HVAC GENERAL NOTES:

1. FURNISH AND INSTALL ALL MATERIALS AND LABOR REQUIRED TO PROVIDE COMPLETE AND OPERABLE HVAC SYSTEMS WITH ALL ITEMS AND APPURTENANCES NECESSARY EVEN THOUGH NOT SPECIFICALLY IDENTIFIED.
2. ALL WORK AND/OR MATERIALS SHALL BE INSTALLED BY A LICENSED CONTRACTOR AND SHALL CONFORM TO ALL APPLICABLE NATIONAL AND LOCAL BUILDING AND MECHANICAL CODES.
3. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSTALL TURNING VANES IN ALL DUCTWORK ELBOWS.
4. WHERE DUCTWORK IS INDICATED TO BE EXPOSED TO VIEW IN OCCUPIED SPACES, PROVIDE MATERIALS THAT ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, AND STAINS AND DISCOLORATIONS, AND OTHER IMPERFECTIONS, INCLUDING THOSE THAT WOULD IMPAIR PAINTING.
5. ALL INTERIOR DUCTS SHALL BE CONSTRUCTED WITH G-60 OR BETTER GALVANIZED STEEL (ASTM A 653/A 653M) LFQ, CHEM TREAT.
6. COORDINATE EXACT ROUTING OF ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF WORK.
7. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION AND ROUTING OF DUCTWORK WITH REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL AIR DEVICES WITH REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING AND OTHER LAYOUTS.
8. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE INSULATED WITH 2" THICK, 0.75 LB/CF (MINIMUM) FSK WRAP INSULATION (MINIMUM INSTALLED R-VALUE = R-6). FOR DUCTWORK WITH INTERNAL LINER, WRAP INSULATION MAY BE OMITTED.
9. ALL SUPPLY/RETURN DUCTWORK FROM AIR HANDLING UNITS SHALL BE LINED WITH 1-1/2" THICK ACOUSTICAL LINING 20' BEYOND UNIT.
10. FLEXIBLE DUCTWORK RUNOUTS SHALL BE LIMITED TO 6'-0" EXTENDED LENGTH. FLEXIBLE DUCTWORK SHALL BE EQUAL TO ATCO #536. FLEXIBLE DUCTS, BOTH SUPPLY AND RETURN, SHALL HAVE INSULATION WITH A MINIMUM R-VALUE OF 6.0, PER IECC. DUCT SHALL HAVE A CONTINUOUS FLEXIBLE FIBERGLASS SHEATH WITH UL APPROVED METALIZED POLYESTER BARRIER JACKET.
11. INSTALL FLEXIBLE DUCTWORK CONNECTIONS AT ALL DUCT CONNECTIONS TO ROOF TOP UNITS AND CLOTHES DRYERS.
12. ALL DUCT DIMENSIONS SHOWN ARE NET CLEAR INSIDE DIMENSIONS.
13. MOUNT ALL THERMOSTATS 4'-0" ABOVE FLOOR (TYPICAL).
14. THE MECHANICAL CONTRACTOR SHALL HIRE AN INDEPENDENT TESTING AND BALANCING AGENCY CERTIFIED BY THE AABC TO TEST AND BALANCE THE HVAC SYSTEMS. SYSTEMS SHALL BE BALANCED TO PLUS/MINUS 10% OF DESIGN REQUIREMENTS. THE CONTRACTOR SHALL PLACE ALL SYSTEMS AND EQUIPMENT INTO FULL OPERATION FOR TESTING AND BALANCING. ONE COPY OF THE FINAL TEST AND BALANCE REPORT WITH THE AABC NATIONAL PERFORMANCE GUARANTY SHALL BE SENT DIRECTLY TO THE ENGINEER OF RECORD. PROVIDE FIVE (5) ADDITIONAL COPIES TO THE CONTRACTOR.

Ventilation Sizing Summary for (E)RTU-2

Project Name: 2017.013.095 - Fusion Medical
Prepared by: Baird, Hampton & Brown, Inc.
01/08/2018
09:12PM

1. Summary

Ventilation Sizing Method	**ASHRAE Std 62.1-2013**	
Design Condition	**Heating operation**	
Occupant Diversity (D)	**1.000**	
Uncorrected Outdoor Air Intake (Vou)	**129**	CFM
System Ventilation Efficiency (Ev)	**0.910**	
Outdoor Air Intake (Vot)	**142**	CFM

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Supply Air (CFM) (Vpz)	Space Floor Area (ft²) (Az)	Area Outdoor Air Rate (CFM/ft²) (Ra)	Time Averaged Occupancy (Occupants) (Pz)	People Outdoor Air Rate (CFM/person) (Rp)	Air Distribution Effectiveness (Ez)	Space Outdoor Air (CFM) (Voz)	Breathing Zone Outdoor Air (CFM) (Vbz)	Space Ventilation Efficiency (Evz)
(E)RTU-2										
102 - BREAK ROOM	1	143	140.1	0.06	0.0	5.00	0.8	**11**	*8*	1.033
103A - STORAGE	1	112	71.0	0.12	0.0	5.00	0.8	**11**	*9*	1.012
103B - PATIENT ROOM	1	101	75.0	0.06	2.0	5.00	0.8	**18**	*15*	0.928
103C - PATIENT ROOM	1	101	75.0	0.06	2.0	5.00	0.8	**18**	*15*	0.928
103D - PATIENT ROOM	1	101	75.0	0.06	2.0	5.00	0.8	**18**	*15*	0.928
103E - LAB	1	83	56.0	0.06	1.0	5.00	0.8	**10**	*8*	0.981
103F - PATIENT ROOM	1	106	88.0	0.06	2.0	5.00	0.8	**19**	*15*	0.927
103G - RECEPTION	1	216	78.0	0.06	3.0	5.00	0.8	**25**	*20*	0.992
CORRIDOR/BREAK ROOM	1	81	211.0	0.06	0.0	5.00	0.8	**16**	*13*	0.910
WAITING ROOM	1	165	210.0	0.06	0.0	5.00	0.8	**16**	*13*	1.011
Totals (incl. Space Multipliers)		**1210**							**129**	**0.910**

AIR DEVICE SCHEDULE

TYPE	DESCRIPTION	OPPOSED BLADE DAMPER	FINISH	PRICE MODEL NO.
S1	10" x 4" SPIRAL PIPE SUPPLY REGISTER DOUBLE DEFLECTION	YES	PRIME COAT	SDGE EXTRUDED ALUMINUM
S2	8" x 4" SIDEWALL SUPPLY REGISTER, DOUBLE DEFLECTION, STEEL WITH DAMPER	YES	WHITE ENAMEL	520D
R1	12" x 4" SPIRAL PIPE RETURN GRILLE	NO	PRIME COAT	SDGER EXTRUDED ALUMINUM
R2	8" x 6" SIDEWALL RETURN AIR GRILLE SINGLE DEFLECTION, STEEL	NO	WHITE ENAMEL	530

NOTES:

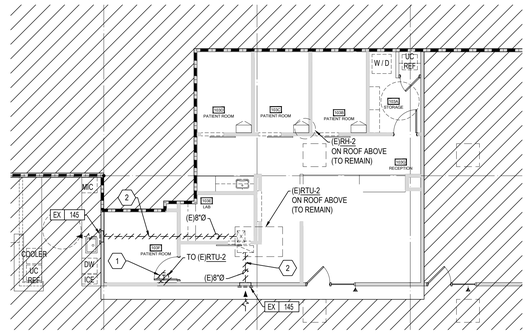
1. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
2. ALL AIR DEVICES INSTALLED IN GYP BOARD, PLASTER, OR OTHER HARD CEILING SHALL HAVE A SEPARATE MOUNTING FRAME.

ROOFTOP UNIT SCHEDULE (REFERENCE FOR TEST AND BALANCE)

UNIT NO.	SUPPLY CFM	O.A. CFM	EXT. S.P. (IN. OF WTR.)	NET COOLING					GAS HEATING		ELECTRICAL				SEER	MANUFACTURER & MODEL NUMBER
				TOTAL BTU	SEN. BTU	E.A.T. Db (°F)	E.A.T. Wb (°F)	AMBIENT TEMP. (°F)	INPUT BTU	OUTPUT BTU	UNIT MCA	MOCP	VOLTS	PHASE		
(E)RTU-2	1400	145	0.6	40.8	33.1	80.2	65.0	105	65	53	34.00	50.00	208	1	14	CARRIER 48KCDA05

NOTES:

1. ROOFTOP UNIT SHALL BE BALANCED TO THE SUPPLY AND OUTSIDE AIRFLOWS NOTED ABOVE.



TRUE NORTH PLAN NORTH 01

MECHANICAL DEMOLITION FLOOR PLAN

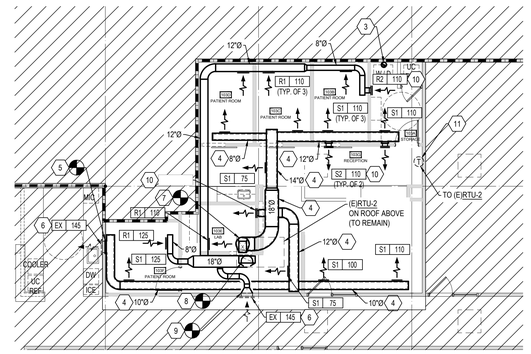
SCALE: 1/8" = 1'-0"

NOTES BY SYMBOL: "(#)"

1. REMOVE EXISTING THERMOSTAT AND ASSOCIATED WIRE FROM LOCATION SHOWN. PREPARE THERMOSTAT FOR RELOCATION PER PLAN 2 OF THIS SHEET.
2. REMOVE EXISTING DUCTWORK FROM EXISTING AIR DEVICE BACK TO EXISTING ROOFTOP UNIT. PREPARE EXISTING ROOFTOP UNIT AND AIR DEVICES FOR FUTURE CONNECTION.
3. ROUTE FULL SIZE EXHAUST DUCT FROM DRYER (OWNER PROVIDED) UP THROUGH ROOF. TERMINATE DUCT ABOVE ROOF WITH RAIN CAP AND INSECT SCREEN.
4. DUCTWORK SHALL BE INTERNALLY LINED SPIRAL DUCTWORK. DUCTWORK SHALL BE PROVIDED WITH PAINT GRIP AND PAINTED PER ARCHITECTURAL.
5. ROUTE 8'Ø INTERNALLY LINED SPIRAL DUCTWORK AND TRANSITION TO FULL SIZE DUCTWORK AND CONNECT TO EXISTING AIR DEVICE.
6. REBALANCE EXISTING AIR DEVICE TO AIRFLOW SHOWN.
7. ROUTE FULL SIZE SUPPLY DUCTWORK DOWN FROM EXISTING ROOFTOP UNIT AND TRANSITION TO 18'Ø SPIRAL ROUND DUCTWORK. CONTINUE DUCTWORK AS SHOWN.
8. ROUTE 18'Ø SPIRAL ROUND RETURN DUCTWORK UP AND TRANSITION TO FULL SIZE DUCTWORK AND CONNECT TO EXISTING ROOFTOP UNIT.
9. ROUTE RETURN DUCTWORK, SIZED AS SHOWN, FROM MAIN AND TRANSITION TO FULL SIZE DUCTWORK TO CONNECT TO EXISTING AIR DEVICE. FIELD VERIFY HEIGHT OF EXISTING AIR DEVICE PRIOR TO ANY DUCT ROUTING AND ROUTE SUPPLY AND RETURN DUCTWORK OVER EACH OTHER AS NECESSARY.
10. BRANCH 8"Ø SPIRAL ROUND DUCTWORK FROM MAIN AND TRANSITION TO FULL SIZE DUCTWORK TO CONNECT WITH SIDEWALL GRILLE.
11. RELOCATE EXISTING THERMOSTAT TO LOCATION SHOWN.

HVAC LEGEND

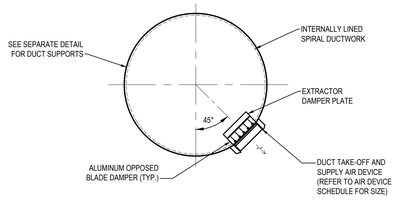
----------	EXISTING TO REMAIN
//////////	ITEM TO BE REMOVED
	NEW DUCTWORK
	SIDEWALL GRILLE
T	THERMOSTAT (MOUNT 4'-0" ABOVE FLOOR)
	VOLUME DAMPER
	CONNECT TO EXISTING
12/8	INDICATES 12" x 8" INS. DIM. NET (1ST FIGURE = SIDE SHOWN, 2ND FIGURE = SIDE NOT SHOWN)
TYPE A 150 CFM	DIFFUSER OR GRILLE DESIGNATION
(E)	EXISTING



TRUE NORTH PLAN NORTH 02

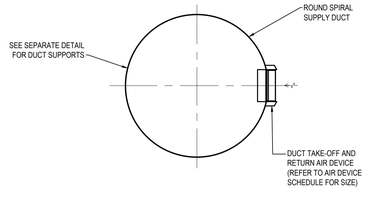
MECHANICAL FLOOR PLAN

SCALE: 1/8" = 1'-0"



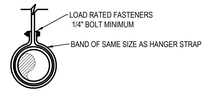
03 *EXPOSED SPIRAL ROUND SUPPLY DUCTWORK DETAIL*

SCALE: NTS



04 *EXPOSED SPIRAL ROUND RETURN DUCTWORK DETAIL*

SCALE: NTS



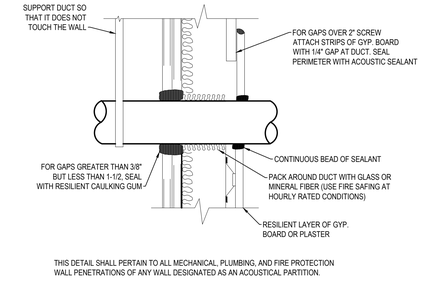
HANGER STRAPS			
DUCT DIA.	HANGER	MAX. LOAD LBS.	MAX SPACING FT.
8"-24"	ONE 1" X 22 GA STRAP	260	12

05 *ROUND DUCT HANGERS*

SCALE: NTS

NOTES:

1. TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
2. PREVENT BENDING OF STRAP AT 90° BEND UNDER LOAD.
3. ALLOWABLE LOAD ON UPPER ATTACHMENT IS 1/4 OF FAILURE LOAD.



THIS DETAIL SHALL PERTAIN TO ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION WALL PENETRATIONS OF ANY WALL DESIGNATED AS AN ACOUSTICAL PARTITION.

06 *DUCT PENETRATION THRU STUD WALL DETAIL*

NOT TO SCALE

BAIRD, HAMPTON & BROWN
engineering and surveying
6300 Ridglea Place, Suite 700 Fort Worth, TX 76116
mail@bhbinc.com • 817.338.1277 • bhbinc.com
TBPE Firm #44 • TBPLS FIRM #10011300
BHB PROJECT # 2017.013.095

gff INTERIORS
3300 West 7th Street, Suite 110
Fort Worth, Texas 76107 | 817.303.1500
2808 Fairmount Street, Suite 300
Dallas, Texas 75201 | 214.303.1500

STATE OF TEXAS
SAUL MARTINEZ
116661
LICENSED PROFESSIONAL ENGINEER
01/15/2018

FUSION MEDICAL AESTHETICS
WHEELHOUSE II
2625 WHITMORE STREET
FORT WORTH, TX 76107

No.	Date	Revision

JS Drawn
SM Approved

MECHANICAL FLOOR PLANS

Project No. 17211.00
Date 01.12.2018

M1.0