

QS Online

ATLANTIC WOODWORKS

6 STOREY MODEL COMPARISON – Original Model (Firewall)

HALIFAX, NOVA SCOTIA



CLASS C ESTIMATE

JANUARY 4, 2017 (date revised from Sept 30, 2016)

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HALIFAX, NOVA SCOTIA

CLASS C ESTIMATE

Prepared for:

Atlantic Woodworks
21535 Fort Lawrence Road
Amherst, Nova Scotia

Prepared by:

QS Online Cost Consultants Inc.

P.O. Box 25177 Clayton Park PO
Halifax, Nova Scotia

January 4, 2017 (date revised from Sept 30, 2016)

REPORT COVER

REPORT RECIPIENT

TABLE OF CONTENTS

LETTER OF INTRODUCTION

1. ESTIMATE SUMMARY AND ANALYSIS	Page 1
2. ESTIMATE APPROACH AND METHODS	Page 2
3. SOURCES OF INFORMATION	Page 2
4. RATES AND THEIR LIMITATIONS	Page 2
5. AREAS OF THE PROJECT	Page 4
6. OVERALL DETAILED COMPARISON CHART AND SUMMARY	

APPENDICES

- A. DETAILED ELEMENTAL ESTIMATE – ORIGINAL BASE MODEL
 - a. One Level Concrete, Five Levels Wood Framed
- B. DETAILED ELEMENTAL ESTIMATE – ALL STEEL
 - a. Six Levels of Structural Steel Framing
- C. DETAILED ELEMENTAL ESTIMATE – ALL CONCRETE
 - a. Six Levels of Structural Framed Concrete
- D. DETAILED ELEMENTAL ESTIMATE – ALL WOOD
 - a. Six Levels of Wood Framed Structure
- E. DOCUMENT & DRAWING LIST
- F. EXCLUSIONS LIST

January 4, 2016

Atlantic Woodworks
21535 Fort Lawrence Road
Amherst, Nova Scotia

Attention: Mr. Patrick Crabbe

RE: 6 Storey Construction – Original Model Comparison – Firewall

Dear Mr. Crabbe,

Please find enclosed four separate estimates for the model comparisons as requested.

Tri-City Contracting from Kamloops, B.C. has provided a base model, described below, which was the basis for three additional structural configurations of costs to be considered. High level structural interpretations of the models as applicable to the Halifax area, were provided by BMR Engineering from Halifax and these directives were included in the logic of the estimates.

The Architectural drawings are drawn by Bluegreen Architecture Inc. from Vernon and Kamloops BC. The Structural drawings are drawn by G. L. Bevan Pritchard Engineering Ltd., Vancouver BC.

All models are 6 storey, and varying in typical composition from the base model which is comprised of 1 level of concrete construction and 5 levels of wood construction above, 1 model with all wood construction, 1 model with all concrete construction, and 1 model with all structural steel construction.

All models are based on a 4' foot deep frost foundation, without basement, SOG, and the ground floor is considered as vacant shell space for commercial tenants, while the upper 5 floors are for residential.

The cost analysis findings indicate that wood construction models are the least expensive to build. This determination is simply from an initial capital cost perspective and has not included any impacts from a detailed life cycle costing analysis. Soft costs are also excluded from the estimate logic.

Electrical wiring costs have been proven to be slightly less per SF for wood framed structures versus those structures with steel stud framing. This difference is due mainly to the allowable use of non-armoured cable / wiring.

A modest savings was attributed to the Electrical unit rate due to lack of details in the design, however a more detailed review would be suggested to determine a more accurate finding of savings for this element.

As requested, the "All Wood" model was further modified to exclude masonry CMU units from the elevator shaft and replaced with wood framed and gypsum assemblies.

The impact of this alteration is a modest cost savings for the Upper Floor and Roof Construction as the shaft extended from the footings up through the roof elevation.

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As requested, the “All Wood” model was further modified to exclude the 5-ply CLT panels included in the “Base Model” with 24” deep parallel chord wood trusses.

This alteration impacted only the sloped roofs in the Roof Construction, the remainder of the roof area was flat and constructed of various depths of TJI joists and their associated assemblies and supports.

The impact of this change was a capital or direct cost savings to this portion of the Roof construction, but the trade-off of the capital cost saving would be an overall increased duration to the Project.

The multiple tasks of installing a significantly greater number of items in the parallel chord assembly, takes longer versus the approach of simply “laying in place” the full length CLT panels using a crane.

Although this report is not including impacts to soft costs or cash flow differentials, the result of extending any project’s duration, cascades into a direct impact to occupancy timing, construction financing costs, extended exposure to weather and seasons, to point out a few cascading impacts.

In regards to mass timber applications such as the CLT example, and other manufactured wood panelized systems for walls and floors, and where the capital cost for supply of these products is higher than the considered substitute parallel chord truss system for example, it would be reasonable to conclude that the return on investment for these manufactured products, is not in the hard or direct costs incurred during construction, but rather in the soft or indirect costs evaluations of the overall project achieved by a shortening the overall duration of the project and gaining earlier occupancy.

We note, that there are a number of minor cost differences between the Kamloops region and Halifax in regards to material supply and labour costs, but this report does not provide a detailed breakdown of these differences.

Specialty lumber such as Douglas Fir and mass timber is cheaper in the Kamloops area versus the Halifax area, mainly due to the impact of shipping costs, while standard dimensional lumber such as SPF #1 & #2, is without significant cost variations as it is similarly available in each respective region. The bulk of the lumber used in the Base Model is SPF dimensional lumber mainly due to it’s availability and lower cost.

The fixed price differences of the materials can be off-set in both regions by various levels of crewing, productivity, and payroll levels.

Construction cost differences in this type of construction are within a range that could be considered generally congruent to each region.

Further detailed analysis as discussed, would be required to determine specifics beyond these Class C estimates.

We remain available to you and your team, for any questions or if further assistance is required, please do not hesitate to contact our office.

Respectfully,



Renaud Francoeur, PQS, LEED AP

Per; QS Online Cost Consultants Inc.

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ESTIMATE SUMMARY / ANALYSIS

	Original Base 30-Sep-16	All Steel 30-Sep-16	All Concrete 30-Sep-16	All Wood 30-Sep-16
A - Shell	7,667,349	7,836,681	7,492,439	7,452,635
A1 - Sub-Structure	381,802	366,134	439,478	352,738
A2 - Structure	3,660,925	3,841,031	3,374,057	3,527,968
A3 - Exterior Enclosure	3,624,622	3,629,516	3,678,904	3,571,929
B - Interiors	3,843,100	5,198,921	5,104,937	3,878,898
B1 - Partitions and Doors	478,880	1,543,351	1,543,351	514,678
B2 - Finishes	1,596,985	1,888,335	1,794,351	1,596,985
B3 - Fittings and Equipment	1,767,235	1,767,235	1,767,235	1,767,235
C - Services	2,165,819	2,254,255	2,254,255	2,147,961
C1 - Mechanical	1,545,630	1,545,630	1,545,630	1,545,630
C2 - Electrical	620,189	708,625	708,625	602,331
Total Hard Costs - before site	13,676,268	15,289,857	14,851,631	13,479,494
D - Site and Ancillary Work	-	-	-	-
D1 - Site Work	-	-	-	-
D2 - Ancillary Work	-	-	-	-
Total Hard Costs - including site	13,676,268	15,289,857	14,851,631	13,479,494
Z1 - General Requirements & Fee	971,015	1,085,580	1,054,466	957,044
Z1.1 - General Requirements	2.0% 273,525	305,797	297,033	269,590
Z1.2 - Fee	5.0% 697,490	779,783	757,433	687,454
Z2 - Allowances	2,109,209	2,358,063	2,290,478	2,078,861
Z2.1 - Design Allowance	10.0% 1,464,728	1,637,544	1,590,610	1,443,654
Z2.2 - Escalation Allowance	0.0% -	-	-	-
Z2.3 - Construction Allowance	4.0% 644,480	720,519	699,868	635,208
Total Construction Costs	16,756,492	18,733,499	18,196,575	16,515,400
Taxes				
HST - 15% NS	0.0% -	-	-	-
Total Excluding Tax	16,756,492	18,733,499	18,196,575	16,515,400
Gross Floor Area - SF	113,380	113,380	113,380	113,380
Total - Dollars per SF	\$147.79	\$165.23	\$160.49	\$145.66
Total - Dollars per m2	\$1,590.80	\$1,778.49	\$1,727.52	\$1,567.91

1. ESTIMATE APPROACH AND METHODS

These four Class C Estimates of the “Base Model” and the three other structural configurations of the “Original” base model, are intended to provide a realistic allocation of direct construction costs for these structures, in Halifax Nova Scotia area.

From the documentation and information provided, quantities for all major elements were assessed or measured where possible and priced at rates considered competitive for a project of this type under a stipulated form of contract in this region of Nova Scotia.

The estimate is a determination of fair market value for the construction of this project and is not a prediction of low bid, as pricing assumes competitive bidding for every portion of work.

For building components and systems where specifications and design details are not available, quality standards have been established by discussions with the design team and typical quality standards for a structure of this type

Allowances for various “miscellaneous” may be used within the body of the estimate, this is to attempt to capture the value of specific project items or elements which are not fully drawn, specified or developed.

2. SOURCES OF INFORMATION

The Class C Estimates have been prepared from the documentation listed herein at Appendix E, Drawing List and Documents.

All of the documentation may be supplemented with information gathered in meetings, telephone calls, emails, and internet searches.

Documents provided are sourced as follows;

- Structural Outline Briefing - Halifax – BMR Engineering
- Architectural – Bluegreen Architecture Inc.
- Structural - BC – G. L. Bevan Pritchard

3. RATES AND THEIR LIMITATIONS**3.1. Contingency for Design and Pricing**

The Design and Pricing allowance is not intended to cover the costs of any program space modifications. The intention is to provide some flexibility for the designers and cost planners during any intentions of future design stages of the project.

The % amount allowed shall be reflective of the level of design achieved.

A Design and Pricing allowance of 10.0% as the state of the drawings received are preliminary in nature.

3.2. Construction Cost Escalation – Year to Year

When the project is anticipated to begin a minimum of 6 (six) months to a year, or more, from the date of this estimate, then it is suggested that a % rate of the estimate should be considered to cover potential project cost escalations which may be incurred during that period.

An Escalation allowance should be considered if the projects duration extends beyond 1 year from the date of project award for potential cost increases during the work.

An escalation allowance of 0.0% has been allowed for this project, as no specific time has been indicated for construction start up, the estimate is in today's dollars.

3.3. Contingency for Potential Change Orders

The Construction Allowance is intended to provide the owner with a reasonable reserve of funds to help mitigate and resolve potential change orders which may present themselves during the course of the development of the work of the project.

A Construction Allowance of 4.0% has been allowed for this project to address potential unforeseen.

3.4. Taxes

A Tax Rate of 15% for HST in Nova Scotia has NOT been allowed for this project.

If this Tax rate is excluded from the project estimate, it is recommended that the owner make separate provisions for Tax Requirements in the project budget as applicable.

Tax Rate impact between Alberta – 5% and Nova Scotia – 15% is not considered in estimated tasks (before tax unit rates) costs but is reasonable to conclude, that potentially after tax, final sale costs in Alberta could range to about 10% less than in Nova Scotia

3.5. Compare to Contractor Quotes

All costs are estimated on the comparative basis of competitive bidding by at least 5 (five) General Contractors who call on at least 3 (three) Sub-Contractor's quotes for each major scope of trade work as well as similar calls to Suppliers, all based on stipulated lump sum form of Contracting.

The unit rates used in the preparation of this estimate, include labour, material, equipment, Sub-Contractor's overhead, and profits.

3.6. Basis of Costs Used in Estimate

QS Online makes reasonable efforts to determine conditions of market for construction work in the intended area of the project. QS Online cannot and will not guarantee that bids or actual construction costs will not vary from this or subsequent cost estimates due to lack of competitive bidding, market conditions, or any other factors.

This opinion of probable construction costs is made on the basis of experience, qualifications, and best judgement of the professional cost consultants assigned to this project. QS Online has no control over the eventual cost of labour, materials, and equipment, or the Contractor's method of determining prices.

QS Online has prepared this estimate in accordance with generally accepted principles and practices. We remain available to discuss the contents of this estimate with any interested party.

3.7. Scope of Work

QS Online recommends that the Owner, the Design Team, and all other proponents with interest to this estimate, carefully review this document, including line item description, unit prices, clarifications, exclusions, assumptions, contingencies, escalation, and mark-ups if applicable.

Requests for modifications of any apparent errors or omissions to this document must be made to QS Online within 10 (ten) days of receipt of this estimate. Otherwise, it will be understood that the contents have been concurred and accepted.

4. AREAS OF THE PROJECT

Gross Floor and Site Developed Area Calculation

DESCRIPTION	Base Model	
Ground	19,396	SF
Level 2	18,796	SF
Level 3	18,796	SF
Level 4	18,796	SF
Level 5	18,796	SF
Level 6	18,796	SF
Fraction	4	SF
Total Gross Floor Area	113,380	SF

SITE DEVELOPED AREA

DESCRIPTION		
Area of site	n/ a	SF
Building Footprint	19,396	SF
Total Site Developed Area	n/a	SF

Site Developed Area is the area of the site less the footprint area of the building.

The above areas have been measured in accordance with the Canadian Institute of Quantity Surveyors Method of Measurement of Buildings by Area and Volume.

September 30, 2016

ATLANTIC WOODWORKS

6 STOREY MODEL COMPARISON -FIREWALL

HALIFAX NOVA SCOTIA

	Area	Net Bldg Cost (less site)	Site and Ancillary Work	TOTAL Excluding Contingencies	TOTAL Including Contingencies	TAX 15% NS	TOTAL	\$/SF
1 Level Concrete - 5 Wood	113,380 SF	13,676,267	13,676,267	14,647,282	16,756,491	-	16,756,491	147.79
All Steel	113,380 SF	15,289,856	15,289,856	16,375,436	18,733,499	-	18,733,499	165.23
All Concrete	113,380 SF	14,851,632	14,851,632	15,906,097	18,196,575	-	18,196,575	160.49
All Wood	113,380 SF	13,479,494	13,479,494	14,436,538	16,515,400	-	16,515,400	145.66

	1 Level Concrete - 5 Wood September 30, 2016			All Steel September 30, 2016			All Concrete September 30, 2016			All Wood September 30, 2016						
	GFA : 113,380		SF	GFA : 113,380		SF	GFA : 113,380		SF	GFA : 113,380		SF				
	Quantity	Unit Rate	Total	Quantity	Unit Rate	Total	Quantity	Unit Rate	Total	Quantity	Unit Rate	Total				
A SHELL	113,380	SF	67.63	7,667,348	113,380	SF	69.12	7,836,680	113,380	SF	66.08	7,492,439	113,380	SF	66.11	7,452,636
A1 SUBSTRUCTURE			3.37	381,802			3.23	366,134			3.88	439,478			3.11	352,738
A11 Foundations	19,396	SF	19.68	381,802	19,396	SF	18.88	366,134	19,396	SF	22.66	439,478	19,396	SF	18.19	352,738
A12 Basement Excavation	0	CY	-	-	0	CY	-	-	0	CY	-	-	0	CY	-	-
A13 Special Conditions	0	Sum	-	-	0	Sum	-	-	0	Sum	-	-	0	Sum	-	-
A2 STRUCTURE			32.29	3,660,925			33.88	3,841,031			29.76	3,374,057			31.12	3,527,968
A21 Lowest Floor Construction	19,396	SF	6.50	126,139	19,396	SF	6.50	126,139	19,396	SF	6.50	126,139	19,396	SF	6.50	126,139
A22 Upper Floor Construction	93,984	SF	32.02	3,008,925	93,984	SF	33.33	3,132,097	93,984	SF	28.50	2,678,370	93,984	SF	30.92	2,905,659
A23 Roof Construction	19,396	SF	27.11	525,861	19,396	SF	30.05	582,795	19,396	SF	29.36	569,548	19,396	SF	25.58	496,170
A3 EXTERIOR ENCLOSURE			31.97	3,624,621			32.01	3,629,516			32.45	3,678,904			31.50	3,571,929
A31 Walls Below Grade	0	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
A32 Walls Above Grade	63,674	SF	42.55	2,709,118	63,674	SF	42.58	2,711,077	63,674	SF	43.35	2,760,466	63,674	SF	41.72	2,656,426
A33 Entrances	138	Lvs	2,168.84	299,300	138	Lvs	2,168.84	299,300	138	Lvs	2,168.84	299,300	138	Lvs	2,168.84	299,300
A34 Roof Covering	19,396	SF	19.13	371,051	19,396	SF	19.13	371,051	19,396	SF	19.13	371,051	19,396	SF	19.13	371,051
A35 Projections	26,945	SF	9.10	245,152	26,945	SF	9.21	248,087	26,945	SF	9.21	248,087	26,945	SF	9.10	245,153
B INTERIORS	113,380	SF	33.90	3,843,100	113,380	SF	45.85	5,198,921	113,380	SF	45.03	5,104,937	113,380	SF	34.21	3,878,897
B1 PARTITIONS & DOORS			4.22	478,880			13.61	1,543,351			13.61	1,543,351			4.54	514,678
B11 Partitions	26,945	SF	6.92	186,480	112,062	SF	11.16	1,250,951	112,062	SF	11.16	1,250,951	32,133	SF	6.92	222,278
B12 Doors	615	Lvs	475.45	292,400	615	Lvs	475.45	292,400	615	Lvs	475.45	292,400	615	Lvs	475.45	292,400
B2 FINISHES			14.09	1,596,985			16.65	1,888,335			15.83	1,794,351			14.09	1,596,985
B21 Floor Finishes	113,380	SF	5.56	630,314	113,380	SF	5.56	630,314	113,380	SF	5.56	630,314	113,380	SF	5.56	630,314
B22 Ceiling Finishes	113,380	SF	3.77	427,908	113,380	SF	6.34	719,258	113,380	SF	5.51	625,274	113,380	SF	3.77	427,908
B23 Wall Finishes	302,926	SF	1.78	538,763	302,926	SF	1.78	538,763	302,926	SF	1.78	538,763	302,926	SF	1.78	538,763
B3 FITTINGS & EQUIPMENT			15.59	1,767,235			15.59	1,767,235			15.59	1,767,235			15.59	1,767,235
B31 Fittings & Fixtures	113,380	SF	10.63	1,205,235	113,380	SF	10.63	1,205,235	113,380	SF	10.63	1,205,235	113,380	SF	10.63	1,205,235
B32 Equipment	113,380	SF	3.12	354,000	113,380	SF	3.12	354,000	113,380	SF	3.12	354,000	113,380	SF	3.12	354,000
B33 Elevators	113,380	SF	1.83	208,000	113,380	SF	1.83	208,000	113,380	SF	1.83	208,000	113,380	SF	1.83	208,000
C SERVICES	113,380	SF	19.10	2,165,819	113,380	SF	19.88	2,254,255	113,380	SF	19.88	2,254,255	113,380	SF	18.94	2,147,961
C1 MECHANICAL			13.63	1,545,630			13.63	1,545,630			13.63	1,545,630			13.63	1,545,630
C11 Plumbing & Heating	113,380	SF	8.25	935,385	113,380	SF	8.25	935,385	113,380	SF	8.25	935,385	113,380	SF	8.25	935,385
C12 Fire Protection	113,380	SF	1.63	185,070	113,380	SF	1.63	185,070	113,380	SF	1.63	185,070	113,380	SF	1.63	185,070
C13 HVAC	113,380	SF	3.75	425,175	113,380	SF	3.75	425,175	113,380	SF	3.75	425,175	113,380	SF	3.75	425,175
C2 ELECTRICAL			5.47	620,189			6.25	708,625			6.25	708,625			5.31	602,331
C21 Service & Systems	113,380	SF	5.47	620,189	113,380	SF	6.25	708,625	113,380	SF	6.25	708,625	113,380	SF	5.31	602,331
NET BUILDING COST - EXCL. SITE			120.62	13,676,267			134.85	15,289,856			130.99	14,851,632			119.26	13,479,494
D SITE & ANCILLARY WORK	113,380	SF	-	-	113,380	SF	-	-	113,380	SF	-	-	113,380	SF	-	-
D1 SITE WORK			-	-			-	-			-	-			-	-
D11 Site Development	0	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
D12 Mechanical Site Services	0	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
D13 Electrical Site Services	0	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
D2 ANCILLARY WORK/RENOVATION			-	-			-	-			-	-			-	-
D21 Demolition	0	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
D22 Alterations	100	SF	-	-	0	SF	-	-	0	SF	-	-	0	SF	-	-
NET BUILDING COST - INCL. SITE			\$ 13,676,267			15,289,856			14,851,632			13,479,494				
Z1 GENERAL REQ'S & FEE			8.56	971,015			9.57	1,085,580			9.30	1,054,466			8.44	957,044
Z11 General Requirements	2.0%	2.41	273,525	2.0%	2.70	305,797	2.0%	2.62	297,033	2.0%	2.38	269,590				
Z12 Fee	5.0%	6.15	697,490	5.0%	6.88	779,783	5.0%	6.68	757,433	5.0%	6.06	687,454				
N TOTAL ESTIMATE - EXCLUDING CONTINGENCIES			14,647,282			16,375,436			15,906,097			14,436,538				
Z2 ALLOWANCES			18.60	2,109,209			20.80	2,358,063			20.20	2,290,478			18.34	2,078,862
Z21 Design & Pricing Allowance	10.0%	12.92	1,464,728	10.0%	14.44	1,637,544	10.0%	14.03	1,590,610	10.0%	12.73	1,443,654				
Z22 Escalation Allowance	0.0%	0.00	-	0.0%	0.00	-	0.0%	0.00	-	0.0%	0.00	-				
Z23 Construction Allowance	4.0%	5.68	644,480	4.0%	6.35	720,519	4.0%	6.17	699,868	4.0%	5.60	635,208				
TOTAL ESTIMATE - INCLUDING CONTINGENCIES			16,756,491			18,733,499			18,196,575			16,515,400				
TAX	0%	0.00	-	0%	0.00	-	0%	0.00	-	0%	0.00	-				
TOTAL CONSTRUCTION ESTIMATE with TAX			16,756,491			18,733,499			18,196,575			16,515,400				
UNIT RATE AND TOTALS			147.79	16,756,491			165.23	18,733,499			160.49	18,196,575			145.66	16,515,400

APPENDIX A

DETAILED ELEMENTAL ESTIMATE – BASE BUILDING

ONE LEVEL CONCRETE, FIVE LEVELS WOOD

**ELEMENTAL COST SUMMARY
CLASS C ESTIMATE**

Atlantic Woodworks

GFA 113,380 SF

1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

Element/Sub-Element	Ratio	Quantity	Unit	Unit Rate	Cost	Total Cost		\$ / GFA	%
A SHELL						\$ 7,667,349		\$ 67.63	45.76%
A1 Sub-Structure						\$ 381,802		\$ 3.37	2.28%
A1.1 Standard Foundations	0.17	19,396	Sf	19.68	381,801.67		\$	3.37	
A1.2 Special Foundations	0.00	0	Sf	-	-		\$	-	
A1.3 Basement Excavation	0.00	0	CY	-	-		\$	-	
A2 Structure						\$ 3,660,925		\$ 32.29	21.85%
A2.1 Lowest Floor Construction	0.17	19,396	Sf	6.50	126,139.15		\$	1.11	
A2.2 Upper Floor Construction	0.83	93,984	Sf	32.02	3,008,925.46		\$	26.54	
A2.3 Roof Construction	0.17	19,396	Sf	27.11	525,860.61		\$	4.64	
A3 Exterior Enclosure						\$ 3,624,622		\$ 31.97	21.63%
A3.1 Walls Below Grade	0.00	0	Sf	-	-		\$	-	
A3.2 Walls Above Grade	0.56	63,374	Sf	42.75	2,709,118.18		\$	23.89	
A3.3 Entrances	0.00	138	Lvs	2,168.84	299,300.00		\$	2.64	
A3.4 Roof Covering	0.17	19,396	Sf	19.13	371,051.00		\$	3.27	
A3.5 Projections	0.05	5,220	Sf	46.96	245,152.50		\$	2.16	
B INTERIORS						\$ 3,843,100		\$ 33.90	22.93%
B1 Partitions & Doors						\$ 478,880		\$ 4.22	2.86%
B1.1 Partitions	0.24	26,945	Sf	6.92	186,480.40		\$	1.64	
B1.2 Doors	0.01	615	Lvs	475.45	292,400.00		\$	2.58	
B2 Finishes						\$ 1,596,985		\$ 14.09	9.53%
B2.1 Floor Finishes	1.00	113,380	Sf	5.56	630,314.00		\$	5.56	
B2.2 Ceiling Finishes	1.00	113,380	Sf	3.77	427,907.60		\$	3.77	
B2.3 Wall Finishes	2.67	302,926	Sf	1.78	538,763.15		\$	4.75	
B3 Fittings & Equipment						\$ 1,767,235		\$ 15.59	10.55%
B3.1 Fittings & Fixtures	1.00	113,380	Sf	10.63	1,205,235.00		\$	10.63	
B3.2 Equipment	1.00	113,380	Sf	3.12	354,000.00		\$	3.12	
B3.3 Elevators	0.00	2	No.	104,000.00	208,000.00		\$	1.83	
B3.4 Conveying Systems	0.00	0	Sum	-	-		\$	-	
C SERVICES						\$ 2,165,819		\$ 19.10	12.93%
C1 Mechanical						\$ 1,545,630		\$ 13.63	9.22%
C1.1 Plumbing & Heating	1.00	113,380	Sf	8.25	935,385.00		\$	8.25	
C1.2 Fire Protection	1.00	113,380	Sf	1.63	185,070.00		\$	1.63	
C1.3 Ventilation	1.00	113,380	Sf	3.75	425,175.00		\$	3.75	
C2 Electrical						\$ 620,189		\$ 5.47	3.70%
C2.1 Electrical & Systems	1.00	113,380	Sf	5.47	620,188.60		\$	5.47	
SUB TOTAL EXCLUDING SITE AND ANCILLARY						\$ 13,676,267		\$ 120.62	81.62%
D SITE & ANCILLARY WORK						\$ -		\$ -	0.00%
D1 Site Work						\$ -		\$ -	0.00%
D1.1 Site Development	0.00	0	Sf	-	-		\$	-	
D1.2 Mechanical Site Services	0.00	0	Sf	-	-		\$	-	
D1.3 Electrical Site Services	0.00	0	Sf	-	-		\$	-	
D2 Ancillary Work						\$ -		\$ -	0.00%
D2.1 Demolition	0.00	0	Sf	-	-		\$	-	
D2.2 Alterations	0.00	0	Sf	-	-		\$	-	
SUB TOTAL INCLUDING SITE AND ANCILLARY						\$ 13,676,267		\$ 120.62	81.62%
Z GENERAL REQUIREMENTS & ALLOWANCES									
Z1 General Requirements & Fee						\$ 971,015		\$ 8.56	5.79%
Z1.1 General Requirements	2.0%				273,525.35		\$	2.41	
Z1.2 Fee	5.0%				697,489.63		\$	6.15	
SUB TOTAL						\$ 14,647,282		\$ 129.19	87.41%
Z2 Allowances						\$ 2,109,209		\$ 18.60	12.59%
Z2.1 Design Allowance	10.0%				1,464,728.23		\$	12.92	
Z2.2 Escalation Allowance	0.0%				-		\$	-	
Z2.3 Construction Allowance	4.0%				644,480.42		\$	5.68	
Taxes						\$ -		\$ -	0.00%
TOTAL ESTIMATED CONSTRUCTION COST						\$ 16,756,491		\$ 147.79	100.00%
							m2	\$ 1,590.80	

CLASS C ESTIMATE

Atlantic Woodworks 1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
A1.1 Foundations				
1	Strip footing building perimeter allow - 2' w x 1' h	805 FT	29.79	23,975
	concrete - allow 25 Mpa (3,625 PSI)	60 CY	135.00	8,049
	formwork - 12" high - each side	1,610 SF	6.00	9,659
	rebar - 3 -15M continuous	3,057 Lbs	0.91	2,782
	rebar - 15M - 2 row, dowel - 16" o.c.	3,831 Lbs	0.91	3,486
2	Strip footing elevator shaft allow - 2' w x 1' h	51 FT	29.79	1,526
	concrete - allow 25 Mpa (3,625 PSI)	4 CY	135.00	512
	formwork - 12" high - each side	102 SF	6.00	615
	rebar - 3 -15M continuous	195 Lbs	0.91	177
	rebar - 15M - 2 row, dowel - 16" o.c.	244 Lbs	0.91	222
3	Strip footing stair shaft allow - 2' w x 1' h	100 FT	29.79	2,993
	concrete - allow 25 Mpa (3,625 PSI)	7 CY	135.00	1,005
	formwork - 12" high - each side	201 SF	6.00	1,206
	rebar - 3 -15M continuous	382 Lbs	0.91	347
	rebar - 15M - 2 row, dowel - 16" o.c.	478 Lbs	0.91	435
4	Pad footing allow - 8' x 8' w x 2' h	56 No.	1,102.81	61,757
	concrete - allow 25 Mpa (3,625 PSI)	265 CY	135.00	35,840
	formwork - 24" high - each side	1,792 SF	6.00	10,752
	rebar-20M EW - 12" o.c.	11,347 Lbs	0.91	10,326
	rebar - 6 - 25M dowel - 6' L	5,318 Lbs	0.91	4,840
5	Frost depth perimeter wall - 4' dp x 12"w	3,220 SF	20.71	66,670
	concrete - allow 25 Mpa (3,625 PSI)	119 CY	135.00	16,098
	formwork - 4' high - each side	6,439 SF	6.00	38,634
	rebar -15M - 16" o.c. E.F. -continuous	6,949 Lbs	0.91	6,323
	rebar - 15M vert E.F. - 16" o.c.	6,170 Lbs	0.91	5,614
6	Pier / column allow - 2' x 1' w x 4' h	224 FT	99.38	22,261
	concrete - allow 25 Mpa (3,625 PSI)	17 CY	135.00	2,240
	formwork - 4' high - each side	1,344 SF	10.00	13,440
	rebar-15M stirrup - 12" o.c.	2,978 Lbs	0.91	2,710
	rebar - 6 - 25M vert - 4' L	4,255 Lbs	0.91	3,872

(Carry Forward) 179,182

CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
			(Amount Forward)	179,182
A1.1 Foundations				
7	Excavation and fill c/w trucking - footprint	19,396 SF	8.83	171,178
	excavate pit - allow flat lot	3,592 CY	12.00	43,102
	excavate working space	298 CY	12.00	3,577
	excavate pad - extra depth	146 CY	12.00	1,752
	allow miscellaneous trenching, etc.	19,396 CY	1.00	19,396
	fill to excavation	3,564 CY	29.00	103,350
8	Miscellaneous	19,396 SF	1.62	31,442
	rigid insulation to building perimete wall 4' dp	3,220 SF	2.25	7,244
	weeping tile socked c/w clear stone - connect to sump pit	966 FT	12.00	11,590
	miscellaneous unforeseen	19,396 SF	0.65	12,607

A1.1 Foundations	19,396	Sf	19.68	381,801.67
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CLASS C ESTIMATE

Atlantic Woodworks 1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.1 Lowest Floor Construction			
1. Slab on grade - 4"	19,396 SF	6.50	126,139
concrete - allow 25 Mpa (3,625 PSI) - no air	237 CY	135.00	32,003
WWM	19,396 SF	0.52	10,086
6 mil poly	19,396 SF	0.10	1,940
granular fill under slab - allow 8"	474 CY	29.00	13,750
hardener / sealant	19,396 SF	1.00	19,396
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
isolation joints around perimeter and column edges	1,444 FT	1.00	1,444
construction joints	19,396 SF	0.50	9,698
saw cut and caulk	19,396 SF	0.35	6,789

A2.1 Lowest Floor Construction	19,396	Sf	6.50	126,139
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.2 Upper Floor Construction			
1 Wood framed floor Level 3, 4, 5, 6	74,588 SF	12.64	942,527
concrete 1 1/2" dp - allow 25 Mpa (3,625 PSI) - no air	345 CY	135.00	46,618
5/8" ply T&G	74,588 SF	4.45	331,917
A units - TJI 110 16" o.c. - 10' L	8,215 SF	5.50	45,183
A units - TJI 210 16" o.c. - 22' L	25,420 SF	5.50	139,810
B units - TJI 110 16" o.c. - 10' L	2,875 SF	5.50	15,813
B units - TJI 210 16" o.c. - 22' L	9,891 SF	5.50	54,401
C units - TJI 110 16" o.c. - 15' 9" L	4,150 SF	5.50	22,825
C units - TJI 560 16" o.c. - 15' 9" L	7,420 SF	6.05	44,891
D units - TJI 110 16" o.c. - 18' 3" L	1,705 SF	5.50	9,378
D units - TJI 560 16" o.c. - 18' 3" L	3,500 SF	6.05	21,175
Storage lockers - TJI 230 16" o.c. - 14' 6" L	132 SF	5.50	726
Storage lockers - TJI 230 16" o.c. - 17' 6" L	140 SF	5.50	770
Storage lockers - TJI 230 16" o.c. - 14' 6" L	245 SF	5.50	1,348
Amenity - TJI 560 16" o.c. - 15' 6" L	990 SF	6.05	5,990
Elevator lobby - TJI 110 16" o.c. - 6' 3" L	480 SF	5.50	2,640
Stair landing - TJI 110 16" o.c. - 6' 9" L	525 SF	5.50	2,888
Corridor - 2 - 2 x 6" 12" o.c. - 6' 9" L	8,900 SF	3.10	27,590
allow hangers, brackets, blocking, nailing	74,588 SF	0.25	18,647
acoustic batt insulation - allow R28 - fiberglass	74,588 SF	1.95	145,447
miscellaneous sundries	74,588 SF	0.06	4,475
2 Level 2 - transfer slab - 18"	19,396 SF	29.88	579,552
concrete - allow 25 Mpa (3,625 PSI) - no air	1,078 CY	135.00	145,470
rebar - allow 8 Lbs / SF	155,168 SF	0.91	141,203
formwork	19,396 SF	13.00	252,148
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
construction joints	19,396 SF	0.50	9,698
3 Concrete elevator wall - to level 2 - 11' 7"h x 12"w	591 SF	20.50	12,107
concrete - allow 25 Mpa (3,625 PSI)	22 CY	135.00	2,953
formwork - 4' high - each side	1,181 SF	6.00	7,087
rebar -15M - 16" o.c. E.F. -continuous	1,030 Lbs	0.91	937
rebar - 15M vert E.F. - 16" o.c.	1,242 Lbs	0.91	1,130

(Carry Forward) 1,534,187

CLASS C ESTIMATE

Atlantic Woodworks

September 15, 2016

1 Level Concrete - 5 Levels Wood Frame

A2 Structure		Quantity	Unit Rate		Amount
			<i>(Amount Forward)</i>		1,534,187
A2.2 Upper Floor Construction					
4	Concrete stair wall - to level 2 - 11' 7"h x 12"w	1,163 SF	20.41		23,747
	concrete - allow 25 Mpa (3,625 PSI)	43 CY	135.00	5,817	
	formwork - 4' high - each side	2,327 SF	6.00	13,961	
	rebar -15M - 16" o.c. E.F. -continuous	2,029 Lbs	0.91	1,846	
	rebar - 15M vert E.F. - 16" o.c.	2,332 Lbs	0.91	2,122	
5	Column allow to level 2 - 56 - 2' x 1' w x 11' 7" h	648 FT	95.99		62,246
	concrete - allow 25 Mpa (3,625 PSI)	48 CY	135.00	6,485	
	formwork - 4' high - each side	3,891 SF	10.00	38,909	
	rebar-15M stirrup - 12" o.c.	6,202 Lbs	0.91	5,644	
	rebar - 6 - 25M vert	12,317 Lbs	0.91	11,208	
6	Concrete block - 10" w - level 3, 4, 5, 6	6,969 SF	18.00		125,442
	stairwell	2,346 SF	18.00	42,228	
	elevator shaft	4,623 SF	18.00	83,214	
7	Demising partition - wood framed - level 3, 4, 5, 6	22,942 SF	15.23		349,353
	GWB 5/8" - paint ready	22,942 SF	1.75	40,149	
	GWB - 5/8" - taped	22,942 SF	1.00	22,942	
	stud - 2 x 6" - 16" o.c.	22,942 SF	2.35	53,914	
	fiberglass insulation - 6"	22,942 SF	1.60	36,707	
	dewydag rod	155 No.	400.00	61,800	
	stud - 2 x 6" - 16" o.c.	22,942 SF	2.35	53,914	
	GWB - 5/8" - taped	22,942 SF	1.00	22,942	
	GWB 5/8" - paint ready	22,942 SF	1.75	40,149	
	<i>deduct area for 10" CMU - Firewall</i>	<i>-4,797 SF</i>	<i>14.49</i>	<i>-69,509</i>	
	<i>add 10" CMU - Firewall - 2nd to Level 6</i>	<i>4,797 SF</i>	<i>18.00</i>	<i>86,346</i>	
8	Non-demising partition -wd framed -level 3, 4, 5, 6	17,663 SF	11.69		206,567
	GWB 5/8" - paint ready	17,663 SF	1.75	30,910	
	stud - 2 x 4" - 16" o.c.	17,663 SF	2.10	37,092	
	fiberglass insulation - 3"	17,663 SF	1.30	22,962	
	dewydag rod	119 No.	400.00	47,600	
	stud - 2 x 4" - 16" o.c.	17,663 SF	2.10	37,092	
	GWB 5/8" - paint ready	17,663 SF	1.75	30,910	
				(Carry Forward)	<u>2,301,542</u>

CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate		Amount
		(Amount Forward)		2,301,542
A2.2 Upper Floor Construction				
9 Corridor partition - wood framed - level 3, 4, 5, 6	27,525 SF	8.45		232,586
GWB 5/8" - paint ready	27,525 SF	1.75	48,169	
GWB - 5/8" - taped	27,525 SF	1.00	27,525	
stud - 2 x 6" - 16" o.c.	27,525 SF	2.35	64,684	
fiberglass insulation - 6"	27,525 SF	1.60	44,040	
GWB 5/8" - paint ready	27,525 SF	1.75	48,169	
10 Interior unit partitions - level 3, 4, 5, 6	20,752 SF	0.00		-
measured in B1.1 Partitions	20,752 SF	0.00	0	
11 Paralam beams and posts - level 3, 4, 5, 6	648 FT	662.78		429,797
3 1/2" x 9 1/2" paralam	5,605 FT	22.00	123,310	
7" x 9 1/2" paralam	315 FT	64.00	20,160	
4 ply - 2 x 6	169 FT	4.80	811	
allow for multi-ply posts - spruce	81,576 FT	3.50	285,516	
12 Stairwell - ground to level 6	10 Flight	4,500.00		45,000
concrete stairs to level 2	2 Flight	6,500.00	13,000	
wood framed stairs - level 3, 4, 5, 6	8 Flight	4,000.00	32,000	

A2.2 Upper Floor Construction	93,984	Sf	32.02	3,008,925
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.3 Roof Construction			
1 Wood framed roof Level	19,396 SF	13.01	252,426
5/8" ply T&G	19,396 SF	4.45	86,312
A units - TJI 110 16" o.c. - 10' L	2,054 SF	5.50	11,296
A units - TJI 210 16" o.c. - 22' L	6,964 SF	5.50	38,302
B units - TJI 110 16" o.c. - 10' L	719 SF	5.50	3,953
B units - TJI 210 16" o.c. - 22' L	2,473 SF	5.50	13,600
C units - TJI 110 16" o.c. - 15' 9" L	1,038 SF	5.50	5,706
C units - TJI 560 16" o.c. - 15' 9" L	1,855 SF	6.05	11,223
D units - TJI 110 16" o.c. - 18' 3" L	426 SF	5.50	2,344
D units - TJI 560 16" o.c. - 18' 3" L	875 SF	6.05	5,294
Storage lockers - TJI 230 16" o.c. - 14' 6" L	132 SF	5.50	726
Storage lockers - TJI 230 16" o.c. - 17' 6" L	140 SF	5.50	770
Storage lockers - TJI 230 16" o.c. - 14' 6" L	245 SF	5.50	1,348
Elevator lobby - TJI 110 16" o.c. - 6' 3" L	120 SF	5.50	660
Stair landing - TJI 110 16" o.c. - 6' 9" L	131 SF	5.50	722
Corridor - 2 - 2 x 6" 12" o.c. - 6' 9" L	2,225 SF	3.10	6,898
allow hangers, brackets, blocking, nailing	19,396 SF	0.25	4,849
deduct area for CLT panels	-5,234 SF	10.06	-52,654
add CLT panels - 5 ply	5,234 SF	21.00	109,914
miscellaneous sundries	19,396 SF	0.06	1,164
2 Concrete block - 10" w	3,045 SF	18.00	54,810
stairwell	1,025 SF	18.00	18,450
elevator shaft	2,020 SF	18.00	36,360
3 Demising partition - wood framed	5,720 SF	15.24	87,155
GWB 5/8" - paint ready	5,720 SF	1.75	10,010
GWB - 5/8" - taped	5,720 SF	1.00	5,720
stud - 2 x 6" - 16" o.c.	5,720 SF	2.35	13,442
fiberglass insulation - 6"	5,720 SF	1.60	9,152
dewydag rod	155 No.	100.00	15,450
stud - 2 x 6" - 16" o.c.	5,720 SF	2.35	13,442
GWB - 5/8" - taped	5,720 SF	1.00	5,720
GWB 5/8" - paint ready	5,720 SF	1.75	10,010
deduct area for 10" CMU - Firewall	-1,199 SF	14.49	-17,377
add 10" CMU - Firewall - Level 6 to Roof	1,199 SF	18.00	21,587

(Carry Forward) 394,391

CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A2 Structure		Quantity	Unit Rate		Amount
			<i>(Amount Forward)</i>		394,391
A2.3 Roof Construction					
4	Non - demising partition - wood framed	4,404 SF	11.70		51,536
	GWB 5/8" - paint ready	4,404 SF	1.75	7,707	
	stud - 2 x 4" - 16" o.c.	4,404 SF	2.10	9,248	
	fiberglass insulation - 3"	4,404 SF	1.30	5,725	
	dewydag rod	119 No.	100.00	11,900	
	stud - 2 x 4" - 16" o.c.	4,404 SF	2.10	9,248	
	GWB 5/8" - paint ready	4,404 SF	1.75	7,707	
5	Corridor partition - wood framed	6,863 SF	8.15		55,933
	GWB 5/8" - paint ready	6,863 SF	1.75	12,010	
	GWB - 5/8" - taped	6,863 SF	1.00	6,863	
	stud - 2 x 6" - 16" o.c.	6,863 SF	2.35	16,128	
	fiberglass insulation - 3"	6,863 SF	1.30	8,922	
	GWB 5/8" - paint ready	6,863 SF	1.75	12,010	
6	Interior unit partitions	5,174 SF	0.00		-
	measured in B1.1 Partitions	5,174 SF	0.00	0	
7	Stairwell - level 6 to Roof	9 Flight	2,666.67		24,000
	wood framed stairs	1 Flight	4,000.00	4,000	
	wood framed stairs at skylights to roof	8 Flight	2,500.00	20,000	
A2.3 Roof Construction		19,396 Sf	27.11		525,861

CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.2 Walls Above Grade				
1	Exterior wall framing	60,420 SF	10.50	634,410
	vapour / moisture barrier - exterior	60,420 SF	2.00	120,840
	exterior sheathing - joints taped / sealed	60,420 SF	1.75	105,735
	stud - 2 x 8" - 16" o.c.	60,420 SF	2.90	175,218
	batt insulation - R28 fiberglass	60,420 SF	1.95	117,819
	6 mil poly	60,420 SF	0.15	9,063
	GWB 5/8" - paint ready	60,420 SF	1.75	105,735
2	Concrete wall - commercial sides - 13' 1"h x 12"w	2,954 SF	28.34	83,710
	concrete - allow 25 Mpa (3,625 PSI)	109 CY	135.00	14,770
	formwork - 13' 1" high - each side	5,908 SF	10.00	59,080
	rebar -15M - 16" o.c. E.F. -continuous	5,078 Lbs	0.91	4,621
	rebar - 15M vert E.F. - 16" o.c.	5,757 Lbs	0.91	5,239
3	Deduct openings	13,691 SF	-10.50	- 143,750
	window at patio fixed unit - single	1,680 SF	-10.50	-17,640
	window at patio fixed unit - double	1,596 SF	-10.50	-16,758
	window at bedrooms	2,000 SF	-10.50	-21,000
	patio door lite above sliding door	885 SF	-10.50	-9,296
	window at sloped roof high side	706 SF	-10.50	-7,417
	commercial glazing	1,267 SF	-10.50	-13,304
	lobby ground floor glazing	75 SF	-10.50	-788
	patio doors at units	4,935 SF	-10.50	-51,815
	commercial double aluminium doors	234 SF	-10.50	-2,457
	lobby double aluminium doors	39 SF	-10.50	-410
	allow double HM at back of Commercial	273 SF	-10.50	-2,867
4	Exterior wall cladding	49,683 SF	35.00	1,738,905
	allow low range cladding 30%	14,905 SF	25.00	372,623
	allow mid range cladding 55%	27,326 SF	35.00	956,398
	allow higher range cladding 15%	7,452 SF	55.00	409,885

(Carry Forward) 2,313,274

CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
			(Amount Forward)	2,313,274
A3.2 Walls Above Grade				
5	Windows and glazing	13,691 SF	28.91	395,844
	window at patio fixed unit - single	1,680 SF	40.00	67,200
	window at patio fixed unit - double	1,596 SF	40.00	63,840
	window at bedrooms	2,000 SF	40.00	80,000
	patio door lite above sliding door	885 SF	40.00	35,414
	window at sloped roof high side	706 SF	50.00	35,320
	commercial glazing	1,267 SF	85.00	107,695
	lobby ground floor glazing	75 SF	85.00	6,375
	patio doors at units	4,935 SF	counted at A3.3 Entrances	
	commercial double aluminium doors	234 SF	counted at A3.3 Entrances	
	lobby double aluminium doors	39 SF	counted at A3.3 Entrances	
	allow double HM at back of Commercial	273 SF	counted at A3.3 Entrances	

A3.2 Walls Above Grade	63,374	Sf	42.75	2,709,118
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CLASS C ESTIMATE

Atlantic Woodworks 1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

A3 Exterior Enclosure	Quantity	Unit Rate	Amount
A3.3 Entrances			
1. Entrance doors c/w base frame and hardware	138 Lvs	2,168.84	299,300
patio doors at units	118 Lvs	2,000.00	236,000
commercial double aluminium doors	6 Lvs	2,000.00	12,000
lobby double aluminium doors	1 Pair	4,000.00	4,000
allow double HM at back of Commercial	6 Pair	2,500.00	15,000
allow for hardware upgrades to commercial	20 Lvs	600.00	12,000
barrier free electric strike - main ground lobby	1 No.	5,000.00	5,000
barrier free power door operator	1 No.	800.00	800
barrier free power supply	1 No.	700.00	700
allow for miscellaneous hardware, keying, etc	138 Lvs	100.00	13,800

A3.3 Entrances	138	Lvs	2,168.84	299,300
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.4 Roof Coverings				
1	Roof covering	19,396 SF	19.13	371,051
	allow 2 ply mod bit - R40	19,396 SF	16.00	310,336
	pavers at walk out	3,343 SF	5.00	16,715
	skylight access	8 No.	5,500.00	44,000

A3.4 Roof Coverings	19,396	Sf	19.13	371,051
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.5 Projections				
1	Parapet	2,668 SF	16.92	45,149
	vapour / moisture barrier - exterior	2,668 SF	2.00	5,336
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669
	stud - 2 x 8" - 16" o.c.	2,668 SF	2.90	7,737
	batt insulation - R28 fiberglass	2,668 SF	1.95	5,203
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669
	toch on cap sheet	2,668 SF	1.25	3,335
	parapet cap - painted metal	920 FT	15.00	13,800
	miscellaneous	2,668 SF	0.15	400
2	CLT overhang c/w roof covering	2,553 SF	37.00	94,461
	add CLT panels - 5 ply	2,553 SF	37.00	94,461
3	Balcony gazebo roof	10,045 SF	10.51	105,543
	2 x 10 cedar plank - taper cut	2,023 SF	5.00	10,115
	balcony deck framing c/w soffit	10,045 SF	9.50	95,428
A3.5 Projections		5,220	Sf	46.96
				245,153

CLASS C ESTIMATE

Atlantic Woodworks 1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

B1 Partitions and Doors		Quantity	Unit Rate	Amount	
B1.1 Partitions					
1	Interior unit partitions	25,927 SF	6.90	178,896	
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372	
	stud - 2 x 4" - 16" o.c.	25,927 SF	2.10	54,447	
	fiberglass insulation - 3"	25,927 SF	1.30	33,705	
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372	
2	Corridor partition - wood framed - Lobby	1,018 SF	7.45	7,584	
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782	
	stud - 2 x 6" - 16" o.c.	1,018 SF	2.35	2,392	
	fiberglass insulation - 6"	1,018 SF	1.60	1,629	
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782	
B1.1 Partitions		26,945	Sf	6.92	186,480

CLASS C ESTIMATE

Atlantic Woodworks 1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

B1 Partitions and Doors	Quantity	Unit Rate	Amount
B1.2 Doors			
1. Interior doors c/w base frame and hardware	615 Lvs	475.45	292,400
unit main entrances	118 Lvs	750.00	88,500
bathroom door	118 Lvs	225.00	26,550
bedroom door	104 Lvs	225.00	23,400
slider bedroom	56 Lvs	175.00	9,800
slider closet	166 Lvs	175.00	29,050
pocket closet door	10 Lvs	200.00	2,000
stairway entrance doors	12 Lvs	1,200.00	14,400
hallway doors	10 Lvs	1,200.00	12,000
common area doors	21 Lvs	1,200.00	25,200
allow for miscellaneous hardware, keying, etc	615 Lvs	100.00	61,500

B1.2 Doors	615	Lvs	475.45	292,400
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.1 Floor Finishes			
1 Floor finish	113,380 SF	5.56	630,314
ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
ground floor lobby - residential - hard tile	720 SF	14.00	10,080
remainder flooring - allowance	93,984 No.	6.50	610,896

B2.1 Floor Finishes	113,380	Sf	5.56	630,314
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

B2 Finishes		Quantity	Unit Rate	Amount
B2.2 Ceiling Finishes				
1	Ceiling finishes allowance	113,380 SF	3.77	427,908
	ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
	ground floor lobby - residential - suspended acoustic tile	720 SF	7.00	5,040
	level 2, 3, 4, 5, 6, GWB 5/8" - paint ready	93,984 SF	1.75	164,472
	GWB - 5/8" - taped	93,984 SF	1.00	93,984
	strapping to joists - 1 x 3" - 16" o.c.	93,984 SF	0.65	61,090
	paint to ceiling	93,984 SF	1.00	93,984

B2.2 Ceiling Finishes	113,380	Sf	3.77	427,908
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.3 Wall Finishes			
1 Wall finishes allowance	118 Units	4,565.79	538,763
interior unit partitions - paint each side	51,854 SF	1.00	51,854
perimeter walls above grade - paint	63,374 SF	1.00	63,374
corridor partition - wood framed - Lobby paint	1,018 SF	1.00	1,018
From Upper Floor Construction			
elev. wall - grnd, furring / GWB, paint, finish lobby side only	203 SF	5.75	1,167
concrete stair wall - ground - finish inside stairs - paint	582 SF	1.00	582
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,347 SF	5.75	13,495
concrete block - 10" w - stair - one side paint	4,622 SF	1.00	4,622
concrete block - 10" w - stair - one side furring, GWB, paint	4,622 SF	5.75	26,577
demising partition - wood framed - paint	45,884 SF	1.00	45,884
non - demising partition - wood framed - paint	35,326 SF	1.00	35,326
corridor partition - wood framed - paint	55,050 SF	1.00	55,050
From Roof Construction			
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,020 SF	1.00	2,020
concrete block - 10" w - stair - one side paint	1,025 SF	5.75	5,894
concrete block - 10" w - stair - one side furring, GWB, paint	1,025 SF	1.00	1,025
demising partition - wood framed - paint	11,440 SF	1.00	11,440
non - demising partition - wood framed - paint	8,808 SF	1.00	8,808
corridor partition - wood framed - paint	13,726 SF	1.00	13,726
allowance for trim / casing package to walls	302,926 SF	0.65	196,902

B2.3 Wall Finishes	302,926	Sf	1.78	538,763
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount	
B3.1 Fittings and Fixtures					
1	Millwork - cabinets, fixtures - units	118 Units	8,594.36	1,014,135	
	closet shelf and rod	1,205 FT	7.00	8,435	
	lower kitchen cabinets - allow plam tops	1,356 FT	350.00	474,600	
	upper kitchen cabinets	1,538 FT	150.00	230,700	
	kitchen island counter - allow plam top	560 FT	350.00	196,000	
	bathroom vanity - allow plam top	354 FT	125.00	44,250	
	toilet paper dispenser, towel bar & ring set	118 Set	125.00	14,750	
	mirror in bath	118 No.	200.00	23,600	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
2	Common area fittings and fixtures	118 Units	1,619.49	191,100	
	mailbox	1 No.	5,000.00	5,000	
	storage lockers	80 No.	1,800.00	144,000	
	amenity room - allowance	1 Sum	5,000.00	5,000	
	interior signage / wayfinding / unit numbering etc.	118 No.	100.00	11,800	
	exterior signage	1 Sum	3,500.00	3,500	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
B3.1 Fittings and Fixtures		113,380	Sf	10.63	1,205,235

CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.2 Equipment				
1	Appliances	590 No.	600.00	354,000
	fridge	118 No.	650.00	76,700
	stove	118 No.	700.00	82,600
	microwave	118 No.	350.00	41,300
	washer	118 No.	600.00	70,800
	dryer	118 No.	700.00	82,600

B3.2 Equipment	113,380	Sf	3.12	354,000
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CLASS C ESTIMATE

**Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.3 Elevators				
1	Elevator - allowance	2 No.	104,000.00	208,000
	elevator - 6 stops	6 Stop	16,000.00	96,000
	elevator -7 stops	7 Stop	16,000.00	112,000

B3.3 Elevators	2	No.	104,000.00	208,000
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.1 Plumbing and Drainage			
1 Plumbing and heating	118 Units	7,926.99	935,385
plumbing and heating allowance - systems may vary	113,380 SF	8.25	935,385

C1.1 Plumbing and Drainage	113,380	Sf	8.25	935,385
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.2 Fire Protection			
1 Sprinkler system	118 Units	1,568.39	185,070
sprinkler system allowance - systems may vary	113,380 SF	1.50	170,070
hand held extinguisher cabinets	30 No.	500.00	15,000

C1.2 Fire Protection	113,380	Sf	1.63	185,070
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.3 HVAC			
1 Ventilation	118 Units	3,603.18	425,175
ventilation system allowance - systems may vary	113,380 SF	3.75	425,175

C1.3 HVAC	113,380	Sf	3.75	425,175
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CLASS C ESTIMATE

Atlantic Woodworks
1 Level Concrete - 5 Levels Wood Frame

September 15, 2016

C2 Electrical	Quantity	Unit Rate	Amount
C2.1 Service and Distribution			
1 Electrical and systems	118 Units	5,255.84	620,189
allowance for power, lighting, security, systems (may vary based on project	113,380 SF	5.47	620,189

C2.1 Service and Distribution	113,380	Sf	5.47	620,189
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APPENDIX B

DETAILED ELEMENTAL ESTIMATE – ALL STEEL
SIX LEVELS OF STRUCTURAL STEEL CONSTRUCTION

**ELEMENTAL COST SUMMARY
CLASS C ESTIMATE**

Atlantic Woodworks
6 Levels Structural Steel Frame

GFA 113,380 SF
September 15, 2016

Element/Sub-Element	Ratio	Quantity	Unit	Unit Rate	Cost	Total Cost		\$ / GFA	%
A SHELL						\$ 7,836,680		\$ 69.12	41.83%
A1 Sub-Structure						\$ 366,134		\$ 3.23	1.95%
A1.1 Standard Foundations	0.17	19,396	Sf	18.88	366,133.59		\$ 3.23		
A1.2 Special Foundations	0.00	0	Sf	-	-		\$ -		
A1.3 Basement Excavation	0.00	0	CY	-	-		\$ -		
A2 Structure						\$ 3,841,031		\$ 33.88	20.50%
A2.1 Lowest Floor Construction	0.17	19,396	Sf	6.50	126,139.15		\$ 1.11		
A2.2 Upper Floor Construction	0.83	93,984	Sf	33.33	3,132,096.88		\$ 27.62		
A2.3 Roof Construction	0.17	19,396	Sf	30.05	582,794.64		\$ 5.14		
A3 Exterior Enclosure						\$ 3,629,516		\$ 32.01	19.37%
A3.1 Walls Below Grade	0.00	0	Sf	-	-		\$ -		
A3.2 Walls Above Grade	0.56	63,374	Sf	42.78	2,711,077.48		\$ 23.91		
A3.3 Entrances	0.00	138	Lvs	2,168.84	299,300.00		\$ 2.64		
A3.4 Roof Covering	0.17	19,396	Sf	19.13	371,051.00		\$ 3.27		
A3.5 Projections	0.05	5,220	Sf	47.53	248,087.30		\$ 2.19		
B INTERIORS						\$ 5,198,921		\$ 45.85	27.75%
B1 Partitions & Doors						\$ 1,543,351		\$ 13.61	8.24%
B1.1 Partitions	0.99	112,062	Sf	11.16	1,250,951.30		\$ 11.03		
B1.2 Doors	0.01	615	Lvs	475.45	292,400.00		\$ 2.58		
B2 Finishes						\$ 1,888,335		\$ 16.65	10.08%
B2.1 Floor Finishes	1.00	113,380	Sf	5.56	630,314.00		\$ 5.56		
B2.2 Ceiling Finishes	1.00	113,380	Sf	6.34	719,258.00		\$ 6.34		
B2.3 Wall Finishes	2.67	302,926	Sf	1.78	538,763.15		\$ 4.75		
B3 Fittings & Equipment						\$ 1,767,235		\$ 15.59	9.43%
B3.1 Fittings & Fixtures	1.00	113,380	Sf	10.63	1,205,235.00		\$ 10.63		
B3.2 Equipment	1.00	113,380	Sf	3.12	354,000.00		\$ 3.12		
B3.3 Elevators	0.00	2	No.	104,000.00	208,000.00		\$ 1.83		
B3.4 Conveying Systems	0.00	0	Sum	-	-		\$ -		
C SERVICES						\$ 2,254,255		\$ 19.88	12.03%
C1 Mechanical						\$ 1,545,630		\$ 13.63	8.25%
C1.1 Plumbing & Heating	1.00	113,380	Sf	8.25	935,385.00		\$ 8.25		
C1.2 Fire Protection	1.00	113,380	Sf	1.63	185,070.00		\$ 1.63		
C1.3 Ventilation	1.00	113,380	Sf	3.75	425,175.00		\$ 3.75		
C2 Electrical						\$ 708,625		\$ 6.25	3.78%
C2.1 Electrical & Systems	1.00	113,380	Sf	6.25	708,625.00		\$ 6.25		
SUB TOTAL EXCLUDING SITE AND ANCILLARY						\$ 15,289,856		\$ 134.85	81.62%
D SITE & ANCILLARY WORK						\$ -		\$ -	0.00%
D1 Site Work						\$ -		\$ -	0.00%
D1.1 Site Development	0.00	0	Sf	-	-		\$ -		
D1.2 Mechanical Site Services	0.00	0	Sf	-	-		\$ -		
D1.3 Electrical Site Services	0.00	0	Sf	-	-		\$ -		
D2 Ancillary Work						\$ -		\$ -	0.00%
D2.1 Demolition	0.00	0	Sf	-	-		\$ -		
D2.2 Alterations	0.00	0	Sf	-	-		\$ -		
SUB TOTAL INCLUDING SITE AND ANCILLARY						\$ 15,289,856		\$ 134.85	81.62%
Z GENERAL REQUIREMENTS & ALLOWANCES									
Z1 General Requirements & Fee						\$ 1,085,580		\$ 9.57	5.79%
Z1.1 General Requirements	2.0%				305,797.13		\$ 2.70		
Z1.2 Fee	5.0%				779,782.68		\$ 6.88		
SUB TOTAL						\$ 16,375,436		\$ 144.43	87.41%
Z2 Allowances						\$ 2,358,063		\$ 20.80	12.59%
Z2.1 Design Allowance	10.0%				1,637,543.63		\$ 14.44		
Z2.2 Escalation Allowance	0.0%				-		\$ -		
Z2.3 Construction Allowance	4.0%				720,519.20		\$ 6.35		
Taxes						\$ -		\$ -	0.00%
TOTAL ESTIMATED CONSTRUCTION COST						\$ 18,733,499		SF \$ 165.23	100.00%
								m2 \$ 1,778.49	

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Steel Frame

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
A1.1 Foundations				
1	Strip footing building perimeter allow - 1' 9" w x 10" h	805 FT	25.01	20,130
	concrete - allow 25 Mpa (3,625 PSI)	43 CY	135.00	5,845
	formwork - 10" high - each side	1,336 SF	6.00	8,017
	rebar - 3 -15M continuous	3,057 Lbs	0.91	2,782
	rebar - 15M - 2 row, dowel - 16" o.c.	3,831 Lbs	0.91	3,486
2	Strip footing elevator shaft allow - 1' 10" w x 10" h	51 FT	25.01	1,281
	concrete - allow 25 Mpa (3,625 PSI)	3 CY	135.00	372
	formwork - 10" high - each side	85 SF	6.00	510
	rebar - 3 -15M continuous	195 Lbs	0.91	177
	rebar - 15M - 2 row, dowel - 16" o.c.	244 Lbs	0.91	222
3	Strip footing stair shaft allow - 1' 9" w x 10" h	100 FT	25.01	2,513
	concrete - allow 25 Mpa (3,625 PSI)	5 CY	135.00	730
	formwork - 10" high - each side	167 SF	6.00	1,001
	rebar - 3 -15M continuous	382 Lbs	0.91	347
	rebar - 15M - 2 row, dowel - 16" o.c.	478 Lbs	0.91	435
4	Pad footing allow - 7' x 7' w x 1' 9" h	56 No.	803.34	44,987
	concrete - allow 25 Mpa (3,625 PSI)	178 CY	135.00	24,010
	formwork - 21" high - each side	1,372 SF	6.00	8,232
	rebar-20M EW - 12" o.c.	8,688 Lbs	0.91	7,906
	rebar - 6 - 25M dowel - 6' L	5,318 Lbs	0.91	4,840
5	Frost depth perimeter wall - 4' dp x 10"w	3,220 SF	19.86	63,933
	concrete - allow 25 Mpa (3,625 PSI)	99 CY	135.00	13,361
	formwork - 4' high - each side	6,439 SF	6.00	38,634
	rebar -15M - 16" o.c. E.F. -continuous	6,949 Lbs	0.91	6,323
	rebar - 15M vert E.F. - 16" o.c.	6,170 Lbs	0.91	5,614
6	Pier / column allow - 2' x 1' w x 4' h	224 FT	136.88	30,661
	concrete - allow 25 Mpa (3,625 PSI)	17 CY	135.00	2,240
	formwork - 4' high - each side	1,344 SF	10.00	13,440
	rebar-15M stirrup - 12" o.c.	2,978 Lbs	0.91	2,710
	rebar - 6 - 25M vert - 4' L	4,255 Lbs	0.91	3,872
	anchor bolt setting	56 No.	150.00	8,400
(Carry Forward)				163,506

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A1 Sub Structure	Quantity	Unit Rate	Amount
		(Amount Forward)	163,506
A1.1 Foundations			
7 Excavation and fill c/w trucking - footprint	19,396 SF	8.83	171,184
excavate pit - allow flat lot	3,592 CY	12.00	43,102
excavate working space	298 CY	12.00	3,577
excavate pad - extra depth	146 CY	12.00	1,752
allow miscellaneous trenching, etc.	19,396 CY	1.00	19,396
fill to excavation	3,564 CY	29.00	103,356
8 Miscellaneous	19,396 SF	1.62	31,444
rigid insulation to building perimete wall 4' dp	3,220 SF	2.25	7,245
weeping tile socked c/w clear stone - connect to sump pit	966 FT	12.00	11,592
miscellaneous unforeseen	19,396 SF	0.65	12,607

A1.1 Foundations	19,396	Sf	18.88	366,133.59
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Steel Frame

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.1 Lowest Floor Construction			
1. Slab on grade - 4"	19,396 SF	6.50	126,139
concrete - allow 25 Mpa (3,625 PSI) - no air	237 CY	135.00	32,003
WWM	19,396 SF	0.52	10,086
6 mil poly	19,396 SF	0.10	1,940
granular fill under slab - allow 8"	474 CY	29.00	13,750
hardener / sealant	19,396 SF	1.00	19,396
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
isolation joints around perimeter and column edges	1,444 FT	1.00	1,444
construction joints	19,396 SF	0.50	9,698
saw cut and caulk	19,396 SF	0.35	6,789

A2.1 Lowest Floor Construction	19,396	Sf	6.50	126,139
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.2 Upper Floor Construction			
1 Metal framed upper floor - level 2, 3, 4, 5, 6	93,984 SF	31.07	2,920,083
concrete 3" dp - allow 25 Mpa (3,625 PSI) - no air	870 CY	135.00	117,480
metal deck - std	93,984 SF	4.75	446,424
horizontal and vertical steel - allowance - 12 psf	1,127,808 Lbs	1.50	1,691,712
allow 15% for miscellaneous metals	169,171 Lbs	1.50	253,757
allow 10% for connections and fittings	129,698 Lbs	1.50	194,547
place and screed	93,984 SF	0.75	70,488
power trowel finish	93,984 SF	0.85	79,886
construction joints	93,984 SF	0.50	46,992
miscellaneous sundries	93,984 SF	0.20	18,797
2 Concrete block - 10" w to level 6	8,723 SF	18.00	157,014
elevator shaft	2,937 SF	18.00	52,866
stairwell	5,786 SF	18.00	104,148
3 Stairwell - ground to level 6	10 Flight	5,500.00	55,000
metal pan	10 Flight	5,500.00	55,000
A2.2 Upper Floor Construction	93,984 Sf	33.33	3,132,097

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate		Amount
A2.3 Roof Construction				
1 Metal framed upper floor	19,396 SF	25.91		502,485
metal deck - std	19,396 SF	4.75		92,131
horizontal and vertical steel - allowance - 12 psf	232,752 SF	1.50		349,128
allow 15% for miscellaneous metals	34,913 Lbs	1.50		52,369
allow 10% for connections and fittings	26,766 Lbs	1.50		40,150
deduct area for CLT panels	-5,234 SF	27.72		-145,086
add CLT panels - 5 ply	5,234 SF	21.00		109,914
miscellaneous sundries	19,396 SF	0.20		3,879
2 Concrete block - 10" w to roof	3,045 SF	18.00		54,810
elevator shaft	1,025 SF	18.00		18,450
stairwell	2,020 SF	18.00		36,360
4 Stairwell - ground to level 6	9 Flight	2,833.33		25,500
metal pan	1 Flight	5,500.00		5,500
wood framed stairs at skylights to roof	8 Flight	2,500.00		20,000

A2.3 Roof Construction	19,396	Sf	30.05	582,795
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount	
A3.2 Walls Above Grade					
1	Exterior wall framing	63,374 SF	11.60	735,138	
	vapour / moisture barrier - exterior	63,374 SF	2.00	126,748	
	exterior sheathing - joints taped / sealed	63,374 SF	1.75	110,905	
	20G metal stud - 2 x 8" - 16" o.c.	63,374 SF	4.00	253,496	
	batt insulation - R28 fiberglass	63,374 SF	1.95	123,579	
	6 mil poly	63,374 SF	0.15	9,506	
	GWB 5/8" - paint ready	63,374 SF	1.75	110,905	
2	Deduct openings	13,691 SF	-11.60	- 158,810	
	window at patio fixed unit - single	1,680 SF	-11.60	-19,488	
	window at patio fixed unit - double	1,596 SF	-11.60	-18,514	
	window at bedrooms	2,000 SF	-11.60	-23,200	
	patio door lite above sliding door	885 SF	-11.60	-10,270	
	window at sloped roof high side	706 SF	-11.60	-8,194	
	commercial glazing	1,267 SF	-11.60	-14,697	
	lobby ground floor glazing	75 SF	-11.60	-870	
	patio doors at units	4,935 SF	-11.60	-57,243	
	commercial double aluminium doors	234 SF	-11.60	-2,714	
	lobby double aluminium doors	39 SF	-11.60	-452	
	allow double HM at back of Commercial	273 SF	-11.60	-3,167	
3	Exterior wall cladding	49,683 SF	35.00	1,738,905	
	allow low range cladding 30%	14,905 SF	25.00	372,623	
	allow mid range cladding 55%	27,326 SF	35.00	956,398	
	allow higher range cladding 15%	7,452 SF	55.00	409,885	
4	Windows and glazing	13,691 SF	28.91	395,844	
	window at patio fixed unit - single	1,680 SF	40.00	67,200	
	window at patio fixed unit - double	1,596 SF	40.00	63,840	
	window at bedrooms	2,000 SF	40.00	80,000	
	patio door lite above sliding door	885 SF	40.00	35,414	
	window at sloped roof high side	706 SF	50.00	35,320	
	commercial glazing	1,267 SF	85.00	107,695	
	lobby ground floor glazing	75 SF	85.00	6,375	
	patio doors at units	4,935 SF	counted at A3.3 Entrances		
	commercial double aluminium doors	234 SF	counted at A3.3 Entrances		
	lobby double aluminium doors	39 SF	counted at A3.3 Entrances		
	allow double HM at back of Commercial	273 SF	counted at A3.3 Entrances		
A3.2 Walls Above Grade		63,374	Sf	42.78	2,711,077

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Steel Frame

September 15, 2016

A3 Exterior Enclosure	Quantity	Unit Rate	Amount
A3.3 Entrances			
1. Entrance doors c/w base frame and hardware	138 Lvs	2,168.84	299,300
patio doors at units	118 Lvs	2,000.00	236,000
commercial double aluminium doors	6 Lvs	2,000.00	12,000
lobby double aluminium doors	1 Pair	4,000.00	4,000
allow double HM at back of Commercial	6 Pair	2,500.00	15,000
allow for hardware upgrades to commercial	20 Lvs	600.00	12,000
barrier free electric strike - main ground lobby	1 No.	5,000.00	5,000
barrier free power door operator	1 No.	800.00	800
barrier free power supply	1 No.	700.00	700
allow for miscellaneous hardware, keying, etc	138 Lvs	100.00	13,800

A3.3 Entrances	138	Lvs	2,168.84	299,300
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.4 Roof Coverings				
1	Roof covering	19,396 SF	19.13	371,051
	allow 2 ply mod bit - R40	19,396 SF	16.00	310,336
	pavers at walk out	3,343 SF	5.00	16,715
	skylight access	8 No.	5,500.00	44,000

A3.4 Roof Coverings	19,396	Sf	19.13	371,051
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount	
A3.5 Projections					
1	Parapet	2,668 SF	18.02	48,084	
	vapour / moisture barrier - exterior	2,668 SF	2.00	5,336	
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669	
	20G metal stud - 2 x 8" - 16" o.c.	2,668 SF	4.00	10,672	
	batt insulation - R28 fiberglass	2,668 SF	1.95	5,203	
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669	
	torch on cap sheet	2,668 SF	1.25	3,335	
	parapet cap - painted metal	920 FT	15.00	13,800	
	miscellaneous	2,668 SF	0.15	400	
2	CLT overhang c/w roof covering	2,553 SF	37.00	94,461	
	add CLT panels - 5 ply	2,553 SF	37.00	94,461	
3	Balcony gazebo roof	10,045 SF	10.51	105,543	
	2 x 10 cedar plank - taper cut	2,023 SF	5.00	10,115	
	balcony deck framing c/w soffit	10,045 SF	9.50	95,428	
A3.5 Projections		5,220	Sf	47.53	248,087

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B1 Partitions and Doors		Quantity	Unit Rate	Amount
B1.1 Partitions				
1	Interior unit partitions	25,927 SF	8.10	210,009
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372
	20G metal stud - 2 x 4" - 16" o.c.	25,927 SF	3.30	85,559
	fiberglass insulation - 3"	25,927 SF	1.30	33,705
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372
2	Corridor partition - metal stud - Lobby	1,018 SF	9.10	9,264
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782
	20G metal stud - 2 x 6" - 16" o.c.	1,018 SF	4.00	4,072
	fiberglass insulation - 6"	1,018 SF	1.60	1,629
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782
3	Demising partition - metal stud	28,662 SF	15.10	432,796
	GWB 5/8" - paint ready	28,662 SF	1.75	50,159
	GWB - 5/8" - taped	28,662 SF	1.00	28,662
	20G metal stud - 2 x 6" - 16" o.c.	28,662 SF	4.00	114,648
	fiberglass insulation - 6"	28,662 SF	1.60	45,859
	20G metal stud - 2 x 6" - 16" o.c.	28,662 SF	4.00	114,648
	GWB - 5/8" - taped	28,662 SF	1.00	28,662
	GWB 5/8" - paint ready	28,662 SF	1.75	50,159
4	Non - demising partition - metal stud	22,067 SF	11.40	251,564
	GWB 5/8" - paint ready	22,067 SF	1.75	38,617
	20G metal stud - 2 x 4" - 16" o.c.	22,067 SF	3.30	72,821
	fiberglass insulation - 3"	22,067 SF	1.30	28,687
	20G metal stud - 2 x 4" - 16" o.c.	22,067 SF	3.30	72,821
	GWB 5/8" - paint ready	22,067 SF	1.75	38,617
5	Corridor partition - metal stud	34,388 SF	10.10	347,319
	GWB 5/8" - paint ready	34,388 SF	1.75	60,179
	GWB - 5/8" - taped	34,388 SF	1.00	34,388
	20G metal stud - 2 x 6" - 16" o.c.	34,388 SF	4.00	137,552
	fiberglass insulation - 6"	34,388 SF	1.60	55,021
	GWB 5/8" - paint ready	34,388 SF	1.75	60,179
B1.1 Partitions		112,062 Sf	11.16	1,250,951

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Steel Frame

September 15, 2016

B1 Partitions and Doors	Quantity	Unit Rate	Amount
B1.2 Doors			
1. Interior doors c/w base frame and hardware	615 Lvs	475.45	292,400
unit main entrances	118 Lvs	750.00	88,500
bathroom door	118 Lvs	225.00	26,550
bedroom door	104 Lvs	225.00	23,400
slider bedroom	56 Lvs	175.00	9,800
slider closet	166 Lvs	175.00	29,050
pocket closet door	10 Lvs	200.00	2,000
stairway entrance doors	12 Lvs	1,200.00	14,400
hallway doors	10 Lvs	1,200.00	12,000
common area doors	21 Lvs	1,200.00	25,200
allow for miscellaneous hardware, keying, etc	615 Lvs	100.00	61,500

B1.2 Doors	615	Lvs	475.45	292,400
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B2 Finishes		Quantity	Unit Rate	Amount
B2.1 Floor Finishes				
1	Floor finish	113,380 SF	5.56	630,314
	ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
	ground floor lobby - residential - hard tile	720 SF	14.00	10,080
	remainder flooring - allowance	93,984 No.	6.50	610,896

B2.1 Floor Finishes	113,380	Sf	5.56	630,314
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.2 Ceiling Finishes			
1 Ceiling finishes allowance	113,380 SF	6.34	719,258
ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
ground floor lobby - residential - suspended acoustic tile	720 SF	7.00	5,040
level 2, 3, 4, 5, 6, suspended GWB 5/8" - paint ready	93,984 SF	5.50	516,912
GWB - 5/8" - taped	93,984 SF	1.00	93,984
paint to ceiling	93,984 SF	1.00	93,984

B2.2 Ceiling Finishes	113,380	Sf	6.34	719,258
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.3 Wall Finishes			
1 Wall finishes allowance	118 Units	4,565.79	538,763
interior unit partitions - paint each side	51,854 SF	1.00	51,854
perimeter walls above grade - paint	63,374 SF	1.00	63,374
corridor partition - wood framed - Lobby paint	1,018 SF	1.00	1,018
demising partition - metal stud - paint	57,324 SF	1.00	57,324
non - demising partition - metal stud - paint	44,134 SF	1.00	44,134
corridor partition - metal stud - paint	68,776 SF	1.00	68,776
From Upper Floor Construction			
elev. wall - grnd, furring / GWB, paint, finish lobby side only	203 SF	5.75	1,167
concrete stair wall - ground - finish inside stairs - paint	582 SF	1.00	582
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,347 SF	5.75	13,495
concrete block - 10" w - stair - one side paint	4,622 SF	1.00	4,622
concrete block - 10" w - stair - one side furring, GWB, paint	4,622 SF	5.75	26,577
From Roof Construction			
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,020 SF	1.00	2,020
concrete block - 10" w - stair - one side paint	1,025 SF	5.75	5,894
concrete block - 10" w - stair - one side furring, GWB, paint	1,025 SF	1.00	1,025
allowance for trim / casing package to walls	302,926 SF	0.65	196,902

B2.3 Wall Finishes	302,926	Sf	1.78	538,763
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount	
B3.1 Fittings and Fixtures					
1	Millwork - cabinets, fixtures - units	118 Units	8,594.36	1,014,135	
	closet shelf and rod	1,205 FT	7.00	8,435	
	lower kitchen cabinets - allow plam tops	1,356 FT	350.00	474,600	
	upper kitchen cabinets	1,538 FT	150.00	230,700	
	kitchen island counter - allow plam top	560 FT	350.00	196,000	
	bathroom vanity - allow plam top	354 FT	125.00	44,250	
	toilet paper dispenser, towel bar & ring set	118 Set	125.00	14,750	
	mirror in bath	118 No.	200.00	23,600	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
2	Common area fittings and fixtures	118 Units	1,619.49	191,100	
	mailbox	1 No.	5,000.00	5,000	
	storage lockers	80 No.	1,800.00	144,000	
	amenity room - allowance	1 Sum	5,000.00	5,000	
	interior signage / wayfinding / unit numbering etc.	118 No.	100.00	11,800	
	exterior signage	1 Sum	3,500.00	3,500	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
B3.1 Fittings and Fixtures		113,380	Sf	10.63	1,205,235

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.2 Equipment				
1	Appliances	590 No.	600.00	354,000
	fridge	118 No.	650.00	76,700
	stove	118 No.	700.00	82,600
	microwave	118 No.	350.00	41,300
	washer	118 No.	600.00	70,800
	dryer	118 No.	700.00	82,600

B3.2 Equipment	113,380	Sf	3.12	354,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.3 Elevators				
1	Elevator - allowance	2 No.	104,000.00	208,000
	elevator - 6 stops	6 Stop	16,000.00	96,000
	elevator -7 stops	7 Stop	16,000.00	112,000

B3.3 Elevators	2	No.	104,000.00	208,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.1 Plumbing and Drainage			
1 Plumbing and heating	118 Units	7,926.99	935,385
plumbing and heating allowance - systems may vary	113,380 SF	8.25	935,385

C1.1 Plumbing and Drainage	113,380	Sf	8.25	935,385
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.2 Fire Protection			
1 Sprinkler system	118 Units	1,568.39	185,070
sprinkler system allowance - systems may vary	113,380 SF	1.50	170,070
hand held extinguisher cabinets	30 No.	500.00	15,000

C1.2 Fire Protection	113,380	Sf	1.63	185,070
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Steel Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.3 HVAC			
1 Ventilation	118 Units	3,603.18	425,175
ventilation system allowance - systems may vary	113,380 SF	3.75	425,175

C1.3 HVAC	113,380	Sf	3.75	425,175
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Steel Frame

September 15, 2016

C2 Electrical		Quantity	Unit Rate	Amount
C2.1 Service and Distribution				
1	Electrical and systems	118 Units	6,005.30	708,625
	allowance for power, lighting, security, systems (may vary based on project	113,380 SF	6.25	708,625

C2.1 Service and Distribution	113,380	Sf	6.25	708,625
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APPENDIX C

DETAILED ELEMENTAL ESTIMATE – ALL CONCRETE

SIX LEVELS OF STRUCTURALLY FRAMED CONCRETE

**ELEMENTAL COST SUMMARY
CLASS C ESTIMATE**

Atlantic Woodworks
6 Levels Structural Concrete Frame

GFA 113,380 SF
September 15, 2016

Element/Sub-Element	Ratio	Quantity	Unit	Unit Rate	Cost	Total Cost		\$ / GFA	%
A SHELL						\$ 7,492,439		\$ 66.08	41.17%
A1 Sub-Structure						\$ 439,478		\$ 3.88	2.42%
A1.1 Standard Foundations	0.17	19,396	Sf	22.66	439,477.66		\$ 3.88		
A1.2 Special Foundations	0.00	0	Sf	-	-		\$ -		
A1.3 Basement Excavation	0.00	0	CY	-	-		\$ -		
A2 Structure						\$ 3,374,057		\$ 29.76	18.54%
A2.1 Lowest Floor Construction	0.17	19,396	Sf	6.50	126,139.15		\$ 1.11		
A2.2 Upper Floor Construction	0.83	93,984	Sf	28.50	2,678,370.03		\$ 23.62		
A2.3 Roof Construction	0.17	19,396	Sf	29.36	569,548.09		\$ 5.02		
A3 Exterior Enclosure						\$ 3,678,904		\$ 32.45	20.22%
A3.1 Walls Below Grade	0.00	0	Sf	-	-		\$ -		
A3.2 Walls Above Grade	0.56	63,374	Sf	43.56	2,760,465.93		\$ 24.35		
A3.3 Entrances	0.00	131	Lvs	2,284.73	299,300.00		\$ 2.64		
A3.4 Roof Covering	0.17	19,396	Sf	19.13	371,051.00		\$ 3.27		
A3.5 Projections	0.05	5,220	Sf	47.53	248,087.30		\$ 2.19		
B INTERIORS						\$ 5,104,937		\$ 45.03	28.05%
B1 Partitions & Doors						\$ 1,543,351		\$ 13.61	8.48%
B1.1 Partitions	0.99	112,062	Sf	11.16	1,250,951.30		\$ 11.03		
B1.2 Doors	0.01	615	Lvs	475.45	292,400.00		\$ 2.58		
B2 Finishes						\$ 1,794,351		\$ 15.83	9.86%
B2.1 Floor Finishes	1.00	113,380	Sf	5.56	630,314.00		\$ 5.56		
B2.2 Ceiling Finishes	1.00	113,380	Sf	5.51	625,274.00		\$ 5.51		
B2.3 Wall Finishes	2.67	302,926	Sf	1.78	538,763.15		\$ 4.75		
B3 Fittings & Equipment						\$ 1,767,235		\$ 15.59	9.71%
B3.1 Fittings & Fixtures	1.00	113,380	Sf	10.63	1,205,235.00		\$ 10.63		
B3.2 Equipment	1.00	113,380	Sf	3.12	354,000.00		\$ 3.12		
B3.3 Elevators	0.00	2	No.	104,000.00	208,000.00		\$ 1.83		
B3.4 Conveying Systems	0.00	0	Sum	-	-		\$ -		
C SERVICES						\$ 2,254,255		\$ 19.88	12.39%
C1 Mechanical						\$ 1,545,630		\$ 13.63	8.49%
C1.1 Plumbing & Heating	1.00	113,380	Sf	8.25	935,385.00		\$ 8.25		
C1.2 Fire Protection	1.00	113,380	Sf	1.63	185,070.00		\$ 1.63		
C1.3 Ventilation	1.00	113,380	Sf	3.75	425,175.00		\$ 3.75		
C2 Electrical						\$ 708,625		\$ 6.25	3.89%
C2.1 Electrical & Systems	1.00	113,380	Sf	6.25	708,625.00		\$ 6.25		
SUB TOTAL EXCLUDING SITE AND ANCILLARY						\$ 14,851,632		\$ 130.99	81.62%
D SITE & ANCILLARY WORK						\$ -		\$ -	0.00%
D1 Site Work						\$ -		\$ -	0.00%
D1.1 Site Development	0.00	0	Sf	-	-		\$ -		
D1.2 Mechanical Site Services	0.00	0	Sf	-	-		\$ -		
D1.3 Electrical Site Services	0.00	0	Sf	-	-		\$ -		
D2 Ancillary Work						\$ -		\$ -	0.00%
D2.1 Demolition	0.00	0	Sf	-	-		\$ -		
D2.2 Alterations	0.00	0	Sf	-	-		\$ -		
SUB TOTAL INCLUDING SITE AND ANCILLARY						\$ 14,851,632		\$ 130.99	81.62%
Z GENERAL REQUIREMENTS & ALLOWANCES									
Z1 General Requirements & Fee						\$ 1,054,466		\$ 9.30	5.79%
Z1.1 General Requirements	2.0%				297,032.63		\$ 2.62		
Z1.2 Fee	5.0%				757,433.21		\$ 6.68		
SUB TOTAL						\$ 15,906,097		\$ 140.29	87.41%
Z2 Allowances						\$ 2,290,478		\$ 20.20	12.59%
Z2.1 Design Allowance	10.0%				1,590,609.75		\$ 14.03		
Z2.2 Escalation Allowance	0.0%				-		\$ -		
Z2.3 Construction Allowance	4.0%				699,868.29		\$ 6.17		
Taxes						\$ -		\$ -	0.00%
TOTAL ESTIMATED CONSTRUCTION COST						\$ 18,196,575		SF \$ 160.49	100.00%
								m2 \$ 1,727.52	

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Concrete Frame

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
A1.1 Foundations				
1	Strip ftng bldng perimeter allow - 3' w x 1' 2" h	805 FT	52.88	42,560
	concrete - allow 25 Mpa (3,625 PSI)	149 CY	135.00	20,162
	formwork - 1' 2" high - each side	2,688 SF	6.00	16,130
	rebar - 3 -15M continuous	3,057 Lbs	0.91	2,782
	rebar - 15M - 2 row, dowel - 16" o.c.	3,831 Lbs	0.91	3,486
2	Strip footing elevator shaft allow - 3' w x 1' 2" h	51 FT	52.88	2,709
	concrete - allow 25 Mpa (3,625 PSI)	10 CY	135.00	1,284
	formwork - 1' 2" high - each side	171 SF	6.00	1,027
	rebar - 3 -15M continuous	195 Lbs	0.91	177
	rebar - 15M - 2 row, dowel - 16" o.c.	244 Lbs	0.91	222
3	Strip footing stair shaft allow - 3' w x 1' 2" h	100 FT	52.88	5,313
	concrete - allow 25 Mpa (3,625 PSI)	19 CY	135.00	2,517
	formwork - 1' 2" high - each side	336 SF	6.00	2,013
	rebar - 3 -15M continuous	382 Lbs	0.91	347
	rebar - 15M - 2 row, dowel - 16" o.c.	478 Lbs	0.91	435
4	Pad footing allow - 10' x 10' w x 2' 6" h	56 No.	1,924.53	107,774
	concrete - allow 25 Mpa (3,625 PSI)	519 CY	135.00	70,000
	formwork - 30" high - each side	2,800 SF	6.00	16,800
	rebar-20M EW - 12" o.c.	17,730 Lbs	0.91	16,134
	rebar - 6 - 25M dowel - 6' L	5,318 Lbs	0.91	4,840
5	Frost depth perimeter wall - 4' dp x 12"w	3,220 SF	20.71	66,670
	concrete - allow 25 Mpa (3,625 PSI)	119 CY	135.00	16,098
	formwork - 4' high - each side	6,439 SF	6.00	38,634
	rebar -15M - 16" o.c. E.F. -continuous	6,949 Lbs	0.91	6,323
	rebar - 15M vert E.F. - 16" o.c.	6,170 Lbs	0.91	5,614
6	Pier / column allow - 2' x 1' w x 4' h	224 FT	99.38	22,261
	concrete - allow 25 Mpa (3,625 PSI)	17 CY	135.00	2,240
	formwork - 4' high - each side	1,344 SF	10.00	13,440
	rebar-15M stirrup - 12" o.c.	2,978 Lbs	0.91	2,710
	rebar - 6 - 25M vert - 4' L	4,255 Lbs	0.91	3,872
(Carry Forward)				247,286

CLASS C ESTIMATE**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
			(Amount Forward)	247,286
A1.1 Foundations				
7	Excavation and fill c/w trucking - footprint	19,396 SF	8.29	160,747
	excavate pit - allow flat lot	3,592 CY	12.00	43,102
	excavate working space	298 CY	12.00	3,577
	excavate pad - extra depth	146 CY	12.00	1,752
	allow miscellaneous trenching, etc.	19,396 CY	1.00	19,396
	fill to excavation	3,204 CY	29.00	92,919
8	Miscellaneous	19,396 SF	1.62	31,444
	rigid insulation to building perimete wall 4' dp	3,220 SF	2.25	7,245
	weeping tile socked c/w clear stone - connect to sump pit	966 FT	12.00	11,592
	miscellaneous unforeseen	19,396 SF	0.65	12,607

A1.1 Foundations	19,396	Sf	22.66	439,477.66
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Concrete Frame

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.1 Lowest Floor Construction			
1. Slab on grade - 4"	19,396 SF	6.50	126,139
concrete - allow 25 Mpa (3,625 PSI) - no air	237 CY	135.00	32,003
WWM	19,396 SF	0.52	10,086
6 mil poly	19,396 SF	0.10	1,940
granular fill under slab - allow 8"	474 CY	29.00	13,750
hardener / sealant	19,396 SF	1.00	19,396
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
isolation joints around perimeter and column edges	1,444 FT	1.00	1,444
construction joints	19,396 SF	0.50	9,698
saw cut and caulk	19,396 SF	0.35	6,789

A2.1 Lowest Floor Construction	19,396	Sf	6.50	126,139
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A2 Structure		Quantity	Unit Rate	Amount
A2.2 Upper Floor Construction				
1	Concrete framed upper floor	93,984 SF	22.68	2,131,557
	concrete 8" dp - allow 25 Mpa (3,625 PSI) - no air	2,297 CY	135.00	310,147
	rebar - allow 8 Lbs / SF	751,872 SF	0.91	684,204
	formwork	93,984 SF	10.00	939,840
	place and screed	93,984 SF	0.75	70,488
	power trowel finish	93,984 SF	0.85	79,886
	construction joints	93,984 SF	0.50	46,992
2	Concrete elevator wall - to level 6 - 57' 7"h x 12"w	2,937 SF	20.34	59,741
	concrete - allow 25 Mpa (3,625 PSI)	109 CY	135.00	14,685
	formwork - 57' 7" high - each side	5,874 SF	6.00	35,244
	rebar -15M - 16" o.c. E.F. -continuous	4,608 Lbs	0.91	4,194
	rebar - 15M vert E.F. - 16" o.c.	6,174 Lbs	0.91	5,618
3	Concrete stair wall - ground - 57' 7"h x 12"w	5,786 SF	20.25	117,176
	concrete - allow 25 Mpa (3,625 PSI)	214 CY	135.00	28,930
	formwork - 57' 7" high - each side	11,572 SF	6.00	69,432
	rebar -15M - 16" o.c. E.F. -continuous	9,078 Lbs	0.91	8,261
	rebar - 15M vert E.F. - 16" o.c.	11,597 Lbs	0.91	10,553
4	Column allow - 56 - 2' x 1' w x 57' 7" h	3,224 FT	94.56	304,896
	concrete - allow 25 Mpa (3,625 PSI)	239 CY	135.00	32,245
	formwork - 57' 7" high - each side	19,347 SF	10.00	193,469
	rebar-15M stirrup - 12" o.c.	25,769 Lbs	0.91	23,450
	rebar - 6 - 25M vert	61,244 Lbs	0.91	55,732
5	Stairwell - ground to level 6	10 Flight	6,500.00	65,000
	concrete stairs	10 Flight	6,500.00	65,000
A2.2 Upper Floor Construction		93,984 Sf	28.50	2,678,370

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.3 Roof Construction			
1 Concrete framed upper floor	19,396 SF	22.23	431,108
concrete 8" dp - allow 25 Mpa (3,625 PSI) - no air	474 CY	135.00	64,007
rebar - allow 8 Lbs / SF	155,168 SF	0.91	141,203
formwork	19,396 SF	10.00	193,960
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
construction joints	19,396 SF	0.50	9,698
deduct area for CLT panels	-5,234 SF	22.68	-118,707
add CLT panels - 5 ply	5,234 SF	21.00	109,914
2 Concrete elevator wall - to roof - 20' 1"h x 12"w	1,025 SF	20.42	20,927
concrete - allow 25 Mpa (3,625 PSI)	38 CY	135.00	5,125
formwork - 20' 1" high - each side	2,050 SF	6.00	12,300
rebar -15M - 16" o.c. E.F. -continuous	1,693 Lbs	0.91	1,540
rebar - 15M vert E.F. - 16" o.c.	2,155 Lbs	0.91	1,961
3 Concrete stair wall - to roof - 20' 1"h x 12"w	2,020 SF	20.33	41,058
concrete - allow 25 Mpa (3,625 PSI)	75 CY	135.00	10,100
formwork - 20' 1" high - each side	4,040 SF	6.00	24,240
rebar -15M - 16" o.c. E.F. -continuous	3,335 Lbs	0.91	3,035
rebar - 15M vert E.F. - 16" o.c.	4,048 Lbs	0.91	3,684
4 Column allow - 56 - 2' x 1' w x 9' 3" h	518 FT	96.44	49,955
concrete - allow 25 Mpa (3,625 PSI)	38 CY	135.00	5,180
formwork - 57' 7" high - each side	3,108 SF	10.00	31,080
rebar-15M stirrup - 12" o.c.	5,211 Lbs	0.91	4,742
rebar - 6 - 25M vert	9,839 Lbs	0.91	8,953
5 Stairwell - ground to level 6	9 Flight	2,944.44	26,500
concrete stairs to roof	1 Flight	6,500.00	6,500
wood framed stairs at skylights to roof	8 Flight	2,500.00	20,000

A2.3 Roof Construction	19,396	Sf	29.36	569,548
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.2 Walls Above Grade				
1	Exterior wall framing	60,420 SF	11.60	700,872
	vapour / moisture barrier - exterior	60,420 SF	2.00	120,840
	exterior sheathing - joints taped / sealed	60,420 SF	1.75	105,735
	20G metal stud - 2 x 8" - 16" o.c.	60,420 SF	4.00	241,680
	batt insulation - R28 fiberglass	60,420 SF	1.95	117,819
	6 mil poly	60,420 SF	0.15	9,063
	GWB 5/8" - paint ready	60,420 SF	1.75	105,735
2	Concrete wall - commercial sides - 13' 1"h x 12"w	2,954 SF	28.32	83,655
	concrete - allow 25 Mpa (3,625 PSI)	109 CY	135.00	14,715
	formwork - 13' 1" high - each side	5,908 SF	10.00	59,080
	rebar -15M - 16" o.c. E.F. -continuous	5,078 Lbs	0.91	4,621
	rebar - 15M vert E.F. - 16" o.c.	5,757 Lbs	0.91	5,239
3	Deduct openings	13,691 SF	-11.60	- 158,810
	window at patio fixed unit - single	1,680 SF	-11.60	-19,488
	window at patio fixed unit - double	1,596 SF	-11.60	-18,514
	window at bedrooms	2,000 SF	-11.60	-23,200
	patio door lite above sliding door	885 SF	-11.60	-10,270
	window at sloped roof high side	706 SF	-11.60	-8,194
	commercial glazing	1,267 SF	-11.60	-14,697
	lobby ground floor glazing	75 SF	-11.60	-870
	patio doors at units	4,935 SF	-11.60	-57,243
	commercial double aluminium doors	234 SF	-11.60	-2,714
	lobby double aluminium doors	39 SF	-11.60	-452
	allow double HM at back of Commercial	273 SF	-11.60	-3,167
4	Exterior wall cladding	49,683 SF	35.00	1,738,905
	allow low range cladding 30%	14,905 SF	25.00	372,623
	allow mid range cladding 55%	27,326 SF	35.00	956,398
	allow higher range cladding 15%	7,452 SF	55.00	409,885

(Carry Forward) 2,364,622

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
			(Amount Forward)	2,364,622
A3.2 Walls Above Grade				
5	Windows and glazing	13,691 SF	28.91	395,844
	window at patio fixed unit - single	1,680 SF	40.00	67,200
	window at patio fixed unit - double	1,596 SF	40.00	63,840
	window at bedrooms	2,000 SF	40.00	80,000
	patio door lite above sliding door	885 SF	40.00	35,414
	window at sloped roof high side	706 SF	50.00	35,320
	commercial glazing	1,267 SF	85.00	107,695
	lobby ground floor glazing	75 SF	85.00	6,375
	patio doors at units	4,935 SF	counted at A3.3 Entrances	
	commercial double aluminium doors	234 SF	counted at A3.3 Entrances	
	lobby double aluminium doors	39 SF	counted at A3.3 Entrances	
	allow double HM at back of Commercial	273 SF	counted at A3.3 Entrances	

A3.2 Walls Above Grade	63,374	Sf	43.56	2,760,466
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Concrete Frame

September 15, 2016

A3 Exterior Enclosure	Quantity	Unit Rate	Amount
A3.3 Entrances			
1. Entrance doors c/w base frame and hardware	138 Lvs	2,168.84	299,300
patio doors at units	118 Lvs	2,000.00	236,000
commercial double aluminium doors	6 Lvs	2,000.00	12,000
lobby double aluminium doors	1 Pair	4,000.00	4,000
allow double HM at back of Commercial	6 Pair	2,500.00	15,000
allow for hardware upgrades to commercial	20 Lvs	600.00	12,000
barrier free electric strike - main ground lobby	1 No.	5,000.00	5,000
barrier free power door operator	1 No.	800.00	800
barrier free power supply	1 No.	700.00	700
allow for miscellaneous hardware, keying, etc	138 Lvs	100.00	13,800

A3.3 Entrances	131	Lvs	2,284.73	299,300
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.4 Roof Coverings				
1	Roof covering	19,396 SF	19.13	371,051
	allow 2 ply mod bit - R40	19,396 SF	16.00	310,336
	pavers at walk out	3,343 SF	5.00	16,715
	skylight access	8 No.	5,500.00	44,000

(Carry Forward) 371,051

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount	
A3.5 Projections					
1	Parapet	2,668 SF	18.02	48,084	
	vapour / moisture barrier - exterior	2,668 SF	2.00	5,336	
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669	
	20G metal stud - 2 x 8" - 16" o.c.	2,668 SF	4.00	10,672	
	batt insulation - R28 fiberglass	2,668 SF	1.95	5,203	
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669	
	toch on cap sheet	2,668 SF	1.25	3,335	
	parapet cap - painted metal	920 FT	15.00	13,800	
	miscellaneous	2,668 SF	0.15	400	
2	CLT overhang c/w roof covering	2,553 SF	37.00	94,461	
	add CLT panels - 5 ply	2,553 SF	37.00	94,461	
3	Balcony gazebo roof	10,045 SF	10.51	105,543	
	2 x 10 cedar plank - taper cut	2,023 SF	5.00	10,115	
	balcony deck framing c/w soffit	10,045 SF	9.50	95,428	
A3.5 Projections		5,220	Sf	47.53	248,087

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B1 Partitions and Doors		Quantity	Unit Rate	Amount
B1.1 Partitions				
1	Interior unit partitions	25,927 SF	8.10	210,009
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372
	20G metal stud - 2 x 4" - 16" o.c.	25,927 SF	3.30	85,559
	fiberglass insulation - 3"	25,927 SF	1.30	33,705
	GWB 5/8" - paint ready	25,927 SF	1.75	45,372
2	Corridor partition - metal stud - Lobby	1,018 SF	9.10	9,264
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782
	20G metal stud - 2 x 6" - 16" o.c.	1,018 SF	4.00	4,072
	fiberglass insulation - 6"	1,018 SF	1.60	1,629
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782
3	Demising partition - metal stud	28,662 SF	15.10	432,796
	GWB 5/8" - paint ready	28,662 SF	1.75	50,159
	GWB - 5/8" - taped	28,662 SF	1.00	28,662
	20G metal stud - 2 x 6" - 16" o.c.	28,662 SF	4.00	114,648
	fiberglass insulation - 6"	28,662 SF	1.60	45,859
	20G metal stud - 2 x 6" - 16" o.c.	28,662 SF	4.00	114,648
	GWB - 5/8" - taped	28,662 SF	1.00	28,662
	GWB 5/8" - paint ready	28,662 SF	1.75	50,159
4	Non - demising partition - metal stud	22,067 SF	11.40	251,564
	GWB 5/8" - paint ready	22,067 SF	1.75	38,617
	20G metal stud - 2 x 4" - 16" o.c.	22,067 SF	3.30	72,821
	fiberglass insulation - 3"	22,067 SF	1.30	28,687
	20G metal stud - 2 x 4" - 16" o.c.	22,067 SF	3.30	72,821
	GWB 5/8" - paint ready	22,067 SF	1.75	38,617
5	Corridor partition - metal stud	34,388 SF	10.10	347,319
	GWB 5/8" - paint ready	34,388 SF	1.75	60,179
	GWB - 5/8" - taped	34,388 SF	1.00	34,388
	20G metal stud - 2 x 6" - 16" o.c.	34,388 SF	4.00	137,552
	fiberglass insulation - 6"	34,388 SF	1.60	55,021
	GWB 5/8" - paint ready	34,388 SF	1.75	60,179
B1.1 Partitions		112,062 Sf	11.16	1,250,951

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Concrete Frame

September 15, 2016

B1 Partitions and Doors	Quantity	Unit Rate	Amount
B1.2 Doors			
1. Interior doors c/w base frame and hardware	615 Lvs	475.45	292,400
unit main entrances	118 Lvs	750.00	88,500
bathroom door	118 Lvs	225.00	26,550
bedroom door	104 Lvs	225.00	23,400
slider bedroom	56 Lvs	175.00	9,800
slider closet	166 Lvs	175.00	29,050
pocket closet door	10 Lvs	200.00	2,000
stairway entrance doors	12 Lvs	1,200.00	14,400
hallway doors	10 Lvs	1,200.00	12,000
common area doors	21 Lvs	1,200.00	25,200
allow for miscellaneous hardware, keying, etc	615 Lvs	100.00	61,500

B1.2 Doors	615	Lvs	475.45	292,400
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.1 Floor Finishes			
1 Floor finish	113,380 SF	5.56	630,314
ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
ground floor lobby - residential - hard tile	720 SF	14.00	10,080
remainder flooring - allowance	93,984 No.	6.50	610,896

B2.1 Floor Finishes	113,380	Sf	5.56	630,314
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Structural Concrete Frame

September 15, 2016

B2 Finishes		Quantity	Unit Rate	Amount
B2.2 Ceiling Finishes				
1	Ceiling finishes allowance	113,380 SF	5.51	625,274
	ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
	ground floor lobby - residential - suspended acoustic tile	720 SF	7.00	5,040
	level 2, 3, 4, 5, 6, suspended GWB 5/8" - paint ready	93,984 SF	5.50	516,912
	paint to ceiling	93,984 SF	1.00	93,984

B2.2 Ceiling Finishes	113,380	Sf	5.51	625,274
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.3 Wall Finishes			
1 Wall finishes allowance	118 Units	4,565.79	538,763
interior unit partitions - paint each side	51,854 SF	1.00	51,854
perimeter walls above grade - paint	63,374 SF	1.00	63,374
corridor partition - metal stud - Lobby paint	1,018 SF	1.00	1,018
demising partition - metal stud - paint	57,324 SF	1.00	57,324
non - demising partition - metal stud - paint	44,134 SF	1.00	44,134
corridor partition - metal stud - paint	68,776 SF	1.00	68,776
From Upper Floor Construction			
elev. wall - grnd, furring / GWB, paint, finish lobby side only	203 SF	5.75	1,167
concrete stair wall - ground - finish inside stairs - paint	582 SF	1.00	582
conc. wall - elevator - one side furring, GWB, paint	2,347 SF	5.75	13,495
concrete wall - stair - one side paint	4,622 SF	1.00	4,622
concrete wall - stair - one side furring, GWB, paint	4,622 SF	5.75	26,577
From Roof Construction			
conc. wall - elevator - one side furring, GWB, paint	2,020 SF	1.00	2,020
concrete wall - stair - one side paint	1,025 SF	5.75	5,894
concrete wall - stair - one side furring, GWB, paint	1,025 SF	1.00	1,025
allowance for trim / casing package to walls	302,926 SF	0.65	196,902

B2.3 Wall Finishes	302,926	Sf	1.78	538,763
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount	
B3.1 Fittings and Fixtures					
1	Millwork - cabinets, fixtures - units	118 Units	8,594.36	1,014,135	
	closet shelf and rod	1,205 FT	7.00	8,435	
	lower kitchen cabinets - allow plam tops	1,356 FT	350.00	474,600	
	upper kitchen cabinets	1,538 FT	150.00	230,700	
	kitchen island counter - allow plam top	560 FT	350.00	196,000	
	bathroom vanity - allow plam top	354 FT	125.00	44,250	
	toilet paper dispenser, towel bar & ring set	118 Set	125.00	14,750	
	mirror in bath	118 No.	200.00	23,600	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
2	Common area fittings and fixtures	118 Units	1,619.49	191,100	
	mailbox	1 No.	5,000.00	5,000	
	storage lockers	80 No.	1,800.00	144,000	
	amenity room - allowance	1 Sum	5,000.00	5,000	
	interior signage / wayfinding / unit numbering etc.	118 No.	100.00	11,800	
	exterior signage	1 Sum	3,500.00	3,500	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
B3.1 Fittings and Fixtures		113,380	Sf	10.63	1,205,235

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B3 Fittings and Equipment

Quantity

Unit Rate

Amount

B3.2 Equipment

1	Appliances	590 No.	600.00	354,000
	fridge	118 No.	650.00	76,700
	stove	118 No.	700.00	82,600
	microwave	118 No.	350.00	41,300
	washer	118 No.	600.00	70,800
	dryer	118 No.	700.00	82,600

B3.2 Equipment	113,380	Sf	3.12	354,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.3 Elevators				
1	Elevator - allowance	2 No.	104,000.00	208,000
	elevator - 6 stops	6 Stop	16,000.00	96,000
	elevator -7 stops	7 Stop	16,000.00	112,000

B3.3 Elevators	2	No.	104,000.00	208,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.1 Plumbing and Drainage			
1 Plumbing and heating	118 Units	7,926.99	935,385
plumbing and heating allowance - systems may vary	113,380 SF	8.25	935,385

C1.1 Plumbing and Drainage	113,380	Sf	8.25	935,385
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.2 Fire Protection			
1 Sprinkler system	118 Units	1,568.39	185,070
sprinkler system allowance - systems may vary	113,380 SF	1.50	170,070
hand held extinguisher cabinets	30 No.	500.00	15,000

C1.2 Fire Protection	113,380	Sf	1.63	185,070
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.3 HVAC			
1 Ventilation	118 Units	3,603.18	425,175
ventilation system allowance - systems may vary	113,380 SF	3.75	425,175

C1.3 HVAC	113,380	Sf	3.75	425,175
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Structural Concrete Frame**

September 15, 2016

C2 Electrical	Quantity	Unit Rate	Amount
C2.1 Service and Distribution			
1 Electrical and systems	118 Units	6,005.30	708,625
allowance for power, lighting, security, systems (may vary based on project	113,380 SF	6.25	708,625

C2.1 Service and Distribution	113,380	Sf	6.25	708,625
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APPENDIX D

DETAILED ELEMENTAL ESTIMATE – ALL WOOD

SIX LEVELS OF WOOD FRAMED STRUCTURE

**ELEMENTAL COST SUMMARY
CLASS C ESTIMATE**

Atlantic Woodworks
6 Levels Wood Frame

GFA 113,380 SF
September 15, 2016

Element/Sub-Element	Ratio	Quantity	Unit	Unit Rate	Cost	Total Cost		\$ / GFA	%
A SHELL						\$ 7,452,636		\$ 65.73	45.13%
A1 Sub-Structure						\$ 352,738		\$ 3.11	2.14%
A1.1 Standard Foundations	0.17	19,396	Sf	18.19	352,738.34		\$ 3.11		
A1.2 Special Foundations	0.00	0	Sf	-	-		\$ -		
A1.3 Basement Excavation	0.00	0	CY	-	-		\$ -		
A2 Structure						\$ 3,527,968		\$ 31.12	21.36%
A2.1 Lowest Floor Construction	0.17	19,396	Sf	6.50	126,139.15		\$ 1.11		
A2.2 Upper Floor Construction	0.83	93,984	Sf	30.92	2,905,659.08		\$ 25.63		
A2.3 Roof Construction	0.17	19,396	Sf	25.58	496,169.91		\$ 4.38		
A3 Exterior Enclosure						\$ 3,571,929		\$ 31.50	21.63%
A3.1 Walls Below Grade	0.00	0	Sf	-	-		\$ -		
A3.2 Walls Above Grade	0.56	63,374	Sf	41.92	2,656,425.65		\$ 23.43		
A3.3 Entrances	0.00	138	Lvs	2,168.84	299,300.00		\$ 2.64		
A3.4 Roof Covering	0.17	19,396	Sf	19.13	371,051.00		\$ 3.27		
A3.5 Projections	0.13	15,266	Sf	16.06	245,152.50		\$ 2.16		
B INTERIORS						\$ 3,878,897		\$ 34.21	23.49%
B1 Partitions & Doors						\$ 514,678		\$ 4.54	3.12%
B1.1 Partitions	0.28	32,133	Sf	6.92	222,277.60		\$ 1.96		
B1.2 Doors	0.01	615	Lvs	475.45	292,400.00		\$ 2.58		
B2 Finishes						\$ 1,596,985		\$ 14.09	9.67%
B2.1 Floor Finishes	1.00	113,380	Sf	5.56	630,314.00		\$ 5.56		
B2.2 Ceiling Finishes	1.00	113,380	Sf	3.77	427,907.60		\$ 3.77		
B2.3 Wall Finishes	2.76	313,302	Sf	1.72	538,763.15		\$ 4.75		
B3 Fittings & Equipment						\$ 1,767,235		\$ 15.59	10.70%
B3.1 Fittings & Fixtures	1.00	113,380	Sf	10.63	1,205,235.00		\$ 10.63		
B3.2 Equipment	1.00	113,380	Sf	3.12	354,000.00		\$ 3.12		
B3.3 Elevators	0.00	2	No.	104,000.00	208,000.00		\$ 1.83		
B3.4 Conveying Systems	0.00	0	Sum	-	-		\$ -		
C SERVICES						\$ 2,147,961		\$ 18.94	13.01%
C1 Mechanical						\$ 1,545,630		\$ 13.63	9.36%
C1.1 Plumbing & Heating	1.00	113,380	Sf	8.25	935,385.00		\$ 8.25		
C1.2 Fire Protection	1.00	113,380	Sf	1.63	185,070.00		\$ 1.63		
C1.3 Ventilation	1.00	113,380	Sf	3.75	425,175.00		\$ 3.75		
C2 Electrical						\$ 602,331		\$ 5.31	3.65%
C2.1 Electrical & Systems	1.00	113,380	Sf	5.31	602,331.25		\$ 5.31		
SUB TOTAL EXCLUDING SITE AND ANCILLARY						\$ 13,479,494		\$ 118.89	81.62%
D SITE & ANCILLARY WORK						\$ -		\$ -	0.00%
D1 Site Work						\$ -		\$ -	0.00%
D1.1 Site Development	0.00	0	Sf	-	-		\$ -		
D1.2 Mechanical Site Services	0.00	0	Sf	-	-		\$ -		
D1.3 Electrical Site Services	0.00	0	Sf	-	-		\$ -		
D2 Ancillary Work						\$ -		\$ -	0.00%
D2.1 Demolition	0.00	0	Sf	-	-		\$ -		
D2.2 Alterations	0.00	0	Sf	-	-		\$ -		
SUB TOTAL INCLUDING SITE AND ANCILLARY						\$ 13,479,494		\$ 118.89	81.62%
Z GENERAL REQUIREMENTS & ALLOWANCES									
Z1 General Requirements & Fee						\$ 957,044		\$ 8.44	5.79%
Z1.1 General Requirements	2.0%				269,589.88		\$ 2.38		
Z1.2 Fee	5.0%				687,454.21		\$ 6.06		
SUB TOTAL						\$ 14,436,538		\$ 127.33	87.41%
Z2 Allowances						\$ 2,078,862		\$ 18.34	12.59%
Z2.1 Design Allowance	10.0%				1,443,653.83		\$ 12.73		
Z2.2 Escalation Allowance	0.0%				-		\$ -		
Z2.3 Construction Allowance	4.0%				635,207.69		\$ 5.60		
Taxes						\$ -		\$ -	0.00%
TOTAL ESTIMATED CONSTRUCTION COST						\$ 16,515,400		\$ 145.66	100.00%
							m2	\$ 1,567.91	

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Wood Frame

September 15, 2016

A1 Sub Structure		Quantity	Unit Rate	Amount
A1.1 Foundations				
1	Strip footing building perimeter allow - 1' 4" w x 8" h	805 FT	24.18	19,459
	concrete - allow 25 Mpa (3,625 PSI)	26 CY	135.00	3,533
	formwork - 8" high - each side	1,610 SF	6.00	9,659
	rebar - 3 -15M continuous	3,057 Lbs	0.91	2,782
	rebar - 15M - 2 row, dowel - 16" o.c.	3,831 Lbs	0.91	3,486
2	Strip footing elevator shaft allow - 1' 4" w x 8" h	51 FT	24.18	1,239
	concrete - allow 25 Mpa (3,625 PSI)	2 CY	135.00	225
	formwork - 8" high - each side	102 SF	6.00	615
	rebar - 3 -15M continuous	195 Lbs	0.91	177
	rebar - 15M - 2 row, dowel - 16" o.c.	244 Lbs	0.91	222
3	Strip footing stair shaft allow - 1' 4" w x 8" h	100 FT	24.18	2,429
	concrete - allow 25 Mpa (3,625 PSI)	3 CY	135.00	441
	formwork - 8" high - each side	201 SF	6.00	1,206
	rebar - 3 -15M continuous	382 Lbs	0.91	347
	rebar - 15M - 2 row, dowel - 16" o.c.	478 Lbs	0.91	435
4	Pad footing allow - 5' x 5' w x 1' 6" h	56 No.	502.04	28,114
	concrete - allow 25 Mpa (3,625 PSI)	104 CY	135.00	14,000
	formwork - 18" high - each side	1,120 SF	6.00	6,720
	rebar-20M EW - 12" o.c.	4,432 Lbs	0.91	4,033
	rebar - 6 - 25M dowel - 6' L	3,693 Lbs	0.91	3,361
5	Frost depth perimeter wall - 4' dp x 8"w	3,220 SF	19.01	61,196
	concrete - allow 25 Mpa (3,625 PSI)	79 CY	135.00	10,624
	formwork - 4' high - each side	6,439 SF	6.00	38,634
	rebar -15M - 16" o.c. E.F. -continuous	6,949 Lbs	0.91	6,323
	rebar - 15M vert E.F. - 16" o.c.	6,170 Lbs	0.91	5,614
6	Pier / column allow - 2' x 1' w x 4' h	224 FT	136.88	30,661
	concrete - allow 25 Mpa (3,625 PSI)	17 CY	135.00	2,240
	formwork - 4' high - each side	1,344 SF	10.00	13,440
	rebar-15M stirrup - 12" o.c.	2,978 Lbs	0.91	2,710
	rebar - 6 - 25M vert - 4' L	4,255 Lbs	0.91	3,872
	post brackets	56 No.	150.00	8,400
(Carry Forward)				143,099

CLASS C ESTIMATE**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A1 Sub Structure	Quantity	Unit Rate		Amount
		(Amount Forward)		143,099
A1.1 Foundations				
7	Excavation and fill c/w trucking - footprint	19,396 SF	9.19	178,198
	excavate pit - allow flat lot	3,592 CY	12.00	43,102
	excavate working space	298 CY	12.00	3,577
	excavate pad - extra depth	146 CY	12.00	1,752
	allow miscellaneous trenching, etc.	19,396 CY	1.00	19,396
	fill to excavation	3,806 CY	29.00	110,370
8	Miscellaneous	19,396 SF	1.62	31,442
	rigid insulation to building perimete wall 4' dp	3,220 SF	2.25	7,244
	weeping tile socked c/w clear stone - connect to sump pit	966 FT	12.00	11,590
	miscellaneous unforeseen	19,396 SF	0.65	12,607

A1.1 Foundations	19,396	Sf	18.19	352,738.34
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.1 Lowest Floor Construction			
1. Slab on grade - 4"	19,396 SF	6.50	126,139
concrete - allow 25 Mpa (3,625 PSI) - no air	237 CY	135.00	32,003
WWM	19,396 SF	0.52	10,086
6 mil poly	19,396 SF	0.10	1,940
granular fill under slab - allow 8"	474 CY	29.00	13,750
hardener / sealant	19,396 SF	1.00	19,396
place and screed	19,396 SF	0.75	14,547
power trowel finish	19,396 SF	0.85	16,487
isolation joints around perimeter and column edges	1,444 FT	1.00	1,444
construction joints	19,396 SF	0.50	9,698
saw cut and caulk	19,396 SF	0.35	6,789

A2.1 Lowest Floor Construction	19,396	Sf	6.50	126,139
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.2 Upper Floor Construction			
1 Wood framed floor Level 3, 4, 5, 6	74,588 SF	12.64	942,527
concrete 1 1/2" dp - allow 25 Mpa (3,625 PSI) - no air	345 CY	135.00	46,618
5/8" ply T&G	74,588 SF	4.45	331,917
A units - TJI 110 16" o.c. - 10' L	8,215 SF	5.50	45,183
A units - TJI 210 16" o.c. - 22' L	25,420 SF	5.50	139,810
B units - TJI 110 16" o.c. - 10' L	2,875 SF	5.50	15,813
B units - TJI 210 16" o.c. - 22' L	9,891 SF	5.50	54,401
C units - TJI 110 16" o.c. - 15' 9" L	4,150 SF	5.50	22,825
C units - TJI 560 16" o.c. - 15' 9" L	7,420 SF	6.05	44,891
D units - TJI 110 16" o.c. - 18' 3" L	1,705 SF	5.50	9,378
D units - TJI 560 16" o.c. - 18' 3" L	3,500 SF	6.05	21,175
Storage lockers - TJI 230 16" o.c. - 14' 6" L	132 SF	5.50	726
Storage lockers - TJI 230 16" o.c. - 17' 6" L	140 SF	5.50	770
Storage lockers - TJI 230 16" o.c. - 14' 6" L	245 SF	5.50	1,348
Amenity - TJI 560 16" o.c. - 15' 6" L	990 SF	6.05	5,990
Elevator lobby - TJI 110 16" o.c. - 6' 3" L	480 SF	5.50	2,640
Stair landing - TJI 110 16" o.c. - 6' 9" L	525 SF	5.50	2,888
Corridor - 2 - 2 x 6" 12" o.c. - 6' 9" L	8,900 SF	3.10	27,590
allow hangers, brackets, blocking, nailing	74,588 SF	0.25	18,647
acoustic batt insulation - allow R28 - fiberglass	74,588 SF	1.95	145,447
miscellaneous sundries	74,588 SF	0.06	4,475
2 Level 2 - wood frame similar to above	19,396 SF	12.64	245,165
3 Wood framed shafts - GWB finish	6,969 SF	20.65	143,930
stairwell - 4 layers 5/8" type X, 2x6 studs, fire batt	3,509 SF	16.50	57,899
elevator shaft, ditto above	5,214 SF	16.50	86,031
4 Demising partition-wood framed - level 2, 3, 4, 5, 6	28,678 SF	15.27	437,895
GWB 5/8" - paint ready	28,678 SF	1.75	50,187
GWB - 5/8" - taped	28,678 SF	1.00	28,678
stud - 2 x 6" - 16" o.c.	28,678 SF	2.35	67,393
fiberglass insulation - 6"	28,678 SF	1.60	45,885
dewydag rod	155 No.	500.00	77,250
stud - 2 x 6" - 16" o.c.	28,678 SF	2.35	67,393
GWB - 5/8" - taped	28,678 SF	1.00	28,678
GWB 5/8" - paint ready	28,678 SF	1.75	50,187
deduct area for 10" CMU - Firewall	-6,338 SF	14.49	-91,831
add 10" CMU - Firewall - Ground to Level 6	6,338 SF	18.00	114,076
(Carry Forward)			<u>1,769,518</u>

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A2 Structure		Quantity	Unit Rate		Amount
			<i>(Amount Forward)</i>		1,769,518
A2.2 Upper Floor Construction					
5	Non-demising partition -wd frmd -level 2, 3, 4, 5, 6	22,079 SF	12.37		273,211
	GWB 5/8" - paint ready	22,079 SF	1.75	38,638	
	stud - 2 x 4" - 16" o.c.	22,079 SF	2.10	46,366	
	fiberglass insulation - 3"	22,079 SF	1.30	28,703	
	dewydag rod	149 No.	500.00	74,500	
	stud - 2 x 4" - 16" o.c.	22,079 SF	2.10	46,366	
	GWB 5/8" - paint ready	22,079 SF	1.75	38,638	
6	Corridor partition - wood framed - level 2, 3, 4, 5, 6	34,406 SF	8.45		290,731
	GWB 5/8" - paint ready	34,406 SF	1.75	60,211	
	GWB - 5/8" - taped	34,406 SF	1.00	34,406	
	stud - 2 x 6" - 16" o.c.	34,406 SF	2.35	80,854	
	fiberglass insulation - 6"	34,406 SF	1.60	55,050	
	GWB 5/8" - paint ready	34,406 SF	1.75	60,211	
7	Interior unit partitions - level 2, 3, 4, 5, 6	25,940 SF	0.00		-
	measured in B1.1 Partitions	25,940 SF	0.00	0	
8	Paralam beams and posts - level 2, 3, 4, 5, 6	93,984 SF	5.66		532,200
	3 1/2" x 9 1/2" paralam	7,006 FT	22.00	154,132	
	7" x 9 1/2" paralam	315 FT	64.00	20,160	
	4 ply - 2 x 6	211 FT	4.80	1,013	
	allow for multi-ply posts - spruce	101,970 FT	3.50	356,895	
12	Stairwell - ground to level 6	10 Flight	4,000.00		40,000
	wood framed stairs - level 2, 3, 4, 5, 6	10 Flight	4,000.00	40,000	
A2.2 Upper Floor Construction		93,984 Sf	30.92		2,905,659

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A2 Structure	Quantity	Unit Rate	Amount
A2.3 Roof Construction			
1 Wood framed roof Level	19,396 SF	11.72	227,303
5/8" ply T&G	19,396 SF	4.45	86,312
A units - TJI 110 16" o.c. - 10' L	2,054 SF	5.50	11,296
A units - TJI 210 16" o.c. - 22' L	6,964 SF	5.50	38,302
B units - TJI 110 16" o.c. - 10' L	719 SF	5.50	3,953
B units - TJI 210 16" o.c. - 22' L	2,473 SF	5.50	13,600
C units - TJI 110 16" o.c. - 15' 9" L	1,038 SF	5.50	5,706
C units - TJI 560 16" o.c. - 15' 9" L	1,855 SF	6.05	11,223
D units - TJI 110 16" o.c. - 18' 3" L	426 SF	5.50	2,344
D units - TJI 560 16" o.c. - 18' 3" L	875 SF	6.05	5,294
Storage lockers - TJI 230 16" o.c. - 14' 6" L	132 SF	5.50	726
Storage lockers - TJI 230 16" o.c. - 17' 6" L	140 SF	5.50	770
Storage lockers - TJI 230 16" o.c. - 14' 6" L	245 SF	5.50	1,348
Elevator lobby - TJI 110 16" o.c. - 6' 3" L	120 SF	5.50	660
Stair landing - TJI 110 16" o.c. - 6' 9" L	131 SF	5.50	722
Corridor - 2 - 2 x 6" 12" o.c. - 6' 9" L	2,225 SF	3.10	6,898
allow hangers, brackets, blocking, nailing	19,396 SF	0.25	4,849
deduct area for 24" dp paralell wood truss - 34' long	-5,234 SF	10.06	-52,654
add 24" dp paralell chord truss, 2' o.c., braced, 1x3 strapped	5,234 SF	11.75	61,500
add 5/8" ply T&G - to PCWT	5,234 SF	4.45	23,291
miscellaneous sundries	19,396 SF	0.06	1,164
2 Wood framed shafts - GWB finish	3,045 SF	16.50	50,243
stairwell - 4 layers 5/8" type X, 2x6 studs, fire batt	1,025 SF	16.50	16,913
elevator shaft, ditto above	2,020 SF	16.50	33,330
3 Demising partition - wood framed	5,720 SF	15.24	87,155
GWB 5/8" - paint ready	5,720 SF	1.75	10,010
GWB - 5/8" - taped	5,720 SF	1.00	5,720
stud - 2 x 6" - 16" o.c.	5,720 SF	2.35	13,442
fiberglass insulation - 6"	5,720 SF	1.60	9,152
dewydag rod	155 No.	100.00	15,450
stud - 2 x 6" - 16" o.c.	5,720 SF	2.35	13,442
GWB - 5/8" - taped	5,720 SF	1.00	5,720
GWB 5/8" - paint ready	5,720 SF	1.75	10,010
deduct partition area for 10" CMU - Firewall	-1,199 SF	14.49	-17,377
add 10" CMU - Firewall - Level 6 to Roof	1,199 SF	18.00	21,587

(Carry Forward) 364,700

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A2 Structure		Quantity	Unit Rate		Amount
			(Amount Forward)		364,700
A2.3 Roof Construction					
4	Non - demising partition - wood framed	4,404 SF	11.70		51,536
	GWB 5/8" - paint ready	4,404 SF	1.75	7,707	
	stud - 2 x 4" - 16" o.c.	4,404 SF	2.10	9,248	
	fiberglass insulation - 3"	4,404 SF	1.30	5,725	
	dewydag rod	119 No.	100.00	11,900	
	stud - 2 x 4" - 16" o.c.	4,404 SF	2.10	9,248	
	GWB 5/8" - paint ready	4,404 SF	1.75	7,707	
5	Corridor partition - wood framed	6,863 SF	8.15		55,933
	GWB 5/8" - paint ready	6,863 SF	1.75	12,010	
	GWB - 5/8" - taped	6,863 SF	1.00	6,863	
	stud - 2 x 6" - 16" o.c.	6,863 SF	2.35	16,128	
	fiberglass insulation - 3"	6,863 SF	1.30	8,922	
	GWB 5/8" - paint ready	6,863 SF	1.75	12,010	
6	Interior unit partitions	5,174 SF	0.00		-
	measured in B1.1 Partitions	5,174 SF	0.00	0	
7	Stairwell - level 6 to Roof	9 Flight	2,666.67		24,000
	wood framed stairs	1 Flight	4,000.00	4,000	
	wood framed stairs at skylights to roof	8 Flight	2,500.00	20,000	
A2.3 Roof Construction		19,396 Sf	25.58		496,170

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount	
A3.2 Walls Above Grade					
1	Exterior wall framing	63,374 SF	10.50	665,427	
	vapour / moisture barrier - exterior	63,374 SF	2.00	126,748	
	exterior sheathing - joints taped / sealed	63,374 SF	1.75	110,905	
	stud - 2 x 8" - 16" o.c.	63,374 SF	2.90	183,785	
	batt insulation - R28 fiberglass	63,374 SF	1.95	123,579	
	6 mil poly	63,374 SF	0.15	9,506	
	GWB 5/8" - paint ready	63,374 SF	1.75	110,905	
2	Deduct openings	13,691 SF	-10.50	- 143,750	
	window at patio fixed unit - single	1,680 SF	-10.50	-17,640	
	window at patio fixed unit - double	1,596 SF	-10.50	-16,758	
	window at bedrooms	2,000 SF	-10.50	-21,000	
	patio door lite above sliding door	885 SF	-10.50	-9,296	
	window at sloped roof high side	706 SF	-10.50	-7,417	
	commercial glazing	1,267 SF	-10.50	-13,304	
	lobby ground floor glazing	75 SF	-10.50	-788	
	patio doors at units	4,935 SF	-10.50	-51,815	
	commercial double aluminium doors	234 SF	-10.50	-2,457	
	lobby double aluminium doors	39 SF	-10.50	-410	
	allow double HM at back of Commercial	273 SF	-10.50	-2,867	
3	Exterior wall cladding	49,683 SF	35.00	1,738,905	
	allow low range cladding 30%	14,905 SF	25.00	372,623	
	allow mid range cladding 55%	27,326 SF	35.00	956,398	
	allow higher range cladding 15%	7,452 SF	55.00	409,885	
4	Windows and glazing	13,691 SF	28.91	395,844	
	window at patio fixed unit - single	1,680 SF	40.00	67,200	
	window at patio fixed unit - double	1,596 SF	40.00	63,840	
	window at bedrooms	2,000 SF	40.00	80,000	
	patio door lite above sliding door	885 SF	40.00	35,414	
	window at sloped roof high side	706 SF	50.00	35,320	
	commercial glazing	1,267 SF	85.00	107,695	
	lobby ground floor glazing	75 SF	85.00	6,375	
	patio doors at units	4,935 SF	counted at A3.3 Entrances		
	commercial double aluminium doors	234 SF	counted at A3.3 Entrances		
	lobby double aluminium doors	39 SF	counted at A3.3 Entrances		
	allow double HM at back of Commercial	273 SF	counted at A3.3 Entrances		
A3.2 Walls Above Grade		63,374	Sf	41.92	2,656,426

CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Wood Frame

September 15, 2016

A3 Exterior Enclosure	Quantity	Unit Rate	Amount
A3.3 Entrances			
1. Entrance doors c/w base frame and hardware	138 Lvs	2,168.84	299,300
patio doors at units	118 Lvs	2,000.00	236,000
commercial double aluminium doors	6 Lvs	2,000.00	12,000
lobby double aluminium doors	1 Pair	4,000.00	4,000
allow double HM at back of Commercial	6 Pair	2,500.00	15,000
allow for hardware upgrades to commercial	20 Lvs	600.00	12,000
barrier free electric strike - main ground lobby	1 No.	5,000.00	5,000
barrier free power door operator	1 No.	800.00	800
barrier free power supply	1 No.	700.00	700
allow for miscellaneous hardware, keying, etc	138 Lvs	100.00	13,800

A3.3 Entrances	138	Lvs	2,168.84	299,300
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure

Quantity

Unit Rate

Amount

A3.4 Roof Coverings

1	Roof covering	19,396 SF	19.13	371,051
	allow 2 ply mod bit - R40	19,396 SF	16.00	310,336
	pavers at walk out	3,343 SF	5.00	16,715
	skylight access	8 No.	5,500.00	44,000

A3.4 Roof Coverings	19,396	Sf	19.13	371,051
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

A3 Exterior Enclosure		Quantity	Unit Rate	Amount
A3.5 Projections				
1	Parapet	2,668 SF	16.92	45,149
	vapour / moisture barrier - exterior	2,668 SF	2.00	5,336
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669
	stud - 2 x 8" - 16" o.c.	2,668 SF	2.90	7,737
	batt insulation - R28 fiberglass	2,668 SF	1.95	5,203
	exterior sheathing - joints taped / sealed	2,668 SF	1.75	4,669
	toch on cap sheet	2,668 SF	1.25	3,335
	parapet cap - painted metal	920 FT	15.00	13,800
	miscellaneous	2,668 SF	0.15	400
2	CLT overhang c/w roof covering	2,553 SF	37.00	94,461
	add CLT panels - 5 ply	2,553 SF	37.00	94,461
3	Balcony gazebo roof	10,045 SF	10.51	105,543
	2 x 10 cedar plank - taper cut	2,023 SF	5.00	10,115
	balcony deck framing c/w soffit	10,045 SF	9.50	95,428

A3.5 Projections	15,266	Sf	16.06	245,153
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B1 Partitions and Doors		Quantity	Unit Rate	Amount
B1.1 Partitions				
1	Interior unit partitions	31,115 SF	6.90	214,694
	GWB 5/8" - paint ready	31,115 SF	1.75	54,451
	stud - 2 x 4" - 16" o.c.	31,115 SF	2.10	65,342
	fiberglass insulation - 3"	31,115 SF	1.30	40,450
	GWB 5/8" - paint ready	31,115 SF	1.75	54,451
2	Corridor partition - wood framed - Lobby	1,018 SF	7.45	7,584
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782
	stud - 2 x 6" - 16" o.c.	1,018 SF	2.35	2,392
	fiberglass insulation - 6"	1,018 SF	1.60	1,629
	GWB 5/8" - paint ready	1,018 SF	1.75	1,782

B1.1 Partitions	32,133	Sf	6.92	222,278
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B1 Partitions and Doors	Quantity	Unit Rate	Amount
B1.2 Doors			
1. Interior doors c/w base frame and hardware	615 Lvs	475.45	292,400
unit main entrances	118 Lvs	750.00	88,500
bathroom door	118 Lvs	225.00	26,550
bedroom door	104 Lvs	225.00	23,400
slider bedroom	56 Lvs	175.00	9,800
slider closet	166 Lvs	175.00	29,050
pocket closet door	10 Lvs	200.00	2,000
stairway entrance doors	12 Lvs	1,200.00	14,400
hallway doors	10 Lvs	1,200.00	12,000
common area doors	21 Lvs	1,200.00	25,200
allow for miscellaneous hardware, keying, etc	615 Lvs	100.00	61,500

B1.2 Doors	615	Lvs	475.45	292,400
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B2 Finishes		Quantity	Unit Rate	Amount
B2.1 Floor Finishes				
1	Floor finish	113,380 SF	5.56	630,314
	ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
	ground floor lobby - residential - hard tile	720 SF	14.00	10,080
	remainder flooring - allowance	93,984 No.	6.50	610,896

B2.1 Floor Finishes	113,380	Sf	5.56	630,314
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CLASS C ESTIMATE

Atlantic Woodworks 6 Levels Wood Frame

September 15, 2016

B2 Finishes		Quantity	Unit Rate	Amount
B2.2 Ceiling Finishes				
1	Ceiling finishes allowance	113,380 SF	3.77	427,908
	ground level - unfinished - sealed concrete	18,676 SF	0.50	9,338
	ground floor lobby - residential - suspended acoustic tile	720 SF	7.00	5,040
	level 2, 3, 4, 5, 6, GWB 5/8" - paint ready	93,984 SF	1.75	164,472
	GWB - 5/8" - taped	93,984 SF	1.00	93,984
	strapping to joists - 1 x 3" - 16" o.c.	93,984 SF	0.65	61,090
	paint to ceiling	93,984 SF	1.00	93,984

B2.2 Ceiling Finishes	113,380	Sf	3.77	427,908
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B2 Finishes	Quantity	Unit Rate	Amount
B2.3 Wall Finishes			
1 Wall finishes allowance	118 Units	4,565.79	538,763
interior unit partitions - paint each side	51,854 SF	1.00	51,854
perimeter walls above grade - paint	63,374 SF	1.00	63,374
corridor partition - wood framed - Lobby paint	1,018 SF	1.00	1,018
From Upper Floor Construction			
elev. wall - grnd, furring / GWB, paint, finish lobby side only	203 SF	5.75	1,167
concrete stair wall - ground - finish inside stairs - paint	582 SF	1.00	582
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,347 SF	5.75	13,495
concrete block - 10" w - stair - one side paint	4,622 SF	1.00	4,622
concrete block - 10" w - stair - one side furring, GWB, paint	4,622 SF	5.75	26,577
demising partition - wood framed - paint	45,884 SF	1.00	45,884
non - demising partition - wood framed - paint	35,326 SF	1.00	35,326
corridor partition - wood framed - paint	55,050 SF	1.00	55,050
From Roof Construction			
conc. blk - 10" w - elevator - one side furring, GWB, paint	2,020 SF	1.00	2,020
concrete block - 10" w - stair - one side paint	1,025 SF	5.75	5,894
concrete block - 10" w - stair - one side furring, GWB, paint	1,025 SF	1.00	1,025
demising partition - wood framed - paint	11,440 SF	1.00	11,440
non - demising partition - wood framed - paint	8,808 SF	1.00	8,808
corridor partition - wood framed - paint	13,726 SF	1.00	13,726
allowance for trim / casing package to walls	302,926 SF	0.65	196,902

B2.3 Wall Finishes	313,302	Sf	1.72	538,763
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount	
B3.1 Fittings and Fixtures					
1	Millwork - cabinets, fixtures - units	118 Units	8,594.36	1,014,135	
	closet shelf and rod	1,205 FT	7.00	8,435	
	lower kitchen cabinets - allow plam tops	1,356 FT	350.00	474,600	
	upper kitchen cabinets	1,538 FT	150.00	230,700	
	kitchen island counter - allow plam top	560 FT	350.00	196,000	
	bathroom vanity - allow plam top	354 FT	125.00	44,250	
	toilet paper dispenser, towel bar & ring set	118 Set	125.00	14,750	
	mirror in bath	118 No.	200.00	23,600	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
2	Common area fittings and fixtures	118 Units	1,619.49	191,100	
	mailbox	1 No.	5,000.00	5,000	
	storage lockers	80 No.	1,800.00	144,000	
	amenity room - allowance	1 Sum	5,000.00	5,000	
	interior signage / wayfinding / unit numbering etc.	118 No.	100.00	11,800	
	exterior signage	1 Sum	3,500.00	3,500	
	allow for miscellaneous barrier free requirements	1 Sum	10,000.00	10,000	
	allow miscellaneous unforeseen	118 No.	100.00	11,800	
B3.1 Fittings and Fixtures		113,380	Sf	10.63	1,205,235

CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B3 Fittings and Equipment

Quantity

Unit Rate

Amount

B3.2 Equipment

1	Appliances	590 No.	600.00	354,000
	fridge	118 No.	650.00	76,700
	stove	118 No.	700.00	82,600
	microwave	118 No.	350.00	41,300
	washer	118 No.	600.00	70,800
	dryer	118 No.	700.00	82,600

B3.2 Equipment	113,380	Sf	3.12	354,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

B3 Fittings and Equipment		Quantity	Unit Rate	Amount
B3.3 Elevators				
1	Elevator - allowance	2 No.	104,000.00	208,000
	elevator - 6 stops	6 Stop	16,000.00	96,000
	elevator -7 stops	7 Stop	16,000.00	112,000

B3.3 Elevators	2	No.	104,000.00	208,000
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.1 Plumbing and Drainage			
1 Plumbing and heating	118 Units	7,926.99	935,385
plumbing and heating allowance - systems may vary	113,380 SF	8.25	935,385

C1.1 Plumbing and Drainage	113,380	Sf	8.25	935,385
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.2 Fire Protection			
1 Sprinkler system	118 Units	1,568.39	185,070
sprinkler system allowance - systems may vary	113,380 SF	1.50	170,070
hand held extinguisher cabinets	30 No.	500.00	15,000

C1.2 Fire Protection	113,380	Sf	1.63	185,070
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

C1 Mechanical	Quantity	Unit Rate	Amount
C1.3 HVAC			
1 Ventilation	118 Units	3,603.18	425,175
ventilation system allowance - systems may vary	113,380 SF	3.75	425,175

C1.3 HVAC	113,380	Sf	3.75	425,175
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CLASS C ESTIMATE

**Atlantic Woodworks
6 Levels Wood Frame**

September 15, 2016

C2 Electrical	Quantity	Unit Rate	Amount
C2.1 Service and Distribution			
1 Electrical and systems	118 Units	5,104.50	602,331
allowance for power, lighting, security, systems (may vary based on project	113,380 SF	5.31	602,331

C2.1 Service and Distribution	113,380	Sf	5.31	602,331
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APPENDIX E
DRAWINGS AND DOCUMENTS LIST

DRAWINGS AND DOCUMENTS LIST

Atlantic Woodworks – 6 Storey Model Comparison - Firewall

CLASS C ESTIMATE

JANUARY 4, 2017

No.	DESCRIPTION	DATE
STRUCTURAL - HALIFAX		
	Structural high level design brief	September 15, 2016
STRUCTURAL - BC		
S1.1	General Notes	September 15, 2016
S1.2	General Notes	September 15, 2016
S2.1	Sections and Details	September 15, 2016
S2.2	Sections and Details	September 15, 2016
S2.3	Sections and Details	September 15, 2016
S2.4	Sections and Details	September 15, 2016
S2.5	Sections and Details	September 15, 2016
S2.6	Elevations	September 15, 2016
S3.1	Foundation Plan	September 15, 2016
S4.1	Parkade Level 2 Slab Plan	September 15, 2016
S6.1	Parkade Level 1 Slab Plan	September 15, 2016
S7.1	Level 2 Slab Plan	September 15, 2016
S8.1	Level 2 Framing Plan, Level 3 Over	September 15, 2016
S9.1	Level 3 Framing Plan, Level 4 Over	September 15, 2016
S10.1	Level 4 Framing Plan, Level 5 Over	September 15, 2016
S11.1	Level 5 Framing Plan, Level 6 Over	September 15, 2016
S12.1	Level 6 Framing Plan, Roof Framing Over	September 15, 2016
ARCHITECTURAL - BC		
A2.0	Level P3 - Lowest	June 29, 2016
A2.1	Level P2	June 29, 2016
A2.2	Level P1	June 29, 2016
A2.3	Level 1	June 29, 2016
A2.4	Level 2	June 29, 2016
A2.5	Level 3	June 29, 2016
A2.6	Level 4 & 5	June 29, 2016
A2.7	Level 6	June 29, 2016
A2.8	Roof	June 29, 2016
A4.0	Sections	June 29, 2016
A4.1	Sections	June 29, 2016
A4.2	Sections	June 29, 2016
A4.3	Sections	June 29, 2016
A4.4	Sections	June 29, 2016

APPENDIX F
EXCLUSIONS LIST

EXCLUSIONS LIST

Atlantic Woodworks – 6 Storey Model Comparison - Firewall

This estimate does not provide for the items noted in the exclusions list of Appendix C. If there is mention of these excluded items in the body of the estimate, then their inclusion shall only be limited to the values expressed within the estimate for those items.

The following items if applicable to your project, are excluded from the estimate:

1. All Soft Costs including
2. Cost of Design Exclusions, Omissions and Errors
3. Professional Fees and Expenses
4. Phased Construction Premiums
5. Location Premiums
6. Design and Pricing Allowance
7. Construction Allowance
8. Preventative Maintenance Contracts
9. Land Acquisition and Impost Charges
10. Development Charges
11. Permits – Building, Plumbing, Access, etc.
12. Legal Fees and Expenses or other Insurance Related Fees
13. Value Added Tax
14. Right of Way Charges or Easement Requirements
15. Financing Fees and Carrying Costs
16. Fund Raising Requirements
17. Owner's Staff and Associated Management
18. Owner Furnished Material or Associated Labour
19. Owner FF&E Budget
20. Loose Furniture, Furnishings, and Equipment
21. Window Treatments
22. Relocation of Existing Facilities, Furniture or Equipment
23. Impact of Adjacent Properties and their Conditions
24. Removal or Mitigation or Remediation of Contaminated Soils
25. Removal of Asbestos or Mitigation of any Hazardous Material
26. Removal of PCB Contaminated Electrical Equipment
27. Window Washing, Maintenance, or Farming Equipment
28. Medical, Laboratory, Specialty, or Other Miscellaneous Equipment
29. Special Audio, Visual, or Security Equipment Installation
30. Includes Provision of Empty Conduit Systems for Above 1.4.1.29
31. Rock Excavation (blasting or chipping) & Removal
32. Trucking beyond 10 kilometers Return (excavation work)
33. Removal of Buried Obstructions (foundations, boulders, debris, etc.)
34. Mitigation of Water Conditions
35. Winter Conditions Affecting the Work
36. Salvage Costs from Woodlot Clearing or Demolition, or any other materials
37. Mitigation or Handling of any Explosives or Ordinances
38. Partial Load Restrictions on Roads to Project