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Washington City Council
Workshop Meeting Agenda
April 24, 2024

PUBLIC NOTICE is hereby given that the Washington City Council will hold a Public Electronic Workshop Meeting on **April 24, 2024 at 4:00 P.M.** hosted at Washington City Hall located at 111 North 100 East, Washington, Utah The meeting will be broadcast via Youtube Live linked online at https://washingtoncity.org/meetings

1. Approval of the Agenda
2. SUU Traffic Study Conclusion
3. Southern Utah Regional Trail Standards
4. Springdale Transit Line Update
5. Ironman 70.3 Update
6. Adjournment

POSTED on this 17th day of April 2024
Tara Pentz, City Recorder

In accordance with the Americans with Disabilities Act, Washington City will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by calling the City Recorder at 656-6308 at least 24 hours in advance of the meeting to be held.

Briefing Document

Description: Traffic Accident Study Findings

Meeting Date: Work Session, 4/24/2024

Presenter: Jason Williams & SUU Students

Submitted By: Jason Williams

Recommendation: None

Background Information: The Washington City Police Department is proactively preventing crashes by collaborating with the Utah Department of Transportation, the Department of Public Safety, and Southern Utah University (SUU). SUU students will present findings on crash patterns, potential causes, and strategies for crash prevention.

Fiscal Impact: None

Impacted Fund: None



2024

Southern Utah

Regional Trail Standards

Acknowledgments

Cedar City Active Transportation Committee	Jacqualine Grant
City of St. George	Cathy Hasfurther
	Lloyd Sutton
	Mark Goble
City of St. George City Council	Dannielle Larkin
DMPO/Five County AOG	Nate Wiberg
Greater Zion	Leslie Fonger
Hurricane City	Arthur Lebaron
Ivins City	Chuck Gillette
La Verkin City Council	Patty Wise
Santa Clara City	Ryan VonCannon
Southern Utah Bicycle Alliance/BikeUtah	Ryan Gurr
Springdale	Tom Dansie
St. George Bicycle Collective	Michael Hernandez
St. George Police Department	Curtis Spragg
Utah Department of Transportation	Chris Hall
Washington City	Paul Walker

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UDOT Keeping Utah Moving

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01 Introduction

Introduction

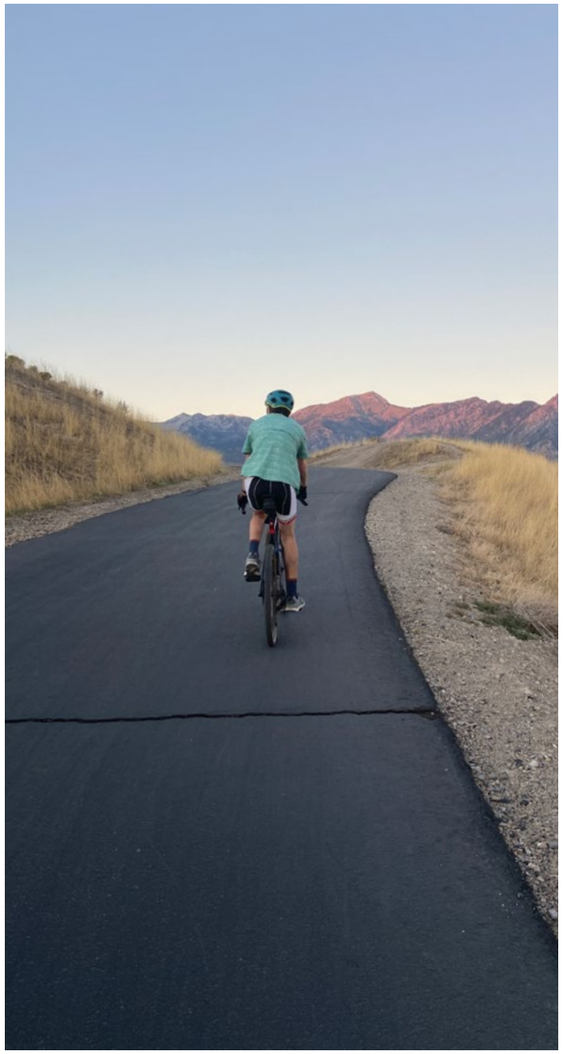
INTRODUCTION

The Southern Utah Regional Trail Standards document outlines standards for the design and implementation of paved trails in Southern Utah. For the purposes of this document, "trail" refers to paved, multi-use paths intended for two-way, non-motorized transportation and recreation. The purpose of this document is to promote a consistent approach to trail design and is intended to be adopted and used by local jurisdictions, agencies, and private developers when building new trails. Jurisdictions are encouraged to evaluate existing trails to determine where improvements can be made to align with the standards in this document.

BASIS FOR DESIGN STANDARDS

The standards outlined in this document were developed in coordination with representatives from various local jurisdictions and stakeholder groups and are based on national best practices for the design of paved trails, including guidance from The American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the National Association of City Transportation Officials (NACTO). Specific guidance referenced in this document includes:

- AASHTO's Guide for the Development of Bicycle Facilities (2012) - any reference to "AASHTO" within this document refers to Chapter 5 of this guide
- FHWA's Manual on Uniform Traffic Control Devices (2023 edition)
- FHWA's Small Town and Rural Multimodal Networks guide (2016)
- FHWA's Improving Visibility at Trail Crossings guide (2021)
- FHWA's Shared-use Path Level of Service Calculator (2006)
- FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (2018)
- NACTO's Urban Bikeway Design Guide (2014)
- NACTO's Don't Give Up at the Intersection guide (2019)



Trail Users

Paved trails, also referred to as shared use paths, are intended to accommodate a variety of non-motorized users who travel at varying speeds and for different purposes, including transportation and recreation. Tables 1.1 and 1.2 outline permitted and prohibited uses on public access trails in Southern Utah.

According to Utah State law, electric-assist devices such as e-bikes are allowed on paved trails. E-bikes are designated base on motor size, maximum assisted speed, and throttle-assist.

Table 1.1 - Permitted Uses on Trails

PERMITTED USES	SPEED OF TRAVEL	DEFINITIONS / CONSIDERATIONS
Walking/Running	1 to 9 mph	• Need wider areas for traveling in groups or walking dogs • Prefer separation from faster-moving trail users • Prefer trails with consistent lighting • May prefer a soft-surface tread
Wheelchairs	1 to 3 mph (nonmotorized) 3 to 5 mph (motorized)	• Prefer separation from faster-moving trail users
Equestrians	3 to 8 mph (trot)	• Prefer a soft-surface tread separated from people riding bicycles
Pedal Cycles	6 to 25 mph (20 mph limit on trails)	• Human powered • Includes unicycles, bicycles, tricycles, and adaptive pedal cycles
Class 1 E-bikes	20 mph max.	• 750 watt motor or less; pedal assist only (no throttle); number of wheels not specified
Class 2 E-bikes	20 mph max.	• 750 watt motor or less; pedal assist and throttle; number of wheels not specified
Class 3 E-bikes	28 mph max. (20 mph limit on trails)	• 750 watt motor or less; pedal assist only (no throttle); must have a speedometer; number of wheels not specified • Commonly used as transportation device for bicycle commuters
Other Personal Mobility Devices	20 mph max.	• Includes in-line skates, one-wheels, hover boards, electric scooters, electric skateboards, segways, or other personal mobility devices that do NOT exceed 20 mph exclusively using motor power

Table 1.2 - Prohibited Uses on Paved Trails

PROHIBITED USES	DEFINITION
Unclassified E-bikes	• Motor greater than 750 watts • Unrestricted motor assisted speed with pedal assist • Unrestricted motor assisted speed with throttle
Motorcycles and E-motorcycles	• Motors capable of speeds greater than 20 mph • Throttle • Foot pegs or aftermarket pedal kits
Golf Carts or Equivalent	
ATVs (Type I and II)	• A motorized off-highway vehicle with four low-pressure or non-pneumatic tires
Other motorized vehicles	• Passenger vehicles, trucks, etc. or any motorized vehicle that can go more than 20 mph exclusively using motor power.



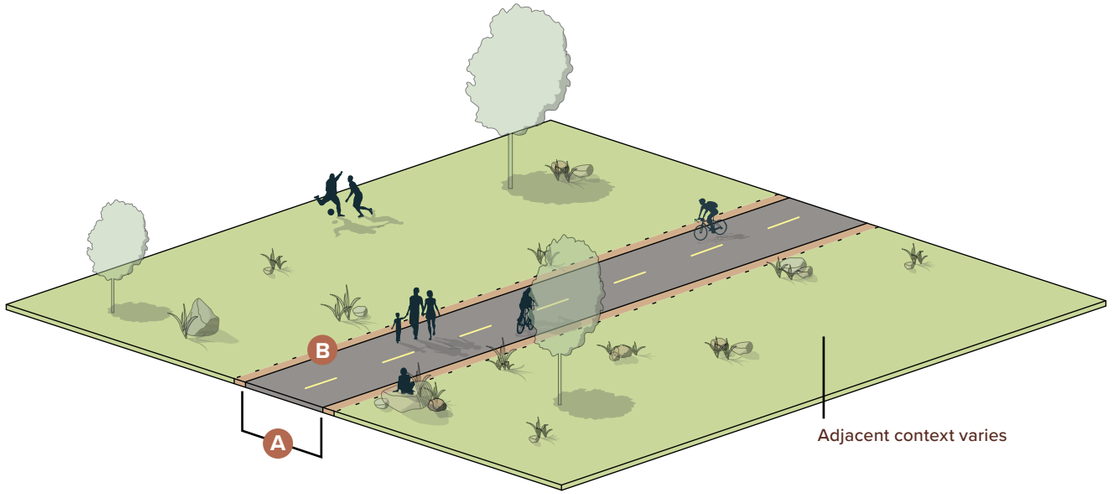
02 Trail Dimensions

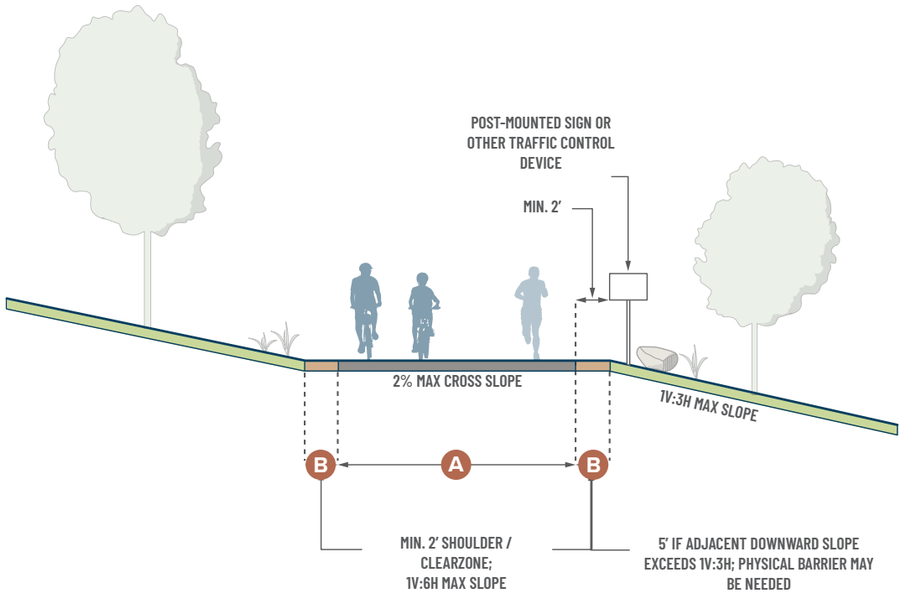
Baseline Trail Dimensions

TYPICAL TRAIL CROSS SECTION

The baseline standard for trail dimensions should follow guidance as outlined in Chapter 5 of AASHTO's Guide for the Development of Bicycle Facilities and illustrated in the figures at the right. Trail design should use the typical cross section unless urban context or anticipated trail use necessitates a different approach. Guidance for varying contexts can be found on subsequent pages of this document.

Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains, areas that may be periodically submerged, or areas of frequent washout.





DESIGN CRITERIA

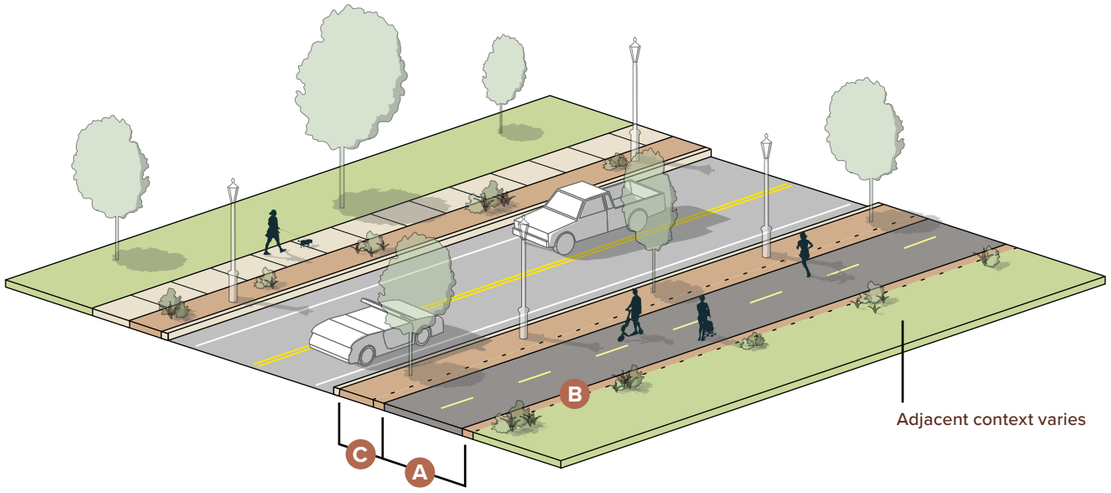
- **A** 10' paved trail; not to exceed 2% cross slope (Note 1)
- **B** 2-3′ graded shoulder, not to exceed 1V:6H cross slope (Note 2 & 3)

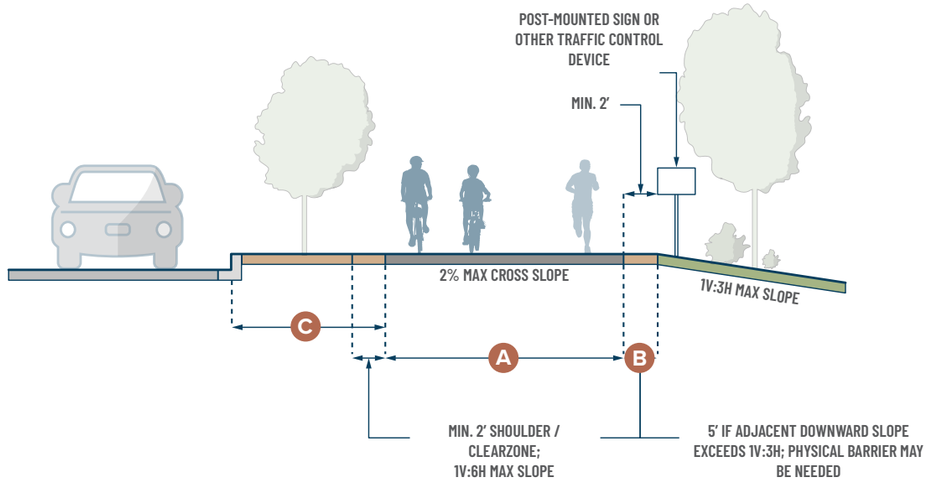
NOTES

1. More width may be necessary depending on context (See page 10).
2. Graded shoulder must be kept clear of vegetation, signage, lighting, or any other vertical obstructions.
3. Where a trail is adjacent to bodies of water or steep downward slopes of 1V:3H or steeper, provide 5′ (minimum) separation from top of slope to edge of path; a physical barrier may be needed - see AASHTO for more guidance.
4. Follow AASHTO guidance for trail design related to cross slopes, horizontal curves, grades, design speed, sight distances, stopping distances, security, etc.

TRAILS ADJACENT TO ROADWAYS

Trail adjacent to roadways, also known as sidepaths, require additional considerations for trail user safety and comfort, such as separation from vehicle traffic and mitigating conflicts at driveways and intersections. Where these conflicts are more prevalent, alternatives such as one-way separated bikeways should be considered in addition to sidewalks. This section addresses trails adjacent to lower-speed roadways such as local, collector, and sometimes arterial streets. For trails adjacent to higher-speed roadways, see page 16.





Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains, areas that may be periodically submerged, or areas of frequent washout.

DESIGN CRITERIA

- **A** 10' paved trail; not to exceed 2% cross slope (Note 1)
- **B** 2-3′ graded shoulder, not to exceed 1V:6H cross slope (Note 2 & 6)
- **C** 5′ minimum buffer (Note 3 & 4)

NOTES

1. More width may be necessary depending on context.
2. Graded shoulder must be kept clear of vegetation, signage, lighting, or any other vertical obstructions.
3. Buffer is measured from face of curb (if present) or the edge of the paved roadway (paved shoulders do not count towards the width of the buffer). Reference local standards for minimum widths needed for street trees.
4. Where buffer is less than 5′, a physical barrier should be provided between the trail and the roadway.
5. See page 16 for trails adjacent to highways.
6. Where a trail is adjacent to bodies of water or steep downward slopes of 1V:3H or steeper, provide 5′ (minimum) separation from top of slope to edge of path; a physical barrier may be needed - see AASHTO for more guidance.
7. Follow AASHTO guidance for trail design related to cross slopes, horizontal curves, grades, design speed, sight distances, stopping distances, security, etc.

Context-based Dimensions

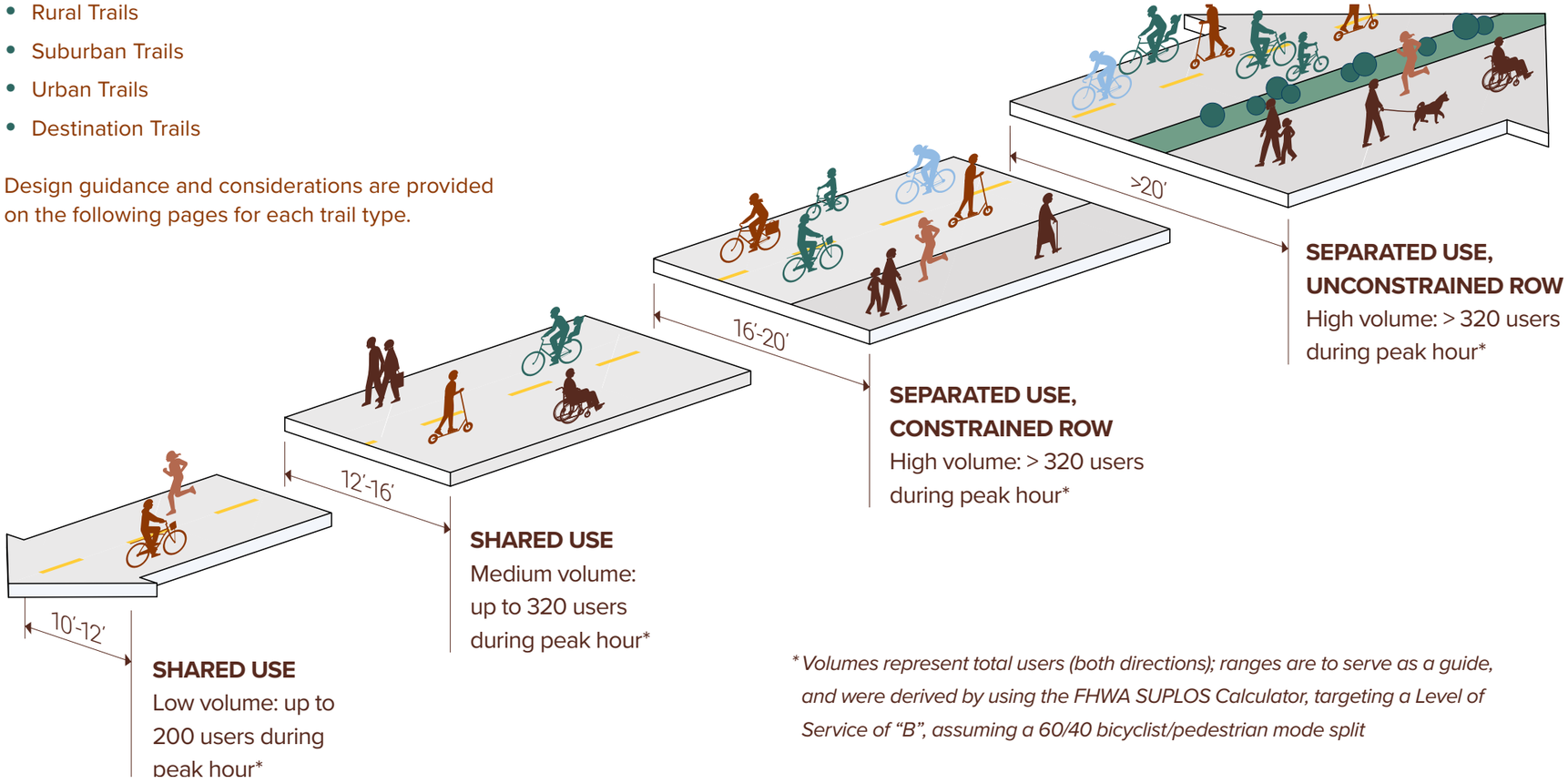
The standards outlined under "Baseline Trail Dimensions" establishes minimum dimensions for paved trails in Southern Utah. However, appropriate trail dimensions vary depending on user demand and urban context. In some cases, a 10' shared-use path is not sufficient to provide a high-quality user experience. As volumes and mix of user types increases on trails, more width, and possible user separation, is necessary to maintain a high-quality user experience. This section outlines a trail classification approach to aid trail designers in determining appropriate trail dimensions and design elements.

TRAIL CLASSIFICATION

Trails in Southern Utah are classified into four categories based on urban context and projected demand:

- Rural Trails
- Suburban Trails
- Urban Trails
- Destination Trails

Design guidance and considerations are provided on the following pages for each trail type.



** Volumes represent total users (both directions); ranges are to serve as a guide, and were derived by using the FHWA SUPLOS Calculator, targeting a Level of Service of "B", assuming a 60/40 bicyclist/pedestrian mode split*

TRAIL LEVEL OF SERVICE

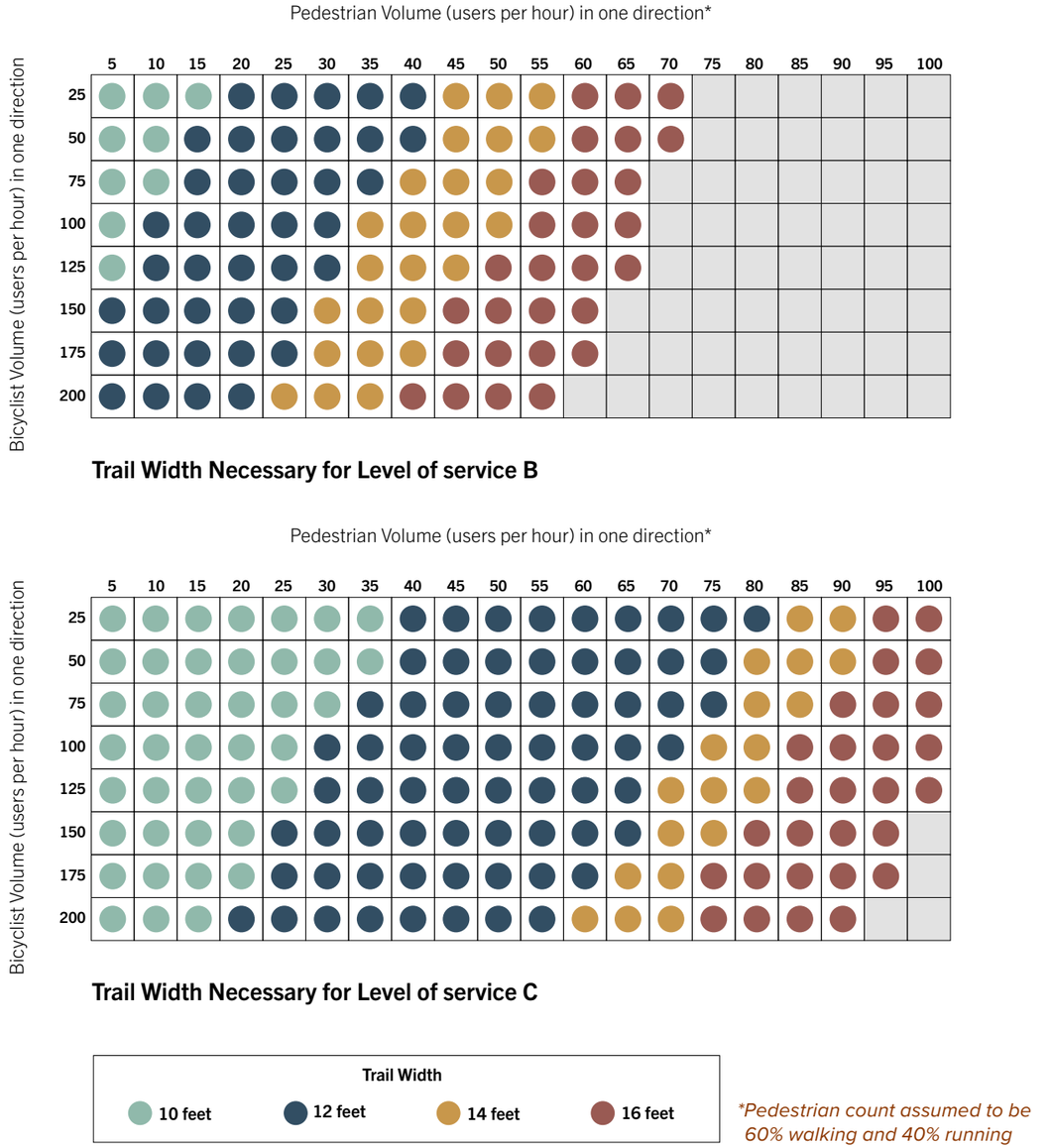
Level of service (LOS) measures the operational conditions of a given corridor in terms of speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience, and is commonly applied to roadways and motor vehicle traffic. The Federal Highway Administration (FHWA) adapted the LOS concept to paved trails and bicycle traffic by developing the Shared-Use Path LOS (SUPLOS) Calculator. This tool helps trail designers determine appropriate trail widths and need for user separation based on anticipated or recorded trail user volumes and the variety of user types, or mode split.

The SUPLOS Calculator grades trails on a scale from best to worst (A to F), with grades A-C being considered acceptable levels of service and D-F being considered degraded levels of service. There are a number of criteria that FHWA acknowledges are missing from the SUPLOS Calculator, including perceived safety, physical setting, quality of scenery, proximity to adjacent motor vehicle traffic, presence or degree of steep slopes, frequency and design of curves, and material conditions. However, it still serves as a useful tool in planning and designing new and improved trails.

The tables at right illustrate recommended trail widths in order to achieve LOS B and LOS C, depending on bicyclist and pedestrian volumes. These tables should be used when evaluating the LOS of existing trails to determine the trail width needed to achieve the desired LOS. LOS B is considered "Good" and retains significant room to absorb more users while still providing a high-quality user experience. A trail with LOS C is considered "Fair" and meets current demands, but an increase in users will begin to diminish the user experience.

For new trails where count data is not available, trail width should be determined by the trail classification assigned to the trail, which is based on surrounding context and anticipated demand. See pages 12-18 for more guidance.

Note: When a separate lane or treadway is provided for pedestrians, pedestrian volumes do not need to be factored into the calculation for trail width. However, a minimum of 6' for pedestrian lanes and 10' for bicycle trails should be maintained in order to accommodate two-way travel.



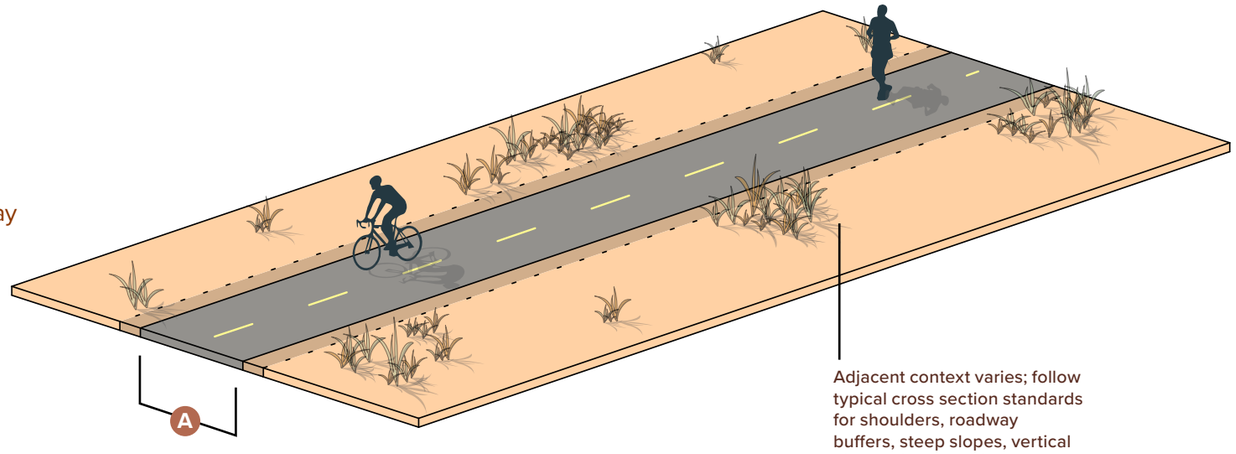
**Pedestrian count assumed to be 60% walking and 40% running*

RURAL TRAIL

Rural Trails are characterized as longer spans of trail in rural contexts where destinations and access points are few and far between. As such, they are more likely to serve recreational trail users, such as recreational cyclists and long-distance runners, but may also see use from commuters traveling longer distances.

EXAMPLES OF RURAL TRAILS

- SR-18 Trail
- Red Hills Parkway Trail
- Whip Trail (Snow Canyon State Park)
- Segments of Virgin River Trail farther away from town



Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains, areas that may be periodically submerged, or areas of frequent washout.

DESIGN CRITERIA

A Typical trail cross section: 10' wide trail with 2-3' graded shoulders (Note 1)

NOTES

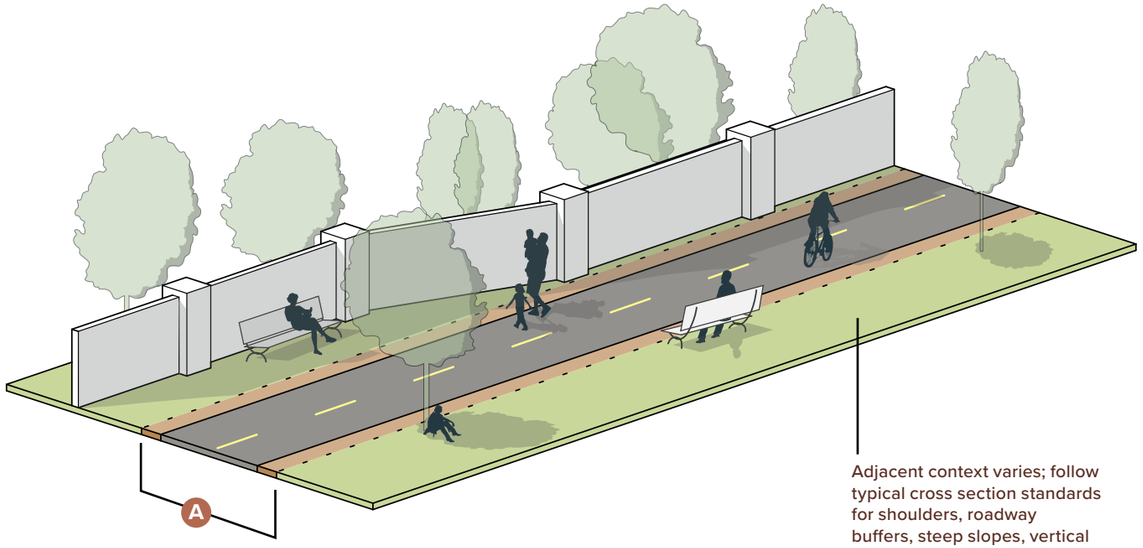
1. Widen trail to 12′ where volumes may be higher, including adjacent to trailheads or approaching popular destinations such as state or national parks.
2. Use wayfinding signage to indicate distance to nearby amenities and rest areas.
3. Follow AASHTO guidance for trail design related to cross slopes, horizontal curves, grades, design speed, sight distances, stopping distances, security, etc.

SUBURBAN TRAIL

Suburban trails are the most common trail type in the region and are characterized by suburban adjacent land use patterns such as low-density residential and big box commercial. They may fall within open space, riparian, or utility corridors or alongside roadways. They primarily serve adjacent neighborhoods, but may attract regional through traffic, and serve a variety of users, including pedestrians, joggers, dog walkers, recreational cyclists, and commuter cyclists.

EXAMPLES OF SUBURBAN TRAILS

- Halfway Wash Trail
- Snow Canyon Parkway Trail
- Lava Flow Trail
- 3000 East Trail



Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains or areas of frequent washout.

DESIGN CRITERIA

A Typical trail cross section: 10' wide trail with 2-3' graded shoulders (Note 1)

NOTES

1. Widen trail to 12′ where volumes may be higher, including adjacent to schools, commercial nodes, transit stops, trailheads, or when the trail also serves as a circulation route within a park.

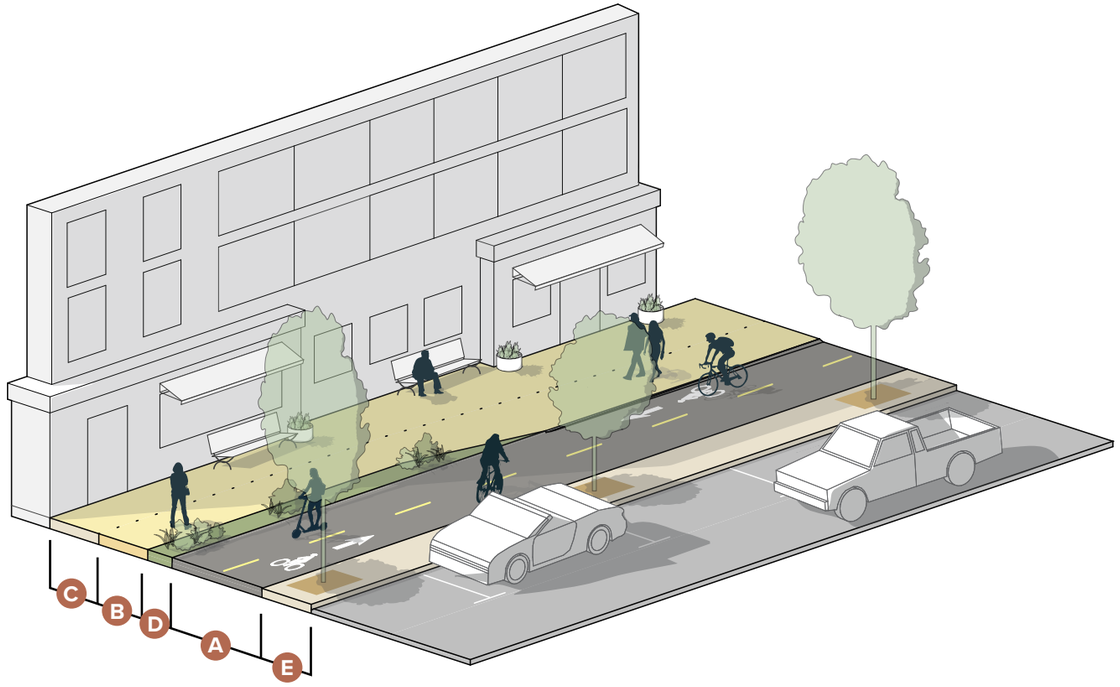
URBAN TRAIL

Urban Trails are characterized by fronting commercial, institutional, civic, multi-family, or other high-density land uses that immediately front the trail and where high volumes of foot traffic are anticipated. Physical cross section elements may vary depending on site specific needs and constraints; however, separation of pedestrians and bicyclists should be a priority.

Two-way bicycle facilities present several challenges in urban contexts (e.g., driveway and intersection conflicts); one-way separated bike lanes may better address these issues in some circumstances.

EXAMPLES OF URBAN TRAILS

- 300 W (Salt Lake City)
- 900 S, 9-Line Trail (Salt Lake City)



Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains, areas that may be periodically submerged, or areas of frequent washout.

DESIGN CRITERIA

- **A** 12-14′ trail width, marked for bicyclists
- **B** 6-8′ pedestrian through zone
- **C** Frontage zone; 2-5′ wide or greater, depending on fronting uses
- **D** Pedestrian buffer (presence and width will vary based on available right-of-way; see Note 1)
- **E** Street buffer; 5' minimum width (see Note 2)

NOTES

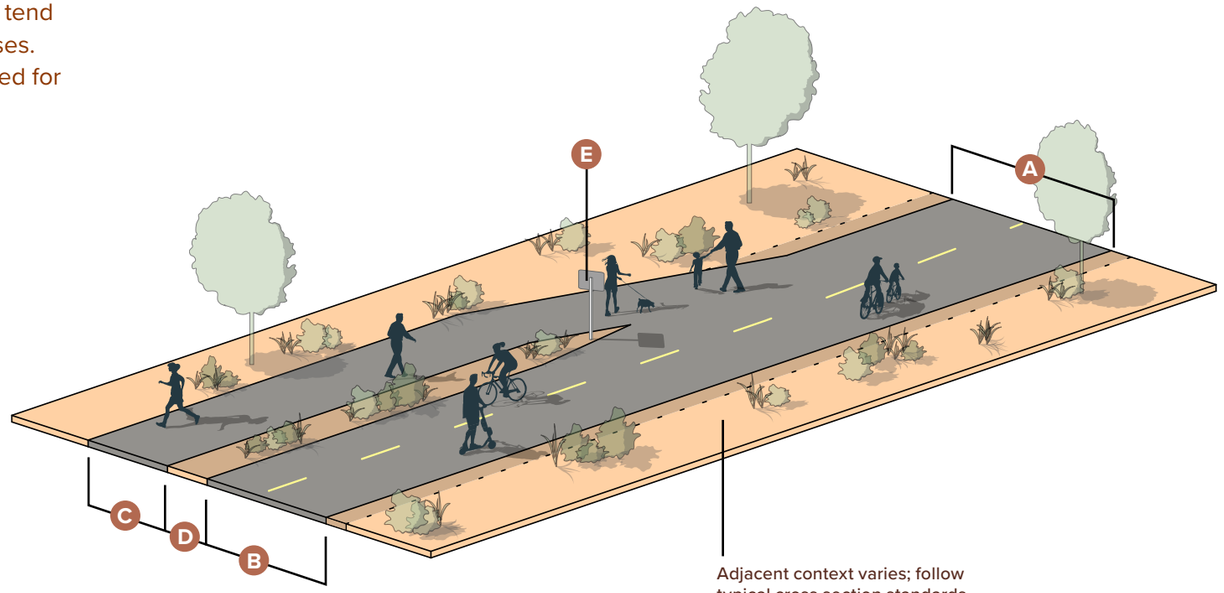
1. To encourage compliance of bicycle and pedestrian separation, consider differing pavement materials, landscape buffers, pavement buffers or delineation, mountable curbs, or a combination of the above; tactile directional indicators should be used if no other landscaping or vertical separation can be provided.
2. Reference local standards for minimum widths needed for street trees.

DESTINATION TRAIL

A destination trail is a trail that attracts both local and regional users as well as people visiting from out of town. In addition to nearby residents using the trail for transportation and recreation, people will travel from farther away to use the trail for recreation. Because of this, destination trails tend to see higher volumes and a higher mix of uses. More visitors on the trail may support the need for more trail width and wayfinding.

EXAMPLES OF DESTINATION TRAILS

- Virgin River Trail



Trail Construction Specifications: Trail cross section should consist of 2.5" voidless hot mix asphalt over 6" compacted road base course (unless otherwise specified in geotechnical investigation to accommodate site specific conditions). Consider using saw-cut concrete in flood plains, areas that may be periodically submerged, or areas of frequent washout.

DESIGN CRITERIA

- **A** 14-16′ trail width where separate pedestrian path is not provided
- **B** 10-12′ trail width when separate pedestrian path is provided
- **C** 6-8′ pedestrian path for slower moving trail users
- **D** Buffer (presence and width will vary based on available right-of-way; see Note 1)
- **E** Messaging to indicate trail separation

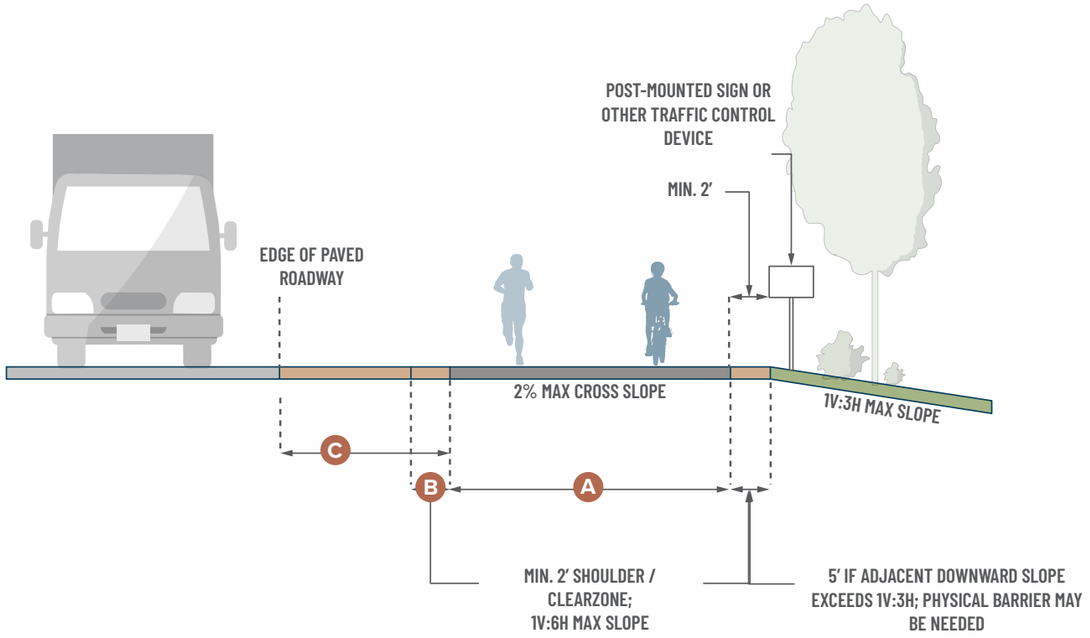
NOTES

1. User separation may only be necessary intermittently; physical separation preferred; but striping and pavement markers may also be used to create pedestrian lane.
2. Pedestrian path surface material may differ from trail surface.
3. Follow AASHTO guidance for trail design related to cross slopes, horizontal curves, grades, design speed, sight distances, stopping distances, security, etc.

Special Circumstances

TRAILS ADJACENT TO HIGHWAYS

Trails adjacent to highways generally follow the same design principles as trails adjacent to other roadways; however, due to the fact that higher motor vehicle speeds occur along highways, and highways often lack concrete curbs, which provide more protection to trail users, more consideration is given to separation between trail users and highway users in this context. The standards outlined in this section may be subject to change based on UDOT review.



DESIGN CRITERIA

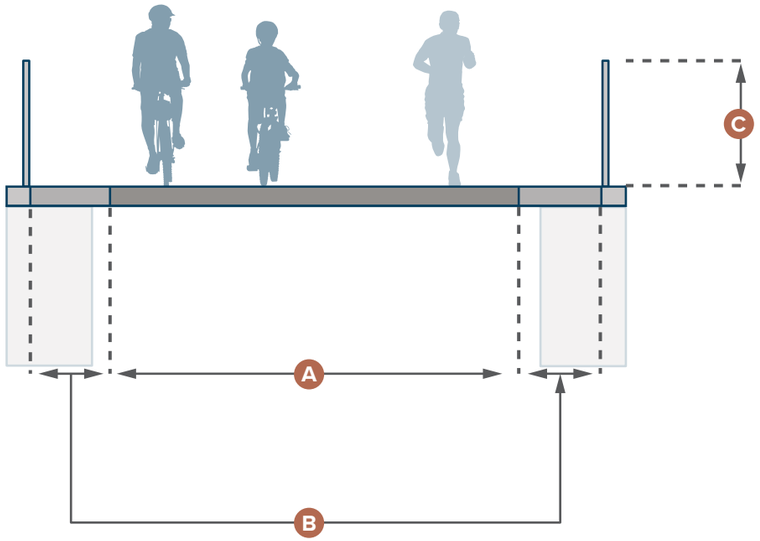
- A Trail width varies (Note 1)
- B 2-3' graded shoulder (Note 2)
- C 10' minimum clear zone from edge of paved roadway to edge of trail (Note 5)

NOTES

1. Use 10' trail width unless greater width is necessary based on context; 12' minimum may be required by UDOT.
2. Graded shoulder must be kept clear of vegetation, signage, lighting, or any other vertical obstructions.
3. Where a trail is adjacent to bodies of water or steep downward slopes of 1V:3H or steeper, provide 5' (minimum) separation from top of slope to edge of path; a physical barrier may be needed - see AASHTO for more guidance.
4. Follow AASHTO guidance for trail design related to design speed, sight distances, stopping distances, grades, security, etc.
5. If 10' width of clear zone cannot be achieved, a physical barrier should be provided between the roadway and the trail; type of barrier subject to UDOT review.

TRAIL BRIDGES

Grade separated crossings such as bridges are sometimes needed to cross barriers such as rivers, drainage washes and channels, or busy streets and highways. The dimensions and design of bridges should maintain the same level of service, safety, and high-quality user experience as the trails they serve.



DESIGN CRITERIA

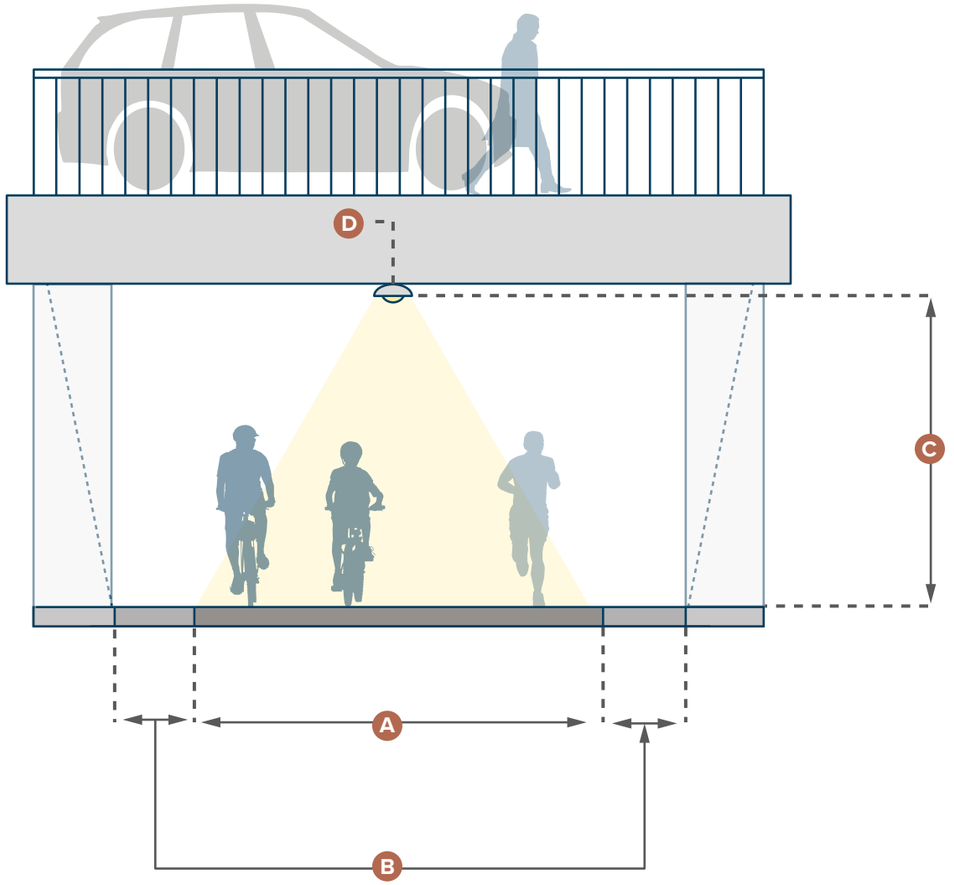
- A Trail width varies (Note 1)
- B 2' clear width
- C 42-48" railing or barrier (Note 3)

NOTES

1. Trail width on the bridge should match the width of the trail leading up to the bridge; trail width does not include the clear width area.
2. If carrying the clear width across the entire bridge is not possible, at a minimum the receiving clear width at the end of the bridge should allow 2' of clearance on each side of the trail and may taper to the trail width. Carrying the clear width across the entire bridge is desired to provide a clear width from the railing and mitigate conflicts with trail users who have stopped on the bridge.
3. Where a bicyclist's handlebar may come into contact with a railing, a smooth, wide rub rail may be installed at a height of 36-44".
4. Openings between horizontal or vertical members on railings and bridge edge protection should comply with ADA standards.

TRAIL UNDERCROSSINGS

Trail undercrossings, or tunnels, allow trail users to cross barriers such as busy streets and highways without interacting with motor vehicle traffic. Similar to bridges, the dimensions and design of undercrossings should maintain the same level of service, safety, and high-quality user experience as the trails they serve. This section provides guidance for creating a safe and comfortable experience.



DESIGN CRITERIA

- **A** Trail width varies (Note 1 & 2)
- **B** 2' clear width (Note 3)
- **C** 10' minimum vertical clearance
- **D** Adequate 24-hour lighting should be provided in undercrossings (Note 5)

NOTES

1. Trail width through undercrossing should match the width of the trail leading up to the undercrossing; trail width does not include the clear width area.
2. For undercrossings longer than 60', greater widths are preferred.
3. If carrying the clear width across the entire undercrossing is not possible, at a minimum the receiving clear width at the end of the undercrossing should allow 2' of clearance on each side and may taper to the trail width. Tapered walls (leaning out) can decrease the clear width needed and create a more comfortable experience.
4. Where possible, make approach to undercrossing straight from both sides to maintain sight lines.
5. Where possible (e.g. divided highway undercrossings), create openings to allow daylight to enter portions of the undercrossing.



03 Trail Signage and Markings

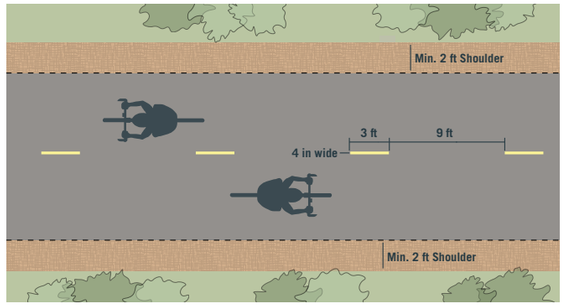
Pavement Markings & Striping

TRAIL STRIPING

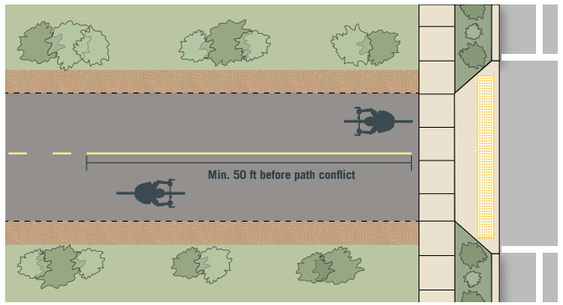
Trail striping should be used to delineate lanes of travel and trail obstructions and should be 4" wide. Striping patterns used on trails in Southern Utah include:

- Dashed yellow lines to separate directions of travel where sight lines allow safe passing
- Solid yellow lines to separate directions of travel and indicate no passing due to limited sight lines or upcoming conflict point (street crossing, trail junction, tunnel, bridge, etc.)
- Solid yellow lines to inform trail users of obstructions within the trail
- Solid white lines to inform trail users of obstructions on the edge of the trail
- Solid white lines to separate users traveling in the same directions

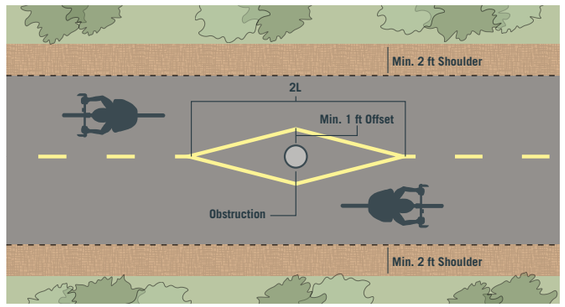
Jurisdictions may opt to not include centerline striping on their trails; however, it is encouraged in order to create consistency across the regional trail network.



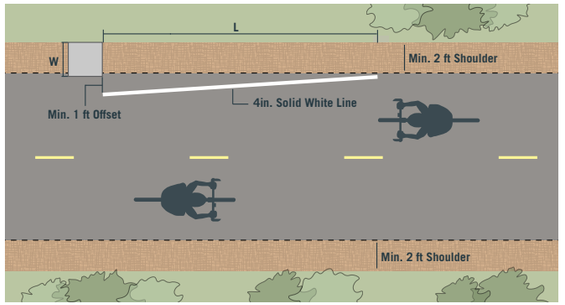
Dashed yellow



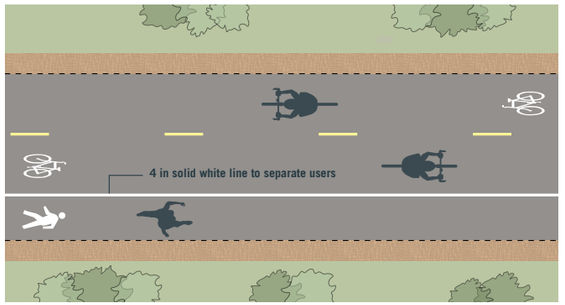
Solid yellow



Solid yellow - obstruction in trail



Solid white - obstruction at edge of trail



Solid white - user separation

L = WS, where W is the offset in feet and S is the bicycle approach speed in mph

TRAIL PAVEMENT SYMBOLS

In addition to striping, trail pavement markings may be used to mark travel lanes for faster and slower moving trail users. A bicycle symbol should be used for lanes intended for faster moving trail users, and a pedestrian symbol should be used for lanes intended for slower moving trail users.

Additionally, where the installation of stop or yield signage is not feasible, word and/or symbol pavement markings may be used in lieu of signage. "Stop" should be communicated with a stop line and/or the word "STOP". "Yield" should be communicated with a yield line and/or the word "YIELD".

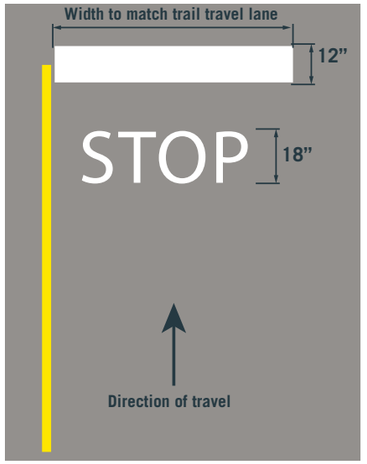
All trail pavement symbols should be made from thermoplastic or paint. Local preference may vary. Thermoplastic symbols are more durable and require heating equipment to apply. If paint is used, paint specifications should follow that which is used on local roadways.



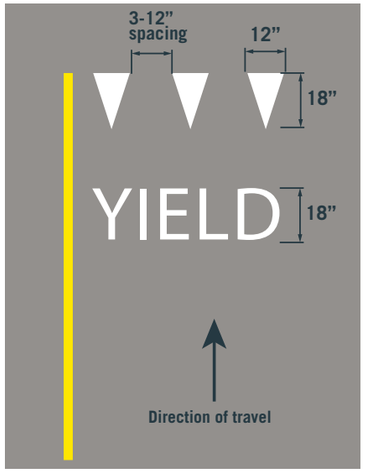
Bicycle pavement marking



Pedestrian pavement marking



Stop line and word pavement markings



Yield line and word pavement markings

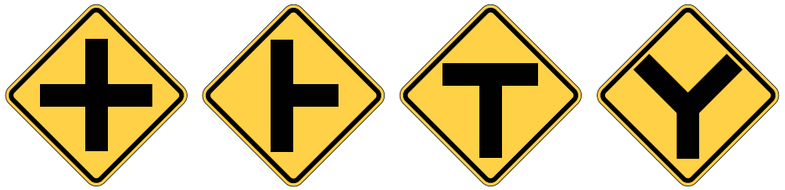
Signage

REGULATORY AND WARNING SIGNAGE

The placement of regulatory and warning signage should follow guidance outlined in AASHTO and the Manual on Uniform Traffic Control Devices (MUTCD) regarding trail clearances, distance from intersections based on stopping sight distances, mounting heights, and accessibility standards.

INTERSECTION WARNING

W2-1 W2-2 W2-4 W2-5



Size: 18 x 18"

Application: Used on a trails in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic. They should be installed at least 50 feet in advance of the beginning of the change alignment.

ORIENTED TOWARDS ROADWAY USERS

Hill: W7-5



Size: 18 x 18"

Application: May be installed on trails to warn bicyclists of steep slopes.

Stop: R1-1



Size: 18 x 18"

Application: Where conditions require trail users to stop; should be placed or shielded so that it is not readily visible to road users.

Yield: R1-2



Size: 18 x 18 x 18"

Application: Installed at points where bicyclists have an adequate view of conflicting traffic and where bicyclists are required to yield the right-of-way to that conflicting traffic.

Bicycle Cross Traffic: W16-21P



Size: 12 x 24"

Application: Typically installed below STOP or YIELD signs on crossroads and driveways to alert road users of an unexpected bicycle movement.

Trail Crossing: W11-15 + W11-15P



W11-15 Size: 30 x 30" for single lane; 36 x 36" for multi-lane; W11-15P Size: 18 x 24"

Application: Used at all locations where a trail crosses a roadway, except for at signalized intersections.

Turning Vehicles Yield: R10-15, modified



Size: 30 x 30"

Application: Placed in advance of side streets and commercial driveways where right turns intersect the trail. The sign should be modified to include both a bicycle and pedestrian icon.

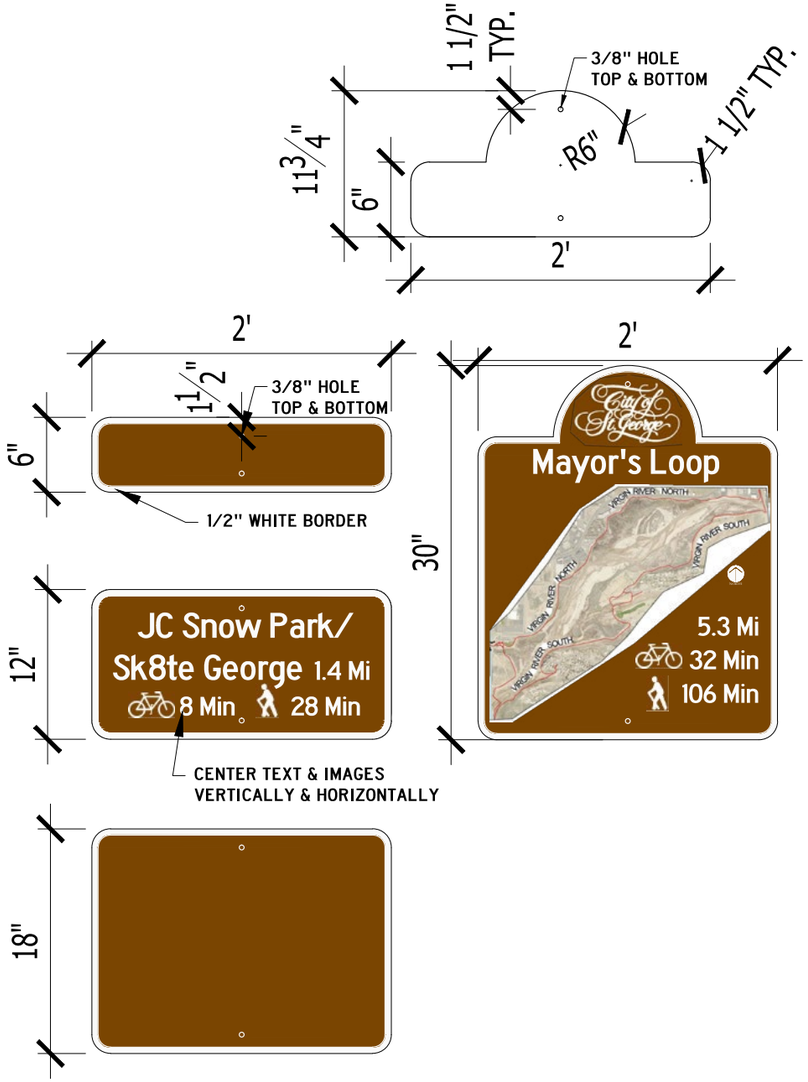
WAYFINDING SIGNAGE

All paved trails in Southern Utah should incorporate the wayfinding signage system established in this document. The purpose of the wayfinding system is to increase confidence of all trail users in orienting themselves in the region and accessing destinations. Wayfinding signage within UDOT right-of-way may be subject to UDOT approval.

SIGN TYPES

- Masthead: sign topper intended to mark the trail currently being traveled; includes a space for local jurisdiction branding
- Directional: includes destination name and directional arrow; installed at trail junctions or decision points
- Destination: includes distance and travel time information for straight ahead destinations served by the trail; installed at trail entry points or after junctions as confirmation signs; may also include directional arrows to function as a "Directional" sign
- Destination (multiple): same function as "Destination" sign, but includes multiple destinations that share the same directional, distance, and travel time information
- Specialty Area: intended to communicate loops or smaller area networks to aid trail users in trip planning and orientation. Graphics and information may vary.



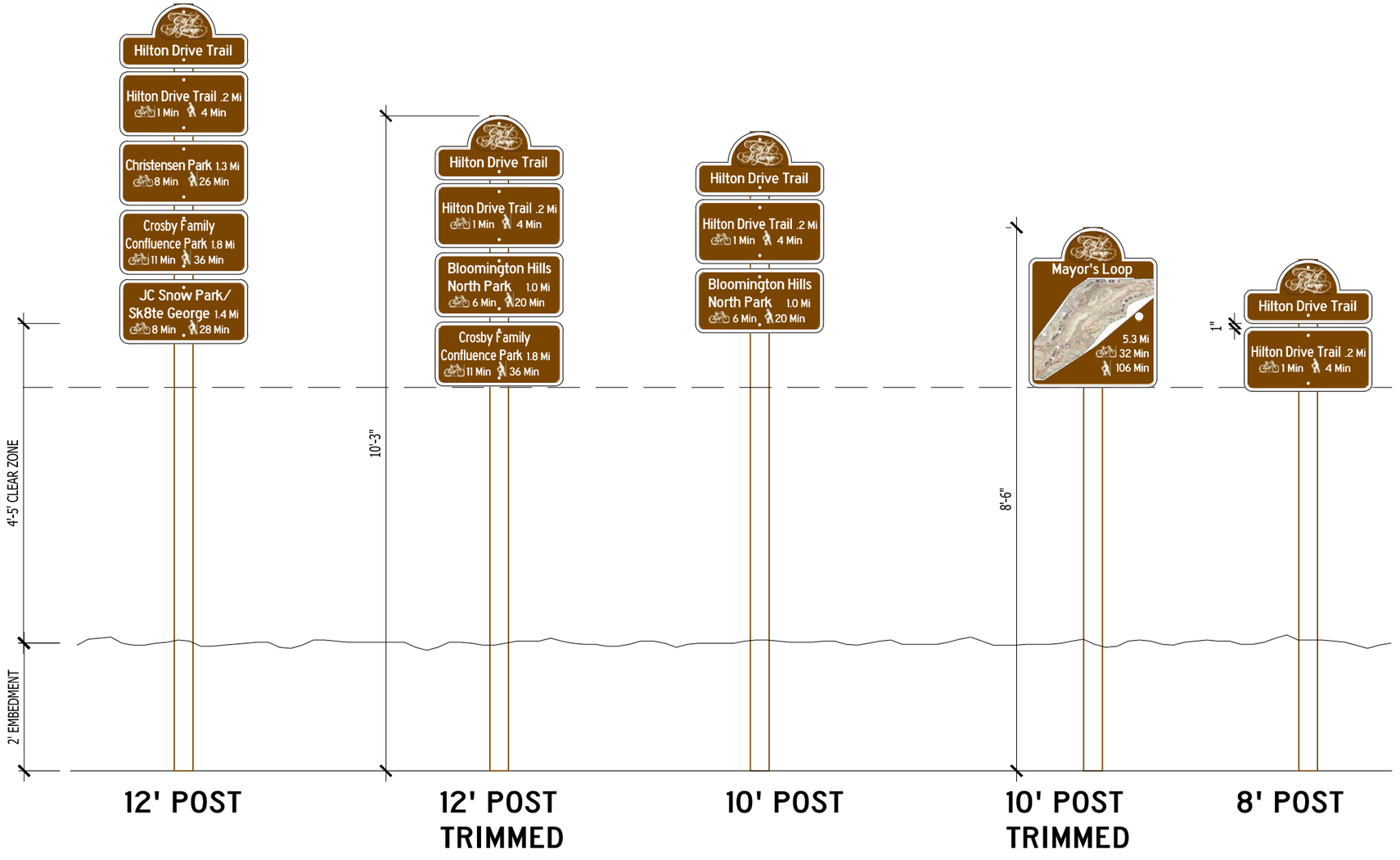


WAYFINDING SIGN INSTALLATION

Wayfinding signage should be installed on 4x4 wood posts. Signs that fall within UDOT right-of-way may require different mounting and installation methods based on UDOT review. Sign placement should follow guidance outlined in AASHTO and the Manual on Uniform Traffic Control Devices (MUTCD) regarding trail clearances, distance from intersections based on stopping sight distances, mounting heights, and accessibility standards.

CUSTOMIZATION

Wayfinding sign shape, size, fonts, icons, information layout, and mounting methods should remain the same across the region. However, each jurisdiction has the flexibility to incorporate custom branding on Masthead signs and use a different base color other than brown on all signs. All colors should comply with MUTCD standards for acceptable colors.



TRAIL ETIQUETTE MESSAGING

Trail etiquette messages should be deployed at strategic locations to promote a safe and friendly environment for everyone. The purpose of trail etiquette messaging is to address and mitigate common conflicts between trail users by establishing what behavior is acceptable and what aligns with local regulations. While the enforcement of etiquette rules is up to local jurisdictions, etiquette messaging can be effective in helping trail users feel accountable to others on the trail when the messaging is placed for all to see.

Table 3.1 establishes the preferred messaging to be used on trails in Southern Utah for various issues/conflicts, as well as guidance for where messages should be placed along the trail for maximum effectiveness. Consistent etiquette messaging is also critical for visitors who may not be familiar with local regulations or trail etiquette.

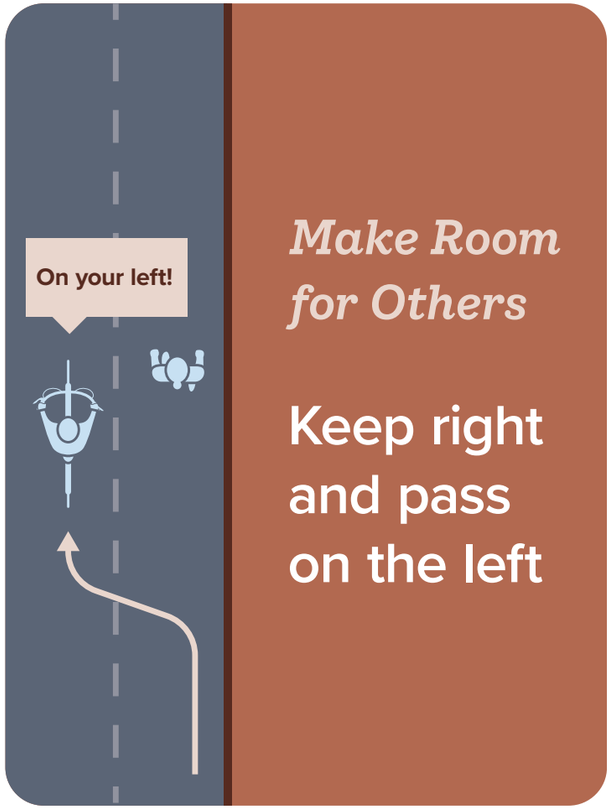
Table 3.1 - Trail Etiquette Messaging

ISSUE/CONFLICT	MESSAGE ON SIGN	PLACEMENT GUIDANCE
Announcing one's self when passing others	Be Kind: Ring bell or announce yourself when passing others	Intermittently throughout "middle points" of the trail corridor (away from trail entrances and junctions) where passing is more likely; emphasis on busy sections of trail
Groups spreading across the full width of the trail	Make Room for Others: Keep your group to the right	Soon after trail entrances and intermittently along busy sections of trail
Keeping right except to pass, passing on the left	Make Room for Others: Keep right and pass on the left	Soon after trail entrances and intermittently along busy sections of trail
Conflicts with dogs on leashes	Make Room for Others: Leash dogs and keep them to your right.	Soon after trail entrances and intermittently along busy sections of trail
Stopping or congregating around corners, in dark tunnels	Limited visibility ahead. Don't stop in tunnels. Limited visibility ahead. Don't stop around corners.	Prior to undercrossings, corners, or other locations with limited visibility
High speeds	Be Kind: Slow down around others	Middle points of the trail (away from trail entrances and junctions) where faster speeds are more likely
Unauthorized vehicles (optional messaging along trail if trail entrance "prohibited uses" signs prove ineffective)	Travel Safe: No golf carts on the trail Travel Safe: No e-motorcycles on the trail Travel Safe: No motorcycles on the trail Travel Safe: No ATVs on the trail	Soon after trail entrances; where frequent infractions are reported

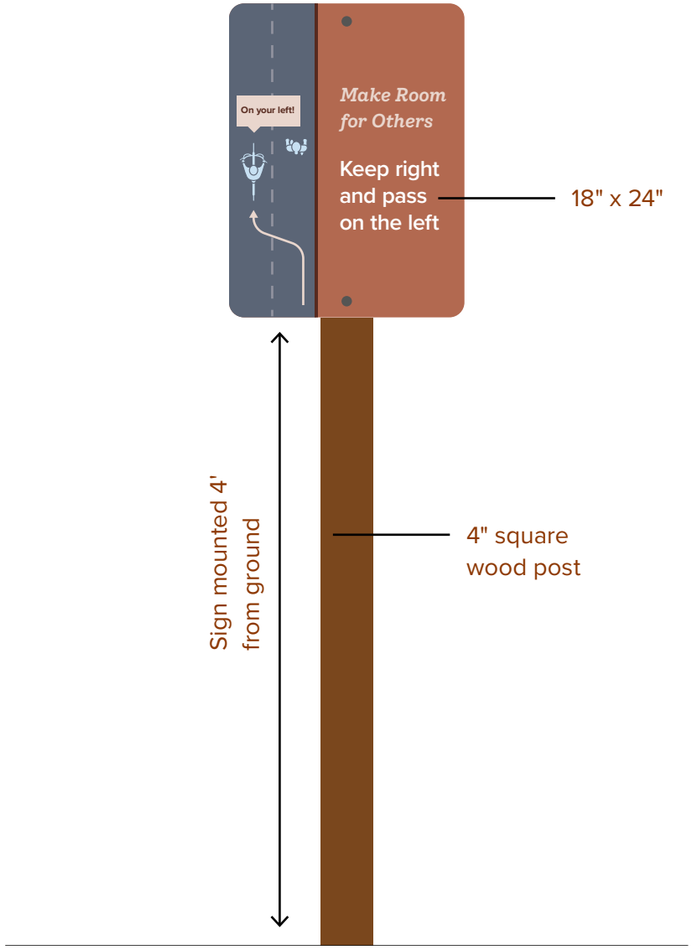
TRAIL ETIQUETTE SIGNAGE

Trail etiquette signage design should follow the template provided in this document to create consistency across the region. Trail etiquette messages and graphics should be printed on 18" x 24" aluminum signs and mounted vertically on a 4" x 4" wood post. Signs should follow placement standards outlined in this chapter and should not be obstructed by vegetation, furnishings, structures, or other signage.

ETIQUETTE SIGN EXAMPLE



ETIQUETTE SIGN MOUNTING



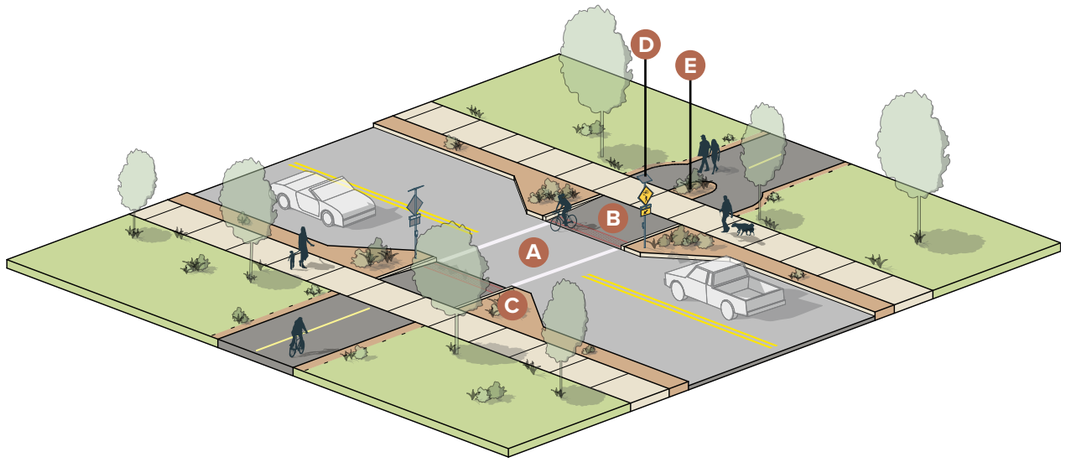


04 Trail/Street Interface

Uncontrolled Crossing Locations

MID-BLOCK STREET CROSSINGS

Whenever a trail intersects a roadway at a mid-block location, adequate measures should be implemented to provide a safe crossing. The preferred crossing treatment will depend on roadway context, but should include a marked crosswalk and trail crossing warning signage at a minimum. Use the Crossing Treatment Selection Guidance on page 29 to determine the appropriate crossing treatment. If on-street parking is present, parking should be restricted within 30 feet of the crossing in both directions to increase trail user visibility.



DESIGN CRITERIA

- **A** Marked crosswalk
- **B** Directional ramps; match width of trail
- **C** Curb bulbouts decrease crossing distance and increase visibility of trail users
- **D** Trail crossing signage at a minimum; see Crossing Treatment Selection Guidance
- **E** If needed, implement measures to restrict motor vehicle access (see page 38)

NOTES

1. Restrict on-street parking within 30 feet of trail crossing in both directions.

D



CROSSING TREATMENT SELECTION

Once a location has been identified as a candidate for a mid-block crossing, Table 4.1 should be used as a guide to determine an appropriate crossing treatment. The recommendations in this table are based on FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations. Engineering judgment should be used on a case-by-case basis to determine final recommendations for a safety countermeasures at mid-block crossings. Engineers should provide adequate justification for any recommendations that deviate from those outlined in table.

Where possible, new trail alignments should be configured to cross at existing controlled crossings or intersections while also avoiding undue detours for trail users.

Table 4.1 - Crossing Treatment Selection

Roadway Type	ADT < 9,000			ADT 9,000 - 15,000			ADT > 15,000		
	≤ 30 mph	35 mph	≥ 40 mph	≤ 30 mph	35 mph	≥ 40 mph	≤ 30 mph	35 mph	≥ 40 mph
2 lanes	A 1245	A 45	B 457	A 246	B 46	C 467	B 246	B 46	C 467
3 lanes w/ raised median	A 1235	A 35	B 357	B 236	B 36	B 367	B 236	B 36	C 367
3 lanes w/o raised median	A 12345	B 345	C 3457	B 2346	B 346	C 3467	C 2346	C 346	C 3467
4+ lanes w/ raised median	A 356	B 356	C 3567	B 356	B 356	C 3567	C 356	C 356	C 3567
4+ lanes w/o raised median	A 3456	B 3456	C 34567	B 3456	B 3456	C 34567	C 34567	C 34567	C 34567

A **Marked crosswalk and signage**

B **RRFB + "A" treatments**

C **PHB or Signal + "A" treatments**

Additional Enhancements:

1. Raised Crosswalk
2. In-street pedestrian sign
3. Advanced "yield here to" markings & signage
4. Pedestrian refuge island
5. Curb extensions/bulbouts
6. Road diet
7. Grade separation

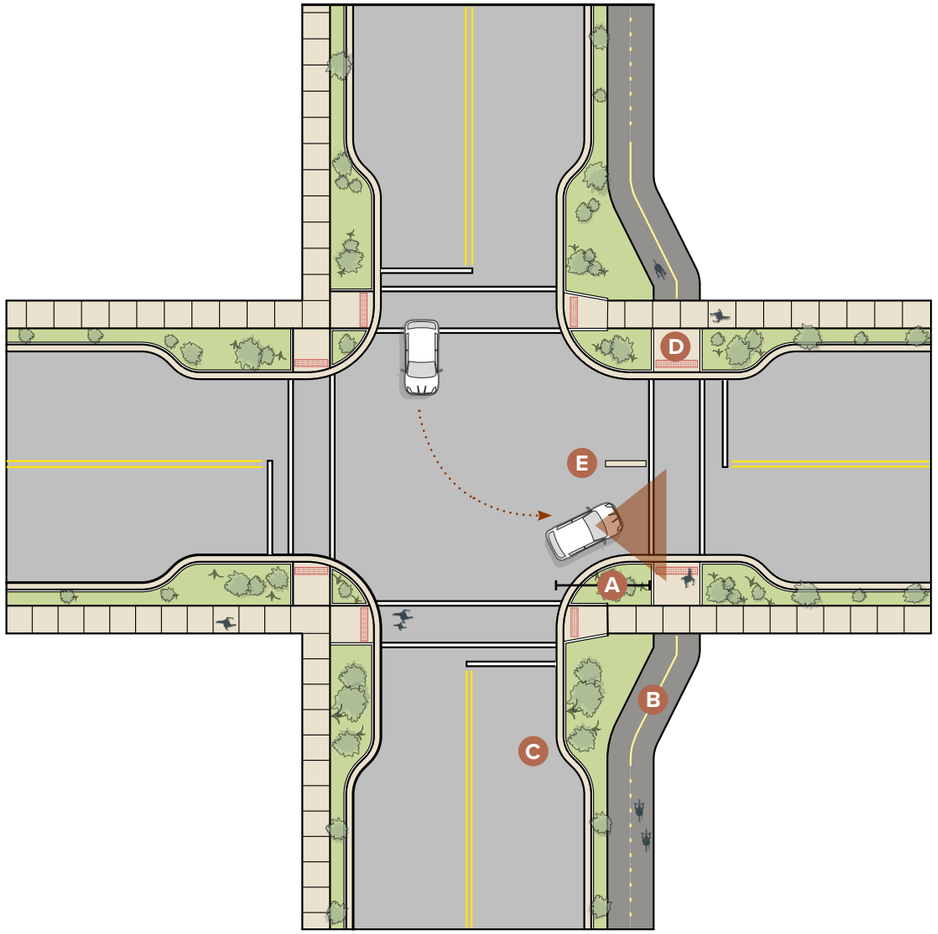
Notes:

- Suggested additional enhancements should be considered and implemented based on context and feasibility
- Use actual speed data where available
- On-street parking should be restricted within 30' of all crossings on both sides

Controlled Intersections

The design of trails through intersections should match the comfort and safety of the trail itself so that an intersection does not serve as a weak link in an otherwise comfortable route. Geometry, roadway characteristics, and right-of-way constraints vary from intersection to intersection; however, the following design principles should be followed when designing trails through intersections:

- Reduce vehicle speeds for both through and turning movements
- Provide a safe space for all modes to wait and yield to others
- Maximize the visibility of pedestrians and bicyclists to motorists
- Mitigate conflicts between bicyclists and pedestrians
- Make navigating the intersection clear and predictable for all modes

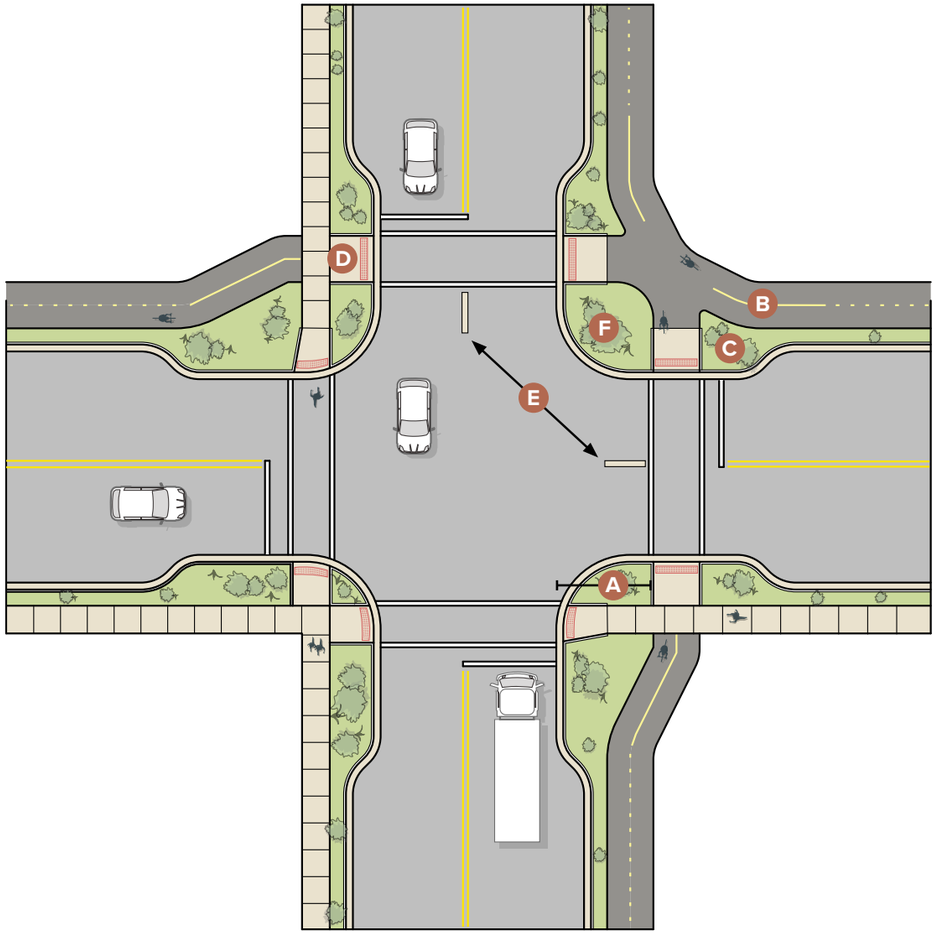


DESIGN CRITERIA

- **A** Provide trail setback from parallel street; enough room for at least one vehicle to queue while yielding
- **B** Solid yellow trail centerline in advance of potential conflict points with other modes
- **C** Curb bulbouts/extensions at intersections to increase visibility of pedestrians and bicyclists waiting to cross, shorten crossing distances, and slow through and turning vehicle movements
- **D** Directional ramps should be used, not apex/diagonal ramps
- **E** Optional hardened centerline to reduce left turn radius and speed

INTERSECTING TRAILS

When two trails intersect at a controlled intersection, the design principles are the same as when a single trail passes through an intersection; however, special attention should be given to the corner at which the two trails intersect, ensuring that a physically protected corner is provided.



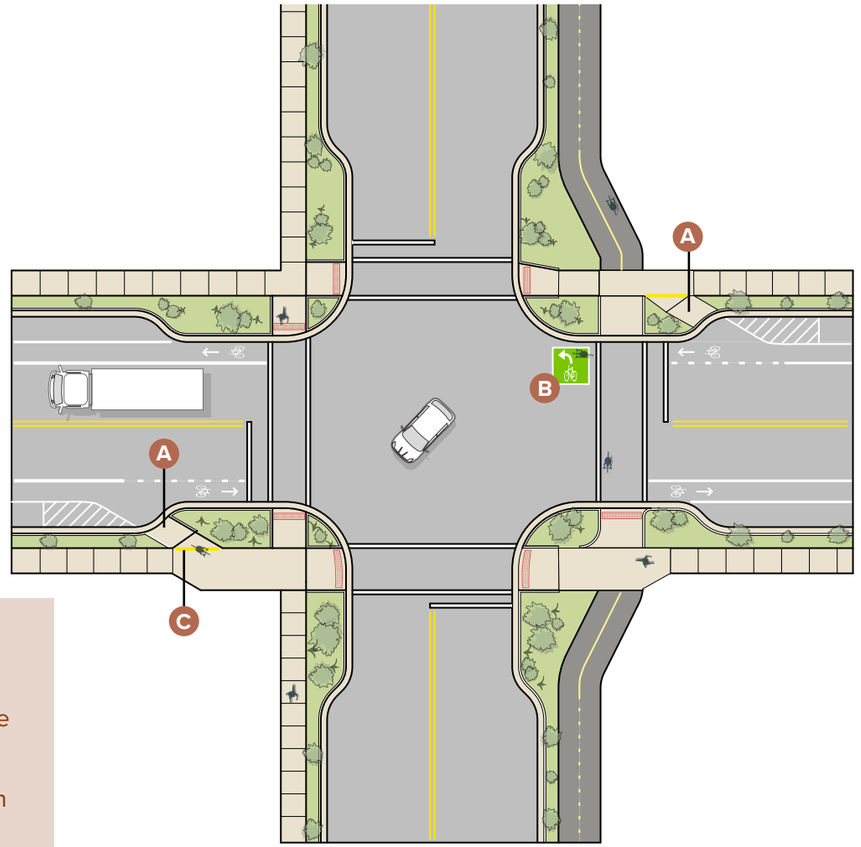
DESIGN CRITERIA

- **A** Provide trail setbacks from parallel streets; enough room for at least one vehicle to queue while yielding
- **B** Solid yellow trail centerline in advance of potential conflict points with other modes
- **C** Curb bulbouts/extensions at intersections to increase visibility of pedestrians and bicyclists waiting to cross, shorten crossing distances, and slow through and turning vehicle movements
- **D** Directional ramps should be used, not apex/diagonal ramps
- **E** Optional hardened centerlines to reduce left turn radius and slow left turning vehicles
- **F** Physically protected corner where trails intersect

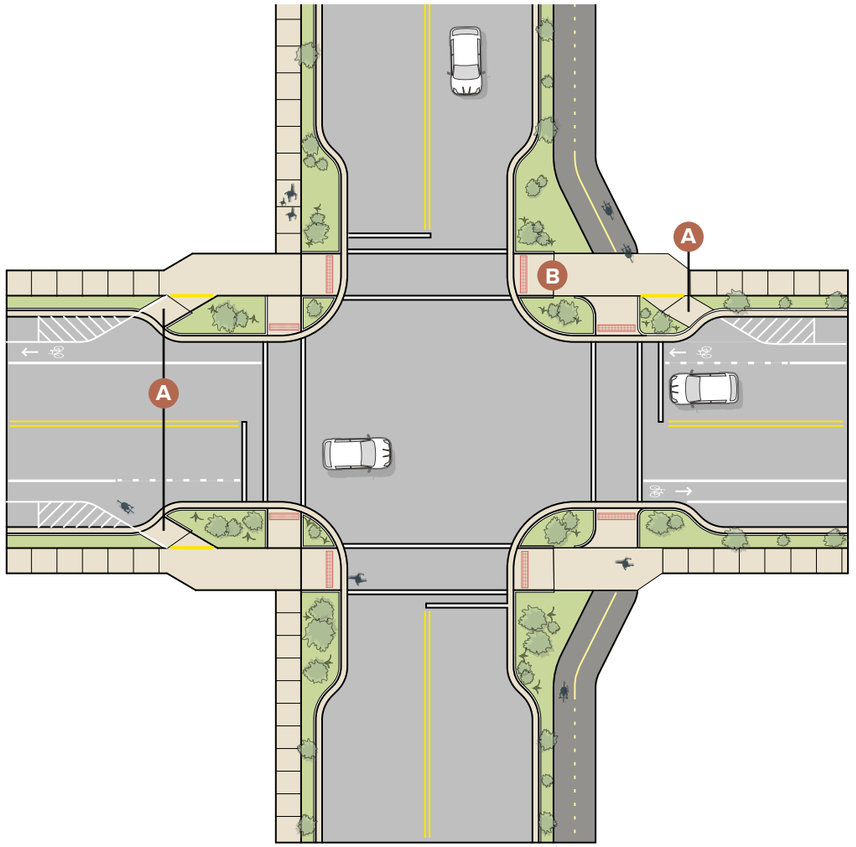
TRAILS INTERSECTING ON-STREET BIKEWAYS

When a trail meets an on-street bikeway at an intersection, the same guiding principles apply. Additional measures should be taken to ensure that bicyclists can safely transition between the trail and the on-street bikeway, including providing adequate queuing space for two-stage left turn movements.

ALTERNATIVE 1: TWO-STAGE LEFT TURN QUEUE BOX



ALTERNATIVE 2: PROTECTED INTERSECTION

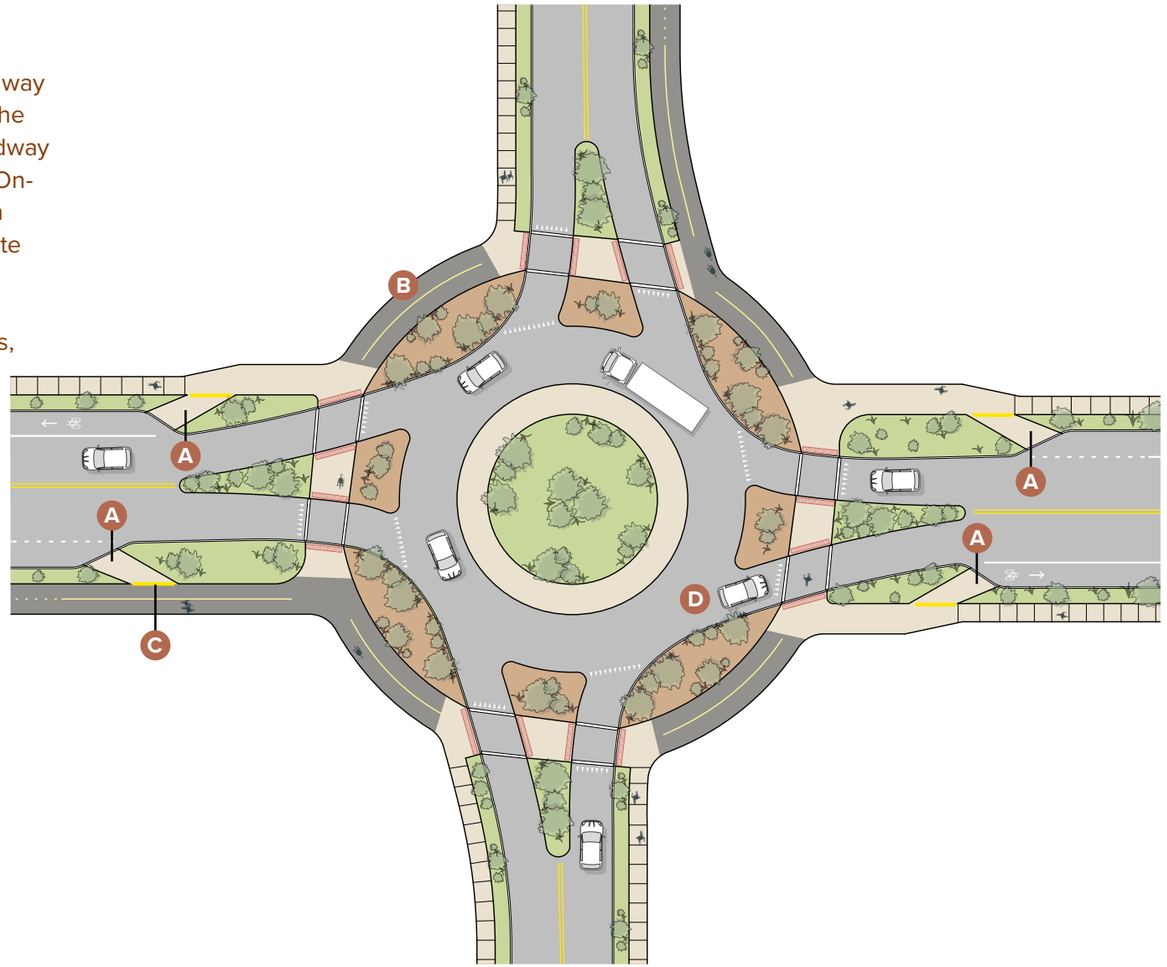


DESIGN CRITERIA

- **A** Transition between on-street bikeway and trail: bike exit/entry ramps
- **B** Left turn queuing space: provide two-stage left turn queue box (Alternative 1) or protected intersection (Alternative 2)
- **C** Tactile Directional Indicators to prevent low-vision pedestrians from using bike ramps

TRAILS AND BIKEWAYS AT ROUNDABOUTS

Trails at roundabouts should be designed in a way that allows trail users to safely move through the roundabout with physical separation from roadway traffic and reasonably short, direct crossings. On-street bicyclists should be provided the option to ramp up to sidewalk level in order to navigate around the roundabout. For more guidance on designing for bicyclists and pedestrians at roundabouts, including multi-lane roundabouts, see Section 2.3 of the NCHRP Report 672, *Roundabouts: An Informational Guide*.



DESIGN CRITERIA

- **A** Bike ramps for transitions between on-street bikeways and trails
- **B** Trail condition or widened sidewalk, even on corners that do not directly serve a trail but may serve on-street bikeway
- **C** Tactile Directional Indicators to prevent low-vision pedestrians from using bike ramps
- **D** Crosswalks set back from roundabout traffic flow to allow motorists a waiting area to yield

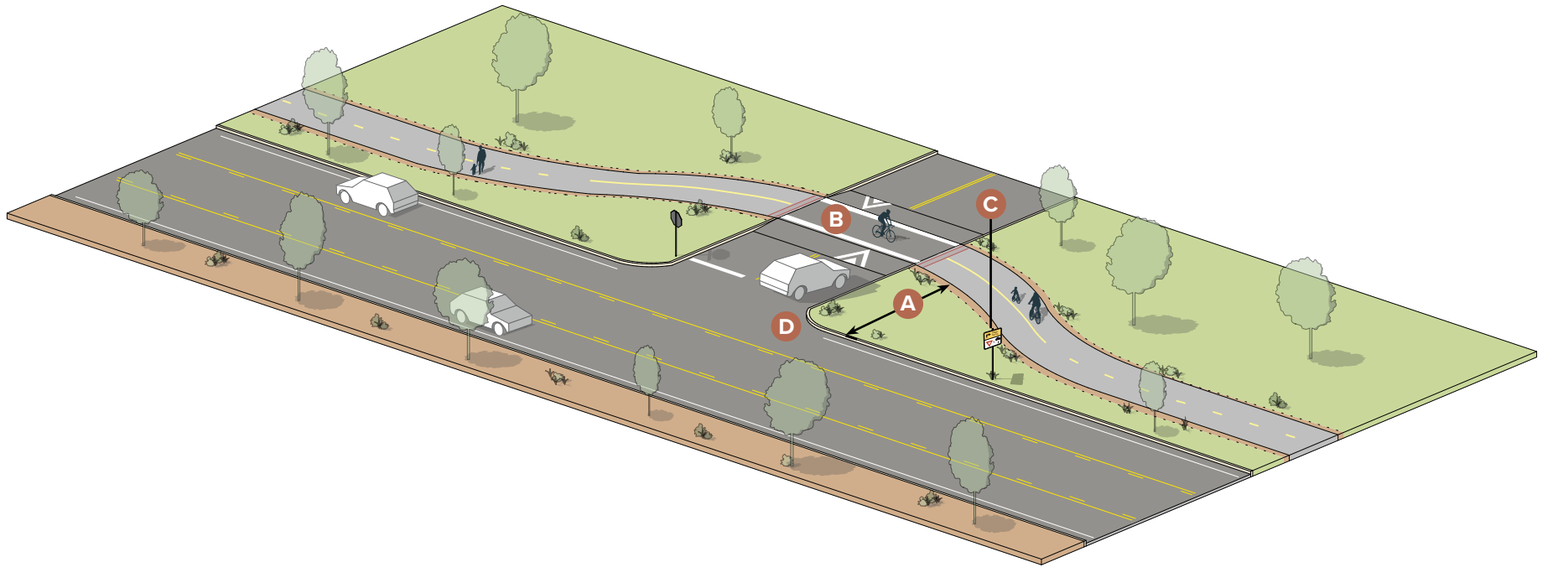
NOTES

1. Additional crossing measures such as RRFB's or Hybrid Beacons may be necessary, depending on context.

Other Scenarios

SIDE STREETS

Trail design at side streets should mitigate conflicts between trail users and roadway users. Design principles for intersections apply to side streets; namely, providing a trail setback and maximizing the visibility of trail users. Trail setbacks are particularly beneficial at stop-controlled side streets because they allow exiting motorists to focus on yielding to trail traffic and then roadway traffic in two phases instead of all at once. Similarly, motorists making a left turn onto the side street can turn across and clear oncoming traffic and then yield to trail traffic. Raised crossings should always be considered to further enhance the safety and comfort of trail users.



DESIGN CRITERIA

- **A** Provide trail setback from parallel street; enough room for at least one vehicle to queue while yielding (20' preferred)
- **B** High visibility crosswalk; consider raised crosswalk to prioritize trail users and slow vehicle traffic
- **C** Right turning vehicles yield to pedestrians and bicyclists signage (R10-15, modified to show pedestrian AND bicycle icon)
- **D** Curb radius designed for turning speeds of 10 mph

NOTES

1. Maintain clear sight triangles where trail intersects side street, clear of tall vegetation, entry signage, and other vertical obstructions.

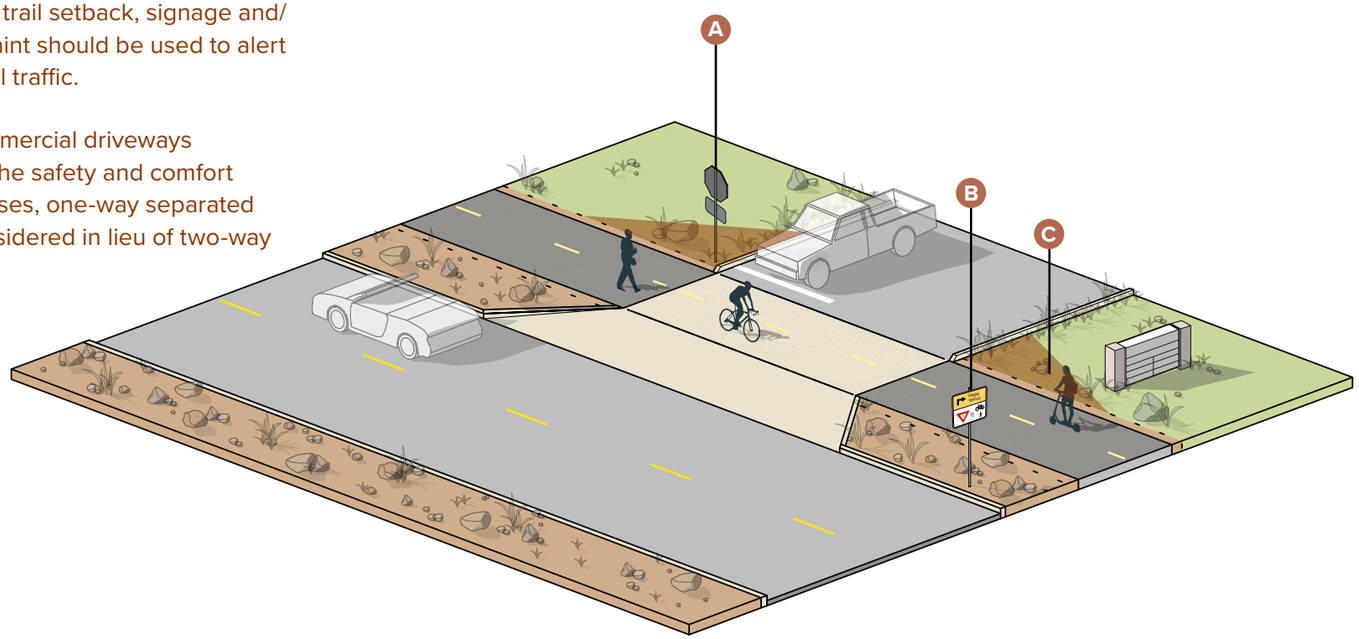
C



COMMERCIAL DRIVEWAYS

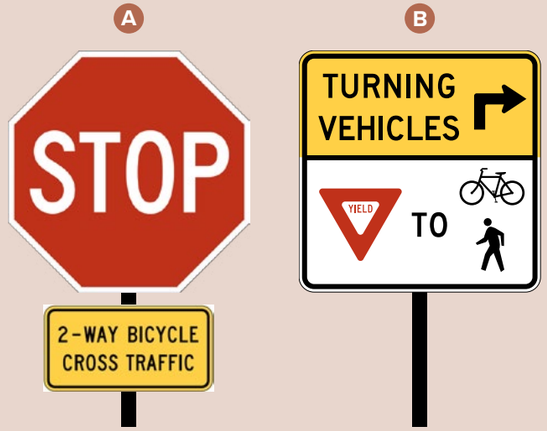
Similar to side streets, commercial driveways present conflicts between trail users and motorists who may not expect two-way trail traffic. If right-of-way does not allow for a trail setback, signage and/or green conflict zone paint should be used to alert motorists of two-way trail traffic.

A high frequency of commercial driveways significantly diminishes the safety and comfort of trail users. In these cases, one-way separated bikeways should be considered in lieu of two-way trails or cycle tracks.



DESIGN CRITERIA

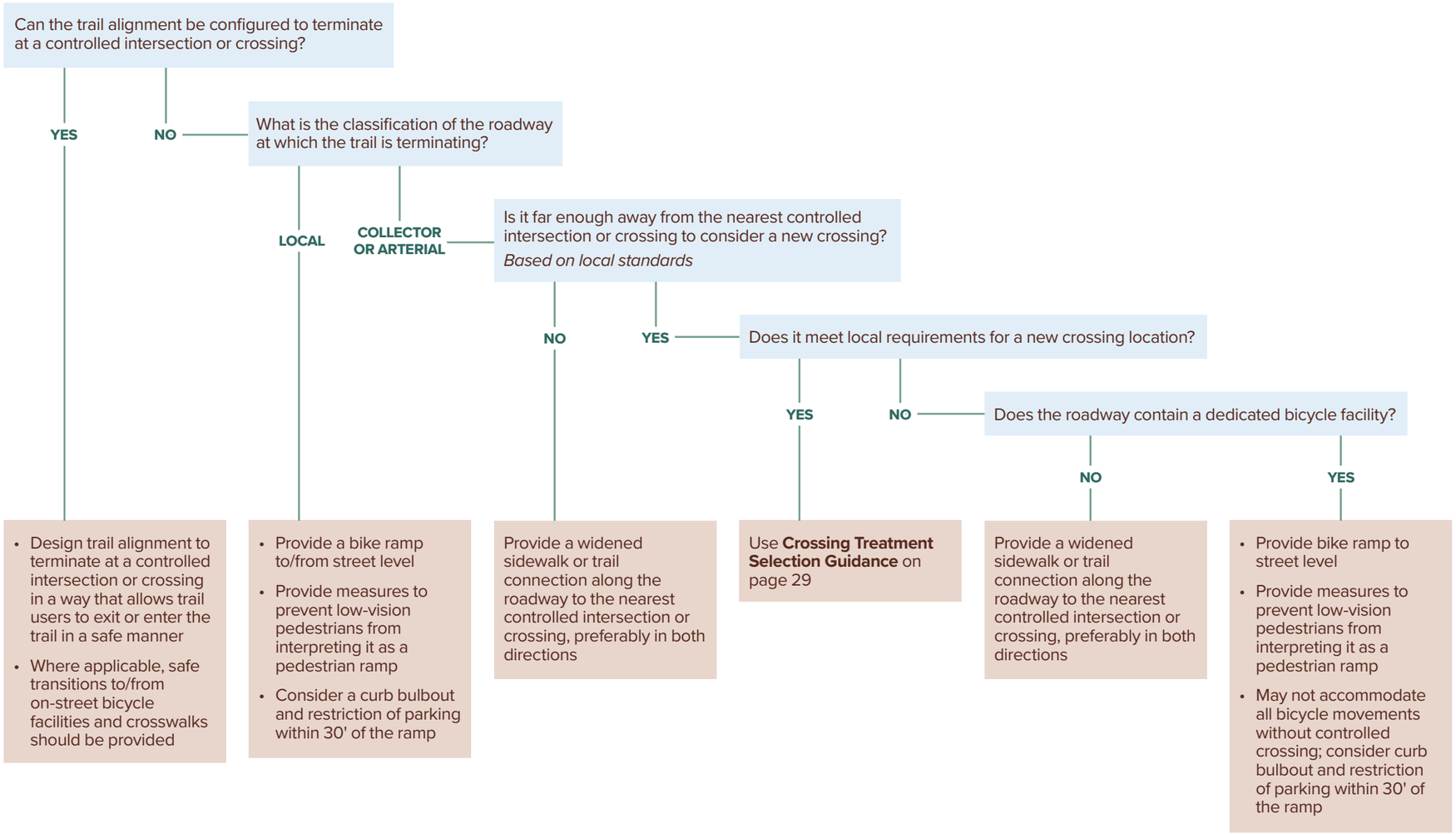
- **A** Stop sign and/or stop bar plus "2-way bicycle cross traffic" signage (MUTCD W16-21P)"
- **B** Right turning vehicles yield to pedestrians and bicyclists signage (R10-15, modified to show pedestrian AND bicycle icon)
- **C** Maintain sight triangles in both directions, clear of tall vegetation and other obstructions, so drivers can see cross traffic



ON-STREET / OFF-STREET TRANSITIONS

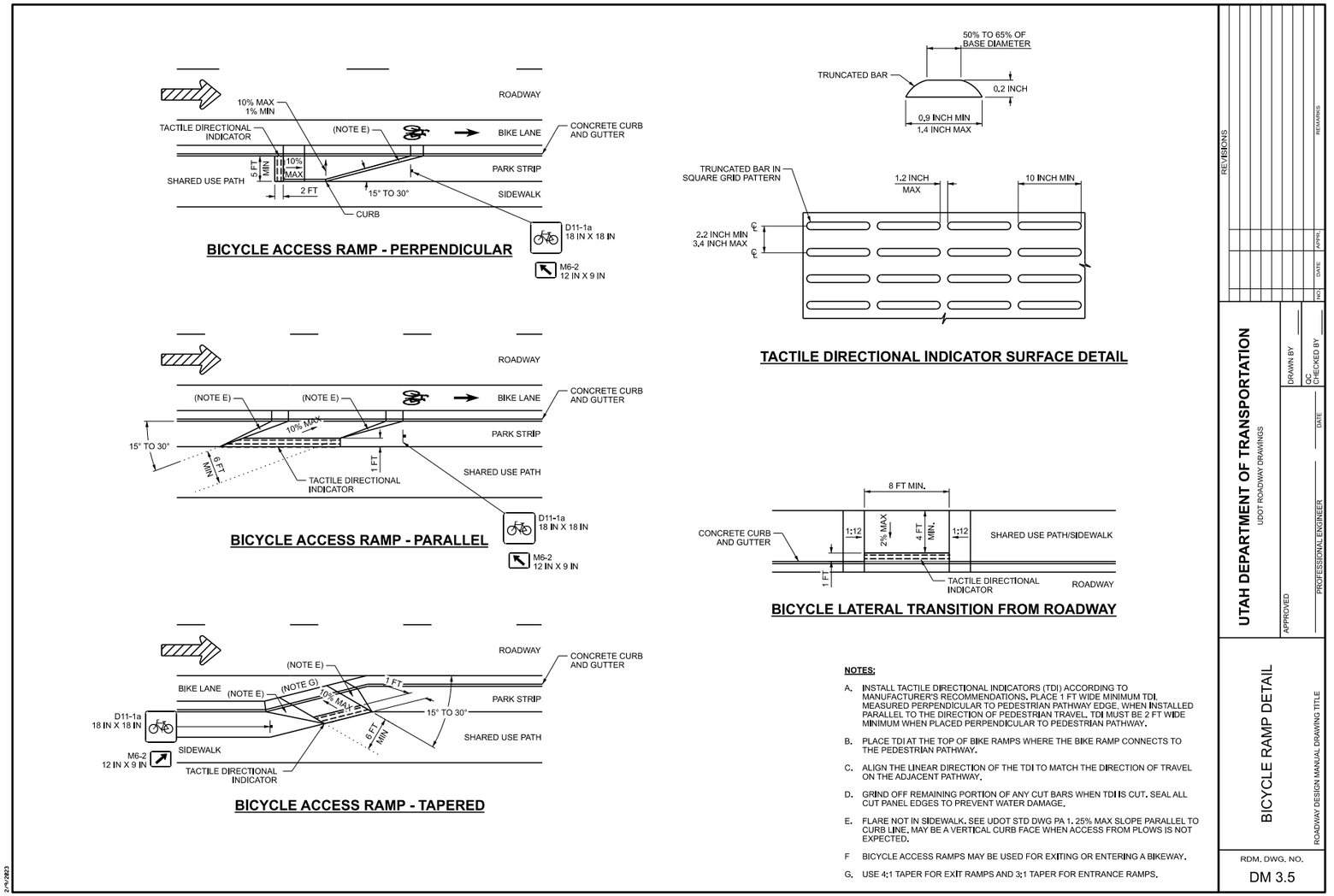
Safe and comfortable transitions between on-street bikeways and off-street trails should be provided. Particular attention should be given to ensuring that transitions comply with ADA standards and protect low-vision pedestrians from unknowingly entering an uncontrolled roadway environment. This section provides planning and design guidance for transitions to/from on-street facilities when a trail terminates at a roadway and any other scenario where a transition is necessary, such as at intersections and roundabouts.

When a trail terminates at a roadway...



ON-STREET / OFF-STREET TRANSITIONS CONTINUED

Bicycle ramps for transitions between on-street and off-street facilities should follow current standards as depicted in UDOT's "Bicycle Ramp Detail" drawings (DM 3.5).



RESTRICTION OF MOTOR VEHICLES

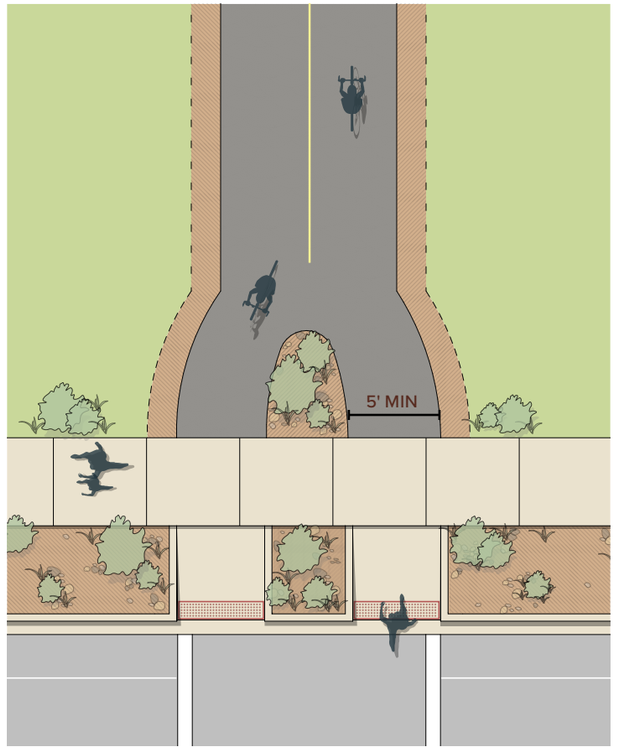
With the exception of municipal service and emergency vehicles, motor vehicles are not allowed on paved trails in Southern Utah, including passenger cars, trucks, motorcycles, ATVs, golf carts, and any vehicle that can exceed 20 mph exclusively using motor power. In some cases it may be necessary to implement measures to restrict motor vehicles. Bollards, both fixed and collapsible, present a hazard to trail users and should only be considered as a last resort. Other design elements that should be considered to help discourage motorized vehicles from entering a trail include:

- Signage communicating prohibited trail uses; for consistency, the signage concept at right should be used throughout the region
- Split-path entry lanes divided by a narrow median or landscape area; this also alerts cyclists about the intersection ahead and the need to slow down.
- Entry design with a strong sense of identity and transition

PROHIBITED TRAIL USES SIGNAGE



TYPICAL SPLIT-PATH ENTRY DESIGN



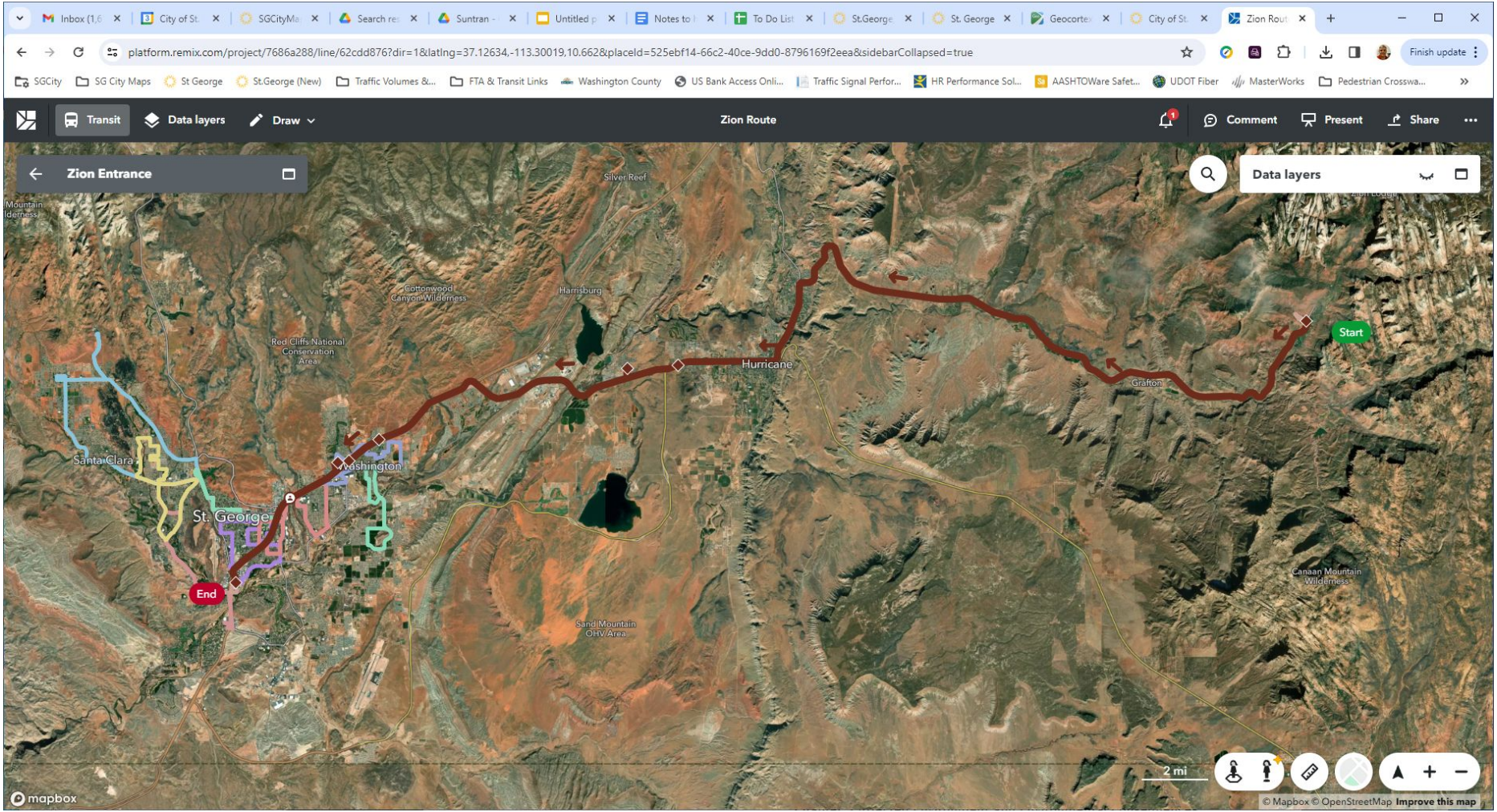
Zion Bus Transit Update
Briefing Document

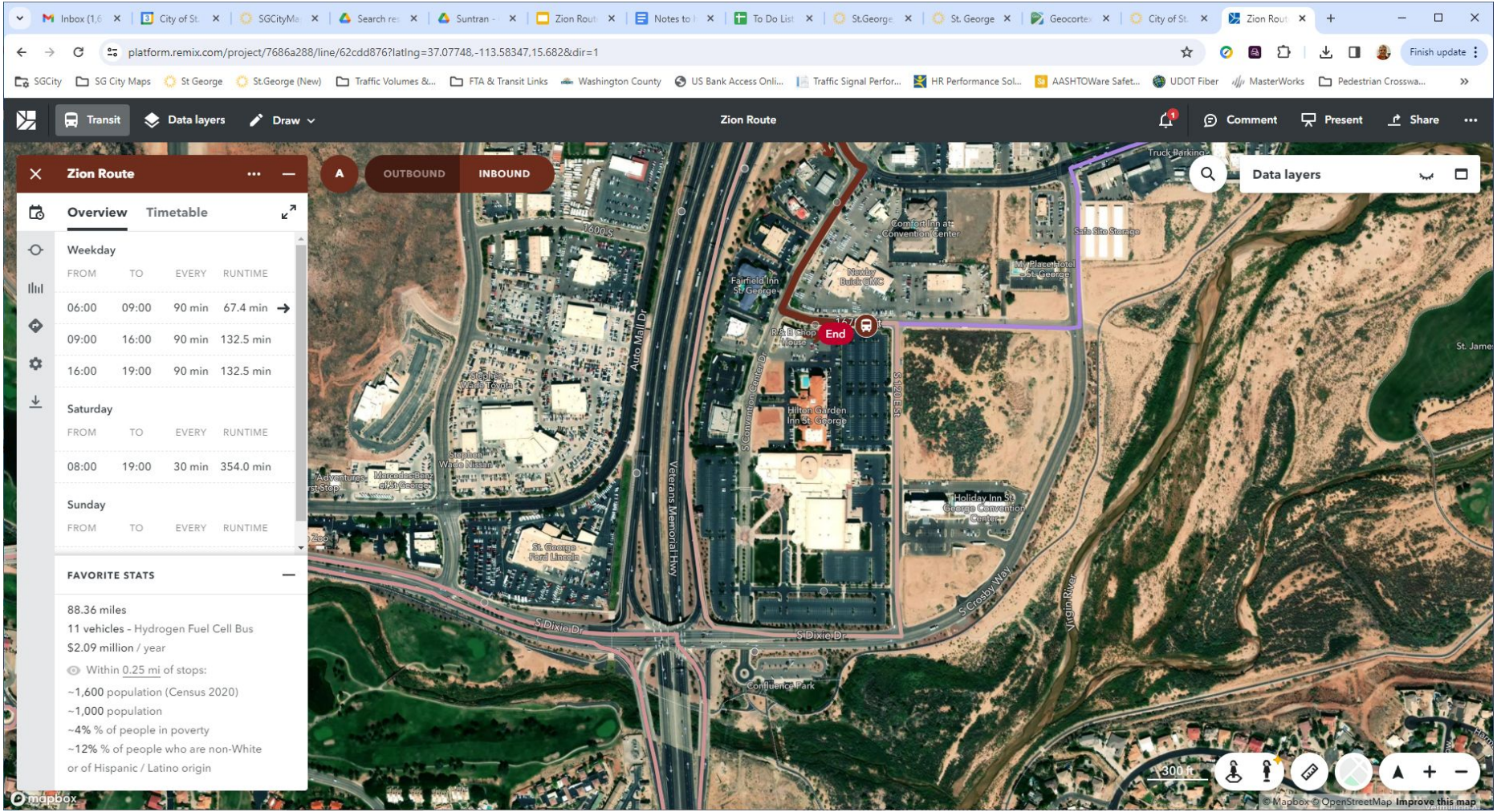
Description:
An update on the Bus route that goes to Springdale and the anticipated stops.

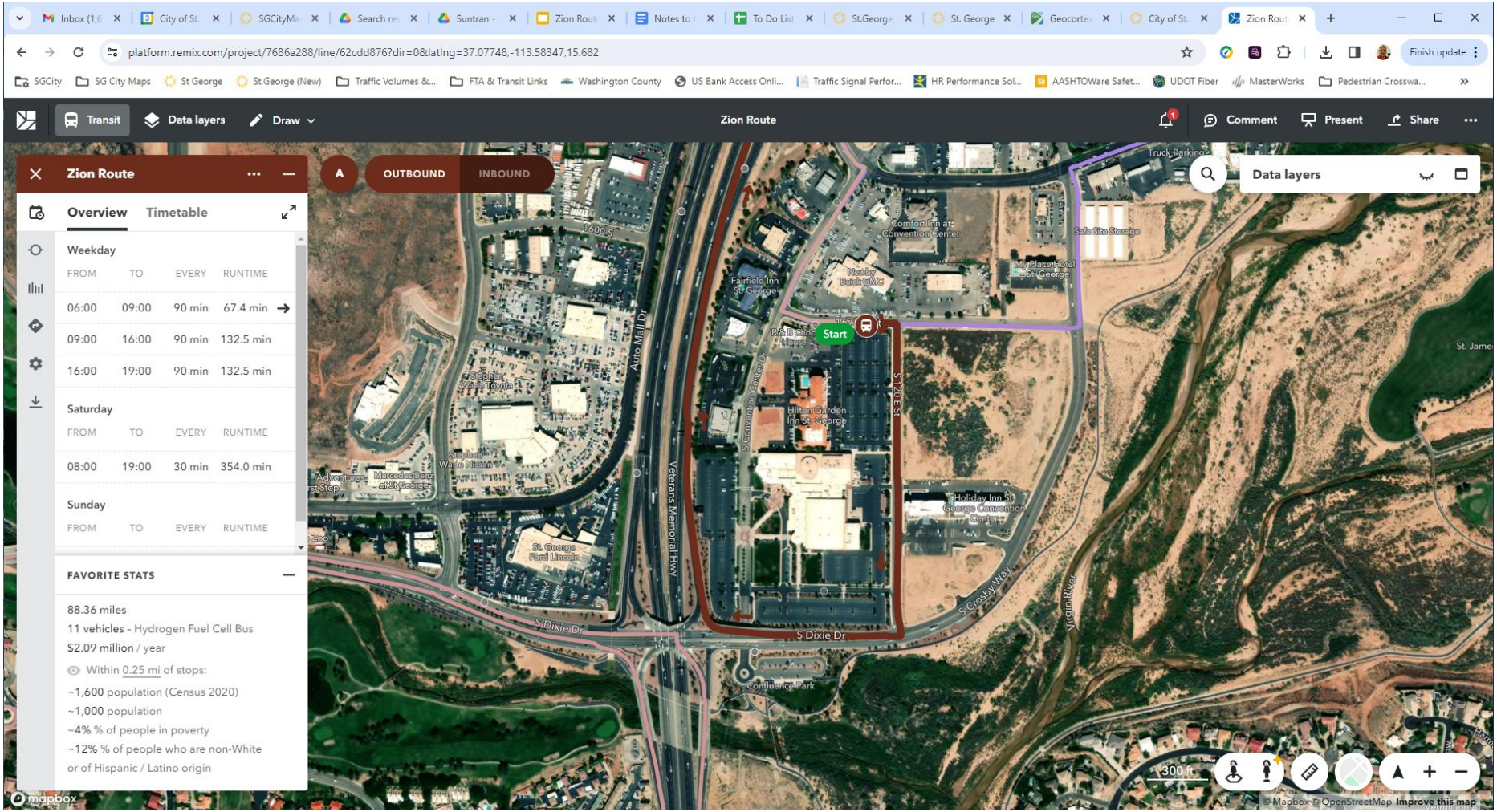
Presenter:
Paul Mogle, City Engineer

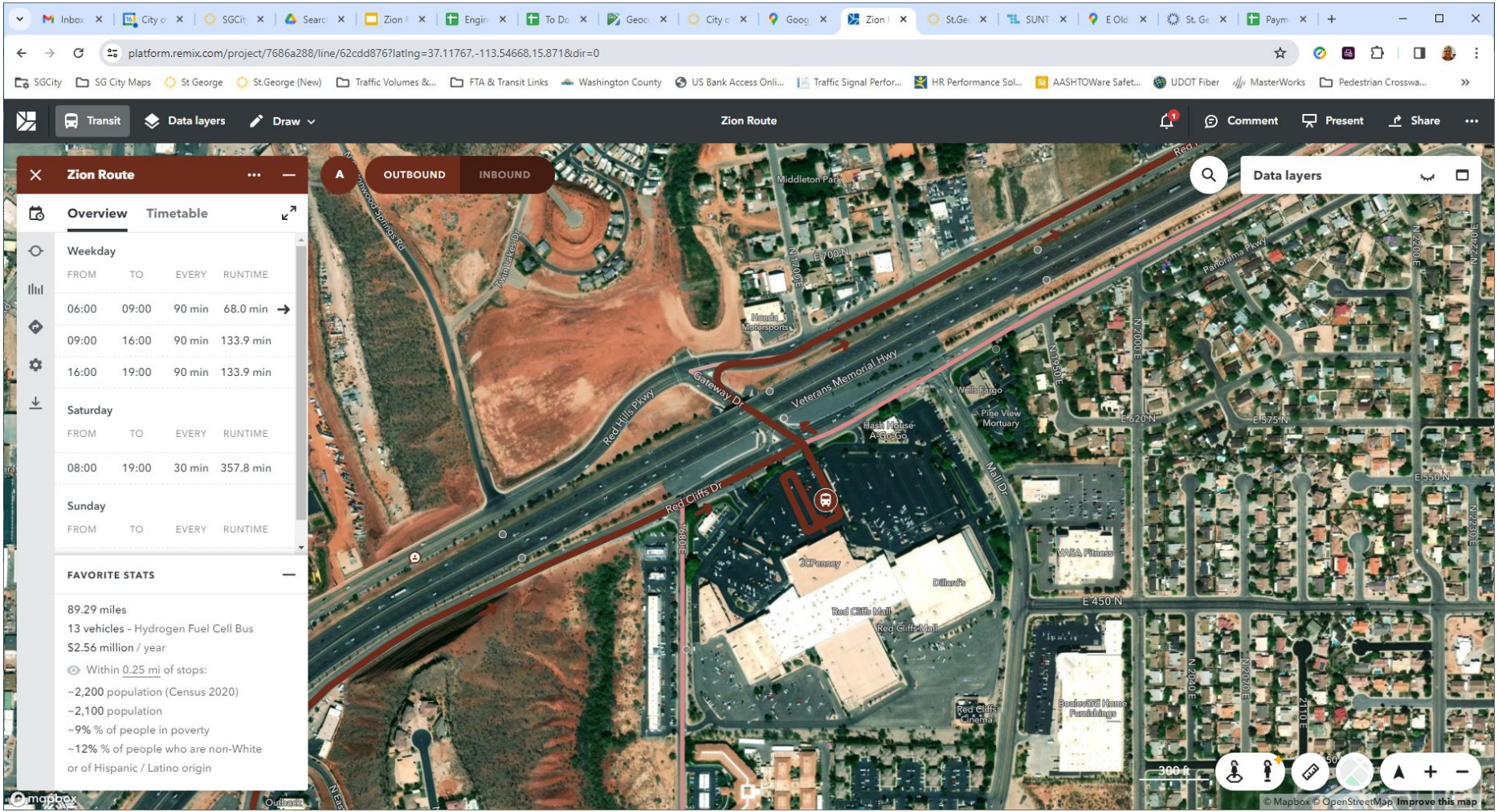
Submitted by:
Paul Mogle, City Engineer

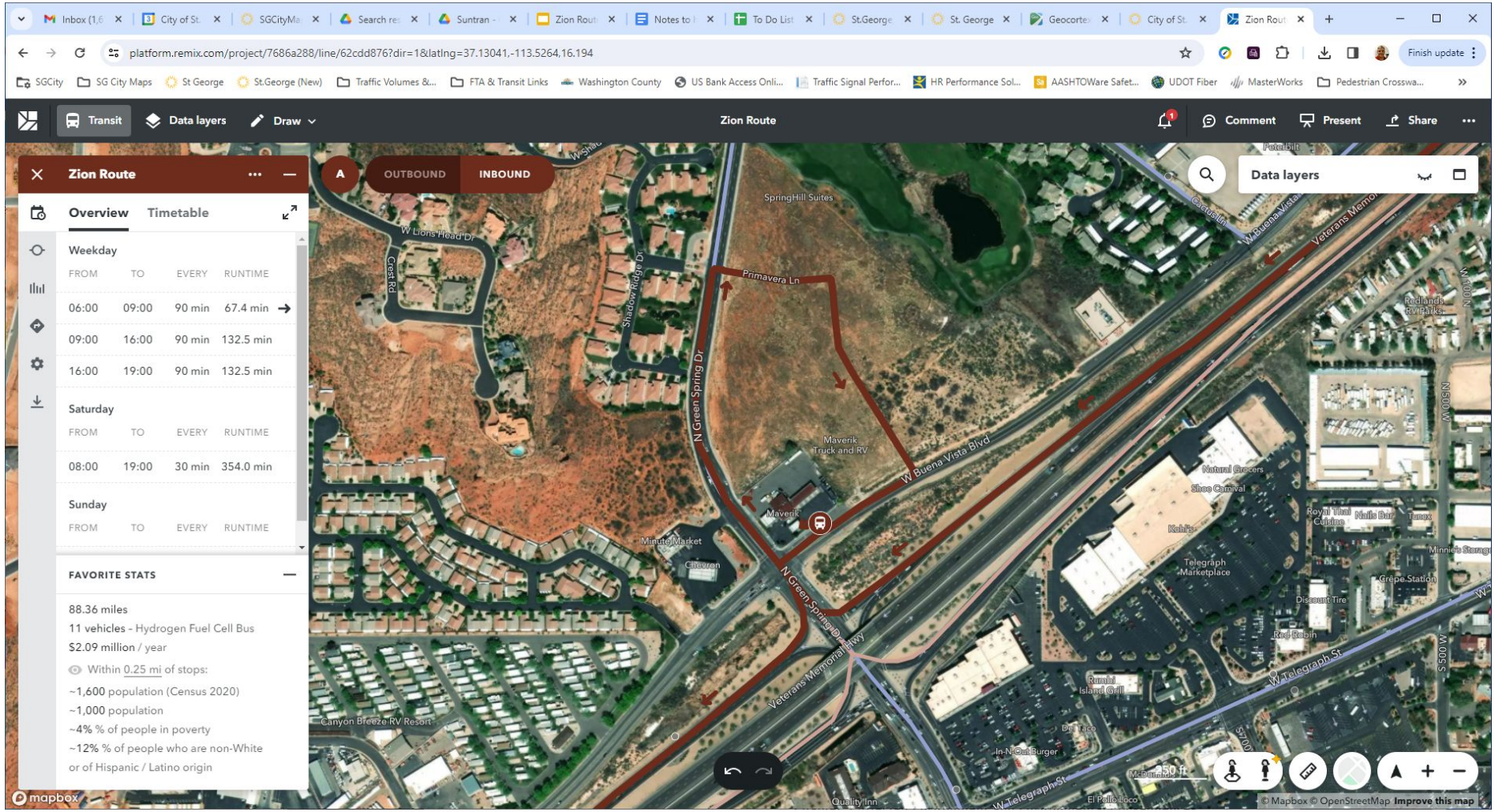
Background Information:
St. George's bus system, Suntran, has been planning for a route up to Springdale for the past several years. Suntran has been working with the local governments to establish stop locations. Those locations have been identified and the plan is to start running buses as early as July of this year. This update is to show the bus route and to give a brief overview of the route.

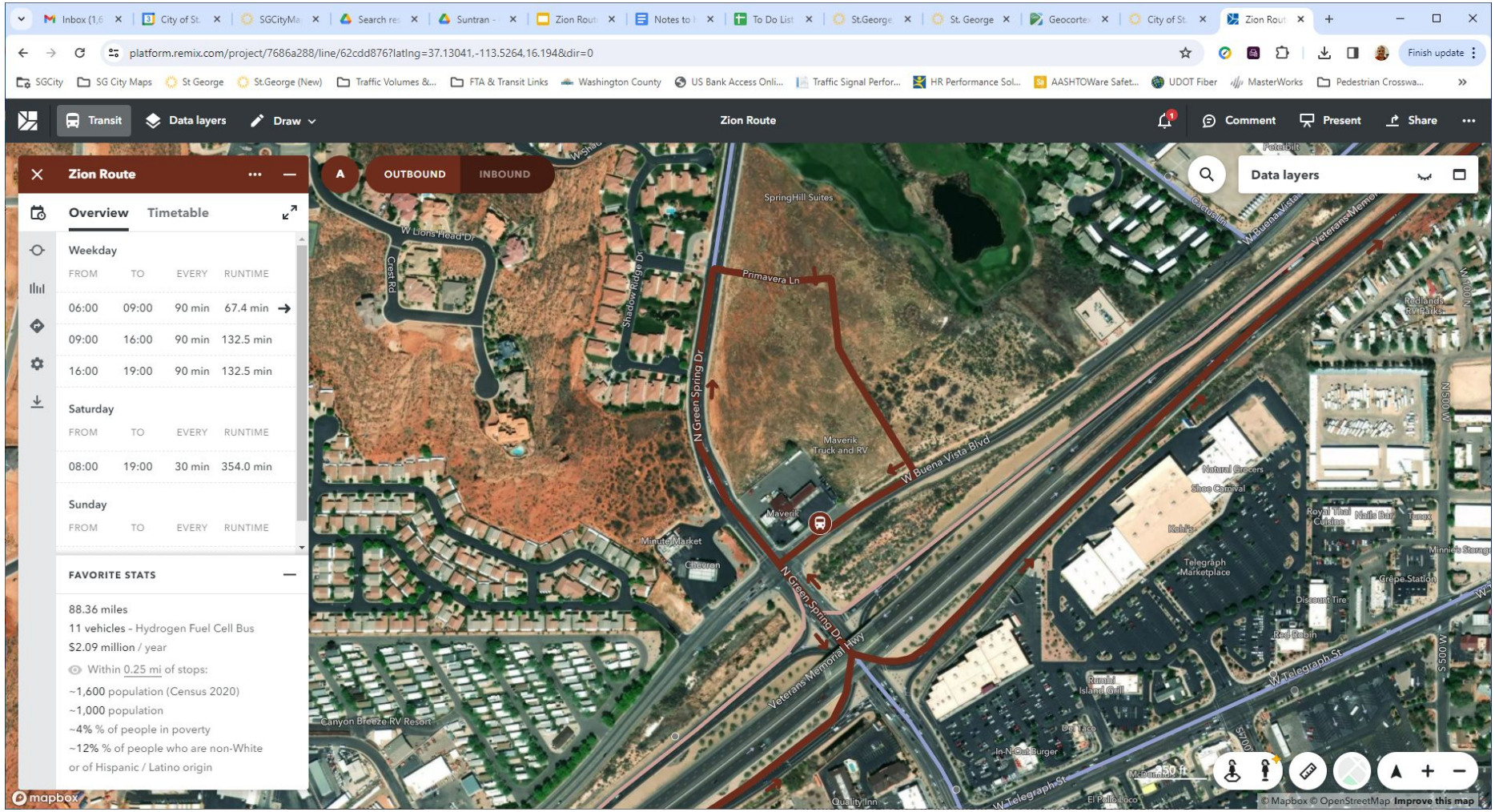

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Entrance
Data layers
Silver Reef
Cottonwood Canyon Wilderness
Harrisburg
Red Cliffs National Conservation Area
Hurricane
Start
Grafton
Santa Clara
Washington
St. George
End
Canaan Mountain Wilderness
Sand Mountain OHV Area
2 mi
mapbox
© Mapbox © OpenStreetMap Improve this map

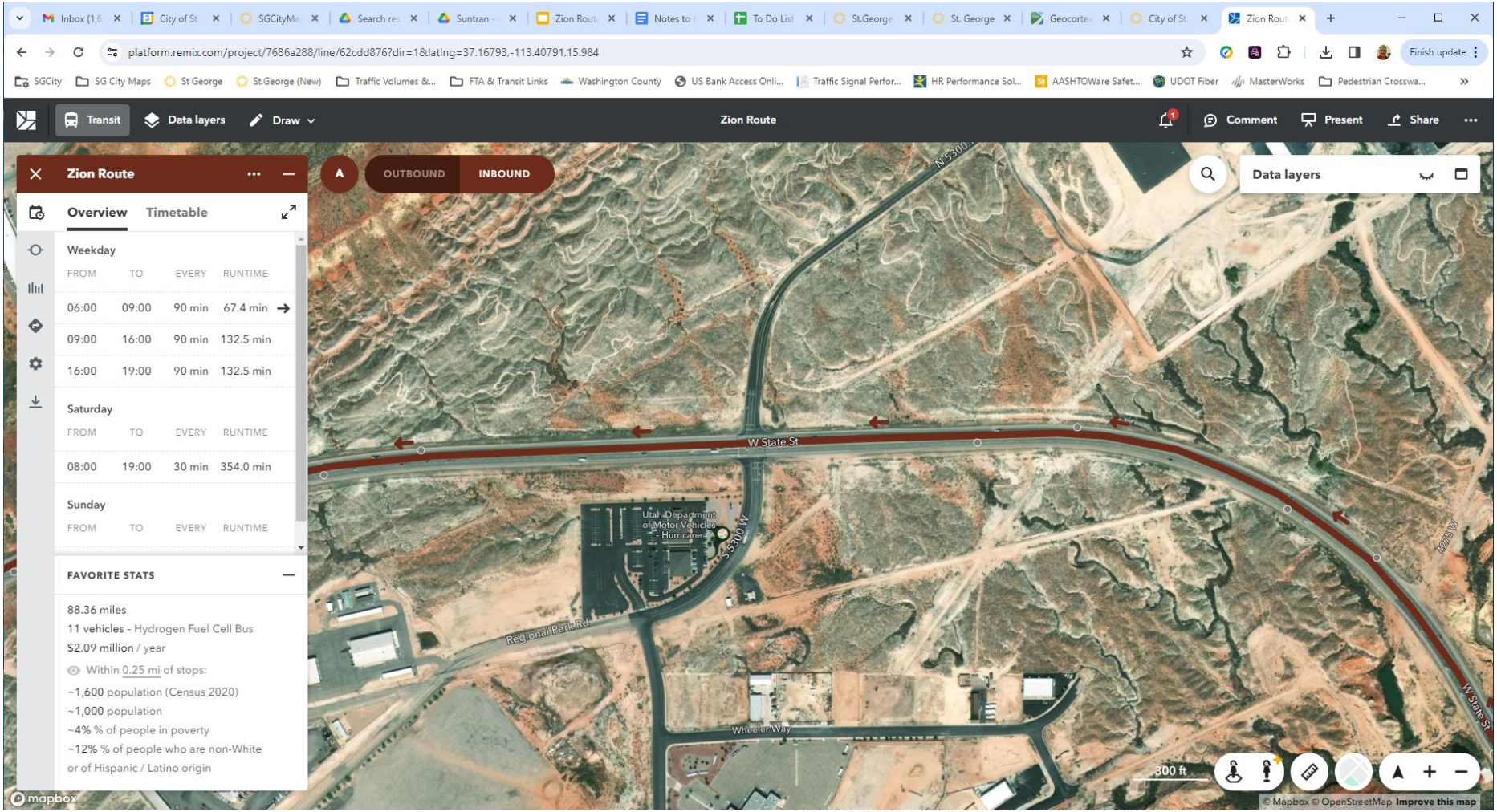

platform.remix.com/project/7686a288/line/62cdd876?latlng=37.07748,-113.58347,15.682&dir=1
Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
11 vehicles - Hydrogen Fuel Cell Bus
$2.09 million / year
Within 0.25 mi of stops:
~1,600 population (Census 2020)
~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
End
Comfort Inn at Convention Center
Fairfield Inn St George
Newby Buick GMC
My Place Hotel St. George
Truck Parking
Safe Site Storage
R&B Shop House
Hilton Garden Inn St. George
Holiday Inn St George Convention Center
Auto Mall Dr
S Convention Center Dr
S 720 E St
Veterans Memorial Hwy
S Dixie Dr
S Crosby Way
Virgin River
Confluence Park
Stephen Wade Toyota
Stephen Wade Nissan
Mercedes-Benz of St George
St. George Ford Lincoln
1600 S
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

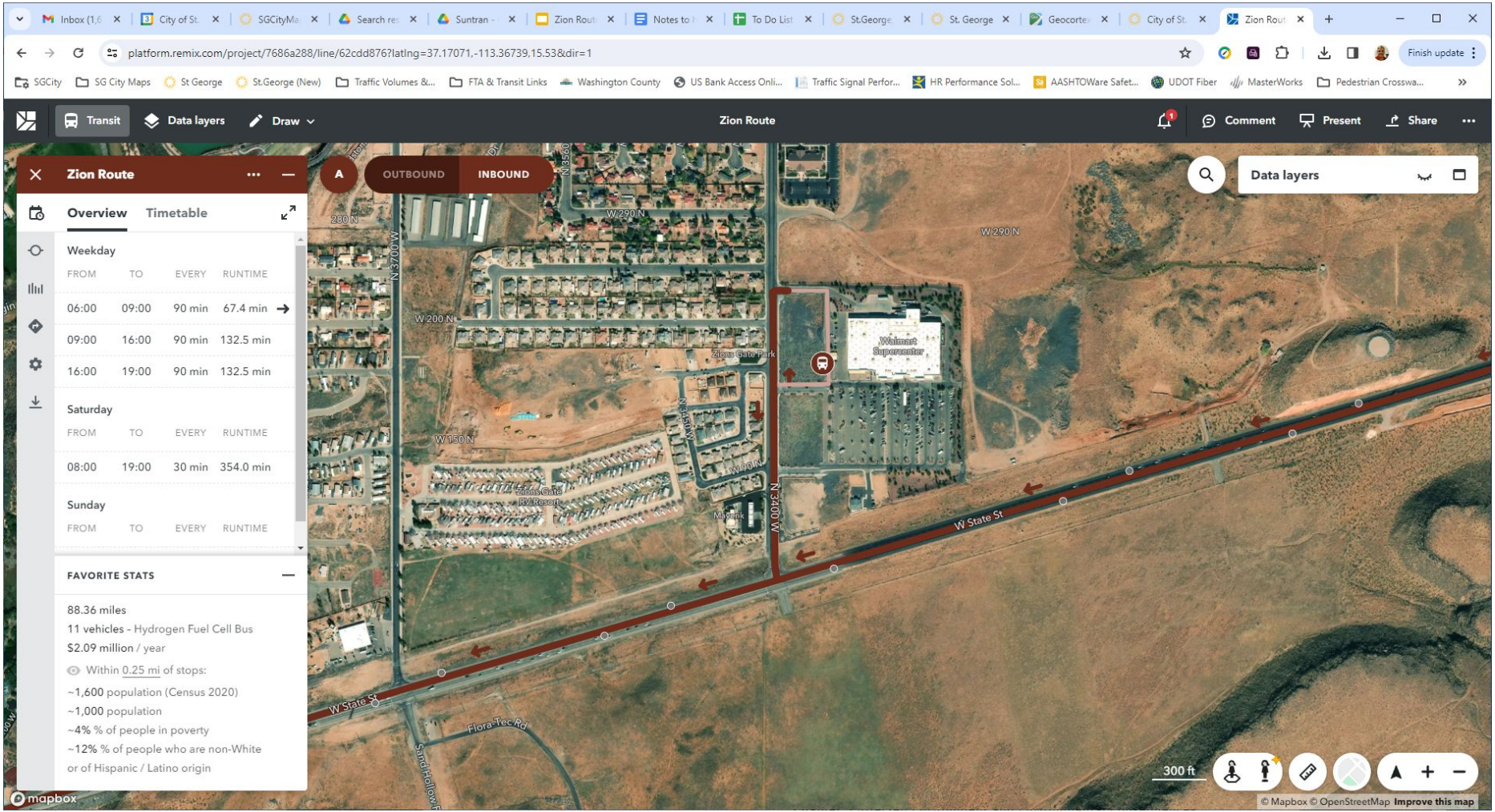

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
11 vehicles - Hydrogen Fuel Cell Bus
$2.09 million / year
Within 0.25 mi of stops:
~1,600 population (Census 2020)
~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Start
Data layers
Auto Mall Dr
Veterans Memorial Hwy
S Convention Center Dr
S 270 E St
S Dixie Dr
S Crosby Way
Virgin River
Comfort Inn at Convention Center
Fairfield Inn St George
Hilton Garden Inn St. George
Holiday Inn St George Convention Center
Confluence Park
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

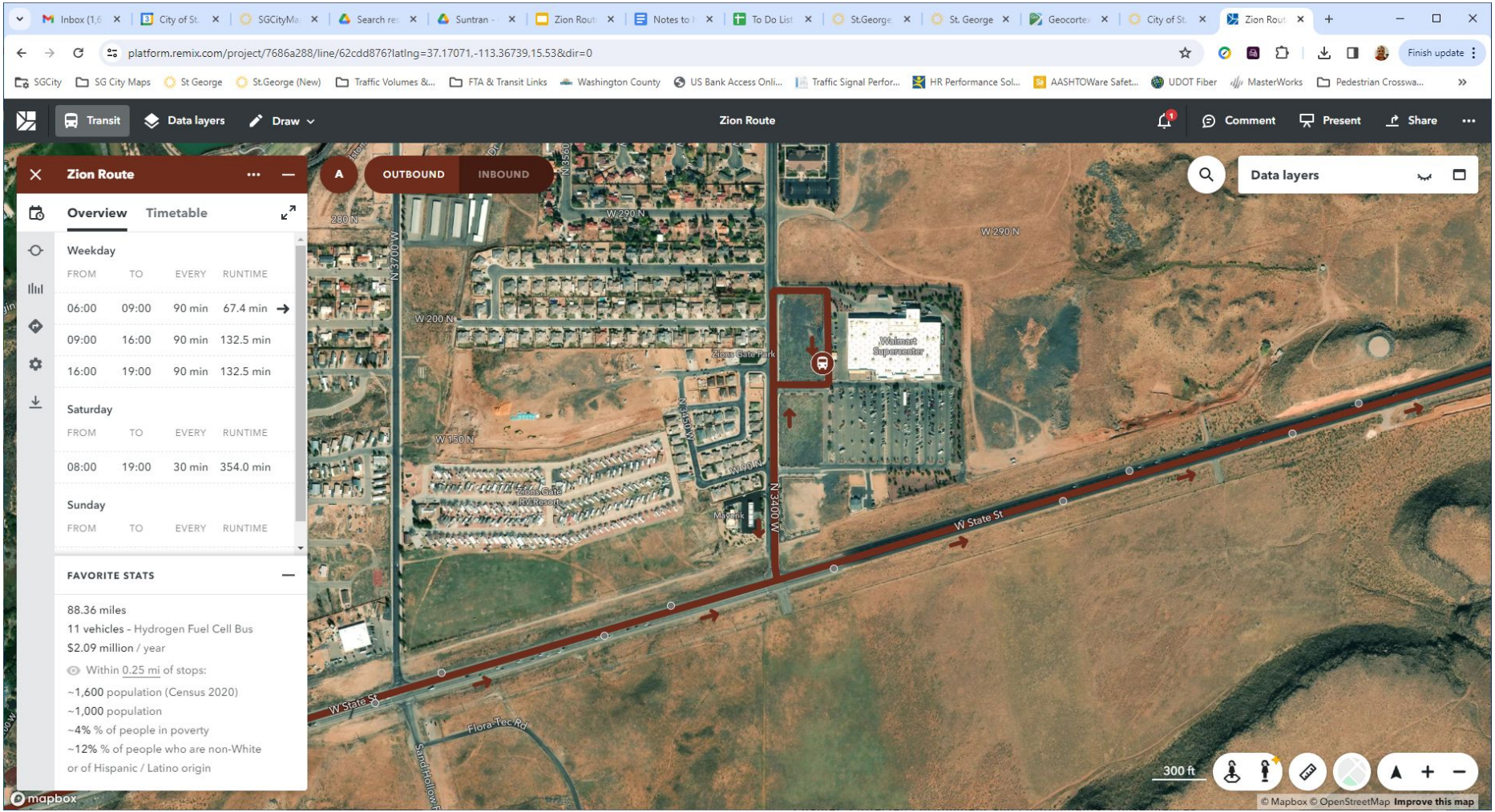

platform.remix.com/project/7686a288/line/62cdd876?latlng=37.11767,-113.54668,15.871&dir=0
Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 68.0 min
09:00 16:00 90 min 133.9 min
16:00 19:00 90 min 133.9 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 357.8 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
89.29 miles
13 vehicles - Hydrogen Fuel Cell Bus
$2.56 million / year
Within 0.25 mi of stops:
~2,200 population (Census 2020)
~2,100 population
~9% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
Middleton Park
Honda Motorsports
Veterans Memorial Hwy
Gateway Dr
Red Hills Pkwy
Red Cliffs Dr
Hash House A Go Go
Wells Fargo
Pine View Mortuary
Panorama Pkwy
Mall Dr
JCPenney
Dillard's
Red Cliffs Mall
VASA Fitness
Boulevard Home Furnishings
Red Cliffs Cinema
E 450 N
E 550 N
E 620 N
E 575 N
300 ft
© Mapbox © OpenStreetMap Improve this map

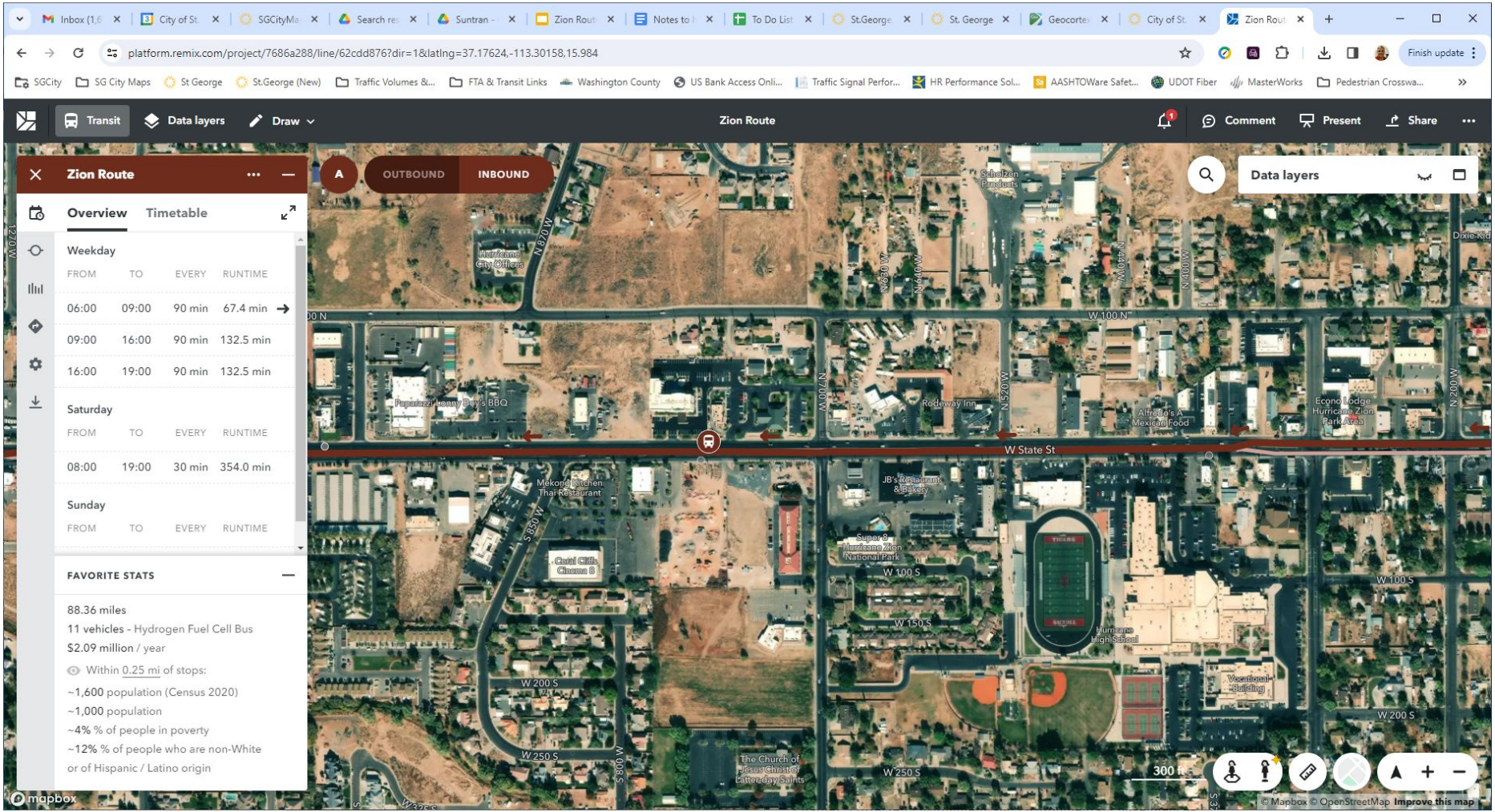

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
11 vehicles - Hydrogen Fuel Cell Bus
$2.09 million / year
Within 0.25 mi of stops:
~1,600 population (Census 2020)
~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
A
OUTBOUND
INBOUND
Data layers
SpringHill Suites
W Lions Head Dr
Crest Rd
Shadow Ridge Dr
Primavera Ln
N Green Spring Dr
Maverik
Maverik Truck and RV
W Buena Vista Blvd
Minute Market
Chevron
Veterans Memorial Hwy
Canyon Breeze RV Resort
Natural Grocers
Shoe Carnival
Kohl's
Telegraph Marketplace
Discount Tire
Red Robin
Ruth's Island Grill
In-N-Out Burger
W Telegraph St
Quality Inn
El Pollo Loco
Redlands RV Parks
Royal Thai Cuisine
Minnie's Storage
Grepe Station
50 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

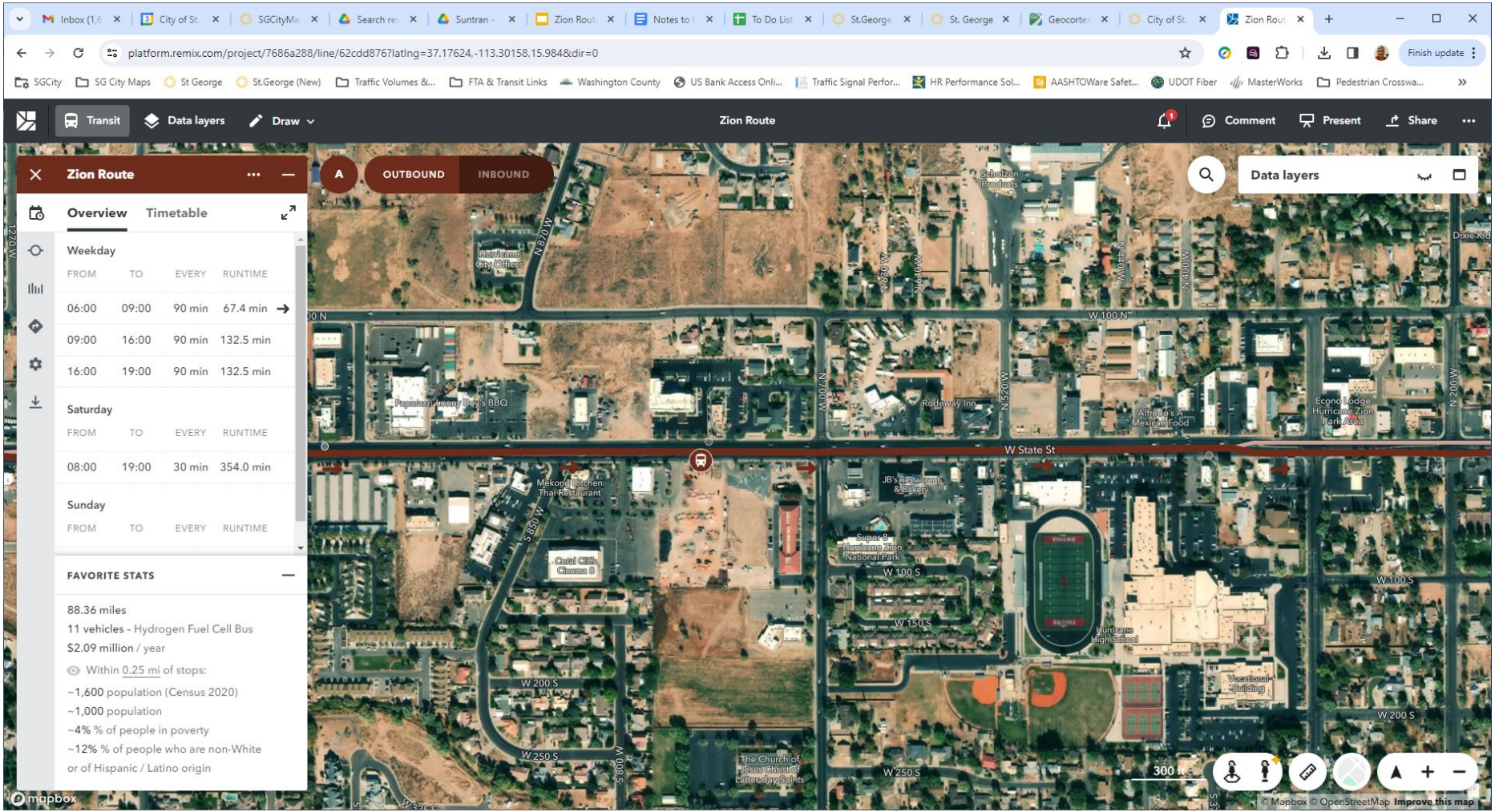

Zion Route
Transit
Data layers
Draw
Comment
Present
Share
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
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Within 0.25 mi of stops:
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~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
SpringHill Suites
W Lions Head Dr
Crest Rd
Shadow Ridge Dr
Primavera Ln
N Green Spring Dr
Maverik Truck and RV
Maverik
W Buena Vista Blvd
Minute Market
Chevron
Veterans Memorial Hwy
Canyon Breeze RV Resort
Natural Grocers
Shoe Carnival
Kohl's
Telegraph Marketplace
Discount Tire
Red Robin
Ruth's Island Grill
In-N-Out Burger
W Telegraph St
Quality Inn
El Pollo Loco
Redlands RV Parks
Royal Thai Cuisine
Minnie's Storage
Grepe Station
N 100 W
N 500 W
W 500 S
S 100 E
50 ft
© Mapbox © OpenStreetMap Improve this map
mapbox

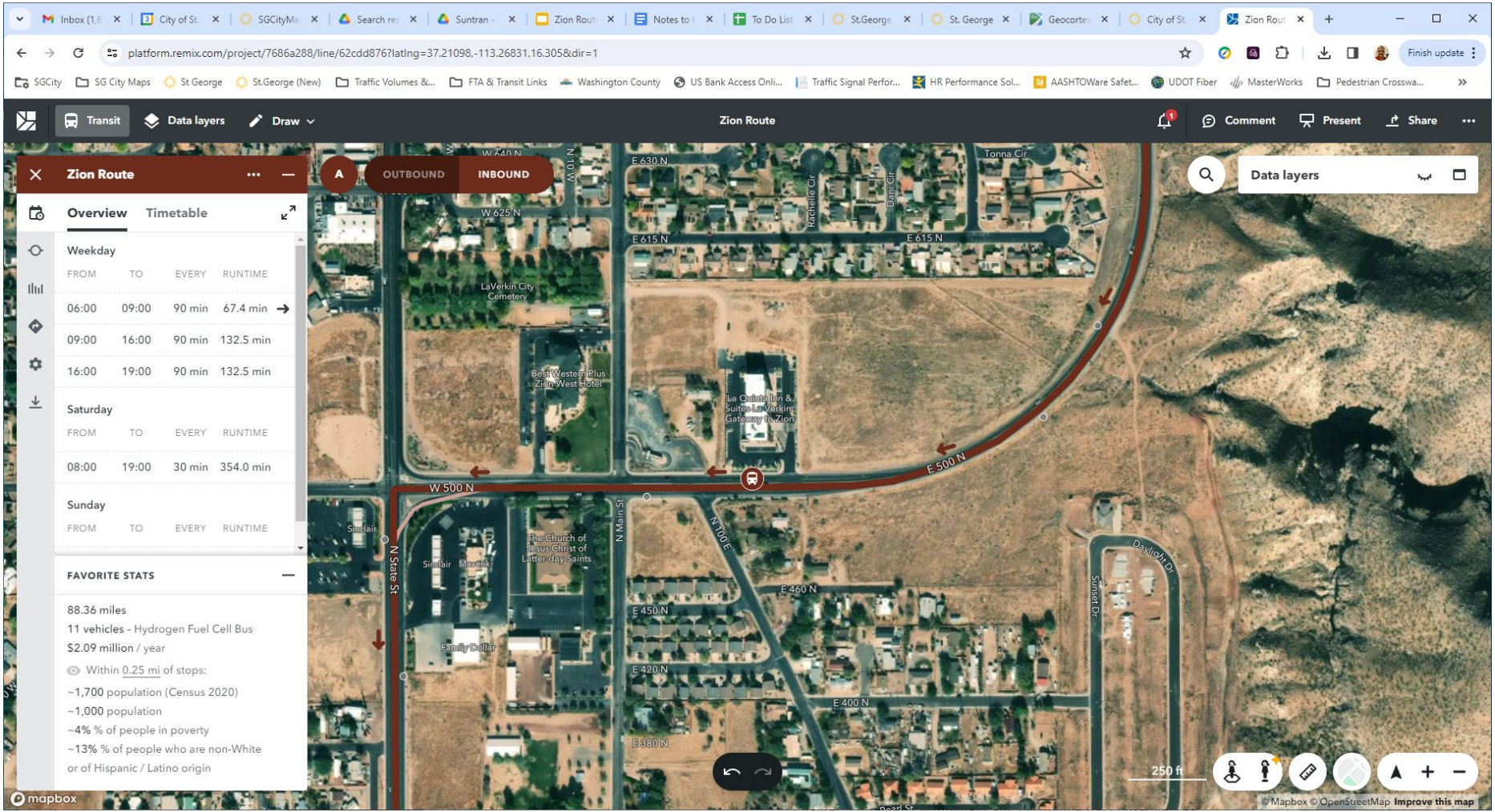

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
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Within 0.25 mi of stops:
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~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
N 5300 W
W State St
Utah Department of Motor Vehicles - Hurricane
S 5300 W
Regional Park Rd
Wheeler Way
W State St
800 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

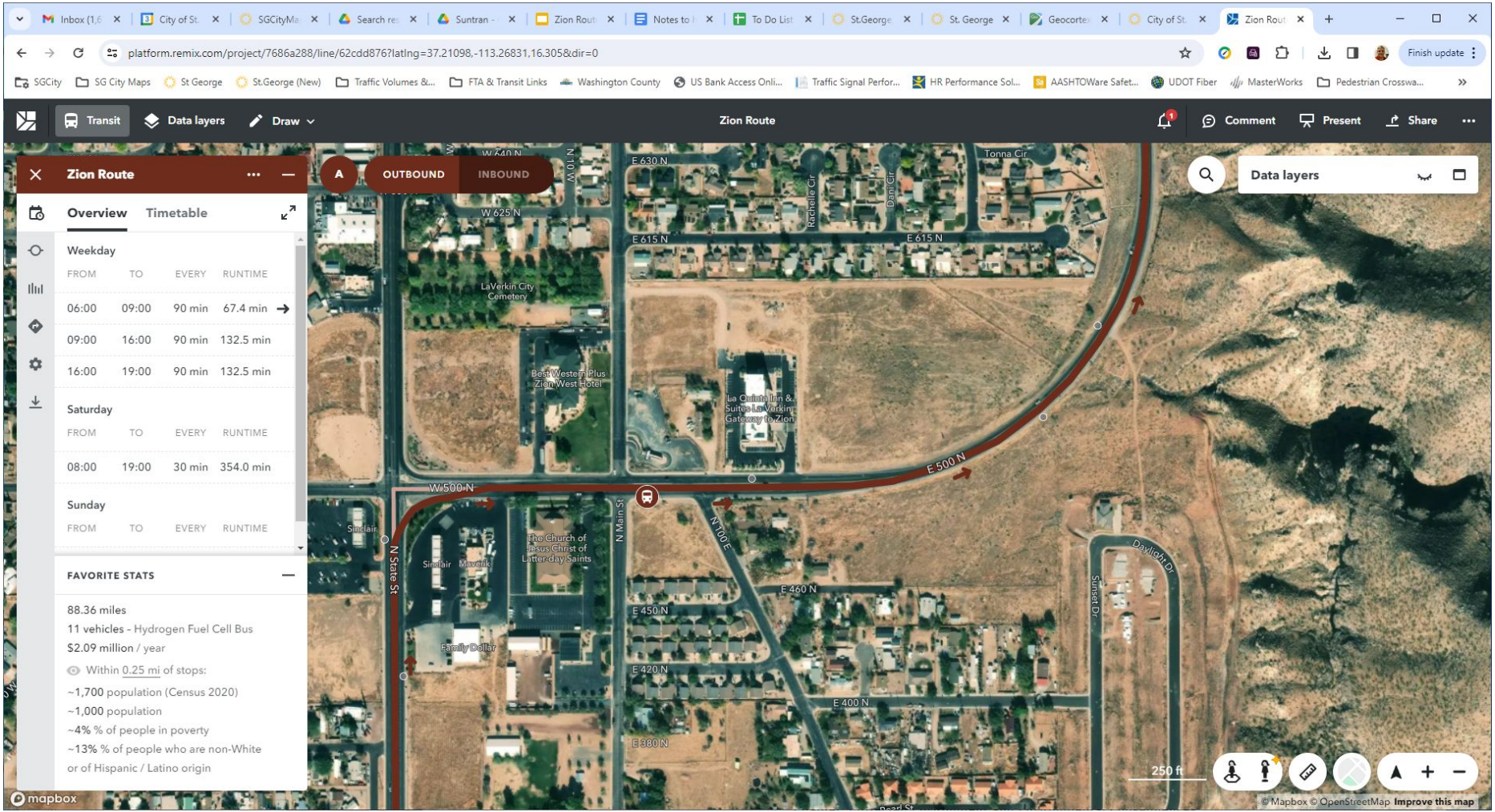

platform.remix.com/project/7686a288/line/62cdd876?latlng=37.17071,-113.36739,15.53&dir=1
Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
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Within 0.25 mi of stops:
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~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
A
OUTBOUND
INBOUND
Data layers
W 290 N
W 200 N
W 150 N
N 3560 W
N 3400 W
N 3300 W
Zion Gate Park
Walmart Supercenter
Zion Gate RV Resort
Mayan
W State St
Flora Tec Rd
Sandhollow
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

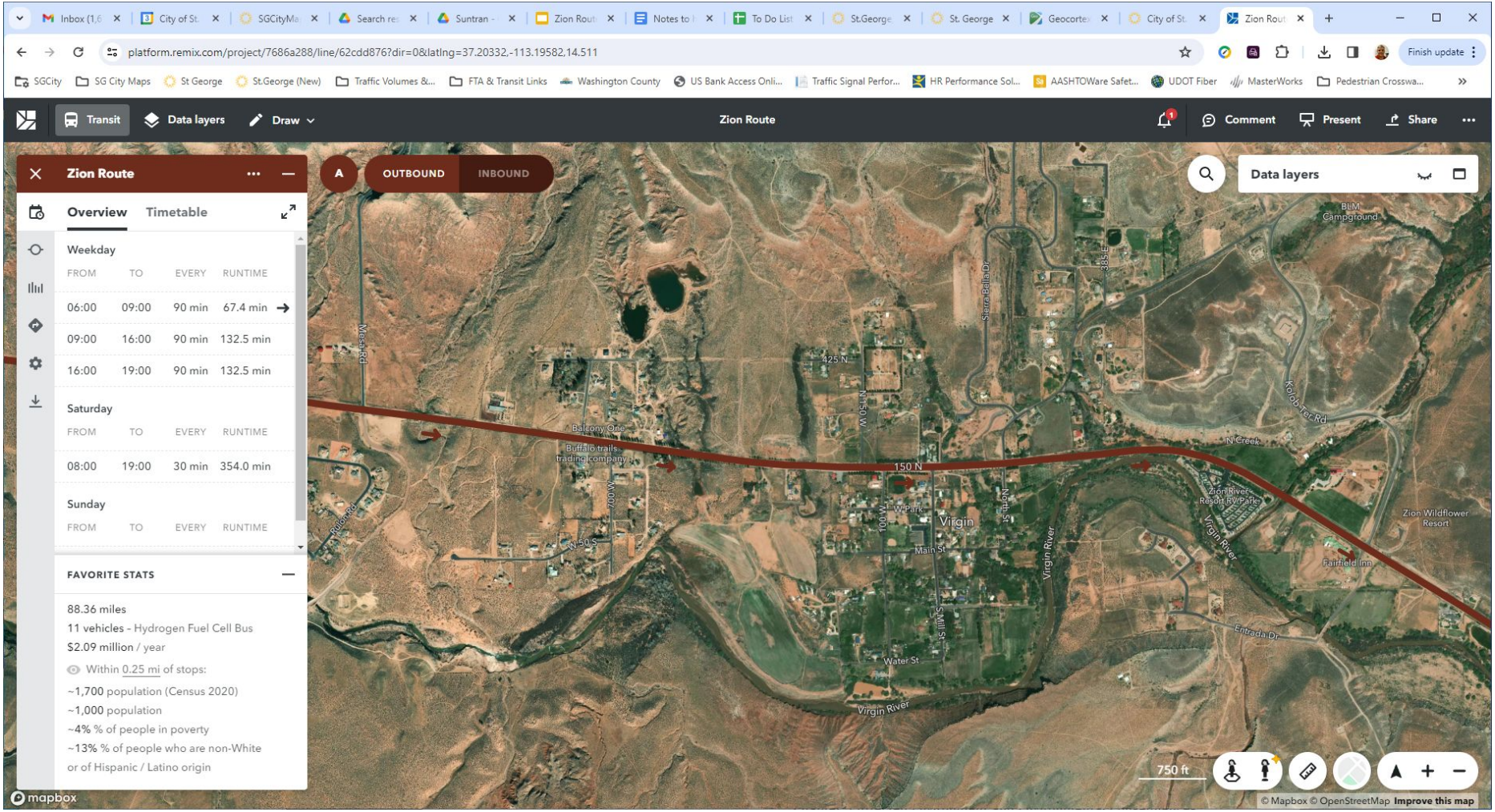

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
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~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
W 290 N
W 200 N
W 150 N
W 100 N
N 3400 W
N 3500 W
N 3700 W
Zion Gate Park
Walmart Supercenter
Zion Gate RV Resort
Mayan
W State St
Flora Tec Rd
Sandhollow
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

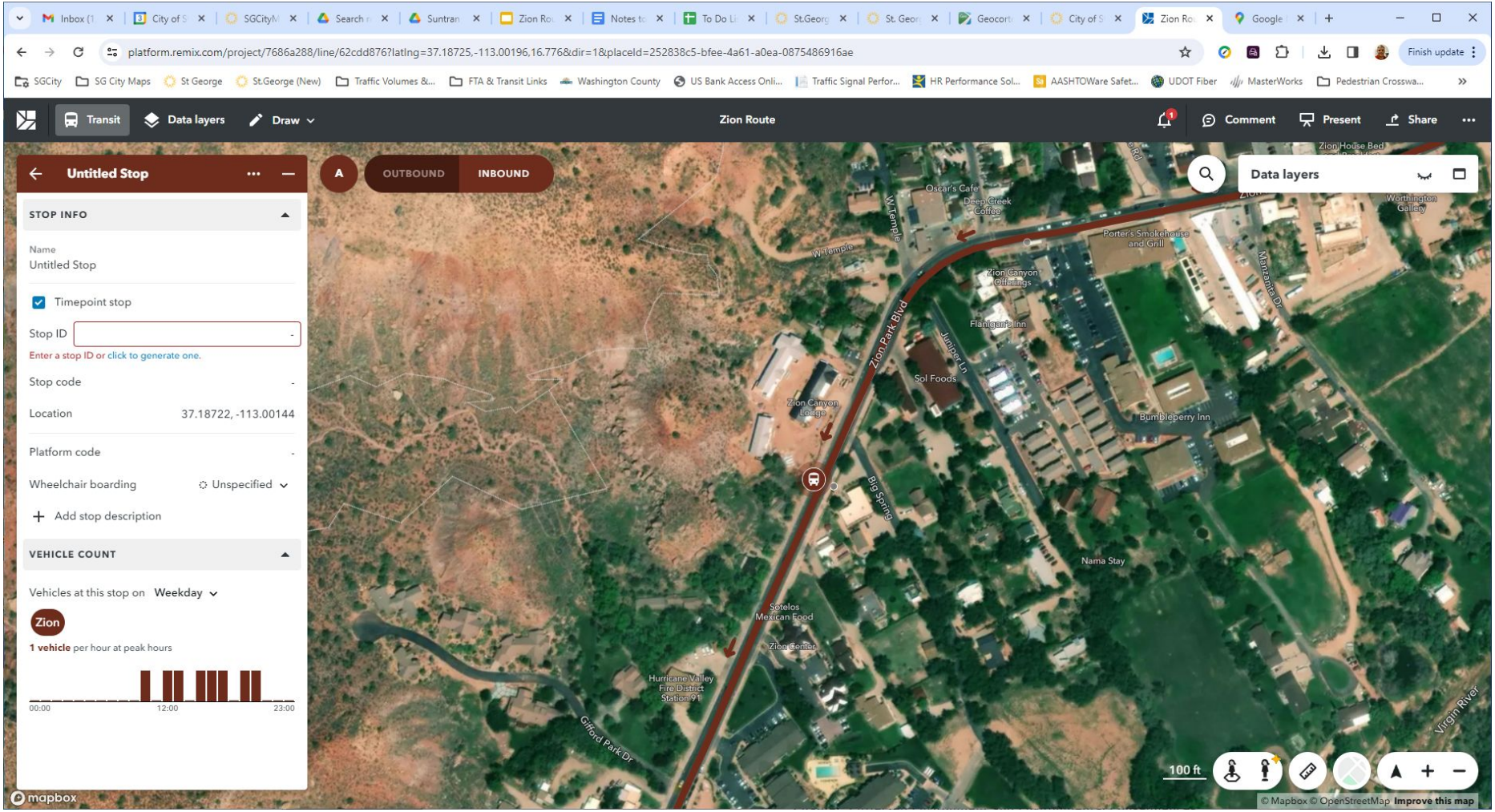

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
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~1,000 population
~4% % of people in poverty
~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
W State St
W 100 N
W 100 S
W 150 S
W 200 S
W 250 S
N 870 W
N 700 W
N 520 W
N 200 W
S 850 W
S 800 W
Hurricane City Offices
Scholzen Products
Paparazzi Jonny Boy's BBQ
Rodeway Inn
Alfredo's A Mexican Food
Econo Lodge Hurricane Zion Park Area
Mekong Kitchen Thai Restaurant
JB's Restaurant & Bakery
Super 8 Hurricane Zion National Park
Coral Cliffs Cinema 8
Hurricane High School
Vocational Building
The Church of Jesus Christ of Latter-day Saints
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

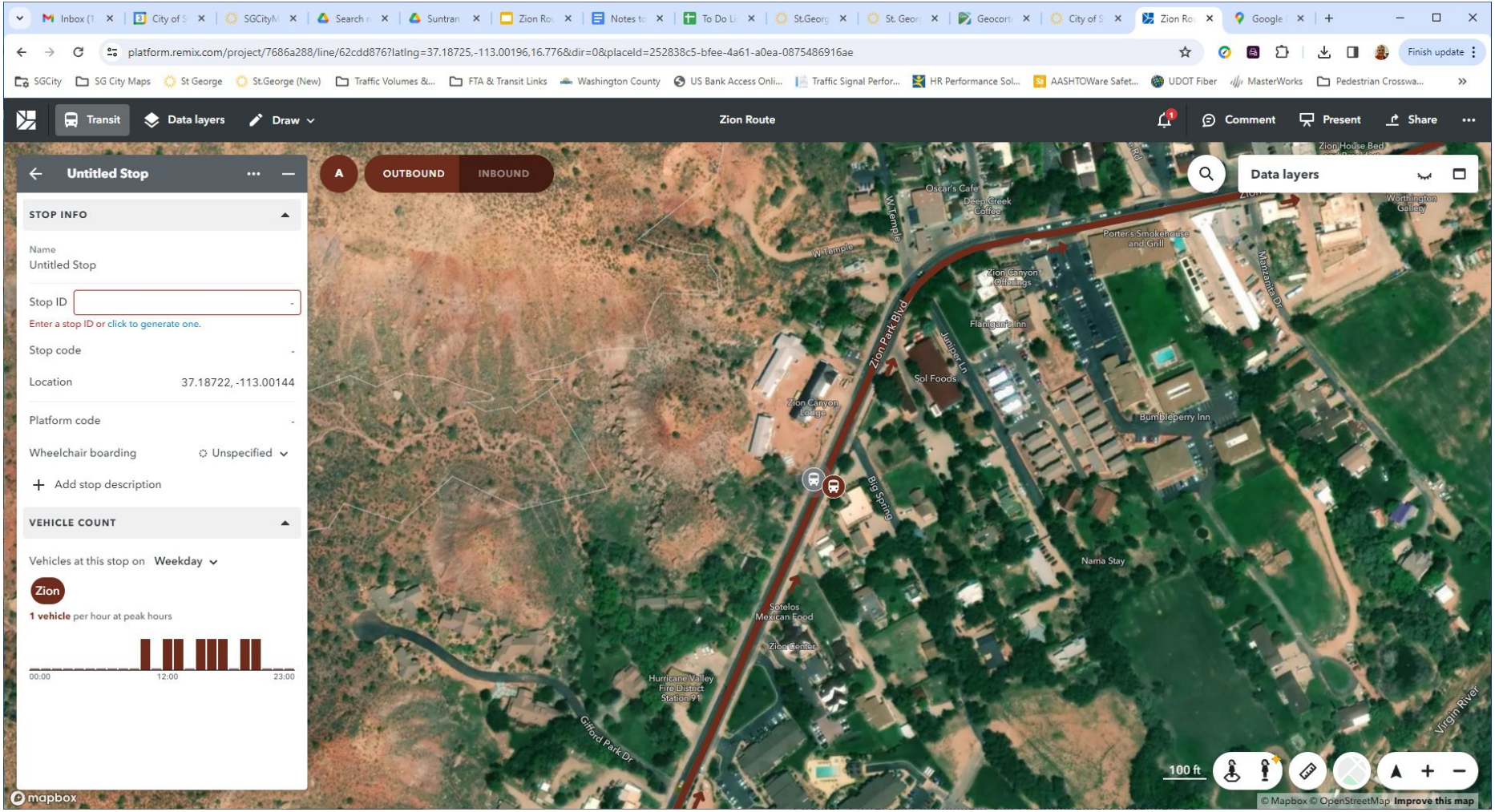

Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
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~1,000 population
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~12% % of people who are non-White or of Hispanic / Latino origin
Data layers
W State St
W 100 S
W 150 S
W 200 S
W 250 S
W 100 N
Hurricane City Offices
Scholzen Products
Rodeway Inn
Alfredo's A Mexican Food
Econo Lodge Hurricane Zion Park Area
Mekong Kitchen Thai Restaurant
JB's Restaurant & Bakery
Super 8 Hurricane Zion National Park
Coral Cliffs Cinema 8
Hurricane High School
The Church of Jesus Christ of Latter-day Saints
300 ft
mapbox
© Mapbox © OpenStreetMap Improve this map

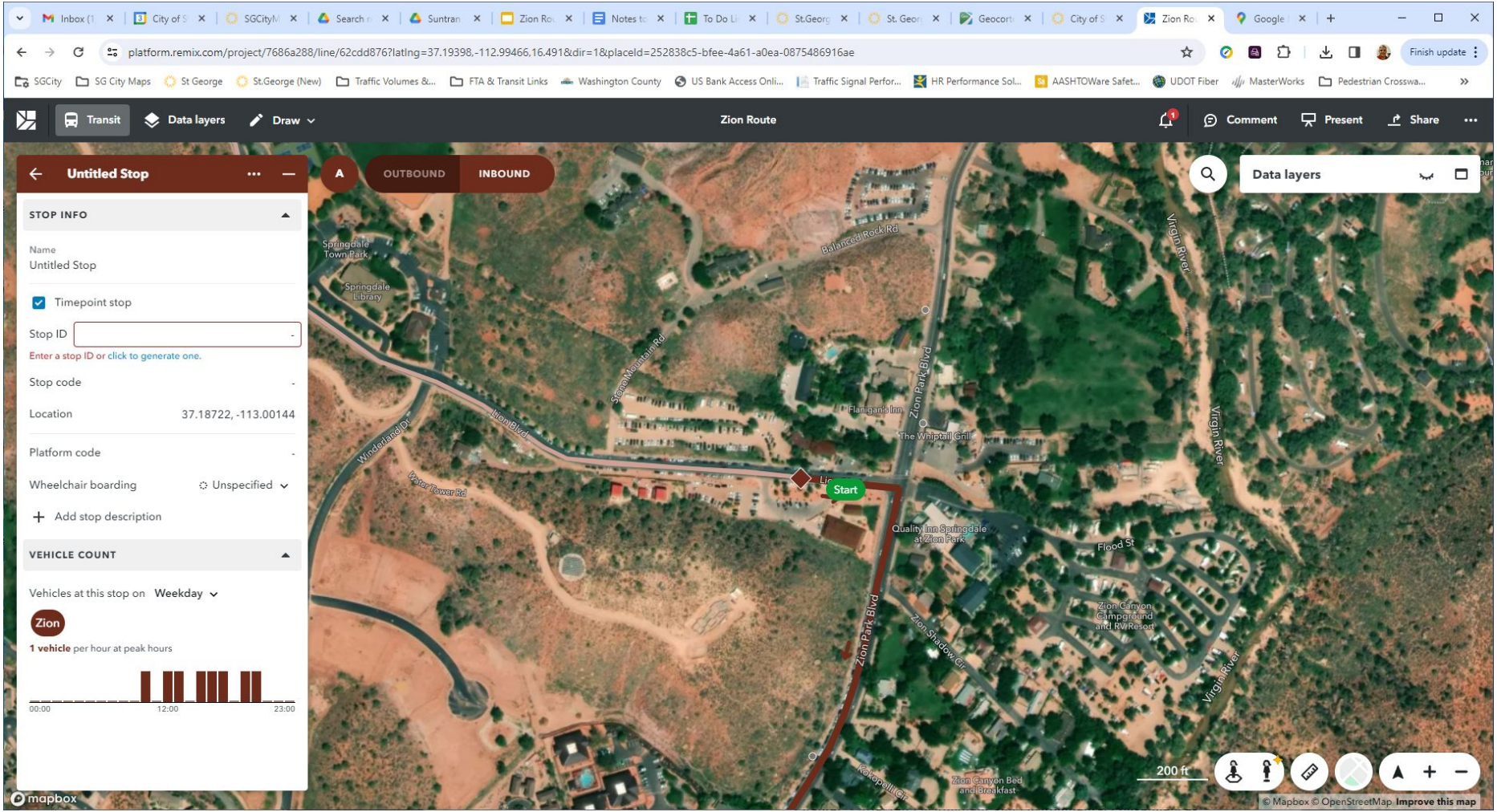

Zion Route
Transit
Data layers
Draw
Comment
Present
Share
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
11 vehicles - Hydrogen Fuel Cell Bus
$2.09 million / year
Within 0.25 mi of stops:
~1,700 population (Census 2020)
~1,000 population
~4% % of people in poverty
~13% % of people who are non-White or of Hispanic / Latino origin
Data layers
W 500 N
E 500 N
N State St
N Main St
N 700 E
E 630 N
E 615 N
W 625 N
E 460 N
E 450 N
E 420 N
E 400 N
E 380 N
Tonna Cir
Rachelle Cir
Dani Cir
Daylight Dr
Sunset Dr
LaVerkin City Cemetery
Best Western Plus Zion West Hotel
La Quinta Inn & Suites La Verkin Gateway to Zion
Sinclair
Maverik
The Church of Jesus Christ of Latter-day Saints
Family Dollar
250 ft
mapbox
© Mapbox © OpenStreetMap Improve this map


Zion Route
Transit
Data layers
Draw
Comment
Present
Share
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
FAVORITE STATS
88.36 miles
11 vehicles - Hydrogen Fuel Cell Bus
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~1,700 population (Census 2020)
~1,000 population
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~13% % of people who are non-White or of Hispanic / Latino origin
Data layers
W 625 N
E 630 N
E 615 N
Tonna Cir
Rachelle Cir
Dani Cir
LaVerkin City Cemetery
Best Western Plus Zion West Hotel
La Quinta Inn & Suites La Verkin Gateway to Zion
E 500 N
W 500 N
N State St
N Main St
N 100 E
Sinclair
The Church of Jesus Christ of Latter-day Saints
Family Dollar
E 460 N
E 450 N
E 420 N
E 400 N
E 380 N
Daylight Dr
Sunset Dr
250 ft
mapbox
© Mapbox © OpenStreetMap Improve this map


Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Zion Route
A
OUTBOUND
INBOUND
Overview
Timetable
Weekday
FROM TO EVERY RUNTIME
06:00 09:00 90 min 67.4 min
09:00 16:00 90 min 132.5 min
16:00 19:00 90 min 132.5 min
Saturday
FROM TO EVERY RUNTIME
08:00 19:00 30 min 354.0 min
Sunday
FROM TO EVERY RUNTIME
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~1,000 population
~4% % of people in poverty
~13% % of people who are non-White or of Hispanic / Latino origin
Data layers
BLM Campground
Mesa Rd
425 N
N 50 W
Sierra Bella Dr
385 E
Kolob Terrace Rd
Balcony One
Buffalo trails trading company
150 N
700 W
100 W
W Park
Virgin
North St
Main St
Virgin River
N Creek
Zion River Resort RV Park
Zion Wildflower Resort
Fairfield Inn
Entrada Dr
N 50 S
S Mill St
Water St
750 ft
mapbox
© Mapbox © OpenStreetMap Improve this map


Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Untitled Stop
A
OUTBOUND
INBOUND
STOP INFO
Name
Untitled Stop
Timepoint stop
Stop ID
Enter a stop ID or click to generate one.
Stop code
Location
37.18722, -113.00144
Platform code
Wheelchair boarding
Unspecified
Add stop description
VEHICLE COUNT
Vehicles at this stop on Weekday
Zion
1 vehicle per hour at peak hours
00:00
12:00
23:00
Data layers
Oscar's Cafe
Deep Creek Coffee
Porter's Steakhouse and Grill
Zion Canyon Offerings
Flanigan's Inn
Sol Foods
Zion Canyon Lodge
Bumbleberry Inn
Nama Stay
Sotelos Mexican Food
Zion Center
Hurricane Valley Fire District Station 91
W Temple
Zion Park Blvd
Big Spring
Gifford Park Dr
Manzanita Dr
Juniper Ln
Virgin River
100 ft
mapbox
© Mapbox © OpenStreetMap Improve this map


Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Untitled Stop
A
OUTBOUND
INBOUND
STOP INFO
Name
Untitled Stop
Stop ID
Enter a stop ID or click to generate one.
Stop code
Location
37.18722, -113.00144
Platform code
Wheelchair boarding
Unspecified
Add stop description
VEHICLE COUNT
Vehicles at this stop on Weekday
Zion
1 vehicle per hour at peak hours
00:00
12:00
23:00
Data layers
Oscar's Cafe
Deep Creek Coffee
Porter's Smokehouse and Grill
Worthington Gallery
W Temple
Zion Canyon Offerings
Flanigan's Inn
Zion Park Blvd
Juniper Ln
Manzanita Dr
Sol Foods
Zion Canyon Lodge
Bumbleberry Inn
Big Spring
Nama Stay
Sotelos Mexican Food
Zion Center
Hurricane Valley Fire District Station 91
Gifford Park Dr
Virgin River
100 ft
mapbox
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platform.remix.com/project/7686a288/line/62cdd876?latlng=37.19398,-112.99466,16.491&dir=1&placeId=252838c5-bfee-4a61-a0ea-0875486916ae
Transit
Data layers
Draw
Zion Route
Comment
Present
Share
Untitled Stop
A
OUTBOUND
INBOUND
STOP INFO
Name
Untitled Stop
Timepoint stop
Stop ID
Enter a stop ID or click to generate one.
Stop code
Location
37.18722, -113.00144
Platform code
Wheelchair boarding
Unspecified
Add stop description
VEHICLE COUNT
Vehicles at this stop on Weekday
Zion
1 vehicle per hour at peak hours
00:00
12:00
23:00
Data layers
Springdale Town Park
Springdale Library
Balanced Rock Rd
Virgin River
Stone Mountain Rd
Zion Park Blvd
Flanigan's Inn
The Whiptail Grill
Wonderland Dr
Lion Blvd
Water Tower Rd
Start
Quality Inn Springdale at Zion Park
Flood St
Zion Canyon Campground and RV Resort
Zion Shadow Cir
Zion Park Blvd
Virgin River
Zion Canyon Bed and Breakfast
200 ft
mapbox
© Mapbox © OpenStreetMap Improve this map