

Request for Quote

Mt Major Trail Sustainability Upgrade

Phase II



The Society for Protection of New Hampshire Forests (Forest Society), is requesting a quote to construct a new sustainable section of the Main Trail across the Forest Society owned Mount Major Reservation, in Alton NH.

We are seeking a professional trail builder to construct ~1,927 linear feet of new trail to bypass the existing eroded trail and highlight a more sustainable and aesthetic route through the contours of the hillside. In addition to phase one completed in 2020, this second phase will continue to allow hiking access to over 80,000 visitors per year, while reducing negative ecological impacts associated to soil erosion. We anticipate completing phase two in the summer & fall of 2023. We will consider proposals starting on-the-ground operations in summer of 2023. Layout, design, and trail construction specifications have been prepared for this project and are available as appendices to this document.

We strongly encourage the following proposal process:

1. Pre-visit meeting (Zoom or conference call).
2. Project site visit with Forest Society project manager.
3. Submit estimate and other selection criteria to project manager.

Interested contractors should email the project manager, Andy Crowley (Forest Society), to schedule a site visit and pre-visit meeting. Please do not visit the project site without first contacting the project manager.

Additional questions, inquiries, and requests for other details can be directed to:

Andy Crowley

Society for the Protection of
New Hampshire Forests
Stewardship Projects Manager
Email: acrowley@forestsociety.org

Timeline for submissions

The Forest Society will be accepting bids for Phase two of the Mt Major Trail Sustainability Upgrade until the **deadline of June 29, 2022**

When preparing the estimate, please include:

1. The attached Mt Major Trail Sustainability Upgrade - Phase II Estimate Sheet
 - a. Estimate for new trail corridor clearing of any trees (*Between Oct 2022 – Mar 2023*)
 - b. Estimate for new trail construction (*Between March and December 2023*)
2. List of equipment available to be used in the project
3. Estimated time-frame for project start and completion

Trail Construction Overview

The newly constructed trail section will be finished to the below design parameters. Prior to any clearing or groundwork, contractors will work with project manager to finalize trail construction specifications.

- **Trail Tread:** Six-foot wide tread. Constructed primarily of 3/4-inch minus size crushed stone surfacing throughout the proposed route at a minimum depth of 6 inches. Outsloped treadway at 2%-5%
- **Erosion Control:** Follow guidelines for out-sloping, waterbars, grade reversals, and other erosion control devices in Best Management Practices: NH Trail Construction and Maintenance Manual (2017). See attached Best Management Practices.
- **Equipment:** This project will require machinery specialized in handling the rocky terrain of Mt Major. Qualified contractors must have documented experience working with this type of equipment in this type of terrain, while keeping the naturalistic character of a trail. Typical equipment may include: 5 ½ foot-wide track carrier, mini track loader, excavator under 10k lbs, skid steer loader, vibratory roller and/or plate compactor, and generator.
- **Material Staging:** Construction of this trail will require a secured staging area for storing materials and equipment at the trailhead parking area. Materials can be delivered with triaxle trucks, and multiple deliveries may be made daily. For the safety of the contractors and the general public, closing of the parking lot to the public is required during the project. The Forest Society will provide locked construction fence at the entrance to the parking lot. Fencing should not be included in your quote.

Project Quantities

The table below summarizes the proposed number of items required for construction of phase two. Use this table as a basis for construction estimates.

Item	Unit	Quantity	Description
Corridor Clearing	Linear Feet	1,927	Clearing limits
Full Bench Cut	Linear Feet	1,835	Excavated treadway
Trail Surfacing	Cubic Yards	214	Trail tread to be surfaced throughout
Stone Steps	Each	79	Sourced off-site. Installed with gargoyles
Stone Cribbing	Square Feet	949	Installed along trail edge to elevated tread where defined
Total length: 1,927 linear feet			

Requirements

1. Contractor must follow best management practices described in Best Management Practices for NH Trail Construction and Maintenance.
2. Contractor and crews must wear appropriate PPE at all times on the work site
3. No field-servicing of equipment is permitted on site at Mt Major Reservation
4. Bids must remain 'valid' through December 2022
5. Any cutting of trees within the trail corridor must be done between October 2022 and March 2023

Anticipated Scope of Work

Construct ~1,927 feet of new rolling contour trail to replace existing eroded fall-line trail section. See work log for specification and detail. Contractor is responsible for all labor, materials & material delivery, and other supplies required to construct the trail section. The anticipated scope of work is further detailed below. Prior to any clearing or groundwork, contractor will work with project manager to finalize routes, clearing limits, and construction specifications that meet or exceed the route proposed in the work log. In observance of the [Endangered and Threatened Wildlife and Plants; 4\(d\) Rule for the Northern Long-Eared Bat](#), any cutting/removal of trees must be done between October 1, 2022 and February 28, 2023. Contractor is not responsible for providing parking lot fencing for material/equipment storage, but is responsible for securing materials and equipment within. All construction material and debris must be removed and swept from the parking area as part of the project phase close-out upon completion of the new trail section.

Closeout of the existing trail section is not included in the scope of phase two, however contractors are welcome to submit a separate bid and proposal. This separate bid will not influence our contractor selection for the new trail construction in phase two and is completely optional.

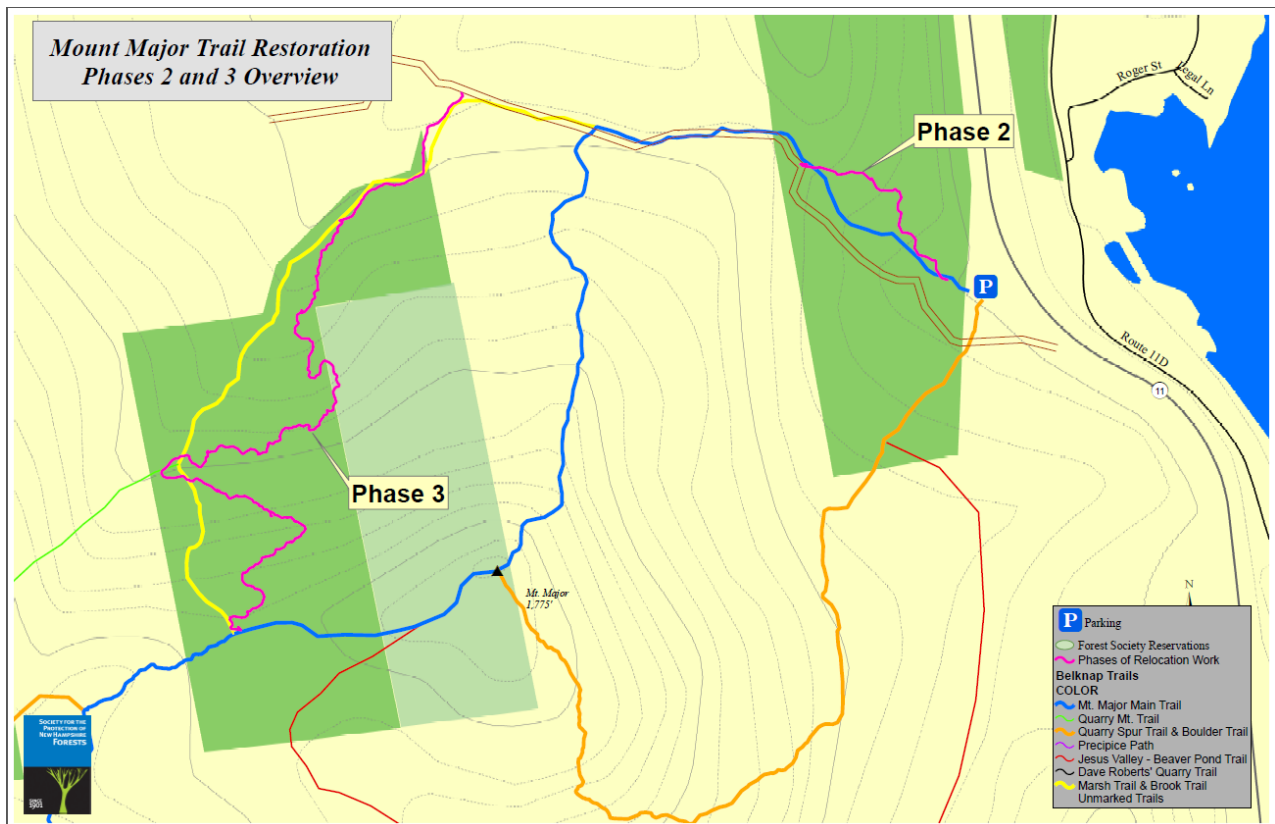
Construct New Trail

New construction of rolling contour trail to replace existing fall line trail following the supplied specifications and layout. Contractor should anticipate a mix of mechanized and hand crew construction across the proposed route.

Phase 2 begins ~242 linear feet from the parking lot, following a proposed route for 1,927 linear feet and reconnecting to the upper junction of the existing Main Trail. See attached georeferenced map.

- **Route:** Rough alignment for this segment has been flagged. Contractor will finalize route location and should anticipate modifying and fine-tuning the alignment. Final route to be approved by Forest Society project manager.
- **Tread:** No tread has been cleared. Contractor responsible for tread and trail bed construction. Contractor should anticipate mostly bench-cut construction with an outsloped tread. Some areas will require a crowned tread. Imported trail surfacing is required throughout the entire proposed trail. The tread width for the proposed trail is 6 feet unless otherwise noted in the work log. Any stones found during excavation can be used for stone cribbing or crushed for backfill. Where crush material is needed, install 1-1/2 inch to 2-inch sized crushed stone at the required depth. Install a 4 oz. nonwoven geotextile fabric on top of the crushed stone or compacted mineral soil.
- **Trail Surfacing:** Surfacing for the Mount Major trails are specified at 3/4-inch minus size crushed stone to increase resistance to displacement. Surfacing should be installed at a minimum 6" depth – compacting in lifts. Surfacing should be crushed rock processed in a quarry, be angular in character, and be a mixture of sieve sizes.
- **Steps, Gargoyles, and Crib Stone:** Phase two will require 79 stone steps with gargoyles to reduce the running grade of the trail and to harden the tread surface to increase sustainability. The recommended stone step width is 5 feet. To further reduce the running grade and stabilize the treadway, 949 square feet of stone cribbing will need to be installed. The stone cribbing ranges in height from 1-foot to 4-feet tall. Contractor should plan to import all stone for steps, gargoyles, and crib stone. Local stones and boulders must remain in place to maintain the natural aesthetic of the location as much as possible.
- **Corridor:** The route has been flagged, but no corridor has been cleared. Contractor to clear trail corridor. Please provide a separate estimate & timeline for the corridor clearing that requires tree removal on the estimate sheet.
- **Crossings:** There are no water/wetland crossings in the proposed route for phase two.
- **Access:** Heavy equipment access from NH Route 11 via the paved Mt Major parking area (DOT District 3). Care must be taken when crossing through phase one to access phase two with heavy equipment. Damage to treadway of phase one section must be touched up/repaired once construction is completed as part of the phase two closeout.

**Mount Major Trail Restoration
Phases 2 and 3 Overview**



Closure of existing section of Main Trail – Optional Separate Bid

The Society for the Protection of New Hampshire Forests is also soliciting separate bids for the closure of the existing ~1050' section of trail to deter further use and encourage visitors to utilize the new sustainable upgrade section. The goal of this closure is two-fold:

1. Prevent further erosion and environmental impact by reducing and slowing the force of water by means of machine-built checks, swales, and wide dispersal of water
2. Deter visitors from attempting to hike the former section by use of visual, physical, and psychological obstacles to encourage use of the newly created section of trail.

Complete closure of the existing trail must be completed by October 1, 2023. If interested, please submit a separate quote and proposal along with the quote for the new trail construction described herein.

Note:

This separate bid will not influence our contractor selection for the new trail construction in phase two.

References

State of New Hampshire. 2017. Best Management Practices for NH Trail Construction and Maintenance. UNH Cooperative Extension, Durham, NH.

USDA Forest Service. 2016. Trail Fundamental and Objectives. Report 1623-3801-MTDC.

Endangered and Threatened Wildlife and Plants; 4(d) Rule for the Northern Long-Eared Bat