



COMPLEX PROJECTS
REQUIRE RESOLVE
THRASHER'S GOT IT

**TOWN OF CLAY
CLAY COUNTY, WEST VIRGINIA
CONTRACT NO. 1: WASTEWATER TREATMENT PLANT AND
COLLECTION SYSTEM UPGRADES PROJECT**

ADDENDUM #2

JULY 20, 2023

THRASHER PROJECT #D10-11021.00 / DEI PROJECT #1810

TO WHOM IT MAY CONCERN:

A Pre-Bid Conference was held on Thursday, June 29, 2023, on the above-referenced project. The following are clarifications and responses to questions posed by contractors for the above-referenced project.

A. GENERAL

1. **ADD** the attached Bipartisan Infrastructure Law Project Sign and the EPA Office of Inspector General Poster to the Contract Documents.

B. SPECIFICATIONS

DELETE item in SECTION 11375 – SBR TREATMENT SYSTEM / DIGESTER SYSTEM (**11375.2.11.E. Portable Suspended Solids System**)

C. DRAWINGS

Electrical Drawings to be **REPLACED**: Drawing Nos. 1810-9, 16C, 18, 18A, 18B, and 18C.

Electrical Drawings to be **ADDED**: Drawing Nos. 1810-21, 21A, 21B, 21C, 21D, 21E, and 21F

D. QUESTIONS AND RESPONSES

QUESTION

1. We had previously discussed providing non-standard control panels to fit in the existing building and be above the flood elevation. Below is the latest excerpt from the email that we had discussed. Is that still the plan?

You would need both the 42" x 60" panel for the ICEAS controls. The 2nd 36" x 48" panel would also be needed to include the WAS pump motor starters along with the 3-phase power components.

RESPONSE

The non-standard panels will be required, as noted.

QUESTION

2. Specification mentions providing an MCC? Last discussion I had was that blower VFDs would be wall mount. Which is to be provided?

RESPONSE

The blower VFDs can be wall mounted, but any required conductors, conduits and/or other appurtenances are to be included in the bid price of the project.

QUESTION

3. For the blower VFDs, do you want VFDs for all 4 blowers?

RESPONSE

Yes.

QUESTION

4. The SBR spec section has a portable TSS probe. This probe is no longer available and should be deleted from the spec section.

RESPONSE

The TSS probe will be deleted from the specifications. (SECTION 11375.2.11.E)

QUESTION

5. **PLAN DRAWINGS:**
No details are shown regarding location of main control panel / local control panels, etc. for bar screen / washer compactor equipment. Please provide any necessary information.

RESPONSE

See attached electrical drawings.

QUESTION

6. **SECTION 11028 Mechanically Cleaned Bar Screen with Washer Compactor:**
Sub Section 2.2.J – Noted channel width of 12" conflicts with the channel width of 18" on plan drawing sheet 7A. Please confirm the correct width.

RESPONSE

The correct width is 18 inches, as shown on Drawing 1810-7A.

QUESTION

7. **SECTION 11028 Mechanically Cleaned Bar Screen with Washer Compactor:**
Sub Section 2.2.J – Section 1.1.B.1 states peak flow is 2 MGD, design conditions chart states peak flow is 1 MGD. Please confirm the correct peak flow.

RESPONSE

Both are correct. The peak flow capacity of the screen is to be 2 MGD; the peak expected flow at the wastewater treatment plant is 1 MGD.

QUESTION

8. SECTION 11028 Mechanically Cleaned Bar Screen with Washer Compactor:
Sub Section 2.2.J – Section 1.1.B.1 states average flow is 0.6 MGD, design conditions chart states average flow is 0.2 MGD. Please confirm the correct average flow.

RESPONSE

The Average Daily Flow will be 0.2 MGD for this facility; the Peak Daily Flow will be 1.0 MGD.

QUESTION

9. SECTION 11028 Mechanically Cleaned Bar Screen with Washer Compactor:
Sub Section 2.4.B.1 – The dead plate heaters specified here are rated for Class I Div 2. The design conditions chart in 2.2.J states the installation envelope is Class I Div 1. Please confirm what NFPA classification the dead plate heating units must meet.

RESPONSE

The rating is Class I Division 2 for this installation.

QUESTION

10. SECTION 15170 – Motors:
Sub Section 2.2.C.3 Fractional horsepower explosion proof motors for bar screen and washer compactor use Class F insulation. Class H is a custom option with high cost and long lead times. Please confirm Class F insulation is acceptable for these motors.

RESPONSE

Insulation that meets the requirements of Class I Division 2, according to NFPA 820 will be appropriate.

QUESTION

11. The description on the bid form for Bid Item 7 is 1,100' of 10" restrained joint pipe bursted. Plan sheet 17 calls out for 360' +/- of this to be cured in place liner and 600' +/- of pipe replacement with 10" restrained joint PVC. I assume that the plans are correct and there is no pipe bursting required? Please clarify.

RESPONSE

The Form of Proposal is correct; the entire 1,100 LF is to be replaced by pipe bursting.

QUESTION

12. MH DC-1 has (2) 14" DI pipes coming into it approximately 9' above the bottom of the manhole. Does this MH need to be a drop MH (per detail on Sheet 16)? Please advise.

RESPONSE

No. This is NOT a drop Manhole.

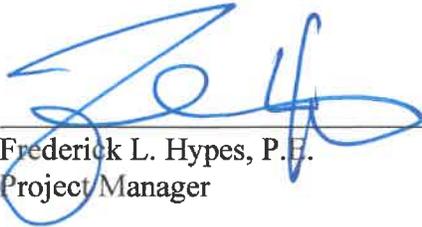
E. CLARIFICATIONS

1. Since design planning for this project was started prior to May 14, 2022, the Build America Buy America Act (BABA) requirements are waived.
2. AIS requirements are applied to this project.

If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, **bids will be received until 2:00 PM on August 1, 2023** at the Town of Clay, 956 Main Street, Clay, WV 25043. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.



Frederick L. Hypes, P.E.
Project Manager



Enclosure: Electrical Drawings
 Bipartisan Infrastructure Law Project Sign
 EPA Office of Inspector General Poster

19 July 2023



OFFICE OF INSPECTOR GENERAL U.S. ENVIRONMENTAL PROTECTION AGENCY



THEFT AND MISUSE OF GOVERNMENT PROPERTY

MISMANAGEMENT AND WASTE OF FUNDS

REPORT

FRAUD WASTE & ABUSE

PROGRAM FRAUD

HOTLINE COMPLAINT FORM



U.S. EPA OIG
HOTLINE
888.546.8740

LABORATORY FRAUD

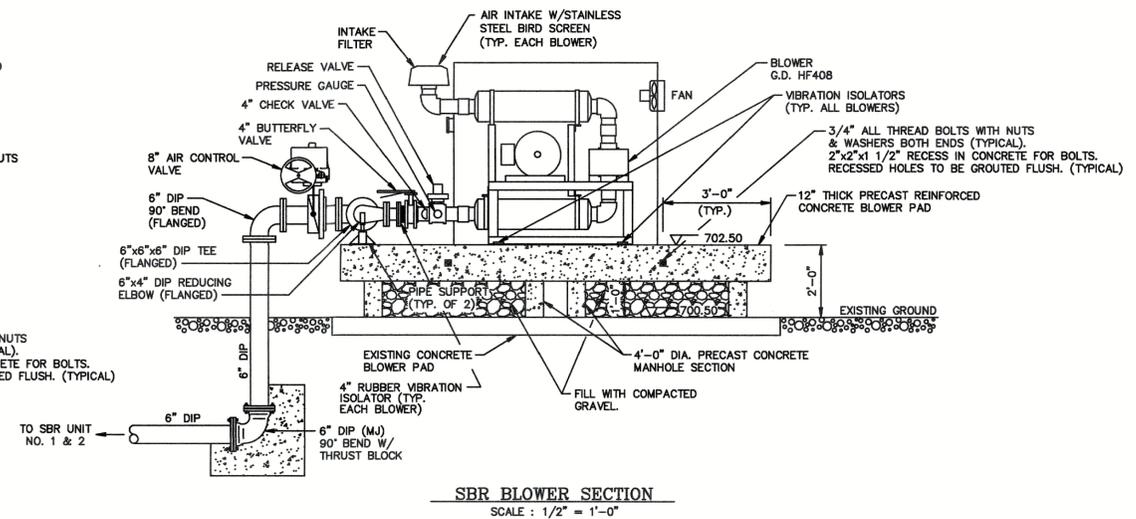
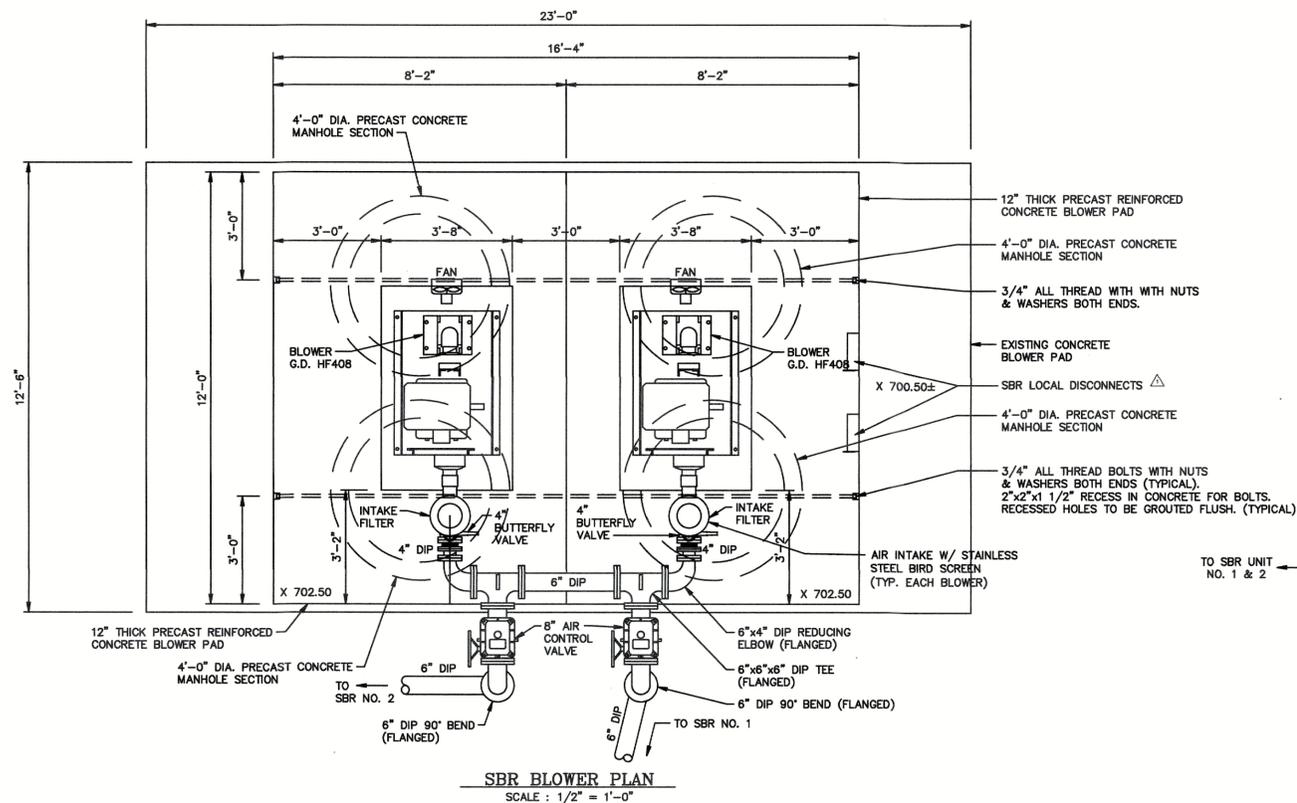
CONFLICT OF INTEREST

ABUSE OF AUTHORITY

CONTRACT, PROCUREMENT, AND GRANT FRAUD

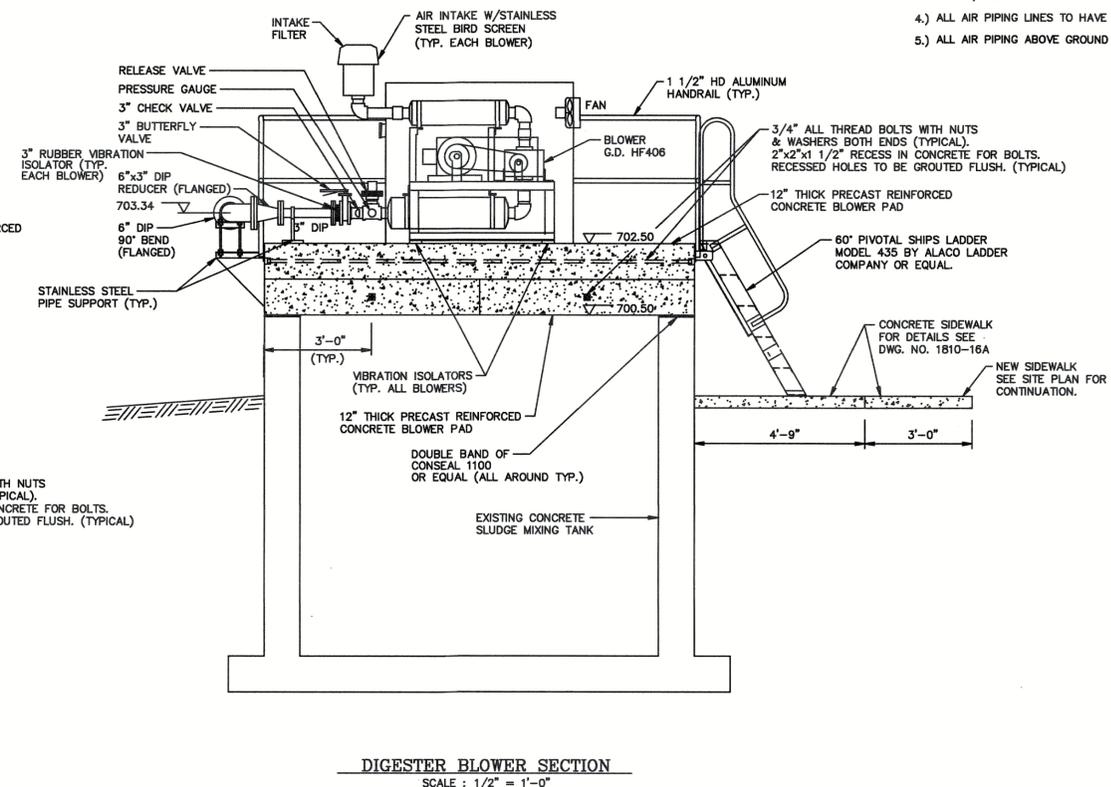
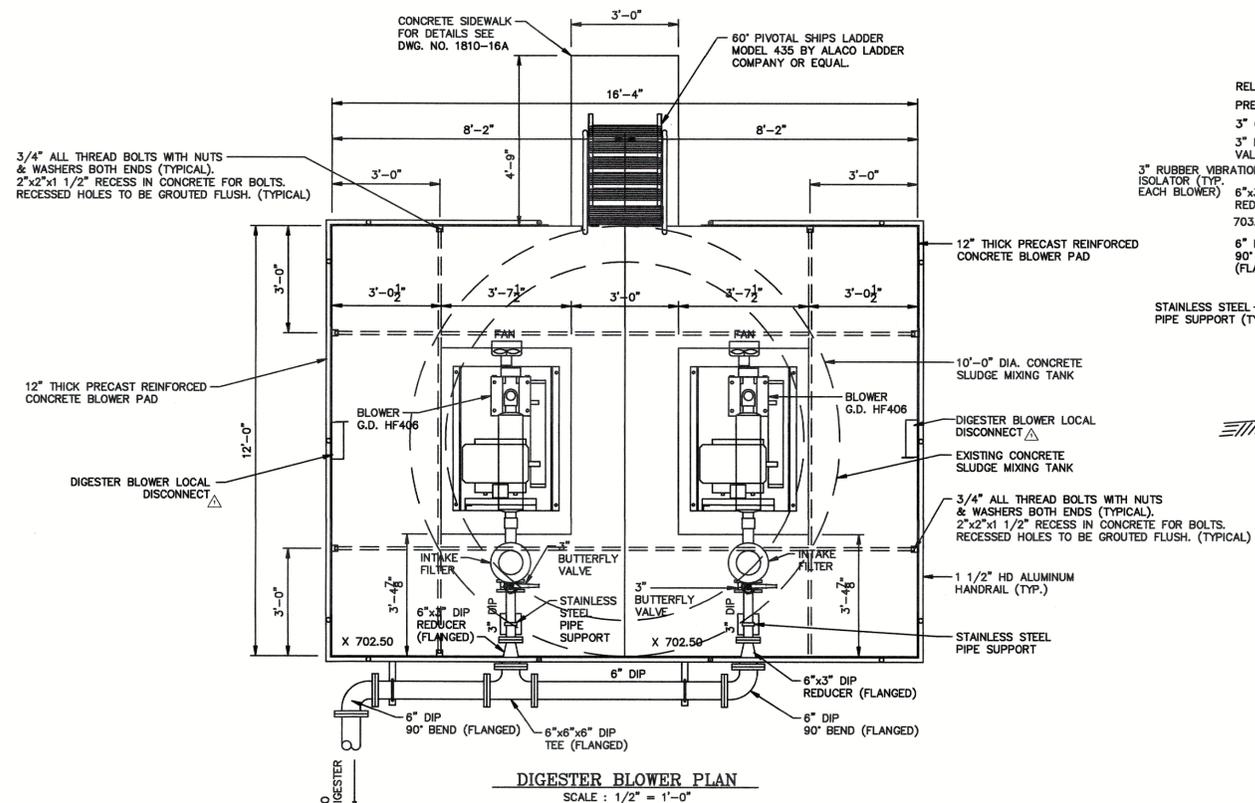
EMPLOYEE MISCONDUCT

COMPUTER CRIMES



BLOWER NOTES:

- 1.) BLOWER WILL HAVE COOLING FAN IN NOISE ENCLOSURE WIRING & HARDWARE TO BE SUPPLIED & CONNECTED BY CONTRACTOR.
- 2.) ALL BLOWERS WILL HAVE DIP BLOWER AIR INFLUENT LINE W/STAINLESS STEEL BIRD SCREEN (TYP.)
- 3.) ALL BLOWERS WILL HAVE DIP BLOWER AIR INFLUENT LINE W/STAINLESS STEEL BIRD SCREEN (TYP.)
- 4.) ALL AIR PIPING LINES TO HAVE HIGH TEMPERATURE GASKETS.
- 5.) ALL AIR PIPING ABOVE GROUND SHOWN TO BE FLANGED.



CONTRACT 1

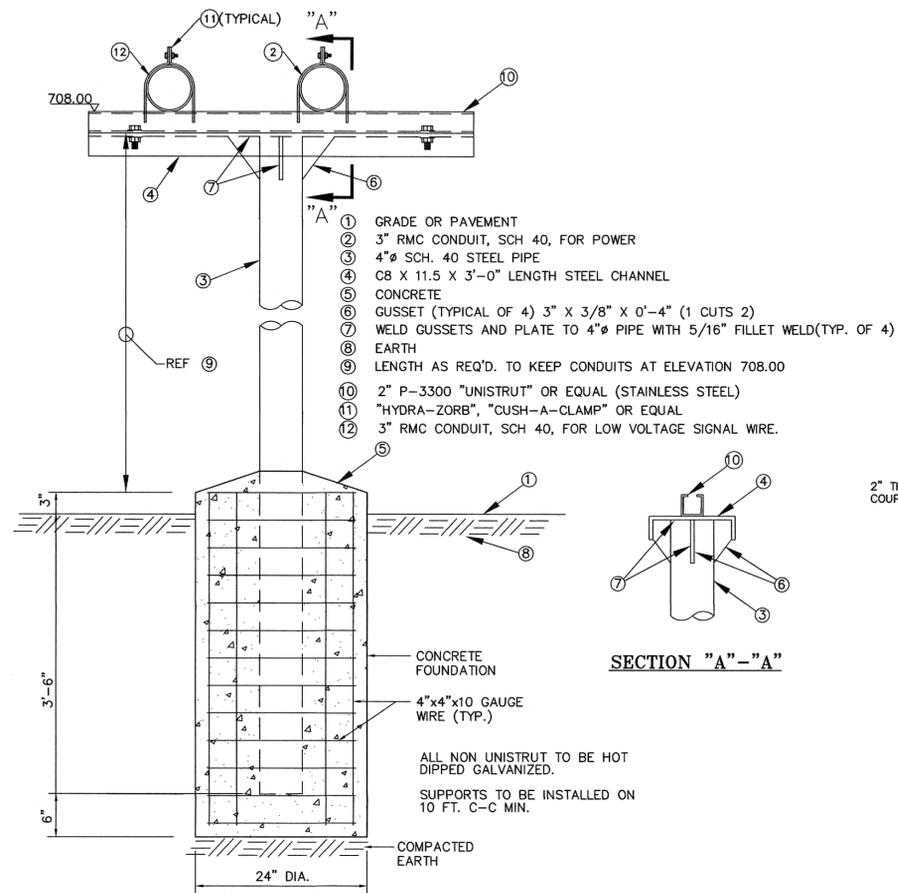
NO.	DATE	DESCRIPTION
REVISIONS		
Town of Clay		WASTEWATER TREATMENT
Clay County, West Virginia		PLANT AND COLLECTION
		SYSTEM UPGRADES

SBR BLOWERS & DIGESTER BLOWERS PLAN AND SECTIONS

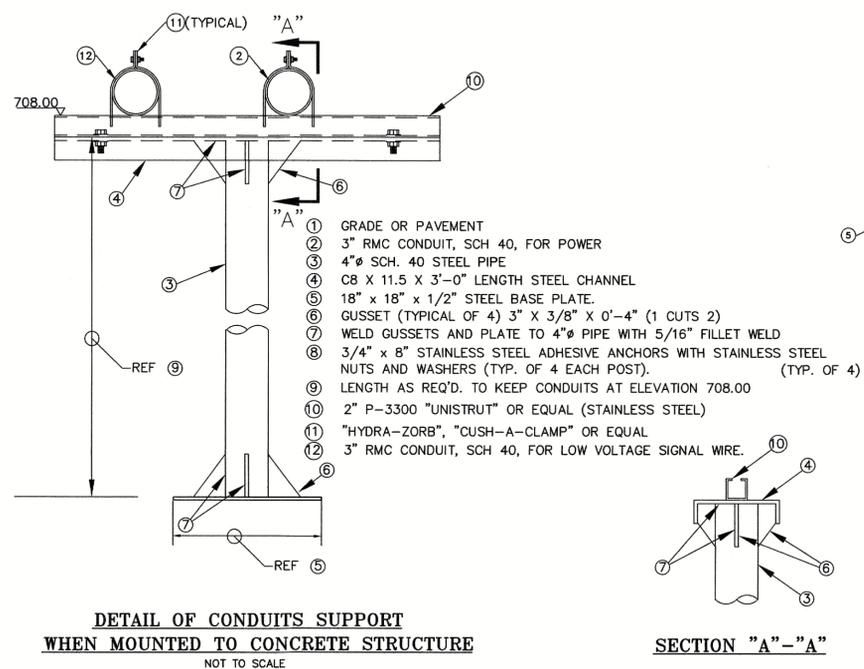
DRAWN BY: KD/JEH	CHECKED BY: F.W.H.	DRAWING 1810
SCALE: AS SHOWN	DATE: MARCH 2021	9

DUNN ENGINEERS, INC.
400 SOUTH RUFFNER ROAD
CHARLESTON, W.V. 25314

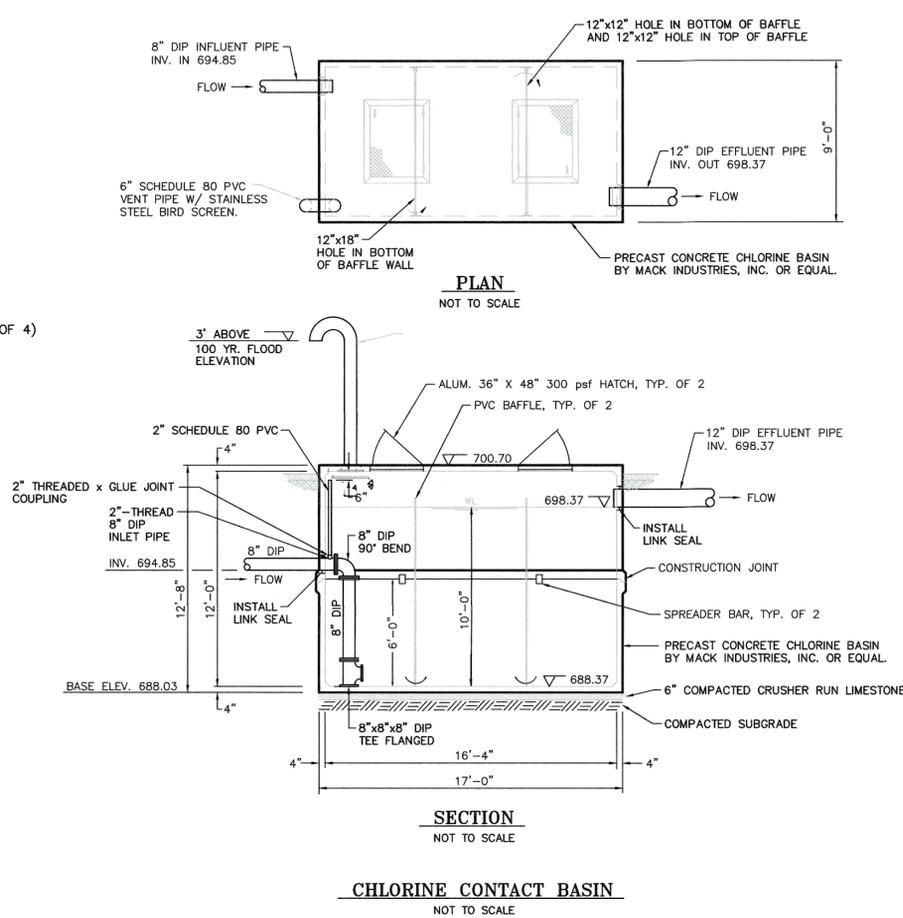
ADDENDUM 2



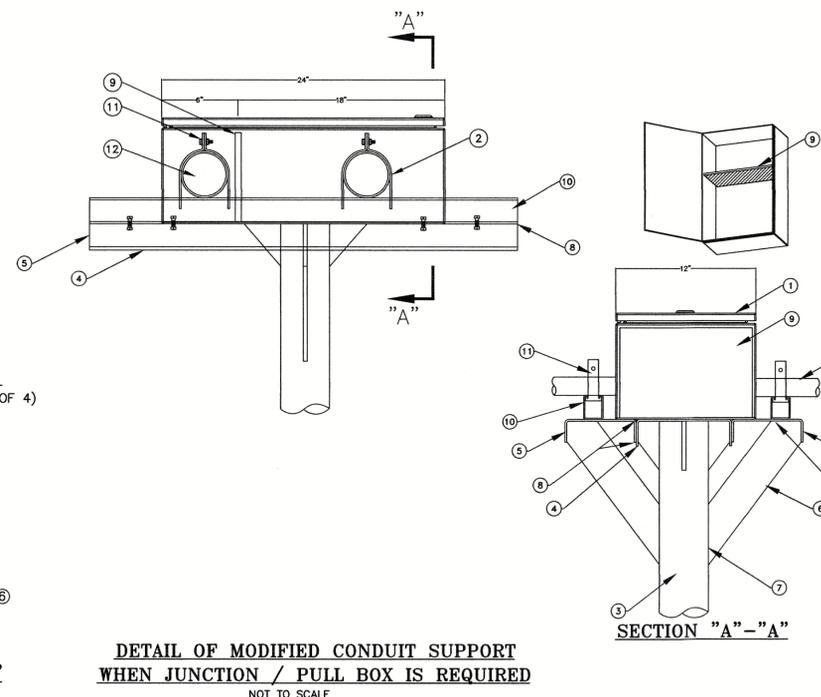
DETAIL OF CONDUITS SUPPORT
NOT TO SCALE



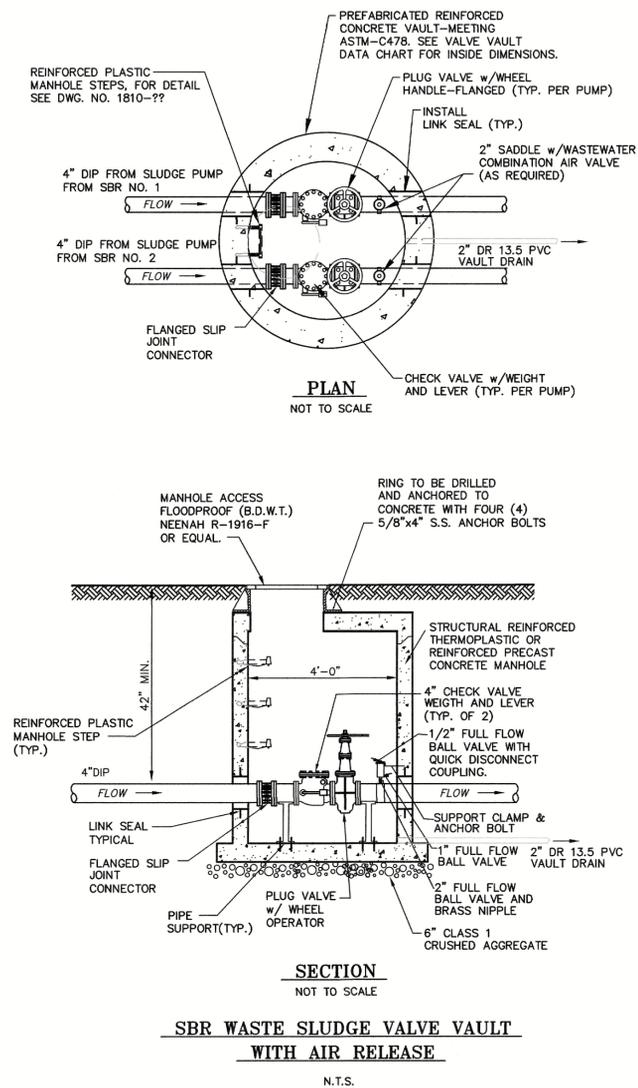
DETAIL OF CONDUITS SUPPORT WHEN MOUNTED TO CONCRETE STRUCTURE
NOT TO SCALE



CHLORINE CONTACT BASIN
NOT TO SCALE



DETAIL OF MODIFIED CONDUIT SUPPORT WHEN JUNCTION / PULL BOX IS REQUIRED
NOT TO SCALE



SBR WASTE SLUDGE VALVE VAULT WITH AIR RELEASE
N.T.S.

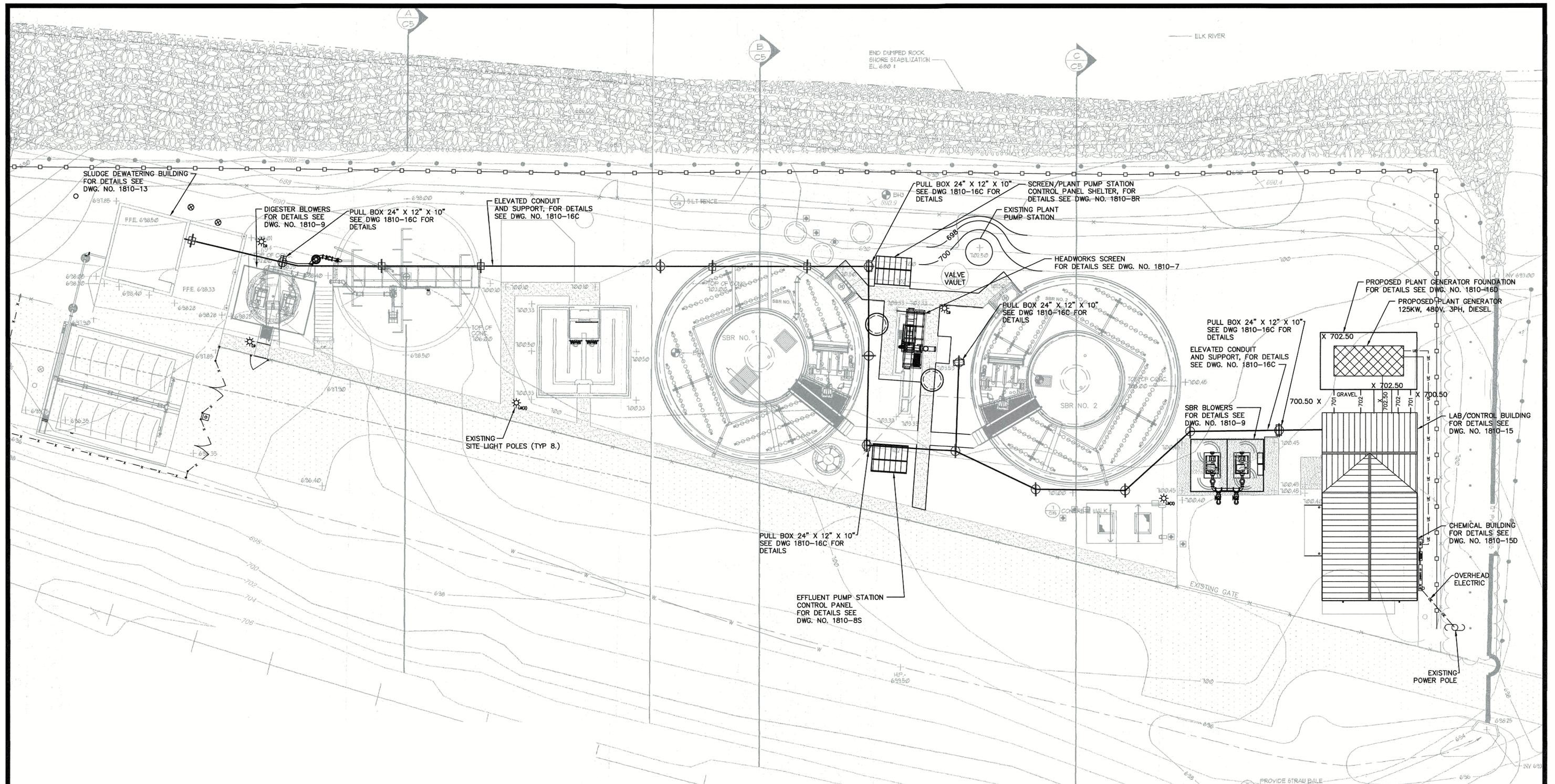
- 24" x 12" x 10" NEMA 4/4X SINGLE HINGE DOOR, SS CLAMPS, PADLOCK HASP AND STAPLE, POWDER COATED, GREY
- 3" RMC CONDUIT, SCH 40, FOR POWER
- 4" SCH. 40 STEEL PIPE
- C8 X 11.5 X 3'-0" LENGTH STEEL CHANNEL
- C6 X 8.2 X 3'-0" LENGTH STEEL CHANNEL (TYP 2)
- GUSSET (TYPICAL OF 2) TO SUPPORT C6 CHANNEL
- WELD GUSSETS AND PLATE TO 4" PIPE AND CHANNEL WITH 5/16" FILLET WELD
- BUTT WELD ALL MATING SURFACES STITCH WELD 2-5
- RED ELECTRICAL FIBERGLASS DIVIDER
- 2" P-3300 "UNISTRUT" OR EQUAL (STAINLESS STEEL)
- "HYDRA-ZORB", "CUSH-A-CLAMP" OR EQUAL
- 3" RMC CONDUIT, SCH 40, FOR LOW VOLTAGE SIGNAL WIRE.



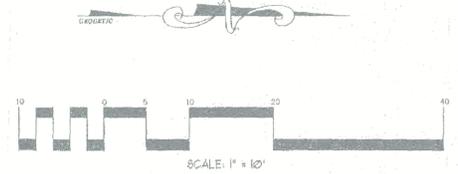
CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		
Town of Clay		WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM UPGRADES
Clay County, West Virginia		
ELECTRICAL DETAILS		
DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: 1"=10'	DATE: JULY 2022	16C
DUNN ENGINEERS, INC. 400 SOUTH RUFFNER ROAD CHARLESTON, W.V. 25314		

ADDENDUM 2



NOTE
 1.) BASE DRAWING TAKEN FROM "RECORD DRAWINGS", TOWN OF CLAY WASTEWATER SYSTEM IMPROVEMENTS CONTRACT 1, DATED MARCH 12, 1999 BY CHAPMAN TECHNICAL GROUP.



100 YR FLOOD ELEVATION - 100.00' ASL

ADDENDUM 2

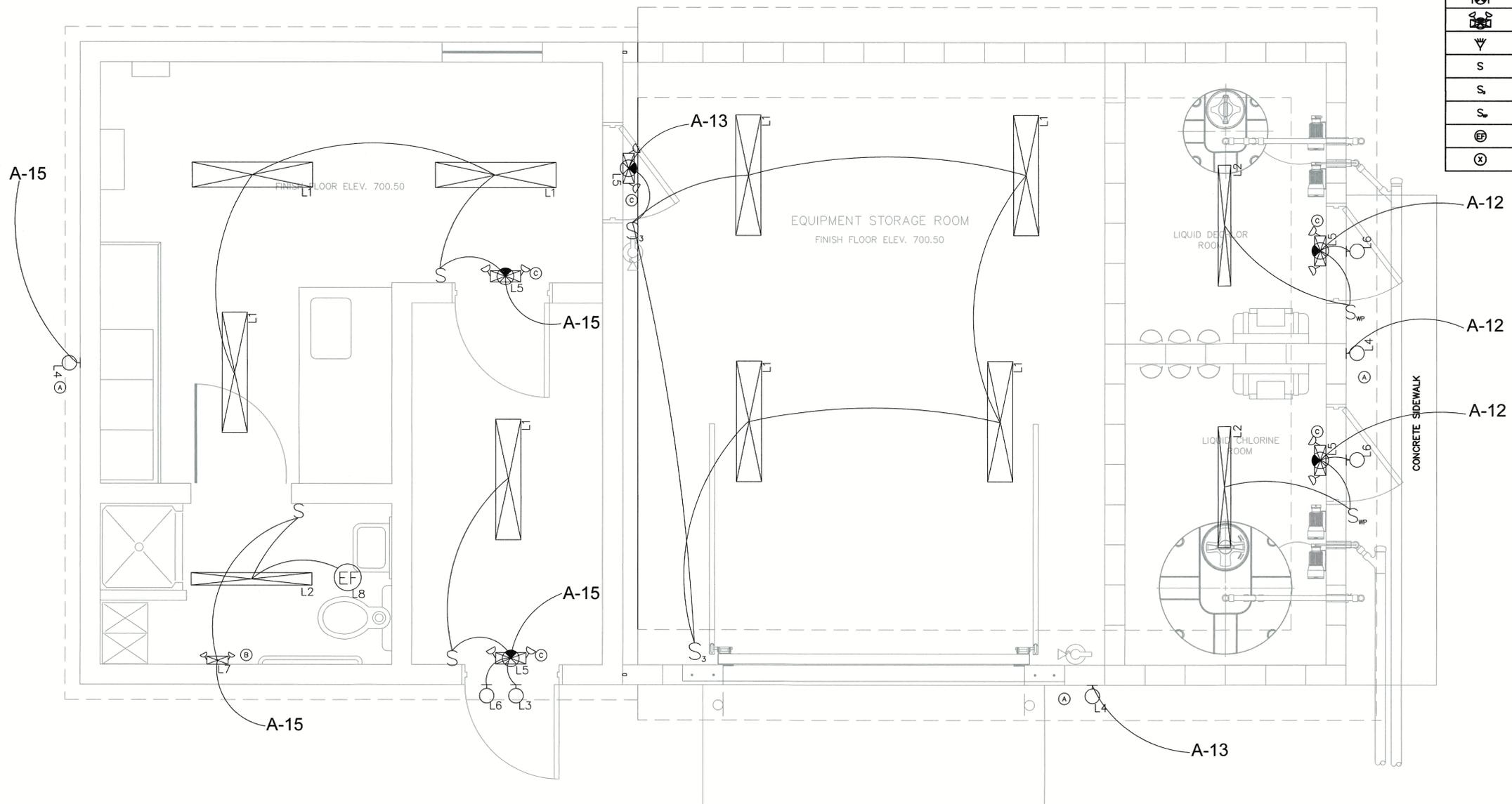


CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		
Town of Clay Clay County, West Virginia		WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM UPGRADES
ELECTRICAL SITE PLAN		
DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: 1"=10'	DATE: JULY 2022	21
 DUNN ENGINEERS, INC. 400 SOUTH RUFFNER ROAD CHARLESTON, W.V. 25314		

SYMBOLS	DESCRIPTIONS	PLAN NOTES
	SURFACE OR RECESSED LED LIGHT FIXTURE	(A) THIS LIGHT TO HAVE A BUILT-IN PHOTOCELL (B) MOUNT NEW EMERGENCY LIGHT FIXTURES IN THIS AREA, 7.5' AFF. (C) MOUNT NEW EMERGENCY EXIT SIGNS/COMBO UNITS CENTERED OVER DOORWAYS. (D) INTERIOR LIGHTING CONDUIT TO BE EMT. (E) ALL CIRCUITS NEED TO BE VERIFIED AND MARKED SO THEY CAN BE REFLECTED ON AS-BUILT DRAWINGS.
	WALL MOUNTED HID, FLOURESCENT OR LED LIGHT FIXTURE	
	BATTERY POWERED EMERGENCY LIGHT	
	BATTERY POWERED EMERGENCY EXIT LIGHT, SHADE INDICATES LIT FACE	
	BATTERY POWERED EMERGENCY EXIT LIGHT, DOUBLE SIDED LIT FACES	
	COMBINATION BATTERY POWERED EMERGENCY LIGHT / EXIT SIGN	
	POLE MOUNTED LIGHT	
	WALL SWITCH, SINGLE POLE, SINGLE THROW	
	WALL SWITCH, THREE WAY	
	WALL SWITCH, WEATHERPROOF	
	EXHAUST FAN, CEILING MOUNTED	
	PLAN NOTE	

LEGEND LIST IS TYPICAL. SOME MAY NOT BE USED ON THIS SHEET



PLAN VIEW
N.T.S.

LIGHTING FIXTURE SCHEDULE						
MARK	LAMPS/TYPE	MOUNTING	MANUFACTURER	SERIES	DESCRIPTION	NOTES
L1	LED 4000 LUMENS	SURFACE	LITHONIA COOPER	LBL4 4000LM BCR1 40K MINI SZT MVOLT 4#WSLED-LM4-400K-F-LVW-LR40-CD1-U	4FT SURFACE MOUNT LOW PROFILE WRAPAROUND LED 4000 LUMEN, 5000K, 120V-277V 34 WATT	120V-277V
L2	LED 5000 LUMENS	SURFACE	LITHONIA COOPER	CSVT L48 5000LM MVOLT 50K BCR1 4#PVTLD-54L850	4FT SURFACE MOUNT VAPOR TIGHT LED STRIP 5000 LUMEN, 4000K, 120V-277V 42 WATT	120V-277V
L3	LED 1600 LUMENS	WALL	LITHONIA COOPER	TWXL LED P1 50K MVOLT PE DBBKX WP15SLPC	LED WALL LUMINAIRE 1600 LUMEN, 5000K, BUILT-IN PHOTOCELL 13 WATT, DARK BRONZE	120V-277V
L4	LED 8800 LUMENS	WALL	LITHONIA COOPER	TWXS LED P1 50K MVOLT PE DBBKX WPSQLED-75	LED WALL LUMINAIRE 8800 LUMENS, 5000K, BUILT-IN PHOTOCELL 97 WATT, DARK BRONZE	120V-277V
L5	LED EM EXIT LIGHT	WALL	LITHONIA COOPER	LHQM LED R APCH7RSC	EXIT SIGN EMERGENCY LIGHT COMBO UNIT SINGLE FACE, RED LETTERING, WHITE HOUSING REMOTE HEAD COMPATIBLE	120V
L6	LED EM REM HEAD	WALL	LITHONIA COOPER	ELAQWP SRM130Y	LED EMERGENCY EXIT LAMP REMOTE FIXTURE ADJUSTABLE LED LAMP HEAD ALUMINUM WEATHER PROOF HOUSING	9.6V
L7	LED EM LIGHT	WALL	LITHONIA COOPER	ELUC AP250LED	EMERGENCY LIGHT, WHITE	120V-277V
L8	LED/EXHAUST FAN	RECESSED	BROAN	AE110L	BATHROOM EXHAUST FAN LED LIGHT COMBO 110 CFM, 800 LUMEN, 3000K 11 WATT	120V
L9	LED	POLE	LITHONIA	DSX1 LED P7 50K T4M MVOLT RFLUMBA NLTAR2 P1H DOBKX G1	LED AREA LUMINAIRE 21000 LUMENS, 5000K, NLTAR2 CONTROLLER 383 WATT	120V-277V

GENERAL NOTES PERTAINING TO ALL FIXTURES:

- DIRECTION INDICATOR ON EXIT SIGNS SHALL COMPLY WITH NFPA 101 SECTION 5-10.4.1.2.
- VERIFY VOLTAGE TO OPERATE FIXTURES WITH ELECTRICAL DRAWINGS.
- LIGHTING FIXTURES SHALL COME COMPLETE WITH NECESSARY MOUNTING HARDWARE.
- ALL RECESSED LIGHTING FIXTURES SHALL BE PAINTED AFTER FABRICATION.
- ANY REQUEST FOR SUBSTITUTION TO THE LIGHTING FIXTURE SCHEDULE SHALL BE OF EQUAL OR HIGHER QUALITY AS DETERMINED BY ENGINEER. ANY PERSON REQUESTING TO SUBSTITUTE FIXTURES MUST SUBMIT IN BOUND FORM A COLLECTION OF MANUFACTURERS CUT SHEETS TO BE REVIEWED BY ENGINEER A MINIMUM OF (FOURTEEN) 14 DAYS PRIOR TO BID. ACCEPTED SUBSTITUTIONS WILL BE REFLECTED IN AN ADDENDUM.
- EMERGENCY BATTERY PACK FOR LIGHT FIXTURES SHALL BE RATED TO SUPPLY A MINIMUM OF 600 INITIAL LUMENS.



CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		

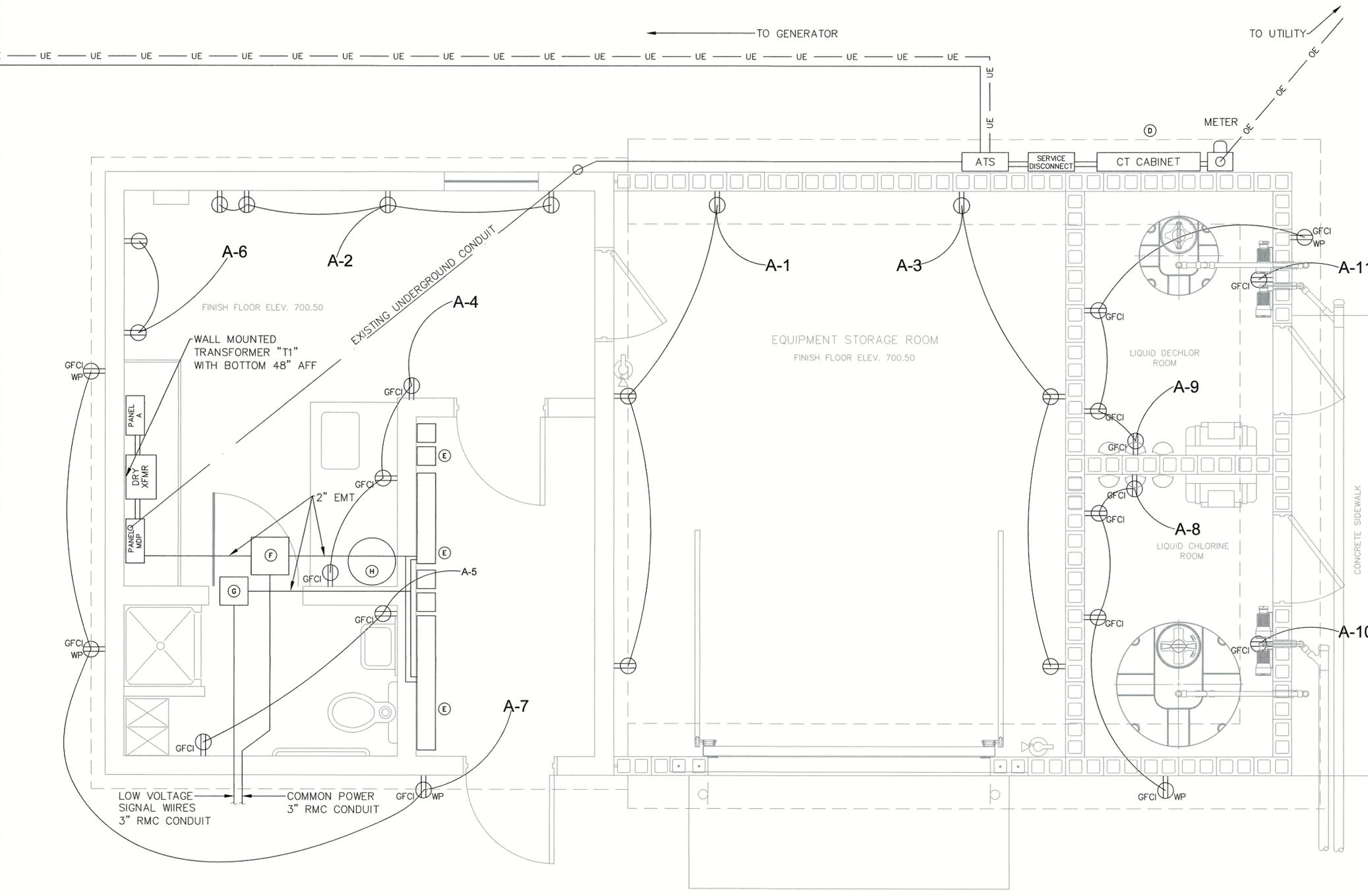
Town of Clay WASTEWATER TREATMENT
Clay County, West Virginia PLANT AND COLLECTION
SYSTEM UPGRADES

PROPOSED
CHEMICAL BUILDING
LIGHTING AND PLAN NOTES

DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: N.T.S.	DATE: JULY 2022	21A

DUNN ENGINEERS, INC.
400 SOUTH RUFFNER ROAD
CHARLESTON, W.V. 25314

ADDENDUM 2



SYMBOLS	DESCRIPTIONS	PLAN NOTES
	DUPLEX RECEPTACLE	(A) ADHERE TO NEC REGULATIONS REGARDING AREAS OF USE FOR NM CABLE (B) EXPOSED INTERIOR CONDUIT RUNS TO BE EMT. (C) ALL 120V RECEPTACLES TO BE 20A (D) ENSURE 4" CLEARANCE BETWEEN ENCLOSURES AND FENCE (E) THE WALL RESERVED FOR SBR AND DIGESTER CONTROL PANELS AND VFDs (F) CEILING MOUNTED PULL BOX 16" X 16" X 8" FOR POWER/MOTOR CIRCUITS (G) CEILING MOUNTED PULL BOX 12" X 12" X 8" FOR LOW VOLTAGE SIGNAL WIRES (H) A. O. SMITH EJCS-20 19 GAL WATER HEATER, 2500 WATT, 120V, REPL. EXIST. (J) SEE DWG 1810-21F ELECTRICAL RISER FOR DETAILS AND POWER DISTRIBUTION
	DUPLEX RECEPTACLE, WEATHERPROOF	
	DUPLEX RECEPTACLE, GFCI PROTECTED	
	DUPLEX RECEPTACLE, GFCI / WEATHERPROOF	
	240 VOLT RECEPTACLE	
	WALL SWITCH, SINGLE POLE, SINGLE THROW	
	WALL SWITCH, THREE WAY	
	WALL SWITCH, WEATHERPROOF	
	EXHAUST FAN, CEILING MOUNTED	
	WATER HEATER (ELECTRIC)	
	PLAN NOTE	
	DETAIL REFERENCE	
	FUSED DISCONNECT	
	NON-FUSED DISCONNECT	
	MOTOR CONNECTION	
	THERMOSTAT, WALL MOUNTED	
	HUMIDISTAT, WALL MOUNTED	

LEGEND LIST IS TYPICAL. SOME MAY NOT BE USED ON THIS SHEET

PLAN VIEW
N.T.S.

MOTOR LEAD CONDUIT SCHEDULE								
NUMBER	CIRCUITS	VOLTAGE	PHASE	ORIGIN	DESTINATION	WIRE SIZE/TYPE	CONDUIT	NOTES
1	SBR BLOWER 1	480	3	SBR/DIGESTER CONTROL PANEL	SBR BLOWER 1	(3) #4 THHN/THWN-2, 75 Deg C, Cu, BK (1) #10 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
2	SBR BLOWER 2	480	3	SBR/DIGESTER CONTROL PANEL	SBR BLOWER 2	(3) #4 THHN/THWN-2, 75 Deg C, Cu, BK (1) #10 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
3	SBR DECANter 1	480	3	SBR/DIGESTER CONTROL PANEL	SBR DECANter 1	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
4	SBR DECANter 2	480	3	SBR/DIGESTER CONTROL PANEL	SBR DECANter 2	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
5	SBR SLUDGE PUMP 1	480	3	SBR/DIGESTER CONTROL PANEL	SBR SLUDGE PUMP 1	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	IN COMMON 3" POWER CONDUIT
6	SBR SLUDGE PUMP 2	480	3	SBR/DIGESTER CONTROL PANEL	SBR SLUDGE PUMP 2	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	IN COMMON 3" POWER CONDUIT
7	DIGESTER BLOWER 1	480	3	SBR/DIGESTER CONTROL PANEL	DIGESTER BLOWER 1	(3) #10 THHN/THWN-2, 75 Deg C, Cu, BK (1) #10 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
8	DIGESTER BLOWER 2	480	3	SBR/DIGESTER CONTROL PANEL	DIGESTER BLOWER 2	(3) #10 THHN/THWN-2, 75 Deg C, Cu, BK (1) #10 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
9	DIGESTER DECANter	208	3	SBR/DIGESTER CONTROL PANEL	DIGESTER DECANter	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT
10	DIGESTER SLUDGE PUMP 1	480	3	SBR/DIGESTER CONTROL PANEL	DIGESTER SLUDGE PUMP 1	(3) #12 THHN/THWN-2, 75 Deg C, Cu, BK (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3" RMC	USE VFD CABLE AS RECOMMEND BY OEM IN COMMON 3" POWER CONDUIT



CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		

Town of Clay WASTEWATER TREATMENT
Clay County, West Virginia PLANT AND COLLECTION
SYSTEM UPGRADES

PROPOSED
CHEMICAL BUILDING
POWER AND PLAN NOTES

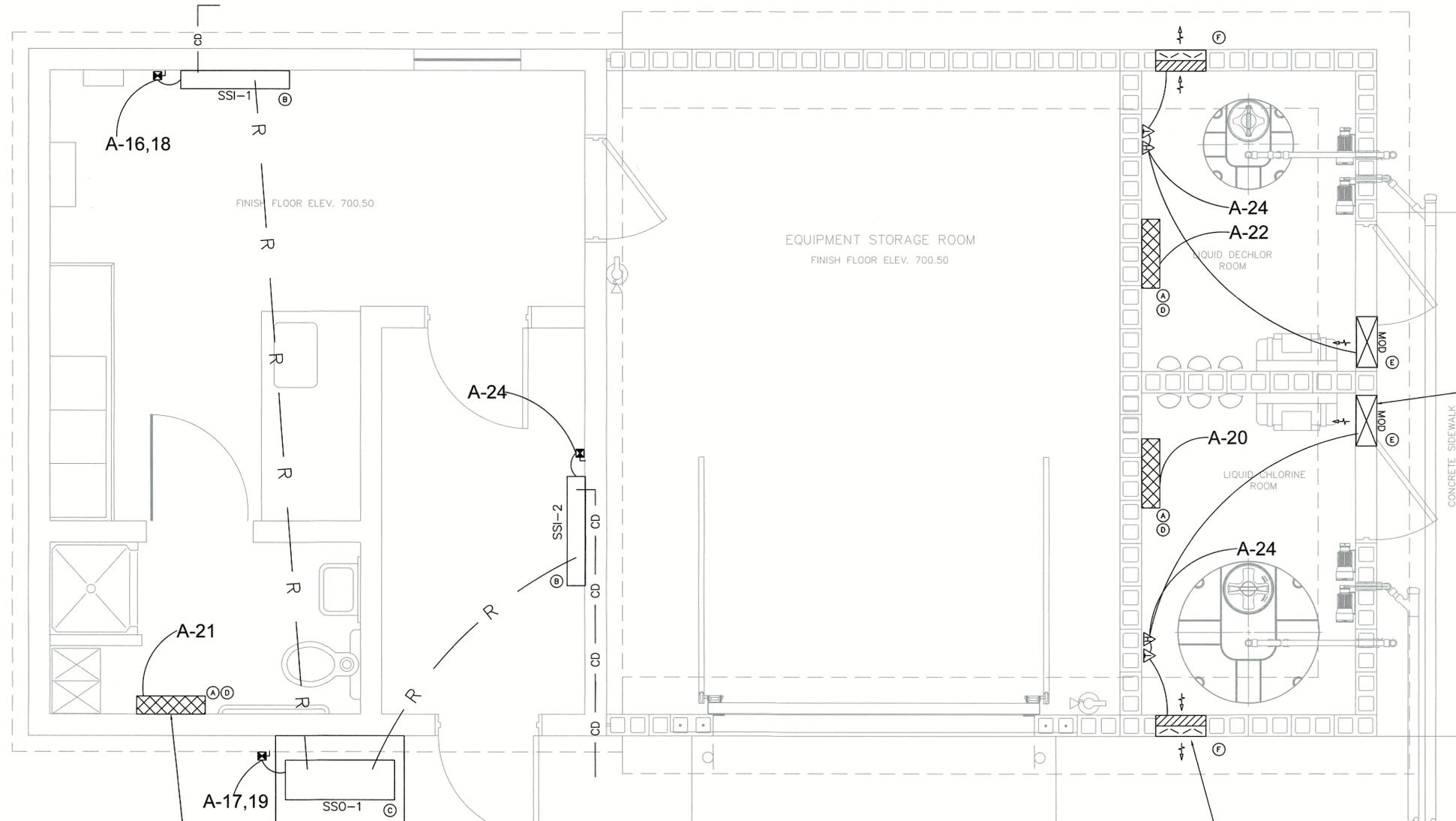
DRAWN BY: MM CHECKED BY: SRH DRAWING 1810
SCALE: N.T.S. DATE: JULY 2022 **21B**

DUNN ENGINEERS, INC.
400 SOUTH RUFFNER ROAD
CHARLESTON, W.V. 25314

ADDENDUM 2

SYMBOLS	DESCRIPTIONS	PLAN NOTES
CD	CONDENSATE DRAIN	(A) TO BE MOUNTED A MINIMUM OF 12" ABOVE FINISHED FLOOR (AFF)
R	REFRIGERANT LINES	(B) INDOOR UNIT TO BE MOUNTED APPROXIMATELY 6' AFF
	MOTORIZED DAMPER	(C) FOLLOW MFG'R'S RECOMMENDATION FOR SPACING FROM SSO-1 TO BLDG
	EXHAUST FAN, WITH FAN GUARD AND LOUVERS	(D) WALL HEATER TO HAVE BUILT-IN THERMOSTAT
	WALL HEATER, ELECTRIC	(E) MOUNT CHLORINE / DECHLORINE INLET DAMPERS APPROX 24" AFF
	THERMOSTAT	(F) MOUNT CHLORINE / DECHLORINE EXHAUST FANS APPROX 7' AFF
	HUMIDISTAT	(G) ALL EXPOSED INTERIOR CONDUIT TO BE EMT
	PLAN NOTE	

LEGEND LIST IS TYPICAL. SOME MAY NOT BE USED ON THIS SHEET



J & D MANUFACTURING
VRS12A-C POWERED 12"
INLET DAMPERS, 120V,
OR EQUIV.
(TYPICAL 2 PLCS)

QMARK HT1502SS ELECTRIC WALL
HEATER, 120V, 200-1500 WATT,
PROGRAMMABLE WITH BUILT-IN
THERMOSTAT, SMHTSSBL BLACK,
SURFACE MOUNTING FRAME
(TYPICAL 3 PLCS)

48"x 48"x 4" THICK
REINFORCED CONCRETE PAD

HESSAIRE 12SF4V35C
12" EXHAUST FAN WITH
FAN GUARD AND LOUVERS
900 CFM, 120V, OR EQUIV.
(TYPICAL 2 PLCS)

PLAN VIEW
N.T.S.



HVAC SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE												
MARK	MANUFACTURER	MODEL NO.	SEER	NOMINAL BTUH	VOLTS/PHASE	FAN POWER	MCA (A)	MOPD (A)	TON	REFRIGERANT	MOUNTING	DESCRIPTION
SSO-1	MITSUBISHI	MXZ-2C20NAHZ3-U1	17.1	20,000	208/230, 1	-	29.5	40	1.5	R410A	CONCRETE PAD	OUTDOOR HEAT PUMP UNIT
SSI-1	MITSUBISHI	MSZ-FS12NA	33.1	12,000	208/230, 1	40 W	1	-	1	R410A	WALL MOUNTED	INDOOR WALL UNIT
SSI-2	MITSUBISHI	MSZ-FS06NA	33.1	6000	208/230, 1	40 W	1	-	0.5	R410A	WALL MOUNTED	INDOOR WALL UNIT

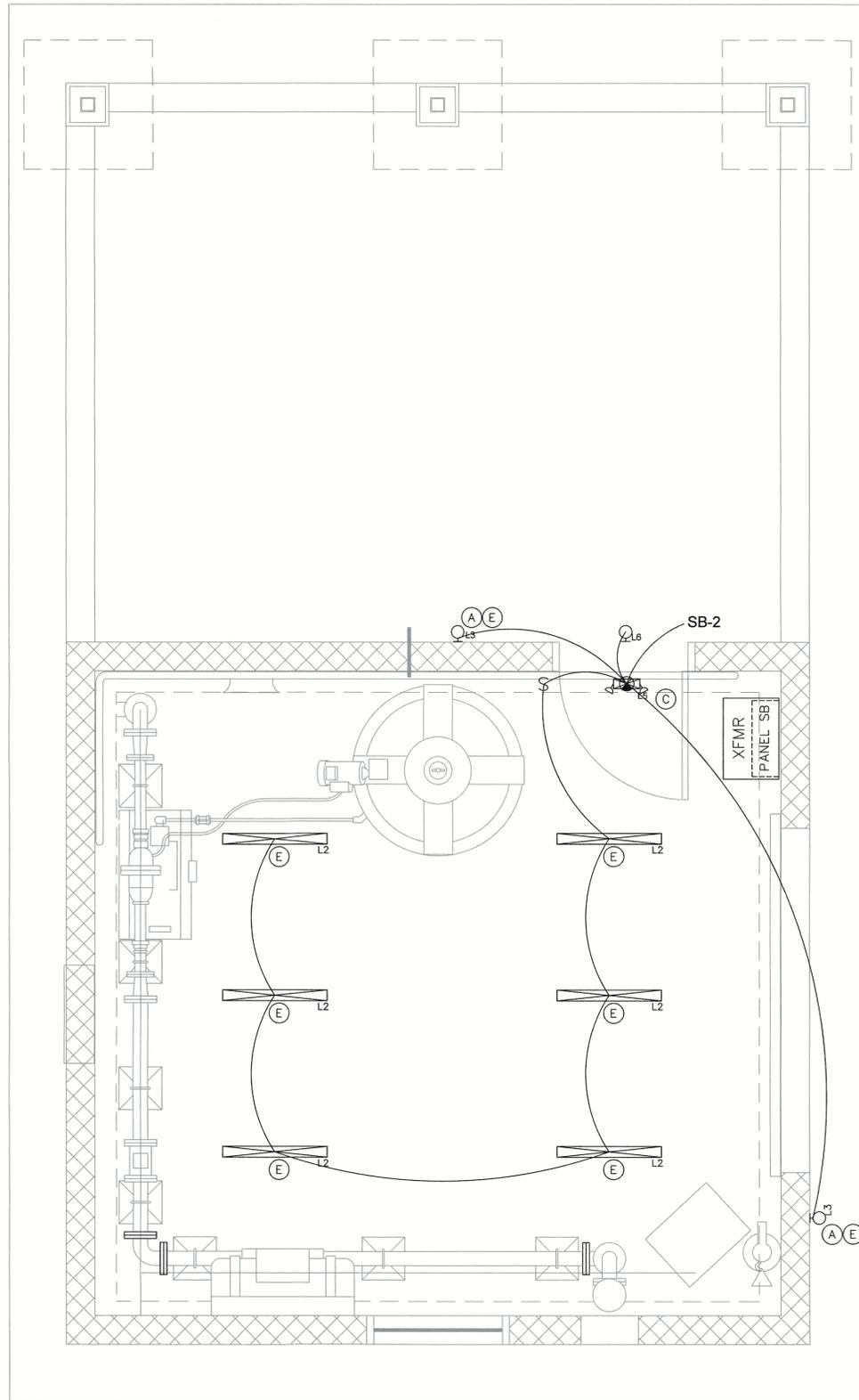
NOTES:

- PROVIDE EQUIPMENT DISCONNECTS.
- REFRIGERANT LINES SIZES, LENGTHS, AND INSULATION PER MANUFACTURER'S RECOMMENDATIONS
- COORDINATE INSTALLATION OF INDOOR UNIT WITH EQUIPMENT INSTALLED IN ROOM.
- PROVIDE CONDENSATE PUMP AND PVC PIPE DRAIN FOR EACH INDOOR UNIT.

CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		
Town of Clay Clay County, West Virginia		WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM UPGRADES
PROPOSED CHEMICAL BUILDING HVAC AND PLAN NOTES		
DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: N.T.S.	DATE: JULY 2022	21C
DUNN ENGINEERS, INC. 400 SOUTH RUFFNER ROAD CHARLESTON, W.V. 25314		

ADDENDUM 2



**LIGHTING PLAN
NTS**

NOTE

1.) BASE DRAWING TAKEN FROM "RECORD DRAWINGS", TOWN OF CLAY WASTEWATER SYSTEM IMPROVEMENTS CONTRACT 1, DATED MARCH 12, 1999 BY CHAPMAN TECHNICAL GROUP.

LIGHTING FIXTURE SCHEDULE						
MARK	LAMPS/TYPE	MOUNTING	MANUFACTURER	SERIES	DESCRIPTION	NOTES
L1	LED 4000 LUMENS	SURFACE	LITHONIA COOPER	LBL4 4000LM 80CRI 40K MIN1 GZT MVOLT 4WSNLED-LD4-40SL-F-UNV-L84G-CD1-U 34 WATT	4FT SURFACE MOUNT LOW PROFILE WRAPAROUND LED 4000 LUMEN, 4000K, 120V-277V	120V-277V
L2	LED 5000 LUMENS	SURFACE	LITHONIA COOPER	CSVT L48 5000LM MVOLT 50K 80CRI 4APVTLD-54L850	4FT SURFACE MOUNT VAPOR TIGHT LED STRIP 5000 LUMEN, 4000K, 120V-277V 42 WATT	120V-277V
L3	LED 1600 LUMENS	WALL	LITHONIA COOPER	TWX1 LED P1 50K MVOLT PE DDBXD WP1150LPC	LED WALL LUMINAIRE 1600 LUMEN, 5000K, BUILT-IN PHOTOCELL 11 WATT, DARK BRONZE	120V-277V
L4	LED 8800 LUMENS	WALL	LITHONIA COOPER	TWX3 LED P1 50K MVOLT PE DDBXD WPSQLED-75	LED WALL LUMINAIRE 8800 LUMENS, 5000K, BUILT-IN PHOTOCELL 97 WATT, DARK BRONZE	120V-277V
L5	LED EM EXIT LIGHT	WALL	LITHONIA COOPER	LHQM LED R APCH7RSQ	EXIT SIGN EMERGENCY LIGHT COMBO UNIT SINGLE FACE, RED LETTERING, WHITE HOUSING REMOTE HEAD COMPATIBLE	120V
L6	LED EM REM HEAD	WALL	LITHONIA COOPER	ELAQWP SRML3GY	LED EMERGENCY EXIT LAMP REMOTE FIXTURE ADJUSTABLE LED LAMP HEAD ALUMINUM WEATHER PROOF HOUSING	9.6V
L7	LED EM LIGHT	WALL	LITHONIA COOPER	ELUC AP25QLED	EMERGENCY LIGHT, WHITE	120V-277V
L8	LED/EXHAUST FAN	RECESSED	BROAN	AE110L	BATHROOM EXHAUST FAN LED LIGHT COMBO 110 CFM, 800 LUMEN, 3500K 11 WATT	120V
L9	LED	POLE	LITHONIA	DSX1 LED P7 50K T4M MVOLT RPUMBA NLTAIR2 PIRH DDBXD G1	LED AREA LUMINAIRE 21000 LUMENS, 5000K, NLTAIR2 CONTROLLER 183 WATT	120V-277V

GENERAL NOTES PERTAINING TO ALL FIXTURES:

- DIRECTION INDICATOR ON EXIT SIGNS SHALL COMPLY WITH NFPA 101 SECTION 5-10.4.1.2.
- VERIFY VOLTAGE TO OPERATE FIXTURES WITH ELECTRICAL DRAWINGS.
- LIGHTING FIXTURES SHALL COME COMPLETE WITH NECESSARY MOUNTING HARDWARE.
- ALL RECESSED LIGHTING FIXTURES SHALL BE PAINTED AFTER FABRICATION.
- ANY REQUEST FOR SUBSTITUTION TO THE LIGHTING FIXTURE SCHEDULE SHALL BE OF EQUAL OR HIGHER QUALITY AS DETERMINED BY ENGINEER. ANY PERSON REQUESTING TO SUBSTITUTE FIXTURES MUST SUBMIT IN BOUND FORM A COLLECTION OF MANUFACTURERS CUT SHEETS TO BE REVIEWED BY ENGINEER A MINIMUM OF (FOURTEEN) 14 DAYS PRIOR TO BID. ACCEPTED SUBSTITUTIONS WILL BE REFLECTED IN AN ADDENDUM.
- EMERGENCY BATTERY PACK FOR LIGHT FIXTURES SHALL BE RATED TO SUPPLY A MINIMUM OF 600 INITIAL LUMENS.

SYMBOLS	DESCRIPTIONS	PLAN NOTES
	SURFACE OR RECESSED LED LIGHT FIXTURE	(A) THIS LIGHT SHALL HAVE BUILT-IN PHOTOCELL
	WALL MOUNTED HID, FLOURESCENT OR LED LIGHT FIXTURE	(B) MOUNT NEW EMERGENCY LIGHT FIXTURES IN THIS AREA, 7.5' AFF
	BATTERY POWERED EMERGENCY LIGHT	(C) MOUNT NEW EMERGENCY EXIT SIGNS/COMBO UNITS CENTERED OVER DOORWAYS
	BATTERY POWERED EMER. EXIT LIGHT, SHADE INDICATES LIT FACE	(D) INTERIOR LIGHTING CONDUIT TO BE EMT.
	BATTERY POWERED EMER. EXIT LIGHT, DOUBLE SIDED LIT FACES	(E) REPLACE EXISTING LIGHTS.
	COMBINATION BATTERY POWERED EMERGENCY LIGHT / EXIT SIGN	(F) ALL CIRCUITS MUST BE VERIFIED ARE MARKED SO THEY CAN BE TRANSFERRED TO AS-BUILT DRAWINGS.
S	WALL SWITCH, SINGLE POLE, SINGLE THROW	
S ₃	WALL SWITCH, THREE WAY	
S _w	WALL SWITCH, WEATHERPROOF	
EF	EXHAUST FAN, CEILING MOUNTED	
(P)	PLAN NOTE	

LEGEND LIST IS TYPICAL. SOME MAY NOT BE USED ON THIS SHEET



CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		

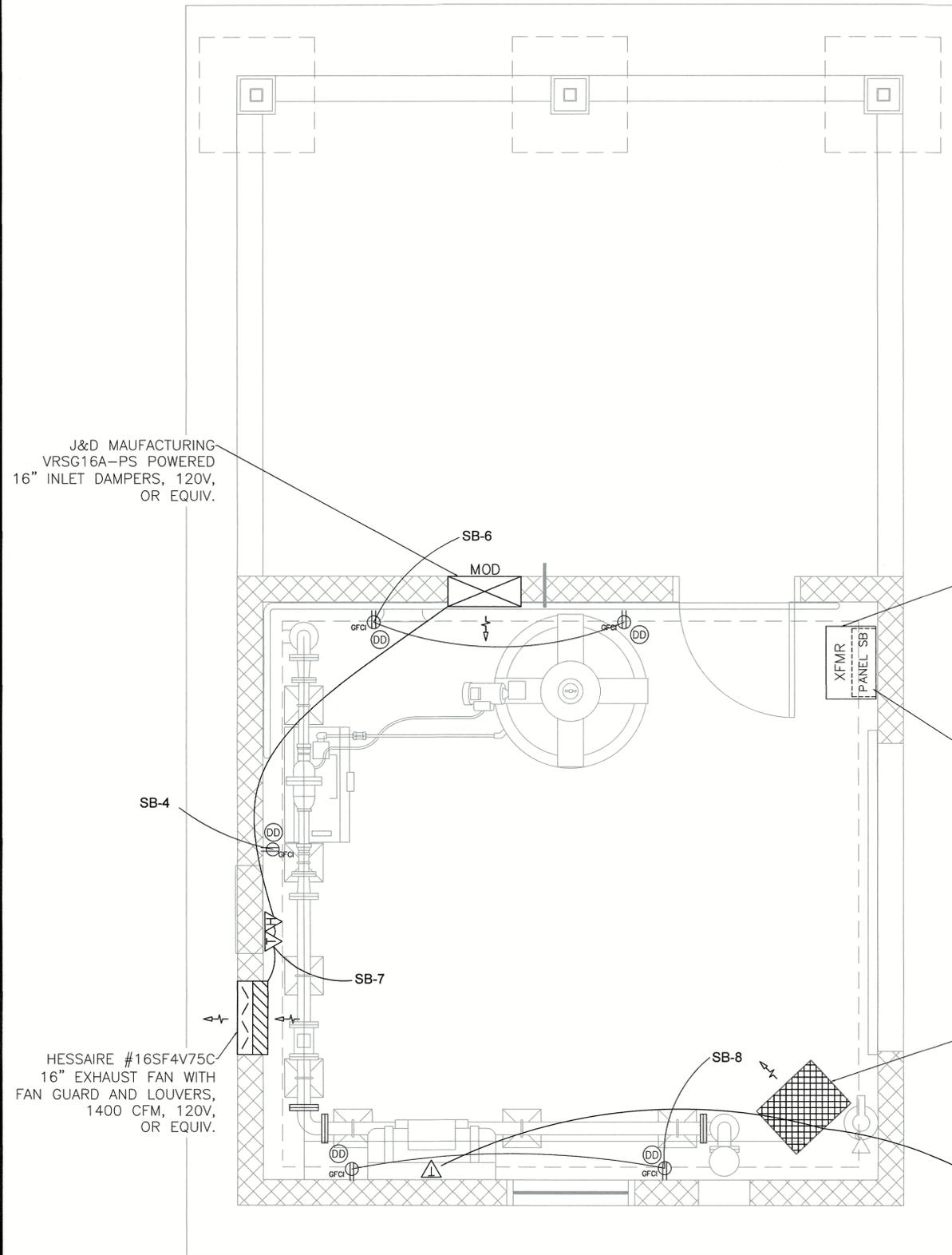
Town of Clay WASTEWATER TREATMENT
Clay County, West Virginia PLANT AND COLLECTION
SYSTEM UPGRADES

**PROPOSED
SLUDGE DEWATERING BUILDING
HVAC AND PLAN NOTES**

DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: N.T.S.	DATE: JULY 2022	21D

DUNN ENGINEERS, INC.
400 SOUTH RUFFNER ROAD
CHARLESTON, W.V. 25314

ADDENDUM 2



POWER & HVAC PLAN
NTS

NOTE

1.) BASE DRAWING TAKEN FROM "RECORD DRAWINGS", TOWN OF CLAY WASTEWATER SYSTEM IMPROVEMENTS CONTRACT 1, DATED MARCH 12, 1999 BY CHAPMAN TECHNICAL GROUP.

Panel: SB																
X		NEMA-1			NEMA-3R			NEMA-4X STAINLESS STEEL								
Location: Sludge Building																
X		208/120 Volts			3 Phase			4 Wire								
X		Main Lug Only			X			Main Breaker								
		Bus Rating: 100 Amps			Main Breaker: 60 Amps											
		Minimum Interrupting Capacity: 22000 Amps Sym														
		Flush Mount			X			Surface Mount								
Provide if checked:		Equipment Ground Bus						Isolated Ground Bus								
X								Gutter Taps								
		Sub-Feed Lugs			Through-Feed Lugs											
Serving	Load (Watts)	Cond. Size 2	Wire Size 1	C/B Trip Amps	Clr. No.	Key Notes	A	B	C	Key Notes	Clr. No.	C/B Trip Amps	Wire Size 1	Cond. Size 2	Load (Watts)	Serving
Electric Wall Heater	1667			3/20	1		X				2	1/20			306	Lighting Interior/Exterior/Emer
	1667				3			X			4	1/20			1920	Polymer Control Panel Recept
	1667				5			X			6	1/20			1440	General Receptacle 1
Exhaust Fan/Intake Louvre	1000			1/20	7		X				8	1/20			1440	General Receptacle 2
					9	5		X			5	10				
					11	5			X		5	12				
Total Load-Odd Circuit (Watts)	6001	1. All wire size #12 AWG minimum except as noted. 2. All conduit size: 3/4 inch minimum except as noted. 3. Ground fault interrupting circuit breaker. 4. Spare circuit breaker. 5. Space only. 6. Shunt-trip circuit breaker. 7. Arc-fault circuit breaker. 8. Solenoid operated circuit breaker.										5106	Total Load-Even Circuit (Watts)			
Total Load-Panel (Watts)	11107	9. Breaker lockon clip.										31	Total Connected Full Load Amps			

SYMBOLS	DESCRIPTIONS	PLAN NOTES
	DUPLEX RECEPTACLE	(AA) ADHERE TO NEC REGULATIONS REGARDING AREAS OF USE FOR NM CABLE (BB) EXPOSED INTERIOR CONDUIT RUNS TO BE EMT. (CC) ALL 120V RECEPTACLES TO BE 20A (DD) REPLACE EXISTING RECEPTACLES WITH 20A GFCI RECEPTACLES
	DUPLEX RECEPTACLE, WEATHERPROOF	
	DUPLEX RECEPTACLE, GFCI PROTECTED	
	DUPLEX RECEPTACLE, GFCI / WEATHERPROOF	
	QUAD RECEPTACLE	
	WALL SWITCH, SINGLE POLE, SINGLE THROW	
	WALL SWITCH, WEATHERPROOF	
	MOTORIZED DAMPER	
	PLAN NOTE	
	EXHAUST FAN, CEILING MOUNTED	
	MOTOR CONNECTION	
	THERMOSTAT / HUMIDISTAT	
	DETAIL REFERENCE	

LEGEND LIST IS TYPICAL. SOME MAY NOT BE USED ON THIS SHEET



CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		
Town of Clay Clay County, West Virginia		WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM UPGRADES
PROPOSED SLUDGE DEWATERING BUILDING POWER, HVAC AND PLAN NOTES		
DRAWN BY: MM	CHECKED BY: SRH	DRAWING 1810
SCALE: N.T.S.	DATE: JULY 2022	21E
DUNN ENGINEERS, INC. 400 SOUTH RUFFNER ROAD CHARLESTON, W.V. 25314		

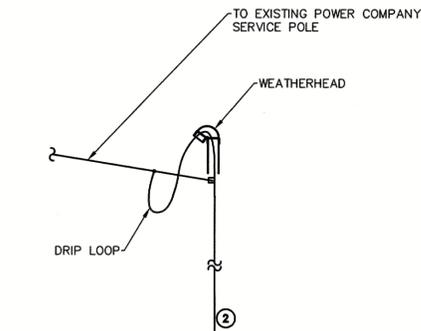
ADDENDUM 2

CONDUIT SCHEDULE								
NUMBER	CIRCUITS	VOLTAGE	PHASE	ORIGIN	DESTINATION	WIRE SIZE/TYPE	CONDUIT	NOTES
1	METER SOCKET			METER SOCKET	CT CABINET	CONNECTED BY UTILITY	1-1/4" RMC	
2	SERVICE ENTRANCE	480	3	WEATHERHEAD	CT CABINET	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK	2" RMC	
3	SERVICE ENTRANCE	480	3	CT CABINET	SERVICE DISCONNECT	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK	2" RMC	
4	AUTOMATIC TRANSFER SWITCH NORMAL	480	3	SERVICE DISCONNECT	AUTOMATIC TRANSFER SWITCH	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) #6 THHN/THWN-2, 75 Deg C, Cu, GR	2" RMC	
5	AUTOMATIC TRANSFER SWITCH EMERGENCY	480	3	GENERATOR	AUTOMATIC TRANSFER SWITCH	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) #6 THHN/THWN-2, 75 Deg C, Cu, GR	2" PVC SCH 40	MINIMUM BURIAL COVER DEPTH 18"
6	MAIN DISTRIBUTION PANEL	480	3	AUTOMATIC TRANSFER SWITCH	EXISTING UNDERGROUND CONDUIT	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) #6 THHN/THWN-2, 75 Deg C, Cu, GR	2" RMC	
7	MAIN DISTRIBUTION PANEL	480	3	EXISTING UNDERGROUND CONDUIT	MAIN DISTRIBUTION PANEL	(3) 4/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) 2/0 THHN/THWN-2, 75 Deg C, Cu, BK (1) #6 THHN/THWN-2, 75 Deg C, Cu, GR	2" RMC	UTILIZE EXISTING CONDUIT
8	TRANSFORMER "T1"	480	3	MAIN DISTRIBUTION PANEL	TRANSFORMER "T1"	(3) #8 THHN/THWN-2, Cu, Bk (1) #10 THHN/THWN-2, Cu, Gr	3/4" EMT	
9	PANEL "A"	208	3	TRANSFORMER "T1"	PANEL "A"	(4) #3 THHN/THWN-2, 75 Deg C, Cu, Bk (1) #8 THHN/THWN-2, 75 Deg C, Cu, Gn	1-1/4" EMT	
10	GENERATOR BLOCK HEATER/BATTERY CHARGER	120	1	PANEL "A"	GENERATOR	(1) #12 THHN/THWN-2, 75 Deg C, Cu, Bk (1) #12 THHN/THWN-2, 75 Deg C, Cu, WH (1) #12 THHN/THWN-2, 75 Deg C, Cu, GR	3/4" PVC SCH 40	MINIMUM BURIAL COVER DEPTH 18"
11	TRANSFORMER "T2"	480	3	MAIN DISTRIBUTION PANEL	TRANSFORMER "T2"	(3) #8 THHN/THWN-2, Cu, Bk (1) #10 THHN/THWN-2, Cu, Gr	3" RMC	IN COMMON 3" POWER CONDUIT
12	SCREEN/PLANT PUMP STATION PANEL	480	3	MAIN DISTRIBUTION PANEL	SCREEN/PLANT PUMP STATION PANEL	(3) #8 THHN/THWN-2, Cu, Bk (1) #10 THHN/THWN-2, Cu, Gr	3" RMC	IN COMMON 3" POWER CONDUIT
13	EFFLUENT PUMP STATION PANEL	480	3	MAIN DISTRIBUTION PANEL	EFFLUENT PUMP STATION PANEL	(3) #8 THHN/THWN-2, Cu, Bk (1) #10 THHN/THWN-2, Cu, Gr	3" RMC	IN COMMON 3" POWER CONDUIT
14	SBR/DIGESTER CONTROL PANEL	480	3	MAIN DISTRIBUTION PANEL	SBR/DIGESTER CONTROL PANEL	(3) #2 THHN/THWN-2, 75 Deg C, Cu, Bk (1) #6 THHN/THWN-2, 75 Deg C, Cu, Gn	1-1/4" EMT	
15	PANEL "SB"	208	3	TRANSFORMER "T2"	PANEL "SB"	(4) #6 THHN/THWN-2, 75 Deg C, Cu, Bk (1) #10 THHN/THWN-2, 75 Deg C, Cu, Gn	1" EMT	
16	GENERATOR CONTROL CIRCUIT	12V DC		AUTOMATIC TRANSFER SWITCH	GENERATOR	(4) #16 THHN/THWN-2, 75 Deg C, Cu, BK	3/4" PVC SCH 40	MINIMUM BURIAL COVER DEPTH 18"

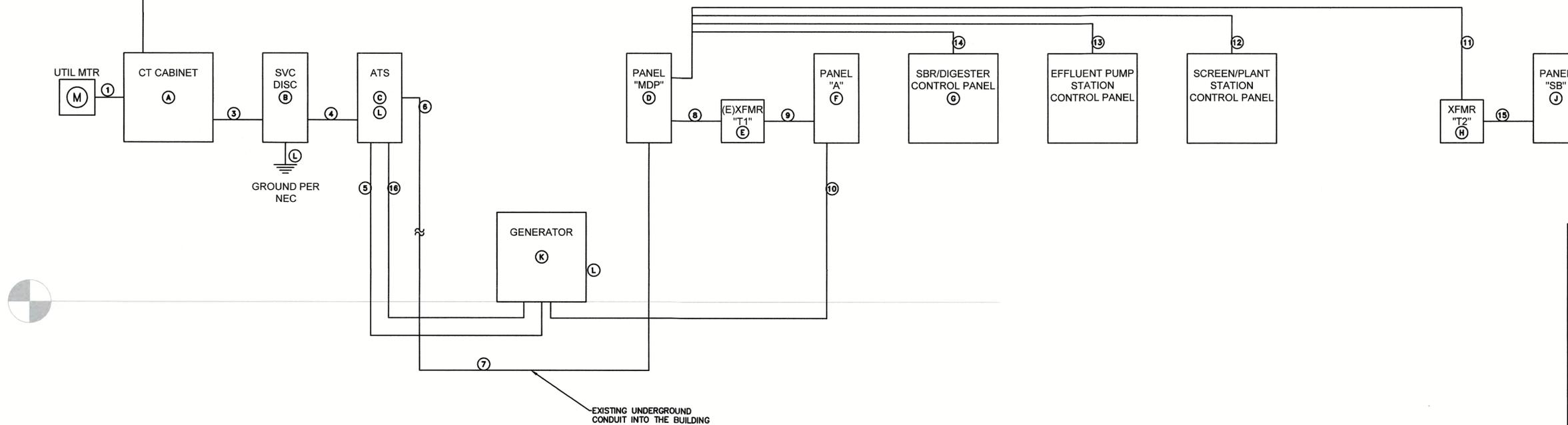
Panel: MDP																
X NEMA-1				NEMA-3R				NEMA-4X STAINLESS STEEL								
Location: Maintenance Building																
X 480 Volts				3 Phase				4 Wire								
Main Lug Only				X Main Breaker				X Main Breaker								
Bus Rating: 250 Amps				Main Breaker: 250 Amps				Amps Sym								
Minimum Interrupting Capacity:				22000				Amps Sym								
Flush Mount				X Surface Mount				Isolated Ground Bus								
Provide if checked:				X Equipment Ground Bus				Gutter Taps								
X Sub-Feed Lugs				Through-Feed Lugs				Through-Feed Lugs								
Serving	Load (Watts)	Cond. Size 2	Wire Size 1	C/B Trip Amps	Cir. No.	Key Notes	A	B	C	Key Notes	Cir. No.	C/B Trip Amps	Wire Size 1	Cond. Size 2	Load (Watts)	Serving
Transformer "T1"	10000	8	3/60	1					X		2	3/40	8		6667	Transformer "T2"
	10000	8	3/60	3					X		4	3/40	8		6667	
	10000	8	3/60	5					X		6	3/40	8		6667	
SBR/Digester Panel	31832	1.25	2	3/150	7				X		8	3/25	8		2103	Effluent Pump Panel
	31832	1.25	2	3/150	9				X		10	3/25	8		2103	
	31832	1.25	2	3/150	11				X		12	3/25	8		2103	
Screen/Plant Pump Panel	5315	8	3/30	13					X		5	14				
	5315	8	3/30	15					X		5	16				
	5315	8	3/30	17					X		5	18				
									X		5	20				
									X		5	22				
									X		5	24				
									X		5	26				
									X		5	28				
									X		5	30				
Total Load-Odd Circuit (Watts)	141441	1. All wire size #12 AWG minimum except as noted. 2. All conduit size: 3/4 inch minimum except as noted. 3. Ground fault interrupting circuit breaker. 4. Spare circuit breaker. 5. Space only. 6. Shunt-trip circuit breaker. 7. Arc-fault circuit breaker. 8. Solenoid operated circuit breaker.												9. Breaker lockon clip.	26310	Total Load-Even Circuit (Watts)
Total Load-Panel (Watts)	167751														202	Total Connected Full Load Amps

Panel: A																
X NEMA-1				NEMA-3R				NEMA-4X STAINLESS STEEL								
Location: Maintenance Building																
X 208Y/120 Volts				3 Phase				4 Wire								
Main Lug Only				X Main Breaker				X Main Breaker								
Bus Rating: 100 Amps				Main Breaker: 100 Amps				Amps Sym								
Minimum Interrupting Capacity:				22000				Amps Sym								
Flush Mount				X Surface Mount				Isolated Ground Bus								
Provide if checked:				X Equipment Ground Bus				Gutter Taps								
X Sub-Feed Lugs				Through-Feed Lugs				Through-Feed Lugs								
Serving	Load (Watts)	Cond. Size 2	Wire Size 1	C/B Trip Amps	Cir. No.	Key Notes	A	B	C	Key Notes	Cir. No.	C/B Trip Amps	Wire Size 1	Cond. Size 2	Load (Watts)	Serving
Recept Equip Room 1	1200			1/20	1				X		2	1/20			800	Recept Control Room 1
Recept Equip Room 2	1200			1/20	3				X		4	1/20			800	Recept Control Room 2
Recept Bathroom	360			1/20	5				X		6	1/20			800	Recept Control Room 3
Recept Outdoor	360			1/20	7				X		8	1/20			720	Recept Chlor general
Recept Dechlor general	720			1/20	9				X		10	1/20			600	Recept Chlor Pump
Recept Dechlor Pump	600			1/20	11				X		12	1/20			181	Light Chlor/Dechlor
Light Equip room	136			1/20	13				X		14	1/20			1464	Light Site pole
Light Control, Bath, Elec Room	178			1/20	15				X		16	2/20			100	HP Indoor Wall Units
Outdoor HP Unit	3016			2/40	17				X		18	2/20			100	Heater Chlor Room
Heater Bathroom	1500			2/20	19				X		20	1/20			1500	Heater Chlor Room
Generator Block htr/Battery chgr	1500			2/20	21				X		22	1/20			1500	Heater Dechlor Room
Water Heater	2500			1/30	23				X		24	1/20			600	Chlor/Dechlor exhaust system
					25				X		26					
					27				X		28					
					29				X		30					
Total Load-Odd Circuit (Watts)	16286	1. All wire size #12 AWG minimum except as noted. 2. All conduit size: 3/4 inch minimum except as noted. 3. Ground fault interrupting circuit breaker. 4. Spare circuit breaker. 5. Space only. 6. Shunt-trip circuit breaker. 7. Arc-fault circuit breaker. 8. Solenoid operated circuit breaker.												9. Breaker lockon clip.	9165	Total Load-Even Circuit (Watts)
Total Load-Panel (Watts)	25451														71	Total Connected Full Load Amps

- PLAN NOTES**
- (A) CT CABINET 48" X 48" X 12" CONFORM SIZE WITH UTILITY - BLACK DIAMOND POWER CO.
 - (B) SERVICE RATED BREAKER DISCONNECT, 480V, 3PH, 4W, 250A, NEMA 3R
 - (C) NON-SERVICE RATED AUTOMATIC TRANSFER SWITCH, 480V, 3PH, 4W, 250A, NEMA 3R, SOLID NEUTRAL
 - (D) MAIN DISTRIBUTION PANEL, 480V, 3 PH, 4W, 30 SPACES, 250A MCB
 - (E) TRANSFORMER "T1" IS EXISTING, 480V:208Y/120V, 30KVA, WALL MOUNTED WITH BOTTOM 48" AFF.
 - (F) NEW PANEL "A", 208Y/120V, 3 PH, 4W, 30 SPACES, 100A MCB, REPLACE EXISTING.
 - (G) SBR/DIGESTER CONTROL PANEL TO BE SUPPLIED BY XYLEM.
 - (H) TRANSFORMER "T2" 480V:208Y/120V, 20 KVA, WALL MOUNTED ABOVE PANEL "SB"
 - (J) NEW PANEL "SB", 208Y/120V, 3PH, 4W, 60A MCB.
 - (K) GENERATOR, 125KW, 480V, 3PH, 4W, DIESEL
 - (L) GROUND AND BOND SERVICE DISCONNECT, ATS, AND GENERATOR PER NEC.



Panel: SB																
X NEMA-1				NEMA-3R				NEMA-4X STAINLESS STEEL								
Location: Sludge Building																
X 208/120 Volts				3 Phase				4 Wire								
Main Lug Only				X Main Breaker				X Main Breaker								
Bus Rating: 100 Amps				Main Breaker: 60 Amps				Amps Sym								
Minimum Interrupting Capacity:				22000				Amps Sym								
Flush Mount				X Surface Mount				Isolated Ground Bus								
Provide if checked:				X Equipment Ground Bus				Gutter Taps								
X Sub-Feed Lugs				Through-Feed Lugs				Through-Feed Lugs								
Serving	Load (Watts)	Cond. Size 2	Wire Size 1	C/B Trip Amps	Cir. No.	Key Notes	A	B	C	Key Notes	Cir. No.	C/B Trip Amps	Wire Size 1	Cond. Size 2	Load (Watts)	Serving
Electric Wall Heater	1667			3/20	1				X		2	1/20			306	Lighting Interior/Exterior/Emer
	1667			3					X		2	1/20			1920	Polymer Control Panel Recept
	1667			5					X		6	1/20			1440	General Receptacle 1
Exhaust Fan/Intake Louvre	1000			1/20	7				X		8	1/20			1440	General Receptacle 2
					9				X		5	10				
					11				X		5	12				
Total Load-Odd Circuit (Watts)	6001	1. All wire size #12 AWG minimum except as noted. 2. All conduit size: 3/4 inch minimum except as noted. 3. Ground fault interrupting circuit breaker. 4. Spare circuit breaker. 5. Space only. 6. Shunt-trip circuit breaker. 7. Arc-fault circuit breaker. 8. Solenoid operated circuit breaker.												9. Breaker lockon clip.	5106	Total Load-Even Circuit (Watts)
Total Load-Panel (Watts)	11107														31	Total Connected Full Load Amps



CONTRACT 1

NO.	DATE	DESCRIPTION
REVISIONS		

Town of Clay WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM UPGRADES
Clay County, West Virginia

ELECTRICAL RISER DIAGRAM AND SCHEDULES

DRAWN BY: MM CHECKED BY: SRH DRAWING 1810
SCALE: N.T.S. DATE: JULY 2022 **21F**

DUNN ENGINEERS, INC.
400 SOUTH RUFFNER ROAD
CHARLESTON, W.V. 25314

ADDENDUM 2

