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"Construction Cost Consultants"

SD COST ESTIMATE

Boston Collegiate Charter School - HVAC Upgrade
Boston, MA

November 19, 2021

GRAND SUMMARY

BASE ESTIMATE		$1,608,248
HAZARDOUS MATERIAL REMOVAL		TBD

TOTAL DIRECT COST		$1,608,248
GENERAL CONDITIONS	15%	$241,237
GENERAL ADMINISTRATIVE O&P	8%	$147,959
BOND, GL INS. PERMIT	3.5%	$69,911
CONTINGENCY	12%	$248,083
ESCALATION (spring 2023)	9%	$208,389

TOTAL CONSTRUCTION COST		$2,523,826

ALTERNATES:

ALTERNATE NO. 1 - CHAIN LINK IN LIEU OF LOUVERED EQUIPMENT SCREEN SCREEN	($69,135)
ALTERNATE NO. 2 - 2nd FLOOR ROOF ACCESS WINDOW	NIC

PROJECT:	Boston Collegiate Charter School - HVAC Upgrade	NO. OF SQ. FT.:	18,960
LOCATION:	Boston, MA	COST PER SQ. FT.:	84.82
CLIENT:	MDS|Miller Dyer Spears Architects		
DATE:	19-Nov-21		

No.: 21067

SUMMARY	DIVISION TOTAL	PERCENT OF PROJECT	COST PER SF
DIVISION 02 - EXISTING CONDITIONS	56,848	4%	3.00
DIVISION 03 - CONCRETE	19,790	1%	1.04
DIVISION 04 - MASONRY	50,300	3%	2.65
DIVISION 05 - METALS	62,654	4%	3.30
055000 METAL FABRICATIONS	7,500	0%	0.40
DIVISION 06 - WOOD, PLASTICS & COMPOSITES	71,500	4%	3.77
DIVISION 07 - THERMAL & MOISTURE PROTECTION			
074000 SIDING PANELS	1,100	0%	0.06
075000 ROOFING & FLASHING	0	0%	0.00
078000 FIRE AND SMOKE PROTECTION	18,012	1%	0.95
079000 JOINT PROTECTION	0	0%	0.00
DIVISION 08 - OPENINGS	1,350	0%	0.07
085000 EXT WINDOW & DOORS	0	0%	0.00
088000 GLAZING	0	0%	0.00
DIVISION 09 - FINISHES			
092000 GYPSUM WALLBOARD ASSEMBLIES	159,055	10%	8.39
095100 ACOUSTICAL CEILINGS	8,720	1%	0.46
096500 RESILIENT FLOORING	1,000	0%	0.05
099000 PAINTING & COATING	8,200	1%	0.43
DIVISION 10 - SPECIALTIES	48,880	3%	2.58
DIVISION 11 - EQUIPMENT	0	0%	0.00
DIVISION 12 - FURNISHINGS	0	0%	0.00
DIVISION 13 - SPECIAL CONSTRUCTION	48,600	3%	2.56
DIVISION 14 - CONVEYING EQUIPMENT	0	0%	0.00
DIVISION 21 - FIRE SUPPRESSION	5,000	0%	0.26
DIVISION 22 - PLUMBING	0	0%	0.00
DIVISION 23 - HVAC	909,838	57%	47.99
DIVISION 25 - INTEGRATED AUTOMATION	0	0%	0.00
DIVISION 26 - ELECTRICAL	125,081	8%	6.60
DIVISION 27 - COMMUNICATIONS	0	0%	0.00
DIVISION 28 - ELECTRONIC SAFETY & SECURITY	0	0%	0.00
DIVISION 31 - EARTHWORK	3,820	0%	0.20
DIVISION 32 - EXTERIOR IMPROVEMENTS	1,000	0%	0.05
DIVISION 33 - UTILITIES	0	0%	0.00

TOTAL	1,608,248	100%	84.82

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
DIVISION 02 - EXISTING CONDITIONS				
022600 HAZARDOUS MATERIAL ASSESSMENT			SEE SUMMARY	
024100 DEMOLITION				
Interior Remove Existing (Not Haz Mat):				
Remove ACT 2x2x3/4 @ MEP work	W / 095100			
#1 Floor/CLG fin@flr open vert shaft(3x3	5	EA	1,250.00	6,250
MEP demolition	W / DIV 22-28			
Elec Rm 13A Interior Remove Existing (Not Haz Mat):				
Salvage dbl dr & frame	1	EA	250.00	250
12'H GWB partition (8 LF)	96	SF	8.00	768
(8/A1.03)Int Ceiling Cut @ Support Horiz Distribution Piping (390 LF Max 1" dia):				
Unistrut trapeze support 4' oc	268	LOC	185.00	49,580
Exterior Remove Existing (Not Haz Mat):				
Window sash	W / 074000			

				56,848
DIVISION 03 - CONCRETE				
033000 CAST IN PLACE CONCRETE				
#15 Exterior Equipment Pad:				
Reinf concrete pad (#5 @ 12"oc t & b)	381	SF	40.00	15,240
Haunched reinf edge(12"Wx24"Dx62LF)	5	CY	450.00	2,250
#14 patch granite area way cap@rail rem'l	46	LF	50.00	2,300

				19,790
DIVISION 04 - MASONRY				
042000 UNIT MASONRY				
Int cut & patch masonry @ MEP:				
Core, Seal Wall open - horiz shaft	43	EA	500.00	21,500
Cut in & Reframe Masonry Bearing Wall -Complete:				
#3 & 4wall open - horiz shaft	6	EA	4,800.00	28,800

				50,300

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
DIVISION 05 - METALS				
051000 STRUCTURAL METAL FRAMING				
#20 Fixed louver screen- East Side				
Galv Post HSSS6x6x3/8 (5 EA x 9'H)	0.6492	TON	15,000.00	9,738
Galv Horiz Girt HSSS6x4x5/16	0.8765	TON	15,000.00	13,148
Acoustic screen- North & South side:				
#17 Galv Post W6x25 (4 EA x 9'H)	0.4725	TON	20,000.00	9,450
#18 Galv Post w/wall anchorMC6x12(2EA	0.1134	TON	20,000.00	2,268
#16 Infill Ext Areaway 3'W:				
1"D galv stl bar grating w/ removable sect	114	SF	225.00	25,650
*Includes Galv stl ledger angles w/ epoxy anchors (L6x3 1/2x 5/16)				
Interior Distribution Units (70 lbs max):				
#7 Unistrut clg support	3	LOC	by hvac	
Interior Horiz Distribution Piping (390 LF Max 1" dia):				
Unistrut trapeze support 4' oc	98	LOC	by hvac	
Exterior Wall Ductwork Support(A1.03):				
Unistrut support	1	LOC	by hvac	
Supply Steel lintel @ Cut in & Reframe Masonry Bearing Wall -Complete:				
#3 & 4 @ 12" wall open - horiz shaft	6	EA	400.00	2,400
054000 COLD FORMED METAL FRAMING		N/A		

				62,654
055000 METAL FABRICATIONS				
Ext mech equip sling support stand	W / HVAC			
#21 Site bollard	2	EA	2,500.00	5,000
Misc metals allowance	1	LS	2,500.00	2,500

				7,500
DIVISION 06 - WOOD, PLASTICS & COMPOSITES				
061000 ROUGH CARPENTRY				
Cut in & Reframe:				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Floor open - vert shaft (3x3)	6	EA	5,000.00	30,000
Note #9 wall blk @ terminal unit	34	EA	750.00	25,500
Misc rough carpentry	1	LS	10,000.00	10,000
062000 FINISH CARPENTRY				
New Closet & Shaft (7 LOC):				
Wall base to match	35	LF	25.00	875
Chair rail to match	35	LF	75.00	2,625
Misc int patching	1	LS	2,500.00	2,500

				71,500
DIVISION 07 - THERMAL & MOISTURE PROTECTION				
074000 SIDING PANELS				
Insulated Metal Wall Panel @ Modified Window :				
#11 Remove window sash frame remains	1	LOC	100.00	100
#13 Alum infill panel @ duct penetration	1	LOC	1,000.00	1,000

				1,100
075000 ROOFING & FLASHING				
Patch / flash @ MEP		N/A		
078000 FIRE AND SMOKE PROTECTION				
Firestopping(D/A1.01)	18,960	GSF	0.95	18,012

				18,012
079000 JOINT PROTECTION	W / UNIT COST			
DIVISION 08 - OPENINGS				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
081700 INTEGRATED DOOR OPENING ASSEMBLIES				
Elec Rm 13A:				
#6 Reinstall Salvaged dbl dr & frame	1	EA	250.00	250
083000 SPECIALTY DOORS AND FRAMES				
Access panels	W / MEP			
087000 HARDWARE	W / UNIT COST			
Replace Door Hardware Rm 13A	1	EA	1,100.00	1,100

				1,350
085000 EXT WINDOW & DOORS		N/A		
088000 GLAZING	W / UNIT COST			
DIVISION 09 - FINISHES				
092000 GYPSUM WALLBOARD ASSEMBLIES				
Gypsum Plaster Patching on Exp MTL Lath:				
12'H Enlarged Elec Rm 13A New Gyp Partitions:				
1A chase wall	38	SF	30.00	1,140
1A rated wall	84	SF	30.00	2,520
Misc wall/ clg patching	1	LOC	1,000.00	1,000
12'H New Gyp Partitions-Duct/Pipe penetrations:				
2A shaft wall(1 LOC)	36	SF	45.00	1,620
2E shaft wall(1 LOC)	60	SF	45.00	2,700
5A shaft wall(1 LOC)	48	SF	45.00	2,160
5B shaft wall (2 LOC)	360	SF	45.00	16,200
5C shaft wall (1 LOC)	48	SF	45.00	2,160
Misc patching @ shaft	6	LOC	1,000.00	6,000

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
New Gyp Soffit :				
1st flr 2 ductwork-complete	17	LF	95.00	1,615
(8/A1.03)Int Ceiling patch @ Support Horiz Distribution Piping (390 LF Max 1" dia):				
Unistrut trapeze support 4' oc	268	LOC	455.00	121,940
*Includes sections 092116.23-092300				

				159,055
095100 ACOUSTICAL CEILINGS				
Remove ACT 2x2x3/4 @ MEP:				
Toilet rm - 100 % (1 loc)	132	SF	25.00	3,300
Toilet rm - selective (2 loc)	86	SF	25.00	2,150
Replace ACT 2x2x3/4	218	SF	15.00	3,270
*Existing ceiling fixtures remain protected in place				

				8,720
096500 RESILIENT FLOORING				
Resilient wall base - to match (096513):				
Enlarged elec closet	1	LOC	1,000.00	1,000

				1,000
099000 PAINTING & COATING				
Interior Prep & Painting:				
New gyp shaft wall@Duct/Pipe penetratio	6	LOC	750.00	4,500
#7 Exist dbl dr & frame- elec closet	1	EA	500.00	500
Misc int painting	1	LS	2,500.00	2,500
Wood Finish (0993020):				
New wall base to match	35	LF	10.00	350
New chair rail to match	35	LF	10.00	350
Wood floor		NIC		
Misc Exterior Prep & Painting		N/A		
Painted exterior ductwork		N/A		

				8,200

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
DIVISION 10 - SPECIALTIES				
109000 MISC SPECIALTIES				
#20East Side 2" Louvered Equipment Acoustical Screen:				
Fixed louver screen (17' 6" x 9' H)	158	SF	110.00	17,380
Fixed louver screen- sgl gate(3'x 9' H)	1	EA	4,500.00	4,500
Fixed louver screen- dbl gate(7'x 9'H)	3	EA	9,000.00	27,000
Structural stl support frame	W / 051200			

				48,880
DIVISION 11 - EQUIPMENT		N/A		
DIVISION 12 - FURNISHINGS		N/A		
DIVISION 13 - SPECIAL CONSTRUCTION				
130000 SPECIAL CONSTRUCTION				
#19 Acoustic Modular Barrier Panel 4":				
North & south side (24' x 9'H)	216	SF	225.00	48,600
Structural stl support frame	W / 051200			

				48,600
DIVISION 14 - CONVEYING EQUIPMENT		N/A		
DIVISION 21 - FIRE SUPPRESSION				
210000 FIRE SUPPRESSION				
Turn-up heads	1	ALLOW	5,000.00	5,000

				5,000
DIVISION 22 - PLUMBING				

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
220000 PLUMBING		N/A		
DIVISION 23 - HVAC				
230000 HVAC				
Ventilation Equipment :				
AHU-1	4,000	CFM	18.50	74,000
AHU Dunnage	1	EA	5,000.00	5,000
AHU-1 Valving and Connections	1	LS	2,500.00	2,500
VRF System:				
VRF Condenser -4&5	34	TON	1,850.00	62,900
Base Rail	1	LS	3,000.00	3,000
Branch Controller 12 Port	2	EA	10,500.00	21,000
Sub Branch Controller 8-4 Port	2	EA	6,500.00	13,000
Indoor HP	34	EA	2,650.00	90,100
Refrigerant Main	400	LF	45.00	18,000
Refrigerant Branch (line set)	34	EA	2,000.00	68,000
Condensate Piping	855	LF	38.00	32,490
Condensate Pump	34	EA	350.00	11,900
Misc. VRF Accessories	1	LS	5,000.00	5,000
Ductwork:				
Galvanized Ductwork	9,546	LBS	18.00	171,828
Supply/duct insul.	5,200	SF	10.00	52,000
Grills dampers and diffusers	57	EA	300.00	17,100
ATC				
VRF System	1	LS	45,000.00	45,000
AHU-1	1	EA	15,000.00	15,000
Programing/Graphics/Testing	1	LS	25,000.00	25,000
Coordination, and HVAC GC	1	LS	50,000.00	50,000
Siesmic/Vibration	1	LS	5,000.00	5,000
Unistrut Hanger Allowance	268	EA	350.00	93,800
REF Charge for VRF	1	LS	2,000.00	2,000
Rigging/ Material Handling	1	LS	12,000.00	12,000
Test and balance	18,960	GSF	0.75	14,220

				909,838
DIVISION 26 - ELECTRICAL				
260000 ELECTRICAL				
Lighting Fixtures:				
Type J-Utility with Cage	3	EA	195.00	585

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
MC-12/2 w/G	90	LF	1.50	135
EMT-3/4"C-3#12	90	LF	3.15	284
Lighting Control	1	ALLOW	1,500.00	1,500
Power				
Duplex WP	3	EA	105.00	315
Junction Box	8	EA	97.00	776
100A/3P output c/b in exist RP2GB Panel	1	EA	200.00	200
60A/3P output c/b in exist Panels	4	EA	150.00	600
250A/3P output NEMA C/B	1	EA	350.00	350
300A/3P output NEMA C/B	1	EA	450.00	450
MP in New Electrical Closet 100A	1	EA	3,600.00	3,600
Misc. Elec. Closet Devices	1	ALLOW	1,000.00	1,000
Feeder Allowance	1	LS	2,000.00	2,000
Fire Alarm				
Duct Smoke Detector	8	EA	110.00	880
Control Module	8	EA	85.00	680
Key Operated Remote Test Station	8	EA	115.00	920
Remote Alarm Indicator	8	EA	450.00	3,600
MC-14/4C red jacket	960	LF	2.85	2,736
AFC-#4901 16/2 14/2	800	LF	3.88	3,104
EMT-3/4"C-4/C #14	200	LF	6.70	1,340
EMT-3/4"C-16/2 14/2	400	LF	7.90	3,160
Tie-In to Existing Alarm	1	LS	1,500.00	1,500
Program & pretest	1	EA	3,500.00	3,500
BFD test & certif.	1	EA	5,000.00	5,000
Mechanical Wiring:				
Indoor Unit	34	EA	650.00	22,100
Branch Controller	4	EA	650.00	2,600
CP	34	EA	375.00	12,750
VRF Condensers	4	EA	850.00	3,400
AHU	1	EA	1,250.00	1,250
Thermal Switches	72	EA	110.00	7,920
Disconnect Switches	5	EA	750.00	3,750
Misc. Mech conn.	1	LS	2,500.00	2,500
Unistrut Allowance	1	LS	3,500.00	3,500
Temporary Power and Shut down		NIC		
20% OH&P	1	LS	19,596.90	19,597
DJE	1	LS	7,500.00	7,500

				125,081

DIVISION 31 - EARTHWORK

310000 EARTHWORK

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
Exterior Equipment Pad 12"D -Existing Gravel Drive:				
Grading-excavate base 12"	28	CY	20.00	560
Excavate/backfill perim ftg 1 x 2	62	LF	20.00	1,240
New 12" Gravel base	14	CY	40.00	560
311000 SITE CLEARING				
Site Prep @ Exterior Equipment Pad:				
Note #14 demo areaway rail	46	LF	10.00	460
Misc site prep	1	LS	1,000.00	1,000

				3,820
DIVISION 32 - EXTERIOR IMPROVEMENTS				
320000 EXTERIOR IMPROVEMENTS				
Restore disturbed area-Exist. Gravel Drive	1	LS	1,000.00	1,000

				1,000
DIVISION 33 - UTILITIES		REMAIN		

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LOCATION:	Boston, MA
CLIENT:	MDS|Miller Dyer Spears Architects
DATE:	19-Nov-21

No.: 21067

ALTERNATES

ALTERNATE NO. 1 - CHAIN LINK IN LIEU OF LOUVERED EQUIPMENT SCREEN	-69,135
ALTERNATE NO. 2 - 2nd FLOOR ROOF ACCESS WINDOW	17,991

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ALTERNATE NO. 1 - CHAIN LINK IN LIEU OF LOUVERED EQUIPMENT SCREEN SCREEN				
Delete:				
Galv Post HSSS6x6x3/8 (5 EA x 9'H)	-0.6492	TON	15,000.00	-9,738
Galv Horiz Girt HSSS6x4x5/16	-0.8765	TON	15,000.00	-13,148
Fixed louver screen (17' 6" x 9' H)	-158	SF	110.00	-17,380
Fixed louver screen- sgl gate(3'x 9' H)	-1	EA	4,500.00	-4,500
Fixed louver screen- dbl gate(7'x 9'H)	-3	EA	9,000.00	-27,000
Add #20A:				
Chain link fence(17' 6" x 9' H)	158	SF	15.00	2,370
Chain link - sgl gate(3'x 9' H)	1	EA	3,000.00	3,000
Chain link - dbl gate(7'x 9'H)	3	EA	6,300.00	18,900
SUBTOTAL				-47,496
GENERAL CONDITIONS		15 %		-7,124
SUBTOTAL				-54,620
P&P BOND & INSURANCE		2.75 %		-1,502
SUBTOTAL				-56,122
FEE		3 %		-1,684
SUBTOTAL				-57,806
DESIGN CONTINGENCY		15 %		-8,671
SUBTOTAL				-66,476
ESCALATION		4 %		-2,659
TOTAL ALTERNATE NO. 1				-69,135

DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL
ALTERNATE NO. 2 - 2nd FLOOR ROOF ACCESS WINDOW				
Add:				
Remove window-complete #25	1	EA	250.00	250
New perim BLK & flash -complete #26	21	LF	10.00	210
Roof access wind/ dr (48"x74")-complete #27	1	EA	10,000.00	10,000
Ext galv stair-complete #28	1	FLT	900.00	900
Int wd access stair-complete #28	1	FLT	250.00	250
Misc int patching	1	LS	250.00	250
Roof patch / flash @ stair	1	LS	500.00	500
SUBTOTAL				12,360
GENERAL CONDITIONS		15 %		1,854
SUBTOTAL				14,214
P&P BOND & INSURANCE		2.75 %		391
SUBTOTAL				14,605
FEE		3 %		438
SUBTOTAL				15,043
DESIGN CONTINGENCY		15 %		2,256
SUBTOTAL				17,299
ESCALATION		4 %		692
TOTAL ALTERNATE NO. 2				17,991