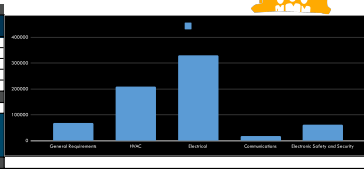


GENERAL SUMMARY

Prepared for: **Bright Path, 288 Mishawum RD, Woburn MA 01801**
 Project ID: **12032024**
 Scope: **G.C.**
 No. Of Floors: **1**
 Date: **5-Sep-24**



BUILDING GSF		13616	
DIVISION NO	DESCRIPTION	TOTAL DIV. COST	TOTAL DIV. COST (PER SF)
1000	General Requirements	\$ 58,009	\$ 4.26
23000	HVAC	\$ 208,007	\$ 15.28
26000	Electrical	\$ 329,761	\$ 24.22
27000	Communications	\$ 16,853	\$ 1.24
28000	Electronic Safety and Security	\$ 61,979	\$ 4.55
TOTAL TRADE COST		\$ 684,570	\$ 50.35
OVERHEAD AND PROFIT		\$ 102,685	\$ 7.54
INSURANCE	15%	\$ 20,537	\$ 1.52
CONTINGENCY	3%	\$ 24,228	\$ 1.79
TAX	5%	\$ 20,137	\$ 1.49
SUGGESTED BID		\$ 862,157	\$ 63.91



DETAILED BREAKDOWN OF ITEMS



SR #	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY	WASTAGE	QUANTITY W/ WASTAGE	UNIT MANHOOUR	HOURLY WAGE	LABOUR COST	MAT. COST	UNIT COST	SR # COST		
GENERAL REQUIREMENTS															
1			Permits	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ -	\$ -		
2			Supervision and Coordination	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ -	\$ -		
3			Schedule and Shop Drawings	LS	1	0%	1	0.000	\$ -	\$ -	\$ 35,000.00	\$ 35,000.00			
4			Final Cleaning	LS	1	0%	1	0.000	\$ -	\$ -	\$ 2,500.00	\$ 2,500.00			
5			Mobilization Costs	LS	1	0%	1	0.000	\$ -	\$ -	\$ 25,000.00	\$ 25,000.00			
6			Temporary Control & Facilities	LS	1	0%	1	0.000	\$ -	\$ -	\$ 2,000.00	\$ 2,000.00			
7			Soilholding	LS	1	0%	1	0.000	\$ -	\$ -	\$ -	\$ -	\$ -		
SUBTOTAL												\$ 68,000			
DVAC															
FLEXIBLE DUCT															
8			1" Dia Flexible Duct	LF	3	100%	3	0.000	\$ 105.00	\$ 315.00	\$ 1.00	\$ 1.00	\$ 315.00		
9			2" Dia Flexible Duct	LF	14	100%	14	0.004	\$ 105.00	\$ 1,470.00	\$ 1.94	\$ 1.94	\$ 1,471.94		
10			3" Dia Flexible Duct	LF	10	100%	10	0.108	\$ 105.00	\$ 1,050.00	\$ 11.34	\$ 11.34	\$ 1,061.34		
11			10" Dia Flexible Duct	LF	75	100%	75	0.114	\$ 105.00	\$ 7,875.00	\$ 3.10	\$ 3.10	\$ 7,878.10		
REFRIGERANT PIPE															
Type "A" C-C Copper Pipe															
12			1/8" Dia Refrigerant Liquid Pipe	LF	9	100%	10	0.032	\$ 105.00	\$ 9.45	\$ 2.64	\$ 6.81	\$ 9.45		
13			3/8" Dia Refrigerant Suction Pipe	LF	9	100%	10	0.038	\$ 105.00	\$ 9.45	\$ 5.02	\$ 9.01	\$ 9.45		
1 1/2" Thick Fiberglass Pipe Insulation															
14			1/8" Dia Refrigerant Liquid Pipe	LF	9	100%	10	0.014	\$ 105.00	\$ 1.47	\$ 0.85	\$ 2.32	\$ 2.32		
15			3/8" Dia Refrigerant Suction Pipe	LF	9	100%	10	0.014	\$ 105.00	\$ 1.47	\$ 0.85	\$ 2.32	\$ 2.32		
REFRIGERANT PIPE FITTINGS															
ELBOW															
16			1/8" Dia Refrigerant Liquid Pipe 90 Deg Elbow	EA	2	0%	2	0.140	\$ 105.00	\$ 16.80	\$ 4.11	\$ 20.91	\$ 20.91		
17			3/8" Dia Refrigerant Suction Tee No 120° Elbow	EA	2	0%	2	0.200	\$ 105.00	\$ 21.00	\$ 6.50	\$ 27.50	\$ 27.50		
CONDENSATE DRAIN PIPE															
Schedule 40 PVC Pipe															
18			1/2" Dia Condensate Drain Pipe	LF	65	100%	72	0.157	\$ 105.00	\$ 16.49	\$ 4.80	\$ 31.99	\$ 31.99		
1 1/2" Thick Fiberglass Pipe Insulation															
19			1/2" Dia Condensate Drain Pipe	LF	65	100%	72	0.014	\$ 105.00	\$ 1.47	\$ 0.85	\$ 2.32	\$ 2.32		
CONDENSATE DRAIN PIPE FITTINGS															
ELBOW															
20			1/2" Dia Condensate Drain Pipe 90° Elbow	EA	25	0%	25	0.240	\$ 105.00	\$ 26.25	\$ 5.54	\$ 29.94	\$ 29.94		
TEE															
21			1/2" Dia Condensate Drain Pipe Tee	EA	14	0%	14	0.421	\$ 105.00	\$ 44.21	\$ 6.67	\$ 44.88	\$ 44.88		
AIR DIVICES															
22			AS Supply Ceiling Diffuser, TITUS (DM), Architectural Square Panel, Flush Face, Round Neck, Steel, White, Physical: 9" Dia Neck Size, 24"24" Face Size, Blow Pattern, 4-WAY Features, Lay-In Fiberglass Ceiling Mount, Insulated, Where No Branch Duct Size is Indicated On Plan, Use Branch Duct Size Indicated Herein Provide A Duct Mounted Volume Damper Whether Or Not A Duct Mounted Volume Damper Is Indicated On Plan. Exceptions: Transfer Air Applications (Grille Is Not Connected By A Ductwork System To A Fan Exhaust And Return Grilles Where Only One Grille Serves The Fan Air Handling System Grilles Connected To Return Air Hoods And Relief Air Louvers Provide A 1" Thick Acoustically Lined Plenum, Same Size As Diffuser Grille X Height/Depth Necessary To Connect Branch Duct Indicated See Details 783M1.1 & 9M3.2	EA	8	0%	8	0.650	\$ 105.00	\$ 84.00	\$ 83.55	\$ 151.80	\$ 1,214	\$ 546.00	
23			AS Supply Ceiling Diffuser, TITUS (DM), Architectural Square Panel, Flush Face, Round Neck, Steel, White, Physical: 9" Dia Neck Size, 24"24" Face Size, Blow Pattern, 4-WAY Features, Lay-In Fiberglass Ceiling Mount, Insulated, Where No Branch Duct Size is Indicated On Plan, Use Branch Duct Size Indicated Herein Provide A Duct Mounted Volume Damper Whether Or Not A Duct Mounted Volume Damper Is Indicated On Plan. Exceptions: Transfer Air Applications (Grille Is Not Connected By A Ductwork System To A Fan Exhaust And Return Grilles Where Only One Grille Serves The Fan Air Handling System Grilles Connected To Return Air Hoods And Relief Air Louvers Provide A 1" Thick Acoustically Lined Plenum, Same Size As Diffuser Grille X Height/Depth Necessary To Connect Branch Duct Indicated See Details 783M1.1 & 9M3.2	EA	7	0%	7	0.680	\$ 105.00	\$ 71.40	\$ 89.70	\$ 161.10	\$ 1,128	\$ 499.80	
24			AS Supply Ceiling Diffuser, TITUS (DM), Architectural Square Panel, Flush Face, Round Neck, Steel, White, Physical: 10" Dia Neck Size, 24"24" Face Size, Blow Pattern, 4-WAY Features, Lay-In Fiberglass Ceiling Mount, Insulated, Where No Branch Duct Size is Indicated On Plan, Use Branch Duct Size Indicated Herein Provide A Duct Mounted Volume Damper Whether Or Not A Duct Mounted Volume Damper Is Indicated On Plan. Exceptions: Transfer Air Applications (Grille Is Not Connected By A Ductwork System To A Fan Exhaust And Return Grilles Where Only One Grille Serves The Fan Air Handling System Grilles Connected To Return Air Hoods And Relief Air Louvers Provide A 1" Thick Acoustically Lined Plenum, Same Size As Diffuser Grille X Height/Depth Necessary To Connect Branch Duct Indicated See Details 783M1.1 & 9M3.2	EA	45	0%	45	0.750	\$ 105.00	\$ 78.75	\$ 106.20	\$ 184.95	\$ 832.25	\$ 3,543.75	
25			AS Supply Ceiling Diffuser, TITUS (DM), Architectural Square Panel, Flush Face, Round Neck, Steel, White, Physical: 12"24" Dia Neck Size, 24"24" Face Size, Blow Pattern, 4-WAY Features, Lay-In Fiberglass Ceiling Mount, Insulated, Where No Branch Duct Size is Indicated On Plan, Use Branch Duct Size Indicated Herein Provide A Duct Mounted Volume Damper Whether Or Not A Duct Mounted Volume Damper Is Indicated On Plan. Exceptions: Transfer Air Applications (Grille Is Not Connected By A Ductwork System To A Fan Exhaust And Return Grilles Where Only One Grille Serves The Fan Air Handling System Grilles Connected To Return Air Hoods And Relief Air Louvers Provide A 1" Thick Acoustically Lined Plenum, Same Size As Diffuser Grille X Height/Depth Necessary To Connect Branch Duct Indicated See Details 783M1.1 & 9M3.2	EA	18	0%	18	0.510	\$ 105.00	\$ 53.55	\$ 41.00	\$ 94.55	\$ 1,702	\$ 963.90	
26			ZKZ Exhaust Grille, TITUS (SR), Architectural Square Panel, Flush Face, Round Neck, Steel, White, Physical: 24"24" Dia Neck Size, 24"24" Face Size, Blow Pattern, 4-WAY Features, Lay-In Fiberglass Ceiling Mount, Insulated, Where No Branch Duct Size is Indicated On Plan, Use Branch Duct Size Indicated Herein Provide A Duct Mounted Volume Damper Whether Or Not A Duct Mounted Volume Damper Is Indicated On Plan. Exceptions: Transfer Air Applications (Grille Is Not Connected By A Ductwork System To A Fan Exhaust And Return Grilles Where Only One Grille Serves The Fan Air Handling System Grilles Connected To Return Air Hoods And Relief Air Louvers Provide A 1" Thick Acoustically Lined Plenum, Same Size As Diffuser Grille X Height/Depth Necessary To Connect Branch Duct Indicated See Details 783M1.1 & 9M3.2	EA	18	0%	18	0.510	\$ 105.00	\$ 53.55	\$ 41.00	\$ 94.55	\$ 1,702	\$ 963.90	
ROOF TOP UNIT															
RTU-1: Roof Top Unit, JOHNSON CONTROLS															
27			ZP00N1ZPB1BA3A, Packaged Rooftop Heat Unit, Natural Gas Fired, Vertical Supply, Vertical Return, R-410A, Nominal Tons: 7.5, Cooling: Total MBH: 90.8, Sensible MBH: 61.0, EER: 12.00, BEER: 15.00, Supply Air: CFM: 2100, ESP (DN W/IG): 1.0, RPM: 999, BHP: 1.19, HP: 1.50, Heating: High Fire (MBH): INPT: 1200, Output: 97.0, Low Fire (MBH): Inpt: 60, Output: 48.6, Thermal EFF: (%) 81, Outdoor Sound Power: 86 dB, Minimum Outdoor Air: CFM: 840, % 81, Electrical: MCA: 41.4, MOP: 50, Voltage: 208, Phase: 3, Weight (LBS): 1280, Ratings: Ratings In Accordance To ARI Standard 210, Ratings In Accordance To ARI Standards 360 & 370, Cooling Performance At ARI Conditions 95°F DB, 80°F EDB, 67°F FWB, Nominal CFM: Features: 2-Stage Cooling, Aluminum Steel Heat Exchanger, Two Stage, 100% Economizer With Outside Air Dry Bulb Sensor And Barometric Relief Damper, 4" Thick Merx-13 Pleated Disposable Filter, Return Air And Supply Air Smoke Detector, Safety Monitoring High & Low Pressure Switches, Freeze Stats, Gas Valve High Temperature Limit Switch, Alarms, Ignition Failure, Safety Lockouts, & Repeated Limit Switch Trips, Single Zone VAV Intelligible Controller With Discharge Air, Return Air, And Outdoor Door Air Temp Sensors, Electronic Programmable Thermostat, 14" High Full Perimeter Spring Vibration Isolation Roof Cur, THRU-The-Curb Utility Connections, Insult, See Detail B3M3.2	EA	1	0%	1	8.500	\$ 105.00	\$ 892.50	\$ 7,590.00	\$ 8,482.50	\$ 8,483	\$ 8,920.50	\$ 7,590.00
RTU-2: Roof Top Unit, JOHNSON CONTROLS															
28			ZP00N1ZPB1BA3A, Packaged Rooftop Heat Unit, Natural Gas Fired, Vertical Supply, Vertical Return, R-410A, Nominal Tons: 7.5, Cooling: Total MBH: 90.8, Sensible MBH: 61.0, EER: 12.00, BEER: 14.60, Supply Air: CFM: 2100, ESP (DN W/IG): 1.0, RPM: 999, BHP: 1.19, HP: 1.50, Heating: High Fire (MBH): INPT: 1200, Output: 97.0, Low Fire (MBH): Inpt: 60, Output: 48.6, Thermal EFF: (%) 81, Outdoor Sound Power: 86 dB, Minimum Outdoor Air: CFM: 840, % 81, Electrical: MCA: 41.4, MOP: 50, Voltage: 208, Phase: 3, Weight (LBS): 1280, Ratings: Ratings In Accordance To ARI Standard 210, Ratings In Accordance To ARI Standards 360 & 370, Cooling Performance At ARI Conditions 95°F DB, 80°F EDB, 67°F FWB, Nominal CFM: Features: 2-Stage Cooling, Aluminum Steel Heat Exchanger, Two Stage, 100% Economizer With Outside Air Dry Bulb Sensor And Barometric Relief Damper, 4" Thick Merx-13 Pleated Disposable Filter, Return Air And Supply Air Smoke Detector, Safety Monitoring High & Low Pressure Switches, Freeze Stats, Gas Valve High Temperature Limit Switch, Alarms, Ignition Failure, Safety Lockouts, & Repeated Limit Switch Trips, Single Zone VAV Intelligible Controller With Discharge Air, Return Air, And Outdoor Door Air Temp Sensors, Electronic Programmable Thermostat, 14" High Full Perimeter Spring Vibration Isolation Roof Cur, THRU-The-Curb Utility Connections, Insult, See Detail B3M3.2	EA	1	0%	1	8.500	\$ 105.00	\$ 892.50	\$ 7,590.00	\$ 8,482.50	\$ 8,483	\$ 8,920.50	\$ 7,590.00
RTU-3: Roof Top Unit, JOHNSON CONTROLS															
29			ZP00N1ZPB1BA3A, Packaged Rooftop Heat Unit, Natural Gas Fired, Vertical Supply, Vertical Return, R-410A, Nominal Tons: 7.5, Cooling: Total MBH: 90.8, Sensible MBH: 61.0, EER: 12.00, BEER: 14.60, Supply Air: CFM: 2100, ESP (DN W/IG): 1.0, RPM: 999, BHP: 1.19, HP: 1.50, Heating: High Fire (MBH): INPT: 1200, Output: 97.0, Low Fire (MBH): Inpt: 60, Output: 48.6, Thermal EFF: (%) 81, Outdoor Sound Power: 86 dB, Minimum Outdoor Air: CFM: 840, % 81, Electrical: MCA: 41.4, MOP: 50, Voltage: 208, Phase: 3, Weight (LBS): 1280, Ratings: Ratings In Accordance To ARI Standard 210, Ratings In Accordance To ARI Standards 360 & 370, Cooling Performance At ARI Conditions 95°F DB, 80°F EDB, 67°F FWB, Nominal CFM: Features: 2-Stage Cooling, Aluminum Steel Heat Exchanger, Two Stage, 100% Economizer With Outside Air Dry Bulb Sensor And Barometric Relief Damper, 4" Thick Merx-13 Pleated Disposable Filter, Return Air And Supply Air Smoke Detector, Safety Monitoring High & Low Pressure Switches, Freeze Stats, Gas Valve High Temperature Limit Switch, Alarms, Ignition Failure, Safety Lockouts, & Repeated Limit Switch Trips, Single Zone VAV Intelligible Controller With Discharge Air, Return Air, And Outdoor Door Air Temp Sensors, Electronic Programmable Thermostat, 14" High Full Perimeter Spring Vibration Isolation Roof Cur, THRU-The-Curb Utility Connections, Insult, See Detail B3M3.2	EA	1	0%	1	8.500	\$ 105.00	\$ 892.50	\$ 7,590.00	\$ 8,482.50	\$ 8,483	\$ 8,920.50	\$ 7,590.00
RTU-4: Roof Top Unit, JOHNSON CONTROLS															
30			ZP00N1ZPB1BA3A, Packaged Rooftop Heat Unit, Natural Gas Fired, Vertical Supply, Vertical Return, R-410A, Nominal Tons: 8.5, Cooling: Total MBH: 97.7, Sensible MBH: 64.4, EER: 12.00, BEER: 15.00, Supply Air: CFM: 2100, ESP (DN W/IG): 1.0, RPM: 942, BHP: 1.15, HP: 1.50, Heating: High Fire (MBH): INPT: 1200, Output: 97.0, Low Fire (MBH): Inpt: 60, Output: 48.6, Thermal EFF: (%) 81, Outdoor Sound Power: 86 dB, Minimum Outdoor Air: CFM: 840, % 81, Electrical: MCA: 46.3, MOP: 50, Voltage: 208, Phase: 3, Weight (LBS): 1285, Ratings: Ratings In Accordance To ARI Standard 210, Ratings In Accordance To ARI Standards 360, 370, 380, 390, 400, Cooling Performance At ARI Conditions 95°F DB, 80°F EDB, 67°F FWB, Nominal CFM: Features: 2-Stage Cooling, Aluminum Steel Heat Exchanger, Two Stage, 100% Economizer With Outside Air Dry Bulb Sensor And Barometric Relief Damper, 4" Thick Merx-13 Pleated Disposable Filter, Return Air And Supply Air Smoke Detector, Safety Monitoring High & Low Pressure Switches, Freeze Stats, Gas Valve High Temperature Limit Switch, Alarms, Ignition Failure, Safety Lockouts, & Repeated Limit Switch Trips, Single Zone VAV Intelligible Controller With Discharge Air, Return Air, And Outdoor Door Air Temp Sensors, Electronic Programmable Thermostat, 14" High Full Perimeter Spring Vibration Isolation Roof Cur, THRU-The-Curb Utility Connections, Insult, See Detail B3M3.2	EA	1	0%	1	9.665	\$ 105.00	\$ 1,014.83	\$ 8,470.00	\$ 9,484.83	\$ 9,485	\$ 1,014.83	\$ 8,470.00

\$ -	\$ -
\$ -	\$ -
\$ 47.89	\$ 4.22
\$ 152.00	\$ 29.88
\$ 124.74	\$ 25.41
\$ 961.79	\$ 249.92
\$ -	\$ -
\$ -	\$ -
\$ 33.26	\$ 26.14
\$ 39.40	\$ 49.70
\$ -	\$ -
\$ 14.55	\$ 8.42
\$ -	\$ -
\$ -	\$ -
\$ 33.60	\$ 8.22
\$ 42.40	\$ 11.00
\$ -	\$ -
\$ -	\$ -
\$ 1,178.68	\$ 386.10
\$ -	\$ -
\$ 101.11	\$ 62.78
\$ -	\$ -
\$ 315.00	\$ 13.50
\$ -	\$ -
\$ 618.87	\$ 9.38
\$ -	\$ -

BREAKDOWN OF DUCT ITEMS

Prepared for: Bright Path, 288 Mishawum RD, Woburn MA 01801
 Project ID: 12032024
 Scope: G.C.



Date: 5-Sep-24

SR #	DESCRIPTION	UNIT	QUANTIT	WASTAGE	QUANTITY
		HVAC	Y		W/
GALVANIZED SHEET METAL DUCT					
1	6" Dia Supply Air Duct	LF	81	10%	89
2	8" Dia Supply Air Duct	LF	111	10%	122
3	10" Dia Supply Air Duct	LF	455	10%	501
4	10" Dia Supply Air Duct (Lined)	LF	20	10%	22
5	12" Dia Supply Air Duct	LF	115	10%	127
6	12" Dia Supply Air Duct (Lined)	LF	15	10%	17
7	14" Dia Supply Air Duct	LF	16	10%	18
8	10"x10" Supply Air Duct	LF	24	10%	26
9	10"x10" Supply Air Duct (Lined)	LF	7	10%	8
10	10"x12" Supply Air Duct	LF	19	10%	21
11	12"x10" Supply Air Duct (Lined)	LF	7	10%	8
12	12"x14" Supply Air Duct	LF	14	10%	15
13	14"x12" Supply Air Duct	LF	24	10%	26
14	14"x12" Supply Air Duct (Lined)	LF	10	10%	11
15	14"x14" Supply Air Duct	LF	31	10%	34
16	14"x14" Supply Air Duct (Lined)	LF	10	10%	11
17	16"x14" Supply Air Duct	LF	16	10%	18
18	18"x14" Supply Air Duct	LF	24	10%	26
19	20"x12" Supply Air Duct (Lined)	LF	17	10%	19
20	20"x14" Supply Air Duct	LF	11	10%	12
21	20"x14" Supply Air Duct (Lined)	LF	34	10%	37
22	20"x16" Supply Air Duct (Lined)	LF	36	10%	40
23	22"x20" Supply Air Duct (Lined) (Size Assumed)	LF	6	10%	7
24	22"x22" Supply Air Duct (Lined) (Size Assumed)	LF	12	10%	13
25	24"x20" Supply Air Duct (Lined) (Size Assumed)	LF	24	10%	26
26	8" Dia Return Air Duct	LF	27	10%	30
27	10" Dia Return Air Duct	LF	6	10%	7
28	10" Dia Return Air Duct (Lined)	LF	5	10%	6
29	12" Dia Return Air Duct	LF	77	10%	85
30	12" Dia Return Air Duct (Lined)	LF	22	10%	24
31	16" Dia Return Air Duct	LF	16	10%	18
32	12"x10" Return Air Duct	LF	9	10%	10
33	12"x14" Return Air Duct	LF	13	10%	14
34	12"x24" Return Air Duct	LF	12	10%	13
35	14"x12" Return Air Duct (Lined)	LF	20	10%	22
36	16"x14" Return Air Duct	LF	11	10%	12
37	16"x14" Return Air Duct (Lined)	LF	33	10%	36
38	18"x16" Return Air Duct	LF	15	10%	17
39	20"x12" Return Air Duct (Lined)	LF	23	10%	25
40	20"x14" Return Air Duct	LF	13	10%	14
41	20"x14" Return Air Duct (Lined)	LF	31	10%	34
42	20"x16" Return Air Duct (Lined)	LF	15	10%	17
43	24"x24" Return Air Duct	LF	10	10%	11
44	26"x18" Return Air Duct (Lined) (Size Assumed)	LF	46	10%	51
45	6" Dia Exhaust Air Duct	LF	206	10%	227
46	8" Dia Exhaust Air Duct	LF	24	10%	26
47	10"x8" Exhaust Air Duct (Lined)	LF	10	10%	11
48	10"x10" Exhaust Air Duct (Lined)	LF	13	10%	14
49	12"x10" Exhaust Air Duct	LF	30	10%	33
50	12"x10" Exhaust Air Duct (Lined)	LF	27	10%	30
51	14"x14" Exhaust Air Duct (Lined)	LF	13	10%	14
52	4" Dia Dryer Exhaust Duct	LF	9	10%	10

DETAILED BREAKDOWN OF ITEMS

Prepared for: **Bright Path, 288 Mishawum RD, Woburn MA 01801**
 Project ID: **12032024**
 Scope: **G.C**



SR.#	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY
GENERAL REQUIREMENTS					
1			Permits	LS	1
2			Supervision and Coordination	LS	1
3			Submittals and Shop drawings	LS	1
4			Final Cleaning	LS	1
5			Mobilization Costs	LS	1
6			Temporary Control & Facilities	LS	1
7			Scaffolding	LS	1

SR.#	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY
HVAC					
FLEXIBLE DUCT					
8			4" Dia Flexible Duct	EA	1
9			6" Dia Flexible Duct	EA	2
10			8" Dia Flexible Duct	EA	1
11			10" Dia Flexible Duct	EA	8
REFRIGERANT PIPE					
Type "AC R" Copper Pipe					
12			1/2" Dia Refrigerant Liquid Pipe	EA	1
13			5/8" Dia Refrigerant Suction Pipe	EA	1
1/2" Thick Fiberglass Pipe Insulation					
14			1/2" Dia Refrigerant Liquid Pipe	EA	1
15			5/8" Dia Refrigerant Suction Pipe	EA	1
REFRIGERANT PIPE FITTINGS					
16			3/8" Dia Refrigerant Liquid Pipe 90 Deg Elbow	EA	2
17			5/8" Dia Refrigerant Suction Pipe 90 Deg Elbow	EA	2
CONDENSATE DRAIN PIPE					
Schedule 40 PVC Pipe					
18			3/4" Dia Condensate Drain Pipe	EA	7
1/2" Thick Fiberglass Pipe Insulation					
19			3/4" Dia Condensate Drain Pipe	EA	7
CONDENSATE DRAIN PIPE FITTINGS					
20			3/4" Dia Condensate Drain Pipe 90 Deg Elbow	EA	25
ELBOW					
21			3/4" Dia Condensate Drain Pipe Tee	EA	14
AIR DEVICES					
22			A6 Supply Ceiling Diffuser, TITUS OMNI, Architectural Square Panel	EA	8
23			A8 Supply Ceiling Diffuser, TITUS OMNI, Architectural Square Panel	EA	7
24			A10 Supply Ceiling Diffuser, TITUS OMNI, Architectural Square Panel	EA	45
25			Z12 Return Grille, TITUS 350R1, Architectural Square Panel, Flush F	EA	18
26			Z24 Exhaust Grille, TITUS 350R1, Architectural Square Panel, Flush F	EA	18
ROOF TOP UNIT					
27			RTU-1: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
28			RTU-2: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
29			RTU-3: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
30			RTU-4: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
31			RTU-5: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
32			RTU-6: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
33			RTU-7: Roof Top Unit, JOHNSON CONTROLS ZJ090N12P2B1BAA3A	EA	1
ROOF TOP UNIT DETAILS					
34			3/4" Dia Condensate Drain Cleanout	EA	14
35			Splash Block	EA	7
DUCTLESS SPLIT AIR CONDITIONING UNIT					
36			DAC-1: Ductless Split Air Conditioning System Air Handler Unit, AC1	EA	1
DUCTLESS SPLIT AIR CONDITIONING UNIT DETAILS					
37			DCU-1: Ductless Split Air Conditioning System Condensing Unit, AC1	EA	1
38			3/4" Dia Refrigerant Suction Line Trap	EA	2
UNIT HEATER					
39			EUH-1: Electric Unit Heater, QMARK MUH0381, Suspended, Fan-For	EA	1
40			EUH-2: Electric Unit Heater, QMARK MUH0381, Suspended, Fan-For	EA	1
41			EUH-3: Electric Unit Heater, QMARK MUH0381, Suspended, Fan-For	EA	1
42			ECH-1: Electric Ceiling Recessed Heater, QMARK CDF-548, Electric	EA	1
43			ECH-2: Electric Ceiling Recessed Heater, QMARK CDF-548, Electric	EA	1
44			ECH-3: Electric Ceiling Recessed Heater, QMARK CDF-548, Electric	EA	1
45			ECH-4: Electric Ceiling Recessed Heater, QMARK CDF-548, Electric	EA	1
EXHAUST FAN					
46			EF-1: Exhaust Fan, GREENHECK G-120-VG, Centrifugal Roof Exhaust	EA	1
47			EF-2: Exhaust Fan, GREENHECK G-60-PA-VG, Centrifugal Roof Exhaust	EA	1
DRYER EXHAUST DETAIL					
48			Dryer Exhaust Wall Box, IN-G-VATE TECHNOLOGIES MODEL 425	EA	1
49			4" Dia Dryer Vent Roof Goose	EA	1
DUCT WEIGHT					
50			Galvanized Sheet Metal Duct	LB	6960
DUCT INSULATION					
51			2" Thick Fiberglass Duct Wrap W/Foil Kraft Resistant Vapor Barrier	SF	3535
DUCT LINER					
52			1" Thick Acoustical Duct Liner	SF	2336
MISCELLANEOUS					
53			22"x20" Flexible Connection	EA	1
54			22"x22" Flexible Connection	EA	2
55			24"x20" Flexible Connection	EA	4
56			20"x18" Flexible Connection	EA	7
57			Smoke Detector	EA	10
58			Temperature Sensor	EA	13
59			Thermostat	EA	7
PVC COUPLING					
60			3/4" Dia	EA	6
PILE-UP PORTS					
61			3/8" Dia Adjustable Clevis Hanger	EA	1
62			5/8" Dia Adjustable Clevis Hanger	EA	1
63			3/4" Dia Adjustable Clevis Hanger	EA	3
64			3/8" Dia Threaded Rod (1 Ea. = 1 FT)	EA	5
DUCT SUPPORTS					
65			3/8" Threaded Rod	EA	376
66			1" x 22 Ga. Strap	EA	188

SR.#	Drawing #	Detail #	DESCRIPTION	UNIT	QUANTITY
ELECTRICAL					
DISTRIBUTION					
CONDUIT					
67			2" EMT Conduit	EA	21
CONDUCTOR					
68			#6 CU THHN/THWN	EA	1
69			#20 CU THHN/THWN	EA	4
70			#10 CU THHN/THWN	EA	1
LEGS					
71			Compression Lag CU With 1-Hole, #6 CU Wire	EA	8
72			Heat Shrink Tubing for #6 CU Wire	EA	8
73			Compression Lag CU With 1-Hole, #20 CU Wire	EA	24
74			Heat Shrink Tubing for #20 CU Wire	EA	24
75			Compression Lag CU With 1-Hole, #30 CU Wire	EA	8
76			Heat Shrink Tubing for #30 CU Wire	EA	8
CIRCUIT BREAKER					
77			1P15A Breaker, GF1	EA	3
78			1P20A Breaker	EA	101
79			1P20A Breaker, GF1	EA	3
80			2P15A Breaker	EA	3
81			2P20A Breaker	EA	9
82			2P20A Breaker, GF1	EA	1
83			2P80A Breaker	EA	1
84			3P15A Breaker	EA	1
85			3P50A Breaker	EA	3
86			3P60A Breaker	EA	3
87			3P25A/175AT MCB	EA	2
PANEL					
88			Panel A: 25A, 120/208, 3Ph, 4W, Mains: MCB, 84 Poles, Surface Mnt	EA	1
89			Panel B: 25A, 120/208, 3Ph, 4W, Mains: MLO, 30 Poles, Surface Mnt	EA	1
90			Panel C: 25A, 120/208, 3Ph, 4W, Mains: MLO, 42 Poles, Surface Mnt	EA	1
91			Panel KP: 25A, 120/208, 3Ph, 4W, Mains: MCB, 30 Poles, Surface Mnt	EA	1
DISCONNECT SWITCH					
92			2P30AF15AF Fused Disconnect Switch, WP	EA	4
93			2P100A Disconnect Switch	EA	1
94			3P30AF25AT Fused Disconnect Switch, WP	EA	2
95			3P60A Disconnect Switch	EA	1
96			3P60AF50AT Fused Disconnect Switch, WP	EA	3
97			3P60AF60AT Fused Disconnect Switch, WP	EA	2
GROUNDING					
98			5/8" x 10' CU Clad Ground Rod	EA	1
99			#6 CU Grounding Conductor	EA	0.1
CONDUIT					
100			3/4" EMT Conduit	EA	589
101			1" EMT Conduit	EA	61
102			3/4" RGS Conduit	EA	5
CONDUCTOR					
103			#12 CU THHN/THWN	EA	72

104	E1.0, E2.0, E3.0 & E4.0	#10 CU THHN/THWN	EA	20	
105		#8 CU THHN/THWN	EA	0.38	
106		#6 CU THHN/THWN	EA	9	
107		#4 CU THHN/THWN	EA	0.1	
			DEVICE		
108		15A Receptacle, GFI, NEMA 5-20R	EA	3	
109		30A Receptacle, GFI, NEMA 5-20R	EA	3	
110		30A Receptacle, NEMA 14-30R	EA	1	
111		Double Duplex Receptacle	EA	7	
112		Double Duplex Receptacle, GFI	EA	18	
113		Duplex Receptacle	EA	99	
114		Duplex Receptacle, GFI	EA	25	
115		Duplex Receptacle, GFI, WP	EA	7	
116		Equipment Connection	EA	7	
117		Plug Mold	EA	1	
			LIGHTING		
			CONDUIT		
118	3/4" EMT Conduit	EA	349		
		CONDUCTOR			
119	#12 CU THHN/THWN	EA	1		
120	#10 CU THHN/THWN	EA	0.6		
121	#8 CU THHN/THWN	EA	50		
		LIGHTING FIXTURES			
122	Illuminated Exit Sign Mounted, Wall Mounted	EA	11		
123	RL1, 6" Recessed LED Downlight, ATLANTIC LIGHTING #LED6-SV1 Watts: 7w	EA	13		
124	RL1, 2x4 Edgelit Dimmable Flat Panel LED, METALUX #24FPSL2SC Watts: 36.3w	EA	128		
125	RL1, 1x4 Edgelit Dimmable Flat Panel LED, METALUX #14FPSL1SC Watts: 36.3w	EA	34		
126	RL3, Recessed 4"x4 Recessed Slot LED, All #36-4XX-35-UNV-XX Watts: 7W PER FT	EA	9		
127	RL4, 2x2 Edgelit Dimmable Flat Panel LED, METALUX #22FPSL2SC Watts: 21w	EA	17		
128	SL1, 4" Surface Mounted Utility LED Strip light, METALUX #4SL1STP Watts: 18w	EA	15		
129	WS1, 2"x4" Linear LED Wall Sconce, WAC LIGHTING #WS-77624-27-X Watts: 20.5	EA	2		
130	WS2, Remote Wall Light, LITHONIA #WDEGC2-LED-P3-40K-80CR Watts: 18w	EA	9		
131	Remote Emergency Lighting Double Heads	EA	5		
132	Self Contained Emergency Lighting Unit	EA	58		
		LIGHTING CONTROL			
133	7 Day Astronomical Programmable Time Clock, TORC	EA	1		
134	Dimmer Low Voltage Momentary Switch, WATSTOPPER #LDC3-C	EA	3		
135	DLM Digital Dimmer Switch, WATSTOPPER #LMDM-101-COLOR	EA	30		
136	DLM Digital Room Controller With One Relay, WATSTOPPER #LMB	EA	20		
137	DLM Digital Room Controller With Two Relay, WATSTOPPER #LMB	EA	5		
138	DLM Dual Technology Sensor, WATSTOPPER #LMDC-100	EA	45		
139	Dual Technology Line Voltage Wall Vacancy Sensor Switch, WAL1514	EA	8		
140	Dual Technology Vacancy Sensor With Power Pack, WATSTOPPER #	EA	2		
141	PhotoCell, Wall Mounted	EA	1		
142	Single Pole Switch	EA	1		
		MISCELLANEOUS			
143	Junction Box	EA	2		
144	Junction Box For Sign Lighting Fixture, WP	EA	3		

COMMUNICATION				
TELECOMMUNICATION				
		CONDUIT		
145	E2.0	3/4" EMT Conduit	EA	33
		CONDUCTOR		
146		CAT6 Cable	EA	17
		J-BOXES		
147		2" J-Boxes	EA	66
		DEVICES		
148		4X8"X3/4" Plywood Backboard	EA	1
149		Telephone Data Outlet	EA	22
150		RJ45 Connector	EA	44
151		Back Box	EA	22
152		Faceplate	EA	22

ELECTRONIC SAFETY AND SECURITY				
FIRE ALARM				
		CONDUIT		
153	FA.0, FA1.0 & FA2.0	3/4" EMT Conduit	EA	226
154		1" EMT Conduit	EA	10
155		3/4" RGS Conduit	EA	8
		CONDUCTOR		
156		CAT6 Cable	EA	1
157		50 ohm Coaxial Cable	EA	0.1
158		#16 CU THHN/THWN	EA	12
159		#14 CU THHN/THWN	EA	8
160		#12 CU THHN/THWN	EA	5
		DEVICES		
161		Addressable Control Module	EA	5
162		Addressable Monitor Module	EA	5
163		Addressable Smoke Detector	EA	26
164		Antenna Fan Or Splitter	EA	1
165		Audio/Visual Alarm, 15cd	EA	8
166		Audio/Visual Alarm, 75cd	EA	17
167		Bi-Directional Amplifier Monitoring Panel	EA	1
168		Bi-Directional Amplifier, NEMA 1	EA	1
169	Drill Switch	EA	1	
170	Fire Alarm System Notification Power Supply	EA	1	
171	Fire Alarm Resonator, WP	EA	1	
172	Fire Alarm Control Panel	EA	1	
173	Indoor Antenna	EA	1	
174	Inchape Module	EA	2	
175	Key Repository Box	EA	1	
176	Manual Pull Station	EA	4	
177	Radio Tower (Provided By System Provider)	EA	1	
178	Remote Alarm Indicator, WP	EA	4	
179	SS (Legend Not Given)	EA	18	
180	Sprinkler Bell	EA	1	
181	Visual Only Unit, 15cd	EA	13	

PROJECTED COST				
OVERHEAD AND PROFIT				
INSURANCE				
CONTINGENCY				
TAX				
SUGGESTED BID				

Notes:

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