



Trail Manual for the Florida Trail System



Florida Trail Association, Inc.
October 27, 2007

This Trail Manual is dedicated
to the Volunteers
of the Florida Trail Association
Who have given their time and energy
To build and maintain over 1,400 miles
Of the Florida Trail
Over the past 41 years

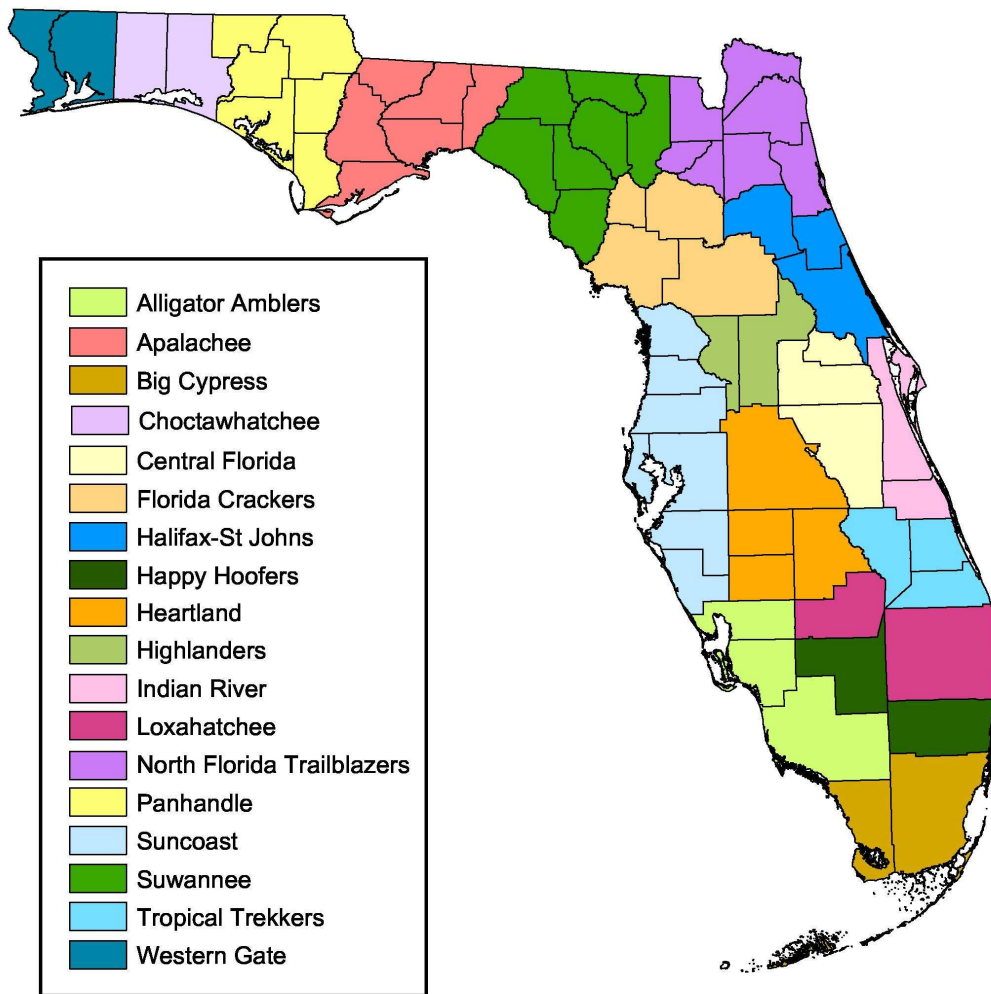
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Glossary of Terms

Florida Trail Association (FTA) – The FTA is a volunteer, membership-based 501(c)(3) Florida not-for-profit Corporation. FTA’s primary purpose is to develop, maintain, promote, and protect a continuous public hiking trail the length of the state of Florida called the Florida National Scenic Trail (FNST) and other side and loop trails, together called the Florida Trail System. FTA partners with the USDA Forest Service in a joint effort to develop and maintain the FNST.

Florida National Scenic Trail (FNST) – One of eight national scenic trails, the FNST was added to the national trails system in 1983 by the U.S. Congress through an amendment to the National Trails System Act (P.L. 90-543). The FNST will one day extend 1,400 miles, from Gulf Islands National Seashore in Florida’s western panhandle to Big Cypress Preserve in south Florida. While the FNST generally follows the route of the Florida Trail (see below), it only includes those segments of trail that have been certified by the USDA Forest Service as meeting the requirements for national scenic trail status. FNST certified sections of trail are open to the general public and are not open to motorized vehicles.

The Florida Trail – Envisioned in 1964 by FTA founder, James Kern, the Florida Trail is a trail that would span the length of the state of Florida and serves as the general route for the Florida National Scenic Trail. Some sections of the Florida Trail have been certified as FNST and are open to the public. Other sections have not been certified and are only open to FTA members due to landowner restrictions. Gaps in the Florida Trail still exist.

The Florida Trail System (FTS) – The system of hiking trails that is comprised of the Florida Trail, including the FNST, in addition to loop and side trails that are maintained by the FTA.

National Forests in Florida, USDA Forest Service – The Federal Agency which has the delegated administrative responsibility for the management of the FNST pursuant to the National Trails System Act. Its primary partner for FNST management is the FTA.

Florida National Scenic Trail Comprehensive Plan (1986) – This plan was developed by the USDA Forest Service in cooperation with the FNST Advisory Council, which included the FTA and affected state and Federal Agencies. This plan provides general guidance on routing, development, protection, and management of the FNST to cooperating public agencies and private landowners.

Landowner Agreement – A written agreement between a landowner and FTA permitting FTA members access to their land to develop, use and maintain sections of the Florida Trail System.

Certification Agreements – Written agreements between the FTA, USDA Forest Service, and a landowner/land manager to certify a segment of trail as FNST as meeting the requirements of the National Trails System Act and the *Florida National Scenic Trail Comprehensive Plan*. These agreements identify the trail route, and how the trail and resources along the trail are to be managed.

Trail Routing – Refers to the general location or area of existing or planned trail.

Trail Alignment – Refers to the exact location of the trail tread on the ground.

Chapter 1: Administration of the Florida Trail System

PREFACE

The Florida Trail Association's mission is to develop, maintain, promote, and protect a continuous public hiking trail the length of the State of Florida called the Florida National Scenic Trail and other side and loop trails, together called the Florida Trail System; and to educate the public by teaching appreciation for and conservation of the natural beauty of Florida; and to provide opportunities to hike and camp.

The intent of this manual is to guide trail development, construction and maintenance techniques for the Florida National Scenic Trail and the Florida Trail System. Segments of the FNST and the FTS are wilderness hiking trails that are cleared, blazed, and signed in accordance with this trail manual. There are some differences between standard practices used on private land and those used on public land, particularly with regard to sign placement and usage. Adherence to tried-and-proven methods will result in a trail that is a pleasure to hike and requires minimum maintenance. Additional readings on trail construction and maintenance can be found in:

- A.T. Design, Construction, and Maintenance, 2nd Ed. (2000). Pub. #503, Appalachian Trail Conference, Box 807, Harpers Ferry, WV 25425. (\$14.95) ph:(304) 535-6331. www.atconf.org
- AMC Field Guide to Trail Building and Maintenance, Appalachian Mountain Club, 5 Joy St., Boston, MA 02108. (\$14.95) or order by phone: (603) 466-2721.
- Lightly on the Land: The SCA Trail-Building and Maintenance Manual, 1996. The Mountaineers, 1001 SW Klickitat Way, Seattle, WA 98134. (\$19.95)

This manual is subject to periodic revision. Please recommend revisions to your chapter Trail Coordinator or the VP-Trails using the form provided on page 93. For additional information, contact:

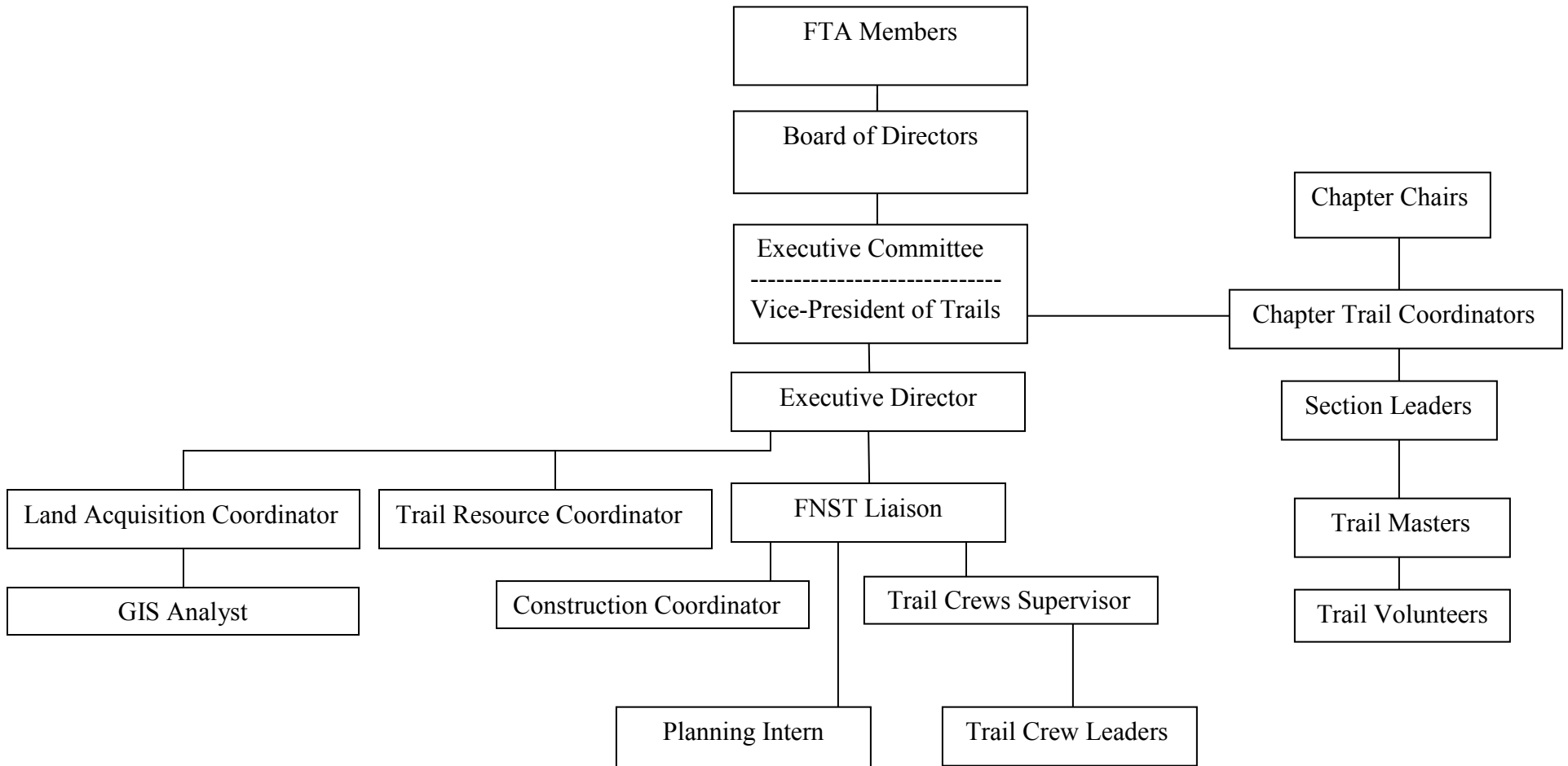
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The following diagram describes the system the FTA uses to organize the construction, maintenance and administration of the Florida Trail System. This organizational chart includes trail related activities under the VP-Trails as well as the position descriptions for FTA trail volunteers. In addition to these volunteer positions, the FTA employs staff to support the efforts of the FTA volunteers. Due to their dedicated funding, the trail staff positions are mainly limited in scope to the Florida National Scenic Trail. The current FNST positions are as follows:

1. **FNST Liaison** - responsible for coordinating with landowners and managers in certifying and managing the FNST along with coordinating the FNST program with the USDA Forest Service.
2. **Construction Coordinator** - responsible for managing the FNST construction and maintenance program.
3. **Trail Resource Coordinator** - responsible for maintaining an inventory and information about the FNST, including the hiking guide and trail maps; managing the volunteer training program, and troubleshooting trail-related issues.
4. **Land Acquisition Coordinator** - responsible for working with the USDA Forest Service in acquiring land to protect the route of the FNST and identifying opportunities to close gaps in the trail where actual acquisition is not required.
5. **Trail Crews Supervisor** - responsible for overseeing trail crew programs
6. **GIS Analyst** - responsible for maintaining all spatial data, and providing maps in support of construction, acquisition and land management programs.
7. **Trail Crew Leaders (Temporary Seasonal Position)** - responsible for leading trail crews.
8. **Trail Planning Intern (Temporary Position)** – responsible for assisting FNST staff with research, planning and coordination

Trail Related Organizational Chart



ROLES AND RESPONSIBILITIES

VICE PRESIDENT – TRAILS

1. Perform the duties of the president in the absence of the VP-Administration and VP-Membership.
2. Accept responsibility for planning, development, maintenance, and protection of the Florida Trail System.
 - a. Oversee all trail related staff.
 - b. Participate in approval of all certification agreements and private landowner agreements. Keep a copy for distribution to Trail Coordinators as needed. The original will be kept in the FTA office.
 - c. Make final decisions on requests for changes in the Trail Manual.
3. Keep information on the trails current.
 - a. Receive yearly reports on the status of the trail from condition reports submitted by the Trail Coordinators.
 - b. Maintain an inventory of all FTA tools and equipment and oversee any equipment loaned between chapters.
4. Draft an annual budget for the Florida Trail System.
 - a. Review and approve the budget for the Florida Trail System.
 - b. Review all requests for tools and equipment, kiosks, boardwalks and bridges submitted for the Florida Trail System and include appropriate requests in a budget to be submitted to the treasurer by April 1st of each year.
5. Oversee all Chapter Trail Coordinators and Section Leaders.
 - a. Send all changes to the president for approval (necessary forms on page 94 and 95).
 - b. Help with all solutions on trail related issues as appropriate.
6. Be responsible for all the following committees/functions.
 - a. Trails Committee
 - b. Maps and Guides to the FTA
 - c. Trail Manual
 - d. Trail Protection Committee
 - e. Long Distance Hikers Committee

TRAILS COMMITTEE

The Trails Committee serves as an advisory committee to the VP-Trails to:

1. Provide a statewide view of the Florida Trail System, its viability and use in its present condition.
2. In conjunction with the Trails Protection Committee, coordinate long-term trail planning and establishment of trail locations, openings, and closings.
3. Recommend policy concerning development and maintenance of trails.
4. Develop standards regulating trail building and maintenance.
5. Review recommendations and changes to the Trail Manual.
6. Assist the VP-Trails with the preparation and prioritization of the trail budget.
7. May establish ad-hoc committees to review other trail related issues

Membership shall consist of:

- Voting: a) Chapter Trail Coordinators
 b) Chair of Trails Committee (unless Chair is also the VP-Trails)

- Non-voting: a) President
 b) VP-Trails
 c) VP-Development and Outreach
 d) Immediate past VP-Trails
 e) FTA Staff
 f) Florida Trail Guidebook Editor
 g) USFS Trail Manager Position

TRAILS COMMITTEE CHAIR

1. Call the meeting.
2. Prepare the agenda.
3. Preside at the meetings.
4. Appoint sub-committees as required.

TRAIL PROTECTION COMMITTEE

Provides guidance to the Officers, Board of Directors and staff concerning the planning and implementation of trail protection strategies, projects, and issues for the routing of the Florida National Scenic Trail and expenditure of trail route acquisition funding.

CHAPTER TRAIL COORDINATOR

1. Responsible to the VP-Trails for coordinating the planning, development, and maintenance of segments of the Florida Trail System *assigned to his/her chapter by the VP-Trails*.
2. Facilitate requests for information between VP-Trails and Section Leaders.
3. Coordinate preparation/submission of:
 - a) Work plans when requested by land managers and required by trail agreements.
 - b) Yearly trail condition reports.
 - c) Equipment/material requests.
 - d) Monthly reports of volunteer hours contributed for trails on respective land management units/agencies as required by FTA-agency agreements (page 79).
4. Serve as a voting member of the Trails Committee.
5. Furnish comments and recommendations on new chapter trail proposals.
6. Ensure that the VP-Trails and the FTA office are notified of any change in the trail routes.
7. Report to his/her chapter about important FTA trail issues and the status of trails within their area.
8. Recruit and recommend persons for Section Leaders to the VP-Trails.
9. Assume responsibility in the event that a Section Leader resigns until a new Section Leader can be found.

Procedure for becoming a **Trail Coordinator**:

1. **Chapter Chair** submits **Chapter Trail Coordinator** nomination form to **VP of Trails**.
(Form on page 96)
2. **VP of Trails** submits nomination form to **President** if approved.
3. **President** submits **signed** nomination form to **Florida Trail Office in Gainesville** to be processed.

SECTION LEADER

1. Responsible to the VP-Trails through the Chapter Trail Coordinator for the detailed development and maintenance of a section of the Florida Trail System.
2. Appoints Trailmasters and assigns each to specific trail responsibilities.
3. Ensures training of Trailmasters and provides each with information and support necessary to perform assigned tasks. Each Trailmaster should be provided with:
 - a. Job Assignment, including training of volunteers in trail construction and maintenance techniques and safety procedures. It is recommended that the assignment of responsibilities and the acceptance be done in writing
 - b. Job Description
 - c. Trail Condition Report (page 74)
 - d. Trail Manual
4. Exercises leadership of Trailmasters by direct communication regarding status of trail assigned and need for maintenance and/or rerouting.
5. Provides trail maintenance schedule for Footprint and chapter newsletter to encourage participation in maintenance.
6. Reviews and approves maps and map revisions as provided by the Trail Resource Coordinator. Provide Trail Resource Coordinator with map revisions.
7. Maintains supplies and equipment as required for Section maintenance.
8. Establishes and maintains personal contact with Section landowners, assuring them of the continued gratitude of the FTA as well as verifying that landowner agreements, restrictions, and prerequisites are adhered to by the FTA.
9. Compiles data from trail registers regarding trail usage for submission to the VP-Trails.
10. Ensures that the trail under his/her supervision is fully inspected semi-annually for condition.
11. Provides Trail Condition Report by December 1st of each year to the Trail Coordinator and other information as required when trail conditions change.
12. Notifies the Chapter Trail Coordinator of any changes in trail conditions, including closings or rerouting of trail.
13. Keeps Chapter Trail Coordinator informed of all section activities.
14. Performs duties of Trailmaster for portions of the trail not assigned to a Trailmaster.
15. Provides trail volunteer hours to the Chapter Trail Coordinator on the quarterly volunteer hours report found on page 79.
16. May assist with identification and routing of new segments of the Florida Trail System.

Procedure for becoming a **Section Leader**

1. **Chapter Chair** and **Trail Coordinator** submit **Section Leader Nomination Form** to **VP of Trails**. (Form on page 97)
2. **VP of Trails** submits nomination to **President** if approved.
3. **President** submits **signed** nomination form to **Florida Trail Office in Gainesville** to be processed.

TRAILMASTER

1. Responsible to the Section Leader for the detailed development and/or maintenance of a segment of the section of the trail as assigned by the Section Leader.
2. Schedules and leads trail maintenance activities on a periodic basis to ensure good condition of the trail all year.
3. Reviews and maintains trail registers (where applicable) and keeps abreast of problem areas through information supplied by trail users and Activity Reports submitted to FTA office.
4. Ensures that trail under his/her supervision is fully inspected semi-annually for condition.
5. Provides trail data to the Section Leader for the Section Leader's Annual Trail Condition Report.
6. Provides trail volunteer hours to the Section Leader on the quarterly volunteer hours report found on page 79.

Chapter 2: Trail Development and Management

A VISION FOR RESOURCE MANAGEMENT ALONG THE FLORIDA TRAIL SYSTEM

The Florida Trail Association envisions a continuous special trail management corridor, varying in width but preferably 1/4th mile wide, in which the natural resources on and surrounding the Trail treadway will be consistently managed to provide a quality user experience and to assure the health of the resources.

This vision expands the application of the FNST Comprehensive Plan to all parts of the Florida Trail System. The FTA has and will expend considerable effort and resources to advance this vision and looks forward to collaborating with its partners to achieve premier hiking opportunities throughout Florida.

This vision shall be realized as management plans are revised and implemented on lands through which the trail passes. As the major partner of the agencies responsible for managing the trail, the FTA believes that management activities within and affecting the corridor, including forest health, water quality, wildlife habitat, changes in trail use, trail maintenance, and trail construction or reconstruction, should only take place after consultation among the respective partners.

FLORIDA TRAIL ASSOCIATION TRAIL POLICIES

USE OF THE FLORIDA TRAIL SYSTEM

The Florida Trail Association supports use of the Florida Trail System by hikers and pedestrians. The FTA opposes use of the trail by mechanical means, including motorized vehicles and bicycles, as well as equestrian and pack stock use. Where multi-use corridors are utilized, a separate footbed for hikers should be built and maintained.

The FTA supports the prohibition of motorized vehicles, horses, pack stock and bicycles on the Florida Trail System, except where the trail makes use of existing multi-use paths. Section 7(c) of the National Trails System Act states: "...efforts shall be made to avoid activities incompatible with the purposes for which such trails were established. The use of motorized vehicles by the general public along any National Scenic Trail shall be prohibited..." All segments of the trail built and maintained by volunteer and/or FTA sponsored trail crews are to be designed, constructed, and maintained to accommodate foot traffic only. The design, construction, and maintenance does not anticipate vehicle, bicycle or equestrian use which can adversely affect the condition of the trail itself and the safety of its users.

The FTA urges the USDA Forest Service, National Park Service, Florida State Parks, Florida Division of Forestry, Water Management Districts and other agencies to not only post vehicle, bicycle and equestrian prohibitions effectively, but to also increase enforcement efforts in areas where prohibited vehicle, bicycle and equestrian use occurs.

TRAIL CLOSURES AND RESTRICTIONS

The principal access restriction on the trails of the Florida Trail System is the closure of tracts of land, both public and private, during all or part of hunting season. To backpackers making extended hikes within a specified time a prohibition on camping may be the same as a prohibition on access. On some sections of the trail camping is prohibited at all times while on others it is prohibited or inconveniently restricted during hunting season. Portions of the trail go through areas that require fees or special permits either for camping or access.

A trail without adequate access may not be better than no trail at all. Trail access involves not only admittance to a site but also the privilege of overnight camping and the avoidance of overly restrictive permitting or registration rules. Full and timely access to the Florida National Scenic Trail is of prime importance to its full utilization and enjoyment and is an objective of the Florida Trail Association. The Florida Trail Association does not oppose fees or special permits required for camping or access.

FTA's policies regarding closures and restrictions:

1. The Florida National Scenic Trail is to remain open to hiking year round.
2. Campsites should be provided on all sections of the Florida National Scenic Trail. Such sites may be off the trail but at a reasonably close distance. Designated sites should be frequent enough to allow reasonable accommodation for hikers of varying abilities. The Florida Trail Association recommends that campsites be located 4 to 6 miles apart.
3. Fees or special permits should not impose a hardship through denial of access or require extraordinary documentation to obtain required permission.

MULTI-USE TRAILS

Single-use trails are pathways designed and utilized for a specific mode of travel. Multi-use trails are pathways that may safely accommodate two or more modes of travel. Hiking trails, or foot-only trails, are single-use pathways developed and managed for quiet, slow travel and the enjoyment of nature away from the extraneous sights and sounds of mechanical conveyances and equestrian traffic and the treadway impacts of these activities including, but not limited to, loose soils and horse droppings.

The FTA is devoted to the interests of hikers and the creation and protection of hiking trails, and in certain situations supports the development of multi-use trails that accommodate hikers. Additionally, FTA supports, as a matter of principle, the establishment of single-use mountain bike and equestrian trails where such trails are considered compatible with the primary purposes of the management area by the landowner or manager.

FTA believes that single-use trails offer the best opportunity for each user to realize the outdoor experience he or she is seeking and to avoid the inherent conflicts that occur when user groups with different needs and expectations are forced to share a common path. The FTA does recognize, however, the benefits of multi-use trails in the urban setting and between points of interest, where the treadway is stabilized and wide enough to provide for the safe passage of all non-motorized users. The very nature of these trails provides favorable opportunities for those that use bicycles, skateboards, and roller blades and less favorable opportunities for walkers and other users. User groups should strive to work together with land managers to resolve existing access and management problems and to avoid future conflicts through cooperative trail planning. Further policy statements are as follows:

1. FTA will not assume responsibility for ongoing maintenance of any trail that has not been approved as a component of Florida Trail System.
2. FTA participation in the development and/or maintenance of multi-use trails is restricted to multiple use segments of the FNST and other hiking trail segments temporarily located on existing roadways.
3. FTA will not participate in the development of any single-track trail open to mountain biking or equestrian activities, and may, at its option, terminate maintenance and support of any single-track hiking trail that is opened or converted to multiple uses by a public land manager.
4. Hiking access to all trails in Florida Trail System is open to the general public with the exception of trails on private property that are restricted to FTA members by the landowner or manager.

SPECIAL EVENTS

Using segments of the Florida Trail System for competitive special events requires thoughtful planning and implementation to avoid significant damage to the natural resources in the trail corridor or disruption of use of the trail by hikers. The trails of the Florida Trail System are constructed and maintained primarily for public use by hikers. Occasional use for special events such as competitive trail running may be done at times in certain locations. Special attention should be given to management techniques that avoid significant resource damage or disruption to hikers of the trail. When trail events are held on the Florida Trail System without significant interference with normal trail use, the Florida Trail Association urges land managers to consider the characteristics of these events, locations, and scheduling before authorizing any such special events.

ADDING TRAILS TO THE FLORIDA TRAIL SYSTEM

The FTA currently maintains in excess of 1,800 miles of hiking trail. Periodically, requests for the construction of new trails are received from members, outside organizations, and government entities. Trails that have been developed to date require many person hours to maintain. Because poorly maintained trail segments can reflect badly on FTA, it is imperative that each chapter carefully consider its overall construction and maintenance capabilities before embarking on new trail construction. With the foregoing in mind, each chapter shall adhere to the following procedure when undertaking the development of new hiking trails.

1. Chapter receives written request for development of a new hiking trail. Each proposal shall include:
 - a. Type of trail (hiking, shared-use, nature, etc.)
 - b. Location
 - c. Approximate length
 - d. Land owner/manager written approval or request and notice of consent to build.
 - e. Name, address, telephone number of contact person.
 - f. Any assistance to be provided (equipment, materials, etc.) by manager.
 - g. Description of terrain and reasonable evidence that the terrain will allow for a viable hiking trail.
 - h. Approximate route should be identified.
2. Chapter Trail Coordinator reviews request in terms of:
 - a. The chapter's interest in developing and maintaining the trail
 - b. The chapter's ability to undertake the project in light of its current trail building resources and its ongoing maintenance responsibilities
 - c. Any other factors deemed appropriate
3. For trails to be part of the FTS, the Chapter shall consider the proposal and recommend approval or denial. Chapters may help build trails that are not part of the Florida Trail System as a community service.
4. For trails to be part of the FTS, the Chapter's recommendation and proposal are submitted by Trail Coordinators to VP-Trails for review and approval. VP-Trails may, at his or her discretion, request additional information and/or clarification of proposal.
5. Following completion of the trail, the Trail Coordinator shall submit a request in writing to the VP-Trails for inclusion of the trail in the Florida Trail System. A map and data sheet for the trail containing the information to be included on Official Florida Trail Maps shall accompany the request using the form found on page 90. The route of the trail should be marked on a 1:24,000 topographic map together with field notes and mileages. A measuring wheel or GPS unit should be used to record mileages to the nearest tenth of a mile. Important points such as road crossings, points of interest, water locations, campsites or camping zones, hazards, etc., should be recorded in the field notes with accurate distances indicated. Descriptions of the trail should be written so they can be used when hiking from either direction. Information such as locations of trail terminal points, flora and fauna, parking sites, gas stations and stores, and special conditions such as 'hunt club land', or safe area during hunting season, should also be noted. A tape recorder may be used for making field notes.
6. The VP-Trails shall present the request for final approval by the Board of Directors at the next regularly scheduled board meeting.

ADDING SEGMENTS TO THE FLORIDA NATIONAL SCENIC TRAIL

Approval of trail as FNST requires execution of a certification agreement by the Supervisor of National Forests in Florida (USDA Forest Service), the manager of the land on which trail is to be located, and, normally, the Florida Trail Association. Accordingly, this procedure modifies the above process for approving trail as part of the Florida Trail System to add procedures required for trail which is also to be certified as Florida National Scenic Trail (FNST).

1. The written proposal required for the development of new trail will be:
 - a. Amendment to an existing certification agreement
 - b. Enter into a new certification agreement, or
 - c. Documented approval via a completed Request to Proceed with Trail Construction form when full certification is not needed or will not be completed in a timely manner (see pages 66 and 67).
2. The President of FTA, Supervisor of National Forests in Florida, and the landowner or his/her representative sign Certification agreements and amendments after review by the Section Leader and Chapter Trail Coordinator. The trail may be constructed prior to certification with approval by the President or VP Trails for FTA, Supervisor of National Forests in Florida or her/his designee, and the landowner or his/her representative (use the Request to Proceed with Trail Construction form). USDA Forest Service approvals are required since it is the Federal Administrator for the Florida National Scenic Trail.
3. The above assumes the proposed trail route or alignment is consistent with the current FNST Preferred Routing Study. If there is an unresolved question as to whether or not the route or alignment is consistent, then the VP-Trails or FTA staff can request a review by the Trail Protection Committee or a subcommittee delegated the responsibilities for such recommendations. If unresolved questions remain, then the issue could be referred to the Executive Committee or Board of Directors.

In the absence of a Trails Protection Committee Meeting (TPC), a subcommittee could be convened (in face-to-face or telephone/computer linked discussion) to review the proposal. A subcommittee of the TPC would include the VP-Trails, FTA leader closest to the action proposed [normally the affected section leader(s) or trail coordinator or both], and TPC chair. With a positive recommendation by staff, and approval by the USFS designee, and an extraordinary majority of the TPC (2/3rds voting in favor of the proposal), the proposal would be approved. With less than a 2/3rds vote by the TPC, the VP-Trails could forward the proposal to the Executive Committee or Board of Directors where the proposal could be approved with a simple majority vote.

The FTA and the USDA Forest Service are working together to acquire land from willing sellers to complete the Florida National Scenic Trail. Often Section Leaders and Chapter Trail Coordinators are in a unique position to identify or learn about land which may be suitably located for closing the gaps in the trail and are potentially available for purchase. Such properties can be nominated for acquisition by notifying the Acquisition Coordinator in writing. An FNST land acquisition nomination form can be found on pages 68 and 69.

TRAIL ROUTING AND ALIGNMENT

For the purposes of planning the FNST and this trail manual, FTA uses the terms, “trail routing” and “trail alignment” to represent two separate activities or steps in trail planning and development. Trail routing refers to the general location or area that the trail is found or to be built. This is distinguished from the term “trail alignment” which is the exact location of the trail tread on the ground. Defining these terms in this manner helps us better understand which step in the process or level of detail when discussing trail planning and development.

TRAIL ROUTING

The general route of the Florida National Scenic Trail is broadly defined by the twenty-mile wide corridor defined in the Florida National Scenic Trail Comprehensive Plan (1986). The FTA has the flexibility to route the FNST anywhere within that twenty-mile planning corridor. The FTA and the USDA Forest Service took a major step toward identifying the entire route for the FNST in the report, Preferred Routing for the Florida National Scenic Trail: Opportunities for Discussion with Public and Private Landowners (2003). This study provides direction for FTA and the USDA Forest Service in development and certification on new trail and for contacting landowners about possible land or easement acquisitions for trail routing. Because the recommendations are based on the best available information, which will be improved as recommendations are pursued, it is expected that the Report and its recommendations (the routing of the trail) will have to be updated periodically. All the trail routing opportunities presented in the report are subject to support and approval by landowners, the FTA and the USDA Forest Service.

TRAIL ALIGNMENT

For a segment of trail to be eligible for certification as part of the Florida National Scenic Trail, the trail must be:

1. Be within the 20 mile wide planning corridor established by the Florida National Scenic Trail Comprehensive Plan.
2. Be open and accessible to the public.
3. Not be located on roads or the shoulders of roads open to motorized use by the general public. Use of motorized vehicles by the public is prohibited with only limited exceptions. The trail may be on a significantly wide road right-of-way or bridge.
4. Be consistent with Federal and state law and regulation.
5. Be supported by landowners.
6. Be certifiable and reasonably permanent.
7. Further the continuity of the 1,400-mile Trail.

The alignment of the trail is one of the most important factors in trail design. It should be done with experienced leaders from the managing authority cooperating with the FTA. The section leader should closely confer with the landowner about areas to avoid and which areas to route the trail near. Any limitations imposed by the landowner should be observed carefully. Examples include: passage but no overnight camping; no fires; no hunting or fishing; and no use of land adjacent to Trail to avoid conflicts with other uses. In timber harvesting areas, try to determine the land manager's plans for harvesting a few years in advance. When possible, avoid routing through areas soon to be clear-cut.

The Trail should be as scenic and diverse as possible, and near to points where water and campsites are available. It is recommended that trail be laid out during the wet season so a dry footway can be selected. Where possible, the Trail should be located to avoid wet or swampy areas. If possible, select a route that will minimize or avoid a need for bridges, boardwalks, raised footways, and other costly structures that must be maintained or replaced in the future. Failure in proper planning the route before clearing may result in multiple rerouting.

During the initial trail location phase, relocation of the trail may be necessary. A housing project may threaten the trail, landowners may change and not agree to the trail location, or the opportunity for a better location may arise. When the trail must be moved, any relocation should be made to provide a more desirable trail for the hiker. Once the current phase of corridor selection and trail location is complete, relocations are expected to be far less frequent. Minor relocations of the footpath, to protect the land or improve scenic quality, may be done by the local manager or landowner in cooperation with the FTA. Major relocation of the FNST may be made only upon the approval of the USDA Forest Service after reviewing a joint proposal by the land manager and the FTA. The desirability of any new location will be carefully assessed before any changes are made. This procedure will allow the USDA Forest Service and the FTA to maintain reliable records of the trail's location.

Should realigning become necessary, a new route should be cut and blazed, if possible, prior to closing the former route. All blazes on the former alignment should be obliterated with medium brown or medium gray paint (a matte or dull finish works best). Obstructions should be placed in the old footway, and all stiles, signs and other trail improvements should be removed. If a section is closed, a new trail route **MUST** be posted for hikers at both ends of the trail and reported as a “Notice to Hikers”, even if that route is a road walk.

Section Leaders are responsible for reporting changes on their trail in a timely manner (see “Notice to Hikers” procedure on page 63). All changes affecting alignment, conditions or hiker facilities should be reported immediately on the “Notice to Hikers” form (see page 87). Major revisions to the trail (trailheads, campsites, water sources, mileage updates, or realigning) should also be reported on the “Map Changes Form” (see page 88) as soon as possible. The procedure describing this form can be found on page 64. The difference between the two forms is that the “Notices” should be brief descriptions and filed as soon as possible, so the hikers can be notified of immediate problems or changes. “Map Changes” should be filed for long-term changes or enhancements to the trail in time for the next map update by May of each year for fall publication. When filing “Map Changes”, including a copy of the old map image and/or text with the changes marked is usually the easiest and fastest way to ensure accuracy.

RESEARCHING AND OBTAINING ACCESS FOR TRAIL ROUTES

Section Leaders should begin their study of a newly acquired section by examining aerial photographs, USGS topographic maps and other available maps, talking with local property owners to learn more about the locale, and to discover the best route through difficult areas. Location of the terminal ends of the Section should be coordinated with the Trail Coordinator and the Section Leaders of adjoining sections. If questions concerning terrain remain unanswered, an aerial inspection may be required. Once a route for the Trail has been determined, three jobs evolve: 1) working with appropriate FTA Staff to ensure property owner/manager permission for trail crossing obtained, 2) conduct final review of trail routing with Trail Coordinator and appropriate FTA Staff, and 3) begin clearing of the footway.

Determining Property Ownership and Boundaries

Start by locating the proposed route on USGS topographic (preferably at a scale of 1:24,000) or FTA hiking maps (1:100,000). Identify on the map a trail corridor about 1/4th mile wide to allow space for trail meanderings as dictated by terrain. Then identify township, range and section coordinates through which the corridor passes. Be aware that some areas may use English or Spanish Land Grant Surveys.

The job of determining ownership can be facilitated by a study of the tax records at county courthouses to reveal the ownership as of the last taxing period. In each county, property records are maintained by the Property Appraiser whose office is usually located at the County Courthouse or a nearby building. Methods of record keeping and ownership numbering systems vary from county to county. At the Office, staff can help you obtain ownership information from their system. Usually these steps must be taken:

1. Refer to the County Property Ownership Maps/Tax Maps – by assistance from staff or from an index map, identify the detail sheets (township maps) through which the trail swath passes. From those maps, obtain the parcel identification numbers for the parcels through which the trail swath would pass. Sometimes those maps may refer to subdivision maps that have the more detailed parcel identification information. Often the Office may have aeriels or the ability to impose Township/Range/Section lines and property parcel lines and numbers onto aerial photographs. These are very useful in locating the trail swath through properties. Check the cost of such maps before ordering.
2. Ask the staff for a printout of ownership information for each of the parcels identified from the maps. Printouts typically include ownership, legal descriptions, size/acreage, buildings on site, land value, and land description. If the records are not automated, ask for tax cards or property value cards. In some cases you might have to go to large books (County Tax Rolls) to identify landowners. If they are not in the Property Appraisers Office, they can be found in the Tax Assessors Office. Tax Rolls list properties by Township, Range, Section and parcel number. Find the geographical area under main headings, then look for the parcel number or subdivision name. Normally, to the right of the parcel number is a description of boundaries and owners' names and address. There may be other ownership information such as land value and description.
3. Usually information can be obtained from the above steps. However, if the description in Tax Rolls is not complete, it should include a reference to other records which will contain additional records/deeds. Key abbreviations include:
 - PB: Plat Book (get description from this book)
 - ORB: Official Record Book (this book includes official legal descriptions)
 - DB: Deed Book (an older method for recording deeds)
4. Many property appraiser records are now available through the World Wide Web. A list of property appraisers web sites is posted on the Florida Department of Revenue Web site at:

<http://dor.myflorida.com/dor/property/appraisers.html>

The property appraiser link will connect you with a county's office web site. In some cases those sites actually provide you access to maps and ownership records for individual property owners. At the present time, this technology can be useful for updating ownership records as well as actually identifying properties through which trail swath would pass.

Working with Landowners

It is important to solicit the good will of all landowners. Personal visits are a must. Meet with landowners one-on-one in friendly surroundings at a time that is convenient for them. If you know someone who knows a particular landowner, have that person arrange the meeting or come along. Be honest and forthcoming, courteous and persistent. Learn everything you can about the landowner and anticipate their concerns.

Good will in the community is also important. Land holdings may be large or small with some property owners living near the proposed Trail route. A lecture or slide show depicting hiking activities may be appropriate for local civic groups. Landowners of large or critical tracts should not be contacted until the Section Leader is thoroughly familiar with the situation and feels that a successful negotiation is likely. Once permission for land usage is obtained, thank you notes should be sent to landowners.

During negotiations for access, the landowner may have questions when they are approached regarding trail routing access through their property. The comments below can be used in discussions or letters. However, answers to property owner questions on these subjects should be answered in direct reference to the property and not just in general terms.

1. **Trail Alignment** - The FTA will only route the trail where the landowner fully approves. The trail is planned and constructed so not to disturb existing or planned land uses and management practices, which of course the landowner may change without consultation of the FTA. Inquire as to property easements and leases that may be incompatible with trail uses. The FTA requests that landowner notify the FTA of changes to the trail so we can work with the landowner to help ensure the trail's continuity when trail reroutes are necessary. All routing details and maps may be reviewed and approved by landowners prior to publication.
2. **Trail Use** – The Florida Trail Association recommends that the trail we build and maintain be used only for hiking, but specific uses are permitted at the discretion of the landowner.
3. **Access** - The owner may grant access only to FTA members, or the owner may grant access to the public. At all times the owner retains control of the access and may close it as he or she wishes. The FTA requests notification 90 days prior to closure of the trail or property so FTA may notify our members.
4. **Liability** - Owners are often concerned that they might be sued by a hiker who is injured while crossing their property. The members of the FTA sign a pledge and waiver of liability that declares the landowner not liable in any way. When non-members participate in FTA activities on property open to the public, they are asked to sign an agreement to be liable for their own actions, exempting the FTA and the property owner from all liability (see sample Assumption of Risk form, page 90). FTA members also sign this form when using trail during FTA activities on private lands. The State of Florida has a recreational use statute that states (s.375.251, F.S.) that states:

An owner or lessee who provides the public with a park area or other land for outdoor recreation purposes owes no duty of care to keep that park area or land safe for entry or by use by others, or to give warning of persons entering or going on that park area or land of any hazardous conditions, structures, or activities thereon... This act does not relieve any person of liability which would otherwise exist for deliberate, willful or malicious injury to persons or property. The provisions thereof

shall not be deemed to create or increase the liability of any person.

This statute states further that it does not apply “if there is any charge made or usually made for entering or using such a park area or land, or if any commercial or other activity, whereby profit is derived from the patronage of the general public, is conducted on such park area or land, or any part thereof”. In the 40-year history of the FTA, there is no known instance where a member or non-member has instituted any suit or made a claim against a private landowner as a result of an injury related to the use, construction or maintenance of the Florida Trail.

Another useful tool to overcoming a liability concern is to work with the landowner and the Florida Department of Environmental Protection to designate the trail as a part of the Florida Greenways and Trail System. s.260.0125F.S. states:

(1)(a) A private landowner whose land is designated as part of the statewide system of greenways and trails pursuant to s.260.016(2)(d), including a person holding subservient interest, owes no duty of care to keep that land safe for entry or use by others or to give warning to persons entering that land of any hazardous conditions, structures, or activities thereon. Such landowner shall not:

1. Be presumed to extend any assurance that such land is safe for any purpose;
2. Incur any duty of care toward a person who goes on the land; or
3. Become liable or responsible for any injury to persons or property caused by the act or omission of a person who goes on the land.

(b) The provisions of paragraph (a) apply whether the person going on the designated greenway or trail is an invitee, licensee, trespasser, or otherwise.

(2) Any private landowner who consents to designation of his or her land as part of the statewide system of greenways and trails pursuant to s. 260.016(2)(d) without compensation shall be considered a volunteer, as defined in s. 110.501, and shall be covered by state liability protection pursuant to s. 768.28, including s. 768.28(9).

5. **Crime and Vandalism** - There is little evidence to support the fear that trails in general produce disturbance to private landowners. In fact the evidence is to the contrary and fears do not materialize. The FTA knows of no incidents of crime or vandalism along the trail caused by members of the FTA or hikers in general. A 1990 study by the Appalachian Trail Conference of crimes on the Appalachian Trail found that despite use by 3 to 4 million persons per year, that there were only 0.05 per 100,000 or 1 in 2 million incidents. This translates to a risk that a person is more likely to be struck by lightning or victimized in your home than a hiker is on the Appalachian Trail.
6. **Camping and Campfires** - Owners are encouraged to permit camping and campfires along the trail. Ask landowners to consider whether they prefer designated campsites as the only camping site(s) allowed or if they will permit backpackers to camp anywhere. Owners typically wish to identify campsites, but undersigned sites can minimize the impact on any particular site along the trail. Campfires are typically allowed at designated campsites.
7. **Gates and Fences** - The FTA reminds its membership and hikers in its materials to always leave gates as found by the hiking party. Fences are bridged by stiles that permit hikers to climb over without damage to fences.
8. **Signs** - The FTA provides its own signs (see sign section) that are erected and worded as approved by owner. Access points to trail from public rights-of-way are only signed if and as the owner approves.

9. **Agreements** - It is strongly recommended that the FTA have written authorization from each landowner/land manager permitting the Florida Trail and members of the FTA and/or public to pass through their land. All agreements with landowners or managers will be either landowner agreements for Florida Trail System or certification agreements for the Florida National Scenic Trail. Agreements with landowners/land managers for the Florida Trail must be made in the name of the Florida Trail Association and not in the name of the Chapter or Section Leader. If written agreements for the Florida Trail on private lands are required, the Sample Private Landowner Agreement should be used (see page 71).

PRIOR to discussing any agreement, the Trail Coordinator, VP-Trails, and the FNST Liaison should be contacted for guidance. Agreements for certified segments of the FNST are negotiated between the landowner, FTA, and the USDA Forest Service by the FNST Liaison in consultation with the Section Leader and VP-Trails. Copies of all executed landowner and certification agreements are to be given to the landowner, the Section Leader, the VP-Trails, the Chapter Trail Coordinator, and the FTA Office. In the event that the landowner requires changes in the Sample Private Landowner Agreement, copies are available in digital form from the VP-Trails or FTA office. Agreements for certified segments of the FNST are negotiated between the landowner, FTA and USDA Forest Service by the FNST Liaison in consultation with the Section Leader and VP-Trails.

RESOLVING CONFLICTS WITH MULTI-USE TRAILS

With the growth in trail popularity among horseback riders, cyclists, and motorized users, land managers are facing pressure to allow different trails or multi-use trails. This can lead to conflicts and confusion. The Florida Trail Association supports the following design and management criteria for multi-use trails open to foot traffic and other non-motorized modes of travel:

1. **Safety.** Trails should be designed to allow for safe passage of one traveler by another and provide for adequate visibility to avoid collisions. Design should account for varying speeds of travel. General use regulations should be promulgated by the management agency and enforced through periodic law enforcement patrol.
2. **Environmental Protection.** Trail surfaces should be designed and managed with provisions that protect against environmental damage and erosion.
3. **The Hiking Experience.** Trails developed for multiple uses should be designed with consideration given to the needs, concerns, and safety of persons traveling on foot.

In the event of multi-use trail confusion/conflict, it is recommended that:

1. When possible, avoid multi-use trails or other user trails in the vicinity of hiking routes. Encourage the land manager to allow planned, single-use trails.
2. When the potential for conflict among trail users exists, work with the land manager at the time of trail planning and trail alignment flagging to avoid intersections and shared trails. Encourage a planned separation of 1000 feet between trails.
3. Attempt to flag and clear the hiking trail first, with up-front agreement by the land manager that intersections or shared trail with other trail users will not be allowed or at least will be minimized and must be approved by the manager.

4. When trail intersections must occur, minimize the impact on the hiker's experience by.
 - a. Crossing the other trail at right angles (90 degrees) with a clear line of sight and obvious blazing on both sides of the intersection.
 - b. If the intersection cannot be 90 degrees and/or the footpath is not obvious, additional signing may be necessary to avoid confusion and inappropriate use of the footpath (see Sign Section).
5. Shared trails are problematic because they tend to be wider, more defined pathways than hiking trails. Hikers may tend to follow the most obvious pathway even when the blazed trail leaves the shared path.
6. When leaving a shared trail, make it clear that the footpath continues in a new direction. Blazing must be obvious and a small directional sign may be necessary at the entrance to the hiking trail (see Sign Section).
7. When poorly planned shared trails or intersections have occurred, consider reroutes. Sometimes minor changes can eliminate problems and be acceptable to all parties.

TRAIL CONSTRUCTION

The Florida National Scenic Trail Comprehensive Plan (1986) states:

The design of the Florida National Scenic Trail (FNST) (should) exhibit high quality performance, and minimize disturbance to the environment. It should be designed on a segment-by-segment basis to accommodate, in a safe and enjoyable manner, the volume and type of traffic planned. The cost of maintenance is another important factor that trail design must consider. A well-designed trail can significantly reduce future costs.

General Considerations

1. Provide for all weather and all season passage where possible. Avoid the need for bridges, boardwalks, and other expensive to maintain structures.
2. Provide a great variety of vegetation and natural beauty. Capitalize on panoramic scenes from the trail such as prairies, marshes, ponds, sinkholes, and ocean.
3. Route the trail to pass within one-fourth mile of potable water and campsite. Avoid roads, airboat and motorcycle trails, and military operations.
4. Avoid proximity to problem areas and abrupt changes in direction that confuse the hiker. A smoothly curving trail is more of a pleasure to hike.
5. Observe limitations imposed by the landowner. Trail location can help meet these limitations and reduce conflicts.

Archaeological and Cultural Considerations

1. Avoid sensitive archaeological sites.
2. Locate the trail near archaeological or historical sites where recommended by the landowner and State Historic Preservation Officer. Interpret the meaning of the site through maps, guidebooks, and signs.
3. When appropriate, provide views and sounds of man's activities such as harvesting timber, harvesting crops, livestock ranching, and fishing without conflicting with these activities.

River, Highway, Railroad Crossings

1. Provide crossings by means of safe bridges and underpasses where volume of traffic is high.
2. Provide adequate visibility when roads or railroads are crossed at grade.
3. Take advantage of natural or existing features to afford a quick crossing without breaking the continuity of the trail.
4. The trail shall cross man-made features such as roads and power transmission lines at right angles to avoid prolonged visual contact.

User Facilities

1. Provide access at varying distances along the trail so users can choose different length trips.
2. Take advantage of opportunities to provide drinking water, showers, clothes washing facilities, and other services needed by hikers.

MINIMUM REQUIREMENTS FOR TRAILS IN THE FLORIDA TRAIL SYSTEM

1. **Tread Clearances** - Adequate side-to-side and overhead clearance shall be maintained. Trail clearance width shall be no wider than 48 inches. The trail clearance width may be as narrow as 32 inches where unauthorized motorized use occurs and in dense growth where appropriate. The actual tread of the trail should be at least 18 inches wide. The trail shall be cleared approximately 80 inches to be high enough to permit passage of a backpacker and their pack.
2. **Obstacles** - The tread should be properly cleared with all vegetation removed or cut at or below ground level to avoid leaving stubs in the tread that trip hikers. Remove logs or cut at an angle to permit foot traffic but restrict vehicles, bicycles and horses.
3. **Blazes** - Blazes shall be properly executed and maintained. The FNST and loop trails not connected to the FNST shall be marked with painted orange blazes that measure two inches wide by six inches tall. Connector and side trails to water, campsites, access points, places of interest or observation points are to be marked with blue paint that also measure two inches wide by six inches tall. A single blaze denotes the route of the trail, a double blaze (one directly above the other, two inches apart) notifies hikers of an important change in the Trail, and an offset double blaze notifies hikers of a turn in the trail. The offset top blaze indicates the direction of the turn. Blazes should be frequent enough to assure hiker that they are on the route. Normally, the next blaze should come into view ahead while the hiker is passing one. White painted blazes may be used for loop or alternate routes when they are connected to the FNST and Florida Trail. Yellow painted blazes may be used for trails that intersect other trails already blazed in orange, white or blue. See the description in "Marking and Signing the Trail" on page 38 for further information.
4. **Campsites and Water** - There should be suitable campsites and sources of water. Campsites should be provided on all sections of the Florida National Scenic Trail. Such sites may be off the trail but at a reasonably close distance. Designated sites should be frequent enough to allow reasonable accommodation for hikers of varying abilities. Campsites are recommended to be located four to six miles apart based on the expected use of the trail and site, but in all cases be no more than one hiking day apart (eight to ten miles). Sources of water should be accessible from campsites and available along the trail.
5. **Trail Structures** - Trail structures, including bridges, boardwalks and stiles, shall be usable and safe. Designs are available from the Construction Coordinator.
6. **Signs** - There shall be appropriate signage where needed, and it shall be maintained. Signage is available from the Construction Coordinator, and may be requested through submitting a Sign Request Form (see page 86).

Accessibility Guidelines

1. The USDA Forest Service has adopted Accessibility Guidelines applicable to all **new** trail construction and trail **alterations** within the jurisdiction of the Forest Service. This jurisdiction includes not just trail with the three National Forests in Florida but

the entire FNST corridor – our through trail and side trails. The Accessibility Guidelines applicable to all federal agencies and programs are under consideration. The guidelines referenced below many be superceded by this federal action.

2. Because the FS is the first to develop such guidelines and because the guidelines are fairly reasonable and measurable, they are being watched closely by other agencies, so we may see other federal, state and local agencies adopting these guidelines in the future.
3. Trails fall under a document called FSTAG (Forest Service Trails Accessibility Guidelines). Bridges and boardwalks are considered a part of the trail rather than a trail structure and therefore are included under FSTAG.
4. All other trail support structures (kiosks, registration boxes, benches, shelters, privies, etc.) are considered “adjacent trail support structures” and are covered under a different document called FSORAG (Forest Service Outdoor Recreation Accessibility Guidelines)
5. The FSTAG defines a number of very specific conditions regarding accessibility on trails. Several **Limiting Factors** are defined which, if covered by an accepted **Condition of Departure** and documented, means the trail has been surveyed and it has been determined to meet or not meet accessibility requirements.

For example: There is a **Limiting Factor** stating “The surface is not firm and stable for a distance of 45 feet or more.” There is a **Condition of Departure** stating “Where compliance would not be feasible due to terrain or prevailing construction practices.” Since the only way to provide a “firm and stable surface” on 95% of the Florida Trail would be to lay down an imported surface and that job would be virtually impossible to do and maintain with a volunteer labor force using hand tools, we simply need to document the exception as we have done through Trail Inventory.

6. Disabled individuals using wheelchairs and other mobility devices, even **motorized** mobility devices, **CANNOT** be excluded from our trail. Nor can you ask an individual what their disability is that requires them to use such devices. Both are a violation of federal law. However, if surveyed and properly documented, FTA will not be required to build our trail to explicitly provide for all such mobility devices.
7. The full versions of these documents may be read at <http://www.fs.fed.us/recreation/programs/accessibility/>. A summary of these documents as they apply to our trail appears on the next few pages.

Height and reach requirements for use in structures

All structures available for public use are governed by the 1968 Architectural Barriers Act – a federal law. These few statements below are simplified from the law, but should cover most of the structures Florida Trail volunteers are involved in building and installing along our trail. More specific specifications on picnic tables, benches and privies are also attached.

1. All seating surfaces should be 17-19 inches above the ground.

2. All buildings that are not accessed directly on the ground/floor (such as shelters, tent platforms or sleeping platforms) should be 17-19 inches above the ground/floor or include a ramp with a minimum 36-inch width and no more than a 5% grade.
3. Anything that must be reached for (registration boxes, door handles, etc) should be no higher than 54 inches and no lower than 9 inches above the ground. A flat and unobstructed area must be provided in front measuring 48 by 30 inches minimum.
4. Writing and eating surfaces should be 36 inches above the ground.
5. All doors must open outward and have a minimum clear width of 32 inches. A flat and unobstructed area must be provided on both sides of the door measuring 48 by 30 inches minimum.
6. Handrails are generally NOT required under ABA or ADA. But if you decide to include handrails they MUST meet ADA specifications. They must be 34-38 inches above the walking surface. Shear force and break force on a handrail must be 250 lb or higher. They must be 1.25-1.5 inches in diameter and the top surface must be rounded. They must extend the full length of the stairs, bridge, etc. or beyond.
7. Fire rings, if provided, must be 9 inches or more above the ground.
8. Privies are NOT required to have walls, a floor, a door, or a roof. However, if the pit toilet has a toilet seat, then that seat and the riser it sits upon must be between 17 to 19 inches above the ground, have vertical sides, have a flat area on either side 3 feet wide, and provide a seat cover that also functions as a back rest. If the pit toilet has a constructed floor, then it should be 60" long X 56" wide. If the pit toilet floor is located above the ground, then a boardwalk must be provided from the ground to the entrance with a grade of 5% or less and have a clear width of at least 36". If a door is provided, then it must open out and must be at least 32" wide. If the pit toilet has walls, then grab bars that support a 250-pound shear force must be mounted on the walls. However, a pit toilet may have lightweight privacy screens (located a minimum of 60 inches beyond the toilet riser) without grab bars.

Picnic Tables

Clearance for Accessible Seating Spaces

Provision of an accessible seating space size includes a minimum clear floor space, width, depth and table clearance, in addition to knee space and toe clearance.

1. Knee space should allow a minimum of 27 inches in height, 30 inches in width, and 19 inches in depth.
2. Toe clearance requires a 9-inch minimum height and shall extend an additional 5 inch minimum from knee clearance, 30 inches minimum width and 19 inches in minimum depth.
3. Clear floor space is a minimum of 30 x 48 inches, with one full-unobstructed side connected to an outdoor recreation access route.

4. Table clearance requires a minimum of 36 inches clear floor or ground space surrounding the useable portion of the table, measured from the seat.

Surface & Slope

The surface of the clear floor space and accessible seating space at picnic tables must be stable and firm. Compliance with surface provisions may not be necessary if one or more of the following conditions for departure apply:

1. Where compliance would cause substantial harm to cultural, historic, religious, or significant natural features or characteristics; or,
2. Where compliance would substantially alter the nature of the setting or the purpose of the facility, or portion of the facility; or,
3. Where compliance would require construction methods or materials that are prohibited by federal, state, or local regulations or statutes; or,
4. Where compliance would not be feasible due to terrain or the prevailing construction practices.

The slope of clear floor spaces is required to be 1:50 or less in any direction. However, where conditions require slopes greater than 1:50 for proper drainage, a maximum slope of 1:33 is allowed. In addition, the slope provisions do not apply where at least one of the conditions of departure exist as stated above.

Benches

1. The front edge of the seat shall be at least 17 inches (430 mm) and no more than 19 inches (485 mm) above the ground or floor space.
2. When more than one bench is provided, at least 50% of the benches shall have a backrest running the full length of the bench. In addition, it is an option to provide one armrest on at least a portion of the benches with back rests. Structural strength of backs, armrests, mounting devices, and so forth, shall comply with 903.6 of the Architectural Barriers Act Accessibility Guidelines.
3. At least one clear floor or ground space complying with 305 of the Architectural Barriers Act Accessibility Guidelines shall be provided adjacent to each bench. This space shall not overlap with the [access trail] for the area.
4. The slope of the clear floor or ground space shall not exceed 1:33 (3%) in any direction.
5. The surface of the clear floor or ground space shall be firm and stable. The type of surface should be appropriate to the setting and level of development.

Pit Toilets

A pit toilet is a primitive outhouse that may consist simply of a hole dug in the ground covered by a toilet riser. The riser may or may not be surrounded by walls and a roof. Pit

toilets are generally located in undeveloped areas and are provided primarily for resource protection, rather than visitor convenience and comfort. Pit toilets may be permanent installations or may be moved from one location to another as the hole is filled or the area becomes overly impacted from use.

The design of pit toilets varies widely depending on the setting, the amount of expected use, and the process used to manage the waste. An accessible pit toilet is not required to have walls, a floor, a door, or a roof. However, if the pit toilet has a riser and toilet seat, the total height of that seat and the riser it sits upon must be 17 to 19 inches above the ground or floor. The riser should have vertical sides, a flat area on either side of the seat that is approximately 3 inches wide, and a seat cover that also functions as a back rest.

If the pit toilet has a constructed floor, it is to comply with 304.3 of the Architectural Barriers Act Accessibility Guidelines to accommodate, clear of obstructions, either a circular turning space 60 inches in diameter or T-shaped turning space within a 60 inch square.

If a door is provided, it must open out, slide, or otherwise not obstruct the clear floor space on the interior of the pit toilet. Doors must provide a minimum of 32 inches clearance in width. Any door hardware is to comply with 404.2.7 of the Architectural Barriers Act Accessibility Guidelines being operable with one hand, without pinching, grasping, or twisting the wrist, and with no more than 5 pounds of pressure. Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.

If the pit toilet has walls, grab bars that support a 250-pound shear force and that comply with 609 of the Architectural Barriers Act Accessibility Guidelines must be mounted on the walls.

Effort should be made to locate the pit toilet entrance at ground level. Some pit toilets are designed to process waste, which requires the riser to be placed above the processing unit. For these toilets, use a slope that permits the entrance to remain at ground level.

If the site does not provide that opportunity and the pit toilet floor must be located above the ground, a trail complying with FSTAG must be provided from the ground to the entrance. If a trail is not feasible, steps into the pit toilet may be provided as a last resort. The step treads must be at least 14 inches deep and 36 inches wide; the step riser should be 6 or 9 inches maximum. A level, clear ground space that is 30 inches by 48 inches must be provided along one side of the steps. One of the steps must fall between 17 and 19 inches above the clear ground space. Single steps are hazards that should be avoided. Where there is no alternative to the use of steps, at least two steps, but preferably three, should be used.

CLEARING THE TRAIL

Once the proposed route has been approved by the landowner, the alignment of the trail on the ground should be determined by hiking the area from both directions so that terrain and visibility may be fully observed. The trail alignment should be marked or identified clearly by flagging it with orange vinyl engineering or surveying tape which is available from hardware and engineering supply stores, or from the VP-Trails and Chapter Trail Coordinators. Once the alignment has been flagged with engineer's tape and approved by the Trail Coordinator and the appropriate FTA Trail Staff, construction should begin as soon as possible to avoid loss of tape by vandals and insects.

The Trail should be located adjacent to suitable trees for blazing. Avoid abrupt changes in direction, which necessitate the use of double blazes. A smoothly curving Trail is more pleasurable to hike. The trail will be more interesting if it can be routed to pass interesting or unique features such as a pond, an unusual tree, a sinkhole, or an old cemetery. Avoid areas near roads, motorcycle, bicycle, and equestrian trails, military operations, and waterways frequented by airboats. Federal regulations prohibit the use of power tools and equipment or vehicle access where the trail passes through a federally designated Wilderness Area (or Wilderness Study Area) such as Juniper Prairie, Bradwell Bay and St. Marks Refuge. Only hand tools can be used in federally designated Wilderness Areas.

The Trail should be constructed to permit foot traffic but to restrict vehicles, bicycles, and horses when necessary. The trail width may be varied to avoid a "tunnel effect" where the vegetation allows. All cuttings should be pulled clear by the cut end leaving only the tops visible from the Trail.

Section Leaders and Trail Coordinators should make the most of new section openings or major construction items by alerting the news media in sufficient time to provide good media coverage. Scheduled development and maintenance hikes published in chapter newsletters and the Footprint should attract a sufficient number of members to accomplish the work. After the trail is opened, law and game officers and park and forest managers should be made aware of the trail, and should be provided with an FTA brochure, section map and other material. A personal visit to these officials helps create the partnership necessary to protect the trail and its users.

SAFETY – CONSTRUCTION & MAINTENANCE

Safety is the number one priority for FTA and those working on the Florida Trail. FTA has created a culture of safety that encompasses all trail maintenance and construction activities. The Florida Trail Association has adopted a set of safety requirements based on the USFS Health and Safety Code Handbook. These requirements are available in the Florida Trail Association Safety Manual, and on the Florida Trail Association Safety Quick Reference Card (see example, page 26).

Workers should always be conscious of the dangers of sharp tools, rough vegetation and terrain, excess heat, cold, fatigue, insects and poisonous snakes. All tools including chain saws, power brush-cutters, mowers and Suwannee Slings can be hazardous if not used properly. Be sure there is sufficient room between workers using these tools. The safety equipment required for all trail maintenance and construction activities and tools are: USFS approved hard hat, work gloves, safety glasses, non-skid boots, and ear protection (when working with power tools). In some cases, long trousers, long sleeves, and 8” high (tall) leather boots may be required. Workers should avoid over-exertion and be sure to drink plenty of water.

Tailgate Safety Sessions

Activity leaders are responsible for ensuring that all participants are able to safely perform trail duties assigned to them. It is required that prior to the start of any construction or maintenance project, the Activity Leader conduct a Tailgate Safety Session. Before hitting the trail, discuss the details of the project, any potential hazards, and all required safety equipment. The Tailgate Safety Session can also be used to ensure that all volunteers have

enough water, are equipped with the proper clothing and footwear, and have signed all necessary documents. Those with specialized training like CPR or chainsaw certification can also be identified.

When going over required safety gear, take the opportunity to pass out the Florida Trail Association Safety Quick Reference Card for those that don't have them, along with any gear that someone requires. When going over the details of the project or hike have the group identify potential hazards and ways to avoid them. This gets the group involved and helps them understand why we are creating a Culture of Safety within FTA.

Florida Trail Trail Maintenance & Construction Safety Quick Reference Card

This Card is meant to serve as a general reference for Personal Protective Equipment (PPE) for staff and volunteers working on the Florida National Scenic Trail and loop and side trails of the Florida Trail System. Required PPE information comes from the USDA Forest Service *Health and Safety Code Handbook*.
 Note: Chainsaw operations require certification from a USFS approved instructor and current Basic First Aid and CPR Certification.

Personal Protective Equipment Codes:

1. USFS Approved Hardhat	10. UV protective sunglasses
2. Eye protection	11. Sunscreen lotion
3. Hearing protection(85dB+)	12. Orange safety vest
4. Long-sleeved shirt	13. Type IV First Aid Kit (chainsaw use)
5. Gloves	14. Chainsaw General Equipment Kit*
6. Non-skid boots	15. Chainsaw approved boots
7. Chainsaw chaps	
8. Basic first aid kit	
9. Insect repellent	

(see reverse for activity/tool key)

* Chainsaw General equipment kit contains: Type IV First aid kit, Fire extinguisher, Chainsaw wrench, Chain file with handle and guard, Approved safety container for fuel, Chain and bar oil container (clearly marked), Proper wedges for the specific work project or activity (wooden wedges are not permitted), Single-bit axe or maul, 3 to 5 pounds, and 8" leather lace up boots with non-skid sole.
 For more detailed information, consult the USFS JHA FS-6700-7, and the accompanying FNST Trail Maintenance & Construction Safety Manual.

Florida Trail Trail Maintenance & Construction Safety Quick Reference Card

NOTE: FTA and USFS require hard hats, gloves and eye protection for all activities and use of tools. FTA and USFS recommend that non-skid boots and a first aid kit accompany all tools and activities. The list of Personal Protective Equipment (PPE) below is based on the USDA Forest Service Health and Safety Code Handbook, with input from FTA Staff and Volunteers
 (see reverse for # key)

<u>Activities / Conditions</u>	<u>Required PPE</u>
Hunting Season	12
Painting	1, 2, 5
Bark Scraping	1, 2, 5
Lopping	1, 2, 5

<u>Tools</u>	<u>Required PPE</u>
Brush Cutter	1-3, 5, 6
Chain Saw Operations	1-7, 13-15
Crosscut Saw Operations	1, 2, 5, 13, 15
Chopping Tools	1, 2, 5, 6
Cutting Tools	1, 2, 5, 6
Flammable / Combustible Liquids	2, 5
Hand-tools	1, 2, 5
Mowers	1-3, 5, 6
Power-operated tools	1, 2, 3, 5

<u>Recommended</u>	<u>PPE</u>
All Activities, tools and conditions	1, 2, 4-6, 8-12

FTA Safety Quick Reference Card (2nd version, current as of 09/12/05)

Trail Construction and Maintenance are inherently hazardous activities. In spite of precautions, accidents and injuries are possibilities when working with tools. The FTA does not accept liability should accident or injuries occur. Please note that all volunteers work at their own risk. Trail volunteers can register with many state and federal agencies to be eligible to receive worker's compensation coverage for injuries received while volunteering. Contact your local land manager for details on available programs. Trail Volunteers working on the Florida National Scenic Trail are covered through the Sponsored Volunteer Agreement with the USDA Forest Service

Volunteer Worker's Compensation Procedures

For Volunteers working on the Florida National Scenic Trail

If a volunteer gets hurt:

- 1- Complete all applicable sections of a form CA-1. . This form and an example of a completed form are found on page XX and on the FTA website at: http://www.floridatrail.org/web/index.php?module=pagemaster&PAGE_user_op=view_page&PAGE_id=54. The Work Hike Leader should complete the supervisor's portion of the form.

This form notifies the agency that there has been an accident. It is the first step towards getting treatment and it also helps the agency determine how to prevent similar accidents in the future. It is important to complete this form even if medical treatment is deemed to be unnecessary at the time because if the injury proves to be worse than originally thought this form will be the foundation for seeking medical treatment under the Forest Service worker's compensation program in the future.

The form should be initiated by the volunteer and submitted to the Work Hike Leader, who will then complete the supervisor's component of the form. When possible, a witness should be asked to complete the section of the form asking for that information. The form should be submitted to the Forest Service at the address provided at the bottom of this document.

- 2- Notify the Forest Service and the Florida Trail Association of the accident no later than the first business day after the event. Contact information is provided at the bottom of this document.

If medical treatment is needed immediately:

- 1- The Work Hike Leader and the Volunteer should complete the applicable portions of a form CA-16. This form assures the medical professional that the US Government will pay for the services rendered in response to the injury described on the CA-1. The form can be authorized by the US Forest Service before or after medical treatment is provided, and Forest Service employees are empowered to give verbal authorization should the medical office require immediate assurance of payment. Given that volunteers may not be able to immediately reach a Forest Service representative, a completed and approved form is NOT required by the Forest Service prior to initial treatment. A completed and approved form should be obtained by the volunteer prior to any follow-up treatment prescribed by the medical professional.
- 2- Along with Form CA-16, the Work Hike Leader should give the volunteer Form OWCP-1500. This form will be used for billing. The physician should complete the applicable portions of Form CA-16 and the OWCP-1500 and forward them to the US Forest Service.

In some cases this form may be used to furnish the volunteer with transportation and/or reimburse his/her transportation. OWCP generally considers 25 miles from the agency or the volunteer's home a reasonable distance to travel for medical care unless appropriate care is not available within that radius.

- 3- Notify the Forest Service and the Florida Trail Association of the accident no later than the first business day after the event. Contact information is provided at the bottom of this document.

If medical treatment is needed later:

- 1- A Forest Service employee must complete and authorize the CA-16 if a volunteer needs to seek medical treatment in the days following an injury. Approval will be at the professional discretion of the Forest Service employee.

If a CA-16 is authorized, then items 2 and 3 in the “If medical treatment is needed immediately” section of this document also apply.

General Information

Choice of Physician: The volunteer is entitled to select the physician or facility which is to provide treatment. The provider must meet the definition of "physician" under the Federal Employees Compensation Act (<http://www.dol.gov/esa/regs/compliance/owcp/fecacont.htm>) and must not have been excluded from payment under the program.

Referral: The original treating physician may wish to refer the volunteer for specialized treatment or for further testing. He or she may do so on the basis of the Form CA-16 already issued; it is not necessary to issue additional authorizations for treatment. Both the original physician and any physician to whom the volunteer is referred are guaranteed payment for 60 days from the date of issue of Form CA-16 unless the Office of Workers Compensation Programs (OWCP) (<http://www.dol.gov/esa/regs/compliance/owcp/fecacont.htm>) terminates this authority at an earlier date. Treatment may continue at OWCP expense if the claim is approved.

Contacts:

Trail Program Manager
Florida National Scenic Trail
USDA Forest Service
325 John Knox Road, Suite F-100
Tallahassee, Florida 32303
850-523-8538 (office)
850-228-1056 (cell)
michellemitchell@fs.fed.us (e-mail)

Construction Coordinator
Florida National Scenic Trail
Florida Trail Association
325 John Knox Road, Suite F-100
Tallahassee, Florida 32303
850-523-8579 (office)
850-528-5266 (cell)
buildit@fs.fed.us (e-mail)

USDA Forest Service, National Forests in Florida (Supervisor’s Office)
850-523-8500

USDA Forest Service, National Forests in Florida (Dispatcher’s Office)
866-840-3236

Florida Trail Association
877-HIKE-FLA (877-445-3352)

Equipment, Tools, and Materials

Hand Tools

There is a large variety of hand tools available for use in trail construction and maintenance, ranging from as small as screwdrivers and bark scraper to Pulaskis and shovels. Regardless of the size or type of the tool, proper use and care of the tool will ensure a safer and longer life for both the tool and the operator.

Prior to using any tool, inspect its condition. Check that handles are attached securely, and are not prone to slipping. If the tool has an edge, make sure it is properly sharpened. Replace or repair any tool that is not in top working condition.

When using any tool, be sure of the surrounding area for other volunteer workers, and other potential hazards. This is often referred to as a person's "dime", or a ten-foot radius of awareness when using any tool.

The Suwannee Sling – An FTA Tradition

An excellent tool for clearing brush and grass from the trail is the Suwannee Sling. Ben Pickard developed the Suwannee Sling for clearing trail along the Suwannee River in the late 1970's. Ray Maxwell, an FTA member, was the original manufacturer of the Suwannee Swing for use on the Florida Trail. It continues to be manufactured by Ray Maxwell's grandson, Craig Yancey. .

This tool has proven itself to be an effective tool for trail work including clearing brush, lopping, scraping and chopping, although it requires strength and endurance to use effectively. It has a fiberglass reinforced thick plastic handle, and its cutting blades (two edges on the bottom and one axe edge) are made of alloy steel, heat-treated to hold a sharp edge, yet tough enough to withstand the shock of hard use without bending. The sling blade is 11.5 inches long and the ax blade has a cutting edge 5 inches long. These two blades and the brace are made of 3/16 thick material and the total weight of the tool is approximately 5 lbs. Handles are available in a 32" or a 36" length (persons 6 foot tall or taller may prefer the longer version).

To use the Suwannee Sling properly, swing the tool as you would use a grass sling. The weight of the tool is an advantage to snip off small vines, brush, and twigs on the trail. For larger growth up to 1/2 inch in diameter and larger, a more energetic swing is needed. For larger "blow downs" or overhanging branches, simply turn the tool over in your hand and use the ax blade.

Caution must be exercised when using this or any other brush-clearing tool. Users must be axe-certified and must use the required personal protective equipment: hardhat, eye protection, gloves and non-skid boots. Any time the Sling is in use, the area being cleared, should be cleared of all other persons. All persons within the general area should also be wearing protective eyewear. A high quality metal file or other quality honing stone is recommended to keep the "Sling" in top cutting form. A diamond type "stone" is highly recommended for its ease of use.

Suwannee Slings may be purchased for \$72.50 each, plus shipping and applicable taxes by contacting Craig Yancey, 7920 Tallowtree Dr. Wesley Chapel, FL 33544 or at 813-973-7402 or by email at YMS56@hotmail.com. A limited supply of Suwannee Slings may be available through the Construction Coordinator at 850-523-8579 or by writing to: FNST

Office, 325 John Knox Road, F-100, Tallahassee, FL 32303-4160. For additional information, visit: www.yanceysmachineshop.com.

Power Tools

Power tools are an efficient way to build and maintain the trail. However, power tools can present hazards to users and bystanders. To help ensure safe operation of power tools:

1. Operators of power tools must have appropriate Personal Protective Equipment, training and supervision. Experienced leaders in the field must provide a safety briefing before tools are distributed. If possible, team experienced users with new users.
2. Read, understand and follow the manufacturer's safety and maintenance rules. If necessary make several copies of each owner's manual and bring a copy of the manual to the field.
3. Work in groups. Do not have anyone operating a power tool out of sight of the group.
4. People working with or near power tools should wear appropriate eye, hearing, and other appropriate personal protection. It may be possible to have two groups, one with power tools and one without.
5. Be alert for fatigue. Require rest breaks for both hand and power tool operators. If possible, periodically change operators. Be sure each person has adequate water.
6. Immediately stop and correct unsafe behavior.
7. Keep all tools properly maintained, oiled and sharpened.

Chainsaws

Chainsaws are effective tools for heavy-duty trail clearing and especially for removing tree blow-downs on established trails. Operators of chainsaws are required to be Certified Sawyers. The chainsaw operator's course is available through the USDA Forest Service. It is also necessary to follow the directions provided in the chain saw operator's manual prior to operation of the chainsaw. The following notes supplement the operator's Manual. Safe use of a chainsaw should be of the utmost concern. The required Personal Protective Equipment for chainsaw use consists of the following:

USFS Approved Hardhat	Chainsaw Chaps
Eye Protections	Appropriate Gloves
Long-Sleeve Shirts	8" High Leather Boots
Hearing protection (85dB)	Chainsaw General Equipment Kit (see below)

The following equipment (Chainsaw General Equipment Kit) is also required to be readily available when operating a chainsaw:

Fire Extinguisher	Type IV First Aid Kit
Chainsaw wrench	Chain file w/ handle & guard
Approved container for fuel	Approved container for oil
Wedges	Single-bit Axe or Maul

When using gasoline for fuel, use care to prevent fire. Ignition switch should be "OFF" during refueling. Use both hands during operation and never touch a moving chain with your hand.

All chainsaws require gasoline and oil mixes. Be sure to mix the oil and gas in the prescribed ratio. Two gallons of fuel mix should be more than adequate for a full day of cutting. Gasoline with a minimum octane of 89 is recommended for all power equipment as fuels with less than 89 octane tend to foul spark plugs and cause poor operation. The chain oil reservoir should be filled only with chain oil. Although many saws have an automatic chain oiler, the manual pump should be frequently used during heavy use to insure adequate lubrication. Chain tension should be frequently checked and adjustments made if loose, and the chain should be kept sharp (consult the operator's manual for adjustment and sharpening procedures). It should be possible to pull the chain around the bar with a gloved hand without undue effort. Clean the air filter several times a day during operation. Some filters can be washed with fuel mix; others are merely brushed clean. When replacing air filters, obtain the one prescribed for the saw. The following spare parts should be carried in the field: spark plug, chain, chain sprocket, and air filter. Other tools are a spark plug wrench, Allen wrenches, screwdrivers, and pliers.

Brushcutters

Like chainsaws, brushcutters are effective tools for heavy duty trail clearing and especially for removing the toughest kinds of brush, small trees, sparkleberry, palmettos, oak thickets, and cypress knees, when constructing new trail and maintaining existing trail. Operators of brushcutters should first and foremost follow the directions provided in the brushcutter operator's manual prior to operation of the chainsaw. These notes supplement the operator's Manual. Safe use of a brushcutter should be of the utmost concern. Operators and those working nearby must wear USFS Approved Hardhat, non-skid boots, safety glasses, hearing protection and work gloves as detailed on the Safety Quick Reference Card. A long-sleeved shirt, and long trousers are also recommended for protection. When using gasoline for fuel, use care to prevent fire. The ignition switch should be "OFF" when fueling the machine.

Most brushcutters have a two cycle, gasoline powered (3-1/2 hp) engine. They weigh from 25 to 30 pounds and have a padded carrying harness to ease their use. Take time to fit the harness to the operator, or brushcutting will be much more difficult than it ought to be. When using a brushcutter, swing the equipment from side to side while the operator advances forward slowly. There is a tendency to swing the cutter too far to the side, cutting too wide a swath. A good job is done by first cutting through thick brush about 6 inches, above the ground on the first pass; then work the stubble down to the ground level on later passes. A lawn mower pushed along the trail after the passage of the brushcutter does a first class job.

If the engine has been sitting idle longer than three days, always shake the engine before attempting to start to remix the fuel in the tank. If the engine has been idle over two months, pour the old fuel out and put fresh fuel in. To aid in starting an engine that has been idle a long time, wash the spark plug in gasoline or fuel mix and pour a thimble of fuel mix in the spark plug hole before reinstalling the plug. Always accelerate or decelerate very slowly (especially a hot engine).

The following tools and spare parts of appropriate size and model should be furnished with the brushcutter and carried in the field: a spark plug wrench; Allen wrenches, screwdrivers, pliers, spare blade, *friction* washer, 2 gallons of gasoline-oil mixture of the specified ratio, and rags.

Trail Mowers

The trail mower is a valuable labor saving tool for both trail development and annual trail maintenance. The difference in trail mowers opposed to lawn mowers includes: heavy duty "commercial use" construction; a heavy blade, belt driven, that provides no up-draft; a rugged thin deck that leans tall weeds and brush permitting the blade to cut them off; large tires to facilitate rough surfaces; a large fuel tank; and hopefully light enough to be lifted over fences, streams, etc. The mower is one of the most expensive pieces of trail equipment, and it ranks high on the list of most dangerous. Operators of trail mowers should first and foremost follow the directions provided in the operator's manual prior to operation. The following supplements the operator's Manual.

Safe use of a trail mower should be of the utmost concern. There are three main hazards - the blade, the rotating belt and pulleys and objects flying from under the mower deck. Commonly, the blade is exposed at the front and sides unlike a common lawn mower where the deck shields the blade. Therefore, when working around the mower, the operator and others working nearby must be constantly alert that feet or hands or any object remain at a safe distance from the blade and the deck. When clearing the cuttings off the top of the deck or from around an axle, be cautious of your foot placement and keep your hands away from the moving belt. Objects struck by the blade frequently are not thrown out of a discharge shoot. They can fly out from under the deck in any direction. To minimize chance of injury by flying objects keep the motor running as slow as the density being cut permits. All personnel should wear USFS approved Hardhats, work gloves, safety glasses, hearing protection, long pants and sleeves. Whenever the mower must be lifted over roots, logs, fences, water, etc. turn the motor off and use plenty of people to handle the hot mower. If it becomes necessary to clear the blade by hand, first take the wire off the spark plug, and connect it to the grounding post.

Strict procedures and routines should be developed to assure maximum utilization, safe operation and extended life. The following recommendations are from lessons learned on the trail.

1. Prior to use the mowers should be given pre-operation checks to insure they were completely serviced after the last use, and that no leaks or damage has occurred while in storage.
2. Prior to mowing in the field, all personnel should be assembled and briefed on: safety, operation, and the mowing regardless of their experience.
3. Each team member should be briefed on where mowing will start, where lunch/rest stops will be and if lunch is to be carried, the route, and the planned stop point that day.

Experience has shown that a single 22-inch mower cut will after a few days allow the weeds, tall grass and brush to lean into the cut path nearly obscuring it. In dense woods and hammocks two widths are recommended requiring two passes with one mower or the use of two mowers with a planned a pickup point. Where there are tall weeds or brush, three widths may be needed for a well-maintained trail.

To make the trail mowing more efficient, a second person can carry fuel and remove deadfall and other debris on the trail in advance of the mowers. By keeping the mowers moving you will cut a lot more trail. If the trail is flat, smooth and free of deadfall, a mile can be mowed in 30 to 45 minutes. If there is hog damage, gator backs, tree roots or hills, it may take much longer. With good weather, smooth terrain and experienced operators, as many as 10 miles can be mowed in a long day.

It is recommended that at least one person on the trail crew be knowledgeable in making field repairs, and that an emergency repair kit be carried. Carrying a spare belt 100 miles is preferable to pulling a dead mower two miles to the truck because a belt broke while on the trail. While mowing, be alert for unusual noises or vibrations. Avoid rocks and other hard objects that will damage blades and become projectiles. Refueling should be planned at least every four hours. Oil level should be checked at each refueling - more frequently if motors are using oil. When mowers are used on successive days, the blades should be sharpened or changed after each day of use. Always remove the spark plug wire and ground it before removing or working on the blade. Check belt tension and inspect entire mower for damage.

After each 12 hours of operation, it is recommended that the following maintenance be performed:

1. Clean debris and dust accumulations with a hose or blower. Be sure the area around the oil filler is clean.
2. Remove and disassemble the air cleaner. Wash foam outer filter with detergent, rinse thoroughly, squeeze dry in clean rags or paper towel, apply a coat of fresh oil and work in thoroughly by squeezing several times, then wrap in paper towel and squeeze out excess oil. Wipe other filter parts clean and reassemble.
3. Drain oil, replace with the recommended oil specified in the operator's manual.
4. Sharpen blade and balance. Always replace bent or cracked blades.
5. Grease front wheel axle, fork and the blade bearing.
6. Clean debris wound around axles, top/bottom of blade shaft.
7. Clean cooling fins by blowing out debris; use a narrow wire as a pick if needed.
8. Inspect entire mower for cracked welds, bent or broken parts, loose wheel bearings, worn belt, etc.
9. Refill gas tank and cans.
10. Secure, ready for next use.

On a periodic basis (after 4 to 6 uses), use a non-oil lubricant, such as WD-40, and spray the wheel bearings, carburetor linkage and flexible throttle cable. Check tire pressure. Check wheels for loose spokes. Remove rust. Touch up paint.

ROUTINE TRAIL MAINTENANCE

VP-Trails assigns specific segments of the Florida Trail System to Chapters to plan, develop and maintain. In the event that a new chapter is formed and/or boundaries of the current chapters are changed, the form on page 73 should be submitted to VP-Trails. Standards for the trail are found on page 21. An annual maintenance schedule will insure that the trail remains a pleasant hike. This work should include:

1. Clearing brush and logs from the footpath. Obstacles may be allowed to restrict vehicles, bicycles, and horses when necessary.
2. Maintaining a smooth tread and reducing erosion.
3. Removing litter and trash.
4. Touching up blazes (blazes may need to be repainted every two years).

5. Repairing or replacing signs, registers, bridges, boardwalks and stiles.

Section leaders and/or Trailmasters should schedule trail development and maintenance hikes. Youth groups work well if they are well supervised. Prior to the beginning of the hiking season, section leaders are strongly recommended to prepare, with the land manager, an agreement or plan listing all maintenance needs and assign performance responsibilities for the upcoming season (see form on page 77). At the end of the season, the section leader should report trail maintenance and construction performed and needs for the following season (see form on page 74). The section leader should also send an annual letter of thanks to landowners/managers (see example on page 72) to show FTA's appreciation for their support and the continued privilege of using their property for the trail. A list of equipment, tools and materials for a maintenance hike are found on page 90. Submit an Activity Proposal (page 89) and Post Activity Report (page 93).

Tools, Equipment and Materials

It is advisable for chapters to keep a supply of tools and equipment to be used by the chapter for trail maintenance and construction. Recommended items include, but are not limited to: bark (paint) scrapers, compound loppers, clippers, rakes, hoes, hand-saws, and axes. The quantity and type of tools and equipment is a chapter decision, and are the responsibility of the chapter to supply, maintain and replace. Power tools and specialty items such as crosscut saws and Suwannee Slings may be acquired by the FTA and or the USDA Forest Service and provided to Section Leaders and Chapters are the responsibility of the Chapters to maintain..

Acquisition of Tools and Equipment for Trail Construction and Maintenance

Availability and accessibility to trail tools by volunteers are critical to the success of the trail construction and maintenance program. FTA’s chapters are essential to providing this supply of tools and equipment for use by volunteers. Chapters should determine the type and availability of tools and equipment necessary to maintain its assigned trail sections. Chapters are responsible for providing, maintaining and replacing trail tools. Recommended tools include, but are not limited to: bark (paint) scrapers, compound loppers, clippers, rakes, hoes, hand-saws, and axes. Power tools and specialty items such as crosscut saws, and Suwannee Slings may be acquired through the Trail Construction Coordinator, but all tool and equipment maintenance is the responsibility of the chapter.

The following table describes which level of the Florida Trail Association has the primary responsibility for acquiring tools and equipment.

Trail Tool, Equipment or other Item to be Purchased	Association Responsibility	Chapter Responsibility	Trail Volunteer Responsibility
Official signs, Safety equipment (hardhat, gloves, safety glasses, ear protection, orange vests), Paint,	YES	NO	NO
Power tools and equipment (brushcutter, chainsaw, mower, generator, drill, etc.)	NO*	YES*	NO
Hand tools (lopper, rake, Suwannee Sling, axe, saw, etc.), Paint brush and container	NO	YES	NO
Gas, tolls, meals, mileage, parking fees, etc.	NO	NO	YES[#]

* - In the event that a Chapter does not have sufficient funds to timely purchase critically needed power equipment, the Association will consider written Chapter requests to equally share in their purchase (for details see Chapter Responsibility below).

- At the Chapter’s expense, it may elect, but is not required to, reimburse a trail volunteer’s documented trail-related expenses.

Association Trail Tool and Equipment Purchases

As funding is available, the Florida Trail Association will purchase and provide the following items to Chapter Trail Coordinators and Section Leaders for Association volunteers to use in constructing and maintaining the Florida Trail.

1. Official trail signs (see SIGNAGE section for details)
2. Safety equipment (hardhats, gloves, safety glasses, ear protection, safety vests)
3. Paint for blazing
4. Share in purchase cost of power equipment with prior approval (see Chapter purchases below)

Chapter Trail Tool and Equipment Purchases

Chapters are responsible for providing the following to support of trail construction and maintenance:

1. Power tools and equipment
2. Hand tools
3. First aid kits (to be maintained at least once per year to ensure items are current).
4. Paint brushes and containers
5. At the Chapter's expense, it may elect, but is not required to, reimburse a trail volunteer's documented trail-related expenses (see Trail Volunteer Personal Expenses below for more information).

Section Leaders needing to acquire or replace tools and equipment are to submit their requests to the Chapter Trail Coordinator. Solicitation of donations and local fundraising by chapters are and should continue to be the primary sources of funding necessary for trail maintenance and construction efforts including purchase of needed tools, equipment and materials. Chapters are strongly encouraged to solicit donations and hold fundraising events to obtain funds necessary to fulfill the mission of the Florida Trail Association, which include trail construction and maintenance expenses. As a 501c(3) non-profit organization, such efforts are vital to ensuring continued vigor and diverse funding sources that support the organization. For ideas on potential donors and fundraisers, contact the FTA headquarters at 800-Hike-FLA, consult the FTA Administrative Manual, or contact other chapters

Assistance Available to Chapters to Purchase of Power Tools and Equipment

In the event that a Chapter does not have sufficient funds to timely purchase critically needed power tools and equipment, the Association will consider written Chapter requests to purchase such tools and equipment equally share in their purchase using the appropriate form as described below.

1. FNST Power Tool and Equipment Requests: For power equipment to be used on trail sections within the FNST corridor, Chapter Trail Coordinators may submit the form found on pages 80 of this Trail Manual.
2. Non-FNST Power Tool and Equipment Requests: For power equipment to be used on Florida Trail System Loop Trails sections, Chapter Trail Coordinators may submit the form found pages 82 of this Trail Manual.
3. All equipment request forms must be accompanied with an updated Inventory of Trail Tools and Equipment for all tools and equipment which are maintained by the Chapter. This form is found on page 78 of this Trail Manual.

All power tool and equipment purchase requests submitted by Chapter Trail Coordinators will be forwarded to the Vice President of Trails for review. The Construction Coordinator will coordinate with the Chapter Trail Coordinator if additional information is required prior to review and approval by the Vice President of Trails. The Vice President of Trails will consider the following factors:

1. Current availability of the subject equipment to the Section Leader and Chapter
2. Demonstrated justification of need
3. Availability of minimum matching Chapter funds
4. Availability of matching funding in the respective FNST or FTA equipment budget

After consideration of the above factors, the Vice-President of Trails will inform in writing or via email, to the requesting Chapter Trail Coordinator and the Construction Coordinator of his/her approval or denial. Upon approval, the Construction Coordinator will coordinate with the Chapter Trail Coordinator to arrange for purchase and delivery of the requested equipment or tools. To make this process as efficient as possible, there are several alternative ways which the purchasing transaction may be handled including:

1. Direct purchase by the Construction Coordinator using the FTA credit card
2. FTA Headquarters issuing a check to the vendor
3. FTA accounts established with a store or vendor
4. Chapter directly purchasing with prior approval. It is not recommended that FTA volunteers purchase tools and equipment directly with personal funds in anticipation of being reimbursed as suppliers are only able to treat sales as tax exempt when payment is made by FTA check, credit card or store account.
5. USDA Forest Service direct purchases (special circumstances only). All tools directly acquired by the USDA Forest Service are Federal Government property to be used only on trail sections within the FNST corridor. As such, these tools and equipment are considered to be loaned to the FTA.

Delivery of purchased tools and equipment to the Chapter will depend on vendor location, method of purchase, and the needs of the section leader or Chapter Trail Coordinator. In most cases, the tools and equipment can be shipped directly to the Section Leader or Chapter Trail Coordinator, or they may be directly picked up from a vendor local to the Section Leader or Chapter Trail Coordinator. Purchases directly made by the USDA Forest Service require delivery to the National Forests in Florida office. The Construction Coordinator will coordinate delivery arrangements with the Chapter Trail Coordinator.

Trail Volunteer Personal Expenses:

Often trail volunteers personally make significant contributions to trail construction and maintenance through their purchase of clothing, boots, gasoline, travel expenses, tolls, meals, parking fees, and other routine, but essential items. Trail volunteers are recommended to keep accurate records, including justification or substantiations of such expenditures, and report these contributions to the appropriate Section Leader. As these contributions may be minor on an individual basis, collectively they represent a significant contribution to the Association. When documented these significant contributions represent match the Association can use to leverage trail construction and maintenance funding from partner government agencies and other sources.

Certain non-reimbursed, direct out-of-pocket, personal expenditures made for trail construction and maintenance may be deductible on the trail volunteer's personal income tax return as they are considered charitable contributions to the Florida Trail Association, Inc., a non-profit corporation, under Section 501(c)(3) of the code. Income tax regulations allow such deductions for direct expenditures but not for the value of services contributed. Expenses such as transportation necessarily incurred in donating services, reasonable expenditure for meals and lodging while away from home, parking fees, tolls, mileage, or actual expenses for gas and oil for power tools are some of the common expenses reasonably counted in deductions.

Chapters may elect to reimburse a trail volunteer's personal trail construction and maintenance related expenses as noted in the above paragraph. As the Association can not effectively administer personal reimbursements, it is the Chapter's responsibility to determine the policies, procedures and documentation it will require if it so elects to reimburse these type of personal expenses. Such reimbursement requests will not be accepted by the Association. In addition to actual cash expenditures, it is important to keep accurate records of the number of hours volunteers contribute on behalf of Florida Trail. These contributions of money and time should be reported on the Annual Trail Condition Report (see page 74) which each Section Leader is required to submit.

Maintenance, Storage and Inventory of Trail Tools and Equipment

Consistent with historical FTA policy and practice, each chapter is responsible for the maintenance, inventory, and secure storage of all tools and equipment assigned to the section leaders and their chapters at chapter expense. The Chapter is also responsible for ensuring that all tools and equipment within the Chapter's care are securely stored and annually inventoried.

The Association recognizes the need and obligation to have properly operating tools and equipment to efficiently and safely construct and maintain the trail. The Association also recognizes that major repair, service and parts can create significant burdens to Chapter treasuries. In order to address these special needs and its overall equipment maintenance responsibilities, the FTA allocates funds to its Trail Construction budget. In those special instances where a Chapter does not have sufficient resources to repair a piece of equipment in a timely manner, a Chapter may seek reimbursement for a portion of the significant, non-routine maintenance, service or repair expenses. All such requests are subject to the availability of funding, negotiation of the Association share of the requested repair, and the approval by the FTA Vice President of Trails. All reimbursement requests for significant, non-routine equipment maintenance expenses must be submitted in writing to the Association prior to any repairs being completed. Following written approval by the FTA Vice President of Trail, the chapter may proceed with the repair. The Chapter must submit all proper receipts for the repairs.

Section Leaders are responsible for maintaining an inventory of the trail tools and equipment assigned to them, including where they are stored. The Chapter Trail Coordinator is responsible for annually inventorying all tools and equipment assigned to the Chapter and its' section leaders . Equipment purchased directly by the USDA Forest Service for use on the FNST is identified with a "For FNST use-only" tag (indicating it is to be only used on the FNST) and serial number which aids in the annual inventory of equipment as required for the USFS. By March 1 annually, FTA will provide the recorded inventory of tools and equipment to each Chapter Trail Coordinator. Inventories are to be submitted annually, by May 31, to the FTA Office. Updated equipment inventories are also to be included with all equipment and tool requests submitted by Chapter Trail Coordinators.

Tools and equipment that is not longer needed by the section leader or chapter is requested to notify the FTA so these tools and equipment may be redistributed. Tools and equipment that are not longer serviceable or economically serviceable, may be properly disposed upon notice of the FTA office. Equipment tagged with a "For FNST use-only" tag that is no longer serviceable or economically serviceable must be returned to the FTA office for disposal by the USDA Forest Service. All inventoried tools and equipment that have been added, transferred and or disposed, should immediately be recorded in the Chapter's tools and equipment inventory.

VOLUNTEER WORK RECORDS AND PATCHES

The documentation of volunteer hours is extremely important to FTA and critical to demonstrating FTA's support for the Florida Trail System to our partners. Quantifying and documenting our volunteers' contributions to the Florida Trail on our agency partners' land is required by trail management and FNST certification agreements with agency partners. A primary return for reporting and collecting these volunteer hours is the FTA uses the value of the documented contributed hours as in-kind match for funding and other resources that the USDA Forest Service and other agency partners provide to FTA for planning, developing, maintaining, promoting, and protecting the Florida National Scenic Trail and the other trails of the Florida Trail System. This documentation also allows FTA to recognize the outstanding contributions of our members, and provides critical documentation as to the amount of work various trail sections require or are receiving.

The FTA office has updated its existing chapter-oriented volunteer hour database to incorporate these agency-oriented volunteer hours. This enhanced database enables FTA to generate volunteer hour reports for each of the agencies and their land management units. For example, the monthly volunteer hour tallies for each state forest would be combined with the other state forests and then annually totaled and reported to the Florida Division of Forestry.

Please report those volunteer hours that directly and indirectly contribute to or benefit that unit or agency on behalf of the Florida Trail. The hours would include those donated for trail work, travel, planning, and activity administration. The volunteer hours reported for land management units/agencies are to be included within the overall total hours that each Chapter currently reports each month. The volunteer hours contributed to specific land management units and agencies represent a smaller subset of the total hours reported by each chapter.

Chapter Trail Coordinators, in coordination with Section Leaders and others volunteer leaders should maintain records of the hours the individual volunteers contribute. A Trail Blazer Patch, a green footprint-shaped patch about 2 inches by x 5 inches, is available to all volunteers who complete ten hours of field work on the trail. When 100 hours are accumulated, the cards should be exchanged for a 100 hour bar patch which may be placed under the Trail Blazer Patch. The same is true of the 500 hour bars when 500 hours of trail work are accumulated. Section Leaders, Chapter Trail Coordinators and Trailmasters are entitled to a free rocker denoting "Trailmaster", "Trail Coordinator" or "Section Leader" to be placed above their Trail Blazer patch. In addition to FTA patches, the USDA Forest Service has trail volunteer patches for volunteer hours for trail work in the National Forests and for the FNST. The USDA Forest Service Trail Volunteer Patch is available to trail workers for 50 hours of service and rocker patches are available in denominations of 100 hours up to 1,000 hours. Additionally, volunteer service patches are available for Florida State Parks. Volunteer patches are distributed to the chapters at FTA Chapter Council meetings.

MARKING AND SIGNING THE TRAIL

Blazing

No trail building technique is more important than proper blazing. This has caused more complaints from hikers than any other consideration. A properly blazed trail will permit the hiker to enjoy the woods while not being continuously concerned about the route, or worse still, losing the trail. Blazes should be frequent enough to assure the hiker that he or she is on the route. Normally, this is

accomplished by placing the blazes so that when the hiker is passing one another comes into view while leaves are on the trees. Terrain may dictate the blazes being placed closer together or farther apart, but the route must be easy to follow. It is necessary to blaze road connectors. The blazing should still be close enough so the hiker is not confused. Blazing every other telephone pole is sufficient along paved roads as confidence or reassurance blazes.

According to the Florida National Scenic Trail Comprehensive Plan, “The FNST will be marked with painted blazes. The primary Trail is marked with orange blazes. Blue blazes mark side and connector trails to camping, access points, or places of interest.” All trails within the FTS shall be blazed orange. Two exceptions are: white painted blazes may be used for loop or alternate routes when they are connected to the FNST and Florida Trail, and yellow painted blazes may be used for trails that intersect other trails already blazed in orange, white or blue.

Trail should be blazed in only one direction at a time. To ensure blazes are appropriately located, it is recommended that the trail be walked in both directions. What you notice in one direction may not be obvious from the other. If equally visible from either direction, blazes may be painted 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. 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. Prepare the surface carefully with a scraper (minimize scraping as much as possible), drawknife, Suwannee Sling, or rub clean with a rag. Do not go so deep as to make the tree bleed, as on pines where pitch will obscure blaze. It may be necessary to place posts where the trees are too far off the trail.

Blazes should be painted approximately five and one-half to six feet off the ground with a 1.5-inch brush. The blaze should be two inches wide and six inches long (about the size of a dollar bill), preferably on a tree wide enough to provide a contrast for the paint. A double blaze (one blaze above another, two inches apart) warns of an important change in the trail. Examples of where to use the double blaze are as follows: where the trail leaves a road, or where the trail leaves a footpath and enters a road. An offset double blaze shall be used when the trail makes an abrupt change in direction (more than a gentle curve) with the top blaze offset in the direction of the turn.. No other blazes are authorized. Metallic or other kinds of nail-on blazes are permissible on posts, but not on trees. When paint blazing is complete, remove the orange engineering tape to prevent it from becoming Trail litter.

Blaze paint, 1.5-inch bristle brushes, and plastic pint jars are distributed by VP-Trails and are available to be picked up at FTA Board of Directors meetings in September and January and at Annual Conferences in March. Please inform the VP-Trails of your needs prior to these meetings so sufficient supplies can be distributed efficiently. The Chapter Trail Coordinator is responsible for obtaining and maintaining an adequate supply on-hand for their chapter’s trails.

The official Florida Trail blaze paint is a Coronado acrylic water-base, high-gloss enamel. . This water-based paint is durable on tree bark and affords easy cleanup with water. Due to the water-based paint’s unsatisfactory service life for blazes painted on pressure treated utility poles or galvanized steel, it is recommended that a mineral based paint be used for the blazes on treated surfaces. The recommended brand is ProMark which is available from Forestry Suppliers, www.forestry-suppliers.com or at 800-647-5368. Experience has demonstrated that spray paint is a poor substitute for the more durable, uniform blaze painted with a brush on a properly scraped surface.

One gallon bleach bottles with the spout cut out and handle retained make excellent carriers for paint, brush, and scraper. A wooden box five inches wide by 5 inches deep by 15 inches long with a handle

is big enough to carry 2 one quart cans of paint, one quart of water, brushes, jars to paint from and rags. Use the following FTA approved paint formulas:

The formula for one gallon of Florida Trail orange blaze paint is:

80-139 (OSHA Orange) plus R-Y; T-Y; M-40; F-8; B-1

The formula for one gallon of Florida Trail blue blaze paint is:

80-34 plus D-Y, E-3Y

The formula for one gallon of Florida Trail yellow blaze paint is:

80-151 (OSHA Yellow)

The formula for one gallon of Florida Trail white blaze paint is:

80-1 (White)

ProMark oil-based orange paint is Forestry Supplier item number 56738

ProMark oil-based blue paint is Forestry Supplier item number 57680

Signs

The 1986 Florida National Scenic Trail Comprehensive Plan states, “The designation of the Florida Trail as a National Scenic Trail mandates the maintenance of a high standard of signing.” Signage is one of the most important elements of the trail. It allows trail managers and volunteers to communicate with the trail users. Signs can enhance the trail experience or they can degrade it. 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 hiker while avoiding excessive signage that require time and money to maintain them and can even become a visual pollutant. Signage along the FNST and the Florida Trail System 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 reassures them along their journey. This adds greater enjoyment to the trail experience by lessening worries of getting 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 among trail users. Confused and lost trail users seldom become supporters or volunteers for the Trail. As with all relationships clear and concise communication builds friendship and respect.
4. **Quality** – Signing of the Florida National Scenic Trail should be reflective of the National Scenic Trail status granted by Congress.
5. **Cost** - Signs should be developed that will be of sufficient quality without being prohibitively expensive so maintenance and replacement can be covered in the land managers annual budgets.
6. **Placement** - Signs should be placed such that they are informative, directional, and minimize liability to landowners as well as allow for maximum public recognition and protection. However, signage should be held to a minimum to avoid visual pollution. Obtain permission from landowners prior to placing any signs on existing stanchions, posts, or structures. As necessary install posts to mount trail signs.

7. **Materials** - Sign materials should blend as much as is feasible with the natural environment, be durable, and cost efficient.
8. **Design** - Signs should be designed to be resistant to vandalism and be easy to build and maintain.
9. **Recognition** - Recognition and awareness help build support for the Trail. Using the FNST symbol and signing the Trail consistently will raise public awareness for the Trail. Also, the best way to thank our partners and supporters of the Trail is to provide a quality experience and identify at appropriate places (such as bulletin boards, kiosks, administrative boundaries) those responsible for maintaining a particular section of Trail. It is also the appropriate place to pat yourselves on the back and show trail users the work you do to make the Trail fun for them.
10. **Project a Friendly, Good Host Attitude** - The Florida National Scenic Trail is a national resource that we build and maintain for the public, not just local club/personal use. Messages must be inviting and friendly; think of trail users as invited guests to your section of the Trail. Signage should emphasize responsible trail stewardship rather than prohibited activities. Too many negative messages are likely to discourage trail users. Look for alternatives to signing. Planting vegetation or adding brush to a section of trail you are trying to rehabilitate may be more attractive visually.
11. **Educate Users** - about Florida, the National Trail System, and User Ethics - Trail kiosks, trailheads, and bulletin boards as well as hiking guides and brochures provide excellent opportunities to share information such as "Leave No Trace" or "Pack it in, Pack it out". They also are great for introducing trail users to special little things along the next stretch of trail, such as the dry sinkhole or the pitcher plant bog, which are special to Florida and the Trail.

Trail signs should provide the basic information necessary to allow trail users to find their way easily and safely along the FNST. This requires a well-blazed trail with occasional distance information, identification of any known hazards, and in this interim period of trail development - clear distinction of FNST segments and Florida Trail segments. However, signage needs along the FNST will vary by section of trail depending on the setting of the Trail (urban versus primitive). Sections of the Trail in more urban areas will probably require a higher level of signage than a primitive section with few intersections and access points. The experience of the Trail will be the overriding factor guiding signage needs along a section of trail. No matter what the setting or experience, trail managers and volunteers should strive to keep the overall signage of the FNST to the minimum needed to guide the users and keep them informed of trail conditions and regulations that will affect them directly.

Developing a Sign Plan and Inventory

Each section of the trail should have a sign plan and inventory that describes the location, content and maintenance of all trail signs along its length that is developed in coordination by the FTA section leader and the appropriate land manager. Although public land managing agencies and private landowners are ultimately responsible for the section of trail that crosses their land, FTA has agreements with them to perform much of the actual trail maintenance work, which includes maintaining the signage. Often the land manager will provide the signs for the trail volunteers to install along the trail.

The first step in effective signing is through an inventory and evaluation of the Trail itself and any existing signs currently in place. FTA maintains an inventory of trail signs using the Florida Trail Geographic Information System. This sign inventory includes a description of each existing and

planned sign, their supports, locations, conditions, and available history. 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 visitors and provide management of an area? New employees, new club members, or actual visitors are great to use as guinea pigs. Often as trail volunteers or managers, we are so familiar with a section of trail, we have a hard time evaluating what signage needs to exist - we could find our way blindfolded! What is obvious to us 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 an effective sign program. It is the database for 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, historical records, action plans, accomplishment documentation, inspection and maintenance records, and relevant physical, technical, and management information needed to effectively administer the sign program.

A form for ordering signs can be found on page 84, and a form for ordering Wooden Routed Signs can be found on page 85. The description should contain sufficient detail to be able to re-create the sign if it is damaged or missing (for example, Sign #7, Milepost 2.5, Directional sign - "Salt Springs Campground 4 miles", Wood Routed, one inch letters, 7 inch by 11 inch panel attached to single 4 inch by 4 inch post).. 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. **Assign ID number** - Each sign should be assigned a unique identification number tied to a mileage point for use in developing the plan, recording maintenance, and for future reference.
3. **Sign Text** - Describe the message exactly as it appears on the sign.
4. **Sign Type and Size** - Document overall size of the sign panel and the type of material, and type of sign.
5. **Text Size** - Document letter heights of text on sign.
6. **Sign Location** - Placement along the trail. Indicate on trail map and in notes, coded according to map number, sign number, mileage, and type of sign.

Annual Evaluation of Signs

Annual evaluation of signs along the trail allows you to assess a trail and determine if there are additional signing 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 relocated signs or removal of certain signs, it is very important to reflect those changes in the inventory records along with the date the 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 trailhead complete with informational signs, yet forget to lead the public to the trailhead or access point. If our visitors can't find our trail 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 plan can then be shared with the landowner/partners for approval and to estimate cost of maintenance, document all inspections, installations, removals, and maintenance work as it is completed. 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.

FNST Marker

Designation as part of the Florida National Scenic Trail carries with it a tremendous amount of respect and responsibility. The FNST is one of only eight national scenic trails in America. We have the responsibility to ensure that the FNST is marked and signed to achieve and maintain consistency along the length of the Trail, to raise the level of comfort and reassurance of trail users who expect a clearly marked trail, and to ensure that the FNST retains its prominence as one of the nation's premier hiking trails. These guidelines are intended to give guidance to land managers, landowners, and those responsible for trail construction and maintenance for signage along the Florida National Scenic Trail.



As required by Section 7(c) of the Act, the Secretary of Agriculture has established the uniform marker for use on the FNST. The purpose of the 24-inch and 12-inch markers supplied by the National Forests in Florida is to identify the location of the FNST to the motoring public. The markers should be placed so they can be readily seen from a moving vehicle approaching from either direction. The placement of the markers requires approval of appropriate State or County authorities. Designation of a part of the Florida Trail as a National Scenic Trail mandates the maintenance of a high standard of signing. Section leaders and managing agencies should give high priority to timely repair and/or replacement of missing or damaged markers and signs. FNST Markers are available from the Construction Coordinator at the FNST Office, 325 John Knox Rd., F-100, Tallahassee, FL 32303-4160; phone: 850-523-8579; FAX 850-523-8578; buildit@fs.fed.us.

24 - inch Marker – These signs would be located on federal or state highways (speed over 40 mph.) and would need to comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), or FDOT sign standards. FNST signing on these roads where the trail crosses consists of a 24-inch logo sign (standard FNST marker is .125-inch aluminum with Type III reflective sheeting and transparent highway inks, in accordance with FDOT standards) and a word panel (aluminum) approximately 22-inch by 11-inch that would have wording such as "TRAIL CROSSING" affixed as a decal to the aluminum blank, and be mounted on a MUTCD-approved post, with signs facing both directions of traffic approximately 100 feet from the actual trail crossing point.

12 - inch Marker – Where the FNST crosses secondary roads (paved or aggregate surface), the road signing would consist of a 12-inch logo sign and a word panel (aluminum) approximately 11-inch by

6-inch that would have wording such as “TRAIL CROSSING” affixed as a decal to the aluminum blank, and be mounted on a 4-inch by 4-inch wooden post, with one sign facing each direction of traffic and approximately 100 feet from the actual trail crossing point.

3.5 – inch Marker - The purpose of the 3.5 inch marker is to identify the FNST to the person approaching from a side trail. It is to be used only on the FNST at common access junctions; at intersections with other trails; and where needed as a reassurance sign if other land use activities or game trails make the trail location uncertain to the traveler. The three and one-half inch marker is not intended to be used as a trail blazer. It should be attached to a wooden sign post or imbedded in the sign's surface. In areas subject to vandalism, a hot brand of the marker (of identical dimensions) on a post may be more practical. Use of the three and one-half inch marker shall be held to the minimum necessary to meet the purpose.

Types of Trail Signs

Directional Signs

Directional signs are used to confirm a trail user's location on the trail and distance to various destinations along the trail. They enable trail users to mark their progress. Appropriate reference points include trail and road intersections/crossings, facilities, and important features. Reference campsites or shelters only on directional signs that are available to trail users so as not to encourage vandalism or use as a hang-out by the general non-trail using public. Limit the number of destinations listed on one sign to 1 or 2 if possible. Correlate destinations to the official Florida Trail Association hiking guide and any other publicly available maps. Be sure to identify the destination when reached!



Directional signs would be placed at major and minor trailheads, as well as at trail intersections to show direction and distance to side features. Another potential site for directional signs is where the FNST re-enters the woods on either side of a road crossing. These signs would be placed approximately 20 feet inside the woods edge, so as not to be seen from the road. These signs would be composed of decay-resistant wood (redwood, cypress, MDO plywood), and messages would be routed into the sign face and painted a contrasting color (white or off-white). The signboards would be 1-inch thick, and could be either 9-inch by 18-inch or 6-inch by 12-inch, depending on the message length, and would be mounted on a single 4-inch by 4-inch wooden post with a 3½-inch logo sign mounted either above or below the panel. Distance should be shown to the nearest 0.1 mile with 1-inch letters. Distance from the ground to the bottom of the sign should be 3 feet. The proper sequence of the message should list:

- 1) The place or trail name
- 2) Straight ahead arrows, lowest mileage first
- 3) Left arrows, lowest mileage first
- 4) Right arrows, lowest mileage first
- 5) Do not show mileage in wilderness

The same standards apply to signs for side trails and other trails off of the main trail route.

Trailhead Signs

Trailhead signs are used in the company of kiosks and trail registers to advertise to trail users the name of the trail they are hiking. These signs should be constructed of a wood that is resistant to decay (redwood, cedar, cypress, MDO plywood) with routed messages painted for contrast. Major trailheads, especially when accessed from a paved road, require relatively large signs, approximately 30-inch by 14-inch mounted on one 4-inch by 4-inch wood post, or 48-inch 20-inch mounted on two 4-inch by 4-inch wood posts. A 12-inch FNST logo sign could be mounted at the base of the trailhead message panel on one of the posts. Minor trailhead signs are smaller, approximately 18-inch by 9-inch, and mounted on one 4-inch by 4-inch wood post. The 3 ½ -inch FNST logo can be used on the post either directly above or below the sign panel.



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. The Florida Recreational Trail Council recommends that regulatory signs be black lettering on a white reflective background. Regulatory signs should be 6-inch by 6-inch and should be placed on 4-inch by 4-inch posts.

Warning Signs

Warning signs are used to inform trail users of hazards along the Trail. It is strongly recommended that any hazards to trail users be removed or mitigated as soon as possible. Warning signs must be maintained to the highest degree in order to avoid potential liability situations and it often is easier to reroute the Trail or mitigate the hazard than to maintain the signage. The Florida Recreational Trail Council recommends in their Trail Design Guidelines that warning signs should be placed at a minimum of 50 feet prior to the hazard and then again at the hazard and signs should be reflective yellow background with black lettering. Design guidelines recommend signing slippery bridges and roadway crossings.

Interpretive/Educational Signing

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

Quality interpretive and educational signs can be very expensive and can require high maintenance. It is recommended that interpretive and educational signing 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. All interpretive/educational signing should be approved by the Forest Service, the land manager/owner, and the volunteer group.

Administrative Boundaries

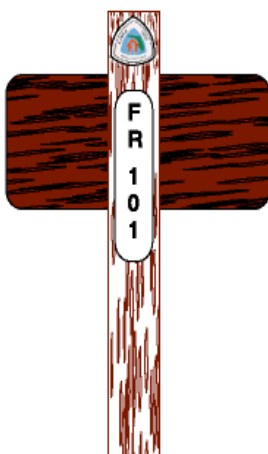
Administrative boundaries should be marked along the trail to provide recognition for the landowners and reaffirm the route to the trail user. These signs would be used at the jurisdictional boundaries between different land-management entities, and would mostly coincide with road crossings. This type of sign will also serve to alert hikers of possible changes in regulations or uses of the trail. For example, when a section of trail that is certified as FNST comes to an end and the trail proceeds as FT, hikers that are not FTA members must be directed that they are not permitted to remain on the trail. The materials and specifications for these signs would be the same as for directional signs. The sign message displayed would include the name of the agency/entity managing the land across which the trail traverses ahead of the hiker (in the direction the hiker is traveling). These signs could be used in combination with directional signs where appropriate.



Signing in Wilderness Areas

Congressionally designated wilderness areas are areas where man's influence is supposed to be minimal. Philosophically, these are supposed to be the few, true wild places. Trail signs are often times in direct conflict with wilderness goals. If you are responsible for maintaining sections of the Trail in a Congressionally designated wilderness area (Juniper Prairie in the Ocala National Forest, St. Marks National Wildlife Refuge, and Bradwell Bay in the Apalachicola National Forest), consult closely with the land manager on your sign plan to be sure trail signage is compatible and does not violate any laws. In addition to Congressionally designated wilderness areas, many state agencies manage lands classified as wilderness according to state agency guidelines. If you are responsible for a section of the FNST on public lands, double check with your managing partner for any special restrictions concerning wilderness areas.

Signs For Trail Users



Road crossings should be planned carefully into the initial construction of the Trail. The Trail should cross roads at right angles in areas with good visibility. Road crossings on blind curves or over hills with limited sight distance may best be handled through trail relocation. A post type system is the recommended standard for the FNST at all road crossings. Use of a 6-inch by 6-inch post is recommended for roads with traffic speeds greater than 35 MPH. A 4-inch by 4-inch post or Carsonite type post system is appropriate for roads with traffic speed less than 35 MPH. The FNST symbol and the international symbols representing the appropriate uses should be displayed on the road-side of the post. The posts should be placed to the right side of the Trail as it exits the road right-of-way.

Carsonite is a company that has developed a signage system that uses the international symbols (decals) affixed to a fiberglass composite, flexible post. These posts and decals come in the standard brown and white we are trying to achieve on the FNST. The National Forests in Florida plan to work with Carsonite to develop a FNST decal that will

work with the system. These signs are not tolerant to burning so are best used along the edges of roads where they can be protected during prescribed fire operations.

Signage at Trail and Road Intersections

Throughout its 1,300 miles, the Florida National Scenic Trail intersects many roads and trails. These intersections can provide opportunities for educating the public or improving access to the Trail, but they can also be safety hazards and points of conflict. Proper trail planning and signing can help to minimize the safety hazards and conflicts. Intersections with roads and trails require signing for two groups. Signs should be placed to notify the trail user of the trail or road crossing. Most often, this is more to help them identify their location along the Trail and to warn them to use care when crossing a road or trail which has high volume or speedy traffic. Signs should also be placed to notify the vehicles or users on the road or trail that they are approaching a trail crossing.

Signage of any vehicular road or highway must be coordinated with the appropriate authority responsible for managing that road or highway. There are numerous laws and regulations guiding signage along roads and highways. Signs generally must be of a certain size, with specific lettering, and materials. Before installing signs along federal and state highways, permits must be acquired from the Florida Department of Transportation (FDOT). Work with your local FDOT Traffic Engineer before placing any signs on road/highway rights-of-way. Failure to do so could result in serious liability issues, as well as lost signs, as FDOT will remove any signs that are not formally permitted.

Trail and road intersections will vary widely from the Federal Interstate System to unmapped jeep trails through the forests. Federal, state, county, and city road systems have very stringent guidelines for signage along highways, and as state above, you must work with the local FDOT District to determine what can be placed along these rights-of-ways. Land managers/owners may also have regulations concerning signage, so be sure to coordinate any and all road signage.

The main benefit of signing for vehicular traffic, beyond the safety aspects is public awareness. People will begin to associate the FNST symbol with the Trail and will hopefully be intrigued enough to find out more about it. The 24-inch FNST marker is to be used where the FNST crosses federal and

state highways, while the 12-inch marker is used for forest and lesser road crossings. This sign simply notifies vehicles the Trail crosses here. Do not encourage vehicles to pull off on road shoulders to access the Trail. This is extremely dangerous. If this begins to occur, construction of a trailhead or removal of the sign is recommended. If a trailhead exists nearby, provide signage to guide vehicles to the trailhead by notifying motorists in advance of the trailhead/access point and notify them again when they have reached the trailhead. Generally, this is done by placing the trail sign 0.25 to 0.5 mile in advance from either direction and then placing a two sided sign at the entrance to the trailhead. Use of international symbols and the official FNST marker is encouraged. If trail use becomes significant, it may be necessary to put up pedestrian crossing signs, consider a pedestrian overpass/underpass, or paint pedestrian crossing lanes across the highway. Once again, your local FDOT district representative will determine what is appropriate.



*Approach Sign for
Primary Highway*



*Approach Sign for
Secondary Road*

Florida Trail Association Signs

Signs should be placed at Trail terminals, Trail junctions, and at major road crossings. A sign should not be evident to drivers on the road unless the Trail is across public property. Signs and other semi-permanent construction attract vandalism—choose location to minimize replacement/relocation. Signs may also indicate water sources, campsites or points of interest. Since they are a major expense item, the need should be carefully studied prior to implementing a sign plan and precaution taken to minimize damage and loss. Be sure to coordinate with landowners and/or land managers in developing the sign plan or erecting signs.

Standard FTA metal signs should be nailed to heavy exterior plywood (½-inch) the same size, with #3 or 1-1/4-inch, hot dipped galvanized nails. Twelve nails will attach the 12-inch sign; eight will attach the 8-inch sign. Nails should be placed at least ½-inch, from the edge and be bent over on the back. Attach the backed signs firmly to treated posts (NOT trees or utility poles) with #10 or 3-inch, hot dipped galvanized nails. The cross- marks printed on the metal signs indicate where the longer nails should be driven.

A cross piece (2-inch by 4-inch by 12-inch), or deadman, should be nailed (large nails) just above the bottom of the post before burying the post at least three feet. Notching the post to accept the “deadman” is tedious, but worthwhile. It discourages removal of the post by rotation. Where vandalism is a particular problem, barbed wire tacked around the edge of the sign, or heavy black grease spread on the back of the sign and post, may help. A spiral of barbed wire around sign posts will prevent hogs from loosening posts with rubbing. Several nails driven vertically into the post top will discourage birds from roosting if the nail heads are clipped off afterwards. FTA signs backed with plywood are designed thick and short to provide minimum leverage for vandals.

There are three standard FTA signs:

1. 12-inch, diamond-shaped FT road crossing or terminal sign, orange on dark brown.
2. 8-inch, diamond-shaped regulatory sign, black on white. A pressure sensitive decal is available to indicate that a segment of Trail is for use by FTA members only.
3. 8-inch, diamond-shaped blank sign, black on white. This sign may be marked with a special paint-filled pen, or decals may be used to provide specific information. Painted markings will have to be replaced periodically.

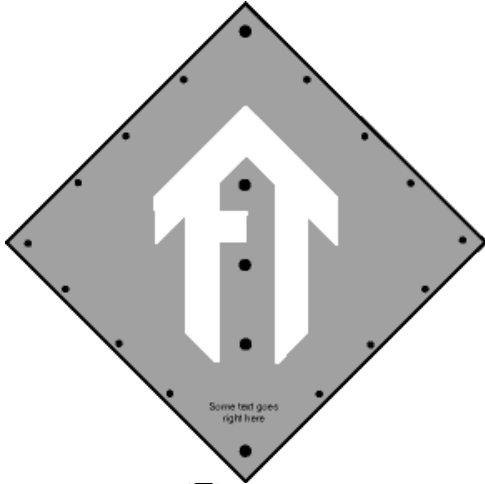
These signs are made of .020 gauge aluminum with a baked-on enamel finish (see below). The words “WATER” and “CAMPSITE” and an arrow are available in decals for use on the 8-inch diamond-shaped blank sign. Paint-filled (not ink) marking pens (both wide and narrow) that will withstand weather are available for making up signs for special purposes on the blank 8-inch signs.

In preparing the wording on signs, it is recommended that geographical features or locations be noted instead of place names or designations that may be shown only on the Florida Trail hiking map or in the Guidebook. For example at trail junctions, give mileages to the major geographical place on each trail, and if both trails eventually go to the same location, state mileages to that location. All marking on signs should be kept simple and easy to understand.

These signs are available from the Construction Coordinator, FNST Office, 325 John Knox Road, F-100, Tallahassee, FL 32303-4160; Telephone: 850-523-8578; FAX 850-523-8578; buildit@fs.fed.us. Signs can be ordered using the form on page 84 and Wooden routed signs can be ordered using the form on page 85. Other signs can be ordered using the form on page 84.

STANDARD FTA METAL SIGNS

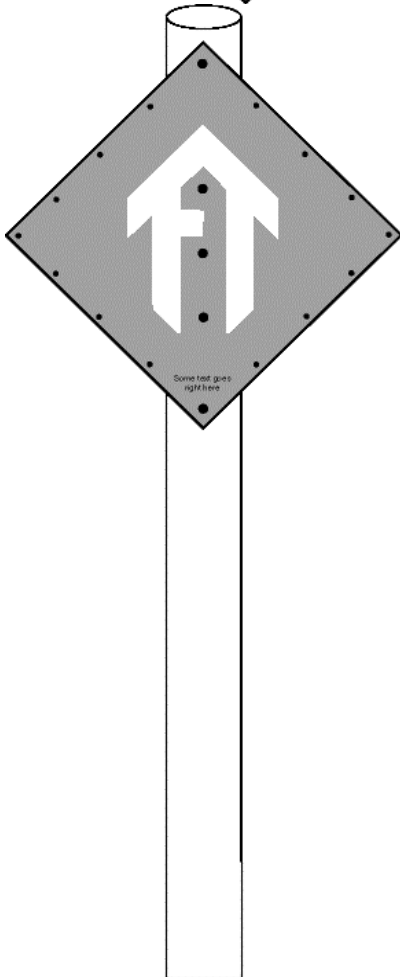
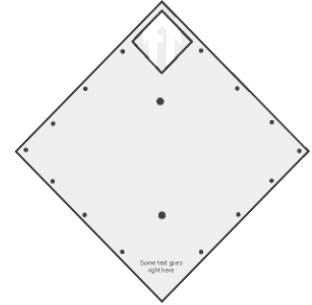
1. 12" Road Crossing sign



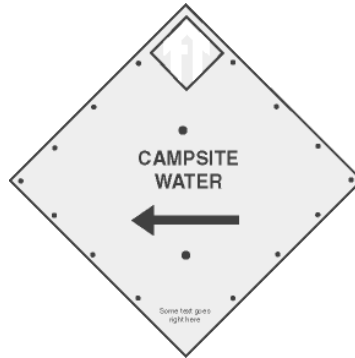
2. 8" Regulatory sign



3. 8" Blank sign



Possible uses of Blank Signs



FT REGULATORY SIGN



Sign Placement

The Sign and Poster Guidelines for the Forest Service state that signs should be placed perpendicular or parallel to direction of the trail. Single-post signs in sections that are restricted to foot travel only should be placed approximately 3 feet from the centerline of the trail tread. This will allow for comfortable passage of hikers with packs, but will obstruct prohibited uses such as motor vehicles.

TRAIL FACILITIES

Campsites and Camping Zones

Campsites should be provided on all sections of the Florida National Scenic Trail. Such sites may be off the trail but at a reasonably close distance. Designated sites should be frequent enough to allow reasonable accommodation for hikers of varying abilities. Campsites are recommended to be located four to six miles apart based on the expected use of the trail and site, but in all cases be no more than one hiking day apart (eight to ten miles). Be aware that some landowners may prohibit camping on their land. In selecting and locating a campsite, the following should be considered:

1. Select a reasonably level and clear wooded site that is near, but not on, the Trail. Avoid placing a site near dead or dying trees or where subject to seasonal flooding. A campsite should be located near a suitable water supply if possible. This may mean boiling for a prescribed time.
2. Campsites should accommodate six to eight small tents.
3. Campsites should be in remote locations (one mile away) from highways, public recreation areas, and residences. Vehicles should not be permitted, and their access to campsites should be restricted.

A wooded site is generally preferred, but an open site is acceptable. The campsite should not be subject to seasonal flooding. Avoid placing a site near dead or dying trees because of the danger of falling limbs or trees. Very tall trees should be avoided as they may attract lightning strikes. An attractive location is desirable but should not take precedence over more important criteria. Campsites may have some improvements such as a table, fire ring, privy, or shelter. Field sanitation and leave no trace measures and should be observed. Furnish toilets only when required by the managing authority. Hikers should be educated to use "no trace" methods where use is light and encouraged to improve any unnatural conditions (litter, campfire scars, etc.) lest such evidence cause this valuable camping privilege to be rescinded. As an alternative to a single campsite, a defined camping zone as large as 150 yards by 400 yards may be established to allow larger groups to camp without crowding. As with campsites, work with the land manager to mark and designate the appropriate location of camping zones.

Bridges and Boardwalks

Section leaders should consult with the Construction Coordinator and obtain approval for all bridges and boardwalks from the managing authority prior to construction. State and Federal regulations often require permits to construct bridges and boardwalks in wetland areas and over streams which the managing authority must obtain prior to construction. Before constructing a bridge or boardwalk, attempt to find a suitable alternative route that eliminates or minimizes the construction, maintenance, and replacement of these costly structures. Selected bridge sites should be thoroughly investigated and planned including photos, sketches, and a written, general description of the area. Standard bridge and boardwalk design information can be obtained from the Construction Coordinator at builitit@floridatrail.org or at the FNST Office, 325 John Knox Rd., F-100, Tallahassee, FL 32303 or at 850-523-8579 FAX 850-523-8578. Two designs for simple boardwalks can be found on pages 57.

Records shall be kept on all bridges and boardwalks on the trail. Section leaders shall conduct an annual survey of all bridges on their section of the trail and a report of the survey shall be submitted to the Construction Coordinator. A name or number should be proposed for each bridge, and photos

submitted for the records. As bridges are built, plans or sketches shall be maintained for each bridge, filed with the bridge name or number in files to be maintained by the Construction Coordinator.

Bridges and boardwalks must safely support backpackers in single file, separated by four feet or more. Bridges may tend to have a bouncy feeling but will be safe for passage unless vandals intentionally vibrate the bridge with the intention of damaging it, in which case the bridge may be damaged or destroyed. Although handrails are not necessarily specified, a given situation may indicate their installation for safety or comfort. Approach ramps should be used to provide greater accessibility, and when designing a boardwalk consideration should be given to providing for mowers to cross. Always use quality materials and treated wood that will withstand the elements when constructing bridges and boardwalks.

Section leaders may request assistance in purchasing materials and hardware for building bridges and boardwalks in sections of trail that are certified (or soon to be certified) as Florida National Scenic Trail. These materials and hardware are made available as funds allow through the FTA- USDA Forest Service challenge cost-share agreement for the FNST, and may be requested through the Construction Coordinator, builitit@floridatrail.org or at the FNST Office, 325 John Knox Road, F-100, Tallahassee, FL 32303-4160 or at 850-523-8579 FAX 850-523-8578. (the request forms can be found on page 80).

The type of bridge or boardwalk to construct will depend upon a variety of factors including: span; end support conditions; material availability; clearance over obstacle to be crossed; environmental conditions and other factors. Before commencing the construction of a bridge, many considerations should be weighed and planned carefully. A few are as follows:

1. **Tools** - tools for the excavation, erection and finishing of the bridge should be assembled before proceeding with the work.
2. **Transportation** - particularly in remote areas, it is important to consider and plan the mode of transportation of supplies, tools, and materials to the site.
3. **Manpower** - the construction of a bridge can be a large job. Plan manpower requirements and availability carefully.
4. **Erection** - the construction should be done in accordance with a previously written plan, step by step. Having an erection plan will force the proper pre-contemplation of potential problems.
5. **Materials** - all the basic materials for the bridge structure, foundation, connectors, and preservative treatment.
 - a. *Trees* - should be pine, cypress or approved hardwood. Bark should be peeled.
 - b. *Rope* - manila, nylon (avoid polypropylene--it stretches), or some carefully selected synthetics.
 - c. *Wire Rope* - all wire rope or strand shall be galvanized and its proof load known.
 - d. *Sawn timbers* - use rough sawn southern pine, cypress, or fir, pressure-treated. Kiln-dried timbers are superior to air-dried timbers. Green timbers will probably warp.
 - e. *Poles* - pressure-treated poles (discarded from utility company) will provide excellent strength and durability.
 - f. *Connectors* - nails, spikes, bolts, washers, nuts, lag bolts, shackles, turnbuckles, etc. -- All should be hot-dipped galvanized and sprayed with corrosion preventative material.
 - g. *Sand* - should always be free of clay or silt-like material, and organic or other deleterious

substance.

- h. *Grout* - use a base of Portland cement, mixed with sand in various proportions dependent upon strength desired. Use three parts sand to one part cement for high strength. Use eight parts sand to one part cement for very low strength. Always use a minimum amount of water -- only as much as absolutely necessary to make a thick paste.

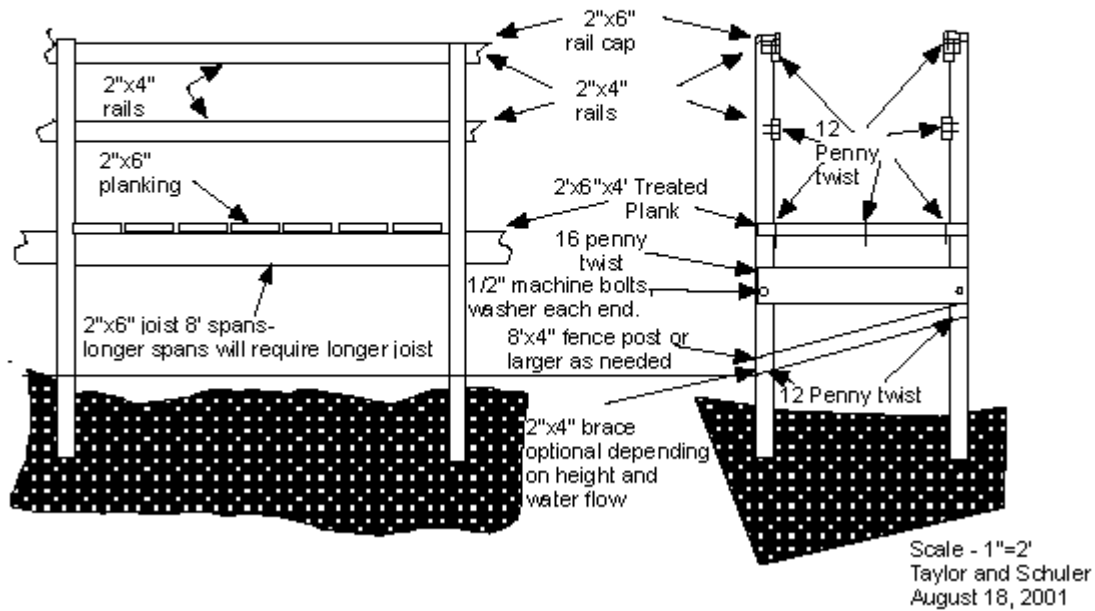
Beam Size Table

To aid in determining the necessary materials, the following beam span table may be used in conjunction with standard designs for trail bridges.

BEAM SIZE	SINGLE BEAM		DOUBLE BEAM	
	Maximum Span	Maximum Cantilever	Maximum Span	Maximum Cantilever
Diameter of Round Beams	L	A	L	A
<hr/>				
4"	6'	2'	8'	3'
5"	9'	3'	12'	4'
6"	12'	4'	14'	5'
7"	15'	5'	18'	6'
8"	18'	6'	22'	7'
9"	21'	8'	25'	8'
10"	25'	9'	29'	9'
12"	32'	10'	37'	12'
14"	39'	11'	45'	13'
16"	47'	14'	54'	16'
18"	55'	16'	63'	18'
<hr/>				
Width by Depth of Rectangular Beams				
4" x 4"	8'	3'	10'	4'
4" x 6"	12'	4'	15'	5'
4" x 8"	17'	5'	20'	6'
6" x 4"	10'	3'	12'	4'
6" x 6"	15'	5'	17'	6'
6" x 8"	20'	6'	23'	8'
6" x 10"	25'	8'	29'	10'
6" x 12"	30'	10'	35'	12'
8" x 4"	11'	4'	13'	4'
8" x 6"	17'	6'	19'	6'
8" x 8"	22'	7'	25'	8'
10" x 4"	12'	4'	14'	5'
10" x 6"	18'	6'	21'	7'
10" x 8"	24'	8'	28'	9'
10" x 10"	30'	10'	34'	11'
10" x 12"	36'	12'	41'	13'

Boardwalk Diagram 1

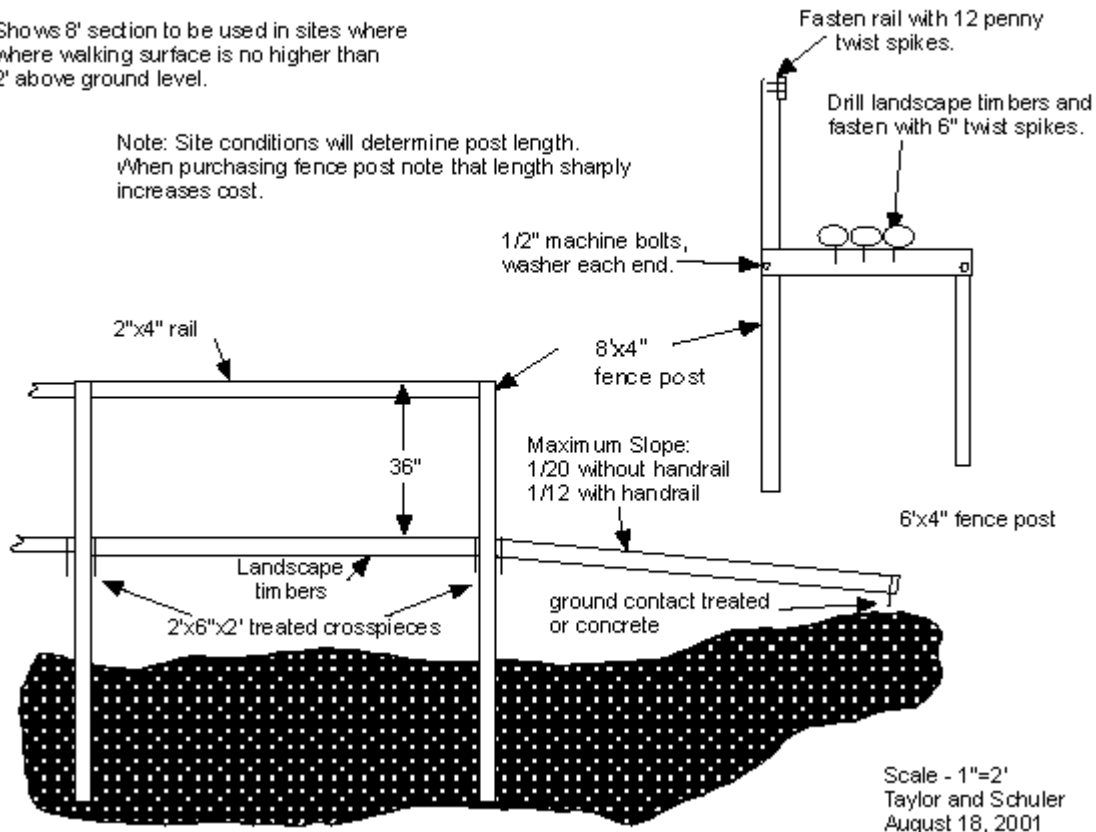
Shows 8' section to be used in sites where walking surface is higher than 2' above ground level.



Boardwalk Diagram 2

Shows 8' section to be used in sites where walking surface is no higher than 2' above ground level.

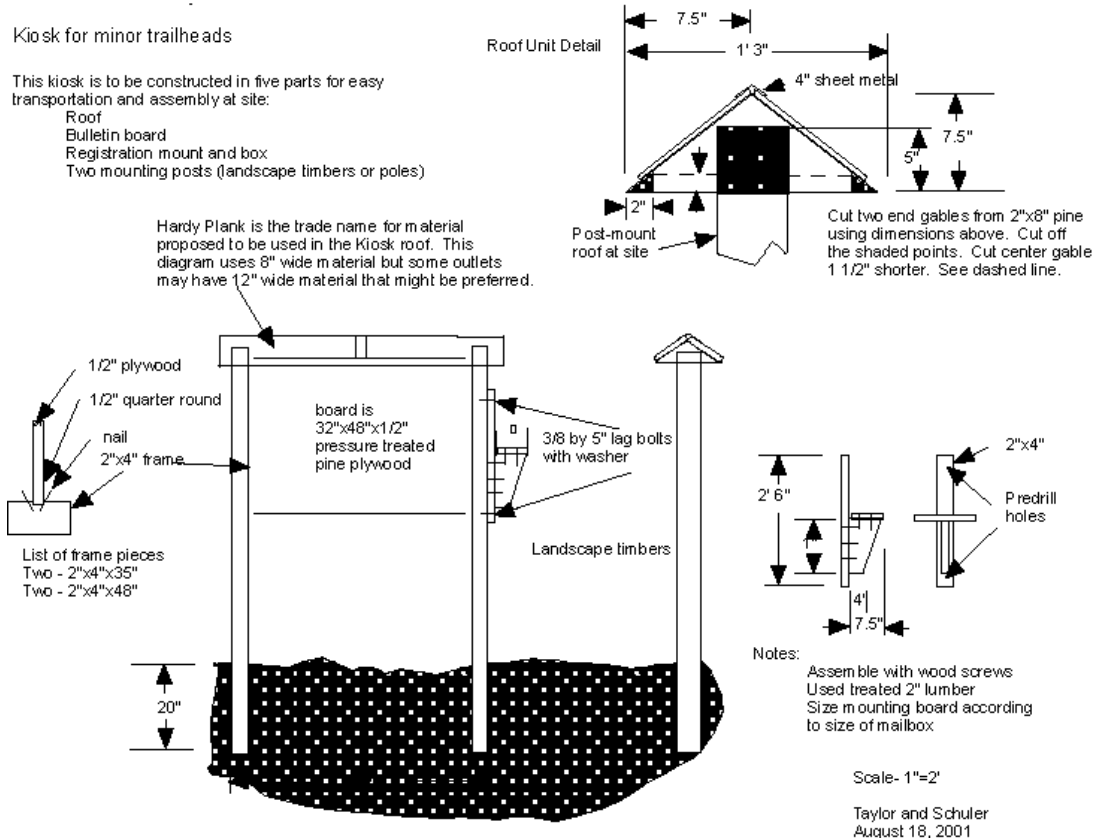
Note: Site conditions will determine post length. When purchasing fence post note that length sharply increases cost.



Trailheads

Trailheads are defined in the Florida National Scenic Trail Comprehensive Plan as a facility provided solely for the trail user to transfer from motorized highway travel to non-motorized trail travel. Basic items to be included in the site design of a trailhead include parking, sanitation, water within a reasonable distance by trail, and access to the main trail. Trailheads should be planned and constructed based upon the amount of use, the mix of user types (equestrian, hiker, day use, long distance use, etc.) approved for a particular section of trail, and the carrying capacity of other trailheads serving the trail in the area. Multiple use trailheads should contain amenities needed by all non-motorized users such as pull through parking spaces for horse trailers, bicycle racks, etc. where such uses are permitted. A trailhead is not intended as a site for picnicking or overnight camping and the design should discourage such use. Wherever possible, trailheads should be located away from the main trail and accessible by a short side or feeder trail. Use kiosks and bulletin boards to consolidate signing, to post regulations and restrictions, and to provide general information needed by trail users.

Major trailheads will normally be located near primary highways and be designed and constructed to a higher level of development than minor trailheads. Major trailheads include parking areas for more than five vehicles, bulletin boards, usually in kiosks, trail registers and can also include such amenities as paved roads, landscaping, and flush toilets, and corrals. They also generally require regular custodial care and law enforcement patrols. Minor trailheads could be as simple as a three to five vehicle parking area, garbage can, bulletin board or kiosk. Minor trailheads require less frequent attention by personnel. Auxiliary trailheads are those trailheads that are combined with other recreation facilities such as campgrounds, picnic areas, or other trailheads. In all cases, maintain a clear separation between facilities and be sure signage related to the trail is located appropriately to avoid confusion. The following is an example of a kiosk.



Trail Registers

Trail registers are used to record trail usage and comments where hikers begin their hikes. The information in the trail register should be collected periodically, read and dispersed to land managers and trail officials. Trail registers are often used by hikers to provide other users and trail managers with up to date information about trail conditions. In cases where hikers are lost, local law enforcement can use registers to find the last entry. Generally, registers are placed at all trailheads.

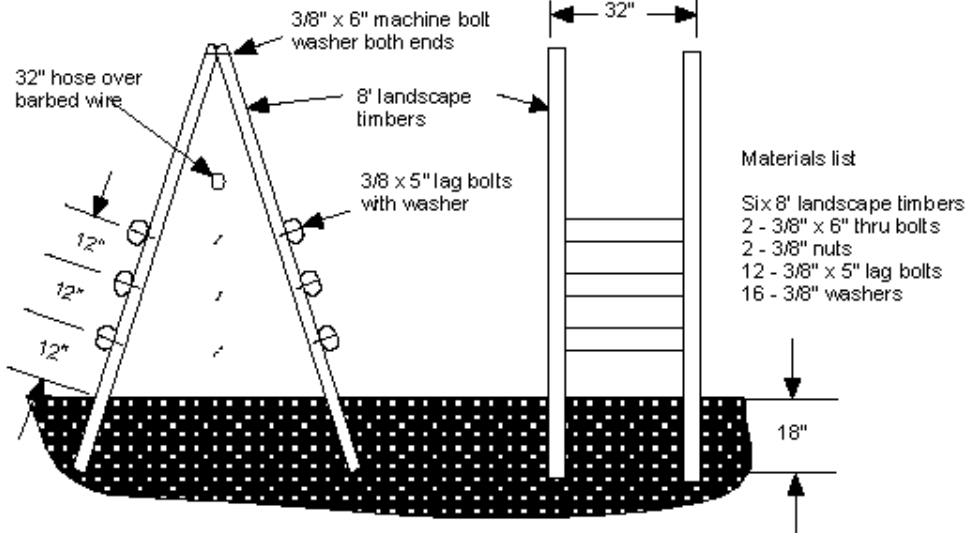
The register should be located so to offer some protection from vandalism. It should be adjacent to the Trail but not visible from roads. The register should be sturdy construction, be weather proof and include paper and a writing instrument. A simple register to install and maintain is a large mailbox solidly mounted on a four by four inch post. The paper and writing instrument should be placed in a large zip lock bag and kept in the mailbox. Other suitable waterproof, inexpensive containers may be used. An example design of a wooden register is available from the FNST office.

Stiles and Walk-Throughs

Keep fence crossings to a minimum. Consult with the landowners to ensure that the location and construction of the stile is appropriate to the situation. Walk-throughs such as wire fences gates and V-shaped fence-opening (dodgeway) stiles may be used to allow mowers to pass through areas without gates. If gates or fence openings are not allowed or necessary, stiles should be used to prevent fence damage when you must route the trail across a fence. Stiles should be strong, durable, and easily crossable. Consult with the landowners to ensure that the location and construction of the stile is appropriate to the situation. Drawings and plans for other stiles and walk-throughs are available from the Construction Coordinator at the buildit@floridatrail.org or at the FNST Office, 325 John Knox Rd, F-100, Tallahassee, FL 32303-4160; 850-523-8579; FAX 850-523-8578. The following are two examples suggested for stile design.

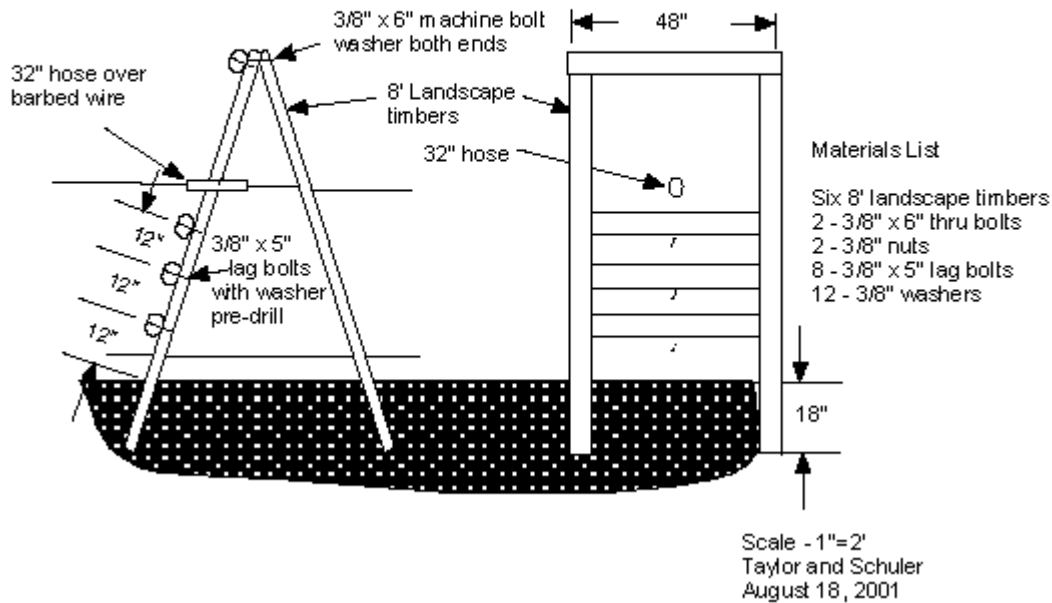
Stile 1

Landscape timbers will last 6 to 10 years when in contact with ground. Dimensioned lumber treated for ground contact would last longer. Conditions on site may require longer vertical members which would need to be 4" x 4" treated material.



Stile 2

Landscape timbers will last 6 to 10 years when in contact with ground. Dimensioned lumber treated for ground contact would last longer. For the longer lasting lumber, substitute 4"x4" posts for the uprights and 2"x6" for the cross pieces. Conditions on site may require longer vertical members which would require 4"x4" treated material.



Hand or Pitcher Pumps

Special care and maintenance of pumps is important to protect the health of hikers who may use them. In the spring when the cypress heads dry out and the temperature soars, proper working order of pumps could be a life and death matter. Leather washers in the pump must be wet to create a vacuum to draw water when the handle is pumped. This is priming the pump.

In order to prime a hand pump:

1. Raise pump handle and pour water in the hole in the top of the pump filling the cylindrical body of the pump.
2. Open the faucet valve at the base of the pump, if it has one.
3. Place your hand over the spout to prevent water from spilling out before pump is primed.
4. Pump quickly at the beginning to prime the pump; then slowly and steadily to clear the water.
5. These steps may need repeating if the pump has not been used recently.

If washers are worn or small rocks are caught in the flapper valve, the pump will not hold a prime. To repair:

1. Close valve at base of pump if so equipped and loosen pump top holding bolts.
2. Lift out handle with connected inner pump extension arm and attached leathers.
3. Remove small rocks (and replace worn leathers if applicable) and reassemble pump, then prime.
4. Be sure pump handle bolts are tight both before and after using pump.
5. Place tools, leathers and instructions in protecting container before leaving camp.

Pumps should be signed to instruct users to treat all water from the pump and to leave containers filled with priming water and close valve at the base of pump when finished with the pump to avoid having the next hiker to re-prime it.

TRAIL DOCUMENTATION

FTS MAP SERIES AND GUIDE BOOKS

The location and description of the trails of the Florida Trail System (the FNST and the loop and side trails) are documented in the FTS map series , The Florida Trail: The Official Hiking Guide, The Florida Trail Companion Guide for Long Distance Hikers, and The Florida Trail Data Book.. The map series was originally developed by the University of Florida's GeoPlan Center for FTA and the USDA Forest Service, but now FTA maintains and updates this map series.. Each map has a trail or trail segment on each side of the same sheet with the trail description, mileages, and related data for that trail or segment found in the accompanying guide books. The trail descriptions are compiled by FTA members, usually the section leaders who maintain specific trail segments. .

For each trail or trail segment in the Florida Trail System, FTA publishes a map or maps along with guidebooks which provide general information, trail head location, and trail data. Also described are: the types of hiking, precautions, landowner restrictions, water availability, parking suggestions, sources of supplies, mail zip codes, motel and campground locations, telephone numbers for sources of additional assistance, and natural or historic items of interest. The Florida Trail Data Book lists trail data and mileage from south-to-north and north-to-south).. For loop trails, mileage is listed in both clockwise and counterclockwise directions. The maps show the trail as a dashed line within a colored line that matches the color of the blaze found along the trail. The mapping scale is 1:100,000.. The distance between points is noted on the maps as well. Additionally, latitude and longitude tick marks and coordinates are located at the maps' margins. The public lands, cities and counties that the trail passes through are listed on each map. Shown on the maps along the trail are sources of public and surface water, trailheads, kiosks, campgrounds, designated camps, campsites, shelters, sources of supplies, and historic and scenic sites..

CHAPTER TRAIL MAPS AND BROCHURES

From time to time, chapters may wish to publish, at their own expense, trail information and maps specifically targeted to trails in their immediate area. These maps may or may not be official Florida Trail System maps and information. It is expected that any maps published as such would not diminish the need for trail users to purchase official FTS maps and guides. Chapter published maps are not to be more specific than official FTS maps and guides. The official FTS maps and guides are copyrighted and should not be copied for distribution (FTA sells these maps to offset expenses related to updating the map series and hiking guide). Any maps which show part of the Florida Trail System and/or makes mention of the FTA should be accompanied by the official FTA disclaimer:

The Florida Trail Association, Inc., its officers, directors, staff and members proclaim the information included to be correct at the time of publication, but they assume no liability arising from the use of the information therein. Persons using the information do so at their own risk.

NOTICE TO HIKERS PROCEDURE

This procedure is being established in order to effectively publish and track “Notice to Hikers” submittals. “Notice to Hikers” submittals should come from Chapter Trail Coordinators or FTA Section leaders and be submitted to the FTA in a timely manner to ensure the safe passage of hikers along and through the Florida Trail System. The “Notice to Hikers Form” can be found on page 87. Changes or problems with trail conditions will be reported in the FTA Footprint and posted on the FTA website.

1. All “Notice to Hikers” submittals need to be transmitted and verified through the FTA.
2. All “Notice to Hikers” submittals should to be made using the appropriate form or a reasonable facsimile.
3. The VP-Trails has designated the Trail Inventory Coordinator to coordinate and disseminate all “Notice to Hikers” data.
4. The Trail Inventory Coordinator will issue the official FTA “Notice to Hikers” to be posted on the FTA website and published in the FTA Footprint.
5. All “Notice to Hikers” submittals will be sequentially numbered by year and sequence, e.g. 2001-001, 2001-002, etc.
6. All “Notice to Hikers” submittals should have an “Effective Date” and an “Ending Date” so that hikers can know when a change takes effect and for how long. These dates should include month and year only. A permanent change will be in effect until the next issue of the map of the affected area and will then expire. A temporary change submitted with no ending date will be returned to the submitter.
7. Permanent changes should be followed up with a “Map Changes Form”. Permanent changes for which no “Map Change Form” is received may not find their way into the next map updates, depending on the nature of the change. The “Map Changes Form” can be found in on page 88.
8. “Notice to Hikers” submittals should include the FTA Trail Map number and/or name (e.g., Map 07/ Econfina Creek).
9. A database of all “Notice to Hikers” submittals will be kept by the FTA Office so that all Notices can be pulled out or cross-referenced by year and sequence number, effective date, ending date or Map.
10. Regardless of whom is doing the trail work, it is the responsibility of the Chapter Trail Coordinator and FTA Section Leader to inform the FTA Office of trail changes.

Submit all changes to:
Florida Trail Association
Attn: Notice to Hikers
5415 SW 13 St
Gainesville, FL 32608
buildit@floridatrail.org
(877) HIKE-FLA
(352) 378-4550 (FAX)

MAP CHANGE PROCEDURE

This procedure is being established in order to effectively publish map updates. Map change orders should come from Chapter Trail Coordinators or FTA Section Leaders and be submitted to the FTA in a timely manner to ensure the safe passage of hikers along and through the Florida Trail System. Temporary and permanent changes in trail conditions should be reported using the Notice to Hikers Procedure. Permanent changes to map images or descriptions should be reported using the Map Changes Procedure as soon as possible following submittal of the Notice to Hikers. The “Map Change Form” can be found on page 88.

1. All requests for changes to map graphics or text must be provided in writing and come from the Chapter Trail Coordinator, the Section Leader or VP-Trails.
2. Any changes coming into the FTA Office from persons other than the Chapter Trail Coordinator, the Section Leader or VP-Trails will be sent to the Chapter Trail Coordinator for confirmation.
3. All changes must be submitted using the appropriate form or a reasonable facsimile.
4. The VP-Trails has designated the Trail Inventory Coordinator to coordinate and disseminate all Map Change data.
5. All map change data submitted will be held until the next revision of the official FTA maps.
6. Regardless of whom does the trail work necessitating the map change, it is the responsibility of the Chapter Trail Coordinator and the FTA Section Leader to inform the FTA Office of trail changes.

Submit all changes to:
Florida Trail Association
Attn: Map Changes
5415 SW 13 Street
Gainesville, FL 32608-5037
buildit@floridatrail.org
(877) HIKE-FLA
(352) 378-4550 (FAX)

Chapter 3: Forms

REQUEST TO PROCEED WITH TRAIL CONSTRUCTION

Florida Trail Association

Date: _____

Trail Name or Description: _____

Type of Trail (hiking, shared-use, etc): _____

Location: _____

_____ Length: _____

Anticipated Supporting Facilities (water, camping, etc): _____

Consistency with Minimum Requirements:	Yes	No
1. Is it consistent with the <u>Preferred Routing Study</u> and <u>The FNST Comprehensive Plan</u> ?	_____	_____
2. Is it a critical connection, reasonably likely to be connected to the FNST?	_____	_____
3. Is it non-motorized?	_____	_____
4. Will it be open to, and accessible by, the public?	_____	_____
5. Will the trail be reasonably permanent?	_____	_____

If the answer to any of the above is no, describe why the trail is proposed: _____

FNST Trail Construction

Describe the pros and cons of the proposed trail alignment (see following "Trail Routing Evaluation Factors")

Are the person-power, funding, equipment and supplies available to construct the trail? If not, describe how they would be made available.

List any Supporting Attachments

Supporting Entities:

Florida Trail Association/Trail Construction and Maintenance Entity

Local Chapter _____, Section Leader _____

Trail Coordinator _____
name signature date

VP-Trails _____
name signature date

Land Manager/ Name of Property _____

Land Owner _____
name signature date

Land Manager _____
name signature date

Supervisor of National Forests or Designee

Supervisor _____
name signature date

Send To:

Construction Coordinator
buildit@floridatrail.org
325 John Knox Road, F-100
Tallahassee, FL 32303-4160
850-523-8578 (FAX)

Revised 10/07

**NOMINATION FORM TO ACQUIRE PROPERTY
FOR THE FLORIDA NATIONAL SCENIC TRAIL**

Florida Trail Association

Date _____

This form is to be used to nominate parcels of land, believed to be potential connections of the Florida National Scenic Trail (FNST), for possible acquisition. Please add additional pages of description or explanation as needed. Maps locating the property, plat maps, aerial photographs, photographs, legal descriptions, tax records, etc. that may help in the analysis of the proposed acquisition should be attached

Send the nomination to: Land Acquisition Coordinator, buildit@floridatrail.org, FNST Office, 325 John Knox Rd., F-100, Tallahassee, FL, 32303-4160, or FAX (850) 523-8578. For information call 850-523-8525.

Description

Parcel Name/Description _____

_____ Parcel ID _____

Type of Trail (hiking, shared use, urban, rural, etc.) _____

Location _____

Existing improvements, if any _____

Trail Map # _____ Nearest Florida Trail or FNST _____

Willing Seller: Yes No Undetermined

Property Ownership

Land Owner Name _____

Address _____

Telephone/Fax _____ E-mail _____

Owner's Representative Name _____

Address _____

Telephone/Fax _____ E-mail _____

Consistency with Minimum Requirements	Yes	No
1. Is the trail consistent with the <u>Preferred Routing Study</u> and <u>The FNST Comprehensive Plan</u> ?	_____	_____
2. Is it a critical connection, reasonably likely to be connected to the FNST?	_____	_____
3. Can the trail be non-motorized?	_____	_____
4. Will the trail be open to, and accessible by, the public?	_____	_____
5. Will the trail be reasonably permanent?	_____	_____

If the answer to any of the above minimum requirements is “no” or “unknown”, describe why the property is proposed: _____

FNST Trail Acquisition

Describe the pros and cons of the proposed acquisition:

Pros:

Cons:

Name of Person Nominating the Property _____

Organization _____

Address _____

Telephone _____ Fax _____

E-mail _____

Revised 10/07

SAMPLE PRIVATE LANDOWNER AGREEMENT
Florida Trail Association

This is a sample agreement only and as such is not legally binding.

THIS AGREEMENT, made and entered into this day of _____, 20___, by and between the Florida Trail Association, a nonprofit corporation registered in the State of Florida, hereinafter referred to as the ASSOCIATION, 5415 SW 13 Street, Gainesville, FL 32608-5037; and [INSERT NAME / ADDRESS], hereinafter referred to as the LANDOWNER(S).

WITNESSETH:

THAT WHEREAS, the ASSOCIATION is developing the Florida Trail, a 1,400-mile footpath extending from the Big Cypress National Preserve in southern Florida north to the Gulf Islands National Seashore in the western panhandle; and

WHEREAS, the ASSOCIATION is desirous of establishing and maintaining a portion of the Florida Trail on and across certain lands owned by the LANDOWNER(S); and

WHEREAS, the LANDOWNER(S) are supportive of the goals and objectives of the Florida Trail and have expressed a willingness to cooperate with the ASSOCIATION.

NOW, THEREFORE, in consideration of the promises and mutual covenants and agreements herein contained, the parties hereto agree as follows:

1. Use of Property: The LANDOWNER(S) hereby grant the ASSOCIATION permission to establish and maintain a segment of the Florida Trail on and across the lands described in Exhibit "A" attached hereto and by this reference made a part hereof. The location and method of access to the property for these purposes shall be mutually agreed upon by the parties.
2. Development/Maintenance: Development and maintenance of the trail shall be undertaken by volunteers under the direct supervision of the ASSOCIATION and in accordance with the standards and procedures set forth in the *Trail Manual for the Florida Trail System* and all applicable local, state, and federal laws, codes, and regulations. The proposed route for and method of marking the trail shall be approved by the LANDOWNER(S) prior to any clearing and blazing by the ASSOCIATION.
3. Payment of Expenses: All costs and expenses associated with development and maintenance of the trail shall be borne by the ASSOCIATION unless otherwise agreed to in writing by the LANDOWNER(S).
4. Indemnification: The ASSOCIATION agrees to defend, indemnify and save harmless the LANDOWNER(S) from and against any damage, liability and loss occasioned by, growing out of, or arising or resulting from any act or omission by the ASSOCIATION, its agents or employees while on the property.
5. Insurance: During the full term of this Agreement, and at its own cost and expense, the ASSOCIATION shall obtain and maintain comprehensive general public liability insurance with a limit of not less than \$250,000 per occurrence and \$500,000 in the aggregate. Such policy of insurance shall endorse the LANDOWNER(S) as additionally insured and shall contain no provisions whereby the insurer may raise any act or omission of the ASSOCIATION (other than nonpayment of premiums or misrepresentation in the inception) as a defense to affording the LANDOWNER(S) coverage thereunder. Such coverage shall

provide for thirty (30) days written notification to the LANDOWNER(S) of any material change or cancellation. The ASSOCIATION shall provide to the LANDOWNER(S) evidence of such coverage by means of a Certificate of Insurance within fifteen (15) days after the execution this Agreement and on an annual basis thereafter.

6. Public Access: The LANDOWNER(S) agree that members of the public shall be afforded access to and use of the trail segment as a footpath for hiking without regard to race, creed, color, sex, age, or national origin.
7. Liability: The LANDOWNER(S) acknowledge that the ASSOCIATION has furnished them a copy of Chapter 375.251 Florida Statutes which limits the liability of landowners making their lands available to the public for outdoor recreation purposes provided that no charge is made for such use and that persons going on their lands are not injured by the deliberate, willful, and malicious acts of the landowner.
8. Overnight Camping: Overnight camping shall be at sites and in a manner approved by the LANDOWNER(S).
9. Trail Closures: The LANDOWNER(S) shall have the right to close the trail segment temporarily in the event of natural disasters or scheduled land management activities such as prescribed burning that may pose a threat to public safety. The landowner will attempt to notify the Association of trail closures at the aforementioned address.
10. Transfer of Real Property: This Agreement does not transfer any real property interest to the ASSOCIATION.
11. Assignments: This Agreement may not be transferred or assigned by the ASSOCIATION without prior written approval of the LANDOWNER(S).
12. Liens: The ASSOCIATION is prohibited from directly or indirectly doing anything whereby the property may be encumbered by a mechanic's lien, and shall, whenever and as often as any mechanic's lien is filed against the property, reported to be for labor or materials furnished, or to be furnished to the ASSOCIATION, discharge the same of record within thirty (30) days after the date of filing.
13. Amendment: This Agreement may be amended at any time by mutual consent of the LANDOWNER(S) and the ASSOCIATION.
14. Termination: This Agreement may be terminated with or without cause by the LANDOWNER(S) or the ASSOCIATION at any time upon written notice to the other party. Termination shall be effective upon the thirtieth (30) day after receipt of such notice from either party.
15. Removal of Improvements: All signs, posts, stiles and related trail improvements shall be removed by the ASSOCIATION within thirty (30) days following the cancellation of this Agreement. Blazes shall be covered with gray paint.
16. Notification of Sale: As a general courtesy, the LANDOWNER(S) agree to notify the ASSOCIATION of any pending sale or transfer of the property.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed the day and year first above written.

LANDOWNER

By: _____ (Witness)

FLORIDA TRAIL ASSOCIATION

By: _____ (President)

_____ (Witness)

SAMPLE THANK YOU LETTER FOR PRIVATE LANDOWNERS
Florida Trail Association

On Florida Trail Association Letterhead

Date

Mr. Generous Landowner
100 Florida Trail Way
Happy Trails, FL 32333

Dear Mr. Landowner,

You have been so helpful and cooperative in permitting the Florida Trail Association to keep a hiking trail open through your property that we would like to say 'Thank you' and provide some news of the Association. I am enclosing a copy of a map of the Trail through your property and a copy of the Association's brochure.

I am glad to have this opportunity to say thank you again. The Trail provides much pleasure for many people and you have helped to make this possible. Please feel free to ask hikers for their FTA membership card and if you note any irregularities please let me know at once. Please contact me at (850) 86B-R549.

Sincerely,

Hard Working,
Section Leader

**FORM TO REQUEST
TRANSFERRING TRAIL SEGMENTS
TO ANOTHER CHAPTER**
Florida Trail Association

In the event that a new chapter is formed and/or boundaries of the current chapters are changed, the following form should be submitted to VP-Trails.

Trail Map Numbers and Section
Name: _____

Chapter transferring
responsibility: _____

Transferring Chapter Trail
Coordinator Signature and date: _____

Chapter accepting
responsibility: _____

Accepting Chapter Trail
Coordinator Signature and date: _____

Approved,
VP-Trails and date: _____

Annual Trail Condition Report

Florida Trail Association, Inc.

The Annual Trail Condition Report is a tool for ensuring that the Florida Trail, National Scenic Trail, and the trails in the Florida Trail System are providing a premiere hiking experience for the public. This report ensures that the trail is being maintained to Florida Trail standards, and provides information for trail updates and improvements. The Annual Trail Condition Report includes this report, a map(s) showing the trail and inventoried trail structures, and a list describing inventoried trail structures. Trail inventory maps are available to download on the FTA website (www.floridatrail.org) in Adobe Reader format (.pdf)

Section Name: _____

Section Leader: _____

Number of Miles: _____ **Florida Trail Map #:** _____ **Date Submitted:** _____

Miles Maintained

Please highlight on the accompanying map(s) all parts of the trail that have been cleared and blazed to standard.

Structures

Please update the accompanying list of trail structures noting changes. Either cut and paste the updated list to the online form below or print and attach to the mailed copy of this report.

Existing Structures not on the provided structures list

If you have structure not listed above please include them here including the same information that was provided on the above listed structures. Eligible structures include: Kiosks, Bridges, Boardwalks, Campsites, Trailheads, Stiles, Registers, and Privies.

Signage

Document any signage issues or needs.

Road Crossings

Document any issues or needs at road crossings.

Water Sources

Document the available water sources and their condition. Also indicate any water source issues or problems.

Treadway Condition

Document any parts of the trail where there are treadway problems (i.e. water, erosion, clear cuts, etc.)

Indications of Unauthorized Use (Bicycle, Horse, OHV)

Document any issues or damages caused by bicycles, horses, or OHV's on the Florida Trail.

Reroutes and new trail segments

Document any new reroutes and trail segments (location, distance, etc.).

Other Comments, Concerns and Recommendations.

Please submit this form annually by May 31 to the Construction Coordinator at builtit@floridatrail.org or by FAX at 850-523-8578 or by mail:

Construction Coordinator
325 John Knox Rd., F-100
Tallahassee, FL 32303-4160

Revised 10/07

ANNUAL TRAIL WORK PLAN
Florida Trail Association

NAME OF LAND MANAGEMENT UNIT: _____

YEAR: June 1, 200_ to May 31, 200_

TRAIL MAINTENANCE SCHEDULE (Expected date and description of tasks to be done):

CAPITAL IMPROVEMENTS NEEDED (Bridges, campsites, signs, etc. include descriptions and drawings): _____

PROPOSED TRAIL DEVELOPMENT (Reroutes, side trails, new trail, etc. - include maps):

OTHER WORK TO BE DONE AND COMMENTS: _____

NAME OF SECTION LEADER: _____

DATE: _____

This form is to be submitted by May 30 to the Construction Coordinator, buildit@floridatrail.org or 325 John Knox Road, F-100, Tallahassee, FL 32303-4160 or FAX to 850-523-8578.

Revised 10/07

INVENTORY OF TRAIL TOOLS AND EQUIPMENT

Florida Trail Association

CHAPTER: _____

DATE: _____

Mail by May 31 to: Construction Coordinator, buildit@floridatrail.org or 325 John Knox Rd., F-100, Tallahassee, FL 32303-4160; FAX 850-523-8578.

1. All trail tools and equipment in the possession of a chapter is considered FTA property for insurance and tracking purposes.
2. List and describe all FTA property in possession of the Chapter.
3. By March 1 annually, the Construction Coordinator will provide the recorded inventory of tools and equipment to each Chapter Trail Coordinator. The Chapter Trail Coordinator is responsible for confirming and updating the inventory and submitting the updated inventory of all tools and equipment to the Construction Coordination by May 31 annually.

ITEM	QUAN- TITY	BRAND	MODEL	SERIAL #	DATE ACQUIRED	PURCHASE PRICE (or estimate)	CONDITION	CUSTODIAN name & location

**FLORIDA NATIONAL SCENIC TRAIL
REQUEST FOR EQUIPMENT, TOOLS, AND MATERIALS
FOR TRAIL CONSTRUCTION AND MAINTENANCE**

Florida Trail Association

Section _____ Name of Requesting Section Leader or Land Manager _____ Date _____

Contact information for Requestor _____

Type of Tool/ Equipment	Brand	Model Number	Vendor	Number Requested	Cost/Item

On the back of this form, please describe or justify your request. Please copy this sheet if more space is needed.

Building Materials and Hardware

Please attach a copy of the trail map showing the location of the structure(s), a sketch of the structure(s), a materials list(s), and a written quote from a supplier. Written approval and authorization from the land manager, including any environmental permits will be required prior to receiving FTA approval to purchase materials and construct any facilities.

Please return your request to: Construction Coordinator, 325 John Knox Road, F-100, Tallahassee, FL 32303-4160 or via fax at 850-523-8578 or via e-mail at buildit@floridatrail.org.

Please use the space below to describe the need for your request.

**NON-FLORIDA NATIONAL SCENIC TRAIL
REQUEST FOR EQUIPMENT, TOOLS, AND MATERIALS
FOR TRAIL CONSTRUCTION AND MAINTENANCE**

Florida Trail Association

Section _____ Name of Requesting _____
 Section Leader or Land Manager _____ Date _____

Contact information for Requestor _____

On the back of this form, please describe or justify your request. Please copy this sheet if more space is needed.

Type of Tool/ Equipment	Brand	Model Number	Vendor	Number Requested	Cost/Item

Building Materials and Hardware

Please attach a copy of the trail map showing the location of the structure(s), a sketch of the structure(s), a materials list(s), and a written quote from a supplier. Written approval and authorization from the land manager, including any environmental permits will be required prior to receiving FTA approval to purchase materials and construct any facilities.

Please return your request to: Construction Coordinator, 325 John Knox Road, F-100, Tallahassee, FL 32303-4160 or via fax at 850-523-8578 or via e-mail at buildit@floridatrail.org.

Please use the space below to describe the need for your request.

Revised 10/07

Revised 10/07

**FLORIDA TRAIL REQUEST FORM
FOR WOODEN ROUTED TRAIL SIGNS
Florida Trail Association**

Name of Requesting Section Leader or Land Manager: _____

Name of Section: _____ **Date:** _____

Contact information for Requesting Party (day phone number and/or email):

Print text of sign exactly as you wish it to appear

Sign Number 1

Line 1 _____

Line 2 _____

Sign Number 2

Line 1 _____

Line 2 _____

Sign Number 3

Line 1 _____

Line 2 _____

Sign Number 4

Line 1 _____

Line 2 _____

Sign Number 5

Line 1 _____

Line 2 _____

**FLORIDA TRAIL REQUEST FORM
FOR WOODEN ROUTED TRAIL SIGNS
Florida Trail Association**

Sign Number 6

Line 1 _____

Line 2 _____

Sign Number 7

Line 1 _____

Line 2 _____

Sign Number 8

Line 1 _____

Line 2 _____

Sign Number 9

Line 1 _____

Line 2 _____

Sign Number 10

Line 1 _____

Line 2 _____

Prior to submitting request for signs, the section leader must have the approval and authorization from the land manager. Please describe and/or attach a copy of the trail map showing the location of where the signs are to be placed. All signage must be consistent with the Sign Plan as described in the *Trail Manual for the Florida Trail System*.

Please return your request to: Trail Resource Coordinator, Florida Trail Association, 5415 SW 13 Street, Gainesville, FL 32608-5037 or via FAX at (352) 378-4550 or via e-mail to buildit@floridatrail.org.

Revised 10/07

NOTICE TO HIKERS FORM
Florida Trail Association

Submitted by:

Name

Title Section Leader Trail Coordinator (check one)

Phone

Email

Changes:

Map Number/Name

Type of change: (Note: All permanent changes should be accompanied by a map change form as soon as possible.)

Permanent Effective Date:

Submitted "Map Change Form" Yes No (check one)

Temporary Effective Date: (Note: For temporary changes an ending date is **required**.)

Ending Date:

Use the space below to describe the changes or attach extra sheets.

(Do not write below this line)

Notice Number:

Verification Date: Verified By:

Website Submittal Date: Footprint Submittal Date:

Map Change Needed? Map Change Date:

Please return form to: Attn: Notice to Hikers, 5415 SW 13 St., Gainesville, FL 32608-5037;
FAX (352) 378-4550; fta@floridatrail.org *Revised 10/07*

MAP CHANGES FORM
Florida Trail Association

Person submitting changes:

Name

Title Section Leader Trail Coordinator (check one)

Phone

Email

Changes to map:

Map Number

Type of change Description Image (check one or both)

Please return forms to: Attn: Map Changes, 5415 SW 13 St., Gainesville, FL 32608-5037
FAX (352) 378-4550; buildit@floridatrail.org

Use the space below to describe the map changes or attach extra sheets. Please include the old map image and/or old map description and clearly indicate the updates/changes.

Revised 10/07

Florida Trail Association, Inc.

Activity Proposal

(Please print)

For publication in:
(Mark all that apply)

Footprint

Chapter Newsletter/Website

FTA Website

Date(s) of Activity: Begin Date _____

If multiple days:

End Date _____

For recurring activities: Recurring Month _____ Recurring Day(s) _____

Type of Activity:

Location:

Activity Region:

Panhandle

North

Central

South

Sponsoring Chapter:

Activity Description:

Public: Yes No Limit: _____ people / tents / canoes (circle one)

Rating (see ratings list below): Leisure Moderate Strenuous

Leader Name:

Address:

Phone: _____ e-mail: _____

Co-Leader Name:

Address:

Phone: _____ e-mail: _____

Please send forms to: Florida Trail Association, 5415 SW 13 St., Gainesville, FL 32608-5037

FAX (352) 378-4550; fta@floridatrail.org

**LIST OF REQUIRED
EQUIPMENT, TOOLS AND MATERIALS
FOR TRAIL MAINTENANCE**
Florida Trail Association

Trail workers must bring and wear the following on a development or maintenance hike. If the trail worker does not have the proper required equipment the Activity Leader must provide on a temporary basis the equipment from the Chapter inventory: (the letter or call responding to their inquiry about the hike should inform them).

- **USFS Approved Hardhat** – sunshade attachment is optional.
- **Eye Protection**
- **Work Gloves**
- **Ear Protection** – when working with power equipment rated at 85 dB or higher (i.e. chainsaws, brushcutters, etc.)
- **Sturdy, comfortable leather boots or shoes - NO OPEN-TOED SHOES OR SANDALS!!!**

Get permission of the work hike leader before bringing your own power tools. DO NOT BRING: alcoholic beverages or firearms.

Section Leaders/Activity Leaders should be sure the following are available:

- | | |
|--|---|
| - First Aid kit (including moleskin for blisters) | - Paint scraper |
| - Long-handled Loppers with extra anvil, screw, oil & wrench | - Orange engineering tape |
| - Clippers | - Maps and compass |
| - Rakes, Hoes | - File for sharpening tools |
| - Axes | - Hand saw, bow-type or folding |
| - Machete and/or Suwannee Sling | - Orange, blue, white & yellow paint (a neutral paint for cover up of old blazes) |
| - Paint kit w/needs | |
| - 1” brush and water for thinning & cleanup | |

Recommended items for all Trail workers:

- **Long-sleeved work shirt and pants** - to protect against thorny plants and sun burn. If you will be painting blazes, expect paint splatters on your clothes.
- **Water** - Two quarts are recommended.
- **Lunch, snacks** - Don't bring food that needs refrigeration.
- **Small backpack** - to carry your gear, water, and lunch while keeping your hands free.
- **Insect repellent** - to protect against mosquitoes, ticks, chiggers (redbugs), no-see-ums, etc.
- **Sunscreen** - as appropriate for your skin type.

Optional gear you may find useful includes **sunlasses, compass, hand lotion, and trash bags** for clean up of trail sections.

Workers are cautioned that there are dangers when working with sharp tools and rough vegetation. Machetes, saws, brush cutters, mowers, swing blades are particularly hazardous. DO NOT USE ANY TOOL OR EQUIPMENT THAT YOU ARE NOT TRAINED OR EXPERIENCED IN OPERATING. Request training from the work hike leader or a more experienced member. Be sure there is sufficient room between workers using tools. Eyes should be protected. Avoid over-exertion and dehydration.

Toll free: 1-877-HIKE-FLA
Local: 352-378-8823

FLORIDA TRAIL ASSOCIATION, INC.
ASSUMPTION OF RISK and SIGN IN SHEET

www.floridatrail.org
fta@floridatrail.org

Certain risks are inherent in any Florida Trail Association, Inc. (the "Association") activity. Each Association member, guest, or non-member participant agrees to accept personal responsibility for his or her safety, and the safety of minors accompanying such persons. The Association cannot ensure the safety of any participant on hikes or activities. In participating in Association activities, each such person agrees to hold harmless and free from blame the Activity Leader(s) and the Association, its officers, directors, and members, for any accident, injury, or illness which might be sustained from participating in hikes or other Association activities. **Neither the Association nor landowners are in any way liable for any injury or illness I might sustain while participating in an Association activity. I will and do hereby assume the above-mentioned risks and will hold Florida Trail Association, Inc., and the Activity Leader(s):**

 Name(s) of Activity Leader(s)

harmless from any and all liability and claims of every kind and nature whatsoever, which may arise from or in connection with my participation in those activities. I also agree that any photographs taken of me on this hike may be used to publicize the Florida Trail Association.

 Activity Date

 Activity Title

 Activity Location

I DO HEREBY CERTIFY BY MY SIGNATURE THAT I HAVE READ, DO UNDERSTAND, AND DO AGREE TO THE TERMS OF THIS DOCUMENT:

NOTE: Signature of parent/guardian is required if participant is under 18 years of age.

Printed Name of Participant	Signature of Participant	Address	Telephone & E-mail	MEMBER? (Y/N)
1)				
2)				
3)				
4)				
5)				
6)				
7)				

POST ACTIVITY REPORT

Florida Trail Association

Date(s) of Activity: _____

Type of Activity: _____

Location: _____

Activity Leader / Phone: _____

Co-Leader / Phone: _____

No. of Participants (attach Risk Assumption form): _____

Summary of Activity:

Include trail conditions, weather encountered, total mileage, etc. Use back of form or attachments if additional space is required.

Describe any extraordinary events or conditions encountered, such as extreme weather, lost hikers, or other emergencies or unexpected situations. Include names of involved persons (if applicable), action taken, and by whom. For injuries, give person's name, type of injury, and any treatment administered.

Activity Leader Signature: _____ *Date:* _____

Submit a copy to: Florida Trail Association, 5415 SW 13 St., Gainesville, FL 32608-5037

FAX (352) 378-4550; fta@floridatrail.org.

Revised 10/07

**FORM TO UPDATE THE
TRAIL MANUAL
FOR THE FLORIDA TRAIL SYSTEM**
Florida Trail Association

The trail manual will be reviewed periodically for necessary revisions. At the direction of the VP-Trails, the Chapter Trail Coordinators will review and submit any needed recommended changes using this form.

Date: _____

Page and Section of Trail Manual: _____

Please describe the suggested change below: _____

Submit form to VP-Trails: _____ Date: _____

Review by the Trails Committee: _____ Date: _____

Approved by VP-Trails: _____ Date: _____

Change completed / rejected: _____ Date: _____

Send To:
Construction Coordinator
buildit@floridatrail.org
325 John Knox Road, F-100
Tallahassee, FL 32303-4160
FAX 850-523-8578
Revised 10/07

**SECTION LEADER
NOMINATION FORM
Florida Trail Association**

(Complete nomination form and mail to the current VP of Trails)

Chapter Name: _____

Section Name and Map Number: _____

Nominee: Name: _____

Email: _____

Phone: _____

Replacing: Name: _____

Justification: _____

Recommended by: _____

Chapter Chair

_____ Date

_____ Trail Coordinator

_____ Date

Approved: _____

VP Trails

_____ Date

_____ President

_____ Date

**CHAPTER TRAIL COORDINATOR
NOMINATION FORM
Florida Trail Association**

(Complete nomination form and mail to the current VP of Trails)

Chapter Name: _____

Nominee: Name: _____

Email: _____

Phone: _____

Replacing: Name: _____

Justification: _____

Recommended by: _____
Chapter Chair

Date

Approved: _____
VP Trails

Date

President

Date