

MARK: HP-1 & HP-2
DESCRIPTION:
FURNISH (8)-2T AND (3)-3T (TOTAL 11 UNITS) OF ACIQ HEAT PUMP WITH MATCHING FAN COIL UNITS, MODEL 15 SEER2 AND 15.2 SEER2, AND INTERGRATED CARRIER (LC) LOW CURRENT 5 KW ELECTRIC HEATER (HEAT STRIPS) MODEL: AQ-GLZS4BA2410 (2 TON) AND AQ-GLZS4BA3610 (3 TON)
- HEAT PUMP SYSTEM:
- CAPACITY: 2 & 3 TON
- REFRIGERANT: R-454B (PURON ADVACE)
- COMPONENTS: SCROLL COMPRESSOR, MULTI-SPEED BLOWER, CASED COIL, AND DRAIN PAN.
- EFFECIENCY: MEETS OR EXCEEDS 16 SEER / 9.5 HSPF.
- ELECTRICAL: 208/230V, 1-PHASE, 60 HZ.
- PERFORMANCE: DESIGNED FOR HIGH-EFFECIENCY HEATING AND COOLING WITH LOW SOUND LEVELS.
- FAN COIL AIRFLOW: 700-1200 CFM @0.54 ESP (ADJUSTABLE).
HEAT STRIPS (ELECTRIC HEATER):
- MODEL: CARRIER (LC) LOW CURRENT 5KW (FC-2401C05LC)
- VOLTAGE: 208-230V, 1-PHASE, WITH INTERGRATED CIRCUIT BREAKER.
- PURPOSE: PROVIDES AUXILIARY HEAT DURING DEFROST CYCLES OR EXTREME COLD TO MAINTAIN COMFORT AND SYSTEM EFFICIENCY. (ENSURE CONSISTENT HEATING CAPACITY IN LOW AMBIENT TEMPERATURES WHEN HEAT PUMP PERFORMANCE DECLINES).
- WARRANTY: 10-YEAR COMPRESSOR, 5-YEAR PARTS (WHEN REGISTERED).
- MANUFACTURER: CARRIER OR APPROVED EQUAL(TRANE, LENNOX, ETC).

HEAT PUMP OUTDOOR-UNIT TO BE NOMINAL 2 TON (FOR 1 BEDROOM UNIT) & 3 TON (FOR 2 BEDROOM UNIT) CAPACITY AND EITHER 208, 230, 460/1/60, COMPLETE WITH 50 FEET INSULATED FREON LINE SET SUITABLE FOR R410A REFRIGERANT, 5 YEAR COMPRESSOR WARRANTY, COPPER/ALUMINUM CONDENSER COIL, SCREEN GUARD, AND SUITABLE FOR 35 DEGREES F. OUTDOOR AIR OPERATION INSTALLED ON ROOF.

MARK: UH-1 TO UH-7
- UH-1 THRU UH-7 FURNISH AND INSTALL 7 ELEC. CEILING HEATERS. THE ONLY HEATERS TO SERVE THE TWO STAIRWELLS & CORRIDOR. UNIT TO BE QMARK QMARK/MARLEY EFF SERIES CEILING HEATER - 120 VOLT 1500 WATTS - FINNED METAL SHEATHED ELEMENT - INCLUDES BUILT IN FAN DELAY.

MARK: ERV-1, ERV-2 & ERV-3
ERV-1, ERV-2, & ERV-3 FURNISH AND INSTALL 15 TOTAL ERV UNITS:

3 ERV UNITS IN BASEMENT LEVEL: 7 ERV UNITS IN FIRST FLOOR LEVEL:
- 1 UNIT SUPPLIES 200 CFM FOR EXERCISE RM
- 2 UNIT SUPPLY 300 CFM EACH FOR EXERCISE RM , LOOBY & MEETING RM
- 5 UNIT SUPPLY 150 CFM FOR EACH 1 BED UNIT.
- 1 UNIT SUPPLY 200 CFM FOR EACH 2 BED UNIT.
- 1 UNIT SUPPLY 300 CFM FOR SOCIAL MEETING RM.

5 ERV UNITS IN 2ND FLOOR LEVEL:
- 3 UNIT SUPPLY 150 CFM FOR EACH 1 BED DWELLING UNIT.
- 2 UNIT SUPPLY 200 CFM FOR EACH 2 BED DWELLING UNIT.

- THE ERV UNIT IS AN AIR APPLIANCE CONTINUOUSLY SUPPLIES OF FRESH, FILTERED AIR WHILE REMOVING AN EQUAL AMOUNT OF STALE AIR. CONTROLLED VENTILATION ENSURES THE OCCUPANTS RECEIVE THE HIGHEST LEVEL OF COMFORT. UP TO 75% OF THE HEAT IN THE EXTRACT AIR IS RECOVERED BY THE HEAT EXCHANGER AND USED TO TEMPER THE FRESH AIR COMING FROM OUTSIDE.

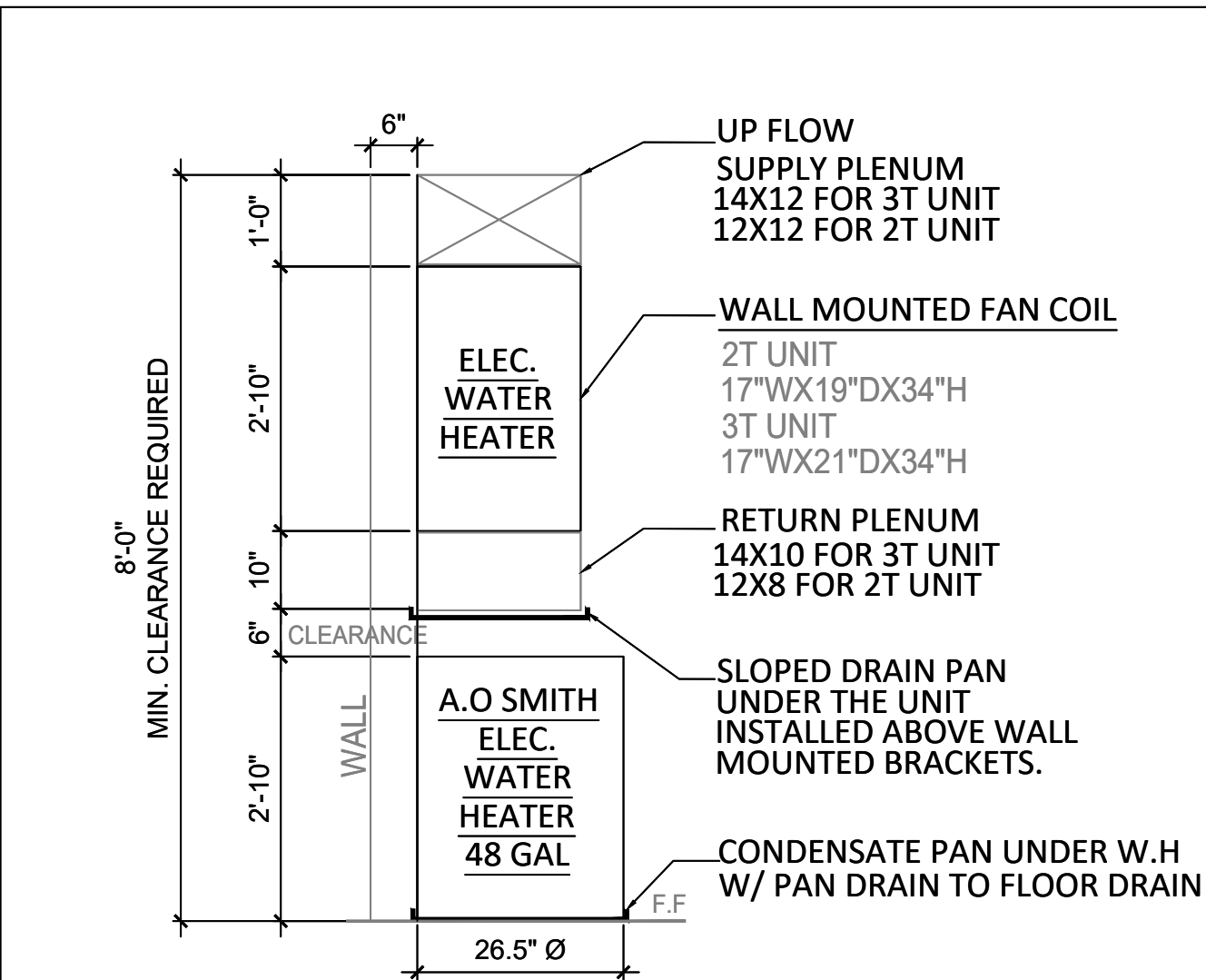
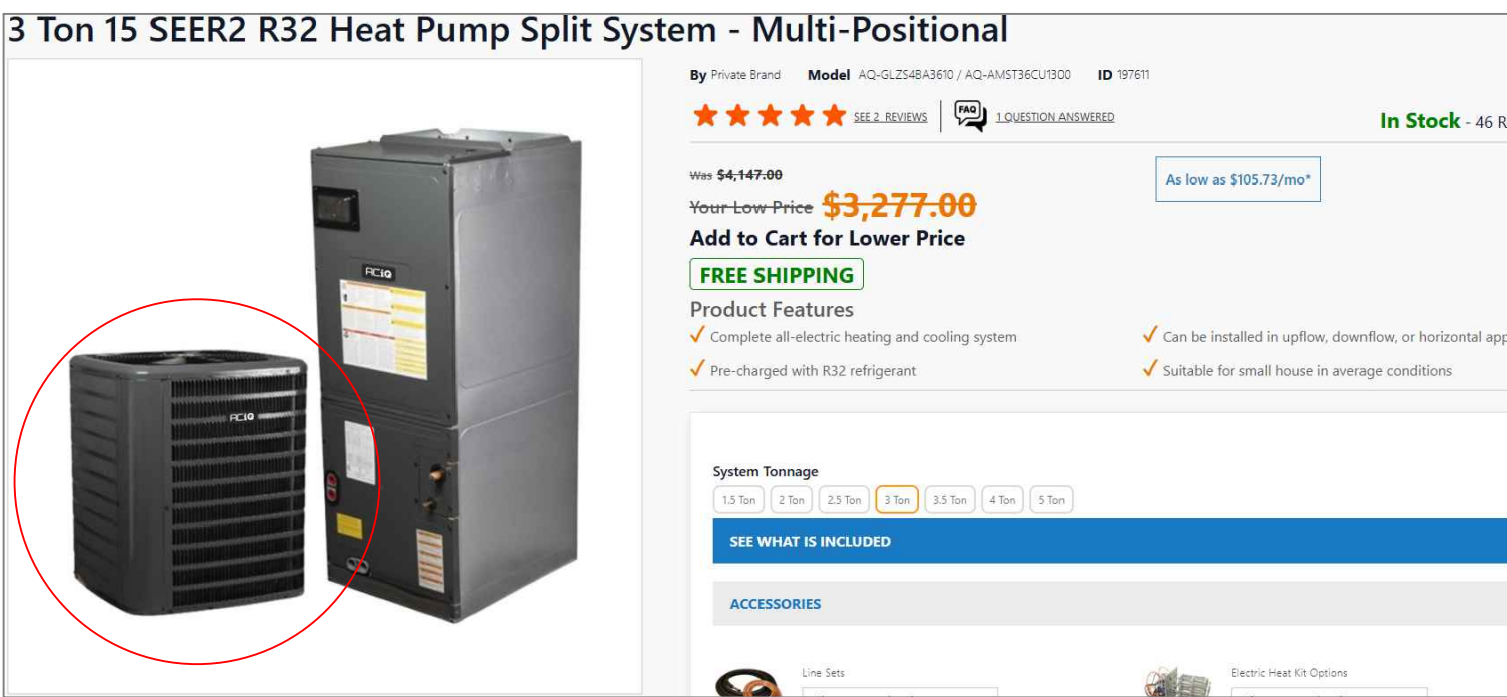
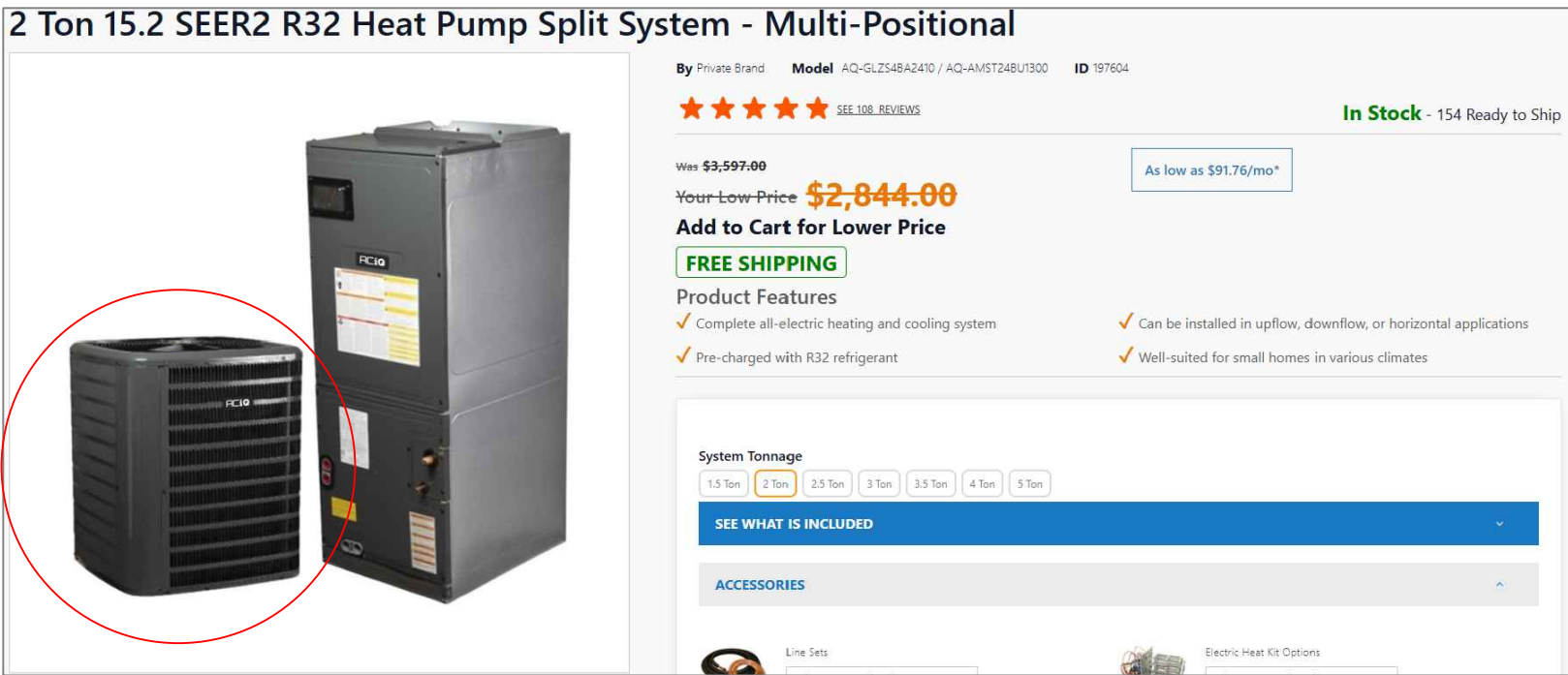
- THE ERV UNITS WILL BE FANTECH ATMO SERIES OR ARCHITECT APPROVES EQUAL.

EXHAUST FANS:
EF-1:
KITCHEN EXHAUST BY OTHERS
EF-2 & EF-3 :
FURNISH AND INSTALL PENN MODEL 25H INLINE SC CEILING CABINET EXHAUST FAN CAPABLE OF 50 CFM WITH 4"Ø EXHAUST DUCT CONNECTION AND 0.01 IP 120/1/60 MOTOR, FACTORY BACKDRAFT DAMPER.
ALL DIFFUSERS AND RETURN AIR GRILLES TO BE MANUFACTURED BY KRUEGER, CARNES, TRUE AIR, CONTINENTAL, OR APPROVED EQUAL, AND TO BE OF THE MODEL AND MATERIALS AS FOLLOWS.
WALL DIFFUSERS TO BE ALUMINUM BAR GRILLE CONSTRUCTION WITH OPPOSED BLADE BALANCING DAMPERS TO PERMIT FINAL AIR BALANCING.
SPIRAL DUCT DIFFUSERS TO BE WHITE OR MATCHING DUCTWORK COLOR AND OF ALUMINUM CONSTRUCTION WITH EITHER OPPOSED BLADE OR DUCT MOUNTED BALANCING DAMPER (EASILY ACCESSIBLE). THE DIFFUSER CAN BE SQUARE NECK OR EQUIVALENT ROUND NECK.
RETURN AIR GRILLES ARE ALUMINUM CONSTRUCTION WITH " BAR SPACING TO MAINTAIN LOW PRESSURE DROP. RETURN AIR GRILLES TO HAVE DUCT MOUNTED BALANCING DAMPERS.
EXHAUST GRILLES TO BE CONSTRUCTED WITH ALUMINUM HAVING 45 DEGREE BLADES SPACED AND BE COMPLETE WITH FACTORY PAINTED WHITE COATING. CABINET FAN TO HAVE AUTOMATIC BACKDRAFT DAMPER.

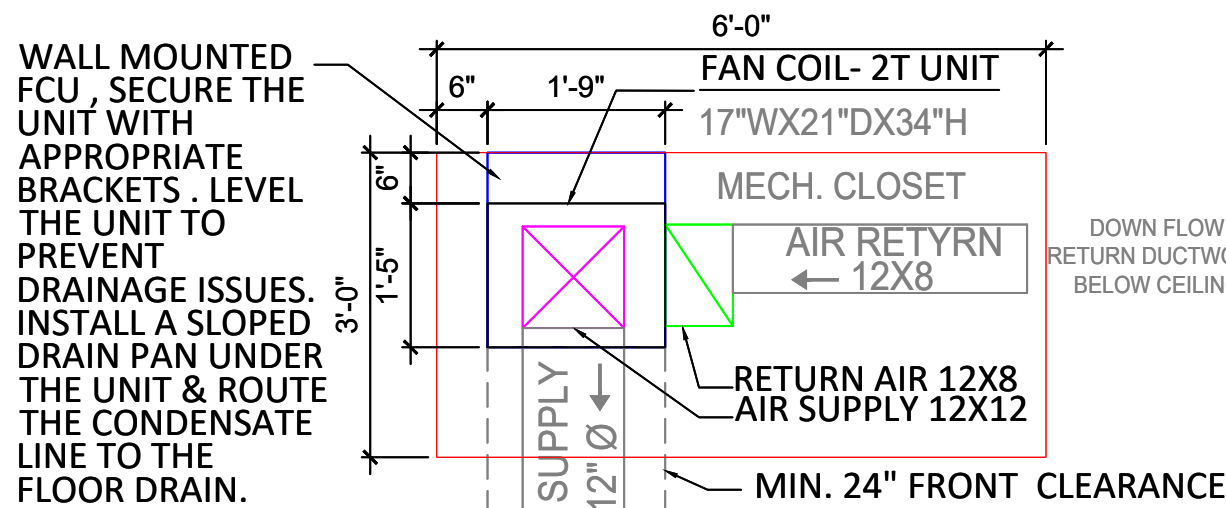
DIFFUSER AND RETURN GRILLES
2 BEDROOM UNIT (UNIT A):
LIVING RM SPIRAL DUCT DIFFUSER 12x4 2 REQ'D
KITCHEN/DIN RM SPIRAL DUCT DIFFUSER 12x4 2 REQ'D
ENTRANCE AREA SPIRAL DUCT DIFFUSER 12x6 1 REQ'D
BEDROOM 1 WALL MTD DIFFUSER 12x10 1 REQ'D
BATH 1 WALL MTD DIFFUSER 8x4 1 REQ'D
BATH 2 WALL MTD DIFFUSER 12x4 1 REQ'D
BATH RM EF2 , 3 CEILING MTD EXH 2 REQ'D
KITCHEN HOOD EXH - BY OTHERS
BED RM 1 WALL MTD RETURN AIR 12X8 1 REQ'D
BED RM 2 WALL MTD RETURN AIR 12X4 1 REQ'D
CORRIDOR AREA WALL MTD RETURN AIR 12X10 1 REQ'D
ENTRANCE AREA WALL MTD RETURN AIR 12X8 1 REQ'D
ERV UNIT WALL MTD AIR INTAKE 12X8 1 REQ'D

1 BEDROOM UNIT (UNIT B):
LIVING RM SPIRAL DUCT DIFFUSER 12X4 2 REQ'D
DINING AREA SPIRAL DUCT DIFFUSER 12X6 1 REQ'D
ENTRANCE AREA SPIRAL DUCT DIFFUSER 12X6 1 REQ'D
BEDROOM 1 SPIRAL DIFFUSER 12X6 1 REQ'D
BATH RM DIFFUSER WALL MTD 8X4 1 REQ'D
BEDROOM 1 RM WALL MTD RETURN DIF. 12x6 1 REQ'D
BATH RM EF2 CEILING MTD EXH DIF. 1 REQ'D
CORRIDOR 1 WALL MTD RETURN DIF. 12X12 1 REQ'D
ERV UNIT WALL MTD RETURN DIFFUSER 12x6 1 REQ'D
KITCHEN HOOD EXH - BY OTHERS

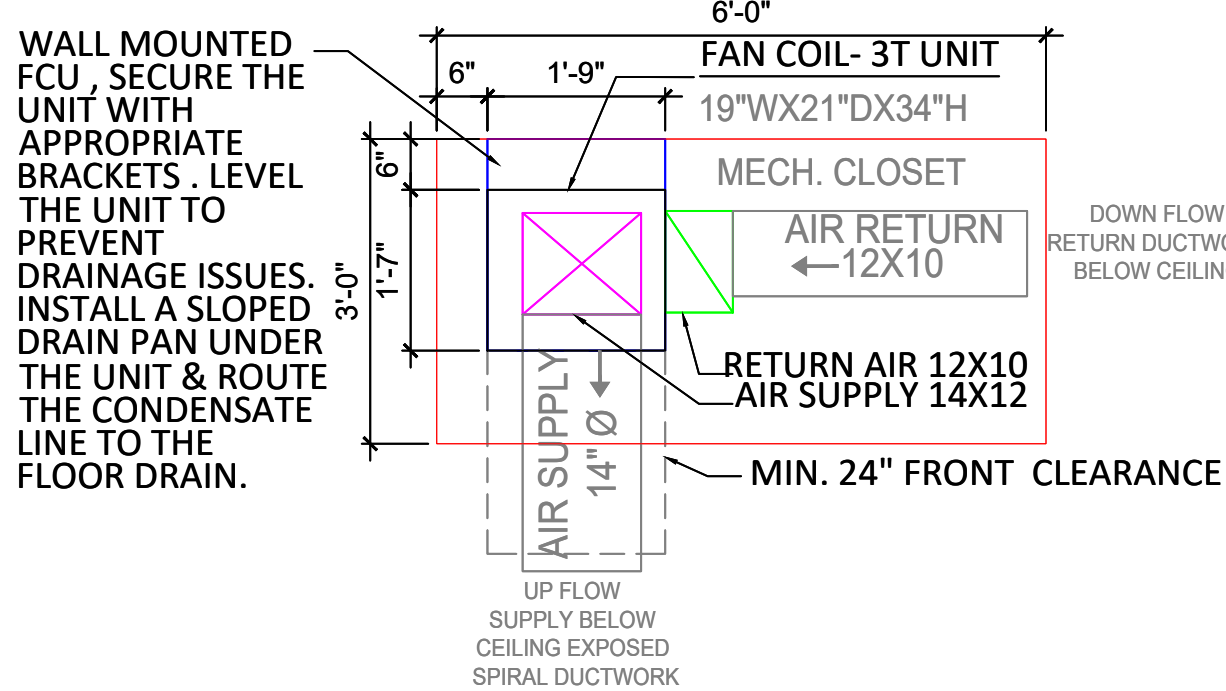
DIFFUSERS CONTINENTAL - CALVERLY
KRUEGER



WALL MOUNTED FAN COIL UNIT (FT5) INSTALLATION
DIAGRAM- UPFLOW CONFIGURATION ABOVE ELEC.
WATER HEATER



TYP. UPFLOW AIR HANDLER 1 BEDROOM 2T UNIT -
AIR SUPPLY & RETURN DUCTWORK



TYP. UPFLOW AIR HANDLER 2 BEDROOM 3T UNIT -
AIR SUPPLY & RETURN DUCTWORK

VENTILATION SCHEDULE FOR BASEMENT & 1ST FLOOR LEVELS:

OCCUPANCY LOAD PER CHAPTER 4 OF MMC 2021 (TABLE 403.3.1.1)											
SPACE DESCRIPTION	AREA S.F	AREA PER OCCUPNT.	OCCUPNT. LOAD	OUTSIDE AIR FLOW RATE		EXHAUST AIR		O.A REQUIRED	E.A REQUIRED	O.A PROVIDED	E.A PROVIDED
				OCC/CFM	S.F/CFM	ITEM / CFM	S.F/CFM				
LOUNGE / GAME ROOM	300	15	20	7.5	0.18	ERV # 3 300 CFM	/	204	/	250	250
BASEMENT MEETING RM	130	15	8	5	0.06		/	48	/	50	50
1ST FLR MEETING ROOM	540	15	36	5	0.06	ERV # 3 300 CFM	/	212.4	/	200	200
BASEMENT EXERCISE RM	875	50	17	20	0.18	ERV #1 + ERV #2= 500 CFM	/	434	/	500	500
TOTAL	1845		81								

AIR BALANCE SCHEDULE						
NAME	OA	RA	SA	EA	PRESSURE	NOTES
LOBBY	250	/	850	250		ERV # 3 300 CFM
MEETING	50	/	250	50		
EXERC. RM	500	/	1700	500		ERV #1 + ERV #2 500 CFM TOTAL
1 FLR MEET.	300	/	1100	300		ERV # 3 300 CFM
TOTAL					0	

VENTILATION SCHEDULE FOR TYP. ONE BEDROOM DWELLING UNITS (UNITS B,C,D,E,F,H,Y,&Z) - TOTAL 08 UNITS

OCCUPANT DESIGNATION	OCCUPANT DENSITY # / 1000	SIZE Ø	OA CFM / PERS	OA CFM / Ø	OA	EXH CFM / Ø	EXHAUST
KITCHEN	-	10 FT	-	-	-	5 CFM / S.F X 10	50 CFM REQ. 100 CFM INTERMITTENT OPERATION PROVIDED
1 BEDROOM UNIT LIVING/DINING AREA	2 PER		15 CFM / PERS	15 CFM X 2	30 CFM 150 CFM ERV PROVIDED		
BATH RM	-	10 X 5	2/3		-	1 CFM / S.F	50 CFM INTERMITTENT OPERATION

VENTILATION SCHEDULE FOR TYP. TWO BEDROOM DWELLING UNITS (UNITS A,G,I) - TOTAL 3 UNITS

OCCUPANT DESIGNATION	OCCUPANT DENSITY # / 1000	SIZE Ø	OA CFM / PERS	OA CFM / Ø	OA	EXH CFM / Ø	EXHAUST
KITCHEN	-	10 FT	-	-	-	5 CFM / S.F X 10	50 CFM REQ. 100 CFM INTERMITTENT OPERATION PROVIDED
2 BEDROOM UNIT LIVING AREA	2 PERS 1ST BED 1 PERS 1ST BED TO. 3 PER		15 CFM / PERS	15 CFM X 3	45 CFM 200 CFM ERV PROVIDED		
BATH RM	-	10 X 5	3/4		-	1 CFM / S.F	50 CFM INTERMITTENT OPERATION

OWNER / OWNER'S AGENT APPROVED & ACCEPTED

DATE: __/__/2025

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PROJECT # 25 - 27

ISSUE DATE # 03/14/2025

REVISION HISTORY

EXIST. CONDITIONS (S.J)	03/14/2025
STUDY 10 (MF)	04/02/2025
STUDY 11 (JH)	04/08/2025
STUDY 12 (JH)	04/11/2025
STUDY 13 (JH)	04/21/2025
OWNER REVIEW	05/09/2025
OWNER REVIEW	05/16/2025
SLU SET	05/20/2025
OWNER REVIEW	05/27/2025
OWNER REVIEW	06/10/2025
OWNER REVIEW	06/13/2025
OWNER REVIEW	06/20/2025

DRAWN BY: S.J + M.F + J.H

CHECKED BY: J.M

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