

PROJECT ENGINEER: R. FROST J. ROSS **DESIGNED BY** K. TREANOR DRAWN BY: FOR BID G. LYNCH CHECKED BY: IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE 0 1/2"

DATE

ISSUED FOR

Hazen HAZEN AND SAWYER 498 SEVENTH AVENUE, 11th FLOOR NEW YORK, NEW YORK 10018

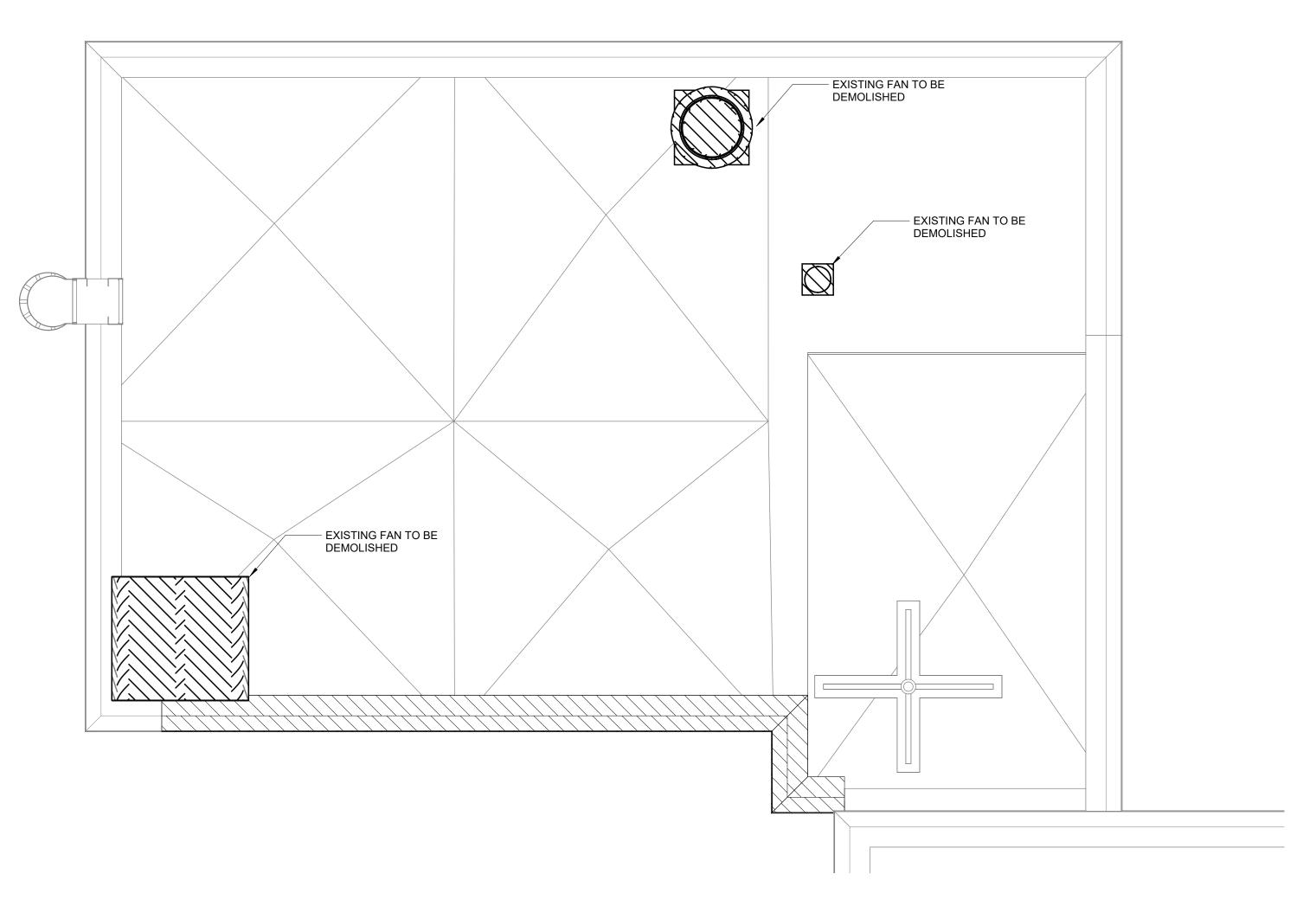
ROCKLAND COUNTY SEWER DISTRICT NO.1 ORANGEBURG, NEW YORK

ORANGEBURG WASTEWATER TREATMENT PLANT SCREENING IMPROVEMENTS PROJECT **HVAC REMOVAL** PLAN EL 70.50

DATE:	JUNE 2024
HAZEN NO.:	90462-000
CONT NO.:	RFB-RC-SWR-2023-06
DRAWING NUMBER:	
	DH-01

1 0 1 2 3

1/4" = 1'-0"



<u>DEMOLITION PLAN EL 88.00</u>
1/4" = 1'-0"



1 0 1 2 3 7'

8							
d CA for RC					PROJECT ENGINEER:	R. FROST	
EDS and					DESIGNED BY:	J. ROSS	
					DRAWN BY:	K. TREANOR	FOR BID
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Doc: 4 7:36					IF THIS BAR DOES NOT	0 1/2" 1"	
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HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

ROCKLAND COUNTY SEWER DISTRICT NO.1 ORANGEBURG, NEW YORK

ORANGEBURG WASTEWATER
TREATMENT PLANT
SCREENING IMPROVEMENTS PROJECT

HVAC REMOVAL PLAN EL 88.00

DATE:	JUNE 2024
HAZEN NO.:	90462-000
CONT NO.:	RFB-RC-SWR-2023-0
DRAWING NUMBER:	
	DH-02

GENERAL NOTES

- 1. AT A MINIMUM, ALL WORK SHALL COMPLY WITH AND BE INSTALLED IN ACCORDANCE WITH THE SUPPLEMENTAL UNIFORM AND FIRE PREVENTION BUILDING CODE, NYS BUILDING CODE, NYS MECHANICAL CODE, 2020 NYS ENERGY CODE, AND ALL CODES LOCAL OR OTHERWISE HAVING JURISDICTION OVER THE WORK. IF THE CONTRACT DOCUMENTS SHOW DIFFERENT THAN THE CODE, THE MORE STRINGENT SHALL APPLY.
- 2. ALL WORK SHOWN ON THE DRAWINGS SHALL BE PROVIDED UNLESS OTHERWISE NOTED.
- 3. DUCTWORK & PIPING IS DIAGRAMMATICALLY SHOWN. EXACT ROUTING OF NEW PIPING & DUCTWORK SHALL BE DETERMINED IN FIELD WITH THE APPROVAL OF THE ENGINEER.
- 4. THE WORDS PROVIDE OR INSTALL, SINGLY OR IN COMBINATION, SHALL MEAN FURNISH AND INSTALL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- 5. THE CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING TO MATCH EXISTING AS REQUIRED FOR THE INSTALLATION OF HIS WORK.
- 6. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF HIS WORK AND NEWLY INSTALLED WORK, INCLUDING PROTECTION OF BUILDING OCCUPANTS AND OWNERS EQUIPMENT, PUBLIC, AND PERSONNEL. PROVIDE APPROPRIATE SIGNAGE, BARRIERS, AND SAFETY GUARD RAILS AS REQUIRED.
- WHERE WELDING OR OPEN FLAME IS USED FOR CUTTING, SOLDERING, ETC.. CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHERS AND A FIRE WATCH IN PROXIMITY OF
- 8. ALL WORK SHALL BE COORDINATED WITH ALL TRADES RELATED TO THE COMPLETION OF THIS PROJECT.
- 9. THE CONTRACTOR SHALL FILE PLANS WITH THE GOVERNING AUTHORITIES HAVING JURISDICTION AND SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE INSTALLATION OF HIS WORK.
- 10. THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORK INSTALLED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR, AFTER ACCEPTANCE OF THE INSTALLATION BY THE ENGINEER AND OWNER. THE CONTRACTOR SHALL SUBMIT IN WRITING TO OWNER STATING THE SAME. EQUIPMENT WARRANTEES OF A LONGER DURATION SHALL APPLY.
- 11. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, HIS REPRESENTATIVES AND THE ENGINEER FROM ANY CLAIMS OR SUITS RESULTING IN NEGLIGENCE ON THE PART OF THE CONTRACTOR AND FOR FAILING TO EXECUTE HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 12. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HOISTING AND SCAFFOLDING AS REQUIRED FOR THE INSTALLATION OF HIS WORK.
- 13. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS AND WORKMEN EXPERIENCED IN THE TRADE HAVING JURISDICTION. ALL WORK SHALL BE SUPERVISED AT ALL TIMES AND WORKMANSHIP SHALL BE FIRST CLASS IN ALL RESPECTS AND IN ACCORDANCE WITH BEST TRADE PRACTICES.
- 14. ANY DEVIATION OR CHANGE IN DESIGN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER AND SIGNED BY THE OWNER. ANY WORK INSTALLED WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER OR FOUND TO BE DEFECTIVE IN ANY WAY SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 15. ALL CONSTRUCTION WORK SHALL BE CONFINED TO THE AREA INDICATED ON PLANS AND SHALL NOT BLOCK MEANS OF EGRESS FOR OCCUPANTS OF THE BUILDING.
- 16. ALL WORK SHALL BE PERFORMED DURING NORMAL WORKING HOURS: 8AM TO 5PM MONDAY THROUGH FRIDAY EXCEPT LEGAL HOLIDAYS OR FOR EMERGENCY REPAIRS, UNLESS DIRECTED OTHERWISE BY THE OWNER. WORKING HOURS MUST BE COORDINATED WITH GENERAL CONTRACTOR. HOWEVER, THE CONTRACTOR MAY WORK EXTRA HOURS AS NEEDED TO COMPLETE THE CONTRACT SCOPE OF WORK AND MEET THE COMPLETION DATE AT NO ADDITIONAL COST TO OWNER, AS LONG AS OWNER HAS BEEN PROPERLY NOTIFIED AND HAS APPROVED SAME
- 17. ROUGH PATCHING OF WALLS, FLOORS, ETC. SHALL BE BY TRADE WHO PERFORMED WORK UNLESS OTHERWISE NOTED AND SHALL MATCH EXISTING SURROUNDING AREA IN ALL RESPECTS. WORK AREA SHALL BE LEFT BROOM CLEAN AT THE END OF EACH DAY. ALL DISCARDED AND DEMOLISHED MATERIAL AND RUBBISH SHALL BE REMOVED FROM PREMISES DAILY IN A LEGAL AND APPROVED MANNER. FINAL PATCHING AND PAINTING SHALL BE PERFORMED BY GENERAL CONTRACTOR
- 18. LIMIT THE SPREAD OF DUST WHEN CUTTING BY INSTALLING POLYETHYLENE BARRIERS OR TARPAULINS AND EXHAUST TO CONTAIN AIRBORNE MATERIALS.
- 19. THE CONTRACTOR SHALL MAINTAIN ON THE JOB SITE A SET OF CONTRACT DRAWINGS.
- 20. THE CONTRACTOR SHALL MAINTAIN ON THE JOB SITE A SET OF SHOP DRAWINGS IN WHICH ANY DEVIATIONS FROM THE ORIGINAL DESIGN SHALL BE NOTED. UPON COMPLETION OF THE INSTALLATION OF NEW WORK THE CONTRACTOR SHALL TURN OVER TO THE OWNER AND ENGINEER (1) SET OF AS-BUILT REPRODUCIBLE DRAWINGS AND (1) SET OF PRINTS INCLUDING ALL APPROVED FIELD CHANGES AND DESIGN DEVIATIONS PRIOR TO RECEIPT OF FINAL PAYMENT BY OWNER.
- 21. ALL PENETRATIONS THROUGH PARTITIONS, FLOORS, WALLS AND ROOF FOR ALL PIPING, CONDUIT AND DUCTWORK SHALL BE SEALED AND FIRE SAFED OFF TO MAINTAIN FIRE INTEGRITY OF EXISTING STRUCTURE.
- 22. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AS WELL AS BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF THE WORK.
- 23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ADEQUATE PRECAUTIONS AND SHALL PROVIDE REASONABLE PROTECTION TO PREVENT INJURY OR DAMAGE TO PERSONS, THE WORK, AND OTHER PROPERTY.

HVAC NOTES

- 1. PROVIDE SLEEVES FOR ALL DUCTS PENETRATING AND PASSING THROUGH ALL PARTITIONS, FLOORS, CEILINGS AND WALLS. ALLOW ROOM IN SLEEVE FOR INSULATION. SLEEVES SHALL BE MINIMUM OF 22 GAUGE SHEET METAL. PACK ANNULAR SPACE IN SLEEVE AROUND DUCT WITH FIRE RATED MATERIAL, SIMILAR TO THERMAFIBER. SEAL AND CAULK ALL WALL, FLOOR, CEILING AND SLAB OPENINGS WITH U.L. APPROVED FIRE RATED MATERIAL TO PREVENT TRANSMISSION OF ODORS AND SMOKE TO ADJACENT SPACES. ALL DUCT PENETRATIONS OF FIRE RATED WALLS AND SLABS SHALL BE EQUIPPED WITH FIRE/SMOKE RATED DAMPERS.
- 2. CONTRACTOR SHALL PROVIDE ACCESS DOORS IN ALL CEILINGS, DUCTS, CHASES AND WALLS AS REQUIRED FOR ACCESS TO ALL CONCEALED OPERATING DEVICES INCLUDING BUT NOT LIMITED TO FIRE DAMPERS, VOLUME DAMPERS, CONTROL DAMPERS AND BOXES, ETC.
- 3. ALL HVAC WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE NYS MECHANICAL CODE, STATE AND LOCAL BUILDING CODES, SMACNA AND ASHRAE STANDARDS, NFPA-90A, ALL CODES AND ORDINANCES HAVING JURISDICTION, AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AT A MINIMUM.
- 4. UPON COMPLETION OF ALL WORK, ALL EQUIPMENT AND DUCTWORK SHALL BE THOROUGHLY CLEANED AND LEFT IN FIRST CLASS CONDITION.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE ENGINEER.
- 6. ALL EQUIPMENT SHALL BE TESTED IN ACCORDANCE WITH ALL APPLICABLE CODES, MANUFACTURER SPECIFICATIONS, AND TO THE SATISFACTION OF THE ENGINEER.
- 7. BALANCE AND ADJUST AIRFLOW TO REGISTERS AND GRILLES AS INDICATED ON DRAWINGS. ALL SYSTEMS SHALL BE BALANCED TO WITHIN 10% OF DESIGN FLOW WITH REPORT SUBMITTED TO OWNER. BALANCING WORK SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED BALANCING CONTRACTOR WHO IS CERTIFIED BY AABC OR NEBB. SUBMIT BALANCING REPORT TO ENGINEER FOR APPROVAL.
- 8. CONTRACTOR SHALL PROVIDE ALL CONTROLS AND CONTROL WIRING AS REQUIRED FOR COMPLETE CONTROL OF EQUIPMENT FOR A COMPLETE FUNCTIONING SYSTEM. REFER TO ELECTRICAL DRAWINGS FOR STANDARDS OF CONSTRUCTION.
- 9. INSTALL ALL REQUIRED APPURTENANCES PER CODE WHETHER SPECIFIED OR NOT FOR COMPLETE FUNCTIONING SYSTEMS.



					PROJECT ENGINEER:		R. FRO	ST
					DESIGNED BY:		J. RO	SS
- AM					DRAWN BY:	K.	TREAN	OR
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					IF THIS BAR DOES NOT	0	1/2"	1"
/30/2023	0	BID	06/2024	PDS	MEASURE 1" THEN DRAWING			
/30	REV	ISSUED FOR	DATE	BY	IS NOT TO FULL SCALE			—

FOR BID

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ROCKLAND COUNTY SEWER DISTRICT NO.1 ORANGEBURG, NEW YORK

ORANGEBURG WASTEWATER TREATMENT PLANT SCREENING IMPROVEMENTS PROJECT

HVAC LEGEND AND NOTES

_	
0	RISER
C	ELBOW DOWN
	UNION
	EXHAUST DUCT
	RETURN DUCT
	SUPPLY DUCT
	DUCT ELBOW WITH TURNING VANES
	AIR TERMINAL
	CHECK VALVE
	GLOBE VALVE
	GATE VALVE
M	MOTORIZED OPERATED DAMPER
T	DUCT MOUNTED TEMPERATURE SENSOR
	THERMOSTAT
DPS	DIFFERENTIAL PRESSURE SWITCH
SA	SUPPLY AIR
EA	EXHAUST AIR
ОС	ODOR CONTROL
OA	OUTSIDE AIR
RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE
LAT	LEAVING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
RAG	RETURN AIR GRILLE
EAG	EXHAUST AIR GRILLE
SAG	SUPPLY AIR GRILLE
<u>EF-1</u>	DENOTES EXHAUST FAN NO. 1
<u>EUH-1</u>	DENOTES ELECTRIC UNIT HEATER NO. 1
<u>L-1</u>	DENOTES LOUVER NO. 1
<u>SF-1</u>	DENOTES SUPPLY FAN NO. 1

LEGEND

DESCRIPTION

EXISTING WORK BY OTHERS

WORK TO BE PROVIDED

WORK TO BE REMOVED

POINT OF CONNECTION

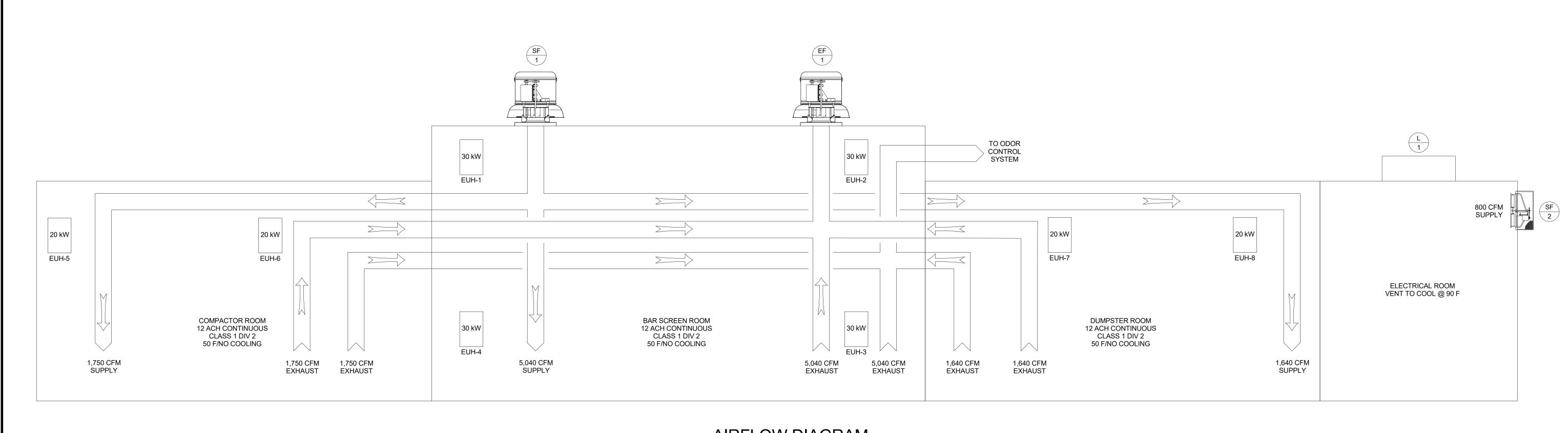
POINT OF DISCONNECTION

SYMBOL

/////

NOTE: ALL WORK IS TO BE PROVIDED UNLESS OTHERWISE NOTED

DATE: **JUNE 202**4 90462-000 HAZEN NO. CONT NO.: RFB-RC-SWR-2023-0 DRAWING NUMBER: H-01



AIRFLOW DIAGRAM NO SCALE



PROJECT ENGINEER: R. FROST J. ROSS DESIGNED BY: DRAWN BY: K. TREANOR G. LYNCH CHECKED BY: IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE 0 1/2" 06/2024 PDS

DATE BY

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ORANGEBURG WASTEWATER TREATMENT PLANT SCREENING IMPROVEMENTS PROJECT

HVAC AIRFLOW DIAGRAM

DATE:	JUNE 2024
HAZEN NO.:	90462-000
CONT NO.:	RFB-RC-SWR-2023-06
DRAWING NUMBER:	
	H-02

	FAN SCHEDULE																
TAG	NAME	ROOM LOCATION	ARRANGEMENT	AIRFLOW (CFM)	ESP	RPM	ВНР	HP	FEG	VOLTAGE	PHASE	FREQUENCY	dBA	WEIGHT (LBS)	MANUFACTURER	MODEL NUMBER	COMMENTS
SF-1	BAR SCREEN SUPPLY FAN	BAR SCREEN ROOM	ROOF TOP SUPPLY FAN	8,430	1 IN WC	1995	3.996	5	75	460	3	60	75	662	соок	225QMXS	2, 3, 4
EF-1	BAR SCREEN EXHAUST FAN	BAR SCREEN ROOM	ROOF TOP EXHAUST FAN	8,430	1 IN WC	2078	4.731	7 1/2	67	460	3	60	76	598	соок	225QMXE	1, 2, 3, 4
SF-2	ELECTRICAL ROOM SUPPLY FAN	ELECTRICAL ROOM	PROPELLER WALL SUPPLY FAN	930	.33 IN WC	860	0.130	1/2	-	460	3	60	64	73	COOK	24EWS612D08	

FAN TO BE STANDBY

FAN SHALL BE SPARK RESISTANT B

EXPLOSION PROOF

4. PROVIDE WITH CURB ADAPTER AS REQUIRED TO MATCH EXISTING 32"x32" ROOF OPENING.

	ELECTRIC UNIT HEATER SCHEDULE										
NAME	ROOM LOCATION	VOLTAGE	POWER (KW)	CAPACITY (MBH)	MOTOR HP	CFM	HORIZ. AIR THROW (ft.)	WEIGHT (LBS)	MANUFACTURER	AREA CLASSIFICATION	COMMENTS
EUH-1, EUH-2, EUH-3, EUH-4	BAR SCREEN ROOM	480/3/60	30	102.3	30	2,330	54	216	QMARK GUX30004832	CLASS 1, DIV. 2, GROUP D	1, 2, 3
EUH-5, EUH-6	DUMPSTER ROOM	480/3/60	20	68.2	20	1,400	43	171	QMARK GUX20004832	CLASS 1, DIV. 2, GROUP D	1, 2, 3
EUH-7, EUH-8	COMPACTOR ROOM	480/3/60	20	68.2	20	1,400	43	171	QMARK GUX20004832	CLASS 1, DIV. 2, GROUP D	1, 2, 3

1. UNIT SHALL BE EXPLOSION PROOF

PROVIDE UNIT WITH DISCONNECT 3. PROVIDE UNIT WITH INTEGRAL THERMOSTAT

	AIR TERMINALS										
UNIT NO.	NO.	LOCATION	CFM (MAX/MIN)	ESP ("WG)	DIMENSIONS LxW (INCHES)	BLADE SPACING (INCHES)	MATERIAL	NC	THROW (FEET)	MFR. & MODEL NO.	REMARKS
SG-1	4	BAR SCREEN ROOM	1260	.183	18x12	3/4"	ALUMINUM	35	45	TITUS 301RL	1
EG-1	8	BAR SCREEN ROOM	1260	.099	24x12	3/4"	ALUMINUM	35	-	TITUS 350R	1
SG-2	2	COMPACTOR ROOM	875	.183	12x12	3/4"	ALUMINUM	35	40	TITUS 301RL	1
EG-2	4	COMPACTOR ROOM	875	.130	18x10	3/4"	ALUMINUM	35	-	TITUS 350R	1
SG-3	2	DUMPSTER ROOM	820	.183	18x8	3/4"	ALUMINUM	40	40	TITUS 301RL	1
EG-3	4	DUMPSTER ROOM	820	.130	18x10	3/4"	ALUMINUM	40	-	TITUS 350R	1
EG-4	1	ELECTRICAL ROOM	925	.263	22x6	3/4"	ALUMINUM	40	-	TITUS 350R	1

NAME

L-1

1. PROVIDE UNIT WITH MANUFACTURERS ROOF CURB

CURB CAP SIZE

17.5." x 17.5"

LOUVER PENTHOUSE SCHEDULE

(SQ. IN.)

2. PROVIDE UNIT WITH BIRDSCREEN

HOOD SIZE

23.75"x 23.75"

NOTES:
1. COORDINATE GRILLE INSTALLATION WITH OTHER TRADES



				PROJECT ENGINEER:	R. FROST	
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HVAC SCHEDULES

HEIGHT | MINIMUM FREE AREA | STATIC PRESSURE | MFR. & MODEL NUMBER | REMARKS

DROP

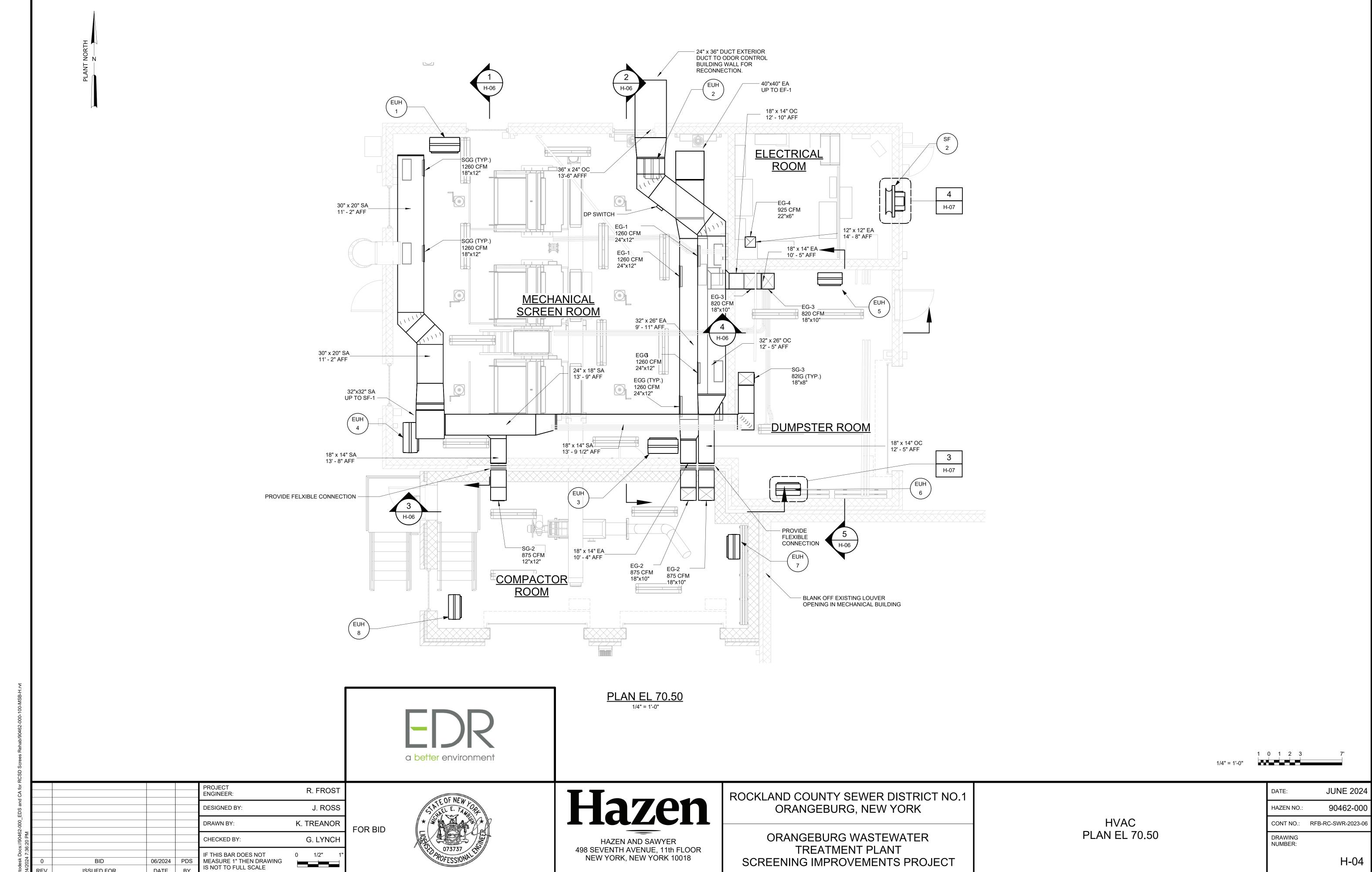
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12x12x2

1, 2

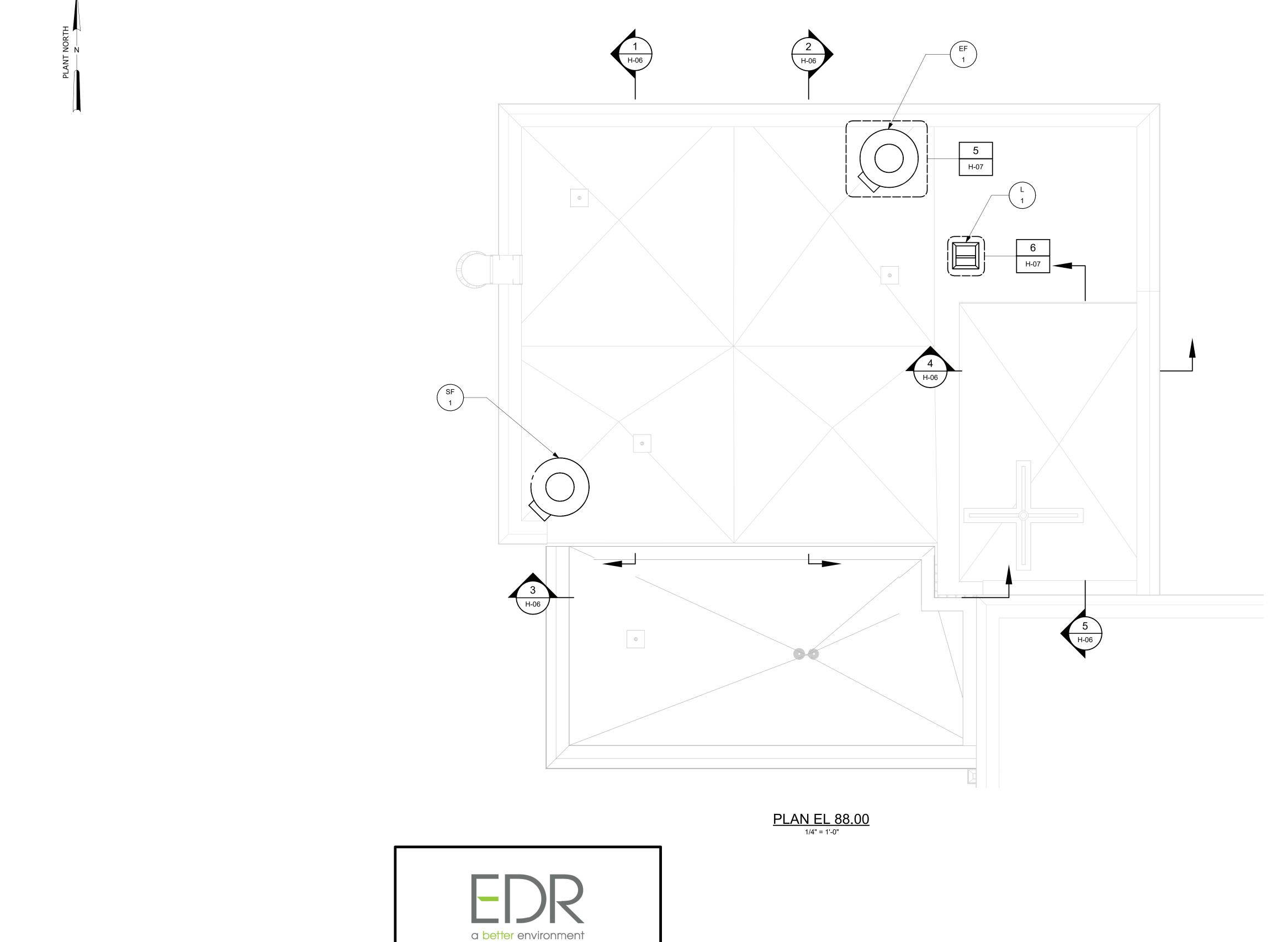
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DRAWING NUMBER:	
	H-03



06/2024

ISSUED FOR

TREATMENT PLANT SCREENING IMPROVEMENTS PROJECT H-04



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

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HVAC PLAN EL 88.00

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