

**CONNECTICUT DEPARTMENT OF ADMINISTRATIVE
SERVICES
CONSTRUCTION SERVICES (DAS/CS)**

**SCHOOLS CONSTRUCTION COST BENCHMARKING STUDY
July 6, 2023**

Prepared By



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**Connecticut Department of Administrative Services
Construction Services (DAS/CS)****July 6, 2023****Purpose:**

Conduct a research study to update the OGCSR statutory requirements to districts for approved costs per square foot (sq ft) for reasonable construction costs of building construction.

Scope of Services:

1. Prepare cost analysis for the following building types (excluding site work beyond 5 feet of building line):
 - Elementary School
 - Middle School
 - High School
 - Vocational/Technical High School
2. Identify cost premiums for a 'De-carbonized' vs a 'High Performance School' including simple CBA (cost benefit analysis) of initial investment expressed in \$/SF.
3. Determine the impacts of geographic location within the state on construction cost.
4. Determine and document key cost drivers for each project type.

Methodology:

Pricing information has been obtained from historic sources utilizing costs from projects with bid information, or funding approvals that are less than 4 years old. To ensure that benchmark data is comparable cost information is normalized for time and location to a common location of Hartford, CT and a common base date of Q1 2023.

Normalization has been established using published indices available from Marshall & Swift Valuation Services which provides national data for adjusting cost information from 95 US cities across 5 construction types and is updated every 3 months.

Analysis has been completed on approximately 30 schools in the study and data has been assigned to the various elements of the standard UNIFORMAT WBS.

Key Assumptions and Clarifications

- 1 All projects are new construction
 - 2 All projects are competitively bid under a design/bid/build procurement route
 - 3 All projects are either lump sum General Contractor or CM with a GMP
 - 4 All projects require prevailing wage
 - 5 Costs are building construction cost only excluding sitework (outside 5' building line and existing building demolition)
 - 6 The general contractor will have full access to the site during normal business hours
- Where particular or unique design characteristics or requirements have been incorporated for a project and are reflected in the cost data, these have been adjusted as part of the normalization process to provide more satisfactory comparison of data.

Exclusions

This Schools Construction Cost Benchmarking Study does not provide for the following:

- 1 Owner supplied and installed furniture, fixtures and equipment
- 2 Loose furniture and equipment except as specifically identified
- 5 Hazardous material handling, disposal and abatement
- 6 Compression of schedule, premium or shift work, and restrictions on the contractor's working hours
- 7 Testing and inspection fees
- 8 Architectural, design and construction management fees

- 9 Scope change and post contract contingencies
- 10 Assessments, taxes, finance, legal and development charges
- 11 Environmental impact mitigation
- 12 Builder's risk, project wrap-up and other owner provided insurance program
- 13 Land and easement acquisition
- 14 Security equipment and devices
- 15 Audio visual equipment

Allowance for the Development of Design

Where available cost data included a design contingency, this had been retained on the basis that this would be a necessary allowance for completion of the design for the project and would be expended and was part of the approved funding for the project.

Escalation Allowance

All prices included in the analysis have been adjusted to a Q12023 basedate no escalation beyond that date is included.

Summary of Analysis & Commentary**Elementary School (Sample Size 7):**

- Data Range: \$481 - \$587/SF
- Average: \$542/SF
- Median: \$541/SF

Middle School (Sample Size 9):

- Data Range: \$502 - \$607/SF
- Average: \$571/SF
- Median: \$580/SF

High School (Sample Size 7):

- Data Range: \$519 - \$619/SF
- Average: \$578/SF
- Median: \$580/SF

Technical High School (Sample Size 8):

- Data Range: \$525 - \$626/SF
- Average: \$587/SF
- Median: \$596/SF

Sustainability & De-Carbonization:

As part of developing a strategy for De-Carbonization it is important to define the goals and objectives of the strategy. Enhancing sustainability measures to move from a LEED Silver rating to a De-Carbonization solution would need to examine the following key factors:

- Rainwater collection & re-use
- Greywater & blackwater systems
- Reduced window to wall ratio
- Improved insulation
- Improved glazing
- Improved lighting performance
- Improved mechanical system performance/solutions (ground source heat pump, solar domestic HW)
- Plugload management
- Renewable energy solutions
- No use of carbon based energy sources at the project

Capital Cost Premiums would be in the range of **+5% to +10%** on base construction cost.

Each sustainability measure should be evaluated from a design/technical/cost perspective to determine optimum solutions and a cost benefit analysis study performed either with just a simple payback calculation or a NPV calculation.

The viability of the sustainability measures should be assessed against an agreed upon time horizon of perhaps 25 years.

Geographic Impacts on Cost within the State of Connecticut

Pricing information in the benchmark information has been normalized to Hartford, CT for comparison purposes. By comparing pricing levels across ten different locations across the state there is a de minimus difference to Hartford, which is the highest pricing level within the state.

Cost Drivers/Major Cost Elements

- 1 For all school types the cost of MEP services represents a significant portion of the total direct cost with HVAC being the largest single driver at approximately 16%.
 - 2 The cost of exterior vertical enclosure (skin) represents approximately 13% of direct cost and is a controllable as a combination of quality and efficiency of the skin. The driver is likely the layout (form or footprint) rather than quality.
 - 3 Interior construction also represents approximately 13% of direct cost, and is driven by program. It is not typically a function of quality.
 - 4 Structure is the next significant cost element at approximately 12% of direct cost. This is also a function of the configuration of the building and therefore grid.
 - 5 The remaining building elements each constitute less than 10% of the direct building cost.
- In all cases the program will drive the cost for the building and actual design and infrastructure will have a lesser influence. Optimizing the systems designs to fit the program needs, and right-sizing the building to accommodate the program will have most impact on cost.

COMPARISON SUMMARY OF AVERAGE COSTS BY SCHOOL TYPE

Item	Description	ELEMENTARY	MIDDLE	HIGH	TECHNICAL HIGH
		Cost \$/SF	Cost \$/SF	Cost \$/SF	Cost \$/SF
	Gross Floor Area				
A	<u>SUBSTRUCTURE</u>				
A10	Foundations	17.28	19.70	20.88	25.99
A40	Slabs-On-Grade	9.57	10.91	11.56	11.59
	Subtotal	26.85	30.62	32.44	37.58
B	<u>SHELL</u>				
B10	Superstructure	47.12	56.87	63.94	59.87
B20	Exterior Vertical Enclosure	69.96	74.07	52.48	54.67
B30	Exterior Horizontal Enclosure	20.73	20.45	18.66	16.94
	Subtotal	137.81	151.39	135.08	131.48
C	<u>INTERIORS</u>				
C10	Interior Construction	55.87	64.92	62.34	71.36
C20	Interior Finishes	28.87	33.54	32.21	31.66
	Subtotal	84.74	98.47	94.55	103.02
D	<u>SERVICES</u>				
D10	Conveying	1.98	2.66	1.84	2.35
D20	Plumbing	21.06	21.84	23.01	24.70
D30	Heating, Ventilation & Air Conditioning	80.52	64.68	81.23	92.27
D40	Fire Protection	6.86	5.76	6.30	7.42
D50	Electrical	31.53	35.06	33.33	36.69
D60	Communications, Safety & Security	15.89	17.68	16.80	18.49
D80	Integrated Automation	4.19	4.66	4.43	4.88
	Subtotal	162.03	152.33	166.95	186.79
E	<u>EQUIPMENT & FURNISHINGS</u>				
E10	Equipment	12.50	15.21	15.01	17.73
E20	Furnishings	7.59	9.24	9.12	7.64
	Subtotal	20.09	24.46	24.12	25.37
Total Direct Costs (Building)		431.54	457.26	453.14	484.25
	General Conditions & General Requirements	44.15	45.80	45.41	34.93
	Contractor's Overhead & Profit or Fee	18.43	16.80	24.79	15.70
Total Construction Costs (excl. Contingencies & Escalation) Jun-2023		494.12	519.86	523.34	534.88
	Contingency for Development of Design	47.78	50.69	54.18	51.96
	Escalation is excluded				
ESTIMATED CONSTRUCTION COST Jun-2023		541.90	570.55	577.52	586.84

Elementary School Cost Analysis

Construction Type -
GSF -

School A	School B	School C	School D	School E	School F	School G	Average
New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction
74,720	88,495	126,385	103,523	105,750	109,855	113,141	Average

A Substructure										
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
A10	Foundations - Concrete spread and strip footings, 4" concrete slab on grade, normal soil conditions									
A1010	Standard Foundations	sf	\$13.37	\$16.48	\$10.83	\$15.41	\$25.16	\$18.92	\$20.81	\$17.28
A1020	Special Foundations									
A1030	Slab on grade	sf	\$7.41	\$9.13	\$6.00	\$8.53	\$13.93	\$10.48	\$11.52	\$9.57
A20	Basement Construction - 12' high, 12" thick waterproofed basement walls									
A2010	Basement Excavation									
A2020	Basement Walls									

B Shell										
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
B10	Superstructure - Steel columns, wide flange: 3 hour fire rated: floors, composite steel frame and deck with concrete slab; roof, steel beams, open web joists and deck									
B1010	Floor Construction	sf	\$20.70	\$26.56	\$25.97	\$29.62	\$14.98	\$25.40	\$18.46	\$23.10
B1020	Roof Construction	sf	\$21.53	\$27.62	\$27.01	\$30.81	\$15.58	\$26.41	\$19.20	\$24.02
B20	Exterior Enclosure - Walls; North, East and West, brick and light weight concrete block with 2" cavity insulation, 25% window; South 8" lightweight concrete block insulated, 10% window. Doors, aluminium and glass at 1st floor level, insulated automatic basement garage door. Windows, aluminium, 3'-0" x 5'-4" insulating glass									
B2010	Exterior Walls		\$49.48	\$56.57	\$33.27	\$48.38	\$43.37	\$58.55	\$48.17	\$48.26
B2020	Exterior Windows	sf	\$25.69	\$15.65	\$21.45	\$21.22	\$21.10	\$18.38	\$15.36	\$19.84
B2030	Exterior Doors	sf	\$2.39	\$1.50	\$1.28	\$3.66	\$1.39	\$1.57	\$1.32	\$1.87
B30	Roofing - Tar and gravel, 4 ply, 2" rigid insulation, R15; one roof access hatch									
B3010	Roof Coverings	sf	\$21.90	\$21.69	\$19.97	\$25.63	\$15.45	\$21.76	\$18.70	\$20.73
B3020	Roof Openings									

C Interiors										
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
C10	Interior Construction - Core, 6" lightweight concrete block partitions, full height. Corridors - 1st and 2nd floor, 3 5/8" steel studs with fire rated gypsum board, full height steel fabricated toilet partitions. Doors - hollow metal; Specialities - toilet accessories, directory board.									
C1010	Partitions	sf	\$36.66	\$42.65	\$34.41	\$36.09	\$33.57	\$35.17	\$26.83	\$35.05
C1020	Interior Doors	sf	\$8.93	\$10.39	\$8.39	\$8.80	\$8.18	\$8.57	\$6.54	\$8.54
C1030	Fittings	sf	\$10.30	\$11.98	\$9.67	\$10.14	\$9.43	\$9.88	\$7.54	\$9.85
C20	Staircases - Steel with concrete fill.									
C2010	Stair Construction	sf	\$2.25	\$2.62	\$2.11	\$2.22	\$2.06	\$2.16	\$1.65	\$2.15
C2020	Stair Finishes	sf	\$0.29	\$0.34	\$0.27	\$0.29	\$0.27	\$0.28	\$0.21	\$0.28
C30	Interior Finishes - Wall Finishes: lobby, mahogany panelling on furring, remainder plaster finish to ceiling height (partition and wall surfaces), paint. Floor Finishes: 1st floor lobby, corridors and toilet rooms, terrazzo, remainder, concrete; tenant developed 2nd thru 8th; toilet rooms, ceramic tiles; office and corridor, carpet. Ceiling Finsishes - 24"x48" fiberglass board tee grid.									
C3010	Wall Finishes	sf	\$6.27	\$7.30	\$5.89	\$6.18	\$5.74	\$6.02	\$4.59	\$6.00
C3020	Floor Finishes	sf	\$12.48	\$14.52	\$11.72	\$12.29	\$11.43	\$11.98	\$9.14	\$11.94
C3030	Ceiling Finishes	sf	\$11.43	\$13.30	\$10.73	\$11.26	\$10.47	\$10.97	\$8.37	\$10.93

D Services										
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
D10	Conveying Systems - two, 2500lb capacity, 200 F.P.M., geared elevators, 9 stops									
D1010	Elevators & Lifts	sf	\$2.50	\$1.98	\$1.54	\$2.37	\$2.48	\$1.52	\$1.44	\$1.98
D1020	Escalators & Moving Walks									
D1090	Other Conveying Systems									
D20	Plumbing - Vanity top lavatories, wall hung urinals and water closets; service sinks. Gas fired domestic hot water and reservoir; copper distribution piping throughout. Cast iron sanitary waste piping; drains in each washroom floor and parking level. 4" CI roof drains and PVC piping.									
D2010	Plumbing Fixtures	sf	\$3.87	\$4.22	\$3.64	\$3.88	\$3.17	\$3.30	\$3.20	\$3.61
D2020	Domestic Water Distribution	sf	\$6.75	\$7.35	\$6.35	\$6.76	\$5.53	\$5.74	\$5.57	\$6.29
D2030	Sanitary Waste	sf	\$5.07	\$5.53	\$4.77	\$5.09	\$4.16	\$4.32	\$4.19	\$4.73
D2040	Rain Water Drainage	sf	\$2.76	\$3.00	\$2.59	\$2.76	\$2.26	\$2.34	\$2.27	\$2.57
D2050	Special Plumbing System	sf	\$0.86	\$0.93	\$0.81	\$0.86	\$0.70	\$0.73	\$0.71	\$0.80
D2090	Other Plumbing Systems	sf	\$3.28	\$3.58	\$3.08	\$3.29	\$2.69	\$2.79	\$2.71	\$3.06

D30	HVAC - Cast iron gas-fired 1088 MBH water boiler and 150 ton water-cooled chiller in penthouse. Perimeter hot water finned tube radiation with wall to wall enclosures. 52800 CFM built-up VAV air handling unit for office floors. VAV air supply and low pressure return air distribution. 5500 CFM direct gas-fired parking garage air handling ventilation unit with air supply and exhaust duct systems. Pneumatic control system with central control.									
D3010	Energy Supply									
D3020	Heat Generating Systems	sf	\$5.43	\$7.17	\$8.17	\$5.57	\$9.46	\$9.08	\$5.54	\$7.20
D3030	Cooling Generating Systems	sf	\$12.13	\$16.00	\$18.24	\$12.44	\$21.12	\$20.28	\$12.36	\$16.08
D3040	Distribution Systems	sf	\$13.09	\$17.27	\$19.68	\$13.42	\$22.79	\$21.88	\$13.34	\$17.35
D3050	Terminal & Package Units	sf	\$18.92	\$24.96	\$28.45	\$19.40	\$32.95	\$31.63	\$19.28	\$25.08
D3060	Controls & Instrumentation	sf	\$5.46	\$7.21	\$8.22	\$5.60	\$9.52	\$9.14	\$5.57	\$7.25
D3070	Systems Testing & Balancing	sf	\$0.84	\$1.10	\$1.26	\$0.86	\$1.46	\$1.40	\$0.85	\$1.11
D3090	Other HVAC Systems & Equipment	sf	\$4.86	\$6.41	\$7.30	\$4.98	\$8.46	\$8.12	\$4.95	\$6.44
D40	Fire Protection - Standard sprinkler system in office area; dry sprinklers in basement parking area; 4" standpipe, 9 hose cabinets									
D4010	Sprinklers	sf	\$6.90	\$6.50	\$6.19	\$6.92	\$7.68	\$6.68	\$7.18	\$6.86
D4020	Standpipes									
D4030	Fire Protection Specialities									
D4090	Other Fire Protection Systems									
D50	Electrical - Service, panel board and feeder, 2000 amps. Lighting, 1st thru 8th, 15 fluorescent fixtures/1000sf, 3 watts/sf. Basement, 10 receptacles/1000 sf, 1.2 watts/sf. Air conditioning, 4 watts/sf; miscellaneous connections 1.2 watts/sf; elevator power, two, 10 HP 230 volt motors; wall switches, 2/1000 sf. Fire detection system, pull stations, signals, smoke and heat detectors. Emergency lighting generator, 30kw.									
D5010	Electrical Services & Distrubtions	sf	\$15.59	\$19.04	\$17.14	\$19.01	\$24.49	\$16.56	\$13.25	\$17.87
D5020	Lighting & Branch Wiring	sf	\$11.92	\$14.55	\$13.10	\$14.53	\$18.72	\$12.66	\$10.13	\$13.66
D5030	Communications & Security	sf	\$13.87	\$16.94	\$15.25	\$16.91	\$21.78	\$14.73	\$11.78	\$15.89
D5090	Other Electrical Systems	sf	\$3.66	\$4.47	\$4.02	\$4.46	\$5.75	\$3.89	\$3.11	\$4.19

E	Equipment & Furnishings									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
E10	Equipment - Automatic parking garage access gate, dock leveller, waste handling compactor.									
E1010	Commercial Equipment	sf	\$4.22	\$4.91	\$4.03	\$3.34	\$4.33	\$3.96	\$3.34	\$4.02
E1020	Institutional Equipment	sf	\$2.21	\$2.57	\$2.11	\$1.75	\$2.26	\$2.07	\$1.75	\$2.10
E1030	Vehicular Equipment	sf	\$0.31	\$0.36	\$0.30	\$0.25	\$0.32	\$0.29	\$0.25	\$0.30
E1090	Other Equipment	sf	\$6.39	\$7.43	\$6.10	\$5.06	\$6.54	\$5.99	\$5.05	\$6.08
E20	Furnishings - Vertical PVC interior blinds for all exterior windows. Washroom vanities.									
E2010	Fixed Furnishings	sf	\$7.98	\$9.27	\$7.62	\$6.32	\$8.17	\$7.48	\$6.31	\$7.59

Direct Construction Costs	\$409.92	\$471.08	\$418.93	\$436.35	\$458.88	\$463.10	\$362.49	\$431.54
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X	General conditions, office overhead & profit									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
X10	General Conditions									
X1010	General Conditions	sf	\$44.97	\$45.59	\$44.29	\$39.71	\$43.04	\$51.81	\$39.63	\$44.15
X20	Overheads & Profit									
X1020	Office Overhead & Profit	sf	\$17.30	\$16.68	\$20.42	\$15.57	\$21.48	\$16.14	\$21.45	\$18.43

Z	Allowances									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
Z10	Design Contingency									
Z10	Design Contingency	sf	\$37.38	\$53.42	\$44.05	\$49.34	\$42.30	\$50.55	\$57.43	\$47.78
Z20	Inflation (escalation) allowance									
Z20	Inflation Allowance	sf	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Benchmarks Total	sf	\$509.56	\$586.77	\$527.70	\$540.96	\$565.70	\$581.60	\$481.00	\$541.90
Total Direct Works Cost	sf	\$409.92	\$471.08	\$418.93	\$436.35	\$458.88	\$463.10	\$362.49	\$431.54

Middle School Cost Analysis

Construction Type -
GSF -

School A	School B	School C	School D	School E	School F	School G	School H	School I	Average
New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction
124,200	162,193	187,840	112,784	183,128	136,790	182,195	186,500	145,846	Average

A Substructure												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
A10	Foundations - Concrete spread and strip footings, 4" concrete slab on grade, normal soil conditions											
A1010	Standard Foundations	sf	\$24.10	\$16.95	\$15.94	\$20.39	\$13.59	\$22.54	\$14.06	\$25.90	\$23.85	\$19.70
A1020	Special Foundations											
A1030	Slab on grade	sf	\$13.35	\$9.39	\$8.83	\$11.29	\$7.53	\$12.49	\$7.78	\$14.35	\$13.21	\$10.91
A20	Basement Construction - 12' high, 12" thick waterproofed basement walls											
A2010	Basement Excavation											
A2020	Basement Walls											

B Shell												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
B10	Superstructure - Steel columns, wide flange: 3 hour fire rated: floors, composite steel frame and deck with concrete slab; roof, steel beams, open web joists and deck											
B1010	Floor Construction	sf	\$27.47	\$31.64	\$29.46	\$25.12	\$31.05	\$25.39	\$29.81	\$27.10	\$23.84	\$27.88
B1020	Roof Construction	sf	\$28.57	\$32.91	\$30.64	\$26.13	\$32.29	\$26.41	\$31.01	\$28.19	\$24.80	\$28.99
B20	Exterior Enclosure - Brick and light weight concrete block with cavity insulation, 25% window; Doors, aluminium and glass Windows, aluminium insulating glass											
B2010	Exterior Walls	sf	\$57.95	\$50.71	\$42.53	\$44.60	\$45.60	\$43.74	\$54.81	\$53.18	\$34.38	\$47.50
B2020	Exterior Windows	sf	\$22.46	\$25.52	\$20.79	\$14.77	\$18.84	\$31.70	\$21.85	\$34.26	\$33.90	\$24.90
B2030	Exterior Doors	sf	\$3.73	\$1.12	\$1.12	\$1.80	\$1.58	\$1.15	\$1.34	\$1.58	\$1.62	\$1.67
B30	Roofing - Tar and gravel, 4 ply, 2" rigid insulation, R15; one roof access hatch											
B3010	Roof Coverings	sf	\$22.51	\$15.70	\$12.35	\$21.64	\$19.50	\$23.76	\$17.65	\$28.84	\$22.10	\$20.45
B3020	Roof Openings											

C Interiors												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
C10	Interior Construction - Core, concrete block partitions, full height. Corridors steel studs with fire rated gypsum board, full height steel fabricated toilet partitions. Doors - hollow metal; Specialities - toilet accessories, directory board.											
C1010	Partitions	sf	\$44.04	\$37.62	\$38.13	\$36.29	\$37.53	\$46.92	\$46.73	\$40.94	\$38.38	\$40.73
C1020	Interior Doors	sf	\$10.73	\$9.17	\$9.29	\$8.84	\$9.15	\$11.43	\$11.39	\$9.98	\$9.35	\$9.93
C1030	Fittings	sf	\$12.37	\$10.57	\$10.71	\$10.19	\$10.54	\$13.18	\$13.13	\$11.50	\$10.78	\$11.44
C20	Staircases - Steel with concrete fill.											
C2010	Stair Construction	sf	\$2.70	\$2.31	\$2.34	\$2.23	\$2.30	\$2.88	\$2.87	\$2.51	\$2.36	\$2.50
C2020	Stair Finishes	sf	\$0.35	\$0.30	\$0.30	\$0.29	\$0.30	\$0.37	\$0.37	\$0.32	\$0.30	\$0.32
C30	Interior Finishes - Wall Finishes: lobby panelling, drywall to ceiling height, paint. Floor Finishes: vinyl tile, ceramic tiles; ACT											
C3010	Wall Finishes	sf	\$7.54	\$6.44	\$6.53	\$6.21	\$6.42	\$8.03	\$8.00	\$7.01	\$6.57	\$6.97
C3020	Floor Finishes	sf	\$15.00	\$12.81	\$12.98	\$12.36	\$12.78	\$15.98	\$15.91	\$13.94	\$13.07	\$13.87
C3030	Ceiling Finishes	sf	\$13.73	\$11.73	\$11.89	\$11.32	\$11.70	\$14.63	\$14.57	\$12.77	\$11.97	\$12.70

D Services												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
D10	Conveying Systems - two, 2500lb capacity, 200 F.P.M., geared elevators, 9 stops											
D1010	Elevators & Lifts	sf	\$2.43	\$2.69	\$3.59	\$1.49	\$2.75	\$2.54	\$4.06	\$1.59	\$2.79	\$2.66
D1020	Escalators & Moving Walks											
D1090	Other Conveying Systems											
D20	Plumbing - Vanity top lavatories, wall hung urinals and water closets; service sinks. Gas fired domestic hot water and reservoir; copper distribution piping throughout. Cast iron sanitary waste piping; drains in each washroom floor CI roof drains and PVC piping.											
D2010	Plumbing Fixtures	sf	\$3.96	\$4.24	\$3.34	\$3.41	\$4.12	\$3.69	\$3.97	\$3.16	\$3.83	\$3.75
D2020	Domestic Water Distribution	sf	\$6.90	\$7.38	\$5.81	\$5.94	\$7.17	\$6.42	\$6.92	\$5.50	\$6.66	\$6.52
D2030	Sanitary Waste	sf	\$5.19	\$5.55	\$4.37	\$4.47	\$5.40	\$4.83	\$5.21	\$4.13	\$5.01	\$4.91
D2040	Rain Water Drainage	sf	\$2.82	\$3.01	\$2.37	\$2.43	\$2.93	\$2.62	\$2.83	\$2.25	\$2.72	\$2.66
D2050	Special Plumbing System	sf	\$0.88	\$0.94	\$0.74	\$0.75	\$0.91	\$0.82	\$0.88	\$0.70	\$0.85	\$0.83
D2090	Other Plumbing Systems	sf	\$3.35	\$3.59	\$2.82	\$2.89	\$3.49	\$3.12	\$3.36	\$2.67	\$3.24	\$3.17
D30	HVAC - Cast iron gas-fired water boiler and water-cooled chiller in penthouse. Perimeter hot water finned tube radiation with wall to wall enclosures. Built-up VAV air handling unit, VAV air supply and low pressure return air distribution. Central control system.											
D3010	Energy Supply											
D3020	Heat Generating Systems	sf	\$5.72	\$5.11	\$5.21	\$4.81	\$7.28	\$6.61	\$5.05	\$6.32	\$5.94	\$5.79
D3030	Cooling Generating Systems	sf	\$12.78	\$11.42	\$11.64	\$10.74	\$16.27	\$14.76	\$11.29	\$14.12	\$13.27	\$12.92
D3040	Distribution Systems	sf	\$13.78	\$12.32	\$12.55	\$11.59	\$17.55	\$15.93	\$12.18	\$15.23	\$14.32	\$13.94
D3050	Terminal & Package Units	sf	\$19.93	\$17.81	\$18.15	\$16.75	\$25.37	\$23.03	\$17.60	\$22.02	\$20.69	\$20.15
D3060	Controls & Instrumentation	sf	\$5.76	\$5.14	\$5.24	\$4.84	\$7.33	\$6.65	\$5.08	\$6.36	\$5.98	\$5.82
D3070	Systems Testing & Balancing	sf	\$0.88	\$0.79	\$0.80	\$0.74	\$1.12	\$1.02	\$0.78	\$0.97	\$0.92	\$0.89
D3090	Other HVAC Systems & Equipment	sf	\$5.12	\$4.57	\$4.66	\$4.30	\$6.51	\$5.91	\$4.52	\$5.65	\$5.31	\$5.17

Middle School Cost Analysis

Construction Type -
GSF -

School A	School B	School C	School D	School E	School F	School G	School H	School I	Average
New	New	New	New	New	New	New	New	New	
Construction	Construction	Construction	Construction	Construction	Construction	Construction	Construction	New Construction	New Construction
124,200	162,193	187,840	112,784	183,128	136,790	182,195	186,500	145,846	Average

A Substructure												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
D40	Fire Protection - Standard wet sprinkler system, standpipes & hose cabinets											
D4010	Sprinklers	sf	\$8.45	\$7.72	\$0.00	\$6.42	\$7.16	\$7.89	\$5.99	\$0.00	\$8.21	\$5.76
D4020	Standpipes											
D4030	Fire Protection Specialities											
D4090	Other Fire Protection Systems											
D50	Electrical - Service, panel board and feeders, lighting, receptacles, HVAC power, miscellaneous connections, elevator power, wall switches. Fire detection system, pull stations, signals, smoke and heat detectors. Emergency lighting.											
D5010	Electrical Services & Distrubtions	sf	\$18.92	\$19.59	\$22.29	\$14.86	\$21.52	\$18.99	\$24.41	\$17.10	\$21.15	\$19.87
D5020	Lighting & Branch Wiring	sf	\$14.46	\$14.97	\$17.04	\$11.36	\$16.45	\$14.52	\$18.66	\$13.07	\$16.16	\$15.19
D5030	Communications & Security	sf	\$16.83	\$17.42	\$19.83	\$13.22	\$19.14	\$16.89	\$21.71	\$15.21	\$18.81	\$17.68
D5090	Other Electrical Systems	sf	\$4.44	\$4.60	\$5.23	\$3.49	\$5.05	\$4.46	\$5.73	\$4.01	\$4.96	\$4.66

E Equipment & Furnishings												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
E10	Equipment - Automatic parking garage access gate, dock leveller, waste handling compactor.											
E1010	Commercial Equipment	sf	\$5.80	\$6.61	\$5.66	\$3.43	\$3.92	\$6.76	\$2.79	\$4.42	\$4.64	\$4.89
E1020	Institutional Equipment	sf	\$3.03	\$3.46	\$2.96	\$1.80	\$2.05	\$3.53	\$1.46	\$2.31	\$2.43	\$2.56
E1030	Vehicular Equipment	sf	\$0.43	\$0.49	\$0.42	\$0.25	\$0.29	\$0.50	\$0.21	\$0.33	\$0.34	\$0.36
E1090	Other Equipment	sf	\$8.77	\$10.00	\$8.56	\$5.20	\$5.92	\$10.23	\$4.22	\$6.69	\$7.02	\$7.40
E20	Furnishings - Vertical PVC interior blinds for all exterior windows. Washroom vanities.											
E2010	Fixed Furnishings	sf	\$10.95	\$12.49	\$10.69	\$6.49	\$7.40	\$12.78	\$5.27	\$8.35	\$8.77	\$9.24

Direct Construction Costs

\$488.19	\$456.78	\$427.79	\$395.16	\$457.80	\$495.12	\$465.45	\$474.55	\$454.49	\$457.26
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X General conditions, office overhead & profit												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
X10	General Conditions											
X1010	General Conditions	sf	\$39.56	\$62.01	\$51.73	\$51.10	\$39.61	\$36.22	\$45.52	\$44.62	\$41.85	\$45.80
X20	Overheads & Profit											
X1020	Office Overhead & Profit	sf	\$14.28	\$13.83	\$14.38	\$14.63	\$17.60	\$21.75	\$15.85	\$24.37	\$14.45	\$16.80

Z Allowances												
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
Z10	Design Contingency											
Z10	Design Contingency	sf	\$47.66	\$52.92	\$50.09	\$41.14	\$50.84	\$53.52	\$52.83	\$55.43	\$51.78	\$50.69
Z20	Inflation (escalation) allowance											
Z20	Inflation Allowance	sf	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Benchmarks Total	sf	\$589.69	\$585.54	\$544.00	\$502.04	\$565.85	\$606.60	\$579.65	\$598.98	\$562.57	\$570.55
Total Direct Works Cost	sf	\$488.19	\$456.78	\$427.79	\$395.16	\$457.80	\$495.12	\$465.45	\$474.55	\$454.49	\$457.26

High School Cost Analysis

Construction Type -
GSF -

School A	School B	School C	School D	School E	School F	School G	Average
New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction
207,077	419,765	394,650	259,847	240,204	421,858	386,630	Average

A Substructure										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
A10	Foundations - Concrete spread and strip footings, 4" concrete slab on grade, normal soil conditions									
A1010	Standard Foundations	sf	\$23.33	\$21.29	\$19.98	\$24.81	\$20.64	\$22.08	\$14.02	\$20.88
A1020	Special Foundations									
A1030	Slab on grade	sf	\$12.92	\$11.79	\$11.07	\$13.74	\$11.43	\$12.23	\$7.77	\$11.56
A20	Basement Construction - 12' high, 12" thick waterproofed basement walls									
A2010	Basement Excavation									
A2020	Basement Walls									

B Shell										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
B10	Superstructure - Steel columns, wide flange: 3 hour fire rated: floors, composite steel frame and deck with concrete slab; roof, steel beams, open web joists and deck									
B1010	Floor Construction	sf	\$30.43	\$28.36	\$36.79	\$31.55	\$29.62	\$28.15	\$34.48	\$31.34
B1020	Roof Construction	sf	\$31.65	\$29.50	\$38.26	\$32.81	\$30.81	\$29.28	\$35.87	\$32.60
B20	Exterior Enclosure - Walls; North, East and West, brick and light weight concrete block with 2" cavity insulation, 25% window; South 8" lightweight concrete block insulated, 10% window. Doors, aluminium and glass at 1st floor level, insulated automatic basement garage door. Windows, aluminium, 3'-0" x 5'-4" insulting glass									
B2010	Exterior Walls		\$39.50	\$40.28	\$0.00	\$38.18	\$37.19	\$45.76	\$53.03	\$36.28
B2020	Exterior Windows	sf	\$18.75	\$21.80	\$0.00	\$23.89	\$18.50	\$22.00	\$0.24	\$15.03
B2030	Exterior Doors	sf	\$1.34	\$1.86	\$0.00	\$0.49	\$1.16	\$0.68	\$2.69	\$1.18
B30	Roofing - Tar and gravel, 4 ply, 2" rigid insulation, R15; one roof access hatch									
B3010	Roof Coverings	sf	\$17.78	\$19.74	\$11.14	\$23.75	\$25.03	\$15.11	\$18.05	\$18.66
B3020	Roof Openings									

C Interiors										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
C10	Interior Construction - Core, 6" lightweight concrete block partitions, full height. Corridors - 1st and 2nd floor, 3 5/8" steel studs with fire rated gypsum board, full height steel fabricated toilet partitions. Doors - hollow metal; Specialities - toilet accessories, directory board.									
C1010	Partitions	sf	\$37.10	\$37.08	\$35.78	\$41.86	\$43.38	\$43.41	\$35.17	\$39.11
C1020	Interior Doors	sf	\$9.04	\$9.04	\$8.72	\$10.20	\$10.57	\$10.58	\$8.57	\$9.53
C1030	Fittings	sf	\$10.42	\$10.42	\$10.05	\$11.76	\$12.19	\$12.19	\$9.88	\$10.99
C20	Staircases - Steel with concrete fill.									
C2010	Stair Construction	sf	\$2.28	\$2.28	\$2.20	\$2.57	\$2.66	\$2.67	\$2.16	\$2.40
C2020	Stair Finishes	sf	\$0.29	\$0.29	\$0.28	\$0.33	\$0.34	\$0.34	\$0.28	\$0.31
C30	Interior Finishes - Wall Finishes: lobby, mahogany panelling on furring, remainder plaster finish to ceiling height (partition and wall surfaces), paint. Floor Finishes: 1st floor lobby, corridors and toilet rooms, terrazzo, remainder, concrete; tenant developed 2nd thru 8th; toilet rooms, ceramic tiles; office and corridor, carpet. Ceiling Finsishes - 24"x48" fiberglass board tee grid.									
C3010	Wall Finishes	sf	\$6.35	\$6.35	\$6.12	\$7.16	\$7.42	\$7.43	\$6.02	\$6.69
C3020	Floor Finishes	sf	\$12.63	\$12.63	\$12.18	\$14.26	\$14.77	\$14.78	\$11.98	\$13.32
C3030	Ceiling Finishes	sf	\$11.57	\$11.56	\$11.16	\$13.06	\$13.53	\$13.54	\$10.97	\$12.20

D Services										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
D10	Conveying Systems - two, 2500lb capacity, 200 F.P.M., geared elevators, 9 stops									
D1010	Elevators & Lifts	sf	\$2.65	\$2.03	\$1.70	\$1.60	\$1.42	\$1.97	\$1.52	\$1.84
D1020	Escalators & Moving Walks									
D1090	Other Conveying Systems									
D20	Plumbing - Vanity top lavatories, wall hung urinals and water closets; service sinks. Gas fired domestic hot water and reservoir; copper distribution piping throughout. Cast iron sanitary waste piping; drains in each washroom floor and parking level. 4" CI roof drains and PVC piping.									
D2010	Plumbing Fixtures	sf	\$3.42	\$4.12	\$4.19	\$3.86	\$4.27	\$4.24	\$3.54	\$3.95
D2020	Domestic Water Distribution	sf	\$5.96	\$7.17	\$7.30	\$6.72	\$7.43	\$7.38	\$6.16	\$6.87
D2030	Sanitary Waste	sf	\$4.48	\$5.39	\$5.49	\$5.05	\$5.59	\$5.55	\$4.63	\$5.17
D2040	Rain Water Drainage	sf	\$2.43	\$2.93	\$2.98	\$2.74	\$3.03	\$3.02	\$2.51	\$2.81
D2050	Special Plumbing System	sf	\$0.76	\$0.91	\$0.93	\$0.85	\$0.94	\$0.94	\$0.78	\$0.87
D2090	Other Plumbing Systems	sf	\$2.90	\$3.48	\$3.55	\$3.27	\$3.61	\$3.59	\$2.99	\$3.34
D30	HVAC - Cast iron gas-fired 1088 MBH water boiler and 150 ton water-cooled chiller in penthouse. Perimeter hot water finned tube radiataion with wall to wall enclosures. 52800 CFM built-up VAV air handling unit for office floors. VAV air supply and low pressure return air distribution. 5500 CFM direct gas-fired parking garage air handling ventilation unit with air supply and exhaust duct systems. Pneumatic control system with central control.									

D3010	Energy Supply									
D3020	Heat Generating Systems	sf	\$6.71	\$7.34	\$10.33	\$8.34	\$5.85	\$6.19	\$6.10	\$7.27
D3030	Cooling Generating Systems	sf	\$14.99	\$16.38	\$23.06	\$18.63	\$13.07	\$13.83	\$13.62	\$16.23
D3040	Distribution Systems	sf	\$16.17	\$17.68	\$24.88	\$20.10	\$14.11	\$14.92	\$14.70	\$17.51
D3050	Terminal & Package Units	sf	\$23.38	\$25.55	\$35.97	\$29.05	\$20.39	\$21.56	\$21.24	\$25.31
D3060	Controls & Instrumentation	sf	\$6.75	\$7.38	\$10.39	\$8.39	\$5.89	\$6.23	\$6.14	\$7.31
D3070	Systems Testing & Balancing	sf	\$1.03	\$1.13	\$1.59	\$1.29	\$0.90	\$0.95	\$0.94	\$1.12
D3090	Other HVAC Systems & Equipment	sf	\$6.00	\$6.56	\$9.23	\$7.46	\$5.23	\$5.54	\$5.45	\$6.50
D40	Fire Protection - Standard sprinkler system in office area; dry sprinklers in basement parking area; 4" standpipe, 9 hose cabinets									
D4010	Sprinklers	sf	\$7.33	\$7.70	\$0.00	\$7.36	\$7.16	\$7.66	\$6.92	\$6.30
D4020	Standpipes									
D4030	Fire Protection Specialities									
D4090	Other Fire Protection Systems									
D50	Electrical - Service, panel board and feeder, 2000 amps. Lighting, 1st thru 8th, 15 fluorescent fixtures/1000sf, 3 watts/sf. Basement, 10 receptacles/1000 sf, 1.2 watts/sf. Air conditioning, 4 watts/sf; miscellaneous connections 1.2 watts/sf; elevator power, two, 10 HP 230 volt motors; wall switches, 2/1000 sf. Fire detection system, pull stations, signals, smoke and heat detectors. Emergency lighting generator, 30kw.									
D5010	Electrical Services & Distrubtions	sf	\$18.61	\$17.87	\$17.67	\$18.41	\$19.09	\$21.67	\$18.89	\$18.89
D5020	Lighting & Branch Wiring	sf	\$14.23	\$13.66	\$13.51	\$14.07	\$14.59	\$16.57	\$14.44	\$14.44
D5030	Communications & Security	sf	\$16.56	\$15.89	\$15.72	\$16.37	\$16.98	\$19.28	\$16.81	\$16.80
D5090	Other Electrical Systems	sf	\$4.37	\$4.19	\$4.15	\$4.32	\$4.48	\$5.09	\$4.43	\$4.43

E	Equipment & Furnishings									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
E10	Equipment - Automatic parking garage access gate, dock leveller, waste handling compactor.									
E1010	Commercial Equipment	sf	\$6.31	\$4.21	\$5.13	\$4.68	\$5.38	\$5.52	\$2.55	\$4.83
E1020	Institutional Equipment	sf	\$3.30	\$2.20	\$2.68	\$2.44	\$2.81	\$2.89	\$1.33	\$2.52
E1030	Vehicular Equipment	sf	\$0.47	\$0.31	\$0.38	\$0.35	\$0.40	\$0.41	\$0.19	\$0.36
E1090	Other Equipment	sf	\$9.54	\$6.37	\$7.76	\$7.07	\$8.14	\$8.36	\$3.86	\$7.30
E20	Furnishings - Vertical PVC interior blinds for all exterior windows. Washroom vanities.									
E2010	Fixed Furnishings	sf	\$11.91	\$7.95	\$9.69	\$8.83	\$10.17	\$10.44	\$4.82	\$9.12

Subtotal	\$455.65	\$452.67	\$421.98	\$491.68	\$460.20	\$474.04	\$415.75	\$453.14
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X	General conditions, office overhead & profit									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
X10	General Conditions									
X1010	General Conditions	sf	\$30.24	\$52.89	\$57.31	\$50.72	\$51.16	\$25.30	\$50.24	\$45.41
X20	Overheads & Profit									
X1020	Office Overhead & Profit	sf	\$47.69	\$17.03	\$17.53	\$15.85	\$15.20	\$47.64	\$12.58	\$24.79

Z	Allowances									
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
Z10	Design Contingency									
Z10	Design Contingency	sf	\$63.65	\$52.75	\$54.03	\$60.71	\$53.35	\$54.59	\$40.17	\$54.18
Z20	Inflation (escalation) allowance									
Z20	Inflation Allowance	sf	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Benchmarks Total	sf	\$597.22	\$575.34	\$550.85	\$618.97	\$579.92	\$601.57	\$518.75	\$577.52
Total Direct Works Cost	sf	\$455.65	\$452.67	\$421.98	\$491.68	\$460.20	\$474.04	\$415.75	\$453.14

Technical High School Cost Analysis

Construction Type -
GSF -

School A	School B	School C	School D	School E	School F	School G	School H	Average
New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction	New Construction
207,077	419,765	394,650	259,847	240,204	421,858	386,630	206,000	Average

A Substructure											
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
A10	Foundations - Concrete spread and strip footings, 4" concrete slab on grade, normal soil conditions										
A1010	Standard Foundations	sf	\$28.36	\$25.88	\$24.29	\$30.17	\$25.09	\$26.84	\$17.04	\$30.27	\$25.99
A1020	Special Foundations										
A1030	Slab on grade	sf	\$12.92	\$11.79	\$11.06	\$13.74	\$11.43	\$12.23	\$7.76	\$11.77	\$11.59
A20	Basement Construction - 12' high, 12" thick waterproofed basement walls										
A2010	Basement Excavation										
A2020	Basement Walls										

B Shell											
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
B10	Superstructure - Steel columns, wide flange; 3 hour fire rated: floors, composite steel frame and deck with concrete slab; roof, steel beams, open web joists and deck										
B1010	Floor Construction	sf	\$28.73	\$26.77	\$34.72	\$29.78	\$27.96	\$26.58	\$32.55	\$28.09	\$29.40
B1020	Roof Construction	sf	\$29.79	\$27.77	\$36.01	\$30.88	\$29.00	\$27.56	\$33.76	\$29.04	\$30.47
B20	Exterior Enclosure - Walls; North, East and West, brick and light weight concrete block with 2" cavity insulation, 25% window; South 8" lightweight concrete block insulated, 10% window. Doors, aluminium and glass at 1st floor level, insulated automatic basement garage door. Windows, aluminium, 3'-0" x 5'-4" insulating glass										
B2010	Exterior Walls		\$42.73	\$43.58	\$0.00	\$41.31	\$40.23	\$49.51	\$57.37	\$42.44	\$39.65
B2020	Exterior Windows	sf	\$17.26	\$20.06	\$0.00	\$21.99	\$17.03	\$20.25	\$0.23	\$11.33	\$13.52
B2030	Exterior Doors	sf	\$1.68	\$2.33	\$0.00	\$0.61	\$1.45	\$0.86	\$3.37	\$1.77	\$1.51
B30	Roofing - Tar and gravel, 4 ply, 2" rigid insulation, R15; one roof access hatch										
B3010	Roof Coverings	sf	\$16.23	\$18.02	\$10.17	\$21.68	\$22.84	\$13.80	\$16.47	\$16.31	\$16.94
B3020	Roof Openings										

C Interiors											
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
C10	Interior Construction - Core, 6" lightweight concrete block partitions, full height. Corridors - 1st and 2nd floor, 3 5/8" steel studs with fire rated gypsum board, full height steel fabricated toilet partitions. Doors - hollow metal; Specialities - toilet accessories, directory board.										
C1010	Partitions	sf	\$43.62	\$43.60	\$42.06	\$49.22	\$51.01	\$51.04	\$41.35	\$53.81	\$46.96
C1020	Interior Doors	sf	\$7.69	\$7.68	\$7.41	\$8.67	\$8.99	\$9.00	\$7.29	\$6.91	\$7.96
C1030	Fittings	sf	\$12.04	\$12.04	\$11.62	\$13.59	\$14.09	\$14.09	\$11.42	\$14.68	\$12.95
C20	Staircases - Steel with concrete fill.										
C2010	Stair Construction	sf	\$2.81	\$2.81	\$2.71	\$3.17	\$3.29	\$3.29	\$2.67	\$3.59	\$3.04
C2020	Stair Finishes	sf	\$0.42	\$0.42	\$0.40	\$0.47	\$0.49	\$0.49	\$0.39	\$0.57	\$0.45
C30	Interior Finishes - Wall Finishes: lobby, mahogany panelling on furring, remainder plaster finish to ceiling height (partition and wall surfaces), paint. Floor Finishes: 1st floor lobby, corridors and toilet rooms, terrazzo, remainder, concrete; tenant developed 2nd thru 8th; toilet rooms, ceramic tiles; office and corridor, carpet. Ceiling Finsishes - 24"x48" fiberglass board tee grid.										
C3010	Wall Finishes	sf	\$4.88	\$4.88	\$4.71	\$5.51	\$5.71	\$5.71	\$4.63	\$3.76	\$4.97
C3020	Floor Finishes	sf	\$12.72	\$12.71	\$12.26	\$14.35	\$14.87	\$14.88	\$12.06	\$13.82	\$13.46
C3030	Ceiling Finishes	sf	\$12.41	\$12.40	\$11.96	\$14.00	\$14.51	\$14.52	\$11.76	\$14.26	\$13.23

D Services											
Uniformat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
D10	Conveying Systems - two, 2500lb capacity, 200 F.P.M., geared elevators, 9 stops										
D1010	Elevators & Lifts	sf	\$3.32	\$2.55	\$2.13	\$2.00	\$1.78	\$2.47	\$1.91	\$2.63	\$2.35
D1020	Escalators & Moving Walks										
D1090	Other Conveying Systems										
D20	Plumbing - Vanity top lavatories, wall hung urinals and water closets; service sinks. Gas fired domestic hot water and reservoir; copper distribution piping throughout. Cast iron sanitary waste piping; drains in each washroom floor and parking level. 4" CI roof drains and PVC piping.										
D2010	Plumbing Fixtures	sf	\$3.63	\$4.36	\$4.44	\$4.09	\$4.52	\$4.50	\$3.75	\$4.58	\$4.23
D2020	Domestic Water Distribution	sf	\$6.31	\$7.60	\$7.73	\$7.12	\$7.87	\$7.83	\$6.52	\$7.97	\$7.37
D2030	Sanitary Waste	sf	\$4.75	\$5.72	\$5.82	\$5.36	\$5.92	\$5.89	\$4.91	\$5.99	\$5.54
D2040	Rain Water Drainage	sf	\$2.58	\$3.10	\$3.16	\$2.91	\$3.22	\$3.20	\$2.67	\$3.25	\$3.01
D2050	Special Plumbing System	sf	\$0.82	\$0.98	\$1.00	\$0.92	\$1.02	\$1.01	\$0.85	\$1.05	\$0.96
D2090	Other Plumbing Systems	sf	\$3.07	\$3.69	\$3.76	\$3.46	\$3.83	\$3.80	\$3.17	\$3.87	\$3.58

D30	HVAC - Cast iron gas-fired 1088 MBH water boiler and 150 ton water-cooled chiller in penthouse. Perimeter hot water finned tube radiatation with wall to wall enclosures. 52800 CFM built-up VAV air handling unit for office floors. VAV air supply and low pressure return air distribution. 5500 CFM direct gas-fired parking garage air handling ventilation unit with air supply and exhaust duct systems. Pneumatic control system with central control.										
D3010	Energy Supply										
D3020	Heat Generating Systems	sf	\$7.46	\$8.15	\$11.48	\$9.27	\$6.51	\$6.88	\$6.78	\$9.27	\$8.22
D3030	Cooling Generating Systems	sf	\$16.76	\$18.32	\$25.79	\$20.83	\$14.62	\$15.46	\$15.23	\$20.92	\$18.49
D3040	Distribution Systems	sf	\$17.98	\$19.65	\$27.65	\$22.34	\$15.68	\$16.58	\$16.33	\$22.33	\$19.82
D3050	Terminal & Package Units	sf	\$26.14	\$28.57	\$40.22	\$32.49	\$22.80	\$24.11	\$23.75	\$32.63	\$28.84
D3060	Controls & Instrumentation	sf	\$7.51	\$8.20	\$11.55	\$9.33	\$6.55	\$6.92	\$6.82	\$9.33	\$8.28
D3070	Systems Testing & Balancing	sf	\$1.15	\$1.26	\$1.77	\$1.43	\$1.00	\$1.06	\$1.05	\$1.43	\$1.27
D3090	Other HVAC Systems & Equipment	sf	\$6.67	\$7.29	\$10.26	\$8.29	\$5.82	\$6.15	\$6.06	\$8.29	\$7.35
D40	Fire Protection - Standard sprinkler system in office area; dry sprinklers in basement parking area; 4" standpipe, 9 hose cabinets										
D4010	Sprinklers	sf	\$8.48	\$8.91	\$0.00	\$8.52	\$8.29	\$8.86	\$8.01	\$8.27	\$7.42
D4020	Standpipes										
D4030	Fire Protection Specialities										
D4090	Other Fire Protection Systems										
D50	Electrical - Service, panel board and feeder, 2000 amps. Lighting, 1st thru 8th, 15 fluorescent fixtures/1000sf, 3 watts/sf. Basement, 10 receptacles/1000 sf, 1.2 watts/sf. Air conditioning, 4 watts/sf; miscellaneous connections 1.2 watts/sf; elevator power, two, 10 HP 230 volt motors; wall switches, 2/1000 sf. Fire detection system, pull stations, signals, smoke and heat detectors. Emergency lighting generator, 30kw.										
D5010	Electrical Services & Distrubtions	sf	\$20.33	\$19.51	\$19.30	\$20.10	\$20.84	\$23.67	\$20.63	\$21.98	\$20.79
D5020	Lighting & Branch Wiring	sf	\$15.54	\$14.91	\$14.75	\$15.36	\$15.93	\$18.09	\$15.77	\$16.80	\$15.89
D5030	Communications & Security	sf	\$18.08	\$17.35	\$17.16	\$17.88	\$18.54	\$21.05	\$18.35	\$19.55	\$18.49
D5090	Other Electrical Systems	sf	\$4.77	\$4.58	\$4.53	\$4.72	\$4.89	\$5.55	\$4.84	\$5.16	\$4.88

E	Equipment & Furnishings										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
E10	Equipment - Automatic parking garage access gate, dock leveller, waste handling compactor.										
E1010	Commercial Equipment	sf	\$8.98	\$5.99	\$7.30	\$6.66	\$7.67	\$7.87	\$3.63	\$9.15	\$7.16
E1020	Institutional Equipment	sf	\$1.57	\$1.05	\$1.28	\$1.16	\$1.34	\$1.37	\$0.63	\$0.00	\$1.05
E1030	Vehicular Equipment	sf	\$0.22	\$0.15	\$0.18	\$0.17	\$0.19	\$0.20	\$0.09	\$0.00	\$0.15
E1090	Other Equipment	sf	\$11.90	\$7.94	\$9.67	\$8.82	\$10.15	\$10.42	\$4.81	\$11.25	\$9.37
E20	Furnishings - Vertical PVC interior blinds for all exterior windows. Washroom vanities.										
E2010	Fixed Furnishings	sf	\$10.13	\$6.76	\$8.24	\$7.51	\$8.65	\$8.88	\$4.10	\$6.83	\$7.64

Subtotal	\$482.52	\$479.37	\$446.87	\$520.68	\$487.35	\$502.00	\$440.27	\$514.92	\$484.25
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X	General conditions, office overhead & profit										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
X10	General Conditions										
X1010	General Conditions	sf	\$23.89	\$41.79	\$45.28	\$40.08	\$40.42	\$19.99	\$39.70	\$28.32	\$34.93
X20	Overheads & Profit										
X1020	Office Overhead & Profit	sf	\$31.83	\$11.36	\$11.70	\$10.58	\$10.15	\$31.80	\$8.40	\$9.78	\$15.70

Z	Allowances										
Unifomat	Element	UoM	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Unit Cost	Average
Z10	Design Contingency										
Z10	Design Contingency	sf	\$61.12	\$50.65	\$51.89	\$58.30	\$51.23	\$52.42	\$38.58	\$51.49	\$51.96
Z20	Inflation (escalation) allowance										
Z20	Inflation Allowance	sf	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Benchmarks Total	sf	\$604.25	\$582.11	\$557.34	\$626.26	\$586.75	\$608.65	\$524.86	\$604.52	\$586.84
Total Direct Works Cost	sf	\$482.52	\$479.37	\$446.87	\$520.68	\$487.35	\$502.00	\$440.27	\$514.92	\$484.25