



UNPAVED TRAIL GUIDELINES



OFFICE OF GREENWAYS AND TRAILS



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1. OBJECTIVES & INTRODUCTION

Mission Statement: To promote new recreational spaces through the development and improvement of unpaved non-motorized trails to suit Florida's current and future recreational needs.

Optimal trails allow users to fully engage in their natural surroundings and be immersed in nature. Effective trail development must consider specific diverse elements, including varying distances, loop configurations, ecosystem representation, scenic viewpoints and graduated levels of difficulty. As professional trail developers, the objective is to optimize the user experience while minimizing impact to the surrounding elements.

In 1987, the Florida Legislature established the Florida Greenways and Trails System under Chapter 260, Florida Statutes. The intent of the Legislature was to improve the health and welfare of the people through the creation of recreational trails, encouraging horseback riding, hiking, bicycling, paddling and jogging. The Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) and the Office of Greenways and Trails (OGT) were mandated under section 260.016, Florida Statutes, to establish

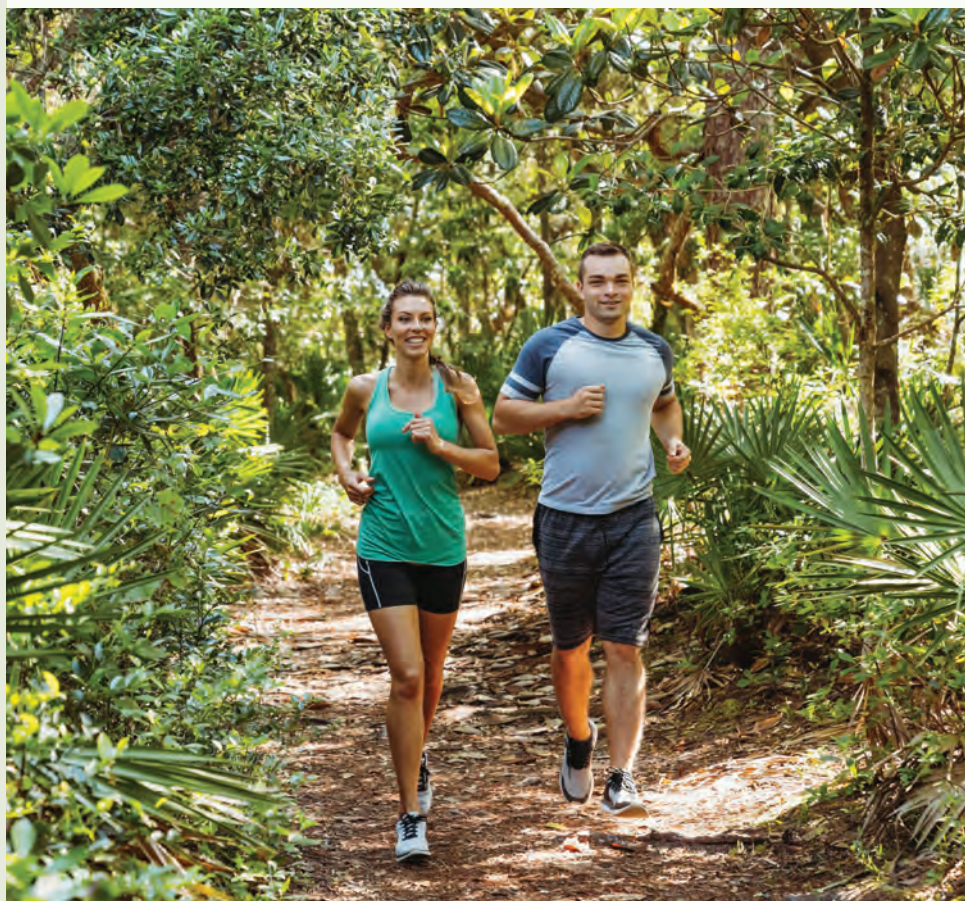
the Florida Greenways and Trails Council. This Council advises DRP in the execution of its powers and duties as defined in statute. The Council is comprised of representatives from various recreational user groups, private landowners, and local, state and federal governments. The Council serves as a central forum where trail users and providers collaborate to advance the development of a statewide network of trails.

The first Council meeting was held in November 1988. This Council recognized the necessity for a set of trail guidelines suitable for Florida's natural environment and created the first edition of trail development and maintenance recommendations. These protocols are designed to provide organizations with comprehensive guidance on the development or reconstruction of trails within Florida, while providing design strategies for unpaved hiking, cycling, equestrian and multi-use trails.

This Unpaved Trail Guidelines should be utilized in conjunction with a professional design and engineering firm. Reach out to the Office of Greenways and Trails for more information.

Trails offer opportunities to engage with Florida's diverse ecology and natural environments. Effective trail design must identify current uses and user demographics, while simultaneously forecasting future recreational demands.

Although design criteria may vary among state and federal organizations, these guidelines are intended to serve as a foundational resource for initiating trail development. Ideally, this document should be utilized in conjunction with a professional design and engineering firm. As a foundational document, this updated edition will undergo continuous refinement and implementation as opportunities emerge.





2. Trail Accessibility

Trails and their associated facilities must be designed with accessibility in mind. The development of trails that are accessible to a diverse range of users with varying abilities is essential.

Physical, environmental and design constraints may preclude a trail from achieving full accessibility. For example, a moderate or advanced narrow single track mountain bike trail may not be suitable for certain types of access, whereas a wider (5-foot) multi-use trail would be more suitable for providing alternative forms of access. Providing current information on trail elements and conditions can aid in assessing a trail's suitability for a user's skill level. This information should be displayed using multiple platforms, including websites, signage and visitor centers.

The experience of navigating unpaved trails should be positive and inclusive for all individuals, regardless of physical limitations. Using accessibility devices such as all-terrain wheelchairs or assistive listening systems is encouraged to foster universal inclusion. Clear communication

regarding the availability of these devices and any reservation requirements is advisable. Furthermore, policies pertaining to service animals warrant consideration. (Refer to Section 5: Wayfinding for related signage guidelines).

To begin redesigning an existing trail to provide greater access, trail design should consider budgetary constraints, legal requirements and the natural environment.

Numerous laws, regulations and statutes govern the establishment of such facilities; therefore, this document should not serve as the exclusive reference for trail design. Additional resources related to the development of outdoor recreation facilities are available. Please refer to Title II of the Americans with Disabilities Act (ADA), current Florida Building Code and Access Board Outdoor Guidelines. Additional manuals are provided by the U.S. Forest Service, including Outdoor Recreation Accessibility Guidelines (FSORAG) and Trail Accessibility Guidelines (FSTAG). For the most recent copies of manuals related to these guidelines, please contact the entities listed above.



3. Pre-Construction Considerations

The development of a well-designed trail begins long before construction plans are finalized. Environmental factors, community requirements, cost feasibility and other essential precautions must be considered.

Aesthetics – To enhance user engagement, routes should be designed to stimulate multiple senses, incorporating not only scenic vistas but also auditory elements (e.g., streams, waterfalls), smells (e.g., pine, ferns, damp earth) and physical features (e.g., vegetation, rock formations, water).

Archaeological/Historical Resources – Trail designs must minimize or entirely avoid impacts to archaeological and historical sites. For additional information, consult the Florida Department of State's Division of Historical Resources.

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Bridges – Where necessary, bridges, walkways and other crossing structures should be provided, incorporating appropriate railings and supplemental safety measures.

Community Involvement – Community engagement is critical for all trail projects, including pre-construction phases and ongoing management and support post-construction. Active community participation in trail planning, construction and maintenance is necessary in trail development. Alliances between local trail user groups should be established to optimize resource utilization and collaborative efforts. Community needs assessments should be conducted, and leadership support for trail development secured.

Consultation with Authorities – Consultation with federal, state, local and other land management authorities is necessary to determine applicable regulations. Capacity should also be considered.

Contaminated Sites – Trails must not be situated on identified contaminated sites. Alternatively, sites should be remediated as necessary to ensure a safe and healthy trail environment. An environmental assessment can facilitate the determination of current or historical site contamination.

Degree of Difficulty – The degree of difficulty

for each trail segment must be established and difficulty ratings should be prominently displayed at trailheads.

Electronic Communication – A majority of trail users carry a mobile device with access to trail information and even user-performance metrics. Trail development can benefit from incorporating a variety of electronic communication options along the trail including:

- **Mobile Websites or Applications** – Utilizing mobile devices and the internet can convey information without the need for signs or other physical changes in the trail. Trail design should incorporate a discussion on what trail information is accessible on a mobile device.
- **Quick Response (QR) Codes** – Using QR codes allows users to scan a barcode and electronically receive information about their surroundings.
- **User Choice** – Some trail users prefer not to utilize technology on trails. Consideration should be given to both users that decide to use technology and those who decide not to.

Monitoring – Monitoring of trails, their facilities and adjacent natural resources are critical components of trail design and planning. The objective is to maintain the trail and protect

Utilizing public land and rights-of-ways can minimize project cost. Verification of land ownership and securing appropriate easements, use permits, licenses, and contractual agreements are essential.

its environment. Additionally, periodic physical inspections of trailheads and the entire trail length are necessary. Trailheads, facilities and identified problem areas along trails should be photographed and/or documented to record changes. Infrastructure, such as bridges, must be inspected by qualified personnel.

Public Land Use – Utilizing public land and rights-of-way can minimize project costs. Verification of land ownership and securing appropriate easements, use permits, licenses and contractual agreements are essential.

Rural/Primitive Trails – These trails typically experience low user volumes, feature minimal amenities and are generally situated remotely from populated areas.

Trail Linkages – Trail location and routing should facilitate connectivity with other statewide trail systems. Efforts should focus on establishing local linkages to statewide trail systems to ensure continuity and accommodate long-distance users.





Waste Receptacles – Waste receptacles should be provided at primary and secondary trailheads, picnic areas and campsites. All trail corridors must adhere to a “pack it in, pack it out” policy. All waste receptacles should be designed to prevent wildlife access to disposed trash to mitigate potential behavioral alterations in animals.

Urban/High Volume Trails – Urban/high volume trails should establish convenient and safe connections to residential areas, educational institutions, activity centers, parks, recreational zones and cultural/historical points of interest. Where practicable, trails should be utilized as alternative transportation routes to motorized use, promoting local commuting, leisure and tourism. Urban/high volume trails must accommodate all appropriate user types and comply with ADA guidelines.

Visibility – Clear visibility, corresponding with user travel speed, must be ensured, particularly at trail intersections, corners and curves.

Cost Efficiency

Materials and Equipment – When trail construction is necessary, the utilization of locally sourced or salvaged materials and equipment is recommended where feasible.

Rehabilitation of Existing Trails – Rehabilitate

or upgrade existing trails when possible as an ecological and economical alternative to constructing new trails. Encourage the use of abandoned railroads, easements and other rights-of-way.

Recycled Materials – Recycled materials should be incorporated wherever suitable.

Life Cycle Costs – Life cycle costs must be a primary consideration in the selection and application of materials for trail construction.

Environmental and Wildlife Protections

Access to Nature – Fostering a healthy connection between humans and nature cultivates an understanding of how coexistence and environmental stewardship contribute to human and ecological sustainability. Trails serve as a vital conduit for exposing an increasingly urbanized population to natural environments. Appropriate interpretation and educational initiatives, integrated with trail use, help trail users understand the importance of environmental protection.

Air Quality and Noise – Where feasible, trail locations should avoid areas with significant air and noise pollution resulting from human activity.

To mitigate erosion on existing trails resulting from inadequate design, water bars or breaks (oriented at angles other than 90 degrees to the trail), graded dips and out slope techniques should be employed.

Diversity of Natural Experiences – Trails should be situated in areas exhibiting diverse habitats, ecosystems, landscapes, natural scenic beauty and proximity to water bodies, whenever practicable. This diversity should offer a broad range of opportunities and varied user experiences.

Drainage and Topography – Trail alignments should conform to existing topography and minimize impacts on natural drainage patterns. To mitigate erosion on existing trails resulting from inadequate design, water bars or breaks (oriented at angles other than 90 degrees to the trail), graded dips and out slope techniques should be employed. Drainage ditches or culverts may be required for specific crossings. Native vegetation should be utilized for erosion prevention wherever appropriate and feasible. Trail design should minimize cut and fill operations, leveraging varied topography that does not impede travel and preserve natural drainage where feasible.



Photo Credits: Wes Ebo



Photo Credits: Wes Eubank

Environmental Impacts and Sensitive

Areas – Trail designers must acknowledge that all trails exert an impact on the landscape, including vegetation, waterways and wildlife. Trails can disrupt animal movement pathways to food, water or shelter. Trails may increase predator access to certain areas. User activity may disturb wildlife, prompting displacement from the trail. These effects can extend significantly beyond the immediate trail corridor, with the magnitude correlating to trail length and density. Trail designers should consult with wildlife biologists to optimize trail routing, thereby understanding and minimizing or negating ecological impacts. Trails should not be sited within ecotones to prevent habitat fragmentation. Where possible and appropriate, abandoned roads or other previously disturbed areas should be adapted for trail use.

Environmental, Social and Economic

Impact Studies – Trails should be designed to ensure environmental compatibility and to provide economic and social benefits to the local community. Impact studies may be legally mandated or necessary when the positive or negative effects of a trail on other public facilities, activities and transportation are not readily discernible.

Location and Route – The chosen location and route of a trail significantly influence the user experience. Users of urban trails will encounter a substantially different experience compared to those utilizing rural trails. The trail route can diversify the user's experience. A meandering path can enhance user interest by promoting observation of varied viewpoints. Trail location and route directly influence the ambiance and perceived level of difficulty. Additionally, the design and implementation team must evaluate cost efficiencies during the planning of trail location and routing.

Viewsheds – Viewsheds offer trail users the opportunity to observe and contemplate specific locations. Typical viewsheds include lakes, natural landscapes, urban areas or other significant sites. Interpretive signage may be installed at these locations to enhance user understanding of the area.

Natural Buffers – Native vegetation should be preserved or replanted to establish natural buffers between trails and surrounding areas, thereby enhancing the user experience.

Prescribed Burns – Prescribed burning is an essential practice for maintaining the health of fire-dependent natural communities. Trails should be

Waste receptacles can attract wildlife. These issues can be mitigated through appropriate facility placement, the deployment of wildlife-resistant waste receptacles, and the promotion of wildlife-conscious camping practices.

designed and managed in collaboration with land managers to avoid interference with prescribed burning practices and to provide users with interpretive information regarding the ecological role of fire.

Sustainability – Trail adaptability must be integrated into design to ensure resilience and ease of repair during natural disasters and ecosystem shifts.

Wildlife Behavior Impacts – Trail infrastructure, including waste receptacles and campsites, can attract wildlife, potentially leading to human-wildlife conflicts. These issues can be mitigated through appropriate facility placement, the deployment of wildlife-resistant waste receptacles and the promotion of wildlife-conscious camping practices.





4. Trail Construction

Hiking Trails

Hiking trails can be categorized into three general usage classifications: Low, Medium and High. Hiking trails with projected low usage should maintain minimal widths, particularly in sensitive, natural and rural environments. Medium and high-volume trails require wider and more stable designs to extend trail longevity. High-volume usage necessitates distinct trail designs, potentially incorporating paved and/or natural surface trails through parks, neighborhoods or activity centers. The subsequent trail design specifications are presented as guidelines.

Tread Width

- Low volume use.....1 to 2 feet
- Medium volume use.....2 to 5 feet
- High volume use.....over 5 feet

Horizontal Clearance – A minimum of 1 foot horizontal clearance must be maintained on each side of the tread. Supplementary clearance should be provided in hazardous zones (e.g., road crossings, steep drop-offs, tripping hazards).

Vertical Clearance – A minimum vertical clearance of 8 feet is required.

Grades

- Desirable grade 0% to 10%
- Maximum grade for extended slope.....10%
- Maximum grade for shorter slope.....15%
- Steps/water bars will be needed.....>15%
- Ramps to bridge/boardwalks8%

Drainage – Unpaved trails should incorporate a cross-slope or crown of 2% to 5% per foot, where necessary, to ensure tread integrity.

Surfaces – Unimproved, unpaved surfaces comprise natural materials such as indigenous soil, leaf litter, pine straw, mowed grass and wood chips. Improved, unpaved surfaces include gravel, compacted limestone, soil stabilizers, crushed shell and graded road base. The selection of surface material should account for location, cost, anticipated user volume and user type.

Hiking Trail Volume Usage and Tread Width		
		
Low Volume Use	Medium Volume Use	High Volume Use
Recommended Tread Width: 1 to 2 Feet	Recommended Tread Width: 2 to 5 Feet	Recommended Tread Width: Over 5 Feet

Guidelines for trails exclusively designed for mountain biking may incorporate heightened challenge and playful elements compared to trails open to diverse user types.

Length of Hike

- Short hike.....1 to 3 miles
- Half-day to one day hike.....3 to 9 miles
- Overnight hike.....over 9 miles

Off-road Cycling Trails

These guidelines exclusively pertain to unpaved bicycle trails. For details concerning the construction of paved recreational trails, contact the Florida Department of Transportation (FDOT).

The objectives for constructing an off-road cycling trail include ensuring durability, sustainability and environmental compatibility, while simultaneously optimizing the user experience for enjoyment and maintaining the intended level of challenge. As per the publication “Guidelines for a Quality Trail Experience” (refer to bibliography), factors critical to all trail users encompass setting/nature, singletrack, exercise, loops and connectivity and variety.





Factors more specific to mountain biking include play, technical challenge, skills progression and trail rhythm. Guidelines for trails exclusively designed for mountain biking may incorporate heightened challenge and playful elements compared to trails open to diverse user types. Consistent with all trail development, maintenance and evaluation, these features must be undertaken in conjunction with land managers, trail users and trail professionals.

Tread Width – A minimum tread width of 18 inches is required.

Horizontal Clearance – A minimum of 1 foot horizontal clearance must be maintained on each side of the tread. Supplementary clearance should be provided in hazardous zones (e.g., road crossings, steep drop-offs).

Vertical Clearance – A minimum vertical clearance of 8 feet is required, with exceptions for occasional natural obstructions that enhance the experience without impeding passage.

Grades – Grades may range from 0% to 50%, with approaches to intersections limited to 0% to 5%.

Drainage – Unpaved trails should incorporate a cross-slope or crown of 2% to 5% per foot, where necessary, to ensure tread integrity.

Surfaces – Unimproved, unpaved surfaces comprise natural materials such as indigenous soil, leaf litter, pine straw, mowed grass and wood

chips. Improved, unpaved surfaces include gravel, compacted limestone, soil stabilizers, clay, crushed shell and graded road base. The selection of surface material should account for location, cost, anticipated user volume and user type. Soft sandy soil is not recommended for extended bicycle trails.

Length of Ride

- Short ride..... 1 to 10 miles
- Medium ride..... 10 to 40 miles
- Long ride..... over 40 miles

Design Speed – Cyclist travel speed is contingent upon several factors, including bicycle type and condition, ride purpose, surface condition, trail location, wind speed and direction and rider condition. Bicycle trails should be designed to accommodate speeds appropriate for the specific terrain and topography.

Turning Radius – Urban/high volume cycling trails should incorporate a minimum turning radius of 20 feet. Trail curvature design is dependent upon the average cyclist speed; increased speed on downhill slopes necessitates a longer radius of curvature. Banking and widening the tread on curves enhance safety. Wilderness bicycle trails should feature a turning radius between 2 and 6 feet. Turning radii may be constrained by natural obstructions (e.g., trees, water, rocks) or environmentally sensitive areas.

Trail Features: Anchors



Anchor Functions

- Natural obstacles can be incorporated to create technically challenging trails.
- The two large trees framing the rider function as natural anchors. In trail design, an anchor is any immovable object that dictates the trail's path.
- Natural anchors can force the rider into a specified direction, preventing trail widening over time.

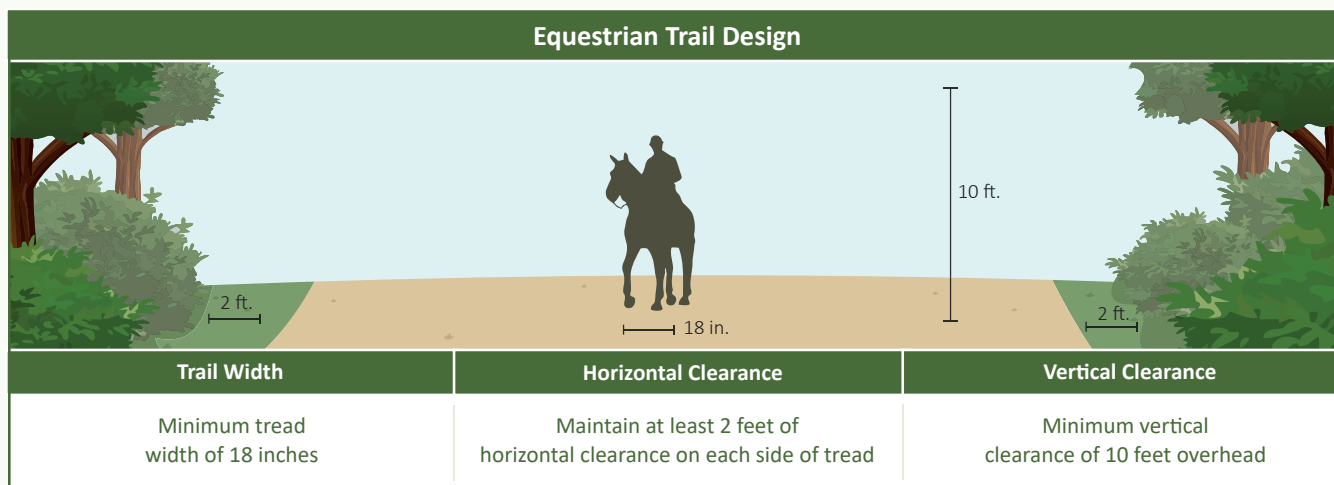
Challenge Features – Natural obstacles can be incorporated to create technically challenging trails. Such features may include rocks, roots, logs, jumps and banked curves. These elements can be integrated into the primary trail or offered as optional side features, thereby accommodating diverse skill levels. For instance, the Munson Hills Trail in North Florida features an optional section of hardened red clay humps and tilted berms, appealing to riders of various skill sets as beginners can choose to move at a slower pace.

Corrals and Anchors – Corrals and anchors are elements positioned along trail edges to manage trail widening, regulate speed and deter shortcuts. Given Florida's infrequent natural occurrence of large rocks and boulders, living trees and logs can serve this purpose. On certain mountain bike trails, closely spaced trees are utilized to delineate

the path, thereby preventing unauthorized access by motorcycles and ATVs.

Varied Terrain – Florida's diverse habitats, often co-occurring within a single area, can significantly enhance the trail experience. Users may transition from open environments to dense forests or from flat terrain to hilly topographies. Certain environments inherently foster a greater sense of remoteness.

Rating a Trail – The International Mountain Bike Association (IMBA) employs a trail difficulty rating system, ranging from easiest (white circle) to extremely difficult (double black diamond) (Refer to Appendix). While trail length is not a criterion, it should be clearly posted on signage and in literature alongside the difficulty rating. Trail difficulty assessment must be conducted in consultation with trail professionals and users.



Factors for consideration include tread width, tread surface, trail grade, natural obstacles and technical features. In certain flat terrains, cost can be a prohibitive factor in achieving higher difficulty ratings.

Equestrian Trails

Equestrian trails typically feature natural, unpaved surfaces, designed for single-file horse and rider travel to provide a “backwoods experience” and foster proximity to nature. Sites proposed for equestrian trails should provide access to sufficient land to develop or connect to a minimum of five miles of trail. Horse-drawn wagons or carriages are increasing in popularity and typically utilize jeep or two-lane dirt roads where bridge access for crossing creeks and streams is available. Consideration should be given to identifying appropriate road systems on public lands capable of accommodating “driving trails.”

Tread Width – A minimum tread width of 18 inches is required.

Horizontal Clearance – Two feet of horizontal clearance must be maintained on each side of the tread width. Supplementary clearance should be provided in hazardous zones (e.g., road crossings, steep drop-offs, tripping hazards).

Vertical Clearance – A minimum vertical

clearance of 10 feet overhead is required.

Grades

- Desirable grade.....0% to 10%
- Maximum grade for extended slope.....18%
- Maximum grade for shorter slope.....25%

Drainage – Unpaved trails should incorporate a cross-slope or crown of 2% to 5% per foot, where necessary, to ensure tread integrity.

Surfaces – Unimproved, unpaved surfaces comprise natural materials such as indigenous soil, leaf litter, pine straw, mowed grass and wood chips. Improved, unpaved surfaces include compacted limestone, soil stabilizers and graded road base. The selection of surface material should account for location, cost, anticipated user volume and user type. Soft sandy soils and gravel are not recommended for extended equestrian trails.

Length of Ride

- Short to half-day.....0 to 16 miles
- Full day.....17 to 32 miles
- Overnight trip..... over 32 miles

Water – Access to water should be provided approximately every 5 to 10 miles along the trail.



Unpaved Multi-Use Trails

For the scope of this document, multi-use trails are defined as trail corridors designed for multiple user groups and types.

The environmental sensitivity of the area, permitted use types and thresholds and other pertinent factors must be considered during multi-use trail design.

Multi-use trails are often more suitable in sensitive habitats than multiple single-use trails. As user volume increases, educational initiatives and management efforts will be necessary to sustain harmonious use.

Unpaved multi-use trails must be designed to accommodate the maximum width and height requirements of all permitted user types. For instance, if equestrian use is allowed, the trail must be routed for equestrian safety and designed to their specific width and height needs.

Tread Width – An optimum tread width of five feet minimum is recommended. Other widths should be determined by the trail's carrying capacity.

Horizontal Clearance – A minimum of 1 foot horizontal clearance must be maintained on each side of the tread.

Vertical Clearance – A minimum vertical clearance of 10 feet is required.

Grades

- Desirable grade.....0% to 5%
- Maximum grade for extended slopes 10%
- Maximum grade for shorter slopes 15%

Drainage – Unpaved trails should incorporate a cross-slope or crown of 2% to 5% per foot, where necessary, to ensure tread integrity.

Surfaces – Unimproved, unpaved surfaces comprise natural materials such as indigenous soil, leaf litter, pine straw, mowed grass and wood chips. Improved, unpaved surfaces include compacted limestone, soil stabilizers and graded road base. The selection of surface material should account for location, cost, anticipated user volume and user type. Soft sandy soil and gravel are not recommended for extended multi-use trails.

Trip Length – Where feasible, trail design should incorporate multiple trip lengths to accommodate users with varying abilities. If multiple distances are impractical on a single trail, design considerations should focus on location and routing, as detailed in other sections of this document.

For transportation-related crossings, consult the Florida Department of Transportation's Design Resources, accessible at <https://www.fdot.gov/design/resources>.

Trail Crossings

Trail crossings are an increasingly critical consideration for various trail types, particularly as Florida's population continues to expand. Trails must respect private property boundaries, assess alignment costs and prioritize user safety. These principles collectively inform strategies for closing trail gaps posed by physical barriers such as roads, railroads, waterways or other obstructions. For transportation-related crossings, including roadways and railroads, consult the Florida Department of Transportation's Design Resources, accessible at <https://www.fdot.gov/design/resources>.

At-Grade Crossings

At-grade crossings are defined as instances where a trail crosses a road or railway without the use of a bridge or tunnel. When a trail necessitates crossing transportation infrastructure or utilities, thorough attention must be given to ensure user safety and respect for private property. The





selection of a safe crossing may surpass scenic routes or necessitate an alternative trail alignment. Appropriate signage should be installed to alert trail users and motorized traffic to the crossing and any potential dangers or hazards. Clear visibility at all crossings is mandatory. Sufficient stopping distance must be provided for both motorists and trail users. A trail's width should not be reduced upon approach to a crossing. The trail alignment should be straight and cross roads or rails at a right angle. If a 90-degree crossing is not feasible, the trail should be widened to enable users to cross at an angle as close to 90 degrees as practicable.

Equestrian trail crossings at paved roads and railroad tracks should provide adequate clear space on both sides of the road or track to permit a reasonable number of riders to assemble and cross collectively.

Above-Grade Crossings

The construction of a trail bridge over a transportation facility, waterway or other land feature impeding trail connectivity often increases project costs. This construction cost should be evaluated against the expense of identifying an alternative route to close the trail gap. Bridges must be constructed above the seasonal high-water mark. Bridges and boardwalks can be deployed where minor connections are necessary, such as across waterways or in topographically challenging areas.

Water Crossings

When crossing over paddling trails, a minimum of 4 feet of vertical clearance must be provided under a bridge at the seasonal high-water mark. Bridges with an elevation exceeding 36 inches above grade or traversing swift-moving water shall incorporate railings with a minimum height of 42 inches. Equestrians may utilize a water ford for crossing waterways less than 30 inches deep, provided the approach is gentle and the stream bottom is firm. Fording areas where erosion and resource degradation are probable should be avoided. Water level indicators are mandatory at all fords.

Fence, Gate and Barricade Crossings

Trails frequently intersect property boundaries. Where a trail encounters a fence that must remain intact, a fence crossing or stepladder crossing (stile) is required.

Fence and Gate – If a permanent pedestrian opening cannot be negotiated through a fenced area, a gate should be installed, accompanied by signage instructing trail users to close the gate after passage or providing contact information for locked access. Alternatively, a self-closing hinge mechanism may be employed to ensure automatic gate closure. Fences delineating livestock areas can be fitted with a pedestrian baffle or a stile.

Barricades are typically deployed to restrict motorized vehicle access to trails or to compartmentalize distinct trail uses.

Gates requiring manual operation should be accompanied by signage reminding users of their responsibility to close gates after use or be equipped with an automatic closing mechanism. However, this scenario should be avoided whenever feasible. Barricades should be installed to deter unauthorized access to trails. They must permit unrestricted access for appropriate trail users, and controlled access for emergencies, maintenance and patrol vehicles.

Barricades – Barricades are typically deployed to restrict motorized vehicle access to trails or to compartmentalize distinct trail uses. Barricades should be accompanied by explanatory signage to clarify expectations, thereby facilitating clear intentions and ease of enforcement. Barricades must permit unrestricted access for pedestrians, equestrians and cyclists, in addition to controlled access for emergencies, maintenance and patrol





vehicles. Wooden or reinforced concrete posts should measure 24 to 30 inches in height, be spaced 4 to 5 feet apart and be marked with a readily visible reflective or painted surface.

Seasonal Use

Trail designers and managers must give special consideration to Florida's tropical climate and user demographic, particularly tourists during cooler months. Florida's moderate climate facilitates nearly year-round trail utilization. Consequently, trail design and management considerations should encompass hunting seasons, potential flooding and other events that could necessitate trail closure. Hunting does not inherently necessitate trail closure unless deemed necessary by the managing authority.

Hunting is a highly popular recreational activity in Florida, and recreational trails frequently cross areas where hunting is legally permitted during specific seasons. Signage and online platforms must clearly indicate hunting season dates. Hunting season calendars should be provided at trailheads, entrance kiosks and on official websites. All users of public lands are advised

to implement appropriate safety precautions to prevent hunting incidents. The wearing of hunter orange is encouraged when hiking during hunting seasons. When designing backcountry trails on lands experiencing seasonal hunting, collaboration with land managers is essential to ensure trails are accurately depicted on hunt maps.