
Location:	Brighton Area Schools BAS Video Conference	Project Number:	18-785
Project:	BAS 2019 Bond	Date:	6-1-20, 4:30 pm

1. Review meeting minutes dated 5/18/20 Committee meeting.
2. Geotechnical / survey consultant update.
 - a. Geotech should be on site conducting Phase 2 work presently. Not current update
 - b. Surveys to be completed in next couple of weeks.
3. Document scanning: time and date to be determined.
4. Project scope
 - a. Phase 1,
 - i. Awaiting committee approval on scope and budget
 - b. Phase 2,
 - i. STEAM Center, review estimate of probable cost (refer to attached)
 - ii. Scranton Middle School, review estimate of probable cost (refer to attached)
 - iii. High School Band update.
5. Citizens / Building Committee Formation, meeting. Status.
6. General open discussion.

Action Items:

- Issuance of Phase 1, drawings and specifications
- Phase 2, Design Development to be issued 7/27/20.

Distribution: BAS Project Team

1021 West Baraga Avenue,
Marquette, Michigan 49855
Phone (906) 228-4480 Fax (906) 228-7524

8571 W. Grand River Ave., Suite 600
Brighton, Michigan 48816
Phone: (810) 229-2701 Fax: (810) 229-6767

Location:	Brighton Area Schools	Project Number:	18-785
Project:	BAS Video Conference	Date:	5-18-20, 4:30 pm
	BAS 2019 Bond		

Present: Refer to attached.

Discussion: Purpose of meeting to discuss 2019 Bond scope.

1. Reviewed and approved meeting minutes dated meeting minutes dated 5/4/20. To be posted with no changes.
2. Geotechnical updated. Currently working on site.
3. Imaging contractor status.
 - a. No current date for scanning services. Estimated to be completed by end of June.
4. Project scope / estimate review comments for Phase 1 documentation. Committee to review further. Once both documents and budget approved, IDI shall make appropriate changes and issue for bidding purposes.
 - a. BECC, Concessions/Toilet Building
 - i. Delete proposed 3-foot guardrail at back of existing tier concrete seating.
 - ii. Signage options discussed.
 1. Base bid, individual letters, with lighting onto surface of letters.
 2. Alternate bid for individually back-lite LED letters.
 - iii. Surge protection required on site. Concessions building indicated, site lighting to be added.
 - iv. Questions raised regarding dedication of contingency monies for irrigation system. Scope of irrigation system replacement unknown until time of construction. Changes in scope shall be addressed at that time to accommodate current unknown conditions in the form of bulletins.
 - v. Hose bib-type fixture adjacent to team benches to be changed to match that installed at Scranton Middle School.
 - vi. Specifications to address care and maintenance of field until such time as its turned over to the District.

- vii. Recommendation for bulldog graphic to above letters on building, however determined not to be a desired appearance and not to include.
- viii. Both Hawkins Concessions and High School Storage building roofing projects shall be considered an alternate under the BECC project.
 - 1. Additional 30 feet in length of roofing to be included at High School storage to accommodate forthcoming addition.
 - 2. Fascia trim shall be included in the roofing to cover existing exposed wood at Hawkins Concession. Fascia black, shingles black.
 - 3. Post enclosure treatment at Hawkins Concession to be determined. May be handled directly by club.
- b. Maintenance Building
 - i. Clarification that bus bay exterior trench drain by code cannot be connected to interior drains. Drawings indicate drained to edge of site paving.
 - ii. Budget remains unchanged at this point.
 - iii. Bus garage access gate technology to be revised. Barton Malow to advise.
- 5. Phase 2 STEAM, High School, Scranton Middle School update.
 - a. STEAM Center
 - i. Fire wall construction adjacent at existing building discussed along with necessary modifications.
 - ii. Second floor to have painted masonry finish.
 - iii. Schematic documentation issued and estimates are underway.
- 6. Phase 3 Indoor Practice Facility
 - i. Horning grounds to be examined for improvements on north side. Current areas require restoration.
- 7. Citizens Committee to be established at each building. Design team to work with Chris Turner and with building groups as necessary.

Distribution: BAS Project Team, refer to attached.



BRIGHTON AREA SCHOOLS

HS STEAM BUILDING

Schematic Design Estimate - 001



Lead Estimator: Bill Cox
June 01, 2020



PROJECT COST SUMMARY

Brighton Area School District
 Steam Building
 Brighton, MI

Schematic Design
 Clark Construction Project 2836
 Schematic Design Rev 001
 June 1, 2020

BOND ITEM	GSF/Bond Item		\$/GSF		Direct Trade Cost	D/E/Bid Contingency (%)	Design /Estimate/Bid Contingency (\$)	Current Est. w/Est. Cont.	Current Est w/ General Conditions	Est. w/Escalation	Est. w/COVID 19 Contingency (%)	Construction Contingency (%)	SD Est Total	Bond Value	Bond Contingency	Bond Budget	Variance (\$)	Variance (%)
001 001 - New STEAM Building	21615	GSF	\$ 359	/GSF	6,482,906	10.00%	648,291	7,131,197	\$7,238,165	\$ 7,238,165	\$ 7,382,928	5%	7,752,074	5,714,286		5,714,286	2,037,788	36%
002 002 - Renovation	2400	GSF	\$ 13	/GSF	26,960	10.00%	2,696	29,656	\$30,101	\$ 30,101	\$ 30,703	5%	32,238	400,000		400,000	(367,762)	-92%
Subtotal Bond Items:				24015 GSF	\$ 372 /GSF		6,509,866	650,987	7,160,853	\$7,268,265	7,268,265	7,413,631	7,784,312	6,114,286		6,114,286	1,670,026	27%



06/01/2020

Area Summary	Cost	Cost / Area
001 - New STEAM Building	\$6,482,906	\$299.93
002 - Renovation	\$26,960	\$11.23
Subtotal Direct Cost	24,015 GSF	\$6,509,866
		\$271.07 /GSF

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
A1010 STANDARD FOUNDATIONS						
0235	Concrete Footings	26.97	cuyd	\$300.00	\$8,091	\$0.34
0236	Perimeter Drains	445.86	lnft	\$20.00	\$8,917	\$0.37
0237	Shore Existing Footings	1.00	allw	\$50,000.00	\$50,000	\$2.08
0238	Footing Rebar @ 75 lbs per c.y.	1.01	tons	\$2,500.00	\$2,528	\$0.11
0239	Concrete Foundation Wall	105.22	cuyd	\$300.00	\$31,567	\$1.31
0240	Foundation Wall Rebar @ 100 lbs per c.y.	5.26	tons	\$2,500.00	\$13,153	\$0.55
0241	Column Pads	11.67	cuyd	\$300.00	\$3,500	\$0.15
0242	Form Column Pads	420.00	sqft	\$16.00	\$6,720	\$0.28
0243	Column Pad Rebar @ 125 lbs per c.y.	0.73	tons	\$2,500.00	\$1,823	\$0.08
0244	Sheet Waterproofing, 60 mil	1,623.46	sqft	\$5.25	\$8,523	\$0.35
0245	Foundation Excavation	190.00	cuyd	\$20.00	\$3,800	\$0.16
0246	Backfill Foundations	136.19	cuyd	\$20.00	\$2,724	\$0.11
0247	Install Dowels, existing footing or slab	220.00	each	\$20.00	\$4,400	\$0.18

Subtotal A1010 Standard Foundations **\$145,746** **\$6.07**

A1030 SLAB ON GRADE						
0248	Slab on Grade, 4"	12,452.62	sqft	\$5.50	\$68,489	\$2.85
0249	Tiered Floor	7.00	cuyd	\$750.00	\$5,250	\$0.22
0250	WWM Sheets-slabs, 4x4 2.1x2.1	241.32	sqrs	\$80.00	\$19,306	\$0.80
0251	Form Slab Edge, On Grade	506.06	lnft	\$6.00	\$3,036	\$0.13
0252	Vapor Barrier, Slab on Grade	12,452.62	sqft	\$0.35	\$4,358	\$0.18
0253	Insulation Board Polystyrene 2" (Substructure)	1,623.46	sqft	\$2.00	\$3,247	\$0.14
0254	2" Perimeter Insulation, 4'-0"	2,024.24	sqft	\$5.00	\$10,121	\$0.42

Subtotal A1030 Slab on Grade **\$113,808** **\$4.74**

B1010 FLOOR CONSTRUCTION						
0255	Steel Connections	7.90	tons	\$4,500.00	\$35,550	\$1.48
0256	Structural Steel, 12.75 lbs/per sf (Floor)	79.39	tons	\$4,500.00	\$357,235	\$14.88
0257	Concrete Slabs on Metal Deck, 4"	9,485.49	sqft	\$5.00	\$47,427	\$1.97
0258	Decking Steel 1.5" Deep (Floor)	9,485.49	sqft	\$3.50	\$33,199	\$1.38
0259	Edge Form Elevated Decks	553.05	lnft	\$15.00	\$8,296	\$0.35

Subtotal B1010 Floor Construction **\$481,707** **\$20.06**

B1020 ROOF CONSTRUCTION						
0260	Canopy Steel	1.00	allw	\$10,000.00	\$10,000	\$0.42
0261	Steel Connections	3.30	tons	\$4,500.00	\$14,850	\$0.62

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
0262	Structural Steel, 7 lbs/per sf (Roof)	33.20	tons	\$4,500.00	\$149,396	\$6.22
0263	Decking Steel 1.5" Deep (Roof)	12,104.00	sqft	\$3.50	\$42,364	\$1.76
0264	Misc. Metal Allowance	21,615.00	sqft	\$3.50	\$75,653	\$3.15

Subtotal B1020 Roof Construction **\$292,263** **\$12.17**

B2010 EXTERIOR WALLS

0265	Weather Barrier	12,398.16	sqft	\$5.00	\$61,991	\$2.58
0266	CMU, 8" - Exterior with Insulated Cores	12,398.16	sqft	\$25.00	\$309,954	\$12.91
0267	CMU, 4" Split Face - Exterior	1,997.83	sqft	\$18.00	\$35,961	\$1.50
0268	Block, exterior loadbearing, 8" Filled Cores below grade	810.00	sqft	\$40.00	\$32,400	\$1.35
0269	Brick Veneer	4,678.75	sqft	\$26.00	\$121,647	\$5.07
0270	Aluminum Composite Panels	5,721.59	sqft	\$60.00	\$343,295	\$14.30
0271	Soffit Framing	356.38	sqft	\$20.00	\$7,128	\$0.30
0272	Soffit, Metal	356.38	sqft	\$25.00	\$8,909	\$0.37

Subtotal B2010 Exterior Walls **\$921,285** **\$38.36**

B2020 EXTERIOR WINDOWS

0273	Aluminum Storefront	664.30	sqft	\$60.00	\$39,858	\$1.66
0274	Curtain Wall	816.77	sqft	\$90.00	\$73,510	\$3.06

Subtotal B2020 Exterior Windows **\$113,368** **\$4.72**

B2030 EXTERIOR DOORS

0275	Aluminum Framed Entrance Doors	10.00	each	\$5,000.00	\$50,000	\$2.08
0276	Coiling OH Door, 10' x 10'	1.00	each	\$9,000.00	\$9,000	\$0.37
0277	Coiling OH Door, 8' x 10'	2.00	each	\$9,000.00	\$18,000	\$0.75

Subtotal B2030 Exterior Doors **\$77,000** **\$3.21**

B3010 ROOF COVERINGS

0278	EPDM Roof	12,104.68	sqft	\$15.00	\$181,570	\$7.56
0279	Insulation Board Polystyrene 2" (Shell)	12,398.16	sqft	\$3.50	\$43,394	\$1.81
0280	Insulation Board Polystyrene 5" (Shell)	12,104.68	sqft	\$6.00	\$72,628	\$3.02
0281	Detail for where new building meets existing at roof	210.43	lnft	\$50.00	\$10,521	\$0.44
0282	Sheetmetal Coping	1,077.00	lnft	\$20.00	\$21,540	\$0.90
0283	Roof Nailers	1,077.00	lnft	\$8.00	\$8,616	\$0.36
0284	Walkway Pads-Roof	300.00	sqft	\$5.00	\$1,500	\$0.06

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
Subtotal B3010 Roof Coverings					\$339,769	\$14.15
C1010 PARTITIONS						
0285	3-5/8" 20GA Wall 5/8" Drywall	1,143.81	sqft	\$9.50	\$10,866	\$0.45
0286	CMU, 8" - Interior	10,380.20	sqft	\$25.00	\$259,505	\$10.81
0287	CMU, 8" Shaft	7,387.01	sqft	\$30.00	\$221,610	\$9.23
0288	Interior Storefront	782.33	sqft	\$50.00	\$39,117	\$1.63
0289	Caulk & Sealants	34,013.16	sqft	\$0.50	\$17,007	\$0.71
0290	New Connection to Existing Building at Door A/C102	1.00	allw	\$15,000.00	\$15,000	\$0.62
0291	Wire Mesh Partition w/ Swing Doors	12.00	lnft	\$250.00	\$3,000	\$0.12
Subtotal C1010 Partitions					\$566,104	\$23.57
C1020 INTERIOR DOORS						
0292	Doors, Frames, Hardware - Wood	14.00	each	\$2,500.00	\$35,000	\$1.46
0293	Doors, Frames, Hardware - Hollow Metal	15.00	each	\$3,000.00	\$45,000	\$1.87
0294	Coiling OH Door, 14' x 10'	1.00	each	\$11,500.00	\$11,500	\$0.48
0295	OH Glass Door	5.00	each	\$15,000.00	\$75,000	\$3.12
Subtotal C1020 Interior Doors					\$166,500	\$6.93
C1030 FITTINGS						
0296	Toilet Partition Phenolic	6.00	each	\$1,500.00	\$9,000	\$0.37
0297	Toilet Accessories	33.00	each	\$150.00	\$4,950	\$0.21
0298	Markerboards	2.00	each	\$1,000.00	\$2,000	\$0.08
0299	Louvers	4.00	each	\$500.00	\$2,000	\$0.08
Subtotal C1030 Fittings					\$17,950	\$0.75
C2010 STAIR CONSTRUCTION						
0300	Steel Stairs	5.00	ftt	\$15,000.00	\$75,000	\$3.12
0301	Concrete Stair Fill	952.37	sqft	\$25.00	\$23,809	\$0.99
0302	Ornamental Rail	57.11	lnft	\$500.00	\$28,556	\$1.19
0303	Wall Railing	39.04	lnft	\$65.00	\$2,538	\$0.11
0304	Stair Railing	70.00	lnft	\$125.00	\$8,750	\$0.36
0305	Steel Ladder	1.00	each	\$5,000.00	\$5,000	\$0.21
0306	Stair Nosings	100.41	lnft	\$7.00	\$703	\$0.03
0307	Geofoam	20.70	cuyd	\$150.00	\$3,105	\$0.13

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
Subtotal C2010 Stair Construction					\$147,461	\$6.14

C3010 WALL FINISHES

0308	Painting, Interior Walls	15,671.14	sqft	\$1.10	\$17,238	\$0.72
0309	Painting, Interior Walls Epoxy	1,696.55	sqft	\$1.50	\$2,545	\$0.11
0310	Acoustic Wall Panel	1.00	allw	\$30,000.00	\$30,000	\$1.25

Subtotal C3010 Wall Finishes					\$49,783	\$2.07
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C3020 FLOOR FINISHES

0311	Carpet Tile	169.07	sqyd	\$40.00	\$6,763	\$0.28
0312	Walk-Off Mat - Carpet Tile	57.20	sqft	\$5.00	\$286	\$0.01
0313	Polished Concrete Floors	3,092.67	sqft	\$5.00	\$15,463	\$0.64
0314	Rubber Flooring	121.97	sqft	\$10.00	\$1,220	\$0.05
0315	Resilient Base, 4"	1,221.93	lnft	\$2.00	\$2,444	\$0.10

Subtotal C3020 Floor Finishes					\$26,176	\$1.09
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C3030 CEILING FINISHES

0316	2x2 Lay-in	8,004.71	sqft	\$5.00	\$40,024	\$1.67
0317	5/8" Drywall Ceiling 6" Stud Frame	1,941.40	sqft	\$12.00	\$23,297	\$0.97
0318	4' Ceiling Transition Bulkhead	270.84	lnft	\$110.00	\$29,793	\$1.24
0319	Acoustic Panel Clouds	1.00	allw	\$75,000.00	\$75,000	\$3.12
0320	Painting, Ceilings	10,869.56	sqft	\$2.50	\$27,174	\$1.13

Subtotal C3030 Ceiling Finishes					\$195,287	\$8.13
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D1010 ELEVATORS AND LIFTS

0321	Traction Elevator	2.00	stop	\$70,000.00	\$140,000	\$5.83
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Subtotal D1010 Elevators and Lifts					\$140,000	\$5.83
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D2010 PLUMBING FIXTURES

0322	Misc Connections	5.00	each	\$354.35	\$1,772	\$0.07
0323	Wash Fountains/EWC's	6.00	each	\$4,134.12	\$24,805	\$1.03
0324	Expansion Tank	1.00	each	\$590.59	\$591	\$0.02
0325	Plumbing Fixtures & Carriers	15.00	each	\$1,476.47	\$22,147	\$0.92

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
Subtotal D2010 Plumbing Fixtures					\$49,314	\$2.05
D2020 DOMESTIC WATER DISTRIBUTION						
0326	Backflow Preventer	1.00	each	\$2,362.35	\$2,362	\$0.10
0327	Plumbing Piping Insulation	700.00	lnft	\$9.45	\$6,615	\$0.28
0328	Domestic Water Piping	700.00	lnft	\$35.44	\$24,805	\$1.03
0329	Recirculating Pump	1.00	each	\$1,181.18	\$1,181	\$0.05
0330	Water Heater, Electric	1.00	each	\$2,952.94	\$2,953	\$0.12
Subtotal D2020 Domestic Water Distribution					\$37,916	\$1.58
D2030 SANITARY WASTE						
0331	Sanitary Piping Above Ground	615.00	lnft	\$59.06	\$36,321	\$1.51
0332	Floor Drains/CO	13.00	each	\$295.29	\$3,839	\$0.16
0333	Oil Interceptor	1.00	each	\$2,362.35	\$2,362	\$0.10
0334	Trench Drain	24.00	lnft	\$147.65	\$3,544	\$0.15
0335	Excavation and Backfill	320.00	lnft	\$59.06	\$18,899	\$0.79
0336	Manhole Cover/Frame	1.00	each	\$2,952.94	\$2,953	\$0.12
0337	UG Sanitary	320.00	lnft	\$64.96	\$20,789	\$0.87
Subtotal D2030 Sanitary Waste					\$88,706	\$3.69
D2040 RAINWATER DRAINAGE						
0338	Elevator Sump Pump	1.00	each	\$2,362.35	\$2,362	\$0.10
0339	Excavation and Backfill	140.00	lnft	\$59.06	\$8,268	\$0.34
0340	Storm Piping Above Grade	530.00	lnft	\$88.59	\$46,952	\$1.96
0341	Storm Piping Below Grade	140.00	lnft	\$147.65	\$20,671	\$0.86
0342	Storm Piping Insulation	320.00	lnft	\$23.62	\$7,560	\$0.31
0343	Roof Drains	13.00	each	\$413.41	\$5,374	\$0.22
Subtotal D2040 Rainwater Drainage					\$91,187	\$3.80
D2090 OTHER PLUMBING SYSTEMS						
0344	Compressed Air Piping	140.00	lnft	\$41.34	\$5,788	\$0.24
0345	HVAC/Plumbing Demo	1.00	each	\$3,779.76	\$3,780	\$0.16
Subtotal D2090 Other Plumbing Systems					\$9,568	\$0.40

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
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D3030 COOLING GENERATION SYSTEMS

0346	ACU/CU - 1	1.50	tons	\$2,952.94	\$4,429	\$0.18
0347	Refrigerant Piping	100.00	lnft	\$35.44	\$3,544	\$0.15
0348	Steam & Condensate Return Piping	80.00	lnft	\$41.34	\$3,307	\$0.14
0349	TMX Valve	1.00	each	\$2,952.94	\$2,953	\$0.12

Subtotal D3030 Cooling Generation Systems **\$14,233** **\$0.59**

D3040 HVAC DISTRIBUTION SYSTEMS

0350	Air Terminal Units - Fan Powered Box	14.00	each	\$1,771.76	\$24,805	\$1.03
0351	Duct Insulation - wrap - supply only	10,863.00	sqft	\$2.95	\$32,078	\$1.34
0352	ERU -1	450.00	cfm	\$17.72	\$7,973	\$0.33
0353	HHW Piping	2,060.00	lnft	\$76.78	\$158,159	\$6.59
0354	Actuated Dampers	4.00	each	\$944.94	\$3,780	\$0.16
0355	Curb Lagging	1.00	each	\$2,952.94	\$2,953	\$0.12
0356	Grilles, Registers, Diffusers	120.00	each	\$177.18	\$21,261	\$0.89
0357	Rigging/Crane	1.00	lsum	\$17,717.64	\$17,718	\$0.74
0358	RTU - 1 (assumed 75 tons)	30,000.00	cfm	\$9.45	\$283,482	\$11.80
0359	Air Handler Units - temporary filters	1.00	lsum	\$5,905.88	\$5,906	\$0.25
0360	MAU - 1	1,500.00	cfm	\$4.72	\$7,087	\$0.30
0361	Ductwork, galvanized, single wall, plenum return	14,786.00	lbs	\$11.81	\$174,649	\$7.27
0362	Dust Collector	1.00	each	\$17,717.64	\$17,718	\$0.74
0363	Lined Return/Transfer Boots	40.00	each	\$177.18	\$7,087	\$0.30
0364	Bathroom Exhaust Fan	1.00	each	\$4,134.12	\$4,134	\$0.17
0365	Fans - 5 (not sized)	5,000.00	cfm	\$1.18	\$5,906	\$0.25

Subtotal D3040 HVAC Distribution Systems **\$774,695** **\$32.26**

D3048 DUCTWORK DISTRIBUTION

0366	Ductwork Liner Board and Jacket	966.00	sqft	\$11.81	\$11,410	\$0.48
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Subtotal D3048 Ductwork Distribution **\$11,410** **\$0.48**

D3050 TERMINAL & PACKAGED UNITS

0367	Cabinet Unit Heaters/UH	6.00	each	\$2,362.35	\$14,174	\$0.59
0368	Radiant Wall Panels	100.00	lnft	\$177.18	\$17,718	\$0.74

Subtotal D3050 Terminal & Packaged Units **\$31,892** **\$1.33**

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D3060 CONTROLS & INSTRUMENTATION						
0369	HVAC Controls, K-12	1.00	lsum	\$60,830.57	\$60,831	\$2.53
Subtotal D3060 Controls & Instrumentation					\$60,831	\$2.53
D3070 SYSTEMS TESTING & BALANCING						
0370	Testing & Balancing	1.00	lsum	\$47,247.05	\$47,247	\$1.97
Subtotal D3070 Systems Testing & Balancing					\$47,247	\$1.97
D3090 OTHER HVAC SYSTEMS & EQUIPMENT						
0371	Glycol Feed Skid with Glycol Charge	1.00	each	\$11,811.76	\$11,812	\$0.49
0372	Coring/Firestopping	1.00	lsum	\$5,905.88	\$5,906	\$0.25
0373	HVAC Pipe Insulation	2,240.00	lnft	\$9.45	\$21,167	\$0.88
Subtotal D3090 Other HVAC Systems & Equipment					\$38,884	\$1.62
D4010 SPRINKLERS						
0374	Fire Protection - COT/Concealed Premium	176.00	each	\$118.12	\$20,789	\$0.87
0375	Fire Protection - Wet Heads	220.00	each	\$413.41	\$90,951	\$3.79
Subtotal D4010 Sprinklers					\$111,739	\$4.65
D5010 ELECTRICAL SERVICE & DISTRIBUTION						
0376	Switches	2.00	each	\$236.24	\$472	\$0.02
0377	Transformer - 75 KVA	1.00	each	\$8,858.82	\$8,859	\$0.37
0378	Panel and TXF Feeders	460.00	lnft	\$59.06	\$27,167	\$1.13
0379	Emergency Shut Down	6.00	each	\$236.24	\$1,417	\$0.06
0380	Grounding	10.00	each	\$885.88	\$8,859	\$0.37
Subtotal D5010 Electrical Service & Distribution					\$46,775	\$1.95
D5020 LIGHTING & BRANCH WIRING						
0381	Occupancy Sensors	34.00	each	\$295.29	\$10,040	\$0.42
0382	Display Case RI	5.00	each	\$295.29	\$1,476	\$0.06
0383	Lighting Fixtures - Architectural	7.00	allw	\$1,771.76	\$12,402	\$0.52
0384	Lighting Fixtures - Emergency Power	60.00	each	\$590.59	\$35,435	\$1.48
0385	Lighting Fixtures - Linear	1,180.00	lnft	\$177.18	\$209,068	\$8.71

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
0386	Lighting Fixtures - Standard	91.00	each	\$354.35	\$32,246	\$1.34
0387	Branch Power Distribution	283.00	each	\$88.59	\$25,070	\$1.04
0388	Lighting Distribution	255.00	each	\$88.59	\$22,590	\$0.94
0389	Receptacles/Data	152.00	each	\$236.24	\$35,908	\$1.50
0390	Floor Receptacle	31.00	each	\$590.59	\$18,308	\$0.76
0391	GFI Receptacle	8.00	each	\$295.29	\$2,362	\$0.10
0392	Hand Dryer Connections	6.00	each	\$590.59	\$3,544	\$0.15
0393	OH Door Connections	15.00	each	\$236.24	\$3,544	\$0.15
0394	PV - Louvers	170.00	each	\$885.88	\$150,600	\$6.27
0395	PV - Power Connections/Inverters/Equipment	22.00	each	\$590.59	\$12,993	\$0.54
0396	RTU/LG Equipment Feeds	5.00	each	\$2,952.94	\$14,765	\$0.61
0397	SM Elect Feeds	43.00	each	\$590.59	\$25,395	\$1.06
0398	Sub Panels	4.00	each	\$2,952.94	\$11,812	\$0.49

Subtotal D5020 Lighting & Branch Wiring **\$627,559** **\$26.13**

D5030 COMMUNICATIONS & SECURITY SYSTEMS

0399	AV/IT Tray	400.00	Inft	\$41.34	\$16,536	\$0.69
0400	Cameras	2.00	each	\$5,905.88	\$11,812	\$0.49
0401	Card Reader	4.00	each	\$2,952.94	\$11,812	\$0.49
0402	Clocks	8.00	each	\$590.59	\$4,725	\$0.20
0403	Conduit/Pull Strings	130.00	Inft	\$29.53	\$3,839	\$0.16
0404	IT/AV - WAP - RI Only	13.00	each	\$236.24	\$3,071	\$0.13
0405	Speakers	17.00	each	\$295.29	\$5,020	\$0.21
0406	Fire Alarm Booster Panel	1.00	each	\$8,858.82	\$8,859	\$0.37
0407	Fire Alarm Devices	33.00	each	\$590.59	\$19,489	\$0.81
0408	Smoke Detectors	4.00	each	\$590.59	\$2,362	\$0.10

Subtotal D5030 Communications & Security Systems **\$87,525** **\$3.64**

E2010 FIXED FURNISHINGS

0409	Casework - Base Cabinet	65.17	Inft	\$300.00	\$19,552	\$0.81
0410	Solid Surface Counter Top	65.21	Inft	\$200.00	\$13,041	\$0.54
0411	Misc. Carpentry	21,615.00	sqft	\$1.00	\$21,615	\$0.90
0412	Solid Surface Window Sill	164.65	Inft	\$30.00	\$4,940	\$0.21
0413	Motorized Window Shades	665.00	sqft	\$35.00	\$23,275	\$0.97

Subtotal E2010 Fixed Furnishings **\$82,422** **\$3.43**

G1010 SITE CLEARING

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
0414	Strip and Export Topsoil	710.00	cuyd	\$12.00	\$8,520	\$0.35
0415	Strip and Export Woodchips	238.00	cuyd	\$12.00	\$2,856	\$0.12

Subtotal G1010 Site Clearing **\$11,376** **\$0.47**

G1020 SITE DEMOLITION & RELOCATION

0416	Demo Asphalt	7,755.00	sqft	\$1.00	\$7,755	\$0.32
0417	Demo Tree, Small	6.00	each	\$350.00	\$2,100	\$0.09
0418	Demo - Sawcutting	150.00	lnft	\$3.50	\$525	\$0.02
0419	Demo Sidewalk 4"	1,000.00	sqft	\$1.00	\$1,000	\$0.04
0420	Demo Maintenance Building	3,090.00	sqft	\$10.00	\$30,900	\$1.29
0421	Demo Gas Line	30.00	lnft	\$28.00	\$840	\$0.03
0422	Demo Sanitary Sewer, 8" Dia.	90.00	lnft	\$25.00	\$2,250	\$0.09
0423	Demo Storm Sewer, 24" Dia.	35.00	lnft	\$28.00	\$980	\$0.04
0424	Demo/Salvage Fence, 4'	130.00	lnft	\$4.00	\$520	\$0.02
0425	Demo/Salvage Fence, 8'	115.00	lnft	\$5.00	\$575	\$0.02
0426	Bulkhead Sanitary Sewer, 8"	2.00	each	\$300.00	\$600	\$0.02
0427	Demo Gas Meter	1.00	each	\$300.00	\$300	\$0.01
0428	Demo Play Structure	4.00	each	\$2,500.00	\$10,000	\$0.42

Subtotal G1020 Site Demolition & Relocation **\$58,345** **\$2.43**

G1030 SITE EARTHWORK

0429	Building Pad	12,452.62	sqft	\$5.00	\$62,263	\$2.59
0430	Fine Grade	21,000.00	sqft	\$0.25	\$5,250	\$0.22
0431	Excavation - Asphalt	2,522.00	cuyd	\$12.00	\$30,264	\$1.26
0432	Excavation - Concrete Paving	15.18	cuyd	\$12.00	\$182	\$0.01
0433	Excavation - Concrete Walk	65.00	cuyd	\$12.00	\$780	\$0.03
0434	Excavation - Retaining Wall	30.00	cuyd	\$12.00	\$360	\$0.01
0435	Elevation - Structural Fill	350.00	cuyd	\$20.00	\$7,000	\$0.29
0436	Class II Sand Backfill - Retaining Wall	20.00	cuyd	\$20.00	\$400	\$0.02
0437	Class II Sand Base - Asphalt	1,462.96	cuyd	\$20.00	\$29,259	\$1.22
0438	Class II Sand Base - Concrete Paving	7.78	cuyd	\$20.00	\$156	\$0.01
0439	Class II Sand Base - Sidewalk	64.17	cuyd	\$20.00	\$1,283	\$0.05
0440	21AA Base - Asphalt	731.48	cuyd	\$35.00	\$25,602	\$1.07
0441	21AA Base - Concrete Paving	5.21	cuyd	\$35.00	\$182	\$0.01
0442	Silt Fence, 36"	50.00	lnft	\$3.50	\$175	\$0.01
0443	Inlet Protection Filter (Silt Sack)	4.00	each	\$150.00	\$600	\$0.02

Subtotal G1030 Site Earthwork **\$163,757** **\$6.82**

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
G2010 ROADWAYS						
0444	Concrete Paving, 8" reinforced	210.00	sqft	\$8.00	\$1,680	\$0.07
Subtotal G2010 Roadways					\$1,680	\$0.07
G2020 PARKING LOTS						
0445	Asphalt Paving per Ton	973.68	tons	\$90.00	\$87,631	\$3.65
0446	Stripe Parking Lot	39,500.00	sqft	\$0.05	\$1,975	\$0.08
0447	Curb & Gutter Concrete	250.00	lnft	\$25.00	\$6,250	\$0.26
Subtotal G2020 Parking Lots					\$95,856	\$3.99
G2030 PEDESTRIAN PAVING						
0448	Concrete Walks, 4"	3,465.00	sqft	\$5.00	\$17,325	\$0.72
Subtotal G2030 Pedestrian Paving					\$17,325	\$0.72
G2040 SITE DEVELOPMENT						
0449	Set & Pour Bollards	4.00	each	\$500.00	\$2,000	\$0.08
0450	Retaining Walls, CIP	21.86	cuyd	\$900.00	\$19,674	\$0.82
Subtotal G2040 Site Development					\$21,674	\$0.90
G2050 LANDSCAPING						
0451	Seeding and Misc Site Restoration	1.00	lsum	\$10,000.00	\$10,000	\$0.42
Subtotal G2050 Landscaping					\$10,000	\$0.42
G3020 SANITARY SEWER						
0452	Sanitary, SDR 4"	34.81	lnft	\$30.00	\$1,044	\$0.04
0453	Tap Fee	1.00	lsum	\$70,000.00	\$70,000	\$2.91
0454	Sanitary Cleanout & Monument Box	1.00	each	\$750.00	\$750	\$0.03
0455	Adjust Existing Sanitary Structure	1.00	each	\$700.00	\$700	\$0.03
0456	Adjust Sanitary Structure / Concrete Collar	1.00	each	\$1,100.00	\$1,100	\$0.05
0457	Support Watermain @ Crossing	1.00	lsum	\$500.00	\$500	\$0.02
Subtotal G3020 Sanitary Sewer					\$74,094	\$3.09

001 - NEW STEAM BUILDING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
G3030 STORM SEWER						
0458	Storm, 6" PVC	65.46	lnft	\$36.00	\$2,357	\$0.10
0459	Storm Manhole, 48" Dia.	1.00	each	\$3,000.00	\$3,000	\$0.12
0460	Storm Cleanout & Monument Box	2.00	each	\$750.00	\$1,500	\$0.06
0461	Tap Existing Storm Structure	1.00	each	\$750.00	\$750	\$0.03
0462	Support Watermain @ Crossing	1.00	lsum	\$500.00	\$500	\$0.02
Subtotal G3030 Storm Sewer					\$8,107	\$0.34
G3060 FUEL DISTRIBUTION						
0463	Gas Pipe and Regulators	120.00	lnft	\$65.00	\$7,800	\$0.32
Subtotal G3060 Fuel Distribution					\$7,800	\$0.32
Z1010 ADMINISTRATION						
0464	Temp Construction Access/Laydown	847.79	sqyd	\$8.00	\$6,782	\$0.28
Subtotal Z1010 Administration					\$6,782	\$0.28
TOTAL 001 - NEW STEAM BUILDING					\$6,482,906	\$299.93

002 - RENOVATION

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
C1010 PARTITIONS						
0465	Misc Wall Patching	1.00	allw	\$10,000.00	\$10,000	\$0.42
Subtotal C1010 Partitions					\$10,000	\$0.42
C3030 CEILING FINISHES						
0466	2x2 Lay-in	2,416.89	sqft	\$5.00	\$12,084	\$0.50
Subtotal C3030 Ceiling Finishes					\$12,084	\$0.50
F2010 BUILDING ELEMENTS DEMOLITION						
0467	Demo Ceiling	2,416.89	sqft	\$1.50	\$3,625	\$0.15
0468	Demo Door & Frame	4.00	each	\$250.00	\$1,000	\$0.04
0469	Demo Windows	1.00	each	\$250.00	\$250	\$0.01
Subtotal F2010 Building Elements Demolition					\$4,875	\$0.20
TOTAL 002 - RENOVATION					\$26,960	\$11.23

001 - New STEAM Building

Assumptions, Clarifications and Exclusions

This estimate is based on drawings dated 05/04/2020 and specifications dated 5/4/2020 by Integrated Design Inc.

Concrete Footings

Assumes thickend slab along existing exterior HS wall

Painting, Interior Walls

Assumes leaving the existing building exterior wall and painting the face in corridor C101



BRIGHTON AREA SCHOOLS

**SCRANTON MIDDLE
SCHOOL
RENOVATION**

Schematic Design Estimate - 001



Lead Estimator: Mark Haverkamp
June 01, 2020



PROJECT COST SUMMARY

Brighton Area Schools
 Scranton Middle School Renovation
 Brighton, MI

Schematic Design
 Clark Construction Project #2836
 R1 10 Week Schedule
 June 1, 2020

BOND ITEM	GSF/Bond Item				Direct Trade Cost	D/E/Bid Contingency (%)	Design /Estimate/Bid Contingency (\$)	Current Est. w/Est. Cont.	Current Est w/ General Conditions	Est. w/Escalation	Est. w/COVID 19 Contingency (%)	Construction Contingency (%)	SD Est Total	Bond Value	Bond Contingency	Bond Budget	Variance (\$)	Variance (%)	
									1.50%	0%	2%								
002 002 Roof replacement	92,975	GSF	\$	12.06	/GSF \$ 903,614	12.00%	\$ 108,434	\$ 1,012,048	\$ 1,027,229	\$ 1,027,229	\$ 1,047,773	7%	1,121,117	\$ 1,304,325	\$	1,304,325	183,208	14%	
003 003 Corridor locker replacement	130,000	GSF	\$	1.50	/GSF \$ 157,170	12.00%	\$ 18,860	\$ 176,030	\$ 178,671	\$ 178,671	\$ 182,244	7%	195,001	\$ 144,563	\$	144,563	(50,439)	-35%	
004 004 Architectural work associated with mechanical scope	130,000	GSF	\$	2.74	/GSF \$ 287,110	12.00%	\$ 34,453	\$ 321,563	\$ 326,386	\$ 326,386	\$ 332,914	7%	356,218	\$ 237,150	\$	237,150	(119,068)	-50%	
005 005 Replace classroom unit ventilators	33,407	GSF	\$	49.44	/GSF \$ 1,331,278	12.00%	\$ 159,753	\$ 1,491,032	\$ 1,513,397	\$ 1,513,397	\$ 1,543,665	7%	1,651,722	\$ 957,363	\$	957,363	(694,359)	-73%	
006 006 Replace HVAC units at interior classrooms	45,682	GSF	\$	5.49	/GSF \$ 202,302	12.00%	\$ 24,276	\$ 226,579	\$ 229,977	\$ 229,977	\$ 234,577	7%	250,997	\$ 353,080	\$	353,080	102,083	29%	
007 007 Replace original air handling units	50,911	GSF	\$	21.94	/GSF \$ 900,096	12.00%	\$ 108,012	\$ 1,008,108	\$ 1,023,229	\$ 1,023,229	\$ 1,043,694	7%	1,116,752	\$ 1,510,247	\$	1,510,247	393,495	26%	
008 008 Replace all ductwork associated with new units	45,682	GSF	\$	6.88	/GSF \$ 253,372	12.00%	\$ 30,405	\$ 283,777	\$ 288,033	\$ 288,033	\$ 293,794	7%	314,360	\$ 337,367	\$	337,367	23,007	7%	
009 009 Replace all pipe fittings associated with new units	45,682	GSF	\$	2.92	/GSF \$ 107,598	12.00%	\$ 12,912	\$ 120,510	\$ 122,317	\$ 122,317	\$ 124,764	7%	133,497	\$ 109,779	\$	109,779	(23,718)	-22%	
010 010 Replace mechanical room equipment	130,000	GSF	\$	5.63	/GSF \$ 589,844	12.00%	\$ 70,781	\$ 660,625	\$ 670,535	\$ 670,535	\$ 683,945	7%	731,822	\$ 441,573	\$	441,573	(290,248)	-66%	
011 011 Replace mechanical system controls	130,000	GSF	\$	5.51	/GSF \$ 577,000	12.00%	\$ 69,240	\$ 646,240	\$ 655,934	\$ 655,934	\$ 669,052	7%	715,886	\$ 548,896	\$	548,896	(166,990)	-30%	
013 013 Cafeteria lighting	6,000	GSF	\$	22.77	/GSF \$ 110,128	12.00%	\$ 13,215	\$ 123,343	\$ 125,194	\$ 125,194	\$ 127,697	7%	136,636	\$ 39,367	\$	39,367	(97,269)	-247%	
014 014 Electrical work associated with mechanical scope	130,000	GSF	\$	1.03	/GSF \$ 108,425	12.00%	\$ 13,011	\$ 121,436	\$ 123,258	\$ 123,258	\$ 125,723	7%	134,523	\$ 47,430	\$	47,430	(87,093)	-184%	
Subtotal Bond Items:		130000	GSF	\$ 46.39	/GSF	5,527,938	663,353	6,191,290	\$6,284,160	6,284,160	6,409,843		6,858,532	6,031,140		6,031,140	(827,392)		

Area Summary	Cost	Cost / Area
002 Roof replacement	\$903,614	\$9.72
003 Corridor locker replacement	\$157,170	\$1.21
004 Architectural work associated with mechanical scope	\$287,110	\$2.21
005 Replace classroom unit ventilators	\$1,331,278	\$39.85
006 Replace HVAC units at interior classrooms	\$202,302	\$4.43
007 Replace original air handling units	\$900,096	\$17.68
008 Replace all ductwork associated with new units	\$253,372	\$5.55
009 Replace all pipe fittings associated with new units	\$107,598	\$2.36
010 Replace mechanical room equipment	\$589,844	\$4.54
011 Replace mechanical system controls	\$577,000	\$4.44
013 Cafeteria lighting	\$110,128	\$18.35
014 Electrical work associated with mechanical scope	\$108,425	\$0.83
Subtotal Direct Cost	130,000 GSF	\$5,527,938
		\$42.52 /GSF

Contingencies, GC's, Supervision, Insurances and Fee

Subtotal Fees	130,000 GSF	\$0	/GSF
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PROJECT TOTAL	130,000 GSF	\$5,527,938	\$42.52 /GSF
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002 ROOF REPLACEMENT

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
B SHELL						
B30 ROOFING					\$903,614	\$6.95
<i>B3010 Roof Coverings</i>					<i>\$903,614</i>	<i>\$6.95</i>
0107	EPDM .060 Thickness Fully adhered	3,600.00	sqft	\$9.75	\$35,100	\$0.27
0108	EPDM Mechanically fastned on existing insulation (Includes demo)	89,895.00	sqft	\$8.75	\$786,581	\$6.05
0109	EPDM Walk pads	983.46	sqft	\$9.00	\$8,851	\$0.07
0110	Remove and replace hoods	16.00	each	\$100.00	\$1,600	\$0.01
0111	Sheetmetal Coping at Parapet	0.00	Inft	\$20.00	\$0	\$0.00
0112	Sheetmetal Coping at Parapet (Remove and replace)	2,859.28	Inft	\$25.00	\$71,482	\$0.55
Subtotal B SHELL					\$903,614	\$6.95
TOTAL 002 ROOF REPLACEMENT					\$903,614	\$9.72

003 CORRIDOR LOCKER REPLACEMENT

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
C INTERIORS						
C10 INTERIOR CONSTRUCTION					\$136,890	\$1.05
<i>C1030 Fittings</i>					<i>\$136,890</i>	<i>\$1.05</i>
0113	Metal Lockers	1,014.00	each	\$135.00	\$136,890	\$1.05
Subtotal C INTERIORS					\$136,890	\$1.05
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$20,280	\$0.16
<i>F2010 Building Elements Demolition</i>					<i>\$20,280</i>	<i>\$0.16</i>
0114	Demo Lockers	1,014.00	each	\$20.00	\$20,280	\$0.16
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$20,280	\$0.16
TOTAL 003 CORRIDOR LOCKER REPLACEMENT					\$157,170	\$1.21

004 ARCHITECTURAL WORK ASSOCIATED WITH MECHANICAL SCOPE

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
C INTERIORS						
C30 INTERIOR FINISHES					\$282,110	\$2.17
<i>C3010 Wall Finishes</i>					<i>\$20,000</i>	<i>\$0.15</i>
0115	Architectural changes required for UV piping 1st floor	20.00	each	\$1,000.00	\$20,000	\$0.15
<i>C3030 Ceiling Finishes</i>					<i>\$262,110</i>	<i>\$2.02</i>
0116	Remove and replace ceilings for piping	15,153.28	sqft	\$5.00	\$75,766	\$0.58
0117	Remove and replace ceiling for ductwork	27,723.87	sqft	\$5.00	\$138,619	\$1.07
0118	Remove and replace locker room ceilings	3,977.00	sqft	\$12.00	\$47,724	\$0.37
Subtotal C INTERIORS					\$282,110	\$2.17
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$5,000	\$0.04
<i>F2010 Building Elements Demolition</i>					<i>\$5,000</i>	<i>\$0.04</i>
0119	Dumpsters	10.00	each	\$500.00	\$5,000	\$0.04
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$5,000	\$0.04
TOTAL 004 ARCHITECTURAL WORK ASSOCIATED WITH MECHANICAL SCOPE					\$287,110	\$2.21

005 REPLACE CLASSROOM UNIT VENTILATORS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$1,284,884	\$9.88
<i>D3020 Heat Generation Systems</i>					<i>\$49,000</i>	<i>\$0.38</i>
0120	HVAC Piping Insulation	4,900.00	Inft	\$10.00	\$49,000	\$0.38
<i>D3030 Cooling Generation Systems</i>					<i>\$72,000</i>	<i>\$0.55</i>
0121	Hydronic piping	480.00	hour	\$150.00	\$72,000	\$0.55
<i>D3040 HVAC Distribution Systems</i>					<i>\$638,384</i>	<i>\$4.91</i>
0122	Trade OHP, GC's, Staff, OT.	1.00	Isum	\$287,304.00	\$287,304	\$2.21
0123	Hydronic Piping, 1"	4,047.38	Inft	\$65.00	\$263,080	\$2.02
0124	Hydronic Piping, Drops from ceiling into unit on first floor	76.00	each	\$500.00	\$38,000	\$0.29
0125	Sheetmetal pipe enclosures (First floor unit vents)	20.00	each	\$2,500.00	\$50,000	\$0.38
<i>D3050 Terminal & Packaged Units</i>					<i>\$462,500</i>	<i>\$3.56</i>
0126	CUV's - Heating and Cooling Coils (Classroom Unit Ventilator)	37.00	each	\$12,500.00	\$462,500	\$3.56
<i>D3090 Other HVAC Systems & Equipment</i>					<i>\$63,000</i>	<i>\$0.48</i>
0127	Supervision HVAC	500.00	hour	\$100.00	\$50,000	\$0.38
0128	Fire Safing - HVAC	130,000.00	sqft	\$0.10	\$13,000	\$0.10
Subtotal D SERVICES					\$1,284,884	\$9.88
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$28,395	\$0.22
<i>F2010 Building Elements Demolition</i>					<i>\$28,395</i>	<i>\$0.22</i>
0129	Demo Piping	2,099.47	Inft	\$10.00	\$20,995	\$0.16
0130	Demo Underground Piping	0.00	Inft	\$0.00	\$0	\$0.00
0131	Demo unit ventilators	37.00	each	\$200.00	\$7,400	\$0.06
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$28,395	\$0.22
Z REQUIREMENTS						
Z10 PROJECT REQUIREMENTS					\$18,000	\$0.14
<i>Z1040 Project Closeout</i>					<i>\$18,000</i>	<i>\$0.14</i>
0132	Final Cleanup	40,000.00	sqft	\$0.45	\$18,000	\$0.14
Subtotal Z REQUIREMENTS					\$18,000	\$0.14
TOTAL 005 REPLACE CLASSROOM UNIT VENTILATORS					\$1,331,278	\$39.85

006 REPLACE HVAC UNITS AT INTERIOR CLASSROOMS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$181,447	\$1.40
<i>D3040 HVAC Distribution Systems</i>					<i>\$181,447</i>	<i>\$1.40</i>
0133	Trade OHP, GC's, Staff, OT.	1.00	lsum	\$53,897.00	\$53,897	\$0.41
0134	Exhaust Fans VFD, 1/2 Hp	15.00	each	\$1,500.00	\$22,500	\$0.17
0135	VAV / CV Boxes with HHW Reheat	55.00	each	\$1,750.00	\$96,250	\$0.74
0136	Diffusers	88.00	each	\$100.00	\$8,800	\$0.07
Subtotal D SERVICES					\$181,447	\$1.40
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$2,855	\$0.02
<i>F2010 Building Elements Demolition</i>					<i>\$2,855</i>	<i>\$0.02</i>
0137	Demo Exhaust fans	16.00	each	\$40.00	\$640	\$0.00
0138	Demo Piping	120.68	lnft	\$8.00	\$965	\$0.01
0139	Demo VAV Boxes	50.00	each	\$25.00	\$1,250	\$0.01
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$2,855	\$0.02
Z REQUIREMENTS						
Z10 PROJECT REQUIREMENTS					\$18,000	\$0.14
<i>Z1040 Project Closeout</i>					<i>\$18,000</i>	<i>\$0.14</i>
0140	Final Cleanup	40,000.00	sqft	\$0.45	\$18,000	\$0.14
Subtotal Z REQUIREMENTS					\$18,000	\$0.14
TOTAL 006 REPLACE HVAC UNITS AT INTERIOR CLASSROOMS					\$202,302	\$4.43

007 REPLACE ORIGINAL AIR HANDLING UNITS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$853,796	\$6.57
<i>D3040 HVAC Distribution Systems</i>					<i>\$850,796</i>	<i>\$6.54</i>
0141	Trade OHP, GC's , Staff, OT.	1.00	Isum	\$164,796.00	\$164,796	\$1.27
0142	Energy Recovery Unit - 1,300 CFM Each	2.00	each	\$12,000.00	\$24,000	\$0.18
0143	Hydronic Piping to AHU's 40' Each	440.00	Inft	\$50.00	\$22,000	\$0.17
0144	Air Handler Units - 1-3 approx. 6,500 cfm each	3.00	each	\$55,000.00	\$165,000	\$1.27
0145	Air Handler Units - 3-6 Avg 5,500 cfm each	3.00	each	\$50,000.00	\$150,000	\$1.15
0146	Air Handler Units - Ceiling Hung Gymnasiums 6,500 CFM	5.00	each	\$65,000.00	\$325,000	\$2.50
<i>D3050 Terminal & Packaged Units</i>					<i>\$3,000</i>	<i>\$0.02</i>
0147	Heating coils	2.00	each	\$1,500.00	\$3,000	\$0.02
D50 ELECTRICAL					\$2,000	\$0.02
<i>D5010 Electrical Service & Distribution</i>					<i>\$2,000</i>	<i>\$0.02</i>
0148	Energy Recovery Units	2.00	each	\$1,000.00	\$2,000	\$0.02
Subtotal D SERVICES					\$855,796	\$6.58
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$26,300	\$0.20
<i>F2010 Building Elements Demolition</i>					<i>\$26,300</i>	<i>\$0.20</i>
0149	Demo AHU's	8.00	each	\$1,500.00	\$12,000	\$0.09
0150	Demo Ductwork at fan rooms	80.00	hour	\$85.00	\$6,800	\$0.05
0151	Demo Gym Air Handlers	5.00	each	\$1,500.00	\$7,500	\$0.06
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$26,300	\$0.20
Z REQUIREMENTS						
Z10 PROJECT REQUIREMENTS					\$18,000	\$0.14
<i>Z1040 Project Closeout</i>					<i>\$18,000</i>	<i>\$0.14</i>
0152	Final Cleanup	40,000.00	sqft	\$0.45	\$18,000	\$0.14
Subtotal Z REQUIREMENTS					\$18,000	\$0.14
TOTAL 007 REPLACE ORIGINAL AIR HANDLING UNITS					\$900,096	\$17.68

008 REPLACE ALL DUCTWORK ASSOCIATED WITH NEW UNITS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$232,235	\$1.79
<i>D3040 HVAC Distribution Systems</i>					<i>\$232,235</i>	<i>\$1.79</i>
0153	Trade OHP, GC's - Staff, OT.	1.00	Isum	\$64,114.00	\$64,114	\$0.49
0154	Duct Insulation - 1-1/2" Blanket	6,000.00	sqft	\$4.00	\$24,000	\$0.18
0155	Ductwork, 8"x 10" galvanized	620.67	lbs	\$9.00	\$5,586	\$0.04
0156	Ductwork 10" Diameter	196.28	Inft	\$12.00	\$2,355	\$0.02
0157	Ductwork 12" Diameter	102.57	Inft	\$14.00	\$1,436	\$0.01
0158	Ductwork 4" Diameter	110.43	Inft	\$9.00	\$994	\$0.01
0159	Ductwork 8" Diameter	304.58	Inft	\$10.00	\$3,046	\$0.02
0160	Ductwork reducers	8.25	each	\$300.00	\$2,475	\$0.02
0161	Ductwork T Fittings	16.00	each	\$75.00	\$1,200	\$0.01
0162	Ductwork 6" Diameter	340.38	Inft	\$8.00	\$2,723	\$0.02
0163	Ductwork Connections to existing	57.00	each	\$100.00	\$5,700	\$0.04
0164	Ductwork, 8"x 8" galvanized	1,747.62	lbs	\$9.00	\$15,729	\$0.12
0165	Ductwork, 10"x 10" galvanized	134.34	lbs	\$9.00	\$1,209	\$0.01
0166	Ductwork, 10"x 12" galvanized	740.43	lbs	\$9.00	\$6,664	\$0.05
0167	Ductwork, 10"x 14" galvanized	275.26	lbs	\$9.00	\$2,477	\$0.02
0168	Ductwork, 12"x 12" galvanized	842.98	lbs	\$9.00	\$7,587	\$0.06
0169	Ductwork, 12"x 14" galvanized	95.96	lbs	\$9.00	\$864	\$0.01
0170	Ductwork, 12"x 16" galvanized	147.59	lbs	\$9.00	\$1,328	\$0.01
0171	Ductwork, 12"x 18" galvanized	225.51	lbs	\$9.00	\$2,030	\$0.02
0172	Ductwork, 14"x 16" galvanized	1,862.08	lbs	\$9.00	\$16,759	\$0.13
0173	Ductwork, for AHU's 1-3	3.00	each	\$10,000.00	\$30,000	\$0.23
0174	Ductwork, 14"x 18" galvanized	439.97	lbs	\$9.00	\$3,960	\$0.03
0175	Ductwork for AHU's 3-6	3.00	each	\$10,000.00	\$30,000	\$0.23
Subtotal D SERVICES					\$232,235	\$1.79
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$21,137	\$0.16
<i>F2010 Building Elements Demolition</i>					<i>\$21,137</i>	<i>\$0.16</i>
0176	Demo Ductwork	2,113.74	Inft	\$10.00	\$21,137	\$0.16
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$21,137	\$0.16
TOTAL 008 REPLACE ALL DUCTWORK ASSOCIATED WITH NEW UNITS					\$253,372	\$5.55

009 REPLACE ALL PIPE FITTINGS ASSOCIATED WITH NEW UNITS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$101,861	\$0.78
<i>D3020 Heat Generation Systems</i>					<i>\$42,500</i>	<i>\$0.33</i>
0177	Valve Package	1.00	each	\$42,500.00	\$42,500	\$0.33
<i>D3040 HVAC Distribution Systems</i>					<i>\$59,361</i>	<i>\$0.46</i>
0178	Trade OHP, GC's , Staff, OT.	1.00	lsum	\$21,037.00	\$21,037	\$0.16
0179	Hydronic Piping, 2"	40.48	lft	\$75.00	\$3,036	\$0.02
0180	Hydronic Piping, 3"	235.25	lft	\$150.00	\$35,288	\$0.27
Subtotal D SERVICES					\$101,861	\$0.78
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$5,737	\$0.04
<i>F2010 Building Elements Demolition</i>					<i>\$5,737</i>	<i>\$0.04</i>
0181	Demo Piping (Large bore)	478.06	lft	\$12.00	\$5,737	\$0.04
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$5,737	\$0.04
TOTAL 009 REPLACE ALL PIPE FITTINGS ASSOCIATED WITH NEW UNITS					\$107,598	\$2.36

010 REPLACE MECHANICAL ROOM EQUIPMENT

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D20 PLUMBING					\$4,400	\$0.03
<i>D2090 Other Plumbing Systems</i>					<i>\$4,400</i>	<i>\$0.03</i>
0182	Sched. 40 Black Steel Gas Pipe, for boilers	50.00	lnft	\$88.00	\$4,400	\$0.03
D30 HVAC					\$582,044	\$4.48
<i>D3020 Heat Generation Systems</i>					<i>\$177,502</i>	<i>\$1.37</i>
0183	Condensing Boiler 2000 MBH Aerco Boilers	3.00	each	\$40,000.00	\$120,000	\$0.92
0184	Base Mounted Pumps- includes base	4.00	each	\$7,500.40	\$30,002	\$0.23
0185	Inline pumps	11.00	each	\$2,500.00	\$27,500	\$0.21
<i>D3030 Cooling Generation Systems</i>					<i>\$182,750</i>	<i>\$1.41</i>
0186	190 Ton Air Cooled Chiller	190.00	tons	\$650.00	\$123,500	\$0.95
0187	45 Ton Air Cooled Chiller	45.00	tons	\$650.00	\$29,250	\$0.23
0188	Demo and lifting for chillers	2.00	each	\$15,000.00	\$30,000	\$0.23
<i>D3040 HVAC Distribution Systems</i>					<i>\$135,792</i>	<i>\$1.04</i>
0189	Trade OHP, GC's , Staff, OT.	1.00	lsum	\$124,435.00	\$124,435	\$0.96
0190	Air Separator - 3"-4"	1.00	each	\$3,785.80	\$3,786	\$0.03
0191	Expansion Tanks - 40 gallons	2.00	each	\$3,785.80	\$7,572	\$0.06
<i>D3070 Systems Testing & Balancing</i>					<i>\$45,500</i>	<i>\$0.35</i>
0192	Testing & Balancing	130,000.00	sqft	\$0.35	\$45,500	\$0.35
<i>D3090 Other HVAC Systems & Equipment</i>					<i>\$40,500</i>	<i>\$0.31</i>
0193	Boiler exhaust	3.00	each	\$3,500.00	\$10,500	\$0.08
0194	Glycol Feed Skid with Glycol Charge	2.00	each	\$15,000.00	\$30,000	\$0.23
Subtotal D SERVICES					\$586,444	\$4.51
F SPECIAL CONSTRUCTION AND DEMOLITION						
F20 SELECTIVE BUILDING DEMOLITION					\$3,400	\$0.03
<i>F2010 Building Elements Demolition</i>					<i>\$3,400</i>	<i>\$0.03</i>
0195	Demo Boilers	3.00	each	\$1,000.00	\$3,000	\$0.02
0196	Demo expansion tanks	3.00	each	\$100.00	\$300	\$0.00
0197	Demo Glycol feed station	1.00	each	\$100.00	\$100	\$0.00
Subtotal F SPECIAL CONSTRUCTION AND DEMOLITION					\$3,400	\$0.03
TOTAL 010 REPLACE MECHANICAL ROOM EQUIPMENT					\$589,844	\$4.54

011 REPLACE MECHANICAL SYSTEM CONTROLS

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D30 HVAC					\$577,000	\$4.44
<i>D3040 HVAC Distribution Systems</i>					<i>\$57,000</i>	<i>\$0.44</i>
0198	Trade OHP, GC's, Staff, OT.	1.00	Isum	\$57,000.00	\$57,000	\$0.44
<i>D3060 Controls & Instrumentation</i>					<i>\$520,000</i>	<i>\$4.00</i>
0199	HVAC Controls, K-12	130,000.00	sqft	\$4.00	\$520,000	\$4.00
Subtotal D SERVICES					\$577,000	\$4.44
TOTAL 011 REPLACE MECHANICAL SYSTEM CONTROLS					\$577,000	\$4.44

013 CAFETERIA LIGHTING

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D50 ELECTRICAL					\$110,128	\$0.85
<i>D5020 Lighting & Branch Wiring</i>					<i>\$110,128</i>	<i>\$0.85</i>
0200	Remove Ballasts convert to LED	98.00	each	\$500.00	\$49,000	\$0.38
0201	Inverters	4.00	each	\$500.00	\$2,000	\$0.02
0202	Recessed 6" MH downlight	58.00	each	\$416.00	\$24,128	\$0.19
0203	Lighting Control	9,000.00	sqft	\$3.00	\$27,000	\$0.21
0204	Recircuit lights for inverter power	16.00	each	\$500.00	\$8,000	\$0.06
Subtotal D SERVICES					\$110,128	\$0.85
TOTAL 013 CAFETERIA LIGHTING					\$110,128	\$18.35

014 ELECTRICAL WORK ASSOCIATED WITH MECHANICAL SCOPE

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL COST	COST / AREA
D SERVICES						
D50 ELECTRICAL					\$108,425	\$0.83
<i>D5010 Electrical Service & Distribution</i>					<i>\$108,425</i>	<i>\$0.83</i>
0205	Boiler shut off controls	2.00	each	\$500.00	\$1,000	\$0.01
0206	AHU'S	11.00	each	\$2,500.00	\$27,500	\$0.21
0207	Chillers	2.00	each	\$2,500.00	\$5,000	\$0.04
0208	Exhaust fans	15.00	each	\$500.00	\$7,500	\$0.06
0209	Unit Vents	36.00	each	\$500.00	\$18,000	\$0.14
0210	VAV Boxes	46.00	each	\$500.00	\$23,000	\$0.18
0211	Boiler VFD's	3.00	each	\$4,325.00	\$12,975	\$0.10
0212	Install 15 HP VFD's	2.00	each	\$2,500.00	\$5,000	\$0.04
0213	Pumps - Inline pumps	11.00	each	\$750.00	\$8,250	\$0.06
0214	Demo Pumps - 20 HP	2.00	each	\$100.00	\$200	\$0.00
Subtotal D SERVICES					\$108,425	\$0.83
TOTAL 014 ELECTRICAL WORK ASSOCIATED WITH MECHANICAL SCOPE					\$108,425	\$0.83

004 Architectural work associated with mechanical scope **Assumptions, Clarifications and Exclusions**

This estimate is based on drawings dated 03/04/2020 and specifications dated 05/04/2020 by IDI Architecture Engineering Consulting

Architectural changes required for UV piping 1st floor Allowance

005 Replace classroom unit ventilators **Assumptions, Clarifications and Exclusions**

This estimate is based on drawings dated 03/04/2020 and specifications dated 05/04/2020 by IDI Architecture Engineering Consulting

Sheetmetal pipe enclosures (First floor unit vents) Allowance for pipe covers

Demo Underground Piping Underground piping to be abandoned in place

013 Cafeteria lighting **Assumptions, Clarifications and Exclusions**

This estimate is based on drawings dated 03/04/2020 and specifications dated 05/04/2020 by IDI Architecture Engineering Consulting

Remove Ballasts convert to LED Replace fixture in lieu of relamping