



Town of Bolton Massachusetts



Conservation Trails Sign Manual

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Introduction

Local hiking trails are one of the most important natural features of Bolton that create its rural appeal. The creation and maintenance of a healthy and sustainable trail system provides quality, passive recreational opportunities in the form of walking, hiking, mountain biking, horseback riding, cross-country skiing, as well as access to points of educational and historical interest with minimal impact to the resource or habitat.

This Sign Manual is to serve as a reference guide for standardizing the marking and signing of Conservation trails throughout the Town of Bolton to be used by the Bolton Conservation Commission, Bolton Conservation Trust, the Bolton Trail Committee and its volunteers to support proper trail use .

It is the objective of the Bolton Conservation Trust, the Bolton Conservation Commission, and the Bolton Trails Committee to achieve a comprehensive and uniform level of trail signing for trails across all of Bolton.

Uniform Trail Signing

Providing uniform signing of the conservation trails will;

- a) Enhance the safety of persons, and property,
- b) Improve travel within and between local conservation areas,
- c) Professionalize and promote the multi-use trail system.
- d) Insure trail users do not trespass on land owner's private property
- e) Communicate land use expectations and regulations

Purpose of Trail Sign

The purpose of trail signs is to;

- a) Guide the users along the trails,
- b) Warn users of trail characteristics and potential hazards,
- c) Provide information necessary for the enjoyment of the recreational opportunity
- d) Connect in property users to current trail map information
- e) Educate trail users in highlighting points of interest
- f) Minimize the impact on habitat, resources , and conservation areas

Responsibilities

Setting clear and achievable guidelines for the uniform signing of the Bolton Conservation Trails is the joint responsibility of the Bolton Conservation Commission, the Bolton Conservation Trust, and the Bolton Trails Committee.

Responsibility for costs associated with the procurement, manufacture, installation, maintenance, and removal of trail signing in accordance with the guidelines rests with the Bolton Conservation Commission and the Bolton Conservation Trust or their appointed joint designee (i.e. Bolton Trails Committee) for trails located within their jurisdiction.

Adhering to a recognized signing standard is likely to minimize the liability accompanying this responsibility.

Sign policies and standards for recreational trails in the Town of Bolton are detailed in this manual.

Typically, the Bolton Trails Committee or Land Steward acts as the installing agent or manager for the signs within Conservation Land, at the trail heads, and along the trail segments when required.

The sign policies and standards for the Bolton trail system will provide the methods and procedures needed to prepare, design, install, and maintain its signs. Individual judgment must be applied to properly locate each sign given unique locations.

Signs

Signage is one of the most important elements of the trail. It allows trail maintenance volunteers a vehicle to communicate with the trail users. Signs can enhance or degrade the trail experience. Signs can be used to inform, guide, direct, interpret, educate, regulate, restrict, and attract. It is important that the trail is sufficiently signed to aid the recreational user while avoiding excessive signage that can become a visual pollutant and requires time and money to maintain. Signage along Bolton trails should:

1. **Identify and Confirm the Trail Route** - This is the most basic signing element along the trail. The most novice trail user must be able to identify the trail and follow the route easily.
2. **Be Consistent** - Consistent signage develops trust among trail users and reassurance along their journey. This significantly enhances the trail experience by reducing the fear of being lost or confused. It can also build trail support through positive experiences.
3. **Minimize Confusion** - Excessive, unnecessary, and duplicative signing not only diminishes the quality of the experience, but can lead to confusion. Confused and lost trail users seldom become supporters or volunteers for the conservation trail. As with all relationships, clear and concise communication builds confidence, respect and support for trails.
4. **Quality** – Signing of the Bolton trails should be reflective of the guidelines discussed in this manual. Quality signage is visible, durable and tamper resistant.
5. **Cost** - Signs need to be of sufficient quality without being prohibitively expensive to build and maintain.
6. **Placement** - Signs should be placed to be informative, directional, and maximize public recognition and protection to enhance the experience and avoid visual pollution.
7. **Materials** - Sign materials should support the natural environment, be durable, and cost efficient.
8. **Recognition** - Recognition and awareness help build support for the trails throughout Bolton.
9. **Project a Friendly, Good Host Attitude** - Messages must be inviting and friendly; think of trail users as invited guests. Signage should emphasize responsible trail stewardship rather than prohibited activities. Too many negative messages are likely new to turn trail users off.
10. **Educate Users** - Trailheads, and bulletin boards as well as hiking guides and brochures provide excellent opportunities to highlight points of interest and share information such as "Leave No Trace" or "Pack it in, Pack it out".

Developing a Sign Plan and Inventory

The first step in effective signage is through an inventory and evaluation of trail locations and existing signs. This assessment is essential to the development of a sign plan. It is VERY important to view and judge each section of trail as if no signs were present. What signs would be needed to assist first time visitors to the area? What is obvious to experienced trail users may be confusing to someone hiking through for the first time. Evaluation of the trail needs to be done from both directions. A sign visible traveling from north to south may be poorly located for a hiker traveling south to north and may be missed.

A comprehensive sign plan provides the framework for managing effective signage to guide decisions involving new installation, replacements, removals, maintenance, and budget preparation. In addition, it

provides for smooth transitions between those responsible for trail maintenance. Sign plans should contain inventories, inspection and maintenance records, and relevant physical, technical, and management information needed to effectively administer the sign program.

A sign inventory should include a description of each existing and planned sign, their supports, locations, conditions, and any relevant vandalism history. The description should contain sufficient detail to be able to re-create the sign if it is damaged or missing. This kind of detail will allow those responsible for a section of trail to evaluate the effectiveness of the signing. Listed below are some of the details needed for the inventory.

1. **Photographic Record** - Photographs help to confirm the written notes in sign inventory, and after all, "a picture is worth a thousand words".
2. **Sign Text** - Describe the message exactly as it appears on the sign.
3. **Sign Type and Size** - Document overall size of the sign panel, the type of material, and type of sign.
4. **Text Size** - Document the font characteristics of text on sign.

Annual Evaluation of Signs

Annual evaluation of signs along the trail allows you to assess a trail and determine if there is additional signage needs. Are there signs missing? What is the condition of the sign? Are there any signs that are no longer necessary or appropriate? Are signs in the proper location? If the annual evaluation results in sign relocation or removal, it is very important to reflect those changes in the inventory records along with the date that changes were made.

In addition to evaluating signage along the trail itself, it is very important to evaluate the trail's visibility to the general public. We often develop a conservation area complete with Conservation Area signs, yet forget to lead the public to the trailhead or access point. If our visitors can't find access to our trails, there certainly is little need for other signage.

Once the inventory and evaluation are complete, an action plan can then be developed based on the information collected for ordering and installing new or replacement signs and maintaining existing signs. This detailed plan with cost estimates and inventory and evaluation documentation will then be presented to the Trust and Conservation Commission for approval. Thorough and accurate records showing type and frequency of maintenance performed will aid in determining service life of the sign, future budget needs and effectiveness of the sign program.

Blazing and Signing the Trail

There are two distinct components of proper marking of trails in Bolton.

Trail Blazing – A marker identified by its shape used to direct trail users to stay on a conservation trail

Trail Signs – A marker with text used to identify trail names, conservation areas, regulatory concerns, interpretive/educational locations, or to identify road crossings

Blazing

No trail building technique is more important than proper blazing. A properly blazed trail will permit the trail user to enjoy the woods while not being continuously concerned about the route, or worse still, losing the trail. This is especially important in the autumn and winter when worn pathways could be covered by leaves or snow. Blazes should be frequent enough to assure the trail user that he or she is on a conservation trail. Normally, this is accomplished by placing the blazes so that when the user is passing one, another blaze comes into view. Terrain may dictate the blazes being placed closer together, or further apart, but the route must be easy to follow. It is necessary to blaze road connectors.

Another way to evaluate blazing frequency is when a trail is conspicuous, place one blaze every five minutes of hiking time or about six per mile in each direction. Where you run into hard to follow sections, blaze more frequently, but never blaze so that more than one blaze is visible ahead, except at trail junctions, road crossings, and similar confusing areas. Blazing every other telephone pole is sufficient along paved roads as confidence or reassurance blazes.

Trails should be blazed in only one direction at a time. What you notice in one direction may not be obvious from the other. If equally visible from either direction, blazes may be placed on opposite sides of trees or posts in order to facilitate trail maintenance for trail builders. Select live trees or other objects such as fence posts and poles that catch the eye and appear firmly placed. Do obtain permission to use fence posts and poles, especially power poles. Look for trees whose branches will not grow out to obscure the blaze. It may be necessary to place posts where the trees are too far off the trail. **Blazes should be placed approximately six and one-half to seven feet off the ground.**

All Bolton Conservation Trails will be marked with a Yellow Triangle

All Bolton conservation trails will be marked with a Yellow Five Inch Equilateral Triangle. A two inch equilateral triangle area is removed denoting trail direction.

Plastic Triangles

When attaching the triangles to trees use aluminum or galvanized siding nails 8 penny approximately three inches in length with a large head. Do not bang the nail in all the way. Rather, leave the nail sticking out one half inch to allow for tree growth.

Avoid the use of steel nails. Years later, hidden in the wood they can cause damage and injury when hit by chain saws or band saws during clearing or harvesting operations .

Primary trail routes can be marked using a 5” yellow equilateral triangle as pictured in Figure 1.



Figure 1: Plastic five inch equilateral triangle for primary trail segments

Secondary trail routes can be marked using a 5” yellow equilateral triangle with a light blue insert as pictured in Figure 2. This insert is held in place behind the primary triangle with the same nails.

Older trail markers no longer in production but still found along certain trail segments shown in Figure 3.



Figure 3: Plastic three inch equilateral triangle (old specification)

Types of Signs

There are six types of signs that should be used to identify the trails in Bolton:

1. **Trail Name Signs** – display the trail name (or names) and direction of the trails
2. **Town Conservation Area Signs** – display the name of the Conservation Area
3. **Trust Conservation Area Signs** – display the name of the Conservation Area
4. **Regulatory Signs** – display laws, rules or regulations governing a trail
5. **Interpretive/Educational Signs** – display special places, historic events, or the plants and animals along a trail
6. **Junction Signs** – identify trail intersections that correspond with map sign placement
7. **QR Code Signs** – links trail users on property to digital trail maps posted to the website
8. **Other Signage** – includes existing “Loop Trail” markers and “Land Boundary” signs

1. Trail Name and Directional Signs

Trail name signs are used to display the name (or names) of the trail and the direction of travel. They enable trail users to confirm a location on the trail, and mark their progress. Limit the number of trails listed on one sign to 1 or 2 if possible. Only the most well traveled, main trails will be named and signed.



Figure 4: Trail Sign

Trail name signs should be placed at major trailheads, as well as at trail intersections to show direction. These signs should be manufactured of 1"x6" premium board and painted brown. Trail names should be routed into the sign face and painted white. The letters on the sign should be 1" in height. Once painted, the entire sign should be sprayed with a clear top coat sealer and mounted to a 2.5"x11" strip of composite wood material for install.

- 1) Signs should be attached by (2) four-inch long bolts or screws with at least a 1.5" shoulder allowing for future tree growth.. Signs can be mounted on a single 4-inch by 4-inch wooden post or tree if location is appropriate. Trail signs set on a tree should be at a height of six and a half feet, signs set on a post can be at a height of five feet.



Figure 5: Shoulder for tree growth

2. Town Conservation Area Signs

Town Conservation Area signs are used to display the name of the conservation area. These signs should be placed in a prominent location along a road or parking area. The purpose of the sign is for identifying the location as well as advertising the conservation area. These signs would be composed of decay-resistant wood (redwood, cypress, mahogany, Pressure Treated Lumber, TREX, etc.), and painted or stained brown, (see fig. 4). Messages would be routed into the sign face and painted white. Routed sign panels shall be attached to the posts using 3” screws and flat 1/8” thick galvanized strap painted brown to match.

Major trailheads, especially when accessed from a paved road, require a large sign, 48-inch wide, mounted on two 4 by 4 wood posts 7 to 10 feet long depending on terrain. Posts are buried at least 2 ft deep with a one foot rebar cross pin near the bottom to improve security. The top panel is 2 by 10, the second panel 2 by 6, each 5 ft long. Additional panels can be hung from the second panel if needed.



Figure 6: Conservation Area Sign

3. Trust Conservation Area Signs

Trust Conservation Area signs are used to display the name of the conservation area. These signs should be placed in a prominent location along a road or parking area. The purpose of the sign is for identifying the location as well as advertising the conservation area. These signs would be composed of decay-resistant wood (redwood, cypress, mahogany, Pressure Treated Lumber, TREX, etc.), and painted or stained brown, (see fig. 4). Messages would be routed into the sign face and painted white with the Trust text in green. The Trust Conservation Area signs typically include a small shed style roof and Trust logo. Routed sign panels shall be attached to the posts using 3” screws.

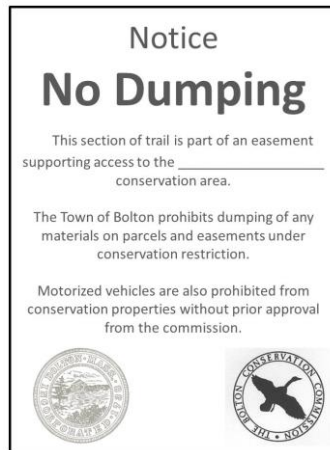
Major trailheads, especially when accessed from a paved road, require a large sign, 48-inch wide, mounted on two 4 by 4 wood posts 7 to 10 feet long depending on terrain. Posts are buried at least 2 ft deep. The top panel is 2 by 10, the second panel 2 by 6, each 5 ft long. Additional panels can be hung from the second panel if needed.



4. Regulatory Signs

Regulatory signs are used to notify trail users of laws, regulations, and rules governing a specific section of the trail. These laws and regulations will vary based on land management/ownership. As much as possible, regulatory signage should be concentrated at trailheads and major trail access points to maintain the minimum number of signs possible on the trail. However, if it is necessary to post regulatory signs along the Trail, use high quality materials, keep narrative concise and to the point, and try to avoid negative signing.

Examples of current regulatory signs include the following messaging and format. These signs are printed on 8.5” x 11” white card stock paper and laminated using heavy .5 mil pouches. Install methods vary.



5. Interpretive/Educational Signaging

Interpretive/educational signaging provides an additional element to the Trail experience. These signs can introduce trail users to special places, historic events, unique habitats and indigenous plants and animals along the trail. Quality interpretive and educational signaging follows a theme that guides the location and narrative of the signs.

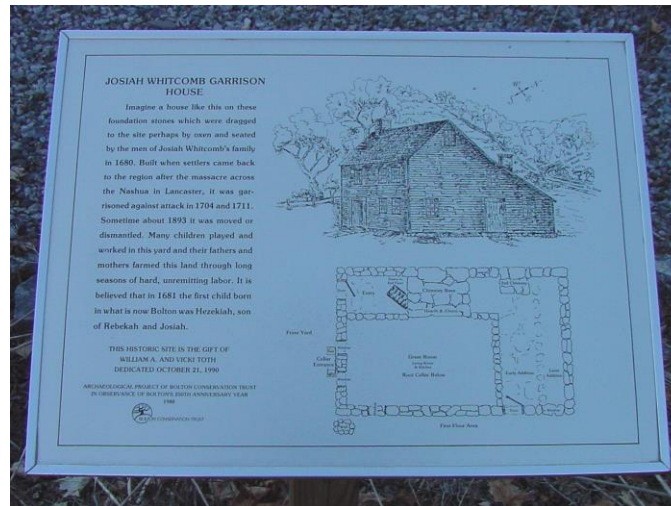


Figure 7: Interpretive/Educational Sign

Quality interpretive and educational signs can be very expensive and can require high maintenance. It is recommended that interpretive and educational signaging be accomplished as much as possible at the trailhead and through brochures and trail guides. These types of media allow for easy inspection, replacement, and updates. However, if it is desirable to place interpretive messages along the Trail, try to place them within a reasonable distance of an access point and keep the signs small and natural in appearance. Anodized aluminum signs can work well in this situation and are long lasting.

6. Junction Signs at Trail Intersections

In larger Conservation properties like Rattlesnake, numerous trail intersections (junctions) exist. 4"x4" Trail Junction Signs can be installed under these conditions and included in the property trails map. A system of number and letters coordinating with a trail head number creates "zones" or "areas" within a given property. Junctions within each zone would have the same number as the trail head followed by a letter of the alphabet. Each junction would have an individual letter designation that corresponds with matching signs shown in property specific maps and as way points in GPS/KML tracking files.

Junction signs are attached using 3"-4" exterior screws with a 1"-1.5" shoulder for future tree growth.

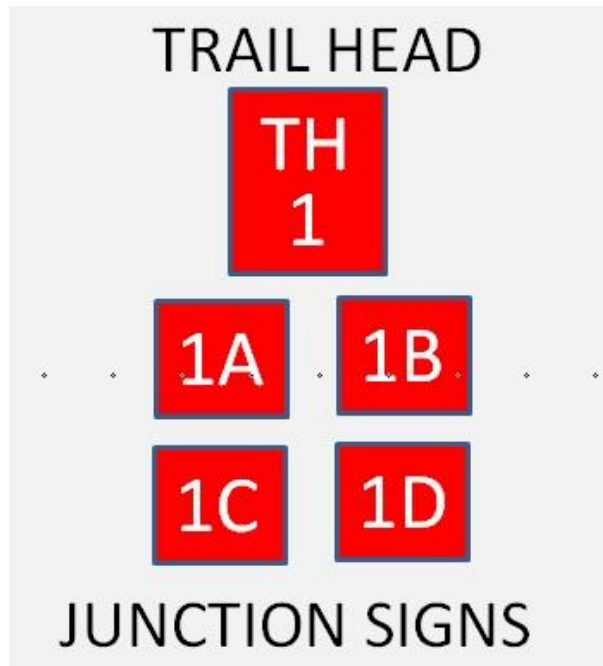


Figure 8: Trail Head with Junction Signs

7. QR Code Signs

To leverage technology and provide access to current property specific digital map content, QR Code Signs can be installed at trail heads. Using a QR Code Reader application installed in a data enabled smart phone, trail users can scan the sign and be taken directly to a mobile device optimized trail map image posted to the internet. In addition, higher resolution PDF files and GPS tracking KML files are made available directly from the trail head through the use of these interactive signs.

This new and exciting process allows in property trail users to carry and reference trail maps on their mobile device. This also provides the most current and up-to-date trail map for each property independent of map revisions or printed materials.

These QR Code Signs are printed 8.5” x 11”, laminated, and posted at main trail access points.



Figure 9: QR Code Signs

8. Conservation Land Non-Motorized Vehicles

This posted mounted sign is typically installed at trail heads when a kiosk is not present. The Conservation Commission keeps an inventory of these signs - premade and installed on 8' 4"x4" posts. The primary purposed of these trail head signs is to keep vehicles at the parking area and restrict the use of motorized vehicles (ATVs, motorcycles, electric/motor powered bicycles) along the trails.

When a kiosk is not available, the post holding these signs can be used to consolidate additional signage required for the property. See Figure 10 for an example of this consolidation.

This sign and post is painted brown with router letters painted white. The post is installed at least two feet into the ground for stability and longevity. The install position will vary based on conditions, but placement should be adjacent to the trail positioned between the parking area and trail head.



Figure 10:
Conservation Land Non-Motorized Vehicle sign with consolidated property signage

9. Other Signage

Three other specialty signs are current in inventory. These signs are applicable in specific instances.

The first is the “Bolton Loop Trail” apple sign screen printed on aluminum stock. The “Bolton Loop Trail” initiative originally took place over two decades ago. It was an attempt to create and mark a perimeter loop of continuous walking around Bolton. This loop was marked, in places, with the most defined sections existing north of RT117 between Rattlesnake and Bolton Flats. Unfortunately, existing conservation properties south of RT117 do not exist to support a feasible loop without extensive on-road walking. Currently, there is no initiative to create or manage additional sections of this initiative. Dozens of these signs are installed around Bolton and neighboring towns, but are not represented in any maps.



The second specialty sign is the “Conservation Commission Land Boundary” marker sign. This 3.75”x3.75” screen printed aluminum sign can be used to delineate and define an edge of a town-owned conservation parcels, areas, or trails. This sign has been successfully used when the edge between private land and open space land requires identification. This sign is tree installed using current specification nails, with at least one inch left between the nail head and bark to allow future growth.



The third specialty sign is a generic “Crossing Private Property, Please Stay on Trail” sign. This white plastic screen printed sign exists in limited quantities. It is typically installed on either end of a trail segment facing the “entrance” direction using two nails. This sign is best used when a formal easement exists across private property.

