

**Middlebury Police Adaptive Reuse
Middlebury, Vermont
STRUCTURAL ENGINEERING
May 29, 2019**

Project Understanding

The current project includes renovation of the former Sand Filter Building and Control Building, design of foundation for a prefabricated Blast Building and a window infill at the Police Department meeting room. Based on cost estimates prepared by Mark Erickson, we undertested the target project budget to be \$1,000,000. Also, based on the VIA architectural proposal we understand the design schedule will run from June to November 2019 and construction will be over 18 weeks in 2020.

Fee Proposal

Schematic Design	\$1,500
Design Development	\$4,500
Construction Documents	\$5,500
Construction Administration	\$3,500
Total	\$15,000

Scope of Work

Engineering Ventures will provide WORK consisting of:

1. Review of the Geotechnical report to incorporate geotechnical engineering recommendations into final foundation design.

If soils information is not available, footing and slab design will be based on presumptive allowable bearing pressures and are to be confirmed at the time of construction by others: a testing agency or geotechnical engineer.

2. Analysis and design of the primary structural framing the building.
3. Design meetings at your office. Approximately 2 design phase meetings are anticipated over the design phase.

4. Drawings and specifications for our portion of the work.
5. Consultation during bidding and construction will be provided including issuance of addenda and clarifications as required.
6. Review of specified contract submittals including shop drawings, product data and samples. Review shall only be for conformance with the design concept and for compliance with the information given in the plans and specifications.
7. Site visits at appropriate intervals to review construction in progress including a final punch list. Up to 3 visits are included. Additional site visits, including a site visit report, can be provided at \$800 per visit.

ASSUMPTIONS AND EXCLUDED SERVICES

The following assumptions are presented in order to more clearly delineate Engineering Ventures' Scope of Work.

1. **Geotechnical Engineering:** It is understood that, if required due to program needs, a geotechnical engineer will be employed on the project by others to provide soil testing and a geotechnical report. The geotechnical report shall be provided to Engineering Ventures and shall include recommendations for bearing capacity, lateral load characteristics, Seismic Site Classification as per the IBC Code, drainage requirements and other relevant subsurface information.
2. **Foundation Design:** Engineering Ventures' Scope of Work assumes the building will be supported on a conventional spread footing foundation.
3. **Construction Cost Estimating and Value Engineering:** Cost estimating is not included as part of our work. We anticipate consulting with the project Construction Manager or Professional Cost Estimator to assist them in developing Construction Cost Opinions. Redesign of the project after the Design Development Phase to reduce the project cost is not included.
4. **Site Engineering, Site Structures, and Utilities:**
 - a. Design of cast-in-place concrete retaining walls that are connected to and within 15 feet of the building will be included on Engineering Ventures' drawings. Site retaining walls detached from the building are not included.
 - b. Light pole bases, equipment pads, sidewalks, curbing, paving, plazas, and other site features are not included.
 - c. Entry sidewalks immediately adjacent to exits are included in our work. We will work to coordinate with the site engineer at the interface between the entry structures and the sidewalks.

- d. Site engineering including grading, drainage, stormwater, and utilities is not included in our scope of work.
 - e. It is understood that existing utilities on the site will be identified by others. Where new or existing utilities are located under or near the building, this shall be brought to Engineering Ventures' attention for resolution. Modification of the foundation design to accommodate utilities under the building will be provided as an additional service.
5. Exterior Skin:
- a. Where Light Gage Metal Framing (LGMF) is utilized for exterior wall systems, a performance specification will be developed to allow the selected manufacturer to design and detail wall framing. LGMF shop drawings prepared by the manufacturer's engineer will be reviewed under our work.
 - b. The design of exterior walls of wood frame, masonry, or concrete is included in our work.
6. Architectural Features: Design and detailing of miscellaneous light framing including railings, stairs, and custom and specialty framing and features is not included.
7. Progression of Design:
- a. Architectural drawings, Architectural background CAD files compatible with AutoCad/REVIT 2019, mechanical engineering, and civil engineering progress prints, reports, sketches, plans, sections, and details as appropriate to describe the intent of the project are to be provided to Engineering Ventures in a timely manner consistent with the project schedule.
 - b. Our services include review of a customary range of system options during the schematic phase. Redesign or work beyond customary review of options during initial phases of the project are not included.
 - c. It is assumed that all disciplines will be progressing at a similar pace and release of structural drawings prior to architectural drawings or other disciplines will not be required.
 - d. In order to allow Engineering Ventures to provide a Final Quality Control/Quality Assurance Review of the structural drawings, adequate time after the completion of other disciplines shall be provided prior to the release of structural drawings for construction.
8. Mechanical Systems/Unique Equipment/Special Loads:
- a. Information regarding special building loads including mechanical equipment to be supported by the structure, elevators, shall be provided to Engineering Ventures in a timely manner. Information shall include: location, weight and/or forces applied to the building, dimensions, and support requirements.
 - b. Where Special loads for architectural elements, special equipment, or unique uses

are required, they shall be brought to the attention of Engineering Ventures.

- c. Design of supports or seismic bracing for ductwork, piping, or miscellaneous mechanical elements is not included.

9. Existing Buildings:

- a. In order for Engineering Ventures to document existing conditions, removal of finishes will be required. It is assumed that cutting of holes in the existing building to observe the existing structure and repair of these holes and openings will be provided by others.
- b. Where existing conditions drawings, reports, or other information related to the work is available, copies shall be made available to Engineering Ventures.
- c. Review of the existing structure for new snow drift loads by proposed additions is not included.
- d. Design of reinforcing of the existing structure to support new snow drift loads will be provided as an additional service, if needed.
- e. Review of the impact of additions and renovations on the existing structure for conformance with the current seismic code is not included.
- f. Design of reinforcing of the existing structure to meet current seismic code requirements will be provided as an additional service, if needed.

10. Steel connections will either be shown on the contract drawings or loads will be provided to allow the steel fabricator to design the connections. Steel connections not detailed on the drawings, or alternate connections to those detailed on the construction drawings shall be designed by the fabricator's engineer. The details and calculations shall be submitted for review and will be required to be stamped by a Professional Engineer.

11. Special Inspections: A Schedule of Special Tests and Inspections in accordance with the International Building Code will be prepared. Testing and Inspection shall be performed by others.