

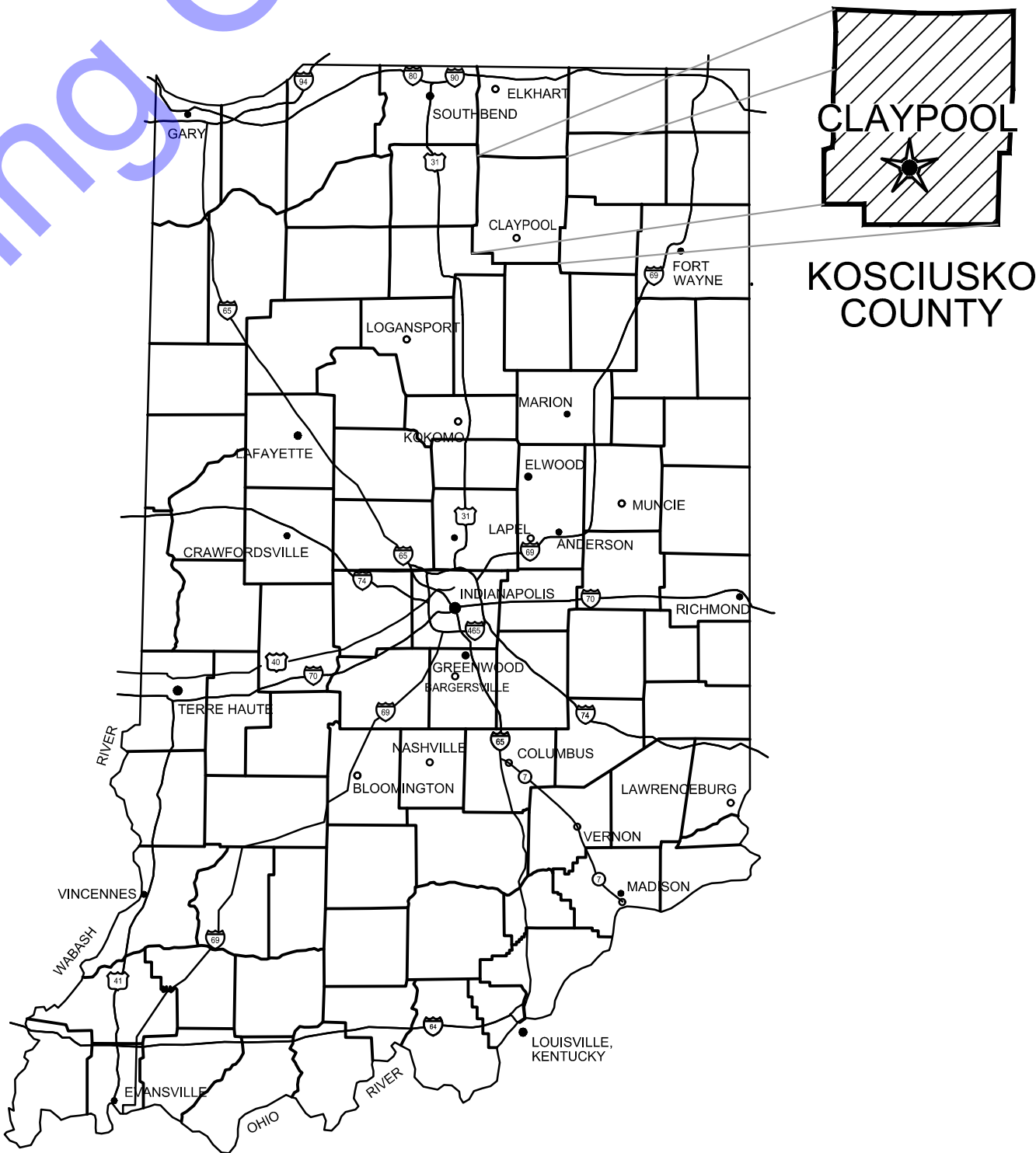
TOWN OF CLAYPOOL

KOSCIUSKO COUNTY, INDIANA

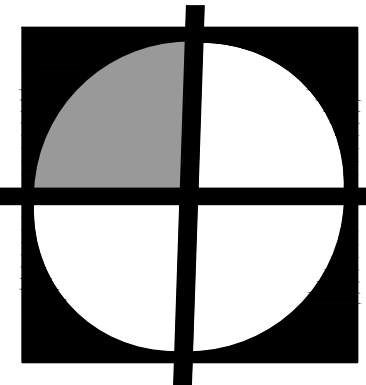
CONTRACT A - WWTP AND LIFT STATION No. 2 IMPROVEMENTS DECEMBER 2024

TOWN COUNCIL

BEN STAGE, JR.	PRESIDENT
DON MILLER	MEMBER
EUGENE WARNER	MEMBER
PAT WARNER	CLERK-TREASURER
DANNY WARNER	WASTE WATER SUPERINTENDENT
RAMA SOBHANI	ATTORNEY FOR TOWN



GENERAL LOCATION MAP



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QA/QC BY : NATALIE M. SCHELLING, P.E.
ENGINEER, P.E.

12/31/2024
DATE :

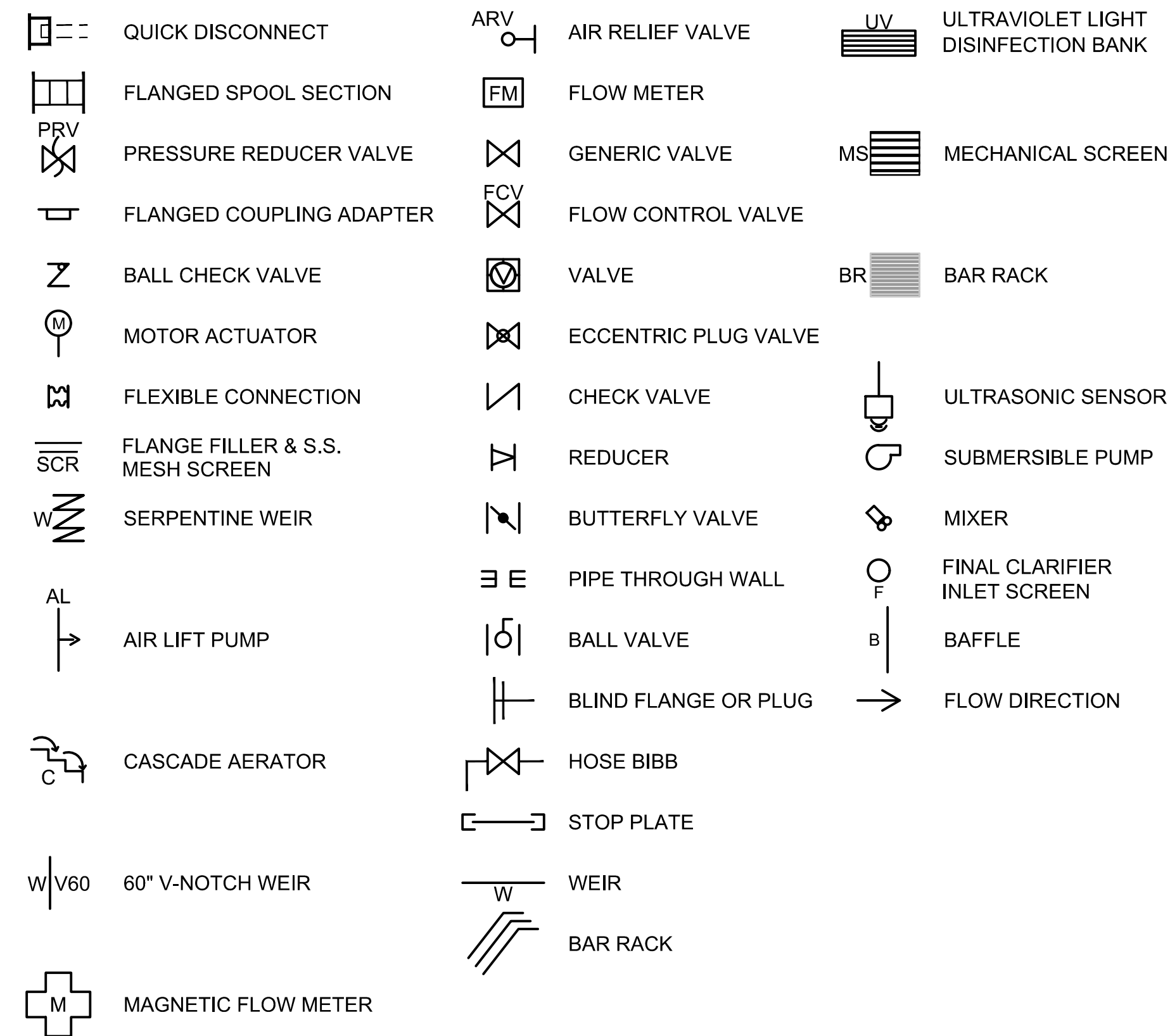
CERTIFIED BY : 
BENJAMIN H. ADAMS
INDIANA PE No. 19700508

12/31/2024
DATE :

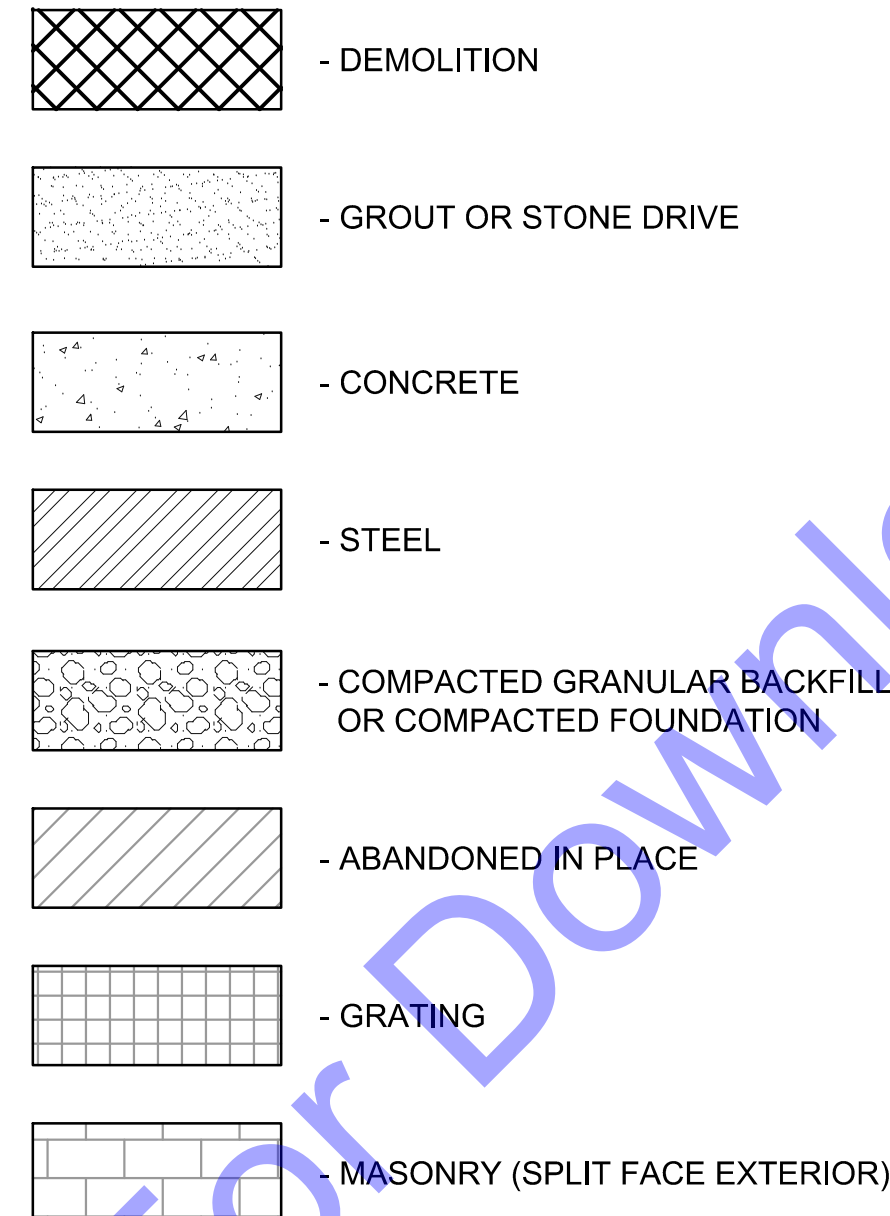


CONTRACT NO. : S23130

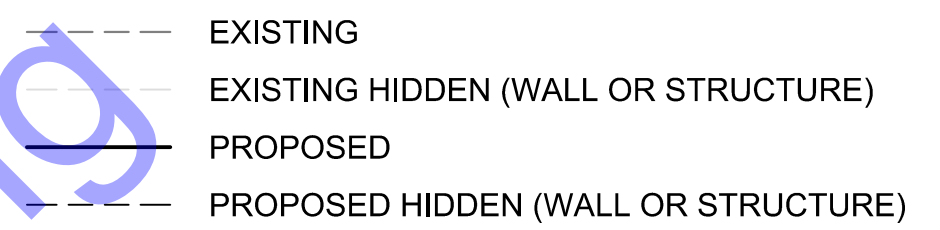
GENERAL SCHEMATIC LEGEND, ABBREVIATIONS, AND SYMBOLS



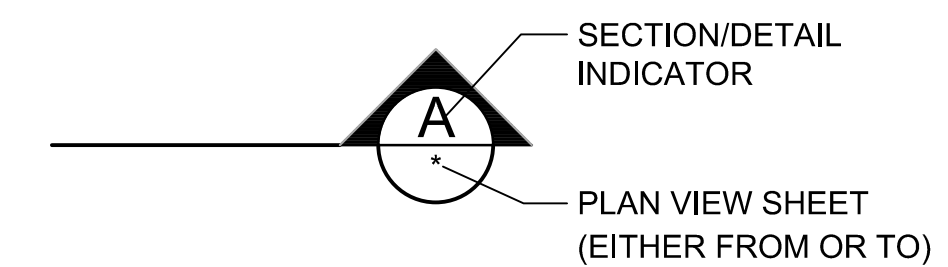
HATCHING SYMBOLS



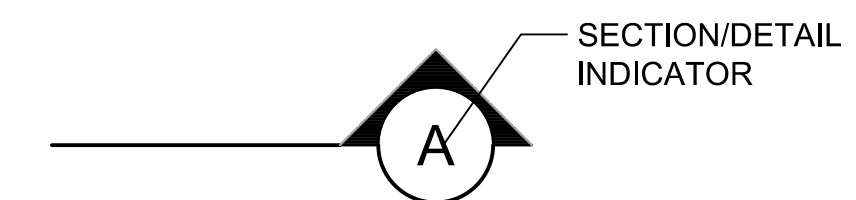
PLAN AND SECTION LINE TYPES



TYPICAL SECTION CUTS/DETAILS

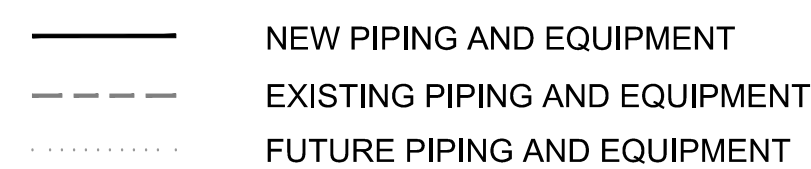


SECTION CUT/DETAIL ON DIFFERENT SHEET

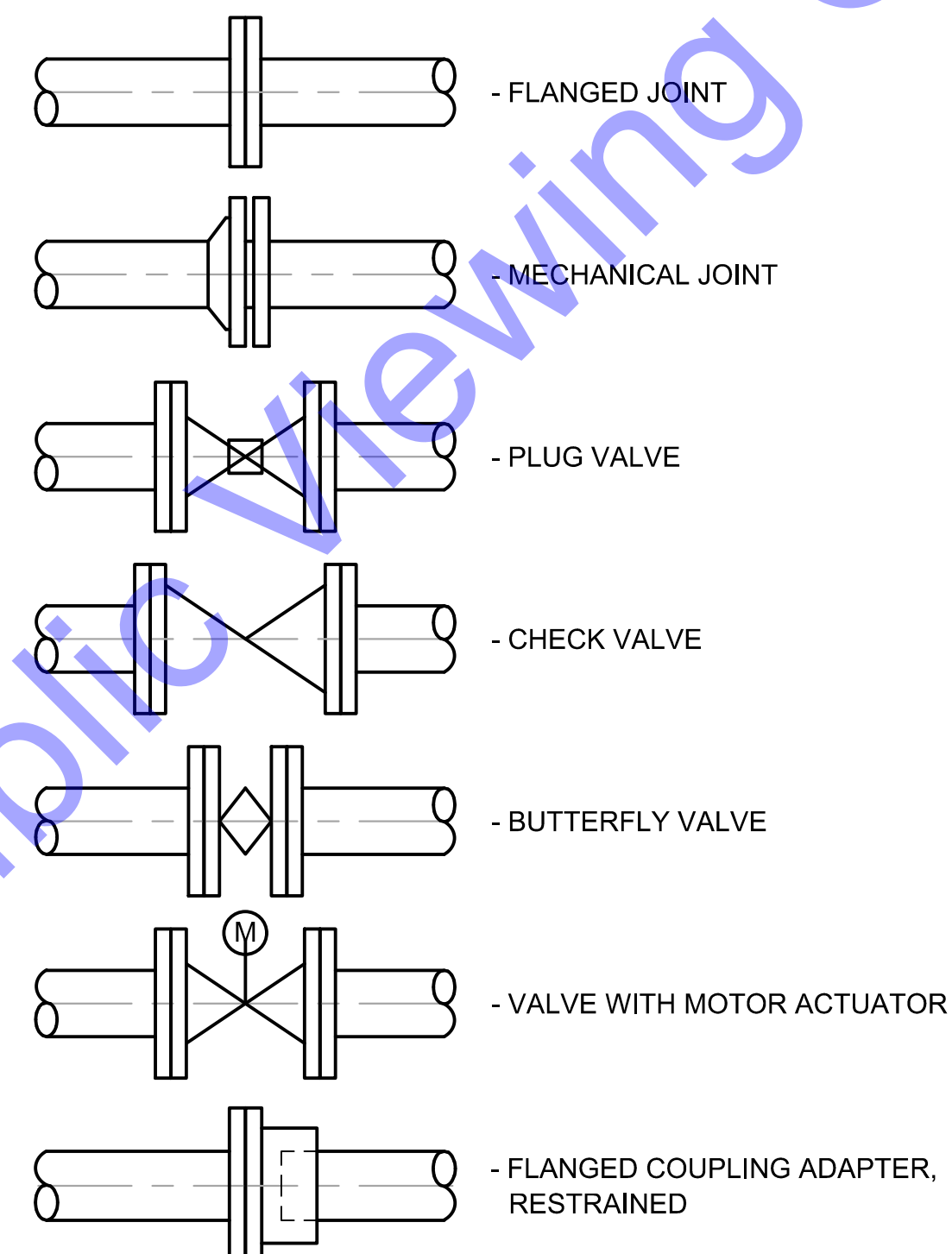


SECTION/DETAIL CUT ON SAME SHEET

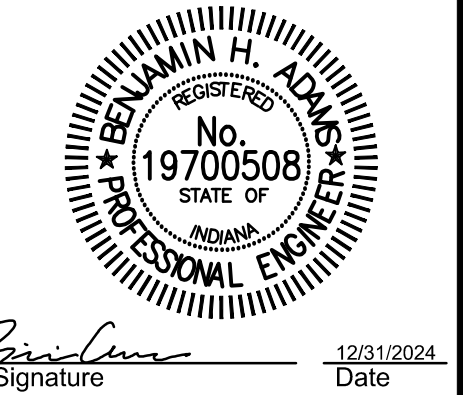
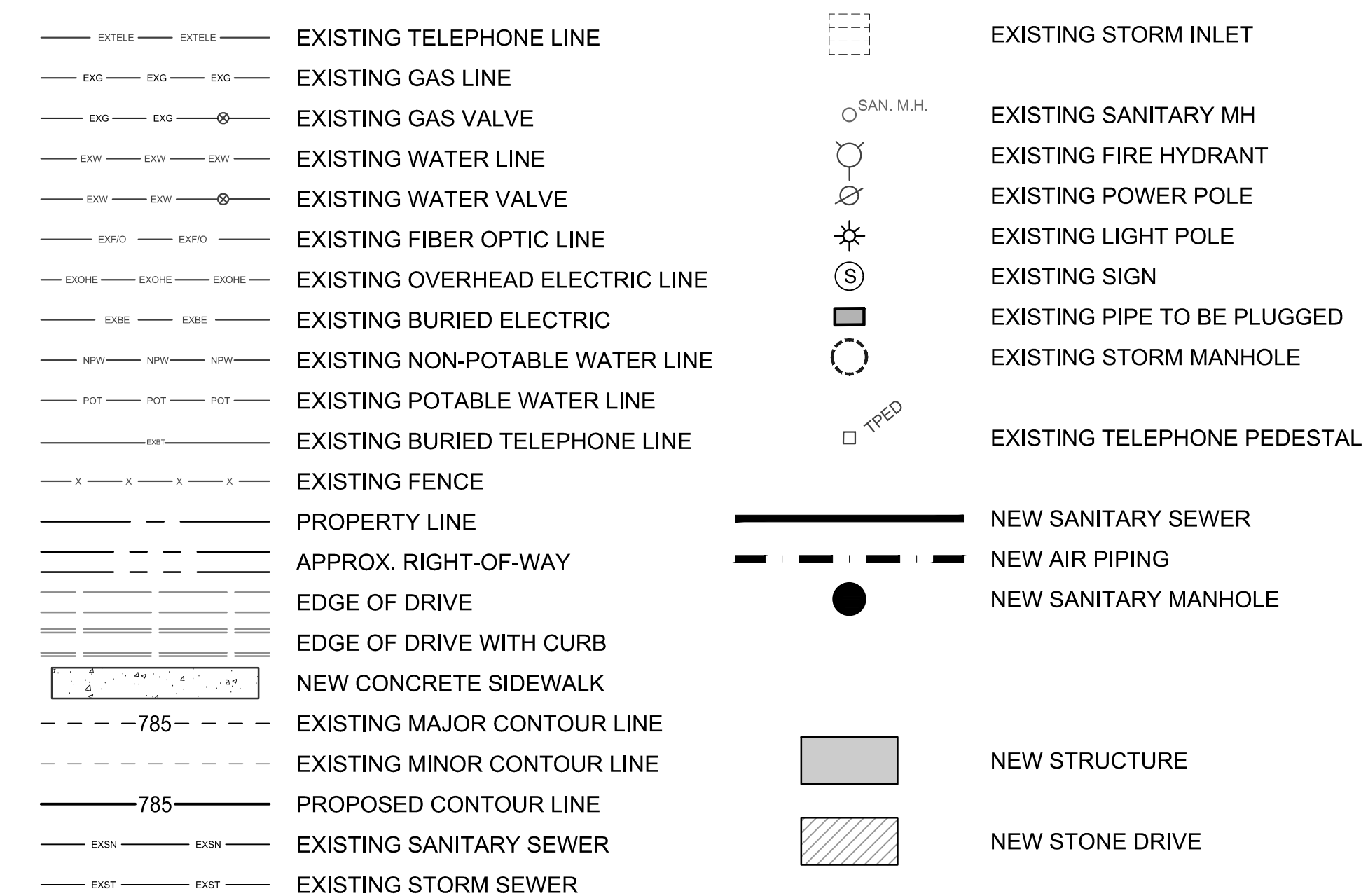
PIPING SCHEMATIC LINE TYPES



TWO LINE PIPING SYMBOLS



SITE PLAN LEGEND



**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

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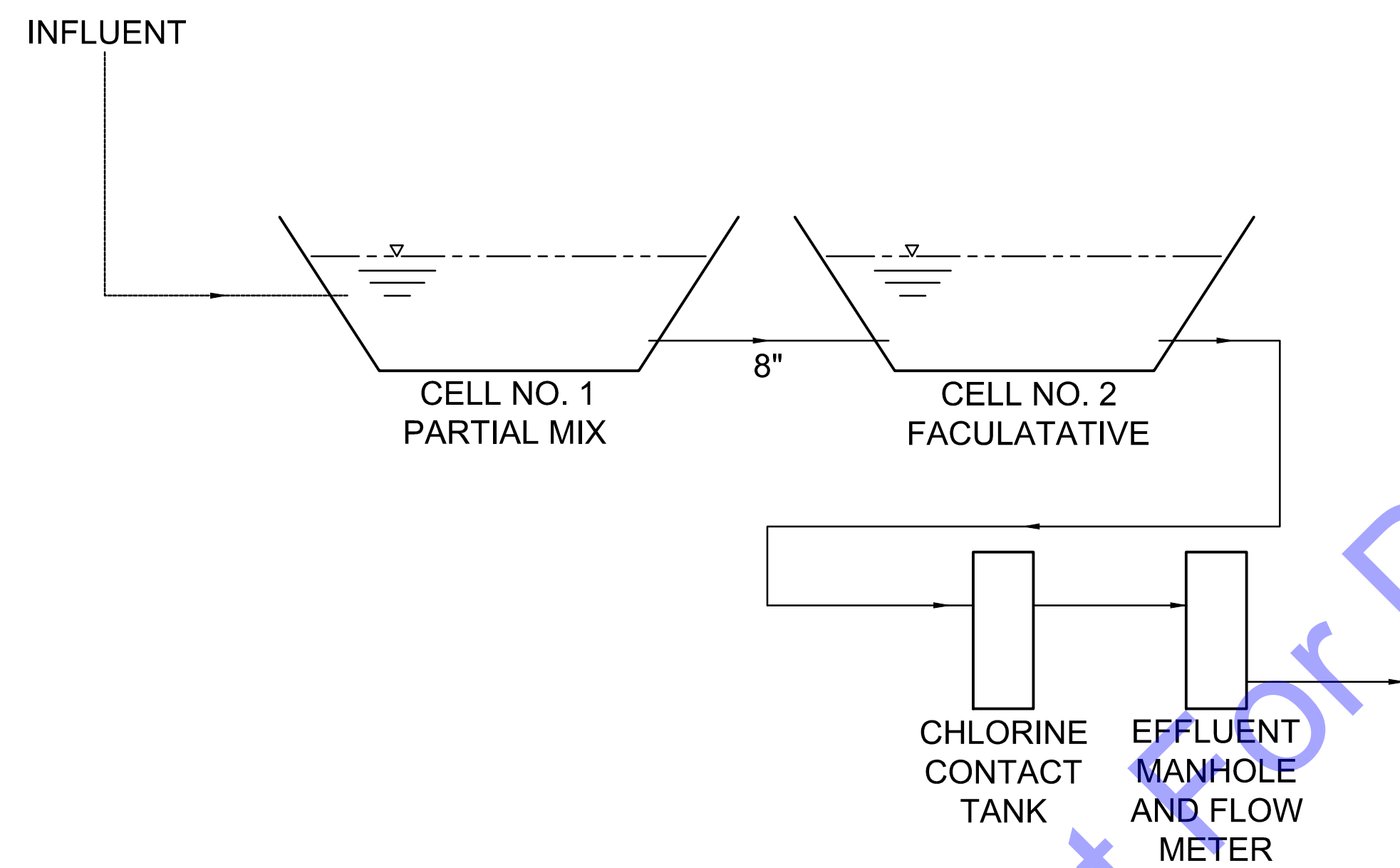
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Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

LEGEND

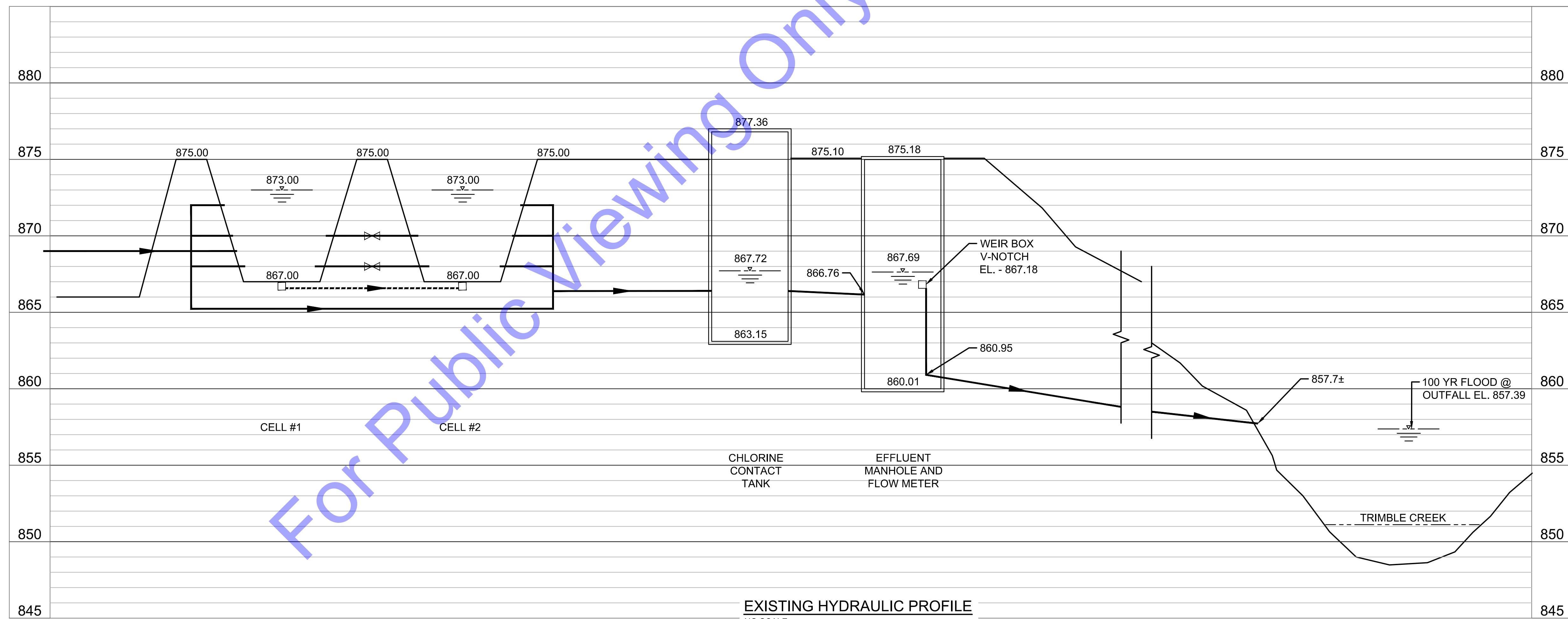
Drawing No:

G3

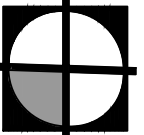
Sheet: 3 OF 55



EXISTING PLANT PROCESS FLOW DIAGRAM

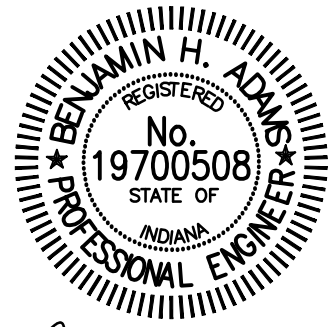


EXISTING HYDRAULIC PROFILE
NO SCALE



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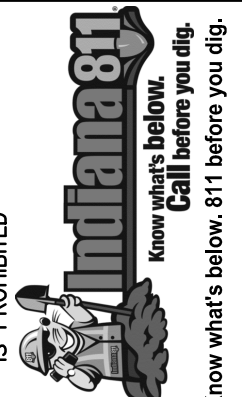
Signature

12/31/2024
Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

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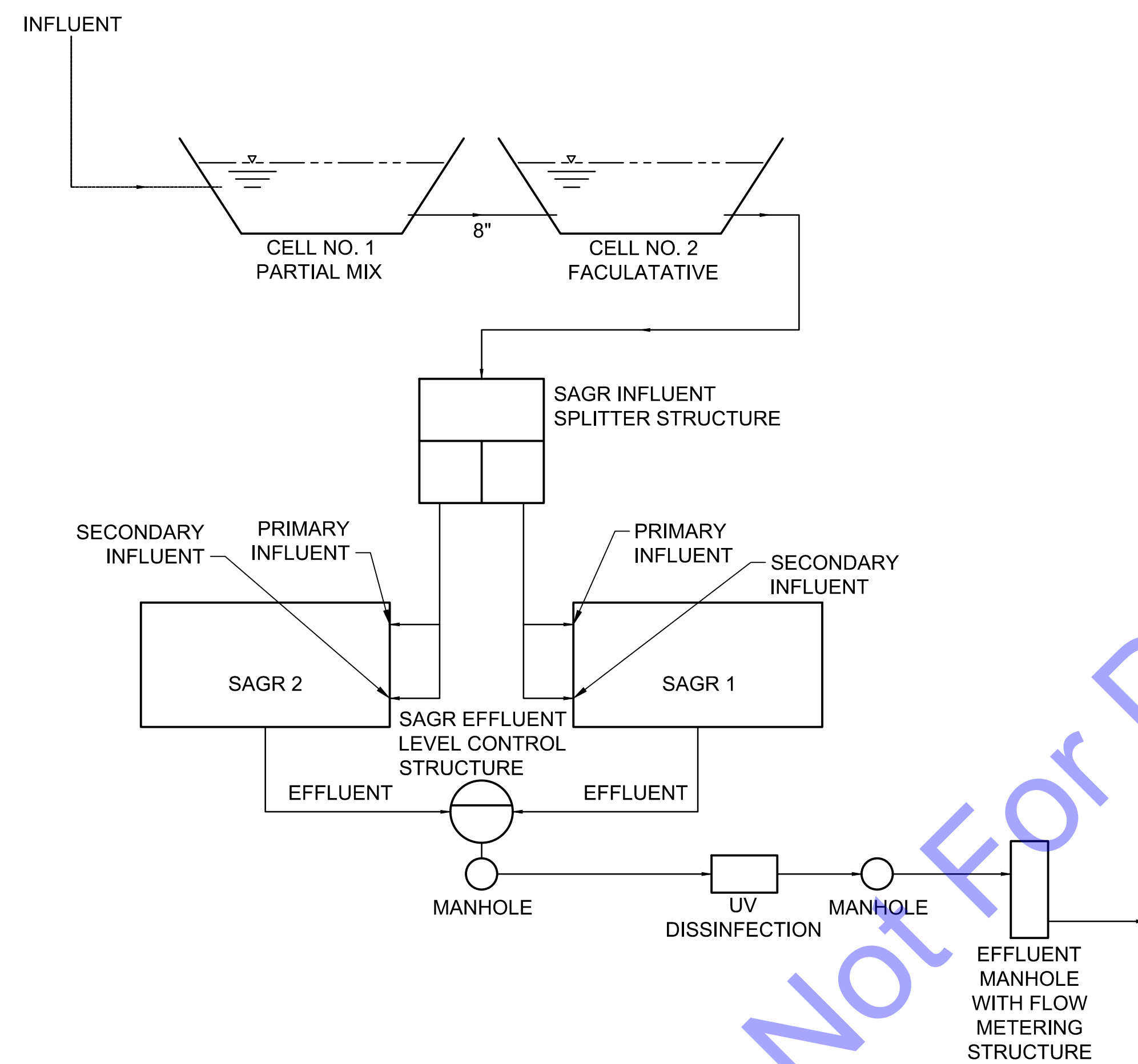
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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EXISTING FLOW DIAGRAM AND HYDRAULIC PROFILE

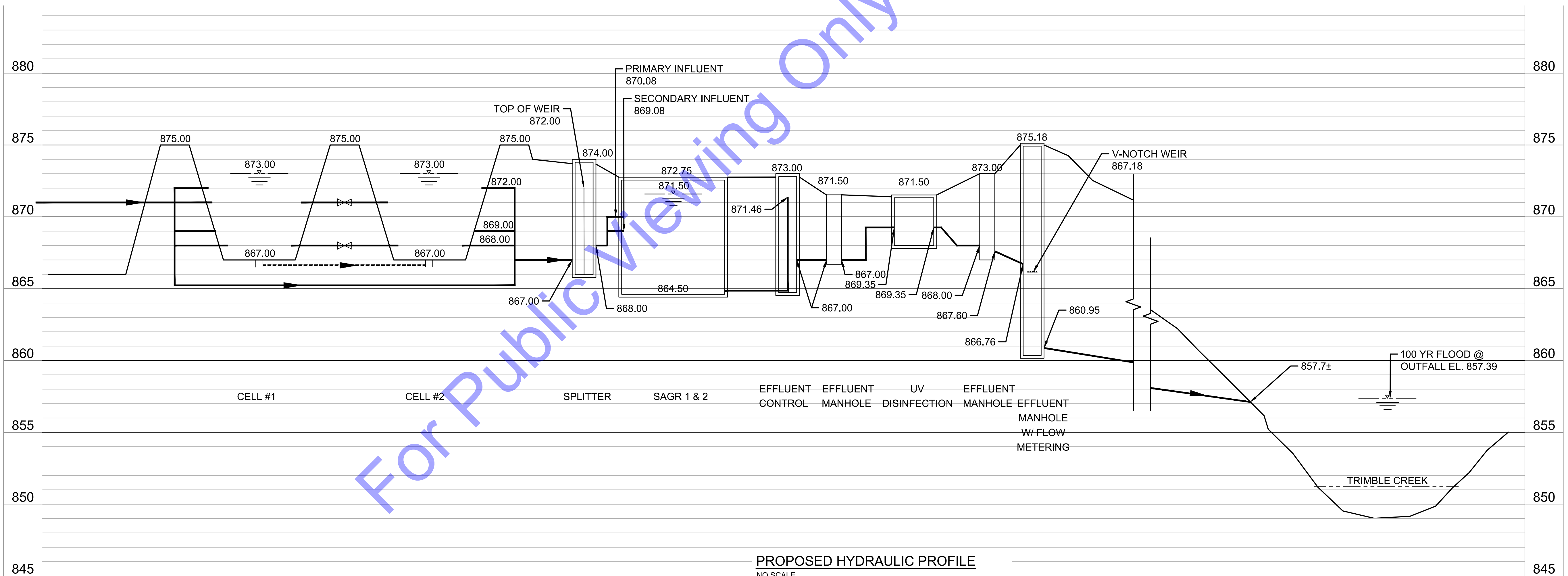
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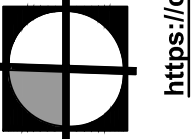
Sheet: 4 OF 55



PROPOSED PLANT PROCESS FLOW DIAGRAM

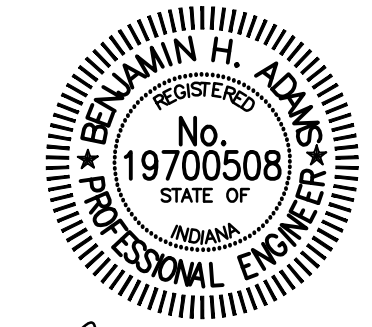


PROPOSED HYDRAULIC PROFILE



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OFFICE LOCATIONS IN:
INDIANAPOLIS, IN. (2)
EVANSVILLE, IN.
FORT WAYNE, IN.
CROWN POINT, IN.
BOWLING GREEN, KY.
SOUTH BEND, IN.



Signature 12/31/2024
Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

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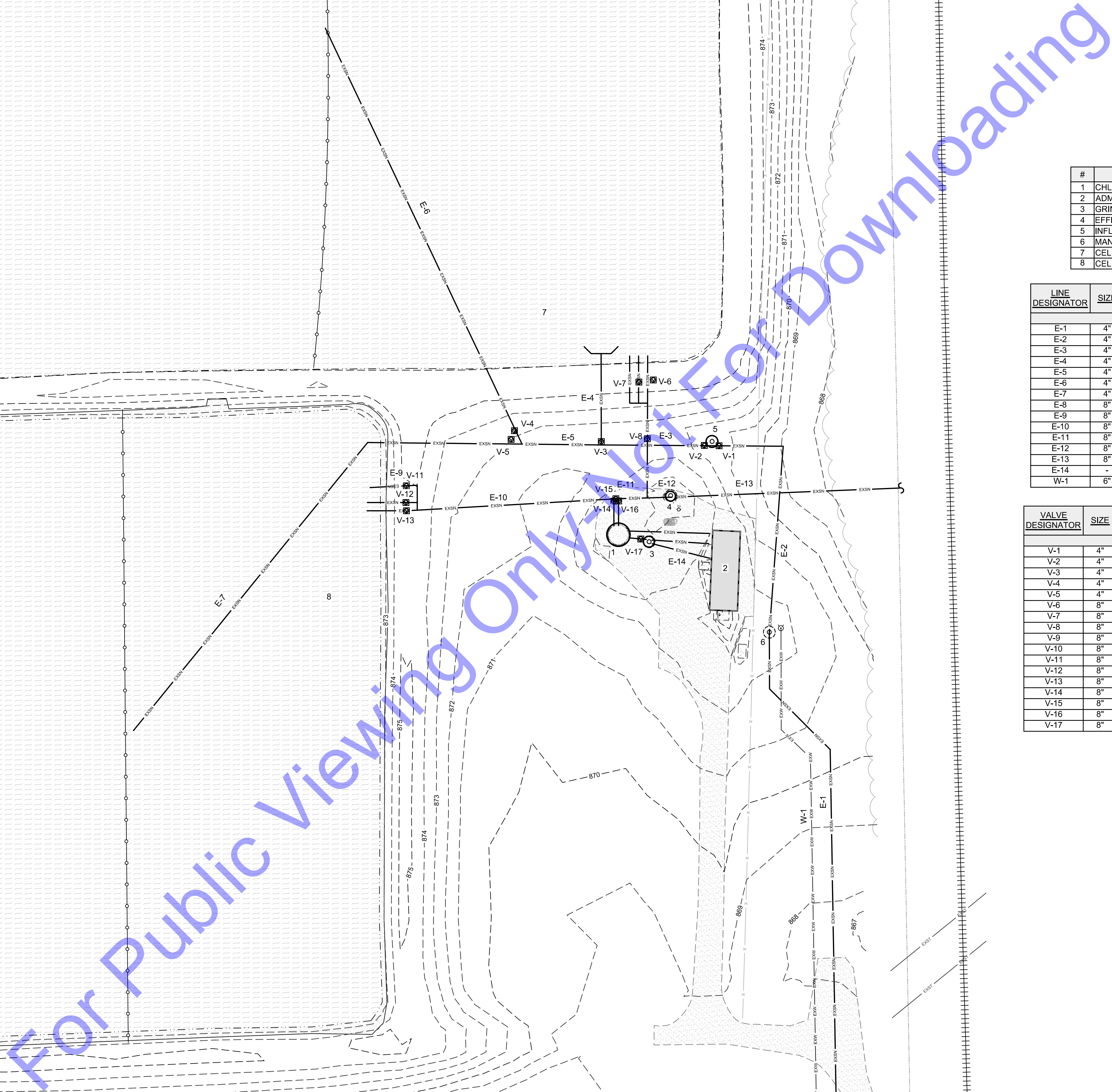
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PROPOSED FLOW DIAGRAM AND HYDRAULIC PROFILE

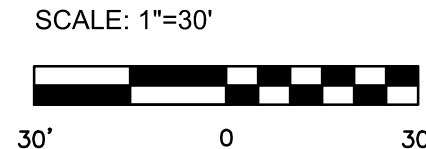
Drawing No:

G5

Sheet: 5 OF 55



SCALE: 1"=30'



#	STRUCTURE DESCRIPTION
1	CHLORINE CONTACT TANK
2	ADMINISTRATIVE/LAB/CHEMICAL FEED BUILDING
3	GRINDER PUMP STATION
4	EFFLUENT FLOW METERING STRUCTURE
5	INFLUENT FLOW METERING STRUCTURE
6	MANHOLE
7	CELL #1
8	CELL #2

LINE DESIGNATOR	SIZE	PIPING DESCRIPTION
EXISTING PIPING		
E-1	4"	FORCE MAIN FROM CLAYPOOL TO STRUCTURE 6
E-2	4"	FORCE MAIN FROM STRUCTURE 6 TO STRUCTURE 5
E-3	4"	FORCE MAIN FROM STRUCTURE 5 TO 4" TEE
E-4	4"	FORCE MAIN INTO CELL #1
E-5	4"	FORCE MAIN FROM 4" TEE TO 4" WYE (NOT IN USE)
E-6	4"	FORCE MAIN FROM WYE TO CELL #1 (NOT IN USE)
E-7	4"	FORCE MAIN FROM WYE TO CELL #2 (NOT IN USE)
E-8	8"	GRAVITY FROM CELL #1 TO CELL #2
E-9	8"	GRAVITY EFFLUENT FROM CELL #2
E-10	8"	GRAVITY EFFLUENT TO CHLORINE CONTACT TANK
E-11	8"	FROM CHLORINE CONTACT TANK TO 8" TEE
E-12	8"	FROM 8" TEE TO EFFLUENT METER PIT
E-13	8"	FROM EFFLUENT METER PIT TO OUTFALL
E-14	-	CHLORINATION AND DECHLORINATION
W-1	6"	EXISTING WATER MAIN

<u>VALVE DESIGNATOR</u>	<u><u>SIZE</u></u>	<u><u>DESCRIPTION</u></u>
<u>EXISTING VALVES</u>		
V-1	4"	INFLUENT FLOW METER BYPASS
V-2	4"	INFLUENT FLOW METER BYPASS
V-3	4"	LAGOON #1 INFLUENT
V-4	4"	LAGOON #1 INFLUENT
V-5	4"	LAGOON #2 INFLUENT
V-6	8"	LAGOON #1 EFFLUENT
V-7	8"	LAGOON #1 EFFLUENT
V-8	8"	LAGOON #1 EFFLUENT
V-9	8"	LAGOON #1 TO LAGOON #2
V-10	8"	LAGOON #1 TO LAGOON #2
V-11	8"	LAGOON #2 EFFLUENT
V-12	8"	LAGOON #2 EFFLUENT
V-13	8"	LAGOON #2 EFFLUENT
V-14	8"	CHLORINE CONTACT TANK BYPASS
V-15	8"	CHLORINE CONTACT TANK BYPASS
V-16	8"	CHLORINE CONTACT TANK BYPASS
V-17	8"	CHLORINE CONTACT TANK



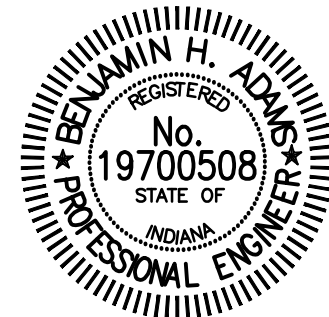
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OFFICE LOCATIONS IN:

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- EVANSVILLE, IN.
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- SOUTH BEND, IN.

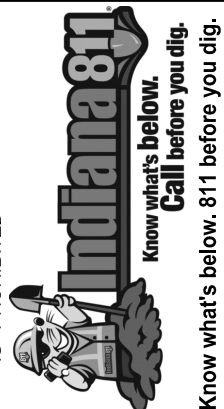


Signature Brian Date 12/31/2024

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

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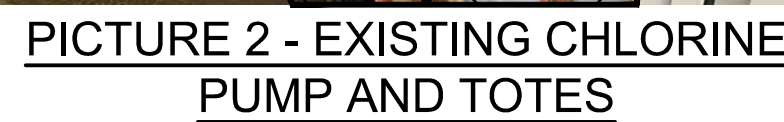
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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EXISTING WWTP SITE AND PIPING PLAN

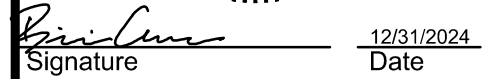
Drawing No:

C1

Sheet: 6 OF 55



1. CHLORINE DISINFECTION SHALL BE KEPT ONLINE UNTIL THE NEW ULTRAVIOLET DISINFECTION SYSTEM HAS BEEN INSTALLED, TESTED, AND PLACED INTO SERVICE.
2. CONTRACTOR SHALL REMOVE TOP SECTION(S) OF THE CHLORINE CONTACT TANK TO BELOW GRADE, CUT HOLE IN BOTTOM AND FILL WITH BACKFILL TO GRADE.
3. CONTRACTOR SHALL REMOVE ALL PIPES AND VALVES TO THE CHLORINE CONTACT TANK AND REPLACE WITH PIPE CONNECTING TO THE EXISTING EFFLUENT METERING MANHOLE.
4. THE CHLORINE CONTACT TANK INLET AND OUTLET PIPES SHALL HAVE THE PLUG VALVES CLOSED, CURB BOXES REMOVED, AND LINES PLUGGED.
5. ALL ITEMS SHALL BE REMOVED FROM THE CHEMICAL ROOM. COORDINATE SALVAGE ITEMS WITH OWNER PRIOR TO LAWFUL DISPOSAL OF ITEMS.
6. THE DIVERSION VALVE (V-15) ON THE MAIN LINE SHALL BE OPENED AND THE CURB BOX REMOVED.
7. CONTRACTOR TO DISPOSE OF ALL MATERIALS IN A LAWFUL MANNER.
8. CHEMICAL FEED LINES SHALL BE FLUSHED WITH CLEAN WATER, PLUGGED AND ABANDONED IN PLACE.



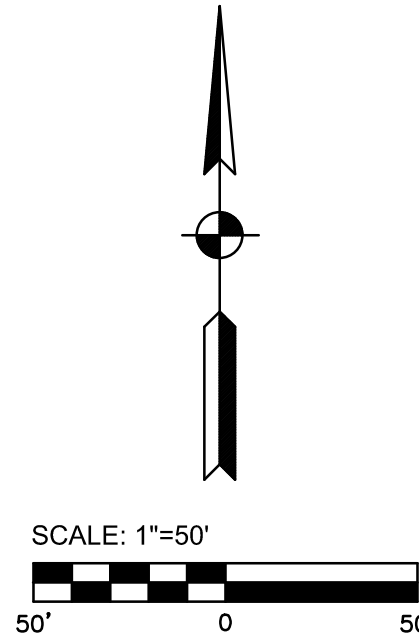
**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**



Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

Drawing No:

C2



**SEE SHEET C4 FOR
SAGR PIPE LAYOUT**

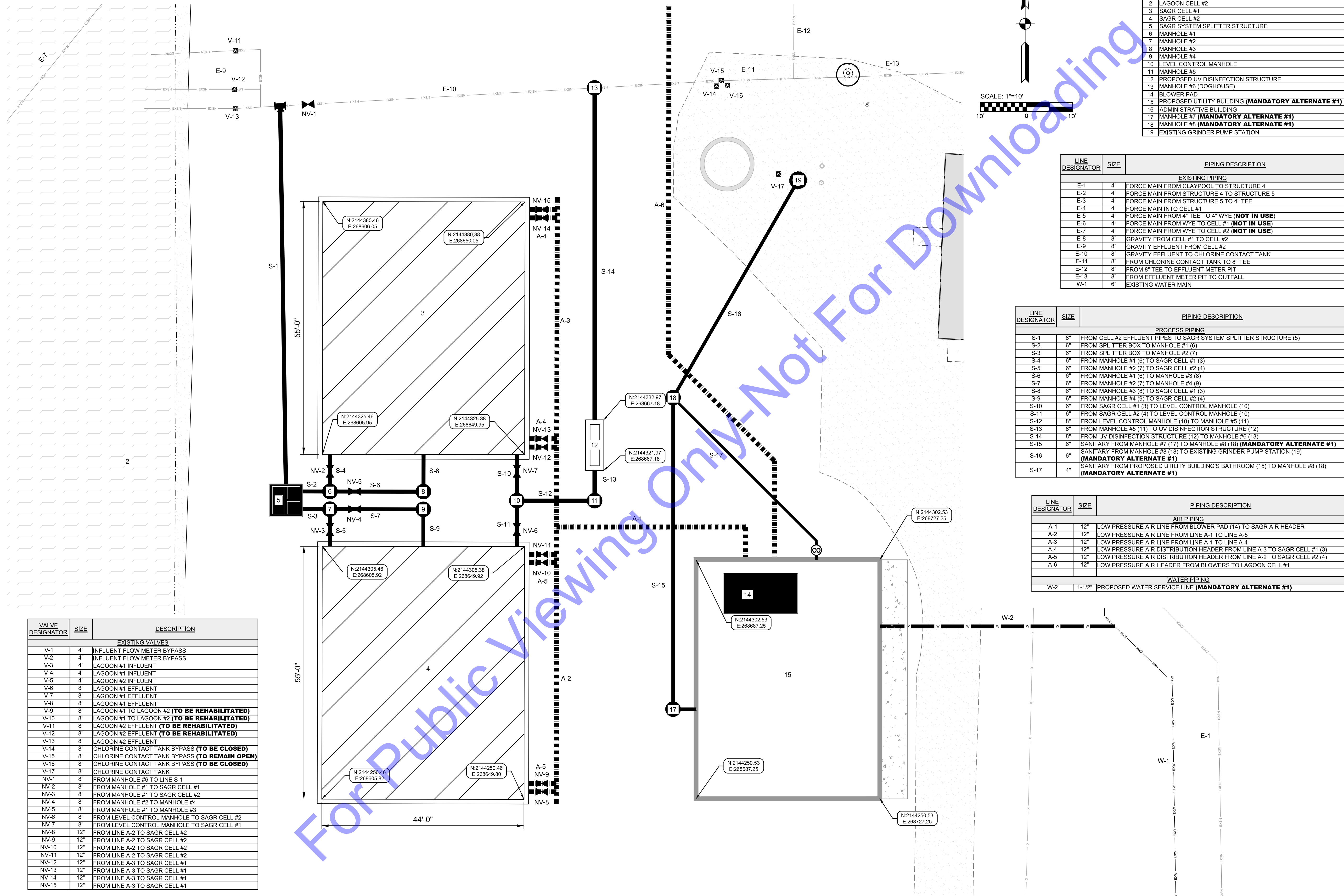
LINE DESIGNATOR	SIZE	PIPING DESCRIPTION
EXISTING PIPING		
E-1	4"	FORCE MAIN FROM CLAYPOOL TO STRUCTURE 4
E-2	4"	FORCE MAIN FROM STRUCTURE 4 TO STRUCTURE 5
E-3	4"	FORCE MAIN FROM STRUCTURE 5 TO 4" TEE
E-4	4"	FORCE MAIN INTO CELL #1
E-5	4"	FORCE MAIN FROM 4" TEE TO 4" WYE (NOT IN USE)
E-6	4"	FORCE MAIN FROM WYE TO CELL #1 (NOT IN USE)
E-7	4"	FORCE MAIN FROM WYE TO CELL #2 (NOT IN USE)
E-8	8"	GRAVITY FROM CELL #1 TO CELL #2
E-9	8"	GRAVITY EFFLUENT FROM CELL #2
E-10	8"	GRAVITY EFFLUENT TO CHLORINE CONTACT TANK
E-11	8"	FROM CHLORINE CONTACT TANK TO 8" TEE
E-12	8"	FROM 8" TEE TO EFFLUENT METER PIT
E-13	8"	FROM EFFLUENT METER PIT TO OUTFALL
W-1	6"	EXISTING WATER MAIN

VALVE DESIGNATOR	SIZE	DESCRIPTION
<u>EXISTING VALVES</u>		
V-1	4"	INFLUENT FLOW METER BYPASS
V-2	4"	INFLUENT FLOW METER BYPASS
V-3	4"	LAGOON #1 INFLUENT
V-4	4"	LAGOON #1 INFLUENT
V-5	4"	LAGOON #2 INFLUENT
V-6	8"	LAGOON #1 EFFLUENT
V-7	8"	LAGOON #1 EFFLUENT
V-8	8"	LAGOON #1 EFFLUENT
V-9	8"	LAGOON #1 TO LAGOON #2 (TO BE REHABILITATED)
V-10	8"	LAGOON #1 TO LAGOON #2 (TO BE REHABILITATED)
V-11	8"	LAGOON #2 EFFLUENT (TO BE REHABILITATED)
V-12	8"	LAGOON #2 EFFLUENT (TO BE REHABILITATED)
V-13	8"	LAGOON #2 EFFLUENT
V-14	8"	CHLORINE CONTACT TANK BYPASS (TO BE CLOSED)
V-15	8"	CHLORINE CONTACT TANK BYPASS (TO REMAIN OPEN)
V-16	8"	CHLORINE CONTACT TANK BYPASS (TO BE CLOSED)
V-17	8"	CHLORINE CONTACT TANK

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Drawing No.
C3

SEE SHEET C3 FOR POND #1 AND POND #2 AERATION LAYOUT



#	STRUCTURE DESCRIPTION
1	LAGOON CELL #1
2	LAGOON CELL #2
3	SAGR CELL #1
4	SAGR CELL #2
5	SAGR SYSTEM SPLITTER STRUCTURE
6	MANHOLE #1
7	MANHOLE #2
8	MANHOLE #3
9	MANHOLE #4
10	LEVEL CONTROL MANHOLE
11	MANHOLE #5
12	PROPOSED UV DISINFECTION STRUCTURE
13	MANHOLE #6 (DOGHOUSE)
14	BLOWER PAD
15	PROPOSED UTILITY BUILDING (MANDATORY ALTERNATE #1)
16	ADMINISTRATIVE BUILDING
17	MANHOLE #7 (MANDATORY ALTERNATE #1)
18	MANHOLE #8 (MANDATORY ALTERNATE #1)
19	EXISTING GRINDER PUMP STATION

LINE DESIGNATOR	SIZE	PIPING DESCRIPTION
<u>EXISTING PIPING</u>		
E-1	4"	FORCE MAIN FROM CLAYPOOL TO STRUCTURE 4
E-2	4"	FORCE MAIN FROM STRUCTURE 4 TO STRUCTURE 5
E-3	4"	FORCE MAIN FROM STRUCTURE 5 TO 4" TEE
E-4	4"	FORCE MAIN INTO CELL #1
E-5	4"	FORCE MAIN FROM 4" TEE TO 4" WYE (NOT IN USE)
E-6	4"	FORCE MAIN FROM WYE TO CELL #1 (NOT IN USE)
E-7	4"	FORCE MAIN FROM WYE TO CELL #2 (NOT IN USE)
E-8	8"	GRAVITY FROM CELL #1 TO CELL #2
E-9	8"	GRAVITY EFFLUENT FROM CELL #2
E-10	8"	GRAVITY EFFLUENT TO CHLORINE CONTACT TANK
E-11	8"	FROM CHLORINE CONTACT TANK TO 8" TEE
E-12	8"	FROM 8" TEE TO EFFLUENT METER PIT
E-13	8"	FROM EFFLUENT METER PIT TO OUTFALL
W-1	6"	EXISTING WATER MAIN

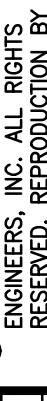
LINE DESIGNATOR	SIZE	PIPING DESCRIPTION
PROCESS PIPING		
S-1	8"	FROM CELL #2 EFFLUENT PIPES TO SAGR SYSTEM SPLITTER STRUCTURE (5)
S-2	6"	FROM SPLITTER BOX TO MANHOLE #1 (6)
S-3	6"	FROM SPLITTER BOX TO MANHOLE #2 (7)
S-4	6"	FROM MANHOLE #1 (6) TO SAGR CELL #1 (3)
S-5	6"	FROM MANHOLE #2 (7) TO SAGR CELL #2 (4)
S-6	6"	FROM MANHOLE #1 (6) TO MANHOLE #3 (8)
S-7	6"	FROM MANHOLE #2 (7) TO MANHOLE #4 (9)
S-8	6"	FROM MANHOLE #3 (8) TO SAGR CELL #1 (3)
S-9	6"	FROM MANHOLE #4 (9) TO SAGR CELL #2 (4)
S-10	6"	FROM SAGR CELL #1 (3) TO LEVEL CONTROL MANHOLE (10)
S-11	6"	FROM SAGR CELL #2 (4) TO LEVEL CONTROL MANHOLE (10)
S-12	8"	FROM LEVEL CONTROL MANHOLE (10) TO MANHOLE #5 (11)
S-13	8"	FROM MANHOLE #5 (11) TO UV DISINFECTION STRUCTURE (12)
S-14	8"	FROM UV DISINFECTION STRUCTURE (12) TO MANHOLE #6 (13)
S-15	6"	SANITARY FROM MANHOLE #7 (17) TO MANHOLE #8 (18) (MANDATORY ALTERNATE #1)
S-16	6"	SANITARY FROM MANHOLE #8 (18) TO EXISTING GRINDER PUMP STATION (19) (MANDATORY ALTERNATE #1)
S-17	4"	SANITARY FROM PROPOSED UTILITY BUILDING'S BATHROOM (15) TO MANHOLE #8 (18) (MANDATORY ALTERNATE #1)

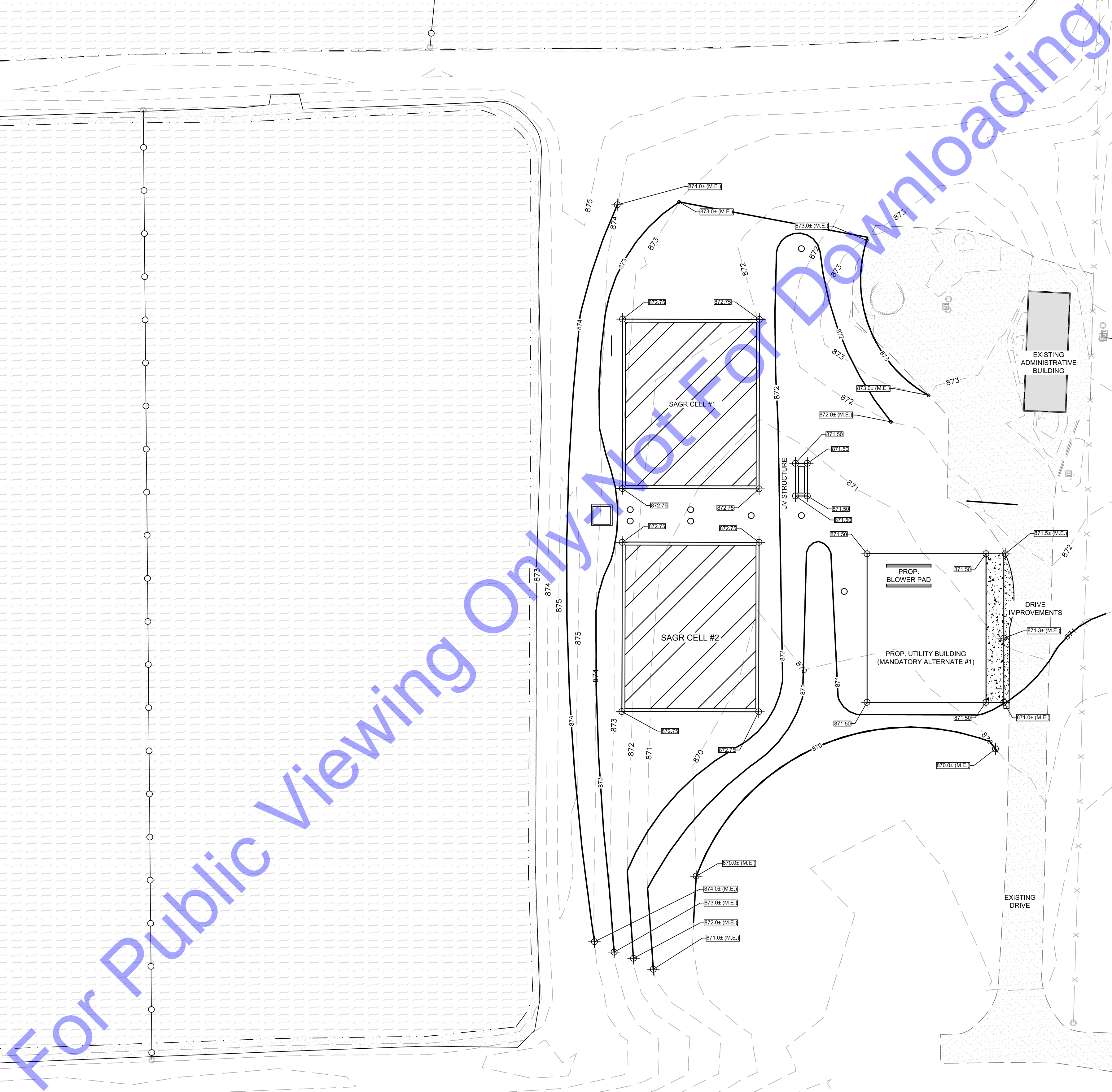
LINE DESIGNATOR	SIZE	PIPING DESCRIPTION
AIR PIPING		
A-1	12"	LOW PRESSURE AIR LINE FROM BLOWER PAD (14) TO SAGR AIR HEADER
A-2	12"	LOW PRESSURE AIR LINE FROM LINE A-1 TO LINE A-5
A-3	12"	LOW PRESSURE AIR LINE FROM LINE A-1 TO LINE A-4
A-4	12"	LOW PRESSURE AIR DISTRIBUTION HEADER FROM LINE A-3 TO SAGR CELL #1 (3)
A-5	12"	LOW PRESSURE AIR DISTRIBUTION HEADER FROM LINE A-2 TO SAGR CELL #2 (4)
A-6	12"	LOW PRESSURE AIR HEADER FROM BLOWERS TO LAGOON CELL #1
WATER PIPING		
W-2	1-1/2"	PROPOSED WATER SERVICE LINE (MANDATORY ALTERNATE #1)

VALVE DESIGNATOR	SIZE	DESCRIPTION
EXISTING VALVES		
V-1	4"	INFLUENT FLOW METER BYPASS
V-2	4"	INFLUENT FLOW METER BYPASS
V-3	4"	LAGOON #1 INFLUENT
V-4	4"	LAGOON #1 INFLUENT
V-5	4"	LAGOON #2 INFLUENT
V-6	8"	LAGOON #1 EFFLUENT
V-7	8"	LAGOON #1 EFFLUENT
V-8	8"	LAGOON #1 EFFLUENT
V-9	8"	LAGOON #1 TO LAGOON #2 (TO BE REHABILITATED)
V-10	8"	LAGOON #1 TO LAGOON #2 (TO BE REHABILITATED)
V-11	8"	LAGOON #2 EFFLUENT (TO BE REHABILITATED)
V-12	8"	LAGOON #2 EFFLUENT (TO BE REHABILITATED)
V-13	8"	LAGOON #2 EFFLUENT
V-14	8"	CHLORINE CONTACT TANK BYPASS (TO BE CLOSED)
V-15	8"	CHLORINE CONTACT TANK BYPASS (TO REMAIN OPEN)
V-16	8"	CHLORINE CONTACT TANK BYPASS (TO BE CLOSED)
V-17	8"	CHLORINE CONTACT TANK
NV-1	8"	FROM MANHOLE #6 TO LINE S-1
NV-2	8"	FROM MANHOLE #1 TO SAGR CELL #1
NV-3	8"	FROM MANHOLE #1 TO SAGR CELL #2
NV-4	8"	FROM MANHOLE #2 TO MANHOLE #4
NV-5	8"	FROM MANHOLE #1 TO MANHOLE #3
NV-6	8"	FROM LEVEL CONTROL MANHOLE TO SAGR CELL #2
NV-7	8"	FROM LEVEL CONTROL MANHOLE TO SAGR CELL #1
NV-8	12"	FROM LINE A-2 TO SAGR CELL #2
NV-9	12"	FROM LINE A-2 TO SAGR CELL #2
NV-10	12"	FROM LINE A-2 TO SAGR CELL #2
NV-11	12"	FROM LINE A-2 TO SAGR CELL #2
NV-12	12"	FROM LINE A-3 TO SAGR CELL #1
NV-13	12"	FROM LINE A-3 TO SAGR CELL #1
NV-14	12"	FROM LINE A-3 TO SAGR CELL #1
NV-15	12"	FROM LINE A-3 TO SAGR CELL #1

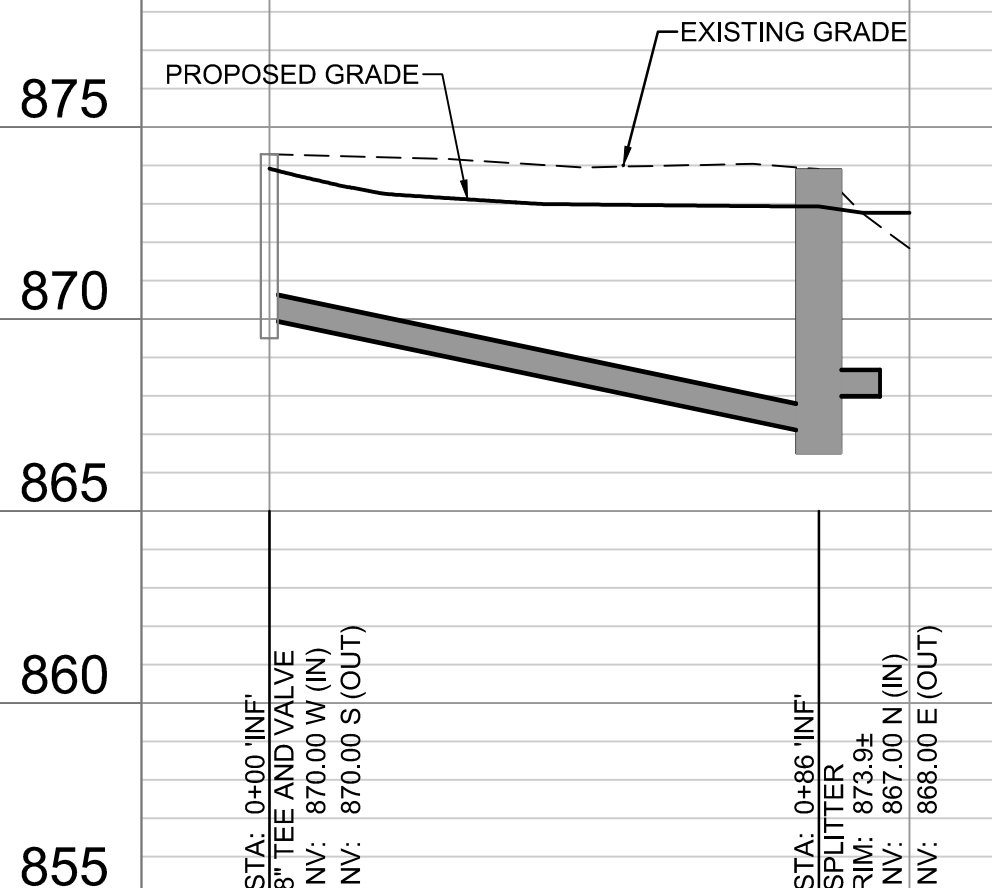
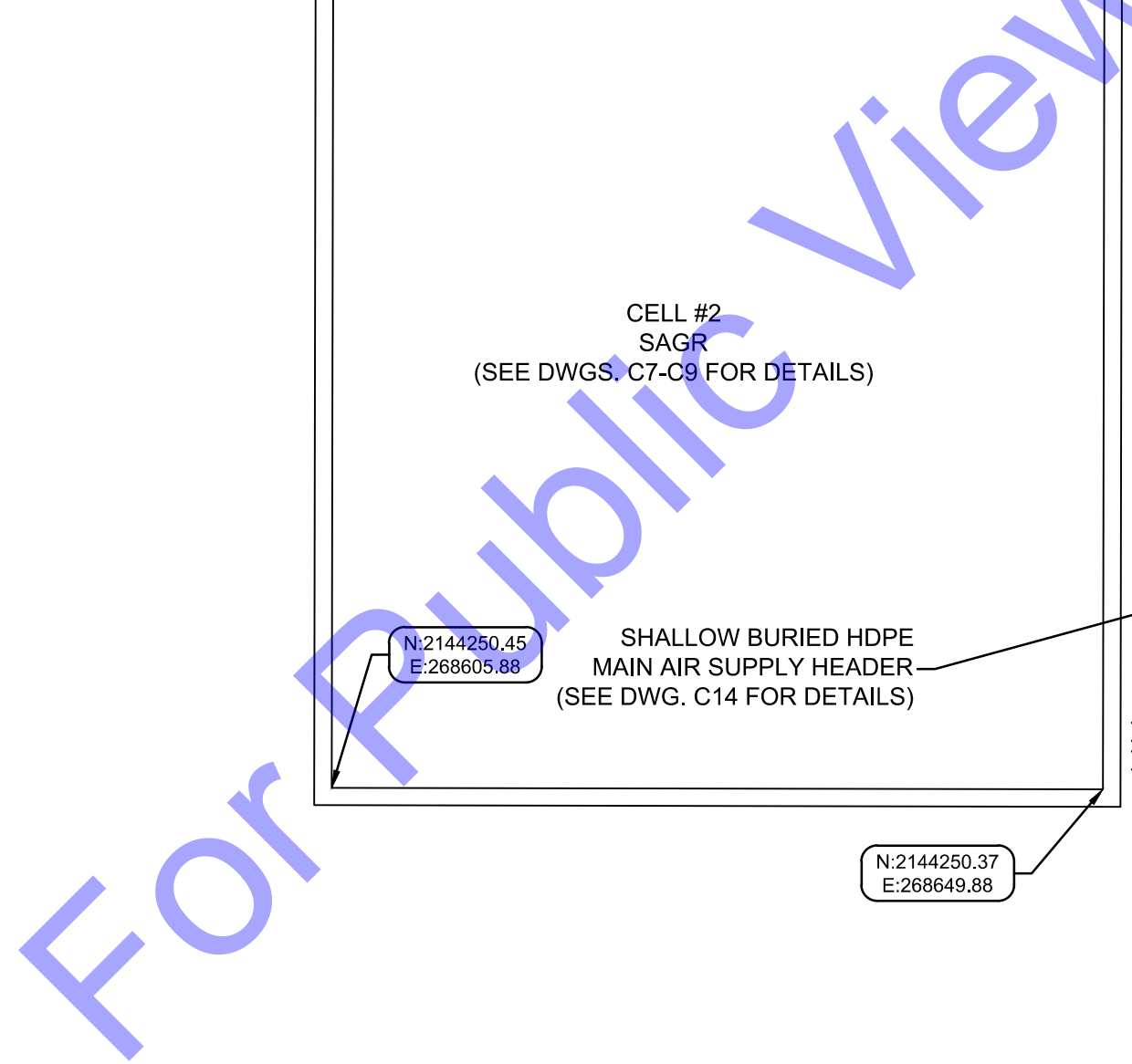
SITE AND PIPING IMPROVEMENTS PLAN

SCALE: 1"=10'

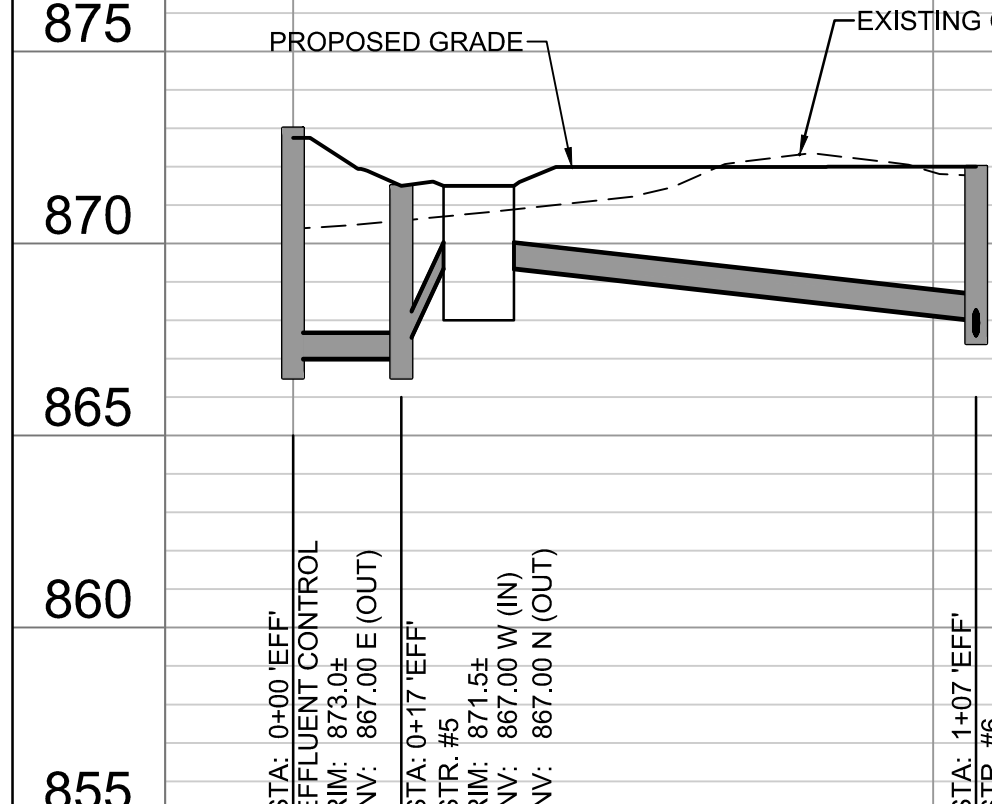
 COMMONWEALTH ENGINEERS, INC. A wealth of resources to make a common good. https://commonwealthengineers.com/		OFFICE LOCATIONS IN: INDIANAPOLIS, IN. (2) EVANSVILLE, IN. FORT WAYNE, IN. CROWN POINT, IN. BOWLING GREEN, KY. SOUTH BEND, IN.	
		 <i>Ben Adams</i> Signature 12/31/2024 Date	
TOWN OF CLAYPOOL KOSCIUSKO COUNTY, INDIANA CONTRACT A - WWTP AND LIFT STATION No. 2 IMPROVEMENTS			
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Designed By: BW		Drawn By: CH	
Issue Date: 12/20/24		Scale: AS SHOWN	
EXISTING WWTP SITE IMPROVEMENTS AND PIPING PLAN			
Drawing No: C4			
Sheet: 9 OF 55			



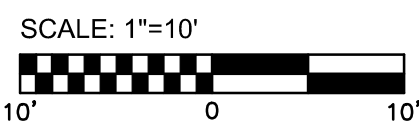
COMMONWEALTH ENGINEERS, INC. A wealth of resources to make a common good.				OFFICE LOCATIONS IN:		
				INDIANAPOLIS, IN. (2) EVANSVILLE, IN. FORT WAYNE, IN. CROWN POINT, IN. BOWLING GREEN, KY. SOUTH BEND, IN.		
 Signature					12/31/2024 Date	
TOWN OF CLAYPOOL KOSCIUSKO COUNTY, INDIANA			CONTRACT A - WWTP AND LIFT STATION No. 2 IMPROVEMENTS			
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No.	Submittal / Revision	By	Date			
Designed By: BW			Drawn By: CH		Checked By: NS	
Issue Date: 12/2024			Project No: S23130		Scale: AS SHOWN	
NEW SITE GRADING						
Drawing No: C5						
Sheet:			10 OF 55			



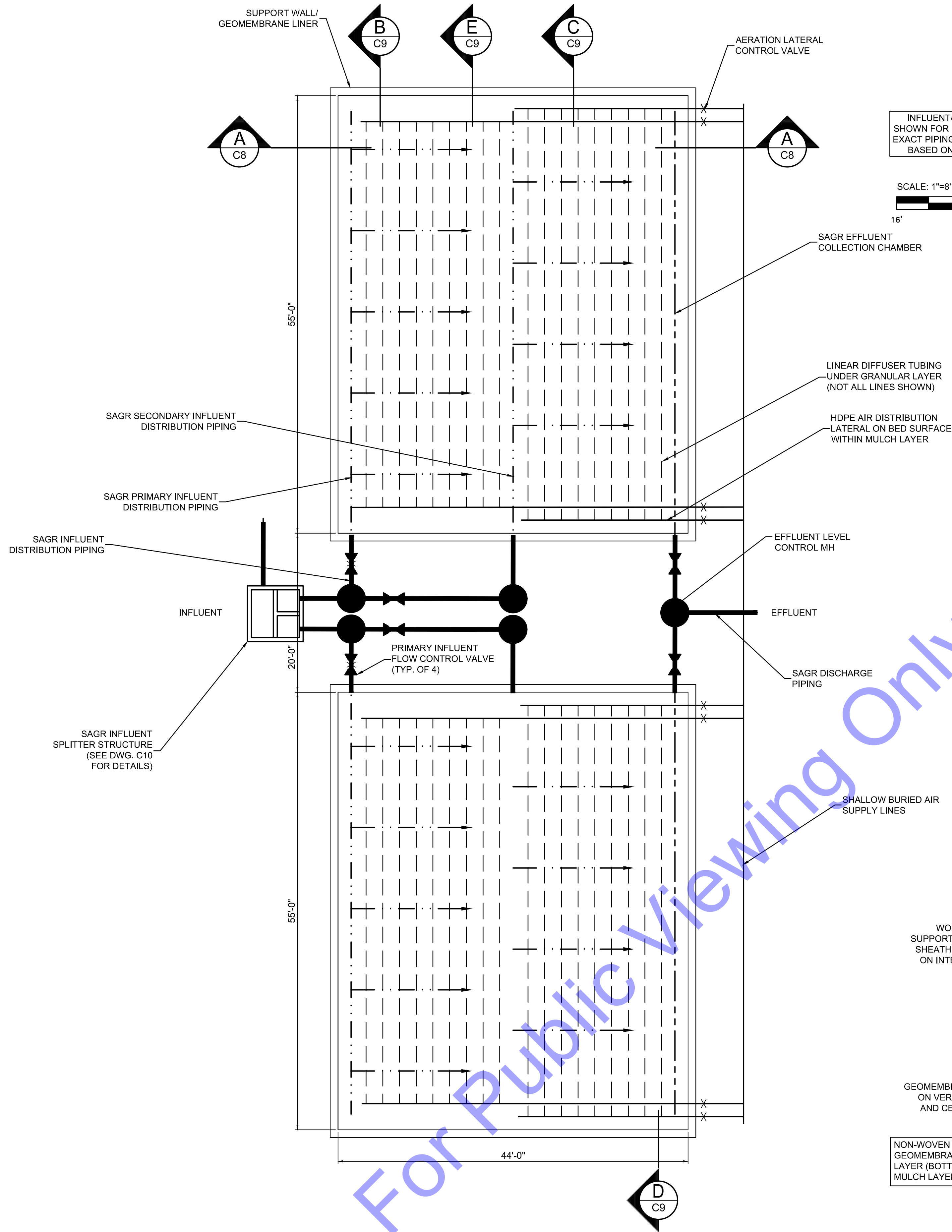
HORIZONTAL SCALE: 1"=30'-0"
VERTICAL SCALE: 1"=5'-0"



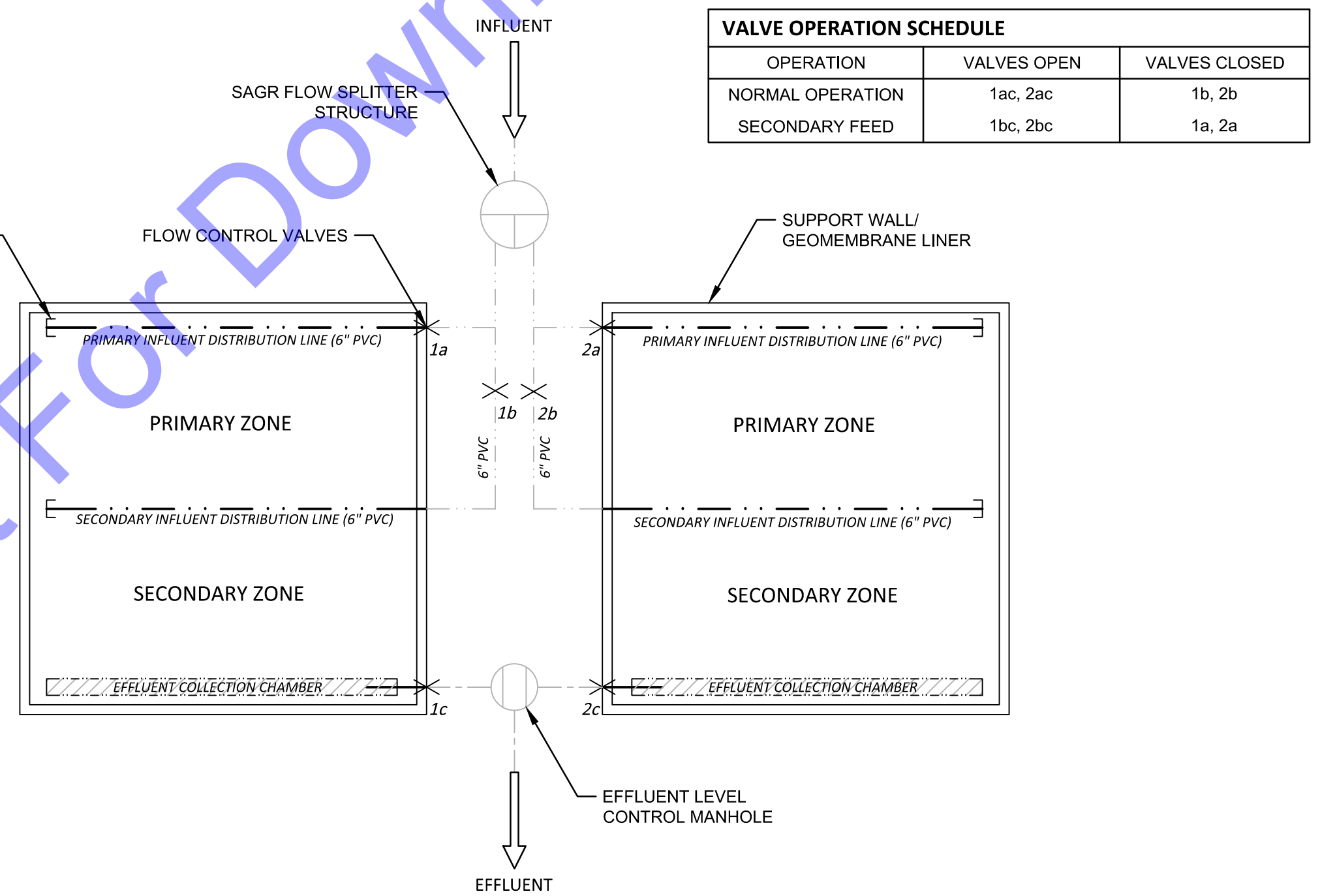
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VERTICAL SCALE: 1"=5'-0"



File: Z: SHARED\IN CLIENTS A-L\CLAYPOOL\S23130 - WASTEWATER - STORMWATER IMPROVEMENTS\06 CAD\A CURRENT FILES\DRAWINGS\CONTRACT A\05-CLAYPOOL- SAGR SYSTEM.DWG
Saved: 4/28/2025 11:46:51 AM Plotted: 4/28/2025 11:47:55 AM Current User: Craig Higbie LastSavedBy: chigbie

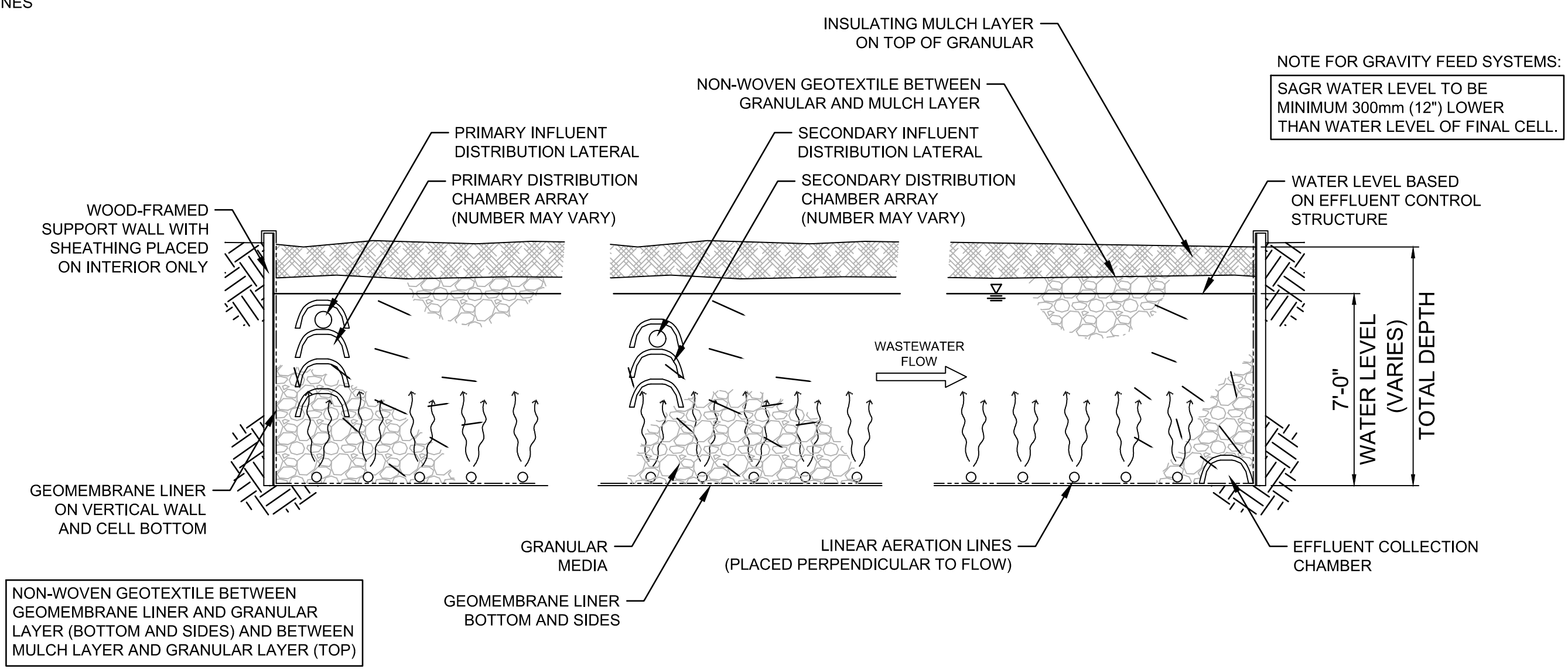


INFLUENT/EFFLUENT PIPING TO SAGR
SHOWN FOR ILLUSTRATIVE PURPOSE ONLY.
EXACT PIPING ROUTING TO BE DETERMINED
BASED ON FINAL LOCATION OF SAGR.



VALVE OPERATION SCHEDULE		
OPERATION	VALVES OPEN	VALVES CLOSED
NORMAL OPERATION	1ac, 2ac	1b, 2b
SECONDARY FEED	1bc, 2bc	1a, 2a

SAGR INFLUENT/EFFLUENT PIPING SCHEMATIC
SCALE: NONE



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SOUTH BEND, IN

REGISTERED PROFESSIONAL ENGINEER
No. 19700508
STATE OF INDIANA
Signature: *Benjamin H. Adams*
Date: 12/31/2024

TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA

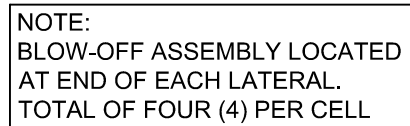
CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS

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No.	Summit/Revision	By	Date

Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

NEW SAGR SYSTEM -
PLAN VIEW



1. MULCH SHALL BE NO. 1 RUBBER CHIPS OR NO. 1 TREAD CHIPS.
2. NO. 1 RUBBER CHIPS SHALL BE UNIFORM CHIPPED BIAS TIRES OR METAL FREE SIDEWALLS; SIZED TO MINUS 2.5", PLUS NO. 10 MESH AND GUARANTEED METAL FREE, BLACK ONLY.
3. NO. 1 TREAD CHIPS SHALL CONSIST OF UNIFORM CHIPPED TIRE TREADS; SIZED TO MINUS 2.5", PLUS NO. 10 SCREEN, MUST BE BEAD FREE, BLACK ONLY.

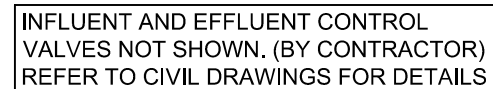
A
C7

**CONTRACT A -
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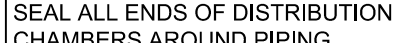
NEW SAGR SYSTEM -
SECTION 'A'

C8



B
C7

*NOTE: ORIFICES TO BE DRILLED ON-SITE



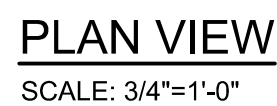
D
C7

NOTE:
ALL PROCESS PIPING AND CONNECTIONS OUTSIDE OF AERATED PONDS AND SAGR BEDS
ARE SHOWN FOR GENERAL ARRANGEMENT PURPOSES ONLY.
REFER TO FINAL CONTRACTOR DRAWINGS FOR FINAL LAYOUT AND ALL CIVIL WORK DETAILS.

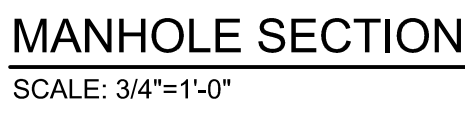


C
C7

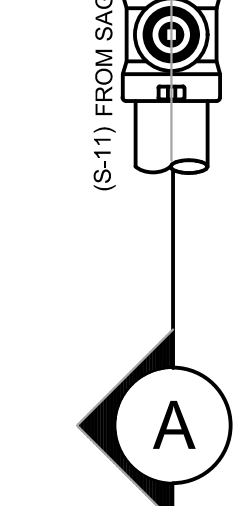
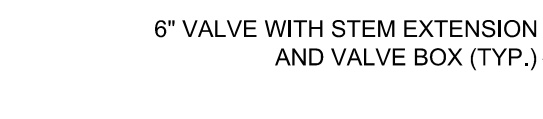
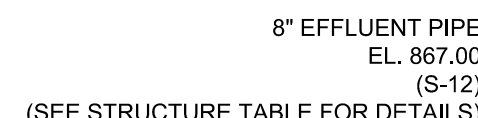
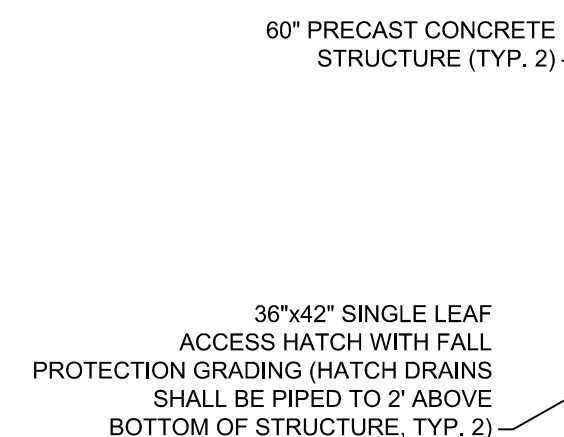




CONTRACTOR TO VERIFY EXISTING EFFLUENT
ELEVATION OF LAGOON CELL #2 TO ENSURE A MINIMUM
OF 0.40% SLOPE TO THE SPLITTER STRUCTURE.



NEW SAGR SYSTEM SPLITTER STRUCTURE - PLAN AND SECTION



A circular professional engineer seal for Benjamin H. Adams. The outer ring contains the text "BENJAMIN H. ADAMS" at the top and "REGISTERED PROFESSIONAL ENGINEER" at the bottom, separated by two stars on each side. The inner circle contains the text "No. 19700508" and "STATE OF INDIANA". The seal is surrounded by a series of short, parallel lines.

--

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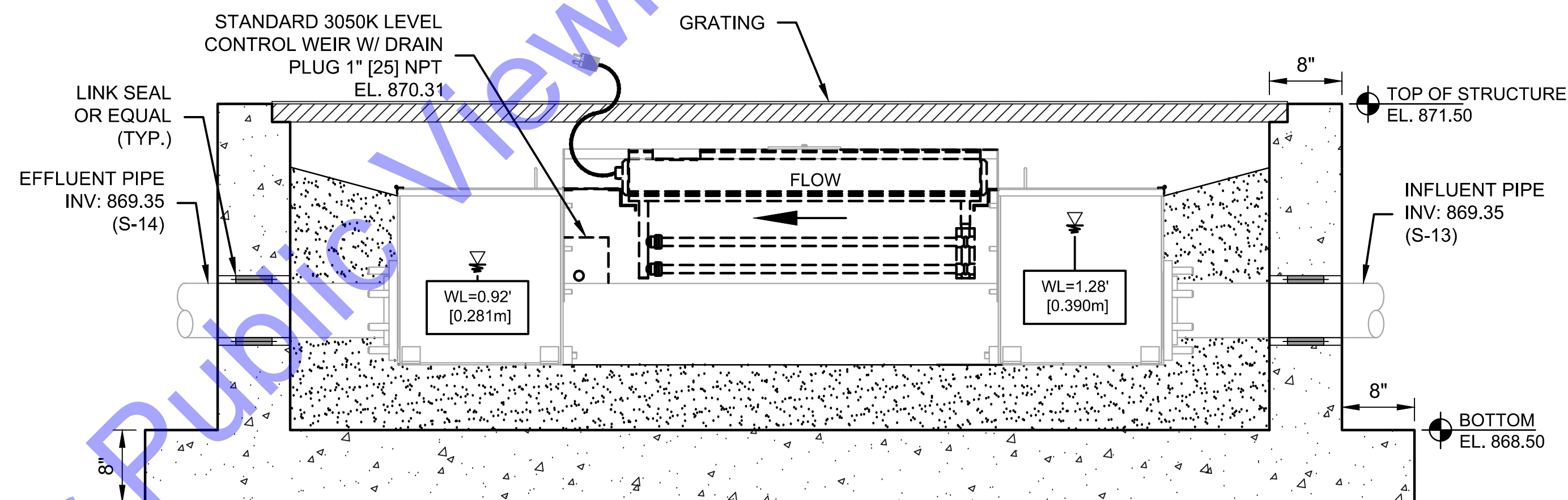
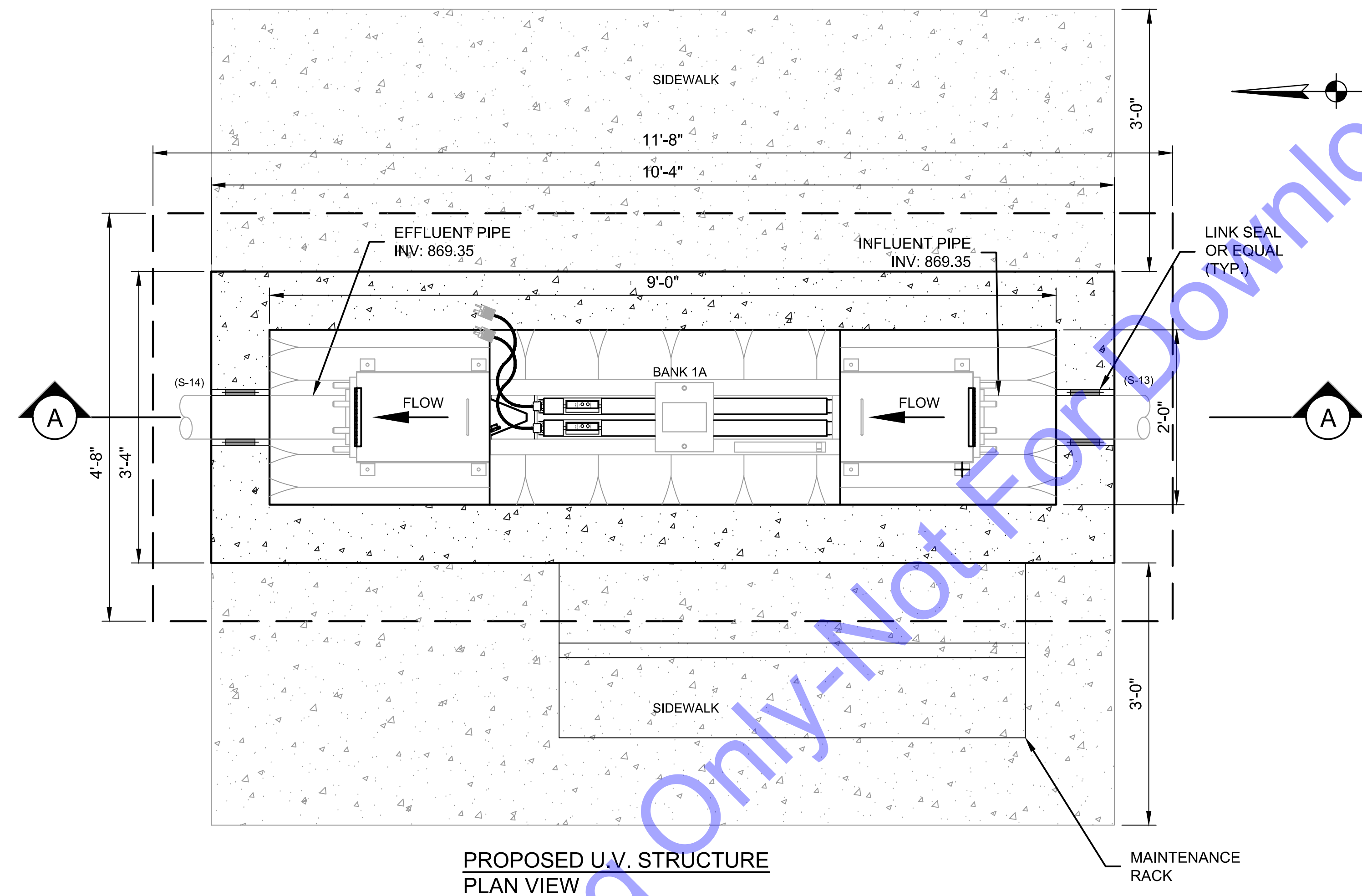
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Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

Drawing No:

C11

Sheet: 16 OF 55



PROPOSED U.V. STRUCTURE
SECTION
SCALE: 1"=1'-0"

SCALE: 1"=1'-0"

- SHEET NOTES:**

1. BASIS OF DESIGN: TROJAN UV300K-1 (SEE SPEC. DS-15).
2. GRATING AND RUBBER MATTING SHALL BE INSTALLED IN REMOVABLE SECTIONS (2' - 3' MAX.).
3. UV MODULE STORAGE RACK TO BE SUPPLIED AND LOCATED INSIDE EX. LAB AND OFFICE BUILDING.

UV PLAN AND SECTION

Drawing No:

C12

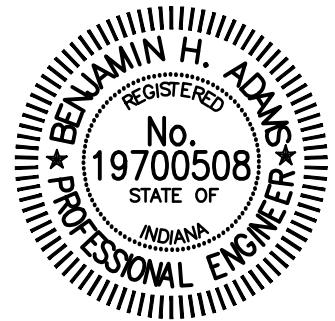
Sheet: 17 OF 55



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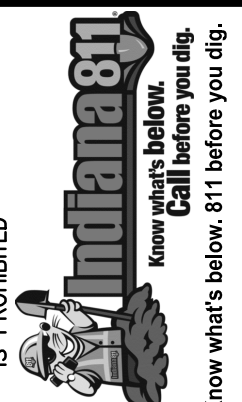

Signature

12/31/2024
Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

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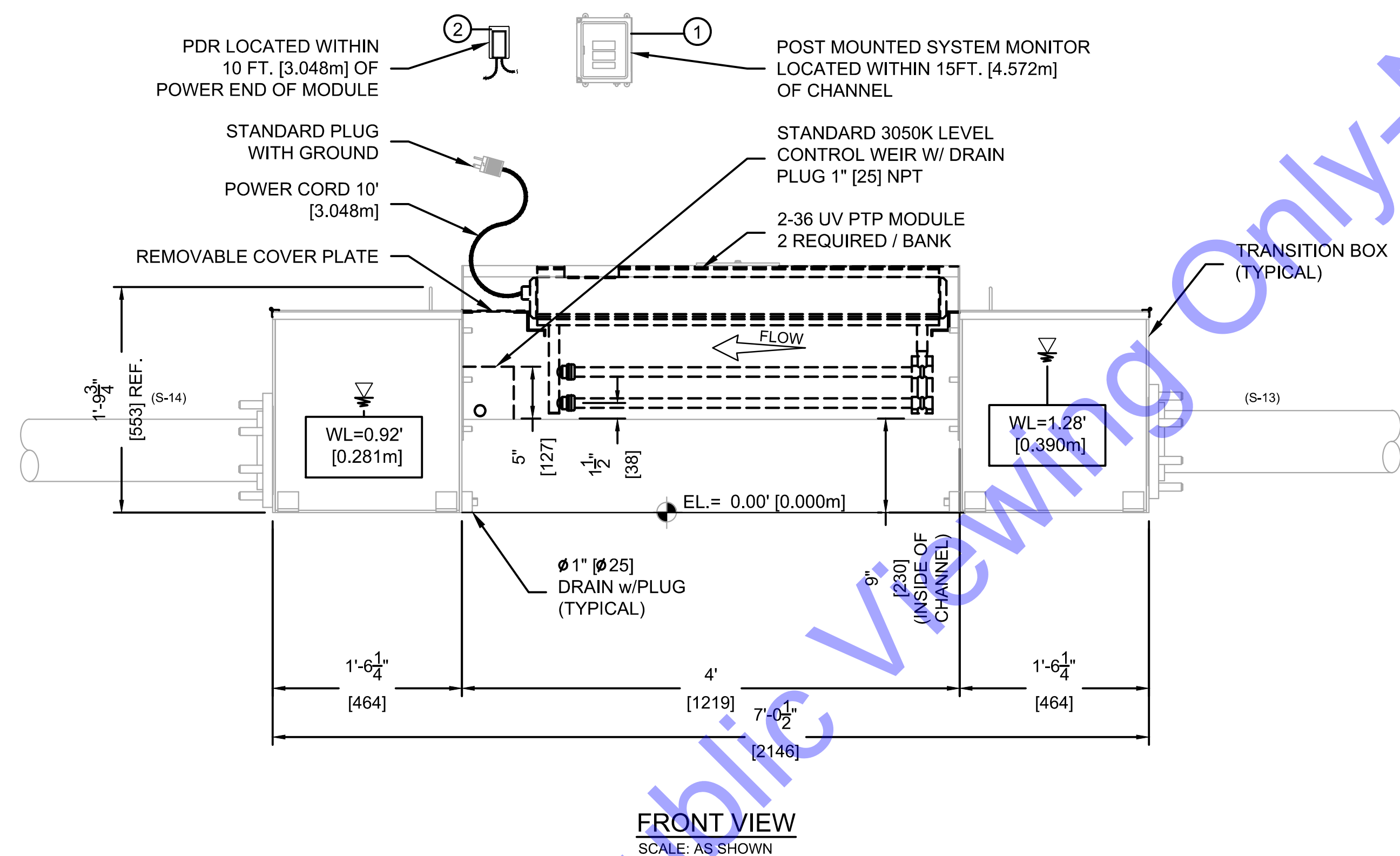
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[illegible]

Designed By: BW	Drawn By: CH	Checked By: NS
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Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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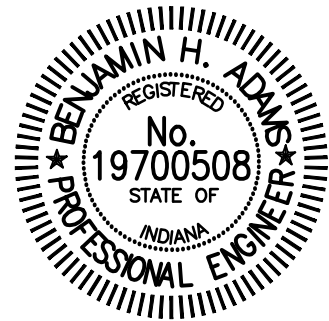
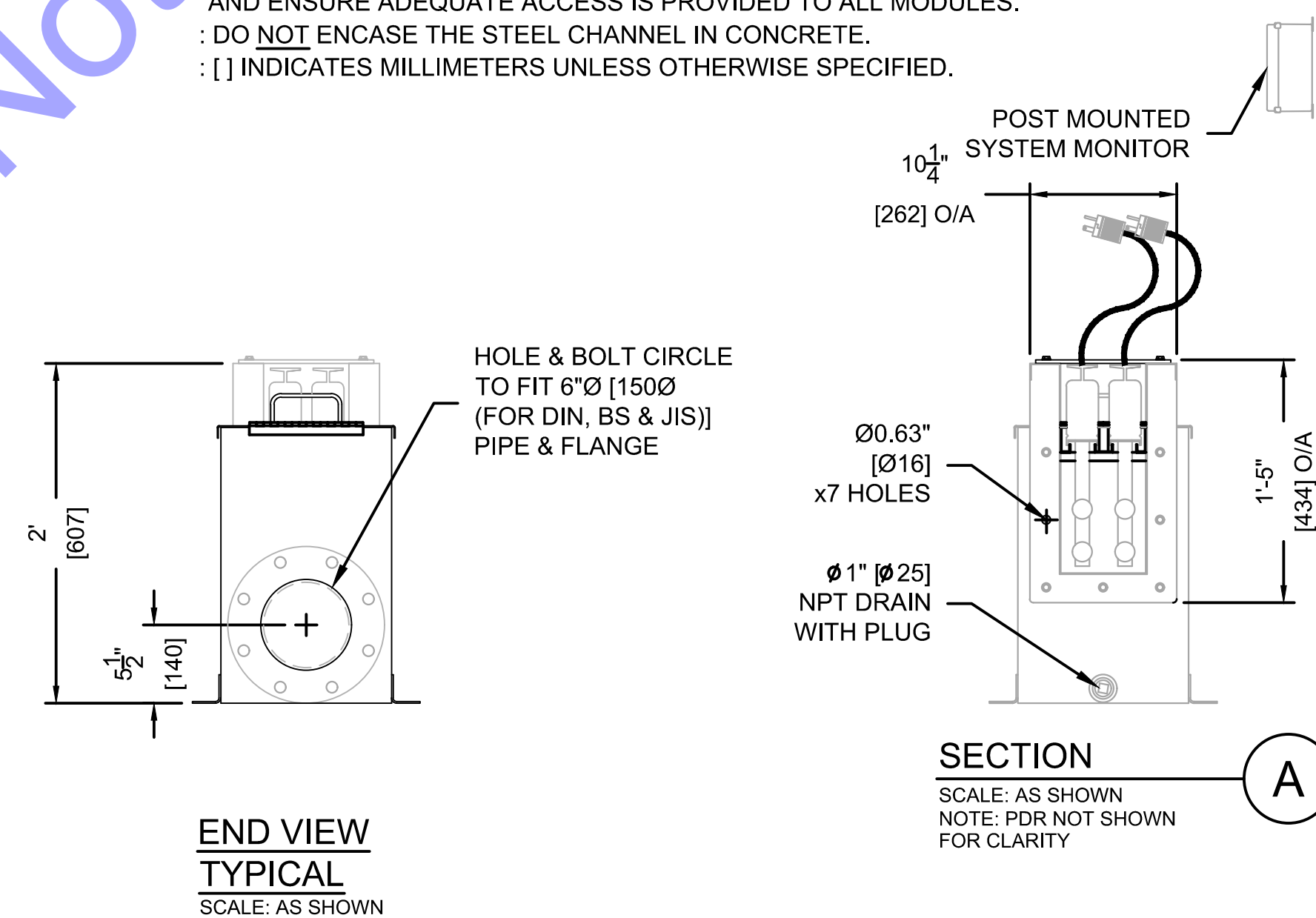


TROJAN^{UV} 3000TM PTP
EQUIPMENT INTERCONNECTIONS

No.	DESCRIPTION	FROM	TO
1	SYSTEM MONITOR POWER SUPPLY 120V, 1 PHASE, 2 WIRE, 5 AMPS	DISTRIBUTION PANEL (DP) (NOT SHOWN) (BY OTHERS)	SYSTEM MONITOR
2	POWER DISTRIBUTION RECEPTACLE (PDR) POWER SUPPLY 120V, 1 PHASE, 2 WIRE, ACTUAL DRAW 1.7 AMPS / PDR	DP (NOT SHOWN) (BY OTHERS)	PDR

NOTES:

- : DO NOT SLOPE CHANNEL FLOOR.
- : CHANNEL WIDTH & DEPTH MUST BE KEPT WITHIN A TOLERANCE OF + OR - ¼" [6].
- : ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
- : BOLTS, WASHERS & NUTS FOR CONNECTION OF CHANNEL TO TRANSITION BOXES ARE PROVIDED BY TROJAN TECHNOLOGIES.
- : SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
- : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY.
- : ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
- : ANY EXTRA OUTLETS NOT BEING USED BY TROJAN EQUIPMENT HAVE NOT BEEN INCLUDED IN THE INTERCONNECT AMPERAGE.
- : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
- : ACCESS IS REQUIRED FOR MODULE REMOVAL - NOTE THE CHANNEL WIDTH AND ENSURE ADEQUATE ACCESS IS PROVIDED TO ALL MODULES.
- : DO NOT ENCASE THE STEEL CHANNEL IN CONCRETE.
- : [] INDICATES MILLIMETERS UNLESS OTHERWISE SPECIFIED.

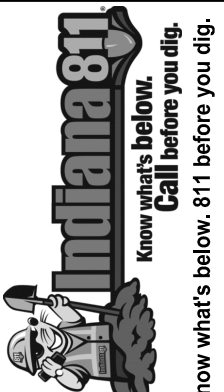


Brian 12/31/2024
Signature Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

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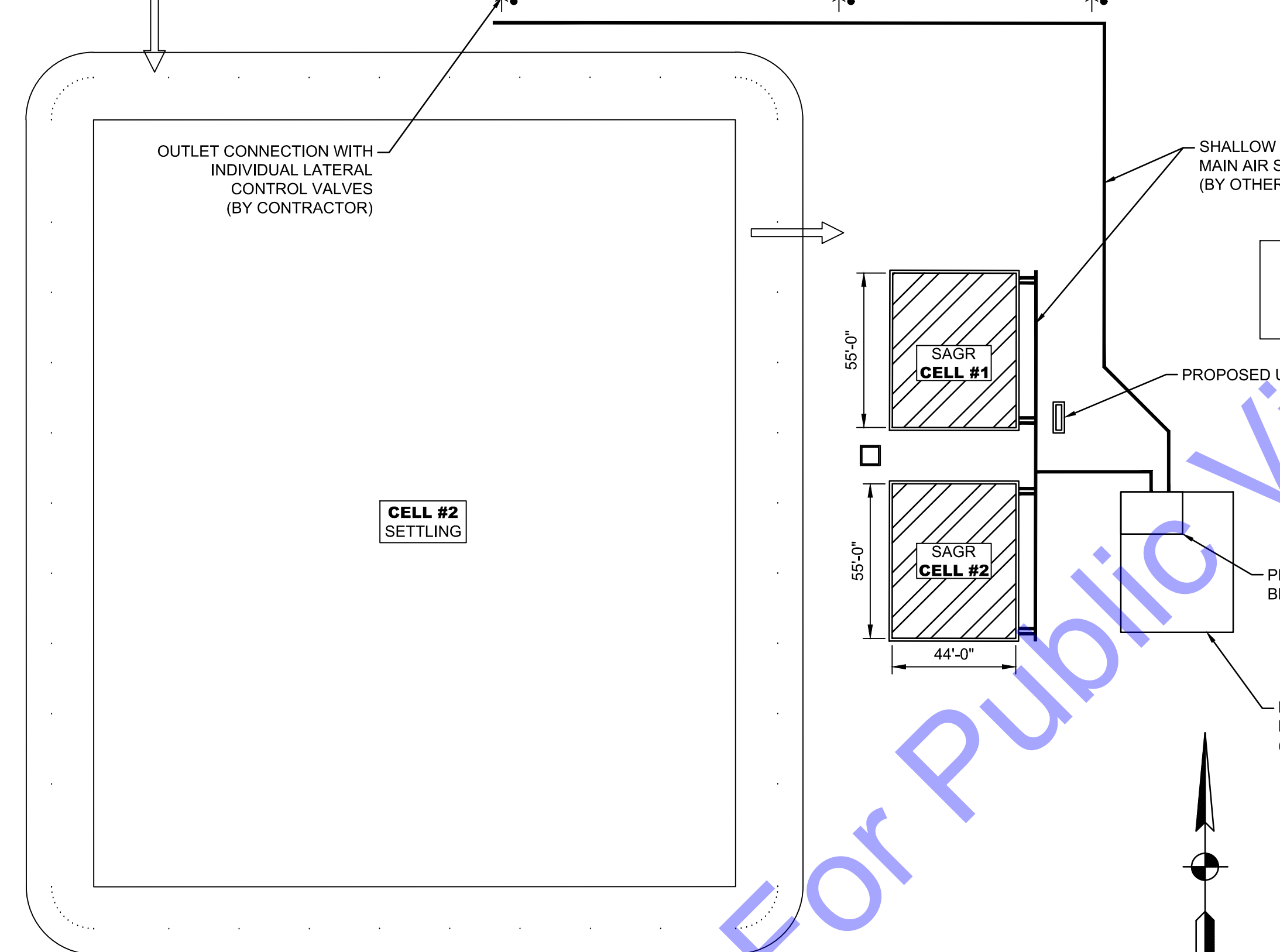
1-800-382-5544
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[illegible]

NEW ULTRAVIOLET DISINFECTION SYSTEM

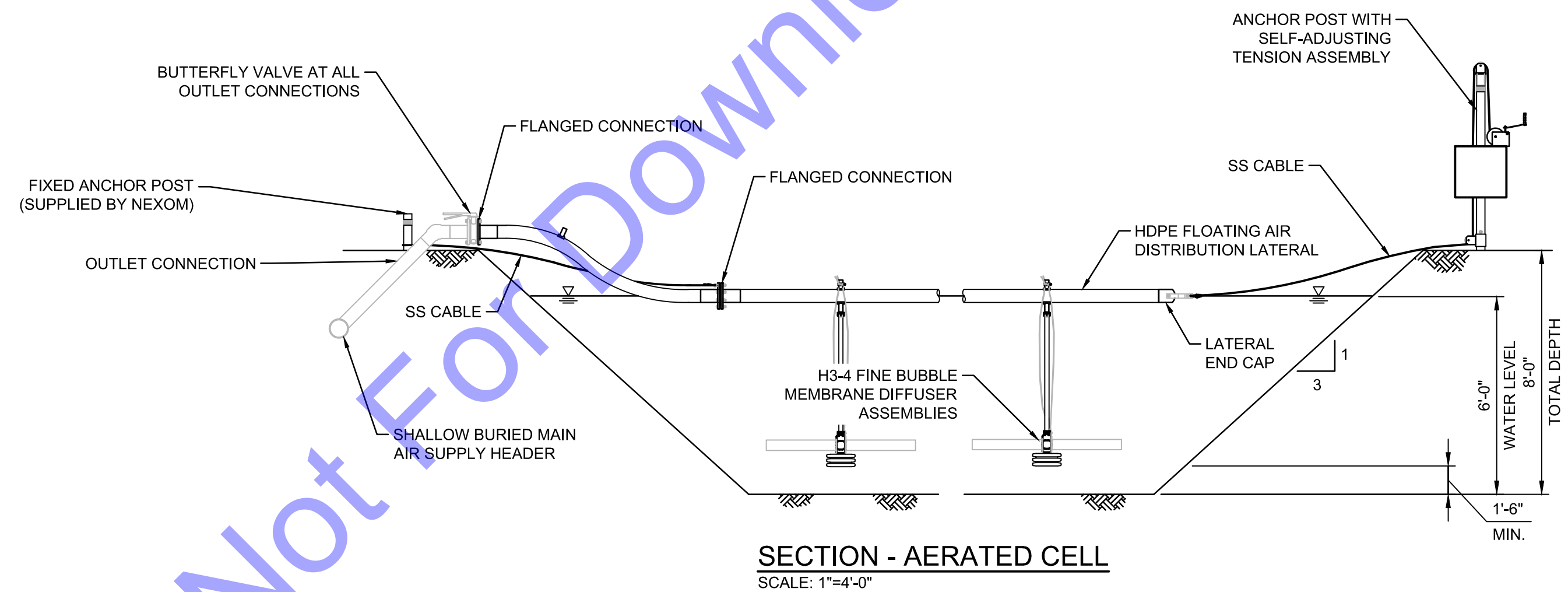
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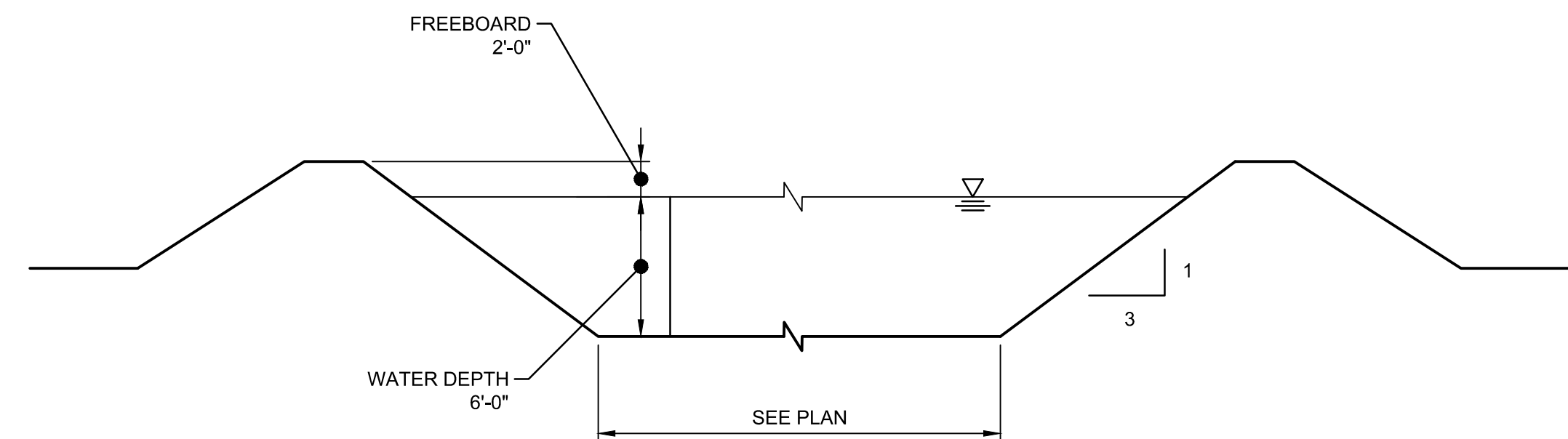


AERATION LAYOUT

SCALE: 1"=40'



SECTION - AERATED CELL
SCALE: 1"=5'-0"



SECTION - AERATED CELL
SCALE: 1"=5'-0"

[illegible]

Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN



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

* SAGR STANDBY PROVIDED BY LAGOON BLOWER



12/31/2024
Date

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

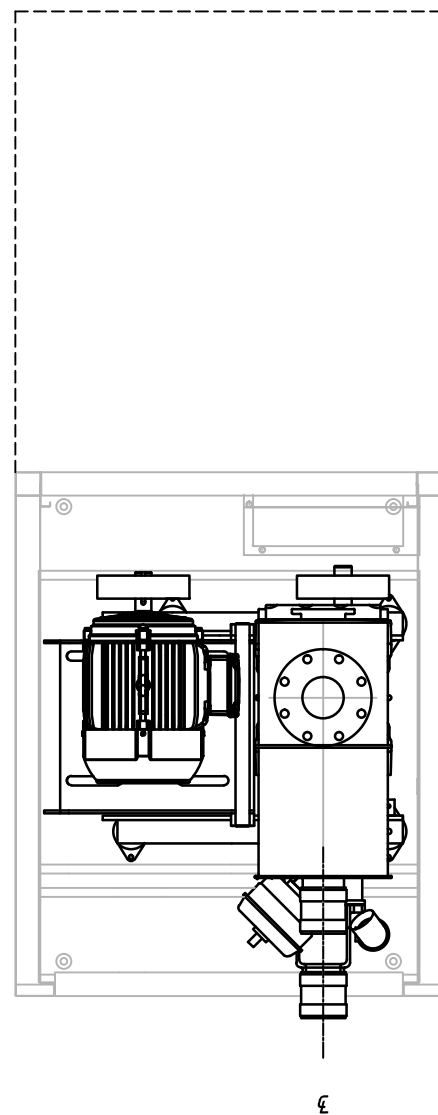


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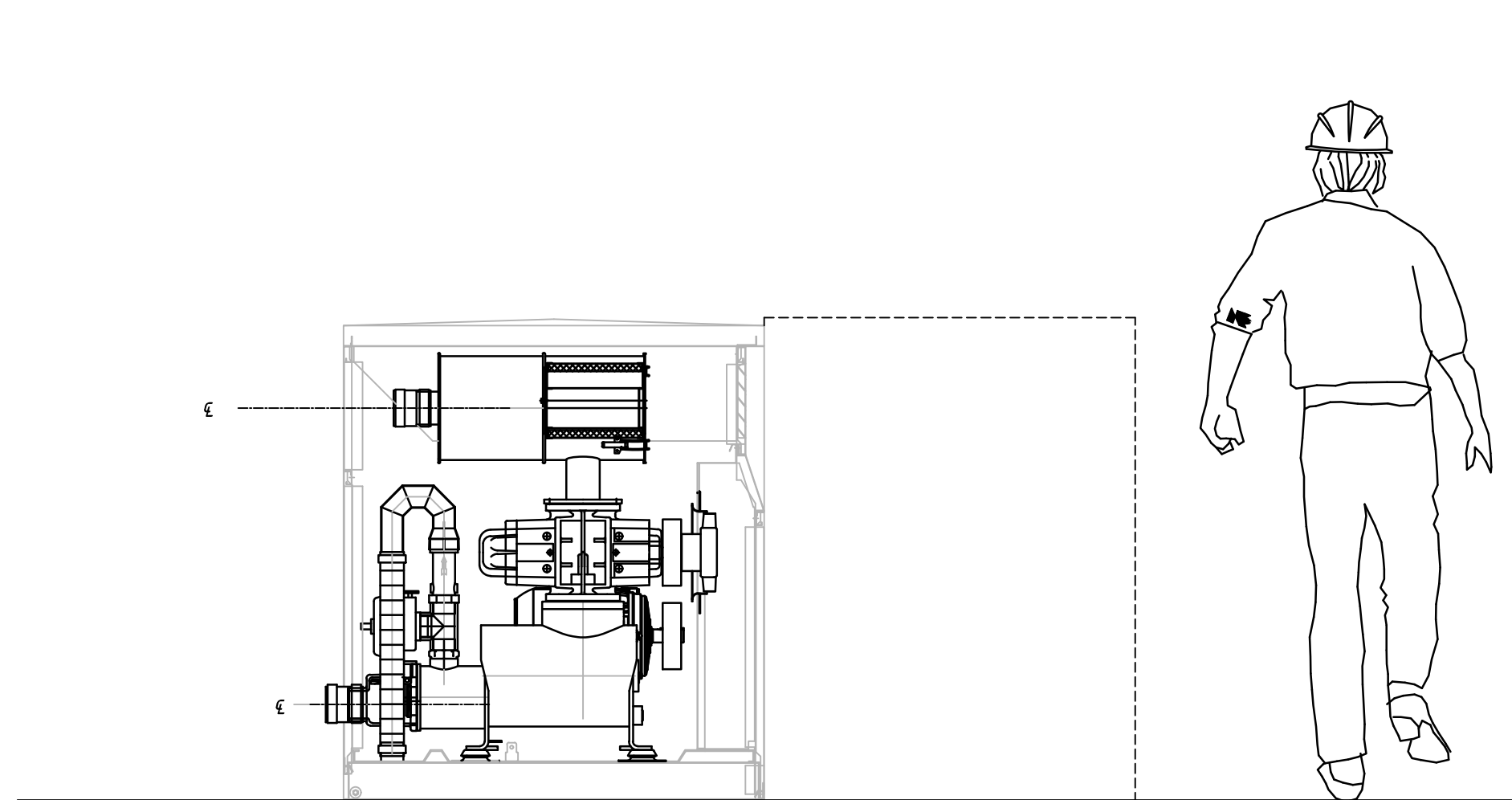
Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

Drawing No:

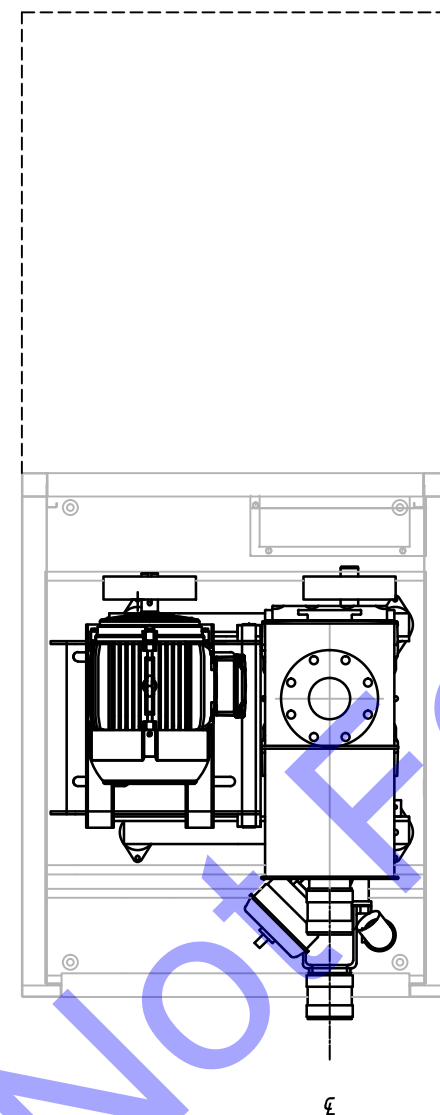
C15



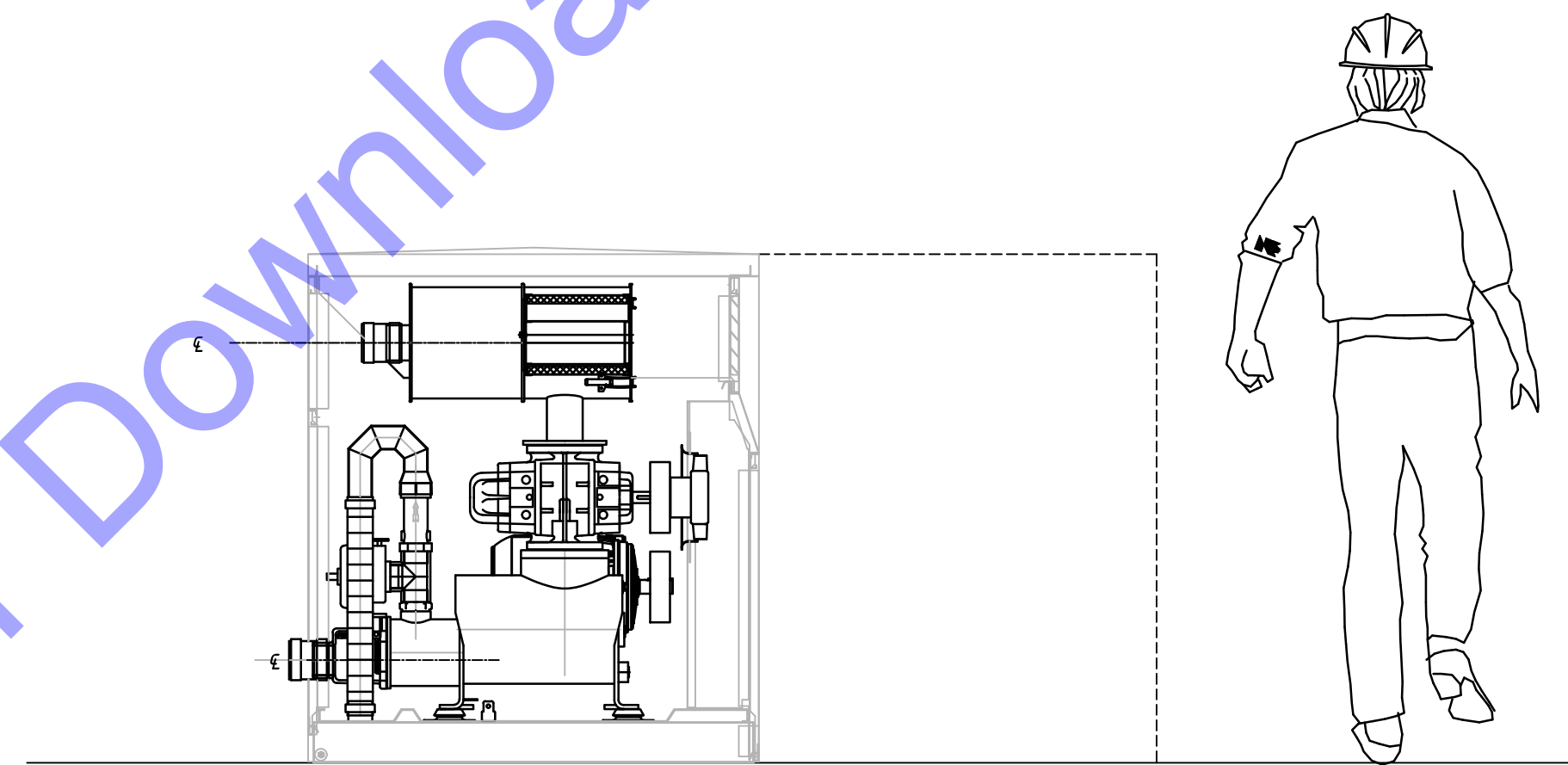
PLAN - GM7L DN80
SCALE: NONE



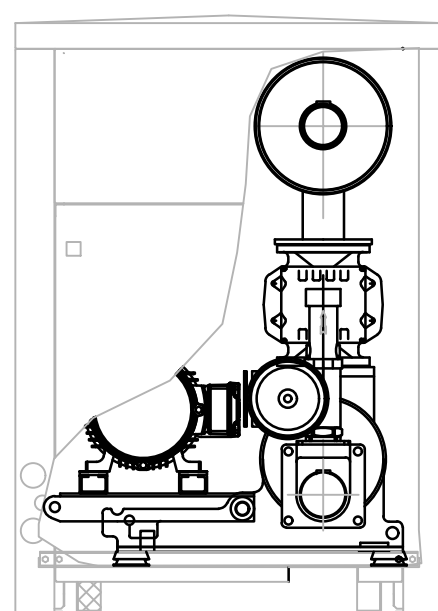
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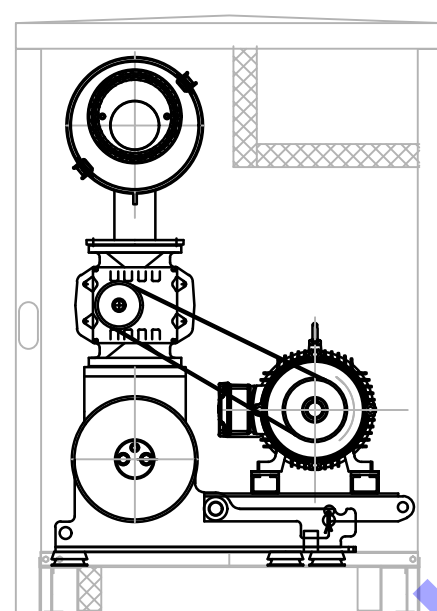
PLAN - GM4S DN80
SCALE: NONE



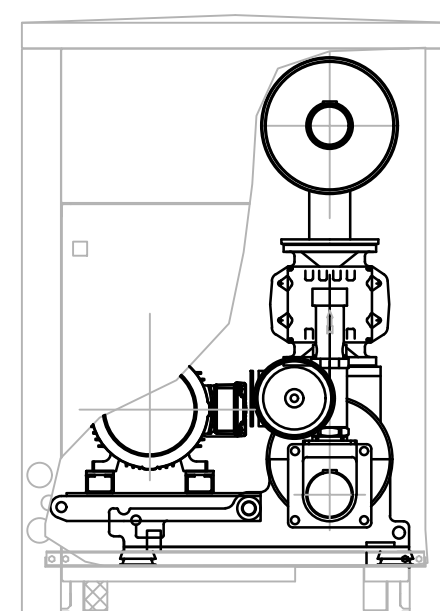
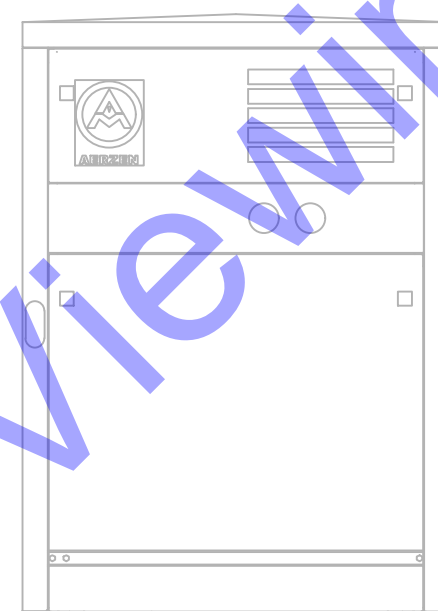
SECTION - GM4S DN80
SCALE: NONE



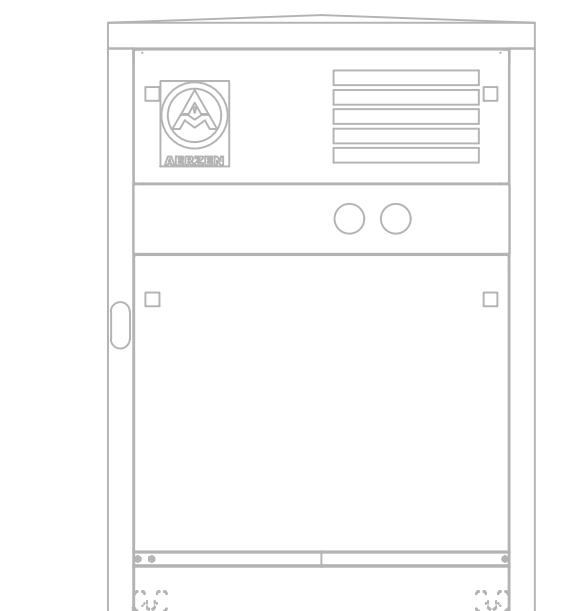
REAR ELEVATION - GM7L DN80
SCALE: NONE



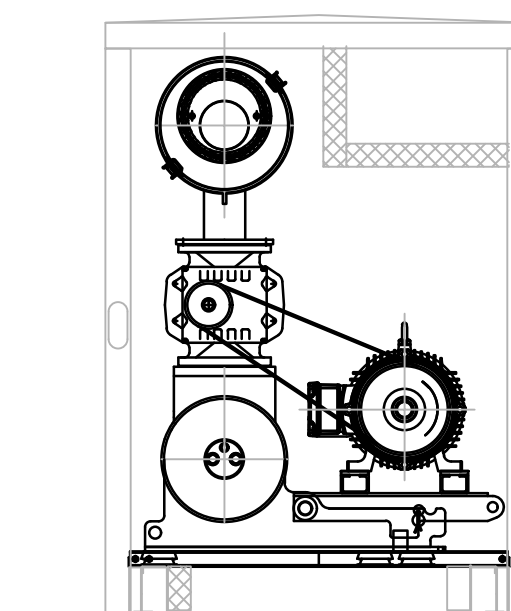
FRONT ELEVATION - GM7L DN80
SCALE: NONE



REAR ELEVATION - GM4S DN80
SCALE: NONE



FRONT ELEVATION - GM4S DN80
SCALE: NONE



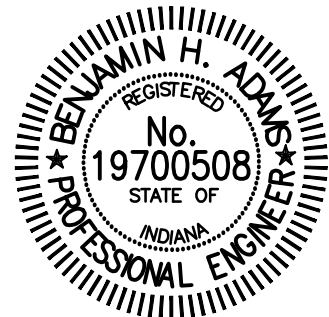
FRONT ELEVATION - GM4S DN80
SCALE: NONE



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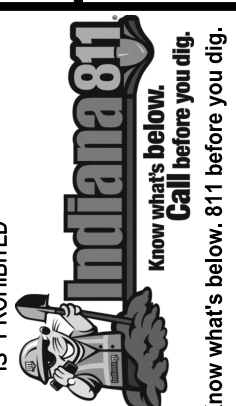

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Designed By: BW	Drawn By: CH	Checked By: NS
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Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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NEW BLOWER - SECTIONS

Drawing No:

C16

Sheet: 21 OF 55

PLUMBING NOTES

GENERAL:

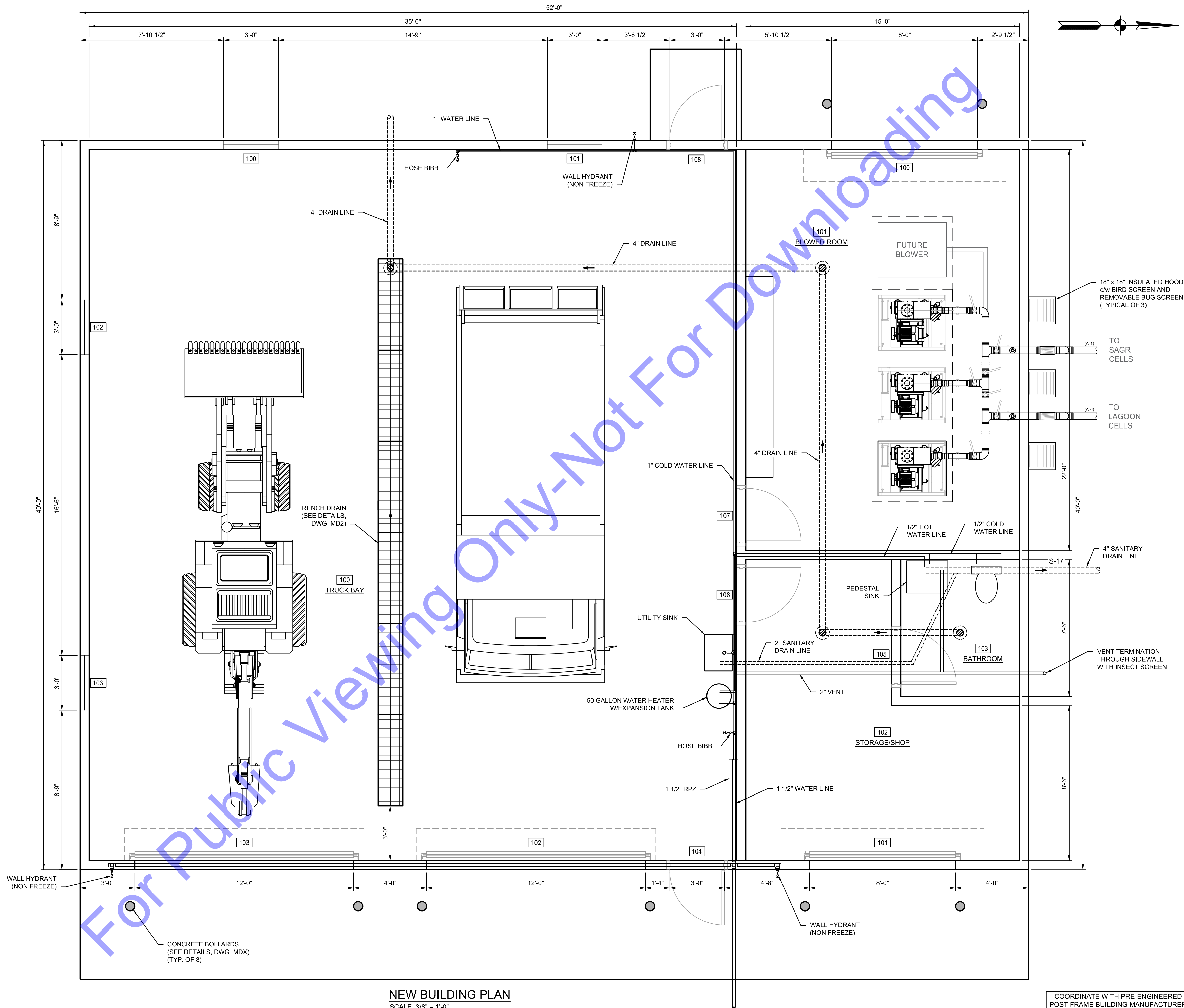
1. DRAWINGS ARE DIAGRAMMATIC ONLY. COORDINATION WITH OTHER TRADES, LAYOUT, ROUTING, AND FITTINGS NECESSARY ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ANY MINOR CHANGES IN THE LOCATION OF ALL EQUIPMENT OR FIXTURES FROM THOSE SHOWN ON THE PLANS SHALL BE MADE WITHOUT EXTRA CHARGE IF SO DIRECTED BY ENGINEER OR OWNER BEFORE INSTALLATION. MINOR CHANGES IN LOCATION SHALL BE DEFINED AS WITHIN 10 FEET IN ANY DIRECTION, HORIZONTALLY OR VERTICALLY, FROM THE LOCATION INDICATED ON THE DRAWINGS.
3. UNLESS OTHERWISE SPECIFIED ALL MATERIALS AND EQUIPMENT INCORPORATED IN THE WORK SHALL BE NEW. ALL WORKMANSHIP SHALL BE FIRST CLASS AND SHALL BE PERFORMED BY PERSONS QUALIFIED IN THEIR RESPECTIVE TRADES.
4. INSTALL BLOCKING INSIDE WALL FOR INSTALLATION OF WALL HUNG EQUIPMENT INCLUDING OWNER PROVIDED EQUIPMENT.
5. ALL WORK INSTALLED BY THIS CONTRACTOR SHALL BE IN COMPLIANCE WITH ALL GOVERNING CODES, REGULATIONS AND THE RECOMMENDED INSTALLATION DETAILS OF THE PRODUCT MANUFACTURERS. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS, LICENSES, AND INSPECTIONS GOVERNING HIS PORTION OF THE CONTRACT FROM THE AUTHORITIES HAVING JURISDICTION AND SHALL PAY THE COST OF SUCH UNLESS SPECIFIED OTHERWISE.
7. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE START UP OF ALL PLUMBING EQUIPMENT. PRIOR TO START UP OF ANY EQUIPMENT THE CONTRACTOR SHALL CHECK AND REVIEW ALL MANUFACTURERS RECOMMENDATIONS FOR PROPER PROCEDURE.
8. PIPE SUPPORTS AND HANGERS ARE OMITTED FROM DRAWINGS IN MOST LOCATIONS FOR CLARITY. WHERE ILLUSTRATED, PIPE SUPPORTS AND HANGERS ARE SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUPPORTS AND HANGERS AS REQUIRED TO ADEQUATELY SUPPORT ALL NEW PIPING.
9. HORIZONTAL AND VERTICAL RUNS OF PIPING SHALL BE INSTALLED PARALLEL AND PERPENDICULAR TO THE WALLS. VERTICAL PIPING SHALL BE PLUMB AND PERPENDICULAR TO THE FLOORS AND CEILINGS UNLESS NOTED OTHERWISE.
10. ALL PIPING SHALL BE INSTALLED & CONNECTED BY THE PLUMBING CONTRACTOR.

WATER PIPING:

1. ALL HOT AND COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ELECTROMETRIC INSULATION INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS ALL INSULATION SHALL BE INSTALLED BY QUALIFIED PERSONNEL TO PROVIDE A PROFESSIONAL VAPOR TIGHT SEAL ON ALL PIPING.
2. ALL WATER PIPE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH PART SIX SECTION 15, HYDROSTATIC TESTING IN THE CONTRACT DOCUMENTS.

SANITARY WASTE AND VENT PIPING:

1. PIPING BELOW GRADE TO BE INSTALLED ON FIRM EARTH TO SLOPE AT A MINIMUM 1/8" PER FOOT. VERIFY ALL INVERTS PRIOR TO CONSTRUCTION START.

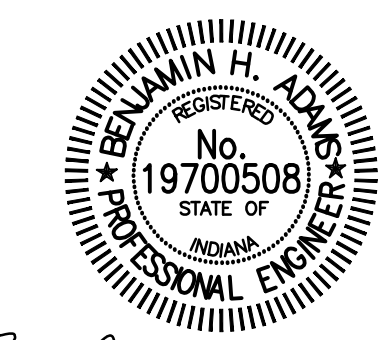


NEW BUILDING PLAN
SCALE: 3/8" = 1'-0"

COORDINATE WITH PRE-ENGINEERED
POST FRAME BUILDING MANUFACTURER



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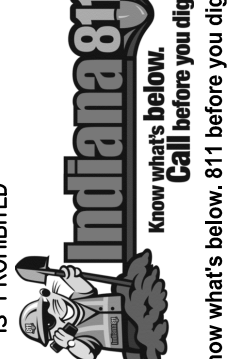
Signature

12/31/2024
Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

CONTRACT A - WWTP AND LIFT STATION No. 2 IMPROVEMENTS

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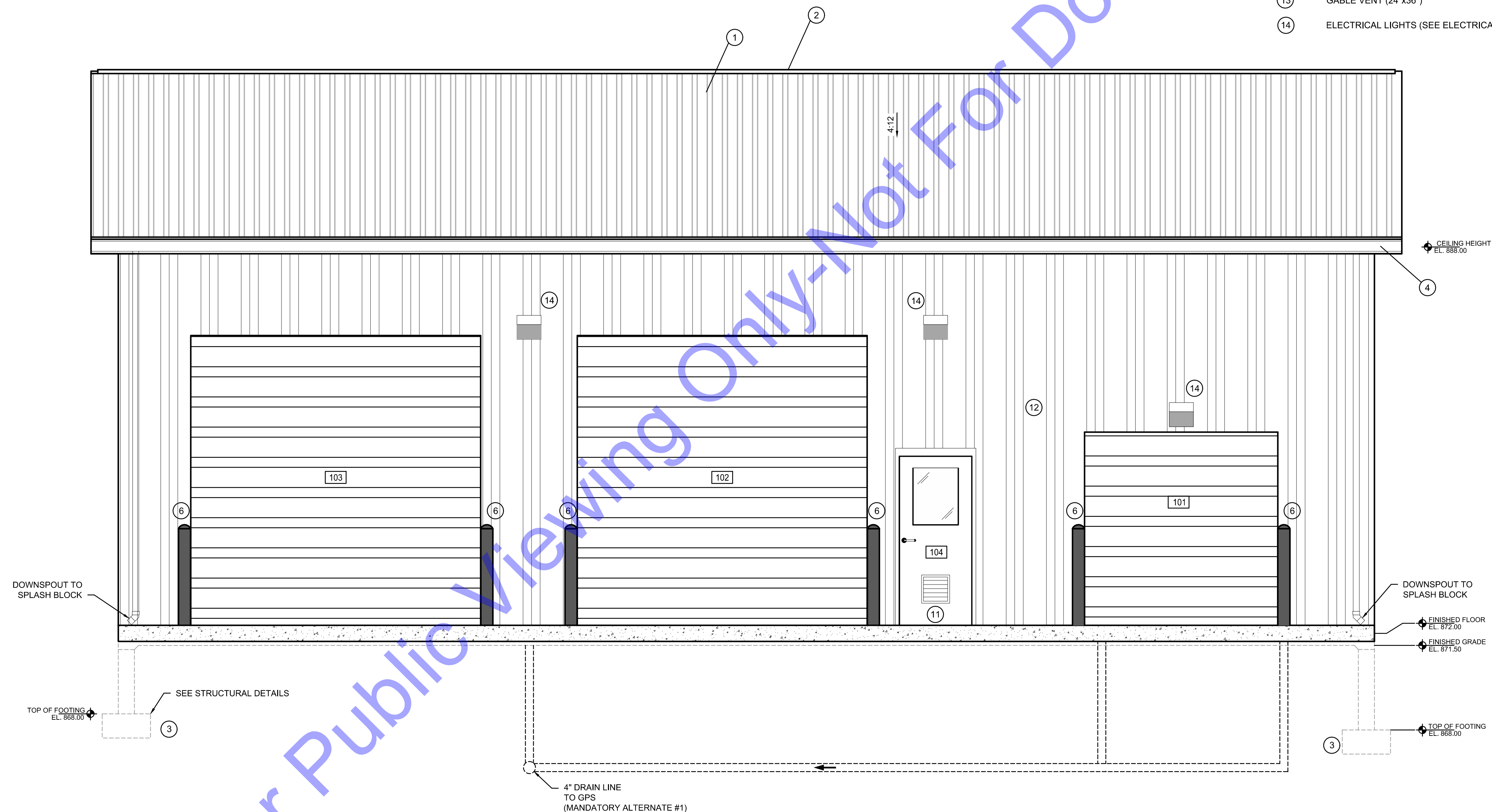
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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NEW UTILITY BUILDING -
PLAN (MANDATORY
ALTERNATE #1)

Drawing No:

C17

Sheet: 22 OF 55



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

COORDINATE WITH PRE-ENGINEERED
POST FRAME BUILDING MANUFACTURER

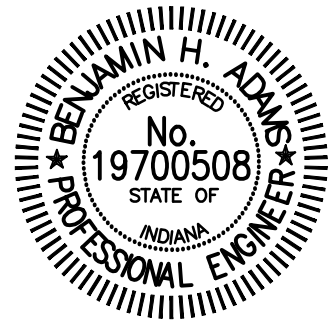
- ELEVATION VIEW KEYNOTE LEGEND:

- 1 METAL ROOF
- 2 RIDGE CAP
- 3 POURED FOOTING (SEE STRUCTURAL DRAWINGS)
- 4 5" PREFINISHED ALUM. GUTTER
- 5 5" PREFINISHED ALUM. DOWNSPOUT
- 6 CONCRETE BOLLARD
- 7 2x8 TREATED WOOD FASCIA BOARD W/ PREFINISHED ALUM. TRIM
- 8 2x6 TREATED WOOD RAKE BOARD W/ PREFINISHED ALUM. TRIM
- 9 SOFFIT
- 10 FIBERGLASS REINFORCE PLASTIC (FRP) WINDOW UNIT
- 11 FIBERGLASS REINFORCED PLASTIC (FRP) DOOR UNIT (PAINTED)
- 12 METAL SIDING
- 13 GABLE VENT (24"x36")
- 14 ELECTRICAL LIGHTS (SEE ELECTRICAL DRAWINGS)



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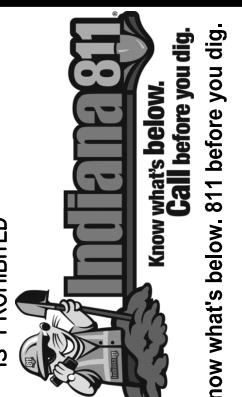

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Date

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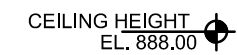
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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NEW UTILITY BUILDING
EAST ELEVATION
(MANDATORY
ALTERNATE #1)

Drawing No:

C18

Sheet: 23 OF 55



DOWNSPOUT TO
SPLASH BLOCK

FINISHED FLOOR
EL. 872.00

FINISHED GRADE
EL. 871.50

SEE STRUCTURAL
DETAILS

4" DRAIN LINE
TO GPS
(MANDATORY ALTERNATE #1)

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

- 1 METAL ROOF
- 2 RIDGE CAP
- 3 POURED FOOTING (SEE STRUCTURAL DRAWINGS)
- 4 5" PREFINISHED ALUM. GUTTER
- 5 5" PREFINISHED ALUM. DOWNSPOUT
- 6 CONCRETE BOLLARD
- 7 2x8 TREATED WOOD FASCIA BOARD W/ PREFINISHED ALUM. TRIM
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- 12 METAL SIDING
- 13 GABLE VENT (24"x36")
- 14 ELECTRICAL LIGHTS (SEE ELECTRICAL DRAWINGS)



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Date

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WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**



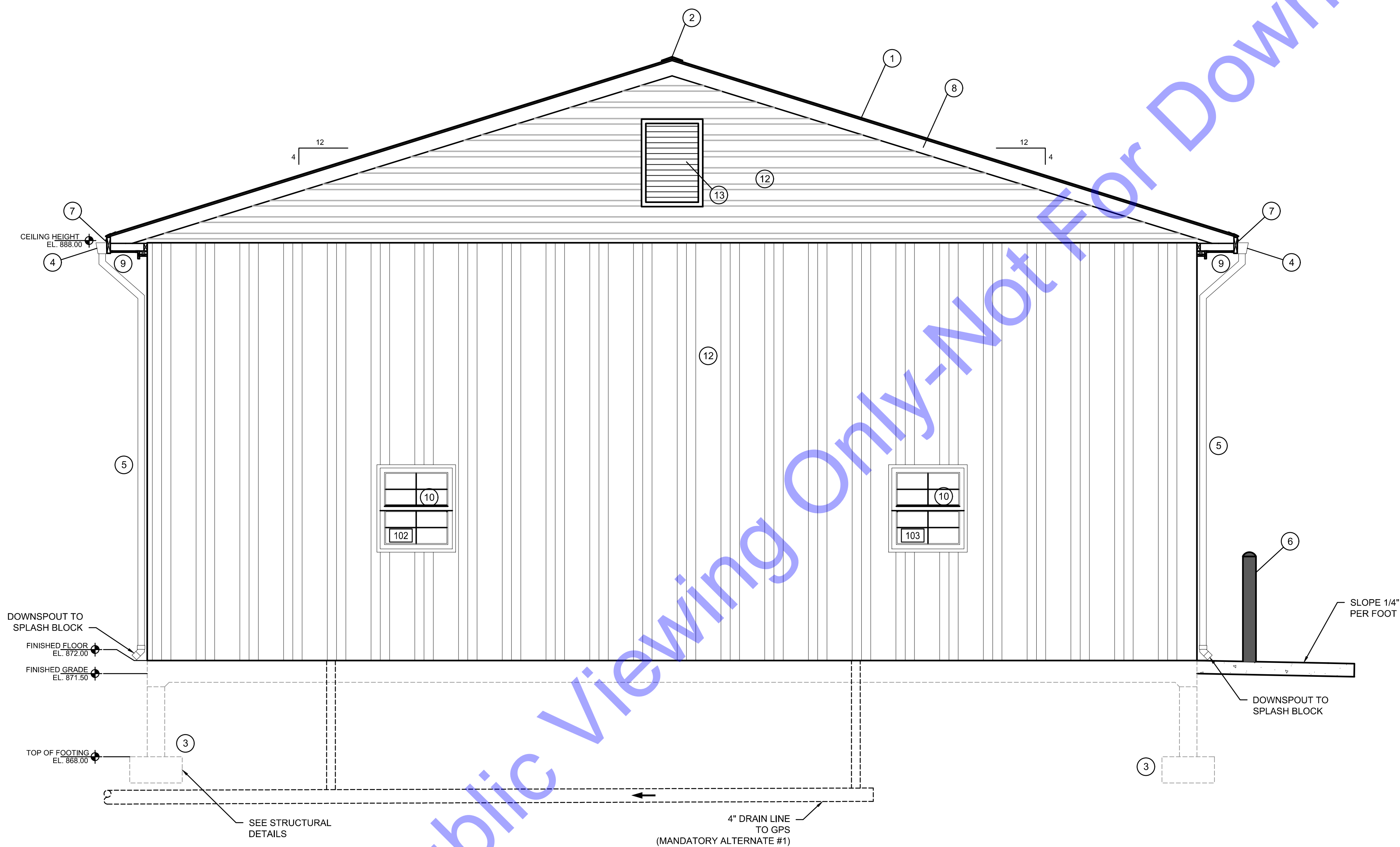
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NEW UTILITY BUILDING -
WEST ELEVATION
(MANDATORY
ALTERNATE #1)

Drawing No:

C19

Sheet: 24 OF 55



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

- ELEVATION VIEW KEYNOTE LEGEND:

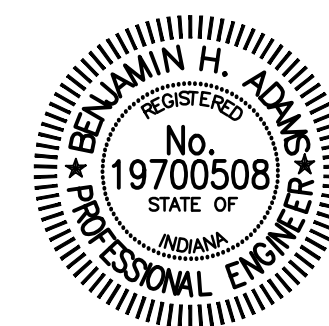
- 1 METAL ROOF
- 2 RIDGE CAP
- 3 POURED FOOTING (SEE STRUCTURAL DRAWINGS)
- 4 5" PREFINISHED ALUM. GUTTER
- 5 5" PREFINISHED ALUM. DOWNSPOUT
- 6 CONCRETE BOLLARD
- 7 2x8 TREATED WOOD FASCIA BOARD W/ PREFINISHED ALUM. TRIM
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Signature

12/31/2024
Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
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No. 2 IMPROVEMENTS**

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Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

NEW UTILITY BUILDING -
SOUTH ELEVATION
(MANDATORY
ALTERNATE #1)

Drawing No:

C20

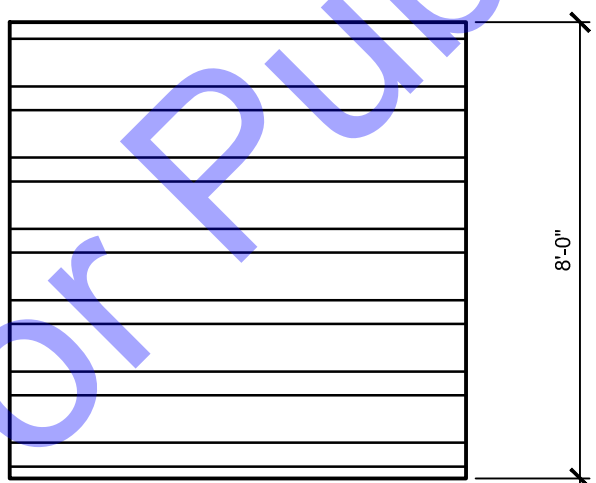
Sheet: 25 OF 55

COORDINATE WITH PRE-ENGINEERED
POST FRAME BUILDING MANUFACTURER

7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5'-1/4"	#	#	#	HARDWARE TO BE USED CORROSION RESISTANT HARDWARE TO BE USED
-------	-----	-------	-------	--------	---	---	---	---	-----	---------	---	---	---	---

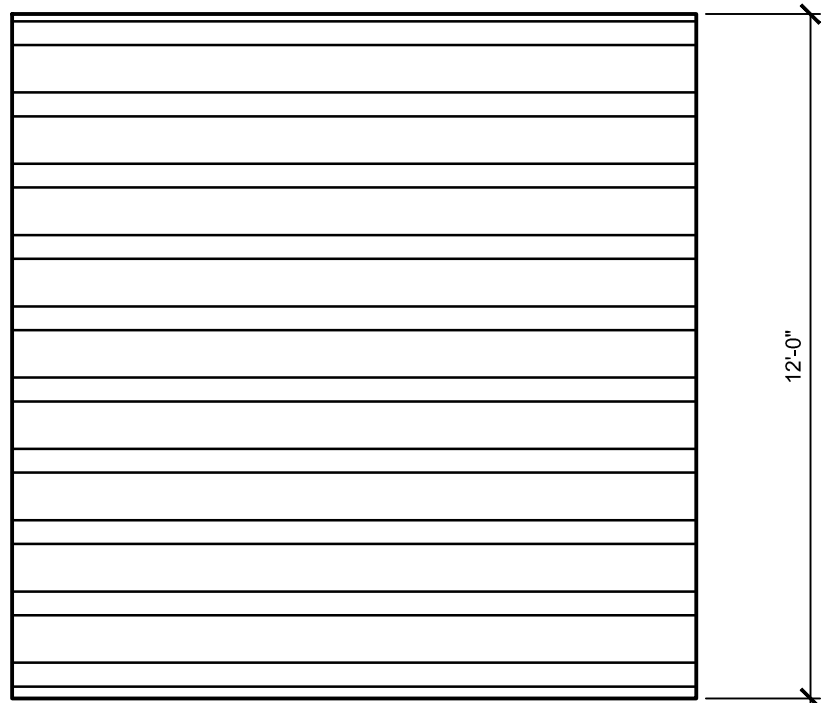
WINDOW SCHEDULE

WINDOW DATA									REMARKS
R.O. WIDTH	R.O. HEIGHT	MATERIAL	SCREEN	GLAZING TYPE	HEAD DETAIL	JAMB DETAIL	SILL DETAIL		
3'-0"	3'-5 ¹ / ₄ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED	
3'-0"	3'-5 ¹ / ₄ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED	
3'-0"	3'-5 ¹ / ₄ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED	
3'-0"	3'-5 ¹ / ₄ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED	



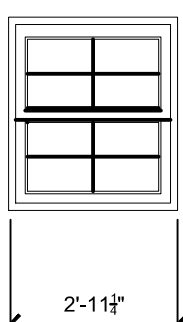
8'-0"

8'-0"



12'-0"

12'-0"



2'-11¹/₂"

**FIBERGLASS
REINFORCED
PLASTIC (FRP)
WINDOW**

LOCATION	DOOR DATA												FRAME DATA						REMARKS
	DOOR NUMBER	QUANTITY	DOOR TYPE	R.O. WIDTH	R.O. HEIGHT	MATERIAL	DOOR WIDTH	DOOR HEIGHT	THICKNESS	LOUVER	WINDOW	SIDE LITE	FRAME NUMBER	MATERIAL	DEPTH	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	<u>NOTES:</u> 1. ALL EXTERIOR DOORS & FRAMES TO BE GALVANIZED.
NEW UTILITY BUILDING	100	1	C	8'-0"	8'-0"	STEEL	8'-0"	8'-0"	1-3/4"	N	N	N	-	STEEL	-	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	101	1	C	8'-0"	8'-0"	STEEL	8'-0"	8'-0"	1-3/4"	N	N	N	-	STEEL	-	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	102	1	B	12'-0"	12'-0"	STEEL	12'-0"	12'-0"	1-3/4"	N	N	N	-	STEEL	-	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	103	1	B	12'-0"	12'-0"	STEEL	12'-0"	12'-0"	1-3/4"	N	N	N	-	STEEL	-	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	104	1	A	3'-4"	7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5-1/4"	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	105	1	A	3'-4"	7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5-1/4"	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	106	1	A	3'-4"	7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5-1/4"	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	107	1	A	3'-4"	7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5-1/4"	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	108	1	A	3'-4"	7'-4"	FRP	3'-0"	7'-0"	1-3/4"	Y	Y	N	1	FRP	5-1/4"	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED

LOCATION	WINDOW DATA													REMARKS
	WINDOW NUMBER	QUANTITY	WINDOW TYPE	WIDTH	HEIGHT	R.O. WIDTH	R.O. HEIGHT	MATERIAL	SCREEN	GLAZING TYPE	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	
NEW UTILITY BUILDING	100	1	A	2'-11 $\frac{5}{8}$ "	3'-4 $\frac{7}{8}$ "	3'-0"	3'-5 $\frac{1}{4}$ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	101	1	A	2'-11 $\frac{5}{8}$ "	3'-4 $\frac{7}{8}$ "	3'-0"	3'-5 $\frac{1}{4}$ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	102	1	A	2'-11 $\frac{5}{8}$ "	3'-4 $\frac{7}{8}$ "	3'-0"	3'-5 $\frac{1}{4}$ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED
	103	1	A	2'-11 $\frac{5}{8}$ "	3'-4 $\frac{7}{8}$ "	3'-0"	3'-5 $\frac{1}{4}$ "	FRP	Y	HIGH PER. TEMPERED	#	#	#	CORROSION RESISTANT HARDWARE TO BE USED





Signature _____ Date 12/31/2024

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Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

NEW UTILITY BUILDING - DOOR SCHEDULES AND DETAILS

Drawing No:
C22
Sheet: 27 OF 55



- | BLOWER SCHEDULE - LAGOON / SAGR | | |
|--|------------|------------|
| DESCRIPTION | LAGOON | SAGR |
| AERZEN BLOWER MODEL No | GM 7L DN80 | GM 4S DN80 |
| NOMINAL INLET SIZE (FLEXIBLE CONNECTOR) | 3" | 3" |
| NOMINAL OUTLET SIZE (FLEXIBLE CONNECTOR) | 3" | 3" |
| BLOWER MOTOR SIZE (hp) | 15 | 15 |
| OPERATING VOLTAGE/PHASE | 460v/3Ø | 460v/3Ø |
| # BLOWERS - TOTAL (INCLUDING STANDBY) * | * 2 | 1 |
| # BLOWERS - NORMAL OPERATION | 1 | 1 |
| AIRFLOW - DESIGN (acfm) | 219 | 132 |
| PRESSURE - NORMAL MAX OPERATION (psi) | 3.3 / 5.1 | 5.2 / 9.2 |

Technical drawing illustrating the layout and dimensions of a housekeeping pad. The drawing shows a worker standing next to the pad, indicating scale. Key components and dimensions include:

- Worker:** A person wearing a hard hat and safety vest, standing to the left of the pad.
- Housekeeping Pad:** A rectangular area defined by dimensions:
 - Overall width: 3'-2"
 - Overall length: 3'-9"
 - Clearance from worker: 4'-0"
 - Clearance from structure: 1'-2"
- Components:**
 - AERZEN BLOWER GM 7L DN80 (TYP OF 2):** Two blowers are shown within the pad.
 - PIPE HANGERS (AS REQUIRED):** Indicated for the piping system.
 - PVC:** Material for the piping connecting the blowers.
 - 18" x 18" INSULATED HOOD c/w BIRD SCREEN AND REMOVABLE BUG SCREEN (TYPICAL OF 3):** Three hoods are shown covering the blowers.
 - FLEXIBLE CONNECTOR (BY CONTRACTOR):** A connector for the piping system.
 - MIN COVER GALV:** Minimum cover for the piping.
 - 4" THICK CONCRETE HOUSEKEEPING PAD:** The base of the pad.
 - PIPE STANDS (AS REQUIRED):** Supports for the piping.
 - MINIMUM METAL PIPE LENGTH:** Indicated as 20'-0" for the transition fitting.
 - METAL HDPE:** Material for the transition fitting.
 - TO LAGOONS/SAGR (A-6) (A-1):** Destination for the piping system.
 - TRANSITION FITTING:** A fitting connecting the piping to the lagoon/sagr.

Site plan showing the layout of three Aerzen blowers and their associated piping. The blowers are arranged in a row, each with a 4-inch thick concrete housekeeping pad. Piping connects the blowers to a common header, which then branches out to two destinations: "TO SAGR CELLS" (labeled A-1) and "TO LAGOON CELLS" (labeled A-6). The layout includes dimensions for the blower footprint (17'-0" by 11'-0") and piping segments (3'-3", 3'-0", 3'-9", 4'-0", 3'-0", 1'-0", 3'-0", 1'-0", 3'-0"). A note indicates "INTAKE PIPING NOT SHOWN FOR CLARITY". A large diagonal watermark "For Public View" is overlaid on the right side of the plan.

PIPE HANGERS (AS REQUIRED)

AERZEN BLOWER
GM 4S DN80 10hp
(TYP OF 1)

18" x 18" INSULATED HOOD
c/w BIRD SCREEN AND
REMOVABLE BUG SCREEN
(TYPICAL OF 2)

PVC

4'-2" CLEAR SPACE
REQUIRED FOR
MAINTENANCE

3'-2"

3'-9"

4'-0"

1'-2"

GALV

FLEXIBLE CONNECTOR

2'-0" MIN. COVER

GALV

HDPE

TO SAGR

TRANSITION FITTING (A-1)

20'-0" MINIMUM METAL PIPE LENGTH

4" THICK CONCRETE
HOUSEKEEPING PAD

PIPE STANDS
(AS REQUIRED)

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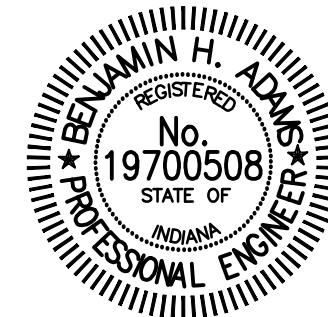
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Date

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Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

NEW UTILITY BUILDING -
PLAN AND SECTION 'A'
(MANDATORY
ALTERNATE #1)

Drawing No:
C23
Sheet: 28 OF 55

885	1+00	0+00	885
880			880
875			875
870			870
865			865
860			860
855			855
850			850

The diagram illustrates a profile view of a road construction project. The vertical axis represents elevation in feet, ranging from 850 to 885. The horizontal axis represents stationing, with labels at 1+00 and 0+00. A dashed line represents the 'EXISTING GRADE', and a solid line represents the 'PROPOSED GRADE'. The proposed grade includes a vertical curve with a 0.40% slope. Below the grade lines, a thick grey line indicates the proposed road surface. Two vertical grey bars represent the installation of 6-inch pipes. The first pipe is located at station 1+00, and the second is at station 0+00. The distance between the start of the first pipe and the start of the second pipe is 55 LF OF 6" PIPE @ 0.40%. The distance from the end of the first pipe to the end of the second pipe is 68 LF OF 6" PIPE @ 0.40%. The total length of the proposed road surface is 123 LF. The diagram also shows the existing ground surface and the proposed grade line. The vertical curve data is as follows:

Station	Point	Elevation (ft)
1+27.0	STA. 1+27.0' EX. G.P.S.	873.9±
1+00.0	RIM: 873.9±	866.00 SW (IN)
0+73.0	STA. 0+73.0'	871.3±
0+73.0	STR. #6	872.0±
0+73.0	RIM: 872.0±	866.32 S (IN)
0+73.0	INV: 866.22 NE (OUT)	
0+05.0	STA. 0+05.0'	871.3±
0+05.0	STR. #7 GRIT REMOVAL	871.3±
0+05.0	RIM: 871.3±	866.69 E (IN)
0+05.0	INV: 866.59 N (OUT)	



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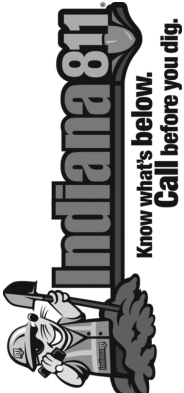
A circular professional engineer seal for Benjamin H. Adams. The outer ring contains the text "BENJAMIN H. ADAMS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. Inside this ring, the word "REGISTERED" is at the top, "No. 19700508" is in the center, "STATE OF" is below the number, and "INDIANA" is at the bottom. The seal is surrounded by a series of short, parallel lines.

Bill Cane 12/31/2024
Signature Date

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

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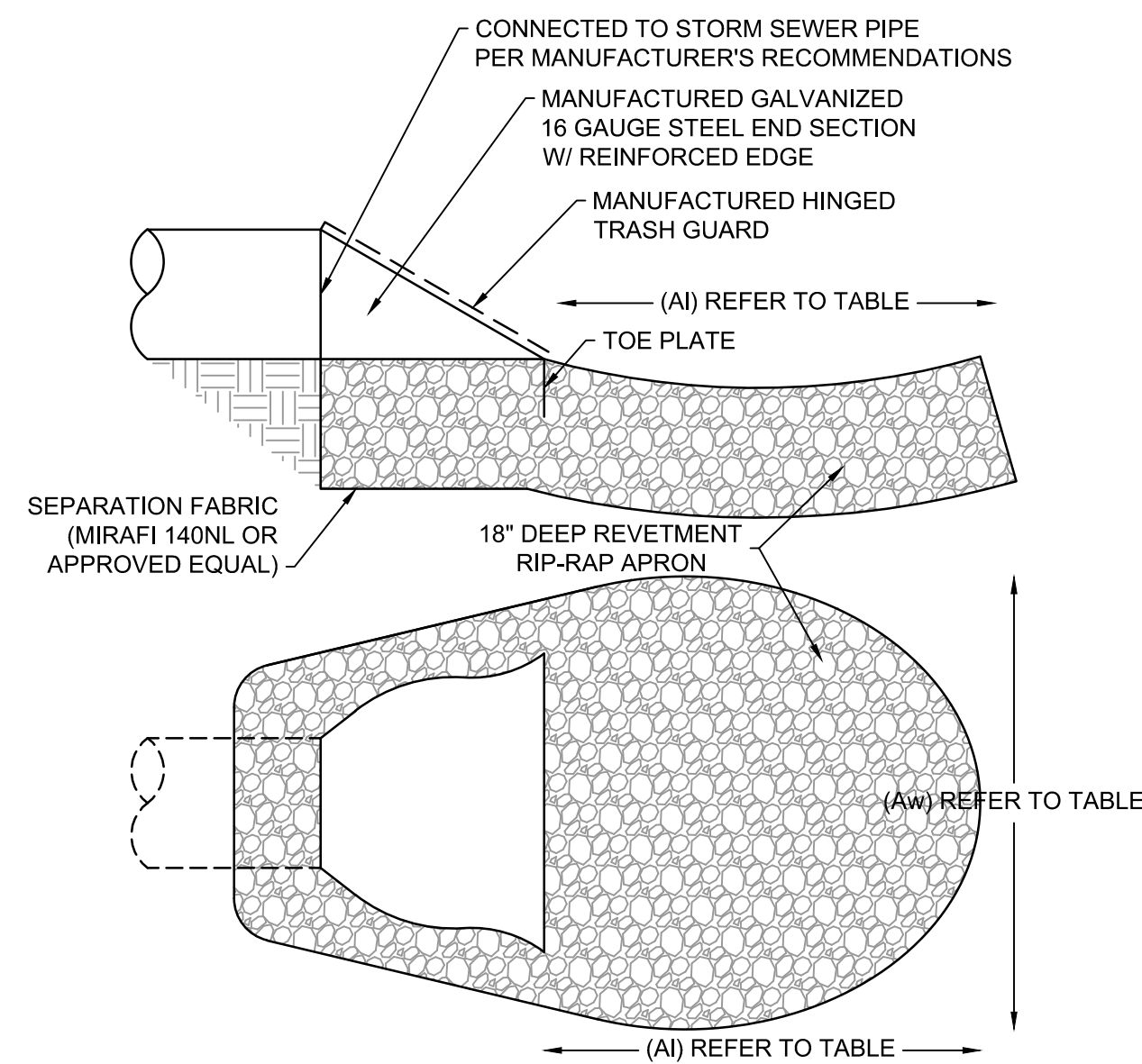
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN
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PLAN AND PROFILE -
LINE 'GPS' - STATION
0+00-1+78 (MANDATORY
ALTERNATE #1)

Drawing No:

C24

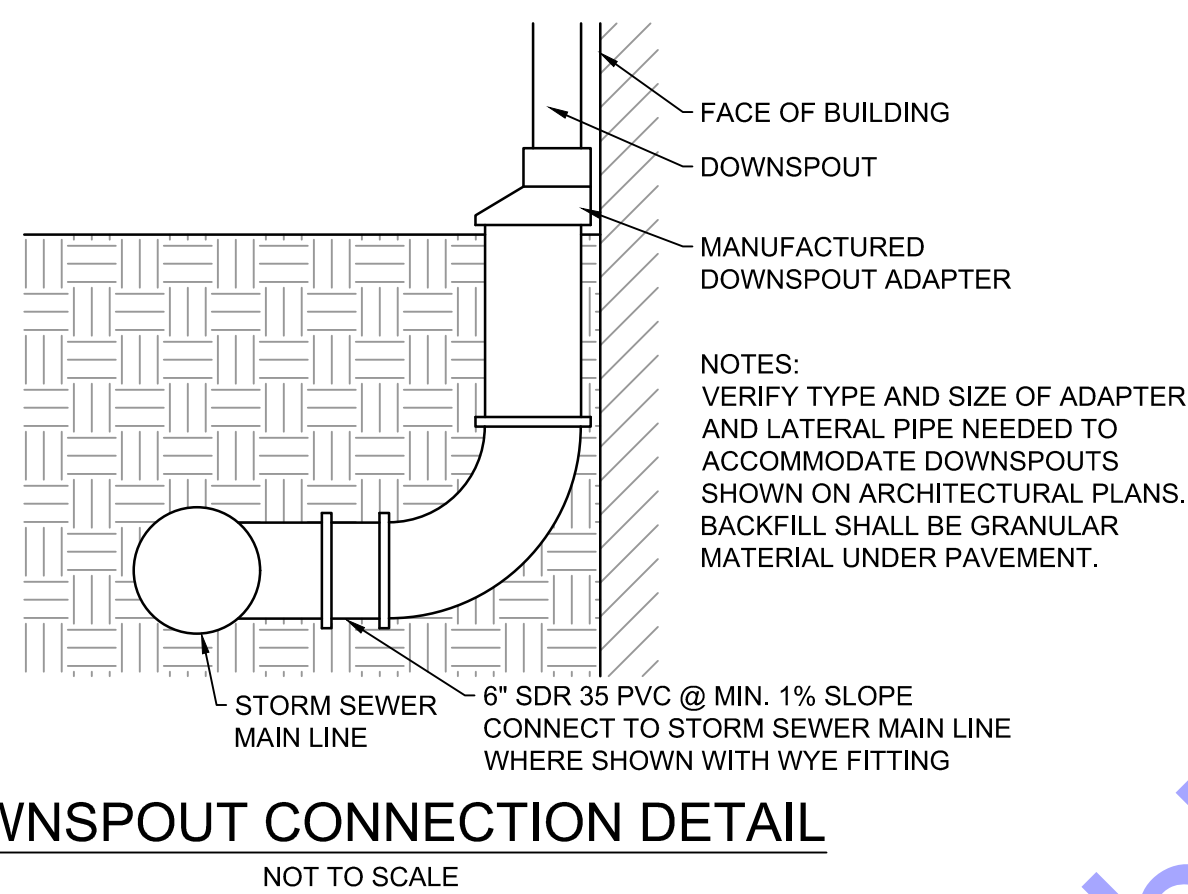
Sheet: 29 OF 55



SIZING FOR FLOW DISSIPATERS AT PIPE OUTLETS			
PIPE SIZE	AVG. RIPRAP DIAMETER	APRON WIDTH (Aw)	APRON LENGTH (Al)
8"	3"	2'-3'	5'-7'
12"	5"	3'-4'	6'-12'
15"	8"	4'-6'	8'-18'
18"	8"	4'-6'	8'-18'
24"	10"	6'-8'	12'-22'
30"	12"	8'-10'	14'-28'
36"	14"	10'-12'	16'-32'

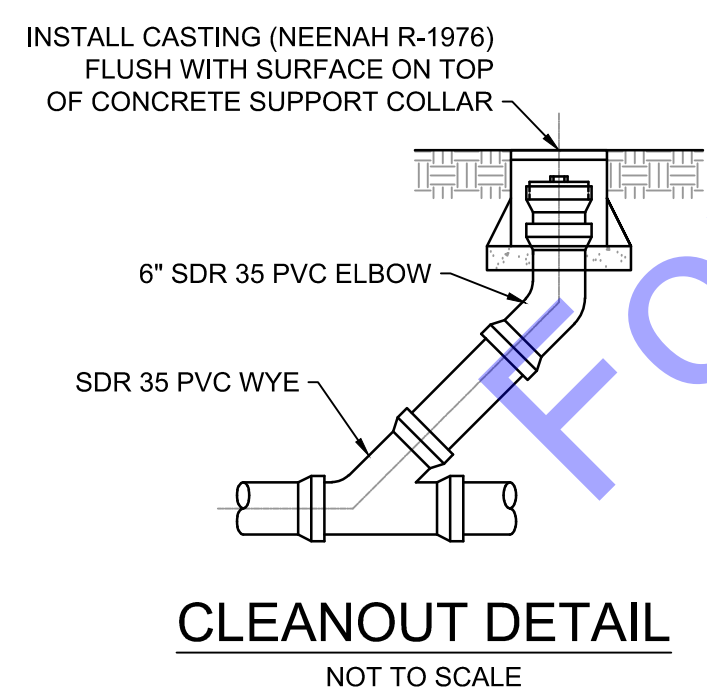
**METAL FLARED END
AND RIP-RAP DETAIL**

NOT TO SCALE



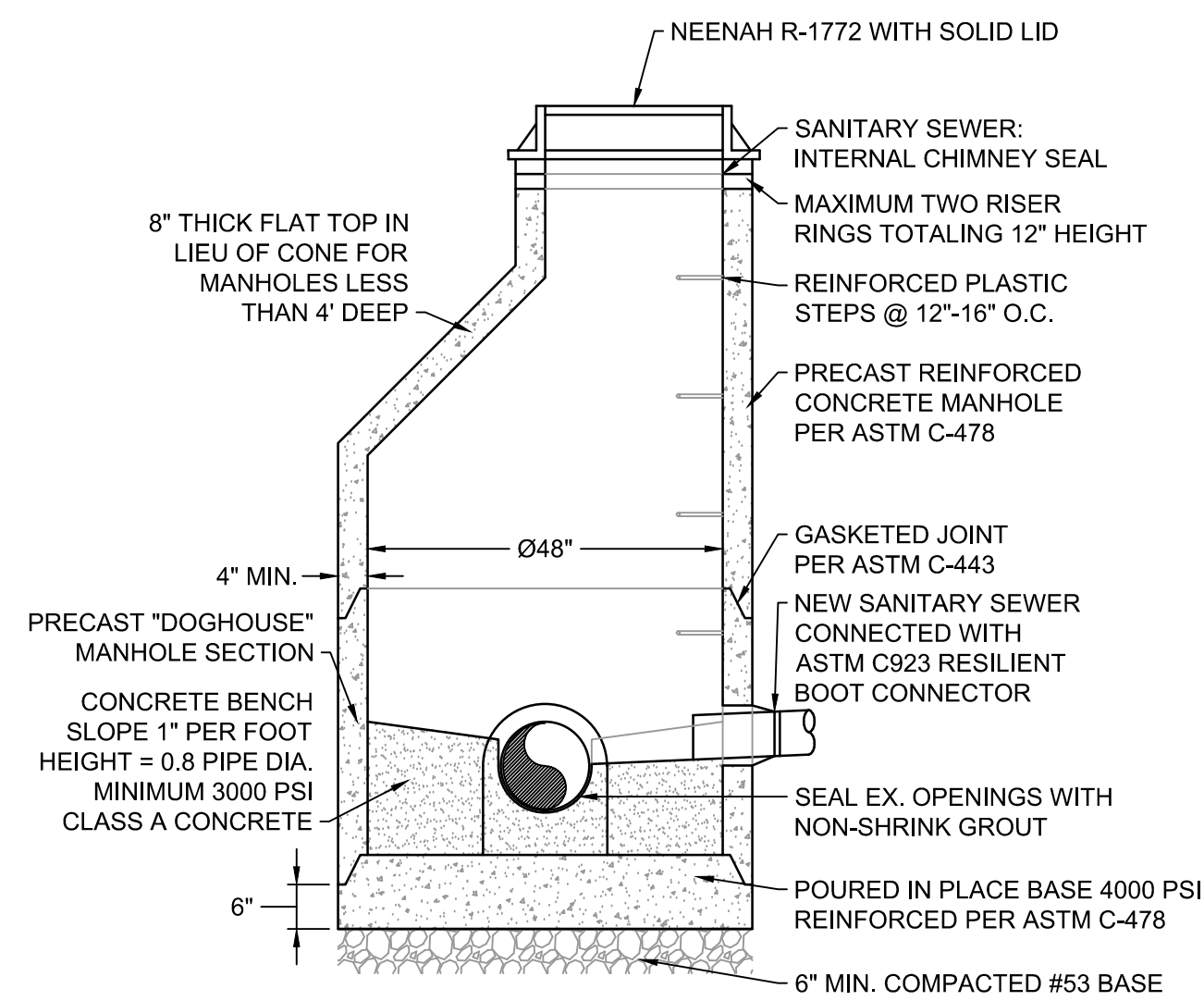
DOWNSPOUT CONNECTION DETAIL

NOT TO SCALE

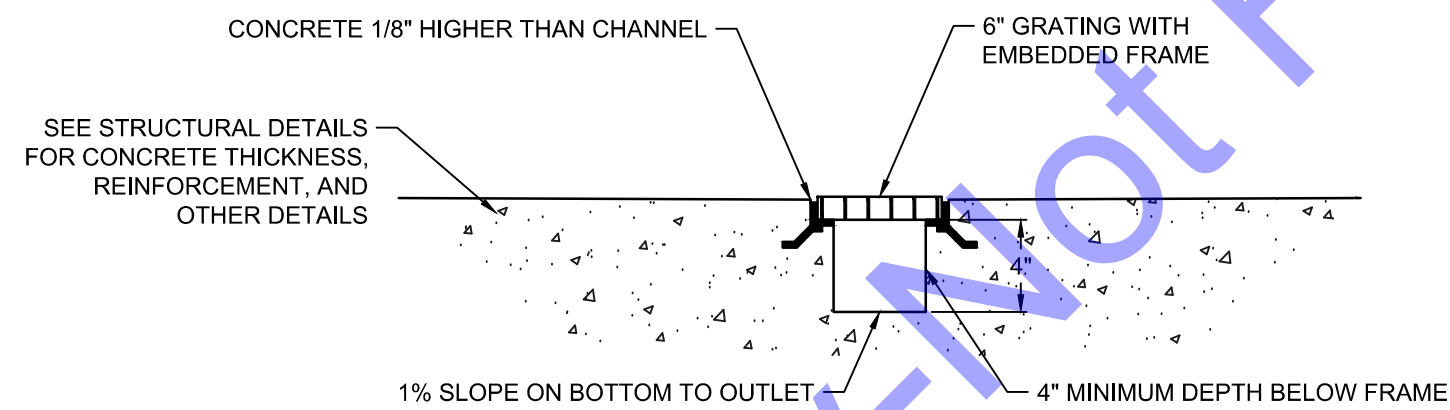


CLEANOUT DETAIL

NOT TO SCALE

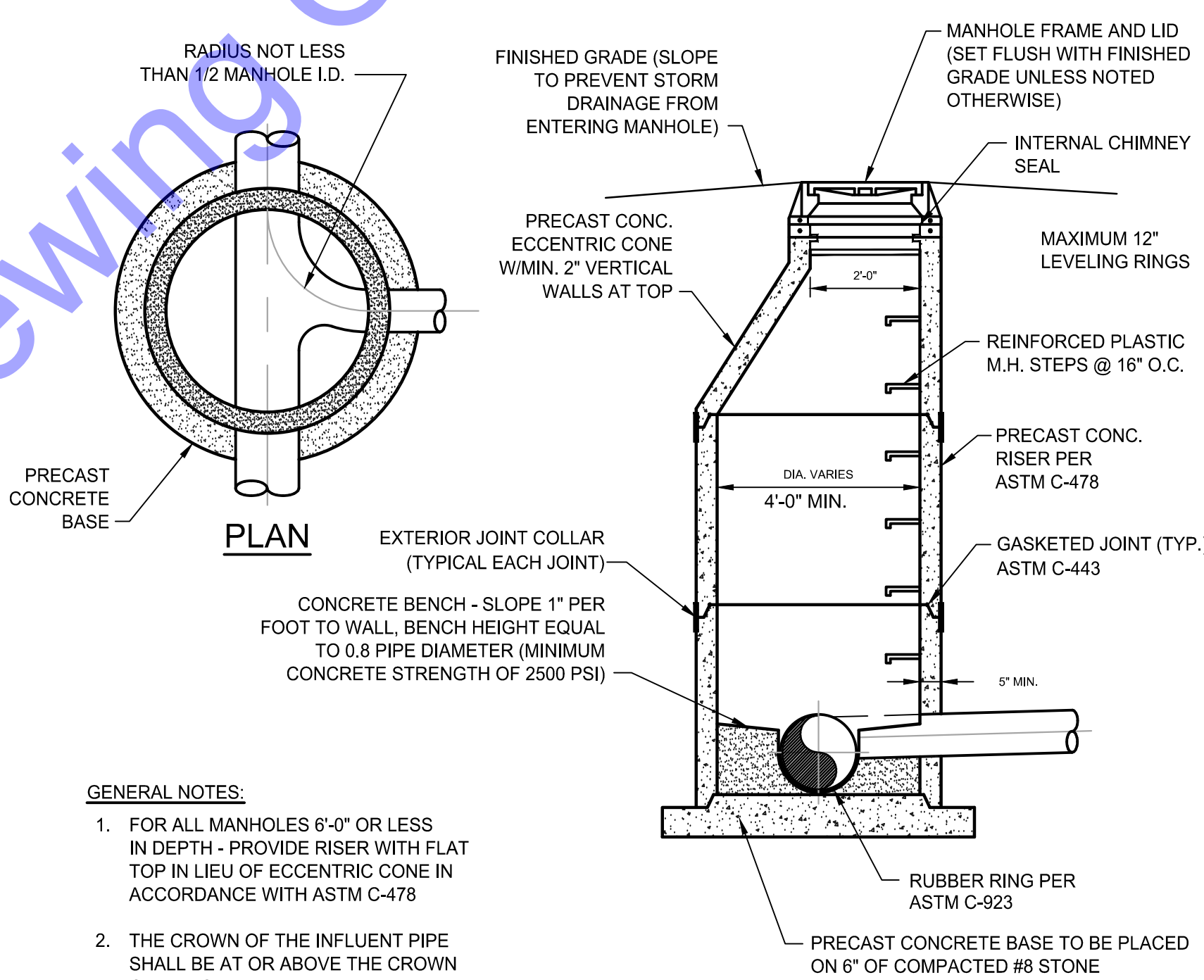


48" DOGHOUSE MANHOLE



TRENCH DRAIN DETAIL

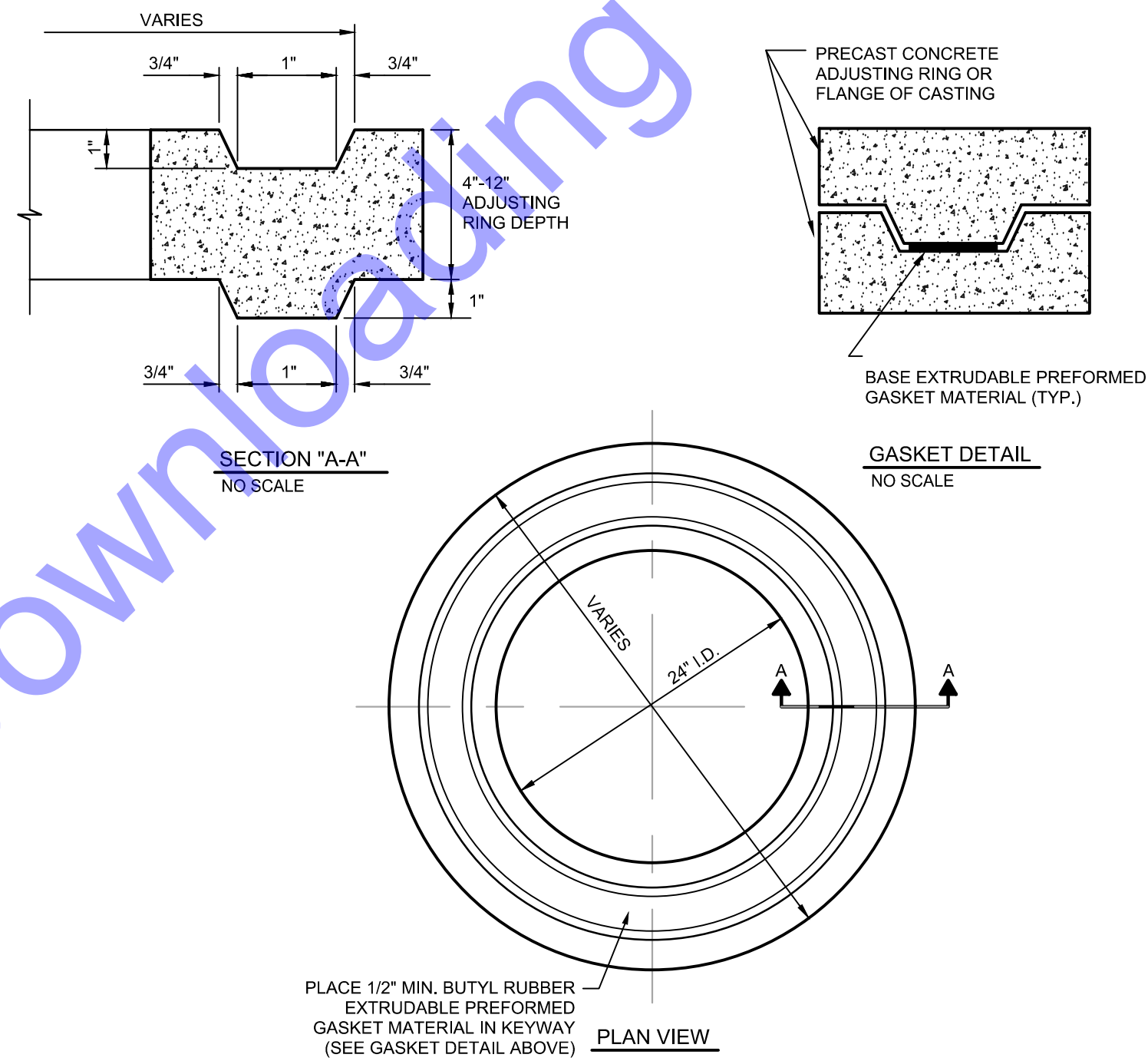
NO SCALE



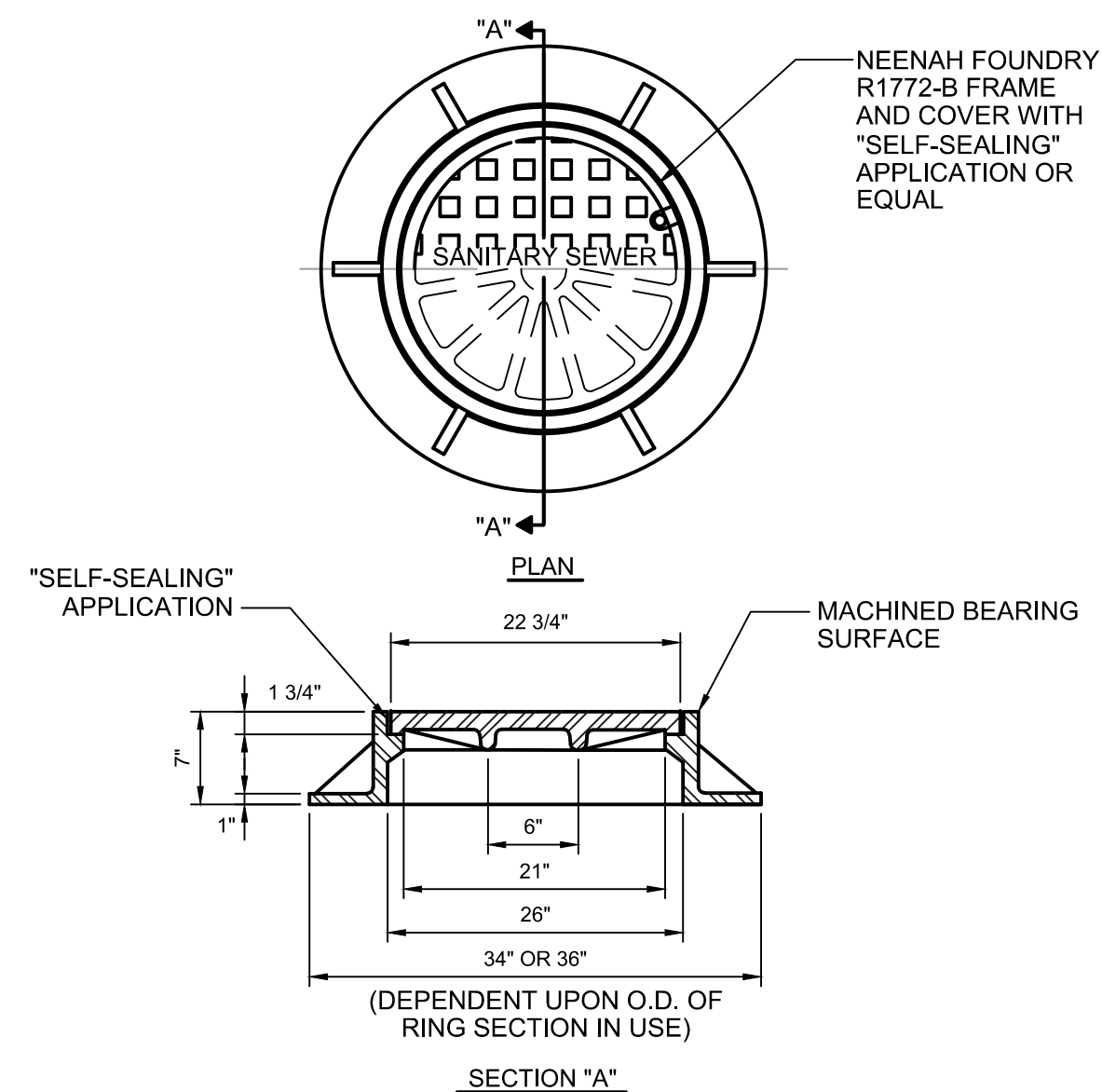
- GENERAL NOTES:

1. FOR ALL MANHOLES 6'-0" OR LESS IN DEPTH - PROVIDE RISER WITH FLAT TOP IN LIEU OF ECCENTRIC CONE IN ACCORDANCE WITH ASTM C-478
2. THE CROWN OF THE INFLUENT PIPE SHALL BE AT OR ABOVE THE CROWN OF THE OUTLET PIPE
3. DROP MANHOLES SHALL BE USED WHENEVER THE DISTANCE FROM THE INVERT OF THE INCOMING LINE AND BOTTOM OF MANHOLE IS GREATER THAN TWO FEET.

STANDARD SANITARY MANHOLE DETAIL



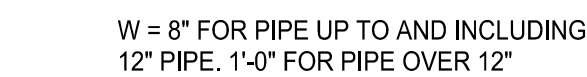
ADJUSTING RING DETAIL



SANITARY SEWER MANHOLE
FRAME AND COVER - STANDARD MANHOLE
SCALE: 1"=1'-0"

[illegible]

Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

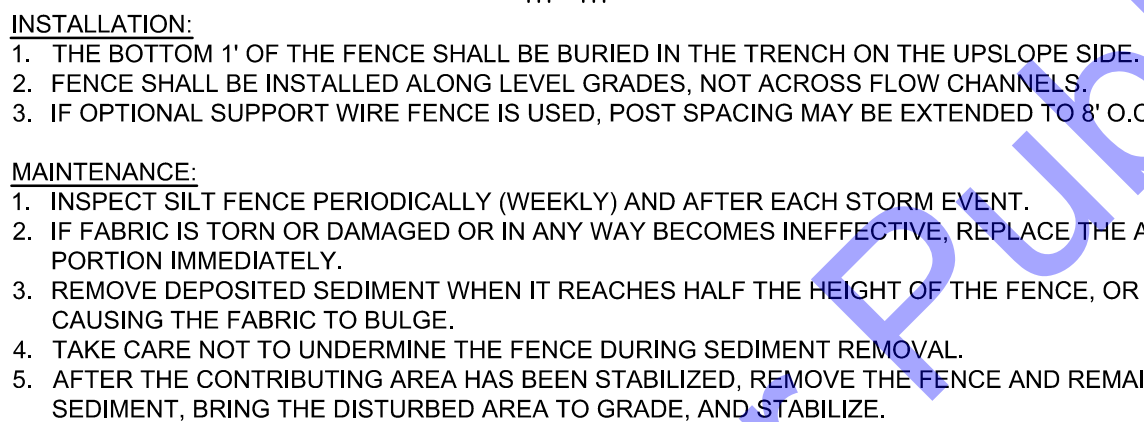
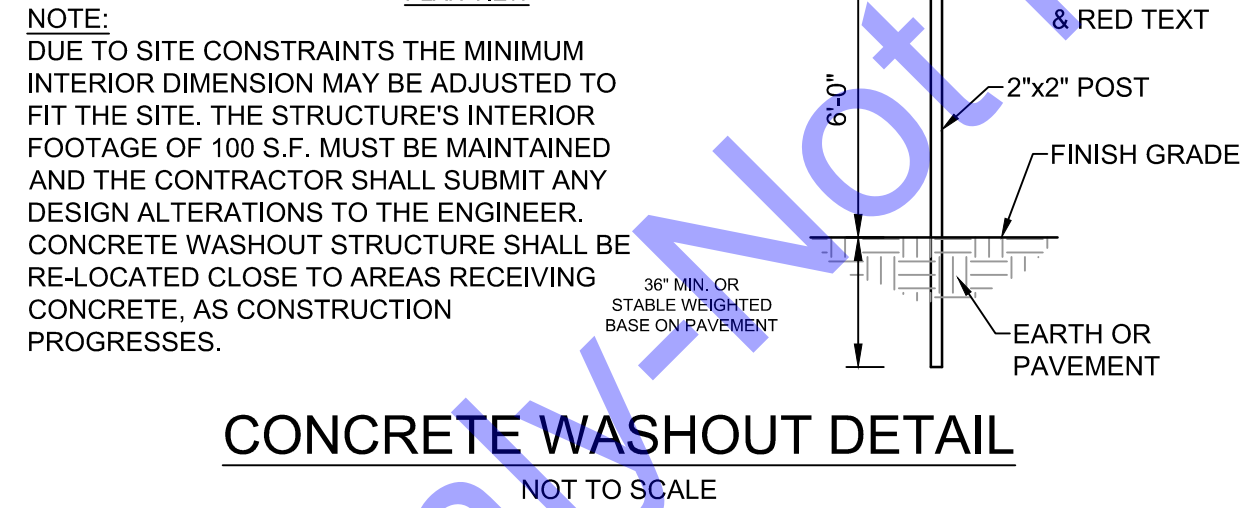
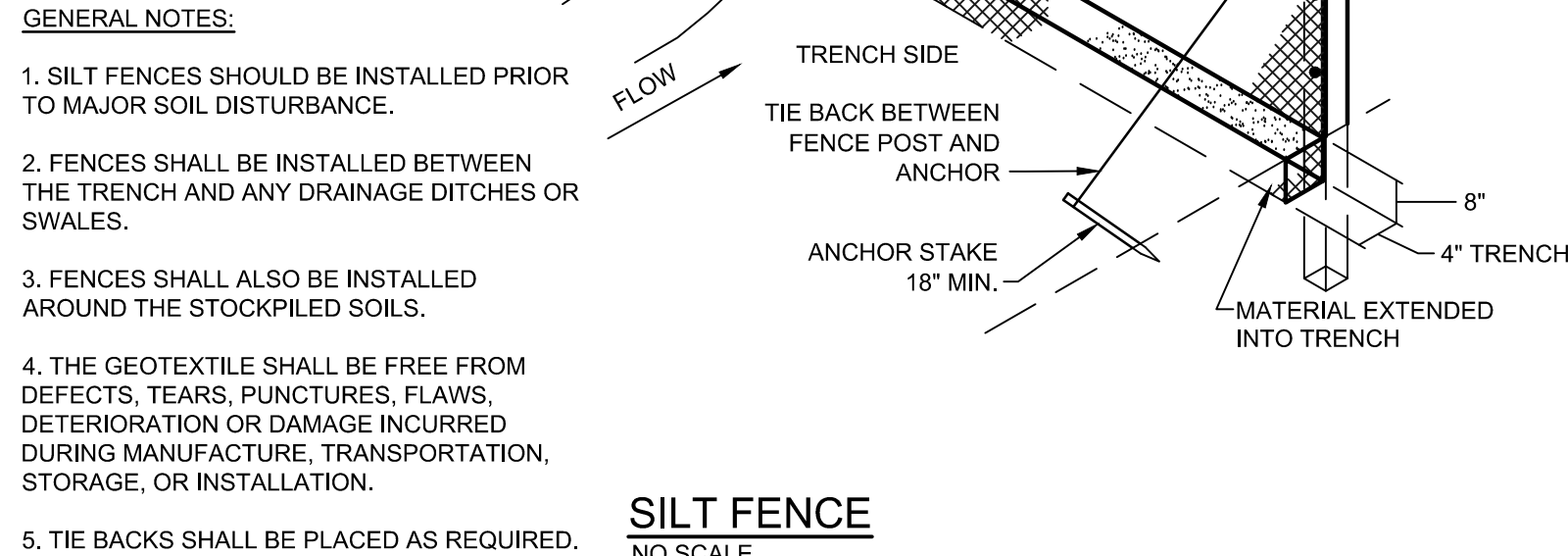


TYPICAL REINFORCED CONCRETE
PIPE SUPPORT
NO SCALE



PIPE SUPPORT AND TABLE DETAIL
NO SCALE

- NOTES:**
1. PROVIDE HALF ROUND RIGID INSULATION AND INSULATION PROTECTION SHIELD, SIMILAR TO GRINNELL FIG. 167 OR ELCEN FIG. 219, WHERE PIPING IS INSULATED
 2. PROVIDE NEOPRENE WAFFLE INSULATION PAD, SIMILAR TO MASON TYPE "W" OR KORKFUND KORPAD 40 UNDER SUPPORT FOOT WHEN PIPING IS ISOLATED OR SUPPORT IS ADJACENT TO MECHANICAL EQUIPMENT.
 3. FOR BASE HEIGHT AND FLANGE DIMENSIONS, SEE TABLE



- ## GENERAL EROSION AND SEDIMENT CONTROL PRACTICES NOTES
1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE INDIANA STORM WATER QUALITY MANUAL FROM THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT.
 2. THE NOTICE OF INTENT (NOI) AND PUBLIC NOTICE FOR THE PROJECT SHALL BE POSTED ON A SIGN INSTALLED AT OR NEAR THE SITE CONSTRUCTION TRAILER. THE NOI SHALL LIST THE CONTACT INFORMATION FOR THE SITE CONTACT PERSON. THE SIGN AND INFORMATION SHALL BE MAINTAINED AND REMAIN LEGIBLE THROUGHOUT CONSTRUCTION.
 3. A COPY OF THIS EROSION AND SEDIMENT CONTROL PLAN AND THE EROSION AND SEDIMENT CONTROL REPORT SHALL BE AVAILABLE AT THE PROJECT SITE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.
 4. THE CONTRACTOR SHALL CONTROL WASTE, GARBAGE, DEBRIS, WASTEWATER, AND OTHER SUBSTANCES ON THE SITE SO THEY WILL NOT BE TRANSPORTED FROM THE SITE BY THE ACTION OF WIND, STORM WATER RUNOFF, OR OTHER FORCES. PROPER DISPOSAL OR MANAGEMENT OF ALL WASTES AND UNUSED BUILDING MATERIAL APPROPRIATE TO THE NATURE OF THE WASTE OR MATERIAL IS REQUIRED.
 5. PUBLIC OR PRIVATE ROADWAYS SHALL BE KEPT CLEAR OF ACCUMULATED SEDIMENT. ALL SEDIMENT THAT IS CLEARED MUST BE RETURNED TO THE LIKELY POINT OF ORIGIN OR OTHER SUITABLE LOCATION. CLEARING OF LARGE AMOUNTS OF SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER.
 6. MINIMIZE THE EXPOSURE OF BARE EARTH BY LIMITING THE WORK AREA TO THAT NECESSARY TO PERFORM THE WORK, AND BY PROPER SCHEDULING OF MANPOWER AND EQUIPMENT.
 7. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED, CLEANED, AND MAINTAINED FOLLOWING EACH STORM EVENT.
 8. WHEREVER POSSIBLE, MAINTAIN EXISTING VEGETATIVE COVER. USE NON-VEGETATIVE MATERIAL INCLUDING MULCH, EROSION BLANKETS, OR STONE TO CONTROL EROSION FROM DISTURBED AREAS.
 9. A LOG SHALL BE MAINTAINED OF ALL INSPECTIONS (WEEKLY, AND FOLLOWING STORM EVENTS), MAINTENANCE AND REPAIR OF EROSION AND SEDIMENT CONTROL MEASURES. THE LOG SHALL BE MAINTAINED ON SITE AND BE AVAILABLE UPON REQUEST TO THE OWNERS REPRESENTATIVES AND THE OPERATING AUTHORITIES HAVING JURISDICTION OVER THE SITE.



EROSION CONTROL PLAN
SCALE: 1"=20'-0"

- EROSION CONTROL LEGEND**

	SILT FENCE
	ROCK CHECK DAM
	INLET PROTECTION



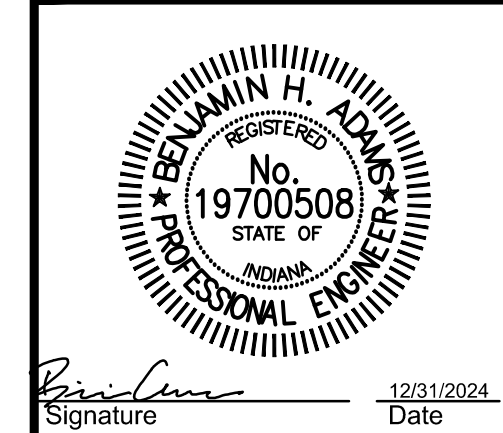
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- SOUTH BEND, IN



**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

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[illegible]

Designed By: BW	Drawn By: CH	Checked By: NS
Issue Date: 12/2024	Project No: S23130	Scale: AS SHOWN

EROSION CONTROL

Drawing No:
EC1

Sheet: 34 OF 55

APPLICABLE CODES AND STANDARDS
1. MECHANICAL INSTALLATION TO BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL CODES HAVING JURISDICTION. 2. CODES CONSIDERED APPLICABLE TO THIS PROJECT INCLUDE BUT ARE NOT LIMITED TO: A. OBC: 2011 INDIANA BUILDING CODE - BASED ON IBC 2009. B. OMC: 2011 INDIANA MECHANICAL CODE - BASED ON IMC 2009. C. OPC: 2011 INDIANA PLUMBING CODE - BASED ON IPC 2009. D. OFC: 2011 INDIANA FIRE CODE - BASED ON IFC 2009. E. IECC: 2009 INTERNATIONAL ENERGY CONSERVATION CODE. F. ASHRAE STANDARD 90.1 2007 ENERGY STANDARDS FOR BUILDINGS EXCEPT LOWRISE RESIDENTIAL BUILDINGS. G. NFPA 13: 2010 SPRINKLER SYSTEM INSTALLATION. H. NFPA 14: 2010 STANDPIPE AND HOSE SYSTEMS. I. NFPA 70: 2011 NATIONAL ELECTRICAL CODE (NEC). J. NFPA 72: 2010 FIRE ALARM AND SIGNALING CODE. K. ANSI HANDICAPPED CODE A117.1. L. AGA: AMERICAN GAS ASSOCIATION. M. AMCA: AIR MOVING AND CONDITIONING ASSOCIATIONS, INC. N. ANSI: AMERICAN NATIONAL STANDARDS INSTITUTE. O. ASHRAE: AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS. P. ASME: AMERICAN SOCIETY OF MECHANICAL ENGINEERS. R. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS. S. MSS: MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY. T. NEMA: NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION. U. NFPA: NATIONAL FIRE PROTECTION ASSOCIATION. V. SMACNA: SHEET METAL CONSTRUCTION FOR VENTILATING AND AIR-CONDITIONING SYSTEMS. W. UL: UNDERWRITERS LABORATORIES, INC. 3. INSTALL ALL WORK IN STRICT CONFORMITY WITH APPLICABLE CODES. 4. SUBMIT AND/OR FILE WITH PROPER AUTHORITIES NECESSARY CONTRACT DOCUMENTS AS REQUIRED BY GOVERNING AUTHORITIES.

COORDINATION NOTES
1. VISIT SITE AND BE INFORMED OF CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. 2. GENERAL CONTRACTOR OR CONSTRUCTION MANAGER SHALL COORDINATE LOCATION AND PROVIDE SUPPORT FRAMING FOR ALL ROOF-MOUNTED HVAC EQUIPMENT. 3. GENERAL CONTRACTOR OR CONSTRUCTION MANAGER SHALL INCLUDE ADEQUATE TIME IN THE CONSTRUCTION SCHEDULE FOR THE TEST & BALANCE SUBCONTRACTOR TO COMPLETE THE SET UP AND BALANCE OF ALL AIR AND WATER FLOW SYSTEMS IN THE PROJECT AFTER THE MECHANICAL SUBCONTRACTOR HAS ALL AIR AND WATER SYSTEMS IN CONTINUOUS, STABLE OPERATION AND UNDER CONTROL. PRIOR TO STARTING THE TESTING AND BALANCING WORK, THE DIVISION 23 SUBCONTRACTOR SHALL FURNISH COMPLETED SETUP AND COMMISSIONING WORKSHEETS AS LISTED IN SECTION 230900 TO THE TEST AND BALANCE SUBCONTRACTOR AS EVIDENCE THAT THE SYSTEMS HAVE BEEN SETUP, CHECKED AND ARE OPERATIONALLY READY FOR BALANCING. 4. NO SUBSEQUENT ALLOWANCE WILL BE MADE BECAUSE OF ERROR OR FAILURE TO OBTAIN NECESSARY INFORMATION TO COMPLETELY ESTIMATE AND PERFORM ALL WORK INVOLVED. 5. CAREFULLY EXAMINE DRAWINGS AND SPECIFICATIONS TO BE THOROUGHLY FAMILIAR WITH ITEMS WHICH REQUIRE PLUMBING OR HVAC CONNECTIONS AND COORDINATION. 6. NOTIFY OTHER TRADES OF ANY DEVIATIONS OR SPECIAL CONDITIONS NECESSARY FOR INSTALLATION OF WORK. 7. RESOLVE INTERFERENCES BETWEEN WORK OF OTHER TRADES PRIOR TO INSTALLATION. 8. ADVISE OTHER TRADES TO LEAVE PROPER CHASES AND OPENINGS, PLACE OUTLETS, ANCHORS, SLEEVES, AND SUPPORTS PRIOR TO POURING CONCRETE OR INSTALLATION OF MASONRY WORK. 9. IN AREAS OF RENOVATION, INSTALLATION OF NEW PIPING, DUCTWORK AND EQUIPMENT WILL REQUIRE REMOVAL OF THE EXISTING CEILING AND GND. SURVEY THE SITE AND BE INFORMED OF EXISTING CONDITIONS WHICH WILL REQUIRE CEILING REMOVAL, INCLUDE THE COST OF THE CEILING WORK OR COORDINATE ITS REMOVAL WITH THE GENERAL CONTRACTOR. 10. ADDITIONAL INSTALLATION COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT REQUIRING ADDITIONAL WORK ON THE PART OF THIS CONTRACTOR OR OTHER SUBCONTRACTORS TO SATISFY THE MANUFACTURER'S INSTALLATION REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE SUBMITTING CONTRACTOR. 11. COORDINATE ALL NECESSARY POWER CONNECTIONS AS RECOMMENDED BY THE MANUFACTURERS OF INSTALLED EQUIPMENT WITH ELECTRICAL TRADESMEN. 12. COORDINATE WITH ELECTRICAL TRADESMEN FOR PROPER SIZING OF CIRCUIT BREAKERS, FUSES, SAFETY SWITCHES, CONDUIT AND WIRING FOR ALL EQUIPMENT FURNISHED BY DIVISION 23 EQUIPMENT PRIOR TO ROUGH-IN. 13. DO NOT ROUTE ANY PIPING DIRECTLY ABOVE OR 42 INCHES IN FRONT OF ELECTRICAL SWITCHGEAR, PANELS OR TRANSFORMERS. 14. IN CERTAIN AREAS OF RENOVATION, INSTALLATION OF NEW PIPING, DUCTWORK, AND EQUIPMENT AS WELL AS HIGHER CEILING HEIGHTS WILL REQUIRE OFFSETTING, RAISING AND IN SOME INSTANCES, RELOCATING OF EXISTING PIPING, DUCTWORK, RAIN WATER LEADERS, SPRINKLERS, AND CONDUIT. SURVEY THE SITE AND BE INFORMED OF EXISTING CONDITIONS IN PARTICULAR ABOVE CEILINGS WHICH WILL REQUIRE OFFSETTING AND OR RELOCATION OF EXISTING PIPING, DUCTWORK AND CONDUIT AND INCLUDE THE COST OF THIS WORK.

MECHANICAL LEGEND			
PIPING		DUCTWORK	
CHS	CHILLED WATER SUPPLY		SUPPLY DUCTWORK
CHR	CHILLED WATER RETURN		RETURN OR EXHAUST DUCTWORK
HVS	HOT WATER SUPPLY		FIRE DAMPER
HVR	HOT WATER RETURN		SMOKE DAMPER
HWRR	HOT WATER REVERSE RETURN		COMBINATION FIRE & SMOKE DAMPER
CWS	CONDENSER WATER SUPPLY		SUPPLY OFFSET & AIR QUANTITY (INDICATES AIRWAY FLOW)
CWR	CONDENSER WATER RETURN		SUPPLY OFFSET & AIR QUANTITY (INDICATES AIRWAY FLOW)
STM (PS)	STEAM SUPPLY PIPING AND ITS PRESSURE		RETURN AIR OFFSET & AIR QUANTITY
CSR	STEAM CONDENSATE RETURN		EXHAUST AIR OFFSET & AIR QUANTITY
P.C.R.	PUMPED STEAM CONDENSATE RETURN		REDUCED FRICTION
D	DRAIN LINE		STEAM HUMIDIFIER
RS	REFRIGERANT SUCTION		THERMOSTAT (ADJUSTABLE)
RL	REFRIGERANT LIQUID		THERMOSTAT (CONCEALED / KEY OPER.)
FTS	FINED TUBE SUPPLY		HUMIDISTAT
FTR	FINED TUBE RETURN		RISE IN DUCTWORK
FOS	FUEL OIL SUPPLY		DROP IN DUCT
FOR	FUEL OIL RETURN		CONICAL TEE
V	EQUIPMENT VENT		BELLMOUTH CONNECTION
E.O.M.	END OF MAIN DRIP		DUCT WITH INTERNAL SOUND LINER
P.R.V.	PRESSURE REDUCING VALVE		SPLITTER DAMPER
ST	STEAM TRAP		REHEAT COIL
BV	BALL VALVE		ELECTRIC REHEAT BOX, CLEARANCE SPACE AND IDENTIFICATION
GV	GATE VALVE		ASTERISK WITH REHEAT BOX INDICATES SPRAY HOT WATER CONTROL VALVE
CV	GLOBE VALVE		HOT WATER REHEAT BOX AND IDENTIFICATION
BUV	BUTTERFLY VALVE		SQUARE ELBOW WITH TURNING VANES
CLV	CONTROL VALVE		MANUAL BALANCE DAMPER
STR	STRAINER WITH HOSE END DRAIN CONNECTION		AUTOMATIC TEMP. CONTROL PANEL
SBV	STRAINER AND BLOWDOWN VALVE		ACCESS DOOR
BAC	BAG CIRCUIT SETTER OR EQUAL BALANCING VALVE		MARINE LIGHT
PCV	PLUG COCK (BALANCING VALVE)		
UN	UNION		INDICATES DIRECTION & QUANTITY OF ROOM AIR PRESSURIZATION
CF	COMPANION FLANGE		DUCT MOUNTED SMOKE DETECTOR
CV	CHECK VALVE		DUCT MOUNTED STATIC PRESSURE CONTROLLER
G	GUIDE		ABOVE FINISHED FLOOR
A	ANCHOR		ABOVE FINISHED ROOF
G	GAUGE & GAUGE COCK		MANUAL BALANCING DAMPER
T	THERMOMETER		PRESSURE INDICATOR (GAUGE)
MV	MOTORIZED VALVE		

HVAC GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE APPROXIMATE ROUTING OF PIPING AND DUCTWORK. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS AND DELAYS. MINOR OFFSETS AND ADJUSTMENTS SHALL BE PROVIDED WHERE REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

2. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES, AND WITH STRUCTURAL AND ARCHITECTURAL ELEMENTS.

3. ALL EXHAUST FANS, SUPPLY FANS, DAMPERS, AND RELIEF VENTS SHALL BE MOUNTED 18" BELOW CEILING HEIGHT. COORDINATE FINAL HEIGHT LOCATIONS WITH OWNER/RPR.

4. DUCT DIMENSIONS INDICATED ON THE DRAWINGS ARE NET AIRSIDE DIMENSIONS.

5. DUCTWORK SHALL BE FABRICATED OF FIBERGLASS (UNLESS NOTED OTHERWISE) AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. SEAL ALL DUCTS, JOINTS, AND SEAMS IN DUCTWORK TO INSURE AGAINST LEAKAGE.

6. PENETRATIONS OF THE WALLS AND FLOORS SHALL BE FLASHED WITH ALUMINUM SHEET ANGLES AND SEALED WITH INSULATING FOAM PER SMACNA ARCHITECTURAL SHEETMETAL DETAILS STANDARDS.

7. ELECTRIC MOTORS FOR EQUIPMENT SHALL BE TEFC, SELECTED FOR NON-OVERLOADING OPERATION. MOTORS SHALL NOT OPERATE IN THEIR SERVICE FACTOR.

8. GRILLES AND DIFFUSERS SHALL BE TITUS OR EQUAL ALUMINUM SIDE WALL GRILLES. RETURN REGISTER SHALL BE TITUS OR EQUAL ALUMINUM LOUVERED SURFACE MOUNT. PROVIDE STANDARD WHITE PAINTED FACE.

FAN SCHEDULE																						
GENERAL NOTES:			ABBREVIATIONS:																			
(1) - HIGH EFFICIENCY MOTOR			(3) - UPBLAST DISCHARGE			PRE - POWER ROOF EXHAUST FAN				SWSI - SINGLE WIDTH, SINGLE INLET				BVS - BELTED VENT SET			PWE - POWERED WALL EXHAUST FAN					
(2) - INCL. WEIGHT OF INERTIA BASE			(4) - TOP HORIZONTAL DISCHARGE			PRS - POWER ROOF SUPPLY FAN				DWDI - DOUBLE WIDTH, DOUBLE INLET				C.T. - CONTROL TRANSFORMER			E.P. - EMERGENCY POWER					
UNIT ACCESSORIES:																						
1 - INLET SCREEN			6 - MOTORIZED OUTLET DAMPERS			11 - SMOKE DETECTOR				16 - DISCHARGE MIN. 70" A.F.R.				21 - WEATHERPROOF HOUSING/TEFC								
2 - MOTORIZED INLET VANES			7 - OUTLET GRAVITY DAMPERS			12 - 24" HIGH ROOF CURB				17 - U.L. 762 LISTED				22 - 2 SPEED, 2 WINDING MOTOR								
3 - MOTORIZED INLET DAMPERS			8 - INERTIA BASE			13 - ACCESS DOOR & DRAIN				18 - EXPLOSION PROOF MOTOR				23 - 3/4 DISC. SWITCH IN HOUSING								
4 - INLET GRAVITY DAMPERS			9 - SPRING ISOLATORS			14 - 2" WASHABLE FILTERS				19 - THERMAL OVERLOAD PROTECTION				24 - PRE-WIRED DISC. SWITCH								
5 - OUTLET SCREEN			10 - BELT GUARD			15 - FAN SAFETY CAGE/WALL SLEEVE				20 - SOLID STATE SPEED CONTROLLER				25 - DOOR LIMIT SWITCH								
UNIT ID	SYSTEM	TYPE	MANUFACTURER	MODEL NO.	CFM	S.P.	MAX. SONES	ROOF/WALL OPENING	UNIT WEIGHT (LBS)	FAN ACCESSORIES	MOTOR (1)			STARTER								NOTES:
											MIN. H.P.	RPM	V/Hz	LOCATION	TYPE	DISC. TYPE	ACCESSORIES					
EF-1	BLOWER ROOM	PWE	GREENHECK (OR EQUAL)	CUE-120-VG	800	0.4"	6.5	15'X15"	63	4.5		1/4	987	120/160								NOTE 1:
EF-2	GARAGE	PWE	GREENHECK (OR EQUAL)	CUE-140-VG	1200	0.4"	7.6	18'X18"	80	4.5		1/4	938	120/160								NOTE 1:
NOTE 1:	ENTIRE UNIT INCLUDING FAN CURB SHALL BE COATED WITH HL-PROZ (OR EQUIVALENT PERFORMANCE) COATING FOR CORROSION PROTECTION.																					

ELECTRIC UNIT HEATER SCHEDULE																								
MARK	LOCATION	CONFIGURATION	AIRFLOW	FAN DATA				HEATER DATA						ELECTRICAL DATA			ACCESSORIES		FILTER DATA		MANUFACTURER WITH MODEL NUMBER	NOTES		
			SUPPLY CFM	TYPE	VOLTAGE	RPM	FLA		KW	MBH	TEMP RISE				FLA	VOLTS	PH	MOUNTING BRACKET	DISCONNECT SWITCH	TYPE			EFF	
EUH-1	BLOWER ROOM	HORIZONTAL	700						3	10.2	14					5.0	460	3	YES	YES			INDEECO 234-U11N-0030U OPTION CODES C, D, AND T (OR EQUAL)	1
EUH-2	STORAGE ROOM	HORIZONTAL	700						2	6.8	9					12.0	208	1	YES	YES			INDEECO 234-U11R-0020C OPTION CODES C, D, AND T (OR EQUAL)	1
EUH-3&4	GARAGE	HORIZONTAL	700						5	17.0	24					8.0	460	3	YES	YES			INDEECO 234-U11N-0050U OPTION CODES C, D, AND T (OR EQUAL)	1
EWH-1	RESTROOM	WALL	70						1.1	3.8	68					5.9	208	1					INDEECO 935U01500V-T-SS (OR EQUAL)	
<u>NOTES:</u>																								
1. OPTION T: THERMOSTAT FACTORY INSTALLED AND PRE-WIRED TO THE CONTROL ENCLOSURE. 50 TO 90 DEGREE F - SET AT 65 F.																								

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MICHAEL A. MIRAMONTE
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA
No. 19800084

Signature: *Michael A. Miramonte* Date: 4/24/2025

TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA

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Designed By: SD
Issue Date: 4/2025

Drawn By: SD
Project No: S23130

Checked By: MM
Scale: AS SHOWN

MECHANICAL LEGENDS AND SCHEDULES

Drawing No:
MO-0
Sheet: 35 OF 55

INSTRUMENT TAG IDENTIFICATION	
AREA TAG TYPE TAG NUMBER (QUAN)	0350 PAH 1234A (2)
COMPONENT DESIGNATOR	
AREA 0350: BUILDING OR PROCESS AREA NUMBER	
TAG TYPE P: FIRST LETTER, SEE ISA TABLE BELOW	
AH: SUCCEEDING LETTERS, SEE ISA TABLE BELOW	
TAG NUMBER 12: P&ID NUMBER	
3: LOOP NUMBER	
4: EQUIPMENT NUMBER	
A: DEVICE LETTER IF MULTIPLE DEVICES	

TAG FUNCTION ABBREVIATIONS	
ALT ALTERNATE C CLOSED(C) CM COMPUTER-MANUAL DIFF DIFFERENCE OR DIFFERENTIAL DO DISSOLVED OXYGEN F FAIL FX CHARACTERIZED FOR FORWARD-STOP(OFF)-REVERSE(MAINTAINED CONTACT) FSR FORWARD-STOP-REVERSE(MOMENTARY CONTACT) HOA HAND-OFF-AUTOMATIC(MAINTAINED CONTACT) HOR HAND-OFF-REMOTE(MAINTAINED CONTACT) II CURRENT TO CURRENT IP CURRENT TO PNEUMATIC LL LEAD-LAG(MAINTAINED CONTACT) LOE LOSS OF ECHO(ULTRASONIC SENSOR FAILURE) LOR LOCAL-OFF-REMOTE(MAINTAINED CONTACT) LOS LOCKOUT STOP/LOCKABLE IN "STOP" POSITION MOMENTARY CONTACT) L/R LOCAL/REMOTE(MAINTAINED CONTACT) MA MANUAL-AUTOMATIC(MAINTAINED CONTACT) MOA MANUAL-OFF-AUTOMATIC(MAINTAINED CONTACT)	O OPEN OA OFF-AUTOMATIC OCA OPEN-CLOSE-AUTOMATIC(MAINTAINED CONTACT) OC OPEN-CLOSE(D)(MAINTAINED CONTACT) OSC OPEN-STOP-CLOSE(MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION) 00 ON-OFF(MAINTAINED CONTACT) OCA ON-OFF-AUTOMATIC(MAINTAINED CONTACT) OOR ON-OFF-REMOTE(MAINTAINED CONTACT) R RUN SBL SLUDGE BLANKET INTERFACE LEVEL SP SPEED POT SQRT SQUARE ROOT SS START-STOP SSA START-STOP-AUTOMATIC SSL START-STOP-LOCK (LOCKABLE IN "STOP" POSITION, MOMENTARY CONTACT) SUM SUMMATION VIB VIBRATION X MULTIPLY
FWD FORWARD REV REVERSE F/R FORWARD/REVERSE(MOTOR STARTER COILS) ESTP ESTOP(EMERGENCY STOP) SPD (SPEED POT) SUSP SUSPEND ALRT ALERT RSET RESET STRT START	

TAG SYMBOLS	
HORIZONTAL BAR SYMBOLS FOR PHYSICAL MOUNTING OF DEVICE	
CONTROL AND I/O DEVICES DISPLAY	
[ADD APPROPRIATE HORIZ. BAR(S)]	
PLC POINT TYPE	
ANALOG INPUT	
ANALOG OUTPUT	
DISCRETE INPUT	
DISCRETE OUTPUT	

INSTRUMENT SOCIETY OF AMERICA TABLE					
LETTER	FIRST LETTER(S)		SUCCEEDING LETTER(S)		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM (LOGGING)	ANNUNCIATE	
B	BURNER COMBUSTION		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
C	USERS CHOICE(*)		USERS CHOICE(*)	CONTROL	CLOSE
D	USERS CHOICE(*)	DIFFERENTIAL	PRIMARY ELEMENT		
E	VOLTAGE				FEEDBACK
F	FLOW RATE	RATIO			
G	USERS CHOICE(*)		GLASS		HIGH
H	HAND (MANUAL)				
I	CURRENT	SCAN	INDICATE		
J	POWER				
K	TIME OR SCHEDULE	TIME RATE OF CHANGE	KEYPAD(DATA ENTRY)	CONTROL STATION	LOW
L	LEVEL		LIGHT(PILOT)		
M	MOTOR	MOMENTARY			MONITORING
N	USERS CHOICE(*)		USERS CHOICE(*)	USERS CHOICE(*)	USERS CHOICE(*)
O	USERS CHOICE(*)		ORIFICE		
P	PRESSURE OR VACUUM		POINT TEST CONNECTION		
Q	QUANTITY	INTEGRATE	RECORD, TREND, LOG		
R	RADIATION				
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSIT	
U	UNIVERSAL(MULTIVARIABLE*)		MULTIFUNCTION(*)	MULTIFUNCTION(*)	MULTIFUNCTION(*)
V	VIBRATION	VALUE		VALVE	
W	WEIGHT, FORCE, TORQUE		WELL		
X	UNCLASSIFIED(*)	X AXIS	UNCLASSIFIED(*)	UNCLASSIFIED(*)	UNCLASSIFIED(*)
Y	EVENT, STATE	Y AXIS	RELAY OR COMPUTE(*)		
Z	POSITION, DIMENSION	Z AXIS	DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT		

(*) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL

SPECIAL CASES:
ETM - ELAPSED TIME METER
JBX - JUNCTION BOX
NDX - INDEX #
MS - MOTOR STARTER
MOR - MOTOR OVERLOAD RELAY
MPR - MOTOR PROTECTION RELAY

CONDUIT NOTES
PVC SCHEDULE 40 BELOW GRADE.
RIGID ALUMINUM OR PVC COATED RGS CONDUIT ABOVE GRADE OUTDOORS.
RIGID ALUMINUM OR PVC COATED RGS CONDUIT IN CLASSIFIED AND CORROSIVE SPACES.
NO CONDUIT SHALL BE RAN ON TOP OF A DECK, ON A WALKWAY, OR IN AN AREA THAT MAY POSE A TRIP HAZARD. NO CONDUIT SHALL BE RAN ABOVE A DECK ABOVE A WALKWAY, OR IN AN AREA THAT IS COMMONLY TRAVELED. ALL CONDUIT IN SUCH AREAS SHALL BE COORDINATED WITH THE CONTRACTOR AND SHALL BE RAN BELOW GRADE OR IN THE CONCRETE DECKING OR PAD. CONDUIT RAN IN CONCRETE DECKING OR PAD SHALL BE AVOIDED WHEN POSSIBLE. IF CONDUIT IS TO BE ROUTED IN A STRUCTURAL CONCRETE DECK, PAD, WALL, ETC. IT SHALL BE COORDINATED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. CONDUIT RAN IN CONCRETE CAN IMPACT THE STRUCTURAL INTEGRITY OF CONCRETE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFORM TO ANY REQUIREMENTS REQUIRED OF THE STRUCTURAL ENGINEER TO ACCOMMODATE THE INTEGRITY OF THE INSTALLATION AT NO COST TO THE OWNER. FOR A CONDUIT EMBEDDED IN SOLUTION TO BE CONSIDERED IT MUST BE THE ONLY REASONABLE SOLUTION. ALL PROPOSED INSTALLATIONS MUST COMPLY WITH ACI 318 AND BE ENGINEER APPROVED.
ALL UNDERGROUND CONDUITS SHALL BE SEALED AT BOTH ENDS.
NO CONDUIT PENETRATIONS ON THE TOP OF ANY OUTDOOR PANELS/ENCLOSURES.

CONTROL WIRING REQUIREMENTS
EACH ANALOG INPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
EACH ANALOG OUTPUT REQUIRES AN 18/2 TWISTED SHIELDED PAIR IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
EACH DISCRETE INPUT REQUIRES 2 #14'S IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
EACH DISCRETE OUTPUT REQUIRES 2 #14'S IN 3/4" CONDUIT UNLESS NOTED OTHERWISE.
CONTROL WIRING OF THE SAME TYPE MAY BE COMBINED INTO THE SAME CONDUIT. EXAMPLES: TWO 4-20MA ANALOG SIGNALS MAY BE COMBINED, TWO 24VDC DISCRETE SIGNALS MAY BE COMBINED, AND TWO 120VAC DISCRETE SIGNALS MAY BE COMBINED.
NOTE: INSTRUMENTS AND CABLE SHALL BE AS REQUIRED BY THE INSTRUMENT MANUFACTURER.

INSTRUMENT POWER
INSTRUMENTS REQUIRING 120 VAC:
1. MAGNETIC FLOW METERS
2. TURBIDITY TRANSMITTERS
3. pH TRANSMITTERS
4. ORP TRANSMITTERS
5. DO TRANSMITTERS
6. ULTRASONIC LEVEL TRANSMITTERS
7. ULTRASONIC FLOW TRANSMITTERS
8. INFLUENT AND EFFLUENT SAMPLERS
NOTE: THIS LIST IS PROVIDED AS A REFERENCE AND IS NOT ALL INCLUSIVE. COORDINATE WITH THE GENERAL CONTRACTOR AND THE EQUIPMENT SUPPLIERS FOR DETAILED WIRING REQUIREMENTS OF INSTRUMENTS, SENSORS, AND EQUIPMENT.

ELECTRICAL GENERAL NOTES	
(GENERAL NOTES APPLICABLE TO ALL ELECTRICAL SHEETS)	
G0. CONTRACTOR SHALL EXAMINE NOT ONLY PLANS AND SPECIFICATIONS FOR ELECTRICAL AND INSTRUMENTATION, BUT PLANS AND SPECIFICATIONS FOR OTHER RELATED SECTIONS, VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS, EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. LATE CLAIMS FOR LABOR AND MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE WILL NOT BE RECOGNIZED.	
G1. THE DRAWINGS ARE DIAGRAMATIC AND ARE NOT INTENDED TO INCLUDE EVERY DETAIL OF REQUIRED CONSTRUCTION, EQUIPMENT, AND MATERIALS. PROVIDE ALL MATERIALS AND WORK NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS BUT WHICH ARE NECESSARY TO FULLY COMPLETE THE WORK.	
G2. WHEN SUBSTITUTING OTHER EQUIPMENT, MATERIALS, AND PRODUCTS THAN SPECIFIED IN THE CONTRACT DOCUMENTS, INCLUDE IN PRIORAL ALL COSTS FOR OTHER DESIGN CHANGES TO THE PROJECT (ALL DIVISIONS) WHICH WILL RESULT FROM USE OF THE SUBSTITUTED ITEMS).	
G3. REVIEW THE CONTRACT DOCUMENTS OF OTHER DIVISIONS, AND COORDINATE ELECTRICAL AND CONTROL WORK WITH THE WORK OF OTHER DISCIPLINES TO AVOID CONFLICTS AND INTERFERENCE.	
G4. UPON COMPLETION OF THE WORK REQUIRED UNDER THIS CONTRACT, PROVIDE TYPED UPDATED DIRECTORY WITHIN DOOR OF EACH AFFECTED PANELBOARD. LEAVE "SPARE" BREAKERS IN "OFF" POSITION.	
G5. ALL MOUNTING HEIGHTS INDICATED ON DRAWINGS ARE TO CENTERLINE, UNO.	
G6. PROVIDE LIGHTING FIXTURES COMPATIBLE WITH CEILING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL ROOM FINISH SCHEDULES.	
G7. IN AREAS HAVING FINISHED CEILINGS, LOCATE CEILING-MOUNTED ELECTRICAL DEVICES AND FIXTURES ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLAN. DO NOT INSTALL CEILING-MOUNTED SMOKE DETECTORS WITHIN 4 FEET OF HVAC SUPPLY DIFFUSERS.	
G8. IN ELECTRICAL AND MECHANICAL EQUIPMENT SPACES, COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES WITH CONDUIT BANKS, DUCTWORK, PIPING, STRUCTURE, SUPPORTS, AND OTHER OBSTRUCTIONS. LOCATE FIXTURES SUCH THAT DIALS, GAUGES, METERS, ETC. ARE PROPERLY ILLUMINATED.	
G9. DO NOT USE ANY LIGHTING FIXTURE AS A RACEWAY FOR CONDUCTORS NOT SERVING THAT PARTICULAR FIXTURE.	
G10. CONNECT BATTERY-OPERATED EMERGENCY LIGHTING UNITS AND EXIT SIGNS HAVING BATTERY BACK-UP TO UNSWITCHED LEGS OF LOCAL LIGHTING CIRCUIT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND NEC SUCH THAT FAILURE OF CIRCUIT TRANSFERS UNIT FROM NORMAL TO EMERGENCY MODE, CAUSING LAMPS TO RE-ENERGIZE.	
G11. DO NOT INSTALL OUTLET BOXES BACK-TO-BACK IN NON-RATED PARTITIONS. OFFSET AND SEAL, SIMILAR TO REQUIREMENTS FOR RATED PARTITIONS, TO MINIMIZE SOUND TRANSMISSION.	
G12. COORDINATE ROUTING OF ALL LARGE CONDUITS (2" DIA AND LARGER) AND PULL BOX LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION TO AVOID CONFLICTS AND TO GUARANTEE REQUIRED CLEARANCE AND ACCESSIBILITY OF ELECTRICAL AND OTHER SYSTEMS.	
G13. COORDINATE WITH OWNER OR OWNERS SELECTED VENDOR PRIOR TO ROUGH-IN FOR EXACT LOCATIONS OF SPECIAL PURPOSE OUTLETS DEDICATED TO SPECIFIC EQUIPMENT. VERIFY REQUIRED NEMA CONFIGURATION OF ALL SUCH OUTLETS.	
G14. PROVIDE APPROPRIATE PULL WIRE IN EACH EMPTY SYSTEMS CONDUIT INCLUDED IN THIS PROJECT.	
G15. INCLUDE GREEN-INSULATED GROUNDING CONDUCTOR SIZED PER 2002 NEC TABLE 250-122 WITH ALL BRANCH CIRCUIT CONDUCTORS SERVING LIGHTING FIXTURES, RECEPTACLES, MECHANICAL OR OTHER DEVICES INSTALLED AT OR BELOW 8'-0".	
G16. MATCH A.I.C. RATINGS AND OTHER CHARACTERISTICS OF EXISTING DEVICES IN PANELBOARD WHEN ADDING BREAKERS TO EXISTING PANELBOARDS.	
G17. ALL WORK SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION ADOPTED BY INDIANA, THE INDIANA CODE AMENDMENT, LOCAL MUNICIPAL CODE, AND THE AUTHORITIES HAVING JURISDICTION.	
G18. ALL CONNECTIONS TO EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT, NOT LESS THAN 12" IN LENGTH, NOR GREATER THAN 36" IN LENGTH.	
G19. ALL CONDUIT PENETRATIONS SHALL BE SEALED WITH APPROPRIATE CONDUIT SEALING MATERIAL.	
G20. ALL CABLE SIZES SHALL UTILIZE COPPER CONDUCTORS.	
G21. FIELD VERIFY LOCATIONS OF BUILDING EXPANSION JOINTS WHEN ROUTING CONDUIT. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL BE INSTALLED WITH THE EXPANSION FITTINGS. EXPANSION FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURERS WRITTEN RECOMMENDATIONS.	
G22. FEEDERS FROM PANEL BOARDS BACK TO MAIN SWITCHBOARD BETWEEN AUTO TRANSFER SWITCHES AND THEIR SOURCE LOADS, BETWEEN DRY TRANSFORMERS AND THEIR SOURCE LOADS ARE NOT INCLUDED. FEEDERS ARE PART OF THE WORK, AND SHALL BE SIZED AS INDICATED ON THE LINE DIAGRAM.	
G23. HOMERUNS SHALL NOT BE COMBINED IN A RACEWAY UNLESS SHOWN ON THE CONTRACT DRAWINGS. SINGLE PHASE BRANCH CIRCUIT HOMERUNS MAY BE COMBINED AT THE CONTRACTORS DISCRETION NOT GREATER THAN (3) PHASE CONDUCTORS, NEUTRAL CONDUCTORS, AND A GROUNDING CONDUCTOR.	
G24. EACH SINGLE PHASE BRANCH CONDUCTOR SHALL HAVE A DEDICATED NEUTRAL BACK TO THE PANEL.	
G25. ALL PENETRATIONS BELOW GRADE SHALL USE UNK SEALS.	
G26. WHERE LOW VOLTAGE (CONTROL) CABLEING IS ALLOWED TO BE INSTALLED WITHOUT A RACEWAY, IT SHALL BE SUPPORTED NOT EXCEEDING INTERVALS OF 40" AND NOT MORE THAN 6" FROM THE CABLES, BOXES, FITTINGS, OUTLETS, RACKS, FRAMES AND TERMINALS.	
G27. ALL MOUNTING HARDWARE INCLUDING NUTS, BOLTS, SCREWS, WASHERS, ETC. SHALL BE STAINLESS STEEL.	
G28. MOUNT JUNCTION BOXES AND DISCONNECT SWITCHES ON STAINLESS STEEL UNISTRUT.	
G29. ALL UNISTRUT, MOUNTING BRACKETS AND SUPPORTING STRUCTURES SHALL BE STAINLESS STEEL.	
G30. DO NOT MIX CONTROL AND POWER CONDUCTORS IN THE SAME CONDUIT. DO NOT MIX DISCRETE AND ANALOG CONTROL CONDUCTORS IN THE SAME CONDUIT.	
G31. ADJUSTABLE SPEED DRIVES (ASD) LINE AND LOAD WIRE SHALL BE RUN IN SEPARATE RACEWAYS.	
G32. ALL HEAT TRACE IS REQUIRED TO BE GFI PROTECTED.	

PUMP AND METER LEGEND	
SYMBOL	DESCRIPTION
	MAGNETIC FLOW METER
	SONIC FLOW METER
	CENTRIFUGAL PUMP
	LOBE PUMP
	PERISTALTIC PUMP
	SUBMERSIBLE PUMP
	GRINDER PUMP

LIGHTING LEGEND	
SYMBOL	DESCRIPTION
	FIXTURE WITH STANDARD BALLAST.
	FIXTURE WITH STANDARD BALLAST AND EMERGENCY BALLAST.

LEGEND		
SYMBOL	DESCRIPTION	MTG HGT AFF TO CL, UNO
	OPEN LIGHTING FIXTURE SYMBOLLOGY DENOTING FIXTURES CONNECTED TO NORMAL POWER: FIXTURE TYPE DETERMINES MOUNTING.	---
	SINGLE DIAGONAL LIGHTING FIXTURE SYMBOLLOGY DENOTING FIXTURES CONNECTED TO CRITICAL OR EQUIPMENT BRANCH (OR EMERGENCY POWER), UNO, FIXTURE TYPE DETERMINES MOUNTING.	---
	DOUBLE DIAGONAL LIGHTING FIXTURE SYMBOLLOGY DENOTING FIXTURES CONNECTED TO LIFE SAFETY BRANCH (OR EMERGENCY POWER), UNO, FIXTURE TYPE DETERMINES MOUNTING.	---
	BATTERY POWERED EMERGENCY LIGHTING UNIT	7'-6"
	EXIT SIGN: ARROWS DENOTE DIRECTIONAL INDICATING CHEVRON ROOMS, SHADING DENOTES FACE(S) ORIENTATION.	---
	WALL WASH OR OTHER DIRECTIONALLY ADJUSTABLE/AIMABLE FIXTURE: OPEN SIDE DENOTES ORIENTATION. TYPE DETERMINES MOUNTING.	---
	TRACK LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	---
	POLE-MOUNTED SITE LIGHTING FIXTURE: TYPE DETERMINES MTG.	---
	FLOOD LIGHTING FIXTURE: TYPE DETERMINES MOUNTING.	---
	PHOTO-CELL	---
	ALL FIXTURES IN THIS SPACE SHALL BE SAME TYPE INDICATED, U.O.N.	---
	SINGLE-POLE TOGGLE SWITCH	3'-10"
	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	3'-10"
	SINGLE-POLE MOTOR-RATED TOGGLE SWITCH DISCONNECT	3'-10"
	SINGLE-POLE OR DOUBLE-POLE MANUAL MOTOR STARTER WITH MELTING ALLOY ELEMENTS FOR THERMAL OVERLOAD PROTECTION	3'-10"
	OCCUPANCY SENSOR SWITCH	3'-10"
	INTERVAL TIMER RESET AND CONTROL SWITCH	3'-10"
	JOG SWITCH	3'-10"
	MUSHROOM HEAD TYPE PUSHBUTTON STATION	5'-0"
	AUTO DOOR CONTROL PUSHPLATE	---
	VARIABLE INTENSITY CONTROLLER INCLUDED WITH OWNER-FURNISHED-CONTRACTOR-INSTALLED SURGICAL LIGHTING FIXTURE	5'-0"
	LOW VOLTAGE CONTROL SWITCH	3'-10"
	FACTORY SUPPLIED WALL CONTROLLER FOR CEILING MOUNTED LIGHTING-INSTALLED BY ELECTRICAL CONTRACTOR	3'-10"
	120V DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V QUADRUPLUX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V QUADRUPLUX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V SINGLE RECEPTACLE, AMP RATING IF OTHER THAN 20A SHOWN, STANDARD MOUNTING HEIGHT, OR OTHER HEIGHT AS NOTED	1'-6", UNO
	120V GFCI DUPLEX RECEPTACLE, STANDARD MOUNTING HEIGHT	1'-6"
	120V GFCI QUADRUPLUX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	120V GFCI DUPLEX RECEPTACLE, SPECIAL MOUNTING HEIGHT INSTALL AT SAME HEIGHT AS SWITCHES IF NO HEIGHT IS INDICATED	ABOVE COUNTER
	SINGLE RECEPTACLE OTHER THAN 120V, VOLTAGE, AMP RATING, NEMA CONFIGURATION, AND MOUNTING HEIGHT AS NOTED	---
	RECEPTACLE OR J-BOX CONNECTION FOR X-RAY VIEWER. VERIFY CONNECTION ROOMS WITH UNIT FURNISHED PRIOR TO ROUGH-IN	---
	120V DUPLEX RECEPTACLE IN FLUSH FLOOR-MOUNTED BOX	---
	TELE-POWER POLE	---
	HALON DUMP STATION	---
	FIRE ALARM MANUAL PULL STATION	3'-10"
	FIRE ALARM MANUAL PULL STATION, KEY-OPERATED	3'-10"
	FIRE ALARM CEILING-MOUNTED SMOKE DETECTOR	---
	FIRE ALARM CEILING-MOUNTED HEAT DETECTOR	---
	FIRE ALARM SUPPLY AIR DUCT-MOUNTED SMOKE DETECTOR	---
	FIRE ALARM RETURN AIR DUCT-MOUNTED SMOKE DETECTOR	---
	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - RECEIVER	AS NOTED
	FIRE ALARM PROJECTED BEAM SMOKE DETECTOR - TRANSMITTER	AS NOTED
	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM VALVE STATUS SWITCH (TAMPER SWITCH)	---
	FIRE ALARM CONNECTION TO SPRINKLER SYSTEM WATER FLOW SWITCH	---
	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE-CHIME & STROBE	6'-8"
	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE-HORN & STROBE	6'-8"
	FIRE ALARM VISUAL ONLY NOTIFICATION DEVICE - STROBE LIGHT	6'-8"
	FIRE ALARM SPEAKER: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	FIRE ALARM HORN, WALL-MOUNTED	AS NOTED
	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	DUCT SMOKE DETECTOR ALARM REMOTE INDICATOR LIGHT AND TEST SWITCH: CEILING-MOUNTED, WALL-MOUNTED	6'-8"
	FIRE ALARM ZONE ADDRESSABLE MODULE	---
	FIRE ALARM INDIVIDUAL ADDRESSABLE MODULE	---
	FIRE ALARM ELECTRO-MAGNETIC DOOR HOLDER	6'-4"
	FIRE RELAY	---
	DESK MOUNTED INTERCOM	---
	WALL MOUNTED INTERCOM	---
	EXPLOSION PROOF SWITCH	3'-10"
	3 WAY SWITCH	3'-10"
	4 WAY SWITCH	3'-10"
	NEMA 4X SWITCH	3'-10"

LEGEND			
ABBREVIATIONS			
ABV	ABOVE	IG	ISOLATED GROUND
AFF	ABOVE FINISHED FLOOR	MON	MONITOR
ACLG	ABOVE FINISHED CEILING	MTG	MOUNTING
BFC	BELOW FINISHED CEILING	MV	MULTI-VIEWER
C	CRITICAL BRANCH OR EMERG PW-RED DEVICE & PLATE, UNO.	MW	MICROWAVE OVEN
CL	CENTER-LINE	NEC	NATIONAL ELECTRICAL CODE
CLG	CEILING-MOUNTED	OCPD	OVERCURRENT PROTECTIVE DEVICE
COF	COFFEE MAKER	OCFI	OWNER-FURNISHED-CONTRACTOR-INSTALLED
COP	COPIER	OFE	OWNER-FURNISHED EQUIPMENT
CTR	COUNTER	PRT	PRINTER
ECB	ENCLOSED CIRCUIT BREAKER	PTS	PNEUMATIC TUBE STATION
EMER	EMERGENCY	Q	EQUIP BRANCH OR EMERG PW-RED DEVICE & PLATE, UNO.
EWV	ELECTRIC WATER COOLER	REF	REFRIGERATOR
EWV	ELECTRIC WATER HEATER	RMTS	REQUIREMENTS
FAX	FACSIMILE MACHINE	WP	WEATHERPROOF
FBO	FURNISHED BY OTHERS	T	TAMPERPROOF DEVICE
GFCI	GROUND FAULT CIRCUIT INTERRUPTING - PERSONNEL PROTECTION	UNO	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTING - EQUIPMENT PROTECTION	UCR	UNDER-COUNTER REFRIGERATOR
HGT	HEIGHT		
HPMR	FUSED PER MANUFACTURE'S RECOMMENDATIONS		

SYMBOL	DESCRIPTION	MTG HGT AFF TO CL, UNO
	EXPOSED RACEWAY	---
	RACEWAY CONCEALED IN OR ABOVE CEILINGS AND WITHIN WALLS	---
	BRANCH CIRCUIT RACEWAY CONCEALED IN OR BELOW FLOOR SLAB OR BELOW GRADE	---
	FEEDER RACEWAY CONCEALED BELOW FLOOR SLAB OR BELOW GRADE	---
	LIGHTNING PROTECTION CABLEING	---
	HOMERUN RACEWAY. NUMBER OF ARROWHEADS DENOTES NUMBER OF CIRCUITS.	---
	RACEWAY TURNING UP AS VIEWED FROM THE LOAD	---
	RACEWAY TURNING DOWN AS VIEWED FROM THE LOAD	---
	RACEWAY VERTICAL RISER WITH HORIZONTAL CONTINUATION AT TWO LEVELS SHOWN	---
	CAPPED RACEWAY	---
	GENERAL LIGHTING OR OUTLET CIRCUIT - MAY BE DAISY CHAINED	---
	JUNCTION BOX	AS NOTED
	ENCLOSED BREAKER	---
	FUSIBLE SAFETY SWITCH (AMP RATING, POLES, FUSE SIZE, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	---
	NON-FUSIBLE SAFETY SWITCH (AMP RATING, POLES, AND NEMA ENCLOSURE TYPE IF OTHER THAN 1 NOTED)	---
	COMBINATION MAGNETIC ACROSS-THE-LINE STARTER WITH MOTOR CIRCUIT PROTECTOR (NEMA STANDARD SIZE NOTED)	---
	CONTROL PANEL FURNISHED INTEGRAL TO EQUIPMENT (SINGLE-POINT ELECTRICAL CONNECTION REQUIRED)	---
	MOTOR	---
	FLEXIBLE CONDUIT CONNECTION	---
	SURFACE- OR FLUSH-MOUNTED LIGHTING/RECEPTACLE PANELBOARD	---
	POWER DISTRIBUTION PANELBOARD	---
	DRY TYPE TRANSFORMER	---
	MISCELLANEOUS SYSTEMS PANEL OR CABINET: REFER TO ABBREVIATIONS.	---

NOTE 1: ALL ABBREVIATIONS, NOTES, AND SYMBOLS SHOWN ON THIS DRAWING DO NOT NECESSARILY APPEAR IN THIS SET OF CONTRACT DOCUMENTS. REFER ONLY TO THOSE THAT APPLY.

ABBREVIATIONS	
ABBREVIATION	MEANING
GFI	GROUND FAULT INTERRUPTER
WP	WEATHER PROOF
AFF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
HPMR	FUSE PER MANUFACTURERS RECOMMENDATIONS
IG	ISOLATED GROUND-ORANGE RECEPTACLE
M	MONITOR RECEPTACLE-CRITICAL POWER: RED RECEPTACLE, 60°A.F.F. (UNO) (UNLESS VENDOR DRAWINGS REQUIRE DIFFERENT HEIGHT)
TSP	TWISTED SHIELDED PAIR

MOTOR CONTROLLER LEGEND	
SYMBOL	DESCRIPTION
	ACROSS THE LINE MOTOR STARTER
	SOFT STARTER
	VARIABLE FREQUENCY DRIVE
	ACROSS THE LINE MOTOR STARTER WITH INTEGRAL DISCONNECT
	SOFT STARTER WITH INTEGRAL DISCONNECT
	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT

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OFFICE LOCATIONS IN:
INDIANAPOLIS, IN. (2)
EVANSVILLE, IN.
FORT WAYNE, IN.
BOWLING GREEN, KY.
SOUTH BEND, IN.

Signature: *Michael A. Miran* Date: 4/24/2025

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP IMPROVEMENTS**

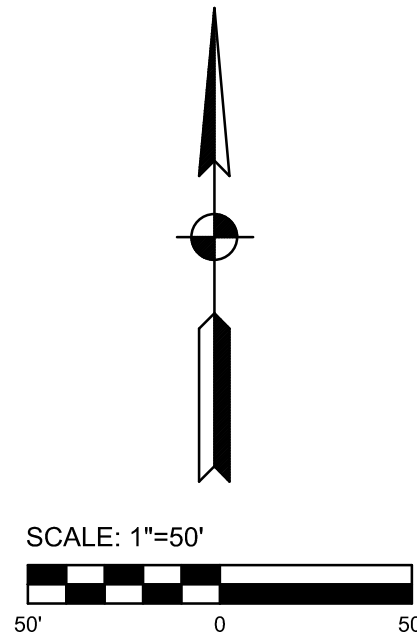
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No.	Submitted	Revision	Date	By	Checked By



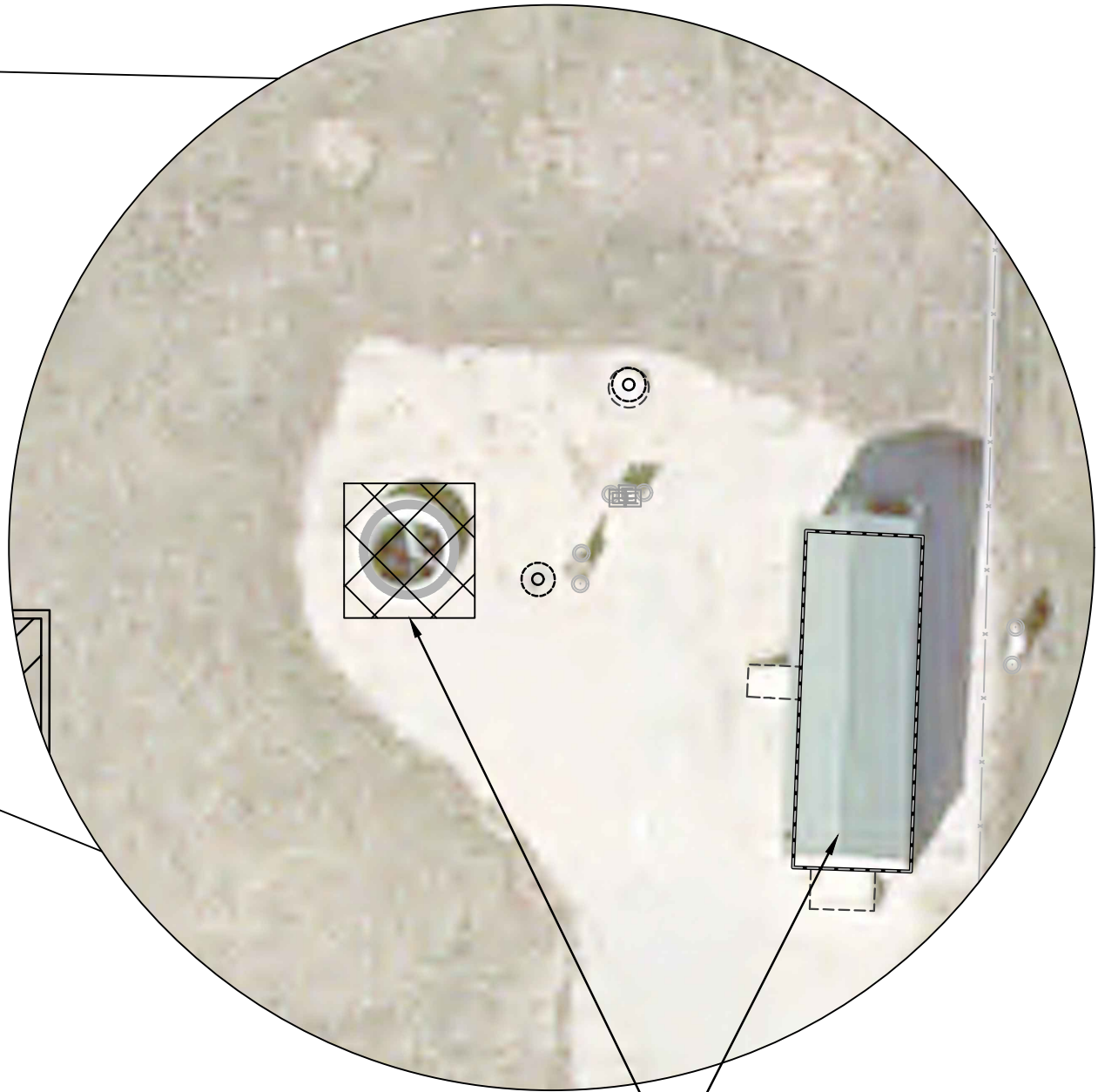
SITE DEMOLITION PLAN
SCALE: 1"=50'



EXISTING METER BASE TO BE REMOVED. CONTRACTOR TO COORDINATE WITH NIPSCO FOR UPGRADED 480V 3-PHASE REQUIREMENTS.



EXISTING 200A AUTOMATIC TRANSFER SWITCH SHALL BE DEMOLISHED. CONTRACTOR SHALL COORDINATE WITH OWNER BEFORE DISPOSAL OF EQUIPMENT.



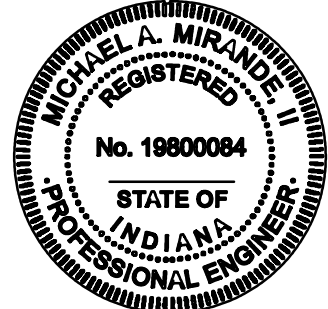
DEMOLISH EXISTING CHLORINATION AND DECHLORINATION EQUIPMENT

DEMOLITION NOTES

- CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED. REFER TO PROCESS AND STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS REGARDING DEMOLITION.
- ITEMS TO BE DEMOLISHED, REMOVED, AND LAWFULLY DISPOSED OF COMPLETE (THIS IS NOT INTENDED TO BE ALL INCLUSIVE. MERELY A REFERENCE). CONTRACTOR SHALL PERFORM ANY AND ALL DEMOLITION, REMOVAL, AND DISPOSAL ACTIVITIES AS REQUIRED FOR COMPLETE AND OPERATIONAL FACILITIES/INSTALLATIONS. REQUIRED DEMOLITION FOR SMALL DIAMETER PIPING, CONDUIT, ETC. NOT SHOWN ON THIS SHEET FOR CLARITY.
- OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT BEFORE THE CONTRACTOR DISPOSES OF EQUIPMENT.
- EXISTING EXTERIOR CONDUIT SHALL BE CUT 8" BELOW GRADE AND SEALED. EXISTING CONDUIT ENTERING CONCRETE OR CONDUIT ENTERING PAVEMENT SHALL BE CUT FLUSH AND CAPPED WITH GROUT. EXISTING WIRING SHALL BE CUT AND REMOVED TO SOURCE.
- CHLORINE DISINFECTION SHALL BE KEPT ONLINE UNTIL NEW ULTRAVIOLET DISINFECTION SYSTEM HAS BEEN INSTALLED, TESTED, AND PLACED INTO SERVICE.
- ALL ITEMS SHALL BE REMOVED FROM THE CHEMICAL ROOM. COORDINATE SALVAGE ITEMS WITH OWNER PRIOR TO LAWFUL DISPOSAL.
- PLANT SHALL REMAIN FULLY FUNCTION DURING DEMOLITION AND CONSTRUCTION.



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Signature: *Michael A. Miranda* Date: 4/24/2025

TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA

CONTRACT A -
WWTP IMPROVEMENTS



No.	Submitted / Revision	By	Date

Designed By: JS Drawn By: JS Checked By: MM

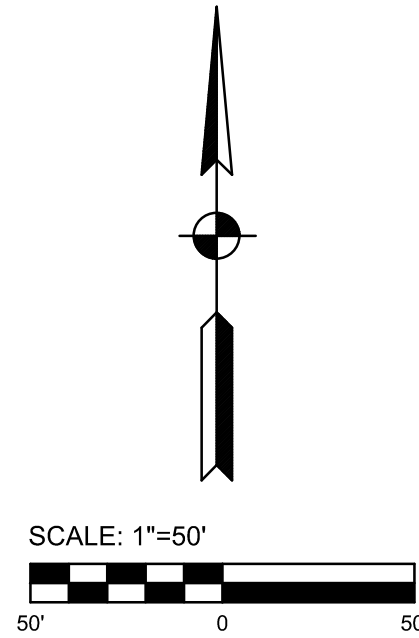
Issue Date: 4/2025 Project No: S23130 Scale: AS SHOWN

ELECTRICAL - SITE
DEMOLITION PLAN

Drawing No:

E1-0

Sheet: 38 OF 55



SCALE: 1"=50'

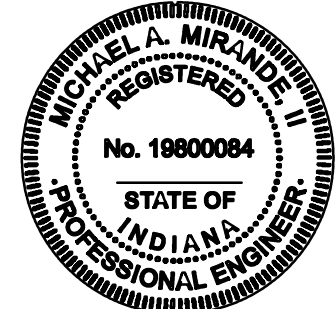
#	DESCRIPTION
1	LAGOON CELL #1
2	LAGOON CELL #2
3	SAGR CELL #1
4	SAGR CELL #2
5	BLOWER PAD
6	PROPOSED UTILITY BUILDING (MANDATORY ALTERNATE #1)
7	ADMINISTRATIVE BUILDING
8	GENERATOR PAD

EXISTING ELECTRICAL PANEL
MOUNTING STRUCTURE



ELECTRICAL SHEET NOTES:

1. CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED. REFER TO PROCESS AND STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS REGARDING DEMOLITION.
2. NEW AUTOMATIC TRANSFER SWITCH TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH ITS MANUFACTURER AND PROVIDE ALL NECESSARY POWER AND CONTROL WIRING FOR A COMPLETE AND FUNCTIONING SYSTEM. LACK OF COORDINATION IS NOT JUSTIFICATION FOR ADDITIONAL FUNDS.
3. A MINIMUM 3' 6" WORKING CLEARANCE IS REQUIRED IN FRONT OF THE CONTROL PANEL PER NEC TABLE 110.26(A)(1).



Signature Mitch A. Minko II Date 4/24/2025

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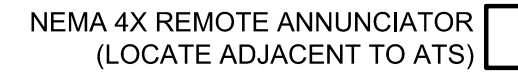
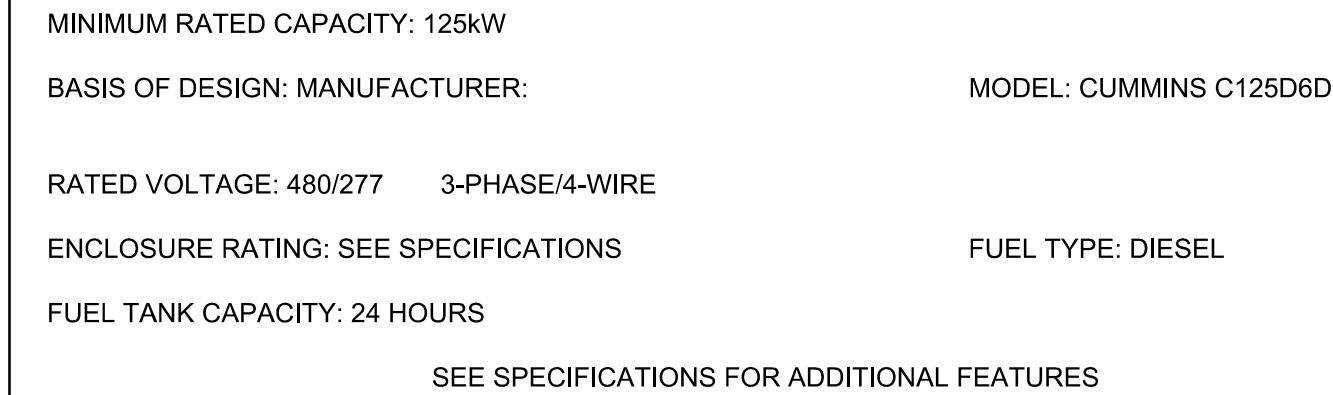
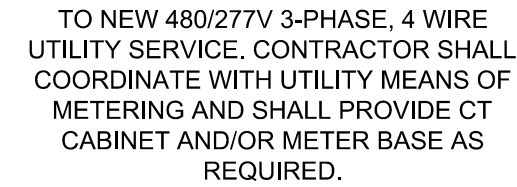
Issue Date: 4/2025	Project No: S23130	Scale: AS SHOWN
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ELECTRICAL - SITE IMPROVEMENT PLAN

Drawing No:

E1-1

Sheet: 39 OF 55



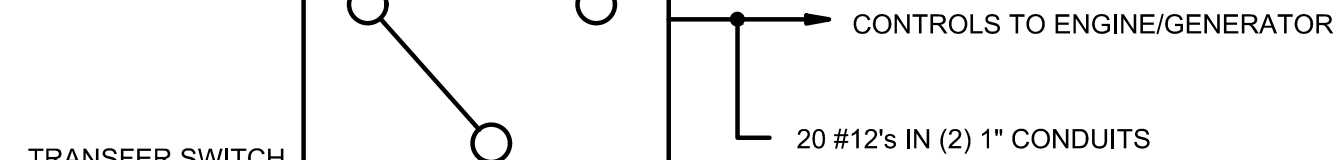
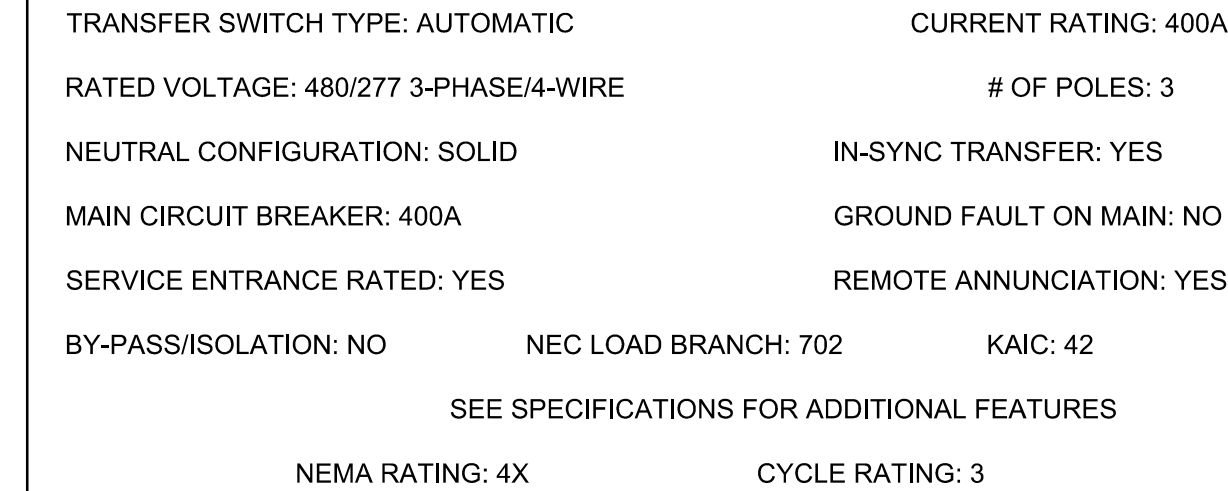
ALL FEEDERS ARE ASSUMED TO BE 4 CURRENT CARRYING CONDUCTORS (3 PHASE CONDUCTORS AND 1 NEUTRAL) UNLESS NOTED OTHERWISE.

FEEDER KEY IS AS FOLLOWS (PARENTHESES DENOTES SUBSCRIPT):

###(N) = 3 PHASES, NO NEUTRAL WITH GROUND

###(2) = 2 PHASES AND NEUTRAL WITH GROUND

ALL CIRCUITS SHALL BE RUN IN PVC BELOW GROUND



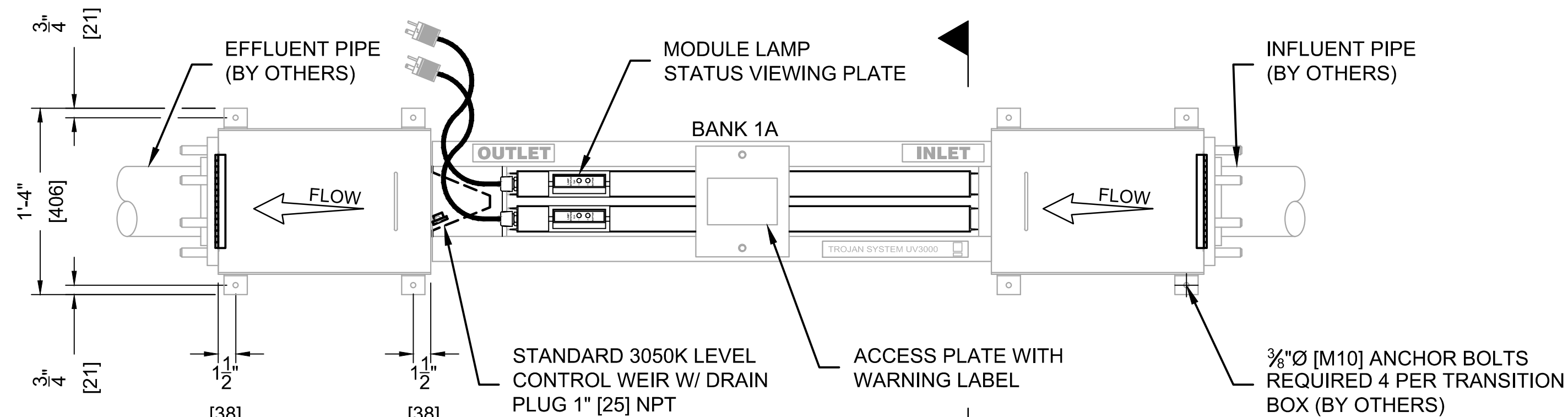


SCALE: 1" = 1'-0"

Panel Name:	PB-1					Panel Amperage:	200A				
Voltage & Phase:		120/240V 1-Phase				Panel A.I.C. Rating:		10kAIC			
Mounting:	Surface					Other:	MCB/110A				
Description						Brk	Phase			Brk	Description
UV SYSTEM MONITOR POWER SUPPLY						20	1	A	2	20	GENERATOR ANCILLARY DEVICES
UV POWER DISTRIBUTION RECEPTACLE						20	3	B	4	20	GENERATOR ANCILLARY DEVICES
SPARE						20	5	A	6	20	GENERATOR ANCILLARY DEVICES
SPARE						20	7	B	8	30	GENERATOR ANCILLARY DEVICES
SPARE						20	9	A	10	-	GENERATOR ANCILLARY DEVICES
SPARE						20	11	B	12	20	SPARE
SPARE						20	13	A	14	20	SPARE
SPARE						20	15	B	16	20	SPARE
SPARE						20	17	A	18	20	SPARE
SPARE						20	19	B	20	20	SPARE
SPARE						20	21	A	22	20	SPARE
SPARE						20	23	B	24	20	SPARE
SPARE						20	25	A	26	20	SPARE
SPARE						20	27	B	28	20	SPARE
SPARE						20	29	A	30	20	SPARE

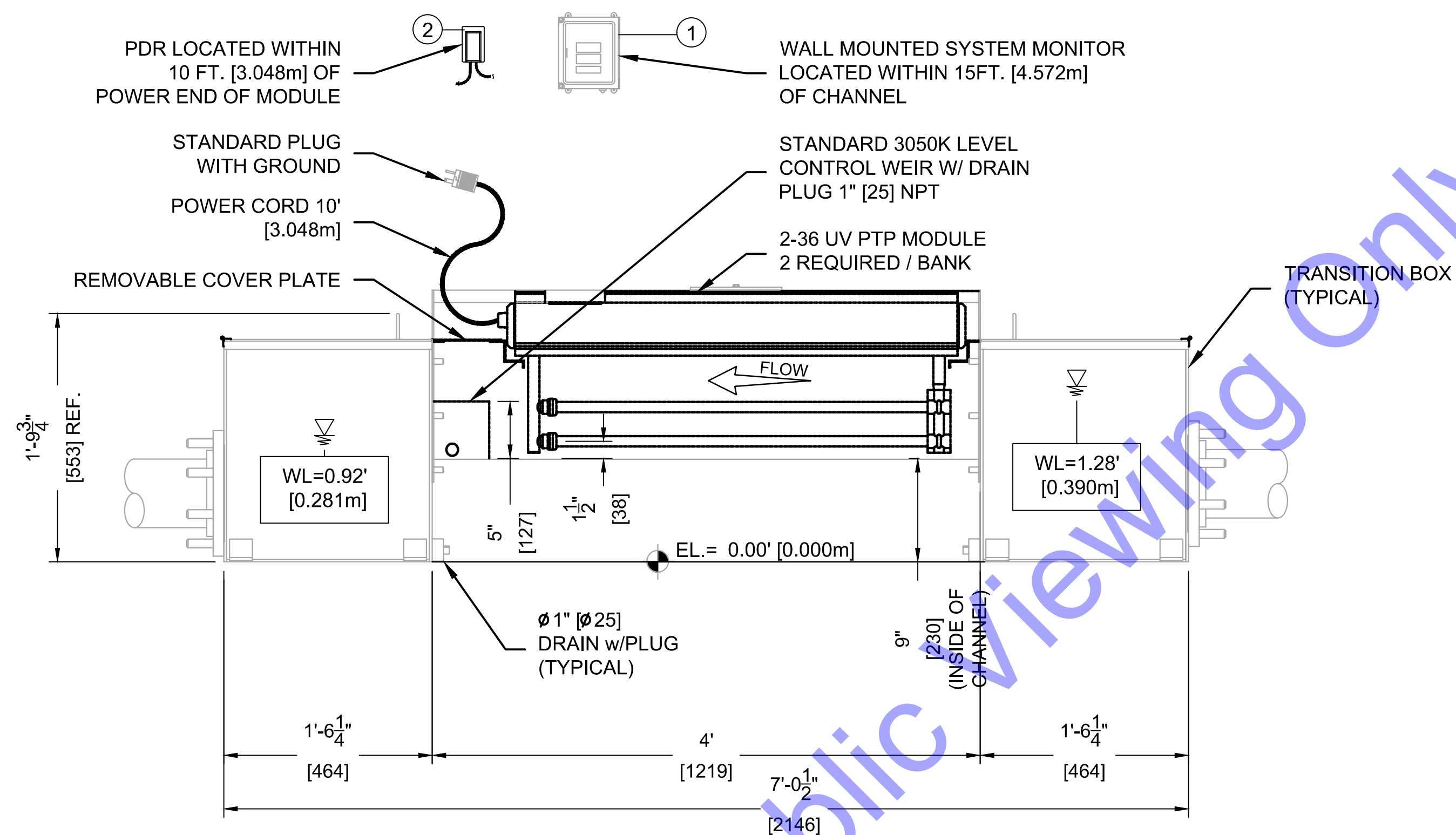
ELECTRICAL SHEET NOTES:

1. CONTRACTOR SHALL VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF DRAWING IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL, OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE, WILL NOT BE RECOGNIZED. REFER TO PROCESS AND STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS REGARDING DEMOLITION.
2. BASE BID: ELECTRICAL PANELS SHALL BE MOUNTED ON THE DESIGNATED SECTION OF THE CONCRETE PAD. CONTROL MOUNTING DETAIL ON DRAWING E1-3 SHALL BE REFERENCED WHEN INSTALLING.
3. BASE BID: ALL ELECTRICAL PANELS WILL BE MOUNTED OUTDOORS AND SHALL BE RATED WITH NEMA 4X ENCLOSURES.
4. PB-1 ON THIS SHEET (E1-4) IS FOR BASE BID ONLY



PLAN VIEW

SCALE: AS SHOWN



FRONT VIEW
SCALE: AS SHOWN

MULTIPLE CHANNELS IN PARALLEL (OPTION):

: ADDITIONAL UNITS CAN BE INSTALLED PARALLEL TO THE UNIT SHOWN.
 : ACCESS BETWEEN EVERY 2 PARALLEL CHANNELS IS REQUIRED FOR MODULE REMOVAL
 : - NOTE THE CHANNEL WIDTH AND ENSURE ADEQUATE ACCESS IS PROVIDED BETWEEN
 : TRANSITION BOXES AND CHANNELS.
 : ACCESS BETWEEN A MAXIMUM OF 2 CHANNELS IS NOT REQUIRED FOR MODULE
 : REMOVAL. TRANSITION BOXES CAN BE INSTALLED ADJACENT TO EACH OTHER.



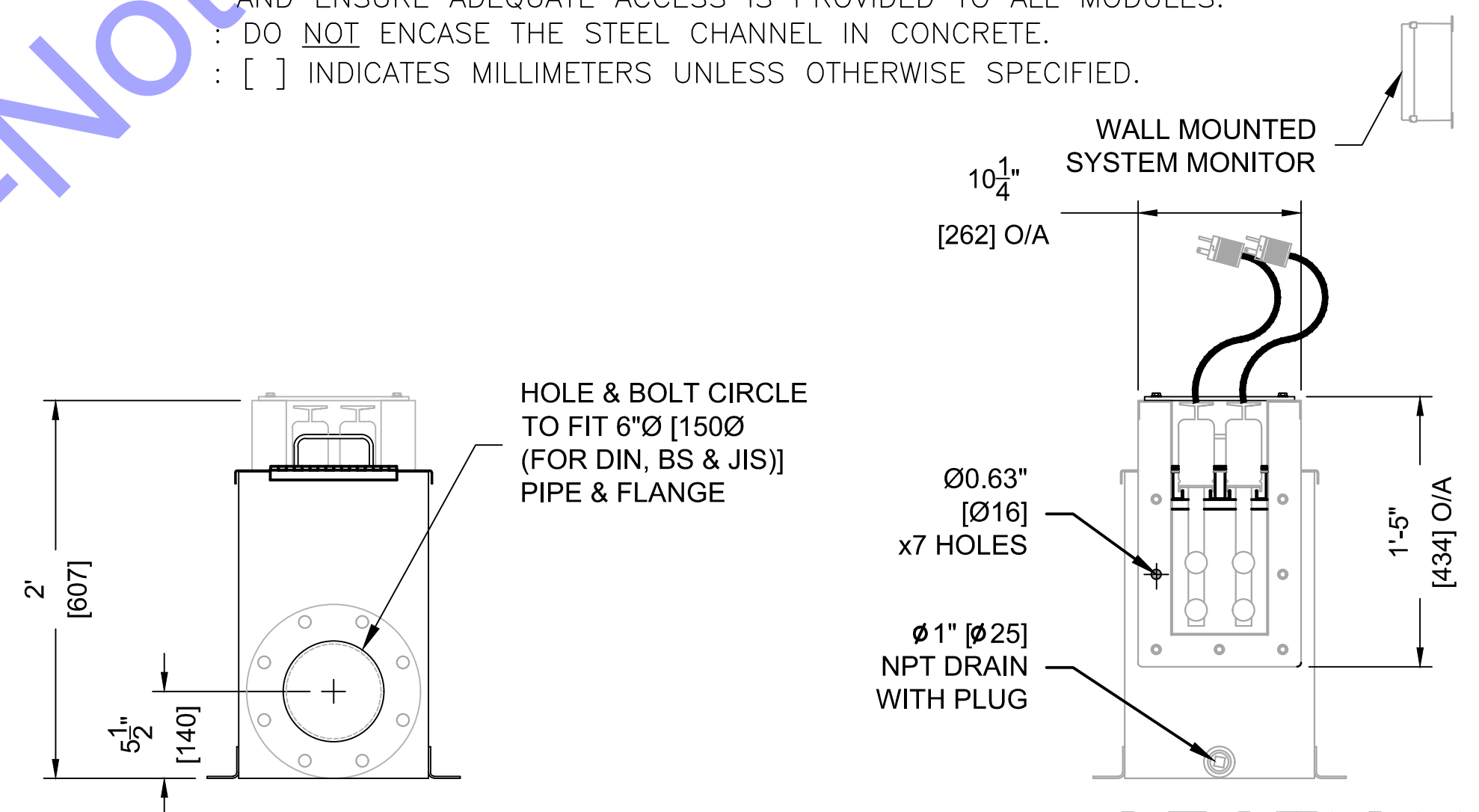
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TROJAN 3000™ PTP
EQUIPMENT INTERCONNECTIONS

No.	DESCRIPTION	FROM	TO
1	SYSTEM MONITOR POWER SUPPLY 120V, 1 PHASE, 2 WIRE, 5 AMPS	PANELBOARD (PB-1)	SYSTEM MONITOR
2	POWER DISTRIBUTION RECEPTACLE (PDR) POWER SUPPLY 120V, 1 PHASE, 2 WIRE, ACTUAL DRAW 1.7 AMPS / PDR	PANELBOARD (PB-1)	PDR

NOTES:

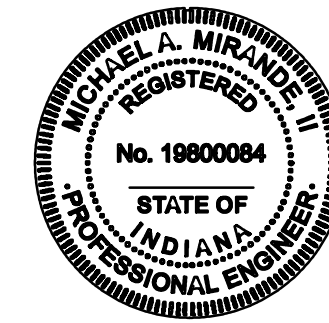
- : DO NOT SLOPE CHANNEL FLOOR.
- : CHANNEL WIDTH & DEPTH MUST BE KEPT WITHIN A TOLERANCE OF + OR - ¼" [6].
- : ANCHOR BOLTS ARE NOT SUPPLIED BY TROJAN TECHNOLOGIES.
- : BOLTS, WASHERS & NUTS FOR CONNECTION OF CHANNEL TO TRANSITION BOXES ARE PROVIDED BY TROJAN TECHNOLOGIES.
- : SYSTEM CONDUIT, WIRING, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS.
- : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY.
- : ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
- : ANY EXTRA OUTLETS NOT BEING USED BY TROJAN EQUIPMENT HAVE NOT BEEN INCLUDED IN THE INTERCONNECT AMPERAGE.
- : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.
- : ACCESS IS REQUIRED FOR MODULE REMOVAL – NOTE THE CHANNEL WIDTH AND ENSURE ADEQUATE ACCESS IS PROVIDED TO ALL MODULES.
- : DO NOT ENCASE THE STEEL CHANNEL IN CONCRETE.
- : [] INDICATES MILLIMETERS UNLESS OTHERWISE SPECIFIED.



END VIEW
(TYPICAL)
SCALE:AS SHOWN

A SECTION
D01 SCALE: AS SHOWN
NOTE: PDR NOT SHOWN
FOR CLARITY

DESCRIPTION: LAYOUT, UV3000PTP-UV3050K 1 CHANNEL 1 BANK 2 LAMPS WEIR		STANDARD DRAWING NO. 3M0508	
DRAWN BY : LZ/JMM/SPM	DATE : 12JN21	REFERENCE NO. N/A	
CHECKED BY : SAH	DATE : 12JN22	DWG NO.	
APPROVED BY : CAP	DATE : 12JN22	D01	REV. D
SCALE (8 $\frac{1}{2}$ x11) : NOT TO SCALE	LOG NUMBER : N/A		



Signature Michael A. Minola II Date 4/24/2025

**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

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Issue Date: 4/2025	Project No: S23130	Scale: AS SHOWN
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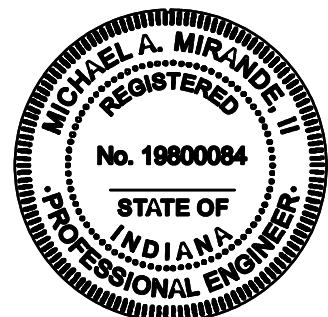
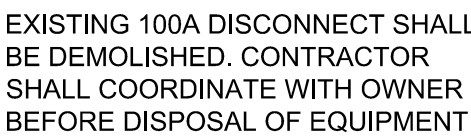
ELECTRICAL - UV SYSTEM

Drawing No:
E1-6



- COORDINATE WITH GENERATOR AND ATS SUPPLIER/MANUFACTURER FOR WIRING REQUIREMENTS DURING BIDDING AND CONSTRUCTION.
2. DO NOT BOND NEUTRAL TO GROUND AT GENERATOR. VERIFY THAT THE NEUTRAL TO GROUND IS NOT BONDED AT GENERATOR BY THE GENERATOR MANUFACTURER. NEUTRAL TO BE BONDED TO GROUND AT AUTOMATIC TRANSFER SWITCH ONLY.
3. ATS SHALL BE DESIGNED FOR FRONT ACCESS AND LIMITED TO ONE SIDE ACCESS.
4. NEW ATS TO BE PROVIDED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH ATS MANUFACTURER AND PROVIDE ALL NECESSARY POWER AND CONTROL WIRING FOR A COMPLETE AND FUNCTIONING SYSTEM. LACK OF COORDINATION IS NOT JUSTIFICATION FOR ADDITIONAL FUNDS.
5. NEW NEMA 4X 100A ATS SHALL BE MOUNTED ON A NEW UNISTRUT STRUCTURE NEXT TO THE LIFT STATION. EXISTING DISCONNECT SHALL BE DEMOLISHED. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL DEMOLISHED EQUIPMENT BEFORE THE CONTRACTOR DISPOSES OF EQUIPMENT.
6. CONTRACTOR IS RESPONSIBLE TO INSTALL A NEW NEMA 4X 480/120V STEP DOWN TRANSFORMER WITH TWO DEDICATED CIRCUIT BREAKERS INSTALLED INSIDE THE EXISTING CONTROL PANEL. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE GENERATOR MANUFACTURER FOR POWER REQUIREMENTS FOR PROPER BREAKER SIZING.
7. CONTRACTOR SHALL COORDINATE WITH GENERATOR MANUFACTURER TO ENSURE GENERATOR IS INSTALLED CORRECTLY. CONTRACTOR TO ENSURE THE EXISTING PUMPS LOCATED AT THE DOWNS ROAD LIFT STATION RUN PROPERLY WITH THE GENERATOR INSTALLED.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE GENERATOR SUPPLIER/MANUFACTURER FOR POWER REQUIREMENTS TO THE ANCILLARY DEVICES. ANCILLARY POWER REQUIREMENTS VARY BETWEEN GENERATOR MANUFACTURES. ALL COSTS ASSOCIATED WITH PROVIDING ANCILLARY POWER TO THE GENERATOR SHALL BE BY THE CONTRACTOR
9. THE PUMP STATION WET WELL IS CLASSIFIED AS CLASS 1 DIVISION 1, GROUP D AREA PER NFPA 820. THE AREA WHICH EXTENDS TO 18" ABOVE THE PUMP STATION TOP OF SLAB AND EXTENDS 3" BEYOND ALL SIDES OF THE HATCH IS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION. ANY EQUIPMENT LOCATED WITHIN THE CLASSIFIED AREA SHALL BE UL LISTED FOR THAT AREA. ALL WIRING METHODS SHALL CONFORM TO THE REQUIREMENTS OF NEC ARTICLE 500 AND 501.
10. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONDUIT AND WIRE FOR GENERATOR AND AUTOMATIC TRANSFER SWITCH ALARMS. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONDUIT, WIRE, AND TERMINATION AT THE GENERATOR AND AUTOMATIC TRANSFER SWITCH FOR ALL AVAILABLE ALARMS AND CONNECT TO THE EXISTING CELLULAR DIALER. OPERATOR IS RESPONSIBLE TO PROVIDE TERMINATORS AT THE CELLULAR DIALER. CONTRACTOR SHALL TAG WIRES AND NOTE WHAT ALARMS ARE CONNECT FOR OPERATOR.

1. SEE E-0 FOR PROJECT CONDUIT REQUIREMENTS.
2. CONTRACTOR SHALL EXAMINE NOT ONLY PLANS AND SPECIFICATIONS FOR ELECTRICAL AND INSTRUMENTATION, BUT PLANS AND SPECIFICATIONS FOR OTHER RELATED SECTIONS. VISIT THE SITE TO BECOME ACQUAINTED WITH ALL PROJECT CONDITIONS INCLUDING EXISTING CONDITIONS. EXECUTION OF CONTRACT IS EVIDENCE THAT THE CONTRACTOR HAS EXAMINED ALL DRAWINGS AND SPECIFICATIONS AND THAT ALL CONDITIONS OF INSTALLING THE WORK IN THIS SECTION ARE VERIFIED. CLAIMS FOR LABOR, MATERIAL OR TIME EXTENSIONS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD EXAMINATIONS BEEN MADE WILL NOT BE RECOGNIZED



Signature Michael A. Mingo II Date 4/24/2025

**TOWN OF CLAYPOOL
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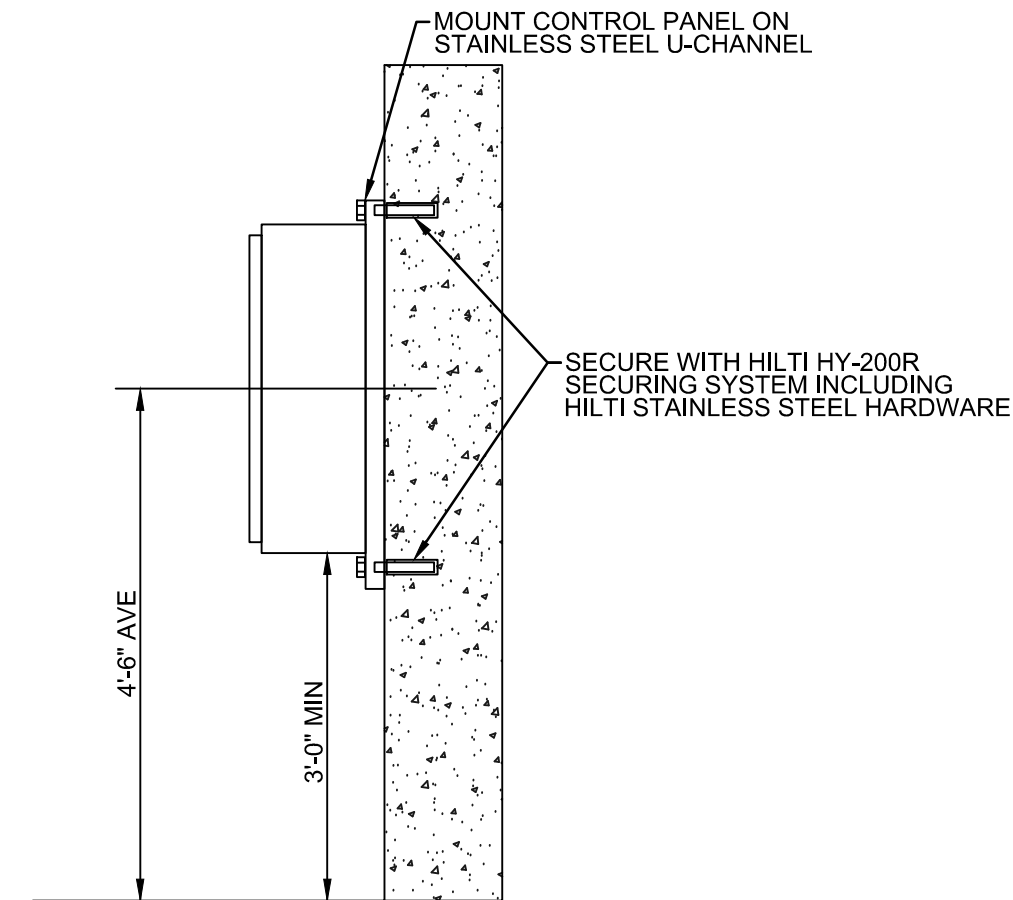
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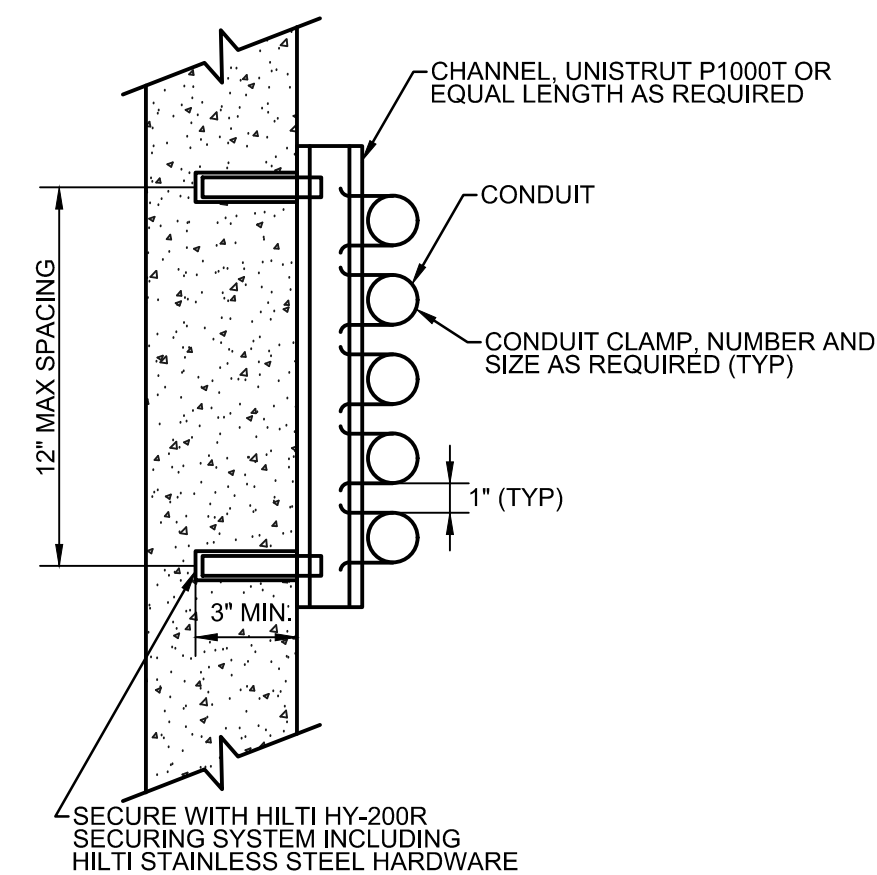
Designed By: JS	Drawn By: JS	Checked By: MM
Issue Date: 4/2025	Project No: S23130	Scale: AS SHOWN

ELECTRICAL - LS ONE-LINE DIAGRAM

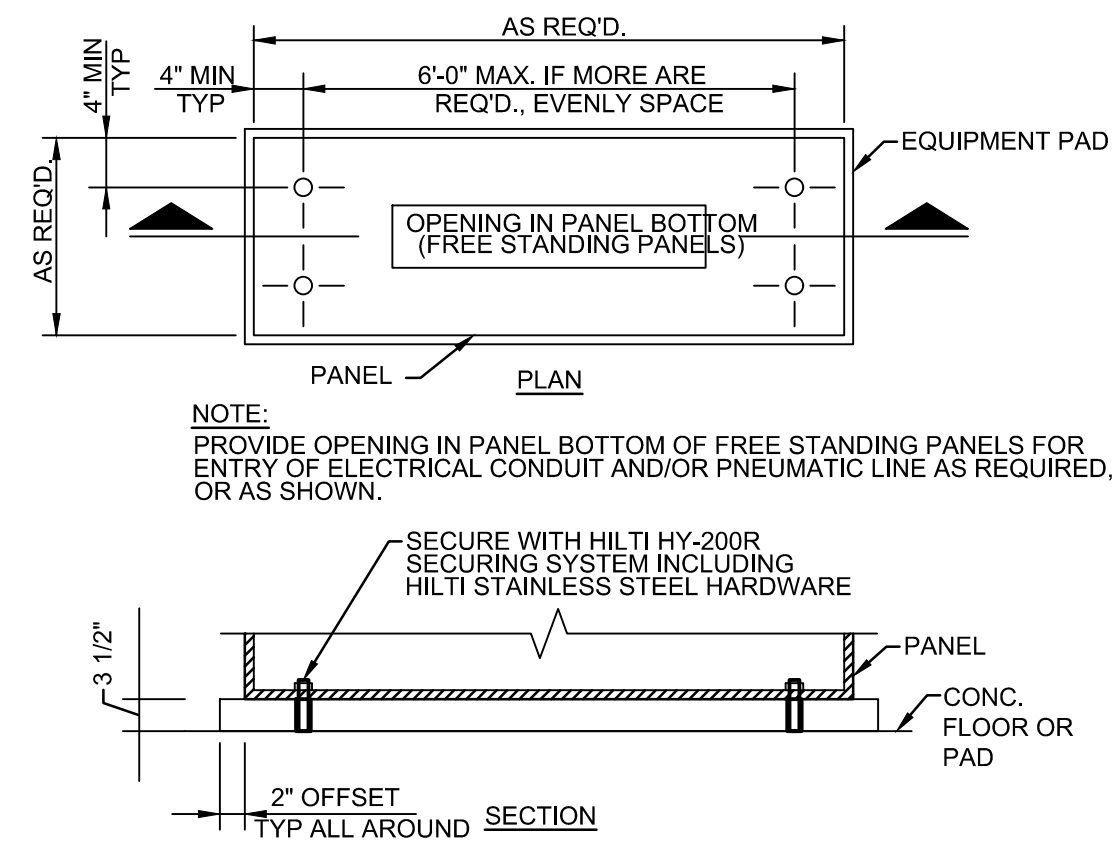
Drawing No:
E2-1



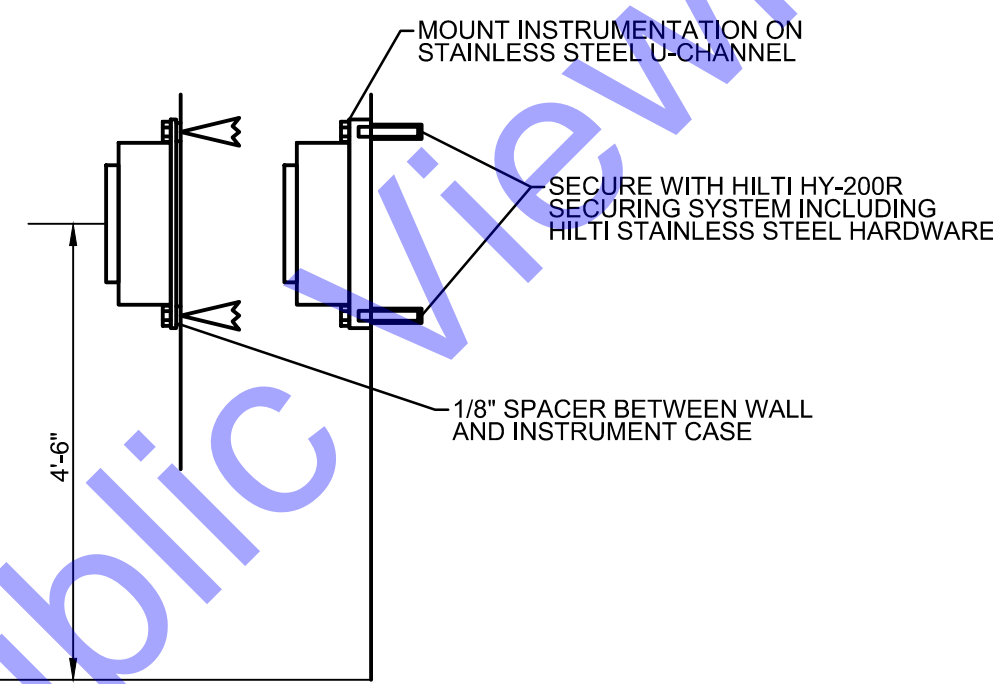
WALL MOUNT CONTROL PANEL INSTALLATION



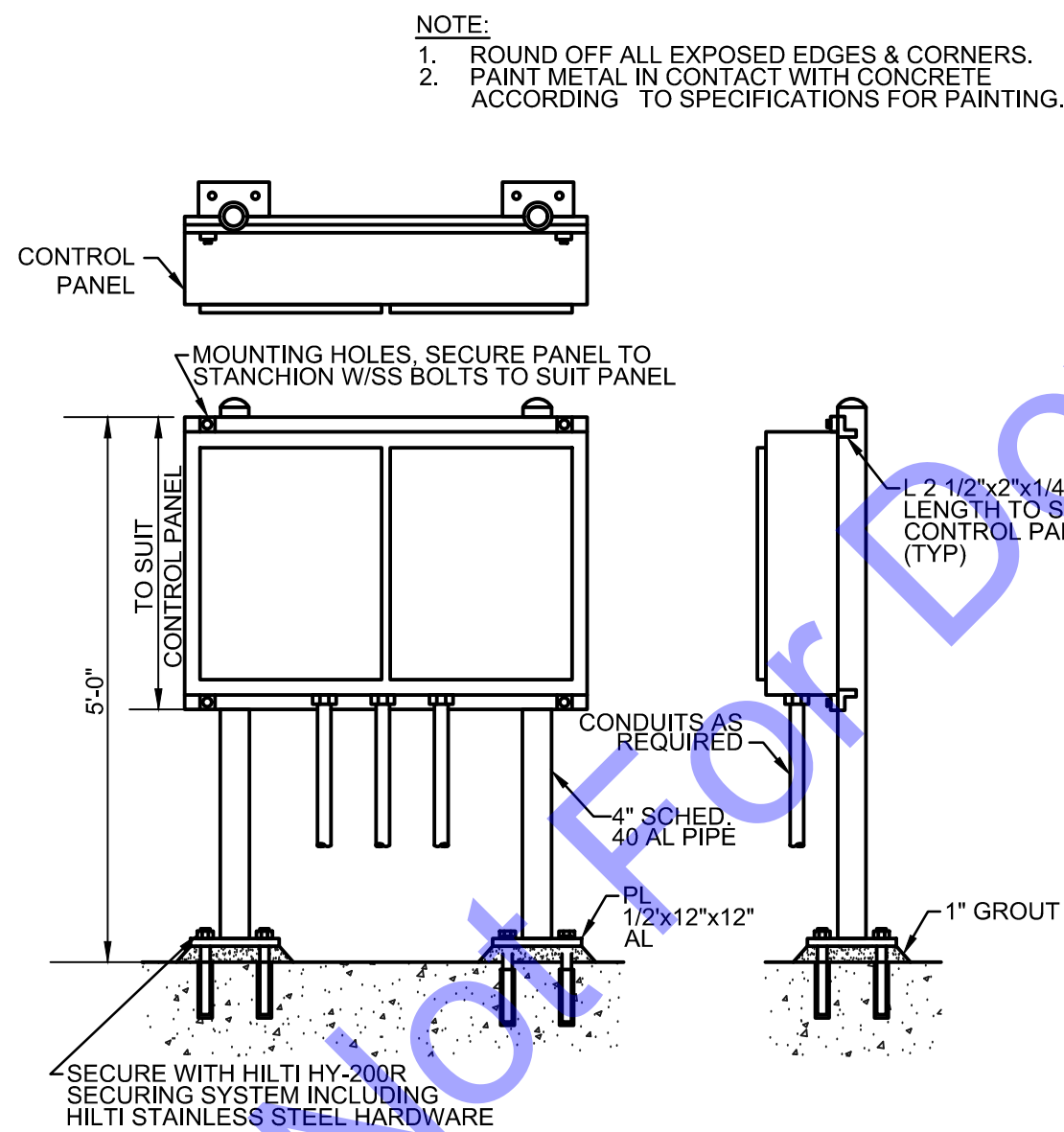
WALL MOUNTED CONDUIT RACK



FREE STANDING OR FLOOR MOUNT CONTROL PANEL INSTALLATION



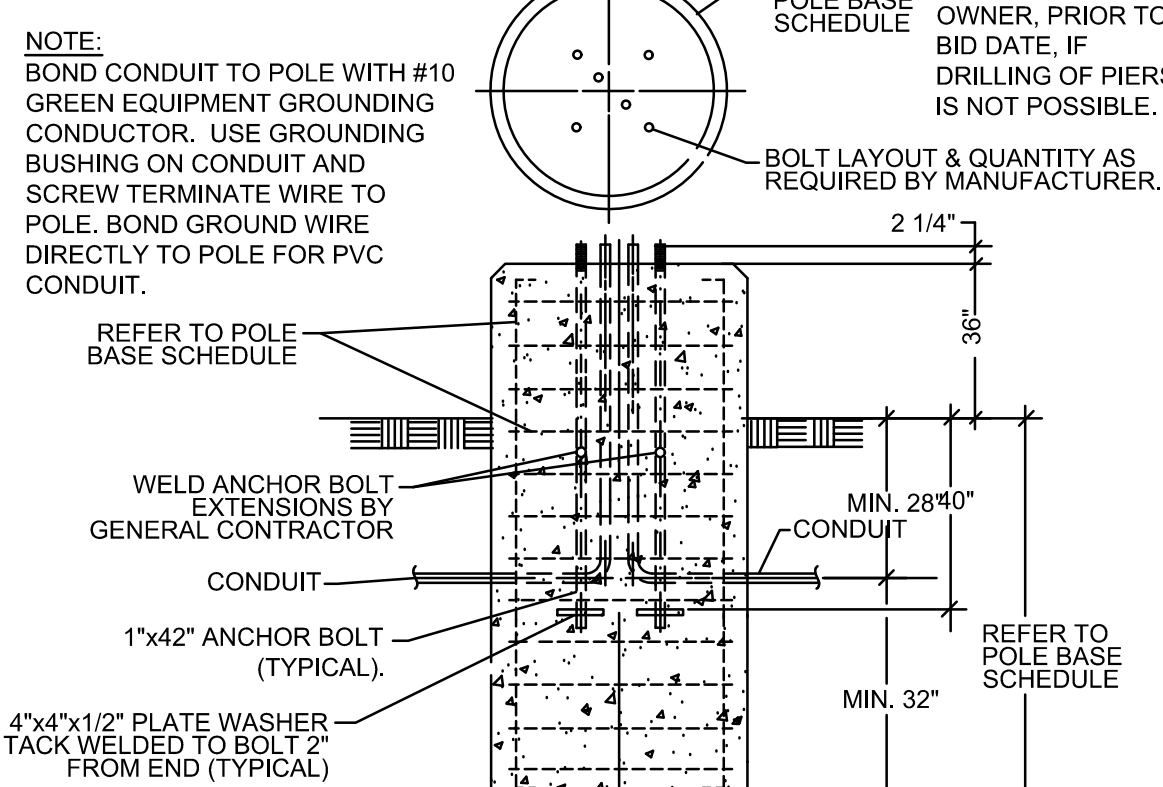
WALL MOUNT SMALL CASE INSTRUMENTATION



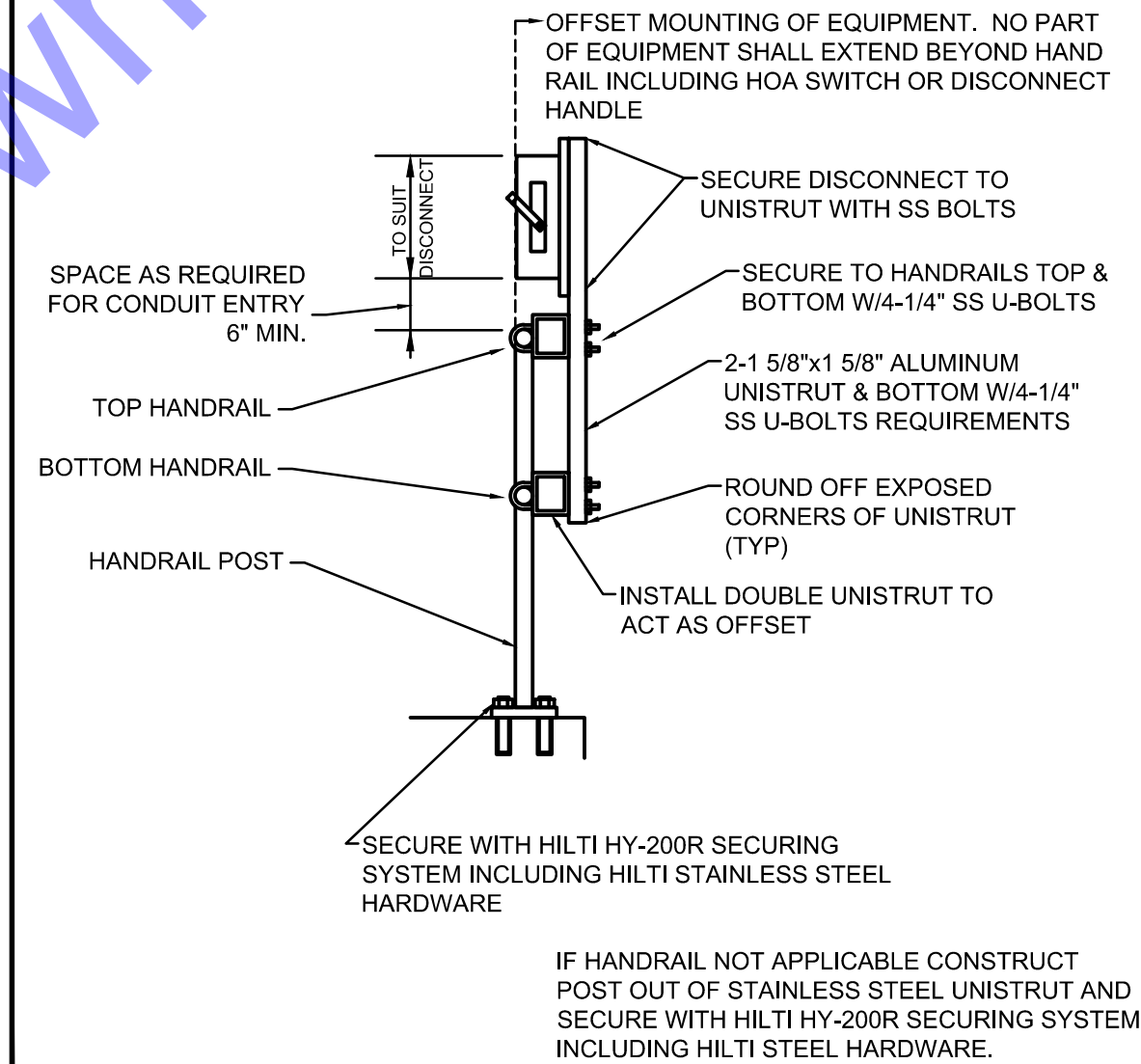
DOUBLE POST STANCHION MOUNT CONTROL PANEL INSTALLATION

POLE BASE SCHEDULE					
POLE HEIGHT	MAXIMUM TOTAL AREA	MINIMUM PIER SIZE	DEPTH BELOW GRADE*	VERTICAL REINFORCEMENT	CIRCULAR TIES
15'-0"	0'-10"	20" DIA.	5'-0"	#-6#	#3 @ 12"
20'-0"	0'-10"	20" DIA.	6'-0"	#-6#	#3 @ 12"
25'-0"	0'-10"	20" DIA.	7'-0"	#-6#	#3 @ 12"
30'-0"	0'-10"	20" DIA.	8'-0"	#-6#	#3 @ 12"
35'-0"	0'-10"	20" DIA.	8'-0"	#-6#	#3 @ 12"
35'-0"	10'-20"	24" DIA.	10'-0"	#-8#	#3 @ 12"
40'-0"	0'-10"	30" DIA.	10'-0"	#-8#	#3 @ 16"
40'-0"	10'-20"	30" DIA.	12'-0"	#-8#	#3 @ 16"

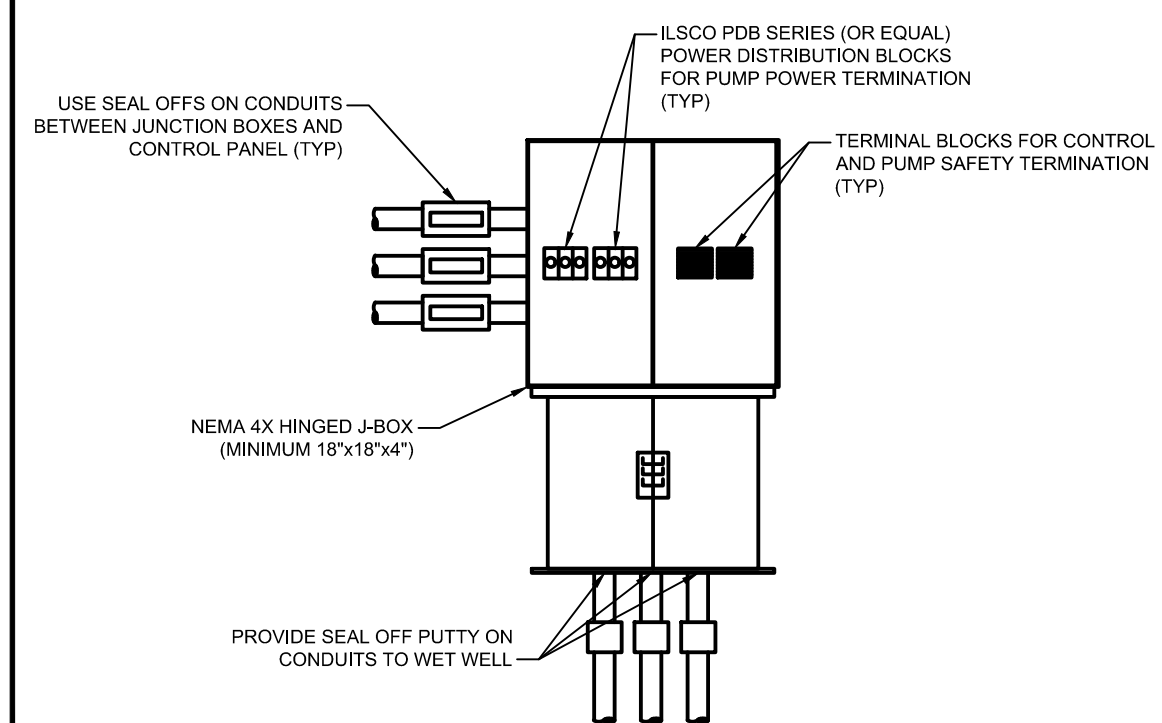
* INCREASE DIAMETER IF NECESSARY TO MAINTAIN MINIMUM 6" CONCRETE COVER OF ANCHOR BOLTS.



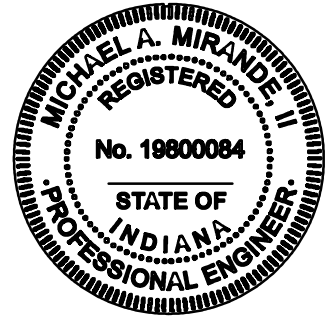
ROUND POLE BASE



HANDRAIL MOUNT DISCONNECT



J-BOX INTERIOR DETAIL



Signature Michael A. Minko II Date 4/24/2025

**TOWN OF CLAYPOOL
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Issue Date: 4/2025	Project No: S23130	Scale: AS SHOWN
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ELECTRICAL - DETAILS

Drawing No:

E3-0



NOT TO SCALE



NOT TO SCALE



NOTES:

- ### GENERATOR/EQUIPMENT PAD DETAIL



NOT TO SCALE

ELEVATION

NOT TO SCALE



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ELECTRICAL - DETAILS
CONTINUED

Drawing No:

E3-1

GENERAL

- The structure has been designed for the in-service loads only. The methods, procedures, and sequences of construction are the responsibility of the Contractor. Supporting formwork for the concrete construction shall not be removed before the concrete has gained sufficient strength to safely support the dead and superimposed loads which will be subsequently applied. The Contractor shall take all necessary precautions to maintain and ensure the integrity of the structure at all stages of construction.
- All work shall be performed in accordance with the Indiana Building Code, 2014 Edition (2012 International Building Code, first printing, with Indiana Amendments).
- Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field, and report any errors or discrepancies to the Structural Engineer prior to the fabrication and erection of any new members.
- Do not determine dimensions by "scaling" off the plans. The Contractor shall accept all risk associated with "scaling" and shall be responsible for all inadequate work resulting therefrom. Questions regarding missing or conflicting dimensions shall be directed, in writing, to the Structural Engineer.
- Existing materials to be removed and reinstalled as part of this contract, but become damaged, shall be replaced with approved new material of equivalent quality and appearance at the Contractor's expense.
- All work shall be performed without damage to adjacent retained work. Adequate protection of areas nearby work against dust, dirt and debris accumulation shall be maintained at all times.
- Principal openings in the structure are indicated on the structural drawings. Refer to the architectural, mechanical, electrical, and plumbing drawings for sleeves, curbs, inserts, etc. not herein indicated. Openings in slabs with a maximum side dimension or diameter of 10 inches or less shall not require additional framing or reinforcement, unless noted otherwise. The location of sleeves or openings not shown in structural members shall be approved by the Structural Engineer.
- The location of sleeves or openings not shown in structural members shall be approved by the Structural Engineer.
- The Contractor shall relocate all mechanical piping, ducts, equipment, electrical conduits, wiring and plumbing that interfere with the proposed construction. Service shall be maintained to all equipment that is served by mechanical, electrical or plumbing conduit being relocated.
- The Contractor shall relocate all utilities which interfere with the proposed construction. Service shall be maintained at all times during utility relocation unless otherwise noted.

FOUNDATIONS

- Exterior footings shall bear 3'-6" minimum below finish grade and shall bear on undisturbed soil.
- Foundation excavation and all other soils related work shall be performed in accordance with the geotechnical engineering report prepared by GME (Job No. G24-112675) dated December 24, 2024, and all associated supplements.
- Foundation and soils related work shall be performed under the direct supervision of a qualified Geotechnical Engineer.
- Foundation excavations shall be made to plan elevations. The soil conditions beneath foundations shall then be inspected by a qualified Geotechnical Engineer. If the underlying soils are found to be unacceptable, one of the following procedures shall be followed:
 - Remove the unacceptable soil and backfill with an engineered structural fill in accordance with the geotechnical engineering report or inspecting Geotechnical Engineer.
 - Lower the footing to an acceptable soil. Contact the Structural Engineer for potential modifications to the foundation system.
- Subgrade structural elements subjected to differential lateral soil pressure shall be adequately braced until the structural elements which provide lateral restraint have been placed and allowed to cure for a minimum of 7 days.
- Excavations for spread footings, combined footings, continuous footings and/or mat foundations shall be cleaned and hand tamped to a uniform surface. Foundation excavations shall be adequately protected against detrimental change in condition from disturbance, rain, freezing, etc. Surface runoff shall not be allowed to enter the excavation.
- Foundation conditions noted during construction, which differ from those described in the geotechnical report shall be reported to the Structural Engineer and Geotechnical Engineer before further construction is attempted.
- Center all column and wall footings under the column or wall above unless otherwise indicated.

CONCRETE

- Reinforced concrete has been designed in accordance with the latest editions of the Building Code Requirements for Reinforced Concrete (ACI 318) and Environmental Engineering Concrete Structures (ACI 350R) by the American Concrete Institute (ACI).
- Slabs on-grade shall be constructed in accordance with the latest edition of the Guide for Concrete Floor and Slab Construction (ACI 302.1R).
- Mixing, transporting, and placing of concrete shall conform to the latest edition of the Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete (ACI 211.1) and the Standard Specifications for Structural Concrete (ACI 301). The special provisions of ACI 211.1 Appendix 5 (Mass Concrete Mix Proportioning) shall be used in proportioning the concrete mixture for the mat foundation to control temperature rise during hydration. In addition, the provisions of ACI 207.1R (Mass Concrete) shall apply. Concrete curing shall conform to the latest editions of the Standard Practice for Concrete Curing (ACI 308) and the Standard Specification for Curing Concrete (ACI 308.1). In case of a discrepancy, the plans and specifications shall govern.
- Unless noted otherwise, concrete shall have natural sand fine aggregate and normal weight coarse aggregates conforming to ASTM C33, and Type I or III Portland Cement conforming to ASTM C150. The Contractor shall submit a mix design for each proposed class of concrete. Mix designs shall indicate proportions by weight, water-cement ratio, slump, air content, synthetic fiber size and quantity, sieve analyses of fine and coarse aggregates, standard deviation analysis, and required average strength and documentation of average strength verifying compliance with ACI 318. The Contractor shall not vary from the mix design without approval from the Structural Engineer.
- Unless noted otherwise, fly ash may be used as a pozzolan to replace a portion of the Portland Cement in a concrete mix. Fly ash, when used, shall conform to ASTM C618, Type C. Concrete mixes using fly ash shall be proportioned to account for the properties of the specific fly ash used and to account for the specific properties of the fly ash concrete thus resulting. The ratio of the amount of the fly ash to the total amount of fly ash plus cement in the mix shall not exceed 25 percent.
- Water-reducing admixtures conforming to ASTM C494 may be used in the concrete mix design. Maximum slump shall be 5 inches for mixes containing water-reducing admixtures and 5 to 8 inches for mixes containing high range water-reducing admixtures.
- Concrete compressive strength tests shall be performed in accordance with ASTM C39. Copies of the test results shall be forwarded to the Structural Engineer. One set of specimens shall be taken for each day's pour of appreciable size and for each 50 cubic yards (100 cubic yards for mass concrete) in accordance with the latest edition of ASTM C31. Each set shall include one specimen tested at 7 days, 2 specimens tested at 28 days and one specimen retained in reserve.
- When the ambient temperature is expected to fall below 40 degrees during the course of a concrete pour or subsequent curing period, it shall be placed and cured in accordance with the latest edition of Cold Weather Concreting (ACI 306R) and an additional set of concrete test cylinders shall be made.
- Concrete mixed, transported, placed, and cured under conditions of high ambient temperature, low humidity, solar radiation, or high winds shall conform to the latest edition of Hot Weather Concreting (ACI 305R) and an additional set of concrete test cylinders shall be made.
- Slump tests shall be made prior to and following the addition of plasticizers. Where concrete is placed by pumping methods, concrete for test cylinders and slump tests shall be taken at the point of final placement.

- Water shall not be added to the concrete at the job site. The Contractor is responsible for coordinating a pumpable and workable mix without the addition of water at the job site. The use of plasticizers, retardants and other additives shall be at the option of the Contractor subject to the approval of the Structural Engineer. Follow the recommendations of the manufacturer for the proper use of additives. Use of calcium chloride or other chloride bearing salts is prohibited.
- Place concrete in a manner so as to prevent segregation of the mix. Delay floating and trowelling operations until the concrete has lost surface water sheen or all free water. Do not sprinkle free cement on the slab surface. Finishing of slab surfaces shall conform to the latest editions of ACI 302.1R and ACI 304R (Guide for Measuring, Mixing, Transporting and Placing Concrete).
- Where an epoxy adhesive is specified for bonding plastic concrete to hardened concrete, it shall conform to the latest edition of the Standard Specification for Bonding Plastic Concrete to Hardened Concrete with a Multi-Component Epoxy Adhesive (ACI 503.2).
- Maintain concrete in a moist condition for at least 5 days at ambient temperatures above 70 degrees, and at least 7 days at ambient temperatures above 50 degrees. Curing compounds or moisture retention covers shall be used for all non-formed surfaces. Formed surfaces shall be cured by leaving forms in place. During hot, dry weather, keep forms moist by sprinkling. When forms are removed prior to the end of the curing period, apply curing compound to the exposed surfaces.
- All interior slabs shall receive a hard "troweled finish". Exterior slabs, sidewalks, and stoops shall receive a "broom (or other type of slip resistant) finish". All formed surfaces not exposed to public view shall receive a "rough form finish", exposed surfaces shall receive a "smooth form finish". Concrete finishes shall be as defined in ACI 301.
- Protect finished concrete surfaces from damage, rain, hail, running water, other injurious effects.
- Protect the concrete surface between finishing operations on hot, dry days or any time plastic shrinkage cracks could develop by using wet burlap, plastic membranes or fogging.
- Horizontal and vertical joints are not permitted in concrete construction except where indicated.
- Construction joints and/or contraction joints at locations other than where indicated shall be submitted to the Structural Engineer for approval.
- Construction joints shall be prepared by roughening the contact surface in an approved manner to a full amplitude of approximately 1/4 inch leaving the contact surface clean and free of laitance.
- Control joints shall be made in concrete slabs-on-grade at major column centerlines, at points of discontinuity, at reentrant corners, and at other locations shown on the plans.
- Provide 3/4 inch chamfers on all exposed corners of concrete except those abutting masonry.
- The Contractor shall verify the location of sleeves, openings, embedded items, etc. and shall ensure that they are in place prior to the placement of the concrete.
- Earth cuts shall not be used as forms ("bank forming") for vertical or sloping surfaces unless otherwise approved by the Structural Engineer. Where bank forming is permitted, the concrete element shall be increased at least 3 inches on all sides exposed to earth to account for possible soil contamination during concrete placement.

CONCRETE SCHEDULE

CONCRETE SCHEDULE						
CLASS	f_c'	AIR CONTENT	MIN. CEMENT: LB/CY (SACKS/CY)	MAX. WATER/ CEMENT: RATIO	CONCRETE PLACEMENT	REMARKS
A	3,000 psi	optional	423 (4.5)	0.58	footings	
B	4,000 psi	optional	517 (5.5)	0.48	foundation walls	
C	4,000 psi	optional	517 (5.5)	0.48	interior slabs-on-grade	synthetic fibers (1.5 lbs/cys)
D	4,500 psi	6% ± 1.5%	611 (6.5)	0.45	UV Structure	crystalline waterproofing admixture
E	4,500 psi	6% ± 1.5%	611 (6.5)	0.40	exterior slabs-on-grade, stoops, curbs, & sidewalks exposed to de-icers	synthetic fibers (1.5 lbs/cys)

REINFORCING STEEL

- Reinforcing bar detailing, fabricating, and placing shall conform to the latest edition of the following standards: Specifications for Structural Concrete for Buildings (ACI 301), ACI Detailing Manual (SP66). The latest editions of Concrete Reinforcing Steel Institute's Reinforcing Bar Detailing and Placing Reinforcing Bars may also be used.
- Provide standard bar chairs, slab blockers, spacers, etc. as required to maintain concrete protection specified. Reinforcing steel shall be tied to prevent displacement during concrete placement.
- Reinforcement bars shall not be tack welded, welded, heated or cut unless otherwise indicated or approved by the Structural Engineer.
- Welding of reinforcement bars, when approved by the Structural Engineer, shall conform to the latest edition of American Welding Society Standard D1.4. Electrodes for shop and field welding of reinforcement bars shall conform to ASTM A233, Class E90XX.
- Synthetic fibers shall be used for temperature and shrinkage reinforcement in concrete slabs-on-grade. Synthetic fibers shall be virgin (non-recycled) nylon or polypropylene fibers conforming to ASTM C1116, Type III. Fibers shall be introduced into the mix at the plant in accordance with the manufacturer's recommendations. The Contractor shall submit the mix design, including the fiber size and quantity, to the Structural Engineer for approval prior to construction. The Contractor shall take adequate measures to manage any difficulty in concrete finishing associated with the use of the fibers.
- Concrete cover over reinforcement, unless otherwise noted, shall be as specified in the latest editions of ACI 318 and ACI 350 with the most stringent requirements governing.
- Unless noted otherwise, splicing of reinforcing bars shall conform to the latest edition of ACI 318.

CONCRETE REINFORCING STEEL LAP SPlice SCHEDULE

BAR SIZE	TENSION SPlice		COMPRESSION SPlice
	TOP BAR	OTHER	
#3	21"	16"	12"
#4	28"	24"	15"
#5	35"	30"	19"
#6	42"	36"	23"
#7	49"	42"	26"
#8	56"	48"	30"
#9	63"	57"	34"
#10	76"	66"	38"
#11	93"	72"	42"

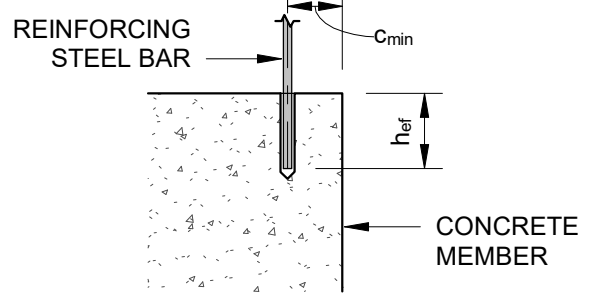
- Horizontal bars in walls, masonry bond beams, and continuous wall footings shall be bent at corners and intersections in such a way that continuity is provided through the joint. Separate corner bars of the same size and spacing as the horizontal reinforcing may be substituted for the bent portion of the continuous bars.
- Unless noted otherwise, provide 2-#5 bars (one each face) around unframed openings and diagonally at reentrant corners of vertical height offsets in concrete walls. Place bars parallel to the sides of the opening and extend 24 inches beyond corners.
- The Contractor shall prepare detailed working or shop drawings to enable him to fabricate, erect and construct all parts of the work in accordance with the drawings and specifications and shall submit one reproducible copy and one blue line copy to the Structural Engineer for review prior to fabrication. These shop drawings will be reviewed for design concepts only. The Contractor shall be responsible for all dimensions, accuracy, and fit of work.

POST-INSTALLED EXPANSION/ADHESIVE ANCHORS

- Post-installed anchors shall only be used where specified on the Construction Documents. The Contractor shall obtain approval from the Structural Engineer prior to installing the post-installed anchors in place of missing or misplaced cast-in-placed anchors.
- Care shall be taken in placing post-installed anchors to avoid conflicts with existing reinforcing steel.
- Post-installed anchors shall be installed by qualified personnel in accordance with the drawings and specifications.
- Post-installed anchors shall be installed by qualified personnel in accordance with the Manufacturer's Printed Installation Instructions (MPII), the drawings and specifications. Installation of adhesive anchors shall be performed by personnel trained to install adhesive anchors. Contractor shall submit installer training cards with anchor package.
- Post-installed anchors shall be HILTI type as manufactured by HILTI Fastening Systems or approved equivalent. Substitution requests must be submitted by the Contractor to the Structural Engineer for review. Provide back-up technical data that demonstrates that the substituted product is capable of achieving the equivalent performance values (minimum) of the specified products using the appropriate design procedure and/or standard(s) as required by the building code.
- Masonry cores receiving post-installed anchors shall be filled with course grout. Grout must comply with IBC Section 2103.12 or IRC Section R609.1.1, as applicable. Alternatively, the grout must have a minimum compressive strength, when tested in accordance with ASTM C1010, equal to its specified strength, but not less than 2,000 psi. Post-installed anchors shall not be installed in a masonry mortar joints.
- The Contractor shall inspect the masonry or concrete surface at each proposed post-installed anchor location prior to installation. If the anchor locations align with mortar joints or the masonry or concrete is honeycombed, cracked or otherwise unsound, the post-installed anchors shall be repositioned so as to be located in sound material and be in accordance with the manufacturer's minimum spacing and edge distance requirements.
- Adhesive anchors shall be subject to the following additional requirements:
 - Anchors shall meet the requirements of ACI 355.2 (mechanical anchors) and ACI 355.4 (adhesive anchors).
 - Proof loading of adhesive anchors is not required.
 - Anchors shall not be installed in concrete cured less than 21-days
 - Anchors shall not be installed until the concrete has reached a minimum compressive strength of 2,500 psi.
 - Concrete temperature must be greater than 50 °F and less than 80 °F prior to installation of the anchors unless otherwise permitted by the MPII.
 - Anchors shall be installed in holes drilled with the HILTI Hollow Drill Bit (TE-CD (SDS Plus) or TE-YD (SDS Max)) and HILTI VC 20/40 Vacuum (VC 20-U or VC 40-U). Follow the MPII for size and depth of holes required.
 - The acceptability of certification other than the ACI/CRSI Adhesive Anchor Installer Certification shall be the responsibility of the Structural Engineer.
 - Adhesive anchors installed in horizontal or upwardly inclined orientations to resist sustained tension loads shall be continuously inspected during installation by an inspector specially approved for that purpose by the building official. The special inspector shall furnish a report to the licensed design professional and building official that the work covered by the report has been performed and that the materials used and the installation procedures used conform to the approved contract documents and MPII.

REINFORCING STEEL EPOXY DOWEL SCHEDULE

BAR SIZE	#3	#4	#5	#6	#7	#8
STANDED EFFECTIVE EMBED, l_{ef}	3-3/8"	4-1/2"	5-5/8"	6-3/4"	7-7/8"	9"
MINIMUM EDGE DISTANCE, C_{min}	2"	2-1/2"	3-1/8"	3-3/4"	4-3/8"	5"



NOTES:

- EPOXY DOWELS SHALL UTILIZE HILTI HIT-HY 200 ADHESIVE SYSTEM OR APPROVED EQUIVALENT
- STANDARD EMBED DEPTH AND MIN EDGE DISTANCES PROVIDED IN THIS SCHEDULE APPLY AT ALL LOCATIONS UNLESS OTHERWISE NOTED ON SECTIONS AND DETAILS.

TYPICAL EPOXY DOWEL

NON-SHRINK GROUT

- Grout shall be a high early strength, non-metallic, shrinkage resistant (when tested in accordance with the latest edition of ASTM C827 or CRD-C621), premixed, non-corrosive, non-staining product conforming to the requirements of the latest edition of ASTM C1107 and containing Portland Cement, silica sands, shrinkage compensating agents and fluidity improving compounds.
- Grout compressive strength tests shall be performed in accordance with the latest edition of ASTM C109, with a restraining plate placed over the molds.
- Grout shall be installed in accordance with the manufacturer's instructions.
- Grout shall be placed in a non-sag flowable state and shall have forms built around it for confinement. Grout shall be cured according to manufacturer's recommendations.

COORDINATION WITH OTHER TRADES

- The Contractor shall coordinate and check all dimensions relating to architectural finishes, structural framing, mechanical openings, equipment, etc. The Structural Engineer shall be notified of any discrepancies before proceeding with work in an area under question.
- The Pre-Engineered Post-Frame Building manufacturer shall prepare detailed working or shop drawings to enable fabrication, erection and construction of all parts of the work in accordance with the drawings and specifications and shall submit copies per the specifications, including calculations, to the Structural Engineer for review prior to fabrication. These shop drawings shall show the design loads, plans, elevations, sections, connections, required bracing, attachments to other work, and details necessary for the Pre-Engineered Post-Frame Building manufacturer to fabricate, erect and construct all parts of the work. These shop drawings and calculations will be reviewed for design concepts only. The Pre-Engineered Post-Frame Building manufacturer shall be responsible for all dimensions, accuracy, and fit of work. The Pre-Engineered Post-Frame Building framing shall be designed by, and the shop drawings and calculations shall bear the seal and signature of, a registered professional engineer in the State of Indiana.
- The Pre-Engineered Post-Frame Building manufacturer shall submit in a timely manner anchor bolt plans that include anchor bolt location, diameter, and projection as well as minimum column reactions for verification of the foundation design shown in the design shall reference specification section DS-18 (PRE-ENGINEERED POST-FRAME BUILDING) for additional requirements for the pre-engineered post-frame building systems.
- The Pre-Engineered Post-Frame Building Manufacturer is responsible for the design and supply of wall openings, louvers, and exhaust fan support framing.

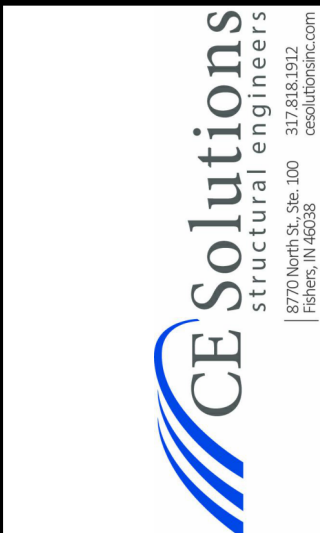
DESIGN

- Building Code:
Indiana Building Code, 2014 Edition (2012 International Building Code, first printing, with Indiana Amendments).
- Soil information:
Allowable net bearing pressure:
Spread Footings
Continuous Wall Footings
Unit weight of soil
Equivalent fluid pressure on tank walls
Coefficient of friction between soil and concrete footing
2000 psf
1500 psf
125 pcf (assumed)
90 psf / ft (assumed)
0.30 (assumed)
- Concrete:
28 day compressive strength (f_c)
See Schedule
- Reinforcing steel (deformed bars of new billet steel):
Stripup and tie
Weldable (Low-Alloy)
Otherwise
Welded wire fabric (smooth)
ASTM A615, Grade 60
ASTM A706, Grade 60
ASTM A615, Grade 60
ASTM A185
- Non-shrink grout:
28 day compressive strength
5,000 psi
- Risk Category
III
- Live loads:
Roof:
25 psf
- Dead loads:
Self-weight of structure:
Suspended mechanical, electrical, and plumbing:
as required
12 psf
- Deflection shall be limited as follows:
Primary Framing:
L/240 for roof total load
L/360 for roof live or snow load
H/240 for wind load
Secondary Framing:
L/240 for roof dead load + roof snow load; but not less than that required to maintain positive drainage for the greater of the dead load + 1/2 roof snow load or live load
L/360 for wind load on walls and roof
L/240 for roof snow load
- Wind loads:
Basic wind speed (3-second gust)
Importance factor, I_w
Exposure
Internal Pressure Coefficient, G_C
Allowable Drift Limit
120 mph
1.0
C
+ 0.18
Ht / 400
- Snow Loads:
Terrain Category
Exposure Factor, C_e
Thermal Factor, C_t
Importance Factor, I_s
Ground Snow Load, P_g
Flat roof Snow Load P_f
Rain-on-Snow Surcharge Load
Design Flat Roof Snow Load, P_r
B
0.9
1.0
1.1
20 psf
14 psf
5 psf
25 psf
- Seismic loads:
Seismic importance factor, I_e
Mapped Spectral Response Acceleration at Short Periods, S_s
Mapped Spectral Response Acceleration at 1 Second, S_1
Site Class
Design Spectral Response Acceleration at Short Periods, S_{ds}
Design Spectral Response Acceleration at 1 Second, S_{d1}
Seismic Design Category
1.25
16.0% g
7.3% g
D
14.0% g
10.0% g
B



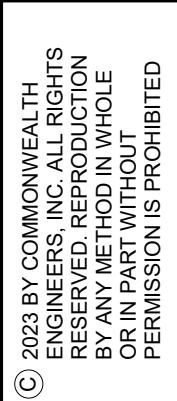
https://commonwealthengineers.com/

OFFICE LOCATIONS IN:
INDIANAPOLIS, IN (2)
EVANSVILLE, IN
FORT WAYNE, IN
CROWN POINT, IN
BOWLING GREEN, KY
SOUTH BEND, IN



TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA

CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS



1-800-382-5444
(IT'S THE LAW)

No.	Submit / Revision	By	Date

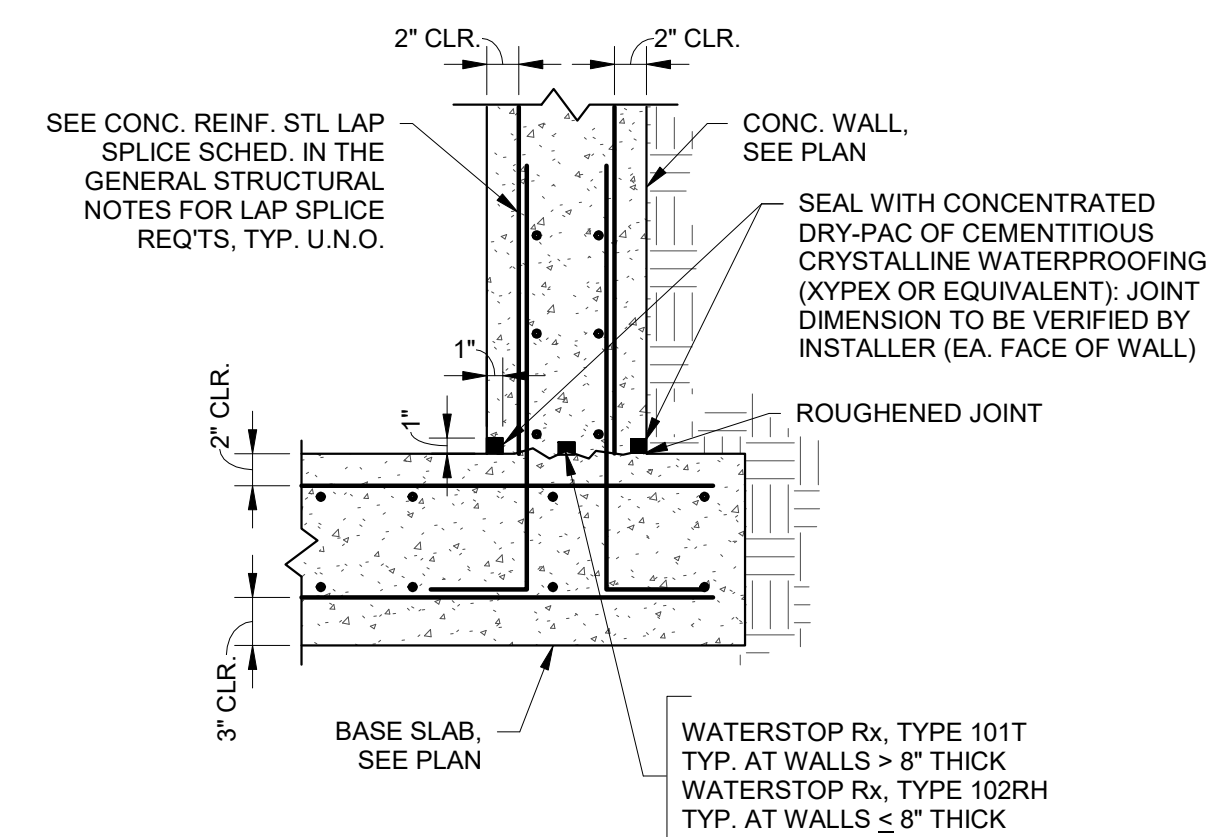
Designed By: CEU	Drawn By: RMS	Checked By: JDT
Issue Date: 4/16/2025	Project No: 24-138	Scale: 12" = 1'-0"

GENERAL STRUCTURAL
NOTES

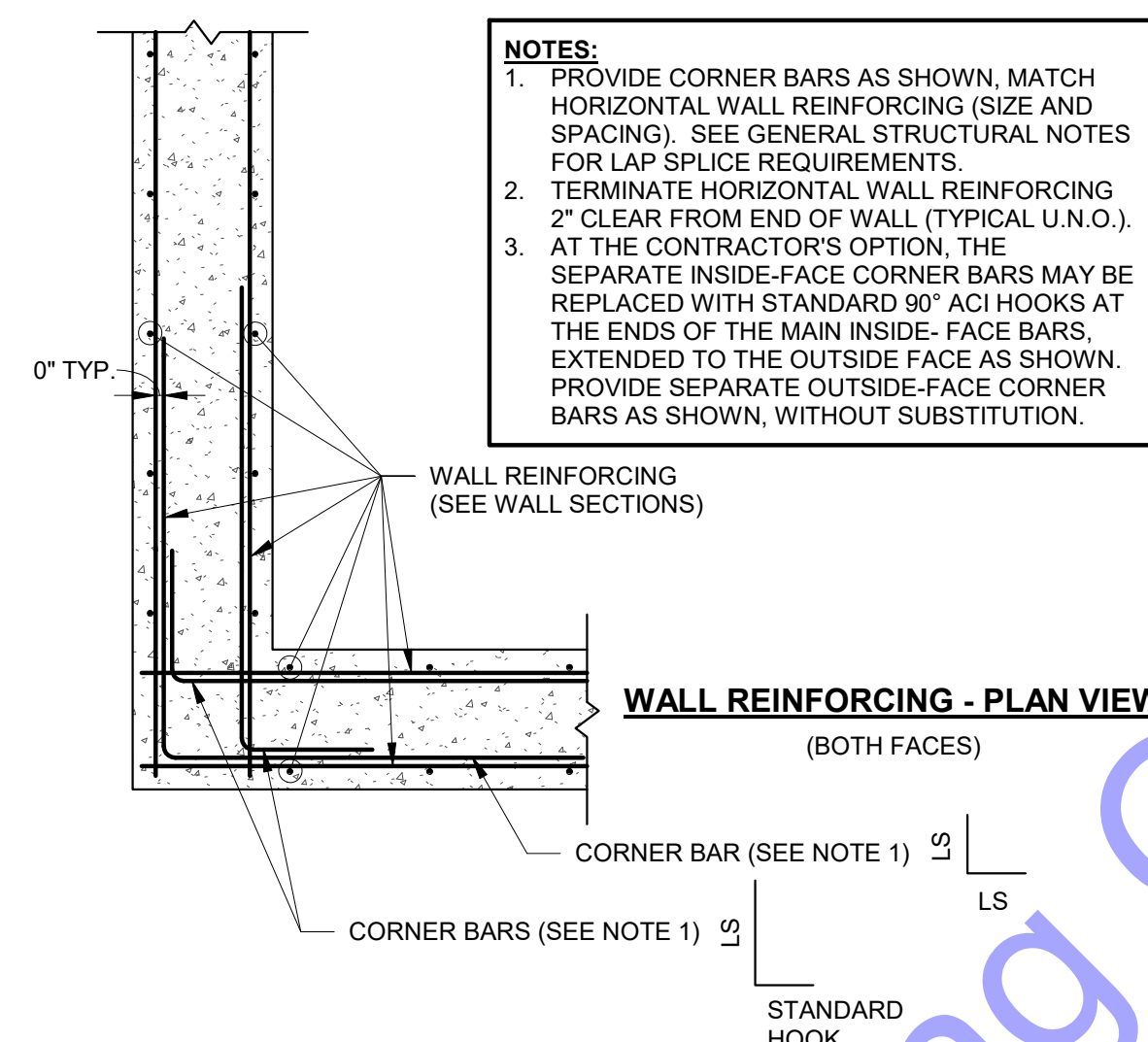
Drawing No:

S0-1

Sheet: 49 OF 55



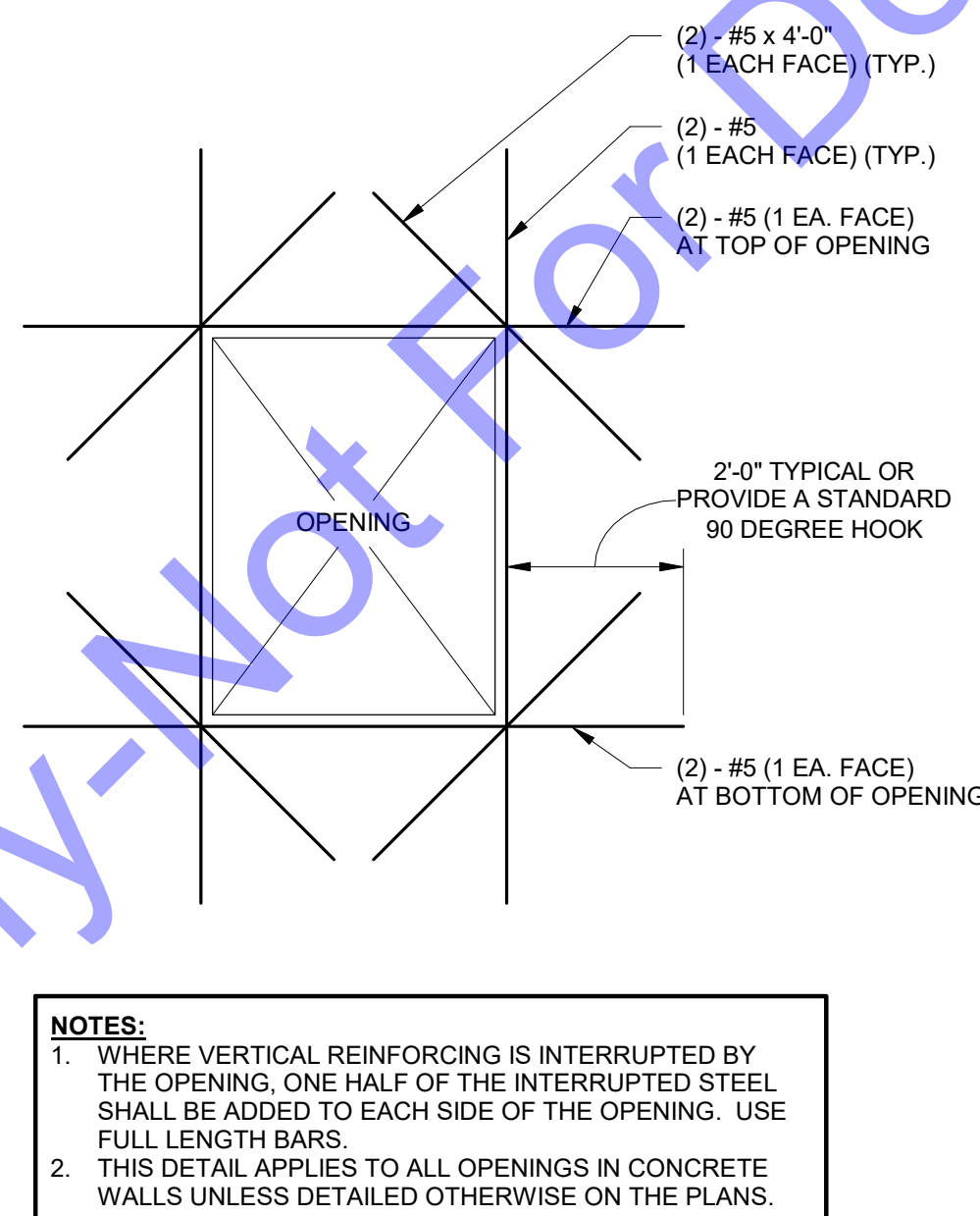
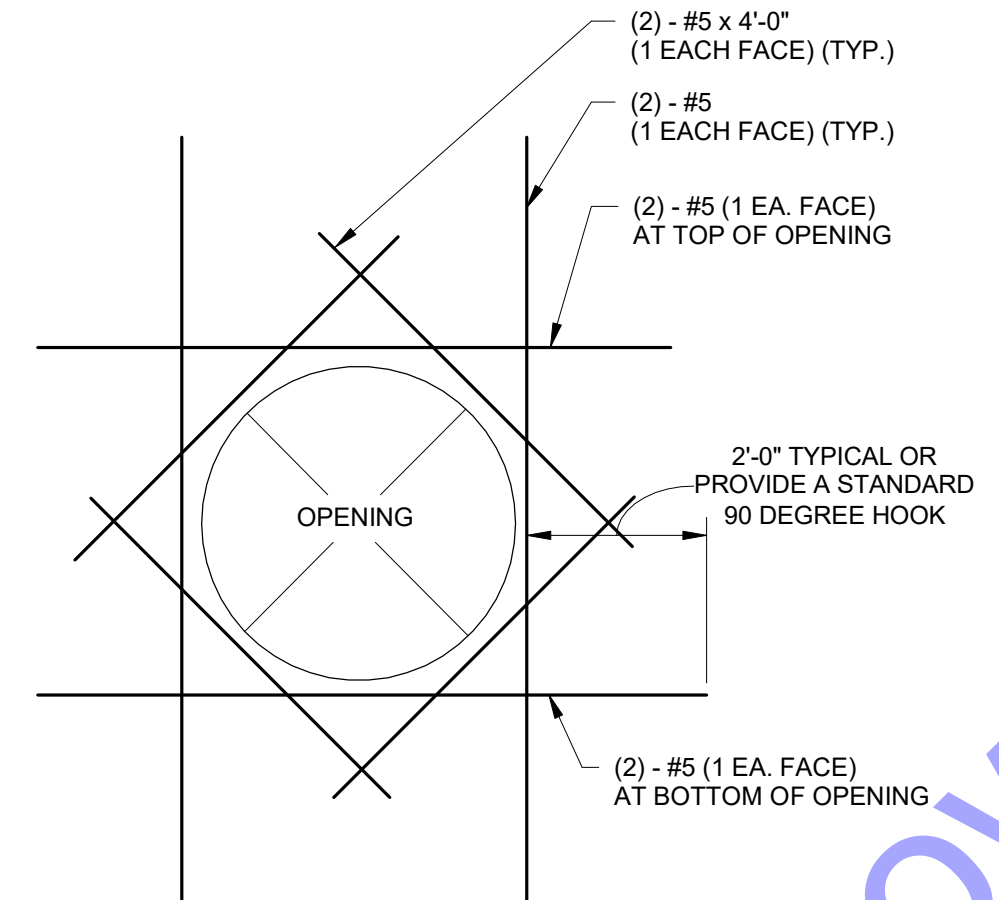
5 TYP. WALL TO BASE SLAB
S0-2 1" = 1'-0"



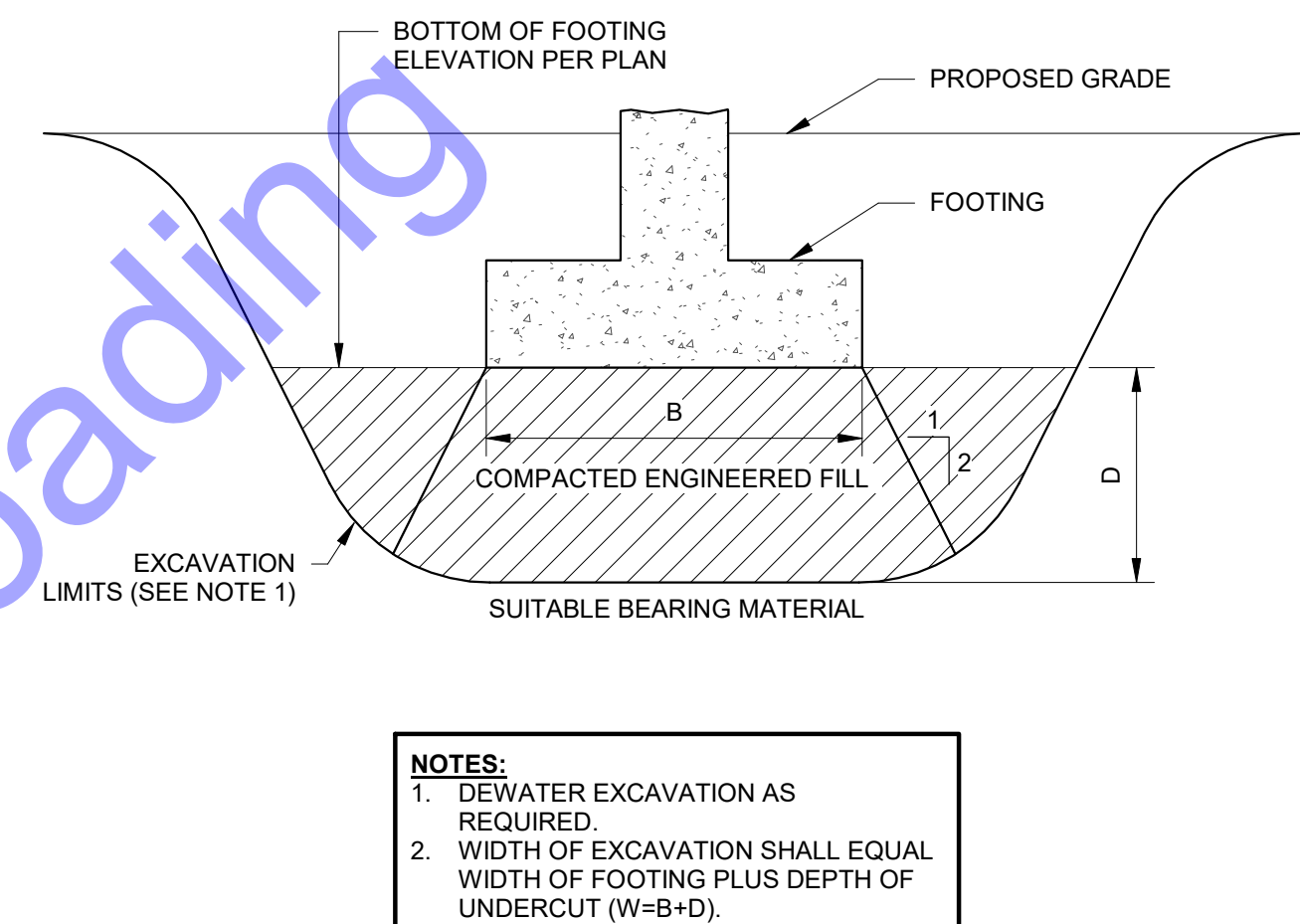
6
S0-2

TYPICAL CONCRETE WALL CORNER
REINFORCEMENT - PLAN VIEW

3/4" = 1'-0"



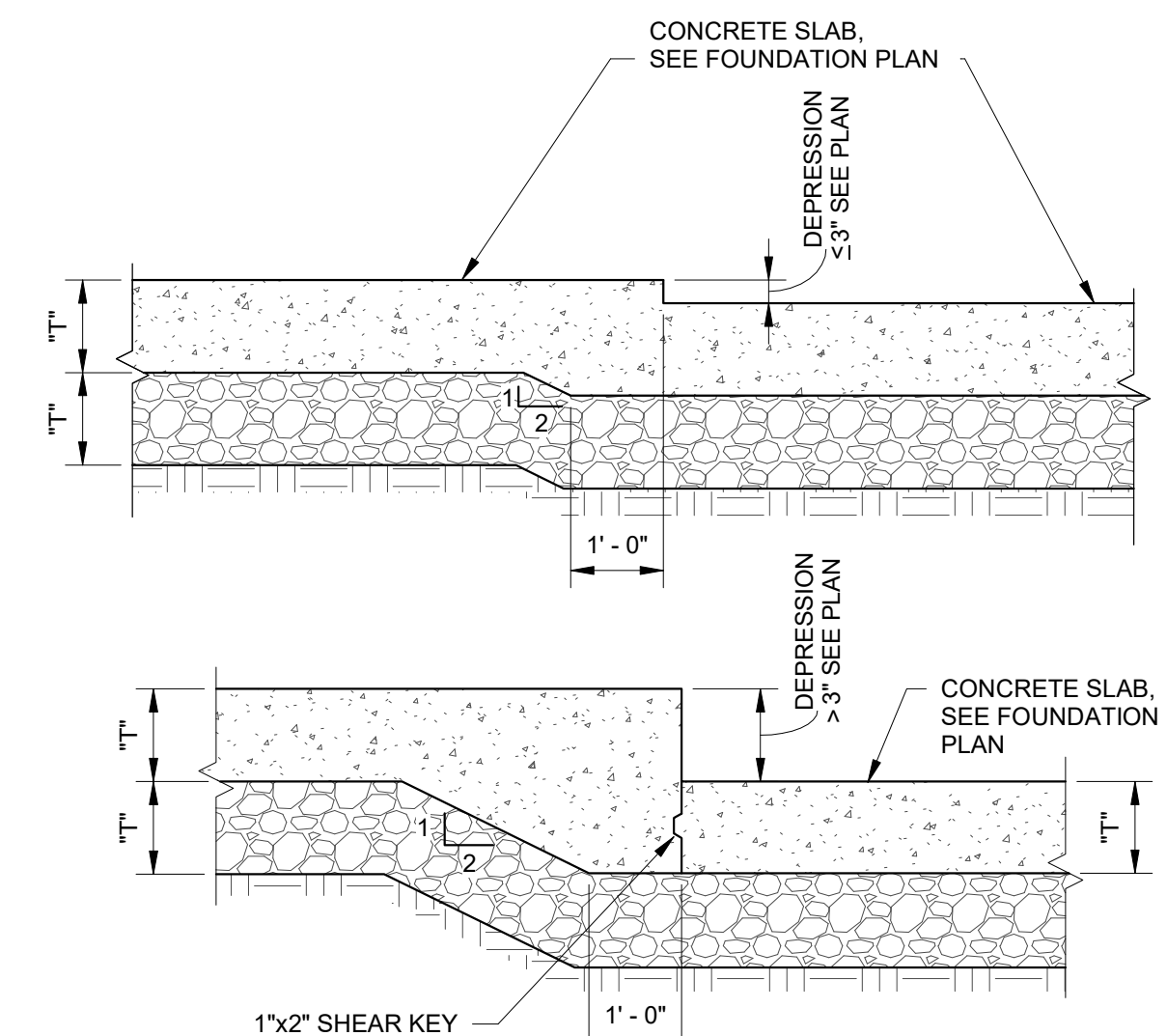
3 TYP. OPENING IN CONCRETE WALL
S0-2 1/8" = 1'-0"



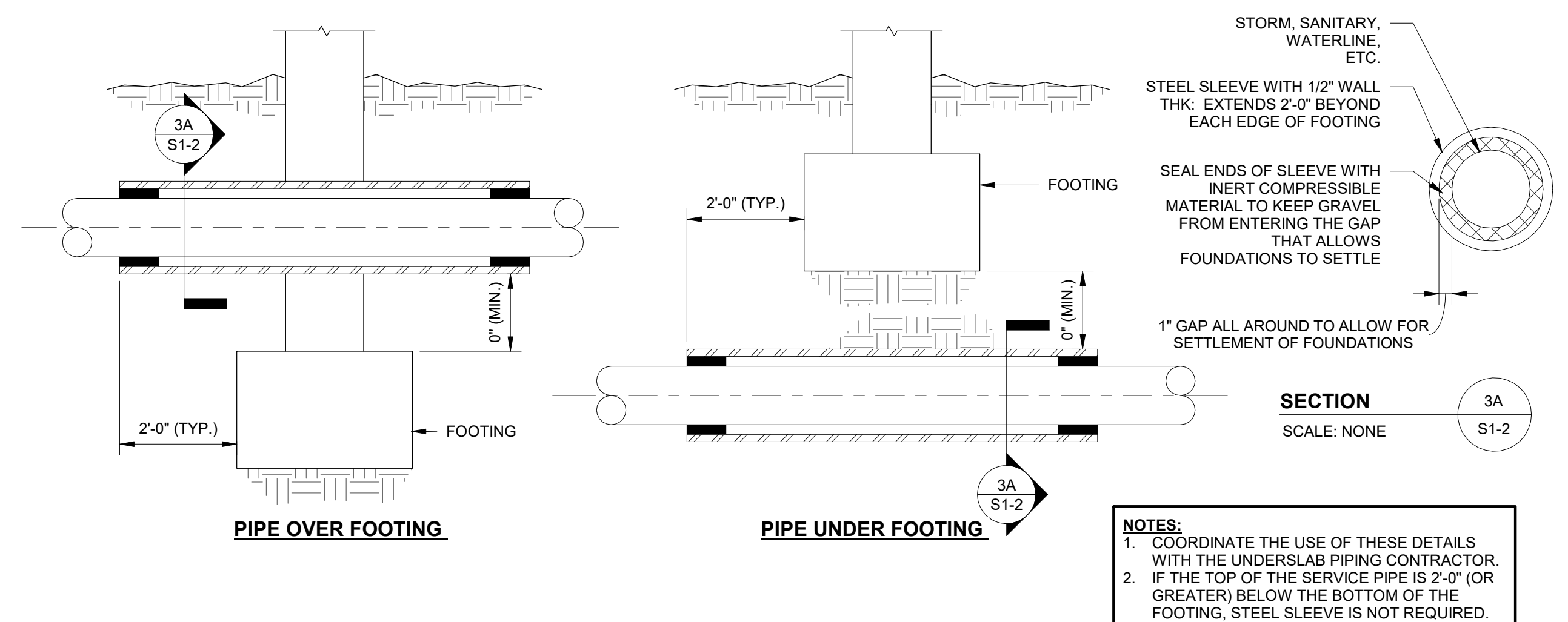
1
S0-2

TYP. FOOTING IN UNDERCUT AREA

1" = 1'-0"



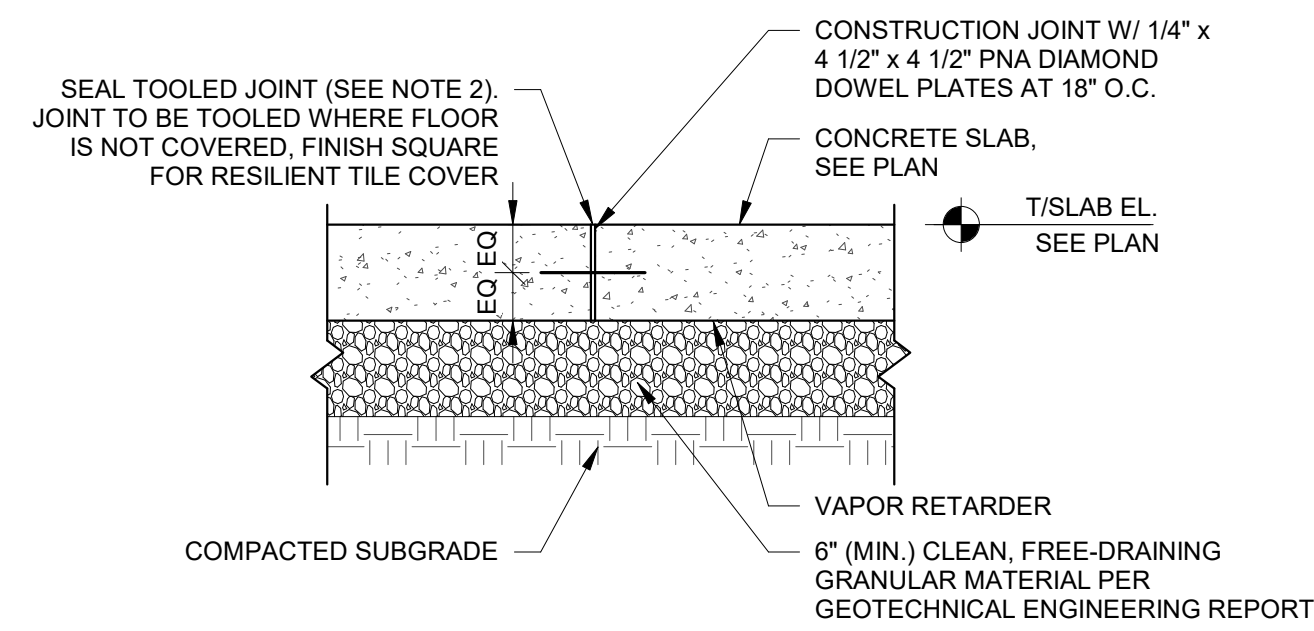
2 SLAB DEPRESSION DETAIL
S0-2 1/2" = 1'-0"



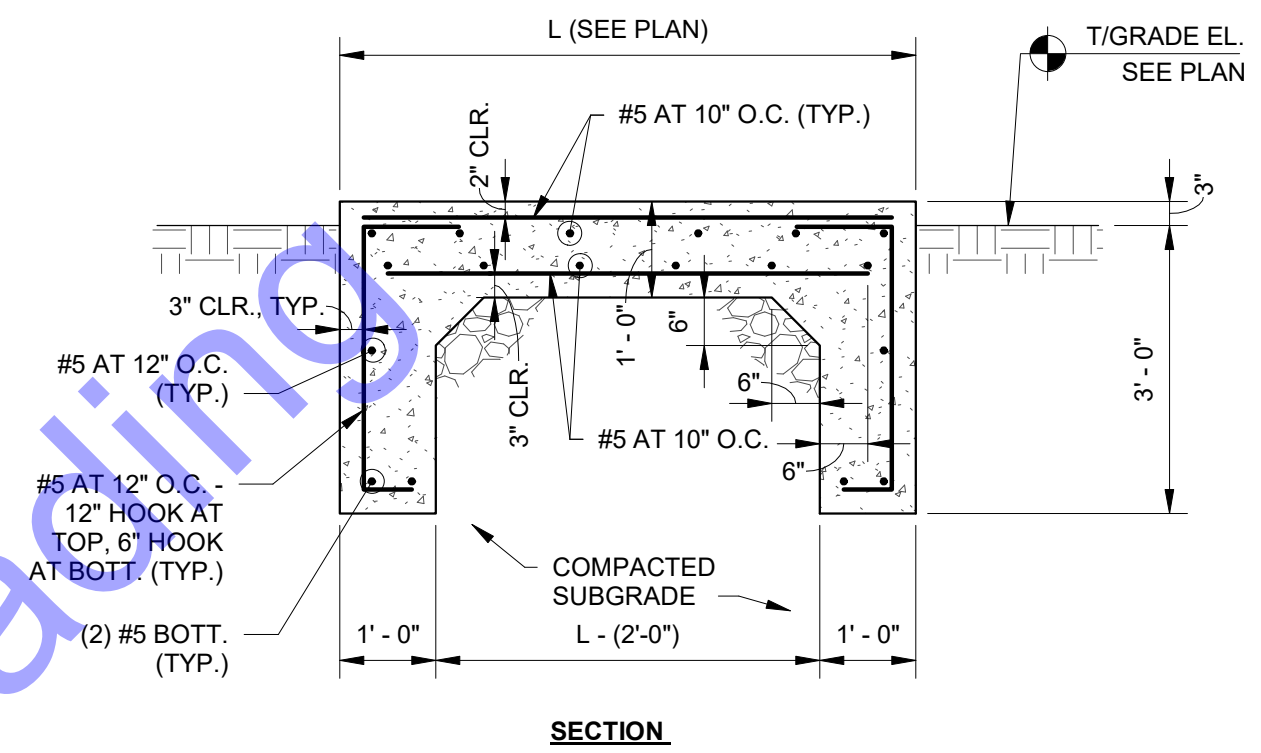
4
S0-2

TYP. UNDERGROUND SERVICE PIPE
DETAIL AT WALL FOUNDATION

1/8" = 1'-0"



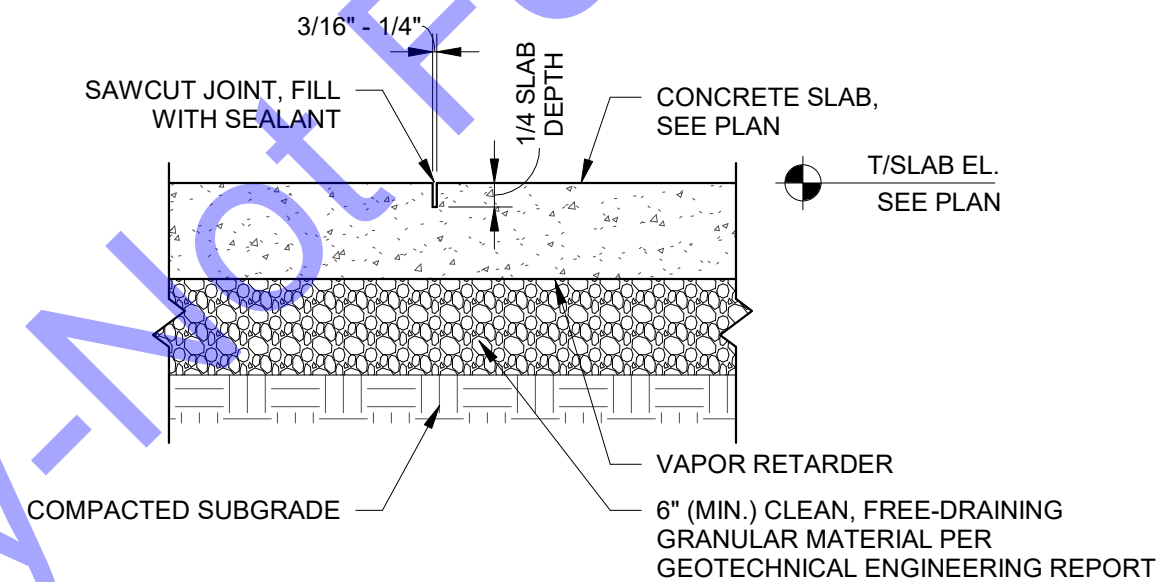
- NOTES:**
1. INSTALL PNA DIAMOND DOWEL PLATES PER MANUFACTURER'S RECOMMENDATIONS.
 2. PRIOR TO SEALING JOINT, PREPARE JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS.
 3. CONSTRUCTION JOINTS SHALL ONLY OCCUR AT LOCATIONS INDICATED.
 4. APPLY LIQUID BOND BREAKER TO FULL DEPTH OF JOINT.



- NOTES:**
1. SEE PROCESS DRAWINGS FOR EQUIPMENT PAD LOCATION.
 2. TOP OF EQUIPMENT PAD SHALL BE FLAT AND LEVEL.
 3. COORDINATE EQUIPMENT PADS WITH THE SELECTED MECHANICAL/ELECTRICAL CONTRACTORS.

TYP. SLAB ON GRADE
CONSTRUCTION JOINT

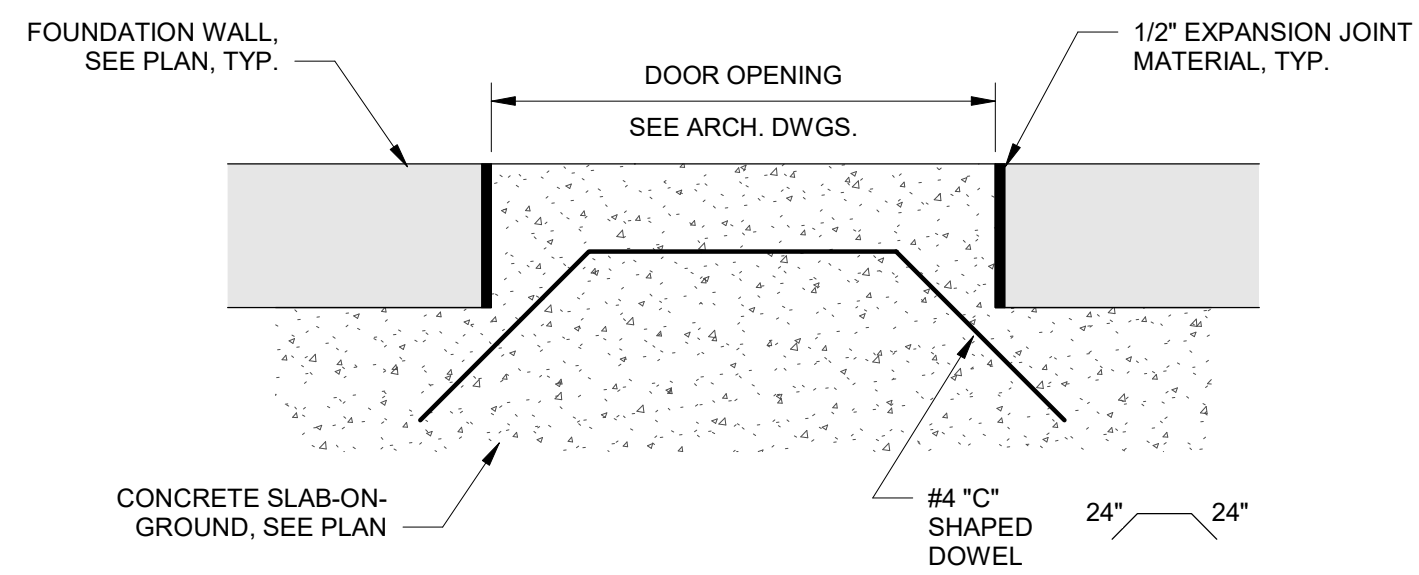
4
S0-3



- NOTES:**
1. SAWCUT JOINT AS SOON AS POSSIBLE WITHOUT RAVELING THE EDGE OF CONCRETE.
 2. PRIOR TO SEALING JOINT, PREPARE JOINT PER SEALANT MANUFACTURER'S RECOMMENDATIONS.

TYP. SLAB ON GRADE
CONTRACTION JOINT

5 CON
S0-3 1" = 1'-0"

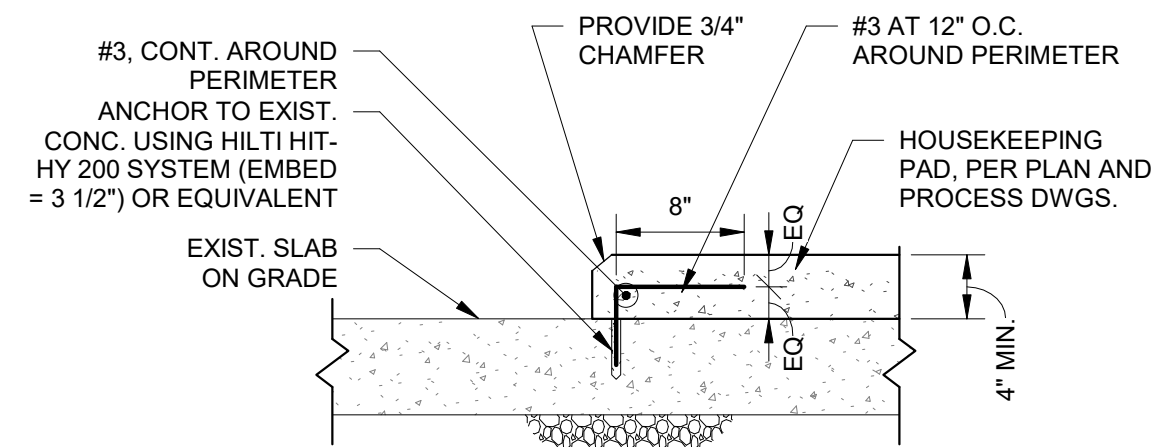


SECTION

6
S0-3 3/4" = 1'-0"

TYP. GENERATOR PAD

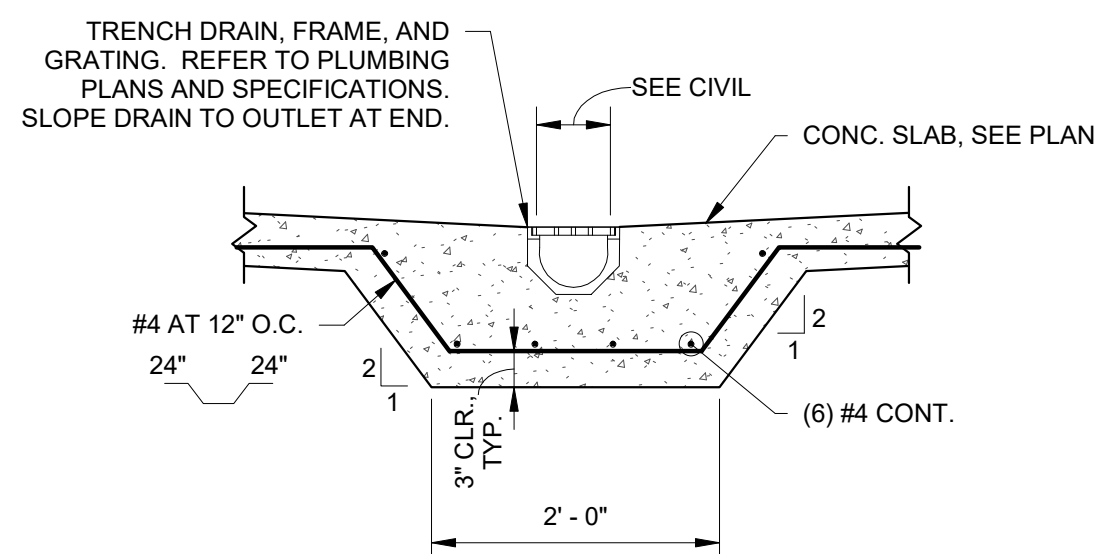
1
S0-3



- NOTES:**
1. CONTRACTOR - VERIFY LOCATION OF THE HOUSEKEEPING PADS WITH THE PROCESS DRAWINGS PRIOR TO POURING CONCRETE.
 2. CONTRACTOR - VERIFY REQUIRED SIZE AND HEIGHT OF THE HOUSEKEEPING PADS WITH THE SELECTED EQUIPMENT MANUFACTURER PRIOR TO POURING CONCRETE.

TYP. HOUSEKEEPING PAD

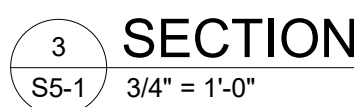
2 TYP.
S0-3 1" = 1'-0"



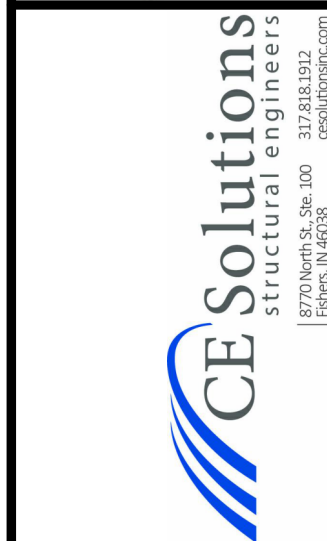
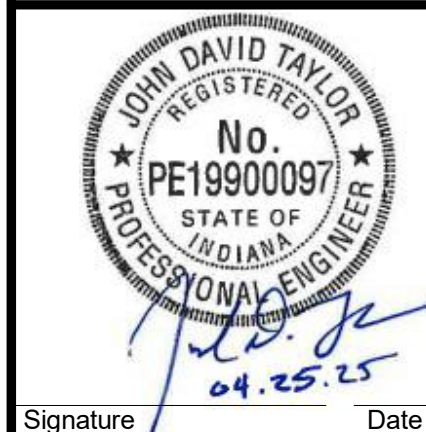
TYP. TRENCH DRAIN DETAIL

3
S0-3

[illegible]



1. SEE THE S0-SERIES SHEETS FOR GENERAL STRUCTURAL NOTES AND TYPICAL STRUCTURAL DETAILS.
2. GENERAL CONTRACTOR TO COORDINATE ALL OPENING, PIPE SLEEVES, EMBEDDED ITEMS, HANDRAILS, GRATING, ETC. WITH THE PROCESS DRAWINGS.
3. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION, CONSTRUCTION OR ERECTION. THE GENERAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DISCREPANCIES.
4. SEE SITE PLAN FOR ALL FINAL GRADE ELEVATIONS.
5. SEE GEOTECHNICAL REPORT FOR ALL BACKFILLING AND COMPACTION REQUIREMENTS BEHIND WALLS AND UNDER BASE SLABS.
6. SEE DETAILS 4/S0-3 AND 5/S0-3 FOR WALL CONSTRUCTION JOINT AND WALL CONTRACTION JOINT REQUIREMENTS.
7. MAINTAIN STRUCTURAL SLAB THICKNESSES AT ALL FLOOR SLOPES AND DEPRESSIONS.



**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

**CONTRACT A -
WWTP AND LIFT STATION
No. 2 IMPROVEMENTS**

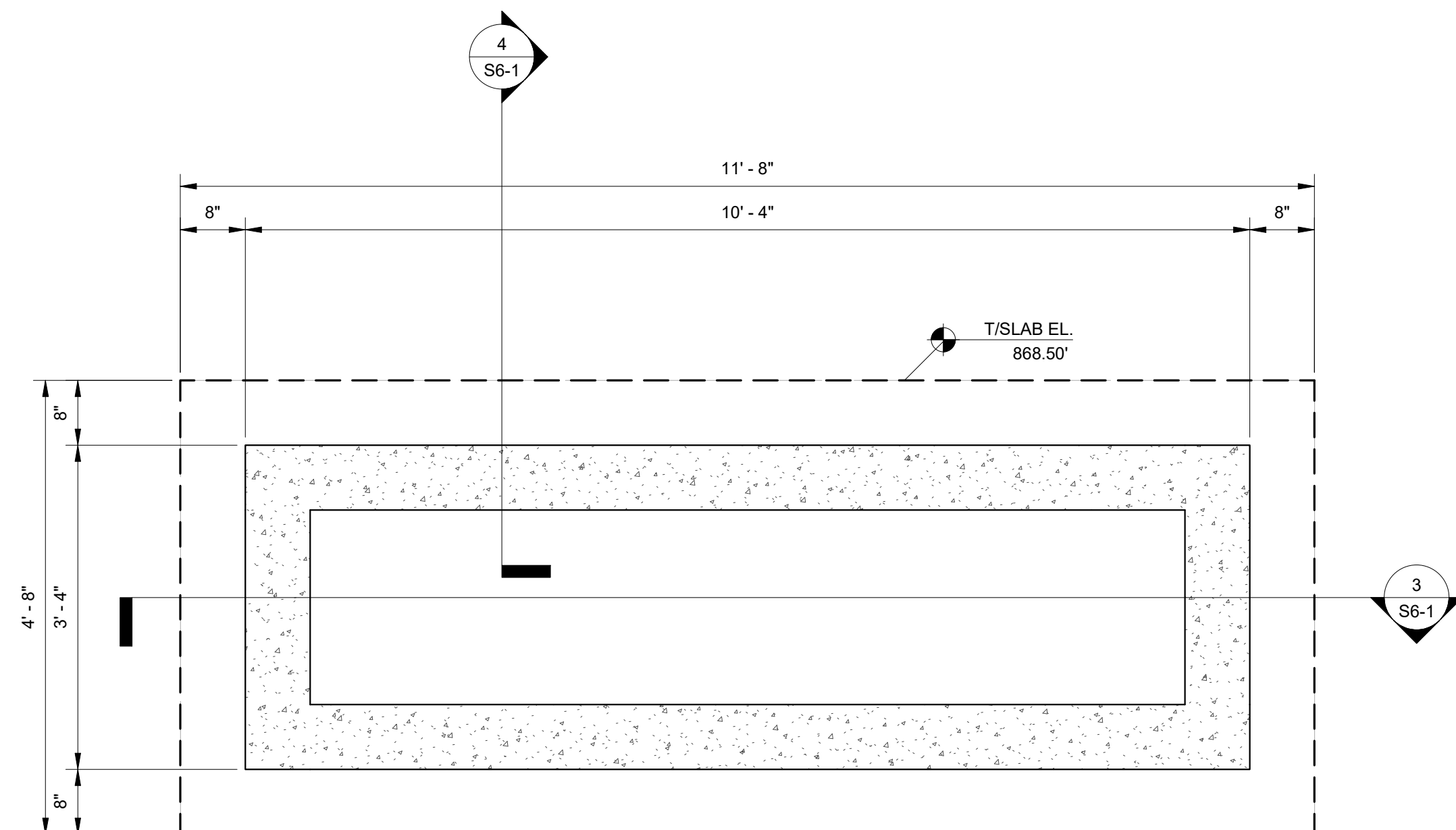
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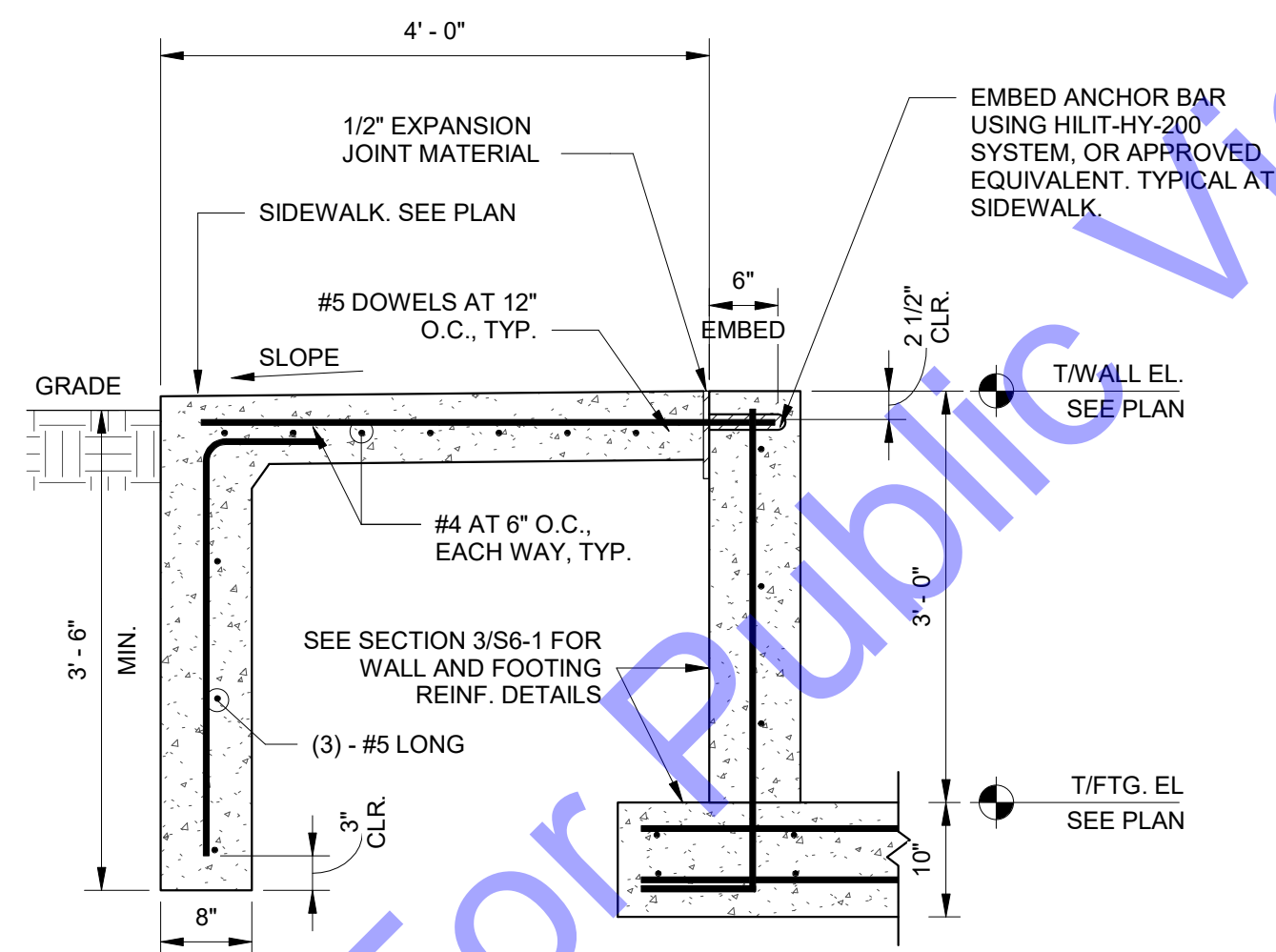
Designed By: CEU	Drawn By: RMS	Checked By: JDT
Issue Date: 06/13/17	Project No: 24-138	Scale: As indicated

NEW SAGR SYSTEM
SPLITTER STRUCTURE -
FOUNDATION PLAN,
UPPER LEVEL PLAN,
AND SECTIONS Copy 1

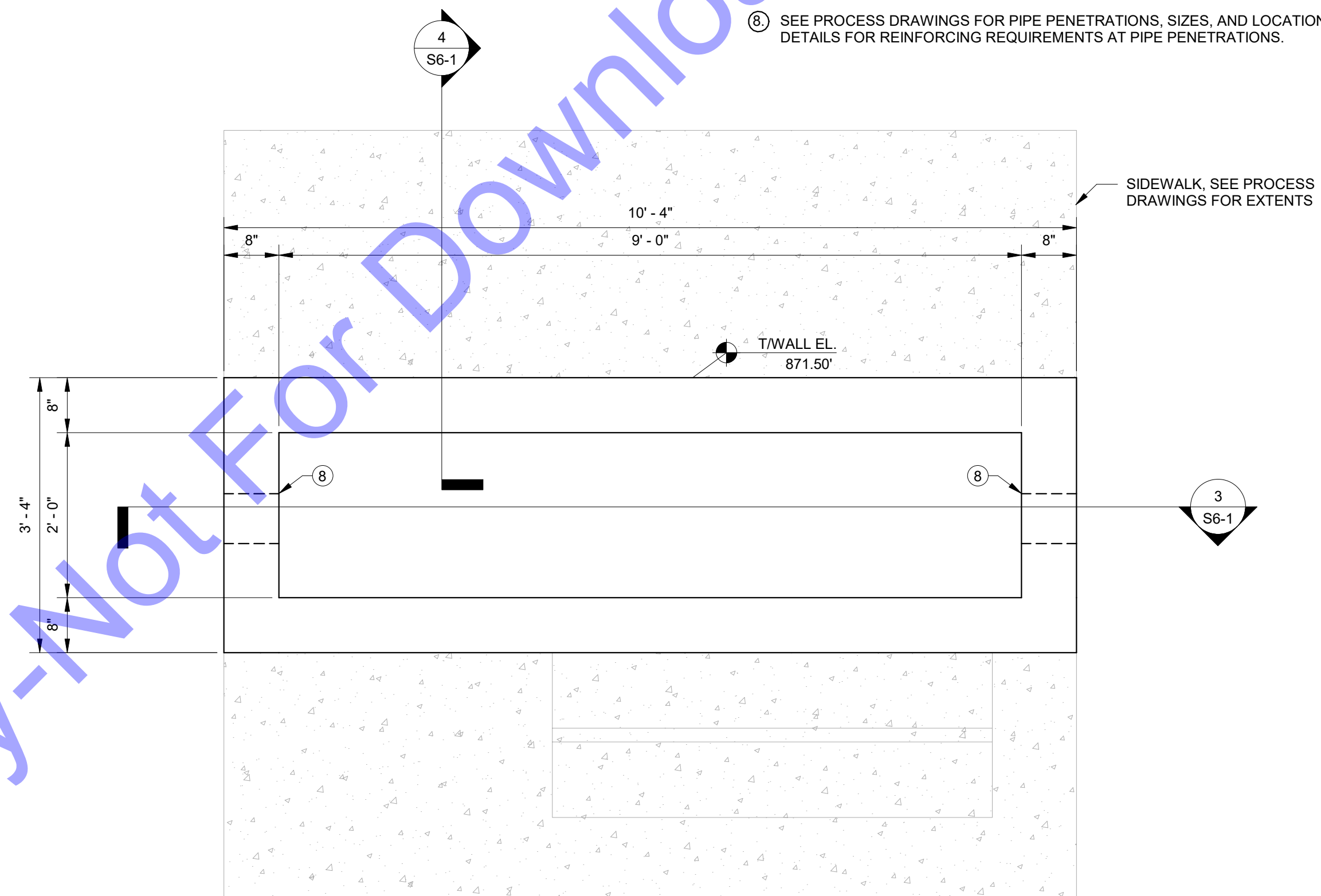
Drawing No:
S5-1
Sheet: 52 OF 55



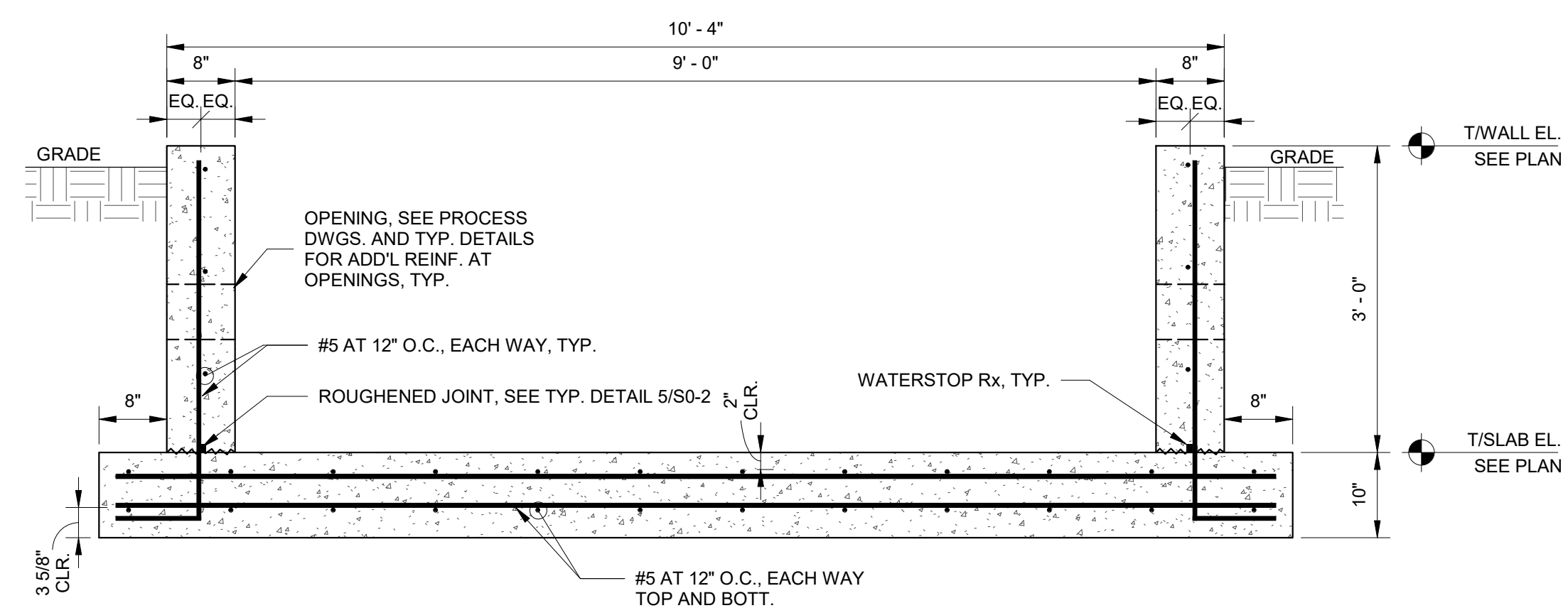
1 UV STRUCTURE - FOUNDATION PLAN
S6-1 3/4" = 1'-0"



4 SECTION
S6-1 3/4" = 1'-0"



2 UV STRUCTURE - TOP PLAN
S6-1 3/4" = 1'-0"



3 SECTION
S6-1 $3/4" = 1'-0"$

- ### FOUNDATION AND UPPER PLAN NOTES

- INDICATES NOTE REFERENCED IN PLAN.
1. SEE THE 50-SERIES SHEETS FOR GENERAL STRUCTURAL NOTES AND TYPICAL STRUCTURAL DETAILS.
2. GENERAL CONTRACTOR TO COORDINATE ALL OPENING, PIPE SLEEVES, EMBEDDED ITEMS, HANDRAILS, GRATING, ETC. WITH THE PROCESS DRAWINGS.
3. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION, CONSTRUCTION OR ERECTION. THE GENERAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DISCREPANCIES.
4. SEE SITE PLAN FOR ALL FINAL GRADE ELEVATIONS.
5. SEE GEOTECHNICAL REPORT FOR ALL BACKFILLING AND COMPACTION REQUIREMENTS BEHIND WALLS AND UNDER BASE SLABS.
6. SEE DETAILS 4/S0-3 AND 5/S0-3 FOR WALL CONSTRUCTION JOINT AND WALL CONTRACTION JOINT REQUIREMENTS.
7. MAINTAIN STRUCTURAL SLAB THICKNESSES AT ALL FLOOR SLOPES AND DEPRESSIONS.
- ⑧ SEE PROCESS DRAWINGS FOR PIPE PENETRATIONS, SIZES, AND LOCATIONS. SEE TYPICAL DETAILS FOR REINFORCING REQUIREMENTS AT PIPE PENETRATIONS.



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- SOUTH BEND, IN



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structural engineers

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cesolutions.com

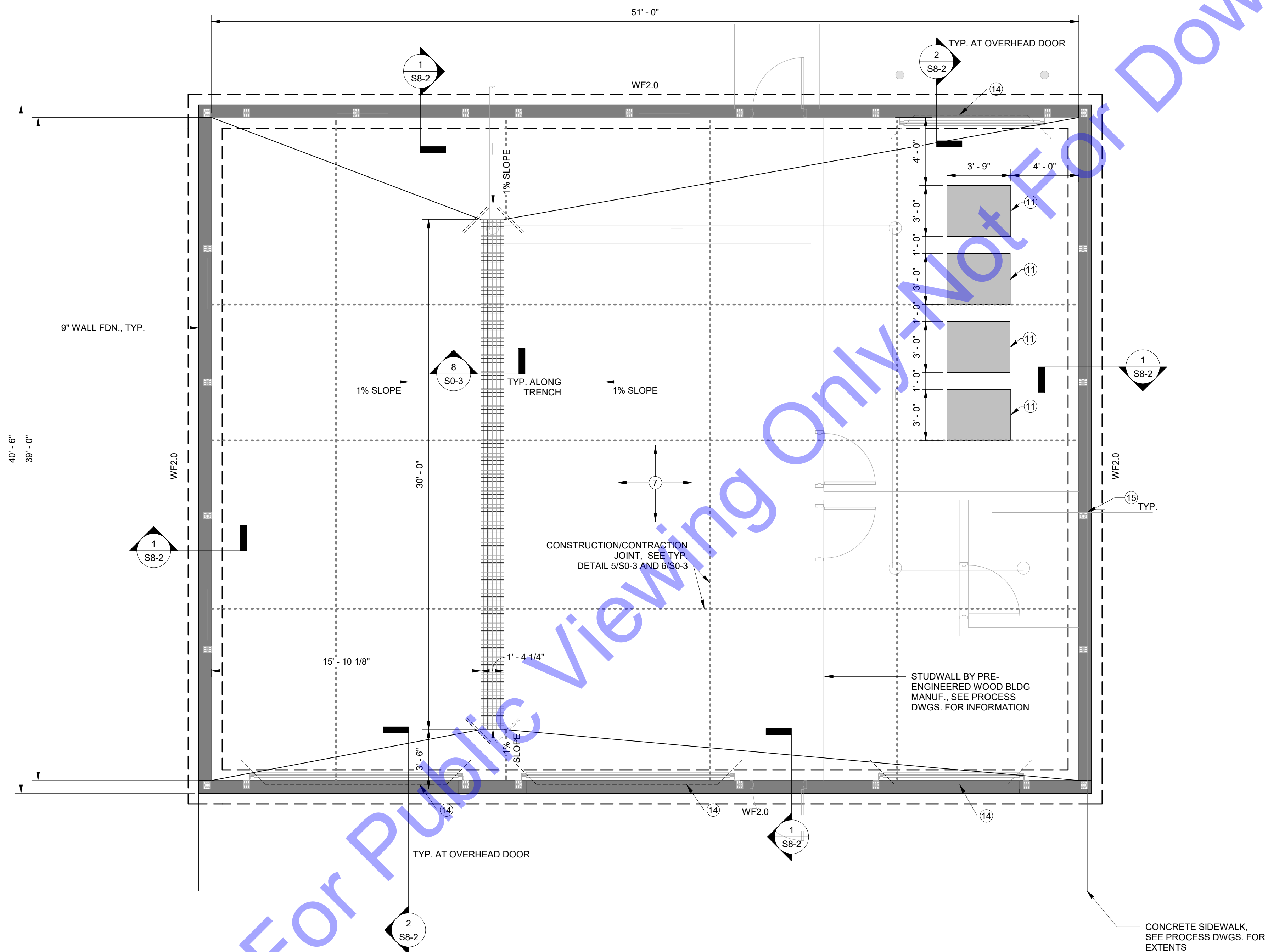
TOWN OF CLAYPOOL KOSCIUSKO COUNTY, INDIANA	CONTRACT A - WWTP AND LIFT STATION No. 2 IMPROVEMENTS
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UV STRUCTURE
FOUNDATION PLAN,
UPPER LEVEL PLAN,
AND SECTION

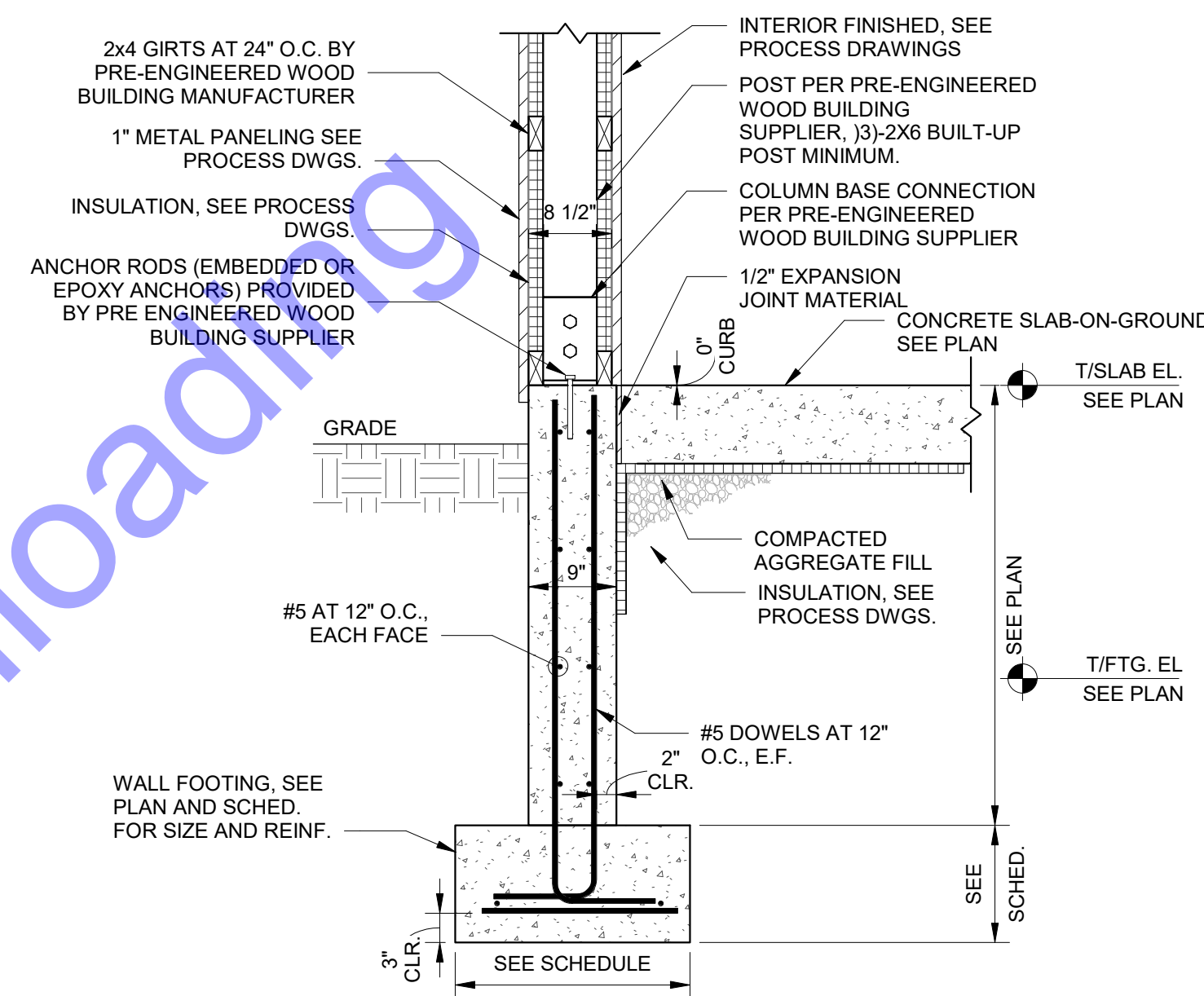
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S6-1
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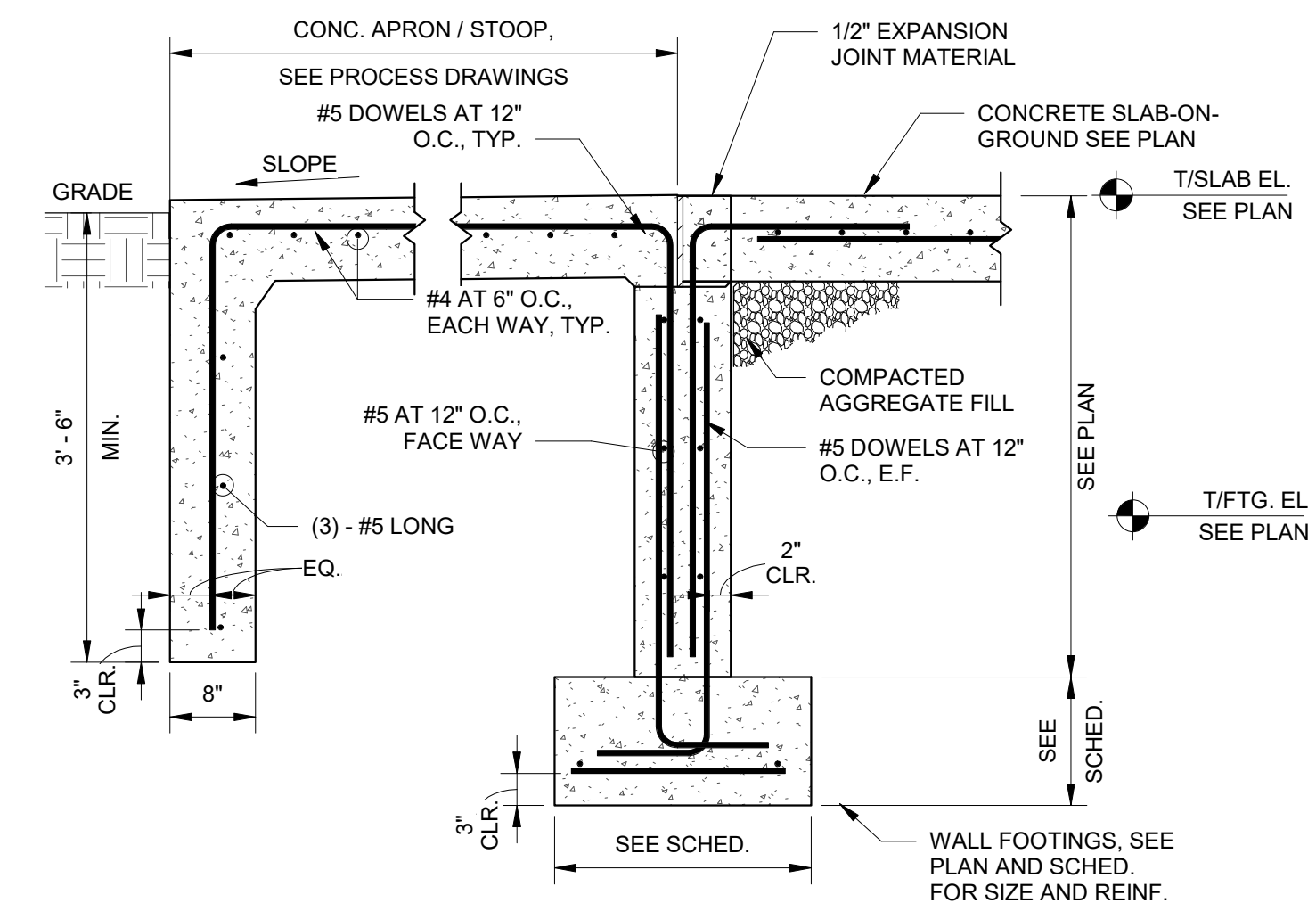
FOUNDATION PLAN NOTES

1. INDICATES NOTE REFERENCED IN PLAN.
2. SEE THE 50-SERIES SHEETS FOR GENERAL STRUCTURAL NOTES AND TYPICAL STRUCTURAL DETAILS.
3. GENERAL CONTRACTOR TO COORDINATE ALL OPENING, PIPE SLEEVES, EMBEDDED ITEMS, HANDRAILS, GRATING, ETC. WITH THE PROCESS DRAWINGS.
4. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION, CONSTRUCTION OR ERECTION. THE GENERAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DISCREPANCIES.
5. SEE SITE PLAN FOR ALL FINAL GRADE ELEVATIONS.
6. SEE GEOTECHNICAL REPORT FOR ALL BACKFILLING AND COMPACTION REQUIREMENTS BETWEEN WALLS AND UNDER BASE SLABS.
7. T/SLAB ELEVATION = 871.75' AT THE PERIMETER, UNLESS NOTED OTHERWISE
T/FOUNDATION WALL ELEVATION = 872.00', UNLESS NOTED OTHERWISE
T/FOOTING ELEVATION = 868.00', UNLESS NOTED OTHERWISE
8. FLOOR SLAB SHALL CONSIST OF A 8-INCH SLAB ON GRADE OVER 6-INCHES OF COMPACTED FILL AND A 10-MIL VAPOR RETARDER. REINFORCE SLAB WITH #5 @ 8" O.C., EACH WAY.
9. SAW CUT OR WET CUT CONTRACTION JOINTS IN SLABS AS SHOWN ON PLANS. WET CUTS ARE TO BE MADE AFTER TROWELING WHILE CONCRETE IS STILL PLIABLE. SAW CUTS ARE TO BE MADE AS SOON AS PRACTICAL AFTER FINAL HARD TROWELLING BUT MUST BE COMPLETED WITHIN 2-HOURS OF FINAL TROWELLING. GENERAL CONTRACTOR SHALL SUBMIT AN ALTERNATE CONSTRUCTION JOINT (CJ) AND CONTRACTION JOINT (CT) LOCATION PLAN TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONCRETE PLACEMENT
10. SEE DETAILS 4/SO-3 AND 5/SO-3 FOR WALL CONSTRUCTION JOINT AND WALL CONTRACTION JOINT REQUIREMENTS.
11. MAINTAIN STRUCTURAL SLAB THICKNESSES AT ALL FLOOR SLOPES AND DEPRESSIONS.
12. 4-INCH HOUSEKEEPING CONCRETE PAD PER DETAIL. 2/SO-3, CONTRACTOR SHALL CONFIRM PAD THICKNESS, SIZE, AND LOCATION WITH THE PROCESS DRAWINGS AND THE SELECTED EQUIPMENT MANUFACTURER. ADDITIONALLY, REFER TO PROCESS DWGS FOR EQUIPMENT PADS NOT SHOWN ON STRUCTURAL FOUNDATION PLAN. SEE PROCESS, ELECTRICAL, AND MECHANICAL DRAWINGS FOR LOCATION OF EQUIPMENT PADS.
13. WFX.X DENOTES FOOTING MARK AND ELEVATION, SEE FOOTING SCHEDULE.
14. AT RE-ENTRANT SLAB CORNER CONDITIONS, PROVIDE (2) #4 x 4'-0" LONG AT 3-INCHES O.C. PLACED 2-INCHES CLEAR FROM CORNER, CENTERED IN SLAB, TYPICAL.
15. AT DOOR LOCATIONS PROVIDE "C" SHAPE DOWELS PER DETAIL. 6/SO-3
16. THE LAYOUT AND ARRANGEMENT OF THE PRE-ENGINEERED POST-FRAME BUILDING SHOWN ON PLAN IS SCHEMATIC IN NATURE AND INTENDED TO CONVEY THE ANTICIPATED SCOPE OF THE PRE-ENGINEERED POST-FRAME BUILDING STRUCTURE. THE WOOD POST LOCATIONS ARE BASED ON A TYPICAL PRE-ENGINEERED POST-FRAME BUILDING LAYOUT. THE WOOD POST LAYOUT, ARRANGEMENT, SPACING, HEIGHT, SPAN, AND DEPTH OF ALL OF THE STRUCTURAL MEMBERS SHALL BE DETERMINED BY THE PRE-ENGINEERED POST-FRAME BUILDING SUPPLIER IN CONSULTATION WITH THEIR QUALIFIED PROFESSIONAL ENGINEER OR SPECIALTY STRUCTURAL ENGINEER. THE INFORMATION SHOWN ON THE PLAN IS NOT MEANT TO BE RESTRICTIVE, NOR DOES IT PREVENT THE PRE-ENGINEERED POST-FRAME BUILDING SUPPLIER FROM SUGGESTING POTENTIAL ALTERNATIVES FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD.
17. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE STRUCTURAL ENGINEER SHOULD THE POST LAYOUT PROVIDED BY THE PRE-ENGINEERED POST-FRAME BUILDING SUPPLIER DEViate FROM WHAT IT IS SHOWN ON PLAN, AND FOR COORDINATING ANY MODIFICATIONS THAT WOULD REQUIRE REVISING THE FOUNDATION AND SLAB-ON-GROUND PLAN TO MATCH THE ALTERED LAYOUT OF THE PRE-ENGINEERED POST-FRAME BUILDING BY THE BUILDING SUPPLIER.
18. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION OF OUTSIDE FACE OF FOUNDATION WALL WITH THE SELECTED PRE-ENGINEERED POST-FRAME BUILDING SUPPLIER AND FOR COORDINATING THE EXTENT OF THE CONCRETE FOUNDATIONS AND SLAB-ON-GROUND PRIOR TO FABRICATION OF THE STEEL REINFORCEMENT, PLACEMENT OF CONCRETE, AND FABRICATION OF THE PRE-ENGINEERED POST-FRAME BUILDING.

WALL FOOTING SCHEDULE					
MARK	WIDTH	LENGTH	THICK.	BOTT. LONG. REINF.	BOTT. TRANS. REINF.
WF2.0	2'-0"	CONT.	1'-0"	2 - #5	#5 AT 12" O.C.



1 SECTION
S8-2 3/4" = 1'-0"

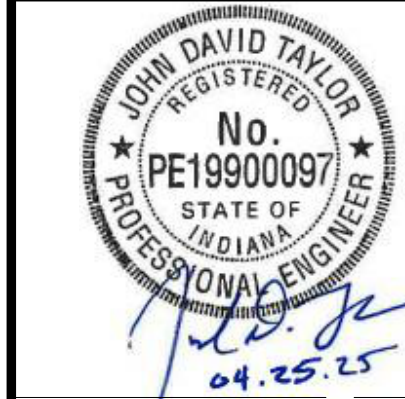


2 SECTION
S8-2 $\frac{3}{4}" = 1'-0"$



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OFFICE LOCATIONS IN:
INDIANAPOLIS, IN. (2)
EVANSVILLE, IN.
FORT WAYNE, IN.
CROWN POINT, IN.
BOWLING GREEN, KY.
SOUTH BEND, IN.



Signature _____

Date _____



**TOWN OF CLAYPOOL
KOSCIUSKO COUNTY, INDIANA**

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WWTP AND LIFT STATION
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Designed By:	Drawn By:	Checked By:
CEU	RMS	JDT

Issue Date:	Project No:	Scale:
02/12/2025	24-138	3/4" = 1'-0"

NEW UTILITY BUILDING -
FOUNDATION SECTIONS

Drawing No:

S8-2

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