OUTDOOR AIR SCHEDULE - 2nd Floor

ROOM DESIGNATION NUMBER	ROOM DESIGNATION NAME	ROOM AREA (SQ. FT.)	NO. OF PEOPLE	NO. OF FIXTURES	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: EST. MAX. OCCUPANCY (P/1000 SQ. FT.)	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: OA CFM / PERSON	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: OA CFM / SQ. FT.	AIR DISTRIBUTION: OA CFM – CODE MINIMUM	AIR DISTRIBUTION: OA CFM – DESIGN	AIR DISTRIBUTION: SUPPLY AIR CFM	AIR DISTRIBUTION: RETURN AIR CFM	EXHAUST/EXFILTRATE CFM (ASHRAE 62.1, TABLE 6–2)
RTU5 (17.5 TON / 7,000 CFM)								[O/A Dmpr @ 20%]				
	CORRIDORS	1,294					.06	78	180	900	900	
2065	STORAGE	35					.12	4				
2067	PROPOSAL ROOM	321	8		50	5	.06	59	100	500	500	
2069	OFFICE	115	1		25	10	.12	24	35	175	175	
2070	STORAGE	63					.12	8				
2071	OFFICE	120	1		25	10	.12	24	35	175	175	
2072	STORAGE	63					.12	8				
2073	OFFICE	120	1		25	10	.12	24	35	175	175	
2075	OFFICE	120	1		25	10	.12	24	35	175	175	
2076	OFFICE	116	1		25	10	.12	24	35	175	175	
2077	STORAGE	28					.12	3				
2078	OFFICE	120	1		25	10	.12	24	35	175	175	
2079	OFFICE	120	1		25	10	.12	24	35	175	175	
2080	OFFICE	120	1		25	10	.12	24	35	175	175	
2081	OFFICE	120	1		25	10	.12	24	35	175	175	
2082	OFFICE	117	1		25	10	.12	24	35	175	175	
2083	OFFICE	120	1		25	10	.12	24	35	175	175	
2084	OFFICE	111	1		25	10	.12	23	35	175	175	
2085	OFFICE	120	1		25	10	.12	24	35	175	175	
2086	HOTELING OFFICE	100	1		25	10	.12	22	35	175	175	
2087	OFFICE	120	1		25	10	.12	24	35	175	175	
2088	HOTELING OFFICE	123	1		25	10	.12	25	35	175	175	
2089	HOTELING OFFICE	101	1		25	10	.12	22	35	175	175	
2090	HOTELING OFFICE	102	1		25	10	.12	22	35	175	175	
2091	STORAGE	36					.12	4				
2092	HOTELING OFFICE	100	1		25	10	.12	22	35	175	175	
2093	HOTELING OFFICE	98	1		25	10	.12	22	35	175	175	
2094	HOTELING OFFICE	101	1		25	10	.12	22	35	175	175	
2095	HOTELING OFFICE	100	1		25	10	.12	22	35	175	175	
2096	HOTELING OFFICE	100	1		25	10	.12	22	35	175	175	
2098	HOTELING OFFICE	100	1		25	10	.12	22	35	175	175	
2100	STORAGE	26					.12	3				
2102	HOTELING OFFICE	98	1		25	10	.12	22	35	175	175	
2104	OFFICE (CORNER)	210	1		25	10	.12	35	65	325	325	
2105	OFFICE	118	1		25	10	.12	24	45	225	225	
2106	OFFICE	116	1		25	10	.12	24	45	225	225	
2107	OFFICE	107	1		25	10	.12	23	45	225	225	
2108	OFFICE	123	1		25	10	.12	25	45	225	225	
							SYSTEM TOTALS =	882	1,400	7,000	7,000	

SYSTEM SUMMARY:

CONDITIONED AREA: 5,322 SF
DESIGN AIRFLOW: 7,000 CFM
DESIGN CFM/SF: 1.32 CFM/SF
EST. OCCUPANCY: 38 PEOPLE

MIN. O/A REQ'D: 882 CFM
DESIGN O/A: 1,400 CFM, 36.8 CFM/PERSON, 0.26 CFM/SF

MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1–2019, TABLE 6–1 IS 17.0 CFM PER PERSON FOR OFFICES AND 15.0 CFM PER PERSON FOR COMPUTER LABS

RTU6 (17.5 TON / 7,000 CFM)								[O/A Dmpr @ 17.5%]				
	CORRIDORS	577					.06	35	153	875	875	
2022	HOTELING OFFICE	118	1		25	10	.12	24	35	200	200	
2023	OFFICE	180	1		25	10	.12	32	61	350	350	
2024	HOTELING OFFICE	118	1		25	10	.12	24	35	200	200	
2025	OFFICE	174	1		25	10	.12	31	61	350	350	
2026	HOTELING OFFICE	118	1		25	10	.12	24	35	200	200	
2027	OFFICE	161	1		25	10	.12	29	61	350	350	
2028	HOTELING OFFICE	118	1		25	10	.12	24	35	200	200	
2029	OFFICE	158	1		25	10	.12	29	61	350	350	
2030	OPEN COLLABORATION	800	10		25	10	.12	196	280	1,600	1,600	
2031	HOTELING OFFICE	121	1		25	10	.12	24	44	250	250	
2032	LAB (O/A TO MSS)	264	4		25	10	.12	72		75		
2033	STORAGE	121					.12	14	35	200	200	
2074	OPEN OFFICE	884	8		25	10	.12	186	245	1,400	1,400	
S2–2	STAIR S–2	286					.06	17	70	400	400	
							SYSTEM TOTALS =	762	1,225	7,000	7,000	

SYSTEM SUMMARY:

CONDITIONED AREA: 4,198 SF
DESIGN AIRFLOW: 7,000 CFM
DESIGN CFM/SF: 1.67 CFM/SF
EST. OCCUPANCY: 31 PEOPLE

MIN. O/A REQ'D: 762 CFM
DESIGN O/A: 1,225 CFM, 39.5 CFM/PERSON, 0.29 CFM/SF

MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1–2019, TABLE 6–1 IS 17.0 CFM PER PERSON FOR OFFICES AND 15.0 CFM PER PERSON FOR COMPUTER LABS

OUTDOOR AIR SCHEDULE - 2nd Floor

ROOM DESIGNATION NUMBER	ROOM DESIGNATION NAME	ROOM AREA (SQ. FT.)	NO. OF PEOPLE	NO. OF FIXTURES	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: EST. MAX. OCCUPANCY (P/1000 SQ. FT.)	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: OA CFM / PERSON	ASHRAE 62.1–2019 TABLE 6–1 REQUIREMENTS: OA CFM / SQ. FT.	AIR DISTRIBUTION: OA CFM – CODE MINIMUM	AIR DISTRIBUTION: OA CFM – DESIGN	AIR DISTRIBUTION: SUPPLY AIR CFM	AIR DISTRIBUTION: RETURN AIR CFM	EXHAUST/EXFILTRATE CFM (ASHRAE 62.1, TABLE 6–2)
RTU7 (17.5 TON / 7,000 CFM)								[O/A Dmpr @ 15%]				
	CORRIDORS	1,309					.06	79	124	825	825	
2051	HOTELING OFFICE	125	1		25	10	.12	25	30	200	200	
2052	OFFICE	110	1		25	10	.12	23	30	200	200	
2053	OFFICE	115	1		25	10	.12	24	26	175	175	
2054	HOTELING OFFICE	144	1		25	10	.12	27	30	200	200	
2055	SUPPLIES	61					.12	7				
2056	SECURITY OFFICE	241	2		25	10	.12	49	75	500	500	
2057	OFFICE (CORNER)	178	2		25	10	.12	41	53	350	350	
2058	OFFICE	120	1		25	10	.12	24	30	200	200	
2059	HOTELING OFFICE	98	1		25	10	.12	22	30	200	200	
2060	OFFICE	121	1		25	10	.12	24	30	200	200	
2061	OFFICE	118	1		25	10	.12	24	30	200	200	
2062	OFFICE	358	10		5	5	.06	72	105	700	700	
2063	CONFERENCE	691	14		50	5	.06	112	180	1,200	1,200	
2064	BREAK RM/LOUNGE	415	8		50	5	.12	90	120	800	800	
2064B	PANTRY	104					.12	13	15	100	100	
2097	OFFICE	121	1		25	10	.12	24	37	250	250	
2099	OFFICE	127	1		25	10	.12	25	37	250	250	
2101	HOTELING OFFICE	98	1		25	10	.12	22	30	200	200	
2103	OFFICE	120	1		25	10	.12	24	38	250	250	
							SYSTEM TOTALS =	751	1,050	7,000	7,000	

SYSTEM SUMMARY:

CONDITIONED AREA: 4,774 SF
DESIGN AIRFLOW: 7,000 CFM
DESIGN CFM/SF: 1.47 CFM/SF
EST. OCCUPANCY: 48 PEOPLE

MIN. O/A REQ'D: 751 CFM
DESIGN O/A: 1,050 CFM, 21.9 CFM/PERSON, 0.22 CFM/SF

MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1–2019, TABLE 6–1 IS 17.0 CFM PER PERSON FOR OFFICES AND 15.0 CFM PER PERSON FOR COMPUTER LABS

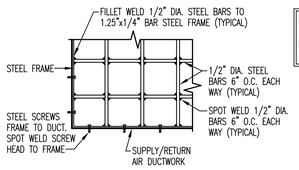
RTU8 (17.5 TON / 7,000 CFM)								[O/A Dmpr @ 15%]				
201	LOBBY	320					.06	19	105	700	700	
S1–2	STAIR 1	242					.06	14	60	400	400	
	CORRIDORS	503					.06	30	90	600	600	
2001	RECEPTION	748	4		5	5	.06	65	150	1,000	1,000	
2003	WOMEN'S RESTROOM	154		3					30	200		250
2004	JANITOR CLOSET	14					.12	2				50
2005	MEN'S RESTROOM	203		5					45	300		350
2011	STORAGE	78					.12	9	11	75	75	
2012	HOTELING OFFICE	86	1		25	10	.12	20	30	200	200	
2013	STORAGE	80					.12	10	11	75	75	
2014	HOTELING OFFICE	86	1		25	10	.12	20	30	200	200	
2015	BREAK ROOM	385	8		50	5	.12	86	112	750	750	
2015A	STORAGE (BREAK RM)	49					.12	6	11	75	75	
2016	CONFERENCE	719	14		50	5	.06	113	210	1,400	1,400	
2017	STORAGE	26					.12	3				
2018	OFFICE	185	1		25	10	.12	32	52	350	350	
2019	HOTELING OFFICE	139	1		25	10	.12	27	37	250	250	
2021	OFFICE	180	1		25	10	.12	32	52	350	350	
2051A	SECURE VESTIBULE	40					.06	2	11	75	75	
							SYSTEM TOTALS =	491	1,050	7,000	6,500	650

SYSTEM SUMMARY:

CONDITIONED AREA: 4,237 SF
DESIGN AIRFLOW: 7,000 CFM
DESIGN CFM/SF: 1.65 CFM/SF
EST. OCCUPANCY: 31 PEOPLE

MIN. O/A REQ'D: 491 CFM
DESIGN O/A: 1,050 CFM, 33.9 CFM/PERSON, 0.25 CFM/SF

MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1–2019, TABLE 6–1 IS 17.0 CFM PER PERSON FOR OFFICES AND 15.0 CFM PER PERSON FOR COMPUTER LABS



Special Note:
SECURITY/MAN BAR CONSTRUCTION IS BASED ON ICD 705 AND DEPARTMENT OF HOMELAND SECURITY REQUIREMENTS

GENERAL NOTES

A. MANBARS ARE REQUIRED FOR ANY PENETRATION LARGER THAN 96 SQ. IN. (UNLESS ONE DIMENSION IS 6" OR LESS).

B. PROVIDE A 12"x12" ACCESS PANEL/DOOR (INSPECTION PORT) ON THE SECURE SIDE OF THE PENETRATION.

C. MAN BAR FRAME SHALL BE CONSTRUCTED TO SLIDE INTO DUCT. THE OVERALL FRAME DIMENSIONS TO BE 1/4" SMALLER IN BOTH DIRECTIONS THAN THE DUCT SIZE SHOWN ON THE PLANS. STEEL CHANNEL ALL AROUND OPENING AT DUCT PENETRATION SHALL HAVE 2"x5/16" MIN. FLANGE BY DEPTH TO FIT WALL OPNG.

D. FRAMES SHALL BE PRE–DRILLED.

E. MAN BARS REQUIRED AT ALL VERTICAL DROPS AT THE ROOFTOP UNIT, AT EACH FLOOR PENETRATION W/AN ACCESS DOOR ON THE MORE SECURE SIDE AND HORIZONTAL PENETRATIONS THRU "APPLICABLE WALL TYPES" INDICATED AT THE RIGHT.

REF: Round Duct Areas

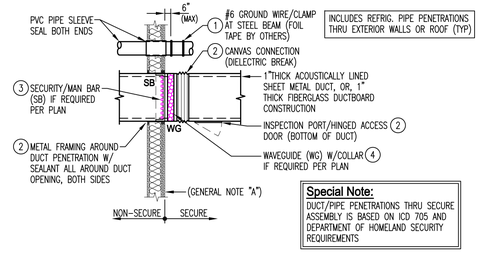
6" DIA = 28.2 SQ. IN.
7" DIA = 28.2 SQ. IN.
8" DIA = 50.2 SQ. IN.
10" DIA = 78.5 SQ. IN.
12" DIA = 113.1 SQ. IN.

DUCTS ≤ 10" DIA DON'T NEED MAN BARS

DUCTS ≥ 12" DIA REQUIRE A MAN BAR ASSEMBLY WITH AN INSPECTION PANEL ON THE MORE SECURE SIDE OF THE PENETRATION

MAN/SECURITY BAR DETAIL (PLAN TAG: SB)

SCALE: NONE



Special Note:
DUCT/PIPE PENETRATIONS THRU SECURE ASSEMBLY IS BASED ON ICD 705 AND DEPARTMENT OF HOMELAND SECURITY REQUIREMENTS

DETAIL NOTES

1. CONDUIT/PIPE PENETRATIONS THRU PVC WALL SLEEVE SHALL BE SEALED ALL AROUND W/ROCK WOOL IN CAVITY. PROVIDE #6 GROUND WIRE AND CLAMP TO STEEL BEAM ON THE SECURE SIDE OF THE ROOM FOR VISIBLE INSPECTION.
2. DUCT PENETRATIONS THRU WALL SHALL BE SEALED ALL AROUND, AND SHALL BE FITTED W/A DIELECTRIC OR CANVAS BREAK WITHIN 6" AT THE SECURE ROOM SIDE WALL. A 12"x12" ACCESS PANEL SHALL BE INSTALLED IN BOTTOM OF DUCT.
3. COORDINATE ORDER AND LOCATION OF ALL DEVICES INSTALLED AT THE WALL: SECURITY BARS (SB), WAVE GUIDES (WG), ACCESS DOORS, ETC W/END USER.
4. WAVEGUIDE (R.F. AIR VENT) IF REQ'D PER PLAN W/ ACCESS DOOR ON SECURE SIDE. MFR/MODEL: UNIVERSAL SHIELDING SERIES #1200A TYPE: 3/16"x1" DEEP STEEL HONEYCOMB CELLS FRAME: 11 GAUGE STEEL ELECTRO–ZINC PLATED W/SOLDER SEAM ON BOTH SIDES

GENERAL NOTES

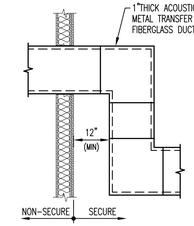
A. WALL CONSTRUCTION AND SOUND TRANSMISSION CLASS (STC) RATING PER ARCHITECTURAL PLANS AND DETAILS FOR LOCATION(S) AND RATINGS.

B. SECURITY BARS (SB) TO BE PROVIDED IN HORIZONTAL DUCT PENETRATIONS THRU AN S4 OR S4a SECURE WALL TYPE.

C. IF BOTH WAVEGUIDES AND MAN BARS ARE INSTALLED, COORDINATE ORDER WITH CLIENT AND LOCATION OF ACCESS DOORS PRIOR TO ROUGH–IN WORK.

DUCT/PIPE PENETRATIONS (THRU SECURE ASSEMBLY)

SCALE: NONE



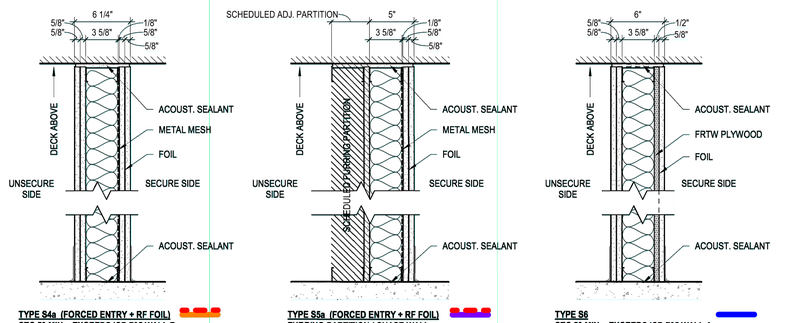
GENERAL NOTES

A. DESIGN AND INSTALLATION OF THE Z–DUCT SHALL NOT COMPROMISE THE STC RATING OF THE WALL.
B. THE Z–DUCT SHALL HAVE (2)–90° BENDS IN ORDER TO ENSURE THERE IS NOT A DIRECT SOUND PATH THRU THE DUCT.
C. ENTIRE LENGTH OF DUCT TO BE LINED W/SOUND ATTENUATION MATERIAL OR CONSTRUCTED OF 1" THK FIBERGLASS DUCTBOARD.

Special Note:
RETURN AIR "Z–DUCT" CONSTRUCTION IS BASED ON ICD 705 AND DEPARTMENT OF HOMELAND SECURITY REQUIREMENTS

Z–DUCT" DETAIL (SUPPLY/RETURN DUCT)

SCALE: NONE



TYPE S4a (FORCED ENTRY + RF FOIL)
STC 50 MIN. - EXCEEDS ICD 705 WALL B
PROVIDE TWO LAYERS TYPE "X" GYPSUM WALLBOARD SECURE SIDE AND TWO LAYERS ON UNSECURE SIDE OF 3 5/8" 16 GA. METAL STUDS @ 16" O.C. WITH 3" SOUND ATTENUATION BLANKETS IN STUD SPACE. 3/4" #9 10 GAGE EXPANDED METAL MESH ON CONTROLLED SIDE, EITHER SPOT WELDED OR SCREWED W/ WASHERS @ 6" O.C. TO 16 GA. METAL STUDS. STAGGER GWB JOINTS. TVM RADIANT FOIL BARRIER ON CONTROLLED SIDE BETWEEN 2 LAYERS GWB. EXTEND STUDS, BOARD, AND BLANKETS FULL HEIGHT TO DECK ABOVE. ATTACH TO STRUCTURE ABOVE W/ VERTICAL SLIP CONNECTIONS. SEE PARTITION NOTES THIS DWG.

TYPE S4b (RF FOIL)
STC 50 MIN. - EXCEEDS ICD 705 WALL A
SAME AS S4a ABOVE LESS EXPANDED METAL MESH.

HVAC REQUIREMENTS
– CANVAS CONNECTION (DIELECTRIC BREAK)
– SECURITY BARS (SB) AT HORIZ. PENETRATIONS
– WAVEGUIDES (WG) AT HORIZ. PENETRATIONS
– ACCESS DOOR (SECURE SIDE)

TYPE S5a (FORCED ENTRY + RF FOIL)
FURRING PARTITION / CHASE WALL
PROVIDE TWO LAYERS TYPE "X" GYPSUM WALLBOARD ON SECURE SIDE OF 3 5/8" 16 GA. METAL STUDS @ 16" O.C. WITH 3" SOUND ATTENUATION BLANKETS IN STUD SPACE OVER ADJACENT FURRING PARTITION. 3/4" #9 10 GAGE EXPANDED METAL MESH ON CONTROLLED SIDE, EITHER SPOT WELDED OR SCREWED W/ WASHERS @ 6" O.C. TO 16 GA. METAL STUDS. STAGGER GWB JOINTS. TVM RADIANT FOIL BARRIER ON CONTROLLED SIDE BETWEEN 2 LAYERS GWB. EXTEND STUDS, BOARD, AND BLANKETS FULL HEIGHT TO DECK ABOVE. ATTACH TO STRUCTURE ABOVE W/ VERTICAL SLIP CONNECTIONS. SEE PARTITION NOTES THIS DWG.

TYPE S5b (RF FOIL)
FURRING PARTITION / CHASE WALL
SAME AS S5b ABOVE LESS EXPANDED METAL MESH.

HVAC REQUIREMENTS
– CANVAS CONNECTION (DIELECTRIC BREAK)
– SECURITY BARS (SB) AT HORIZ. PENETRATIONS
– WAVEGUIDES (WG) AT HORIZ. PENETRATIONS
– ACCESS DOOR (SECURE SIDE)

TYPE S6
STC 50 MIN. - EXCEEDS ICD 705 WALL A
PROVIDE ONE LAYER OF TYPE "X" GYPSUM WALLBOARD OVER ONE LAYER 1/2" FRTW PLYWOOD ON SECURE SIDE AND TWO LAYERS OF TYPE "X" GYPSUM WALLBOARD ON UNSECURE SIDE OF 3 5/8" 16 GA. METAL STUDS @ 16" O.C. WITH 3" SOUND ATTENUATION BLANKETS IN STUD SPACE. STAGGER GWB JOINTS. TVM RADIANT FOIL BARRIER ON CONTROLLED SIDE BETWEEN PLYWOOD AND GYPBOARD. EXTEND STUDS, BOARD, PLYWOOD, AND BLANKETS FULL HEIGHT TO DECK ABOVE. ATTACH TO STRUCTURE ABOVE W/ VERTICAL SLIP CONNECTIONS. SEE PARTITION NOTES THIS DWG.

HVAC REQUIREMENTS
– CANVAS CONNECTION (DIELECTRIC BREAK)
– Z–DUCT ON SUPPLY & RETURN DUCTWORK
– ACCESS DOOR (SECURE SIDE)

SECURE PARTITION TYPES

(Refer to Architectural Sheet AG004 for more information; shown here for coordination purposes)

SCALE: NONE

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PROJECT KONA
NASK TI

4123 Colonel Glenn Hwy
Beavercreek, OH 45431

ISSUANCES

No.	Description	Date
	Issued for Bldg Shell Permit	2-10-25
	Issued for 2nd FL T.I. Permit	11-24-25

Drawn By

Checked By

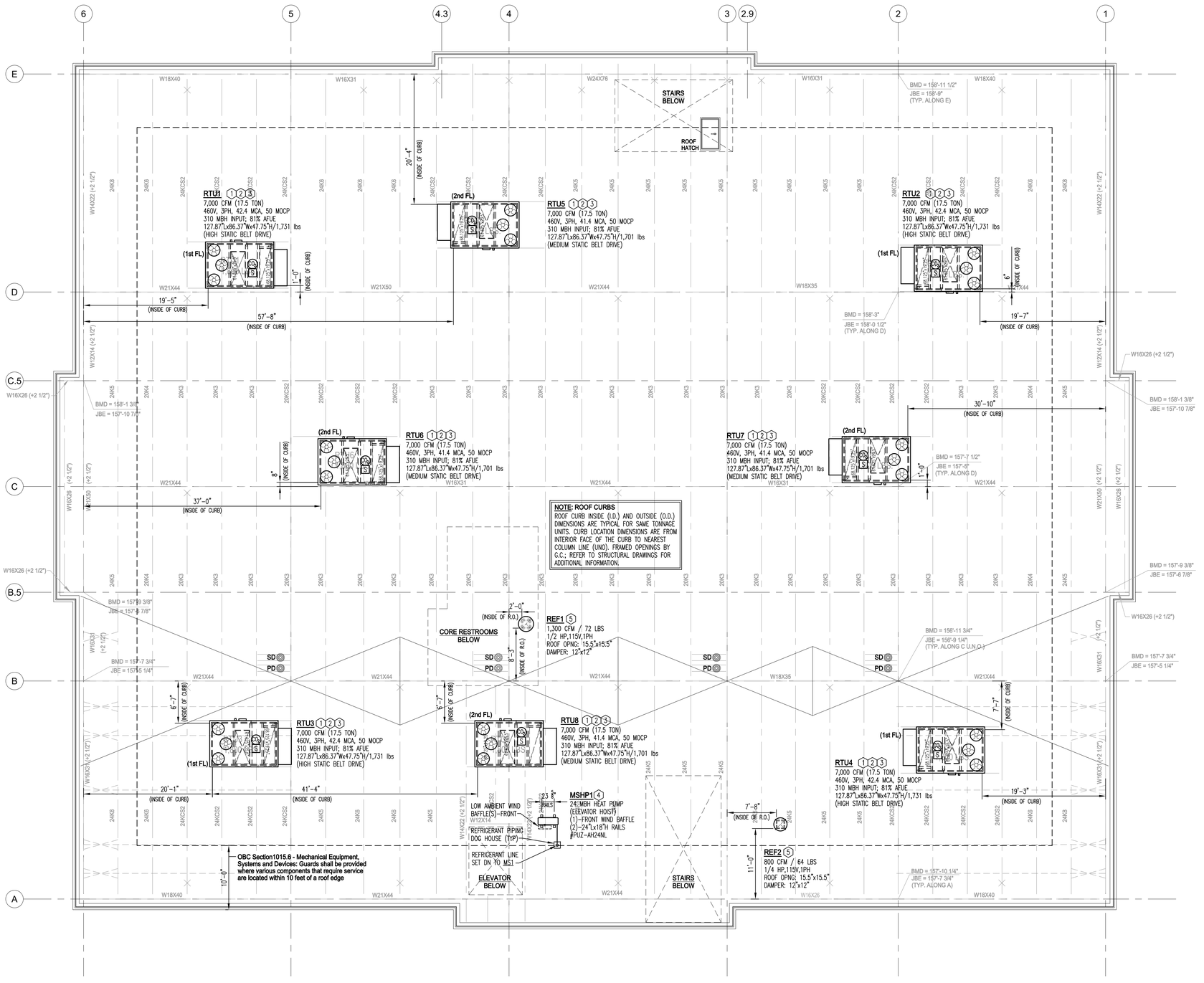
Client Number 727

Project Number 7617

STATE OF OHIO — THERESA A. ROOT E68169 — REGISTERED PROFESSIONAL ENGINEER
Digitally Signed by Theresa A. Root
License No. E68169, Exp. Date 12-31-27

DRAWING TITLE
MECHANICAL SCHEDULES

SHEET NO.
M003



ROOF PLAN (SHELL)

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

EQUIPMENT LIST - SHELL ROOFTOP

REF1 [SHELL CORE RESTROOMS]
MFR & MODEL: GREENHECK G-130-VG (DIRECT DRIVE)
EXHAUST CAP.: 1,300 CFM @ 0.5" S.P.
ELECTRICAL: 1/2 HP, 6.4 FLA, 115V, 1PH, 1725 RPM, 8 MCA, 15 MOCP VARI-GREEN EC MOTOR W/DIAL FOR BALANCING
WEIGHT W/ACC'S: 72 LBS
ROOF OPNG/DMPR: 15.5"x15.5" / 12"x12"
FEATURES/OPTIONS: 14"H ROOF CURB; GRAVITY BACKDRAFT DAMPER; NEMA 1 TOGGLE DISCONNECT (FIELD INSTALLED); UL LISTED; AMCA CERTIFIED; BIRDSCREEN; CORROSION RESISTANT FASTENERS; ALUMINUM HOUSING/CURB CAP

REF2 [SHELL ELEC/HOUSE ROOMS]
MFR & MODEL: GREENHECK G-090-VG (DIRECT DRIVE)
EXHAUST CAP.: 800 CFM @ 0.5" S.P.
ELECTRICAL: 1/4 HP, 2.85 FLA, 115V, 1PH, 1725 RPM, 4 MCA, 15 MOCP VARI-GREEN EC MOTOR W/DIAL FOR BALANCING
WEIGHT W/ACC'S: 64 LBS
ROOF OPNG/DMPR: 15.5"x15.5" / 12"x12"
FEATURES/OPTIONS: 14"H ROOF CURB; GRAVITY BACKDRAFT DAMPER; NEMA 1 TOGGLE DISCONNECT (FIELD INSTALLED); UL LISTED; AMCA CERTIFIED; BIRDSCREEN; CORROSION RESISTANT FASTENERS; ALUMINUM HOUSING/CURB CAP

RTU1 thru RTU4 [1st FLOOR UNITS w/HIGH STATIC BELT DRIVES]
MFR & MODEL: CARRIER 48FEEM20B3A6-8M0A0
COOLING CAP.: 7,000 CFM (17.5 TON); 227.04 MBH; 2-STAGE COOLING 10.8 ARI EER / 14.5 IEER
NATURAL GAS: 310/251 MBH INPUT/OUTPUT; 81% AFUE; 2-STAGE HEATING
ELECTRICAL: 3.95 BHP, 460V, 3PH, 42.4 MCA, 50 MOCP HIGH STATIC BELT DRIVE
DIMENSIONS/WEIGHT: 127.875"Lx86.375"Wx47.75"H / 1,701 lbs
FEATURES: ECONOMIZER W/ENTHALPY CONTROL; CO2 AND RETURN AIR DUCT SMOKE DETECTOR (FACTORY INSTALLED)
FILTERS: (6)-20"x25"x2" THROWAWAY
REFRIGERANT: R-454B
CURB: #CRRFCURB045A00; 255 lbs

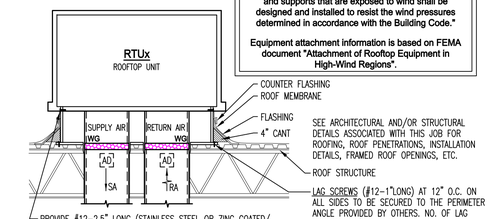
RTU5 thru RTU8 [2nd FLOOR UNITS w/MED STATIC BELT DRIVES]
MFR & MODEL: CARRIER 48FEEM20B2A6-8M0A0
COOLING CAP.: 7,000 CFM (17.5 TON); 227.04 MBH; 2-STAGE COOLING 10.8 ARI EER / 14.5 IEER
NATURAL GAS: 310/251 MBH INPUT/OUTPUT; 81% AFUE; 2-STAGE HEATING
ELECTRICAL: 3.95 BHP, 460V, 3PH, 41.4 MCA, 50 MOCP HIGH STATIC BELT DRIVE
DIMENSIONS/WEIGHT: 127.875"Lx86.375"Wx47.75"H / 1,701 lbs
FEATURES: ECONOMIZER W/ENTHALPY CONTROL; CO2 AND RETURN AIR DUCT SMOKE DETECTOR (FACTORY INSTALLED)
FILTERS: (6)-20"x25"x2" THROWAWAY
REFRIGERANT: R-454B
CURB: #CRRFCURB045A00; 255 lbs

CONSTRUCTION NOTES

1. COORDINATE LOCATION OF ROOFTOP UNIT WITH STRUCTURAL FRAMING; SHIFT AS NECESSARY. PROVIDE FULL SIZE, SCHEDULE 40 PVC CONDENSATE DRAIN W/TRAP ROUTED/DIRECTED TOWARDS AREA ROOF DRAIN.
2. PROVIDE FULL SIZE SUPPLY AND RETURN AIR DROPS DOWN THRU CURB INTO SHELL SPACE. DUCTWORK EXTENSIONS/LAYOUT, FOR TENANT INTERIOR SHALL BE PROVIDED UNDER SEPARATE CONTRACT.
3. IF NOT FACTORY INSTALLED, INSTALL RETURN AIR DUCT MOUNTED SMOKE DETECTOR AND CO2 SENSOR PER THE MFR'S INSTRUCTIONS; DEVICES PROVIDED WITH RTU. SMOKE DETECTORS SHALL BE INTERLOCKED TOGETHER BY FLOOR SUCH THAT DETECTION OF SMOKE BY ANY UNIT ON THAT FLOOR SHALL SHUT DOWN ALL UNITS SERVING THAT FLOOR UNDER THE BUILDING SHELL PACKAGE.
4. MINI SPLIT OUTDOOR UNIT (AC/HP) SHALL BE INSTALLED ON, AND SECURED TO (2)-18"Hx24"L EQUIPMENT RAILS WITH (2)-STRAPS AND A MINIMUM OF (2)-SCREWS ON EACH STRAP TO COMPLY WITH OMC 301.15 WIND RESISTANCE AND FEMA'S "ATTACHMENT OF ROOFTOP EQUIPMENT IN HIGH-WIND REGIONS." EQUIPMENT RAILS SHALL BE SECURED/ATTACHED TO ROOF FRAMING. ROUTE REFRIGERANT LINE SET DOWN TO RESPECTIVE INDOOR UNIT THRU COMMON DOG HOUSE/PIPE CURB. SEAL ALL PENETRATIONS WEATHERTIGHT.
5. COORDINATE LOCATION OF ROOF MOUNTED EXHAUST FAN W/STRUCTURAL FRAMING; SHIFT AS NECESSARY. DROP DUCTWORK DOWN TO RESPECTIVE FLOOR AS SHOWN.

This unit attachment drawing was created to show that equipment installation complies for resistance to high wind-pressures for 3-second wind gust speeds of 115 mph (OBC, Chap 16), and OMC 301.15 "Wind resistance: Mechanical equipment, appliances and supports that are exposed to wind shall be designed and installed to resist the wind pressures determined in accordance with the Building Code."

Equipment attachment information is based on FEMA document "Attachment of Rooftop Equipment in High-Wind Regions".



SEE ARCHITECTURAL AND/OR STRUCTURAL DETAILS ASSOCIATED WITH THIS JOB FOR ROOFING, ROOF PENETRATIONS, INSTALLATION DETAILS, FRAMED ROOF OPENINGS, ETC.

NOTE: T.I. DEVICES
RF WAVEGUIDES (WG) AND ACCESS DOOR (AD) SHALL BE FURNISHED AND INSTALLED UNDER THE T.I. PHASE IF REQUIRED.

ROOFTOP UNIT SECUREMENT DETAIL

SCALE: NONE

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ISSUANCES

No.	Description	Date
	Issued for Bldg Shell Permit	2-10-25
	Issued for 2nd FL T.I. Permit	11-24-25

Drawn By

Checked By

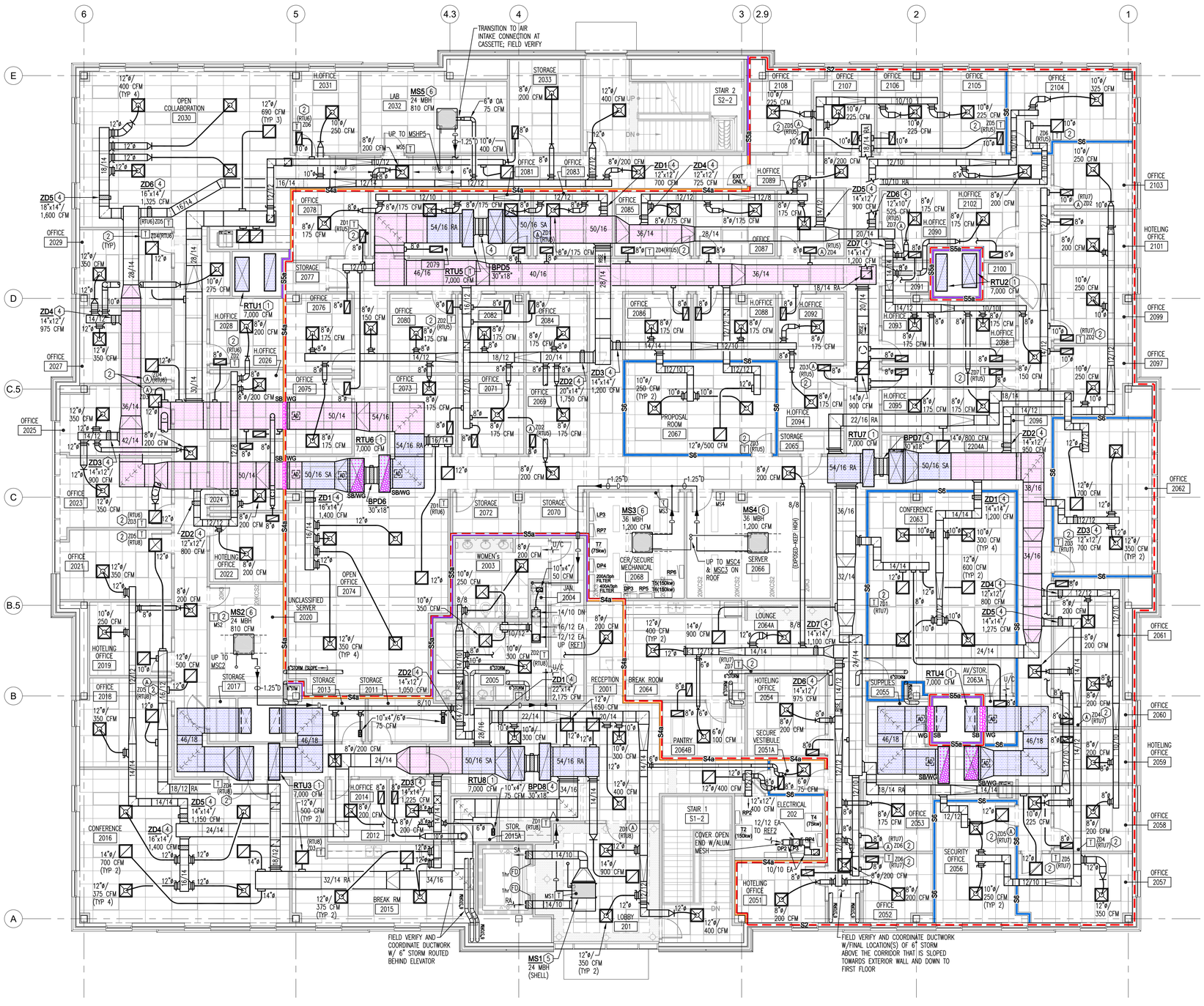
Client Number 727

Project Number 7617

STATE OF OHIO — THERESA A. ROOT E68169 — REGISTERED PROFESSIONAL ENGINEER
Digitally Signed by Theresa A. Root
License No. E68169, Exp. Date 12-31-27

DRAWING TITLE
MECHANICAL ROOF SHELL PLAN

SHEET NO.
M101



2nd FLOOR (T.I.)

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

NORTH

CONSTRUCTION NOTES

1. BLDG SHELL DUCTWORK DOWN THRU SHAFTS TO BE MAINTAINED. REMOVE MESH FROM END OF DUCTWORK AND EXTEND AS SHOWN. ENSURE INSULATION IS CONTINUOUS WITHOUT TEARS.
2. REMOVE TEMPORARY THERMOSTAT AS REQUIRED TO ACCOMMODATE T.I. WORK AND CONTROLS ASSOCIATED WITH ZONE DAMPERS, ETC. WHERE SHOWN. IF THERMOSTAT IS INSTALLED ON A WALL OR SECURE CONSTRUCTION, THE DEVICE SHOULD BE SURFACE MOUNTED; COORDINATE W/E.C.. CONTROLS SHALL BE HARD WIRED; NO WIRELESS CONTROLS (OR HAVE THE CAPABILITY TO BE WIRELESS) ARE PERMITTED. THERMOSTATS/CONTROLLERS TO BE CLEARLY LABELED FOR ZONE AND RTU SERVED.
3. SECURITY BARS (SB) AND/OR WAVE GUIDES (WG) WITH ACCESS DOOR AND DIELECTRIC BREAK (CANVAS CONNECTION) ON THE SECURE SIDE. REFER TO DETAILS ON SHEET M003 FOR DUCTWORK THAT PENETRATES SECURE ASSEMBLIES.
4. INSTALL ZONE AND BYPASS DAMPER IN AN ACCESSIBLE LOCATION; DO NOT INSTALL ABOVE LIGHTS, SPRINKLER HEADS, DUCTWORK, ETC. PROVIDE CONTROL WIRING TO RESPECTIVE THERMOSTAT, AVERAGING SENSOR AND ZONE CONTROL BOARD; LABEL STAT FOR DAMPER AND RTU IT SERVES.
5. -- NOTE DELETED --
6. FIELD VERIFY LOCATION OF SUSPENDED INDOOR CASSETTE WITH OTHER CEILING MOUNTED DEVICES AND SHIFT AS NECESSARY. ROUTE LINE SET UP TO HEAT PUMP OR A/C UNIT ON ROOF W/DIELECTRIC BREAK INSIDE. INSULATE LINE SET THE ENTIRE RUN. ROUTE FULL SIZE (1.25") SCH 40 PVC DRAIN LINE SLOPED OR PUMPED OVER TO MOP BASIN IN JANITOR CLOSET; LABEL DRAIN LINE FOR FUTURE REFERENCE.
7. INSTALL HUMIDIFIER W/REMOTE DISTRIBUTION UNIT PER THE MFR'S INSTRUCTIONS; ADJUST/SHIFT UNIT AS NECESSARY BASED ON MOUNTING BRACKETS AND WALL STUD SPACING FOR A SECURE INSTALLATION. COORDINATE WATER SUPPLY, DRAIN AND ELECTRICAL CONNECTIONS W/P.C. AND E.C. PROVIDE CONDENSATE PUMP TO ENSURE PROPER DISPOSAL OF CONDENSATE TO MAIN DRAIN LINE USED BY

ZONE DAMPER SCHEDULE

UNIT TAG	AREA(S) SERVED	DESIGN AIRFLOW RATE (CFM)	SIZE (INCHES)	QTY: THERMOSTAT (WIRED)	QTY: SENSOR (REMOTE/AVERAGING)
RTU5 (7,000 CFM)					
ZD1	OFFICES 2078,79,81,83	700	12"x12"	1	1
ZD2	OFFICES 2069,71,73,75,76,80,82,84	1,750	20"x14"	1	1
ZD3	PROPOSAL 2067; OFFICES 286,88,92,94	1,200	14"x14"	1	1
ZD4	OFFICES 2085,87,89; CORRIDOR	725	12"x12"	1	1
ZD5	OFFICES 2105–2108	900	14"x12"	1	1
ZD6	OFFICE 2104; CORRIDOR	525	12"x10"	1	
ZD7	OFFICES 2090,93,95,96,98; 2102	1,200	14"x14"	1	1
BPD5	BYPASS DAMPER (NOTE E)	5,600	30"x18"		
RTU6 (7,000 CFM)					
ZD1	OPEN OFFICE 2074	1,400	16"x14"	1	
ZD2	H. OFFICES 2022,24,26,28	800	12"x12"	1	
ZD3	OFFICES 2023,25; CORRIDOR	900	14"x12"	1	1
ZD4	OFFICES 2027,29; CORRIDOR	975	14"x12"	1	1
ZD5	OPEN COLLABORATION 2030	1,600	18"x14"	1	
ZD6	OFFICE 2031, STOR 2033, STAIR 2; CORR.	1,325	16"x14"	1	
BPD6	BYPASS DAMPER (NOTE E)	5,600	30"x18"		
RTU7 (7,000 CFM)					
ZD1	CONFERENCE 2063	1,200	14"x14"	1	
ZD2	OFFICES 2097,99 & 2101,2103	950	14"x12"	1	1
ZD3	OFFICE 2062	700	12"x12"	1	
ZD4	OFFICES 2058–2061	800	12"x12"	1	1
ZD5	OFFICE 2057; SECURITY 2056; CORRIDOR	1,275	14"x14"	1	1
ZD6	OFFICES 2051,52,53; CORRIDOR	975	14"x12"	1	1
ZD7	BREAK ROOM 264; CORRIDOR	1,100	14"x14"	1	
BPD7	BYPASS DAMPER (NOTE E)	5,600	30"x18"		
RTU8 (7,000 CFM)					
ZD1	RECEPTION 2001; LOBBY 201, STAIR 1	2,175	22"x14"	1	1
ZD2	WOMEN 2003; MEN 2005; CORR; STOR.	1,050	14"x12"	1	
ZD3	BREAK ROOM 2015; OFFICES 2012,14	1,225	14"x14"	1	
ZD4	CONFERENCE 2016	1,400	16"x14"	1	
ZD5	OFFICES 2018,19; CORRIDOR	1,150	14"x14"	1	1
BPD8	BYPASS DAMPER (NOTE E)	5,600	30"x18"		

GENERAL NOTES:

A. ZONE DAMPERS (ROUND OR RECTANGULAR) SHALL BE 2-POSITION TYPE, 24vac, SPRING-RETURN DAMPER W/BUILT-IN ACTUATOR.

B. LOCATION OF ZONE DAMPERS SHALL BE COORDINATED WITH CEILING SYSTEMS, LIGHTS, FRAMING, ETC. IF ZONE DAMPER IS LOCATED ABOVE A HARD CEILING (SOFFIT, ETC.) A LABELED ACCESS PANEL SHALL BE INSTALLED.

C. PROVIDE ALL POWER AND WIRING DIAGRAMS TO E.C. FOR COORDINATION.

D. LOCATION FOR ZONE BOARD FOR EACH ZONE DAMPER SYSTEM SHALL BE FIELD VERIFIED AND DETERMINED. E.C. SHALL PROVIDE POWER TO BOARD.

E. BYPASS DAMPERS SHALL BE ELECTRONIC TYPE WITH DAMPERS SIZED AT 0.15"–0.2" W.C. FOR APPROX. AIRFLOW SHOWN.

Zone Damper Totals:

Size	QTY	Size	QTY
12x10	1	16x14	3
12x12	5	18x14	1
14x12	6	20x14	1
14x14	7	22x14	1
		TOTAL	25

Bypass Damper Totals:

Size	QTY
30x18	4
TOTAL	4

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DRAWING TITLE

MECHANICAL
2nd FL T.I. PLAN

SHEET NO.

M202