



Bike Lanes - A Practical Perspective on the U.S. Best Practice

Transportation Services Division
Development Services Department

March 27, 2024
MC24-001



Outline

Introduction [Types by US Best Practice]

Jurisdictional Perspectives

Way Forward

Introduction

Bike Lanes are a portion of the roadway designated by striping, signage, and pavement markings for the exclusive use of bicyclists.

The U.S. best practice groups the bike lanes into four distinct types:

1. Conventional Bike Lanes
2. Buffered Bike Lanes
3. Contra-Flow Bike Lanes
4. Left-Side Bike Lanes

Introduction - Conventional Bike Lanes **

Merits

- Increases bicyclist comfort and confidence on busy streets.
- Creates separation between bicyclists and automobiles.
- Increases predictability of bicyclist and motorist positioning and interaction.

Demerits

- Door zones and turning movement conflicts
- Minimal Buffer between the modes of travel

** *Hyperlink [access to detailed discussion on the topic]*



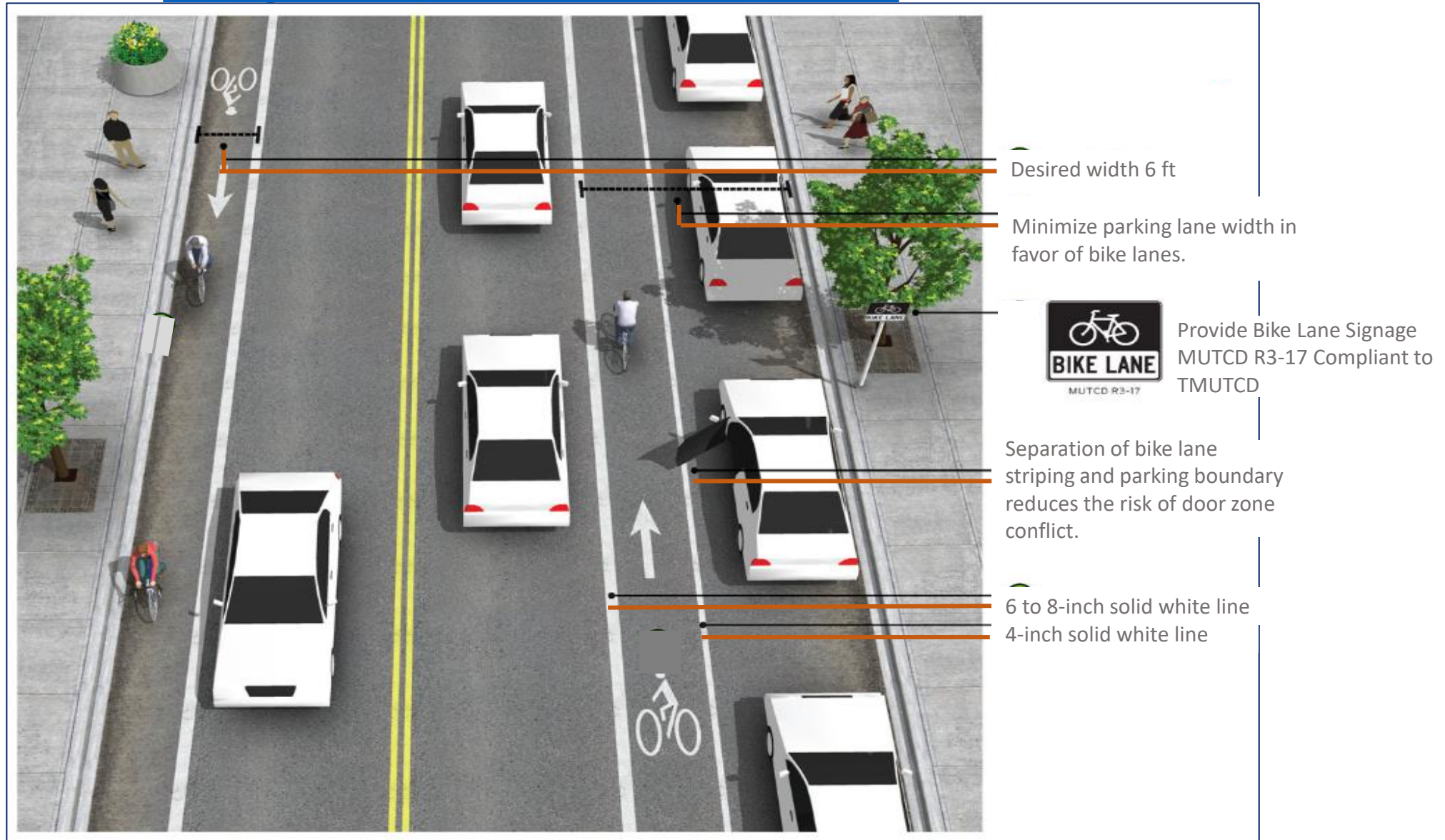
Source: National Association of City Transportation Officials

Introduction - Design of Conventional Bike Lanes

Treatment Adoption and Professional Consensus

Conventional Bicycle lanes are the most common bicycle facility in use in the US, and most jurisdictions are familiar with their design and application as described in the MUTCD and *AASHTO Guide for the Development of Bicycle Facilities*.

Source: National Association of City Transportation Officials



Introduction - Buffered Bike Lanes **

Merits

- Provides greater shy distance between vehicles and bicyclists
- Encourages bicyclists to ride outside the door zone due to the buffer between the parked cars and the bike lanes.
- Provides a greater space for bicycling without making the bike lane appear so wide that it might be mistaken for a travel or parking lane.
- Encourages bicycling by contributing to the perception of safety among users of the bicycle network.

Demerits

- Implementation limitations in built-up areas
- May restrict ROW for future expansions

** *Hyperlink [access to detailed discussion on the topic]*



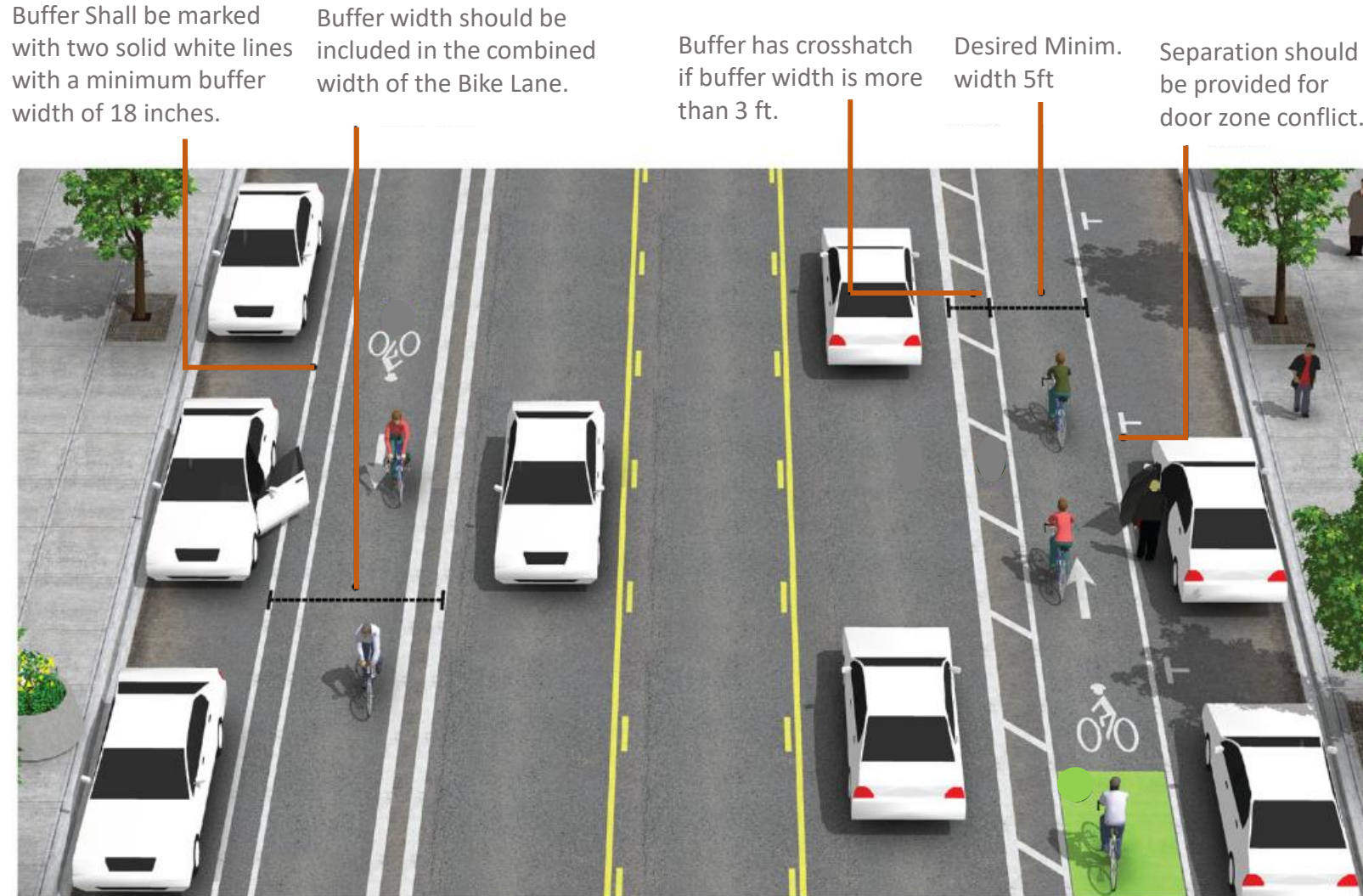
Source: National Association of City Transportation Officials

Introduction - Design of Buffered Bike Lanes

Treatment Adoption and Professional Consensus

Buffered bike lanes are used in the following US cities :

Austin, TX
Cape Coral, FL
Los Angeles, CA
Minneapolis, MN
New York City, NY
Portland, OR
Phoenix, AZ
San Francisco, CA
Seattle, WA
Tucson, AZ



Source: National Association
of City Transportation
Officials

Introduction - Contra Flow Bike Lanes

Treatment Adoption and Professional Consensus

Contra-flow bike lanes are used in the following US cities :

Austin, TX

Boulder, CO

Cambridge, MA

Baltimore, MD

Chicago, IL

Madison, WI

Minneapolis, MN

New York City, NY

Portland, OR

San Francisco, CA

Seattle, WA

Washington, DC

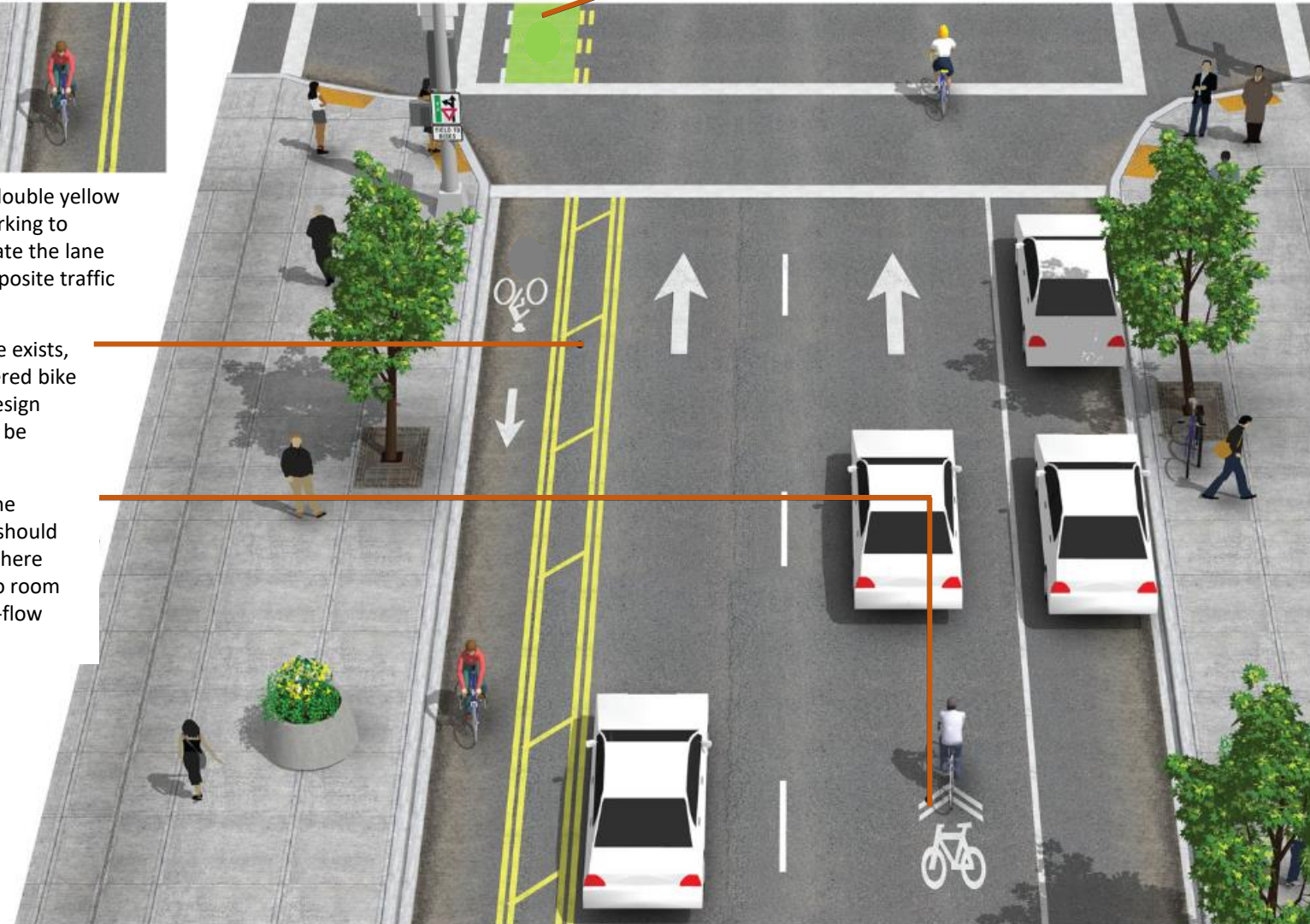
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A solid double yellow line marking to demarcate the lane from opposite traffic

If space exists, a buffered bike lane design should be used.

Shared lane markings should be used where there is no room for a with-flow bike lane.



Contra-flow bike lane markings should be extended beyond the intersection especially contraflow lanes against the curb to alert cross-street traffic

Source: National Association of City Transportation Officials

Introduction - Left Side Bike Lanes **

Merits

- Avoids potential right-side bike lane conflicts on streets.
- Improves bicyclists' visibility by having the bike lane on the driver's side.
- Minimizes door zone conflicts next to parking
- Fewer bus and truck conflicts as most bus stops and loading zones are on the right side of the street.

Demerits

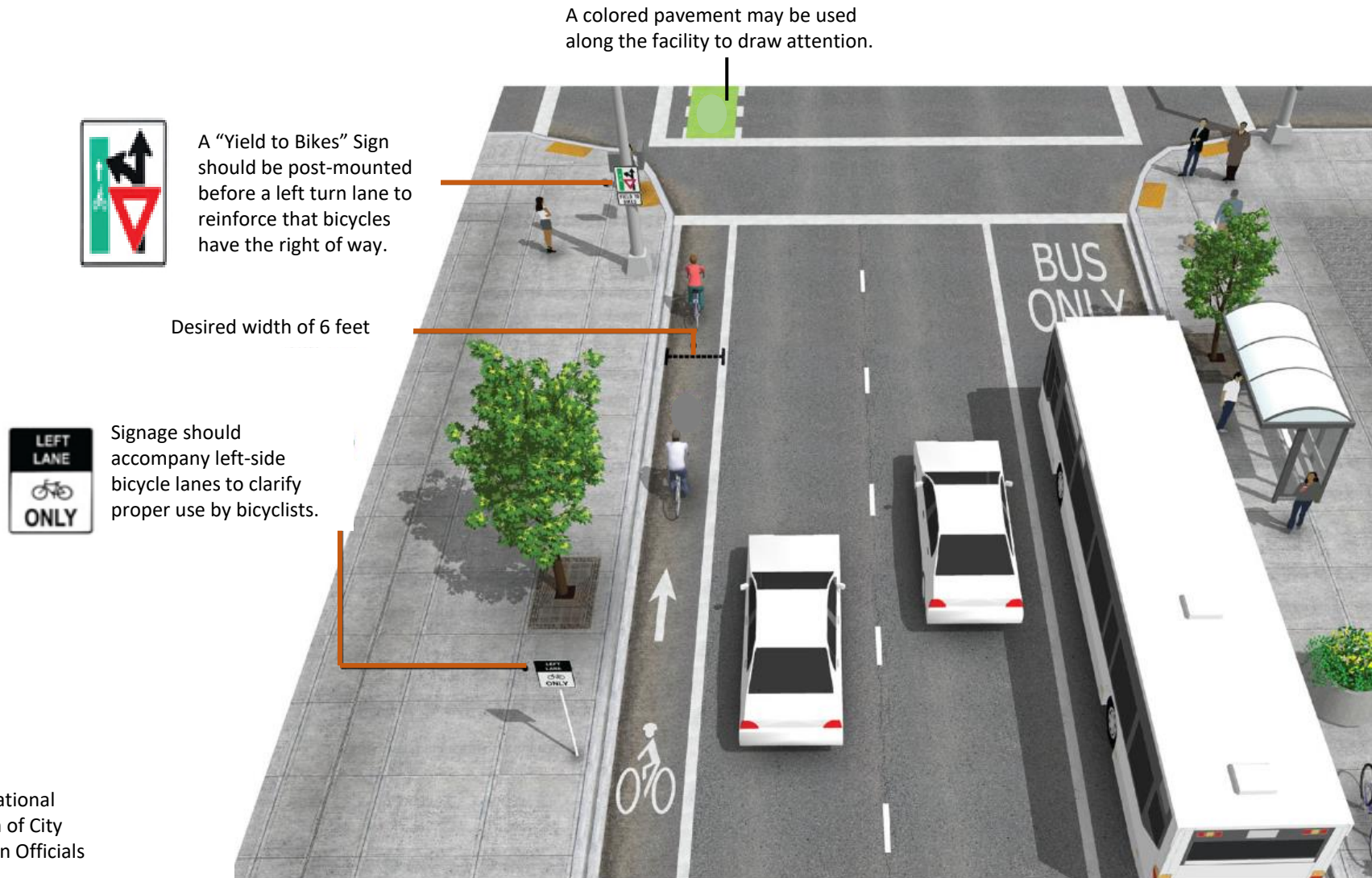
- Efficient applicability on one-way couplets
- Right turn complexities during rush hour

** *Hyperlink [access to detailed discussion on the topic]*



Source: National Association of City Transportation Officials

Introduction - Left Side Bike Lanes Design



Source: National
Association of City
Transportation Officials

Treatment Adoption and Professional Consensus

Left-side bike lanes are used in
the following US cities:

Berkeley, CA

Boston, MA

Chicago, IL

Madison, WI

Minneapolis, MN

Naples, FL

New York City, NY

Portland, OR

Sacramento, CA

San Francisco, CA

Seattle, WA

Washington, DC

Introduction – Other Bike Lane Concepts

Shared Roadway

Marked by a diamond-shaped sign with a bike. These signs are on roads where people on bikes and vehicles share the road. They are typically installed on streets where a person in a vehicle can safely pass a person on a bike within three feet of distance.

Source: [City of Denton](#)



Source: [City of Denton](#)

Sharrows

A shared lane marking of a bicycle symbol with two chevrons above it. People on bikes and in vehicles share the roadway. Used on low-volume, low-speed streets under 30 MPH.



Introduction– Other Bike Lane Concepts

Green Bike Lane

These are used to identify conflict areas where people in vehicles and on bicycles interact to make each other more aware of the other's presence.



Source: [City of Denton](#)

Shared Use Path/Side path

An extra-wide sidewalk (typically eight or more feet wide) adjacent to the roadway that is meant for travel by pedestrians and people on bikes.



Source: [City of Denton](#)

Trails

A wide path outside of the road right-of-way is meant for use by all non-motorized forms of transportation.



Source: [Cooper Creek Trail](#),
Denton
Picture: Ross Patterson
June 19, 2023

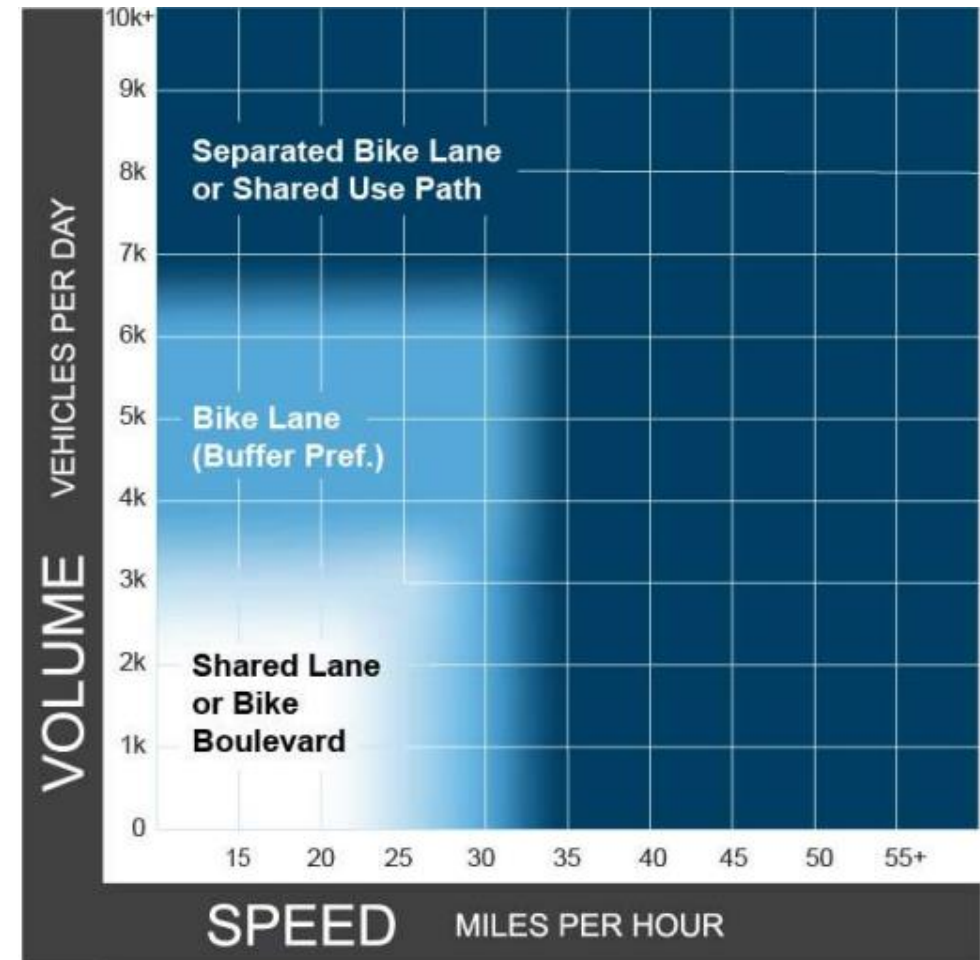
Jurisdictional Perspectives

1. State of Texas Perspective
2. City of Denton Perspective

Jurisdictional Perspectives - Texas Department of Transportation

Bike Facility Selection Guidance for Urban Context

- **New Construction or Existing Right of Way**
(Per guidance)
- **Bridge Replacement or Rehabilitation**
(minimum 5 ft Clear Space)
- **Texas Bicycle Tourism Trails**
(10-ft general or min 8 ft shoulder width)



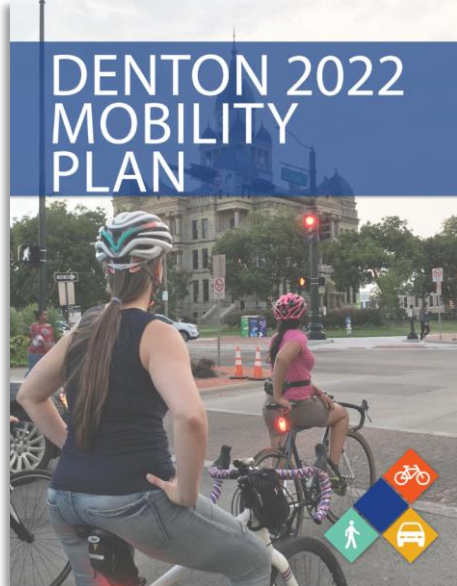
** TXDOT Provides Separate Bike Facility Selection Guidance for Rural Context

Source: TXDOT Bicycle Accommodation Design Guide, 2021

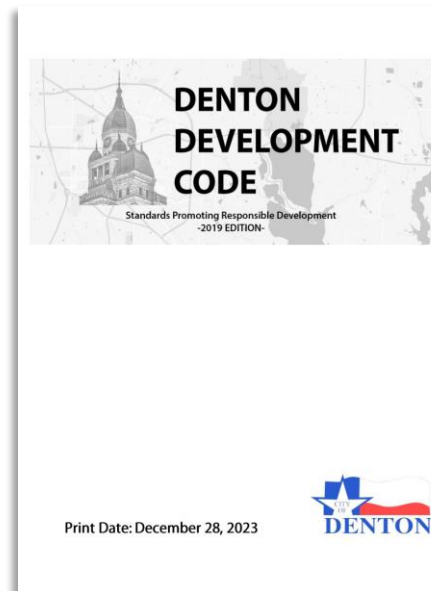
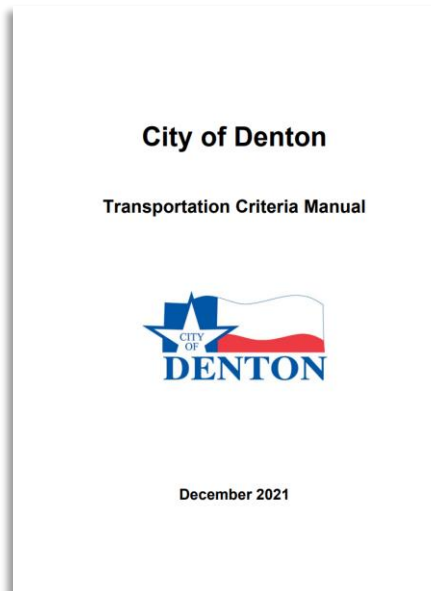
City of Denton Bike Lanes Perspective

Resources

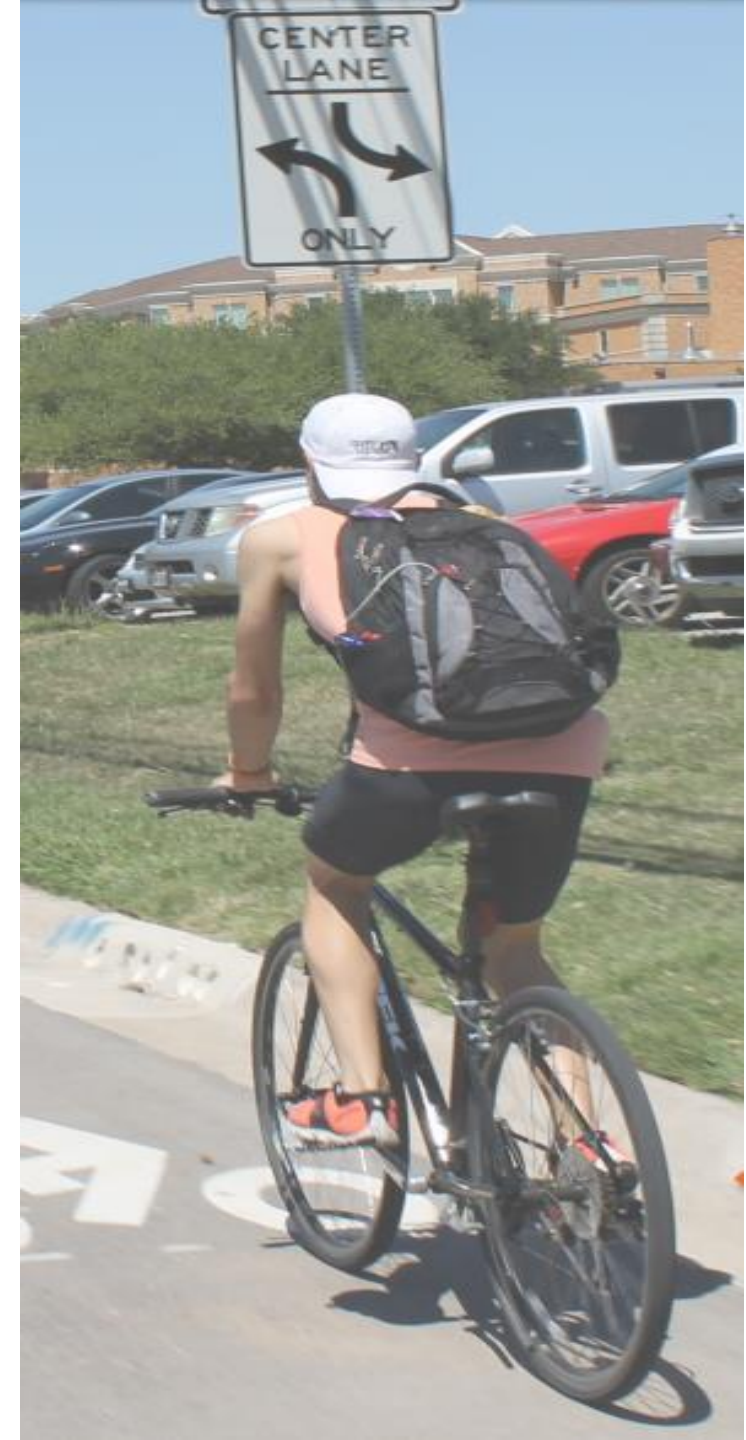
- Denton Mobility Plan (Bicycle Plan)
- Denton Transportation Criteria Manual
- Denton Development Codes and Standard Details Document



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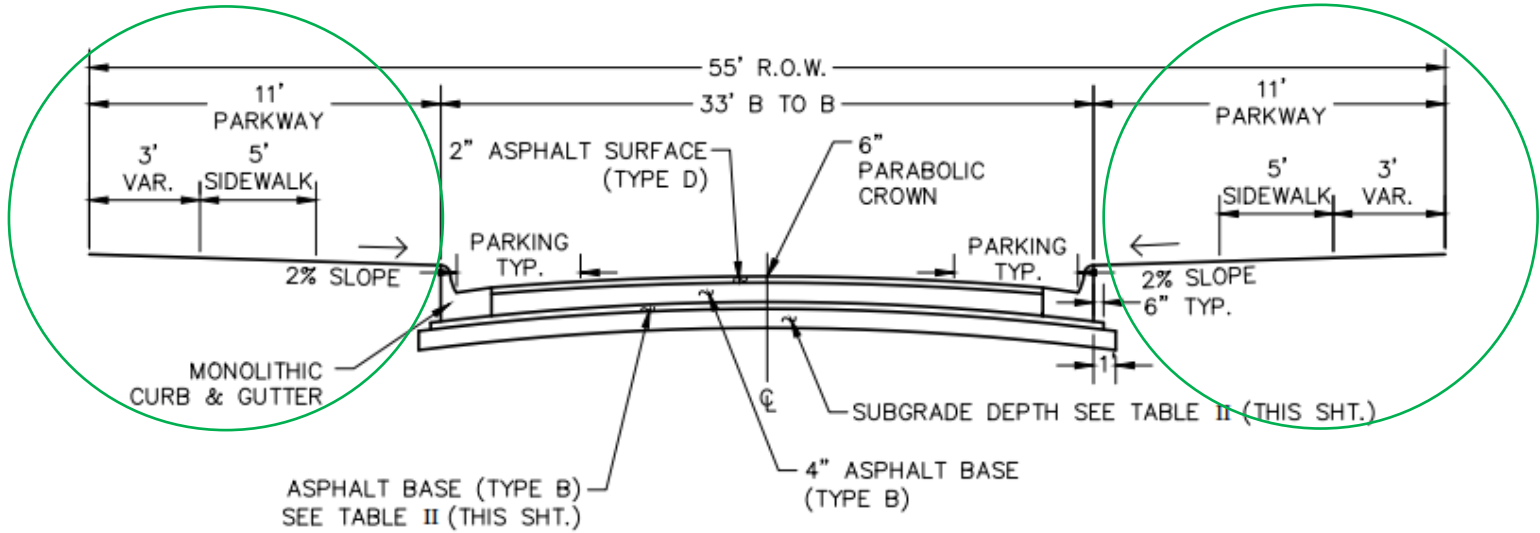


City of Denton Bike Lanes Standards

- **The Standard Details Documents**
 - Residential Street - 5 ft Sidewalks
 - All Other Street - 10 ft Multiuse Path
 - Bike Lanes are not specified on Street Sections
- **Mobility Plan** addresses Bike Lanes as a generalized topic
- **Professional Judgment** on the use of Bike Lanes on roads as a context-sensitive design



City of Denton Bike Lanes Standards



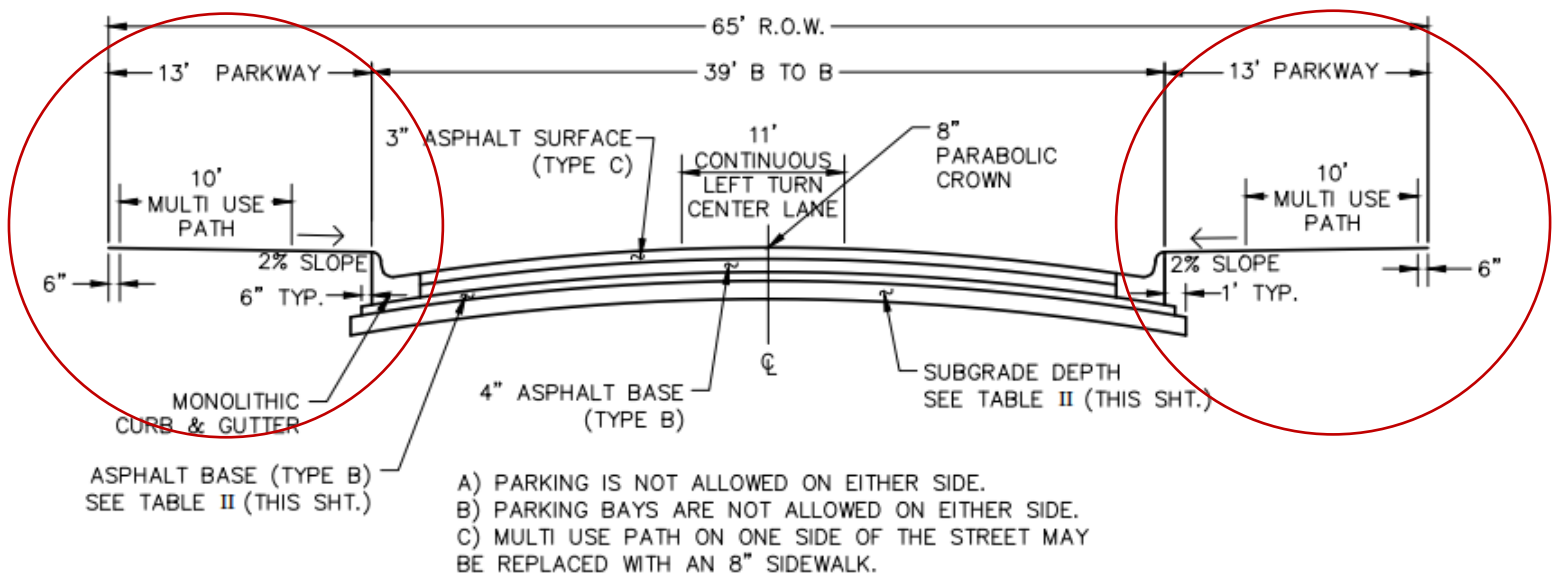
- A) ANGLE PARKING BAYS ARE PERMITTED.
- B) A MINIMUM 12 FT. WIDE UNOBSTRUCTED TRAVEL LANE SHALL BE PROVIDED.

Other Street Sections

Source: [City of Denton Standard Details Document](#)

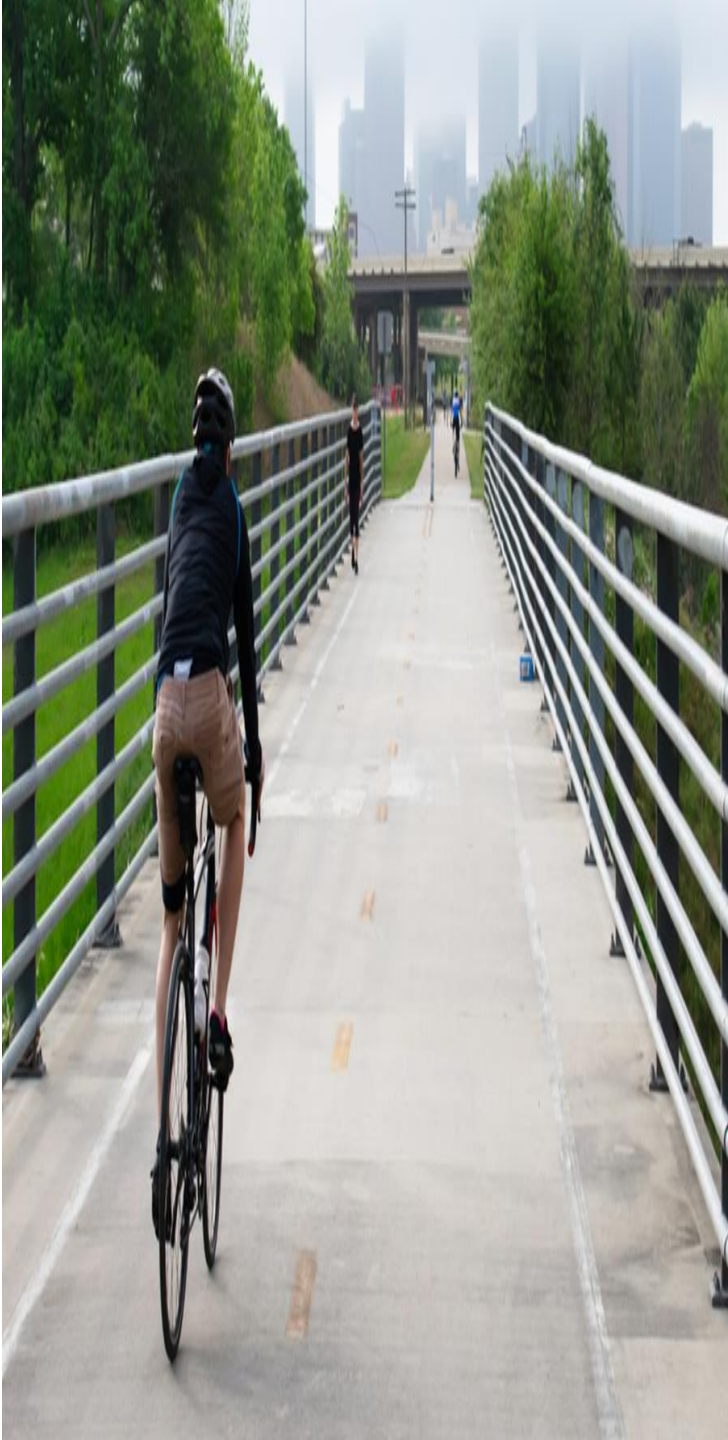


City of Denton Bike Lanes Standards



Residential Street Collector Section

Source: [City of Denton Standard Details Document](#)



Way Forward

1. Planning for Bike Lanes – as one of the priorities
2. Develop Localized Standards for Four Distinct types of on-road bike lanes
3. Enhance the Transportation Criteria Manual and Street Sections in the Standard Details Document to add/improve bike lanes
4. City Council's consideration for on-street bike lane standards





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