



Town of Bristol

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**SCOPE OF WORK
FOR THE
LINCOLN ROAD RIVERBANK WASHOUTS REPAIR**

I. BACKGROUND

There are two riverbank slides on Lincoln Road along the New Haven River. The first occurred six or seven years ago when high water took out rocks from below. The rest fell from above over time. This is approximately the same dimension as the second slide, but deeper. The second slide probably occurred during the Halloween 2019 storm. According to Stream Alteration Engineer Jaron Borg, "[t]he dimensions of the failing revetment are approximately 70-foot in length and 25-feet in height. Failing soils were noted 10 feet from the paved surface with an toe of slope estimated at 20 feet from the travel lane. Further failure of the riverbank threatens to undermine Lincoln Road."

GPS coordinates for 1st wash: 44.07627, -073.02642

GPS coordinates for 2nd wash: 44.07461, -073.02178

This project will be funded, in part, through VTrans Structures Grant Agreement #BC2106 and the standard VTrans contract requirements will apply.

II. SCOPE OF WORK

An environmental engineer would be hired to design a plan to stabilize the riverbank, prepare the permit documents, prepare construction specifications, etc. The engineer would assist the Town in securing the necessary VT Stream Alteration Permit, federal Corps of Engineers permit, and local floodplain permit. The project would then be put out to bid for construction. The engineer would provide construction inspection services and prepare the necessary certifications of compliance.

General tasks to include:

- Review the VTrans requirements;
- Perform a site inspection;
- Prepare design drawings for repairs / mitigation steps outlined in the attached correspondence;
- Secure necessary permits;
- Prepare bid package for construction; and
- Oversee construction.

III. SCOPE OF SERVICES

Task 1.0 – Data Review and Collection

- 1.1 Review the existing standard VTrans contract requirements.
- 1.2 Perform a site inspections to assess damages first-hand of the two sites and to gather information for design.
- 1.3 A survey of the sites may be necessary. If so, this will need to be subcontracted.

Task 1.0 Deliverables:

- Existing information (PDF)
- Field notes and photographs (PDF)
- Survey data (XLS, PDF)
- GIS sketch plan (PDF)
- Cost opinion (PDF)
- Memorandum (PDF)

Task 2.0 – Design

- 2.1 Prepare final designs for the riverbank restoration. Plan sheets will include title, existing conditions, proposed conditions, and construction details. A project manual and formal specifications are not anticipated. All specifications will be referenced on the design plans.
- 2.2 Prepare an engineer’s opinion of probable construction cost.
- 2.3 Meet with the project team to review the final design plans.
- 2.4 Respond to comments and make one (1) round of edits to finalize the plans and opinion of probable construction cost.

Task 2.0 Deliverables:

- Draft and final design plans (PDF)
- Draft and final cost (PDF)

Task 3.0 – Permitting

- 3.1 Prepare an application for the US Army Corps of Engineers Programmatic General Permit.

- 3.2 Prepare an application for the State of Vermont Stream Alteration Permit.
- 3.3 Prepare an application for a Town of Bristol floodplain/zoning permit.
- 3.4 Attend a site visit to review the plans with the regulators.
- 3.5 Respond to comments and make one (1) round of edits to finalize the plans and opinion of probable construction cost.

Task 3.0 Deliverable

- Submitted permit applications or self-verification letters (PDF)
- Updated final design plans (PDF)
- Updated final cost (PDF)

Task 4.0 – Bid Phase Services

- 4.1 Prepare a request for bids that summarizes the key project details and permit requirements and a bid sheet that will be submitted by Contractors with their bid information. Post the bid to the Vermont Bid System website. We anticipate that this will be a simple bid announcement on SLR or Town template, and not a formal project manual.
- 4.2 Participate in a pre-bid site walks.
- 4.3 Respond to bidder questions. Addenda will be issued to the bid as needed.
- 4.4 Prepare a bid tabulation to assist with review of the bids. Check bidder references as needed to assist with contractor selection. Check references and make hiring recommendation to the Town for approval.

Task 4.0 Deliverables:

- Request for bids and bid sheet (PDF)
- Notes from the pre-bid site walk (PDF)
- Addenda and response to bidder questions (PDF)
- Bid tabulation and hiring recommendation (PDF)

Task 5.0– Construction Phase Services

- 5.1 Coordinate execution of the construction contract. We anticipated that the Town will provide their contract documents as the project owner.
- 5.2 Communicate with the Contractor, Town, State, and others during construction.

5.3 Review and comment on submittals such as construction sequence, water control plan, and safety plan.

5.4 Participate in a pre-construction site walk to review design plans with the selected Contractor and issue a notice to proceed.

5.5 Observe progress and review construction work for design and permit compliance. We anticipate approximately ten (10) site visits over a construction period of one month and thus a member of our team will be on site two to three times a week. Visits will range between 2 and 4 hours.

5.6 Prepare a construction observation report and email to the project team within 24 hours of a site visit. The report will summarize the day's activity and include photographs.

5.7 Participate in a post-construction site walk. Review punch list items to ensure the project is complete.

5.8 Prepare a GPS-based post construction plan to document construction activities for the regulators and Town.

IV. EXCLUSIONS AND LIMITATIONS

The following services are not included in this proposal.

1. Permitting fees
2. Administrative front-end specifications and a Project Manual
3. Full-time resident engineering construction oversight
4. Post-construction monitoring
5. Borings and soil testing

V. SCHEDULE

The project must be completed, including construction, by December 31, 2023.

VI. GRANT AGREEMENT CONDITIONS

Attachments C, D, and E and Appendix E of VTrans Structures Grant Agreement #BC2106 are incorporated by reference.

The Town of Bristol is an equal opportunity provider and employer and does not discriminate on the basis of race, color, national origin, age, disability, religion, gender, or familial status.

Lincoln Road Bank Repair
6/28/2022

| | | Project Role | | | | | | | |
|-----------------------------------|--|-----------------|---------------|---------------------|-------------|-----------------|----------------|----------------|-----------------|
| | | Project Manager | Lead Engineer | Project Engineer/LA | Total Hours | Personnel | Travel | Printing/Other | Fee |
| MMI VT Preferred Rates and others | | \$170 | \$155 | \$110 | | | | | |
| 1.0 | Data Review and Collection | | | | | | | | |
| 1.1 | Review VTrans contracting | 1 | | | 1 | \$170 | | | \$170 |
| 1.2 | Site inspection | 4 | 4 | 4 | 12 | \$1,740 | \$120 | | \$1,860 |
| 1.3 | Survey | | 4 | 4 | 8 | \$1,060 | | | \$1,060 |
| | Sub-Total > | 5 | 8 | 8 | 21 | \$2,970 | \$120 | \$0 | \$3,090 |
| 2.0 | Design | | | | | | | | |
| 2.1 | Draft plans | 2 | 12 | 40 | 54 | \$6,600 | | | \$6,600 |
| 2.2 | Cost opinion | | 4 | 4 | 8 | \$1,060 | | | \$1,060 |
| 2.3 | Virtual meeting | 2 | 2 | 2 | 6 | \$870 | | | \$870 |
| 3.3 | Edits and final plans | 2 | 4 | 16 | 22 | \$2,720 | | | \$2,720 |
| | Sub-Total > | 6 | 22 | 62 | 90 | \$11,250 | \$0 | \$0 | \$11,250 |
| 3.0 | Permitting | | | | | | | | |
| 3.1 | Army Corps | | 4 | 4 | 8 | \$1,060 | | | \$1,060 |
| 3.2 | Stream Alteration | | 4 | 4 | 8 | \$1,060 | | | \$1,060 |
| 3.3 | Town of Bristol Zoning | 4 | | 4 | 8 | \$1,120 | | | \$1,120 |
| 3.4 | Site visit | 4 | 4 | 4 | 12 | \$1,740 | \$120 | | \$1,860 |
| 3.5 | Edits to plans | 2 | 4 | 16 | 22 | \$2,720 | | | \$2,720 |
| | Sub-Total > | 10 | 16 | 32 | 58 | \$7,700 | \$120 | \$0 | \$7,820 |
| 4.0 | Bid Phase Services | | | | | | | | |
| 4.1 | Bid announcement and bid sheet | 2 | 4 | 6 | 12 | \$1,620 | | | \$1,620 |
| 4.2 | Conduct pre-bid site walk | 4 | 4 | 4 | 12 | \$1,740 | \$120 | | \$1,860 |
| 4.3 | Respond to bidder questions and issue addendum | 6 | 2 | | 8 | \$1,330 | | | \$1,330 |
| 4.4 | Bid tabulation and contractor recommendation | 2 | | | 2 | \$340 | | | \$340 |
| | Sub-Total > | 14 | 10 | 10 | 34 | \$5,030 | \$120 | \$0 | \$5,150 |
| 5.0 | Construction Phase Services | | | | | | | | |
| 5.1 | Coordinate contracting | 2 | | | 2 | \$340 | | | \$340 |
| 5.2 | Coordinate with Town, regulators, and surrounding landowners | 2 | 2 | | 4 | \$650 | | | \$650 |
| 5.3 | Review shop drawings and submittals | 2 | 6 | | 8 | \$1,270 | | | \$1,270 |
| 5.4 | Conduct pre-construction site walk with contractor | 4 | 4 | 4 | 12 | \$1,740 | \$120 | | \$1,860 |
| 5.5 | Conduct construction observation (10 visits) | 30 | 30 | 30 | 90 | \$13,050 | \$1,000 | | \$14,050 |
| 5.6 | Prepare inspection reports and photo-document construction | 6 | 6 | 6 | 18 | \$2,610 | | | \$2,610 |
| 5.7 | Hold post-construction site walk | 4 | 4 | 4 | 12 | \$1,740 | | | \$1,740 |
| 5.8 | Prepare as-built GPS-based plan | | 8 | 8 | 16 | \$2,120 | | | \$2,120 |
| | Sub-Total > | 50 | 60 | 52 | 162 | \$23,520 | \$1,120 | \$0 | \$24,640 |
| | TOTAL | 85 | 116 | 164 | 365 | \$50,470 | \$1,480 | \$0 | \$51,950 |

