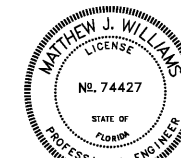


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FLA REG. PE 74427  
JOB NO. 202016

DQ GRILL & CHILL  
US HWY 90 (LOT 2)  
GLEN ST MARY, FL  
32040



GRILL & CHILL

AMERICAN DAIRY QUEEN  
MINNEAPOLIS, MN U.S.A.

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BUILDING TYPE:  
DAIRY QUEEN GRILL & CHILL  
CORE 66  
STORE NO. 45961

DRAWN, CHECKED, & APPROVED BY: ADQ  
DESIGN-ARCHITECTURE-CONSTRUCTION  
(DAC) DEPARTMENT

THIS IS "PLAN" NORTH  
FOR ACTUAL BUILDING  
ORIENTATION REFER TO  
SITE PLAN (BY OTHERS)

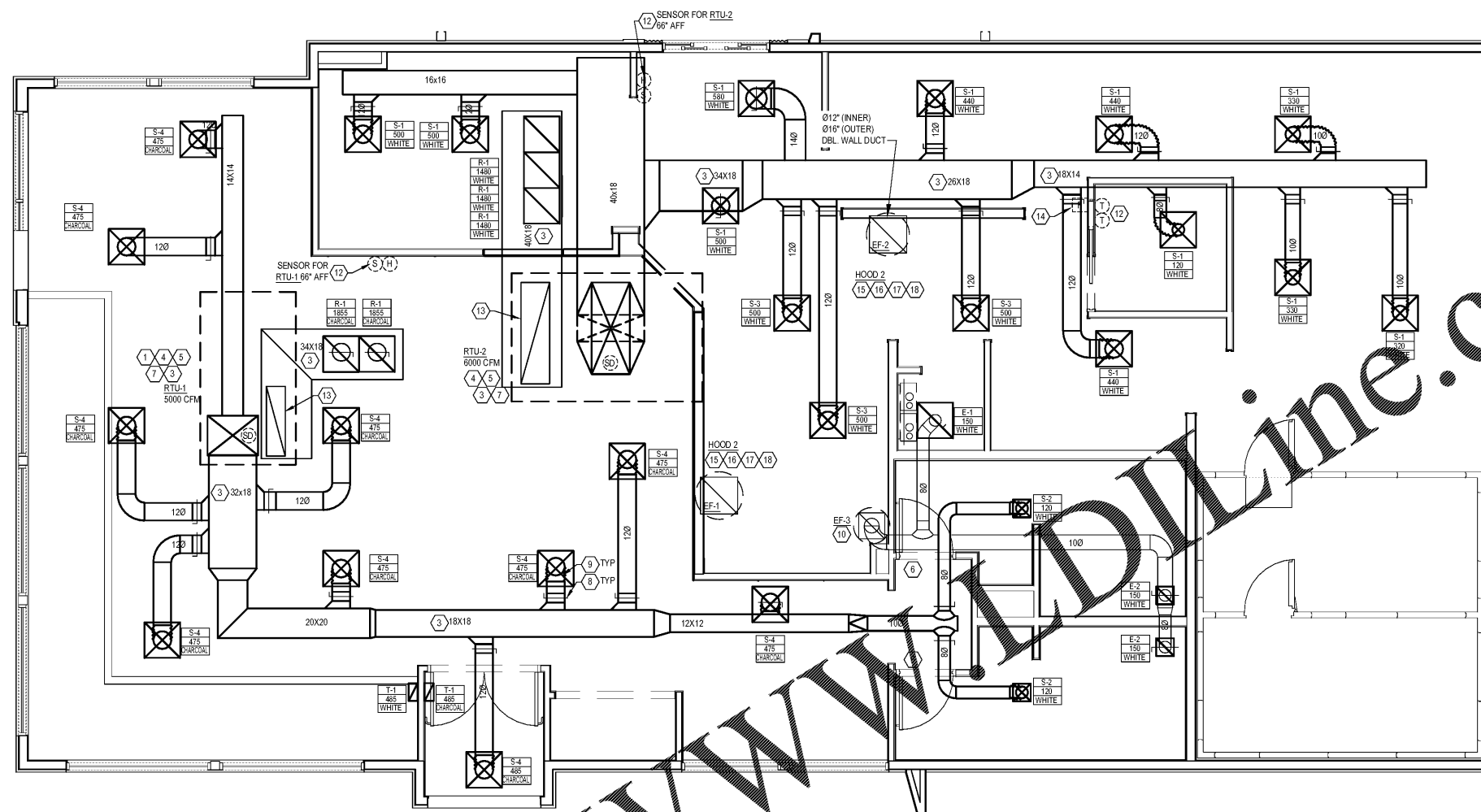
ISSUE DATE: 10/30/2020

REVISION DATE:  
10/30/2020 ISSUE FOR CONSTRUCTION  
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HVAC PLAN &  
EQUIPMENT  
SCHEDULES

SHEET NUMBER:

M1



THIS PLAN WAS DEVELOPED USING THE  
FLORIDA MECHANICAL CODE 2020,  
ASHRAE 62.1 2016 EDITION

### 1 HVAC PLAN

M1 SCALE: 1/4" = 1'-0"

#### HVAC MECHANICAL EQUIPMENT/KITCHEN VENTILATION SYSTEM RESPONSIBILITY MATRIX

EQUIPMENT	TAG	SPECIFIED MFG.	PRICE QUOTE & ORDER THRU	EQUIPMENT PROVIDED BY	ROOF CURB PROVIDED BY	CHECK TEST & BALANCE	EQUIPMENT INSTALLED BY	EQUIPMENT STARTUP BY	1ST YEAR LABOR WARRANTY
EXHAUST FANS	EF-1, EF-2	CAPTIVEAIRE		PART OF FRANCHISEES EQUIPMENT PACKAGE			MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
KITCHEN HOOD	HOOD 1, HOOD 2	CAPTIVEAIRE		PART OF FRANCHISEES EQUIPMENT PACKAGE			MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
HOOD FIRE SYS.	HOOD 1, HOOD 2	CAPTIVEAIRE		PART OF FRANCHISEES EQUIPMENT PACKAGE			CAPTIVEAIRE	CAPTIVEAIRE	CAPTIVEAIRE
DUCT HEATER	DH-1	REDDI	CARRIER	CARRIER	N/A	CAPTIVEAIRE	MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
ROOFTOP UNITS	RTU-1, RTU-2	CARRIER	CARRIER	CARRIER	CARRIER	CAPTIVEAIRE	MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
GRILLES/DIFFUSERS		KRUEGER	HJC	HJC	N/A		MECH. CONTR.	MECH. CONTR.	MECH. CONTR.

#### CARRIER NATIONAL ACCOUNTS PROVIDED HVAC EQUIPMENT AND MATERIAL PACKAGE

- THE HVAC EQUIPMENT AND MATERIALS OUTLINED IN THE RESPONSIBILITY MATRIX SHALL BE PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR THROUGH "CARRIER NATIONAL ACCOUNTS". FOR NATIONAL ACCOUNT PRICING & SHIPPING REFER TO NATIONAL VENDORS LIST.
- THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ORDERING, DELIVERY, AND STORAGE OF THE EQUIPMENT AND MATERIALS PACKAGE.
- UPON PLACING AN ORDER THE HVAC CONTRACTOR WILL RECEIVE A CONTRACTOR ASSISTANCE MANUAL FROM THE CARRIER NATIONAL ACCOUNTS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF THE EQUIPMENT AND MATERIALS PACKAGE.

#### CARRIER NATIONAL ACCOUNTS - PROVIDED ROOF TOP EQUIPMENT PACKAGE

- INCLUDES ALL ROOFTOP HEATING AND AIR CONDITIONING EQUIPMENT WITH ALL ACCESSORIES AS SPECIFIED ON THESE PLANS AND SPECIFICATIONS. SEE SCHEDULE ON SHEET M3.

#### KRUEGER NATIONAL ACCOUNTS - PROVIDED AIR DEVICE PACKAGE

- INCLUDES ALL REGISTERS, GRILLES & DIFFUSERS WITH SQUARE TO ROUND TRANSITION AS REQUIRED AS SPECIFIED ON THESE PLANS & SPECIFICATIONS.

#### CARRIER NATIONAL ACCOUNTS - PROVIDED CURB PACKAGE

- INCLUDES ROOF CURBS FOR RTU-1 & RTU-2. ROOF CURBS ARE TO BE ASSEMBLED & INSTALLED ON SITE.

#### CAPTIVEAIRE - FRANCHISEE PROVIDED KITCHEN VENTILATION SYSTEMS PACKAGE

- THE KITCHEN VENTILATION SYSTEM COMPONENTS OUTLINED IN THE RESPONSIBILITY MATRIX SHALL BE PROVIDED AS PART OF THE FRANCHISEE'S EQUIPMENT PACKAGE. COORDINATED AND INSTALLED BY THE MECHANICAL CONTRACTOR. REFER TO NATIONAL VENDORS LIST FOR CONTACT INFORMATION.

#### CAPTIVEAIRE - PROVIDED FIRE SUPPRESSION SYSTEM PACKAGE

- A FACTORY INSTALLED FIRE SUPPRESSION SYSTEM WILL BE PROVIDED FOR THE KITCHEN EXHAUST HOODS UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE. LOCAL PERMITS, HOOK UP OF DETECTION AND SUPPLY LINES, INSTALLATION OF PULL STATION AND FIRE SUPPRESSION AGENT AND CHECKOUT ARE PROVIDED BY CAPTIVEAIRE UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE.
- ITEMS THAT ARE NOT INCLUDED: SPECIAL DRAWINGS THAT MAY BE REQUIRED BY STATE/LOCAL AUTHORITIES, INSTALLATION OF GAS SHUNT TYPE VALVE, ELECTRICAL INTERLOCK TO EXHAUST FAN BY OTHERS, FULL DUMP TEST IF REQUIRED IS NOT INCLUDED.

#### CAPTIVEAIRE - PROVIDED THIRD PARTY CHECK, TEST & BALANCE PACKAGE

- A COMPLETE BUILDING AIR BALANCE, INCLUDING THE AIR CONDITIONING EQUIPMENT, TO ENSURE CORRECT KITCHEN HOOD CAPTURE & OCCUPANT COMFORT PROVIDED BY "CAPTIVEAIRE" UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE.

#### HVAC/KITCHEN VENTILATION SERVICES AND WARRANTY PACKAGE

- MECHANICAL CONTRACTOR WILL PROVIDE THE HVAC SERVICES AND WARRANTY PACKAGE.
- HVAC SERVICES AND WARRANTY PACKAGE: SEE MATRIX ABOVE.
- MECHANICAL CONTRACTOR IS RESPONSIBLE TO CORRECT INSTALLATION DEFICIENCIES THAT OBSTRUCT THE COMPLETION OF THE BUILDING AIR BALANCING AND HVAC SERVICES WARRANTY PACKAGE.

#### OUTSIDE AIR REQUIREMENTS

OCCUPANCY TYPE	GROSS FLOOR AREA (S.F.)	PEOPLE	REQUIRED OUTSIDE AIR BASED ON ASHRAE 62.2004		
			CFM PER PERSON	CFM PER S.F.	CFM REQUIRED
DINING	1370	60**	7.5	0.18	697
OFFICE	31	1	5.0	0.06	7
KITCHEN	850	9	0	0.70	595
RESTROOM	40	0	0	0	0
VESTIBULE	223	4*	75*	0	300
TOTAL	2514	74			1599

\* RATE BASED ON 75 CFM PER FIXTURE WITH (4) RESTROOM FIXTURES  
\*\* OCCUPANT LOAD BASED ON SEATING CAPACITY

#### AIR BALANCE SCHEDULE

TAG	CFM SUPPLY	CFM RETURN	OSA	TRANSFER AIR	CFM EXHAUST
RTU-1	5000	3710	1290	0	-
RTU-2	6000	4440	1560	0	-
EF-1	-	-	-	-	1100
EF-2	-	-	-	-	1000
EF-3	-	-	-	-	450
TOTAL	11000	8150	2850	0	2550

#### NOTES:

- BUILDING AIR BALANCE: (300) CFM POSITIVE PRESSURE
- KITCHEN AIR BALANCE: (750) CFM NEGATIVE TO DINING ROOM

#### GENERAL NOTES

- HVAC CONTRACTOR SHALL PROVIDE FIELD APPLIED FOIL VAPOR BARRIER INSULATION TO ALL DIFFUSER BACKS.
- RTU AND EXHAUST FAN ROOF PENETRATIONS SHALL BE COORDINATED WITH STRUCTURAL.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL VERTICAL AND HORIZONTAL OFFSETS (NOT SHOWN) FOR DUCT AND EQUIPMENT INSTALLATION.
- REFERENCE ALL DETAILS ON SHEETS M3 THROUGH M5 FOR EQUIPMENT INSTALLATION.
- ALL ROOF CURBS SHALL BE SEALED AIR TIGHT FOR BUILDING PRESSURE TESTING.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR REFRIGERANT PIPING. PLUMBING CONTRACTOR WILL PROVIDE ALL CONDENSATE PIPING. ALL EQUIPMENT FURNISHED WITH PRE CHARGED LINE SETS.
- SEE PROJECT MANUAL FOR BUILDING MATERIALS SPECIFICATIONS.
- DUCTWORK TO BE INSTALLED TIGHT TO BOTTOM OF STRUCTURE THROUGHOUT. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICTS. MAINTAIN CLEARANCE ABOVE DUCT FOR INSULATION.
- CLEAN ALL DUCTWORK BOTH INSIDE AND OUT BEFORE START-UP OF ROOFTOP UNITS.
- FLEXIBLE DUCT LIMITED TO 5'-0" MAX.
- PROVIDE TURNING VANES IN ALL 90 DEG ELBOWS IN SUPPLY AND RETURN DUCTWORK.
- THE ANSUL FIRE SUPPRESSION SYSTEM, (LIQUID SYSTEM, TYPE-R102, SEE DETAIL 5M3), IS PRE-PIPED INTO HOOD BY HOOD MANUFACTURER AS PART OF THEIR PACKAGE. SEE "RESPONSIBILITY MATRIX."

#### KEY NOTES

- ROOF TOP UNIT RTU-1: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, ECONOMIZER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- ROOF TOP UNIT RTU-2: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, MOTORIZED OSA DAMPER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- INSTALL ALL DUCTWORK TIGHT TO BOTTOM OF DECK OR STRUCTURAL MEMBERS.
- PROVIDE SMOKE DETECTOR IN SUPPLY AIR STREAM WHERE INDICATED. AIR HANDLING EQUIPMENT SHALL BE INTERLOCKED WITH THE DETECTOR TO SHUT DOWN THE UNIT. FURNISH AND INSTALL AN AUDIBLE AND VISUAL ALARM DEVICE IN MONITORED AREA, PER LOCAL CODE.
- DUCTWORK INSULATION: ALL RETURN AND SUPPLY DUCTWORK SHALL BE WRAPPED WITH 1 1/2 LBS BLANKET INSULATION, WITH FOIL FACING.
- MINIMUM 1" UNDERCUT DOOR FOR PROPER RETURN AIRFLOW.
- RETURN/SUPPLY DUCTWORK DOWN FULL SIZE FROM AIR HANDLING EQUIPMENT WITH NEOPRENE FLEX CONNECTORS. SUPPORT DUCTWORK TO RELEASE TENSION IN FLEX CONNECTORS. TRANSITION AS SHOWN. SEE DETAIL 1M3.
- VOLUME DAMPER, TYPICAL FOR ALL.
- FLEX DUCTWORK CONNECTION TO DIFFUSERS/GRILLES TYPICAL. FLEX DUCTWORK TO BE INSULATED WITH FOIL VAPOR BARRIER. FLEX DUCTWORK NOT TO EXCEED 5'-0" IN LENGTH. SEE DETAIL 4M3.
- EF-3: PROVIDE ROOF MOUNTED TOILET EXHAUST FAN WITH BACK DRAFT DAMPER. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- NOT USED.
- REMOTE SENSORS, HUMIDISTATS AND THERMOSTATS: REMOTE SENSORS AND THERMOSTATS TO BE MOUNTED WHERE INDICATED. FIELD-VERIFY THE LOCATION WITH ARCHITECT, OWNER, AND ON-SITE CONDITIONS PRIOR TO PERFORMING WORK.
- EXTEND SHEET MANUAL RETURN AIR PLENUM UP FROM GRILLE AND CONNECT TO RETURN AIR DUCT AS INDICATED.
- MANUAL PULL STATION FOR ANSUL FIRE SUPPRESSION SYSTEM. VERIFY WITH LOCAL AUTHORITY NUMBER OF PULLS, LOCATION, AND HEIGHT ABOVE FINISH FLOOR. SEE DETAIL 5M3.
- EXACT LOCATION OF ALL HOODS SHALL BE DETERMINED BY THE KITCHEN EQUIPMENT DRAWINGS AND EQUIPMENT CUT SHEETS. COORDINATE WITH ALL DISCIPLINES PRIOR TO INSTALLATION.
- KITCHEN HOOD SYSTEM: EF-1 & EF-2: INSTALL KITCHEN EXHAUST SYSTEM FROM INDICATED VENDOR. THE PACKAGE TO INCLUDE THE STAINLESS STEEL EXHAUST HOOD, GREASE FILTERS, GREASE CATCH PAN, WIRE WAYS, INCANDESCENT LIGHT FIXTURE RATED FOR EXHAUST HOODS, EXHAUST FAN, AND ROOF CURB.
- INSTALL KITCHEN HOOD EXHAUST DUCTWORK AS INDICATED ON PLANS. DUCTWORK SIZES AND LAYOUTS SHALL NOT BE MODIFIED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- HOOD SYSTEM AND DUCT PROVIDED BY CAPTIVEAIRE. SEE SHEETS M4.14M.7. COORDINATE ANY MODIFICATIONS WITH HOOD VENDOR/CAPTIVEAIRE.