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## GENERAL NEW WORK NOTES

- CONTRACTOR SHALL VISIT THE BUILDING AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID OR COMMENCING ANY WORK.
- ALL WORK SHALL BE DONE IN CONFORMITY WITH THE LATEST EDITION OF ALL APPLICABLE CODES AND AUTHORITY HAVING JURISDICTION.
- ALL INFORMATION CONTAINED IN THESE DRAWINGS IS ACCORDING TO THE ORIGINAL CONSTRUCTION DOCUMENTS PROVIDED BY THE OWNER AND LIMITED FIELD OBSERVATIONS. THE ENGINEER MAKES NO REPRESENTATION FOR THE ACCURACY OF SUCH INFORMATION AND ALL MATERIALS, EQUIPMENT, DIMENSIONS, CONDITIONS, ETC. SHALL BE FIELD VERIFIED.
- ALL WORK SHALL BE DONE IN STRICT COORDINATION AND AS APPROVED BY OWNER. ALL INTERRUPTIONS IN THE FUNCTIONING OF MECHANICAL SYSTEMS SHALL BE DONE DURING OFF-PEAK OR UNOCCUPIED TIMES AND STRICTLY AS APPROVED BY OWNER WHICH WILL BE NOTIFIED A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF SUCH WORK.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH ALL OTHER TRADES AND FOR ANY REPAIRS DUE TO ACCIDENTAL DAMAGES OR FAULTY WORKMANSHIP.
- ALL R/A GRILLES SHALL BE PROVIDED WITH PROTECTIVE CONSTRUCTION FILTERS AND ALL A/C UNITS SHALL HAVE THEIR FILTERS REPLACED WITH NEW ONES AT THE END OF THE CONSTRUCTION PERIOD.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS REGARDING HIS WORK.
- FOR ALL ADDITIONAL INFORMATION REGARDING SCOPE OF WORK AND BUILDING CONDITION, COORDINATE WITH ARCHITECTURAL PLANS.

## HVAC ABBREVIATION LEGEND

| AFF | ABOVE FINISH FLOOR         | GR   | GRILLE                                     |
|-----|----------------------------|------|--|
| AHU | AIR HANDLING UNIT          | MCA  | MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)     |
| CU  | CONDENSING UNIT            | MOCP | MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS |
| EWT | ENTERING WATER TEMPERATURE | LWT  | LEAVING WATER TEMPERATURE                  |
| EAG | EXHAUST AIR GRILLE         | R/A  | RETURN AIR                                 |
| EF  | EXHAUST FAN                | RAG  | RETURN AIR GRILLE                          |
| EXH | EXHAUST                    | O/A  | OUTSIDE AIR                                |
| FD  | FIRE DAMPER                | M/A  | MAKE-UP AIR                                |
| E/A | EXHAUST AIR                | WMS  | WIRE MESH SCREEN                           |
| S/A | SUPPLY AIR                 | CG   | CEILING                                    |
| N   | NEW                        | BDD  | BACK DRAFT DAMPER                          |
| E   | EXISTING                   | RE   | RELOCATED                                  |

## MECHANICAL NOTES

- THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE 2020 AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS: SMACNA/ANSI-2016, SMACNA-10, 85; ASHRAE 15-2019; 34-2019 62.1-2016; NFPA 70-2017, 72-16, 90A-15, 91-15, 96-17, 101-2018; NEBB-2005; NAIMA-2009; NFRC 100-2017, 200-2017, 400-2017; ANSI Z10.0-2019, Z21.8-2017, Z21.83-98.
- THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
- THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES.
- THE CONTRACTOR SHALL SUPPLY THE ARCHITECT/ENGINEER WITH "AS-BUILT" DRAWINGS.
- CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF A COMPLETE SET OF SHOP DWGS, (INCLUDED DUCTWORK), MANUFACTURER'S SUBMITTALS FOR EACH PIECE OF EQUIPMENT & CONTROLS INCLUDED IN CONTRACT.
- ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS. ALL EQUIPMENT SHALL BE UL OR ETL LISTED. ALL INSTALLATIONS SHALL COMPLY WITH FMC 2020, CH. 3, GENERAL REGULATIONS.  
  
FOR BUILDINGS LOCATED WITHIN 3,000 FT FROM THE OCEAN, CONTRACTOR SHALL UTILIZE NON-FERROUS MATERIALS OR PROVIDE CORROSION COATING FOR ALL OUTDOOR EXPOSED METAL/STEEL EQUIPMENT, SUPPORTS, STANDS, FASTENERS, ETC. BY 3RD PARTY AS APPLIED BY BLYGOLD, LUVATA, ADVANCOAT (ENSEAL CR) OR APPROVED EQUAL WITH STANDARD 5-YEAR WARRANTY.
- DUCTWORK:  
ALL DUCT WORK SHALL BE CONSTRUCTED, INSULATED, SEALED AND SUPPORTED IN ACCORDANCE WITH 2020 FECC SECTION C403.2.9, 2020 FMC SECTION 6 AND LATEST EDITION OF S.M.A.C.N.A. WHERE ALTERNATE DESIGN DETAILS ARE SHOWN IN THE STANDARDS, THE HIGHEST QUALITY DESIGN DETAIL SHALL BE PROVIDED.  
  
DUCT SIZING IS COMPLIANT WITH FBC SEC. 603.2 BASED ON ASHRAE "EQUAL FRICTION" METHOD, UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS.  
  
ALL DUCT WORK SHALL BE INSULATED IN ACCORDANCE WITH 2020 FECC SECTION C403.2.9, TABLE C403.2.9.1 INCLUDING FOOTNOTES (MANDATORY REQUIREMENTS).  
  
ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS AND SHALL COMPLY 2020 FMC, SECTION 603.9 AND 2020 FECC SECTION C403.2.9.2.  
  
ALL DUCT WORK SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 12 FEET AND SHALL BE IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS METAL & FLEXIBLE, FLEXIBLE AND OTHER FACTORY-MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS, PROVIDE DUCT MANUFACTURERS INSTALLATION INSTRUCTIONS AND LISTINGS ON SITE.  
  
A. ALL AIR CONDITIONING DUCT WORK SHALL BE OF 1" (R-4.2) STANDARD DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL FLEXIBLE DUCT TO BE R-4.2 WITH A MAX. TOTAL LENGTH NOT TO EXCEED 15 FT. INSTALL UL LISTED FOR PLENUM, FLEXIBLE DUCTWORK ELBOW SUPPORTS AT EACH DIFFUSER, GRILLE, AND REGISTER EQUAL TO "FLEXRIGHT" BY TITUS OR "FLEXFLOW ELBOW" AS MANUFACTURED BY "THERMAFLEX".  
  
**SPECIAL NOTE**  
SMACNA DUCT PRESSURE CLASSES BASED ON OPERATING PRESSURE ARE: 1/2", 1", 2", 3", 4", 6", AND 10". EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC DUCT PRESSURE CLASS SHOWN ON PLANS. WHERE NO PRESSURE CLASS IS SPECIFIED FOR CONSTANT VOLUME SYSTEMS, 1" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS REGARDLESS OF VELOCITY. WHERE NO PRESSURE CLASS IS SPECIFIED FOR VARIABLE VOLUME SYSTEMS, 2" W.G. PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THE SMACNA STANDARDS FOR DUCTWORK UPSTREAM OF VAV BOXES. ALL DUCTWORK SHALL BE SEALED TO SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" FOR ITS PRESSURE CLASS SEALING METHODS.
- ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND UNITS. ARCHITECTED AIR DUCTS SHALL BE EXTERNALLY INSULATED WITH R-6 MIN. ALL METAL EXHAUST, MAKE-UP OR OTHERWISE DUCTS INSTALLED IN LOCATIONS WHERE DEWPOINT CONDITIONS CAN OCCUR INSIDE THE DUCT SHALL BE EXTERNALLY INSULATED WITH R-6 MIN. AIR INTAKE AND EXHAUST OPENINGS SHALL BE SCREENED WITH A CORROSION RESISTANT MATERIAL PER FMC 2020, TABLE 401.5, AND 501.5. LOUVERS THAT PROTECT EXHAUST OPENINGS IN STRUCTURES LOCATED IN HURRICANE-PRONE REGIONS, AS DEFINED IN THE FLORIDA BUILDING CODE (BUILDING) SHALL COMPLY WITH AMCA STANDARD 550. OUTDOOR OPENINGS LOCATED IN EXTERIOR WALLS SHALL MEET THE PROVISIONS FOR EXTERIOR WALL OPENING PROTECTIVES IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (BUILDING).
- O/A INTAKES SHALL NOT BE TAKEN FROM A LOCATION CLOSER THAN 10 FT FROM ANY CHIMNEY, VENT OUTLET OR SANITARY SEWER VENT OUTLET PER FMC 2020, SEC. 401.4. OUTSIDE AIR INTAKE VENTS LOCATED ON ROOFS WILL BE PROPERLY MARKED WITH A UNIVERSAL MARKING "INTAKE", PERMANENTLY ATTACHED.
- DUCT SIZES SHOWN ON PLANS ARE INSIDE DIMENSIONS.
- ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACES OFF-WHITE OR AS ARCHITECT. DEVICES SHALL BE AS SPECIFIED OR EQUAL TO TITUS, PRICE OR METALAIR, PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS AS INDICATED ON PLANS. PROVIDE BALANCING DAMPERS FOR ALL SUPPLY AND RETURN DIFFUSERS AND REGISTERS AND TO ENSURE COMPLIANCE WITH FMC 2020 PAR.601.5 FOR BALANCED RETURN/TRANSFER AIR FLOW.
- BUILDING/TEMPERATURE CONTROLS: CONTRACTOR SHALL PROVIDE A FULLY INTEGRATED BUILDING CONTROL SYSTEM. WHERE APPLICABLE, PROVIDE BAS/EMS INTERFACE FOR ALL HVAC EQUIPMENT, AS REQUIRED BY THE EXISTING CONTROLS OR DESIGN DOCUMENTS. IN ADDITION AND AS APPLICABLE:  
  
A.AA. FOR NEW, STANDALONE UNITS:THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO- HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE AS RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL. PROVIDE SOFTWARE LOCK AND/OR TAMPER PROOF COVERS AS COORDINATED WITH OWNER/END CLIENT.  
  
A.AB. FOR VAV BOXES: PROVIDE DDC CONTROLS PER CONTROL PLANS, PROVIDE ROOM T'STAT/SENSOR WITH OVERRIDE  
  
A.AC. FOR EXISTING EQUIPMENT: SHALL BE SERVICED AND RELOCATED AS SHOWN. IF NEW THERMOSTAT IS PROVIDED IT SHALL MATCH BUILDING STANDARDS.  
  
A.AD. POWER PROVISIONS: SHALL BE FURNISHED AND INSTALLED BY ELEC. CONTRACTOR UNLESS OTHERWISE NOTED. CONTROL WIRING BY MECH/CONTROL CONTRACTOR.  
A.AD.A. 24V TRANSFORMER SHALL BE PROVIDED BY MANUFACTURER FOR ALL UNITS/EQUIPMENT THAT REQUIRE CONTROL POWER FOR UNITARY CONTROLLERS, IF NOT OTHERWISE NOTED.  
A.AD.B. 120V POWER AS REQUIRED BY SYSTEM CONTROLLERS SHALL BE PROVIDED/COORDINATED BY ELEC. CONTRACTOR WITH MECH. AND CONTROLS CONTRACTORS
- THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT PER A.D.A REQUIREMENTS WHERE APPLICABLE; MAX. 48" HIGH FOR FORWARD REACH, MAX. 48" HIGH FOR SIDE REACH. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO PURCHASING/INSTALLATION.  
**SPECIAL NOTE**  
WHENEVER THERE ARE MORE THAN ONE SENSOR OR THERMOSTAT, SIDE BY SIDE, THEY SHALL BE GANGED TOGETHER WITHIN THE SAME COVER PLATE WHEREVER POSSIBLE. CONTRACTOR SHALL COORDINATE THIS ISSUE WITH ARCHITECT/OWNER PRIOR TO INSTALLATION AND SHALL BRING ANY DISCREPANCY TO THE ENGINEER'S ATTENTION.
- REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING-JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BOP SUPER COPPER-PHOSPHORUS ALLOY OR BAg1 SILVER ALLOY. REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL. ALL EXPOSED INSULATION SHALL BE PROTECTED WITH A PROTECTIVE, PUNCTURE AND TEAR RESISTANT JACKETING SYSTEM EQUAL TO "VENTURE CLAD" AND COMPLY WITH FMC 2020, SEC.1101.5 PROTECTION. PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL (ADHESIVE TAPE SHALL NOT BE PERMITTED) COMPLIANT WITH FEC 2020, SEC. C403.2.10.
- "ARMAFLEX" OR EQUAL INSULATION SHALL BE USED FOR SUCTION REFRIGERANT LINES WITH THICKNESS PER FLORIDA ENERGY CODE TABLE C403.2.10. FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.
- ALL BRANCH TAKE-OFFS TO BE PROVIDED W/ MANUAL VOLUME DAMPERS, PROVIDE RADIUS ELBOWS WHERE FEASIBLE, SQUARE ELBOWS AND TEE'S SHALL BE FURNISHED W/SINGLE FOIL TURNING VANES. PROVIDE MANUAL VOLUME DAMPERS WITH EXTRACTOR AT ALL FLEX TAKE-OFFS. PROVIDE REMOTE, CLAMP OPERATED VOLUME DAMPERS IN INACCESSIBLE AND HARD CEILING AREAS, "YOUNG REGULATOR" OR EQUAL.

## MECHANICAL NOTES

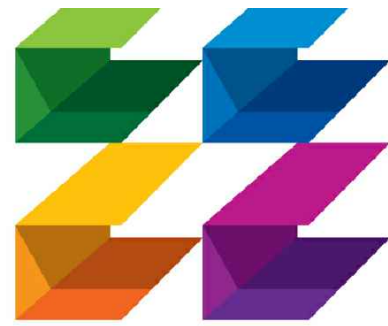
- PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START-UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.
- HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT, AS PER FEC 2020, SEC. C 408.2.2, FOR SYSTEMS OVER 15 TONS, THE T & B SHALL BE PERFORMED BY A CERTIFIED, INDEPENDENT COMPANY FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AND ANY AIR MOVING SYSTEMS. THE TEST AND BALANCE REPORT SHALL BE IN ACCORDANCE WITH THE AABC OR NEBB STANDARDS AND PROCEDURES AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLES, RETURN GRILLES AND EXHAUST GRILLES AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLES, EVAPORATORS, ENERGY RECOVERY UNITS AND ANY TYPE OF HEAT EXCHANGERS.  
  
**EXCEPTIONS:**  
1. BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 15 TONS OR LESS PER SYSTEM MAY BE TESTED AND BALANCED BY A MECHANICAL CONTRACTOR LICENSED TO DESIGN AND INSTALL SUCH SYSTEM(S).  
2. BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 65,000 BTU/H OR LESS PER SYSTEM ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.  
  
BUILDING ENVELOPE SHALL BE POSITIVELY PRESSURIZED TO PREVENT INFILTRATION PER FEC 2020, SEC. C 408.2.2.1  
**SPECIAL NOTE:**  
FOR (EXISTING) SMOKE EVACUATION SYSTEMS HVAC CONTRACTOR SHALL PROVIDE A T & B REPORT PRIOR TO ANY NEW WORK, PROVING THAT THE SMOKE EVACUATION SYSTEM PERFORMS PER ORIGINAL DESIGN DOCUMENTS AND IS COMPLIANT WITH LOCAL CODE REQUIREMENTS.  
  
AS PART OF BID, CONTRACTOR SHALL INCLUDE COSTS NECESSARY TO MAKE ONE CHANGE IN EACH UNITS SHEAVE, BUSHINGS AND BELTS, BALANCING DAMPERS REQUIRED AND ANY OTHER DEVICES REQUIRED FOR THE CORRECT BALANCE OF THE SYSTEM AS REQUIRED BY THE TAB FORM.
- RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED. AUXILIARY DRAIN PANS SHALL BE INSTALLED UNDER ALL COILS ON WHICH CONDENSATION CAN OCCUR AND UNDER ALL UNITS IN CONCEALED SPACES OR ANY AREA WHERE BLDG. DAMAGE CAN OCCUR AS A RESULT OF AN OVERFLOW, TO COMPLY WITH FMC 2020, PAR. 307.2. AN ALTERNATE WATER-DETECTION LEVEL DEVICE TO SHUT DOWN THE EQUIPMENT IS ACCEPTABLE.
- ALL DUCT INSULATION SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50, WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.
- HVAC CONTRACTOR SHALL PROVIDE VENTILATION CONTROLS COMPLIANT WITH FMC 2020, SEC. 403 AND 405. FOR ALL SYSTEMS AND SHALL VERIFY EXISTING CONDITIONS FOR COMPLIANCE, AS REQUIRED, FOR A FULLY OPERATIONAL SYSTEM. VENTILATION FOR ENCLOSED PARKING GARAGES SHALL COMPLY WITH FMC 2020, SEC. 404.
- MECHANICAL EQUIPMENT ON ROOF OR ELEVATED STRUCTURES SHALL COMPLY WITH FMC 2020 PAR. 306.5 IF INSTALLED HIGHER THAN 16 FEET A.F.F., MECHANICAL EQUIPMENT INSTALLED IN ATTICS SHALL MEET THE REQUIREMENTS OF FMC 2020 PAR. 306.3 IF THE EQUIPMENT CAN NOT BE SERVICED/REMOVED THROUGH REQUIRED OPENING. MECHANICAL EQUIPMENT SHALL BE PROTECTED WITH MECH. BARRIERS IF EXPOSED. ALL EQUIPMENT SHALL BE INSTALLED ON CONCRETE PADS AT GRADE LEVEL, SIZED PER STRUCTURAL PLANS.  
**SPECIAL NOTE**  
ALL WIND LOAD AND OTHER COMPLIANCE CALCULATIONS AND/OR INSTALLATION DETAILS FOR OUTDOOR MOUNTED MECHANICAL EQUIPMENT AS REQUIRED BY FBC 2020, SEC. 1509, 1522 AND CHAPTER 16, SHALL BE PROVIDED BY A STRUCTURAL ENGINEER AND ARE SHOWN ON THESE PLANS FOR REFERENCE ONLY. SUCH CALCULATION SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER OR BY THE GENERAL OR MECHANICAL CONTRACTOR ON BEHALF OF CLIENT.  
CONTRACTOR TO PROVIDE WIND LOAD CALCULATIONS SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER IN ORIGINAL FOR COMPLIANCE WITH SEC. 301.15 OF FMC 2020, INCLUDING ANY DOCUMENTATION REQUIRED BY LOCAL JURISDICTION FOR PERMIT PURPOSES.
- PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120-208/240 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 277-480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC 110.26.
- MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLUMBING ELECTRICAL, FIRE SPRINKLER, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS SHALL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. CHANGES IN DUCTWORK SIZE AND ROUTE WILL BE REQUIRED TO AVOID STRUCTURAL, PLUMBING, FIRE SPRINKLER, AND ELECTRICAL INTERFERENCE. FEATURES, DUCTWORK CHANGES MAY BE MADE BY CONTRACTOR USING EQUIVALENT SIZED DUCT. CONTACT ENGINEER IF DUCT AREA WILL NOT FIT.
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS AND EQUIPMENT. IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES, ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.
- CONDENSATE DRAIN PIPING TO BE AS SPECIFIED PER PLUMBING PLANS. IF NOT SPECIFIED THEY SHALL BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH INSULATION THICKNESS PER FEC 2020 TABLE C403.2.9.1. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM TO COMPLY WITH FMC 2020, SEC. 307 SUPPLY CONDENSATE PUMP WHERE NECESSARY AS IMPOSED BY FIELD CONDITIONS OR INSTALLATION CHANGES AND PIPE TO CONDENSATE DRAIN PER PLUMBING PLANS.
- MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER BUILDING C.O. FOR ALL MECHANICAL SYSTEMS, DUCTWORK, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR UNDER THESE DRAWINGS AND AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE WARRANTY FOR COMPRESSORS FOR (5) FIVE YEARS, ANY REPAIRS REQUIRING SYSTEM SHUTDOWN WILL BE DONE DURING NON-OPERATIONAL PERIODS OR AS AGREED WITH OWNER.
- CLEARANCE FOR MAINTENANCE, SERVICE, REPAIRS, AND REPLACEMENT FOR ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED TO COMPLY WITH FMC 2020, SEC. 306. SERVICE ACCESS PANELS FOR MECH. EQUIPMENT IN CONCEALED SPACES SHALL BE PROVIDED TO COMPLY WITH THE REQUIREMENTS OF SEC. 306.
- IF REMODELLING AN EXISTING SPACE, THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID. CONTRACTOR SHALL INSPECT ALL EXISTING AND NEW COMPONENTS OF THE MECHANICAL SYSTEMS AND ENSURE THAT ALL ARE OPERATIONAL AND WORKING AS SHOWN ON THE APPROVED CD PLANS AT THE TIME OF C.O.
- CORROSION COATING: CONTRACTOR SHALL PROVIDE CORROSION COATING TO CONDENSER/EVAPORATOR COILS, EQUIPMENT CASINGS/CABINETS AND ALL EXPOSED COPPER PIPING/ COMPRESSORS/ CONDENSER SECTION, AS WELL AS, ANY EXPOSED METAL WITHIN AIRSTREAM BY 3RD PARTY AS APPLIED BY BLYGOLD, LUVATA, ADVANCOAT OR APPROVED EQUAL WITH STANDARD 5-YEAR WARRANTY.
- COMMISSIONING**  
MECHANICAL SYSTEMS SHALL BE COMMISSIONED IN COMPLIANCE WITH FEC 2020, SEC. C408, WITH THE TWO LISTED EXCEPTIONS. THE OWNER/MECHANICAL CONTRACTOR SHALL PROVIDE TO THE E.O.R. DESIGN PROFESSIONAL ALL NECESSARY DOCUMENTATION REQUIRED BY THE BUILDING OFFICIAL PRIOR TO FINAL INSPECTION, PROVING EVIDENCE OF SYSTEMS COMMISSIONING PER SEC. C408.2.4 AND C408.2.5.  
a. A COMMISSIONING PLAN SHALL BE COMPLETED AND CERTIFIED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY PER SEC. 408.2.1.  
b. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT" PER SEC. C408.2.4.  
c. THE COMMISSIONING DOCUMENTS SHALL BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY PER SEC. C408.2.5 AND SHALL INCLUDE: 1) DRAWINGS, 2) MANUALS, 3) SYSTEM BALANCING REPORT, AND 4) FINAL COMMISSIONING REPORT.  
d. LIGHTING SYSTEM FUNCTIONAL TESTING: CONTROLS FOR AUTOMATIC LIGHTING SYSTEMS SHALL COMPLY WITH SECTION C408.3.

## MECHANICAL SHEET INDEX

| SHEET# | DESCRIPTION                      |
|--------|----------------------------------|
| M0.1   | MECHANICAL NOTES, LEGEND & INDEX |
| M2.1   | MECHANICAL PLAN                  |
|        |                                  |
| M6.1   | MECHANICAL SCHEDULES             |
| M6.2   | MECHANICAL SCHEDULES             |
| M7.1   | MECHANICAL DETAILS               |

## MECHANICAL LEGEND

|  |  |  |   |
|--|--|--|---|
|  | NEW S/A CEILING DIFFUSER   |  | CEILING EXHAUST FAN                               |
|  | NEW R/A CEILING GRILLE   |  | INLINE EXHAUST FAN                                |
|  | EXISTING S/A CEILING DIFFUSER  |  | SIDEWALL EXHAUST FAN                              |
|  | EXISTING R/A CEILING GRILLE  |  | ROOF EXHAUST FAN                                  |
|  | SLOT / LINEAR DIFFUSER   |  | VARIABLE FREQ. DRIVE CONTROL PANEL                |
|  | WALL LOUVER / WALL DIFFUSER.   |  | SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION         |
|  | VOLUME CONTROL DAMPER  |  | RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION |
|  | REDUCER OR INCREASER   |  | EQUIPMENT TAG                                     |
|  | NEW FLEX DUCT  |  | THERMOSTAT  |
|  | EXISTING FLEX DUCT   |  | HUMIDISTAT  |
|  | NEW DUCTWORK   |  | WALL SWITCH                                       |
|  | EXISTING DUCTWORK  |  | REMOTE KEY TEST STATION                           |
|  | "Z" BOOT TRANSFER DUCT   |  | WALL SWITCH                                       |
|  | ROUND UP   |  | POC- POINT OF CONNECTION                          |
|  | BELLMOUTH TAP  |  | SUPPLY AIR  |
|  | SHOE TAP DAMPER  |  | RETURN AIR  |
|  | FIRE DAMPER  |  | DOOR UNDER CUT                                    |
|  | RETURN AIR FIRE DAMPER   |  | AP - ACCESS PANEL                                 |
|  | EXISTING FIRE DAMPER   |  | SECTION MARK                                      |
|  | FIRE SMOKE DAMPER  |  | SMOKE DAMPER                                      |
|  | RETURN AIR FIRE SMOKE DAMPER   |  | FIRE-SMOKE DAMPER                                 |
|  | DUCT SMOKE DETECTOR  |  | MOTORIZED DAMPER                                  |
|  | STANDARD SINGLE DUCT VAV BOX (3'0" SERVICE CLEARANCE)                  |  | BUTTERFLY VALVE                                   |
|  | STANDARD SINGLE DUCT VAV BOX WITH REHEAT COIL (3'0" SERVICE CLEARANCE) |  | GATE VALVE  |
|  | SPLITTER BOX   |  | BALANCING VALVE                                   |
|  |  |  | ELECTRIC DUCT HEATER                              |
|  |  |  | EXISTING  |
|  |  |  | RELOCATE EXISTING                                 |
|  |  |  | NEW   |
| NOT ALL SYMBOLS MAY APPLY TO THESE PLANS |  |  |   |



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CONSTRUCTION

SEAL

JOSE AGUILA

FL. REG# A000

PROJECT TITLE

**STONEBRIDGE  
COUNTRY CLUB  
GOLF  
MAINTENANCE  
BUILDING**

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BOCA RATON, FL 33498

REVISIONS

THESE DRAWINGS ARE PREPARED

PER ESTABLISHED INDUSTRY

STANDARDS AND REPRESENT THE

ARCHITECT AND ENGINEERS

DESIGN CONCEPT. THEY ARE NOT

INTENDED TO PROVIDE EVERY

DETAIL OR CONDITION REQUIRED

TO CONSTRUCT THE BUILDING.

THE CONTRACTOR THROUGH

SUBMITTALS AND OTHER

COORDINATION EFFORTS IS FULLY

RESPONSIBLE FOR PROVIDING A

COMPLETE AND OPERATIONAL

BUILDING WHETHER INDICATED ON

THE PLANS OR NOT.

DRAWING TITLE

MECHANICAL NOTES

DATE

09/08/23

DRAWN BY

KAB

JOB NUMBER

220906

DRAWING NUMBER

PERMIT SET - 10/16/23

M0.1

|   |                |
|---|----------------|
| ISSUED FOR PERMIT   | -              |
| ISSUED FOR CONSTRUCTION   | -              |
| KAMM CONSULTING PROJECT #:  | 2023-0419      |
| PROJECT MANAGER:  | RON SLOAN      |
|   |                |
| 1407 West Newport Center Drive<br>Deerfield Beach, Florida 33442<br>Phone 954.949.2200 Fax 954.949.2201<br>engineering@kammconsulting.com<br>Certification of Authorization #8189 | date<br>signed |