

**Juliet W/ Long School
HVAC Upgrades
1845 Route 12
Gales Ferry, CT 06335**

ESTIMATE SUMMARY		MEP Upgrades			
			8,000	GSF	
BUILDING AREA		Sub-Total	Total	\$/SF	% of Total
Description					
31 0000 SITE WORK			9,000	1.13	0.42%
319500	Site Restoration and Rehabilitation	9,000			
03 3000 CONCRETE			-	-	0.00%
04 0000 MASONRY			-	-	0.00%
05 0000 METAL			178,000	22.25	8.26%
051000	Structural Steel	178,000			
06 0000 WOOD & PLASTICS			20,100	2.51	0.93%
061000	Rough Carpentry	20,100			
062000	Finish Carpentry	-			
064000	Architectural Woodwork	-			
07 0000 THERMAL & MOISTURE PROTECTION			26,000	3.25	1.21%
075000	Roofing	26,000			
08 0000 DOORS & WINDOWS			-	-	0.00%
09 0000 FINISHES			71,060	8.88	3.30%
092000	Plaster and Gypsum Board	24,690			
093000	Tile	-			
095000	Ceilings	43,350			
096000	Flooring	-			
097000	Wall Finishes	-			
098000	Acoustical Treatment	-			
099000	Paints and Coatings	3,021			
10 0000 SPECIALTIES			-	-	0.00%
11 0000 EQUIPMENT			-	-	0.00%
12 0000 FURNISHING			-	-	0.00%
13 0000 SPECIAL CONSTRUCTION			-	-	0.00%
14 0000 CONVEYING SYSTEM			-	-	0.00%
21 0000 MECHANICAL - FIRE PROTECTION			-	-	0.00%
22 0000 MECHANICAL - PLUMBING			101,074	12.63	4.69%
224100	Plumbing piping	97,074			
224300	Plumbing specialties	4,000			
224400	Plumbing fixtures	-			
224500	Plumbing equipment	-			
224750	Pool & fountain equipment	-			
224800	Special systems	-			

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Description					
23 0000 MECHANICAL - HVAC			907,416	113.43	42.08%
235100	Hydronic & refrigerant piping	127,042			
235500	Heat generation	-			
236500	Refrigeration	-			
237500	Heat transfer	334,100			
238500	Air handling	245,800			
238800	Air distribution	114,973			
239500	Controls	78,000			
239900	Testing & balancing	7,500			
26 0000 ELECTRICAL			40,600	5.08	1.88%
262000	Power generation	-			
263000	Medium voltage distribution	-			
264000	Service & distribution	28,100			
265000	Lighting	-			
266000	Special systems	10,000			
267000	Communication	-			
268500	Electric resistance heating	-			
269000	Controls	-			
269500	Testing	2,500			
SUBTOTAL DIRECT COST		\$ 1,353,250	\$ 1,353,250	\$ 169	62.76%
Design Contingency		10.0%	135,325	16.92	6.28%
Escalation - 24 months		5.0%	148,857	18.61	6.90%
General Conditions - Field Supervision, etc.			50,000	6.25	2.32%
General Requirements - Safety, Signage, etc.			16,000	2.00	0.74%
General Liability Insurance		1.1%	18,738	2.34	0.87%
Building Permit - By Owner		0.0%	-	-	0.00%
State Education Fund		0.026%	448		
Payment & Performance Bond (Subguard)		1.2%	19,805	2.48	0.92%
OH&P		10.00%	174,242	21.78	8.08%
TOTAL DIRECT COST			\$ 1,916,665	\$ 240	88.89%
Owner Related Design Costs / Contingency		12.5%	239,583	29.95	11.11%
TOTAL CONSTRUCTION COST			\$ 2,156,248	\$ 270	100.00%

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		BUILDING AREA			8,000	GSF
	DESCRIPTION	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS
31 0000	SITE WORK					
310500	<u>Demolition</u> w/Mechanical & Electrical Trades					
	Demolition					-
319500	<u>Site Restoration and Rehabilitation</u> Set up Crane Pad; confirm soil bearing capacity (2) Locations - (1) for RTU's 1 & DOAS 1 and (1) for RTU 2 & DOAS 2	2	LS	2,500.00	5,000	
	Dissassemble Crane Pads and Restore Lawn	2	LS	2,000.00	4,000	
	Site Restoration and Rehabilitation					9,000
	SUBTOTAL SITE WORK					9,000
03 3000	CONCRETE					
	SUBTOTAL CONCRETE					-
04 0000	MASONRY					
	SUBTOTAL MASONRY					-
05 0000	METAL					
051000	<u>Structural Steel</u>					
	Structural Support - DOAS 1	1.00	LS	40,000.00	40,000	
	Structural Support - DOAS 2	1.00	LS	40,000.00	40,000	
	Structural Support - RTU 1	1.00	LS	30,000.00	30,000	
	Structural Support - RTU 2	1.00	LS	30,000.00	30,000	
	Structural Support - VRF Condensing Units	1.00	LS	25,000.00	25,000	
	Hoisting / Rigging	1.00	LS	13,000.00	13,000	
	Structural Steel					178,000
	SUBTOTAL METAL					178,000
06 0000	WOOD & PLASTICS					
061000	<u>Rough Carpentry</u>					
	Misc. Rough Carpentry to support openings, etc.	1.00	LS	6,500.00	6,500	
	Temp Protection	1.00	LS	8,800.00	8,800	
	Dumpsters / Clean-up	4.00	EA	1,200.00	4,800	
	Rough Carpentry					20,100
062000	<u>Finish Carpentry</u> NONE					
	Finish Carpentry					-

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DESCRIPTION	BUILDING AREA			8,000	GSF
	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS
064000 <u>Architectural Woodwork</u> NONE Architectural Woodwork					-
SUBTOTAL WOOD & PLASTICS					20,100
07 0000 <u>THERMAL & MOISTURE PROTECTION</u>					
075000 <u>Roofing</u> Modify Existing roof openings, flashings, etc to accommodate New Curbs	2	EA	2,500.00	5,000	
New roof openings, flashings, etc to accommodate New openings	4	EA	4,000.00	16,000	
Misc Roof Protection / Material Lay Down	1	LS	5,000.00	5,000	
Roofing					26,000
SUBTOTAL THERMAL & MOISTURE PROTECTION					26,000
08 0000 <u>DOORS & WINDOWS</u>					
SUBTOTAL DOORS & WINDOWS					-
09 0000 <u>FINISHES</u>					
092000 <u>Plaster and Gypsum Board</u> Opt #1 - Boys Room Ceiling Reconfiguration	87.93	SF	18.00	1,583	
Opt #1 - Bulkhead/Soffit Face	1,510.40	SF	15.00	22,656	
Opt #1 - Restroom Ceiling Reconfiguration	25.06	SF	18.00	451	
Plaster and Gypsum Board					24,690
093000 <u>Tile</u> NONE Tile					-
095000 <u>Ceilings</u> Opt #1 - ACT Ceiling at Front of Classrooms	5,037.59	SF	8.00	40,301	
Opt #1 - Corridor Ceiling - Remove & Reinstall	609.83	SF	5.00	3,049	
Ceilings					43,350
096000 <u>Flooring</u> NONE Flooring					-
097000 <u>Wall Finishes</u> NONE					

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		BUILDING AREA			8,000	GSF
DESCRIPTION	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS	
Wall Finishes						-
<u>098000</u> <u>Acoustical Treatment</u>						
NONE						
Acoustical Treatment						-
<u>099000</u> <u>Paints and Coatings</u>						
Opt #1 - Bulkhead/Soffit Face	1,510.40	SF	2.00	3,021		
Paints and Coatings						3,021
SUBTOTAL FINISHES						71,060
<u>10 0000</u> <u>SPECIALTIES</u>						
SUBTOTAL SPECIALTIES						-
<u>11 0000</u> <u>EQUIPMENT</u>						
SUBTOTAL EQUIPMENT						-
<u>12 0000</u> <u>FURNISHING</u>						
SUBTOTAL FURNISHING						-
<u>13 0000</u> <u>SPECIAL CONSTRUCTION</u>						
SUBTOTAL SPECIAL CONSTRUCTION						-
<u>14 0000</u> <u>CONVEYING SYSTEM</u>						
SUBTOTAL CONVEYING SYSTEM						-
<u>21 0000</u> <u>MECHANICAL - FIRE PROTECTION</u>						
SUBTOTAL FIRE PROTECTION						-
<u>22 0000</u> <u>MECHANICAL - PLUMBING</u>						
<u>224100</u> <u>Plumbing piping</u>						
New Gas Line - run to new Equipment	1,213.42	LF	80.00	97,074		
Plumbing piping						97,074

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	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS
<u>224300</u> <u>Plumbing specialties</u> New Gas Meter	1.00	EA	4,000.00	4,000	
Plumbing specialties					4,000
<u>224400</u> <u>Plumbing fixtures</u> NONE					
Plumbing fixtures					-
<u>224500</u> <u>Plumbing equipment</u> NONE					
Plumbing equipment					-
<u>224750</u> <u>Pool & fountain equipment</u> NONE					
Pool & fountain equipment					-
<u>224800</u> <u>Special systems</u> NONE					
Special systems					-
SUBTOTAL MECHANICAL - PLUMBING					101,074
<u>23 0000</u> MECHANICAL - HVAC					
<u>235100</u> <u>Hydronic & refrigerant piping</u> Opt #1 - Refrigeration & Liquid Lines	932.42	LF	125.00	116,553	
Pipe Insulation	932.42	LF	11.25	10,490	
Hydronic & refrigerant piping					127,042
<u>235500</u> <u>Heat generation</u> NONE					
Heat generation					-
<u>236500</u> <u>Refrigeration</u> NONE					
Refrigeration					-
<u>237500</u> <u>Heat transfer</u> Opt #1 - 2-Ton Cassette in each Classroom	31.00	EA	3,800.00	117,800	
Opt #1 - Heat Pump (HP-1) - 10 Ton	1.00	EA	26,500.00	26,500	
Opt #1 - Heat Pump (HP-2) - 10 Ton	1.00	EA	26,500.00	26,500	
Opt #1 - Heat Pump (HP-3) - 12 Ton	1.00	EA	31,800.00	31,800	
Opt #1 - Heat Pump (HP-4) - 14 Ton	1.00	EA	37,100.00	37,100	
Opt #1 - Heat Pump (HP-5) - 8 Ton	1.00	EA	21,200.00	21,200	
Opt #1 - Heat Pump (HP-6) - 8 Ton	1.00	EA	21,200.00	21,200	
RTU 1 - 3-Ton	1.00	EA	8,400.00	8,400	
RTU 2 - 12-Ton	1.00	EA	33,600.00	33,600	
Hoisting / Rigging	1.00	LS	10,000.00	10,000	

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	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS
NONE					
Heat transfer					334,100
<u>238500</u> <u>Air handling</u>					
Opt #1 - DOAS Unit #1 - 18-Ton	1.00	EA	100,800.00	100,800	
Opt #1 - DOAS Unit #2 - 25-Ton	1.00	EA	135,000.00	135,000	
Hoisting / Rigging	1.00	LS	10,000.00	10,000	
Air handling					245,800
<u>238800</u> <u>Air distribution</u>					
12x9 Duct	309.38	LF		-	
16x10 Duct	81.72	LF		-	
16x12 Duct	87.96	LF		-	
16x9 Duct	168.74	LF		-	
18x12 Duct	55.27	LF		-	
20x12 Duct	23.74	LF		-	
28x12 Duct	21.77	LF		-	
28x14 Duct	16.59	LF		-	
30x16 Duct at Gymnasium	111.58	LF		-	
Total Wt	3,289.50	LBS	14.00	46,053	
Duct Insulation	2,626.70	SF	12.00	31,520	
Bell Mouth Take-off & Supply Duct Register, Volume Damper, Flex Duct Connection Branch Duct (12"x12" CD-1; 8" Dia. Neck; Balanced to 265 CFM each	27.00	EA	1,000.00	27,000	
Existing Exhaust Riser Below to DOAS	2.00	EA	-	-	
New Supply Riser to DOAS	2.00	EA	1,000.00	2,000	
Sidewall Diffuser at Gymnasium	14.00	EA	600.00	8,400	
Air distribution					114,973
<u>239500</u> <u>Controls</u>					
New Controls, Updating / Rework	52.00	PTS	1,500.00	78,000	
Controls					78,000
<u>239900</u> <u>Testing & balancing</u>					
Commisisoning, Testing & Balancing	1.00	LS	7,500.00	7,500	
Testing & balancing					7,500
SUBTOTAL HVAC					907,416
<u>26 0000</u> <u>ELECTRICAL</u>					
<u>262000</u> <u>Power generation</u>					
NONE					
Power generation					-
<u>263000</u> <u>Medium voltage distribution</u>					
NONE					
Medium voltage distribution					-

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DESCRIPTION	BUILDING AREA			8,000	GSF
	QTY	UNIT	UNIT COST	AMOUNT	SUB-TOTALS
<u>264000</u> <u>Service & distribution</u>					
Misc Electrical Demo to Support New Work	1.00	LS	2,500.00	2,500	
120V GFI duplex outlet at DOAS/CU-1 pad for service	1.00	EA	600.00	600	
Dedicated electrical circuit with local fused disconnect switch at new rooftop equipment	1.00	EA	1,000.00	1,000	
Power to DOAS 1	1.00	EA	3,000.00	3,000	
Power to DOAS 2	1.00	EA	3,000.00	3,000	
Power to RTU 1	1.00	EA	3,000.00	3,000	
Power to RTU 2	1.00	EA	3,000.00	3,000	
Power to Heat Pumps	6.00	EA	2,000.00	12,000	
Service & distribution					28,100
<u>265000</u> <u>Lighting</u>					
NONE					
Lighting					-
<u>266000</u> <u>Special systems</u>					
Fire Alarm Upgrades	1.00	LS	10,000.00	10,000	
Special systems					10,000
<u>267000</u> <u>Communication</u>					
NONE					
Communication					-
<u>268500</u> <u>Electric resistance heating</u>					
NONE					
Electric resistance heating					-
<u>269000</u> <u>Controls</u>					
w/Mechanical					
Controls					-
<u>269500</u> <u>Testing</u>					
Testing, Inspections & Certifications	1	LS	2,500.00	2,500	
Testing					2,500
SUBTOTAL ELECTRICAL					40,600