

DETAILED BREAKDOWN OF ITEMS

Prepared for:

Project ID:

Scope:

Date:

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
HVAC									
	Combustion Air Vent Pipe								
1	14"x14" Combustion Air Vent Pipe	LF	9	10%	10	\$ 23.00	\$ 60.00	\$ 83.00	\$ 863.70
	Combustion Air Vent Pipe Fittings								
	Elbow								
2	14"x14" Combustion Air Vent Pipe 90 Deg Elbow	EA	1	0%	1	\$ 14.20	\$ 6.50	\$ 20.70	\$ 20.70
	Refrigerant Pipe								
	Type "ACR" Copper Pipe (Assumed)								
3	1/4" Refrigeration Liquid Pipe	LF	1523	10%	1675	\$ 10.44	\$ 1.80	\$ 12.24	\$ 20,499.88
4	1/2" Refrigeration Suction Pipe	LF	1523	10%	1675	\$ 12.14	\$ 2.98	\$ 15.12	\$ 25,323.38
	Insulation								
	3/4" Thick Elastomeric Pipe Insulation								
5	1/4" Refrigeration Liquid Pipe	LF	1523	10%	1675	\$ 1.50	\$ 1.35	\$ 2.85	\$ 4,773.26
6	1/2" Refrigeration Suction Pipe	LF	1523	10%	1675	\$ 1.75	\$ 1.65	\$ 3.40	\$ 5,694.41
	Refrigerant Pipe Fittings								
	Elbow								
7	1/4" Dia Refrigeration Liquid Pipe 90 Deg Elbow	EA	114	0%	114	\$ 14.20	\$ 6.50	\$ 20.70	\$ 2,359.80
8	1/2" Dia Refrigeration Suction Pipe 90 Deg Elbow	EA	114	0%	114	\$ 46.00	\$ 18.00	\$ 64.00	\$ 7,296.00
	Air Devices								
9	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 4" Dia Neck Size, 40 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
10	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 6"x4" Neck Size, 30 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	39	0%	39	\$ 48.00	\$ 107.00	\$ 155.00	\$ 6,045.00
11	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 6"x4" Neck Size, 35 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	38	0%	38	\$ 48.00	\$ 107.00	\$ 155.00	\$ 5,890.00
12	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 7" Dia Neck Size, 110 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	2	0%	2	\$ 80.00	\$ 230.00	\$ 310.00	\$ 620.00
13	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 7" Dia Neck Size, 140 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	3	0%	3	\$ 80.00	\$ 230.00	\$ 310.00	\$ 930.00
14	A: Supply Air Diffuser, RUSKIN/ABD-SEA (4"), 8" Dia Neck Size, 200 CFM 1: Standard Finish. 2: Surface Mount. 3: 1-Way Throw (Long Side). 4: Automatic Balancing Damper W/Grill Combination.	EA	3	0%	3	\$ 87.00	\$ 244.00	\$ 331.00	\$ 993.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
15	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 10" Dia Neck Size, 275 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	2	0%	2	\$ 87.00	\$ 244.00	\$ 331.00	\$ 662.00
16	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 10" Dia Neck Size, 300 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	2	0%	2	\$ 96.00	\$ 263.00	\$ 359.00	\$ 718.00
17	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 12"x12" Neck Size, 220 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	3	0%	3	\$ 87.00	\$ 244.00	\$ 331.00	\$ 993.00
18	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 18"x10" Neck Size, 800 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 106.00	\$ 330.00	\$ 436.00	\$ 436.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
19	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 20"x10" Neck Size, 470 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 108.00	\$ 286.00	\$ 394.00	\$ 394.00
20	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 5"x5" Neck Size, 25 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	77	0%	77	\$ 48.00	\$ 107.00	\$ 155.00	\$ 11,935.00
21	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 6" Dia Neck Size, 100 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00
22	B: Supply Air Diffuser, RUSKIN/ABD-SEA-ST (4"), 6" Dia Neck Size, 120 CFM 1: Standard Finish. 2: Surface Mount. 3: Fixed Horizontal Blades. 4: Automatic Balancing Damper W/Grill Combination. 5: Supply With Acoustically Lined Boot.	EA	2	0%	2	\$ 80.00	\$ 230.00	\$ 310.00	\$ 620.00
23	C: Supply Air Diffuser, METAL-AIRE/5700-6, 10" Dia Neck Size, 300 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 96.00	\$ 263.00	\$ 359.00	\$ 359.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
24	C: Supply Air Diffuser, METAL-AIRE/5700-6, 4" Dia Neck Size, 20 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00
25	C: Supply Air Diffuser, METAL-AIRE/5700-6, 5" Dia Neck Size, 40 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	24	0%	24	\$ 48.00	\$ 107.00	\$ 155.00	\$ 3,720.00
26	C: Supply Air Diffuser, METAL-AIRE/5700-6, 5" Dia Neck Size, 60 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00
27	C: Supply Air Diffuser, METAL-AIRE/5700-6, 5" Dia Neck Size, 60 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00
28	C: Supply Air Diffuser, METAL-AIRE/5700-6, 5" Dia Neck Size, 75 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
29	C: Supply Air Diffuser, METAL-AIRE/5700-6, 6" Dia Neck Size, 100 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00
30	C: Supply Air Diffuser, METAL-AIRE/5700-6, 6" Dia Neck Size, 120 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	6	0%	6	\$ 80.00	\$ 230.00	\$ 310.00	\$ 1,860.00
31	C: Supply Air Diffuser, METAL-AIRE/5700-6, 8" Dia Neck Size, 150 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00
32	C: Supply Air Diffuser, METAL-AIRE/5700-6, 8" Dia Neck Size, 200 CFM 1: Standard Finish. 2: Louver Faced, 4-Way Throw. 3: 24"x 24" T-Bar Lay-in Frame (Panel Mounted As Required). 4: Radial Shutter Damper (RSD).	EA	4	0%	4	\$ 87.00	\$ 244.00	\$ 331.00	\$ 1,324.00
33	E: Return Air Grille, METAL-AIRE/PHPR-15-6, 24"x12" Neck Size, 1040 CFM 1: Standard Finish. 2: Surface Mount. 3: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD). 6: Balancing Damper W/Locking Quadrant. 7: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 135.00	\$ 375.00	\$ 510.00	\$ 510.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
34	E: Return Air Grille, METAL-AIRE/PHPR-15-6, 24"x12" Neck Size, 120 CFM 1: Standard Finish. 2: Surface Mount. 3: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD). 6: Balancing Damper W/Locking Quadrant. 7: Supply With Acoustically Lined Boot.	EA	6	0%	6	\$ 80.00	\$ 230.00	\$ 310.00	\$ 1,860.00
35	E: Return Air Grille, METAL-AIRE/PHPR-15-6, 24"x12" Neck Size, 540 CFM 1: Standard Finish. 2: Surface Mount. 3: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD). 6: Balancing Damper W/Locking Quadrant. 7: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 108.00	\$ 286.00	\$ 394.00	\$ 394.00
36	E: Return Air Grille, METAL-AIRE/PHPR-15-6, 24"x12" Neck Size, 80 CFM 1: Standard Finish. 2: Surface Mount. 3: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD). 6: Balancing Damper W/Locking Quadrant. 7: Supply With Acoustically Lined Boot.	EA	1	0%	1	\$ 48.00	\$ 107.00	\$ 155.00	\$ 155.00
37	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 10" Dia Neck Size, 260 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	4	0%	4	\$ 87.00	\$ 244.00	\$ 331.00	\$ 1,324.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
38	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 16"x16" Neck Size, 80 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	2	0%	2	\$ 48.00	\$ 107.00	\$ 155.00	\$ 310.00
39	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 7" Dia Neck Size, 120 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00
40	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 7" Dia Neck Size, 140 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00
41	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 7" Dia Neck Size, 150 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 80.00	\$ 230.00	\$ 310.00	\$ 310.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
42	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 8" Dia Neck Size, 175 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	5	0%	5	\$ 80.00	\$ 230.00	\$ 310.00	\$ 1,550.00
43	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 8" Dia Neck Size, 200 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 87.00	\$ 244.00	\$ 331.00	\$ 331.00
44	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 8" Dia Neck Size, 220CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	5	0%	5	\$ 87.00	\$ 244.00	\$ 331.00	\$ 1,655.00
45	F: Supply Air Diffuser, METAL-AIRE/PHPSI-6, 9" Dia Neck Size, 200CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: Square To Round Transition. 5: Radial Shutter Damper (RSD).	EA	1	0%	1	\$ 87.00	\$ 244.00	\$ 331.00	\$ 331.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
46	G: Return Air Grille, METAL-AIRE/CC5-1, 18"x36" Neck Size, 1600 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 5: Fixed Horizontal Blades.	EA	1	0%	1	\$ 185.00	\$ 450.00	\$ 635.00	\$ 635.00
47	G: Return Air Grille, METAL-AIRE/CC5-1, 20"x20" Neck Size, 1015 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 5: Fixed Horizontal Blades.	EA	1	0%	1	\$ 135.00	\$ 375.00	\$ 510.00	\$ 510.00
48	G: Return Air Grille, METAL-AIRE/CC5-1, 20"x20" Neck Size, 800 CFM 1: Insulated Type 2E Linear Slot Diffuser W/(1) 1" Slot x 48" Length & Adjustable Discharge Flow Pattern. 2: Standard Finish. 3: Surface Mount. 4: 1 1/2" Slot Width, 5' Length, 4 Slot, Return Non Insulated. 5: Fixed Horizontal Blades.	EA	1	0%	1	\$ 106.00	\$ 330.00	\$ 436.00	\$ 436.00
	Split System Heat Pump Unit								
49	AHU-1: Split System Heat Pump Indoor Unit, TRANE 4TGP4F024A1D, HP-Coil 4TXCA02453HA, Supply CFM 800, Min OA/CFM 100, Total Cooling BTUH 22600, Heating BTUH 23800, 208V/1Ph/60Hz, 30.0 MCA, 40 MOCB	EA	1	0%	1	\$ 450.00	\$ 4,300.00	\$ 4,750.00	\$ 4,750.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
50	AHU-2: Split System Heat Pump Indoor Unit, TRANE 4TGP4F024A1D, , HP-Coil 4TXCA02453HA, Supply CFM 800, Min OA/CFM 40, Total Cooling BTUH 22600, Heating BTUH 23800, 208V/1Ph/60Hz, 30.0 MCA, 40 MOCP	EA	1	0%	1	\$ 450.00	\$ 4,300.00	\$ 4,750.00	\$ 4,750.00
51	AHU-3: Split System Heat Pump Indoor Unit, TRANE 4TGP4F036A1D, , HP-Coil 4TXCA02453HA, Supply CFM 1215, Min OA/CFM 210, Total Cooling BTUH 37100, Heating BTUH 33800, 208V/3Ph/60Hz, 28.8 MCA, 40 MOCP	EA	1	0%	1	\$ 450.00	\$ 6,500.00	\$ 6,950.00	\$ 6,950.00
52	AHU-4: Split System Heat Pump Indoor Unit, TRANE 4TGP4F048A1D, , HP-Coil 4TXCA02453HA, Supply CFM 1600, Min OA/CFM 350, Total Cooling BTUH 52000, Heating BTUH 37980, 208V/3Ph/60Hz, 20.5 MCA, 30 MOCP	EA	1	0%	1	\$ 450.00	\$ 6,500.00	\$ 6,950.00	\$ 6,950.00
53	HP-1: Split System Heat Pump Outdoor Unit, TRANE 4TWA502410AA, 208V/1Ph/60Hz, 12MCA, 20MOCP	EA	1	0%	1	\$ 450.00	\$ 16,283.00	\$ 16,733.00	\$ 16,733.00
54	HP-2: Split System Heat Pump Outdoor Unit, TRANE 4TWA502410AA, 208V/1Ph/60Hz 12MCA, 20MOCP	EA	1	0%	1	\$ 450.00	\$ 16,283.00	\$ 16,733.00	\$ 16,733.00
55	HP-3: Split System Heat Pump Outdoor Unit, TRANE 4TWA503630AA, 208V/3Ph/60Hz 11MCA, 15MOCP	EA	1	0%	1	\$ 450.00	\$ 22,000.00	\$ 22,450.00	\$ 22,450.00
56	HP-4: Split System Heat Pump Outdoor Unit, TRANE 4TWA504830AA, 208V/3Ph/60Hz 22MCA, 30MOCP	EA	1	0%	1	\$ 450.00	\$ 22,000.00	\$ 22,450.00	\$ 22,450.00
	Electrical Wall Heater								
57	EWB-1: Electrical Wall Heater, MARKEL HF3324TTD-RP, 1.5KW, 208V/1PH,175CFM,27 °F 1: Integral Tamper-Proof Thermostat. 2:Surface Mounted Installation. 3:Built-in Power Disconnect. 4:Thermal Overheat Protection. 5:Vandal Resistant.	EA	6	0%	6	\$ 130.00	\$ 604.15	\$ 734.15	\$ 4,404.90

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
58	EWH-2: Electrical Wall Heater, MARKEL HF3325TTD-RP, 2.25KW, 208V/1PH,175CFM,41 °F 1: Integral Tamper-Proof Thermostat. 2:Surface Mounted Installation. 3:Built-in Power Disconnect. 4:Thermal Overheat Protection. 5:Vandal Resistant.	EA	1	0%	1	\$ 130.00	\$ 663.00	\$ 793.00	\$ 793.00
59	EWH-3: Electrical Wall Heater, MARKEL HF3326TTD-RP, 3.0KW, 208V/1PH,175CFM,54 °F 1: Integral Tamper-Proof Thermostat. 2:Surface Mounted Installation. 3:Built-in Power Disconnect. 4:Thermal Overheat Protection. 5:Vandal Resistant.	EA	1	0%	1	\$ 130.00	\$ 699.98	\$ 829.98	\$ 829.98
	Fan								
60	EF1: Fan, G'HECK SP-6, CFM 75, RPM 690, 40 Watts, Sones 3.1, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Provide Cooling Thermostat.	EA	20	0%	20	\$ 185.00	\$ 320.00	\$ 505.00	\$ 10,100.00
61	EF 2: Fan, G'HECK SP-9, CFM 150, RPM 1100, 129 Watts, Sones 3.3, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Interlock With Light Where Noted.	EA	1	0%	1	\$ 185.00	\$ 388.00	\$ 573.00	\$ 573.00
62	EF3: Fan, G'HECK SP-A70, CFM 50, RPM 850, 20.2 Watts, Sones 0.80, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Interlock With Light Where Noted.	EA	1	0%	1	\$ 172.00	\$ 212.00	\$ 384.00	\$ 384.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
63	EF4: Fan, G'HECK SP-9, CFM 150, RPM 1100, 129 Watts, Sones 3.3, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Solid State Speed Control.	EA	1	0%	1	\$ 192.00	\$ 398.00	\$ 590.00	\$ 590.00
64	EF5: Fan, G'HECK CSP228, CFM 400, RPM 1350, 144 Watts, Sones 2.7, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Solid State Speed Control. 4:Interlock With Light Where Noted.	EA	1	0%	1	\$ 164.00	\$ 369.00	\$ 533.00	\$ 533.00
65	EF6: Fan, G'HECK SP-9, CFM 150, RPM 1100, 129 Watts, Sones 3.3, 120V/1PH,60Hz 1: Alternate MFGS: Greenheck, PENN, Cook, Panasonic 2:Provide Wall Caps Where Shown & Louver As Required. 3:Interlock With Light Where Noted.	EA	1	0%	1	\$ 185.00	\$ 398.00	\$ 583.00	\$ 583.00
	Branch Selector								
66	BC-1: Branch Selector CMB-P1016NU-HA1	EA	1	0%	1	\$ 450.00	\$ 12,987.00	\$ 13,437.00	\$ 13,437.00
	Variable Refrigerant Flow								
67	VRF-1-1: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NMAU-E3	EA	1	0%	1	\$ 240.00	\$ 2,724.00	\$ 2,964.00	\$ 2,964.00
68	VRF-1-2: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NMAU-E3	EA	1	0%	1	\$ 240.00	\$ 2,724.00	\$ 2,964.00	\$ 2,964.00
69	VRF-1-3: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NMAU-E3	EA	1	0%	1	\$ 240.00	\$ 2,724.00	\$ 2,964.00	\$ 2,964.00
70	VRF-1-4: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NMAU-E3	EA	1	0%	1	\$ 240.00	\$ 2,724.00	\$ 2,964.00	\$ 2,964.00
71	VRF-1-5: Variable Refrigerant Flow, Mitsubishi/PLFYP08NCMU-ER4	EA	1	0%	1	\$ 280.00	\$ 3,200.00	\$ 3,480.00	\$ 3,480.00
72	VRF-1-6: Variable Refrigerant Flow, Mitsubishi/PLFY-P08NCMU-ER4	EA	1	0%	1	\$ 280.00	\$ 3,200.00	\$ 3,480.00	\$ 3,480.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
73	VRF-1-7: Variable Refrigerant Flow, Mitsubishi/PVFY-P12NAMU-E	EA	1	0%	1	\$ 280.00	\$ 2,450.00	\$ 2,730.00	\$ 2,730.00
74	VRF-1-8: Variable Refrigerant Flow, Mitsubishi/PVFY-P12NAMU-E	EA	1	0%	1	\$ 280.00	\$ 2,450.00	\$ 2,730.00	\$ 2,730.00
75	VRF-1-9: Variable Refrigerant Flow, Mitsubishi/PVFY-P12NAMU-E	EA	1	0%	1	\$ 280.00	\$ 3,200.00	\$ 3,480.00	\$ 3,480.00
76	VRF-1-10: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NAMU-E3	EA	1	0%	1	\$ 280.00	\$ 2,724.00	\$ 3,004.00	\$ 3,004.00
77	VRF-1-11: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NAMU-E3	EA	1	0%	1	\$ 280.00	\$ 2,724.00	\$ 3,004.00	\$ 3,004.00
78	VRF-1-12: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NAMU-E3	EA	1	0%	1	\$ 280.00	\$ 2,724.00	\$ 3,004.00	\$ 3,004.00
79	VRF-1-13: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NAMU-E3	EA	1	0%	1	\$ 280.00	\$ 2,724.00	\$ 3,004.00	\$ 3,004.00
80	VRF-1-14: Variable Refrigerant Flow, Mitsubishi/PEFY-P18NAMU-E3	EA	1	0%	1	\$ 280.00	\$ 2,724.00	\$ 3,004.00	\$ 3,004.00
81	VRF-1-15: Variable Refrigerant Flow, Mitsubishi/PLFY-P08NAMU-ER4	EA	1	0%	1	\$ 280.00	\$ 3,200.00	\$ 3,480.00	\$ 3,480.00
82	VRF-1-16: Variable Refrigerant Flow, Mitsubishi/PLFY-P08NMAU-ER4	EA	1	0%	1	\$ 280.00	\$ 3,200.00	\$ 3,480.00	\$ 3,480.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
83	VRF-1: Mitsubishi PORKY-P168TLMO-A, Modules P168, Cooling Capacity 168000.0(BTU/h), Nominal Heating Capacity 188.000.0(BTU/h), Cooling Efficiency 19.6IEER/11.2EER, Heating COP @47°F 3.49, Norm System Connected Capacity 120.2%, Design Cooling Outdoor Temp DB °F 97, Design Heating Outdoor Temp WB°F 7.9 , Corrected Cooling Total Capacity 152767.1 (BTU/h), Corrected Heating Capacity 113342.2 (BTU/h), Sound Pressure 61 (dBA), Compressor Type Scroll, Compressor Quaintly 1, Preliminary added Field Charge 58.0, 208/230V/3Phase 3Wire, MCA 208/230 68/63, MOCP 110/100 1: Nominal Cooling Capacities are based on indoor coil EAT of 80/76°F (DB/WB), outdoor of 95 °F (DB). 2:Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor 43°F (WB) 3: Efficiency Values for EER, IEER,COP are based on AHIR 1230 test method for mixture of ducted & non-ducted indoor units. 4: Added Field Charge Listed is in addition to factory charge, this must be updated based upon field as built pricing layout	EA	1	0%	1	\$ 320.00	\$ 4,500.00	\$ 4,820.00	\$ 4,820.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
	Louver								
84	L-4, Louver, RUSKIN/ELF-375DX, 16"x12" Neck Size. 1: Combustion Air Louver 2: Drainable Frame 3: Protective Screen On Inside Of Building	EA	1	0%	1	\$ 120.00	\$ 268.00	\$ 388.00	\$ 388.00
	Roof Top Unit								
85	MUA-1: Split Roof Top Unit, MITSUBISHI ELECTRIC MPE-1-W4-11-150-1M, 3066 LB, Elevation 981 Ft, Supply CFM 3415, Exhaust CFM 2395, Supply RPM 3342, Exhaust RPM 2705, Motor Size 5Hp, 80.1 MCA, 100 MOP.	EA	1	0%	1	\$ 3,197.00	\$ 4,757.00	\$ 7,954.00	\$ 7,954.00
	Packaged Terminal Heat Pump								
86	PTAC-1: GE AZ45E07DAC Total CFM 409/250, Cooling-Non Tons 0.583, Sensible BTUH 5884, Total-BTUH 7000, Cool-Power 11.94KW, Heat Pump BTUH 6900, Electrical COP 3.4, 208V/1PH/60Hz, 9.6 Ampere/30 Rate, 13.4 EER 1: Remote Thermostat, Digital, W/Temp. Setting Display & "WARMER/COOLER" Selector 48" A.F.F. In Accessible Rooms And 54" A.F.F. In Non-Accessible Rooms. Pipe Condensate Drain To Vertical Collection System Full Size. 2: Pipe Condensate Drain To Vertical Collection System. 3: Use Copper Wire Type THW For 75 °C Temperature Rating.	EA	62	0%	62	\$ 256.00	\$ 1,029.00	\$ 1,285.00	\$ 79,670.00

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
87	PTAC-2: GE AZ65H09DAD Total CFM 409/250, Cooling-Non Tons 0.792, Sensible BTUH 7125, Total-BTUH 9500, Cool-Power 11.94KW, Heat Pump BTUH 9100, Electrical COP 3.6, 208V/1PH/60Hz, 19.2 Ampere/30 Rate, 12.0 EER 1: Remote Thermostat, Digital, W/Temp. Setting Display & "WARMER/COOLER" Selector 48" A.F.F. In Accessible Rooms And 54" A.F.F. In Non-Accessible Rooms. Pipe Condensate Drain To Vertical Collection System Full Size. 2: Pipe Condensate Drain To Vertical Collection System. 3: Use Copper Wire Type THW For 75 °C Temperature Rating.	EA	15	0%	15	\$ 256.00	\$ 1,337.00	\$ 1,593.00	\$ 23,895.00
	Dampers								
88	6" Dia Fire Damper	EA	1	0%	1	\$ 46.00	\$ 120.00	\$ 166.00	\$ 166.00
89	7" Dia Fire Damper	EA	1	0%	1	\$ 46.00	\$ 125.00	\$ 171.00	\$ 171.00
90	9"x6" Fire Damper	EA	3	0%	3	\$ 46.00	\$ 132.00	\$ 178.00	\$ 534.00
91	10"x6" Fire Damper	EA	2	0%	2	\$ 46.00	\$ 140.00	\$ 186.00	\$ 372.00
92	10"x8" Fire Damper	EA	1	0%	1	\$ 50.00	\$ 144.00	\$ 194.00	\$ 194.00
93	12"x6" Fire Damper	EA	1	0%	1	\$ 53.00	\$ 213.00	\$ 266.00	\$ 266.00
94	14"x6" Fire Damper	EA	5	0%	5	\$ 57.00	\$ 167.00	\$ 224.00	\$ 1,120.00
95	14"x10" Fire Damper	EA	1	0%	1	\$ 64.00	\$ 180.00	\$ 244.00	\$ 244.00
96	16"x8" Fire Damper	EA	1	0%	1	\$ 64.00	\$ 209.00	\$ 273.00	\$ 273.00
97	18"x36" Fire Damper	EA	1	0%	1	\$ 134.00	\$ 360.00	\$ 494.00	\$ 494.00
98	20"x10" Fire Damper	EA	1	0%	1	\$ 69.00	\$ 252.00	\$ 321.00	\$ 321.00
99	20"x20" Fire Damper	EA	1	0%	1	\$ 75.00	\$ 267.00	\$ 342.00	\$ 342.00
100	22"x8" Fire Damper	EA	1	0%	1	\$ 78.00	\$ 272.00	\$ 350.00	\$ 350.00
101	24"x8" Fire Damper	EA	5	0%	5	\$ 86.00	\$ 289.00	\$ 375.00	\$ 1,875.00
102	28"x8" Fire Damper	EA	4	0%	4	\$ 110.00	\$ 322.00	\$ 432.00	\$ 1,728.00
103	32"x8" Fire Damper	EA	2	0%	2	\$ 121.00	\$ 341.00	\$ 462.00	\$ 924.00
	Misc.								
104	10" Dia Filter & Extend Dryer Vent	EA	1	0%	1	\$ 27.20	\$ 68.00	\$ 95.20	\$ 95.20
105	3/8" Mesh Screen	EA	1	0%	1	\$ 78.00	\$ 160.00	\$ 238.00	\$ 238.00
106	4" Dia Duct Coupler	EA	4	0%	4	\$ 2.78	\$ 6.95	\$ 9.73	\$ 38.92
107	Thermostat	EA	20	0%	20	\$ 68.00	\$ 85.00	\$ 153.00	\$ 3,060.00
108	4" Dia Dryer Vet Cap	EA	4	0%	4	\$ 57.00	\$ 15.00	\$ 72.00	\$ 288.00
109	4" Dia Wall Cap	EA	4	0%	4	\$ 57.00	\$ 30.59	\$ 87.59	\$ 350.36
110	6" Dia Wall Cap	EA	14	0%	14	\$ 65.00	\$ 35.33	\$ 100.33	\$ 1,404.62

[illegible]