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September 13, 2019

Delivered by Courier, Email & RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
Suite 2701
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: Energy+ Inc.
Motion to Review (EB-2019-0180)
Evidence of Neil Kelsey

Please find enclosed Energy + Inc.'s Evidence of Neil Kelsey in this proceeding. Paper copies of this letter and the accompanying Evidence of Neil Kelsey will be delivered to you by courier.

Yours very truly,

BORDEN LADNER GERVAIS LLP

Per:

Original signed by John Vellone

John A.D. Vellone

cc: Intervenors of record in **EB-2019-0180**

EB-2019-0180

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B, as amended (the "Act");

AND IN THE MATTER OF a Motion to Review and Vary the Board's Decision and Order dated June 13, 2019 in respect of an Application by Energy+ Inc. under Section 78 of the Act for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2019 (Board File No. EB-2018-0028).

WRITTEN EVIDENCE OF
Mr. Neil Kelsey

September 13, 2019

CBRE

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A. INTRODUCTION

A.1 Q: Please state your name, occupation and by whom are you employed.

1. I am Neil Kelsey. I am the Director Cost Consultancy for the Central and Eastern Region of CBRE Limited with a business address at 18 King Street East, Suite 1100, Toronto, Ontario, M5C 1C4 ("CBRE").

A.2 Q: Please state your educational background and experience.

2. A copy of my CV is included at Appendix "A" to this evidence. In summary, I trained as a Quantity Surveyor in the UK, which included attendance at University and achievement of a BSc (Honours) in Quantity Surveying and then gained my Member of the Royal Institution of Chartered Surveyors (MRICS) qualification following graduation. Since moving to Canada, I have obtained my Professional Quantity Surveyor (PQS) designation from the Canadian Institute of Quantity Surveyors. I lead the CBRE Cost Consultancy service delivery in the Project Management division within CBRE in Eastern and Central Canada regions.

A.3 Q: Who is CBRE Limited and what is its business?

3. CBRE is a real estate firm and is a corporation and the Canadian operating company of CBRE Group, Inc. Our parent company is publicly traded and operates more than 450 offices worldwide and has clients in more than 100 countries. Headquartered in Los Angeles, CA, it is the world's largest commercial real estate services firm (in terms of 2017 revenue). CBRE's strong financial stability and unmatched size is paramount to our ability to invest in platform resources, technology, training, and leadership to support our clients through partnership.

4. CBRE, Group Inc. (NYSE:CBG) is a Fortune 500 and S&P 500 company. The company offers strategic advice and execution for property sales and leasing; corporate services; property, facilities and project management; mortgage banking; appraisal and valuation; development services; investment management; and research and consulting.

A.4 Q: Have you previously submitted evidence before the Ontario Energy Board?

5. No.

A.5 Q: On whose behalf are you submitting evidence?

6. I have prepared this evidence on behalf of Energy+ Inc. ("**Energy+**") in connection with a Motion to Review and Vary[1] the Ontario Energy Board's (the "**Board**") Decision and Order dated June 13, 2019 regarding Energy+ Inc.'s 2019 Distribution Rate Application (OEB File No. EB-2018-0028) (the "**Decision**").[2]

A.6 Q: On what issues are you submitting evidence?

7. I am submitting evidence that pertains to the aspects of the Decision relating specifically to Energy+'s proposed Southworks facility, and specifically evidence that relates to the Board's assessment of prudence with respect to the Southworks facility.

A.7 Q: What instructions were you provided in relation to the issues to be addressed in your evidence?

8. Energy+'s legal counsel provided the following instructions:

"The three issues that we ask CBRE to consider and to provide an opinion on are as follows:

1. We ask that you review the comparators submitted by OEB staff being the Powerstream comparator in EB-2008-0244 and Enersource comparator EB-2012-0033 (the "**Comparators**") and provide your opinion as to whether these Comparators are appropriate when analyzing the cost of the proposed Energy+ Southworks project. In your discussion of the appropriateness of these Comparators, we would ask that you highlight any similarities or differences between the Comparators and the Southworks proposal.

2. Based on your analysis of the Comparators at question 1, and on the assumption that the Comparators are appropriate, provide your opinion as to what would be the average cost per square foot of the Comparators.

3. What would be the appropriate rate of inflation to apply to the average cost per square foot determined at question 2 to provide the current average cost? In your opinion, would it be appropriate to use the IRM inflationary factors or would it be appropriate to use the rate of inflation from the construction industry? After determining the appropriate use of rate of inflation to apply to the cost of the Comparators, provide your opinion as to what would be the average cost per square foot of a facility such as Southworks at this time.

   In preparing your opinion, we ask that you review Rule 13A of the OEB's rules of practice and

[1] EB-2019-0180 Energy+ Motion to Review and Vary dated July 2, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/646315/File/document
[2] EB-2018-0028 Decision and Order dated June 13, 2019, Corrected on June 18, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/645169/File/document

procedure with respect to the duties of an expert.[3] In particular, an expert must assist the Board impartially and provide their evidence in a fair and objective manner. Rule 13A.03 provides the form in which the expert opinion must be delivered.

CBRE will also need to review and sign the acknowledgement of expert duty available online at: http://www.ontarioenergyboard.ca/oeb/_Documents/Regulatory/Rules_Form-A_Experts_Duty.pdf"

A.8 Q: What other issues do you intend to address in your evidence?

9. To prepare an independent Class C Estimate based on the Design Brief prepared by the Architect, Martin Simmons.

B. MATERIALS CONSIDERED

B.1 Q: What background materials have you reviewed to inform your evidence?

10. In preparing this analysis I have reviewed the following material which was filed on the evidentiary record in EB-2018-0028:

a. The Energy+ Facilities Business Plan,[4] as updated on December 13, 2018,[5] specifically as it relates to the proposed Southworks facility (the "**Facilities Plan**"), including:

i. Design Meeting Drawings and Information dated May 2, 2018 – Martin Simmons Architects;

ii. Design Brief and Drawings & Information dated January 14, 2019 – Martin Simmons Architects;

iii. Melloul Blamey Class C Estimate Revised December 10, 2018; and

[3] Ontario Energy Board Rules of Practice and Procedure (Revised November 16, 2006, July 14, 2008, October 13, 2011, January 9, 2012, January 17, 2013, April 24, 2014 and October 28, 2016). https://www.oeb.ca/sites/default/files/uploads/documents/regulatorycodes/2019-01/OEB-Rules-of-Practice-and-Procedure-20161028.pdf
[4] EB-2018-0028 Energy+ 2019 Distribution Rate Application, Exhibit 2, Appendix 2-1 – Distribution System Plan, Appendix N: Facilities Business Plan. http://www.rds.oeb.ca/HPECMWebDrawer/Record/607900/File/document
[5] EB-2018-0028 Energy+ Update to the Evidence filed December 13, 2018. http://www.rds.oeb.ca/HPECMWebDrawer/Record/628875/File/document

iv. CBRE Market Overview Document dated June 29, 2015;

b. The Energy+ Response to Technical Conference Questions dated January 22, 2019 as it relates to the Facilities Plan;[6]

c. The oral hearing transcripts dated March 7 and 8, 2019, only as they related to the Facilities Plan;[7]

d. The Energy+ written argument-in-chief as it relates to the Facilities Plan (the "**AIC**") filed March 15, 2019;

e. The written submissions of OEB Staff,[8] Consumers Council of Canada ("**CCC**"),[9] School Energy Coalition ("**SEC**"),[10] and Vulnerable Energy Consumers Coalition ("**VECC**")[11] received March 29, 2019, and the reply submissions of OEB Staff,[12] SEC,[13] and VECC[14] received April 5, 2019, and the reply submissions of CCC[15] received April 8, 2019, each only as they relate to the Facilities Plan. I did not consider the written submissions of Hydro One Networks Inc. ("**Hydro One**") or Toyota Motor Manufacturing Canada Inc. ("**Toyota**") as they did not relate to the Facilities Plan; and

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[6] EB-2018-0028 Energy+ Response to Technical Conference Questions dated January 22, 2019.
Part 1 - http://www.rds.oeb.ca/HPECMWebDrawer/Record/632327/File/document
Part 2 - http://www.rds.oeb.ca/HPECMWebDrawer/Record/632329/File/document
[7] EB-2018-0028 Transcript Vol. 1 dated March 7, 2019 at pg. 42, lines 7-15.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/636425/File/document
[8] EB-2018-0028 OEB Staff Written Submissions dated March 29, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638530/File/document
[9] EB-2018-0028 CCC Written Submissions dated March 29, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638453/File/document
[10] EB-2018-0028 SEC Written Submissions dated March 29, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638461/File/document
[11] EB-2018-0028 VECC Written Submissions dated March 29, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638455/File/document
[12] EB-2018-0028 OEB Staff Reply Submissions dated April 5, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638940/File/document
[13] EB-2018-0028 SEC Reply Submissions dated April 5, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638955/File/document
[14] EB-2018-0028 VECC Reply Submissions dated April 5, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/638946/File/document
[15] EB-2018-0028 CCC Reply Submissions dated April 7, 2019 – Received April 8, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/639020/File/document

f. The Decision as it relates to the Facilities Plan.[16]

11. In addition, I have considered the following information on two of the benchmarks discussed in the Decision:

a. Publicly available information from the OEB's prior approval of a the 2008 Powerstream administrative building;[17] and

b. Publicly available information from the OEB's prior approval of a 2012 Enersource administrative building.[18]

B.2 Q: What other information have you considered in respect of your evidence?

12. In addition, I have considered the following information in respect of my evidence:

(i) Melloul Blamey Engagement Letter dated March 28, 2017 to Energy+

(ii) Energy+ Cost of Service Application

(iii) Decision & Order EB-2018-0028, Corrected June 18, 2019 (as advised above)

(iv) Enersource (EB-2012-0033)

a. Derry Road Building Condition Assessment[19]

b. EX K4.6 20120913 Benchmark done by Enersource

c. Excerpt from Enersource Rate case re Business Facilities[20]

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[16] EB-2018-0028 Decision and Order dated June 13, 2019, Corrected on June 18, 2019.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/645169/File/document
[17] EB-2008-0244 PowerStream Inc. 2009 Electricity Distribution Rate Application, Exhibit B1, Tab 5, Schedule 1 (page 2) and Schedule 3 (page 12 of 18).
http://www.rds.oeb.ca/HPECMWebDrawer/Record/85755/File/document
[18] EB-2012-0033 Enersource Hydro Mississauga Inc. Decision and Order, December 13, 2012, pp. 13-18.
http://www.rds.oeb.ca/HPECMWebDrawer/Record/377015/File/document
[19] Response to OEB Staff IR, July 23, 2012, Exhibit 1, Issue 2.1, IR#12, Attachment 1
[20] Response to OEB Staff IR, July 23, 2012, Exhibit 1, Issue 2.1, IR#12, Attachment 1

d. Excerpt from Enersource Rate case re New Building Proposed Alternatives [21]

e. Pages from Enersource APPL_2013_CoS Administration Building Forecast Space[22]

f. Pages from Enersource APPL_2013_CoS Administration Building Overview[23]

g. Pages from Enersource IRR Components of the $20M Purchase & Refurbishment[24]

h. OEB Decision on Enersource Building 20121213 – Pages 11-18.

(v) Powerstream (EB-2008-0244)

a. Pages from Pwrstrm_IRR_OEB_20090420[25]

b. Powerstream_APPL_20081010 Cor Head Office Write UP to CBRE[26]

C. THE CHALLENGES WITH THE BENCHMARKING COMPARATORS

The Decision uses a calculated cost per sq. ft. derived from prior approvals for a 2008 Powerstream administrative building and a 2012 Enersource administrative building as benchmarks to assess prudence of the Southworks facility.

C.1 Q: What are the limitations, risks or challenges inherent in using these types of comparisons to assess the prudence of the Southworks facility?

13. Each construction project is different and presents different challenges. To accurately compare or benchmark costs of projects, considerations to take into account include:

[21] Response to OEB Staff IR, July 23, 2012, Exhibit 1, Issue 2.1, IR#12, Attachment 2
[22] Exhibit 2, Tab 2, Schedule 5, Appendix 4, Page 1 of 1.
[23] Exhibit 2, Tab 2, Schedule 5 Pages 1-14.
[24] Response to CCC IR, July 23, 2012, Exhibit 1, Issue 2.1, IR#4, Page 4 of 4
[25] Exhibit B1, Tab 5, Schedule 1, Pages 2-3
[26] Exhibit B1, Tab 5, Schedule 3, Pages 1 to 18.

- Should be within the same sector (i.e. Health, Secondary Education etc.)
- Projects similar in nature and size
- Is the project Renovation or New Build?
- The specification level
- Any items that may be abnormal or high specification that will have a larger impact on the cost
- Appropriate adjustments for location and time i.e. inflationary adjustments

New Build construction projects within the same sector and similar in size and scope are easier to compare against one another. Renovation projects can differ vastly in type of work, scope of work and conditions. For example, some renovation project may involve structural alterations, retention of facades, installation of new foundations and full fit out inclusive of finishes and mechanical and electrical installations, whereas some renovation projects may only require painting and new finishes. These two vastly differing projects would still be classed as renovation projects.

C.2 Q: If you were to perform a more reliable benchmarking comparison as between the Powerstream, Enersource and Southworks facilities, list the categorical types of information you would need on each facility?

14. Detailed breakdown on construction costs and drawing plans, elevations and sections would assist further in understanding scope and the type of work. Separation of renovation costs, new build costs and costs applicable to the site. This would facilitate benchmarking and comparisons of new build, renovation and the site work elements. A detailed breakdown in costs would also allow for appropriate adjustments for any abnormal or higher specification items that affect costs. For example, if an office fit out involves the construction of an interconnecting staircase then this will drive up the cost and affect the cost per square foot. Not all fit out projects will have an interconnecting staircase and if this is identified in a detailed cost breakdown, then the cost can be adjusted to facilitate a more equivalent comparison.

15. Also, the date to the nearest quarter of contract award and the project location.

C.3 Q: Were you able to find all the information that you would need on the public record to accurately compare the 2008 Powerstream and 2012 Enersource administrative building cost per square foot with the cost per square foot of the Southworks facility? If no, what were you unable to find?

16. Unfortunately, I was unable to find sufficient information on the construction cost breakdown and separation of costs for new build construction elements and renovation elements for the 2008 Powerstream and 2012 Enersource comparators. I was also unable to find a separation of professional fees associated with the building renovation. It is good practice to be able to separate professional fees from construction costs as this facilitates clearer transparency for benchmarking. Within our cost database and in the Cost Consultancy professions, we are not concerned with land costs, as these not attributable to the project from a construction cost and project cost perspective and often we are not made aware of this regardless.

17. Furthermore, on the Enersource project there was potential confusion on the square footage as the Building Condition Assessment Report stated a footprint of 36,000 square feet but did not state the building square footage, which was obtained elsewhere.

C.4 Q: Summarize the key information you could find on the 2008 Powerstream and 2012 Enersource comparators, as it relates to the Southworks facility?

18. The year each building became operational for both Powerstream and Enersource. From the documents that I have reviewed, the cost for the Enersource project are, in my opinion and experience, extremely low for the combined cost of the building condition costs and fit out costs, which also included professional fees. The costs for each included land / building purchase costs and for reasons listed elsewhere within this document, to be able to benchmark, the costs need to be separated and reviewed and analyzed against those that are similar in scope and are within the same market sector. Unfortunately, there is insufficient detail on apportionment of costs to be able comment any further as to why the costs are low. To summarize, the information available related to the building function; in-service year; total cost; square footage; number of full-time employees (FTE); square

footage / FTE; cost / square foot. The detail and cost build-up within the total cost was not available, which facilitates clearer benchmarking that is more reliable as a result.

C.5 Q: In the absence of detailed more information about the 2008 Powerstream and 2012 Enersource administrative buildings, how else could you benchmark costs?

19. In the absence of detailed information / breakdown, then in an attempt to compare on an equal basis, appropriate escalation should be applied to both the Powerstream and Enersource projects. At the very least, costs would then be comparable, albeit with appropriate caveats around land cost, professional fees, renovation costs and new build costs.

20. If available, it is preferable to separate the renovation construction costs from the new build construction costs. This would facilitate a cost comparison on a more equal footing.

C.6 Are other benchmarks of performance (other than cost per square foot), such as cost per FTE and FTE per square foot also relevant considerations or should they be ignored?

21. Costs per FTE could be used but detailed cost data is the most useful. There are other metrics that can be used, however, this tends to be more relative to the particular market or sector. For example, hotels can be expressed as a cost per room, hospitals may use cost per bed. Cost Consultancy companies will provide estimates with total construction costs broken down into cost per square foot and / or square metres, which then facilitate benchmarking of such data. The construction and provision of space however does cost money regardless of new build construction or renovation, therefore, optimum design solutions need to be sought, as the provision of too much space will mean a higher cost is incurred.

D. INFLATION IN THE CONSTRUCTION INDUSTRY

D.1 Is the construction industry sensitive to escalation of costs over time? Why?

22. The construction industry is susceptible to micro and macro-economic inflation, along with local market forces that can influence pricing by both General Contractors and sub-trades.

Concrete, formwork and roofing sub-trades have been in higher than usual demand and can have the effect of driving up costs above forecasted inflation. We have observed an increase in demand and a corollary increase in cost in the last eighteen months.

23. Aa a result of the tariffs imposed on steel, raw steel and aluminum prices have increased steel work costs at the end of 2018. Since Canada is a net importer of steel, this has had an effect of increasing raw steel prices of between 20 - 40%, which has been passed on to steel suppliers and sub-trades within the construction sector.

24. At CBRE we have seen construction costs steadily rise since 2008 in the GTA region within the Office Tenant Fit Out sector. Within Toronto, these costs have risen at an increased rate due to a greater impact of local market supply and demand. In addition, since 2008, office design has changed as offices have moved towards a more open plan concept. Previously, offices were designed with private office areas, which meant a greater level of internal divisions, hence a greater amount of drywall partitioning. Offices that still have partitioning look to increase the open concept via glazed office fronts.

25. The construction cost steady increase referred to above in paragraph 25, is demonstrated by the Table shown below in D.5, which illustrates the escalation over the period of 2008 – 2021 in the Toronto region, based on the Building Construction Price Index, produced by Stats Can. Given that Toronto is geographically the closest region to Cambridge, it makes sense to use this data for adjustment of costs from the appropriate year.

D.2 What is the Statistics Canada "Building Construction Price Index"[27] and what does it measure?

26. The Statistics Canada (Stats Can) Building Construction Price Index (BCPI) collects residential and non-residential construction price movements and market information across 11 census metropolitan areas in Canada. Changes are measured over time in the prices that contractors charge to construct a range of new Commercial, Institutional, Industrial and Residential buildings in 11 census metropolitan areas: St. John's, Halifax,

[27] Statistics Canada "Building Construction Price Index"
http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=2317

Moncton, Montréal, Ottawa–Gatineau (Ontario part), Toronto, Winnipeg, Saskatoon, Calgary, Edmonton and Vancouver.

27. The information is used to produce various indexes which measure change over time in contractors' prices to construct a range of new commercial, institutional, industrial and residential buildings. The contractor's price used within the Index reflects the value of all materials, labour, equipment, overhead and profit to construct a new building. It excludes value added taxes and any costs for land, land assembly, building design, land development and real estate fees.

D.3 The Building Construction Price Index differentiates between "Commercial Buildings", "Industrial Buildings" and "Office Buildings". Which category would be most appropriate to use for the Southworks facility?

28. Previously Stats Can used to differentiate between Commercial Buildings, Industrial Buildings. However, the BCPI now differentiates between Residential and Non-Residential only. The Non-Residential covers for Office, Warehouse and Retail previously covered under the Commercial headings. Therefore, the most appropriate Index to use is the Non-Residential.

D.4 The Building Construction Price Index is broken down by geographic area. Which geographic area would be most comparable to the Southworks facility?

29. There are eleven geographical areas that are listed within the Building Construction Price Indices. The geographical area closest to the Southworks project is Toronto, which is approximately 60 miles to the West. The next closest geographical location is Ottawa, which is over 300 miles to the East. Therefore, based on published data, Toronto is the closest location.

D.5 Tabulate the percentage change in the Building Construction Price Index – Office Buildings – Toronto for the period 2008-2019.

30. The Table below is an extract from the Non-Residential Building Indices from Stats Can.

Construction Prices Indexes for Non-residential Buildings
Geography: Toronto

Year	Price Indexes	% Difference
2008 Q1	83	
2009 Q1	86.7	4,5
2010 Q1	84.6	-2.4
2011 Q1	87.5	3.4
2012 Q1	90.4	3.3
2013 Q1	91.1	0.8
2014 Q1	91.8	0.8
2015 Q1	93.7	2.1
2016 Q1	95.3	1.7
2017 Q1	98.9	3.8
2018 Q1	102.1	3.2
2019 Q1	107.4	5.2

Source: Statistics Canada. Table 18-10-0135-01 Building construction price indexes, by type of building

D.6 How does Building Construction Price Index – Office Buildings - Toronto differ from a more general inflationary index, such as GDP-IPI?

31. The BCPI Non-Residential is the most appropriate index to use, as stated under D.3. In Canada, the GDP-IPI is the federal government's featured index of inflation in the domestic economy's final goods and services. It differs from the Construction Price Index mainly in covering inflation in the prices of capital equipment used by industry as well as inflation in consumer product prices. This is very different to construction. As stated previously under D.1, the construction industry is susceptible to different micro and macro-economic influences than those inflation indexes used for typical household goods or those that are not related to construction.

D.7 Which inflationary index is more appropriate to properly escalate 2008 and 2012 construction costs for the purposes of benchmarking to the costs of the Southworks facility? Why?

32. The Non-Residential BCPI is the most appropriate as this covers for the construction escalation within the sub-sector of non-residential work, which is inclusive of commercial and office projects.

D.8 Please prepare a table that inflates separately the 2008 Powerstream cost per square foot of $301.00, and the 2012 Enersource cost per square foot of $228

using the proper inflationary index to arrive at a 2021 cost per square foot for each facility (for 2020 Q1 and 2021 Q1, assume a 2.4% inflationary factor).

Year	% Difference	Powerstream 2008 $301 / sf	Enersource 2012 $228 / sf
2008 Q1		301	
2009 Q1	4.5	315	
2010 Q1	-2.4	307	
2011 Q1	3.4	317	
2012 Q1	3.3	328	228
2013 Q1	0.8	331	230
2014 Q1	0.8	333	232
2015 Q1	2.1	340	237
2016 Q1	1.7	346	241
2017 Q1	3.8	359	250
2018 Q1	3.2	371	258
2019 Q1	5.2	390	271
2020 Q1	2.4*	399	278
2021 Q1	2.4*	409	284

* Assumed Rate of 2.4%

E. CBRE'S UPDATED CLASS "C" ESTIMATE

CBRE performed an independent Class C Estimate to assess the reasonableness of the Class C Estimate prepared by Melloul Blamey for the Southworks project. Our accompanying Report is included in Appendix "B".

33. We detail below the main cost differential between the Melloul Blamey Class C Estimate dated December 10, 2108 and the CBRE Class C Estimate produced in September 2019.

Item	CBRE	Melloul Blamey	Difference	Comments
Construction Managers Fee	161,000	420,000	259,000	The CM Fee seems on the high side. We have allowed for 3%, which is closer to current market conditions. The Melloul Blamey cost refers to a letter dated March 28, 2017. The fee is fixed and includes for management of changes that occur during construction are not subject to mark-up by Melloul Blamey
Sub-Totals	**161,000**	**420,000**	**259,000**	

Neil Kelsey

Per:

APPENDIX A
CV OF NEIL KELSEY

This Appendix "A" referred to in the written evidence of
Mr. Neil Kelsey dated September 13, 2019

Neil Kelsey

Per: N. Kelsey

Neil Kelsey PQS, MRICS

Director, Cost Consultancy

CBRE

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CBRE Project Management
Toronto, ON

Profile

Neil is a qualified Quantity Surveyor with 25 years of international experience in cost consultancy, general contracting and construction advisory. He has significant experience in civil infrastructure, transit, rail, health, education, mining and commercial sectors in both Canada and the United Kingdom. Recently, he was the Change Control Manager for the $500M Union Station renovation project in Toronto. He has been recognized by both employers and clients for his outstanding performance in consultancy.

Professional Experience

CBRE LIMITED

Director, Cost Consultancy (2017–Present)

- **Key achievements include:**
- Establishment of Cost Database utilizing CBRE's extensive project database across various sectors, inclusive of Commercial Office, Retail, Education, civic centres, recreational facilities
- **Key projects include:**
- **Cost Consultant & Quantity Surveying - Region of Peel, Vendor of Records | Project Values $500K - $10M**
- Appointed to provide Quantity Surveying / Cost Consultancy to the Region as part of the Vendor of Records. Projects range from conceptual estimating to pre-tender (Class A) estimating, claims advice, cashflow forecasting, schedule preparation, earned value and the provision of in-house educational seminars.
- **Claims Consultant – Golf Club Renovation (King, ON) | Project Value: $4M**
- Neil and his team were appointed to provide an independent third-party assessment of a delay and disruption claim to assist in the resolution of a dispute between the Owner and Construction Manager. Neil evaluated each delay item and payment applications for their completeness and their substantiation to monies claimed within. A final value was assessed that enabled both parties to reach an agreement and avoid the need for costly litigation.
- **Cost Consultant & Project Controls – Distribution & Automation Centre (Toronto, ON) | Project Value: $200M**
- Neil's role on this confidential project are to prepare a range of estimates from Class D estimates to Class B, input into the RFP for the General Contractor, review and advise on suitable procurement models, along with implementation of project controls for the project, inclusive of earned value analysis, schedule and cost reviews.
- **Cost Consultant – Various Tenant Fit Outs (Toronto, ON) | Project value: $500K - 20M**
- Neil has prepared several estimates for tenant fit out projects, comprising of Financial sector, High specification offices, Retail, Law and Tech sector for ranging from Class D estimates to Class A.
- **Cost Consultant – Parsons HQ Fit Out (Toronto, ON) | Project value: $1M**
- Neil prepared an estimate for the renovation of an existing office, comprising of new partitions and general fit out. The Estimate was within 0.5% of the accepted General Contractor's tender. The comparison between the Estimate and tender further provided the Client with greater cost transparency and facilitated the integration of optional extras due to the Estimate accuracy.
- **Cost Consultant – Scotiabank Arena Re-brand (Toronto, ON) | Project value: $15M (Phase 1)**
- Neil provided services to assist the Owner in preparing suitable budgets for the re-branding of various areas within the Air Canada Centre as part of their f re-brand. This involves close working with the Owner in establishing appropriate budgets and updating the Report as actual costs become known.
- **Cost Consultant for WLG Gowling Tenant Fit Out (Montreal, Que) | Project value: $12M**
- Neil prepared a Class D Estimate for the proposed renovation of two floors comprising of very high

specification level for Law Firm, to provide an early indication of the budget. This estimate was within 5% of the Construction Managers Class A Estimate.

- **Cost Consultant for Bank Nova Scotia (Toronto, ON) | Project value: $8M**
- Post contract cost monitoring and Actual Cost Report forecasting for project requiring infrastructure and campus upgrade. Review of RFP and financial submissions, tender interviews and close working with Project Management.
- **Cost Consultant NLSC (Various locations, NS) | Project value: $3M**
- Estimating services and agreement of Construction Management submissions, for proposed roll out of fit out of retail units across various locations within Nova Scotia. Scrutinizing costs to ensure uniform pricing, accuracy, consistency and value for money are achieved on the programme of Works. Managed to save 20 times the Cost Consultancy fee over the program roll out.

LAKELAND CONSULTING
Director, Contracts & Commercial (2016–2017)

Key projects include:

- **Change Control Manager for Union Station Renovation (Toronto, ON) | $500M**
  Neil managed review of costs for owner/contractor on change orders. He was the Commercial Manager of work packages ($100M), responsible for forecasting, change management and payment application preparation.
- **Project Director for Humber College Parking Lot (Toronto, ON) | $30M**
  Neil project managed the build of a new parking structure—Humber College's first P3 project. Neil's evaluation and review led to a change in the procurement mode, which saved millions in lost revenue.
- **Claims Consultant for Sheppard West Station (Toronto, ON) | Claim value: $16M**
  Neil prepared claim documentation on Sheppard West Station for prominent sub-trade and presented the claim to the General Contractor.

TURNER & TOWNSEND
Associate Director (2008–2015)

Key achievements include:

- Awarded the Gold Award for best performing consultant by Turner & Townsend
- Recognized by a client for outstanding service for on time and budget delivery of a $60M hospital project

Key projects include:

- **Cost Consultant for Metrolinx Union Station, Platform 28/29 (Toronto, ON) | Value: $65M**
  Neil provided cost estimates for the renovation of Platform 28/29, inclusive of new platform, new canopies, baggage handling conveyor and associated mechanical, electrical and control rooms.
- **Cost Consultant 321 Silver Star Boulevard Office (Toronto, ON) | Value: $35M**
  Neil provided cost estimates for the construction of a new office block, complete with basement car parking, along with retail area and site works.
- **Cost Consultant Centennial College, Student Accommodation (Toronto, ON) | Value: $70M**
  Neil provided Cost Consultancy services on a mixed used student accommodation, teaching and conference facility for Class C estimate. Neil also provided cost apportionment services for the capital cost due to the involvement of a third-party capital contributor.
- **Project Director, Food Production Facility, Southern Ontario | Value: $240M**
  Neil provided Claims consulting services for several design issues on a food production facility. Due to errors and omissions the design missed several elements, causing cost overruns. Neil led a team of 9 to determine the cost differential between actual cost and tendered cost to establish damages.

Clients Represented:

- Centennial College
- Humber College
- Brock University
- Metrolinx
- BP
- CNRL
- Repsol
- Saudi-Aramco
- MLSE

Expertise:

- Quantity surveying
- Cost reconciliation
- Pre-tender estimates
- GMP review
- Change order review
- Value engineering

- **Cost Consultant for Union Pearson Express (Toronto, ON) | Value: $200M**
  Neil provided key advisory services and realized savings of $50M+ on the owner's first P3 project.
- **GTAA Toronto Pearson International Airport (Toronto, ON) | Value: $500K - $5M**
  Neil provided a range of estimates, from feasibility studies/contractual estimates to Class A estimates. Potential project included a new entrance and foyer area, washroom renovations, and new dining and retail areas.
- **Member of Consortium Team for Eglinton LRT (Toronto, ON) |Value: $5B**
  Neil assisted one of the Consortiums to prepare bid by providing cost, contractual, commercial, risk and schedule advice.
- **Cost Consultant for Stoney Bus Facility (Calgary, AB) | Value: $200M**
  Neil provided due diligence review of proposed new maintenance storage facility, which comprised an independent third-party review of construction costs, as well as estimating and risk advice to the design team.
- **Project Surveyor for Newcastle International Airport | Value: $2M – $20M**
  Neil provided cost, contractual, procurement and commercial advice, inclusive of engagement on new terminal. Live and operational terminal with flights maintained was a required part of the service delivery.
- **Project Director for retail park | Value: $80M**
  Neil undertook cost audit of build-up of GMP, RFP process and change control processes and management. Established errors in RFP and procurement model with recommendations made to Client senior management.
- **Commercial Manager for light rail system | Value: $700M**
  Asset refurbishment program for LRT, including educating in-house and consultant staff in contractual administration to mitigate and manage risk of contract conditions.
- **Managing Surveyor and Project Director for Transit Heavy Civil Engineering / Roads (UK) | Value: $30M**
  Neil managed the design and construction of a major earthworks project, including monitoring expenditure and offering cost and contract advice, GMP and actual cost forecasting, and risk management. Negotiation of second-stage contract award figure with Contractor saved the client $15M. The project came under budget by $2M.

TELFORD HART ASSOCIATES (UK)
Associate Director (2005–2008)

Key Projects include:

- **Retail Expansion Project (Scotland & England, UK): | Project Value: $20M ($2M per store)**
  Neil undertook a program of expansion that involved the renovation or new build of 10 stores. The role included estimating, measurement sub-trade procurement, tender evaluation and negotiation, payment certification, change-order agreement, and sub-trade final account agreement.
- **Northumbria University, various projects (England, UK): | Project Value: $30M**
  Neil undertook various Educational projects for Northumbria University, comprising of renovation of existing floors within existing building. The role comprised of estimating, measurement sub-trade procurement, tender evaluation and negotiation, payment certification, change-order agreement, and sub-trade final account agreement.

Education and Accreditations

- Professional Member, Royal Institution of Chartered Surveyors (MRICS)
- PQS Designation, Canadian Institute of Quantity Surveyors (CIQS)
- BSc Honours, Quantity Surveying, Northumbria University
- RICS APC Doctor / Mentor

APPENDIX B
CLASS C ESTIMATE

This Appendix "B" referred to in the written evidence of
Mr. Neil Kelsey dated September 13, 2019

Neil Kelsey

Per: 

CBRE

ENERGY+

OFFICE RENOVATION

Class C Consruction Cost Estimate & Commentary on OEB Decision for Advanced Capital Module

64 Grand Avenue South, Cambridge, ON

Date: Sep-19

PROJECT MANAGEMENT
CostConsultancy

1.0 Contents

ENERGY+
OFFICE RENOVATION
Class C Consruction Cost Estimate & Commentary on OEB Decision
for Advanced Capital Module
64 Grand Avenue South, Cambridge, ON

Date: September-19
Project No.: TBC

1.0 Executive Summary

CBRE have been retained by Energy+ to prepare a Class C construction cost estimate for the proposed office renovation works at 64 Grand Avenue South, Cambridge, Ontario and provide their opinion on the Ontario Energy Board 's (OEB) decision advising Energy+ that they will provide funding in the amount of $6.75M, in lieu of the $8.1M Energy+ have requested.

Within this Report we detail the Project Budget and summarize the construction costs for the works to the existing shell, the proposed internal work and the site work, relevant to Energy+ office portion of the larger development of the Southworks project.

In preparing this Report, we also include the detailed estimate build-up with appropriate quantities and rates for the construction works, relevant to a Class C Estimate and level of detail.

We also provide commentary on the OEB decision, with particular reference to the benchmarking reasoning cited by the OEB in their decision, utilizing the Powerstream and Enersource projects.

This Estimate and Report is the supporting documentation to the Written Evidence document of Neil Kelsey, Director of Cost Consultancy, CBRE Project Management.

2.0 Introduction

CBRE have been appointed Energy+l to prepare a Class C construction cost estimate for the proposed office renovation works at 64 Grand Avenue South, Cambridge, Ontario. In addition to the Class C Estimate, CBRE are also to provide their opinion on the Ontario Energy Board 's (OEB) decision advising Energy+ that they will provide funding in the amount of $6.75M, in lieu of the $8.1M Energy+ have requested.

1) Energy+ Office Renovation, Design Meeting Plans, dated May 2, 2018

The proposed office renovation is part of an old stone foundry building at 64 Grand Avenue South, Cambridge. The design proposes to divide the South building into two separate buildings by erecting a firewall, Energy+ are then to occupy the South portion following the division.
As part of the division, the renovation also requires upgrades to the existing building envelope inclusive of removal and replacement of existing windows, new building frontage and replacement of existing roof coverings. Minor site works are also included with car parking for 4 cars, including a barrier free space, hard and soft landscaping, retaining walls, and external staircase. To meet the office needs of Energy+ a mezzanine floor is proposed over part of the ground floor plate. The internal works comprise of typical office fit out with a mixture of private offices, meeting rooms, boardrooms, storage and admin offices, with open plan areas more prevalent on the Ground floor. New washrooms and an Elevator are included within the design.

The construction cost estimated is based on the following design information prepared by the Prime Consultant, Martin Simmons Architects:

- Design Meeting Drawings & Information dated May 2, 2018
- Design Brief Drawings & Information dated January 14, 2019

There is a slight difference in the proposed layouts between the two documents listed above. We have used the Design Meeting document dated May 2, 2018 to base our estimate upon, whilst utilizing the sub-consultant information within the document dated January 14, 2018 for information on Mechanical, Electrical and Structural information.

Subsequent changes to the Design/Engineering after CBRE have received documentation for estimating cannot be incorporated into the estimate.

3.0 Quantities and Methodology

- The cost estimate has been produced referring to the Design Brief prepared by Marin Simmons Architects, inclusive of the sub-consultant information and outline drawings provided, as referred to above.
- Actual measurement take-offs were taken from the drawings. These quantities are approximate as there were no dimensions provided. We have used this this method in conjunction with data and metrics from previous projects similar in nature to the project scope, to facilitate a benchmark to the estimate.
- CBRE uses a wide range of standard measurement and quantifying methods in accordance with the Canadian Institute of Quantity Surveyors (CIQS)

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Basis of Pricing

We understand that the project is to be procured utilizing a Construction Management form of procurement, via negotiations with Melloul Blamey Construction. This construction cost estimate assumes the sub-trade work packages will be e procured on a competitive tender basis, with fixed prices based on the completed design information.

1) It is further assumed that there will be a minimum of four sub-trades submitting a tender for each work package, following preliminary selection.
2) The costs within this estimate represent the fair market value and are not intended to be a prediction of the lowest bid.
3) The Estimate does not take account of any abnormal market conditions and assumes that the project will be keenly tendered following preliminary selection.
4) The estimate is inclusive of all mark ups and General Conditions.
5) The construction rates used are based on 3rd Quarter 2019 prices with an allowance for market escalation.
6) Should fewer bids be received or solicited then prices will typically be higher due to lack of competition.
7) CBRE have priced the estimate based on current market conditions. No account has been made for market conditions that are unforeseen and could not have reasonably accounted for. As such CBRE have no control over the cost of labour, materials, local and economic conditions, all of which may impact the ability to price or source competitive tenders for projects similar in nature.

Estimating Allowance / Contingency

The Estimate includes for an Estimating Contingency of 15%, which is reflective of the current Schematic Design stage. In addition, given the project involves renovation works comprising of both structural and remedial works to the external envelope, we would recommend that this allowance is reviewed and monitored following appropriate design development and investigative surveys, particularly in relation to the structural and remedial works involved.

Construction Contingency

The Estimates excludes any allowance for Construction Contingency to cover for changes that may occur on site.

Any proposed Construction Contingency allowance should be considered for inclusion within Energy+ overall budget to cover for changes that will occur on site. Given that the works relate to the renovation of an existing structure that was constructed over 150 years ago then an appropriate allowance should be set aside for such issues.

Escalation

As outlined above this Estimate is calculated using rates based on 3rd Quarter 2019 rates. An Escalation allowance is included within the Financial Summary.

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Project Scope

It is important that Energy+ carefully reviews this cost estimate including all line item descriptions, clarifications, exclusions, assumptions, allowances and contingencies to ensure the estimate reflects the scope of the project.

Exclusions

The Estimates do not include the following costs:

1) HST
2) Specialist Consultant Fees (other than those referred to in the Estimate)
3) Permit and Development Charges (other than those referred to in the Estimate)
4) Re-location of existing services
5) Financing costs
6) Any Furniture Moving, Re-installation and Move Costs
7) Premium costs associated with single sourcing
8) Signage and graphics (other than those referred to within the Estimate)
9) Abnormal and Extraordinary Market Escalation
10) Removal of Hazardous Material such as Asbestos and Lead
11) Premiums for working in inaccessible or partially accessible spaces during construction.
12) Work beyond the project limits identified by the project boundary
13) Audio Visual Equipment and installation

Risks to the Cost Estimate

Items that can affect the cost estimates, may include, but are not limited to:

- Changes to the design subsequent to the issue of the documents stated above which this estimate is based on.
- Unforeseen and Unknown Structural conditions
- Non Competitive Bid restrictions and the sole sourcing of products/materials from specific vendors.
- Restrictive technical specifications that can result in non-competitive environment.
- A pressured, phased schedule in an occupied space.
- Access restrictions, unidentified out of hours work policies and phasing restrictions
- Restrictive technical specifications that produce a non competitive environment.
- Change in logistics, site access, overtime requirements.

4.0 Benchmarking

To be able to benchmark costs on this proposed project then appropriate or similar projects should be used to compare against. To perform this it is certainly easier if the projects are new build rather than renovation projects.
Renovation and new build projects differ in the construction works and activities they involve. Indeed, every renovation project differs in that it will have characteristics that are unique to that particular project or property.

For example, some renovation projects may only require office fit out type work, where the work is all internal, such as partitioning, finishes, extension of or amendments to existing mechanical and electrical installations and some minor strip out, whereas other projects may involve structural work, forming openings, roofing works, insertion of new floors, retention of existing structures etc., in addition to the fit out. It is for this reason that renovation type works are more difficult to benchmark.

Fit Out

At CBRE, we deliver a lot of office fit out projects per annum and as such we have significant data on office fit out costs. We can with appropriate adjustments, benchmark the internal fit out element of the works.

Within 2019, typical office fit out costs are in the region of $120 - $140 / sf for construction., with a medium - upper medium level specification, which seems appropriate for this project. These benchmark construction costs comprise of office partitioning, with a mixture of metal frame and glazed partitions, suspended ceilings, carpeting and vinyl tiling, painting to partitions with some wall tiling to lunchrooms, millwork to offices and kitchen / lunchroom fit outs and amendments to existing mechanical and electrical installations, inclusive of new lighting, ductwork and sprinkler amendments / installation. Fit out costs do not generally include for washrooms fixtures and fittings as they are typically included by the Landlord.

The Interior Work estimate is at $150 per square foot. Within this figure there are values for elements of work that are not typically within an office fit out project, so they have to adjusted for to benchmark appropriately.

Interior Work		$ / sf
Energy+ Interior Work Estimate		3,231,000
Adjust for the following:-	$	
• Credenzas Allowance	24,000	
• Washroom accessories	5,970	
• Security	40,000	
• Moveable partitions	120,000	
	189,970	189,970
		3,041,030
Revised cost per square foot based on area (21,496 sf)		$141

Adjust for benchmark mechanical and electrical fit out costs

	Energy+ ($/sf)	Fit Out Benchmark ($/sf)	
• Mechanical	32	10	
• Electrical	26	20	
	58	30	$28
			$113
Add for: -			
• General Conditions - 10%			$11
• Construction Manager Fee - 2%			$2
• Contingencies - 15%			$17
			$144

Following the adjustments made, the square footage cost for the fit out portion of the works is close to the benchmark costs for a typical office fit out that falls within the medium to medium upper specification level, based on CBRE cost fit outs.

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Work to Existing Shell & Structure

The proposed work to the existing shell and structure comprises of the construction of a new firewall inclusive of associated foundations, new pad foundations for the new mezzanine floor including construction of new support columns within the existing structure, construction of a new elevator pit, new canopy to building entrance, new joists / joist strengthening to existing roof structures, insertion of a new staircase, re-pointing of existing masonry and new roof covering.

The works in connection with the existing shell and structure are relative only to this particular project. Whilst we can use costs from previous projects that may be similar for that particular work element in isolation, when collated together to form an estimate for the work involved for 64 Grand Avenue South, any cost per square foot or square metre is relative only to this project and becomes very difficult to benchmark.
Withn this estimate, we have to include for costs for the new firewall inclusive of foundations, the new mezzanine, new columns, elevatior pit, new canopy to the entrance, strengthening of the existing roof, new internal staircase, re-pointing existing masonry and new roof covering.

These works to the existing structure are all unique to this project and it is therefore difficult to benchmark the costs in relation to this element of the works for this reason

The Fit Out elements of the works can be benchmarked to a certain degree to arrive at a cost per sf, however, the work to the existing shell does not lend itself to benchmarking in this manner.

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5.0 Commentary on OEB Decision

Commentary is provided below on the OEB Decision.

Cost Estimates

The OEB, within their decision, provide commentary on the cost estimates prepared by Melloul Blamey at Class D Stage and Class C Stage. The Class C Estimate has increased from circa 5M to circa $8M. The Class D Estimate, was, we understand, prepared on a lot less design information and less scope.

Construction Industry Inflation / Escalation

The construction industry is susceptible to micro and macro economic issues, along with local market forces that can have an effect on pricing by both General Contractors and sub-trades. Within the last 18 moths or so concrete, formwork and roofing sub-trades have been in higher than usual demand and can have the effect of driving up costs above forecasted inflation.

Steelwork costs have risen also since the end of 2018 due to imposed steel tariffs between Canada and the US have had an effect on raw steel and aluminum prices on material that are imported from a country other than the US.
Since Canada is a net importer of steel, this has had an effect of increasing raw steel prices of between 20 - 40%, which has been passed on to steel suppliers and sub-trades within the construction sector.

At CBRE we have seen construction costs steadily rise since 2008 in the GTA region within the Office Tenant Fit Out sector. Within Toronto, these costs have risen at an increased rate due to a greater impact of local market supply and demand. Since 2008, office design has changed as we see more open plan type offices. Previously, offices were designed with greater proportion of private office areas, which meant a greater level of internal divisions, hence a greater amount of drywall partitioning. Offices designs that still have partitioning look to increase the open concept via glazed office fronts.
This is also in tandem with the movement towards providing greater flexibility to the workforce, for example, 'hotel desks', which are not designated to specific personnel within an organization, reduced footprint requirements as more staff work from home and the creation of relaxation spaces, such as break out areas and collaborative areas.

Such changes in design, influence the breakdown of costs and where costs are allocated. For example, if less is being spent or allocated to drywall, then there is a greater allocation to the provision of equipping the office space for fittings and finishes.

Selection of Melloul Blamey

When selecting a Construction Manager or General Contractor, there are advantages and disadvantages to negotiation with a single source. In terms of the Energy+ decision to negotiate with Melloul Blamey, we understand they have been working with them since 2013 and that they are also the Construction Manager on the whole proposed Southworks project.

Advantages to negotiating with Melloul Blamey are, the actual sub-trade work is still to be competitively tendered which represents upwards of 80% of the construction value. With Construction Management, the actual cost of the project is not known until the award of the final sub-trade work package. Accurate cost estimates are therefore very important to prevent any unanticipated costs that were not potentially budgeted for. With Construction Management, there is the potential that changes in design can still be accommodated, as the design is not fully complete and the final construction value should be closer to the project cost following the award of the final sub-trade work package.

There is also the advantage that there is a close working relationship between Energy+ and Melloul Blamey, which due to the earlier involvement of the Construction Manager, should extend to the Design Team. We understand that the Construction Manager Fee allowance from Melloul Blamey includes for management of potential changes that may occur on site and any associated costs are not subject to mark-up from Melloul Blamey. Witin this Estimate we have included for what we believe to be the market rate for the Constructon Manager Fee.

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Class D Estimate

The purpose of the Class D Estimate is to establish a project budget estimate based on very limited design information. Such design information is typically 5 – 10% complete. A Class D Estimate will provide an outline project budget based on design information provided where preliminary measures can be performed, if the information permits. Outline design drawing / plans are produced which should facilitate approximate take-off measures that we will prepare from the design information and forms an inherent part of the Estimate.

For the Energy+ Class D Estimate, we understand that this was based on a design by another Architect and not Martin Simmons. This design had the mezzanine at the West side of the building previously and there were no allowances for Professional Fees and Furniture, Fittings & Equipment. The Contingency allowance also increased in the Class C Estimate, whilst this is not typical, it likely reflects the greater level of risk being known and / or increased scope.

Class C Estimate

The purpose of the Class C Estimate is to provide an estimate based on limited design information, which we anticipate being approximately 10 – 30% complete, which is typical for Schematic Design.

A Class C Estimate provides an outline project budget based on Schematic Design information, which the Design Team will have progressed to 20 – 30% complete. The design will have progressed to such a stage where preliminary measures can be performed, and the design moves away from a simple plan (Class D Estimate information) and becomes more dimensional to such a level where drawings are produced showing scale and relationship with other building elements and components

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Class C Consruction Cost Estimate & Commentary on OEB Decision
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6.0 Financial Summary

Construction Component	Southworks (1,997m²) Energy+ Office Renovation
Area (sf)	21,496
	Amount
Construction	
1 Work to Existing Shell	$1,199,000
2 Interior Work	$3,231,000
3 Site Work	$417,000
NET CONSTRUCTION COST - Excluding General Conditions, Fee & Contingencies (3Q 2019 $)	$4,847,000
$/sf	$225
General Conditions & Construction Manager Fee	
4 General Conditions (including Insurance)	$517,000
5 Construction Manager Fee (3%)	$161,000
6 Contingencies (15%)	$829,000
7 Additional Contingency for work to existing Shell (5%)	$60,000
8 Escalation to 3rd Quarter 2020	$222,000
TOTAL CONSTRUCTION COSTS - (3Q 2019 $)	$6,636,000
$/sf	$309
Allowances & Professional Fees	
9 Allowances	$145,815
10 Professional Fees (including LEED)	$617,772
11 Furniture Allowance (as Energy+ allowance)	$400,000
12 Building Permit	$10,000
TOTAL PROJECTS COSTS - (3Q 2019 $)	$7,809,587
$/sf	$363

The report includes for an Order of Magnitude Construction Cost estimate along with inclusions for Professional Fees.

The procurement model is to be Construction Management with sub-contractors to submit tenders for the sub-trade works. We have allocated prudent Mark Ups & Contingencies.

Contingency for Hard Cost is allowed at 15% for Estimating and Design. We have included for a further 5% Contingency for the higher risk profile of works in connection with the Existing Shell. There are no inclusions for any Construction Contingency (changes that may occur on site)

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Works to Existing Shell & Structure

Date: September-19
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Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Element		Elemental Amount	Cost / m2	Cost / sf	Amount	
A SHELL						
A1 SUBSTRUCTURE			$49.32	$4.58		
A11 Foundation		$98,482	$49.32	$4.58		
A12 Basement Excavation		$0	$0.00	$0.00	$98,000	8%
A2 STRUCTURE			$160.92	$14.95		
A21 Lowest Floor Construction		$0	$0.00	$0.00		
A22 Upper Floor Construction		$222,653	$111.49	$10.36		
A23 Roof Construction		$98,700	$49.42	$4.59	$321,000	27%
A3 EXTERIOR ENCLOSURE			$390.79	$36.30		
A31 Walls Below Grade		$21,712	$10.87	$1.01		
A32 Walls Above Grade		$230,065	$115.21	$10.70		
A33 Windows & Entrances		$317,234	$158.86	$14.76		
A34 Roof Covering		$201,400	$100.85	$9.37		
A35 Projections		$10,000	$5.01	$0.47	$780,000	65%
NET BUILDING COST (Excluding Site)			$601.02	$55.84	$1,199,000	100%
Z GENERAL REQUIREMENTS & ALLOWANCES						
Z1 GEN. REQ. & FEE	0.0%		$0.00	$0.00		
Z11 General Requirements	0.0%	$0	$0.00	$0.00		
Z12 Fee	0.0%	$0	$0.00	$0.00	$0	0%
TOTAL CONSTRUCTION ESTIMATE (Excluding Allowances)					$1,199,000	100%
Z2 ALLOWANCES	0.0%		$0.00	$0.00		
Z21 Estimating Allowance	0.0%	$0	$0.00	$0.00		
Z22 Escalation Allowance	0.0%	$0	$0.00	$0.00		
Z23 Construction Allowance	0.0%	$0	$0.00	$0.00	$0	0%
GOOD & SERVICES TAX	0.0%	$0	$0.00		$0	0%
TOTAL CONSTRUCTION ESTIMATE (Including Allowances)					$1,199,000	100%

GFA	1,997 m²	$600	m²
GFA	21,496 Sq. Ft.	$56	Sq. Ft.

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CONSTRUCTION COST ESTIMATE

Works to Existing Shell & Structure

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

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Description	Quantity	Rate	Amount
GROSS FLOOR AREA			
TOTAL GROSS FLOOR AREA	1,997 m²		
A1 SUBSTRUCTURE			
A11 Foundations			
Work to Proposed Firewall			
Break out existing slab for new Firewall - 29m long for 450mm wide foundation	1 sum	10000.00	10,000
Strip foundations to perimeter wall walls	29 m	750.00	21,750
Extra for digging in assumed confined space	1 sum	7500.00	7,500
Mezzanine Columns			
Excavate for new pad foundations	43 m3	30.00	1,295
Extra for breaking out existing slab / backfill etc.	43 m3	25.00	1,079
Extra for breaking out in confined space	1 sum	5000.00	5,000
Excavation for working space	43 m3	30.00	1,295
Backfill to underside of existing slab	27 m3	50.00	1,348
Concrete to pad foundations	12 m3	275.00	3,166
Reinforcement to foundations (125 kg/m3)	1,439 kg	4.00	5,756
Formwork to pad foundations	22 m2	175.00	3,808
Extra for work in confined space	1 sum	2500.00	2,500
Allow for reinstatement of existing concrete slab and make good all work disturbed (32 columns internally)	32 no	350.00	11,200
Allowance for dewatering	1 sum	5000.00	5,000
Elevator Pit			
Excavate for pit	16 m3	50.00	810
Concrete to pit slab / foundation	4 m3	250.00	900
Reinforced concrete to pit slab	2,106 kg	4.20	8,845
Formwork to pit slab	5 m2	175.00	840
Concrete to walls	5 m3	250.00	1,350
Reinforced concrete to pit walls (130 kg/m3)	675 kg	4.20	2,835
Excavation for working space	16 m3	30.00	486
Extra for work in confined space	1 sum	1000.00	1,000
Waterproofing to slab walls	18 m2	40.00	720
TOTAL A11 Foundations	5 m3	18866.33	98,482
TOTAL A1 SUBSTRUCTURE			98,482
A2 STRUCTURE			
A21 Lowest Floor Construction			
No work assumed			
TOTAL A21 Lowest Floor Construction	0 m2	0.00	0

CONSTRUCTION COST ESTIMATE

Works to Existing Shell & Structure

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

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Description	Quantity	Rate	Amount
A22 Upper Floor Construction			
New staircase construction comprising of timber staircase, balustrading, from Ground Floor to Mezzanine, inclusive of landing, approx. length 6m (on plan)	1 no	75000.00	75,000
Allowance for structural amendments to existing slab to accommodate staircase	1 sum	10000.00	10,000
Structural support to new staircase	1 sum	7500.00	7,500
Mezzanine Frame			
Steel columns to Mezzanine (assumed 25 kg/m)	3,360 kg	4.20	14,112
Steel beams to Mezzanine (assumed 25 kg/m)	7,145 kg	4.20	30,009
Amendments to existing structure - inclusive of forming openings in existing wall to accommodate new frame / beams	1 sum	3000.00	3,000
Timber joists at 400mm centres	1,666 m	20.00	33,320
Plywood decking to timber joists	688 m2	25.00	17,200
Connections	1 sum	10000.00	10,000
Secondary steelwork (bracing, M&E plant support etc.) - allowance only	1 sum	20000.00	20,000
Canopy			
Steel columns to Mezzanine (assumed 25 kg/m)	210 kg	4.20	882
Steel beams to Mezzanine (assumed 25 kg/m)	150 kg	4.20	630
Amendments to existing structure - inclusive of forming openings in existing wall to accommodate new frame / beams	1 sum	1000.00	1,000
TOTAL A22 Upper Floor Construction			222,653
A23 Roof Construction			
Work to Lower Roof (no details)			
New joists to lower roof to decrease span of existing, including allowing for notching into existing brickwork	1,276 m2	75.00	95,700
Allowance for miscellaneous steel / metals	1 sum	3000.00	3,000
TOTAL A23 Roof Construction	1,997 m2	49.42	98,700
TOTAL A2 STRUCTURE			321,353

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64 Grand Avenue South, Cambridge, ON

CONSTRUCTION COST ESTIMATE

Works to Existing Shell & Structure

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
A3 EXTERIOR ENCLOSURE			
A31 Walls Below Grade			
Walls below grade to for new columns	6 m3	300.00	1,843
Formwork to columns	61 m2	200.00	12,288
Reinforcement (100 kg/m3)	614 kg	4.20	2,580
Extra for working in confined space and non-productive time	1 sum	3000.00	3,000
Miscellaneous / unmeasured items	1 sum	2000.00	2,000
TOTAL A31 Walls Below Grade	**31 m2**	**706.76**	**21,712**
A32 Walls Above Grade			
Existing Masonry			
Repointing to existing masonry to external and internal (50% of external wall area allowed - no deductions for openings)	774 m2	50.00	38,700
Allowance for making good to existing jambs and preparing to receive new for new glazing frontage (included elsewhere) and new stone jambs to match existing	1 sum	10000.00	10,000
Cleaning / remedial work to existing stone lintels over openings	62 no	500.00	31,000
New Firewall			
New concrete firewall	87 m3	225.00	19,575
Reinforcement to firewall	8,700 kg	4.20	36,540
Formwork	580 m2	160.00	92,800
Firestopping	29 m	50.00	1,450
TOTAL A32 Walls Above Grade	**774 m2**	**297.24**	**230,065**
A33 Windows & Entrances			
Remove existing windows (refer Site & Ancillary Work)			
New window installation, size assumed at 1.35m wide x 3.60m high to Ground Floor	125 m2	600.00	75,006
New window installation, size assumed at 1.35m wide x 3.60m high to Mezzanine	160 m2	600.00	96,228
New External Door entrance incl side screens	2 no	7500.00	15,000
New single leaf external entrance / exit door	1 no	3000.00	3,000
New glazing / curtain walling to form new front	90 m2	1200.00	108,000
Framing to glazing front	1 sum	20000.00	20,000
TOTAL A33 Windows & Entrances	**1,997 m2**	**158.86**	**317,234**
A34 Roof Covering			
Mod two ply roof to Lower Roof	792 m2	150.00	118,800
Roof finish to Higher Roof (no spec provided)	484 m2	150.00	72,600
Roof accessories	1 sum	10000.00	10,000
TOTAL A34 Roof Covering	**792 m2**	**254.29**	**201,400**
A35 Projections			
New canopy	1 sum	10000.00	10,000
TOTAL A35 Projections	**1,997 m2**	**5.01**	**10,000**
TOTAL A3 EXTERIOR ENCLOSURE			**780,411**
TOTAL A SHELL			**1,200,246**

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CONSTRUCTION COST ESTIMATE

Works to Existing Shell & Structure

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
Z1 GENERAL REQUIREMENTS & FEE			
Z11 General Requirements			
General Requirements (refer Financial Summary)	ls		0
TOTAL Z11 General Requirements			0
Z12 Fee			
Fee (refer Financial Summary)	ls		0
TOTAL Z12 Fee			0
TOTAL Z1 GENERAL REQUIREMENTS & FEE			0
TOTAL CONSTRUCTION ESTIMATE EXCLUDING ALLOWANCES			1,200,246
Z2 CONTINGENCIES			
Z21 Estimating Contingency			
Estimating Contingency (refer Financial Summary)	ls		0
TOTAL Z21 Estimating Contingency			0
Z23 Construction Contingency			
Construction Contingency	ls		0
Total Z23 Construction Contingency			0
TOTAL Z2 CONTINGENCIES			0
TOTAL Z GENERAL REQUIREMENTS & CONTINGENCIES			0
TOTAL BUILDING COST INCLUDING ALLOWANCES			1,200,246

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Interior Works

Date: September-19
Project No.: TBC

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Element		Elemental Amount	Cost / m2	Cost / sf	Amount	
B INTERIORS						
B1 PARTITIONS & DOORS			$689.52	$64.06		
B11 Partitions		$1,236,904	$619.37	$57.54		
B12 Doors		$140,100	$70.15	$6.52	$1,377,000	43%
B2 FINISHES			$160.44	$14.91		
B21 Floor Finishes		$153,997	$77.11	$7.16		
B22 Ceiling Finishes		$84,882	$42.50	$3.95		
B23 Wall Finishes		$81,520	$40.82	$3.79	$320,000	10%
B3 FITTINGS & EQUIPMENT			$146.25	$13.59		
B31 Fittings & Fixtures		$158,970	$79.60	$7.40		
B32 Equipment		$33,100	$16.57	$1.54		
B33 Conveying Systems		$100,000	$50.07	$4.65	$292,000	9%
C SERVICES						
C1 MECHANICAL			$343.45	$31.91		
C11 Plumbing & Drainage		$158,050	$79.14	$7.35		
C12 Fire Protection		$73,897	$37.00	$3.44		
C13 H.V.A.C.		$393,942	$197.26	$18.33		
C14 Controls		$60,000	$30.04	$2.79	$686,000	21%
C2 ELECTRICAL			$278.63	$25.89		
C21 Service & Distribution		$126,411	$63.30	$5.88		
C22 Lighting, Devices & Heating		$307,610	$154.03	$14.31		
C23 Systems & Ancillaries		$122,411	$61.30	$5.69	$556,000	17%
NET BUILDING COST (Excluding Site)			$1,618.29	$150.34	$3,231,000	100%
Z GENERAL REQUIREMENTS & ALLOWANCES						
Z1 GEN. REQ. & FEE	0.0%		$0.00	$0.00		
Z11 General Requirements	0.0%	$0	$0.00	$0.00		
Z12 Fee	0.0%	$0	$0.00	$0.00	$0	0%
TOTAL CONSTRUCTION ESTIMATE (Excluding Allowances)					$3,231,000	100%
Z2 ALLOWANCES	0.0%		$0.00	$0.00		
Z21 Estimating Allowance	0.0%	$0	$0.00	$0.00		
Z22 Escalation Allowance	0.0%	$0	$0.00	$0.00		
Z23 Construction Allowance	0.0%	$0	$0.00	$0.00	$0	0%
GOOD & SERVICES TAX	0.0%	$0	$0.00		$0	0%
TOTAL CONSTRUCTION ESTIMATE (Including Allowances)					$3,231,000	100%

GFA	1,997 m²	$1,618	m²
GFA	5,015 Sq. Ft.	$150	Sq. Ft.

ENERGY+
OFFICE RENOVATION
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CONSTRUCTION COST ESTIMATE

Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity		Rate	Amount
GROSS FLOOR AREA				
TOTAL GROSS FLOOR AREA	1,997	m²		
B1 PARTITIONS & DOORS				
B11 Partitions				
Interior partition, comprising of single layer Gypsum board 16mm thick both sides, metal stud	393	m2	145.00	56,973
Interior partition, comprising of two layers Gypsum board 16mm thick both sides, metal stud	751	m2	185.00	138,843
Glazed partitions, (assumed higher spec than PC350)	1,012	m2	900.00	911,088
Glazed screen to internal Entrance lobby, size 3.80m wide x 3.60m high	1	no	7500.00	7,500
Glazing film	1	sum	2500.00	2,500
Sliding partitions to divide Rooms, span 8.00m, incl structural work	1	sum	60000.00	60,000
Sliding partitions to divide Rooms, span 7.00m incl structural work	1	sum	60000.00	60,000
TOTAL B11 Partitions	**2,156**	**m2**	**573.77**	**1,236,904**
B12 Doors				
Single leaf door, Solid Core Wood doors, including frames and heavy duty hardware	25	no	2100.00	52,500
Double leaf door, Solid Core Wood doors, including frames and heavy duty hardware	1	no	4000.00	4,000
Single leaf glazed swing door including hardware, frames etc.	28	no	2600.00	72,800
Double leaf glazed swing door including hardware, frames etc.	2	no	5400.00	10,800
TOTAL B12 Doors	**56**	**no**	**2501.79**	**140,100**
TOTAL B1 PARTITIONS & DOORS				**1,377,004**
B2 FINISHES				
B21 Floor Finishes				
Take up existing floor finish (N/A)				
Polish existing / new concrete floor	66	m2	25.00	1,656
New floor finish comprising of resilient tile / non-slip vinyl tile flooring	870	m2	80.00	69,585
Mid quality carpet tiles	682	m2	70.00	47,708
Higher quality carpet finish	252	m2	90.00	22,638
Rubber cove baseboard	373	m	20.00	7,454
Timber baseboard	246	m	12.00	2,957
Allowance for entrance matting	1	no	2000.00	2,000
TOTAL B21 Floor Finishes	**1,997**	**m2**	**77.11**	**153,997**

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Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
B22 Ceiling Finishes			
Gypsum plasterboard ceiling	999 m2	80.00	79,882
Form feature bulkheads	1 sum	5000.00	5,000
TOTAL B22 Ceiling Finishes	**999 m2**	**85.01**	**84,882**
B23 Wall Finishes			
Framing and Drywall, including vapour barrier, air gap etc.	1,020 m2	20.00	20,397
Painting to partitions	2,287 m2	10.00	22,868
Tiling to Wet areas (Washrooms, Changing, splashback areas)	400 m2	90.00	35,961
Extra for wall tiling to splashback areas	6 m2	50.00	293
Allowance for tiling to other areas (not detailed	1 sum	2000.00	2,000
TOTAL B23 Wall Finishes	**3,307 m2**	**24.65**	**81,520**
TOTAL B2 FINISHES			320,398
B3 FITTINGS & EQUIPMENT			
B31 Fittings & Fixtures			
Kitchen cabinetry and worktops to Lunchroom	1 sum	35000.00	35,000
Miscellaneous Kitchen fittings to Lunchroom	1 sum	5000.00	5,000
Reception Desk	1 no	30000.00	30,000
Credenzas to Training Rooms	4 no	4000.00	16,000
Credenzas to Boardroom	2 no	4000.00	8,000
Benching to Changing Areas (male & Female)	1 sum	12000.00	12,000
Miscellaneous shelving to Storage Rooms etc.	1 sum	10000.00	10,000
Millwork - notional allowance to Meeting Rooms (3 No.)	1 sum	5000.00	5,000
Millwork - notional allowance to Enclosed offices (18 No.)	1 sum	20000.00	20,000
Undetailed shelving	1 sum	1000.00	1,000
Washroom accessories: -			
Toilet paper dispenser	6 no	75.00	450
Folding shower seat	2 no	500.00	1,000
Shower curtain, rod & hooks	2 no	200.00	400
Robe hook	6 no	20.00	120
Grab bars - shower	2 no	350.00	700
Grab bars - toilet	2 no	350.00	700
Mirror	8 no	200.00	1,600
Bench to Barrier Free / Universal Washroom	1 no	1000.00	1,000
Notional allowance for Notice boards	1 sum	1000.00	1,000
Metals:			
Notional Allowance metals	1 sum	1000.00	1,000
Metal balustrading	6 m	1500.00	9,000
Furnishings - Excluded			
Window Blinds - Excluded			
TOTAL B31 Fittings & Fixtures	**1,997 m2**	**79.60**	**158,970**

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CONSTRUCTION COST ESTIMATE

Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
B32 Equipment			
White Goods / Kitchen Appliances			
Dishwasher	1 no	1100.00	1,100
Refrigerator to Lunchroom	1 no	1500.00	1,500
Mini refrigerator	2 no	500.00	1,000
Microwave	2 no	500.00	1,000
Ice machine	1 no	500.00	500
Stove	0 no	1800.00	0
Lockers to Male & Female Changing - assumed full height)	16 no	1750.00	28,000
TOTAL B32 Equipment	**1,997 m2**	**16.57**	**33,100**
B33 Conveying Systems			
Elevator installation - 2 stops	2 no	50000.00	100,000
TOTAL B33 Conveying Systems	**0 stp**	**0.00**	**100,000**
TOTAL B3 FITTINGS & EQUIPMENT			**292,070**
TOTAL B INTERIORS			**1,989,472**
C1 MECHANICAL			
C11 Plumbing & Drainage			
Equipment			
HW boiler	2 no	15000.00	30,000
Water meter	2 no	5000.00	10,000
HW heater	2 no	10000.00	20,000
HW recirculation pump	2 no	2000.00	4,000
HW water tank	2 no	5000.00	10,000
Piping			
Cold water	130 m	75.00	9,750
Hot water	120 m	75.00	9,000
Hot water recirculation	120 m	75.00	9,000
Sanitary and vent piping	100 m	90.00	9,000
Storm drainage	1 sum	10000.00	10,000
Fixtures			
Mop sink	1 no	1500.00	1,500
Kitchen sink - countertop	3 no	1000.00	3,000
Basin - wall mounted	2 no	900.00	1,800
Inset basins	5 no	1000.00	5,000
New basin Barrier free with faucet	1 no	1000.00	1,000
WC Barrier free	1 no	1500.00	1,500
WC	7 no	1200.00	8,400
Urinal	1 no	900.00	900
Drinking fountain	2 no	1000.00	2,000

CONSTRUCTION COST ESTIMATE

Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
Grab bars (jncl Fittings)	0 no	350.00	0
Shower incl tray, head etc.	2 no	1300.00	2,600
Rough in for sink / basins	12 no	400.00	4,800
Rough in for dishwasher	1 no	400.00	400
Rough in for fridge	3 no	400.00	1,200
Rough in for WC	8 no	400.00	3,200
White Goods / Kitchen Appliances			
Dishwasher (refer Equipment)			
Fridge (refer Equipment)			
TOTAL C11 Plumbing & Drainage	**1,997 m2**	**79.14**	**158,050**
C12 Fire Protection			
Sprinkler to Office			
New sprinkler installation	1,997 m2	35.00	69,897
Standpipe system			
Notional allowance - hangers	1 no	3000.00	3,000
Miscellaneous			
fire extinguishers - allowance	1 sum	1000.00	1,000
TOTAL C12 Fire Protection	**1,997 m2**	**37.00**	**73,897**
C13 HVAC			
Indoor Air Handling Unit	1 sum	120000.00	120,000
Outdoor Condensing Unit	1 sum	80000.00	80,000
Ductwork	1,997 m2	40.00	79,882
Diffusers and grilles	21 no	160.00	3,360
Exhaust fans	10 no	1000.00	10,000
Kitchen hood exhaust	1 no	1700.00	1,700
VAV Units			
Fan coil units	1 sum	3000.00	3,000
gas piping	100 m	100.00	10,000
Water supply and return	100 m	500.00	50,000
silencers - notional allowance	1 sum	2000.00	1,000
exterior insulation - assume not required			
Heating Devices			
Perimeter radiation			
heaters - notional allowance	1 sum	20000.00	20,000
Fire and motorized dampers	1 sum	3000.00	3,000
Miscellaneous			
testing and balancing	1 sum	12000.00	12,000
fuel oil system- Not required			
commissioning - No allowance			
fuel oil system- Not required			
commissioning - No allowance			
TOTAL C13 HVAC	**1,997 m2**	**197.26**	**393,942**

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CONSTRUCTION COST ESTIMATE

Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity		Rate	Amount
C14 Controls				
Controls allowance	1	sum	60000.00	60,000
computer hardware, software and programming- not included				
TOTAL C14 Controls	1,997	m2	30.04	60,000
TOTAL C1 MECHANICAL				685,889
C2 ELECTRICAL				
C21 Service & Distribution				
Normal Power	1,997	m2	30.00	59,911
Allowance		m2		0
Permits, inspection, testing and job setup (refer below)		sum		0
Emergency Power	1	sum	30000.00	30,000
Panels, Splitters	1	sum	25000.00	25,000
Rough in - core holes	1	sum	2000.00	2,000
Notional allowance - hangers	1	sum	2000.00	2,000
Metering allowance	1	sum	1500.00	1,500
Wiring to Mechanical	1	sum	3000.00	3,000
Permit, inspection, testing, job set up	1	sum	3000.00	3,000
TOTAL C21 Service & Distribution	1,997	m2	63.30	126,411
C22 Lighting, Devices & Heating				
Lighting layout	1,997	m2	100.00	199,705
Allowance for Higher grade light fixtures to Training Rooms, Boardrooms, Meeting Rooms c	1	sum	20000.00	20,000
Exterior lighting to Building	10	no	950.00	9,500
Lighting on roof	1	sum	3000.00	3,000
LV switch lighting	1	sum	2500.00	2,500
Power				
Power	1,997	m2	32.00	63,905
Power in Common areas:				
Not applicable		m2	32.00	0
Heating				
Notional allowance	1	sum	6000.00	6,000
Power to Auto doors	2	no	750.00	1,500
Push button to Auto doors	2	no	250.00	500
Wiring to snow melt	1	sum	1000.00	1,000
TOTAL C22 Lighting, Devices & Heating	1,997	m2	154.03	307,610

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CONSTRUCTION COST ESTIMATE

Interior Work

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
C23 Systems & Ancillaries			
Fire alarm	1 sum	15000.00	15,000
Allow for annunciator c/w wiring	1 no	2000.00	2,500
Allowances for fire alarm testing, etc.	1 sum	5000.00	5,000
Security			
Allowance	1 sum	40000.00	40,000
Communication			
Racks, patch panels, switches & cabling	1,997 m2	18.00	35,947
Data / Comms	1,997 m2	12.00	23,965
TOTAL C23 Systems & Ancillaries	**1,997 m2**	**61.30**	**122,411**
TOTAL C2 ELECTRICAL			**556,432**
TOTAL C SERVICES			**1,242,321**
NET BUILDING COST (EXCLUDING SITE)			**3,231,793**
Z1 GENERAL REQUIREMENTS & FEE			
Z11 General Requirements			
General Requirements (refer Financial Summary)	ls		0
TOTAL Z11 General Requirements			**0**
Z12 Fee			
Fee (refer Financial Summary)	ls		0
TOTAL Z12 Fee			**0**
TOTAL Z1 GENERAL REQUIREMENTS & FEE			**0**
TOTAL CONSTRUCTION ESTIMATE EXCLUDING ALLOWANCES			**3,231,793**
Z2 CONTINGENCIES			
Z21 Estimating Contingency			
Estimating Contingency (refer Financial Summary)	ls		0
TOTAL Z21 Estimating Contingency			**0**
Z23 Construction Contingency			
Construction Contingency	ls		0
Total Z23 Construction Contingency			**0**
TOTAL Z2 CONTINGENCIES			**0**
TOTAL Z GENERAL REQUIREMENTS & CONTINGENCIES			**0**
TOTAL BUILDING COST INCLUDING ALLOWANCES			**3,231,793**

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64 Grand Avenue South, Cambridge, ON

Site Works

Date: September-19
Project No.: TBC

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Element		Elemental Amount	Cost / m2	Cost / sf	Amount	
D SITE & ANCILLARY WORK						
D1 SITE WORK			$186.62	$17.34		
D11 Site Development		$270,186	$135.30	$12.57		
D12 Mechanical Site Services		$51,500	$25.79	$2.40		
D13 Electrical Site Services		$51,000	$25.54	$2.37	$373,000	89%
D2 ANCILLARY WORK			$21.98	$2.04		
D21 Demolition		$0	$0.00	$0.00		
D22 Alterations		$43,900	$21.98	$2.04	$44,000	11%
NET BUILDING COST (Including Site)					$417,000	
Z GENERAL REQUIREMENTS & ALLOWANCES						
Z1 GEN. REQ. & FEE	0.0%		$0.00	$0.00		
Z11 General Requirements	0.0%	$0	$0.00	$0.00		
Z12 Fee	0.0%	$0	$0.00	$0.00	$0	0%
TOTAL CONSTRUCTION ESTIMATE (Excluding Allowances)					$417,000	100%
Z2 ALLOWANCES	0.0%		$0.00	$0.00		
Z21 Estimating Allowance	0.0%	$0	$0.00	$0.00		
Z22 Escalation Allowance	0.0%	$0	$0.00	$0.00		
Z23 Construction Allowance	0.0%	$0	$0.00	$0.00	$0	0%
GOOD & SERVICES TAX	0.0%	$0	$0.00		$0	0%
TOTAL CONSTRUCTION ESTIMATE (Including Allowances)					$417,000	100%
GFA	1,997 m²				$209	m²
GFA	21,496 Sq. Ft.				$19	Sq. Ft.

CONSTRUCTION COST ESTIMATE

Site Works

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
GROSS FLOOR AREA			
TOTAL GROSS FLOOR AREA	1,997 m²		
D1 SITE WORK			
D11 Site Development			
Strip, prepare, rough and fine grading	570 m2	2.00	1,140
Excavation to reduce levels / formation level	228 m3	4.00	912
Remove surplus soil from site	228 m3	20.00	4,560
Asphalt road	232 m2	50.00	11,597
Concrete road curbs	50 m	65.00	3,271
Concrete curbs paved areas (allowance only)	1 sum	1000.00	1,000
Paved areas	321 m2	90.00	28,902
Bedding to paved areas	321 m2	2.00	642
Car park lining	3 no	35.00	105
Barrier free symbol to car park	1 no	40.00	40
Retaining Walls			
Retaining wall foundations	44 m	600.00	26,400
Concrete to retaining walls	90 m3	225.00	20,142
Reinforcement to walls (125kg/m3)	11,190 kg	4.20	46,998
Formwork to retaining walls	448 m2	160.00	71,616
Extra for brick / masonry finish to retaking wall next to Building	59 m2	75.00	4,410
Extra for fair finish to retaining wall (both sides)	330 m2	25.00	8,250
Capping to retaining wall	44 m	150.00	6,600
External Stairs			
Concrete stairs from external sidewalk to main Entrance, approx. 3, wide x 8m length (on plan)	1 no	5000.00	5,000
Balustrading to one side	9 m	900.00	8,100
Soft Landscaping			
Soft landscaping / planting (notional allowance only)	1 sum	1000.00	1,000
Planters	1 sum	2000.00	2,000
Trees - semi mature	2 no	500.00	1,000
Irrigation allowance	1 sum	2000.00	2,000
Bike racks	1 sum	3000.00	3,000
Bollards	2 no	750.00	1,500
Building Signage - notional allowance (no details)	1 sum	10000.00	10,000
TOTAL D11 Site Development			270,186

CONSTRUCTION COST ESTIMATE

Site Works

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
D12 Mechanical Site Services			
Storm			
Connect to existing mains	1 no	5000.00	5,000
Manholes	1 no	4500.00	4,500
Drainage pipework	20 m	250.00	5,000
Catch basin	2 no	3000.00	6,000
Sanitary			
Connect to existing mains	1 no	5000.00	5,000
Manholes	1 no	4500.00	4,500
Drainage pipework	20 m	250.00	5,000
Water service			
Connection to Water			
Connect to existing mains (N/A)	1 no	5000.00	5,000
Water pipework	20 m	200.00	4,000
Fire hydrant	1 no	5000.00	5,000
Concrete block thrust	1 no	2500.00	2,500
TOTAL D12 Mechanical Site Services			**51,500**
D13 Electrical Site Services			
Electrical connection	1 no	30000.00	30,000
Conduit entry into building	1 sum	10000.00	10,000
Lamppost lighting to car park, single headed pole	2 no	3000.00	6,000
Allowance for new manhole	1 no	5000.00	5,000
TOTAL D13 Electrical Site Services			**51,000**
TOTAL D1 SITE WORK			**372,686**
D2 ANCILLARY WORK			
D21 Demolition			
No work			0
TOTAL D21 Demolition			**0**
D22 Alterations			
Create opening in existing external wall for new glazing (included elsewhere), approx. size 10m wide x 9.80m high, inclusive of all temporary propping	1 sum	10000.00	10,000
Allowance for miscellaneous removal (no details, notional allowance only)	1 sum	2000.00	2,000
Removal of existing roof covering to Lower Roof	792 m2	25.00	19,800
Removal of existing roof covering to Higher Roof	484 m2	25.00	12,100
TOTAL D22 Alterations			**43,900**
TOTAL D2 ANCILLARY WORK			**43,900**
TOTAL D SITE & ANCILLARY WORK			**416,586**
NET BUILDING COST (INCLUDING SITE)			**416,586**

ENERGY+
OFFICE RENOVATION
Class C Consruction Cost Estimate & Commentary on OEB Decision
for Advanced Capital Module
64 Grand Avenue South, Cambridge, ON

CONSTRUCTION COST ESTIMATE

Site Works

Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

Description	Quantity	Rate	Amount
Z1 GENERAL REQUIREMENTS & FEE			
Z11 General Requirements (refer Financial Summary)			
TOTAL Z11 General Requirements			0
Z12 Fee (refer Financial Summary) TOTAL Z12 Fee			0
TOTAL Z1 GENERAL REQUIREMENTS & FEE			0
TOTAL CONSTRUCTION ESTIMATE EXCLUDING ALLOWANCES			416,586
Z2 CONTINGENCIES			
Z21 Estimating Contingency			
Estimating Contingency (refer Financial Summary)	ls		0
TOTAL Z21 Estimating Contingency			0
Z23 Construction Contingency - refer Financial Summary			
Construction Contingency	ls		0
Total Z23 Construction Contingency			0
TOTAL Z2 CONTINGENCIES			0
TOTAL Z GENERAL REQUIREMENTS & CONTINGENCIES			0
TOTAL BUILDING COST INCLUDING ALLOWANCES			416,586

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Gross Floor Area (m²): 1,997
Gross Floor Area (sf): 21,496

Date: September-19
Project No.: TBC

7.0 Allowances

Description	Quantity	Rate	Amount
GROSS FLOOR AREA			
TOTAL GROSS FLOOR AREA	1,997 m²		

ALLOWANCES	

Allowances - as per Melloul Blamey Class C Estimate (not included in CBRE Construction Estimate)

1)	Testing & Inspection	1 sum	10000.00	10,000
2)	Commissioning	1 sum	5815.00	5,815
3)	Soils Remediation	1 sum	100000.00	100,000
4)	Pre-Construction Services Fee	1 sum	30000.00	30,000
5)	LEED Consultant (included in Professional Fees)	1 sum	0.00	0
	TOTAL ALLOWANCES			145,815

8.0 Basis of Costs

Gross Floor Area SF	21,496
Elemental Construction Scope	
Substructure	Amendments to existing substructure for new pad foundations to support mezzanine floor
Structure	New mezzanine floor within existing structure. Strengthening to existing roof structure
Exterior Enclosure	Re-pointing to existing masonry (50% area allowed). New glazed frontage to Building. Replacement of existing windows, new external doors. Replacement of existing roof coverings.
Partitions & Doors	Drywall partitions, with glazed partitions and glazed screens where shown. New solid core single leaf doors and glazed doors to Office fronts.
Finishes	New Gypsum board ceiling to 50% of area. New carpet floor finish and vinyl flooring with new baseboards. Paint to Drywall and wall tiling to Washrooms and Lunchroom
Fittings & Equipment	Millwork to Reception, Millwork allowance, Kitchen cabinetry. Inclusions for microwave, dishwasher, fridge. Credenzas to Boardrooms
Mechanical	Plumbing fixtures including WC's, wash basins, and sinks. New hot water boilers, heaters and equipment, ductwork, fans, new sprinkler installation and controls.
Electrical	Communication outlets to Work areas, mechanical wiring, lighting, with an allowance for higher spec lighting to Training Rooms, Boardrooms and Meeting Rooms. Fire alarm testing. Power distribution and security installation.
Site Work	Car parking surfacing, new retaining walls, external stairs, soft and hard landscaping to applicable site boundary.
Ancillary Work	Alteration work to remove existing roof covering and form opening in existing Elevation for new glazed frontage.
General Requirements	An allowance has been made for the General Contractors site establishment, staffing, attendance on sub-contractors, temporary services and plant required to complete the project
Allowances	Testing & Inspection, Soils Remediation, Pre-Construction Services Fee, Commissioning

APPENDIX C
FORM A

FORM A

Proceeding: EB-2019-0180

ACKNOWLEDGMENT OF EXPERT'S DUTY

1. My name is NEIL KELSEY (*name*). I live at BURLINGTON (*city*), in the ONTARIO (*province/~~state~~*) of CANADA .

2. I have been engaged by or on behalf of ENERGY + (*name of party/parties)* to provide evidence in relation to the above-noted proceeding before the Ontario Energy Board.

3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
   (a) to provide opinion evidence that is fair, objective and non-partisan;
   (b) to provide opinion evidence that is related only to matters that are within my area of expertise; and
   (c) to provide such additional assistance as the Board may reasonably require, to determine a matter in issue.

4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

Date SEPT 12, 2019

N. K

Signature