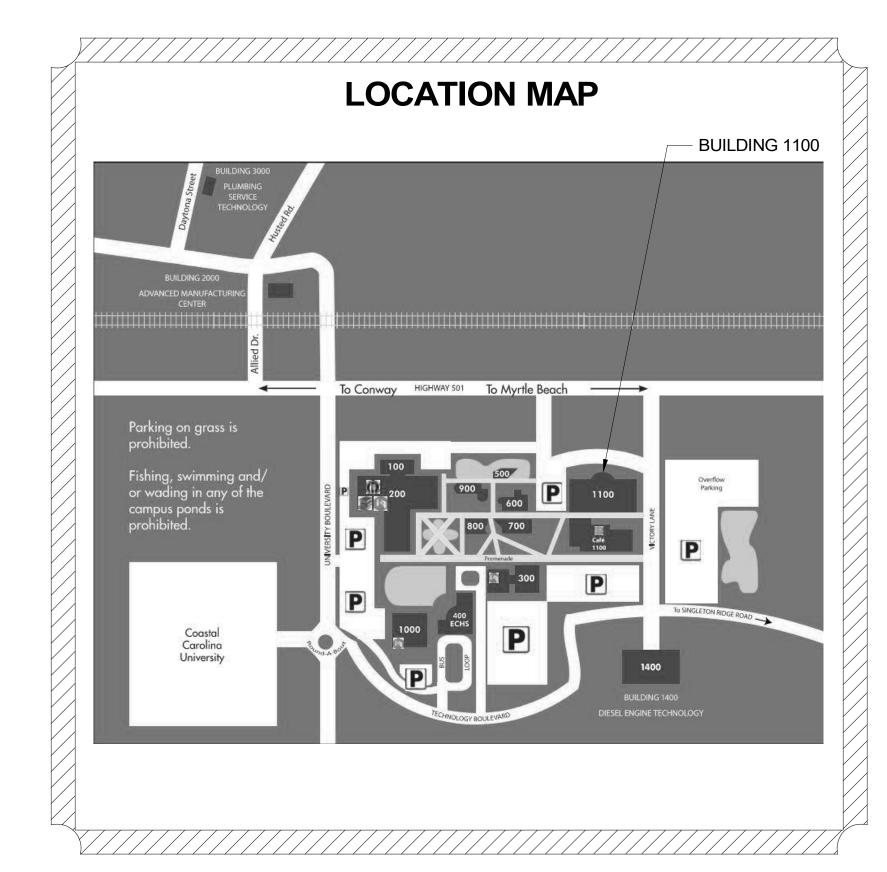


UPGRADE AND REPLACE HVAC UNITS ON CONWAY BUILDING 1100 STATE PROJECT NUMBER: H59-6211-ML 2050 HWY 501 E CONWAY, SC 29526

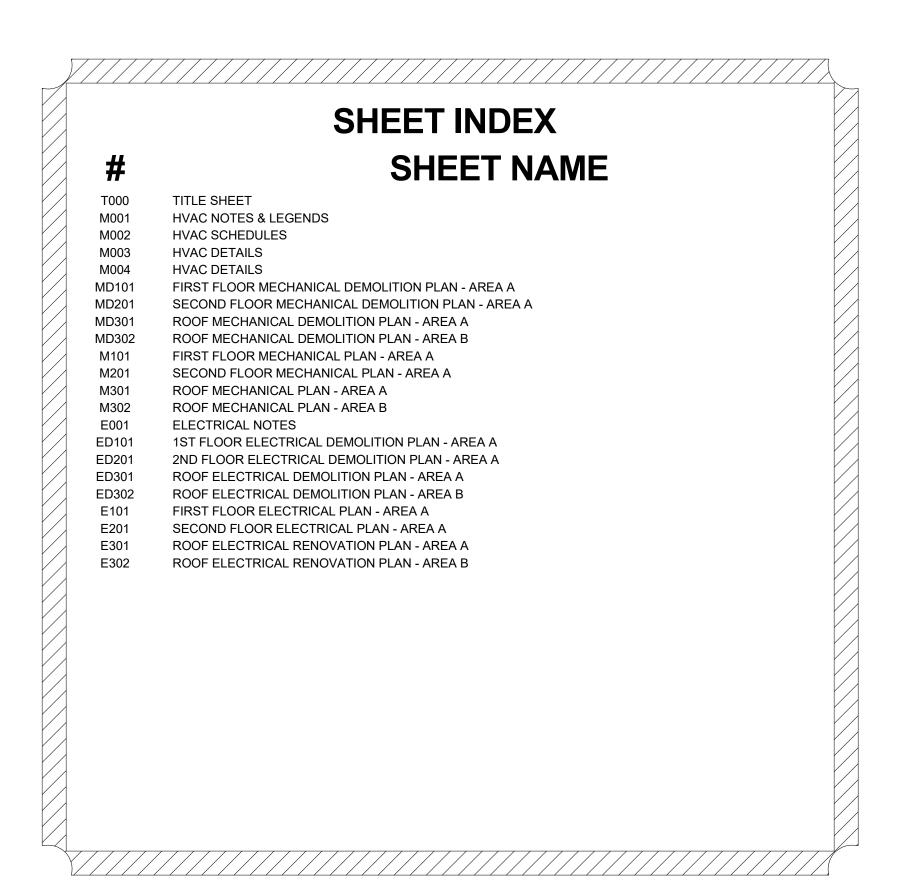


MT. PLEASANT, SC 29464



SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT INCLUDES THE DEMOLITION AND SUBSEQUENT REPLACEMENT OF ALL HVAC EQUIPMENT, CONTROLS, AND ASSOCIATED ELECTRICAL INSTALLED WITHIN THE BUILDING.







CONWAY, SC 29526

REV

DB No. H59-6211-ATE:

DRAWN BY:
CHECKED BY:

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MECHANICAL SYSTEMS **SEISMIC AND WIND REQUIREMENTS**

PER IBC-2018/ASCE 7-16

- PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.
- EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTER 26 TO 29 OF ASCE 7-16.
- WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED. THE MORE DEMANDING FORCE MUST BE USED.
- REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.
- USE THE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.
- FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL REGISTERED IN THE STATE THE JOB IS LOCATED. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.
- WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.
- SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAYS AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

MECHANICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION

ALL HVAC COMPONENTS EXCEPT AS NOTED IN Ip=1.5

Ip = 1.0

SEISMIC DESIGN CATEGORIES D.E.F.

Ip = 1.5

			SI	EISMIC DESIGI	N CATEGORIES D,E,F	
			СОМ	PONENT IMPO	RTANCE FACTOR (Ip)	
			1.0		1.5	
СОМРО	NENT IDE	NTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
R	ROOF MOU	INTED	RESTRAIN ALL	1	RESTRAIN ALL	-
FI	LOOR MOL	JNTED	RESTRAIN ALL	1, 2	RESTRAIN ALL	-
V	WALL MOU	NTED	RESTRAIN ALL	1, 2	RESTRAIN ALL	-
COMF	PONENT S	UPPORTS	RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPEN	IDED IN	ILINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
EQUIPM	IENT N	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	1	RESTRAIN ALL	-
		TILE PIPING COPPER, ETC.)	>3"	4	>1"	4
_	_	UCTILE PIPING IIC, CERAMIC)	RESTRAIN ALL	4	RESTRAIN ALL	4
SUSPEN	DED PIPE	ON TRAPEZE	RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE >	4	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10	4
	DUCTWO	DRK	6 SQ.FT. AND LARGER AND >17 LBS/FT	4,5	6 SQ.FT. AND LARGER AND > 17 LBS/FT	4,5
MULTIPL	LE DUCTS	ON TRAPEZE	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4,5	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4,3
СОМРО	NENT CEF	RTIFICATION	NOT REQUIRED	-	REQUIRED	6
NOTEC.	NOTES:					

- EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK. PIPING, AND CONDUIT.
- RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS LOCATED AT 4 FT. OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
- 3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
- RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
- ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
- COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF

MEG	
MEC	HANICAL ABBREVIATIONS
ABBR	DESCRIPTION
(E)	EXISTING
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG AH	ABOVE FINISHED GRADE
AHU	AIR HANDLER AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BHP	BRAKE HORSE POWER
BMS	BUILDING MANAGMENT SYSTEM
BOD	BASIS OF DESIGN
BOP	BOTTOM OF PIPE
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
DB	DECIBELS
DDC	DIRECT DIGITAL CONTROLS
DIA	DIAMETER
DRN EA	DRAIN EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
EDH	ELECTRICAL DUCT HEATER
EF	EXHAUST FAN
EH	ELECTRIC HEATER
EMCS	ENERGY MANAGEMENT CONTROL
	SYSTEM
ESP	EXTERNAL STATIC PRESSURE
FD	FLOOR DRAIN
FDM	FIRE DAMPER
FPM	FEET PER MINUTE FAN ROTATIONS PER MINUTE
FRPM FT	FEET
GPM	GALLONS PER MINUTE
HD	HUB DRAIN
HP	HEAT PUMP
HP	HORSEPOWER
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
MBH MC	THOUSANDS OF BTU'S PER HOUR MECHANICAL CONTRACTOR
MD	MANUAL DAMPER
NC	NOISE CRITERIA
OA	OUTSIDE AIR
PD	PRESSURE DROP
PS	PIPE SUPPORT
RA	RETURN AIR
REFR	REFRIGERANT
RH	RELATIVE HUMIDITY
RM	REMOTE MONITOR
RPM RTU	ROTATIONS PER MINUTE ROOF TOP UNIT
SA	SUPPLY AIR
SF	SUPPLY FAN
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VFD	VARIABLE FREQUENCY DRIVE
VNT	VENT
W/	WITH
WMS	WIRE MESH SCREEN
°F	DEGREES FAHRENHEIT

	HVAC SYMBOL	LEGE	ND
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
X Y	AIR TERMINAL TAG, X=TYPE MARK, Y=CFM		COMPONENT TO BE DEMOLISHED
\boxtimes	AIR TERMINAL DIFFUSER (CEILING MOUNTED)	X"x Y"	DUCTWORK (X" = WIDTH, Y" = HEIGHT)
	AIR TERMINAL RETURN GRILLE (CEILING MOUNTED)	r _K	TURNING VANES
	AIR TERMINAL EXHAUST GRILLE (CEILING MOUNTED)		CONDENSING UNIT
	AIR TERMINAL ROUND CONE DIFFUSER	0	ROOFTOP UNIT
1	SIDEWALL REGISTER / GRILLE	0	ROOF CAP
T	THERMOSTAT	++++++	PREINSULATED FLEXIBLE DUCT
(H)	HUMIDISTAT	티타	FLEXIBLE DUCT CONNECTION
CO2	CO2 SENSOR	•	CONNECTION TO EXISTING SYSTEM
	FAN POWERED BOX	—M	MOTORIZED DAMPER
SD	DUCT MOUNTED SMOKE DETECTOR (BY E.C.)	—— FD	FIRE DAMPER
 	EQUIPMENT CLEARANCE	臣	MANUAL DAMPER
Т	THERMOSTAT (DUCT MOUNTED)		

	AL CODES AND STANDARDS I ALL SOUTH CAROLINA MODIFICATIONS)
CODE	DESCRIPTION
IBC (2018)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IMC (2018)	INTERNATIONAL MECHANICAL CODE
NFPA 90A (2018)	STANDARD FOR THE INSTALLATION AIR-CONDITIONING & VENTILATING SYSTEMS
SMACNA (2005)	HVAC DUCT CONSTRUCTION STANDARDS MANUAL, THIRD EDITION

DESIGN CONDITIONS

ALL HVAC CONTROLS IN THE BUILDING SHALL BE REPLACED WITH NEW DDC CONTROLS PROVIDED BY CMI, CONNECTED TO EXISTING CAMPUSWIDE INFRASTRUCTURE.

GENERAL HVAC NOTES

- THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL INSTALLATION W/ THE STRUCTURE AND OTHER TRADES AND SHALL PROVIDE ADDITIONAL OFFSETS AND FITTINGS AS NECESSARY
- 2. THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH THE THE CODES LISTED ON THIS SHEET AS WELL AS ALL LOCAL CODE OFFICIAL REQUIREMENTS.
- IN THE EVENT OF A CONFLICT BETWEEN CODES, THE MOST STRINGENT SHALL ALWAYS GOVERN. DUCT DIMENSIONS ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL CLEARANCES PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, DUCTWORK, AND PIPING SYSTEMS. WHERE CONDITIONS REQUIRE A CHANGE IN DUCT OR PIPE ROUTING, NOTIFY THE ARCHITECT FOR AN ACCEPTABLE ALTERNATIVE METHOD. AVOID ROUTING DUCTWORK DIRECTLY OVER LIGHT FIXTURES, DIFFUSERS, AND OTHER CEILING MTD. DEVICES. LOCATE ALL MECHANICAL EQUIPMENT SO THAT FILTERS AND COMPONENTS REQUIRING ACCESS (SERVICE AND MAINTENANCE) ARE FULLY ACCESSIBLE.
- PROVIDE CURVED RADIUS ELBOW AT FIRST SUPPLY & RETURN FITTING FOR ALL HVAC UNITS. PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS IN ALL RECTANGULAR SUPPLY/RETURN/EXHAUST DUCT SYSTEMS. ANY OFFSETS REQUIRED IN DUCT SYSTEMS SHALL BE INSTALLED PER SMACNA 2005 3RD EDITION MANUAL. SHARP ANGLED
- TRANSITIONS OR OFFSETS 'WILL NOT BE ALLOWED'. PROVIDE DUCT ACCESS DOORS AS REQUIRED.
- INSTALLATION IF ACCESS WILL BE HINDERED SO AN ALTERNATE LOCATION CAN BE SELECTED ALL DUCT TAKE-OFFS SHALL BE INSTALLED AS SHOWN BY DETAILS ON THE PLANS WITH A MANUAL BALANCING DAMPER AT EVERY TAKE-OFF. WHERE DUCT RUN-OUT SIZE IS NOT
- ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH PRESCRIBED CLEARANCES FOR SERVICE AND MAINTENANCE. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF RECOMMENDED CLEARANCES ARE NOT POSSIBLE BEFORE INSTALLING EQUIPMENT.
- ALL ROTATING MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATION. PROVIDE FLEXIBLE NEOPRENE DUCT CONNECTORS BETWEEN DUCTWORK AND ISOLATED

INSTALL ALL DUCT MOUNTED DEVICES (DAMPERS, ACCESS DOORS, ETC.) AND PIPING SPECIALTIES IN EASILY ACCESSIBLE LOCATIONS. ADVISE THE ARCHITECT IN ADVANCE OF

- 10. THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF FIRE RATED WALLS/FLOORS/CEILINGS BY DUCTWORK PIPING, ETC., WITH U.L. LISTED FIRE STOPPING MATERIAL TO
- MAINTAIN FIRE RATING OF THE BARRIER. 11. SEISMIC PROTECTION OF EQUIPMENT, DUCTWORK, PIPING AND UTILITIES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16 OF THE INTERNATIONAL BUILDING CODE, 2018
- EDITION. ALL SEISMIC RESTRAINT AND BRACING SHALL BE SUBSTANTIATED BY MANUFACTURER'S SUBMITTALS PER THE SPECIFICATIONS. FOR ADDITIONAL INFORMATION. SEE 'MECHANICAL SYSTEMS SEISMIC AND WIND REQUIREMENTS' ON THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF SEISMIC BRACING DEVICES WITH THE OWNER'S SEISMIC SPECIAL INSPECTOR. PROVIDE A MINIMUM OF SEVEN DAYS ADVANCE NOTICE OF INSTALLATION. 12. BALANCE ALL AIR DISTRIBUTION DEVICES, EXHAUST FANS, AND OUTSIDE AIR QUANTITIES AS SCHEDULED OR SHOWN ON THE DRAWINGS. PROVIDE MARKERS AT ALL DAMPER
- LOCATIONS SHOWING FULL OPEN/CLOSED POSITIONS AND DAMPER SETTING FOR REQUIRED AIRFLOW. PROVIDE FINAL TEST AND BALANCE REPORT ALONG W/ SCHEMATIC DRAWINGS SHOWING DIFFUSER LOCATION W/ DESIGN AND ACTUAL CFM. THE DIFFUSER TAGS ON THE DRAWINGS SHALL CORRESPOND TO THE DIFFUSER TAGS ON THE REPORT. THIS REPORT SHALL BE SUBMITTED BEFORE THE FINAL INSPECTION IS PERFORMED. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
- 13. ALL CONTROL WIRING, CONDUIT AND CONTROLS ACCESSORIES NECESSARY TO IMPLEMENT THE OUTLINED SEQUENCES OF OPERATION SHALL BE PROVIDED BY THE CONTROLS 14. WIND LOAD PROTECTION OF ROOF MOUNTED EQUIPMENT AND DUCTWORK SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16 OF THE INTERNATIONAL BUILDING CODE, 2018
- EDITION. ALL WIND LOAD RESTRAINT AND BRACING SHALL BE SUBSTANTIATED BY MANUFACTURER'S SUBMITTALS PER THE SPECIFICATIONS.
- 15. ALL EXPOSED PIPING AND DUCTWORK SHALL BE PAINTED. COORDINATE W/ ARCHITECTURAL PLANS/SPECIFICATIONS FOR EXPOSED LOCATIONS AND PAINTING REQUIREMENTS. 16. SEE ARCHITECTURAL DOCUMENTS FOR ROOF PENETRATION AND FLASHING REQUIREMENTS.
- 17. WHERE "APPROXIMATELY" IS USED TO DEFINE INSTALLATION LOCATIONS, CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO VERIFY THERE ARE NO CONFLICTS PRIOR TO INSTALLATION AT DIMENSION LISTED.







H59-6211-ML

6/6/2022 DRAWN BY: CHECKED BY:

SHEET

										ROC	FTO	D UNI	T SCHED	ULE									
	AIR CAP	ACITY CFM						COOLIN	IG CAPA	ACITY @	95°F OA	\			HE	ATING CAPA	CITY @	17°F OA			MINIMUM		
			FAN MAX	NOMINAL	ESP INCHES	TSP INCHES	TOTAL	SENS	ENTER	ING AIR	LEAVI	NG AIR	HEATING CAPACITY	EAT		MAX AIR		LWT		MAX COIL	EFF @ AHRI COND	BASIS OF	
TAG	TOTAL	OA (MIN)	RPM	FAN HP	WG	WG	MBH	MBH	DB °F	WB °F	DB °F	WB °F	MBH	°F	LAT °F	_	EWT °F		GPM	WPD (FT WG)		DESIGN	MODEL
RTU-1	5600	2260	661	3	0.95	0.99	171.31	131.64	80.0 °F	67.0 °F	57.0 °F	56.7 °F	212.56	65.0 °F	100.0 °F	0.09	180.0 °F	160.0 °F	21.2	1.95	12.1 / 14	TRANE	THD180
RTU-2	2500	450	1056	2.75	1.00	1.07	86.02	62.1	80.0 °F	67.0 °F	56.2 °F	55.4 °F	103.03	62.0 °F	100.0 °F	0.26	180.0 °F	160.0 °F	10.3	0.95	12.6 / 14.5	TRANE	THC092
RTU-2B	1600	320	1028	1	0.50	0.57	48.17	38.07	80.0 °F	67.0 °F	56.9 °F	56.9 °F									12 / 14	TRANE	TSC048
RTU-3	5600	3000	696	3	1.10	1.14	170.49	130.82	80.0 °F	67.0 °F	57.0 °F	56.7 °F	340.1	60.0 °F	116.0 °F	0.46	180.0 °F	146.0 °F	20.0	0.54	12.1 / 14	TRANE	THD180
RTU-4	4600	1620	799	3	1.50	1.52	141.26	107.09	80.0 °F	67.0 °F	56.6 °F	56.4 °F									12.1 / 15	TRANE	THD150
RTU-5	11000	2420	1147	20	2.80	4.49	424.13	318.9	80.0 °F	67.0 °F	54.0 °F	53.0 °F	463.7	70.0 °F	108.9 °F	0.2" MAX.	180.0 °F	160.0 °F	46.3	10' MAX.	10.3 /	TRANE	SLHLF404C
RTU-6	10500	2160	1305	20	2.45	4.56	330.98	225.42	80.0 °F	67.0 °F	56.2 °F	55.2 °F	387.07	70.0 °F	104.0 °F	0.25" MAX.	180.0 °F	160.0 °F	38.7	10' MAX.	10.9 /	TRANE	SLHLF304C
RTU-11	2500	250	1118	2.75	1.25	1.32	85.58	61.66	80.0 °F	67.0 °F	56.2 °F	55.4 °F									12.6 / 15	TRANE	THC092
RTU-12	2500	560	1118	2.75	1.25	1.32	85.58	61.66	80.0 °F	67.0 °F	56.2 °F	55.4 °F									12.6 / 15	TRANE	THC092
RTU-13	2500	240	1200	2.75	1.50	1.61	70.7	56.8	80.0 °F	67.0 °F	57.8 °F	57.5 °F									13.1 / 15.5	TRANE	THC074
RTU-14	2500	240	1200	2.75	1.50	1.61	70.7	56.8	80.0 °F	67.0 °F	57.8 °F	57.5 °F									13.1 / 15.5	TRANE	THC074
RTU-15	7580	1800	1277	15	1.73	3.48	286.16	189.28	80.0 °F	67.0 °F	54.3 °F	53.5 °F	324.47	70.0 °F	109.5 °F	0.15" MAX.	180.0 °F	160.0 °F	32.4	10' MAX.	10.8 /	TRANE	SLHLF2540
RTU-16	2400	585	1110	2.75	1.25	1.31	71.06	56.16	80.0 °F	67.0 °F	57.4 °F	57.1 °F									13.1 / 15.5	TRANE	THC074

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.
2. PROVIDE UNITS WITH CURB ADAPTER.
3. PROVIDE UNITS WITH BUILT-IN CONVENIENCE OUTLET.
4. PROVIDE NEW DUCT MOUNTED HOT WATER HEATING COIL WITH HEATING CAPACITIES SHOWN IN SCHEDULE FOR RTU-1, RTU-2, AND RTU-3. HOT WATER HEATING COIL BASIS OF DESIGN IS TRANE.
5. PROVIDE UNITS WITH DRY BULB ECONOMIZATION WITH BAROMETRIC RELIEF.
6. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.
7. PROVIDE WITH BACNET CONNECTION TO CAMPUS CONTROLS.

						SPLIT	SYST	TEM All	R COND	ITIONE	R SCHED	ULE				
T	AG	AIR CAPA	CITY CFM			COOLI	NG CAPA	ACITY @ 9	5°F OA				MINIMUM			
				ESP			ENTER	ING AIR	LEAVI	NG AIR	HEATING		EFF @ AHRI			
INDOOR	OUTDOOR	TOTAL	OA	INCHES WG	TOTAL MBH	SENS MBH	DB °F	WB °F	DB °F	WB °F	@ 25°F OA		COND (EER/SEER)	BASIS OF DESIGN	INDOOR MODEL	OUTDOOR MODEL
SSAH-1	SSHP-1	1600	NOTE 2	0.40	48.2	36.5	80.0 °F	67.0 °F	58.50 °F	57.1 °F	31	5.8	12.5 / 15	TRANE	GAM5B0C48	4TWR5048
SSAH-2	SSHP-2	1600	NOTE 2	0.40	48.2	36.5	80.0 °F	67.0 °F	58.50 °F	57.1 °F	31	5.8	12.5 / 15	TRANE	GAM5B0C48	4TWR5048

NOTES:

1. REFER TO ELECTRICAL FOR VOLTAGE INFORMATION.

2. RECONNECT TO EXISTING OUTSIDE AIR AND BALANCE TO EXISTING.

3. PROVIDE UNITS WITH NEW REFRIGERANT LINE SETS.

4. CONDENSER COILS SHALL BE FACTORY COATED WITH ELECTROFIN PROTECTIVE E-COATING.

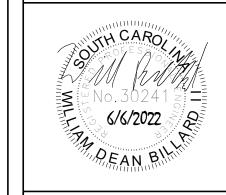
5. PROVIDE THERMOSTAT CAPABLE OF CONNECTING TO EXTERNAL CONTROLLER.

	PRIMARY	COOLING	COOLING	APD @ COOLING	ADJUSTED HEATING		COIL CAPACITY	EAT	LAT		EWT	LWT	COIL PD	BASIS OF	
TAG	INLET (INCHES)	MAX CFM	MIN CFM	AIRFLOW (IN H2O)	AIRFLOW (CFM)	FAN CFM	(MBH)	°F	°F	GPM	°F	°F	(FT H2O)	DESIGN	MODEL
VAV-13-1	12	1510	760	0.39 in-wg	1510	800	50.1	65 °F	95 °F	1.59 GPM	180 °F	115 °F	0.77	PRICE	FDV5
'AV-14-1	12	1610	810	0.42 in-wg	1610	800	52.7	65 °F	95 °F	1.70 GPM	180 °F	116 °F	0.87	PRICE	FDV5

		SUPPLY FAI	N		EXHAUST FA	N		ENTHALP	Y WHEEL			
							SUMMER	SUPPLY	WINTER	SUPPLY		
TAG	EXTERNAL STATIC PRESSURE	SUPPLY AIRFLOW (CFM)	MAX HP	EXTERNAL STATIC PRESSURE	EXHAUST AIRFLOW (CFM)	MAX HP	EAT (DB/WB °F)	LAT (DB/WB °F)	EAT (DB/WB °F)	LAT (DB/WB °F)	MANUFACTURER	MODEL NUMBER
ERV-1	0.30 in-wg	2200	0.75	0.50 in-wg	2000	1.5	95/78	80.5/67	27/22	59.6/49.1	SEMCO	FVT-3000
ERV-3	0.30 in-wg	3000	2	0.50 in-wg	1800	0.75	95/78	84/69.9	27/22	51.7/43.6	SEMCO	FVT-3000
ERV-4	0.30 in-wg	1600	0.75	0.50 in-wg	1600	1.5	95/78	80.7/67.2	27/22	59.2/48.9	SEMCO	FVT-2000
ERV-16	0.10 in-wg	745	0.75	0.50 in-wg	510	0.75	95/78	82.7/68.8	27/22	54.7/45.8	SEMCO	SP-700

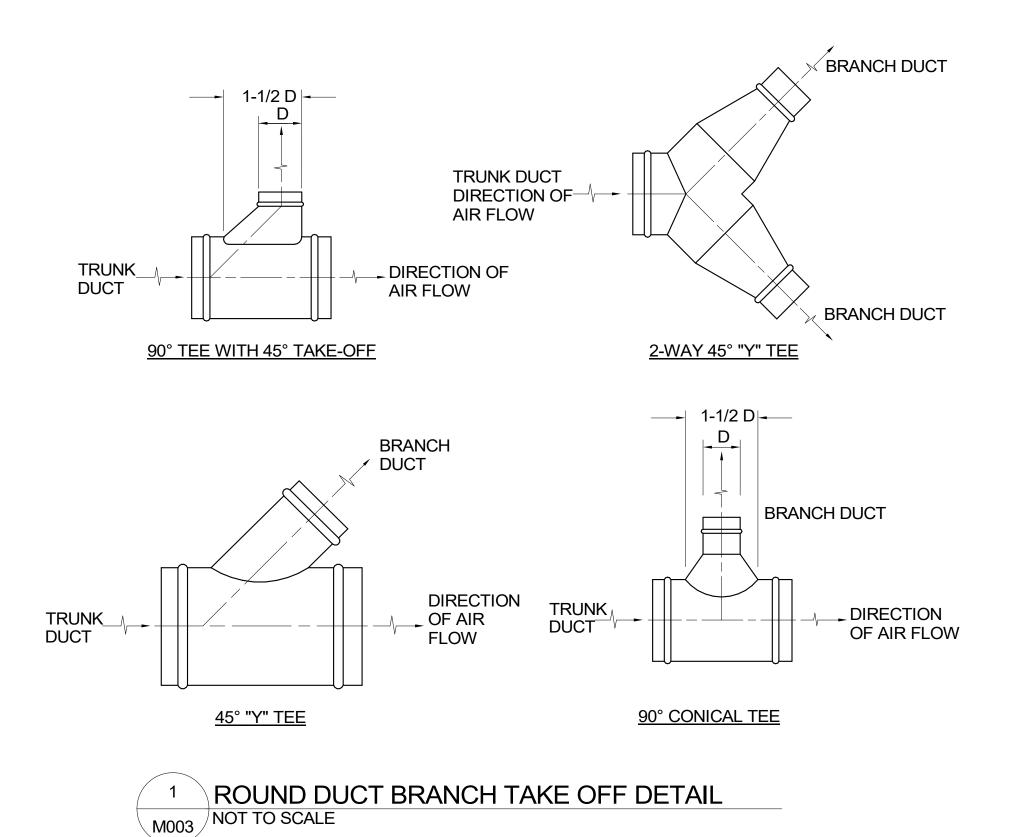
	CAPACITY	ESP INCHES		MOTOR	MAXIMUM SOUND		SYSTEM	FAN	BASIS OF	
TAG	CFM	WG	FRPM	HP	RATING DB	TYPE	SERVED	CONTROL	DESIGN	MODE
EF-2	1880	0.50	917	1	60	ROOF	RESTROOMS	SCHEDULE	GREENHECK	G-160-V
EF-4	1885	0.50	918	1	60	ROOF	RESTROOMS	SCHEDULE	GREENHECK	G-160-V

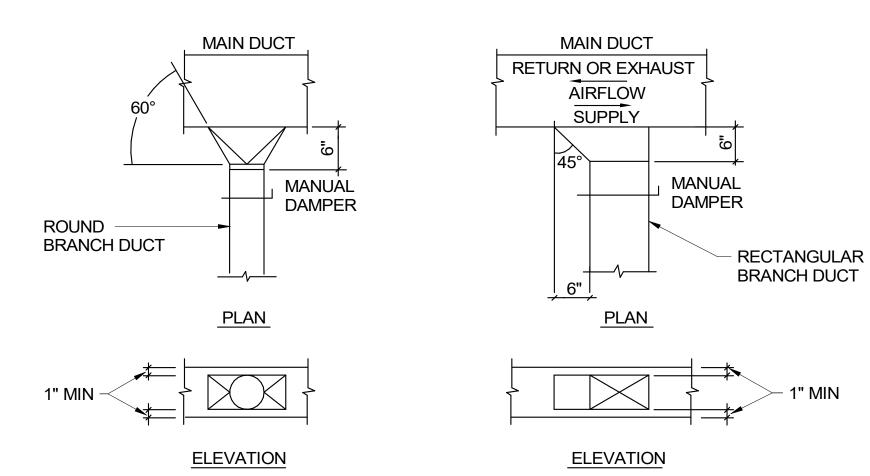
	BASIS OF DESIGN	DESCRIPTION	FACE SIZE	NECK SIZE	MOUNTING TYPE	TAG
_	-					Supply Air
ASPD	PRICE	PLAQUE FACE SUPPLY DIFFUSER	24"x24"	8"Ø	CEILING	Α
SDB	PRICE	LINEAR SLOT DIFFUSER - 48", 4 x 1" SLOTS	24"x24"	10"Ø	CEILING	В
 6E.		EILING GRID.	SSORIES WITH CI	PE AND ACCE	ATE MOUNTING TYF ATE AIR DISTRIBUTI	NOTES: 1. COORDIN 2. COORDIN





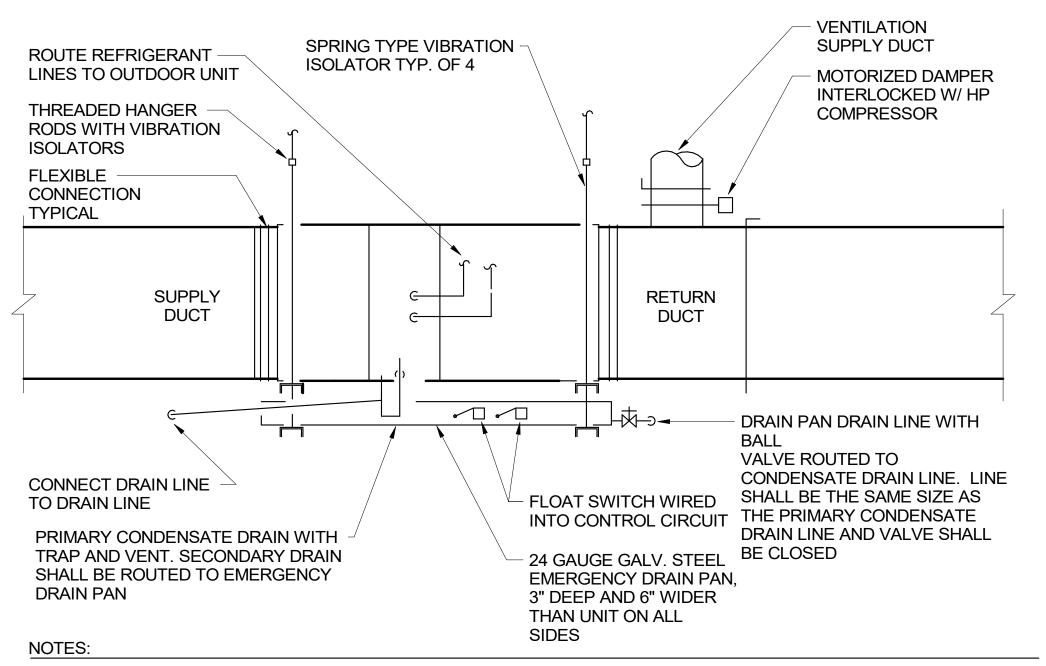
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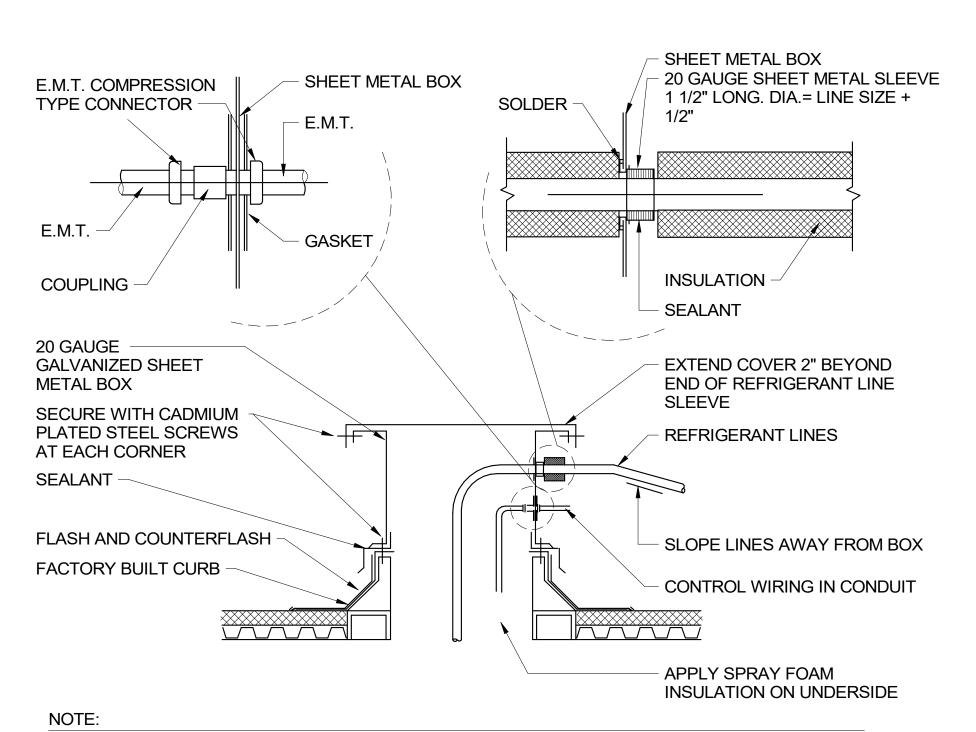
- CONTRACTOR MAY SUBSTITUTE A MANUFACTURED FITTING FOR THE DETAILED TAKE-OFF ABOVE
- 2. TAKE-OFFS IN MEDIUM PRESSURE DUCT SHALL HAVE AN OVERSIZED INTAKE.
- 3. SPIN-IN FITTINGS WITH INTEGRAL SCOOP AND DAMPER SHALL ONLY BE USED ON LOW PRESSURE DUCT.
- 4. FITTINGS SHALL BE SCREWED TO THE TRUNK DUCT AND SEALED WITH MASTIC. MASTIC TAPE IS NOT ACCEPTABLE, SEE SPECIFICATIONS.
- ^{5.} IF VAV BOX IS LOCATED IN BRANCH DUCT, BALANCE DAMPER SHALL NOT BE INSTALLED IN TAKOFF FROM MAIN TRUNK DUCT.

TYPICAL DUCT TAKE OFF INSTALLATION DETAIL M003 NOT TO SCALE



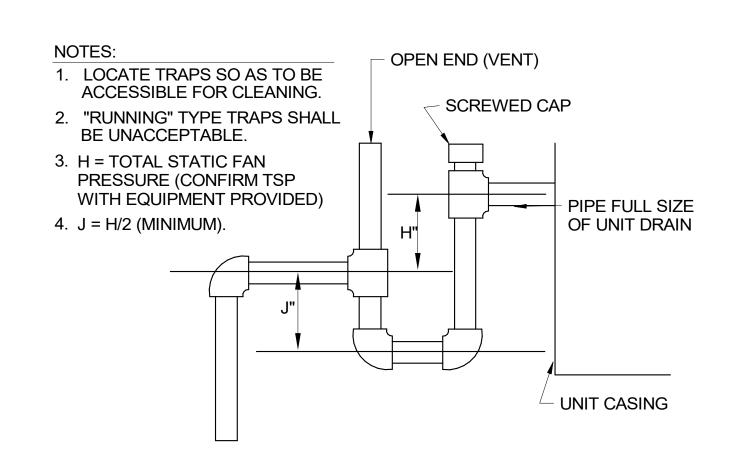
- 1. ROUTE DRAIN LINES AS INDICATED ON DRAWINGS. ALL DRAIN LINES SHALL SLOPE AT LEAST 1" PER 10 FT. CONTINUOUSLY. LINES SHALL NOT BE ALLOWED TO RUN ALONG THE CEILING STRUCTURE AND RISE UP AGAIN.
- 2. PROVIDE HANGING RODS FOR UNITS SUSPENDED FROM STRUCTURE AND SUSPEND EMERGENCY DRAIN PAN FROM UNIT.
- 3. SUPPORT EMERGENCY DRAIN PAN ON ANGLES OR STRUTS; PAN TO BE EASILY REMOVABLE FOR MAINTENANCE

ACCESS HORIZONTAL AHU INSTALLATION DETAIL NOT TO SCALE

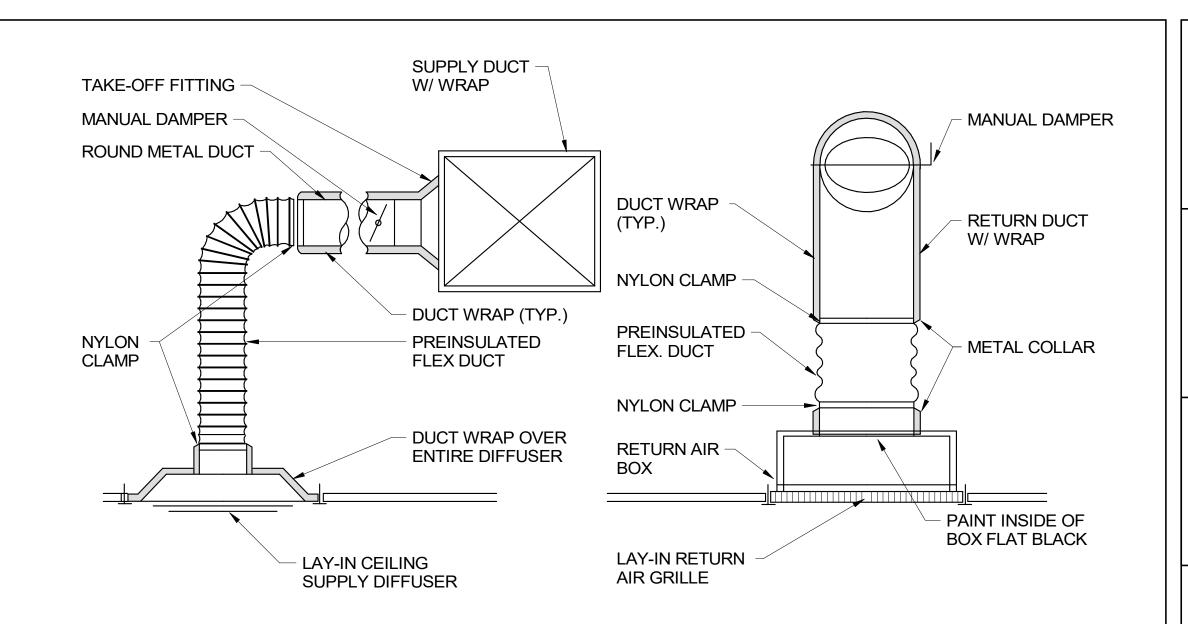


1. SIZE BOX TO ACCOMMODATE MULTIPLE LINE SETS TO MINIMIZE ROOF PENETRATIONS. PROVIDE SEPARATE BOX PENETRATIONS FOR LIQUID AND SUCTION LINES.

REFRIGERANT LINE/ROOF PENETRATION DETAIL M003 NOT TO SCALE



CONDENSATE DRAIN TRAP INSTALLATION DETAIL M003 NOT TO SCALE



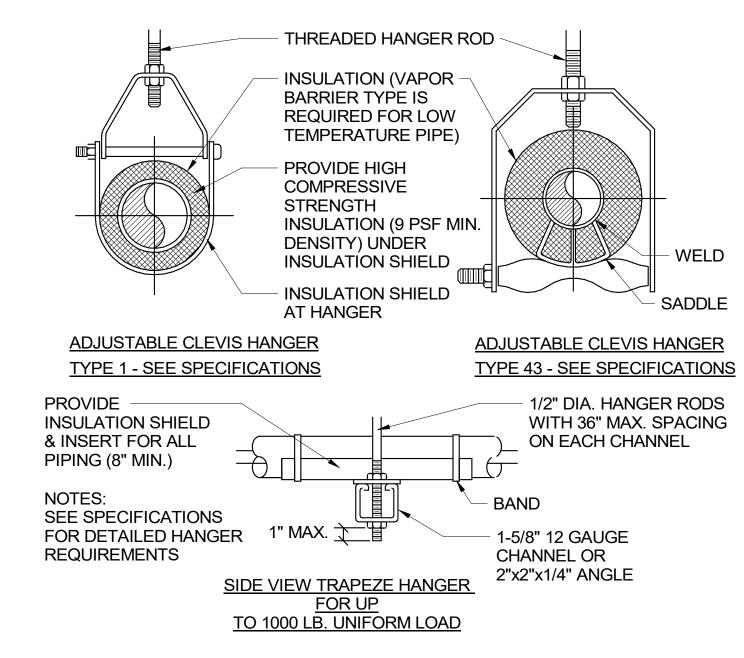
NOTES:

- 1. INSTALL NYLON CLAMPS ON INNER FLEX DUCT LINER AND OUTER JACKET. TAPE ENDS OF PREINSULATED FLEX. DUCT AT THE DIFFUSER AND THE BRANCH DUCT CONNECTION.
- 2. RETURN AIR BOX SHALL BE MINIMUM 12" HIGH. RETURN DUCT MAY TAP INTO THE SIDE OF THE BOX A MINIMUM OF 6" ABOVE GRILLE.
- 3. PROVIDE YOUNG REGULATOR REMOTE DAMPER CONTROLLER FOR EACH DIFFUSER AND GRILLE LOCATED IN AREAS WITH INACCESSIBLE CEILINGS. LOCATE CONTROLLER IN A CONCEALED, ACCESSIBLE LOCATION.

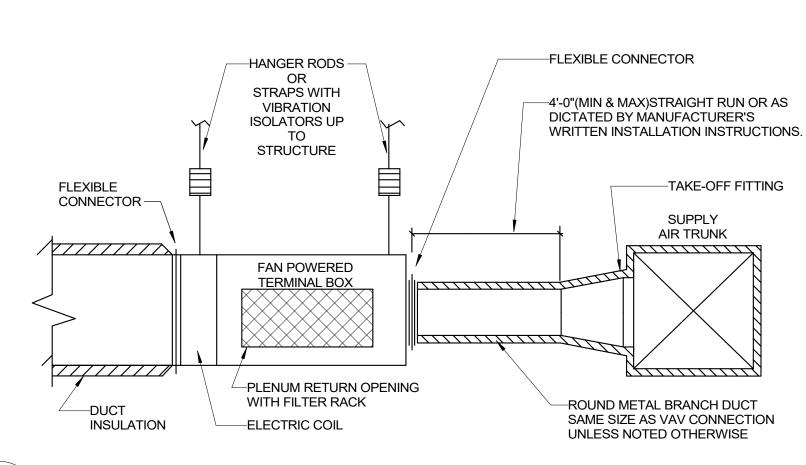
TYPICAL DIFFUSER/GRILLE INSTALLATION DETAIL M003 NOT TO SCALE

		MAXIMUM	PIPE	/TUBI	NG S	UPPC	ORT S	PACI	NG			
NOM. SIZE	IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
PIPE	FT.	7	7	7	9	10	11	12	14	16	17	19
TUBING	FT.	5 FT	6	7	8	8	9	10	12	13	14	16
NOTE, FOD	TDAD		го т	۸۷۲ ۵		NIC C		<u> </u>	CT CI	7F ()	N TD/	DEZ

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE

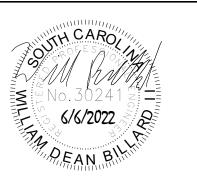


MECHANICAL PIPE SUPPORT DETAIL M003 NOT TO SCALE



8 TYPICAL FAN POWERED BOX INSTALLATION DETAIL M003 NOT TO SCALE







CE HVAC UNITS ON CC 2050 HWY 501 E CONWAY, SC 29526 HVAC DETAILS

H59-6211-ML

DATE: 6/6/2022 DRAWN BY: CHECKED BY:

SHEET NUMBER

M003

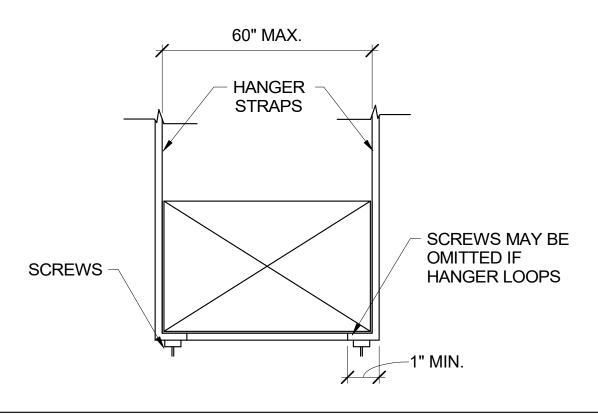


		TABLE 4-	1 RECT	TANGUI	LAR DUCT HAI	NGERS MINIM	UM SIZE		
MAXIMUM HALF OF	PAIR AT 10	FT. SPACING	PAIR	AT 8 F	T. SPACING	PAIR AT 5 F	T. SPACING	PAIR AT 4F	T. SPACING
DUCT PERIMETER	STRAP	WIRE/ROD	STI	RAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2= 30"	1" X 22 GA.	10 GA. (.135")	1" X 2	22 GA.	10 GA. (.135")	1" X 22 GA.	12 GA. (.106")	1" X 22 GA.	12 GA. (.106
P/2= 72"	1" X 18 GA.	3/8"	1" X 2	20 GA.	1/4"	1" X 22 GA.	1/4"	1" X 22 GA.	1/4"
P/2= 96"	1" X 16 GA.	3/8"	1" X 1	18 GA.	3/8"	1" X 20 GA.	3/8"	1" X 22 GA.	1/4"
P/2= 120"	1-1/2"X16GA.	1/2"	1" X 1	16 GA.	3/8"	1" X 18 GA.	3/8"	1" X 20 GA.	1/4"
P/2= 168"	1-1/2"X16GA.	1/2"	1-1/2"	X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"
P/2= 192"	NOT GIVEN	1/2"	1-1/2"	X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 16 GA.	3/8"
P/2=193" UP					5	SPECIAL ANAL	YSIS REQUIR	ED	
	RAPS ARE LA	•			SINGLE	HANGER MAX	IMUM ALLOWA	ABLE LOAD	
	SE MINIMUM F. 22 GA - TWO				STRAP		WIRE	OR ROD (DIA	.)

1" X 22 GA. - 260 LBS.

1" X 20 GA. - 320 LBS.

1" X 18 GA. - 420 LBS.

1" X 16 GA. - 700 LBS.

1-1/2 " X 16 GA. - 1100 LBS.

1/4"-270 LBS.

3/8"-680 LBS.

1/2"-1250 LBS.

5/8"-2000 LBS.

3/4"-3000 LBS.

SUPPORT DETAIL M004 NOT TO SCALE

NOT TO SCALE

1" X 18,20,22 GA. - TWO #10 OR

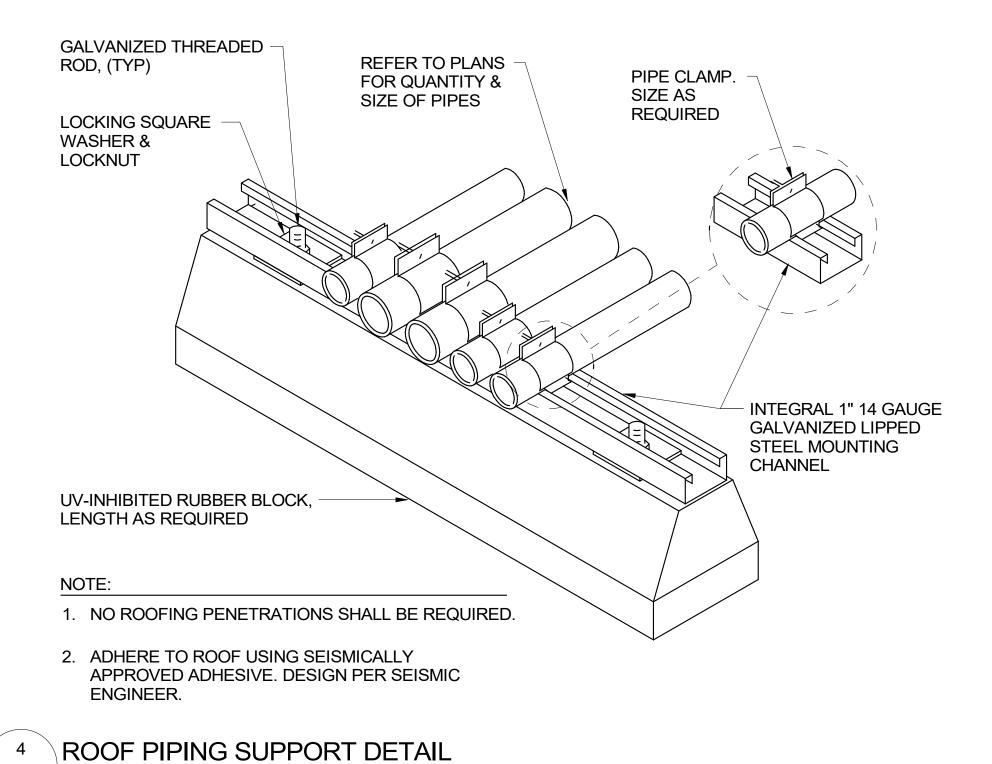
1" X 16 GA. - TWO 1/4" DIA.

SERIES, NOT SIDE BY SIDE.

PLACE FASTENERS IN

1-1/2" X 16 GA. -TWO 3/8" DIA.

ONE 1/4" BOLT

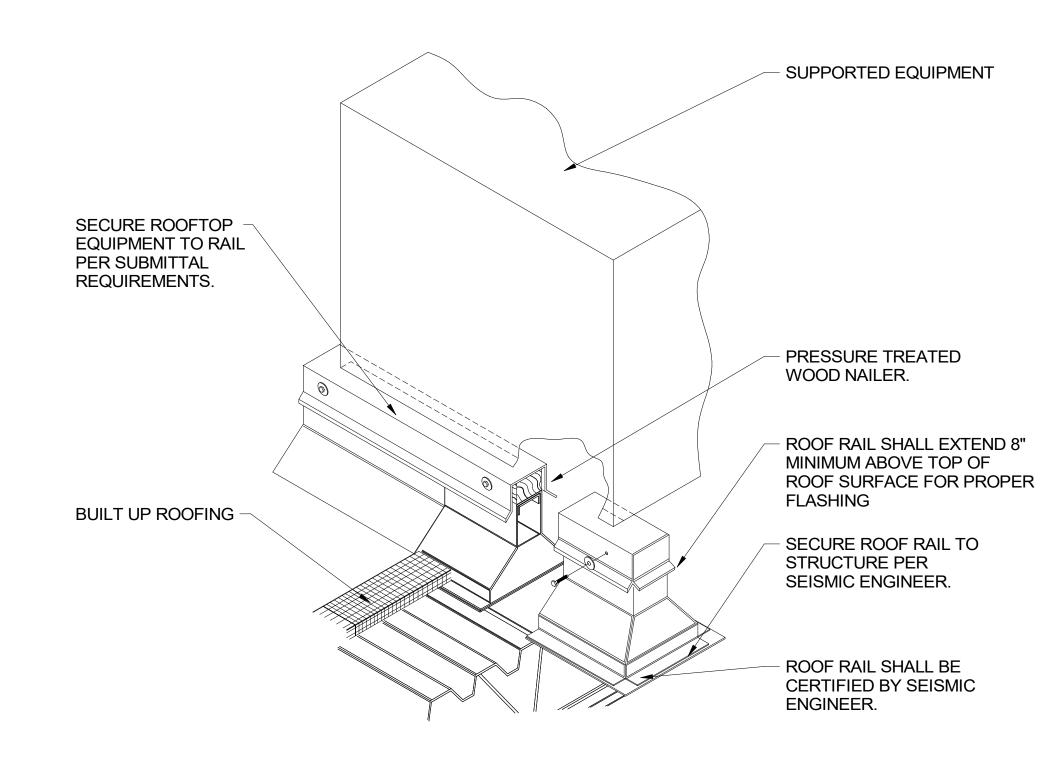


- OUTDOOR AIR (SEE SCHEDULES, FOR REQUIRED) FLEXIBLE CONNECTIONS -IN SA & RA DUCTS - PREFABRICATED SEISMIC/VIBRATION ISOLATION ROOF CURB TO MATCH A/C UNIT & ROOF SLOPE. RTU SEISMIC/VIBRATION ISOLATION CURB ROOF DECK -SHALL BE A RATED ASSEMBLY - FLASH AND COUNTERFLASH **AUXILIARY STEEL** SUPPORT AROUND ROOF JOISTS PERIMETER OF S **ROOF CURB EXISTING SMOKE** DETECTOR RETURN AIR DUCT -- SUPPLY AIR DUCT NEW SUSPENDED CEILING -

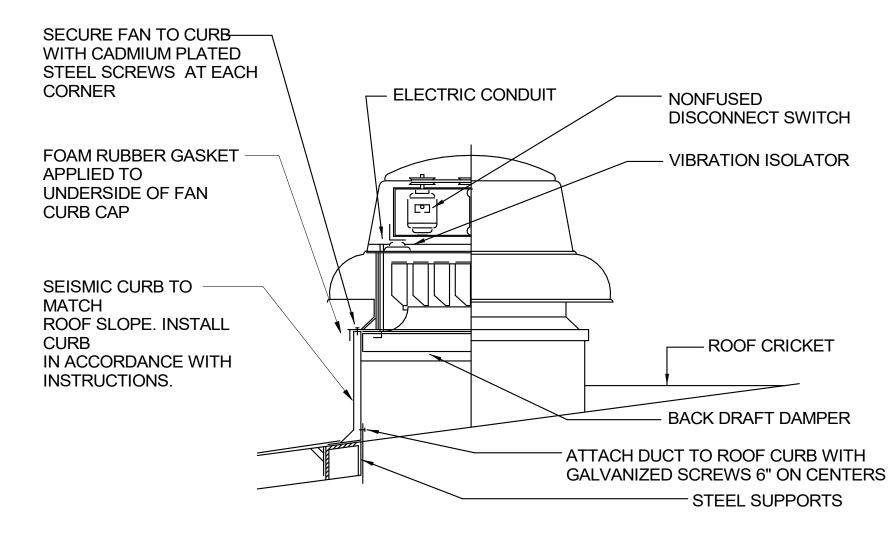
NOTES:

- 1. PROVIDE EQUIPMENT ROOF CURBS W/ INTEGRAL VIBRATION ISOLATION SPRINGS.
- 2. CURB SHALL BE FURNISHED BY EQUIPMENT MANUFACTURER AND SHALL BE INSTALLED AND FLASHED BY THE ROOFING CONTRACTOR.
- 3. ROOFTOP UNITS SHALL RE-USE EXISTING ROOF PENETRATIONS. PROVIDE UNITS WITH CURB ADAPTERS.
- 4. PROVIDE AND INSTALL 1/2" THICK DUCT LINER IN THE FIRST 10 FEET FROM UNIT ON SUPPLY AND RETURN DUCT. LINER SHALL BE FLEXIBLE ELASTOMERIC.

ROOF TOP UNIT INSTALLATION DETAIL

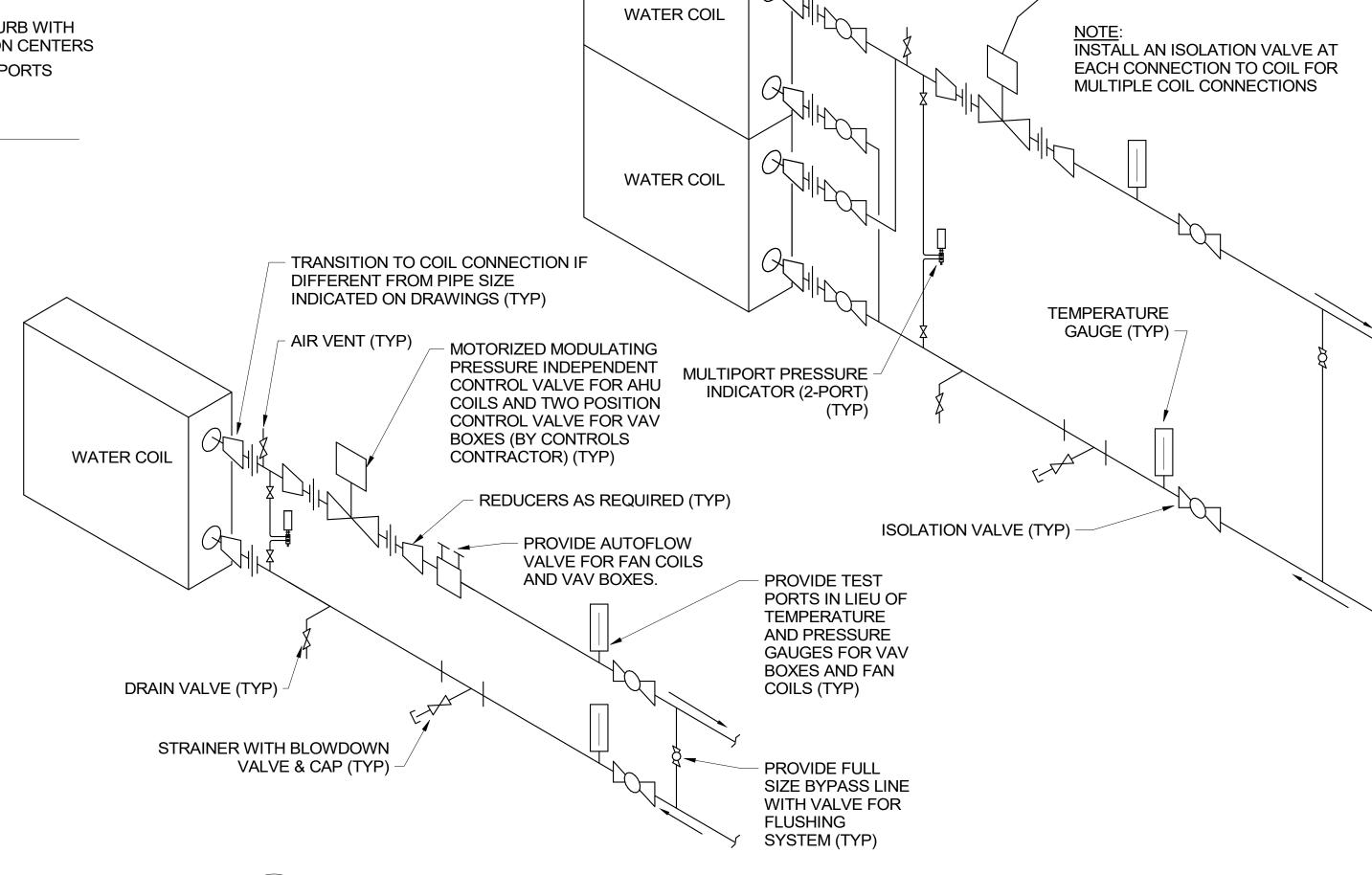


³ ROOF RAIL DETAIL NOT TO SCALE



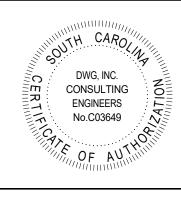
5 ROOF EXHAUST FAN INSTALLATION DETAIL

MO04 NOT TO SCALE



6 HYDRONIC WATER COIL PIPING DETAIL

M004 NOT TO SCALE







ACE HVAC UNITS ON CC 2050 HWY 501 E CONWAY, SC 29526 HVAC DETAILS

TO DDC CONTROLLER

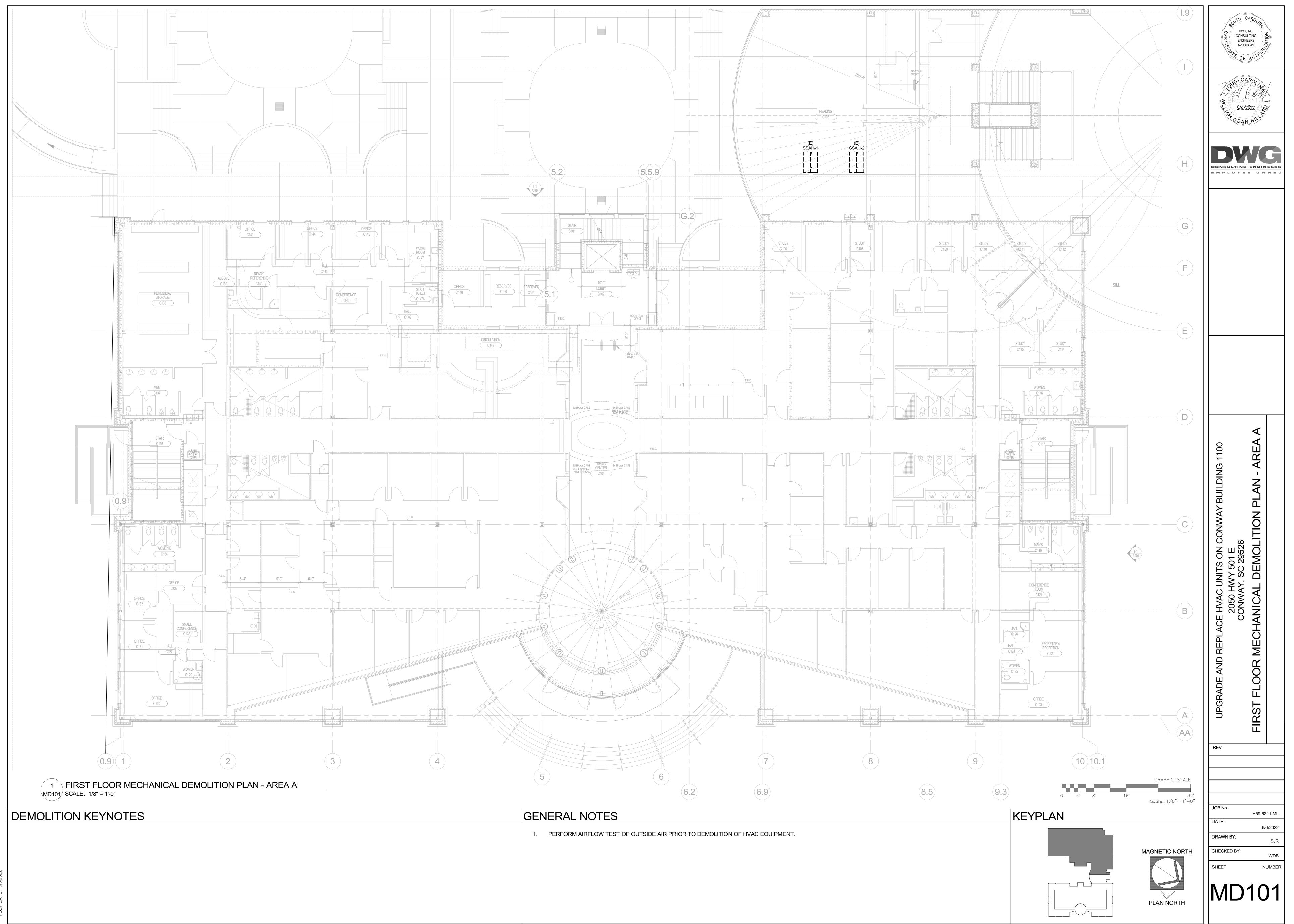
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H59-6211-ML DATE: 6/6/2022 DRAWN BY: CHECKED BY:

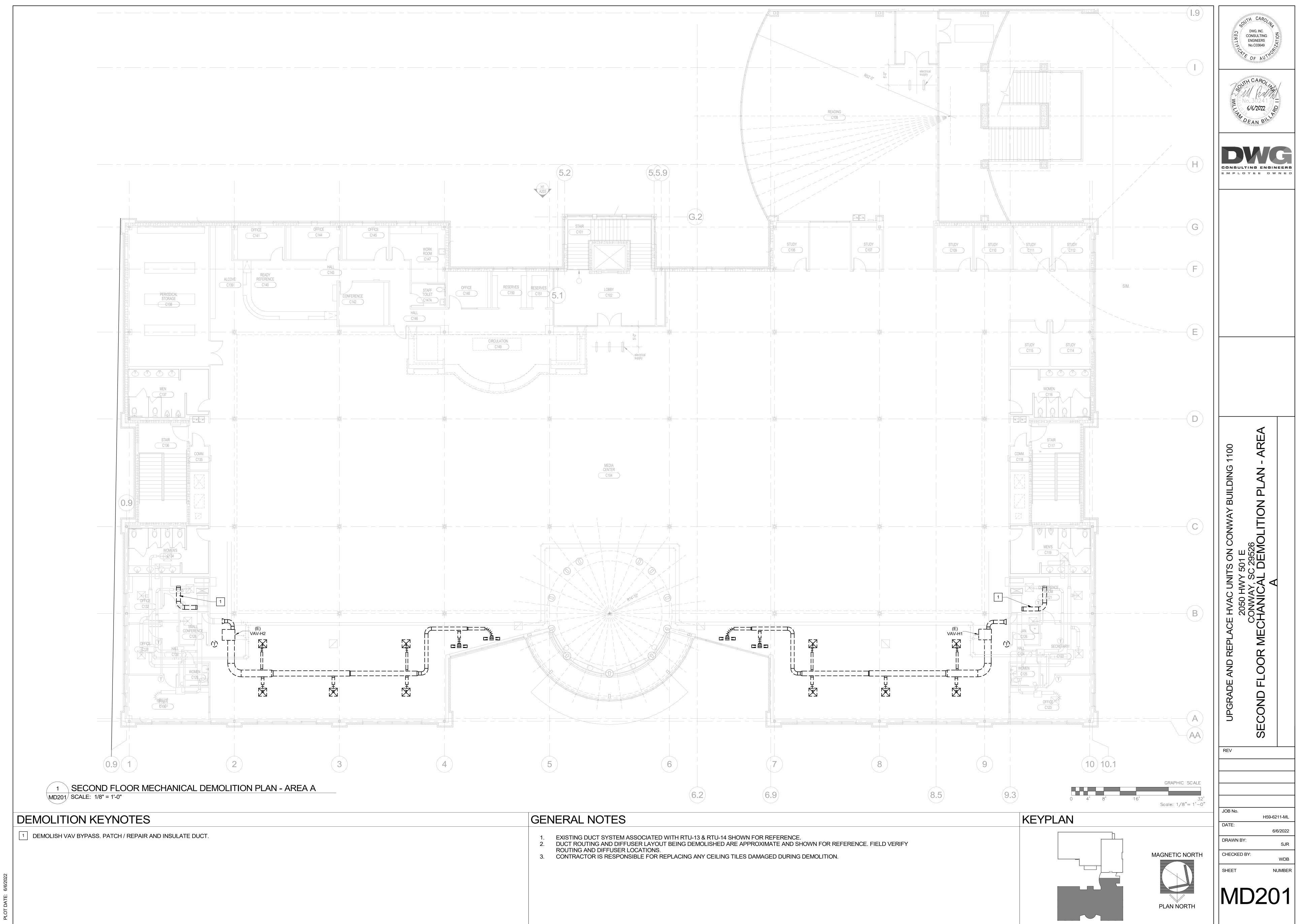
M004

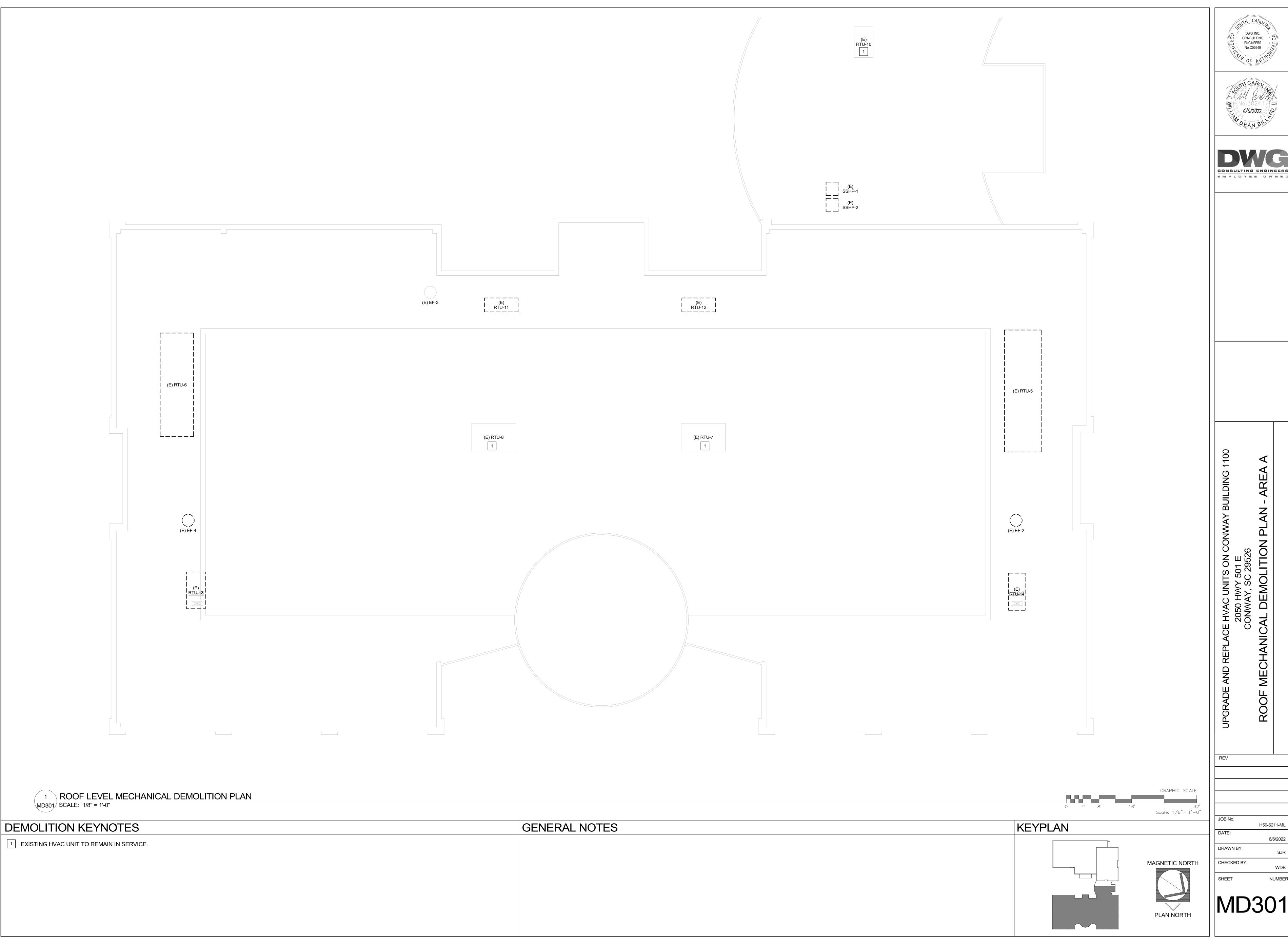
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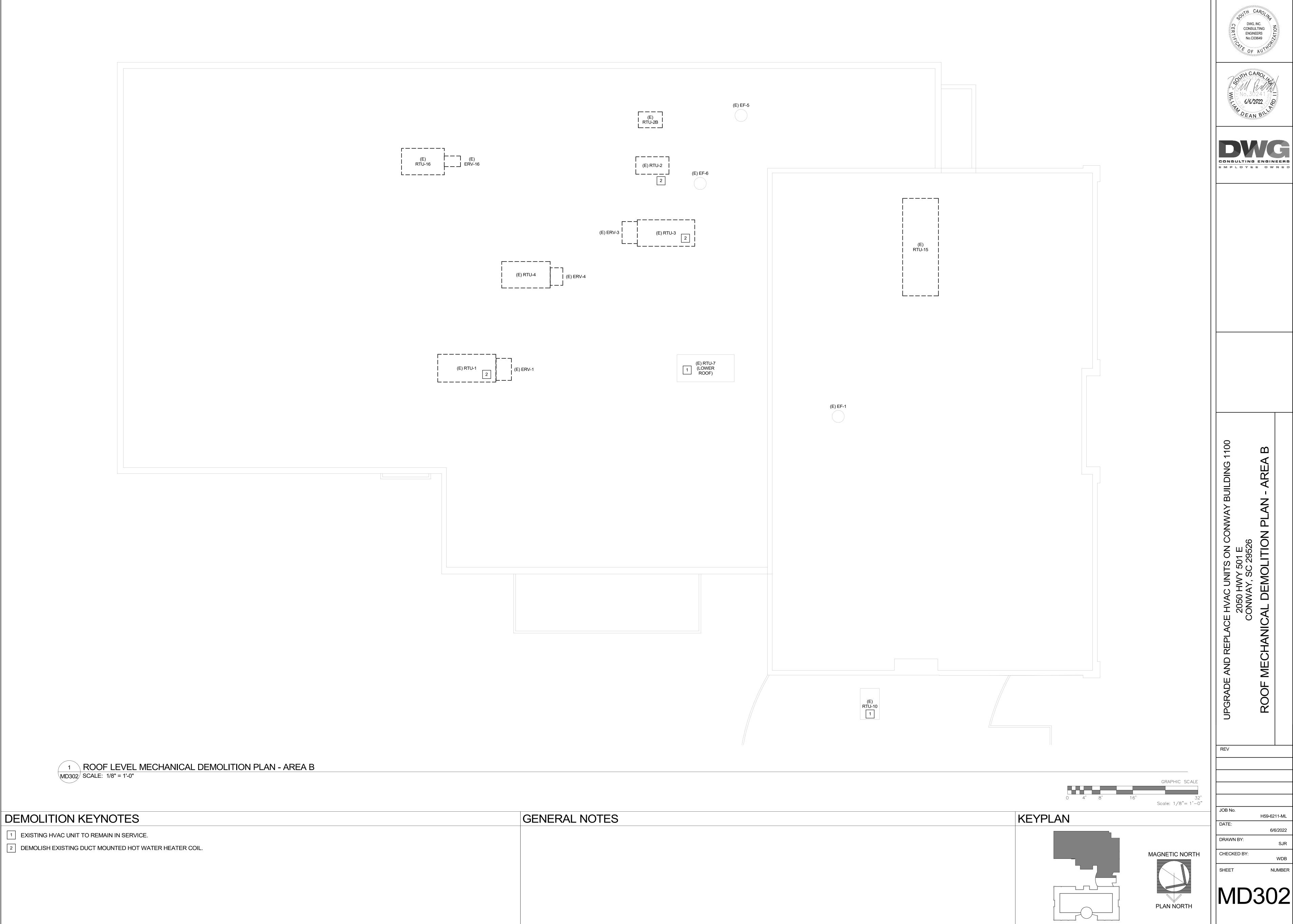


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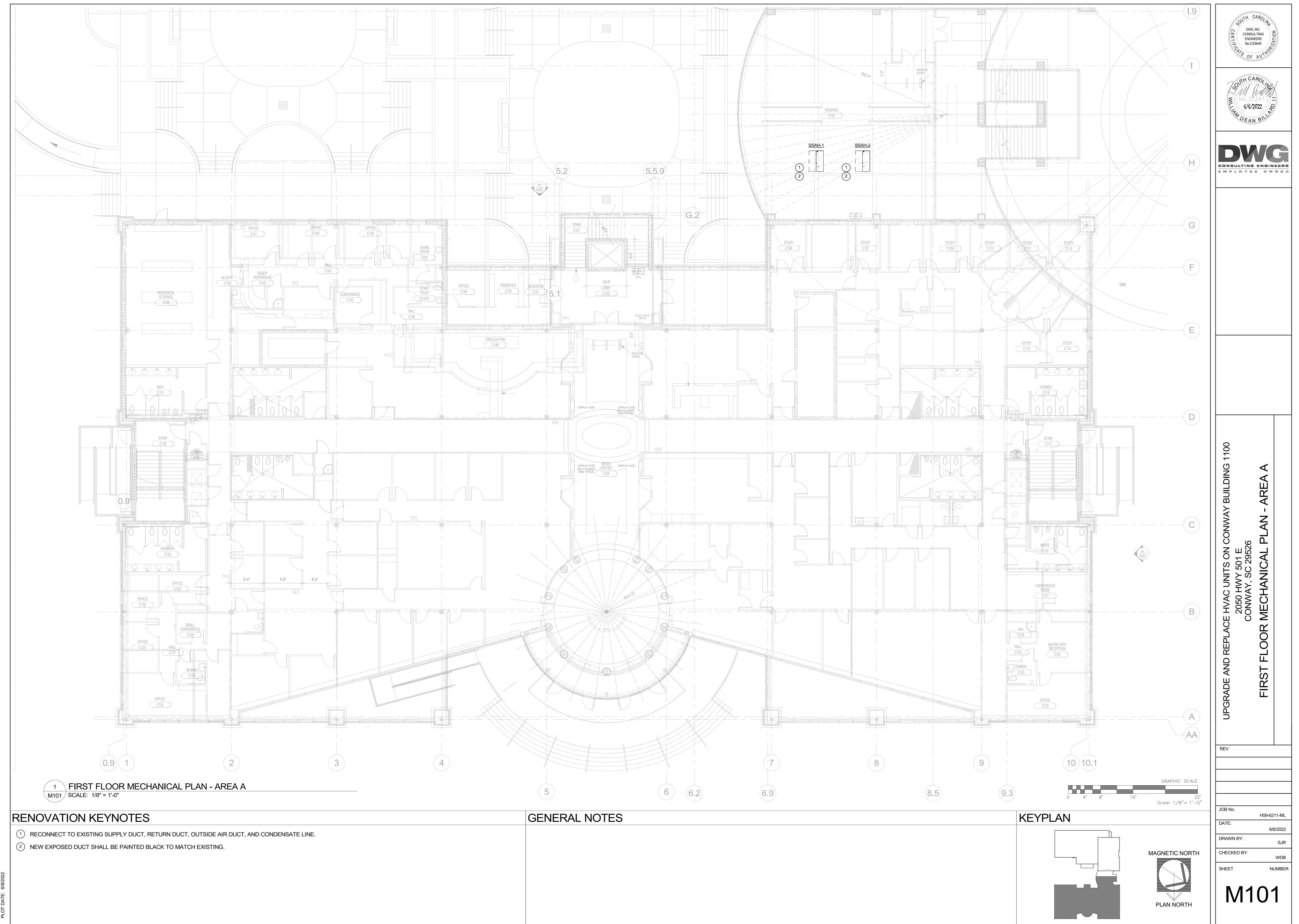




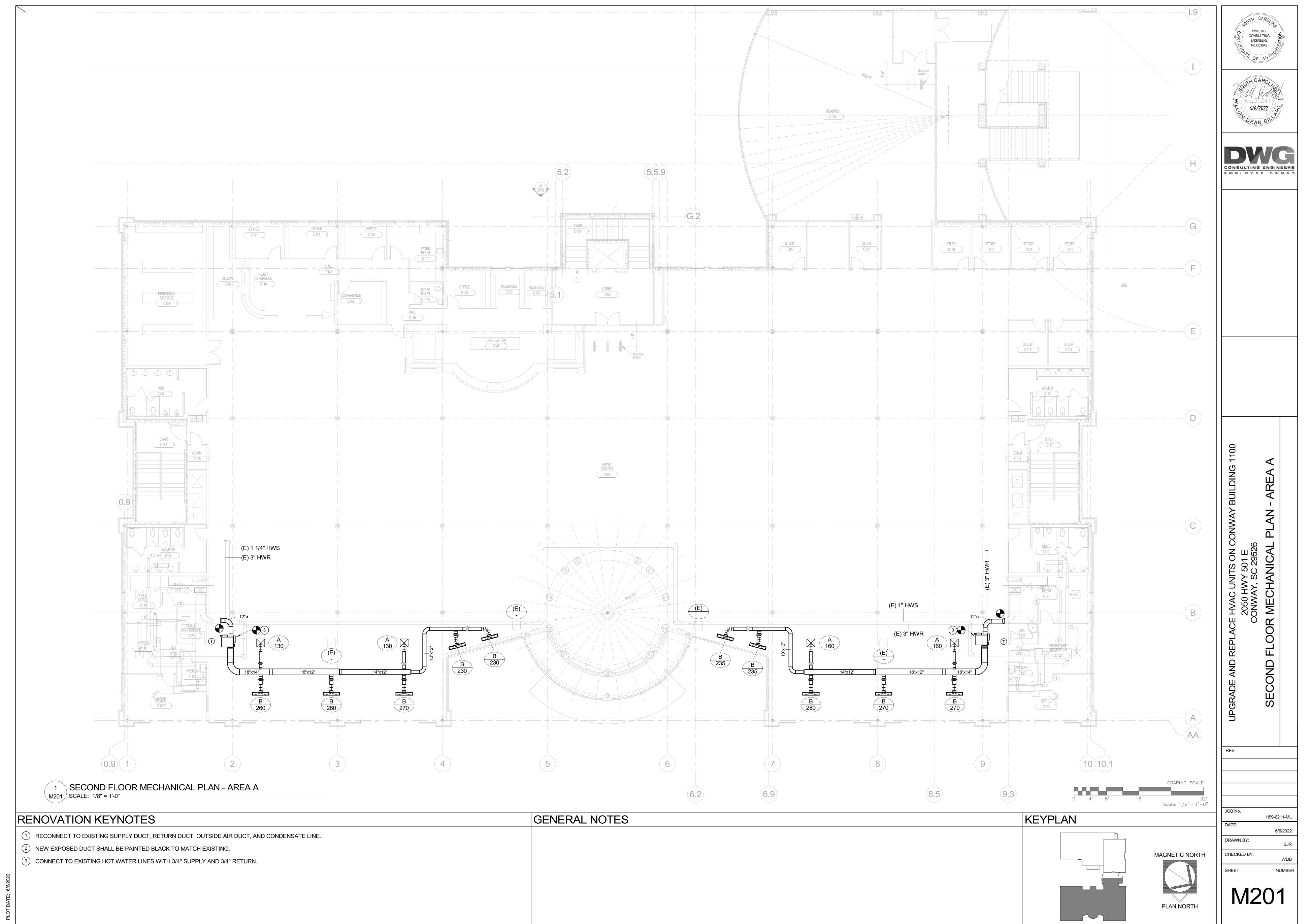


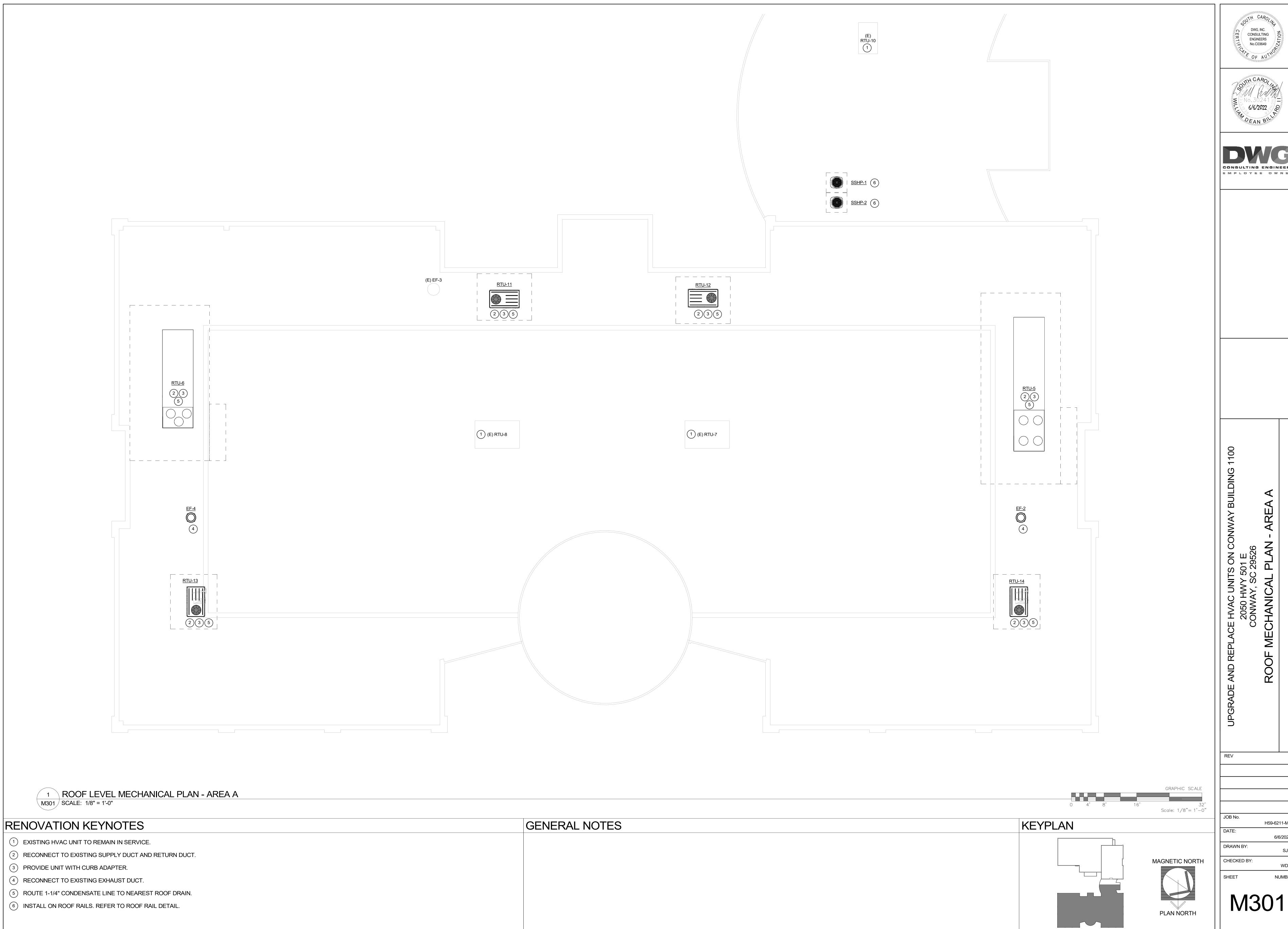






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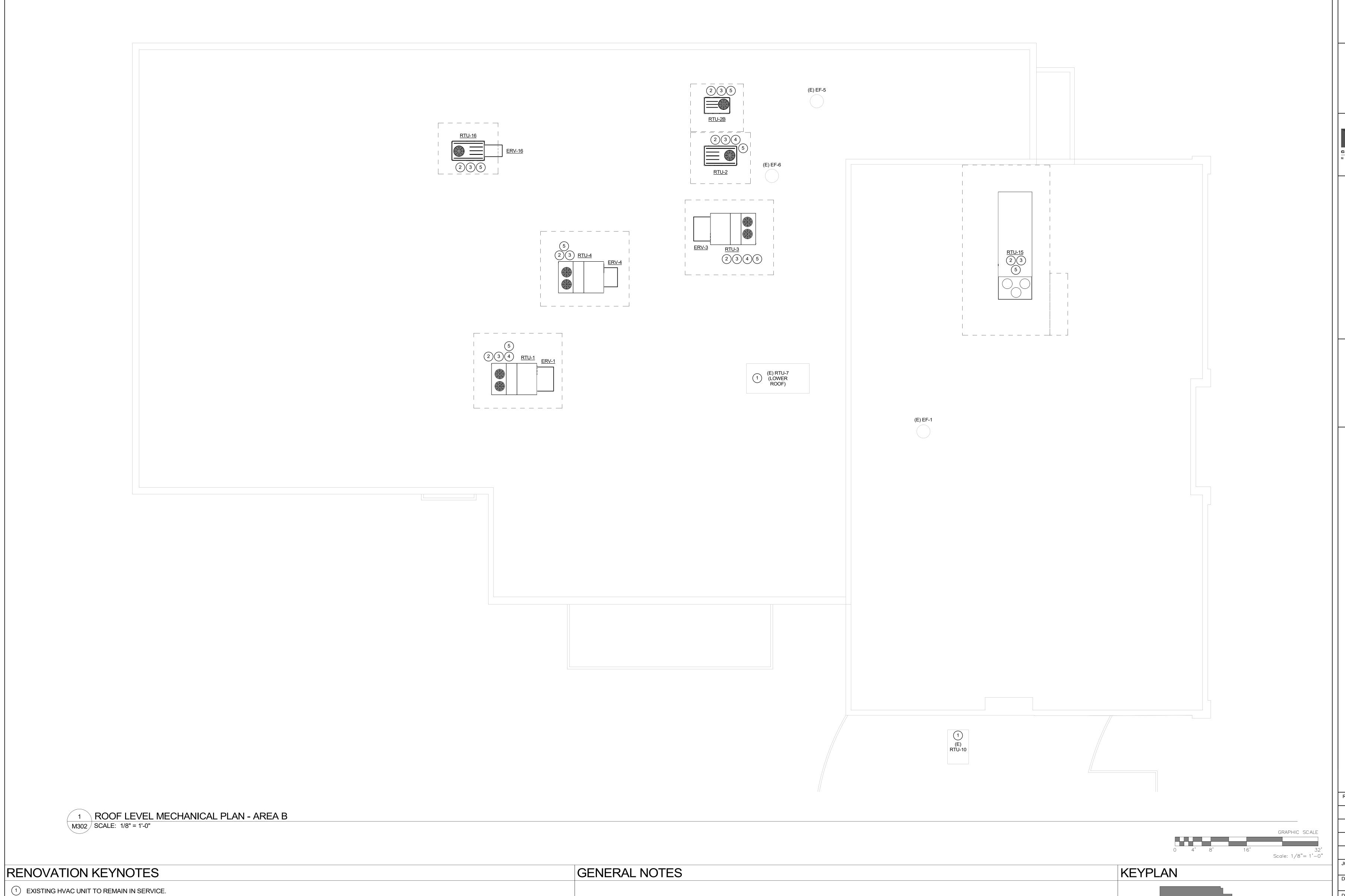




CONSULTING ENGINEERS

H59-6211-ML

6/6/2022



DWG, INC.
CONSULTING
ENGINEERS
No.C03649

OF AUTHORITICAL POPULATION OF AUT





501 E C 29526

2050 HWY 501 E CONWAY, SC 29526

CONWAY, S ROOF MECHANICA

REV

JOB No.
H59-6211-MI

JOB No.

H59-6211-ML

DATE:
6/6/2022

DRAWN BY:
SJR

MAGNETIC NORTH

CHECKED BY:

WDI

SHEET

NUMBE

PLAN NORTH

M302

(2) RECONNECT TO EXISTING SUPPLY DUCT AND RETURN DUCT.

5) ROUTE 1-1/4" CONDENSATE LINE TO NEAREST ROOF DRAIN.

4 INSTALL NEW DUCT MOUNTED HOT WATER HEATER COIL. REFER TO ROOFTOP UNIT SCHEDULE. RECONNECT TO HOT WATER HEATING PIPING.

3 PROVIDE UNIT WITH CURB ADAPTER.

ELECTRICAL SYSTEMS SEISMIC REQUIREMENTS

PER IBC-2018/ASCE 7-16

- A. PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.
- B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTER 26 TO 29 OF ASCE 7-16.
- C. WHERE DESIGN FOR SEISMIC AND WIND LOADS IS REQUIRED, THE MORE DEMANDING FORCE MUST BE USED.
- D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY. WIND SPEEDS. ETC.
- E. USE THE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT

Ip = 1.0

- F. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL REGISTERED IN THE STATE THE JOB IS LOCATED. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.
- G. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.
- H. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAYS AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

ELECTRICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGN	NOITA
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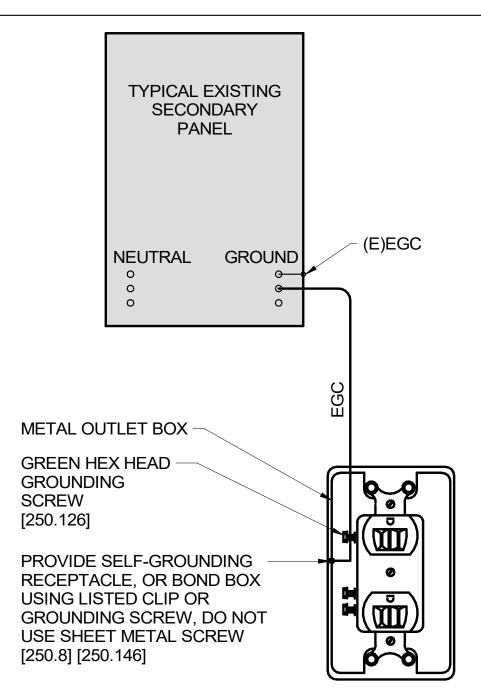
Ip = 1.5

• ALL ASSOCIATED ELECTRICAL WORK UNLESS NOTED OTHERWISE • EMERGENCY LIGHTS • EXIT LIGHTS • FIRE ALARM

SEISMIC DESIGN CATEGORIES D.E.F

			7.4120 5,2,1		
		COMPONE	NT IMPORTANCE FACTOR (Ip)		
	1.0		1.5		
COMPONENT IDENTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES	
ROOF MOUNTED	RESTRAIN ALL	1	RESTRAIN ALL	-	
FLOOR MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-	
WALL MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-	
COMPONENT SUPPORTS	RESTRAIN ALL	1	RESTRAIN ALL	-	
SUSPENDED EQUIPMENT	RESTRAIN ALL	1	RESTRAIN ALL	-	
SINGLE CONDUIT	RESTRAIN IF ≥ 2.5"	3	RESTRAIN IF ≥ 2.5"	3	
CABLE TRAY/BUS DUCT TRAPEZED CONDUIT	DO NOT DELETE ON TRAPEZE ≥ 2.5". RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	3	RESTRAIN IF ANY CONDUIT ON TRAPEZE > 2.5". RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	3	
COMPONENT CERTIFICATION	NOT REQUIRED	-	REQUIRED	5	
PENDANT, LAY-IN AND CAN LIGHTS	REQUIRED	4	REQUIRED	4	

- 1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
- RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER MASS AT 4' OR LESS ABOVE A FLOOR. IS POSITIVELY ATTACHED TO THE STRUCTURE. AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING AND CONDUIT.
- 3. RESTRAINT IS NOT REQUIRED IF THE CONDUIT IS SUPPORTED BY HANGERS AND EACH HANGER IN THE RUN IS 12" IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12" IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
- 4. THE RESTRAINT OF PENDANT, LAY-IN AND CAN LIGHTS IS ADDRESSED IN ASTM C636 AND E580.
- $^{5.}$ COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.



GROUNDING NOTES:

ABBR. DESCRIPTION

NUMBERS IN BRACKETS REFER TO SPECIFIC SECTIONS OF THE NATIONAL ELECTRICAL CODE.

GROUNDING LEGEND

SIZE PER TABLE 250.122.

EQUIPMENT GROUNDING CONDUCTOR

- ALL UNDERGROUND OR OTHERWISE INACCESSIBLE GROUND CONNECTIONS AND SPLICES SHALL BE EXOTHERMICALLY WELDED
- GROUND ELECTRODE FOR SEPARATELY DERIVED SYSTEMS SHALL BE THE NEAREST METAL WATER PIPE OR STRUCTURAL METAL. IF EITHER IS NOT AVAILABLE, PROVIDE GROUNDING CONDUCTOR BACK TO MAIN GROUND BUS AT SERVICE ENTRANCE.
- PROVIDE A GROUND WIRE IN ALL CONDUITS. EARTH SHALL NOT BE USED AS THE SOLE GROUND RETURN PATH FOR ANY EQUIPMENT POWERED UNDER THIS PROJECT
- OTHERWISE OVERCURRENT PROTECTION MIGHT NOT WORK, OR IT MIGHT CAUSE POWER QUALITY PROBLEMS.
- NO ALUMINUM SHALL BE USED FOR GROUNDING WORK WITHOUT THE SPECIFIC WRITTEN PERMISSION OF THE ENGINEER. EXCEPTION: ALUMINUM BUILDING STRUCTURAL MATERIALS SHALL BE BONDED WITH LISTED ALUMINUM EQUIPMENT WITH
- 7. ALL METAL ENCLOSURES AND RACEWAYS SHALL BE BONDED TO GROUND [250.86]. FOR CIRCUITS OVER 250V PROVIDE BOND PER [250.97], STANDARD LOCKNUTS ARE NOT ACCEPTABLE.
- PROVIDE EGC CONNECTED TO ANY JUNCTION BOX WHERE SPLICE IS MADE [250.148].

ALUMINUM TO COPPER CONNECTORS FOR ROUTING COPPER EGC'S.

PROVIDE BOND TO EXPOSED METAL ON ALL MOTORS, PUMPS, AND LIGHTING FIXTURES PER [250.112].



GENERAL ELECTRICAL NOTES

- BRANCH CIRCUIT WIRING FOR 20A CIRCUITS SHALL BE SIZED PER WIRE SIZING CHART. WHERE CONDUCTOR AND RACEWAY SIZE ARE SHOWN AT HOMERUN, SUCH SIZE SHALL BE USED FOR THE ENTIRE CIRCUIT. EXCEPTION: FINAL CONNECTION TO DEVICES IN OUTLET BOXES IS NOT REQUIRED TO BE LARGER THAN #12.
- RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILINGS, BELOW FLOOR AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. EXPOSED RACEWAYS MAY BE USED IN UNFINISHED SPACES, WHERE EXPLICITLY NOTED ON PLANS AND WHERE APPROVED BY THE ARCHITECT AND ENGINEER. LAY OUT EXPOSED RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL
- FEEDER CONDUITS AND BRANCH CIRCUITS ROUTING SHALL COMPLY WITH DETAILS ON DRAWINGS AND SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES BEFORE AND DURING CONSTRUCTION. A FIRESTOP SYSTEM SHALL BE USED TO SEAL ALL PENETRATIONS OF ELECTRICAL CONDUITS AND CABLES
- THROUGH FIRE-RATED PARTITIONS. THE FIRESTOP SYSTEM SHALL CONSIST OF A FIRE-RATED CAULK TYPE SUBSTANCE AND HIGH TEMPERATURE FIBER INSULATION BY STI OR APPROVED EQUAL. ONLY METAL CONDUIT SHALL BE USED TO PENETRATE FIRE-RATED PARTITIONS. SEE ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS OF FIRE-RATED WALLS. THE USE OF MC CABLE IS NOT ALLOWED, UNLESS NOTED OTHERWISE
- PROVIDE A LISTED EXPANSION/DEFLECTION FITTING FOR ALL CONDUIT CROSSING EXPANSION JOINTS PER
- NEC 300.4.H. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF EXPANSION JOINTS. WHEREVER THE WORD "PROVIDE" IS USED ON THE ELECTRICAL DRAWINGS, IT SHALL BE INFERRED TO
- MEAN "FURNISH AND INSTALL", UNLESS NOTED OTHERWISE. REFER TO THE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING.

GENERAL DEMOLITION NOTES

ALL ELECTRICAL EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIALS UNTIL RELEASED BY THE OWNER'S PROJECT MANAGER. MATERIALS THAT THE OWNER'S PROJECT MANAGER CHOOSES TO RETAIN SHALL BE DELIVERED BY THE CONTRACTOR TO A LOCATION DESIGNATED BY THE PROJECT MANAGER. ALL OTHER MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

GENERAL EXISTING CONDITION NOTES

- AREAS OF WORK EXIST FOR THIS PROJECT WHICH WERE NOT ACCESSIBLE OR HAD LIMITED ACCESS DURING DESIGN. AS SUCH, CONTRACTOR SHALL VERIFY ALL UTILITIES IN AREA OF WORK BEFORE DEMOLITION OF ANY SERVICE. ANY ELECTRICAL COMPONENTS NOT SHOWN SHALL BE IDENTIFIED AND THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AS SOON AS POSSIBLE. NO ELECTRICAL REWORK SHALL BE COMMENCED WITHOUT COORDINATION OF BOTH ARCHITECT AND ENGINEER. WHERE INFORMATION SHOWN ON THESE DRAWINGS CONFLICTS WITH VERIFIED FIELD CONDITIONS, IT SHALL BE BROUGHT TO
- THE ATTENTION OF THE ARCHITECT AND ENGINEER. IN AREAS WHERE THE EXISTING CEILINGS ARE NOT SLATED TO BE REPLACED, THE CONTRACTOR SHALL WORK THROUGH THE EXISTING CEILINGS (SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR AREA OF WORK). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DAMAGED TILE OR GRID THAT IS A RESULT OF THEIR WORK. ALL WORK PERFORMED ABOVE EXISTING CEILINGS SHALL BE PERFORMED
- AFTER HOURS AND SCHEDULED WITH THE OWNER IN ADVANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A FIRESTOP SYSTEM IN ALL PENETRATIONS OF FIRE-RATED FLOORS AND WALLS CREATED BY THE REMOVAL OF EXISTING ELECTRICAL CONDUIT OR CABLES, AS WELL AS THOSE CREATED BY NEWLY INSTALLED CONDUITS AND SLEEVES.
- WHERE INSTALLATION REQUIRES CUTTING OR DRILLING OF THE EXISTING FLOOR SLAB, THE CONTRACTOR SHALL X-RAY THE EXISTING SLAB PRIOR TO WORK TO ENSURE THAT NO EXISTING UTILITIES OR STRUCTURAL ELEMENTS IN THE SLAB WILL BE COMPROMISED BY THE WORK. NOTIFY THE A/E OF ANY CONFLICTS THAT WILL REQUIRE RELOCATING THE PROPOSED SLAB WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGED UTILITIES OR STRUCTURAL ELEMENTS CAUSED BY THE SLAB DEMOLITION.
- SUPPORT ALL EXISTING CONDUITS AND JUNCTION BOXES ABOVE THE CEILING IN THE CONSTRUCTION
- REMOVE ALL ABANDONED CONDUIT, WIRE AND CABLES ABOVE THE CEILING IN THE CONSTRUCTION AREA. PROVIDE JUNCTION BOX COVERS ON ALL EXISTING JUNCTION BOXES ABOVE THE CEILING IN THE
- CONSTRUCTION AREA. SUPPORT ALL EXISTING CABLES ABOVE THE CEILING IN THE CONSTRUCTION AREA.

GENERAL HVAC CONTROLS CONDUIT NOTES

- PROVIDE CONDUIT FOR HVAC CONTROL CIRCUITS AS REQUIRED TO INTERCONNECT HVAC UNIT TO CONTROL CIRCUITS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND CONTROLS PROVIDER TO DETERMINE SCOPE OF CONDUITS REQUIRED FOR HVAC CONTROLS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT. COORDINATE POINTS OF CONNECTION WITH DIVISION 23. PROVIDE PULL CORD IN ALL EMPTY CONDUITS. SEE MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL HVAC EQUIPMENT (AHU, HP, CU, RTU, DUCT SMOKE DETECTORS, VAV,
- FCU. THERMOSTATS, ETC). THESE DOCUMENTS MAY NOT INCLUDE ENTIRE ELECTRICAL INFRASTRUCTURE REQUIRED TO SUPPORT THE BUILDING AUTOMATION SYSTEM. COORDINATE WITH BAS PROVIDER ON ALL NECESSARY INFRASTRUCTURE FOR A COMPLETE AND WORKING SYSTEM.

GENERAL FIRE ALARM SYSTEM NOTES

THERE IS NOT FIRE ALARM SCOPE OF WORK ASSOCIATED WITH THIS PROJECT. ALL HVAC UNITS ARE BEING REPLACED IN KIND AND IT IS ASSUMED EXISTING DUCT MOUNTED SMOKE DETECTORS ARE CURRENTLY INSTALLED IN ALL DUCTWORK WHERE REQUIRED BY UNIT CFM. IF EXISTING DUCT MOUNTED SMOKE DETECTORS ARE TEMPORARILY REMOVED/REINSTALLED DURING UNIT REPLACEMENT OR ARE ALTERED IN ANY WAY, THE EXISTING FIRE ALARM SYSTEM SHALL BE RECERTIFIED UPON COMPLETION OF WORK.

			EQUIPM	ENT CONNECTION	SCHEDULE	
UNIT I.D.	VOLTS	# OF POLES	LOAD (VA)	BRANCH CIRCUIT WIRING	DISCONNECT / STARTER	CIRCUIT BREAKER
ERV						
ERV-1	480 V	3	4240	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	15A
ERV-3	480 V	3	4572	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	15A
ERV-4	480 V	3	4240	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	15A
ERV-16	480 V	3	6235	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	15A
FAN POWE	RED VAV					
VAV-13-1	120 V	1	1176	2#12, 1#12G, 3/4"C	TOGGLE SWITCH	20A
VAV-14-1	120 V	1	1176	2#12, 1#12G, 3/4"C	TOGGLE SWITCH	20A
FANS						
EF-2	120 V	1	1380	2#12, 1#12G, 3/4"C	WEAHTERPROOF TOGGLE SWITCH	20A
EF-4	120 V	1	1380	2#12, 1#12G, 3/4"C	WEAHTERPROOF TOGGLE SWITCH	20A
ROOFTOP (JNITS					
RTU-1	480 V	3	27436	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	45A
RTU-2	480 V	3	16628	3#10, 1#10G, 3/4"C	NFDS 30/3/4X	25A
RTU-2B	480 V	3	9145	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	15A
RTU-3	480 V	3	27436	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	45A
RTU-4	480 V	3	24941	3#8, 1#10G, 3/4"C	NFDS 60/3/4X	40A
RTU-5	480 V	3	85366	3#1, 1#6G, 1-1/4"C	NFDS 200/3/4X	125A
RTU-6	480 V	3	65239	3#3, 1#8G, 1-1/4"C	NFDS 100/3/4X	100A
RTU-11	480 V	3	16628	3#10, 1#10G, 3/4"C	NFDS 30/3/4X	25A
RTU-12	480 V	3	16628	3#10, 1#10G, 3/4"C	NFDS 30/3/4X	25A
RTU-13	480 V	3	14965	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	20A
RTU-14	480 V	3	14965	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	20A
RTU-15	480 V	3	54747	3#4, 1#8G, 1"C	NFDS 100/3/4X	80A
RTU-16	480 V	3	14965	3#12, 1#12G, 3/4"C	NFDS 30/3/4X	20A
SPLIT SYST	EMS					
SSAH-1	208 V	2	7010	2#8, 1#10G, 3/4"C	NFDS 60/2/1	45A
SSAH-2	208 V	2	7010	2#8, 1#10G, 3/4"C	NFDS 60/2/1	45A
SSHP-1	208 V	2	3848	2#8, 1#10G, 3/4"C	NFDS 60/2/4X	40A
SSHP-2	208 V	2	3848	2#8, 1#10G, 3/4"C	NFDS 60/2/4X	40A

EQUIPMENT CONNECTION SCHEDULE GENERAL NOTES:

ENGINEER FOR DIRECTION. REFER TO ADDITIONAL NOTES ON RENOVATION DRAWINGS.

1. ALL HVAC UNITS AND EXHAUST FANS IN THIS SCHEDULE ARE INTENDED TO REPLACE THE EXISTING HVAC UNIT IN THE SAME LOCATION. EXISTING CONDUIT AND CONDUCTORS SHALL REMAIN AND BE EXTENDED IN KIND TO NEW DISCONNECT LOCATION. IF EXISTING CONDUCTOR/CONDUIT OR CIRCUIT BREAKER SIZES SHOWN ON THIS SCHEDULE DIFFER IN THE FIELD, NOTIFY

	POWER AND TELECOMMUNICA	ATION	S SYMBOL LEGEND
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
Фх	JUNCTION BOX (WALL MOUNTED) "X" INDICATES JUNCTION BOX TYPE		PANELBOARD - SURFACE MOUNTED
① X	JUNCTION BOX (CEILING MOUNTED) "X" INDICATES JUNCTION BOX TYPE		PANELBOARD - FLUSH MOUNTED
	DISCONNECT SWITCH (FUSIBLE OR NON-FUSIBLE)	\boxtimes	TRANSFORMER
	SWITCHBOARD		

ELEC	TRICAL ABBREVIATIONS
ABBR	DESCRIPTION
(E)	EXISTING
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BOD	BOTTOM OF DEVICE
CBB	COMMUNICATIONS BACKBOARD
cd	CANDELA
CGB	COMMUNICATIONS GROUNDING BUSBAR
CLG	CEILING
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FDS	FUSED DISCONNECT SWITCH
GBB	GROUND BUSBAR
GFCI	GROUND-FAULT CIRCUIT-INTERRUPTING
GFI	GROUND-FAULT INTERRUPTING
GP	GENERAL PURPOSE
HP	HEAT PUMP
J-BOX	JUNCTION BOX
KW	KILOWATTS
MCGB	MAIN COMMUNICATIONS GROUNDING BUSBAR
NEC	NATIONAL ELECTRICAL CODE
NFDS	NON-FUSED DISCONNECT SWITCH
OC	ON CENTER
RTU	ROOF TOP UNIT
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER
CONTROL PANELS	DESCRIPTION
BMS	BUILDING MANAGEMENT (AUTOMATION) SYSTEM

	SIZING CHART BRANCH CIRCUITS
DISTANCE, 120V	MINIMUM WIRE SIZE
0 - 90 FEET	#12 AWG
90 - 230 FEET	#10 AWG
230 - 446 FEET	#8 AWG

LINE LEGEND		
SYMBOL	DESCRIPTION	
	EXISTING TO REMAIN	
	NEW CONSTRUCTION	
	DEMOLISH	

ELECTRICAL CODES AND STANDARDS (WITH ALL **SOUTH CAROLINA MODIFICATIONS)**

CODE	DESCRIPTION
IBC (2018)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IFC (2018)	INTERNATIONAL FIRE CODE
NFPA 70 (2017)	NATIONAL ELECTRICAL CODE
NFPA 72 (2016)	NATIONAL FIRE ALARM AND SIGNALING CODE





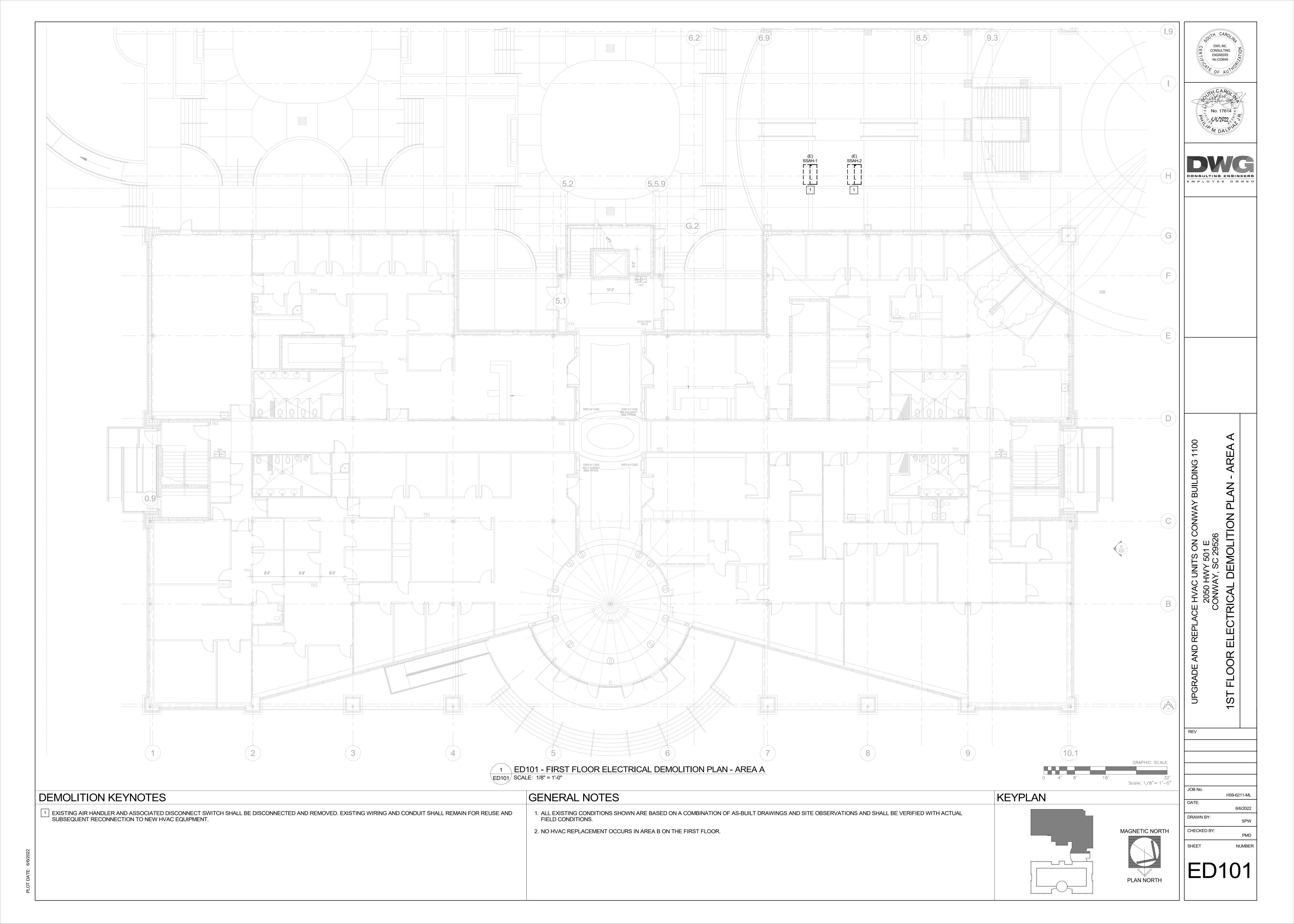


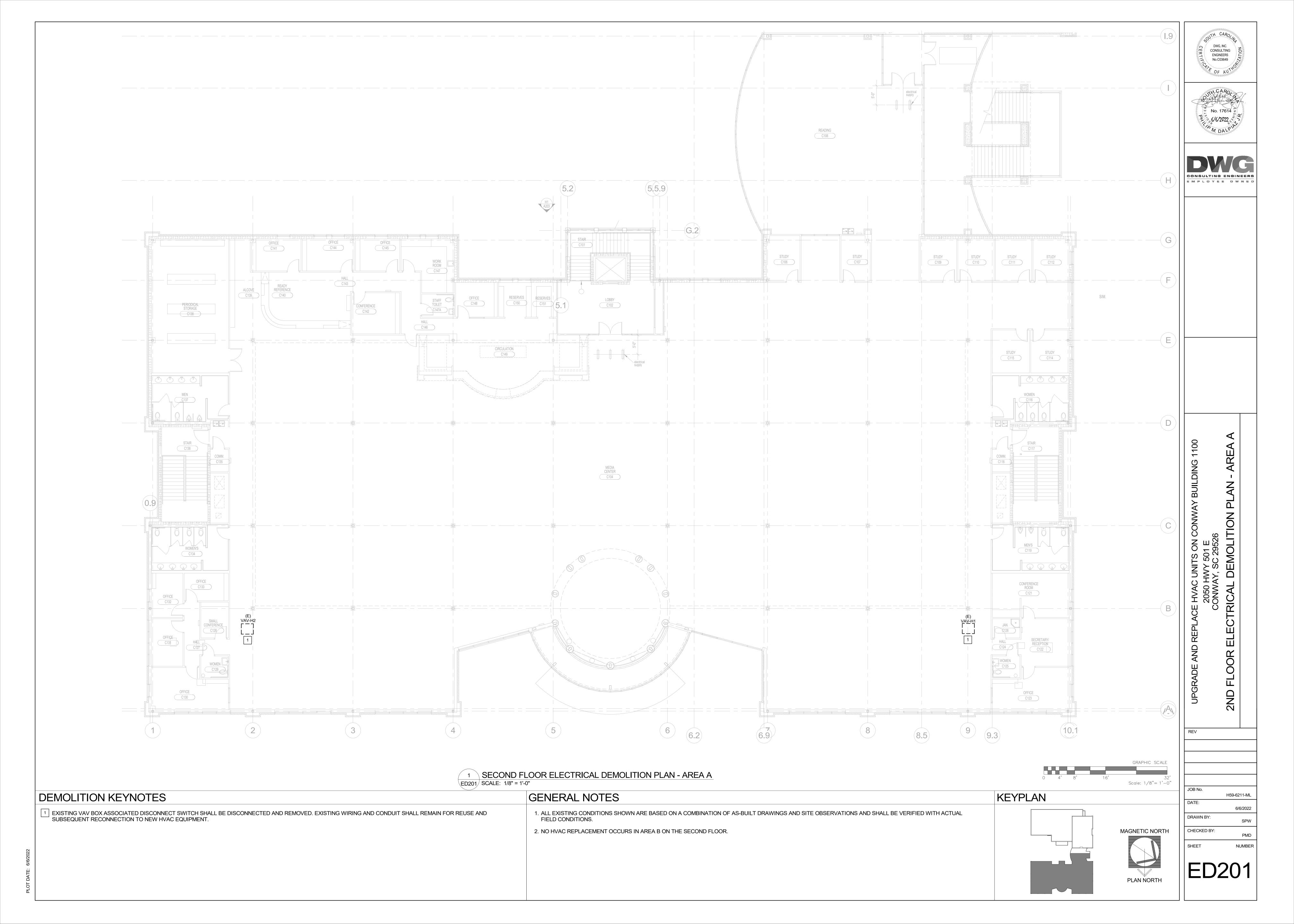


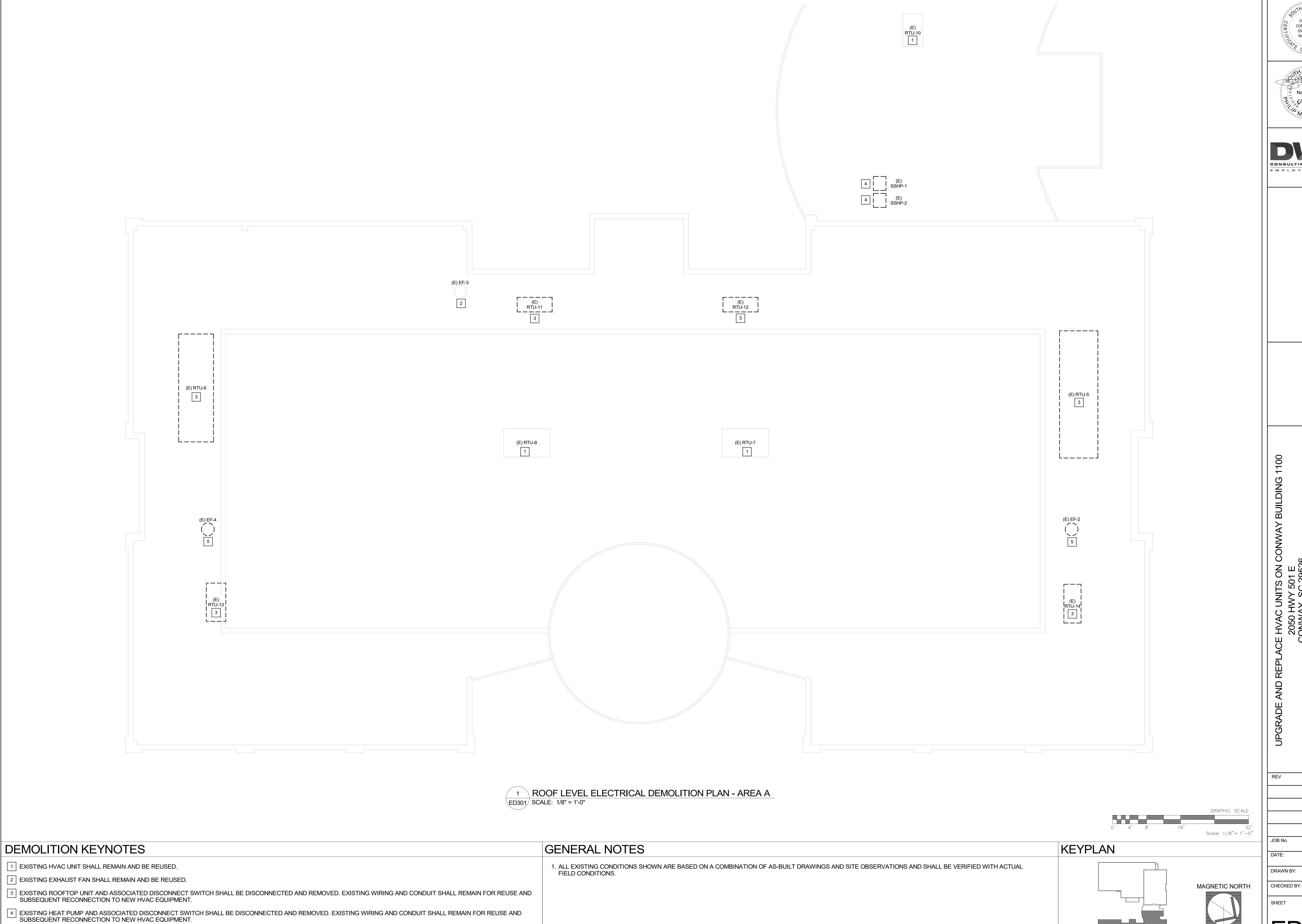
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NUMBER SHEET







DWG, INC. CONSULTING ENGINEERS No.C03649





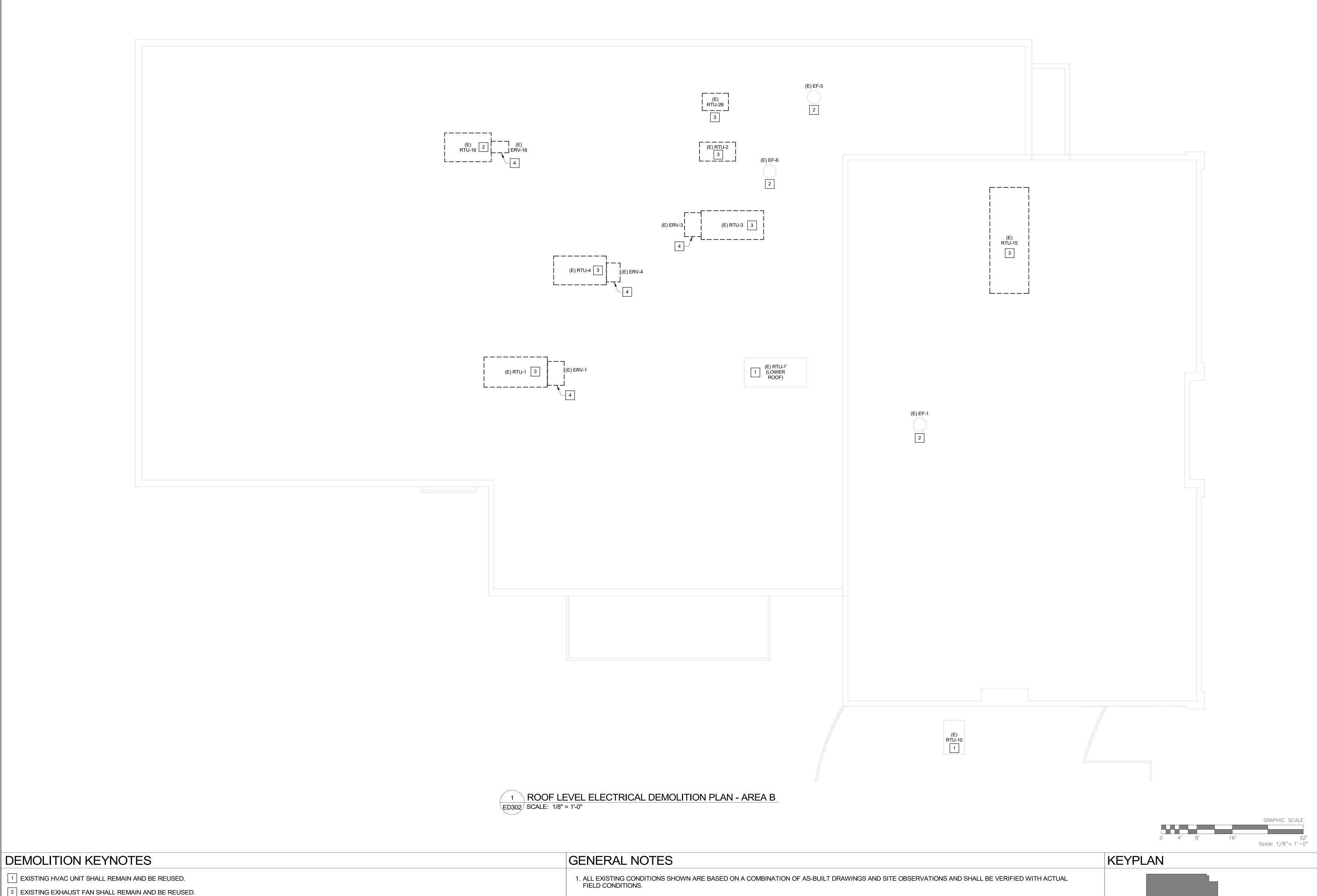
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PLAN NORTH

ED301

5 EXISTING EXHAUST FAN AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.



EXISTING ROOFTOP UNIT AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.

4 EXISTING ERV UNIT AND ASSOCIATED DISCONNECT SWITCH SHALL BE DISCONNECTED AND REMOVED. EXISTING WIRING AND CONDUIT SHALL REMAIN FOR REUSE AND SUBSEQUENT RECONNECTION TO NEW HVAC EQUIPMENT.







HVAC UNITS ON CONWAY BUILDING 1100 2050 HWY 501 E ONWAY, SC 29526

PGRADE AND REPLACE HVAC UNITS
2050 HWY 50
CONWAY, SC 2
ROOF ELECTRICAL DEMOLIT

REV

JOB No.

H59-6211-ML

DATE:
6/6/2022

DRAWN BY:
SPW

CHECKED BY:

MAGNETIC NORTH

CHECKED BY:

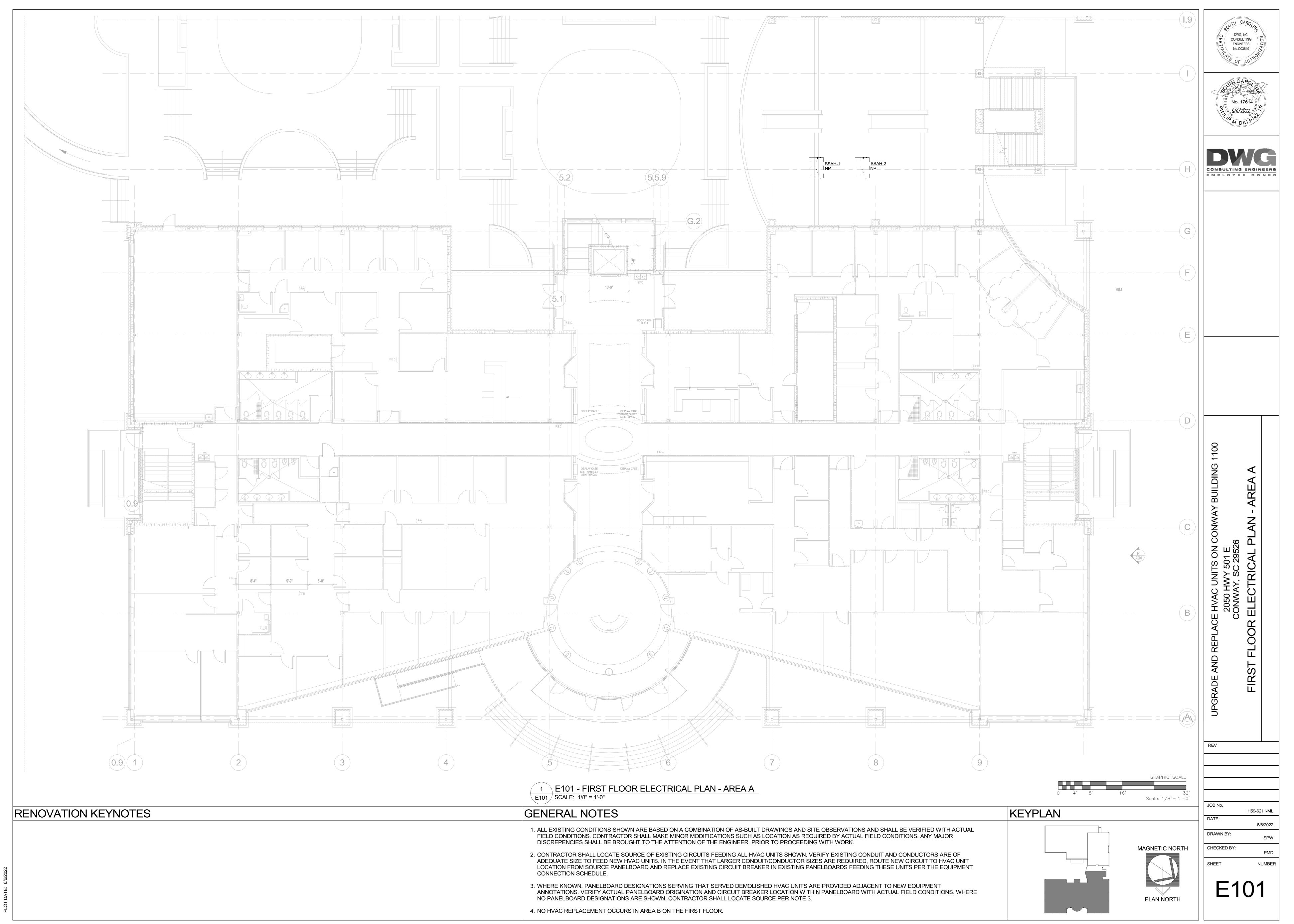
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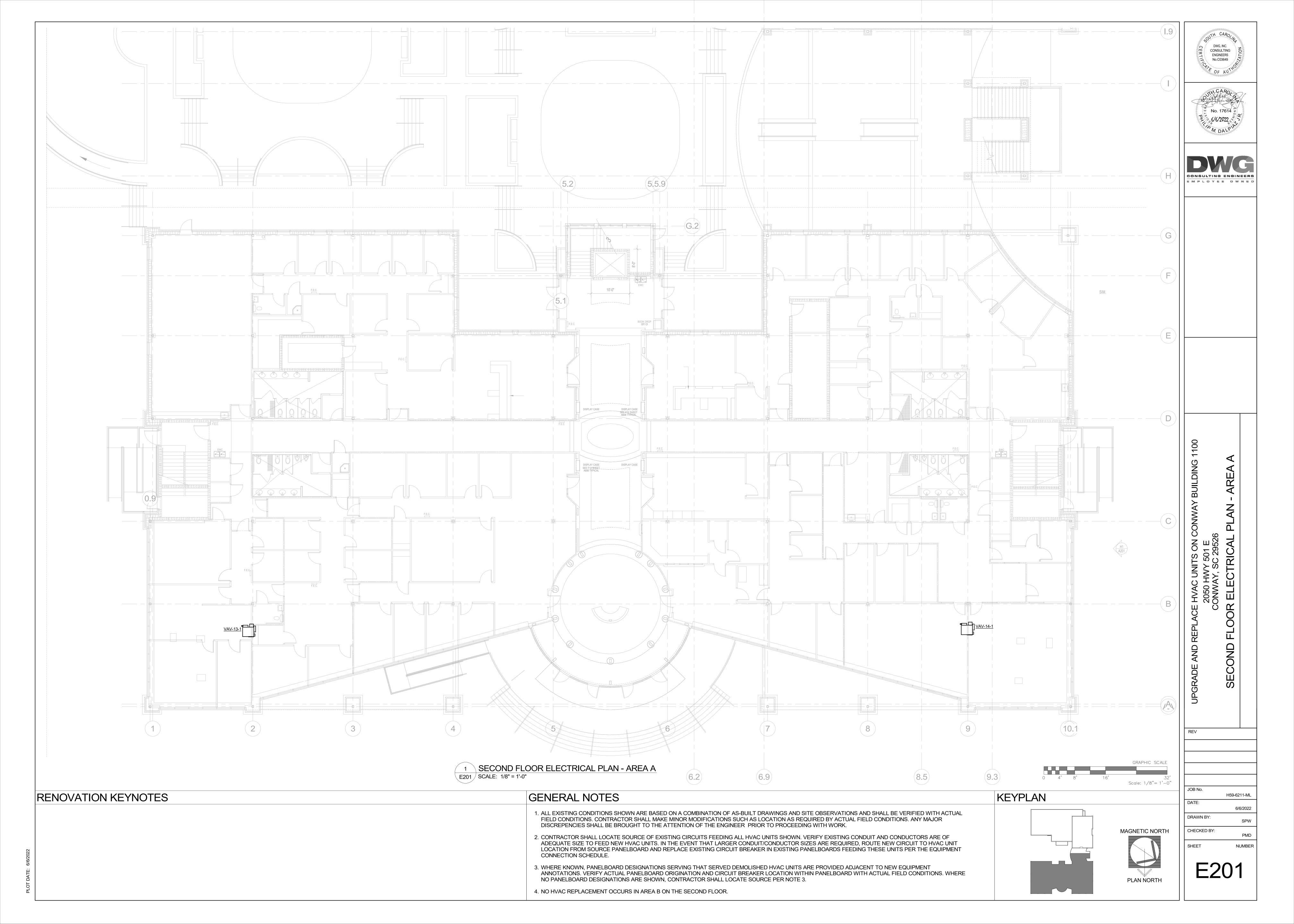
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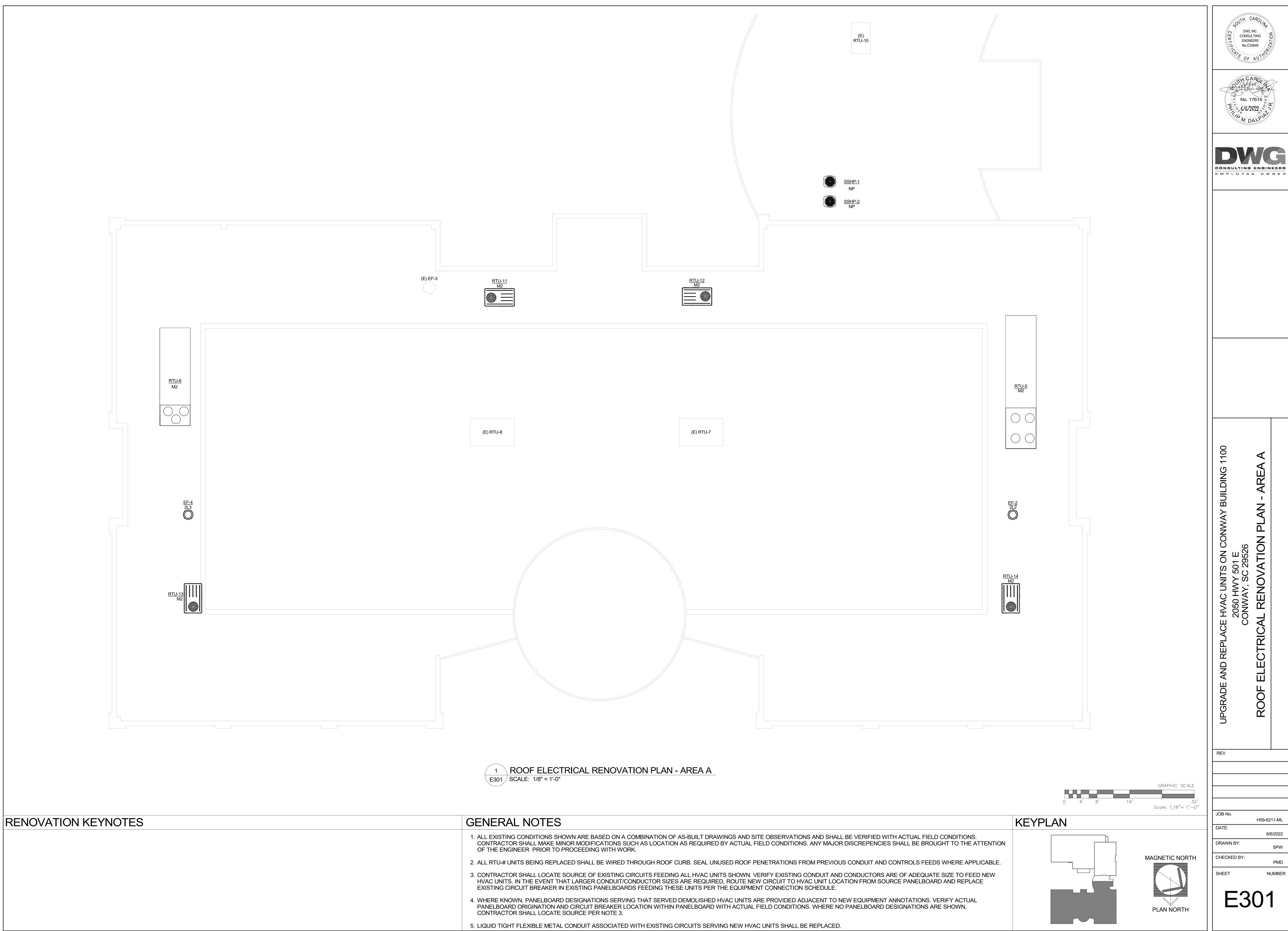
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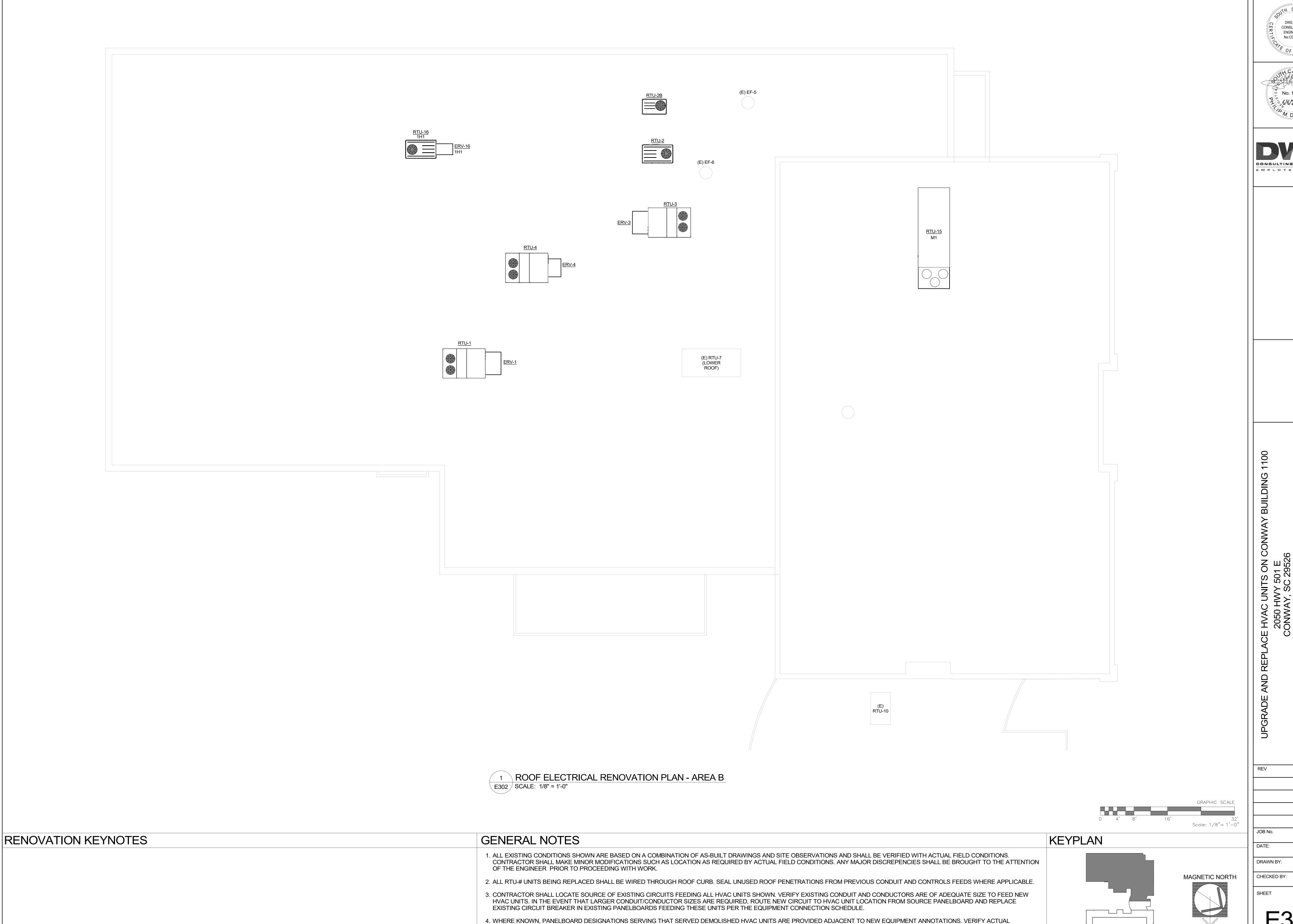
PLAN NORTH

ED302









PANELBOARD ORIGINATION AND CIRCUIT BREAKER LOCATION WITHIN PANELBOARD WITH ACTUAL FIELD CONDITIONS. WHERE NO PANELBOARD DESIGNATIONS ARE SHOWN, CONTRACTOR SHALL LOCATE SOURCE PER NOTE 3.

5. LIQUID TIGHT FLEXIBLE METAL CONDUIT ASSOCIATED WITH EXISTING CIRCUITS SERVING NEW HVAC UNITS SHALL BE REPLACED.

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