



Zero by Degrees LLC

Energy Independence in Affordable Steps

March 28, 2016

Dean Bloch
Town of Charlotte
P.O. BOX 119
Charlotte, Vermont 05445
dean@townofcharlotte.com

Cc: Suzy Hodgson
suzyhodgson@gmavt.net

Re: Senior Center Envelope Audit

Dear Dean,

Thank you for contacting Zero by Degrees, LLC for a quote for a building envelope audit for the St. Senior Center in Charlotte, VT. Based on our discussion and RFP dated 3-17-16, I propose the following:

Envelope Audit:

1. Conduct an infrared scan and blower door test of the building to determine the continuity of the thermal and air barrier. Please note: infrared and blower door testing will be conducted outside of normal business hours.
2. Review the present fuel and kWh consumption data to benchmark the building against other buildings of similar type.
3. Interview the building operator to understand any past envelope failures such as water leaks, cold areas, ice dams, mildew, sheetrock failures or condensation.
4. Obtain measurements of the building from plans and/or the site.
5. Through site visit and plan review determine the functional R-value in each part of the building including windows and doors to see if the R-value can be improved.
6. Conduct all the required BPI health and safety tests to insure that the building is operating safely now and to anticipate any impacts on health and safety that may occur with improvements to the building.
7. Create a HERO model through Efficiency VT to determine possible rebates that are available for each envelope improvement measure that is considered.
8. Create an energy model of the building and reconcile it with actual consumption as a basis for predicting energy savings for envelope improvements.

Presentables:

1. A written report of the findings, recommendations, predicted energy savings, and predicted costs (including possible rebates) for envelope improvements. This report will also be the foundation of a long-term energy plan for the building.
2. A DVD copy of the infrared scan images.
3. A follow up meeting in the Town of Charlotte to answer questions about the report.

Follow Up Audit:

1. After envelope improvement measures have been made we will conduct a follow up audit to verify the envelope has improved and to conduct all the required BPI health and safety tests to insure that the building is operating safely.
2. This audit is required to finalize the EVT incentives.
3. A written follow up report with the results of the audit and any recommendations.
4. The follow up audit will be completed by December 31, 2016 provided that the envelope improvement measures are complete by December 1, 2016. This will allow enough time for scheduling the audit with our other work.

Prices:

For the envelope audit and presentables.....\$3,750.00

For the follow up audit.....\$910.00

Audit Schedule:

<u>Project milestone</u>	<u>Completion date</u>
Bid award	April 12, 2016
Site data collection and testing. Anticipate 1 day on site starting at noon and working until 8 or 9 pm.	Week of April 18- 22, 2016. Exact day TBD
Data analysis and report	Week of April 25- 29, 2016
Audit report to Town by email	April 29, 2016 by 4 pm.
Follow up meeting in Charlotte to answer questions about the report	May 2016. Exact day TBD.
Envelope improvements complete by others no later than...	December 1, 2016
Follow up audit data collection. Anticipate 1 day on site starting at 2pm and working until 5 or 6 pm.	December 1- 20, 2016. Exact day TBD
Follow up audit report Town by email	December 31, 2016 by 4 pm.

Notes:

1. All heating systems, AC, and ventilation systems will have to be turned off during blower door testing.
2. Blower door testing (air tightness testing) requires that all exterior doors and windows remain closed and all interior doors remain open for about 3 hours. For this reason testing is typically done during off peak hours. One representative of the building owner may need to be present during testing to provide access to locked areas and for building security.
3. Zero by Degrees is an independent testing and auditing firm. Our services include testing, auditing, building analysis, and reporting. Z by D does not provide construction, insulation, or air sealing services. Those services may be required after the envelope audit and will need to be contracted through a separate firm. Z by D can recommend qualified firms for this work.

- 4. Testing and analysis is limited to the scope described above. Revealing the root cause of some envelope deficiencies may involve a combination of nondestructive *and* destructive inspection methods. Additional testing beyond the scope described above requires prior authorization and is billed at our standard rates (\$130/hr.)

Terms:

Payment due within 30 days of the final invoice. Additional scope beyond what is described above requires prior authorization and will be billed at standard rates (\$130/ hour).

Please don't hesitate to call if you have any questions regarding these services. If you wish to contract with Zero by Degrees to perform this work, please sign below. I will schedule this testing pending receipt of the signed proposal and proper weather conditions.

Sincerely,

Jon Haehnel
Zero by Degrees, LLC

Name (please print)	Title
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Signature	Date
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The Owner(s) or other authorized agents, by signing this Project Agreement, accept the terms and conditions in the referenced proposal for all of the Owners, and grant Zero by Degrees LLC the right to use photos, drawings, and other project information for promotional use.