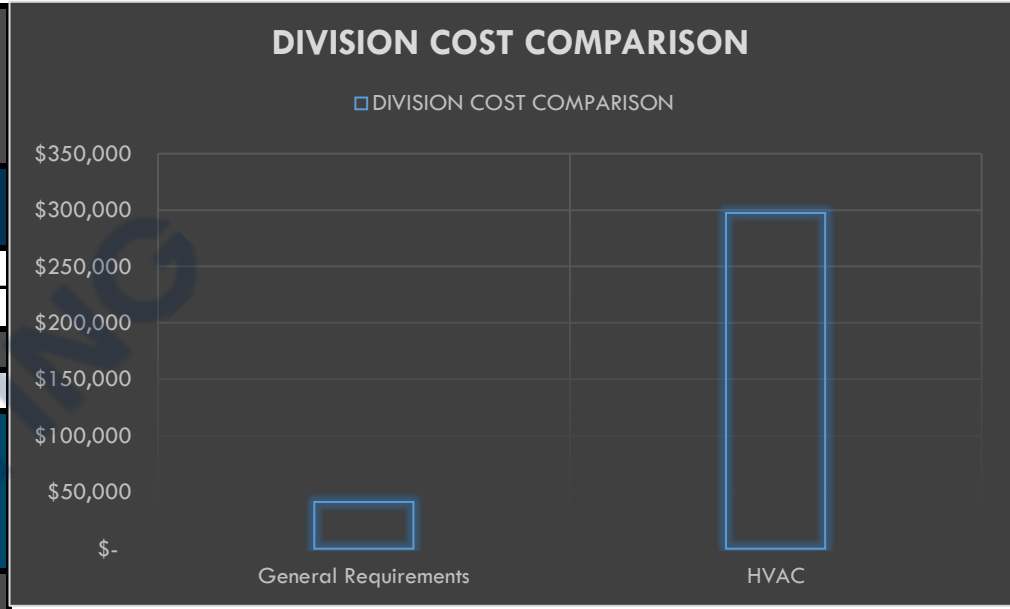


GENERAL SUMMARY

Prepared for:
Project ID:
Scope: HVAC
No. Of Floors: 3
Date: 09/12/23



BUILDING GSF	6,221		
Main Floor (SF)	4,995		
Mezzanine (SF)	728		
2nd Floor (SF)	498		
DIVISION NO	DESCRIPTION	TOTAL DIV. COST	TOTAL DIV. COST (PER SF)
1000	General Requirements	\$ 41,300	\$ 7
23000	HVAC	\$ 297,601	\$ 48
TOTAL TRADE COST		\$ 338,901	\$ 54
OVERHEAD AND PROFIT	15%	\$ 50,835	\$ 8.17
INSURANCE	3%	\$ 10,167	\$ 2
CONTINGENCY	5%	\$ 16,945	\$ 3
TAX	0%	\$ -	\$ -
SUGGESTED BID		\$ 416,848	\$ 67



DETAILED BREAKDOWN OF ITEMS

Prepared for:
Project ID:
Scope: HVAC



Date: 09/12/23

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
GENERAL REQUIREMENTS													
1			Permits	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 1,500.00	\$ 1,500.00
2			Supervision and Coordination	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 18,000.00	\$ 18,000.00
3			Submittals and Shop drawings	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 2,500.00	\$ 2,500.00
4			Final Cleaning	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 1,000.00	\$ 1,000.00
5			Mobilization Costs	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 10,000.00	\$ 10,000.00
6			Temporary Control & Facilities	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 8,000.00	\$ 8,000.00
7			Scaffolding	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ 300.00	\$ 300.00
												SUBTOTAL	\$ 41,300
HVAC													
COMBUSTION AIR PIPE													
Assumed Stainless Steel Pipe													
8			4" Dia Combustion Air Supply Pipe	LF	56	10%	61	0.364	\$ 75.00	\$ 27.30	\$ 168.00	\$ 195.30	\$ 11,966.03
COMBUSTION AIR PIPE FITTINGS													
ELBOW													
9			4" Dia Combustion Air Supply Pipe 90 Deg Elbow	EA	8	0%	8	1.320	\$ 75.00	\$ 99.00	\$ 85.21	\$ 184.21	\$ 1,473.68
COMBUSTION EXHAUST AIR PIPE													
Assumed Stainless Steel Pipe													
10			3" Dia Combustion Exhaust Air Pipe	LF	13	10%	14	0.333	\$ 75.00	\$ 24.98	\$ 97.58	\$ 122.56	\$ 1,698.61
11			4" Dia Combustion Exhaust Air Pipe	LF	44	10%	48	0.364	\$ 75.00	\$ 27.30	\$ 168.00	\$ 195.30	\$ 9,452.52
12			6" Dia Combustion Exhaust Air Pipe	LF	12	10%	13	0.571	\$ 75.00	\$ 42.83	\$ 442.00	\$ 484.83	\$ 6,186.37
COMBUSTION EXHAUST AIR PIPE FITTINGS													
ELBOW													
13			3" Dia Combustion Exhaust Air Pipe 90 Deg Elbow	EA	2	0%	2	1.000	\$ 75.00	\$ 75.00	\$ 72.14	\$ 147.14	\$ 294.28
14			4" Dia Combustion Exhaust Air Pipe 90 Deg Elbow	EA	6	0%	6	1.320	\$ 75.00	\$ 99.00	\$ 85.21	\$ 184.21	\$ 1,105.26
15			6" Dia Combustion Exhaust Air Pipe 90 Deg Elbow	EA	2	0%	2	1.500	\$ 75.00	\$ 112.50	\$ 174.83	\$ 287.33	\$ 574.66
HYDRONIC SUPPLY PIPE													
Assumed Type "L" Hard Drawn Copper Tube													
16			1-1/2" Dia Hydronic Supply Pipe	LF	179	10%	197	0.154	\$ 75.00	\$ 11.55	\$ 11.47	\$ 23.02	\$ 4,532.64
17			2-1/2" Dia Hydronic Supply Pipe	LF	8	10%	9	0.258	\$ 75.00	\$ 19.35	\$ 29.17	\$ 48.52	\$ 427.51
18			3" Dia Hydronic Supply Pipe	LF	298	10%	328	0.286	\$ 75.00	\$ 21.45	\$ 40.24	\$ 61.69	\$ 20,221.98
19			4" Dia Hydronic Supply Pipe	LF	41	10%	45	0.410	\$ 75.00	\$ 30.75	\$ 75.45	\$ 106.20	\$ 4,812.98
Assumed 2" Thick Fiberglass Insulation													
20			1-1/2" Dia Hydronic Supply Pipe	LF	179	10%	197	0.032	\$ 75.00	\$ 2.40	\$ 7.28	\$ 9.68	\$ 1,905.99
21			2-1/2" Dia Hydronic Supply Pipe	LF	8	10%	9	0.035	\$ 75.00	\$ 2.63	\$ 8.26	\$ 10.89	\$ 95.91
22			3" Dia Hydronic Supply Pipe	LF	298	10%	328	0.041	\$ 75.00	\$ 3.08	\$ 8.74	\$ 11.82	\$ 3,872.96
23			4" Dia Hydronic Supply Pipe	LF	41	10%	45	0.042	\$ 75.00	\$ 3.15	\$ 10.20	\$ 13.35	\$ 605.02
HYDRONIC SUPPLY PIPE FITTINGS													
ELBOW													
24			1-1/4" Dia Hydronic Supply Pipe 90 Deg Elbow	EA	1	0%	1	0.533	\$ 75.00	\$ 39.98	\$ 23.64	\$ 63.62	\$ 63.62
25			1-1/2" Dia Hydronic Supply Pipe 90 Deg Elbow	EA	7	0%	7	0.615	\$ 75.00	\$ 46.13	\$ 37.22	\$ 83.35	\$ 583.42
26			2-1/2" Dia Hydronic Supply Pipe 90 Deg Elbow	EA	4	0%	4	1.231	\$ 75.00	\$ 92.33	\$ 121.73	\$ 214.06	\$ 856.22
27			3" Dia Hydronic Supply Pipe 90 Deg Elbow	EA	7	0%	7	1.455	\$ 75.00	\$ 109.13	\$ 175.04	\$ 284.17	\$ 1,989.16
28			4" Dia Hydronic Supply Pipe 90 Deg Elbow	EA	2	0%	2	1.778	\$ 75.00	\$ 133.35	\$ 377.25	\$ 510.60	\$ 1,021.20
WYE													
29			3" Dia Hydronic Supply Pipe Wye	EA	2	0%	2	2.286	\$ 75.00	\$ 171.45	\$ 316.89	\$ 488.34	\$ 976.68
30			4" Dia Hydronic Supply Pipe Wye	EA	1	0%	1	3.200	\$ 75.00	\$ 240.00	\$ 739.41	\$ 979.41	\$ 979.41
TEE													
31			2-1/2" Dia Hydronic Supply Pipe Tee	EA	1	0%	1	2.000	\$ 75.00	\$ 150.00	\$ 218.30	\$ 368.30	\$ 368.30
32			2-1/2" / 1" Dia Hydronic Supply Pipe Tee	EA	2	0%	2	2.000	\$ 75.00	\$ 150.00	\$ 218.30	\$ 368.30	\$ 736.60
33			3" Dia Hydronic Supply Pipe Tee	EA	3	0%	3	2.286	\$ 75.00	\$ 171.45	\$ 316.89	\$ 488.34	\$ 1,465.02
34			3" / 1-1/2" Dia Hydronic Supply Pipe Tee	EA	2	0%	2	2.300	\$ 75.00	\$ 172.50	\$ 350.00	\$ 522.50	\$ 1,045.00
35			4" Dia Hydronic Supply Pipe Tee	EA	2	0%	2	3.200	\$ 75.00	\$ 240.00	\$ 739.41	\$ 979.41	\$ 1,958.82
REDUCER													
36			3" / 1-1/4" Dia Hydronic Supply Pipe Reducer	EA	1	0%	1	2.300	\$ 75.00	\$ 172.50	\$ 350.00	\$ 522.50	\$ 522.50
37			4" / 2-1/2" Dia Hydronic Supply Pipe Reducer	EA	1	0%	1	3.250	\$ 75.00	\$ 243.75	\$ 750.14	\$ 993.89	\$ 993.89
38			4" / 3" Dia Hydronic Supply Pipe Reducer	EA	1	0%	1	3.200	\$ 75.00	\$ 240.00	\$ 820.14	\$ 1,060.14	\$ 1,060.14
HYDRONIC RETURN PIPE													
Carbon Steel Pipe													
39			1-1/2" Dia Hydronic Return Pipe	LF	175	10%	193	0.200	\$ 75.00	\$ 15.00	\$ 15.34	\$ 30.34	\$ 5,840.45
40			2-1/2" Dia Hydronic Return Pipe	LF	7	10%	8	0.320	\$ 75.00	\$ 24.00	\$ 34.20	\$ 58.20	\$ 437.90
41			3" Dia Hydronic Return Pipe	LF	286	10%	315	0.372	\$ 75.00	\$ 27.90	\$ 44.26	\$ 72.16	\$ 22,701.54
42			4" Dia Hydronic Return Pipe	LF	27	10%	30	0.444	\$ 75.00	\$ 33.30	\$ 64.89	\$ 98.19	\$ 2,905.44
Assumed 1" Thick Fiberglass Insulation													
43			1-1/2" Dia Hydronic Return Pipe	LF	175	10%	193	0.021	\$ 75.00	\$ 1.58	\$ 2.80	\$ 4.38	\$ 842.19
44			2-1/2" Dia Hydronic Return Pipe	LF	7	10%	8	0.026	\$ 75.00	\$ 1.95	\$ 3.43	\$ 5.38	\$ 40.48
45			3" Dia Hydronic Return Pipe	LF	286	10%	315	0.032	\$ 75.00	\$ 2.40	\$ 3.69	\$ 6.09	\$ 1,915.91
46			4" Dia Hydronic Return Pipe	LF	27	10%	30	0.038	\$ 75.00	\$ 2.85	\$ 4.89	\$ 7.74	\$ 229.03
HYDRONIC RETURN PIPE FITTINGS													
ELBOW													
47			1-1/2" Dia Hydronic Return Pipe 90 Deg Elbow	EA	2	0%	2	0.800	\$ 75.00	\$ 60.00	\$ 26.16	\$ 86.16	\$ 172.32
48			2-1/2" Dia Hydronic Return Pipe 90 Deg Elbow	EA	2	0%	2	1.143	\$ 75.00	\$ 85.73	\$ 98.59	\$ 184.32	\$ 368.63
49			3" Dia Hydronic Return Pipe 90 Deg Elbow	EA	6	0%	6	1.600	\$ 75.00	\$ 120.00	\$ 161.97	\$ 281.97	\$ 1,691.82
50			4" Dia Hydronic Return Pipe 90 Deg Elbow	EA	1	0%	1	2.600	\$ 75.00	\$ 195.00	\$ 300.00	\$ 495.00	\$ 495.00
TEE													
51			2-1/2" Dia Hydronic Return Pipe Tee	EA	1	0%	1	1.143	\$ 75.00	\$ 85.73	\$ 98.59	\$ 184.32	\$ 184.32
52			3" Dia Hydronic Return Pipe Tee	EA	1	0%	1	1.600	\$ 75.00	\$ 120.00	\$ 161.97	\$ 281.97	\$ 281.97
53			3" / 1-1/2" Dia Hydronic Return Pipe Tee	EA	2	0%	2	1.600	\$ 75.00	\$ 120.00	\$ 175.14	\$ 295.14	\$ 590.28
REDUCER													
54			4" / 2-1/2" Dia Hydronic Return Pipe Reducer	EA	1	0%	1	2.670	\$ 75.00	\$ 200.25	\$ 310.00	\$ 510.25	\$ 510.25
55			4" / 3" Dia Hydronic Return Pipe Reducer	EA	1	0%	1	2.670	\$ 75.00	\$ 200.25	\$ 345.00	\$ 545.25	\$ 545.25
RADIANT SNOWMELT PIPE													
RAUPEX Tube													
56			5/8" ID Radiant Tube @ 9" O.C. (10300 SF)	LS	1	0%	1	0.000	\$ 75.00	\$ -	\$ -	\$ 4,000.00	\$ 4,000.00
REFRIGERANT PIPE													
Type "L" Hard Drawn Copper Tube													
57			3/8" Dia Refrigerant Liquid Pipe	LF	32	10%	35	0.095	\$ 75.00	\$ 7.13	\$ 4.62	\$ 11.75	\$ 410.84
58			5/8" Dia Refrigerant Suction Pipe	LF	31	10%	35	0.101	\$ 75.00	\$ 7.58	\$ 6.19	\$ 13.77	\$ 475.44
1/2" Thick Closed Cell Foam "Armaflex" Insulation													
59			3/8" Dia Refrigerant Liquid Pipe	LF	32	10%	35	0.022	\$ 75.00	\$ 1.65	\$ 0.75	\$ 2.40	\$ 83.95
60			5/8" Dia Refrigerant Suction Pipe	LF	31	10%	35	0.022	\$ 75.00	\$ 1.65	\$ 0.78	\$ 2.43	\$ 83.93
REFRIGERANT PIPE FITTINGS													
ELBOW													
61			3/8" Dia Refrigerant Liquid Pipe 90 Deg Elbow	EA	4	0%	4	0.364	\$ 75.00	\$ 27.30	\$ 4.65	\$ 31.95	\$ 127.80
62			5/8" Dia Refrigerant Suction Pipe 90 Deg Elbow	EA	4	0%	4	0.421	\$ 75.00	\$ 31.58	\$ 8.50	\$ 40.08	\$ 160.30
CONDENSATE DRAIN PIPE													
Schedule 40 PVC													
63			3/4" Dia Condensate Drain Pipe	LF	28	10%	31	0.157	\$ 75.00	\$ 11.78	\$ 3.85	\$ 15.63	\$ 479.53
1/2" Thick Closed Cell Foam "Armaflex" Insulation													
64			3/4" Dia Condensate Drain Pipe	LF	28	10%	31	0.042	\$ 75.00	\$ 3.15	\$ 0.85	\$ 4.00	\$ 122.76
CONDENSATE DRAIN PIPE FITTINGS													
ELBOW													

DETAILED BREAKDOWN OF ITEMS

Prepared for:
Project ID:
Scope: HVAC



Date: 09/12/23

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST	
65	M-0.1, M-1.0, SM-1.0, & SM-1.1		3/4" Dia Condensate Drain Pipe 90 Deg Elbow	EA	4	0%	4	0.200	\$ 75.00	\$ 15.00	\$ 1.10	\$ 16.10	\$ 64.40	
			AIR DEVICES											
66			E-1: Exhaust Unit, Size: 12 X12, Provide By General Contractor,	EA	1	0%	1	0.450	\$ 75.00	\$ 33.75	\$ 73.81	\$ 107.56	\$ 107.56	\$ 107.56
67			E-2: Exhaust Unit, KUSKIN ELV10DW, Size: 18 X18, Provide By...	EA	1	0%	1	0.850	\$ 75.00	\$ 63.75	\$ 145.84	\$ 209.59	\$ 209.59	\$ 209.59
68			E-3: Exhaust Air Unit, KUSKIN ELV10DW, Size: 24 X24, Provide By General Contractor,	EA	1	0%	1	1.000	\$ 75.00	\$ 75.00	\$ 210.10	\$ 285.10	\$ 285.10	\$ 285.10
			INLINE DUCT FAN											
69			IF-1: Inline Duct Fan, GREENHECK SQ-60HP-VG/E Air Flow: 35 CFM	EA	1	0%	1	2.250	\$ 75.00	\$ 168.75	\$ 1,050.14	\$ 1,218.89	\$ 1,218.89	\$ 1,218.89
			EXHAUST FANS											
70			E1-1: Exhaust Fan, Airflow: 70 CFM, Power: 120/160, Remarks:	EA	1	0%	1	1.560	\$ 75.00	\$ 117.00	\$ 192.99	\$ 309.99	\$ 309.99	\$ 309.99
71			E1-5: Exhaust Fan, CANACOR P122WG, Airflow: 1590 CFM, Power: 120/160, Remarks:	EA	1	0%	1	2.000	\$ 75.00	\$ 150.00	\$ 685.24	\$ 835.24	\$ 835.24	\$ 835.24
			AIR HANDLING UNITS											
72			AHU-1A: Air Handling Unit, indoor Unit, CARRIER 40MAQB24B-...	EA	1	0%	1	5.250	\$ 75.00	\$ 393.75	\$ 5,000.00	\$ 5,393.75	\$ 5,393.75	\$ 5,393.75
73			AHU-1B: Air Handling Unit, indoor Unit, CARRIER 40MB00P-...	EA	1	0%	1	4.850	\$ 75.00	\$ 363.75	\$ 4,400.00	\$ 4,763.75	\$ 4,763.75	\$ 4,763.75
			AIR CURTAIN											
74			AC-1: Air Curtain, BERNER CLC08-1036EB, Electric Heat: 4 KW, V...	EA	1	0%	1	3.500	\$ 75.00	\$ 262.50	\$ 1,863.27	\$ 2,125.77	\$ 2,125.77	\$ 2,125.77
			HEAT PUMP											
75			HP-1: Outdoor Unit, CARRIER 38MGRQ36B-3, Voltage: 208-230/160, MCA/MOCP: 25/50, Accessories:	EA	1	0%	1	4.200	\$ 75.00	\$ 315.00	\$ 3,850.54	\$ 4,165.54	\$ 4,165.54	\$ 4,165.54
			BOILER											
76			B-1: Boiler, LOCHINVAR F1X850N, BTH Input: 850,000, BTH Output: 825,000, EWT: 160 °F, LWT: 180 °F, Temp Rise: 20 °F	EA	1	0%	1	8.500	\$ 75.00	\$ 637.50	\$35,683.00	\$ 36,320.50	\$ 36,320.50	\$ 36,320.50
77			B-2: Boiler, LOCHINVAR FTX850N, BTH Input: 850,000, BTH Output: 825,000, EWT: 160 °F, LWT: 180 °F, Temp Rise: 20 °F	EA	1	0%	1	8.500	\$ 75.00	\$ 637.50	\$35,683.00	\$ 36,320.50	\$ 36,320.50	\$ 36,320.50
			BOILER DETAIL											
78			Axiom SF100 Make Up Package With Alarm Panel	EA	1	0%	1	2.000	\$ 75.00	\$ 150.00	\$ 3,356.00	\$ 3,506.00	\$ 3,506.00	\$ 3,506.00
79			Expansion Tank, EXTROL SX-40V	EA	2	0%	2	1.000	\$ 75.00	\$ 75.00	\$ 386.40	\$ 461.40	\$ 461.40	\$ 922.80
80			Expansion Tank, EXTROL SX-60V	EA	1	0%	1	1.000	\$ 75.00	\$ 75.00	\$ 543.48	\$ 618.48	\$ 618.48	\$ 618.48
81			HX-1: Heat Exchanger Shall Have A Capacity Of 806 MBH, With 180 Deg F / 105 Deg F Glycol Side And 120 Deg F / 105 Deg F Glycol Side	EA	1	0%	1	1.000	\$ 75.00	\$ 915.00	\$11,250.00	\$ 12,165.00	\$ 12,165.00	\$ 12,165.00
82			HX-2: Heat Exchanger Shall Have A Capacity Of 791 MBH, With 180 Deg F / 105 Deg F Glycol Side And 120 Deg F / 105 Deg F Glycol Side	EA	1	0%	1	1.000	\$ 75.00	\$ 973.50	\$10,985.00	\$ 11,958.50	\$ 11,958.50	\$ 11,958.50
83			Neutralizing Kit N1100	EA	2	0%	2	1.250	\$ 75.00	\$ 93.75	\$ 285.10	\$ 378.85	\$ 378.85	\$ 757.70
84			P-1: Pump, "GRUNDFOS INLINE #UPS40-160/2, Flow (GPM): 65, Head (Feet): 26, Electrical Data: HP (Or Noted): 3/4, RPM: 3200	EA	1	0%	1	1.500	\$ 75.00	\$ 112.50	\$ 2,650.62	\$ 2,763.12	\$ 2,763.12	\$ 2,763.12
85			P-2: Pump, "GRUNDFOS INLINE #UPS40-160/2, Flow (GPM): 65, Head (Feet): 26, Electrical Data: HP (Or Noted): 3/4, RPM: 3200	EA	1	0%	1	1.500	\$ 75.00	\$ 112.50	\$ 2,650.62	\$ 2,763.12	\$ 2,763.12	\$ 2,763.12
86			P-3: Pump, "GRUNDFOS INLINE #UPS40-160/2, Flow (GPM): 123, Head (Feet): 26, Electrical Data: HP (Or Noted): 2, RPM: 3200	EA	1	0%	1	1.500	\$ 75.00	\$ 112.50	\$ 3,650.95	\$ 3,763.45	\$ 3,763.45	\$ 3,763.45
87			P-4: Pump, "GRUNDFOS INLINE #UPS40-160/2, Flow (GPM): 123, Head (Feet): 26, Electrical Data: HP (Or Noted): 2, RPM: 3200	EA	1	0%	1	1.500	\$ 75.00	\$ 112.50	\$ 3,650.95	\$ 3,763.45	\$ 3,763.45	\$ 3,763.45
			ELECTRIC HEATER											
88			EH-1: Electric Heaters, QMARK CWH1201DSR, Voltage: 120V, Watts: 1.8KW, Mounting HT: AFF To Bottom Of Unit	EA	1	0%	1	1.420	\$ 75.00	\$ 106.50	\$ 365.14	\$ 471.64	\$ 471.64	\$ 471.64
89			EH-2: Electric Heaters, QMARK CWH1201DSR, Voltage: 120V, Watts: 1.8KW, Mounting HT: AFF To Bottom Of Unit	EA	1	0%	1	1.420	\$ 75.00	\$ 106.50	\$ 365.14	\$ 471.64	\$ 471.64	\$ 471.64
			HEATER											
90			RH-1: Radiant Heater, SPACE-RAY PTS-125-30-ALC-N5, Fuel: Natural Gas, Input: 125,000 BTUH, Electrical: 120V/1PH/3A, Mounting Hight: Coord. W/Equip/Struct, Heater Length: 30 Foot, Note: 1. Provide With T-Stat At 55 Deg F Maximum Setpoint.	EA	1	0%	1	7.520	\$ 75.00	\$ 564.00	\$ 2,548.00	\$ 3,112.00	\$ 3,112.00	\$ 3,112.00
91			RH-2: Radiant Heater, SPACE-RAY PTS-125-30-ALC-N5, Fuel: Natural Gas, Input: 125,000 BTUH, Electrical: 120V/1PH/3A, Mounting Hight: Coord. W/Equip/Struct, Heater Length: 30 Foot, Note: 1. Provide With T-Stat At 55 Deg F Maximum Setpoint.	EA	1	0%	1	7.520	\$ 75.00	\$ 564.00	\$ 2,548.00	\$ 3,112.00	\$ 3,112.00	\$ 3,112.00
92			RH-3: Radiant Heater, SPACE-RAY PTS-75-20-ALC-N5, Fuel: Natural Gas, Input: 75,000 BTUH, Electrical: 120V/1PH/3A, Mounting Hight: Coord. W/Equip/Struct, Heater Length: 20 Foot, Note: 1. Provide With T-Stat At 55 Deg F Maximum Setpoint.	EA	1	0%	1	4.250	\$ 75.00	\$ 318.75	\$ 1,762.00	\$ 2,080.75	\$ 2,080.75	\$ 2,080.75
93			UH-1: Unit Heater, MODINE HDB60SS011FBAN, Fuel: Natural Gas, Input: 60,000 BTUH, Output 49,200BTUH, Electrical: 115V/1PH, Mounting Hight: Max. Mounting Height Of 13'-0" AFF, Note: 1. Provide With T-Stat At 55 Deg F Maximum Setpoint. 2.Follow All MFG. Recommended Clearances And Requirements.	EA	1	0%	1	4.000	\$ 75.00	\$ 300.00	\$ 1,685.99	\$ 1,985.99	\$ 1,985.99	\$ 1,985.99
			GLYCOL MAKE-UP UNIT											
94			3" Dia Glycol Make-up Unit, GTP #GRE07-E6-4 (7.5 Gallon Units)	EA	2	0%	2	4.250	\$ 75.00	\$ 318.75	\$ 1,985.00	\$ 2,303.75	\$ 4,607.50	\$ 4,607.50
			MANIFOLD											
95			M-1: Snow Melt Recessed Manifold	EA	1	0%	1	3.000	\$ 75.00	\$ 225.00	\$ 325.64	\$ 550.64	\$ 550.64	\$ 550.64
96			M-2: Snow Melt Recessed Manifold	EA	1	0%	1	3.000	\$ 75.00	\$ 225.00	\$ 325.64	\$ 550.64	\$ 550.64	\$ 550.64
97			M-3: Snow Melt Recessed Manifold	EA	1	0%	1	3.000	\$ 75.00	\$ 225.00	\$ 325.64	\$ 550.64	\$ 550.64	\$ 550.64
98			M-4: Snow Melt Recessed Manifold	EA	1	0%	1	3.000	\$ 75.00	\$ 225.00	\$ 325.64	\$ 550.64	\$ 550.64	\$ 550.64
			DUCT WEIGHT											
99			Galvanized Sheet Metal Duct	LB	39	10%	43	0.120	\$ 75.00	\$ 9.00	\$ 0.85	\$ 9.85	\$ 427.33	\$ 427.33
			DUCT INSULATION											
100			Thickness Assumed 1-1/2" Thick Foil Vapor Barrier Insulation With Fire Smoke Rating of 25/50	SF	36	10%	39	0.025	\$ 75.00	\$ 1.88	\$ 1.38	\$ 3.26	\$ 127.42	\$ 127.42
			MISCELLANEOUS											
101			2-1/2" Dia Strainer	EA	2	0%	2	0.420	\$ 75.00	\$ 31.50	\$ 191.39	\$ 222.89	\$ 445.78	\$ 445.78
102			4" Dia Air Separator, HONEYWELL	EA	2	0%	2	0.385	\$ 75.00	\$ 28.88	\$ 124.54	\$ 153.42	\$ 306.83	\$ 306.83
103			3" Dia Auto Vent	EA	2	0%	2	0.350	\$ 75.00	\$ 26.25	\$ 55.24	\$ 81.49	\$ 162.98	\$ 162.98
104			4" Dia Backflow Preventer, HONEYWELL #FM911	EA	1	0%	1	0.500	\$ 75.00	\$ 37.50	\$ 134.64	\$ 172.14	\$ 172.14	\$ 172.14
105			4" Dia Exhaust Bird Screen	EA	2	0%	2	0.300	\$ 75.00	\$ 22.50	\$ 55.55	\$ 78.05	\$ 156.10	\$ 156.10
106			4" Dia Exhaust Duct Cap	EA	1	0%	1	0.200	\$ 75.00	\$ 15.00	\$ 42.14	\$ 57.14	\$ 57.14	\$ 57.14
107			4" Dia Exhaust Rain hood	EA	2	0%	2	0.480	\$ 75.00	\$ 36.00	\$ 62.99	\$ 98.99	\$ 197.98	\$ 197.98
108			Air Intake Hood With Insect Screen	EA	1	0%	1	0.560	\$ 75.00	\$ 42.00	\$ 109.41	\$ 151.41	\$ 151.41	\$ 151.41
109			Pressure Gauge	EA	5	0%	5	0.400	\$ 75.00	\$ 30.00	\$ 73.50	\$ 103.50	\$ 517.50	\$ 517.50
110			Temperature Sensor	EA	6	0%	6	0.210	\$ 75.00	\$ 15.75	\$ 22.40	\$ 38.15	\$ 228.90	\$ 228.90
			VALVES:											
111			1-1/2" Dia Balancing Valve	EA	2	0%	2	0.420	\$ 75.00	\$ 31.50	\$ 320.59	\$ 352.09	\$ 704.18	\$ 704.18
112			1-1/2" Dia Ball Valve	EA	4	0%	4	0.400	\$ 75.00	\$ 30.00	\$ 137.84	\$ 167.84	\$ 671.36	\$ 671.36
113			2-1/2" Dia Check Valve	EA	2	0%	2	0.385	\$ 75.00	\$ 28.88	\$ 231.52	\$ 260.40	\$ 520.79	\$ 520.79
114			2-1/2" Dia Gate Valve	EA	2	0%	2	0.560	\$ 75.00	\$ 42.00	\$ 250.14	\$ 292.14	\$ 584.28	\$ 584.28
115			2-1/2" Dia Pressure Relief Valve	EA	2	0%	2	0.400	\$ 75.00	\$ 30.00	\$ 120.00	\$ 150.00	\$ 300.00	\$ 300.00
116			2-1/2" Dia Shutoff Valve	EA	2	0%	2	0.350	\$ 75.00	\$ 26.25	\$ 146.50	\$ 172.75	\$ 345.50	\$ 345.50
117			3" Dia Balancing Valve	EA	2	0%	2	0.480	\$ 75.00	\$ 36.00	\$ 1,250.00	\$ 1,286.00	\$ 2,572.00	\$ 2,572.00
118			3" Dia Ball Valve	EA	4	0%	4	0.450	\$ 75.00	\$ 33.75	\$ 252.39	\$ 286.14	\$ 1,144.56	\$ 1,144.56
119			3" Dia Gate Valve	EA	2	0%	2	0.750	\$ 75.00	\$ 56.25	\$ 320.10	\$ 376.35	\$ 752.70	\$ 752.70
120			3" Dia Relief Valve	EA	2	0%	2	0.425	\$ 75.00	\$ 31.88	\$ 132.87	\$ 164.75	\$ 329.49	\$ 329.49
121			3" Dia Shutoff Valve	EA	2	0%	2	0.400	\$ 75.00	\$ 30.00	\$ 210.14	\$ 240.14	\$ 480.28	\$ 480.28
122			4" Dia Gate Valve	EA	4	0%	4	0.920	\$ 75.00	\$ 69.00	\$ 640.36	\$ 709.36	\$ 2,837.44	\$ 2,837.44
123			4" Dia Pressure Reducing Valve	EA	1	0%	1	0.500	\$ 75.00	\$ 37.50	\$ 185.64	\$ 223.14	\$ 223.14	\$ 223.14
124			4" Dia Shutoff Valve	EA	1	0%	1	0.485	\$ 75.00	\$ 36.38	\$ 320.14	\$ 356.52	\$ 356.52	\$ 356.52
			UNIONS:											
125			2-1/2" Dia Union	EA	4	0%	4							
126			3" Dia Union	EA	2	0%	2							

DETAILED BREAKDOWN OF ITEMS

Prepared for:
Project ID:
Scope: HVAC



Date: 09/12/23

SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOUR	HOURLY WAGE	LABOR COST	MAT. COST	UNIT COST	SUB COST
127			4" Dia Union	EA	1	0%	1						
			PVC COUPLINGS										
128			3/4" Dia	EA	2	0%	2						
			PIPE SUPPORTS										
129			3/8" Dia Adjustable Clevis Hanger	EA	5	0%	5						
130			5/8" Dia Adjustable Clevis Hanger	EA	5	0%	5						
131			3/4" Dia Adjustable Clevis Hanger	EA	4	0%	4						
132			1-1/2" Dia Adjustable Clevis Hanger	EA	58	0%	58						
133			2-1/2" Dia Adjustable Clevis Hanger	EA	1	0%	1						
134			3" Dia Adjustable Clevis Hanger	EA	58	0%	58						
135			4" Dia Adjustable Clevis Hanger	EA	15	0%	15						
136			6" Dia Adjustable Clevis Hanger	EA	1	0%	1						
137			3/8" Dia Threaded Rod (1 Ea. = 1 FT)	EA	72	0%	72						
138			5/8" Dia Threaded Rod (1 Ea. = 1 FT)	EA	75	0%	75						
			DUCT SUPPORTS										
139			3/8" Threaded Rod	EA	6	0%	6	0.100	\$ 75.00	\$ 7.50	\$ 11.25	\$ 18.75	\$ 112.50
140			1" x 22 Ga. Strap	EA	3	0%	3	0.065	\$ 75.00	\$ 4.88	\$ 3.25	\$ 8.13	\$ 24.38
											SUBTOTAL \$ 297,601		

											PROJECTED COST		\$338,901
OVERHEAD AND PROFIT											15%	\$50,835	
INSURANCE											3%	\$10,167	
CONTINGENCY											5%	\$16,945	
TAX											0%	\$0	
SUGGESTED BID												\$416,848	

Notes:

- Online sources are used for pricing.
- Prices can vary depending upon field conditions.



BREAKDOWN OF DUCT ITEMS

Prepared for:

Project ID:

Scope: HVAC

IV ESTIMATING

Date:

12-Sep-23

SR #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE
HVAC					
	GALVANIZED SHEET METAL DUCT				
1	6" Dia Supply Air Duct (Size Assumed)	LF	9	10%	10
2	4" Dia Exhaust Air Duct	LF	17	10%	19

IV ESTIMATING