

- KEY NOTES:**
- 1 REMOTE TEST STATION FOR SMOKE DETECTORS FOR RTU-1, 2, & 3. TEST STATION TO BE MOUNTED ON THE MANAGER'S OFFICE WALL. SECURITY CONTRACTOR SHALL WIRE RTU FACTORY MOUNTED SMOKE DETECTORS TO SECURITY FIRE ALARM PANEL. MECHANICAL CONTRACTOR SHALL PROVIDE TEST STATION AND WIRING BETWEEN COMPONENTS AS WELL AS WIRING TO SHUT DOWN THE A/C FAN UPON ACTIVATION OF THE SMOKE DETECTOR. G.C. TO TEST THE SMOKE DETECTOR FUNCTIONS WITH THE WAMA PROJECT MANAGER.
 - 2 WALL MOUNTED SENSOR(S) FOR EACH MECHANICAL UNIT PER ROOFTOP UNIT SCHEDULE ON SHEET M3.0. G.C. SHALL INSTALL AND WIRE TO UNIT. BAS CONTRACTOR SHALL CONNECT TO MECHANICAL UNIT ONLY.
 - 3 COORDINATE EXACT LOCATION OF EXHAUST FAN PENETRATION WITH ARCHITECTURAL ROOF PLAN. INSTALL GALVANIZED DUCT WORK DOWN FROM FAN INTO CEILING/JOIST SPACE. AND CONNECT TO CEILING GRILLES.
 - 4 REFER TO TYPICAL DUCT PLENUM DETAIL ON SHEET M3.0.
 - 5 ROUTE SUPPLY DUCT UNDER RETURN DUCT AT THIS POINT.
 - 6 ROUTE DUCT THROUGH ANGLED WEB MEMBER AND SUPPORT AT PANEL POINT.
 - 7 PROVIDE SURFACE MOUNT ADAPTER FRAME TO ALLOW ACCESS TO CEILING ABOVE THROUGH DIFFUSER OPENING. SEE AIR DEVICE SCHEDULE.
 - 8 ROUTE DUCT UNDER STRUCTURAL MEMBERS AT THIS LOCATION.
 - 9 DUCTWORK TO RUN WITHIN JOIST SPACING. MECHANICAL CONTRACTOR TO COORDINATE MECHANICAL WORK WITH ALL TRADES PRIOR TO INSTALLATION.
 - 10 TRANSFER AIR DUCT ASSEMBLY.
 - 11 PROVIDE SEALED 2" X 2" PLENUM BOX ASSEMBLY ABOVE TRANSFER GRILLS TO ALLOW FLEX TRANSFER DUCT CONNECTIONS.
 - 12 DUCT TAKEOFF WITH DAMPER FROM BOTTOM OF MAIN DUCT.

PERMITTING NOTE:
ALL REFRIGERATION EQUIPMENT INCLUDING WALK-IN COOLERS AND REFRIGERATORS WILL BE SUBMITTED UNDER A SEPARATE PERMIT.

SHEET GENERAL NOTE:
A. MECHANICAL CONTRACTOR SHALL ADJUST ALL LINEAR SLOT DIFFUSERS TO A GENERALLY VERTICAL FLOW. ADJUSTMENT SHALL BE MADE SO AS TO AVOID AIRFLOWS ON SENSORS, REFRIGERATION CASES, OR OPEN FOOD REFRIGERATION EQUIPMENT.

HVAC LEGEND	
SYMBOL	DESCRIPTION
	NEW RECTANGULAR OR ROUND DUCT
	FLEXIBLE DUCT
	SUPPLY AIR DUCTWORK UP THROUGH PLAN
	RETURN AIR DUCTWORK UP THROUGH PLAN
	EXHAUST AIR DUCTWORK UP THROUGH PLAN
	90° ELBOW WITH TURNING VANES
	MANUAL AIR VOLUME CONTROL DAMPER
	4 WAY SUPPLY DIFFUSER
	3 WAY SUPPLY DIFFUSER
	2 WAY OPPOSED SUPPLY DIFFUSER
	2 WAY CORNER SUPPLY DIFFUSER
	RETURN AIR DEVICE
	EXHAUST AIR DEVICE
	AIR CURTAIN
	LINEAR SLOT DIFFUSER WITH PLENUM
	COMBINATION TEMPERATURE/HUMIDITY SENSOR
	TEMPERATURE SENSOR
	CO2 SENSOR
	TYPE MARK CFM
	MECHANICAL EQUIPMENT TAG
	CONDENSATE PIPING
	ROOF MOUNTED EXHAUST FAN
	INLINE EXHAUST FAN
	PACKAGED ROOFTOP AIR CONDITIONER

1 HVAC FLOOR PLAN
M1.0 1/4" = 1'-0"

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CLIENT NAME
WAWA
260 WEST BALTIMORE PIKE
WAWA, PENNSYLVANIA 19063

PROJECT NAME
WAWA F85 V2021.1
STORE #5425
PALM COAST PKWY & FLORIDA PARK DR
S PALM COAST, FL

SHEET TITLE
HVAC FLOOR PLAN

PROFESSIONAL ENGINEER
JOSE J. DIAZ-VELAZQUEZ
No. 78474
STATE OF FLORIDA
11/07/2023

No.	Description	Date
M	MECH CHANGES	05/09/2022
N	MECH & PLUMB REV	06/14/2023
N	PRE-BID SET	06/14/2023
N	CONSTRUCTION SET	11/07/2023

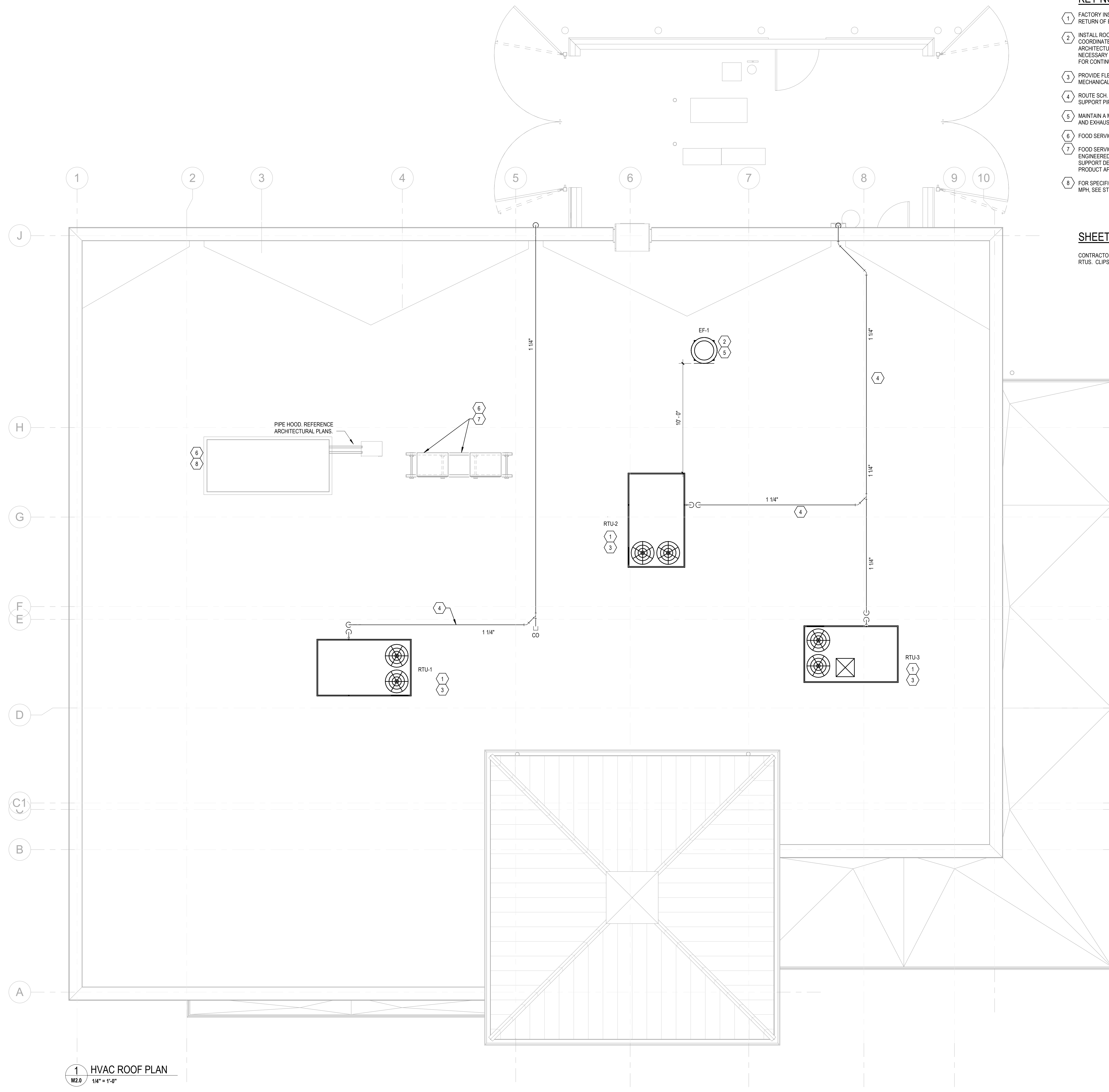
PROJECT NO.
220142

DATE
05-15-2022

DRAWN
JDF

CHECKED
ESD

M1.0



KEY NOTES:

- 1 FACTORY INSTALLED SMOKE DETECTORS IN MAIN SUPPLY AND RETURN OF EACH ROOF TOP UNIT.
- 2 INSTALL ROOF MOUNTED EXHAUST FAN PER DETAIL ON SHEET M3.0. COORDINATE EXACT LOCATION OF FAN PENETRATION WITH ARCHITECTURAL ROOF PLAN. TRANSITION GALVANIZED DUCTWORK AS NECESSARY FROM FAN INTO CEILING/JOIST SPACE. SEE SHEET M1.0 FOR CONTINUATION.
- 3 PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL DUCTWORK AND MECHANICAL UNITS.
- 4 ROUTE SCH. 40 PVC CONDENSATE DRAIN PIPING ALONG ROOF. SUPPORT PIPING PER DETAIL ON SHEET M3.0.
- 5 MAINTAIN A MINIMUM 10' CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND EXHAUST TERMINATIONS ON ROOF.
- 6 FOOD SERVICE REFRIGERATION EQUIPMENT PROVIDED BY OTHERS.
- 7 FOOD SERVICE REFRIGERATION EQUIPMENT MOUNTED ON PRE-ENGINEERED RACK. REFER TO "CONDENSING UNIT ROOFING SUPPORT DETAIL" ON ARCHITECTURAL SHEETS FOR FLORIDA. PRODUCT APPROVAL INFORMATION.
- 8 FOR SPECIFIC WIND LOADING REQUIREMENTS NOT TO EXCEED 135 MPH. SEE STRUCTURAL DRAWINGS.

SHEET GENERAL NOTE:

CONTRACTOR RESPONSIBLE FOR USING CURBS PLUS CLIPS ON ALL RTUS. CLIPS ARE DELIVERED TO SITE AS SEPARATE PACKAGE.

1 HVAC ROOF PLAN
M2.0
1/4" = 1'-0"

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WAWA, PENNSYLVANIA 19063

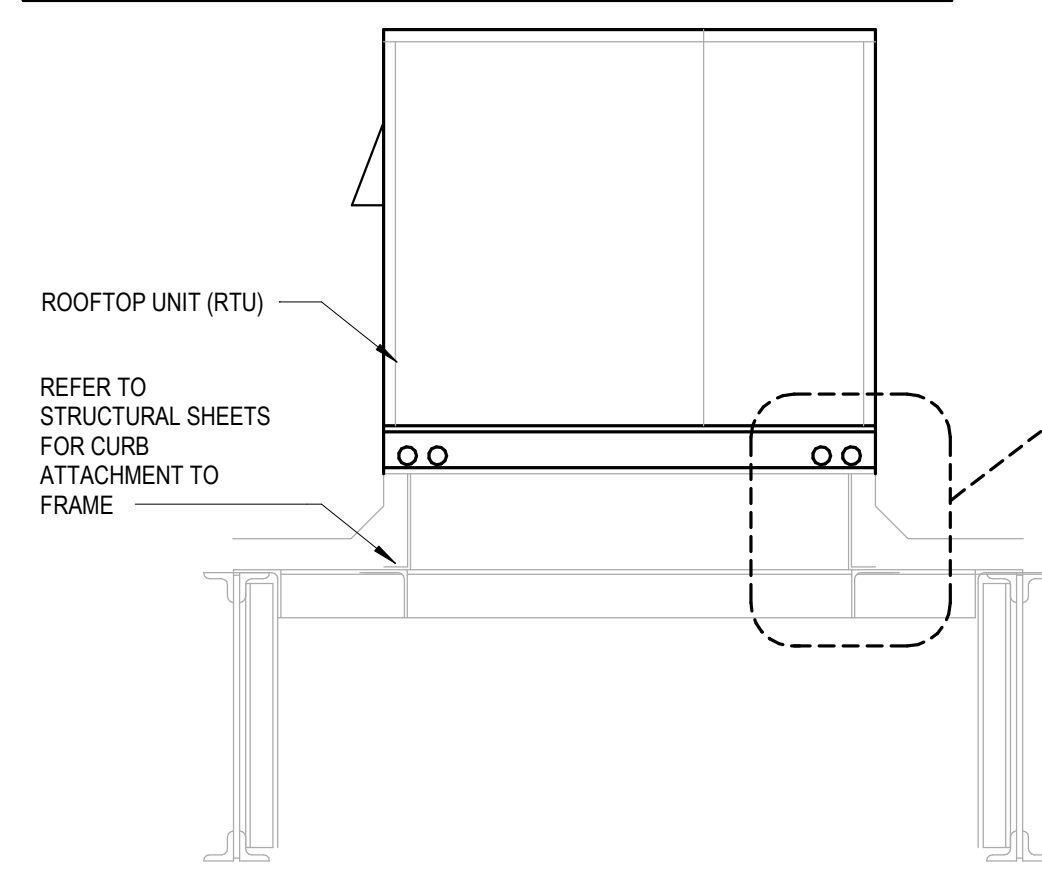
PROJECT NAME
WAWA F85 V2021.1
STORE #5425
PALM COAST PKWY & FLORIDA PARK DR
S PALM COAST, FL

SHEET TITLE
HVAC ROOF PLAN

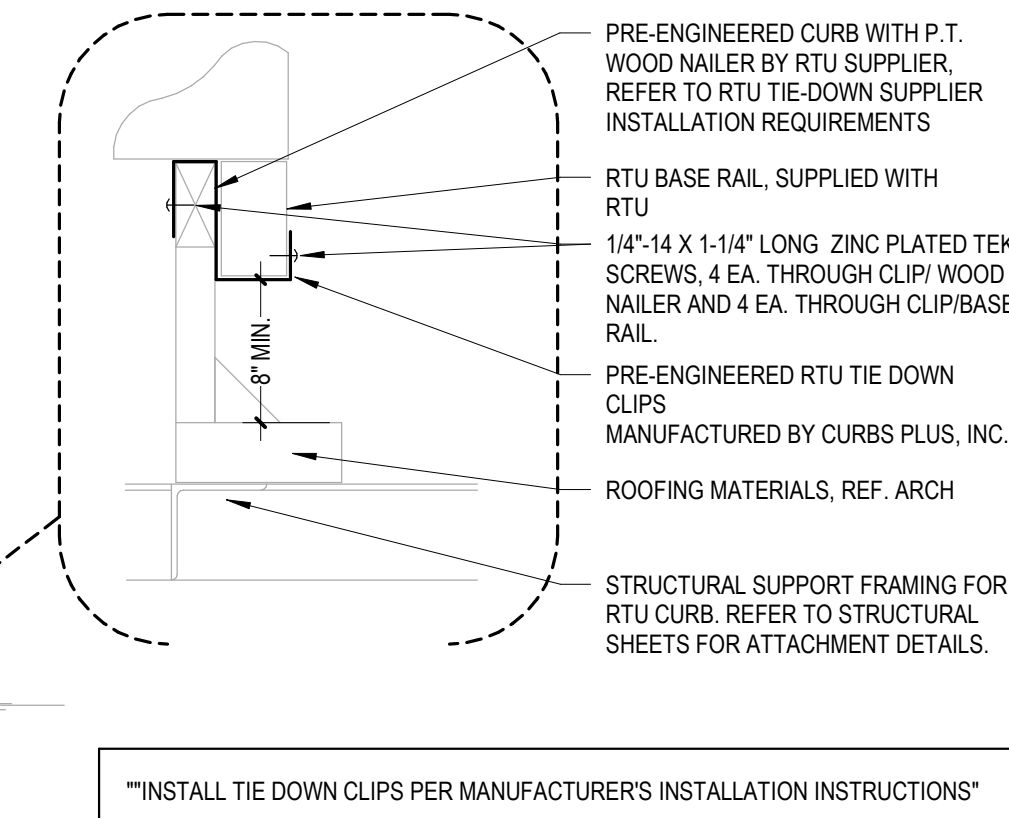
No.	Description	Date
1	PRE-BID SET	08/14/2022
2	CONSTRUCTION SET	11/07/2023

PROJECT NO. 220142	DATE 08-15-2022	DRAWN JSP	CHECKED ESD
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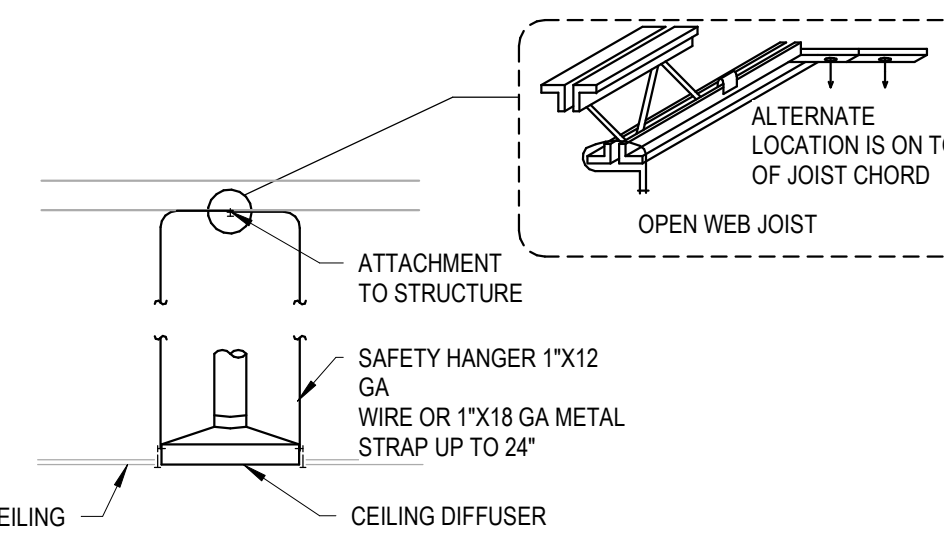
BUILDING LOCATION	WIND SPEED ZONE (FBC FIGURE 1503A)
S PALM COAST, FL	135 MPH



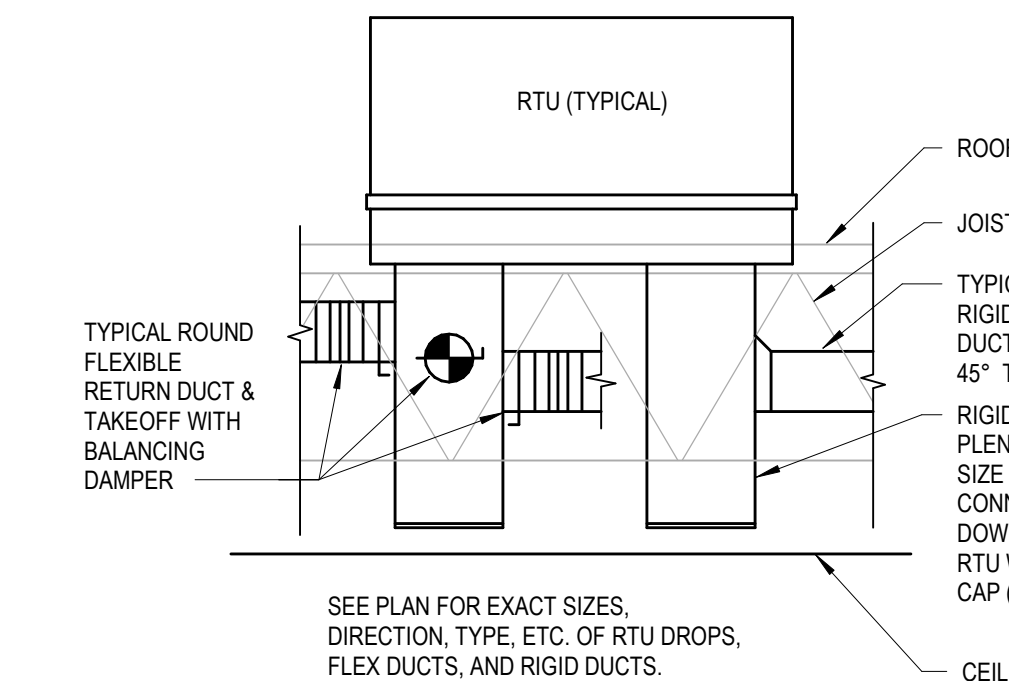
1 RTU TIE-DOWN DETAIL
M3.0 NOT TO SCALE



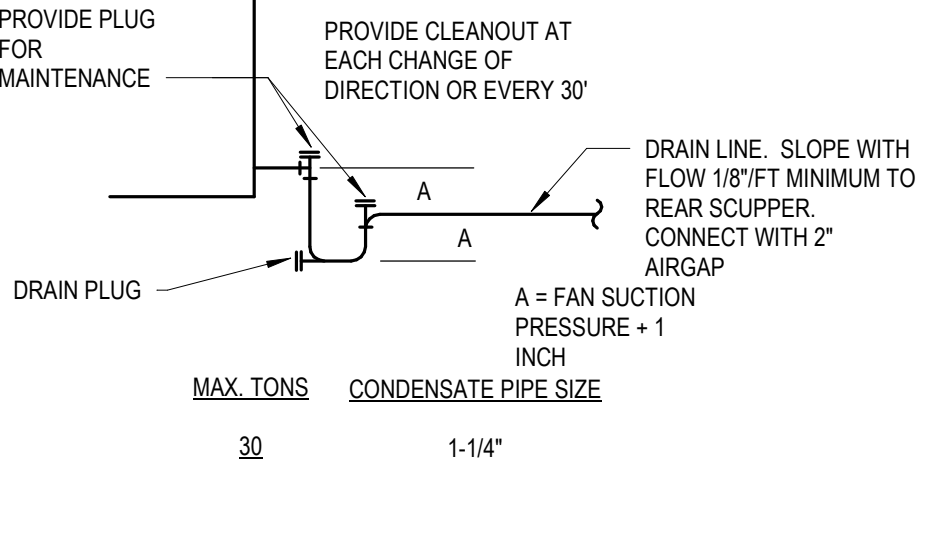
2 CEILING DIFFUSER RUNOUT DETAIL
M3.0 NOT TO SCALE



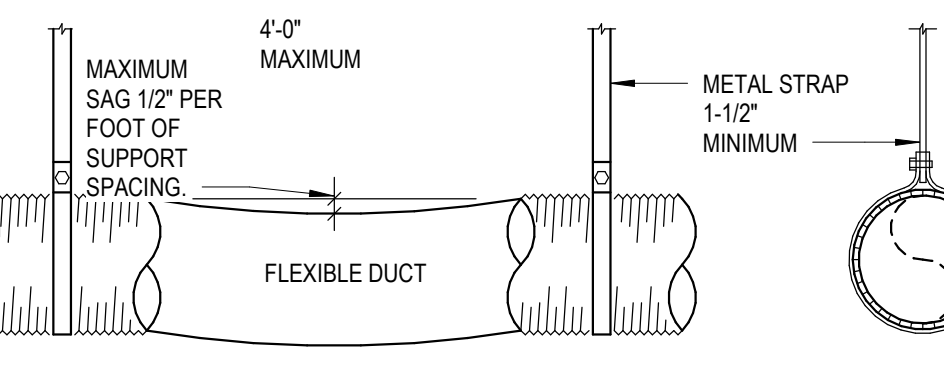
3 CEILING MOUNTED AIR DIFFUSER SUPPORT DETAIL
M3.0 NOT TO SCALE



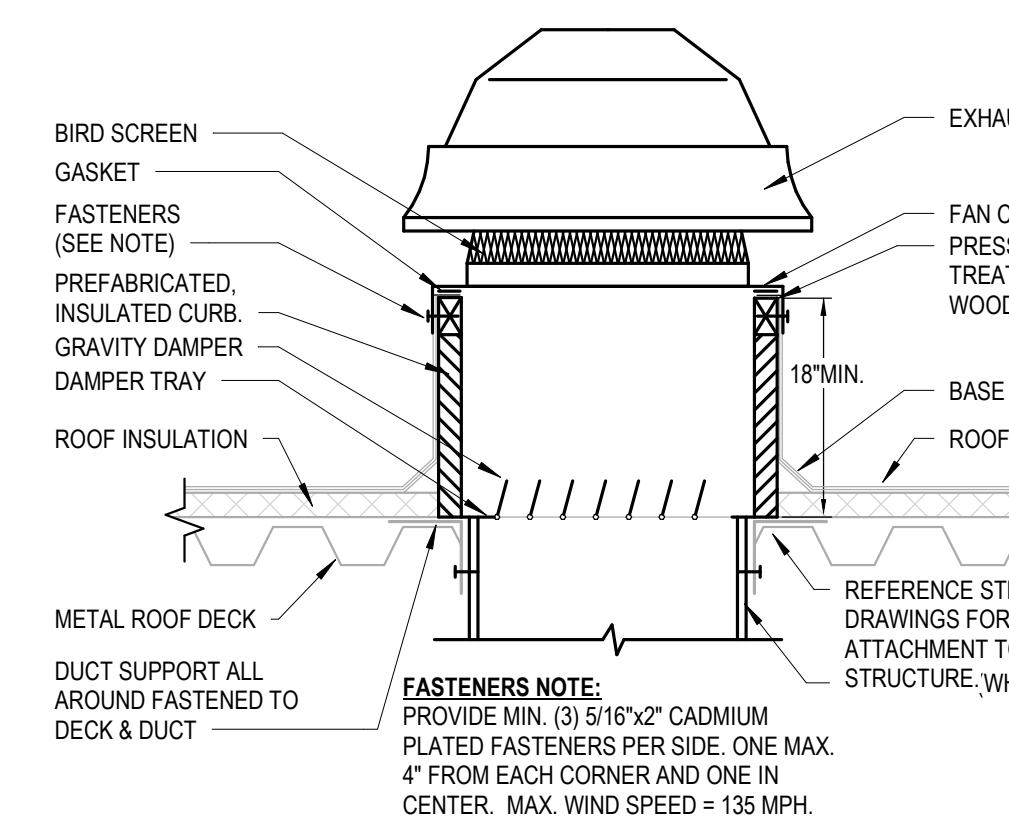
4 TYPICAL DUCT PLENUM DETAIL
M3.0 NOT TO SCALE



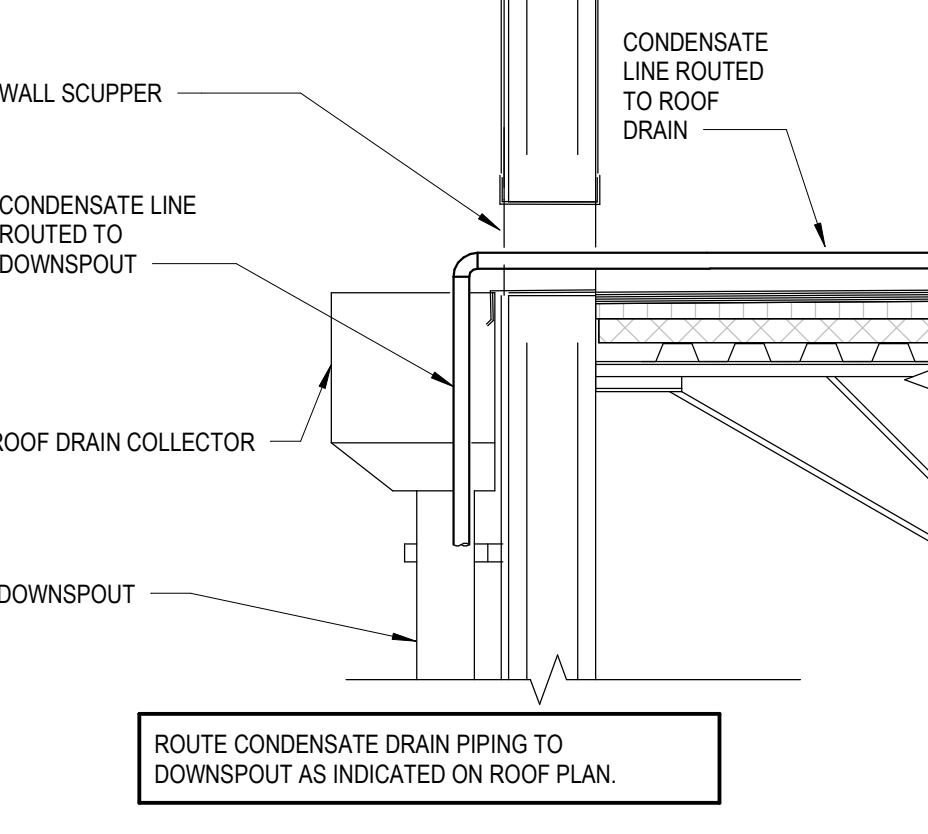
5 CONDENSATE DRAIN TRAP DETAIL
M3.0 NOT TO SCALE



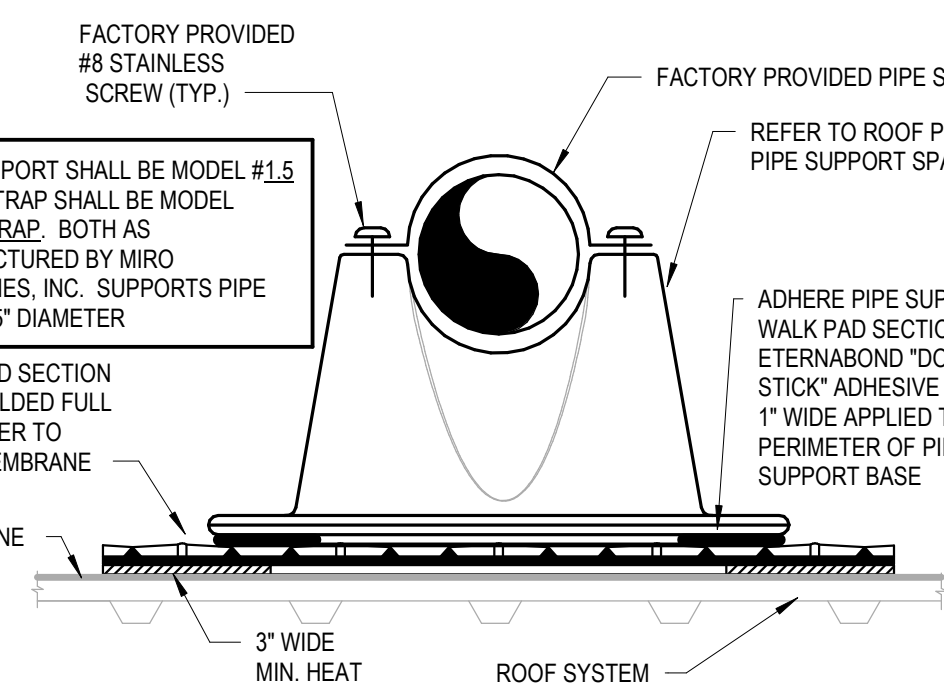
6 FLEX DUCT SUPPORT DETAIL
M3.0 NOT TO SCALE



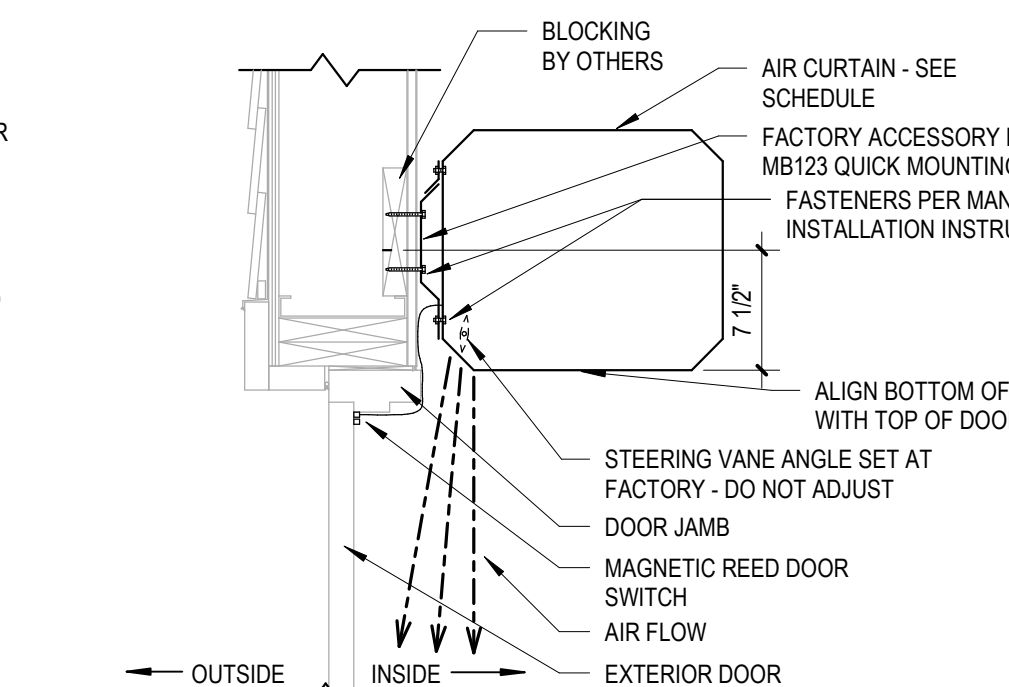
7 ROOF FAN MOUNTING DETAIL
M3.0 NOT TO SCALE



8 CONDENSATION TERMINATION DETAIL
M3.0 NOT TO SCALE



9 CONDENSATE PIPE ROOF SUPPORT DETAIL
M3.0 NOT TO SCALE



10 AIR CURTAIN INSTALLATION DETAIL
M3.0 NOT TO SCALE

RTU-1, 2, & 3 SEQUENCE OF OPERATION

SUPPLY AIR BLOWER SPEED
UNIT HAS FOLLOWING SUPPLY AIR BLOWER SPEED SETTINGS THAT PERTAIN TO THIS INSTALLATION:

- COOLING AIR BLOWER SPEED
- HEATING AIR BLOWER SPEED

COOLING MODE

- Y1 DEMAND: COMPRESSOR 1 OPERATES AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.
- Y2 DEMAND: ALL COMPRESSORS OPERATE AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.

DEHUMIDIFICATION MODE

- IF THE UNIT RECEIVES A CALL FOR DEHUMIDIFICATION, ECONOMIZER FREE COOLING IS LOOKED OUT (ON UNITS EQUIPPED WITH ECONOMIZER).
- CALL FOR DEHUMIDIFICATION, NO Y1, Y2 DEMAND: 1ST STAGE COMPRESSOR OPERATES, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED, AND THE REHEAT VALVE IS ENERGIZED.
- Y1 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED AND THE REHEAT VALVE IS ENERGIZED.
- Y2 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED, AND THE REHEAT VALVE IS DE-ENERGIZED.

HEATING MODE (ELECTRIC HEAT)

- W1 DEMAND: 1ST STAGE ELECTRIC HEAT IS ENERGIZED AND THE SUPPLY AIR BLOWER OPERATES AT HEATING SPEED.
- W2 DEMAND: 2ND STAGE ELECTRIC HEAT IS ENERGIZED AND THE SUPPLY AIR BLOWER OPERATES AT HEATING SPEED.

MODULATING OUTDOOR AIR DAMPER

- THE MINIMUM DAMPER POSITION FOR "OCCUPIED HIGH BLOWER" IS ADJUSTED DURING UNIT SETUP TO PROVIDE MINIMUM FRESH AIR REQUIREMENTS PER RTU SCHEDULE.
- WHEN SUPPLY AIR BLOWER IS OFF, THE OUTDOOR AIR DAMPER IS CLOSED.
- WHEN UNIT IS IN OCCUPIED MODE AND SUPPLY AIR BLOWER IS OPERATING, THE OUTDOOR AIR DAMPER IS AT MINIMUM "HIGH BLOWER" POSITION.

RTU-1, 2, & 3 TEST AND BALANCE NOTES

- TEST AND BALANCE CONTRACTOR TO OBTAIN INITIAL BALANCE OF COOLING CFM FOR RTU USING FAN SCHEDULE. ADJUSTMENT TO WITHIN +/- 5% SCHEDULED SUPPLY AIR CFM PRODIGY CONTROLLER MAY BE USED FOR FINAL 5% TO OBTAIN SCHEDULED COOLING CFM.
- SET MINIMUM OUTDOOR AIR DAMPER POSITION FOR COOLING AND VERIFY OUTSIDE AIR CFM PER RTU SCHEDULE.
- NOT USED.
- NOT USED.
- USING PRODIGY CONTROLLER, VERIFY HEATING CFM EQUALS COOLING CFM.
- ALL PRODIGY CONTROLLER SETTINGS OTHER THAN THOSE MENTIONED ABOVE SHALL REMAIN AS THEIR DEFAULT VALUE AS SET FROM THE FACTORY.
- VERIFY POSITIVE BUILDING PRESSURE.

HVAC GENERAL NOTES

- ALL MECHANICAL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE - MECHANICAL, SMACNA, UL, LOCAL CODES, MANUFACTURER'S RECOMMENDATIONS, AND ALL AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR TO VISIT SITE AND VERIFY ALL CLEARANCES BEFORE FABRICATION OF DUCTWORK AND PROVIDE ADDITIONAL OFFSET AND/OR CHANGES IN DUCT SIZES TO MEET FIELD CONDITIONS AND COORDINATE WITH ELECTRICAL, PLUMBING AND FIRE PROTECTION SUBCONTRACTOR BEFORE ANY CONSTRUCTION WORK.
- SUPPLY AIR, RETURN AIR, OUTSIDE AIR AND EXHAUST AIR DUCTWORK SHALL BE SHEET METAL CONSTRUCTION. DUCT SHALL BE INSTALLED SECURELY SUPPORTED, HUNG OR SUSPENDED FROM THE STRUCTURE. JOINTS SHALL BE SEALED WITH 3" WIDE GLASS FABRIC TAPE OR FOSTER 3030 MASTIC OR EQUAL. DUCT CONSTRUCTION, SEALING AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE - MECHANICAL AND THE JURISDICTION'S LATEST CODE ACCEPTED SMACNA STANDARDS.
- OUTSIDE AIR INTAKES, ROOFTOP UNITS, GRAVITY ROOF VENTS, LOWERS SHALL MAINTAIN A MINIMUM OF 10' 0" FROM ANY EXHAUST OR SANITARY VENT.
- PROVIDE ALL MECHANICAL EQUIPMENT WITH MANUFACTURER'S RECOMMENDED SERVICE AREA CLEARANCES.
- ALL ROOFTOP UNITS SHALL BE CONSTRUCTED AND INSTALLED TO WITHSTAND LOCAL WIND LOAD DESIGN.
- SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED BY THE UNIT MANUFACTURER. WIRED TO THE KEY SWITCH BY THE MECHANICAL CONTRACTOR, AND WIRED TO THE FIRE ALARM BY THE FIRE ALARM CONTRACTOR. SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72, NATIONAL FIRE ALARM CODE, NFPA 90A, STANDARD FOR INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, 2020 FLORIDA BUILDING CODE - MECHANICAL AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE A VISIBLE/AUDIABLE NOTIFICATION PANEL. MAKE SYSTEM SENSOR SSK430 OR EQUAL, COMPATIBLE WITH BUILDING FIRE ALARM SYSTEM.
- PLANS AND DIAGRAMS ARE SCHEMATIC ONLY AND SHOULD NOT BE SCALED.
- HVAC CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL ELECTRICAL COSTS WHICH MAY RESULT FROM SUBSTITUTED EQUIPMENT.
- PROVIDE EXTERNAL DUCT INSULATION FOR SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK. DUCTWORK INSULATION SHALL BE FOIL FACED FIBERGLASS DUCT WRAP WITH A MINIMUM THERMAL RESISTANCE (R) OF 6.0. INSULATION SHALL HAVE VAPOR BARRIER. INSTALL PER MFR. REQUIREMENTS.
- COORDINATE CEILING MOUNTED DIFFUSERS, REGISTERS, AND GRILLES AND OTHER CEILING MOUNTED EQUIPMENT WITH LIGHTING FIXTURES.
- TURNING VANES SHALL BE PROVIDED IN ALL SUPPLY DUCT RECTANGULAR ELBOWS WITH ANGLES BETWEEN 15 DEGREES AND LESS THAN 90 DEGREES PER THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS MANUAL.
- DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- DIFFUSERS, DIFFUSERS, REGISTERS, GRILLES, AND OTHER TENS OF THE AIR HANDLING SYSTEM SHALL NOT BE SUPPORTED BY THE CEILING OR CEILING SUSPENSION SYSTEM.
- UNLESS OTHERWISE NOTED, INSTALL DUCTWORK AS HIGH AS POSSIBLE, TIGHT TO BOTTOM OF STRUCTURE. COORDINATE DUCT ELEVATION WITH STORM LEADERS, WATER PIPING, SANITARY DRAINS AND MAJOR ELECTRICAL CONDUITS.
- CONTRACTOR TO PROVIDE ALL SUPPLEMENTARY STEEL REQUIRED TO SUSPEND MECHANICAL EQUIPMENT & MATERIALS. INSTALLATION OF EQUIPMENT SHALL COMPLY WITH MANUFACTURER'S SPECIFICATIONS AND CLEARANCE REQUIREMENTS FOR SERVICING OF EQUIPMENT.
- VERIFY VOLTAGE WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
- PROVIDE A TRAP IN ALL CONDENSATE PIPING SERVING AIR HANDLING UNITS AND ROOFTOP UNITS. SLOPE CONDENSATE LINE 1/8" PER FOOT. CONDENSATE LINES SHALL BE PVC SCH. 40. ALL CONDENSATE DRAIN PIPING SHALL BE PROPERLY SUPPORTED. SEE "CONDENSATE DRAIN TRAP" DETAIL.
- GUARANTEE, FOR ONE YEAR AFTER DATE OF ACCEPTANCE BY THE OWNER, ALL EQUIPMENT, MATERIALS AND WORKMANSHIP TO BE FREE FROM DEFECT.
- DO NOT CUT STRUCTURAL MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
- FLEXIBLE AND RIGID ROUND DUCT TAKE-OFFS FOR DIFFUSERS SHALL BE THE SAME SIZE AS DIFFUSER NECK. MAXIMUM FLEXIBLE DUCT LENGTH SHALL BE 8'-0". FLEXIBLE DUCT SHALL BE THERMAFLEX TYPE M-KC OR EQUAL. FLEXIBLE DUCT SHALL BE INSULATED FIBERGLASS, R-6, CLASS 1, UL LISTED AND COMPLY WITH NFPA 90A AND NFPA 90B.
- ALL WALL MOUNTED TEMPERATURE, HUMIDITY, AND CO2 SENSORS SHALL BE INSTALLED AT AN ELEVATION OF 5'4" ABOVE FINISHED FLOOR TO THE TOP UNLESS OTHERWISE NOTED ON DRAWINGS. LOCATION OF THE WALL MOUNTED SENSORS SHALL BE COORDINATED WITH OTHER TRADES FOR A NEAT APPEARANCE. FINAL LOCATION OF SENSORS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER OR THEIR REPRESENTATIVE IN THE FIELD.
- PROVIDE FLEXIBLE NEOPRENE DUCT CONNECTORS ON THE DISCHARGE AND ENTERING SIDES OF PACKAGED ROOFTOP UNITS, FANS, AND OTHER VIBRATING EQUIPMENT TO WHICH DUCTWORK IS ATTACHED.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL TRADES' INSTALLATION SCHEDULES. COORDINATE WORK SCHEDULE WITH GENERAL CONTRACTOR.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASE AND WALL PENETRATIONS INTENDED FOR DUCTWORK AND PIPING SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- MECHANICAL EQUIPMENT, DUCTWORK AND PIPING SHALL BE INSTALLED AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITH THE AVAILABLE SPACE. FIELD VERIFY FINAL LOCATIONS TO INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
- WHEN THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OR IS CAPABLE OF MORE THAN ONE INTERPRETATION, SUCH MATTERS WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING BEFORE THE SUBMISSION OF BIDS. THE ARCHITECT/ENGINEER SHALL MAKE CORRECTION OR EXPLANATION IN WRITING.
- PLANS AND SPECIFICATIONS ARE INTENDED AS A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED. ALL ITEMS NOT SPECIFICALLY MENTIONED OR SHOWN, BUT NECESSARY FOR THE COMPLETION OF THE INSTALLATION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. THIS CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE MECHANICAL, ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL PLANS BEFORE SUBMITTING HIS FINAL BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO THE CONTRACTOR'S FAILURE TO FAMILIARIZE HIMSELF/HERSELF WITH THE PLANS.
- CONTRACTOR TO ALLOW SUFFICIENT TIME (APPROXIMATELY 2 WEEKS) FOR EQUIPMENT REVIEW. CONTRACTOR SHALL SUBMIT THE FOLLOWING EQUIPMENT FOR REVIEW (1 HARD COPY) PRIOR TO ORDERING AND INSTALLATION: ROOFTOP UNITS, AIR HANDLING UNITS AND AIR COOLED CONDENSERS, DIFFUSERS AND REGISTERS, EXHAUST FANS AND MAKE UP AIR FANS, DUCT INSULATION, DUCT CONSTRUCTION STANDARDS.
- AFTER THE HEATING AND AIR CONDITIONING SYSTEM INSTALLATIONS ARE COMPLETE, THE CONTRACTOR SHALL HAVE EACH SYSTEM TESTED, ADJUSTED, AND BALANCED BY AN INDEPENDENT TESTING AND BALANCING CONTRACTOR. SEE SPECIFICATIONS FOR TESTING AND BALANCING CONTRACTOR CERTIFICATIONS AND REQUIREMENTS. UPON COMPLETION OF TEST AND BALANCE OF ALL SYSTEMS, THE CONTRACTOR SHALL PRESENT THE OWNER AND ARCHITECT WITH A WRITTEN TEST AND BALANCE REPORT IN A TIMELY MANNER PER SPECIFICATIONS.

HVAC ROOFTOP UNIT SCHEDULE

MARK	AREA SERVED	NOMINAL TONS	SUPPLY AIR FAN DATA			ELECTRIC HEAT		UNIT POWER	WEIGHT (LBS. RTU ONLY)	TOTAL COOLING CAPACITY		BASIS OF DESIGN		NOTES								
			OUTSIDE AIR CFM	E.S.P. (IN.)	HP	KW	CONTROL STAGES			VOLTAGE	PHASE	MCA	MCP		COOLING HIGH (T5)	SENSIBLE HIGH (T5)	EER	MANUFACTURER	MODEL			
RTU-1	RETAIL	8.5	3400 CFM	500	0.5	3.75	22.5	1	208 V	3	70	70	1397	96.1	75.4	76.5	63.9	92/75	12.3	LENNOX ENLIGHT	LCT1024HE	1-20
RTU-2	FOOD SERVICE	10	4000 CFM	700	0.5	3.75	NA	NA	208 V	3	52	60	1396	117	91.1	75.2	62.5	92/75	12.2	LENNOX ENLIGHT	LCT1204HE	2-20
RTU-3	RETAIL	7.5	3000 CFM	450	0.5	3.75	22.5	1	208 V	3	70	70	1350	91.8	68.7	76.1	63.5	92/75	12.5	LENNOX ENLIGHT	LCT0924HE	2-20

- NOTES:**
- PROVIDE CO2 SENSOR FOR INTERLINK WITH BUILDING AUTOMATION SYSTEM.
 - PROVIDE LENNOX HUMIDITROL HOT GAS REHEAT OPTION.
 - PROVIDE REMOTE WALL MOUNTED COMBINATION TEMPERATURE/HUMIDITY SENSOR MODEL 21W06.
 - REFER TO CONTROL SYSTEM NOTES FOR CONTROL COMPONENTS REQUIREMENTS.
 - PROVIDE 5 MINUTE ANTI-SHORT CYCLE TIMER.
 - PROVIDE THRU THE BASE ELECTRICAL AND SINGLE POINT CONNECTION.
 - PROVIDE WITH FACTORY 2" THROW AWAY PLEATED MERV 8 FILTERS.
 - PROVIDE WITH 18" ROOF CURB.
 - PROVIDE FACTORY 15 AMP GFCI SERVICE OUTLET WITH WEATHERPROOF COVER. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE FIELD WIRING TO RECEPTACLE.
 - PROVIDE WITH FACTORY INSTALLED DISCONNECT.
 - PROVIDE WITH MOTORIZED DAMPER AND OUTSIDE AIR INTAKE HOOD.
 - PROVIDE MANUFACTURER'S MOTOR AND DRIVE PACKAGE AS REQUIRED TO MEET SCHEDULED AIR CAPACITIES AND PRESSURE DROP.
 - PROVIDE FACTORY APPLIED PHENOLIC COATING FOR CORROSION PROTECTION ON CONDENSER COILS.
 - PROVIDE BUILDING AUTOMATION SYSTEM (BAS) EQUIPMENT - REFER TO BAS SYSTEM MASTER SPEC FOR SYSTEM DETAILS AND EQUIPMENT PART NUMBERS.
 - PROVIDE FACTORY INSTALLED BACNET BAS INTERFACE.
 - PROVIDE LENNOX DIRTY FILTER SWITCH.
 - PROVIDE LENNOX BMS CONTROL BOARD (STANDARD ON L-SERIES UNITS).
 - PROVIDE WITH FACTORY CONDENSATE PAN WATER LEVEL MONITORING DEVICE FOR COMPLIANCE WITH FBC 2020 MECHANICAL SECTION 307.2.3.
 - PROVIDE WITH FACTORY INSTALLED SUPPLY AND RETURN SMOKE DETECTORS.

OUTSIDE AIR CALCULATION

AREA SERVED	AREA (SQFT)	PEOPLE / 1000 SQFT	# PEOPLE	CFM / PERSON	PEOPLE O.A. RECD (CFM)	CFM / SQFT	SQFT OUTSIDE AIR (M)	TOTAL CFM CALCULATED	CFM SUPPLIED
OFFICE	70	5	2	5	10	0.06	5	15	
ASSOCIATE	100	5	2	5	10	0.06	6	16	
DELIVERY	78	2	1	10	10	0.12	10	20	
RETAIL	1612	15	25	7.5	188	0.12	194	382	
								433	500
RTU-1									
FOOD SVC. 1	316	20	7	7.5	53	0.12	38	91	
FOOD SVC. 2	292	20	6	7.5	45	0.12	36	81	
								172	700
RTU-2									
COFFEE	242	20	5	7.5	38	0.12	30	68	
RETAIL	497	15	8	7.5	60	0.12	60	120	
BACKROOM	167	20	4	7.5	30	0.12	21	51	
STAGING	73	2	1	10	10	0.12	9	19	
WASHROOM	152	20	4	7.5	30	0.12	19	49	
								307	450
RTU-3									

- NOTES:**
- OCCUPANCY LOAD VENTILATION RATES ARE BASED ON NET OCCUPABLE SPACE IN ACCORDANCE WITH THE JURISDICTION'S LATEST ACCEPTED VERSION OF THE 2020 FLORIDA MECHANICAL CODE TABLE 403.3.1.1.
 - ANTICIPATED NUMBER OF PEOPLE IS BASED ON AN OCCUPANCY LOAD FACTOR (R) PEOPLE/SF VALUE (BASED ON THE JURISDICTION'S LATEST ACCEPTED VERSION OF THE 2020 FLORIDA MECHANICAL CODE, TABLE 403.3.1.1).

AIR BALANCE SCHEDULE

SYSTEM	CFM
RTU-1	+500
RTU-2	+700
RTU-3	+450
EF-1	-1150
BUILDING POSITIVE PRESSURE	+500

HVAC EXHAUST FAN SCHEDULE

MARK	CFM	EXT. STATIC PRESSURE (IN. WG)	FAN TYPE	DRIVE TYPE	SOMES	MOTOR HP	FAN RPM	BASIS OF DESIGN		NOTES		
								VOLTAGE	PHASE			
EF-1	1150 CFM	0.250 inHG	DOWNBLAST	DIRECT	6.4	1/4	818	120 V	1	GREENHECK	G-140	1-2

- NOTES:**
- NO SUBSTITUTIONS PERMITTED-
 - 1. PROVIDE WITH FACTORY DISCONNECT, FACTORY WIRED SOLID STATE SPEED CONTROLLER, 18" HIGH ROOF CURB WITH DAMPER TRAY, BACKDRAFT DAMPER, AND BIRD SCREEN.
 - 2. WIRE FOR CONTINUOUS OPERATION.

HVAC AIR DEVICE SCHEDULE

TYPE	MARK	MANUFACTURER	MODEL	SERVICE	DESCRIPTION	MOUNTING TYPE	MATERIAL	NECK SIZE	FACE SIZE	NOTES
CD-1	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	LAY-IN	ALUMINUM	18"X18"	24"X24"	1.7	
CD-2	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SURFACE	ALUMINUM	18"X18"	24"X24"	6.7	
CD-3	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SURFACE	ALUMINUM	8"X8"	NECK-45"	5.7	
G-1	PRICE	630FF	RET/EXH/TRAN	LOUVERED FACE FILTER RETURN GRILLE	LAY-IN	ALUMINUM	20"X20"	NECK-3.34"	4	
G-2	PRICE	630FF	FILTER RETURN	LOUVERED FACE FILTER RETURN GRILLE	SURFACE	ALUMINUM	16"X16"	NECK-3.34"	4	
G-3	PRICE	630FF	FILTER RETURN	LOUVERED FACE FILTER RETURN GRILLE	SURFACE	ALUMINUM	8"X8"	NECK-3.34"	4	
LD-1	PRICE	TB04	SUPPLY	48" INSULATED PLENUM W/ (4) 1" SLOTS	LAY-IN	ALUMINUM	SEE PLAN	N/A	2.3	

- NOTES:**
- NO SUBSTITUTIONS PERMITTED-
 - 1. FOR LAY-IN CEILINGS PROVIDE WITH 18"X18" FULL FACE APPEARANCE DIFFUSER NECK. PROVIDE WITH FACTORY SQUARE TO ROUND NECK ADAPTER MODEL "SR". ROUND NECK SIZE SHALL BE EQUAL TO FLEX SIZE SERVING DIFFUSER.
 - 2. PROVIDE WITH PLENUM INTERNALLY LINED WITH COATED FIBERBOARD. EXTERNALLY INSULATE PLENUM UPON INSTALLATION WITH DUCT WRAP INSULATION.
 - 3. PROVIDE WITH CENTER NOTCH OPTION (CN) AS REQUIRED WHEN USED IN 24" T-BAR CEILING.
 - 4. "QR" STYLE (1/4" TURN FASTENERS ONLY) - OMIT FILTER. FILTER RETURN GRILLES PROVIDED SOLELY FOR MAINTENANCE PURPOSES. OMIT FILTER UPON INSTALLATION.
 - 5. PROVIDE WITH TYPE 6 BEVELED SURFACE MOUNT FRAME AND FACTORY SQUARE TO ROUND NECK ADAPTER MODEL "SR".
 - 6. PROVIDE LAY-IN STYLE FACE DIFFUSER AND ALUMINUM PLENUM FRAME MODEL AFD. COORDINATE LOCATION WITH CEILING FRAMING INSTALLER.
 - 7. PROVIDE WITH FACTORY BACK PAN INSULATION.

HVAC AIR CURTAIN SCHEDULE

MARK	AREA SERVED	BASIS OF DESIGN		UNIT POWER	MOUNTING HEIGHT	NOTES			
		MANUFACTURER	MODEL						
AC-1	STAGING	POWERED AIRE	BCE-1-36	2170 CFM	0.5	120 V	1	7'-2"	1-4
AC-2	DELIVERY	POWERED AIRE	BCE-1-48	2165 CFM	0.5	120 V	1	7'-2"	1-4

- NOTES:**
- NO SUBSTITUTIONS PERMITTED-
 - 1. MOUNT INSIDE BUILDING ABOVE DOOR AT 7'-2" A.F.F. MOUNTING HEIGHT IS FROM BOTTOM OF AIR CURTAIN.
 - 2. PROVIDE ALL NECESSARY MOUNTING BRACKETS AND ACCESSORIES.
 - 3. PROVIDE WITH MODEL SM-300 COMMERCIAL MAGNETIC REED DOOR SWITCH.
 - 4. AIR CURTAIN CONTROLLED BY MAGNETIC REED DOOR SWITCH. FAN ON WHEN DOOR IS OPEN.

LENNOX SETUP PARAMETERS - FLORIDA STORES (R)

- UNIT ID CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):**
- BACNET CONFIGURATION: GO TO SETTINGS-GENERAL->CONFIGURATION ID1 POSITION 5 SET TO "0"
 - NETWORK CONFIGURATION: GO TO SETUP-NETWORK INTEGRATION. SET TO BACNET
 - CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR. CO2, TEMP & HUMIDITY (PER UNIT, AS NEEDED).

INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):

- PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS
- PARAMETER 106 DEHUMID SETPOINT: 50. THIS IS A CENTERED SET POINT (+/-)
- PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE
- PARAMETER 117 CO2 DAMPER MAX OPEN %: 50
- PARAMETER 118 CO2 START OPEN PPM: 1200
- PARAMETER 119 CO2 FULL OPEN PPM: 1500
- PARAMETER 137 OCC-HEAT SET POINT: 68 (BACK UP)
- PARAMETER 139 CO2 COOLING SET POINT: 72 (BACK UP)
- PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1

CFM VALUES / MSAV FAN SPEEDS (AIR BALANCER TO DEFINE / IF APPLICABLE):

- HEAT CFM VALUE: PER THE HVAC SCHEDULE
- HIGH COOL CFM VALUE: PER THE HVAC SCHEDULE
- LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE
- VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE

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WAWA, PENNSYLVANIA 19063

PROJECT NAME
WAWA F85 V2021.1
STORE #5425
PALM COAST PKWY & FLORIDA PARK DR
S PALM COAST, FL

SHEET TITLE
HVAC SCHEDULES, NOTES AND DETAILS

DATE
05-15-2023

DRAWN
JOF

CHECKED
ESD

REVISION
No. Description Date
1. MECH CHANGES 05/10/2023
2. PRELIM SET 06/14/2023
3. PERMIT COMMENTS 06/02/2023
CONSTRUCTION SET 11/07/2023

PROJ. NO.
220102

M3.0