DFW Discovery Trail Branding & Wayfinding

Final Report and Recommendations

JANUARY 2023

North Central Texas Council of Governments

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North Central Texas
Council of Governments

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ES Executive Summary

Project Introduction

The Fort Worth to Dallas Regional Trail has been planned for more than 20 years and will span 66 miles at its completion. The trail will connect the five cities of Fort Worth, Arlington, Grand Prairie, Irving, and Dallas and is envisioned as a local, state, and national destination.

Through the efforts of NCTCOG and the design and planning team, this project has created a unified name and branding for the trail, recommendations for trail technology, recommendations for necessary support infrastructure for ecotourism and major regional and national events such as marathons, and recommendations for trail safety (911 signage and lighting).

PROJECT GOALS

Enhance.

Enhance the functionality and experience of using the Trail.

Promote.

Promote the visibility and awareness of the Trail at the local, state, and national level.

Attract.

Attract new users and programming to the Trail.

Public Engagement Process and Results

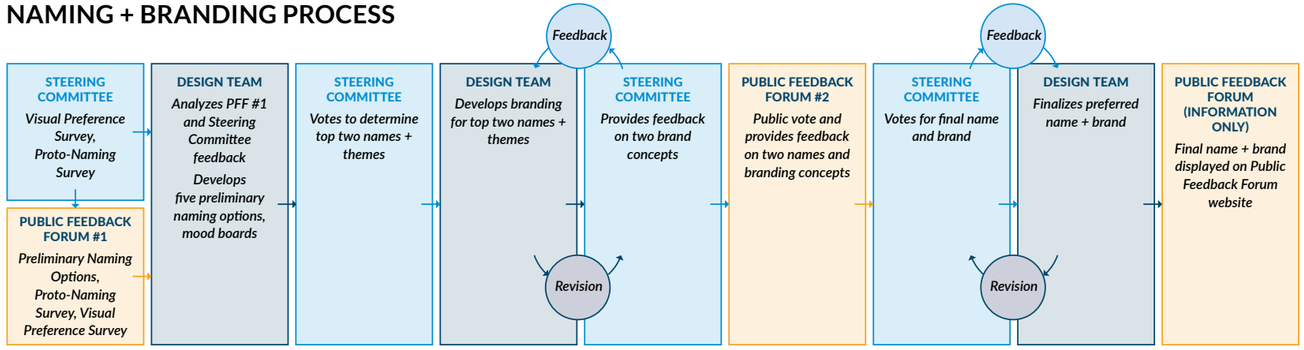
In order to develop regionally-coordinated branding and wayfinding system for the trail, broad stakeholder and public input was solicited. Engagement activities were broadly divided into three phases: Discover, Test, and Implement.

TWO BRANDING ALTERNATIVES

Logo Option 1

Logo Option 2

NAMING + BRANDING PROCESS

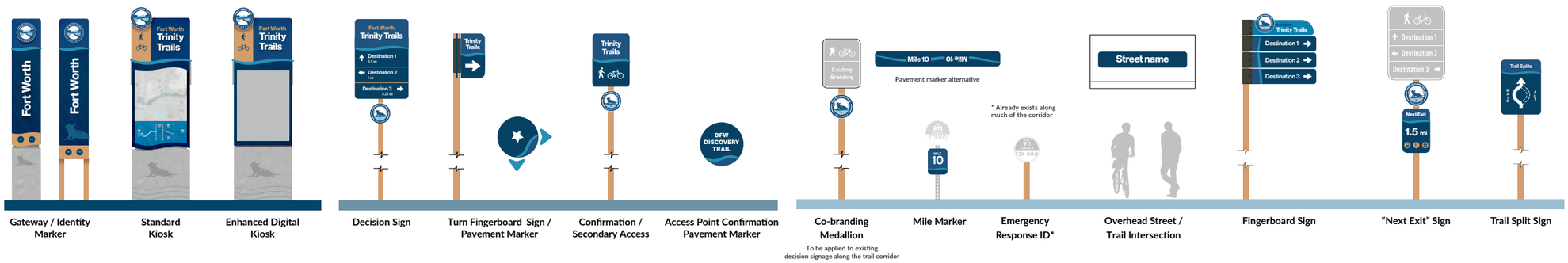


Final Branding and Wayfinding Family

Branding

Main Trail Logo | Fort Worth | Arlington | Grand Prairie | Irving | Dallas

Wayfinding



Gateway / Identity Marker | Standard Kiosk | Enhanced Digital Kiosk | Decision Sign | Turn Fingerboard Sign / Pavement Marker | Confirmation / Secondary Access | Access Point Confirmation Pavement Marker | Co-branding Medallion (To be applied to existing decision signage along the trail corridor) | Mile Marker | Emergency Response ID* | Overhead Street / Trail Intersection | Fingerboard Sign | "Next Exit" Sign | Trail Split Sign

Recommendations

Supporting Recommendations

In order to support the Plan's goals to Enhance, Promote, and Attract, additional recommendations were developed to complement the regional branding and wayfinding system. These recommendations seek to address other issues relating to the regional trail's functionality, utility, economic development potential, management, and safety. These recommendations are summarized below and more detail can be found in Chapters Four through Eight.

911 Signage and Lighting

The Planning Team determined that the existing 911 signage system employed by Fort Worth, Arlington, and Dallas is functioning well. Opportunities to support and improve emergency response efforts along the regional trail include developing emergency signage for Grand Prairie and Irving, and improving regional coordination through shared geolocated signage, emergency response best practices workshops, and a What Three Words pilot.

Implementation of corridor-wide trail lighting is not recommended due to wildlife impacts, seasonal flooding, or simply low use levels. In addition, hours of operation vary from jurisdiction to jurisdiction and may limit the need for lighting in parks that close at dusk. The corridor was assessed to determine the areas with the highest need for trail lighting, based on key commute routes and key first-last mile routes.

Additional 911 signage and lighting recommendations may be found on page 23.

Trail Technology

The DFW Discovery Trail has the opportunity to leverage new technology to provide a world-class trail experience with digital display boards and trail counters. Digital display boards can be included to ensure trail users have the most up-to-date information on trail conditions, closures, and events, as well as access to relevant city or trail-related resources. Trail counters can collect accurate data regarding the number of trail users and activity, which may then be used to help quantify benefits of all types.

Additional trail technology recommendations may be found on page 31.

Events

The trail has the potential to host a wide array of events and activities that support local economies and elevate the trail's profile. The Planning Team has identified best practices and opportunities for holding events of all kinds, including national and community race events, and cultural and non-sport events.

Additional event recommendations may be found on page 43.

Placemaking Program

Physical improvements to the trail corridor can change the user experience and create memorable moments. These experiences can help solidify the trail's value and importance to local communities while creating opportunities to share unique local stories. Opportunities for placemaking could include economic development, community gateways, scenic vistas, resting and play, and public art integration.

Additional placemaking recommendations may be found on page 61.

Maintenance, Management and Operations

In order to support the proposed wayfinding system, attract regional and national events, and promote a seamless experience along the DFW Discovery Trail, different maintenance, management, and operations structures were analyzed. Development of a regional trail organization that has a singular vision for the DFW Discovery Trail could serve a valuable role in coordinating, promoting, and leveraging the trail as a community asset.

Additional operations recommendations may be found on page 77.

01 Introduction

The DFW Discovery Trail: A world-class trail connecting five cities from downtown Fort Worth to downtown Dallas

PROJECT BACKGROUND

PROJECT GOALS

Project Background

In 1996, the Regional Transportation Council, the policy-making body for the Dallas-Fort Worth region Metropolitan Planning Organization (MPO), adopted Mobility 2020 which identified a trail extending between Fort Worth and Dallas. This trail would form part of a Regional Veloweb trail network connecting cities and counties across the Dallas-Fort Worth metropolitan area. In 2013, the North Central Texas Council of Governments (NCTCOG) Transportation Department, the lead agency for the MPO, convened the mayors of the five core cities of the Dallas-Fort Worth Region—Fort Worth, Arlington, Grand Prairie, Irving, and Dallas—to discuss the idea of a continuous regional trail from Downtown Fort Worth to Downtown Dallas. The trail alignment would be over 60 miles long once completed.

Since 2013, the Cities of Arlington, Dallas, Fort Worth, Grand Prairie, and Irving, along with NCTCOG, Dallas County, and the Texas Department of Transportation (TxDOT), have been actively coordinating the funding and construction of various sections of the Regional Veloweb trail which extends through each of the five cities. The trail was identified in TxDOT's 2018 Statewide Bicycle Tourism Trails Network Study, and was also highlighted as an economic development, traffic reducing, and health and wellness asset to the surrounding communities.

In 2019, the mayors of the five cities met and agreed to support an initiative to create a cohesive branding and marketing package for the 60+ mile regional trail alignment, with the goal of promoting ecotourism, drawing major events to the trail, and increasing recognition of the trail in and beyond the region.

In 2021, NCTCOG began efforts for branding and marketing of this world-class trail as a regional, State, and national tourism destination. What followed was an iterative and collaborative process, resulting in this Best Practices Guide. Through the efforts of NCTCOG and the design and planning team, this project has created a unified name and branding for the trail, recommendations for trail technology, recommendations for necessary support infrastructure for ecotourism and major regional and national events such as marathons, and the integration of a regional 911 signage system along the trail. In addition, the project has provided clarity and consensus for ongoing marketing, maintenance, and operations of the trail corridor, including the potential for existing and new partners to oversee these efforts.

The construction of the trail is in various stages of development and is anticipated to be completed in 2024. This construction process also involves linking several previously existing trails in each of the cities, including the Trinity Trails in Fort Worth, River Legacy Trail in Arlington, Mike Lewis Trail in Grand Prairie, Campion Trail in Irving, and the Trinity Skyline Trail in Dallas.

Project Goals

With the upcoming completion of a 60+ mile regional trail linking Fort Worth to Dallas, this plan seeks to find new ways to leverage and support this important community asset. The goals below reflect the diverse benefits that the trail creates while seeking to identify new supporting infrastructure, programs, and policies that will solidify the trail as a beloved and well-used community asset.

Enhance.

Enhance the functionality and experience of using the Trail.

- Improve commuting and transportation functions of the Trail
- Clarify route options and foster exploration
- Direct users to local and regional destinations
- Integrate the Trail into the local community fabric

Promote.

Promote the visibility and awareness of the Trail at the local, state, and national level.

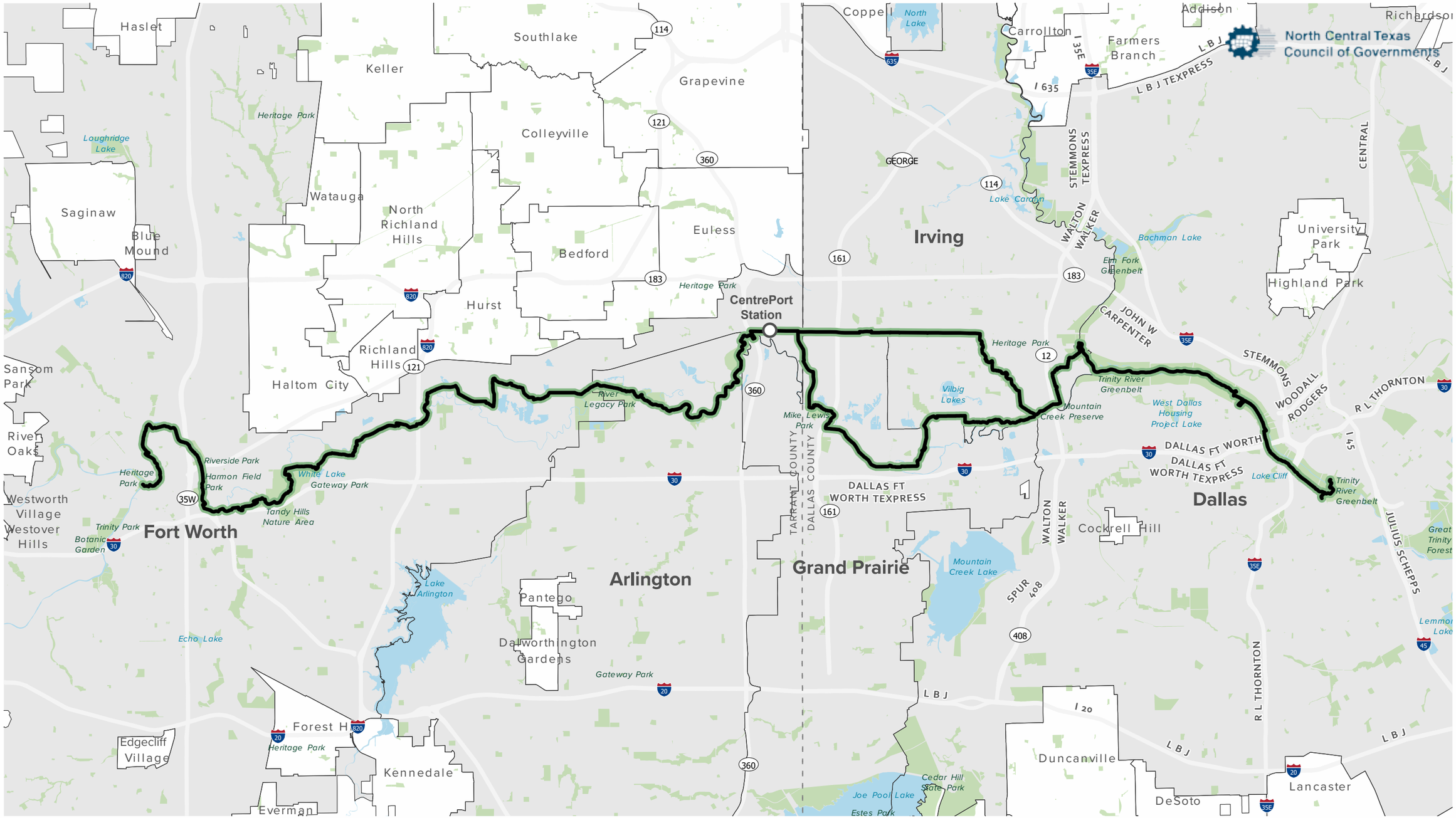
- Raise public awareness of the Trail to both local residents and visitors
- Develop a unique and recognizable identity for the Trail

Attract.

Attract new users and programming to the Trail.

- Attract new users to the Trail
- Support and attract a broad array of events, activities, and programs
- Highlight the Trail's sustainable tourism opportunities

Figure 1. Fort Worth to Dallas Regional Trail Extents



02 Branding Guide

The DFW Discovery Trail branding seeks to instill a sense of adventure and discovery that attracts new users to the trail.

LOGO FAMILY
LOGO HIERARCHY
LOGO ANATOMY
COLORS
TYPOGRAPHY
UNACCEPTABLE USES
SPACE AND SIZE

Logo Family

Family Overview

The DFW Discovery Trail logo family consists of six logos. There is one regional (main trail) logo and five jurisdictional logos for Arlington, Dallas, Grand Prairie, Irving, and Fort Worth. Each jurisdictional trail logo contains an animal that could be discovered along the trail.

- Dallas: Dragonfly
- Arlington: Bobcat
- Grand Prairie: Osprey
- Irving: Heron
- Fort Worth: Texas Horned Toad

All of the logo iterations are part of the larger DFW Discovery Trail logo family. Appropriate uses for each logo type will be discussed on the subsequent pages.

REGIONAL LOGO

Main Trail Logo

JURISDICTIONAL LOGOS

Fort Worth

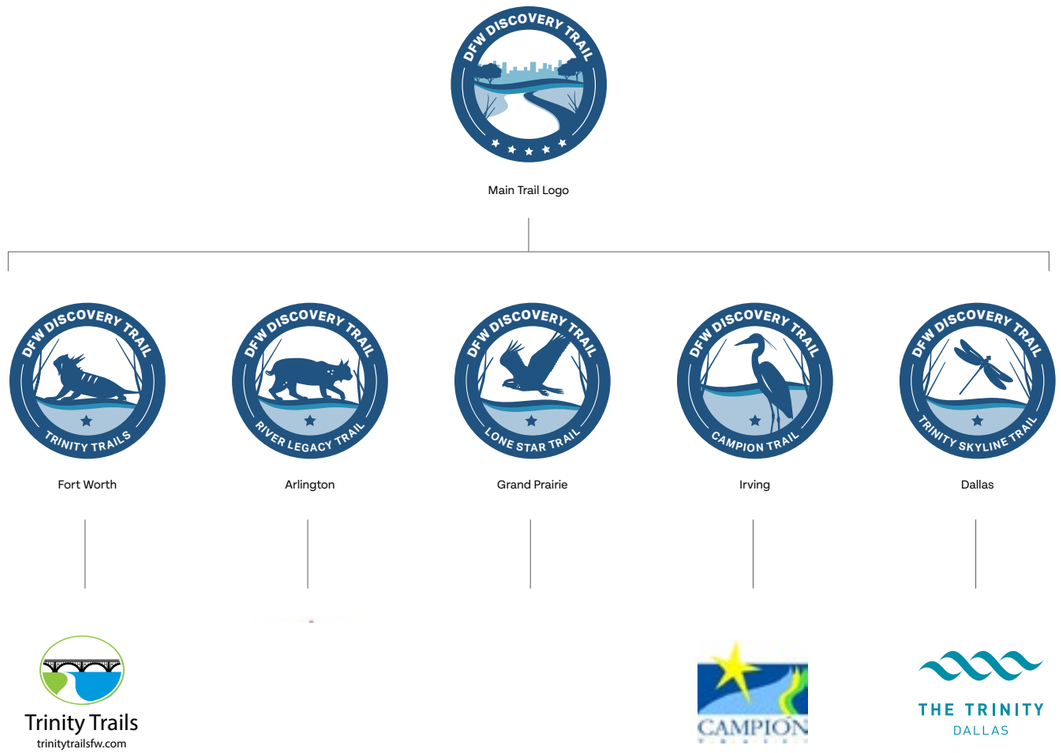
Arlington

Grand Prairie

Irving

Dallas

Logo Hierarchy



WHICH LOGO SHOULD I USE?

REGIONAL LOGO

When in doubt, use the regional (main trail) logo. It represents the entire trail. The regional logo can and should be used by itself (not alongside a jurisdictional logo).

JURISDICTIONAL LOGOS

Use a jurisdictional logo when referring to a local trail segment that lies within the larger DFW Discovery Trail (i.e. River Legacy Trail, a part of the DFW Discovery Trail)

LOCAL TRAIL LOGOS

Local trail logos can be used alongside regional or jurisdictional logos for co-branding.

Logo Anatomy

Although there are some variable elements within the logos, many elements remain the same in order to convey a consistent visual language.

REGIONAL LOGO

The regional logo always stays the same and has no potential modifications. The regional logo is a badge style logo with a black band on the outside and a regional trail illustration in the center. In the black band the regional trail name appears, as well as five stars to represent each of the five jurisdictions. The text and stars are framed with two simple lines. The regional logo also includes a double wave and natural grasses which also appear in the jurisdictional logos.

JURISDICTIONAL LOGOS

The jurisdictional logos are also badge style logos with a black band on the outside. In the black band the regional trail name appears, as well as a local trail name below. The text is framed with two simple lines. They contain jurisdiction-specific animal illustrations in the center. The jurisdictional logos also include the double wave and natural grasses which also appear in the regional logo. **The jurisdictional logos have two potential modifications: the jurisdictional-specific illustration can change depending on the jurisdiction, and the local trail name* can be updated as needed. Everything else must remain the same.**

**Note: City names are not to be included in the logo*

Colors

Color is a primary means of visual identification. Below are the designated colors for the DFW Discovery Trail logo. Do not apply unapproved colors to the logo or use unapproved colors when working with the brand.

PMS

Pantone© Matching System (PMS) inks are the industry standard for color specification in offset printing with spot color.

CMYK

CMYK (cyan, magenta, yellow, key/black) mixes have been customized to match, as closely as possible, the color palette's PMS values. CMYK inks are primarily used in four-color (or full-color) commercial and digital printing.

RGB

RGB (red, green, blue) color system is used when designing for the screen, such as slide presentations, email flyers, and social media posts.

HEX

HEX color values, which appear as six character combination of letters and numbers, are used for applications viewed on screen, such as web pages.

COLOR PALETTE

DISCOVERY DARK BLUE
PMS 7693 C
100 / 75 / 38 / 25
6 / 65 / 99
#064163

DISCOVERY MEDIUM BLUE
PMS 2144 C
94 / 70 / 27 / 10
31 / 83 / 128
#1F5380

DISCOVERY LIGHT BLUE
PMS 2925 C
79 / 32 / 17 / 0
40 / 142 / 181
#288EB5

DISCOVERY TAN
PMS 728 C
13 / 37 / 60 / 5
209 / 157 / 110
#D19D6E

Typography

NEUE HAAS GROTESK DISPLAY PRO

There is one typeface at the heart of the DFW Discovery Trail identity: Neue Haas Grotesk Display Pro. This typeface must be used whenever possible.

The typeface can be synced via Adobe Fonts for Creative Cloud users: fonts.adobe.com/fonts/neue-haas-grotesk

INTER

If and when Neue Haas Grotesk Display Pro is not available to use, please substitute with Inter. It can be downloaded for free at: fonts.google.com/specimen/Inter

HEADLINES & SUBHEADERS

Neue Haas Grotesk Display Pro 95 Black
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*(){}:"<?,./;

Neue Haas Grotesk Display Pro 75 Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*(){}:"<?,./;

Neue Haas Grotesk Display Pro 65 Medium
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*(){}:"<?,./;

BODY, CAPTIONS & FOOTERS

Neue Haas Grotesk Display Pro 55 Roman
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*(){}:"<?,./;

Neue Haas Grotesk Display Pro 56 Italic
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&(){}:"<?,./;*

Neue Haas Grotesk Display Pro 45 Light
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&*(){}:"<?,./;

Neue Haas Grotesk Display Pro 46 Light Italic
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789!@#$%^&(){}:"<?,./;*

Unacceptable Uses

Any deviation from the acceptable uses of the DFW Discovery Trail logo means the logo will be more difficult to remember, which will negatively impact the effectiveness of the program. Therefore, no variations of the logo are permitted under any circumstances.

Here are a few examples of typical logo violations. The examples are meant to be representative, however, and do not encompass all possible cases.

Do not attempt to re-draw or re-typeset elements of the logo

Do not place the logo within another shape

Do not use low-res or pixelated versions of the logo

Do not distort or stretch the logo

Do not alter the colors of the logo

Do not tilt or turn the logo

Space & Size

The DFW Discovery Trail logo should be used consistently to project a distinctive brand identity.

CLEAR SPACE

To help the logo tell its story most effectively, a buffer of clear space must be maintained around the DFW Discovery Trail logo.

A unit of space equivalent to the thickness of the black band should be used at all times. See diagram at right.

MINIMUM SIZE

To ensure readability, do not use the regional or jurisdictional logos at a size smaller than 0.75” in width.

CLEAR SPACE

MINIMUM SIZE

03 Wayfinding System Design

The DFW Discovery Trail wayfinding system seeks to create a unique, legible, and functional that supports and attracts trail users.

CONCEPTUAL WAYFINDING FAMILY
WAYFINDING FAMILY
SIGN PLACEMENT AND PROGRAMMING RESOURCES
IMPLEMENTATION GUIDANCE

Conceptual Wayfinding Family

This section outlines the conceptual wayfinding family, including the various wayfinding elements and sign types proposed in this plan. Shapes, sizes, colors, and messaging illustrated in this section are for conceptual purposes only. These components are explored in the conceptual branding. Because some segments of the trail corridor already contain wayfinding elements that will remain in place, the elements found in this wayfinding family may not apply universally to the corridor, and may be adapted. Potential wayfinding elements for the DFW Discovery Trail include the following:

Access Elements

- Gateway / Identity Markers
- Information Kiosks

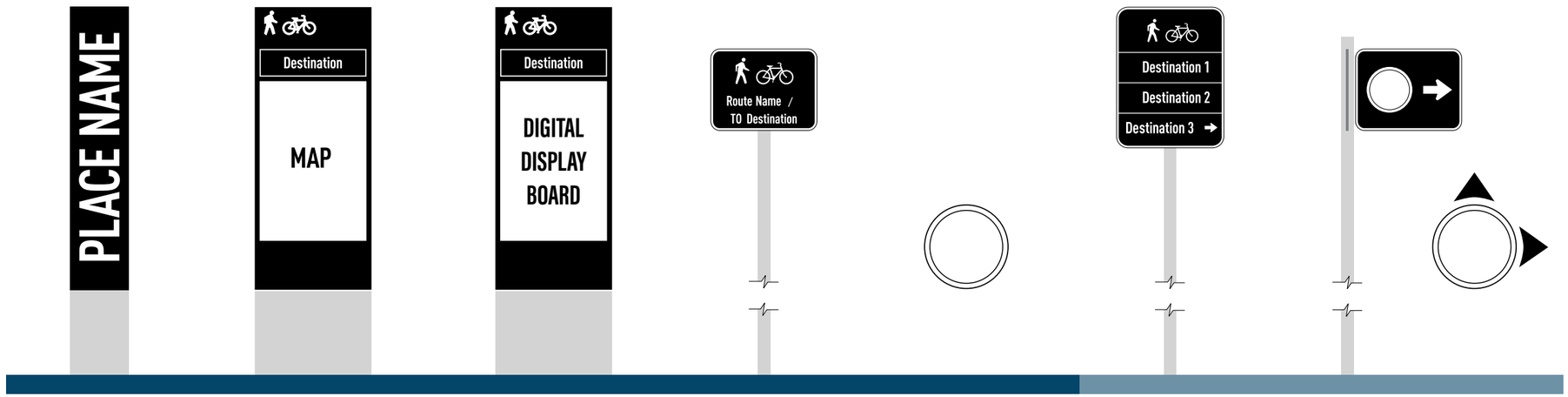
Fundamental Navigational Elements

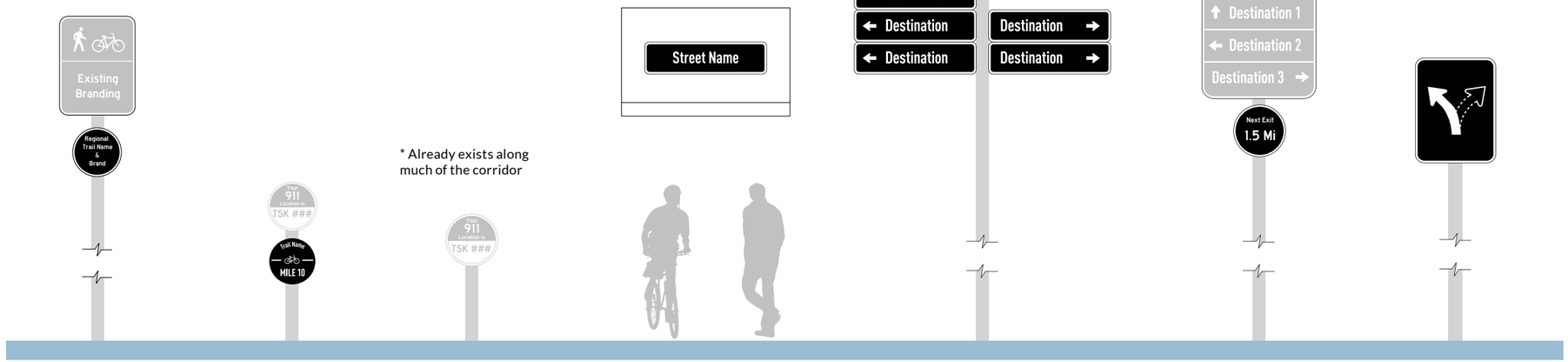
- Decision Signs
- Turn Fingerboard Signs / Pavement Markers
- Confirmation/Secondary Access Signs

Enhanced Navigational Elements

- Co-Branding Blaze / Medallion
- Mile Markers
- Emergency Response IDs
- Overhead Street / Trail Intersection Signs
- Fingerboard Signs
- “Next Exit” Signs
- Trail Split Sign
- Variable Message Boards

Wayfinding Typology



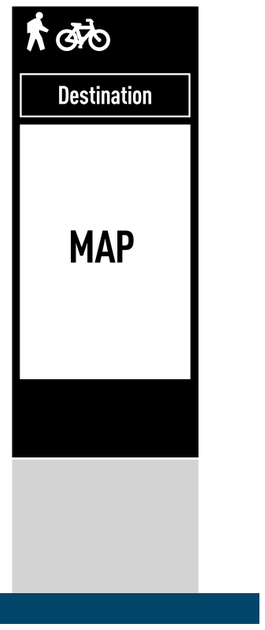


Access Elements

Gateway / Identity Markers

ESTIMATED QUANTITY: 7

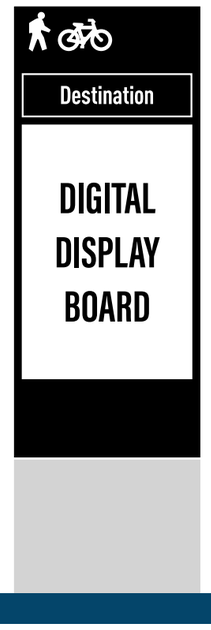
Gateway or identity markers define entry into a distinct area or mark trailheads, more prominent access points, and landmarks. For the DFW Discovery Trail, gateway/identity markers could also be used to indicate transition between jurisdictions or announce arrival at certain neighborhoods or districts. They also present opportunities for integrating artwork or community branding.



Standard Kiosks

ESTIMATED QUANTITY: 29

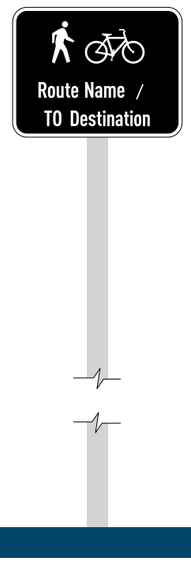
Information kiosks provide helpful information related to navigation, nearby attractions, and trail-related rules, regulations, and resources, and are typically placed at trailheads plazas, or rest areas.



Enhanced Digital Kiosks

ESTIMATED QUANTITY: 5

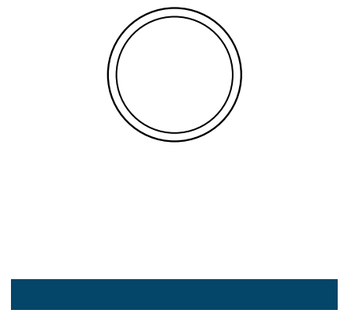
Similar in design and function to Standard Kiosks, enhanced digital kiosks house digital displays in place of static maps and allow additional information to be displayed, including event calendars, weather conditions, trail closure notifications, and other dynamic information.



Confirmation / Secondary Access

ESTIMATED QUANTITY: 48

Placed after select turns and intersections to reassure trail users that they are on the designated route, or at access points to guide trail users to the regional trail.

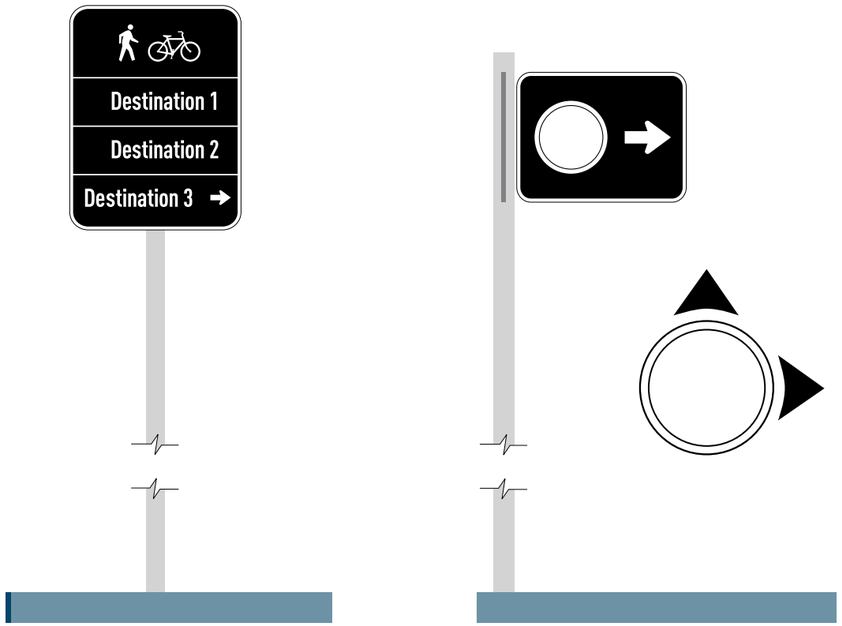


Confirmation / Secondary Access

ESTIMATED QUANTITY: 48

Typically supplemented by decision signs, kiosks, or confirmation signs, access point confirmation pavement markers are placed where access paths meet the designated trail to announce arrival to the regional trail.

Fundamental Navigational Elements



Decision Signs

ESTIMATED QUANTITY: 163

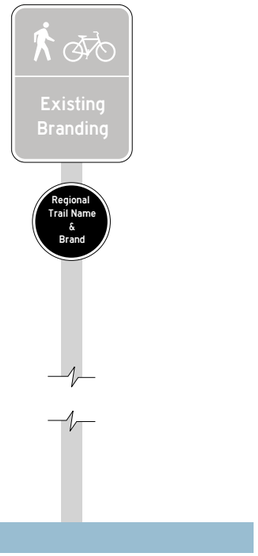
Placed at trail junctions to clarify route options where two or more routes converge, or at complex intersections. Decision signs point to destinations that are accessible via active modes.

Turn Sign / Pavement Marker

ESTIMATED QUANTITY: 39

Turn Fingerboards/Pavement Markers are placed at or before a turn or intersection to help users stay on the designated path. They can be implemented as a fingerboard sign and/or directional pavement markers. These will be needed when the trail alignment jogs or requires additional visual cues through a potentially confusing intersection.

Enhanced Navigational Elements



Co-branding Medallion

ESTIMATED QUANTITY: DETERMINED BY CITY

For sections of the trail that include existing branding or signage that is to remain, a simple blaze or medallion can be added to the sign assembly to communicate that the local trail is part of the DFW Discovery Trail. The local trail brand would be most prominent.

Mile Marker

ESTIMATED QUANTITY: 62

Placed intermittently to provide trail users with a sense of distance and serve as a way to reference location along the trail. Intended to mount to existing sign posts, light poles, or structures. May also be implemented as a pavement marker.

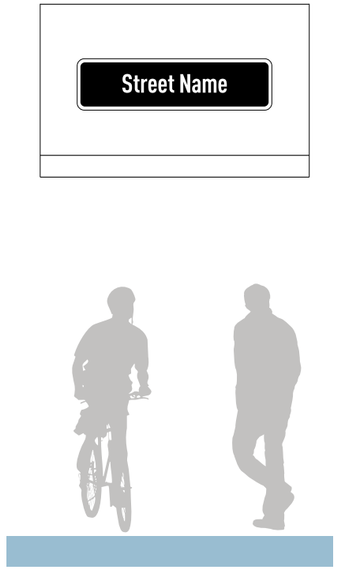
* Already exists along much of the corridor

Emergency Response ID

ESTIMATED QUANTITY: EXISTING

Provides location codes for emergency response; already exist throughout the corridor with the exception of Grand Prairie.

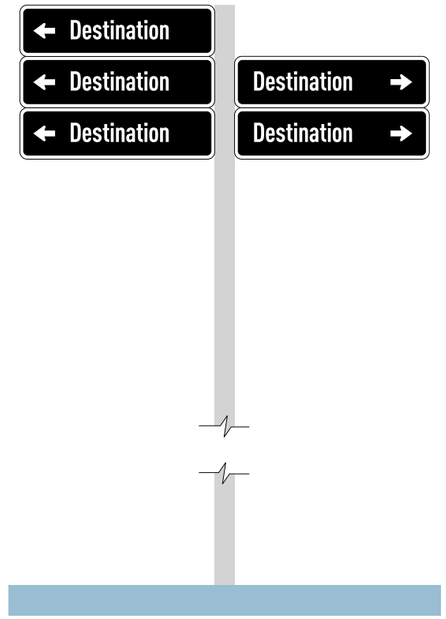
Enhanced Navigational Elements



Overhead Street / Trail Intersection

ESTIMATED QUANTITY: 25

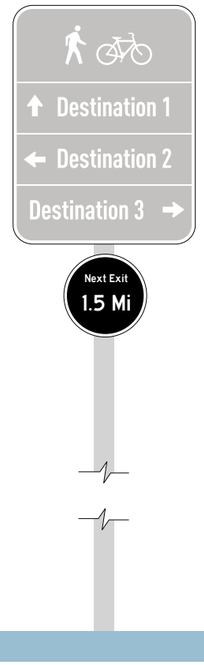
Whenever the trail passes under a roadway, street signs help orient trail users within the urban context. Traditional sign blades or vinyl decals be attached to existing bridge beams above the trail. Coordination with respective transportation agencies should be conducted to ensure any structural or maintenance concerns are addressed.



Fingerboard Sign

ESTIMATED QUANTITY: 2

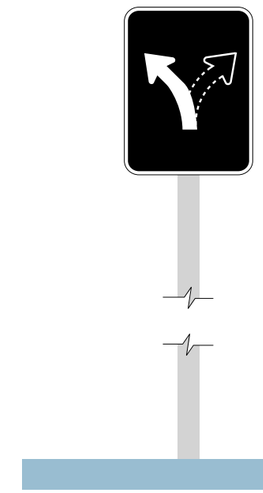
Fingerboard signs clarify route options where two or more regional trail routes converge, or at complex intersections. They may be used in lieu of decision signs, as one sign assembly serves all approaching legs of the trail and is located at the junction, whereas decision signs are placed in advance of the junction and serve only one approach.



Next Exit Sign

ESTIMATED QUANTITY: TBD

“Next Exit” signs can alleviate uncertainty by communicating entry/exit opportunities at points of no return and intermittently along isolated segments when the distance between entry/exit points is longer than one mile. These signs can be incorporated in conjunction with decision signs or as stand-alone elements.

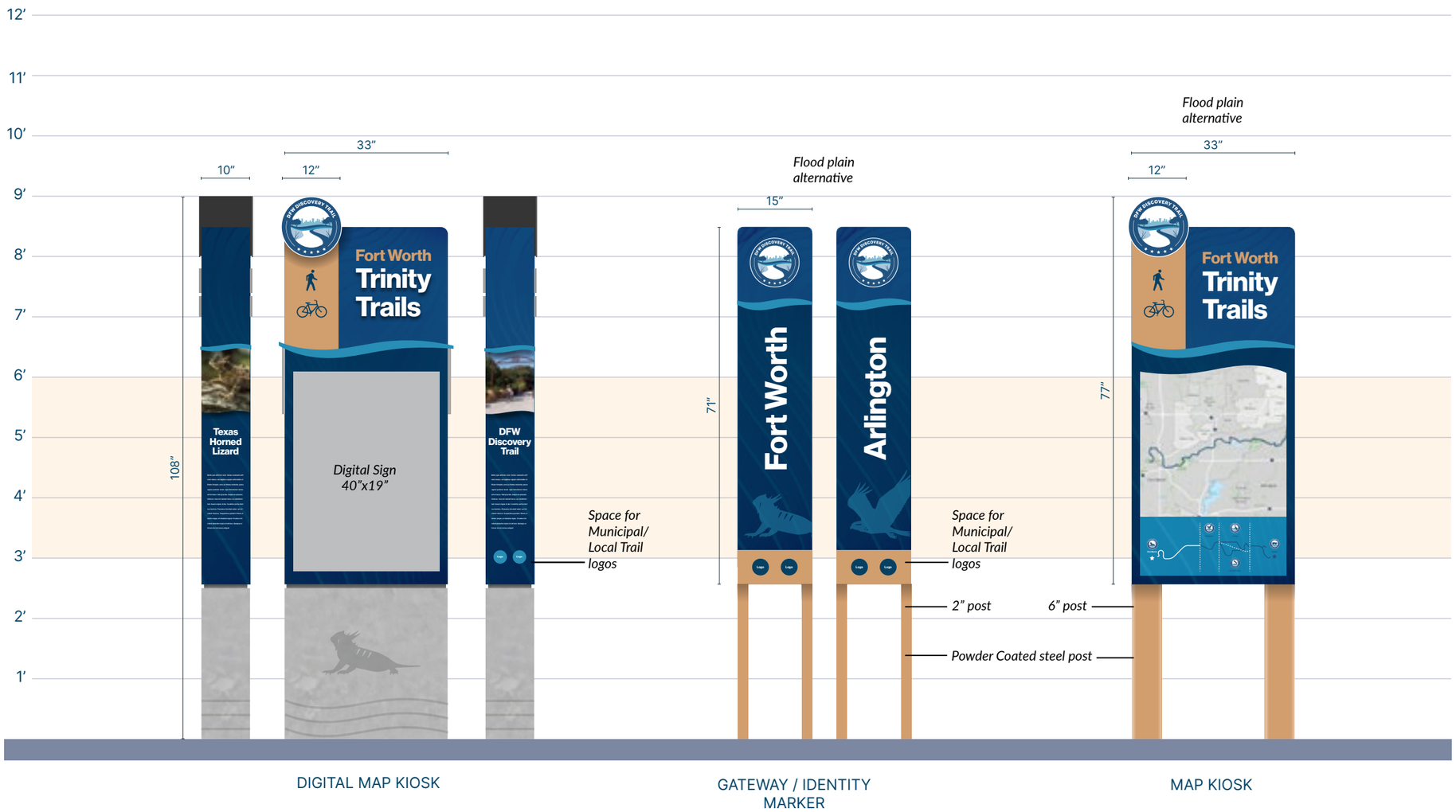


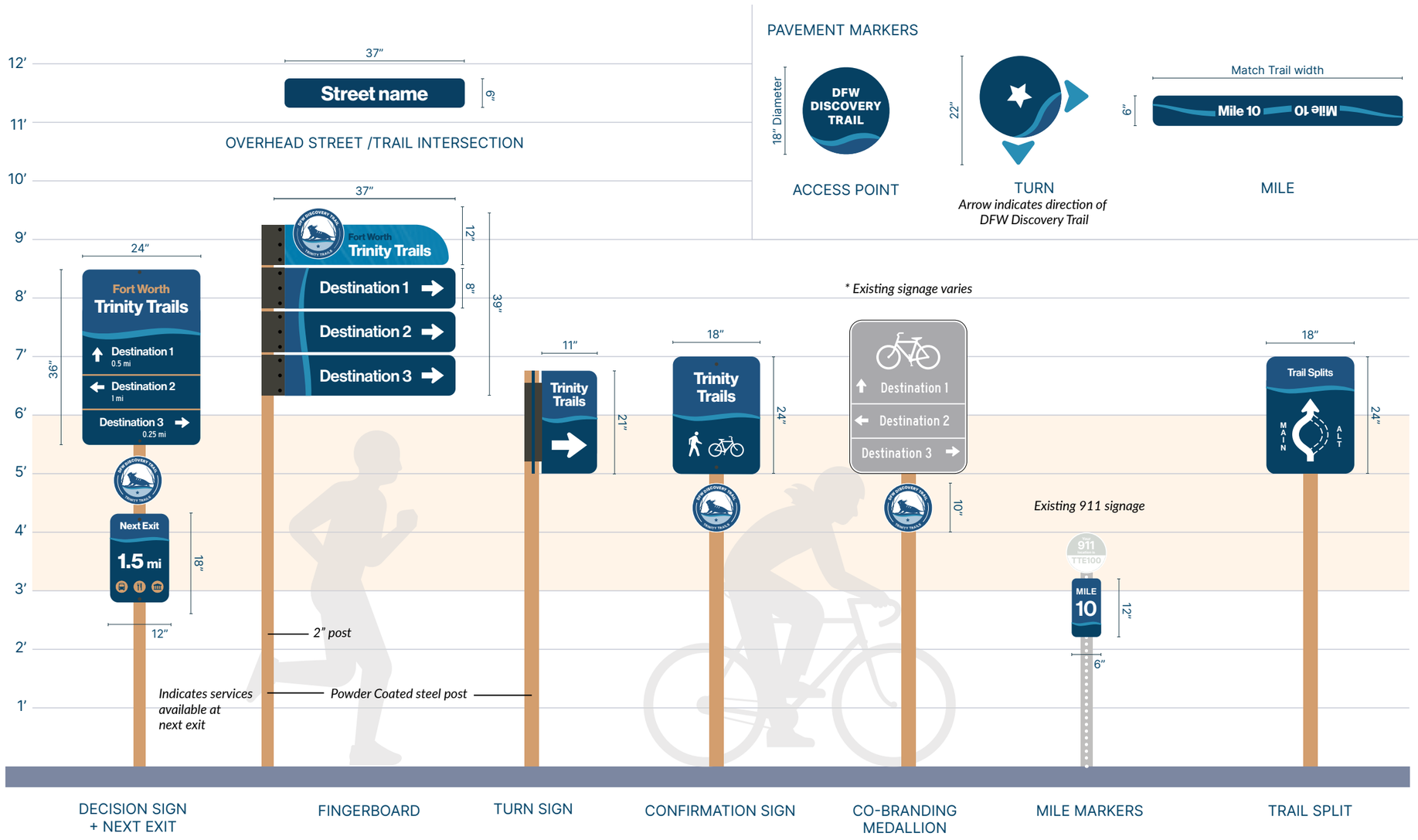
Trail Split Sign

ESTIMATED QUANTITY: 10

Trail Split signs are used in instances along a trail where the trail splits and shortly thereafter rejoins; trail users should know that they are not leaving the regional trail by taking the alternate route.

Wayfinding Family




PAVEMENT MARKERS
18" Diameter
DFW DISCOVERY TRAIL
ACCESS POINT
22"
TURN
Arrow indicates direction of DFW Discovery Trail
6"
Match Trail width
Mile 10
MILE
12'
11'
10'
9'
8'
7'
6'
5'
4'
3'
2'
1'
37"
Street name
6"
OVERHEAD STREET /TRAIL INTERSECTION
* Existing signage varies
24"
Fort Worth
Trinity Trails
Destination 1
0.5 mi
Destination 2
1 mi
Destination 3
0.25 mi
36"
Next Exit
1.5 mi
18"
12"
37"
Fort Worth
Trinity Trails
Destination 1
Destination 2
Destination 3
12"
8"
39"
2" post
11"
Trinity Trails
21"
18"
Trinity Trails
24"
Destination 1
Destination 2
Destination 3
10"
Existing 911 signage
911
TTE100
MILE
10
12"
6"
18"
Trail Splits
MAIN
ALT
24"
Indicates services available at next exit
Powder Coated steel post
DECISION SIGN + NEXT EXIT
FINGERBOARD
TURN SIGN
CONFIRMATION SIGN
CO-BRANDING MEDALLION
MILE MARKERS
TRAIL SPLIT

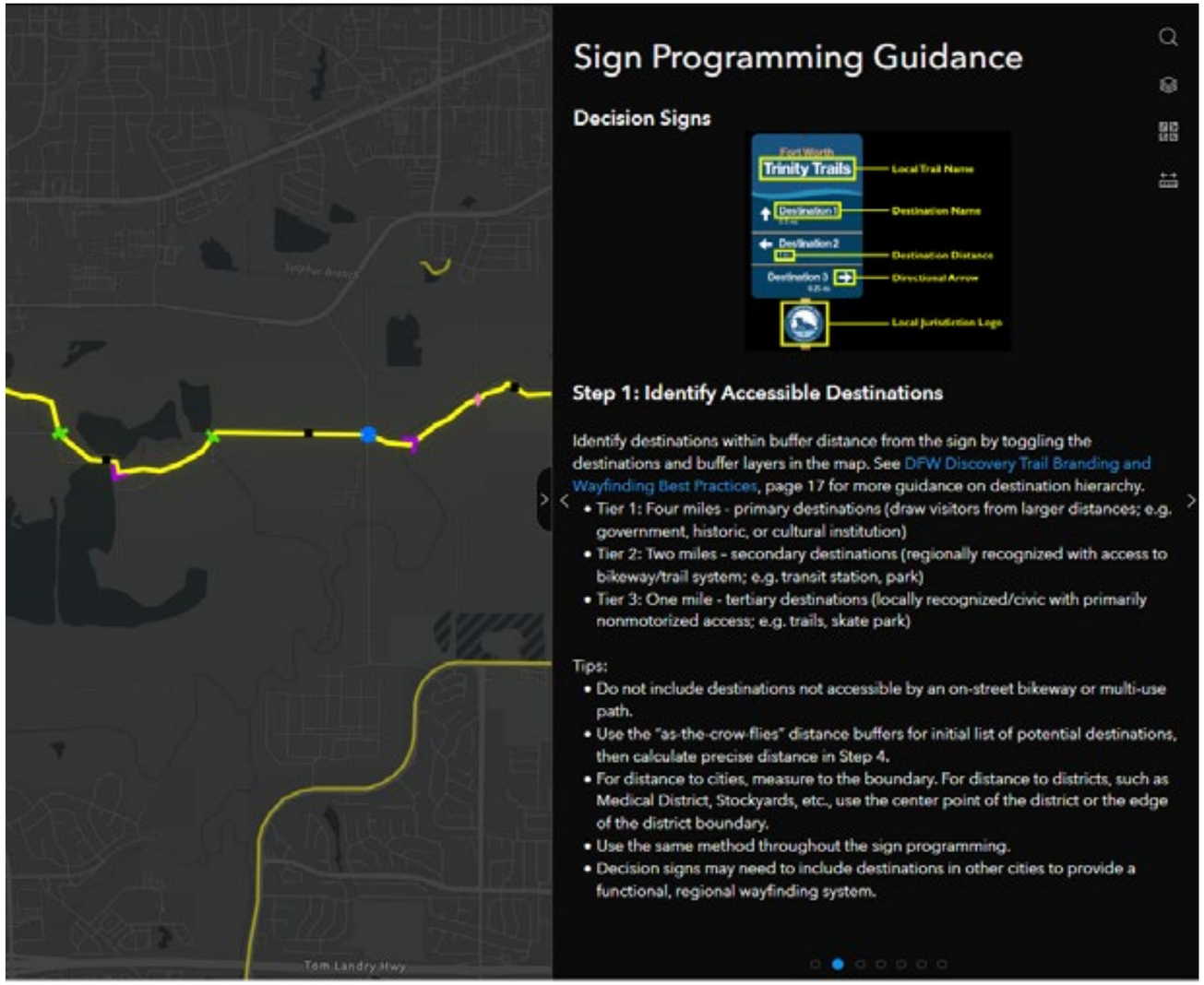
Sign Placement and Programming Resources

Sign Placement and Programming

Approximate sign locations and guidance for sign programming are provided in a digital, interactive format at the DFW Discovery Trail Sign Placement Plan and Programming Guidance website . The intent of the sign placement and programming site is to aid jurisdictions in the implementation of the proposed wayfinding system by providing an easily accessible sign placement map, with step-by-step guidance for determining what messaging and destinations should be programmed onto each sign. Upon implementation, City staff will be able to use the sign placement and programming site to determine which sign types will be needed for a particular trail segment, including quantities. The interactive map will provide necessary information such as accessible destinations, distance buffers, and implementation notes outlining considerations for the fabrication and installation of signs.

Sign placement map notes:

- The sign placement map is schematic in nature, providing approximate locations of signs that are subject to change. All sign locations shall be field verified and approved prior by the City and/or land manager prior to construction.
- Placement plan is based on best available data for trail alignments that are under construction or planned. Pending final design, minor modifications may be needed to sign locations and programming.
- Sign locations may require adjustments based on field conditions.
- The sign placement map provided assumes a full build-out of the DFW Discovery Trail and connecting trails; therefore, some signs are shown on the map that should not be installed until associated trail connections are made.
- Refer to Appendix B: Wayfinding Best Practices for additional sign placement guidance.



Implementation Process

Wayfinding Implementation

Due to the long-distance and multi-jurisdictional nature of the DFW Discovery Trail, implementation of the proposed wayfinding system will most likely require a phased and coordinated approach. In addition, repairs, replacements and updates to the wayfinding system will require ongoing coordination to maintain consistency with the original design and graphic standards. The Regional Trail Organization, described in Chapter 8, would play an important role in coordinating regional implementation and ongoing management of the wayfinding system. The adjacent graphic illustrates anticipated phases and steps in the implementation and maintenance of the proposed DFW Discovery Trail wayfinding system.

Planning, Design, and Phase I Implementation

Jurisdictions review and adjust placement plan as needed based on timing and construction of the regional trail and connecting trails

Precise sign locations coordinated and vetted with jurisdictions

Regional Trail Organization collaborates with cities to develop the sign programming and quantities for first phase of implementation

Regional Trail Organization advertises and selects local sign fabricator

Sign fabricator creates shop drawings based on design intent drawings

Fabricator / contractor installs Phase I wayfinding signage

Subsequent Construction Phases and Wayfinding Repairs/Replacement

Regional Trail Organization coordinates with cities on repairs or replacements to wayfinding signs as needed

Design intent drawings from first phase of wayfinding implementation referenced and matched to provide consistency

Ongoing Management

Regional Trail Organization coordinates implementation efforts to maintain consistency and fidelity to the approved wayfinding system

Regional Trail Organization evaluates updates to the wayfinding system as new destinations are developed and as new connections to the regional trail are built

04

911 Signage and Lighting Recommendations

The DFW Discovery Trail seeks to prioritize safety through a thoughtful approach to supporting infrastructure.

911 / EMERGENCY RESPONSE SIGNAGE
TRAIL LIGHTING RECOMMENDATIONS

911 / Emergency Response Signage

Trail emergency signage can be used to accurately communicate location information to emergency responders along a trail corridor. This is especially important on trail systems like the DFW Discovery Trail that include remote areas, or areas with few road crossings to orient trail users. Emergency response signage must be geolocated in a readily accessible format, such as Geographic Positioning System (GPS), to allow emergency responders and others to understand their relative position along the trail and within their service area.

Fort Worth

Irving

Arlington

Dallas

Existing Signage System

Most jurisdictions along the DFW Discovery Trail employ a similar emergency response signage system to help trail users describe their location to 911 call centers. The basic framework for this system includes:

- Two- or Three-Character Trail Code: Trail codes represent the trail name of that particular section of trail. For example, “TTE” represents “Trinity Trails East” while “RL” represents “River Legacy”.
- Station Number: Station numbers vary by jurisdiction and may reference the centerline of the river, actual trail mileage, or in some cases are an arbitrary number.
- Sign Design: Most signs include the text “Your 911 location is” on the top half of the circular sign. This text is in white against a green background. The bottom half of the sign (white background with text in green) includes the trail character and station number. While this format is most commonly seen along the trail, some cities, currently use a different sign design format that is not consistent with emergency response signage systems in the other cities.

Table 1. Signage formats

City Name	911 Signage Format
Fort Worth	2-3 Letter, 3-4 Digits
Arlington	2 Letter, mile marker
Grand Prairie	None
Irving	2 Letter, 3 Digit
Dallas	3 Letter, 3 Digit

Emergency Responder Coordination

In April of 2022, the Planning Team met with a variety of stakeholders involved in emergency response activities including local police, fire departments, 911 call centers and others involved in fielding and responding to emergencies for each of the five cities along the DFW Discovery Trail. At this meeting, case studies of emergency response signage system from other regional trails around the country were presented. Questions were also posed to the group to inform potential recommendations for emergency response signage practices. Key takeaways of these questions are shown below:

"For those with existing 911 emergency response signage systems, how willing would your agency be to move away from your current system to adopt a more regionally-coordinated approach?"

- Existing 911 / emergency signage systems are currently working for most jurisdictions
- All jurisdictions, except Grand Prairie, have emergency signage in place that has been coordinated with emergency call centers and responders
- Most jurisdictions are open to moving away from the current signage system if a better system was developed, however a lot of effort and coordination has gone into what exists today so any change would need to offer significant advantages over the present system
- Changing the existing emergency response signage system would be a large undertaking for TRWD specifically:
  - First, they employ this same emergency response system on all of their trails, not just the DFW Discovery Trail; creating a "one-off" system for just this trail would be problematic
  - Second, they have a substantial number of signs on the corridor currently and replacing all existing signs would be onerous and expensive
- Some participants expressed interest in additional emergency signage systems such as "What Three Words" but only as a supplement to the primary emergency response system that exists today. All participants indicated that they are able to use WTW with their existing 911 technology/ software.
- Station numbering on 911 signs are not intended to be used for mileage markers, and in no way represent distance traveled on the trail. Thus, there is not a significant advantage to having sequential numbering across the five cities. As it relates to mileage, wayfinding signage can address distance traveled on the trail (eg. mileage to the next city or to nearby destinations)
- Some participants brought up concerns regarding the need for the public to be re-educated if a new 911 signage system were installed

"What is working well with the current system in place? What could be improved?"

- Existing system is working well operationally for each jurisdiction
- Numbers across different systems are not sequential but that does not appear to be an issue for general trail users
- One option for improvement could be to include adjacent cities emergency response signage in their database so if calls are incorrectly routed to the wrong call center, responders can transfer them to the appropriate city
- A regional curriculum for emergency responders could help leverage existing knowledge and best practices for responding to incidents on the trail

"What are the basic pieces of information that first responders need to respond to incidents on the trail corridor?"

- Need to know where to access the trail and what types of vehicles can get through; gates on some portions of the trail limit vehicular access

"What other emergency response issues need to be coordinated beyond signage to allow first-responders to effectively respond to incidents on the trail corridor?"

- Workshops and coordination with responders are conducted periodically to provide training about how and where to access the regional trail; these cover coordination and details on bridges, bollards, and where vehicular access can be achieved

911 / Emergency Response Signage Recommendations

After careful consideration of case studies from around the country and coordination with local responders, the Planning Team determined that the existing 911 signage system employed by Fort Worth, Arlington, and Dallas is functioning well. No changes to the physical signage system in these communities is recommended due to the adequate performance of the existing system, the amount of investment that has already been made to coordinate and implement these signs, and the public re-education of the trail users that would have to occur if the 911 signage system changed.

While the existing emergency signage system should remain, there are opportunities to support and improve emergency response efforts along the regional trail. These include:

- **Grand Prairie Emergency Signage:** Although Grand Prairie currently has mile markers along its portion of the DFW Discovery Trail, these signs have not been coordinated with emergency responders. Grand Prairie emergency responders did not indicate that this has been a problem in the past, however implementation of signage that is appropriately coordinated with 911 call centers is recommended. For consistency, it is recommended the City of Grand Prairie implement the same 911 sign design and comparable alpha-numeric system that other jurisdictions along the corridor use.
- **Irving Emergency Signage:** Existing Irving emergency signage should be upgraded and revised to the same 911 sign design and alpha-numeric system used in the other cities.
- **Improved Regional Coordination:**
  - Geolocated Signage Shared Among Jurisdictions: While emergency responders and 911 call centers reported that their current emergency signage system has worked well, jurisdictions have generally not shared the signage, and GPS locations, with adjacent cities. By sharing signage data including sign codes, GPS information, and trail access information, jurisdictions could be prepared to locate or transfer callers that may not be routed to the appropriate call center.
  - Best Practices for Responding to Trail Emergencies: Another opportunity for improvement could include regional workshops among emergency responders to share tips and strategies for responding to incidents on the regional trail. The curriculum could include a variety of content such as access strategies for trail incidents, water rescues, and current trends.
  - What Three Words Pilot: Although the existing emergency signage system has proven capable, emergency responders expressed a level of interest in exploring a new geolocation system called What Three Words. What Three Words divides the world into three meter squares and assigns a unique combination of three words to describe that location. This provides an accurate and memorable way to describe locations and has been used by a variety of agencies and emergency responders across the country. A pilot program could be developed to test the What Three Words system along the regional trail. Inexpensive decals or stickers could be printed and placed on specific signage elements as a supplement to the existing emergency response signage. If successful, the program could be expanded or made permanent. Additional coordination with 911 call centers and emergency responders would be necessary to ensure that they can incorporate What Three Words into their existing practices, and that staff in call centers and emergency responders are familiar with the What Three Words program so they can appropriately respond in an emergency. Education for trail users would also be necessary so that they understand how the system works.

Example of a What3Words emergency sign. Image credit: What3Words

Trail Lighting Recommendations

Lighting can be an effective tool for increasing trail user comfort, improving security and reducing the likelihood of unwanted behavior. Lighting provides a choice for how to use trails during non-daylight hours. The goal of lighting trails for security is to make a place unattractive or uncomfortable to offenders while also providing a sense of security and attracting the intended use of trails. Properly lit trails should be easy to observe, eliminate potential hazards at intersections or access points, attract use and enhance other environmental design techniques. Lighting also increases the hours of the day the trail can be safely used. Lighting is especially important in locations where the trail provides access to destinations that operate during dark lighting conditions (e.g. rail stations, parks, etc.)

According to the AASHTO Guide for the Development of Bicycle Facilities, pedestrian-scale lighting is preferred to tall highway style lights. Pedestrian-scale lighting is characterized by shorter light poles (standards about 15 ft high), lower levels of illumination (except at crossings), and closer spacing (to avoid dark zones between luminaires). Additionally, overhead lighting is preferred in lieu of low bollard lighting. Bollard lighting does not project sufficient light at eye level and distorts the available light due to the 'up-lighting' effect. This makes it difficult for users to recognize facial features, and diminishes their perception of safety. For these reasons, bollard lighting should only be used in combination with overhead lighting or when overhead lighting fixtures are not permitted or feasible.

Existing Rock Island Road Sidepath lighting

Existing Centennial Park Trail lighting

Trail Lighting Recommendations

Based on the context of the DFW Discovery Trail, implementation of corridor-wide trail lighting is not recommended due to wildlife impacts, seasonal flooding, or simply low use levels. In addition, hours of operation vary from jurisdiction to jurisdiction and may limit the need for lighting in parks that close at dusk. Despite these challenges, some segments of the corridor could benefit from trail lighting to provide commuting benefits for those who may wish to use the trail during non-daylight hours.

ASSESSING TRAIL LIGHTING NEEDS

In order to asses what areas of the trail would have the most commuting value and subsequent need for trail lighting, the planning team analyzed two criteria:

Key Commute Routes: Employment densities were mapped along the corridor to identify key hubs of activity where after-hours commuting may be in demand. Key areas with high job densities near the trail can be found in Irving. Other high employment areas exist near downtown Dallas and downtown Fort Worth.

Key First-Last Mile Routes: The Planning Team also mapped high-capacity transit stations. Areas of the trail within 3-miles (an average bicycle trip in the US) of a high-capacity transit station could serve as an important first-last mile connection transit.

PRIORITY TRAIL LIGHTING LOCATIONS

Based on the previous criteria, the Planning Team recommends three potential priority areas for implementation of trail lighting. The high priority area described below poses relatively few barriers to implementation other than cost. The moderate priority areas offer similar benefits in terms of non-daylight hours commuting, but have implementation challenges to overcome such as permitting, maintenance, or environmental impacts.

- **High Priority Trail Lighting A: The Rock Island Road Sidepath, Centennial Park Trail, and the Delaware Creek Trail** - The urban location of the Rock Island Road Creek Trail, Centennial Park Trail, and Delaware Creek Trail provide proximity to TRE stations would allow the corridor to serve as a valuable commuting facility and first-last mile connection. While existing sections of the Rock Island Road Sidepath and Centennial Park Trail already have trail lighting, future extensions should be considered a prime candidate for trail lighting. In addition the Delaware Creek Trail should also be a candidate for trail lighting improvements.
- **Moderate Priority Trail Lighting B: Trinity Skyline Trail (Between Trammell Crow Park and Santa Fe Trail)** - The Trinity Skyline Trail's proximity to Downtown Dallas and ability to connect to nearby neighborhoods such as West Dallas makes trail lighting a viable consideration along these segments of trail. Complicating implementation issues exist around maintenance, seasonal flooding, environmental impacts, and permitting. These issues should be further studied and analyzed prior to moving forward with implementation of trail lighting.
- **Moderate Priority Trail Lighting C: Fort Worth Trinity Trails (Panther Island to Gateway Park)** - The Fort Worth Trinity Trail connects many employment centers and attractions, particularly between Gateway Park and Panther Island. Trail lighting would improve the trail's commuting value during non-daylight hours. Complicating implementation issues exist around maintenance, seasonal flooding, environmental impacts, and permitting. These issues should be further studied and analyzed prior to moving forward with implementation of trail lighting.

Trail Lighting Implementation Challenges

Trail lighting offers tangible benefits to trail users in terms of usability and safety, however it requires careful consideration of impacts including costs, maintenance, and environmental effects. The Planning Team coordinated with local jurisdictions and land managers with regards to implementation challenges surrounding trail lighting. While this plan identifies priority areas where trail lighting would be most beneficial, implementation of trail lighting projects will be a local decision and require additional study and coordination to address the various issues described below.

LEVEE-PROTECTED AND FLOOD-PRONE AREAS

Sections of the trail corridor that are within levees, such as the Dallas Trinity Skyline Trail or the Fort Worth Trinity Trails, require coordination with local flood control agencies and the USACE. Adding trail lighting to these areas require special consideration, permitting, and maintenance. Solar trail lighting would be recommended in these zones to mitigate challenges surrounding flooding. Solar lighting also supports straight-forward replacement of a single fixture if trail lighting does become damaged. Proposed light fixture locations would need to avoid any impacts to the levee prism and be properly coordinated with applicable flood control agencies and the USACE.

HOURS OF OPERATION

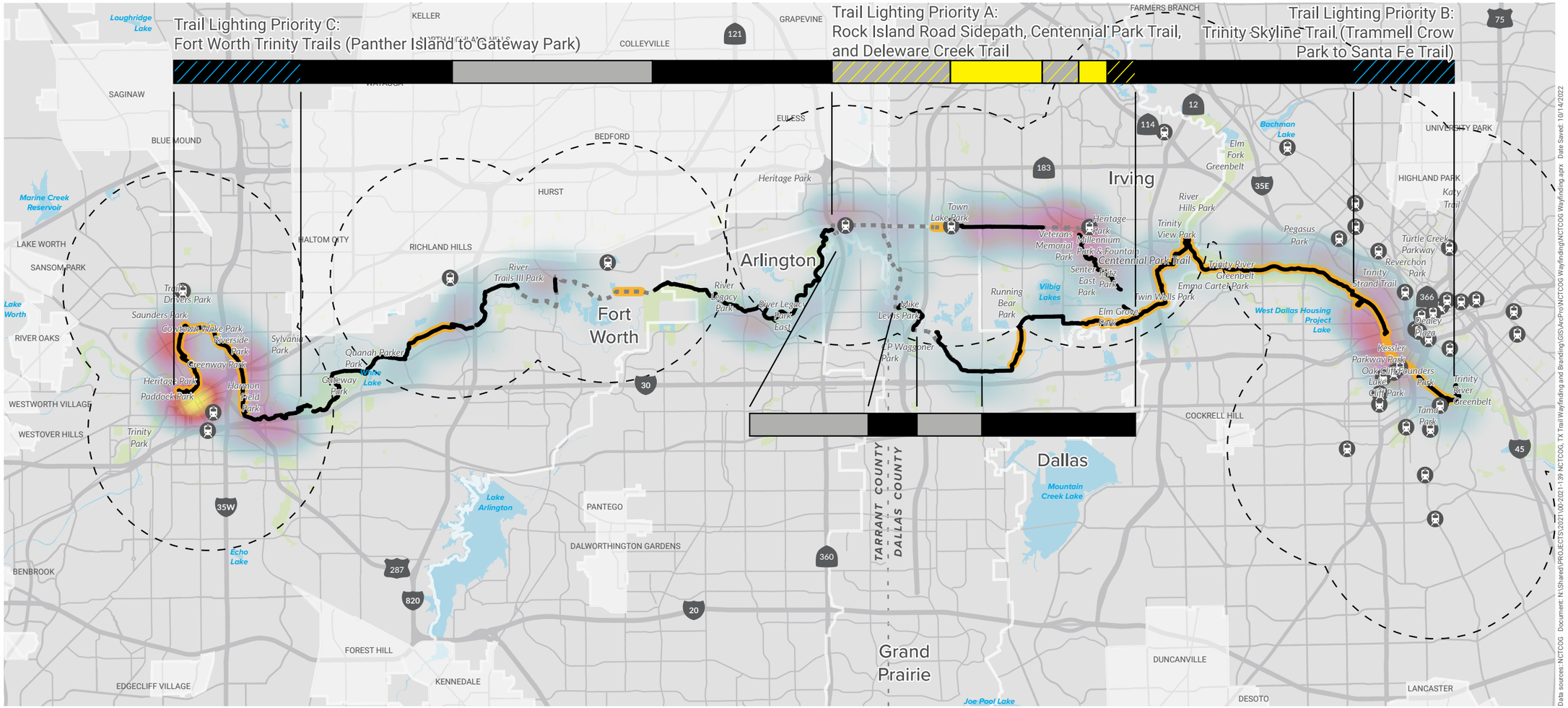
Hours of operation along the DFW Discovery Trail varies from jurisdiction to jurisdiction. In areas where trail lighting is recommended and evening-hour use is desirable, adjustments may be needed to the trail's hours of operations as some properties are only open from dawn to dusk.

ENVIRONMENTALLY SENSITIVE AREAS

Much of the DFW Discovery Trail exists along riparian corridors and potentially sensitive environmental areas. Trail lighting can negatively affect wildlife, including nocturnal animals and migratory birds. To best prevent lighting disturbances:

- Lighting should be angled down and well-shielded by the selected fixture to direct lighting only where it is needed.
- Lighting with warmer temperatures should be used to prevent blue light emissions (International Dark-Sky Association (IDA) recommends color temperatures of no more than 3000 Kelvins.)
- Lenses should be flat so they only shed light on the path below
- The material of selected fixtures should limit glare (IDA provides a list of certified light fixtures that have received IDA's Fixture Seal of Approval. This list is available here: https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/fsa-products/)
- In especially sensitive areas, consider using motion-activated lighting or limited lighting hours

While these strategies can help mitigate problems, they do not completely negate the effects of lighting on surrounding habitat and wildlife. As such, lighting should only be implemented in areas where user volumes, commuting patterns, or safety demonstrates a strong need for trail lighting.



LIGHTING ANALYSIS

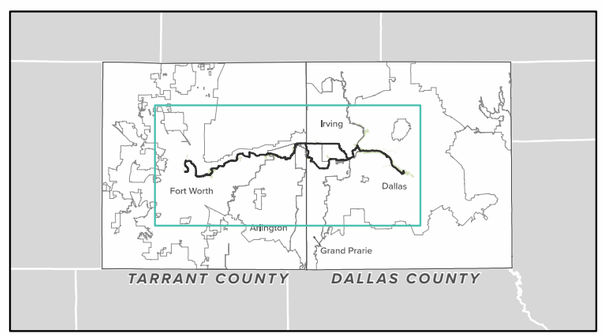
DFW DISCOVERY TRAIL BRANDING & WAYFINDING

Transit
- Rail Stations
- 3-Mile Transit Buffer

Employment Density
- Sparse
- Dense

Trail Corridor
- Trail Gap
- DFW Discovery Trail Corridor
- Trail Segments Adjacent to Levees

Lighting Areas
- New Trail Facilities Being Added
- Areas With Existing Lighting
- Areas Without Existing Lighting
- Areas Where Lighting is Recommended
- Areas Where Lighting is Recommended, but Where Limitations Are in Place



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05 Trail Technology

The DFW Discovery Trail has the opportunity to leverage new technology to provide a world-class trail experience

DIGITAL DISPLAY BOARDS

TRAIL COUNTERS

Digital Display Boards

Digital Display Boards

Digital display boards can be included to make sure trail users have the most up to date information they'll need while using the trail, and provide access to maps and a maintenance reporting site. These message boards could also host a variety of other information that would benefit trail users and trail managers. Message boards could be integrated within trail kiosks to serve as a hub of information at major trailheads. Programming and content ideas for digital display boards are included below:

WEATHER AND RIVER CONDITIONS

Severe thunderstorms, high winds, extreme heat, and potential flooding can all prove dangerous while using a trail. Ensuring trail users are aware of forecasted weather events by sharing important weather-related information on the message boards can help them make smart decisions before they commit to a long bike ride, run, or walk and potentially get stuck in a dangerous situation. In addition, with the popularity of paddling activities on the Trinity River, river flow information from the USGS could also be hosted near river launch sites.

TRAIL CLOSURES

Flooding and events periodically require trail closures or detours along the DFW Discovery Trail. Providing trail closure information via digital display boards can inform trail users of segments they won't be able to use, and possible reroutes they can elect to use to bypass a closed segment. Coordination would be required among the various trail managers to ensure trail closure information is shared in a timely fashion.

TRAIL EVENTS AND COMMUNITY CALENDAR

Digital display boards are a great way to spread the word about upcoming and current events taking place along the trail. On the day of an event, the display boards can include directions to get to a starting point or the general area where an event is taking place. Message boards can also promote upcoming events or communicate when a trail may be closed due to a planned event.

LINKS TO RELEVANT CITY OR TRAIL-RELATED RESOURCES

In addition to evolving alerts, like weather, trail closures, and events, some constant elements can be considered to include on a digital display board. Potential ideas include a link or QR code trail users can use to report maintenance issues they observe along the trail and links to maps showing the trail corridor and the broader region.

DYNAMIC SPONSORSHIP INFORMATION

Sponsorships and "trail adopters" are a great way to raise funds or support maintenance of a trail network, but these sponsorships are often changing and moving up and down in level of sponsorship. Including space on a digital display boards to list trail sponsors allows sponsor logos to be changed out easily without physical changes to signage.

Table 2. Proposed Digital Display Board Locations

Proposed Digital Display Board Locations		
#	**Location**	**Jurisdiction**
1	Ronald Kirk Pedestrian Bridge	Dallas
2	Centennial Park	Irving
3	Mike Lewis Park	Grand Prairie
4	River Legacy Park – West	Arlington
5	Panther Island	Fort Worth

INTEGRATION WITH TRAIL COUNTER DATA

Digital display boards present the opportunity to integrate trail user count data to increase awareness and raise the profile of the regional trail. During Bike Month, during events, or to foster friendly competition among jurisdictions, display of trail count information on digital display boards could be a fun way to celebrate the trail.

ADDITIONAL OPTIONAL FEATURES

Digital display boards come in many varieties, but those that are capable of the items listed above (sharing weather/event alerts, maps, and links/other access to report issues along the trail or learn more about the trail) should be prioritized. Some other features that are included in some varieties of digital message boards that could also be considered include:

- Wi-Fi access for trail users
- Touchscreen features
- Audible messaging

IMPLEMENTATION AND OPERATIONS

While digital display boards can add a dynamic and engaging element to wayfinding systems, they do require additional resources to operate, maintain, and program with current information.

Costs (2022 dollars)**:** All-weather digital display boards cost $20,000-$35,000 each but will vary depending on site-specific conditions. Software costs may be up to an additional $10,000 depending on vendor. In addition, programming and maintaining content for display boards likely will require additional resources. Some installation and construction costs may be offset through sponsorships or advertising hosted via the display board.

Proposed Application: Digital display boards should be implemented at high-visibility locations where they will be easily viewed by trail users and the general public. One enhanced kiosk (with digital display board) has been recommended in each jurisdiction.

Phased Implementation:

Based on their cost and complexity, implementation of digital display boards may follow a separate timeline than other simpler components in the wayfinding system. For this reason, trailhead kiosks should be designed to facilitate compatibility with digital display boards in the future. Kiosks may be designed so that static wayfinding maps could be swapped out with digital display boards. In addition, conduits should be provided to kiosks within paved areas to accommodate future electrical connections.

Example of a digital display kiosk. Image credit: Hootboard

Example of a digital display kiosk. Image credit: Future systems Inc.

Trail Counter Recommendations

Trail Counters

Collecting accurate data regarding number of trail users and where they typically enter and exit a trail has historically been a challenge, requiring city staff and volunteers to manually track this information. This collection often leads to data inaccuracies and makes processing the gathered data challenging. However, recent improvements in trail counters have made this process much more simple, reliable, and accessible. Trail counters, when placed in strategic locations along a regional trail, can help determine where the most activity is taking place, and where more changes may be needed to increase usership. Additionally, trail counters can help to quantify benefits all types, from economic impacts to community health.

BENEFITS OF TRAIL COUNTERS

UNDERSTANDING TRAIL CIRCULATION PATTERNS

When trail counters are strategically placed, the data they collect can help indicate the frequency of use of specific trail segments, entrances, and other locations along a trail. Having this data can help determine where additional investments are needed along the trail, make it possible to understand the impact of new facilities, and reveal changes over time.

PUBLIC HEALTH

Multi-Use trails encourage physical activity, so being able to easily quantify how many individuals are using a trail can help indicate levels of physical activity in an area. For example, increased numbers of trail users on weekends and outside of standard work hours indicate that the trail is being used for leisure and recreation. Quantifying these benefits can build support and foster partnerships with health-focused organizations such as regional hospitals or health departments.

ENVIRONMENTAL

Regional trails can provide a safe, comfortable connection for those biking or walking to access destinations. More individuals using active modes to get to destinations means fewer cars on the road, and therefore, fewer emissions and better environmental quality. Additionally, accurate data showing how many people are using trails can be used in grant applications for the development of additional active transportation infrastructure to prove that demand and public interest for biking and walking facilities exists.

ECONOMY

Trails generally increase tax revenues in the communities where they are located and tend to revitalize previously empty or abandoned areas by encouraging new development . Having accurate counts of trail users can help show that a trail has increased activity in an area, and can justify the development of new spurs, connections, or additional trail corridors.

Existing and Proposed Counters along the Regional Trail

Four trail counters have already been placed along various portions of the DFW Discovery Trail. These are located at the west end of the trail in Heritage Park, east of Cowtown Wake Park, in Elm Grove Park, and on the east end of the corridor just south of Twin Wells Park. To understand trail use throughout the entire regional trail corridor, an additional 17 trail counter locations are recommended. These locations were picked based on their relation to a major access point for the trails and to provide geographic coverage throughout the entire corridor.

PARAMETERS FOR LOCATING COUNTERS

Due to varying conditions along the regional trail, there are some limitations as to where counters can be placed. Seasonal flooding and permitting issues related to levee-protected areas of the trail corridor impact site selection for trail counters. First, most trail counters, including battery-powered versions, while waterproof to standard weather conditions, are not designed to withstand being submerged by flood waters. As such, coordination with local trail managers is key to avoid locating counters in areas where flooding is likely to be an issue. Second, permitting installation of trail counters near or within levees would require coordination with Tarrant Regional Water District (TRWD), Dallas Water Utilities, and the U.S. Army Corp of Engineers (USACE). For these reasons, trail counters are recommended at trail access points that are primarily outside of existing levees.

PROPOSED TRAIL COUNTERS

Two different types of trail counters are recommended for the Fort Worth to Dallas Regional Trail, both functioning in different ways and with different costs.

DUAL ACTIVITY COUNTER

Dual activity counters use two different elements to count trail users: one element is a passive infrared sensor that detects trail users at any speed but cannot differentiate between those walking and biking. This is installed in a post alongside the trail. A wire, or inductive loop, can then be installed in the trail tread next to the infrared counter that picks up on the metal of a bike wheel. This wire system can count individual cyclists even when riding in groups. By combining the data collected from each element, counts of walkers and bikers can be interpolated. An aspect of this counter system that makes it a great option for the trail system is that it relies on battery power instead of needing a hard-wired power source. Battery levels need to be monitored to ensure counts are being recorded but their lifespan averages around two- years with some models.

Proposed Application: Dual activity counters are recommended at minor trailheads/access points to provide economical counts and geographic coverage of the corridor.

Costs: The combined cost of purchasing both elements in this counter system is typically around $6100, with replacement batteries ($100-200) needed every two years. Count data can be automatically transmitted via a mobile data unit within the counter periodically throughout the day. Operation costs include an annual data subscription (around $420), and any maintenance needs once the system is in place. Installation costs will vary depending on the location.

Examples of dual activity counters. The top image shows the infrared sensor, and the bottom image shows the wire, or inductive loop cyclist detector. Both images from Eco-Counter

Pros:

- Durable and discreet counter
- Counts bicyclists and pedestrians
- Does not require hard-wired power

Cons:

- To count cyclists, trail surface must be cut
- Only counts trail users traveling along a single path (screen line counts)

POTENTIAL VENDOR/MODEL:

Dual Activity Post Counter by EcoCounter
Dual Activity Bike Counter by EcoCounter

VIDEO DETECTION COUNTER

Another trail counter option is a video detection/artificial intelligence counter that can pick up on multiple user types and cover an area up to 82' wide. This option is easier to install compared to the need to place the wires of the other counter within the trail's surface. However, it needs to be installed on a tall post or pole to prevent view obstruction and requires hard-wired power to operate.

One major benefit of video detection counters is that they can analyze movements at intersections. If placed at an intersection, video detection counters can analyze traffic traveling along a connector trail from a trailhead or access point, and traffic traveling along the regional trail. In addition, video counters can be mounted on light poles or bridges to analyze trail intersections within the floodplain while enjoying protection from damaging flood waters. Video detection counters may also be configured to communicate with the broader trail counting platform so that counts can be analyzed across the system.

Lighting conditions can affect the operations of the counter, so it is critical to locate the counter in a position where the field of view is neither too bright, nor too dark. Data from this counter is transmitted every 15 minutes to an online platform where it can be easily analyzed.

Proposed Application: Video detection counters are recommended at major trailheads along the DFW Discovery Trail where there is a need to analyze trail user circulation at intersections and where power is already available on-site.

Costs: The cost for this system runs around $8325 per unit with about $200 needed for shipping and $7 per meter of power supply cable. The counters also require remote installation assistance (about $500) and an annual fee of $660 for an automatic data transmission account. The additional expense of running power to the counter can add significant cost depending on the proximity and availability of a nearby power supply, and installation costs will vary by location.

Pros:

- Durable and discreet counter
- Counts bicyclists and pedestrians
- Counts movements in multiple directions (if placed at an intersection)

Cons:

- Lighting conditions must be carefully considered
- Powering the counter with a hard-wired connection can be expensive depending on the location

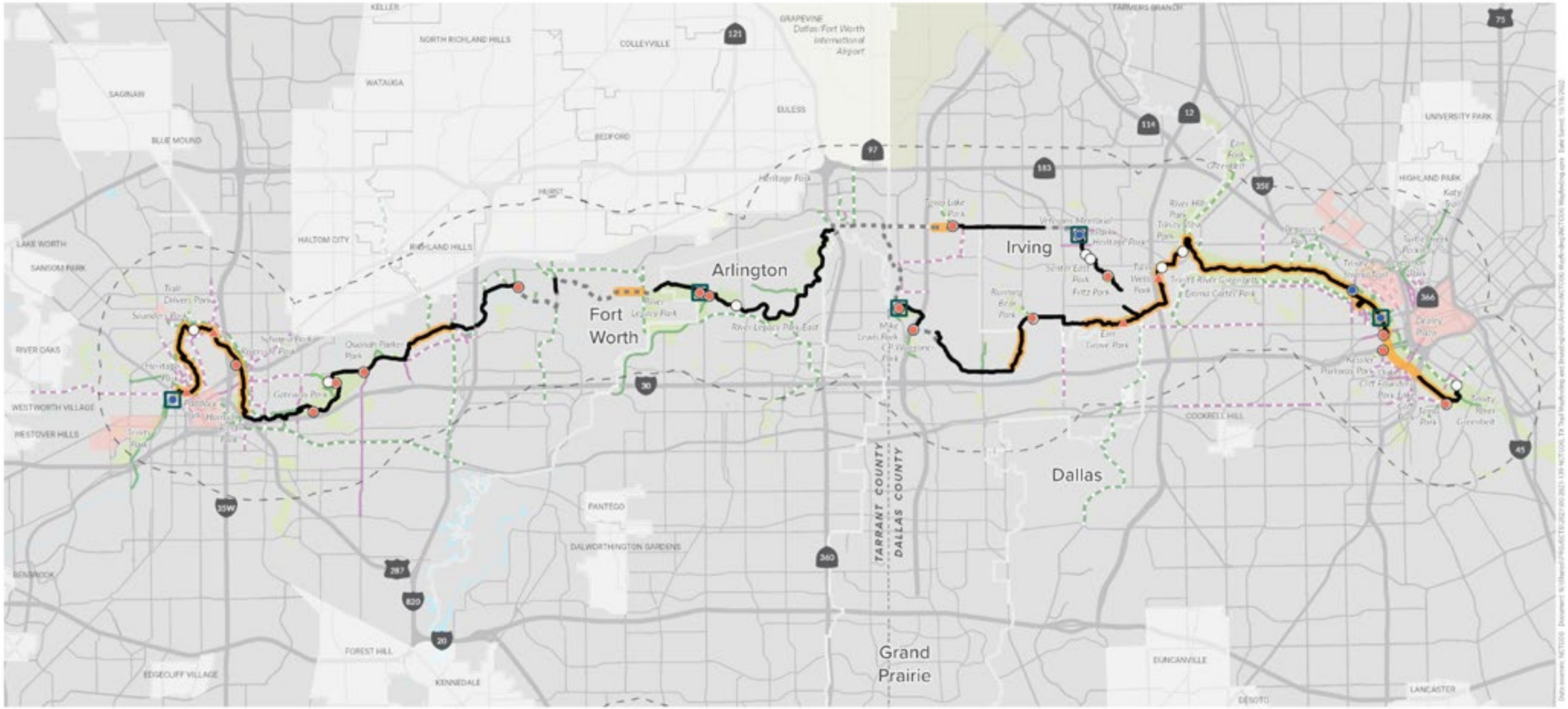
POTENTIAL VENDOR / MODEL:

CITIX AI by EcoCounter

Example of a video detection counter. The top image shows the installed detector, and the bottom image shows what the camera is detecting. Both images from Eco-Counter

Table 3. Proposed Trail Counter Locations

Proposed Trail Counter Locations				
#	**Location**	**Counter Type**	**Jurisdiction**	**Notes**
1	Panther Island	Video Counter	Fort Worth	
2	Greenway Park	Dual Activity Counter	Fort Worth	
3	Riverbank Rd Trailhead	Dual Activity Counter	Fort Worth	
4	Gateway Park – West	Dual Activity Counter	Fort Worth	
5	Gateway Park – East	Dual Activity Counter	Fort Worth	
6	River Trails III Park	Dual Activity Counter	Fort Worth	
7	River Legacy Park – West	Dual Activity Counter	Arlington	
8	River Legacy Park – East	Dual Activity Counter	Arlington	
9	Mike Lewis Park	Dual Activity Counter	Grand Prairie	
10	Lower Tarrant Rd	Dual Activity Counter	Grand Prairie	
11	Running Bear Park	Dual Activity Counter	Grand Prairie	
12	TRE – West Irving Station	Dual Activity Counter	Irving	
13	Centennial Park	Video Counter	Irving	
14	Fritz Park	Dual Activity Counter	Irving	
15	Trammel Crow Park	Video Counter	Dallas	Attach to light pole on roadway bridge to avoid floodplain issues
16	Ronald Kirk Pedestrian Bridge	Video Counter	Dallas	
17	Trinity Overlook Park	Dual Activity Counter	Dallas	
18	Dallas Fort Worth Turnpike	Dual Activity Counter	Dallas	
19	Santa Fe Trestle Trailhead	Dual Activity Counter	Dallas	



EXISTING AND PROPOSED TRAIL COUNTERS + DIGITAL DISPLAY BOARDS

DFW DISCOVERY TRAIL BRANDING & WAYFINDING

alta

0 1.5 3 MILES

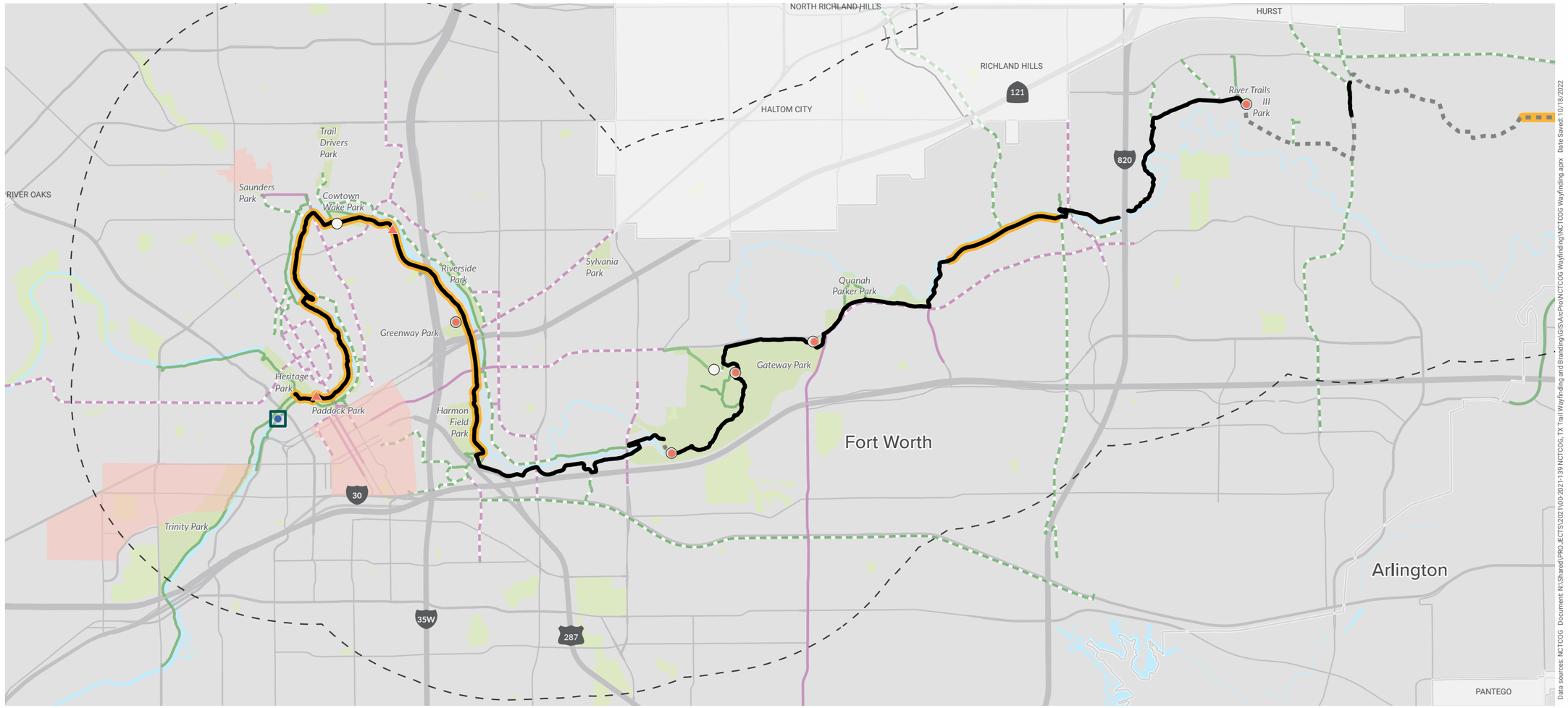
N

Counters + Display Boards
- Proposed Dual Activity Counter
- Proposed Video Counter
- Proposed Digital Display Boards
- Existing Trail Counters
- Major Access Points

DFW Discovery Trail Corridor
- Trail Gap
- Trail Segments Adjacent to Levees
- Existing Trail Alignments

Planned Trail Connections
- Trails
- On-street Bikeways

Existing Trail Connections
- Trails
- On-street Bikeways



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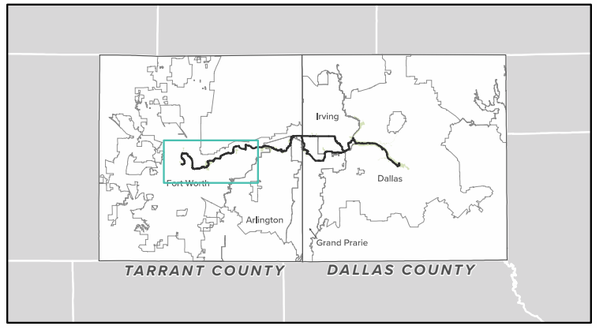

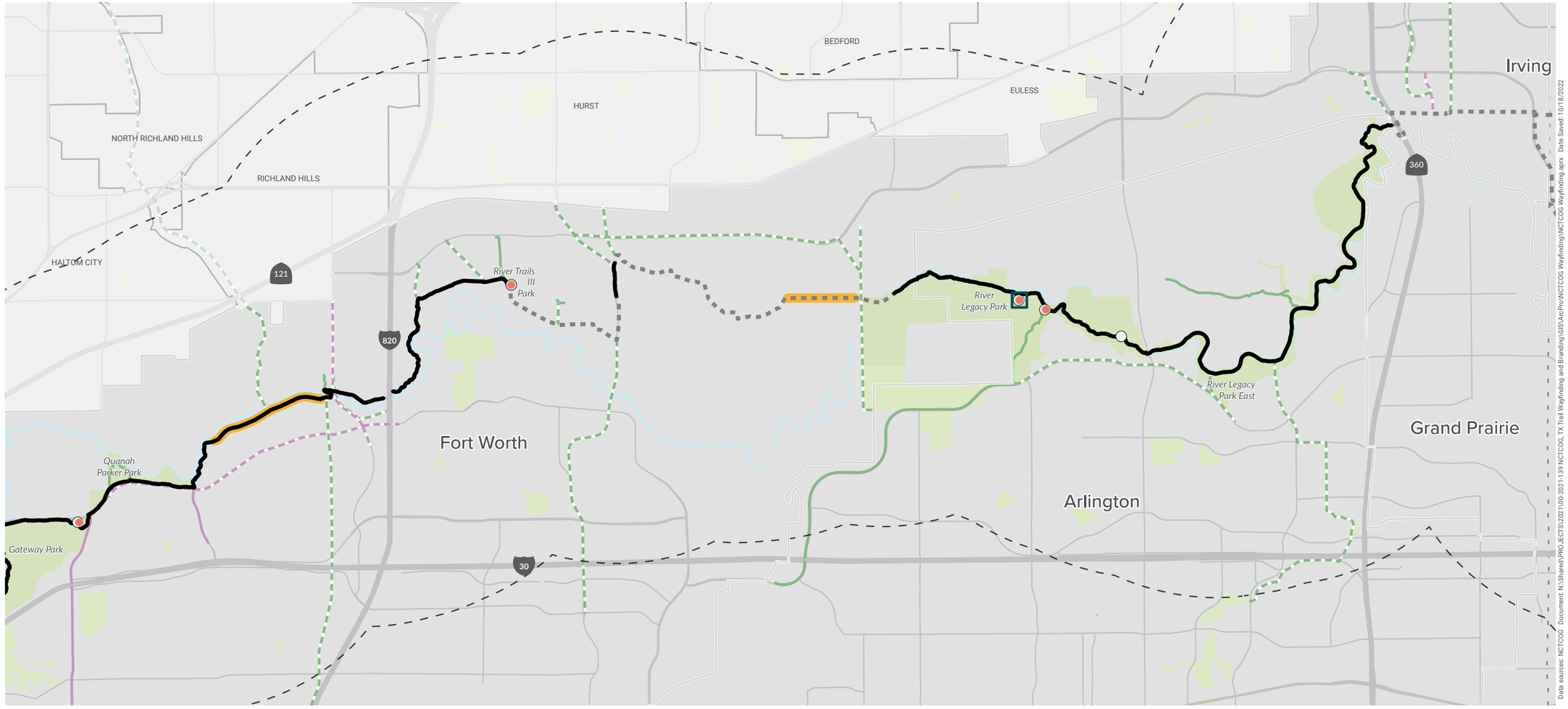

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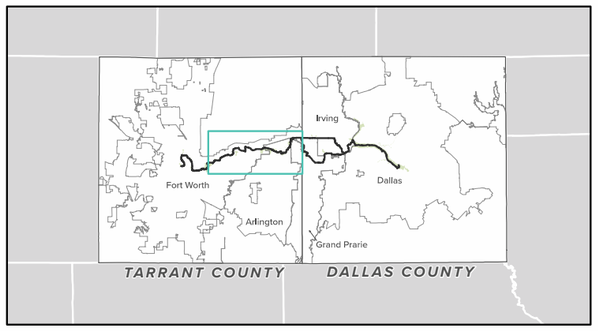

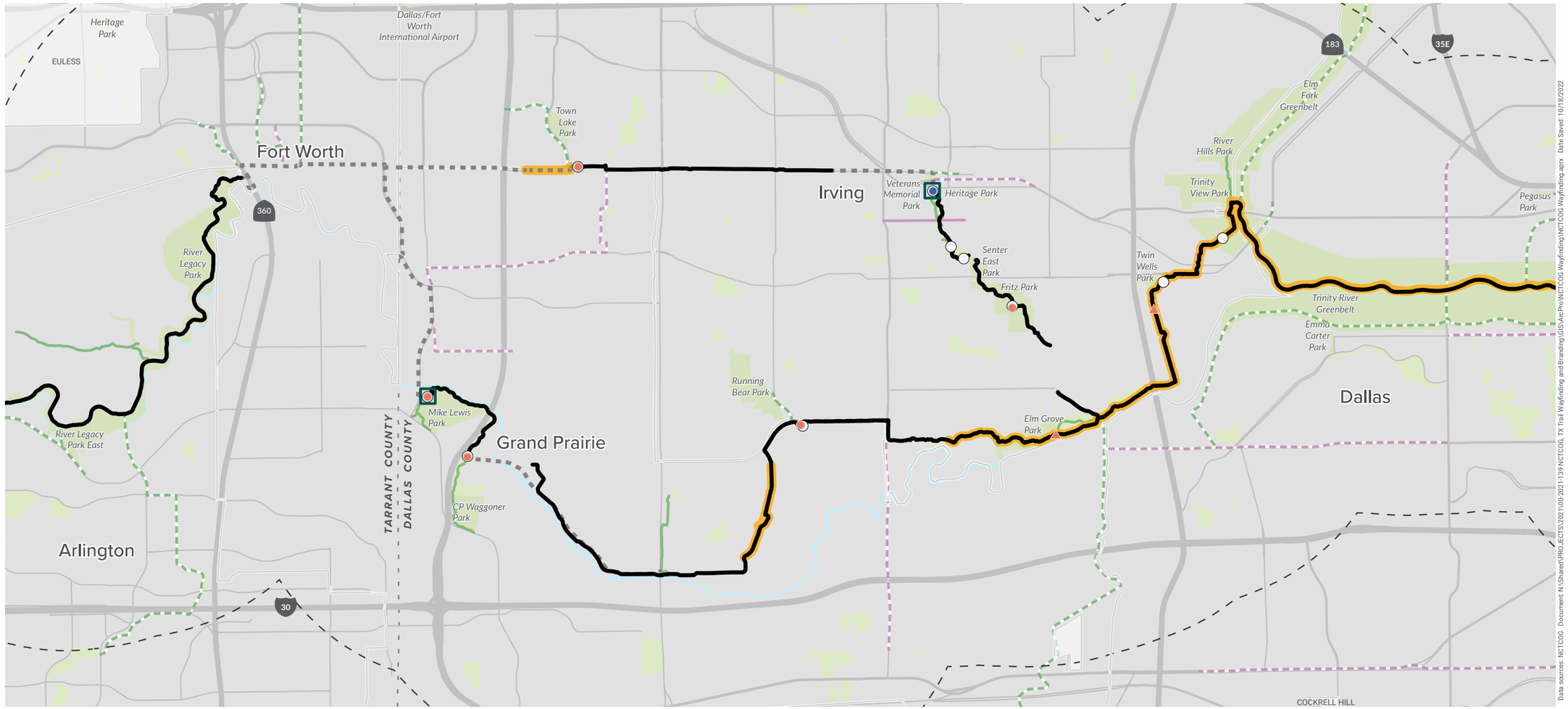

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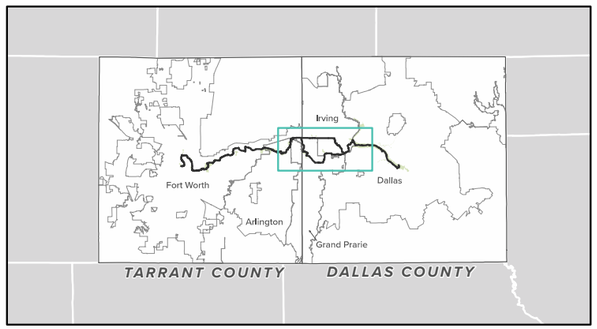

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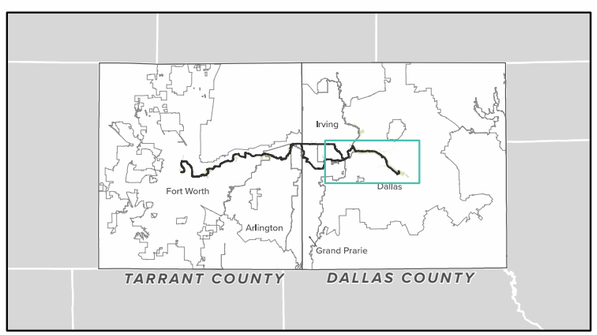

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06 Event Recommendations

The DFW Discovery Trail has the potential to host a wide array of events and activities that support local economies and elevate the profile of the trail.

EVENT BEST PRACTICES
DALLAS RACE ROUTES
IRVING RACE ROUTES
GRAND PRAIRIE RACE ROUTES
ARLINGTON RACE ROUTES
FORT WORTH RACE ROUTES
CULTURAL AND NON-SPORT EVENT OPPORTUNITIES

Event Best Practices

The DFW Discovery Trail's 60+ mile length and connections to a variety of unique destinations makes it an attractive venue for local, regional, and even national-scale events. Based on conversations with local event organizers and jurisdictions, the Planning Team has identified the following best practices and opportunities for holding events of all kinds along the trail to activate the trail and bring awareness to this important community asset.

Best Practices for Hosting National Marathon Events

Hosting a a scenic, shaded route that is designed to be a Boston Marathon qualifier race would attract racers nationwide. Participant investment in training and travel is high, so these races must be well-planned and executed experiences, in order to garner repeat customers. On-street portions of a race shouldn't be shied-away from. There are many advantages to on-street race portions including space for spectators, easy set-up for water stations, and quick emergency access. In fact, 18 of the 22 top Boston Marathon Qualifying races in the world are completely on-street (even if one is technically on a hard-packed dirt road.) Three are partially on paved greenway trails or bike paths (Steamtown Marathon: 4.2 miles on greenway bike paths, Mountains 2 Beach Marathon: 5-10 miles, and Twin Cities Marathon: about half on paths), and only 1 is majority on paved bikeways (Mohawk Hudson River Marathon: 18 miles on paths.) The DFW Discovery Trail could be leveraged to create a very special marathon experience.

Important Details to Ensure Success

Details below are best practices from organizers of the Irving Marathon series in addition to the Boston Athletic Association's basic qualifying race criteria listed at:

https://www.baa.org/races/boston-marathon/enter/qualify/top-qualifying-races

- Organizers will need parking for at least 2,000 cars to accommodate enough participants to break even on costs
- Shuttles or buses can be used to bring racers from nearby parking lots (School Districts can be good partners to provide busses for shuttling participants)
- It is preferable for the route to be a loop through scenic, shaded areas rather than an in-line segment to avoid congestion with two-way traffic on a single route. On-street routes can avoid this by utilizing both sides of a multi-lane street.
- To transition routes between on-street and off-street, use ADA-ramped intersections to prevent racers from needing to run up over a curb, which can be a trip hazard.
- The route should be mostly if not fully paved. Participants are not generally accustomed to racing on dirt trails.
- For segments not on concrete paths, low-pile carpet can be placed across dirt for improved traction
- Racers need ample space, such as a 15-foot paved path for one-way racing
- A corral start, where runners are released in waves of other racers with a similar pace, is a potential solution if participants need to backtrack on a specific segment. This strategy is not preferred, however, and should only be used if the race size is too large to accommodate all participants at once
- A pavilion or simple shade structure at the race headquarters can be useful for vendors, award ceremonies, music performers, etc.
- Lighting at the race headquarters can assist with early morning setup, which often begins between 3-5am for a large race that officially starts at 8am
- Markets with vendors, music performers, and other entertainment for racers and their families are becoming more common for large events
- Race bibs (ID sheets that are pinned to the runners shirt) often include rip-off tabs for free food and drink at various vendor booths
- A photo vendor booth at the Race Headquarters is becoming standard, where racers can obtain photos taken during the race, often complementary with registration.
- If coordinating a vendor market, an ideal location could include paved paths to the market area to limit vendors struggling with loading and unloading through the grass
- Services requested from nearby hotels can include water stations if on the route, shuttles to the race headquarters for racers and to designated Spectator Spots for family and friends, a VIP space at a hotel restaurant, and race weekend package offerings

Large, expensive races may take a few years to grow into successful events. Many race organizers expect to lose money for 3 to 4 years until the event gains recognition, is well-established with partners and sponsors, and has enough participants to break even financially.

As a large event becomes established, the real customer shifts to the hundreds of volunteers necessary to host a large event. Relationships with community groups who will help coordinate volunteers become a primary focus, as well as the experience of volunteers at the event.

Best Practices for Hosting Community Race Events

These races include Half Marathons, 10k, and 5k lengths. Smaller community races may attract regional attendees but not national attendees to the same degree as Boston Marathon qualifier events.

Races are best viewed as the event in themselves rather than serving another purpose such as a fundraiser, due to the level of expenses and coordination required. However, incorporating craft markets and live music entertainment at the race headquarters are becoming more common.

A minimum of 500-800 participants is generally necessary to break even on costs, so access to large parking areas, shuttles for transporting from further away parking lots, or nearby transit lines are essential.

Municipalities interested in lowering costs for race coordinators should consider:

- Hosting a race off-street on a trail will help lower costs for police and traffic control
- Planning the race headquarters where access to electricity, water, and shade structures exist can lower costs for renting generators and shade tents, as well as eliminating volunteer time for distributing water

Best Practices for Event Permitting

For a single city or multiple cities in coordination, the application process may differ between cities, but there are a few best practices and basic recommendations that can assist in coordination:

- Application submission deadline should be no later than 90 days before race. Additional time may be necessary for review of impact on transit/bus routes and stops.
- Departments in each city will have differing needs and may have developed a process with previous race organizers. Some cities may have a process in place to route the application through all necessary departments:
    - Special Events Permitting
    - Police Department
    - Transportation Department
    - Parks Department
    - Emergency Management
- Require event insurance coverage and additional plans/ permits for port-a-lets, shade structures and stages, and amplified sound including live music, as necessary.
- Contact information can be given to race organizers to:
    - Reserve private or public areas/trails/parks
    - Begin permit process for food handling, alcoholic beverages, etc.
- A meeting is recommended for the application to ensure all information is detailed and all questions or special situations are addressed sufficiently.
- Route specifications:
    - Route description may include a separate document with maps detailing signage locations, route turns and street or sidewalk closures and restrictions. If the route impacts public transit stops or routes, those impacted bus stops or routes should be indicated.
    - A map of street closures and ride-share drop-off/ pick up locations should be provided to shared-ride companies in advance.
    - Submit the route through Google/Waze Major Traffic Event submission form.
    - Notice to impacted communities may be required at 30 days and 15 days prior to the event.
    - Temporary signage and pavement markings may be needed to indicate the race route. Signage should be removed post-race and pavement markings should be designed to fade quickly or be power washed off after the event.
- Drone permit for videography can be included in the race application. Most drones include a permit process in the product's app
- A final check-in as the race date nears to confirm that no last-minute changes need to be made, from the race organizers side or from the city's side, before police locations are finalized.

**Recommendations were compiled from Irving Marathon best practices and permitting policies from Dallas Special Events and Trinity Watershed Management.*

Municipalities or organizations seeking a local event organizer or additional insights may contact Lozaro Alvarez, CEO and founder of Irving Marathon series, hosting eight annual race events.

lazaro@irvingmarathon.com 972-469-0805 www.irvingmarathon.com

Event Recommendations and Route Options by Jurisdiction

The DFW Discovery Trail possesses numerous opportunities for trail-focused events. The Planning Team has identified a series of race routes for each jurisdiction along the regional trail. In many cases, future trails from the Regional Veloweb have been shown as part of the race route in order to avoid participants traveling in opposite directions along the same segment of trail. For certain races, supporting infrastructure such as electrical hookups, potable water, water fountains, shade structure(s), and lighting strategically placed at the race headquarters will support the services expected by racers and ease logistical burdens for organizers.

Fort Worth Race Routes

See map on opposite page for numbered route locations.

1 FORT WORTH 5K

This Fort Worth route begins and ends at Gateway Park. It is a perfect route because of the scenery and the accessibility that it offers to attendees. Approximately half the route is next to the river which it then leads into the wooded area of the park and through the park itself. All of Gateway Park's parking lots combined have approximately 685 parking spaces.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters near the baseball fields in Gateway Park. Facilities could also be useful for baseball game attendees.

2 FORT WORTH 10K

Beginning at Gateway Park near the Trinity River Overlook, this route is entirely off-street, within the Fort Worth Trinity levees and the nearby Gateway Park. The route takes advantage of the bridges across the river to loop around both sides. Alternatively, the same route could be headquartered at Harman Field Park if sports games are not already scheduled there.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at Gateway Park and Harmon Field Park.

3 FORT WORTH/ARLINGTON NATIONAL MARATHON

Beginning and ending at the Entertainment District around AT&T Stadium, the race headquarters should enable all race participants to park on-site. The majority of this route is off-street, winding along Village Creek Trail, the DFW Discovery Trail through River Legacy Park, and the planned paths along Cooks Lane and along Ballpark Way and Brown Blvd. Two fairly short segments at the beginning of the route and end of the route must be on-street but these high-capacity roads should easily accommodate one lane removal for the race route. The segment through the neighborhoods just west of AT&T Stadium zigs a little to create the exact length for the route. Ideally, the race begins through the neighborhood and ends at the Richard Greene Linear Park.

Recommended Improvements:

- Construct planned trail segments.
- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at AT&T Stadium.

4 CENTREPORT MARATHON

Race only begins and ends at the CentrePort TRE Station in Fort Worth – see Grand Prairie or Irving for route description and location.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at CentrePort TRE Station.

5 FULL DISCOVERY TRAIL NATIONAL MARATHON

For this race, there would be two distinct start points, one in Dallas and one in Fort Worth, with both marathons ending at CentrePort Station. The race start locations, at Santa Fe Trestle Trail East Access and Riverside Park, would only require a simple setup. The race end at CentrePort Station would be the primary location for vendors, music, and celebration. The Trinity Railway Express could be the primary way for racers and their family and friends to arrive at the race end and to return to their vehicles at the race start location, return to their hotel, or to home.

Designated spectator areas could be planned near partner hotels or in scenic locations along the race route and partner hotels could schedule shuttles to specific nearby cheering stations, and to the nearest train station for easy transport to the race and back.

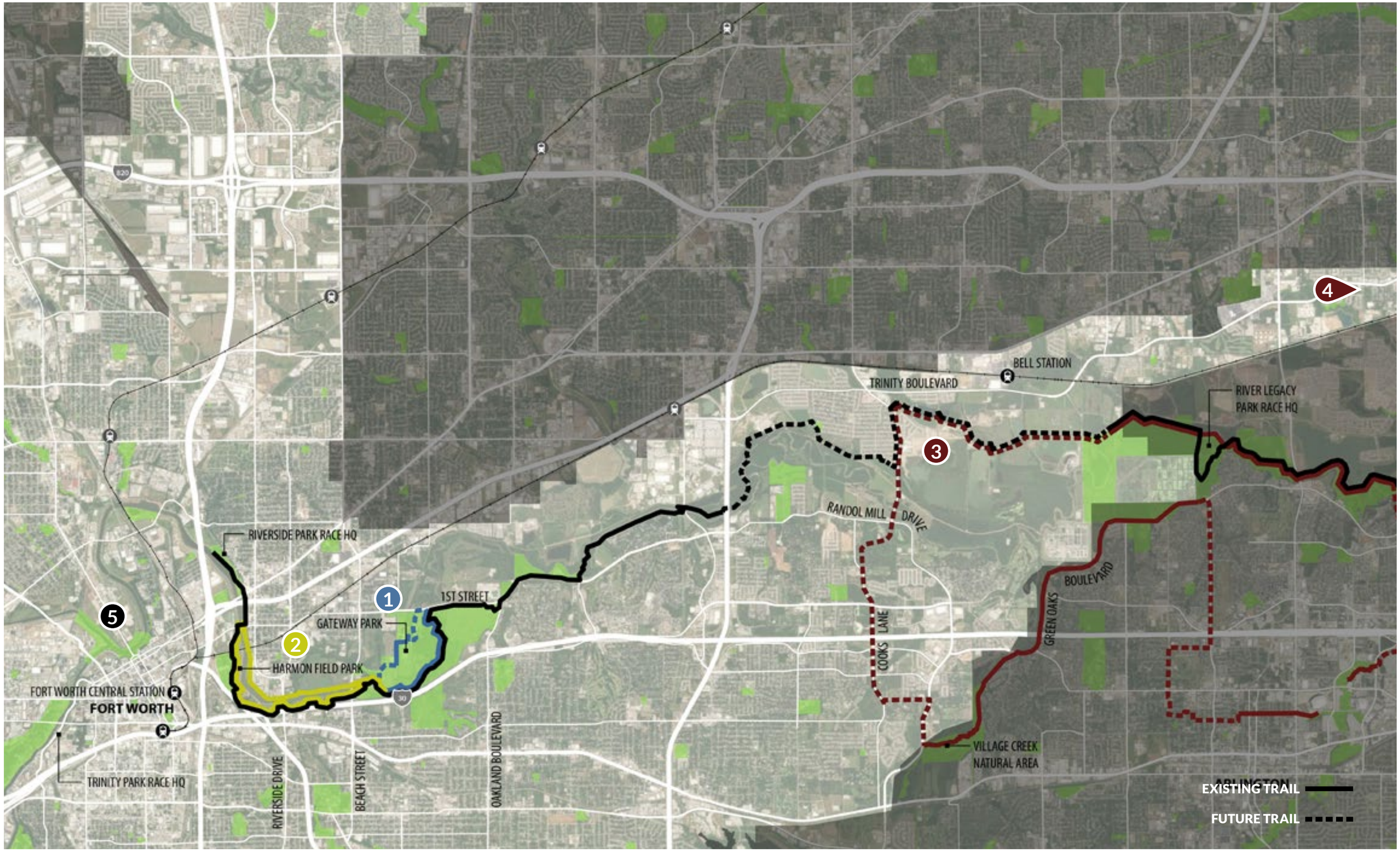
Fort Worth Start:

To create a 26.2 mile marathon route ending at CentrePort Station, the Fort Worth race must begin at Riverside Park. This park does not have a sufficient amount of parking but it is near the Fort Worth Central Station.

Racers would arrive for the Fort Worth race at Riverside Park by taking the TexRail or Trinity Railway Express trains to the Fort Worth Central Station. Race organizers would need to provide a shuttle for the 2.5 mile drive to Riverside Park.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s) strategically placed at the race start at Riverside Park.
- Electricity outlets, water fountains, and shade structure(s) strategically placed at the race end at CentrePort Station in the parking lot.
- City of Fort Worth could consider acquiring the open lawn adjacent to the station at Statler Boulevard and Breezewood Drive.


820
4
BELL STATION
TRINITY BOULEVARD
RIVER LEGACY
PARK RACE HQ
3
RANDOL MILL DRIVE
RIVERSIDE PARK RACE HQ
1
1ST STREET
GATEWAY PARK
5
2
HARMON FIELD PARK
30
FORT WORTH CENTRAL STATION
FORT WORTH
COOKS LANE
GREEN OAKS BOULEVARD
VILLAGE CREEK
NATURAL AREA
TRINITY PARK RACE HQ
RIVERSIDE DRIVE
BEACH STREET
OAKLAND BOULEVARD
ARLINGTON
EXISTING TRAIL
FUTURE TRAIL

Arlington Race Routes

See map on opposite page for numbered route locations.

1 ARLINGTON 5K

This potential 5k route is 1 mile longer than a 5k but because it loops around Lake Viridian it's not possible to shorten unless the race start and finish are in two different locations. However, for a community race that does not need to be a specific length, it's a great route. Availability of parking, multiple options for race headquarter locations, and the beautiful segments of trail make this a great race location, including the ability for the Viridian community to participate without needing to park at the race headquarters.

Recommended Improvements:

Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters either near Viridian Lake Slope Park at Collins St and Viridian Park Ln or closer to the Lakeview Event and Conference Center.

2 ARLINGTON 10K

This route through River Legacy utilizes surrounding roads and a neighborhood connection to complete a 10k. The neighborhood connection may need to be confirmed or may need access permission from neighbors. There's a lot of shade through the River Legacy Park and includes a loop inside the larger race loop to complete the length. A portion of this route also includes a planned segment of the DFW Discovery Trail. Parking arrangements currently being used by River Legacy races would need to be employed for this race event as well.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at River Legacy.

3 ARLINGTON HALF MARATHON

This potential ½ marathon route loops around Lake Viridian trail and through River Legacy trails with a western loop through neighborhoods and a slightly industrial area. It is 2 miles longer than a standard ½ marathon unless portions include a turnaround on the trail rather than a continuous loop. A portion of the route is also on a planned trail or sidewalk along a road.

This route is also convenient because it has a large parking option near Lake Viridian. However, it is commercial parking that has 425 spaces, and may be a slight inconvenience for the shopping center retail spaces.

Recommended Improvements:

- Construct planned trail segments.
- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters either near Viridian Lake Slope Park at Collins St and Viridian Park Ln or closer to the Lakeview Event and Conference Center.

4 FORT WORTH/ARLINGTON NATIONAL MARATHON

Beginning and ending at the Entertainment District around AT&T Stadium, the race headquarters should enable all race participants to park on-site. The majority of this route is off-street, winding along Village Creek Trail, the DFW Discovery Trail through River Legacy Park, and the planned paths along Cooks Lane and along Ballpark Way and Brown Blvd. Two fairly short segments at the beginning of the route and end of the route must be on-street, but these high-capacity roads should easily accommodate one lane removal for the race route. The segment through the neighborhoods just west of AT&T Stadium zigs a little to create the exact length for the route. Ideally, the race begins through the neighborhood and ends at the Richard Greene Linear Park.

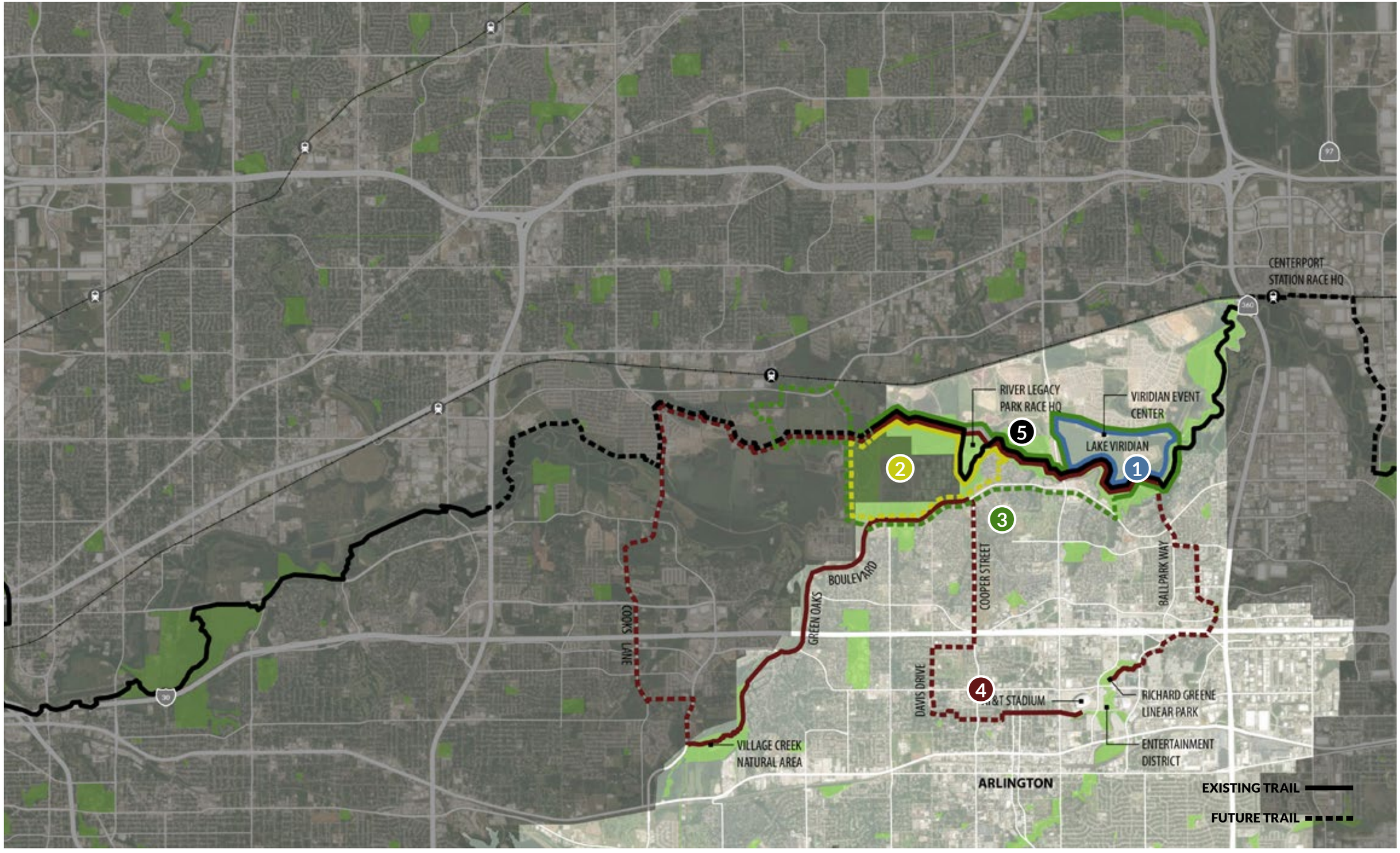
Recommended Improvements:

- Construct planned trail segments.
- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at AT&T Stadium.

5 FULL DISCOVERY TRAIL NATIONAL MARATHON

For this race, there would be two distinct start points, one in Dallas and one in Fort Worth, with both marathons ending at CentrePort Station. The race start locations, at Santa Fe Trestle Trail East Access and Riverside Park, would only require a simple setup. The race end at CentrePort Station would be the primary location for vendors, music, and celebration. The Trinity Railway Express could be the primary way for racers and their family and friends to arrive at the race end and to return to their vehicles at the race start location, return to their hotel, or to home.

Designated spectator areas could be planned near partner hotels or in scenic locations along the race route and partner hotels could schedule shuttles to specific nearby cheering stations, and to the nearest train station for easy transport to the race and back.


CENTERPORT
STATION RACE HQ
RIVER LEGACY
PARK RACE HQ
VIRIDIAN EVENT
CENTER
LAKE VIRIDIAN
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COOPER STREET
BALLPARK WAY
BOULEVARD
GREEN OAKS
COCKS LANE
DAVIS DRIVE
&T STADIUM
RICHARD GREENE
LINEAR PARK
ENTERTAINMENT
DISTRICT
VILLAGE CREEK
NATURAL AREA
ARLINGTON
EXISTING TRAIL
FUTURE TRAIL

Grand Prairie Race Routes

See map on opposite page for numbered route locations.

1 GRAND PRAIRIE / IRVING / DALLAS FULL MARATHON

This route begins and ends at Lone Star Park, with an abundance of parking and where current races are already being held. Much of the route is on existing segments of the DFW Discovery Trail. The southern portion of this route extends to Mountain Creek Lake, mostly on planned connections. It is recommended that the planned Hensley Field development on the north end of Mountain Creek Lake plan for a marathon segment through the development, connecting from Bagdad Rd to the north, and connecting to the east along the lake on City of Dallas park land to an existing trail. Parts of this route are on the road but these high-capacity roads should easily accommodate one lane removal for the race route.

Recommended Improvements:

- Construct planned trail segments.
- Plan & construct a route through Hensley Field development.
- Plan & construct for a route through City of Dallas park land along the northeastern edge of Mountain Creek Lake connecting Hensley Field to an existing trail to the east.
- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters in Lone Star Park.

2 CENTREPORT MARATHON

This marathon route begins and ends at CentrePort TRE Station in Fort Worth and is entirely on the DFW Discovery Trail and a small planned segment along W Shady Grove Rd in Grand Prairie. The route passes the West Irving TRE Station before heading south and west along the planned W Shady Grove Rd segment then looping south and east along DFW Discovery Trail back up past the Downtown Irving TRE Station. Then south along the planned W Shady Grove Rd segment again and north up the DFW Discovery Trail back to CentrePort TRE Station.

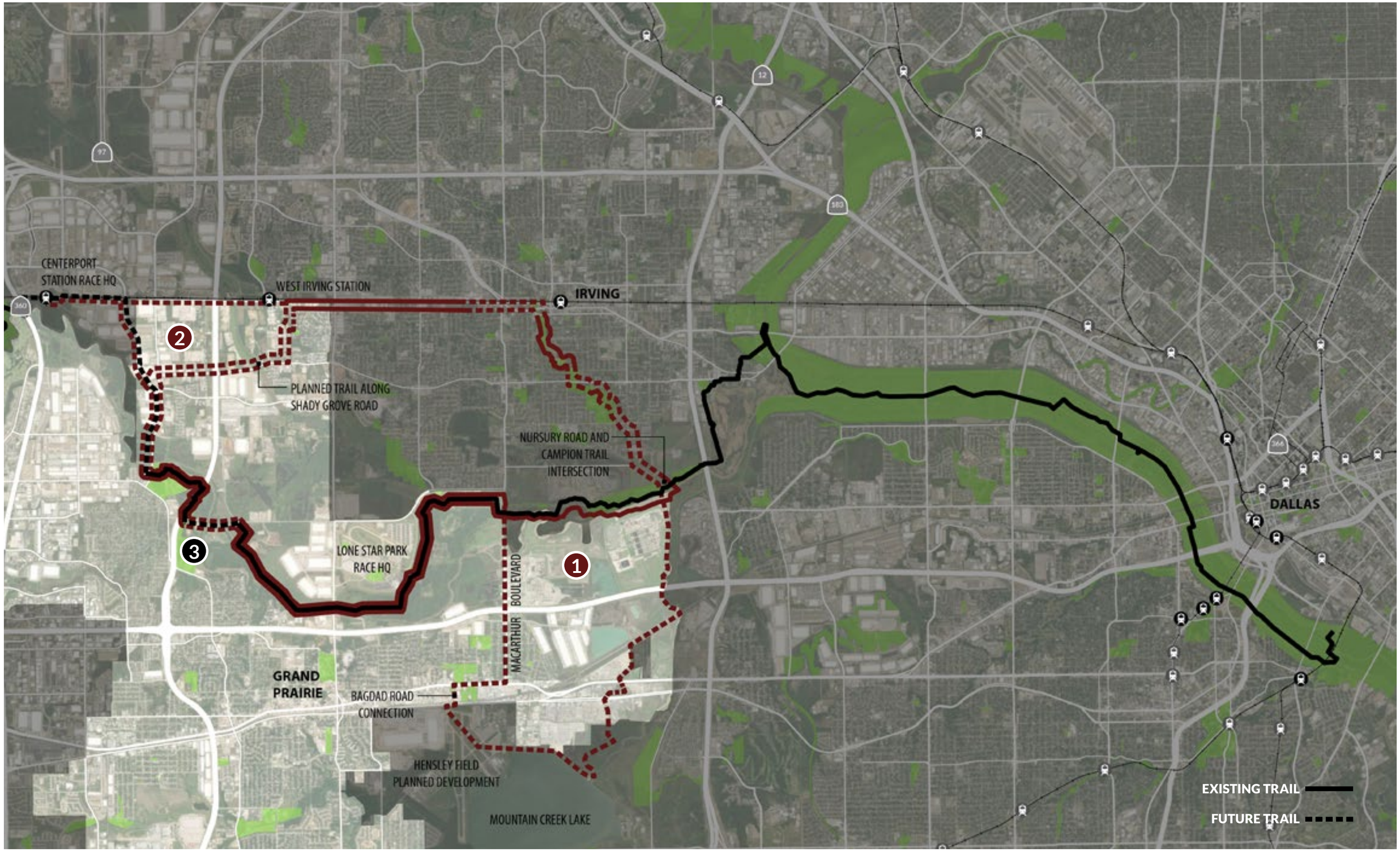
Recommended Improvements:

- Construct planned trail segment

3 FULL DISCOVERY TRAIL NATIONAL MARATHON

For this race, there would be two distinct start points, one in Dallas and one in Fort Worth, with both marathons ending at CentrePort Station. The race start locations, at Santa Fe Trestle Trail East Access and Riverside Park, would only require a simple setup. The race end at CentrePort Station would be the primary location for vendors, music, and celebration. The Trinity Railway Express could be the primary way for racers and their family and friends to arrive at the race end and to return to their vehicles at the race start location, return to their hotel, or to home.

Designated spectator areas could be planned near partner hotels or in scenic locations along the race route and partner hotels could schedule shuttles to specific nearby cheering stations, and to the nearest train station for easy transport to the race and back.


CENTERPORT
STATION RACE HQ
WEST IRVING STATION
IRVING
2
PLANNED TRAIL ALONG
SHADY GROVE ROAD
NURSURY ROAD AND
CAMPION TRAIL
INTERSECTION
3
LONE STAR PARK
RACE HQ
1
MACARTHUR BOULEVARD
GRAND
PRAIRIE
BAGDAD ROAD
CONNECTION
HENSLEY FIELD
PLANNED DEVELOPMENT
MOUNTAIN CREEK LAKE
DALLAS
EXISTING TRAIL
FUTURE TRAIL

Irving Race Routes

There's only a small portion of the DFW Discovery Trail in Irving, primarily the segment between Trinity View Park ending just before Lone Star Park and including the segment up toward the Downtown Irving/Heritage Crossing Trinity Railway Express (TRE) Station.

Ideally, a race segment could connect the TRE Station back toward Trinity View Park to complete a loop. However, there appears to be no safe, practical route here. This part of Irving is heavily industrial and there are many highways to cross as well as high-volume roads with industrial vehicles and 18-wheeler traffic. Any trails built here will need to be designed off-street and will take planning and coordination with private property owners and TxDOT. Two potential routes are identified here, but not at the standard lengths for races.

See map on opposite page for numbered route locations.

1 IRVING HALF MARATHON OPTION 1

This potential route starts and ends at Trinity View Park. One portion of the route would be repeated beginning at the intersection of S Nursery Rd and the Campion trail, back to the race start, but the 7 mile loop between when racers first pass the S Nursery and Campion intersection and return to it may be long enough to prevent racers starting and ending the race from running into each other on the trail.

Recommended improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at Trinity View Park.

2 IRVING HALF MARATHON OPTION 2

This potential half marathon route is 2.7 miles longer than a half marathon because it's primarily on existing or planned trails in set locations. However, for a community race that does not need to be a specific length, it's a great route.

This route begins and ends at Trinity View Park, connecting the DFW Discovery Trail with the Las Colinas Campion Trail where trails are under construction along the Elm Fork Trinity River. Much of this planned route along the Tinity River is already nearing construction. The route then navigates through Irving's residential neighborhoods through a series of lakes and walking paths along Rochelle Blvd, connecting to the DFW Discovery Trail at the Downtown Irving/Heritage Crossing Trinity Railway Express (TRE) Station.

Recommended Improvements:

- Planned trail segments north from Trinity View Park to connect with levee trail near Lone Star Offroad Park to Cistercian Preparatory School, which is then imminently close to California Crossing Park and the trails in Las Colinas.
- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters at Trinity View Park.

3 GRAND PRAIRIE / IRVING / DALLAS FULL MARATHON

This route begins and ends at Lone Star Park, with an abundance of parking and where current races are already being held. Much of the route is on existing segments of the DFW Discovery Trail. The southern portion of this route extends to Mountain Creek Lake, mostly on planned connections. It is recommended that the planned Hensley Field development on the north end of Mountain Creek Lake plan for a marathon segment through the development, connecting from Bagdad Rd to the north, and connecting to the east along the lake edge to an existing trail. Parts of this route are on the road but these high-capacity roads should easily accommodate one lane removal for the race route.

Recommended Improvements:

- Construct planned trail segments.
- Plan & construct a route through the Hensley Field development. This is a large redevelopment site and will require coordination with the City of Dallas and planning team, as the master plan is nearing completion.
- Plan & construct a route through City of Dallas park land along the northeastern edge of Mountain Creek Lake connecting Hensley Field to an existing trail to the east.
- Electricity outlets, water fountains, shade structure(s), and lighting strategically placed at the race headquarters in Lone Star Park.

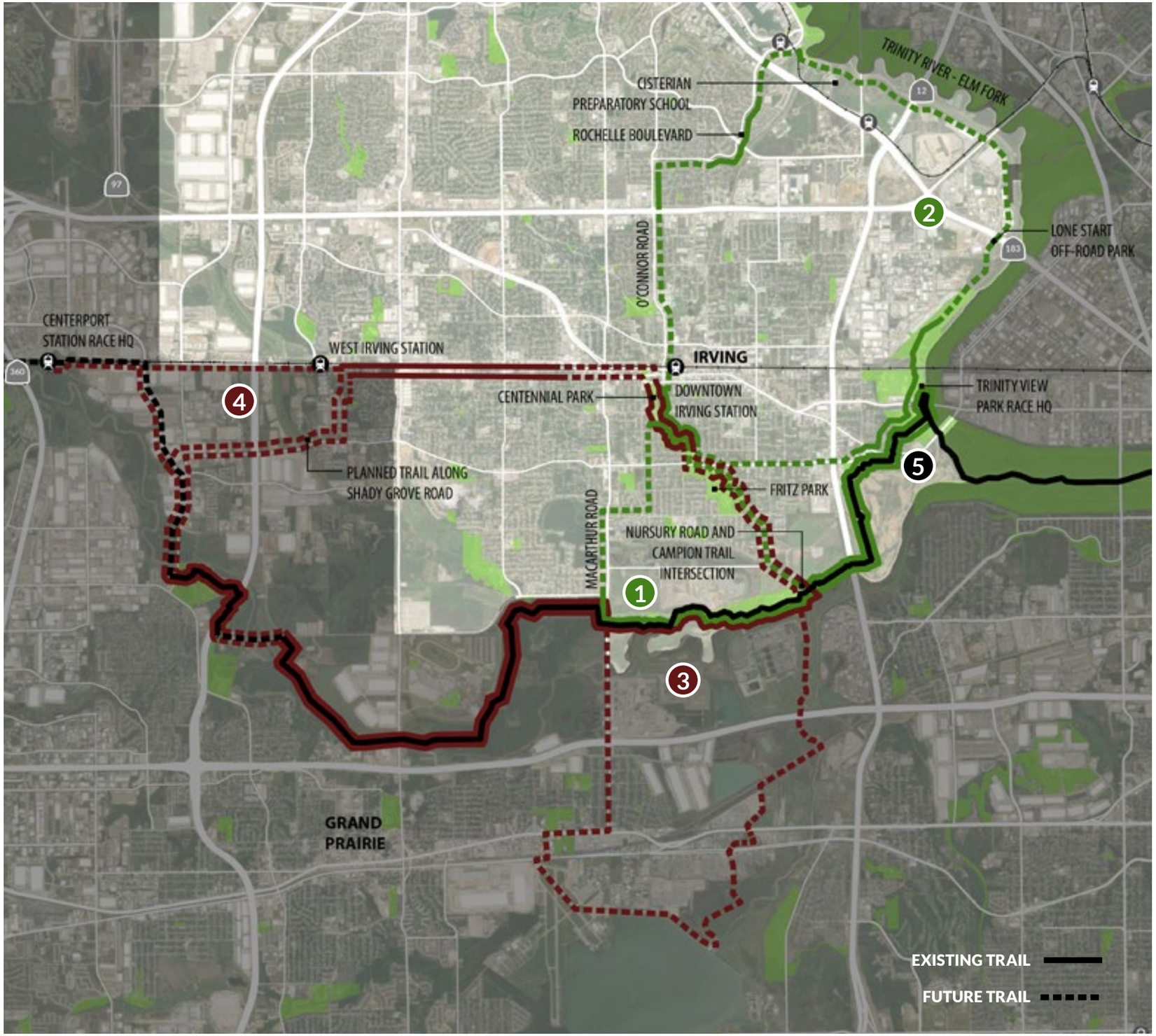
4 CENTREPORT MARATHON

This marathon route begins and ends at CentrePort TRE Station in Fort Worth and is entirely on the DFW Discovery Trail and a small planned segment along W Shady Grove Rd in Grand Prairie. The route passes the West Irving TRE Station before heading south and west along the planned W Shady Grove Rd segment then looping south and east along DFW Discovery Trail back up past the Downtown Irving TRE Station. Then south along the planned W Shady Grove Rd segment again and north up the DFW Discovery Trail back to CentrePort TRE Station.

5 FULL DISCOVERY TRAIL NATIONAL MARATHON

For this race, there would be two distinct start points, one in Dallas and one in Fort Worth, with both marathons ending at CentrePort Station. The race start locations, at Santa Fe Trestle Trail East Access and Riverside Park, would only require a simple setup. The race end at CentrePort Station would be the primary location for vendors, music, and celebration. The Trinity Railway Express could be the primary way for racers and their family and friends to arrive at the race end and to return to their vehicles at the race start location, return to their hotel, or to home.

Designated spectator areas could be planned near partner hotels or in scenic locations along the race route and partner hotels could schedule shuttles to specific nearby cheering stations, and to the nearest train station for easy transport to the race and back.



Dallas Race Routes

See map on opposite page for numbered route locations.

1 DALLAS 10K OPTION 1 - TRINITY LEVEES NORTH

Completely on the Trinity Skyline trail between the Dallas levees, this route begins and ends at the Ronald Kirk Pedestrian Bridge Park. This route is either 0.32 miles too short (ending by crossing the river on the Ronald Kirk pedestrian bridge from the east side) or 0.4 miles too long (continuing further south to cross the river at Commerce St) a creative solution may be found to enable a 10K.

2 DALLAS 10K OPTION 2

The route begins and ends at Moore Park with the turnaround atop the Commerce St bridge, and back across the levee trail. Segments of this trail would be on existing gravel paths, making it important to specify the route surface for racers who may be more accustomed to racing on concrete surfaces only. With the 8th & Corinth DART station across the street from the Moore Park trailhead, attendees could be encouraged to take DART to the race. This would decrease the amount of parking spaces needed for the event.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters in Moore Park.

3 DALLAS HALF MARATHON

This route is almost entirely within the Trinity River levees and off roads. It begins at Trinity View Park with a turnaround atop the Commerce St bridge. Parking lots at Trinity View Park include 500 parking spaces. Alternatively, the race could begin at Trinity Groves, near downtown Dallas, with 75 parking spaces at the Ron Kirk Pedestrian Bridge park and approximately 200 on private property to the west, adjacent to the bridge park plus private restaurant parking around Trinity Groves. The northern segment of this route takes participants to a serene area of the Dallas Trinity Park, away from the hustle and bustle of the city, and with some of the best views of the Dallas skyline.

Recommended Improvements:

- Electricity outlets, water fountains, and shade structure(s), and lighting strategically placed at the race headquarters, on the western end of Ron Kirk pedestrian Bridge and/or at Irving's Trinity View Park.

4 DALLAS FULL TRINITY LEVEE

A good route for a race that is not bounded by the need to be a typical race length. This race could start and end at Trinity View Park, Moore Park, or Ronald Kirk Pedestrian Bridge park.

Completely on the Trinity Skyline trail between the Dallas levees, this route is dictated by placement of bridges crossing the river. This route is five miles longer than a half-marathon but eight miles short of a full marathon.

5 FULL DISCOVERY TRAIL NATIONAL MARATHON

For this race, there would be two distinct start points, one in Dallas and one in Fort Worth, with both marathons ending at CentrePort Station. The race start locations, at Santa Fe Trestle Trail East Access and Riverside Park, would only require a simple setup. The race end at CentrePort Station would be the primary location for vendors, music, and celebration. The Trinity Railway Express could be the primary way for racers and their family and friends to arrive at the race end and to return to their vehicles at the race start location, return to their hotel, or to home.

Designated spectator areas could be planned near partner hotels or in scenic locations along the race route and partner hotels could schedule shuttles to specific nearby cheering stations, and to the nearest train station for easy transport to the race and back.

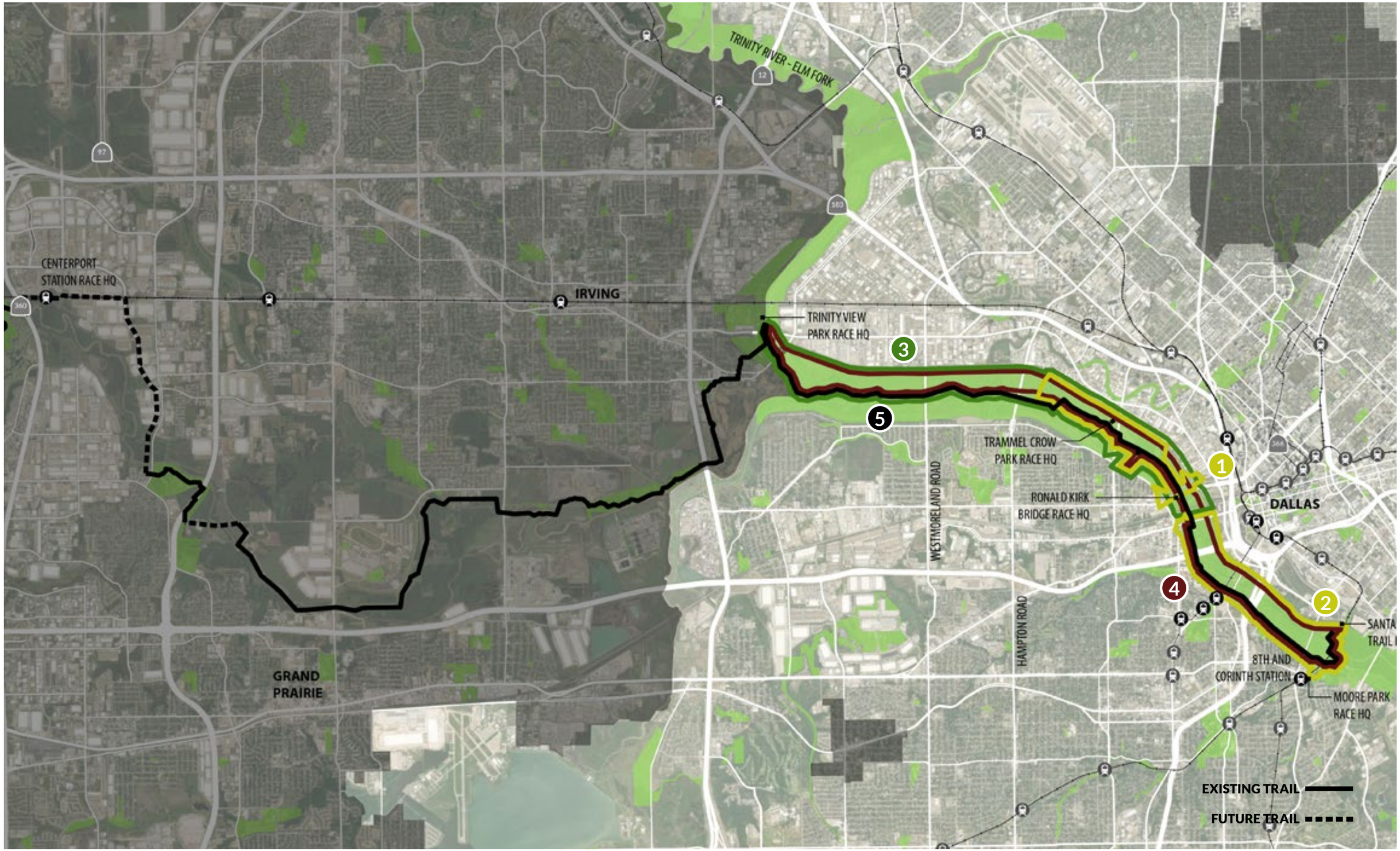
Dallas Start:

To create a 26.2 mile marathon route ending at CentrePort Station, the Dallas Race must begin at Santa Fe Trestle Trail East Access. This park does not have a sufficient amount of parking but its location near the 8th & Corinth Dallas Area Rapid Transit Station would allow attendees to arrive by train with a short 0.95 mile walk on the trail to the race start.

The race ends at CentrePort Station, allowing attendees to also take the train back to their hotel or home just as they arrived.

Recommended Improvements:

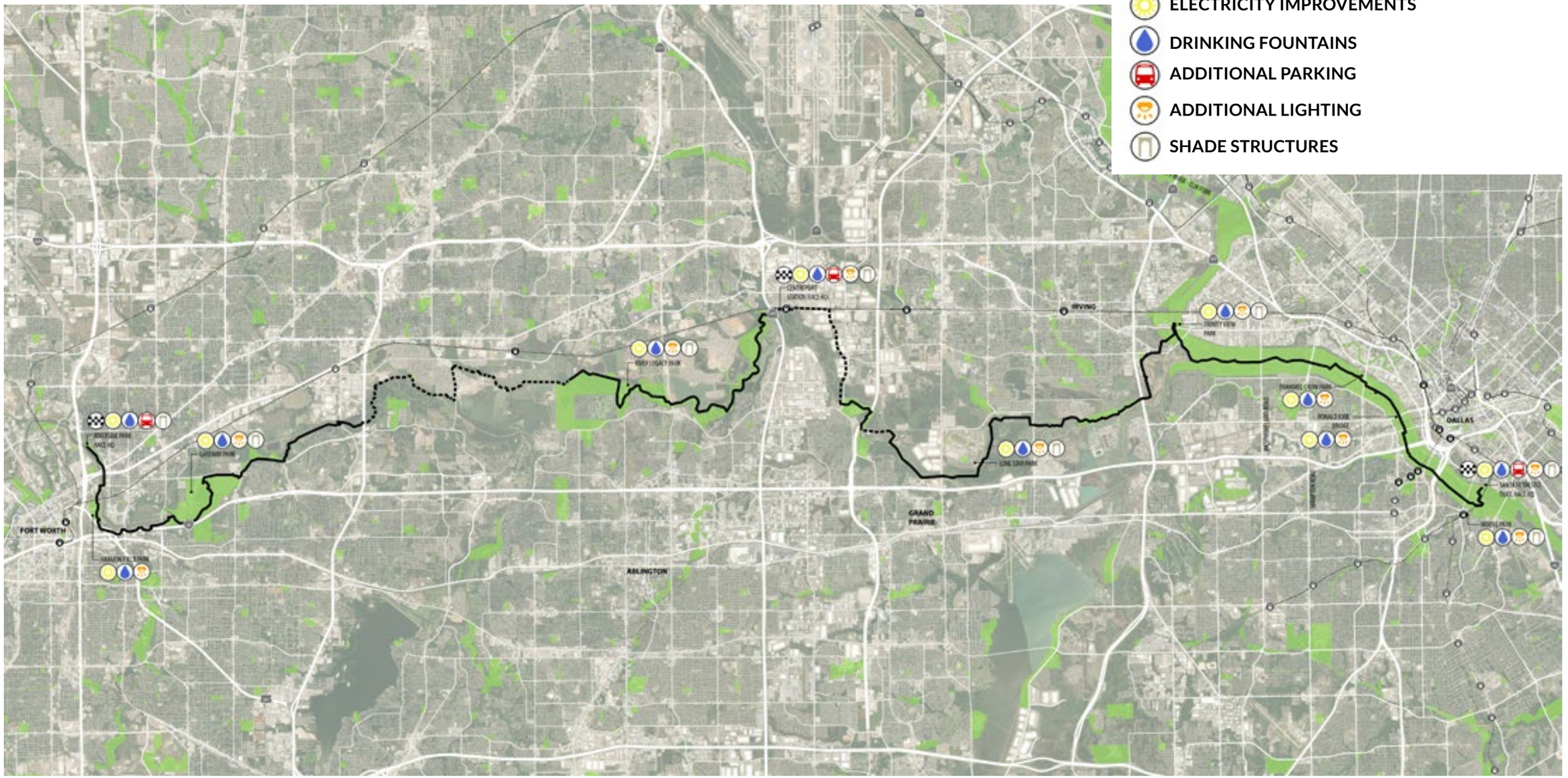
- Electricity outlets, water fountains, and shade structure(s) strategically placed at the race start at the Santa Fe Trestle Trail East Access.


TRINITY RIVER - ELM FORK
CENTERPORT
STATION RACE HQ
IRVING
TRINITY VIEW
PARK RACE HQ
3
5
TRAMMEL CROW
PARK RACE HQ
1
RONALD KIRK
BRIDGE RACE HQ
WESTMORELAND ROAD
DALLAS
4
2
HAMPTON ROAD
8TH AND
CORINTH STATION
MOORE PARK
RACE HQ
GRAND
PRAIRIE
EXISTING TRAIL
FUTURE TRAIL

Event Improvements Overview

Legend

- START/FINISH LINE
- ELECTRICITY IMPROVEMENTS
- DRINKING FOUNTAINS
- ADDITIONAL PARKING
- ADDITIONAL LIGHTING
- SHADE STRUCTURES



DFW Discovery Trail Event Improvements

EVENT INFRASTRUCTURE IMPROVEMENTS

In order to effectively host a variety of events along the DFW Discovery Trail, infrastructure improvements may be beneficial at key locations. This could include improved access to power, potable water, lighting, parking, or other potential improvements. Coordination with permitting staff and event organizers is recommended to refine proposed improvements to cater to the specific needs of each site and event.

Table 4. Event Infrastructure Improvement Costs

Infrastructure Improvement	Planning Level Cost
Electric Hookup (ea)*	$2,000
Lighting (per fixture)	$15,000
6' picnic table (ea)	$2,500
6' bench (ea)	$3,000
Surface Parking Space (ea)	$5,000
Shade/Pavilion (10' x 20')	$23,500
Hose Bibb (ea)*	$500
Water Fountain (ea)**	$8,000

* Assumes power already available on-site

** Assumes potable water already available on-site.

*** Assumes potable water and sewer access available on-site.

Table 5. Conceptual Event Infrastructure Improvement Locations (listed from West to East)

Jurisdiction	Location	New / Improved Electrical Hookups	New / Improved Drinking Fountains	Shade Structures	Additional Parking
Fort Worth	Riverside Park	X	X	X	X
Fort Worth	Harmon Field Park	X	X		
Fort Worth	Gateway Park	X	X	X	
Fort Worth	CentrePort Station	X	X	X	X
Arlington	River Legacy Park	X	X	X	
Grand Prairie	Lone Star Park	X	X	X	
Irving	Trinity View Park	X	X	X	
Dallas	Trammel Crow Park	X	X		
Dallas	Ronald Kirk Bridge	X	X		
Dallas	Moore Park	X	X	X	
Dallas	Santa Fe Trestle Trail East	X	X	X	X

Cultural and Non-Sport Event Opportunities

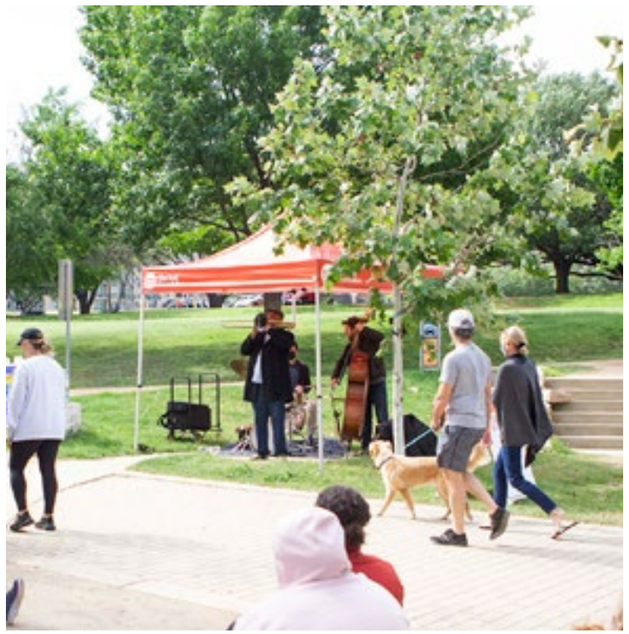
While sports races can provide a significant economic impact to local jurisdictions, the DFW Discovery Trail should seek to attract and provide experiences for a broad spectrum of potential users. The following event recommendations are intended to serve as a starting point and initial brainstorm for programming a diverse spectrum of events for the trail.

TASTE OF THE TRAIL

Food trucks and vendors can set up at regular intervals along the trail to encourage trail users to explore the trail and sample the culinary delights of North Central Texas.

Case Study: Root River Trail Towns, Taste of the Trail

Website: https://www.rootrivertrail.org/



TUNES OF THE TRAIL

Live music and performances could be staged at regular intervals along the trail to provide a linear concert. Smaller acoustic performances could be used to fill in gaps along the trail where power hook-ups may not exist.

Case Study: Katy Trail (Missouri)

Website: https://katytrailmo.com/events/2021-pedalers-jamboree/

WALK WITH A DOC

Partnerships could be developed with local healthcare organizations to host walks on the trail with doctors where people can ask health-related questions.

Case Study: Indianapolis Greenways

Website: https://www.greenwayspartnership.com/events

Potential Partners: Dallas Medical District Healthcare providers, Texas Health Fort Worth

DISCOVER THE TRAIL

Subject matter experts such as master naturalists, historians, or biologists could be recruited to provided walking or biking tours along the trail while telling the unique cultural or ecological stories of the region through the use of the trail. TRE and public transit could be utilized to facilitate shuttles if needed based on the desired length and route. The regional trail non-profit could assume responsibility for organizing guides and subject matter experts.

Potential Partners: Texas Master Naturalists, local historical societies, universities

STRUT YOUR MUTT

Partnerships could be formed with local animal shelters near the trail to allow volunteers to check out rescue dogs and walk them on the trail. The Regional Trail Non-Profit could research potential partners and coordinate logistics with local jurisdictions.

Potential Partners: Local animal shelters

TERROR TRAIL OR TRICK OR TREAT TRAIL

Festive events during fall/October soliciting volunteers to hand out candy for kids or create a haunted house type of event for teenagers and adults. The event may serve as an alternative venue for Trunk or Treat events already taking place within the community.

Potential Partners: Existing jurisdictions or community groups hosting “Trunk or Treat” events and open to an alternative setting

ART WALK

Coordinate in-person or virtually guided tours of public art along the trail. Artwork may be permanent or temporary and provide information on works

Potential Partners: TRWD, local arts councils

SEARCH ON SPOKES

Scavenger hunt on wheels to find various hidden items or collect photographs with certain objects along the length of the trail.

Potential Partners: Local parks departments

FARM TO TRAIL

Organize Farmer’s Markets on the trail or at parks along the trail system.

Potential Partners: Existing farmers markets that may be open to a new venue

COWBOY RIDE

Opportunity for community members to strut their stuff with full cowboy getup on bikes.

Potential Partners: Fort Worth Stockyards

07 Placemaking Program

Creating special, unique, and authentic places along the DFW Discovery Trail will help create a memorable experience for both local trail users and visitors.

INTRODUCTION

PLACEMAKING OPPORTUNITIES

Introduction

While the wayfinding system, event programming, and operational recommendations included in this plan will support the project goals to “enhance, promote, and attract”, physical improvements to the trail corridor can change the user experience and create memorable moments. These experiences can help solidify the trail’s value and importance to local communities while creating opportunities to share unique local stories.

These improvements may take a variety of forms from grand gestures to a simple bench overlooking a pleasant view of the Trinity River. Decorative pavement can also be used to highlight points of interest along the DFW Discovery Trail. In new and future applications, this could take the form of integral-colored concrete, while existing portions of the trail and hardscape areas can be retrofitted with paint. Colors should match the designated colors as discussed in the branding section of this guide.

The following pages identify unique placemaking opportunities and provide general guidance for creating a memorable and unique trail experience in support of the DFW Discovery Trail vision.

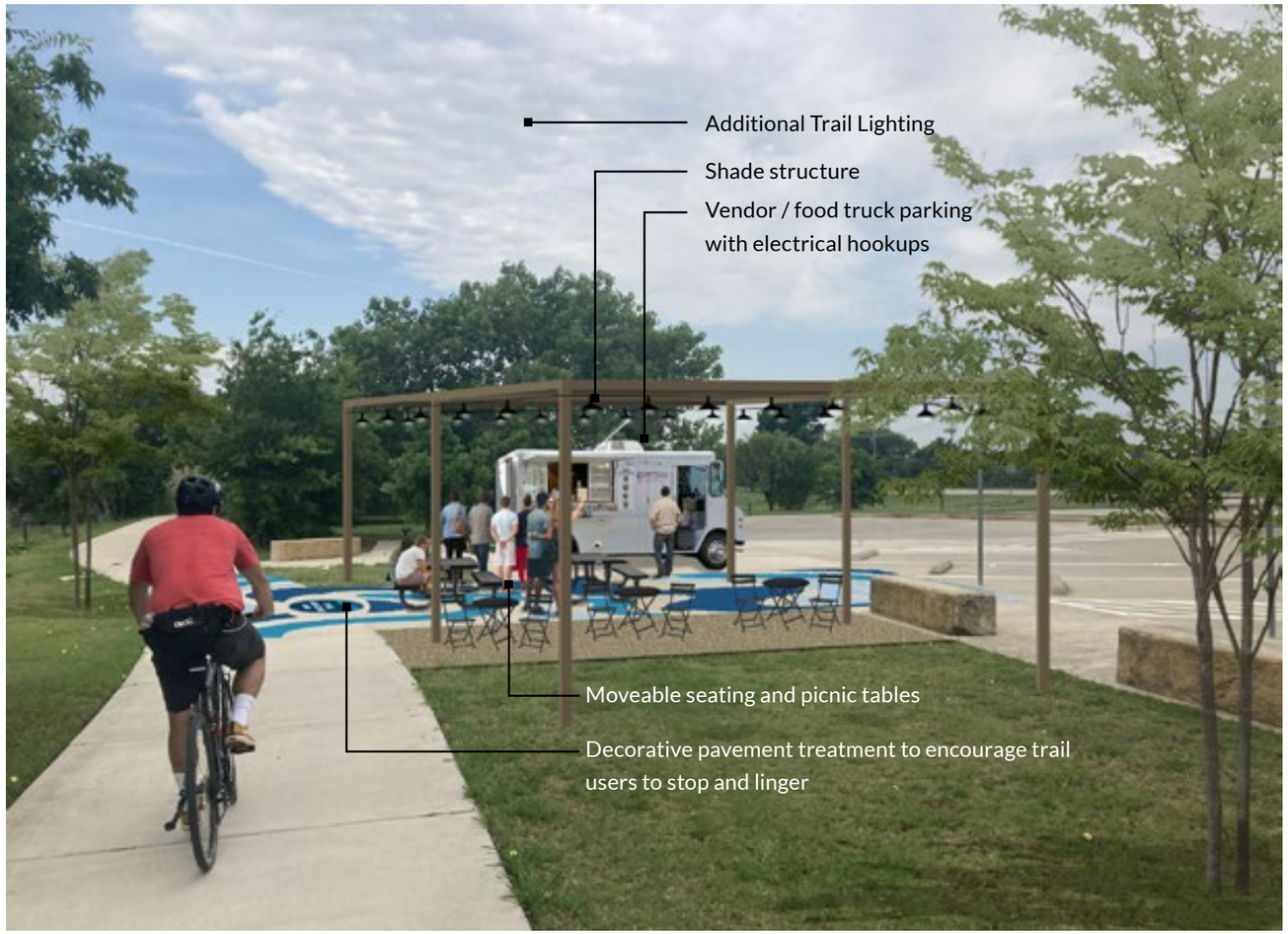
Placemaking Opportunities

Economic Development Opportunities

Throughout the trail there are many opportunities for vendors, restaurants, or businesses that could enhance the trail user experience and create new attractions. Jurisdictions could work with local vendors such as food trucks, mobile bicycle repair shops, kayak rental outfitters, or other potential vendors to supply valuable services to trail users while activating the trail in a dynamic way. Vendor zones could be defined through public art or pavement patterns that extend to the trail and encourage trail users to stop and explore local offerings. A Regional Trail Organization (see Chapter 8) could assist in curating a diverse and complementary array of local vendors while coordinating with jurisdictions to address logistical concerns and comply with permitting requirements.

Source: groupn.co

Source: knoxfoodpark.com



Rendering of potential food truck hub and flexible outdoor seating at Trinity River trailhead in Fort Worth

Community Gateways

Community gateways may announce the entrance to new neighborhoods or cities. Signage may be complemented with pavement treatments and landscaping as feasible. At city boundaries, gateway markers may be used to physically announce to trail users that they are entering a new jurisdiction.

Rendering of potential community gateway treatment at Trinity View Park

Scenic Vistas

Scenic vistas offer trail users a comfortable place to linger and take in the views available along the DFW Discovery Trail. Benches with customized DFW Discovery Trail branding should be oriented towards desirable views, whether it be the Trinity River or the Dallas skyline. This typology could also be used to provide resting spots along long uninterrupted stretches of trail.

Source: landezine.com

Source: essexoutdoordesign.com

Rendering of potential scenic overlook in River Legacy Park

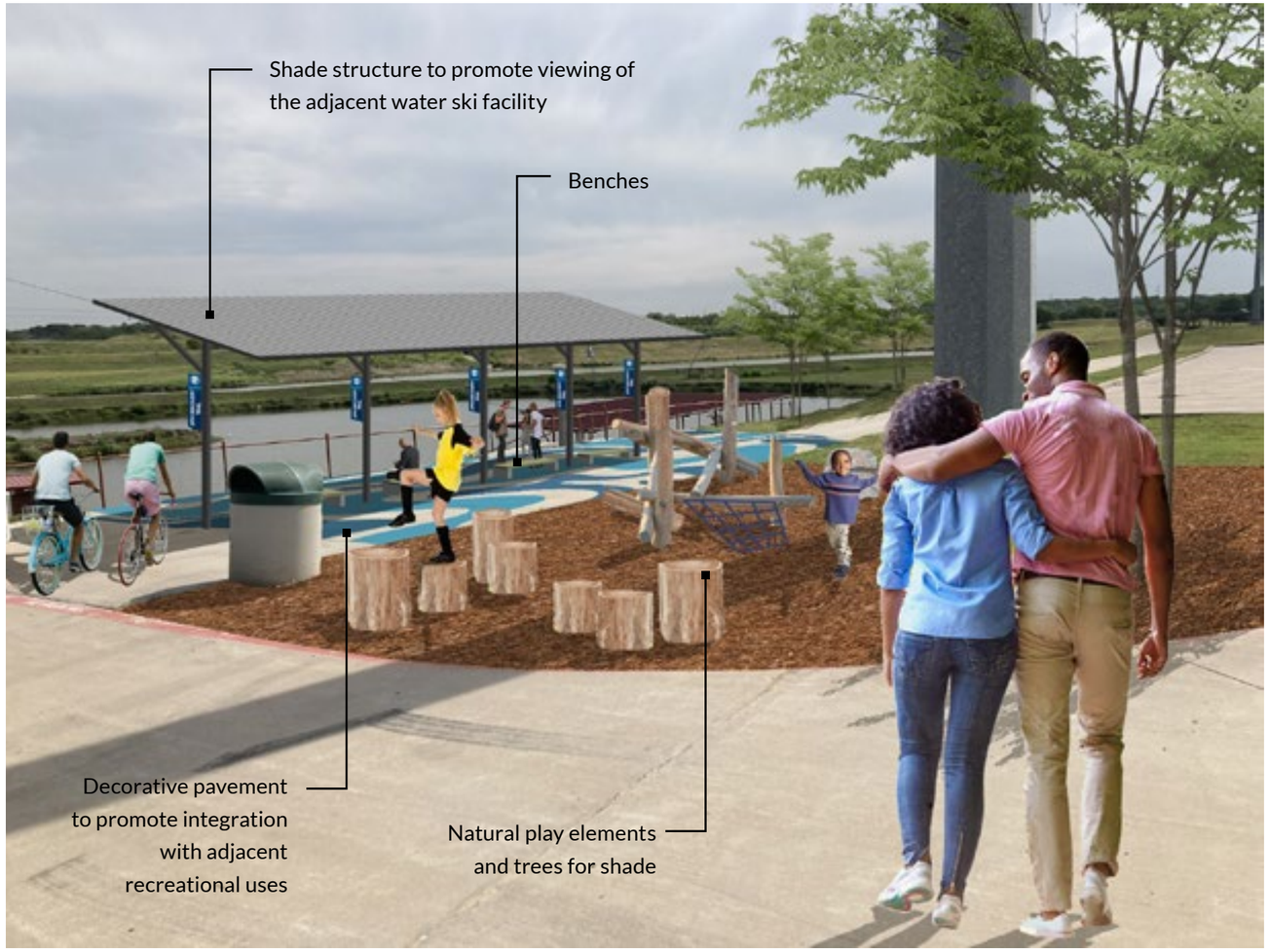
Resting and Play

This placemaking typology seeks to better integrate the trail corridor with adjacent parks and recreational amenities. This may include seating near the trail oriented towards adjacent sports fields, small pieces of playground equipment, or other improvements that encourage trail users to linger at the parks and open spaces along the DFW Discovery Trail.

Source: maryland.gov

Source: taylorkhors.com

Source: karavanlandskap.se



Public Art Opportunities

Public art can add a new dimension to the value of the trail while telling some of the region's unique stories. Many examples of public art can already be found along various sections of the DFW Discovery Trail. These include a variety of sculptures and murals. TRWD already has a popular "Paint the Walls" program that commissions murals on pump houses and other structures on properties they manage. This plan does not seek to recommend a rigid structure for public art along the trail; however, there are several complementary themes that could be integrated into the public art program that would complement the vision for the DFW Discovery Trail. These include:

WILDLIFE ART

The final branding for the DFW Discovery Trail includes unique "sub-brands" for each of the five jurisdictions that reflect animals that could be found along the regional trail. These include a dragonfly, heron, osprey, bobcat, and horned toad. These animals could be integrated into the public art program for each of the cities. In some cases, they could serve as the focal point of the artwork while in other cases they may be secondary, or even "easter eggs" within the commissioned artwork. Integrating these animals into the public art program for each city along the trail can help build recognition of each city's trail brand.

CULTURAL AND ENVIRONMENTAL HISTORY

The Trinity River and the Tall Timbers are two of the most distinct environmental features of the DFW Discovery Trail corridor. The public art program could explore the influence these natural features had on the development of the region.

Fort Worth Trail: Existing

Fort Worth Trail: Example of LED lighting for interest and safety as well as Horned Toad Branding Art

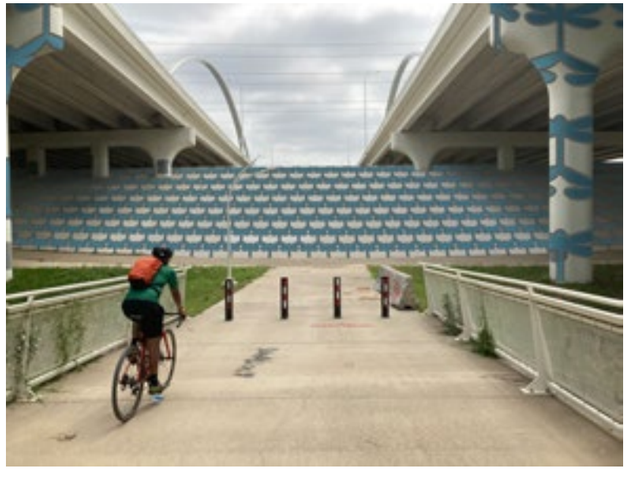
Irving Rock Island Trail: Existing

Irving Rock Island Trail: Example of Heron and city branding

Arlington Trail: Existing

Arlington Trail: Example of Bobcat Artwork Branding

Dallas Skyline Trail: Existing



Dallas Skyline Trail: Example of abstract dragonfly art

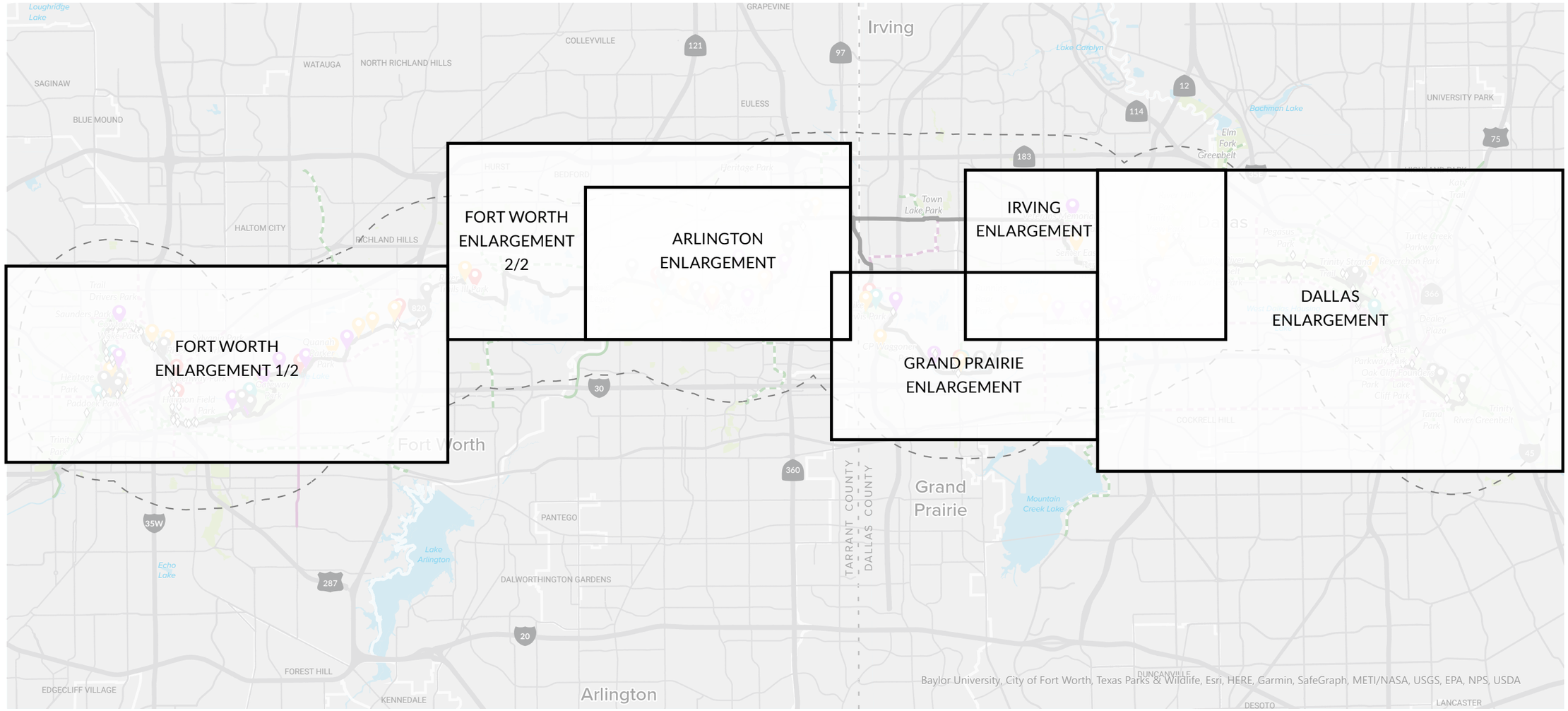
NATIVE AMERICAN HISTORY

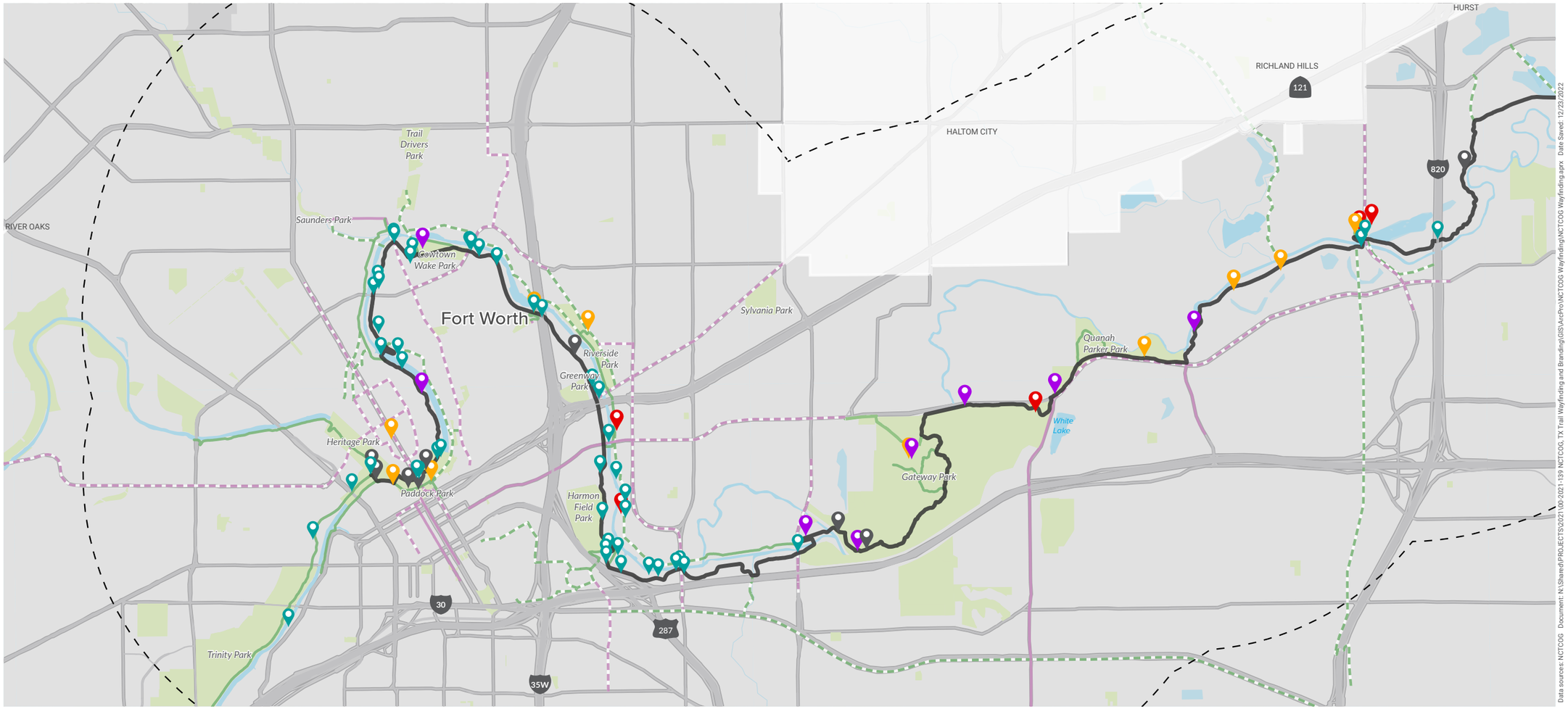
Various Native American tribes traveled through or hunted lands in and around the Trinity River. The DFW Discovery Trail offers an opportunity to tell the unique history of the indigenous people who frequented the region prior to colonial development.

The renderings highlighting placemaking opportunities along the DFW Discovery Trail show decorative pavement. Paving patterns could be used to provide visual cues to trail users that unique opportunities exist at specific locations along the trail. These opportunities could range from public art to wildlife viewing to local food truck vendors. Paving patterns using the DFW Discovery Trail brand colors and shapes will both reinforce the wayfinding system and build brand recognition throughout the corridor.

These pavement treatments could even be implemented using low-cost materials such as acrylic paint. Colors should correspond to the standard brand colors as indicated in Chapter 2. Consistent and suitable locations for applying these paving treatments include trailheads, trail access points, and the placemaking locations previously described in this chapter.

Placemaking Recommendations





FORT WORTH PLACEMAKING (1/2)

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

DFW Discovery Trail

Existing Trail Connections

Trails

On-street Bikeways

Planned Trail Connections

Trails

On-street Bikeways

2 Mile Corridor Buffer

Placemaking Locations

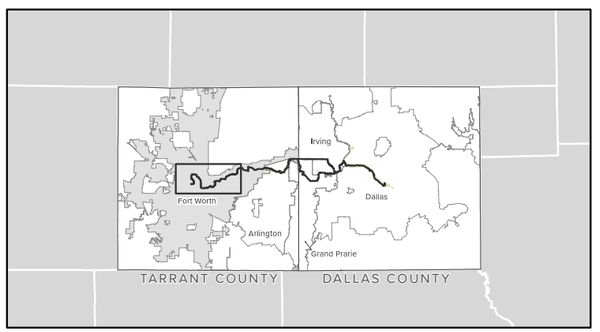
Economic Development

Community Gateway

Resting & Play

Scenic Vista

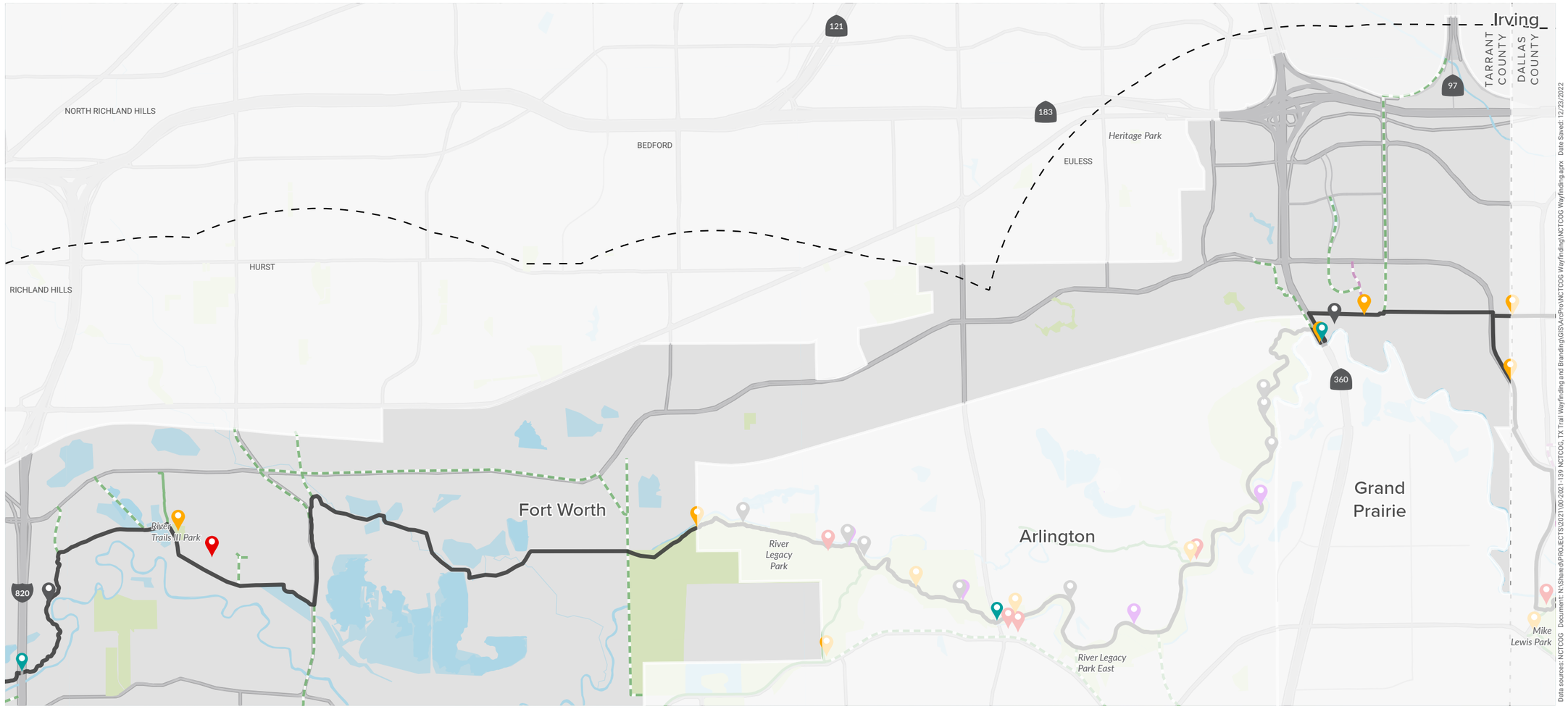
Public Art Opportunities



alta

0 0.5 1 MILES

N



FORT WORTH PLACEMAKING (2/2)

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

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0 0.5 1 MILES

N

DFW Discovery Trail

Existing Trail Connections

- Trails
- On-street Bikeways

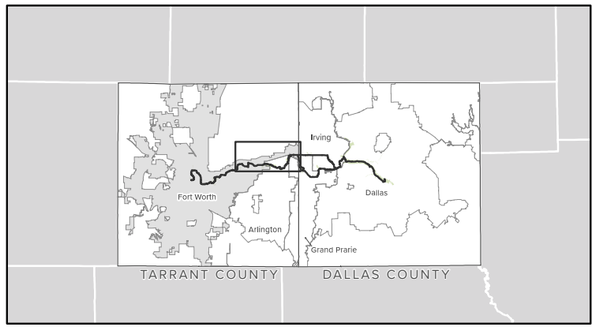
Planned Trail Connections

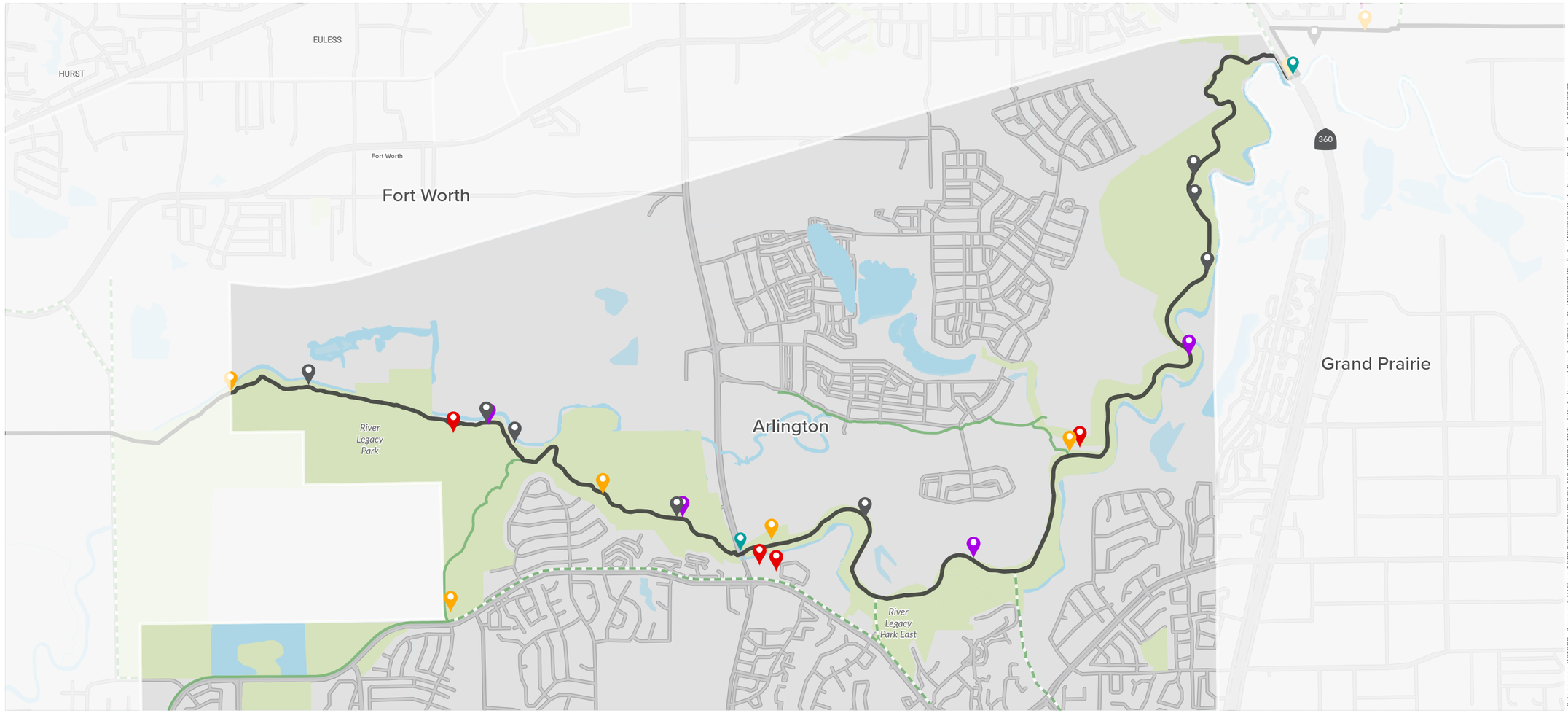
- Trails
- On-street Bikeways

2 Mile Corridor Buffer

Placemaking Locations

- Economic Development
- Community Gateway
- Resting & Play
- Scenic Vista
- Public Art Opportunities





ARLINGTON PLACEMAKING

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

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0 0.25 0.5 MILES

N

DFW Discovery Trail

Existing Trail Connections

- Trails
- On-street Bikeways

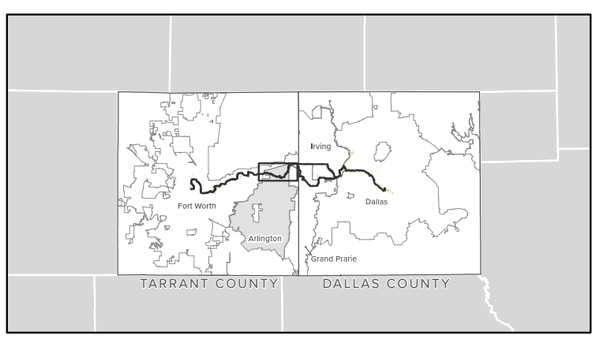
Planned Trail Connections

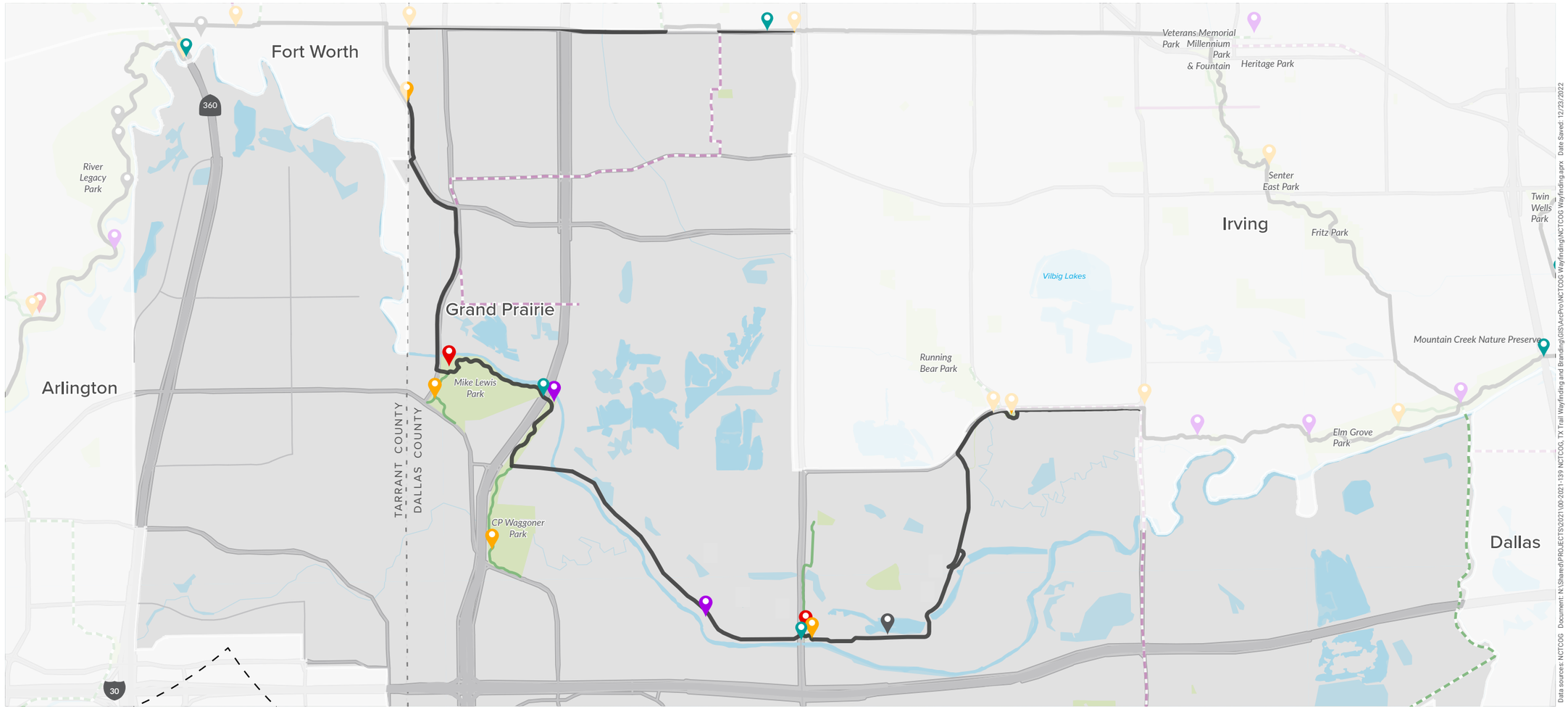
- Trails
- On-street Bikeways

2 Mile Corridor Buffer

Placemaking Locations

- Economic Development
- Community Gateway
- Resting & Play
- Scenic Vista
- Public Art Opportunities





GRAND PRAIRIE PLACEMAKING

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

DFW Discovery Trail

Existing Trail Connections

- Trails
- On-street Bikeways

Planned Trail Connections

- Trails
- On-street Bikeways

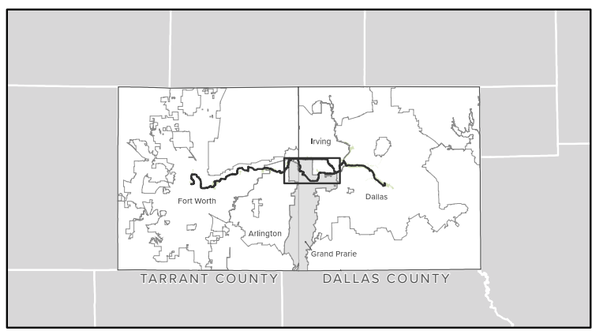
2 Mile Corridor Buffer

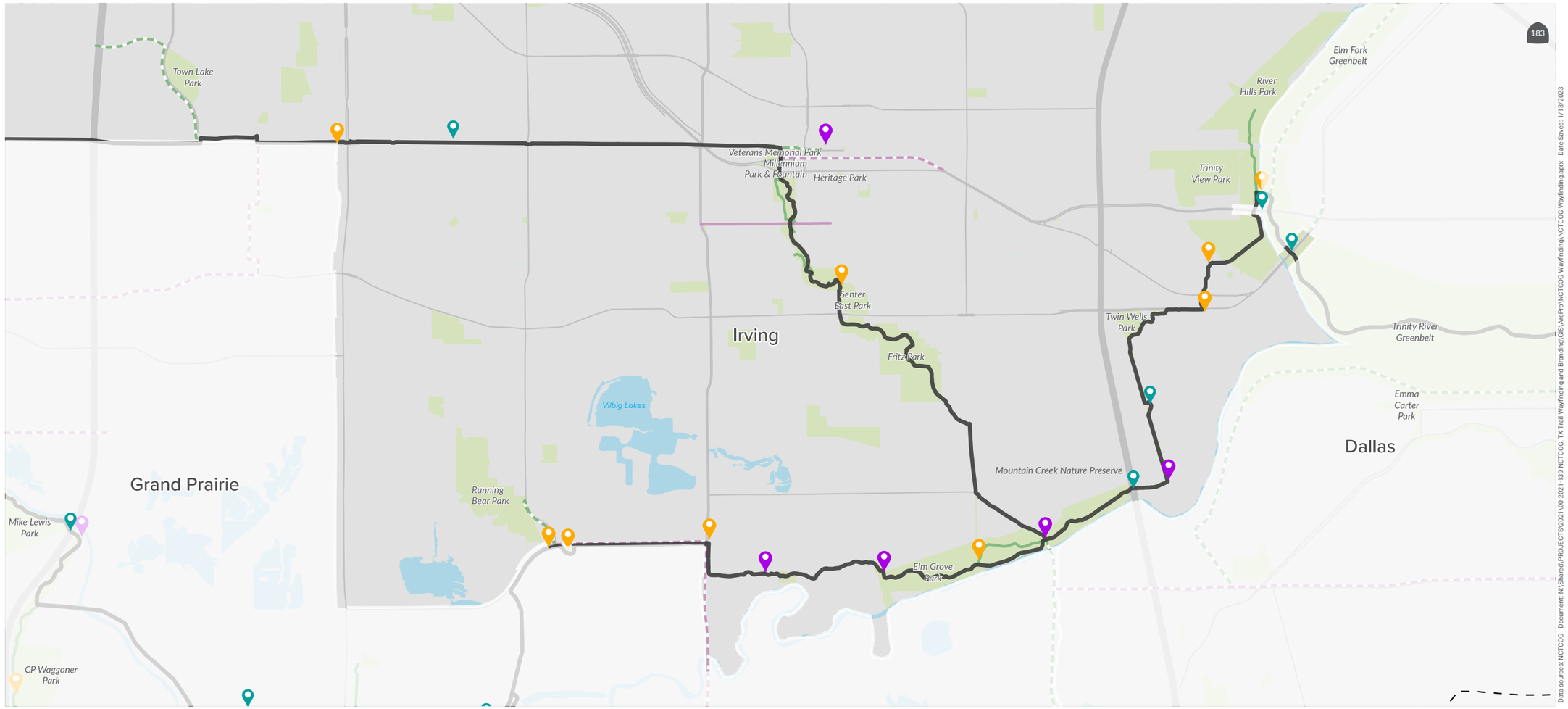
Placemaking Locations

- Economic Development
- Community Gateway
- Resting & Play
- Scenic Vista
- Public Art Opportunities

alta

0 0.25 0.5 MILES





IRVING PLACEMAKING

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

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DFW Discovery Trail

Existing Trail Connections

Trails

On-street Bikeways

Planned Trail Connections

Trails

On-street Bikeways

2 Mile Corridor Buffer

Placemaking Locations

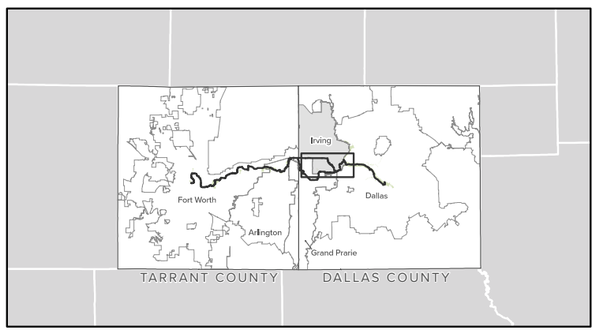
Economic Development

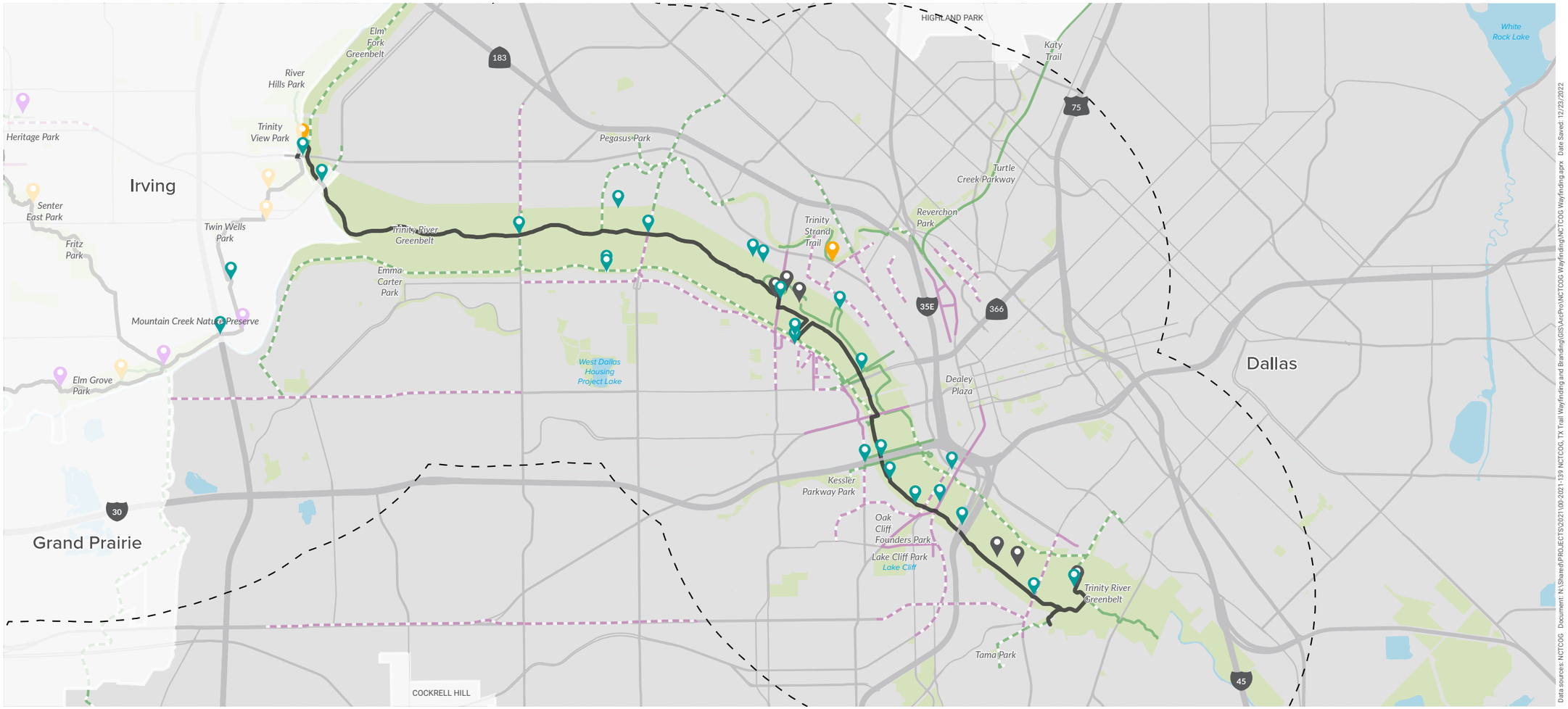
Community Gateway

Resting & Play

Scenic Vista

Public Art Opportunities





DALLAS PLACEMAKING

DFW DISCOVERY TRAIL
BRANDING AND WAYFINDING

DFW Discovery Trail

Existing Trail Connections

- Trails
- On-street Bikeways

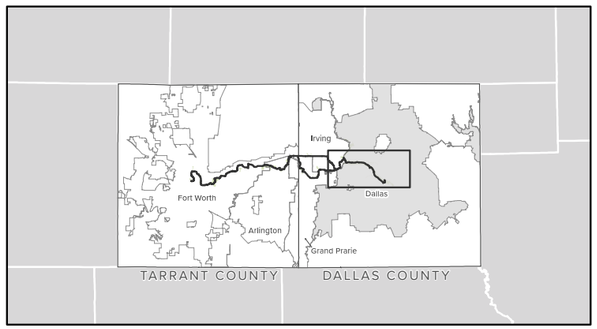
Planned Trail Connections

- Trails
- On-street Bikeways

2 Mile Corridor Buffer

Placemaking Locations

- Economic Development
- Community Gateway
- Resting & Play
- Scenic Vista
- Public Art Opportunities



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08 Trail Maintenance, Management, and Operations Recommendations

Formation of a regional trail management organization has the potential to improve and support many aspects of the DFW Discovery Trail.

MAINTENANCE, MANAGEMENT, AND OPERATIONAL NEEDS

CASE STUDIES

ESTABLISHING A REGIONAL TRAIL MANAGEMENT STRUCTURE

Maintenance, Management and Operational Needs

Critical elements of successful regional trails include effective maintenance, management, and operations. While individual jurisdictions are primarily responsible for carrying out most maintenance and management activities along the DFW Discovery Trail, inconsistencies can detract from the trail's value as a regional amenity and transportation corridor.

Through interviews with jurisdictions, the planning team learned about various maintenance and management practices used by each jurisdiction. Jurisdictions shared many of the same basic maintenance and management practices as they relate to issues like trail cleanups, mowing trail shoulders, etc. However, a few key inconsistencies stood out that detract from the trail's effectiveness and operations at a regional scale. These include:

Hours of Operations - There are not listed hours of operations for trail usage and most jurisdictions default to the park hours through which the trail passes. This varies widely throughout the corridor and can be a confusing issue for trail users.

Trail Closures and Coordination - Limited coordination is currently happening between jurisdictions as it relates to notification of trail closures. As such trail users that start their journey in one jurisdiction may encounter unexpected trail closures if their trip takes them to or through another city.

Coordinated event permitting - Disparate permitting processes between jurisdictions discourage and limit the potential of multi-jurisdictional events and races.

Economic Development Promotion- While individual cities may promote certain segments of the trail, no organization is leading out on promoting the trail as a regional asset or potential event site.

These issues, among others that are identified later in the chapter, could benefit from the creation of a regional trail management structure that bring together community leaders and involved organizations to synchronize operations, elevate the visibility of the trail within the region, leverage resources, and improve the trail experience. This section provides a look at existing regional trail organizations, and explores how a similar organization could be structured to support the DFW Discovery Trail.

Case Studies

Coordinating, maintaining, and promoting a regional trail that runs through multiple counties and/or jurisdictions is a large undertaking. That's why regional trail management groups often form to bring together all trail stakeholders, and make decisions as a collective rather than as individual entities. This helps to distribute work, create uniformity, and keep trails safe and well-maintained for all users.

The following case studies from around the country represent a variety of regional trail groups with different structural organizations, roles in trail development and maintenance, and strategies for promoting and publicizing the trail for local, regional, and national events.

Table 6. Trail Management Case Study Matrix

Organization	Trail Name / Location	Fundraising	Maintenance	Coordination / Consistency	Events	Marketing and Promotion
Jordan River Commission	Jordan River Trail, Salt Lake City Metro, UT	• Member cities contribute annual dues • Legislative appropriations	• Maintenance split among Salt Lake County and local jurisdictions • Community members able to report maintenance issues through the MyJordanRiver app	• Development of an updated strategic plan every two years to ensure the commission is working from the same goals	• Events include clean ups, community paddling events, and relay races • A series of events are listed here: https://jordanrivercommission.com/learn/events/	• Marketing through events and grant/ funding assistance
Raccoon River Valley Trail Association	Raccoon River Valley Trail, Central Iowa	• Option to become a "Friend of the Raccoon River Valley Trail" by donating • Fundraising events like the RRVT Annual Banquet • Trail Permit ($10/annual pass, or $2/day pass) required for trail users 18+, provides funding for trail promotion and marketing, as well as maintenance	• Repairs completed by the three county conservation boards	• Monthly meetings with a representative from each jurisdiction and each of the three counties	• Events include relay races, banquets, and more. • A series of events are listed here: https://raccoonrivervalleytrail.org/trail-events/	• Marketing through various community events • Included in the Rails-to-Trails Conservancy's Hall of Fame
High Line Canal Conservancy	High Line Canal Trail, Denver Metro, CO	• Annual memberships offered to become a "High Line Hero" • Large fundraising events, like relay races, silent auctions, and "Dine for the High Line" - a cocktail hour and seated dinner	• Each of the jurisdictions has a user agreement (IGA) to maintain their section of the trail	• Annual "Report to the Community" and progress reports to highlight the steps being taken to continue to improve the trail	• Events include community walks with various themes, relay races, and cleanups. • A series of events are listed here: https://highlinecanal.org/events/	• "Become a High Liner" by walking, running, rolling, or biking all 71 miles of the trail • High Line Canal Trail map & guide available

Jordan River Commission

The Jordan River Commission was created in 2010 as part of an Interlocal Cooperation Agreement to accomplish several objectives: to facilitate the regional implementation of the adopted corridor plan (Blueprint Jordan River), to serve as a technical resource for local communities, and to provide a platform for the coordination of planning, restoration, and development along the corridor. The Commission's mission encompasses oversight and support for both the river and the trail.

Location: North Central Utah

Regional Trail Length: 66 miles

Motto: Our River – Our Future

Members and Member Types:

- 17 cities
- 2 counties
- 6 regional special service districts
- 2 state agencies

Organization Website: https://jordanrivercommission.com/

Seven Core Purposes for the Commission, as identified by the Interlocal Cooperation Agreement:

1. Encourage and promote multiple uses of the river and river corridor
2. Foster communication and coordination
3. Promote resource utilization and protection
4. Maintain and develop recreation access
5. Monitor and promote responsible economic development
6. Identify and secure funding for the acquisition of critical habitat and open space
7. Engage in ongoing planning for the identified Jordan River Blueprint study area

Specific Services Provided:

- Small grants program ($2,500-5,000) available to member governments and community partners for projects that help implement the goals of the Blueprint Jordan River plan and the core purposes of the commission.
- Grant writing assistance to local jurisdictions for projects that again align with the plan goals and commission core purposes
- Volunteer event coordination including trail and river clean-ups
- A public calendar of events related to the Jordan River Trail
- A library of current and past plans and maps related to the Jordan River Trail, and a variety of other resources related to restoration, water quality, the economics of recreation, and other relevant topics
- Regularly scheduled public meetings, with agendas and minutes available online

Raccoon River Valley Trail Association

The Raccoon River Valley Trail (RRVT) Association was formed in 2006 to market and promote the RRVT by facilitating tourism and economic development initiatives along the trail corridor. The association started out as a 10-person task force focused on trail improvement projects, and has since expanded to a larger group with a greater role as the trail has grown. The trail now connects 14 towns, and due in part to the RRVT Association, now boasts 28 hotels + 45 restaurants along the trail, and 350,000+ visitors/year.

Location: West Central Iowa

Regional Trail Length: 89 miles

Motto: The Quintessential Central Iowa Experience

Members and Member Types:

- 14 towns
- 3 counties
- Trail advocates (number varies)

Organization Website: https://raccoonrivervalleytrail.org/rrvt-association/

Specific Services Provided:

- Coordination of trail improvements (such as the installation of a wayfinding signage system and permanent restroom facilities in every town along the trail.)
- Maintenance of the trail website, sharing information and features about the trail in addition to information about attractions and businesses in the communities along or near the trail.
- Assistance for communities along the trail in developing new businesses and attractions to draw in trail users and tourists.
- Worldwide promotion of the trail to bicyclists and others interested in the recreational opportunities made possible by the trail
- Organization of annual events, such as an RRVT Association donor banquet, group relay races, distance rides like “Tour the Raccoon”, and more.

High Line Canal Conservancy

The High Line Canal Conservancy, formed in 2014, represents a passionate community dedicated to the preservation of the canal corridor. The Conservancy provides the leadership necessary to tackle preservation and enhancement efforts along the High Line Canal Trail, while always working collaboratively with the public and partners of the Conservancy to make decisions. The Community Vision for the trail is that "The High Line Canal's 71 meandering miles will be preserved and enhanced as a cherished greenway that connects people to nature and binds varied communities together from the foothills to the plains."

HIGH LINE CANAL
CONSERVANCY

Location: Denver, Colorado metro

Regional Trail Length: 71 miles

Motto: Preserving, Protecting and Enhancing Colorado's 71-Mile Canal – in Partnership with the Public

Members and Member Types:

- Board of Directors
- 14 staff members
- 2 counties
- 11 cities
- Partnership with Denver Water
- 13 community partners, referred to as the "Canal Collaborative"

Organization Website: https://highlinecanal.org/

The Mission: to preserve, protect and enhance the 71-mile-long Canal in partnership with the public. To accomplish the mission, the Conservancy works to:

- Steward the future of the Canal through leadership, education and advocacy
- Engage citizens to protect and preserve the Canal
- Build a strong and representative community
- Establish sustainable partnerships between diverse geographic regions and jurisdictions
- Adopt an ambitious and transformative future vision and masterplan for the Canal
- Champion and oversee implementation of the Canal master plan

The mission is achieved through leadership, stewardship, advocacy, and education, using the following **principles:**

- One Canal
- Respect for Local
- Maintaining Historic and Natural Character
- Environmental Stewardship
- Education
- Excellence in Experience and Design
- Multiple Layered Benefits
- Broad Outreach and Inclusivity
- Bridging Communities
- Sustainable and Equitable

Specific Services Provided:

- Public outreach to build community leadership and commitment to preserving, protecting and enhancing the Canal
- Coordinates volunteer events such as trash pickups, weed removal, and tree plantings
- Maps, guides, history, and current projects/detours
- Calendar of events and programs to get involved with along the canal
- Facilitation of a membership program to help raise money for the corridor

Establishing a Regional Trail Management Structure

Purpose

A cohesive approach to maintaining, managing, and operating the trail to make it a region-wide asset is vital. The goals of a regional trail management structure may include, but are not limited to:

- Public Safety: Develop consistent protocols to promote and maintain public safety and security across all jurisdictions.
- Maintenance: Create guidelines and regulations for conducting consistent routine and long-term facility maintenance.
- Coordination: Develop protocols for consistent and timely communication including potential maintenance of website for the DFW Discovery Trail.
- Programming and Events: Develop strategies to foster new events and community engagement programs and services with the local communities and the public spaces adjacent to the trail.
- Funding: Develop funding strategies and partnerships and establish a consistent funding stream.

Overview of Options

Management of trails usually starts with agreements between public agencies and often includes the creation of specific non-profits for the maintenance, volunteer management, and/or coordination of funds for the trail. There are a few different models to follow to establish an entity to proceed with implementing the trail, as detailed in Table 7. Efforts could be focused on forming a new trail-focused nonprofit, funding a position within another existing local agency, or creating a DFW Discovery Trail program within an existing non-profit (like the Circuit Trails Conservancy or Streams and Valleys).

Regardless of the governance structure, some federal grants will require that the applicant be a government agency, in which case the government agency will be able to create a Memo of Understanding (MOU) with the regional trail organization or other agency to manage the grants on their behalf.

Table 7. Trail Management Models

Options	Pros	Cons
New Non-profit	• Increased autonomy and single focus on the DFW Discovery Trail vision • Good fit for multi-jurisdictional trail	• Funding for operating costs and overhead can be a significant challenge • Start-up and overhead costs required before organizational fundraising can begin • Staffing challenges
Funding a position within another existing local agency or organization	• May be easier to secure grants	• May not have as much autonomy for decision-making • Need to ensure goals are aligned, stakeholder and community relationships and impressions are positive • Could be difficult to fund and staff a new position • May be limited local precedent for this type of position
Creating a Trails Program within an Existing Non-profit	• Efficient use of resources • Minimized start-up efforts and no duplicated costs with existing non-profit • Less funding pressure	• Need to make sure mission aligns with existing non-profit and that board and staff and major donors are all in agreement on funding and running the program and that there are no conflicts

Additionally, trail governance structures for a multi-jurisdictional trail can also include a multi-agency cooperative agreement, the creation of a Joint Powers Authority or a Special District. These options may work better for sharing funding or maintenance and operations, but do not work as well as a non-profit organization for the programming, fundraising and coordination goals also desired.

Roles of Public Agencies

Support from the local governments, water districts and other land-owning agencies along the trail corridor is essential for ensuring the trail is a continuous, well-maintained, and widely-used trail. Officials from all entities should seek to implement consistent trail design and management guidelines, while maintaining local character and branding. A regional trail organization can assist with this coordination and oversight.

Local governments should establish partnership agreements and clear lines of communication with the regional trail organization to coordinate around trail maintenance, volunteer needs, funding, and promotion of the trail. Local governments should include building, maintaining, and promoting the trail into their long-range transportation and comprehensive plans.

Regional Trail Organization

Whether it is a new non-profit or an expanded one, regional trail organizations are uniquely positioned to collaborate with the multiple stakeholder groups who are interested in this regional trail: local communities, city and state officials, federal government, government agencies, local trails biking groups, running groups, and tourists. Particularly when multiple agencies manage the land, regional trail organizations are a mission-driven outside force, dedicated to moving the facility/project forward. Trail organizations are well suited to recruit and work with volunteers, build momentum for the trail, and raise money, public awareness, and community support. Trail non-profits are particularly savvy at balancing the needs of different trail user constituencies. They offer a way for people from different user groups across the region to work together around a common geographic feature or asset.

TRAIL NON-PROFIT STRUCTURE

The Board of Directors, staff, and important partners will govern the organization and trajectory of the trail. Board members may also hold political power and provide links to local, state or even federal government.

BOARD OF DIRECTORS

The trail non-profit will need a Board of Directors, as required for all 501c3 non-profits. The board should include members who represent many different stakeholder groups and interests: river ecology, social events, sporting events, political, historical, economic/business, and more. Some board members can be ‘working’ board members that provide assistance with their expertise in getting tasks accomplished for the trail. Other board members should be connected to the philanthropic and business community and be capable of making connections for major donations and funding relationships. The board can be comprised of either or both types of board members. It is also possible that some interested parties may not want to commit to a board role, but are willing to help in other ways. They can serve as committee members for various trail needs (e.g., technical, fundraising, awareness-raising, government interaction).

STAFF

Paid staff are essential for the success of the non-profit. At minimum staff positions must include an Executive Director and Coordinators to manage communication, maintenance, fundraising, volunteer recruitment, and event planning.

COMMITTEES

Committees can be used to focus expertise and efforts on specific goals of the regional trail organization. Committees should be staffed by a combination of board members and staff members and can also include interested volunteers.

Regional Trail Manager Roles

REGIONAL COORDINATION

A good trail will market itself over time, but a new one requires marketing and promotion to highlight experiences offered on the trail. While individual jurisdictions are responsible for planning, designing, maintaining, and operating their respective segments of the regional trail, a regional trail manager would have a unique perspective for the overall vision. Just as state DOTs coordinate with local jurisdictions on state routes that run through their communities, regional trails have similar coordination needs to promote a seamless and consistent experience for trail users. The following activities represent potential roles for a regional trail management organization. While these roles are somewhat flexible and could be assigned or shared with various trail partners, there is inherent value in facilitating activities through a single organization.

ONLINE PRESENCE

The regional trail organization should create a dedicated website for the entire regional trail. The website should be updated regularly with new and accurate content like trail closures due to construction, maintenance, flooding, or upcoming events. The website should also reflect the branding of the trail and offer useful resources for trail users, partners, volunteers, and sponsors.

Pertinent information and outreach should be duplicated on trail-specific social media outlets to reach the broadest range of potential trail users. All social media should be similarly co-branded as the website and linked from the website so that it is clear they are all managed by the regional trail organization.

Trail information available on the website should also be available via real time digital display boards to communicate weather, upcoming events, trail closures, and other information. These display boards offer a sponsorship opportunity for local businesses or philanthropists.

The regional trail organization can make sure the trail and its amenities are listed on the following apps as a more efficient way to share information broadly to users. The following are examples of popular trail apps, where up-to-date trail information is directly accessed by users:

- AllTrails (free): Allows users to search based on location for nearby trails, use GPS to navigate on the trail, view high quality maps, post photos of scenic places, and connect with other users.
- MapMyHike (free): Allows users to map trails, view popular treks, connect with other users, and use health tracking technology.
- CycleMap (free): Users can plan and get detailed information about bike routes, learn about points of interest and amenities along routes, discover new routes and use them offline.
- EQUITrail ($4.99): Users can view and download equestrian trail maps and share trail information with other users.
- TrailForks (free): Provides interactive mountain bike trail maps with topographic layer, access information, points of interest, trail popularity and ratings, compass, and GPS tracking.

Table 8. Regional Trail Website Functions

Function	Description
Wayfinding & Trip Planning	The regional trail website could host a variety of information to help trail users plan their trips, including static pdf maps to be printed at home, interactive maps that could be used on smart phones while on the trail corridor, or other information about destinations and services available along the trail corridor.
Advocacy and Sponsorship	A website focused on the DFW Discovery Trail could include information on trail benefits, ways for people to support the trail (either financially or through volunteer opportunities), and how to advocate for the trail. The website could serve as a resource for potential donors to learn about the trail or to recognize existing donors.
Event Calendar	The website could publish and promote events taking place on the trail.
Trail Closures	Flooding, trail maintenance, and new trail construction all impact trail users. The website could provide a "one-stop shop" for up-to-date trail closure without needing to visit each of the jurisdiction websites separately.
Digital Signage Content	The proposed wayfinding signage includes recommendations for the use of digital message boards at key trailhead locations. Curated content to populate these message boards could be sourced from the regional trail website to provide timely and useful information to trail users in real time.
Social media presence	An active and engaging social media presence can help promote awareness about the variety of experiences, destinations, and activities available on the trail. Social media can also support a dialogue with trail users and build support for the trail over time.

- TrailLink (free): Hosted by the Rails-to-Trails Conservancy, TrailLink allows users to view detailed trail maps, save favorite trails, and add photos, reviews, and/or missing trails or trail segments

SPECIAL EVENT USAGE POLICIES

The regional trail organization should institute special event usage guidelines and requirements to pro actively plan for large events. When special events are hosted on a passage of the trail, a single day with a large volume of hikers, runners, or bikers can create substantial maintenance issues, as well as conflicts with other users of the trail. The regional trail organization should establish special event guidelines or requirements as outlined below.

The regional trail organization can work with all local agency staff to review the guidelines and establish event-specific requirements for any company or organization seeking to host an event on the Trail. In addition, the organization can work with local jurisdictions to streamline and standardize permitting logistics to more easily facilitate multi-jurisdictional events. Many potential race routes travel between multiple jurisdictions so this coordination between neighboring jurisdictions is critical to creating a supportive framework for trail-based events.

To ensure a successful event for all involved parties guidelines should specify:

- Which sections of the trail are available for special events and which are not.
- What types of events are permissible or prohibited (from mountain bike races to mud runs to scavenger hunts).
- Which months of the year or days of the week are available or restricted for special events.

Requirements should specify:

- A meeting with regional trail organization staff and volunteers and the landowner/land manager at least four weeks prior to the event.
- A special event usage fee and/or a negotiated donation amount to be provided to a Trail Maintenance Fund.
- Maintenance activities that need to occur within a set time frame after the event to restore the trail's condition and repair any damage (this could occur as a volunteer workday organized by the event promoter).

Optional:

- Opportunity for the regional trail organization to advertise at the event.
- Permission for the regional trail organization to contact the event attendees with an e-mail inviting them to become members of and/or volunteer for the trail non-profit.

PROGRAMMING

The regional trail organization should create a promotional program for the trail that includes seasonal events that reach a broad cross-section of trail user types, ages and geographies. Some of these events will be organized by the organization, while others will be hosted by local municipalities, special interest clubs or private businesses promoting their events. All events should be listed in a centralized location on the trail's website, social media and any digital display boards.

The role of the regional trail organization is to serve as a one-stop-shop for businesses and other groups seeking to hold events on the trail. The organization should participate in and aid existing local events hosted by municipalities and use that opportunity to for further outreach for the trail.

The regional trail organization should partner with other advocacy groups that have aligned interests in trails, conservation, the Trinity River, and community development to coordinate marketing and advocacy efforts and to support events. The Bi-Annual Texas Active Transportation and Trails Conference held by Bike Texas is a great opportunity for non-profits and other trail partners to gather, learn from one another, and coordinate for the years ahead.

VOLUNTEER RECRUITMENT AND MANAGEMENT EFFORTS

The regional trail organization should tap into existing user groups, such as local bicycle groups, neighborhood associations, mountain bike groups, and equestrian groups, as volunteers and trail ambassadors. This model has proven successful with other long-distance trails and has the potential to lessen user group conflict by creating joint stewards of a shared resource.

In a coordinated effort across the corridor, trail managers should work with the trail non-profit to host 'National Trail Day' events on as many segments of the existing trail as possible. Special events are a useful tool for inviting new users to experience the trail and obtaining media attention.

PUBLIC SAFETY

HOURS OF OPERATION

Hours of operation along the DFW Discovery Trail vary from segment to segment based on the land manager responsible for that portion of the trail. This creates a confusing policy structure for trail users to navigate and does not support commuting on the trail which often requires early-morning or evening use. A regional trail organization could work with local jurisdictions to synchronize trail hours and operations along the corridor. If this proves to be a difficult task, the organization can begin with consolidating information on their website so that trail users understand the hours of operations for the trail segments they plan to use.

TRAIL DESIGN

While local jurisdictions are likely to lead design efforts for the DFW Discovery Trail, the regional trail organization can inform and advocate for consistent design standards for new and renovated segments of the DFW Discovery Trail. This could include details such as standard trail widths, materials, and signage to provide a consistent regional experience.

MONITORING OF TRAIL

As most of the trail is already designed, built, or anticipated to be completed within two years; the continuing role of the trail non-profit is to promote regional continuity along the trail and monitor the trail for safety issues. The regional trail organization can play a crucial role of receiving and redirecting trail safety feedback to the owning and operating jurisdiction of the relevant trail segment.

MAINTENANCE

Effective trail maintenance is critical to the overall success and safety of any trail system. Maintenance activities typically include pavement maintenance, landscape maintenance, facility upkeep, sign replacement, mowing, litter removal and painting. As referenced earlier in the management section, a successful trail maintenance program requires coordination and consistency in order to provide a seamless experience for trail users.

While it is anticipated that local cities will continue to perform the primary maintenance activities along the DFW Discovery Trail within their respective jurisdictions, the regional trail organization could serve a key role in several maintenance activities.

MAINTENANCE BEST PRACTICES AND COORDINATION

The regional trail organization could serve as a convener and coordinator to promote consistent maintenance best practices along the DFW Discovery Trail. This could address region-wide maintenance activities such as flooding clean-up, mowing trail shoulders, vegetation management, and other pertinent maintenance issues. The regional trail organization could assist by documenting maintenance best practices in a region-wide "handbook" or by convening annual workshops with local maintenance providers.

WAYFINDING SYSTEM MAINTENANCE

The wayfinding system proposed by this plan will help improve the functionality and visibility of the regional trail; however, long-term success will require careful monitoring and maintenance of the wayfinding system. As a consistent regional amenity throughout the trail, the regional trail organization could assume responsibility for the maintenance of the wayfinding signage system. This could include the following activities:

- Replacing worn or damaged wayfinding signage elements
- Updating signage or maps as conditions change along the regional trail corridor
- Extending the DFW Discovery Trail brand and signage to other adjacent trails if desired by local jurisdictions
- Coordinating with local jurisdictions to ensure consistent application of wayfinding standards

TRAIL CLEAN UPS

The regional trail organization could support local jurisdictions by organizing and deploying trail clean-ups with volunteer groups. This could take the burden off of local jurisdictions to supervise volunteer groups while allowing the regional non-profit to direct resources towards the areas most in need of attention. Additionally, the regional trail organization could establish an Adopt-a-Trail program for organizing community maintenance for segments of the trail.

FUNDING

The regional trail organization serves as the 501c3 fundraising arm to raise money to fill the gaps in public funding. Their role is to advocate for public and private funding through local foundations and corporations. The fundraising plan should consist of several fundraising mechanisms including a grant writing program and sponsorship program.

ANNUAL REPORT

To assist with the fundraising plan the trail regional trail organization should create promotional materials and a Trail Report and provide regular updates. The promotional materials provide a basis for promoting the trail as well as its sponsors and donors. The benchmarking report shows progress in trail development, fundraising, and friendraising. Recognizing and measuring success is an important step towards making the case for potential funders and long-term resource partners.

Adopted Trail Signage

TRAIL SPONSOR PROGRAM

The trail sponsor program should feature different ways that businesses, foundations, and individuals can advertise their financial contributions to the trail. Businesses that want to show they are invested in the community should contribute financially to building the trail or by volunteering their time. High-profile, well-designed trails spur economic development and boost quality of life, which brings direct benefits to the regional business community. Businesses should consider participating in a proposed Adopt-a-Trail program to help keep a specific section of trail clean and maintained. By adopting a trail, businesses get state-wide philanthropic publicity that will be directly beneficial to their reputation in the community. Local businesses that could be advocates include businesses that are related to cycling, sports, and health.

Sponsors at different levels could be recognized on the trail website, printed materials, collateral (patches, stickers, water bottles, t-shirts, etc.) and potentially verbally as a part of media coverage. The trail non-profit must work closely with key stakeholders to decide which parts of the trail they are willing to “sell” to sponsors. For example, some trails allow sponsors to brand physical pieces of infrastructure like benches and display boards or even segments of trails, while other trails are very successful at leveraging donations and sponsorships without displaying logos or branding trail infrastructure.

Formation of the Regional Trail Organization

Initiating and getting a regional trail organization "off the ground" is a formidable challenge. Fortunately, there are already active and established non-profits working in the region whose mission may overlap with the activities identified in this chapter for a future regional trail organization. These non-profits include the Circuit Trails Conservancy Streams and Valleys, and possibly others.

While these existing organizations may not have the interest or capacity to take on all the potential roles identified for the regional trail organization, they may offer a starting point for collaboration. Either organization could allow use of their non-profit status to "stand up" a new DFW Discovery Trail-focused organization. Alternatively, if an existing organization was very supportive of the DFW Discovery Trail vision, they could attempt to take on the roles described in this chapter within their existing organizational structure.

THE CIRCUIT TRAILS CONSERVANCY

The Circuit Trail Conservancy (CTC) is the 501(c)(3) partnering with the City of Dallas to build The LOOP. Following unanimous approval from the Dallas City Council in 2018, the CTC and the City's partnership was established to create a comprehensive, alternative transportation solution funded by a combination of public and generously donated private dollars. By strategically building new trails linked to existing ones, the CTC is leading the formation of a walkable circuit in the heart of urban Dallas.

STREAMS AND VALLEYS

Streams & Valleys is a non-profit organization and river steward whose mission is to inspire, fund, and advocate for projects that improve and expand community access and use of the Trinity River and its trails. The organization was formed in 1969 to re-establish the river as a clean and healthy waterway. Streams & Valleys plans and coordinates recreation enhancements, beautification efforts, and promotes the Trinity River and its tributaries in Fort Worth and Tarrant County. Streams & Valleys also serves as the convener of the River Partners and of river planning efforts. Operated by a small staff and volunteer board, the organization currently focuses on fundraising for river projects, as well as programming of public events and various river-oriented campaigns.

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09 Appendices

APPENDIX A: EXISTING CONDITIONS

APPENDIX B: WAYFINDING BEST PRACTICES

APPENDIX C: PUBLIC ENGAGEMENT

A Existing Branding Inventory

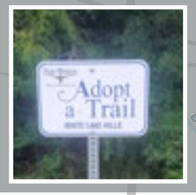
Existing Branding Inventory

The Planning Team conducted an initial inventory of existing branding and wayfinding signage that can be found along the regional trail corridor. The following maps in Appendix A illustrate the various trail names, logos, and wayfinding signage that has been developed by jurisdictions and land managers.

Prevalent logos in the corridor

City of Fort Worth | Fort Worth Trinity Trails | TRWD

Existing Signage Examples



EXISTING TRAIL BRANDING

FORT WORTH TO DALLAS REGIONAL TRAIL BRANDING & WAYFINDING

alta

0 0.5 1 MILES

N

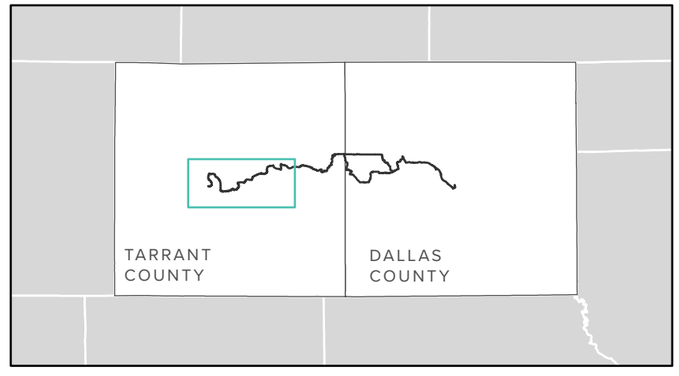
Legend

Fort Worth to Dallas Trail Corridor

- Fort Worth Trinity Trails
- Trail Gap
- Parks

Roads

- Primary Highway
- Secondary Highway
- Major Arterial



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Prevalent logos in the corridor

City of Fort Worth | Fort Worth Trinity Trails | TRWD | City of Arlington | River Legacy Park / Trail

NORTH RICHLAND HILLS
BEDFORD
EULESS
Irving
RICHLAND HILLS
HALTOM CITY
121
820
360
30
River Trails III Park
Mallard Cove Park
River Legacy Trail
River Legacy Park
River Legacy Park East
Fort Worth Trinity Trails
Quanah Parker Park
White Lake
Gateway Park
Fort Worth
Grand Prairie
Arlington
Stratford Nature Area
Tandy Hills Nature Area

Existing Signage Examples

EXISTING TRAIL BRANDING

FORT WORTH TO DALLAS REGIONAL TRAIL BRANDING & WAYFINDING

alta

0 0.5 1 MILES

N

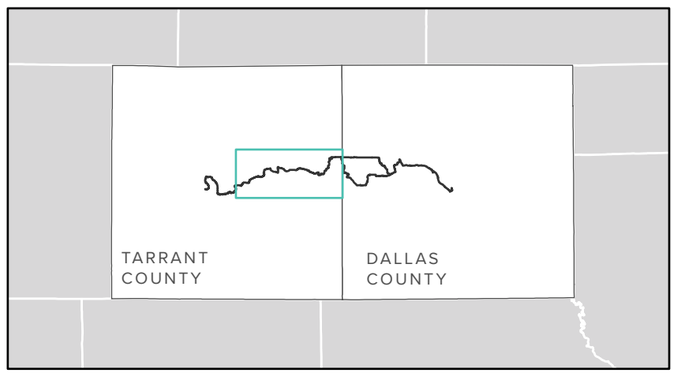
Legend

Fort Worth to Dallas Trail Corridor

- Fort Worth Trinity Trails
- River Legacy Trail
- Trail Gap
- Parks

Roads

- Primary Highway
- Secondary Highway
- Major Arterial



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Prevalent logos in the corridor

City of Arlington | River Legacy Park / Trail | City of Grand Prairie | City of Irving | Campion Trails

Existing Signage Examples

EXISTING TRAIL BRANDING

FORT WORTH TO DALLAS REGIONAL TRAIL BRANDING & WAYFINDING

alta

0 0.5 1 MILES

N

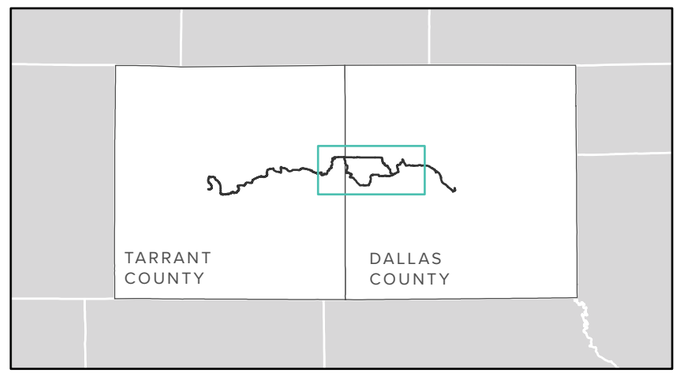
Legend

Fort Worth to Dallas Trail Corridor

- Centennial Park Trail
- Delaware Creek Trail
- Delaware Creek Trail at Senter Park
- Fritz Park Trail
- Good Link Linear Park Trail
- Lone Star Trail
- Mike Lewis Trail
- Mountain Creek Preserve Trail
- River Legacy Trail
- Rock Island Road Sidepath
- South Campion Trail
- Trinity Skyline Trail
- Trinity View Park Trail
- Twin Wells Park Trail
- Trail Gap
- Parks

Roads

- Primary Highway
- Secondary Highway
- Major Arterial



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Prevalent logos in the corridor

City of Dallas | Dallas Parks & Recreation | The Trinity

Existing Signage Examples

EXISTING TRAIL BRANDING

FORT WORTH TO DALLAS REGIONAL TRAIL BRANDING & WAYFINDING

alta

0 0.5 1 MILES

N

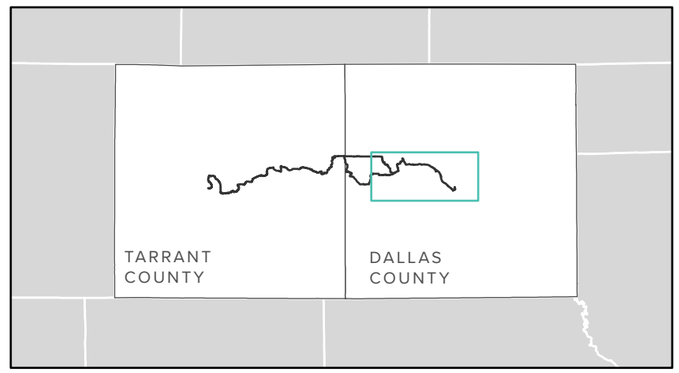
Legend

Fort Worth to Dallas Trail Corridor

- Centennial Park Trail
- Delaware Creek Trail
- Delaware Creek Trail at Senter Park
- Fritz Park Trail
- Lone Star Trail
- Mountain Creek Preserve Trail
- Rock Island Road Sidepath
- Santa Fe Trestle Trail
- South Campion Trail
- Trinity Skyline Trail
- Trinity Strand Trail
- Trinity View Park Trail
- Twin Wells Park Trail
- Trail Gap
- Parks

Roads

- Primary Highway
- Secondary Highway
- Major Arterial



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B Wayfinding Best Practices

A cohesive, attractive wayfinding system can greatly contribute to a place's legibility and identity

WAYFINDING PRINCIPLES
WAYFINDING ELEMENTS
BRANDING
DESTINATION SELECTION AND PROGRAMMING
GENERAL PLACEMENT GUIDANCE

Wayfinding Principles

CONNECT PLACES

Facilitate travel between destinations and provide guidance to new destinations and transit.

KEEP INFORMATION SIMPLE

Present information simply, using clear fonts and simple designs, so that it can be understood quickly.

MAINTAIN MOTION

Be legible and visible for people moving so that they can read the signage without stopping.

BE PREDICTABLE

Standardize the placement and design of signs so that signage patterns become predictable.

PROMOTE ACTIVE TRAVEL

Encourage increased rates of active transportation by helping people to realize they can walk and roll to the places they want to go.

The built environment should be designed so people can quickly orient themselves, recognize areas of different character, and intuitively locate and navigate to destinations. The degree to which a place accomplishes these things determines its legibility, or how easily both locals and visitors can understand where they are and where they're going. A cohesive, attractive wayfinding system can greatly contribute to a place's legibility and identity by better enabling individuals to:

- Easily and successfully find their destination
- Understand where they are with respect to other key locations
- Orient themselves in an appropriate direction with little misunderstanding or stress
- Discover new places and services

The following guiding principles, based on best practices from around North America, will help create an effective wayfinding system for the DFW Discovery Trail.

CONNECT PLACES

An effective wayfinding system should directly connect to places locals and visitors want to go and enable them to confidently discover new destinations that can be reached by walking or bicycling. Wayfinding connects neighborhoods and provides navigational assistance to both local and regional destinations, and is an extension to the bicycling and walking network, providing a seamless travel experience for non-motorized users. Wayfinding provides benefits that go beyond physical signage. It can create a deeper connection to a place, cultivate a sense of pride by reflecting community values, and support local economic development by encouraging residents and visitors to use local services.

KEEP INFORMATION SIMPLE

Wayfinding should provide clear information in a logical succession, and not overburden users with excess information. Information should be presented in as clear and simple format as possible. Wayfinding signage should be both universal and usable for the widest possible demographic and with special consideration for those without high educational attainment, English language proficiency, or spatial reasoning skills. It is important to provide information in manageable amounts. Too much information can be difficult to process quickly; too little, and decision-making becomes impossible. Information should be provided in advance of where major changes in direction are required, repeated as necessary, and confirmed when the maneuver is complete.

MAINTAIN MOTION

Wayfinding information should be presented in a way that is quickly understood. Walking and bicycling require physical effort, and frequent stopping and starting to check directions may lead to frustration and discourage use. Wayfinding information that can be quickly and easily grasped contributes to a more enjoyable environment for walking and bicycling. Consistent, clear, and visible wayfinding elements allow active transportation users to navigate while maintaining movement.

BE PREDICTABLE

Wayfinding should be predictable and consistent. When information is predictable, it can be recognized and quickly understood. Predictability should relate to all aspects of wayfinding placement and design (i.e., sign materials, dimensions, colors, forms, and placement). Design consistency also contributes to a continuity of experience as landscapes and context change along bicycling and walking routes. Once users trust that they will encounter consistent and predictable information, their level of comfort is raised and new journeys become easier to attempt and complete, thereby promoting an experience that is welcoming and friendly. Similarly, maps should employ consistent symbology, fonts, colors, and style.

PROMOTE ACTIVE TRAVEL

Wayfinding should encourage active transportation by creating an accessible, clear, and attractive system that is intuitive to navigate by walking and bicycling. Whether directed towards people walking and bicycling or indirectly seen by passing vehicles, the system should integrate into the cultural environment and should be easy to understand. An effective wayfinding system has the potential to validate walking and bicycling as viable transportation options by communicating network connectivity and addressing perceived barriers such as time and distance to destinations.

Wayfinding should also expand the awareness and use of bicycle and pedestrian facilities by the whole community. The installation of wayfinding has the potential to increase walking and bicycling on existing facilities with low levels of use. This is an efficient use of active transportation investments on infrastructure already in place. Wayfinding also helps expand the use of the existing transportation network without costly infrastructure improvements.

Wayfinding Elements

The goal of a wayfinding system is to simplify navigation in urban environments. This section describes the spectrum of elements used in creating a wayfinding signage network. These elements are listed below and outlined in further detail on subsequent pages.

ACCESS ELEMENTS

- Gateway/Identity monuments
- Information kiosk
- Secondary access signage

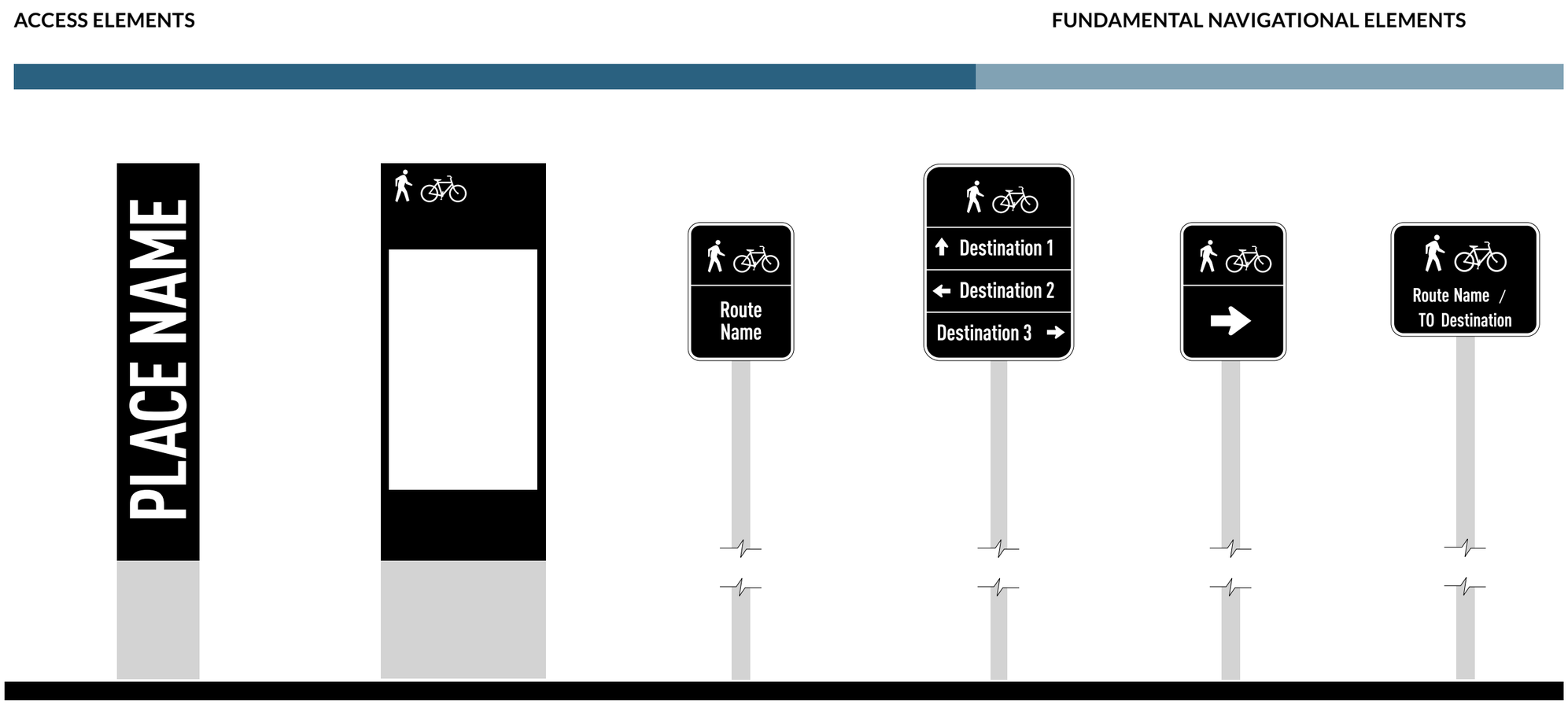
FUNDAMENTAL NAVIGATIONAL ELEMENTS

- Decision signs
- Turn signs
- Confirmation signs

ENHANCED NAVIGATIONAL ELEMENTS

- Pavement markers
- Mile markers
- Street/trail intersection signs
- Fingerboard signs

Figure 2. Spectrum of Signs: Wayfinding Elements



GATEWAY / IDENTITY

Define the entry into a distinct neighborhood, or mark trailheads, access points, and landmarks. Opportunity for community-directed placemaking and integrated artwork.

INFORMATION KIOSK

Appropriately scaled maps can provide helpful navigational information, and are most effective when placed in plazas or rest areas. Kiosks may also present other information when paired with digital display boards such as trail counts or other dynamic trail information.

SECONDARY ACCESS

Mark entry to trails or paths at locations where limited user traffic may not necessitate as much information as information kiosks.

DECISION

Clarify route options where two or more routes converge, or at complex intersections.

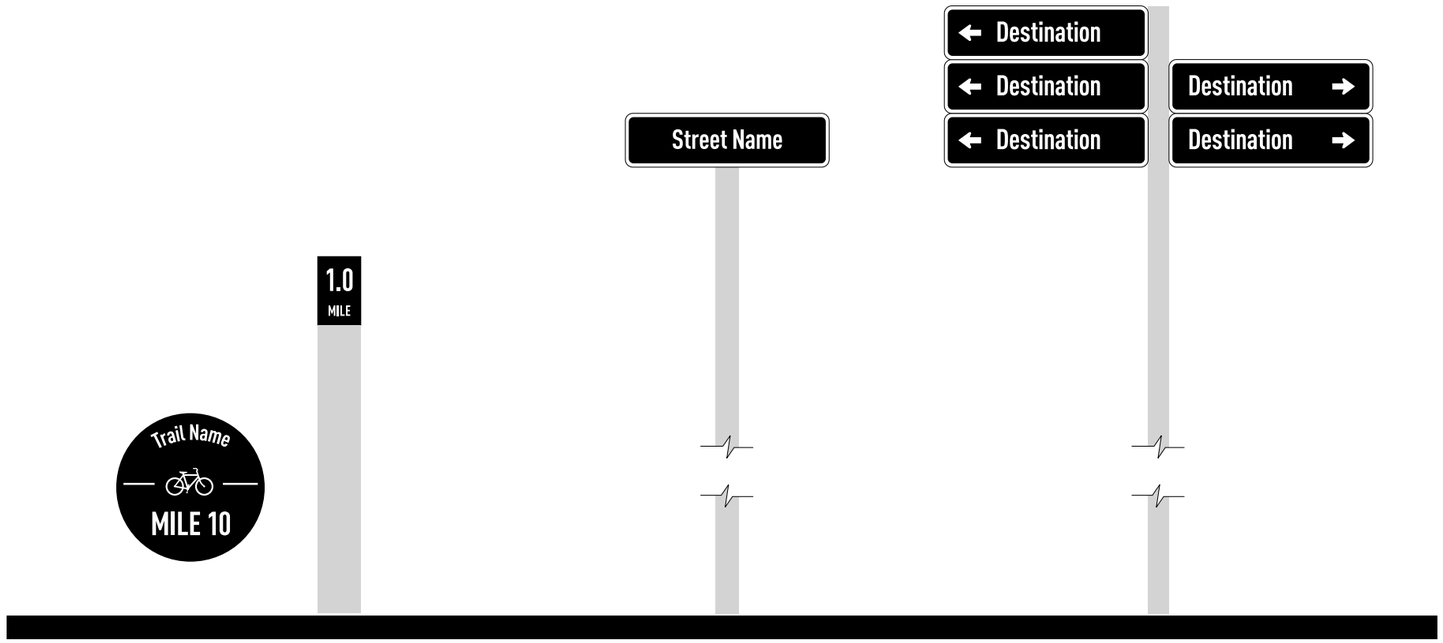
TURN

Placed before a turn or intersection to help users stay on the designated path. Turn guidance may also be configured as pavement markings.

CONFIRMATION

Placed after a turn or intersection to reassure path users that they are on the correct route.

ENHANCED NAVIGATIONAL ELEMENTS



PAVEMENT MARKER

Reinforce path branding and designate lanes for different modes, speeds or uses.

MILE MARKER / EMERGENCY RESPONSE ID

Provide trail users a sense of distance and/or serve as a waypoint for emergency response or maintenance activities.

STREET/TRAIL INTERSECTION

Orient off-street trail users at street crossings and inform vehicular traffic of trail crossings.

FINGERBOARD

Clarify route options where two or more routes converge, or at complex intersections.

DIGITAL DISPLAY BOARDS COULD BE INTEGRATED WITH KIOSKS

Access Elements

Access elements guide users into the network served by the wayfinding system either by marking physical entry to trails, pathways, or other facilities, or by providing information to new or potential users in a clear and understandable way that encourages participation in active travel. The most common application of access elements is for off-street trails and paths, but are also effective in downtown areas or in conjunction with transit hubs, or other multimodal transfer locations. Access elements can include gateway monuments, information kiosks, and secondary access signage. Note that it may be possible to combine multiple access elements in some cases; or, for instance, kiosks may serve the purpose of gateway monuments, and vice versa. Figure 2 presents the different sign types.

GATEWAY/IDENTITY MONUMENTS

Gateways define the entry into a distinct place with a defined identity. They are the first communication and introduction to a physical place, issuing a feeling of arrival. Gateways can be scaled for pedestrian and bicyclist experiences or vehicular experiences.

Bold gateway elements give visitors a sense of arrival

Trail gateway monument

Information kiosk

Secondary access signage (scaled down kiosk)

Secondary access signs can be simple, branded confirmation signs

INFORMATION KIOSKS

Kiosks that include area or regional maps provide helpful navigational information, especially where users may be stopping long enough to digest more information (i.e., transit stations or stops, busy intersections, trailheads). Kiosks should be located in conspicuous areas along the primary route from parking areas to the trail. Sufficient space should be provided around the kiosk to allow people to observe the information without obstructing adjacent walkways and should meet ADA clear zone requirements.

Typical elements to include on information kiosks are:

- City or regional map, including bicycle and pedestrian facilities, transit stations, bus stops, bike share or micromobility stations, and common destinations
- Community branding
- Regulations, etiquette, and safety information
- Trail name (if applied to a specific trail)
- Digital kiosks can also have changing or temporary displays such as for events or trail closures

Additionally, per the Americans with Disabilities Act (ADA) standards, trailhead facilities built with federal funds must include the following information on map panels:

- Length of the trail or trail segment
- Surface type/firmness/stability
- Typical and minimum width
- Typical and maximum running slope
- Typical and maximum cross slope

SECONDARY ACCESS SIGNAGE

Secondary access points with limited parking, services, or user traffic may not necessitate the same level of information and signage as formal access points with greater use. Signage at these locations may vary from a simple confirmation sign stating the name of the trail to a scaled down trailhead kiosk complete with user map, rules and regulations, permitted and restricted uses, and destination information.

Fundamental Navigational Elements

Fundamental navigational elements are the foundation of a wayfinding system to guide bicyclists and pedestrians to their destinations along designated facilities. These fundamental elements as they pertain to on-street bicycling are found in the Manual of Uniform and Traffic Control Devices (MUTCD) (Section 9B.20) and include decision signs, confirmation signs, and turn signs. While MUTCD standards relate directly to on-street bicycle networks, the same sign types and design considerations apply to off-street shared use paths. Fundamental navigation elements for off-street facilities differ from on-street, MUTCD-regulated facilities in that they consider multiple modes beyond just bicycles (e.g. pedestrians, skateboards, scooters, etc.) and opportunities exist for more flexible sign design and branding.

DECISION SIGNS

Decision signs mark and are placed prior to the junction of two or more bikeways. These signs also inform users how to access nearby destinations. These signs include destinations that can be paired with distances in time and/or mileage, and arrows. Users can orient themselves within the bikeway system based on key destinations including culturally significant landmarks, shopping districts, and other recreational facilities. These signs provide direction and distance to key destinations.

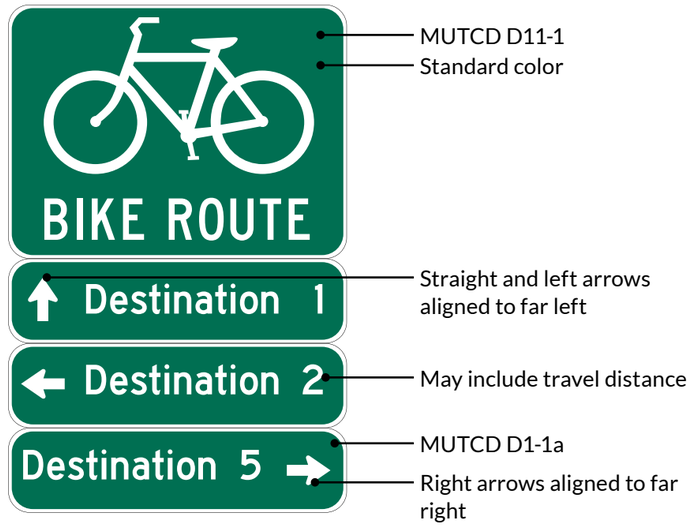
CHARACTERISTICS OF DECISION SIGNS

- Mark the junction of two or more bikeways
- Inform users of designated routes to access key destinations
- Provide direction and distance to destinations
- May include travel times to destinations

PLACEMENT CRITERIA FOR DECISION SIGNS

- For on-street applications, place 50-100 feet prior to a decision point; for off-street: 25-50 feet. These are adequate distances for bicyclists and pedestrians to see and respond to sign messaging. Exact distances will vary depending on context.
- Placed at key junctions alongside a bike route to indicate nearby destinations.
- Left turns for bicyclists require special consideration. The decision sign should be located within various distances before the intersection based on the number of lanes the bicyclist must merge across in order to make a legal left turn. The following distances should be used to allow adequate notification of left turns:
  - Zero lane merge: 50’
  - One lane merge: 100’
  - Two lane merge: 200’
- Signs should have a maximum of three destinations
- Signs should have a 2-foot minimum lateral offset of from edge of path or curb to edge of sign to prevent clipping from traffic.

Figure 3. MUTCD standard decision sign



CONFIRMATION SIGNS

Confirmation signs identify designated bike routes. This builds confidence that the user is on the correct path or route. In addition, these signs increase awareness of bicyclists by informing motorists of their presence. Confirmation signs are an integral component of any trail or bike system that crosses roads, changes direction, and has intermediate access points between trail or route beginning or end.

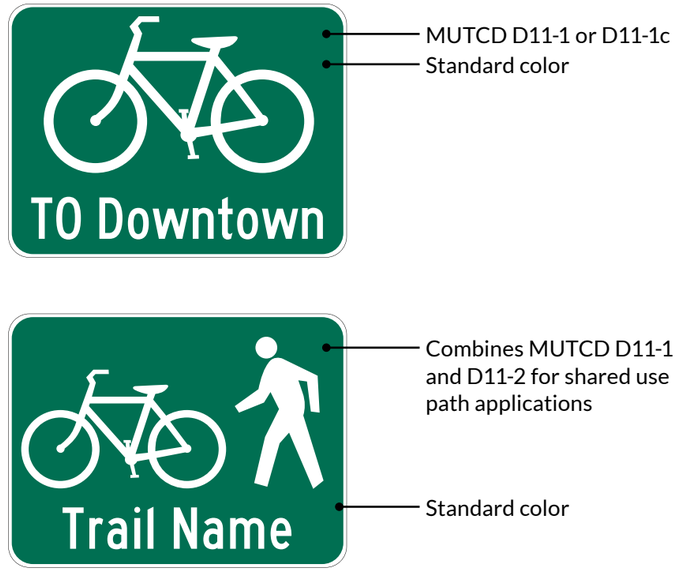
CHARACTERISTICS OF CONFIRMATION SIGNS

- Placed after access points along a trail or on-street bikeway, as well as after decision or turn signs
- Spaced periodically along a route or trail to maintain a consistent level of confidence that users are still traveling along the same route
- Do not indicate a change in direction
- May have informational or branding content such as the name of the route
- May include up to one directional destination (e.g. downtown)

PLACEMENT CRITERIA FOR CONFIRMATION SIGNS

- After decision signs and decision points
- Locations where a designated route is not linear as well as after complex intersections (e.g. intersections with more than four approaches, roundabouts, or indirect routing)
- Approximately every 1-2 miles on off-street facilities, unless another type of bicycle-specific sign (such as a turn, decision, or other bicycle regulatory sign) or pavement marking is present within the 1-2 mile interval
- Within 50-100 feet immediately following turns to confirm designated bicycle route
- Signs should have a 2-foot minimum lateral offset of from edge of path or curb to edge of sign to prevent clipping from traffic
- Mounting height should be a minimum of 7 feet from the bottom of the sign to finished grade for on-street signs and a minimum of 4 feet for signs along off-street facilities
- If the signed route is approaching a turn, turn signs or decision signs should be used instead of confirmation signs

Figure 4. MUTCD standard confirmation signs



TURN SIGNS

Turn signs indicate where a bikeway turns from one street onto another street, and only one route option is available. Turn signs are at key points of navigation for bikeway users. Turn signs direct the cyclist where to turn to remain on the designated route, allowing the cyclist to dedicate most of his or her attention to riding safely and responsibly.

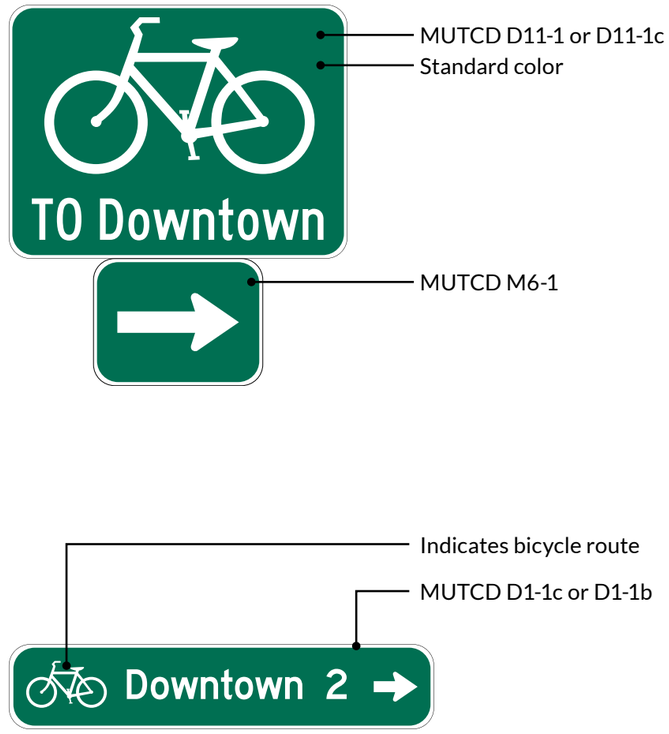
CHARACTERISTICS OF TURN SIGNS

- Clear direction for bicyclists and pedestrians to turn when a route transitions from one roadway or trail to another.
- May be a combination of a confirmation sign (MUTCD D11-1) and directional arrow (MUTCD M6-1) or a stand-alone decision plaque (MUTCD D1-1, D1-1b)
- May include travel distance to destination (MUTCD D1-1a, D1-1c)

PLACEMENT CRITERIA FOR TURN SIGNS

- The turn sign should be located in the block immediately preceding the turn.
- When a bikeway turns, a turn sign will be located at 50-100 feet (on-street) or 25-50 feet (off-street) in advance of the turn, or near side of the intersection).
- Left turns for bicyclists require special consideration. The turn sign should be located within various distances before the intersection based on the number of lanes the bicyclist must merge across in order to make a legal left turn. The following distances should be used to allow adequate notification of left turns:
  - Zero lane merge: 50’
  - One lane merge: 100’
  - Two lane merge: 200’
- Signs should have a 2-foot minimum lateral offset from edge of path or curb to edge of sign to prevent clipping from traffic.
- Mounting height should be a minimum of 7’ from the bottom of the sign to finished grade for on-street signs and a minimum of 4’ for signs along off-street facilities
- In locations where there are two or more bike routes, a decision sign, rather than two turn signs, should be used.

Figure 5. MUTCD standard turn signs



Enhanced Navigational Elements

Enhanced navigational elements provide additional wayfinding assistance beyond fundamental signage, improving the user experience and providing more opportunities for system branding and identity. Enhanced navigational elements could include pavement markings, mile markers, street/trail intersection signs, and fingerboard signs.

PAVEMENT MARKINGS

Pavement markings can serve a variety of wayfinding purposes along off-street bikeways and trails. They can often be utilized to communicate direction, route name, community branding, mile markers, and street crossings. Pavement markings may be provided in lieu of, or in addition to standard signs, thus limiting sign clutter. Common materials used for pavement markings include pre-formed thermoplastic, paint, stamped concrete, or embedded metal.

MILE MARKERS & EMERGENCY RESPONSE SIGNAGE

Mile markers are a series of numbered markers that may be placed alongside a trail at defined intervals to help users understand how far they have gone, and how far they have to go to their next destination. Furthermore, mile markers provide pathway managers and emergency response personnel points of reference to identify field issues such as maintenance needs or locations of emergency events. Mile marker locations should be geo-located and supplied to emergency responders so that responders can efficiently respond to incidents on the trail. System brand mark, path name, and distance information in miles may be included as well as jurisdiction identification. It is important that mile markers are spaced at consistent intervals, such as every 1/4 to mile, along a pathway network. Point zero should begin at the southernmost and/or westernmost terminus points of a pathway. Mile markers on regional trails should be coordinated to continue across municipal boundaries when possible. Pavement marking mile markers can also be used in lieu of post-style mile markers.

STREET/TRAIL INTERSECTION SIGNS

There are several benefits to including signage at trail and street intersections. The primary reason is to orient the trail user to which street the user is crossing. Additionally, trail signage at these locations facing motorists (in addition to standard regulatory signage) can help bring attention to the trail crossing. Decision signage should be present if needed to communicate directions to destinations accessible from the cross-street. Street/trail intersection signage should also be included where trails cross over or under streets via grade-separated intersections. Riparian trails, rail trails, or other trails with infrequent connections to the street network make it difficult for trail users to orient themselves. Simple street signage on overcrossing or undercrossing structures can help trail users determine their location.

FINGERBOARD SIGNS

Fingerboard signs serve a purpose similar to decision signs in that they provide wayfinding to multiple destinations located in multiple directions from the junction at which the sign is located. They provide an efficient way to give direction at a junction that is approached from multiple angles, and are not as limited in the amount of destinations that can be included. Because they are not standard MUTCD wayfinding assemblies and can contain more than three destinations, fingerboards are better applied in pedestrian or off-street trail contexts where people have time and space to process more information.

Enhanced Navigational Elements

Pavement marking / mile marker

Fingerboard sign

Motor vehicle-oriented signage indicating trail crossing

Mile marker

Trail/street undercrossing

Destination Selection and Programming

Following the principle of "connect places," this section describes an approach for selecting potential destinations to which people traveling along the DFW Discovery Trail may want to go. Wayfinding signs typically only allow for a limited number of destinations per sign. Thus, a consistent approach to selecting destinations for inclusion on wayfinding elements is necessary, given the multitude of potential destinations possible. Signs should follow the same approach throughout the DFW Discovery Trail so that the system is clear and predictable. Destinations and their names should be referred to consistently on all relevant wayfinding signs. As a general rule, only destinations that are open and accessible to the public should be signed.

DESTINATION HIERARCHY

Due to the large number of destinations accessible from the DFW Discovery Trail, it is best to organize them into a hierarchy. This will to help with determining which destinations to include or omit at any given point along the trail. Such a hierarchy allows information to be layered through a series of decision points as a visitor travels along the trail and makes his or her way to destinations that are unique to each city. The concept is simple – it is giving the right information at the right time.

Prioritizing and categorizing destinations into hierarchies also helps determine the physical distance from which the locations are signed. Note there is flexibility in these hierarchies as locations may not fit neatly into each.

PRIMARY DESTINATIONS

Destinations in this category are of primary importance and receive directional information to their locations on directional signs from a large radius throughout the City. They serve as "pull through" destinations because they draw visitors through the City from farther away. These destinations serve a primary visitor function, such as a visitor center or convention center. Examples of destinations that fall into this category are downtowns, statewide or regional trails, districts (of regional significance), major and regional parks, arenas and stadiums, culturally significant landmarks, major institutions, universities, transit stations, and other municipalities. To be categorized into this tier, a destination will meet two or more of the following criteria:

- Nationally recognized destination
- Governmental, historical, or cultural institution
- Not-for-profit or publicly owned institution
- Includes a staffed visitor information center or kiosk

SECONDARY DESTINATIONS

Destinations in this category are of major importance and receive directional information to their locations on signs from a smaller radius surrounding their locations. Typically this is limited to the decision points located closest to the point of interest. These are generally recognized destinations that have access to the bikeway or trail system nearby. Examples of destinations that fall into this category are community parks, secondary schools, and neighborhood shopping districts. To be categorized into this tier, a destination will meet two or more of the following criteria:

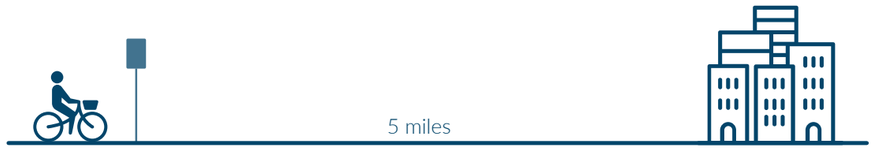
- Regionally recognized destination
- Open at least 40 hours per week
- Open at least 9 months out of the year

TERTIARY DESTINATIONS

Destinations in this category are minor, or exclusively civic destinations, and are primarily accessed by pedestrians, non-motorized vehicles or offer non-motorized activity such as trails, skate park, and water activities. These destinations are generally local attractions or activities such as community and recreation centers. To be categorized into this tier, a destination will meet one or both of the following criteria:

- Locally recognized destination
- Primarily accessed via non-motorized vehicle

Figure 6. Destination hierarchy and signing distances



SIGNING DISTANCES

Signing distances suggest the maximum distance that destinations should appear on directional signs. This process ensures that information is spread along the journey in manageable amounts according to users' immediate needs.

Distances may be measured either to a destination boundary or center, as long as the approach is consistent throughout the region. Cities typically have a well-defined edge and thus should be measured to boundary lines. Districts are less defined in terms of their boundaries and thus should be measured to their centers. Parks, schools, are other specific destinations typically have a street address and thus distances should be measured to the main entrance of the specific location. If a destination is large or has several access points, distance should be measured to the point at which the bicyclist or pedestrian will most likely arrive.

PRIMARY DESTINATION SIGNING DISTANCE

Primary destinations provide navigational guidance to the widest spectrum of system users and thus should be prioritized on signs. As general rule, primary destinations should appear on signs up to five miles away, but may be signed for distances longer than five miles if they have a strong regional pull.

SECONDARY DESTINATION SIGNING DISTANCE

Secondary destinations appeal to a broad spectrum of users and should be included on signs up to two miles away.

TERTIARY DESTINATION SIGNING DISTANCE

Tertiary destinations are typically places of local or neighborhood interest and should be signed up to one mile away.

DESTINATION ORDER

Decision signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions.

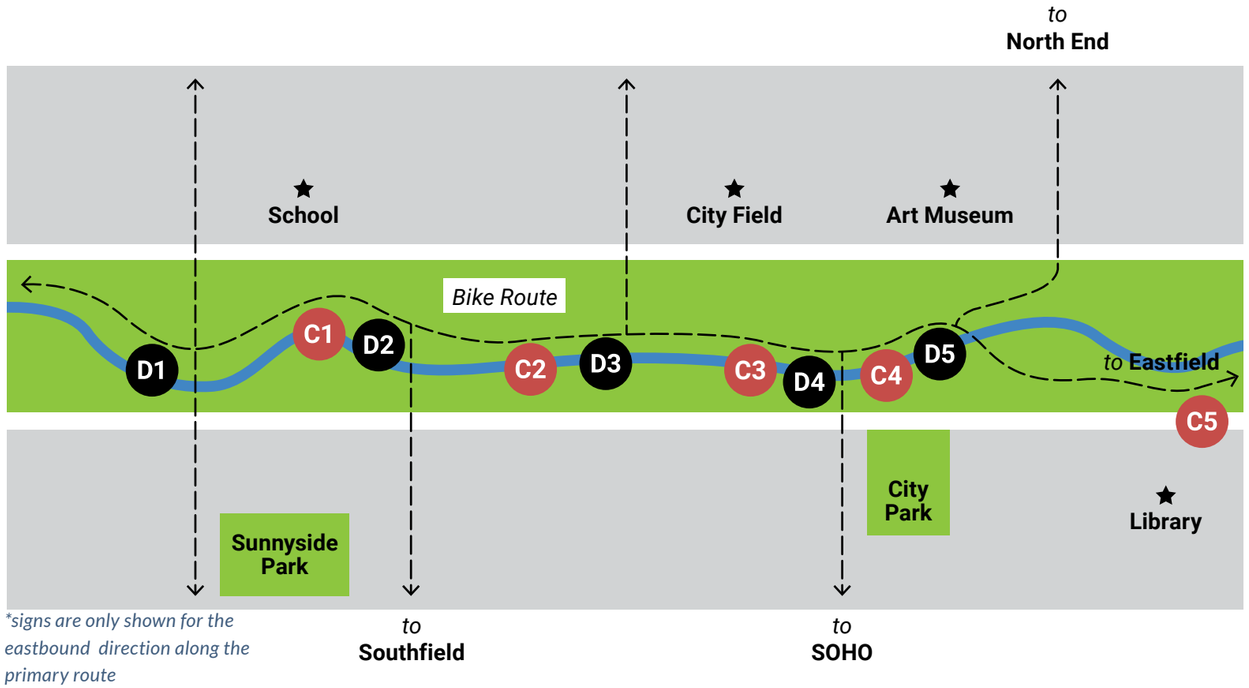
A straight-ahead location should always be placed in the top slot followed by the destination to the left and then the right, even if destinations to the right or left are closer. If two destinations occur in the same direction, the closer destination should be listed first followed by the farther destination.

Arrows should be placed for glance recognition, meaning straight and left arrows are located to the left of the destination name, while right arrows are placed to the right of the destination name.

ABBREVIATIONS

When placing destination names on signs, names and routes should not exceed a maximum of 19 characters (including spaces and icons). When insufficient space is available for full wording, abbreviations may be used. Unless necessary to avoid confusion, periods, commas, apostrophes, question marks, ampersands, and other punctuation marks or characters that are not letters or numerals should be avoided.

Figure 7. Process for destination programming and general sign placement



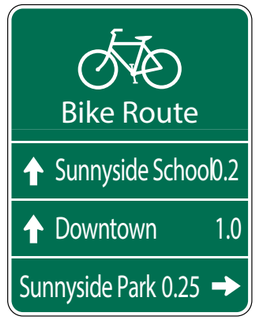
**signs are only shown for the eastbound direction along the primary route*

This diagram displays how destinations are applied to decision and confirmation signs along a hypothetical route.*

It displays how:

- Destinations are selected by distance and hierarchy
- How destinations are ordered according to direction and distance
- How destinations are added and removed from west to east

Decision Signs

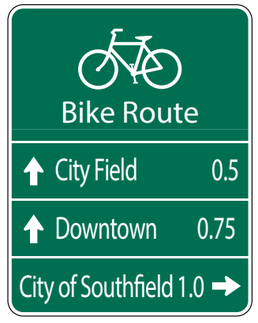


D1

Three miles west of Downtown, there are few Tier 1 and 2 destinations.

Due to this, two local (Tier 3) destinations appear on the sign.

Even though Downtown is a Tier 1 Destination, it is placed below Sunnyside School because the school is closer.

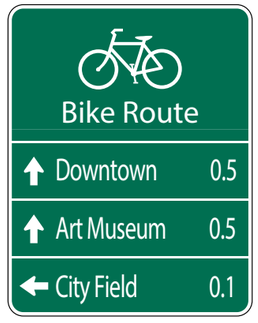


D2

Downtown is the pull through destination.

Sunnyside School and Park drop from the sign, because the bicyclist has past them.

City of Southfield (Tier 1) and City Field (Tier 2) replace these destinations.



D3

Since City Field has been reached, it is dropped from the sign, replaced by the Art Museum (Tier 2)

City Field, which is directly off the Bike Route is signed to using a left arrow.

Downtown being the closest straight destination, moves to the top of the sign.

D4

Downtown remains on the sign, but no mileage is given since downtown is reached.

City Park (Tier 2) is included on the sign, even though SOHO District (Tier 1) is within the signing threshold; This shows planner discretion in determining destinations.

The Art Museum remains.

D5

Since Downtown has been reached, Downtown is replaced by City of Eastfield as the pull through destination for the bike route.

Fewer destinations exist east of Downtown, so a Tier 2 (North End District) and a Tier 3 (Eastside Library) make the sign.

Confirmation Signs

C1-C4

Downtown is the pull through destination, remaining on each sign until Downtown is reached.

C5

Eastfield replaces Downtown as the pull through destination.

Table 9. MUTCD compliant abbreviations

Message	Abbreviation
Alternate	ALT
Avenue	Ave, Av
Bicycle	BIKE
Boulevard	BLVD
Bridge	BR
Center (as part of a place name)	CTR
Circle	CIR
Court	CT
Crossing (other than highway)	X-ING
Drive	DR
East	E
Hospital	HOSP
Information	INFO
International	INTL
Junction / Intersection	JCT
Mile(s)	MI
Miles Per Hour	MPH
Minute(s)	MIN
Mount	MT
Mountain	MTN
National	NATL
North	N
Parkway	PKWY
Pedestrian	PED
Place	PL
Road	RD
South	S
Street	ST
Telephone	PHONE
Terrace	TER
Trail	TR
West	W

For a comprehensive list, standards, and guidelines for MUTCD compliant abbreviations, refer to MUTCD Section 1A.15 (Abbreviations Used on Traffic Control Devices)

ICONS AND SYMBOLS

Icons and symbols can be beneficial additions to a wayfinding signage design toolkit because they help to communicate information simply and expand comprehension beyond those with English language proficiency. Where proficiency is low, icons and symbols can substitute for words or concepts that are hard to explain or translate, like trailhead, transit, school, etc.

Universal symbology and iconography that have been developed by the American Institute of Graphic Arts (AIGA) and the National Park Service (NPS) are familiar to most people and translate across most languages and cultures. Use of symbols and icons on wayfinding signage, especially within names of destinations, can save space and improve legibility and comprehension.

Figure 8. Examples of NPS icons and symbols

General Placement Guidance

Consistent and appropriate placement of wayfinding elements helps to provide a legible wayfinding system while ensuring the signage elements do not create undue safety hazards. The Guide for the Development of Bicycle Facilities by the American Association of State Highway Transportation Officials (AASHTO) provides information on the physical infrastructure needed to support bicycling facilities. Most of this guidance applies to off-street, shared-use paths as well. The AASHTO Guide largely defers to Part 9 of the MUTCD for basic guidelines related to the design of wayfinding systems. Additional information provided by AASHTO regarding sign placement is as follows:

- Wayfinding guidance may be used to provide connectivity between two or more major facilities, such as a street with bike lanes and/or sidewalks and a shared-use path
- Wayfinding may be used to provide guidance and continuity in a gap between existing sections of a facility, such as a bike lane or shared-use path
- Road/path name signs should be placed at all path-roadway crossings to help users track their locations
- Reference location signs (mile markers) assist path users in estimating their progress, provide a means for identifying the location of emergency incidents, and are beneficial during maintenance activities
- On a shared-use path, obstacles, including signs, shall be placed no closer than 24 inches from the near edge of the travel way and no more than 6 feet away. For pole-mounted signs, the lowest edge of the sign shall be 4 feet above the existing ground plane

ACCESSIBILITY STANDARDS

As wayfinding systems often relate to accessible routes or pedestrian circulation, it is important to consider technical guidance from the Americans with Disabilities ACT (ADA) in order to implement wayfinding signs and other elements that do not impede travel or create unsafe situations for pedestrians, bicyclists, and/or those with disabilities. The Architectural and Transportation Barriers Compliance Board and the AASHTO Guide for the Development of Bicycle Facilities also provide guidance for safe and accessible design for the built environment. The following are standards that should be considered when designing and placing wayfinding signs.

VERTICAL CLEARANCE

On-Street: Vertical clearance shall be a minimum of 84 inches when adjacent to a sidewalk or on-street environment.

Off-Street: Vertical clearance shall be 96 inches high maximum (when overhanging the path), or 48 inches minimum from the grade of the path to the bottom of the sign and 24 inches from the edge of the path tread to the edge of the sign when the sign is mounted adjacent to the trail.

POST-MOUNTED OBJECTS

Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches, the lowest edge of such sign or obstruction shall be 27 inches minimum or 80 inches maximum above the finished floor or ground.

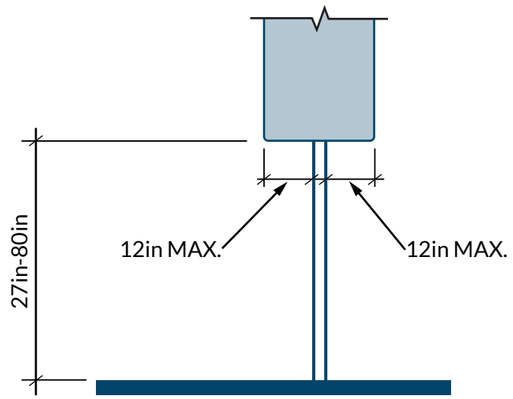
PROTRUDING OBJECTS

Objects with leading edges more than 27 inches and not more than 80 inches above the finished floor or ground shall protrude 4 inches maximum horizontally into the circulation path.

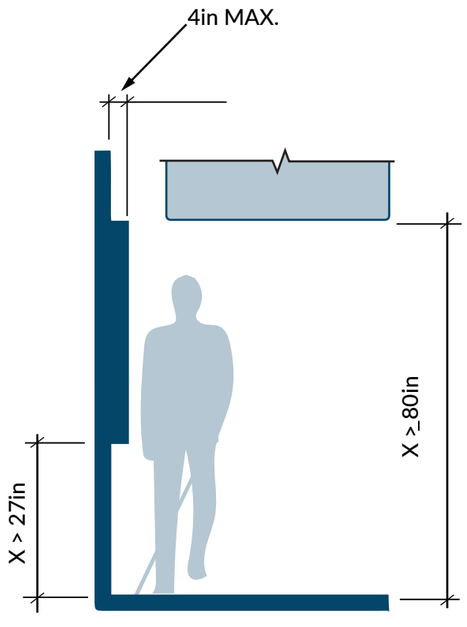
REQUIRED CLEAR WIDTH

Protruding objects may not, in any case, reduce the clear width required for accessible routes. Generally, this requirement is met by maintaining 4 feet of minimum clear width for people maneuvering mobility devices. This requirement applies to sidewalks and other pedestrian circulation paths.

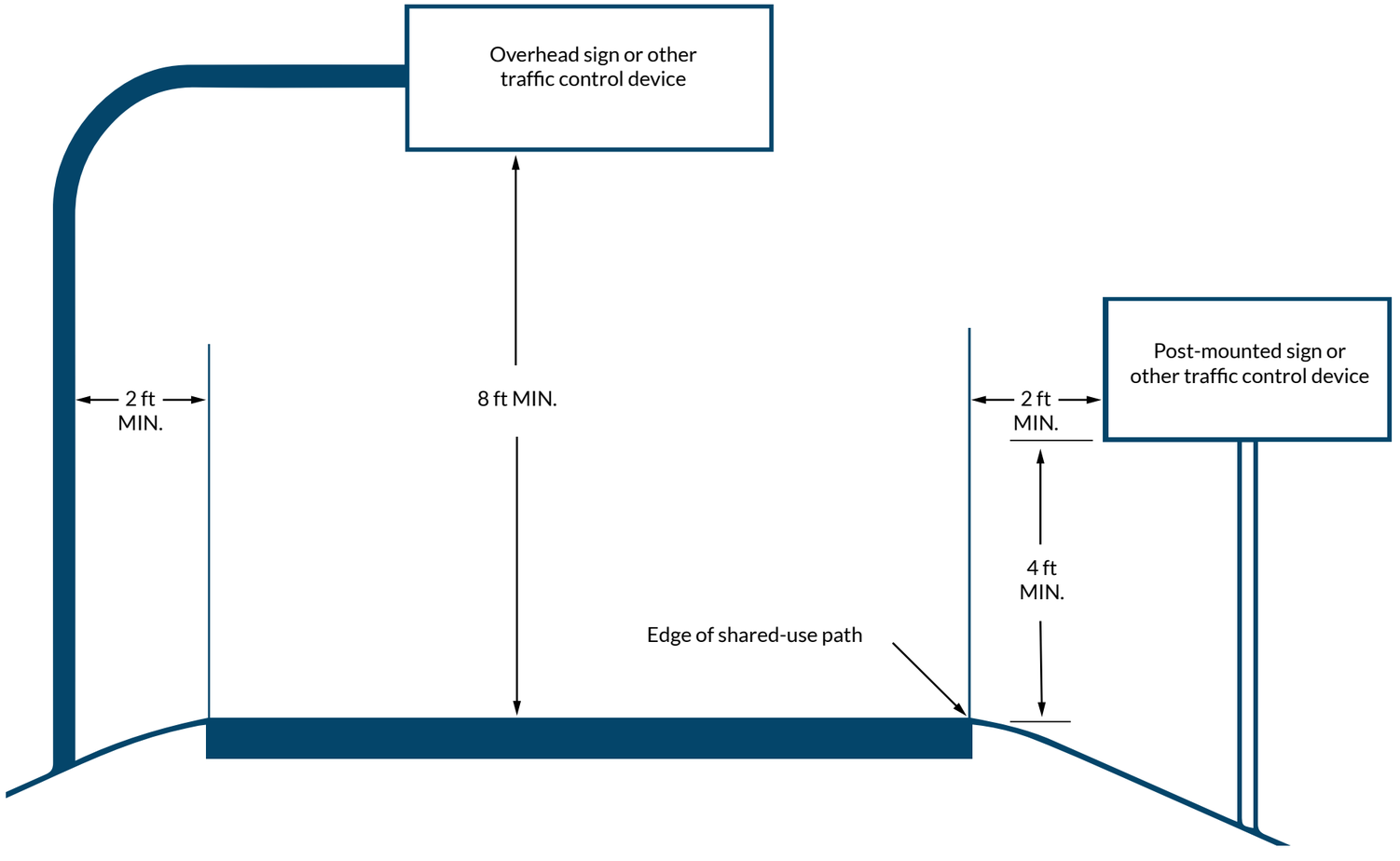
Figure 9. AASHTO guidance for sign placement



a) Minimum clearance for post-mounted objects

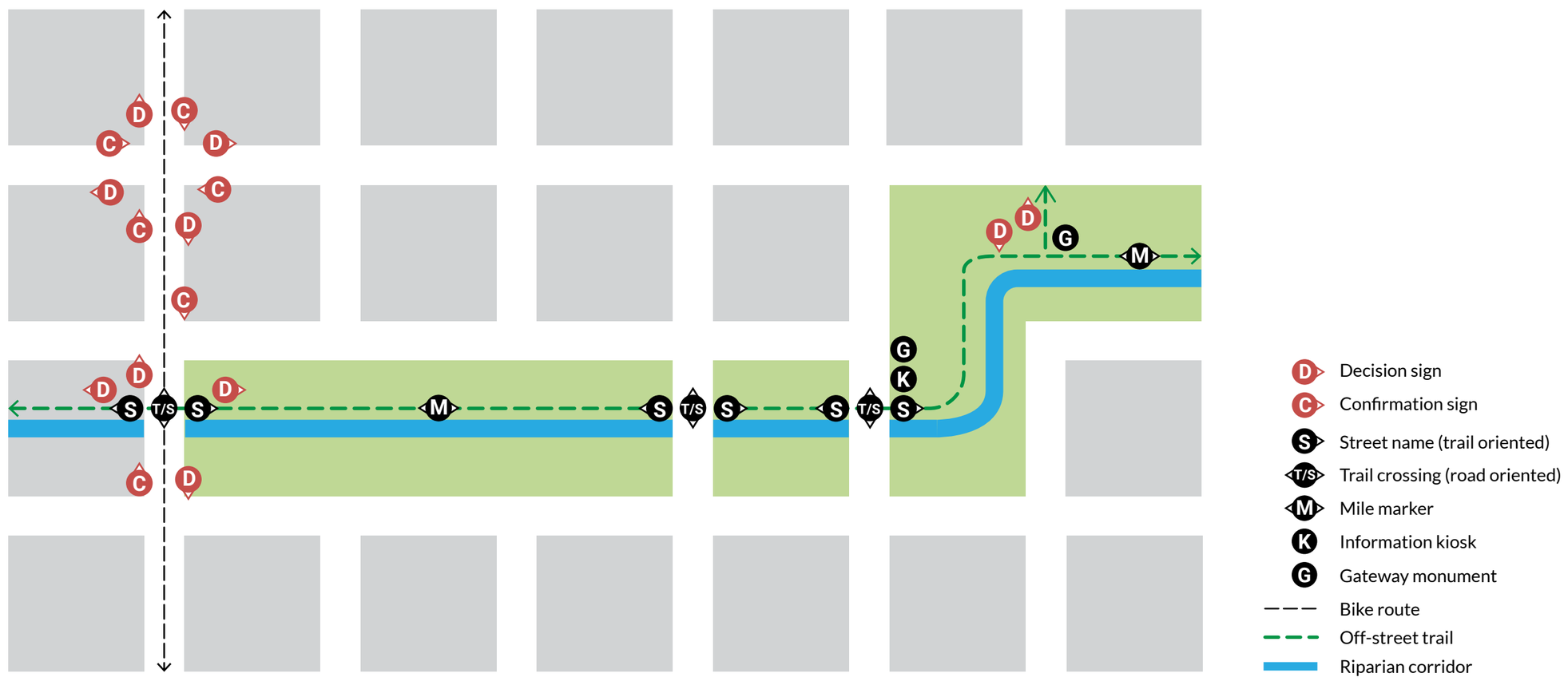


b) Minimum clearances for protruding objects



c) Minimum clearances for signs along shared-use paths

Figure 10. General sign placement guidance



Example of sign placement along an off-street riparian corridor and an intersecting on-street bicycle facility, creating a single, interconnected network

Conformance with MUTCD Standards

The Manual on Uniform Traffic Control Devices, or MUTCD, is a document issued by the Federal Highway Administration (FHWA) of the United States Department of Transportation. The MUTCD specifies the standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel. The MUTCD was established in order to achieve uniformity and consistency in traffic control devices (wayfinding signage is considered a traffic control device) so that information would be readily recognized and understood by travelers.

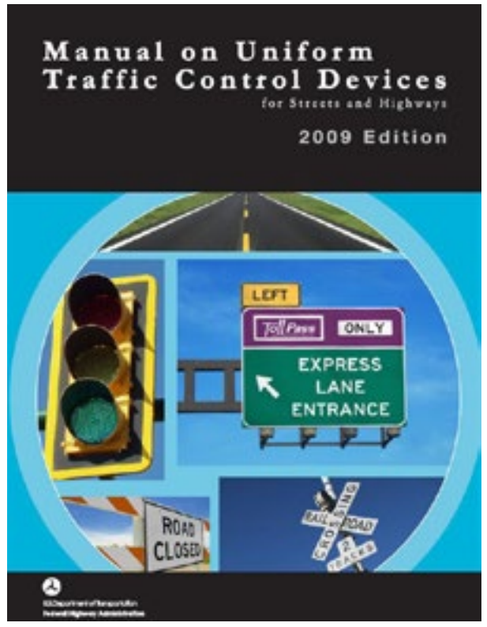
BICYCLE SIGN STANDARDS

The fundamental navigational elements in this plan, as well as pavement markings on public streets, are the only wayfinding elements whose standards are dictated by the MUTCD. Access elements, enhanced navigational elements, and interpretive elements allow for more flexibility and customization. However, trail and on-street wayfinding and signage elements that are not strictly compliant or not addressed by the MUTCD may be implemented at the local jurisdiction's discretion. In extreme circumstances state DOTs have required removal of non-compliant signage as a condition for federal funding. Coordination with local jurisdictions on flexible approaches to bikeway wayfinding is encouraged. Per the MUTCD, devices should be designed so that:

- Size, shape, color, composition, lighting or retro-reflection, and contrast are combined to draw attention to the devices; simplicity of message combine to produce a clear meaning
- Legibility and size combine with placement to permit adequate time for response
- Uniformity, size, legibility, and reasonableness of the message combine to command respect

The MUTCD also recommends the arrangement and amount of text, or legend, on each section of each sign:

- Guide signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions
- A straight ahead location should always be placed in the top slot followed by the destination to the left and then the right. If two destinations occur in the same direction, the closer destination should be listed first followed by the farther destination
- Arrows shall be depicted as shown in Figures 2 and 4 for glance recognition, meaning straight and left arrows are to be located to the left of the destination name, while an arrow indicating a destination to the right shall be placed to the right of the destination name. The approved arrow style must be used
- 19 characters (including spaces) in title case should be considered a maximum length for a single destination title. 10-14 characters (including spaces) in title case should be considered an ideal maximum length for a single destination title
- In situations where two destinations of equal significance and distance may be properly designated and the two destinations cannot appear on the same sign, the two names may be alternated on successive signs
- Approved fonts include the Federal Series (series B, C, or D), also known as Highway Gothic. Clearview is also currently approved for use.
- A contrast level of 70% needs to be achieved between foreground (text and graphics) and background



Cover of the Manual on Uniform Traffic Control Devices

FLEXIBILITY IN COMMUNITY WAYFINDING

Section 2D.50 (Community Wayfinding Signs) of the MUTCD recognizes the desire of some communities to incorporate supplemental information and/or community branding in addition to the minimum standards outlined for bicycle signs in Section 9B. The Community Wayfinding Sign standards allow for customization by permitting the use of enhancement markers, a common color other than the standard MUTCD green, and color coding of destinations.

COLOR

Per the community wayfinding standards, color coding may be used on wayfinding guide signs to help users distinguish between multiple potentially confusing traffic generator destinations located in different neighborhoods or subareas within a community or area. Community wayfinding guide signs may use background colors other than green in order to provide a color identification for the wayfinding destinations by geographical area within the overall wayfinding guide signing system.

The MUTCD prohibits the use of some colors for wayfinding signs, these colors are known as “assigned colors”. The “assigned colors” consist of the standard colors of red, orange, yellow, purple, or the fluorescent versions thereof, fluorescent yellow-green, and fluorescent pink. They cannot be used as background colors for community wayfinding guide signs, in order to minimize possible confusion with critical, higher-priority regulatory and warning sign color meanings readily understood by road users.

The color wheel diagram in Figure 11 depicts colors which are already assigned specific meanings and thus shall not be used on community wayfinding signs. Green is the standard color for guide signs. Blue and brown are also used for traveler information including destination and street name signs. The remaining colors are eligible for use on community wayfinding signs as long as they are sufficiently different from the “assigned colors”.

Figure 11. MUTCD color standards

SUPPLEMENTAL INFORMATION

DISTANCE AND TIME

The addition of measuring distance in terms of miles and minutes has been employed by a number of cities in the United States and has been explicitly allowed by the Oregon state supplement to the MUTCD. Although this strategy is not explicitly permitted in Texas, adding distance in familiar units has been found to be an effective encouragement tool. For some, two miles may sound like a daunting distance to ride a bike, while twelve minutes sounds approachable. A pace of 10 miles per hour or 6 minutes per mile is the typical pace used for bicyclists, which is lower than typical bicycle design speed in order to best reflect and encourage the riding speed of the casual rider and to take into account traffic signals and other delays.

Decision sign with distance and time information (source: nacto.org)

Figure 12. MUTCD compliance spectrum

There is a spectrum of compliance with MUTCD standards. Depending on context, any of these could be effective wayfinding families. Funding and approval requirements, as well as desire for customization and integration with other networks should all be considerations when choosing level of compliance.

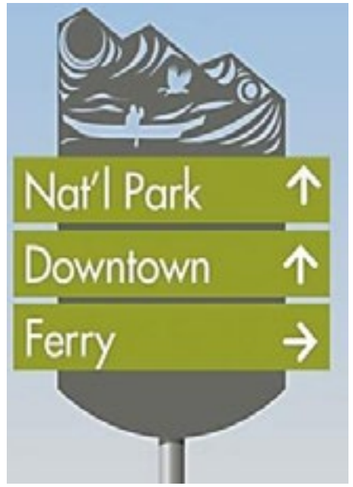
RIGID

FLEXIBLE

- MUTCD standard
- Information is clear and consistent
- No regional or local identity modifications
- Some variation in size and shape
- No encouragement information

- Information consolidated into a single sign
- Variation in size and shape
- Travel times included

- Unique system or municipality identifiers or enhancement markers
- Custom color variations as allowed by MUTCD Community Wayfinding standards



- Custom framing and support structures
- Unique sign shapes and sizes
- Decorative elements
- Non-standard colors and layout

SUCCESSFUL LOGOS ARE:

- A unique mark that represents a brand or an organization
- Simple
- Distinctive & memorable
- Timeless

SUCCESSFUL LOGOS ARE NOT:

- Responsible for telling the entire brand story
- Overly complex & complicated
- Generic
- Trendy

Common trail logo styles:

Text-based

Emblem

Lock-up / Combination

Lettermark

Branding Best Practices

An attractive, cohesive, branded wayfinding system can greatly contribute to a place's legibility and identity.

BRANDING OVERVIEW

A **brand** is the full set of assumptions, expectations, and experiences that a user associates with a product, place, or service. The logo is the most obvious visual component, but branding also includes the name, internet presence (websites and social media), "voice", use of imagery and photography, and the impact that the product/place/service has on their community.

LOGO STYLES

Four of the most common trail logo styles are shown at left. Different logo styles perform better in different contexts, but generally: a logo should be recognizable at small scales, and in black-and-white/grayscale. Complicated or detailed illustrations can pose problems in both of those contexts, and if the illustration dominates or compresses the text, it can impact legibility too.

COLOR

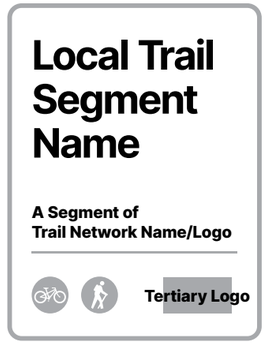
Low-contrast signs with a glossy finish are difficult to read at a distance as the colors can visually blur together and may create glare. For this reason it is important to choose high contrast colors for logos, messaging, and other sign elements. Do not place text on a patterned or heavily textured background.

The color combinations shown above are generally considered to have good contrast; note that other factors, including font style, text height, surface reflectivity, and available light should be considered together when designing accessible signs.

Representational Art in the LA River Master Plan logo

Abstract art in the Charlotte Rail Trail (right) and Singing River Trail (below) logos

Cobranding option 1:
Think Long-Term



Cobranding option 2:
Celebrate the Local

ART

Art can be very powerful, especially if it's simple and meaningful to the community, such as the crane as a symbol for the LA River path (above).

HUMAN FIGURES/PEOPLE

Icons, illustrations, and symbols of people, though they are usually designed to be generic, still send subtle messages about the type of person who is welcome on the path; at the same time, their very generic-ness has a dulling effect on the art, making the logo look predictable and bland. This can hold true for images (icons, illustrations, etc) of trails and mountains: in general these just look generic (consider the original Razorback Greenway logo, in the Peer Brands section).

ABSTRACT ART

Abstract, geometric, and non-representational art can add a great deal of interest to a simple text-based logo, while avoiding some of the pitfalls of representational art outlined above (see the Charlotte Rail Trail logo, above center).

COMMUNITY PARTICIPATION

Community buy-in is essential for a successful branding of any large public amenity. The Singing River Trail logo (above, right) was developed in close collaboration with stakeholders, who identified a desire to recognize and uplift the region's indigenous people. Alta worked with a local indigenous artist to adapt a traditional pattern into a bold, distinctive logo which straddles the lines between representational and abstract, and historic and modern.

Art can be an essential element of a brand when it's in balance with the message, and appropriate for the community. Art should not dominate the design at the expense of legibility, especially when one of the primary uses of the logo is for wayfinding. Most communities want the name of the trail to be legible on signs, which is difficult when the art dominates the design or when the name is encircled in or wrapped around a badge. Bicycle / pedestrian symbols may be included on the signs as necessary, and do a better job of conveying those modes (and provide more flexibility) than a tiny icon or set of icons on the logo itself.

COBRANDING

Different trail networks handle cobranding in their own way. The history and cultural importance of individual trail segments should play a major role in deciding which brand will occupy the primary position on signs and which will take secondary or tertiary positions.

The diagrams above show two typical approaches: the first sign gives the larger trail network name/logo the primary position on the sign (see Atlanta Beltline). A strong, regional brand can confer long-term benefits, increase access to funding, and contribute to a sense of regional belonging.

The second sign above gives the local trail segment name the primary position on the sign. This can be a powerful tool for reaching consensus and buy-in from partner brands, and can help the public navigate the system by preserving the names that they're used to (see The Circuit Trails).

Many regional trails provide tertiary cobranding opportunities for local municipalities and funding partners. Both of the signs above show tertiary logos below the signs' main branding and messaging.

PEER BRAND STUDY:

THE CIRCUIT TRAILS

The Circuit Trails logo is approachable and sophisticated in its simplicity. The distinctive shape is eye-catching and looks good in a wide variety of contexts and scales. Clearly designed with co-branding in mind, the logo proudly takes second position on signage and successfully unites formerly competing trails into a more powerful and harmonious system.

OVERVIEW

The Circuit Trails is a large regional network of more than 350 miles of multi-use trails connecting communities in and around Greater Philadelphia.

COLOR

The bright green and white of the logo create a distinctive mark, but don't provide much contrast, so the text can easily become faded, washed out, and illegible. The darker purple is a good choice for the signage background, allowing the local trail name to stand out as the primary message.

DESIGN

The segmented lines in the logo are essentially abstract, but they nod to the history of the trail as three disconnected "spines" that were brought together under The Circuit Trails umbrella brand—a move which unlocked regional and federal funding, raised the profile of the regional trails, and helped local cities and towns to build access trails to link in to the larger system.

This is a text-based logo; the absence of representational art helps to minimize clutter—especially important in a cobranded environment—and allows the logo to function at a variety of scales.

SIGN FABRICATION

Signs have a distinctive arced top and bottom, which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

The Circuit Trails logo occupies a secondary position on signage, with the primary focus on the local trail name. It works within a system that offers personalization opportunities for the trails and their respective partners, which translates into a powerful "strength in numbers" approach. Tertiary logos on signs include funding partners, overlapping trails, and managing municipalities.

BRAND DEVELOPMENT

The development of the Circuit Trails regional identity was funded by the William Penn Foundation, with a goal to unite multiple trail systems under one mega-brand which could negotiate more effectively with municipalities, promote itself and the region more efficiently, and combine funding sources to benefit the entire network. The brand was developed in close collaboration with a group of committed, empowered stakeholders.

PEER BRAND STUDY:

Atlanta BeltLine

Based on a Georgia-Tech student's thesis project, the Atlanta BeltLine is transforming an abandoned loop of rail corridor into a multi-use trail connecting neighborhoods, communities, and activity centers. The logo, a loop composed of many separate and overlapping entities, reflects the physical shape and connecting function of the trail.

OVERVIEW

The Atlanta BeltLine is a sustainable redevelopment project that will ultimately connect 45 in-town neighborhoods via a 22-mile loop of multi-use trails, modern streetcar, and parks, based on railroad corridors that formerly encircled Atlanta.

COLOR

Cool colors on a white or steel gray background create a chilly, even corporate visual impact. Because the signs don't "blend in" with their natural context, they are highly visible and recognizable.

DESIGN

An elegant metaphor for connection, the loose composition of colored squares helps to balance the cold, corporate colors and materials palettes. The mark is essentially abstract, which allows it to read well at multiple scales. This style of logo is called a "lockup", which means the art and the text are divisible, and their relationship is defined in the brand guidelines. As seen on this page, multiple lockups are possible, allowing a great deal of flexibility when applying the logo to signs, documents, and collateral.

SIGN FABRICATION

A variety of sign styles are in the ground. All share a distinctive, custom look and feel, metal construction, and dimensionality.

COBRANDING

The Atlanta Beltline's primary loop was conceived and branded as a whole early on in its development. The cobranding strategy reflects that singular vision: signs are heavily branded with Atlanta Beltline taking the primary position—even dwarfing the directional and regulatory messaging in some instances. Secondary logos may appear on a lower panel.

PEER BRAND STUDY:

The original Razorback Greenway logo was intended for use in the planning documents, and not necessarily designed or well-suited for trail signage. A proposed re-brand is explored on the following page.

OVERVIEW

The Razorback Greenway is a 36-mile long trail spanning a large portion of Northwest Arkansas, linking together dozens of popular community destinations, six downtowns, and scenic lakes.

COLOR

A muddy palette of muted earth tones provides limited contrast on signs, and can get lost in the environment.

DESIGN

This is a badge-style logo featuring a very detailed illustration. The text is pushed to the edges, making it difficult to read at any scale, and impossible at small scales (see top image, this page). The buildings represented in the logo have specific meaning for this trail, and yet the overall impression is more busy than specific.

SIGN FABRICATION

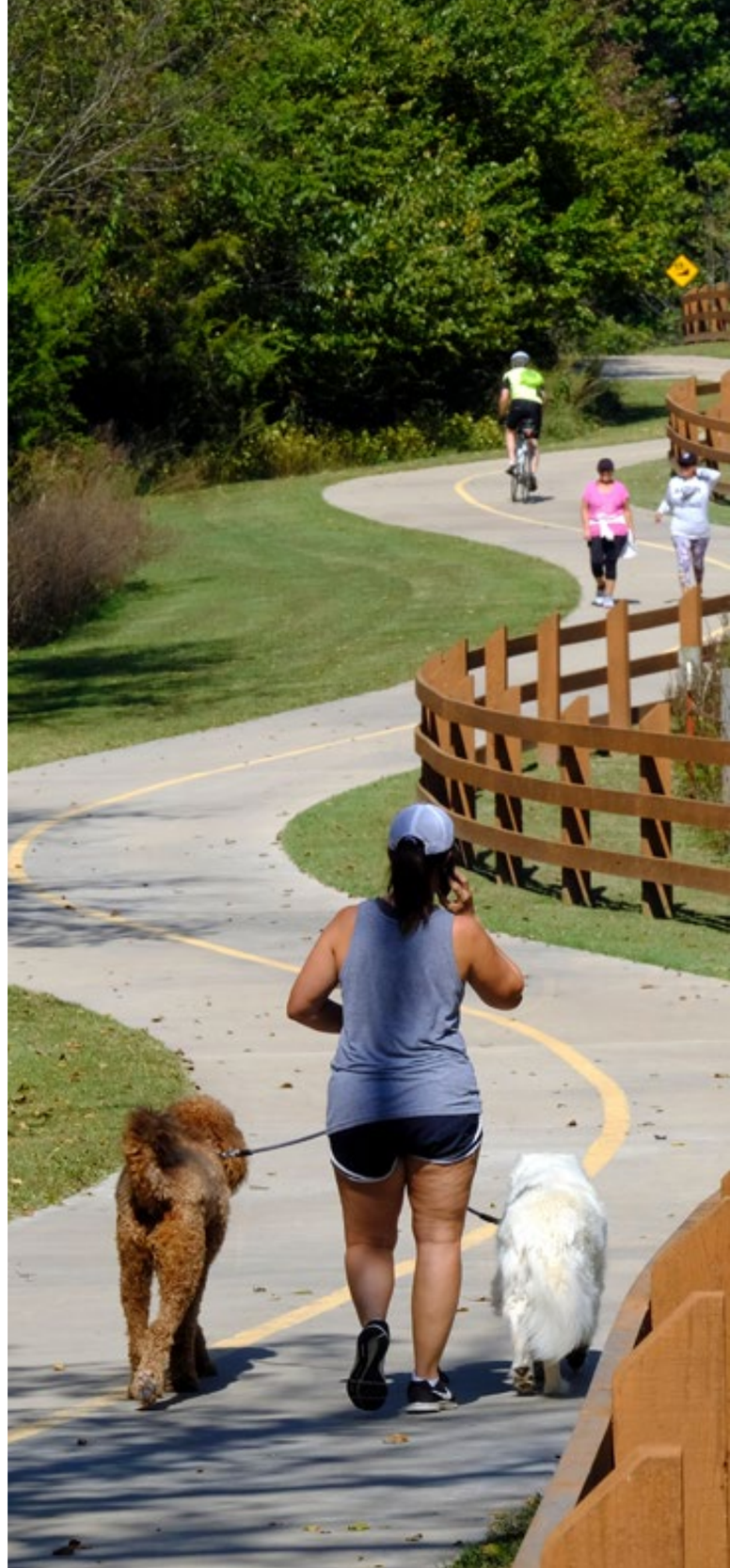
Signs have distinctive shapes (two custom shapes are shown on this page, top and bottom), which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

The Razorback Trail occupies the primary position on signs, with local trail names highlighted at the top of directional signs (unfortunately, the beige highlight actually reduces legibility). Tertiary logos, including municipalities and funding partners, appear in a band at the bottom of signs.

BRAND DEVELOPMENT

The logo featured on this page was developed as part of the planning process (intended to create an identity for planning documents) and not intended for signage or as a permanent identity for the greenway. There was therefore no public outreach or engagement component to the design process.



PEER BRAND STUDY:

The Northwest Arkansas Razorback Regional Greenway rebranded logo is clean and direct. It is easy to read and nicely contained within a vivid green circle.

OVERVIEW

This proposed re-brand contrasts starkly with the existing identity. The proposal includes bright, transit-inspired updates to all signs, graphics, and maps, but retains the shape and structure of most existing sign types.

COLOR

A simple palette of green and white has some advantages: good contrast can be achieved on signs and with the surrounding landscape; the combination of green and white is reminiscent of highway signs, which are designed for high visibility and legibility; with a name like "greenway", the color green is an obvious choice that may boost name recognition.

DESIGN

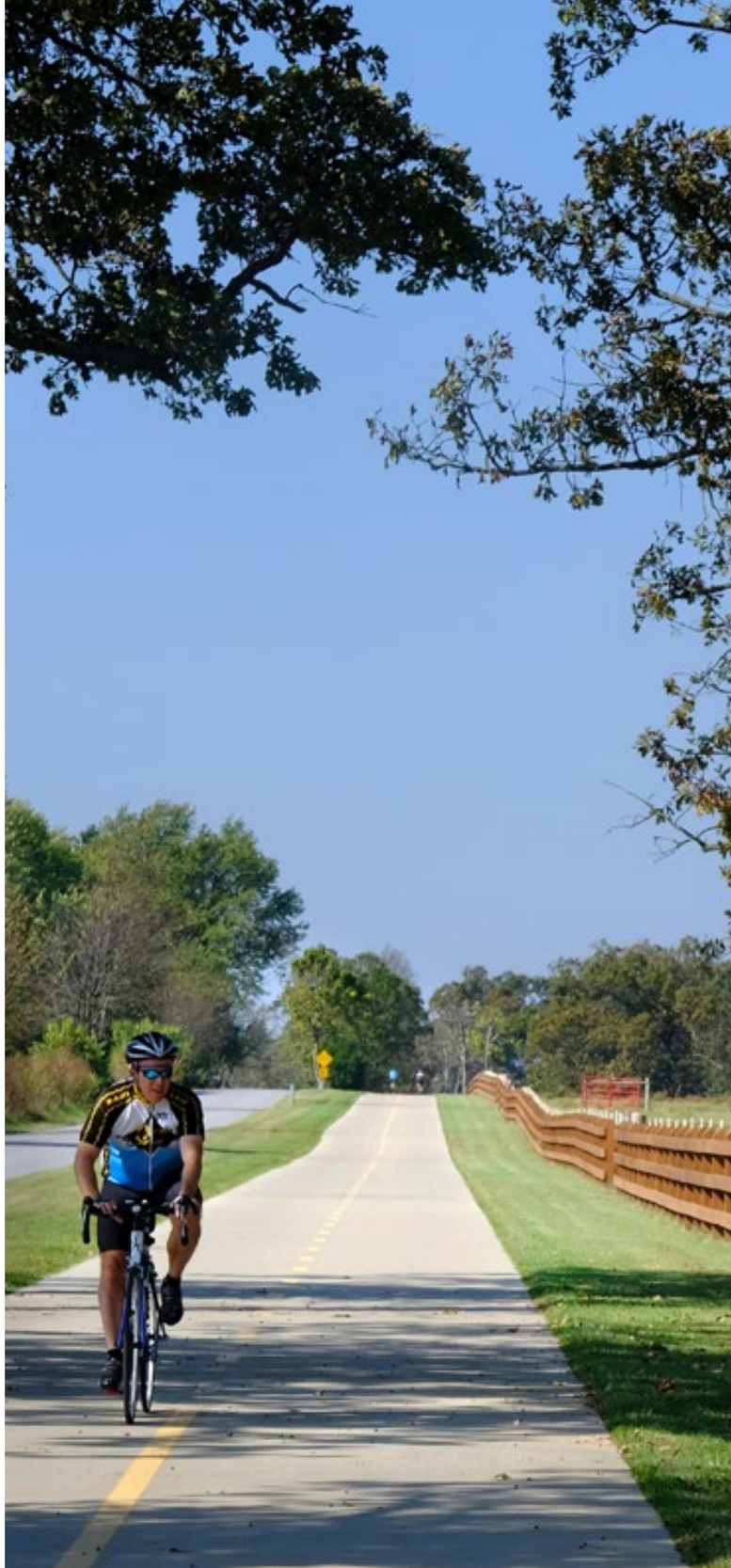
This is a badge-style logo featuring a very simple, text-based design. The designers included text-only versions that are not confined to the circle, which may work better at smaller scales or in compressed contexts. The proposed re-brand includes a small suite of icons (chevron/arrows, cyclist, tools, water, etc) that can be used throughout the region to extend the brand into the environment and improve access to trailside amenities.

SIGN FABRICATION

Signs have distinctive shapes (two custom shapes are shown on this page, top and bottom), which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

Exactly mirroring the original branded signs, The Razorback Trail occupies the primary position on signs, with local trail names highlighted at the top of directional signs. Tertiary logos, including municipalities and funding partners, appear in a band at the bottom of signs.



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Public Engagement

A robust public process guided the development of the branding and naming of the DFW Discovery Trail

PUBLIC ENGAGEMENT PROCESS
“DISCOVER” PHASE METHODS
NAMING + BRANDING QUESTIONNAIRE
STEERING COMMITTEE POLLING
VIRTUAL OPEN HOUSE
STAKEHOLDER INTERVIEWS
FOCUS GROUP INTERVIEWS

Public Engagement Process

Introduction

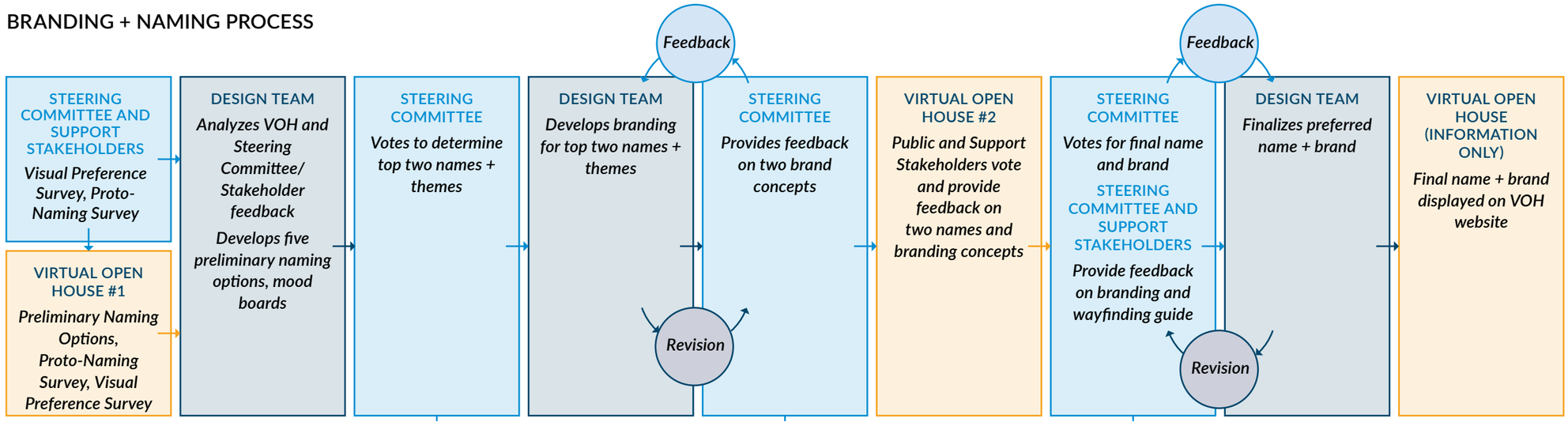
Public engagement was a key component in the development of the proposed regional trail branding and complementary infrastructure, programmatic, and policy recommendations included in this plan. Engagement activities were broadly divided into three phases: Discover, Test, and Implement. The following pages give an overview of the methods and findings from each of these phases of outreach.

PUBLIC ENGAGEMENT GROUPS AND ROLES

Steering Committee- This group included representatives from the five jurisdictions through which the regional trail passes. This group vetted recommendations and provided primary feedback on the plan's progress.

Support Stakeholders- This group consisted of non-profits, advocates, event organizers, and other stakeholders with a vested interest in the regional trail corridor. This group advised on specific topics such as recreation, operations, events, promotion of the trail, or other key issues.

BRANDING + NAMING PROCESS



“Discover” Phase Methods

Naming + Branding Questionnaire

PG 132
Audience: Project stakeholders
Responses: 13
Format: Survey form

Steering Committee and Support Stakeholders Mentimeter Poll

PG 134
Audience: Project steering committee and Support Stakeholders
Responses: 40
Format: Remote interactive live polling

Virtual Open House

PG 137
Audience: Residents of the five cities and general public included in the project area
Responses: 599
Format: Website

Stakeholder Interviews and Focus Groups

PGS 145 AND 147
Audience: City staff and support stakeholders
Format: Interviews, focus groups

Naming + Branding Questionnaire

Questions Asked

The naming and branding questionnaire presented participants with questions about the potential audience, look, and feel of the brand and wayfinding strategy for the regional trail system. These questions focus on regional identifiers, brand elements, and key words and phrases.

Results

Who is the intended audience for this brand and wayfinding system? Are there groups (demographic, age, or other category) that aren't currently using the trail that you'd like to attract?

The consensus among respondents is that local residents already know about the trail system, and effort should be made to attract and inform visitors to the area of the recreational amenities that are available.

What is unique/notable/special about the Fort Worth to Dallas Regional Trail that you would like this project to reflect? What would a local resident say they were most proud of?

Most respondents mentioned the natural beauty of the region and how easily accessible recreational amenities are from urban areas. The Dallas-Fort Worth metro area is quickly growing, and the trail system can serve as reinforcement for the connection across communities.

Are there any local images, icons, historical, or archeological elements we could consider as potential starting points for branding? Are there images, places, geographic features, or symbols that really express the corridor to residents?

The Trinity River is a historic element that many identify with the region. Many respondents also mentioned the native landscape, flora, and fauna that make the area unique.

Are there any symbols, icons, or color palettes that we should avoid using? Are there colors or color palettes (perhaps that are currently in use by an associated brand or agency) that we should consider using in our design?

Respondents would like to see the use of natural colors in the branding for this trail system. Stereotypical "Texas" imagery (i.e., cowboys, Americana, "Deep South") should be avoided.

Are there words that must be included in naming the Fort Worth to Dallas Regional Trail? Are there words that must be avoided in naming the Fort Worth to Dallas Regional Trail?

The Trinity River, as previously mentioned, is a major identifier for the region. There should be minimal to no classical western influences, and references to "North Texas" may be confusing to visitors who are unfamiliar with the state.

"Because most of the regional trails follow the river and an element of nature, I think it's important to reflect the serene natural landscape in one of the largest urban areas."

"Natural tones and relaxing color schemes. Avoid using jarring harsh colorways that would be disruptive to the environment of the trail system."

"Trinity seems to be regularly-used in trail names and creates a connection between the cities covered."

Are there any names, words, or phrases that locals/residents are already using for the Fort Worth to Dallas Regional Trail?

Dallas to Fort Worth Trail or Connection, Downtown to Downtown, Fort Worth to Dallas, Trinity Trails, Trinity River Trail

Are there established names for sections of the Fort Worth to Dallas Regional Trail that are important to local users and what are they geographic limits of those sections?

Each section of the trail has its own name that is recognizable to local users.

What do you call the regional trail now?

Fort Worth to Dallas [Regional] Trail, Dallas to Fort Worth [Regional] Trail, Trinity Trails, Trinity River Trails

What are other words that you use for "trail"?

Shared-use path, path, connector, road, pathway, loop

What historic sites, geographic features, and/or notable people are associated with the areas around the Fort Worth to Dallas Regional Trail?

The Trinity River is a unifying feature of the region, and mentioned most by respondents. Multiple respondents mentioned that the river is known as Arkikosa by indigenous groups. Other features and figures mentioned include: iconic bridges, Ripley Arnold, Mosier Valley, John Neely Brian, Clay Barrow, and archaeological remains.

Please list five or more words that describe your desired visual impression for branding. (For example: innovative, bold, warm, modern, approachable, etc.)

Most respondents would like to see branding that is welcoming, approachable, enticing, and inviting. Branding could also be bold, memorable, and modern.

"The Trinity River is the reason why Dallas was founded and after that all the other cities around it, so it would be great to highlight its importance."

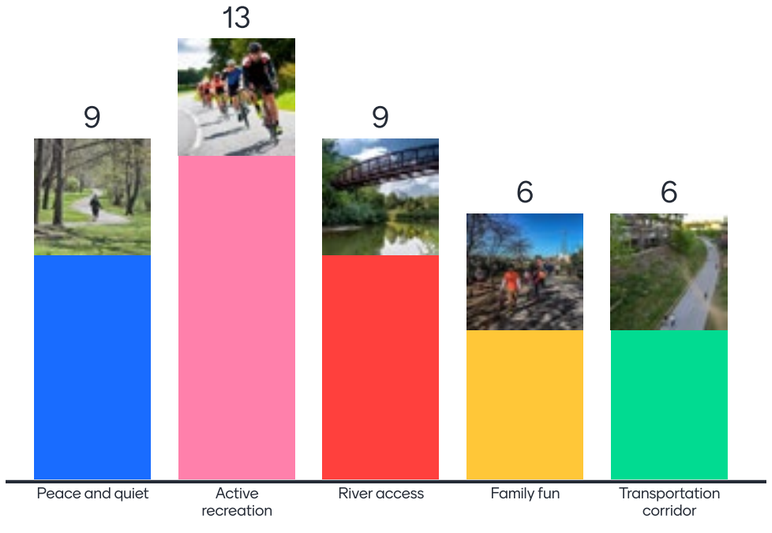
Steering Committee and Support Stakeholders Polling

Questions Asked

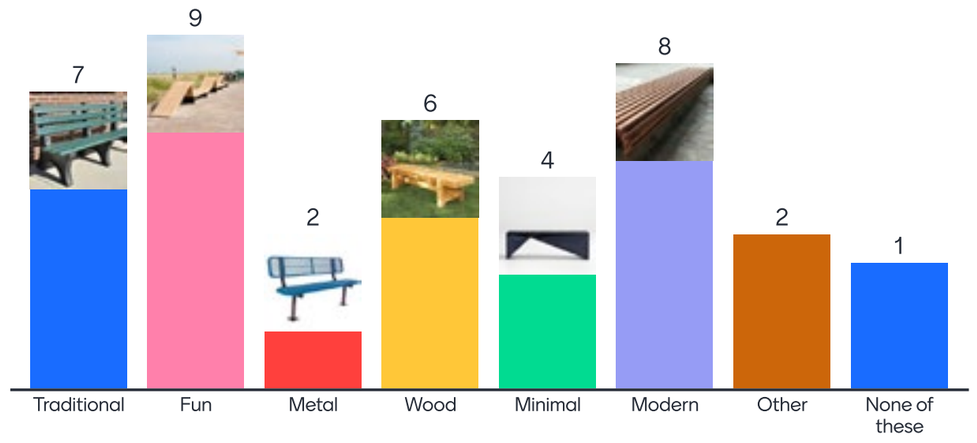
The steering committee and support stakeholders were presented with a visual preference survey which included questions regarding the existing experience of being on the path, architectural and design preferences, and word association.

Results

What is the primary or dominant experience of being on the path?



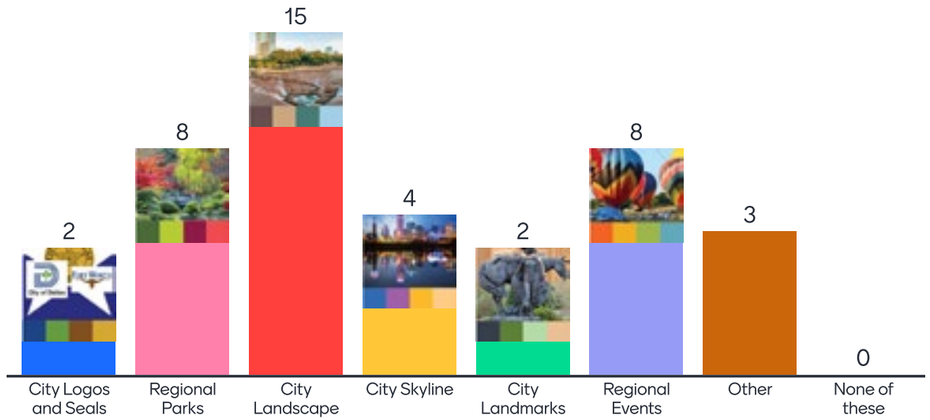
Is there a bench style that resonates with your vision for the Fort Worth to Dallas Regional Trail?



If you selected "Other" or "None of these" from the previous slide, please share your suggestions:

- Needs a back, whatever we do.
- Needs to be durable for flooding
- Shelters / shade
- Sustainable and low/no maintenance
- Stone / Masonry
- Streamlined to function and reference to the Riverflow
- Can cities have uniqueness in this area?
- Recycled plastic benches that last longer than wood, don't splinter

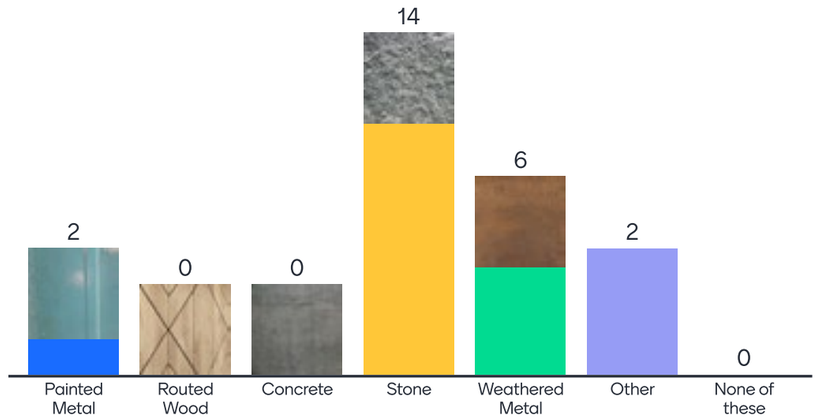
Are there colors that resonate with your vision for the wayfinding system?



If you selected "Other" or "None of these" from the previous slide, please share your suggestions:

- 2 colors, 3 max
- Not ties to sports teams
- Stay away from sports franchise colors too
- Nature, specifically the river, is the connecting factor to me
- Colors that associate with natural surroundings
- Colors compatible with the theme
- If there is a great palette, no need to marry to a city or cities
- Reflect that this train runs through major cities with a huge population

Are there materials that are especially representative of the area?

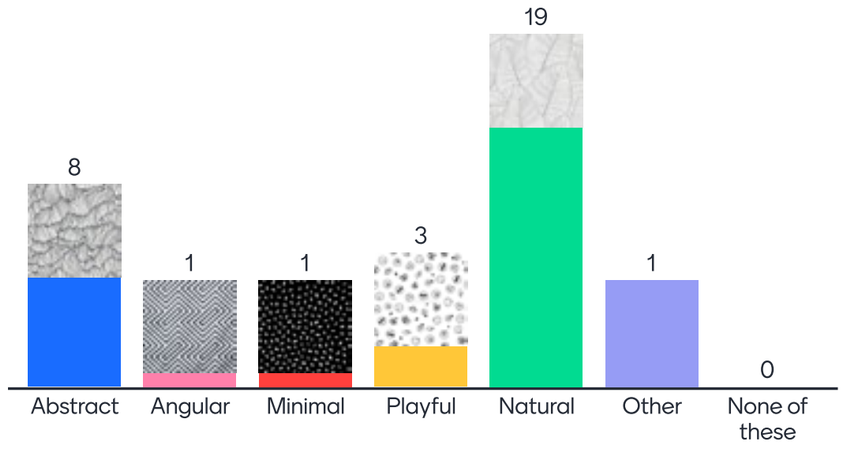


If you selected "Other" or "None of these" from the previous slide, please share your suggestions:

- Limestone
- Sustainable, natural
- Austin Chalk native to this region
- Lots of unique metal bridges in corridor
- Texas Master Naturalists may be a good group to identify native materials
- Materials need to be power washable and virtually maintenance-free. Metal is hot in Texas' sun. Limestone or granite are Texan.
- Recycle - make a statement to encourage use
- Panted metal - reference calatrava bridges in Dallas
- Limestone and pavers that allow water to soak in the soil. Its better for the trees

What words would you use to describe your vision for a region-wide wayfinding system?

Are there patterns that are distinct to the area, or meaningful to the broader community?



If you selected "Other" or "None of these" from the previous slide, please share your suggestions:

- Iconic
- Respectful of natural corridor
- Don't blend too much - need to be seen
- Unexpected in a good way for what perceptions of DFW are
- Tie in with existing architectural elements
- We do a lot of art deco zigzag in FW, so if there are cobranding opportunities to incorporate that on the western end it may be of interest.
- Blend with surroundings

Virtual Open House

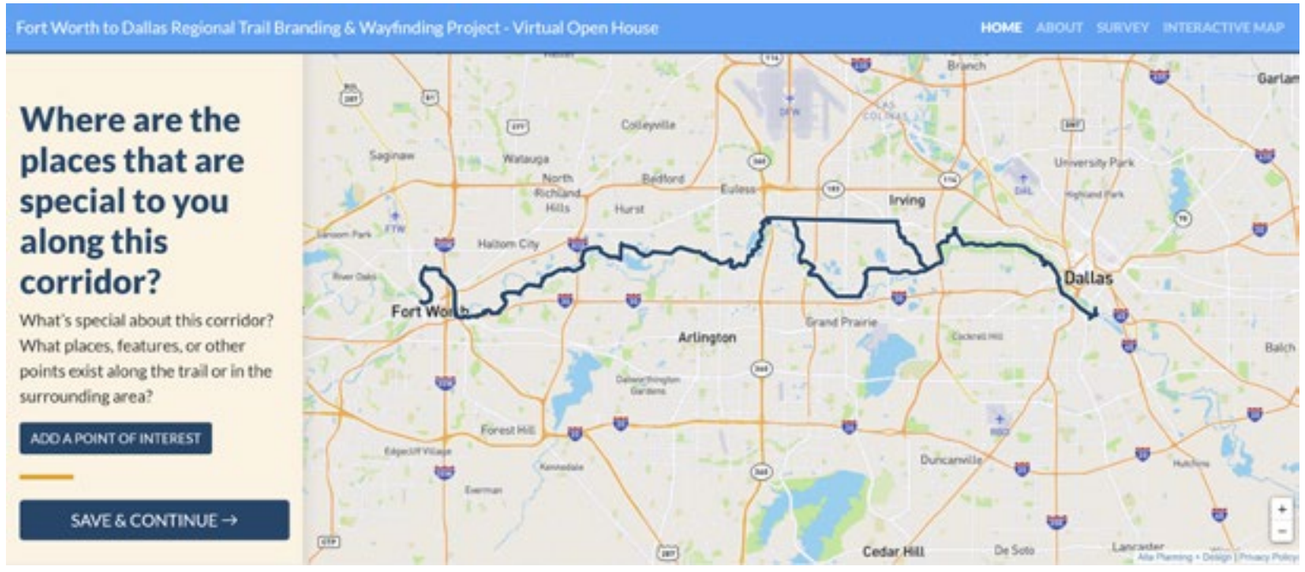
Format & Participation

The virtual open house ran from November 8, 2021 through December 8, 2021. It was promoted locally with 45 yard signs placed on the existing trail corridor and through social media promotion on a staggered-release schedule over three weeks to maximize reach.

599 people participated in the virtual open house.

Questions Asked

The virtual open house presented local residents of the trail system area with a survey and interactive mapping activity. The survey focused on the existing experience of using the trail, a naming exercise, architectural and design preferences, and word association. The mapping exercise asked respondents to identify points of interest along the corridor, access points, and destinations.



Screenshot of the mapping portion of the virtual open house

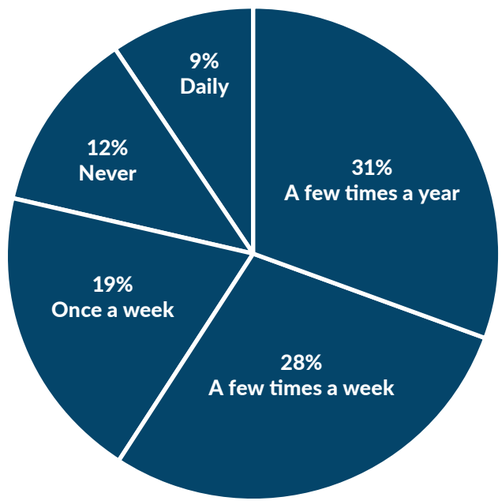
Promotional yard sign

Social media post artwork

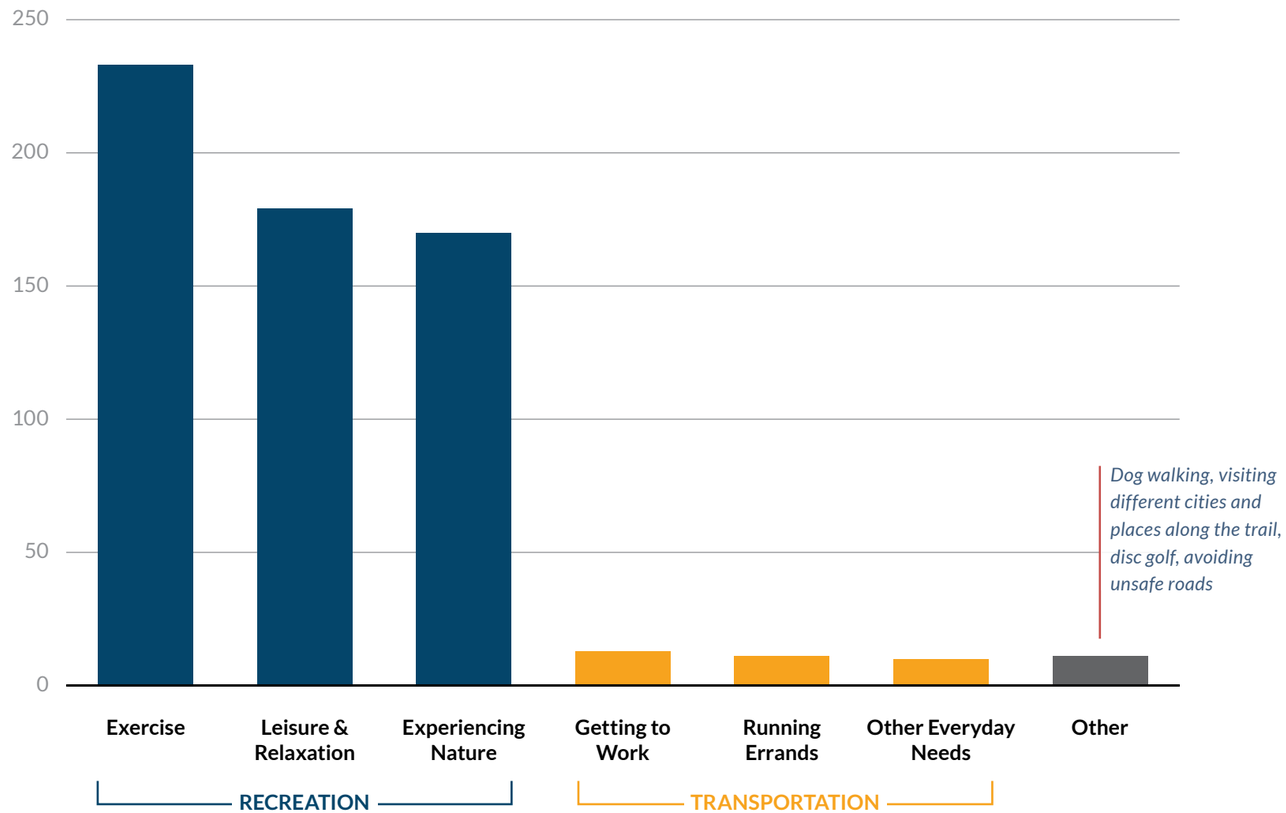
Survey Results

From the survey, one can see that over 50% of the people polled use the trail once a week or more. Only 12% have never used the trail, which presents a great opportunity for capturing more of the population through education, access, and programming.

The vast majority of participants use the trail for recreation purposes. Improvements focused on this user group will benefit a large number of people. At the same time, improvements such as wayfinding and connectivity can help to encourage more use for transportation.

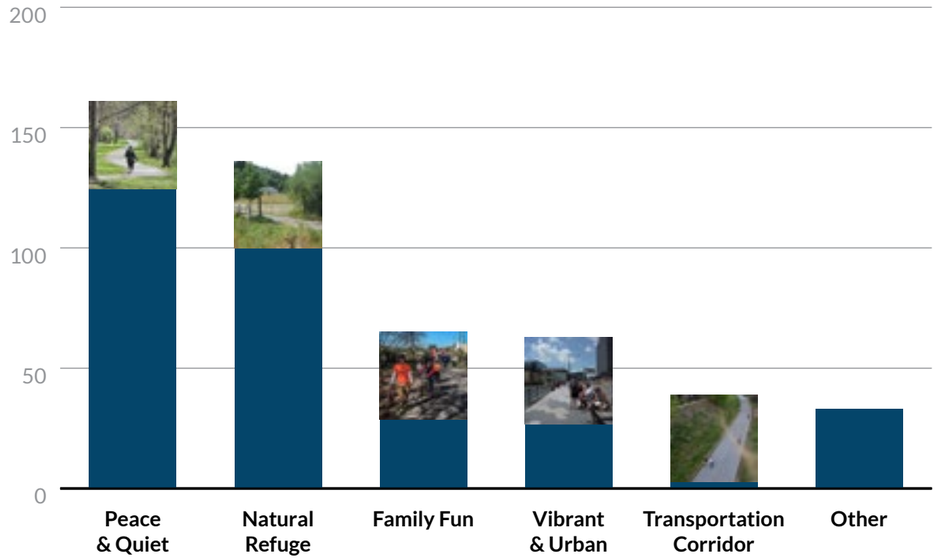


Use frequency along the regional Trail

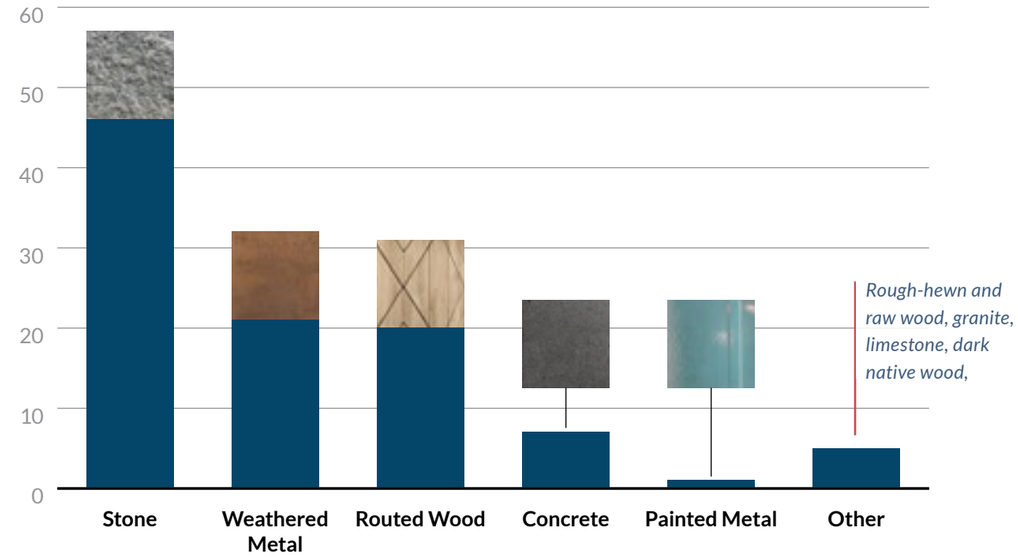


Types of use along the regional Trail

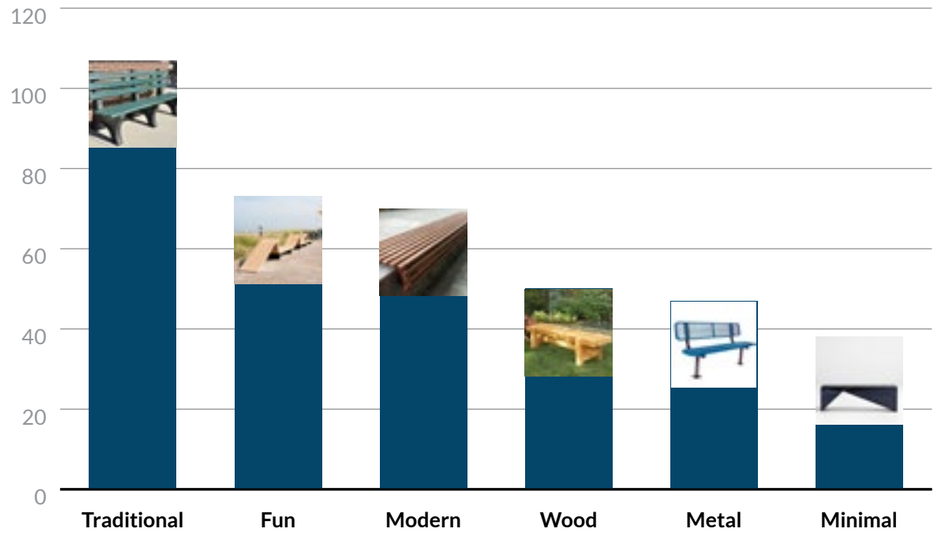
What is your primary or dominant experience of being on the path?



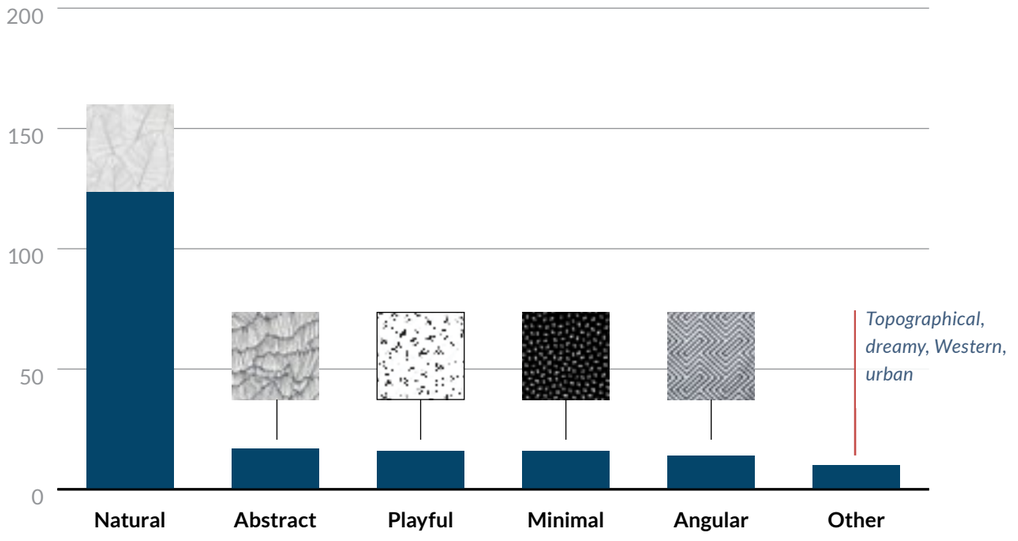
Are there materials that are especially representative of the area, native to the land, or meaningful to the community?



Is there a bench style that resonates with your vision for the Fort Worth to Dallas Regional Trail?



Do any of these patterns resonate with your vision for the look and feel of the Fort Worth to Dallas Regional Trail?



What do you call the regional trail now?

Top Responses

Trinity: 65

DFW variants: 19

River Legacy: 18

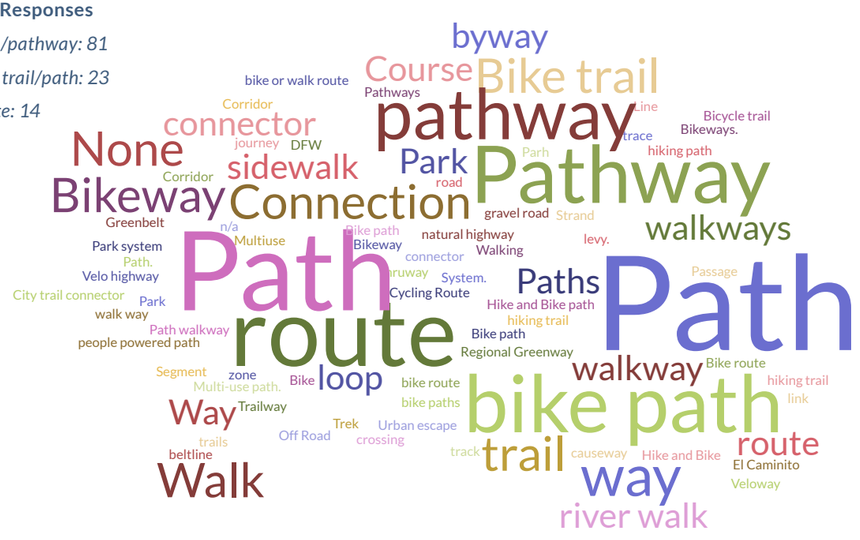
What are other words that you use for "trail"?

Top Responses

Path/pathway: 81

Bike trail/path: 23

Route: 14



What words would you use to describe your vision for a region-wide wayfinding system?

Top Responses

Welcoming: 52

Friendly: 40

Timeless: 32

Modern: 23

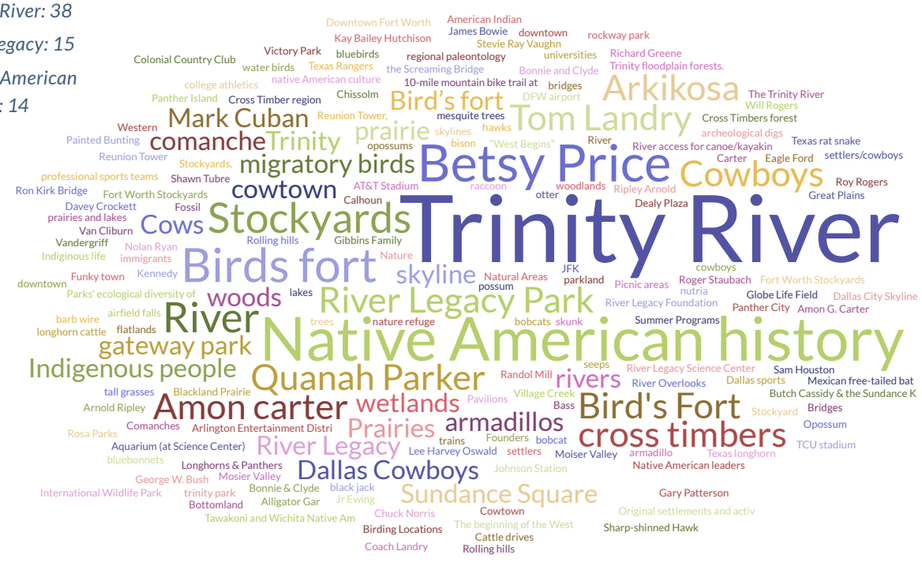
What historic sites, geographic features, and/or notable people are associated with the region?

Top Responses

Trinity River: 38

River Legacy: 15

Native American history: 14



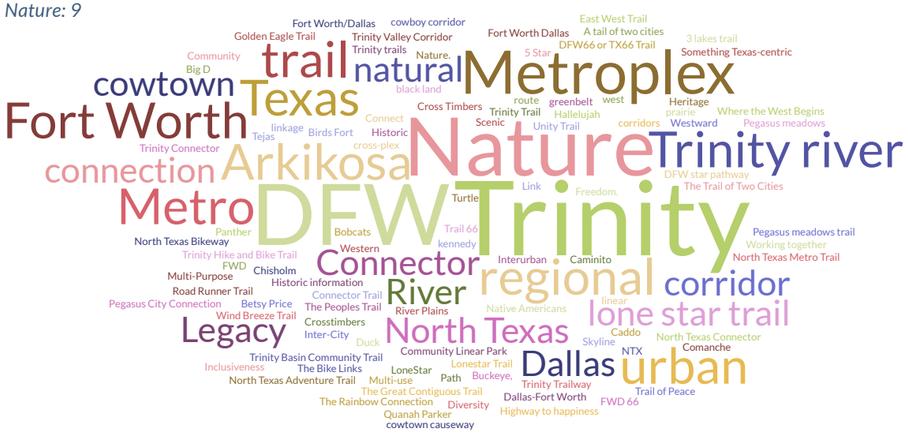
Are there are any words or phrases that should be included in the trail name?

Top Responses

Trinity: 22

DFW variants: 18

Nature: 9



Are there any words or phrases that should be avoided?

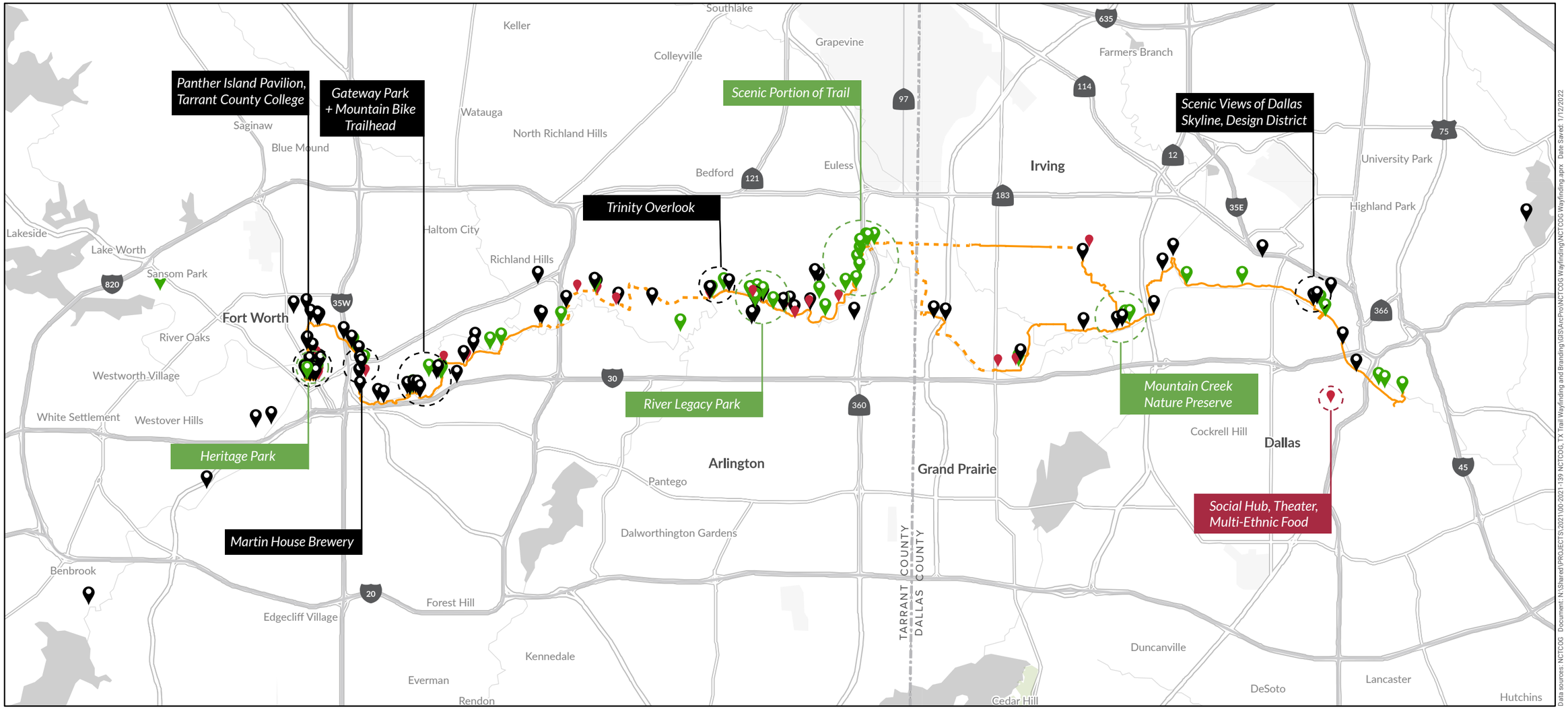
Top Responses

DFW variants: 16

Individual names: 5

Metroplex: 5

Figure 13. Virtual Open House results illustrating special points of interest



VIRTUAL OPEN HOUSE ENGAGEMENT

WHERE ARE THE PLACES THAT ARE SPECIAL TO YOU ALONG THIS TRAIL?

alta

0 10 20 MILES

N

Public Input Web Map Results

Points of Interest

- Built feature
- Natural feature
- Other

Fort Worth To Dallas Regional Trail

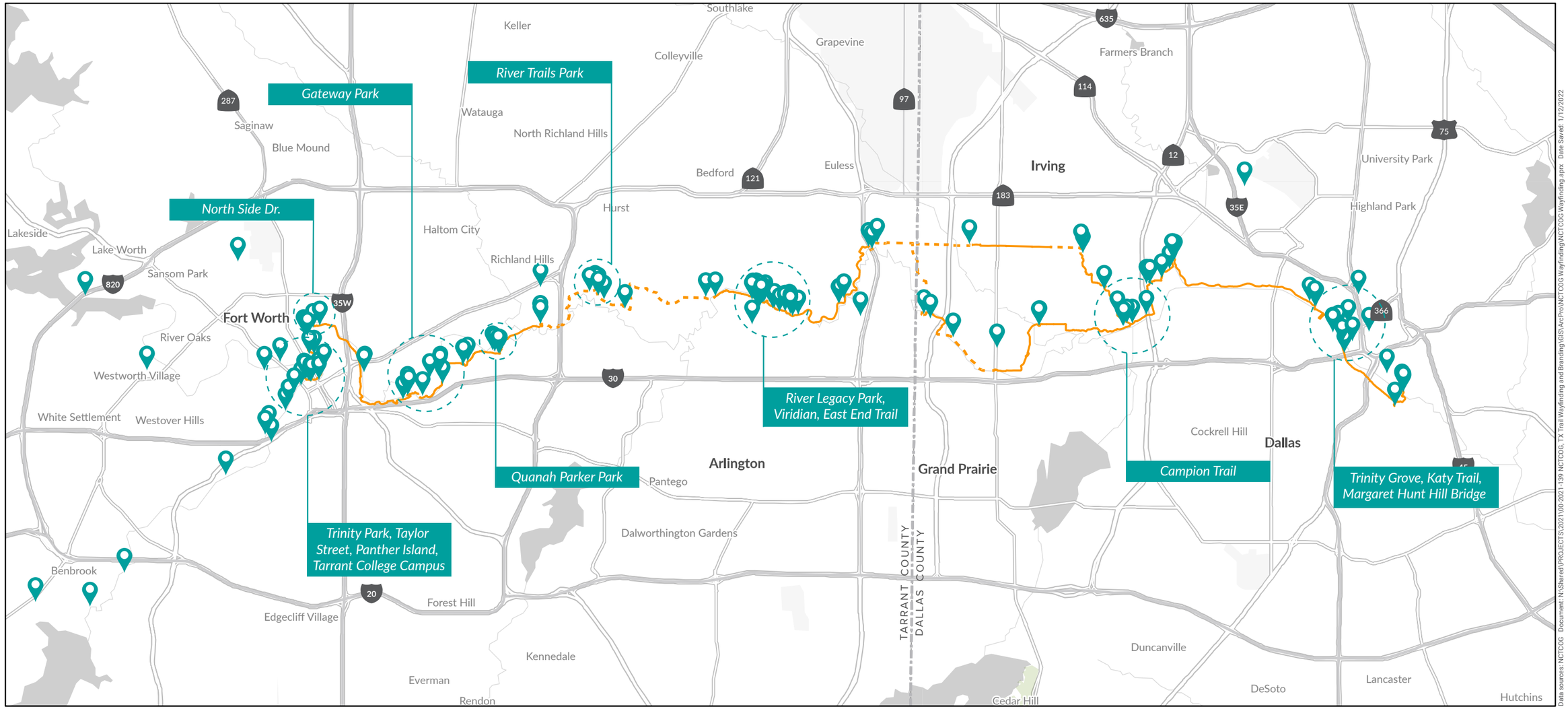
- Existing

Proposed

- Trail Gap

Data sources: NCTCOG Document: N:\Shared\PROJECTS\2021\00-2021-139 NCTCOG_TX Trail Wayfinding and Branding\GIS\ArcPro\NCTCOG Wayfinding.aprx Date Saved: 1/12/2022

Figure 14. Virtual Open House results illustrating points of access



VIRTUAL OPEN HOUSE ENGAGEMENT

WHERE DO YOU ACCESS THE TRAIL?

alta

0 10 20 MILES

N

Public Input Web Map Results

Access Point

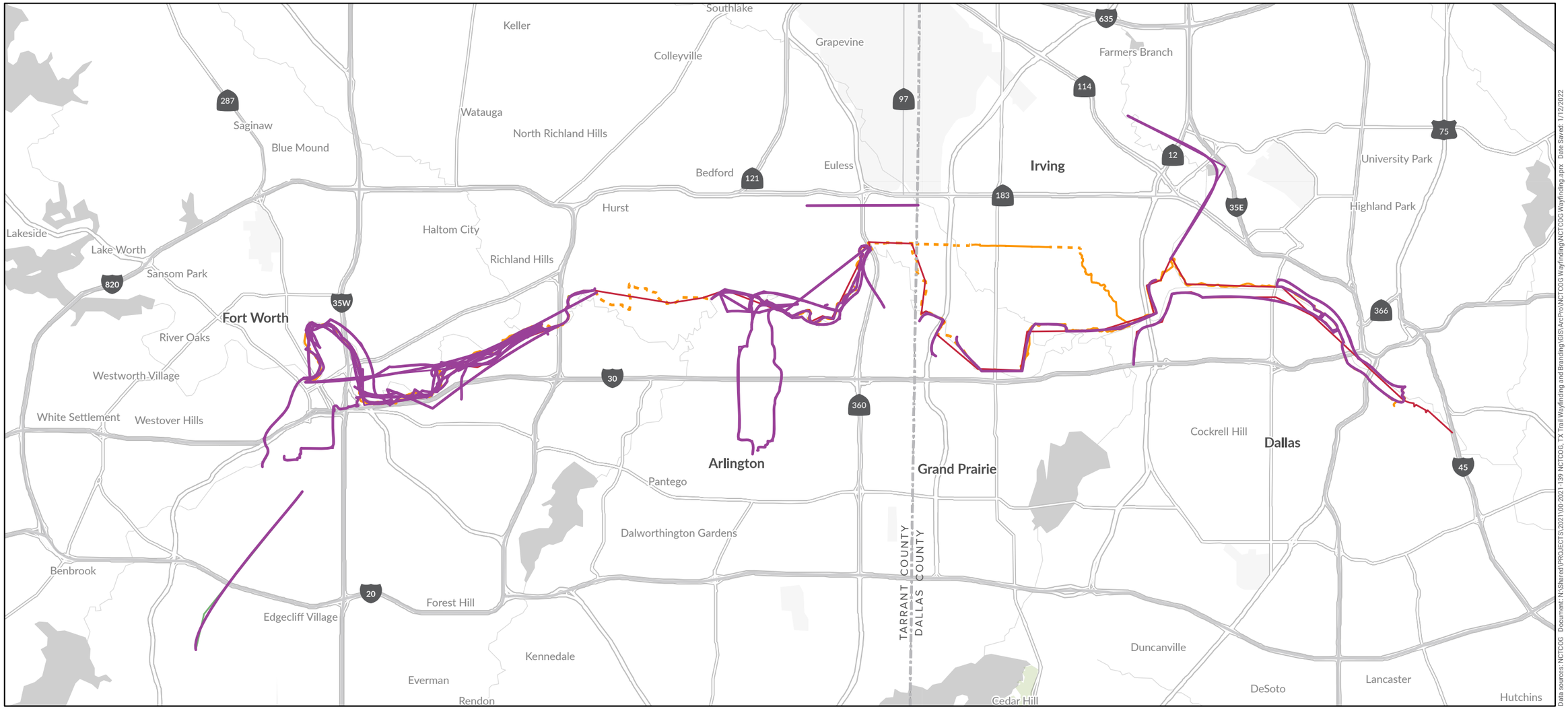
Fort Worth To Dallas Regional Trail

Existing

Proposed

Trail Gap

Figure 15. Virtual Open House results illustrating routes taken along the trail



VIRTUAL OPEN HOUSE ENGAGEMENT

WHERE DO YOU GO ON THE TRAIL?

alta

0 10 20 MILES

N

Public Input Web Map Results

Routes

— User-Identified Routes

Fort Worth To Dallas Regional Trail

— Existing

Proposed

- - - Trail Gap

Data sources: NCTCOG Document: N:\Shared\PROJECTS\2021\00-2021-139 NCTCOG_TX Trail Wayfinding and Branding\GIS\ArcPro\NCTCOG Wayfinding\NCTCOG Wayfinding.aprx Date Saved: 1/12/2022

Stakeholder Interviews

Five stakeholder interviews were held in February and March, 2022 to learn about each jurisdiction's existing trail policies and operations, and gather input on each stakeholder's goals and desires for a new regional trail system. These jurisdictions included:

- Dallas
- Fort Worth
- Grand Prairie
- Irving
- Arlington

The following pages summarize major takeaways from each interview. Complete meeting minutes and attendees from each interview can be found in Appendix X: Jurisdiction Interviews

Dallas

Branding Feedback:

- Needs to respect and coordinate with broader Trinity branding in Dallas
- Clear, timeless, and recognizable branding
- Trinity River is critical

Wayfinding Feedback:

- Limited access points in Dallas section of the trail; focus on 911 signage
- Wayfinding could support communication of trail closures
- Signage needs to be low maintenance
- Avoid sign clutter
- Gateways need to be developed outside of the levees due to flooding and permitting issues

Permitting :

- Coordinate with TXDOT, USACE, Dallas Water Utilities on permitting

Fort Worth / TRWD

Branding Feedback:

- Want to preserve existing "Trinity Trails" branding
- Promote eco-tourism and exploration; provide something for everyone
- Desire to communicate the regional nature of the trail

Wayfinding Feedback:

- Existing TRWD trailhead kiosk signs will likely remain
- Most of the trail is outside of the road ROW so limited MUTCD concerns

Maintenance/Operations:

- Interested in consistent rules and enforcement throughout the corridor
- Concerns around low-water crossings and river safety during flood events

Grand Prairie

Branding Feedback:

- Promote the trail and let trail users know they are in Grand Prairie
- Don't compete too much with City or Parks branding that already exists
- "Trinity River" seems like a good common thread
- Prefer to preserve existing trail names in Grand Prairie including the Goodlink Trail and others

Wayfinding Feedback:

- Some trails are sidepaths and may need to conform with the MUTCD
- Currently no mile markers or system for emergency response on the Grand Prairie sections of the regional trail

Maintenance/Operations Feedback:

- Interested in more universal maintenance standards across jurisdictions

Organizational Feedback:

- Interested in a regional organization for marketing with representation from each of the jurisdictions

Irving

Branding Feedback:

- Important to maintain the existing Campion Trails branding

Wayfinding Feedback:

- Interested in developing gateways; currently limited spots to park and access the trail
- Existing mile markers are coordinated with emergency responders

Events Feedback:

- Common events include 5K's on the sound end of the trail; cricket fields are also popular

Maintenance/Operations Feedback:

- Common flooding issues with the Campion Trail; northern section is inaccessible for months at a time
- Desire to coordinate trail closures among jurisdictions

Arlington

Branding Feedback:

- Important to preserve existing River Legacy Park branding and colors
- Reinforce regional nature of the trail and celebrate local assets and destinations

Wayfinding Feedback:

- Desire to install gateways where space exists; have tried to do this at bridges in the past
- Need a system that is easily reproduced for maintenance purposes
- Desire to limit sign clutter
- Existing 911/emergency response signage is placed every 1/4-mile and is coordinated with first responders

Events Feedback:

- Numerous 5K events held within River Legacy; the City has been approached by marathon organizers in the past but the park can't currently support those requests; perhaps a multi-city marathon

Maintenance/Operations:

- Flooding is common. Gate systems to close trails during flooding are present at some trailheads and parking areas.

Focus Group Interviews

Four themed focus group interviews were held in early February and March 2022 to learn about each group's goals and desires for a new regional trail system, and opportunities to collaborate on the trail's programming. These focus groups included:

- Community, Culture, & Arts
- Potential Event Hosts & Marketing
- River & Ecology
- Sports Event Hosts

Community, Culture, & Arts

Objectives Feedback:

- Important to communicate how to access destinations beyond the levees
- Connect adjacent neighborhood

Wayfinding Feedback:

- Simplicity of signage
- Consider color-coding wayfinding signage by asset type

Public Art Feedback:

- Pump house murals are still popular and newsworthy
- Consider allowing for customized gateways to reflect local neighborhoods
- Consider corridor-wide themes for public art to promote exploration
- Consider opportunities for recognizing indigenous tribes
- Focus on fewer, well-done investments; quality over quantity
- Consider opportunities for performance spaces
- Pole banners on light poles can be artistic, provide community event info, or offer sponsorship opportunities
- 10% of implementation cost required for future maintenance

Marketing and Tourism

Objectives Feedback:

- Need to balance events with public expectations that the trail will be available for use
- Ability to hold simultaneous events on different parts of the trail
- Desire to make the Regional Trail a larger part of broader marketing strategy
- Promote the quality of life benefits the trail and the region offers
- Interest in telling unique history, natural features, and visual beauty
- Many 5K races associated with larger events or conferences

Organizational Feedback:

- Convention Bureau's can help spread the word about the trail but need collateral and information to distribute
- Need an organization to be the clearinghouse for trail information and events
- Regional trail should have a website of its own; consider virtual tour of the corridor
- Need to make sure trails are posted on Racejoy

River & Ecology

Objectives Feedback:

- Trinity Coalition mission includes parks, trails, and the waterway

Recreational Feedback:

- Limited opportunity for paddling events because of limited parking near launch sites
- Desire to easily communicate the different recreational trail activities of the corridor including paved trails, fishing, kayaking, horseback riding, or water recreation
- Potential QR codes for more detailed paddling information such as river flows

Wayfinding Feedback:

- Create wayfinding signage that is updatable and easy to replace

Events Feedback:

- Counters are important to measure traffic before and after sections are completed and quantify use
- Opportunities for environmental events are important such as “Trash Bash”
- Adopt-a-River section has been effective- 90% of the TRWD section has been adopted

Events Feedback:

- Consider walks with a Master Naturalist along the trail
- Identify and coordinate with local schools who could use the trail as part of their curriculum

Sports Event Hosts

Event Needs Feedback

- Parking is a major driver of event suitability
- Creative approaches can be used: Parking on grass, shuttles, road diets, etc.....
- Power and electrical hookups are also important
- Traffic control drives cost and varies from jurisdiction to jurisdiction
- Ability for self-contained races with few or no road crossings
- Some conflict with general trail users and public expectations of using the trail
- Flooding impacts event scheduling and route possibilities
- Lighting and safety are important for evening and early morning events.
- Many blind curves in some areas; need to communicate trail etiquette

Organizational Feedback:

- Often-times not a great system for coordinating with all the necessary departments

Miscellaneous Feedback:

- For commercial races, 1500 participants seem to be the break-even point

“Discover” Phase Composite Results

Trail Use & Experience

Respondents largely agree that the trail experience provides **peace and quiet**, and **active recreation** opportunities. 46% of virtual open house respondents use the trail once or a few times a week.

Colors, Materials, Patterns, & Architecture

Most support was shown for utilizing **natural** colors and patterns from the regional landscape. Preference was shown for a **traditional** bench style, with fun and modern closely following. **Stone** was the most popular material choice, more specifically limestone and granite.

Local Images, Icons, & Historic Elements

The **Trinity River** showed up most frequently in responses across the entire outreach process. Stakeholders and local residents feel strongly about the unifying quality of the river; it unites the five cities in the trail region and has strong ties to the history of urban development in the area.

It is important to acknowledge the indigenous history of the region. Multiple respondents mentioned that the river is known as **Arkikosa** by the Caddo indigenous group. The Comanche also have a presence in the area, resulting in two distinct cultures between the Dallas and Fort Worth area. However, the name given to the river by the Comanche is unknown. The name Trinity (La Santísima Trinidad, “the Most Holy Trinity”) was given to the river in 1690 by Alonso De León, a Spanish Catholic explorer.[1]

Other notable local images and elements frequently mentioned by respondents include:

- Iconic river bridges
- Unique flora and fauna of the natural landscape (armadillo, alligator gar, opossum, longhorn, wetlands, woodlands)
- City skylines
- Fort Worth Stockyards
- Bird’s Fort
- Cross Timbers
- Cowboys and classic Western imagery (it should be noted that this is divisive; some respondents were adamant that this should be avoided, while others wanted to see it represented)

Branding & Wayfinding Approach

Respondents would like to see an approach that is above all **welcoming**, **friendly**, **modern**, and **natural**.

Trail System Name

When the naming process started, there was no formal single name for the entire trail system, but many refer to it as the Trinity Trail(s) or as whatever segment they are closest to or use most frequently.

When choosing a name for the system, respondents said they would like to avoid using the names of any specific individuals or cities. Unity is preferred over specificity, as there are five cities included in the system’s region.

“Submerged in nature with teases of open areas for warmth in the winter but still remains a natural oasis away from vehicles and buildings.”

“Attract future visitors and inhabitants of this great metroplex by inclusive naming and iconography.”

1 https://www.tshaonline.org/handbook/entries/trinity-river

Precedent imagery from the "Discover" phase of outreach

“Test” Phase Methods

Branding Alternatives Questionnaire

Audience: Jurisdictions

Format: Survey form

Public Feedback Forum

Audience: Residents of the five cities included in the project area and general public

Responses: 1659 on the survey, 187 on the map

Format: Website

Branding Alternatives Questionnaire

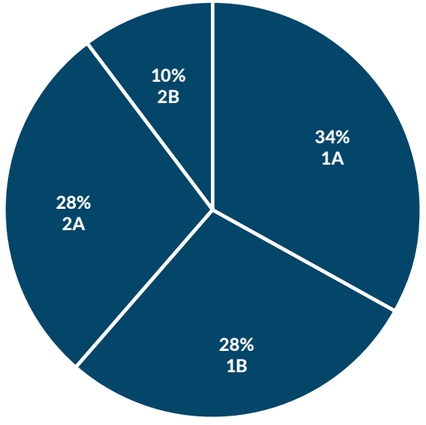
Developing buy-in from jurisdictions was a critical aspect of this plan. Over the last twenty years, local jurisdictions have remained diligent in advancing the vision for the regional trail through planning and capital development. Jurisdictions also funded this plan and will be the primary implementers of the plan's recommendations. For these reasons, while public and stakeholder feedback was indispensable for informing the brand development process, city feedback was prioritized in the final logo and brand selections.

Questions Asked

The steering committee branding questionnaire presented the jurisdictions with the four branding concepts developed for the regional trail system, and asked for ratings and opinions on each concept. This questionnaire helped narrow the branding concepts from four options to two. These two options were then advanced and presented via the Public Feedback Forum (described later).

Results

Please rank all four logos in order of preference



How would you rate each of the following logos out of five stars?

Concept 1A

4.2/5

- Like the animal themes
- Nice to have a different marker for each city trail
- Tells a story

Concept 1B

3.5/5

- Too similar to boy scout badge/ camping signage
- Like the nature aspects
- Metro sky line doesn't need to be a focal point

Advanced to public feedback forum

Concept 2A

3.5/5

- Simple, iconic design
- Trinity is duplicated too often
- Very reminiscent of a trail and river

Advanced to public feedback forum

Concept 2B

1.7/5

- Too close the City of Dallas logo
- Not unique to a trail
- DFW reference not necessary

Public Feedback Forum

Format & Participation

The public feedback forum ran from April 26th, 2022 through June 20th, 2022. It was promoted locally through press releases, yard signs placed along the trail, social media, and email blasts.

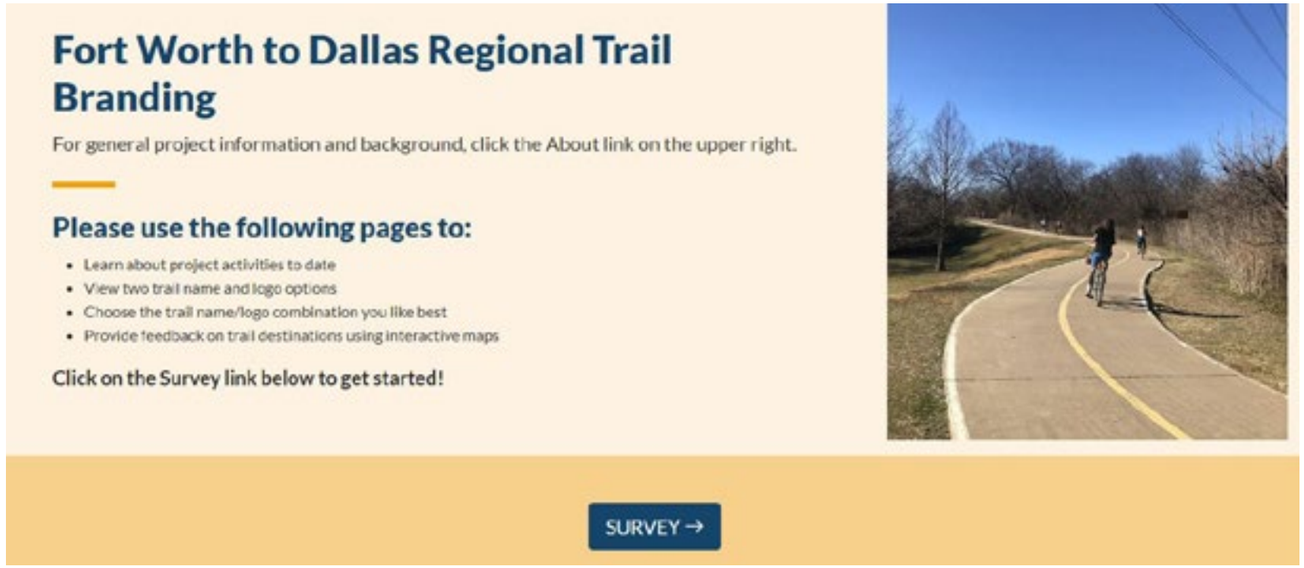
1,659 individuals participated in the survey and 187 participants added comments/suggestions to the interactive map, including 96 recreation-based destinations, 71 social/ cultural destinations, and 17 transportation destinations.

Questions Asked

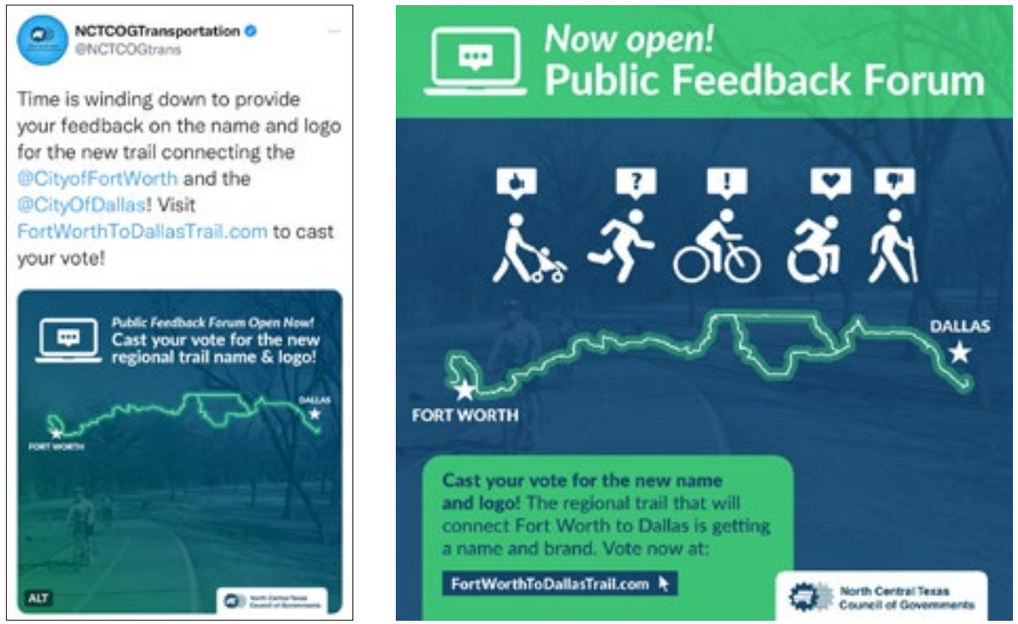
The public feedback forum presented local residents of the trail system area with a survey and interactive mapping activity. The survey focused on two name and logo concepts that were developed based on previous engagement efforts and steering committee feedback:

- Logo 1: DFW Discovery Trail
- Logo 2: DFW Trinity Trail

The mapping exercise asked respondents to identify destinations and attractions that should be considered in the future wayfinding system.



Screenshot of the mapping portion of the virtual open house



Social media posts about the virtual open house

Survey Results

If you had to choose between Name/Logo #1 and Name/Logo #2, which would you choose?

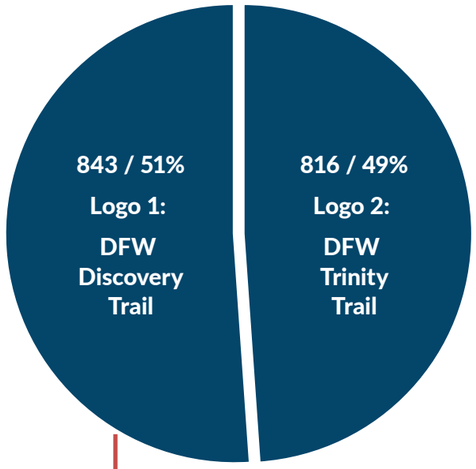
How would you rank this logo?

Survey participants were asked to rank each logo with a slider to indicate how strongly they either liked or disliked the logo design. In this case, 0 = no response, 1 = 'It's Awesome' and 5 = 'Strongly Dislike'. Lower overall average scores therefore reflect a more positive reaction to each logo concept.

In the individual ranking scores, the DFW Discovery Trail received mostly positive feedback with an average score of 2.31 or 'Like'.

In the individual ranking scores, the DFW Trinity Trail received mostly positive feedback with an average score of 2.08 or 'it's awesome'.

The graphic below illustrates the results of the Likert ranking question.



DFW Discovery Trail Logo was voted as the preferred option

Logo 1: DFW Discovery Trail
706 Comments

Overall Comments:

In general, participants that liked the concept appreciated the natural theme of the graphic, noting it relates well to the trail. Those who did not prefer it felt it was childish and not very unique.

- Like the animal/nature theme (399 comments)
- Feels authentic/welcoming (148 comments)
- Like the educational/discovery element (110 comments)

- Don't like the animal theme; feels childish (65 comments)
- Discovery theme is too generic (23 comments)

Logo 2: DFW Trinity Trail
647 Comments

Overall Comments:

In general, participants that liked the concept liked the simple, modern graphic, and its connection with the Trinity River. Those who did not prefer it felt the graphic was corporate and unoriginal, and felt the term 'Trinity' is overused in the region.

- Like the modern, clean design (329 comments)
- Appreciate the connection to the Trinity River (182 comments)
- Relates better to the area (87 comments)

- Feels like a corporate, unoriginal logo (129 comments)
- The word 'Trinity' is overused in the area (89 comments)
- Prefer the name 'Trinity Trail' but prefer graphics from Logo 1 (30 comments)

Based on the preferred direction for the DFW Discovery Trail branding, the planning team and NCTCOG collaborated with local jurisdictions to identify and design unique, jurisdiction-level logos with specific animals that could be "discovered" along the regional trail. These logos are intended to support the theme of discovery while recognizing the unique assets and character of the various jurisdictions. An overall regional trail logo was also developed in the same style that would be used when referring to the entirety of the trail corridor. See the branding guide (Chapter 2) for specific instructions on logo usage.

Figure 16. Virtual Open House Destination Heat Map

VIRTUAL OPEN HOUSE ENGAGEMENT

INDICATE THE DESTINATIONS AND ATTRACTIONS THAT THE FUTURE WAYFINDING SYSTEM SHOULD DIRECT PEOPLE TOWARDS

Heat Map based on No. of Likes
- Sparse
- Dense
- Existing
- Trail Gap

User generated suggestions

Type
- Recreation
- Social / Cultural
- Transportation

alta

0 10 20 MILES

N

Steering Committee Wayfinding Preference Survey

Questions Asked

Steering Committee members were asked to select their preferred wayfinding concept design between Family 1 and Family 2. They were also asked what they liked most about their preferred Family, if there was anything they'd like to change, which color palette they preferred, and if there were any major issues that should be considered while refining the preferred Family.

Results

Which sign designs do you prefer, Family 1 designs or Family 2 designs?

FAMILY 1 | | | | | | FAMILY 2

Family 1 was preferred 4-to-1.

Which color palette do you prefer, the blue of Family 1 or the green/brown of Family 2?

Family 1 (Blue) was unanimously preferred.

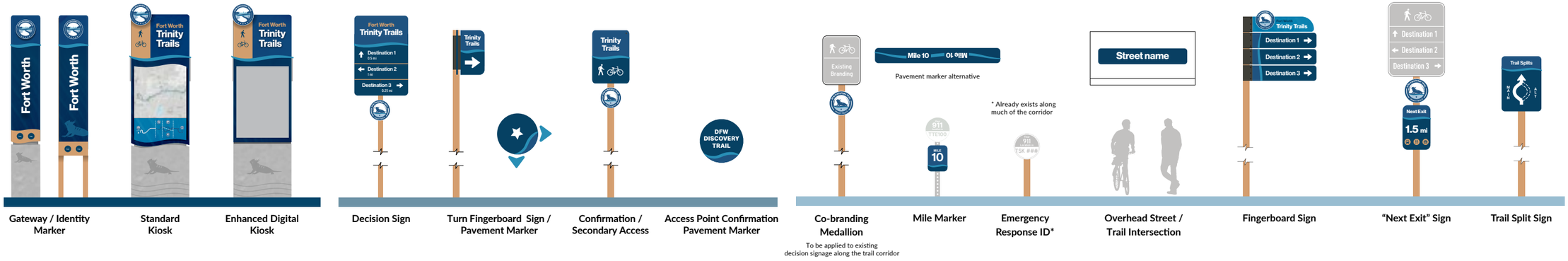
The design guide for Wayfinding Family 1 can be found in Chapter 3: Wayfinding System Design on page 13

Additional Comments

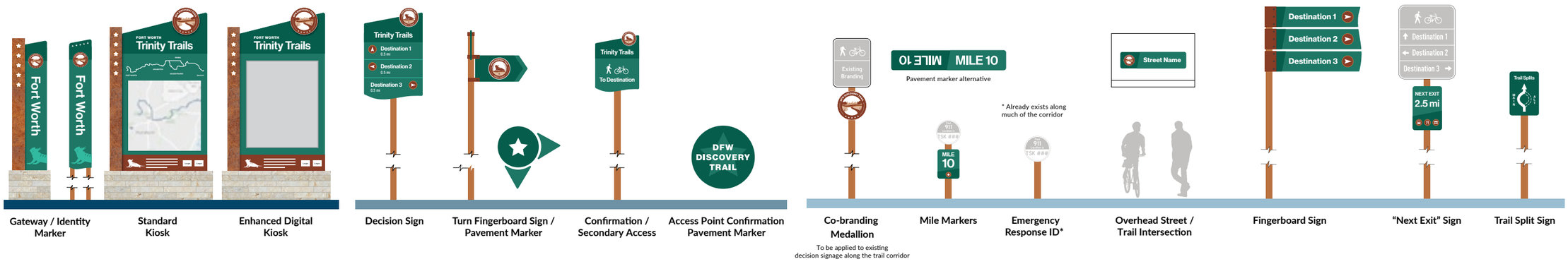
"Colors balance well with existing Trinity Trails signage. Concerns on the second family with rusted metal and limestone interacting. The sharper angles feel more like mountain hiking than river recreation."

"[Family 1] looks more contemporary and [will] last longer before looking dated. It also more closely matches the Trinity River sign guidelines."

"Would be nice to have more floodplain alternatives since the majority of trail portions are located within floodplain area, thus prone to intense flooding, debris collection multiple times a year."



Full Wayfinding Family 1



Full Wayfinding Family 2