

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING LOCATION	FACE SIZE (IN.)	NECK SIZE (IN.)	NOTES
SD-1	TITUS	TMR	ROUND CONE	DUCT	22"ø	SEE PLANS	1,2,5
SD-2	TITUS	OMNI	PLAQUE	LAY-IN	24"x24"	SEE PLANS	1,2,3,5,6
SD-3	TITUS	OMNI	PLAQUE	SURFACE	24"x24"	SEE PLANS	1,2,3,5,6,7
RG-1	TITUS	PAR	LOUVERED	LAY-IN	24"x24"		1,3,4,5,6,8
EG-1	TITUS	PAR	LOUVERED	SURFACE	12"x12"	10"x10"	1,3,4,5,6,7,8

NOTES:
 1. NECK SIZE SHOWN ON DRAWINGS.
 2. 4-WAY THROW PATTERN UNLESS OTHERWISE SHOWN ON DRAWINGS.
 3. BAKED ENAMEL FINISH, WHITE.
 4. PROVIDE NECK FOR DUCT CONNECTION.
 5. BRANCH DUCT SIZE SHALL BE SAME AS NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
 6. FRAME TYPE TO MATCH CEILING CONSTRUCTION, COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLAN.
 7. PROVIDE WITH OPPOSED BLADE DAMPER OPERABLE FROM NECK OF DIFFUSER.
 8. ALUMINUM CONSTRUCTION.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL	DRIVE	CFM	ESP (IN.)	SONES	FAN RPM	ELECTICAL			WEIGHT (LB.)	NOTES
								HP (W)	FLA	V/PH/Hz		
EF-1	GREENHECK	G-090-VG	DIRECT	450	0.5	7.3	1542	1/10	1.4	120/1/60	60	1,2,3,4,5,6,7

NOTES:
 1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 2. PROVIDE WITH FLORIDA WIND RATED ROOF CURB.
 3. PROVIDE WITH SPEED CONTROLLER FOR BALANCING.
 4. PROVIDE WITH MANUFACTURER'S DISCONNECT SWITCH.
 5. PROVIDE WITH BACKDRAFT DAMPER.
 6. PROVIDE WITH BIRDSCREEN.
 7. FAN SHALL RUN CONTINUOUSLY.

ROOFTOP AIR CONDITIONING UNIT SCHEDULE - ELECTRIC

MARK	MANUFACTURER	MODEL	SUPPLY AIR	MIN OA	SUPPLY FAN		COOLING COIL			HEATING DATA		UNIT ELECTRICAL DATA		WEIGHT (LB.)	NOTES		
					ESP	HP	TOTAL (MBH)	SENS. (MBH)	EAT (DB/WB)	EER (SEER)	MBH	KW	V/PH/Hz			MCA	MOCAP
RTU-1	CARRIER	50HC**17	6000	800	0.8	5	175.9	137.6	77.8/64.8	12.2	156.7	45.9	480/3/60	66.2	80	2675	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES:
 1. ALL COOLING CAPACITIES SHOWN ARE BASED ON AN AMBIENT OUTDOOR TEMPERATURE OF 95°F, 92.8°F DB & 76.4°F WB SUMMER DESIGN TEMPERATURE AND A WINTER DESIGN TEMPERATURE OF 29.4°F.
 2. PROVIDE WITH FLORIDA WIND RATED ROOF CURB.
 3. CONTRACTOR SHALL INSTALL ALL NEW FILTERS PRIOR TO TEST AND BALANCE WORK.
 4. PROVIDE UNIT WITH LOUVERED HAIL GUARDS.
 5. PROVIDE UNIT WITH UNPOWERED GFCI CONVENIENCE OUTLET.
 6. PROVIDE UNIT WITH DIFFERENTIAL ENTHALPY TYPE ECONOMIZER WITH BAROMETRIC RELIEF.
 7. PROVIDE UNIT WITH MOTORIZED OUTDOOR AIR DAMPER.
 8. PROVIDE UNIT WITH FACTORY INSTALLED HINGED ACCESS PANEL.
 9. PROVIDE UNIT WITH FACTORY MOUNTED DISCONNECT SWITCH.
 10. PROVIDE UNIT WITH FACTORY INSTALLED SUPPLY AND RETURN SMOKE DETECTORS. PROVIDED WITH FIELD INSTALLED REMOTE TEST STATION AND VISABLE AND AUDIBLE SIGNALING DEVICE.
 11. PROVIDE UNIT WITH HOT GAS REHEAT FOR HUMIDITY CONTROL.
 12. PROVIDE UNIT WITH COASTAL COIL COATING PACKAGE.
 13. PROVIDE UNIT WITH 2 SPEED FAN CONTROL.
 14. PROVIDE WITH FLOAT SWITCH IN DRAIN PAN BELOW OVERFLOW LEVEL, UNIT SHALL SHUT DOWN UPON ALARM FROM FLOAT SWITCH.

VENTILATION REQUIREMENTS

(BASED ON ASHRAE 62.1, TABLE 6.1)

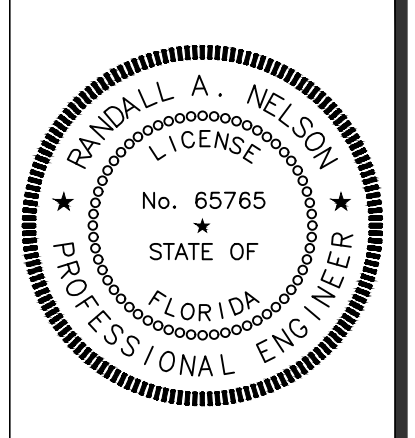
ROOM	SPACE TYPE	AREA (SQFT.)	OCCUPANT DENSITY (#/1000 SQFT.)	OCCUPANTS	AREA OUTDOOR AIR RATE (CFM/SQFT.)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	OUTDOOR AIR REQUIRED (CFM)	EXHAUST REQUIRED (CFM)
SALES FLOOR	SUPERMARKET	2134	8	18	0.06	7.5	257	0
SALES COUNTER	SUPERMARKET	267	8	3	0.06	7.5	33	0
OFFICE	OFFICE	71	5	1	0.06	5	7	0
MENS RR	RESTROOM	187	0	0	0	0	0	225
WOMENS RR	RESTROOM	180	0	0	0	0	0	150
CORRIDOR	CORRIDOR	103	0	0	0.06	0	7	0
MOP	STORAGE/JANITOR	18	0	0	0.12	0	3	25
DINING	DINING	356	70	25	0.18	7.5	251	0
COOKING	KITCHEN (COOKING)	51	20	2	0.12	7.5	14	0
COOLERS	REFRIGERATED WAREHOUSE	465	0	0	0	10	0	0
BEER CAVE	REFRIGERATED WAREHOUSE	141	0	0	0	10	0	0
BACK OF HOUSE	STORAGE ROOMS	499	0	0	0.12	0	60	0
TOTAL:							632	400
EV =							0.8	
VOT =							790	400

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ABBREVIATIONS
	DIFFUSER		EQUIPMENT (SEE SCHEDULE)	AFF ABOVE FINISHED FLOOR
	RETURN AIR GRILLE		EQUIPMENT NUMBER	BTU BRITISH THERMAL UNIT
	RETURN OR EXHAUST DUCT UP		INDICATES DETAIL, PLAN, SECTION, AND/OR DIAGRAM (APPLIES ONLY WHERE INDICATED ON DRAWINGS)	CFM CUBIC FEET PER MINUTE
	SUPPLY DUCT UP		INDICATES DRAWING ON WHICH DETAIL APPEARS	COMP COMPRESSOR
	SUPPLY DUCT DOWN		INDICATES TYPICAL DETAIL (APPLIES TO ALL CONTRACT DRAWINGS)	DB DRY BULB
	RETURN OR EXHAUST DUCT DOWN		INDICATES DRAWING ON WHICH DETAIL APPEARS	DN DOWN
	ROUND DUCT DOWN		INDICATES SECTION NUMBER	DX DIRECT EXPANSION
	ROUND DUCT UP		INDICATES WHICH DRAWING SECTION APPEARS	EAT ENTERING AIR TEMPERATURE
	VANED ELBOW		INDICATES REVISION & NUMBER	EFF EFFICIENCY
	LOW PRESSURE FLEX DUCT		CONNECT NEW TO EXISTING	ESP EXTERNAL STATIC PRESSURE
	45° TAKEOFF FITTING		SHEET NOTE NUMBER	ETC EXHAUST
	MANUAL VOLUME DAMPER		DIFFUSER TYPE SIZE CFM	F Fahrenheit
			THERMOSTAT	FLA FULL LOAD AMPS
			SENSOR	FT FEET PER MINUTE
			HUMIDITY/ENTHALPY SENSOR	GPM GALLONS PER MINUTE
			DOOR UNDERCUT	GRS/LB HORSEPOWER
				HP HERTZ
				HZ INCHES
				KW KILOWATT
				MBH THOUSANDS OF BTU PER HOUR
				MIN MINIMUM
				NEG NEGATIVE
				NTS NOT TO SCALE
				OA OUTSIDE AIR
				OBD OPPOSED BLADE DAMPER
				OC ON CENTER
				PH PHASE
				PSI POUNDS PER SQUARE INCH
				PSIG POUNDS PER SQUARE INCH GAUGE
				RH RELATIVE HUMIDITY
				SA SUPPLY AIR
				SH SENSIBLE HEAT
				SP STATIC PRESSURE
				TEMP TEMPERATURE
				TYP TYPICAL
				UC UNDERCUT
				VOLT VOLTAGE
				W/O WITHOUT
				WB WET BULB
				WC WATER COLUMN

MECHANICAL GENERAL NOTES:

- PRIOR TO SUBMITTING BID, VISIT THE SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. DUCTWORK AND PIPING SHALL BE ROUTED TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC.
- TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION DURING WORK. REPAIR ANY DAMAGE CAUSED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING IS SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND SHALL MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN 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.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. CHASE AND PENETRATIONS INTENDED FOR DUCTWORK AND PIPING SHALL BE VERIFIED WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- COORDINATE LOCATION OF ROOF PENETRATIONS WITH THE EXISTING CONDITIONS AND ARCHITECTURAL DRAWINGS.
- SEAL ALL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS. FIREPROOF ALL PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
- COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL, AND DUCT INSTALLATION REQUIREMENTS.
- LOCATION OF CEILING DIFFUSERS, REGISTERS, AND GRILLES SHALL BE ADJUSTED AS REQUIRED TO ACCOMMODATE FINAL CEILING AND LIGHTING LOCATIONS.
- DUCTWORK CROSSING FIRE RATED WALL OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
- PROVIDE FIRE AND/OR FIRE/SMOKE DAMPERS IN DUCTWORK AT CEILINGS AND WALLS AS REQUIRED BY BUILDING CODE AUTHORITY HAVING JURISDICTION. FIRE AND FIRE/SMOKE DAMPERS SHALL CONFORM TO NFPA AS APPLICABLE.
- PROVIDE WALL AND/OR DUCT ACCESS PANELS OR DOORS FOR ACCESS TO ALL FIRE AND/OR FIRE/SMOKE DAMPERS. ACCESS PANEL OR DOOR SHALL BE MINIMUM SIZE OF 6"x6" AND SHALL BE INSTALLED WITH 12" OF DAMPER. PROVIDE A REMOVABLE DUCT SECTION WHERE DUCT SIZE IS TOO SMALL FOR A 6"x6" ACCESS DOOR.
- THERMOSTATS AND HUMIDISTATS SHALL BE LOCATED AND SET BY MECHANICAL CONTRACTOR AND WIRED IN CONDUIT BY ELECTRICAL CONTRACTOR. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHTS SHALL BE 48" AFF TO MEET ADA REQUIREMENTS UNLESS OTHERWISE NOTED ON PLANS.
- COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH ANY WALL MOUNTED ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF ANY WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
- ALL BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS, AND GRILLES SHALL HAVE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT.
- BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
- RIGID DUCTWORK INSULATION: PROVIDE R-6 MINIMUM INSULATION WRAP ON ALL CONCEALED DUCTWORK. PROVIDE R-4.2 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED SPIRAL DUCTWORK. PROVIDE R-6 MINIMUM INTERNAL DUCT LINER ON ALL EXPOSED RECTANGULAR DUCTWORK. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE DIMENSIONS. SHEET METAL SIZES SHALL INCREASE ACCORDINGLY. PROVIDE R-12 MINIMUM INSULATION ON ALL DUCTWORK INSTALLED IN UNCONDITIONED SPACES. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- FLEXIBLE DUCT WORK SHALL BE HERMAFLEX TYPE MKE, FLEXMASTER TYPE BM, OR APPROVED EQUAL. SHALL BE LISTED UNDER 181 AS CLASS 1 AIR DUCT AND SHALL BE PROVIDED WITH INTEGRAL R-6 MINIMUM FIBERGLASS INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH AND SHALL BE INSTALLED AND SUPPORTED TO AVOID SHARP BENDS AND SAGGING. FLEXIBLE DUCTWORK IS NOT ALLOWED IN EXPOSED AREAS.



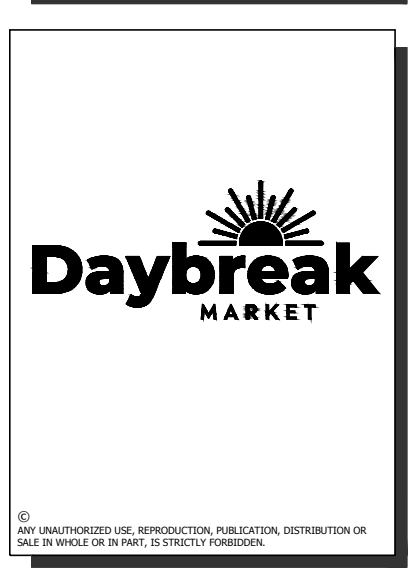
SIGNATURE DATE: 12/23/2022



PROJECT: DAYBREAK MARKET CONVENIENCE STORE

DAYBREAK MARKET CONVENIENCE STORE

WIREGRASS RD, LOT 1
PASCO COUNTY, FL



REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 4/22/2022

SHEET TITLE:
MECHANICAL NOTES, LEGEND, AND SCHEDULES

SHEET NUMBER:
M100

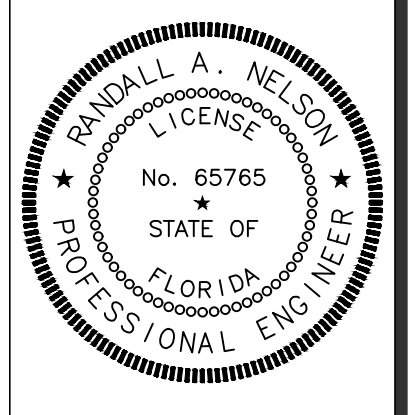
System Checksums

By Acertus

COOLING COIL PEAK				CLG SPACE PEAK				HEATING COIL PEAK				TEMPERATURES			
Peak at Time: 8:17				Peak at Time: 8:17				Peak at Time: 29				Peak at Time: 29			
Outside Air: OADB/BWHR: 88 / 76 / 117				Outside Air: OADB/BWHR: 88 / 76 / 117				Outside Air: OADB/BWHR: 88 / 76 / 117				Outside Air: OADB/BWHR: 88 / 76 / 117			
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Btu/h	Percent Of Total	Space Sensible	Percent Of Total	Space Sens	Coil Peak Btu/h	Percent Of Total	SADB	Cooling	Heating	RA Plenum	Return	Fa R/UA	Fa Bl/UD
14,181	14,181	14,181	9	0	0	0	-10,523	8.05	66.5	66.3	77.8	68.3	79.2	62.3	
17,775	0	17,775	11	20,345	19	0	0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	
5,919	0	5,919	4	5,133	5	-17,974	-17,974	13.75	5,163	5,163	5,163	5,163	5,163	5,163	
4,982	1,096	5,148	3	5,205	5	-4,347	-6,611	4.29	0.0	0.0	0.0	0.0	0.0	0.0	
0	0	0	0	0	0	-6,019	-6,019	4.60	0.0	0.0	0.0	0.0	0.0	0.0	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	800	800	800	800	800	800	
27,756	15,267	43,023	26	30,683	29	-28,340	-40,127	30.70	800	800	800	800	800	800	
19,514	4,617	24,132	15	19,514	18	0	0	0.00	5,163	5,163	5,163	5,163	5,163	5,163	
23,405	0	23,405	14	12,109	11	0	0	0.00	650	650	650	650	650	650	
41,091	0	41,091	25	41,091	39	0	0	0.00	2	2	2	2	2	2	
84,010	4,617	88,628	54	72,804	68	0	0	0.00	0	0	0	0	0	0	
3,532	-3,532	0	0	3,112	3	-2,115	0	0.00	0	0	0	0	0	0	
0	0	33,840	21	0	0	-36,211	27.70	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
127	-2,034	127	0	127	0	-55,872	-55,872	42.74	0	0	0	0	0	0	
0	0	-2,034	-1	0	0	1,495	-1.14	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	
115,424	14,319	163,583	100.00	106,726	100.00	-86,327	-130,715	100.00	46	46	46	46	46	46	

MECHANICAL KEYNOTES: (1,2,X)

1. COORDINATE INSTALLATION OF EQUIPMENT, DUCTWORK, AND PIPING WITH ALL TRADES. DUCTWORK AND PIPING SHALL NOT BE ROUTED OVER ELECTRICAL PANELS, DISCONNECTS, TRANSFORMERS, OR OTHER ELECTRICAL EQUIPMENT. VERIFY LOCATION OF ALL ELECTRICAL EQUIPMENT BEFORE INSTALLATION OF HVAC DUCTWORK AND PIPING.
2. PROVIDE GALVANIZED STEEL DUCTWORK, SIZES AS NOTED ON DRAWINGS. DUCTWORK SIZES ARE CLEAR INSIDE DIMENSIONS. REFER TO SPECIFICATIONS FOR INSULATION REQUIREMENTS.
3. ROUTE DUCTS AS HIGH AS POSSIBLE ABOVE BOTTOM OF CHORD AND BETWEEN JOIST. COORDINATE ALL DUCTWORK ROUTING AND SIZING WITH JOIST AND TRUSS LOCATIONS.
4. ROUTE FULL SIZE SUPPLY DUCT UP TO ROOFTOP UNIT. FIELD VERIFY EXACT LOCATION. TRANSITION DUCTWORK AS REQUIRED FOR FULL AND COMPLETE OPERATION.
5. ROUTE FULL SIZE RETURN DUCT UP TO ROOFTOP UNIT. FIELD VERIFY EXACT LOCATION. TRANSITION DUCTWORK AS REQUIRED FOR FULL AND COMPLETE OPERATION.
6. ROUTE 12" EXHAUST DUCT UP TO EXHAUST FAN ON ROOF. FIELD COORDINATE EXACT LOCATION. TRANSITION DUCTWORK AS REQUIRED FOR FULL AND COMPLETE OPERATION.
7. PROVIDE RETURN OPENING IN TOP OF DUCT. SIZE AS INDICATED ON PLAN. COVER OPENING WITH 1/2"x1/2" GALVANIZED STEEL HARDWARE CLOTH. MAINTAIN MINIMUM 10" CLEARANCE FROM OPENING IN TOP OF DUCT TO ROOF DECK.
8. UNDERCUT DOOR A MINIMUM OF 1" FOR AIRFLOW.
9. MOUNT BOTTOM OF DIFFUSER AT 12'-6" AFF.
10. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT WITH AUTO CHANGE-OVER FOR HEATING/COOLING AND INTEGRAL DEHUMIDIFICATION OUTPUT. INSTALL AT 48" AFF. THERMOSTAT SHALL BE COMPATIBLE WITH ROOFTOP UNIT. VERIFY INSTALLATION LOCATION WITH OWNER.
11. ALL EXPOSED ROUND DUCTWORK SHALL BE INTERNALLY LINED SPIRAL DUCTWORK. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. ROUTE DUCTWORK AS HIGH AS POSSIBLE BELOW STRUCTURE.



SIGNATURE DATE: 12/23/2022



DAYBREAK MARKET
CONVENIENCE STORE
WIREGRASS M25, LOT 1
PASCO COUNTY, FL

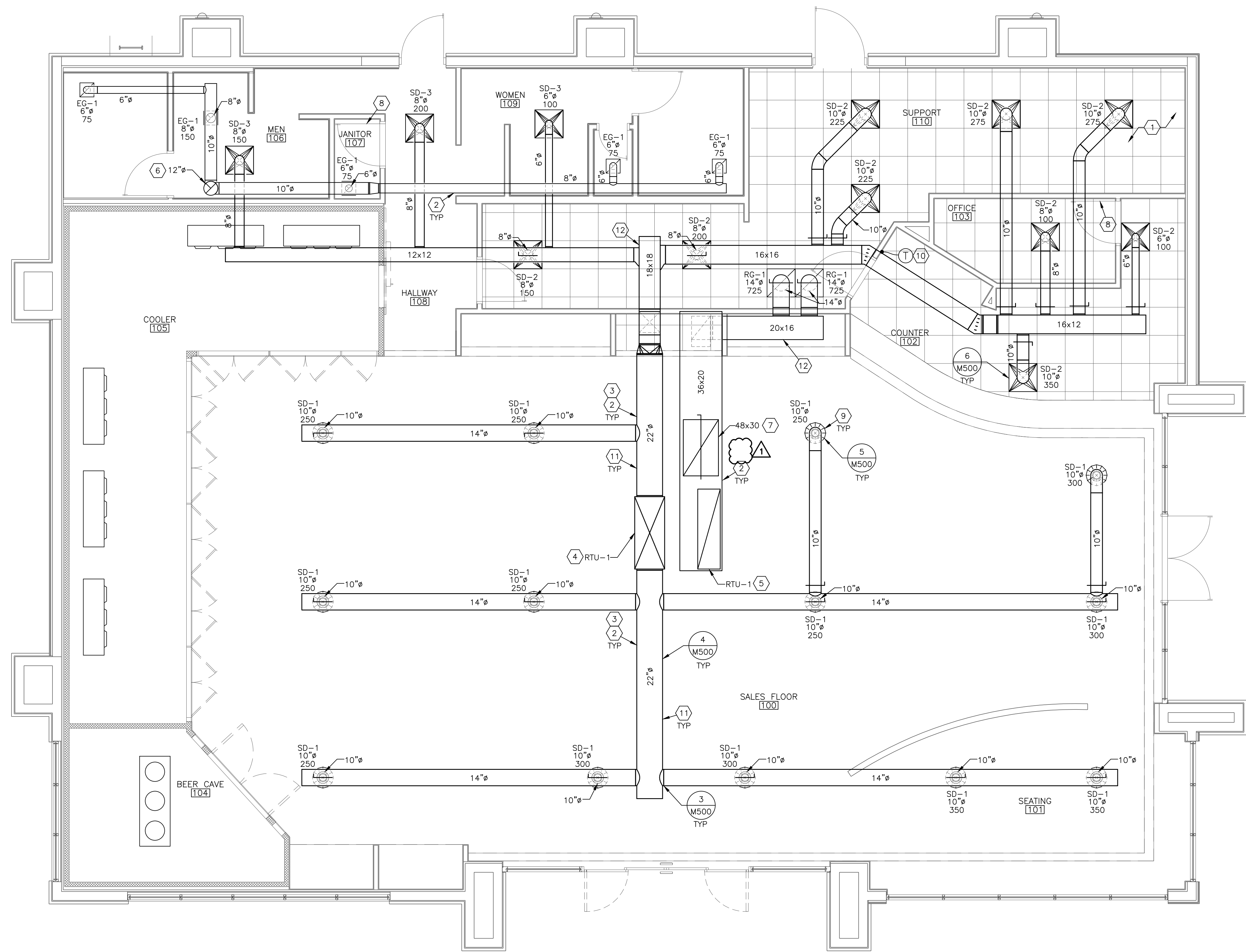


REV	DATE	DESCRIPTION
1	11/30/22	COUNTY COMMENTS

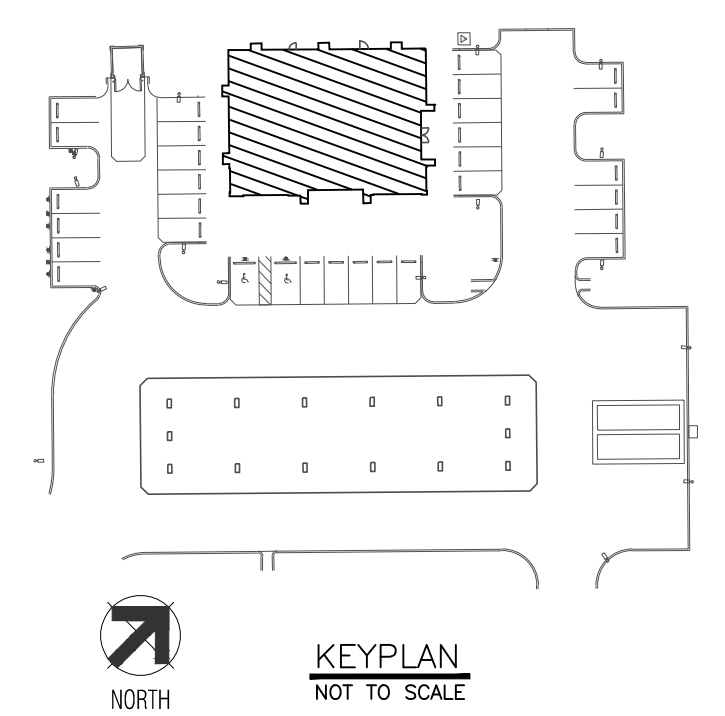
ORIGINAL ISSUE DATE: 4/22/2022

SHEET TITLE:
MECHANICAL CONVENIENCE STORE PLAN

SHEET NUMBER:
M201



1 MECHANICAL PLAN
1/4"=1'-0"



15000 - BASIC MECHANICAL REQUIREMENTS

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 15.

READ THE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL DIVISIONS OF WORK AND COORDINATE AND THE WORK OF SUBCONTRACTORS WITH ALL DIVISIONS OF WORK. PROVIDE SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.

SCHEDULE THE COMPLETION AND INSPECTION OF WORK AND THE WORK OF SUBCONTRACTORS TO COMPLY WITH THE SCHEDULE AND THE PROJECT COMPLETION DATE.

VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE BID. SUBMITTAL OF BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE RESPONSIBILITY IN PERFORMANCE OF WORK.

READ ALL RELEVANT DOCUMENTS, BECOME FAMILIAR WITH THE JOB, SCOPE OF WORK, TYPE OF GENERAL CONSTRUCTION, AND THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS. ALSO UNDERSTAND THE PURPOSE FOR WHICH THESE DOCUMENTS HAVE BEEN PREPARED AND BECOME COGNIZANT OF ALL THE DETAILS INVOLVED. COORDINATE WORK WITH THAT OF OTHERS.

DEFINITIONS: FURNISH - PURCHASE AND DELIVER TO PROJECT SITE COMPLETE WITH EVERY NECESSARY APPURTENANCE AND SUPPORT. INSTALL - UNLOAD AT THE DELIVERY POINT AT THE SITE AND PERFORM EVERY OPERATION NECESSARY TO ESTABLISH SECURE MOUNTING AND CORRECT OPERATION AT THE PROPER LOCATION IN THE PROJECT. PROVIDE - FURNISH AND INSTALL.

GENERAL REQUIREMENTS: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY OTHERS SHALL BE PROVIDED. CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE ARCHITECT-ENGINEER, AS REQUIRED.

THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE FURNISHED AND INSTALLED EVEN THOUGH SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLY WITH THE DRAWINGS AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE FURNISHED AND INSTALLED AS PART OF CONTRACT.

WHERE THE DRAWINGS OR SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODES OR THE OWNERS CRITERIA, PROVIDE THE SYSTEM WITH THE MORE STRINGENT REQUIREMENTS AS DESIGNED AND DESCRIBED ON THESE DRAWINGS, UNLESS SPECIFICALLY NOTED OTHERWISE.

ALL MECHANICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.

HANGERS SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES. UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW. UNDERWRITERS LABORATORIES LISTED AND LABELED AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.

CODES: ALL WORK SHALL CONFORM TO THE OWNER'S CRITERIA, THE STATE'S, COUNTY'S, CITY'S AND LOCAL CODES AND ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES, AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. INCLUDE ANY CHANGES REQUIRED BY CODES IN THE BID. IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE INCLUDED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED BY THE OWNER.

LICENSES, PERMITS, COMMISSIONING, INSPECTIONS & FEES: OBTAIN AND PAY FOR ALL LICENSES, PERMITS, COMMISSIONING, INSPECTIONS, AND FEES REQUIRED OR RELATED TO THIS WORK.

PROVIDE TO THE OWNER-ARCHITECT A COMMISSIONING PLAN, PRELIMINARY COMMISSIONING REPORT, FINAL COMMISSIONING REPORT, AND CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

TRADE NAMES, MANUFACTURERS AND SHOP DRAWINGS: WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY ARCHITECT-ENGINEER PRIOR TO BID THROUGH SHOP DRAWINGS SUBMITTAL AND BEFORE ACCEPTANCE PRIOR TO INSTALLATION. ANY CHANGES TO ELECTRICAL SERVICE, STRUCTURAL FRAMING, ETC. OR ANY OTHER MODIFICATION THAT IS REQUIRED BY THE USE OF ALTERNATE EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND SHALL INCLUDE ALL COSTS IN BID FOR THE REQUIRED CHANGES. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT NO EXPENSE TO THE OWNER.

GUARANTEE: GUARANTEE ALL MATERIALS AND WORK PROVIDED UNDER THIS CONTRACT AND MAKE GOOD, REPAIR OR REPLACE AT NO EXPENSE TO THE OWNER, ANY DEFECTIVE WORK, MATERIAL, OR EQUIPMENT WHICH MAY BE DISCOVERED WITHIN A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION. EXTENDED WARRANTIES ARE AS SPECIFIED WITH INDIVIDUAL EQUIPMENT.

QUALITY ASSURANCE: INDUSTRY STANDARDS AND CODES: UNLESS MODIFIED BY THESE SPECIFICATIONS, THE DESIGN, MANUFACTURER, TESTING AND METHOD OF INSTALLING ALL MATERIALS, APPARATUS AND EQUIPMENT SHALL CONFORM TO THE FOLLOWING: 1. AHRJ CODE FOR REFRIGERATION APPARATUS 2. ANSI B9.1 SAFETY CODE FOR MECHANICAL REFRIGERATION 3. STANDARDS OF NATIONAL FIRE PROTECTION ASSOCIATION 4. SMACNA 5. ASHRAE

RECORD DRAWINGS: MAINTAIN ONE COPY OF DRAWINGS ON THE JOB SITE TO RECORD DEVIATIONS FROM CONTRACT DRAWINGS, SUCH AS: LOCATION OF CONCEALED PIPING VALVES AND DUCTS, REVISIONS, ADDENDUMS, AND CHANGE ORDERS, AND SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.

AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, MAKE ANY FINAL CORRECTIONS TO DRAWINGS, SUCH AS: LOCATION OF EACH PRINT BY SIGNATURE THEREON. A SET OF REPRODUCIBLE DRAWINGS ALONG WITH ONE SET OF BLUELINES OF THE MOST RECENT SET OF DRAWINGS WITH TEMPERATURE CONTROLLING INCLUDED SHALL BE DELIVERED TO THE ARCHITECT UPON COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

DISCREPANCIES IN DOCUMENTS: DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. WHERE DRAWINGS, EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE UNCLEAR, ADVISE THE ARCHITECT-ENGINEER IN WRITING, OF VARIATIONS TO CONTRACT DOCUMENTS PRIOR TO SUBMISSION OF BID. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AT THE PROPER TIME FOR SETTING OR EMBEDMENT SO AS TO CAUSE NO DELAY. DUCTWORK AND EQUIPMENT ASSEMBLIES SHOWN ON THE DRAWINGS ARE

PHASING REQUIREMENTS

INCLUDE IN BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE EXTERNAL INSULATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST.

MANUFACTURER'S NAMES AND CATALOG NUMBERS: SPECIFIC REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS NECESSARILY AN "OFF THE SHELF" ITEM; REQUIREMENTS FOR SPECIFIC FINISHES, MATERIALS OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURER'S STANDARDS. ASCERTAIN THAT SUCH MODIFICATIONS ARE FULLY CONSIDERED.

DIAGRAMS, NAMEPLATES AND LABELS: EACH MAJOR COMPONENT OF EQUIPMENT SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS AND CATALOG NUMBER ON A PLATE SECURELY AFFIXED IN A CONSPICUOUS PLACE. THE NAMEPLATE OF A DISTRIBUTING AGENCY WILL NOT BE ACCEPTED. ALL PIECES OF EQUIPMENT, VALVES, STARTERS, DISCONNECTS, AND ALL PNEUMATIC AND ELECTRIC CONTROL INSTRUMENTS AND APPARATUS SHALL BE IDENTIFIED WITH 1/16" THICK BLACK LAMINATED PLASTIC NAMEPLATES, WITH 3/16" HIGH WHITE LAMINATED LETTERS. SIMILAR AND LIKE EQUIPMENT SHALL BE DESIGNATED WITH NUMERICAL SUFFIX (EXAMPLE: THERMOSTAT, T-1). THE NAMEPLATE IDENTIFICATIONS SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. PROVIDE A LABEL FOR THE MECHANICAL SYSTEM STATING: (NAME, ADDRESS AND PHONE NUMBER OF CONTRACTOR). LETTERS SHALL BE 1/4" HIGH AND LOCATED IN A CONSPICUOUS PLACE NEAR THE HVAC EQUIPMENT.

CUTTING AND PATCHING: PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SPECIFICATION. CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OR ARCHITECT.

PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE ARCHITECT.

EXISTING UTILITIES, ETC. THAT ARE DAMAGED DURING THE CONSTRUCTION PERIOD, WHETHER OR NOT DUE TO NEGLIGENCE SHALL BE REPAIRED OR REPLACED AND LEFT IN A CONDITION SATISFACTORY TO THE ARCHITECT.

SLEEVES: PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE. ACCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. COORDINATE THROUGH THE ARCHITECT ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.

ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTY" FOAM, *RATED FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.

SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE, FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILING, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

HANGERS: HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.

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HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED. PROVIDE SWAY AND SEISMIC BRACING WHERE REQUIRED BY CODE.

JOB CONDITIONS: PROTECT MATERIALS, APPARATUS AND EQUIPMENT FROM DAMAGE, MOISTURE, DIRT, DEBRIS AND WORK OF OTHER TRADES.

OPERATION MANUALS AND INSTRUCTIONS: PROVIDE OPERATING AND MAINTENANCE INSTRUCTIONS AT THE COMPLETION OF THE PROJECT. SUBMIT THREE HARD BOUND COPIES TO ARCHITECT, AS NOTED.

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AFTER THE LIST HAS BEEN PROCESSED BY THE ARCHITECT, SUBMIT THROUGH SHOP DRAWINGS AND PRODUCT DATA OF ALL EQUIPMENT. THESE SUBMITTALS SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS AFTER THE PROCESSING DATE OF THE ORIGINAL SUBMITTAL LIST. SUBMISSIONS SHALL BE MADE EARLY ENOUGH IN PROJECT TO ALLOW FOR (10) WORKING DAYS FOR REVIEW BY ARCHITECT-ENGINEER WITHOUT CAUSING DELAYS OR CONFLICTS IN THE PROJECT'S PROGRESS.

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TEST AND BALANCE REPORT: SUBMIT AT FINAL INSPECTION OPERATION AND MAINTENANCE MANUALS; SUBMIT COPIES IN COMPLIANCE WITH SECTION, OPERATION AND MAINTENANCE MANUALS.

15400 - HEATING VENTILATION AND AIR CONDITIONING

PRODUCTS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW. SYSTEMS SHALL FUNCTION CORRECTLY AS A WHOLE, AND IN ALL ITS PARTS, UP TO THE SPECIFIED CAPACITY. SYSTEMS OR DEVICES FAILING TO MEET PERFORMANCE REQUIREMENTS SHALL BE REPLACED, ALTERED OR REPAIRED AS REQUIRED TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS. WORK DAMAGED OR MARKED BY SUCH REPLACEMENTS, ALTERATIONS, OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITIONS AT NO ADDITIONAL COST TO THE OWNER. WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED, THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. BEFORE INSTALLATION, THE PHYSICAL DIMENSIONS SHALL BE CHECKED TO VERIFY FIT IN SPACES ALLOTTED ON THE DRAWINGS. INSERTS, PIPE SLEEVES, AND SUPPORTS OF AIR CONDITIONING EQUIPMENT SHALL BE PROVIDED AS SPECIFIED. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AT THE PROPER TIME FOR SETTING OR EMBEDMENT SO AS TO CAUSE NO DELAY. DUCTWORK AND EQUIPMENT ASSEMBLIES SHOWN ON THE DRAWINGS ARE

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15400 - HEATING VENTILATION AND AIR CONDITIONING

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HVAC INSULATION

LOW PRESSURE DUCTWORK INSULATION: EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. ABANDONED PIPING AND/OR DUCTWORK IS TO BE REMOVED TO POINT OF ORIGIN. THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.

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SUBMITTALS: SUBMIT WITHIN THIRTY (30) DAYS AFTER THE DATE OF NOTICE TO PROCEED AND BEFORE PURCHASING ANY MATERIALS OR EQUIPMENT. REFER TO THE ARCHITECT FOR REVIEW. A COMPLETE LIST OF SIX (6) COPIES, OF ALL MATERIALS INCORPORATED IN THE WORK. THIS LISTING SHALL BE ARRANGED BY THE ORDER OF OCCURRENCE IN THE SPECIFICATIONS, FOLLOWED BY THE ITEMS ON THE DRAWING NOT SPECIFICALLY INCLUDED IN THE SPECIFICATIONS.

AFTER THE LIST HAS BEEN PROCESSED BY THE ARCHITECT, SUBMIT THROUGH SHOP DRAWINGS AND PRODUCT DATA OF ALL EQUIPMENT. THESE SUBMITTALS SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS AFTER THE PROCESSING DATE OF THE ORIGINAL SUBMITTAL LIST. SUBMISSIONS SHALL BE MADE EARLY ENOUGH IN PROJECT TO ALLOW FOR (10) WORKING DAYS FOR REVIEW BY ARCHITECT-ENGINEER WITHOUT CAUSING DELAYS OR CONFLICTS IN THE PROJECT'S PROGRESS.

ALL SUBMITTALS SHALL BE COMPLETE, NO CONSIDERATION WILL BE GIVEN TO PARTIAL SUBMITTALS, UNLESS NOTED OTHERWISE BY ARCHITECT. EACH ITEM SHALL HAVE A COVER PAGE STATING PROJECT, SPECIFICATION AND PARAGRAPH, REFERENCE NUMBER, OR DRAWING REFERENCE NUMBER, AND SCHEDULED EQUIPMENT IDENTIFICATION NUMBER, IF APPLICABLE.

THE REVIEW OF SUBMITTALS DOES NOT RELIEVE RESPONSIBILITY OF SHOP DRAWING ERRORS IN DETAIL, SIZES, QUANTITIES, WIRING DIAGRAM ARRANGEMENTS AND DIMENSIONS WHICH DEViate FROM THE SPECIFICATIONS, CONTRACT DRAWINGS AND/OR JOB CONDITIONS AS THEY EXIST.

IF APPARATUS OR MATERIALS ARE SUBSTITUTED FOR THOSE SPECIFIED UNDER THIS SECTION, AND SUCH SUBSTITUTIONS NECESSITATE CHANGES IN OR ADDITIONAL CONNECTIONS, PIPING SUPPORTS OR CONSTRUCTIONS, SAME SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ASSUME COST AND ENTIRE RESPONSIBILITY THEREOF. ARCHITECT'S PERMISSION TO MAKE SUCH SUBSTITUTION SHALL NOT RELIEVE FULL RESPONSIBILITY FOR WORK.

TEST AND BALANCE REPORT: SUBMIT AT FINAL INSPECTION OPERATION AND MAINTENANCE MANUALS; SUBMIT COPIES IN COMPLIANCE WITH SECTION, OPERATION AND MAINTENANCE MANUALS.

BOLTED TO EQUIPMENT LIP FRAME.

CLAMPS: GALVANIZED SPRING STEEL CLAMPS OR PANDUIT STRAPS AT CONNECTIONS TO DUCT FITTINGS OR DEVICES.

MANUFACTURER: FLEXIBLE DUCTWORK AND COMPONENTS SHALL BE AS MANUFACTURED BY GENERAL ENVIRONMENTAL CORPORATION OR APPROVED EQUAL.

INSTALLATION: INSTALL DUCT CONNECTORS TO LOW PRESSURE DUCTS USING MANUFACTURER'S TEMPLATE FOR ALL HOLES AND SECURE THE CONNECTOR WITH METAL SCREWS HAVING FIRST APPLIED FOSTER'S 30-02 DUCT SEALANT TO THE ADJOINING SURFACES. DO NOT PRESSURIZE THE SYSTEM FOR 48 HOURS. STRETCH NEW DUCT WHEN REMOVING IT FROM CARTONS WHERE IT MAY HAVE BEEN SHIPPED IN A COMPRESSED STATE. USE THE MINIMUM LENGTH OF FLEXIBLE DUCT REQUIRED TO MAKE THE SPECIFIC CONNECTION UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. THE MAXIMUM DEVELOPED LENGTH OF FLEX DUCT IS 5'. AVOID SHARP BENDS. USE A MINIMUM INSIDE BEND RADIUS EQUAL TO (1) TIMES THE INSIDE DIAMETER OF THE DUCT. SUPPORT HORIZONTAL DUCT RUNS AS DETAILED IN THE CONSTRUCTION DOCUMENTS. ALLOW THE FLEXIBLE DUCT TO EXTEND STRAIGHT AWAY FROM CONNECTORS FOR A FEW INCHES PRIOR TO INITIATING ANY BEND. MAKE CONNECTIONS OF FLEXIBLE DUCT TO RIGID DUCT OR TERMINALS AS FOLLOWS:

- 1. FOSTER'S 30-02 SEALANT TO THE INSIDE OF THE FLEXIBLE DUCT TO DEPTH OF 3 INCHES.
2. SLIDE THE FLEXIBLE DUCT OVER THE CONNECTOR AND WRAP WITH MINIMUM OF TWO REVOLUTIONS OF REINFORCED FOIL DUCT TAPE STARTING ABOUT 2 INCHES BACK FROM END OF FLEXIBLE DUCT AND SEALING OVERLAP WITH LAST WRAP.
3. PLACE A CLAMP OR STRAP OVER THE TAPED END AND SECURE FIRMLY.
4. REPAIR ALL DAMAGE TO VAPOR BARRIER WITH FOSTER'S 35-00 REINFORCED WITH 4 INCH WIDE GLASS FABRIC AND A SECOND COAT OF FOSTER'S 35-00.

AIR DISTRIBUTION DEVICES: DESCRIPTION: AIR DISTRIBUTION DEVICES SHALL BE PROVIDED TO DELIVER THE INDICATED VOLUME OF SUPPLY AIR WITHOUT EXCEEDING THE NC RATING AS FOLLOWS: EMPLOYEE AND CUSTOMER AREAS: NC-30.

DIFFUSERS, GRILLES AND REGISTERS: MANUFACTURER SHALL BE TITUS OR APPROVED EQUIVALENT. FOR MODEL NUMBERS AND TYPES SEE AIR DISTRIBUTION SCHEDULE ON DRAWING. DIFFUSERS, GRILLES, AND REGISTERS SHALL BE OF THE SURFACE, FLUSH, OR LAY-IN MOUNTING IN ACCORDANCE WITH THE DRAWINGS. WHERE THEY ARE LOCATED, THE FINISH OF THE DIFFUSERS, GRILLE, OR REGISTER FACE PANEL SHALL BE BAKED ENAMEL OFF WHITE COLOR, WHERE MOUNTING SCREWS ARE REQUIRED IN AIR DISTRIBUTION DEVICES, THEY SHALL BE FINISHED TO MATCH THE ADJACENT SURFACE OF THE DEVICES. SUPPLY AND RETURN GRILLES AND REGISTERS WHICH ARE SURFACE MOUNTED SHALL BE PROVIDED WITH SPONGE RUBBER GASKETED FRAMES TO PREVENT SMUDDING.

INSTALLATION: INSTALL WHERE SHOWN ON DRAWINGS. DIFFUSERS, REGISTERS AND FITTINGS SHALL BE SECURELY ATTACHED TO FINISH SURFACES, OR STRUCTURAL MEMBERS BEHIND FINISH SURFACES. LAF-IN DIFFUSERS MOUNTED IN ACQUSTION. TILE CEILING SHALL BE RIGIDLY MOUNTED, ABOVE THE FACE PANEL, TO THE CEILING SUSPENSION SYSTEM. DRAINABLE LOUVERS SHALL BE INSTALLED AS RECOMMENDED BY MANUFACTURER.

CONTROLS, ELECTRIC: DESCRIPTION: THE WORK CONSISTS OF INSTALLING CONTROLS FOR THE HVAC SYSTEM.

ELECTRICAL: ELECTRICAL WORK AND MATERIALS ASSOCIATED WITH THE CONTROL SYSTEM SHALL BE INSTALLED AS WORK OF THIS SECTION BUT IN ACCORDANCE WITH DIVISION 16. POWER WIRING IS SPECIFIED UNDER DIVISION 16 AND SHOWN ON ELECTRICAL DRAWINGS. ELECTRICAL CONTROL WIRING CONDUIT AND FITTINGS ASSOCIATED WITH THE SPACE REVIEW CHECKLIST BELOW. PAYMENT OF ALL COSTS FOR TESTING AND BALANCING SHALL BE INCLUDED IN THE BID.

ELECTRIC ROOM THERMOSTATS: THERMOSTAT SHALL BE AS SPECIFIED IN THE DRAWINGS. THERMOSTATS FOR ROOM UNITS SHALL HAVE AUTOMATIC HEATING/COOLING CHANGEOVER AND SHALL BE PROVIDED WITH A LOCKABLE COVER.

SMOKE DETECTOR: SMOKE DETECTOR SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR AS SHOWN IN THE DRAWINGS. WIRING AND REMOTE ALARM INDICATOR SHALL BE RIGIDLY MOUNTED. SMOKE DETECTOR SHALL BE POWERED AS SPECIFIED IN DRAWINGS.

TESTING, ADJUSTING AND BALANCING: TESTING, ADJUSTING AND BALANCING OF ALL WORK SHALL BE MADE BY AN INDEPENDENT CONTRACTOR, WHO IS CURRENTLY LICENSED ASSOCIATED AIR BALANCING COUNCIL (AABC) OR

STORM DRAINAGE PIPING CALCULATION
AREA (A) PRIMARY ROOF DRAINS

RAINFALL RATE OF PROJECT CITY	4.5
ROOF AREA	1500
PARAPIT AREA	152
TOTAL ROOF AREA FOR THIS LEADER	1652
PROJECTED GPM FOR THE LEADER	77.23
SLOPE OF THE PIPING	1/4"
VERTICAL LEADER SIZE	4
HORIZONTAL LEADER SIZE	4
ROOF AREA CALCULATION (AS SHOWN ON ARCHITECTURAL PLAN A 121)	
ROOF AREA + PARAPIT AREA/2 = TOTAL ROOF AREA	

STORM DRAINAGE PIPING CALCULATION
AREA (B) PRIMARY ROOF DRAINS

RAINFALL RATE OF PROJECT CITY	4.5
ROOF AREA	1828
PARAPIT AREA	106
TOTAL ROOF AREA FOR THIS LEADER	1934
EQUIVALENT AREA FOR CONDENSATE	0.1875
PROJECTED GPM FOR THE LEADER	90.60
SLOPE OF THE PIPING	1/4"
VERTICAL LEADER SIZE	4
HORIZONTAL LEADER SIZE	4
ROOF AREA CALCULATION (AS SHOWN ON ARCHITECTURAL PLAN A 121)	
0.0125 GPM OF CONDENSATE PER TON, SCHEDULED RTU IS 15-TON =	0.1875
ROOF AREA + PARAPIT AREA/2 = TOTAL ROOF AREA	

STORM DRAINAGE PIPING CALCULATION
AREA (C) PRIMARY ROOF DRAINS

RAINFALL RATE OF PROJECT CITY	4.5
ROOF AREA	1422
PARAPIT AREA	218
TOTAL ROOF AREA FOR THIS LEADER	1640
PROJECTED GPM FOR THE LEADER	76.67
SLOPE OF THE PIPING	1/4"
VERTICAL LEADER SIZE	4
HORIZONTAL LEADER SIZE	4
ROOF AREA CALCULATION (AS SHOWN ON ARCHITECTURAL PLAN A 121)	
ROOF AREA + PARAPIT AREA/2 = TOTAL ROOF AREA	

STORM DRAINAGE PIPING CALCULATION
AREA (A) SECONDARY ROOF DRAINS

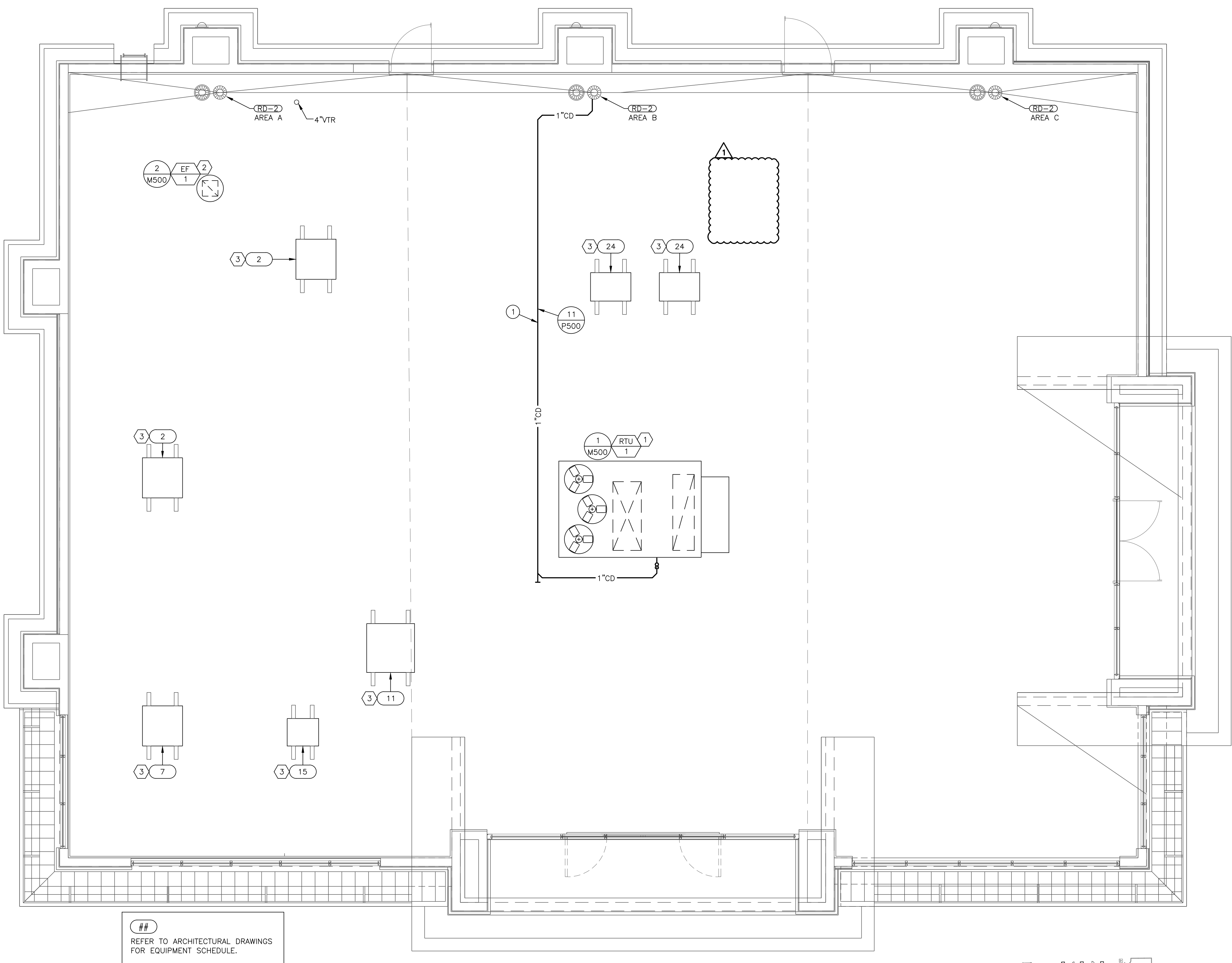
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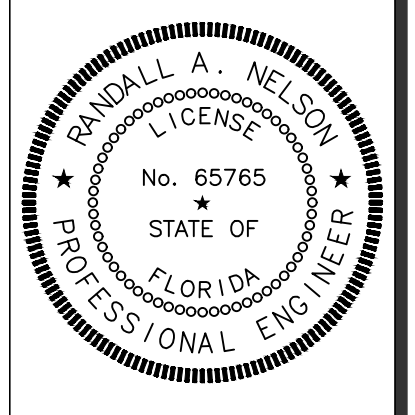
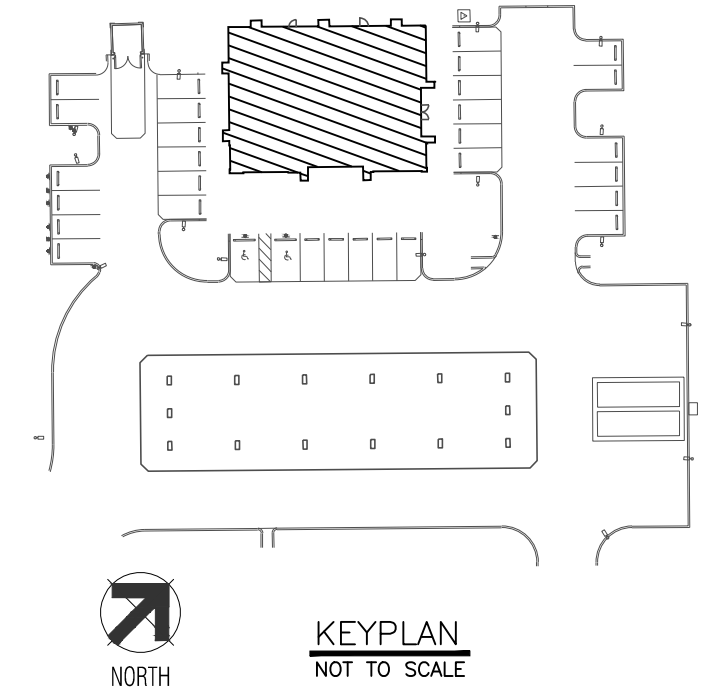


REFER TO ARCHITECTURAL DRAWINGS FOR EQUIPMENT SCHEDULE.

MECHANICAL AND PLUMBING ROOF PLAN
1/4" = 1'-0"

PLUMBING KEYNOTES: (1, 2, 3)
1. ROUTE 1"CD TO ROOF DRAIN AS SHOWN. PROVIDE WITH AIR GAP PER CODE.

MECHANICAL KEYNOTES: (1, 2, X)
1. PROVIDE NEW ROOFTOP UNIT WITH FLORIDA WIND RATED CURB. MAINTAIN MINIMUM 10'-0" FROM ALL EXHAUST OUTLETS.
2. PROVIDE NEW EXHAUST FAN WITH FLORIDA WIND RATED CURB. MAINTAIN MINIMUM 10'-0" FROM ALL OUTDOOR AIR INTAKES.
3. OWNER'S EQUIPMENT SUPPLIER TO PROVIDE CONDENSING UNITS, REFRIGERANT LINES, AND ASSOCIATED PROVISIONS. CONTRACTOR TO PROVIDE REFRIGERATION CONDENSER STAND. SEE DETAIL 7/M500 FOR CONDENSING UNIT ROOF MOUNTING INFORMATION.



SIGNATURE DATE: 12/23/2022



DAYBREAK MARKET
CONVENIENCE STORE
WIREGRASS M25, LOT 1
PASCO COUNTY, FL



REV	DATE	DESCRIPTION
1	11/30/22	COUNTY COMMENTS

ORIGINAL ISSUE DATE: 4/22/2022

SHEET TITLE:
CONVENIENCE STORE AND TENANT ROOF PLAN

SHEET NUMBER:
MP200