

EXHAUST FAN SCHEDULE									
TAG	CFM	RPM	S.P. IN. W.G.	WATTS/HP	SONES	ELECTRIC	CONTROL	MANUFACTURER MODEL NUMBER	DESCRIPTION & ACCESSORIES
EF-1	375	1070	.25	224 WATTS	5.5	120-1-60	WIRED WITH LIGHT	GREENHECK SP-A510	1, 2, 3
EF-2	500	1100	.25	350 WATTS	5.5	120-1-60	WIRED WITH LIGHT	GREENHECK SP-A700	1, 2, 3

(1) CABINET CEILING FAN, DIRECT DRIVE, CENTRIFUGAL, SPRING LOADED ALUMINUM BACKDRAFT DAMPER.
 (2) ALUMINUM, WHITE ENAMEL CEILING GRILLE.
 (3) ALUMINUM HOODED WALL CAP WITH BUILT-IN BIRDSCREEN AND DAMPER.

AIR DISTRIBUTION DEVICE SCHEDULE					
TAG	SERVICE	NECK SIZE	OVERALL SIZE	MODEL NUMBER	DESCRIPTION & ACCESSORIES
A	SUPPLY	—	12 X 6	610	1, 2, 4, 5, 6
B	SUPPLY	8"ø	12 X 12	ASCD	1, 2, 4, 7, 8
C	SUPPLY	8"ø	24 X 24	ASCD	1, 2, 3, 7, 8
R1	RETURN	—	30 X 30	630	1, 2, 3, 5
R2	RETURN	14"ø	24 X 24	80	1, 2, 3, 5
R3	RETURN	—	15 X 30	630	1, 2, 3, 5

(1) PRICE AIR DISTRIBUTION; OR APPROVED EQUAL.

(2) ALUMINUM CONSTRUCTION, STANDARD WHITE FINISH.

(3) T-BAR LAY-IN PANEL

(4) SURFACE MOUNT BORDER.

(5) CFM SHOWN IN GRILLE TAG IS MAXIMUM POSSIBLE WITH EXHAUST AND OUTSIDE AIR AT 0.

(6) DOUBLE DEFLECTION GRILLE.

(7) SQUARE FACE, ROUND NECK DIFFUSER

(8) BUTTERFLY STYLE VOLUME CONTROL DAMPER.

NOTE: VERIFY SIZING TO MATCH EXISTING ROUGH IN WHERE APPROPRIATE.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE
Prescriptive ☒ Energy Cost Budget _____

Thermal Zone _____ 3H
Exterior design conditions
winter dry bulb _____ 26° F
summer dry bulb _____ 92° F DB/76° F WB
Interior design conditions
winter dry bulb _____ 70° F
summer dry bulb _____ 75° F
relative humidity _____ 50%
Building heating load _____ NO ADDITIONAL
Building cooling load _____ NO ADDITIONAL

Mechanical Spacing Conditioning System _____
Unitary
description of unit _____
heating efficiency _____ N/A
cooling efficiency _____ N/A
heat output of unit _____ N/A
cooling output of unit _____ N/A
boiler
total boiler output. If oversized, state reason.
N/A
chiller
total chiller capacity. If oversized, state reason.
N/A

List equipment efficiencies _____ N/A

Equipment schedules with motors (mechanical systems)
motor horsepower _____ SEE SCHEDULES
number of phases _____ SEE SCHEDULES
minimum efficiency _____ SEE SCHEDULES
motor type _____ ODP
of poles _____ 4

Additional prescriptive compliance method : _____ N/A

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment of the 2012 North Carolina State Energy Code.

SIGNED: _____
NAME: STEVEN H. EVERHART JR., P.E.
TITLE: PROFESSIONAL ENGINEER

BASIS OF DESIGN: UNLESS OTHERWISE NOTED THE PURPOSE OF THESE DRAWINGS IS TO PROVIDE DIRECTION AND BASIS OF DESIGN TO A COMPETENT CONTRACTOR FAMILIAR WITH THE TYPE OF SYSTEMS BEING INSTALLED SUFFICIENT TO INDICATE OWNERS REQUESTS AND CODE REQUIREMENTS. IT IS THE CONTRACTORS RESPONSIBILITY, WHEN OTHERWISE UNDIRECTED, TO FOLLOW STANDARD INDUSTRY PRACTICES AND BASIC CODE REQUIREMENTS TO PROVIDE THE BEST QUALITY OF WORK. WHEN NECESSARY, THE CONTRACTOR SHALL BE INDICATED, COORDINATING EXACT ROUTINGS AND LOCATIONS WITH OTHER TRADES AND THE OWNER, SELECTING CODE APPROVED MATERIALS, AND MAKING MINOR OFFSETS/ADJUSTMENTS BASED ON FIELD COORDINATION AND OWNER'S FIELD REQUESTS. CHANGE OF MANUFACTURER TO EQUIVALENT SYSTEMS, WITH OWNER'S APPROVAL, IS ACCEPTABLE. CONTACT ENGINEER WITH ANY CONFLICTS NOT COVERED BY THE ABOVE INSTRUCTIONS.

DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH BEST PRACTICES OF SHEET METAL WORK AND SMACNA STANDARDS.

MAXIMUM DIMENSION OF DUCT	GUAGE U.S. STD.	TRANSVERSE JOINT	BRACING
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DUCTS 25 INCHES OR SMALLER IN MAXIMUM DIMENSION SHALL BE SUPPORTED WITH 1 INCH FLAT BAND HANGERS; DUCTS 25 INCHES AND LARGER SHALL BE SUPPORTED BY 3/4 INCH X 1-1/2 INCH ANGLE IRON AND ROUND ROD. SUPPORTS SHALL BE NOT MORE THAN 8 FEET ON CENTERS, PROPERLY FASTENED AND PLACED TO BUILDING STRUCTURES AND SHALL EXTEND AND BE RIVETED TO THE BOTTOM OF DUCTS.

FURNISH AND INSTALL FLEXIBLE COLLARS IN THE DUCTWORK CONNECTIONS TO AIR HANDLING FANS TO PREVENT NOISE TRANSMISSION BETWEEN SECTIONS.

IT IS ACCEPTABLE TO CHANGE RECTANGULAR DUCTWORK TO THE EQUIVALENT SIZE IN ROUND PROVIDED THE CONTRACTOR COORDINATES ALL CLEARANCE ISSUES.

EDGES OF INSULATION SHALL BE CUT STRAIGHT AND TRUE AND SHALL BE TIGHTLY BUTTED. THE VAPOR BARRIER JACKET SHALL OVERLAP THE BLANKET JOINT A MINIMUM OF THREE INCHES (3"). THE JACKET LAP SHALL BE FASTENED WITH MOISTURE RESISTANT ADHESIVE AND ALSO OUTWARD CLINCHING STAPLES SPACED TEN INCHES (10") C/C. THE VAPOR BARRIER EDGE AND STAPLES SHALL THEN BE COVERED WITH A THREE INCH (3") WIDE TAPE OF THE SAME MATERIAL AS THE JACKET AND SHALL BE FASTENED WITH MOISTURE RESISTANT ADHESIVE.

INSULATING BLANKET ON THE BOTTOM OF SURFACES IN EXCESS OF 24 INCHES WIDE SHALL BE SECURED AGAINST THE DUCT WITH ADHESIVE OVER THE ENTIRE AREA, MECHANICAL CLIPS ON 24 INCH CENTER OR BY WIRE TIES AROUND THE DUCT SPACED 24 INCHES C/C.

REGISTERS AND GRILLES: ALL REGISTERS AND GRILLES SHALL BE OF SIZE, STYLE AND CAPACITY CALLED FOR ON PLANS AND IN THE GRILLE SCHEDULE. PROVIDE RUBBER OR EXPANDED FOAM GASKETS COMPLETELY AROUND ALL REGISTER AND GRILLE FRAMES TO PREVENT AIR LEAKAGE BETWEEN GRILLE FRAME AND DUCT OR BETWEEN GRILLE FRAME AND SURROUNDING FINISHED SURFACE. ACCEPTABLE MGFS: PRICE, CARNES, METALAIR, KRUGER. REGISTERS AND GRILLES SHALL BE BALANCED TO CFM SHOWN AND RECORD MADE OF ACTUAL FLOW AND BALANCE METHOD.

OPERATING INSTRUCTIONS, CERTIFICATES AND WARRANTIES: THE ORIGINAL OF ALL INSPECTION CERTIFICATES SHALL BE DELIVERED TO THE OWNER AND ONE (1) COPY EACH TO THE ENGINEER PRIOR TO REQUEST FOR FINAL PAYMENT.

PRIOR TO FINAL PAYMENT TO THE CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE TO TRAIN THE AUTHORIZED PERSONNEL ON HOW TO SERVICE, START-UP AND SHUT-DOWN THE VARIOUS SECTIONS OF THE SYSTEM. UPON COMPLETION OF THIS PHASE OF THE CONTRACT, THE CONTRACTOR SHALL SECURE A LETTER OF ACCEPTANCE FROM THE OWNER THAT HE IS SATISFIED WITH THE CONDITIONS STIPULATED HEREIN. UPON ACCEPTANCE OF THIS LETTER AND AT THE DISCRETION OF THE ENGINEER, THE FINAL PAYMENT WILL BE MADE.

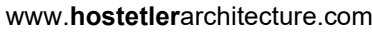
THE WORK UNDER THIS CONTRACT WILL BE ACCEPTED ONLY AS AN ENTIRE SYSTEM UPON SATISFACTORY COMPLETION OF THE REQUIRED TESTS. NO PARTIAL ACCEPTANCE OF ANY PART OR PORTION OF APPARATUS WILL BE MADE.

ALL EQUIPMENT AND PIPING SHALL BE SO INSTALLED THAT NO OBJECTIONABLE NOISES FROM EQUIPMENT, PIPING OR AIR DISTRIBUTION ARE AUDIBLE IN THE FINISHED AREAS.

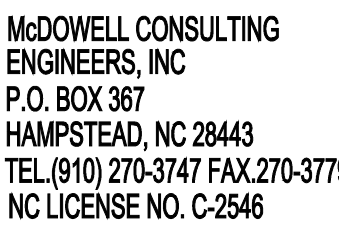
THE ONE (1) YEAR GUARANTEE PERIOD WILL START ON THE DAY OF FINAL INSPECTION AND ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A LETTER WITH TWO (2) COPIES STATING THE BEGINNING AND ENDING DATES OF THE GUARANTEE BASED ON THE AFOREMENTIONED STARTING DATES.

AIR BALANCE: ALL SYSTEMS SHALL BE BALANCED BY THE CONTRACTOR PER THE REQUIREMENTS OF SECTION 503.2.9 OF THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE.

ENERGY_CODE_COMPLIANCE:HVAC EQUIPMENT SELECTED MEETS PERFORMANCE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE SECTION 506.2.1 ANY SUBSTITUTIONS MUST MEET THIS STANDARD AS WELL. UPON FINAL INSPECTION THE CONTRACTOR SHALL PROVIDE TO OWNER MANUALS AND EVIDENCE OF AIR BALANCE. CONTRACTOR SHALL SCHEDULE DESIGN PROFESSIONAL AND ASSIST TO COMPLETE SYSTEM INSTALLATION STATEMENT IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE SECTION 503.2.9.



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WILMINGTON
NORTH CAROLINA

DRAWN BY:	KSG	PROJ. MGR:	SE
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JOB NO.

18013

SHEET

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