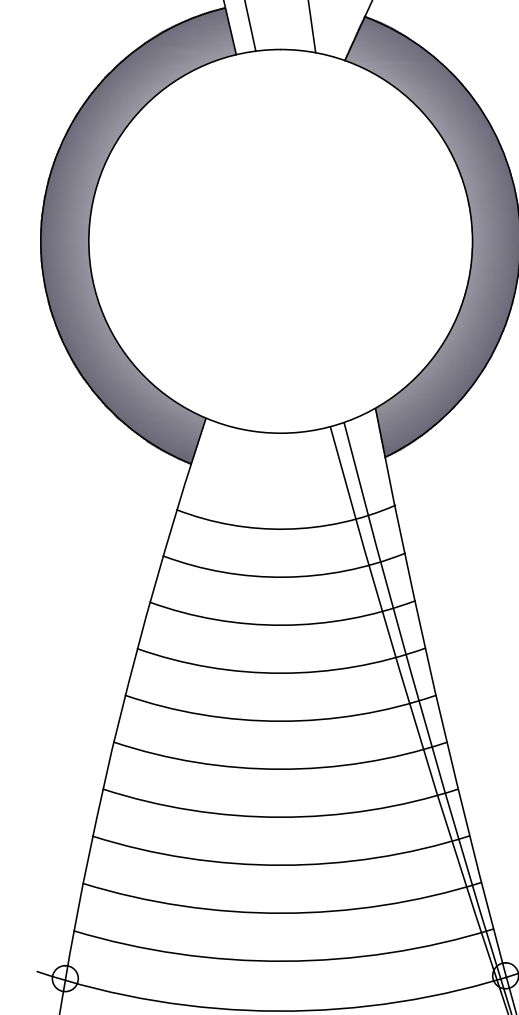


LEVEL 2 ALTERATION  
 TENANT BUILD-OUT FOR:  
**SF PROCESSING**  
 1315 N. FEDERAL HWY. 2ND.FLOOR  
 BOYNTON BEACH, FL. 33435

JOHN SHERMAN REED  
 ARCHITECT  
 FL LICENSE# AR9571

JSR DESIGN GROUP INC.  
 970 SW 11TH STREET  
 BOCA RATON, FL 33486  
 AA26002033 PH: 561-362-7203  
 FAX: 561-362-7204



1. All designs and concepts are the property of JSR Design Group Inc., and may not be modified or copied without written permission by the architect.  
 2. Contractor to verify all written dimensions (Not scaled) & notify architect of any discrepancies or omissions. Construction shall not proceed until said discrepancies or omissions have been resolved by architect.  
 3. Contractor to verify and approve all shop drawings and dimensions before having drawings reviewed and accepted by the architect prior to construction.

16014

M6.1

CHECK SET: 02/22/16



700 WEST HILLSBORO BLVD. - BLDG. #1, SUITE 204  
 DEERFIELD BEACH, FLORIDA 33441  
 TEL: (561) 391-9292 FAX: (561) 391-9998  
 CERTIFICATE OF AUTHORIZATION NO. 28107  
 LUISULA IARRATE, P.E. LICENSE #75122  
 STEPHEN F. ROLLIN, P.E. LICENSE #36428  
 DONALD H. AUSTIN, JR., P.E. LICENSE #60651  
 JASON BARBER, P.E. LICENSE #73050  
 E-MAIL: INFO@FAECNBUILDING.COM  
 DESIGNED BY: KW/AB PM: AN P/N 16014

PROGRESS OR CHECK SETS, BY THEIR NATURE, MAY BE INCOMPLETE AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION. CONTRACTOR RECOGNIZES HIS SOLE RESPONSIBILITY TO INCLUDE ALL CONTINGENCIES FOR DESIGN AND INSTALLATION TO MEET THE PROJECT REQUIREMENTS IN ANY PRICING EXERCISE.

PRIOR TO SUBMITTING THE BID, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND INFORM THE ARCHITECT AND THE ENGINEER OF ANY DISCREPANCY BETWEEN THESE DOCUMENTS AND THE EXISTING CONDITIONS AND SHALL INCLUDE IN THE BID TO CORRECT THE SAME AS DIRECTED. THE ENGINEER AND THE ARCHITECT, ARE NOT RESPONSIBLE FOR ANY ADDITIONAL COSTS RESULTING FROM VERIFIABLE EXISTING CONDITIONS DISCOVERED AFTER CONTRACT HAS BEEN AWARDED. NO CHANGES SHALL BE MADE TO THESE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD. ALL CHANGES SHALL BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION. NOT FOR BID UNTIL PERMIT HAS BEEN ISSUED.

- 4. EARL HAGOOD, INC. - (305) 266-7070.
- 5. OR APPROVED EQUAL.

C. CONTRACTOR SHALL:

- 1. VISIT SITE AT START OF PROJECT AND COORDINATE REQUIRED BALANCING EQUIPMENT AND DAMPERS WITH MECHANICAL CONTRACTOR.
- 2. AIR SYSTEMS:
  - a. MAKE CHANGES TO BELTS, PULLEYS, DAMPERS, VOLUME BOXES, ETC. TO OBTAIN DESIGN CONDITIONS AS REQUIRED BY TAB PROCEDURES.
  - b. BALANCE SUPPLY, RETURN AND EXHAUST AIR OUTLETS WITHIN 10% OF DESIGN WHILE MAINTAINING REQUIRED PRESSURE RELATIONSHIPS. RECORD DESIGN AND ACTUAL TOTALS.
  - c. MEASURE AND REPORT FAN RPM, FAN SUCTION PRESSURE, FAN DISCHARGE PRESSURE, FAN TOTAL PRESSURE AND PRESSURE DROP ACROSS COMPONENTS, DESIGN AND ACTUAL SUPPLY, RETURN, OUTSIDE AND EXHAUST AIR.
  - d. ACTUAL AND DESIGN NAMEPLATE AMPERAGE ON FAN MOTORS.
  - e. PRESSURE DIFFERENTIAL ACROSS DUCT SMOKE DETECTORS.
  - f. ADJUST FANS FOR LOWEST STATIC PRESSURE REQUIRED TO DELIVER TO OUTLETS AS NOTED IN NEBB OR AABC PROCEDURES.
  - g. MEASURE SUPPLY AND RETURN ENTERING AND LEAVING TEMPERATURES (DB/WB) ACROSS EACH COIL AND AT EACH SUPPLY DISCHARGE AND RETURN INLET AT UNIT.
  - h. PROVIDE WRITTEN REPORT AT LEAST ONE WEEK BEFORE FINAL INSPECTION AND A TECHNICIAN DURING FINAL INSPECTION OF PROJECT.

- EQUIPMENT, PIPING AND DUCTWORK.
- 3. ALL SUPPORTS EXPOSED TO OUTDOORS SHALL BE CLEANED, PRIMED AND PAINTED TO PREVENT RUSTING. FINISH COLOR AS SELECTED BY OWNER.
- 4. THE USE OF BALING WIRE OR PERFORATED METAL STRAPPING IS NOT PERMITTED FOR

15250 - INSULATION

- A. INSULATION, ADHESIVES, COATINGS, SEALERS, TAPES, ETC. SHALL HAVE A FLAME SPREAD OF 25 OR LESS AND SMOKE DEVELOPMENT OF 50 OR LESS IN ACCORDANCE WITH ASTM E-84, NFPA 225, UL 723 AND MEET THE REQUIREMENTS OF NFPA 90A. ALL INSULATING R-VALUES TO MEET THE REQUIREMENTS OF THE FLORIDA ENERGY CODE.
- B. FIBERGLASS PIPE INSULATION, JOHNS MANVILLE MICRO-LOK 850, CERTAINTeed, KNAUF, OWENS CORNING. JACKET: ASJ KRAFT PAPER WITH ALUMINUM FOIL.
- C. CELLULAR GLASS PIPE INSULATION, PITTSBURGH CORNING "FOAMGLASS".
  - 1. ALL HVAC PIPING EXPOSED TO WEATHER.
- D. FLEXIBLE ELASTOMERIC INSULATION, ARMSTRONG "AP ARMAFLEX", MITCHEL, RUBATEX:
  - 1. REFRIGERATION SUCTION LINES: 3/4" THICK
- E. BLANKET TYPE DUCT INSULATION, JOHNS MANVILLE, CERTAINTeed, KNAUF, OWENS CORNING, MINIMUM R=6.0, FOIL FACED KRAFT VAPOR BARRIER:
  - 1. ALL SUPPLY, OUTSIDE AIR AND RETURN WHERE CONCEALED FROM VIEW, R-6
  - F. SEMI RIGID BOARD TYPE DUCT INSULATION 15lb DENSITY, CERTAINTeed 1B-300, JOHNS MANVILLE, KNAUF, OWENS CORNING:
    - 1. ALL SUPPLY, RETURN AND OUTSIDE AIR WHERE EXPOSED
    - 2. MINIMUM DUCT INSULATION THICKNESS AND R VALUES ARE AS FOLLOWS:
      - a. SUPPLY AND RETURN AIR IN UNCONDITIONED SPACE: 2" (R-6 MIN.)
      - b. SUPPLY AND RETURN AIR IN CONDITIONED INTERIOR SPACE: 1.5" (R-4.2 MIN.)
      - c. OUTSIDE AIR: 2" (R-6 MIN.)
      - d. SUPPLY AIR IN CEILING RETURN AIR PLENUM: 1.5" (R-4.2 MIN.)
      - e. RETURN AIR IN CEILING RETURN AIR PLENUM: NOT REQUIRED
      - f. DUCTWORK OUTSIDE OF BUILDING: 3" (R-8 MIN.)

- FIBERGLASS DUCTWORK:
  - A. ALL DUCTWORK OPERATING AT OR BELOW 15" W.G. STATIC PRESSURE, 1500 FPM VELOCITY AND 250°F AIR TEMPERATURE CAN BE CONSTRUCTED OF 1 1/2" THICK (R-6) FIBROUS GLASS DUCT BOARD MEETING THE REQUIREMENTS OF THE LATEST EDITION OF THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARD. ALL DUCTWORK LOCATED WITHIN CONDITIONED SPACE AT OR BELOW 15" W.G. STATIC PRESSURE, 1500 FPM VELOCITY AND 250°F AIR TEMPERATURE CAN BE CONSTRUCTED OF 1" THICK (R-4.2) FIBROUS GLASS DUCT BOARD MEETING THE REQUIREMENTS OF THE LATEST EDITION OF THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARD. ALL FLEX DUCT SHALL BE RATED CLASS I, UL-181 LISTED WITH METALIZED INNER AND OUTER FOIL LINERS.
  - B. FABRICATION AND INSTALLATION OF DUCT AND FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARD. FURTHERMORE, CLOSURE SYSTEMS FOR LONGITUDINAL SEAMS AND TRANSVERSE JOINTS SHALL BE IN ACCORDANCE WITH PROCEDURES NECESSARY TO COMPLY WITH SECTION III, CLOSURES.

SUPPORTS.

- G. WARRANTY/GUARANTEE
  - 1. THE CONTRACTOR SHALL WARRANTY/GUARANTEE AND MAINTAIN THE STABILITY OF WORK AND MATERIALS AND KEEP SAME IN PERFECT REPAIR AND CONDITION OF THE PERIOD OF ONE YEAR. DEFECTS OF ANY KIND DUE TO THE FAULTY WORK OR MATERIALS APPEARING DURING THE ABOVE MENTIONED PERIOD MUST BE IMMEDIATELY MADE GOOD BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE ENTIRE SATISFACTION OF THE OWNER AND ENGINEER. SUCH RECONSTRUCTION AND REPAIRS SHALL INCLUDE DAMAGE TO THE FINISH OR FURNISHING OF THE BUILDING RESULTING FROM THE ORIGINAL DEFECT OR REPAIR THERE TO.

15970 - TEMPERATURE CONTROLS

- A. EXTEND EXISTING CONTROL SYSTEM TO NEW EQUIPMENT AND PROVIDE ALL MODIFICATIONS NECESSARY FOR A FULLY FUNCTIONING SYSTEM.
- B. AIR HANDLING UNIT AND CONSTANT VOLUME REHEAT BOXES.
  - 1. THE EXISTING CONTROL SYSTEM IS TO BE MODIFIED BY THE OWNERS EXISTING CONTROL VENDOR.
  - 2. AUTOMATIC CONTROL VALVES SHALL BE FULLY PROPORTIONING WITH MODULATING PLUG OR V-PORT INNER GUIDES OR BALL TYPE. THE VALVE SHALL BE QUIET IN OPERATION AND FAIL-SAFE IN THE NORMALLY OPEN POSITION IN THE CONTROL EVENT OF CONTROL FAILURE. CONTROL VALVES SHALL BE SIZED BY THE CONTROL MANUFACTURER AND SHALL BE WARRANTED TO MEET THE HEATING AND COOLING LOADS AS SPECIFIED. CONTROL VALVES SHALL BE SUITABLE FOR THE PRESSURE CONDITIONS AND SHALL CLOSE AGAINST THE DIFFERENTIAL PRESSURE INVOLVED. VALVE OPERATORS SHALL BE OF THE PNEUMATIC OR ELECTRIC 24 VOLT TYPE. BODY PRESSURE RATING AND CONNECTION TYPE (SCREWED FLANGED OR FLANGED) SHALL CONFORM TO PIPE SCHEDULE ELSEWHERE IN THIS SPECIFICATION.
  - 3. CONTROL CONTRACTOR SHALL PROVIDE ALL WIRING REQUIRED FOR THE CONTROL SYSTEM TO OPERATE. IF THE JOB CONTAINS SMOKE DAMPERS OR CAV/VAV BOXES THEY SHALL ALSO BE WIRED BY T.C.C.
  - 4. MOUNT THERMOSTATS 48" A.F.F. ALIGN WITH LIGHT/SWITCHES, DOOR SWINGS AND OTHER WALL MOUNTED DEVICES. COORDINATE LOCATION WITH ARCHITECT.
  - 5. PROGRAMMABLE TYPE THERMOSTATS SHALL BE HONEYWELL "T300" SERIES OR AS RECOMMENDED BY EQUIPMENT MANUFACTURER. THERMOSTAT SHALL BE COOLING-HEATING COMBINATION OF STAGES MATCHING THE AIR CONDITIONING EQUIPMENT, WITH "COOL-AUTO-HEAT-OFF" AND FAN "AUTO-ON-OFF" SELECTOR SWITCHES. PROVIDE TAMPERPROOF COVER.

15990 - TEST AND BALANCE

- A. PROVIDE COMPLETE TEST AND BALANCE OF ALL WATER AND AIR SYSTEMS IN ACCORDANCE WITH NEBB (NATIONAL ENVIRONMENTAL BALANCING BUREAU) OR AABC (ASSOCIATED AIR BALANCE COUNCIL) STANDARDS.
- B. TEST AND BALANCE FIRM TO BE:
  - 1. CERTIFIED TEST & BALANCE - (561) 961-5068, OR (954) 532-4772.
  - 2. DADE TEST AND BALANCE, INC. - (954) 791-3194.
  - 3. TOTAL DYNAMIC BALANCE - (954) 425-0764.

15010 - BASIC MECHANICAL REQUIREMENTS  
 A. CODES & REFERENCES

- 1. FLORIDA BUILDING CODE 2014. (WITH AMENDMENTS)
- 2. SMACNA
- 3. NFPA 101
- 4. NFPA 90A
- 5. NFPA 99

B. SCOPE OF WORK

- 1. PROVIDE ALL REQUIRED PERMITS, LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THE SCOPE OF THE PROJECT SHOWN ON THE DRAWINGS AND READY FOR OCCUPANCY AND USE BY OWNER. THE WORK SHALL INCLUDE BUT IS NOT LIMITED TO:
  - a. REMOVAL AND CONNECTIONS TO NEW EQUIPMENT AND SYSTEMS
  - b. CUTTING AND PATCHING TO REMOVE OR INSTALL NEW WORK
  - c. CLEANING AND TESTING
  - d. INSTRUCTION TO OWNER'S PERSONNEL
- 2. ALL REMOVAL WORK AND DISRUPTIONS OF EXISTING SERVICES SHALL BE COORDINATED AND SCHEDULED IN ADVANCE WITH OWNER'S REPRESENTATIVES.
- 3. PROVIDE ALL BUILDING PENETRATIONS REQUIRED TO COMPLETE PROJECT. ALL PENETRATIONS TO BE PATCHED AND SEALED TO BE WATERTIGHT. MAINTAIN FIRE RATINGS OF EXISTING STRUCTURE.
- 4. PROVIDE ALL NECESSARY DUCT, EQUIPMENT AND PIPE SUPPORTS AND MATERIALS REQUIRED FOR INSTALLATION. PER THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL CODES.
- 5. NOT ALL COMPONENTS REQUIRED ARE INDICATED ON THESE DRAWINGS. REFER TO MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS INCLUDING CONNECTION LOCATIONS, TYPES AND SIZES. PROVIDE ISOLATING VALVES AND UNIONS AT ALL EQUIPMENT CONNECTIONS.

C. REQUIRED SHOP DRAWINGS:

- 1. INSULATION
- 2. AIR DEVICES
- 3. DUCTWORK COORDINATION DRAWINGS
- 4. CONTROLS
- 5. AIR HANDLING EQUIPMENT
- 6. THERMOSTATS
- 7. FANS
- 8. FILTERS

D. MAINTENANCE MANUALS

- 1. PROVIDE MAINTENANCE MANUALS TO OWNER(S) FOR ALL NEW EQUIPMENT CONTAINING ALL OPERATING AND MAINTENANCE DATA, SUBMITTALS, WARRANTIES, DIAGRAMS, AHRI CERTIFICATES, INSPECTION REPORTS AND VALVE LISTS IN A 3 RING BINDER WITH POCKETS FOR DRAWINGS. PROVIDE OWNER WITH 2 COPIES.
- 2. PROVIDE AN INDEX INSIDE THE BINDER COVER WITH A LIST OF EACH EQUIPMENT ITEM. EACH ITEM SHALL BE INDIVIDUALLY TABBED.
- 3. PROVIDE A LIST OF ALL REQUIRED REGULAR MAINTENANCE ACTIONS.
- 4. MAINTENANCE LIST SHALL REFERENCE TABULATED ITEM AND SHALL INCLUDE THE TITLE OR PUBLICATION NUMBER FOR THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT.

E. AS-BUILT DRAWINGS

- 1. THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE TO THE CONTRACT DOCUMENTS (AS-BUILT).
- 2. THE CONTRACTOR SHALL PROVIDE THE ENGINEER 2 SETS OF COMPLETED AS-BUILT DRAWINGS.
- 3. THE PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL ACCURATE AS-BUILTS ARE DELIVERED.

F. SUBSTITUTIONS

- 1. EQUIPMENT AND DESIGN OF SYSTEMS INDICATED ON THE DESIGN DRAWINGS AND WITHIN THESE SPECIFICATIONS SHALL BE CONSIDERED AS "SPECIFIED STANDARD" OF QUALITY. NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER 10 DAYS PRIOR TO BID DATE.
- 2. ANY DEVIATION FROM SPECIFIED EQUIPMENT THAT AFFECTS THE ELECTRICAL REQUIREMENTS SHALL BE COORDINATED BY THE MECHANICAL CONTRACTOR AND EQUIPMENT VENDOR WITH THE ELECTRICAL CONTRACTOR PRIOR TO SUBMITTING BIDS.

G. WIND LOADS

- 1. ALL EQUIPMENT TO BE MOUNTED OUTSIDE SHALL BE FURNISHED WITH A NDA (NOTICE OF ACCEPTANCE) FOR WINDSTORM OR BE FURNISHED WITH AN ENGINEERED DETAIL GOOD FOR THE LOCAL WIND RATE.

15050 - BASIC MATERIALS AND METHODS

- A. ACCESS PANELS - FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY GENERAL CONTRACTOR.
  - 1. PROVIDE FOR ACCESS TO ALL SERVICEABLE EQUIPMENT IN WALLS AND CEILINGS
  - 2. MICOR STYLE M FOR DRYWALL
  - 3. MICOR STYLE K FOR PLASTER
  - 4. MINIMUM SIZE 16"x16"
  - 5. NYSTROM, KARP, JI. INDUSTRIES OR WILLIAMS PAINT

B. LABELING

- 1. PROVIDE RIGID PLASTIC EMBOSSED EQUIPMENT NAME TAGS FOR ALL NEW EQUIPMENT AND DISCONNECTS. SETON NAMEPLATE CORPORATION.

C. FLASHING AND COUNTER FLASHING

- 1. FURNISH MATERIALS AND COORDINATE INSTALLATION FOR ALL PENETRATIONS OF ROOF BY ALL DUCT AND PIPE.
- 2. SHEET METAL - 24ga. ASTM A525
- 3. SHEET LEAD 6 lbs. PER SQ. FT. (WHERE ALLOWED)
- 4. STAINLESS STEEL 20 ga.
- 5. SHEET COPPER 24 oz. PER SQ. FT.

D. MECHANICAL SYSTEMS CLEANING

- 1. CLEAN AND TOUCH UP ALL FACTORY FINISHES
- 2. FLUSH ALL HVAC SYSTEMS BEFORE CONNECTION TO EQUIPMENT
- 3. CLEAN ALL CLOSED HVAC SYSTEMS WITH ALKALINE CLEANER CIRCULATED FOR 72 HOURS

E. CLEANING TESTING AND ADJUSTING

- 1. THE MECHANICAL CONTRACTOR, AT HIS EXPENSE, SHALL CLEAN, REPAIR, ADJUST, CHECK, BALANCE AND PLACE IN SERVICE THE VARIOUS SYSTEMS HEREIN SPECIFIED WITH THEIR RESPECTIVE EQUIPMENT, ACCESSORIES AND PIPING. HE/SHE SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TOOLS REQUIRED TO PERFORM TESTS REQUIRED BY THESE SPECIFICATIONS AND BY THE GOVERNING AUTHORITIES.
- 2. NO WORK SHALL BE COVERED OR CONCEALED UNTIL PROPERLY INSPECTED AND TESTED.

F. HANGERS AND SUPPORTS

- 1. PROVIDE ALL NECESSARY DUCTWORK, PIPE SUPPORTS, HANGERS, RODS, CLAMPS AND ATTACHMENTS TO PROPERLY INSTALL AND SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM THE BUILDING STRUCTURE.
- 2. PROVIDE ANY ANGLE IRON OR UNISTRUT AND SUSPENSION RODS REQUIRED TO INSTALL