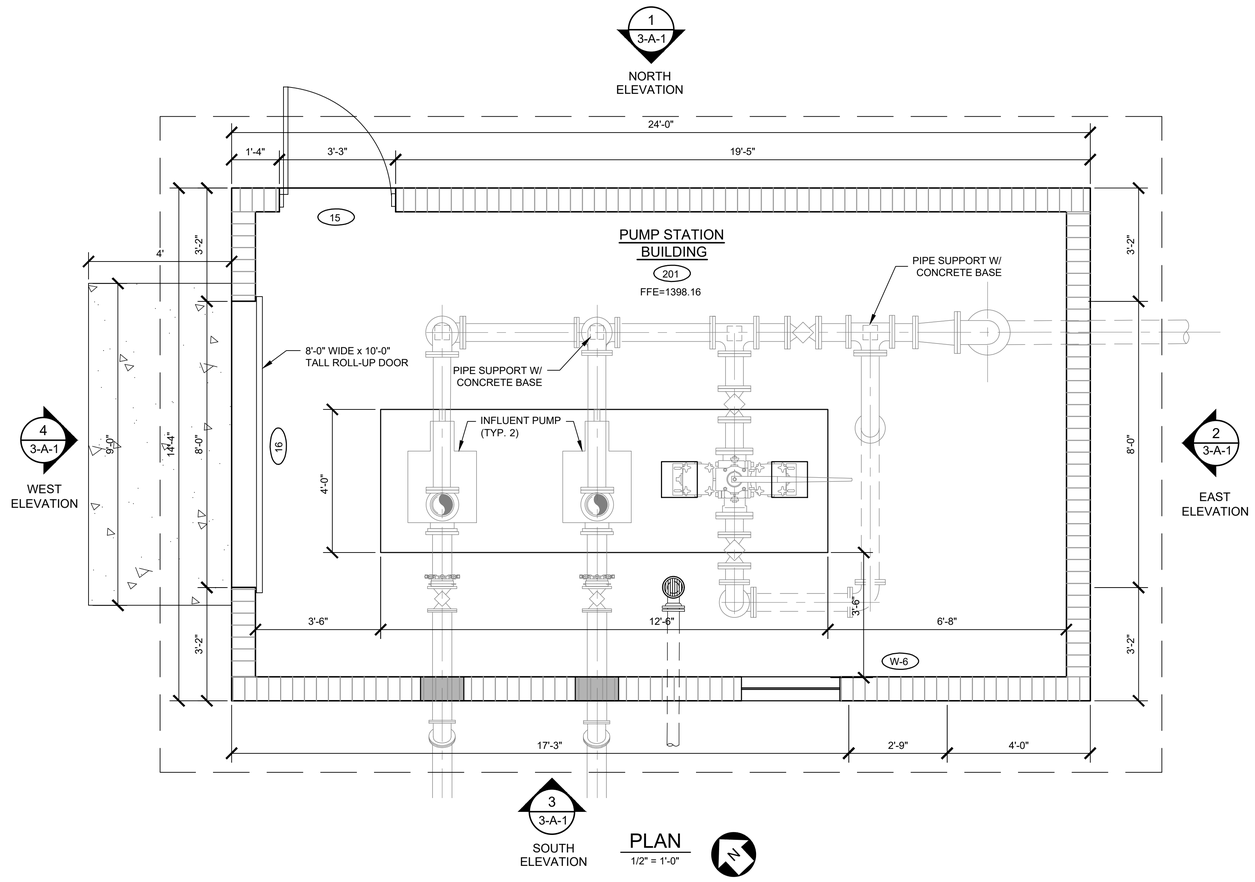
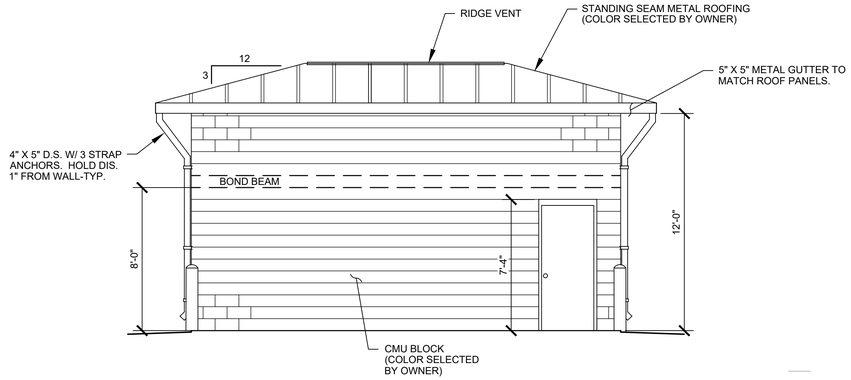
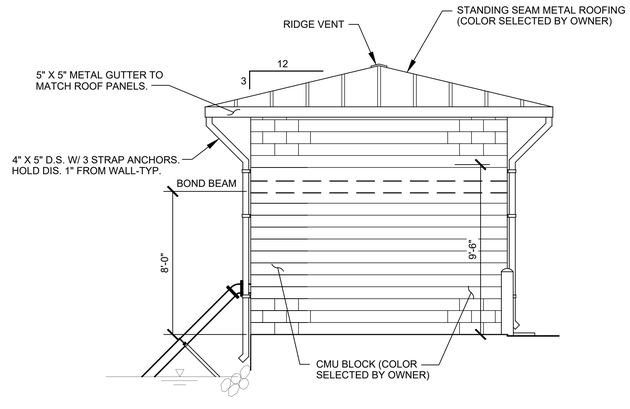
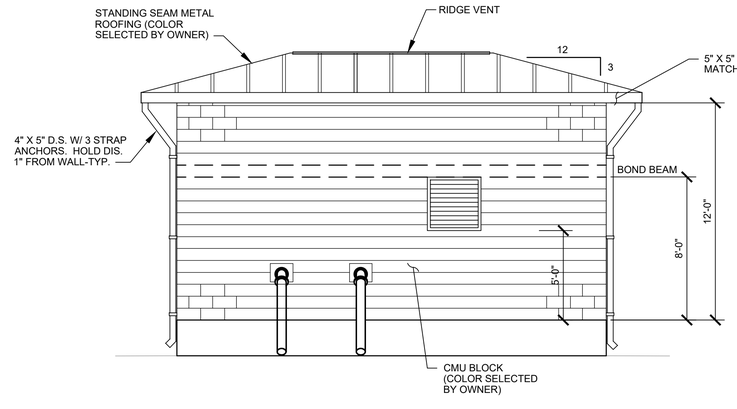




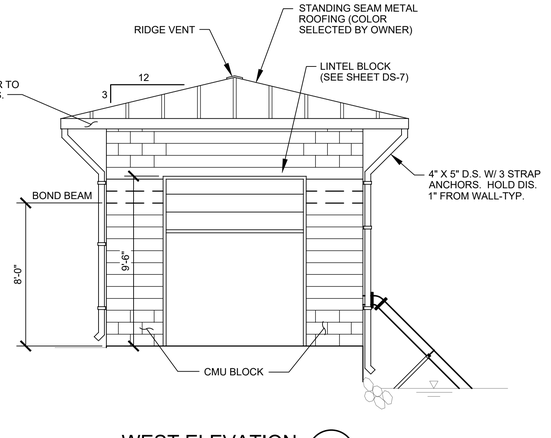
NORTH ELEVATION (1 / 3-A-1)
1/4" = 1'-0"



EAST ELEVATION (2 / 3-A-1)
1/4" = 1'-0"



SOUTH ELEVATION (3 / 3-A-1)
1/4" = 1'-0"



WEST ELEVATION (4 / 3-A-1)
1/4" = 1'-0"

GEORGIA REGISTERED PROFESSIONAL ENGINEER
NO. 039453
JULY 31, 2025
MEG M. MBUGUA

No.	Revisions	Initial	Date
1	RELEASED FOR BID	MM	7-31-2025

RINDT ENGINEERING + ENVIRONMENTAL

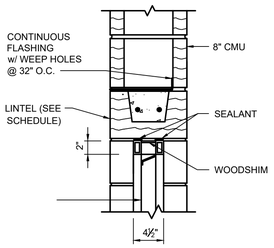
CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

INFLUENT PUMPS PLAN AND ELEVATIONS

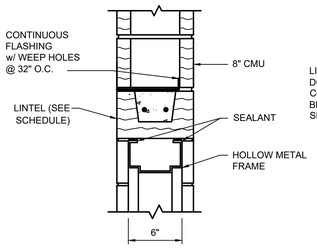
Drawn: AE
Design: AE
Checked: MM
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2022
3-A1-Influent Pump Station.dwg

Sheet No.
3-A-1

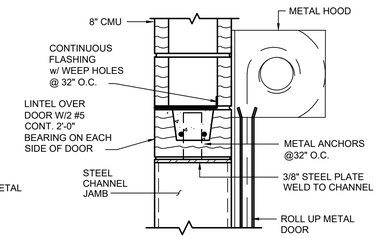
Z:\Projects\2019\R2019-111 Cleveland - WWTP Expansion\06 Drawings\Area 03 - Influent Pump Station\3-A1-Influent Pump Station.dwg 08/01/2025 1:25pm aencamacion



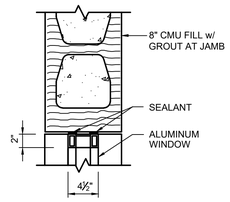
HEAD
(WINDOW)



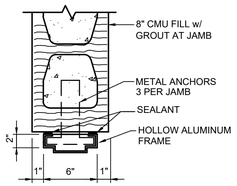
HEAD



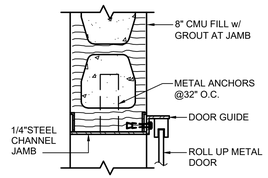
HEAD



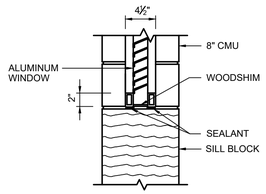
JAMB
(WINDOW)



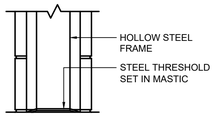
JAMB



JAMB

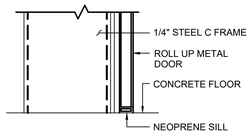


SILL
(WINDOW)



SILL

MAN DOOR

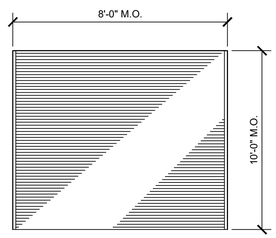
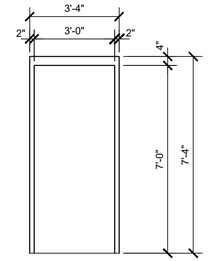
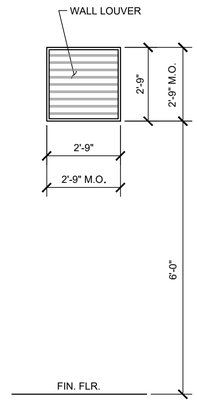


SILL

ROLL-UP DOOR

TYPICAL LOUVER DETAILS

TYPICAL DOOR DETAILS

ELEVATION	DOOR SCHEDULE		LOUVER SCHEDULE
			
MARK	16	15	W-6
SIZE	8'-0"x10'-0"		
TYPE	ROLL-UP INSULATED	INSULATED HOLLOW METAL	ALUMINUM
FRAME		2"x5 3/4" HOLLOW METAL	1 1/2"x 4" ALUMINUM
HEAD			
JAMB			
SILL			
HARDWARE SET			

GEORGIA REGISTERED NO. 039453 PROFESSIONAL ENGINEER MEG M. MBUGUA JULY 31, 2025

No.	Revisions	Initial	Date
1	RELEASED FOR BID	MM	7-31-2025

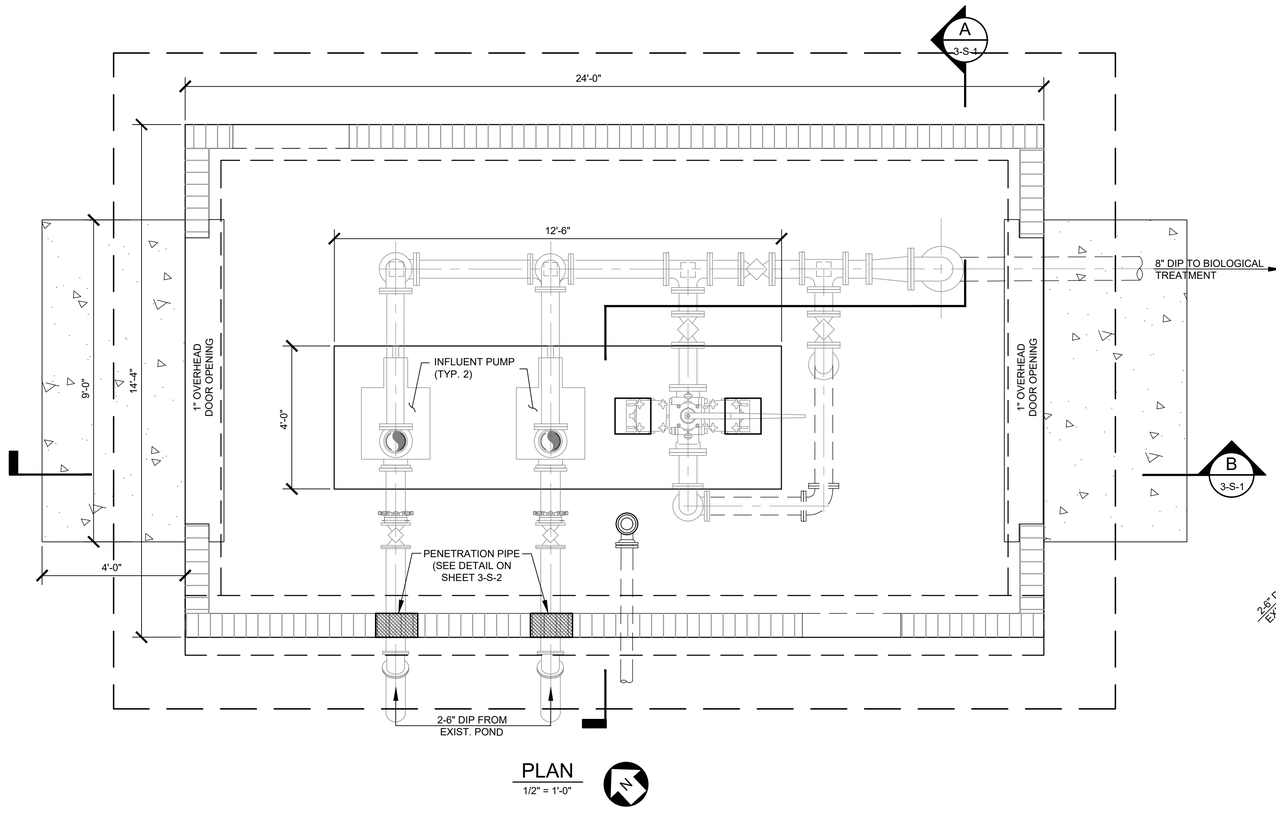
PRINT ENGINEERING + ENVIRONMENTAL

CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

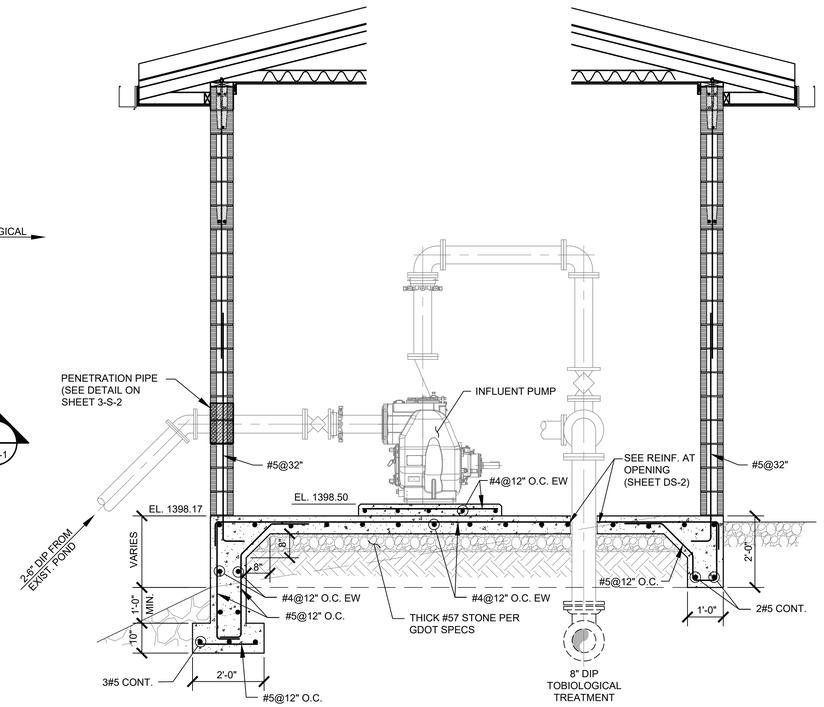
INFLUENT PUMP STATIONS
SCHEDULE DOOR AND WINDOW DETAILS

Drawn: AE
Design: AE
Checked: MM
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2022
3-A1-1-Influent Pump Station.dwg

Sheet No.
3-A-2

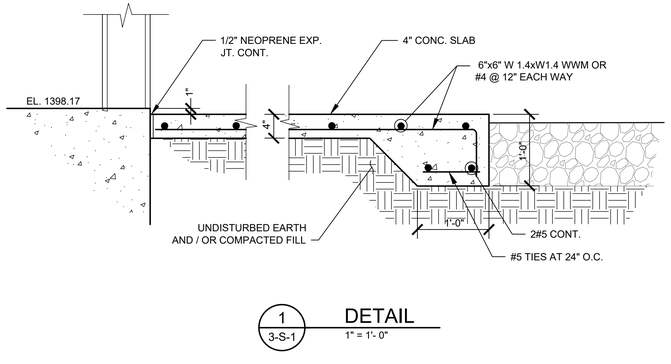


PLAN
1/2" = 1'-0"

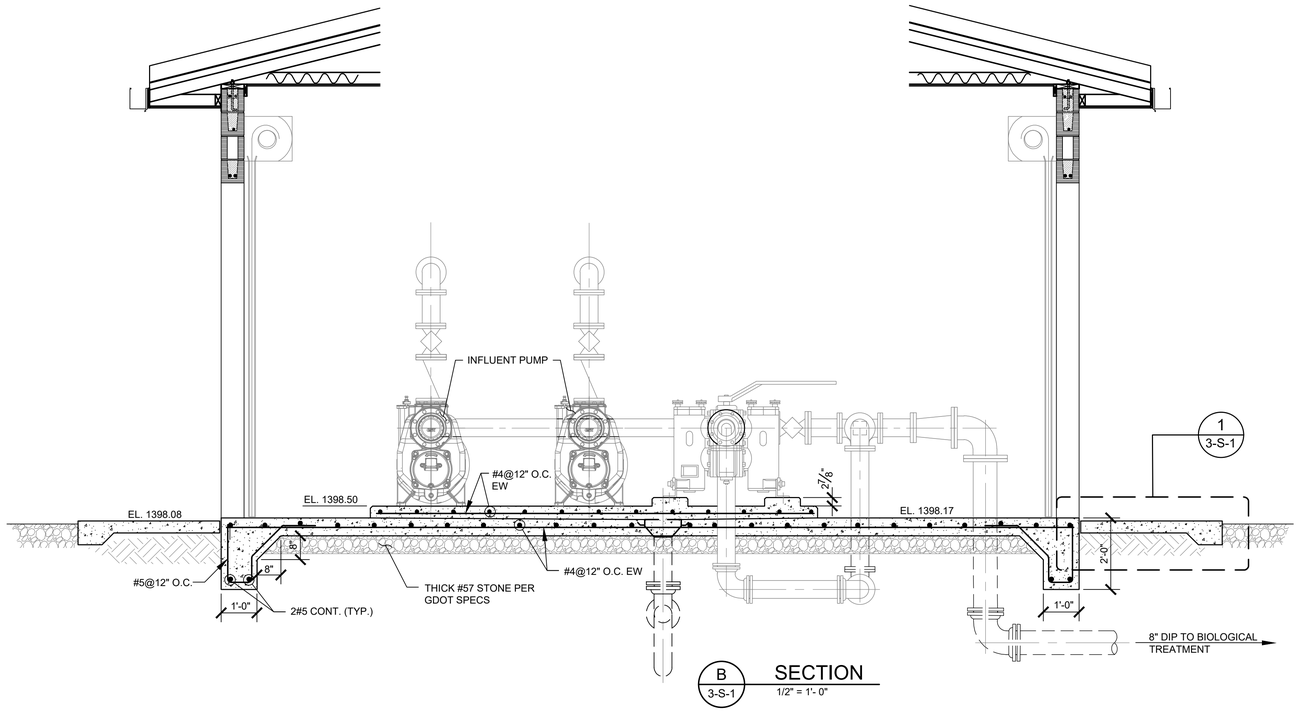


A
3-S-1
SECTION
1/2" = 1'- 0"

NOTE:
MASONRY CONTROL JOINTS AND HORIZONTAL REINFORCING, SEE STRUCTURAL DETAIL ON SHEET- DS-7.



1
3-S-1
DETAIL
1" = 1'- 0"



B
3-S-1
SECTION
1/2" = 1'- 0"

GEORGIA REGISTERED NO. 039453 PROFESSIONAL ENGINEER MEG M. MBUGUA JULY 31, 2025

No.	Revisions	Initial	Date
1	RELEASED FOR BID	MM	7-31-2025

RINDT ENGINEERING + ENVIRONMENTAL

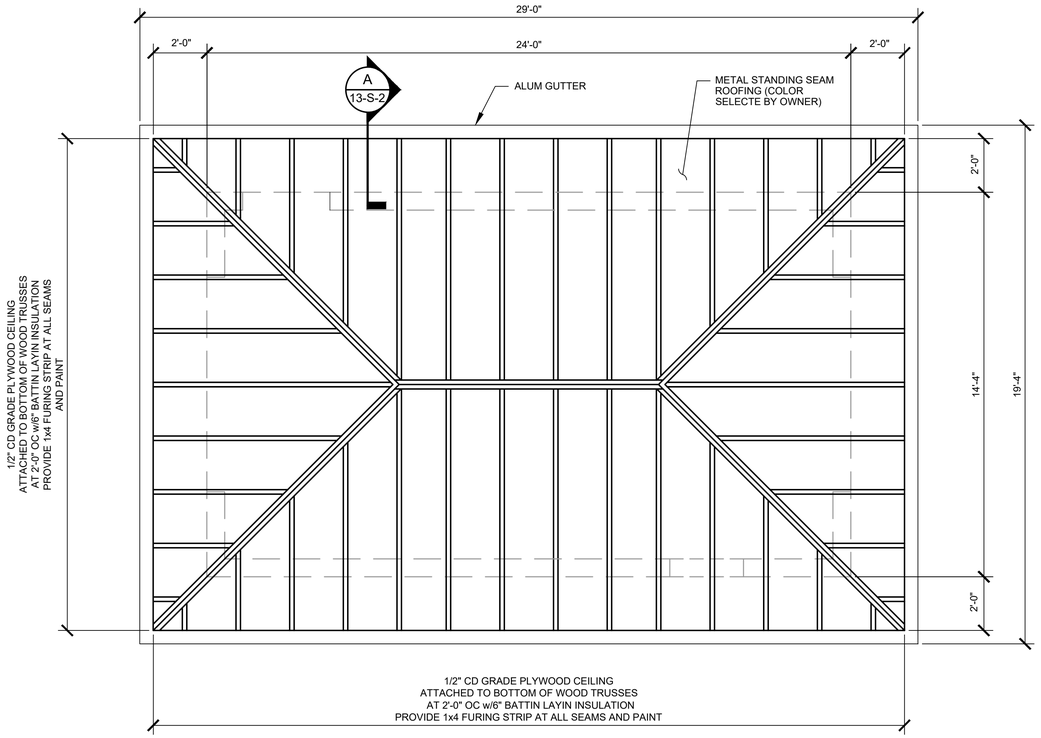
CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

INFLUENT PUMPS PLAN AND SECTION

Drawn: AE
Design: AE
Checked: MM
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2022
3-S-1-Influent Pump Station.dwg

Sheet No.
3-S-1

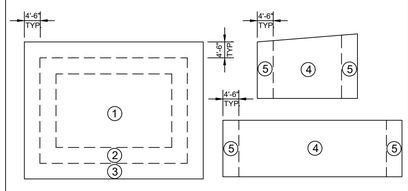
Z:\Projects\2019\R2019-111 Cleveland - WWTP Expansion\06 Drawings\Area 03 - Influent Pump Station\3-S-1-Influent Pump Station.dwg 08/01/2025 1:25pm aencarnacion



ROOF PLAN

3/8" = 1'-0"

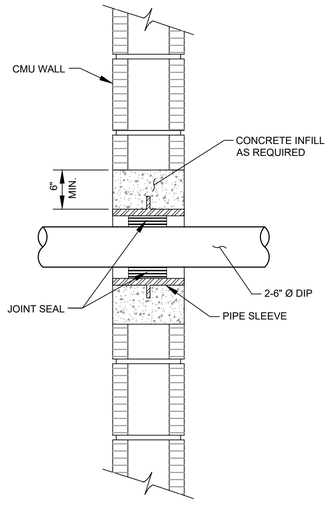
BLOWER AND CHLORINATION SYSTEM CANOPIES						
WIND DESIGN PRESSURES COMPONENTE CLADDING, PSF (LFRD)						
ROOF						
EFFECTIVE AREA (SF)	ZONE 1		ZONE 2		ZONE 3	
	(+)	(-)	(+)	(-)	(+)	(-)
10	20	-44	31	-67	40	-132
25	20	-44	31	-67	31	-67
50	20	-44	31	-67	31	-67
WALLS (WHERE OCCURS)						
EFFECTIVE AREA (SF)	ZONE 4 (FIELD)		ZONE 5 (CORNERS)			
	(+)	(-)	(+)	(-)		
<10	51	-56	51	-69		
50	46	-51	46	-58		
200	42	-46	42	-49		
>500	38	-43	38	-43		



WIND PRESSURE NOTES:

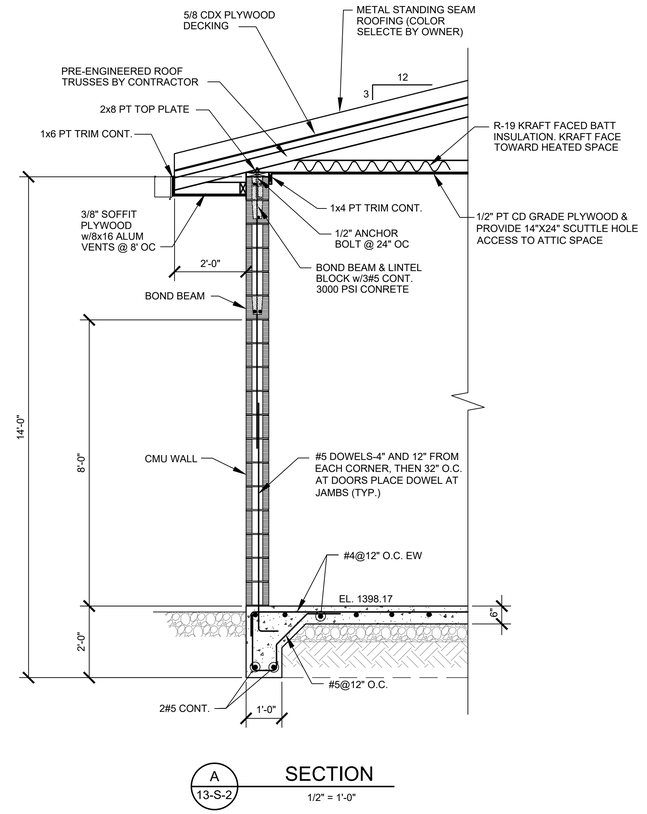
1. SEE "WIND DESIGN CRETERIA" NOTES ON G-10.
2. "a" - 4'-6", OH = OVERHANG ZONE PRESSURES.
3. DESIGN PRESSURES ARE PROVIDED AT ULTIMATE DESIGN WIND SPEEDS. TO CONVERT TO NOMINAL DESIGN WIND SPEEDS (ASD) MULTIPLE PRESSURES BY FACTOR OF 0.60.
4. THE EFFECTIVE AREA SHALL BE DETERMNED AS FOLLOWS UNLESS OTHERWISE NOTED:
   a. THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE THIRD THE SPAN LENGTH.
   b. THE AREA THAT IS TRIBUTARY TO AN INDIVIDUAL FASTENER.
5. NAGATIVE SIGN INDICATES PRESSURE ACTING OUTWARD FROM SURFACE.

ENCLOSURE CLASSIFICATION — OPEN (OBSTRUCTED)



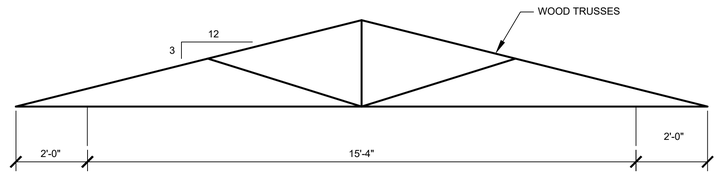
MASONRY PIPE PENETRATION DETAIL

N.T.S.



A 13-S-2 SECTION

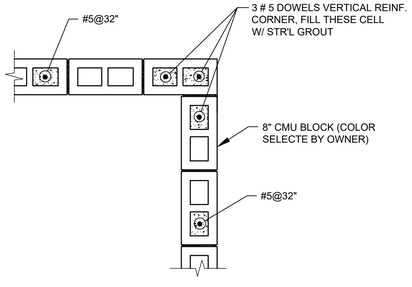
1/2" = 1'-0"



NOTE:
BOTTOM CHORD TO BE DESIGNED PROVIDED BY THE CONTRACTOR

TRUSS DETAIL

1/2" = 1'-0"



NOTE:
FOR HORIZONTAL REINFORCEMENT SEE DETAILS ON SHEET DS-7.

1 13-S-1 CORNER CONCRETE BLOCK

3/4" = 1'-0"

GEORGIA REGISTERED NO. 039453 PROFESSIONAL ENGINEER MEG M. MBUGUA JULY 31, 2025

No.	Revisions	Initial	Date
1	RELEASED FOR BID	MM	7-31-2025

RINCON ENGINEERING + ENVIRONMENTAL

CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

INFLUENT PUMPS ROOF PLAN AND SECTION

Drawn: AE
Design: AE
Checked: MM
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2022
3-S-1 Influent Pump Station.dwg

Sheet No.
3-S-2

Z:\Projects\2019\R2019-111 Cleveland - WWTP Expansion\06 Drawings\Area 03 - Influent Pump Station\3-S-1-Influent Pump Station.dwg 08/01/2025 1:26pm aencarnacion

GENERAL REQUIREMENTS:

THE WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, EWUIPMENT AND LABOR, AND THE PERFORMANCE OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS, FOR THE INSTALLATION OF COMPLETE AND WORKING AIR CONDITIONING, HEATING AND VENTILIATION SYSTEM. CHECK FIELD CONDITIONS AND MAKE MEASUREMENTS BEFORE ORDERING MATERIALS.

MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTUREERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO CONTAIN THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN.

THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES AND COPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDIANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH AND SAFETY. ALL WORK SHALL BE IN CONFORMANCE WITH GOVERNING CODES.

PROVIDE MECHANICAL EQUIPMENT HAVING MOTORS WITH MOTOR PROTECTORS. WIRING AND PROPER OPERATION OF MECHANICAL EQUIPMENT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRCTOR. ALL WIRING SHALL BE ROUTED IN CONDUIT OR PLENUM RATED WIRING.

THE SYSTEM SHALL HAVE A WARRANTY COVERING LABOR, MATERIALS AND EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

THE MECHANICAL CONTRACTOR SHALL COORDINATE THE EXACT DIFFUSER AND GRILLE LOCATIONS WITH THE ELECTRICAL CONTRACTOR AND ALL OTHER TRADES AND ALSO COORDINATE SPACE AVAILABILITY FOR DUCTWORK ABOVE RECESSED LIGHTING TO AVOID RELOCATING DUCTWORK AT THE MECHANICAL CONTRACTORS EXPENCE. ALL AIR DISTRIBUTION DEVICES IN LAY-IN CEILING SHALL BE INDEPENDANTLY SUPPORTED TO THE STRUCTURE WITH A MINIMUM OF (2) SUPPORT RODS OR WIRES IN COMPLIANCE WITH SECTION 2.3.1.3 OF NFPA 90A AND UNIFORM BUILDING CODE IF REQUIRED BY THE LOCAL CODE ATHORITY.

PROVIDE COMPLETE TESTING AND BALANCING OF AQLL MECHANICAL SYSTEMS IN ACCORDANCE WITH AABC OR NEBB LATEST STANDARD WITH REPORT.

CONDENSATE DRAIN PIPING SHALL BE PVC FOR ALL CONDENSATE DRAIN LINES WITH A MINIMUM SLOPE OF 1/8" PER FOOT FROM THE UNIT TO THE APPROVED PLUMBING CONNECTION. PROVIDE TRAPS AT UNITS AND INSTALL OVERFLOW DRAINS AS REQUIRE BY MECHANICAL CODE. TEST CONDENSATE PIPING TO HIGHEST POINT IN THE SYSTEM AND HOLD FOR FOUR HOURS. PROVIDE INSULATION ON ALL CONDENSATE PIPING INSIDE THE BUILDING.

DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA GUILDLINES AND LOCAL STANDARDS FOR THE INTENDED PURPOSE. RADIUS ELBOWS SHALL HAVE A MINIMUM CENTERLINE RADIUS OF 1.5 TIMES THE DUCT DIMENSION IN THE DIRECTION OF THE TURN, AND SQUARE ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES. ALL JOINTS SHALL BE TAPED WITH GLASS CLOTH AND HARDCAST OR ADHESIVE (UL LISTED). ALL DUCT SIZES ARE TO THE INSIDE DIMENSIONS, INCREASE OUTSIDE DIMENSIONS AS NECESSARY.

ALL INSULATION ADHESIVE AND INSTALLATION SHALL COMPLY WITH NFPA 90A.

GRILLES AND REGISTERS SHALL BE OF THE TYPE AND FINISH AS INDICATED ON THE DRAWINGS, COMPLETE WITH OPPOSED BLADE DAMPERS EXTRACTORS AND STRAIGHTENING GRIDS AS REQUIRES.

AIR CONDITIONING CONTROLS SHALL BE BY THE EQUIPMENT MANUFACTURER, FOR USE WITH MULTI-ZONE HEAT PUMPS.

HVAC – GENERAL NOTES

1. ALL WORK AND EQUIPMENT SHALL CONFORM WITH THE REQUIREMENTS OF THE 2019 (OR LATEST EDITION IN FORCE) INTERNATIONAL MECHANICAL CODE WITH GEORGIA AMENDMENTS, NFPA 90A, AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
2. FIELD LOCATE EQUIPMENT AND ROUTE DUCTWORK AND CONDUIT, ETC. AS REQUIRED SO NOT TO OBSTRUCT OTHER EQUIPMENT OR ACCESS. COORDINATE ROUTING WITH ROOF STRUCTURE AND OVERHEAD CRANE SYSTEM.
3. IT SHALL BE UNDERSTOOD THAT THE DRAWINGS SHOW THE GENERAL ROUTING OF PIPES, DUCTS, ETC. AND THE APPROXIMATE LOCATION OF APPARATUS. CONTRACTOR TO FIELD VERIFY ALL FIELD DIMENSIONS AND INVESTIGATE EXISTING CONDITIONS PRIOR TO FABRICATING DUCTWORK OR PIPING AND LOCATING EQUIPMENT. PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE COORDINATED WITH EXIST. UTILITIES AND OBSTRUCTIONS. UTILITIES SHALL BE RELOCATED BY THE CONTRACTOR AS REQUIRED. COORDINATE ALL ROUTING WITH LIGHTING AND STRUCTURAL FEATURES. CONTRACTOR SHALL NOTE THAT THE DRAWINGS REPRESENT WORK TO BE INSTALLED BY A KNOWLEDGEABLE, LICENSED MECHANICAL CONTRACTOR FAMILIAR WITH THE TYPES OF SYSTEMS INDICATED AND DO NOT NECESSARILY SHOW ALL DETAILS FOR SYSTEM INSTALLATION.
4. ALL EQUIPMENT INSTALLED IN THE BUILDING SHALL BE CORROSION RESISTANT SUITABLE FOR CORROSIVE LOCATIONS. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL PLANS AND SHALL FURNISH EQUIPMENT WIRED FOR VOLTAGES AS REQUIRED. CONTRACTOR TO COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
5. COORDINATE THERMOSTAT LOCATIONS AS APPLICABLE WITH LIGHTS, CEILING GRID, ETC. AND ARCHITECTS REFLECTED CEILING PLAN.
6. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, ETC. TO FIT WITHIN THE SPACE ALLOWED BY LAYOUT DRAWINGS AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBER IS NOT PERMITTED.
7. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE OWNER WITH ONE (1) YEAR WARRANTY ON EQUIPMENT AND INSTALLATION.
9. CONTRACTOR SHALL TEST ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND CERTIFY TO OWNER IN WRITING THAT ALL SYSTEMS ARE FULLY AND PROPERLY OPERATIONAL UPON COMPLETION OF WORK. CONTRACTOR SHALL PROVIDE THREE COPIES OF TEST AND BALANCE REPORT TO OWNER.
10. CONTRACTOR SHALL ENSURE THAT ADEQUATE CLEARANCE IS MAINTAINED IN FRONT OF ELECTRICAL PANELS AND AROUND ALL EQUIPMENT FOR MAINTENANCE.

FAN SCHEDULE

EF #-#	SERVICE	CFM	HP	RPM	S.P.	VOLTS/PH	REMARKS
3–1	INFLUENT PUMP STATION	850	1/2	1,448	0.59	120/1	1, 2, 3, 4, PROVIDE MOTOR OPERATED DAMPER, INTERLOCK WITH LOUVERS
9–1	WAS–RAS PUMP STATION	1,000	1/2	1,533	0.60	120/1	1, 2, 3, 4, PROVIDE MOTOR OPERATED DAMPER, INTERLOCK WITH LOUVERS
11–1	DEWATERING BUILDING	2,600	1.0	1,474	0.66	460/3	1, 2, 3, 4, PROVIDE MOTOR OPERATED DAMPER, INTERLOCK WITH LOUVERS
12–1	RESTROOM	110	24.2 W	960	1.375	120/1	5, INTERLOCK WITH LIGHTS
13–1	CHEMICAL FEED ROOM	600	1/4	1,638	0.59	120/1	1, 2, 3, 4, PROVIDE MOTOR OPERATED DAMPER, INTERLOCK WITH LOUVERS

1. EXHAUST FANS TO BE INTERNALLY AND EXTERNALLY COATED (INCLUDING WHEEL AND ALL SURFACES IN AIRSTREAM) SUITABLE FOR SEVERELY CORROSIVE ATMOSPHERES (CHLORINE, HYDROFLUOROSILICIC ACID, CAUSTIC, SODIUM HYPOCHLORITE AS WELL AS PHOSPHATE WHICH SHOULD NOT BE CORROSIVE). COATING TO BE FACTORY APPLIED POLYESTER COATING, GREENHECK HI–PRO POLYESTER OR APPROVED EQUAL.
2. PROVIDE WITH WALL MOUNTING FLANGE, 45 DEGREE WEATHER HOOD, MOTOR AND BELT GUARDS, ALL COATED AS INDICATED ABOVE. COORDINATE SQUARE WALL OPENING SIZE WITH BLOCK MASON / GENERAL CONTRACTOR.
3. FANS SHALL BE PROVIDED WITH CORROSION RESISTANT, NEMA 4X, WALL MOUNTED THERMOSTAT TO CONTROL FANS. THERMOSTAT SHALL BE 120V, SPDT IN NEMA 4X HOUSING, CHROMOLOX MODEL WCRT–100 OR EQUAL. THERMOSTAT SHALL ENERGIZE FANS UPON RISE IN TEMPERATURE ABOVE ADJUSTABLE SET POINT (80°F SET INITIALLY).
4. FANS SHALL BE CONTROLLED VIA ADJUSTABLE THERMOSTAT WITH WALL MOUNTED OVERRIDE SWITCH.
5. DUCT TO EXTERIOR WALL, FULL SIZE OF UNIT OPENING. TERMINATE WITH WALL CAP WITH INTERNAL BACKDRAFT DAMPER

LOUVERS

L #-#	TYPE	SIZE WIDTH	SIZE HEIGHT	FRAME	BLADES	DAMPER	BASIS OF DESIGN	REMARKS
3–1	STATIONARY	16	24"	MATCH WALL TYPE	DRAINABLE	YES, MOTORIZED	GREENHECK ESD–635	WALL LOUVER, SEE NOTES 1, 2, 3
9–1	STATIONARY	24	24"	MATCH WALL TYPE	DRAINABLE	YES, MOTORIZED	GREENHECK ESD–635	WALL LOUVER, SEE NOTES 1, 2, 3
11–1	STATIONARY	24	24"	MATCH WALL TYPE	DRAINABLE	YES, MOTORIZED	GREENHECK ESD–635	WALL LOUVER, SEE NOTES 1, 2, 3
13–1	STATIONARY	16	24"	MATCH WALL TYPE	DRAINABLE	YES, MOTORIZED	GREENHECK ESD–635	WALL LOUVER, SEE NOTES 1, 2, 3

1. LOUVERS SHALL BE EXTRUDED ALUMINUM WITH BIRDSCREEN AND MIN. .08" THICK FRAME AND BLADES. ENTIRE LOUVER SHALL BE KYNAR COATED. COLOR TO BE SELECTED BY OWNER / ARCHITECT.
2. LOUVER TO BE PROVIDED WITH 120V ELECTRIC MOTOR OPERATED DAMPER. DAMPER SHALL BE INTERLOCKED WITH RESPECTIVE FAN TO OPEN WHEN FAN IS ENERGIZED. DAMPERS SHALL BE FIBER–REINFORCED PLASTIC RESIN TYPE. DAMPER MOTOR/ACTUATOR SHALL BE INSTALLED IN A NEMA 4X ENCLOSURE SUITABLE FOR CORROSIVE ENVIRONMENTS. CASING SHALL BE EPOXY PAINTED.
3. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.

UNIT HEATER SCHEDULE

UH #-#	BASIS OF DESIGN	MODEL	CFM	FAN HP	HEATER INPUT	FUEL	VOLTS/PH	AREA SERVICE	REMARKS/ ACCESSORIES
3–1	BERKO	BWD05432	700	.388 AMPS	5.0 KW	ELECTRIC	480/3	INFLUENT PUMP STATION	1,2,3
9–1	BERKO	BWD05432	700	.388 AMPS	5.0 KW	ELECTRIC	480/3	WAS–RAS PUMP STATION	1,2,3
11–1	BERKO	BWD05432	700	.388 AMPS	5.0 KW	ELECTRIC	480/3	DEWATERING BUILDING	1,2,3
13–1	BERKO	BWD05432	700	.388 AMPS	5.0 KW	ELECTRIC	480/3	CHEMICAL FEED ROOM	1,2,3

1. PROVIDE WITH WALL MOUNTED THERMOSTAT, CONTACTOR, AND INTEGRAL FAN CONTROL POWER TRANSFORMER. ALL COMPONENTS SHALL BE HOUSED IN NEMA 4X ENCLOSURE SUITABLE FOR CORROSIVE ENVIRONMENTS. CASING SHALL BE EPOXY PAINTED.
2. PROVIDE WITH WALL OR CEILING MOUNTING BRACKETS. MOUNT AS HIGH AS POSSIBLE (7' MIN.) A.F.F.
3. PROVIDE WITH INTEGRAL NEMA 4X NON–FUSED DISCONNECT SWITCH.

HEAT PUMP INDOOR UNITS

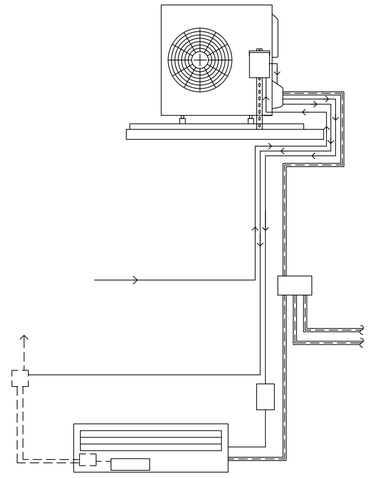
HPIU #-#	SUPPLY AIR CFM	MIN. O.A. CFM	COOLING TOTAL MBH	HEATING MBH	ELECTRICAL VOLTS	ELECTRICAL PHASE	BASIS OF DESIGN (OR EQUAL BY CARRIER, FRIGIDAIRE)	REMARKS
11–1	190	0	6.0	8.7	208	1	MITSUBISHI MSZ–FS06NA	
11–2	487	0	22.5	27.6	208	1	MITSUBISHI MSZ–GL24NA	
12–1	2,000	140	60.0	55.6	230	1	CARRIER FS5ANBC60L15	15 KW ELECTRIC HEAT

HEAT PUMP OUTDOOR UNITS

HPOU #-#	COOLING TOTAL MBH	HEATING MBH	ELECTRICAL VOLTS	ELECTRICAL PHASE	BASIS OF DESIGN (OR EQUAL)	REMARKS
11–1	6.0	8.7	208	1	MITSUBISHI MUZ–FS06NA	
11–2	48.0	50.0	208	1	MITSUBISHI MXZ–SM48NAM2	
12–1	60.0	55.6	230	1	CARRIER 27SCA560	

AIR DISTRIBUTION DEVICE

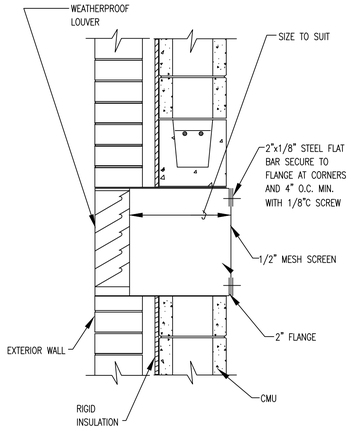
TAG CFM	TYPE	SIZE NECK	SIZE FACE	FRAME	THROW	DAMPER	REMARKS
A	DIFFUSER	8"ø	24"x24"	SURFACE	4–WAY	YES	TITUS TMS OR EQUAL
B	DIFFUSER	6"ø	12"x12"	SURFACE	4–WAY	YES	TITUS TMS OR EQUAL
C	RETURN	10"ø	12"x12"	SURFACE	--	NO	TITUS 50F OR EQUAL
D	RETURN	16"ø	24"x24"	SURFACE	--	NO	TITUS 50F OR EQUAL



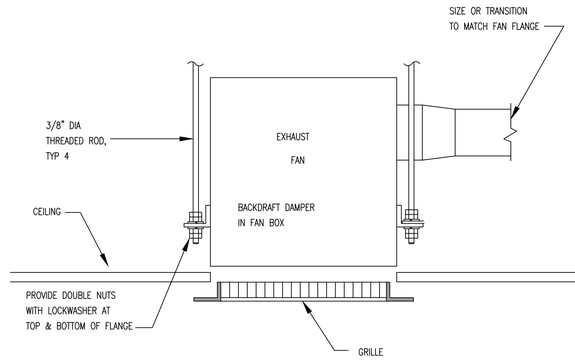
Notes:

1. REFER TO ASD–89 FOR PLATFORM CURB INSTALLATION AND ADDITIONAL INFORMATION.
2. SPLIT SYSTEM'S MANUFACTURERS AND MODELS VARY, REFERENCE MANUFACTURER'S INSTALLATION GUIDE FOR ADDITIONAL INFORMATION.

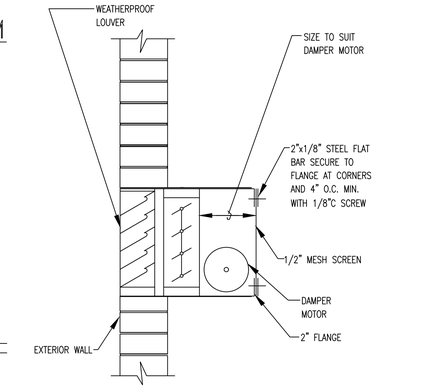
DUCTLESS SPLIT SYSTEM DIAGRAM



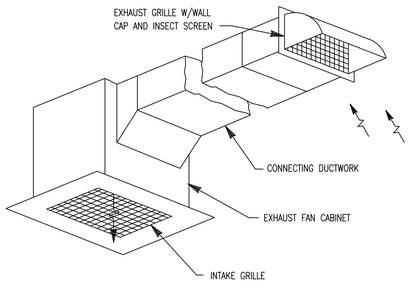
LOUVER MOUNTING DETAIL



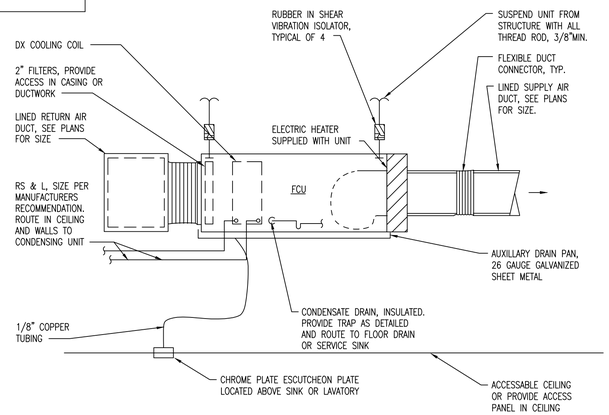
CEILING EXHAUST FAN



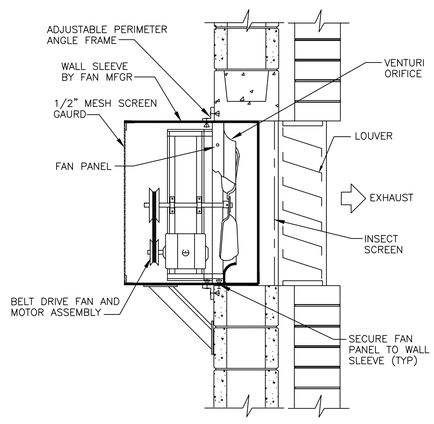
LOUVER MOUNTING DETAIL



CEILING EXHAUST FAN DETAIL



HORIZONTAL FAN COIL UNIT



WALL MOUNTED PROPELLER FAN DETAIL

J. B. Cobb Engineering, LLC
Mechanical/Industrial
Office: (678) 363-8754 Since 1997
Cell Phone: (404) 403-2126
97 Lakeridge Drive Dallas, GA 30132
jbcobbpe@bellsouth.net

EDEC
A SALAS O'BRIEN COMPANY
EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA REGISTERED No. 20348 PROFESSIONAL ENGINEER JAY BARTLEY COBB

No.	Revisions	Initial	Date
1	RELEASED FOR BID	JBC	7-31-2025

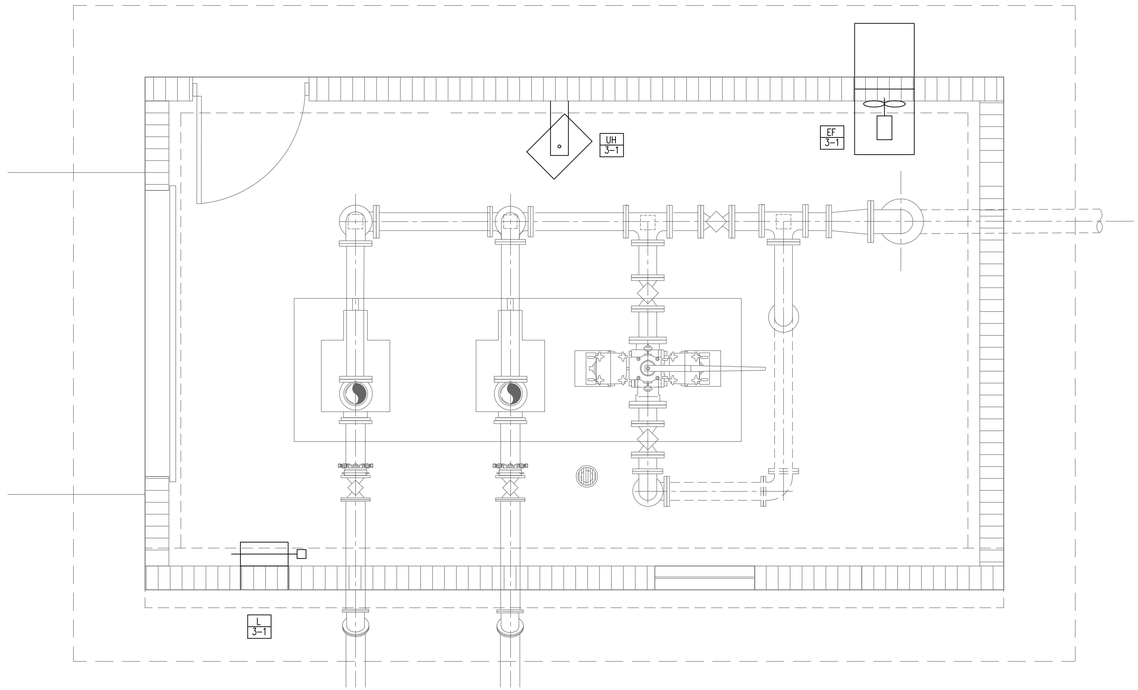
RINDT ENGINEERING + ENVIRONMENTAL

CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

HVAC NOTS SCHEDULES AND DETAILS

Drawn: JBC
Design: JBC
Checked: JBC
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2025

Sheet No.
H-1



1 INFLUENT PUMP STATION BUILDING HVAC PLAN

SCALE: 1/2" = 1'

GRAPHIC SCALE

2 0 1 2 4 8

(IN FEET)
1/2 inch = 1 ft.

HVAC SYMBOLS AND ABBREVIATIONS

	SUPPLY AIR DUCT UP/DOWN	CHWR	CHILLED WATER RETURN
	RETURN/EXHAUST AIR DUCT UP/DOWN	CHWS	CHILLED WATER SUPPLY
	NEW DUCTWORK	CU-*	CONDENSING UNIT
	FLEXIBLE DUCT	DIA.	DIAMETER
	VOLUME DAMPER	EF-*	EXHAUST FAN
	SUPPLY DIFFUSER	ES	EQUAL SPLIT
	RETURN OR EXHAUST GRILLE	FIL-*	FILTER
T	THERMOSTAT	F-*	FURNACE
P	PRESSURE SENSOR	GA	GAUGE
S	SMOKE DETECTER	OA	OUTSIDE AIR
	FIRE DAMPER	OE	OPEN ENDED DUCT
	FIRE/SMOKE DAMPER	SD	SPLITTER DAMPER
	PIPE TURNED DOWN	U/G	UNDERGROUND
	PIPE TURNED UP	UH-*	UNIT HEATER
	BRANCH PIPE OFF MAIN	VD	VOLUME DAMPER
CFM	CUBIC FEET PER MINUTE	A/C-*	AIR CONDITIONING SYSTEM
M	MOTOR OPERATOR	AFF	ABOVE FINISHED FLOOR
		AHU-*	AIR HANDLING UNIT

GEORGIA REGISTERED No. 20349 PROFESSIONAL ENGINEER JAY BARTLEY COBB

No.	Revisions	Initial	Date
1	RELEASED FOR BID	JBC	7-31-2025

RINDT ENGINEERING + ENVIRONMENTAL

CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES

INFLUENT PUMP STATION BUILDING HVAC PLAN

Drawn: JBC
Design: JBC
Checked: JBC
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2025

J. B. Cobb Engineering, LLC
Mechanical/Industrial
Office: (678) 363-8754 Since 1997 Cell Phone: (404) 403-2126
97 Lakeridge Drive Dallas, GA 30132 jbcobbpe@bellsouth.net

EDEC
A SALAS O'BRIEN COMPANY

EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

Sheet No.
H-2

GREENHECK
Building Value in Air.

EF 3-T

Job Name: SE1-14-440-VG Cut Sheet
Tag: MK-1
Quantity: 1
Printed Date: July 17, 2025

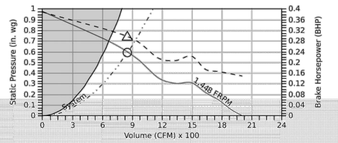
Model: SE1-14-440-VG

Sidewall Direct Drive Exhaust Fan

Standard Construction Features: Galvanized steel panel with fabricated galvanized steel drive frame (optional wall housing or wall collar). Propeller, aluminum. Direct driven motor in the airstream.

Fan Configuration	
Drive type	Direct

Performance	
Requested Volume (CFM)	850
Actual Volume (CFM)	850
Total External SP (in. wg)	0.59
Fan RPM	1,448
Operating Power (bhp)	0.29
Startup Power (bhp)	0.29
FEI	-
Air Stream Temp (F)	70
Start-up Temp (F)	70
Air Density (lbs/ft^3)	0.072
Elevation (ft)	1000
Static Efficiency (%)	27
Outlet Velocity (ft/min)	766



Fan curve
Brake horsepower curve
Operating Point SP
Operating Bhp point
Max system curve
System curve

Static Pressure Calculations	
External SP	0.5 in. wg
Backdraft Damper	0.04 in. wg
Wall Housing	0.03 in. wg
Weatherhood	0.02 in. wg
Total External SP	0.59 in. wg

Motor	
Size (hp)	1/2
V/C/P	115/60/1
NEC FLA (Amps)	6.6
Min Circuit Ampacity (MCA)	8.2
Max Overload Production (MOP)	15
Short Circuit Current Rating (SCCR)	5 kA

Sound

	Octave Bands (hz)								LwA	dBA	Sones
	62.5	125	250	500	1000	2000	4000	8000			
Inlet	88	72	70	66	67	61	55	64	72	60	12.5

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.The AMCA certified ratings seal applies to sound and air performance ratings only.Performance certified is for installation type A: Free inlet, free outlet.Power rating does not include transmission losses.Performance ratings do not include the effects of appurtenances.The AMCA licensed air and/or sound performance data has been modified for installation, appurtenances, etc. not included in the certified data. The modified performance is not AMCA licensed but is provided to aid in selection and applications of the product.The sound ratings shown are loudness values in hemispherical sones at 1.5 m (5 ft).in a hemispherical free field calculated per ANSI/AMCA Standard 301.Values shown are for Installation Type A: free inlet hemispherical sone levels.dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal for Sound applies to inlet sone ratings only.

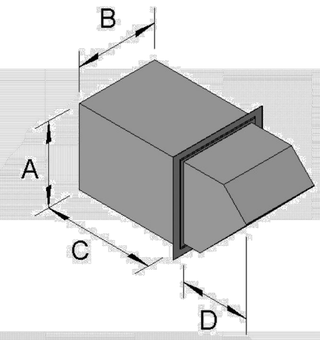
FLA - based on tables 150 or 148 of National Electric Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.
MCA and MOP values shown only account for the motor; not accessories (damper actuator, field supplied VFD, etc.).
SCCR is a rating on components and assemblies representing the maximum level of short-circuit current that a component or assembly can withstand without causing a fire or shock hazard. A short circuit exceeding this rating can cause catastrophic and violent equipment, component and enclosure failure.

GREENHECK
Building Value in Air.

EF 3-T

Job Name: SE1-14-440-VG Cut Sheet
Tag: MK-1
Quantity: 1
Printed Date: July 17, 2025

Dimensions and Weights		
Label	Value	Description
-	14	Impeller Diameter (in)
-	75	Weight w/o accessories (lbs)
A	20	Overall Height (in)
B	20	Overall Width (in)
C	26	Overall Length (in)
D	18	WTHD Length (in)
-	21.25	Wall Opening Width (in)
-	21.25	Wall Opening Height (in)



*All dimensions are in inches.

GREENHECK
Building Value in Air.

L 3-T

Job Name: ESD-635-16x24 Cut Sheet
Tag: MK-1
Quantity: 1
Printed Date: July 17, 2025

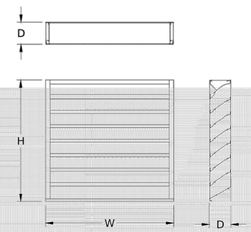
Model: ESD-635-16x24

6 in. Drainable Blade Louver

Certifications/special requirements: AMCA-500-L (Air), AMCA-500-L (Water)

Construction	
Material	Aluminum
Blade Type	All
Blade Orientation	Horizontal
Weight (lbs)	10

Dimensional	
Nominal Width (in)	16
Nominal Height (in)	24
Actual Width (in)	15.75
Actual Height (in)	23.75
Blade Depth (in)	6
Sections Wide	1
Sections High	1



Performance	
Application	Intake
Volume (CFM)	850
Pressure Drop (in. wg)	0.08
Free Area Velocity (ft/min)	749
Free Area (ft^2)	1.1
Air Density (lbs/ft^3)	0.075

*Louvers are tested to figure 5.5-6.5
*Sections wide x high are as configured with a base mill finish channel frame product and may vary depending on options selected.

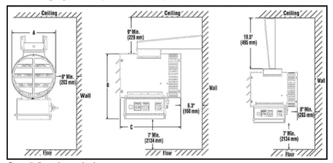
Greenheck Fan Corporation certifies that the louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.

BERKO®
A Marley Engineered Products Brand
470 Beauty Spot Rd. E, Bennettsville, SC 29512

UH 3-T

SUBMITTAL SHEET
TYPE BWD
WASH-DOWN UNIT HEATERS

TYPE BWD - WASH-DOWN UNIT HEATERS



See unit dimensions on back page

CAPACITIES
2, 3, 5, 7.5, 10, 12.5, 15, 20 KW 120, 208, 240, 277, 480, 600^V 1Ø or 3Ø (Varies with Model)
25, 30, 39 KW 208, 240, 480V 3Ø only

*Only for 5-10kw

JOB NAME:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:
SUBMITTED BY:
DATE:

ITEM	QTY.	CATALOG NUMBER	TAG	KW	VOLTS	Ø	AMPS

ACCESSORIES AND CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION

SUBMITTED BY:	DATE	APPROVED BY:	DATE

ZSS-BWDUH (06-17) www.berkomep.com

BWD SERIES

BERKO®
A Marley Engineered Products Brand

UH 3-T

SELECTION CHART

MODEL NUMBER	KW	VOLTS	PHASE	OUTPUT BTU/HR	HEATER AMPS	MOTOR VOLTS	MOTOR PHASE	MOTOR AMPS	TEMP RISE	CFM	SHIP WEIGHT LBS (KG)
BWD02112	2	120	1	6,824	16.7	120	1	1.554	9	700	60 (27.2)
BWD02812	2	208	1	6,824	9.6	208	1	0.896	9	700	60 (27.2)
BWD02212	2	240	1	6,824	8.3	240	1	0.777	9	700	60 (27.2)
BWD03112	3	120	1	10,236	25.0	120	1	1.554	14	700	60 (27.2)
BWD03812	3	208	1	10,236	14.4	208	1	0.896	14	700	60 (27.2)
BWD03212	3	240	1	10,236	12.5	240	1	0.777	14	700	60 (27.2)
BWD03712	3	277	1	10,236	10.8	277	1	0.673	14	700	60 (27.2)
BWD03832	3	208	3	10,236	8.3	208	1	0.896	14	700	60 (27.2)
BWD03232	3	240	3	10,236	7.2	240	1	0.777	14	700	60 (27.2)
BWD03432	3	480	3	10,236	3.6	480	1	0.388	14	700	60 (27.2)
BWD05812	5	208	1	17,060	24.0	208	1	0.896	23	700	60 (27.2)
BWD05212	5	240	1	17,060	20.8	240	1	0.777	23	700	60 (27.2)
BWD05712	5	277	1	17,060	18.1	277	1	0.673	23	700	60 (27.2)
BWD05412	5	480	1	17,060	10.4	480	1	0.388	23	700	60 (27.2)
BWD05832	5	208	3	17,060	13.9	208	1	0.896	23	700	60 (27.2)
BWD05432	5	480	3	17,060	6.0	480	1	0.388	23	700	60 (27.2)
BWD07812	7.5	208	1	25,590	36.1	208	1	0.896	34	700	60 (27.2)
BWD07212	7.5	240	1	25,590	31.3	240	1	0.777	34	700	60 (27.2)
BWD07712	7.5	277	1	25,590	27.1	277	1	0.673	34	700	60 (27.2)
BWD07412	7.5	480	1	25,590	15.6	480	1	0.388	34	700	60 (27.2)
BWD07832	7.5	208	3	25,590	20.8	208	1	0.896	34	700	60 (27.2)
BWD07232	7.5	240	3	25,590	18.0	240	1	0.777	34	700	60 (27.2)
BWD07432	7.5	480	3	25,590	9.0	480	1	0.388	34	700	60 (27.2)
BWD07632	7.5	600	3	25,590	7.2	240	1	1.8	34	1450	75 (34)
BWD10212	10	240	1	34,120	41.7	240	1	0.777	22	1450	60 (27.2)
BWD10712	10	277	1	34,120	36.1	277	1	0.673	22	1450	60 (27.2)
BWD10412	10	480	1	34,120	20.8	480	1	0.388	22	1450	60 (27.2)
BWD10832	10	208	3	34,120	27.8	208	1	0.896	22	1450	60 (27.2)
BWD10232	10	240	3	34,120	24.1	240	1	0.777	22	1450	60 (27.2)
BWD10432	10	480	3	34,120	12.0	480	1	0.388	22	1450	60 (27.2)
BWD10632	10	600	3	34,120	9.6	240	1	1.8	33	2400	75 (34)
BWD12812	12.5	208	1	42,650	60.1	208	1	1.793	27	1450	60 (27.2)
BWD12212	12.5	240	1	42,650	52.1	240	1	1.554	27	1450	60 (27.2)
BWD12832	12.5	208	3	42,650	34.7	208	1	1.793	27	1450	60 (27.2)
BWD12232	12.5	240	3	42,650	30.1	240	1	1.554	27	1450	60 (27.2)
BWD12432	12.5	480	3	42,650	15.0	480	1	0.777	27	1450	60 (27.2)
BWD15812	15	208	1	51,180	72.1	208	1	1.793	20	2400	110 (49.9)
BWD15212	15	240	1	51,180	62.5	240	1	1.554	20	2400	110 (49.9)
BWD15412	15	480	1	51,180	31.3	480	1	0.777	20	2400	110 (49.9)
BWD15832	15	208	3	51,180	41.8	208	1	1.793	20	2400	110 (49.9)
BWD15232	15	240	3	51,180	36.1	240	1	1.554	20	2400	110 (49.9)
BWD15432	15	480	3	51,180	18.0	480	1	0.777	20	2400	110 (49.9)
BWD20412	20	480	1	68,240	41.7	480	1	0.777	26	2400	120 (54.4)
BWD20232	20	240	3	68,240	48.1	240	1	1.554	26	2400	120 (54.4)
BWD20432	20	480	3	68,240	24.1	480	1	0.777	26	2400	120 (54.4)
BWD25832	25	208	3	85,300	69.4	208	1	1.793	33	2400	120 (54.4)
BWD25232	25	240	3	85,300	60.1	240	1	1.554	33	2400	120 (54.4)
BWD25432	25	480	3	85,300	30.1	480	1	0.777	33	2400	120 (54.4)
BWD30832	30	208	3	102,360	83.3	208	1	1.793	39	2400	120 (54.4)
BWD30232	30	240	3	102,360	72.2	240	1	1.554	39	2400	120 (54.4)
BWD30432	30	480	3	102,360	36.1	480	1	0.777	39	2400	120 (54.4)
BWD39432	39	480	3	133,068	46.9	480	1	0.777	51	2400	120 (54.4)

All units other than standard models are non-returnable.

Factory Installed Accessories

CATALOG NUMBER	DESCRIPTION
T	Thermostat
L	Pilot Light
S	Mode/Selector Switch
D	Disconnect Switch
E	Monel Element*
M	Manual Reset
P	Epoxy Coating

* Monel elements are subject to longer lead times - contact factory for details.

kW	Dimensions Inches (mm)			
	A	B	C	D
2-10	13 (330)	19.5 (495)	18 (457)	19.5 (495)
12.5-39.0	20 (508)	31 (787)	27 (686)	24.2 (615)

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

Corrosion resistant unit heater(s) shall be supplied by Berko, A Marley Engineered Products Brand, Bennettsville, SC. The unit heater(s) shall be UL listed for corrosive areas and NEMA4X wash down requirements.

HEATING ELEMENTS: The heating elements shall be corrosion resistant 300 stainless steel sheathed with 316 stainless steel fins for maximum heat dissipation. The elements are to be attached to junction box with leak-resistant stainless steel fittings.

CONTROL CENTER: The controls are completely factory prewired and tested and enclosed in a NEMA4X molded fiberglass control enclosure mounted beneath the heater cabinet. The control center shall include contactors, automatic reset over-temperature protector, fan delay relay, motor contactor and fused transformer for 24V control circuit. Convenient terminal blocks are included for remote thermostat connection.

FAN AND MOTOR ASSEMBLY: The fan and motor assembly shall include a totally enclosed, permanently lubricated, ball bearing motor, epoxy coated for corrosion resistance. Motor rating shall be 1/4 hp up to 10KW. 1/2 hp for 208V and 3/4 hp for 240/480 for units above 10kw. The fan shall be aluminum with corrosion resistant coating, directly connected to the motor, and be dynamically balanced. An epoxy sealed thermal fan delay shall be provided to allow the fan to continue to operate after heating thermostat has been satisfied to maximize transfer of generated heat to space being heated. The fan and motor shall be protected by an adjustable louvered outlet grille to direct flow up or down, painted with one coat zinc chromate primer and two coats of corrosion resistant paint.

OVER-TEMPERATURE PROTECTION: Built in over temperature protection shall be provided by an automatic reset thermal cutout.

HEATER CASE: The heater case shall be constructed of heavy 16 gauge type 304 stainless steel for corrosion resistance and assembled with stainless steel hardware. A stainless steel combination wall and ceiling swivel type mounting bracket to be supplied with unit heater.

J. B. Cobb Engineering, LLC
Mechanical/Industrial
Office: (678) 363-8754
Since 1997
Cell Phone: (404) 403-2126
97 Lakeridge Drive
Dallas, GA 30132
jbcobbpe@bellsouth.net

EDEC
A SALAS O'BRIEN COMPANY
EDEC, INC.
4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685

GEORGIA
REGISTERED
No. 20349
PROFESSIONAL
ENGINEER
JAY BARTLEY COBB

No.	Revisions	Initial	Date
1	RELEASED FOR BID	JBC	7-31-2025

RINDT
ENGINEERING • ENVIRONMENTAL

CITY OF CLEVELAND
WASTEWATER TREATMENT PLANT UPGRADES
INFLUENT PUMP STATION BUILDING
HVAC SPECIFICATIONS

Drawn: JBC
Design: JBC
Checked: JBC
Project No: R2019-111
Scale: AS SHOWN
Date: JULY 2025

Sheet No.
H-3