South Hero Recreation Park and Islandacres Trail
South Hero Land Trust

Assessment for Accessibility
Site Visit November 8, 2024

Prepared by
Upper Valley Trails Alliance (UVTA)
PO Box 1215
Norwich, VT 05055
802-649-9075
russell.hirschler@uvtrails.org

UVTA is part of the Vermont Trails Accessibility Hub, funded by the Vermont Outdoor Recreation Economic Collaborative (VOREC)

Introduction

The Upper Valley Trails Alliance is a 501(c)(3) non-profit organization whose mission is to advocate for the maintenance, use, and development of recreation trails. The bulk of UVTA's work is focused on the Upper Valley region of Vermont and New Hampshire.

UVTA has become a regional leader for accessible trail design and construction. Since its founding in 1999, UVTA has built dozens of accessible trails including wheelchair accessible trails at VINS in Quechee, VT, The Montshire Museum in Norwich, VT, Chaffee Wildlife Sanctuary in Lyme, NH, and the Mascoma River Greenway and Ruth Shepard Trail in Lebanon, NH.

UVTA is part of the Vermont Trails Accessibility Hub. The Hub was developed with funding from the Vermont Outdoor Recreation Economic Collaborative Community Grants Program. The Hub consists of the Vermont Trails and Greenways Council, Upper Valley Trails Alliance, Northern Forest Canoe Trail, Vermont Mountain Bike Association, Vermont Adaptive Ski and Sport, and Community Geographics.

Trail Planning

When reviewing and assessing existing trails to be upgraded or new trails to be built for accessibility, we adhere to the Access Board Standard Guidelines based on the Architectural Barriers Act. These guidelines contain scoping and technical requirements for accessibility to sites, facilities, buildings, and elements by individuals with disabilities. The requirements are to be applied during the design, construction, addition to, alteration, and lease of sites, facilities, buildings, and elements to the extent required by regulations issued by Federal agencies under the Architectural Barriers Act of 1968 (ABA).

By designing and building to accessible standards, particularly with the guideline to limit slopes, these trails inherently become safer and more sustainable. Detailed information about the trail accessibility standards can be found at https://www.access-board.gov/aba/#aba-1017.

In general, trails built to Access Board Guidelines have an average running slope of 5% but can go up to 12% in certain intervals and a cross slope of 2-3%. Trail treadway width, treadway materials, parking facilities, restroom facilities, picnic and bench facilities, and informational kiosks are all important considerations for accessible trail projects.

South Hero Recreation Park/David Hobbes Trail Description and Special Features

The park offers a trail network approximately 1/2 mile long, including a recently rebuilt fully accessible 450 foot boardwalk. Parts of the trails were hardened with crushed stone but are overgrown and were not fully built to accessible standards. The trails currently provide access to an outdoor recreation area that includes a small pond and a collection of fitness equipment. The trailhead is located at 75 South Street (parking lot shared with the Folsom Education and Community Center).

The existing trails create a figure 8 with two accessible entry points from the parking lot. The accessible boardwalk will ideally be extended and a pond viewing platform built to make this an even better nearby resource for the Folsom Education Center and Elementary School. The entire trail network was assessed for upgrading to accessible standards.

Permitting and Landowner Permissions

Since the park is town owned, landowner permissions should not present any issues.

We recommend that SHLT discuss the potential need for any permits with all relevant departments of the State of Vermont and the Town of South Hero to be sure everything is in place before moving forward with any improvements.

There should also be some communication with the School District and the Fire Department to be sure that dedicated handicapped parking will not interfere with existing needs and operations, including current use as a pumping station for the department.

Trail Construction Process

Almost the entire existing trail currently meets Access Board guidelines for wheelchair access with some of the trail hardened with a layer of hardpack (portions overgrown with grass and reportedly vulnerable to seasonal flooding). A short section, identified on the accompanying map, will require a reroute to get the grade to accessible standards.

On trail sections where there is not any existing hardpack, a small excavator should be used to rough in the trail to a general width of 5 feet, and remove any vegetation and duff layer to mineral soil. On trail sections that have existing hardpack, the top inch of hardpack should be removed along with any vegetation to a width of 5 feet.

A layer of ¾ inch ledgestone from a local quarry will be laid in the trail treadway to a depth of 4 inches. A vibrating plate compactor will be used to compact this first layer of ledgestone to a depth of 3 inches. Then non woven geotextile cloth (filter fabric) will be laid on the ledgestone (to help reduce vegetation and the integrity of the top layer of hardpack) . Then a layer of ⅜ inch hardpack from a local quarry will be laid to a depth of 4 inches. Again, a vibrating plate compactor will be used to compact the hardpack to a depth of 3 inches.

A 50 foot path will be needed to connect the parking lot to the existing boardwalk. This section would follow the same construction process as above.

Potential Issues and Trail Features to Consider

The existing ramps to the boardwalk should be slightly elevated to reduce the slope and then can be tied directly into the hardened accessible trail.

While almost all of the existing trail has slopes within the Access Board guidelines, the entire trail will need to be raised and hardened with gravel and hardpack. Some of the seasonal flooding issues may be minimized or eliminated if the surface is raised a few inches in those sections. There is one section of the trail noted on the map that will have to be rerouted to meet accessible grades and slopes.

Handicapped parking spots should be identified with proper signage installed.

One of the primary school/student access points to the boardwalk and trail system is accessed from the basketball court on the south side of the park. Unfortunately, the grade is currently over 25% and does not meet accessible guidelines. It is possible to install a 50 foot long hardened ramp to provide wheelchair access to the boardwalk at this location. However, the benefits do not seem worth the costs as this would require significant excavation, tree cutting and potentially a retaining wall. Therefore, our recommendation is to direct wheelchair users to the main accessible entrance from the parking lot - which can still be easily accessed from the school. If this basketball entrance remains open, a staircase should be considered, and a sign should be added to identify it as unsafe for wheelchairs.

If the current access from the basketball court to the boardwalk remains open, we recommend installing wooden steps using 6”x6”x8’, timber lock screws and rebar. This staircase will improve safety for general users as the hardened dirt on a steep slope can become muddy and icy during weather events.

Example of wooden steps.

Materials and Labor Budget Estimate

- Materials
  - ¾ Inch Ledgestone (300 tons-15 truckloads) $7,125 (including trucking)
  - ⅜ Inch Hardpack (300 tons -15 truckloads) $7,875 (including trucking)
  - Non woven Geotextile cloth (7 rolls at 360 ft) $875
  - (4) 6”x6”x8’ PT Timbers $180
    Materials Total $16,055

- Equipment
  - 5 Foot Mini Excavator Rental (3 weeks) $4,500
  - Vibrating Plate Compactor Rental (3 weeks) $1,200
  - Mechanized Dumper Rental* (3 weeks) $1,500
    Equipment Total $7,200

- Labor
  - 6-person crew/3 weeks (including staging, etc) $28,800

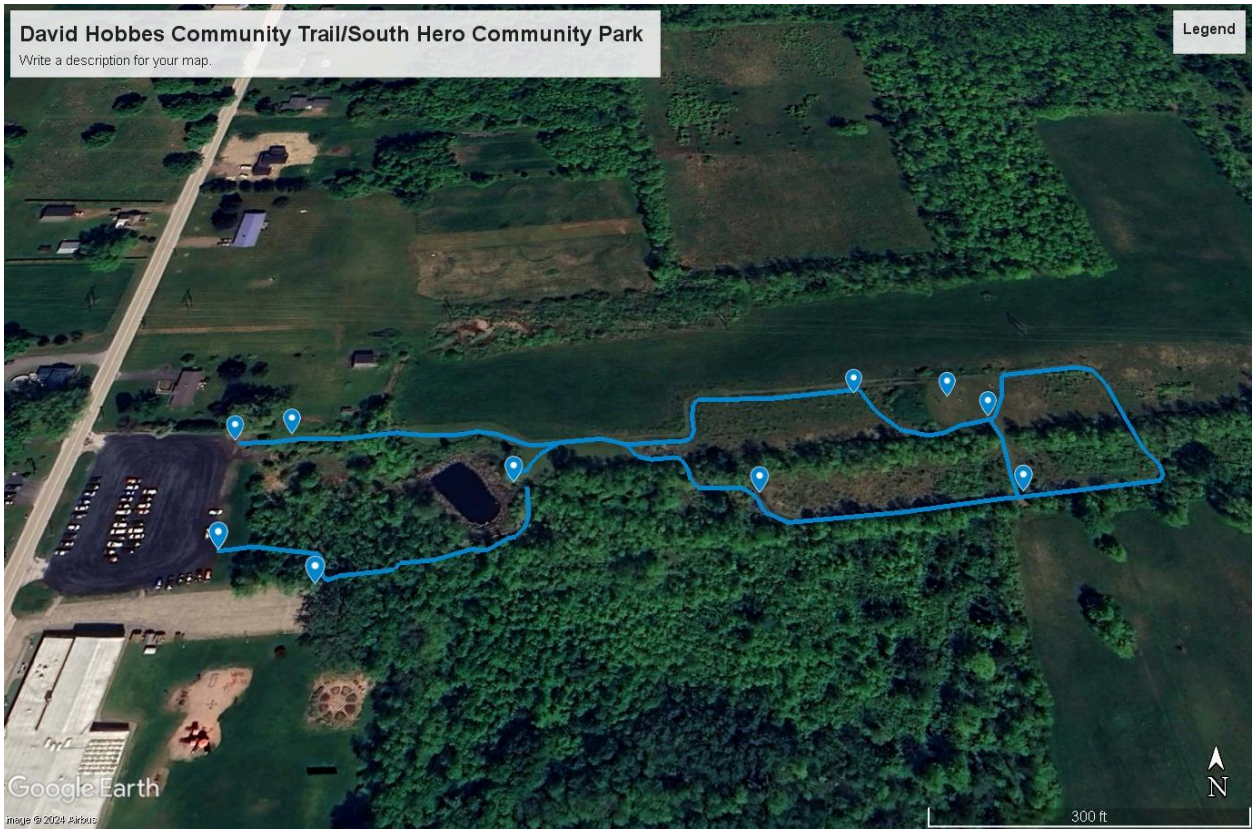
- Project Total (including 20% contingency) $62,466

Costs for materials, labor, and rental equipment are based on usual UVTA costs. Volunteer support, skilled equipment owners and operators, and donations of materials and labor can significantly decrease project costs. A hybrid trail approach could be considered: contracting a professional machine operator/trail builder to rough-in the trail, and paid labor/volunteer labor to spread material and finish the trail. In addition to the mechanized equipment, work crews will need basic trail tools (shovels, hoes, loppers, rakes, etc.).

*UVTA owns 2 CanyCom Tracked Haulers. If possible, a comparable machine should be procured to carry and dump the crushed stone.

Map (South Hero Community Park Trails)

Please click on the map below to access the google map online.



Islandacres Trail Description and Features

The Islandacres Trail is a joint effort between Steve and Kelly Robinson, owners of Islandacres Farm, the Wells Family, The Masons, South Hero Land Trust, and the Town of South Hero to open a 1.2 mile public, non-motorized trail that would connect South Street to Tracy Road.

Although the entire proposed 1.2 mile trail can be built to accessible guidelines, the primary assessment was focused on the first 2,800 feet (phase 1) from the Mason's Lodge on South Street, following the edge of the South Hero Town Cemetery, and then following the outside edge of the farm field, under the power lines, along the edge of the South Hero Marsh to a designated spot at the edge of the wooded area in the middle of the property (see map).

Phase 2, which is approximately 3,062 feet, runs from the terminus of phase 1 to Tracy Road.

This assessment will provide the pertinent information to build the entire trail to the required guidelines. Given some of the issues raised during our visit, we recommend implementing the entire accessible trail in phases to manage costs.

Permitting and Landowner Permissions

We recommend that SHLT discuss the potential need for any permits with all relevant departments of the State of Vermont and the Town of South Hero to be sure everything is in place before moving forward with any improvements.

SHLT should also consult with VLT (the Easement Holder on the farm property) to be sure the final trail placement and construction adheres to any restrictions in the Easement.

Trail Construction Process

Once a final trail track has been agreed upon in consultation with the farm owners and VLT, a small excavator should be used to rough in the trail to a width of 5 feet, removing any vegetation and duff layer to mineral soil.

A layer of ¾ inch ledgestone from a local quarry will be laid in the trail treadway to a depth of 5 inches. A vibrating plate compactor will be used to compact the ledgestone to a depth of 4 inches. Then a layer of non woven geotextile cloth (filter fabric) will be laid on the ledgestone. Then a layer of ⅜ inch hardpack from a local quarry will be laid to a depth of 5 inches. Again, a vibrating plate compactor will be used to compact the hardpack to a depth of 4 inches.

Potential Issues and Trail Features to Consider

The current proposal for parking has a dedicated handicapped spot located on the North side of the Mason's building. Consideration should be given to move that to the South side along the split rail fence.

The first section of the trail (mentioned above to the edge of the woods), approximately 2,800 feet in distance, will be relatively straightforward to build. During the initial excavation, the trail should be installed with slight curves and meanders. This will be both more aesthetically pleasing and also decrease any slopes to 5% or below.

The trail terminus will be an ideal location for a bench, picnic table, and/or a small wildlife viewing structure. Any amenity or structure should adhere to accessible guidelines.

The proposed plan is to extend the trail for foot travel through the woods and along the edge of the fields with the trail terminating at Tracy Road. This section, with an approximate distance of 3,062 feet, can be built to accessible standards but due to the cost and scope of phase 1, would likely be implemented at a later date, if at all. This section will require some bridging along the wet areas on the edge of the field, a bridge to cross a drainage ditch from the farm to the wetland and a final structure of some kind to cross the drainage ditch on the edge of Tracy Road.

Materials and Labor Budget Estimate Phase 1

- Materials
  - ¾ Inch Ledgestone (327 tons-17 truckloads) $7,770 (including trucking)
  - ⅜ Inch Hardpack (327 tons -17 truckloads) $8,585 (including trucking)
  - Non woven Geotextile cloth (8 rolls at 360 ft) $1,000
  - Materials Total $17,355

- Equipment
  - 5 Foot Mini Excavator Rental (3 weeks) $4,500
  - Vibrating Plate Compactor Rental (3 weeks) $1,200
  - Mechanized Dumper Rental* (3 weeks) $1,500
  - Equipment Total $7,200

- Labor
  - 6-person crew/3 weeks (including staging, etc) $28,800

- Project Total (including 20% contingency) $64,026

Materials and Labor Budget Estimate Phase 2

- Materials
  - ¾ Inch Ledgestone (350 tons-18 truckloads) $8,312 (including trucking)
  - ⅜ Inch Hardpack (350 tons -18 truckloads) $9,190 (including trucking)
  - Non woven Geotextile cloth (8 rolls at 360 ft) $1,000
  - Materials Total $18,502

- Bridge Materials (20 x 4 foot bridge)
  - (6) 2'x8'x20 PT @ 31.57 $190
  - (2) 6'x6'x8' PT @ 29.88 $60
  - (20) 2'x6'x8' Rough cut hemlock' @ $10.56 $212
  - (12) Angle Brackets @ 1.45 $18
  - (1) 3 ½ exterior deck screws 25lb @ $120 $120
  - (1) ⅜"x4" galvanized carriage bolts (25 pack) $48
  - (1) Washers 25pk @ $7.07 $8
  - (1) Hex Nut 3/8" 25pk @ $8.23 $9

    Total Materials $665

- Boardwalk Materials for spanning wet areas (100 feet but could be longer)
  - (20) 2'x'8'x16' PT @ 21.78 $436
  - (8) 2'x8'x10' PT @ 14.38 $116
  - (11) 6'x6'x8' PT @ 33.38 $368
  - (100) 2'x6'x8 Rough cut hemlock' @ $10.56 $1,056
  - (44) Angle Brackets @ 1.38 $61
  - (1) 3 ½ exterior deck screws 25lb @ $120 $120
  - (1) 3" exterior deck screws 2000ct @ $114.98 $115
  - (4) 5" galvanized Carriage Bolts 25pk @ $58.28 $234
  - (1) ⅜" galvanized washer @ $33.42 $34
  - (1) 3/8" galvanized hex nut @ $35.34 $36

    Total Materials $2,576

  Equipment
  - 5 Foot Mini Excavator Rental (3 weeks) $4,500
  - Vibrating Plate Compactor Rental (3 weeks) $1,200
  - Mechanized Dumper Rental* (3 weeks) $1,500

    Equipment Total $7,200

- Labor
  - 6-person crew/3 weeks (including staging, etc) $28,800
  - 3-person crew/1 week for 100 foot bridge $4,800

- Project Total (including 20% contingency) $75,050

The design and installation of the crossing of the drainage ditch at the end of the trail at Tracy Road should be discussed with the Town Public Works to determine the best solution for that location.

Staging of materials will be essential to the project. Access for trucks along the trail and the farm road to stage large loads of stone will significantly speed the process. Without access to both staging locations along the trail, a minimum of 1 week would need to be added to the project timeline and cost.

Costs for materials, labor, and rental equipment are based on usual UVTA costs. Volunteer support, skilled equipment owners and operators, and donations of materials and labor can significantly decrease project costs. A hybrid trail approach could be considered: contracting a professional machine operator/trail builder to rough-in the trail, and paid labor/volunteer labor to spread material and finish the trail. In addition to the mechanized equipment, work crews will need basic trail tools (shovels, hoes, loppers, rakes, etc.).

*UVTA owns 2 CanyCom Tracked Haulers. If possible, a comparable machine should be procured to carry and dump the crushed stone.

Map (Islandacres Trail)

Please click on the map below to access the google map online.