

Medway Community Forest Cooperative Ltd.

Campground Trail Network Construction



Proposals due: January 19, 2021 by 4:30 PM AST

Submission details: Submit proposal to MCFC Executive Director, Mary Jane Rodger via email (maryjane@medwaycommunityforest.com)

Background:

The Medway Community Forest Co-op (MCFC) is a member-based crown land licensee of 15,000 ha operating under principles of ecological forestry and multi-value forest management, building resiliency by restoring Wabanaki-Acadian forests rather than managing for market forces. We aim to promote the multiple values of forests (timber, non-timber forest products, recreation, education, research, etc.) to diversify local economies and support rural communities with a core focus on resiliency. The MCFC manages a license area that can be used to test ecotourism revenue streams on Crown land in Nova Scotia. The MCFC is located in a region that is well suited to recreation, sharing property boundaries with the Tobeatic Wilderness Area, the Medway Lakes Wilderness Area and Kejimikujik National Park and National Historic Site.

The MCFC is seeking to procure trail construction for the development of a network of accessible and footpath-style trails in the Stave Lake region of the MCFC license area, between Maitland Bridge and South Milford in Annapolis Co. The MCFC signed a Letter of Authority with the Department of Natural Resources and Renewables (then Lands and Forestry) in 2020 and are fully approved to begin construction as soon as possible. The trail network will provide recreational amenities to the public and users of the MCFC campground, which will be constructed in the area at a later date.

Objectives:

We recommend that any interested bidders visit the trail location and walk the proposed trail prior to submitting a bid. Bid prices should include any projected costs related to boardwalk construction (if necessary) excluding the price of lumber, which can be provided by MCFC at no cost to the successful bidder.

The site offers a plethora of landscape features including unique water and rock formations encompassed within a diverse old growth Acadian forest. The trail extends through a mature, mid-successional mixedwood stand of white pine, red and black spruce, balsam fir, white and yellow birch, and red maple. The mixed age forest has a diversity of wildlife habitat attributes supporting an abundance of animals, understory vegetation, and fungi. The proximity to Lower Stave and Stave Lakes has the trail passing through low-lying wet areas between the lakes where a boardwalk will be required.

At times, the construction of trails will involve resurfacing, redirecting, and brushing to clear the route and danger trees. The trails should follow and meander naturally around the topography,

removing as few trees and with as little ground disturbance as possible. Each trail will be constructed to a unique standard applicable to its primary use as outlined below.

The proponent will develop a bid for construction of the MCFC campground trails including:

Item	Trail Distance	Trial Type	Bid Price
Campground main + accessible site access	1,025 m	Type 1	
Campground site access	220 m	Type 2	
Day-use recreational trail	3,700 m	Type 3	
(2) Holes for outhouses - 2-3' diameter, 6' depth			
Total Project Cost:			

Trail Construction Standards:

Trail type 1 has the highest amount of traffic and the most impact on the environment of the trail types. Conversely, trail type 3 has lower traffic and the trail tread is minimal. A detailed description of trail types and standards are outline in Table 1 below.

Table 1: **Trail Types and Standards**

	Type 1	Type 2	Type 3
Tread surface	Compacted aggregates	Compacted mineral soil	Natural tread: on-site soil/rock unsurfaced
Tread width	2-4 m	1-2 m	30-50 cm
Cleared width	1-2 m each side (including shoulder)	0.6-1 m each side (including option shoulder)	1 m (total)
Cleared height (min)	3.5 m	3 m	2.4 m
Corridor width	18 m	8 m	6 m
Typical users	Non-motorized multi-use, wheelchair accessible	Pedestrian, biking	Pedestrian, mountain biking

(Definitions in appendix C)

The main trail (1 km – figure 2) through the campground will be Type 1 (appendix A), to accommodate wheelchair and wagon access for guests to reach their booked site. The trails to each site from the main trail (20 m x 11) will be Type 2 (appendix B), with the exception of the accessible site trail (25 m) which will continue through as Type 1. The 3,700 m day-trail network (figure 2) beyond the campground will be Type 3 (table 1) as a foot path to maintain as much natural characteristic as able.

There is a small watercourse crossing to access the farthest west site, in which steppingstone rocks will be aligned to pass over where the bank if stable, there currently exists rocks for crossing the narrow waterway. All efforts will be made to minimize disturbance to streambeds

and banks, and to avoid erosion of stream banks and sedimentation of streams. All developments are in review of and adhere to Watercourse Alteration Regulations for Nova Scotia and Nova Scotia Environment trail construction guidelines (Hiking Trail Standards for Wilderness Areas, 2008). Trails will involve minor resurfacing, redirecting, and brushing to clear the route, and follow the surfacing guides and standards above.

Recreational Trail Construction Guidelines:

- Footpath trail to Lower Stave and Stave Lake, and adjacent to old growth in area
- Day-use trails, each will have appropriate signage and maps throughout locating hiker's position:
 - Trails will follow routes that are a combination of existing historic forwarding trails and new trails, following natural topography.
 - Trails will be footpaths and will not use tread material unless necessary (Type 3).
 - Paths will be cleared primarily by removing organics and some surface leveling including benching.
 - Minimum disturbance, maintaining a natural aesthetic
 - Use of steppingstones wherever possible in areas wet, poorly drained areas. If necessary, construct a simple boardwalk using local lumber.

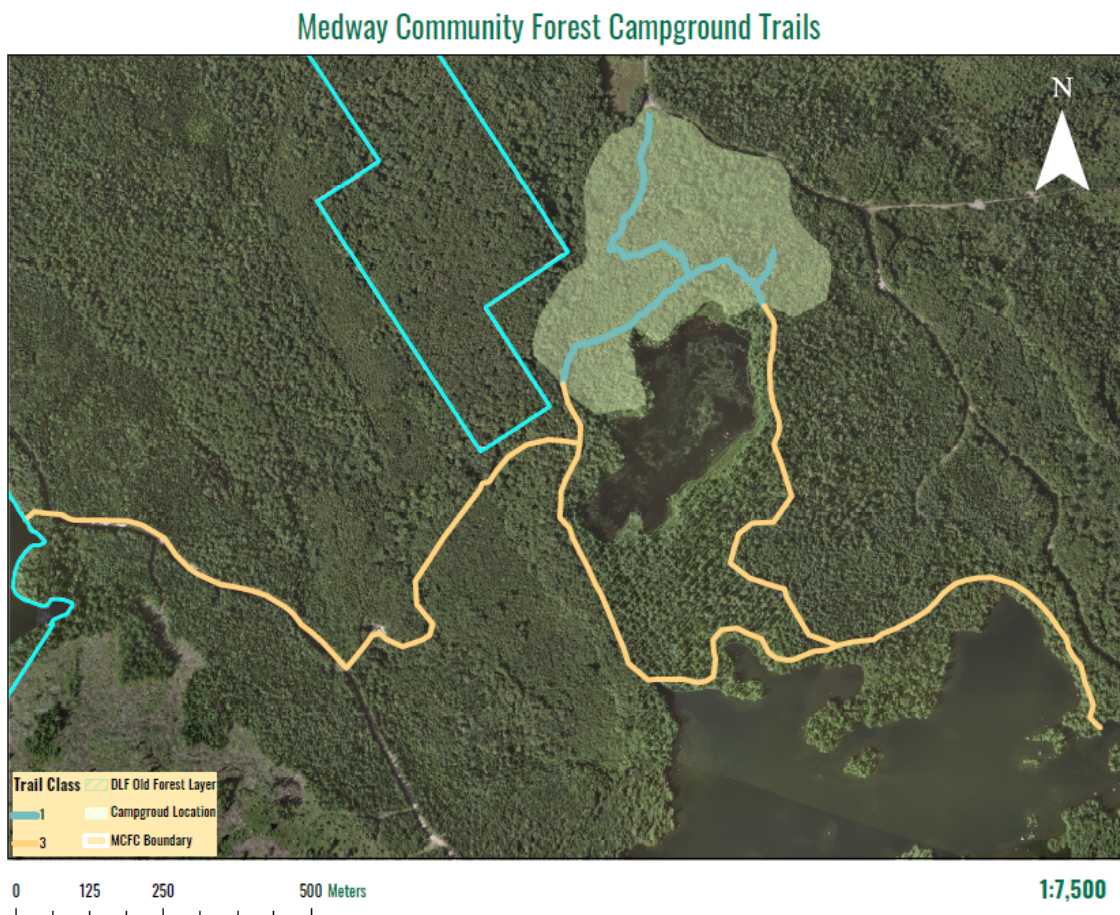


Figure 2: Map of proposed campground area and extended recreational day-use trail. Some minor changes have been made to the location of trails as represented in this map during layout, however distances have only been minorly reduced from this original sketch.

The following considerations should be made for tread construction (Hiking Trail Standards for Wilderness Areas, 2008):

a) Dry, level ground

- Where necessary, do minimum work on tread only; it can rely on trail markers to keep people on path until the trail becomes established with use.
- Only clear, rake and remove stumps - do not cut roots of live trees.
- If possible, bypass large trees when siting the trail to avoid projecting roots.
- If not possible to avoid projecting roots, add fill or rock on either side of the roots to ramp up and elevate tread over roots.

b) Wet, level ground

- Use a 24-hour seepage pit test to determine if an area is wet below moss level; do not use the presence of moss as a determinant of a wet area; moss can grow in dry sites.
- Use steppingstones if possible; otherwise, rake and fill only.
- Do not use fill if the wet spot can be easily stepped or jumped over (less than 75 cm); test is whether you would be tempted to step off the tread to avoid mud or water.
- The use of steppingstones or a puncheon is preferred to the use of fill for areas of water flow, deep standing water, or wide standing water.

c) Slopes

- Where slopes may have near-surface drainage, the following process may be required for any trail segments on slopes where there is potential for seepage:
 - prior to any clearing of right of way on slopes, conduct a 24-hour seepage pit test (even if the alignment has been approved);
 - dig holes at 200 m or a smaller spacing increment which mimics the cut required for side-banking;
 - leave for 24 hours; if the hole fills with water, relocate the trail to the slope's crest and reroute descent in a better drained area. For example, down a natural spur which drains to both sides;
 - follow good practices to manage drainage on trail grades;
 - where side banking is used, ensure tread slopes very slightly away from hill (3% outslope);
 - design tread location (refine alignment) to use natural dips, rather than structures, to capture drainage and divert water from the trail surface;
 - use small boulders (not wood structures) where waterbar construction is required;
 - do not overbuild waterbars; use natural dips or refer to the provincial Trail Construction Manual for spacing for guidance, if natural dips are not available.

Right-of-Way (ROW) Requirements:

The ROW throughout the proposed trails will be a minimum of 4 feet (1.5m) wide and 8 feet (2.5m) high. The trail alignment is to be cleared as indicated on the maps and marked with trail signs or flag, approximately every 20 meters (based on line-of-sight). The trail planning is completed prior to trail construction to avoid seepage areas, minimize slope and to avoid obstructions and large trees. All coarse woody debris will be removed from proposed alignment with the cut ends facing away from trail.

Proposal Submission Guidelines

Contractor Qualifications

At minimum, the successful proponent will possess the following:

- Extensive experience constructing a variety of trails
- Experience with trail construction and road upgrading machinery
- Knowledge of Acts and Regulations pertaining to recreational use of Nova Scotia Crown lands

Proposal Submission

In order to be considered, the submission should include the following:

1. Statement of Intent
 - The proponent should clearly outline their approach and understanding of the various elements of the aforementioned objectives and how they meet the minimum qualifications.
2. Work Outline and Timeline
 - The proponent should include an outline their proposed plan to execute the construction of trails, and a general timeline for completion.
3. Budget
 - The proponent should include a summary of fees and expenses needed to complete trail construction.
4. References
 - The proponent will provide 2 references that can attest to experience related to trail development.

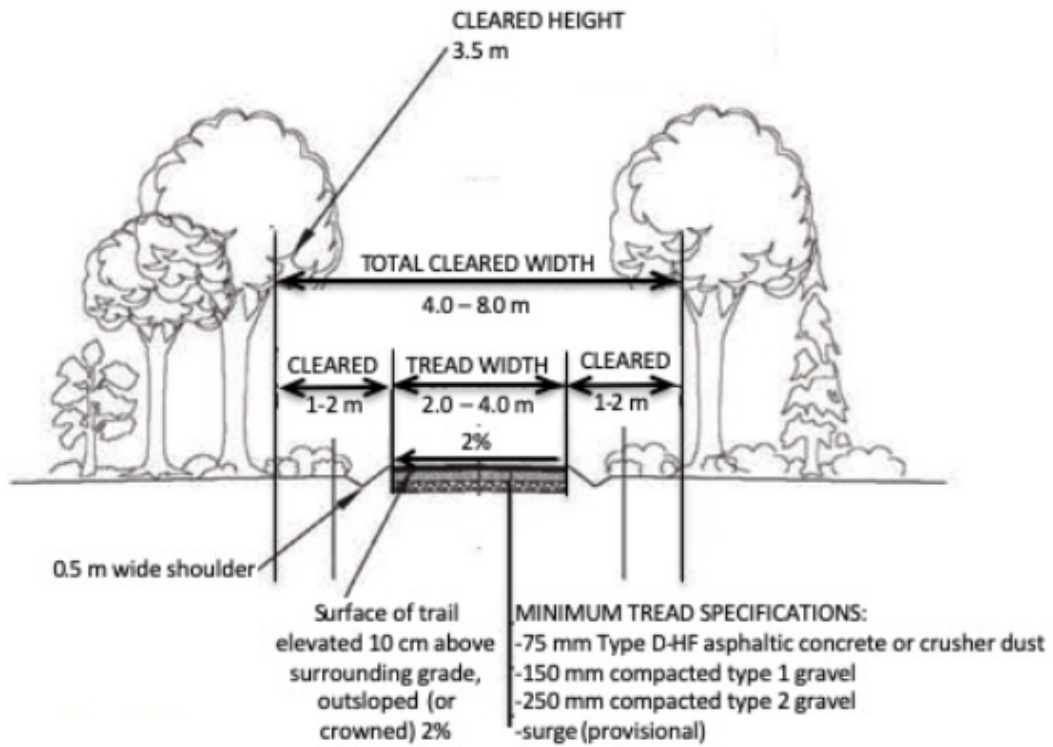
Estimated Timeline and Deliverables

Release tender document	Dec. 20, 2021
Proposals due	January 15, 2022
Award contract	February 1, 2022
Completion of notifications based on timeline of successful proposal (responsibility of MCFC)	February 15, 2022
Trail construction	February 1 – December 31, 2022*

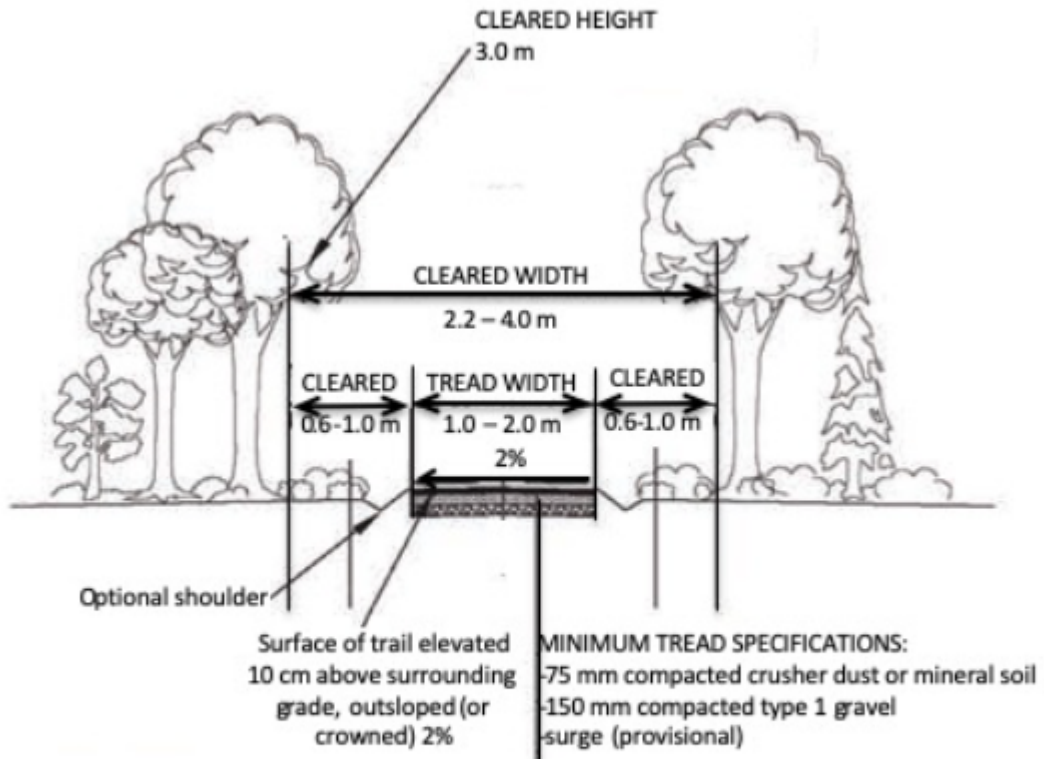
** All project expenses must be billed to MCFC before December 31, 2022*

All proponents must include their CRA business registration # and proof of good standing with relevant provincial joint stocks association.

Appendix A: Trail Type One Design



Appendix B: Trail Type Two Design



Appendix C: Definitions of trail type table

Definitions and Notes:

Tread surface: For all trail types, wood chips are not recommended as they retain moisture, rot, are easily moved by surface water and are a poor surface for wheeled trail users (strollers, wheelchairs, bicycles). Types 1 and 2 trails: Trail surface is typically outsloped rather than crowned for easier construction with large machines.

Tread width: Typical width of finished trail tread. May vary locally for types 3-5 or owing to natural terrain features.

Cleared width: Zone cleared of above-ground vegetation beside tread. Type 1 Trails: Build 50 cm wide shoulders topped with gravel or mulch in this zone.

Cleared height: Remove tree branches up to this height to the extent of the cleared width.

Corridor width: Zone within which to manage or remove obstructions that impede sight line or any other conditions that pose a hazard to trail users. Disturbance of vegetation and soil within the corridor may be necessary but is to be minimized.

Typical users: Pedestrian includes all foot-users, eg. hiking, running, snowshoeing.