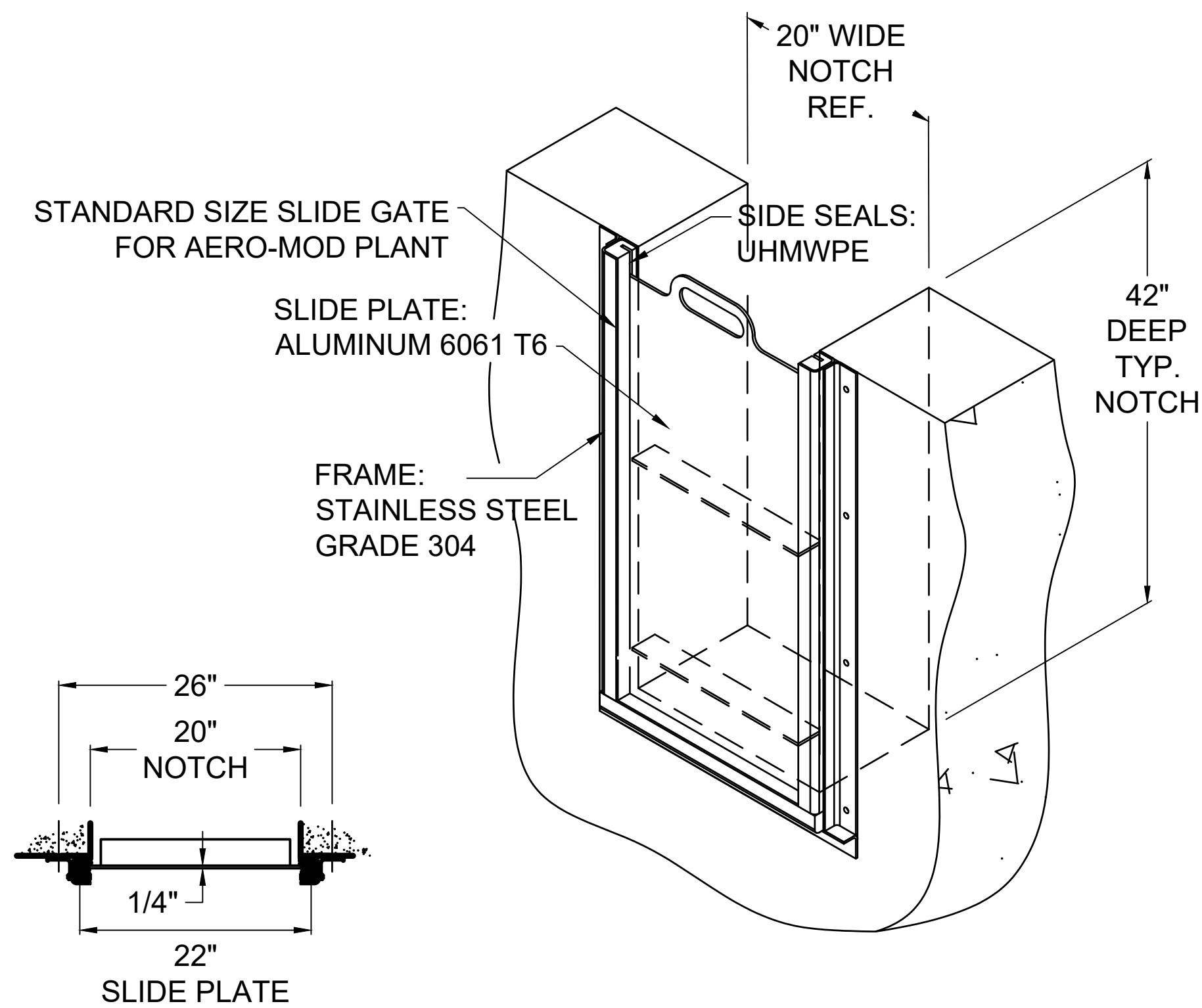


**ROUND INLET SCREEN**

NOTE: MATERIAL 1/4" NOMINAL  
THICKNESS MOLDED RTM WITH  
FIBERGLASS REINFORCED  
POLYESTER RESIN.



**TYPICAL SUCTION HOOD**



**SLIDE GATE**

CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
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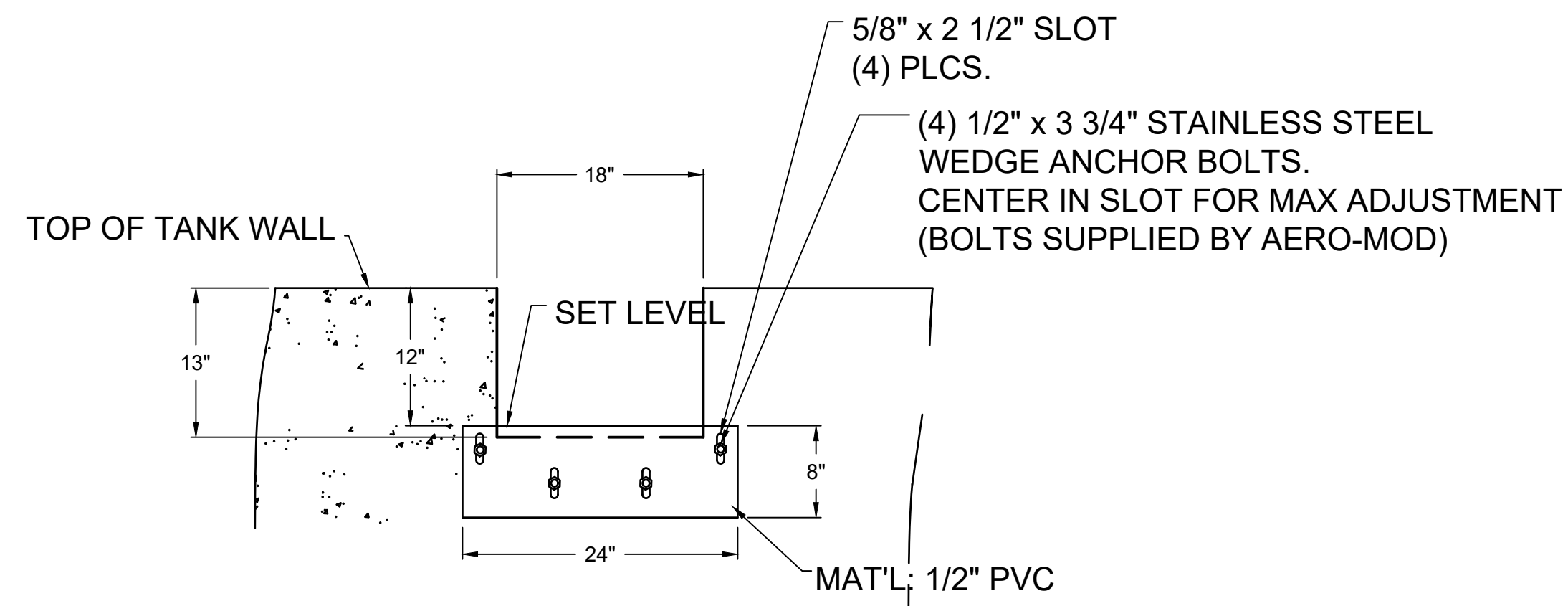
1/5/2023

J.L. Chung Chen

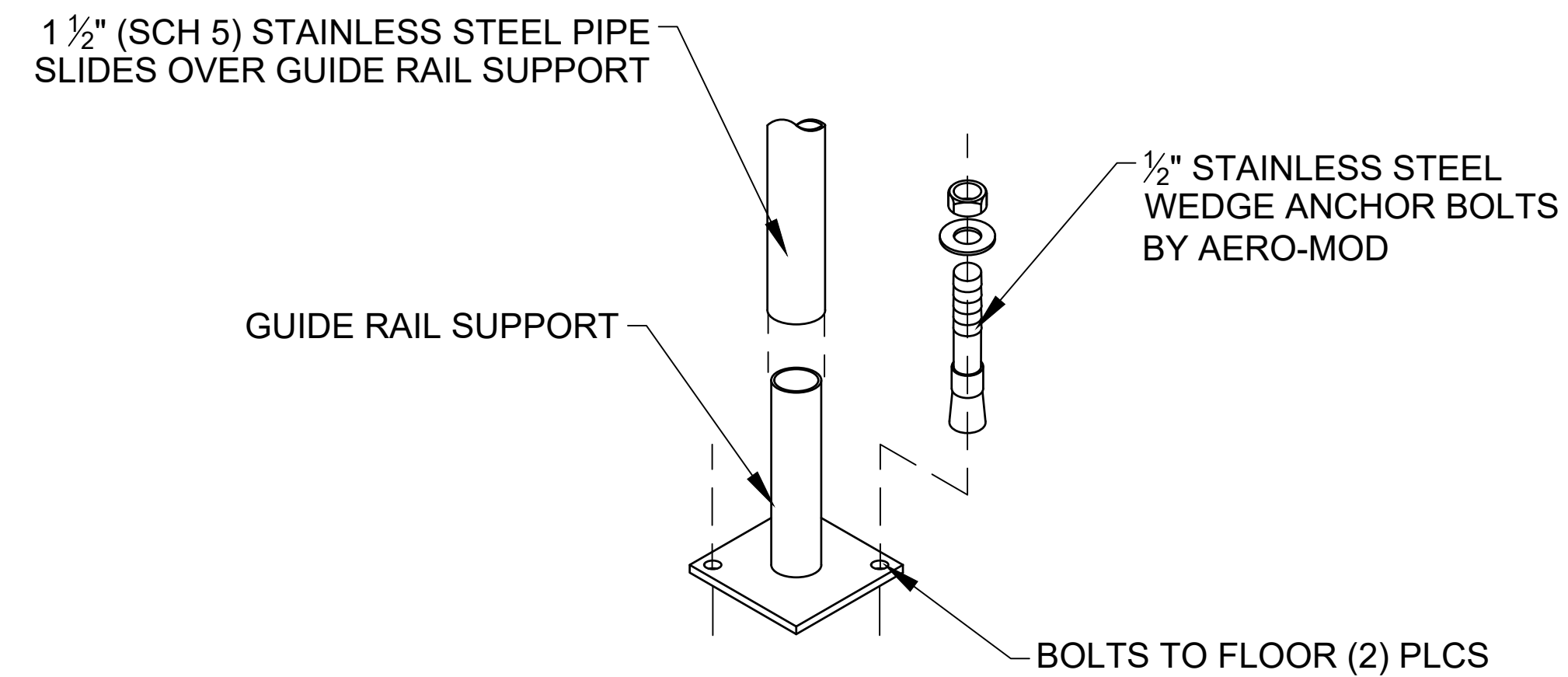
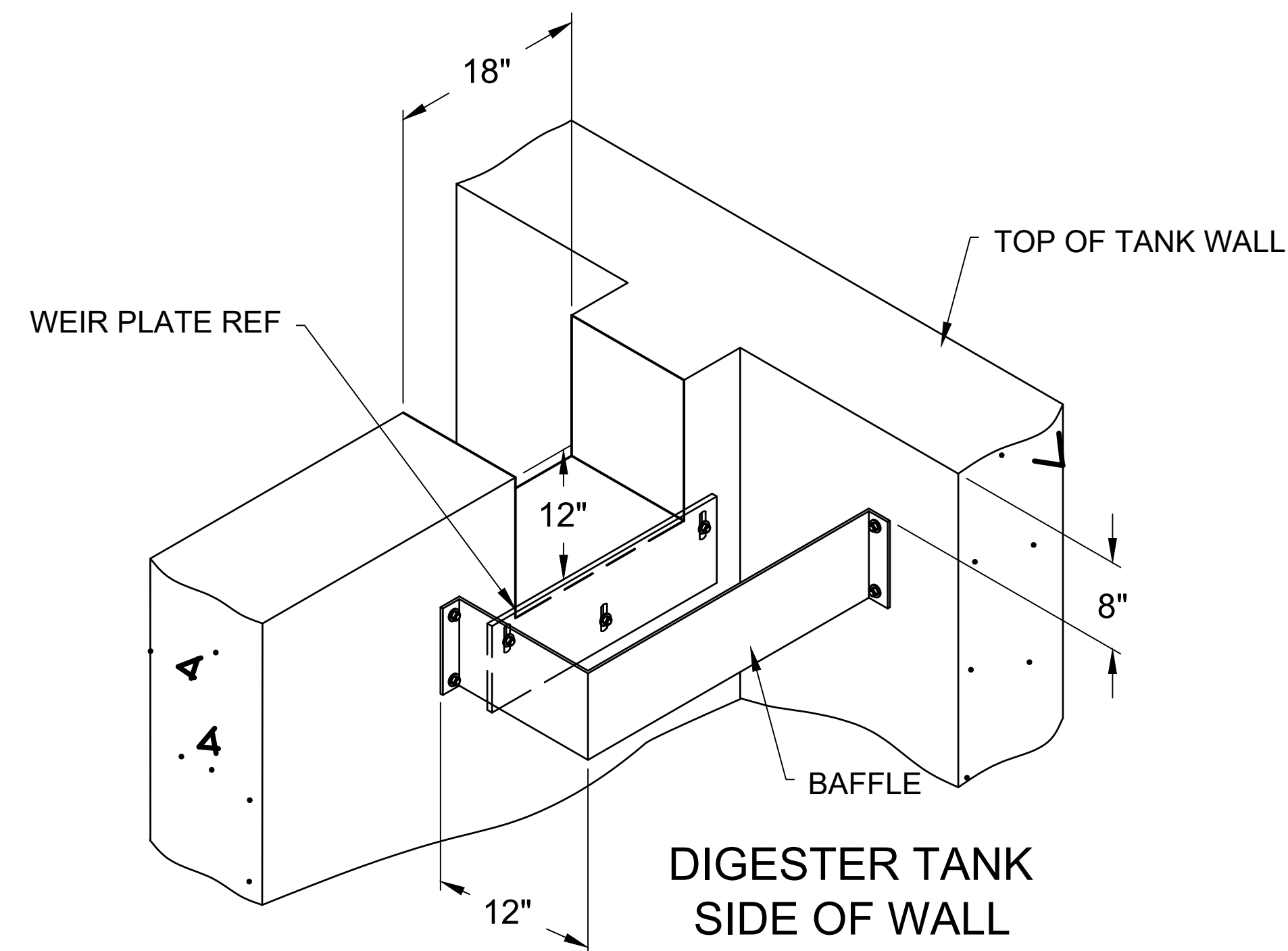
SCALE: NTS

SMALL COMPONENT  
DETAILS (1 OF 3)

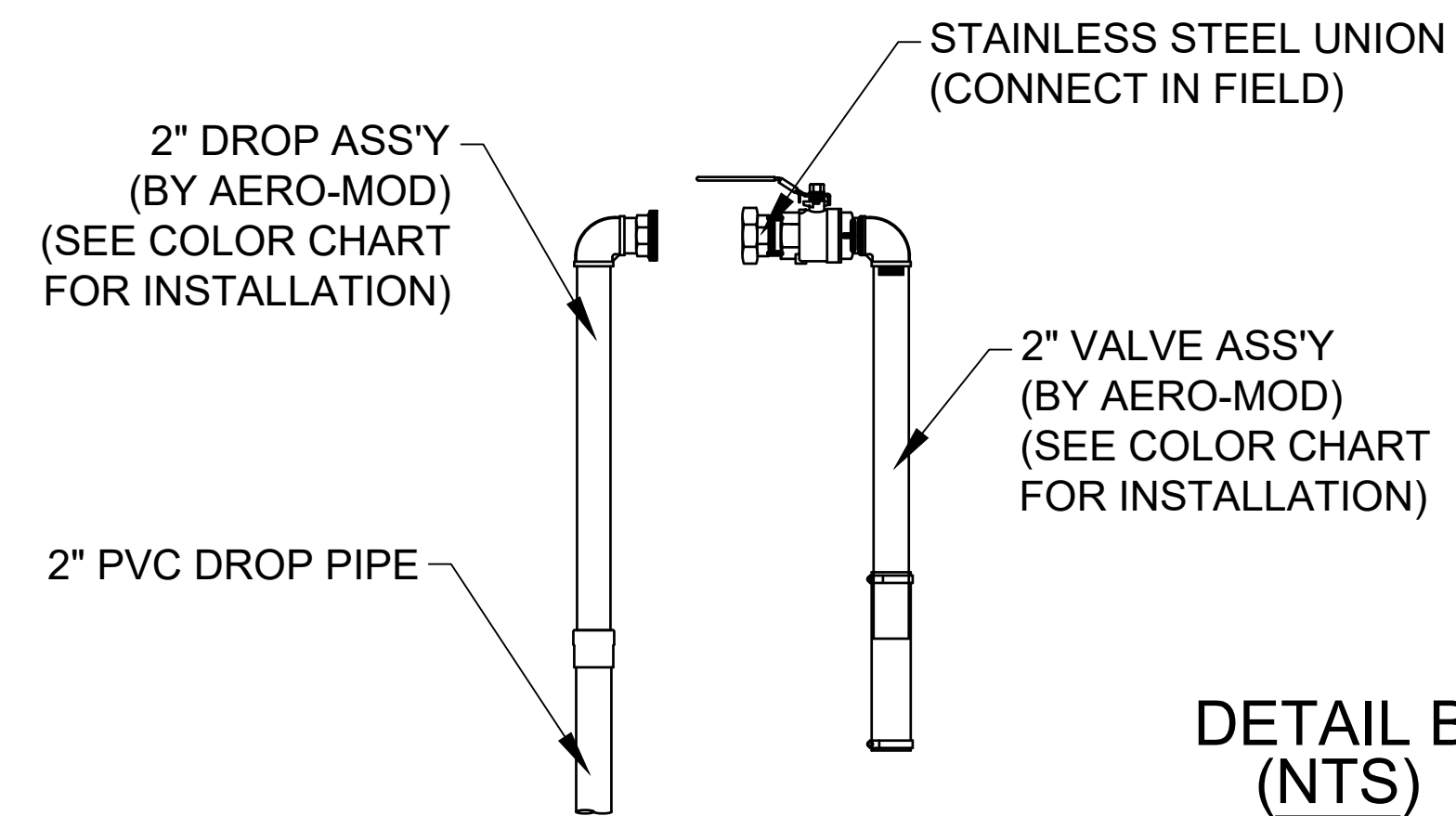
**M307**



**DIGESTER SUPERNATANT RETURN WEIR**  
(INSTALL ON DIGESTER SIDE OF WALL)



**DETAIL A**  
(NTS)



**AERATOR DETAILS**

**DETAIL B**  
(NTS)

CONSTRUCTION SET

**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

#	Revision	Date

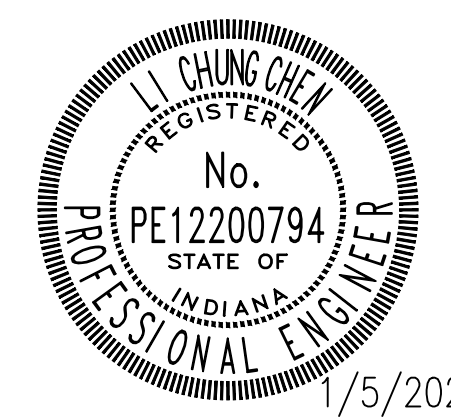
Project #: 21-400-194-1

Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

Date: **1/5/2023**



1/5/2023

*L.I. Chung Chen*

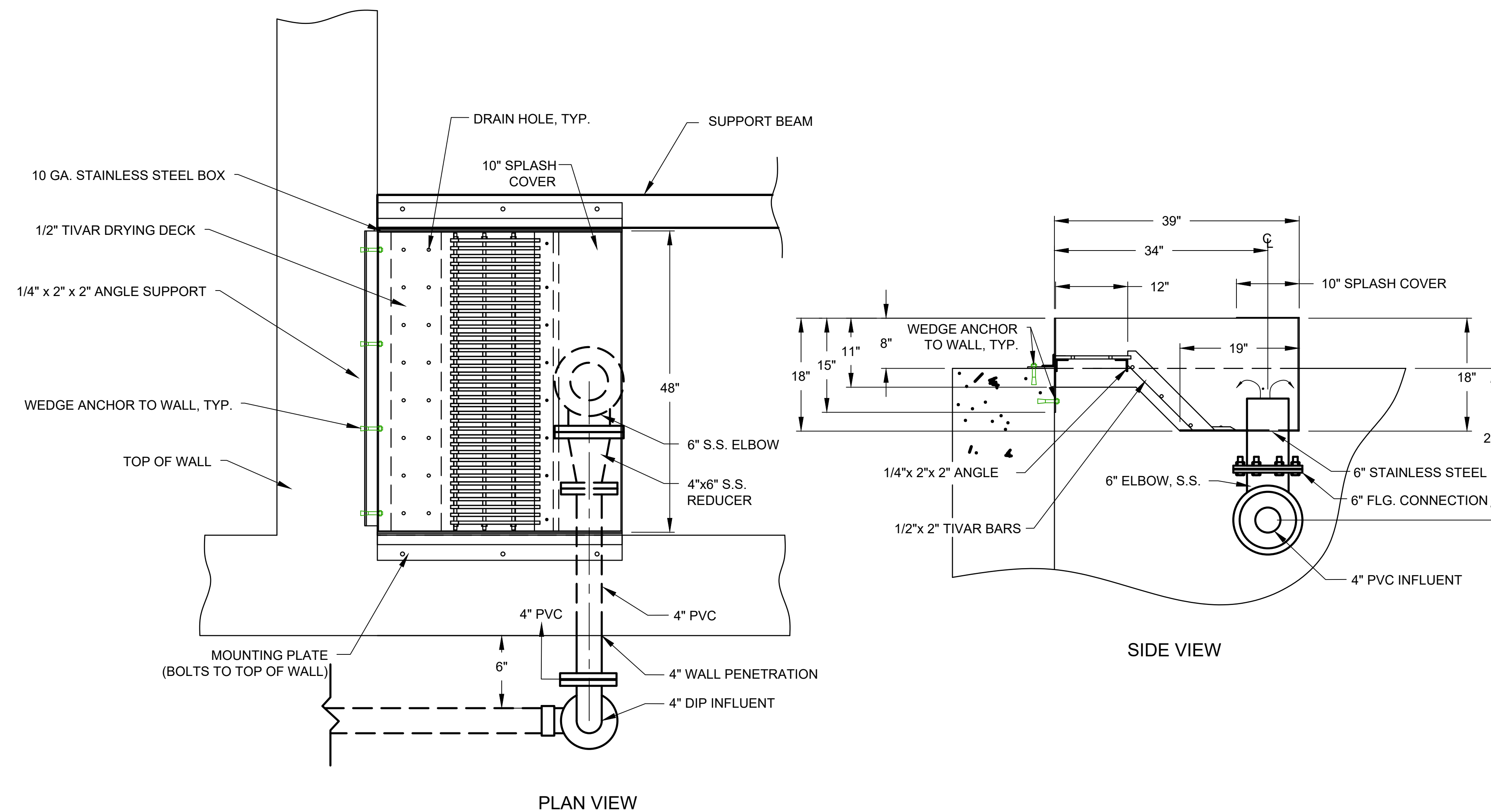
SCALE: NTS

**SMALL COMPONENT DETAILS (2 OF 3)**

**M308**

NOTE:

1. THIS WASTEWATER TREATMENT SYSTEM LAYOUT IS BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE WWTP PACKAGE PLANT DESIGN AS SHOWN AND SPECIFIED.
2. MANUAL BAR SCREEN IS PROVIDED BY PACKAGE PLANT SUPPLIER. CONTRACTOR SHALL FIELD VERIFY BAR SCREEN MOUNTING AND INLET PIPE WALL PENETRATION LOCATION.
3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND D.I.P. OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)



**MANUAL BAR SCREEN**

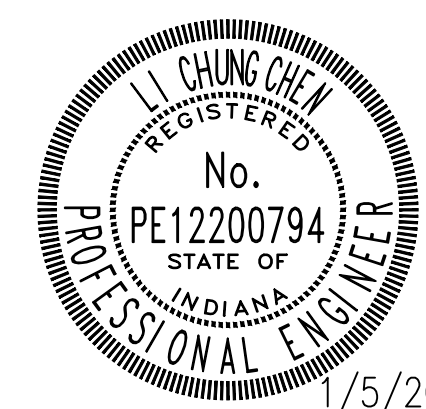
CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION

WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023



1/5/2023  
*L.I. Chung Chen*

SCALE: NTS

SMALL COMPONENT  
DETAILS (3 OF 3)

**M309**



CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

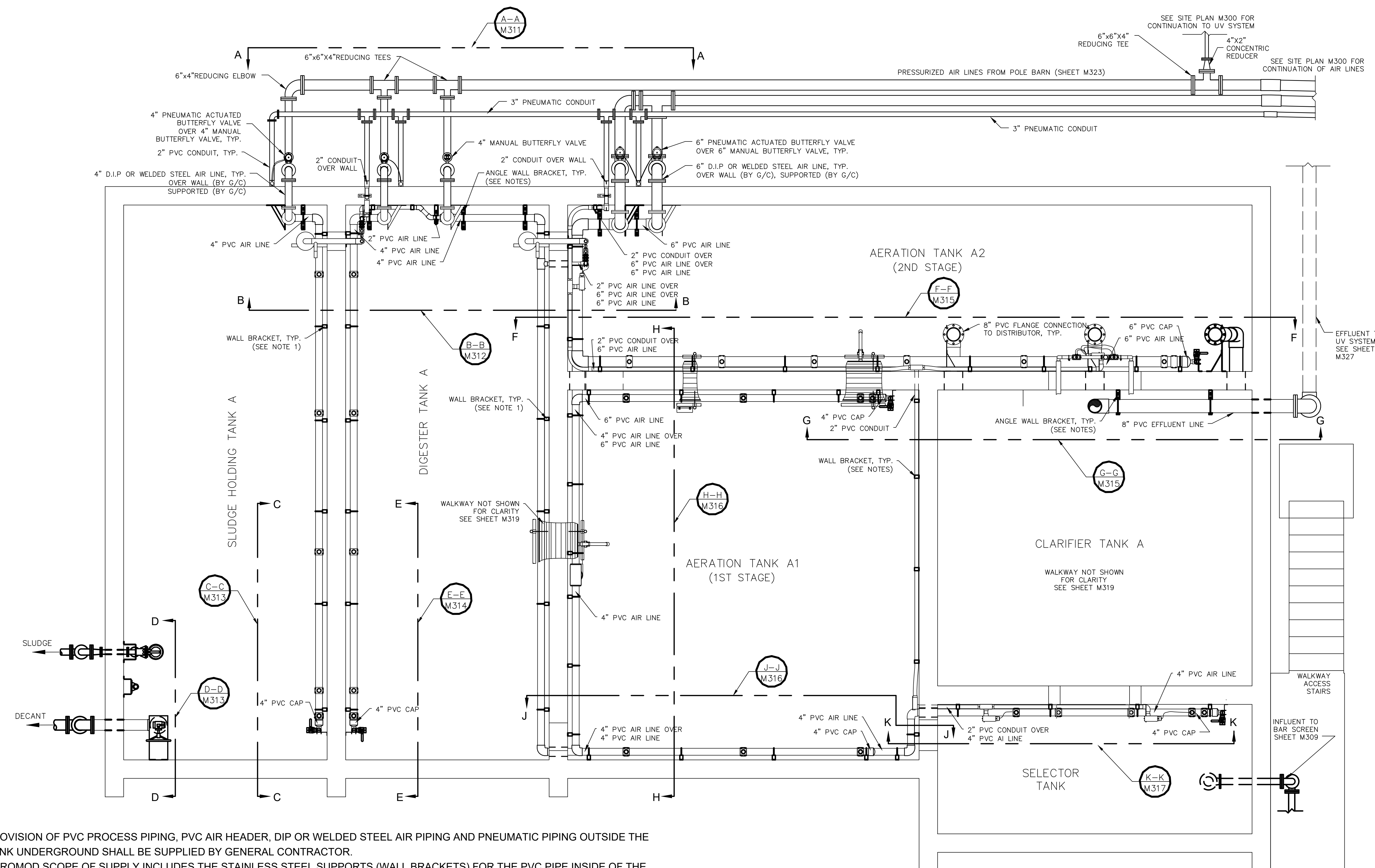
Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**



SCALE: NTS

**PIPING PLAN  
OVERALL LAYOUT**

**M310**



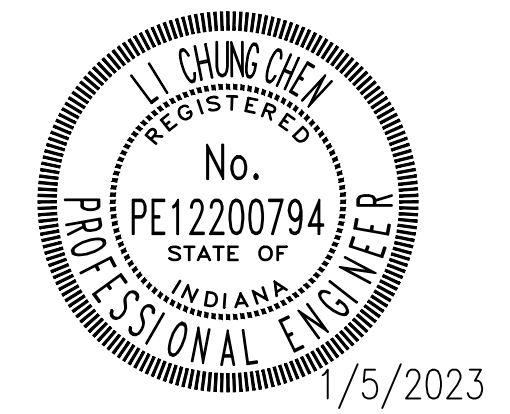
- NOTE:
1. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC PIPING OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
  2. AEROMOD SCOPE OF SUPPLY INCLUDES THE STAINLESS STEEL SUPPORTS (WALL BRACKETS) FOR THE PVC PIPE INSIDE OF THE TANKS, AS WELL AS THE FLEX HOSES THAT ATTACH PIPING TO AERO-MOD SUPPLIED EQUIPMENT. THE WALL AND ANGLE BRACKETS USED FOR SUPPORTING PVC PIPING ARE TYPICALLY SPACED 5'-0" APART. AEROMOD WILL SUPPLY THE PNEUMATIC TUBING AND FITTINGS ASSOCIATED WITH THE OPERATION OF THE AEROMOD EQUIPMENT. PIPE SUPPORTS FOR NON-PVC PIPE WILL NEED TO BE SUPPLIED BY THE GENERAL CONTRACTOR.
  3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND D.I.P. OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
  4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN AND SCOPE.

**PIPING LAYOUT PLAN**

PRINT DATE: 1/5/23 3:08 PM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2100000401.000\_RQAW - WHEATLAND WWTP\6.00\_CADD\6.03\_DRAWINGS\22-0401-PD-PLAN-PIPING.DWG PLOT SCALE: 1:1

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023

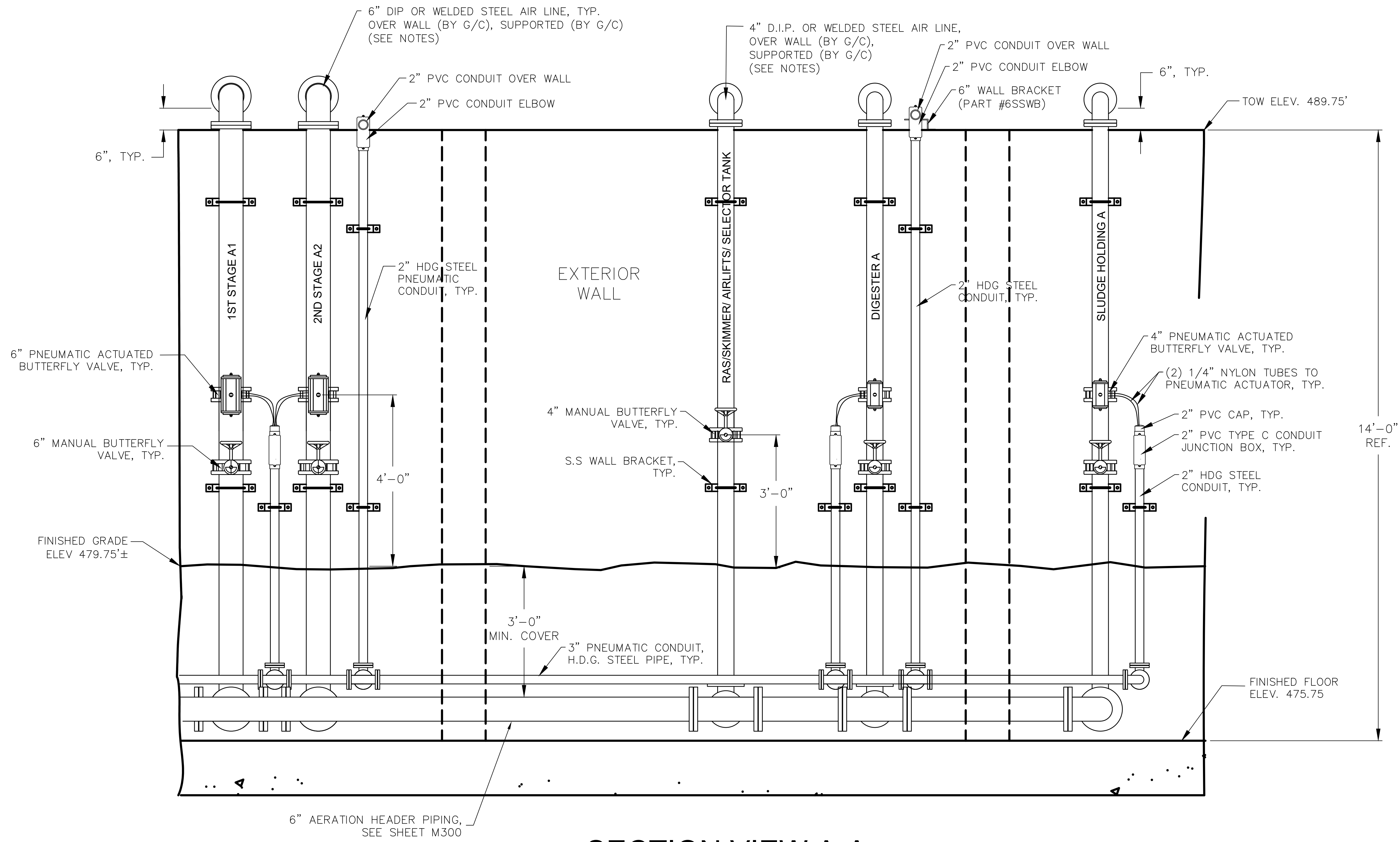


*L.I. Chung Chen*

SCALE: NTS

**PIPING PLAN  
SECTION VIEW A-A**

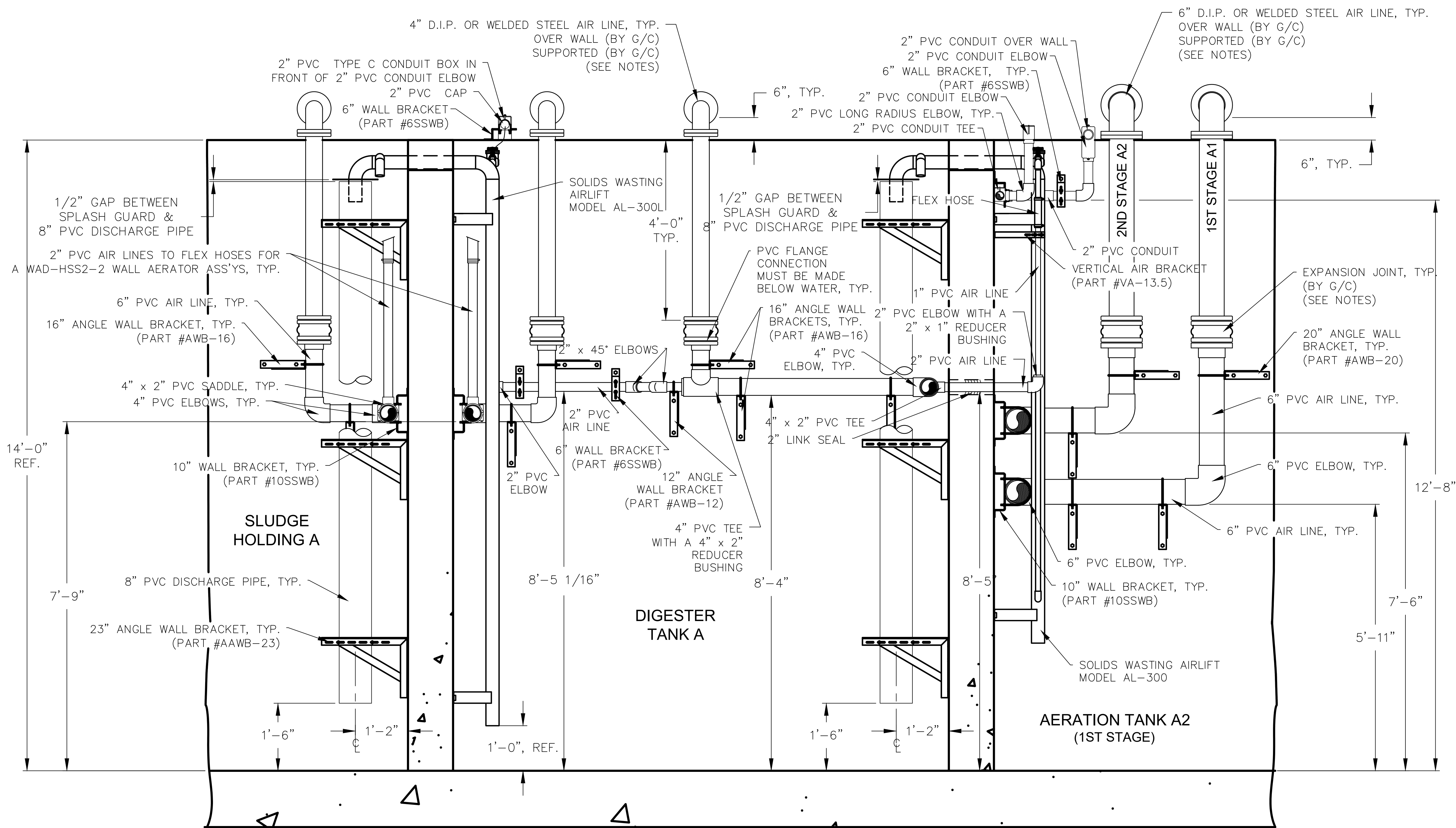
**M311**



**SECTION VIEW A-A**

- NOTE:
1. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC CONDUITS OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
  2. AEROMOD SCOPE OF SUPPLY INCLUDES THE STAINLESS STEEL SUPPORTS (WALL BRACKETS) FOR THE PVC PIPE INSIDE OF THE TANKS, AS WELL AS THE FLEX HOSES THAT ATTACH PIPING TO AERO-MOD SUPPLIED EQUIPMENT. THE WALL AND ANGLE BRACKETS USED FOR SUPPORTING PVC PIPING ARE TYPICALLY SPACED 5'-0" APART. AEROMOD WILL SUPPLY THE PNEUMATIC TUBING AND FITTINGS ASSOCIATED WITH THE OPERATION OF THE AEROMOD EQUIPMENT. PIPE SUPPORTS FOR NON-PVC PIPE WILL NEED TO BE SUPPLIED BY THE GENERAL CONTRACTOR.
  3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND DIP OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
  4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN AND SCOPE.

PRINT DATE: 1/10/23 PLOT SCALE: 1:186.9116 EDIT DATE: 1/9/23 5:56 PM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2200000401.000\_RQAW - WHEATLAND WWTP\6-00\_CADD\6.03\_DRAWINGS\22-0401-PD-PLAN-PIPING.DWG



**SECTION VIEW B-B**

**NOTE:**

1. PROVISION OF PVC PROCESS PIPING, PVC AIR HEADER, DIP OR WELDED STEEL AIR PIPING AND PNEUMATIC PIPING OUTSIDE THE TANK UNDERGROUND SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
2. AEROMOD SCOPE INCLUDES THE STAINLESS STEEL SUPPORTS (WALL BRACKETS) FOR THE PVC PIPE INSIDE OF THE TANKS, AS WELL AS THE FLEX HOSES THAT ATTACH PIPING TO AERO-MOD SUPPLIED EQUIPMENT. THE WALL AND ANGLE BRACKETS USED FOR SUPPORTING PVC PIPING ARE TYPICALLY SPACED 5'-0" APART. AEROMOD WILL SUPPLY THE PNEUMATIC TUBING AND FITTINGS ASSOCIATED WITH THE OPERATION OF THE AEROMOD EQUIPMENT. PIPE SUPPORTS FOR NON-PVC PIPE WILL NEED TO BE SUPPLIED BY THE GENERAL CONTRACTOR.
3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND DIP OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN AND SCOPE.

CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION

WHEATLAND, IN 47597

#	Revision	Date

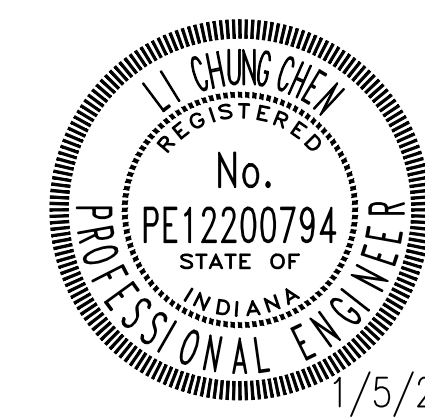
Project #: 21-400-194-1

Designed By: LC

Drawn By: JM

Checked By: LC

Date: 1/5/2023



1/5/2023

*L.I. Chung Chen*

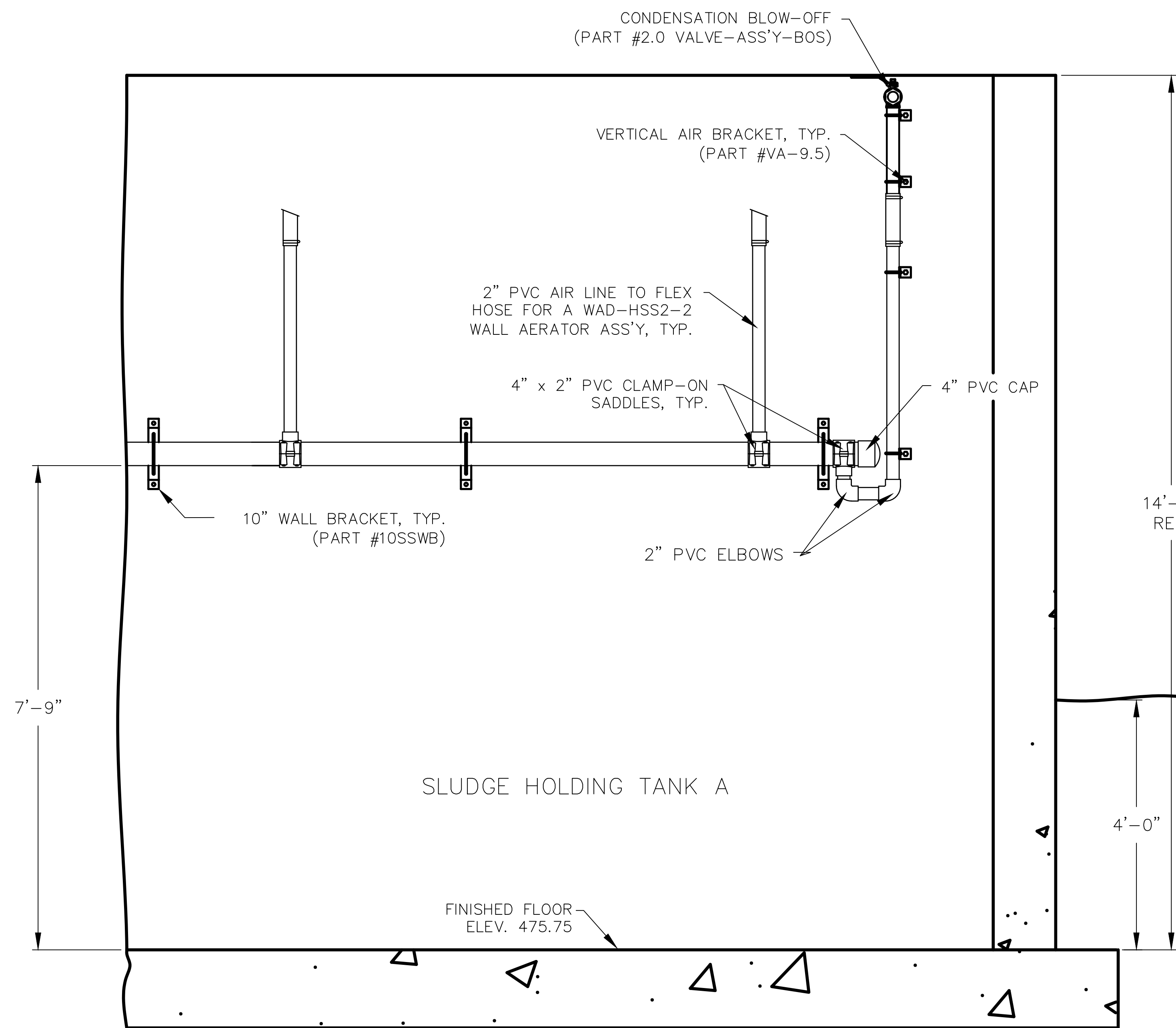


**PIPING PLAN  
SECTION VIEW B-B**

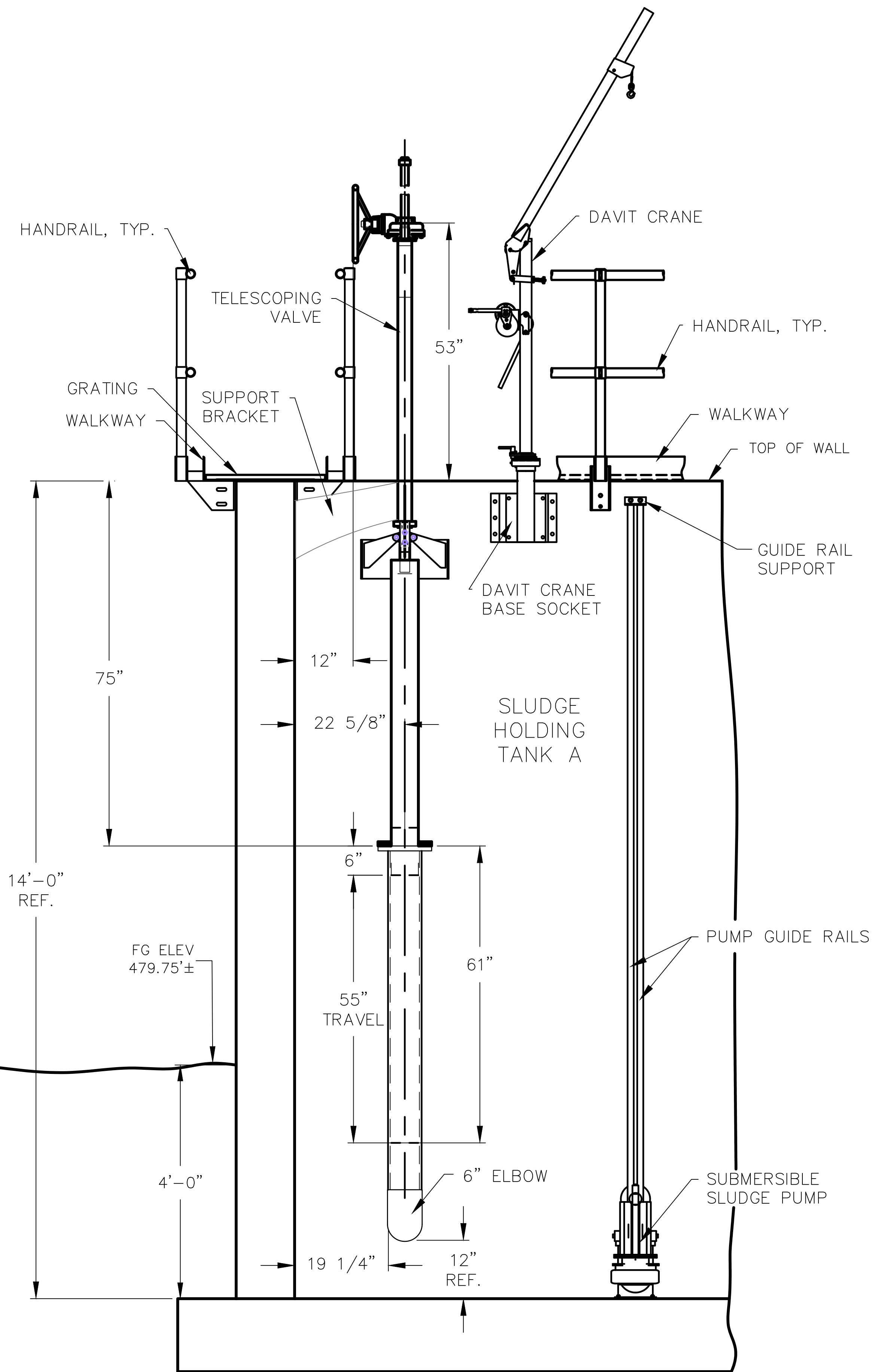
**M312**

NOTE:

1. PROVISION OF DECANTING TELESCOPING VALVE ASSEMBLY, SUBMERSIBLE SLUDGE PUMP WITH GUIDE RAIL, LIFTING CRANE AND MOUNTING HARDWARE SHALL BE SUPPLIED BY THE WWTP PACKAGE PLANT SUPPLIER - AEROMOD.
2. AEROMOD SCOPE OF SUPPLY INCLUDES THE STAINLESS STEEL SUPPORTS (WALL BRACKETS) FOR THE PVC PIPE INSIDE OF THE TANKS, AS WELL AS THE FLEX HOSES THAT ATTACH PIPING TO AERO-MOD SUPPLIED EQUIPMENT. PIPE SUPPORTS FOR NON-PVC PIPE WILL NEED TO BE SUPPLIED BY THE GENERAL CONTRACTOR.
3. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL & OUTSIDE OF TANKS MUST BE RIGIDLY SUPPORTED TO PREVENT INTERIOR PVC PIPING DAMAGE. EXPANSION JOINTS ARE ALSO REQUIRED TO ISOLATE MOVEMENT OF PVC PIPING AND D.I.P. OR WELDED STEEL PIPING AT CONNECTION INSIDE TANKS. (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
4. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF WWTP PACKAGE PLANT DESIGN AND SCOPE.



SECTION VIEW C-C



SECTION VIEW D-D

#	Revision	Date

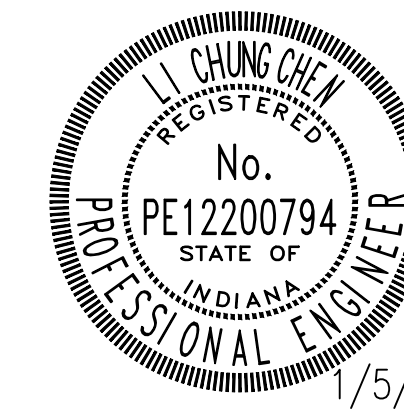
Project #: 21-400-194-1

Designed By: **LC**

Drawn By: **JM**

Checked By: **LC**

Date: **1/5/2023**



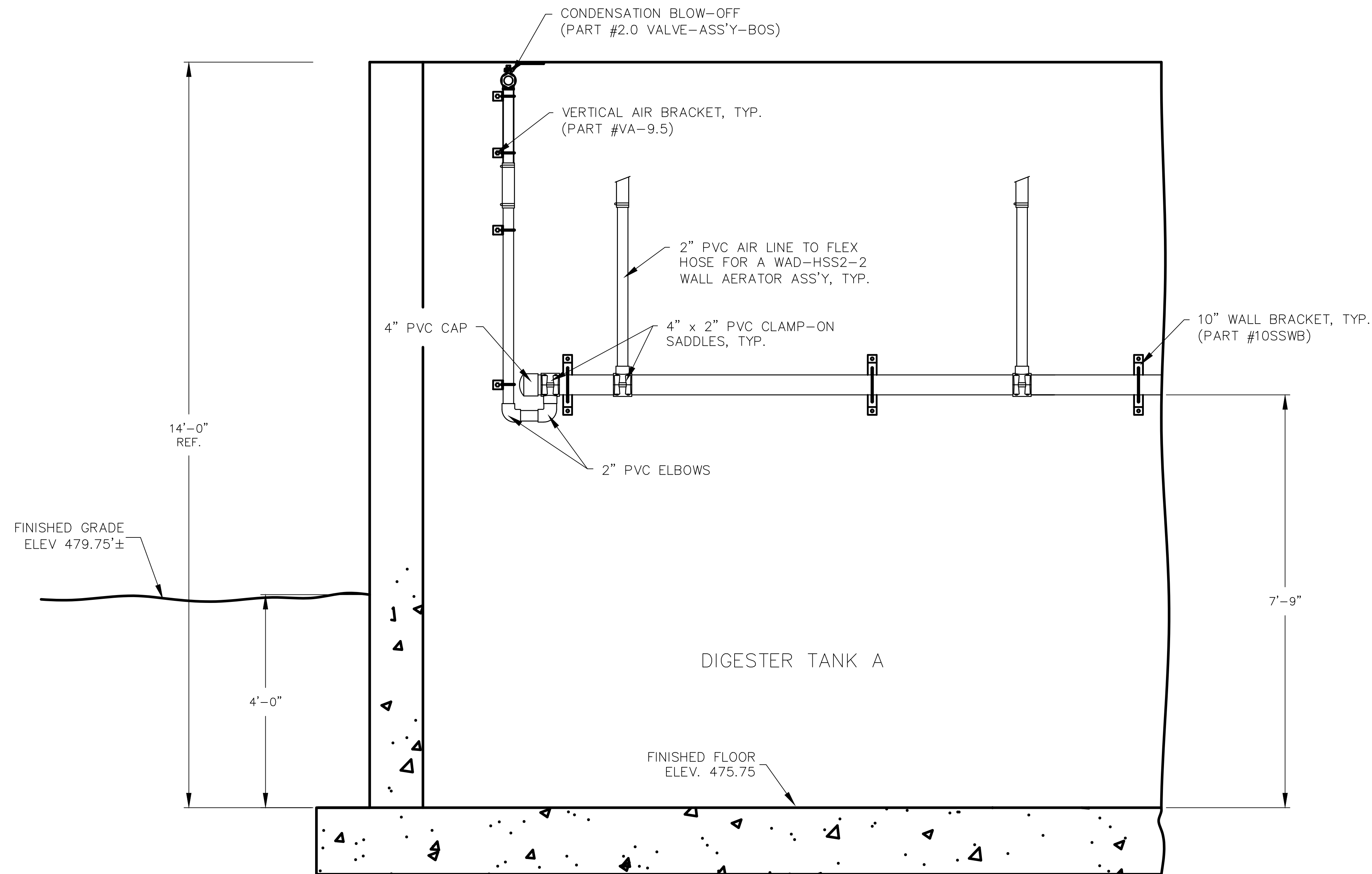
*L.I. Chung Chen*

SCALE: NTS

PIPING PLAN  
SECTION VIEWS  
C-C & D-D

**M313**

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597



SECTION VIEW E-E

#	Revision	Date

Project #: 21-400-194-1  
Designed By: LC  
Drawn By: JM  
Checked By: LC  
Date: 1/5/2023

L.I. CHUNG CHEN  
REGISTERED  
No. PE12200794  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
1/5/2023  
*J. Chen*

SCALE: NTS

PIPING PLAN  
SECTION VIEW E-E

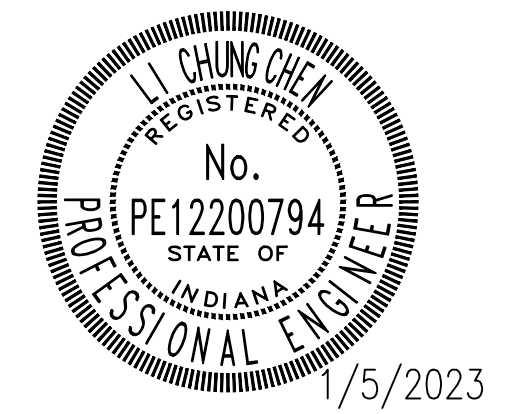
**M314**

PRINT DATE: 1/5/23 PLOT SCALE: 1:1 EDIT DATE: 1/4/23 3:08 PM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2100000401.000\_RQAW - WHEATLAND WWTPL6.00\_CADD\6.03\_DRAWINGS\22-0401-PP-PLAN-PIPING.DWG

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**

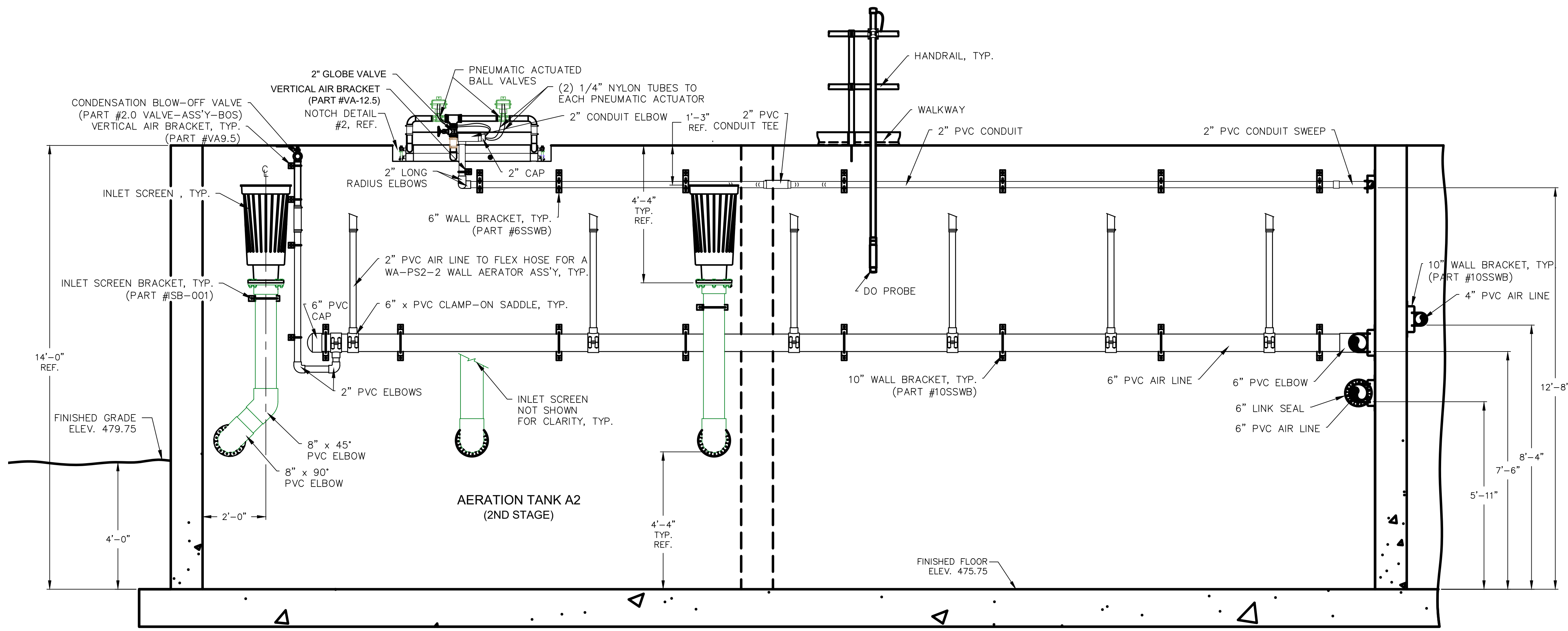


*L.I. Chung Chen*

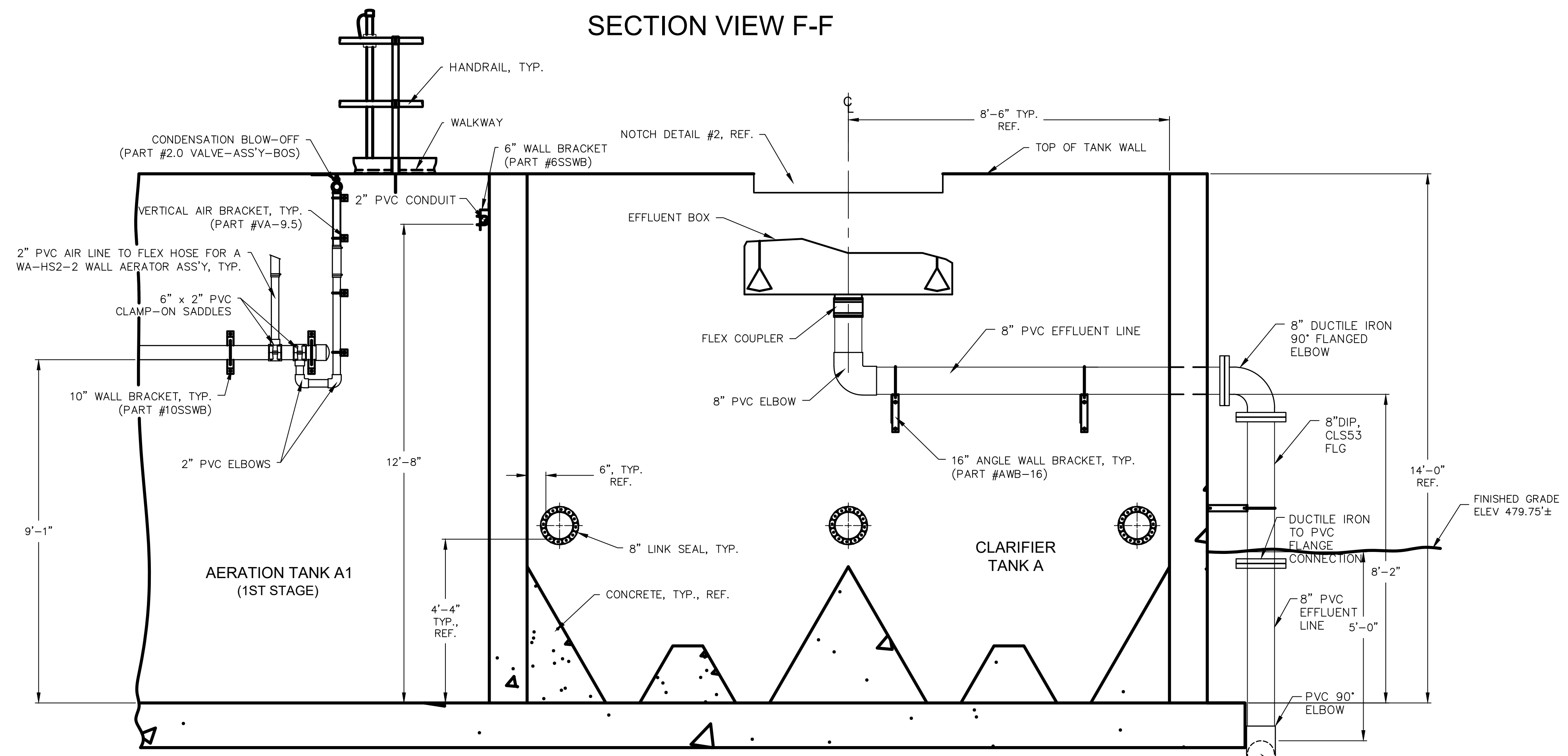
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PIPING PLAN  
SECTION VIEWS  
F-F & G-G

**M315**



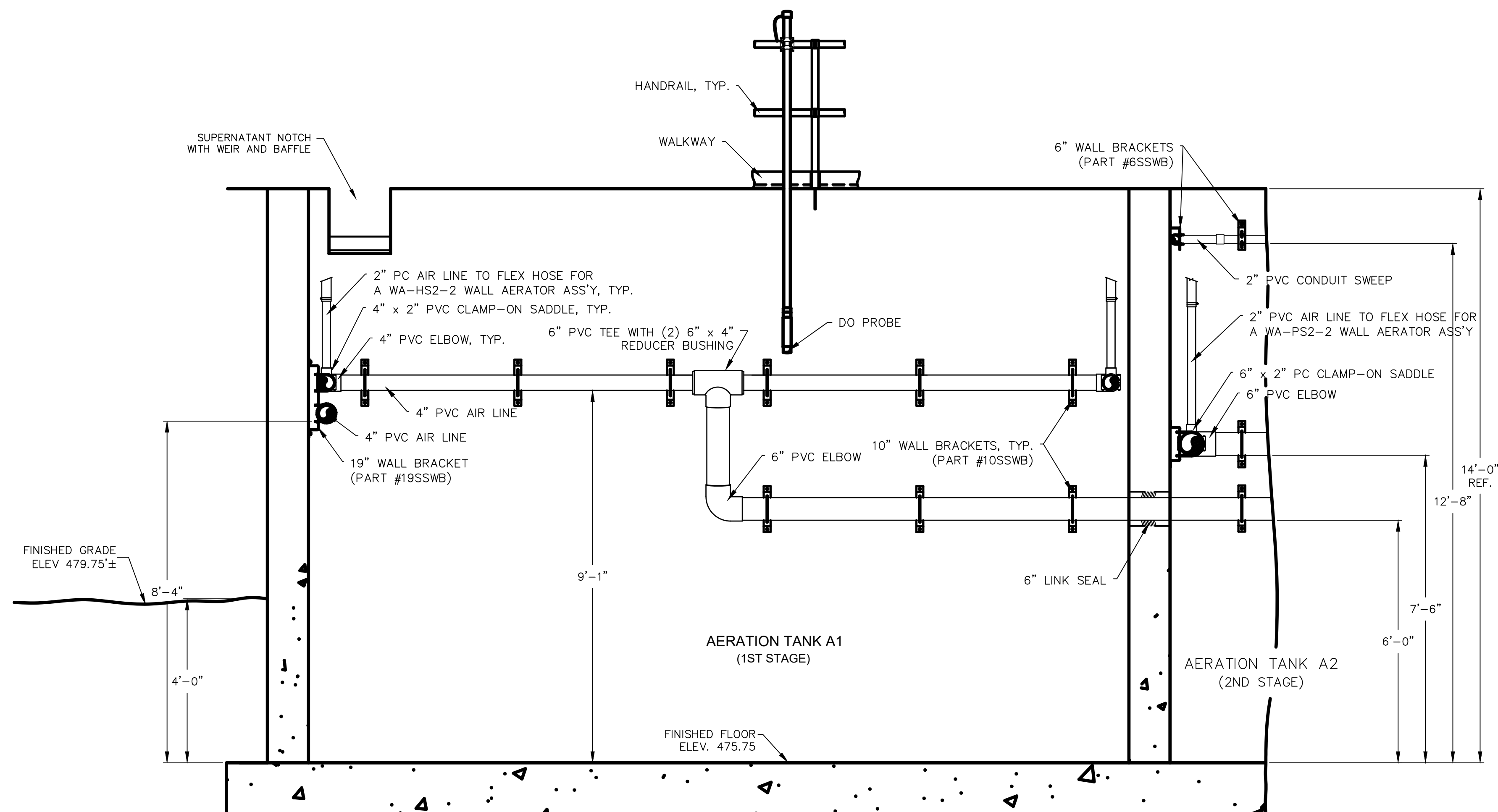
SECTION VIEW F-F



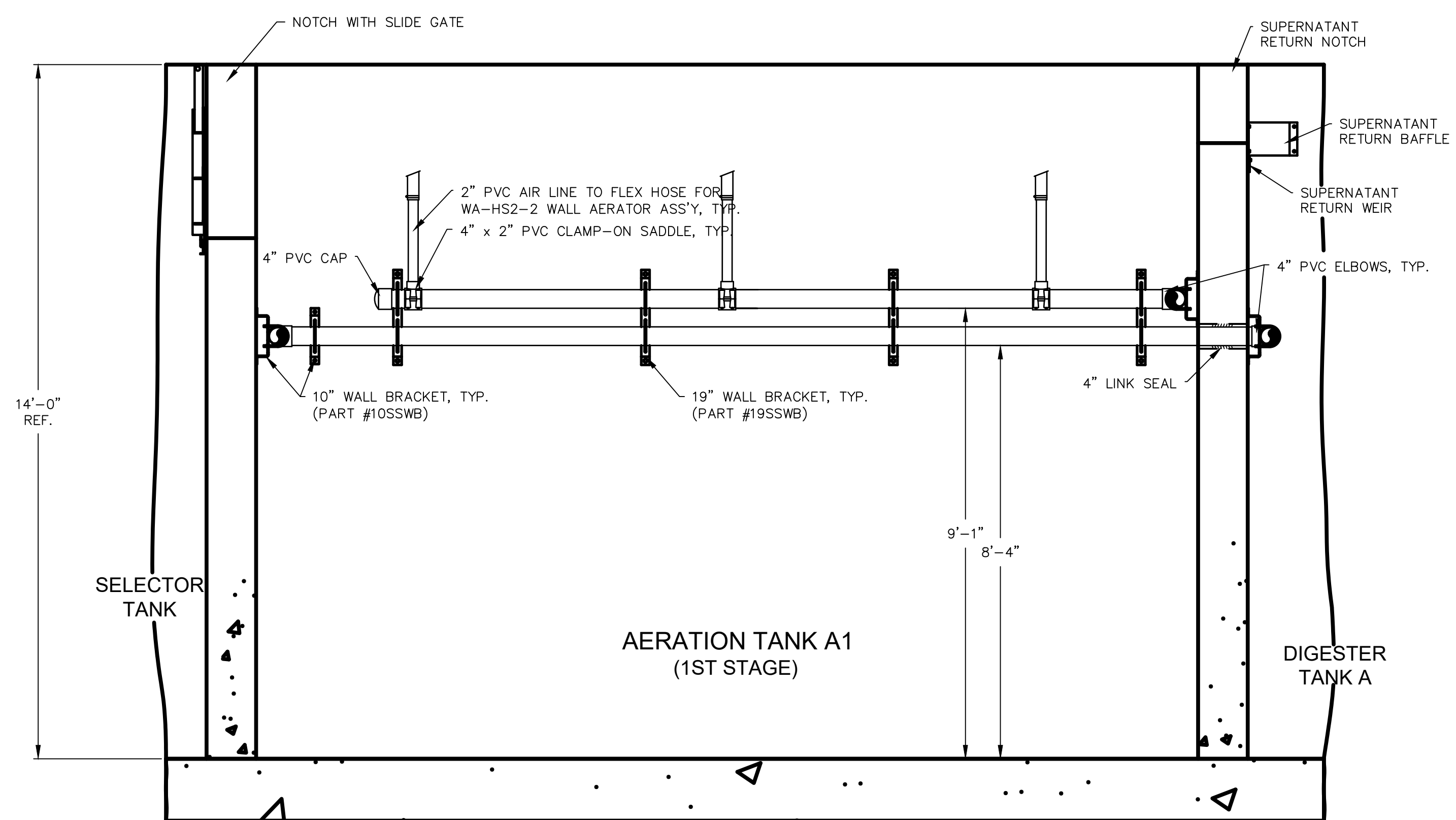
SECTION VIEW G-G

SEE UV SYSTEM SHEET  
M327 FOR CONTINUATION  
OF 8" PVC SDR-26 PIPE

PRINT DATE: 1/5/23 PLOT SCALE: 1:1 EDIT DATE: 1/4/23 - 3:08 PM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2100000401.000\_RQAW - WHEATLAND\WWT\6.00\_CADD\6.03\_DRAWINGS\22-0401-PD-PLAN-PIPING.DWG



SECTION VIEW H-H



SECTION VIEW J-J

CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION

WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1

Designed By: LC

Drawn By: JM

Checked By: LC

Date: 1/5/2023



1/5/2023

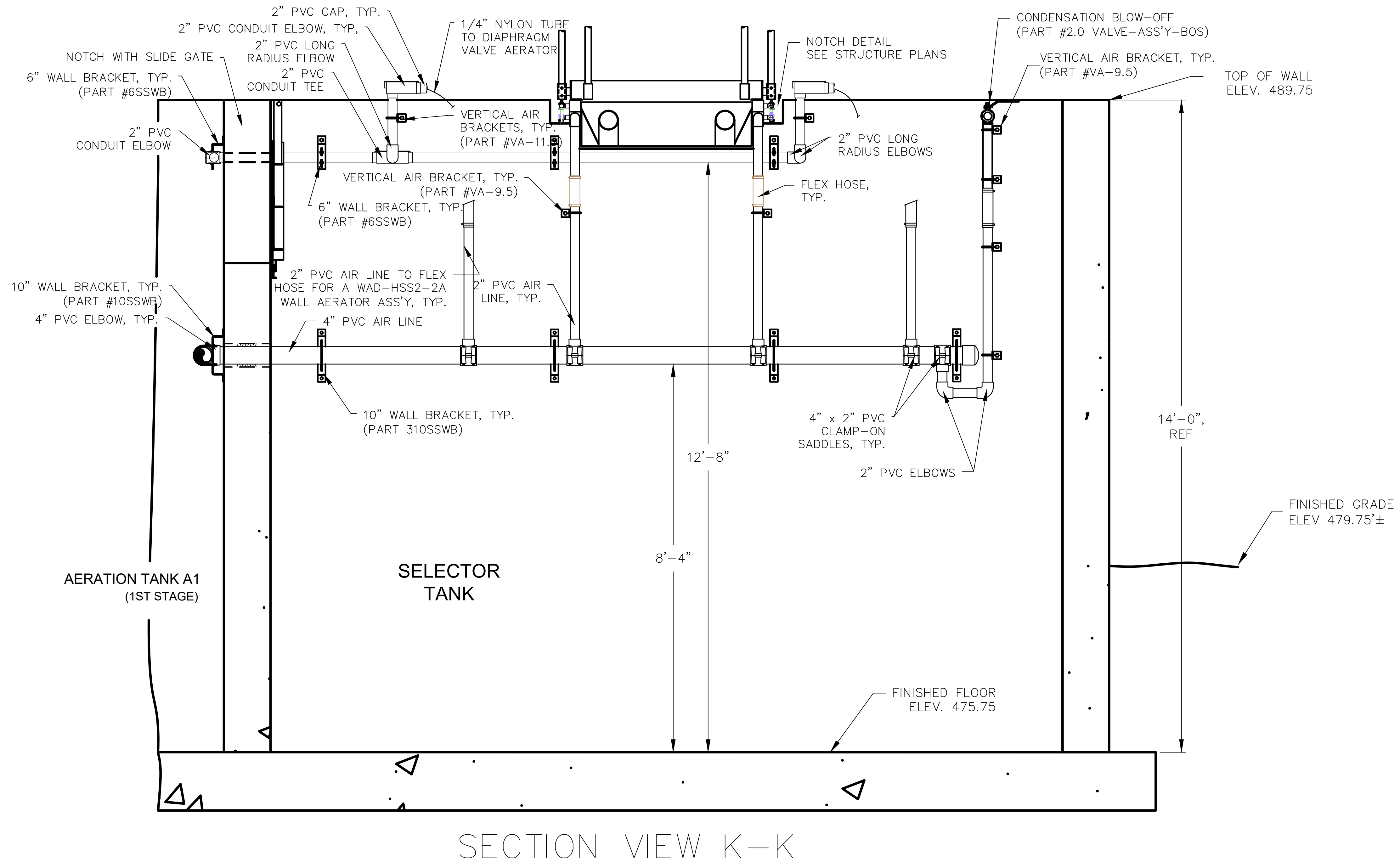
*L.I. Chung Chen*

SCALE: NTS

PIPING PLAN  
SECTION VIEWS  
H-H & J-J

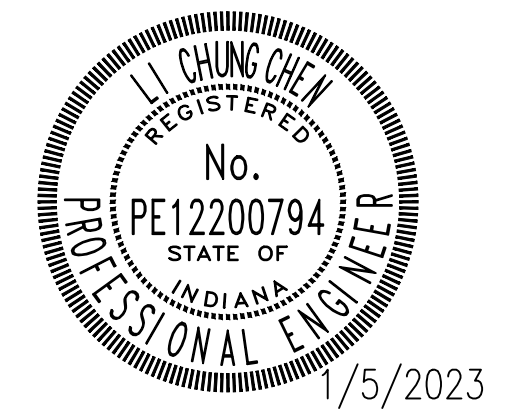
**M316**

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597



#	Revision	Date

Project #: 21-400-194-1  
 Designed By: LC  
 Drawn By: JM  
 Checked By: LC  
 Date: 1/5/2023



*L.I. Chung Chen*

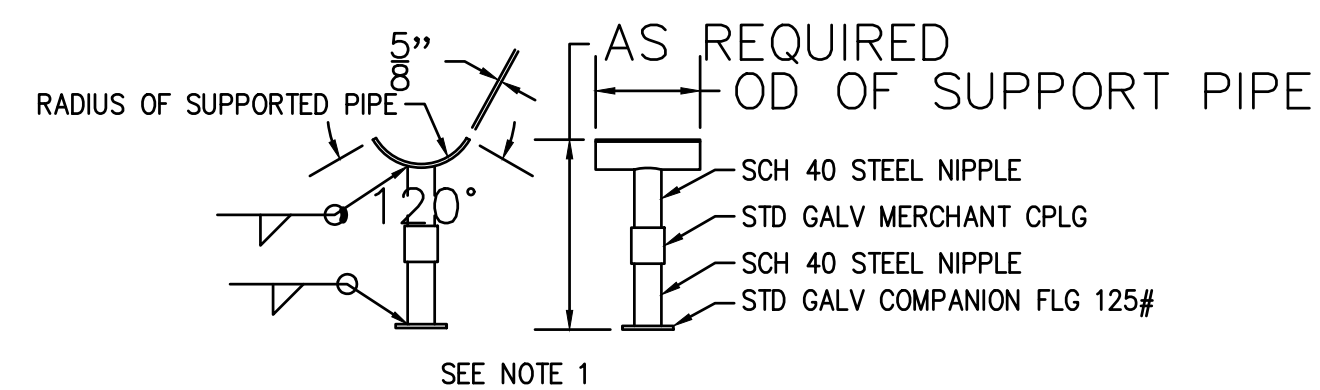
SCALE: NTS

PIPING PLAN  
SECTION VIEW K-K

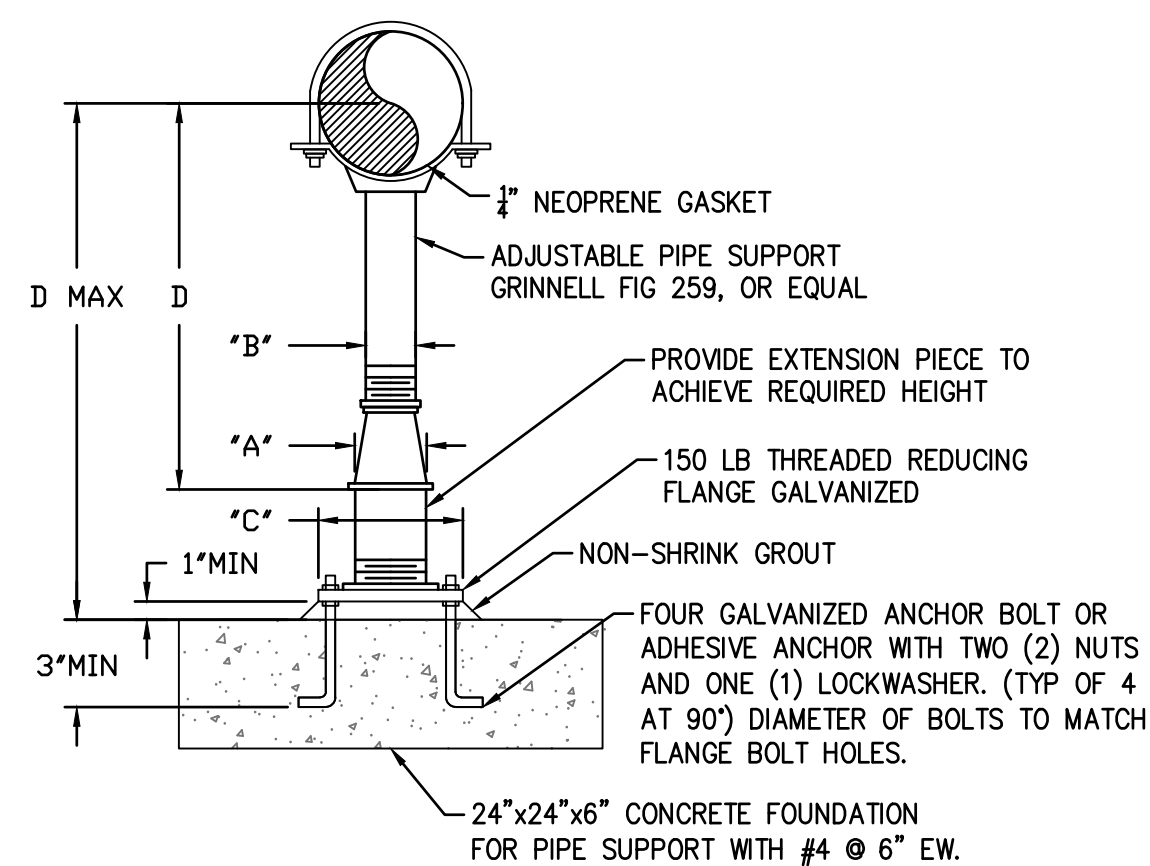
**M317**

PRINT DATE: 1/5/23 PLOT SCALE: 1:1 EDIT DATE: 1/4/23 3:08 PM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2200000401.000\_RQAW - WHEATLAND WWTPL6.00\_CADD\6.03\_DRAWINGS\22-0401-PD-PLAN-PIPING.DWG





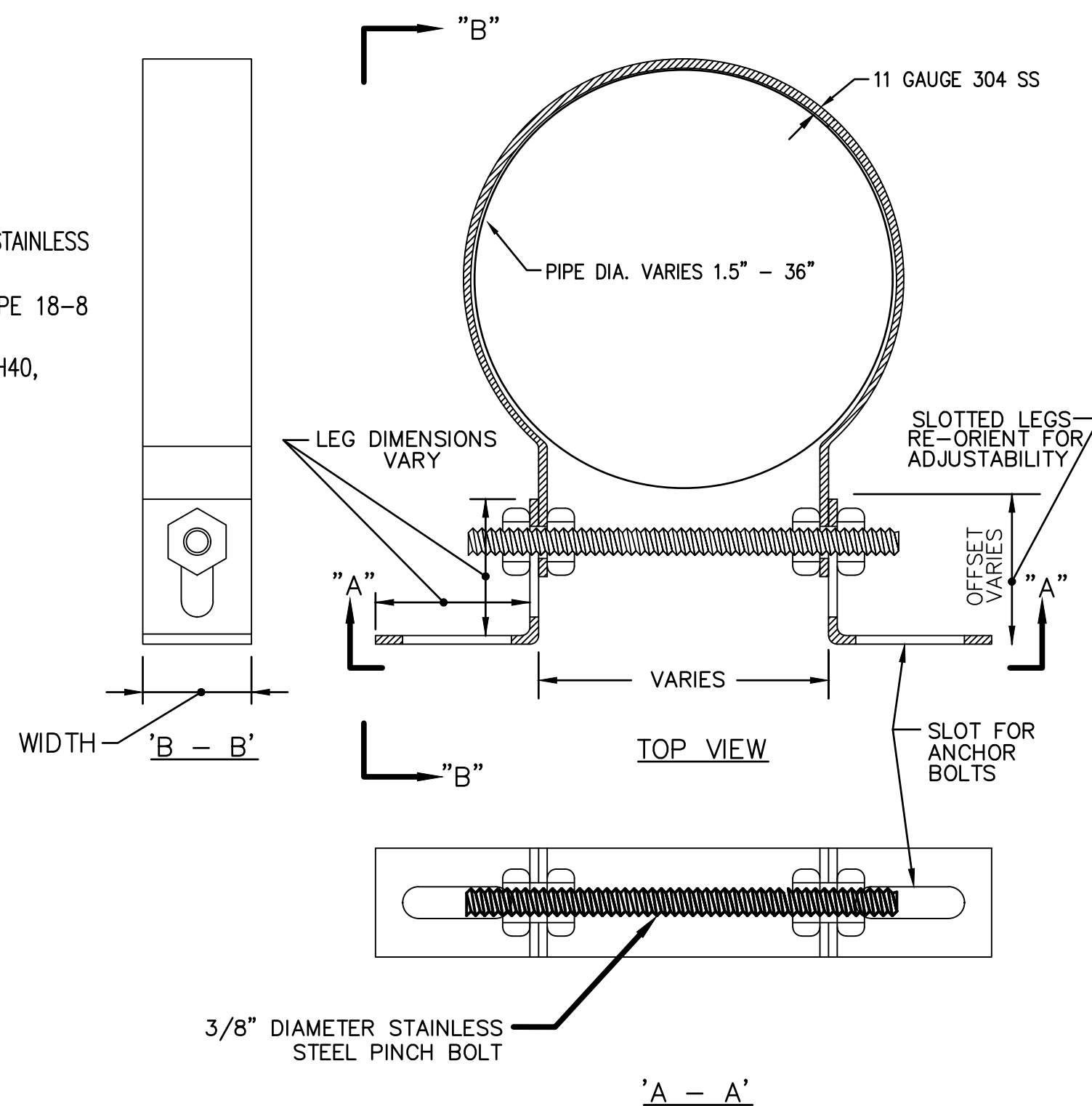
1 TYP ADJUSTABLE PIPE SUPPORT DETAIL  
SCALE: NTS



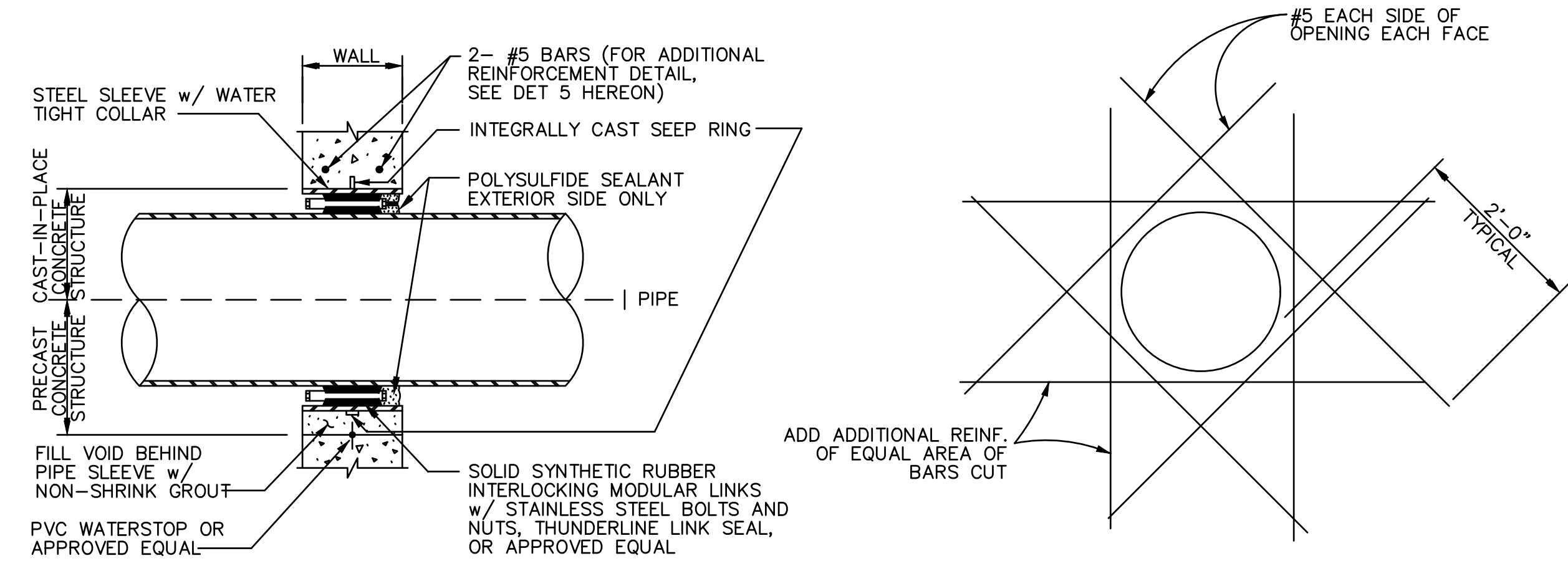
2 ADJUSTABLE PIPE SUPPORT WITH "U" BOLT  
SCALE: NTS

ADJUSTABLE PIPE SUPPORT (HOT DIPPED GALVANIZED)					
DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D	D MAX (FT)
2 1/2	2 1/2	1 1/2	9	9	3
3	2 1/2	1 1/2	9	9	3
3 1/2	2 1/2	1 1/2	9	9	3
4	3	2 1/2	9	9	6
6	3	2 1/2	9	12	6
8	3	2 1/2	12	12	6
10	3	2 1/2	12	12	10
12	3	2 1/2	12	15	10
14	4	3	12	15	10
16	4	3	12	18	10
18	6	4	14	18	10
20	6	4	14	20	10
24	6	4	14	24	10

- SPECIFICATIONS:  
1) CLAMP AND BRACKETS ARE TYPE 304 STAINLESS STEEL, 11 GAUGE (.1196").  
2) 3/8"  $\phi$  PINCH BOLT AND NUTS ARE TYPE 18-8 STAINLESS STEEL.  
3) WIDE RANGE OF SIZES FOR SDR35, SCH40, C10D-C900. STOCKED FOR 1.5" - 36" OTHER SIZES AVAILABLE.
- 1.5" (1.5" - 10" BRACKETS)
  - 2.0" (12" - 16" BRACKETS)
  - 3.0" (18" - 24" BRACKETS)
  - 4.0" (27" - 36" BRACKETS)



3 PIPE SUPPORT BRACKET  
SCALE: NTS



4 TYPICAL WALL PENETRATION AND REINFORCEMENT DETAIL  
SCALE: NTS

#	Revision	Date

Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**

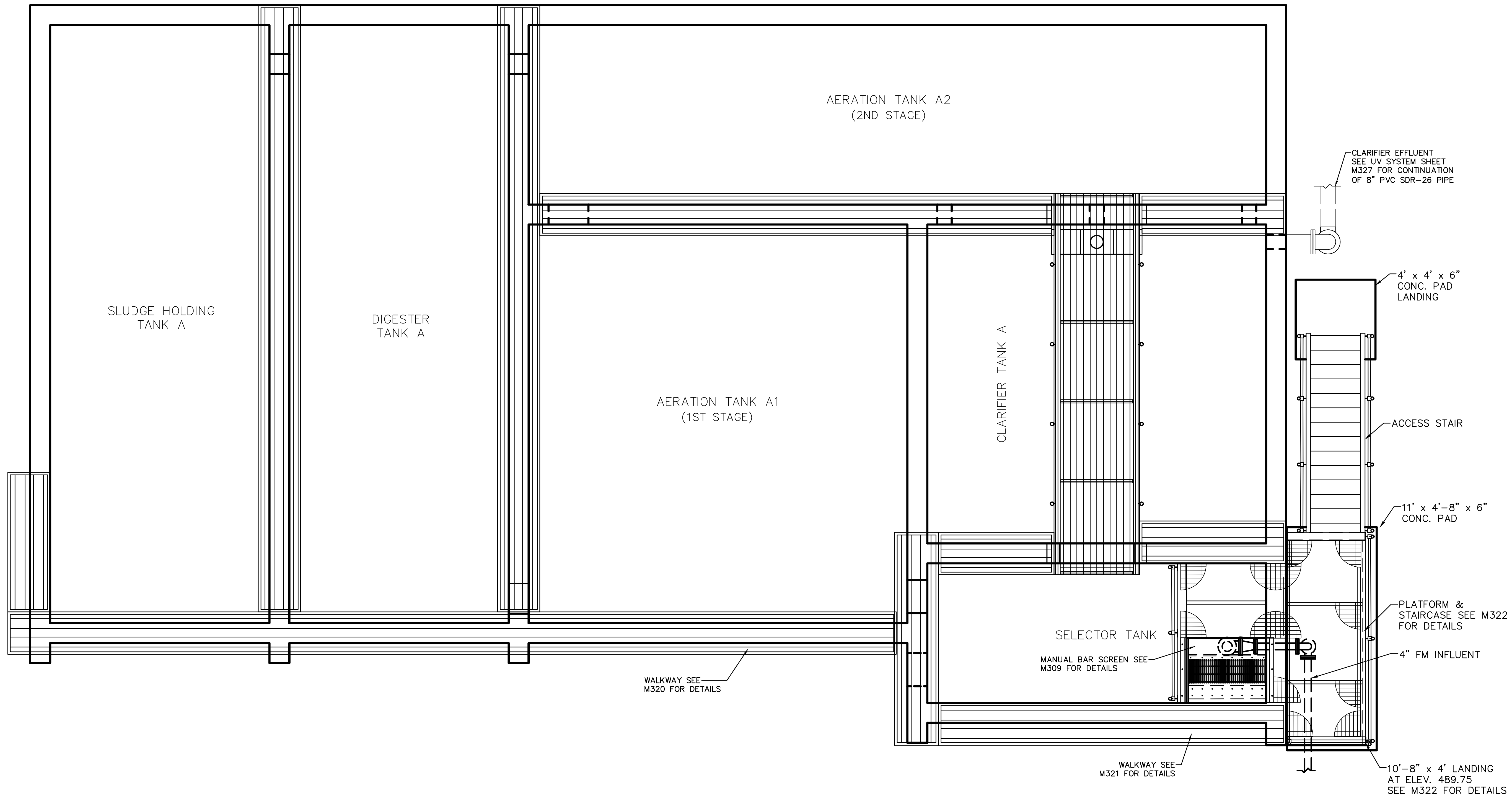


SCALE: NTS

**PIPING DETAILS**

**M318**

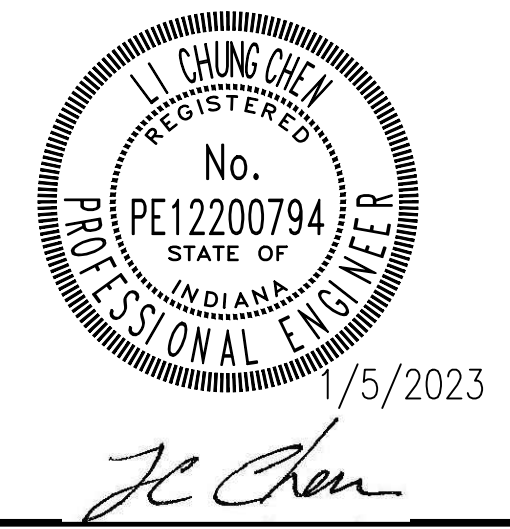
CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597



TANK TOP WALKWAY PLAN

#	Revision	Date

Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**

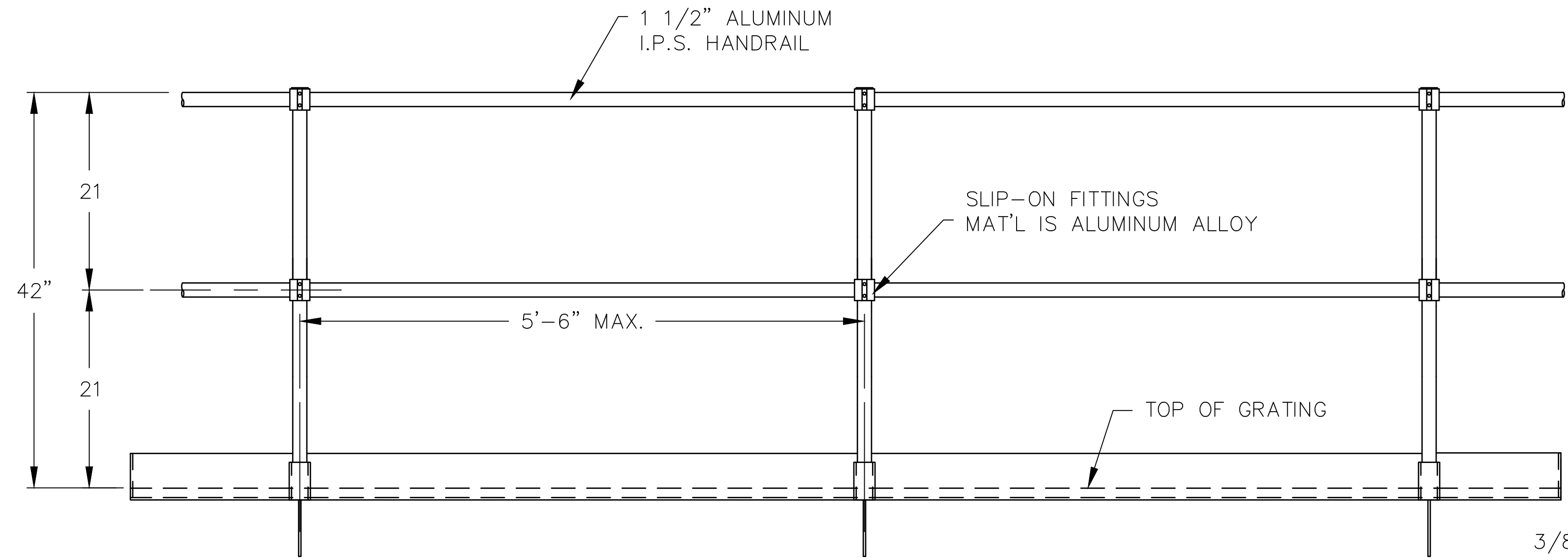


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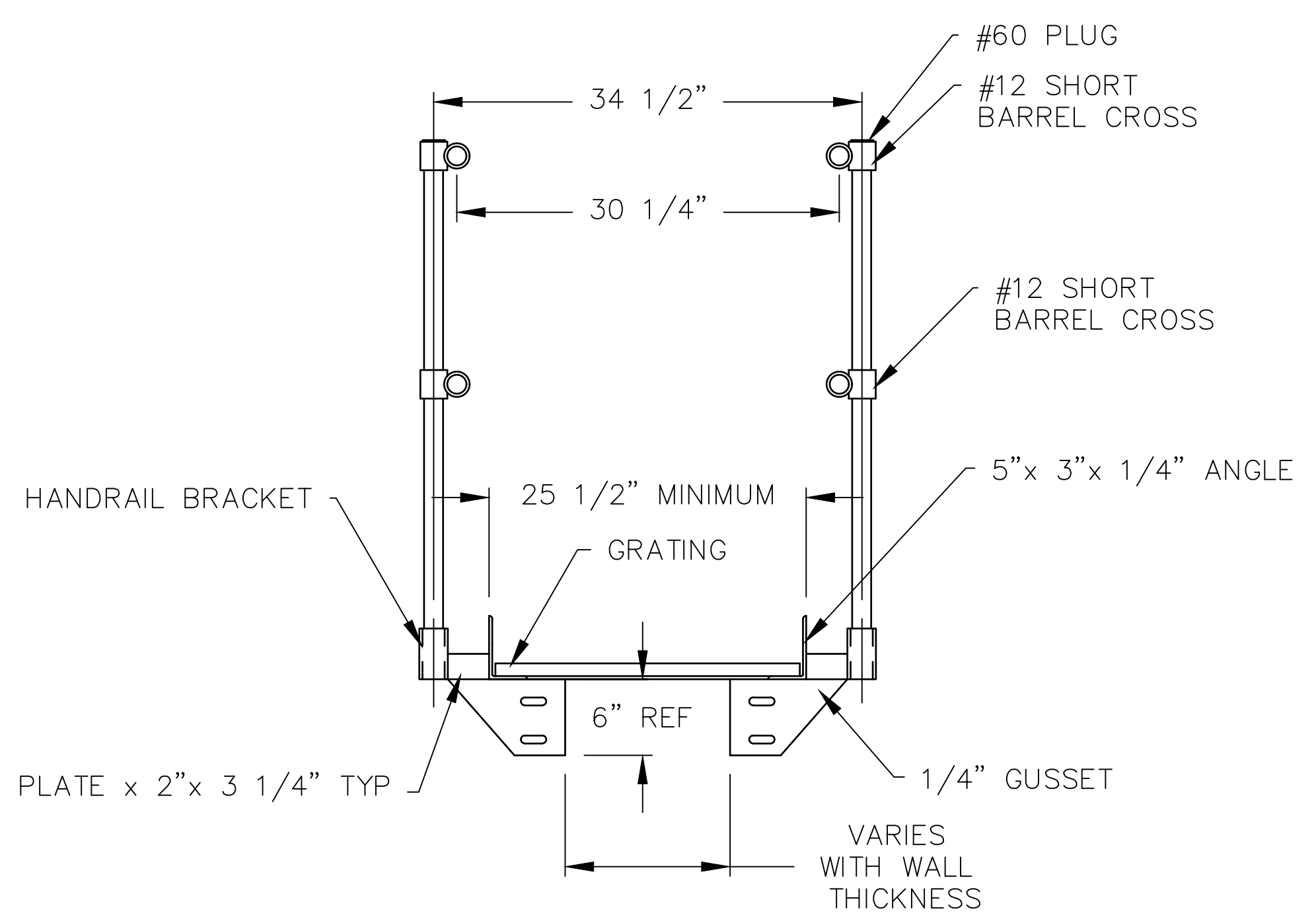
**WALKWAY PLAN**

**M319**

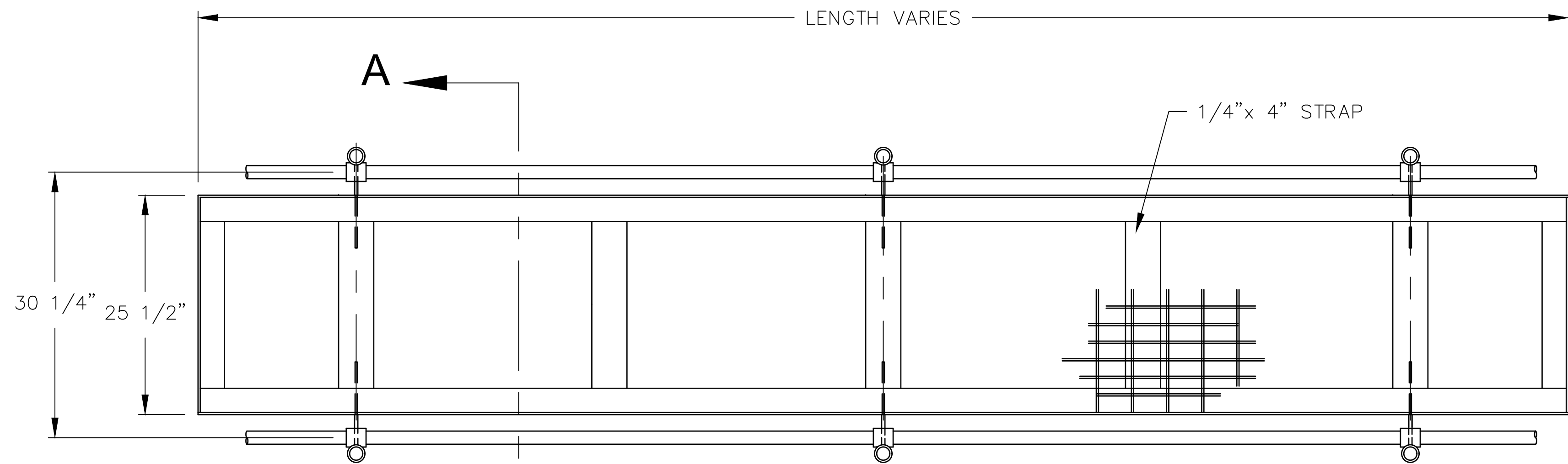
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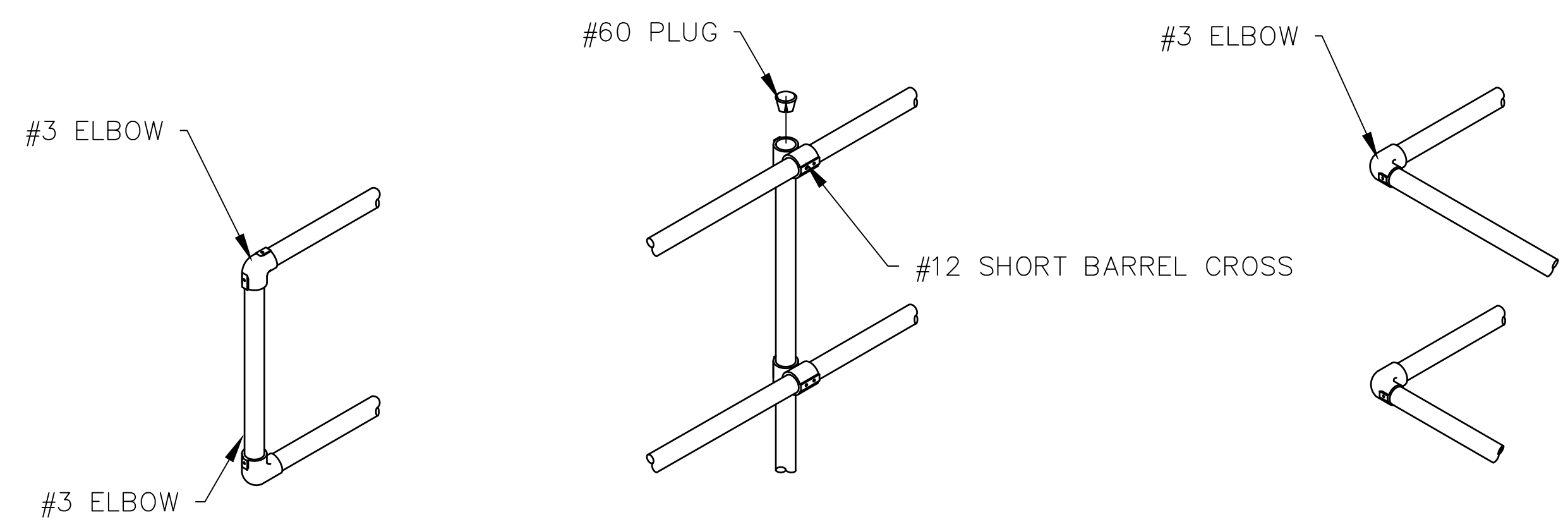
PROFILE VIEW



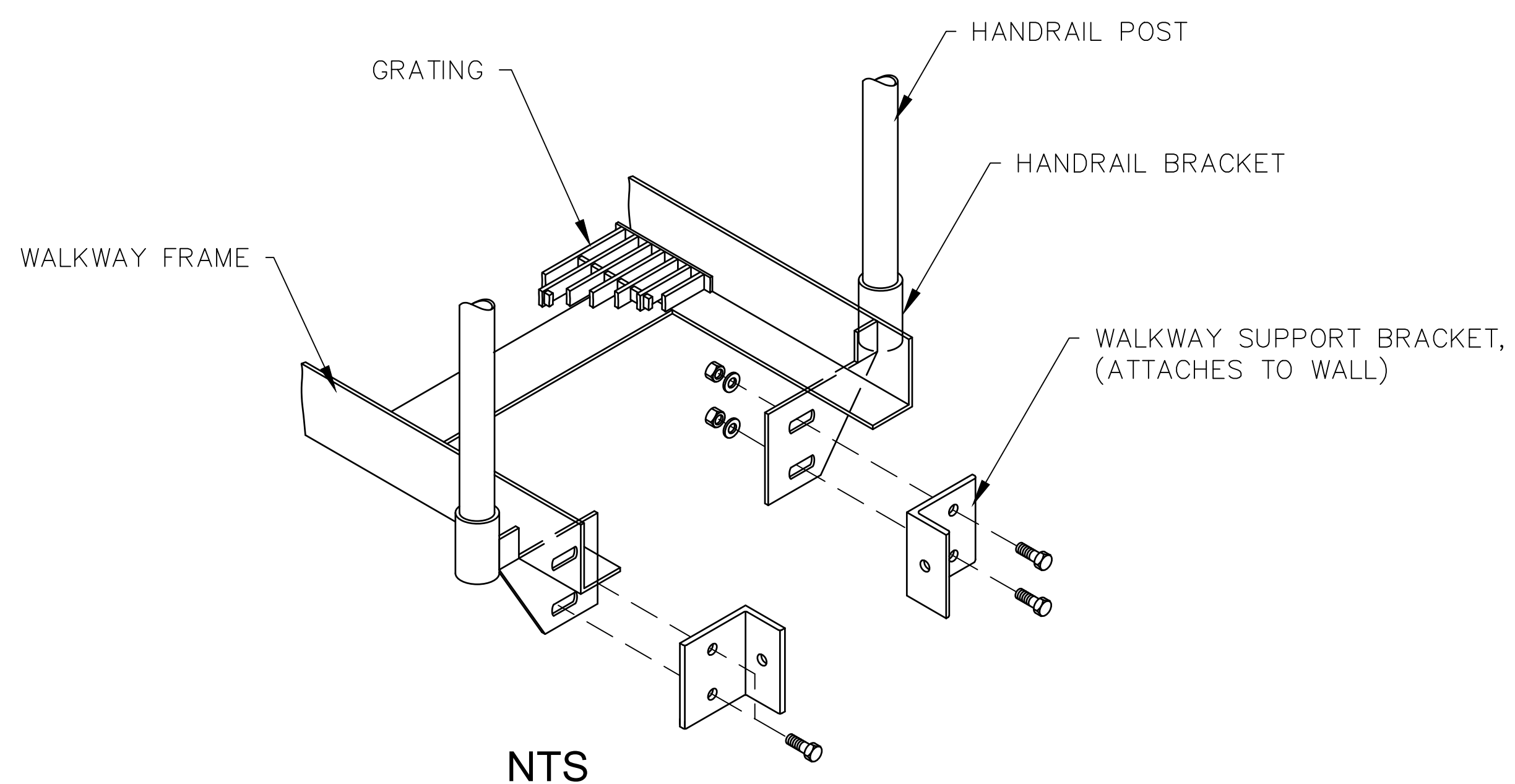
SECTION A-A  
NTS



PLAN VIEW



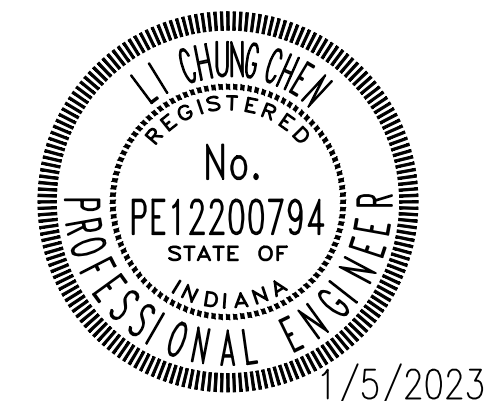
HANDRAIL FITTING DETAILS  
(FITTING COMBINATIONS VARY PER JOB)



NTS

#	Revision	Date

Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**



*L.I. Chung Chen*



PRINT DATE: 1/5/23 - 10:47 AM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2200000401.000\_RQAW - WHEATLAND WWTPL6.00\_CADD\6.02\_DRAWINGS\22-0401-RD-PLAN-WALKWAY.DWG PLOT SCALE: 1:1

CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT  
 PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

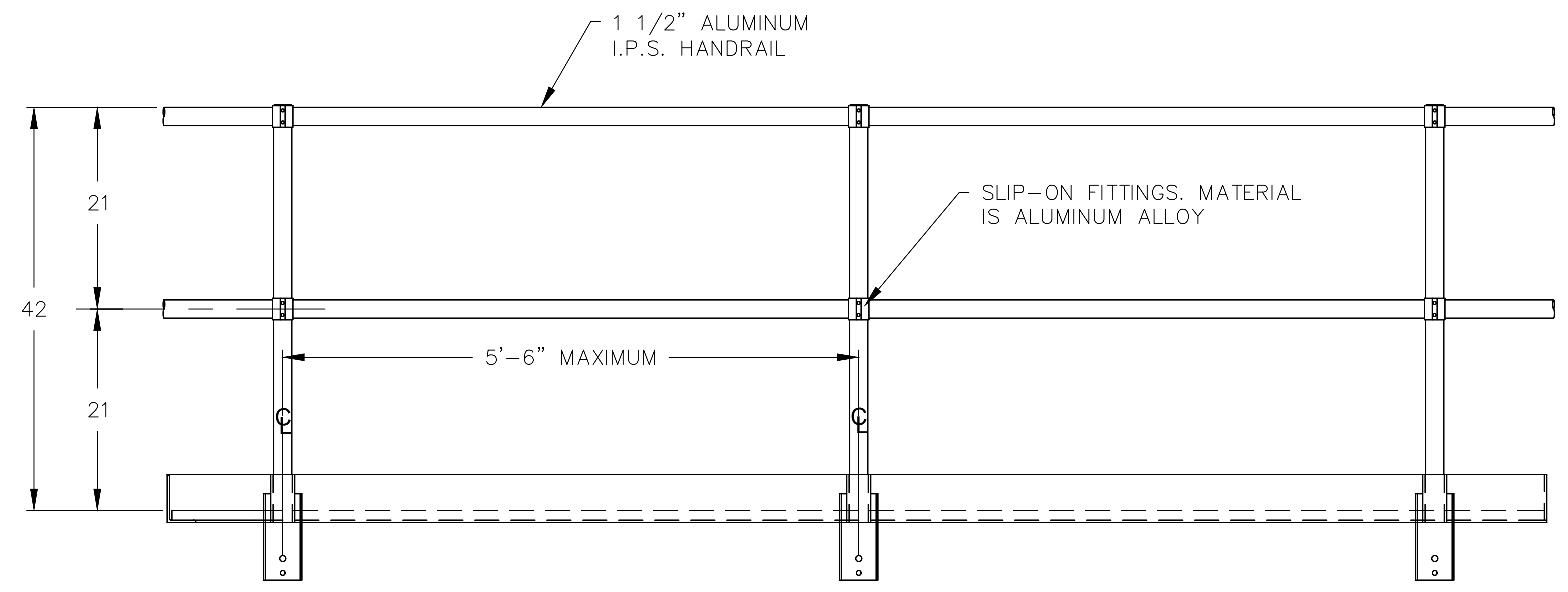
Project #: 21-400-194-1  
 Designed By: **LC**  
 Drawn By: **JM**  
 Checked By: **LC**  
 Date: **1/5/2023**

**L.I. CHUNG CHEN**  
 REGISTERED  
 No. **PE12200794**  
 STATE OF **INDIANA**  
 PROFESSIONAL ENGINEER  
 1/5/2023  
*J. Chen*

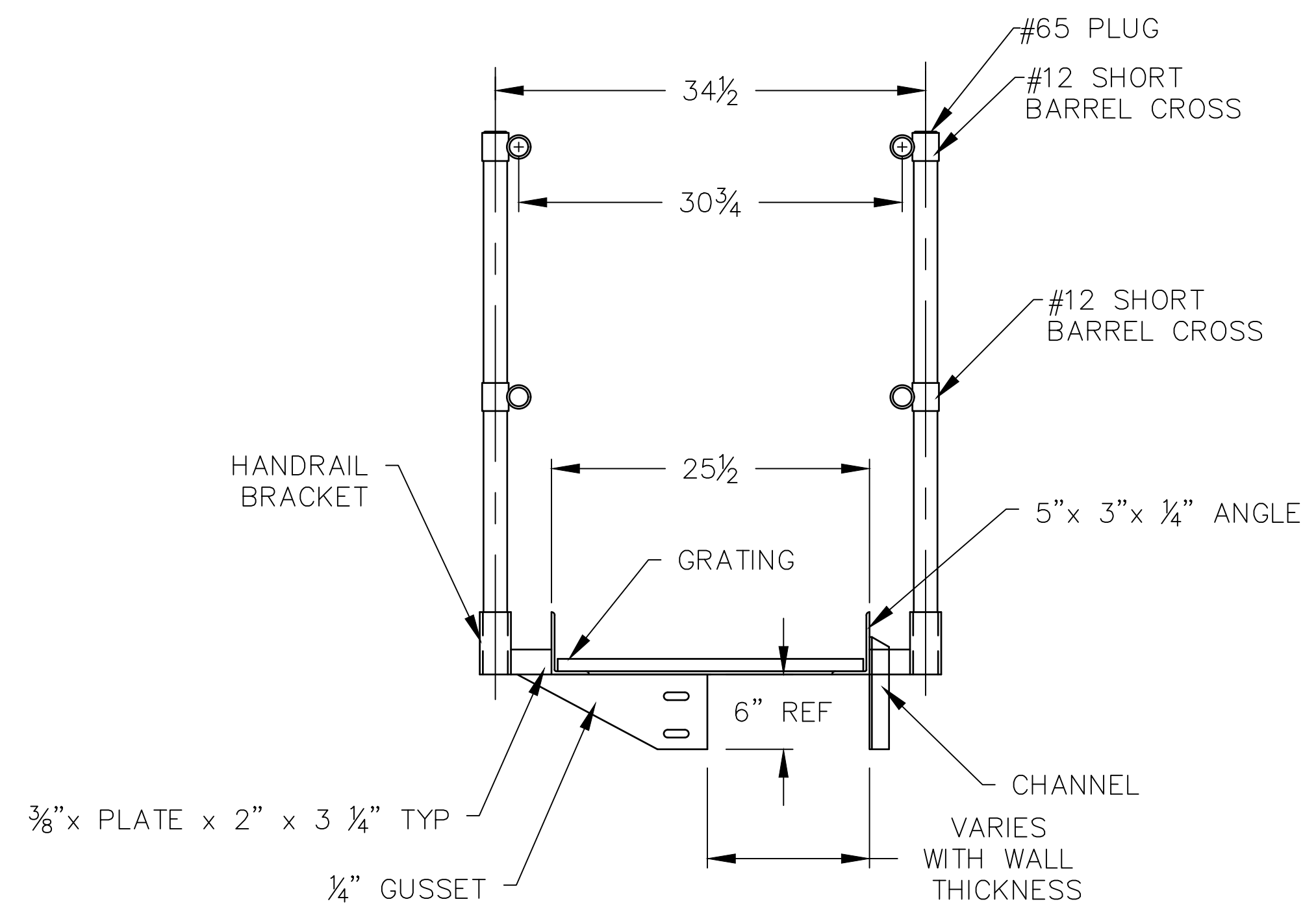


**WALKWAY DETAILS  
 (2 OF 2)**

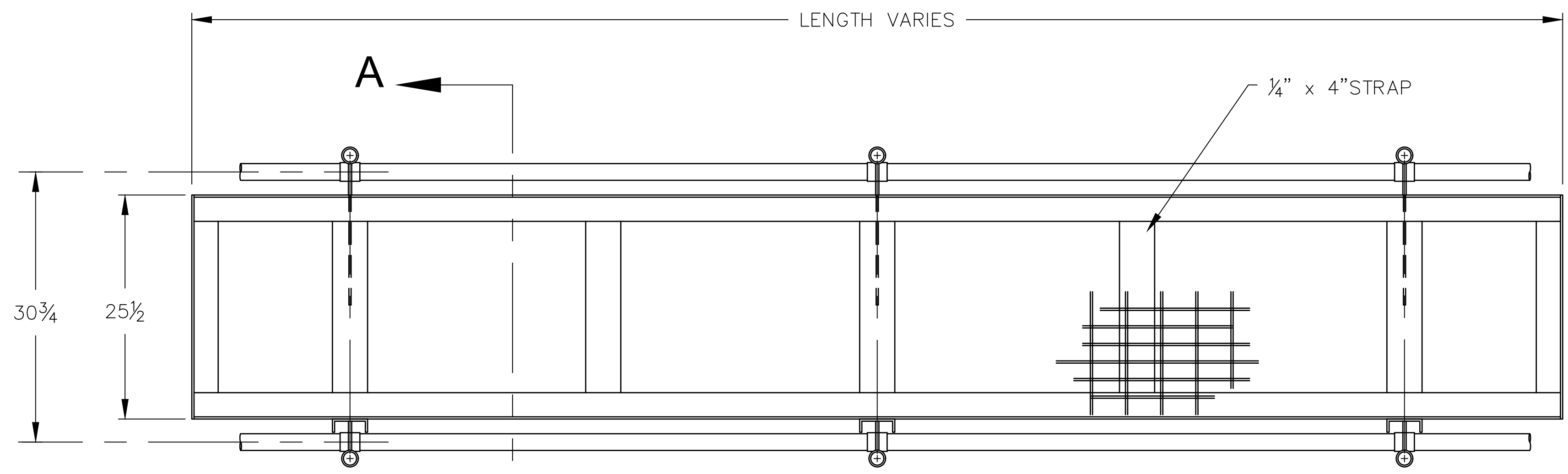
**M321**



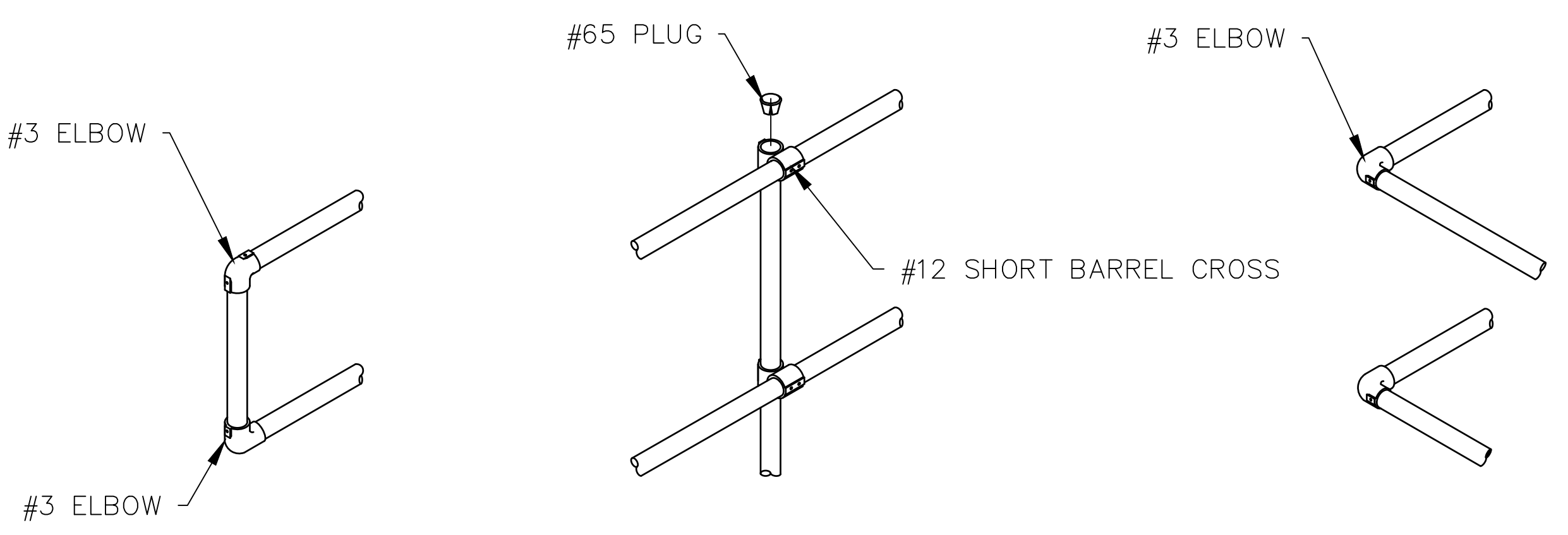
**SIDE VIEW**



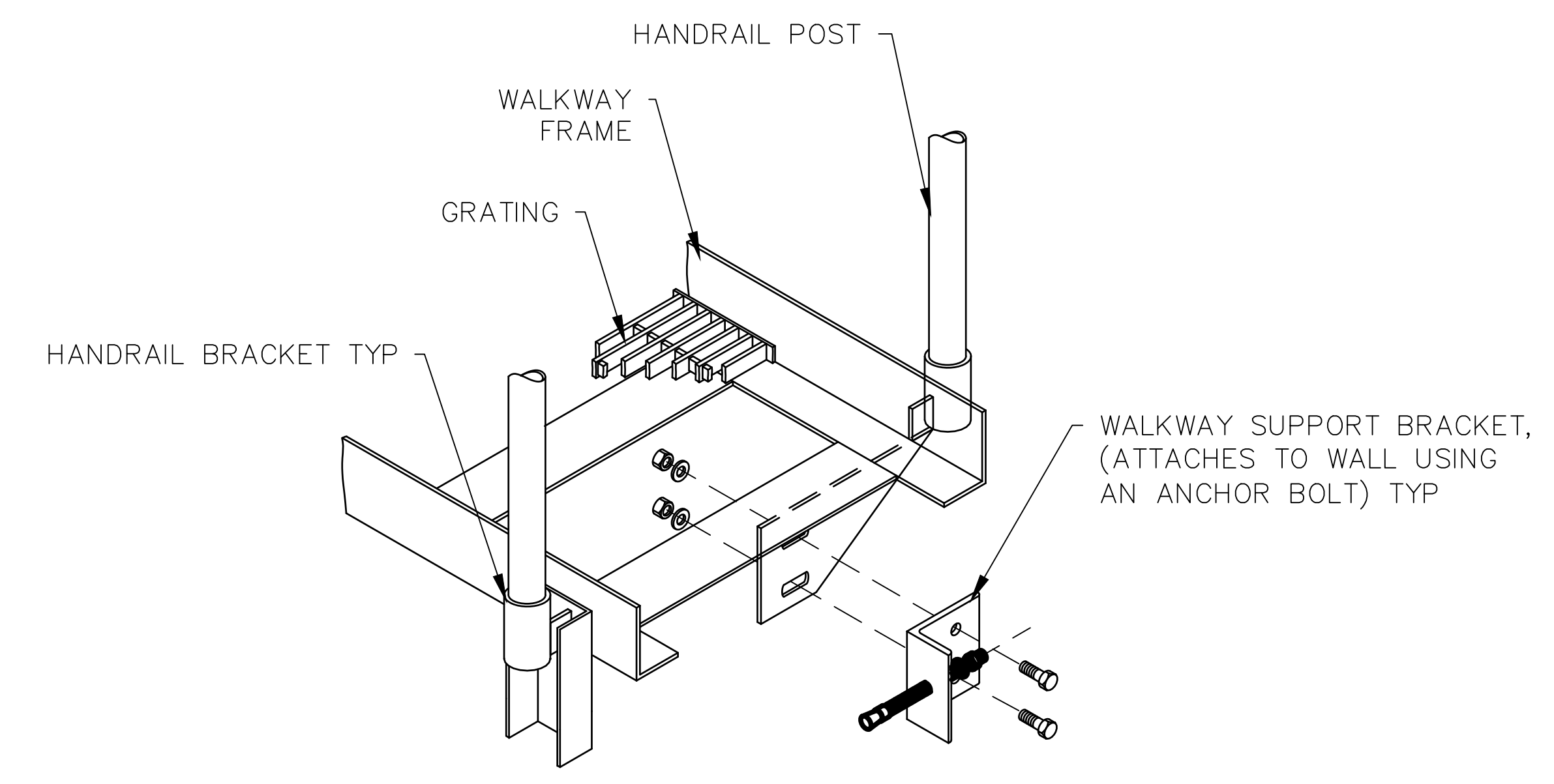
**SECTION A-A  
 NTS**



**TOP VIEW**



**HANDRAIL FITTING DETAILS  
 (FITTING COMBINATIONS VARY PER JOB)**



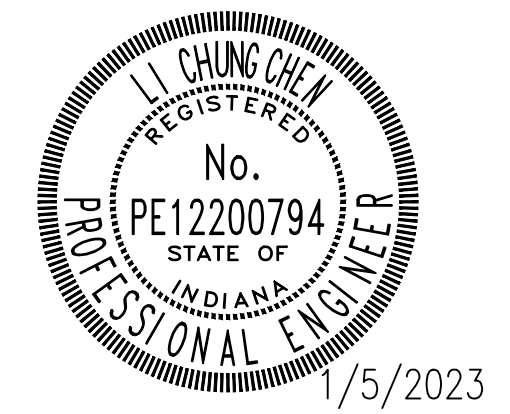
**NTS**

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CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**

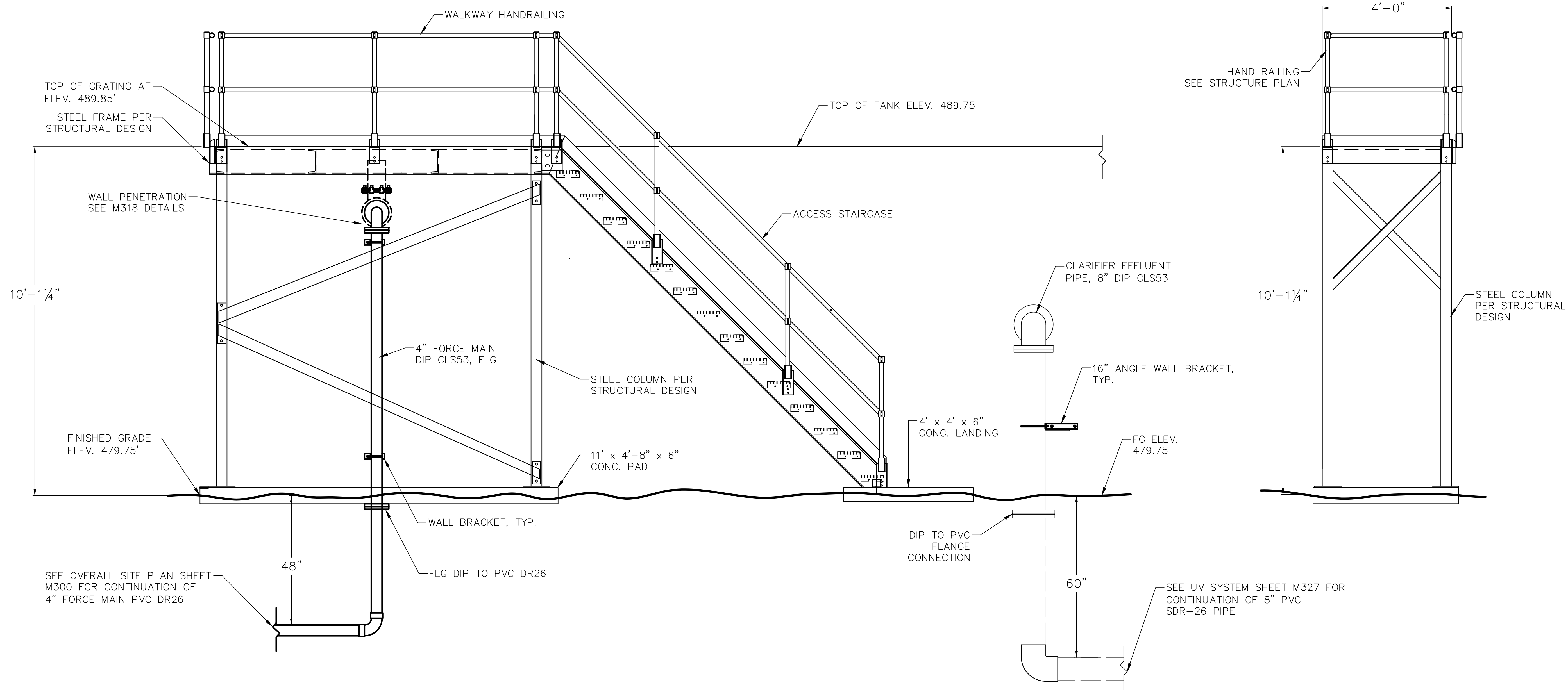


*L.I. Chung Chen*



**STAIRWAY DETAILS**

**M322**



STAIRCASE & LANDING ELEVATION

STRUCTURE FRAME PROFILE

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#	Revision	Date

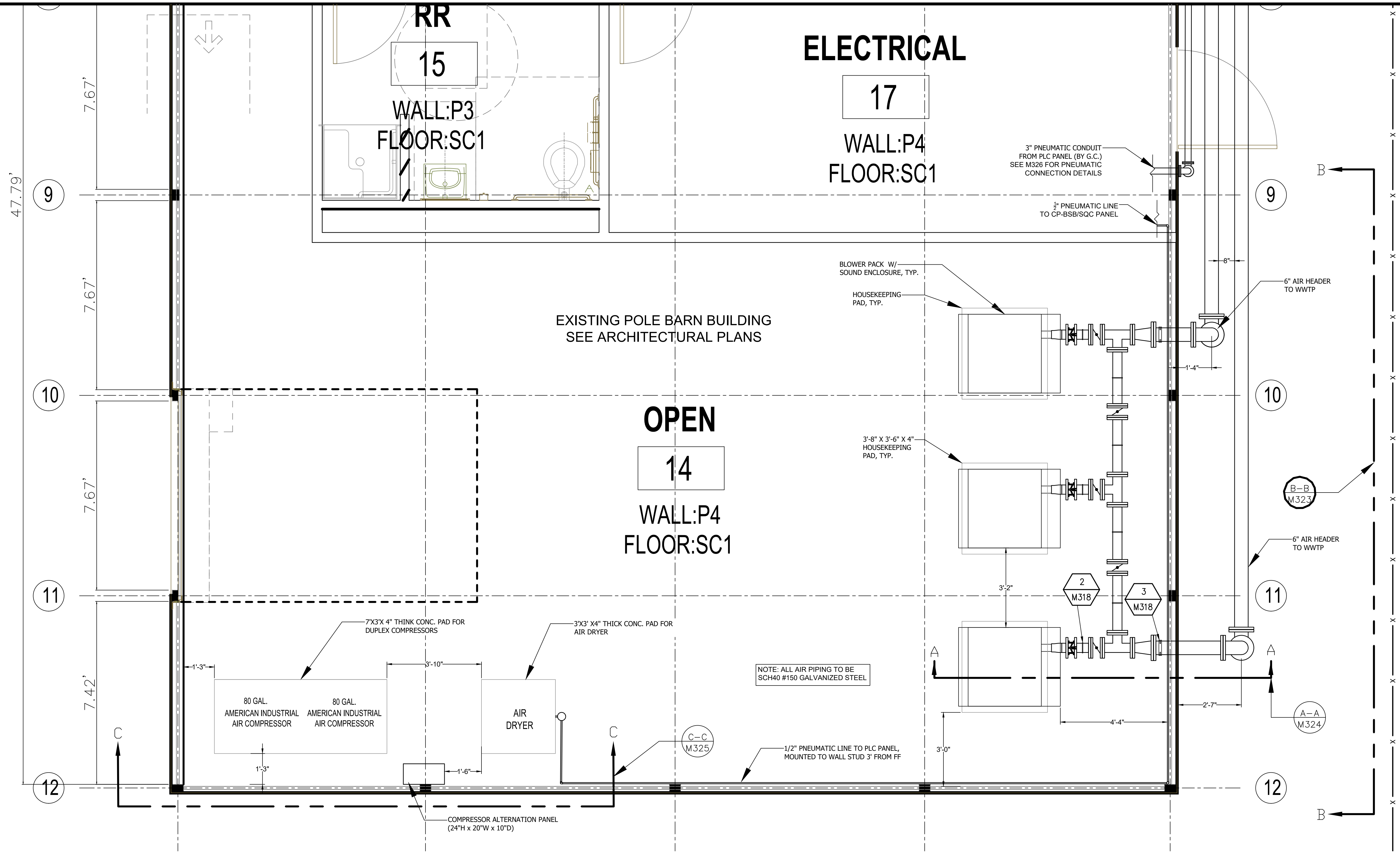
Project #: 21-400-194-1  
Designed By: **LC**  
Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**

**L.I. CHUNG CHEN**  
REGISTERED  
No. PE12200794  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
1/5/2023  
*J.C.*



**POLE BARN  
BLOWER LAYOUT**

**M323**



**ELECTRICAL**

RR  
15  
WALL:P3  
FLOOR:SC1

17  
WALL:P4  
FLOOR:SC1

EXISTING POLE BARN BUILDING  
SEE ARCHITECTURAL PLANS

**OPEN**  
14  
WALL:P4  
FLOOR:SC1

80 GAL.  
AMERICAN INDUSTRIAL  
AIR COMPRESSOR

80 GAL.  
AMERICAN INDUSTRIAL  
AIR COMPRESSOR

AIR  
DRYER

COMPRESSOR ALTERNATION PANEL  
(24"H x 20"W x 10"D)

NOTE: ALL AIR PIPING TO BE  
SCH40 #150 GALVANIZED STEEL

1/2" PNEUMATIC LINE TO PLC PANEL,  
MOUNTED TO WALL STUD 3' FROM FF

3" PNEUMATIC CONDUIT  
FROM PLC PANEL (BY G.C.)  
SEE M326 FOR PNEUMATIC  
CONNECTION DETAILS

1/2" PNEUMATIC LINE  
TO CP-BSB/SQC PANEL

BLOWER PACK W/  
SOUND ENCLOSURE, TYP.

HOUSEKEEPING  
PAD, TYP.

3'-8" X 3'-6" X 4"  
HOUSEKEEPING  
PAD, TYP.

2  
M318

3  
M318

C-C  
M325

B-B  
M323

A-A  
M324

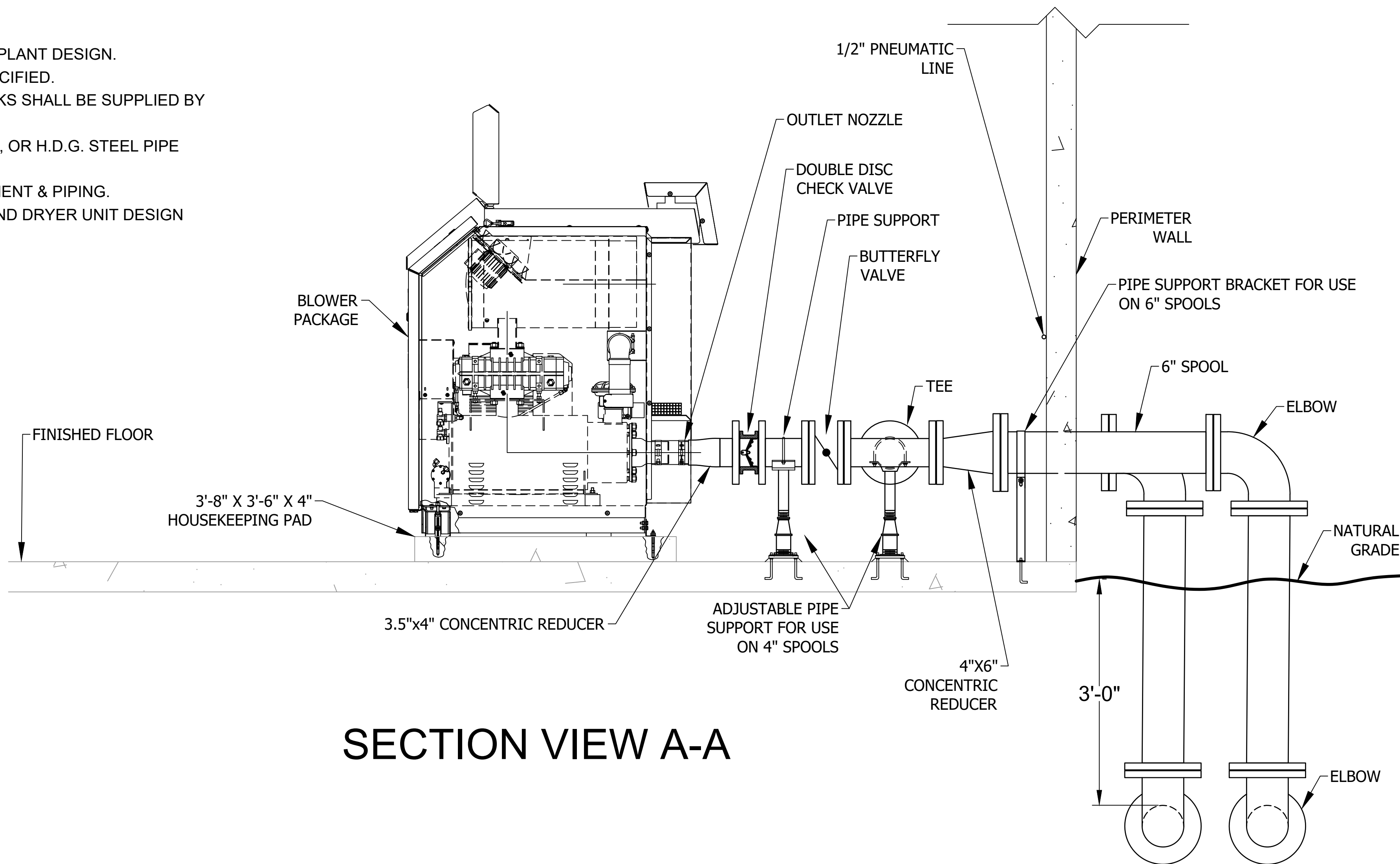
NOTE:

1. THE BLOWER PACKAGES AND PNEUMATIC SYSTEM ARE BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE BLOWERS AND COMPRESSOR UNITS AS SHOWN AND SPECIFIED.
2. CONTRACTOR SHALL FIELD VERIFY SITE CONDITION PRIOR TO INSTALLATION OF EQUIPMENT & PIPING.
3. AIR AND PNEUMATIC PIPING, FITTING, PIPE SUPPORT FROM BLOWERS TO THE AEROMOD TANKS SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
4. PRESSURIZED AIR PIPING OUTSIDE THE TANK SHALL BE DIP CLS 53, OR H.D.G. STEEL PIPE SCH 40.
5. DUE TO MOVEMENT, WEIGHT & VIBRATION, PIPING OVER WALL MUST BE RIGIDLY SUPPORTED. EXPANSION JOINTS ARE REQUIRED TO ISOLATE MOVEMENT OF AIR PIPING AT CONNECTIONS (THIS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR)
6. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF BLOWER PACKAGE, COMPRESSOR AND DRYER UNIT DESIGN AND SCOPE.

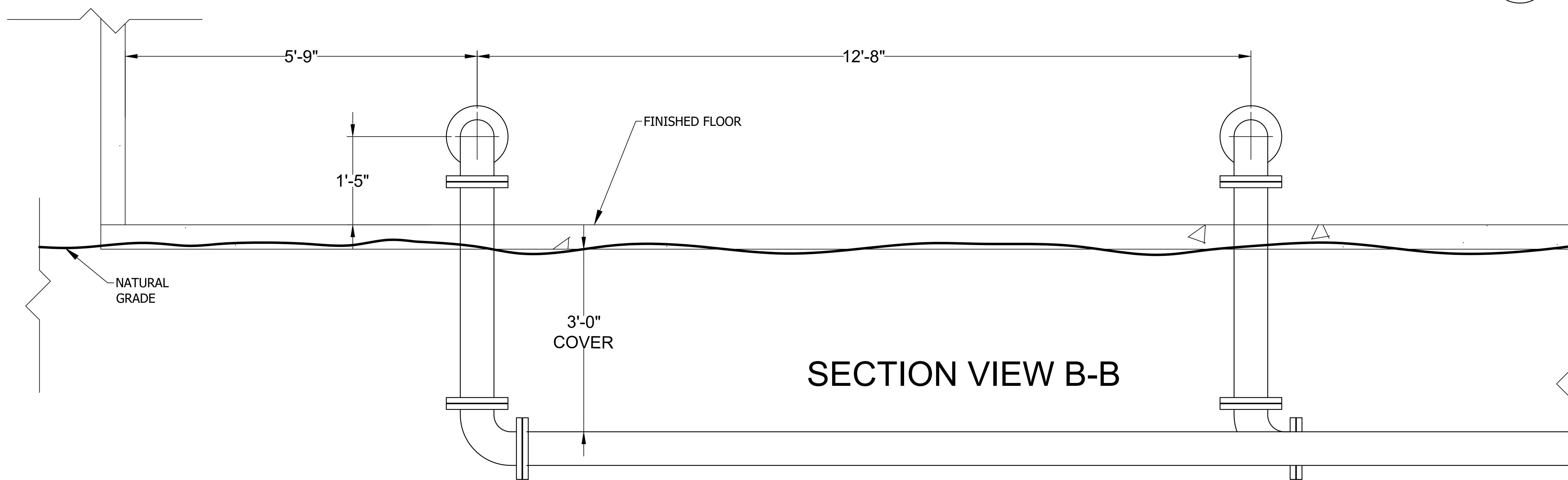
**SEE SHEET M300 FOR LOCATION OF POLE BARN  
AND OVERALL SITE PLAN LAYOUT**

PRINT DATE: 1/10/23 PLOT SCALE: 1:186.9116 EDIT DATE: 1/10/23 - 10:04 AM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2200000401\_000\_RQAW - WHEATLAND WWTP\16.00\_CADD\6.03\_DRAWINGS\22-9401-PD-PLAN-POLE BARN.DWG

- NOTE:
1. THE BLOWER PACKAGES AND PNEUMATIC SYSTEM ARE BASED ON AEROMOD PACKAGE PLANT DESIGN. CONTRACTOR SHALL PROVIDE BLOWERS AND COMPRESSOR UNITS AS SHOWN AND SPECIFIED.
  2. AIR AND PNEUMATIC PIPING, FITTING, SUPPORT FROM BLOWERS TO THE AEROMOD TANKS SHALL BE SUPPLIED BY GENERAL CONTRACTOR.
  3. PRESSURIZED AIR PIPING FROM BLOWERS TO THE AEROMOD TANK SHALL BE DIP CLS 53, OR H.D.G. STEEL PIPE SCH 40.
  4. CONTRACTOR SHALL FIELD VERIFY SITE CONDITION PRIOR TO INSTALLATION OF EQUIPMENT & PIPING.
  5. REFER TO SPEC SECTION 46 07 53 FOR DETAILS OF BLOWER PACKAGE, COMPRESSOR AND DRYER UNIT DESIGN AND SCOPE.



**SECTION VIEW A-A**

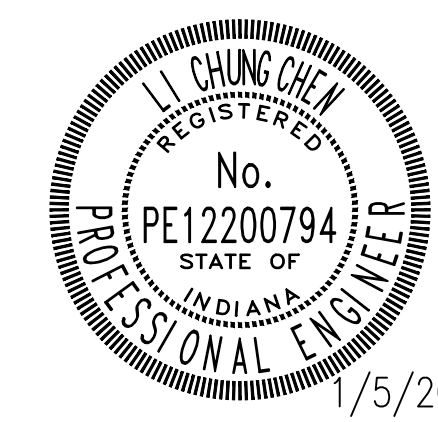


**SECTION VIEW B-B**

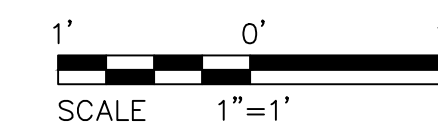
CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT  
 PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

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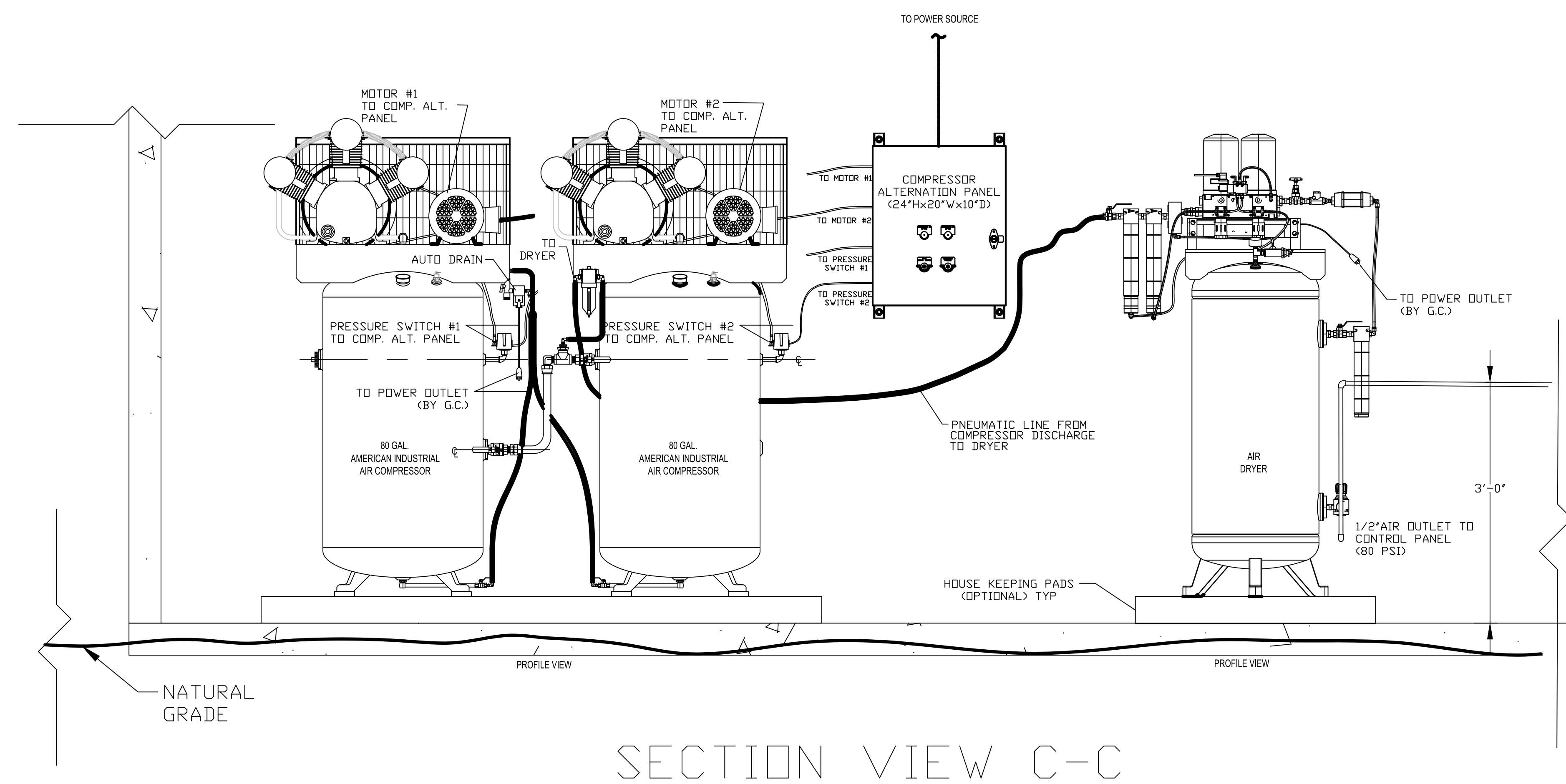
*L.I. Chung Chen*



**POLE BARN  
 SECTION VIEWS  
 A-A & B-B**

**M324**

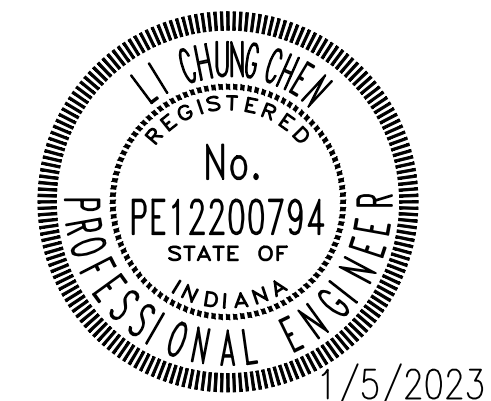
CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM  
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 DIVISION I - WASTEWATER TREATMENT  
 PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597



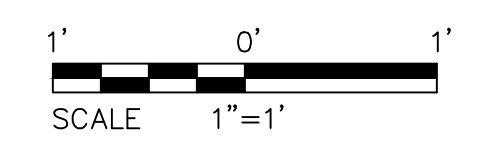
SECTION VIEW C-C

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: **LC**  
 Drawn By: **JM**  
 Checked By: **LC**  
 Date: **1/5/2023**



1/5/2023  
*L.I. Chung Chen*



**POLE BARN  
 SECTION VIEW C-C**

**M325**

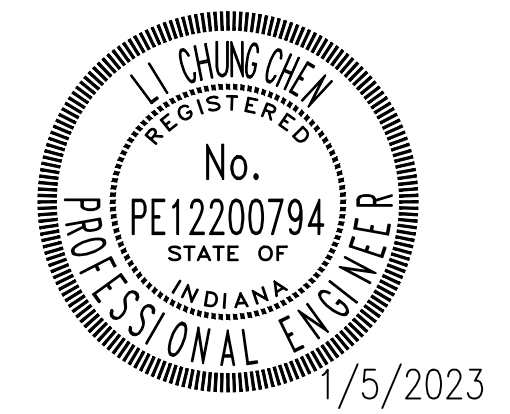
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CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

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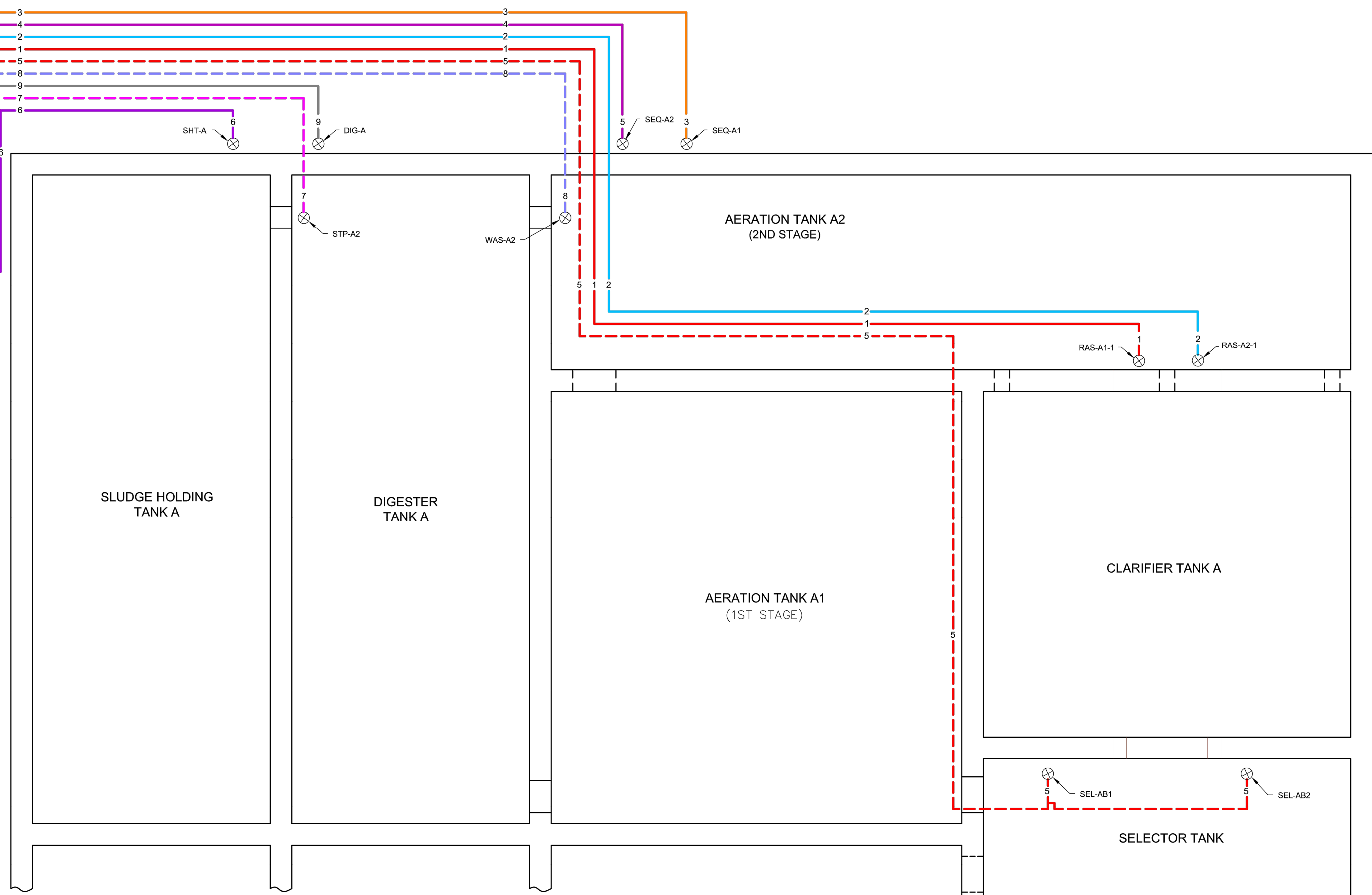
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Drawn By: **JM**  
Checked By: **LC**  
Date: **1/5/2023**



*L.I. Chung Chen*

SCALE: NTS  
**PNEUMATIC CONNECTION PLAN**

**M326**



- NOTE:
- ALL NYLON TUBE CONNECTIONS MUST BE MADE OUTSIDE OF PVC CONDUIT LINES AND ABOVE WATER LEVEL.
  - THE PNEUMATIC SCHEMATIC DRAWING IS FOR CONTRACTOR USE ONLY (TO AID IN INSTALLATION).

PNEUMATIC LINE NO.	NYLON TUBE COLOR	NO. OF TUBES	DESCRIPTION AND VALVE NO.	NORMAL VALVE POSITION
1	RED (04126)	TWO	RAS VALVES* RAS-A1-1	CLOSED
2	BLUE (04166)	TWO	RAS VALVES* RAS-A2-1	CLOSED
3	ORANGE (04136)	TWO	SEQUOX VALVE SEQ-A1	OPEN
4	PURPLE (041D6)	TWO	SEQUOX VALVE SEQ-A2	OPEN
5	RED (04126)	ONE	SELECTOR TANK VALVE SEL-AB1, AB2	OPEN
6	DARK PURPPE (041H6)	TWO	SLUDGE HOLDING VALVE SHT-A	OPEN
7	PINK (041G6)	ONE	SLUDGE TRANSFER VALVE STP-A	CLOSED
8	VIOLET (04186)	ONE	SOLIDS WASTING VALVE WAS-A2	CLOSED
9	SILVER (041F6)	TWO	DIGESTER VALVE DIG-A	OPEN

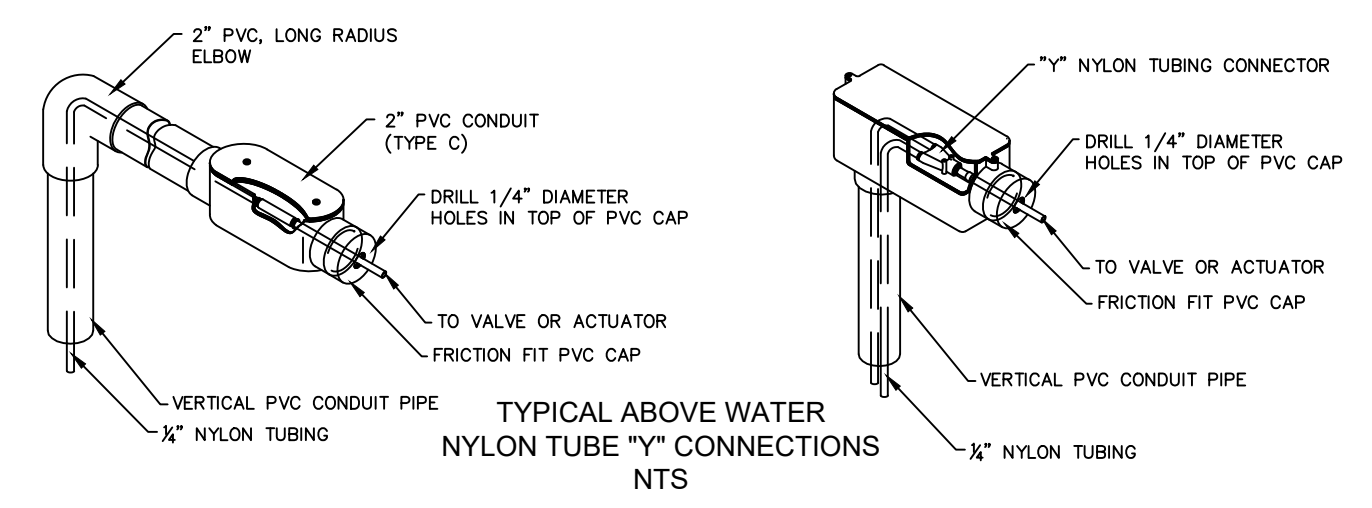
\*RAS VALVES STAY IN LAST POSITION WHEN HIGH PRESSURE AIR IS LOST

XXX - X(X)# - #	INDICATES CYCLE/STAGE/ VALVE OR EQUIPMENT NUMBER
X(X)#	INDICATES CYCLE/STAGE
X(X)	INDICATES TRAIN(S)/LOCATION
#	INDICATES TYPE/FUNCTION FOR VALVE OR EQUIPMENT
RAS	= RETURN ACTIVATED SLUDGE
SEQ	= SEQUOX VALVE
SEL	= SELECTOR TANK
SHT	= SLUDGE HOLDING
STP	= SLUDGE TRANSFER PUMP
WAS	= WASTE ACTIVATED SLUDGE
DIG	= DIGESTER

**SYMBOL KEY**

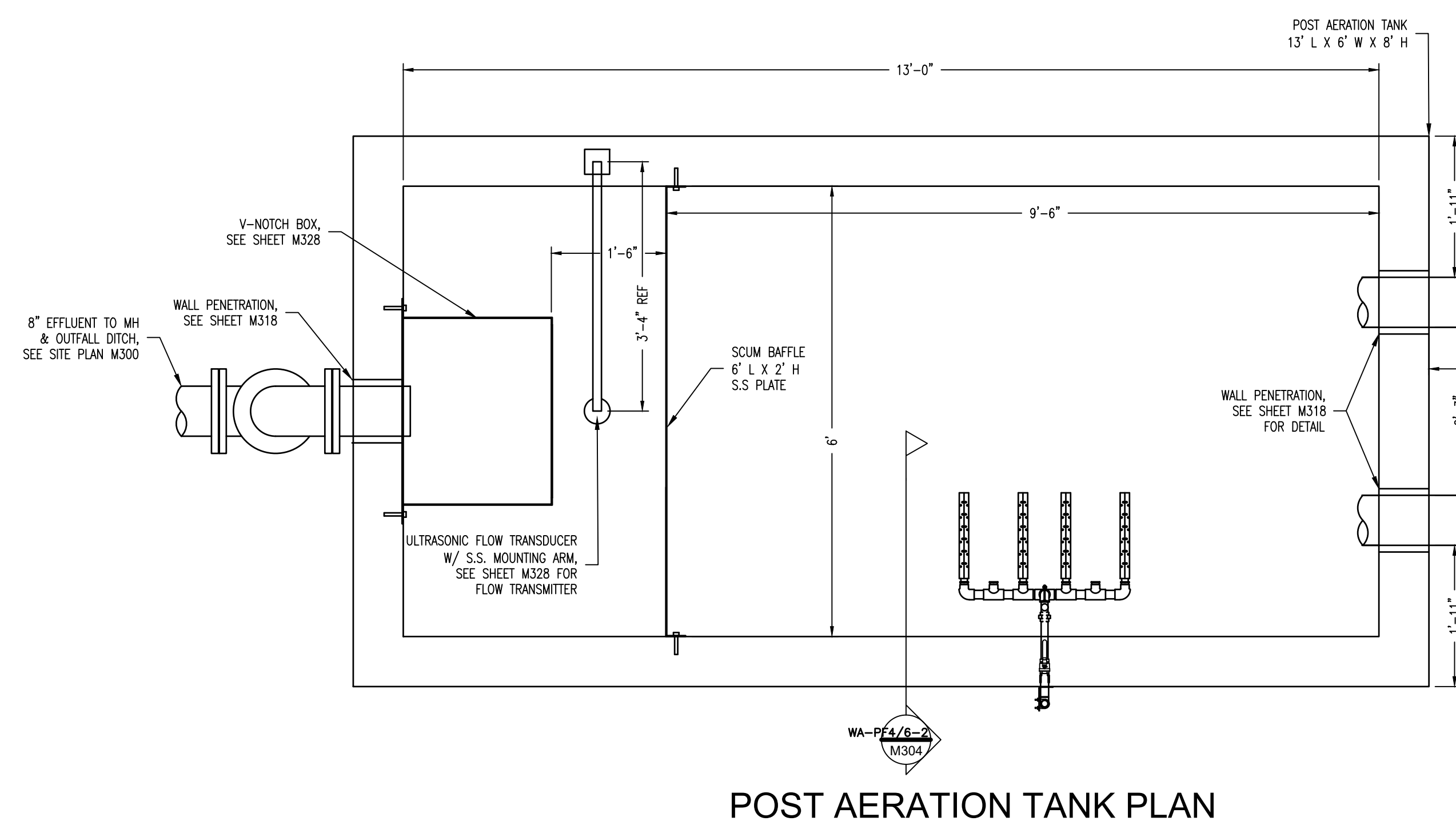
⊗ PNEUMATIC VALVE

⊗ INDICATES ABOVE WATER NYLON TUBE "Y" CONNECTION NEAR THE VALVE

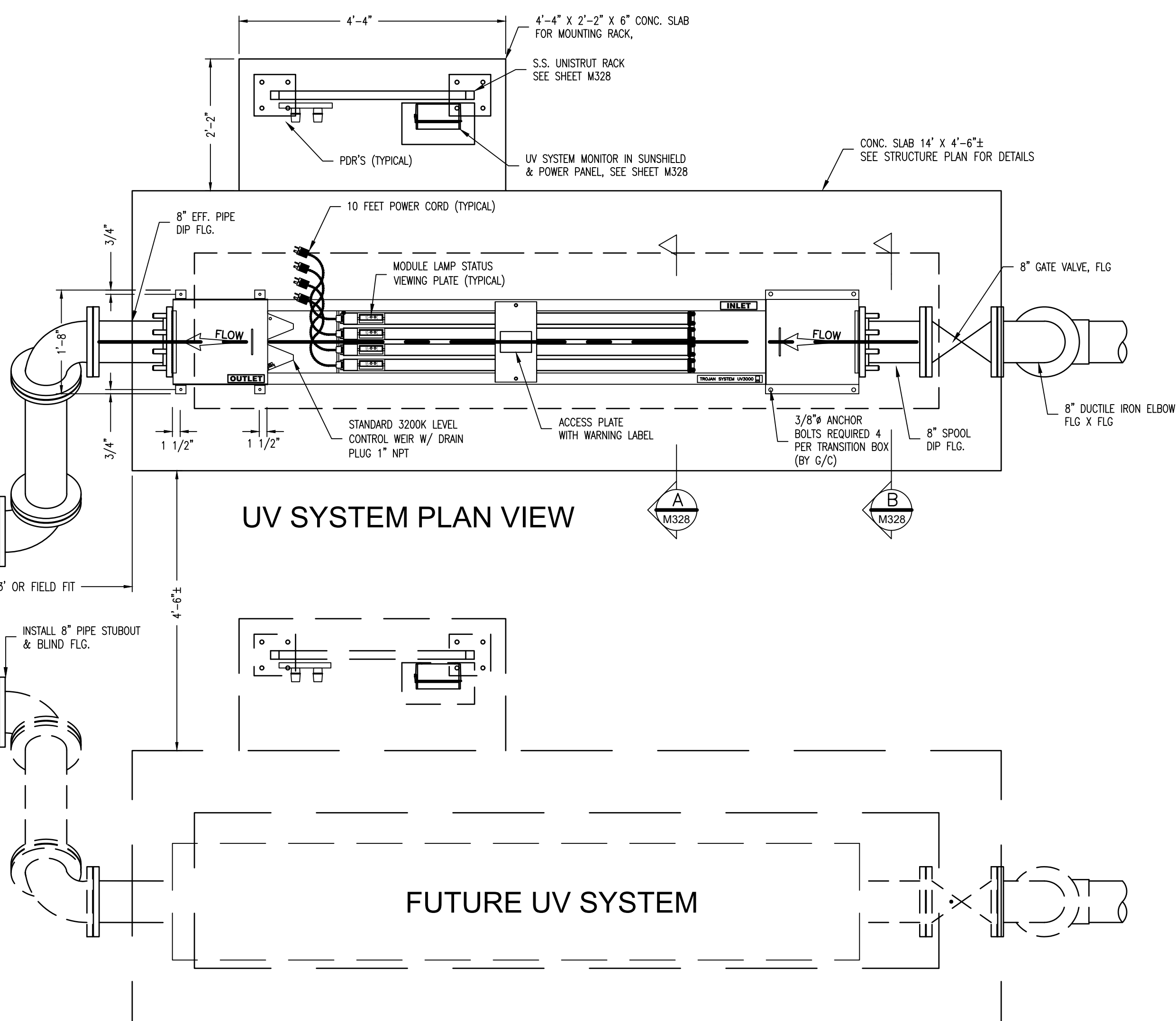


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No.	UV SYSTEM POWER DESCRIPTION	CABLE/WIRING FROM	TO
1	SPLITTER PANEL POWER SUPPLY 120V, 1 PHASE, 2 WIRE, ACTUAL DRAW 6.4 AMPS / SPLITTER PANEL	DISTRIBUTION PANEL (DP) (NOT SHOWN, BY ELEC. CONTRACTOR)	SPLITTER PANEL (BY ELEC. CONTRACTOR)
2	POWER DISTRIBUTION RECEPTACLE (PDR) POWER SUPPLY, 120V, 1 PHASE, 2 WIRE, ACTUAL DRAW 3.2 AMPS / PDR	SPLITTER PANEL (BY ELEC. CONTRACTOR)	PDR
3	SYSTEM MONITOR POWER SUPPLY 120V, 1 PHASE, 2 WIRE, 5 AMPS	DP (NOT SHOWN)	SYSTEM MONITOR

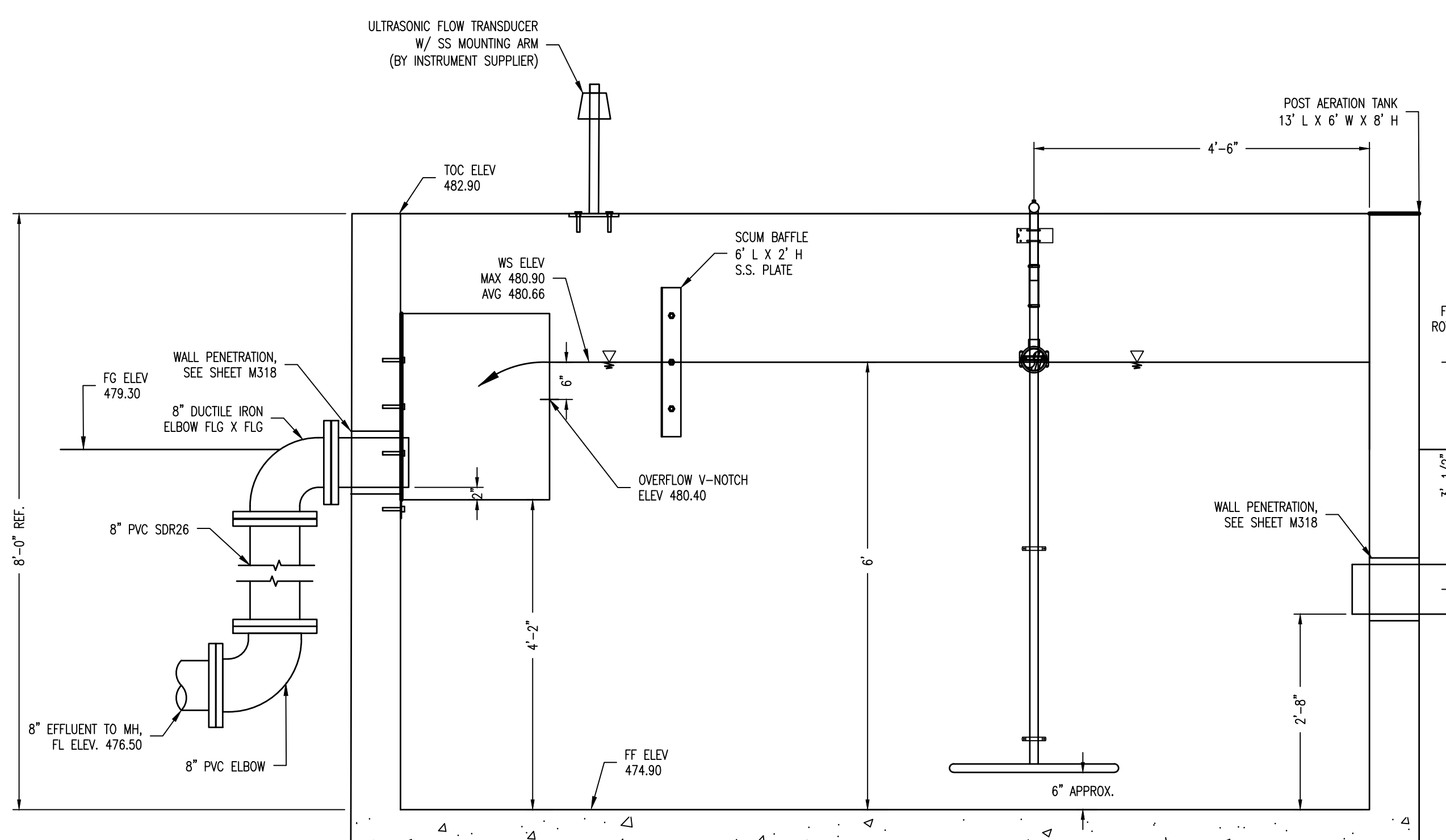


POST AERATION TANK PLAN

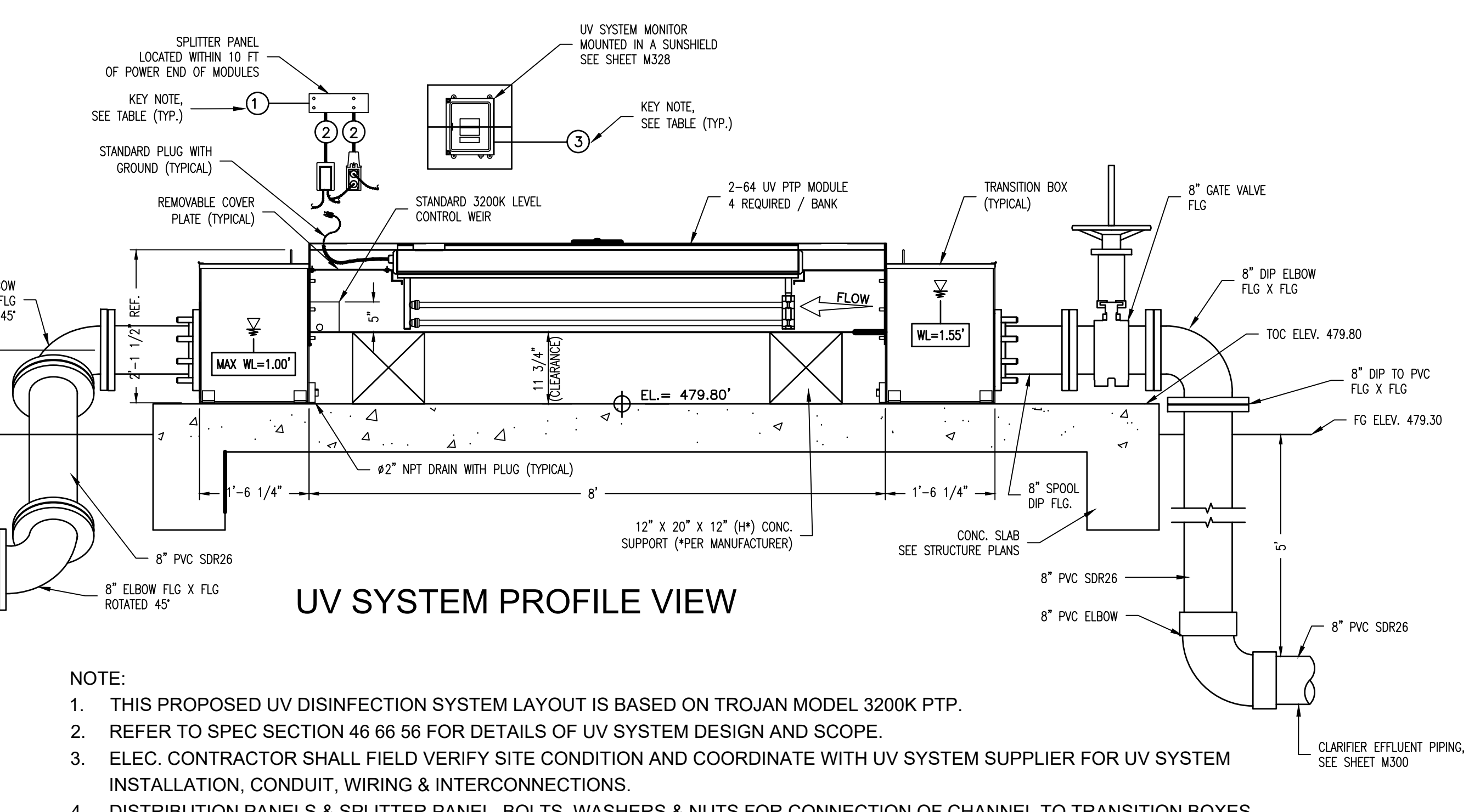


UV SYSTEM PLAN VIEW

FUTURE UV SYSTEM



POST AERATION TANK PROFILE



UV SYSTEM PROFILE VIEW

- NOTE:
1. THIS PROPOSED UV DISINFECTION SYSTEM LAYOUT IS BASED ON TROJAN MODEL 3200K PTP.
  2. REFER TO SPEC SECTION 46 66 56 FOR DETAILS OF UV SYSTEM DESIGN AND SCOPE.
  3. ELEC. CONTRACTOR SHALL FIELD VERIFY SITE CONDITION AND COORDINATE WITH UV SYSTEM SUPPLIER FOR UV SYSTEM INSTALLATION, CONDUIT, WIRING & INTERCONNECTIONS.
  4. DISTRIBUTION PANELS & SPLITTER PANEL, BOLTS, WASHERS & NUTS FOR CONNECTION OF CHANNEL TO TRANSITION BOXES ARE PROVIDED BY ELEC. CONTRACTOR.

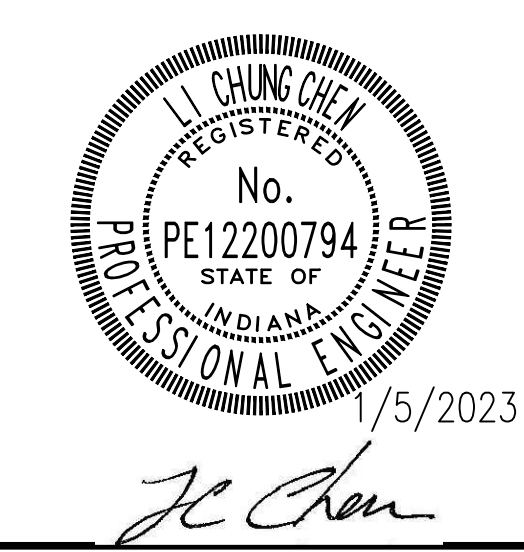
CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION

WHEATLAND, IN 47597

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SCALE: NTS  
UV SYSTEM & POST AERATION

**M327**

PRINT DATE: 1/5/23 11:24 AM EDITED BY: LC DRAWING FILE: J:\TOWHEATLAND\2200000401.000\_RQAW - WHEATLAND WWTP\16.00\_CADD\6.02\_DRAWINGS\22-0401-PD-PLAN-UV SYSTEM & POST AERATION.DWG PLOT SCALE: 1:1

CONSTRUCTION SET

WHEATLAND WASTEWATER SYSTEM  
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WHEATLAND, IN 47597

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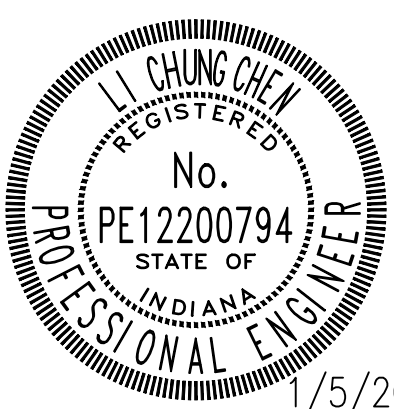
Project #: 21-400-194-1

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Drawn By: **JM**

Checked By: **LC**

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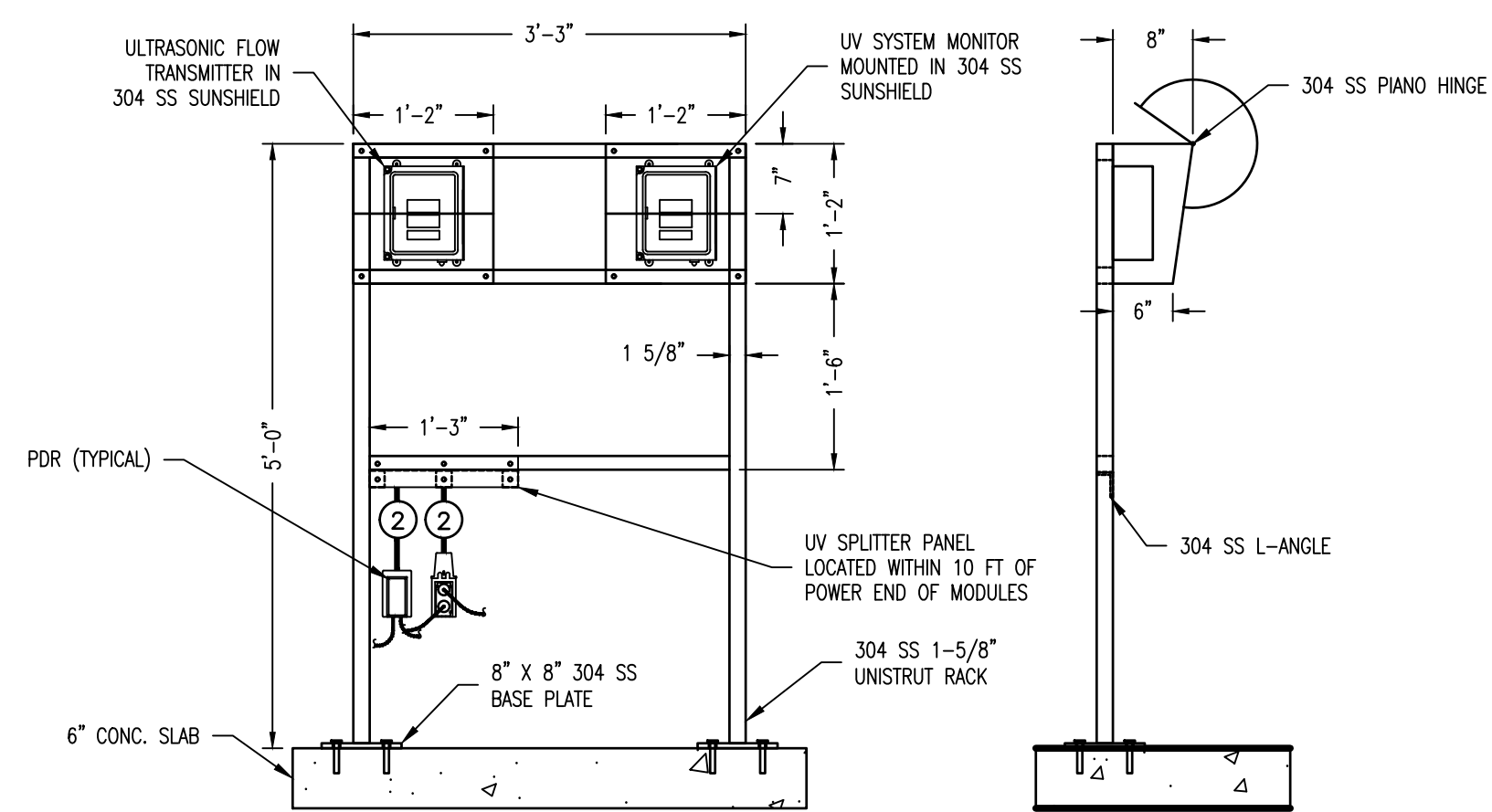
1/5/2023

*L.I. Chung Chen*

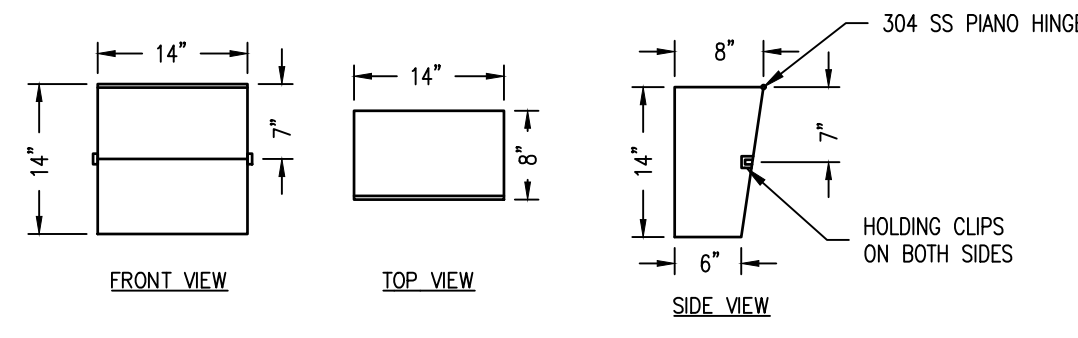
SCALE: NTS

UV SYSTEM &  
POST AERATION  
DETAILS

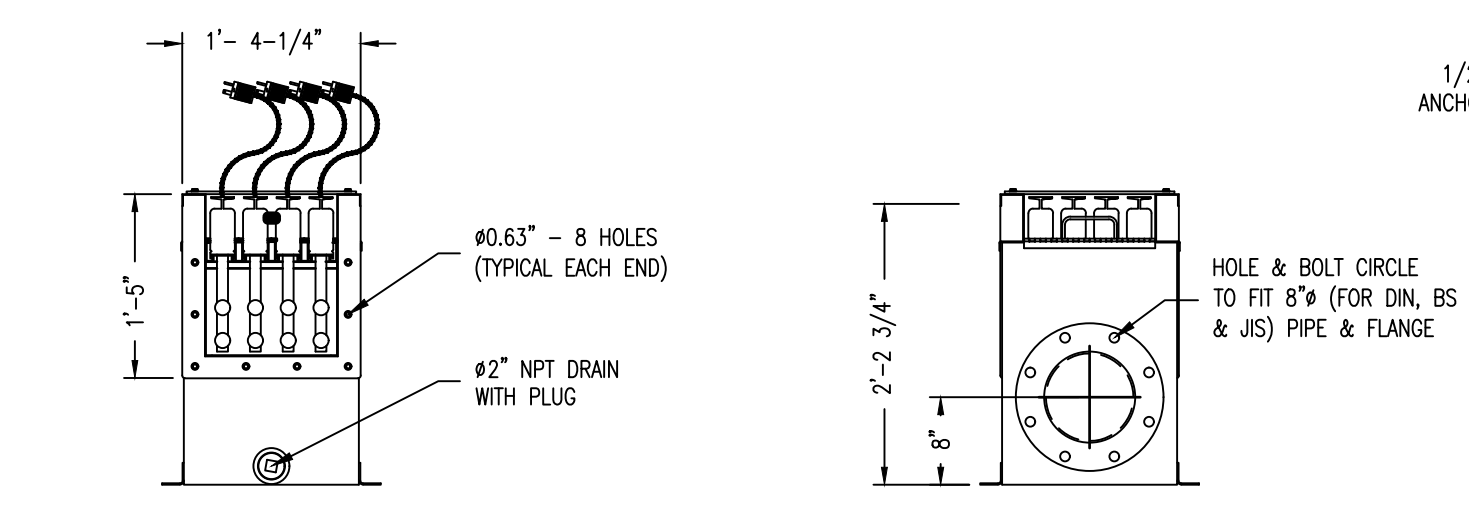
**M328**



CONTROL PANEL MOUNTING STATION



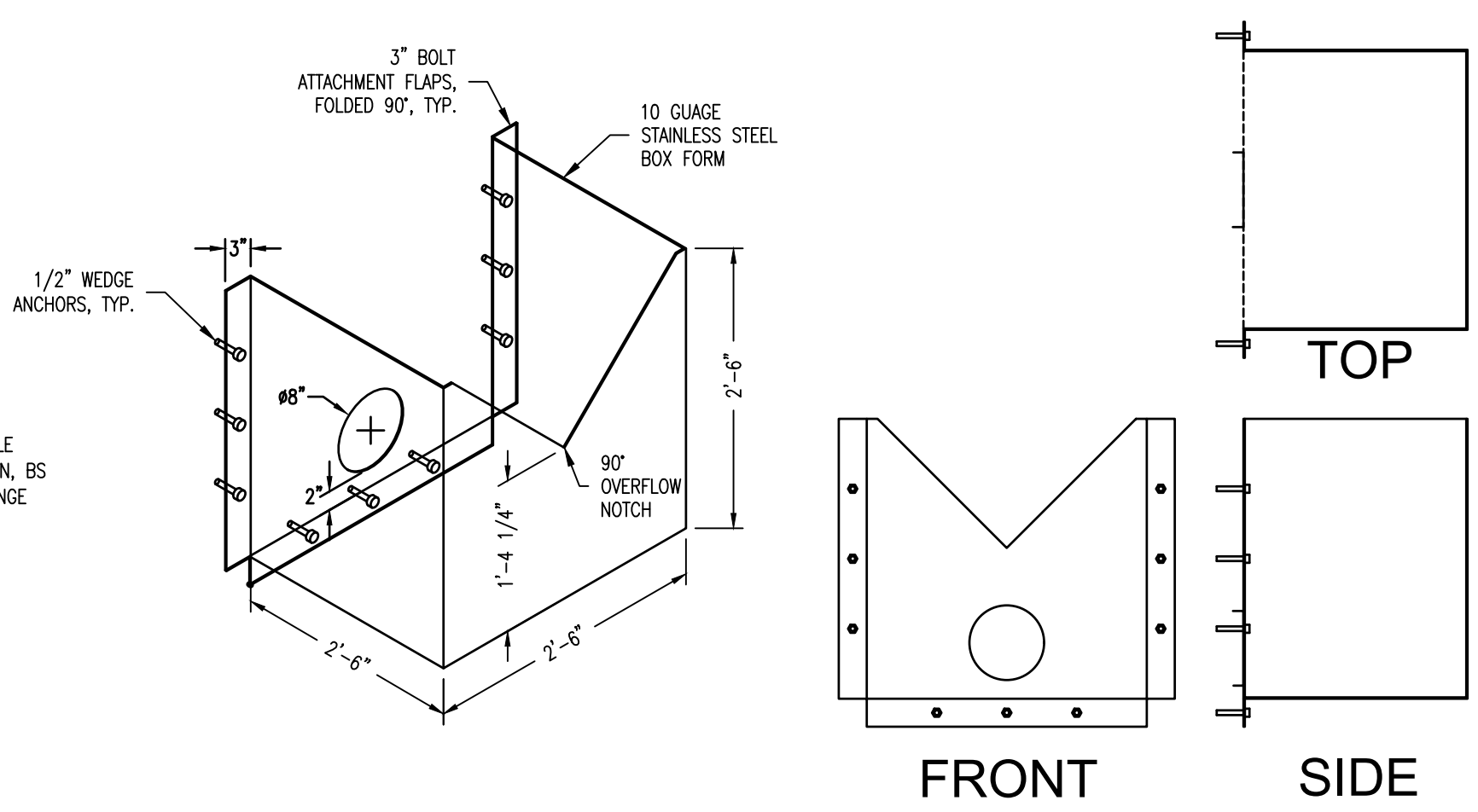
INSTRUMENT SUNSHIELD DETAILS



**A** SCALE: AS SHOWN  
NOTE: PDR AND SYSTEM MONITOR NOT SHOWN FOR CLARITY

**B** SCALE: AS SHOWN

UV MODULE SECTIONS



POST AERATION TANK EFFLUENT WEIR BOX

FRONT SIDE

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D

C

B

A

### SINGLE AND MULTI-ZONE DX SPLIT SCHEDULE

REMARKS:  
 1. PROVIDE WIRELESS REMOTE CONTROLLER KIT FOR EACH INDOOR UNIT.  
 2. OUTDOOR UNIT SHALL BE RATED FOR LOW AMBIENT CONTROL DOWN TO -5 F. PROVIDE RATED CAPACITIES AS LISTED FOR COOLING AT 47F AND HEATING AT 17F.  
 3. PROVIDE INDOOR UNITS WITH INTEGRAL CONDENSATE PUMP AND ALARM. FOR HIGH WALL STYLE UNITS PROVIDE CONDENSATE PUMP SIMILAR TO REFCO GOBI II.  
 4. CONTRACTOR SHALL SIZE ALL REFRIGERANT PIPING SO AS NOT TO REDUCE RATED CAPACITY. SUBMIT REFRIGERANT PIPING DETAIL WITH SUBMITTAL.  
 5. INDOOR UNITS SHALL BE POWERED THROUGH OUTDOOR UNIT.  
 6. MOUNT OUTDOOR UNITS ON 12" HIGH ROOF RAILS OR STAND FOR GRADE MOUNTED UNITS.  
 7. OUTDOOR UNIT SHALL BE RATED FOR OPERATION DOWN TO 0 DEG F.  
 8. PROVIDE WITH VENTILATION KIT.

OUTDOOR UNIT MARK	MANUFACTURER	INDOOR UNIT							OUTDOOR UNIT							REMARKS		
		MARK	MODEL	STYLE	MAX CFM	OUTSIDE AIR CFM	COOLING MBH	HEATING MBH	MARK	MODEL	COOLING CAPACITY	HEATING CAPACITY	SEER/EER	HSPF	MCA		MOCP	VOLTS/PHASE
ACCU-1	LG	AC-1A	LSN120HSV5	WALL MOUNT	460	0	12.0	13.0	ACCU-1	LSU120HSV5	12 MBH	12 MBH	22/12.5	10	10	15	208 / 1	1,2,3,4,5,6,7
ACCU-2	LG	AC-2A	ARNU123TRD4	CASSETTE	335	35	12.0	13.0	ACCU-2	ARUN024GSS4	24 MBH	27 MBH	17 / 10.7	10	19.6	30	208 / 1	1,2,3,4,5,6,7,8
		AC-2B	ARNU123TRD4	CASSETTE	335	35	12.0	13.0										1,2,3,4,5,6,7,8

### EXHAUST FAN SCHEDULE

1. PROVIDE WITH 16" HIGH INSULATED ROOF CURB.  
 2. MANUFACTURER TO PROVIDE MOTOR STARTER.

MARK	LOCATION			TYPE	CFM	ESP (IN-WG)	WHEEL			MOTOR					EMERGENCY POWER	ACCESS DOOR	BELT DRIVE	BIRD SCREEN	GRAVITY BDD	MOTORIZED DAMPER	VIBRATION ISOLATORS	UNIT MTD. DISC. SW	DESIGN REFERENCE		REMARKS
	NAME	SERVICE					FAN RPM	HP	BHP	VOLTS/PHASE/HE RTZ	FLA	MANUFACTURER	MODEL NO.												
EF-1	ROOF	EXHAUST FAN		CENTRIFUGAL DOWNBLAST	1000	0.50	BI	1057	0.25	0.13	115/1/60	3.8	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	GREENHECK	G-130-VG	1,2	

#### CONTROLS:

##### DX SPLIT SYSTEMS:

DX SPLIT SYSTEMS SHALL MODULATE BETWEEN COOLING AND HEATING DEPENDING ON SPACE REQUIREMENTS. SYSTEM SHALL STAGE COMPRESSORS TO MAINTAIN SPACE SETPOINTS. UNIT SHALL BE CONTROLLED BY WIRELESS REMOTE/THERMOSTAT KIT PROVIDED BY MANUFACTURER. THE SUPPLY FAN SHALL RUN CONTINUOUSLY TO PROVIDE THE REQUIRED VENTILATION RATE FOR THE OFFICE.

##### ERV:

ERV SHALL OPERATE CONTINUOUSLY EXTRACTING EXHAUST AIR FROM THE BATHROOM AND PROVIDING FRESH AIR TO THE OFFICE.

##### ROOF EXHAUST FAN:

ROOF EXHAUST FAN SHALL BE TIED TO A LABELED WALL SWITCH TO ALLOW FOR SUMMER VENTILATION/DESTRATIFICATION.

##### ELECTRIC WALL HEATERS (EWH-1, 2):

ELECTRIC WALL HEATERS SHALL MODULATE THE HEATING ELEMENT TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 68 DEG (ADJ).

##### ELECTRIC UNIT HEATERS (UH-1):

ELECTRIC UNIT HEATERS SHALL MODULATE THE HEATING ELEMENT TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 55 DEG (ADJ.)

#### INSULATION REQUIREMENTS:

##### DUCTWORK:

ALL DUCTWORK ASSOCIATED WITH THE ERV AND ALL TRANSFER AIR DUCTWORK SHALL BE INSULATED WITH ONE OF THE FOLLOWING OPTIONS.

1. FLEXIBLE ELASTOMERIC: 1-1/2 INCHES THICK.
2. MINERAL-FIBER BLANKET: 1-1/2 INCHES THICK AND 0.75-LB/CU. FT. NOMINAL DENSITY.
3. MINERAL-FIBER BOARD: 1-1/2 INCHES THICK AND 2-LB/CU. FT. NOMINAL DENSITY.

EXHAUST DUCTWORK ASSOCIATED WITH THE ROOF MOUNTED EXHAUST FAN DOES NOT NEED TO BE INSULATED.

##### PIPING:

SUCTION/HOT GAS PIPING SHALL HAVE 2" FLEXIBLE ELASTOMERIC INSULATION. OUTDOOR PIPING MUST HAVE A UV RESISTANT PVC JACKET.

### ELECTRIC HEATER SCHEDULE

REMARKS:  
 1. PROVIDE WITH UNIT MOUNTED DPST THERMOSTAT.  
 2. THERMOSTAT TO CYCLE FAN UPON A CALL FOR HEATING.  
 3. PROVIDE WITH FACTORY MOUNTED INTEGRAL DISCONNECT SWITCH.  
 4. REFER TO FLOOR PLANS FOR UNIT QUANTITIES AND LOCATIONS.

MARK	MANUFACTURER	MODEL NUMBER	TYPE	INPUT (KW)	OUTPUT (MBH)	ELECTRICAL CHARACTERISTICS	HEATER AMPS	MCA	MOCP	REMARKS
EWH-1	BERKO (OR EQUAL)	SRA1512DSF	WALL MOUNTED	1.5	5.12	120 V/ 1PH	12.5	15.6	20	1,2,3
EWH-2	BERKO (OR EQUAL)	SRA2024DSF	WALL MOUNTED	2	6.83	208 V/ 1PH	7.3	10.5	15	1,2,3
UH-1	BERKO (OR EQUAL)	HUH-5245A	CEILING/STRUCTURE MOUNTED	5	17	208 V/ 1PH	20.8	26	30	1,2,3

### ERV SCHEDULE

REMARKS:  
 1. PROVIDE WITH SPEED CONTROL SWITCH. MOUNT ON UNIT.  
 2. PROVIDE WITH VENT CAPS WITH BACKDRAFT GRAVITY DAMPERS AT OUTSIDE PENETRATIONS.

MARK	MANUFACTURER	MODEL NUMBER	EXHAUST CFM	EXHAUST ESP (in.w.c)	OUTSIDE AIR CFM	OUTSIDE AIR ESP (in.w.c)	WATTS	ELECTRICAL CHARACTERISTICS	MOCP	REMARKS
ERV-1	PANASONIC (OR EQUAL)	FV-10VEC2	70	0.25	70	0.25	18	120 V/ 1PH	20	1,2,3,4

### LOUVER SCHEDULE

1. FURNISH WITH ALUMINUM BUG SCREEN AND SECURITY BARS.  
 2. FURNISH WITH KYNAR PAINT FINISH OF STANDARD COLOR SELECTION BY ARCHITECT.  
 3. PROVIDE BACKDRAFT DAMPER.

MARK	LOCATION		MANUFACTURER	MODEL NO.	CFM	DIMENSIONS			FREE AREA (SF)	MAX FAV	APD	BIRD SCREEN	REMARKS
	NAME					W	H	D					
LV-1	LAB		RUSKIN	ELF6375DXD	2000	3'-0"	3'-0"	0'-6"	4.9	500 FPM	0.10 in-wg	Yes	1,2,3

### DIFFUSER / GRILLE SCHEDULE

REMARKS:  
 1. BRANCH DUCTWORK TO THE DIFFUSER SHALL BE THE SAME SIZE AS THE NECK UNLESS OTHERWISE NOTED.  
 2. PROVIDE FRAME STYLE APPROPRIATE FOR CEILING TYPE (I.E. LAY IN, SURFACE MOUNT).  
 3. PROVIDE SQUARE TO ROUND TRANSITION FOR ROUND RUN OUTS AS REQUIRED.  
 4. PROVIDE CEILING RADIATION DAMPER TO MEET RATING OF CEILING CONSTRUCTION WHERE REQUIRED.

TAG	NECK SIZE	FACE LENGTH	FACE WIDTH	MATERIAL	FINISH	MAX NC	MAX THROW (FT)	MAX TOTAL APD (IN WG)	MANUFACTURER	MODEL	NOTES
E1	6"Ø	12"	12"	ALUMINUM	WHITE	15	6	0.05	PRICE	E-80	1,2,3,4
T1	6"Ø	12"	12"	ALUMINUM	WHITE	15	6	0.05	PRICE	E-80	1,2,3,4



CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1

Designed By: N.H.

Drawn By: N.H.

Checked By: D.B.

Date: 12/28/22



NOT FOR CONSTRUCTION

SCHEDULES - MECHANICAL

# M600

5

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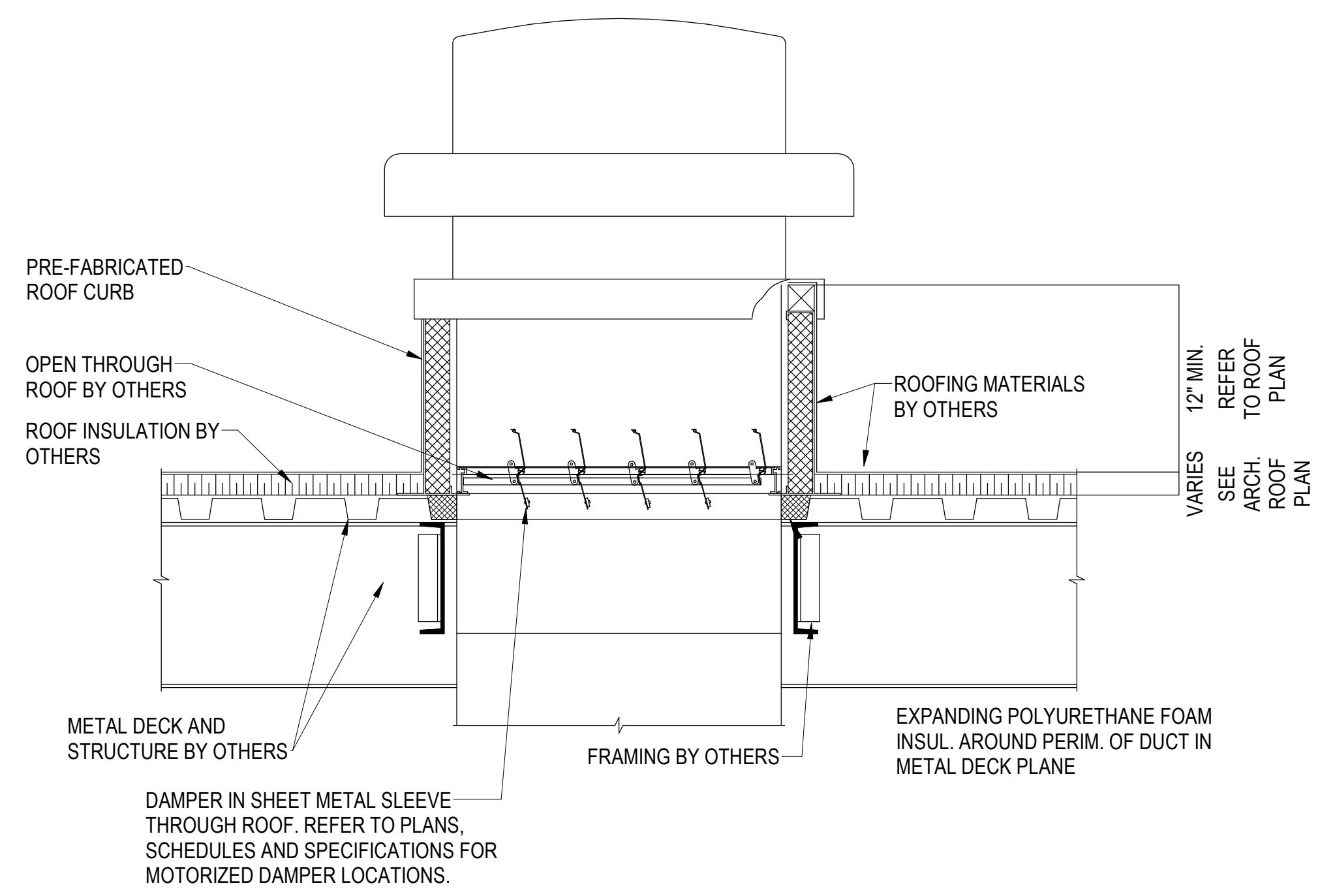
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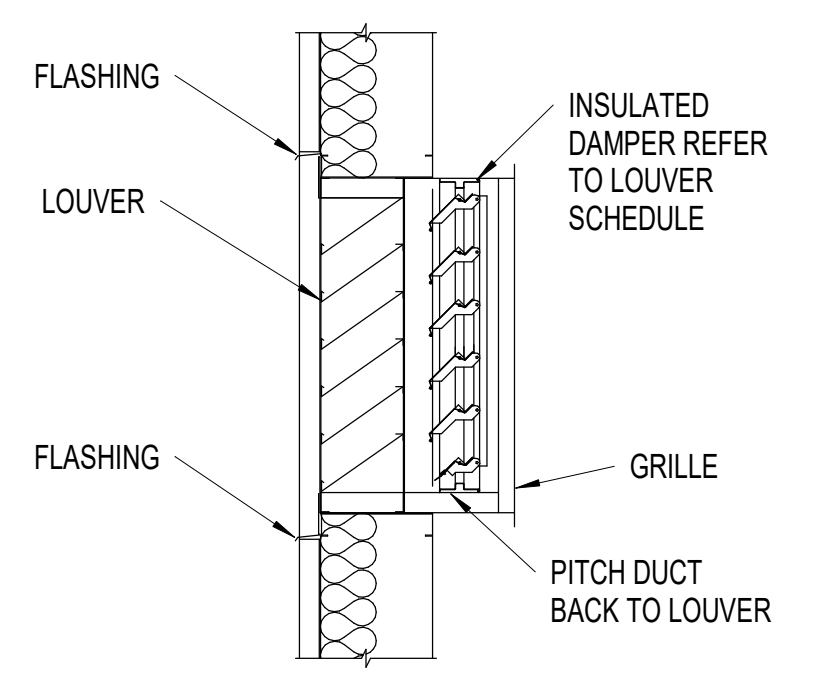
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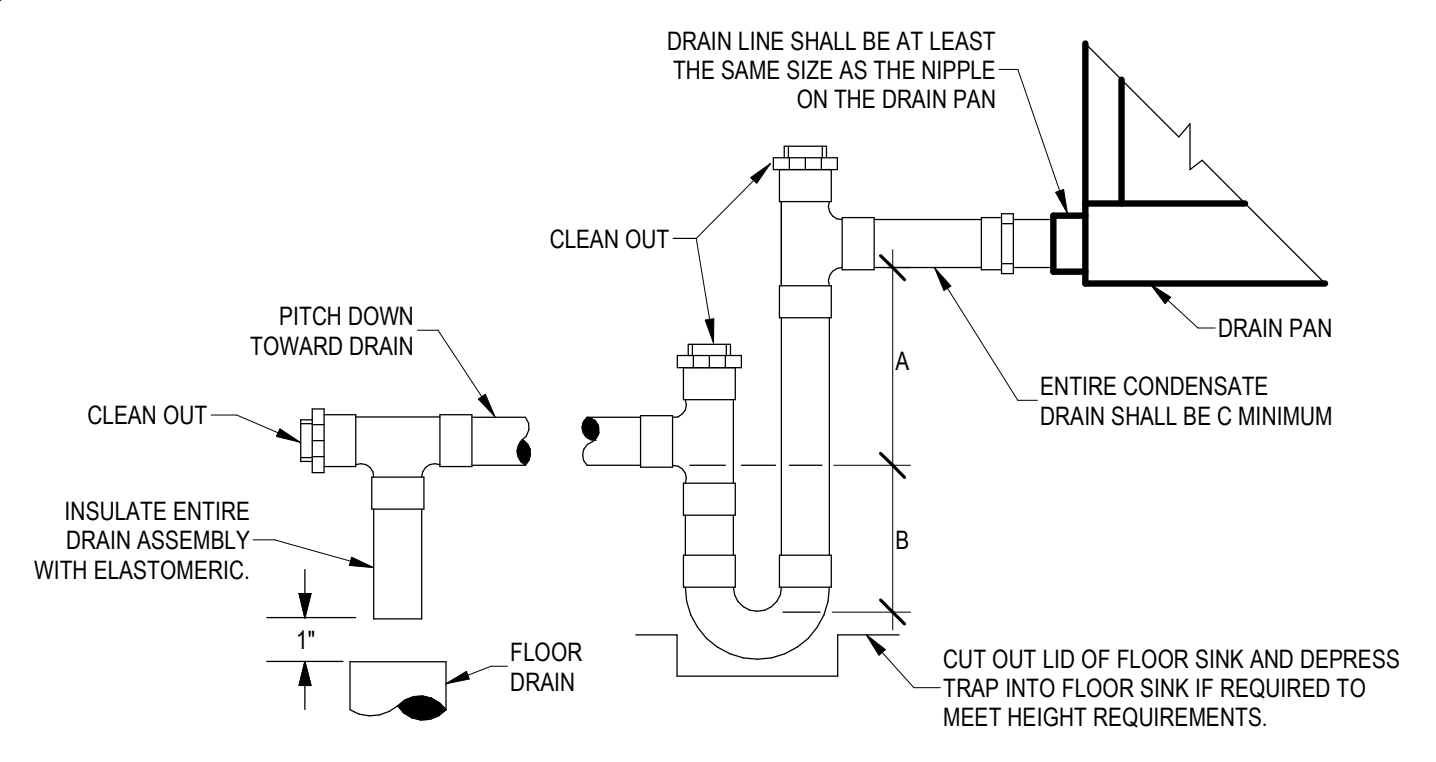
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**1 M - DETAIL - ROOF MOUNTED DOWNBLAST EXHAUST FAN**  
NOT TO SCALE



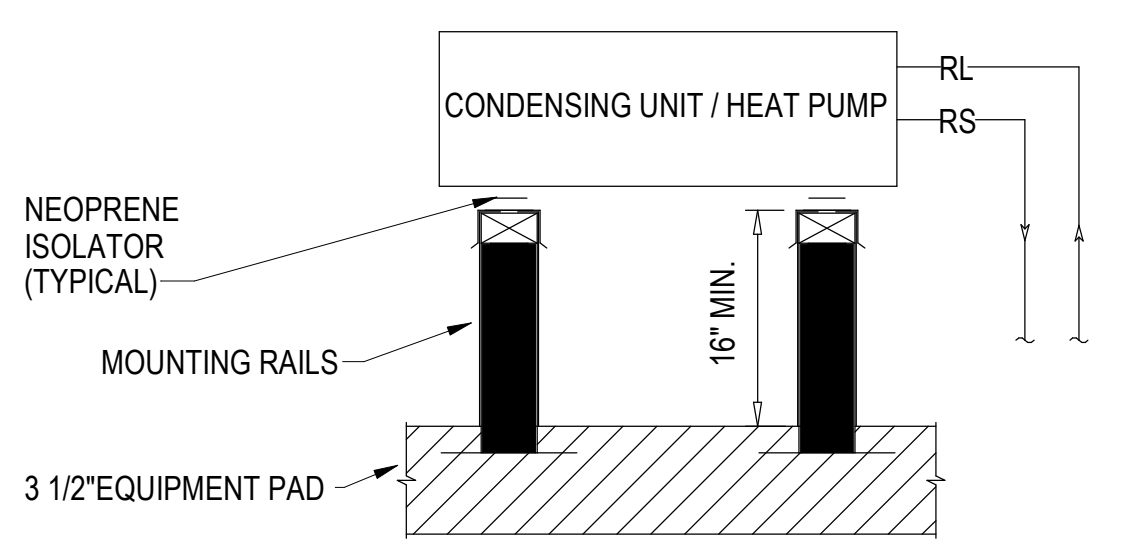
**2 M - DETAIL - LOUVER INSTALLATION**  
NOT TO SCALE



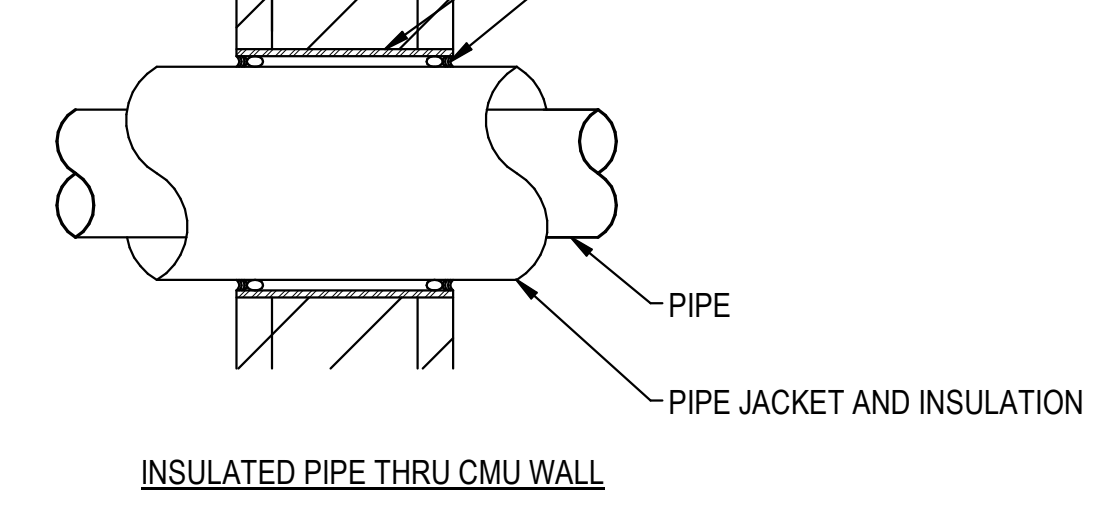
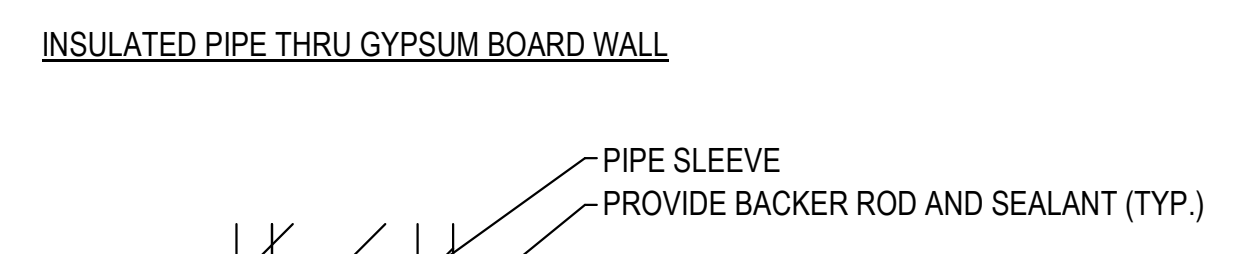
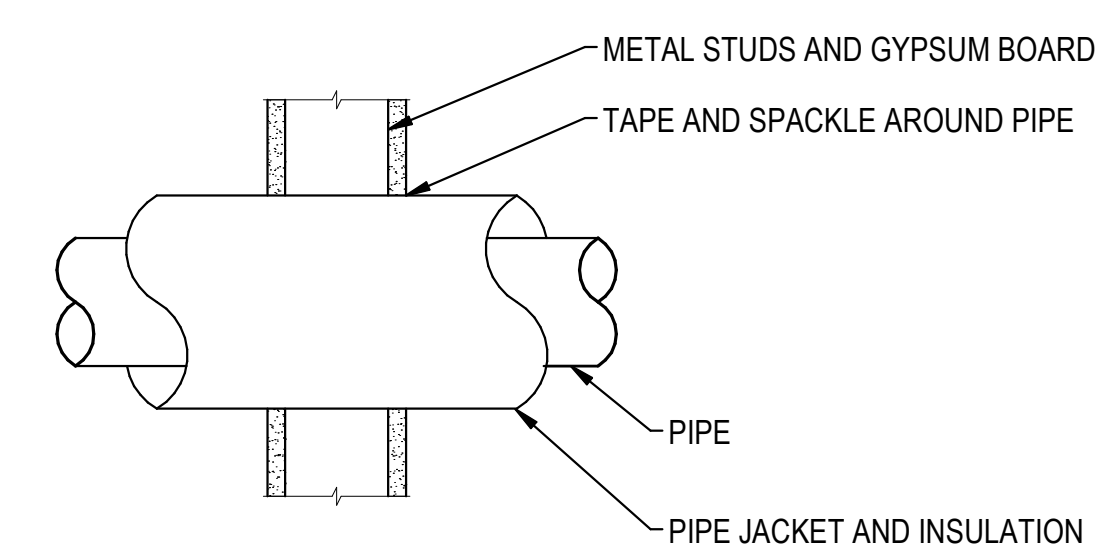
UNIT TYPE	A	B
DRAW THROUGH	P + 1	P/2 + 1
BLOW THROUGH	2' MIN.	2P

P = STATIC PRESSURE AT DRAIN PAN

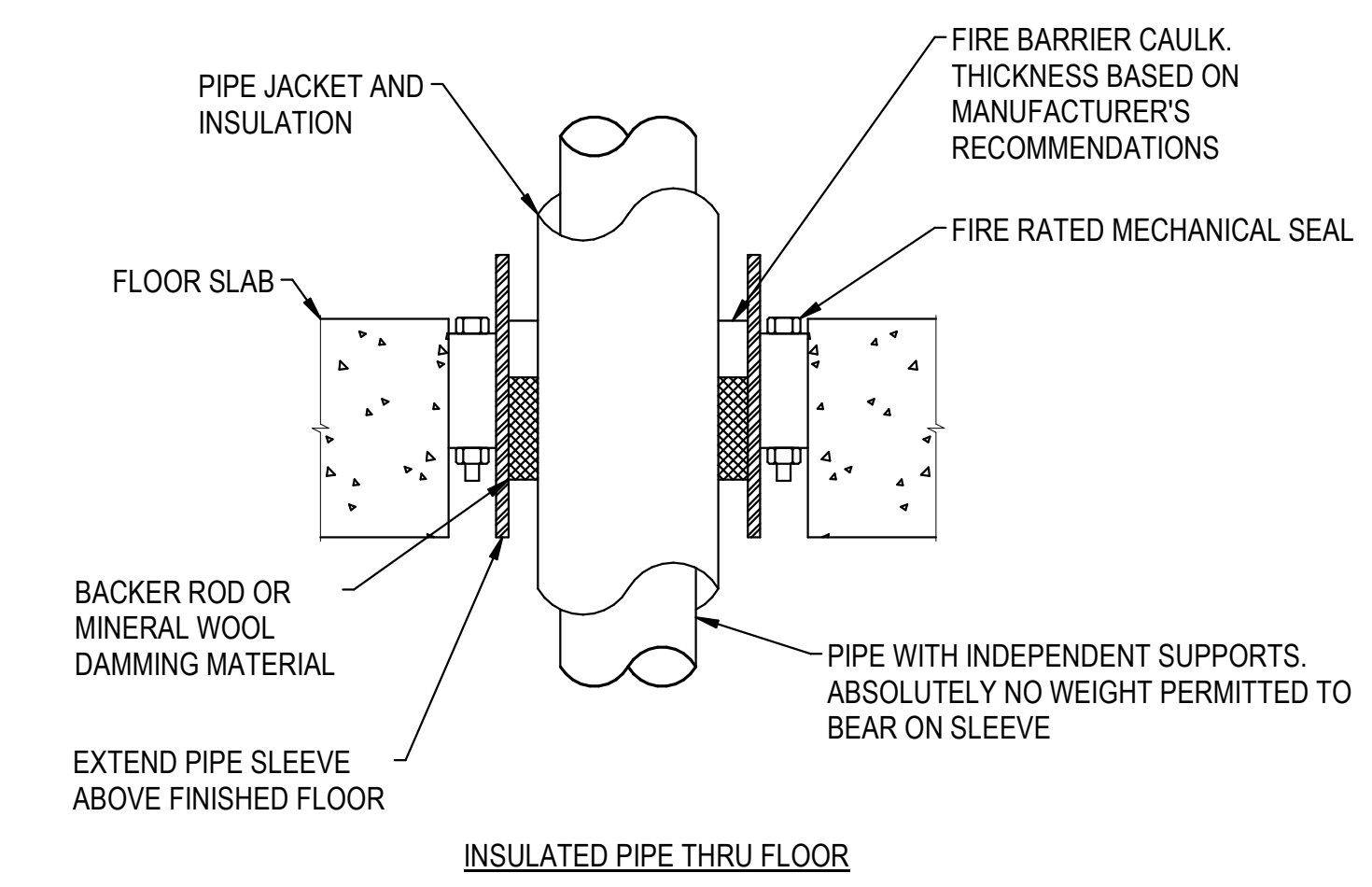
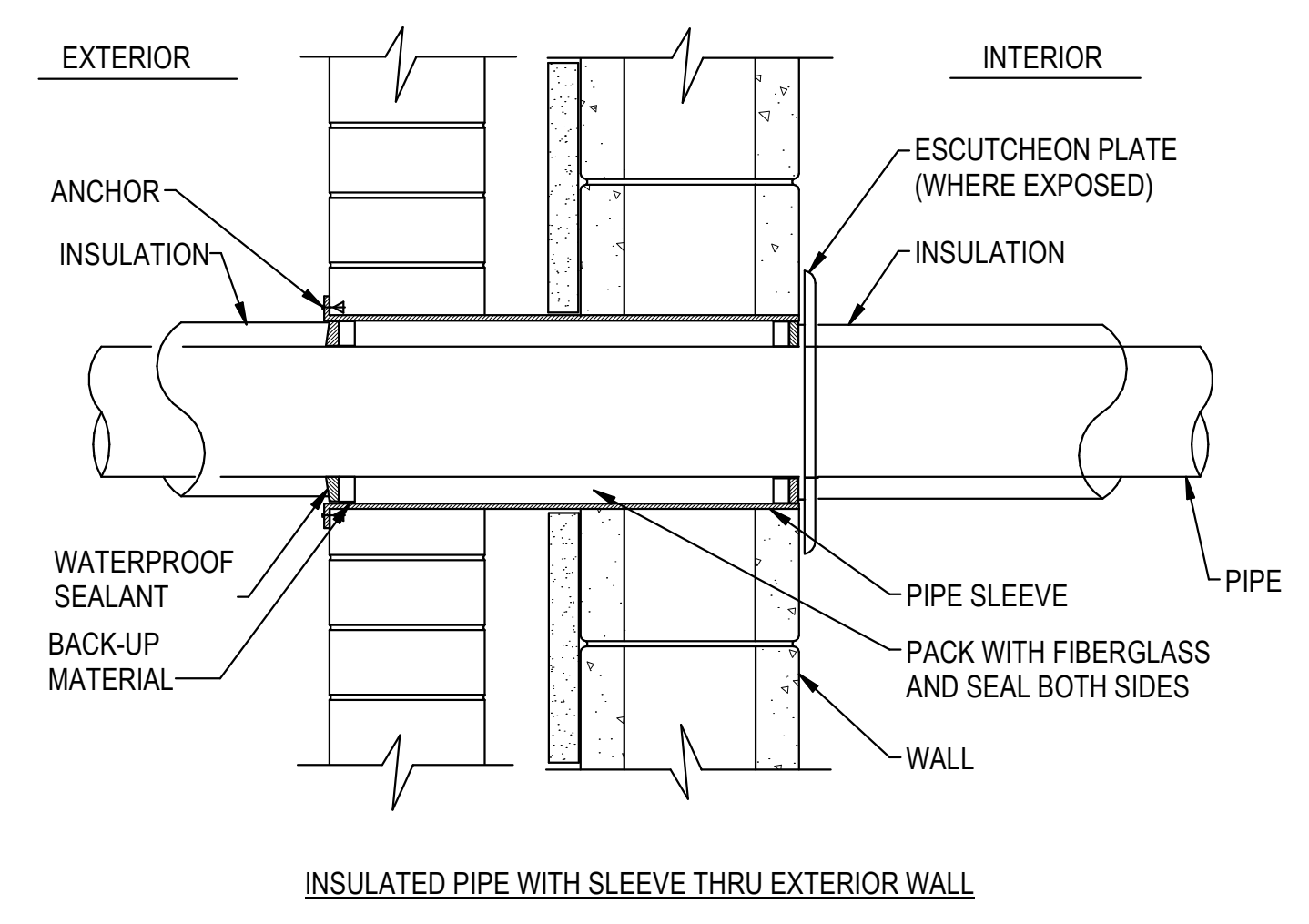
**4 M - DETAIL - CONDENSATE DRAIN TRAP**  
NOT TO SCALE



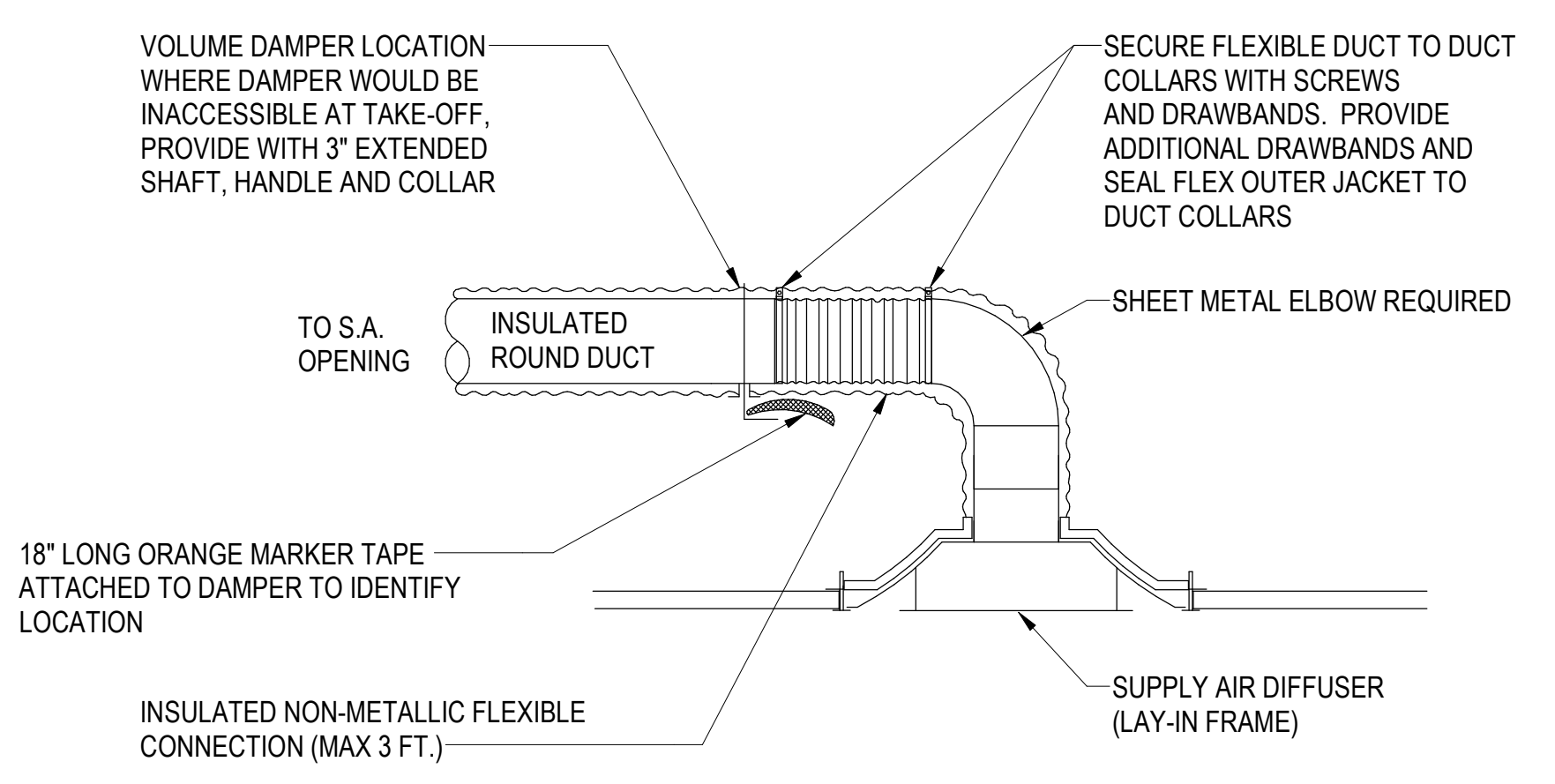
**5 M - DETAIL - CONDENSING OR HEAT PUMP UNIT**  
NOT TO SCALE



**3 M - DETAIL - PIPE THROUGH WALL**  
NOT TO SCALE

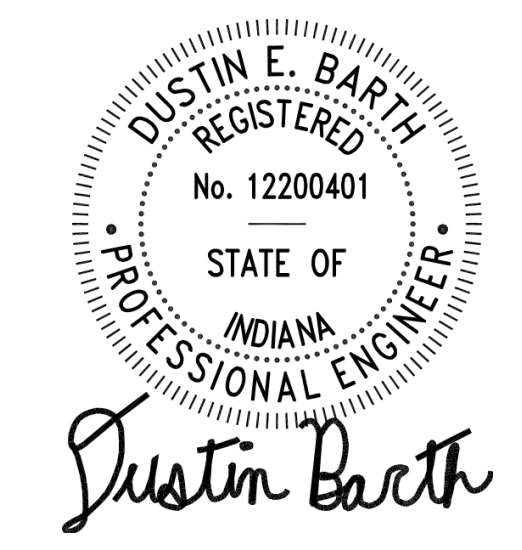


**6 M - DETAIL - DIFFUSER MOUNTING**  
NOT TO SCALE

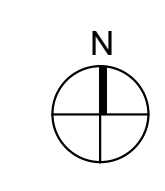


#	Revision	Date

Project #: 21-400-194-1  
Designed By: N.H.  
Drawn By: N.H.  
Checked By: D.B.  
Date: 12/28/22



NOT FOR CONSTRUCTION





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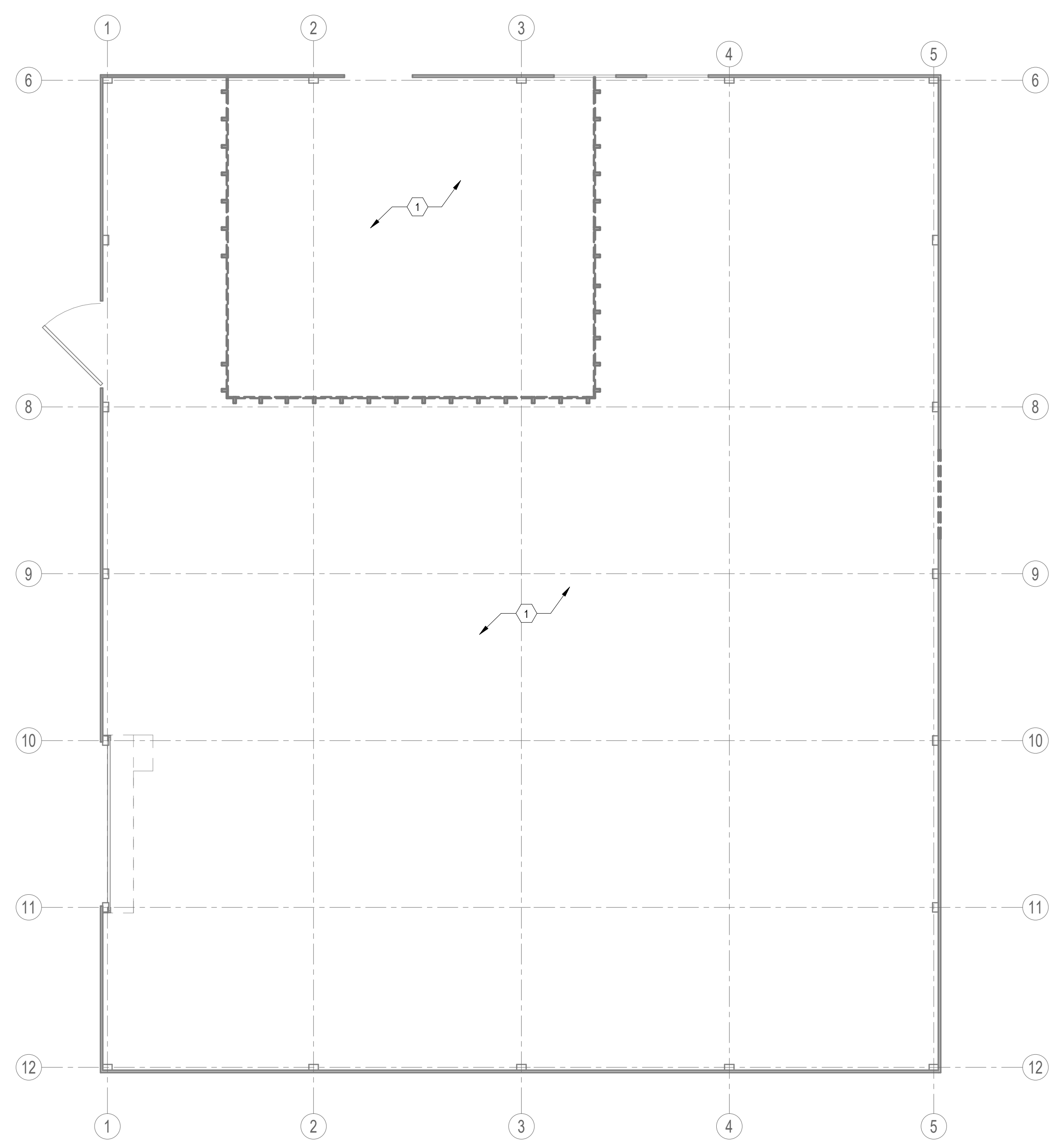
PLAN NOTES	
#	NOTE
1	DEMO ALL LIGHTING, ELECTRICAL DEVICES, WIRING, AND EQUIPMENT IN THIS AREA BACK TO SOURCE.

D

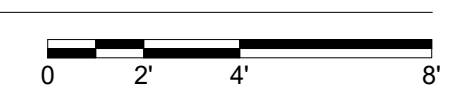
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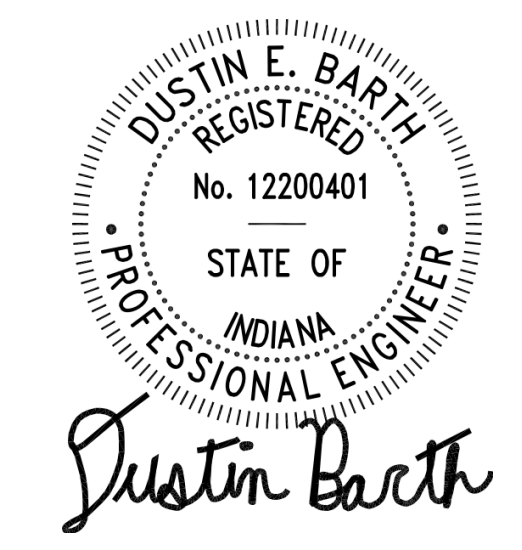
**1** FIRST FLOOR ELECTRICAL DEMOLITION PLAN  
1/4" = 1'-0"



CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

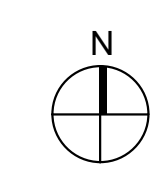
#	Revision	Date
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Project #: 21-400-194-1  
 Designed By: DJ  
 Drawn By: DJ  
 Checked By: DB  
 Date: 12/28/22



*Dustin Barth*

NOT FOR CONSTRUCTION



FIRST FLOOR  
 ELECTRICAL DEMOLITION  
 PLAN

**E110**

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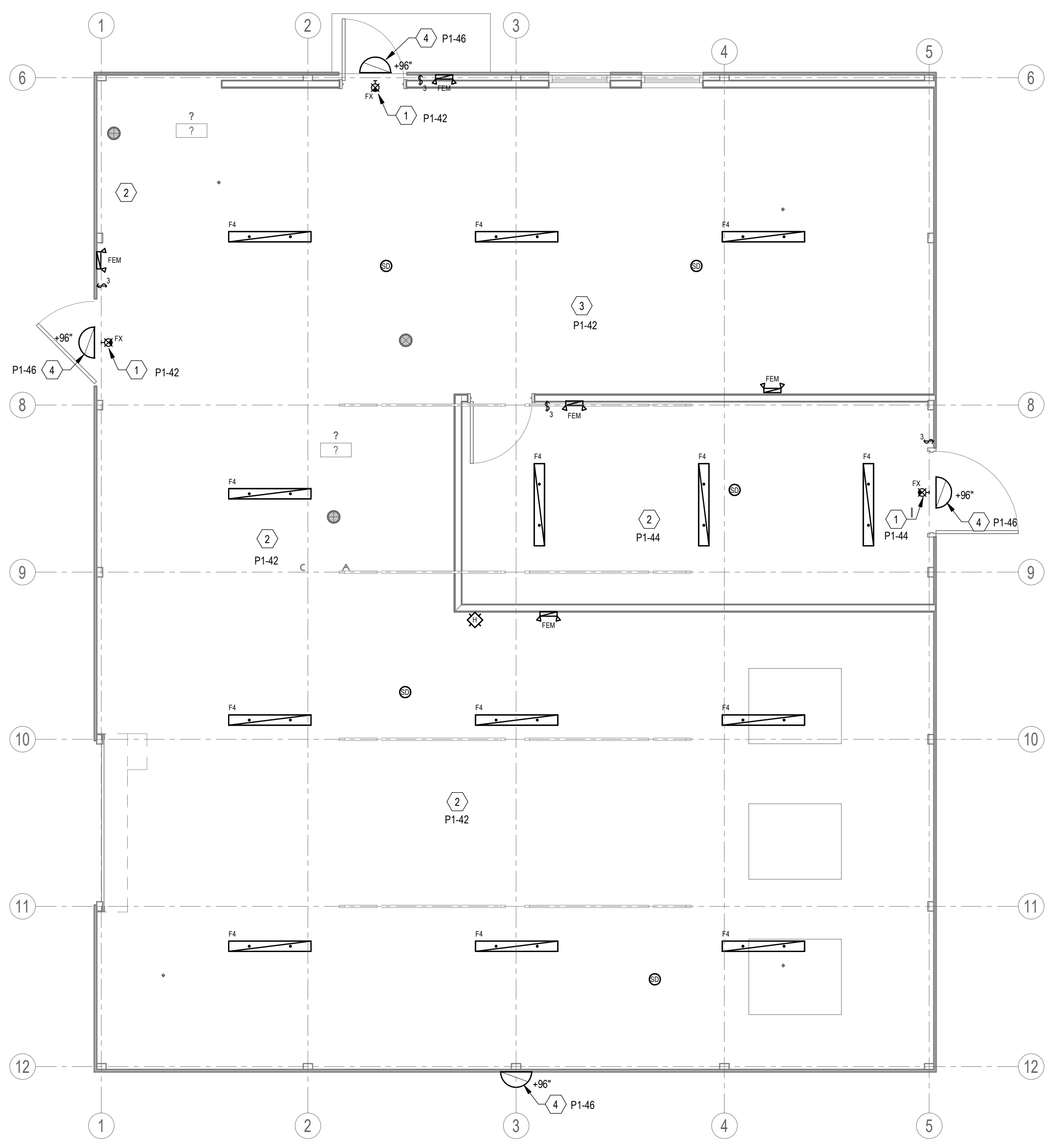
LIGHTING CONTROL INTENT SCHEDULE	
SPACE TYPE	DESCRIPTION
OFFICES	LIGHTING IN THIS SPACE SHALL OPERATE AS MANUAL ON AND MANUAL OFF. USER SHALL HAVE ON, OFF, RAISE, AND LOWER MANUAL OVERRIDE BUTTONS AT WALL CONTROLS.
ELECTRICAL ROOMS	MANUAL LINE VOLTAGE SWITCH(ES), NO LIGHTING CONTROL SYSTEM INTEGRATION.
CORRIDORS	LIGHTING IN THIS ROOM SHALL OPERATE AS AUTO ON/ AUTO OFF. NO MANUAL CONTROL.
RESTROOMS STORAGE JANITORS CLOSETS	LIGHTING IN THIS ROOM SHALL OPERATE AS AUTO ON/ AUTO OFF. CONTROL VIA MANUAL ON/OFF SWITCH AT WALL OR AUTO ON/OFF VIA OCCUPANCY SENSOR.

**NOTE:** ROOM/SPACE CONTROL OPERATION SHALL NOT DEPEND ON 'LAST STATE' USER INPUTS FOR HOW IT WILL OPERATE DAY TO DAY. REGARDLESS IF THE ROOM/SPACE HAS BEEN SHUT-OFF AUTOMATICALLY OR MANUALLY, AFTER ROOM SENSORS HAVE DETECTED NO OCCUPANTS FOR A PRESET TIME DELAY THEN THE ROOM CONTROLS SHALL REVERT BACK AND OPERATE AS DESCRIBED ABOVE.

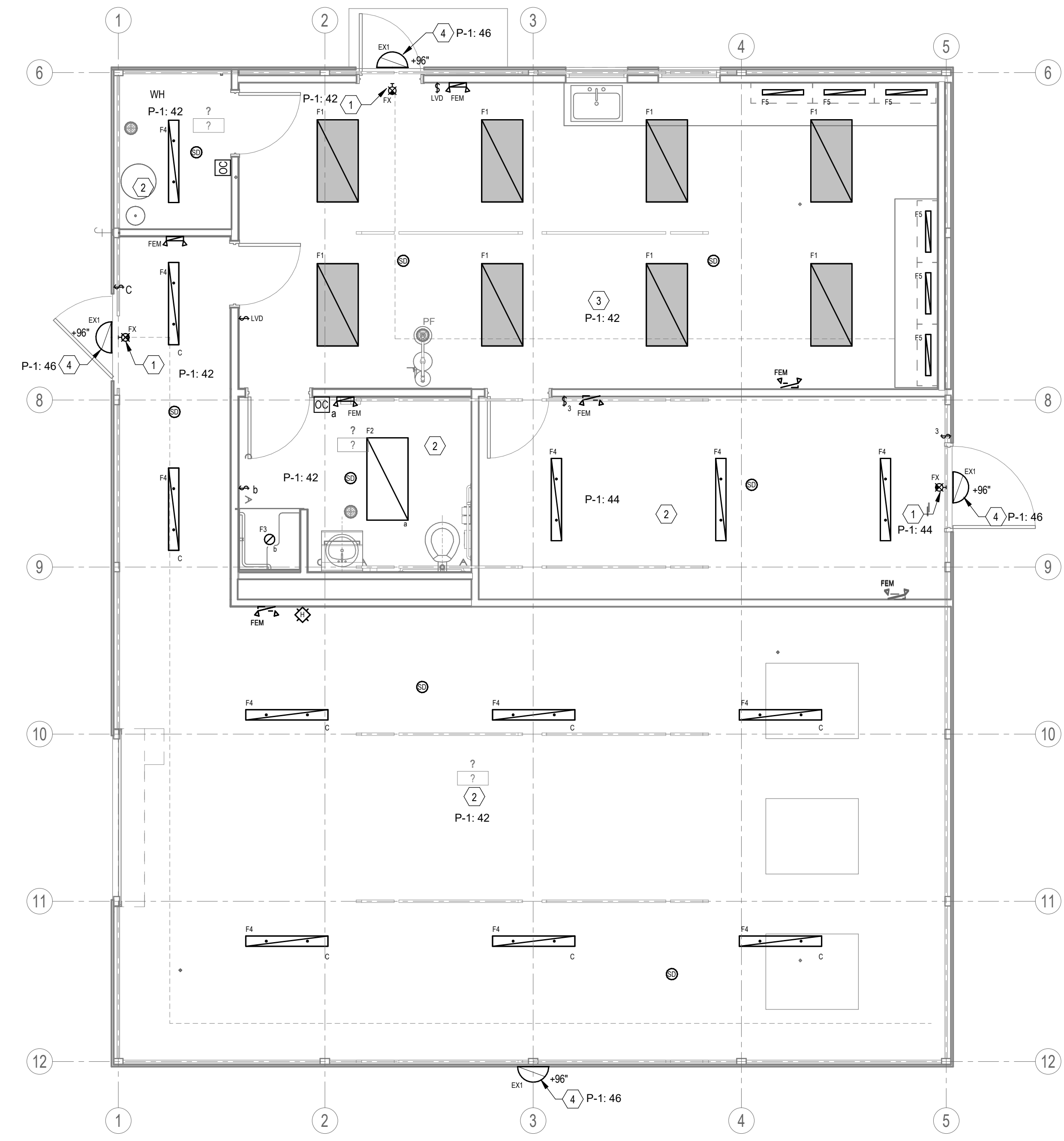
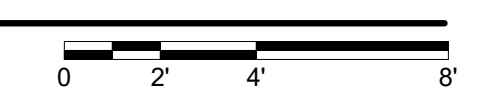
PLAN NOTES	
#	NOTE
1	CONNECT EXIT LIGHTS TO 20A, 1P, 120V UNSWITCHED EMERGENCY SYSTEM CIRCUIT INDICATED, UNLESS NOTED OTHERWISE.
2	4 CONNECT UNSHADED/NORMAL POWER LIGHTS WITHIN THIS BOUNDARY TO 20A, 1P, 120V CIRCUIT INDICATED.
3	CONNECT ALL SWITCHED EMERGENCY POWER LIGHT FIXTURES IN THIS ROOM VIA LIGHTING CONTROL DEVICES SHOWN, UTILIZING 20A, 1P, 277V EMERGENCY SYSTEM CIRCUIT INDICATED.
4	EXTERIOR LIGHTING FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL, LOCATED ON ROOF. CONNECT TO 20A, 1P, 277V EMERGENCY CIRCUIT INDICATED.

- GENERAL NOTES - LIGHTING:**
- A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
  - B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE.
  - C. CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10AWG UNLESS NOTED OTHERWISE.
  - D. PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
  - E. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
  - F. ALL OCCUPANCY SENSOR SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
  - G. SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
  - H. ALL RECESSED LIGHTING FIXTURES IN LAY-IN CEILINGS SHALL BE INSTALLED WITH A FLEXIBLE METAL CONDUIT WITH MAXIMUM LENGTH OF 6 FEET.
  - I. LIGHT FIXTURES THAT ARE INSTALLED WITHIN A FIRE-RATED CEILING SHALL BE PROVIDED WITH FIRE RATED COVERS IN ORDER TO MAINTAIN THE CEILING FIRE RATINGS. FIRE RATED COVERS SHALL BE COVERS SUCH AS TENMAT FIRE PROTECTION SOLUTIONS OR SIMILAR. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FIRE RATED CEILING LOCATIONS AND PROVIDE COVERS ACCORDINGLY.

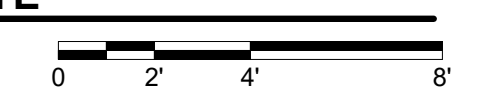
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**1 FIRST FLOOR LIGHTING AND SYSTEMS PLAN - BASE BID**  
1/4" = 1'-0"



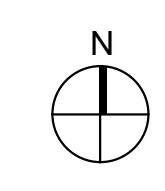
**2 FIRST FLOOR LIGHTING AND SYSTEMS PLAN - ALTERNATE**  
1/4" = 1'-0"



**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: DJ  
 Drawn By: DJ  
 Checked By: DB  
 Date: 12/28/22



FIRST FLOOR LIGHTING AND SYSTEMS PLANS

**E210**



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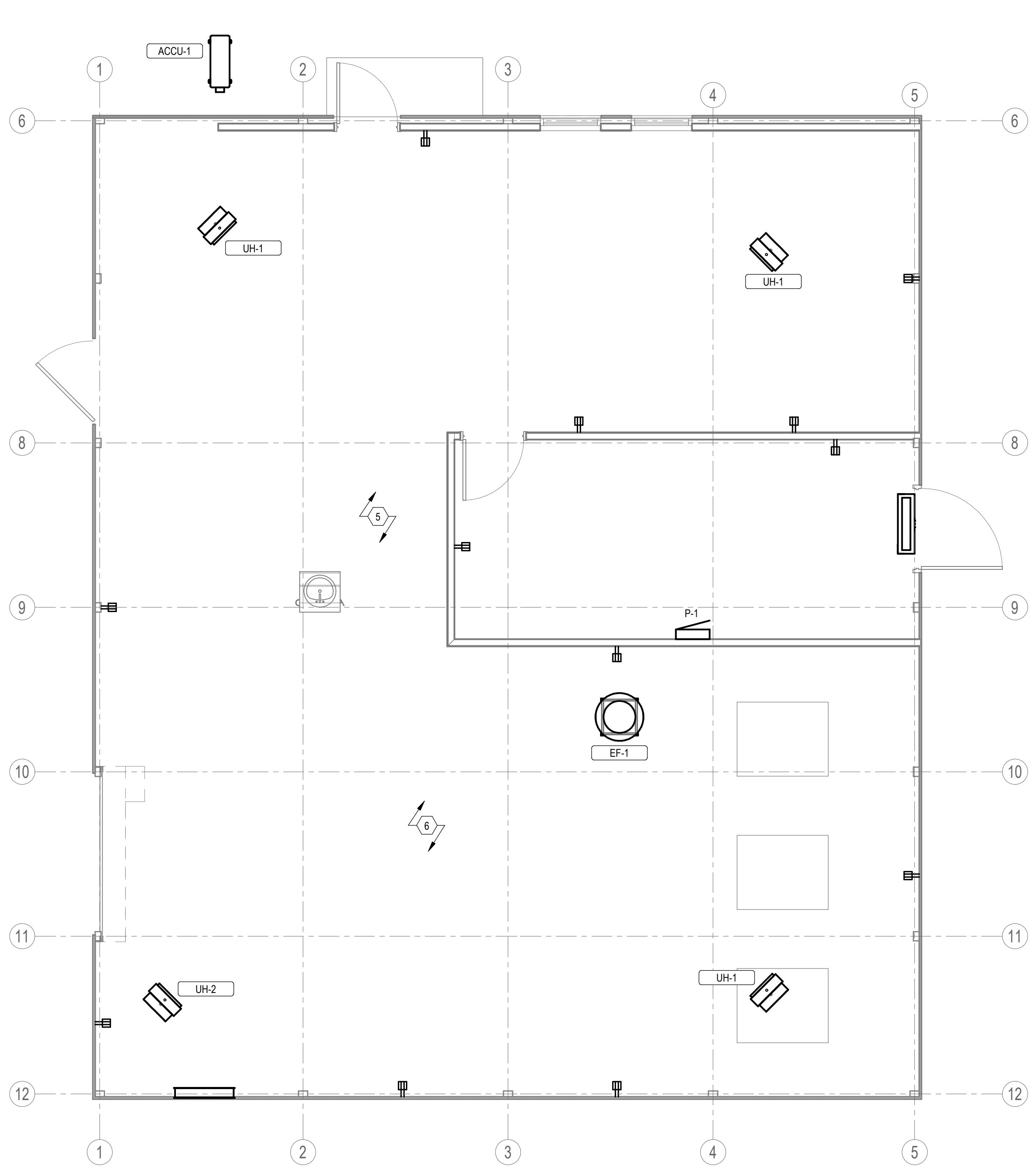
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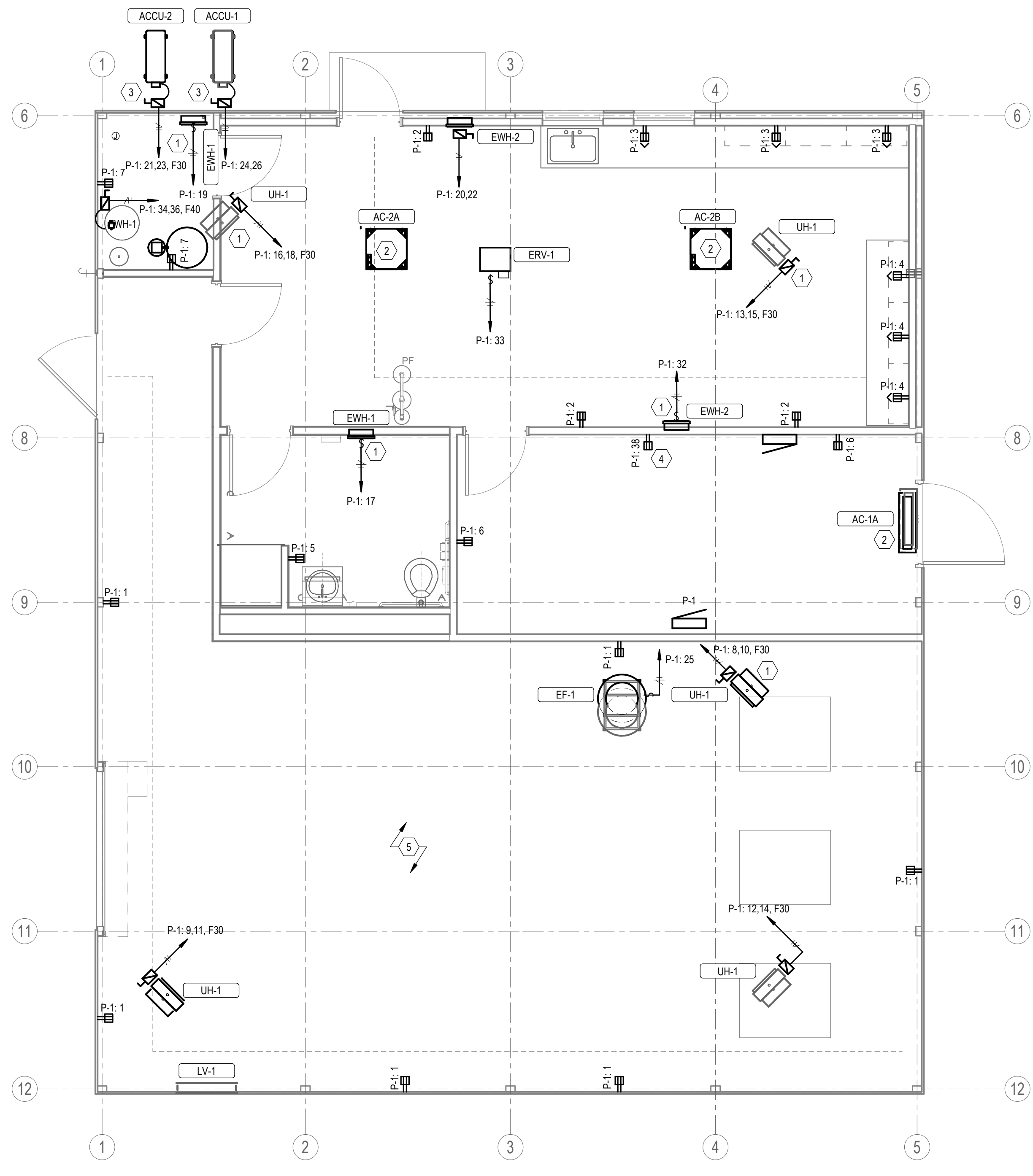
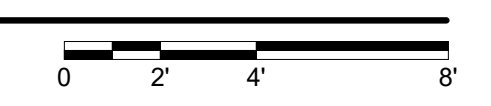
A

#	NOTE
1	UNIT PROVIDED WITH FACTORY INSTALLED SAFETY DICONNECT SWITCH.
2	EC SHALL PROVIDE DISCONNECT AND ALL ELECTRICAL INTERCONNECTIONS BETWEEN INDOOR UNIT AND ASSOCIATED OUTDOOR UNIT AS REQUIRED.
3	PROVIDE NEMA 3R 208V, 2P-30A FUSIBLE DISCONNECT. FUSE AS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ADDITIONAL SUPPORT STRUCTURE AS REQUIRED.
4	DEDICATED RECEPTACLE AND CIRCUIT FOR HONEYWELL CHART RECORDER. VERIFY EXACT LOCATION.
5	REFER TO SIMMS-DURKIN ASSOCIATES DRAWINGS FOR ADDITIONAL ELECTRICAL INFORMATION AND REQUIREMENTS.
6	REFER TO FIRST FLOOR ALTERNATE PLAN FOR CIRCUITING REQUIREMENTS.

- GENERAL NOTES - POWER:
- A. REFER TO SHEET E-001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
  - B. REFER TO MECHANICAL AND PLUMBING SERIES DRAWINGS FOR ADDITIONAL SCOPE OF WORK.
  - C. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON THE TOTAL CIRCUIT DISTANCE.
  - D. ALL RECEPTACLES LOCATED WITHIN 6 FEET OF A SINK SHALL BE GFCI TYPE. ALL RECEPTACLES MAY NOT BE IDENTIFIED AS GFCI ON PLAN, BUT SHALL BE PROVIDED ACCORDING TO REQUIREMENT.
  - E. ALL SPECIAL TYPE RECEPTACLES SHALL BE NEMA 6-20R UNLESS NOTED OTHERWISE AND SHALL BE CIRCUITED WITH (2)#10 + (1)#10 NEUTRAL + (1)#10 GROUND. COORDINATE REQUIREMENTS WITH OWNER SUPPLIED EQUIPMENT PRIOR TO INSTALLATION.
  - F. REFER TO ARCHITECTURAL SCHEDULES, DETAILS, AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.
  - G. UNLESS NOTED OTHERWISE, ALL NEW DEVICES SHALL BE INSTALLED FLUSH IN WALL.
  - H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO PANELBOARD BREAKERS, REFER TO PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.



**1** FIRST FLOOR POWER PLAN - BASE BID  
1/4" = 1'-0"



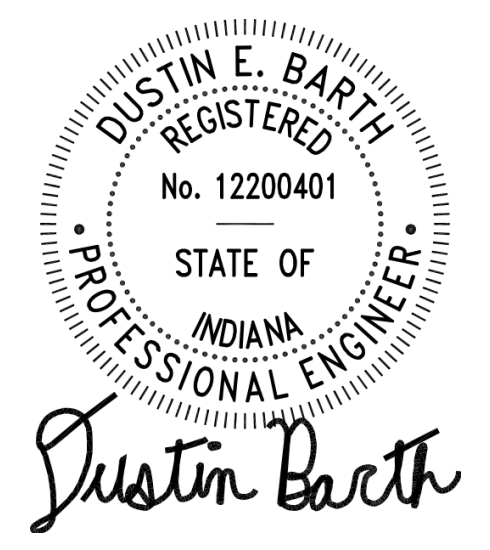
**2** FIRST FLOOR POWER PLAN - ALTERNATE  
1/4" = 1'-0"



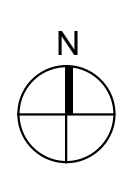
CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: Designer  
 Drawn By: Author  
 Checked By: Checker  
 Date: 12/28/22



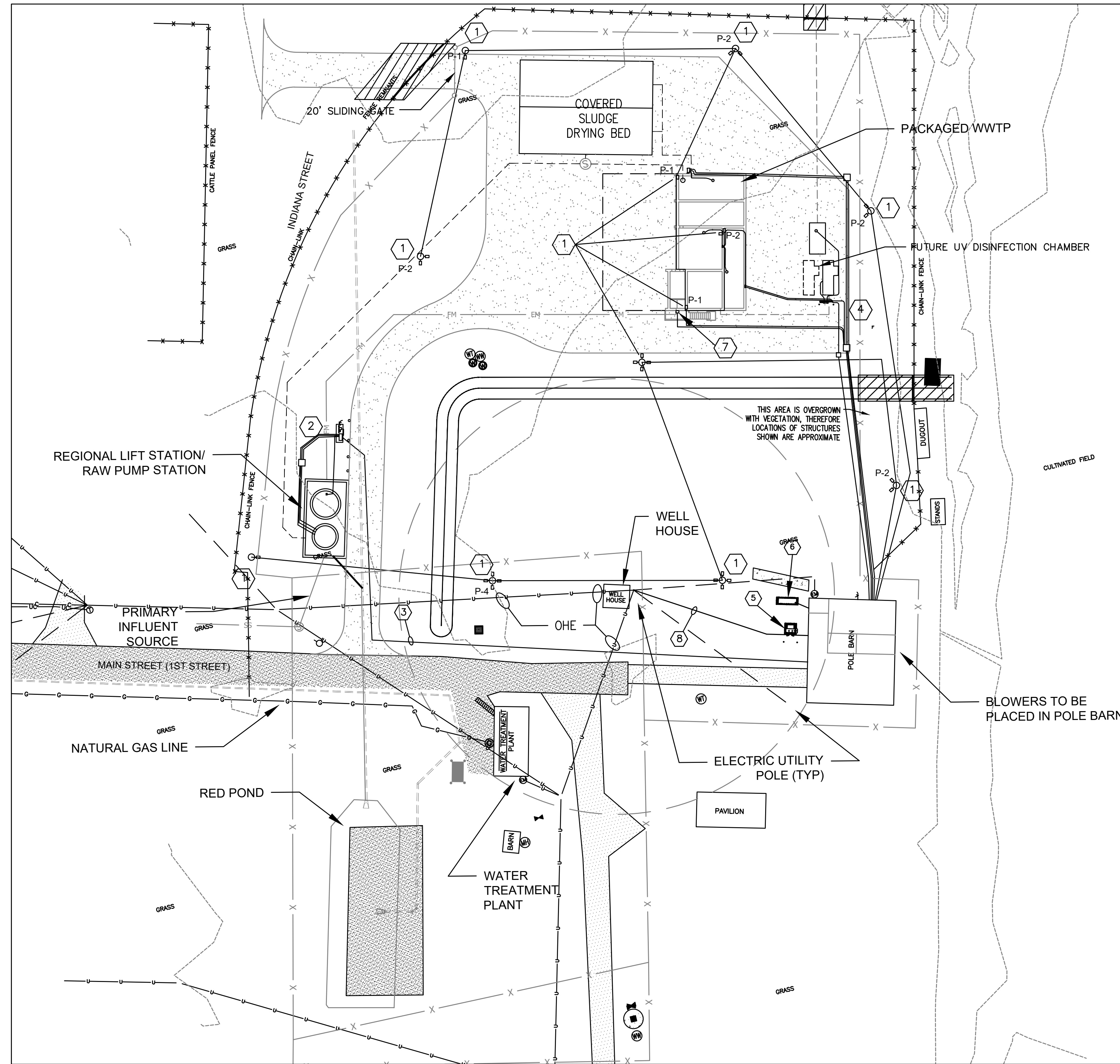
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FIRST FLOOR POWER PLAN

E211

PRINT DATE: 1/6/23 8:35 AM EDIT DATE: 1/6/23 8:35 AM EDITED BY: CORY GRAVES DRAWING FILE: \\ITRHEM\OPERATIONS\PROJECTS\2022\2022141 WHEATLAND, IN\PACKAGED WWT\3D CAD CURRENT WORKING\E301 ELECTRICAL SITE DRAWING.DWG PLOT SCALE: 1:30'-0"



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

**GENERAL ELECTRICAL NOTES: ALL SHEETS**

- A. LOCATE ALL EXISTING PIPING AND UTILITIES BEFORE INSTALLING UNDERGROUND CONDUITS; PROTECT ALL EXISTING INSTALLATIONS.
- B. ALL BELOW GRADE CONDUIT SHALL BE SCH. 40 PVC. ALL TRANSITIONS (90 DEGREE ELBOW) FROM BELOW GRADE TO ABOVE GRADE OR THROUGH A CONCRETE SLAB SHALL BE GALVANIZED RIGID STEEL.
- C. ALL OUTDOOR ABOVE GRADE CONDUIT SHALL BE RIGID ALUMINUM. SUPPORT EVERY 3'.
- D. ALL RIGID ALUMINUM CONDUIT WHERE IN CONTACT WITH EARTH OR CONCRETE SHALL HAVE OXIDATION RESISTANT COATING.
- E. ALL EQUIPMENT, WIRING, AND CONDUIT INSTALLED WITHIN WET WELL OR INTO A CLASS 1 DIVISION 1 AND/OR DIVISION 2 HAZARDOUS AREA SHALL BE EXPLOSION-PROOF RATED. ALL UNDERGROUND CONDUITS INSTALLED INTO A CLASS 1 DIVISION 1 AND/OR DIVISION 2 HAZARDOUS AREA SHALL BE GALVANIZED RIGID STEEL.
- F. PROVIDE PUTTY TYPE DUCT SEAL FOR ALL UNDERGROUND CONDUIT OPENINGS IN OUTDOOR EQUIPMENT.
- G. MAINTAIN 3" SEPARATION BETWEEN 480V POWER CONDUITS AND LOW VOLTAGE (NETWORK, 24V DC CONTROL, OR INTRINSICALLY SAFE CIRCUIT) CONDUITS. MAINTAIN 1" SEPARATION BETWEEN 120V POWER CONDUITS AND LOW VOLTAGE (NETWORK, 24V DC CONTROL, OR INTRINSICALLY SAFE CIRCUIT) CONDUITS.
- H. WHERE CONDUIT CROSSES UNDER EXISTING OR FUTURE ROADS/DRIVES, CONDUIT SHALL BE GALVANIZED RIGID STEEL. SAW CUT AND REPAIR EXISTING PAVEMENT AS NECESSARY.
- I. ANTI-CORROSION SUBSTANCE SHALL BE USED AS A BARRIER BETWEEN ALL DISSIMILAR METALS TO PREVENT CORROSION. USE IDEAL NOALOX ANTI-OXIDANT COMPOUND OR APPROVED EQUAL.
- J. WIRE AND CONDUIT ROUTES AND ELECTRICAL EQUIPMENT LOCATIONS ARE APPROXIMATE, FIELD VERIFY EXACT INSTALLATIONS.
- K. ALL WIRING, CONDUIT, AND TERMINATIONS FURNISHED AND INSTALLED BY CONTRACTOR.
- L. SEE ELECTRICAL ONE-LINE DIAGRAM FOR WIRING AND CONDUIT REQUIREMENTS.
- M. CONTRACTOR SHALL TAKE NECESSARY MEANS TO PROTECT AND SUPPORT CABLES TO PREVENT DAMAGE DURING CONSTRUCTION. PROTECT EXISTING SYSTEMS AND CABLING DURING CONSTRUCTION.
- N. MAINTAIN 5' MINIMUM SEPARATION BETWEEN VENTED TERMINAL BOXES AND OTHER ELECTRICAL EQUIPMENT. MAINTAIN 3' MINIMUM SEPARATION BETWEEN WET WELL HATCH AND ELECTRICAL EQUIPMENT.
- O. OWNER WILL COORDINATE WITH DUKE ENERGY TO PROVIDE 480V, 3PH POWER TO SITE.

**ELECTRICAL KEYED NOTES:**

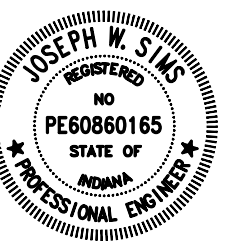
- 1. AREA LIGHTING. SEE LIGHTING FIXTURE SCHEDULE E313.
- 2. LIFT STATION CONTROL PANEL.
- 3. LIFT STATION POWER.
- 4. POWER & INSTRUMENTATION.
- 5. PAD MOUNTED TRANSFORMER.
- 6. GENERATOR PAD AND GENERATOR.
- 7. HEAT TRACE.
- 8. UTILITY PRIMARY.



**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: WK/DD/JR  
 Drawn By: CG  
 Checked By: WRK/JWS  
 Date: 01/06/2023

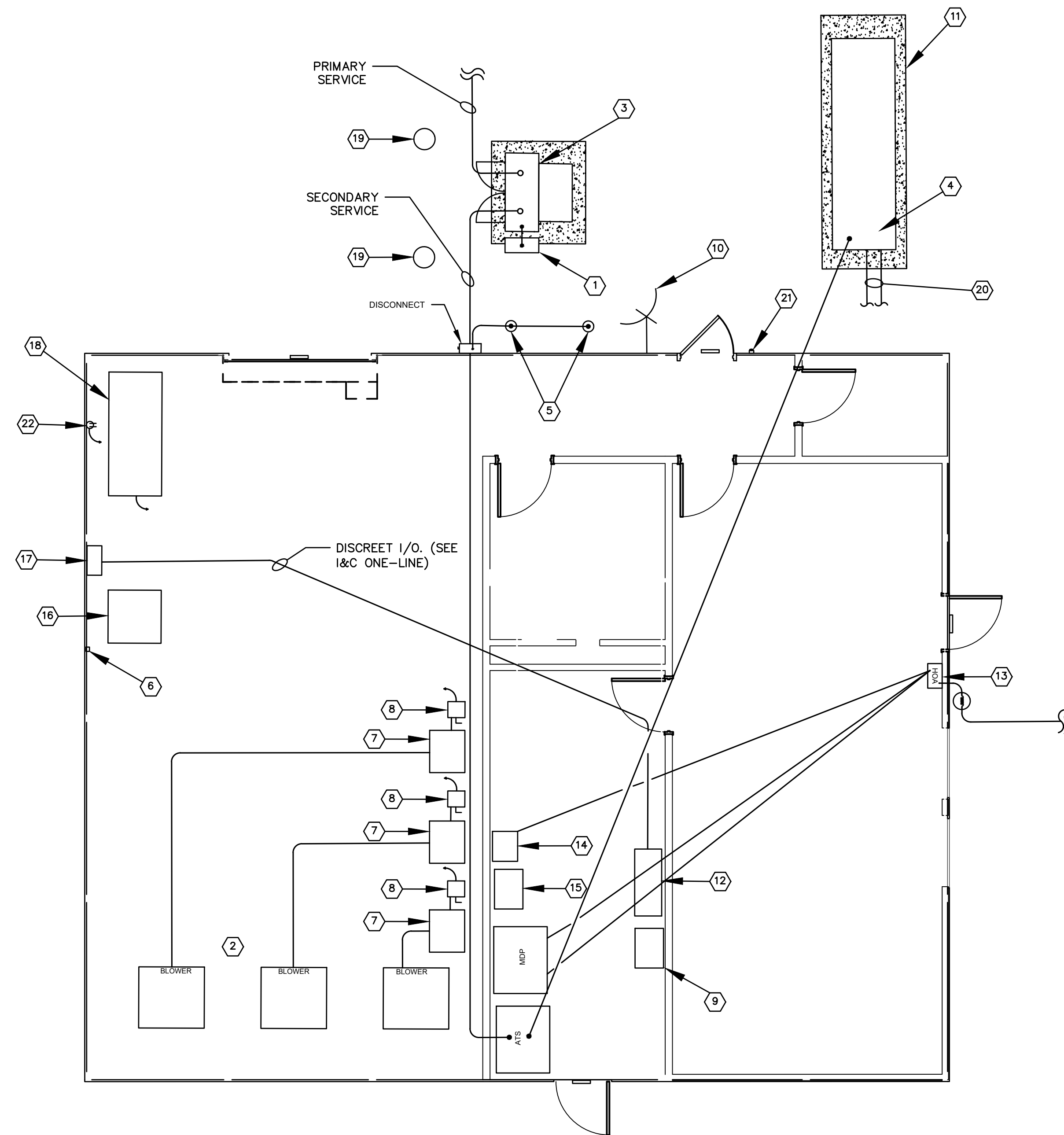


Joseph W. Sims

**SIMS-DURKIN ASSOCIATES**  
**ENGINEERING COMPANY**  
 5755 WEST 74TH STREET  
 INDIANAPOLIS, INDIANA 46278  
 PHONE: 317-209-4035  
 FAX: 317-222-4120  
 WEB: WWW.SIMS-DURKIN.COM  
 SDA PROJECT NUMBER: 2022141

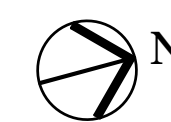
**ELECTRICAL SITE DRAWING**  
**E301**

PRINT DATE: 1/6/23 PLOT SCALE: 1:186/3116 EDIT DATE: 1/19/23 8:42 AM EDITED BY: CORY GRAYES DRAWING FILE: \\TRUENCS\OPERATIONS\PROJECTS\2022\2022141 WHEATLAND, IN \PACKAGED\WWT\20 CAD CURRENT WORKING\E303 BUILDING ELECTRICAL EQUIPMENT LAYOUT.DWG



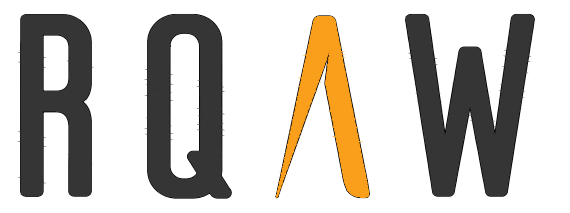
ELECTRICAL KEYED NOTES:

1. ELECTRIC SERVICE METER - 277/480V 3PH, 4W.
2. SEE SHT M323 FOR COMPRESSORS & BLOWERS LAYOUT
3. TRANSFORMER FURNISHED AND INSTALLED BY UTILITY; REINFORCED CONCRETE PAD BY ELECTRICAL CONTRACTOR. 10' MINIMUM CLEARANCE IN FRONT, 3' MINIMUM CLEARANCE ALL OTHER SIDES. MINIMUM 4' AWAY FROM BUILDING.
4. GENERATOR WITH SUB-BASE 24HR FUEL TANK, ON REINFORCED CONCRETE PAD, 4' MINIMUM CLEARANCE ALL SIDES.
5. TWO GROUND RODS, 10' APART. SEE ONE-LINE.
6. 120V AIR DRYER RECEPTACLE. HOME RUN TO PANEL P-1.
7. 3 VFD BLOWER CONTROL PANELS. SEE ONE-LINE E303.
8. BLOWER DISCONNECT SWITCH. MOUNTED TO WALL. SEE ONE-LINE E303.
9. NEW HONEYWELL CHART RECORDER FOR WWTP FLOW METERING/RECORDING.
10. UBIQUITY AIRMAX ETHERNET WIRELESS BRIDGE.
11. 6" REINFORCED CONCRETE PAD.
12. CP-BSB/SQC AEROMOD PLC CONTROL PANEL.
13. LIGHTING CONTROL PANEL. SEE E312 DETAILS.
14. PANEL P-1
15. 480-120/208V TRANSFORMER.
16. DRYER.
17. COMPRESSOR ALTERNATION PANEL.
18. 2 COMPRESSORS.
19. BOLLARDS.
20. CONTROL AND ACCESSORY CIRCUITS. SEE E309.
21. EMERGENCY STOP FOR GENERATOR.
22. RECEPTACLE FOR COMPRESSOR AUTO DRAIN. HOME RUN TO PANEL P-1.



**BUILDING ELECTRICAL EQUIPMENT LAYOUT**

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



INTENTIONAL INNOVATION

CONSTRUCTION SET

**WHEATLAND WASTEWATER SYSTEM  
IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**

WHEATLAND, IN 47597

#	Revision	Date
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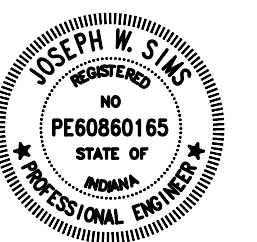
Project #: 21-400-194-1

Designed By: WK/DD/JR

Drawn By: CG

Checked By: WRK/JWS

Date: 01/06/2023



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SDA PROJECT NUMBER: 2022141

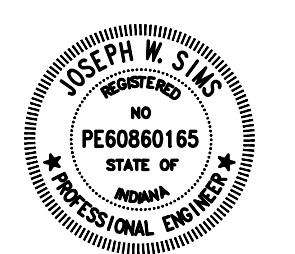
BUILDING ELECTRICAL  
EQUIPMENT LAYOUT

**E302**

**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

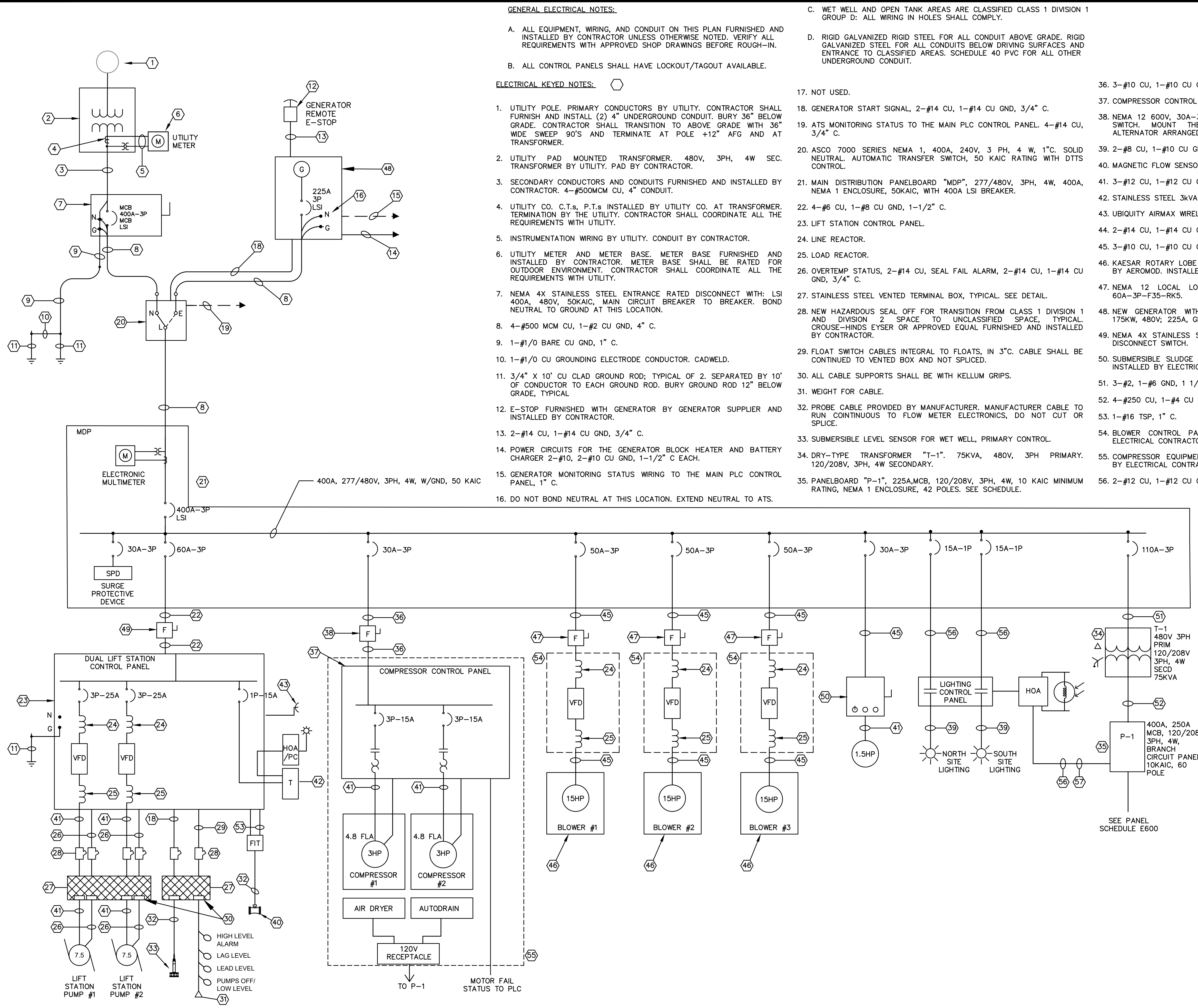
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**GENERAL ELECTRICAL NOTES:**

- A. ALL EQUIPMENT, WIRING, AND CONDUIT ON THIS PLAN FURNISHED AND INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED. VERIFY ALL REQUIREMENTS WITH APPROVED SHOP DRAWINGS BEFORE ROUGH-IN.
- B. ALL CONTROL PANELS SHALL HAVE LOCKOUT/TAGOUT AVAILABLE.

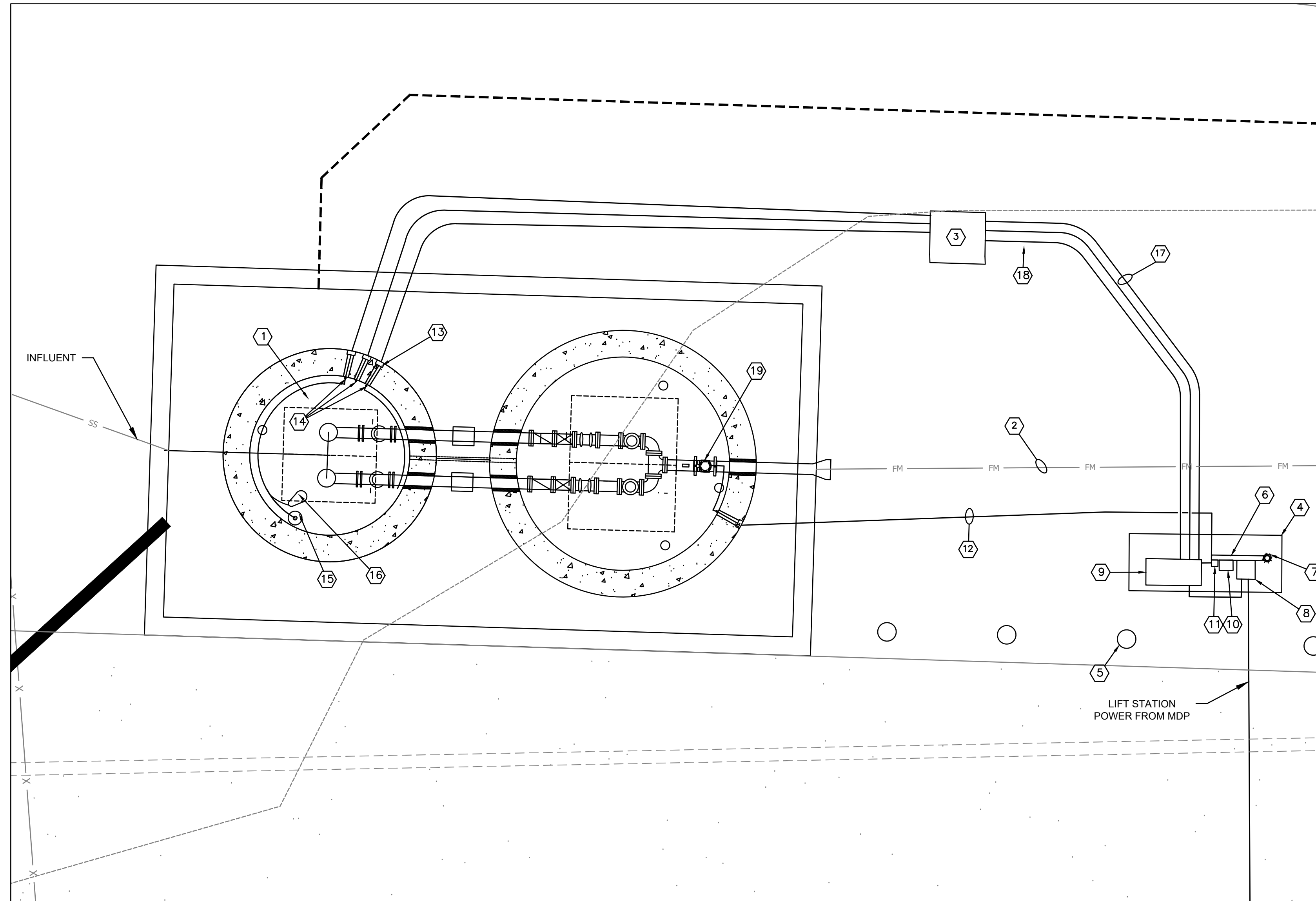
**ELECTRICAL KEYED NOTES:**

1. UTILITY POLE. PRIMARY CONDUCTORS BY UTILITY. CONTRACTOR SHALL FURNISH AND INSTALL (2) 4" UNDERGROUND CONDUIT. BURY 36" BELOW GRADE. CONTRACTOR SHALL TRANSITION TO ABOVE GRADE WITH 36" WIDE SWEEP 90'S AND TERMINATE AT POLE +12" AFG AND AT TRANSFORMER.
2. UTILITY PAD MOUNTED TRANSFORMER. 480V, 3PH, 4W SEC. TRANSFORMER BY UTILITY. PAD BY CONTRACTOR.
3. SECONDARY CONDUCTORS AND CONDUITS FURNISHED AND INSTALLED BY CONTRACTOR. 4-#500MCM CU, 4" CONDUIT.
4. UTILITY CO. C.T.s, P.T.s INSTALLED BY UTILITY CO. AT TRANSFORMER. TERMINATION BY THE UTILITY. CONTRACTOR SHALL COORDINATE ALL THE REQUIREMENTS WITH UTILITY.
5. INSTRUMENTATION WIRING BY UTILITY. CONDUIT BY CONTRACTOR.
6. UTILITY METER AND METER BASE. METER BASE FURNISHED AND INSTALLED BY CONTRACTOR. METER BASE SHALL BE RATED FOR OUTDOOR ENVIRONMENT. CONTRACTOR SHALL COORDINATE ALL THE REQUIREMENTS WITH UTILITY.
7. NEMA 4X STAINLESS STEEL ENTRANCE RATED DISCONNECT WITH: LSI 400A, 480V, 50KAIC, MAIN CIRCUIT BREAKER TO BREAKER. BOND NEUTRAL TO GROUND AT THIS LOCATION.
8. 4-#500 MCM CU, 1-#2 CU GND, 4" C.
9. 1-#1/0 BARE CU GND, 1" C.
10. 1-#1/0 CU GROUNDING ELECTRODE CONDUCTOR. CADWELD.
11. 3/4" X 10' CU CLAD GROUND ROD; TYPICAL OF 2. SEPARATED BY 10' OF CONDUCTOR TO EACH GROUND ROD. BURY GROUND ROD 12" BELOW GRADE, TYPICAL.
12. E-STOP FURNISHED WITH GENERATOR BY GENERATOR SUPPLIER AND INSTALLED BY CONTRACTOR.
13. 2-#14 CU, 1-#14 CU GND, 3/4" C.
14. POWER CIRCUITS FOR THE GENERATOR BLOCK HEATER AND BATTERY CHARGER 2-#10, 2-#10 CU GND, 1-1/2" C EACH.
15. GENERATOR MONITORING STATUS WIRING TO THE MAIN PLC CONTROL PANEL, 1" C.
16. DO NOT BOND NEUTRAL AT THIS LOCATION. EXTEND NEUTRAL TO ATS.

- C. WET WELL AND OPEN TANK AREAS ARE CLASSIFIED CLASS 1 DIVISION 1 GROUP D: ALL WIRING IN HOLES SHALL COMPLY.
  - D. RIGID GALVANIZED RIGID STEEL FOR ALL CONDUIT ABOVE GRADE. RIGID GALVANIZED STEEL FOR ALL CONDUITS BELOW DRIVING SURFACES AND ENTRANCE TO CLASSIFIED AREAS. SCHEDULE 40 PVC FOR ALL OTHER UNDERGROUND CONDUIT.
17. NOT USED.
  18. GENERATOR START SIGNAL, 2-#14 CU, 1-#14 CU GND, 3/4" C.
  19. ATS MONITORING STATUS TO THE MAIN PLC CONTROL PANEL. 4-#14 CU, 3/4" C.
  20. ASCO 7000 SERIES NEMA 1, 400A, 240V, 3 PH, 4 W, 1"C. SOLID NEUTRAL. AUTOMATIC TRANSFER SWITCH, 50 KAIC RATING WITH DTTS CONTROL.
  21. MAIN DISTRIBUTION PANELBOARD "MDP", 277/480V, 3PH, 4W, 400A, NEMA 1 ENCLOSURE, 50KAIC, WITH 400A LSI BREAKER.
  22. 4-#6 CU, 1-#8 CU GND, 1-1/2" C.
  23. LIFT STATION CONTROL PANEL.
  24. LINE REACTOR.
  25. LOAD REACTOR.
  26. OVERTEMP STATUS, 2-#14 CU, SEAL FAIL ALARM, 2-#14 CU, 1-#14 CU GND, 3/4" C.
  27. STAINLESS STEEL VENTED TERMINAL BOX, TYPICAL. SEE DETAIL.
  28. NEW HAZARDOUS SEAL OFF FOR TRANSITION FROM CLASS 1 DIVISION 1 AND DIVISION 2 SPACE TO UNCLASSIFIED SPACE, TYPICAL. CROUSE-HINDS EYSER OR APPROVED EQUAL FURNISHED AND INSTALLED BY CONTRACTOR.
  29. FLOAT SWITCH CABLES INTEGRAL TO FLOATS, IN 3"C. CABLE SHALL BE CONTINUED TO VENTED BOX AND NOT SPLICED.
  30. ALL CABLE SUPPORTS SHALL BE WITH KELLUM GRIPS.
  31. WEIGHT FOR CABLE.
  32. PROBE CABLE PROVIDED BY MANUFACTURER. MANUFACTURER CABLE TO RUN CONTINUOUS TO FLOW METER ELECTRONICS, DO NOT CUT OR SPLICE.
  33. SUBMERSIBLE LEVEL SENSOR FOR WET WELL, PRIMARY CONTROL.
  34. DRY-TYPE TRANSFORMER "T-1". 75KVA, 480V, 3PH PRIMARY. 120/208V, 3PH, 4W SECONDARY.
  35. PANELBOARD "P-1", 225A, MCB, 120/208V, 3PH, 4W, 10 KAIC MINIMUM RATING, NEMA 1 ENCLOSURE, 42 POLES. SEE SCHEDULE.

PRINT DATE: 1/6/23  
 PLOT SCALE: 1/8"=1'-0"  
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PRINT DATE: 1/6/23  
 PLOT SCALE: 1:1000  
 FILE: I:\PROJECTS\2022\2022141 WHEATLAND, IN PACKAGED\WMP\20 CAD CURRENT WORKING\E304 LIFT STATION ELECTRICAL SITE PLAN.DWG



**LIFT STATION SITE PLAN**

NOT TO SCALE REFER TO CIVIL SITE DRAWING FOR SCALE

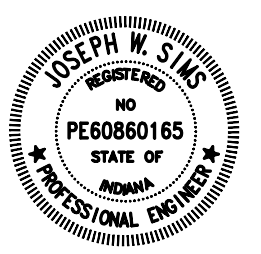
**ELECTRICAL KEYED NOTES:** ○

1. WET WELL.
2. FORCE MAIN.
3. VENTED TERMINAL BOX. SEE DETAILS.
4. EQUIPMENT CONCRETE PAD. SEE DETAILS.
5. BOLLARD – TYPICAL OF 4. SEE DETAILS.
6. EQUIPMENT RACK. SEE DETAILS.
7. AREA LIGHT AND WIRELESS ETHERNET BRIDGE ON MAST.
8. LIFT STATION MAIN POWER FUSED DISCONNECT. SEE ONE-LINE.
9. CONTROL PANEL.
10. TRANSFORMER.
11. FIT PANEL MODEL MC6081. NO EQUALS.
12. FLOW METER CABLE FURNISHED BY FLOW METER MANUFACTURER, IN 1 1/4" C BY CONTRACTOR. THIS CABLE CANNOT BE CUT OR SPLICED. COORDINATE PROPER DISTANCE WHEN ORDERING.
13. PROVIDE LINK SEAL FOR EACH WET WELL PENETRATIONS.
14. UTILIZE KELLUM GRIPS FOR EACH CABLE SUSPENDED FROM BOX.
15. SUBMERSIBLE LEVEL SENSOR. KSPI MODEL 710 OR EQUIVALENT.
16. FLOAT SWITCHES. PROVIDE WITH STAINLESS STEEL "J" HOOKS.
17. FLOAT SWITCH AND SUBMERSIBLE TRANSMITTER MANUFACTURER CABLES. ALL CABLES TO BE LONG ENOUGH TO PUMP CONTROL PANEL. NO SPLICES ALLOWED.
18. INDIVIDUAL PUMP LEAD CONDUIT AND CABLES.
19. EUROMAG FLOW METER MODEL MUT2300. NO EQUALS.

**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
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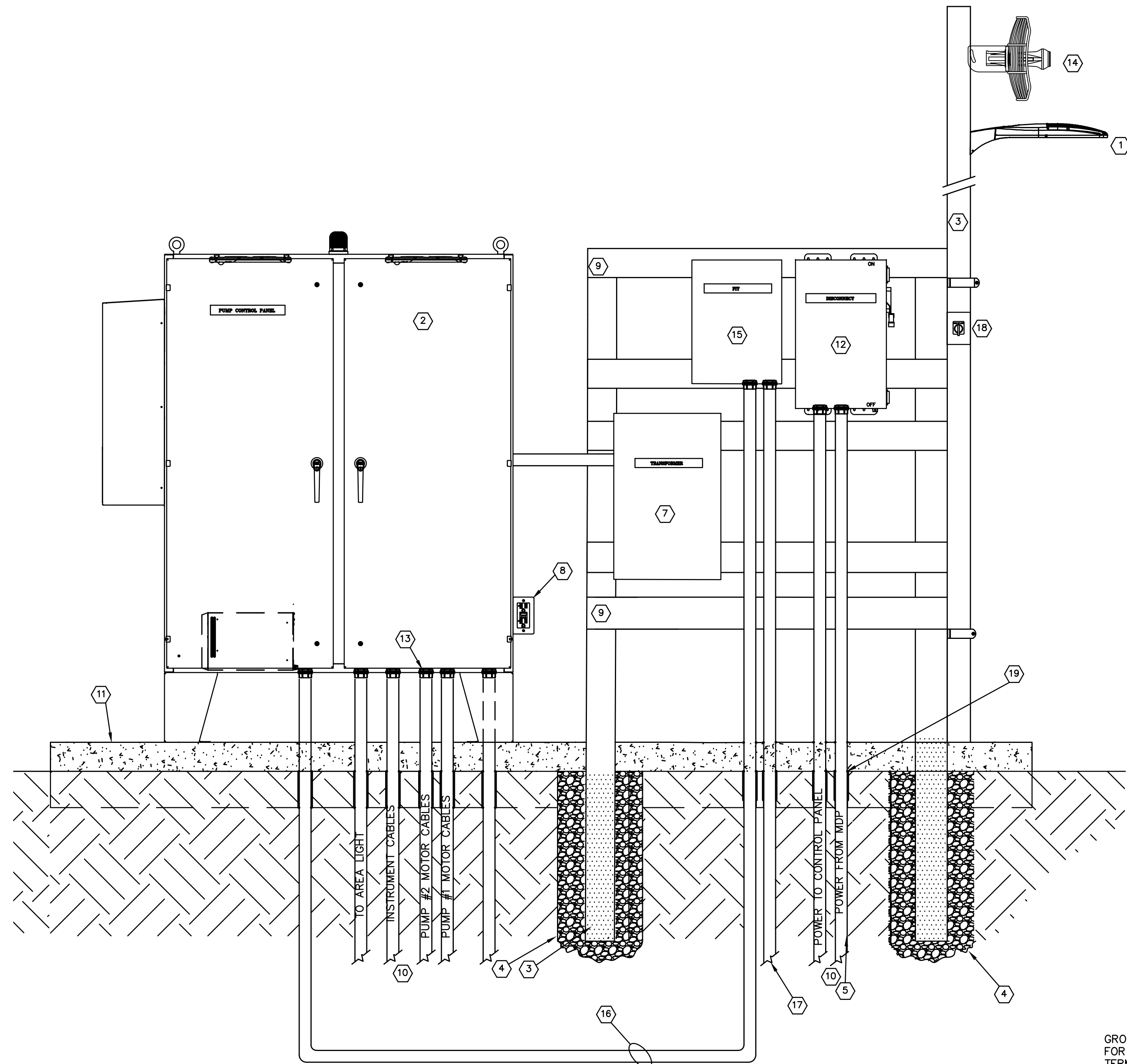


Joseph W. Sims

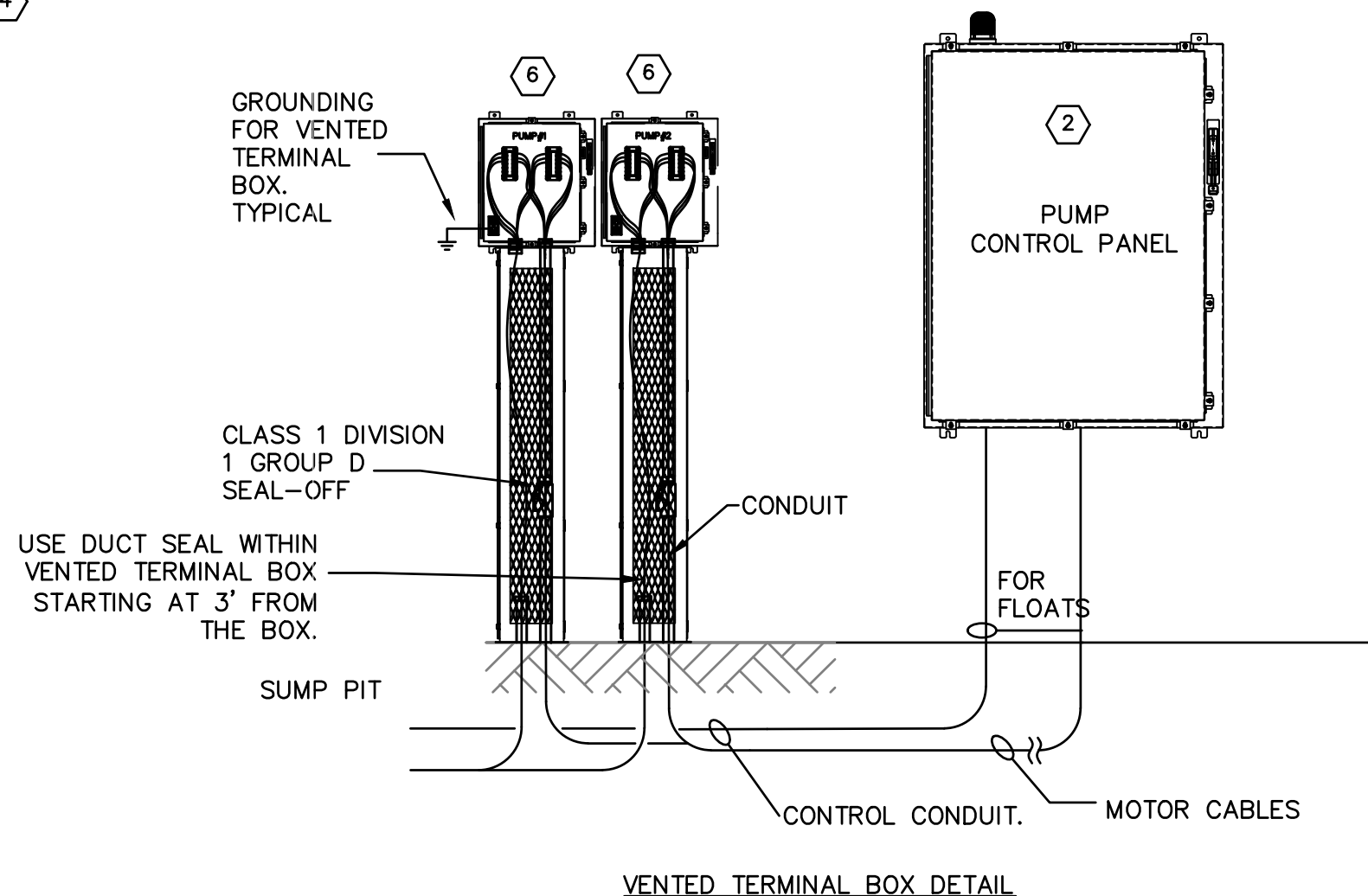
**SIMS-DURKIN ASSOCIATES**  
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**LIFT STATION ELECTRICAL SITE PLAN**  
**E304**

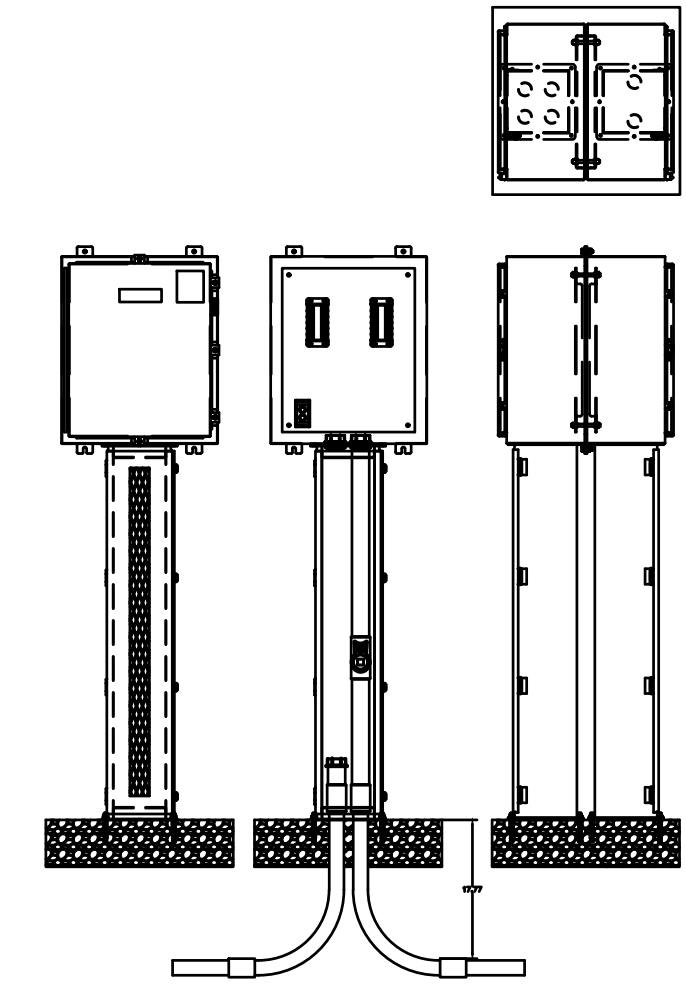
PRINT DATE: 1/6/23 PLOT SCALE: 1:186-9116 EDIT DATE: 1/6/23 EDITED BY: CORY GRAVES DRAWING FILE: \\TRUENAS\OPERATIONS\PROJECTS\2022\2022141 WHEATLAND, IN \PACKAGED\WVWP\20 CAD CURRENT WORKING\E305 LIFT STATION ELECTRICAL DETAILS.DWG



LIFT STATION SECTION VIEW - ELECTRICAL AND INSTRUMENTATION DETAILS



VENTED TERMINAL BOX DETAIL



VENTED TERMINAL BOX DETAIL - TYPICAL

GENERAL ELECTRICAL NOTES:

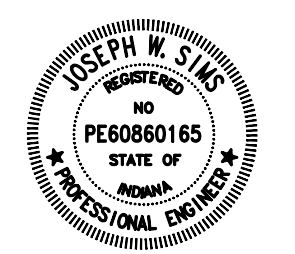
- A. SEE ONE LINE DIAGRAM E303 FOR ADDITIONAL DETAILS AND REQUIREMENTS.
- B. PROVIDE LINK SEAL WITH STAINLESS HARDWARE FOR ALL CONDUIT PENETRATIONS INTO LIFT STATION WET WELL.
- C. PROVIDE STAINLESS STEEL HARDWARE FOR ALL EQUIPMENT INSTALLED IN WET WELL; THIS INCLUDES BUT NOT LIMITED TO KELLEM'S CABLE GRIPS, CABLE RACKS, MOUNTING BRACKETS, BOLTS AND NUTS.
- D. WET WELL CLASSIFICATION IS CLASS 1, DIVISION 1 - GROUP D - ALL WIRING SHALL COMPLY.

ELECTRICAL KEYED NOTES:

- 1. STATION MOUNTED AREA LIGHT. LED TYPE MOUNTED ON 10' ALUMINUM MAST ON OR NEAR EQUIPMENT RACK. SEE FIXTURE SCHEDULE E313.
- 2. NEW DUPLEX PUMP CONTROL PANEL. SEE ONE-LINE AND PUMP CONTROL PANEL DETAILS DRAWING.
- 3. ALUMINUM POSTS SHALL HAVE A CORROSION PROTECTIVE COATING.
- 4. 36" DEEP X 16" CONCRETE PEDESTAL BASE.
- 5. FEEDER FROM MDP IN BLDG.
- 6. VENTED TERMINAL BOX. SEE DETAIL THIS SHEET.
- 7. STAINLESS STEEL 3kVA TRANSFORMER.
- 8. 15A WEATHERPROOF GFCI COURTESY OUTLET WITH IN-USE COVER. BULKHEAD STYLE WITH TRIP BREAKER AND ETHERNET PORT. SIMILAR TO ZP-PGA-32-201.
- 9. 3"x3" ALUMINUM EQUIPMENT RACK. ALL RISERS TO HAVE CAPS TO PREVENT WATER PENETRATION. VERTICAL EQUIPMENT MOUNTS SHALL BE STAINLESS STEEL UNISTRUT IF REQUIRED.
- 10. UNDERGROUND WIRING AND CONDUIT.
- 11. 3' X 10' 8" RE-ENFORCED CONCRETE PAD ON GRAVEL SUBBASE. APPROXIMATE.
- 12. STAINLESS STEEL DISCONNECT SWITCH.
- 13. WEATHER TIGHT FITTINGS FOR PANEL ENTRY.
- 14. UBQUIITY AIRMAX ETHERNET BRIDGE MODEL LITEBEAM M 5 NO EQUALS.
- 15. FLOW METER LOCAL INDICATOR TOTALIZER, RECORDER, TRANSMITTER.
- 16. 4-20mA DC CABLE IN 1" C..
- 17. POWER FOR MAGNETIC FLOW METER FROM LIFT STATION CONTROL PANEL.
- 18. PROVIDE WEATHERPROOF HOA SWITCH FOR SITE LIGHT.
- 19. PVC SLEEVE THROUGH CONCRETE

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**NOTE:**

- THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND TESTING; ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.
- SAGINAW CONTROL AND ENGINEERING (SCE): ENCLOSURE, EQUIPMENT PANEL AND DEAD FRONT SWING PANEL SHOWN FOR REFERENCE.

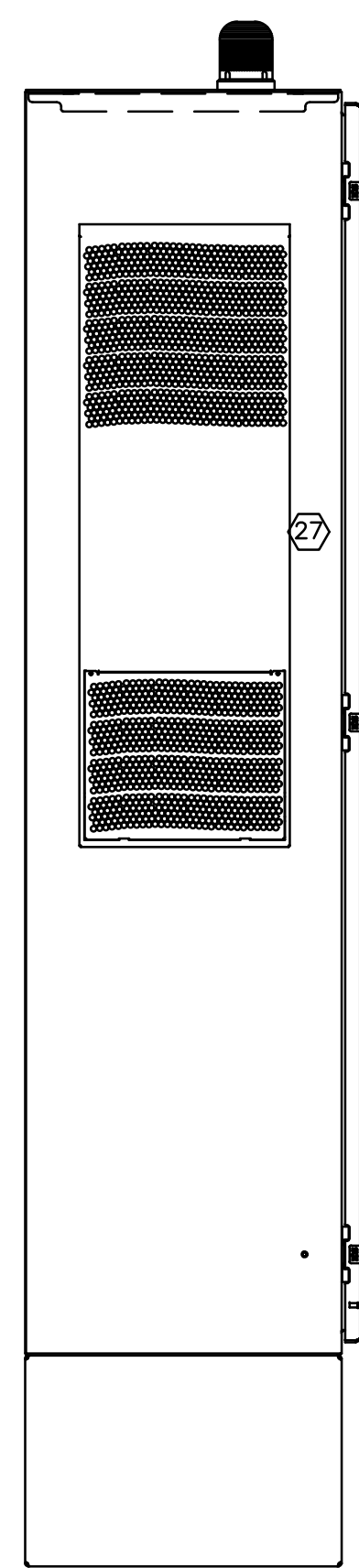
**ELECTRICAL KEYED NOTES:**

1. NEMA 4X STAINLESS STEEL ENCLOSURE, 72"x60"x24" MINIMUM.
2. 72"x60" INTERIOR EQUIPMENT PANEL.
3. DEAD FRONT SWING PANELS.
4. ALARM STROBE LIGHT.
5. GREEN PUSH-TO-TEST AND AMBER PUSH-TO-TEST PILOT LIGHTS, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
6. 3 POSITION HOA SWITCH, TYPICAL FOR EACH PUMP. 30.5MM NEMA4X.
7. MOTOR PROTECTION RELAYS - FLUSH MOUNT. MATCH PUMP MANUFACTURER SPECIFICATIONS. FLYGT MINICAS II SHOWN. IF FLUSH-MOUNT VERSION IS NOT AVAILABLE, PROVIDE PILOT LIGHTS AND PUSH BUTTONS FOR SEAL FAIL, OVERTEMP AND RESET.
8. 2 POSITION SELECTOR SWITCH FOR PLC OR FLOAT MODE SELECTION.
9. NAME PLATES. WHITE WITH BLACK LETTERS. TYPICAL.
10. THREE PHASE MAIN POWER ENTRY DISTRIBUTION BLOCK.
11. MAIN POWER GROUND BLOCK.
12. WIRE DUCT - AS REQUIRED.

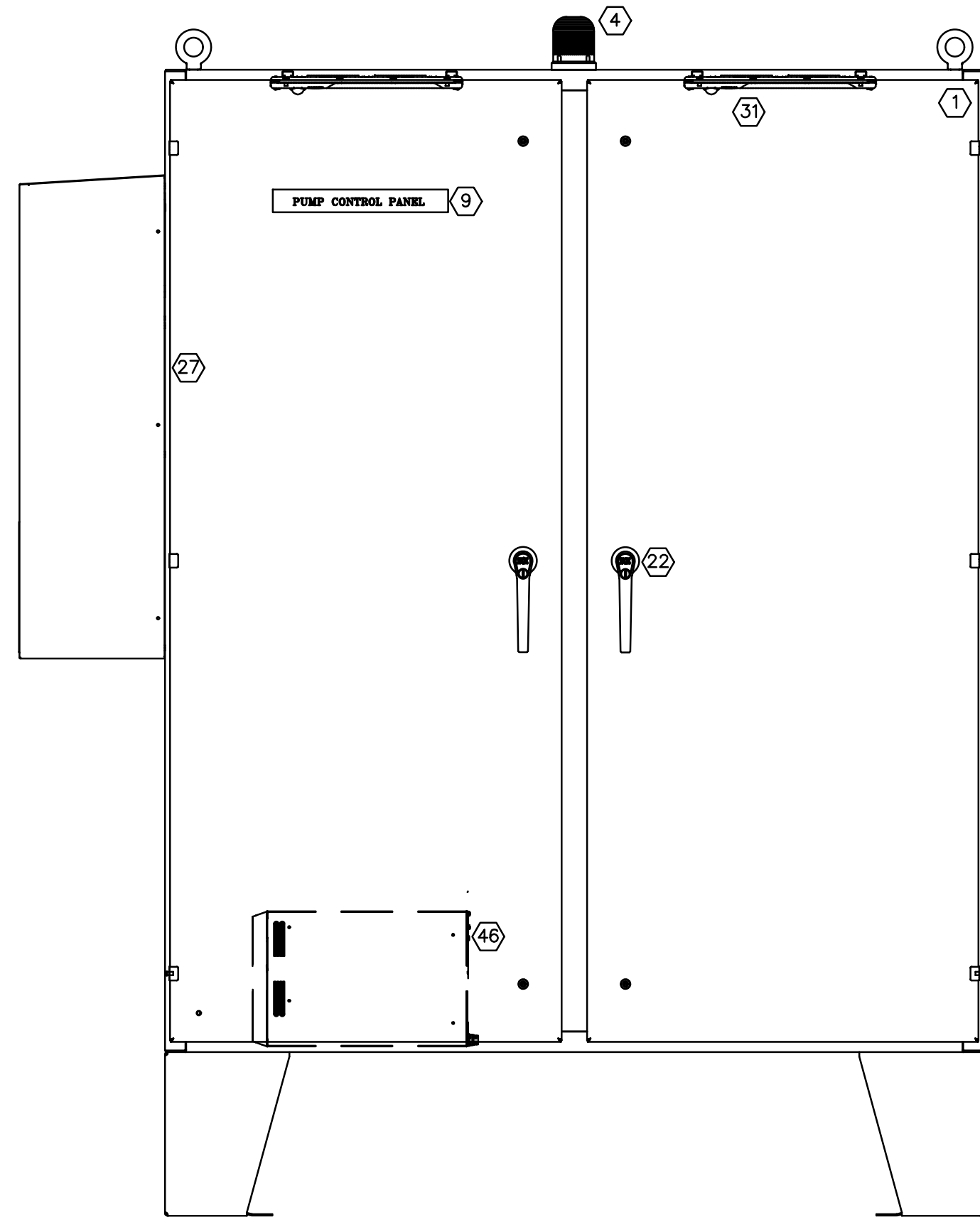
13. 15A 1P CONTROL POWER CIRCUIT BREAKER.
14. SPARE 1P CIRCUIT BREAKER - 15A.
15. 2 POLE 15A POWER TRANSFORMER CIRCUIT BREAKER.
16. PHASE MONITOR RELAY.
17. 3 PHASE MONITOR RELAY CIRCUIT BREAKER.
18. 3 PHASE SURGE PROTECTOR DEVICE (SPD) CIRCUIT BREAKER.
19. 3 PHASE SPD.
20. CONTROL RELAYS, 120VAC COIL AND 10A MIN. CONTACT RATING. DPDT TYPICAL.
21. RUNTIME HOUR METER. TYPICAL.
22. LOCKABLE HANDLE.
23. FIELD WIRING AND SWING PANEL COMPONENT INTERFACE WIRING TERMINAL BLOCKS.
24. SEAL FAIL MODULE FIELD WIRING TERMINAL BLOCKS.
25. INTRINSICALLY SAFE BARRIER (ISB) BOX WITH 4-CHANNEL DIGITAL ISB MODULE FOR FLOAT SWITCHES AND ANALOG ISB FOR LEVEL SENSOR.
26. VARIABLE FREQUENCY DRIVES (VFD): ABB ACQ580-31 ULH AC DRIVE, WITH EMBEDDED ETHERNET/IP, STANDARD PROTECTION,

- FORCED AIR, AC INPUT WITH DC TERMINALS, OPEN TYPE, 10 AMPS, 5HP ND, 480 VAC, 3 PH AND REMOTE KEYPAD MODULE.
27. AIR CONDITIONING UNIT WITH HEATER, SCE-AC3400 OR SIMILAR. AIR CONDITIONING UNIT TO BE SIZED BY CONTRACTOR BASED ON HEAT LOSS CALCULATIONS FOR THIS SIZE OF ENCLOSURE AND EQUIPMENT.
  28. 2P-15A CIRCUIT BREAKER FOR AIR CONDITIONING UNIT.
  29. THERMAL MAGNETIC MOTOR PROTECTION CIRCUIT BREAKERS WITH LOCKOUT/TAGOUT. TMAX-X OR EQUAL PER MANUFACTURER SPECIFICATION.
  30. LINE REACTORS, TYPICAL PER MANUFACTURER RECOMMENDATION.
  31. ENCLOSURE LED PANEL LIGHTING.
  32. EARTH GROUND TERMINAL BLOCK.
  33. OPEN AREA FOR HEATER PER MANUFACTURER RECOMMENDATION.
  34. LOAD REACTORS, TYPICAL PER MANUFACTURER RECOMMENDATION.
  35. GROUND BLOCK.
  36. MAIN 120VAC 15A POWER CIRCUIT BREAKER.
  37. POWER FAIL RELAY. RELAY TO REPORT TO SCADA UPON LOSS OF POWER.
  38. PHOENIX CONTACT PLUGTRAB SURGE PROTECTION DEVICE.

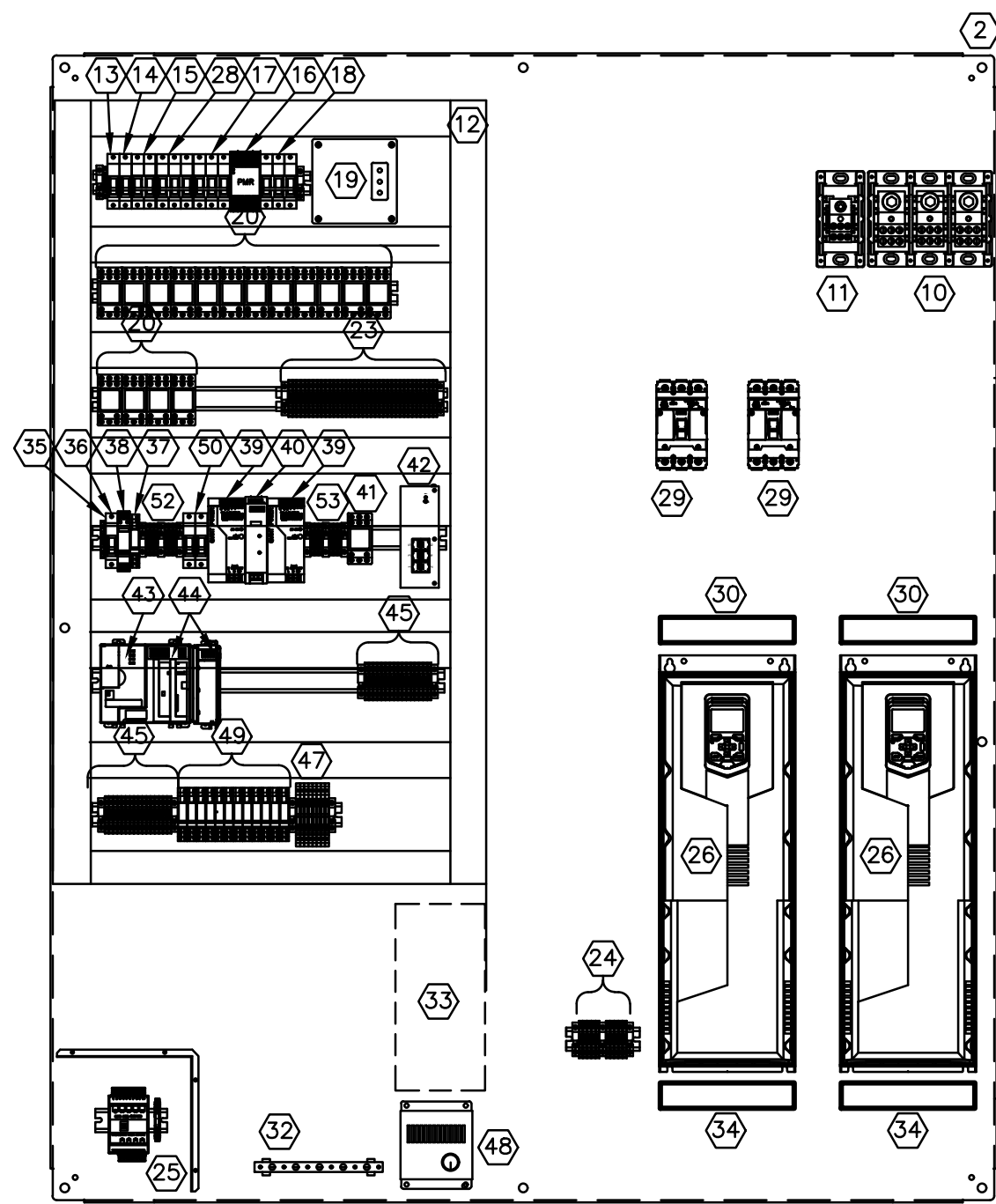
39. 5A REDUNDANT 24VDC POWER SUPPLY.
40. POWER SUPPLY REDUNDANCY MODULE.
41. UPS BYPASS CONTACTOR.
42. ETHERNET SWITCH.
43. COMPACTLOGIX L24ER WITH EMBEDDED IO.
44. COMPACTLOGIX MIX ANALOG INPUT MODULE.
45. DIGITAL INPUT FIELD TERMINAL BLOCKS.
46. 1000VA UPS. DUAL CONVERSION TYPE.
47. ANALOG INPUT FIELD TERMINAL BLOCKS.
48. 100W PANEL HEATER WITH INTEGRAL THERMOSTAT. ALLOW PROPER SPACING PER MANUFACTURER REQUIREMENTS. IF AC UNIT HAS HEATER, PANEL HEATER IS NOT REQUIRED.
49. DIGITAL OUTPUT ISOLATION RELAYS.
50. 3A POWER SUPPLY CIRCUIT BREAKERS.
51. HMI - MAPLESYSTEMS CMT3072XHT.
52. 120V BUS TERMINAL BLOCKS.
53. 24VDC BUS TERMINAL BLOCKS.



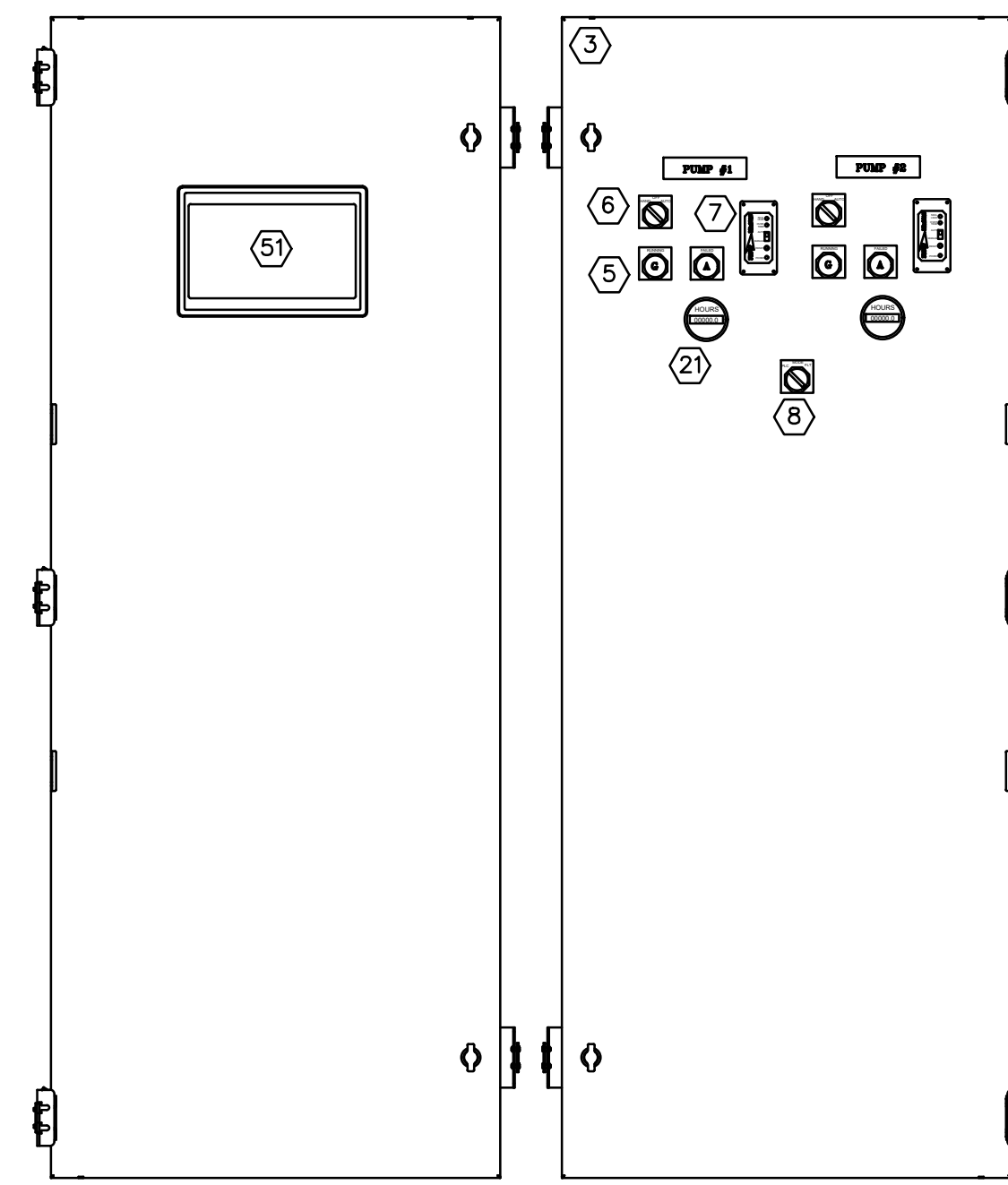
PUMP CONTROL PANEL SIDE VIEW



PUMP CONTROL PANEL OUTER DOOR VIEW



PUMP CONTROL PANEL EQUIPMENT PANEL VIEW



PUMP CONTROL PANEL SWING DOOR VIEW

**LIFT STATION PUMP CONTROL PANEL LAYOUT DETAILS**

SCALE: NONE

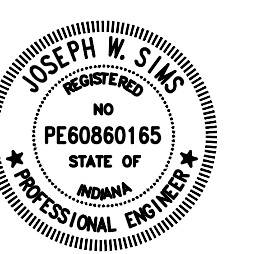
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**CONSTRUCTION SET**  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
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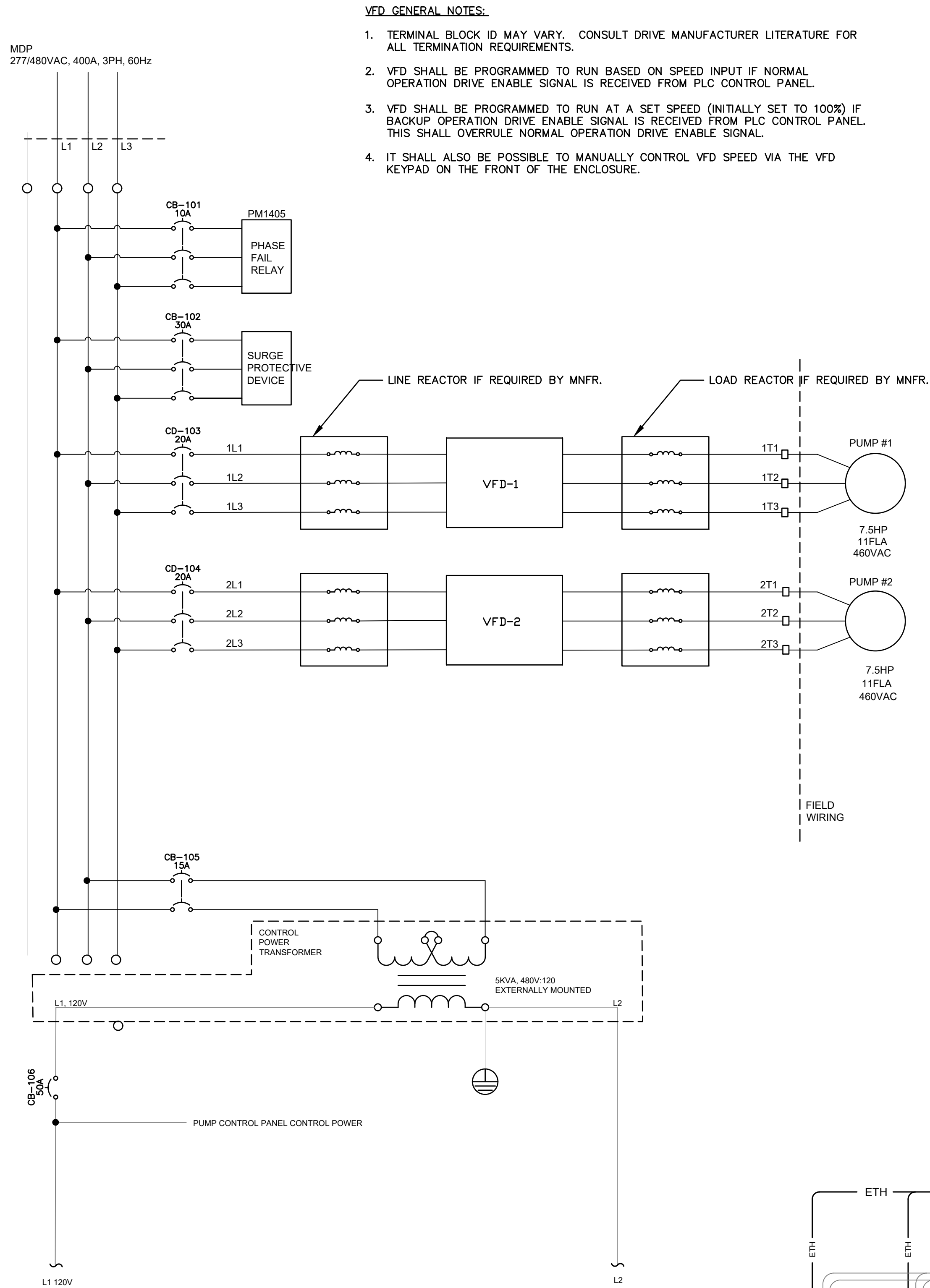


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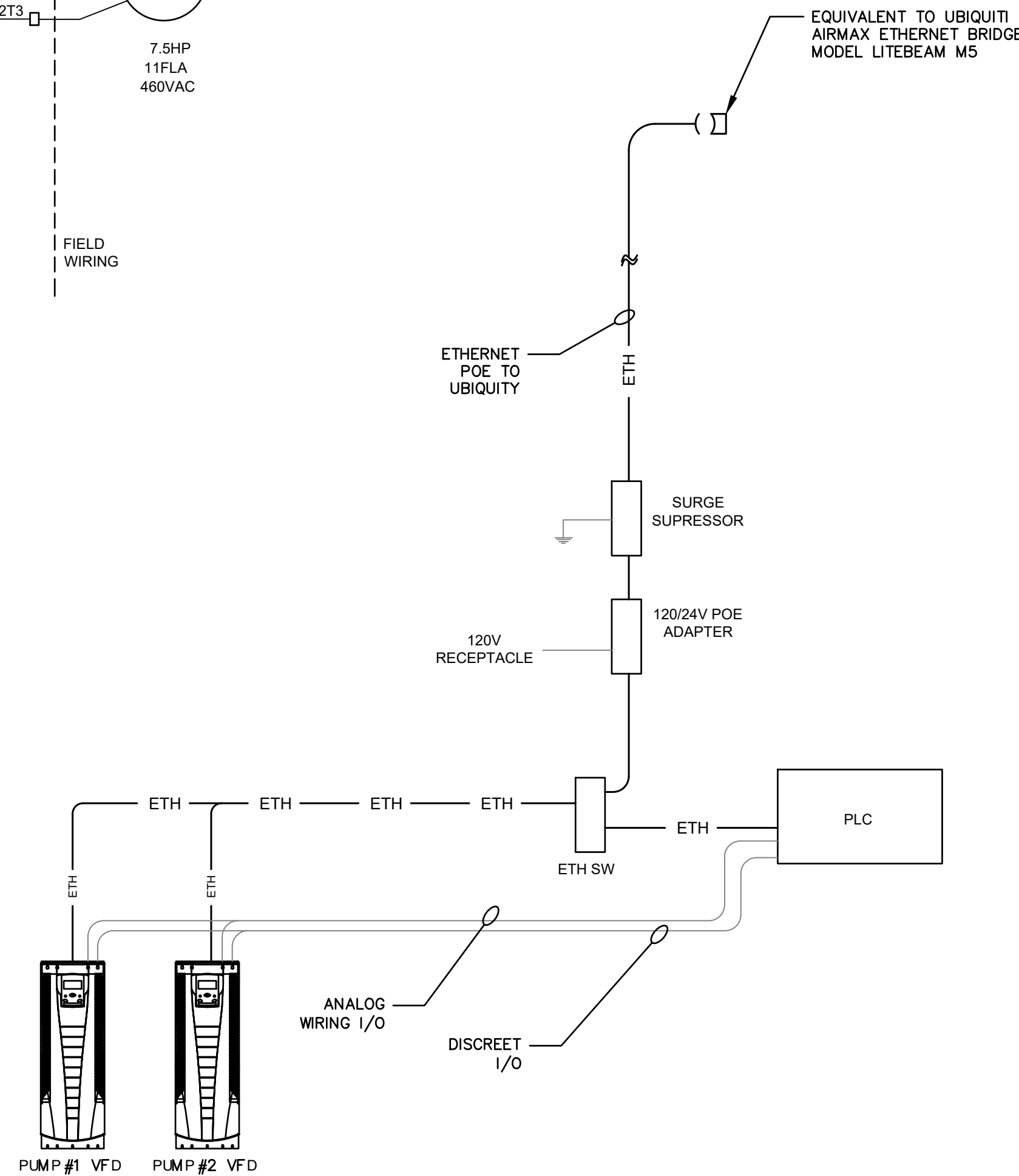
LIFT STATION PUMP CONTROL PANEL LAYOUT DETAILS  
**E306**

PRINT DATE: 1/6/23 PLOT SCALE: 1:186.9116 EDIT DATE: 1/5/23 8:26 AM EDITED BY: CORY GRAVES DRAWING FILE: I:\VIEW\OPERATIONS\PROJECTS\2022\2022141 WHEATLAND, IN\PACKAGED\WVP\3D CAD CURRENT WORKING\VIEW\6 LIFT STATION PUMP CONTROL PANEL LAYOUT DETAILS.DWG

PRINT DATE: 1/6/23 PLOT SCALE: 1:186.9116 EDIT DATE: 1/9/23 9:28 AM EDITED BY: CORY GRAVES DRAWING FILE: \\TRUENUS\OPERATIONS\PROJECTS\2021\2021-141 WHEATLAND, IN\PACKAGED\WMT\2021 CAD CURRENT WORKING\E307 LIFT STATION PUMP CONTROL PANEL WIRING DETAILS.DWG

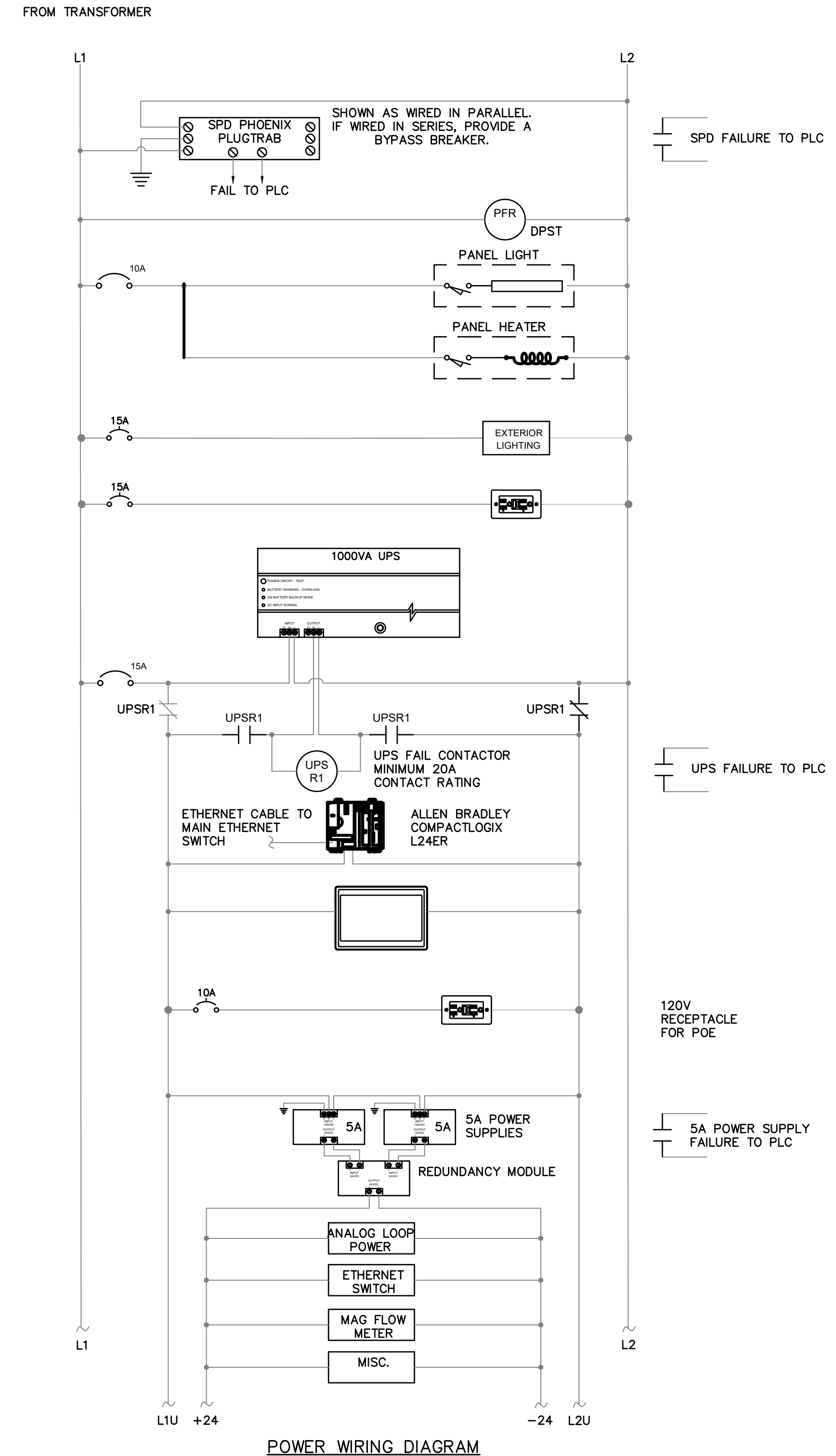


- VFD GENERAL NOTES:**
1. TERMINAL BLOCK ID MAY VARY. CONSULT DRIVE MANUFACTURER LITERATURE FOR ALL TERMINATION REQUIREMENTS.
  2. VFD SHALL BE PROGRAMMED TO RUN BASED ON SPEED INPUT IF NORMAL OPERATION DRIVE ENABLE SIGNAL IS RECEIVED FROM PLC CONTROL PANEL.
  3. VFD SHALL BE PROGRAMMED TO RUN AT A SET SPEED (INITIALLY SET TO 100%) IF BACKUP OPERATION DRIVE ENABLE SIGNAL IS RECEIVED FROM PLC CONTROL PANEL. THIS SHALL OVERRULE NORMAL OPERATION DRIVE ENABLE SIGNAL.
  4. IT SHALL ALSO BE POSSIBLE TO MANUALLY CONTROL VFD SPEED VIA THE VFD KEYPAD ON THE FRONT OF THE ENCLOSURE.



**LIFT STATION PUMP CONTROL PANEL WIRING DETAILS**

SCALE: NONE

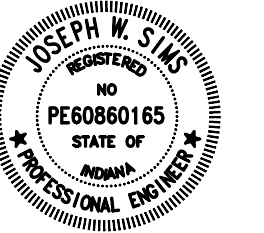


**POWER WIRING DIAGRAM**

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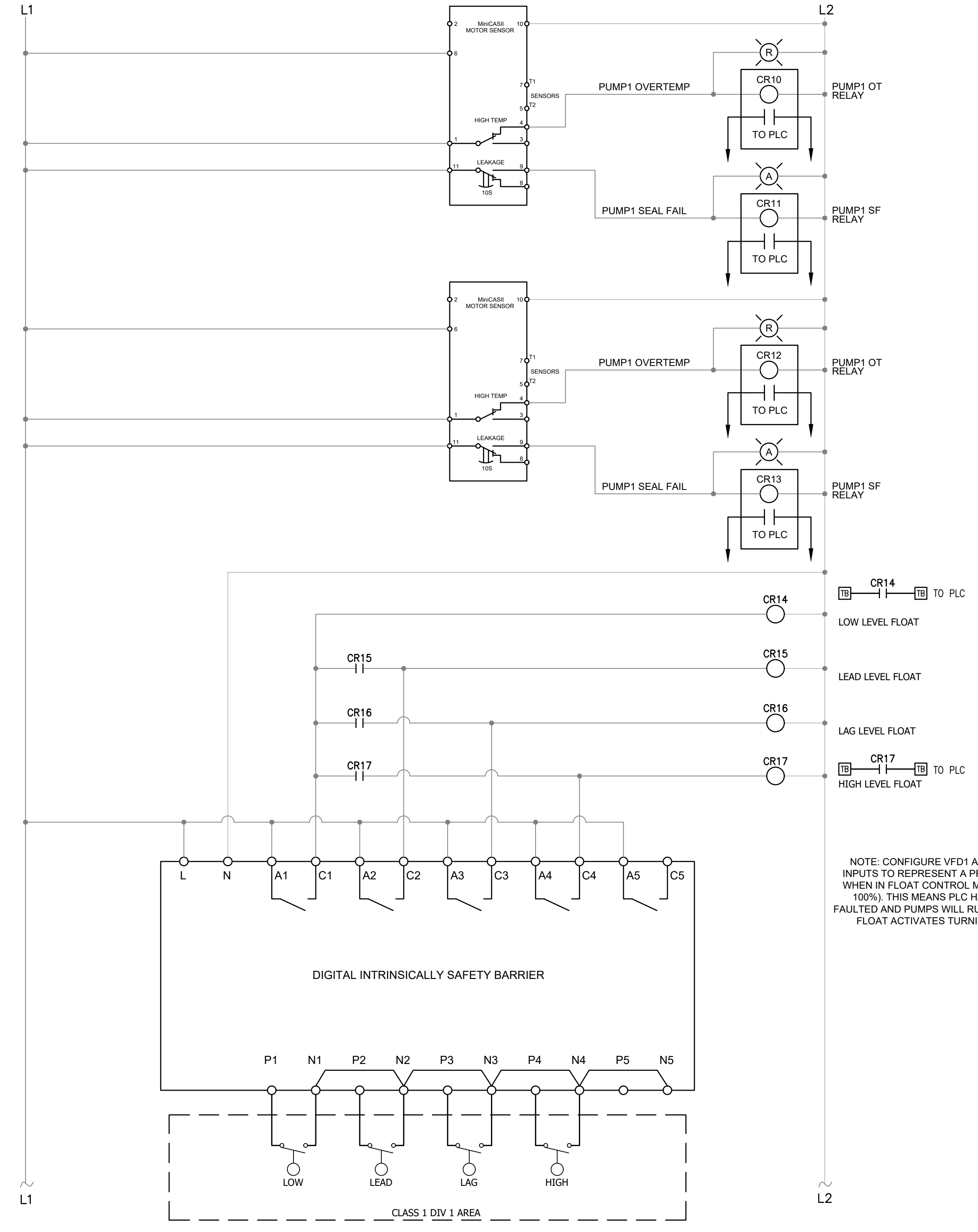
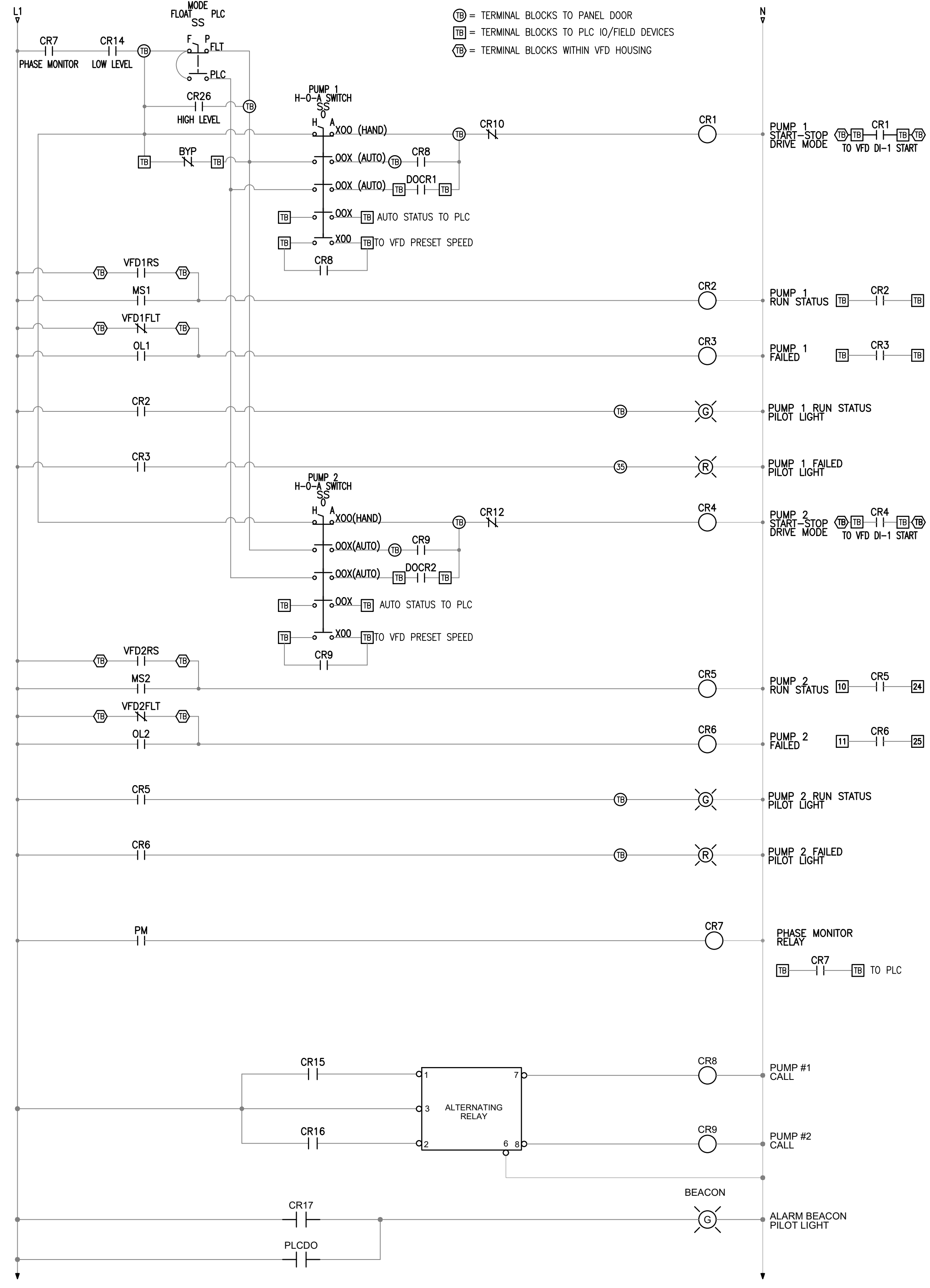
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Joseph W. Sims



PRINT DATE: 1/6/23 PLOT SCALE: 1:100000 EDIT DATE: 12/29/22 - 9:17 AM EDITED BY: CORY GRAYES DRAWING FILE: \\TRUENIS\OPERATIONS\PROJECTS\2022\2022-141 WHEATLAND, IN PACKAGED\WVW720 CAD CURRENT WORKING\E308 LIFT STATION PUMP CONTROL PANEL WIRING DETAILS CONT.DWG



**LIFT STATION PUMP CONTROL PANEL LAYOUT DETAILS CONT**

NOT TO SCALE

**NOTE:**  
THE CONTRACTOR/PANEL FABRICATOR SHALL BE RESPONSIBLE FOR THE FINAL SELECTION OF COMPONENTS, LAYOUT, FABRICATION, WIRING AND PROGRAMMING. ALL SUBJECT TO SHOP DRAWING REVIEW. THESE DETAILS ARE INTENDED TO INDICATE SCOPE OF WORK, QUALITY REQUIREMENTS, AND EXPECTATIONS.

**SIMS-DURKIN ASSOCIATES**  
**ENGINEERING COMPANY**  
5755 WEST 74TH STREET  
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FAX: 317-222-4120  
WEB: WWW.SIMS-DURKIN.COM  
SDA PROJECT NUMBER: 2022141

**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
WHEATLAND, IN 47597

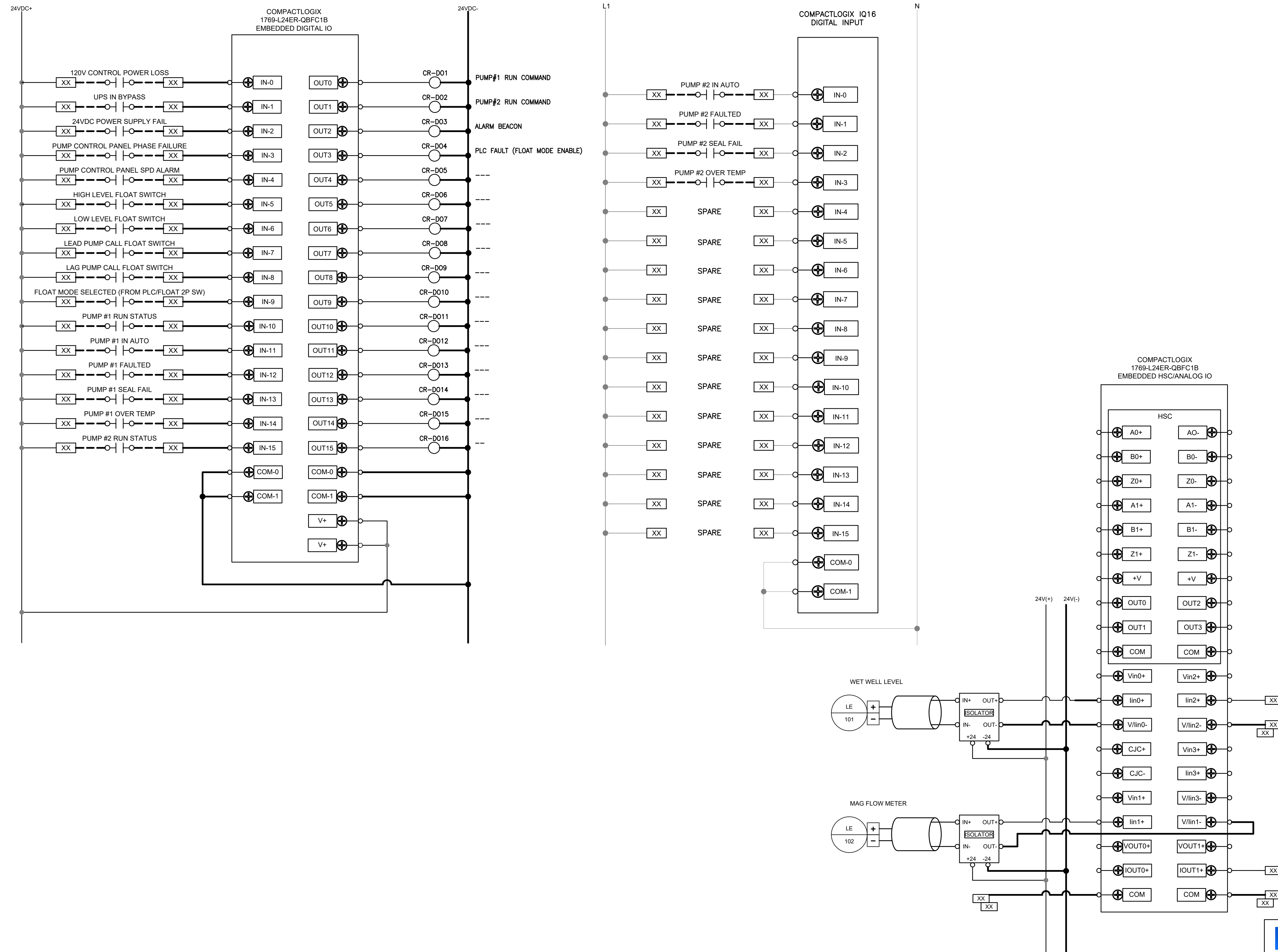
CONSTRUCTION SET

#	Revision	Date

Project #: 21-400-194-1  
Designed By: WK/DD/JR  
Drawn By: CG  
Checked By: WRK/JWS  
Date: 01/06/2023



PRINT DATE: 1/6/23  
 PLOT SCALE: 1:386.9116  
 EDIT DATE: 12/29/22 - 9:18 AM  
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 DRAWING FILE: \\TRIVENUS\OPERATIONS\PROJECTS\2022\2022141 - WHEATLAND, IN\PACKAGED\WWT\2023\CAD\CURRENT\WORKING\E309 LIFT STATION PUMP CONTROL PANEL WIRING DETAILS CONT.DWG



**LIFT STATION PLC WIRING DETAILS**

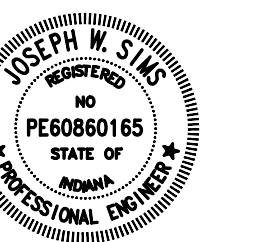
NOT TO SCALE

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CONSTRUCTION SET  
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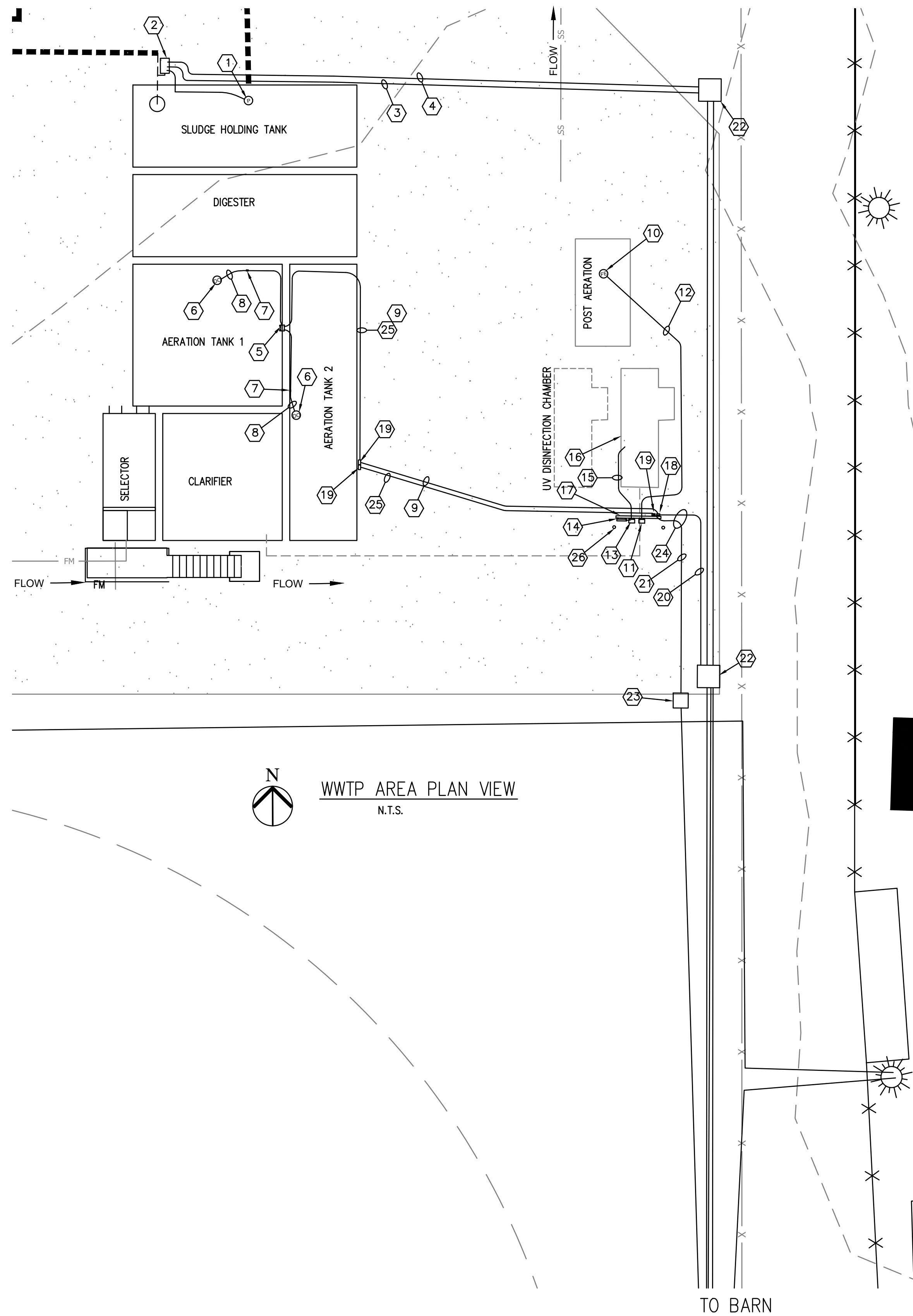


Joseph W. Sims

LIFT STATION PUMP  
 CONTROL PANEL WIRING  
 DETAILS CONT

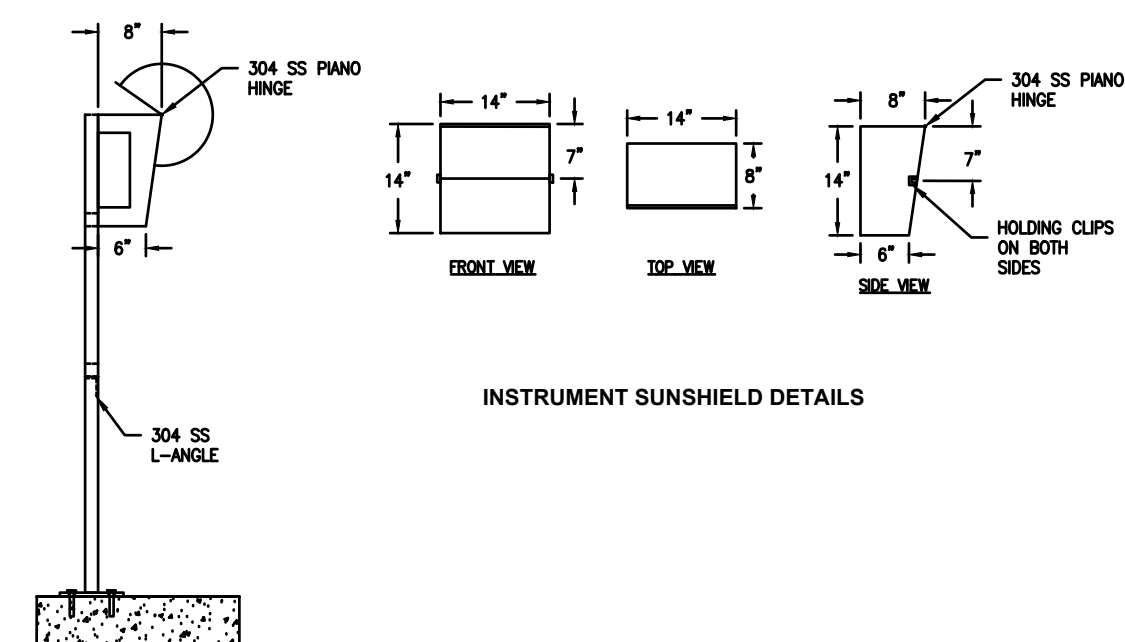
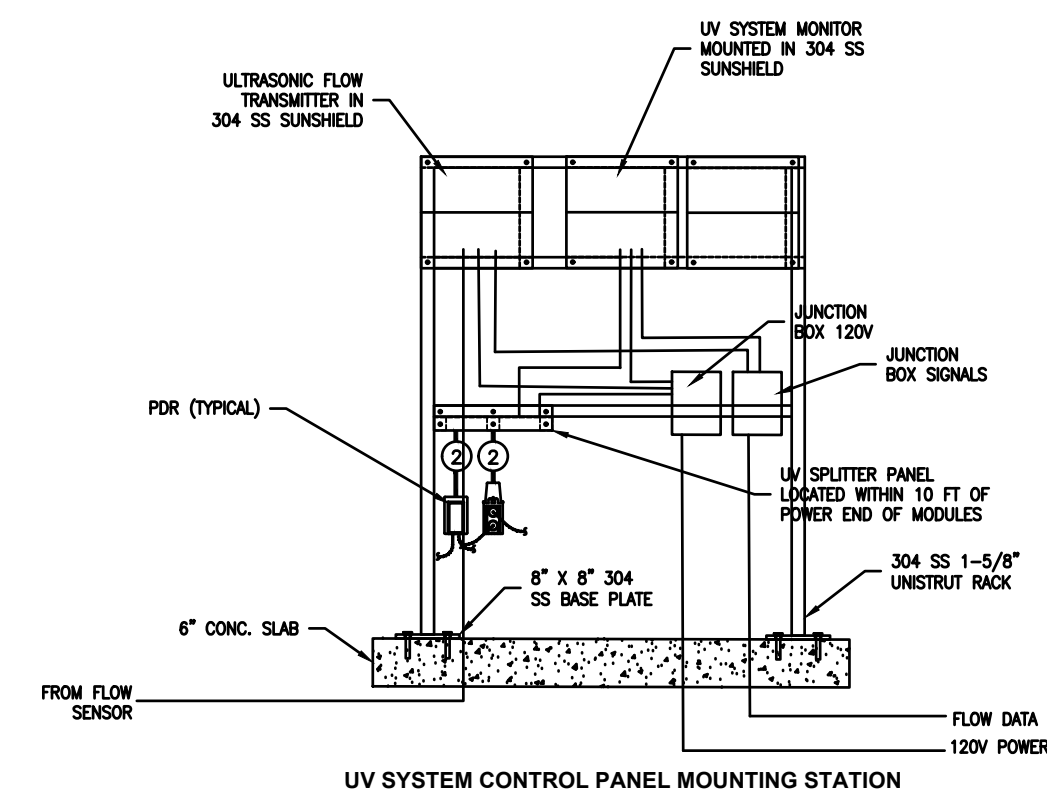
**E309**

PRINT DATE: 1/6/23 EDIT DATE: 1/5/23 9:45 AM EDITED BY: CORY GRAVES DRAWING FILE: \\TRUENAS\OPERATIONS\PROJECTS\2022\2022141 WHEATLAND, IN \PACKAGED WWT\20 CAD CURRENT WORKING\E310 UV AEROMOD SYSTEM PLAN.DWG PLOT SCALE: 1:186.9116



**ELECTRICAL KEYED NOTES:** ○

1. SLUDGE PUMP. SEE E303.
2. SUBMERSIBLE SLUDGE PUMP CONTROL PANEL FURNISHED BY AEROMOD INSTALLED BY ELECTRICAL CONTRACTOR. SEE MANUFACTURERS DETAILS. INSITE SENSOR PROBE CABLE WILL BE 33 LF LONG AND CANNOT BE CUT OR SPLICED. THIS CABLE WILL NEED TO BE CONNECTED TO THE BARRIER JUNCTION BOX AS PER NOTE [7]. THE E.C. WILL NEED TO PROVIDE CABLE FROM THE BARRIER JUNCTION BOX TO THE PROBE ANALYZER/DO MONITOR (ITEM [5]).
3. SLUDGE PUMP 3 PHASE POWER. SEE E303.
4. SLUDGE PUMP CONTROL/MONITORING WIRE TO CP-BSB CONTROL PANEL. 12-#14 CU, 1" C. (RUN STATUS, FAIL STATUS, ON/OFF CALL, SEAL FAIL, OVERTEMP AND SPARE).
5. DO MONITOR - INSITE MODEL MPA-48. MOUNT TO TOP RAILING USING INSITE MOUNTING KIT.
6. DO PROBE - INSITE MODEL 12 DO.
7. BARRIER JUNCTION BOX - INSITE MODEL SJB-1 FOR EACH PROBE. MOUNT TO RAILING NEAR DO MONITOR. CONNECTION TO SENSOR CABLE REQUIRES NEMA 4X, CL1, DIV 2, GR A,B,C,D APPROVED SEALED FITTING.
8. MANUFACTURER CABLE IN 3/4" C. - DO NOT CUT OR SPICE. ORDER FOR APPROPRIATE DISTANCE. MAX 200'.
9. 2-#16 TSP IN 3/4" C.
10. ULTRASONIC FLOW SENSOR FOR EFFLUENT FLOW RATE THROUGH WEIR. FLO-CORP CHANNELFLOW UOCM. NO EQUALS.
11. ULTRASONIC FLOW TRANSMITTER/CONTROLLER. FLO-CORP FIGICOM 200 - MODEL #: UCOM-1-DC2-A-E-N-4, NO EQUALS.
12. ULTRASONIC FLOW SENSOR MANUFACTURER CABLE. 3/4" C.
13. UV SYSTEM CONTROLLER. TROJAN UV 3000B WITH FLOW PACING.
14. STAINLESS STEEL SPLITTER WITH UV SYSTEM MODULE WEATHERPROOF OUTLETS. PROVIDE PER MANUFACTURER REQUIREMENTS.
15. MANUFACTURER LAMP MODULE CABLES.
16. TROJAN UV 3200K PTP UV SYSTEM.
17. 3"X3" WELDED ALUMINUM EQUIPMENT RACK. SAME DETAILS AS LIFT STATION. LENGTH AS REQUIRED.
18. 12" X 12" JUNCTION BOX FOR 120V CONTROL POWER OF EQUIPMENT TO "P-1". SEE PANEL SCHEDULE.
19. 12" X 12" JUNCTION BOX FOR CONTROL/MONITORING SIGNAL WIRES.
20. POWER WIRES FOR EQUIPMENT, SEE P-1 PANEL SCHEDULE. FLOW METER ELECTRONICS, DISSOLVED OXYGEN SENSOR ELECTRONICS, PDR OUTLETS FOR UV, HEAT TRACE PLUS SPARES: 12 - #12 CU, 2 - #12 CU GND, 1-1/4" C.
21. SIGNAL WIRES: 4-#16 TSP, 6-#14 CU, 1-1/4" C.
22. PULL BOX - POWER WIRE.
23. PULL BOX - ANALOG TYPE SIGNAL CABLES.
24. MAINTAIN 3" SEPARATION BETWEEN ANALOG SIGNAL CABLES AND AC POWER WIRING.
25. 2-#12 CU, 1-#12 CU GND, 1" C.
26. BALLARD, SEE DETAILS.

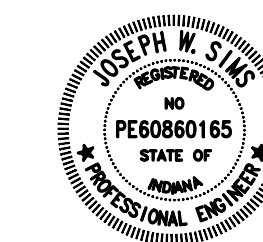


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CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM**  
**IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT**  
**PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

#	Revision	Date

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Joseph W. Durkin

- ▲ = ANALOG INPUT
- ▼ = ANALOG OUTPUT
- △ = DIGITAL INPUT
- ▽ = DIGITAL OUTPUT
- ETH = ETHERNET

GENERATOR DATA TRANSFERRED SIGNALS:

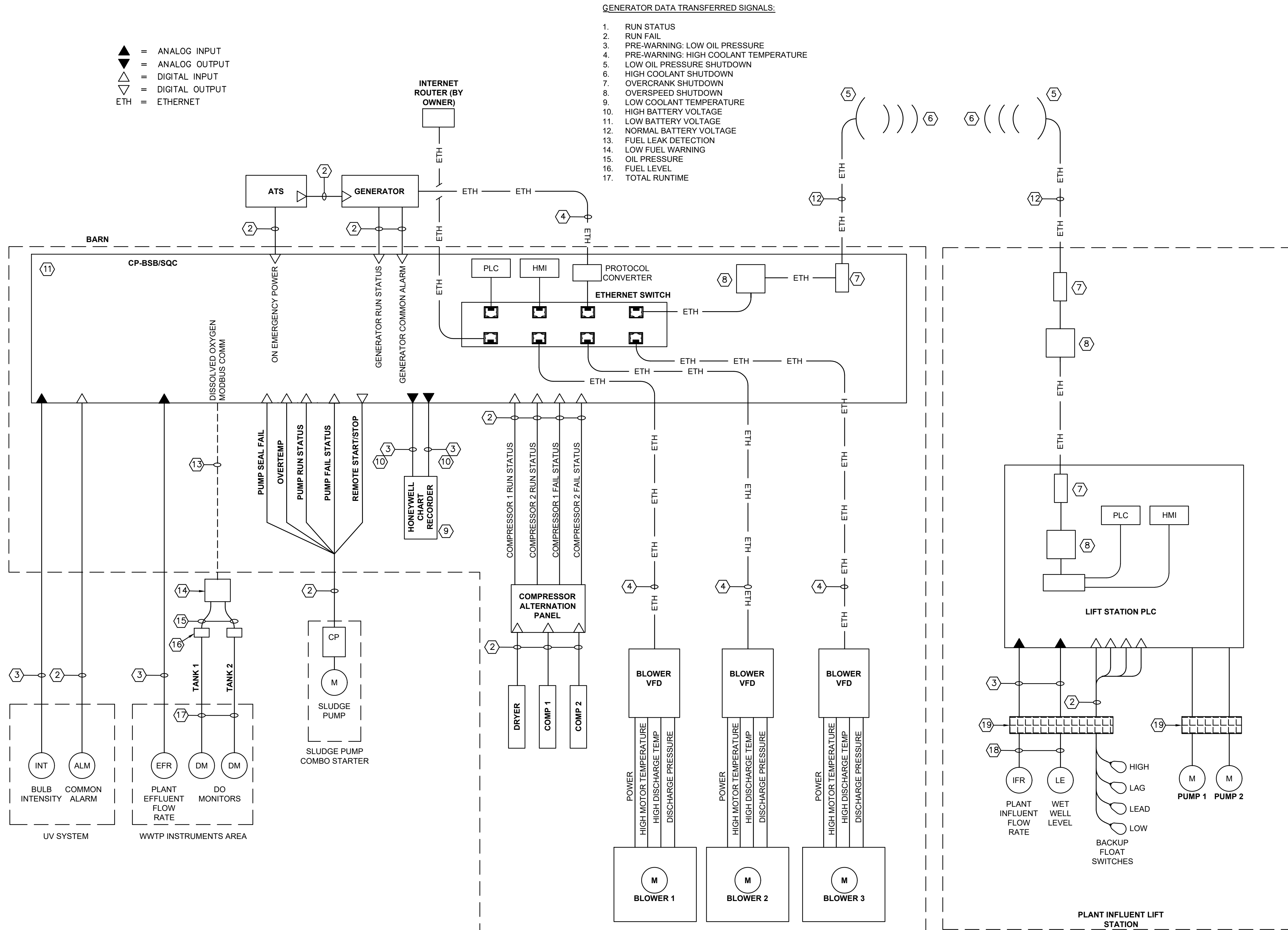
1. RUN STATUS
2. RUN FAIL
3. PRE-WARNING: LOW OIL PRESSURE
4. PRE-WARNING: HIGH COOLANT TEMPERATURE
5. LOW OIL PRESSURE SHUTDOWN
6. HIGH COOLANT SHUTDOWN
7. OVERCRANK SHUTDOWN
8. OVERSPEED SHUTDOWN
9. LOW COOLANT TEMPERATURE
10. HIGH BATTERY VOLTAGE
11. LOW BATTERY VOLTAGE
12. NORMAL BATTERY VOLTAGE
13. FUEL LEAK DETECTION
14. LOW FUEL WARNING
15. OIL PRESSURE
16. FUEL LEVEL
17. TOTAL RUNTIME

ELECTRICAL KEYED NOTES:

1. ANALOG SIGNALS IN 3/4" C.
2. DISCRETE SIGNAL IN 3/4" C.
3. ANALOG SIGNAL, TSP #16, 3/4" C.
4. CAT5E ETHERNET CABLE TO SWITCH.
5. ETHERNET BRIDGE UBIQUITI AIRMAX LITEBEAM M5. NO EQUALS.
6. ETHERNET BRIDGE TO BE ORIENTATED DIRECTLY AT LIFT STATION ETHERNET BRIDGE.
7. SURGE SUPPRESSOR.
8. POE ADAPTER.
9. HONEYWELL MODEL DR 4300 2 PEN CIRCULAR CHART RECORDER.
10. PLC TO PROVIDE COPY OF 4-20mA SIGNAL FOR INFLUENT FLOW FOR LIFT STATION MAGNETIC FLOW METER AND EFFLUENT FLOW FOR WASTEWATER TREATMENT PLANT ULTRASONIC FLOW METER. EFFLUENT FLOW METERING REQUIRED BY IDEM.
11. MAIN PLC PANEL FURNISHED BY AEROMOD AND INSTALLED BY CONTRACTOR.
12. WEATHERPROOF TYPE ETHERNET CABLE TO UBIQUITI RADIO.
13. DISSOLVED OXYGEN ANALYZER TO PLC MODBUS COMMUNICATIONS CABLE. 1-#16 TSP OR BELDEN 3106A.
14. DO MULTI-CHANNEL ANALYZER.
15. DO PROBE CABLE FROM JUNCTION BOX TO ANALYZER. BELDEN 9418; NO EXCEPTIONS.
16. JUNCTION BOX.
17. MANUFACTURER DO PROBE SENSOR CABLE.
18. MANUFACTURER PROVIDED CABLES.
19. VENTED TERMINATION BOX. SEE DETAILS.

LIFT STATION DATA TRANSFERRED SIGNALS:

1. PUMP 1 RUN STATUS
2. PUMP 1 FAILED STATUS
3. PUMP 1 IN AUTO
4. PUMP 1 SEAL FAIL
5. PUMP 1 OVERTEMP
6. PUMP 1 START/STOP COMMAND
7. PUMP 1 SPEED CONTROL SIGNAL
8. PUMP 1 SPEED FEEDBACK
9. PUMP 2 RUN STATUS
10. PUMP 2 FAILED STATUS
11. PUMP 2 IN AUTO
12. PUMP 2 SEAL FAIL
13. PUMP 2 OVERTEMP
14. PUMP 2 START/STOP COMMAND
15. PUMP 2 SPEED CONTROL SIGNAL
16. PUMP 2 SPEED FEEDBACK
17. HIGH LEVEL FLOAT
18. LOW LEVEL FLOAT
19. 3 PHASE FAILURE
20. 3 PHASE SURGE TRIP
21. 120V POWER LOSS
22. STATION LEVEL
23. STATION FLOW RATE



I&C ONE-LINE DIAGRAM

NOT TO SCALE

#	Revision	Date
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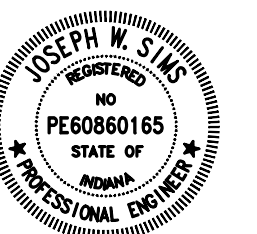
Project #: 21-400-194-1

Designed By: WK/DD/JR

Drawn By: CG

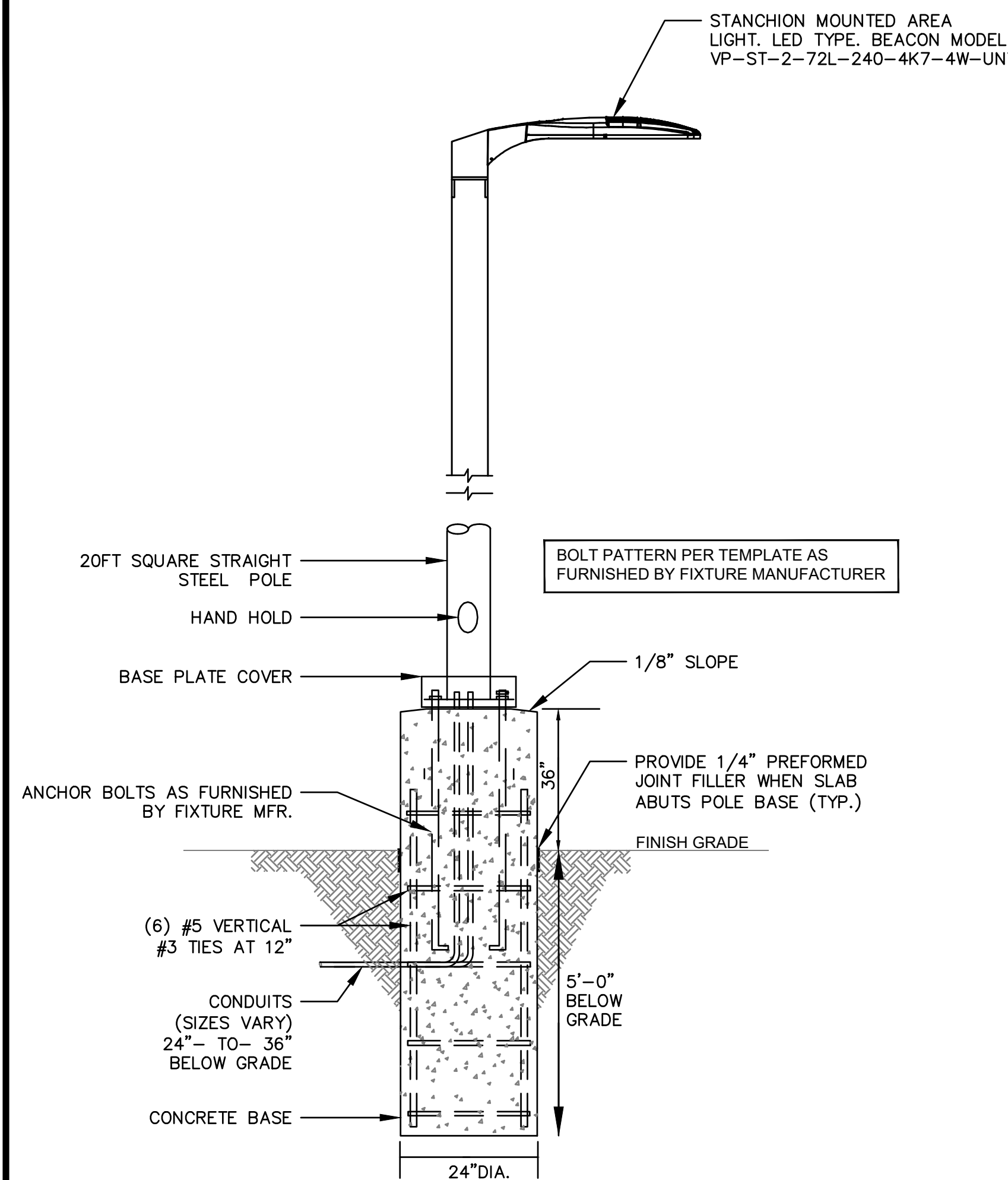
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Date: 01/06/2023

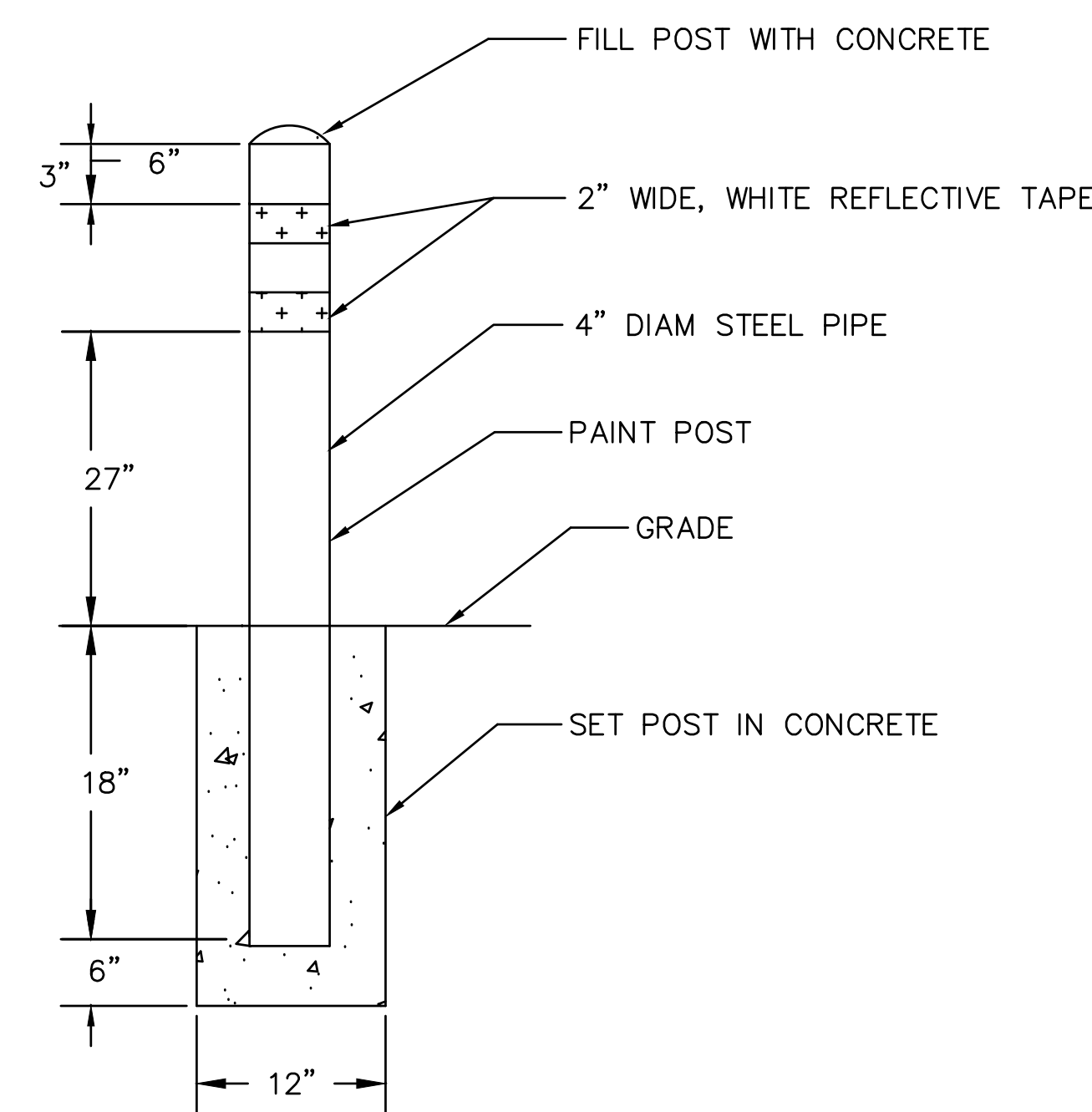


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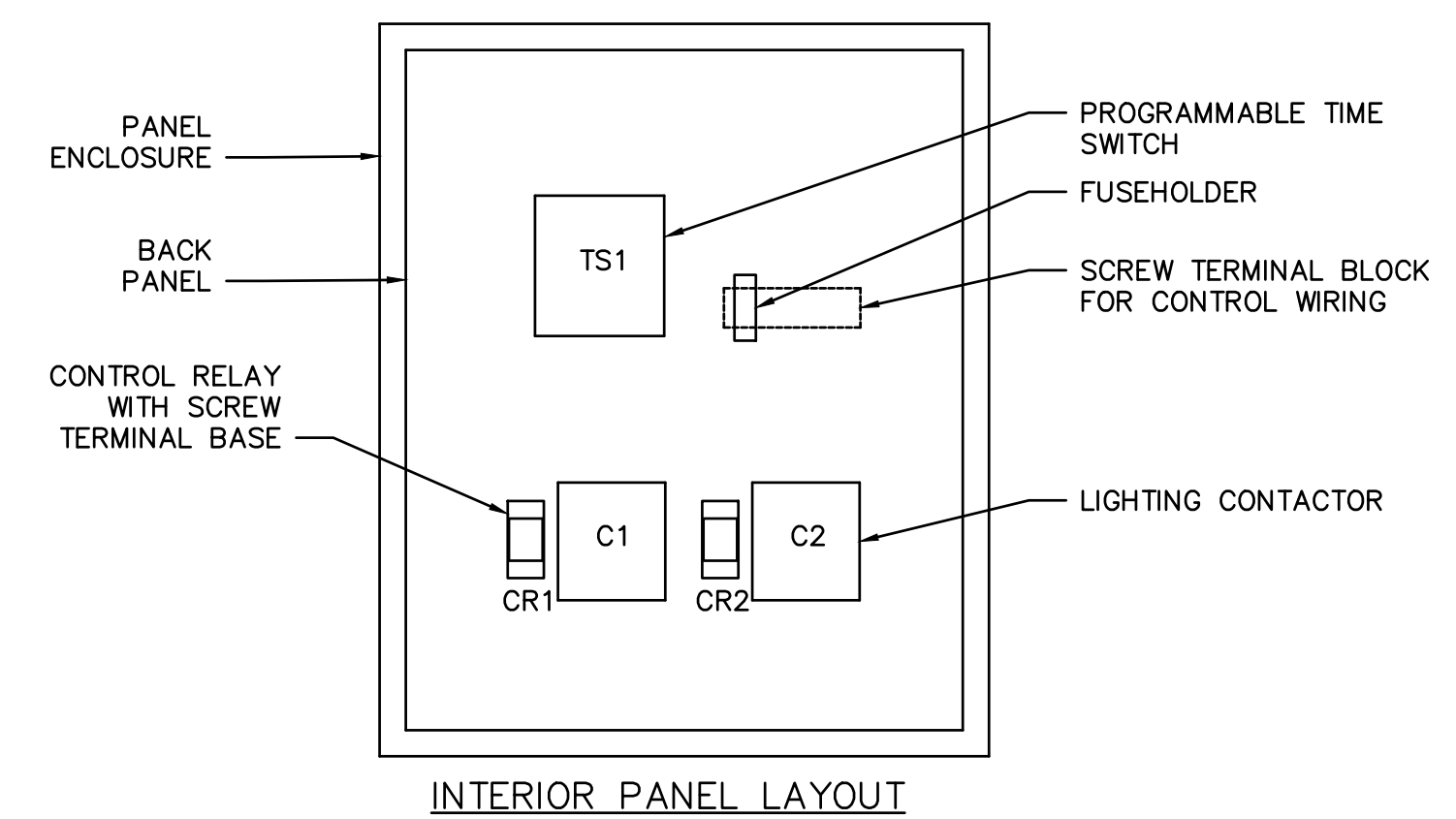
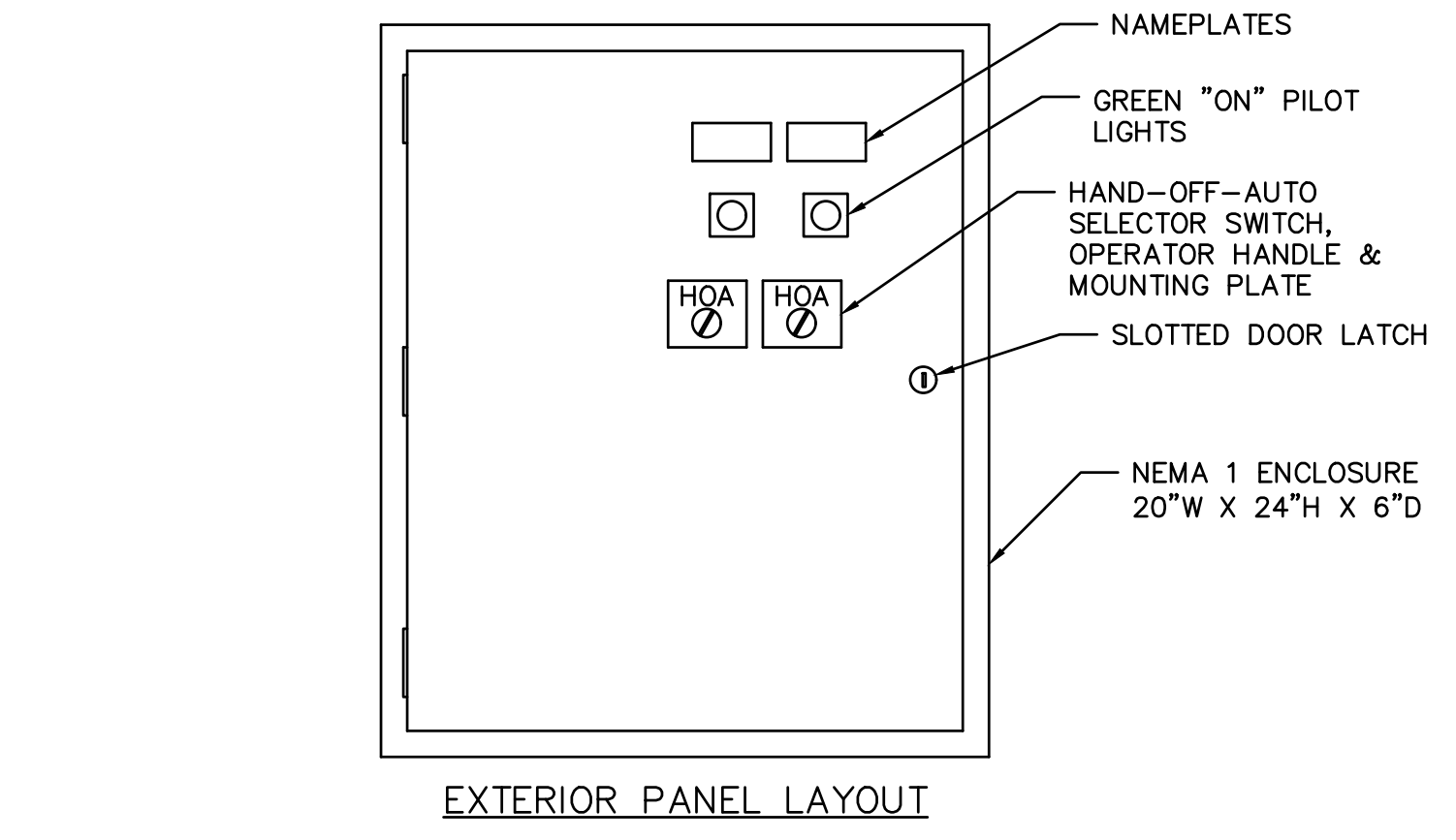
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**LIGHTING POLE DETAIL**  
NOT TO SCALE

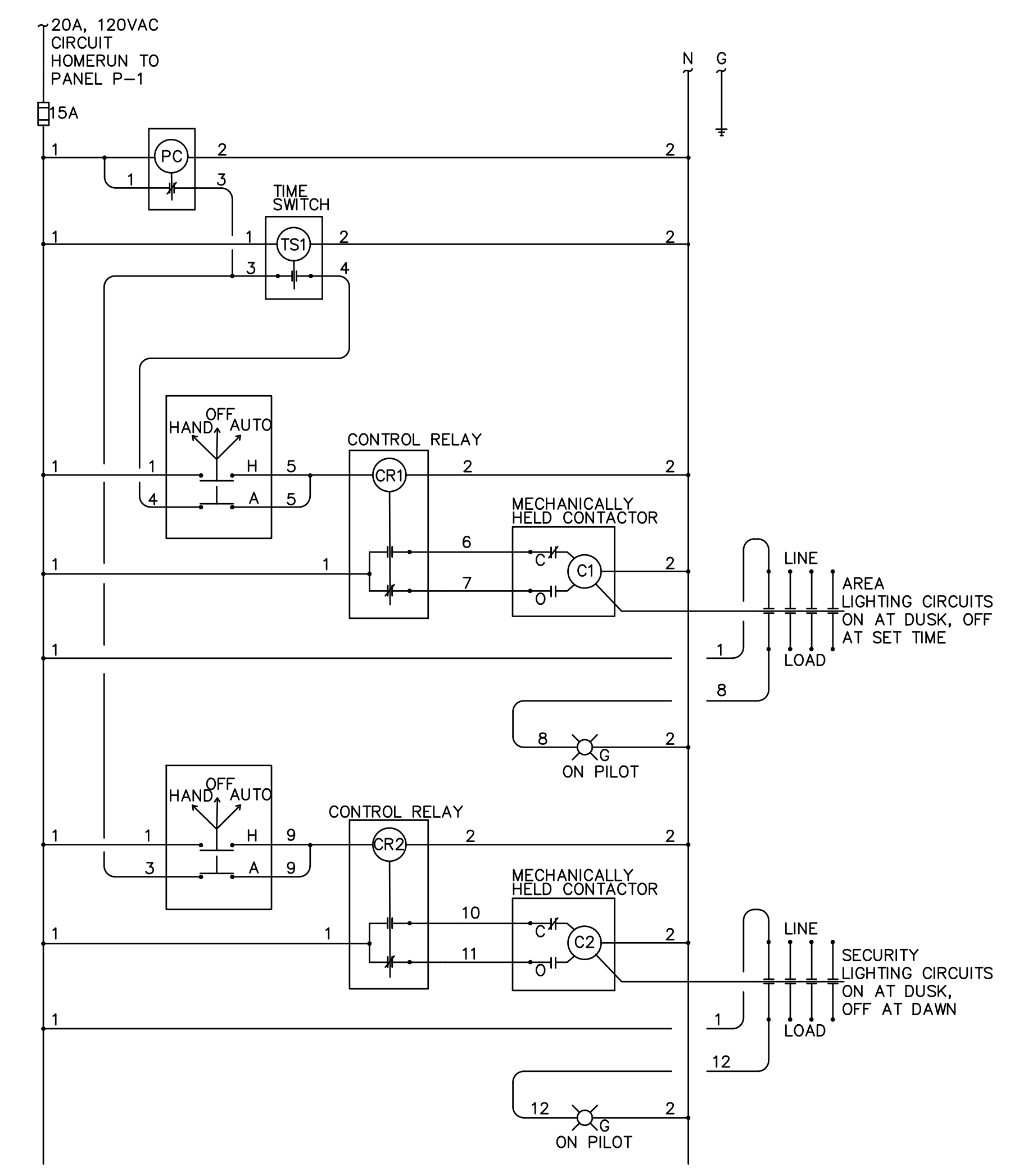


**PIPE BOLLARD DETAIL**  
NOT TO SCALE



**LIGHTING CONTROL PANEL LAYOUT**  
NOT TO SCALE

**GENERAL ELECTRICAL DETAILS**  
NOT TO SCALE



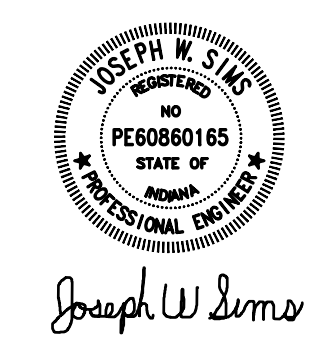
**LIGHTING CONTROL PANEL WIRING DIAGRAM**  
NOT TO SCALE

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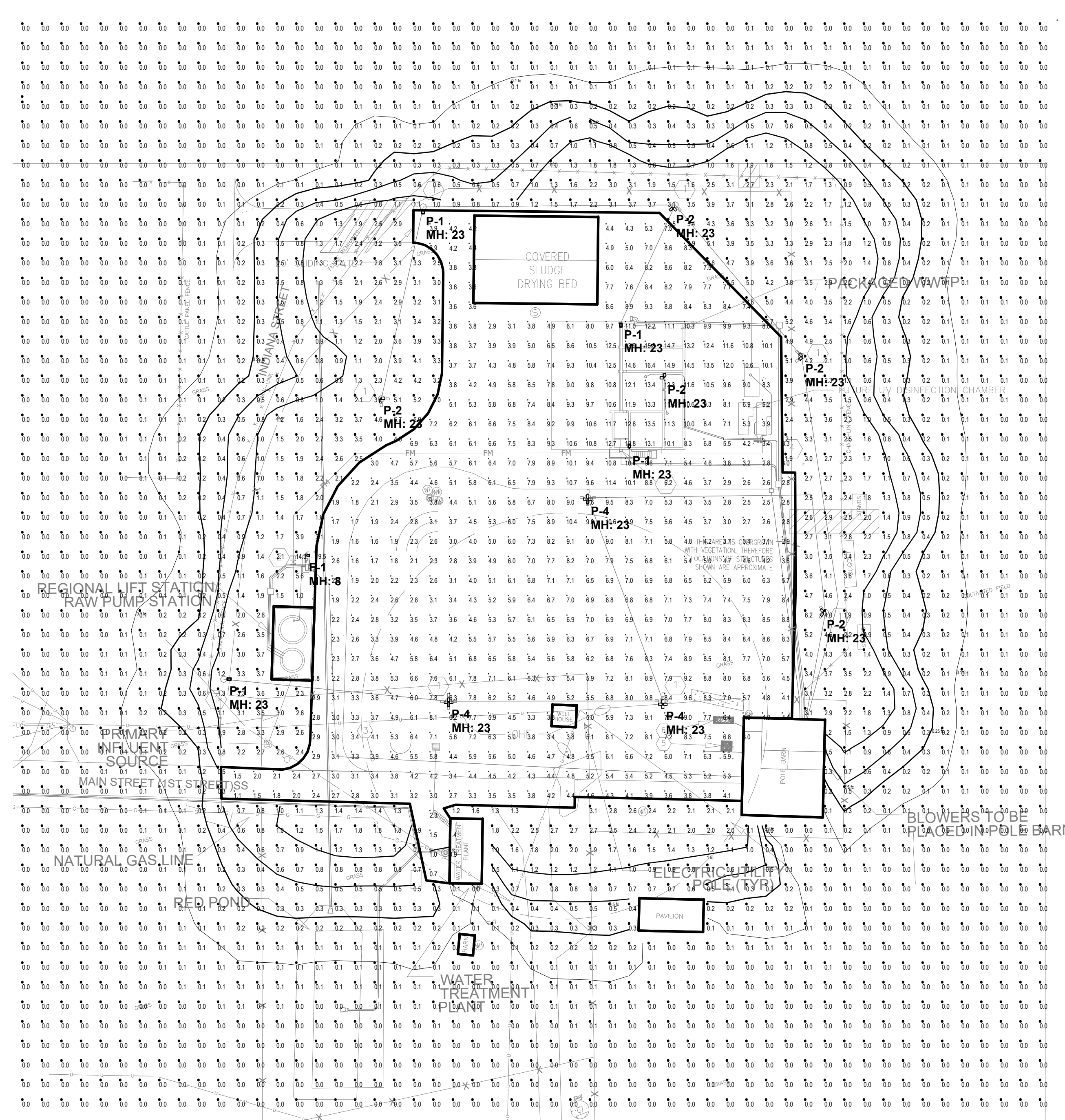
CONSTRUCTION SET  
**WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS**  
**DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION**  
 WHEATLAND, IN 47597

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CONSTRUCTION SET  
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DIVISION I - WASTEWATER TREATMENT  
PLANT AND REGIONAL LIFT STATION**  
WHEATLAND, IN 47597



RENDER - TOP VIEW

PHOTOMETRIC PLAN DESIGNED BY ESL-SPECTRUM  
WWW.ESL-SPECTRUM.COM  
PHONE: 317.951.2300

Luminaire Schedule								
Project: 20220282-HG WHEATLAND WWTP - SITE LIGHTING R1 1-5-23								
Symbol	Qty	Label	Arrangement	Lum. Watts	Lum. Lumens	LLF	Manufacturer	Description
⊕	1	F-1	Single	62.7	7032	0.850	BEACON	VP-F-1-132L-55-4K7-W-UNV
⊕	4	P-1	Single	241.7	23985	0.850	BEACON	(1) VP-ST-2-72L-240-4K7-4W-UNV
⊕	5	P-2	2 @ 90 degrees	241.7	23985	0.850	BEACON	(2) VP-ST-2-72L-240-4K7-4W-UNV
⊕	3	P-4	4 @ 90 Degrees	241.7	23985	0.850	BEACON	(4) VP-ST-2-72L-240-4K7-4W-UNV

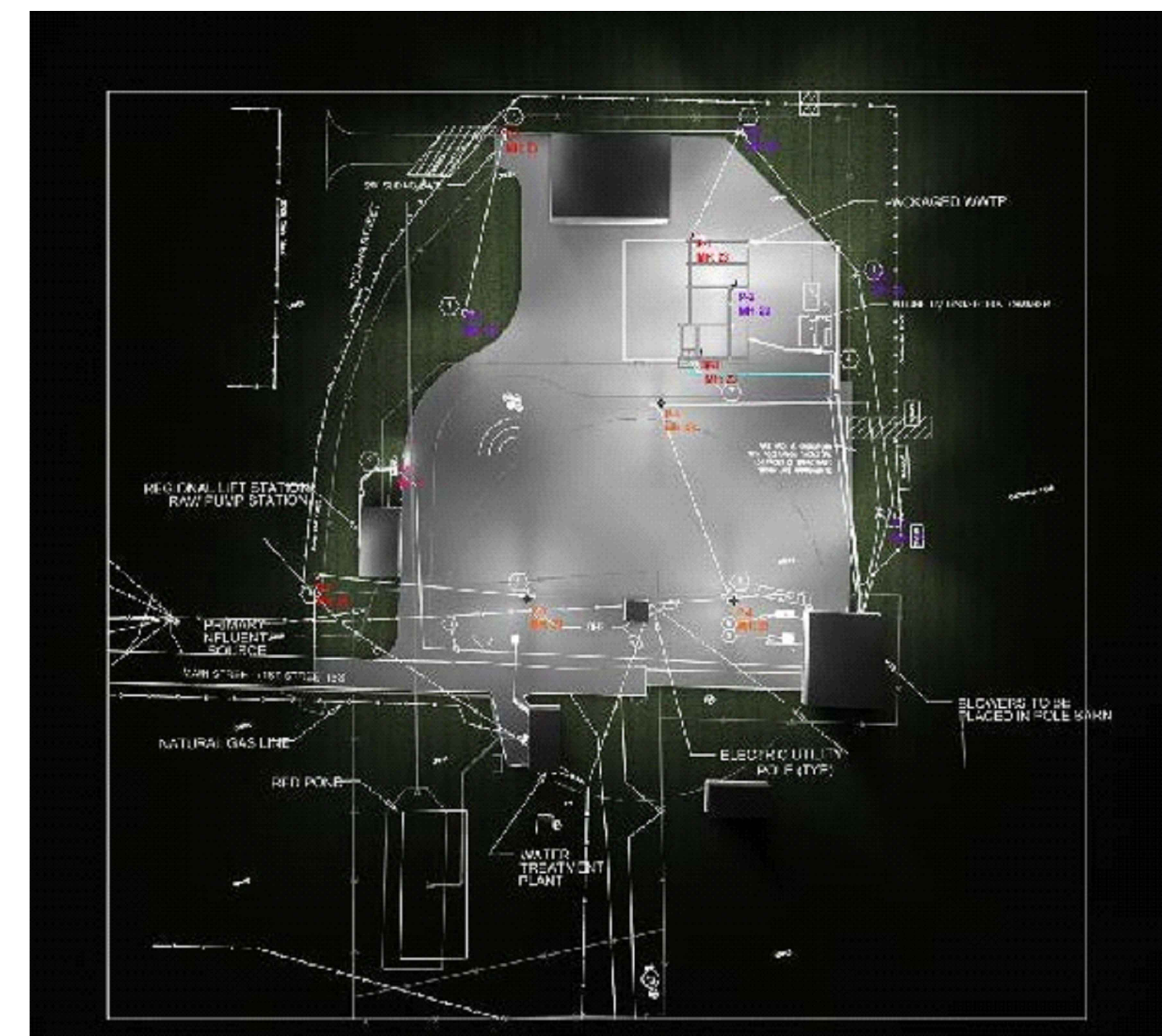
CALCULATIONS ARE MAINTAINED HORIZONTAL ILLUMINANCE FIGURES IN FOOT-CANDLES  
POINTS SHOWN ARE AT GRADE  
FIXTURE MOUNTING HEIGHTS ARE SPECIFIED NEXT TO FIXTURES AS "MH"  
POLES ARE 20'-0" ON A 3'-0" BASE

Calculation Summary					
Project: 20220282-HG WHEATLAND WWTP - SITE LIGHTING R1 1-5-23					
Label	CalcType	Units	Avg	Max	Min
PERIMETER @ GRADE	ILLUMINANCE	Fc	0.54	19.5	0.0
SITE @ GRADE	ILLUMINANCE	Fc	6.05	16.4	0.7

ESL-Spectrum's services are for estimation purposes only, and are not warranties.  
Final design and illumination levels must be determined and specified by an electrical engineer.  
Field results may differ from computer predictions because of many uncontrollable factors and adverse test conditions such as:  
line voltage variations, lamp performance, product manufacturing tolerances, jobsite conditions, and other unrecoverable light-loss factors.

THE FIXTURE TYPE(S) AND LAMPING(S) SPECIFIED ON THIS LAYOUT MUST BE USED IN ORDER TO MEET THE EXACT CRITERIA AND PERFORMANCE DATA SHOWN.  
IES RECOMMENDED ILLUMINANCE TARGETS USED WHERE APPLICABLE.

APPROXIMATED SITE AREA  
Area = 63670 Sq.ft

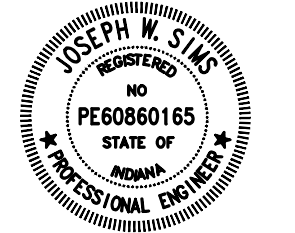


PSEUDO COLOR ILLUMINANCE LEVELS

SITE LIGHTING - PLAN VIEW  
Scale: 1 inch = 20 Ft.

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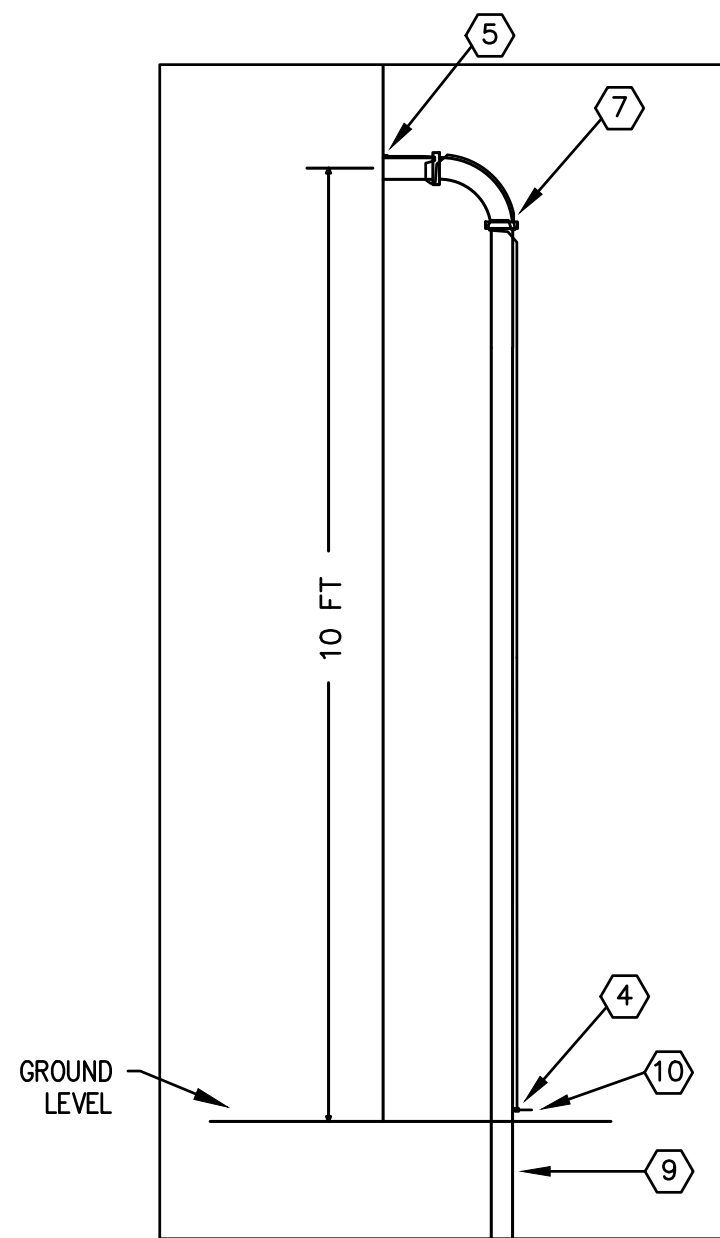
**LIGHTING DETAILS**  
SCALE: NONE

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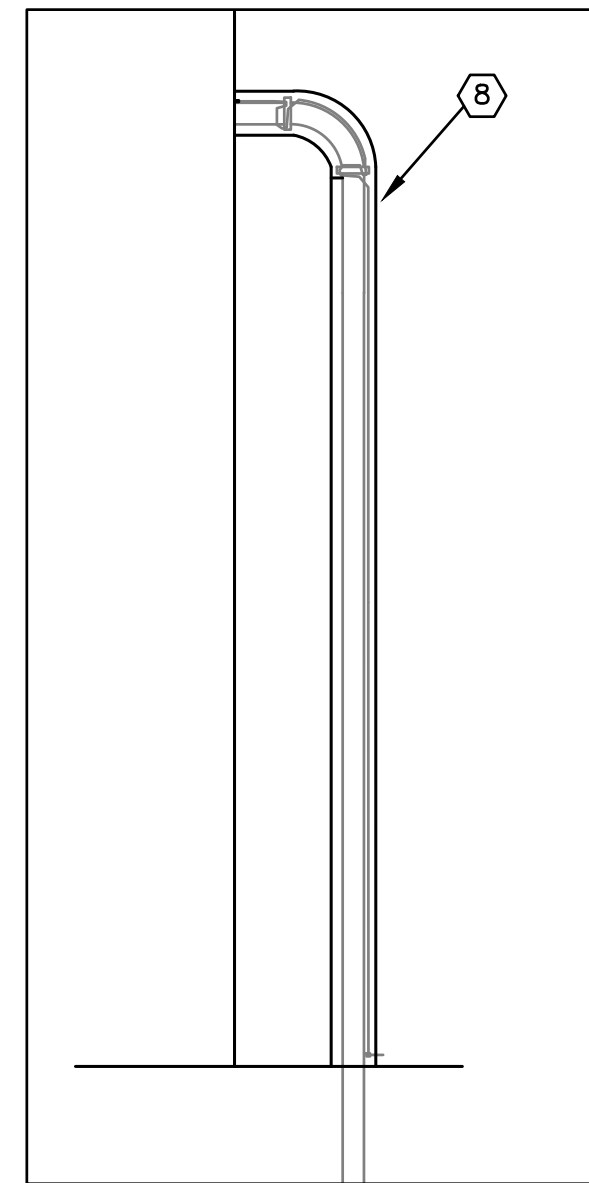
**LIGHTING DETAILS**

**E313**

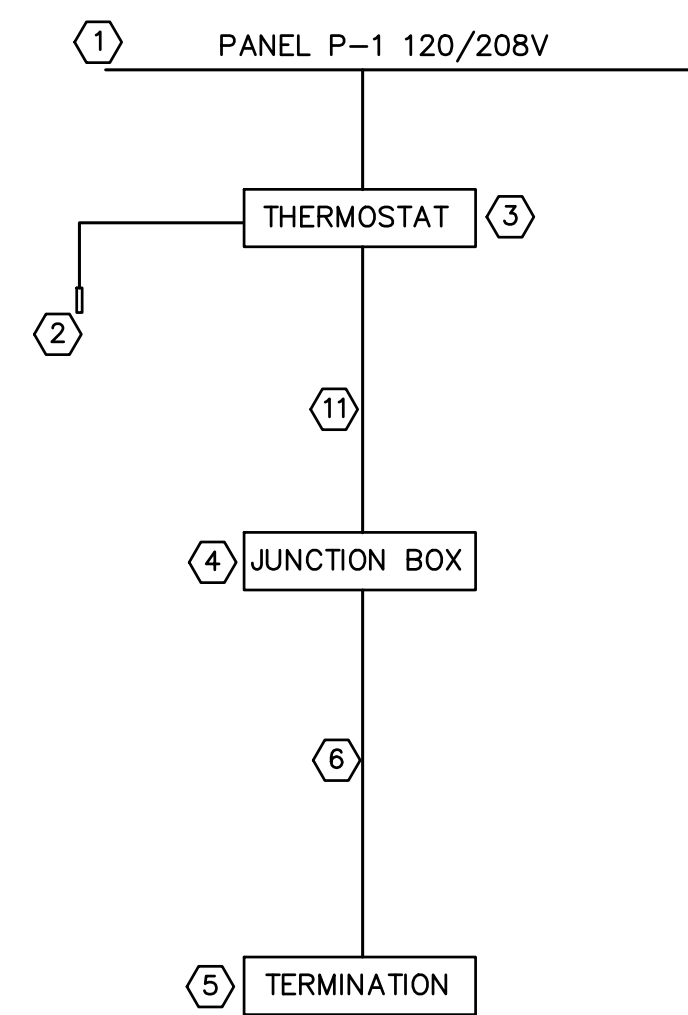
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4" PIPE W/HEAT TRACE  
N.T.S.



PIPE W/ 2" INSULATION  
N.T.S.



HEAT TRACE ONE-LINE  
N.T.S.

GENERAL ELECTRICAL NOTES:

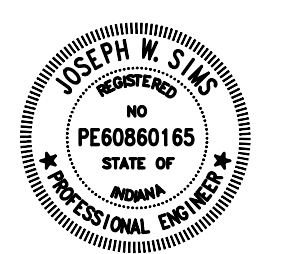
- A. ALL EQUIPMENT, WIRING, AND CONDUIT ON THIS PLAN FURNISHED AND INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED. VERIFY ALL REQUIREMENTS WITH APPROVED SHOP DRAWINGS BEFORE ROUGH-IN.
- B. ALL CONTROL PANELS SHALL HAVE LOCKOUT/TAGOUT AVAILABLE.
- C. OPEN TANK AREAS ARE CLASSIFIED CLASS 1 DIVISION 2: ALL WIRING SHALL COMPLY.
- D. RIGID ALUMINUM GALVANIZED RIGID STEEL FOR ALL CONDUIT ABOVE GRADE. RIGID GALVANIZED STEEL FOR ALL CONDUITS BELOW DRIVING SURFACES AND ENTRANCE TO CLASSIFIED AREAS. SCHEDULE 40 PVC FOR ALL OTHER UNDERGROUND CONDUIT.
- E. CONDUIT ENTRY INTO ALL ENCLOSURES SHALL BE THRU BOTTOM OF ENCLOSURE.

ELECTRICAL KEYED NOTES:

- 1. PANEL P-1. SEE SHEET E600.
- 2. AMBIENT TEMPERATURE SENSOR.
- 3. HEAT TRACE THERMOSTAT - SET FOR 45 DEGREES.
- 4. HEAT TRACE POWER CONNECTION KIT. RAYCHEM JBS-A00-A OR EQUAL.
- 5. HEAT TRACE TERMINATION.
- 6. HEAT TRACE TAPE 120V, 8W/FT. RAYCHEM 8BTV2-CT OR EQUAL.
- 7. CONTRACTOR SHALL LOOP HEAT TRACE AT FLANGES.
- 8. FLEXIGLASS CLOSED CELL FOAM INSULATION OR EQUAL COVERED BY ALUMINUM JACKETING. SEAL JACKETING ALONG ALL ENDS, EDGES, AND PENETRATIONS.
- 9. 4" INFLUENT PIPE.
- 10. 120V FROM THERMOSTAT.
- 11. 2-#12 CU IN 1-1/2" C.

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 F A X : 3 1 7 - 2 2 2 - 4 1 2 0  
 WEB: WWW.SIMS-DURKIN.COM  
 SDA PROJECT NUMBER: 2022141

**HEAT TRACE**

# E314

5

4

3

2

1

**Branch Panel: P-1**

Location: ELECTRICAL 102      Voltage: 208Y/120      Branch: NORMAL  
 Supplied From:      Phase: 3      A.I.C. Rating: 10,000  
 Mounting: Surface      Wire: 4      Main Type: MCB  
 Enclosure Type: Type 1      Ground: Equipment Ground Bus      Main Rating: 225 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	Receptacle BLOWERS 103	20 A	1	1.1	0.5			1	20 A Receptacle OFFICE 101	2	
3	Receptacle OFFICE 101	20 A	1		0.5	0.5		1	20 A Receptacle OFFICE 101	4	
5	Receptacle RR 104	20 A	1			0.2	0.4	1	20 A Receptacle ELECTRICAL 102	6	
7	Receptacle STORAGE 105	20 A	1	0.4	2.2			2	30 A UH-1	8	
9					2.2	2.2				10	
11	UH-1	30 A	2					2	30 A UH-1	12	
13				2.2	2.2					14	
15	UH-1	30 A	2					2	30 A UH-1	16	
17	UWH-1	20 A	1				1	2.2	2	30 A UH-1	18
19	UWH-1	20 A	1	1	0.8					20	
21	ACCU-2	30 A	2		2	0.8			2	15 A EWH-2	22
23							2	0.6	2	15 A ACCU-1	24
25	EF-1	20 A	1	0.5	0.6				2	15 A ACCU-1	26
27	UV Controller	25 A	1		0.5	0.5			1	20 A Ultrasonic Flow Meter	28
29	UV PDR	15 A	1			0.5	0.5	1	15 A UV PDR	30	
31	DO Analyzer	20 A	1	0.5	1				1	20 A EWH-1	32
33	ERV-1	20 A	1		0.1	3					34
35	SPARE	20 A	1				0	3	2	40 A EWH-1	36
37	SPARE	20 A	1	0	0.2				1	20 A Honeywell Chart Recorder	38
39	SPARE	20 A	1		0	0.5			1	20 A SQC Panel	40
41	SPARE	20 A	1				0	0.7	1	20 A Lighting Room 101, 104, 105, 103	42
43	SPARE	20 A	1	0	0.1				1	20 A Lighting ELECTRICAL 102	44
45	SPARE	20 A	1		0	0.1			1	20 A Lighting	46
47	SPARE	20 A	1				0	0	1	20 A SPARE	48
49	SPARE	20 A	1	0	0				1	20 A SPARE	50
51	SPARE	20 A	1		0	0			1	20 A SPARE	52
53	SPARE	20 A	1				0	0	1	20 A SPARE	54
55	SPARE	20 A	1	0	0				1	20 A SPARE	56
57	SPARE	20 A	1		0	0			1	20 A SPARE	58
59	SPARE	20 A	1				0	0	1	20 A SPARE	60
<b>Total Load:</b>				13.2 kVA	17.3 kVA	15.5 kVA					

Load Summary:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	958 VA	100.00%	958 VA	
Mechanical	3600 VA	70.00%	2520 VA	<b>Total Conn. Load: 46038 VA</b>
Motor	34700 VA	100.00%	34700 VA	<b>Total Est. Demand: 44958 VA</b>
Receptacle	6780 VA	100.00%	6780 VA	<b>Total Conn. Current: 128 A</b>
				<b>Total Est. Demand Current: 125 A</b>

Remarks:

**LIGHT FIXTURE SCHEDULE - INTERIOR LIGHTING**

FIXTURE TYPE	FIXTURE NAME	DESCRIPTION	VOLTAGE	MAXIMUM ALLOWED WATTAGE	LAMP TYPE	COLOR TEMPERATURE	DELIVERED LUMENS	ACCEPTABLE MANUFACTURERS
F4	LED STRIP FIXTURE	4" WIDE X 4' LONG, SURFACE MOUNT OR SUSPENDED, FROSTED DROP LENS, WIDE DISTRIBUTION, DAMP LOCATION LISTED.	120 V	41 W	LED	3500K	5000	LITHONIA Z1LD, METALUX SNLED, COLUMBIA MPS
FEM	EMERGENCY LIGHT FIXTURE	FLAME RETARDANT THERMOPLASTIC HOUSING, SELF DIAGNOSTICS AVAILABLE, UL 924 LISTED EMERGENCY BATTERY WITH A MINIMUM OF 90 MINUTES OF RUNTIME.	120 V	3 W	LED			HUBBELL - PROGRESS LIGHTING - PE2EU, COOPER - SURE-LITES - AP2SQLED, LITHONIA LIGHTING - EU2C
FX	EXIT LIGHT	DIE CAST ALUMINUM EXIT, WHITE HOUSING, DIRECTIONAL ARROWS AND NUMBER OF FACES AS PER DRAWINGS, UNIVERSAL CEILING OR WALL MOUNT, STENCIL FACE, RED LETTERS, UL LISTED, MEETS UL924, NFPA 101, NEC, AND OSHA ILLUMINATION STANDARDS, FIVE YEAR WARRANTY.	120 V	4 W	LED			DUAL-LITE SE, LITHONIA LE, SURE-LITES CX

**LIGHT FIXTURE SCHEDULE - EXTERIOR LIGHTING**

FIXTURE TYPE	FIXTURE NAME	DESCRIPTION	VOLTAGE	MAXIMUM ALLOWED WATTAGE	LAMP TYPE	COLOR TEMPERATURE	DELIVERED LUMENS	ACCEPTABLE MANUFACTURERS
EX1	EXTERIOR WALL PACK	18"W X 9"D X 9"H, DIE-CAST ALUMINUM HOUSING, TYPE IV DISTRIBUTION, WET LOCATION LISTED, PROVIDE WITH INTEGRAL 90 MINUTE EMERGENCY BATTERY. FINISH COLOR TO BE SELECTED BY ARCHITECT.	120 V	29 W	LED	4000K	3053	LITHONIA W5Q, OR APPROVED EQUAL

- GENERAL NOTES - LIGHT FIXTURES:**
- A. ALL FIXTURES SHALL BE CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) TO US SAFETY STANDARDS-UL, ETL, CSA.
  - B. ALL FIXTURES SHALL BE PAINTED AFTER FABRICATION.
  - C. THIS SCHEDULE DOES NOT NECESSARILY INDICATE TYPE OF TRIM REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING TRIM TYPE WITH TYPE OF CEILING SYSTEM AT EACH INSTALLATION LOCATION. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS AND PROVIDE ACCORDINGLY.
  - D. ALL FIXTURES LOCATED IN AN EXTERIOR AND/OR UNCONDITIONED ENVIRONMENT SHALL BE PROVIDED WITH HOUSINGS, LAMPS, AND/OR DRIVERS SUITABLE FOR THIS ENVIRONMENT.
  - E. ALL LED FIXTURES SHALL BE LM-79/IM-80 TESTED AND COMPLIANT.
  - F. ALL LED FIXTURES SHALL BE PROVIDED WITH A MINIMUM OF FIVE-YEAR WARRANTY. REFER TO SPECIFICATION SECTION 265100 FOR ADDITIONAL REQUIREMENTS.
  - G. LUMENS LEVELS LISTED IN THIS SCHEDULE ARE INTENDED TO BE DELIVERED LUMENS. SUBMITTALS ARE TO INCLUDE THE DELIVERED LUMEN TOTAL OF EACH FIXTURE AND MUST MEET THE LEVEL INDICATED FOR EACH FIXTURE TYPE.
  - H. WATTAGE LISTED IN THIS SCHEDULE ARE TO BE MAXIMUM ALLOWABLE WATTAGE FOR EACH FIXTURE. SUBMITTED LIGHT FIXTURES MUST NOT EXCEED LISTED MAXIMUM WATTAGE TO ACHIEVE SPECIFIED DELIVERED LUMENS.



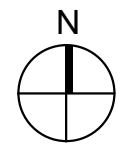
CONSTRUCTION SET  
 WHEATLAND WASTEWATER SYSTEM  
 IMPROVEMENTS  
 DIVISION I - WASTEWATER TREATMENT PLANT  
 AND REGIONAL LIFT STATION  
 WHEATLAND, IN 47597

#	Revision	Date

Project #: 21-400-194-1  
 Designed By: DJ  
 Drawn By: DJ  
 Checked By: DB  
 Date: 12/28/22



NOT FOR CONSTRUCTION



ELECTRICAL SCHEDULES

E600



5

4

3

2

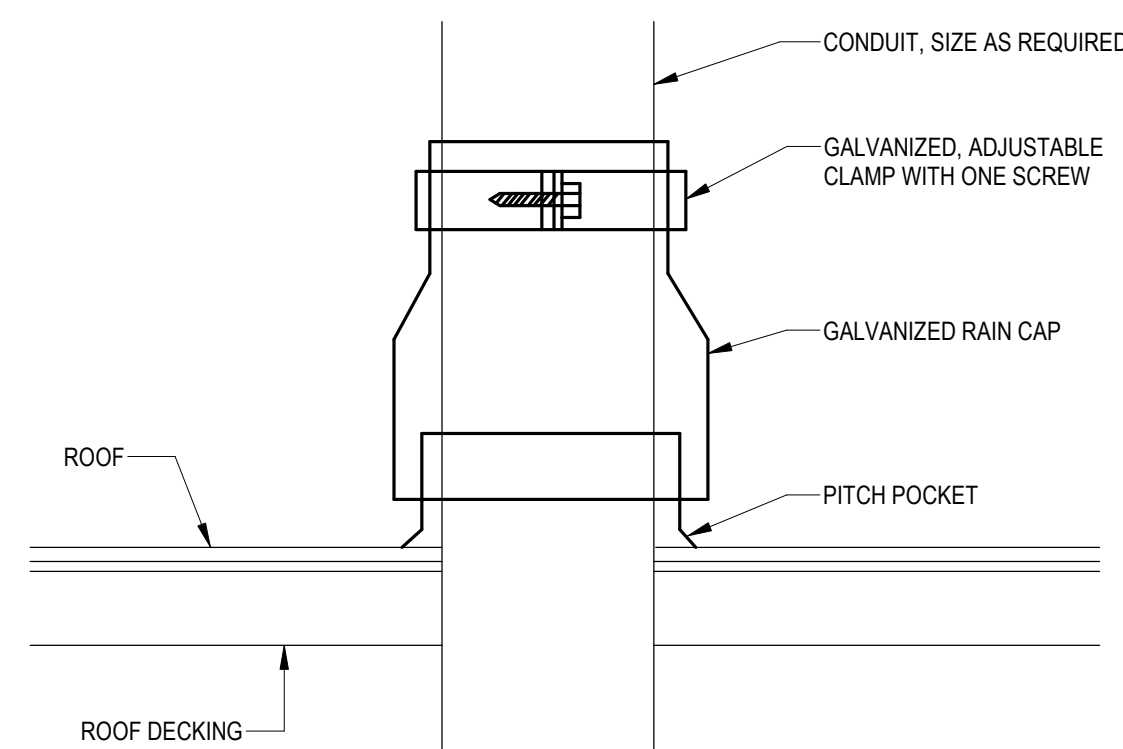
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D

C

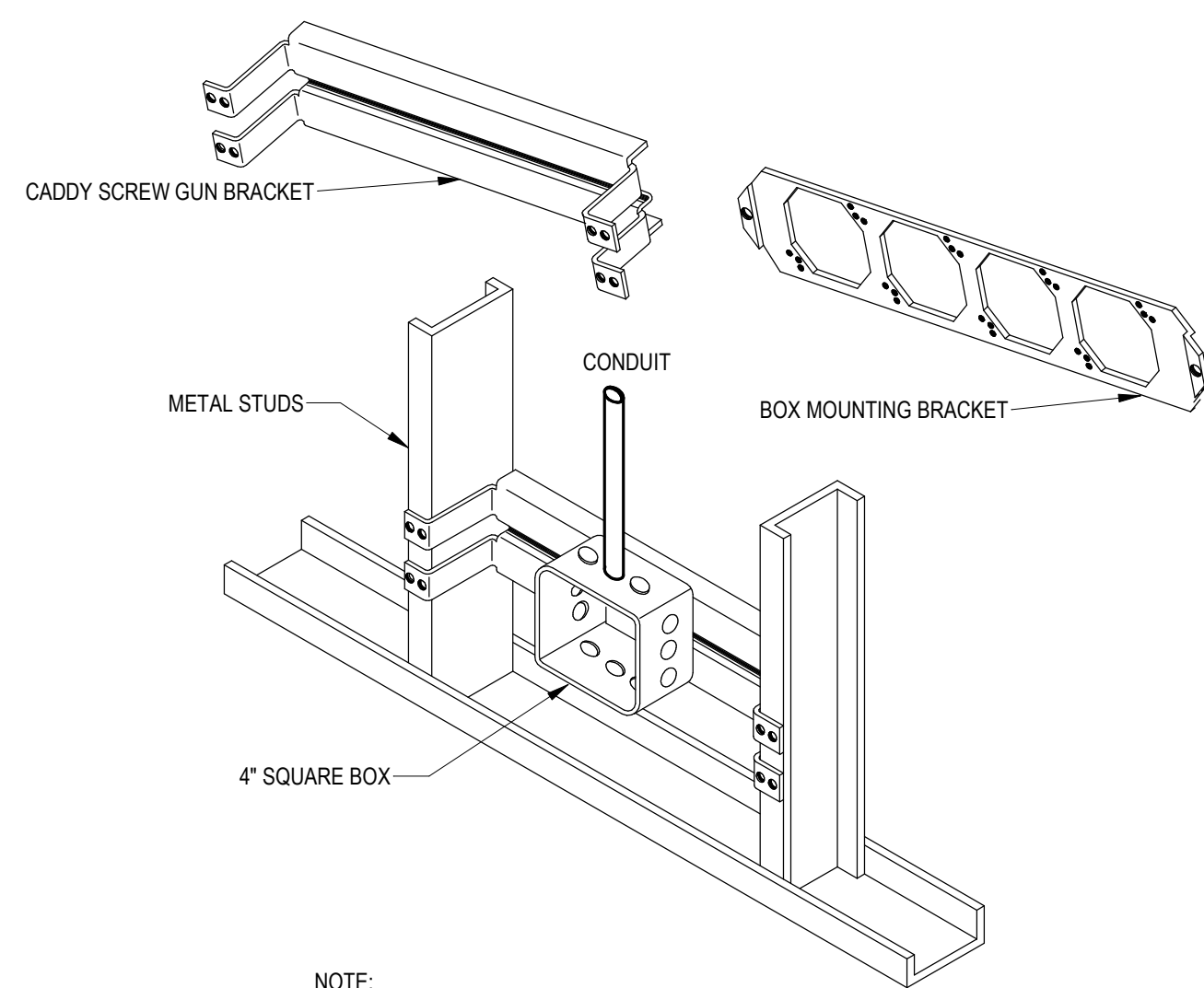
B

A



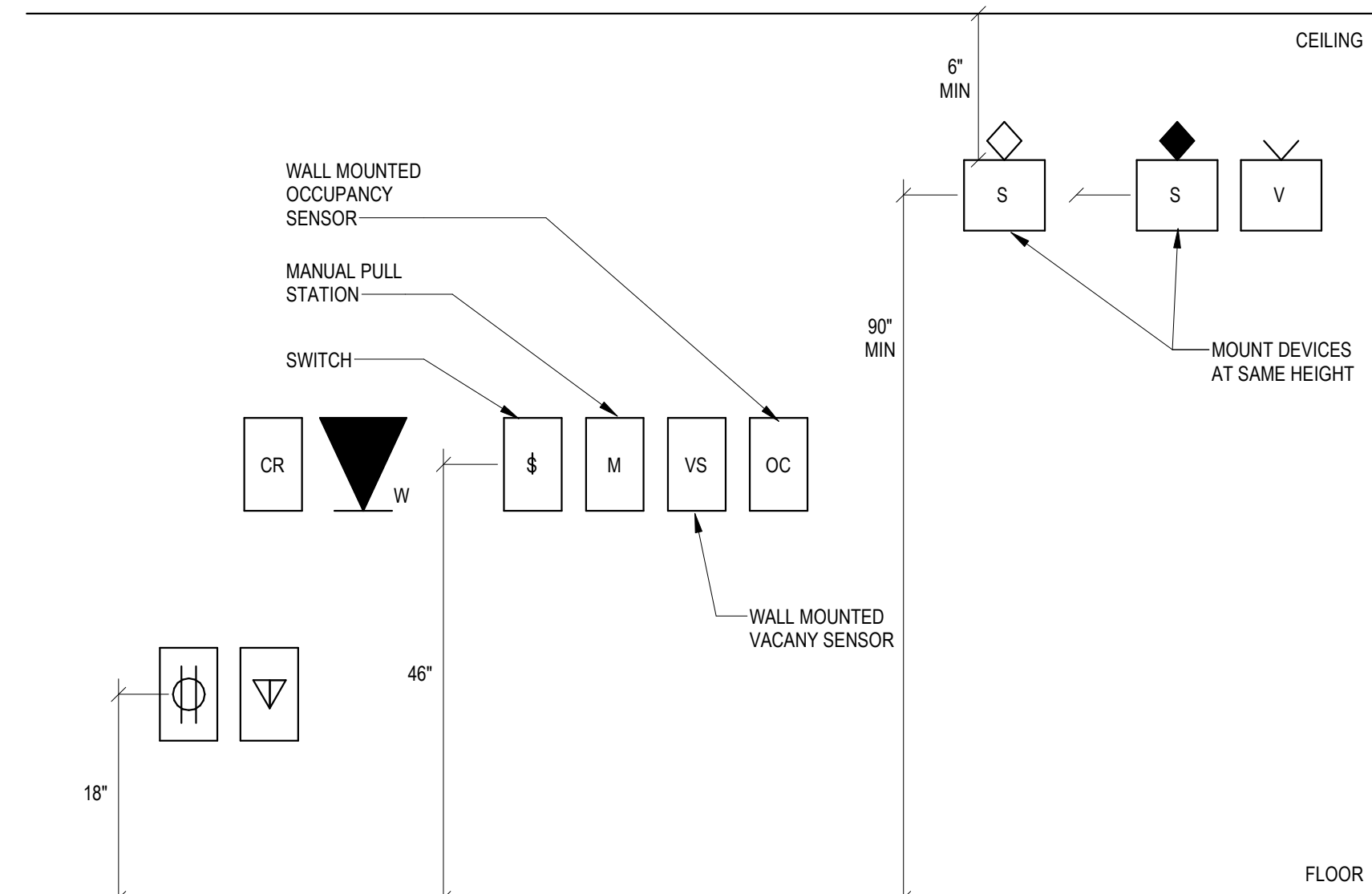
NOTE: COORDINATE WITH GENERAL CONTRACTOR.

1 ELECTRICAL ROOF PENETRATION DETAIL  
NOT TO SCALE

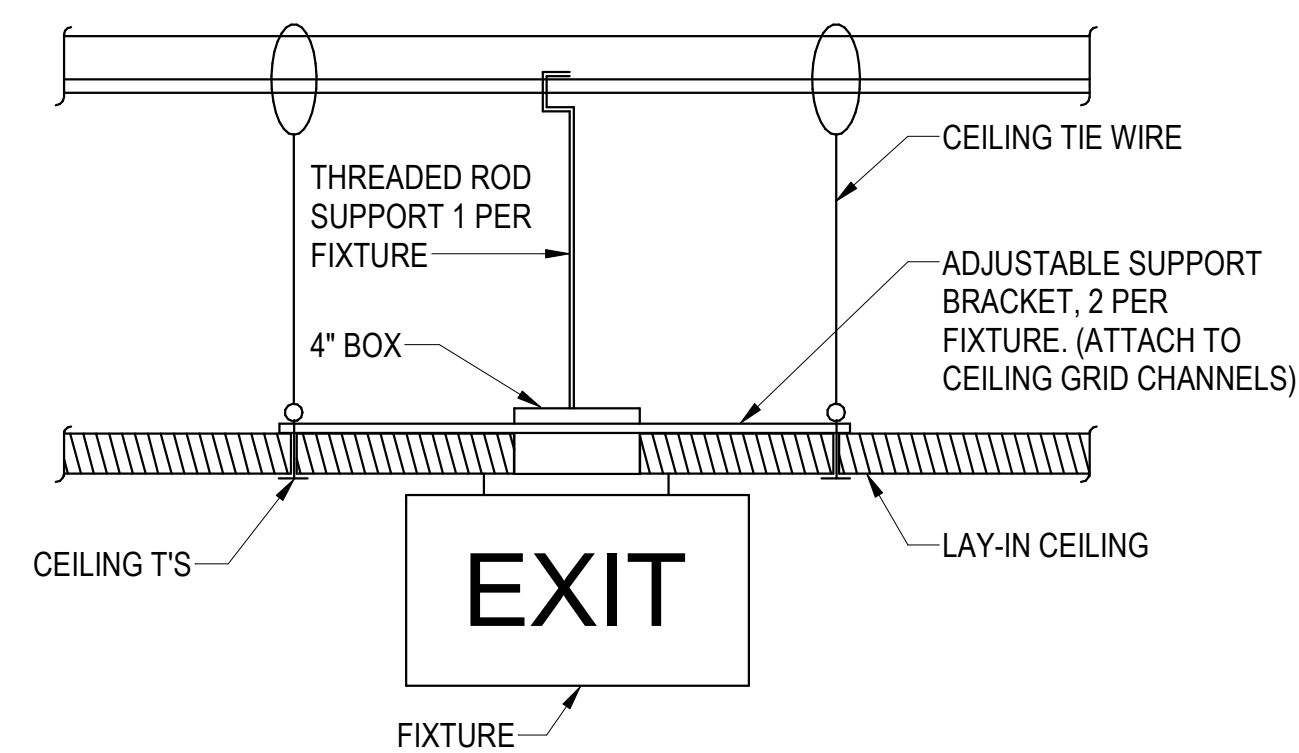


NOTE:  
1. FOR METAL STUD WALL CONSTRUCTION ONLY.  
2. EITHER CADDY SCREW GUN BRACKET OR BOX MOUNTING BRACKET MAY BE USED AS STUD-TO-STUD SUPPORTS

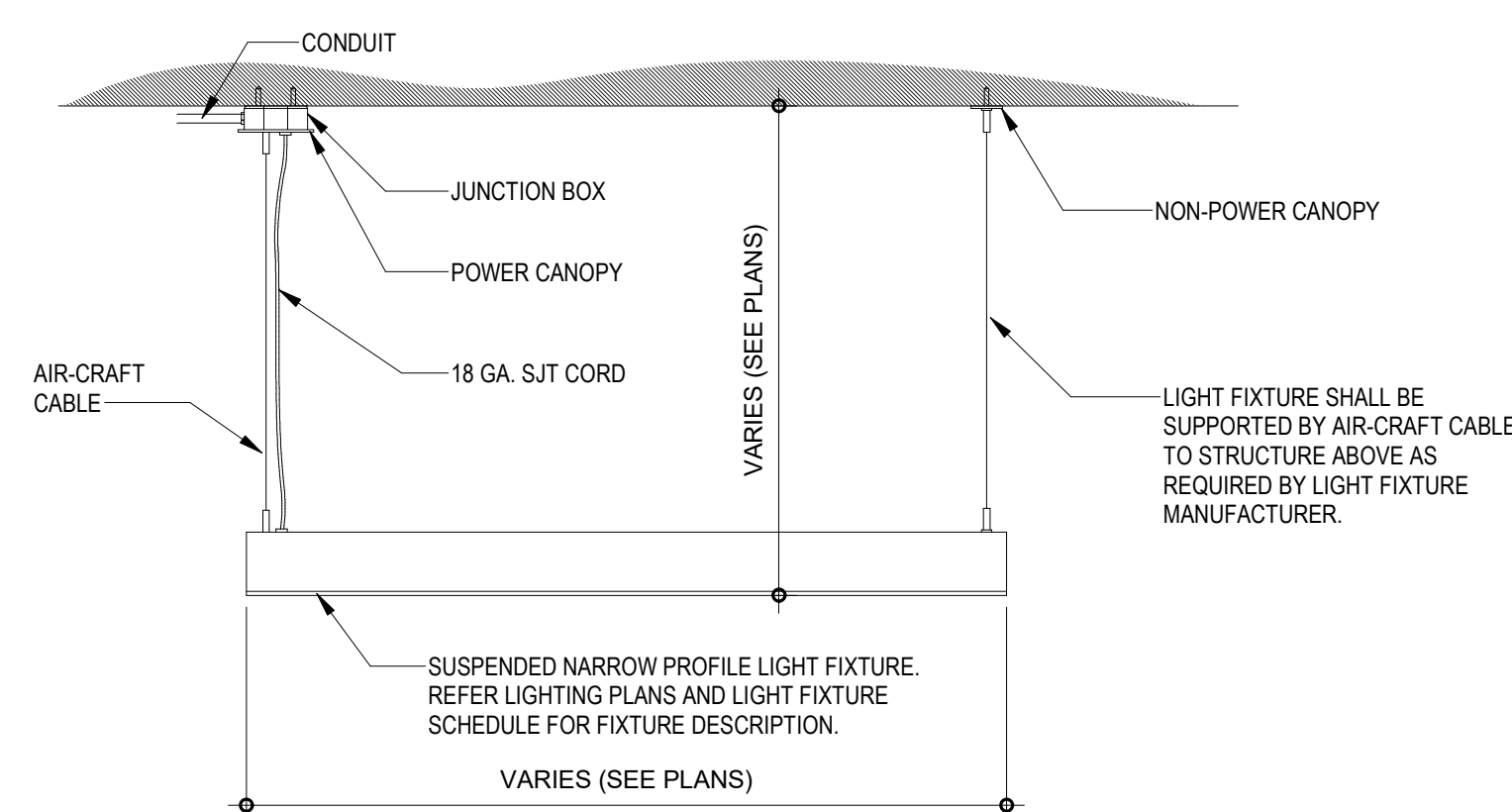
2 WALL BOX INSTALLATION DETAIL - DOUBLE MOUNT  
NOT TO SCALE



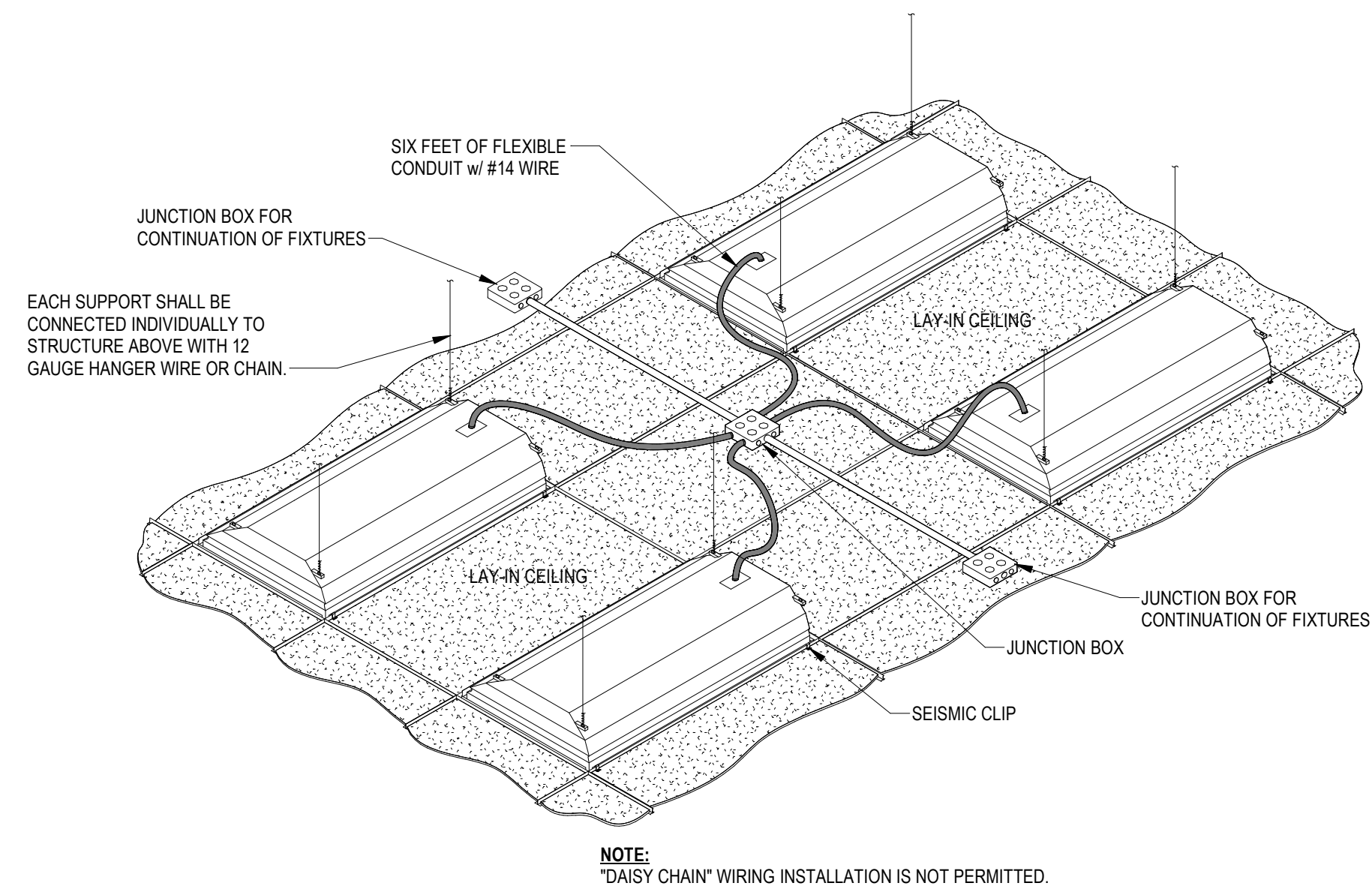
3 TYPICAL DEVICE MOUNTING HEIGHTS  
NOT TO SCALE



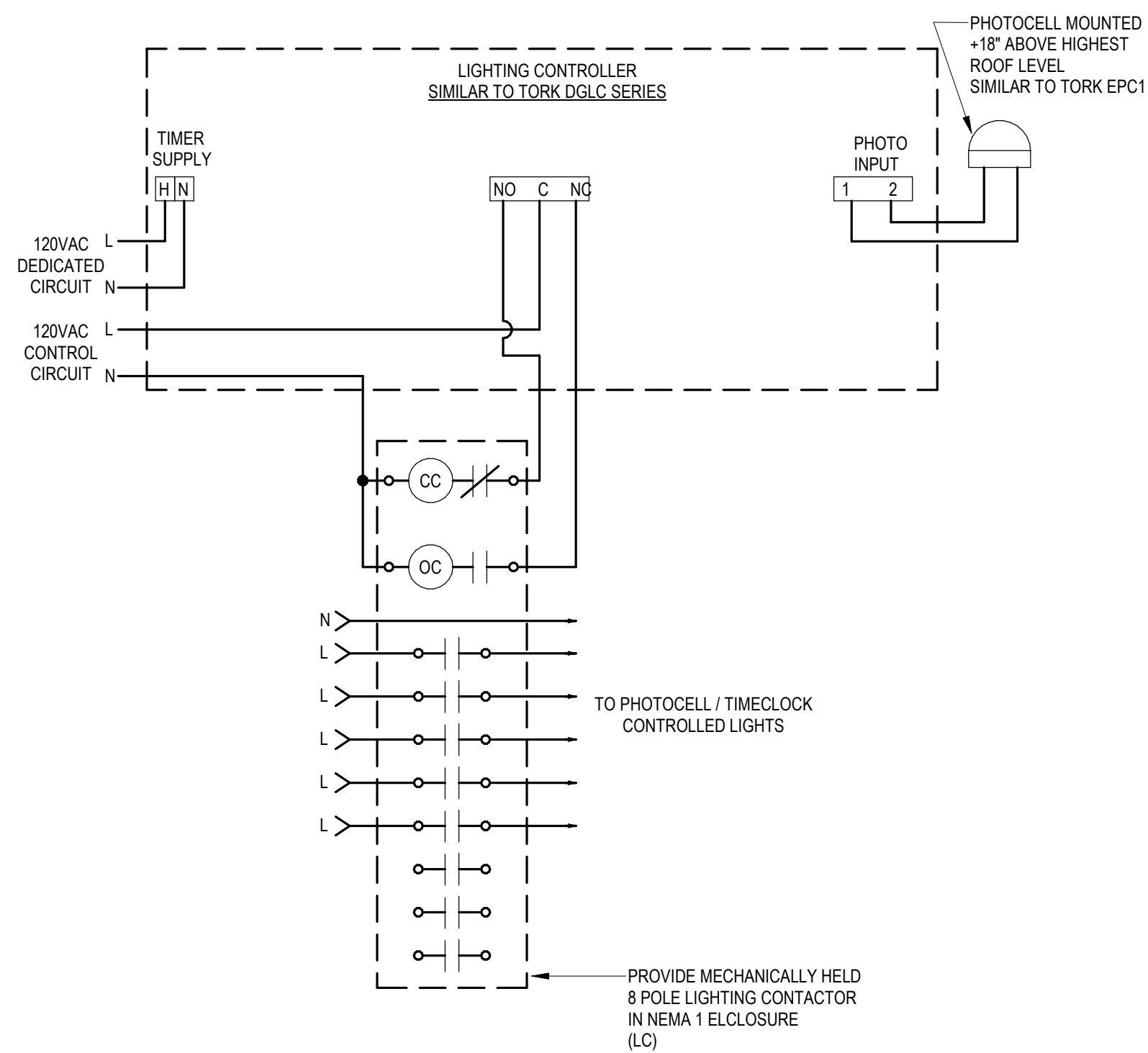
4 EXIT FIXTURE MOUNTING DETAIL  
NOT TO SCALE



5 SUSPENDED LIGHT FIXTURE DETAIL  
NOT TO SCALE



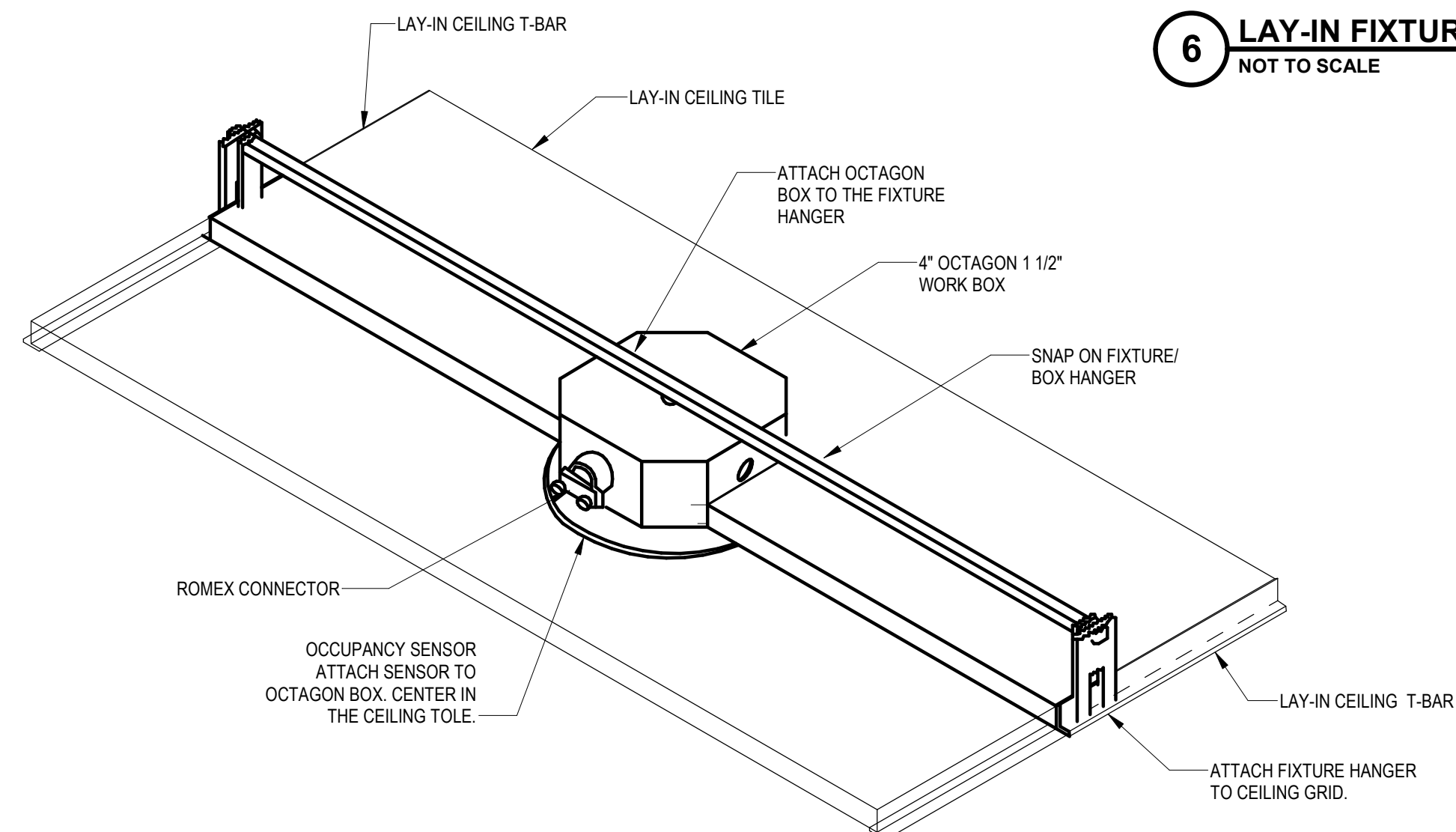
6 LAY-IN FIXTURE WIRING DETAIL  
NOT TO SCALE



OPERATION - TORK CONTROLLER CAN PROVIDE PHOTOCELL AND/OR TIMECLOCK CONTROL. CONFIRM OWNER CONTROL PREFERENCE PRIOR TO INSTALLATION AND PROVIDE AS SUCH.

NOTE: REFER TO LIGHTING PLANS FOR CIRCUIT INFORMATION.

7 PHOTOCELL/TIME CLOCK LIGHTING CONTROLLER SCHEMATIC  
NOT TO SCALE



NOTE: LOW VOLTAGE CABLES SHALL BE SUPPORTED TO BE OFF OF THE CEILING GRID AND CEILING TILE. SUPPORT CABLES TO THE BUILDING STRUCTURE UTILIZING VELCRO OR CABLE TIES.

8 OCCUPANCY SENSOR MOUNTING DETAIL  
NOT TO SCALE

RQAW

CONSTRUCTION SET  
WHEATLAND WASTEWATER SYSTEM IMPROVEMENTS  
DIVISION I - WASTEWATER TREATMENT PLANT AND REGIONAL LIFT STATION  
WHEATLAND, IN 47597

#	Revision	Date
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Project #: 21-400-194-1

Designed By: DJ

Drawn By: DJ

Checked By: DB

Date: 12/28/22



NOT FOR CONSTRUCTION

ELECTRICAL DETAILS

E800