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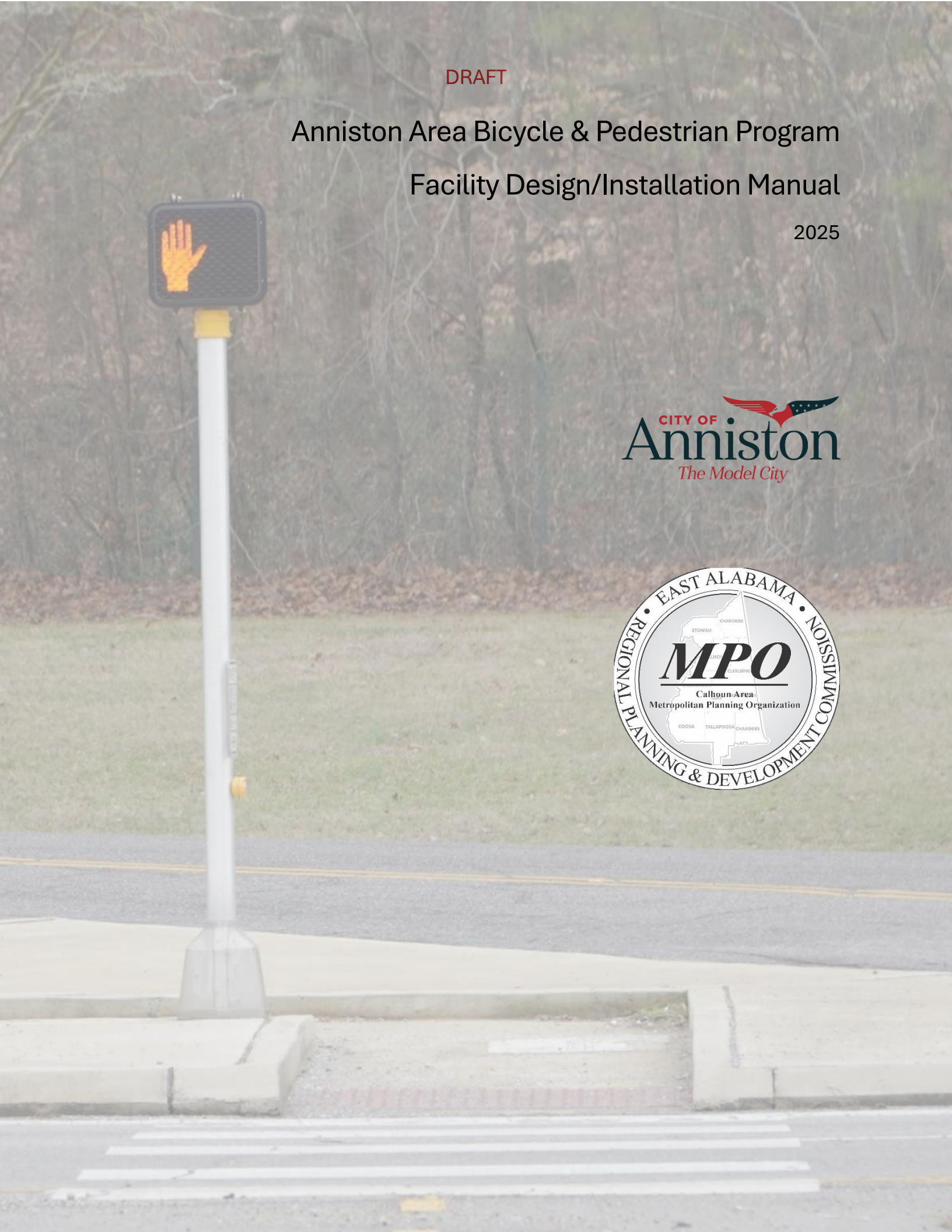
Anniston Area Bicycle & Pedestrian Program

Facility Design/Installation Manual

2025



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Tables

The previous version of this Manual was completed in 2021 by J.R. Wilburn & Associates. Due to the nature of this effort as an update to the Manual, much of the previous version's content remained in place as produced by J.R. Wilburn & Associates. Sain Associates updated, amended, and added content where necessary for the City of Anniston to produce.

Glossary of Terms

Bicycle – A pedal-powered means of transport, including three and four-wheeled human-powered vehicles, but not children's tricycles. Some States treat bicycles as vehicles subject to motor vehicle laws.

Bicycle Boulevard – A street segment or series of connected segments modified to accommodate through bicycle traffic while limiting through motor vehicle traffic.

Bicycle Facilities – A general term denoting improvements and provision made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically designated for bicycle use.

Bicycle Lane or Bike Lane – A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

Bicycle Level of Service (BLOS) – A model used to estimate bicyclists' average perception of the quality of service of a section of roadway between two intersections.

Bicycle Locker or Bike Locker – A secure, lockable container used for individual bicycle storage.

Bicycle Network – A system of bikeways designated by the jurisdiction having authority. This system may include bike lanes, bicycle routes, shared-use paths, and other identifiable bicycle facilities.

Bicycle Rack or Bike Rack – A stationary fixture to which a bicycle can be securely attached.

Bicycle Route or Bike Route – A roadway or bikeway designated by the jurisdiction having authority, either with a unique route designation or with Bike route signs along which bicycle guide signs may provide directions and distance information. Signs that provide directions, distance, and destination information for bicyclists do not necessarily establish a bicycle route.

Bicycle Path or Bike Path – See Shared Use Path

Bicycle Route System – A system of bikeways designated by the jurisdiction having authority with appropriate directional and informational route markers, with or without specific bicycle route numbers. Bike routes should establish a continuous routing but may be a combination or any and all types of bikeways.

Bicycle Wheel Channel – A channel installed along the side of a stairway to facilitate walking a bicycle up or down the stairs.

Bikeway – A generic term for any road, street, path or way which in some manner specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Highway – A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Independent Right-of-Way – A general term denoting right-of-way outside the boundaries of a conventional highway.

Glossary of Terms (continued)

Rail-Trail – A shared use path, ether paved or unpaved, built within the right-of-way of an existing or former railroad.

Rail with Trail – A shared use path, either paved or unpaved, built within the right-of-way of an active railroad.

Right-of-Way – A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Right-of-Way (Assignment) – The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian.

Roadway – The portion of the highway, including shoulders, intended for vehicular use.

Recumbent Bicycle – A bicycle with pedals at roughly the same level as the seat where the operator is seated in a reclined position with their back supported.

Roundabout – A type of circular intersection that provides yield control to all entering vehicles and features channelized approaches and geometry to encourage reduced travel speeds through the circular roadway.

Rumble Strips – A textured or grooved pavement sometimes used on or along shoulders or highways to alert motorists who stray onto the shoulder. The pavement treatment is designed to create noise and vibration to alert motorists of a need to change their path or speed. Longitudinal rumble strips are sometimes used on or along shoulders or center lines of highways. Transverse rumble strips are placed on the roadway surface in the travel land, perpendicular to the direction of travel.

Shared Lane – A lane of traveled way that is open to both bicycle and motor vehicle travel.

Shared-Lane Marking – A pavement marking symbol that indicates an appropriate bicycle positioning in a shared lane.

Shared Roadway – A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.

Shared Use Path – A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-or-way. Shared-use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. Most shared-use paths are designed for two-way travel.

Shoulder – The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub-base, base and surface courses.

Sidewalk – The portion of a street or highway right-or-way, beyond the curb edge of roadway pavement, designed for preferential or exclusive use by pedestrians.

Sidepath – A shared use path located immediately adjacent and parallel to a roadway.

Glossary of Terms (continued)

Signed Shared Roadway (Signed Bike Route) – A shared roadway which has been designated by signing as a preferred route for bicycle use.

Traveled Way – The portion of the roadway intended for the movement of vehicles, exclusive of shoulders and any bike lane, immediately inside the shoulder.

Unpaved Path – Paths not surfaced with a hard, durable surface such as asphalt or Portland cement concrete.

List of Acronyms

AASHTO – American Association of State Highway and Transportation Officials

ACTS – Areawide Community Transportation System

ADA – Americans with Disabilities Act

ALDOT – Alabama Department of Transportation

FHWA – Federal Highway Administration

MMTC – Multi-Modal Transportation Center

MPO – Metropolitan Planning Organization

MUTCD – Manual on Uniform Traffic Control Devices

NACTO – National Association of City Transportation Officials

PROWAG – Public Right-of-Way Accessibility Guidelines

ROW – Right-of-way

USDOT – United States Department of Transportation

1 Introduction

The purpose of this manual is to provide planning and engineering guidance to the City of Anniston, Alabama, as it proceeds to develop the bicycle and pedestrian facilities contained in its adopted *Bicycle and Pedestrian Program*. The design criteria presented here will apply to the physical infrastructure components over which pedestrians, bicyclists, and other users will operate (sidewalks, shared use paths, bike lanes, paved shoulders, shared use roadways). The criteria incorporate and are consistent with the most current guidance and recommendations presented in recognized professional standards manuals in use for the development of plans for bicycle facilities:

- American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Pedestrian Facilities, 2021, Second Edition*
- American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities, 2024, Fifth Edition*
- National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide, 2014, Second Edition*
- Federal Highway Administration (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD), 2023, Eleventh Edition*

This manual has been tailored to address local needs for improvements that are most applicable to Anniston based on input from local officials and the following plans and/or initiatives:

- Anniston Area Bicycle and Pedestrian Program Implementation Plan (2013, 2021 Update)
- Calhoun Area MPO Bicycle and Pedestrian Plan (2012, 2019 Update)
- Downtown Anniston revitalization efforts
- Coldwater Mountain Bike Complex development
- Providing connections to the Areawide Community Transportation System (ACTS) fixed-route transit system

Construction standards for implementing bicycle facilities will follow applicable construction specifications of the State of Alabama and the City of Anniston.

This document serves as a flexible reference that can be amended based on practical considerations observed during the implementation of projects, as well as revisions or additions to the overall MPO work program.

This document was reviewed and updated in 2025 to ensure that the recommended practices for bicycle facility treatments are consistent with best practices and with the manuals referenced above.

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2 Pedestrian Facilities

2.1 Pedestrian Facility Users

Many resources outline pedestrian profiles and design guidance, but the overarching legislation concerning pedestrian facility users is the Americans with Disabilities Act (ADA). ADA established the United States Access Board, who oversees the development of ADA guidance. The most recent document is the *Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way* (PROWAG) released in 2011. The General Services Administration and the USDOT adopted PROWAG as part of the ADA standards. Effective January 17, 2025, any new construction or altered facilities require adherence to PROWAG.

This Manual is not intended to be comprehensive. Specific guidance regarding all aspects pedestrian facilities can be found in the following documents:

- Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Ed. (AASHTO, 2021)
- A Policy on Geometric Design of Highways and Streets, 7th Ed. (AASHTO, 2018)
- Manual on Uniform Traffic Control Devices, 11th Ed. (USDOT, 2023)

2.2 Sidewalks

Description

Sidewalks define an exclusive space for pedestrians to travel. They are designed to create separation between the pedestrian and other modes of transportation. Sidewalks are most commonly found adjacent to the edge of pavement for the traveled way or parking lanes. The guidance found in the AASHTO *Guide for the Design of Pedestrian Facilities* (2021) represents a standard industry resource for sidewalks.

Figure 2-1 illustrates the various zones of a sidewalk, including the pedestrian through zone, the frontage zone, and the furnishing zone.

Design Elements

Where sidewalks exist, the following sidewalk widths are recommended:

- Traditional Sidewalk—5 feet minimum
- Adjacent to curb face, street edge, or longitudinal joint—5 feet minimum, 6 feet recommended

A buffer zone between the edge of pavement and a sidewalk is desirable for sidewalks parallel to streets. Where sidewalks exist, the following sidewalk buffer zones are recommended:

- Adjacent to roadway edge of pavement or back of curb—4 feet recommended
- Adjacent to guardrail, fence, or other structure—2 feet recommended

Where a buffer zone is not feasible, a wider sidewalk is recommended.

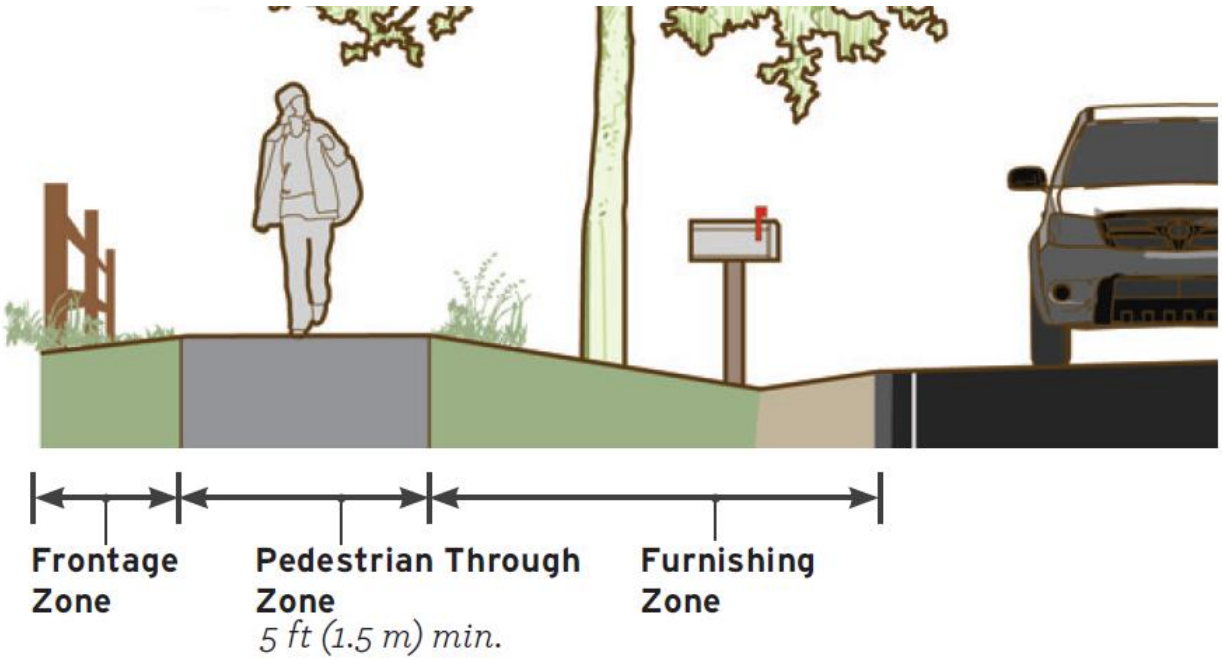

Figure 2-1: Example of Sidewalk Zones
Source: FHWA Small Town and Rural Multimodal Networks

Signing

Regulatory, warning and guide signs and plaques for sidewalks, as well as their proper placement, follow the standards contained in the MUTCD.

According to Alabama state law, motorists must yield to pedestrians in marked crosswalks. The Pedestrian Warning (W11-2) sign serves as a warning sign that pedestrian activity and/or a crosswalk should be expected. The Turning Vehicles Yield to Pedestrians (R10-15) sign serves as an indicator that a crosswalk on an intersecting roadway may have frequent pedestrian activity. Both signs are shown in **Figure 2-2**.

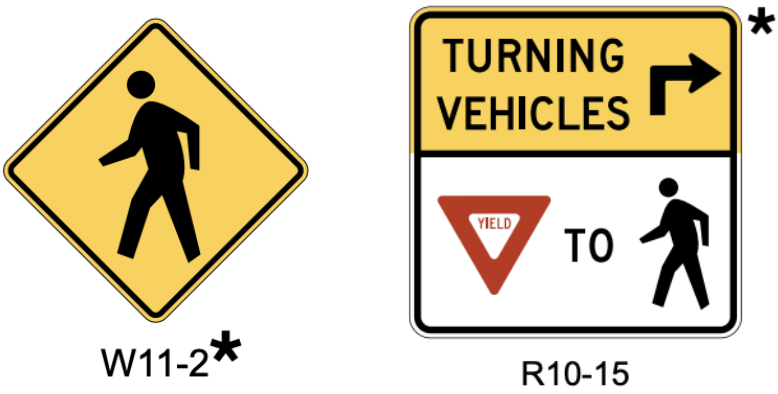

Figure 2-2: Examples of Common Pedestrian Signage
Source: FHWA, MUTCD, 2023

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3 Bicycle Facilities

3.1 Bicycle Facility Users

Bicycle users can vary in confidence levels and ability. Roger Geller of the City of Portland, Oregon, suggests that cyclists fall into one of four typologies: strong and fearless, enthused and confident, interested but concerned, and no way no how. These rider typologies have various appetites for cycling on bicycle facilities in any community.

This Manual is not intended to be comprehensive. Specific guidance regarding all aspects of bicycle users and facilities can be found in the following documents:

- Guide for the Development of Bicycle Facilities, 5th Ed. (AASHTO, 2024)
- A Policy on Geometric Design of Highways and Streets, 7th Ed. (AASHTO, 2018)
- Manual on Uniform Traffic Control Devices, 11th Ed. (USDOT, 2023)

Bicycles come in a variety of sizes and shapes. Children's bikes have physical lengths of 45 inches or less, while adult tandem bikes and bikes with trailers can have 96 inches or more. The minimum and preferred bicyclist operating space is presented in **Figure 3-1,** which is sourced from the *AASHTO Guide for the Development of Bicycle Facilities (2024)*. For the purposes of this design manual, the key bike dimensions are those contained in **Table 3-1**.

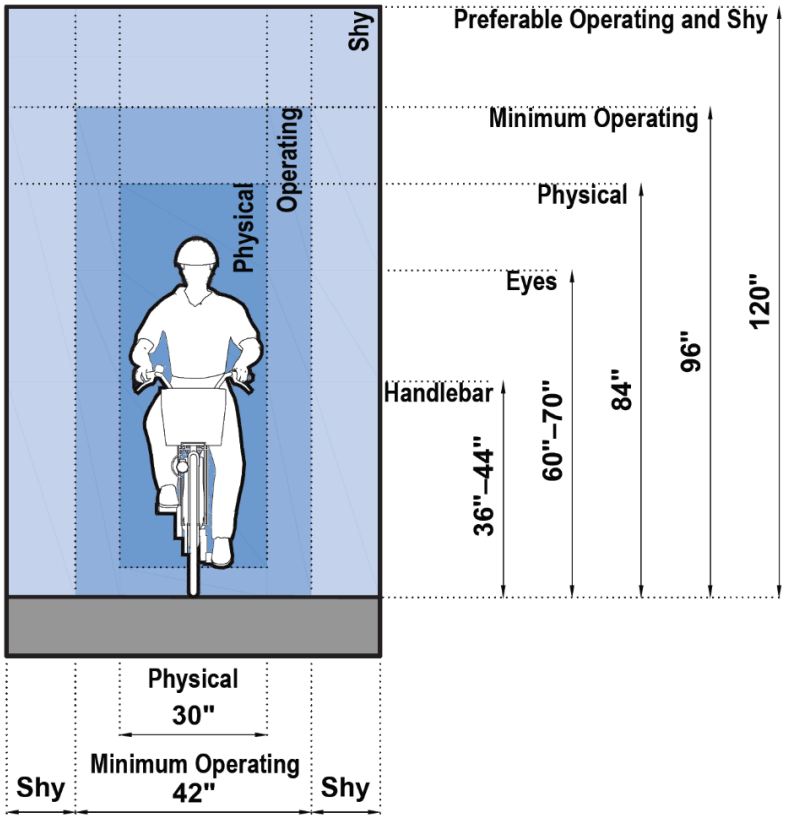


Figure 3-1: Bicyclist Operating Space
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Table 3-1: Key Bicycle Dimensions

Bicycle Type	Feature	Dimensions
Adult Typical Bicycle	Physical length 85th %ile length Physical width 85th %ile width Physical height of handlebars Eye height Operating width (minimum for a limited distance) Operating width (recommended) Operating height (minimum) Operating height (recommended)	64-71 inches 70 inches 22-28 inches 27 inches 30-42 inches 57-69 inches 42 inches 48-60 inches 100 inches 120 inches
Adult Single Recumbent Bicycle	Physical length 85th %ile length Physical width 85th %ile width Physical height Eye height	70-85 inches 82 inches 21-27 inches 26 inches 29-32 inches 45-54 inches
Adult Tandem Bicycle	Physical length Physical width	96 inches 29 inches
Adult Longtail Cargo Bicycle	Physical length Physical width Physical height	76-86 inches 25 inches 27-39 inches
Adult Box Bicycle	Physical length Physical width Physical height	95-102 inches 19-24 inches 35-43 inches
Child Trailer	Physical length (trailer only) Physical width Physical Height	42-48 inches 23-48 inches 17-38 inches
Trailer Bicycle	Physical length (trailer only) Physical width Physical Height	36-40 inches 22-26 inches 30-42 inches
Adult Cargo Bicycle	Physical length Physical width Physical height	85.8 inches 35.4 inches 47.2 inches
Electric-Assist Delivery Tricycle	Physical length Physical width Physical height	117 inches 50.8 inches 85 inches
Hand Bicycle	Physical length Physical width Physical height	70-80 inches 30-35 inches 35-45 inches
Inline Skater	Sweep Width	60 inches

Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

3.2 Bike Lanes

3.2.1 Conventional Bike Lanes

Description

Conventional bike lanes define an exclusive road space for bicyclists by using special pavement markings and signage (**Figure 3-2**). Located adjacent to the motor vehicle travel lane, bike lanes are designed to create a separation between the bicyclist and the automobile, and to provide for flow in the same direction as motor vehicle travel. Bike lanes are normally placed on the right side of the street, between adjacent travel lanes and curbs, road edges, or parking lanes. Typical bicycle lane users fall into the strong and fearless or enthused and confident cyclist typologies.

Figure 3-2: Example of Conventional Bike Lane along Noble Street in Anniston AL
Source: Sain Associates

Design Elements

Where bike lanes exist without adjacent parking, the following bike lane widths are recommended:

- Adjacent to curb face—5 to 7 feet
- Adjacent to street edge or longitudinal joint—4 feet minimum
- Areas with illegal parking concerns—5 to 7 feet
- Adjacent to guardrail or other physical barrier—8 feet desirable, 6 feet minimum

Where bike lanes exist with adjacent parking, the following bike lane widths are recommended:

- Distance from curb face to outer edge of bike lane (includes 7-foot parking lane, 2.5-foot door buffer and 5-foot bike lane)—14.5 feet preferred; 12 feet minimum (if door zone buffer not included)

Pavement Markings

Bike lanes may be marked by a symbol or word legends. The bike symbol or "BIKE LANE" word legend markings and arrow should be placed:

- At the beginning of the bike lane.
- At the far side of all bike path crossings.
- At the approaches and at the far sides of all street crossings.
- At major changes in direction.
- At intervals not to exceed ½ mile.
- At the beginning and the end of bike lane pockets at approaches to intersections.

Detailed dimensions of bike lane markings are provided in **Figure 3-3**.

Longitudinal striping or line marking will consist of a solid white line separating the bike lane from the motor vehicle travel lane. The minimum width for the line is 6 inches; 8 inches is recommended for added visibility and emphasis.

Signing

Regulatory signs, warning signs, guide signs, and plaques for conventional bike lanes, as well as their proper placement, follow the standards contained in the MUTCD. **Figure 3-4** shows typical bike lane signage marking a route with a designated bike lane. Special attention should be given to signage in high activity areas with on-street parking and/or deliveries.

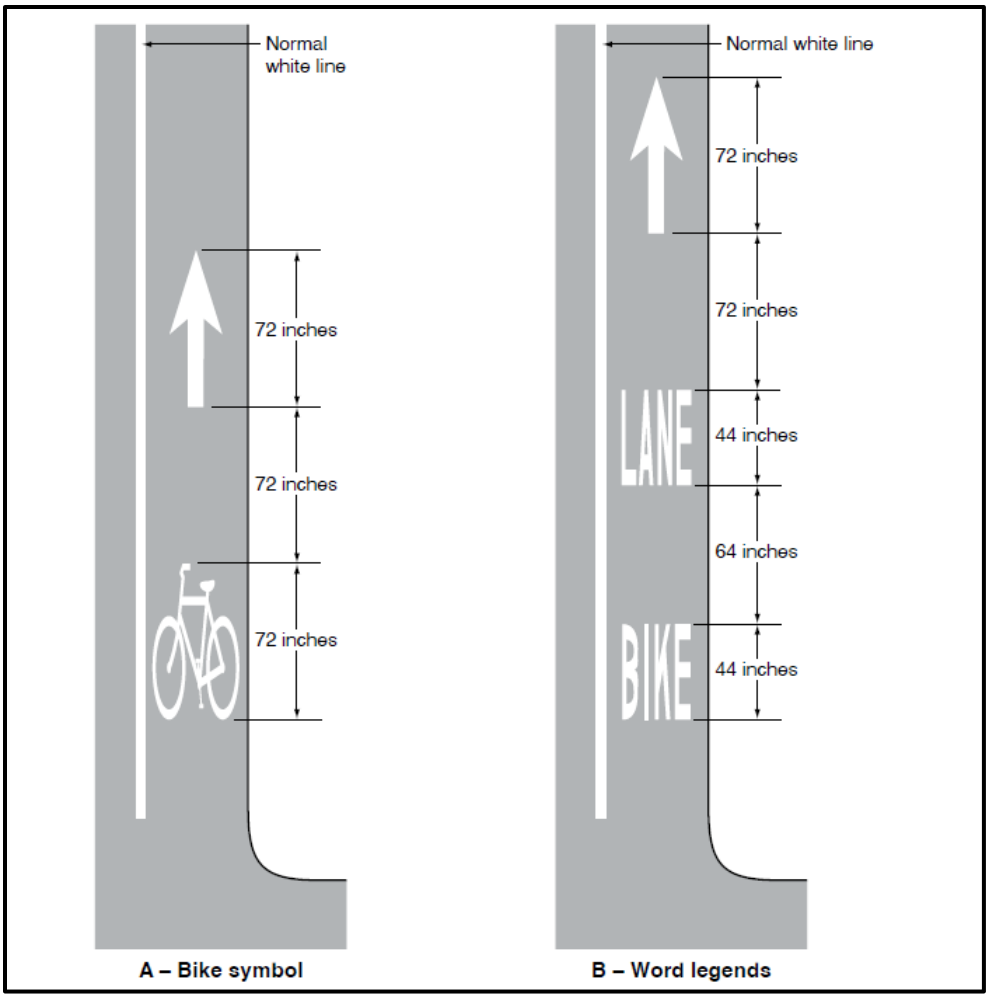


Figure 3-3: Bike Lane Marking Dimensions
Source: FHWA, MUTCD, 2023

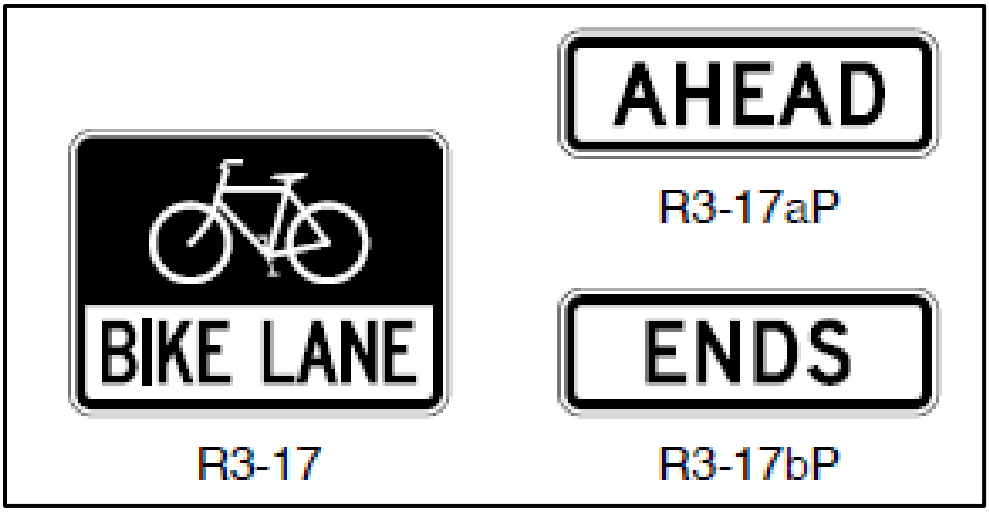


Figure 3-4: Common Bike Lane Signs
Source: FHWA, MUTCD 2023

3.2.2 Buffered Bike Lanes

Description

Buffered bike lanes are conventional bike lanes with added buffer zones separating the bicycle lanes from the adjacent motor vehicle travel lanes and any parking lanes, as shown in **Figure 3-5**. They are applicable in any place where standard bike lanes are being considered and where extra lanes or extra lane widths are available. Buffered bike lanes represent a good alternative to conventional bike lanes if travel speed or traffic volumes are high. Typical buffered bicycle lane users fall into the strong and fearless or enthused and confident cyclist typologies.

Figure 3-5: Example of Buffered Bike Lanes
Source: NACTO, Urban Bikeway Design Guide, 2014

Design Elements

Buffered bike lanes follow the same basic standards as conventional bike lanes in regard to placement, minimum widths, signing, and marking. The main difference is the added buffer space between the bike lane and the adjacent travel lane.

Where buffered bike lanes exist, the following buffer widths are recommended:

- Buffer width—Minimum 1.5 feet, 2-4 feet recommended

Markings

Buffered bike lane markings include the same bicycle symbol or word legends as conventional bike lanes do. The buffer space is marked with solid white lines along both edges, as shown in **Figure 3-6**. Dashing the buffer boundary lines may be done at points where cars are expected to be crossing (e.g., driveways and intersections).

For buffer areas of 3 feet or greater, install diagonal cross hatching or chevron markings within the buffer area. Markings are to be white, shaped as chevron markings, and with points facing towards approaching traffic.

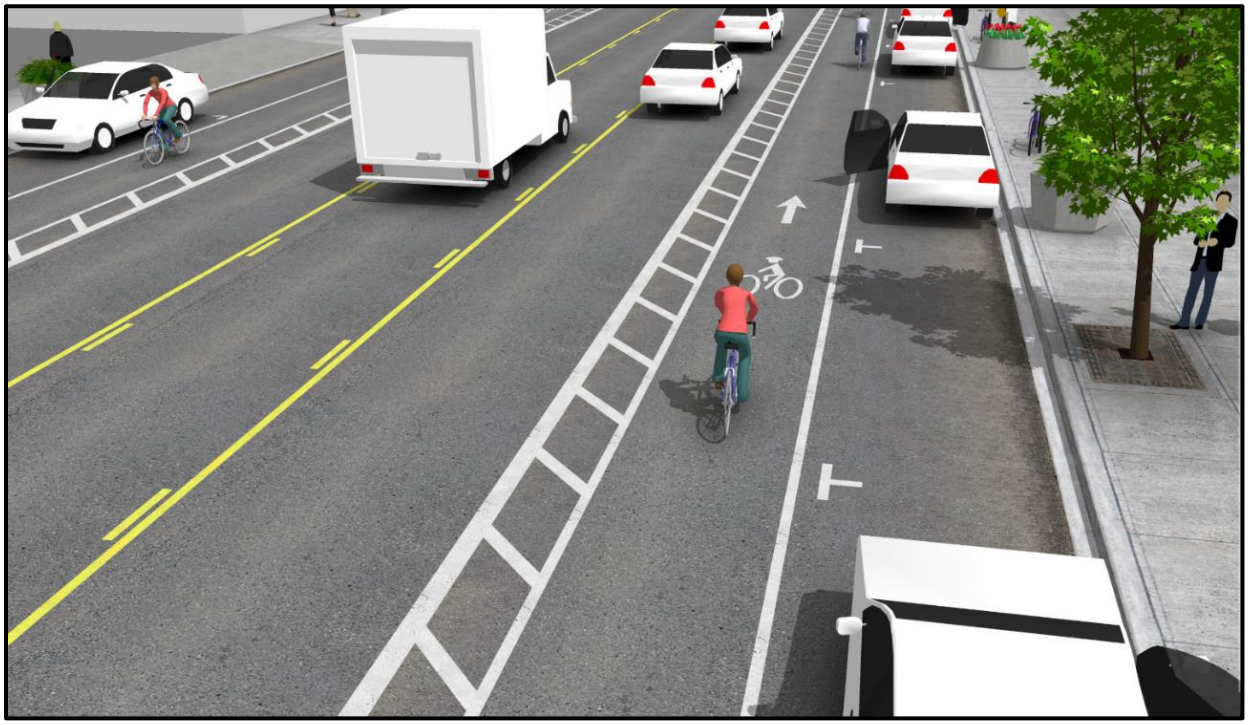


Figure 3-6: Conceptual Example of Buffered Bike Lane Markings
Source: NACTO, Urban Bikeway Design Guide, 2014

Signing

Regulatory, warning and guide signs and plaques for buffered bike lanes, as well as their proper placement, follow the standards contained in the MUTCD. **Figure 3-4**, shown previously, is indicative of typical signing for a designated bike lane.

3.2.3 Paved Shoulders

Description

Paved shoulders most often are placed on rural roadways that connect town centers or other major destinations (see **Figure 3-7**). Posted speeds along such highways are typically in the 40-55 mph range, and shoulder widths may vary depending on speeds and traffic volumes along the road. To accommodate bicycle travel, the paved shoulder should meet the minimum standards required of any designated bike lane. Typical paved shoulder users fall into the strong and fearless or enthused and confident cyclist typologies.

Figure 3-7: Examples of Paved Shoulder Bike Facilities
Source: Sain Associates

Design Elements

Where paved shoulder bike facilities exist with minimum clear shoulder width and no rumble strips, the following facility dimensions are recommended:

- Uncurbed sections with no vertical obstructions adjacent to roadway—4 feet minimum
- Sections with curb, guardrail, or other barrier—5 feet minimum

Where paved shoulder bike facilities exist with minimum clear shoulder width and rumble strips present, the following facility dimensions are recommended:

- From rumble strip to outside edge of shoulder—4 feet minimum
- If curb, guardrail, or other obstacle present—5 feet minimum

Where rumble strips exist along paved shoulder bike facilities, the following facility dimensions are recommended (see **Figure 3-8**) :

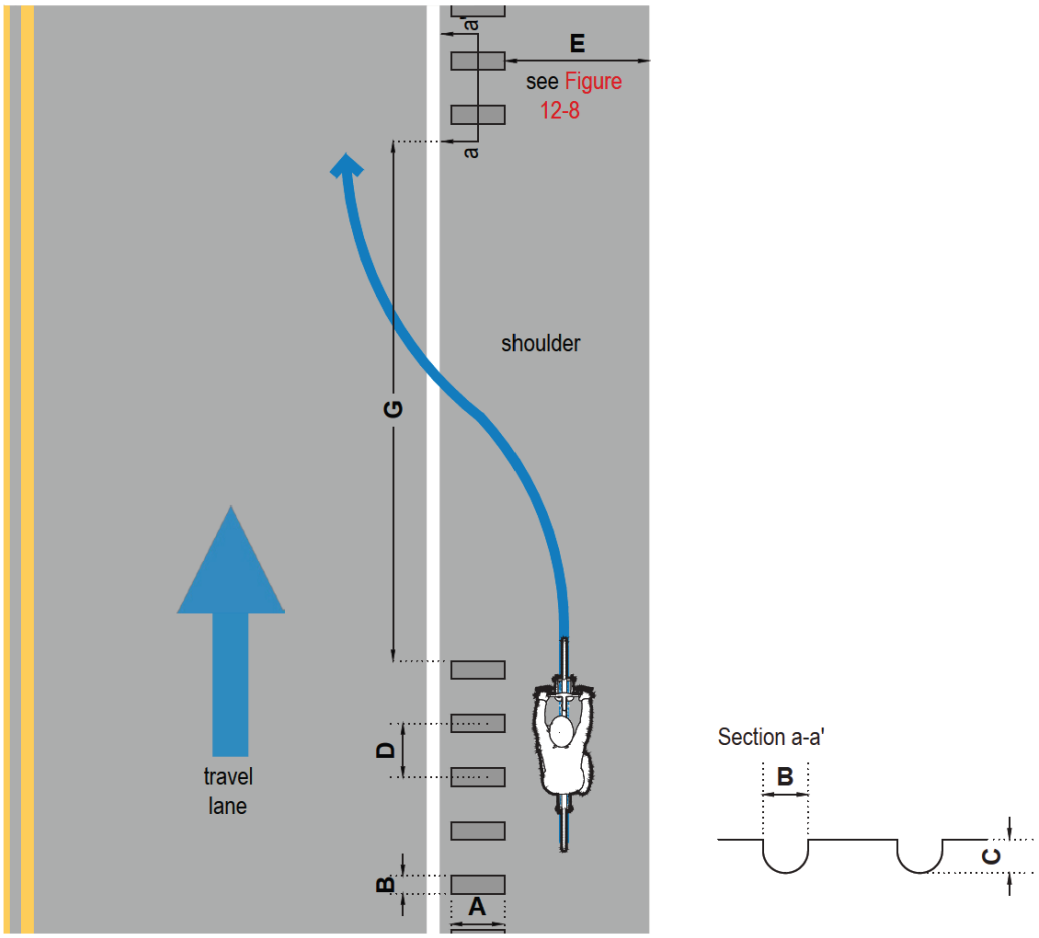
- Length (A)—Minimum 6 inches
- Width (B)—5 inches parallel to the traveled way
- Depth (C)—0.375 inches
- Spacing (D)—11 to 12 inches
- Clear Path (E)—Minimum 4 feet to edge of pavement; 5 feet if curb, guardrail or other obstruction present
- Gap (G)—Minimum 12 feet; recommended 12-15 feet gaps every 40-60 feet

Markings

Shoulders designated as bike lanes follow the minimum pavement marking standards for conventional and buffered bike lanes (refer to **Figure 3-3**, shown previously).

Signing

A paved shoulder bicycle facility does not require additional signage. However, guide signs and plaques for paved shoulder bicycle facilities, as well as their proper placement, should follow the standards contained in the MUTCD.



Definitions	
Length (A)	Dimension of rumble strip measured lateral to the travel lane
Width (B)	Dimension of rumble strip measured parallel to the travel lane
Depth (C)	Vertical distance measured from top of pavement surface to bottom of a rumble strip pattern
Spacing (D)	Dimension between rumble strip patterns
Clear Path (E)	Distance from outside (for example, right) edge of rumble strip to oustide edge of paved shoulder
Gap (G)	Distance measured parallel to roadway, between groups of rumble strip patterns

Figure 3-8: Paved Shoulder and Rumble Strip Design Parameters
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

3.2.4 Shared Lanes

Description

Shared lanes are low-speed, low-traffic facilities on which motor vehicles or cyclists can travel. Cyclists are free to use travel lanes, but shared lanes are aimed at providing a specific route for cyclists in low-stress environments. Shared lanes should be considered when a roadway is low-speed or low-volume and an exclusive bicycle facility is not practical to install or maintain. Typical shared lane users fall into the strong and fearless cyclist typology.

Anniston Shared Lane Network

The network encompasses over 14 miles of shared lanes along the following routes:

- Noble Street, from AL-202 to 18th Street
- 4th Street, Noble Street to Mulberry Avenue
- 10th Street, Clydesdale Avenue and 11th Street to Cobb Avenue
- 11th Street, from Cobb Avenue to Fairmont Avenue (**Figure 3-9**)
- 12th Street, from Noble Street to Chief Ladiga Trail
- 14th Street, from Noble Street to Chief Ladiga Trail
- 18th Street, from Christine Street to Cobb Avenue
- Christine Street, from 11th Street to 18th Street
- Cobb Avenue, from 11th Street to 18th Street
- Baltzell Gate Road, Summerall Gate Road, and Coxwell Road
- LaGarde Park interior roads

Figure 3-9: Example of a Shared Lane Facility along 11th Street in Anniston
Source: Sain Associates

Markings

Shared lane markings (sometimes referred to as "sharrows") are pavement marking symbols placed along streets that are part of a bicycle network, as shown in **Figure 3-10**. The markings are placed on an alignment designating a practical path for bicycle travel and are intended to help bicyclists position themselves safely in traffic lanes while alerting motorists to the presence and lateral position of bicyclists. The aim is to create a safe operating environment for both motorists and cyclists.

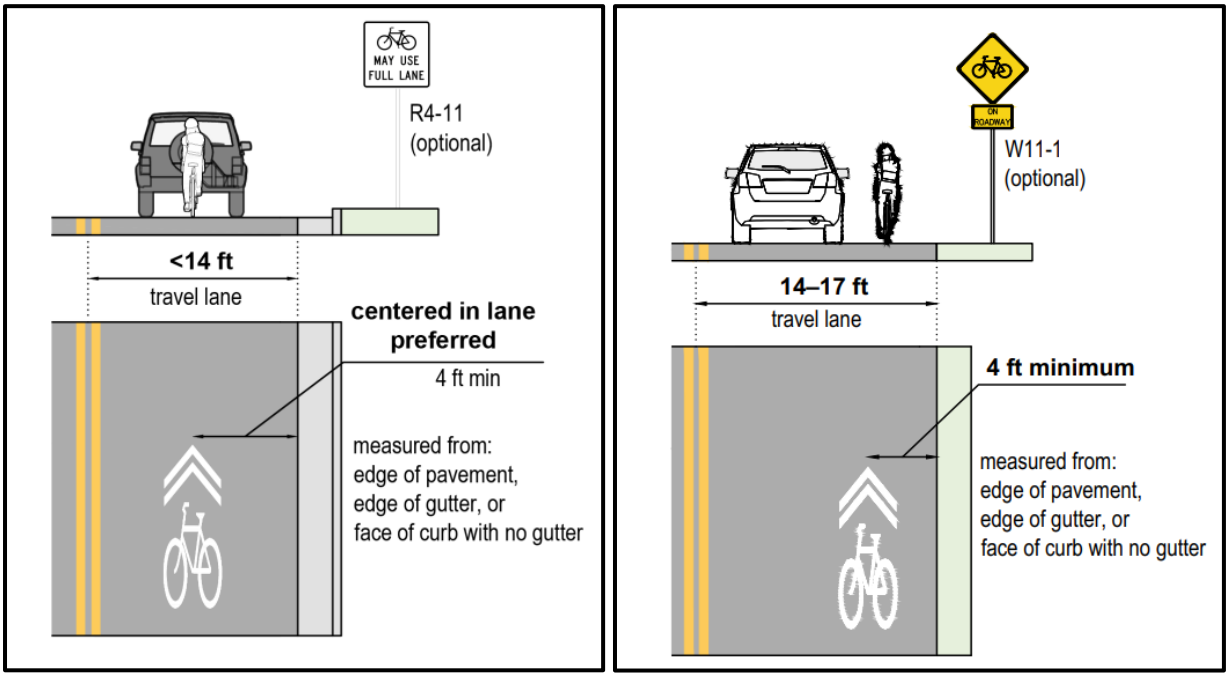


Figure 3-10: Shared Lane Marking Lateral Placement in Travel Lanes without Parking
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Design Elements

It is recommended that shared lane facilities exist on roadways with a posted speed limit of 25 mph or less. Where shared lane facilities exist, the following symbol spacing is recommended:

- Along busier streets (e.g., downtown)—50 to 100 feet
- Along low volume routes (e.g., fringe and residential)—Up to 250 feet
- Always place after intersections

Where shared lane facilities exist, the following lateral placement of symbols is recommended (refer to **Figure 3-10**):

- Streets with on-street parallel parking—Minimum 12 feet (13-14 feet preferred) from face of curb or edge of traveled way (if no curb is present, allow 2.5 feet for door zone)
- Streets without on-street parallel parking—Minimum of 4 feet from curb face or edge of traveled way if no curb is present
- Preferred Placement—Center of travel lane

Signing

Regulatory, warning and guide signs and plaques for share-the-road bike routes will follow the standards contained in the MUTCD. **Figure 3-11** shows examples of share-the-road signage.

Figure 3-11: Example of Shared Lane Signage along West 4th Street in Anniston
Source: Sain Associates

Other Improvements To Consider for Shared Lanes

Though shared lanes are a low-cost bicycle facility, they should be more comprehensive than simply installing pavement markings to promote safer use of shared lane facilities.

- Consider traffic calming measures for vehicular traffic along shared lane facilities.
- Clearly identify travel lanes through striping edges of pavement and gutter troughs.
- Replace drainage grates as needed with bicycle-use compatible grates.
- Make drainage grates and manhole or utility covers flush with the pavement.
- Refresh shared lane symbols frequently.
- Install wayfinding signage for shared lane users to navigate the shared lane network.
- Consider overhead lighting along shared lane facilities.

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4 Shared Bicycle & Pedestrian Facilities

4.1 Shared Use Paths

Shared use paths are active transportation facilities located independently from the roadway network. They may interact with roadways, but shared use paths are not parallel to a roadway. Typical shared use path users are pedestrians and any of the four cyclist typologies. **Figure 4-1** shows an example of the Chief Ladiga Trail, which is a shared use path, as it enters the City of Anniston.

This Manual is not intended to be comprehensive. Specific guidance regarding all aspects of bicycle and pedestrian facilities can be found in the following documents:

- Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Ed. (AASHTO, 2021)
- Guide for the Development of Bicycle Facilities, 5th Ed. (AASHTO, 2021)
- A Policy on Geometric Design of Highways and Streets, 7th Ed. (AASHTO, 2018)
- Manual on Uniform Traffic Control Devices, 11th Ed. (USDOT, 2023)

Figure 4-1: The Chief Ladiga Trail
Source: Sain Associates

4.1.1 Chief Ladiga Trail

The Chief Ladiga Trail is a shared-use, asphalt surface path originally extending over a distance of 32.5 miles from the Alabama-Georgia State Line to Michael Tucker Park in the City of Anniston. Connecting with Georgia's Silver Comet Trail at the state line, the two trails combine to form one of the longest paved trails in the United States. Constructed over a decade beginning in 1993, the original segment of the Chief Ladiga Trail follows the former Seaboard and Southern rail line from Georgia to Jacksonville, and the former Norfolk Southern rail line from Jacksonville to Anniston. The corridor provides access to scenic views, small towns and historic sites situated along its path.

Completion of a new section of the Chief Ladiga Trail extending to the Multi-Modal Transportation Center (MMTC) at 4th Street, opened in 2025. This extension represents a major element of the City's Bicycle and Pedestrian Program approved in 2013 and the subject of the design criteria presented below. These criteria apply only to the physical facilities over which bicyclists and other users will operate. Additional elements that may be considered in completing this section, such as trailheads, rest areas, parking lots, mileposts and logo signing, are discussed in Section 4 of this manual.

Location

The Chief Ladiga Trail is located within a former Norfolk Southern railroad corridor, extending approximately 6 miles within the City of Anniston from Michael Tucker Park to 4th Street and the Anniston MMTC. **Figure 4-2** shows the southern terminus of the Chief Ladiga Trail at the MMTC.

Figure 4-2: Current Southern Terminus of the Chief Ladiga Trail at West 4th Street
Source: Sain Associates

Design Elements

Design of the Chief Ladiga Trail adheres to the following design elements:

- Width—Paved shared use path; 10 feet minimum, 12 feet recommended
- Shoulder Width—On both sides; 2 feet minimum, 3 to 5 feet recommended
- Slope—1 Horizontal to 6 Vertical (1H:6V) maximum
- Side Slope and Recovery Area—In general, no protective barrier required if minimum recovery area from the edge of path to top of slope is as follows:
    - 1H:4V or flatter No recovery area necessary
    - 1H:3V 2 to 3 feet minimum
    - 1H:2V 3 to 5 feet minimum
    - Steeper than 1H:2V 5 feet or greater
- Lateral Clearance (from obstacles other than signs)—2 feet minimum, 4 feet recommended
- Vertical Clearance—8 feet minimum, 10 feet recommended
- Separation from Roadway or Pedestrian Path—5 feet recommended minimum
- Surface—4 to 5 inches of asphalt paving over 6 inches of compacted aggregate surface
- Grade—grades are less than 2 percent over the 7.2-mile section; no guidance needed.
- Cross Slope—1 percent minimum recommended; 2 percent maximum
- Design Speed—20 mph recommended

Figure 4-3 displays a visual representation of many design elements referenced above.

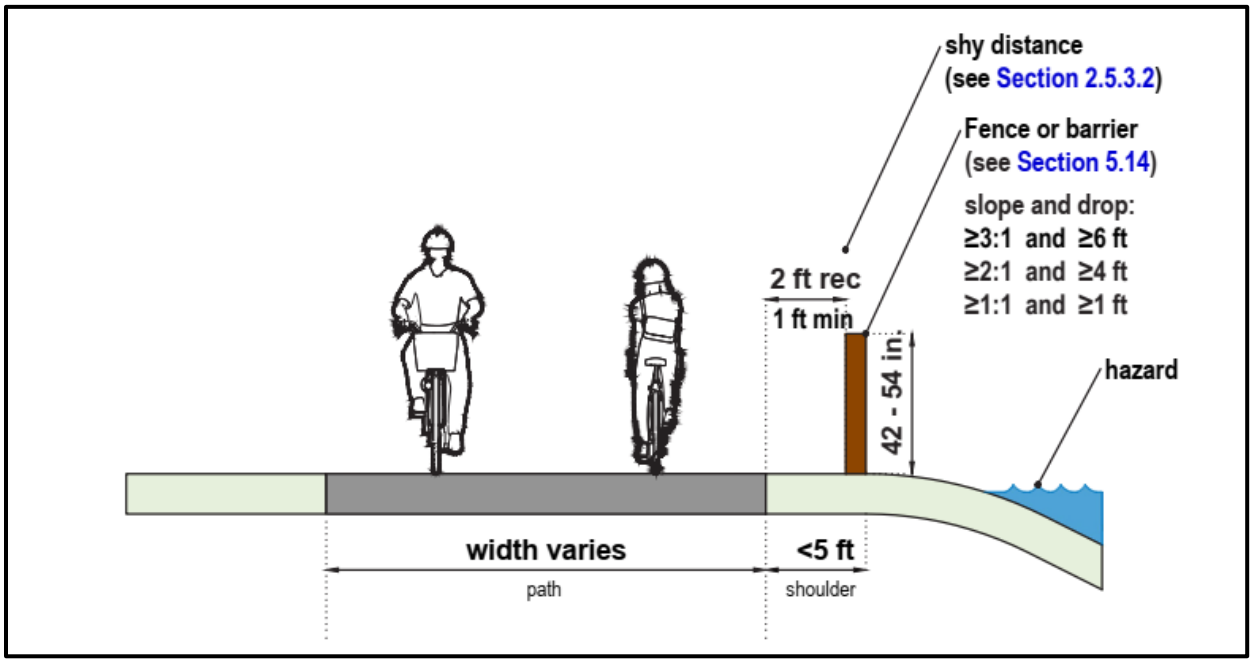

Figure 4-3: Protective Barrier Standards
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Bollards

Per the *AASHTO, Guide for the Development of Bicycle Facilities, 2024* the installation of bollards is appropriate if there is a documented history of unauthorized motor vehicles intruding upon the shared use path. Bollards, and other physical barriers, create permanent obstacles to path users including those with disabilities. Physical barriers present a crash hazard for bicyclists and impede access for emergency responders. If bollards must be installed, they should be spaced to accommodate wider bicycles and allow cyclists to pass through without requiring dismount.

Consider the below 3-step approach prior to the installation of bollards.

1. Post appropriate signage prohibiting motor vehicle entry. **Figure 4-4** shows an example of a sign that can be placed at roadway crossing locations.
2. Design the entry point of the shared use path to clearly indicate that the path is not intended for motor vehicle use. This can be done with the installation of a center island at the shared use path entry (see **Figure 4-5**). Elements of the center island:
    i. Divide the entryway into two sections equal to half of the width of the shared use path. Each half should not exceed six feet
    ii. Delineate trail approach with solid line pavement markings
    iii. Use mountable curbing on island perimeter
    iv. Design to allow emergency and maintenance vehicles entry to path
3. Provide designated emergency and maintenance vehicle access drives adjacent to shared use path entrances. These vehicle accesses can be secured by gates or fencing (not bollards, as the use of those at these entrances could encourage use by path users)

Figure 4-4: No Motor Vehicles (R5-3) Sign
Source: FHWA, MUTCD 2023

If these steps are taken and unauthorized vehicles continue to be an issue and are determined to pose greater risk that those risks presented by physical barriers, bollards may be installed per the guidelines outlined in the Guide for the Development of Bicycle Facilities. The aesthetic design of bollards can vary by location depending on the surrounding environment, but one specific style of bollard should be used for the entire trail length to establish consistency and an overall facility identity. The City's recommended bollard design, which can be found in **Figure 4-6**, is a square-shaped steel bollard which can be detached at the base and locked when in place.

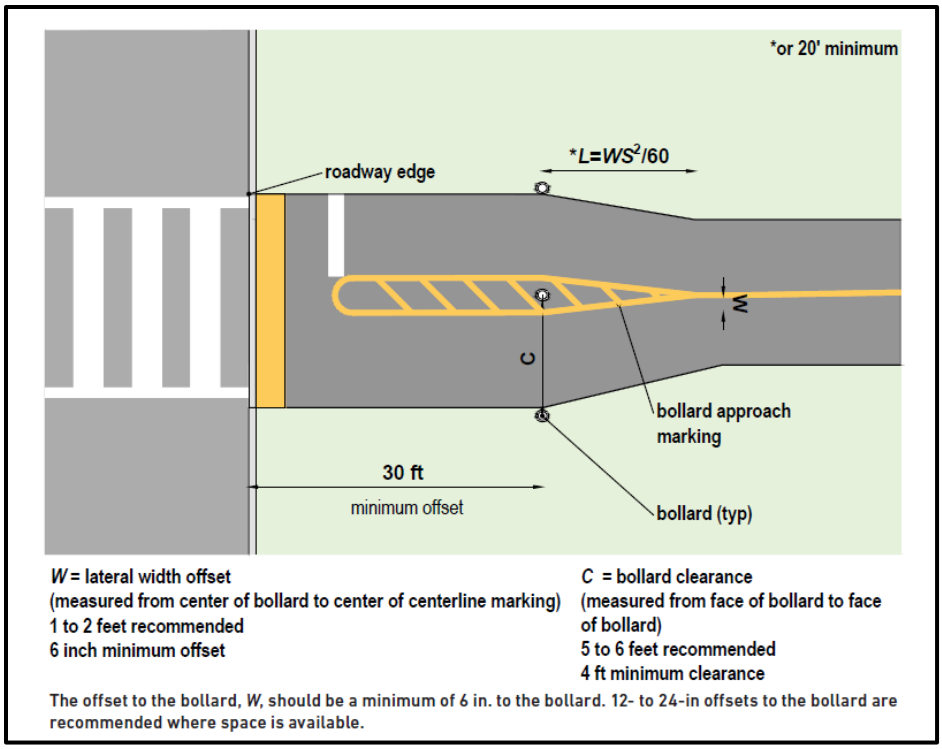

Figure 4-5: Conceptual Example of Bollard Approach Markings
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Figure 4-6: Example of Bollards along the Chief Ladiga Trail
Source: Sain Associates

Protective Barriers

The use of protective barriers for safety, security and separation from adjacent uses is based on clear area, side slope steepness, other hazards, and the need for bridge railings (refer to **Figure 4-7**).

- Minimum Height – 42 inches
- Shoulder (Lateral Offset) – 2 to 3 feet recommended, minimum 1 foot with constraints.
- Recommended Height – 48 to 52 inches
- Openings below 27 inches – Less than 6 inches
- Openings above 27 inches – Less than 8 inches
- Rub Rail (smooth, 8 inches wide) – Installed between 36 inches and 44 inches in height

Bridges

- Clear Width—10 feet minimum; 12-14 feet desirable
- Vertical Clearance—Same as for path (10 feet)
- Loading—H10, 10-ton load for two-axle vehicle
- Approach Railing—Extend 15 feet from ends of bridge and flared
- Decking—Recommend 14-foot-wide preformed concrete sections capable of supporting the recommended loading

Figure 4-7 displays several dimensions for design elements referenced above.

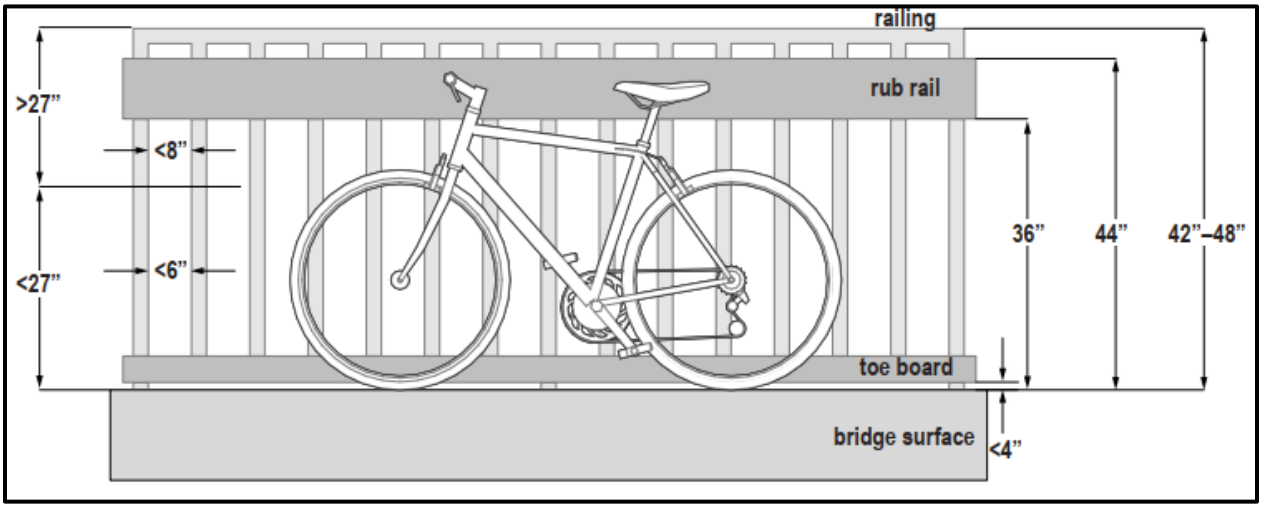

Figure 4-7: Bridge and Railing Dimensions
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Detailed Design Elements

Pavement Width, Cross Slope and Clearance

The desirable minimum paved width for the approximately 6-mile Chief Ladiga Trail section from Michael Tucker Park to 4th Street and the Multi-Modal Transportation Center is 12 feet, with a minimum cross slope of 1 percent and a maximum of 2 percent. Lesser widths of 10 feet, and in rare cases 8 feet, may be used out of necessity for short distances where a physical constraint exists (e.g., bridge abutment, fence or utility structure), provided advance warning signs are placed at such

locations. In addition, in areas where high user volumes exist (children, walkers, skaters or other users), larger maintenance or emergency vehicles require access, or severe curves and grades are present, path widths may need to be greater than 12 feet. Additionally, if separate, adjacent pedestrian paths are provided, the minimum separation distance is recommended to be 5 feet.

Pavement Markings

To provide for increased safety, it is recommended that retroreflective centerline striping be used on the Chief Ladiga Trail section to organize pathway traffic and separate two directions of travel. Broken yellow center line stripe should only be used where passing is permitted; otherwise, solid yellow should be used. White edge line markings may be used when nighttime use routinely occurs, approaches to intersections, significant width changes, separation of pedestrians and bicyclists, bridge or other constraint approaches, or delineation of obstructions. **Figure 4-8** shows how white edge line striping should be used to mark an obstruction.

Stop and yield lines, if used, should be installed a minimum of 2 feet from the edge of roadway or sidewalk. These pavement markings should be implemented through the guidance included in Chapter 5 of the *AASHTO, Guide for the Development of Bicycle Facilities, 2024*.

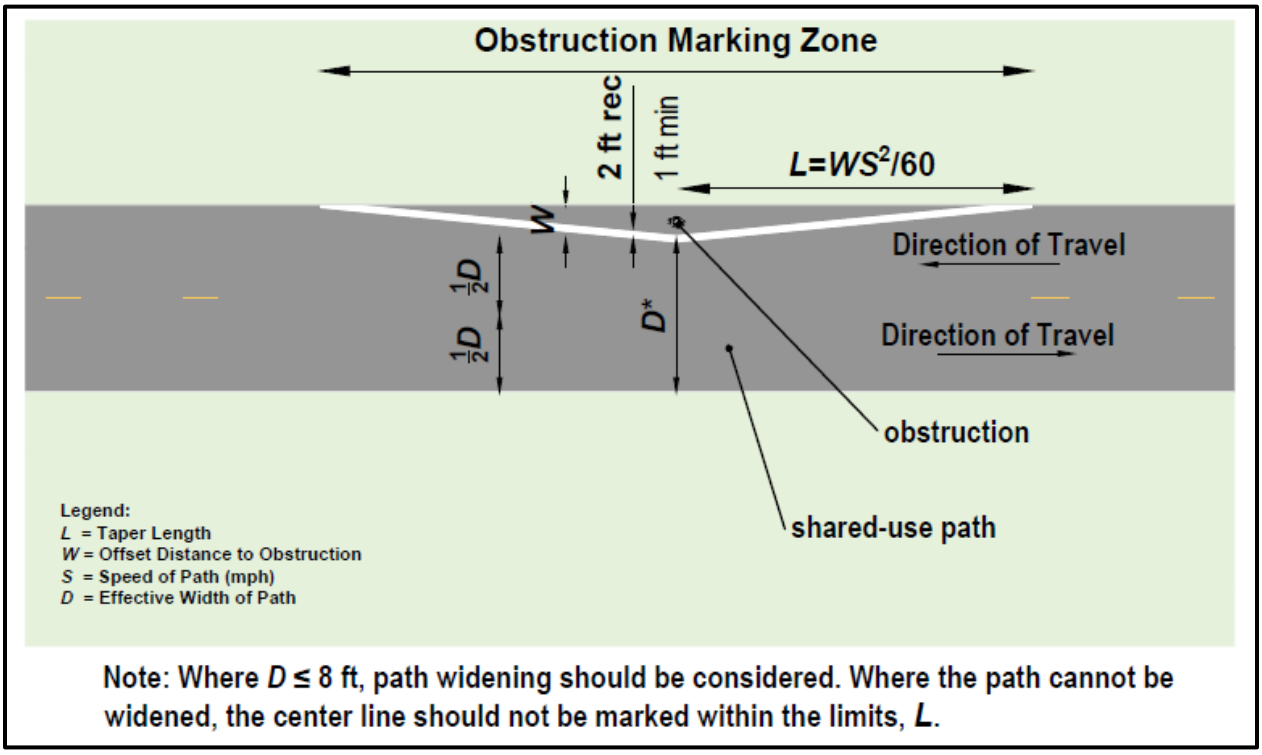

Figure 4-8: Obstruction Delineation
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Graded Shoulders

Graded shoulder widths on each side of the pathway should be a minimum of 2 feet, with a slope no greater than 1V:6H. The desirable and recommended standard for the Chief Ladiga Trail section is at least 3 to 5 feet, with a slope not exceeding 1V:6H.

Clearances and Sign Placement

The recommended minimum lateral clearance from obstacles such as trees, poles, walls, fences and other obstructions is 2 to 3 feet. Minimum overhead clearance for signs, underpasses, or other obstructions is 8 feet. The recommended standard for overhead clearance on the Chief Ladiga Trail section is 10 feet. Signs are recommended to be placed at a minimum of 2 feet and a maximum of 6 feet lateral distance from the edge of the path. Sign height placement should be a minimum of 4 feet and a maximum of 5 feet above the path to the bottom of the sign.

Figures 4-9 and 4-10 show recommended shared use path dimensions and provides recommended clearances and sign placement.

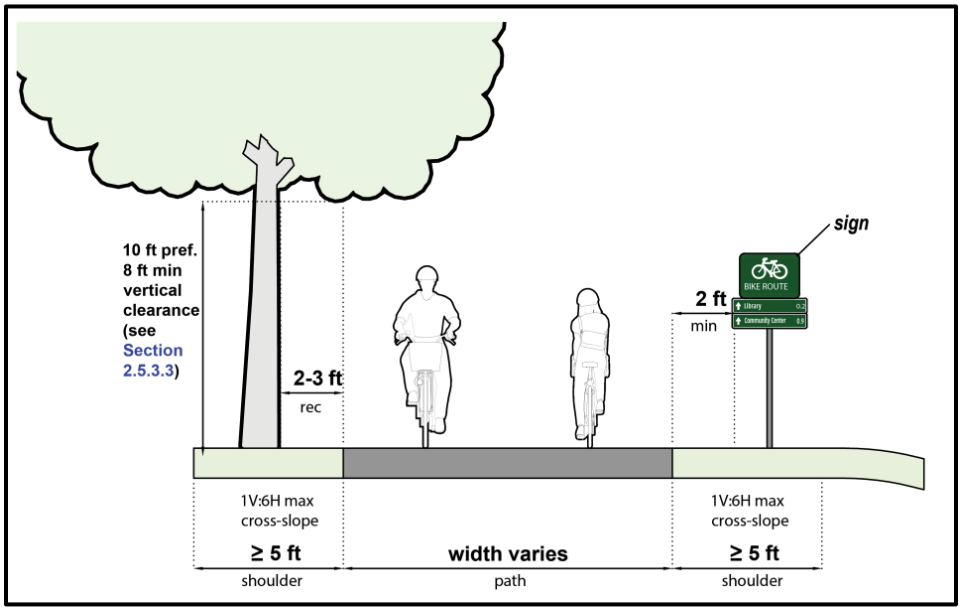

Figure 4-9: Shared Use Path Shoulder Dimensions

Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

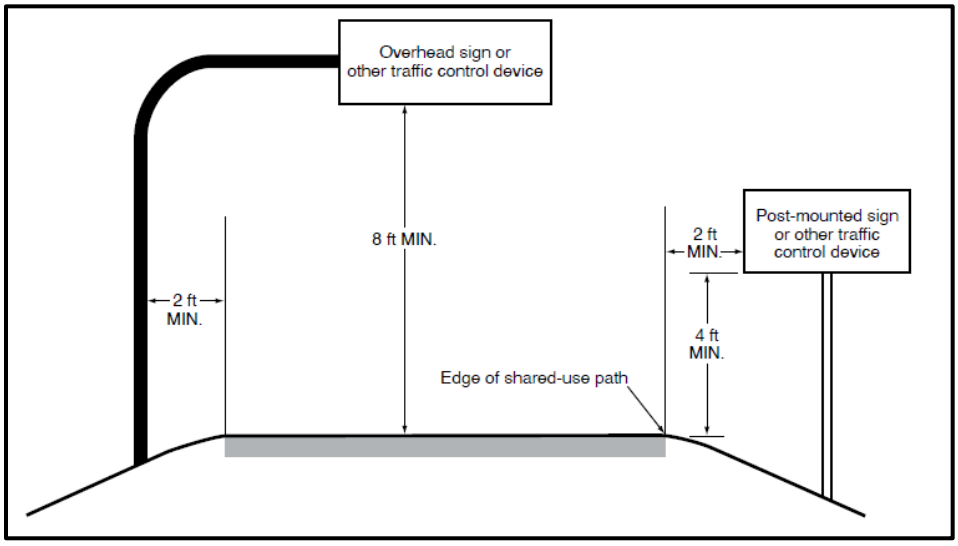

Figure 4-10: Shared Use Path Vertical and Horizontal Clearance

Source: FHWA, MUTCD, 2023

Use of Physical Barriers and Rails

Physical barriers, fencing or safety rails may be necessary in areas along the path where steep, narrow embankments or other conditions do not allow for a recommended 5-foot recovery zone adjacent to the pathway. In general, this would include downward slopes of 1V:3H or greater with a drop of 6 feet or greater; slopes of 1V:2H or steeper with a drop of 4 feet or greater; and slopes of 1V:1H with a drop of 1 foot or greater. Where safety rails are necessary, they should begin before and extend beyond the area of need, with ends flared away from the path edge. The lateral offset of safety barriers should be at least 1 foot from the path's edge.

Protective Railings, Fences and Barriers

The minimum recommended height for protective railings is 42 inches. In areas along the Chief Ladiga Trail where such protection is required (steep, narrow embankments, bridges and other places where warranted), it is recommended that 48 to 52 inches be the standard. Openings between horizontal or vertical rounds or slats in the lower 27 inches should be no greater than 6 inches. Above 27 inches, openings should be no greater than 8 inches. It is also recommended that a smooth, wide rub rail be installed at a height of 36 to 44 inches to reduce the chance of handlebars being caught by the railing. **Figure 4-11** shows an example of a bridge approach along the Chief Ladiga Trail.

Figure 4-11: Example Bridge Approach along the Chief Ladiga Trail
Source: Sain Associates

Surface Structure

Pavement thickness will be dependent on local soils conditions and loading factors, particularly loads due to use by maintenance and emergency vehicles. For the Chief Ladiga Trail section, the recommended typical section for the pathway is 12 feet wide, 4 to 5 inches deep of Hot Mix Asphalt paving over 6 inches of compacted aggregate base extending for 2 feet on either side of the asphalt surface. For bridge decks, the desirable surface is 14-foot-wide preformed concrete sections topped by protective railing at the recommended height.

Bridges and Overpasses

Assuming existing railroad structures along the Chief Ladiga Trail section (such as that shown in **Figure 4-12**) are adequate for retrofitting to support loading from trail users and occasional use by maintenance and emergency vehicles, the recommended minimum clear width on the bridges is 12 feet, with the desirable width of 14 feet. The widths and weights of common emergency, patrol and maintenance vehicles should be considered in making the width determination.

Figure 4-12: Retrofitted Railroad Trestle along Chief Ladiga Trail
Source: Sain Associates

Lighting

Lighting can improve nighttime visibility along the shared use path and can also offer an increased feeling of personal security. Lighting is not required for shared use paths but should be considered when the shared use path serves a transportation purpose. In areas where nighttime use of an unlit shared use path is permitted, lighting should be provided at intersections with roadways. Even when nighttime use is prohibited, lighting of crosswalks that connect to sidewalks should be considered.

4.2 Roadway Crossings

Context-sensitive design is a critical aspect for any bicycle or pedestrian facility intersecting a roadway. There are applications for motorists to be applied to the roadway as well as applications for cyclists and pedestrians to be applied along the bicycle or pedestrian facility.

The *AASHTO Guide for the Development of Bicycle Facilities (2024)* and *AASHTO Guide for the Design of Pedestrian Facilities* (2021) details evaluation of right-of-way assignment at shared use path and roadway crossings. Approach speeds, volumes, roadway geometry, and sight distance should all be considered when determining intersection control.

The MUTCD also provides guidance for crossing markings, signage, and other design elements.

4.2.1 Crossing Approach

In cases where skewed path crossings exist, it is recommended that such crossings be retrofitted to provide a minimum 60-degree crossing angle, with a 90-degree angle desirable (Refer to **Figure 4-13**).

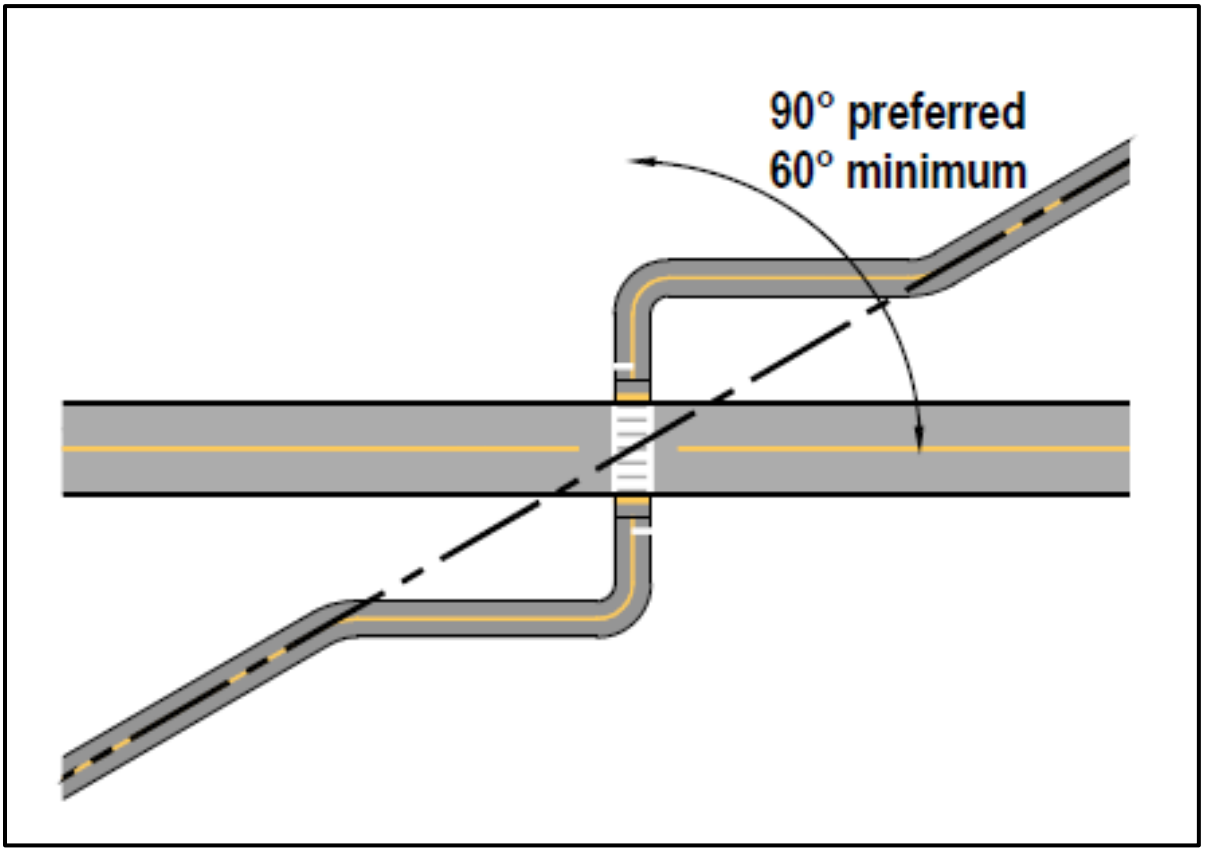

Figure 4-13: Crossing Approach Geometry
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

4.2.2 Crosswalk Markings

Crosswalk markings follow standards outlined in the MUTCD, Chapter 3C. White longitudinal lines 12 to 24 inches wide separated by gaps of 12 to 60 inches are recommended. The longitudinal lines should be as long as the trail is wide. **Figure 4-14** shows an example of a ladder design crosswalk at a trail crossing treatment along the Chief Ladiga Trail.

Alabama state law dictates that motorists must yield to pedestrians within a marked crosswalk. It is recommended to use high-visibility crosswalk markings for shared use paths and mid-block crosswalks. According to the MUTCD, the longitudinal bar and ladder designs are considered high-visibility crosswalk markings.

Figure 4-14: Example of Trail Crossing Treatment along the Chief Ladiga Trail
Source: Sain Associates

4.2.3 Crossing Signage

Vehicular traffic warning signs are to be used to alert road users to locations where trail crossings occur. Example installations of vehicular warning signs can be seen in **Figure 4-15**. Types of vehicular warning signs referenced in the MUTCD include W11-1, W11-15, and W11-15a, as shown in **Figure 4-16**.

Figure 4-15: Example Vehicular Warning Signage
Source: Sain Associates

Application

Vehicular warning signage treatments would be used at crossings of the Chief Ladiga Trail where vehicles have the right-of-way. Specific locations are yet to be determined. Vehicular warning signs are also recommended where the McClellan Spur crosses AL 21 at Baltzell Gate Road and Summerall Gate Road.

Design Standards

- If a post-mounted W11-1, W11-15, or W11-15a sign is placed at the location of the crossing point where pedestrians, bicyclists, or other shared-use path users might be crossing the roadway, a diagonal downward pointing arrow (W16-7P) plaque shall be mounted below the sign. If the W11-1, W11-11, W11-15, or W11-15a sign is mounted overhead, the W16-7P supplemental plaque shall not be used.

Design Guidance

- The combined Bicycle/Pedestrian (W11-15) sign may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL X-ING (W11-15P) supplemental plaque may be mounted below the W11-15 sign. The TRAIL CROSSING (W11-15a) sign may be used to warn of shared-use path crossings where users might be crossing the roadway.
- The W11-1, W11-15, and W11-15a signs and their related supplemental plaques may have a fluorescent yellow-green background with a black legend and border.
- Supplemental plaques with legends such as AHEAD, XX FEET, NEXT XX MILES, or SHARE THE ROAD may be mounted below vehicular traffic warning signs to provide advance notice to road users of unexpected entries.
- A warning beacon may be used with any vehicular traffic warning sign to indicate specific periods when the condition or activity is present or is likely to be present, or to provide enhanced sign conspicuity.
- Intersection Warning (W2-1 through W2-5) should not be used along shared use paths unless the trail user has the right-of-way at the crossing
- Where a trail crossing is controlled by a Stop or Yield sign, a Stop Warning (W3-1) or Yield Warning (W3-2) may be used on the shared use path approach to warn trail users of an upcoming roadway crossing.

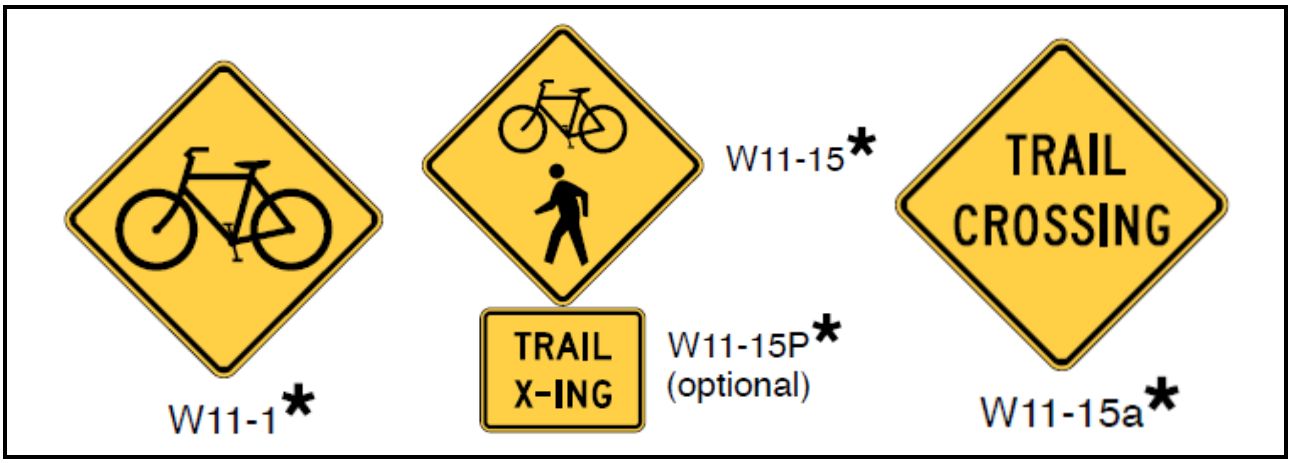

Figure 4-16: Types of Vehicular Warning Signage
**A fluorescent yellow-green background color may be used for these signs.*
Source: FHWA, MUTCD, 2023

4.2.4 Active Warning Beacon

Active warning beacons are user-actuated amber flashing lights that supplement warning signs at unsignalized intersections or mid-block crosswalks (see example in **Figure 4-17**). Beacons can be actuated either manually by a push-button or passively through detection. Rectangular Rapid Flash Beacons (RRFBs), a type of active warning beacon, uses an irregular flash pattern similar to emergency flashers on police vehicles and can be installed on either two-lane or multi-lane roadways. Active warning beacons should be used to alert drivers to yield where bicyclists have the right-of-way on a path crossing a road.

Figure 4-17: Example Active Warning Beacon
Source: Sain Associates

Application

The potential use of active warning beacons applies exclusively at roadway crossings along the Chief Ladiga Trail where bicyclists have the right-of-way. Specific locations are yet to be determined.

Design Standards

- Active warning beacons shall be installed on the side of the road. If center islands or medians exist, providing secondary installations in these locations marginally improves driver yielding behavior.
- Beacons shall be unlit when not activated.
- If intended for use by bicyclists, push button actuation shall be provided, and should be located so bicyclists can activate the signal without dismounting. Push buttons should have a supplemental sign facing the bicyclist's approach to increase visibility.

Design Guidance

- RRFBs should be used to supplement standard pedestrian and bicycle crossing signs and markings.
- RRFBs should not be used where the crosswalk approach is controlled by a yield sign, stop sign, or traffic-control signal.
- RRFBs can be used at a crosswalk or a roundabout.

Design of RRFBs shall follow the standards contained in the *Manual on Uniform Traffic Control Devices* (MUTCD).

4.2.5 Traffic Calming

Where approach speeds exceed the desired threshold outlined in Article VII of *The Code of the City of Anniston, Alabama*, implementation of traffic calming measures may be appropriate. The municipal code is primarily focused on the use of speed humps or speed tables, but additional measures may be considered by the city engineer as needed.

The following traffic calming measures may be appropriate for streets where bicycle and pedestrian facility crossings exist:

- Raised Median Islands (see **Figure 4-18**)
- Traffic Circles
- Raised Median through Intersections
- Curb Extensions
- Chicanes
- Diagonal Diverter
- Lane Narrowing

Appendix C of ALDOT's *Alabama Speed Management Manual* (2015) provides standard drawings of the traffic calming measures cited above as well as others that the City may consider.

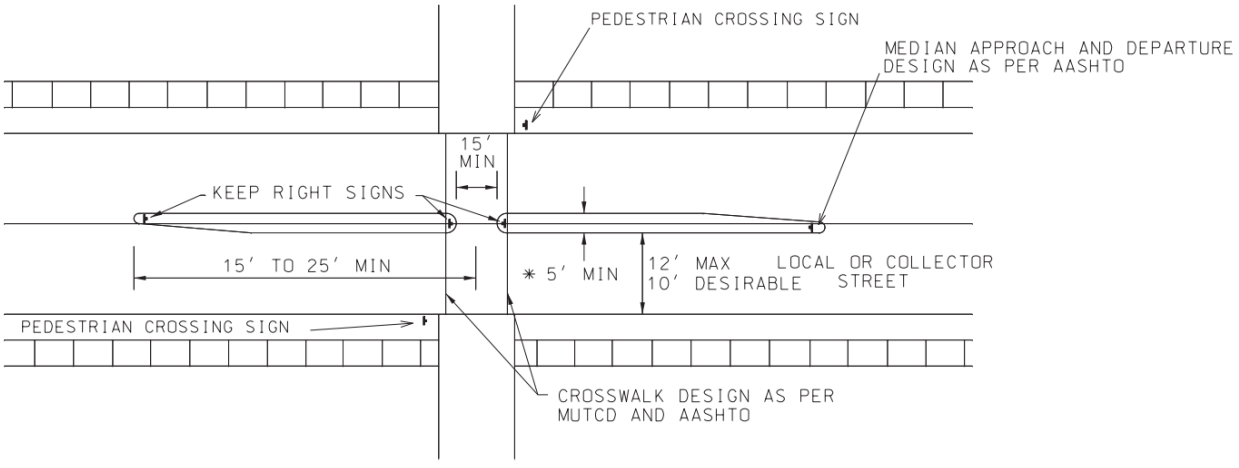

Figure 4-18: Standard Drawing of Mid-Block Crosswalk Median Island
Source: ALDOT

4.2.6 Crossing Design Examples

Auto Has Right-of-Way

The following illustrations represent sample treatments for trail crossings of public streets where auto travel has the right-of-way. **Figure 4-19** represents a crossing where the trail users are made to stop at the crossing roadway. In some cases of low volume roadways, yield signs for trail users may be appropriate.

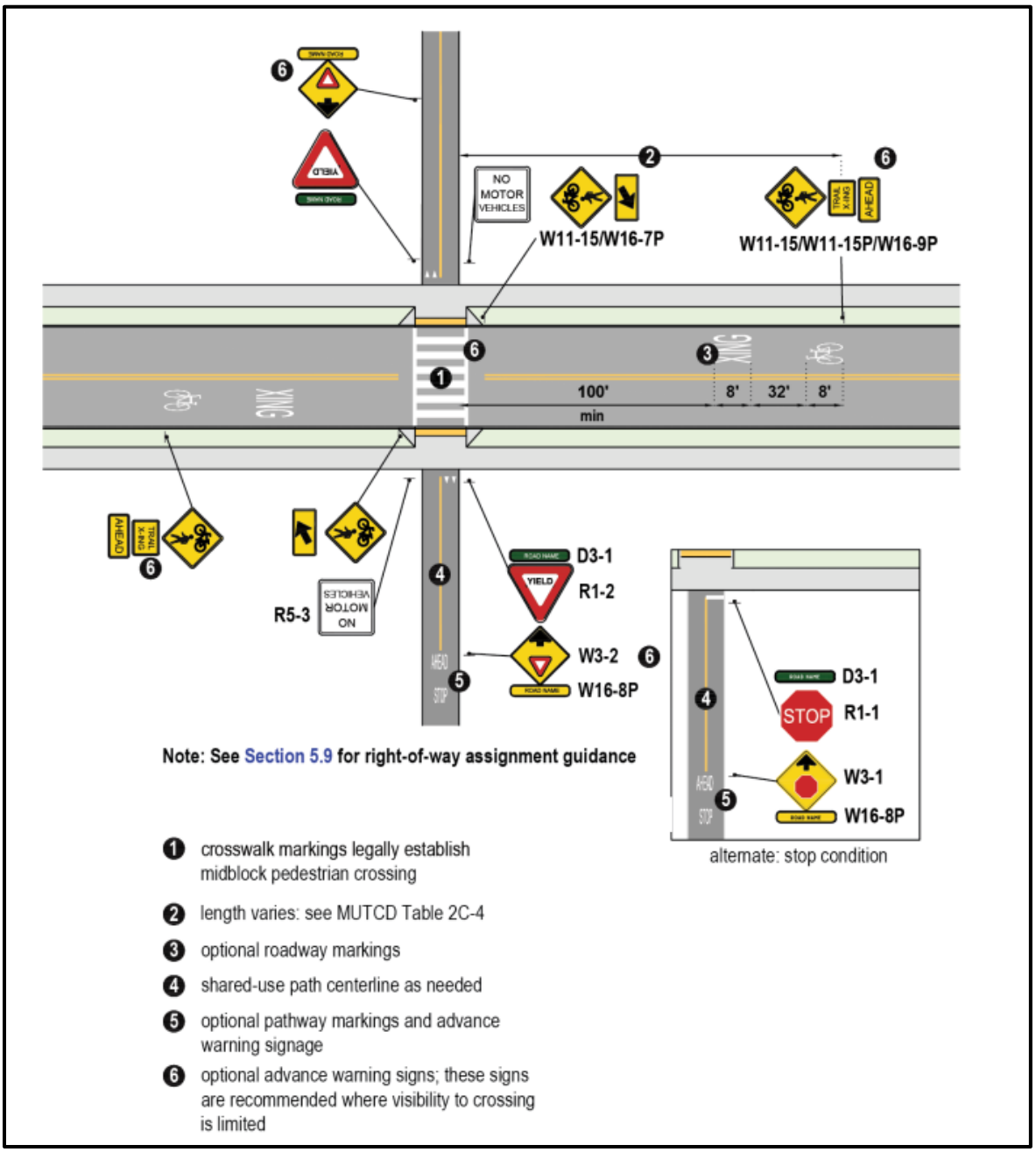

Figure 4-19: Sample Concept Design for Trail Crossing—Trail Users Yield
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

Trail User Has Right-of-Way

Sample treatments for trail crossings of public streets where trail users have the right-of-way are illustrated below. **Figure 4-20** represents a crossing where the roadway users are made to stop at the crossing roadway.

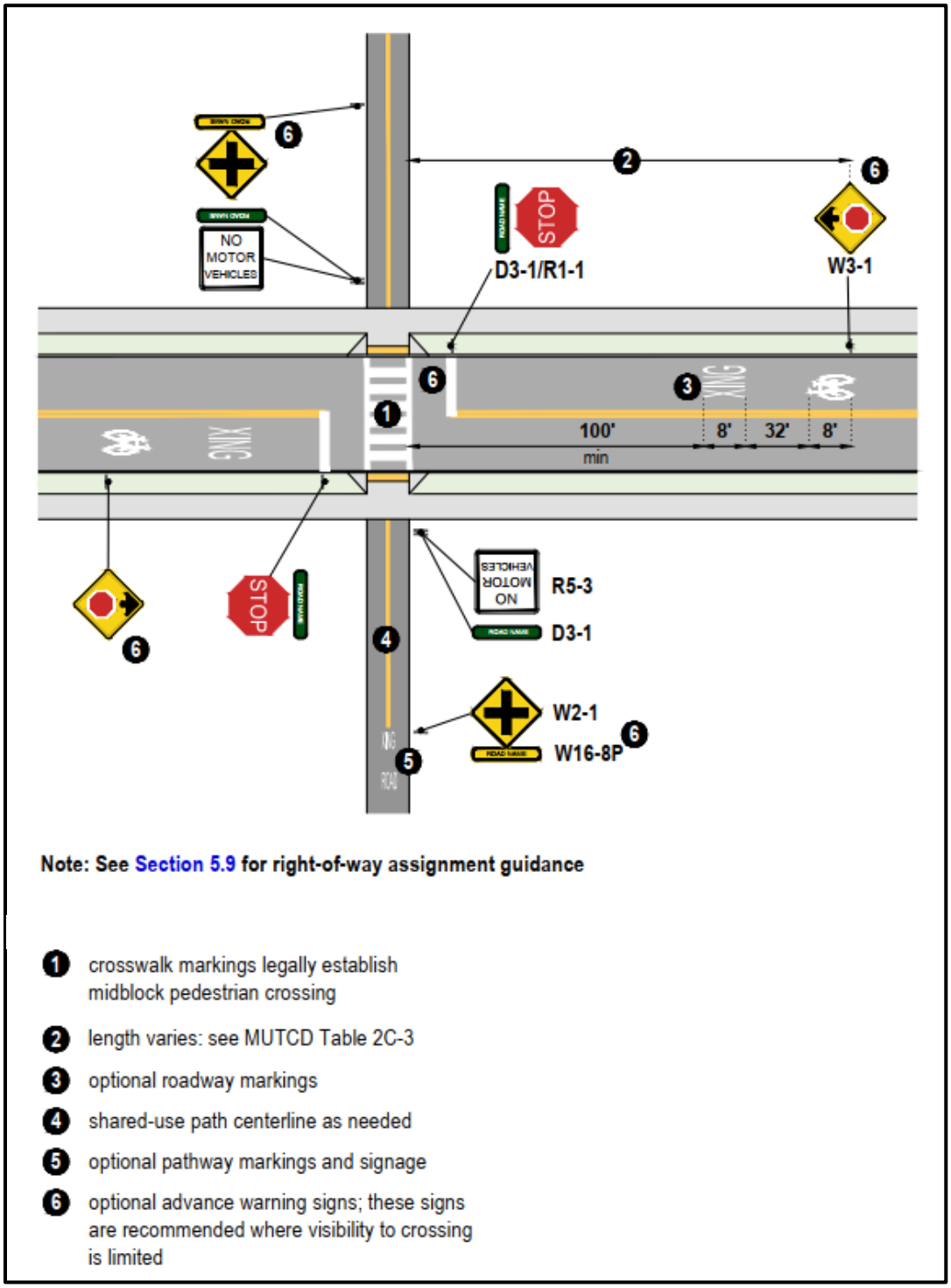

Figure 4-20: Sample Concept Design for Trail Crossing—Roadway Users Yield
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

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5 Wayfinding

5.1 Wayfinding Signage for Cyclists & Pedestrians

There are three general types of wayfinding signs:

1. Confirmation Signs
    a. Purpose: Confirmation signs indicate to bicyclists that they are on a designated bikeway. They also make motorists aware of the bicycle route.
    b. Information: Destinations and Distance/Time. No arrows.
2. Turn Signs
    a. Purpose: Turn signs indicate where a bikeway turns from one street onto another street. They can be used with pavement markings.
    b. Information: Destinations and Arrows
3. Decision Signs
    a. Purpose: Decision signs mark the junction of two or more bikeways.
    b. Information: Destinations, Arrows, and Distances. Travel times are optional.

Figure 5-1 shows several different examples of confirmation, turn, and decision wayfinding signage.

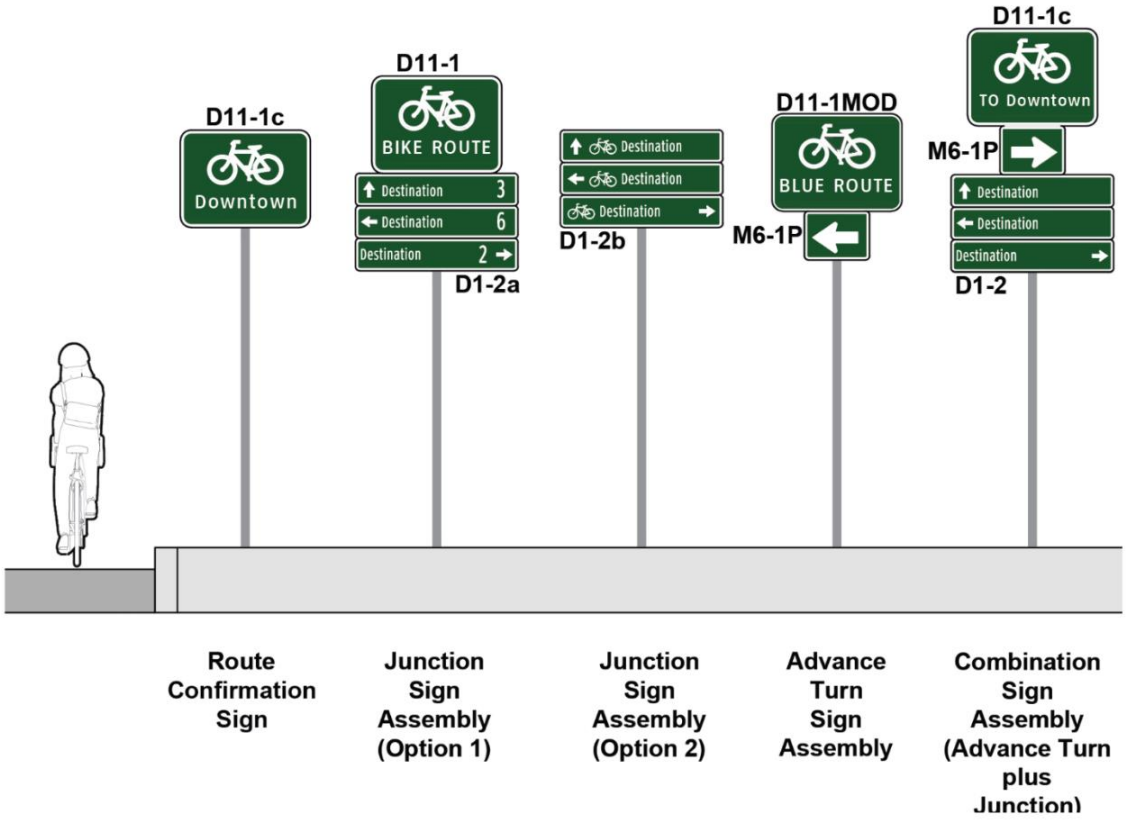

Figure 5-1: Examples of Standard Wayfinding Signs
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

There are varying degrees of flexibility with each type of wayfinding sign. Sections 2D.55 and 9D.12 of the MUTCD summarize deviations from standard signage which may be allowed on streets and shared use paths. There are stipulations regarding text size, background colors, sign shape, among others. The Chief Ladiga Trail is a paved shared use path and falls under the jurisdiction of the MUTCD, where natural surface recreational trails would not. An example of a branded community wayfinding sign is included in **Figure 5-2**.

Figure 5-2: Example of Branded Community Wayfinding Signs
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

At this time, holistic branding has not been established for the Chief Ladiga Trail. If branding and logos are developed, more unique signage which adheres to MUTCD standards is permissible. A critical mark of success for many trail systems is developing branding and a cohesive appearance for users. This also extends to city centers and commercial districts, which can be identified or integrated into the trail system by cohesive wayfinding signage.

Additional tools such as information kiosks or maps can serve to complement standard, MUTCD-compliant signage. While there are endless possibilities for wayfinding signage systems, the key to success is consistency throughout a network.

It is important to note that wayfinding signs can be directed towards bicyclists, motorists, or both. For bicyclists, wayfinding signage is applicable throughout Anniston's entire planned bicycle network. Specifically, wayfinding signage is recommended in Downtown Anniston along 11th Street and 18th Street, crossings of Quintard Avenue, and in the vicinity of Zinn Park. Along all sections of the Chief Ladiga Trail, wayfinding signs would also be optimal. An example of a key location within the City is the McClellan Spur connections to Summerall Gate Road and Baltzell Gate Road.

For motorists, wayfinding signs would primarily serve to direct to trailheads (parking along the Chief Ladiga Trail) or other significant places to access the bicycle network. The placement of these signs would be dependent on the placement of these access points. These signs would be placed along major streets such as Quintard Avenue, Noble Street, and AL-202.

With careful placement, wayfinding signs can direct both motorists and bicyclists. This is especially true for signage along AL-202 at Legarde Avenue, along Quintard Avenue, and on Noble Street at crossings of the designated bicycle network.

5.1.1 Confirmation Signs

Purpose

Confirmation signs indicate to bicyclists that they are on a designated bikeway. They also make motorists aware of the bicycle route.

Information

Confirmation signs can include destinations and distance/time. They do not include arrows. Example confirmation signs are shown in **Figure 5-3**.

Placement

Confirmation signs should be placed every one-quarter to one-half-mile on off-street facilities and every 2 to 3 blocks along on-street routes, unless another type of sign is used (e.g., within 150 feet of a turn or decision sign). Confirmation signs should be placed soon after turns to confirm destination(s). Pavement markings can also act as confirmation that a bicyclist is on a preferred route.

Figure 5-3: Example Confirmation Signs
Source: NACTO, Urban Bikeway Design Guide, 2014

Design Standards

- Follow MUTCD standards (Section 9A.02 – Standardization of Application for signing), including mounting height and lateral placement from edge of path or roadway. Additional standards and guidance are found in Chapter 9D – Guide and Service Signs.

Design Guidance

- Confirmation signs should be placed every one-quarter to one-half mile along off-street bicycle routes or every 2 to 3 blocks along on-street routes, as well as on the far side of major street intersections.
- Clearview Highway font is recommended, as it is commonly used for guide signs in the United States.

5.1.2 Turn Signs

Purpose

Turn signs indicate where a bikeway turns from one street onto another street. They can be used with pavement markings.

Information

Turn signs include destinations and arrows. Example turn signs are shown in **Figure 5-4**.

Placement

Turn signs should be placed on the near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through). Pavement markings can also indicate the need to turn to the bicyclist.

Figure 5-4: Example Turn Signs
Source: NACTO, Urban Bikeway Design Guide, 2014

Design Standards

- Follow MUTCD standards (Section 9A.02 – Standardization of Application for signing), including mounting height and lateral placement from edge of path or roadway. Additional standards and guidance are found in Chapter 9D – Guide and Service Signs.

Design Guidance

- Turn signs should be placed on the near-side of the intersection to indicate where the bike route turns.
- Clearview Highway font is recommended, as it is commonly used for guide signs in the United States.

5.1.3 Decision Signs

Purpose

Decision signs mark the junction of two or more bikeways.

Information

Decision signs include destinations, arrows, and distances. Travel times are optional but recommended. Example decision signs are shown in **Figure 5-5**.

Placement

Decision signs should be placed on the near-side of intersections in advance of a junction with another bicycle route.

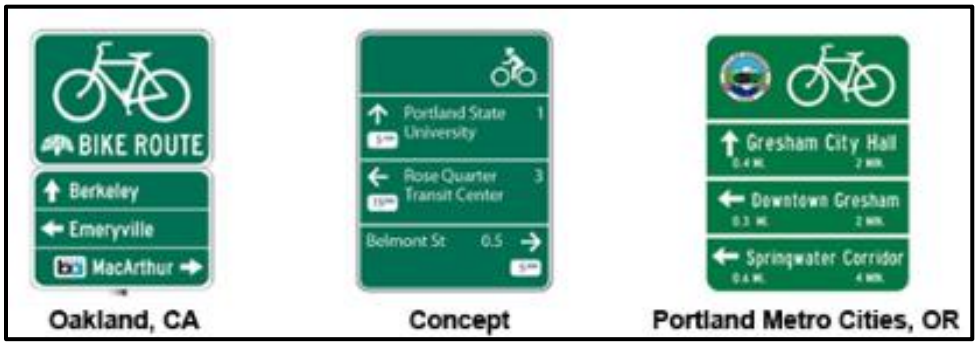

Figure 5-5: Example Decision Signs

Source: NACTO, Urban Bikeway Design Guide, 2014

Design Standards

- Follow MUTCD standards (Section 9A.02 – Standardization of Application for signing), including mounting height and lateral placement from edge of path or roadway. Additional standards and guidance are found in Chapter 9D – Guide and Service Signs.

Design Guidance

- Decision signs should be placed in advance of all turns (near-side of intersection) or decision points along the bicycle route.
- Decision signs should include destinations, directional arrows, and distance. Travel time required to reach the destination provides bicyclists with additional information and may also be included. It is recommended that a 10-mph bicycle speed be used for travel time calculations.
- The closest destination to each sign is placed in the top slot, with farther destinations placed in slots two and three. This allows the nearest destination to "fall off" the sign and subsequent destinations to move up the sign as the bicyclist approaches. For longer routes, show intermediate destinations rather than include all destinations on a single sign.
- Clearview Highway font is recommended, as it is commonly used for guide signs in the United States.

Figure 5-6 illustrates the recommended placement of wayfinding signs at intersections.

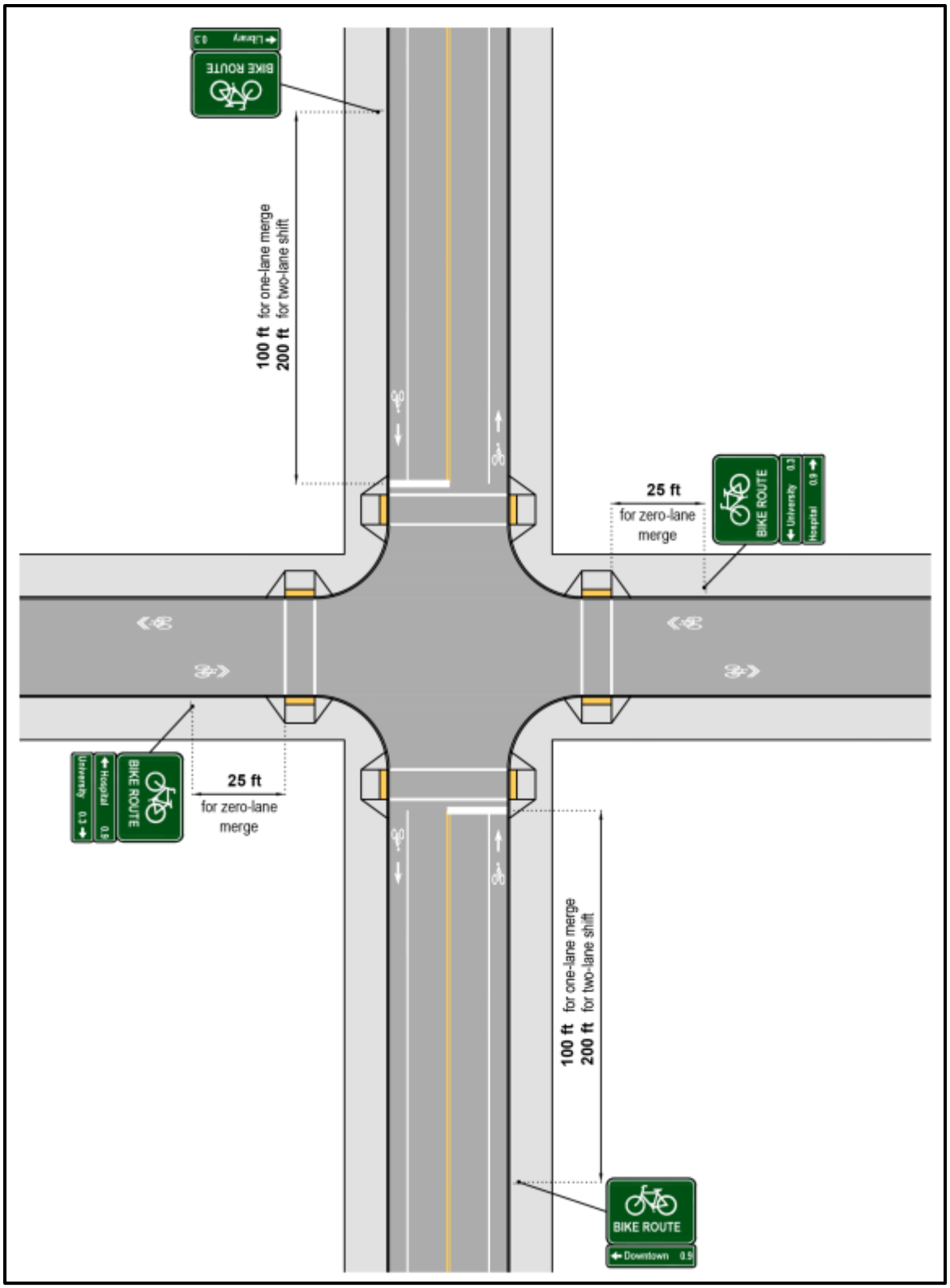

Figure 5-6: Placement of Wayfinding Signs
Source: AASHTO, Guide for the Development of Bicycle Facilities, 2024

5.2 Informational Kiosks & Wayfinding

With the recent extension of the Chief Ladiga Trail into downtown Anniston, six new distinct trailhead kiosks have been developed at key locations. Each kiosk supports visitors in wayfinding, orientation, and engagement with the trail system. The unique kiosks are located at:

- Michael Tucker Park and Campground
- McClellan Spur
- 14th Street
- 10th Street
- Anniston Multimodal Center & Dr. David Satcher Wellness Clinic and Park

All are situated within the city limits of Anniston, Alabama, enhancing user experience and integrating the extended trail corridor. **Figures 5-7 and 5-8** show inset maps for kiosk signage, and **Figures 5-9** through **5-13** display example maps for kiosk signs for the locations listed above. The inset maps are designed to occupy space on the five informational kiosks to orient trail users on their general location within the context of the entire trail. **Appendix A** includes an example detail of a sign structure housing an informational kiosk map.

- **Figure 5-7**: Chief Ladiga Trail Inset Map
- **Figure 5-8**: Chief Ladiga Trail Anniston Extension Inset Map
- **Figure 5-9**: Michael Tucker Park Kiosk Map
- **Figure 5-10**: McClellan Spur Kiosk Map
- **Figure 5-11**: 14th Street / Historic Downtown Anniston Kiosk Map
- **Figure 5-12**: 10th Street / Historic Downtown Anniston Kiosk Map
- **Figure 5-13**: Anniston MMTC / Dr. David Satcher Wellness Clinic & Park Kiosk Map

All figures referenced in Section 5.2 remain in draft form at the time of this Manual's submittal and will be finalized in a future update.

Design of the information kiosk maps is attributed to Jennifer Green, author of the thesis entitled *Tourism, Mapping, Retail and Recreational Trails: A Case Study of Connectivity between Trails and Adjacent Downtowns in Anniston, Alabama, USA*. The case study "examines the estimated increase in economic impact on a geography's local economy by creating cross-marketing efforts between expanding and established outdoor recreation trail to a closely located city downtown commerce district."

Further coordination with City of Anniston Main Street is recommended for **Figures 5-12 and 5-13** to develop a program for local businesses to access space on the informational kiosks for advertising purposes.

Figure 5-7: Inset Map 1
Source: Jennifer Green

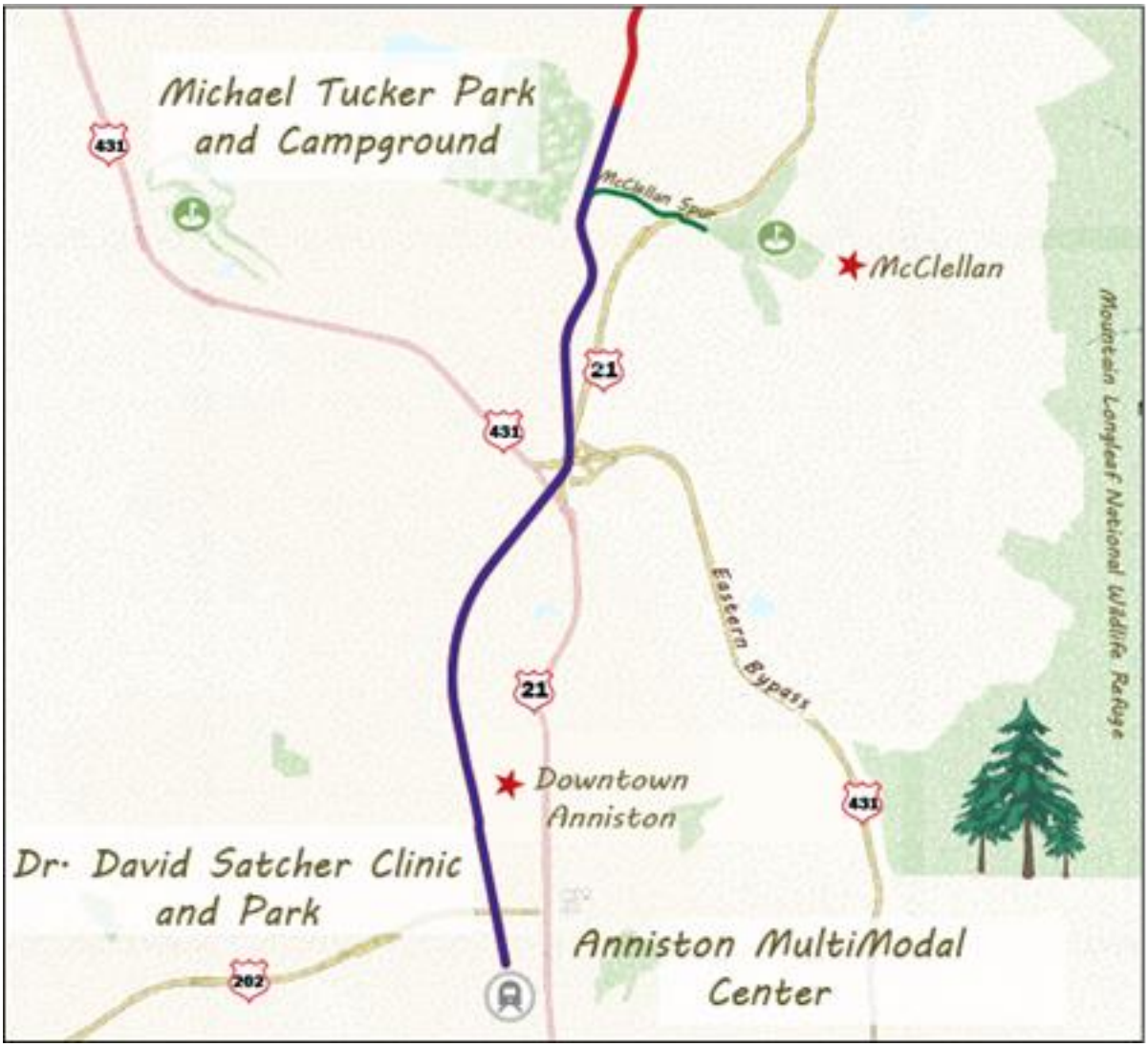

Figure 5-8: Inset Map 2
Source: Jennifer Green

Figure 5-9: Location Map - Michael Tucker Park
Source: Jennifer Green

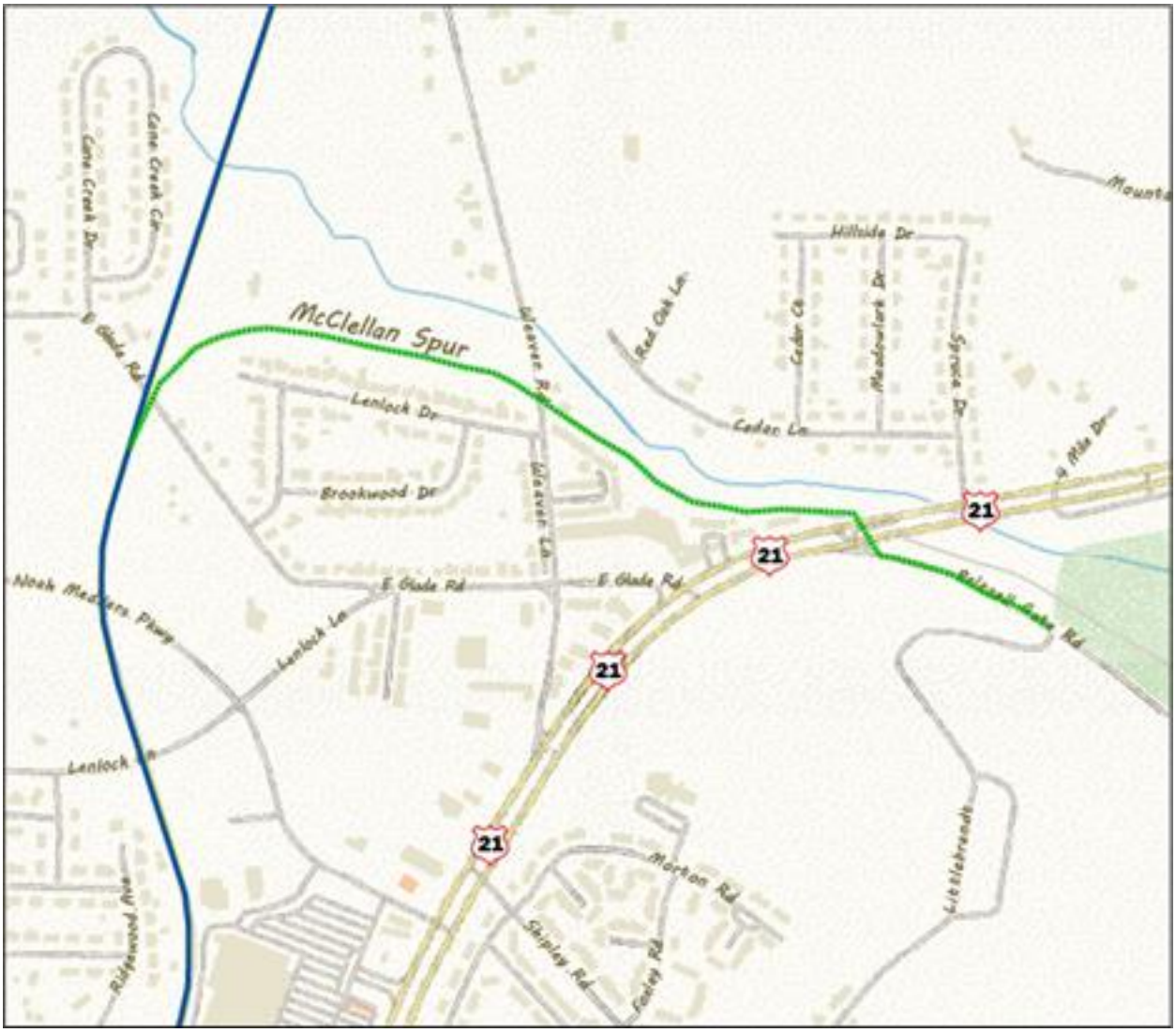

Figure 5-10: Location Map - McClellan Spur
Source: Jennifer Green

Figure 5-11: Location Map 14th Street / Historic Downtown Anniston
Source: Jennifer Green

Figure 5-12: Location Map - 10th Street / Historic Downtown Anniston
Source: Jennifer Green

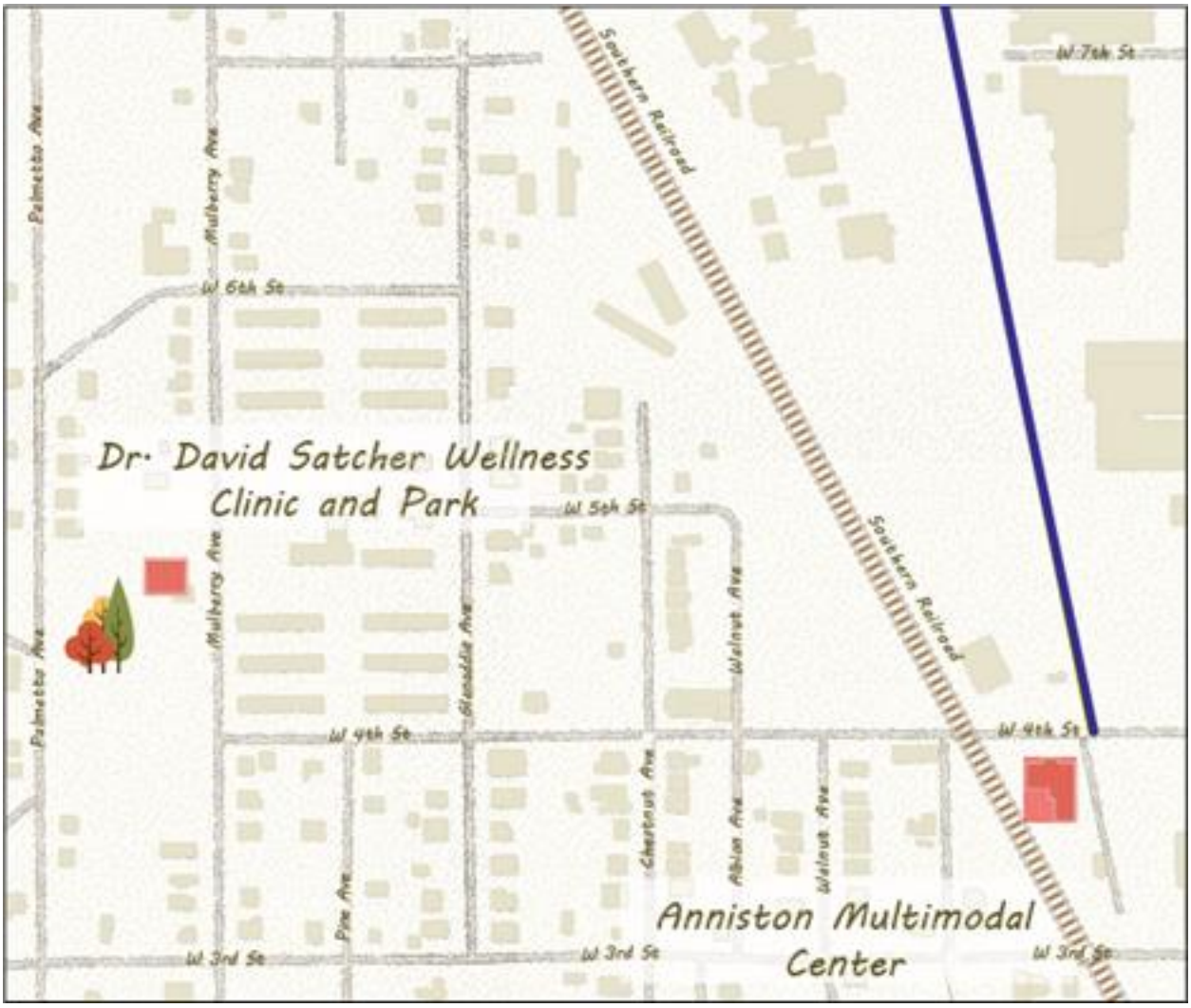

Figure 5-13: Location Map - Anniston Multimodal Center
Source: Jennifer Green

5.2.1 Signage Specification

- **Kiosk Sign Size:** Minimum 36"x36" per location, designed for high visibility and legibility.
- **Placement:** Installed prominently at strategic locations to maximize accessibility and visitor engagement.
- **Durability:** Graphic panels produced on weather-resistant substrate, suitable for outdoor use, vandal resistance, and long-term colorfastness.
- **Content Elements:**
    - Detailed, up-to-date Trail network maps
    - "You Are Here" orientation markers
    - Key destinations and trail amenities
    - Safety messages, trail etiquette, and regulatory notices
    - Site-specific features relevant to each trailhead

5.2.2 Map Creation and Sign Design Process

- **Data Preparation:**
    - All base maps and geospatial data were created using ArcGIS Pro, ensuring accuracy of local features, points of interest, and trail routing.
    - GIS data layers included county and municipal boundaries, natural features, parks, intersecting trails, roads, and points of interest pertinent to the trail experience.
- **Design Integration:**
    - ArcGIS Pro maps were exported using the Adobe Creative Cloud extension, streamlining the workflow into Adobe Illustrator.
    - In Adobe Illustrator, the base maps were stylized to enhance clarity, contrast, and visual appeal, conforming to the graphic standards set for the trail system. Custom symbols, color palettes, and labeling were refined to ensure legibility from typical kiosk viewing distances.
- **Customization:**
    - Each kiosk map was further tailored to its specific location, featuring focused legends, landmark callouts, and relevant amenities unique to that site.
    - Orientation arrows, summary trail data, and important urban or park connections were incorporated and positioned for quick reference by visitors.

5.2.3 Content and Accessibility Considerations

- **Font and Visuals:** Large, easy-to-read sans-serif typography, high-contrast color choices, and simplified graphic elements were used to accommodate a broad user spectrum including seniors and children.
- **ADA Compliance:** Placement and content were reviewed in alignment with accessibility guidelines and national sign standards for trail facilities.
- **Information Hierarchy:** Map elements are arranged with the most relevant wayfinding details, followed by secondary content (e.g., safety, events).

5.2.4 Updating and Maintenance

- **Archival:** All electronic artwork and geospatial data for each kiosk installation is archived to facilitate future updates as the trail or city changes.
- **Review:** Content accuracy and physical condition are reviewed periodically by the responsible public works or parks department, with map updates executed as needed.

5.2.5 Next Steps

This approach ensures all official kiosks along the Chief Ladiga Trail in Anniston present clear, visually consistent, and informative wayfinding resources. Through the integration of professional GIS mapping tools and advanced graphic design methodologies, the kiosks directly support both recreational users and local tourism while reinforcing the identity and connectivity of the city's expanded trail system.

Upon finalization of the proposed kiosk maps, it is recommended that the City pursue installation of the kiosks according to the guidance set forth in this Manual. Along with the kiosk maps, appropriate safety and emergency contact information need to be developed and included on each kiosk.

There are additional opportunities for the City to facilitate placement of local businesses on the kiosk, which can be further explored by the City in coordination with Main Street Anniston.

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6 Signalization

6.1 Bicycle & Pedestrian Signals

Given Anniston's current network and infrastructure characteristics, two types of bicycle and pedestrian signals are recommended:

1. Countdown Pedestrian Signals
2. Active Warning Beacons

Though countdown pedestrian signals are named with pedestrians in mind, they can serve the needs of both pedestrians and bicyclists.

6.1.1 Countdown Pedestrian Signals

Countdown pedestrian signals are appropriate in areas of pedestrian activity at crossings characterized by high traffic volumes. Along roadways with share-the-road designations and/or designated bicycle lanes, these signals serve two functions: 1) provide motorists, bicyclists and pedestrians with a clear indication of crossing times; and 2) provide pedestrians and bicyclists notification as to whether they have sufficient time to clear a certain intersection. **Figure 6-1** shows several examples of countdown pedestrian signals.

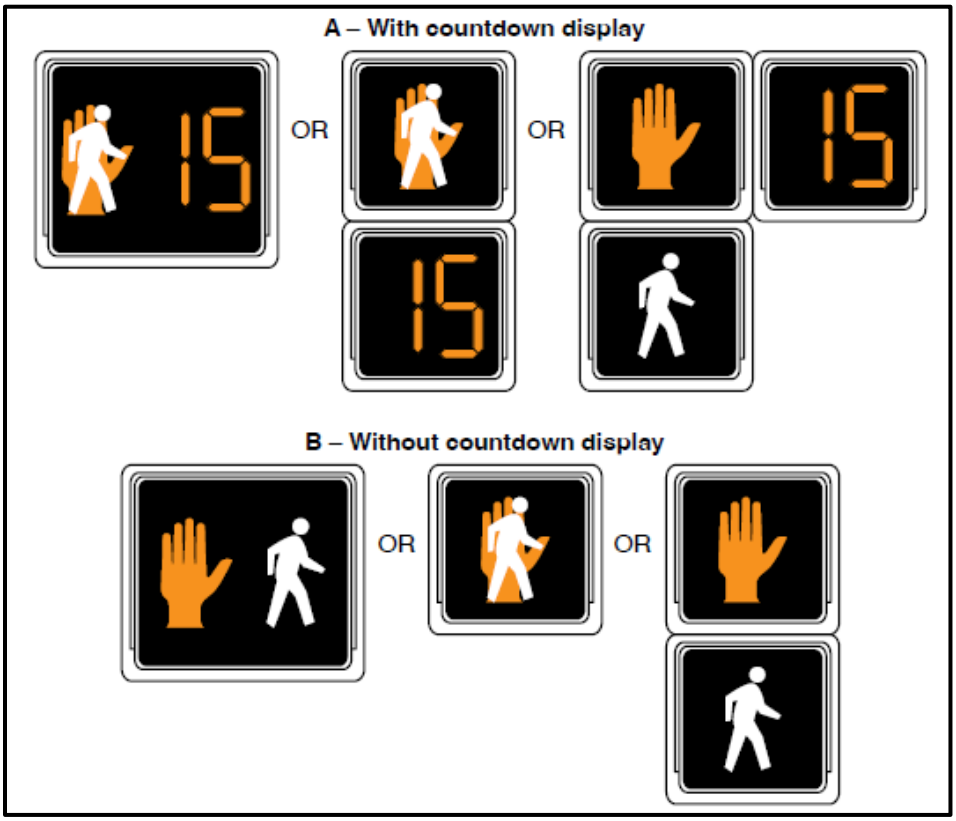

Figure 6-1: Example Countdown Pedestrian Signals
Source: FHWA, MUTCD, 2023

Application

Along the proposed bicycle network, potential locations for these treatments are:

- 11th Street at Quintard Avenue
- 18th Street at Quintard Avenue
- AL 21 at Baltzell Gate Road (see **Figure 6-2**)
- AL 21 at Summerall Gate Road
- AL 202 at Noble Street
- AL 202 at Legarde Avenue

In addition to intersections along the designated bicycle network, countdown pedestrian signals will be appropriate in high pedestrian areas of Downtown Anniston, such as along Quintard Avenue and Noble Street.

Figure 6-2: Example Pedestrian Countdown Signal
Source: Sain Associates

Design Standards

- At crosswalks where the pedestrian change interval is more than 7 seconds, all pedestrian signal heads shall include a pedestrian change interval countdown display in order to inform pedestrians and bicyclists of the number of seconds remaining in the pedestrian change interval. The pedestrian change interval countdown display may be used at crosswalks where the pedestrian change interval is 7 seconds or less.
- Where countdown pedestrian signals are used, the countdown shall always be displayed simultaneously with the flashing UPRAISED HAND (symbolizing DON'T WALK) pedestrian signal head indication.

- Countdown pedestrian signals shall consist of Portland orange numbers that are at least 6 inches in height on a black opaque background. The countdown pedestrian signal shall be located immediately adjacent to the associated UPRAISED HAND (symbolizing DON'T WALK) pedestrian signal head indication.
- Display of the remaining seconds shall begin only at the beginning of the pedestrian change interval (flashing UPRAISED HAND). After the countdown displays zero, the display shall remain dark until the beginning of the next countdown.
- The countdown pedestrian signal shall display the number of seconds remaining until the termination of the pedestrian change interval (flashing UPRAISED HAND). Countdown displays shall not be used during the walk interval or during the red clearance interval of a concurrent vehicular phase.

Design Guidance

- If used with a pedestrian signal head that does not have a concurrent vehicular phase, the pedestrian change interval (flashing UPRAISED HAND) should be set to be approximately 4 seconds less than the required pedestrian clearance time, and an additional clearance interval (during which a steady UPRAISED HAND is displayed) should be provided prior to the start of the conflicting vehicular phase.
- For crosswalks where the pedestrian enters the crosswalk more than 100 feet from the countdown pedestrian signal display, the numbers should be at least 9 inches in height.
- Because some technology includes the countdown pedestrian signal logic in a separate timing device that is independent of the timing in the traffic signal controller, care should be exercised by the engineer when timing changes are made to pedestrian change intervals.
- If the pedestrian change interval is interrupted or shortened as part of a transition into a preemption sequence, the countdown pedestrian signal display should be discontinued and go dark immediately upon activation of the preemption transition.

6.1.2 General Signal Timing Standards

As bicyclists go from a separated path network to an on-street network sharing common travel lanes with motorists, they become subject to traffic controls that must satisfy the diverse needs of multiple users, including pedestrians. When bicyclist and pedestrian presence is expected, the pedestrian should be viewed as the design user. Design components that should be considered at signal controlled intersections include: traffic signal head options for controlling bicycles, signal phasing, signal timing, and detection. To determine if a traffic signal should be installed, the warrant criteria laid out in the *MUTCD* should be evaluated.

Because bicyclists typically travel at much lower speeds, adjustments in signal timing are usually required to ensure safe and efficient movement of the entire traffic stream. Minimum Green Times (MGT) based on Bicycle Crossing Times (BCT) need to be developed for both stopped (standing) and moving (rolling) bicycle conditions.

Standing Bicycle Crossing Time ($BCT_{standing}$)

$$BCT_{standing} = PRT + \frac{V}{2a} + \frac{W + L}{V}$$

- $BCT_{standing}$ = Bicycle Crossing Time (seconds)
- W = Intersection Width (feet)
    - Measured from intersection entry (stop line or crosswalk) to halfway across the last lane carrying through traffic
- L = Typical Bicycle Length (6')
- V = Attained Bicycle Crossing Speed (14 feet per second)
- PRT = Perception Reaction Time (1 second)
- a = Bicycle Acceleration (1.5 $feet/second^2$)

Bicycle Minimum Green (BMG) Time for Standing Bicycle

$$BMG_{standing} = BCT_{standing} - Y - R_{clear}$$

$$Y = Yellow\ Change\ Interval\ (seconds),\ R_{Clear} = All - Red\ Time\ (seconds)$$

Rolling Bicycle Crossing Time ($BCT_{rolling}$)

$$BCT_{rolling} = (BD + W + L)/V$$

$$BD = PRT\ x\ V + V2/2a$$

$$BCT_{rolling} = Bicycle\ Crossing\ Time\ (seconds)$$

$$W = Intersection\ Width\ (feet)$$

$$L = Bicycle\ Length\ (use\ 6\ feet)$$

$$V = Bicycle\ Speed\ Crossing\ Intersection\ (use\ 14.7\ feet\ per\ second\ for\ flat\ terrain)$$

$$BD = Breaking\ Distance\ (feet)$$

$$PRT = Perception\ Reaction\ Time\ (use\ 1\ second)$$

$$a = Deceleration\ Rate\ for\ Wet\ Pavement\ (use\ 5\ feet/second2)$$

Use of Extension Time (T_{extn})

For bicycles entering an intersection near the end of a green cycle, it may be necessary to consider the use of a time extension to allow the intersection to clear. Extension time can be estimated using the following formula:

$$BCT_{rolling} <= T_{extn} + Y + R_{clear}.$$

Figure 6-3 provides recommended pedestrian intervals for signal timing.

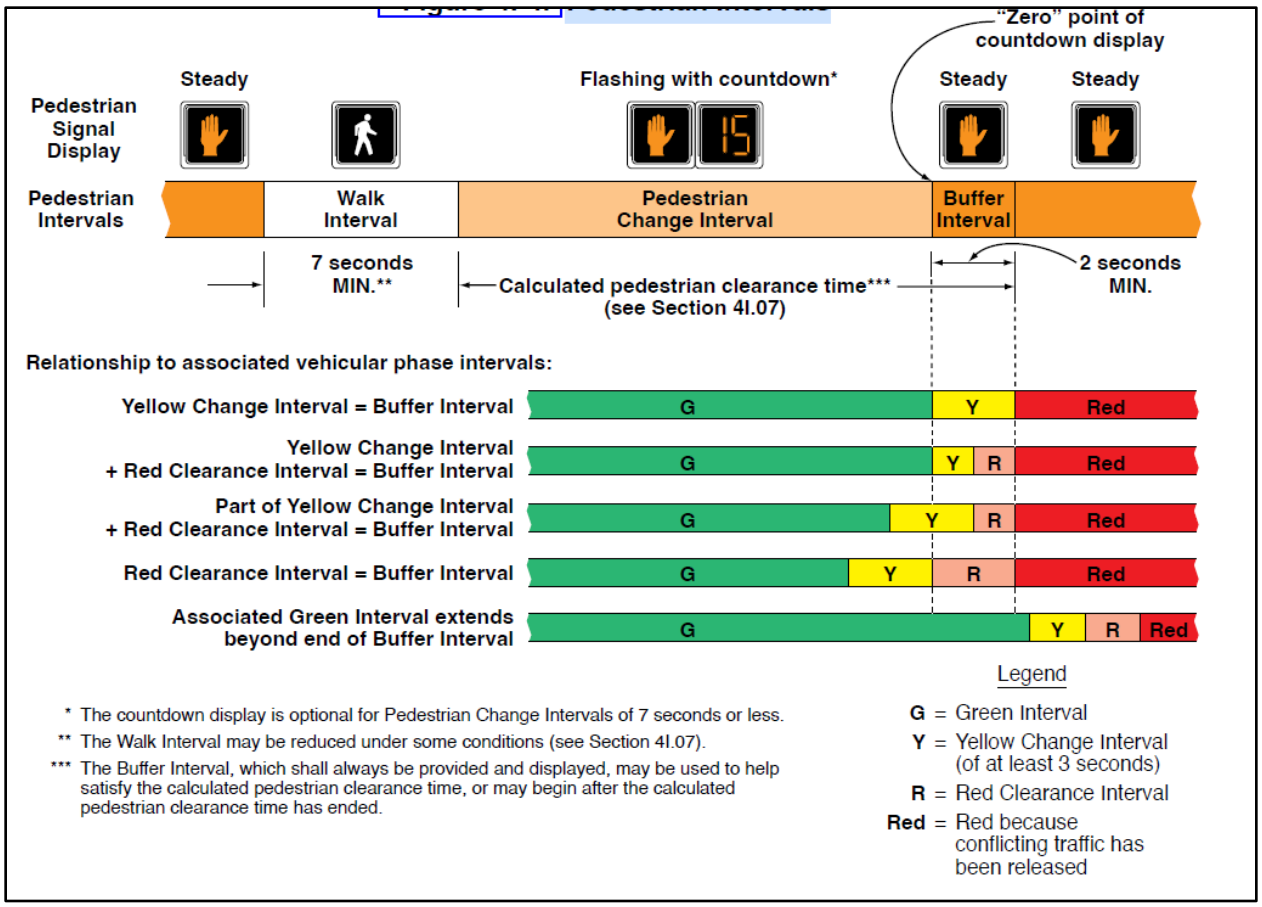

Figure 6-3: Signal Timing for Countdown Pedestrian Signals
Source: FHWA, MUTCD, 2023

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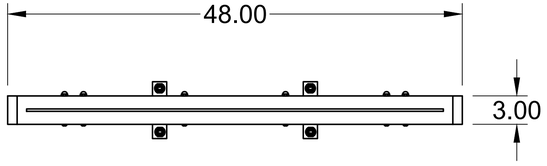
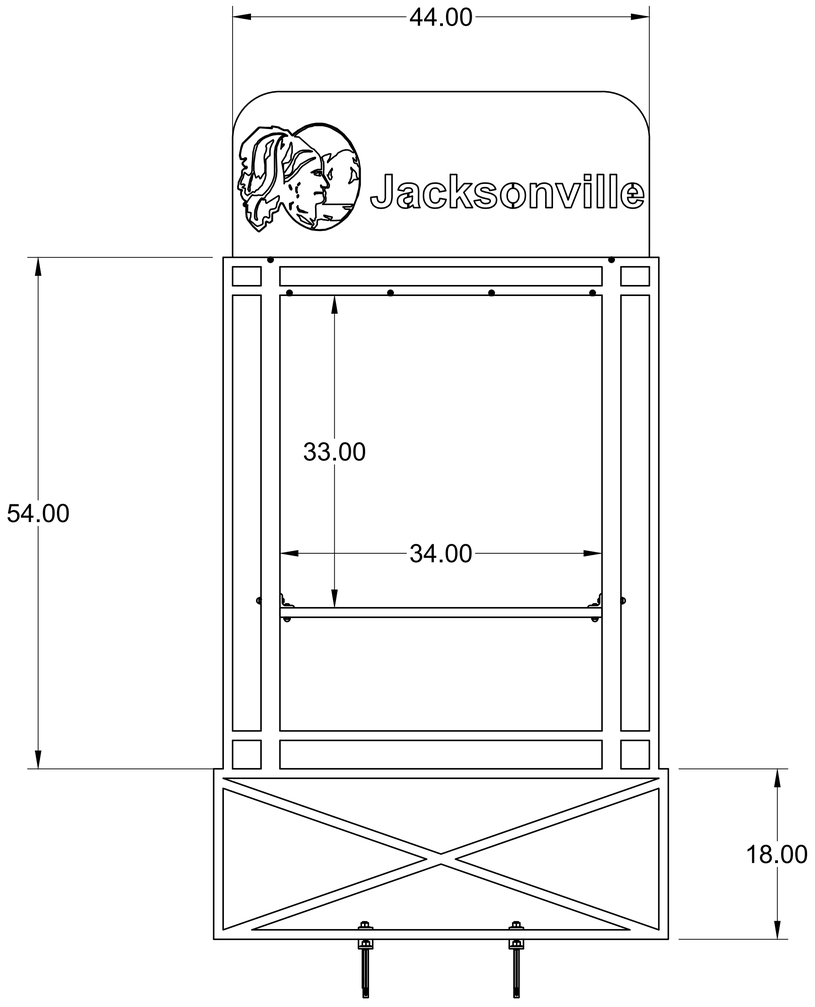
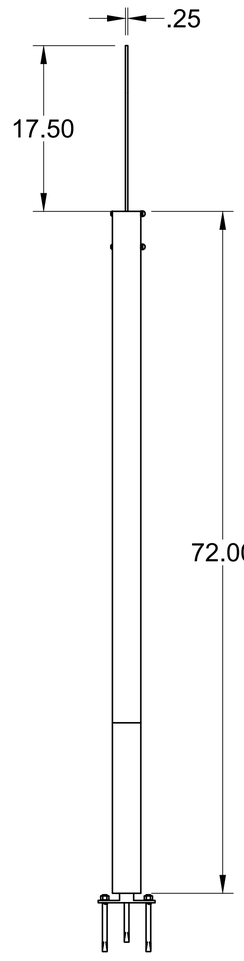
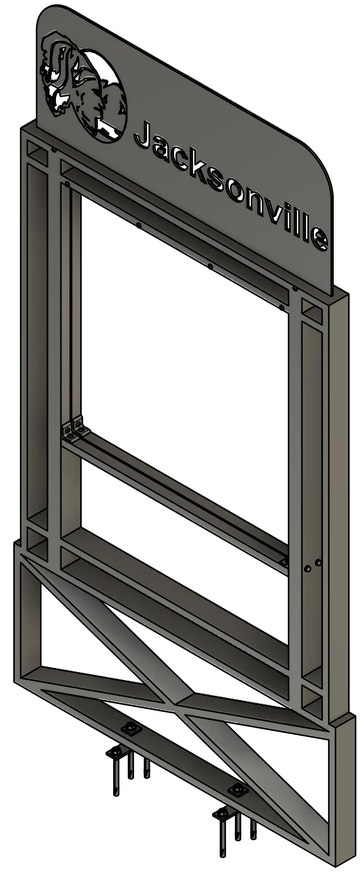
Appendix A – Conceptual Drawing of Kiosk Frame Structure

Source: Jacksonville State University Center for Economic Development and Business Research









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	TITLE: Kiosk Frame			
APPROVED	SIZE: D	CODE	DWG NO	REV
CHECKED				
DRAWN: Logan Nelms 9/13/23	SCALE: 1:8	WEIGHT	SHEET: 1/1	