

**ENGINEERING**  
114 EAST 8th AVENUE, TALLAHASSEE, FL 32303  
PHONE 904.224.7622  
www.H2Engineering.com

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Florida Registry #1665  
Robert D. Richards, P.E. #90648

## FLORIDA SHERIFFS YOUTH LEARNING CENTER AND BLACKBURN-HUNT BUILDING

MAHAN DRIVE  
TALLAHASSEE, FL.



Clemons, Rutherford, &  
Associates, Inc.

Architects  
Planners  
Interior Designers  
Construction Managers  
2027 Thomasville Road  
Tallahassee, Florida 32308  
phone 850-385-6153  
fax 850-386-8420  
cra@clemons-rutherford.com

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Submittal			
Phase	Date	Drw	Chk
DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

Revision		
#	Description	Date

CRA Project # 24029

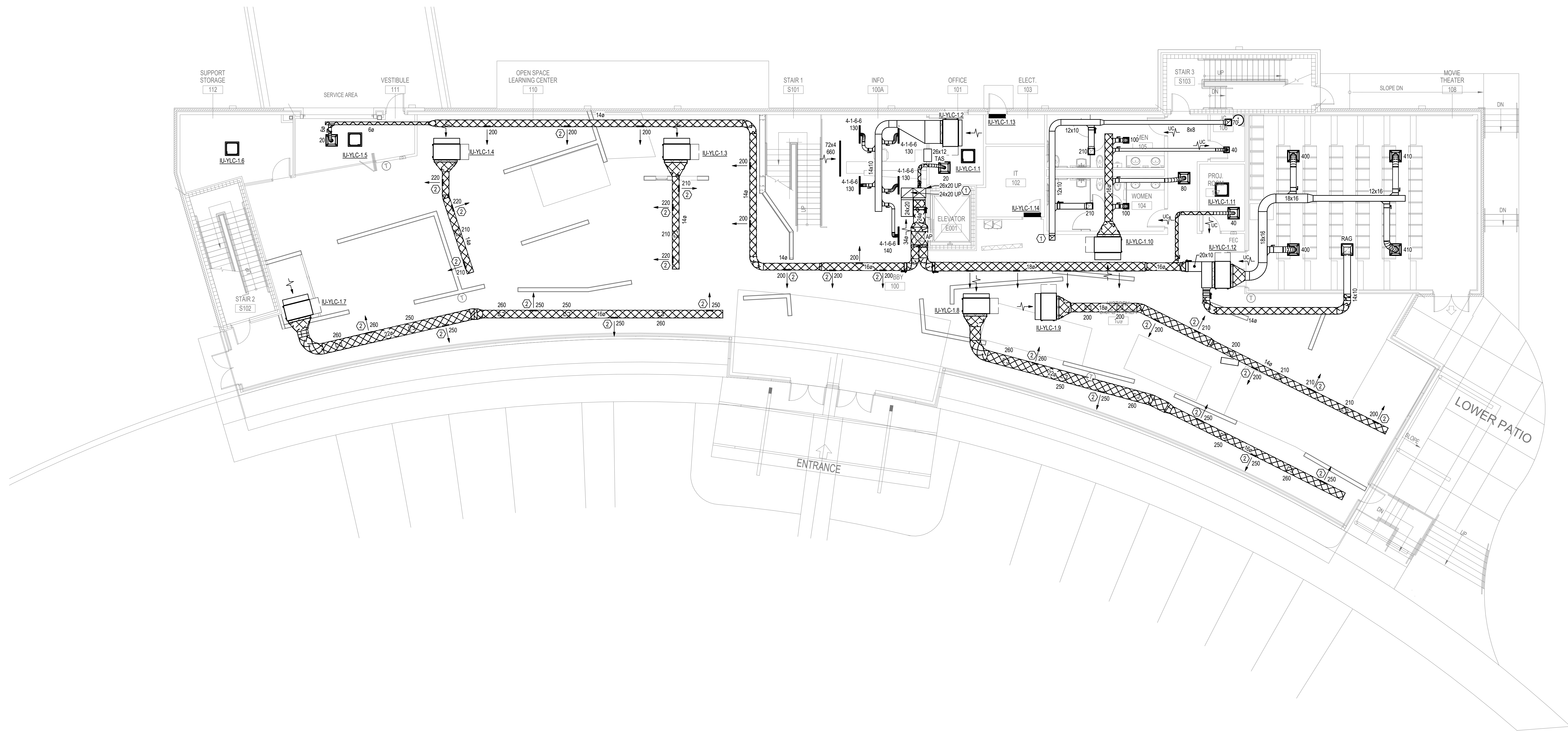
Phase: CONSTRUCTION  
DOCUMENTS

SHEET TITLE  
YOUTH LEARNING  
CENTER - 1ST FLOOR  
PLAN

M1.1

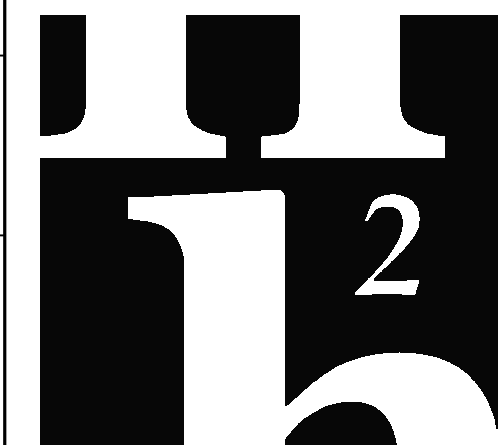
### KEYED NOTES:

- ① DUCTWORK TO/FROM SECOND FLOOR. SEE M1.2.
- ② CENTER DEVICE AT 45 DEGREES BELOW DUCT HORIZONTAL.



North 1 FIRST FLOOR PLAN  
1/8" = 1'-0"





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Florida Registry #4365  
Robert D. Richards, P.E. #90648

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CRA Project # 24029

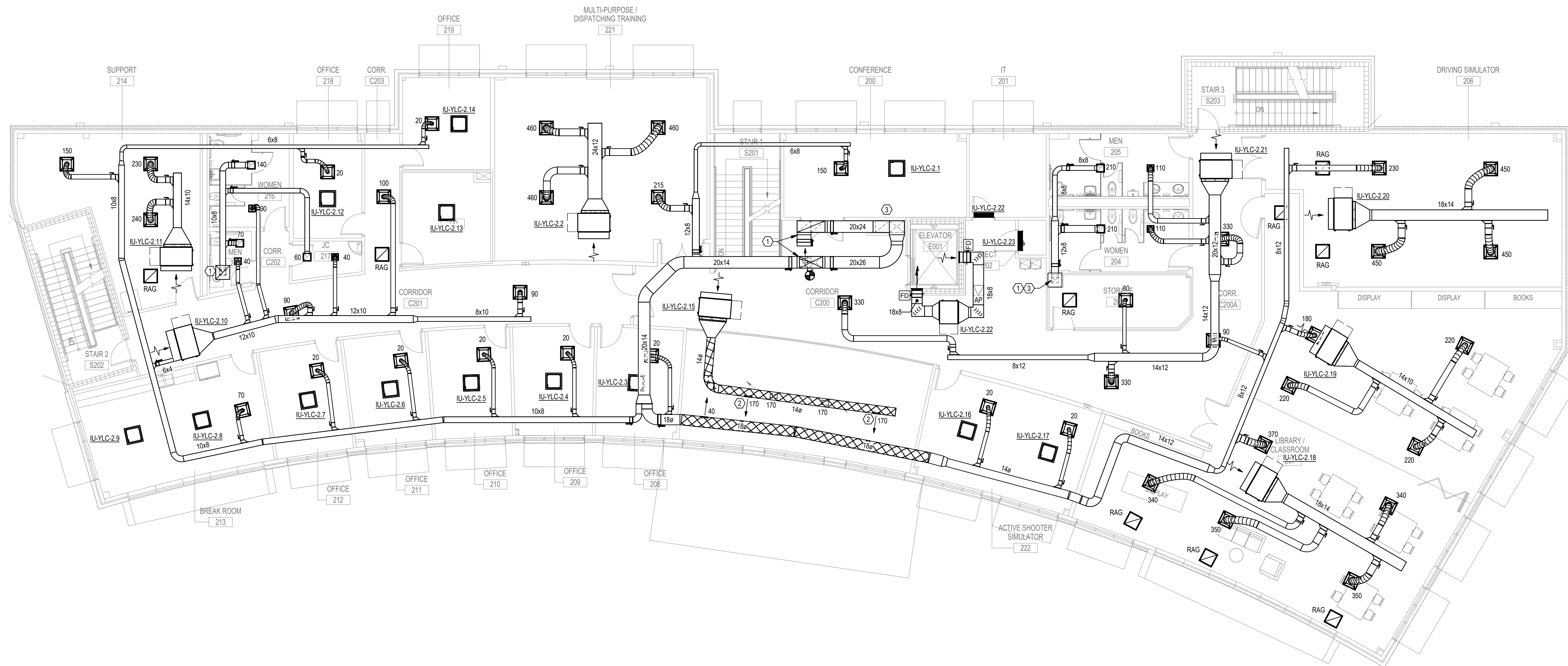
Phase: **CONSTRUCTION  
DOCUMENTS**

SHEET TITLE  
**YOUTH LEARNING  
CENTER - 2ND FLOOR  
PLAN**

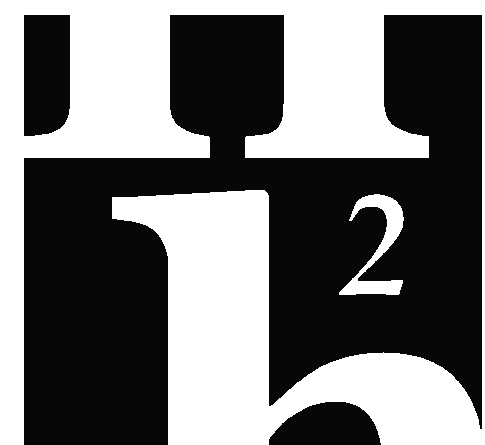
**M1.2**

### KEYED NOTES:

- ① DUCTWORK TO/FROM ROOF. SEE M1.8.
- ② CENTER DEVICE AT 45 DEGREES BELOW DUCT HORIZONTAL.
- ③ DUCTWORK TO/FROM FIRST FLOOR. SEE M1.1.



**1 SECOND FLOOR PLAN**  
1/8" = 1'-0"



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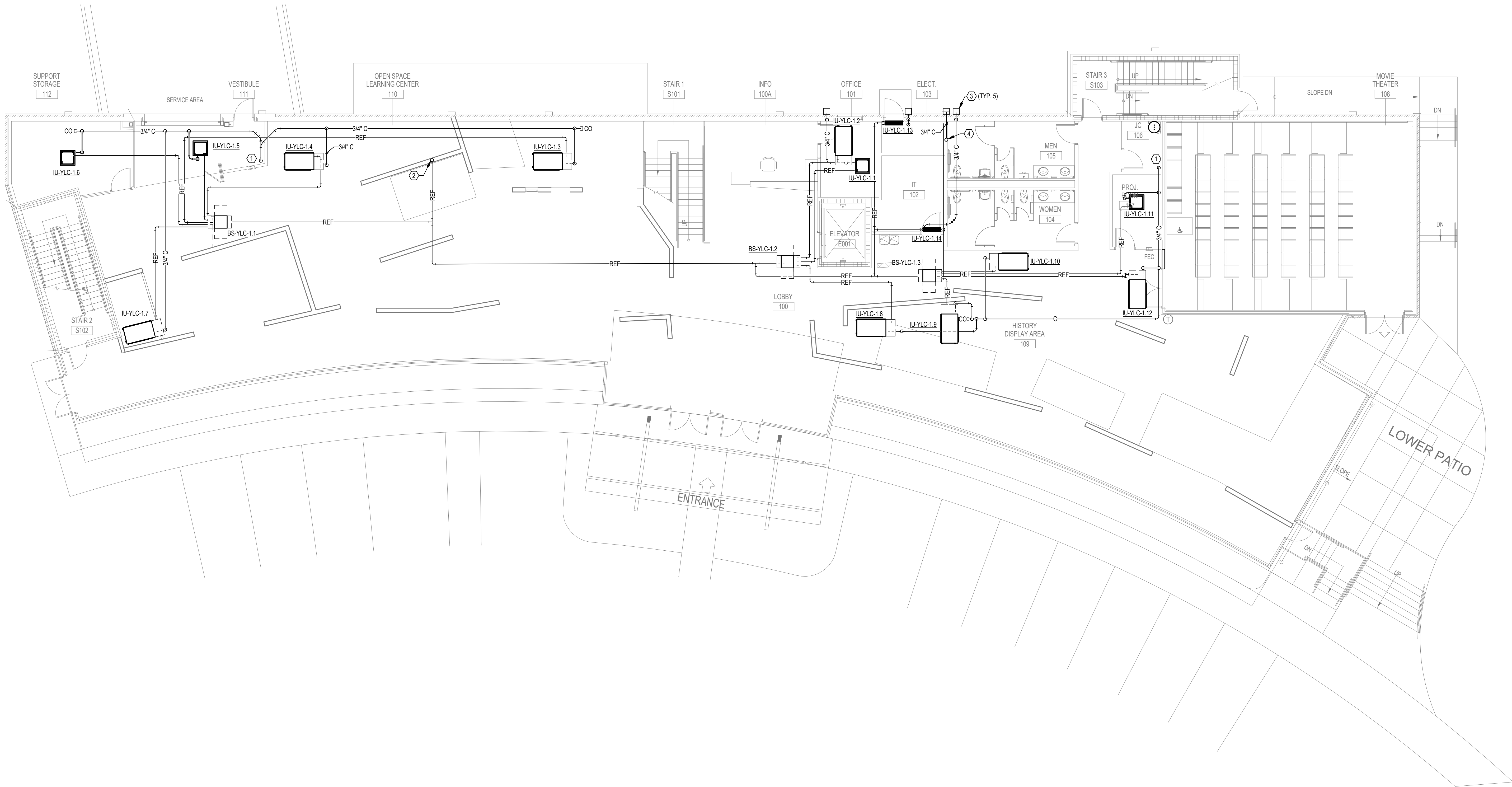
Phase: **CONSTRUCTION  
DOCUMENTS**

SHEET TITLE  
**YOUTH LEARNING  
CENTER - 1ST FLOOR  
PLAN**

**M1.3**

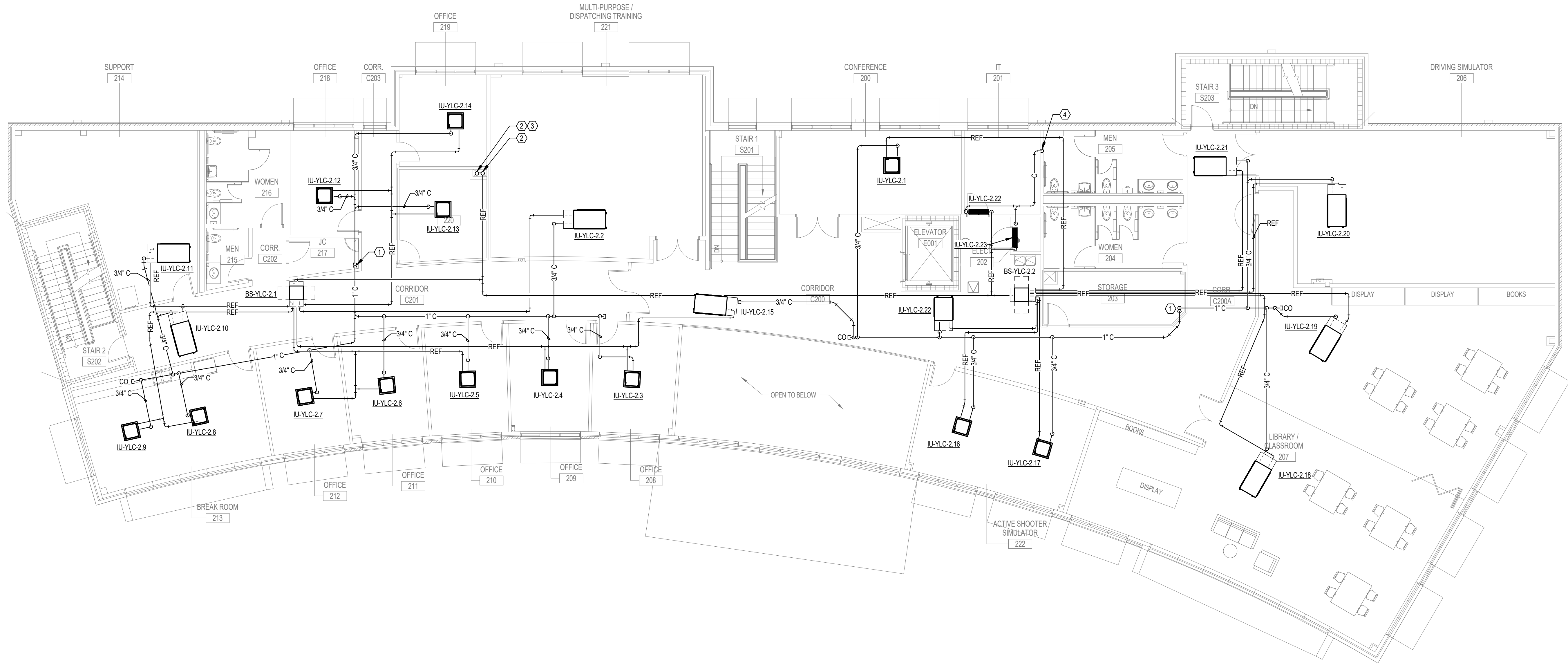
**KEYED NOTES:**

- ① ROUTE CONDENSATE PIPING DOWN TO FLOOR SINK IN THIS VICINITY. SEE PLUMBING DRAWINGS.
- ② REFRIGERANT PIPING FROM ABOVE. SEE M1.4 FOR CONTINUATION.
- ③ ROUTE CONDENSATE PIPING DOWN INSIDE WALL TO 12" AFF AND TO BUILDING EXTERIOR AS INDICATED.
- ④ CONDENSATE FROM ABOVE. SEE M1.4 FOR CONTINUATION.



**1 FIRST FLOOR PLAN-PIPING**  
1/8" = 1'-0"

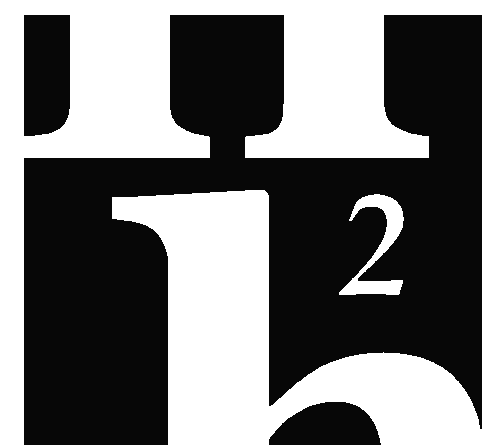
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Annotate Drawings 24-197 Task Sheriff's Association - Learning Center\24-197 Task Sheriff's Association - Learning Center - MEP.dwg



**1 SECOND FLOOR PLAN-PIPING**  
1/8" = 1'-0"

**KEYED NOTES:**

- ① ROUTE CONDENSATE PIPING DOWN TO FLOOR SINK IN THIS VICINITY. SEE PLUMBING DRAWINGS.
- ② REFRIGERANT PIPING FROM ABOVE. SEE M1.8 FOR CONTINUATION.
- ③ REFRIGERANT PIPING TO BELOW. SEE M1.3 FOR CONTINUATION.
- ④ CONDENSATE PIPING TO BELOW. SEE M1.3 FOR CONTINUATION.



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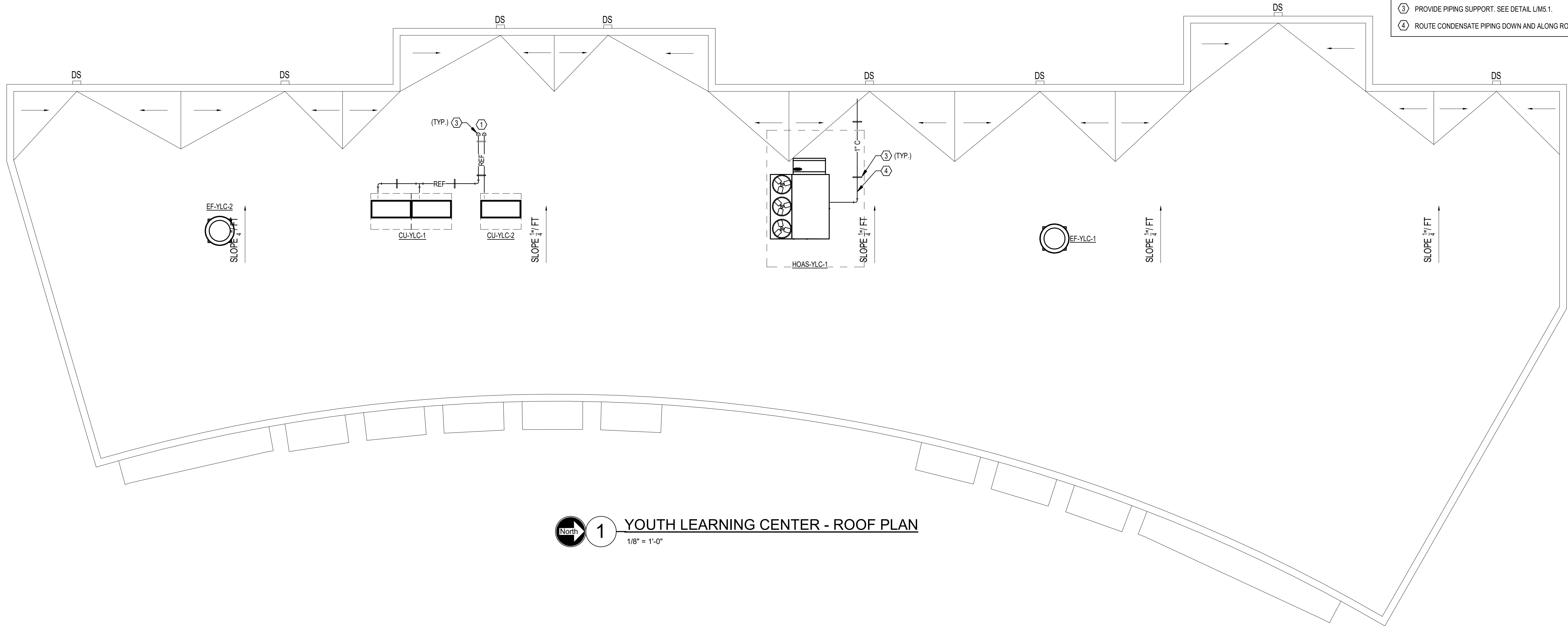
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SHEET TITLE  
**YOUTH LEARNING  
CENTER - 2ND FLOOR  
PLAN**

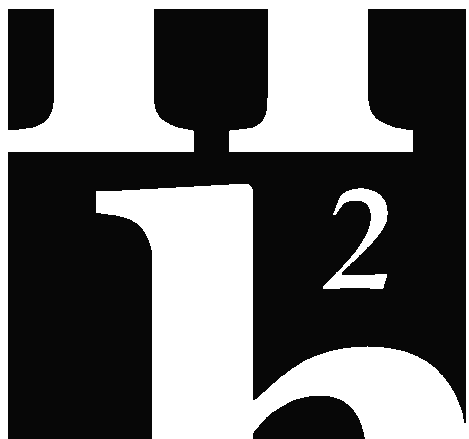
**M1.4**



**1 YOUTH LEARNING CENTER - ROOF PLAN**  
1/8" = 1'-0"

KEYED NOTES:

- ① ROUTE REFRIGERANT PIPING THROUGH ROOF TO BELOW. SEE DETAIL KIMS.1. SEE 1/M.1.4 FOR CONTINUATION.
- ② ROUTE REFRIGERANT PIPING THROUGH ROOF TO BELOW. SEE DETAIL KIMS.1. SEE 2/M.1.6 FOR CONTINUATION.
- ③ PROVIDE PIPING SUPPORT. SEE DETAIL LIMS.1.
- ④ ROUTE CONDENSATE PIPING DOWN AND ALONG ROOF WITH MINIMUM 1% SLOPE TO DRAIN.



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Phase: **CONSTRUCTION  
DOCUMENTS**

SHEET TITLE  
**YOUTH LEARNING  
CENTER - ROOF PLAN**

**M1.8**



TYPE			A2	A5	A6	D1	D3	D5	D6	D7	D9	D10	E1	E2	H5	
DESCRIPTION			2x2 CEILING CASSETTE	2x2 CEILING CASSETTE	2x2 CEILING CASSETTE	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	WALL MOUNTED	
	TOTAL COOLING CAPACITY (NOTE 1)		BTUH	7,500	15,000	18,000	7,200	12,000	18,000	24,000	30,000	48,000	57,000	72,000	24,000	
	SENSIBLE COOLING CAPACITY (NOTE 1)		BTUH	5,500	10,800	13,000	6,100	9,700	13,800	16,800	22,400	34,800	41,800	56,900	18,000	
	HEATING CAPACITY (NOTE 2)		BTUH	8,500	17,000	20,000	8,500	13,500	20,000	27,000	34,000	54,000	60,000	81,000	25,500	
	AIR FLOW RATE (HIGH / LOW)		CFM	307 / 229	405 / 282	511 / 353	317 / 229	450 / 388	635 / 529	688 / 565	1,094 / 812	1,377 / 988	1,624 / 1,130	2,047 / 1,764	2,541 / 2,188	635 / 470
	EXTERNAL STATIC PRESSURE (HIGH / LOW)		IN. WG	N/A	N/A	N/A	0.40 / 0.12	0.40 / 0.12	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.95 / 0.38	0.95 / 0.44	N/A
	SOUND PRESSURE LEVEL (HIGH / LOW)		dBA	32 / 26	37 / 28	43 / 33	31 / 29	37 / 35	39 / 37	40 / 38	41 / 39	42 / 40	45 / 43	49 / 46	49 / 46	47 / 41
	ELECTRICAL CHARACTERISTICS		V / PH	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1
	MINIMUM CIRCUIT AMPACITY		AMPS	0.3	0.4	0.6	0.6	1.4	1.6	1.8	2.8	3.4	3.4	9.5	10.7	0.6
	MAXIMUM OVERLOAD PROTECTION		AMPS	15	15	15	15	15	15	15	15	15	15	15	15	15
	CONDENSATE DRAIN SIZE		IN.	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1	1	3/4
	OUTSIDE AIR INTAKE SIZE		IN.	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WEIGHT		LBS.	35	37	41	55	62	80	80	102	102	104	302	302	31
FAN DRIVE			DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	
MANUFACTURER			DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	
MODEL NUMBER			FXQZ07	FXZ015	FXZ018	FXMQ07	FXMQ12	FXMQ18	FXMQ24	FXMQ30	FXMQ48	FXMQ54	FXMQ72	FXMQ96	FXAQ24	
DETAIL REFERENCE			GMS.1	GMS.1	GMS.1	FMS.1	FMS.1	FMS.1	FMS.1	FMS.1	FMS.1	FMS.1	FMS.1	FMS.1	HMS.1	
NOTES:																
1 COOLING CAPACITY RATED @ 95°F AMBIENT, 80°Fdb / 67°Fwb ENTERING AIR TEMPERATURE.																
2 HEATING CAPACITY RATED @ 47°Fdb / 43°Fwb AMBIENT, 70°Fdb ENTERING AIR TEMPERATURE.																

DESIGNATION	SCHEDULED TYPE	DESCRIPTION	COMBINATION RATIO	ADJUSTED CAPACITY
			(%)	(BTU/H)
CU-YLC-1	I	HEAT RECOVERY	130%	260,520
CU-YLC-2	H	HEAT RECOVERY	130%	237,160

NOTES:

- ADJUSTED CAPACITY @ INDOOR DESIGN TEMPERATURE & COMBINATION RATIO.
- REFRIGERANT PIPING SHALL BE SIZED BY MANUFACTURER.
- COAT ENTIRE CONDENSING UNIT WITH CORROSION INHIBITOR.

OUTDOOR CONDITIONS - DESIGN DAY (TALLAHASSEE, FLORIDA)				
	COOLING (0.4% ANNUAL)	*Fdb - *Fwb	96.2	- 76.2
	HEATING (99.6% ANNUAL)	*Fdb	26.5	
	ENTHALPY (0.4% ANNUAL)	*Fdb - *Fwb	89.0	- 79.9
	DEHUMIDIFICATION (0.4% ANNUAL)	*Fdb - *Fwb	82.9	- 79.2
	EVAPORATION (0.4% ANNUAL)	*Fdb - *Fwb	88.8	- 80.0
	HUMIDIFICATION (99% ANNUAL)	GR / LB	13.0	
INDOOR CONDITIONS - SUMMER				
	OFFICE AREAS (EXCEPT AS NOTED BELOW)	*Fdb - %RH	74	- 55
	CLASSROOMS	*Fdb - %RH	74	- 50
	MUSEUMS / ARCHIVES	*Fdb - %RH	70	- 50
	TELECOMMUNICATION ROOMS	*Fdb - %RH	78	- 55
	MECHANICAL / ELECTRICAL ROOMS / SERVICE AREAS	*Fdb - %RH	80	- 50
	ELEVATOR MACHINE ROOMS	*Fdb - %RH	80	- 50
INDOOR CONDITIONS - WINTER				
	OFFICE AREAS (EXCEPT AS NOTED BELOW)	*Fdb - %RH	70	- 30
	CLASSROOMS	*Fdb - %RH	70	- 30
	MUSEUMS / ARCHIVES	*Fdb - %RH	68	- 45
	TELECOMMUNICATION ROOMS	*Fdb - %RH	65	- 30
	MECHANICAL / ELECTRICAL ROOMS / SERVICE AREAS	*Fdb - %RH	70	- 30
	ELEVATOR MACHINE ROOMS	*Fdb - %RH	70	- 30

TYPE		H	I	
DESCRIPTION		HEAT RECOVERY	HEAT RECOVERY	
PERFORMANCE				
	NOMINAL CAPACITY	TONS	20	22
	COOLING CAPACITY (NOTE 1)	BTUH	240,000	264,000
	HEATING CAPACITY (NOTE 2)	BTUH	270,000	297,000
	EER (NOTE 3)	BTU / W-HR	11.65	10.80
	IEER (NOTE 3)	BTU / W-HR	21.10	19.80
	SIMULTANEOUS COOLING & HEATING EFFICIENCY (NOTE 3)	BTU / W-HR	23.70	22.15
	COEFFICIENT OF PERFORMANCE (NOTE 3)	BTU / W-HR	3.54	3.41
	SOUND PRESSURE LEVEL	dBA	68	69
UNIT DATA				
	COMBINATION		(2) 10-TON	(1) 10-TON (1) 12-TON
	COMPRESSOR QUANTITY (INVERTER)	#	1 + 1	1 + 1
	MAXIMUM NUMBER OF INDOOR UNITS	#	41	45
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 3	208 / 3
	MINIMUM CIRCUIT AMPACITY	AMPS	43.0 + 43.0	43.0 + 58.3
	MAXIMUM OVERLOAD PROTECTION	AMPS	50 + 50	50 + 70
	WEIGHT	LBS.	793	793
	REFRIGERANT TYPE		R410A	R410A
MANUFACTURER			DAIKIN	DAIKIN
MODEL NUMBER			REYQ2604XATJA	REYQ2604XATJA
DETAIL REFERENCE			JMS.1	JMS.1
NOTES:				
1	COOLING CAPACITY RATED @ 95°F AMBIENT, 80°Fdb / 67°Fwb ENTERING AIR TEMPERATURE.			
2	HEATING CAPACITY RATED @ 47°Fdb / 43°Fwb AMBIENT, 70°Fdb ENTERING AIR TEMPERATURE.			
3	EFFICIENCY RATINGS BASED ON MIX OF DUCTED AND NON-DUCTED INDOOR UNITS.			

TYPE OF SPACE		EXHAUST AIR	OUTSIDE AIR	
		CFM / FT.	CFM / PERSON	CFM / FT.
	BREAK ROOMS		5	0.06
	CLASSROOMS (AGE 9 PLUS)		10	0.12
	CONFERENCE / MEETING		5	0.06
	CORRIDORS		0	0.06
	JANITOR / TRASH	1	0	0.00
	LIBRARIES		5	0.12
	LOBBIES		5	0.06
	MAIN ENTRY LOBBIES		5	0.06
	MUSEUMS / GALLERIES		7.5	0.06
	MUSIC/ THEATER/DANCE		10	0.06
	OFFICE SPACE		5	0.06
	STORAGE ROOMS		0	0.12
	TOILET (PUBLIC)	50/70	0	0.00

**NOTES:**

- 1 VENTILATION RATES FOR SPACES WITH INTERMITTENT OCCUPANCY (PEAK OCCUPANCY LESS THAN THREE HOURS) HAVE BEEN REDUCED ON AVERAGE OCCUPANCY DURING THE OCCUPIED PERIOD, BUT NOT LESS THAN HALF OF THAT REQUIRED DURING PEAK OCCUPANCY.
- 2 VENTILATION RATES CALCULATED PER REQUIREMENTS OF FBC, MECHANICAL 2023.
- 3 EXHAUST IS PER WATER CLOSET AND/OR URINAL. HIGHER RATE USED.

Designation	Description	Scheduled Type	Outside Air Quantity	External Static Pressure	System Connected To		Notes	
			(CFM)	(Inch WG)	Branch Selector	Condensing Unit	Standard	Special
IJA-YLC-1.1	2x2 Ceiling Cassette	A1	20	0.10	BS-YLC-1.2	CJ-YLC-1	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-1.2	Ducted Concealed Above Ceiling	D6	350	0.10	BS-YLC-1.2	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.3	Ducted Concealed Above Ceiling	D7	270	0.10	BS-YLC-1.1	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.4	Ducted Concealed Above Ceiling	D7	265	0.10	BS-YLC-1.1	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.5	2x2 Ceiling Cassette	A1	20	0.10	BS-YLC-1.1	CJ-YLC-1	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-1.6	2x2 Ceiling Cassette	A1	0	0.10	BS-YLC-1.1	CJ-YLC-1	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-1.7	Ducted Concealed Above Ceiling	E2	55	0.10	BS-YLC-1.1	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.8	Ducted Concealed Above Ceiling	E2	55	0.10	BS-YLC-1.2	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.9	Ducted Concealed Above Ceiling	E1	1,550	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.10	Ducted Concealed Above Ceiling	D1	40	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.11	2x2 Ceiling Cassette	A1	40	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-1.12	Ducted Concealed Above Ceiling	D10	1,000	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-1.13	Wall Mounted	H5	0	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3	
IJA-YLC-1.14	Wall Mounted	H5	0	0.10	BS-YLC-1.3	CJ-YLC-1	1, 2, 3	
IJA-YLC-2.1	2x2 Ceiling Cassette	A6	150	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.2	Ducted Concealed Above Ceiling	D9	215	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.3	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.4	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.5	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.6	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.7	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.8	2x2 Ceiling Cassette	A5	35	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.9	2x2 Ceiling Cassette	A5	35	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.10	Ducted Concealed Above Ceiling	D3	60	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.11	Ducted Concealed Above Ceiling	D5	150	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.12	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.13	2x2 Ceiling Cassette	A1	0	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.14	2x2 Ceiling Cassette	A1	20	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.15	Ducted Concealed Above Ceiling	D6	40	0.10	BS-YLC-2.1	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.16	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.17	2x2 Ceiling Cassette	A2	20	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 6, 7	
IJA-YLC-2.18	Ducted Concealed Above Ceiling	D9	310	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.19	Ducted Concealed Above Ceiling	D6	240	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.20	Ducted Concealed Above Ceiling	D9	230	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.21	Ducted Concealed Above Ceiling	D9	90	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IJA-YLC-2.22	Wall Mounted	H5	0	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3	
IJA-YLC-2.23	Wall Mounted	H5	0	0.10	BS-YLC-2.2	CJ-YLC-2	1, 2, 3	

VARIABLE REFRIGERANT FLOW - BRANCH SELECTOR TYPES				
TYPE			C1	C2
	DESCRIPTION		MULTI PORT	MULTI PORT
	SERIES		FLEX	FLEX
	MAXIMUM CAPACITY OF CONNECTED INDOOR UNITS	BTUH	144,000	216,000
	NUMBER OF PORTS	#	4	6
	MAXIMUM NUMBER OF CONNECTED UNITS PER PORT	#	5	5
	COOLING INPUT POWER	W	43	64
	HEATING INPUT POWER	W	43	64
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 1	208 / 1
	MINIMUM CIRCUIT AMPACITY	AMPS	0.4	0.6
	MAXIMUM OVERLOAD PROTECTION	AMPS	15	15
WEIGHT		LBS	49	73
MANUFACTURER			DAIKIN	DAIKIN
MODEL NUMBER			BSF4Q24TVJ	BSFGQ24TVJ
DETAIL REFERENCE			C/M5.2	C/M5.2

DESIGNATION	SCHEDULED TYPE	DESCRIPTION	SERIES
BS-YLC-1.1	C1	MULTI PORT	FLEX
BS-YLC-1.2	C1	MULTI PORT	FLEX
BS-YLC-1.3	C2	MULTI PORT	FLEX
BS-YLC-2.1	C2	MULTI PORT	FLEX
BS-YLC-2.2	C2	MULTI PORT	FLEX

NOTES:

1 REFRIGERANT PIPING SHALL BE SIZED BY MANUFACTURER.



## M4.1

FANS				
DESIGNATION			EF-YLC-1	EF-YLC-2
	SERVICE		CLASS 1 OR 2 EXHAUST	CLASS 1 OR 2 EXHAUST
	MOUNTING METHOD		ROOF	ROOF
	FAN TYPE		CENTRIFUGAL UPBLAST	CENTRIFUGAL UPBLAST
	AIR FLOW	CFM	270	890
	STATIC PRESSURE	IN.	0.4	0.4
	AIRSTREAM TEMPERATURE	DEG F	70	70
	FAN SPEED	RPM	1,300	795
	FAN DRIVE		DIRECT	DIRECT
	MOTOR SPEED	RPM	1,550	1,050
	MOTOR POWER	HP or W	1/8 HP	1/3 HP
	MOTOR BRAKE HORSEPOWER	BHP	N/A	N/A
	ELECTRONICALLY COMMUTATED MOTOR		YES	YES
	ELECTRICAL CHARACTERISTICS	V / PH	120 / 1	120 / 1
	WEIGHT	LBS	23	56
	NOISE LEVEL (RADIATED)	SONES or LwA	5.4 SONES	4.6 SONES
STANDARD NOTES			1, 2, 3, 4, 7, 9	1, 2, 3, 4, 7, 9
SPECIAL NOTES				
MANUFACTURER			COOK	COOK
MODEL NUMBER			90R1SDH	165RH10D
DETAIL REFERENCE			DNM5.1	DNM5.1
NOTES: (SEE SEQUENCES OF OPERATION ON SHEET MC2.1 FOR FAN CONTROLS)				
1 PROVIDE PRE-WIRED DISCONNECT SWITCH, FACTORY MOUNTED.				
2 PROVIDE SOLID STATE SPEED CONTROLLER, FACTORY MOUNTED.				
3 PROVIDE BIRD SCREEN.				
4 PROVIDE BACKDRAFT DAMPER, GRAVITY OPERATED.				
7 PROVIDE PRE-FABRICATED INSULATED ROOF CURB, 12-INCH HIGH WITH DAMPER TRAY, SLOPED TO MATCH ROOF SLOPE.				
9 PROVIDE TIE-DOWN EYELETS.				

BUILDING AIR BALANCE - YOUTH LEARNING CENTER (NORMAL)

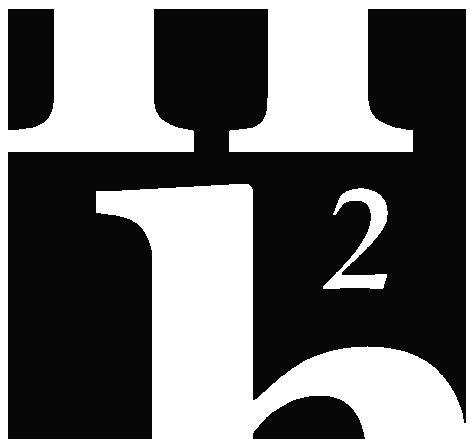
OUTSIDE AIR SOURCE	CFM	EXHAUST SOURCE	CFM
HOAS-YLC-1	3,970	EF-YLC-1	270
		EF-YLC-2	890
		HOAS-YLC-1 (RELIEF)	2,050
TOTAL	3,970	TOTAL	3,210
BUILDING PRESSURIZATION		(+)	760

BUILDING AIR BALANCE - YOUTH LEARNING CENTER (ECONOMIZER)

OUTSIDE AIR SOURCE	CFM	EXHAUST SOURCE	CFM
HOAS-YLC-1	5,520	EF-YLC-1	270
		EF-YLC-2	890
		HOAS-YLC-1 (RELIEF)	3,600
TOTAL	5,520	TOTAL	4,760
BUILDING PRESSURIZATION		(+)	760

MAKEUP AIR UNIT - PACKAGED

DESIGNATION			HOAS-YLC-1	
AIR FLOW RATES	TOTAL SUPPLY AIR		CFM	5,520
	OUTSIDE AIR		CFM	3,970
	RELIEF AIR (NORMAL / ECONOMIZER)		CFM	2050 / 3600
	MINIMUM SUPPLY FAN SPEED SETTING		%	100
	MINIMUM EXHAUST FAN SPEED SETTING		%	60
FILTER SECTION				
	DAMPERS		NONE	
	FILTER ORIENTATION		FLAT	
	TYPE OF FILTER		2" THICK PLEATED	
COOLING DATA				
	TOTAL COOLING CAPACITY	MBTUH	340.5	
	SENSIBLE COOLING CAPACITY	MBTUH	203.9	
	AIR ENTERING COOLING COIL	*Fdb - *Fwb	90.2	- 74.3
	AIR LEAVING COOLING COIL	*Fdb - *Fwb	55.1	- 55.0
	EER / IEER	BTU / W-HR	10.6	/ 13.2
	CONDENSATE DRAIN SIZE	IN.	1	
HOT GAS REHEAT DATA				
	TYPE		MODULATING	
	HEATING CAPACITY	MBTUH	114.8	
	AIR ENTERING HOT GAS REHEAT COIL	*F	55.1	
	AIR LEAVING HOT GAS REHEAT COIL	*F	75	
HEATING DATA - ELECTRIC				
	HEATING CAPACITY - # OF STAGES	KW - #	60	- SCR
	AIR ENTERING HEATING COIL	*F	38.7	
	AIR LEAVING HEATING COIL	*F	72.9	
SUPPLY FAN SECTION				
	FAN TYPE		PLENUM	
	DRIVE TYPE		DIRECT	
	FAN QUANTITY	#	1	
	EXTERNAL STATIC PRESSURE	IN. WG	1.5	
	MAXIMUM TOTAL STATIC PRESSURE (INCLUDING DIRTY FILTER)	IN. WG	3.11	
	DIRTY FILTER ALLOWANCE	IN. WG	0.93	
	FAN MOTOR HORSEPOWER (PER FAN)	HP - BHP	7 1/2	- 4.02
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - BHP	7 1/2	- 4.02
	VARIABLE FREQUENCY DRIVE		1 PER UNIT	
EXHAUST FAN SECTION				
	FAN TYPE		PLENUM	
	DRIVE TYPE		DIRECT	
	FAN QUANTITY	#	1	
	EXTERNAL STATIC PRESSURE	IN. WG	1	
	MAXIMUM TOTAL STATIC PRESSURE (INCLUDING DIRTY FILTER)	IN. WG	1	
	DIRTY FILTER ALLOWANCE	IN. WG	0	
	FAN MOTOR HORSEPOWER (PER FAN)	HP - BHP	2	- 0.8
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - BHP	2	- 0.8
	VARIABLE FREQUENCY DRIVE		1 PER FAN	
UNIT DATA				
	COMPRESSOR QUANTITY	# - #	2	
	WEIGHT	LBS	3,186	
	REFRIGERANT TYPE		R-454B	
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 3	
	MCA / MOCP	AMPS	206	/ 225
MANUFACTURER			AAON	
MODEL NUMBER			RNA-030-C-A-B-GAB08-ADAH0	
DETAIL REFERENCE			E,NM5.1	
NOTES:				
1	PROVIDE ONE (1) MODULATING COMPRESSOR.			
2	NOT USED.			
3	PROVIDE SUPPLY AIR TEMPERATURE AND DEWPOINT CONTROL.			
4	PROVIDE SUPPLY AIR TEMPERATURE SENSOR.			
5	PROVIDE OUTSIDE AIR TEMPERATURE AND HUMIDITY SENSORS.			
6	PROVIDE SUCTION PRESSURE TRANSDUCER.			
7	PROVIDE RETURN AIR TEMPERATURE AND HUMIDITY SENSORS.			
8	PROVIDE TERMINAL BLOCK WITH 2 DIGITAL RELAY OUTPUTS.			
9	COAT ALL COILS WITH CORROSION INHIBITOR.			
10	NOT USED.			
11	PROVIDE EBTRON GOLD SERIES AIRFLOW MEASURING STATION.			
12	PROVIDE CONVENIENCE ELECTRICAL OUTLET.			
13	PROVIDE ROOF CURB WITH THROUGH THE CURB UTILITIES.			
14	NOT USED.			
15	PROVIDE DISCONNECT SWITCH.			



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FLORIDA  
SHERIFFS YOUTH  
LEARNING  
CENTER AND  
BLACKBURN-HUNT  
BUILDING

MAHAN DRIVE  
TALLAHASSEE, FL.



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Submittal

Phase	Date	Drw	Chk
DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

Revision

#	Description	Date

CRA Project # 24029

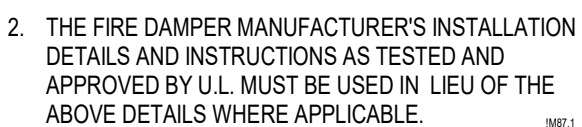
Phase: CONSTRUCTION  
DOCUMENTS

SHEET TITLE  
SCHEDULES

M4.2







1. ACCESS DOOR SHALL BE NOMINAL 24"x24" UNLESS NOTED OTHERWISE.
2. LOCATE DOOR IN CEILING OR WALL TO ALLOW UNOBSTRUCTED ACCESS TO EQUIPMENT, DAMPERS, ETC. AND NOT IN CONFLICT WITH LIGHTS, DIFFUSERS, SPRINKLERS, ETC.
3. ACCESS PANELS LOCATED IN SECURE CEILINGS SHALL BE SECURITY TYPE

The diagram illustrates the required clearances for two types of HVAC units: a single-port unit and a multi-port unit.

**Single-Port Unit (Top):**

- Top Clearance:** 3" MIN. TOP CLEARANCE
- Side Clearance (Control Box):** 12" MIN. CONTROL BOX SIDE CLEARANCE
- Side Clearance (Refrigerant Piping):** 17" MIN. SIDE CLEARANCE
- Bottom Clearance:** 2" MIN. BOTTOM CLEARANCE
- Refrigerant Piping:**
  - REF. REF. (Refrigerant Piping to Indoor Unit)
  - REF. REF. (Refrigerant Piping to Outdoor Unit)

**Multi-Port Unit (Bottom):**

- Top Clearance:** 1" MIN. TOP CLEARANCE
- Side Clearance (Control Box):** 24" MIN. CONTROL BOX SIDE CLEARANCE
- Side Clearance (Refrigerant Piping):** 24" MIN. SIDE CLEARANCE
- Bottom Clearance:** 1" MIN. BOTTOM CLEARANCE
- Refrigerant Piping:**
  - REF. REF. (Refrigerant Piping to Indoor Unit)
  - REF. REF. (Refrigerant Piping to Outdoor Unit)
- Shut-Off Valve:** SHUT-OFF VALVE (TYPICAL)
- Refrigerant Piping:**
  - REF. REF. (Refrigerant Piping to Indoor Unit)
  - REF. REF. (Refrigerant Piping to Outdoor Unit)

**Notes:**

1. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNTING REQUIREMENTS.
2. SEE REFRIGERANT PIPING CONNECTIONS TO THE SYSTEM IN SECTION 1.5 FOR MOUNTING AND CLEARANCE REQUIREMENTS.

**Legend:**

- SINGLE-PORT**
- MULTI-PORT**

Diagram illustrating two methods for concealing diffusers in a ceiling:

**FLANGED FRAME, CONCEALED MOUNTING**  
 N.T.S.

Labels for the left diagram:

- PLENUM WITH HEMMED EDGE, SUSPENDED FROM STRUCTURE
- CONCEALED MOUNTING BRACKET (SUPPLIED WITH SLOT DIFFUSER)
- SCREW (SUPPLIED WITH SLOT DIFFUSER)
- SLOT DIFFUSER
- GYP BOARD CEILING

**T-BAR LAY-IN STYLE**  
 N.T.S.

Labels for the right diagram:

- PLENUM WITH HEMMED EDGE, SUSPENDED FROM STRUCTURE
- CONCEALED MOUNTING BRACKET (SUPPLIED WITH SLOT DIFFUSER)
- SCREW (SUPPLIED WITH SLOT DIFFUSER)
- SLOT DIFFUSER
- LAY-IN CEILING TILE

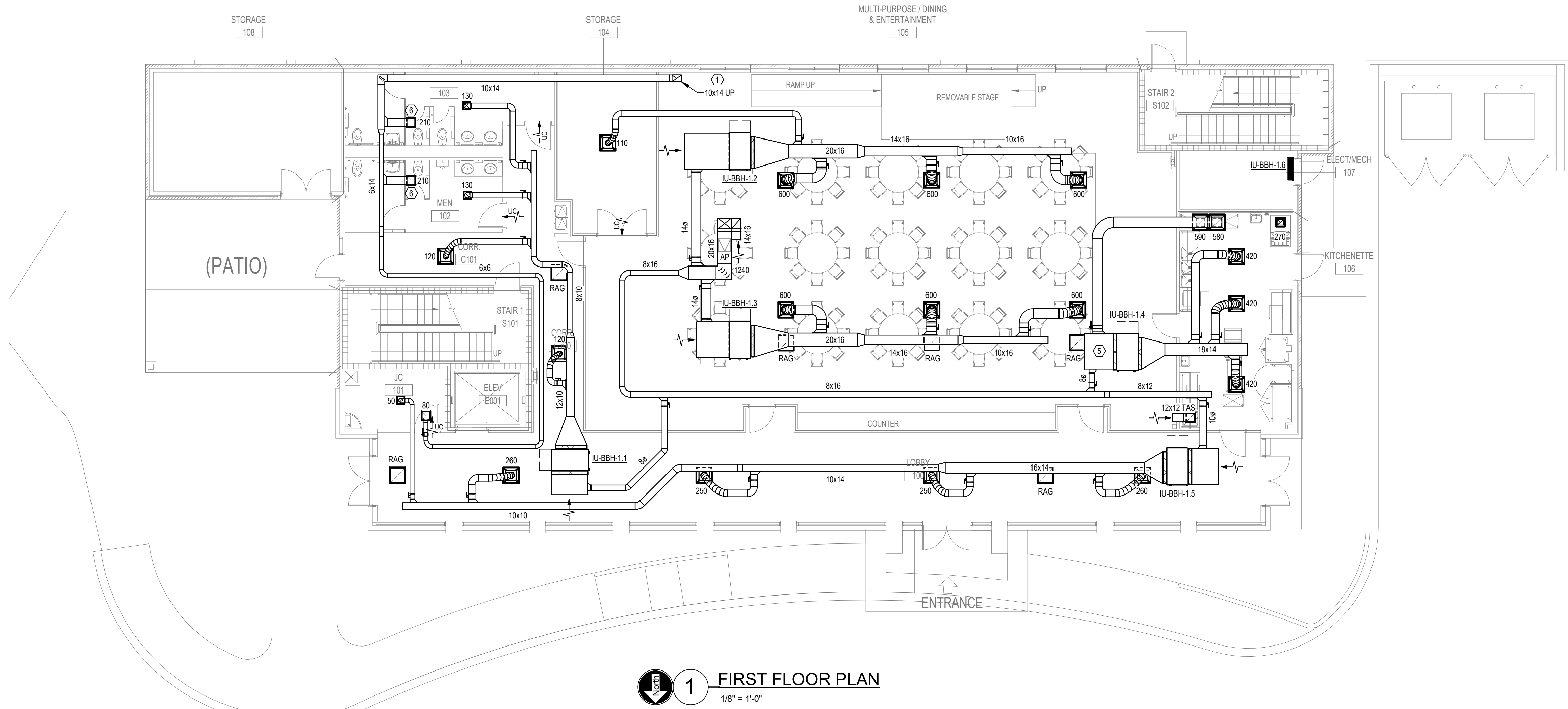
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## M5.2

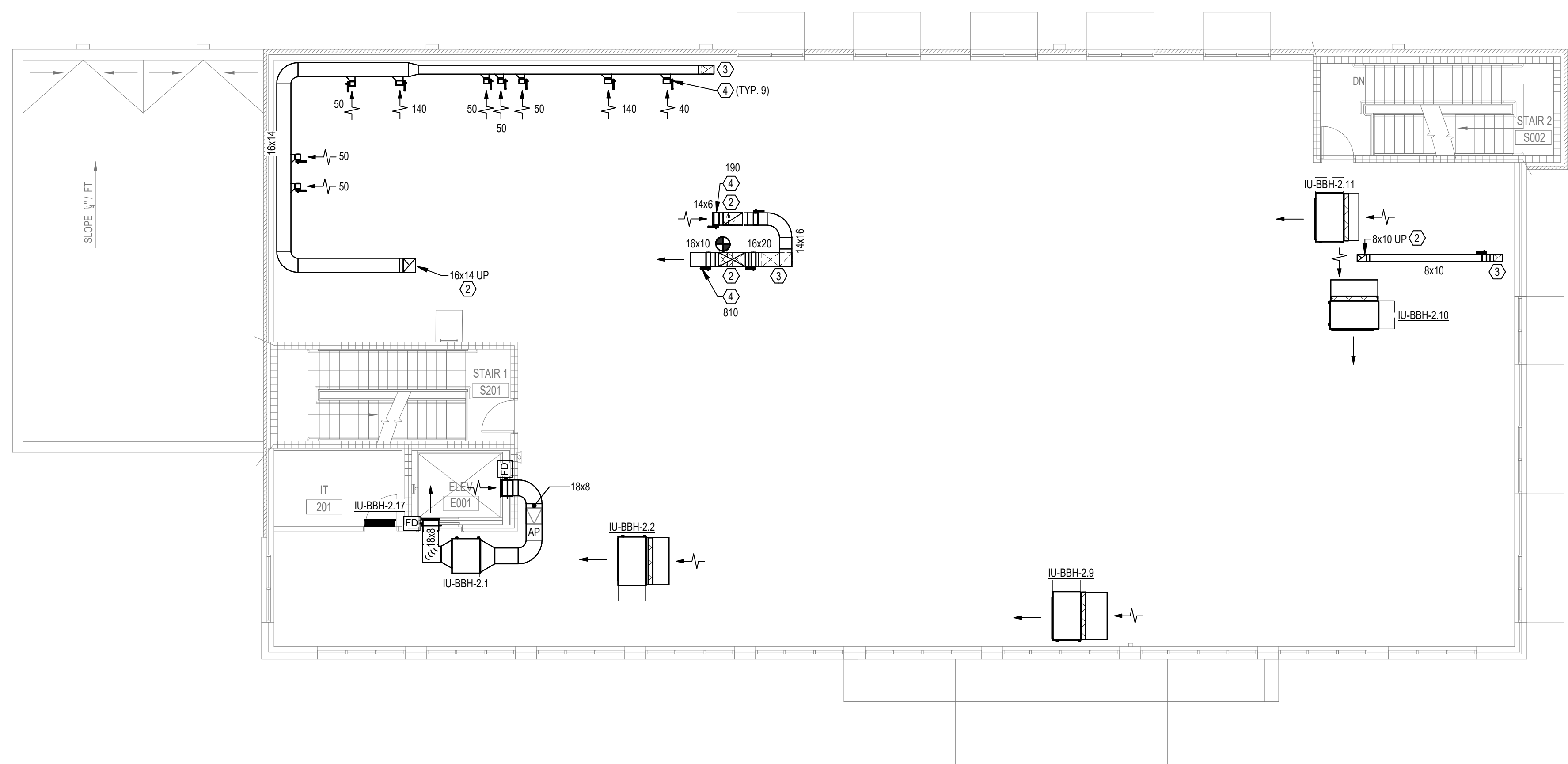








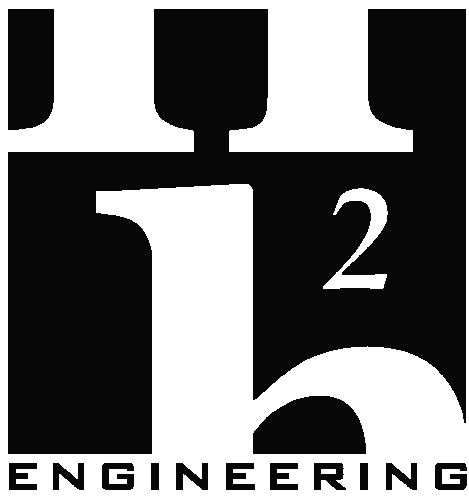
**1 FIRST FLOOR PLAN**  
1/8" = 1'-0"



**2 SECOND FLOOR PLAN**  
1/8" = 1'-0"

**KEYED NOTES:**

- ① DUCTWORK TO/FROM SECOND FLOOR. SEE 2/M1.5.
- ② DUCTWORK TO/FROM ROOF. SEE 2/M1.8.
- ③ DUCTWORK FROM FIRST FLOOR. SEE 1/M1.5.
- ④ BALANCE TO INDICATED CFM.
- ⑤ PROVIDE FULLY ENCLOSED RETURN PLENUM. CONNECT DUCTWORK TO PLENUM AS INDICATED.
- ⑥ PROVIDE AIR DEVICE WITH OPPOSED BLADE DAMPER.



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**Submittal**

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DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

**Revision**

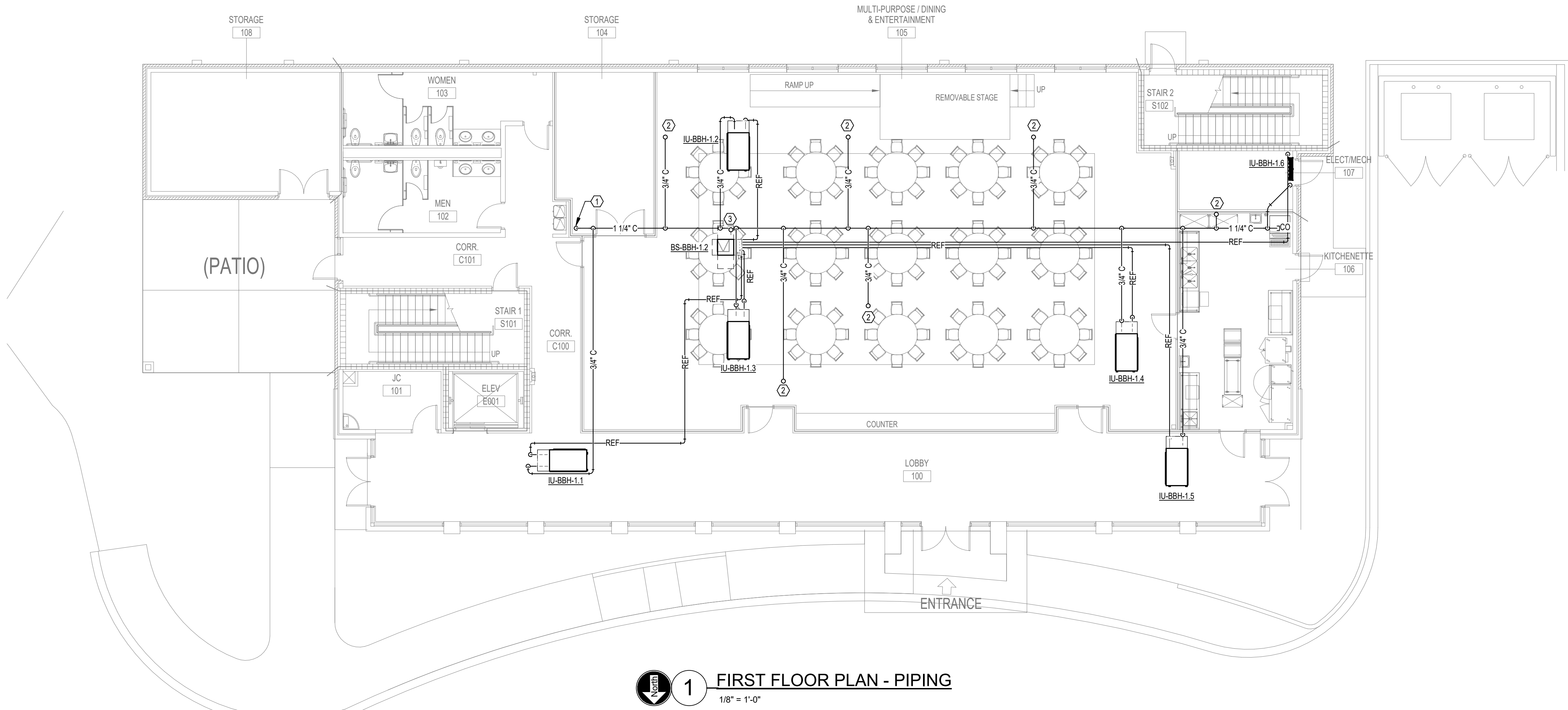
#	Description	Date

CRA Project # **24029**

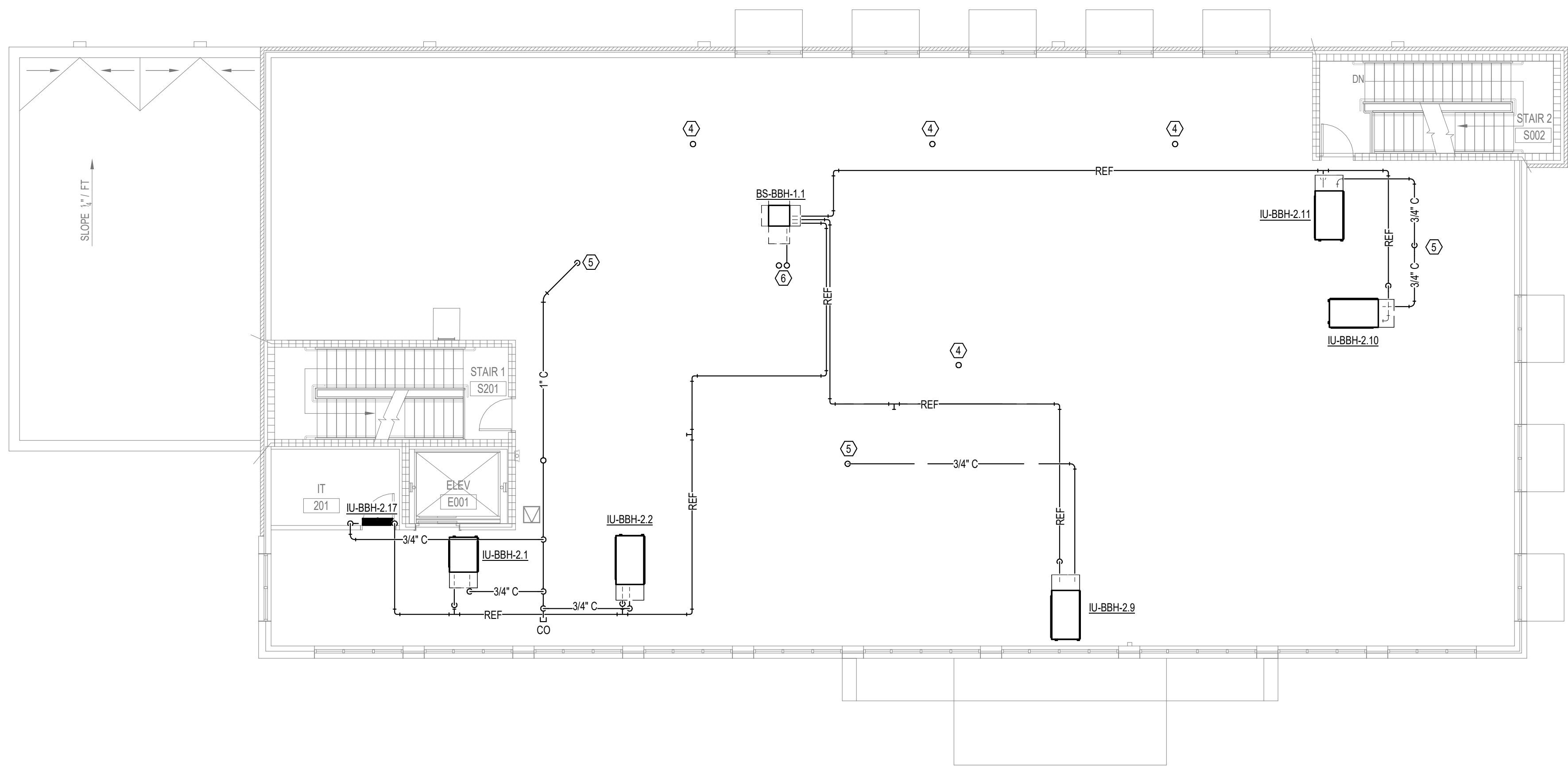
Phase: **CONSTRUCTION  
DOCUMENTS**

SHEET TITLE  
**BLACKBURN-HUNT  
BUILDING**

**M1.5**



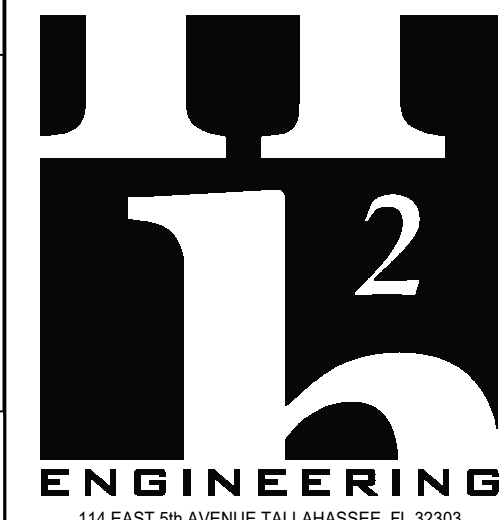
1 FIRST FLOOR PLAN - PIPING  
1/8" = 1'-0"



2 SECOND FLOOR PLAN - PIPING  
1/8" = 1'-0"

KEYED NOTES:

- 1 ROUTE CONDENSATE PIPING DOWN TO FLOOR SINK IN THIS VICINITY. SEE PLUMBING DRAWINGS.
- 2 CONDENSATE PIPING FROM ABOVE. SEE 2/M1.6.
- 3 REFRIGERANT PIPING TO/FROM FLOOR ABOVE. SEE 2/M1.6 FOR CONTINUATION.
- 4 STUB UP 3/4" CONDENSATE PIPING TO 6" AFF. CAP PIPING FOR FUTURE.
- 5 CONDENSATE PIPING TO BELOW. SEE 1/M1.6.
- 6 REFRIGERANT PIPING TO/FROM ROOF. SEE M1.8 FOR CONTINUATION.



SEE PROJECT No. 24179  
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Robert D. Richards, P.E. #90648

FLORIDA  
SHERIFFS YOUTH  
LEARNING  
CENTER AND  
BLACKBURN-HUNT  
BUILDING

MAHAN DRIVE  
TALLAHASSEE, FL.



Clemons, Rutherford, &  
Associates, Inc.

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willing to be in default under this agreement, except by  
agreement in writing and with appropriate compensation to CRA.

Submittal			
Phase	Date	Drw	Chk
DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

Revision		
#	Description	Date

CRA Project # 24029

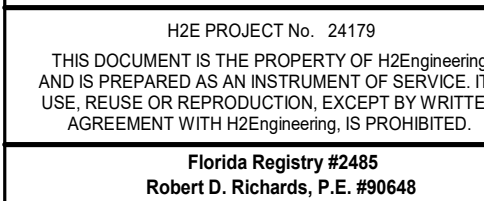
Phase: CONSTRUCTION  
DOCUMENTS

SHEET TITLE  
BLACKBURN-HUNT  
BUILDING - PIPING

M1.6



- ① PROVIDE AIR DEVICE WITH OPPOSED BLADE DAMPER.
- ② DUCTWORK TO/FROM SECOND FLOOR. SEE 2/M1.8 FOR CONTINUATION.
- ③ DUCTWORK TO/FROM FIRST FLOOR. SEE 1/M1.5 FOR CONTINUATION.
- ④ ROUTE CONDENSATE PIPING TO FLOOR BELOW. SEE 1/M1.6 FOR CONTINUATION.



MAHAN DRIVE  
TALLAHASSEE, FL.



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Submittal			
Phase	Date	Drw	Chk
DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

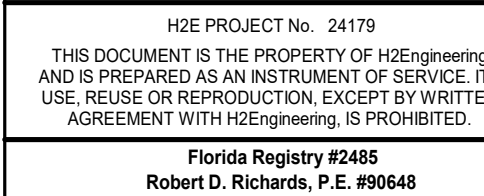
[illegible]CRA Project # **24029**

Phase: **CONSTRUCTION DOCUMENTS**

SHEET TITLE  
**BLACKBURN-HUNT  
BUILDING - 2ND FLOOR  
PLAN - ADD ALTERNATE  
M1.7A**



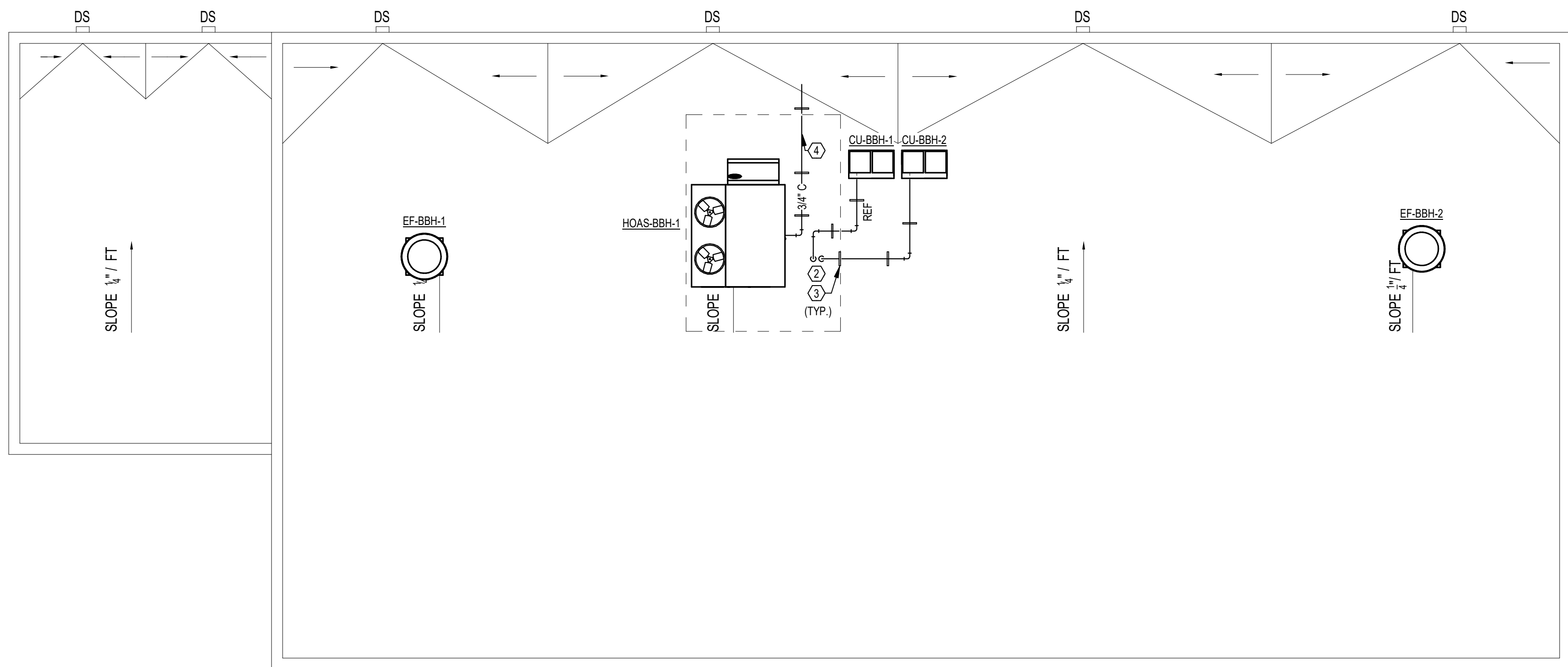
- ① ROUTE REFRIGERANT PIPING THROUGH ROOF TO BELOW. SEE DETAIL K/M5.1. SEE 1/M1.4 FOR CONTINUATION
- ② ROUTE REFRIGERANT PIPING THROUGH ROOF TO BELOW. SEE DETAIL K/M5.1. SEE 2/M1.6 FOR CONTINUATION
- ③ PROVIDE PIPING SUPPORT. SEE DETAIL L/M5.1.
- ④ ROUTE CONDENSATE PIPING DOWN AND ALONG ROOF WITH MINIMUM 1% SLOPE TO DRAIN.



MAHAN DRIVE  
TALLAHASSEE, FL.

[illegible][illegible]

Phase: **CONSTRUCTION DOCUMENTS**

**M1.8**

 **2** BLACKBURN-HUNT BUILDING - ROOF PLAN  
1/8" = 1'-0"

VARIABLE REFRIGERANT FLOW - INDOOR UNIT TYPES																
TYPE			A1	A3	A5	A6	D3	D4	D5	D6	D7	D8	D9	D10	E1	H5
DESCRIPTION			2x2 CEILING CASSETTE	2x2 CEILING CASSETTE	2x2 CEILING CASSETTE	2x2 CEILING CASSETTE	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	DUCTED CONCEALED ABOVE CEILING	WALL MOUNTED
	TOTAL COOLING CAPACITY (NOTE 1)	BTUH	5,800	9,500	15,000	18,000	12,000	14,200	18,000	24,000	30,000	36,000	48,000	57,000	72,000	24,000
	SENSIBLE COOLING CAPACITY (NOTE 1)	BTUH	4,700	6,600	10,800	13,000	9,700	10,400	13,800	16,800	22,400	25,700	34,800	41,800	56,900	18,000
	HEATING CAPACITY (NOTE 2)	BTUH	6,500	10,500	17,000	20,000	13,500	17,000	20,000	27,000	34,000	40,000	54,000	60,000	81,000	26,500
	AIR FLOW RATE (HIGH / LOW)	CFM	300 / 229	317 / 229	405 / 282	511 / 353	450 / 388	560 / 500	635 / 529	688 / 565	1,094 / 812	1,130 / 812	1,377 / 988	1,624 / 1,130	2,047 / 1,764	635 / 470
	EXTERNAL STATIC PRESSURE (HIGH / LOW)	IN. WG	N/A	N/A	N/A	N/A	0.40 / 0.12	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.80 / 0.20	0.95 / 0.38	N/A
	SOUND PRESSURE LEVEL (HIGH / LOW)	dBA	32 / 26	33 / 26	37 / 28	43 / 33	37 / 35	38 / 37	39 / 37	40 / 38	41 / 39	41 / 39	42 / 40	45 / 43	49 / 46	47 / 41
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1
	MINIMUM CIRCUIT AMPACITY	AMPS	0.3	0.3	0.4	0.6	1.4	1.5	1.6	1.8	2.8	2.9	3.4	3.4	9.5	0.6
	MAXIMUM OVERLOAD PROTECTION	AMPS	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	CONDENSATE DRAIN SIZE	IN.	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1	3/4
	OUTSIDE AIR INTAKE SIZE	IN.	4	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WEIGHT	LBS.	35	37	37	41	62	80	80	80	102	102	102	104	302	31
FAN DRIVE		DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	
MANUFACTURER			DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN
MODEL NUMBER			FXZQ05	FXZQ09	FXZQ15	FXZQ18	FXMQ12	FXMQ15	FXMQ18	FXMQ24	FXMQ30	FXMQ36	FXMQ48	FXMQ54	FXMQ72	FXAQ24
DETAIL REFERENCE			GM5.1	GM5.1	GM5.1	GM5.1	FM5.1	FM5.1	FM5.1	FM5.1	FM5.1	FM5.1	FM5.1	FM5.1	FM5.1	HMS.1
NOTES:																
1			COOLING CAPACITY RATED @ 95°F AMBIENT, 80°Fdb / 67°Fwb ENTERING AIR TEMPERATURE.													
2			HEATING CAPACITY RATED @ 47°Fdb / 43°Fwb AMBIENT, 70°Fdb ENTERING AIR TEMPERATURE.													

VRF - CONDENSING UNITS				
DESIGNATION	SCHEDULED TYPE	DESCRIPTION	COMBINATION RATIO (%)	ADJUSTED CAPACITY (BTUH)
CU-BBH-1	D	HEAT RECOVERY	130%	142,320
CU-BBH-2	B	HEAT RECOVERY	130%	94,752
NOTES:				
1		ADJUSTED CAPACITY @ INDOOR DESIGN TEMPERATURE & COMBINATION RATIO.		
2		REFRIGERANT PIPING SHALL BE SIZED BY MANUFACTURER.		
3		COAT ENTIRE CONDENSING UNIT WITH CORROSION INHIBITOR.		

DESIGN CONDITIONS				
OUTDOOR CONDITIONS - DESIGN DAY (TALLAHASSEE, FLORIDA)				
	COOLING (0.4% ANNUAL)	*Fdb - *Fwb	96.2	- 76.2
	HEATING (99.6% ANNUAL)	*Fdb	26.5	
	ENTHALPY (0.4% ANNUAL)	*Fdb - *Fwb	89.0	- 79.9
	DEHUMIDIFICATION (0.4% ANNUAL)	*Fdb - *Fwb	82.9	- 79.2
	EVAPORATION (0.4% ANNUAL)	*Fdb - *Fwb	88.8	- 80.0
	HUMIDIFICATION (99% ANNUAL)	GR / LB	13.0	
INDOOR CONDITIONS - SUMMER				
	OFFICE AREAS (EXCEPT AS NOTED BELOW)	*Fdb - %RH	74	- 55
	CLASSROOMS	*Fdb - %RH	74	- 50
	MUSEUMS / ARCHIVES	*Fdb - %RH	70	- 50
	TELECOMMUNICATION ROOMS	*Fdb - %RH	78	- 55
	MECHANICAL / ELECTRICAL ROOMS / SERVICE AREAS	*Fdb - %RH	80	- 50
	ELEVATOR MACHINE ROOMS	*Fdb - %RH	80	- 50
INDOOR CONDITIONS - WINTER				
	OFFICE AREAS (EXCEPT AS NOTED BELOW)	*Fdb - %RH	70	- 30
	CLASSROOMS	*Fdb - %RH	70	- 30
	MUSEUMS / ARCHIVES	*Fdb - %RH	68	- 45
	TELECOMMUNICATION ROOMS	*Fdb - %RH	65	- 30
	MECHANICAL / ELECTRICAL ROOMS / SERVICE AREAS	*Fdb - %RH	70	- 30
	ELEVATOR MACHINE ROOMS	*Fdb - %RH	70	- 30

VARIABLE REFRIGERANT FLOW - CONDENSING UNIT TYPES				
TYPE		B	D	
DESCRIPTION		HEAT RECOVERY	HEAT RECOVERY	
PERFORMANCE				
	NOMINAL CAPACITY	TONS	8	12
	COOLING CAPACITY (NOTE 1)	BTUH	96,000	144,000
	HEATING CAPACITY (NOTE 2)	BTUH	108,000	162,000
	EER (NOTE 3)	BTU / W-HR	13.55	11.75
	IEER (NOTE 3)	BTU / W-HR	24.85	22.55
	SIMULTANEOUS COOLING & HEATING EFFICIENCY (NOTE 3)	BTU / W-HR	23.75	23.75
	COEFFICIENT OF PERFORMANCE (NOTE 3)	BTU / W-HR	3.90	3.99
	SOUND PRESSURE LEVEL	dBA	65	66
UNIT DATA				
	COMBINATION		N/A	N/A
	COMPRESSOR QUANTITY (INVERTER)	#	1	1
	MAXIMUM NUMBER OF INDOOR UNITS	#	16	25
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 3	208 / 3
	MINIMUM CIRCUIT AMPACITY	AMPS	38.1	58.3
	MAXIMUM OVERLOAD PROTECTION	AMPS	45	70
	WEIGHT	LBS.	727	793
	REFRIGERANT TYPE		R410A	R410A
MANUFACTURER		DAIKIN	DAIKIN	
MODEL NUMBER		REYQ96XATJA	REYQ144XATJA	
DETAIL REFERENCE		JIM5.1	JIM5.1	
NOTES:				
1	COOLING CAPACITY RATED @ 95°F AMBIENT, 80°Fdb / 67°Fwb ENTERING AIR TEMPERATURE.			
2	HEATING CAPACITY RATED @ 47°Fdb / 43°Fwb AMBIENT, 70°Fdb ENTERING AIR TEMPERATURE.			
3	EFFICIENCY RATINGS BASED ON MIX OF DUCTED AND NON-DUCTED INDOOR UNITS.			

VENTILATION RATE				
		EXHAUST AIR	OUTSIDE AIR	
TYPE OF SPACE		CFM / FT.	CFM / PERSON	CFM / FT.
	BREAK ROOMS		5	0.06
	CLASSROOMS (AGE 9 PLUS)		10	0.12
	CONFERENCE / MEETING		5	0.06
	CORRIDORS		0	0.06
	JANITOR / TRASH	1	0	0.00
	KITCHEN (COOKING)	0.7	7.5	0.12
	LOBBIES		5	0.06
	MAIN ENTRY LOBBIES		5	0.06
	MULTI-PURPOSE ASSEMBLY		5	0.06
	MULTI-USE ASSEMBLY		7.5	0.06
	OFFICE SPACE		5	0.06
	STORAGE ROOMS		0	0.12
	TOILET (PUBLIC)	50/70	0	0.00
NOTES:				
1	VENTILATION RATES FOR SPACES WITH INTERMITTENT OCCUPANCY (PEAK OCCUPANCY LESS THAN THREE HOURS) HAVE BEEN REDUCED OR AVERAGE OCCUPANCY DURING THE OCCUPIED PERIOD, BUT NOT LESS THAN HALF OF THAT REQUIRED DURING PEAK OCCUPANCY.			
2	VENTILATION RATES CALCULATED PER REQUIREMENTS OF FBC, MECHANICAL 2023.			
3	EXHAUST IS PER WATER CLOSET AND/OR URINAL. HIGHER RATE USED.			

VRF - INDOOR UNIT DESIGNATIONS								
DESIGNATION	DESCRIPTION	SCHEDULED TYPE	OUTSIDE AIR QUANTITY	EXTERNAL STATIC PRESSURE	SYSTEM CONNECTED TO		NOTES	
			(CFM)	(INCH WG)	BRANCH SELECTOR	CONDENSING UNIT	STANDARD	SPECIAL
IU-BBH-1.1	DUCTED CONCEALED ABOVE CEILING	D4	30	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-1.2	DUCTED CONCEALED ABOVE CEILING	E1	850	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-1.3	DUCTED CONCEALED ABOVE CEILING	E1	850	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-1.4	DUCTED CONCEALED ABOVE CEILING	D9	90	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-1.5	DUCTED CONCEALED ABOVE CEILING	D8	200	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-1.6	WALL MOUNTED	H5	0	0.10	BS-BBH-1.1	CU-BBH-1	1, 2, 3	
IU-BBH-2.1	DUCTED CONCEALED ABOVE CEILING	D6	0	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-2.2	DUCTED CONCEALED ABOVE CEILING	D5	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-2.3	2x2 CEILING CASSETTE	A3	150	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.4	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.5	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.6	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.7	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.8	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.9	DUCTED CONCEALED ABOVE CEILING	D7	60	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-2.10	DUCTED CONCEALED ABOVE CEILING	D10	300	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-2.11	DUCTED CONCEALED ABOVE CEILING	D3	50	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14	
IU-BBH-2.12	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.13	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.14	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.15	2x2 CEILING CASSETTE	A1	20	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.16	2x2 CEILING CASSETTE	A5	70	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3, 4, 5, 6, 7	
IU-BBH-2.17	WALL MOUNTED	H5	0	0.10	BS-BBH-1.2	CU-BBH-2	1, 2, 3	
NOTES: (SEE SEQUENCES OF OPERATION ON SHEET MC2.1 FOR CONTROLS)								
1	REFRIGERANT PIPING SHALL BE SIZED BY MANUFACTURER.							
2	PROVIDE SIMPLIFIED WIRED REMOTE CONTROL.							
3	PROVIDE 1" PLEATED FILTER (SEE SPECIFICATIONS).							
4	PROVIDE UNIT INTEGRAL CONDENSATE PUMP WITH OVERFLOW SAFETY SHUTOFF.							
5	PROVIDE CHECK VALVE AT UNIT CONDENSATE OUTLET.							
6	PROVIDE DECORATION PANEL.							
7	PROVIDE FILTER CHAMBER.							
8	PROVIDE FRESH AIR INTAKE KIT.							
9	PROVIDE AIR SUCTION FLANGE FOR REAR RETURN.							
10	SET FAN SPEED TO ACHIEVE AIRFLOW (AS INDICATED ON PLANS).							
11	PROVIDE 220-VOLT CONDENSATE PUMP (SAUERMANN SI-30 OR APPROVED EQUAL).							
12	PROVIDE NAVIGATION REMOTE CONTROLLER (WHERE EQUIPPED WITH ZONE DAMPERS).							
13	PROVIDE INDIVIDUAL THERMOSTATS FOR EACH ZONE (WHERE EQUIPPED WITH ZONE DAMPERS).							
14	SET MINIMUM DAMPER POSITION TO 20% FOR EACH DAMPER (WHERE EQUIPPED WITH ZONE DAMPERS).							

VARIABLE REFRIGERANT FLOW - BRANCH SELECTOR TYPES				
TYPE			C2	C3
	DESCRIPTION		MULTI PORT	MULTI PORT
	SERIES		FLEX	FLEX
	MAXIMUM CAPACITY OF CONNECTED INDOOR UNITS	BTUH	216,000	290,000
	NUMBER OF PORTS	#	6	8
	MAXIMUM NUMBER OF CONNECTED UNITS PER PORT	#	5	5
	COOLING INPUT POWER	W	64	86
	HEATING INPUT POWER	W	64	86
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 1	208 / 1
	MINIMUM CIRCUIT AMPACITY	AMPS	0.6	0.8
	MAXIMUM OVERLOAD PROTECTION	AMPS	15	15
WEIGHT	LBS.	73	81	
MANUFACTURER			DAIKIN	DAIKIN
MODEL NUMBER			BSF6Q634TVJ	BSF6Q634TVJ
DETAIL REFERENCE			C/M5.2	C/M5.2

FANS				
DESIGNATION			EF-BBH-1	EF-BBH-2
	SERVICE		CLASS 1 OR 2 EXHAUST	CLASS 1 OR 2 EXHAUST
	MOUNTING METHOD		ROOF	ROOF
	FAN TYPE		CENTRIFUGAL (UPBLAST)	CENTRIFUGAL (UPBLAST)
	AIR FLOW	CFM	1,130	270
	STATIC PRESSURE	IN.	0.4	0.4
	AIRSTREAM TEMPERATURE	DEG F	70	70
	FAN SPEED	RPM	701	1,300
	FAN DRIVE		DIRECT	DIRECT
	MOTOR SPEED	RPM	1,725	1,550
	MOTOR POWER	HP or W	1/8 HP	1/8 HP
	MOTOR BRAKE HORSEPOWER	BHP	N/A	N/A
	ELECTRONICALLY COMMUTATED MOTOR		YES	YES
	ELECTRICAL CHARACTERISTICS	V / PH	120 / 1	120 / 1
	WEIGHT	LBS	23	23
	NOISE LEVEL (RADIATED)	SONES or LwA	4.7 SONES	5.4 SONES
STANDARD NOTES			1, 2, 3, 4, 7, 9	1, 2, 3, 4, 7, 9
SPECIAL NOTES				
MANUFACTURER			COOK	COOK
MODEL NUMBER			180RH1TD	90R150H
DETAIL REFERENCE			DNMS.1	DNMS.1
NOTES: (SEE SEQUENCES OF OPERATION ON SHEET MC2.1 FOR FAN CONTROLS)				
1 PROVIDE PRE-WIRED DISCONNECT SWITCH, FACTORY MOUNTED.				
2 PROVIDE SOLID STATE SPEED CONTROLLER, FACTORY MOUNTED.				
3 PROVIDE BIRD SCREEN.				
4 PROVIDE BACKDRAFT DAMPER, GRAVITY OPERATED.				
7 PROVIDE PRE-FABRICATED INSULATED ROOF CURB, 12-INCH HIGH WITH DAMPER TRAY, SLOPED TO MATCH ROOF SLOPE.				
9 PROVIDE TIE-DOWN EYELETS.				

NATURAL VENTILATION RATE					
			FLOOR AREA	OPENABLE AREA	
TYPE OF SPACE			FT.	MINIMUM (FT.)	ACTUAL (FT.)
	STORAGE ROOMS		341	14	46
NOTES:					
1			NATURAL VENTILATION CALCULATED PER REQUIREMENTS OF FLORIDA BUILDING CODE - MECHANICAL 2023, BASED ON MINIMUM OPENABLE AREA TO THE OUTDOORS OF 4% OF THE FLOOR AREA OR UNOBSTRUCTED AREA OF 6% TO ADJOINING SPACES.		

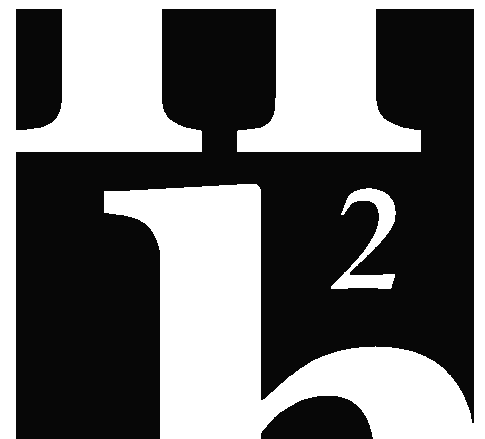
BUILDING AIR BALANCE - BLACKBURN-HUNT (NORMAL)

OUTSIDE AIR SOURCE	CFM	EXHAUST SOURCE	CFM
HOAS-BBH-1	1,850	EF-BBH-1	1,130
		EF-BBH-2	270
TOTAL	1,850	TOTAL	1,400
BUILDING PRESSURIZATION		(+)	450

BUILDING AIR BALANCE - BLACKBURN-HUNT (ECONOMIZER)

OUTSIDE AIR SOURCE	CFM	EXHAUST SOURCE	CFM
HOAS-BBH-1	2,830	EF-BBH-1	1,130
		EF-BBH-2	270
		HOAS-BBH-1 RELIEF	980
TOTAL	2,830	TOTAL	2,380
BUILDING PRESSURIZATION		(+)	450

MAKEUP AIR UNIT - PACKAGED			
DESIGNATION			HOAS-BBH-1
AIR FLOW RATES			
	TOTAL SUPPLY AIR	CFM	2,830
	OUTSIDE AIR	CFM	1,850
	RELIEF AIR (NORMAL / ECONOMIZER)	CFM	0 / 980
	MINIMUM SUPPLY FAN SPEED SETTING	%	100
	MINIMUM EXHAUST FAN SPEED SETTING	%	0
FILTER SECTION			
	DAMPERS		NONE
	FILTER ORIENTATION		FLAT
	TYPE OF FILTER		2" THICK PLEATED
COOLING DATA			
	TOTAL COOLING CAPACITY	MBTUH	205.1
	SENSIBLE COOLING CAPACITY	MBTUH	117.9
	AIR ENTERING COOLING COIL	*Fdb - *Fwb	88.9 -- 73.3
	AIR LEAVING COOLING COIL	*Fdb - *Fwb	49.3 -- 49.3
	EER / IEER	BTU / W-HR	12.1 / 16.0
	CONDENSATE DRAIN SIZE	IN.	1
HOT GAS REHEAT DATA			
	TYPE		MODULATING
	HEATING CAPACITY	MBTUH	76.2
	AIR ENTERING HOT GAS REHEAT COIL	*F	49.3
	AIR LEAVING HOT GAS REHEAT COIL	*F	75
HEATING DATA - ELECTRIC			
	HEATING CAPACITY - # OF STAGES	KW - #	30 -- SCR
	AIR ENTERING HEATING COIL	*F	41.6
	AIR LEAVING HEATING COIL	*F	74.8
SUPPLY FAN SECTION			
	FAN TYPE		PLENUM
	DRIVE TYPE		DIRECT
	FAN QUANTITY	#	1
	EXTERNAL STATIC PRESSURE	IN. WG	1.5
	MAXIMUM TOTAL STATIC PRESSURE (INCLUDING DIRTY FILTER)	IN. WG	2.7
	DIRTY FILTER ALLOWANCE	IN. WG	0.93
	FAN MOTOR HORSEPOWER (PER FAN)	HP - BHP	5 -- 2.17
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - BHP	5 -- 2.17
	VARIABLE FREQUENCY DRIVE		1 PER UNIT
EXHAUST FAN SECTION			
	FAN TYPE		PLENUM
	DRIVE TYPE		DIRECT
	FAN QUANTITY	#	1
	EXTERNAL STATIC PRESSURE	IN. WG	1
	MAXIMUM TOTAL STATIC PRESSURE (INCLUDING DIRTY FILTER)	IN. WG	1
	DIRTY FILTER ALLOWANCE	IN. WG	0
	FAN MOTOR HORSEPOWER (PER FAN)	HP - BHP	1 -- 0.13
	FAN MOTOR HORSEPOWER (UNIT TOTAL)	HP - BHP	1 -- 0.13
	VARIABLE FREQUENCY DRIVE		1 PER FAN
UNIT DATA			
	COMPRESSOR QUANTITY	# - #	2
	WEIGHT	LBS	3,067
	REFRIGERANT TYPE		R-454B
	ELECTRICAL CHARACTERISTICS	V / PH	208 / 3
	MCA / MOCF	AMPS	129 / 150
MANUFACTURER			AAQN
MODEL NUMBER			RNA-018-CA-8-GABOC-A02N0
DETAIL REFERENCE			E.NIMS.1
NOTES:			
1 PROVIDE ONE (1) MODULATING COMPRESSOR.			
2 NOT USED.			
3 PROVIDE SUPPLY AIR TEMPERATURE AND DEWPOINT CONTROL.			
4 PROVIDE SUPPLY AIR TEMPERATURE SENSOR.			
5 PROVIDE OUTSIDE AIR TEMPERATURE AND HUMIDITY SENSORS.			
6 PROVIDE SUCTION PRESSURE TRANSDUCER.			
7 PROVIDE RETURN AIR TEMPERATURE AND HUMIDITY SENSORS.			
8 PROVIDE TERMINAL BLOCK WITH 2 DIGITAL RELAY OUTPUTS.			
9 COAT ALL COILS WITH CORROSION INHIBITOR.			
10 NOT USED.			
11 PROVIDE EBTRON GOLD SERIES AIRFLOW MEASURING STATION.			
12 PROVIDE CONVENIENCE ELECTRICAL OUTLET.			
13 PROVIDE ROOF CURB WITH THROUGH THE CURB UTILITIES.			
14 NOT USED.			
15 PROVIDE DISCONNECT SWITCH.			



SEE PROJECT No. 24179  
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Robert D. Richards, P.E. #90648

FLORIDA  
SHERIFFS YOUTH  
LEARNING  
CENTER AND  
BLACKBURN-HUNT  
BUILDING

MAHAN DRIVE  
TALLAHASSEE, FL.



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Submittal

Phase	Date	Drw	Chk
DESIGN DEVELOPMENT	02-28-25	MAW	RDR
50% CD	04-15-25	MAW	RDR
100% CD	07-18-25	MAW	RDR

Revision

#	Description	Date

CRA Project # 24029

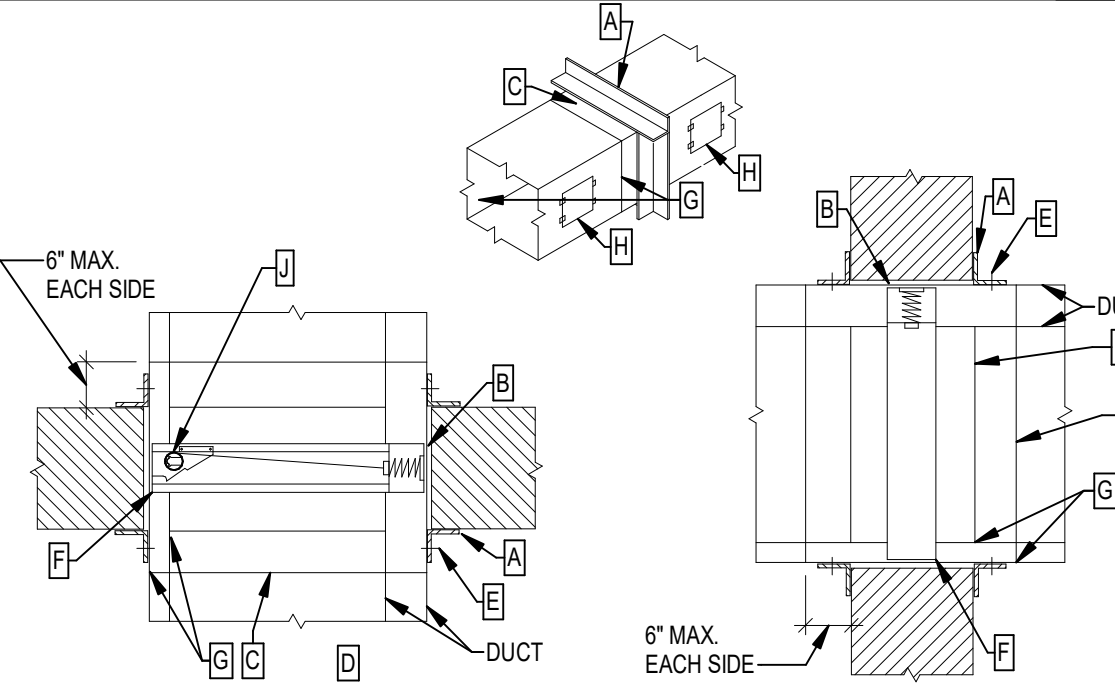
Phase: CONSTRUCTION  
DOCUMENTS

SHEET TITLE  
SCHEDULES

M4.2







**NOTES:**

- CLEARANCE REQUIREMENTS FOR FIRE DAMPER SLEEVES WITHIN OPENING IS BASED ON 1/8" PER FOOT OF WIDTH (OR HEIGHT) UNLESS OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. THE SLEEVE MAY REST ON THE BOTTOM OF THE OPENING, AND NEED NOT BE CENTERED. (FRACTIONAL DIMENSIONS SHALL BE TAKEN AS THE NEXT LARGER WHOLE FOOT). EXAMPLE: A 30" x 24" FIRE DAMPER SLEEVE IS INSTALLED IN WALL/FLOOR OPENING. THE OPENING SHALL BE 30 3/8" WIDE (18" X 3") BY 24 1/4" HIGH (18" X 2").
- THE SLEEVE IS RETAINED IN THE WALL/FLOOR BY THE USE OF STEEL RETAINING ANGLES A. THESE MUST OVERLAP THE EDGE OF THE FRAMING BY A MINIMUM OF ANGLES A. THESE MUST OVERLAP THE EDGES OF THE FRAMING BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE OPENING. THIS MEANS THAT THE MINIMUM WIDTH OF THE RETAINING ANGLE WOULD BE 1.38". (GOOD PRACTICE CALLS FOR AN ADDITIONAL SAFETY FACTOR BY MAKING THE ANGLE IN THIS CASE 1 1/2" WIDE.
- THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING AFTER THE OPENING HAS BEEN FRAMED AND THE FIRE RESISTIVE MATERIALS PROVIDED WERE REQUIRED. THE FIRE RESISTIVE MATERIALS SHALL BE EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIALS USED IN THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE WALL/FLOOR PENETRATION. THE CONTRACTOR ERECTING THE WALL/FLOOR IS RESPONSIBLE FOR PROVIDING THE FIRE RESISTIVE MATERIAL AND CORRECT SIZE OPENINGS TO ACHIEVE THE REQUIRED CLEARANCE.
- THE FIRE DAMPER MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS AS TESTED AND APPROVED BY U.L. MUST BE USED IN LIEU OF THE ABOVE DETAILS WHERE APPLICABLE.

**A** RETAINING ANGLES, MINIMUM 1 1/2" x 1 1/2" x 0.054 (16 GAUGE). RETAINING ANGLES MUST LAP STRUCTURAL OPENING 1" MINIMUM AND COVER OPENINGS OF CORNERS. CAULK THE EXTERIOR PERIMETER OF FIRE DAMPER RETAINING ANGLES WITH A THIN FILLET OF AN APPROVED CAULKING MATERIAL TO PREVENT THE PASSAGE OF SMOKE AND ALLOW MOVEMENT OF THE ANGLE.

**B** CLEARANCE, 1/8" PER LINEAR FOOT IN BOTH DIMENSIONS (SEE NOTE 1 BELOW).

**C** STEEL SLEEVE, 1/4 GAUGE, OR AS ALLOWED BY U.L. STANDARD 555.

**D** APPROVED FIRE DAMPER, CURTAIN OR BLADE TYPE.

**E** SECURE RETAINING ANGLES TO SLEEVE, ON 8" CENTERS WITH 1/2" LONG WELDS, OR 1/4" BOLTS AND NUTS, OR #10 STEEL SCREWS, OR MINIMUM 3/16" STEEL RIVETS.

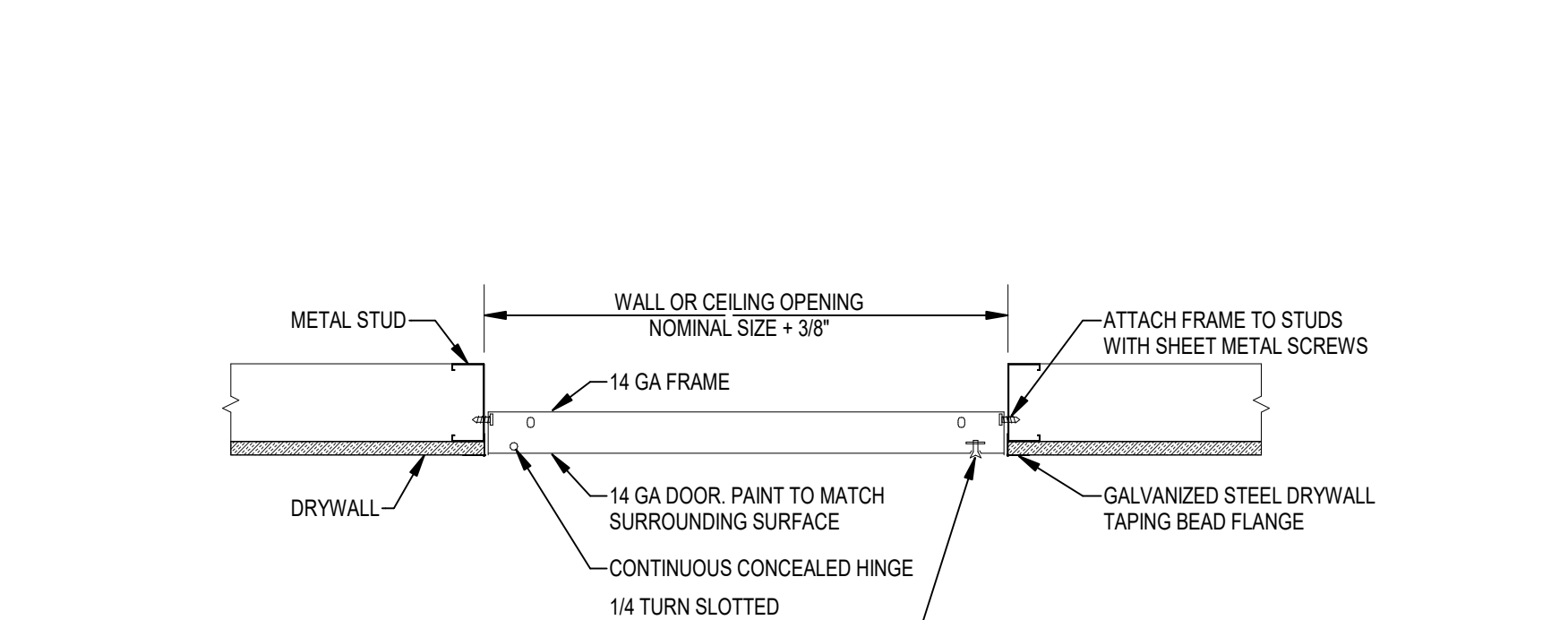
**F** SECURE FIRE DAMPER TO SLEEVE, ON 8" CENTERS WITH 1/2" LONG WELDS, OR 1/4" BOLTS AND NUTS, OR #10 STEEL SCREWS, OR MINIMUM 3/16" STEEL RIVETS.

**G** CONNECT DUCT TO SLEEVE OR FIRE DAMPER, WITH BREAKAWAY CONNECTION.

**H** INSTALL HINGED ACCESS DOOR.

**I** NEGATOR CLOSURE SPRING.

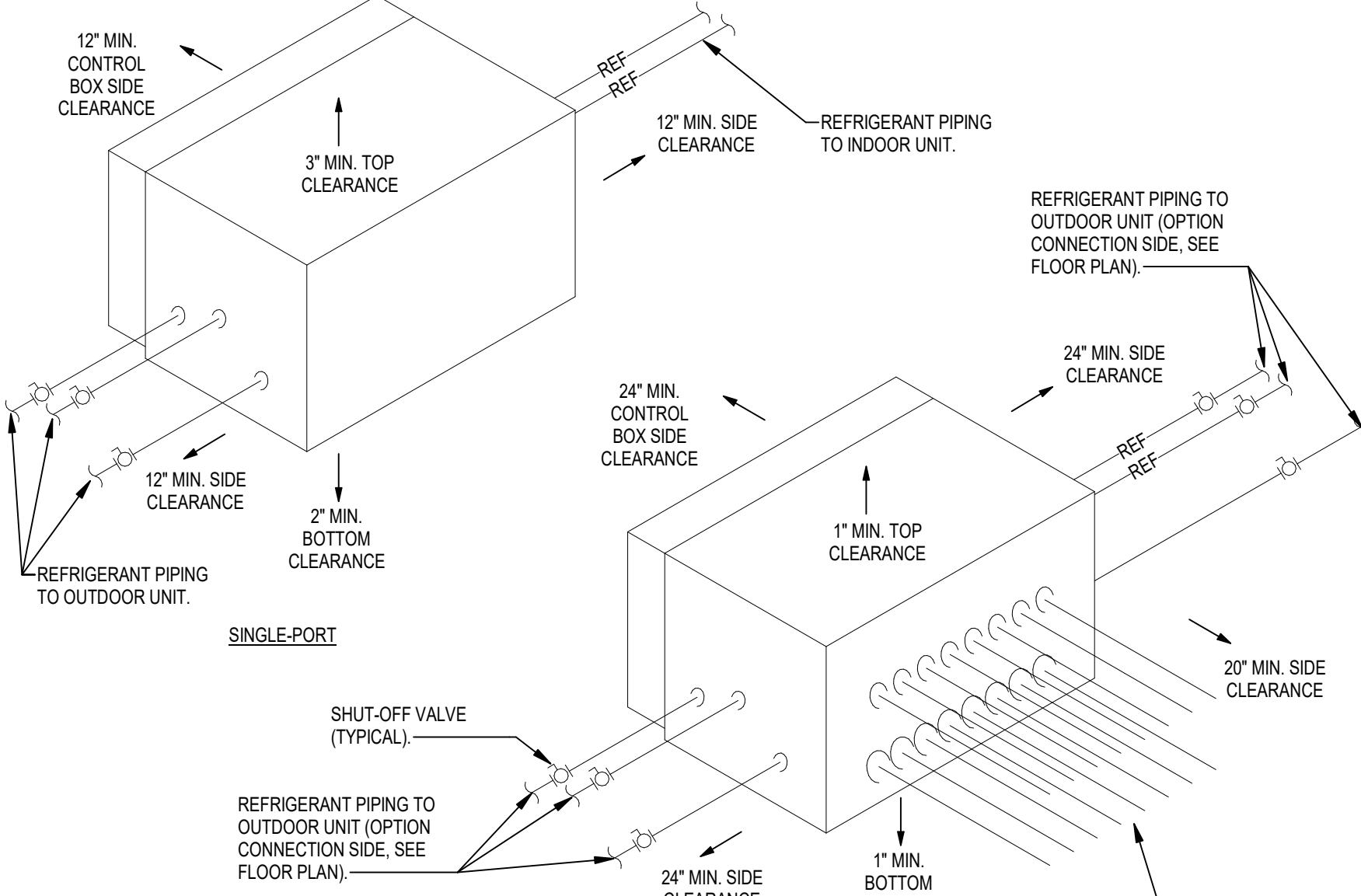
**A FIRE DAMPER INSTALLATION**



**NOTES:**

- ACCESS DOOR SHALL BE NOMINAL 24"x24" UNLESS NOTED OTHERWISE.
- LOCATE DOOR IN CEILING OR WALL TO ALLOW UNOBSTRUCTED ACCESS TO EQUIPMENT, DAMPERS, ETC. AND NOT IN CONFLICT WITH LIGHTS, DIFFUSERS, SPRINKLERS, ETC.
- ACCESS PANELS LOCATED IN SECURE CEILINGS SHALL BE SECURITY TYPE.

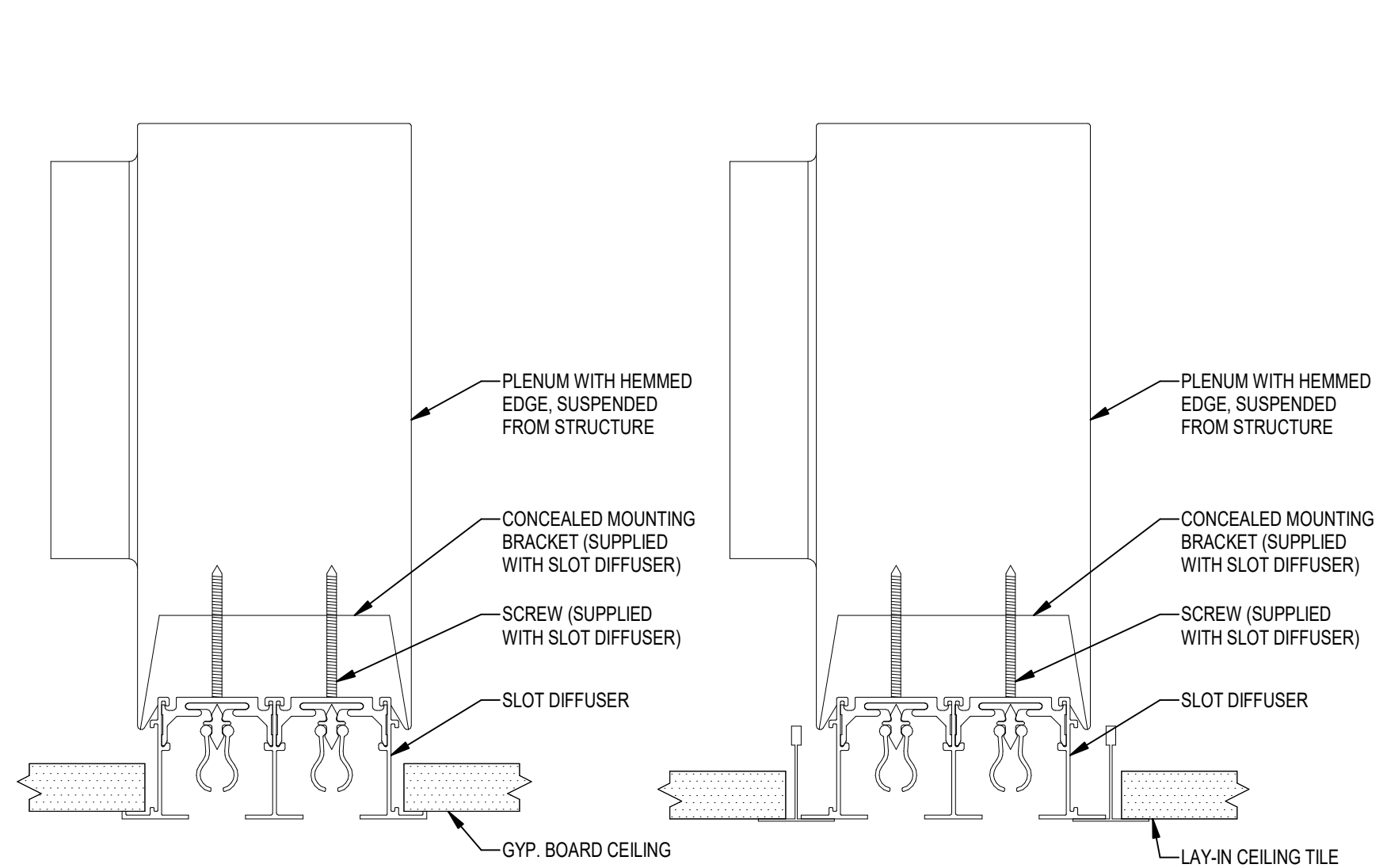
**B EQUIPMENT ACCESS PANEL**



**NOTES:**

- PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AND MOUNTING REQUIREMENTS.
- UNITS SUPPORTED FROM STRUCTURE ABOVE.
- SEE VRV BRANCH SELECTOR DESIGNATION & TYP SCHEDULE ON SHEET M0.3 FOR NUMBER OF PORTS.

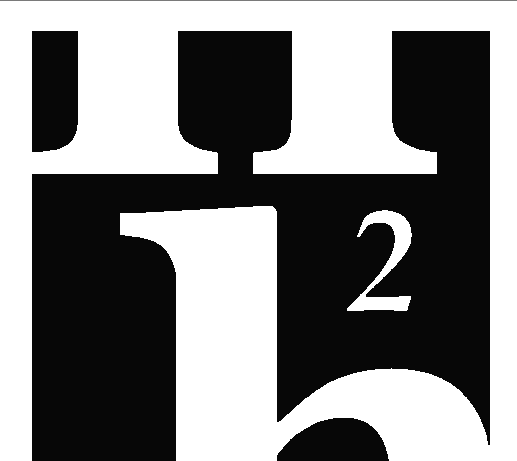
**C VARIABLE REFRIGERANT VOLUME - HEAT RECOVERY UNITS**



**FLANGED FRAME, CONCEALED MOUNTING**  
N.T.S.

**T-BAR LAY-IN STYLE**  
N.T.S.

**D SLOT DIFFUSER**



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**FLORIDA SHERIFFS YOUTH LEARNING CENTER AND BLACKBURN-HUNT BUILDING**

MAHAN DRIVE  
TALLAHASSEE, FL.



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CRA Project # **24029**

Phase: **CONSTRUCTION DOCUMENTS**

SHEET TITLE  
**DETAILS**

**M5.2**