

HVAC SPECIFICATIONS:

GENERAL

- EXCEPT WHERE DIMENSIONS ARE SHOWN THE DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE DRAWINGS DO NOT SHOW EVERY FITTING AND DETAIL. ALL PIPING SYSTEMS, DUCT SYSTEMS, EQUIPMENT, MATERIALS, AND LABOR SHALL BE COMPLETE. PROVIDE ALL NECESSARY OFFSETS, CONNECTIONS, SUPPORTS, FITTINGS, DETAILS, MATERIALS, EQUIPMENT, AND LABOR TO COMPLETE THE WORK. COORDINATE ALL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, PLUMBING, ELECTRICAL, AND ALL OTHER WORK SHOWN ON THE CONTRACT DOCUMENT DRAWINGS. COORDINATE WORK WITH ARCHITECTURAL ELEMENTS INCLUDING AVAILABLE SPACE ABOVE EACH CEILING. ALL MATERIALS SHALL FIT THE SPACE AVAILABLE. VERIFY DIMENSIONS AND CLEARANCES AT BUILDING SITE PRIOR TO COMMENCING WORK. DRAWINGS SHALL NOT BE SCALED.
- WHEN ALL TRADE WORK IS SUBCONTRACTED, IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO VERIFY HIS SUBCONTRACTORS AND THEIR ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE WORK OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.
- THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE TO BE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS. ALL DIMENSIONAL ISSUES SHALL BE DIRECTED TO THE ARCHITECT FOR HIS RESOLUTION.
- VISIT SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
- PROVIDE OPERATION AND MAINTENANCE MANUALS.
- PROVIDE PRODUCT SUBMITTALS FOR THE FOLLOWING: SPLIT SYSTEMS; FANS; VIBRATION ISOLATION; GRILLES, REGISTERS, AND DIFFUSERS; PIPING AND ACCESSORIES; DUCTWORK AND ACCESSORIES; INSULATION & DUCT LINER; ROOF HOODS; AIR ION GENERATORS; PIPING AND EQUIPMENT LABELING; TEST AND BALANCE REPORT; CONTROLS.
- PROVIDE 1/4" SCALE SHOP DRAWINGS OF MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK. PROVIDE 1/8" SCALE MANUFACTURER APPROVED REFRIGERANT PIPING SHOP DRAWING, INCLUDING EACH MANUFACTURER RECOMMENDED ACCESSORY.
- PROVIDE ALL MATERIALS AND EQUIPMENT AS WELL AS PERFORM ALL THE LABOR REQUIRED TO FULFILL ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS AND COMPLETE ALL WORK SHOWN ON THESE DRAWINGS AS SPECIFIED AND AS REQUIRED BY CODE. ALL SYSTEMS SHALL BE FINISHED, TESTED AND BALANCED, ADJUSTED, AND PROVEN TO BE FULLY OPERATIONAL AND USEABLE. PROVIDE COMPLETE FUNCTIONAL SYSTEMS INSTALLED IN ACCORDANCE WITH THE LOCAL JURISDICTION REQUIREMENTS, COMPLETELY TESTED AND APPROVED BY THE LOCAL PERMITTING AUTHORITIES.
- COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. THEY SHALL COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSDICTIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
- ALL EQUIPMENT AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE VARIOUS EQUIPMENT MANUFACTURERS' RECOMMENDATIONS, CONTRACT DOCUMENTS AND APPLICABLE CODES / REGULATIONS.
- PROVIDE LABELING FOR HVAC PIPING. PROVIDE EQUIPMENT LABELING FOR EACH FAN AND SPLIT SYSTEM INDOOR AND OUTDOOR UNIT.
- PROVIDE ACCESS FOR EQUIPMENT MAINTENANCE, INCLUDING FILTER PULL.
- PROVIDE WORK IN ACCORDANCE WITH NFPA 90A AND THE 2018 INTERNATIONAL MECHANICAL CODE WITH GEORGIA STATE AMENDMENTS.
- ONE SET OF TEMPORARY FILTERS SHALL BE PROVIDED FOR USE DURING CONSTRUCTION TO BE REPLACED AT THE CONCLUSION OF CONSTRUCTION PRIOR TO AIR BALANCE. INSTALL ONLY WHEN INSTRUCTED BY THE OWNER.
- PROVIDE OWNER TRAINING INCLUDING THERMOSTAT PROGRAMMING.
- PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS OR ANY OTHER CONCEALED EQUIPMENT.
- ALL TESTS SHALL BE COMPLETED BEFORE ANY EQUIPMENT OR PIPING INSULATION IS APPLIED.
- CONTRACTOR SHALL LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UPSTREAM AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
- ALL LOCATIONS AND SIZES OF ALL FLOOR, WALL AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING OR CONDUIT SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M, HILTI OR APPROVED EQUAL.
- EQUIPMENT, DUCTWORK AND PIPING SHALL NOT BE PERMITTED TO BE SUPPORTED FROM ANY METAL DECK.
- CONTRACTORS SHALL MAINTAIN A MINIMUM OF 6"-8" CLEARANCE TO THE UNDERSIDE OF PIPES, DUCTS, CONDUITS AND SUSPENDED EQUIPMENT THROUGHOUT ACCESS ROUTES ON THE EQUIPMENT MEZZANINE.
- CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR AND ALL ELECTRICAL CONTRACT DOCUMENTS PRIOR TO ORDERING.
- DURING THE CONSTRUCTION PHASE, EACH RETURN AIR INLET AT EACH RETURN AIR DUCT OPENING SHALL BE PROTECTED AGAINST ENTERING DUST. PROVIDE TEMPORARY ROLL TYPE FILTER MEDIA SECURED WITH TAPE AT EACH RETURN AIR DUCT INLET. REMOVE THIS AFTER THE CONSTRUCTION PHASE AND PRIOR TO OCCUPANCY.

SPLIT SYSTEMS

- VERTICAL UPFLOW, SIDE RETURN SPLIT DX SYSTEMS WITH COMPRESSOR AND CONDENSATE TRANE IS THE LAYOUT BASIS. CARRIER AND DAIKIN ARE ACCEPTABLE MANUFACTURERS. ELECTRIC AUX. HEAT ELEMENTS SHALL BE NICKEL CHROME WITH 1/2" LIMIT CONTROL. INSTANTI SHORT CYCLE TIMER, CONDENSER COIL GUARD, 5 YEAR COMPRESSOR WARRANTY.

FANS

- CABINET FANS: BROAN, GREENHECK, LORIN, LOREN CO. IN MINNAPOLIS, AND CARNES SHALL BE ACCEPTABLE MANUFACTURERS. PAINTED GALVANIZED STEEL HOUSING. DIRECT DRIVE CENTRIFUGAL FAN. INTERNALLY ISOLATED FAN MOTOR. EGGRATE EXHAUST GRILLE. SOLID STATE FAN SPEED CONTROLLER. INTEGRAL FAN MOTOR DAMPER AND DISCONNECT SWITCH.

VIBRATION ISOLATION

- PROVIDE VIBRATION ISOLATION FOR AIR MOVING EQUIPMENT. ACCEPTABLE MANUFACTURERS: AMBER BOOTH, VIBRO-AC, VIBRO-ACOUSTICS, MASON INDUSTRIES, VIBRATION ELIMINATOR CO., VIBRO-ACOUSTICS, AND VIBRO-ACOUSTICS. PROVIDE VIBRATION MOUNTINGS AND CONTROLS. FOR AIR MOVING EQUIPMENT INCLUDING BUT NOT LIMITED TO FANS AND SPLIT SYSTEM AIR HANDLING UNITS 2,000 CFM AND SMALLER, PROVIDE RIBBED NEOPRENE MOUNTING FOR FLOOR MOUNTED UNITS (AMBER BOOTH TYPE NR) AND NEOPRENE SUSPENSION TYPE VIBRATION ISOLATORS FOR SUSPENDED UNITS (AMBER BOOTH TYPE BRD).

GRILLES, REGISTER, AND DIFFUSERS

- PROVIDE PER AIR DISTRIBUTION SCHEDULE. ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES LOCATED IN INACCESSIBLE CEILINGS SHALL HAVE FACE OPERABLE DAMPERS TO ALLOW AIR BALANCING OF THE SYSTEM AFTER THE CEILING IS IN PLACE. REFER TO ARCHITECTURAL CEILING PLANS FOR EXACT LOCATIONS OF ALL AIR DISTRIBUTION DEVICES. IF A PARTICULAR ITEM IS NOT SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLAN, PREPARE A DRAWING AND PRESENT IT TO THE ARCHITECT FOR HIS REVIEW AND/OR APPROVAL.

PIPING AND ACCESSORIES

- CONDENSATE DRAIN PIPING SHALL SCHEDULE 40 PVC. FOR PIPING LOCATED IN A RETURN AIR PLENUM, PROVIDE PLENUM RATED WRAP OVER PVC PIPING OR COPPER TUBING, TYPE L, HARD DRAWN ASTM B88. PROVIDE A REMOVABLE CLEANOUT PLUG AT EACH CHANGE OF DIRECTION. CONDENSATE DRAIN LINES RUNNING HORIZONTALLY SHALL BE SLOPED 1/4" PER FOOT DOWN IN THE DIRECTION OF FLOW. ALL AIR CONDITIONING CONDENSATE DRAIN LINES FROM EACH AIR HANDLING UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET WITH A "P" TRAP AND PIPED TO NEAREST DRAIN.
- REFRIGERANT PIPING SHALL BE COPPER TUBING, TYPE ACR, SOFT OR HARD DRAWN ASTM B280.

DUCTWORK AND ACCESSORIES

- GAUGES AND CONSTRUCTION FOR DUCTWORK SHALL CONFORM TO SMACNA'S HVAC DUCT CONSTRUCTION STANDARDS.
- TRANSITION RECTANGULAR DUCTWORK ON BOTTOM AND SIDES. MAINTAIN TOP OD DUCTWORK LEVEL AND AS HIGH AS POSSIBLE.
- ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH SQUARE TO ROUND TRANSITIONS.
- COORDINATE DUCTWORK AND PIPING WITH PLUMBING, FIRE PROTECTION AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES.
- RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED WITH CURVED ELBOWS BUILT WITH NOT LESS THAN A CENTERLINE RADIUS OF 1-1/2 TIMES THE DUCT WIDTH WHERE POSSIBLE. SQUARE ELBOWS SHALL NOT BE EMPLOYED UNLESS DEFINITELY SHOWN ON THE DRAWINGS. SQUARE FITTINGS SHALL HAVE DOUBLE THICKNESS FOIL SECTION TURNING VANES WHICH SHALL BE MANUFACTURER'S STANDARD PRODUCT AND SHALL BE SPACED AS SHOWN IN THE "DUCT MANUAL".
- RECTANGULAR MOTOR OPERATED DAMPERS: THE LAYOUT BASIS IS RUSKIN CD-36, RECTANGULAR, OPPOSED BLADE, LOW LEAKAGE WITH BLADE AND JAMB SEALS. 5.4 CFM PER SQUARE FOOT LEAKAGE AT 1" WC. ACCEPTABLE ALTERNATE MANUFACTURERS ARE AS FOLLOWS: AMERICAN WARMING AND VENTILATING, PHILLIPS-AIRE, ARROW UNITED, AIR BALANCE, AIRLOITE, GREENHECK, KRUEGER, NAILOR, NATIONAL CONTROLLED AIR, LOUVERS AND DAMPERS INC, SAFE AIR, CESCO/ADVANCED AIR, OR AIRSTREAM.
- ROUND MOTOR OPERATED DAMPERS: THE LAYOUT BASIS IS RUSKIN CD-RS25, ROUND, BUTTERFLY DAMPER, 0.15 CFM PER INCH OF PERIMETER AT 4" WC. ACCEPTABLE ALTERNATE MANUFACTURERS ARE AS FOLLOWS: AMERICAN WARMING AND VENTILATING, PHILLIPS-AIRE, AIR BALANCE, AIRLOITE, GREENHECK, KRUEGER, NAILOR, NATIONAL CONTROLLED AIR, LOUVERS AND DAMPERS INC, SAFE AIR, CESCO/ADVANCED AIR, OR AIRSTREAM.
- PROVIDE INSULATED FLEXIBLE DUCTWORK AS INDICATED. THE LAYOUT BASIS FOR INSULATED FLEXIBLE DUCTWORK IS THERMAFLEX MKE. FLEXIBLE DUCT RUNOUTS SHALL BE INSTALLED FREE OF KINKS AND SAGS. MAXIMUM LENGTH OF LOW PRESSURE FLEXIBLE DUCT SHALL BE 7'-0".
- PROVIDE A FLEXIBLE DUCTWORK CONNECTION AT THE SUCTION AND DISCHARGE OF EACH AIR HANDLING UNIT AND EACH FAN.
- PROVIDE LOW LEAKAGE ADJUSTABLE MANUAL VOLUME DAMPER TO CONTROL AIRFLOW THROUGH EACH SUPPLY DIFFUSER. FOR INSTALLATIONS IN AN INACCESSIBLE CEILING, ACCESS SHALL BE FROM THE DIFFUSER.
- PROVIDE ACCESS DOORS IN DUCTWORK FOR OPERATION, ADJUSTMENT, AND MAINTENANCE OF ALL FANS, VALVES, AND MECHANICAL EQUIPMENT.
- PROVIDE FIRE/SMOKE DAMPERS IN ALL FIRE RATED WALLS AND FLOORS AS IDENTIFIED ON ARCHITECTURAL DRAWINGS. RATINGS OF FIRE DAMPERS SHALL MEET THE RATING AS IDENTIFIED IN THE ARCHITECTURAL WALL RATING SCHEDULE AND LIFE SAFETY PLANS.
- DUCT SIZES ARE SHOWN AS INSIDE CLEAR DIMENSIONS, WHERE INTERNAL INSULATION IS CALLED FOR, DIMENSIONS SHALL BE INCREASED BY THE THICKNESS OF THE INSULATION.

INSULATION & DUCT LINER

- PROVIDE MINIMUM 1.5" THICK FLEXIBLE BLANKET, MINIMUM R VALUE OF 5.0 AT 75 DEGREES F. (NOT INCLUDING FILM RESISTANCE). FOIL SCRIM KRAFT VAPOR BARRIER RATED AT .05 PERMS SECURED WITH 18 GAUGE STAINLESS STEEL WIRE AT 18" OC, ADHESIVE, AND STICK PINS. PROVIDE DUCTWORK INSULATION ON SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK.
- PROVIDE FACTORY LINED DUCTWORK FOR THE FIRST 10'-0" OF SUPPLY AIR DUCTWORK DOWNSTREAM OF SPLIT SYSTEM AIR HANDLING UNITS AND WHERE INDICATED ON PLAN. PROVIDE 1" THICK 1.5 PCF DENSITY DUCT LINER. THE LAYOUT BASIS IS MCGILL ACOUSTILINE. WHERE DUCTWORK IS CALLED TO HAVE INTERNAL LINER, EXTERNAL DUCT WRAP SHALL BE OMITTED.
- PROVIDE 1/2" THICK ARMAFLEX INSULATION FOR REFRIGERANT SUCTION PIPING AND CONDENSATE DRAIN PIPING.
- PROVIDE JACKETING SUITABLE FOR OUTDOOR SERVICE IN ADDITION TO REQUIRED INSULATION OF REFRIGERANT PIPING INSTALLED OUTDOORS. PAINTED CONDUITS WILL NOT BE APPROVED.

ROOF HOODS

- PROVIDE INTAKE AND RELIEF HOODS PER MISC. EQUIPMENT SCHEDULE. PROVIDE MANUFACTURER FURNISHED ROOF CURBS TO MATCH ROOF SLOPE.

AIR ION GENERATORS

- BASIS OF DESIGN IS PLASMA ION MODEL 100. INSTALL PER MANUFACTURER RECOMMENDATIONS. INTERLOCK OPERATION WITH SPLIT SYSTEM AC UNIT FAN.

PIPING AND EQUIPMENT LABELING

- REFRIGERANT AND CONDENSATE DRAIN PIPING SHALL BE LABELED WITH STICK ON LABELS.
- ALL MECHANICAL EQUIPMENT INCLUDING SPLIT SYSTEM INDOOR AND OUTDOOR UNITS, AIR ION GENERATORS, FANS AND HEATERS SHALL BE PROVIDED WITH ENGRAVED BAKED PHENOLIC LABELS.

TEST AND BALANCE

- TESTING, ADJUSTING, AND BALANCING (TAB) SHALL BE PERFORMED BY AN INDEPENDENT AABC OR NEBB TEST CONTRACTOR. TEST AND ADJUST THE AIRFLOW AT EACH SPIN IN AT EACH SUPPLY DIFFUSER AND ENVIRONMENTAL EXHAUST AIR GRILLE. MEASURE AND ADJUST OA, RA, AND SA AIRFLOW BY TRAVERSE AT EACH SPLIT SYSTEM AIR HANDLING UNIT AND FAN. PROVIDE STATIC PRESSURE PROFILE, MEASURE AND RECORD TEMPERATURES FROM MAIN SUPPLY DURING FULL HEATING AND COOLING MODES.
- THE MECHANICAL CONTRACTOR SHALL MAKE CHANGES TO ANY PULLEYS, BELTS, AND/OR DAMPERS AS REQUIRED TO PROVIDE THE BALANCE OF AIR SYSTEMS AS SHOWN ON THE PLANS AT NO ADDITIONAL COST TO THE CONTRACT.

CONTROLS

- FURNISH AND INSTALL A COMPLETE SYSTEM. PROVIDE ALL NECESSARY RELAYS, TIMECLOCKS, CONTACTOR, AND TRANSFORMERS REQUIRED TO ACCOMPLISH THE PERFORMANCE AND CONTROL SEQUENCES INDICATED ON THE DRAWING AND IN THE SPECIFICATIONS.
- SPLIT SYSTEM SEQUENCE OF OPERATION: WHEN THE SPACE IS NOT IN FIRE ALARM, THE UNIT SHALL OPERATE AS FOLLOWS:
 - UNOCCUPIED MODE -- THE OA DAMPER SHALL SHUT. THE UNIT SHALL CYCLE COMPRESSORS TO MAINTAIN SPACE COOLING UNOCCUPIED SET POINT AND SHALL CYCLE HEATERS TO MAINTAIN SPACE HEATING UNOCCUPIED SET POINT.
 - OCCUPIED MODE -- THE UNIT SHALL OPEN ITS OUTSIDE AIR DAMPER TO THE MINIMUM OUTSIDE AIR POSITION. THE UNIT SHALL CYCLE THE COMPRESSORS TO MEET THE SPACE COOLING OCCUPIED SET POINT AND SHALL CYCLE HEATERS TO MAINTAIN SPACE HEATING OCCUPIED SET POINT.
- DURING OCCUPIED MODE, TOILET EXHAUST FANS SHALL TURN ON. DURING UNOCCUPIED MODE, FANS SHALL TURN OFF.
- THE LAYOUT BASIS FOR THE ELECTRONIC THERMOSTAT IS HONEYWELL COMMERCIAL THERMOSTAT. CONTROL FUNCTIONS SHALL INCLUDE STAGING OF HEATING AND COOLING, AUTOMATIC CHANGEOVER, NIGHT SETBACK. PROVIDE KEYBOARD SECURITY FUNCTION.
- PROVIDE PLENUM RATED CABLE FOR ALL CONTROL WIRING WHERE RUN IN RETURN AIR PLENUM NOT IN CONDUIT.
- ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND ELECTRICAL PORTION OF THE CONTRACT DOCUMENTS.
- MOUNT THERMOSTATS AND FAN SWITCHES WHERE INDICATED ON PLANS 48" A.F.F. UNLESS NOTED OTHERWISE.

ABBREVIATION / DESCRIPTION:

AC	AIR-CONDITIONING
ABV	ABOVE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
ARCH	ARCHITECT
BDD	BACKDRAFT DAMPER
BOH	BACK OF HOUSE
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C/C	COOLING COIL
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEANOUT
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CP	CONTROL PANEL
CT	COOLING TOWER
CU	CONDENSING UNIT
D	DRAIN
dB	DECIBEL
DB	DRY BULB
DIA	DIAMETER
DIFF	DIFFUSER
DN	DOWN
EAT	EXHAUST AIR
EA	ENTERING AIR TEMPERATURE
EDH	ELECTRICAL DUCT HEATER
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
F	DEGREES FAHRENHEIT
FD	FIRE DRAIN
FL	FLOOR DRAIN
FLOOR	FLOOR
FLEX	FLEXIBLE
FOD	FACE OPERATED DAMPER
FSD	FRESH SMOKE-GAS
FT	FEET
FT2	SQUARE FEET
GR	GRILLE
H/C	HEATING COIL
HRT	HOUR
IN	INCHES
K/W	KILOWATT
L	LEAVING AIR TEMPERATURE
L/P	POUNDS
LF	LINEAR FEET
MA	MANUAL AIR VENT
MAX	MAXIMUM
PSH	100 BTU/HOUR
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MVD	MANUAL VOLUME DAMPER
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NPSH	NET POS. SUCTION HEAD
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTERS
OE	OPEN END
OPNG	OPENING
PH	ELECTRICAL PHASE
PLBG	PLUMBING
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQ. IN. ABSOLUTE
PSIG	POUNDS PER SQ. IN. GAUGE
RA	RETURN AIR
SA	SUPPLY AIR
SD	SMOKE DAMPER
SD	SPLITTER DAMPER
SE	SMOKE EXHAUST
SP	STATIC PRESSURE (IN. W.G.)
SQ	SQUARE
SS	STAINLESS STEEL
T/STAT	THERMOSTAT
TP	TYPICAL
UC	3/4" UNDERCUT
W/	WITH
WB	WET BULB
WC	WATER COLUMN

HVAC LEGEND:

	EQUIPMENT DESIGNATION
	EQUIPMENT TYPE
	EQUIPMENT NUMBER
	SECTION CUT LINE
	SECTION NUMBER
	DRAWING WHERE SHOWN
	REVISION TRIANGLE
	CEILING DIFFUSER
	RETURN REGISTER OR GRILLE
	EXHAUST REGISTER OR GRILLE
	DUCT SIZE (WIDTH X DEPTH)
	MANUAL VOLUME DAMPER OPPOSED BLADE
	MOTOR OPERATED DAMPER
	FLEXIBLE DUCT CONNECTION
	RECTANGULAR DUCT ELBOW WITH DOUBLE THICKNESS TURNING VANES
	BRANCH TAKE-OFF WITH SPIN-IN (TYPICAL)
	LINED DUCTWORK
	AIRFLOW DIRECTION
	SUPPLY DUCT CROSS-SECTION UP
	SUPPLY DUCT DN
	RETURN OR EXHAUST CROSS-SECTION UP
	RETURN OR EXHAUST DUCT DN
	DUCT SIZE (WIDTH X DEPTH)
	ROUND DUCT SIZE (DIAMETER)
	ELBOW TURNED UP
	ELBOW TURNED DOWN
	TEE OUTLET UP
	TEE OUTLET DOWN
	THERMOSTAT
	DROP IN DIRECTION OF FLOW
	RISE IN DIRECTION OF FLOW

JOB NUMBER:	19221
CHECKED BY:	Checker

PLANNING ARCHITECTURE INTERIORS

CALBERT DESIGN GROUP

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HAPPY FACES ACADEMY
LEARN... PLAY... GROW...

PROJECT LOCATION:

2865 WEBB ROAD
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REVISIONS

NO	DATE:	DESCRIPTION:

SPECIFICATIONS, NOTES, AND LEGEND - MECHANICAL

MO.0

DATE 09/20/13

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