

ESTIMATE DETAIL



PROJECT NAME

	DESCRIPTION	QTY	UNIT	RATE	TOTAL (\$)
940	HVAC				20,55,169
941					
942	<u>Accessibility</u>				
943	New Work				
944	<u>Air Handling Units</u>				
945	DOAS-1; 2000 CFM, 100%OA, 90MBH DX cooling Capacity, 75 MBH Hot water heating capacity, w/ Enthalpy energy recovery wheel & ECM, Supply fan 6hp, Exhaust Fan 6hp, 460V/3ph/60hz, 30.1 FLA, w/ freeze protection pump and VAV control, Make-Trane, Model- Horizon - OABD096	1	EA	1,25,000.00	1,25,000
946					
947	<u>Fans</u>				
948	EF-1; 1800 CFM, Downblast, Direct drive, 1/2hp, 120V/1ph/60hz, 6.6 FLA, Make-GREENHECK, Model- G-140-VG	1	EA	5,400.00	5,400
949					
950	<u>Terminal Units</u>				
951	ACCU-1, Air cooled condensing unit, 14 Ton, 168000 BTUH cooling capacity, 188000 BTUH heating capacity, R410A, 460V/3ph/60hz, 26 MCA, w/ basepan heater, 18" High stand, capable of heat recovery heat pump, Bacnet Integration, Make-Trane-Mitsubishi, Model- PURY-EP168	1	EA	38,000.00	38,000
952	BC-1; Branch Connector	1	EA	4,500.00	4,500
953	FCU-1; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
954	FCU-2; Fan Coil Unit, 6000 BTUH cooling Capacity, 6700 BTUH Heating Capacity, 250 CFM, 208V/1ph/60hz, 1.75 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	2,925.00	2,925
955	FCU-3; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
956	FCU-4; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
957	FCU-6; Fan Coil Unit, 6000 BTUH cooling Capacity, 6700 BTUH Heating Capacity, 250 CFM, 208V/1ph/60hz, 1.75 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	2,925.00	2,925
958	FCU-7; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
959	FCU-8; Fan Coil Unit, 18000 BTUH cooling Capacity, 20000 BTUH Heating Capacity, 500 CFM, 208V/1ph/60hz, 2.94 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	4,000.00	4,000
960	VAV-1; Air terminal unit, 100 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
961	VAV-2; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
962	VAV-3; Air terminal unit, 100 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
963	VAV-4; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100

964	VAV-6; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
965	VAV-7; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
966	VAV-8; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
967	FTR-A: fin-tube radiation - 2.5' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	1	EA	312.50	313
968	FTR-A: fin-tube radiation - 3.0' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	2	EA	375.00	750
969	FTR-A: fin-tube radiation - 7' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	1	EA	875.00	875
970	FTR-A: fin-tube radiation - 8' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	1	EA	1,000.00	1,000
971	FTR-A: fin-tube radiation - 8.5' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	1	EA	1,062.50	1,063
972	FTR-B: fin-tube radiation - 6' Length, 1 Rows, 374 BTU/LF, Make-Runtal, Model- RF-2	1	EA	750.00	750
973	FTR-B: fin-tube radiation - 6.5' Length, 1 Rows, 374 BTU/LF, Make-Runtal, Model- RF-2	1	EA	812.50	813
974	FTR-B: fin-tube radiation - 7' Length, 1 Rows, 374 BTU/LF, Make-Runtal, Model- RF-2	1	EA	875.00	875
975	FTR-C: fin-tube radiation - 3' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	2	EA	375.00	750
976	FTR-C: fin-tube radiation - 4' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	3	EA	500.00	1,500
977	FTR-C: fin-tube radiation - 5' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	2	EA	625.00	1,250
978	FTR-C: fin-tube radiation - 9' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	1	EA	1,125.00	1,125
979	CUH-B; Cabinet unit heater; 345 CFM, 17MBH, 1.7GPM, 120V/1ph/60hz, 1.4MCA, w/ aquastat control, Make- Vulcan, Model- C-1060-04	1	EA	2,750.00	2,750
980					
981	<u>Pipe and Fittings</u>				
982	Connect to existing hot water pipe: 3/4"	6	EA	300.00	1,800
983	HWS/R; hot water supply/return pipe				
984	- 2 1/2"	7	LF	90.00	630
985	- 1 1/4"	208	LF	70.00	14,560
986	- 3/4"	777	LF	56.59	43,970
987	Branch pipe for terminal units (Fintube Radiation, Cabinet unit Heater)	180	LF	56.59	10,186
988	Insulation on hot water pipe	1,172	LF	10.00	11,720
989	Secondary Valve Sets (Hot Water)	18	EA	550.00	9,900
990	Control Valve Sets for Terminals (Assumes individual control)				
991	- FTR-A; Finned tube radiation	17	EA		incl. in BMS
992	- CUH-B; Cabinet unit heater	1	EA		incl. in BMS
993	Refrigerant Main Pipe- Unsized	691	LF	44.28	30,597
994	Refrigerant Branch Pipe for FCU - Unsized	112	LF	44.28	4,959
995	Insulation on Refrigerant piping	803	LF	7.00	5,621
996	Condensate Drain	157	LF	33.99	5,336
997	Insulation on condensate drain piping	157	LF	7.00	1,099
998	Secondary Valve Sets (Refrigerant)	7	EA	550.00	3,850
999	Control Valve Sets for Terminals (Assumes individual control)				
1,000	- Condensing Unit	1	EA		incl. in BMS
1,001	- Indoor unit	7	EA		incl. in BMS
1,002					
1,003	<u>Sheetmetal & Accessories</u>				
1,004	Galvanized ductwork	4,803	LBS	18.00	86,454
1,005	Galvanized ductwork - Reconciliation adjustment	4,000	LBS	18.00	72,000
1,006	Insulation	6,772	SF	6.00	40,629
1,007	Connect to existing Duct; 8 x 8	1	EA	750.00	750
1,008	Diffuser, Registers & Grilles: Make- Tuttle & Bailey				
1,009	- A4: Ceiling Supply Diffuser: 200 CFM, Model- ARC	2	EA	532.50	1,065
1,010	- B: Ceiling Exhaust Grille, 50 CFM, Model- A70D	1	EA	532.50	533
1,011	- B: Ceiling Exhaust Grille, 75 CFM, Model- A70D	7	EA	532.50	3,728
1,012	- B: Ceiling Exhaust Grille, 150 CFM, Model- A70D	6	EA	532.50	3,195
1,013	- B: Ceiling Exhaust Grille, 225 CFM, Model- A70D	2	EA	532.50	1,065
1,014	- B: Ceiling Exhaust Grille, 275 CFM, Model- A70D	1	EA	532.50	533
1,015	- B: Ceiling Exhaust Grille, 300 CFM, Model- A70D	1	EA	532.50	533
1,016	- B: Ceiling Exhaust Grille, 350 CFM, Model- A70D	1	EA	532.50	533
1,017	- B: Ceiling Return Grille, 100 CFM, Model- A70D	2	EA	532.50	1,065
1,018	- B: Ceiling Return Grille, 300 CFM, Model- A70D	1	EA	532.50	533
1,019	- B: Ceiling Return Grille, 350 CFM, Model- A70D	1	EA	532.50	533
1,020	- B: Ceiling Return Grille, 400 CFM, Model- A70D	1	EA	532.50	533

1,021	- B: Ceiling Return Grille, 450 CFM, Model- A70D	1	EA	532.50	533
1,022	- B: Ceiling Return Grille, 500 CFM, Model- A70D	1	EA	532.50	533
1,023	- B: Ceiling Return Grille, 600 CFM, Model- A70D	1	EA	532.50	533
1,024	- B: Wall Exhaust Grille, 50 CFM, Model- A70D	1	EA	532.50	533
1,025	- C1: Linear slot diffuser: 100 CFM, 4' Length, Model- 6000	4	EA	532.50	2,130
1,026	- C1: Linear slot diffuser: 125 CFM, 4' Length, Model- 6000	2	EA	532.50	1,065
1,027	- C1: Linear slot diffuser: 150 CFM, 6' Length, Model- 6000	2	EA	532.50	1,065
1,028	- C1: Linear slot diffuser: 200 CFM, 4' Length, Model- 6000	4	EA	532.50	2,130
1,029	- C1: Linear slot diffuser: 250 CFM, 6' Length, Model- 6000	1	EA	532.50	533
1,030	Volume Control Damper				
1,031	- 14" x 8"	6	EA	400.00	2,400
1,032	- 12" x 10"	1	EA	400.00	400
1,033	- 8" x 8"	22	EA	300.00	6,600
1,034					
1,035	Building Management Systems				
1,036	DOAS @ 25 Pts each- allow	25	PTS	1,200.00	<i>Excluded, assumed packaged controls</i>
1,037	EF-1; Exhaust Fan @ 3 Pts each	3	PTS	1,200.00	3,600
1,038	ACCU-1 @ 6 Pts each- allow	6	PTS	800.00	4,800
1,039	FCU with VAV @ 8 Pts each	56	PTS	800.00	44,800
1,040	Fintube Radiator @ 5 Pts each	85	PTS	800.00	68,000
1,041	Cabinet unit heater @ 4 Pts each	4	PTS	800.00	3,200
1,042	Tie to existing BMS system	1	LS	2,500.00	2,500
1,043					
1,044	Miscellaneous				
1,045	Testing, commissioning & balancing	1	LS	28,860.93	28,861
1,046	Cleaning and repairing of leakage duct	1	LS	7,500.00	7,500
1,047	Rigging and Handling	1	LS	9,500.00	9,500
1,048	Commissioning Support	1	LS	7,500.00	7,500
1,049	Co-ordination, rigging, CAD, Sub-trade On Costs, temp requirements	1	LS	25,000.00	25,000
1,050	Critical Repairs				
1,051	Selective Demolition				
1,052	Air Handling Units				
1,053	AHU-20; Remove Existing Auditorium AHU 13000 CFM along with all associated piping and controls	1	EA	25,000.00	25,000
1,054	Rf-21; Remove Return Fan associated with AHU-20	1	EA		<i>Incl. Above</i>
1,055	AHU-22; Remove Existing Classroom AHU 3000 CFM along with all associated piping and controls	1	EA	16,500.00	16,500
1,056	Rf-23; Remove Return Fan associated with AHU-22	1	EA		<i>Incl. Above</i>
1,057	DSA-Ex; Remove sound Attenuator, (serving AHU-20, 13000 CFM)	3	EA		<i>Incl. Above</i>
1,058	Remove VFD associated with AHU	4	EA		<i>Incl. Above</i>
1,059					
1,060	Fans				
1,061	EF-15/16/17/18/19; Remove Exhaust Fan	5	EA	3,750.00	18,750
1,062	EF-Ex; Remove Existing Exhaust Fan	2	EA	3,750.00	7,500
1,063					
1,064	Terminal Units				
1,065	AC-Ex; Remove Existing wall mounted split unit along with all associated piping and controls	4	EA	1,000.00	4,000
1,066	ACCU-Ex; Remove Existing air cooled condensing unit mounted on wall bracket serving split unit	2	EA	850.00	1,700
1,067	ACCU-20; Remove Existing air cooled condensing unit	1	EA	14,000.00	14,000
1,068	ACCU-22; Remove Existing air cooled condensing unit and dunnage supports	1	EA	7,500.00	7,500
1,069	EBR-Ex; Remove Electric baseboard radiation	20	EA	625.00	12,500
1,070	ECUH-EX: Remove Electric Cabinet unit heater	3	EA	500.00	1,500
1,071					
1,072	Sheetmetal & Accessories				
1,073	Remove Ductwork	1,280	LF	25.00	32,000
1,074	- Duct: 12 x 13	160	LF		<i>Incl. above</i>
1,075	- Duct: 16 x 14	70	LF		<i>Incl. above</i>
1,076	- Duct: 16 x 16	216	LF		<i>Incl. above</i>
1,077	- Duct: 26 x 16	25	LF		<i>Incl. above</i>
1,078	- Duct: 50 x 16	31	LF		<i>Incl. above</i>
1,079	- Duct: Ex: 12 x 12	14	LF		<i>Incl. above</i>
1,080	- Duct: Ex: 10 x 10	103	LF		<i>Incl. above</i>
1,081	- Duct: Ex: 8 x 8	131	LF		<i>Incl. above</i>
1,082	- Duct: Ret: 24 x 20	73	LF		<i>Incl. above</i>
1,083	- Duct: Ret: 38 x 20	43	LF		<i>Incl. above</i>
1,084	- Duct: Ret: 48 x 20	45	LF		<i>Incl. above</i>

1,085	- Duct: Sup: 20 x 12	55	LF		Incl. above
1,086	- Duct: Sup: 30 x 14	53	LF		Incl. above
1,087	- Duct: Sup: unsized	148	LF		Incl. above
1,088	- Duct:OA: 60 x 28	73	LF		Incl. above
1,089	- Risers Duct: Ex 10 x 10: 10' LF	40	LF		Incl. above
1,090	Assumed existing toilet area duct for demolition	1	LS	1,500.00	1,500
1,091	Remove Registers, Grilles, and Diffusers	55	EA	150.00	8,250
1,092	Remove Louver 60 x 28	2	EA	500.00	1,000
1,093	Remove Louver 60 x 28	2	EA	500.00	1,000
1,094	Remove Louver 60 x 28	2	EA	500.00	1,000
1,095	New Work				
1,096	<u>Air Handling Units</u>				
1,097	RTU-1; Packaged rooftop unit, 13000 CFM, 552 MBH DX cooling capacity, 580 MBH Hot water heating capacity, Supply fan 20hp, Exhaust fan 7.5 hp, 129 MCA, 460V/3ph/60hz, w/ full economizer, vav controls, Bacnet integration, ECM, freeze protection pump, Make- Trane, Model- Intellipak	1	EA	1,37,000.00	1,37,000
1,098	DSA-1; Sound Attenuator, 10200CFM, Make- VIBRO-ACOUSTICS, Model- RFL	1	EA	11,730.00	11,730
1,099	DSA-2; Sound Attenuator, 8500CFM, Make- VIBRO-ACOUSTICS, Model- RFL	1	EA	9,775.00	9,775
1,100	DSA-3; Sound Attenuator, 1700CFM, Make- VIBRO-ACOUSTICS, Model- RFL	1	EA	1,955.00	1,955
1,101	RTU-2; Packaged rooftop unit, 4000 CFM, 120 MBH DX cooling capacity, 150 MBH Hot water heating capacity, Supply fan 3hp, 21 MCA, 460V/3ph/60hz, w/ full economizer, vav controls, Bacnet integration, ECM, freeze protection pump, Make- Trane, Model- TZC120	1	EA	60,000.00	60,000
1,102	Allow sound Attenuator for above RTU-2 (4000 CFM)	1	EA	4,600.00	4,600
1,103					
1,104	<u>Fans</u>				
1,105	EF-2; 750 CFM, Downblast, Direct drive, 1/6hp, 120V/1ph/60hz, 2.8 FLA, Make-GREENHECK, Model- G-095-VG	1	EA	3,750.00	3,750
1,106					
1,107	<u>Terminal Units</u>				
1,108	FCU-9; Fan Coil Unit, 6000 BTUH cooling Capacity, 6700 BTUH Heating Capacity, 250 CFM, 208V/1ph/60hz, 1.75 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	2,925.00	2,925
1,109	FCU-10; Fan Coil Unit, 6000 BTUH cooling Capacity, 6700 BTUH Heating Capacity, 250 CFM, 208V/1ph/60hz, 1.75 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	2,925.00	2,925
1,110	FCU-11; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
1,111	FCU-12; Fan Coil Unit, 24000 BTUH cooling Capacity, 27000 BTUH Heating Capacity, 750 CFM, 208V/1ph/60hz, 2.88 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	5,500.00	5,500
1,112	FCU-13; Fan Coil Unit, 6000BTUH cooling Capacity, 6700 BTUH Heating Capacity, 250 CFM, 208V/1ph/60hz, 1.75 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	2,925.00	2,925
1,113	FCU-14; Fan Coil Unit, 12000 BTUH cooling Capacity, 13500 BTUH Heating Capacity, 300 CFM, 208V/1ph/60hz, 2.3 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	3,500.00	3,500
1,114	VAV-9; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,115	VAV-10; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,116	VAV-11; Air terminal unit, 150 CFM, size-6, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,117	VAV-12; Air terminal unit, 300 CFM, size-8, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100

1,118	VAV-13; Air terminal unit, 50 CFM, size-4, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,119	VAV-14; Air terminal unit, 150 CFM, size-6, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,120	FTR-A: fin-tube radiation - 10.5' Length, 1 Rows, 290 BTU/LF, Make- Runtal, Model- RF-2	1	EA	1,100.00	1,100
1,121	FTR-A: fin-tube radiation - 2.5' Length, 1 Rows, 290 BTU/LF, Make-Runtal, Model- RF-2	2	EA	312.50	625
1,122	FTR-B: fin-tube radiation - 15' Length, 1 Rows, 374 BTU/LF, Make-Runtal, Model- RF-2	3	EA	1,875.00	5,625
1,123	FTR-C: fin-tube radiation - 10' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	4	EA	1,250.00	5,000
1,124	FTR-C: fin-tube radiation - 15' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	1	EA	1,875.00	1,875
1,125	FTR-C: fin-tube radiation -11' length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	1	EA	1,375.00	1,375
1,126	CUH-A; Cabinet unit heater; 345 CFM, 17MBH, 1.7GPM, 120V/1ph/60hz, 1.4MCA, w/ aquastat control, Make- Vulcan, Model- W-1060-04	5	EA	2,750.00	13,750
1,127					
1,128	<u>Pipework & accessories</u>				
1,129	Connect to existing hot water pipe: 3"	2	EA	750.00	1,500
1,130	HWS/R; hot water supply/return pipe				
1,131	- 3"	430	LF	135.00	58,050
1,132	- 2 1/2"	17	LF	102.00	1,734
1,133	- 2"	83	LF	75.00	6,225
1,134	- 1 1/2"	220	LF	75.00	16,500
1,135	- 1 1/4"	8	LF	70.00	560
1,136	- 1"	249	LF	65.00	16,185
1,137	- 3/4"	665	LF	56.59	37,632
1,138	Branch pipe for terminal units (Fintube Radiation, Cabinet unit Heater)	170	LF	56.59	9,620
1,139	Insulation on hot water pipe	1,842	LF	10.00	18,420
1,140	Secondary Valve Sets (Hot Water)	17	EA	550.00	9,350
1,141	Control Valve Sets for Headend unit (Assumes individual control)				
1,142	- RTU-1/2; Rooftop Units	2	EA		<i>incl. in BMS</i>
1,143	Control Valve Sets for Terminals (Assumes individual control)				
1,144	- FTR-A; Finned tube radiation	12	EA		<i>incl. in BMS</i>
1,145	- CUH-A; Cabinet unit heater	5	EA		<i>incl. in BMS</i>
1,146	Refrigerant Main Pipe- Unsized	1,647	LF	44.28	72,929
1,147	Refrigerant Branch Pipe for FCU - Unsized	96	LF	44.28	4,251
1,148	Insulation on Refrigerant piping	1,743	LF	7.00	12,201
1,149	Condensate Drain	133	LF	33.99	4,521
1,150	Insulation on condensate drain piping	133	LF	7.00	931
1,151	Secondary Valve Sets (Refrigerant)	6	EA	550.00	3,300
1,152	Control Valve Sets for Terminals (Assumes individual control)				
1,153	- Indoor unit	6	EA		<i>incl. in BMS</i>
1,154					
1,155	<u>Sheetmetal & Accessories</u>				
1,156	Galvanized ductwork	9,800	LBS	18.00	1,76,400
1,157	Insulation	7,050	SF	6.00	42,300
1,158	Connect to existing Duct; 28 x 12	1	EA	1,200.00	1,200
1,159	Connect to existing Duct; 26 x15	1	EA	1,200.00	1,200
1,160	Diffuser, Registers & Grilles: Make- Tuttle & Bailey				
1,161	- A4: Ceiling Supply Diffuser: 150, Model- ARC	3	EA	532.50	1,598
1,162	- A4: Ceiling Supply Diffuser: 200, Model- ARC	2	EA	532.50	1,065
1,163	- A4: Ceiling Supply Diffuser: 250, Model- ARC	12	EA	532.50	6,390
1,164	- A5: Ceiling Supply Diffuser: 200 CFM, Model- ARC	1	EA	532.50	533
1,165	- B: Ceiling Exhaust Grille: 75 CFM Model- A70D	4	EA	532.50	2,130
1,166	- B: Ceiling Return Grille, Model; 150 CFM- A70D	3	EA	532.50	1,598
1,167	- B: Ceiling Return Grille: 200 CFM, Model- A70D	2	EA	532.50	1,065
1,168	- B: Ceiling Return Grille: 500 CFM, Model- A70D	5	EA	532.50	2,663
1,169	- B: Ceiling Return Grille: 550 CFM, Model- A70D	2	EA	532.50	1,065
1,170	- B: Ceiling Return Grille: 700 CFM, Model- A70D	2	EA	532.50	1,065
1,171	- B: Ceiling Return Grille: 5100 CFM, Model- A70D	2	EA	532.50	1,065
1,172	- C1: Linear slot diffuser: 300 CFM, 6' Length, Model- 6000	5	EA	532.50	2,663
1,173	- S: 4-Way Ceiling Diffuser: 24 x 36: 850 CFM	12	EA	532.50	6,390
1,174	Volume Control Damper				
1,175	- 14" x 8"	7	EA	400.00	2,800
1,176	- 10" x 8"	3	EA	400.00	1,200
1,177	- 8" x 8"	8	EA	300.00	2,400
1,178					
1,179	<u>Building Management Systems</u>				

1,180	RTU @ 25 Pts each- allow	50	PTS	1,200.00	<i>Excluded, assumed packaged controls</i>
1,181	EF-2; Exhaust Fan @ 3 Pts each	3	PTS	1,200.00	3,600
1,182	FCU with VAV @ 8 Pts each	48	PTS	800.00	38,400
1,183	Fintube Radiator @ 5 Pts each	60	PTS	800.00	48,000
1,184	cabinet unit heater @ 4 Pts each	20	PTS	800.00	16,000
1,185	Tie to existing BMS system	1	LS	2,500.00	2,500
1,186					
1,187	<u>Miscellaneous</u>				
1,188	Testing, commissioning & balancing	1	LS	37,009.27	37,009
1,189	Cleaning and repairing of leakage duct	1	LS	10,000.00	10,000
1,190	Rigging and Handling	1	LS	12,000.00	12,000
1,191	Commissioning Support	1	LS	10,000.00	10,000
1,192	Co-ordination, rigging, CAD, Sub-trade On Costs, temp requirements	1	LS	30,000.00	30,000
1,193	<u>Additional Program</u>				
1,194	<u>Terminal Units</u>				
1,195	FCU-5; Fan Coil Unit, 24000 BTUH cooling Capacity, 27000 BTUH Heating Capacity, 750 CFM, 208V/1ph/60hz, 2.88 MCA, w/ ECM, integral condensate pump w/ condensate level switch, BACNET integration, Make: Trane-Mitsubishi, Model: TPEFY	1	EA	5,500.00	5,500
1,196	VAV-5; Air terminal unit, 250 CFM, size-6, Make-Nailor, Model-D3000	1	EA	1,100.00	1,100
1,197	FTR-B: fin-tube radiation - 6' 1/2" Length, 1 Rows, 374 BTU/LF, Make-Runtal, Model- RF-2	2	EA	812.50	1,625
1,198	FTR-C: fin-tube radiation - 10' Length, 1 Rows, 531 BTU/LF, Make-Runtal, Model- RF-2	2	EA	1,250.00	2,500
1,199					
1,200	<u>Pipework & accessories</u>				
1,201	HWS/R; hot water supply/return pipe				
1,202	- 3/4"	120	LF	56.59	6,791
1,203	Branch pipe for terminal units (Fintube Radiation)	40	LF	56.59	2,264
1,204	Insulation on hot water pipe	160	LF	10.00	1,600
1,205	Secondary Valve Sets (Hot Water)	4	EA	550.00	2,200
1,206	Control Valve Sets for Terminals (Assumes individual control)				
1,207	- Finned tube radiation	4	EA		<i>incl. in BMS</i>
1,208	Refrigerant Main Pipe- Unsized	48	LF	44.28	2,125
1,209	Refrigerant Branch Pipe for FCU - Unsized	16	LF	44.28	708
1,210	Insulation on Refrigerant piping	64	LF	7.00	448
1,211	Condensate Drain	5	LF	33.99	170
1,212	Insulation on condensate drain piping	5	LF	7.00	35
1,213	Secondary Valve Sets (Refrigerant)	1	EA	550.00	550
1,214	Control Valve Sets for Terminals (Assumed individual control)				
1,215	- Indoor unit	1	EA		<i>incl. in BMS</i>
1,216					
1,217	<u>Sheetmetal & Accessories</u>				
1,218	Galvanized ductwork	538	LBS	18.00	9,684
1,219	Insulation	428	SF	6.00	2,568
1,220	Diffuser, Registers & Grilles: Make- Tuttle & Bailey				
1,221	- A3: Ceiling Supply Diffuser: 75 CFM, Model- ARC	1	EA	532.50	533
1,222	- A4: Ceiling Supply Diffuser: 200 CFM, Model- ARC	1	EA	532.50	533
1,223	- B: Ceiling Return Grille, 300 CFM, Model- A70D	1	EA	532.50	533
1,224	- B: Ceiling Return Grille, 600 CFM, Model- A70D	1	EA	532.50	533
1,225	- C1: Linear slot diffuser: 100 CFM, 4' Length, Model- 6000	2	EA	532.50	1,065
1,226	- C1: Linear slot diffuser: 200 CFM, 8' Length Model- 6000	2	EA	532.50	1,065
1,227	Volume Control Damper				
1,228	- 14" x 8"	2	EA	400.00	800
1,229	- 8" x 8"	6	EA	300.00	1,800
1,230					
1,231	<u>Building Management Systems</u>				
1,232	FCU with VAV @ 8 Pts each	8	PTS	800.00	6,400
1,233	Fintube Radiator @ 5 Pts each	20	PTS	800.00	16,000
1,234	Tie to existing BMS system	1	LS	2,500.00	2,500
1,235					
1,236	<u>Miscellaneous</u>				
1,237	Testing, commissioning & balancing	1	LS	2,865.13	2,865
1,238	Cleaning and repairing of leakage duct	1	LS	500.00	500
1,239	Rigging and Handling	1	LS	750.00	750
1,240	Commissioning Support	1	LS	400.00	400
1,241	Co-ordination, rigging, CAD, Sub-trade On Costs, temp requirements	1	LS	1,200.00	1,200
TOTAL CONSTRUCTION COST					20,55,169