SPLIT DIRECT EXPANSION (DX) EQUIPMENT

																1											
						INDOOR	UNIT									COMBINED COOLING CAPACITIES					l						
	TOTAL HEATING			CARRIER	CARRIER		CARRIER NOMINAL			COOLING						REMARKS											
MARK	SERVES	S.A.	O.A.	E.S.P.	MOTOR	GAS	EFF.	GAS IN	GAS OUT	FURNACE BASIS	COIL BASIS	MIN.	REFR.	BASIS OF	TONNAGE	TOTAL	SENS	LAT	Ent. Tdb	Ent. Twb	Lvg. Tdb	Lvg. Twb	1				
		(CFM)	(CFM)	(IN WG)	(hp)	TYPE	AFUE	(BTUH)	(BTUH)	OF DEISGN	OF DEISGN	SEER		DESIGN		(MBH)	(MBH)	(MBH)	(°F)	(°F)	(°F)	(°F)	1 2	3 4	1 5	6	7 8
FURN-1/ CU-1	LOWER LEVEL	1,000	110	0.50	1/2 ECM	NATURAL	92%	60,000	56,000	59SP2A060E1412	CNPVP3 7AL	15.5	R-410A	24ACC430	2.5	27.5	20.5	7.0	76.7	65.3	57.0	56.0	x x	X	< x	Х	X :
FURN-2/ CU-2	FIRST FLOOR	1,000	145	0.50	1/2 ECM	NATURAL	92%	60,000	56,000	59SP2A060E1412	CNPVP3 17AL	15.5	R-410A	24ACC430	2.5	28.8	21.0	7.8	77.2	65.7	57.0	56.0	x x	X	< x	X	X Z
FURN-3 / CU-3	SECOND FLOOR	1,200	185	0.50	1/2 ECM	NATURAL	92%	60,000	56,000	59SP2A060E1714	CNPVP37 7AL	15.0	R-410A	24ACC436	3.0	35.0	25.4	9.6	77.3	65.9	57.0	56.0	хх	X	< x	X	x ;

NOTES (APPLY TO ALL):

- A. SEE ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS.
- B. SUBMITTED UNIT CAPACITIES SHOULD BE WITHIN +/- I 0% OF SCHEDULED CAPACITIES.
- C. BASIS OF DESIGN: CARRIER. SEE SPECIFICATIONS.
- ACCEPTABLE ALTERNATES: JCI/YORK, TRANE, DAIKIN/MCQUAY, LENNOX
- D. ALL EVAPORATORS AND COOLING COILS LOCATED ABOVE THE LOWEST LEVEL FINISHED FLOOR SHALL BE INSTALLED WITH
- AN AUXILIARY CONDENSATE DRAIN PAN UNDER THE UNIT. PROVIDE AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO
- SHUTDOWN THE UNIT OPON DETECTION OF WATER IN THE AUXILIARY DRAIN PAN.
- E. AS AN ALTERNATIVE TO THE AUXILIARY CONDENSATE DRAIN PAN, AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN
- THE UNIT UPON DETECTION OF WATER MAY BE INSTALLED IN TH EPRIMARY DRAIN LINE, THE OVERFLOW DRAIN LINE OR THE
- EQUIPMENT SUPPLIED DRAIN PAN. THE WATER LEVEL DETECTOR SHALL BE LOCATED AT A POINT HIGHER THAN TH EPRIMARY DRAIN
- LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

REMARKS (APPLY AS SCHEDULED):

- I . PROGRAMMABLE THERMOSTAT.
- 2. 2-PIPE DIRECT VENTING KIT. PROVIDE CONCENTRIC TERMINATION AT ROOF OR WALL; REFER TO FLOOR PLAN. VENT SIZE, MATERIALS AND
- TERMINATION SHALL BE PER MANUFACTURER'S REQUIREMENTS.
- 3. INDOOR FAN DELAY KIT. 4. DISPOSABLE FILTER.
- 5. ANTI-SHORT CYCLE TIMER.
- 6. DISCONNECT SWITCH PROVIDED BY ELECTRICAL SUBCONTRACTOR AT BOTH THE INDOOR AND OUTDOOR UNIT. REFER TO THE
- ELECTRICAL DOCUMENTS.
- 7. MOUNT OUTDOOR CONDENSING UNIT ON CONCRETE HOUSEKEEPING PAD. PAD SHALL BE A MINIMUM 4" THICK AND SHALL
- EXTEND 6" BEYOND UNIT ON ALL SIDES.
- 8. PROVIDE CONDENSATE PUMP. PUMP MAY BE OMITTED WHERE GRAVITY DRAIN IS POSSIBLE.

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

CALLOUT	DESCRIPTION	FACE SIZE (IN)	INLET SIZE (IN)	NOISE CRITERIA @ MAX CFM	MODEL
RS1812	EGGCRATE GRILLE	18x12	18x12	25	TITUS 50F
RS1818	EGGCRATE GRILLE	18x18	18x18	25	TITUS 50F
SSD1204	DRUM LOUVER	14x6	12x4	0	TITUS DL

A. AIR DEVICE (I.E. DIFFUSERS, REGISTERS AND GRILLES) COLOR SELECTION SHALL BE MADE BY ARCHITECT. CONTRACTOR SHALL SUBMIT COLOR/FINISH CHARTS FOR ARCHITECTURAL REVIEW AND SELECTION. B. THE CONTRACTOR SHALL COORDINATE AIR DEVICE FRAME AND/OR SUSPENSION TYPE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN.

DUCTLESS SPLIT DIRECT EXPANSION (DX) EQUIPMENT

	INDOOR UNIT								OUTDOOR UNIT				
NAA DK	CEDI/EC	TVOE	Model (Ceptico	NON MINIAL	CEM	MADK	N AIN I	N 41N1	MODELICEDIEC	COOLING	HEATING		
MARK	SERVES	TYPE	MODEL/SERIES	TONS	CFM	MARK	MIN. SEER	MIN. HSPF	MODEL/SERIES	TOTAL (MBH)	@ 47°F (MBH)		
MFCU-1	ELEVATOR EQUIPMENT ROOM	WALL-MOUNTED, HEAT PUMP	PKA-A 8HA4	1.50	320/370/425	MHP-1	15.3	9.5	PUZ-A 8NHA4	18.0	19.0		
MFCU-2	ELECTRICAL ROOM	WALL-MOUNTED, HEAT PUMP	PKA-A 8HA4	1.50	320/370/425	MHP-2	15.3	9.5	PUZ-A 8NHA4	18.0	19.0		

NOTES (APPLY TO ALL):

- A. BASIS OF DESIGN: MITSUBISHI. EQUAL PRODUCTS: DAIKIN, LENNOX, SAMSUNG, LG, SANYO, CARRIER, JCI/YORK.
- B. SINGLE POWER CONNECTION AT OUTDOOR UNIT. DISCONNECT SWITCHES PROVIDED AT THE INDOOR AND OUTDOOR UNITS BY ELECTRICAL
- SUBCONTRACTOR. REFER TO THE ELECTRICAL DOCUMENTS.
- C. R-4 I OA REFRIGERANT.
- D. FACTORY CONDENSATE PUMP OR CONDENSATE LIFT MECHANISM.
- E. WALL MOUNTED WIRED REMOTE CONTROLLER.
- F. INVERTER DRIVEN COMPRESSOR.
- G. MOUNT OUTDOOR UNIT ON CONCRETE HOUSEKEEPING PAD ON GRADE. PAD SHALL BE MIN. 4" THICK AND SHALL EXTEND 6" BEYOND UNIT ON ALL SIDES.
- H. REFRIGERANT LINE SET TOTAL EQUIVALENT LENGTH SHALL NOT EXCEED 100 FEET. SHOULD AN ALTERNATE MANUFACTURER BE USED,
- CONTRACTOR SHALL COMPLY WITH ALTERNATE MANUCAFTURER LINE SET LIMITATIONS.

DUCTLESS SPLIT DIRECT EXPANSION (DX) EQUIPMENT - ADD ALTERNATE

	INDOOR UNIT							TDOOR UN	COMBINED CAPACITIES		
										COOLING	HEATING
MARK	SERVES	TYPE	MODEL/SERIES	NOMINAL	CFM	MARK	MIN.	MIN.	MODEL/SERIES	TOTAL	@ 47°F
				TONS			SEER	HSPF		(MBH)	(MBH)
MFCU-3	FIRE PUMP ROOM	WALL-MOUNTED, HEAT PUMP	PKA-A 8HA4	1.50	320/370/425	МНР-З	15.3	9.5	PUZ-A 8NHA4	18.0	19.0

NOTES (APPLY TO ALL):

- A. BASIS OF DESIGN: MITSUBISHI. EQUAL PRODUCTS: DAIKIN, LENNOX, SAMSUNG, LG, SANYO, CARRIER, JCI/YORK.
- B. SINGLE POWER CONNECTION AT OUTDOOR UNIT. DISCONNECT SWITCHES PROVIDED AT THE INDOOR AND OUTDOOR UNITS BY ELECTRICAL
- SUBCONTRACTOR. REFER TO THE ELECTRICAL DOCUMENTS.
- C. R-4 | OA REFRIGERANT.
- D. FACTORY CONDENSATE PUMP OR CONDENSATE LIFT MECHANISM.
- E. WALL MOUNTED WIRED REMOTE CONTROLLER.
- F. INVERTER DRIVEN COMPRESSOR.
- G. MOUNT OUTDOOR UNIT ON CONCRETE HOUSEKEEPING PAD ON GRADE. PAD SHALL BE MIN. 4" THICK AND SHALL EXTEND 6" BEYOND UNIT ON ALL SIDES.
- H. REFRIGERANT LINE SET TOTAL EQUIVALENT LENGTH SHALL NOT EXCEED 100 FEET. SHOULD AN ALTERNATE MANUFACTURER BE USED,
- CONTRACTOR SHALL COMPLY WITH ALTERNATE MANUCAFTURER LINE SET LIMITATIONS.

LOUVERS

SYMBOL	MODEL/	SERVES	SIZE	MIN FREE AREA	CFM	MAX PRESS.	OPERATOR	INTERLOCK	FRAME	REMARK		'KS
SYMBOL	SERIES	SLKVLS	WxH (IN)	(SQ FT)	CTIVI	(IN WC)	OI LIVATOR	INTERECOR	TIVAIVIL	ı	2	3
WL-A	ESD-635	FCU-1,2,3 OUTSIDE AIR	12x18	0.4	185	0.05	N/A	N/A	ALUMINUM	X	X	

- A. FINAL COLOR SELECTION SHALL BE MADE BY ARCHITECT AT TIME OF SHOP DRAWING APPROVAL. PROVIDE COLOR/FINISH CHARTS AS PART OF SUBMITTAL.
- B. DESIGN IS BASED ON PRODUCTS BY GREENHECK. ACCEPTABLE ALTERNATES SHALL BE BY UNITED ENERTECH, ARROW, RUSKIN.
- EMARKS (APPLY AS SCHEDULED): I. BIRD SCREEN
- 2. BAKED ON ENAMEL FINISH.

ELECTRIC WALL HEATER

MARK	CFM	WATTS	HEAT	BASIS OF		S				
IVIANX	CTIVI	WAIIJ	(BTU/H)	DESIGN	-	2	3	4	15)	6
EWH-A	100	3000	10235	QMARK AWH	Х	X	X	X	X	Х

- I. PROVIDE WITH INTEGRAL THERMOSTAT AT UNIT TO MAINTAIN MINIMUM 45 F (ADJUSTABLE).
- 2. COORDINATE ELECTRICAL CHARACTERISTICS WITH ELECTRICAL CONTRACTOR.
- 3. FAN DELAY SWITCH.
- 4. THERMAL CUTOUT.
- 5. FACTORY DISCONNECT SWITCH.
- 6. SURFACE MOUNTING KIT.

NO SCALE RETURN AIR DUCT SA DUCT UP, SEE FLOOR (SEE PLANS FOR SIZE PLAN FOR SIZE AND AND CONTINUATION) -ROUTING (TRANSITION TO FURNACE SUPPLY OPENING) -FLEX CONNECTION — OA DUCT (SEE FLOOR PLAN FOR SIZE AND CONTINUATION) - MOUNT UNIT ON ANGLE IRON FRAME MANUAL - FILTER ACCESS VOLUME DAMPER -BACK

- FLOAT SWITCH TO

SHUT DOWN UNIT

—AUXILIARY DRAIN PAN

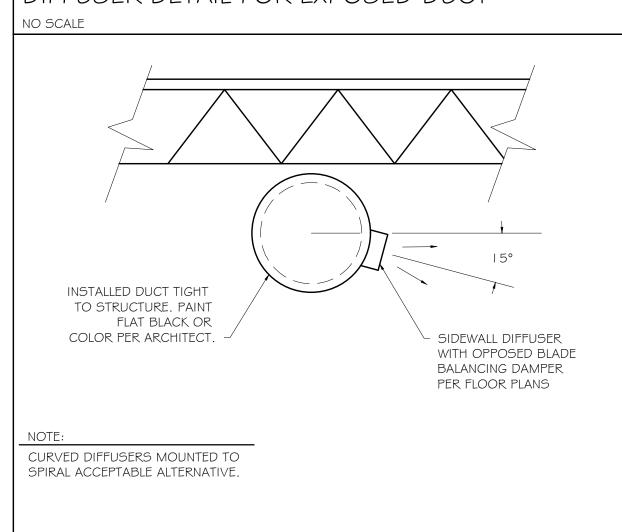
VERTICAL FURNACE DETAIL

DRAFT

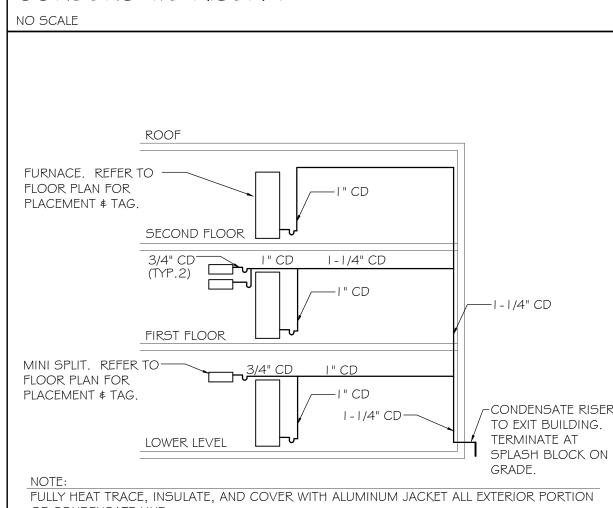
DAMPER-

DIFFUSER DETAIL FOR EXPOSED DUCT

ROUTE PRIMARY CONDENSATE LINE TO HUB DRAIN, SEE PLMB. DWGS.



CONDENSATE RISER I



ADD ALTERNATE

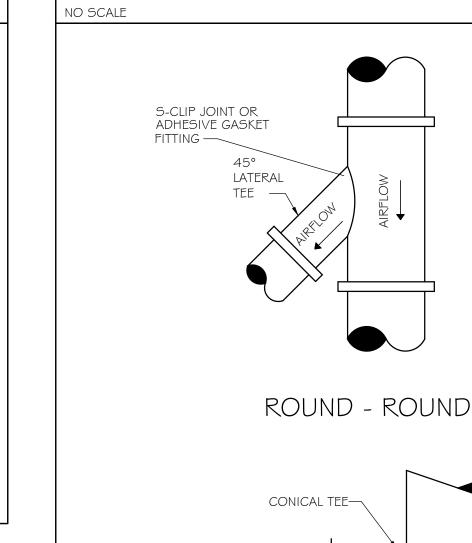
OF CONDENSATE LINE.

ADD ALTERNATE:

CONTRACTOR TO PROVIDE OWNER AN ESTIMATE TO INCLUDE NEW MINI SPLIT AND HEAT PUMP, ALONG WITH CONDENSATION, REFRIGERATION, AND ELECTRICAL CONNECTION TO SERVE FIRE PUMP ROOM. THIS SHALL BE PROVIDED AS A SEPARATE LINE ITEM TO THE BASE BID.

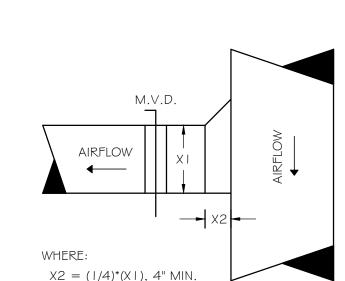
DIFFUSER TAKE-OFF DETAIL NYLON TIE ON EXTERIOR INSULATION - NYLON TIE ON INTERNAL LINER - INTERIOR LINER - PREINSULATED FLEXIBLE **ROUND SHEET** DUCTWORK. SEE METAL DUCT SPECIFICATIONS. LENGTH DIAMETER AS SHALL NOT EXCEED 8'-0". INDICATED ON PROVIDE SUPPORT PER PLANS. —— SMACNA STANDARDS. INSTALL FREE OF KINKS \$ - DAMPER HERE FOR INACCESSIBLE CEILINGS (I.E. HARD CEILINGS) PROVIDE FACTORY, PRE-MOLDED INSULATION WITH SCOOP DAMPER HERE FOR BLANKET ON DIFFUSER ACCESSIBLE CEILINGS BACKPLATE CONNECT FLEX DUCT ENDS TO -SUPPLY DIFFUSER - CEILING SHEET METAL DUCT AND DIFFUSER SEE ARCH NECK WITH NYLON TIES. INTERIOR LINER AND EXTERIOR INSULATION OF ∠WHERE BRANCH DUCT SIZE DIFFERS FROM FLEX DUCT TO BE TIED INDIVIDUALLY. SCHEDULED DIFFUSER NECK SIZE, CONTRACTOR INSTALL USING TENSIONING TOOL AS SHALL PROVIDE NECESSARY TRANSITION. PER MANUFACTURER'S RECOMMENDATIONS.

DUCTWORK DETAILS



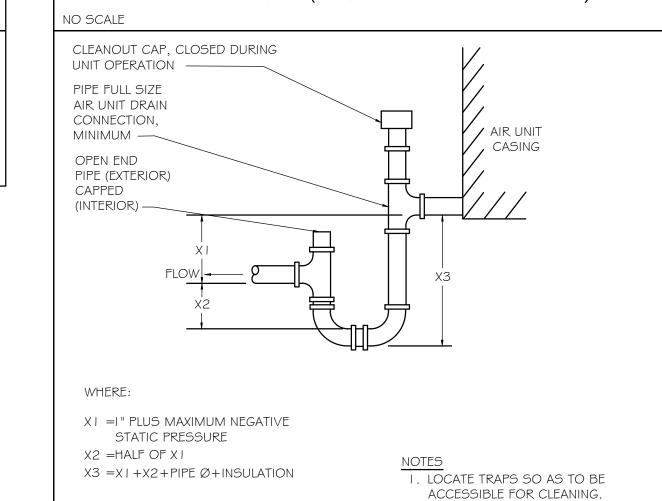


RECTANGULAR - ROUND

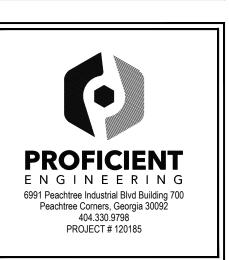


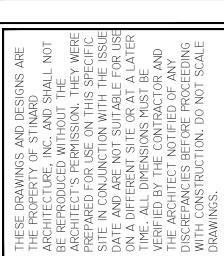
RECTANGULAR - RECTANGULAR

CONDENSATE TRAP (DRAW THROUGH UNIT)



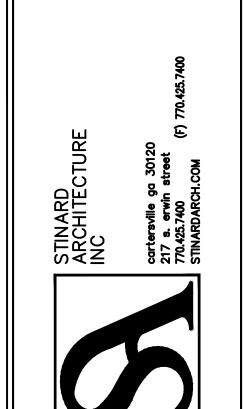






Storag

Storage 1639 ewste₁ elf



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