ORDINANCE NO. 2024-O-29

AN ORDINANCE ADOPTING THE TRANSPORTATION ELEMENT OF THE GENERAL PLAN WHICH INCLUDES THE IMPACT FEES FACILITIES PLAN

WHEREAS, in accordance with Utah Code 10-9a-403 Midvale City is required to include a Transportation Element in its General Plan; and

WHEREAS, the City desires to continue to create an efficient and balanced transportation system that enhances the quality of life for all residents and visitors; and

WHEREAS, the City has partnered with Wasatch Front Regional Council (WFRC) and received funding to hire a consultant to conduct an in-depth analysis including a transparent planning process; and

WHEREAS, the Midvale City Transportation Element of the General Plan used Utah Code 10-9a-403 as its basis, conducted the required analyses and proposes a comprehensive Transportation Plan including an Impact Fees Facilities Plan; and

WHEREAS, the Planning Commission held a public hearing on October 23, 2024 to review the plan, receive public comment and, after considering all the information received, made a recommendation to approve the Transportation Element of the General Plan; and

WHEREAS, the City Council of Midvale City, Utah held a public hearing on November 12, 2024; and

WHEREAS, after taking into consideration citizen testimony, planning analysis, and the Planning Commission's recommendation as part of its deliberations, the City Council finds it is within the best interest of the City to amend the General Plan by adding a Transportation Element.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Midvale City, Utah as follows:

Section 1: The General Plan is hereby amended to include a Transportation Element.

Section 2: This ordinance shall take effect upon the date of first publication.

PASSED AND APPROVED this 3rd day of December 2024.

Paul Glover, Mayor Pro Tempore

ATTEST:

Rori L. Andreason, MMC
City Recorder

MIDVALE CITY STATE OF UTAH INCORPORATED JULY 1, 1909 CORPORATE SEAL

Voting by the Council:	"Aye"	"Nay"
Bonnie Billings	✓	
Paul Glover	✓	
Heidi Robinson	✓	
Bryant Brown	✓	
Dustin Gettel	✓	

Date of first publication: Dec 9, 2024

Midvale City Transportation Master Plan

DECEMBER 2024

Midvale City
Transportation Master Plan

Prepared for:

Midvale City
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December 2024

ACKNOWLEDGMENTS

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Midvale City

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ACRONYMS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic volumes
ADA	Americans with Disabilities Act
APBP	Association of Pedestrian and Bicycle Professionals
AT	active transportation
ATIF	Active Transportation Investment Fund
ATIIP	Active Transportation Infrastructure Investment Program
ATO	Access to Opportunities
BRT	Bus Rapid Transit
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CRP	Carbon Reduction Program
FLM	first/last mile
ITE	Institute of Transportation Engineers
LOS	Level of Service
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RCN	Reconnecting Communities and Neighborhoods Grant Program
SE	socioeconomic
SS4A	Safe Streets and Roads for All
TAZ	traffic analysis zone
TIF	Transportation Investment Fund
TIP	Transportation Improvement Program
TMP	Transportation Master Plan
TTIF	Transit Transportation Investment Fund
UDOT	Utah Department of Transportation
UGRC	Utah Geospatial Resource Center
UTA	Utah Transit Authority
WFRC	Wasatch Front Regional Council

1. Introduction

Midvale City is a vibrant community located in Salt Lake County, Utah with a population of approximately 35,600. The city offers a convenient location with easy access to adjacent municipalities of Murray, Sandy, Cottonwood Heights, and West Jordan as well as convenient access to Interstates 15 and 215. Midvale continues to experience moderate growth, attracting residents and businesses alike. As Midvale City grows, it is crucial to have a well-planned transportation system that meets the needs of residents, businesses, and visitors. This will ensure efficient movement of people and goods within the city and to the surrounding areas. This Transportation Master Plan (TMP) is focused on guiding future transportation investments and ensuring a coordinated approach to managing the city's transportation network.

1.1 Goals

The development of goals and objectives for the Midvale City TMP commenced with a comprehensive review of existing documents and transportation strategies. Key goals and recurring themes reflecting both current needs and future aspirations were identified through this examination. Additionally, community survey responses were examined to determine themes from the public. The synthesized insights were formulated into a draft framework addressing the community's diverse transportation needs. This draft was presented to the City Council on November 14, 2023, for comment. The process ensures that the goals and objectives are strategically sound and aligned with Midvale's transportation vision.

Goals:

1. Increase quality of life in Midvale through comfortable human-powered and motorized access for everyday trips such as recreation, health care, employment, and cultural and community amenities.
2. Support human-powered access to neighborhoods, city centers, parks, gateways, and redevelopment target areas.
3. Improve community cohesion and recreation through active transportation (AT).
4. Create a safe, connected, and equitable transportation system that supports multi-modal movement and responsible parking.

1.2 Public Engagement

The Engage Midvale initiative gathered community input for the TMP. Between August 2023 to August 2024, the website recorded a total of 493 visits, with a maximum of 19 visitors per day.

Key Engagement Activities:

- *Surveys*: 84 participants completed surveys, providing valuable insights into transportation usage patterns, concerns, and priorities.
- *Informed Visitors*: 165 individuals obtained detailed information about transportation initiatives.
- *Engaged Participants*: 88 individuals actively contributed through surveys and other means.

Key Findings:

- *Priorities*: Active transportation, resilience, and connectivity were identified as top priorities.
- *Concerns*: Public transportation, accessibility, and safety were expressed as primary concerns.

The community feedback gathered through the Engage Midvale initiative significantly shaped the Midvale Transportation Master Plan. Insights from the surveys and public engagement ensured that the proposed transportation improvements directly address the residents' needs and priorities.

1.2.1 Community Survey and Public Comment

The Engage Midvale Transportation Master Plan survey, conducted between September 2023 and March 2024, highlighted several key themes:

Safety:

Respondents prioritized safety, citing concerns about collector and arterial streets for cyclists and pedestrians, as well as high vehicle speeds on Center Street and State Street.

Connectivity and Travel:

Connectivity throughout Midvale was a common issue, with residents noting difficulty in traveling east of I-15 to west Midvale without a car. Canal trails attracted interest from some residents.

Transportation Habits:

Driving alone was the most common mode of transportation, followed by carpooling, walking, and biking. TRAX/FrontRunner was the least used. Daily use was most frequent for driving alone and walking, while other modes were used weekly.

Priorities:

Residents prioritized improvements for traffic calming, public transportation, bicycle facilities, and sidewalks. There was no strong preference for enhancing the system with new features or focusing on maintaining existing infrastructure, or for a larger number of smaller projects versus a smaller number of larger projects.

Demographics:

Most participants commute through, visit, or work in Midvale, with some being residents.

A detailed dataset from the Survey Responses Report can be found in Appendix A.

1.2.2 Public Event #1 – Harvest Days 2023

In August 2023, the team participated in the Midvale City Harvest Days event to initiate awareness of the TMP. The engagement team set up a booth where 76 attendees were provided with information about the TMP and directed to further resources. Additionally, a dedicated TMP site was established on the Engage Midvale web platform in preparation for the public survey.

1.2.3 Public Event #2 – Harvest Days 2024

In August 2024, the engagement team again participated in Midvale City's Harvest Days. The booth provided information about an upcoming public presentation, which would review survey results, present the draft transportation master plan, and outline next steps.

1.2.4 Public Event #3 – Draft Plan Presentation August 2024

On August 7, 2024, a hybrid public meeting was held, both virtually and in-person. Project team representatives and city staff presented the draft TMP and discussed how survey results influenced the plan. The meeting included a Q&A session.

Eight community members attended in person, and 30 participants joined via YouTube live stream. The presentation recording was posted on the Engage Midvale site and shared on Midvale City's Facebook page, receiving 582 views.

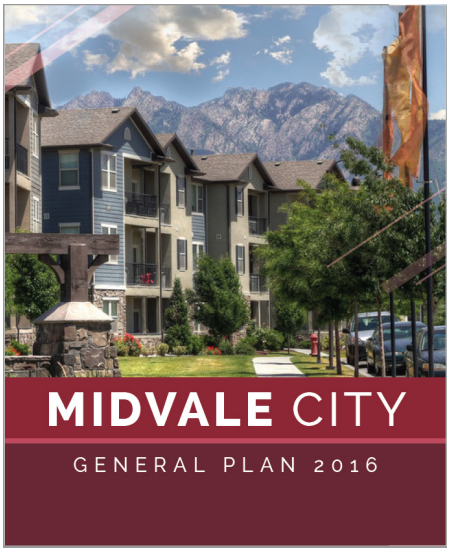
2. Existing Conditions

Midvale City's transportation network offers strong regional connectivity through major highways and TRAX stations. However, within the city, east-west travel is limited, particularly for pedestrians and cyclists. Congestion on major roads frequently spills over to local streets, and north-south barriers like I-15 and State Street hinder east-west movement.

Public transit options have limitations. TRAX stations lack robust east-west connections, and existing bus routes do not fully address service gaps. To create a more balanced and connected transportation system, Midvale City is actively pursuing improvements outlined in this document.

2.1 Previous Studies

Midvale City General Plan, 2016

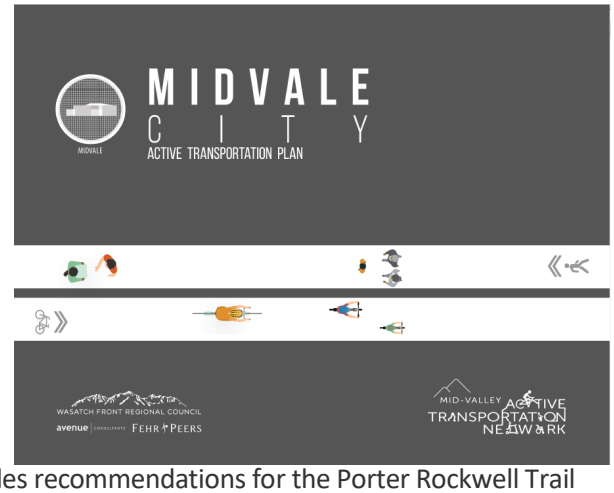


The Midvale City General Plan 2016 serves as a blueprint for the city's future development. Adopted in 2016, it aims to guide decisions on land use, infrastructure, and overall community character. A key focus is improving east-west connectivity within Midvale, currently limited by transportation barriers. The plan encourages a variety of housing options, promotes a strong and diverse economy, and emphasizes walkable and bikeable neighborhoods. Public participation played a role in shaping the plan, ensuring it reflects the desires of Midvale residents. Overall, the Midvale City General Plan 2016 strives to create a thriving and connected city for the future.

Salt Lake County Active Transportation Implementation Plan, 2017

This plan provides recommendations for a county-wide high comfort bicycle network intended to attract a broad spectrum of bicyclists, including those that are less confident riding near motor vehicles traveling at higher speeds. High comfort bicycle facilities provide dedicated space and additional separation between bicyclists and vehicles on roads with higher vehicle speeds and volumes, or traffic calming on neighborhood streets that are shared by bicyclists and vehicles. High comfort bicycle routes also provide safe and convenient crossings of busy roads. The plan identifies a high-comfort bicycle network for Salt Lake County including recommendations for Midvale City such as bike lanes on 7500 South and 8000 South, multi-use paths, and neighborhood byway connections to TRAX stations.

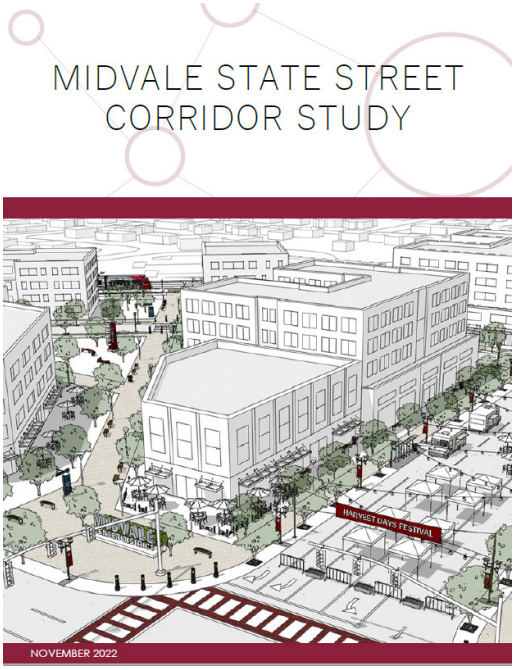
The Mid-Valley Active Transportation Plan, 2022



The Mid-Valley Active Transportation Plan focuses on improving connections for pedestrians and cyclists across six Utah cities, including Midvale. It aims to address the challenge of limited east-west travel within these communities, especially for those who do not use cars. The plan proposes a network of sidewalks, bike lanes, and trails to connect key destinations like parks, schools, and TRAX stations. This would encourage residents to walk and bike more often, improving public health and reducing reliance on cars. The plan also highlights areas for improvement around existing TRAX stations to make them more accessible on foot and bike. The plan includes recommendations for the Porter Rockwell Trail extension, a Center Street raised cycle track and Wasatch Street bike lanes. By creating a more connected and user-friendly active transportation network, the Mid-Valley Active Transportation Plan aims to make these cities more livable and sustainable.

Midvale State Street Corridor Study, 2022

The Midvale State Street Corridor Study outlines a plan to revitalize the State Street area. The goals of the plan are: Celebrate Midvale's history and character through art, culture, and consistent design standards. Improve safety and access for all users (drivers, pedestrians, cyclists, and public transit riders), enhance signage, and create vibrant public spaces. Encourage reinvestment, attract new businesses, and promote land uses that create a lively streetscape. Foster collaboration with residents, businesses, and other stakeholders, ensure inclusivity in the planning process, and balance diverse needs. Additionally, the plan focuses on three key objectives: improving local and regional connectivity, creating a network of distinct districts with a strong sense of place, and enhancing the overall aesthetic of the corridor. This initiative aims to make State Street a more welcoming and vibrant destination for residents and visitors, offering a mix of shopping, dining, living, and entertainment options. Challenges include pedestrian barriers around TRAX stations and pedestrian and bicycle safety.



Fort Union Corridor Study, 2024

The Midvale Fort Union Corridor Study analyzes Fort Union Boulevard with an eye towards redeveloping it into a more comfortable and exciting space for residents. Breaking the corridor into three segments, the study examines the ways in which each segment has redevelopment potential as well as opportunities to upgrade active transportation infrastructure. Separated bike facilities, midblock crossings, wider sidewalks, and increased housing density around key transportation hubs feature prominently in this plan. In addition the plan explores economic conditions throughout the corridor and the ways in which new transportation and housing infrastructure can combine to further stimulate an already bustling area.

Midvale Center and Fort Union Station Area Plan, 2024

The Midvale City Council approved a plan to improve the areas around the Midvale Center and Fort Union TRAX stations. This plan aligns with a state law requiring better development around rail stations. The goal is to improve design, land use, housing options, walking/biking access, and overall sustainability within a half-mile radius of the stations. The plan reflects community input gathered through surveys, workshops, and discussions. To advance the plan, approval from regional transportation authorities is required. This plan positions Midvale as a leader in urban re-development and aims to foster a more livable city for all.

Midvale Main Street Small Area Plan, 2018 and Voices of Main Street, 2024

The Main Street revitalization plans tackle isolation caused by freeways, rail lines, and fast streets. The plans aim to create a more connected and pedestrian-friendly area. Slower traffic on key streets, improved crosswalks, and a future walkway to the TRAX station are some solutions. An active transportation connection to the Jordan River Parkway is also planned. These improvements will enhance safety, public transit access, and the overall character of the neighborhood, ultimately attracting better development and strengthening Midvale's image.

2.2 Existing Transportation Network

2.2.1 Active Transportation Network

Recognizing streets as vital pathways for mobility, Midvale City TMP emphasizes the development of a safe, efficient, and inclusive multi-modal transportation network. This network aims to accommodate diverse street users, mitigate environmental impacts, promote healthy lifestyles, and enhance overall community well-being. Streets are not merely conduits for movement but foundational elements that shape urban development and public spaces, contributing to Midvale's appeal and economic vitality.

Midvale's existing road network, while serving the city's transportation needs, presents limited opportunities for AT facilities beyond the north-south aligned trails along the Jordan River Parkway. Many of the existing multi-use path/cycle tracks within the Bingham Junction developments are disconnected from other facilities. Many of the existing neighborhood level streets inherently provide safe movement for pedestrians and cyclists as there are lower speeds, reduced traffic, and wide streets.

Figure 1 illustrates the existing AT facilities and major points of interest (schools, retail centers, community centers, and transit stations) within Midvale City limits. The existing AT network primarily consists of multi-use paths and cycle tracks clustered near the Jordan River, with a notable absence of dedicated AT infrastructure in many areas. This lack of connectivity hinders safe and convenient walking and biking for residents, particularly those who wish to leave their neighborhoods to access other parts of the city.

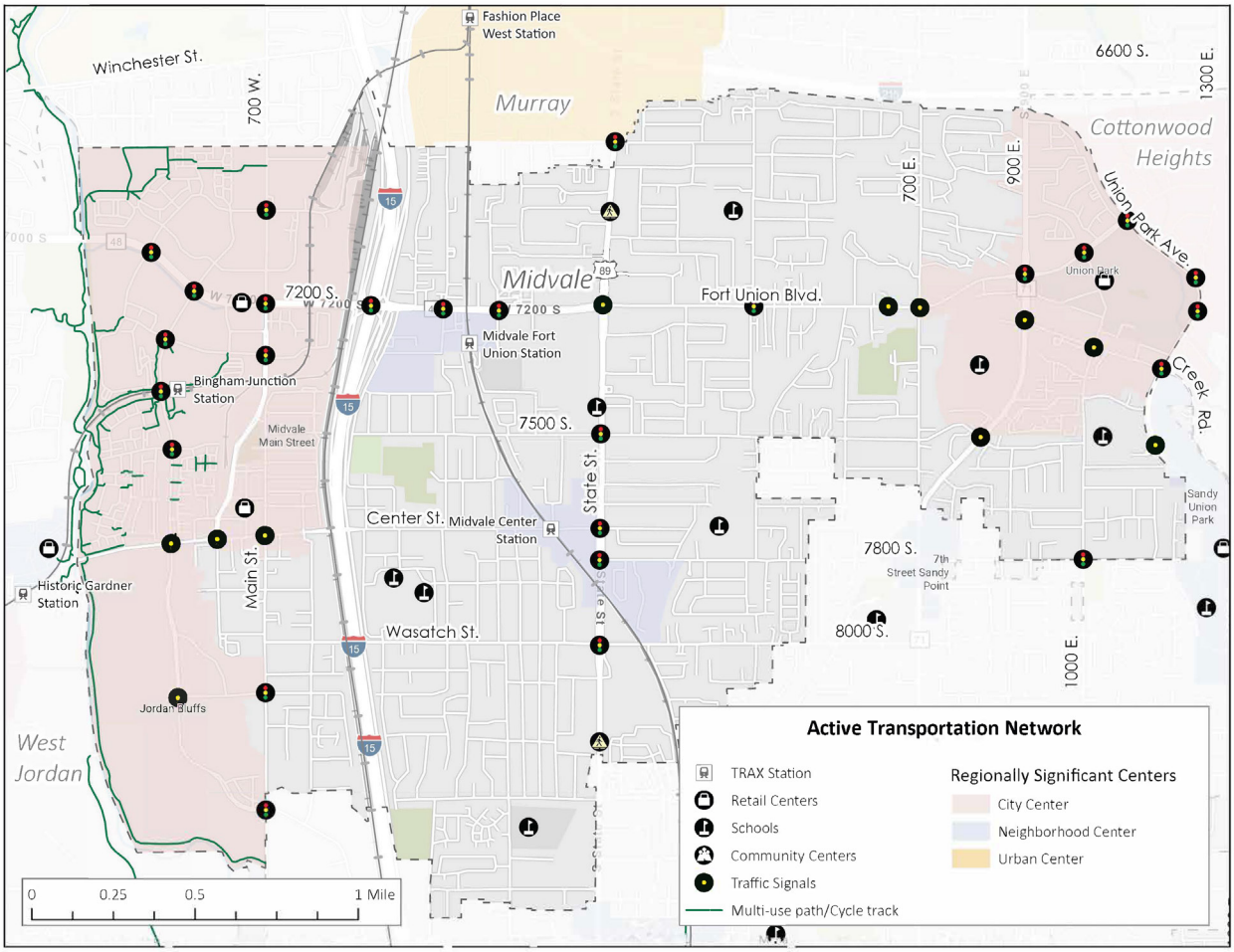


Figure 1. Existing AT Network

2.2.1.1 Pedestrian Facilities

Midvale's sidewalks are generally well-maintained and adhere to minimum standards along the city's main streets. However, the sidewalk network is inconsistent on smaller neighborhood streets. Some streets have sidewalks only on one side, while others lack sidewalks entirely. There are specific cases, such as at 7020 South and 700 West, where sidewalks abruptly end at buildings and then resume a short distance away. It is recommended that Midvale conduct an Americans with Disabilities Act (ADA) assessment to ensure compliance and identify any deficiencies in the sidewalk infrastructure.

The pedestrian facilities in Midvale mainly consist of sidewalks, supplemented by the westside Jordan River Trail, which serves as a shared-use path for both pedestrians and cyclists. The city's sidewalk network is generally complete, with standard widths ranging from 3.8 to 5 feet. Sidewalks are crucial as they provide dedicated pathways for walking, separate from vehicular traffic. They are essential for pedestrians and those using mobility devices, supporting various necessary activities.

As shown in Figure 2- Existing Pedestrian Network, the pedestrian network in Midvale offers access to parks, TRAX stations, and commercial areas across major roads. The connectivity within Midvale seems comprehensive, providing access across all interstates and arterial/collector roadways.

It is important to note that this assessment does not cover the condition of every sidewalk in the city, and there may be variations. For instance, some roads lack a buffer between the sidewalk and the roadway, which affects the perceived comfort of the network.

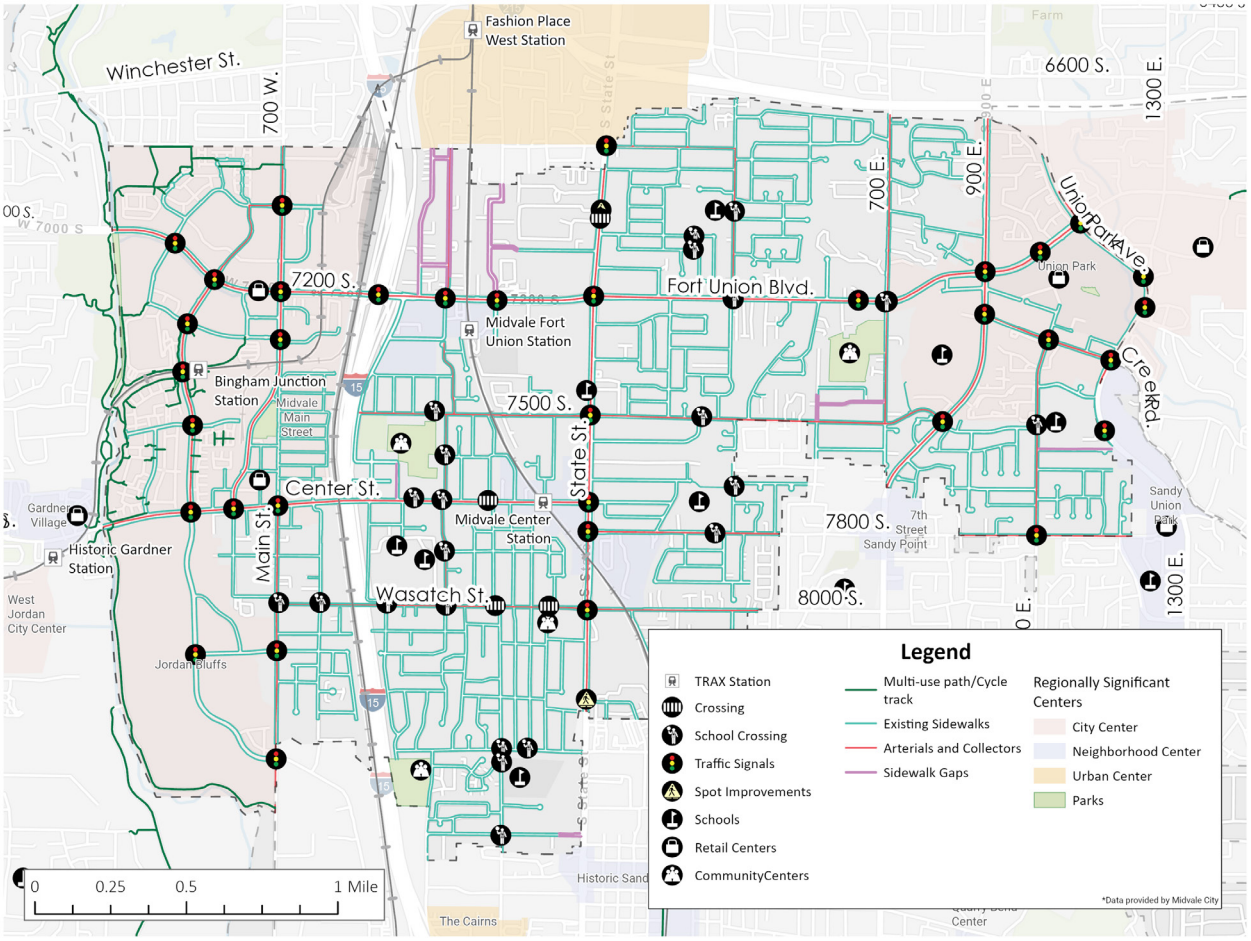


Figure 2. Existing Pedestrian Network

2.2.1.2 Existing Facilities and Connectivity

Midvale faces challenges in establishing efficient east-west links within its active transportation landscape, primarily due to rail barriers and the dominance of heavily trafficked north-south corridors like I-15 and State Street. Despite these challenges, the city has a promising network of east-west connector streets, including Center Street, 7500 South, and 8000 South. These connector streets provide valuable opportunities to enhance cyclist and pedestrian connectivity, linking to key community destinations such as parks, schools, places of worship, and commercial centers. Safer routes along these streets can benefit both current and future cyclists and pedestrians by avoiding freeway interchanges and other high-traffic zones.

To leverage the strengths of Midvale's east-west connector streets, it is essential to develop an optimized bicycling network. Identifying network gaps and opportunities for improvement opens possibilities for extending connectivity along 7800 South, 7500 South, and continuing along 7200 South, ultimately establishing a connection to Fort Union Boulevard and the Fort Union Shopping Mall.

Figure 3 through Figure 6 illustrate pedestrian accessibility maps. The subsequent maps highlight existing facilities and identify gaps within a half-mile radius of transit stations, schools, and retail/community nodes. The use of half-mile radii corresponds to a general 10-minute access shed that does not consider obstacles or walkability factors. This mapping exercise offers a concise overview of general access for each destination type, emphasizing areas for enhancing pedestrian connectivity.

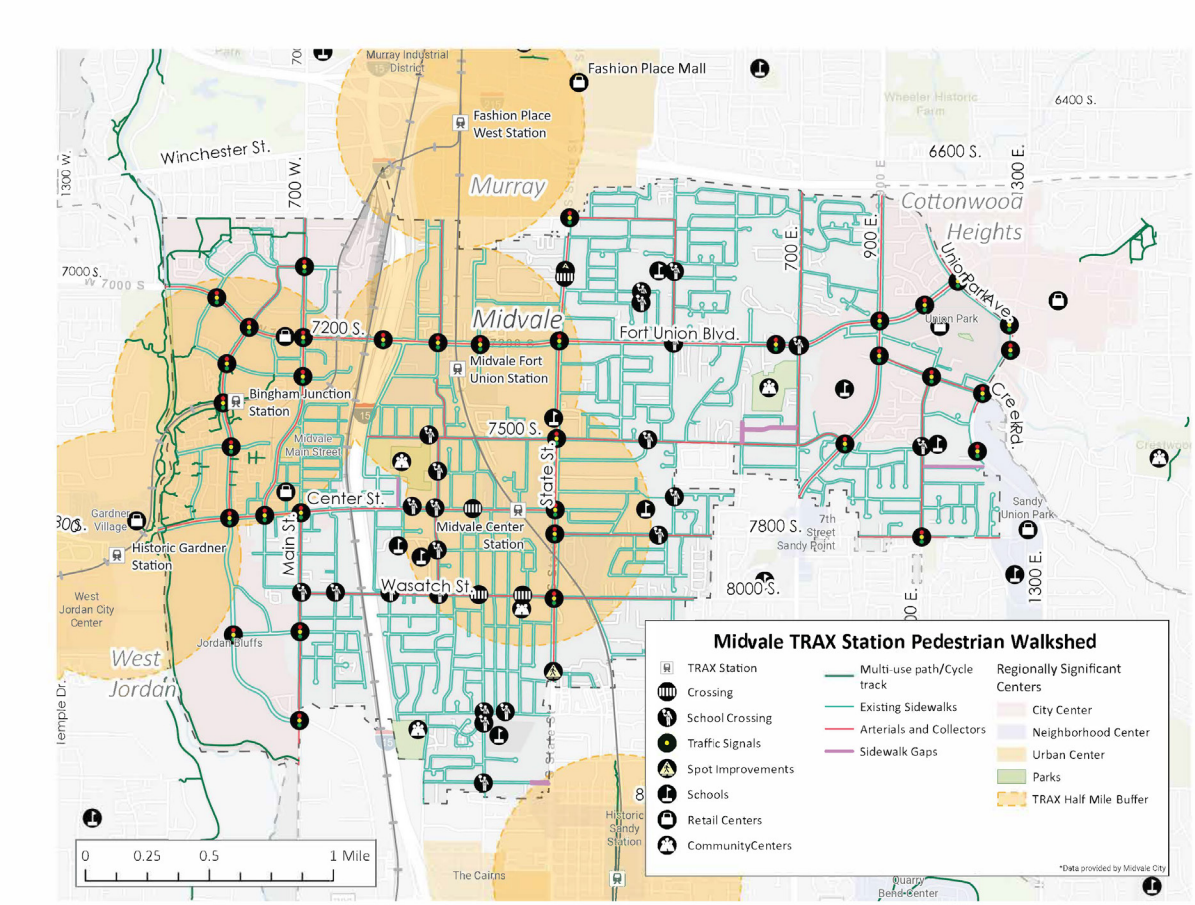


Figure 3. TRAX Station Pedestrian Walkshed

Midvale offers public transportation options with three UTA TRAX stations (7200 South, Center Street, and Bingham Junction) and five bus routes. Two additional stations (Historic Gardner and Fashion Place) are also shown on the map as they provide nearby transit service to Midvale. These connections provide easy access to major regional destinations, including downtown Salt Lake City and various ski resorts.

Although Midvale has a strong transit system, pedestrian barriers like fences and busy roads can hinder connections to TRAX stations. Addressing these challenges is essential for maximizing the benefits of the existing stations and ensuring easy access for both residents and visitors.

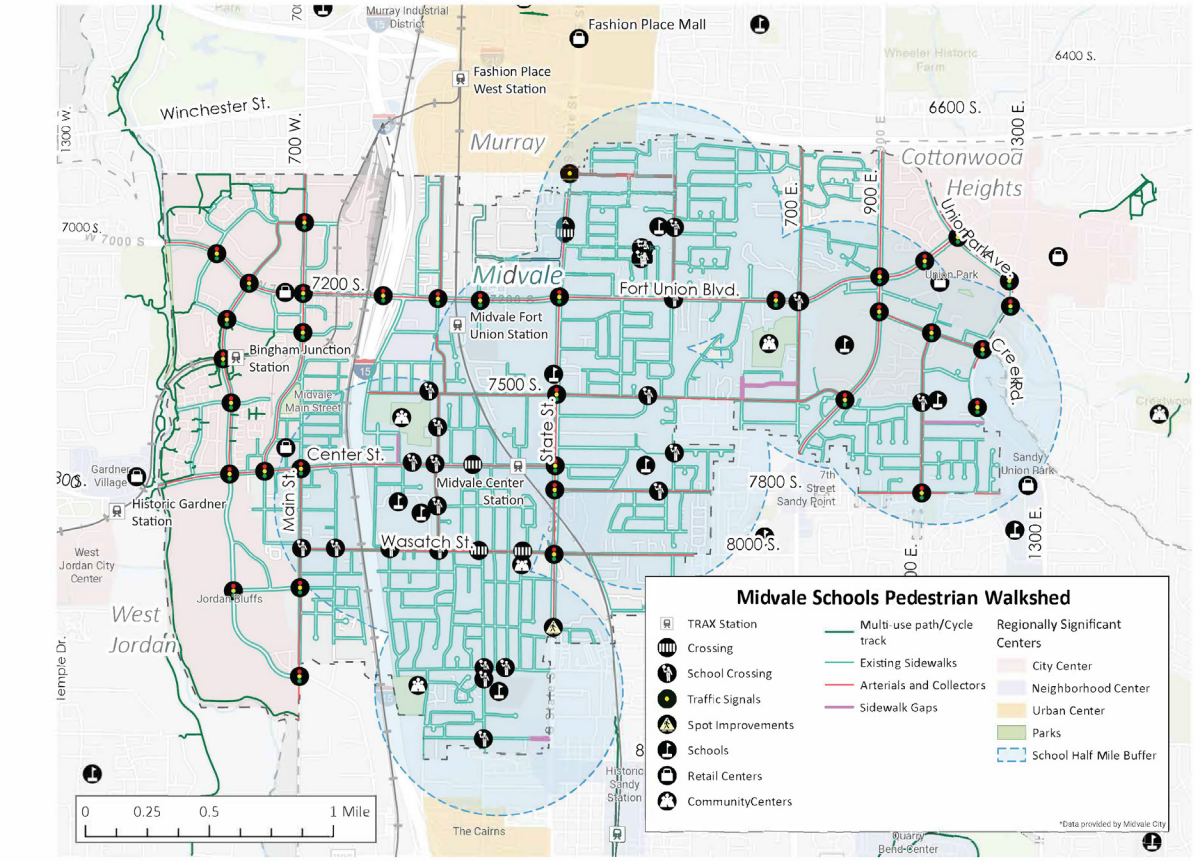


Figure 4. School Pedestrian Walkshed

Midvale hosts a diverse range of schools, encompassing both special education and regular education institutions. Special education schools include the Utah Autism Academy and Jordan Valley School. Additional educational facilities consist of Midvale Middle School (grades 6-8), Midvale Elementary School (grades K-5), Hillcrest High School (grades 9-12), Copperview Elementary School (grades K-5), East Midvale Elementary School (grades K-5), and Midvalley Elementary School (grades K-5).

Figure 4 shows current crossings and designated school zones that facilitate access for students. Schools are generally well-distributed throughout residential areas in Midvale, except for the newer areas west of Main Street. The subsequent recommendation effort involves pinpointing potential enhancements and assessing the efficiency of existing crossing points. This initiative aims to elevate overall pedestrian safety and accessibility, ensuring an optimal environment for students.

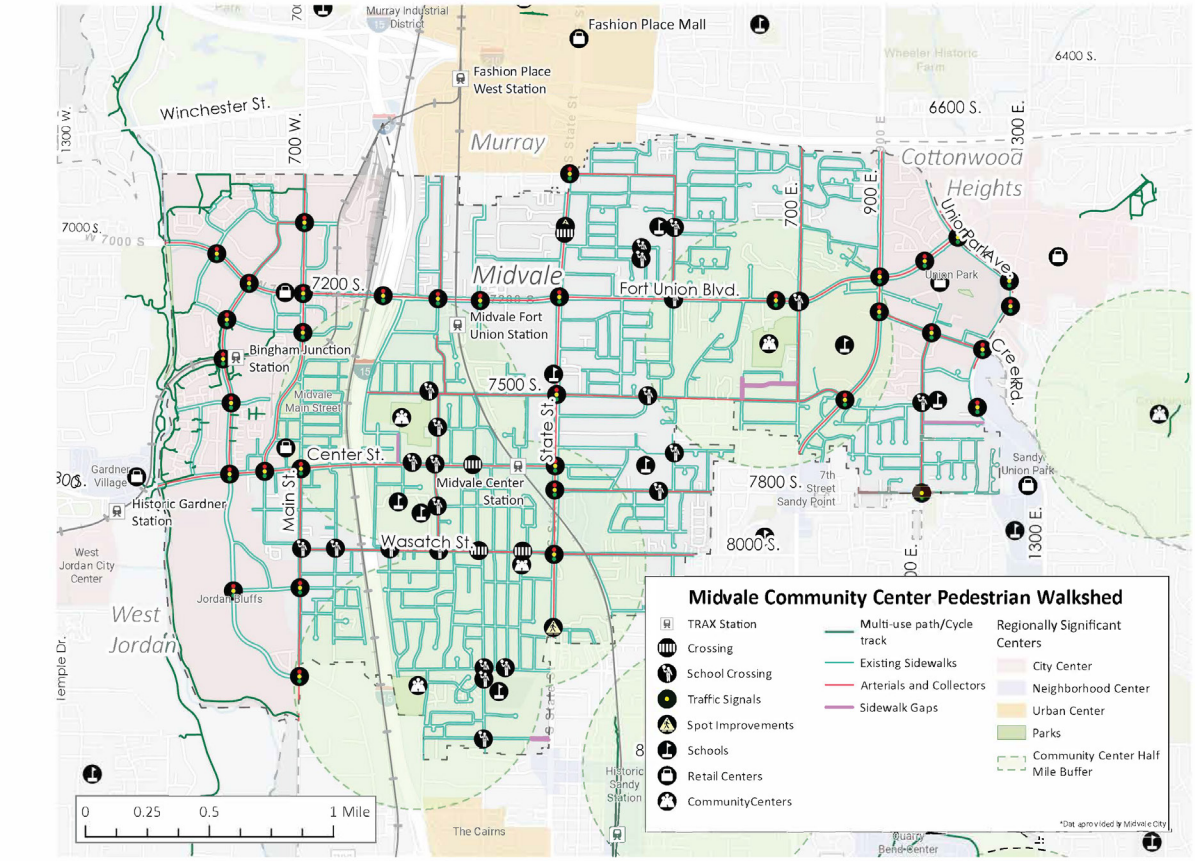


Figure 5. Community Center Pedestrian Walkshed

Community centers are primarily concentrated on the west side of the city, situated between the interstate and State Street. These include:

- Copperview Community Center, a facility owned and managed by Salt Lake County, is located at 8446 Harrison Street. This center serves the community by providing a diverse range of recreation and education services.
- Midvale City Park, owned and managed by Midvale City, spans approximately 19 acres, and is situated at 455 West 6th Avenue. The park features tennis courts, football/soccer fields, playground equipment, a pavilion, a community building, restrooms, a splash pad, and an amphitheater.
- Union Park, a neighborhood park owned and managed by Salt Lake County, encompasses around 16.56 acres at 7360 South 700 East. Ongoing discussions have identified Union Park as a potential future community center.

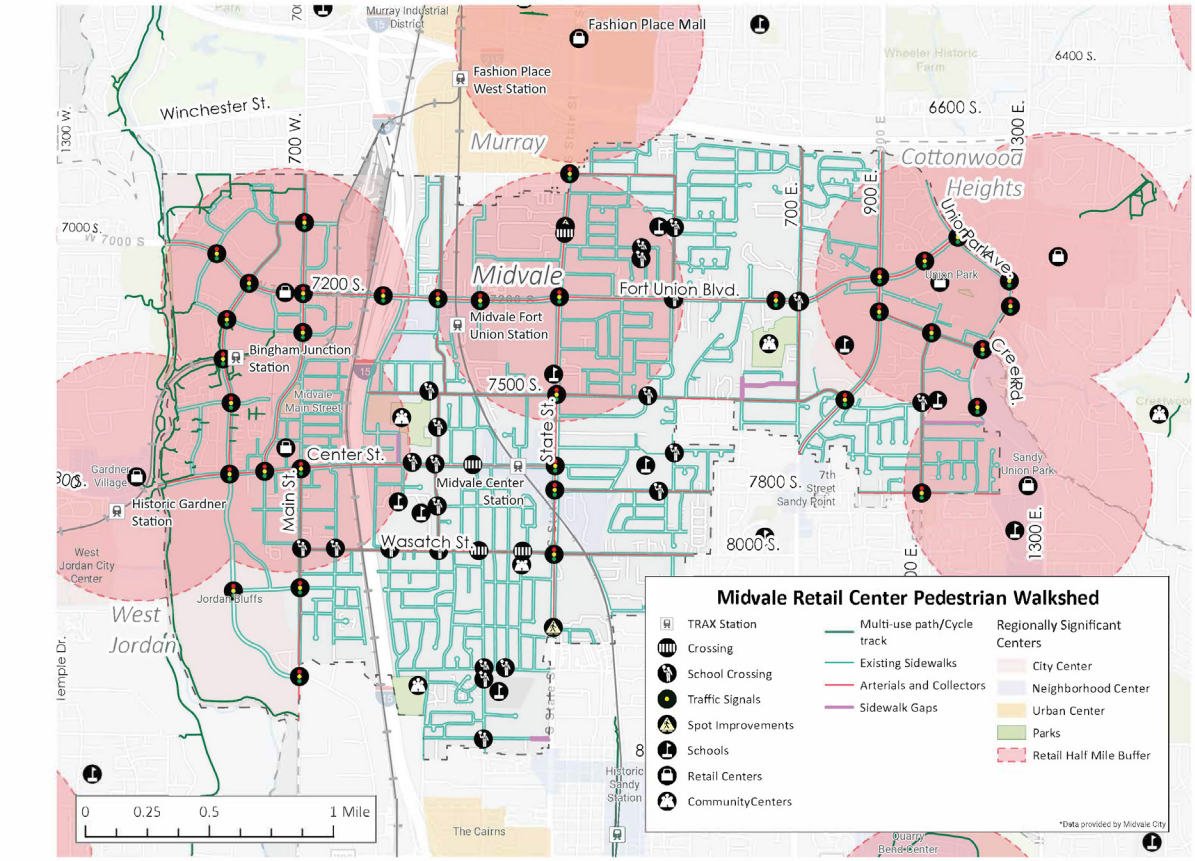


Figure 6. Retail Center Pedestrian Walkshed

Retail nodes in Midvale are concentrated in three primary areas, mainly on the west side of the city, with a particular focus on the Bingham Junction and Midvale Main Street center. Notably, the region around State Street and 7200 South showcases a diverse array of retail establishments, primarily on the western end adjacent to State Street.

The North State Street area occupies a strategic location at the intersection of two major arterial roadways, providing convenient access to both I-15 and I-215.

The Fort Union region stands out as a significant regional commercial center, featuring large retailers, chain restaurants, commercial office spaces, banks, and various public facilities. The Shops at Fort Union shopping area serves as a notable focal point within this bustling commercial district.

2.2.2 Vehicle Network

The proximity to I-15 and I-215 provides Midvale City good regional vehicular access, though the I-15/7200 South interchange is the only freeway access within Midvale City boundaries. I-15 crossings occur at three locations: 7200 South, Center Street, and 8000 South (Wasatch Street) Direct east/west connectivity across Midvale is only provided by Fort Union Boulevard/7200 South. Center Street, Wasatch Street, and 7800 South offer indirect east/west connectivity. State Street and 900 East are the primary north/south corridors. On the west side of I-15, Main Street and 700 West are an indirect

north/south path. Bingham Junction Boulevard is a major north/south roadway but does not extend beyond Midvale City boundaries. Figure 7 illustrates the major roadways in Midvale City. Section 2.3 provides a more detailed discussion of traffic performance.

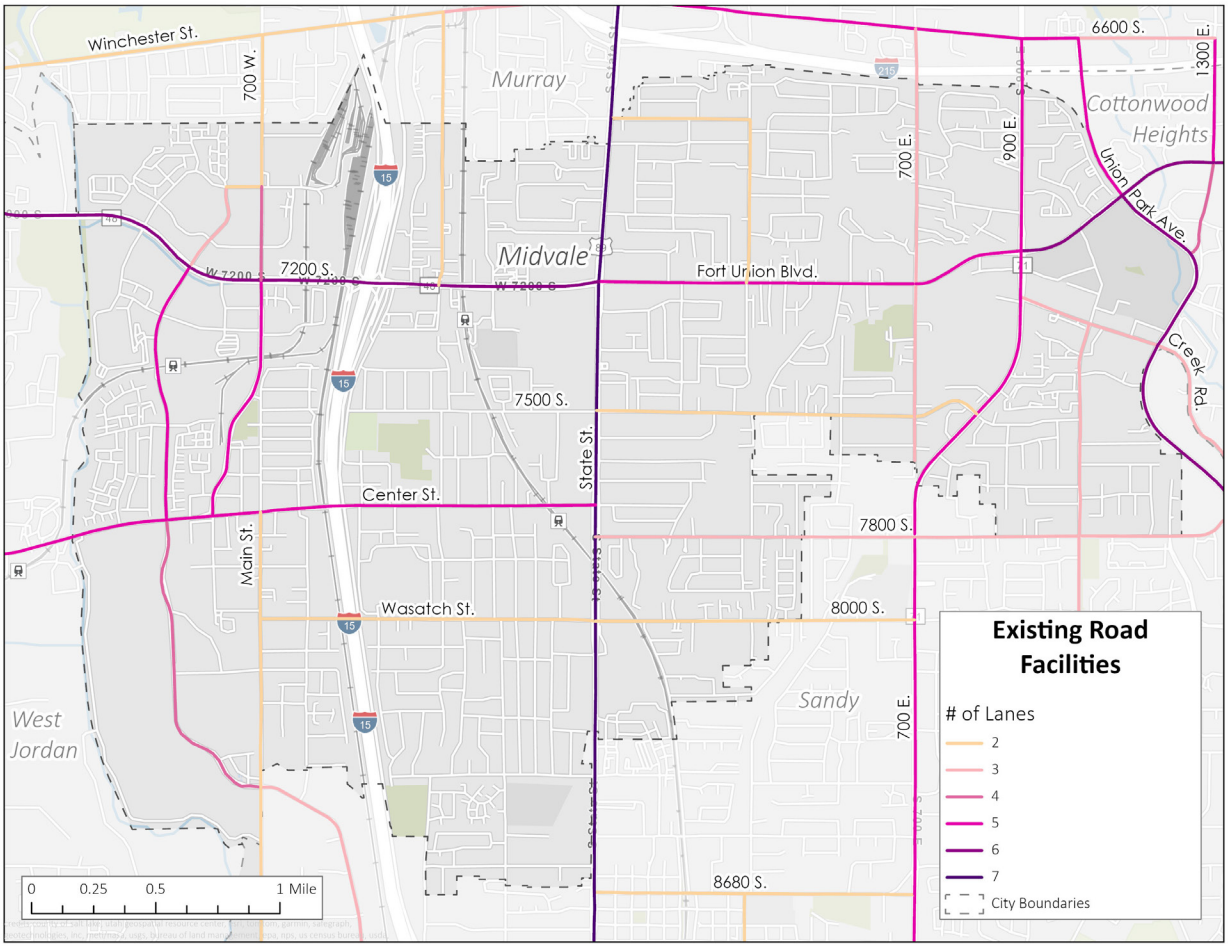


Figure 7. Existing Road Facilities in Midvale City

2.2.3 Transit Network

Midvale City's transit network is primarily served by the Utah Transit Authority (UTA). The UTA Frontrunner Commuter Rail line runs through Midvale City with the closest stations to the south in South Jordan and to the north in Murray. Midvale City is home to three TRAX light rail stations: Bingham Junction, Midvale Fort Union, and Midvale Center. The UTA Red Line serves Bingham Junction Station and the UTA Blue Line serves the Midvale Fort Union and Midvale Center stations. Both TRAX lines run a 15-minute weekday service. UTA operates relatively infrequent (every 30 minutes or more) bus routes in Midvale City. Many routes focus on service to TRAX stations. Figure 8 illustrates Midvale's existing transit network.

Recent efforts to improve transit services include the Fort Union Transit Center changes, aimed at enhancing operator efficiency and rider experience, and the creation of new Innovative Mobility Zones to better serve the community. Additionally, Midvale has developed Station Area Plans for all three TRAX stations. These plans are designed to optimize land use and transportation options around the stations, in accordance with state mandates.

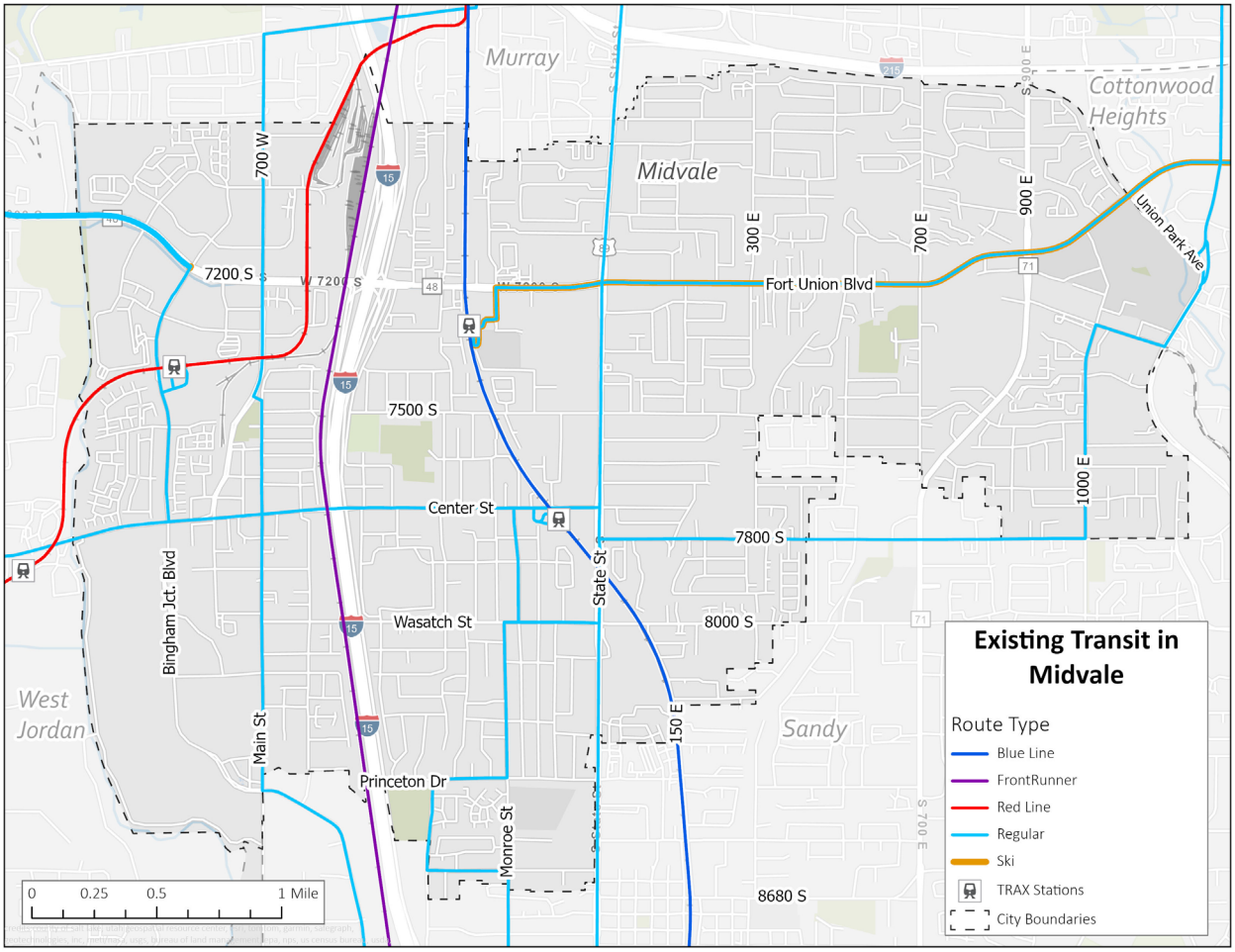


Figure 8. Existing Transit Network in Midvale City

2.3 Traffic Analysis

2.3.1 Traffic Volumes and Level of Service

The Utah Department of Transportation (UDOT) publishes Annual Average Daily Traffic volumes (AADT) for State and Federal Aid roads. AADT is the total volume of vehicle traffic of a highway or road for a year divided by 365 days. It is meant to represent traffic on a typical day of the year. UDOT reports and maps are updated annually and are available in the summer/fall after the completed year. The latest year of published data is 2023 which is shown in Figure 9.

Not including I-15, the most heavily traveled roadways in the city are State Street, 900 East, Fort Union Boulevard/7200 South, Union Park Avenue, and 700 West between 7200 South and Center Street. Elsewhere throughout the city, volumes consistently remain below 20,000 vehicles per day.

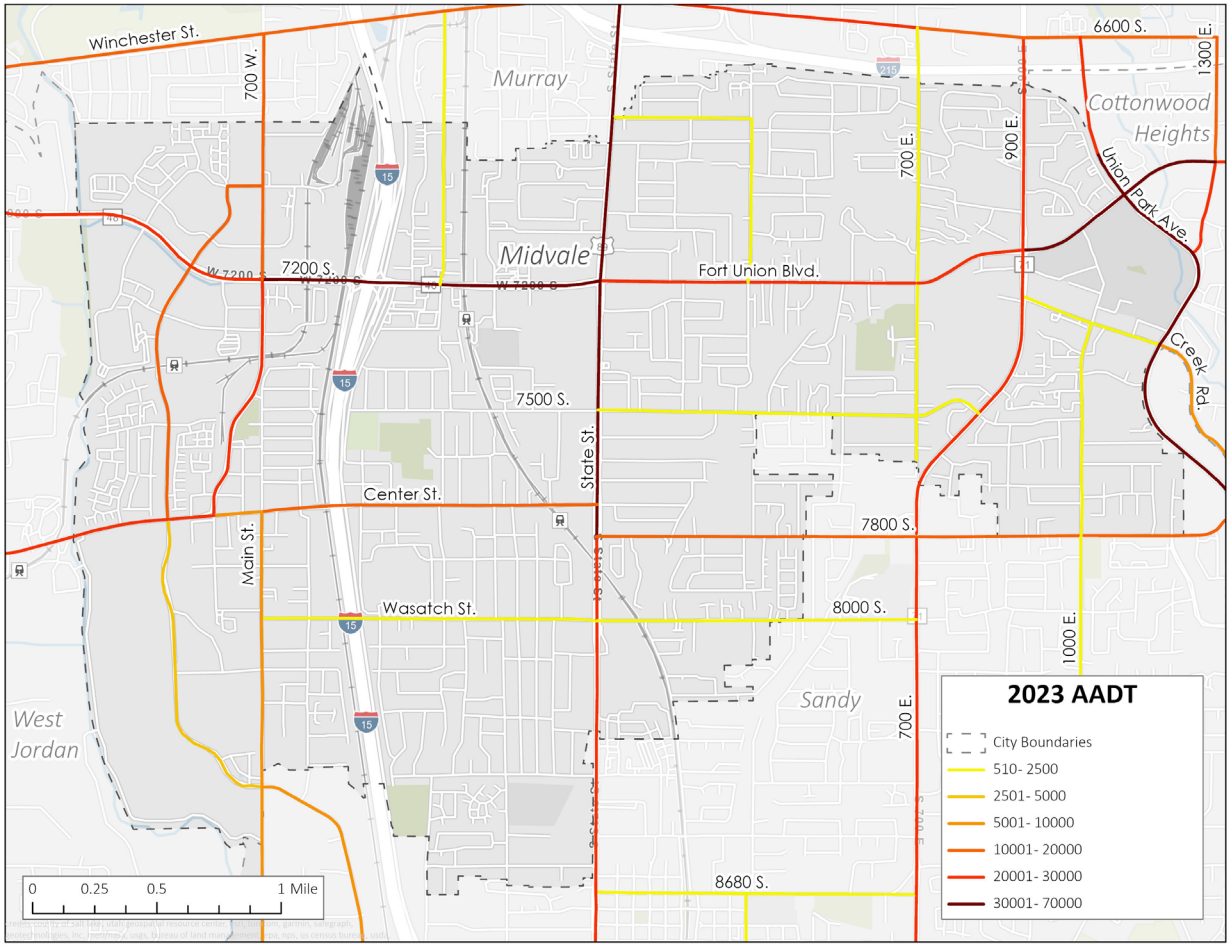


Figure 9. UDOT 2023 AADT Traffic on Midvale City Major Roadways

2.3.2 Travel Times

The travel time data was obtained via UDOT's Clear Guide platform which aggregates vehicle probe data. The data was used to evaluate existing average cross-city PM peak hour travel time for five corridors:

- Fort Union Blvd. (3.8 miles).
- Center St. (4.2 miles).
- Main St. (2.0 miles).
- State St. (2.4 miles).
- 900 E (1.5 miles).

Figure 10 summarizes the travel time for the weekday PM peak period (4:00 to 6:00) for a three-month period (August, September, October 2023). East/west cross-city travel times average about 10 minutes for both the Fort Union Boulevard/7200 South corridor and the Center Street/7800 South corridor. The north/south corridors range from three to five minutes.

One challenge to east-west travel is the at-grade crossings of the UTA TRAX lines, particularly where the light rail intersects major roadways. The unpredictable timing of trains makes it difficult to synchronize traffic signals, leading to delays. The primary crossing of concern is at Fort Union Boulevard near the Fort Union Station, where train crossings have the greatest impact on traffic flow. Resolving this problem will require collaboration among multiple agencies to develop a long-term solution that effectively addresses the community's transportation needs.

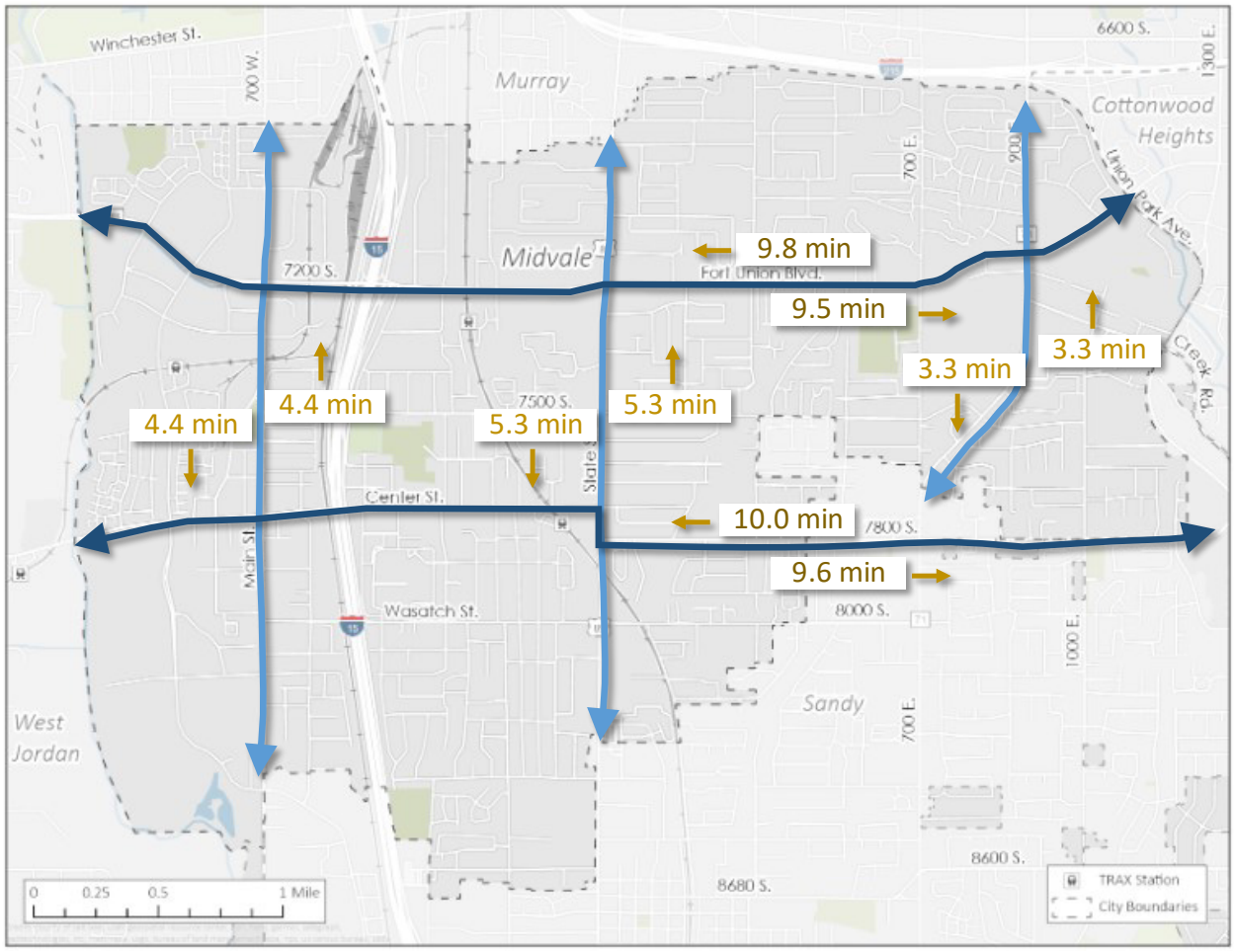


Figure 10. Directional Travel Times During PM Peak

2.3.3 Origin-Destination Data

Origin/destination travel data for drivers and active transportation users was analyzed using data from Replica Studio's nationwide travel model estimates. These estimates are based on a combination of socioeconomic data, vehicle probe data, and modeling algorithms.

Figure 11 illustrates Replica data for the origin of trips ending in Midvale on a typical Tuesday in Spring 2023. The data shows that most of the trips to Midvale originate within the city itself. Outside Midvale, the most common origins are from Salt Lake City, Murray, Sandy, South Jordan, and Riverton.

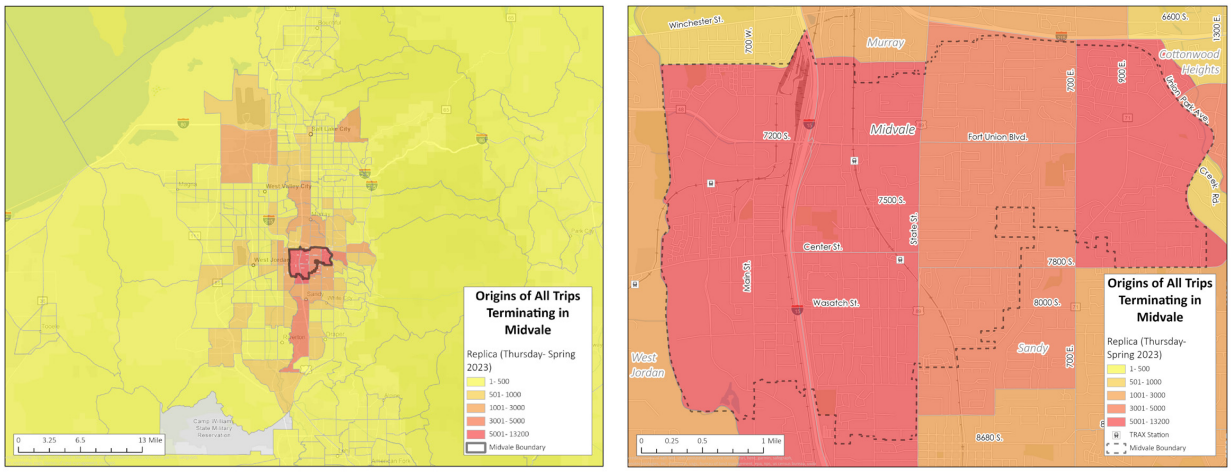


Figure 11. Origin of All Trips Terminating in Midvale City

Figure 12 illustrates Replica data for the destinations of trips originating from Midvale City in a representation of Tuesdays in Spring 2023. The data shows that most of the trips originating from Midvale city are local trips that also terminate within the city limit. Similar to the trip origin analysis, common destinations outside Midvale City are Salt Lake City, Murray City, Sandy City, South Jordan City, and Riverton City.

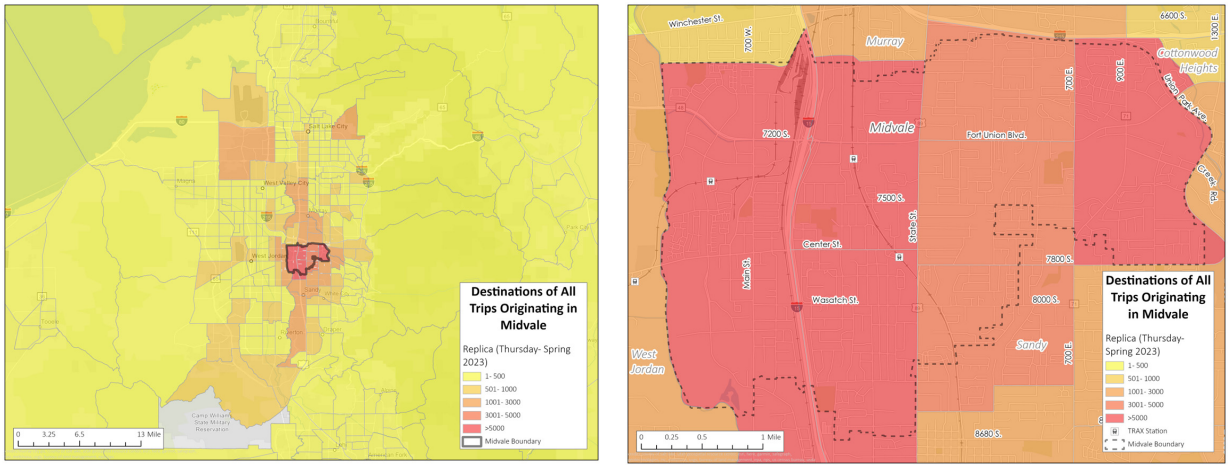


Figure 12. Destination of All Trips Originated from Midvale City

Figure 13 and Figure 14 illustrate Replica data for the origins and destinations of auto trips only. Figure 15 and Figure 16 provide similar data for transit trips. Transit trips are less likely to have both an origin and a destination in Midvale City than auto trips. Transit trips show a higher propensity for longer distance locations such as downtown Salt Lake City and the University of Utah campus. These areas are served directly by UTA TRAX lines.

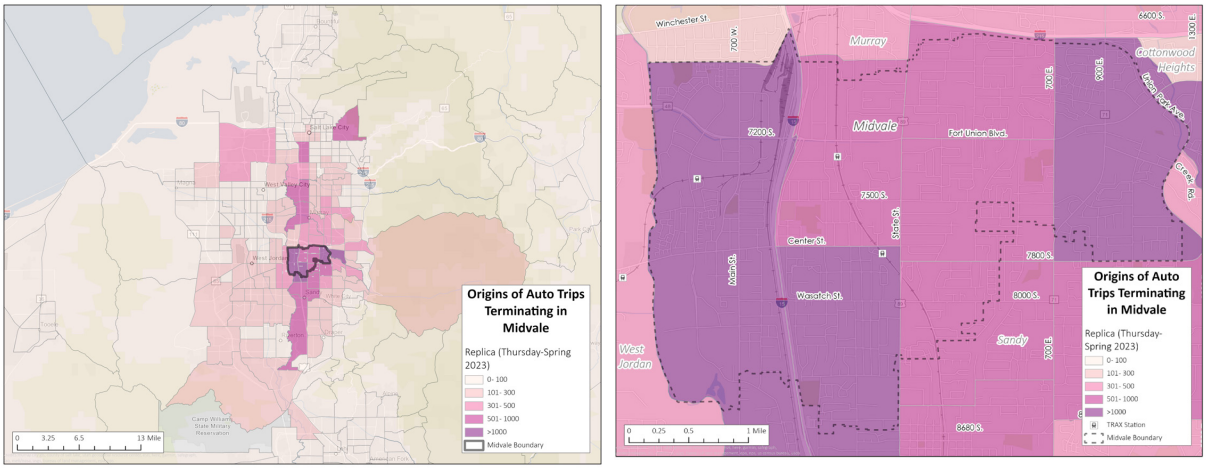


Figure 13. Origin of Auto Trips Terminating in Midvale City

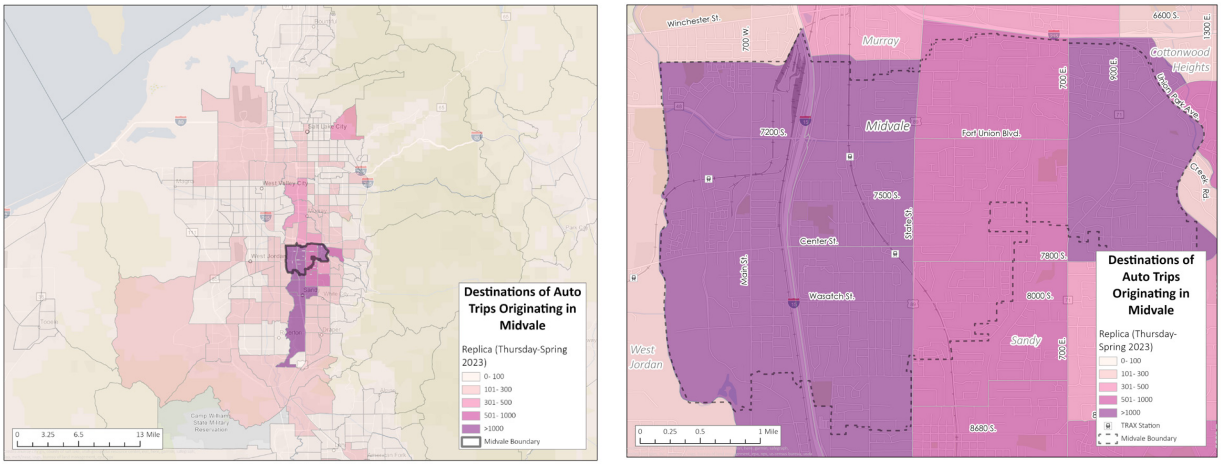


Figure 14. Destination of Auto Trips Originating from Midvale City

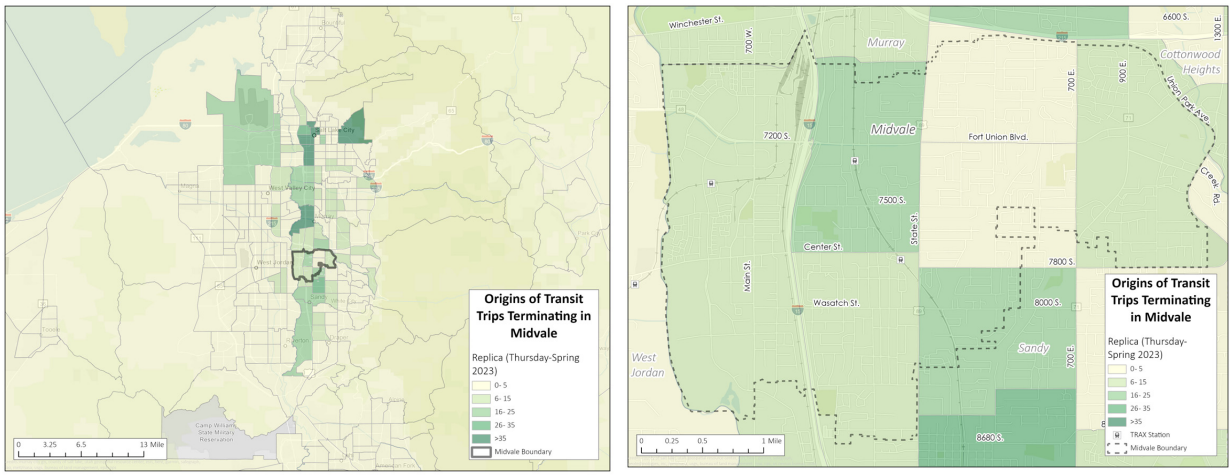


Figure 15. Origin of Transit Trips Terminating in Midvale City

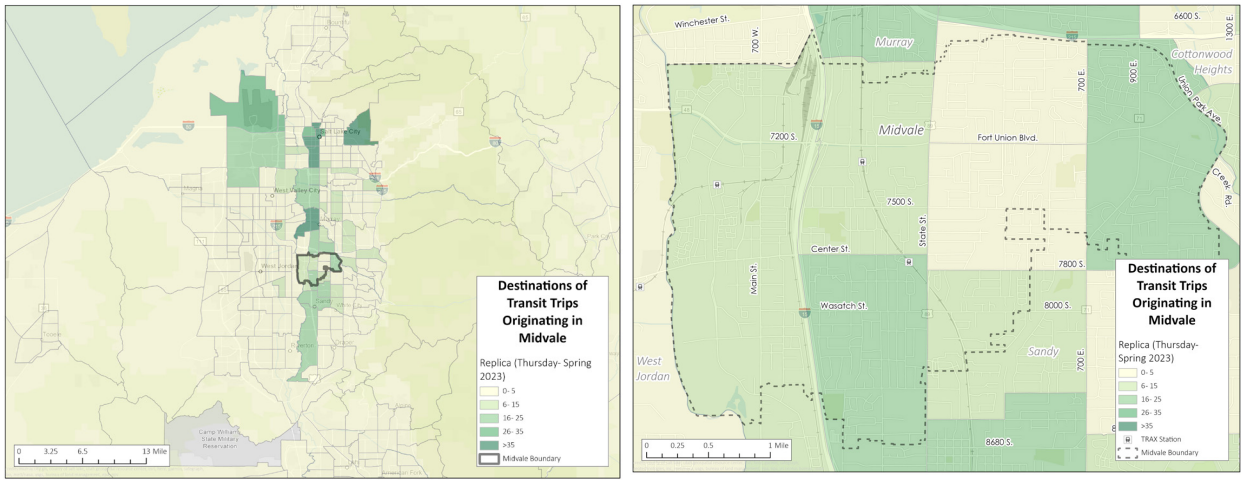


Figure 16. Destination of Transit Trips Originated from Midvale City

Figure 17 and Figure 18 illustrate Replica data for the origin of AT trips terminating in Midvale City in Spring 2023 on Tuesdays. AT trips have a much higher likelihood of having an origin and destination within Midvale City which is reflective of the greater difficulty of making long-distance AT trips compared to driving and transit.

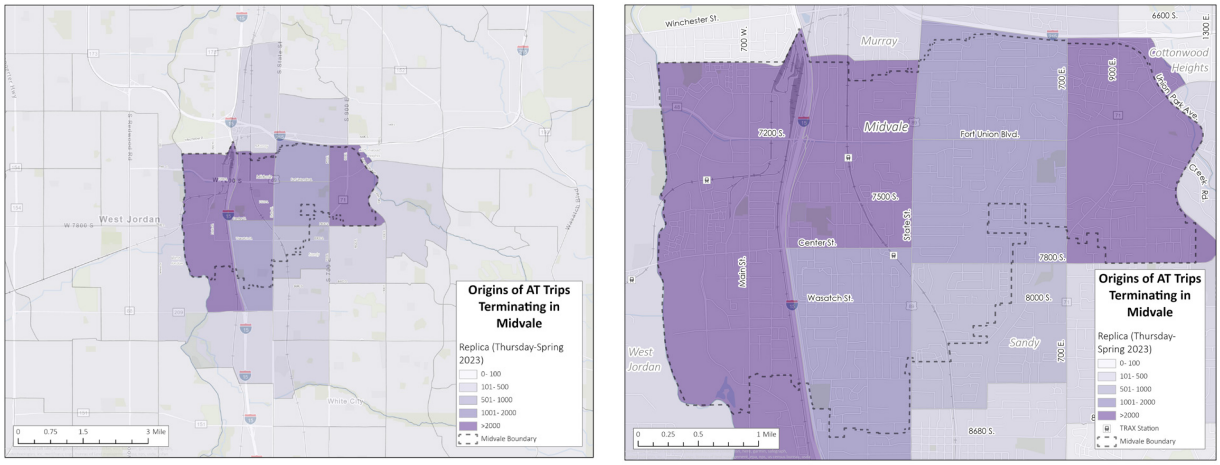


Figure 17. Origin of AT Trips Terminating in Midvale City

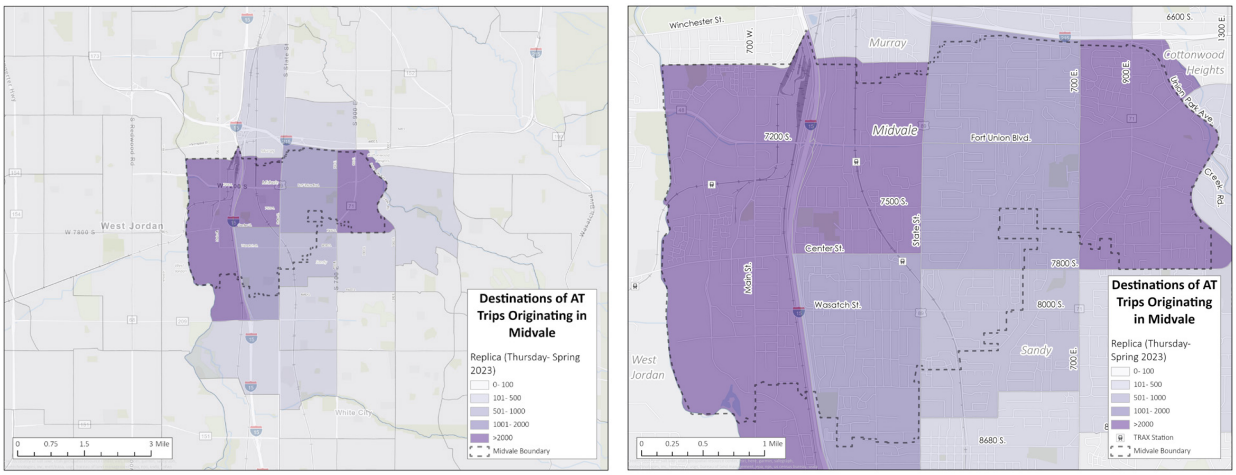


Figure 18. Destination of AT Trips from Midvale City

2.4 Safety Analysis

A safety analysis was performed using the most recent four years of crash data (2019-2022) from the UDOT Traffic and Safety Division. Historical crash patterns and conditions within Midvale City were analyzed to inform TMP recommendations.

2.4.1 Crash Data Analysis

Crashes were identified within Midvale City boundaries for 2019-2022. In total, there were 3,299 reported crashes. Figure 19 is a heat map of crash locations illustrating the highest concentrations of crashes within the city. Crashes tend to cluster along major corridors such as Fort Union Boulevard/7200 South, State Street, Union Park Avenue, and west 7800 South. In particular, the I-15/7200 S interchange area is the highest concentration area in the city featuring approximately 314 crashes during the four analysis years.

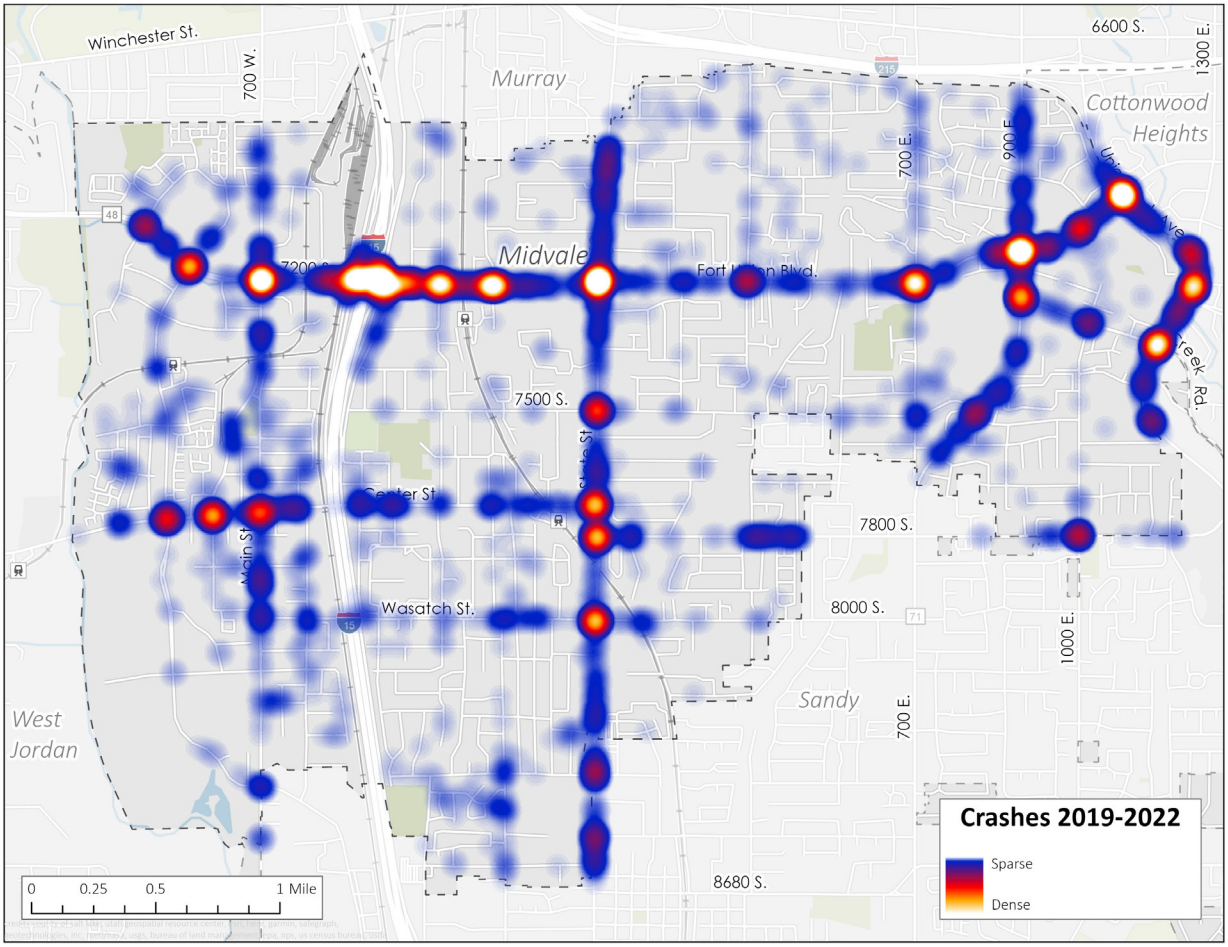


Figure 19. Crash Frequencies from 2019 to 2022

2.4.1.1 Fatal and Serious Injury Crashes

Crash severity is reported according to a five-category scale ranging from no injury to fatality. There is considerable emphasis in Utah among safety agencies, transportation planners and engineers to eliminate fatal crashes. However, the low frequency of fatal crashes can result in an insufficient sample size to identify meaningful patterns. As a result, the next level of crash severity – serious injury crashes – is often included in a crash severity analysis.

The number of fatal and serious injury crashes per capita in Midvale City as a percentage of total crashes is lower than Salt Lake County. About 1.4% of crashes were fatal and serious injury crashes in Midvale City and 2% of crashes were fatal and/or involved serious injury in Salt Lake County, as shown in Table 1.

Figure 20 illustrates the fatal and serious injury crash locations in Midvale City. For the analysis period, there were seven crashes with a fatality and 39 serious injury crashes. Most of the fatal crashes occurred on major roads except for fatal crashes on Bingham Junction Boulevard near 6960 South. Four (57%) of the fatal crashes were pedestrian or bicycle crashes. Thirteen (33%) of the serious injury crashes involved pedestrian/bicyclist. The key crash characteristics of the Fatal crashes are shown in Table 2.

Table 1. Crashes Comparison (2019-2022)

Area	Total Crashes	Fatal and Serious Injury Crashes	% of Fatal and Serious Injury Crashes
Midvale City	3,229	46	1.4%
Salt Lake County	96,406	1,908	2.0%

Table 2. Fatal Crash Characteristics (2019-2022)

Year	Key Crash Characteristics
2019	Bicyclist failed to yield and got struck by vehicle.
2019	Angle crash where one vehicle ran red light and hit by oncoming vehicle. Older driver involved.
2020	Motorcyclist lost control at curve of the road. Teenage driver involved.
2020	Left-turning vehicle hit by oncoming vehicle. DUI and older driver involved.
2021	Hit and run pedestrian crash.
2022	Pedestrian crossing roadway against red signal struck by vehicle.
2022	Pedestrian crash.

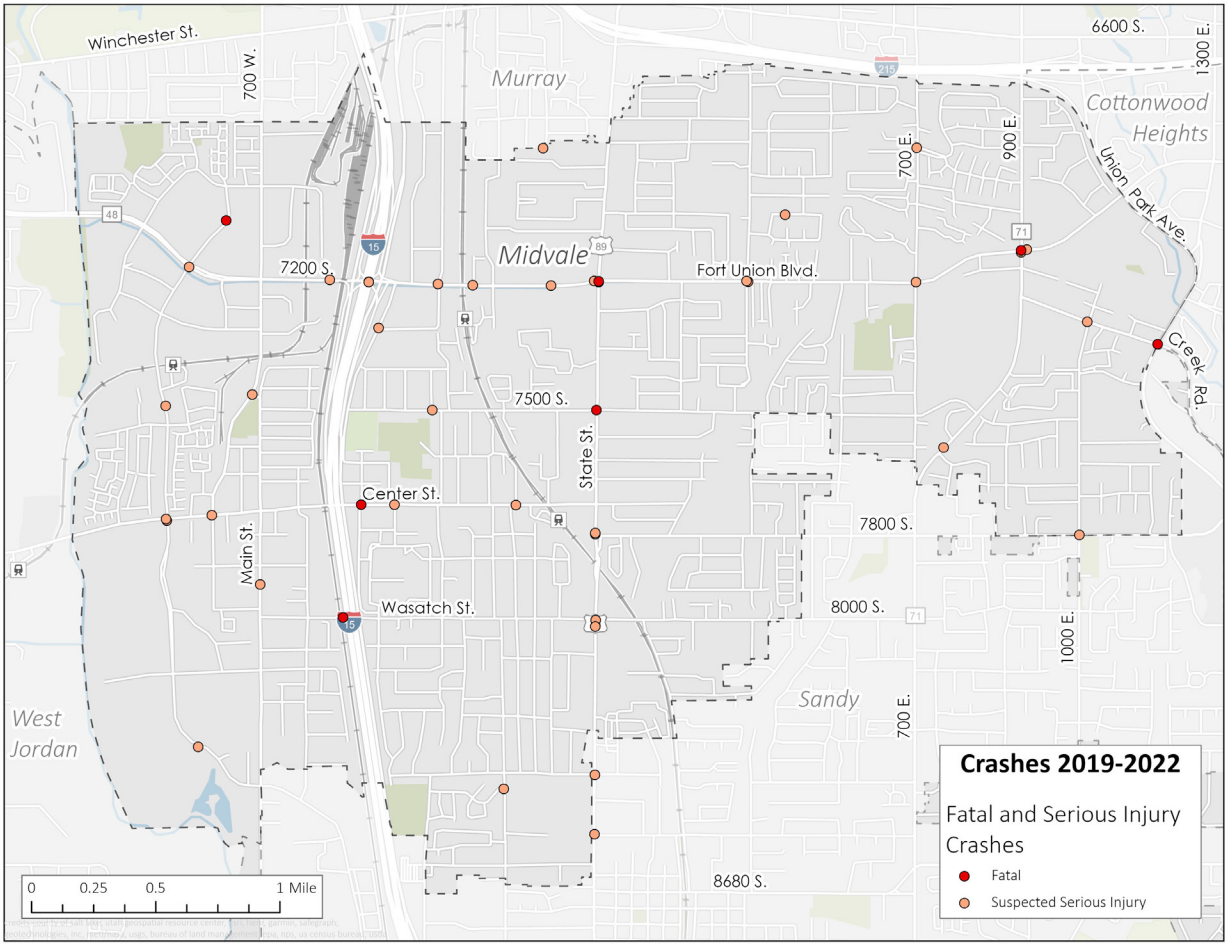


Figure 20. Fatal and Severe Injury Crashes

2.4.1.2 Bicycle and Pedestrian Crash Analysis

Between 2019 and 2022, Midvale City experienced 28 vehicle crashes involving a bicyclist and 76 crashes involving pedestrians. Figure 21 and Figure 22 illustrate the locations of these crashes by severity. Many of these crashes occurred on Fort Union Boulevard and State Street. High frequencies of crashes on these roadways may be related to higher speeds and traffic volumes and fewer active transportation facilities, such as shoulders, bike lanes, or midblock crossings. Figure 23 shows pedestrian-involved crashes by pedestrian position. While pedestrian crashes are scattered throughout the city, there is a trend of crashes occurring within crosswalks as 36% of pedestrian-involved crashes occurred within a crosswalk.

Of the total crashes during the study period, 104 involved pedestrians or bicyclists, representing 3.2% of all crashes. While this is a relatively small percentage, pedestrian and bicycle crashes account for a higher proportion of fatal and serious injury crashes in Midvale compared to the county.

The rate of bicycle-involved crashes in Midvale is similar to the countywide rate. Approximately 0.9% of all crashes in Midvale involved bicyclists. However, pedestrian crashes in Midvale are more prevalent than in Salt Lake County overall. About 2.4% of crashes in Midvale involved pedestrians, compared to 1.7% in Salt Lake County. See Table 3 for the statistical breakdown.

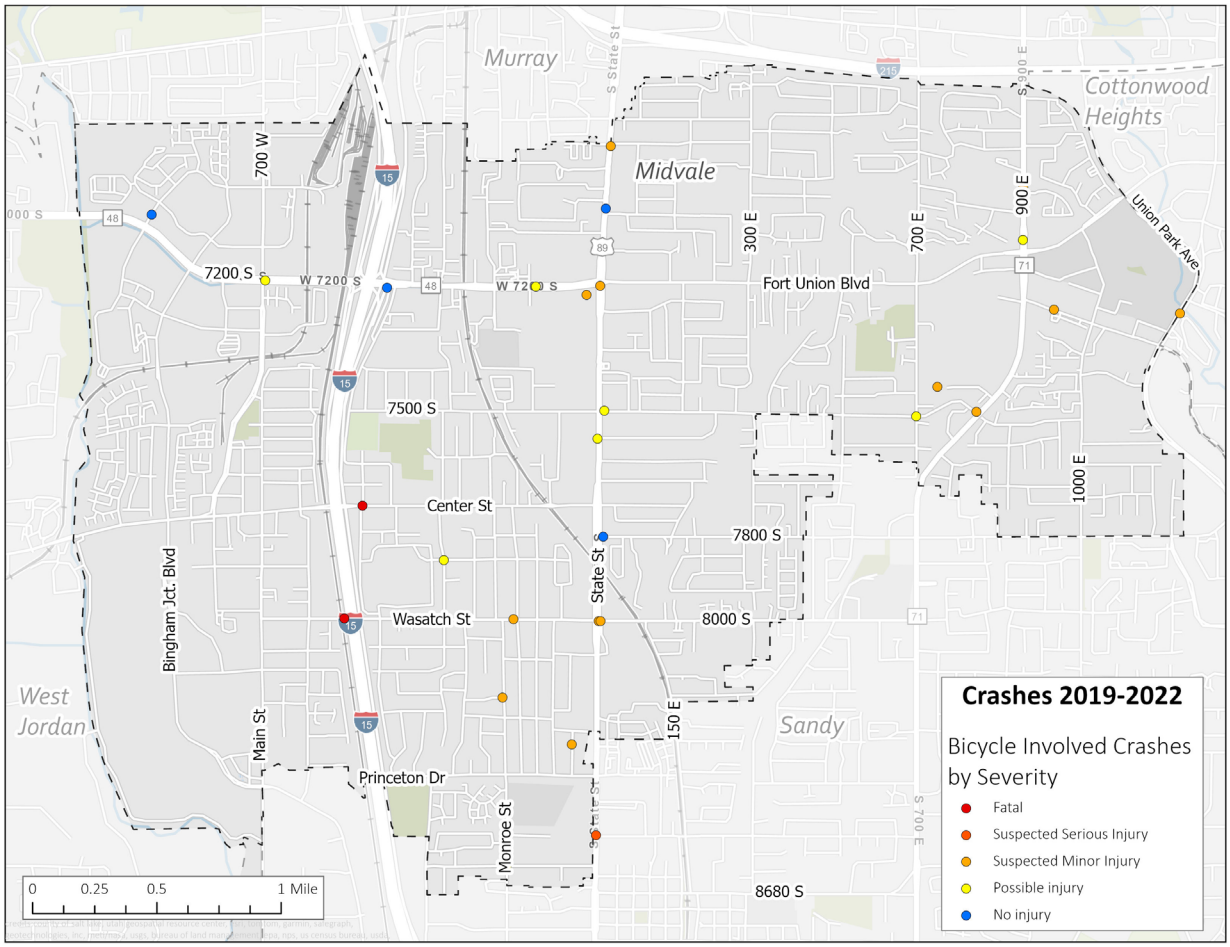


Figure 21. Bicycle Involved Crashes by Severity

Table 3. Pedestrian-Involved Crashes per Peer Comparison (2019-2022)

Area	Total Crashes	Pedestrian Crashes	Percent of Pedestrian Crashes	Bicycle Crashes	Percent of Bicycle Crashes
Midvale City	3,229	76	2.4%	28	0.9%
Salt Lake County	96,406	1,668	1.7%	873	0.9%

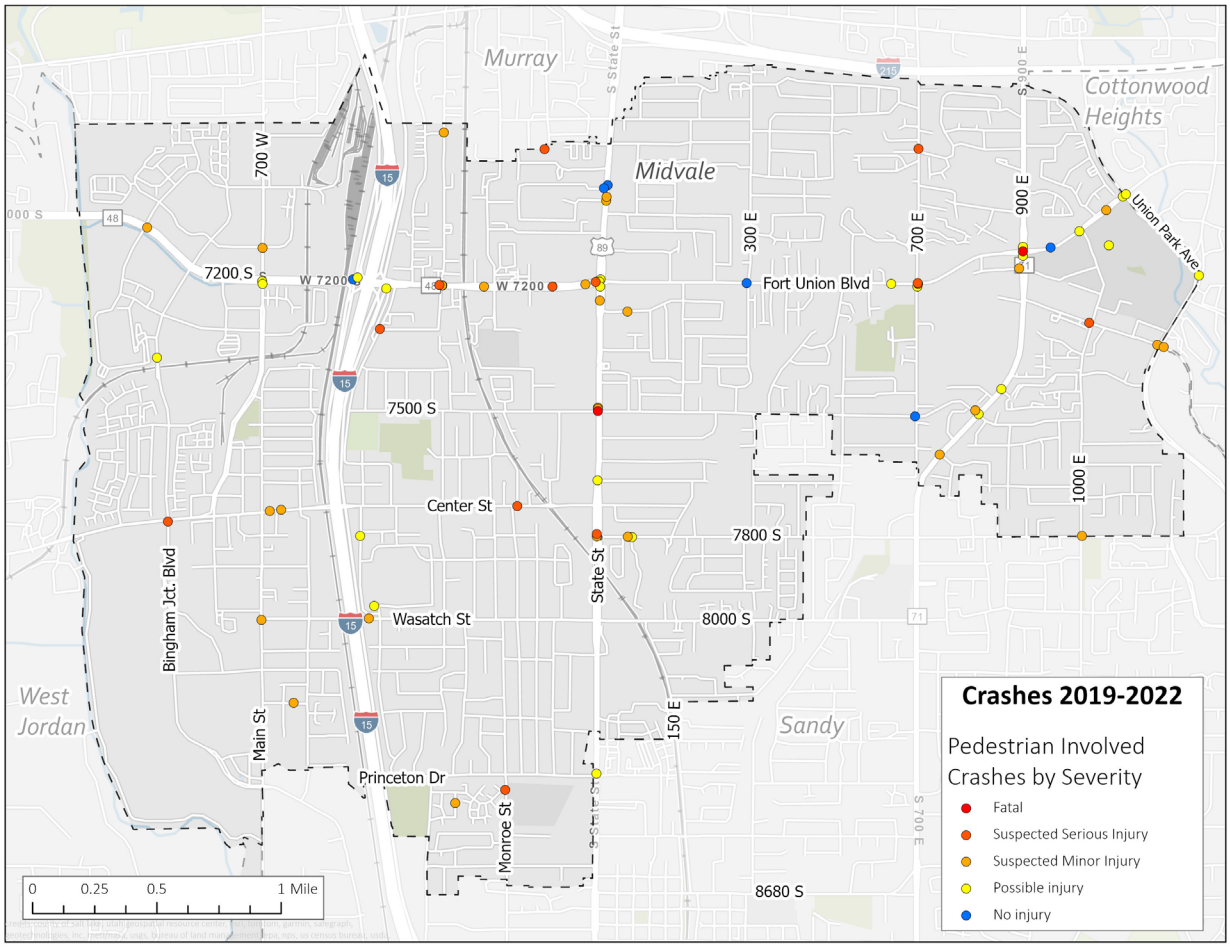


Figure 22. Pedestrian Crashes by Severity

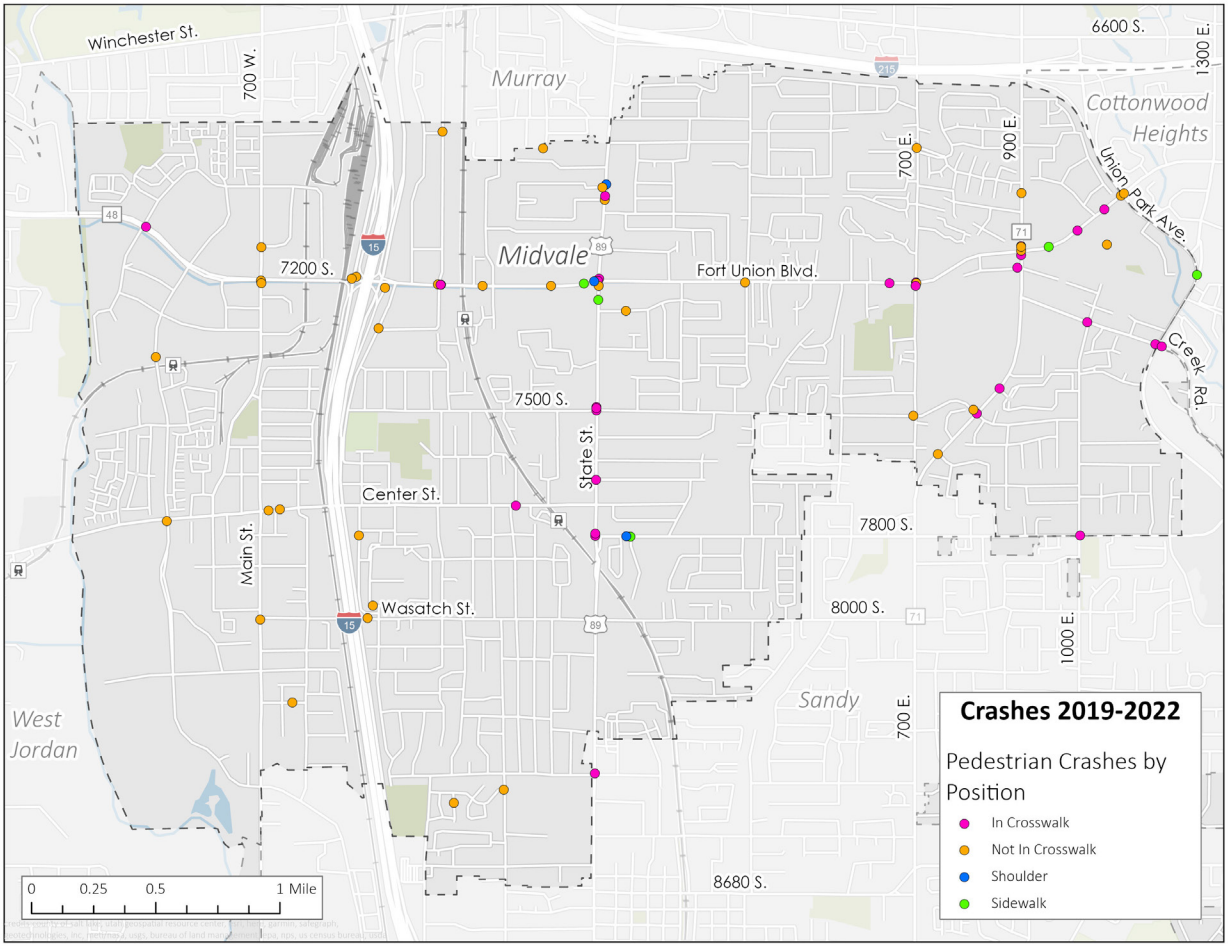


Figure 23. Pedestrian Crashes by Position

3. Future Demand Conditions

3.1 Travel Demand Modeling

The Wasatch Front Regional Council (WFRC) travel demand model version 9.0 was used to forecast traffic conditions and travel patterns in Midvale City. An existing condition baseline along with 2034 and 2050 forecast year models were developed for the purpose of this transportation plan. The following sections outline the modeling preparation and calibration processes, along with discussions surrounding the resulting datasets and other information developed to best understand existing and forecasted travel patterns and network conditions.

3.1.1 Model Calibration and Refinement

When applying regional models to small-scale areas and individual corridors, it is often necessary to undergo a calibration process specific to that area or corridor, because the models have originally been developed and calibrated for regional performance. The calibration process provides an opportunity to tailor the model to detailed specifics of an area, which may have been missed in model development or

have since become outdated. The calibration process generally includes review and revision of the three main inputs of the models: traffic analysis zones (TAZ), socioeconomic (SE) data and the roadway network. For the base year calibration, model inputs were calibrated closest to present day conditions, which in this case was 2023.

3.1.1.1 Traffic Analysis Zone Splits

Socioeconomic data is the driving factor for trip generation in a travel demand model. This data is provided for geographic subsections of the model, known as traffic analysis zones (TAZs), for each modeled year. Sometimes the TAZs need to be refined to enable better model performance for specific areas. For the Midvale model calibration, TAZ splits were performed in the Bingham Junction area to enable network refinement in that area. Figure 24 shows the existing and refined TAZ structure in the Bingham Junction area.

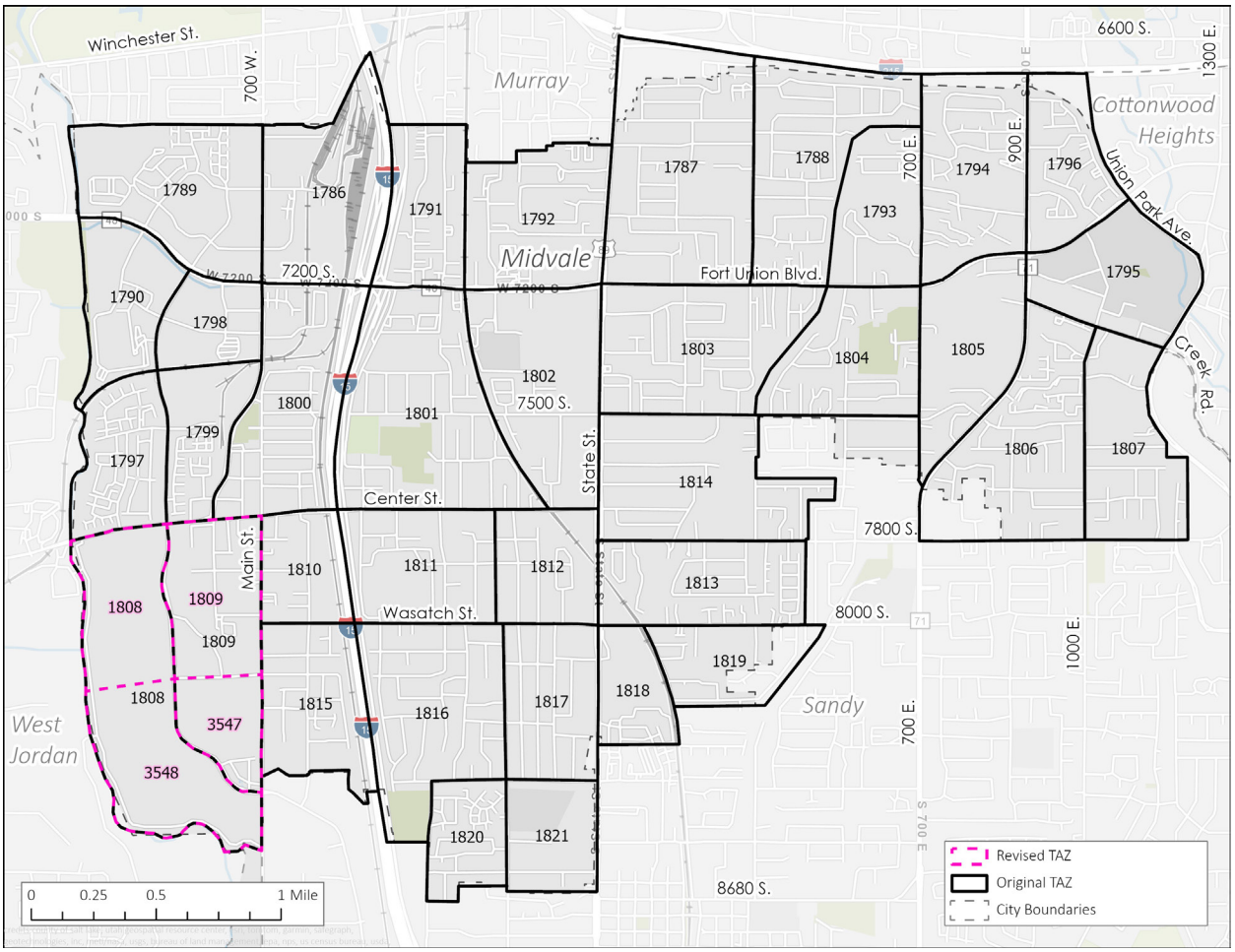


Figure 24. Transportation Analysis Zones

3.1.1.2 Socioeconomic Inputs

Socioeconomic revisions were made to select TAZs in coordination with Midvale City. Revisions to the base year were limited to the Bigham Junction area to accommodate the TAZ splits. For 2050, refinements were made to account for anticipated development. Table 4 shows the base model and refined socioeconomic data within Midvale. Highlighted cells indicate where revisions were made.

Table 4. Household and Employment Revisions

TAZID	Households			Population			Employment		
	2023	2050	2050 Adjusted	2023	2050	2050 Adjusted	2023	2050	2050 Adjusted
1786	1	292	292	1	732	732	1,369	1,456	1,456
1787	558	684	684	1,445	1,597	1,597	1,558	1,631	1,631
1788	550	630	630	1,447	1,467	1,467	0	0	0
1789	695	863	863	1,688	1,869	1,869	1,555	1,165	1,316
1790	0	0	0	0	0	0	3,976	3,959	3,959
1791	0	0	672	0	0	0	1,063	1,058	1,121
1792	768	850	1,400	1,656	1,641	1,641	1,566	1,613	1,613
1793	346	415	415	861	908	908	469	476	476
1794	483	743	743	1,097	1,579	1,579	852	795	795
1795	101	325	825	214	776	776	2,942	3,867	3,867
1796	614	695	695	1,398	1,432	1,432	704	867	867
1797	1,061	1,111	1,111	2,557	2,342	2,342	0	0	0
1798	0	0	0	0	0	0	1,599	1,608	1,608
1799	590	776	776	1,385	1,650	1,650	273	140	140
1800	211	738	738	509	1,803	1,803	1,468	1,761	1,761
1801	789	902	1,152	1,750	1,872	1,872	605	728	728
1802	480	704	924	1,050	1,481	1,481	1,799	1,764	1,764
1803	559	645	645	1,467	1,495	1,495	482	486	486
1804	352	393	393	873	879	879	125	131	131
1805	207	265	265	474	592	592	931	909	909
1806	840	1,010	1,010	1,881	2,053	2,053	623	892	892
1807	359	476	476	850	1,047	1,047	590	561	561
1808	314	2,230	1,024	888	5,475	2,264	358	2,952	1,136
1809	974	1,587	1,158	2,382	3,582	2,742	174	732	341
1810	268	320	320	670	693	693	294	311	311
1811	264	345	345	738	843	843	247	262	262
1812	210	267	367	591	663	663	208	300	300
1813	754	827	827	1,959	1,870	1,870	127	161	161
1814	418	529	529	1,065	1,205	1,205	457	473	473
1815	535	610	610	1,244	1,283	1,283	191	195	195
1816	460	533	533	1,305	1,282	1,282	0	0	0
1817	278	295	295	787	717	717	385	392	392
1818	229	245	245	578	542	542	284	306	306
1819	203	268	268	509	613	613	102	108	108
1820	344	359	359	963	864	864	94	99	99
1821	150	208	208	418	504	504	422	443	443
3547	n/a	n/a	429	n/a	n/a	840	n/a	n/a	391
3548	n/a	n/a	1,656	n/a	n/a	3,211	n/a	n/a	1,816
Total	**14,962**	**21,139**	**23,882**	**36,701**	**47,352**	**47,352**	**27,890**	**32,596**	**32,809**

3.1.1.3 Modeled Networks

The model network was refined for the 2023 existing year and for the future 2050 No-Build conditions. Network refinements included changes to accommodate the zone split in the Bingham Junction area. The 2023 network, shown in Figure 25, seeks to replicate the existing transportation system within the city, for collector and arterial streets. The 2050 No-Build network, shown in Figure 26, assumes no capacity improvements or network changes within the city limits from the 2023 condition. Improvements outside of Midvale City limits were maintained in the 2050 No-Build network, such as widening of 700 East south of Midvale city.

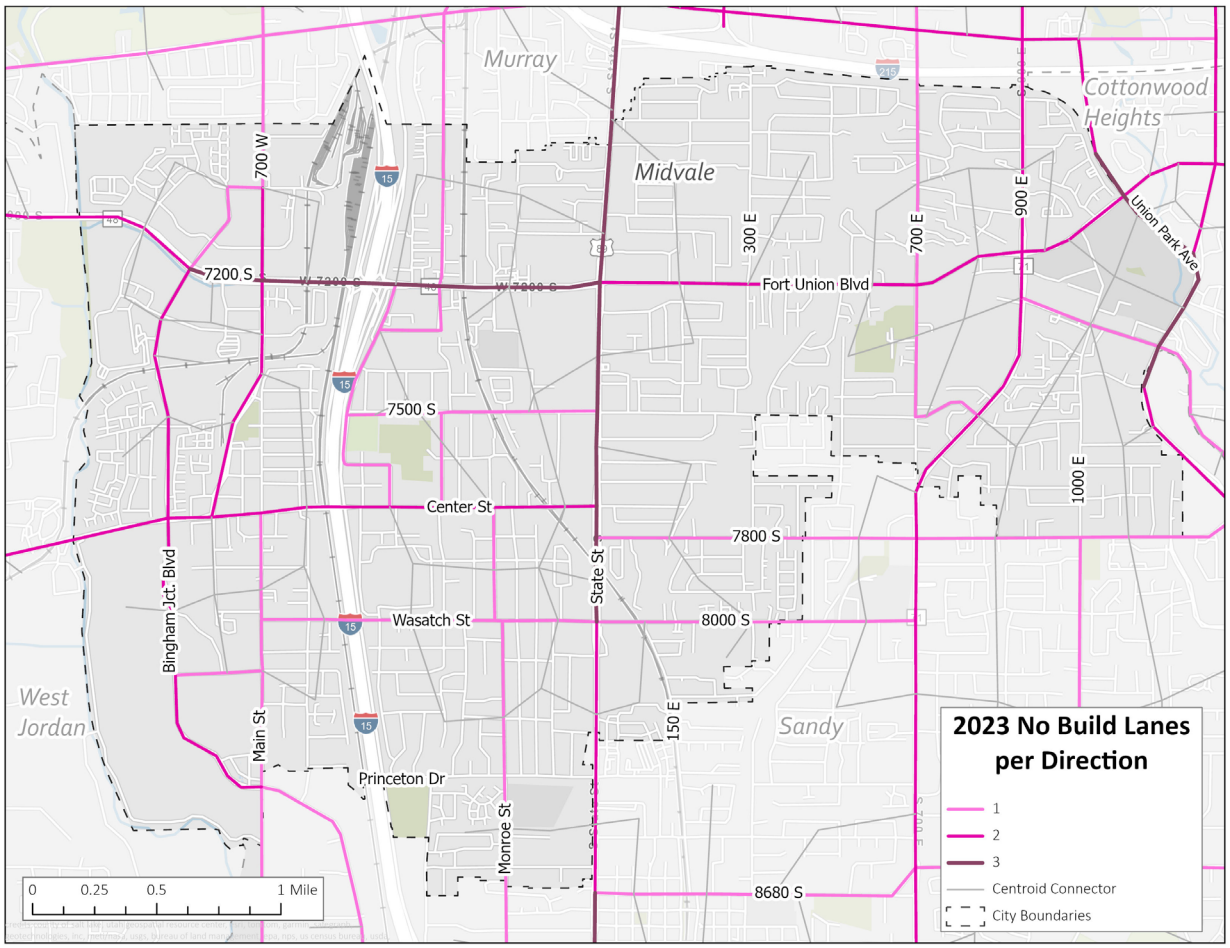


Figure 25. 2023 Existing Lanes per Direction

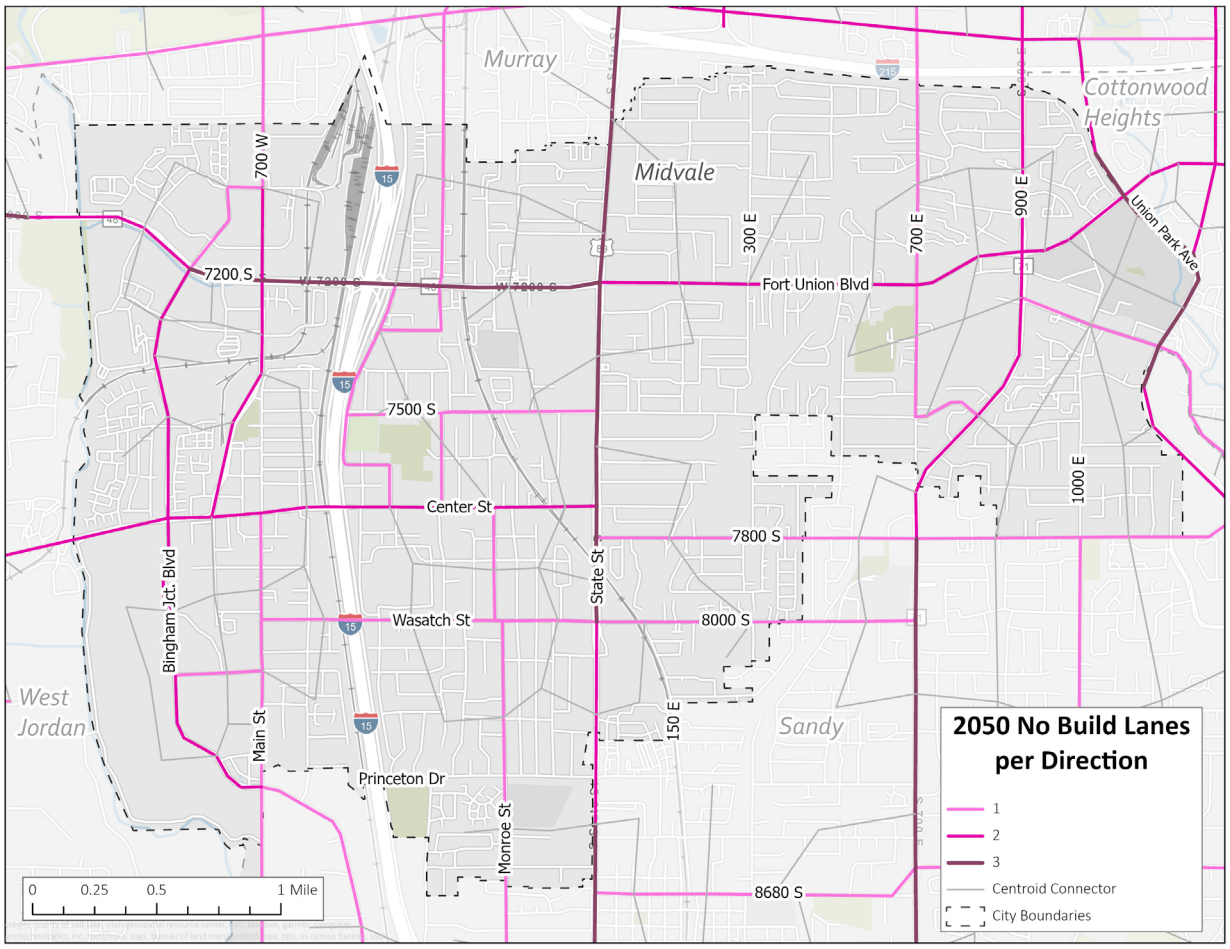


Figure 26. 2050 No-Build Lanes per Direction

3.1.2 Future Travel Demand Forecast

3.1.2.1 Volumes and Level of Service

Level of Service (LOS) is a measure of traffic flow quality, ranging from A (excellent) to F (congested). A LOS of D, indicating 'approaching unstable flow,' is commonly used for urban areas and was the benchmark for the Midvale analysis. The analysis estimated the capacity of existing and future roads based on lane configuration and signal spacing. Table 5 summarizes the daily traffic capacities used in the Midvale City analysis.

Table 5. Daily Level of Service D Capacity in Midvale City

Lanes	Arterial		Collector	
	≥ 1/2 mile Signal Spacing	< 1/2 mile Signal Spacing	≥ 1/2 mile Signal Spacing	< 1/2 mile Signal Spacing
2	12,500	11,300	11,200	9,800
3	19,100	16,000	17,500	13,500
4	38,300	32,500	30,900	22,700
5	41,000	35,000	37,200	31,000
6	52,800	46,000		
7	57,000	50,000		

3.1.2.2 Existing Roadway Level of Service

The calculated daily LOS for the existing 2023 base network is shown in Figure 27. LOS reaches LOS E or F on a few segments on 7200 South/Fort Union Blvd west of I-15, 7800 South west of 1000 East, and Union Park Avenue just north of Fort Union Boulevard.

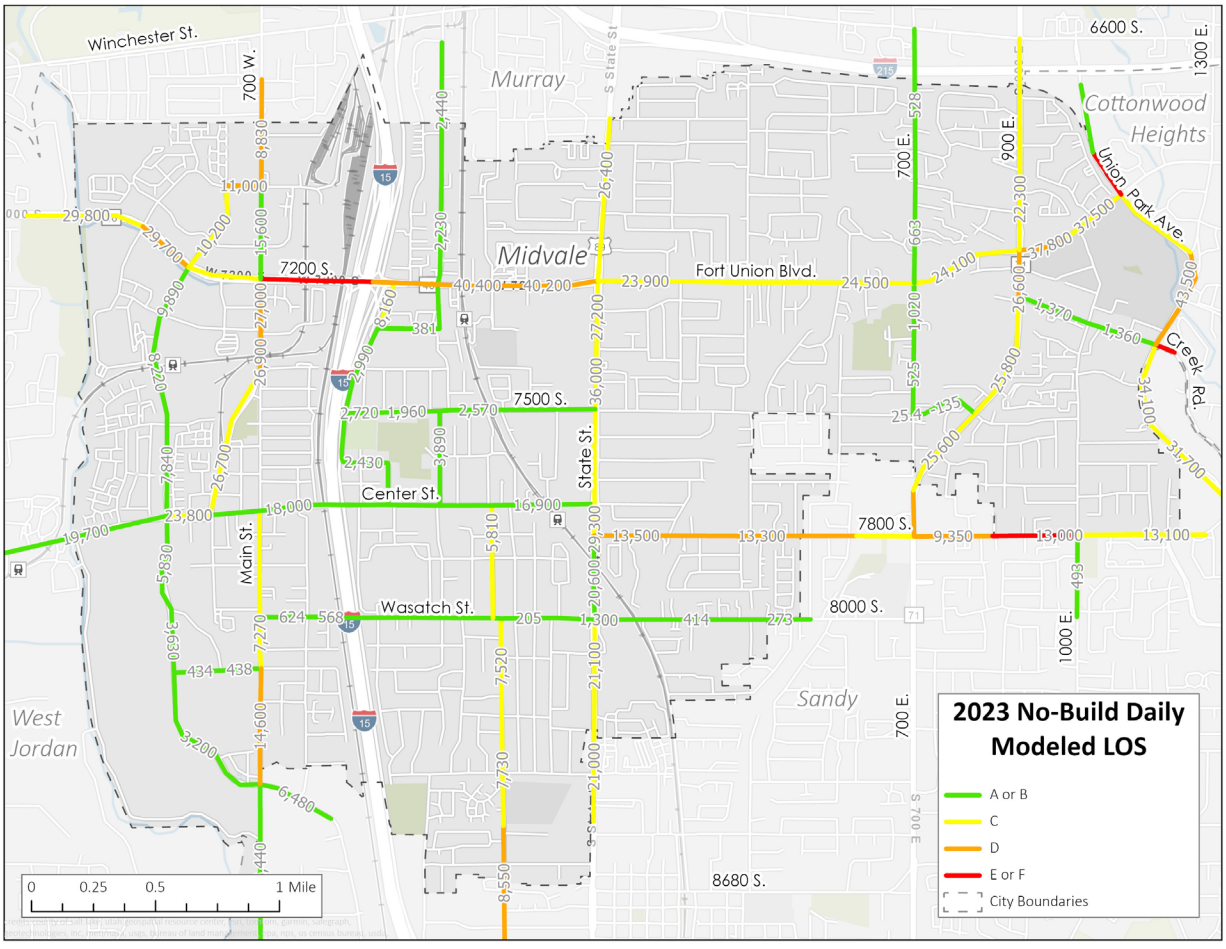


Figure 27. 2023 Existing Level of Service

3.1.2.3 Future Roadway Level of Service

The calculated daily LOS for the No-Build 2034 network is shown in Figure 28. Fort Union Blvd from State Street to 700 West is expected to operate at LOS E or F. The section from State Street to Interstate 15 that operated at LOS D in existing conditions degrades to LOS E or F in 2034 No-Build condition.

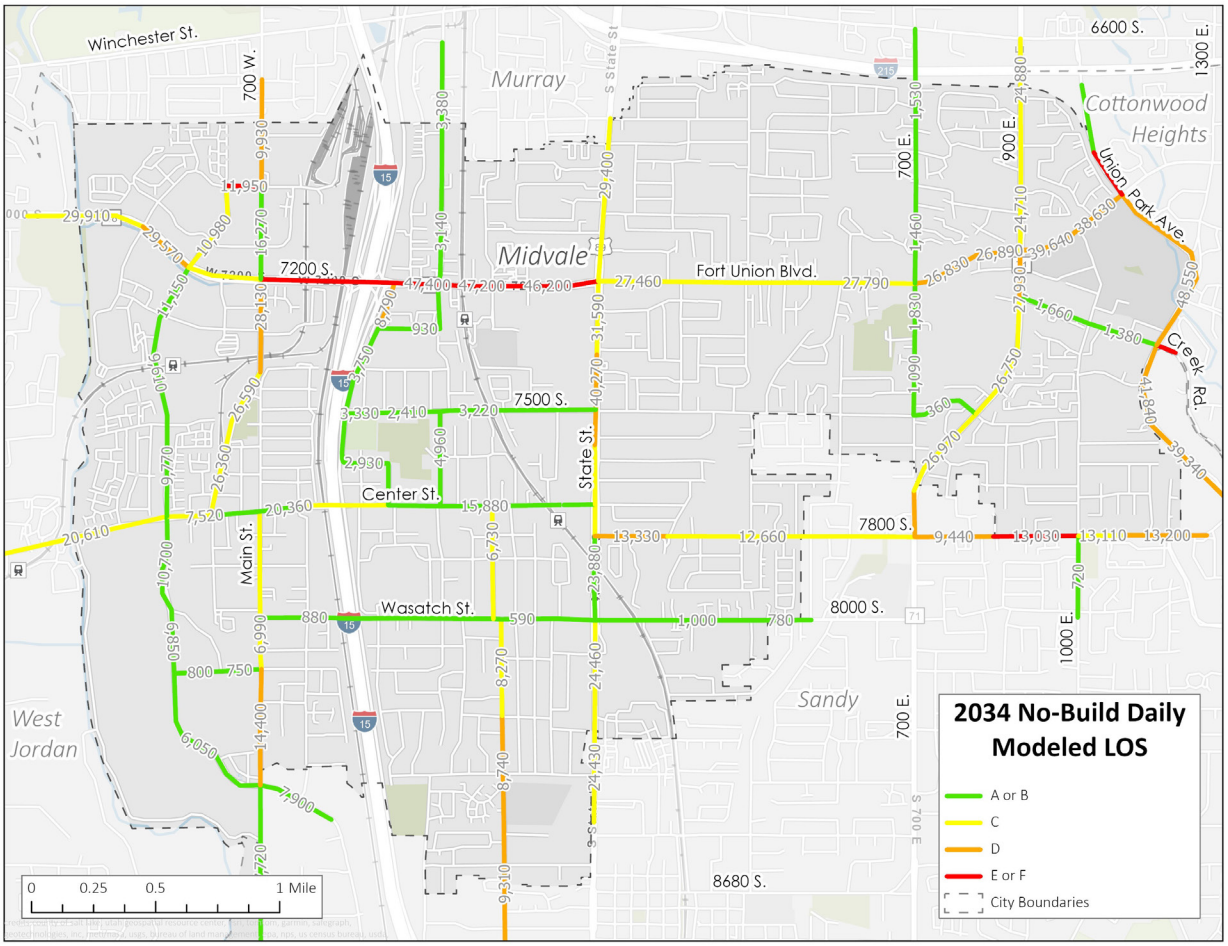


Figure 28. 2034 No-Build LOS

The calculated daily LOS for the No-Build 2050 network is shown in Figure 29. Union Park Avenue just north of the Creek Road and 700 West just north of Bingham Junction Boulevard degrade from LOS D in 2023 and 2034 No-Build condition to LOS E or F in the 2050 No-Build condition.

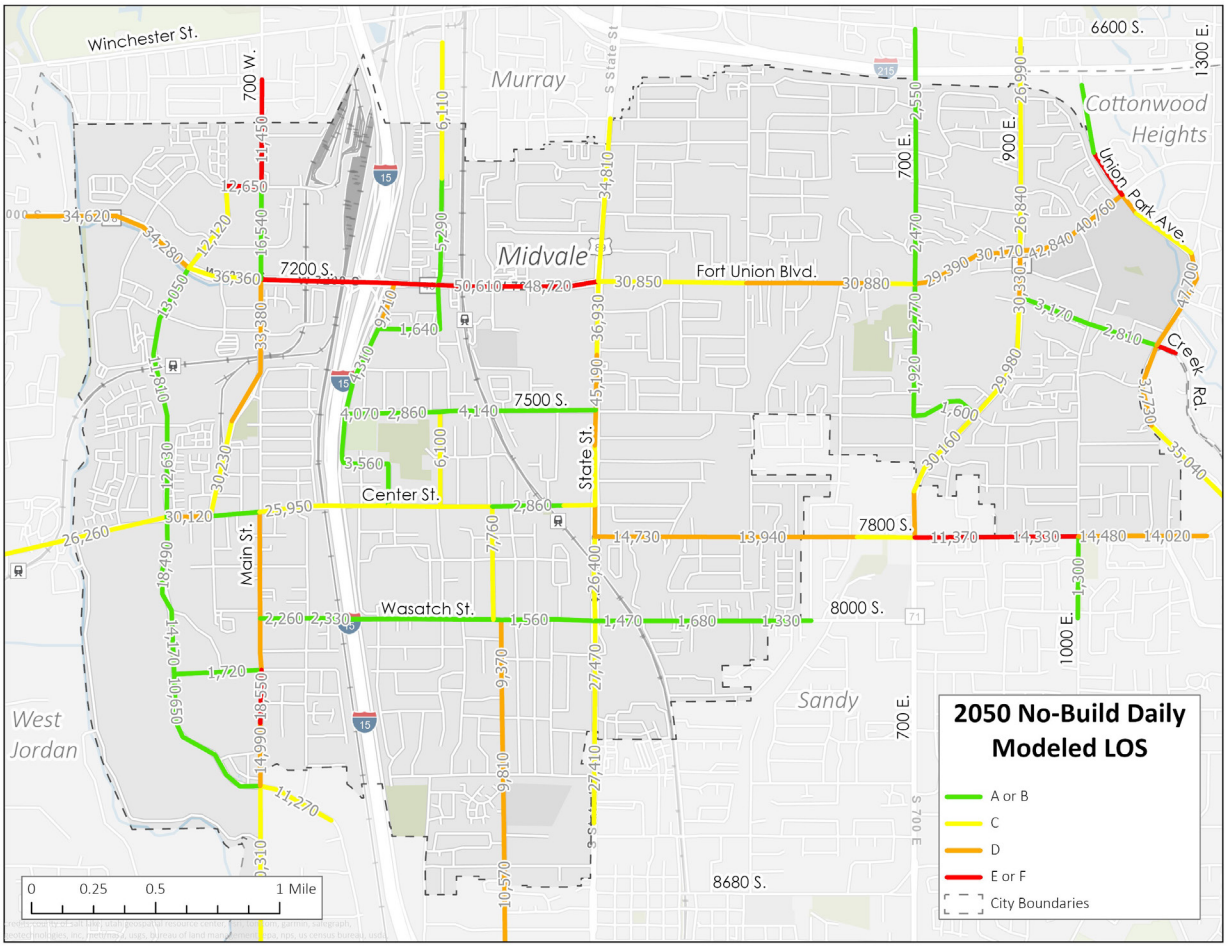


Figure 29. 2050 No-Build LOS

3.1.2.4 Future Traffic Volume Change

The daily volume change from 2023 to 2050 is shown in Figure 30. Volume increases most significantly in western portions of the city, such as Bingham Junction Boulevard, 7800 South, as well as Fort Union Boulevard near Interstate 15. Growth on other roadways is less than 10,000 vehicles per day.

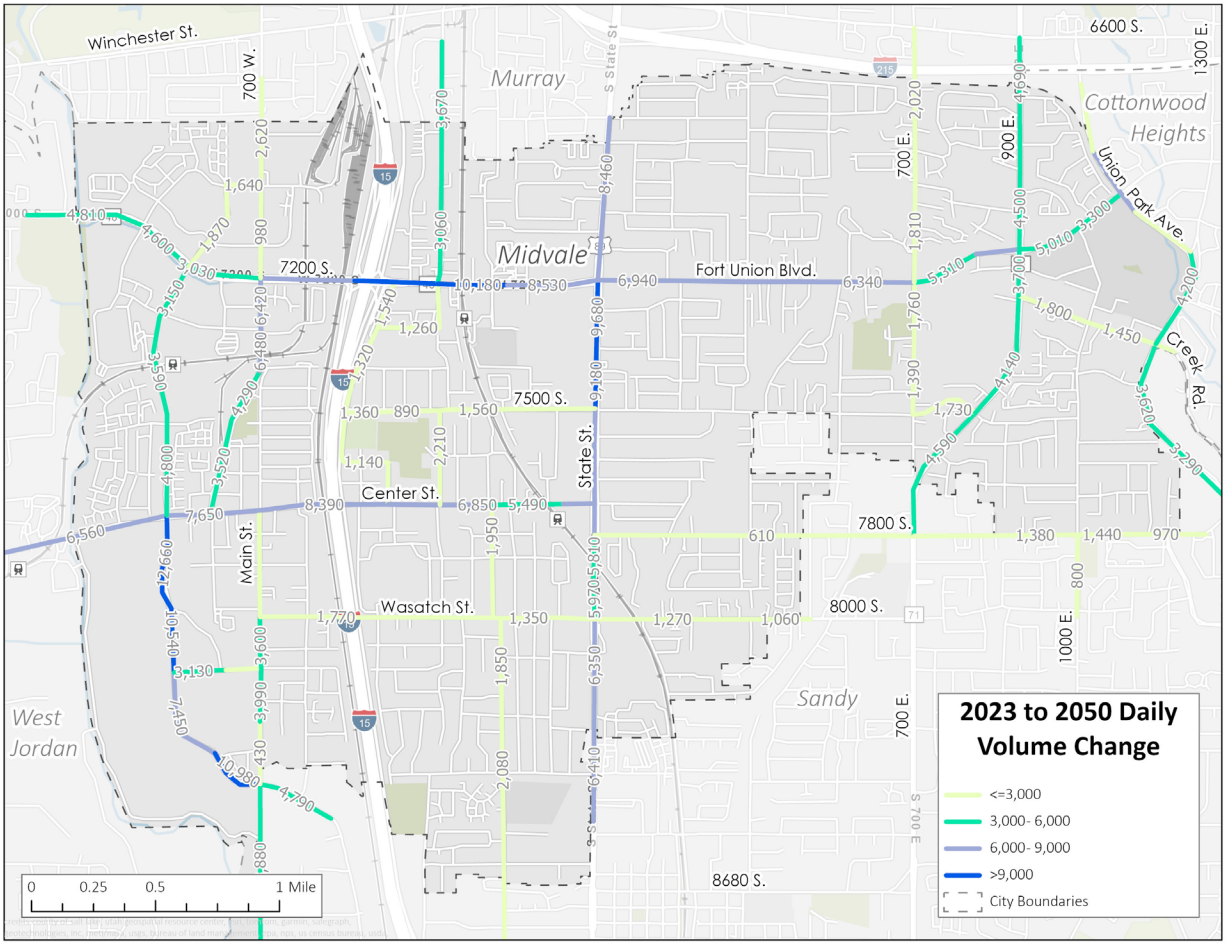


Figure 30. 2023-2050 No-Build Daily Volume Change

4. Transportation System Plan

4.1 Roadway System Analysis

The Roadway System Analysis identifies a range of improvement projects, including re-striping, widening, and new road construction. These projects were informed by the Utah Unified Transportation Plan 2023-2050, travel demand modeling, and the Midvale City General Plan. Each project is tailored to address specific needs, such as expanding lane capacities or constructing new road segments. The plan details associated costs, including excavation, paving, curb and gutter installation, and landscaping.

4.1.1 Roadway Capacity Analysis and Improvement Options

To further enhance Midvale's transportation infrastructure, a roadway capacity analysis was conducted. This analysis evaluated traffic volumes, level of service, and travel times to identify areas needing improvement. Drawing from the 2023-2050 Regional Transportation Plan, the analysis presents a list of potential projects targeting specific roadways within Midvale City. These

improvements aim to enhance traffic flow, reduce congestion, and improve overall transportation efficiency. Table 6 lists the roadway capacity improvement projects for Midvale City along with project descriptions and costs. Figure 31 illustrates the roadway projects. Cost details are contained in Appendix C.

One area of focus is Fort Union Boulevard at the TRAX light rail line, which presents unique challenges due to the at-grade crossing sandwiched between two closely-spaced traffic signals. While restriping the road to add a third westbound lane would provide some congestion relief, its effectiveness will be limited by the operational constraints of the rail crossing. Consequently, a more substantial long-term solution may be required to effectively address the congestion and improve overall traffic conditions at this location. This may include exploring grade separation of the crossing either by elevating or lowering the TRAX line, Fort Union Boulevard, or both. Such modifications could impact station platform location and property access on Fort Union Boulevard. Midvale City should explore long-term options in partnership with UTA and UDOT.

Table 6. Planned Roadway Projects List

Street	Improvement Type	Extents	Length (feet)	Cost
700 West	Complete 5-lane cross section	Commerce Park Drive to Murray Boundary	1,990	$775,000
Fort Union Boulevard	Re-stripe/Widen WB to 3 lanes	State Street to Interstate 15	3,135	$121,000
7200 S/Jordan River Boulevard	Widen to 7 lanes	Bingham Junction Blvd to West Jordan Boundary	2,090	$7,531,000
7800 South	Widen to 7 lanes	Bingham Junction Blvd to West Jordan Boundary	1,556	$274,000
State Street	Widen to 7 lanes	8000 South to Sandy Boundary	1,820	$6,570,000
900 East	Widen to 7 lanes	Fort Union Boulevard to Sandy Boundary	4,313	$15,448,000
Tuscany View Road	New Road Construction	Francesco Way to Holden Street	1,537	$5,191,000

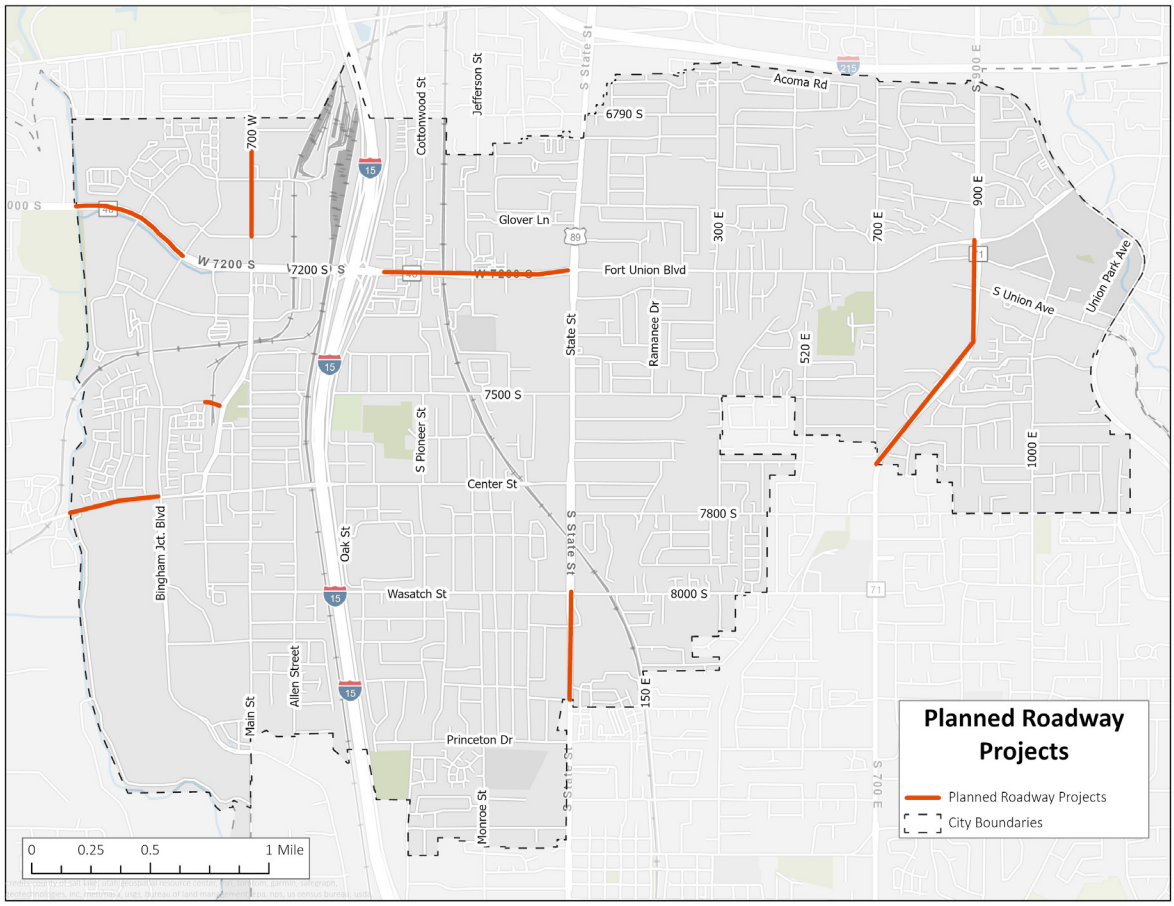


Figure 31. Planned Roadway Projects Map

To assess the impact of planned transportation projects on future traffic conditions, travel demand was modeled for the year 2050. The "Build 2050" scenario, depicted in Figure 32, incorporates the proposed improvements outlined in this plan. Figure 33 presents the calculated daily level of service (LOS) for the Build 2050 network.

As shown in Figure 33, several sections of 700 West and 7800 South, which experienced severe congestion (LOS E or F) in the "No-Build" scenario, are expected to improve to moderate congestion (LOS C or D) under the Build 2050 plan. The widening of 700 West is a key factor contributing to this improvement.

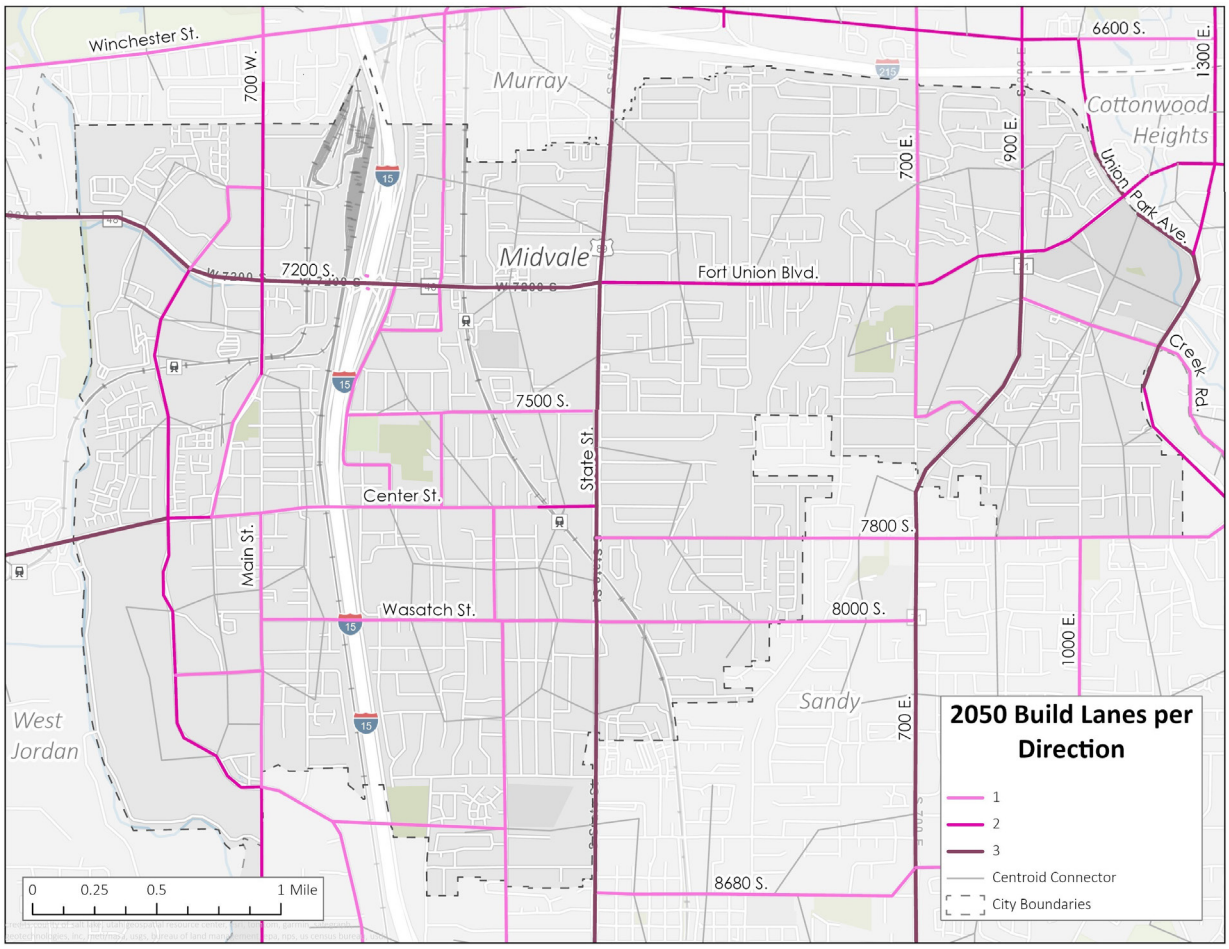


Figure 32. 2050 Build Lanes per Direction

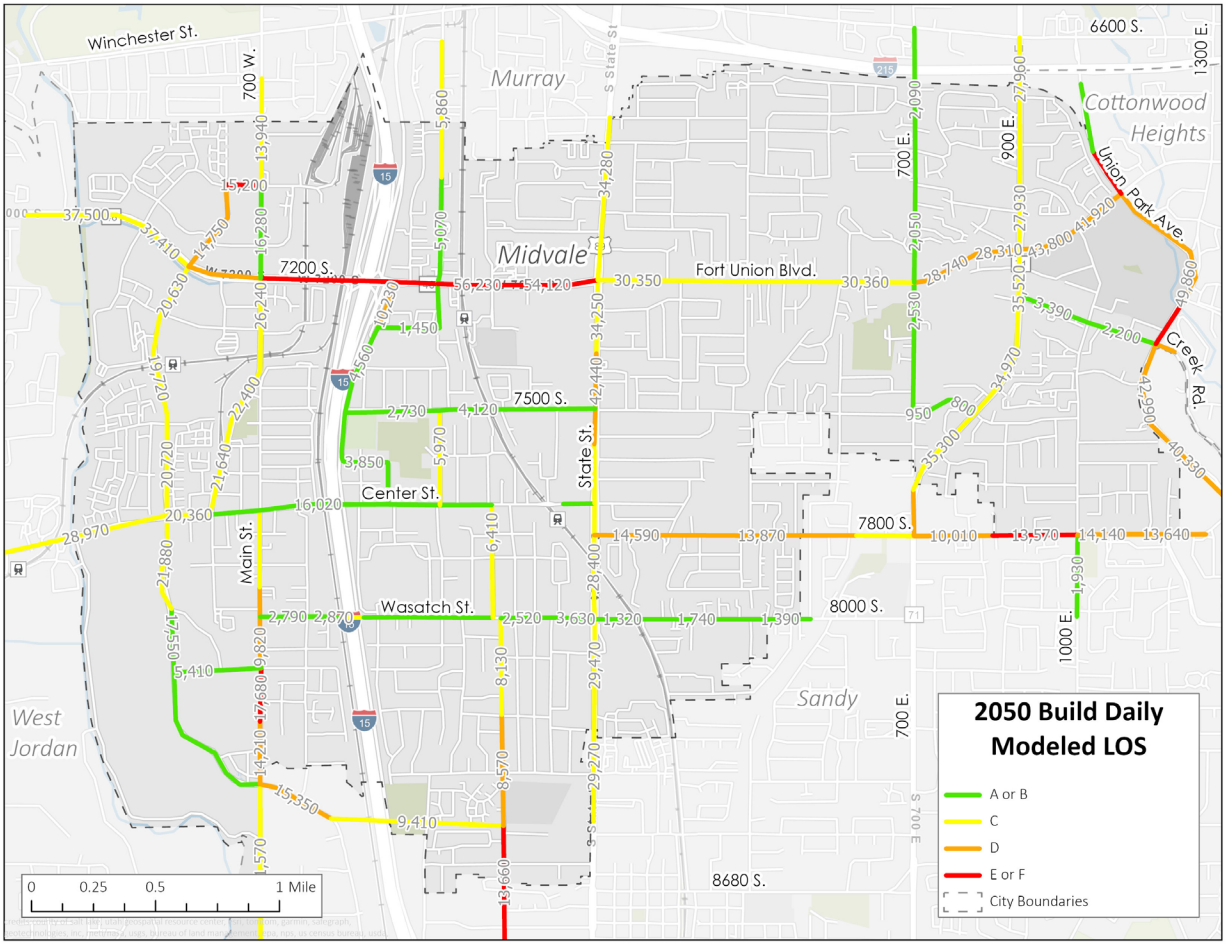


Figure 33. 2050 Build Level of Service

4.1.2 Traffic Pattern Analysis

Midvale City plans to reconfigure portions of Center Street and Holden Street from five to three lanes to improve active transportation facilities (see Section 4.2). To assess the impact on vehicle traffic, a travel demand model was used. Figure 34 shows traffic volume changes with lane reductions on Center Street and Holden Street. Significant reductions (around 10,000 trips per day) are seen on Center Street and Holden near the lane reconfigurations. Smaller reductions appear on Main Street, Monroe, and State Street south of Center Street. In contrast, portions of Bingham Junction Blvd and 7200 South experience increases of about 9,000 trips per day. Since the highest volume increases are on higher-capacity roads, the lane reconfigurations are deemed acceptable to implement.

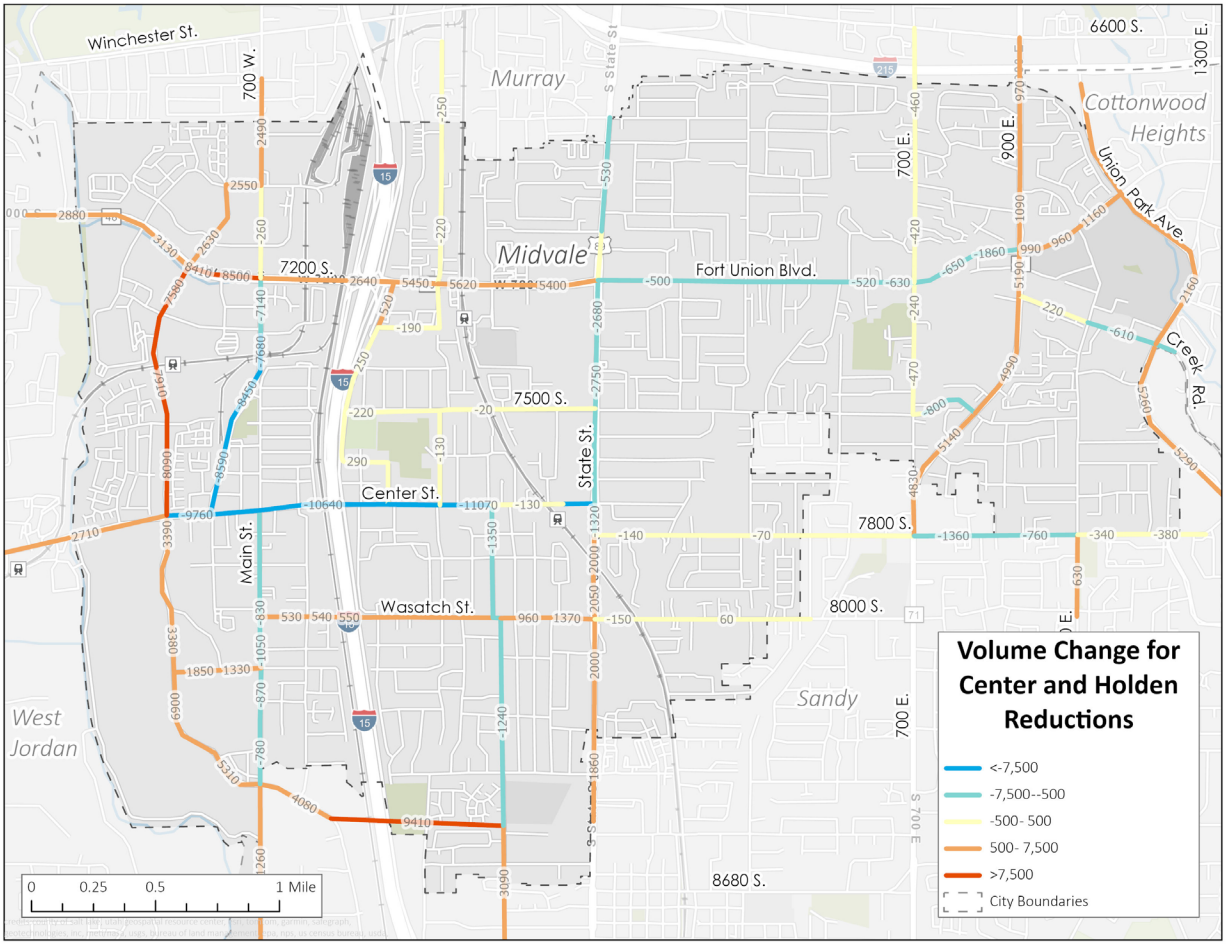


Figure 34. 2050 Volume Change Analysis for Center Street and Holden Street Lane Reductions

4.2 Active Transportation System Plan

This section outlines a strategy to improve Midvale City's pedestrian and cycling infrastructure. By analyzing travel patterns, key areas for improvement have been identified, resulting in a two-phase implementation plan. Each proposed project has been evaluated to ensure that investments align with broader transportation goals.

The plan prioritizes projects that support walking, biking, and transit. It integrates these initiatives with the city's overall transportation plan and aims to create a connected network for active transportation users. Key corridors and areas will be identified and improved to provide both infrastructure and a welcoming environment. While not all streets may be explicitly included, they remain eligible for investments to support the city's transportation goals.

Planning bicycle networks requires considering all types of cyclists, with a focus on attracting those most concerned about safety. Research identifies four cyclist categories: highly confident, somewhat confident, interested but concerned, and not currently interested. The "interested but concerned" group represents the largest potential ridership increase, but they require safe infrastructure to participate.

Network design should prioritize comfort and minimize stress. Factors like traffic speed and volume significantly impact cyclists' comfort. Communities should establish a target comfort level based on the desired user base.

Selecting the right bikeway type involves a multi-step process. It starts with identifying the desired type based on network goals and then refines the selection based on practical considerations like available space and budget. The chosen facility type significantly influences ridership. Generally, higher speeds and volumes necessitate more protective bike lanes or separated paths. This ensures the safety and attracts the "interested but concerned" cyclist group.

4.2.1 Traveler Alignment Analysis

The Traveler Alignment Analysis evaluates the potential for Midvale City residents to switch from driving to walking or biking, based on planned active transportation routes. Using origin-destination data, the Traveler Alignment Analysis identifies projects likely to influence travel behavior, finding that eastern Midvale, especially north-south corridors, has the highest potential. Although the analysis provides valuable insights, it acknowledges limitations such as weather, personal preferences, and data accuracy. These findings can help Midvale City prioritize projects and secure transportation funding. Additional details are in Appendix B.

The analysis identified the top 10 projects with the highest potential for shifting travel modes by comparing current travel patterns with proposed active transportation projects. Key factors included trip distance, project proximity, and travel direction. Despite some data and methodological limitations, the analysis offers important insights for project prioritization and resource allocation.

The results of the traveler alignment analysis are displayed in Figure 35, overlaid on the origin-destination data that the analysis draws from. Longer projects were broken into approximately two-mile long segments for analysis purposes. The top five corridors with the highest active trip conversion potential are all on the eastern side of Midvale. Fort Union Boulevard from 700 East to Wasatch Boulevard by the Fort Union Canyon Center shows the highest projected induced bike trip potential. Generally, active mode shift potential is higher on north-south projects. The projects west of I-15 all received lower mode shift potential compared to the rest of the city. The top 10 projects by average mode shift potential are described in Table 7. The mode shift potential results are also used active transportation project prioritization as discussed in Section 4.2.2.

Table 7. Top 10 Mode Shift Potential Projects

Project Corridor	Facility Type	Average Mode Shift Potential Score
Fort Union Blvd	Separated Bike Lane	7,537
Union Park Ave/City Limits Perimeter	Shared Use Path	4,554
700 E	Buffered Bike Lane	4,390
7800 S	Buffered Bike Lane	4,213
900 E	Sidepath	4,136
300 E	Neighborhood Byway	4,093
7200 S	Sidepath	3,954
Porter Rockwell Trail	Shared Use Path	3,902
1000 E	Buffered Bike Lane	3,855
High Tech Drive	Bike Lane	3,831

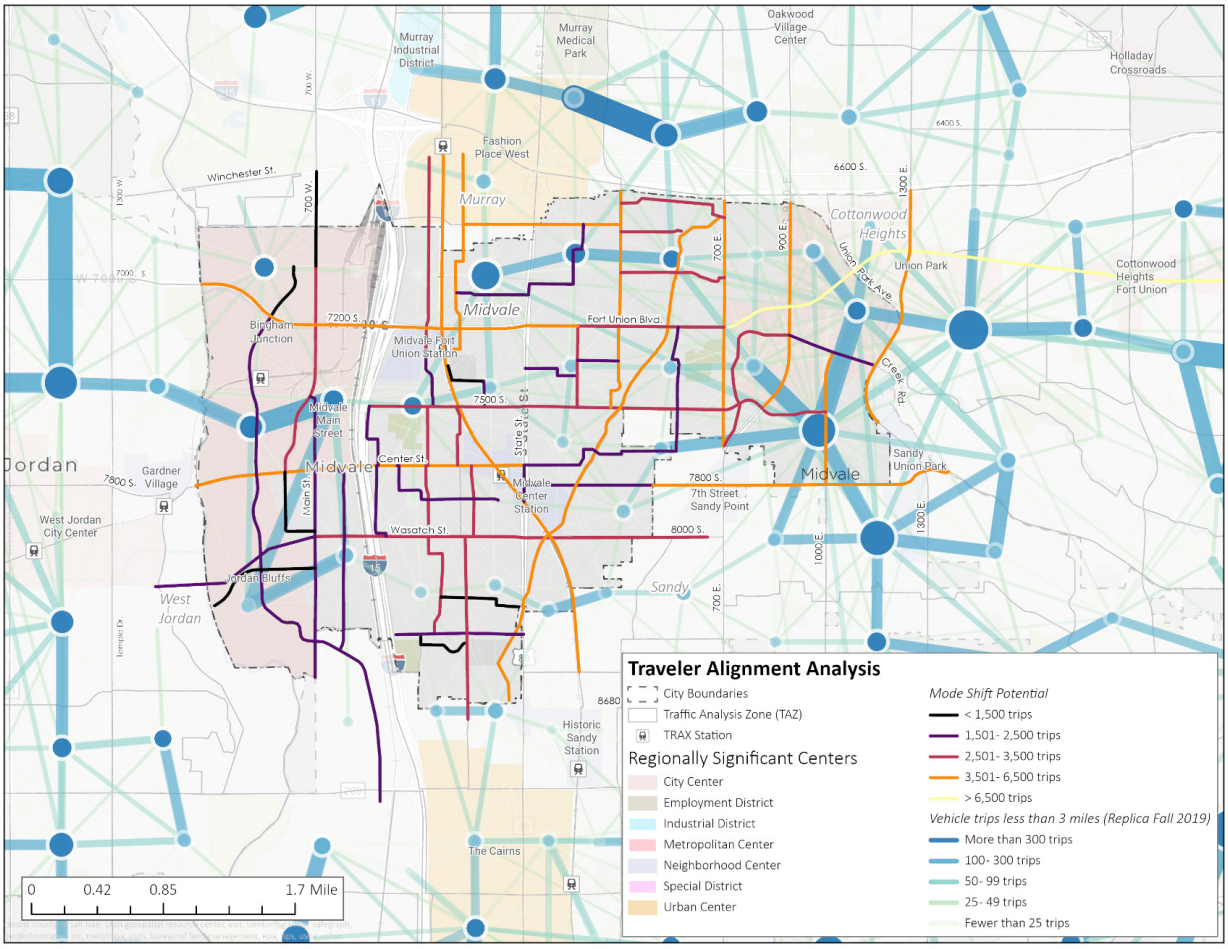


Figure 35. Traveler Alignment Analysis Results Including Mode Shift Potential

4.2.2 Network Expansion and Prioritization

4.2.2.1 Phase 1: Priority Projects

The initial phase focuses on critical network improvements. This phase involves mapping both primary and secondary transportation corridors to identify areas in most need of attention. The assessment considers key criteria such as network connectivity, traffic volume, and alignment with city development goals. Projects deemed essential for improving the overall transportation system ("Priority") receive the most attention in Phase 1.

4.2.2.2 Phase 2: Secondary Projects

Phase 2 takes a broader look at potential projects beyond the immediate critical network needs. High-level concepts and cost estimates are developed for these "Secondary" projects while acknowledging any existing constraints. This allows for a preliminary assessment of their potential impact and feasibility.

4.2.2.3 Project Prioritization Score

A Project Prioritization Score was used to differentiate between Priority Projects and Secondary Projects. This score considers several factors:

- **First-Last Mile Projects:** Projects that improve connections to and from public transportation hubs or activity centers.
- **Mode Shift Analysis:** Potential for encouraging a shift from car dependence to alternative modes like cycling or walking.
- **Cost-Weighted Ranking:** Balancing the project's potential benefits with its overall cost.

4.2.2.4 Secondary Considerations

While the primary considerations prioritize network improvements and mode shift, additional factors are considered to ensure a well-rounded approach. These include:

- **Access to Opportunities:** Projects that improve access to essential services like healthcare facilities, schools, and grocery stores.
- **Safety:** Addressing areas with a high incidence of crashes, particularly those involving pedestrians or cyclists.
- **Regional Connectivity:** Projects that contribute to the completion of regional trail networks and enhance overall network connectivity.

By applying a two-phased approach with a well-defined Project Prioritization Score, it is possible to make informed decisions about which transportation projects will deliver the most significant benefits for the community.

4.2.2.5 Linear Improvements

The priority linear active transportation improvement projects outlined in this analysis (see Table 8) represent a carefully planned and strategic approach to enhancing active transportation options in Midvale. By focusing on critical network improvements and prioritizing projects that align with the city's development goals, these initiatives aim to provide the highest AT value.

Table 8. Priority Linear Improvement Projects

Project ID	Project Name	Facility Type	Project Start	Project End	Cost
LI-1	Fort Union Blvd	Sidepath	Jordan River Parkway/City Limits	Ramanee Drive	$15,064,000
LI-2	Bingham Junction Blvd	Buffered Bike Lane	7200 South	Center Street	$111,000
LI-3	Holden Street	P1-Buffered Bike Lane P2 -Separated Bike Lane	6960 South	Center Street	P1- $415,000 P2- $2,858,000
LI-4	Main Street	Shared Lane Markings	Holden Street/700 W	Center Street	$57,000
LI-5	Center Street	Sidepath	City Limits	State Street	$35,379,000
LI-6	Main Street	Buffered Bike Lane	Center Street	City Limits	$166,000
LI-7	Wasatch/8000 South	Buffered Bike Lane	Main Street	City Limits	$293,000
LI-8	Cottonwood Street	Bike Lane	City Limits	Millenium Way	$100,000
LI-9	Porter Rockwell Trail	Future Study to Determine Exact Facility	City Limits	City Limits	$2,032,000
LI-10	TRAX SUP	Shared Use Path	7200 S Trax Station	Maple Street	$721,000
LI-11	State Street	Sidepath	Center Street	Porter Rockwell Trail	$3,620,000
LI-12	7800 South	Buffered Bike Lane	State Street	415 East	$66,000
LI-13	Fort Union Blvd	Separated Bike Lane	Ramanee Dr	Jordan and Salt Lake City Canal	$2,769,000
LI-14	Jordan and Salt Lake City Canal	Future Study to Determine Exact Facility	Larchwood Drive	City Limits	2,080,000
LI-15	Fort Union Blvd	Separated Bike Lane	Jordan and Salt Lake City Canal	700 E	$1,758,000
LI-16	700 East	Buffered Bike Lane	City Limits	City Limits	$292,000
LI-17	Fort Union Blvd	Separated Bike Lane	700 E	Union Park Ave/City Limits	$4,474,000
LI-18	900 East	Sidepath	City Limits	7500 South	$7,170,000
LI-19	700 West	Bike Lane	City Limits	6960 S	$157,000

The secondary linear improvement projects (see Table 9) offer complementary enhancements to the overall network. These initiatives, carefully selected to support the city's development goals and aim to create a more comprehensive AT network.

Table 9. Secondary Linear Improvement Projects

Project ID	Project Name	Facility Type	Project Start	Project End	Cost
LI-20	Bingham Junction Boulevard	Sidepath	7200 S	River Gate Dr	$119,000
LI-21	Wasatch Street	Shared Use Path	City Limits	Main St	$86,000
LI-22	Ivy Drive	Shared Use Path	City Limits	Main St	$636,000
LI-23	Bingham Junction Boulevard	Sidepath	Center St	City Limits	$3,024,000
LI-24	805 West	Neighborhood Byway	Center St	Main St	$90,000
LI-25	Allen Street	Neighborhood Byway	Center St	City Limits	$190,000
LI-26	Oak Street	Shared Lane Markings	Center St	Wasatch St	$22,000
LI-27	Catalpa Road/Locust Steet	Neighborhood Byway	6th Ave	Center St	$71,000
LI-28	Greenwood Avenue	Bike Lane	Catalpa Rd	State St	$27,000
LI-29	Chapel Street/Garden View Drive	Neighborhood Byway	Center St	Wilson St	$138,000
LI-30	Jefferson Street	Neighborhood Byway	7500 S	Princeton Dr	$181,000
LI-31	Cottonwood Streat	Neighborhood Byway	Millenium Way	7500 S	$57,000
LI-32	Princeton Drive	Neighborhood Byway	Hoover St	State St	$131,000
LI-33	Foxbridge Drive	Neighborhood Byway	Princeton Dr	Monroe St	$64,000
LI-34	Marquette Drive	Neighborhood Byway	Jackson St	City Limits	$614,000
LI-35	Monroe Street	Buffered Bike Lane	Wasatch St	City Limits	$435,000
LI-36	Roosevelt Street	Bike Lane	Center St	Wasatch St	$36,000
LI-37	Grant Street	Neighborhood Byway	7500 S	Center St	$63,000
LI-38	Maple Street	Neighborhood Byway	Lowe's Ln	7500 S	$904,000
LI-39	High Tech Drive	Bike Lane	City Limits	7200 S Trax Station	$250,000
LI-40	Glover Lane/Carlson Ave/160 E	Neighborhood Byway	High Tech Dr	6790 S	$200,000
LI-41	6790 South	Neighborhood Byway	City Limits	300 S	$161,000
LI-42	7350 South/Marie Drive	Neighborhood Byway	State St	Ramanee Dr	$61,000
LI-43	Greenwood Avenue	Buffered Bike Lane	State St	700 E	$844,000
LI-44	Ramanee Dr	Neighborhood Byway	7200 E	7500 S	$114,000
LI-45	Carol Way	Neighborhood Byway	Ramanee Dr	Halelani Dr	$82,000
LI-46	300 East	Neighborhood Byway	City Limits	7500 S	$229,000
LI-47	Acoma Road	Neighborhood Byway	300 E	700 E	$429,000
LI-48	6865 South	Neighborhood Byway	300 E	500 E	$90,000
LI-49	6990 South	Neighborhood Byway	300 E	700 E	$62,000
LI-50	7720 South	Neighborhood Byway	State St	Sandra Way	$57,000
LI-51	Sandra Way	Neighborhood Byway	7660 S	7800 S	$7,600
LI-52	520 East	Neighborhood Byway	7720 S	7200 S	$250,000
LI-53	7800 South	Buffered Bike Lane	S 415 E	E Creek Rd	$717,000
LI-54	Hillcrest High Drive	Bike Lane	700 E	900 E	$22,000
LI-55	East Jordan Canal	Shared Use Path	City Limits	900 E	$43,000
LI-56	Casa Negra Avenue	Neighborhood Byway	900 E	1000 E	$65,000
LI-57	1000 E	Buffered Bike Lane	South Union Ave	7800 S	$216,000
LI-58	South Union Avenue	Buffered Bike Lane	900 E	S Union Park Ave	$216,000
LI-59	Union Park Avenue	Shared Use Path	City Limits	City Limits	$107,000

4.2.2.6 Spot Improvements

The following primary spot improvement projects intend to address specific challenges within Midvale's existing crosswalk infrastructure. By enhancing connectivity between key destinations and eliminating barriers to travel, these initiatives aim to encourage more residents to walk, bike, and use public transit. Spot improvements can come in a variety of forms, including, high-visibility crosswalk markings, signage, raised crosswalks, curb extensions, pedestrian-activated flashing beacons, reflective bollards, improved lighting, and pedestrian trail bridges. Additionally, traffic management improvements such as reduced speed limits, traffic signals, pedestrian countdown timers, and no-turn-on-red restrictions could also be considered. Specific treatments are location-dependent according to roadway width and speed, pedestrian and bicycle volumes, sight distance, and other feasibility considerations. Other than one pedestrian bridge project, cost estimates presented in Table 10 and Table 11 range from $30,000 to $120,000. The costs are a function of the number roadway lanes at each location assuming that wider roadways will require a higher level of improvements. More detailed, site-specific analysis is required to determine the specific improvements and costs at each location.

Table 10. Primary Spot Improvement Projects

Project ID	Improvement Type	Cross Street	Cross Street	Cost
SI-1	Crossing Enhancement	Commerce Park Dr	700 W	$90,000
SI-2	Crossing Enhancement	7800 S	JRT	$60,000
SI-3	Crossing Enhancement	Bingham Junction Blvd	7549 S	$120,000
SI-4	Crossing Enhancement	Holden St	Tuscany View Rd	$120,000
SI-5	Crossing Enhancement	1st Ave	Main Street	$60,000
SI-6	Crossing Enhancement	W Center St	Allen St	$90,000
SI-7	Crossing Enhancement	Center St	Oak St	$90,000
SI-8	Crossing Enhancement	Center St	Jefferson St	$90,000
SI-9	Crossing Enhancement	7500 S	Jefferson St/Cottonwood ST	$30,000
SI-10	Crossing Enhancement	Millenium Way	Cottonwood St	$60,000
SI-11	Crossing Enhancement	7200 S	400 W	$120,000
SI-12	Crossing Enhancement	7200 S	Porter Rockwell Trail	$120,000
SI-13	Crossing Enhancement	7200 S	In front of CSL Plasma	$120,000
SI-14	Crossing Enhancement	Monroe St	W Foxbridge Dr	$60,000
SI-15	Crossing Enhancement	Wasatch St	Jordan and Salt Lake City Canal	$60,000
SI-16	Crossing Enhancement	Wasatch St	Porter Rockwell Trail	$60,000
SI-17	Crossing Enhancement	7800 S	Jordan and Salt Lake City Canal	$60,000
SI-18	Crossing Enhancement	7200 S	Jordan and Salt Lake City Canal	$120,000
SI-19	Crossing Enhancement	700 E	Larchwood St	$90,000
SI-20	Crossing Enhancement	7500 S	700 E	$90,000
SI-21	Intersection Enhancement	Hillcrest High Dr	900 E	$450,000
SI-22	Intersection Enhancement	7200 S	900 E	$450,000
SI-23	Crossing Enhancement	South Union Ave	Midblock	$90,000
SI-24	Intersection Enhancement	South Union Ave	Union Park Ave	$500,000
SI-25	Crossing Enhancement	Union Park Ave	Waterslide Cir	$150,000

The secondary spot improvements offer targeted enhancements that are carefully selected to complement the primary spot improvements by improving street and intersection crossings by non-motorized users.

Table 11. Secondary Spot Improvement Projects

Project ID	Improvement Type	Cross Street	Cross Street	Cost
SI-26	Jordan River Bridge	Bingham Jct Park	Jordan River	$325,000
SI-27	Crossing Enhancement	River Gate Dr	View Park Dr	$60,000
SI-28	Crossing Enhancement	W River Gate Dr	Suzanne Dr	$60,000
SI-29	Crossing Enhancement	Bingham Junction Blvd	Winco Parking Lot	$120,000
SI-30	Intersection Enhancement	River Gate Dr	700 W	$400,000
SI-31	Crossing Enhancement	700 W	7022 S	$90,000
SI-32	Crossing Enhancement	Bingham Junction Blvd	Legacy Center Way	$120,000
SI-33	Crossing Enhancement	Coliseum Way	CHG Healthcare	$90,000
SI-34	Crossing Enhancement	Grandeur View Way	Blue Vista Ln	$60,000
SI-35	Crossing Enhancement	Blue Vista Ln	Midblock	$60,000
SI-36	Crossing Enhancement	Main St	Blue Vista Ln	$60,000
SI-37	Crossing Enhancement	Coliseum Way	Parking Garage	$90,000
SI-38	Crossing Enhancement	Bingham Junction Blvd	7389 S	$120,000
SI-39	Crossing Enhancement	Bingham Jct Blvd	Midblock	$120,000
SI-40	Crossing Enhancement	Bingham Jct Blvd	Ivy Dr	$120,000
SI-41	Crossing Enhancement	Allen St	Wasatch St	$120,000
SI-42	Crossing Enhancement	Princeton Dr	300 W/Jackson	$60,000
SI-43	Crossing Enhancement	8600 S	Jordan and Salt Lake City Canal	$30,000
SI-44	Crossing Enhancement	Princeton Dr	Jordan and Salt Lake City Canal	$120,000
SI-45	Crossing Enhancement	Wood St	Midblock	$30,000
SI-46	Crossing Enhancement	7200 S	Ramanee Dr	$120,000
SI-47	Crossing Enhancement	7500 S	Jordan and Salt Lake City Canal	$60,000
SI-48	Crossing Enhancement	Greenwood Ave	520 E	$60,000
SI-49	Crossing Enhancement	900 E	E 7010 S	$120,000
SI-50	Crossing Enhancement	East Jordan Canal	Midblock	$30,000
SI-51	Crossing Enhancement	Hillcrest High Dr	7500 S	$60,000
SI-52	Crossing Enhancement	Husky Hwy	7301 near Hillcrest HS parking lot	$120,000
SI-53	Crossing Enhancement	1000 E	Casa Negra Ave	$60,000
SI-54	Crossing Enhancement	South Union Ave	1105 E	$90,000

4.2.2.7 Priority Projects Map

Results of the AT Project Prioritization Analysis showing priority projects for both linear and spot improvements (see Figure 36 and Figure 37).

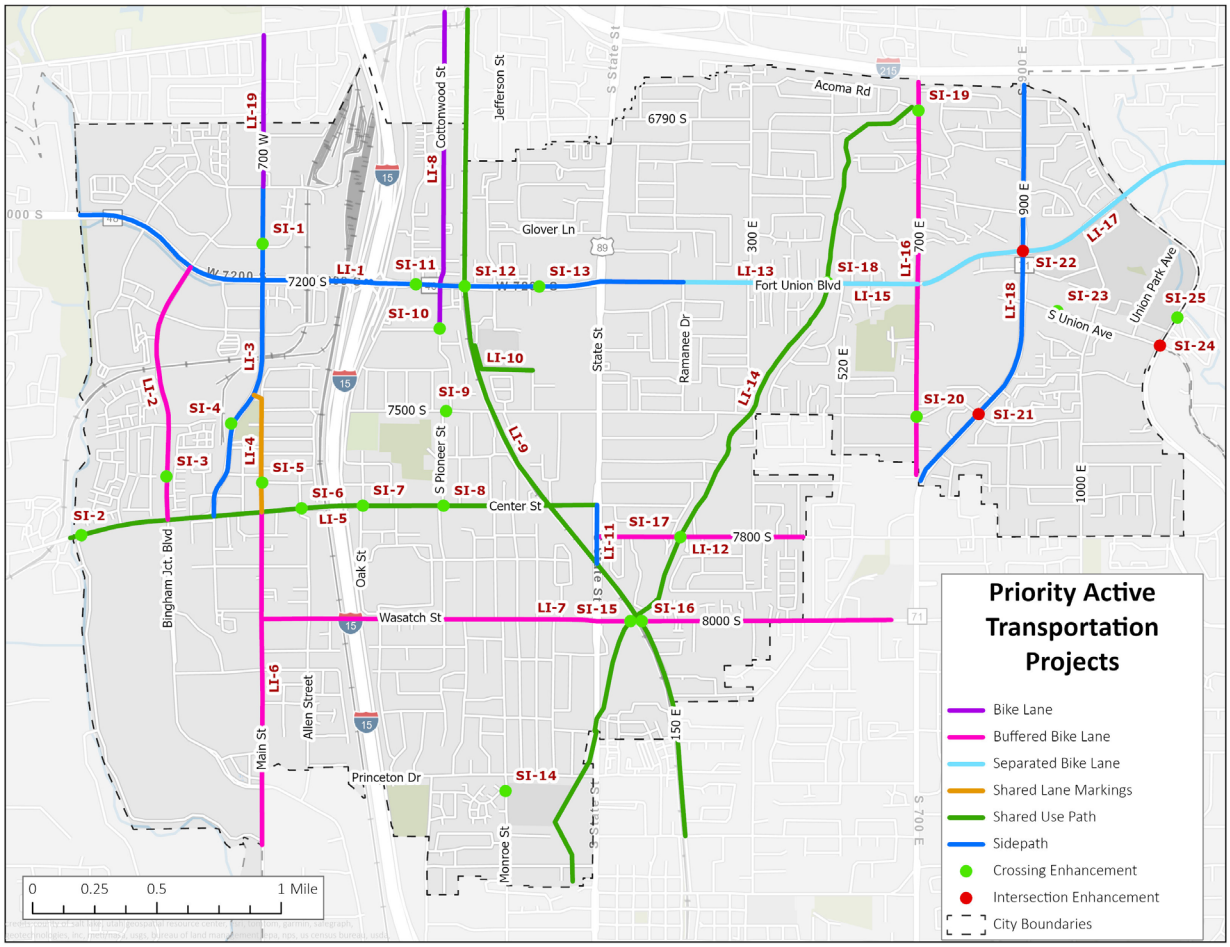


Figure 36. AT Priority (Linear + Spot) Projects

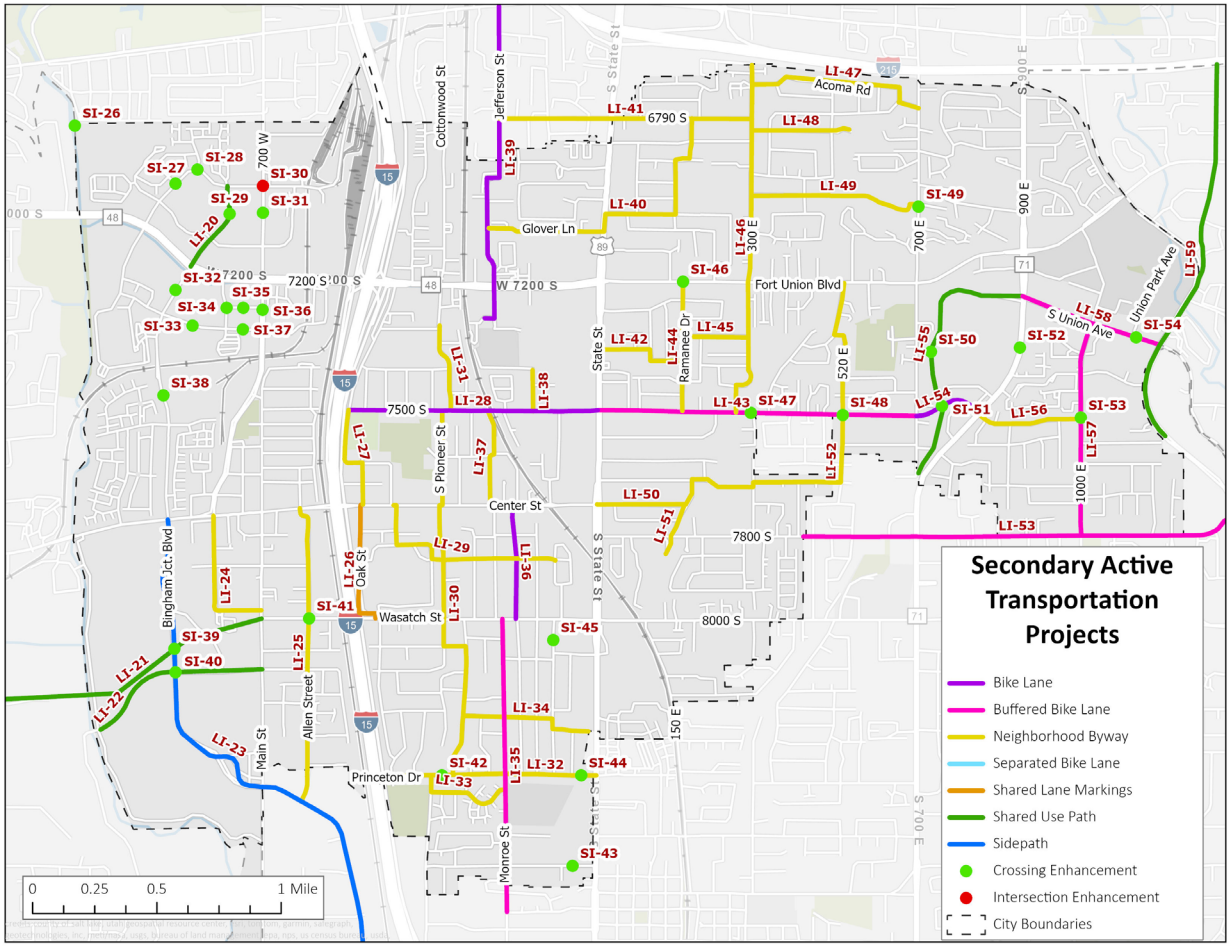


Figure 37. AT Secondary (Linear + Spot) Projects

4.2.2.8 Phasing

AT Project Phasing is shown in Figure 38.

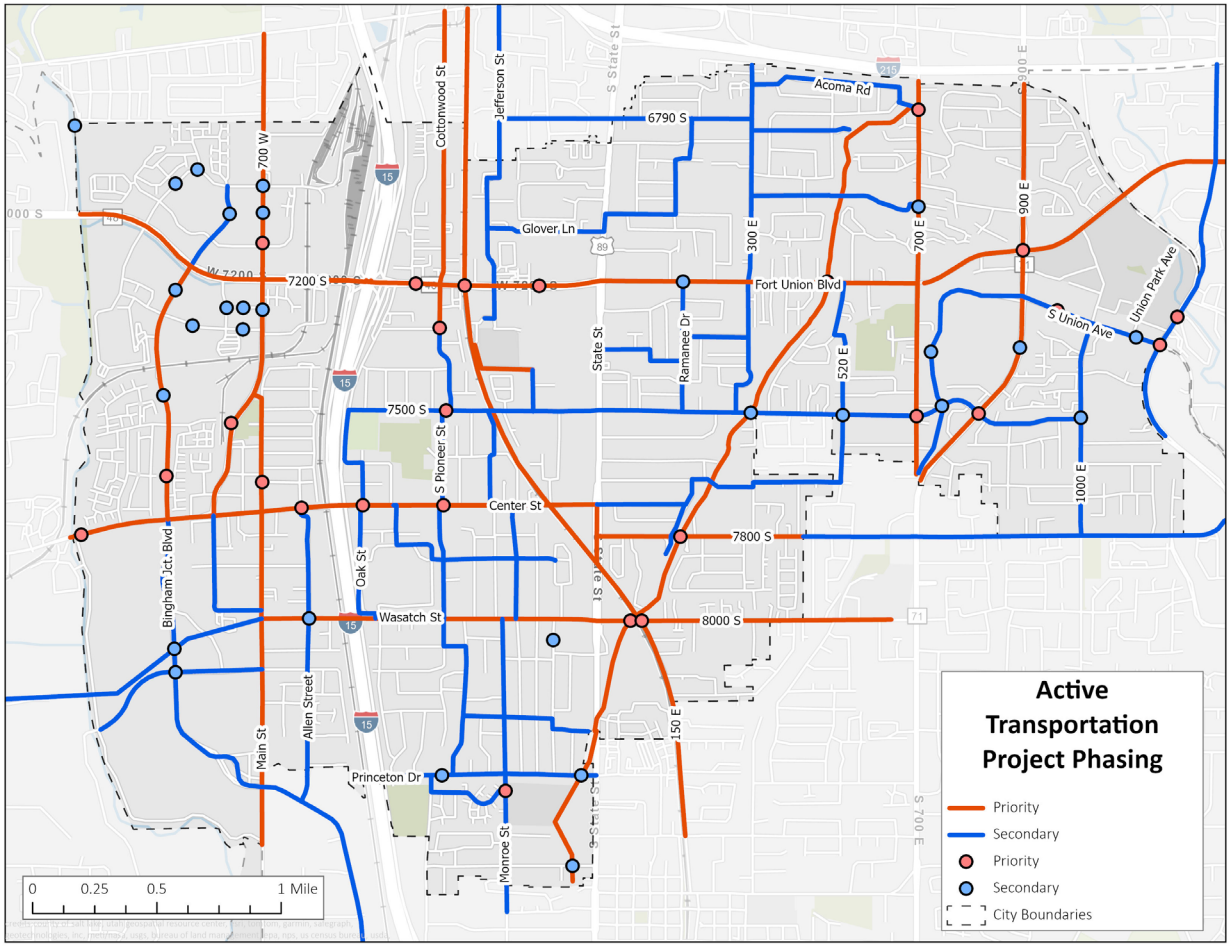


Figure 38. AT Project Phasing

4.3 Planned Transit Projects

Figure 39 depicts planned transit projects outlined in the Wasatch Front Regional Council's (WFRC) 2023-2050 Regional Transportation Plan. These are centered around increased frequencies on existing bus routes, extension of existing routes, and the creation of a Bus Rapid Transit (BRT) on State Street. In addition to the proposed State Street BRT route, the RTP also calls for existing bus service on State Street to be increased to a 15-minute frequency or better. A similar improvement is proposed for the bus route currently operating on Fort Union Boulevard. Finally, the plan also calls for a 900 East bus route, which currently terminates just north of Midvale, to extend further south through the city and terminate at the intersection of 7800 South and State Street. Bus service along 1300 East would also be extended further south to connect to the city's northeastern boundary. While not part of UTA or WFRC long-range planning efforts, Midvale City desires to explore options to grade separate TRAX crossings within the city.

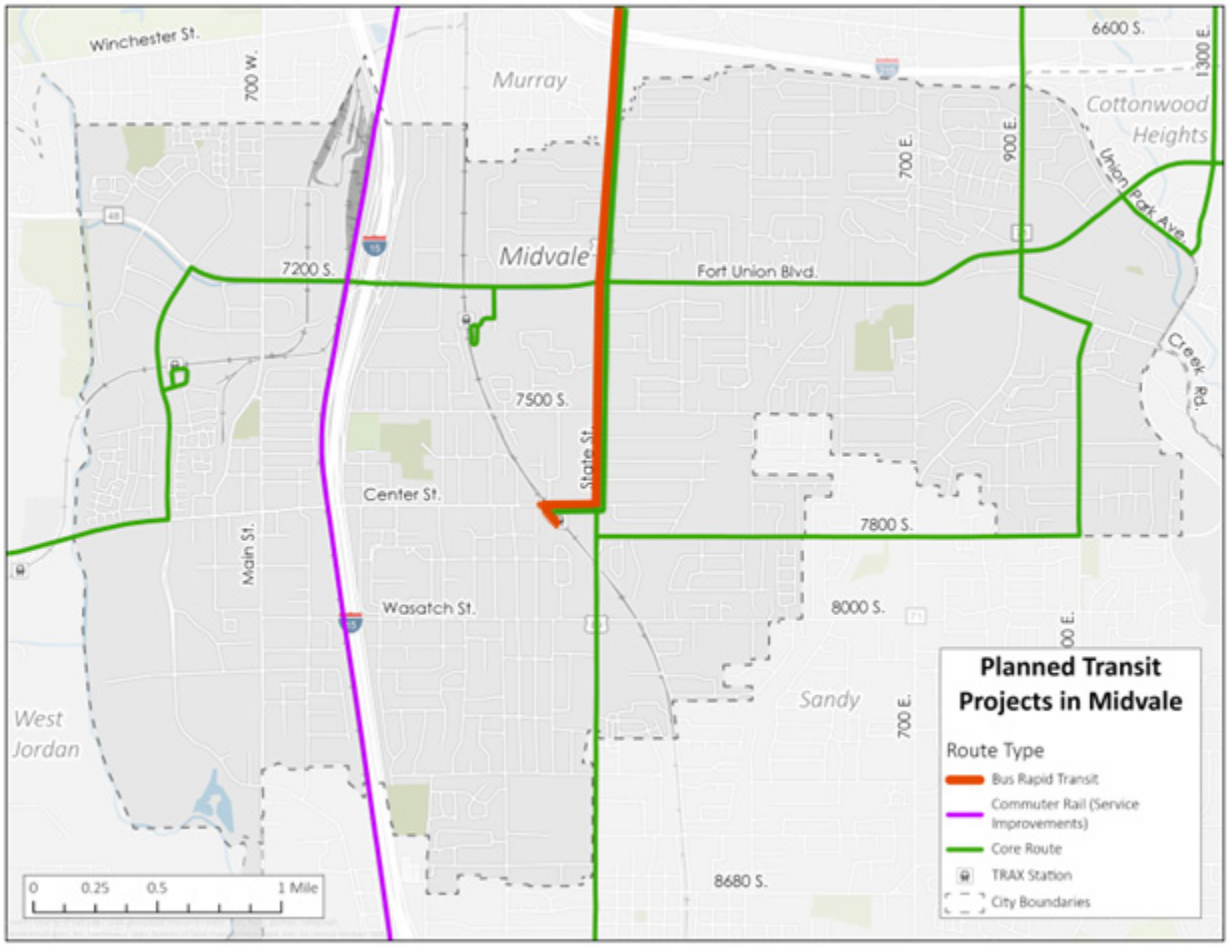


Figure 39. Planned Transit Project Network in Midvale City

4.4 Functional Classification

Functional classification has evolved significantly beyond its original role of categorizing roadways by traffic function. It now also guides roadway design expectations, such as speed, capacity, and their alignment with current and future land use. Federal legislation relies on functional classification to determine funding eligibility under the Federal-aid program, while transportation agencies use it to assess and set benchmarks for roadway performance in a shift towards performance-based management. This approach increasingly shapes expectations and measures outcomes related to preservation, mobility, and safety.

Roadways in Midvale are categorized into arterials, collectors, and local streets based on their functional classification. Assigning each roadway to its appropriate category is important to promote efficient traffic flow throughout the network. Determining the classification requires a blend of technical expertise and practical judgment, balancing scientific criteria with real-world considerations. Figure 40 displays the functional classification.

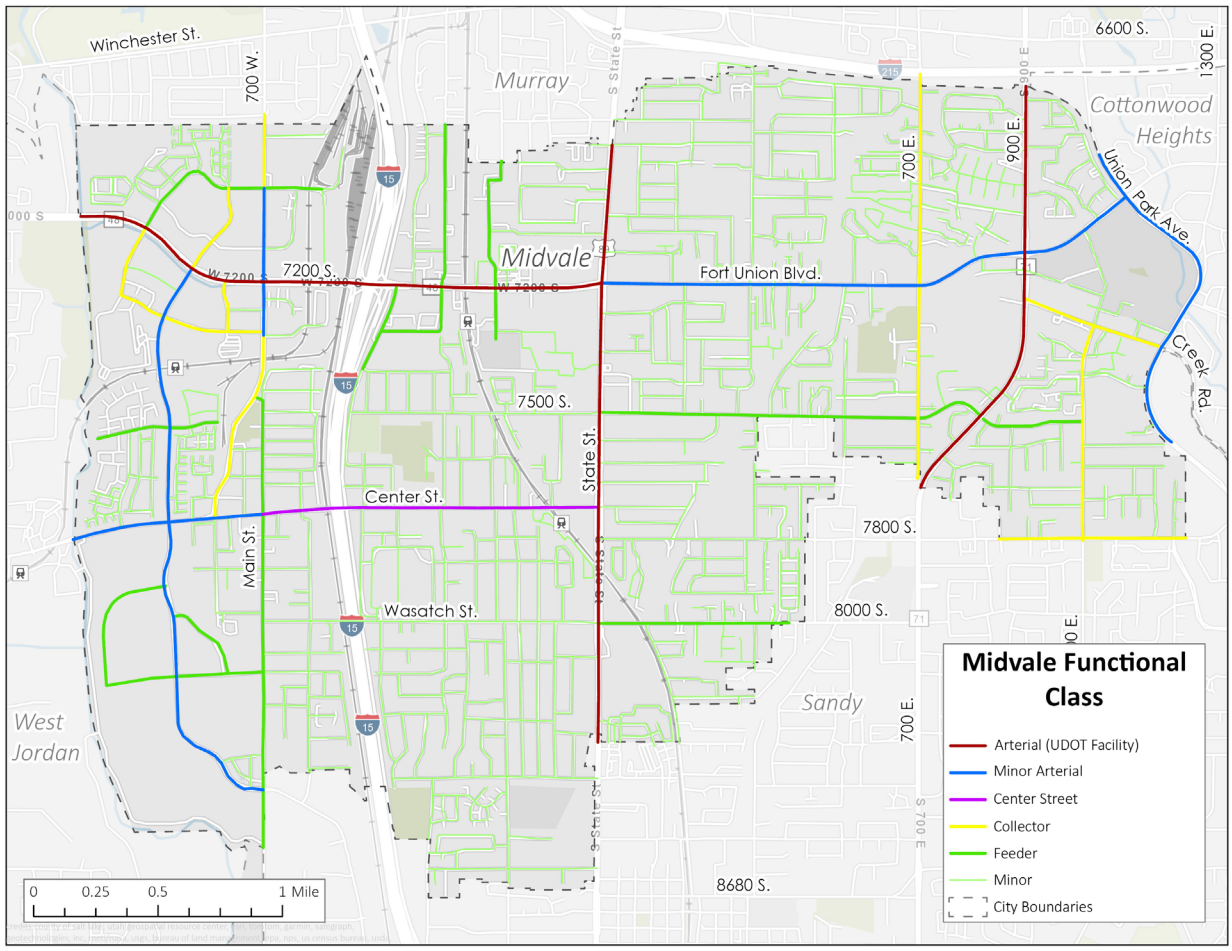


Figure 40. Roadway Functional Class

4.4.1 Street Sections

Street sections depict the various components that make up a road within the right-of-way. The right-of-way is public land encompassing the road itself, medians, parking areas, bike lanes, curb and gutter, park strips (for utilities and landscaping), and sidewalks. Design decisions for these components—such as the number and size of lanes—are typically made during project planning in accordance with city guidelines, considering the road's functional classification and the available right-of-way.

The sections provided in this chapter serve as initial references for road reconstruction and active transportation projects in Midvale. They offer a general overview of what road cross-sections may look like, but each project requires a tailored design that addresses the specific conditions of its location. Understanding the elements of a road cross-section is crucial. These elements include the driving lanes, shoulders, bike lanes, sidewalks, utilities, and drainage areas. This knowledge is vital for effective decision-making during project planning.

In Midvale City, roads vary in width, which means a uniform cross-section may not be applicable to all roads. Each road should be evaluated individually to determine the most appropriate cross-section for future designs, considering its current width and usage.

Table 12 provides a detailed overview of different road types, their typical widths, and associated bike facilities.

Table 12. Bike Facility per Functional Class – Cross Section Variations

Functional Class	Figure #	Description	Lanes	Bike Facility Type
Minor Arterial 106' **ROW**	41	Standard	5	Standard
	42	106' ROW Standard	5	Sidepath
	43	106' ROW with Separated Bike Lanes	5	Separated Bike Lane
	44	106' ROW with Buffered Bike Lanes	5	Buffered Bike Lane
Center Street	45	92' ROW with Sidepath	3	Sidepath
Major Collector 80' **ROW**	46	80' ROW Standard	5	Standard
	47	80' ROW with Buffered Bike Lanes	3	Buffered Bike Lanes
	48	80' ROW Separated Bike Lanes	3	Separated Bike Lane
	49	80' ROW with Separated Bike Lanes and Parking	3	Separated bike Lane and Parking
Collector Street 66' **ROW**	50	66' ROW Standard	3	Standard
	51	66' ROW with Bike Lanes	3	Bike Lanes
	52	66' ROW with Buffered Bike Lanes	2	Buffered Bike Lane
	53	66' ROW with Separated Bike Lanes	2	Separated bike Lane
	54	66' ROW with Sidepath	3	Sidepath
	55	66' ROW with Shared Lane Markings	3	Shared Lane Markings
Feeder Street 60' **ROW**	56	60' ROW Standard	3	Standard
	57	60' ROW with Bike Lanes	2	Bike Lanes
	58	60' ROW with Buffered Bike Lanes	2	Buffered Bike Lanes
	59	60' ROS Neighborhood Byway	2	Neighborhood Byway
Minor Street 50' **ROW**	60	50' ROW Standard	2	Standard
	61	50' ROW with Bike Lanes	2	Bike Lanes
	62	50' ROW Neighborhood Byway	2	Neighborhood Byway
	63	50' ROW with Sidepath	2	Sidepath
Private Street 35'	64	35' ROW Private Street	2	Standard

Figure 41 to Figure 64 illustrate these various cross-sections. While these figures give a general framework, every project will necessitate a design customized to its unique context. It is also important to note that total width displayed for each cross-section includes an additional foot of space on the outer edge of the sidewalk for maintenance purposes as per Midvale City standard drawings.

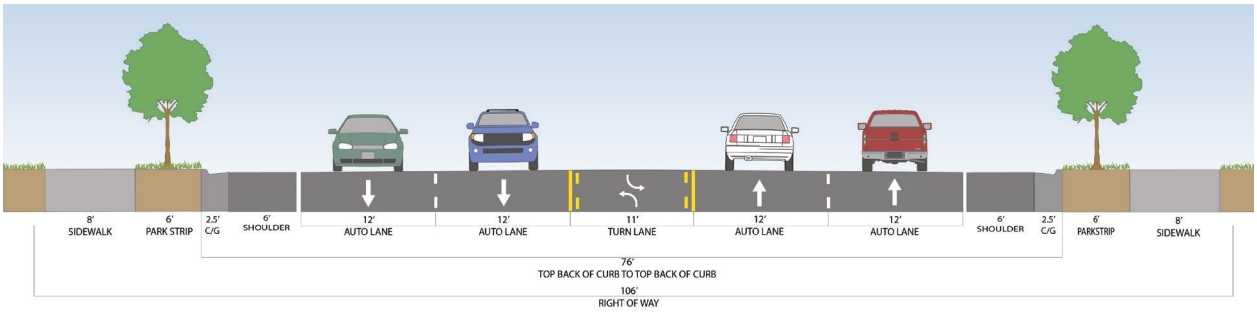


Figure 41. 106' ROW Standard

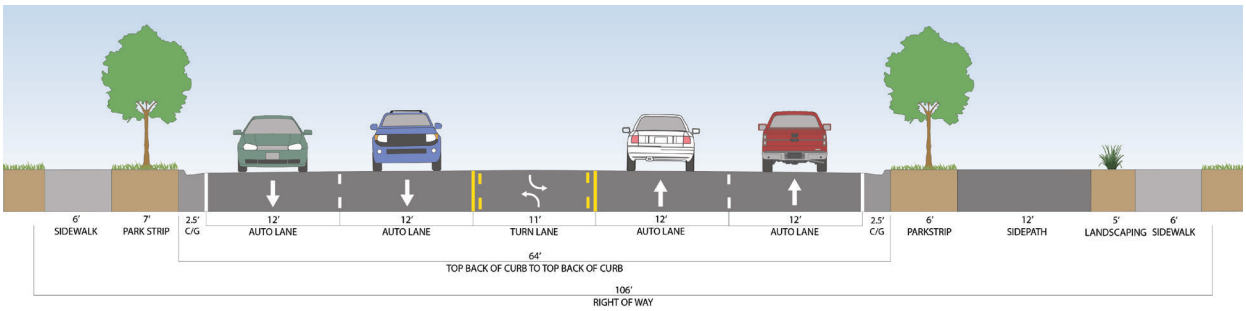


Figure 42. 106' ROW with Sidepath

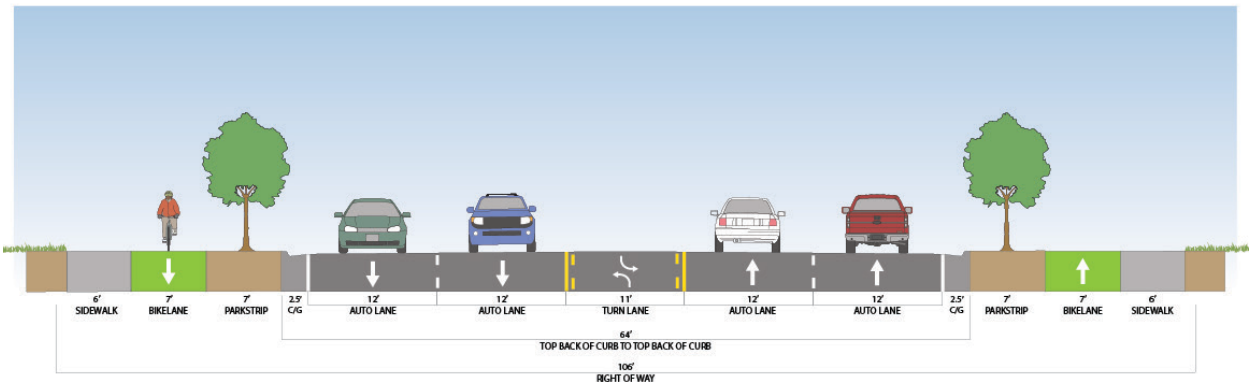


Figure 43. 106' ROW with Separated Bike Lanes

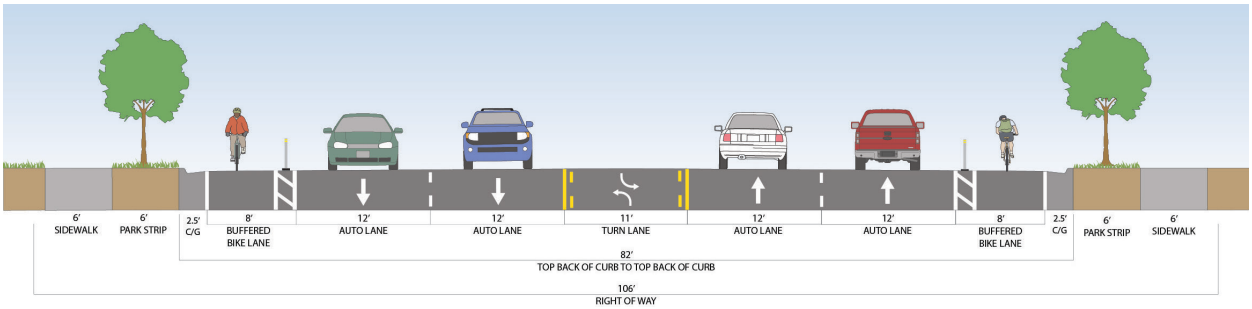


Figure 44. 106' ROW with Buffered Bike Lanes

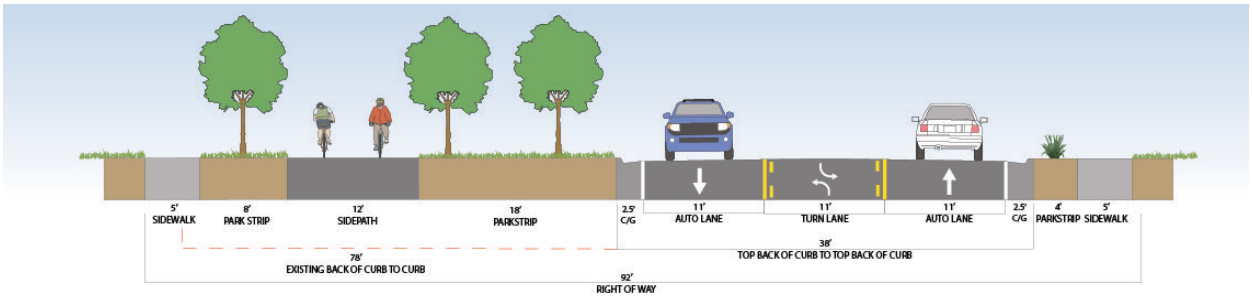


Figure 45. Center Street - 92’ ROW with Sidepath

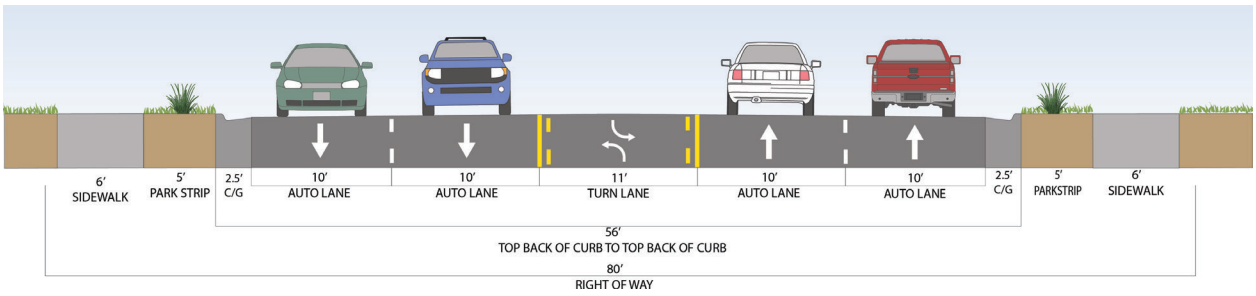


Figure 46. 80' ROW Standard

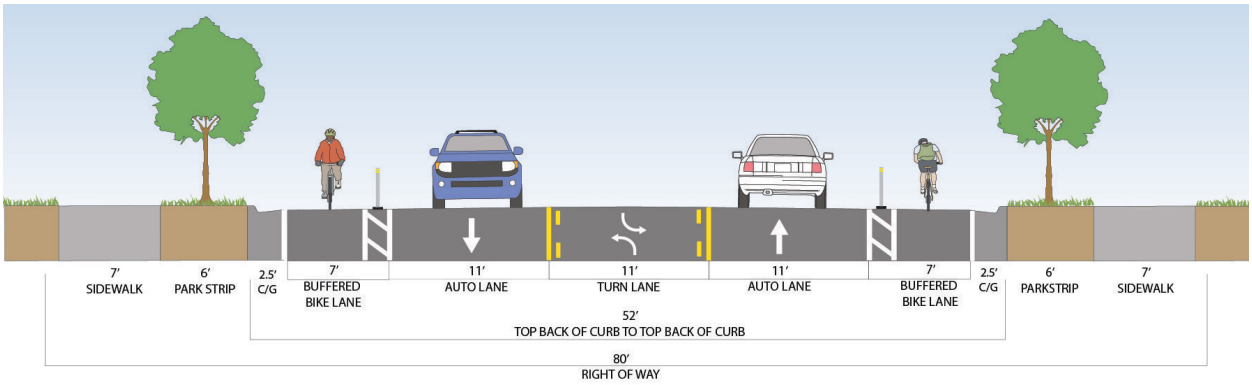


Figure 47. 80' ROW with Buffered Bike Lanes

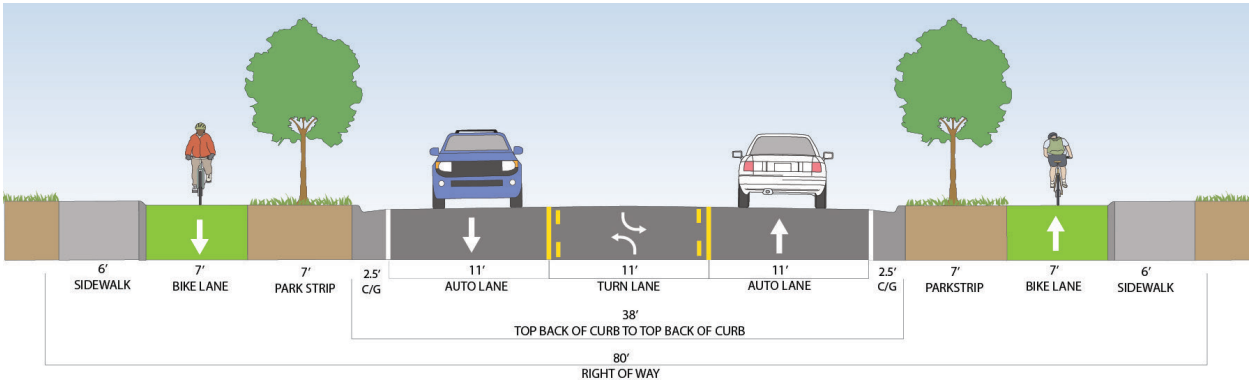


Figure 48. 80' ROW Separated Bike Lanes

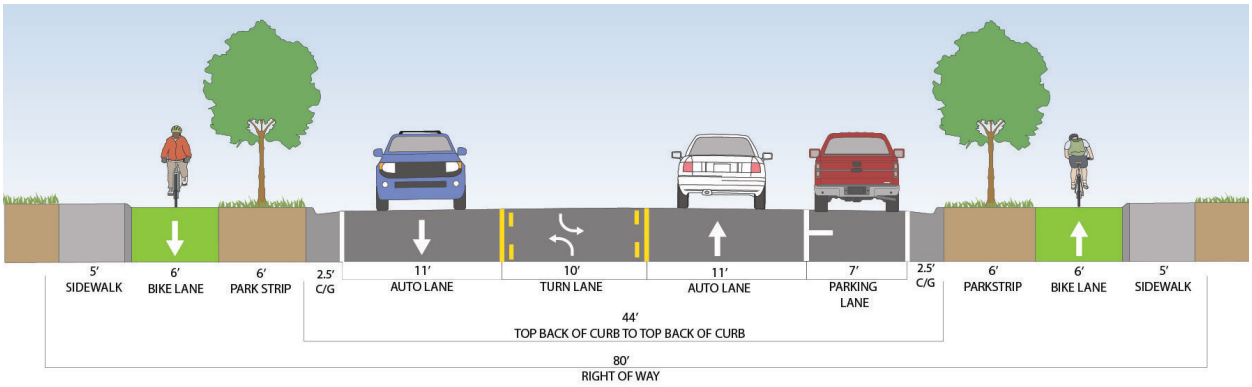


Figure 49. 80' ROW with Separated Bike Lanes and Parking

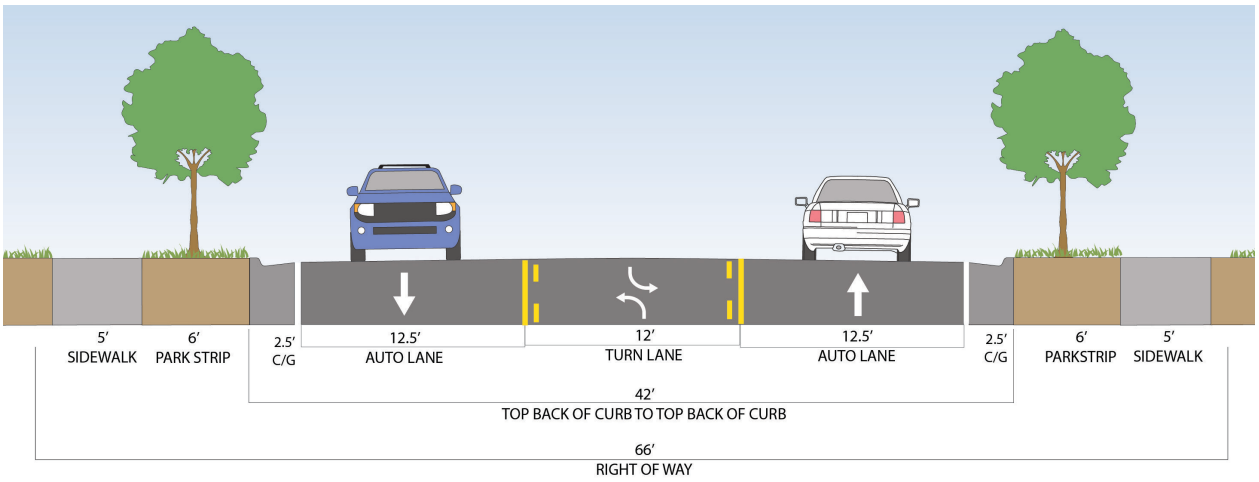


Figure 50. 66' ROW Standard

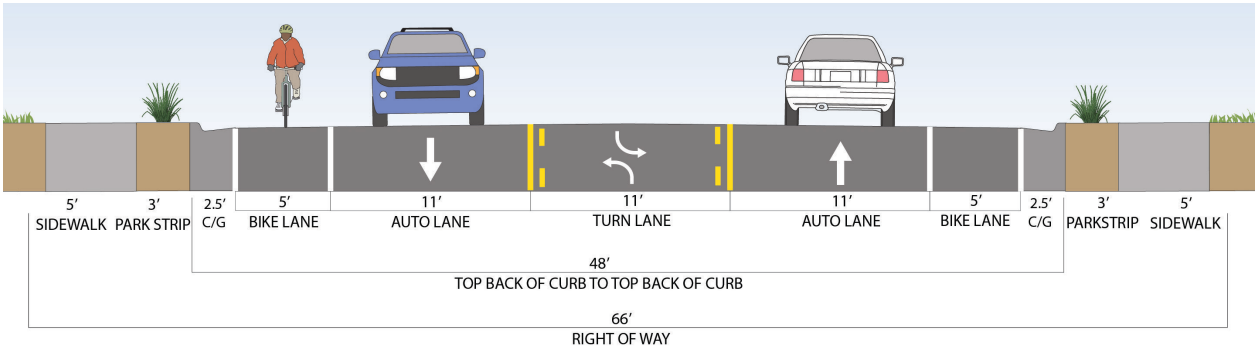


Figure 51. 66' ROW with Bike Lanes

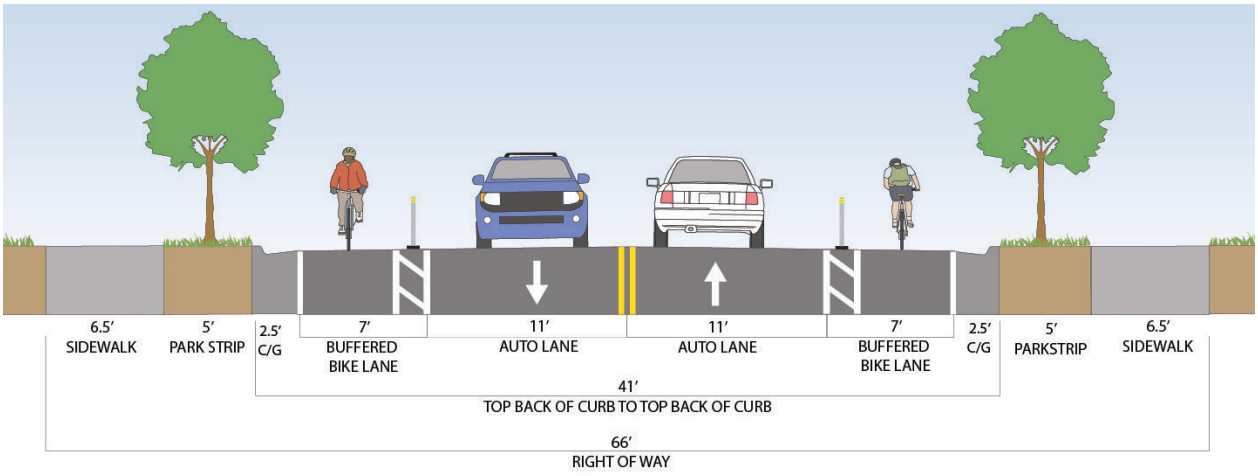


Figure 52. 66' ROW with Buffered Bike Lanes

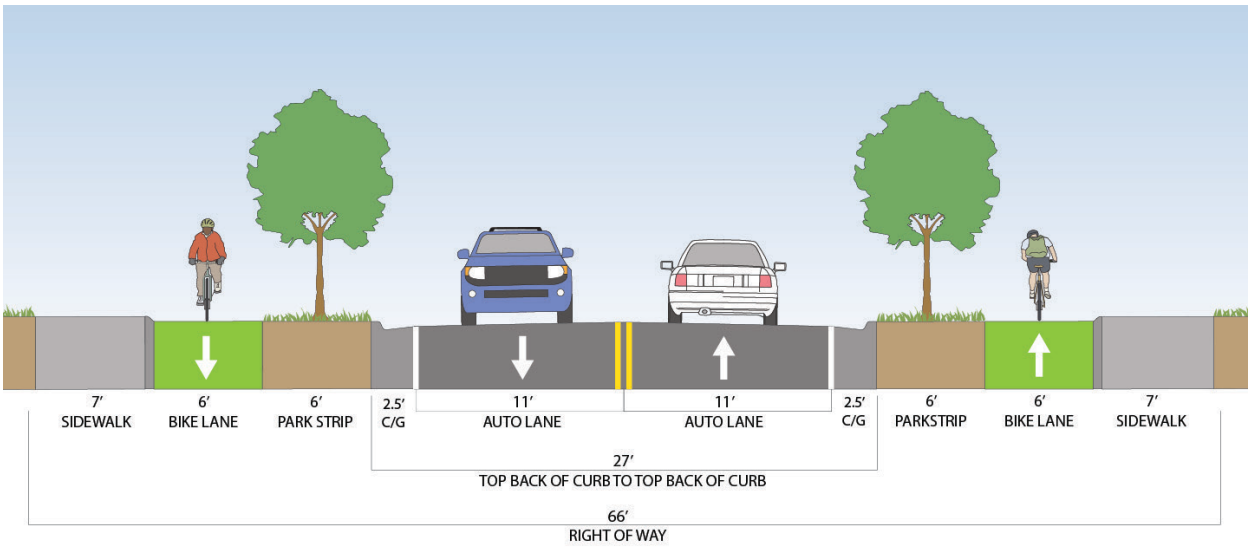


Figure 53. 66' ROW with Separated Bike Lanes

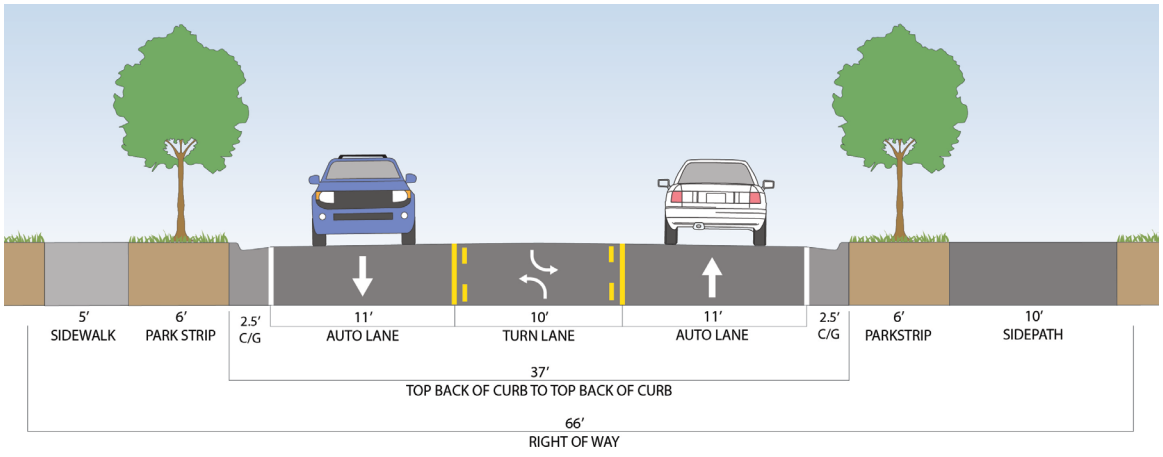


Figure 54. 66' ROW with Sidepath

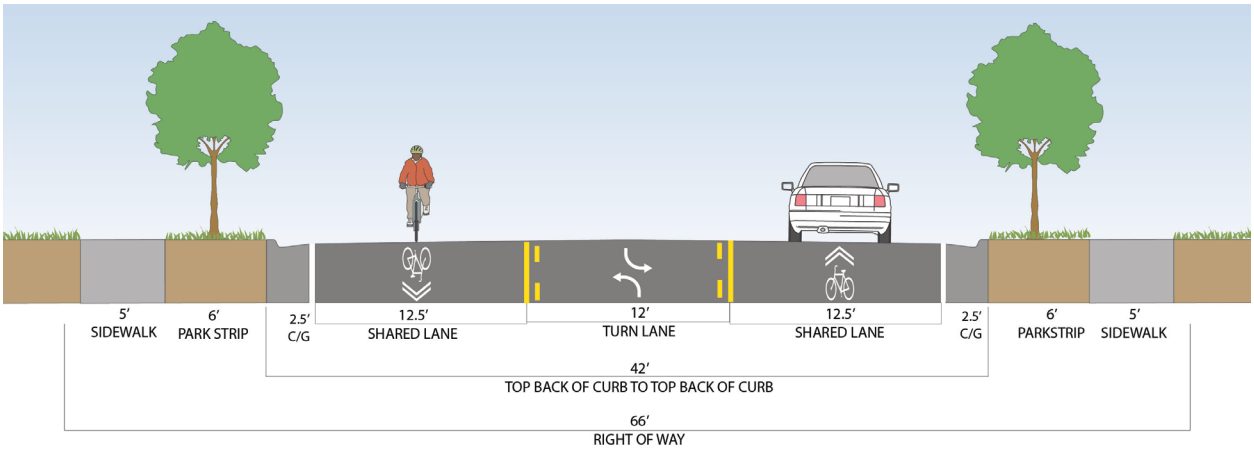


Figure 55. 66' ROW with Shared Lane Markings

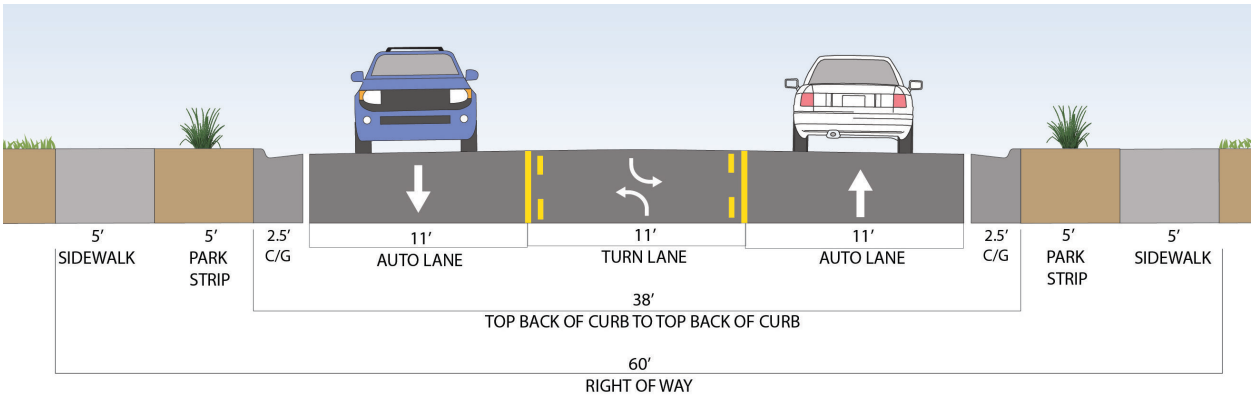


Figure 56. 60' ROW Standard

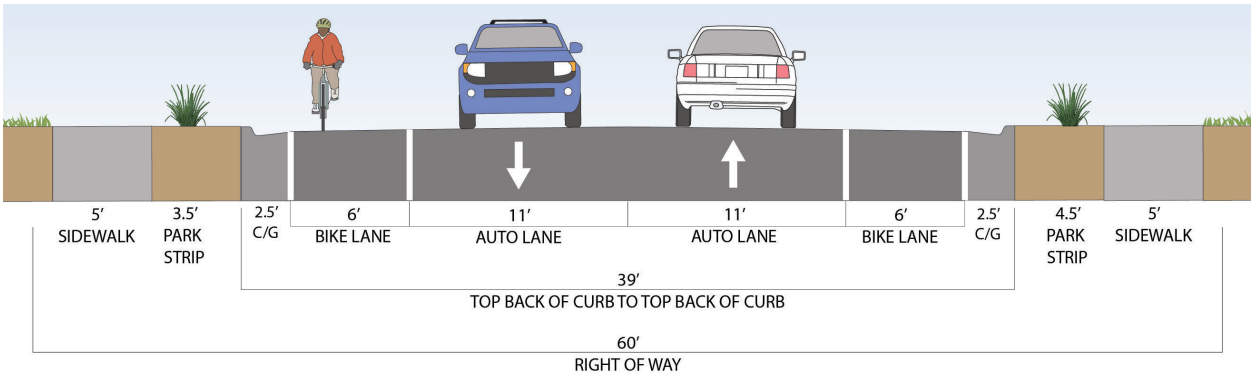


Figure 57. 60' ROW with Bike Lanes

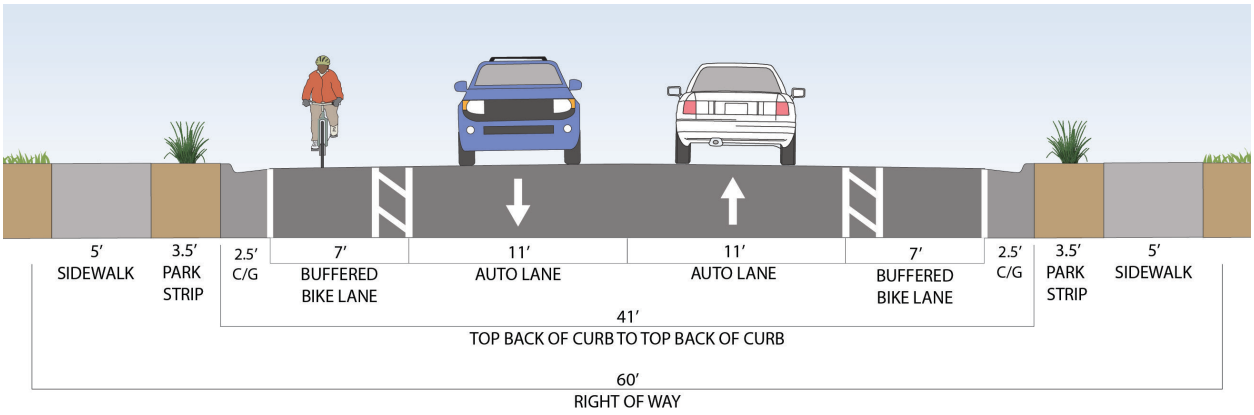


Figure 58. 60' ROW with Buffered Bike Lanes

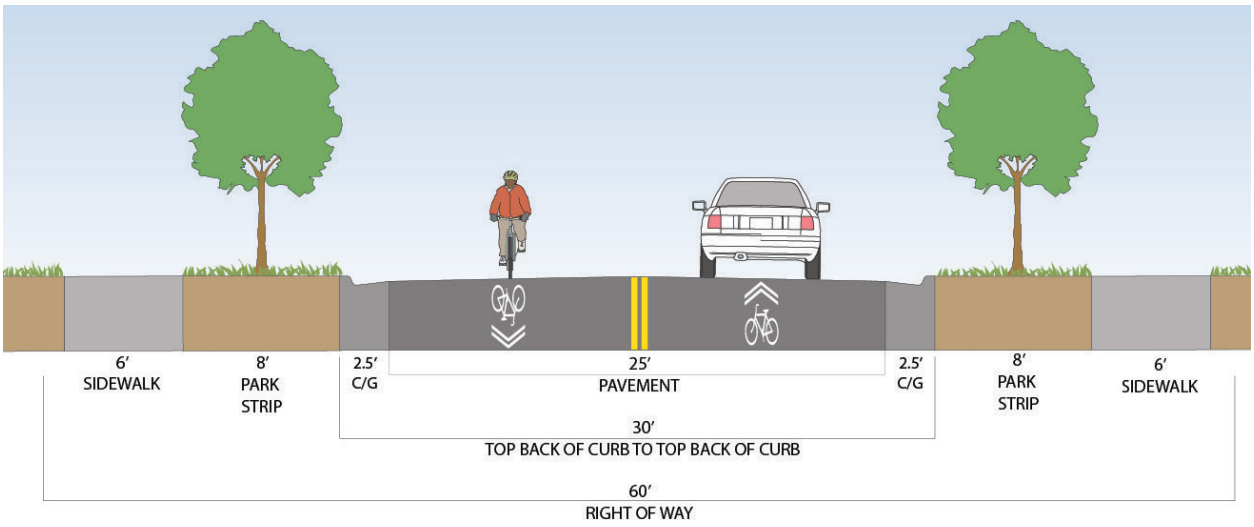


Figure 59. 60' ROW Neighborhood Byway

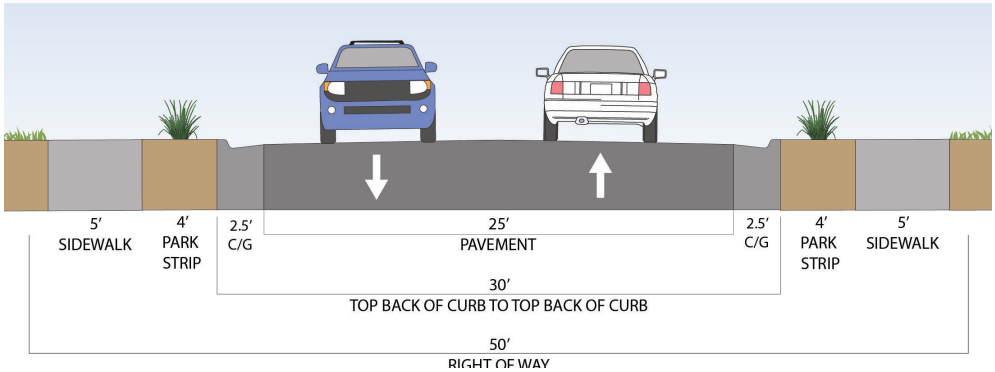


Figure 60. 50' ROW Standard

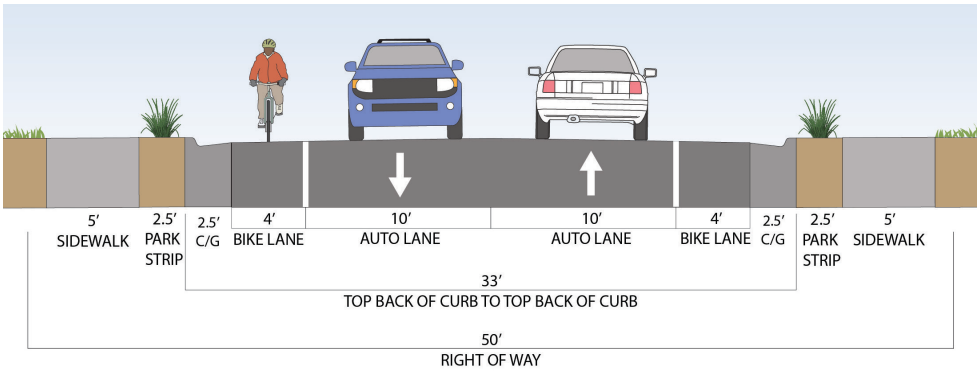


Figure 61. 50' ROW with Bike Lanes

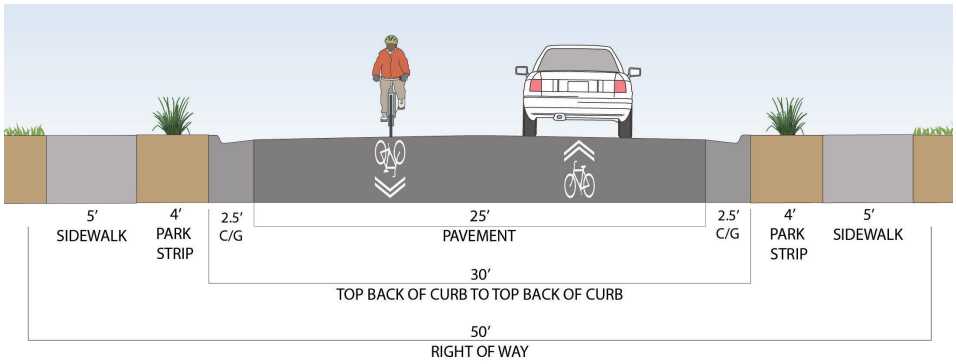


Figure 62. 50' ROW Neighborhood Byway

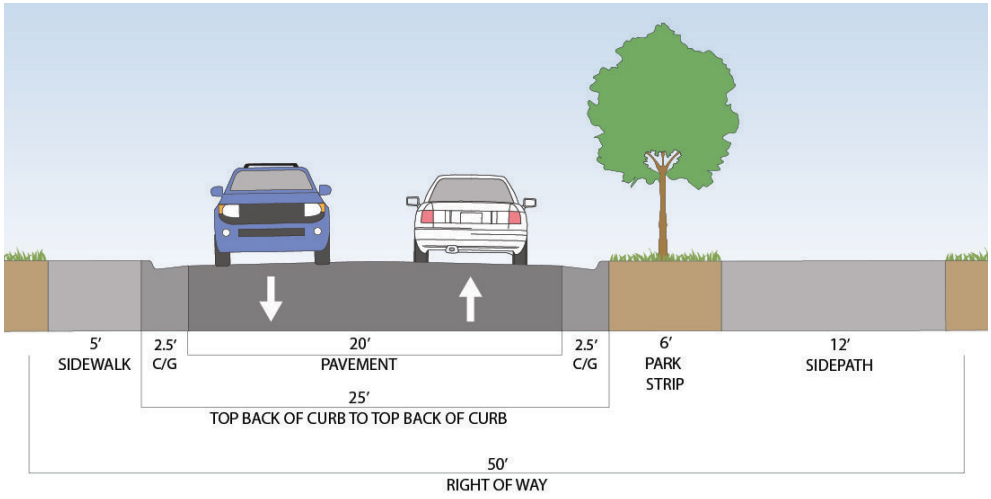


Figure 63. 50' ROW with Sidepath

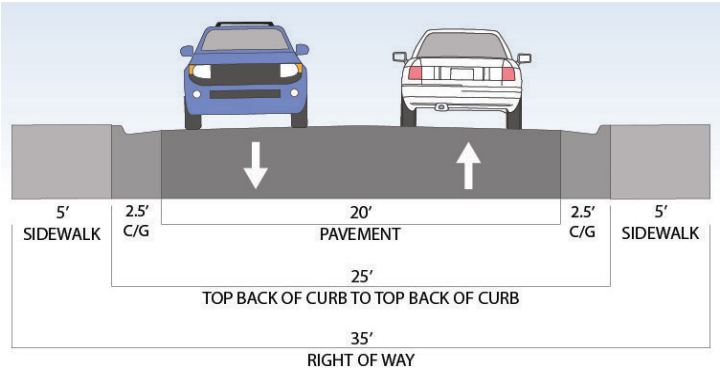


Figure 64. 35' ROW Private Street

4.4.2 Implementation Plan Cost Estimates

The project list includes preliminary cost estimates for various transportation improvements. Funding for street improvements typically comes from a combination of sources, including state and local funding, bonds, impact fees, and public-private partnerships. For detailed information on specific street improvements and infrastructure enhancements aimed at improving traffic flow, safety, and overall road quality, please refer to Appendix C. Appendix D provides cost estimates for the highest-priority active transportation improvements.

City general funds and B&C road funds are typical sources for transportation projects for many communities. However, these funds are usually insufficient to execute an entire capital facilities plan. Cities need to pursue other funding sources to implement their plans. The following are opportunities available to Midvale City to augment roadway and AT funding.

4.4.2.1 WFRC Transportation Improvement Program

The WFRC Transportation Improvement Program (TIP) allocates funds annually to a 6-year program. TIP funds are used for roadway, transit, and active transportation projects, through four distinct programs:

- Congestion Mitigation and Air Quality Program
- Surface Transportation Program
- Transportation Alternatives Program
- Carbon Reduction Program

The Surface Transportation Program is the largest of the four and programs about $20M annually to the Salt Lake County area for roadway capacity projects. All TMP roadway projects are candidates for this fund, though the cost of the 900 East project may render it less likely to be selected since it would command a majority of the annual funding amount.

The other programs offer approximately $2M-$5M annually to the Salt Lake County area. Both roadway and AT projects are eligible within the various programs. Given the funding available, lower cost AT projects, especially spot improvements, are likely to be most successful.

4.4.2.2 UDOT Transportation Investment Fund

The UDOT Transportation Investment Fund (TIF) applies to capacity projects on state facilities that exceed $5M. Two roadway projects meet these criteria: 7200 South/Jordan River Boulevard widening and State Street widening. The Fort Union Boulevard project is estimated at less than $5M. However, if the scope of the project expands beyond a restriping, then the cost would likely meet the $5M minimum requirement.

4.4.2.3 UDOT TIF Active

The UDOT TIF Active program is a subset of the overall TIF. It provides funding for paved AT projects. Current prioritization methods favor projects that relate to congestion reduction on state highways. AT projects on or near state highways may be good candidates for this fund. Examples include LI-1, LI-9, LI-11, LI-16, as well as spot AT improvements on state highways.

4.4.2.4 UDOT Transit TIF

The UDOT Transit Transportation Investment Fund (TTIF) program funds both capacity transit projects as well as transit station first/last mile (FLM) connections. The FLM subcategory can apply to TMP projects near transit stations, particularly the three TRAX stations. Three TMP AT projects recently received funding from this program (LI-10, LI-8, LI-3). Additional candidates for future funding from the AT Priority list could include SI-10, SI-11, SI-12, LI-2, and LI-11.

4.4.2.5 UDOT Active Transportation Investment Fund

In 2023, Utah launched efforts to create a statewide regional network of paved trails. The associated Active Transportation Investment Fund (ATIF) allocates $45M annually for projects. Projects should create a regional trail spine, tying into local facilities when possible. These trails are meant to serve a regional purpose, improve connectivity to adjacent communities, and connect to high-use areas.

No trail projects in Midvale City were funded in the first round of ATIF programming or are on the current ranked candidate list. With the adoption of the TMP, Midvale City AT projects are part of a local adopted plan and may be more favorable candidates for the ATIF ranked list. Three AT projects provide compelling reasons to be considered for the ATIF.

First, the Porter Rockwell Trail (LI-9) would extend an existing regional trail that connects into Utah County. It would also provide connections to TRAX stations and civic centers. Second, the Center Street project (LI-5) would provide a critical east-west connection in south Salt Lake County where east-west AT facilities are sparse. It would connect to the Jordan River Parkway as well as the future Bingham Creek Trail which is funded project through the ATIF and will connect to the Mountain View Corridor trail. The Center Street project will also link the Garnder Village TRAX station and the Midvale Center TRAX station. Third, the Jordan and Salt Lake City Canal Trail (LI-14) could be a regional connection to Murray City on the north and Sandy City on the south.

4.4.2.6 Impact Fees

Under Utah State Code (11-36a-302), jurisdictions can charge impact fees to development to help pay for the costs of transportation projects constructed to accommodate the associated growth. Impact fee rates are set according to a specific process adhering to State Code. Midvale City is primarily a built-out community. Analysis shows that the roadway projects proposed in this TMP are not impact-fee eligible. Additional detail is provided in Appendix E.

4.4.2.7 Federal Funds

There are currently numerous federal funding opportunities available for pedestrian and bicycle transportation projects. The programs can fund many of the project types identified within this plan, including bike lanes, sidewalks, pathways and trails, road diets, and more. Predominate sources of funds include:

- Active Transportation Infrastructure Investment Program (ATIIP).
- Carbon Reduction Program (CRP).
- Congestion Mitigation and Air Quality Improvement Program (CMAQ).
- Rebuilding American Infrastructure with Sustainability and Equity (RAISE).
- Reconnecting Communities and Neighborhoods Grant Program (RCN).
- Safe Streets and Roads for All (SS4A) – WFRC recently completed an SS4A Safety Action Plan that encompasses Midvale City.

A comprehensive table of all federal pedestrian and bicycle funding opportunities can be found here:

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf

4.5 Supporting Program and Policies

4.5.1 Recommendations and Plan Goals

The plan goals served as the foundation for crafting recommendations encompassing both active transportation network enhancements and policy/programming suggestions. To ensure alignment between these recommendations and the project goals, it is imperative to assess contribution to each goal.

Goal 1. Increase Quality of Life: By prioritizing a high-comfort/low-stress bicycle network, the approach ensures that residents can easily access everyday destinations such as recreation areas, healthcare facilities, employment centers, and cultural amenities. This means less time commuting and more time enjoying life. Designing facilities that cater to the needs of all types of bicyclists, especially the "Interested but Concerned" demographic, enhances the overall quality of life by providing safe and convenient transportation options, improving air quality, and reducing congestion.

Goal 2. Support Human-Powered Access: The network recommendations focus on providing comfortable access to neighborhoods, city centers, parks, and redevelopment areas for both motorized and human-powered modes of transportation. By considering the preferences and comfort levels of different types of bicyclists, the approach encourages a wider range of residents to choose human-powered transportation as an efficient option.

Goal 3. Improve Community Cohesion and Recreation: The emphasis on creating a safe and comfortable transportation network, including both bicycle and vehicular options, contributes to enhancing community cohesion and recreational opportunities. By accommodating the needs of various travelers, including those who may be interested but concerned about safety, the outcome promotes active transportation and fosters a sense of community through shared recreational spaces and connected pathways.

Goal 4. Create a Safe, Connected, and Equitable Transportation System: The network recommendations prioritize safety, connectivity, and equity by selecting appropriate AT types based on real-world factors such as motor vehicle volume and speed. By designing facilities that cater to the needs of the "Interested but Concerned" cohort, the approach ensures that the transportation system is accessible to all residents, regardless of their comfort level or mode of transportation preference.

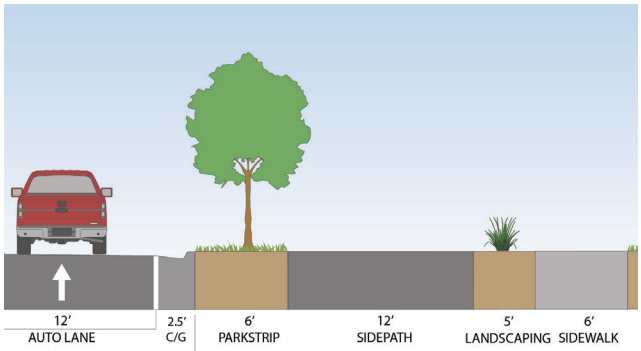
In summary, the network recommendations and approach are closely aligned with the project goals of enhancing the quality of life, supporting human-powered access, improving community cohesion and recreation, and creating a safe, connected, and equitable transportation system in Midvale. By considering the needs and preferences of different types of bicyclists, the approach maximizes the potential for bicycling as a viable transportation option while promoting a healthier and thriving community.

4.5.2 Active Transportation Toolkit

This toolkit is intended to be a summary of each tool – they do not include design guidelines, which can be found elsewhere, in a range of manuals and guides, including the National Association of City Transportation Officials Urban Street Design Guide and Urban Bikeway Guide, the AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities, and the Institute of Transportation Engineers' (ITE) Design Walkable Urban Thoroughfares: A Context Sensitive Approach. It is not intended that all of these be adopted as design manuals, but rather as resources for items to be considered. The following details some common AT configuration options.

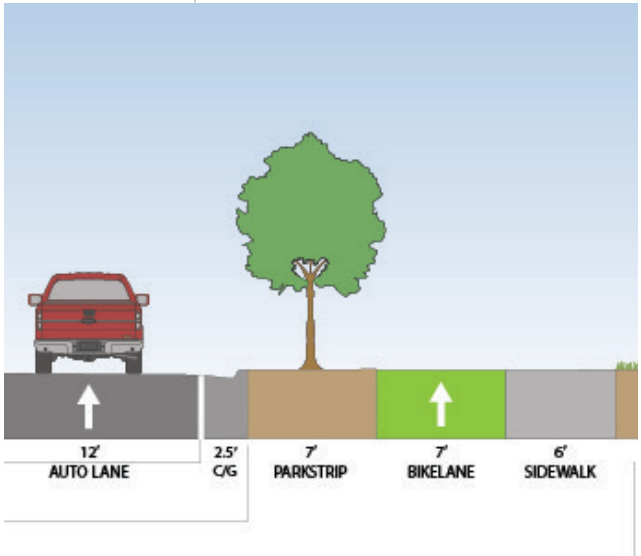
4.5.2.1 Sidepath

Paved multi-use sidepaths provide safe and low-stress AT and recreational opportunities. At 10 to 12 feet wide, these facilities are physically separated from motor vehicle traffic and can be adjacent to a roadway, railroad, or canal right-of-way, or follow their own right-of-way.



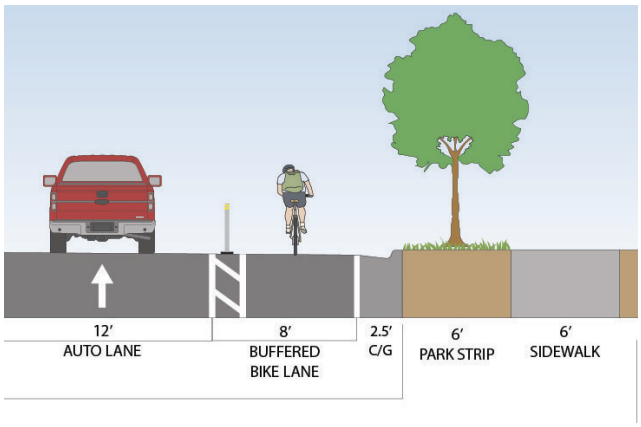
4.5.2.2 Protected Bike Lane

Like sidepaths, protected bike lanes operate behind curb but are narrower and support one direction of travel. Protected bike lanes may be separated from the curb or sidewalk by park strips or other landscaping.



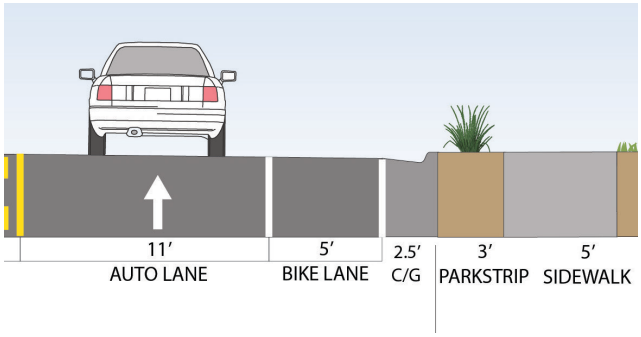
4.5.2.3 Buffered Bike Lane

Buffered bike lanes provide an on-street option until a protected bike lane with its additional safety benefits can be implemented. Buffered bike lanes are generally 7 to 9 feet wide and include a 3-foot buffer area adjacent to the vehicle travel lane.



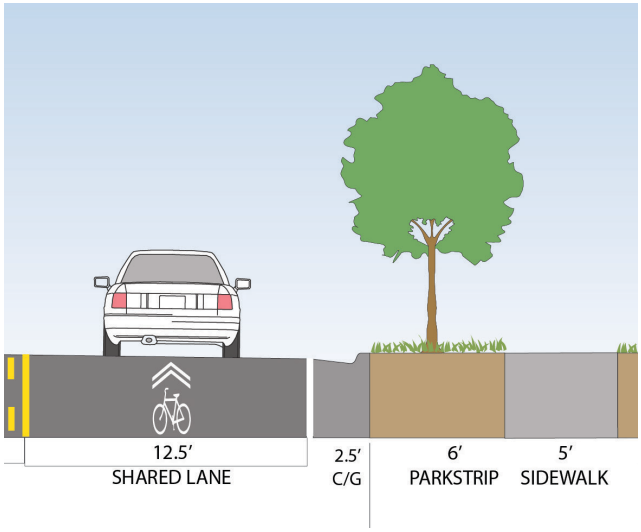
4.5.2.4 Bike Lane

Conventional bike lanes are adjacent to vehicle lanes and are recommended to be 6 feet wide. These lanes provide good connectivity and comfortable riding along lower volume collectors.



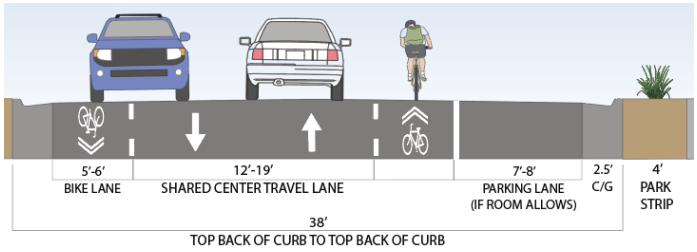
4.5.2.5 Shared Lane

A shared lane denotes through pavement markings that bicycle and vehicular traffic share the same pavement space. Shared lanes should be limited to very low volume roads or for very short segments of higher volume roads where physical constraints prevent separation.



4.5.2.6 Advisory Bike Lanes

Advisory bicycle lanes provide a bicycle-priority space 5-7 feet wide with bicycle lane markings on a roadway too narrow for conventional bike lanes. Also known as “edge lane roads,” the center lane on low-traffic street is shared between car traffic in both directions and a dedicated space for bicycling on either side of the street.[1]



[1] For more information see Kaysville ATP, A-42 and bikeportland.org Advisory bike lanes: Utrech versus Portland by Taylor Griggs

Table 13 lists several tools and resources that can be used to enhance AT networks.

Table 13. Most Critical Tools for Active Transportation Core Network

List of Tools		
Bike intersection improvements	Pedestrian-activated signals	Streetscape amenities and furnishings
Buffered bike lane	Protected bike lane	Transit stops and stations
Curbside access management	Sidepath	Trees and landscaping
High-visibility pedestrian crossings	Sidewalk	Wayfinding
Median refuges	Sidewalk repair	Advisory Bike Lanes
Park strip/furnishing zone	Street network connectivity improvements	

5. Transportation Metrics and Development Strategies

This chapter presents a comprehensive overview of the performance metrics and reporting framework designed to evaluate and enhance the transportation infrastructure in Midvale. The framework provides a clear methodology for tracking progress and ensuring that transportation improvements align with community goals. This framework is instrumental in measuring success in key areas such as quality of life, connectivity, and community strength.

As Midvale embarks on enhancing its urban infrastructure, the following policy recommendations aim to address critical aspects of street connectivity, bicycle parking, and overall street design. These recommendations are designed to foster a more integrated and accessible city environment, ultimately contributing to a more vibrant and functional community. The proposed initiatives include establishing robust street connectivity standards, updating bicycle parking requirements to accommodate current and future needs, applying for Bicycle Friendly Community designation, and adopting a comprehensive Complete Streets policy. Each section outlines actionable steps and resources to guide Midvale in achieving these goals, ensuring that future development aligns with the city's commitment to improving transportation and urban mobility.

5.1 Policy Recommendations

5.1.1 Street Connectivity Recommendations

Street connectivity refers to the interconnected network of routes and intersections that is formed by a city's streets. Connectivity refers to both the number of connections made as well as the directness of the routes. A well-connected network consists of numerous short links and intersections, minimal dead-ends, and is often formed by a grided street network. Improved connectivity results in reduced travel times and vehicle miles traveled, increased route options for all road users, and contributes to numerous other positive benefits such as improvements in safety, emergency services, and the local economy.

Midvale should develop street connectivity standards, including establishing minimum network spacing standards and connectivity requirements based on land use context and destinations. The Utah Street Connectivity Guide provides cities with context-sensitive guidance to measure and implement street connectivity standards into their local development codes.[2]

5.1.2 Bicycle Parking Recommendations

Bicyclists need safe and convenient parking, whether for short trips or long-term storage. Midvale's current bicycle parking requirements only specify the minimum number of spaces but lack detail on types and locations. These should be updated to meet current and future demands.[3]

Short-Term Parking:

- Bike Racks: Suitable for trips under two hours. Recommended styles include Inverted U, Post and Ring, and Wheelwell Secure. Racks should be:
  - → Within 50 feet of the main entrance.
  - → In high-traffic areas with passive surveillance.
  - → Curbside with a 2-foot gap from parked cars.
  - → Spaced 4 feet minimum apart.
  - → At least 6 feet from property lines.
  - → Protected from the weather, if possible.

Long-Term Parking:

- Bike Parking Rooms: Dedicated spaces in buildings, with a minimum of 15 square feet per bike where space is limited.
- High-Density Racks: Vertical or two-tier racks for higher volumes but avoid types that are difficult to use for people with heavy bikes or disabilities.

Consult the Association of Pedestrian and Bicycle Professionals (APBP) Bicycle Parking Guide for up-to-date recommendations.

5.1.3 Apply for Bicycle Friendly Community Designation

Every year, the League of American Bicyclists awards cities with the Bicycle Friendly Community designation. This designation reflects local leader's efforts to continually build better places to bike and evaluate those efforts against other cities nationally. Applying for the Bicycle Friendly Community designation demonstrates the city's commitment to prioritizing the bicycling experience. The application process provides cities with the opportunity to reflect and improve upon their efforts to encourage cycling, as well as actively improve the safety and accessibility of their network. Regardless of if the city is awarded the designation, the process provides the city with data and insight that it would not have had otherwise, potentially providing clear action items for the city to pursue in its pursuit of creating a high-quality active transportation network.[4]

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[2] For more information see the Utah Street Connectivity Guide.

[3] For more information see the Association of Pedestrian and Bicycle Planner's Bicycle Parking Guidelines 2nd Edition.

[4] For more information see Becoming A Bicycle Friendly Community (BFC).

5.1.4 Adopt a Complete Streets Policy

Complete Streets are streets that prioritize safety and mobility for all road users, including pedestrians, bicyclists, and people of all ages and abilities. The concept of Complete Streets encompasses many approaches to planning, designing, and operating street networks, and policies can be set at all levels of government. The approaches to Complete Streets vary based on the local context, and no two street designs will look the same as each respond to its community context. Complete Streets may address a variety of elements, including sidewalks, bike lanes, bus lanes, public transportation stops, frequent and safe crosswalks, median islands, curb extensions, accessible pedestrian signals, roundabouts, modified vehicle travel lanes, streetscape, landscape improvements, and more.

Effective Complete Streets policies should have a clear vision, prioritize underserved communities, apply to all projects, and ensure compliance from developers. They should be based on up-to-date design criteria and include measures for progress and implementation.

Examples of successful Complete Streets policies include Salt Lake City's ordinance, Park City's People-First Streets, and the Wasatch Front Regional Council's Complete Streets Vision. These should serve as models as Midvale develops its own Complete Streets program.[5]

5.2 Performance Measurement Framework

The following report card (Figure 65) is designed to assess transportation system performance bi-yearly over the next four years. This report card includes multi-modal criteria, enabling the Midvale to align actions with defined goals and objectives. Providing clear benchmarks for evaluating and enhancing the city's transportation network. Metrics include:

1. **Enhanced Quality of Life**

   Description: Improve mobility for daily needs (healthcare, shopping, errands, leisure) by increasing pedestrian, bicycle, and transit options.

   - Traffic Volume: Maintain or decrease traffic volume on key roads (Fort Union, Center, Main, State, 900 East Streets) using UDOT traffic statistics.
   - Travel Times: Maintain or improve travel times during PM peak on key routes (Fort Union, Center, Main, State, 900 East Streets) through traffic studies.

2. **Connecting People and Places through Human Powered Access**

   Description: Improve access and safety for pedestrians and cyclists by tracking crash statistics and expanding the active transportation network.

   - Crash Statistics: Reduce overall and specific category crashes (citywide, key intersections, severity) using Numetric data.
   - Active Transportation Network: Increase AT network mileage from 28.78 miles using Utah Geospatial Resource Center (UGRC) data.

[5] For more information see the Smart Growth America Complete Streets Policies.

3. **Build Stronger Communities**

   Description: Foster community cohesion and encourage recreation through active transportation.

   - Mobility Satisfaction: Improve public perception of transportation system quality, ease of walking, and bicycling using Polco survey data.

4. **Safety, Connectivity, and Equitable Connecting People and Places**

   Description: Build a safe, well-connected, and accessible transportation network for all users.

   - Access to Opportunities: Enhance access to job opportunities and city centers using the Housing Access to Opportunities (ATO) Calculator and custom queries.
   - Planned Transportation Improvements: Increase transit accessibility to 54.98% and achieve a 91.83% completion rate for active transportation projects.

5.2.1 Report Card

Expected Trends:

Decreasing: Crash statistics, traffic volume on Center, Main, and 900 East Streets.

Stable: Traffic volume on Fort Union, travel times on Center, Main, and 900 East Streets.

Increasing: Travel times on State and Fort Union Streets, active transportation network miles, mobility satisfaction, access to opportunities, planned transportation projects for active transportation and transit.

Data Sources:

Traffic Volume and Travel Times: UDOT traffic statistics.

Crash Statistics: Numetric.

Active Transportation Network Length: UGRC Trails and Pathways, Utah Roads geodatabase.

Mobility Satisfaction: 2024 NCS report for Midvale by Polco.

Access to Opportunities, Access to Jobs, Planned Transportation Metrics: WFRC Housing calculator data.

Performance Metrics - Report Card

Goals & Metrics	Expected Trend	2024 Results	2026 Results	2028 Results
Enhanced Quality of Life				
Traffic Volume		**Vehicles/Day**		
Fort Union	Maintain	26,000		
Center Street	Decrease	18,700		
Main Street	Decrease	6,700		
State Street	Maintain	31,000		
900 E	Decrease	26,600		
Travel Times		**Avg. Travel Time (minutes) During PM Peak**		
Fort Union	Increase	9.8		
Center Street	Maintain	10		
Main Street	Maintain	4.4		
State Street	Increase	5.3		
900 E	Maintain	3.3		
Connecting People and Places through Human Powered Access				
Crash Statistics		**Crahses/Year**		
City-Wide	Decrease	1100		
I-15/Fort Union	Decrease	131		
Center Street	Decrease	88		
Main Street	Decrease	22		
State Street	Decrease	195		
900 E	Decrease	111		
Fatal Crashes	Decrease	2		
Serious Injury Crashes	Decrease	13		
Bicycle Involved crashes	Decrease	9		
Pedestrian Involved Crashes	Decrease	25		
AT Network (Miles)	Increase	28.78		
Stronger Communities				
Mobility Satisfaction				
Overall quality of the transportation system	Increase	56%		
Ease of walking	Increase	47%		
Ease of travel by bicycle	Increase	47%		
Connecting People & Places				
Access to Opportunities		**2023**	**2027**	**2031**
City Centers	Increase	32.47		
Auto Access to Jobs	Increase	93.06		
Transit Access to Jobs	Increase	48.03		
Planned Transportation				
Transit	Increase	54.98		
Active	Increase	91.83		

Figure 65. Performance Metrics - Report Card

Appendix A

Survey Responses Report

Midvale Transportation Master Plan

SURVEY RESPONSE REPORT

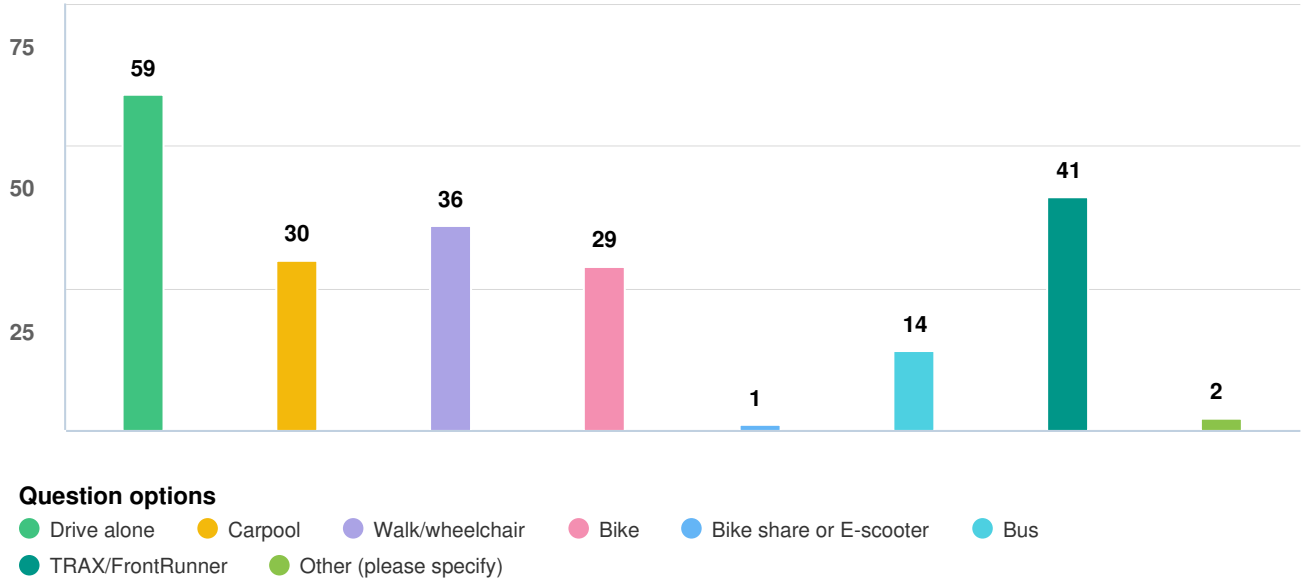
02 December 2021 - 10 July 2024

PROJECT NAME:
Transportation Master Plan

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Which of the following modes of transportation do you use? Check all that apply.

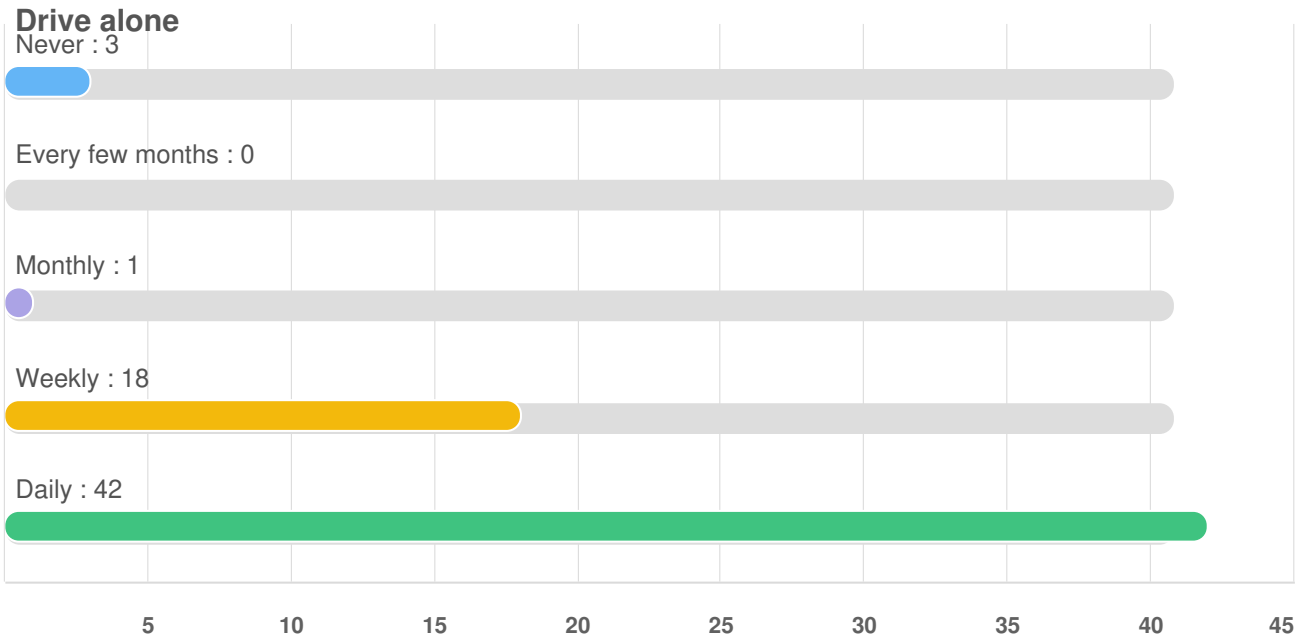


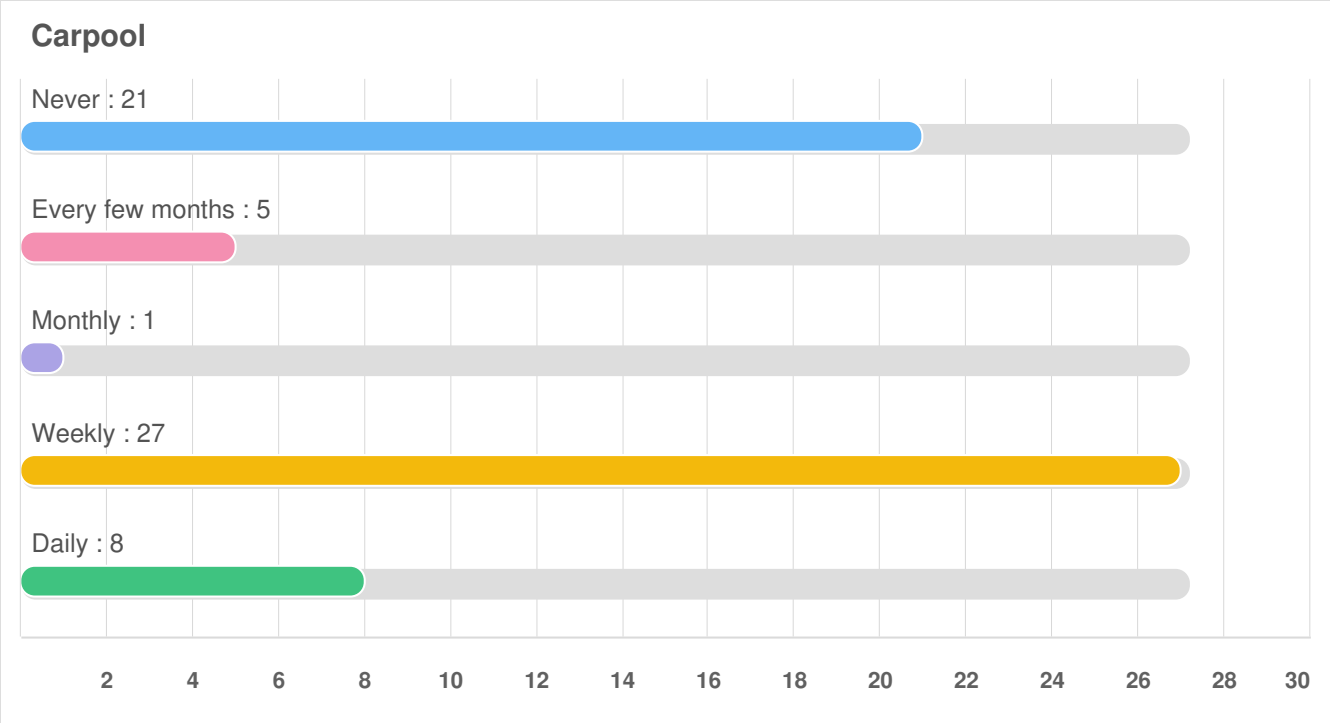
Optional question (63 response(s), 2 skipped)
Question type: Checkbox Question

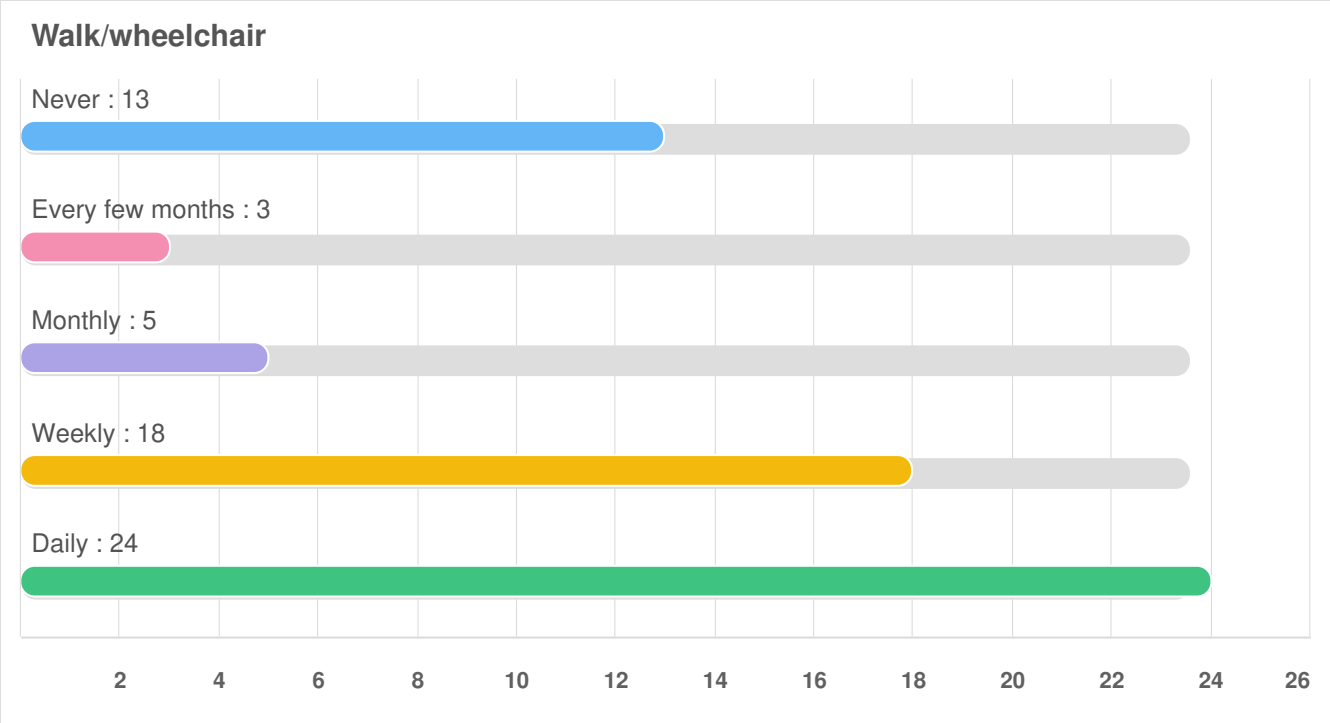
Q2 How often do you use the following modes of transportation?

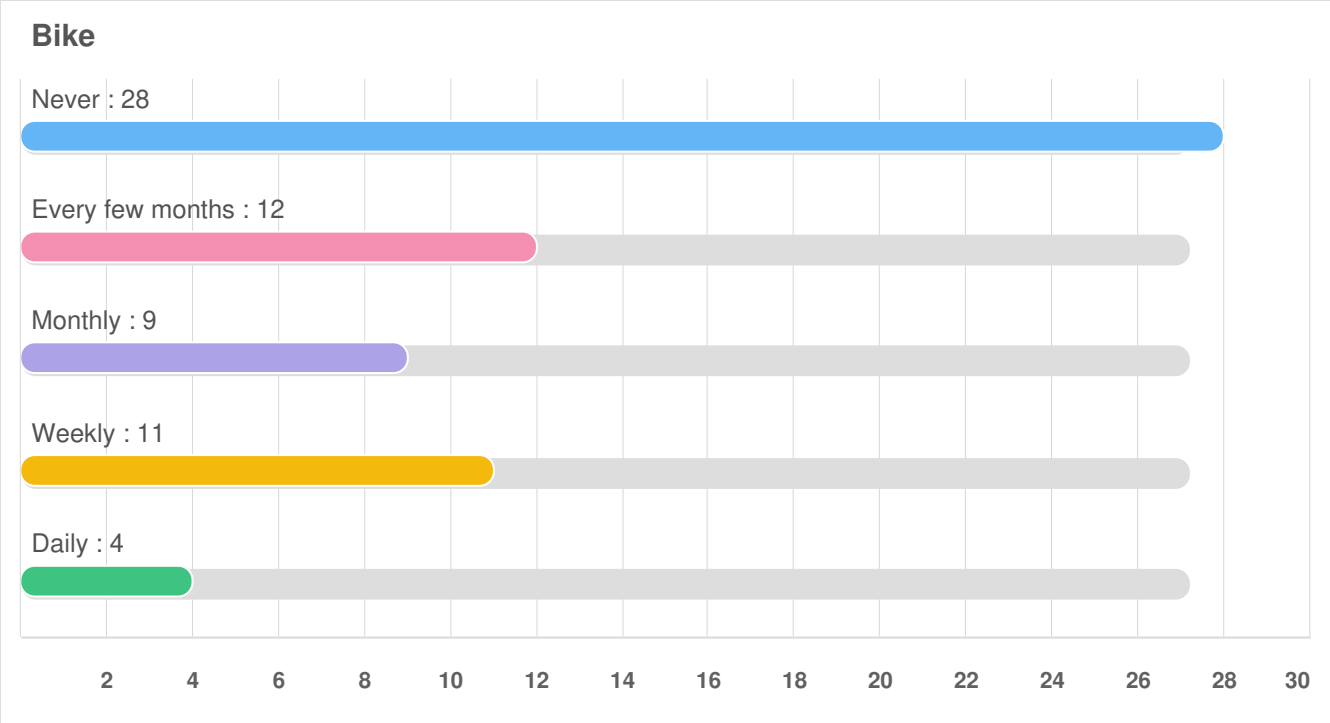
Optional question (65 response(s), 0 skipped)
Question type: Likert Question

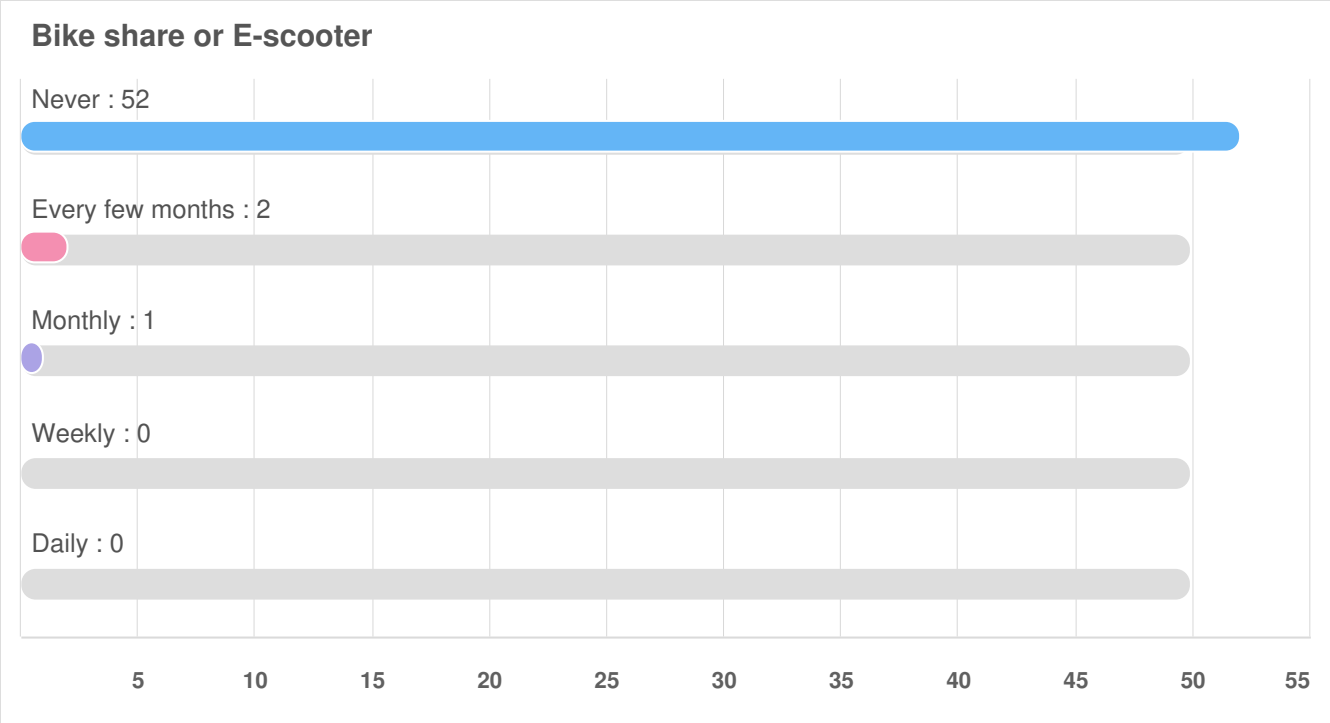
Q2 How often do you use the following modes of transportation?

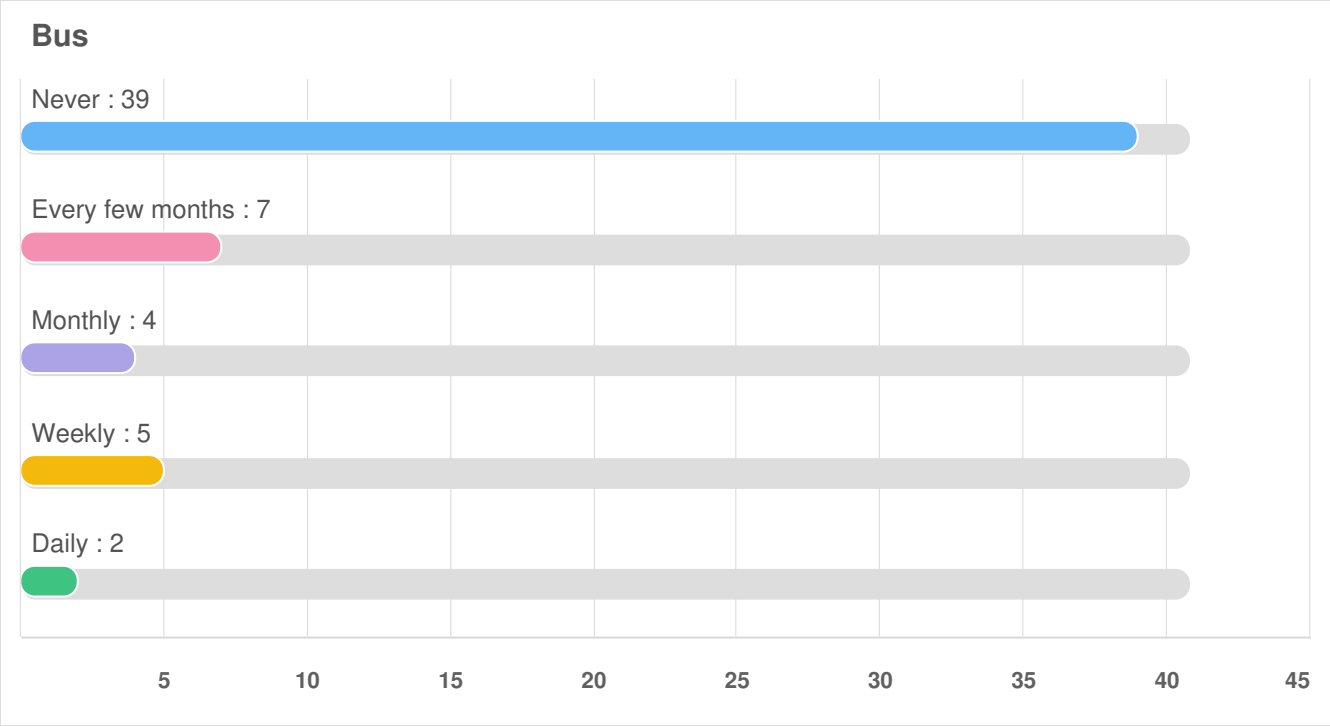


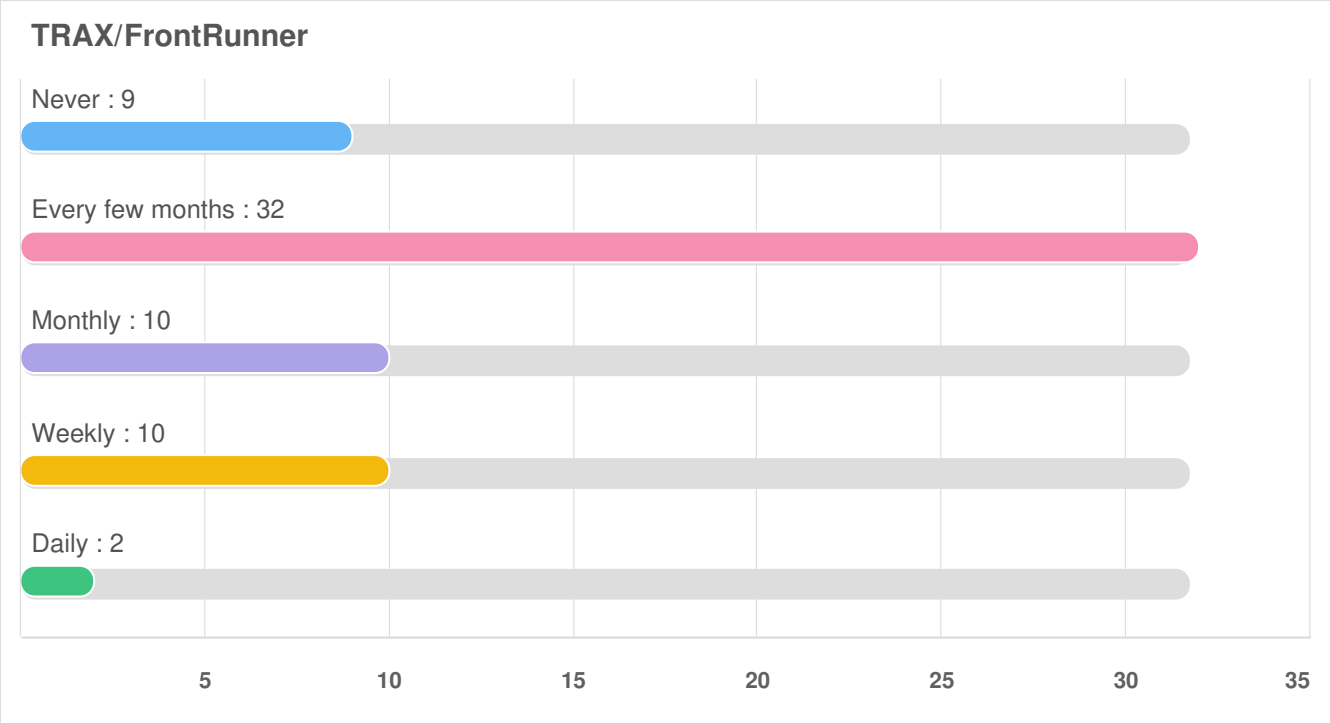

Carpool
Never : 21
Every few months : 5
Monthly : 1
Weekly : 27
Daily : 8
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30


Walk/wheelchair
Never : 13
Every few months : 3
Monthly : 5
Weekly : 18
Daily : 24
2
4
6
8
10
12
14
16
18
20
22
24
26

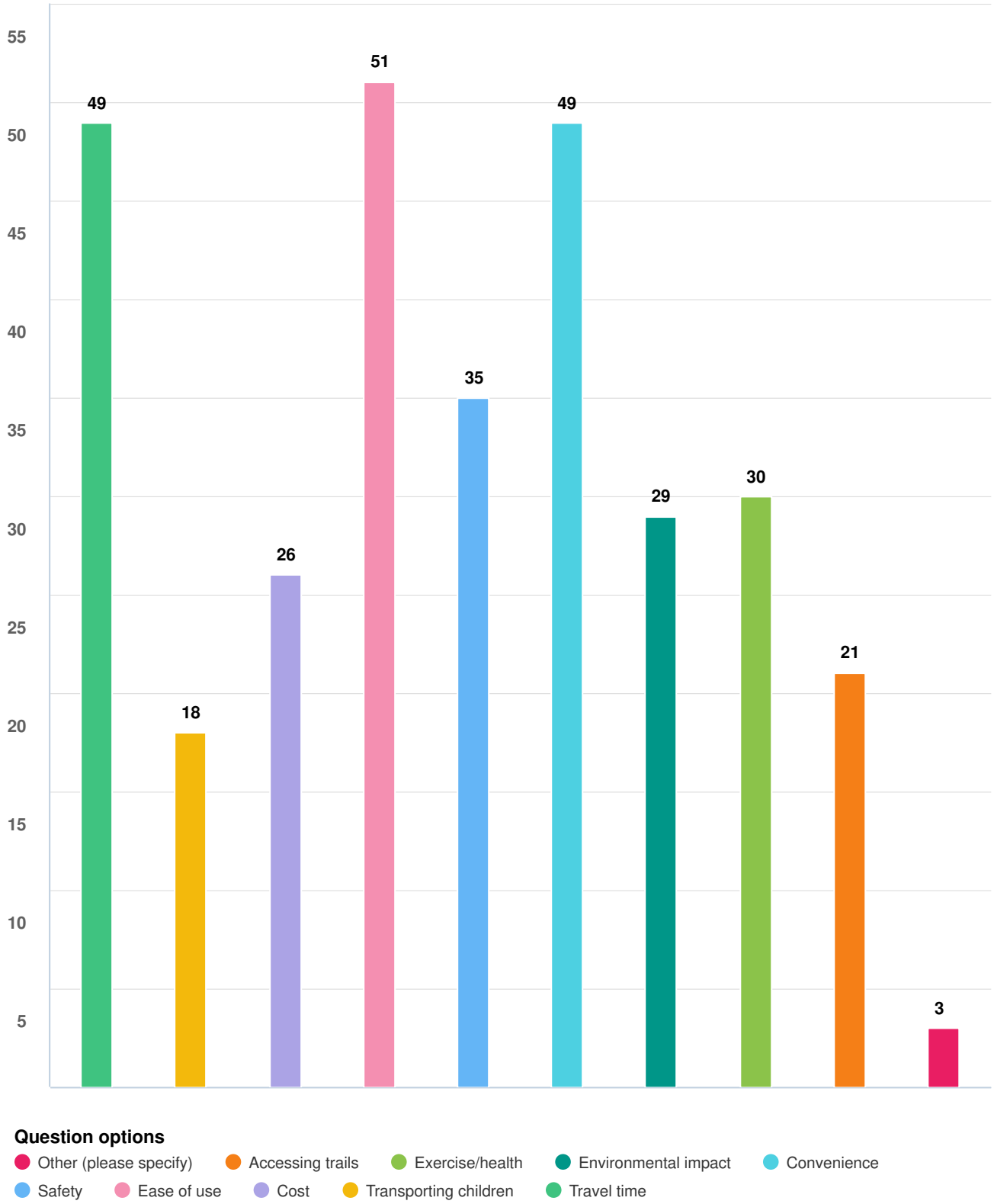

Bike
Never : 28
Every few months : 12
Monthly : 9
Weekly : 11
Daily : 4
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30


Bike share or E-scooter
Never : 52
Every few months : 2
Monthly : 1
Weekly : 0
Daily : 0
5
10
15
20
25
30
35
40
45
50
55


Bus
Never : 39
Every few months : 7
Monthly : 4
Weekly : 5
Daily : 2
5
10
15
20
25
30
35
40
45


TRAX/FrontRunner
Never : 9
Every few months : 32
Monthly : 10
Weekly : 10
Daily : 2
5
10
15
20
25
30
35

Q3 What factors are most important to you when selecting a mode of transportation? Check all that apply.



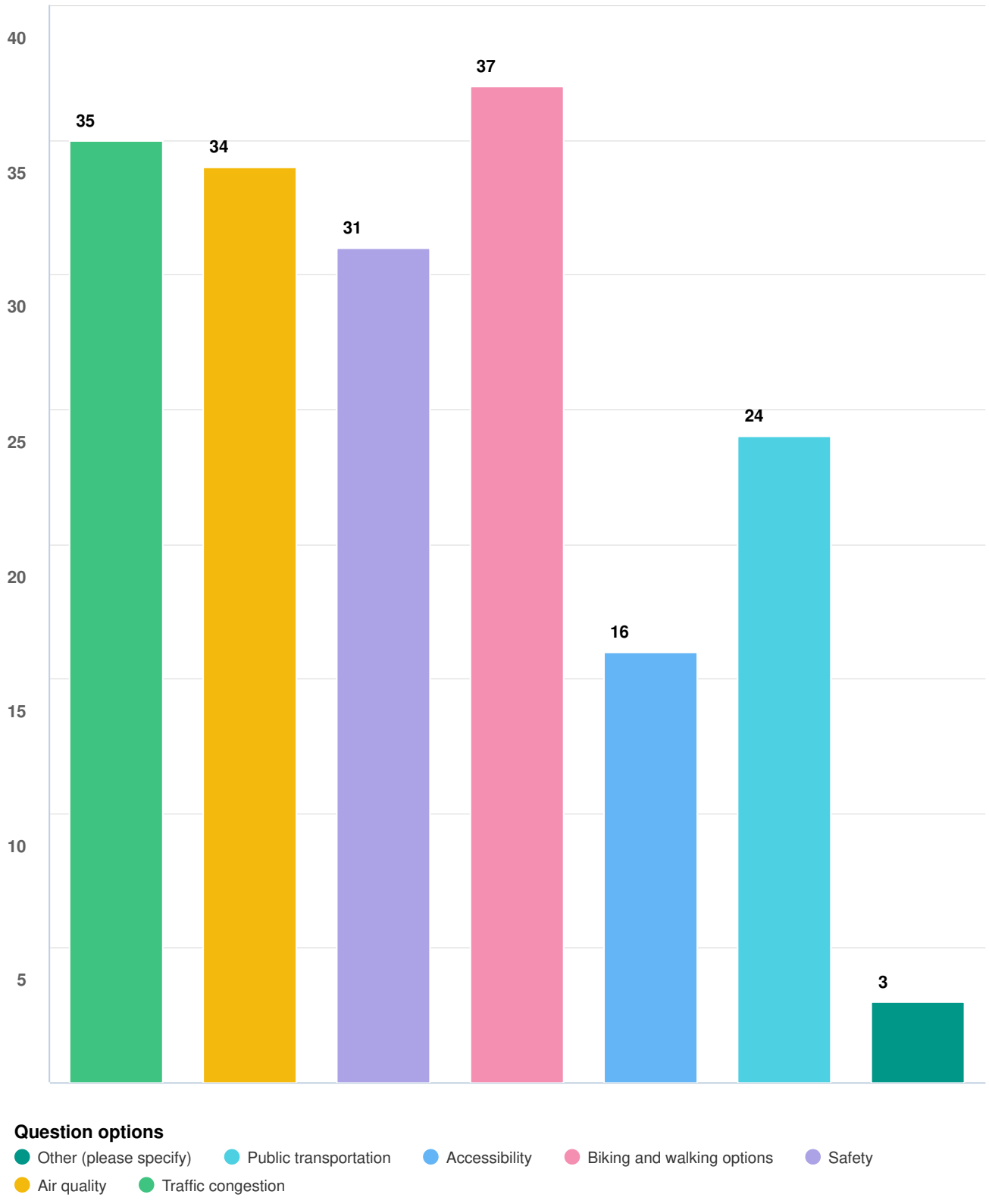
Optional question (65 response(s), 0 skipped)
Question type: Checkbox Question

Q4 What destinations do you most frequently travel to? Please rank your choices from 1 -8. (1- Most frequent, 8 - Least frequ...

OPTIONS	AVG. RANK
Shopping	3.00
Work	3.48
Dining/entertainment	3.59
Social/personal	3.62
Public spaces (libraries, recreation center, park, etc.)	4.52
Transit connections	5.26
Trail access	5.51
School	5.59

Optional question (65 response(s), 0 skipped)
Question type: Ranking Question

Q5 What transportation issues are you most concerned with in Midvale? Please select your top three.



Optional question (65 response(s), 0 skipped)
Question type: Checkbox Question

Q6 Please tell us more about the transportation issues you are concerned about.

Anonymous 10/30/2023 02:17 AM	The streets we have are overcrowded because of the housing growth. People don't drive very safely.
Anonymous 11/16/2023 07:05 PM	Frequency would help with reliability in our area. My husband relies on public transit, and I would like to keep things accessible for him.
Anonymous 11/16/2023 09:17 PM	I live close to Bingham Junction Park and me and my neighbors wish that there was access to Jordan River Trail. There is a path to the river but a bridge was never built.
Anonymous 11/30/2023 07:38 PM	I work just 3 miles from home, but none of the available options head in that direction. Despite walking a few times, frequent stops at lengthy traffic lights, favoring cars, extend the journey. This compels me to drive, even for such a short distance.
Anonymous 12/05/2023 09:35 AM	I don't believe it is safe for family neighborhoods to have to be on the lookout for individuals getting off of TRAX in the middle of the night. It isn't appropriate to connect a neighborhood to a busy transportation site. Peace of mind would be taken away. Children in the neighborhood who are walking home from school are also placed at a greater risk.
weblankenship 1/09/2024 05:38 PM	It is very scary to cross state to get to trax or to get home from trax. Right turn is allowed on red on center. Our city is disconnected—cut in half by state. A pedestrian bridge would be very helpful. Buses rarely frequent state street.
Anonymous 1/10/2024 03:34 PM	I wish there was more accessibility to trax stops, specifically from around Main Street. Not a lot of public transit options around there.
Anonymous 1/12/2024 07:41 AM	I am concerned with the number of viable cycling routes. I ride my bike most places and want to see more ways to safely move around our city by bike.
Anonymous 1/15/2024 12:13 PM	Early morning bus routes are my biggest concern along with the lack of bike lanes around my area. Buses dont start come arounnd until

	6:30 which makes it challenging to reach the frontrunner for the early service. The lack of bike lanes also make it unsafe for me to bike around midvale and to nearby transport hubs. If there were more bike lanes and separators between the bike lane and the road, I would feel a lot safer biking and moving around in Midvale.
Anonymous 2/20/2024 03:35 PM	I would love to never have to drive again. The trax line is a decent start, but the busses need a lot of work.
Anonymous 3/04/2024 01:11 PM	I would like to see more bike paths/trails and bike lanes to improve efficiency and safety for those commuting by bike.
Anonymous 3/04/2024 02:05 PM	There's way to much traffic on our streets.
Anonymous 3/05/2024 05:55 PM	Availability for transportation for senior citizens to access services they need
Anonymous 3/05/2024 06:13 PM	I am very concerned about criminal and dangerous activity around Midvale. I'm afraid to walk by myself or with family. We have seen a lot of graffiti and heard of gang activity. I do not allow my children to leave the house alone or be outside in the yard after dark.
Anonymous 3/05/2024 08:50 PM	I love using public transportation, but it's hard to get to where I need to go because buses are infrequent, transfers make travel time unbearable, and Trax and buses don't go where I need to go (mostly kids schools and the grocery store.) Also, not a Midvalr specific issue, but I think public transportation should be subsidized more to make it free for passengers. I'm never going to use it if it's more expensive AND less convenient than driving. :/
Anonymous 3/06/2024 05:52 PM	I am concerned for the safety of my middle schoolers and other students as they walk and ride bikes to and from school. There isn't a crossing guard or any other safety features like flashing lights to get people's attention to slow down and watch for pedestrians. Often my teens wait a bit to cross the street because vehicles will not stop to let them cross. Many vehicles speed on Wasatch Street and Monroe Drive making it very dangerous for pedestrians.
Anonymous 3/13/2024 10:36 AM	My husband relies on public transit. I continue to worry about reliability of accessibility although it is considerably better here than

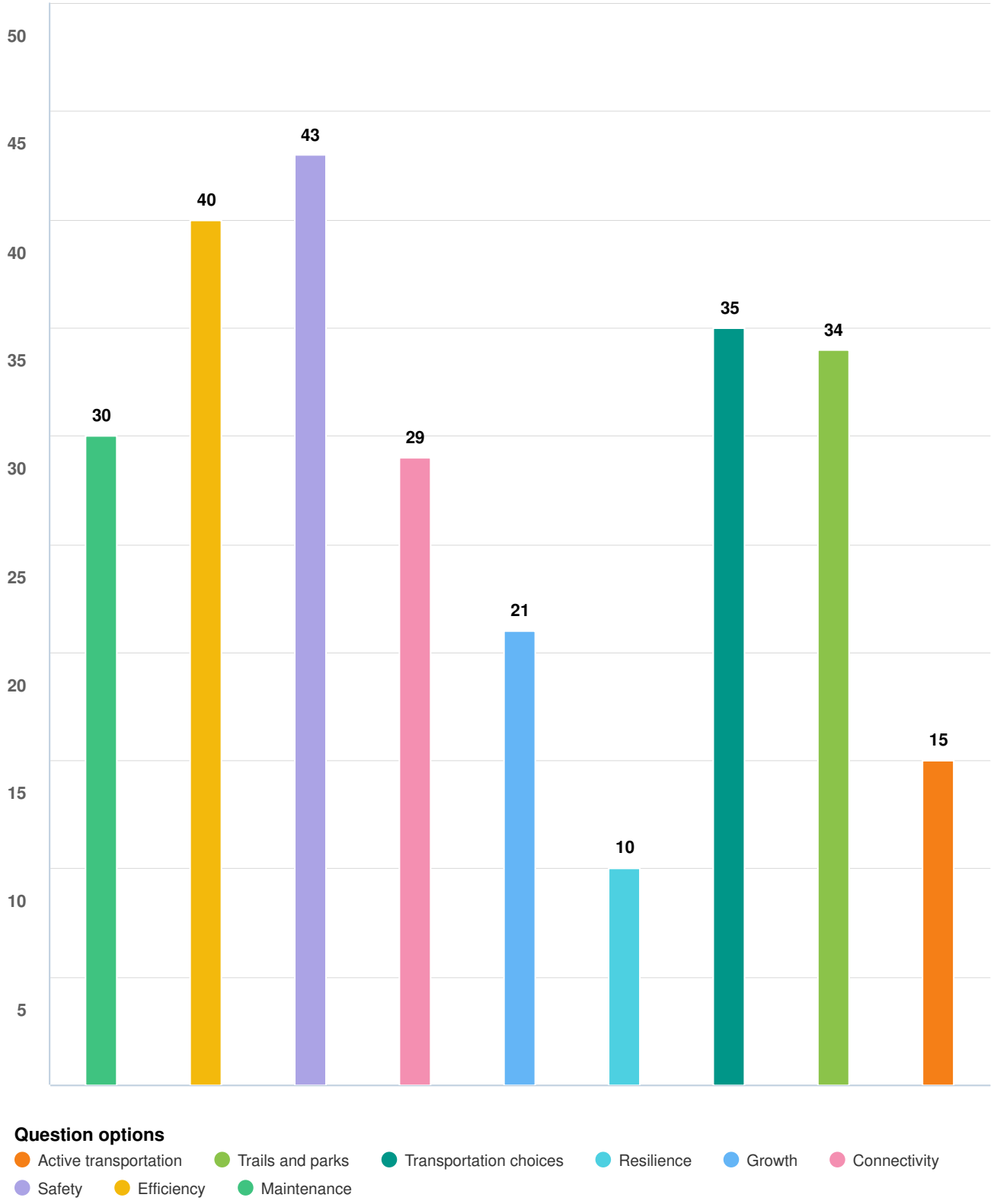
	where we moved from 5 years ago, the southeast.
Anonymous 3/13/2024 10:43 AM	bus route needing higher frequency
Anonymous 3/21/2024 08:09 AM	Better accessibility and safety at our public transit hubs
Anonymous 4/17/2024 03:18 PM	I would love a pedestrian bridge over 700 west to connect main street to the TRAX Station.
Anonymous 4/18/2024 02:59 PM	It is very frustrating when most of the main roads are cut off or detoured by construction, so trying to find another route is extremely difficult.
Anonymous 4/18/2024 03:11 PM	Number of apartment complexes on Main Center has attributed to congestion on Main Street. As well as apartment complexes on Center Street. No traffic light from Trax Station to Main Center.
Anonymous 4/18/2024 04:07 PM	I hear alot of racing up and down the streets. People not obeying traffic signs, even police officers. The police need to lead by example especially if they pull you over for not stopping at a stop sign completely and they are seen just going through the stop sign and don't even have their lights on. I am a delivery driver for midvale and my concern is drivers that just think they own the road and are a danger for other drivers.
Anonymous 4/18/2024 05:21 PM	Both the intersection next to tracks and getting on and off the freeway can be a little bit scary when going by.
Anonymous 4/18/2024 06:48 PM	Bike lanes, off road trails
Anonymous 4/19/2024 06:19 AM	I moved to Midvale to be closer to Trax, the homeless and Transients are making me rethink my decision. My ideal form of transportation is train and skating. The skate paths SUCK in Midvale. I'm sure wheelchair folks feel the same. The roads are old, the sidewalks are disasters, and where are the bike lanes? The homeless problem around 7200 S x I15 is disgusting.

Anonymous 4/19/2024 07:30 AM	Walking near trax on 7200 south. Lots of drug use and begging for money.
Anonymous 4/19/2024 07:58 AM	A few more cross walks would be appreciated
Anonymous 4/19/2024 08:53 AM	Length of time to reach destinations with public transit. Air quality is poor
Anonymous 4/19/2024 09:40 AM	More bike lanes in midvale. Need some speed bumps on 7500s, too many people drive too fast on neighborhood streets, only a matter of time before someone gets hurt.
Anonymous 4/19/2024 11:25 AM	Getting stuck at lights for 2-4 light cycles. I have a bad foot.
Anonymous 4/19/2024 05:16 PM	frequency of all transit connections!
Anonymous 4/19/2024 06:42 PM	Getting too many apartments creating too much traffic
Anonymous 4/20/2024 11:36 AM	Midvale police are very responsive, and I appreciate them very much.
Anonymous 4/20/2024 05:44 PM	I desire to see a plan where vehicles and bikes are on separate right of ways. Not a part of a road in terms of a lane of traffic. We do have the Jordan River parkway that is completely separate but getting to that place is taking your life in your hands. I would ride a bike to work if there was distinct, separate rights of way for each mode of traffic. One possible avenue would be to use part of the trax and front runner easements to create this separation. Still even at that juncture more would need to be done to make it sustainable.
Anonymous 4/21/2024 05:25 PM	Walking and biking are unsafe in many areas of Midvale, with streets designed for only vehicle traffic -- few protected crosswalks, intersections too large to cross quickly, absence of sidewalks.
Anonymous 4/22/2024 07:05 PM	Stop lights take too long

Anonymous 5/07/2024 06:22 PM	I'd like to have a safe way to ride my bike from home to the Jordan River Parkway. I'm concerned about the number of cars parked on residential streets. Many are parked illegally (much too close to stop signs, etc.). There seems to be little concern for parking rules and also little enforcement.
Anonymous 5/15/2024 07:59 AM	Keep Midvale beautiful and safe.
Anonymous 5/23/2024 07:26 AM	volume, speeds, air pollution, lack of controls, amount of traffic flow thru city of non- residents.
Anonymous 6/17/2024 03:38 PM	Wider sidewalks in zone SF-2

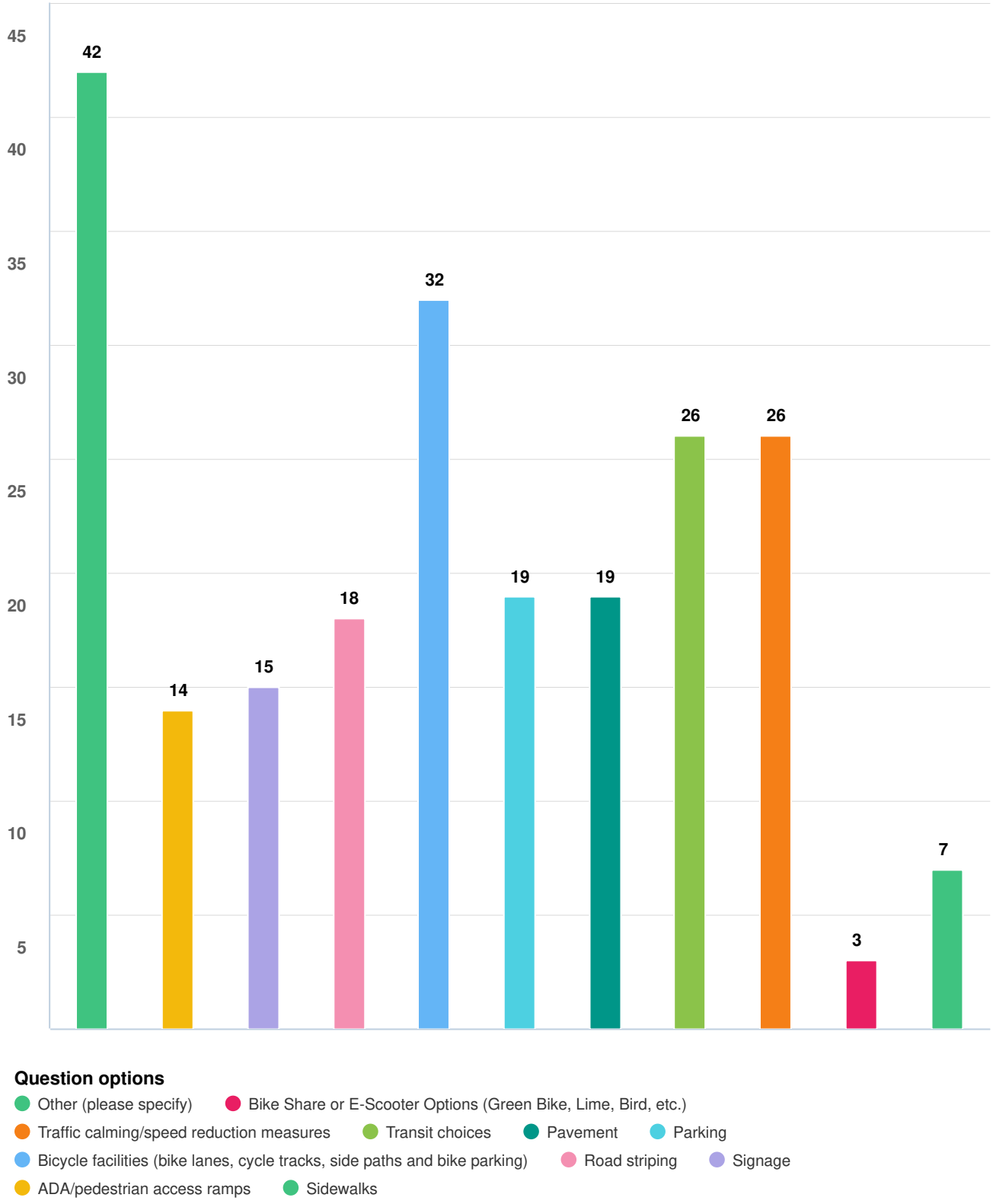
Optional question (41 response(s), 24 skipped)
Question type: Essay Question

Q7 What goals are most important to you? Check all that apply.



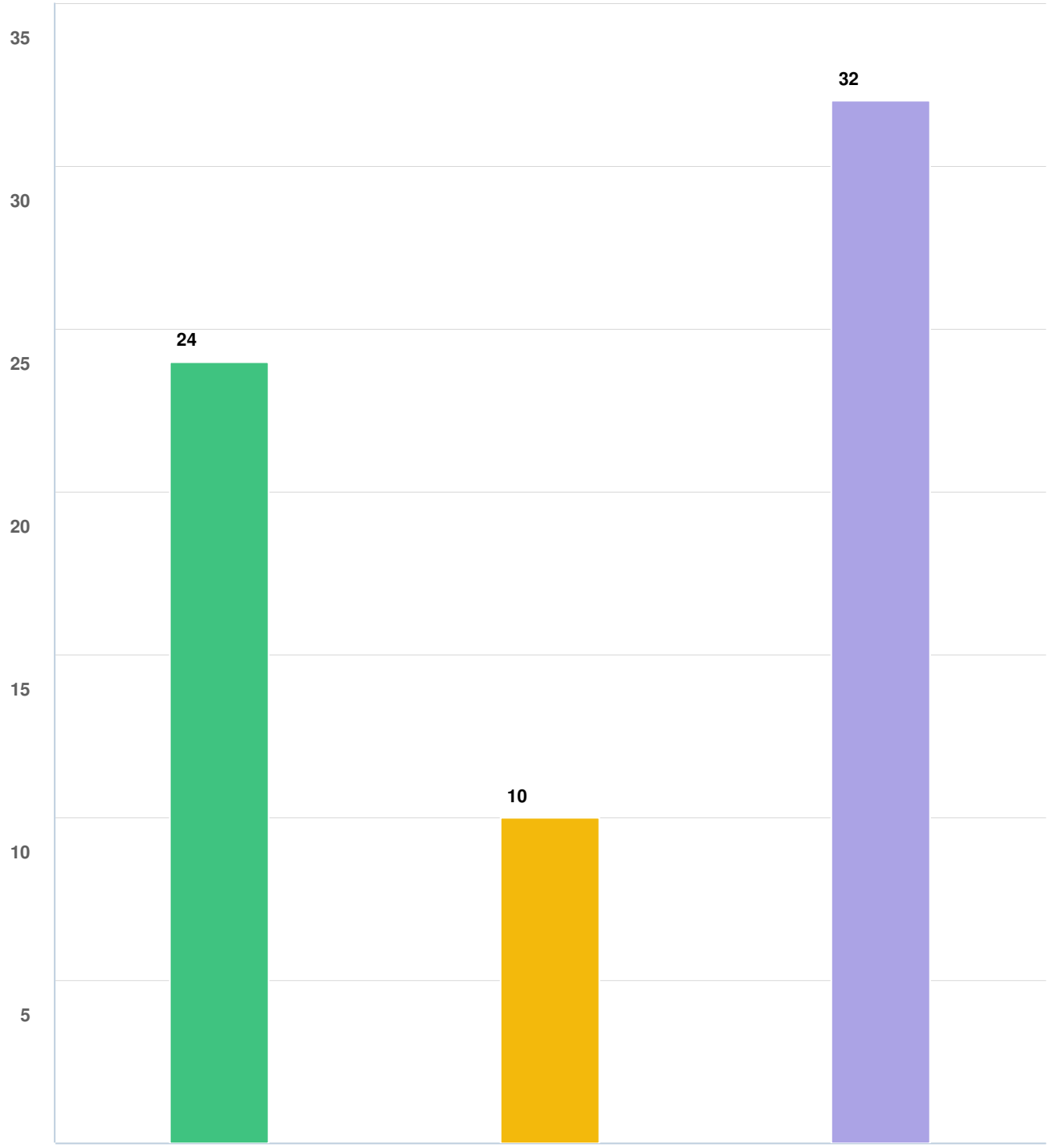
Optional question (64 response(s), 1 skipped)
Question type: Checkbox Question

Q8 What types of improvement projects are most important to you? Check all that apply.



Optional question (64 response(s), 1 skipped)
Question type: Checkbox Question

Q9 . If we had a set amount of money to spend, should we…

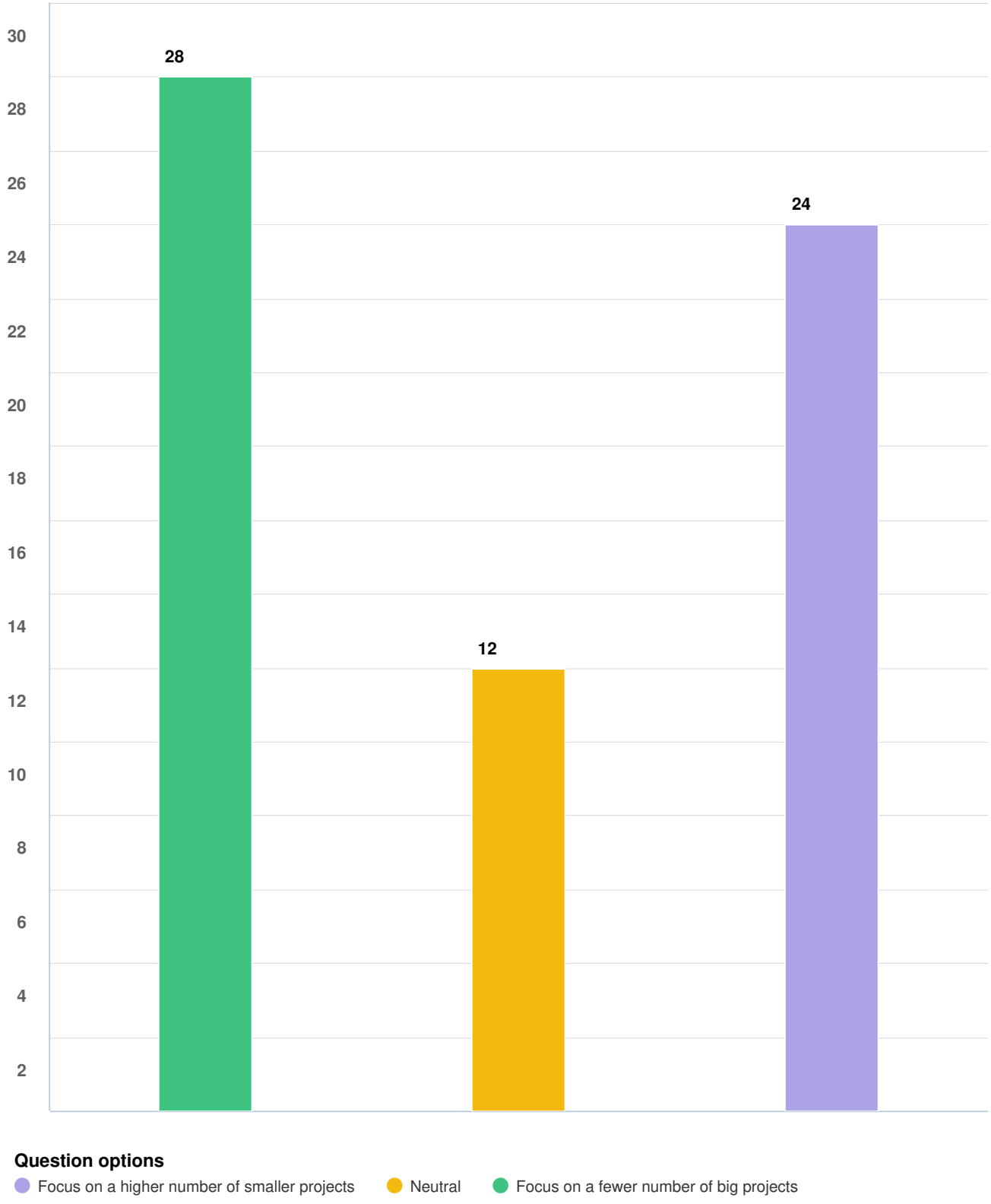


Question options

- Enhance the transportation system with new or improved facilities and services
- Neutral
- Better maintain the existing transportation system

Optional question (64 response(s), 1 skipped)
Question type: Checkbox Question

Q10 If we had a set amount of money to spend, should we…



Optional question (63 response(s), 2 skipped)
Question type: Checkbox Question

Q11 Please tell us more about the current transportation projects that are important to you.

Anonymous 10/29/2023 09:02 PM	Canal trails will improve connectivity.
Anonymous 10/30/2023 02:17 AM	Keeping existing roads safer. Traffic and speeding is a huge problem everywhere. Center and State Street seem to have accidents on a regular basis.
Anonymous 10/30/2023 04:38 PM	Please please make the lanes easier to see. Especially in rain or snow they are invisible.
Anonymous 11/16/2023 07:05 PM	Public transit first and foremost.
Anonymous 11/30/2023 07:38 PM	I would love to see protected bike bike lanes and improved pedestrian access, particularly around Trax, with better connections to local amenities.
Anonymous 12/05/2023 09:35 AM	I believe it is important for Midvale City to use the funding to improve the current facilities instead of creating new walkways that would need continuous monitoring.
Anonymous 1/12/2024 07:41 AM	The proposed bike paths to/from Fort Union is one I'm eagerly hope happens. It would make grocery and shopping trips much safer by bicycle.
Anonymous 1/28/2024 06:07 PM	Pedestrian safety and connections to trails. Support access to public transit
Anonymous 3/04/2024 01:11 PM	I would love to see bike/walking trails added to all the canals in the city similar to the Murray canal trail.
Anonymous 3/05/2024 05:55 PM	Maintaining our roads clean and free of garbage, especially on the on and off ramps at highway entrances and exits. Garbage ends up on our sidewalks also. Could cleanup for this create temporary jobs for individuals who need it? As parole? Volunteer work?

Anonymous 3/13/2024 10:36 AM	Transit Zones, TRZ/HTRZs
Anonymous 3/21/2024 08:09 AM	The connection between midvale to other cities via trails or bike systems
Anonymous 4/17/2024 03:18 PM	A pedestrian bridge connecting Midvale Main street to the Bingham Junction Trax Station.
Anonymous 4/18/2024 02:59 PM	No comment
Anonymous 4/18/2024 03:11 PM	Is available parking considered a transportation project?
Anonymous 4/18/2024 03:26 PM	Fixing the roads
Anonymous 4/18/2024 04:07 PM	Can you please figure out a way in order to make the lines visible at night especially in the rain. I am from Massachusetts and we can always see the lines in the road. Use reflectors that are sucken into the road if you are concerned about snow plows.
Anonymous 4/18/2024 04:43 PM	Need to handle larger influx of people living in Midvale.
Anonymous 4/18/2024 05:21 PM	Northbound freeway off-ramp headed eastbound at 7200 South
Anonymous 4/18/2024 06:43 PM	Driving
Anonymous 4/18/2024 06:48 PM	Bike lanes
Anonymous 4/19/2024 06:19 AM	Skating pathways, get rid of the homeless so we can walk our neighborhoods.
Anonymous 4/19/2024 07:58 AM	Walking/ biking safety

Anonymous 4/19/2024 08:53 AM	Increasing transit routes to reduce time to destinations
Anonymous 4/19/2024 09:40 AM	Bike lanes. Slowing people down on 7500 s.
Anonymous 4/19/2024 09:41 AM	Rio grande project, improving public transport
Anonymous 4/19/2024 11:25 AM	The orange barrels taking traffic to one lane
Anonymous 4/19/2024 05:16 PM	west to east connection is horrible, there needs to be a light rail connection (something like the s line in sugarhouse). Bicycles and cars are different modes of transport, just like how we dont want pedestrians on the motorway, there shouldn't be bicycles on it either. Bicycle routes should perhaps be completely independent from car roads, this improves the cyclists experience, because it will be a unique interaction with the built environment that isnt shared with cars and makes them safer and more accessible to those more vulnerable in our community. Make bicycling more accessible, and the way to do that is to take it off the car road
Anonymous 4/20/2024 07:35 AM	Biking and walking trails/paths
Anonymous 4/20/2024 11:36 AM	We have well-maintained TRAX signals. I appreciate that. There is an area of fencing near the Grant Street apartments that sorely needs to be replaced/beautified.
Anonymous 4/20/2024 05:44 PM	7200 south enhancements. I really hope that intermodal transportation needs are considered not just a widening of the road
Anonymous 4/21/2024 07:40 AM	Beautifying Midvale, particularly around 7200 s and catalpa street
Anonymous 4/21/2024 05:25 PM	Drawing business to Main Street with walk ability initiatives; creating bike lanes separate from car traffic on Ft. Union; improving TRAX use through better and safer stations (including restrooms!).

Anonymous 4/22/2024 07:05 PM	Too many apartments going up making the traffic worse.
Anonymous 5/07/2024 06:22 PM	Safe bike access from residential areas to Jordan River Parkway.
Anonymous 5/23/2024 07:26 AM	Making any routes a 24/7/365 because people cannot depend of service, therefore always needing multiple autos This being wheter you live close or away from bus or train stops.
Anonymous 6/17/2024 03:38 PM	Wider sidewalks in zone sf-2

Optional question (37 response(s), 28 skipped)
Question type: Essay Question

Q12 Are there areas in Midvale that you feel are unsafe for vehicles, pedestrians, or cyclists? Please explain the issue.

Anonymous 10/29/2023 09:02 PM	State Street is terrible for cyclists. Pedestrians aren't safe either. Most collector and arterial streets aren't safe for adolescent cyclists.
Anonymous 10/30/2023 02:17 AM	Center Street. Cars speed and don't seem to notice the "going fast" signs.
Anonymous 11/16/2023 07:05 PM	We mostly take public transit or walk and we very rarely feel unsafe.
Anonymous 11/16/2023 09:17 PM	7200 south. I ride my bike frequently and have to cross 7200 south which I wouldn’t have to do if I could access Jordan River Trail from Bingham Junction Park.
Anonymous 11/30/2023 07:38 PM	The W Jordan River Blvd and S Bingham Junction Blvd intersection poses frequent challenges for vehicles, with almost monthly accidents. Unprotected left turns add to the lack of driver safety. State Street intersections, with their extended light cycles, are inconvenient for pedestrians, significantly slowing down crossing. Despite being less than 5 miles from my workplace, the roads on my route (7200 S) don't feel safe for biking due to heavy traffic and driver speed during typical commuter time. Sidewalk biking is common, but I find it

	uncomfortable with pedestrians sharing the space.
weblankenship 1/09/2024 05:38 PM	7720 South and State is dangerous when crossing state walking East. Right turns are allowed on red light = drivers not looking for pedestrians when turning south on state. I've almost been hit so many times. Also businesses do not keep state street sidewalks clear of snow. It's hard to walk on ice and drifts.
Anonymous 1/12/2024 07:41 AM	The Fort Union area is incredibly dangerous for anyone not inside of a car. There are few safe intersections and no lanes for cyclists. There are also oceans of unused parking space.
Anonymous 1/15/2024 12:13 PM	In and around the Midvale police station. There is limited bike access, and street parking makes it hard for cars to see oncoming traffic. When I do drive, I notice that it is hard for those who are exiting the neighborhoods to see past these cars.
Anonymous 1/28/2024 06:07 PM	7800 south, especially for pedestrians.
Anonymous 2/20/2024 03:35 PM	The width and visibility of Bingham Jct Blvd cause vehicles to drive excessively fast, which can easily become a safety issue. It also gives the impression of being a high-speed thoroughfare, which leads to run red lights.
Anonymous 3/04/2024 01:11 PM	The whole state street corridor is very challenging and unsafe for biking and walking as well as ft Union blvd. Also, the east/west streets that cross i15 lack bike lanes making it difficult to access downtown and the Jordan river trail from all areas of the city.
Anonymous 3/04/2024 02:05 PM	Yes, every road
Anonymous 3/05/2024 05:55 PM	Lines to distinguish lanes are not visible around traffic lights at night. There is one lane on Bingham Junction heading north that isnt clear. Some cars use the space between the lane and the sidewalk as a turning lane. This is a hazard especially for cyclists or pedestrians and needs to be marked. It is across from the bank and Maverick as you turn east onto 7200 South.

Anonymous 3/05/2024 06:13 PM	8000 S. This is an area where kids wait for school busses and cross the street to and from school. Cars drive way too fast and the street seems barely lit. It’s very dangerous for kids getting to school.
Anonymous 3/05/2024 08:17 PM	Honestly speed is the biggest factor. Getting people to slow down on 7800, 7500, Fort Union.
Anonymous 3/13/2024 10:36 AM	No
Anonymous 3/21/2024 08:09 AM	Yes 7200 south corridor
Anonymous 4/18/2024 02:59 PM	No comment
Anonymous 4/18/2024 03:11 PM	Main Street is a mess sometimes due to lack of parking and construction crews blocking traffic.
Anonymous 4/18/2024 03:26 PM	7200 S between state and redwood Rd
Anonymous 4/18/2024 04:07 PM	Around 7200 and i15 exit people cross where every they want without regards to a driver being able to see them or not. Also there needs to be parking enforcement because cars are parked close the corners and block your view to see on coming traffic.
Anonymous 4/18/2024 04:43 PM	Crossing over from Gardiner village to the opposite side
Anonymous 4/18/2024 05:15 PM	No bike lanes on main and connecting roads
Anonymous 4/18/2024 05:21 PM	From the cemetery to the McDonald's on the frontage road
Anonymous 4/19/2024 06:19 AM	7200 S. Near I15
Anonymous	7200 south trax station and surrounding area. Especially between gas

4/19/2024 07:30 AM	stations on Cottonwood St. Lots of drug use and begging for money.
Anonymous 4/19/2024 07:58 AM	7720 can be a bit nasty
Anonymous 4/19/2024 08:53 AM	No
Anonymous 4/19/2024 09:40 AM	7500 s is dangerous for pedestrians. 7800 s is dangerously for cyclists and needs a designated bike lane, both ways, the street is wide enough to support this in current form.
Anonymous 4/19/2024 11:25 AM	7200 s between the freeway and State streets
Anonymous 4/19/2024 05:16 PM	car roads are unsafe for cyclists, pedestrians are unsafe around highway overpasses and near highway entrances and exits; high speed traffic is not friendly when intersected or shared with slow traffic like pedestrians and cyclists
Anonymous 4/19/2024 06:42 PM	7800 s for bikes. 80th for bikes.
Anonymous 4/20/2024 07:35 AM	7200 South east of 7th west - high traffic. State street and 7800 S - conflicting traffic patterns take away driver focus
Anonymous 4/20/2024 11:36 AM	Yes. Near the MODA Union housing around the bend on Millenial way. The parking causes congestion, and the pedestrians have no safe way to cross. We must not have red light runners here.
Anonymous 4/20/2024 05:44 PM	7800 south / Center Street. State Street Connection to trail systems like Jordan River corridor is life threatening, especially as you get close to the river. Painting lanes on streets is not safe nor does it encourage the use of bikes for commuting. There needs to be a connective separate system that goes from the river all the way to the east commercial properties. Both on 7800 and 7200.
Anonymous 4/21/2024 07:40 AM	Catalpa street is a high traffic area, and there aren't any side walks/sidewalks are sporadic

Anonymous 4/21/2024 05:25 PM	Pedestrian crossings for Center Street and Holden Street are insufficient to protect pedestrians. The roads are too wide for flashing light crosswalks to be effective, and stop lights would be a safer choice. There are not enough crosswalks available on 900 East --> 700 East; creating a dangerous tendency for Hillcrest students to try to cross without walking to Ft. Union. Fort Union is dangerous for cyclists, with no protection...especially from turning traffic.
Anonymous 4/22/2024 07:05 PM	School crossing on center street. We need red lights to stop the traffic. Not all cars stop at the yellow flashing lights.
Anonymous 5/07/2024 06:22 PM	Crosswalk at Grant Street and Center Street. Dangerous for pedestrians.
Anonymous 5/15/2024 07:59 AM	Curves on Catalpa and Cottonwood near the Moda apartments and are really hard to see around. People drive way too fast. Clear the weeds and shrubs. Add more lighting. Add mirrors for better visibility. Require Moda apartment residents to park in the lot rather than on the curve of the street.
Anonymous 6/17/2024 03:38 PM	sidewalks in zone sf-2

Optional question (41 response(s), 24 skipped)
Question type: Essay Question

Q13 Are there areas in Midvale where you experience significant traffic or congestion? Please explain the issue.

Anonymous 10/29/2023 09:02 PM	No
Anonymous 10/30/2023 02:17 AM	State and Center. The turn light to go West isn't long enough and poorly yimmed with the 8000 light. So it backs up every single time. Regardless of the day/time.
Anonymous 10/30/2023 04:38 PM	Of course anywhere near the freeway. Understand there is not much that can be done.

Anonymous 11/16/2023 09:17 PM	7200 south
Anonymous 11/30/2023 07:38 PM	On 7200 S near ramps on to 15 and 205 there is always traffic (of course) but I think the weird split lane makes it harder and people continuing straight get stuck behind those waiting to go north. It just causes a lot of stupid driving.
weblankenship 1/09/2024 05:38 PM	State, getting off the freeway at 7200 is awful
Anonymous 1/10/2024 03:34 PM	Making a right turn onto 7200 from
Anonymous 1/12/2024 07:41 AM	There are too many cars in the fort union area. If there were easier ways for locals to visit these stores without a car, it would make more room for everyone else - and be safer.
Anonymous 1/15/2024 12:13 PM	Around the business/manufacturing area on 450 west up to the light by the two maverick gas stations is always backed up and the turning lane is always over filled. It makes it hard to exit the gas station or move around any of the businesses. I do not know if this is within midvale or sandy.
Anonymous 1/28/2024 06:07 PM	7200 and I-15, Fort Union near the shopping center and Union Park
Anonymous 3/04/2024 01:11 PM	The state street/i215 area can be a mess. It seems like the are issues with traffic light integration in that area.
Anonymous 3/04/2024 02:05 PM	7200 S, 7800 S, State St.
Anonymous 3/05/2024 05:55 PM	700 E and 7800 S between 4 and 6 pm - traffic is backed up sometimes all the way to Hillcrest High
Anonymous 3/05/2024 08:17 PM	Union center area
Anonymous	Around Trader Joe’s, Midvale Walmart etc. sometimes I get stuck

3/05/2024 08:50 PM	inching along that area for 15 minutes.
Anonymous 3/06/2024 05:52 PM	No
Anonymous 3/13/2024 10:36 AM	Not really compared to alot of other cities
Anonymous 3/13/2024 02:05 PM	7200 Corridor west of State Street. With Trax lines and several traffic signals, traffic can really get backed up.
Anonymous 3/21/2024 08:09 AM	Yes 7200 south corridor including family center/Union park
Anonymous 4/18/2024 02:59 PM	I try not to be out during peak traffic times. I schedule appointments and do my shopping during less busy times of the day, and I am retired. So I don’t have to contend with commuter traffic.
Anonymous 4/18/2024 03:11 PM	Main Center. New apartment complexes do not seem to have parking for their renters. Also, the few homes left on Main Street are being pushed out. Not fair.
Anonymous 4/18/2024 03:26 PM	7200 S 300 W
Anonymous 4/18/2024 04:07 PM	Traffic has increased throughout Midvale.
Anonymous 4/18/2024 04:43 PM	Sometimes on 7200 south going toward the west facing I-15, cars backs out to the intersection where the two gas stations are.
Anonymous 4/18/2024 05:21 PM	No really
Anonymous 4/19/2024 06:19 AM	7800 South where the road dips and meets with West Jordan.
Anonymous 4/19/2024 07:30 AM	Main St and 7800 south needs left turn arrow.

Anonymous 4/19/2024 08:53 AM	State street by fashion place mall regularly and fort union during rush hours
Anonymous 4/19/2024 09:40 AM	7200 and state street. Lights are timed poorly.
Anonymous 4/19/2024 11:25 AM	State street between 6400 s and 80th south
Anonymous 4/19/2024 05:16 PM	I don't think there is significant traffic or congestion in Midvale
Anonymous 4/19/2024 06:42 PM	Getting out to 7200 s from cottonwood street. What a mess
Anonymous 4/20/2024 07:35 AM	State street, 7720 South to 7800 south - this miss-matched intersection needs to be overhauled to align and allow for better traffic patterns and a single light.
Anonymous 4/20/2024 05:44 PM	Main at 7800 east west bound no turning lane light. Cottonwood street at 7200 south no left turn light and yet the smaller traffic place of Ivy off of main has one?
Anonymous 4/21/2024 05:25 PM	Turning onto eastbound Fort Union from northbound 700 West -- the right turn lane backs up, forcing drivers to queue in the emergency lane all the way to 9th Ave / Coliseum Way. Exiting eastbound I-215 onto southbound Union Park -- traffic backs up along I-215, effectively consuming an entire lane of the belt route.
Anonymous 4/27/2024 09:21 AM	7200 s between I15 and State, too many lights
Anonymous 5/07/2024 06:22 PM	Entrance to Midvale Middle School at Pioneer and Garden View.
Anonymous 5/15/2024 07:59 AM	Near the Moda apartment.
Anonymous 6/17/2024 03:38 PM	n/a

Optional question (39 response(s), 26 skipped)
Question type: Essay Question

Q14 Are there areas in Midvale that are difficult to access? Please explain the issue.

Anonymous 10/29/2023 09:02 PM	It's difficult to get from east of I-15 to west without a car.
Anonymous 10/30/2023 02:17 AM	The road near the new Moda apartments. The apartment cars park in the road, and it gets significantly more narrow.
Anonymous 11/16/2023 07:05 PM	Like with most of the valley east west connections could use some help.
Anonymous 1/12/2024 07:41 AM	The Fort Union area is incredibly difficult to access without a car.
Anonymous 1/28/2024 06:07 PM	East/west access because of freeway. A pedestrian bridge at 7500-ish would be awesom
Anonymous 3/04/2024 01:11 PM	Crossing state street and fort union Blvd is dangerous and difficult for pedestrians and cyclists.
Anonymous 3/05/2024 05:55 PM	The homes on Ft Union and 700 East are sometimes hard to get to depending on time of day and flow of traffic
Anonymous 3/06/2024 05:52 PM	No
Anonymous 3/13/2024 10:36 AM	The East/West connections are tricky.
Anonymous 3/13/2024 02:05 PM	Difficult to access grocery stores using public transportation.
Anonymous 3/21/2024 08:09 AM	Yes 7200 south corridor including family center/Union park

Anonymous 4/18/2024 02:59 PM	No comment
Anonymous 4/18/2024 03:11 PM	Main Street shops, Midvale Senior Center, and Midvale City office buildings. This is due to lack of parking.
Anonymous 4/18/2024 03:26 PM	My subdivision off of 300w 7300 S
Anonymous 4/18/2024 04:07 PM	Main roads if you have to take a left through traffic and there is no light can take awhile.
Anonymous 4/18/2024 04:43 PM	Coming from either the elementary school and middle school, getting on Center street can be hard.
Anonymous 4/18/2024 05:21 PM	No
Anonymous 4/18/2024 05:40 PM	At Trax crossings
Anonymous 4/19/2024 06:19 AM	All of the parks
Anonymous 4/19/2024 07:58 AM	Getting in and out of gardener village and some of the Jordan River parkway parking
Anonymous 4/19/2024 08:53 AM	No
Anonymous 4/19/2024 09:40 AM	Getting to Fort Union is tough sometimes, very busy.
Anonymous 4/19/2024 11:25 AM	Anything near I15
Anonymous 4/20/2024 11:36 AM	Getting in and out of the Post Office is tricky.

Anonymous 4/20/2024 05:44 PM	7800 south Jordan River Parkway. Incomplete sidewalk connecting north side, sidewalk to the trail system. Is there a way to get across the street in Midvale north south to the trail system?
Anonymous 4/21/2024 05:25 PM	Any intersection that doesn't have a protected left turn, along Fort Union, prevents traffic from flowing during heavier use times.
Anonymous 4/22/2024 07:05 PM	Fort union can be a nightmare during high traffic times.
Anonymous 5/15/2024 07:59 AM	Catalpa does not have a full sidewalk. We need one for safety.
Anonymous 5/23/2024 07:26 AM	No, but there are areas of serious safety and crime issues which is a significant reason for non usage
Anonymous 6/17/2024 03:38 PM	n/a

Optional question (30 response(s), 35 skipped)
Question type: Essay Question

Q15 Is there anything you think the project team should know?

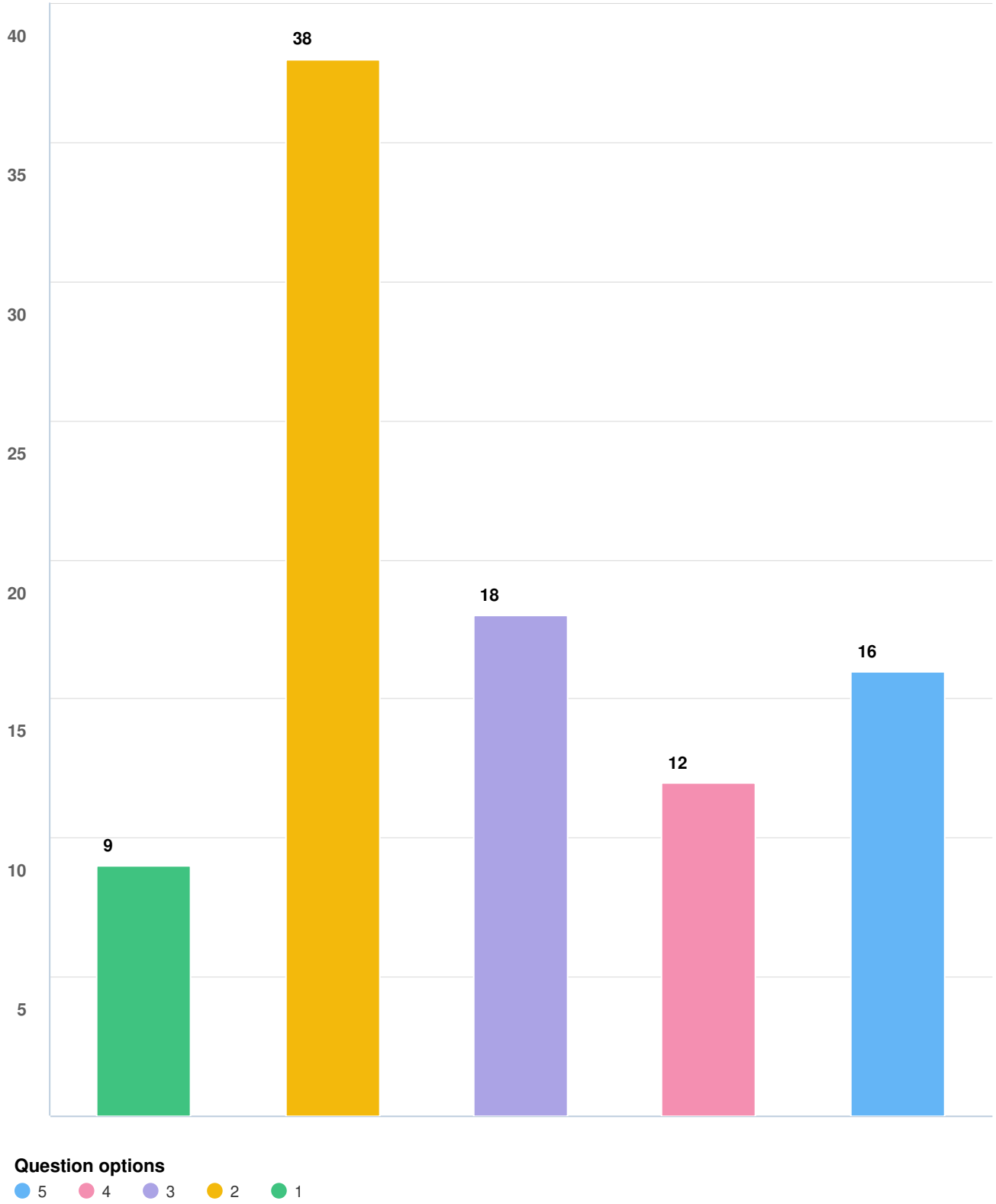
Anonymous 10/30/2023 02:17 AM	Please don't do construction on two parallel lines at the same time. (Example, center was closed going West, at the same time 7500 was closed going West. We would not access our street)
Anonymous 11/16/2023 09:17 PM	Bike lanes and access . I'd like to see bike lanes extended on 700 west.
Anonymous 11/30/2023 07:38 PM	Thanks for working on this!
Anonymous 12/05/2023 09:35 AM	Placing walkways in areas that are out of public view creates environments that allow suspicious and illegal activity (i.e. hidden alleyways, walkways).
Anonymous	I applaud the efforts Midvale is making to create a future for more

1/12/2024 07:41 AM	than just cars. I understand cars are still crucial, but by allowing those who are able to move around the city without them, it will make the lives of everyone better, no matter their transportation choices.
Anonymous 3/05/2024 05:55 PM	We generally feel safe on the roads in Midvale. There are a few places where upkeep on the pavement is needed but overall, Midvale is doing well to keep our roads safe and accessible..
Anonymous 3/06/2024 05:52 PM	My teens were almost hit by a car speeding down Wasatch Street on their way home from school. Thanks to a neighbor who honked when saw the vehicle coming, my children were not seriously injured or killed. This is a serious safety issue!
Anonymous 4/18/2024 02:59 PM	No comment
Anonymous 4/18/2024 03:11 PM	It seems that Main Street is being over developed. Not enough room for cars and people.
Anonymous 4/18/2024 03:26 PM	Stop craming buildings and huge apartments on small streets
Anonymous 4/18/2024 04:07 PM	We were given notice last year that the sidewalk was going to be fixed and told not to park in the area for certain dates. Midvale never came to fix it and wasted money to mark the sidewalk and hand out notices.
Anonymous 4/18/2024 05:21 PM	If possible a walking bridge to get across state street
Anonymous 4/19/2024 06:19 AM	Please do sidewalk expansion joints at a 20 degree angle. It is safer for everyone.
Anonymous 4/19/2024 08:53 AM	No
Anonymous 4/19/2024 05:16 PM	we are thankful that you are involved and working on solutions to make Midvale better, we want to be involved too and this survey helps for sure, keep the public involved and only great things will come. Thank you!

Anonymous 4/20/2024 07:35 AM	Security needs to be addressed at access points to the Jordan River trail. Those parking lots in Midvale are costly due to breakins.
Anonymous 4/20/2024 11:36 AM	I appreciate well-maintained lots and edges so much. Cleanliness is so important to me and my family.
Anonymous 4/20/2024 05:44 PM	Snow removal on side streets in Midvale is dismal, if you you adding separate bike ways to our system do not forget funding for clearance of these new facilities.
Anonymous 4/21/2024 07:40 AM	I'd like to see some light water wise landscaping to address the areas between 7500 s and 7200 south. The park and go and "empty areas" between are often a dumping ground of litter or weeds. It would be nice to see some sidewalks as well as some intentional green space
Anonymous 4/21/2024 05:25 PM	Much of the city's sidewalks are impassable to wheelchairs or motorized scooters until the snow melts.
Anonymous 5/15/2024 07:59 AM	Better advertise meetings so that residents will participate.
Anonymous 5/23/2024 07:26 AM	yes 700 East from Winchester to 7500 S should be , no commercial traffic, speed 25MPH, speed radar signs installed, speed mitigation measures. This area is completely residential. This are will match the traffic flow in from Murray 725 East which speed is 25 mph and has speed radar signs. 700 East also has the Entrance to Hillcrest HS and the proposed recreation center. This area lacks any park and I would hope that this will change in the future. It is proposed that a trail/ wal/bike crossin in in the works adding to the safety need for lessening speed and safe crossings.
Anonymous 6/17/2024 03:38 PM	n/a

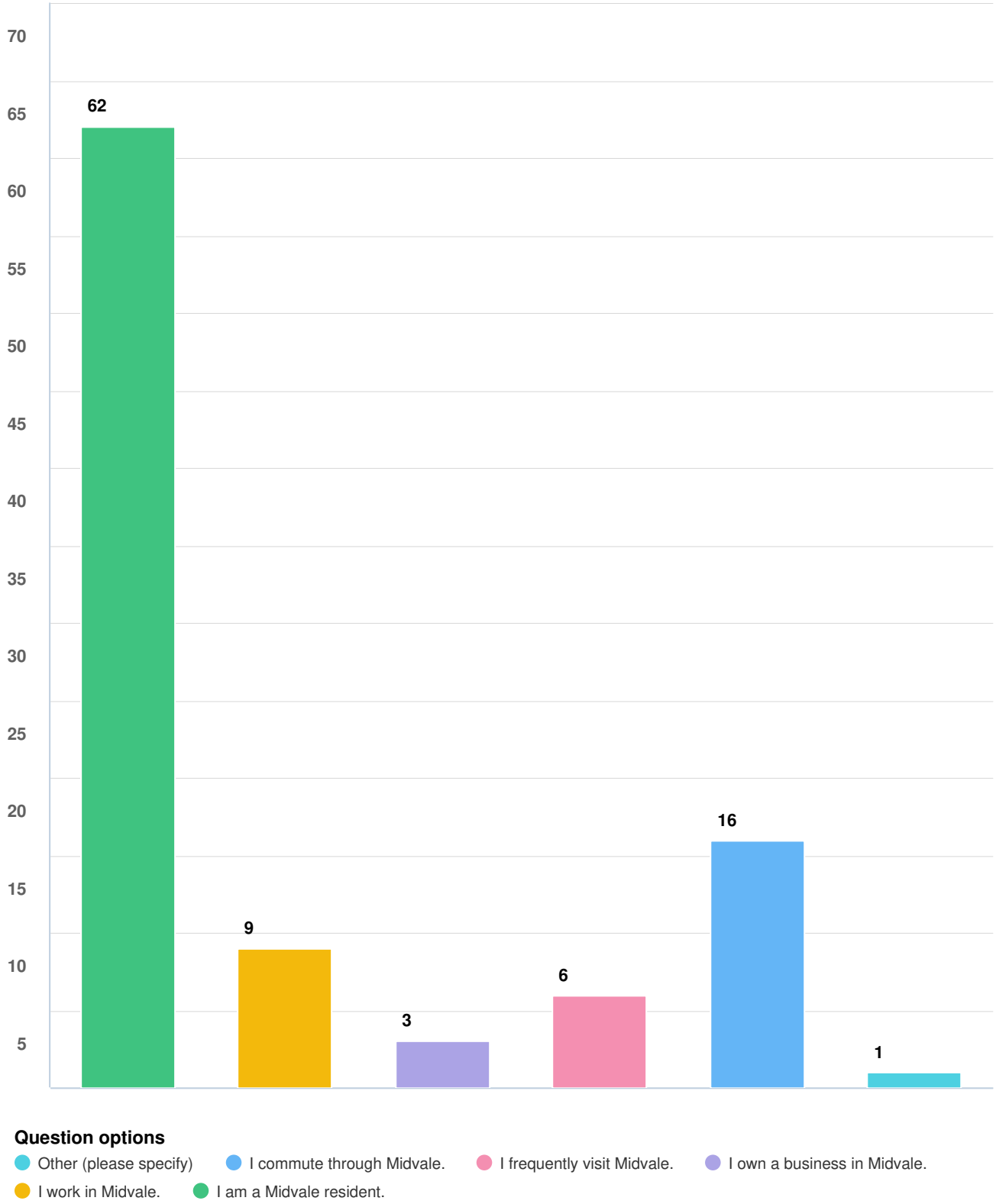
Optional question (23 response(s), 42 skipped)
Question type: Essay Question

Q16 Using the map below, please tell us in which area you live or work or spend time.



Optional question (64 response(s), 1 skipped)
Question type: Checkbox Question

Q17 Please tell us more about you. Select all that apply.



Optional question (65 response(s), 0 skipped)
Question type: Checkbox Question

Appendix B

Traveler Alignment Analysis

MEMORANDUM

To: Midvale City

From: Izzy Youngs & David Wasserman, Alta Planning & Design

Date: 6/10/2024

Re: Traveler Alignment Analysis

Executive Summary

Analysis Purpose and Results

This analysis evaluated how many people may shift from driving to walking or bicycling based on their proximity to active transportation routes planned in the Transportation Mater Plan. The analysis indicated that the following projects had the highest potential to influence a change in people's travel behavior. The projects from the Draft Priority Network that are shown in the table below are also in the top 15% of prioritized projects of the Active Transportation Build-Out Scenario, indicating that the projects that have been the most highly prioritized are also those with the best potential to encourage people to walk or bike instead of drive.

Table 1. Top 10 projects by average mode shift potential.

Project Corridor	Facility Type	Average Mode Shift Potential Score
Fort Union Blvd	Separated Bike Lane	7,537
Union Park Ave / City Limits Perimeter	Shared Use Path	4,554
S 700 E	Buffered Bike Lane	4,390
7800 S	Buffered Bike Lane	4,213
S 900 E	Sidepath	4,136
S 300 E	Neighborhood Byway	4,093
7200 S	Sidepath	3,954
Rail Trail	Shared Use Path	3,902
S 1000 E	Buffered Bike Lane	3,855
High Tech Drive	Bike Lane	3,831

Analysis Methodology Overview

The graphic on the following page provides a high-level overview of the mode shift analysis methodology. More detailed information is provided in the proceeding pages.

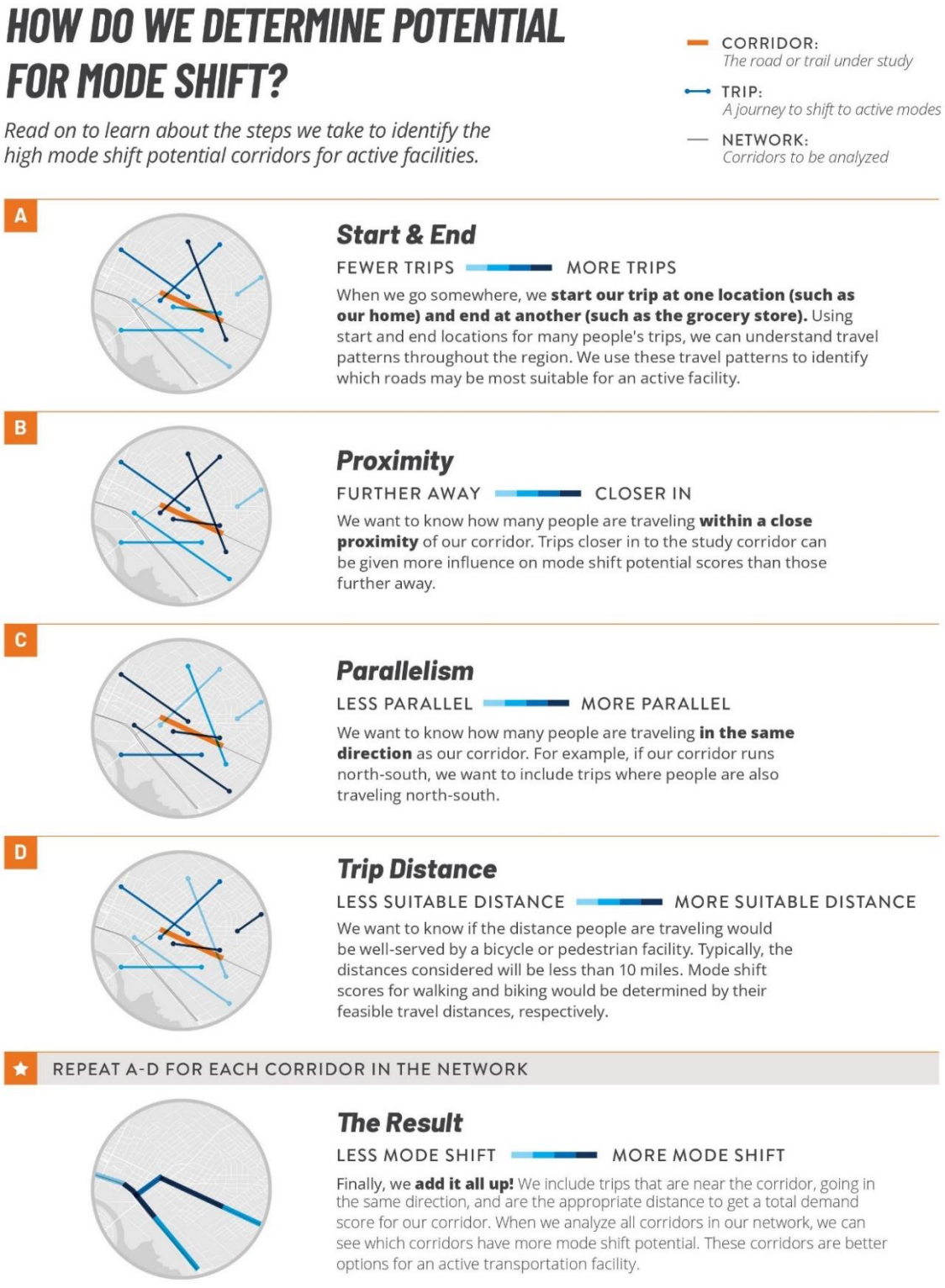


Figure 1. Visual explanation of the analysis methodology to produce an active mode shift potential from OD lines.

Traveler Alignment Analysis

This analysis evaluates the relative alignment between origin-destination lines and proposed active mode facilities to estimate the project-level potential for shifting vehicle trips to active modes. The output is a ranked index that indicates the relative mode shift potential of all projects evaluated in a single analysis.

The Utah Department of Transportation (UDOT) is using this traveler alignment tool to produce one measure out of four in the TIF Active funding model. The TIF (Transportation Investment Fund) Active is the largest pool of funding offered by UDOT for local community's projects. Communities nominate projects to be considered for the funding, which is offered at a 40% match rate. UDOT ranks all the nominated projects using a TIF Active prioritization model This measure is critical for UDOT to understand potential transportation use of any given multi-use trail, on-street facility, or crossing project. While mode shift is not the only measure that is important for UDOT to consider when recommending projects for funding, it is one that helps the department make more informed decisions about how a project may be used.

Methodology

Origin-destination (OD) data provided by Replica Places represented daily trips during Fall 2019 as straight lines connecting the centroid of the origin TAZ to the centroid of the destination TAZ. Although more recent Replica data is available, UDOT currently uses this 2019 dataset in the prioritization model, so it has also been used as a part of this analysis. A single OD line represents all trips within that origin and destination pair and shows general travel patterns spatially within the study area. To approximate which of these trips may utilize the proposed project, OD lines are evaluated relative to the project alignment for parallelism and proximity. Parallelism examines if the trips represented by the OD line are traveling roughly in the same direction as the project, and proximity considers OD lines that are geographically closer to the project.

Next, OD lines are filtered based on the average distance of the trips taken between that OD pair. Trip distance is used as a proxy for identifying trips with the potential to be made by active modes, as documented in travel behavior research showing the relationship between active transportation mode shares and trip distances in the US.[1] The step-by-step considerations are summarized visually in **Figure 1**Error! Reference source not found..

Limitations

Though trip distance is a reasonable indicator of trips that can be made using active modes, it is unrealistic to expect all short trips to convert to active transportation. Even if supportive infrastructure is provided, there are several reasons why a trip would still be made by non-active modes:

- **Heavy Loads**. In many cases, cargo bikes can support many types of grocery or shopping trips, but some heavy loads are often bulky or heavy enough to warrant the use of a vehicle.
- **Travel Trip Type**. Some shared trips are chained in ways where using active transportation for the entire trip is difficult. For example, if one leg of a tour that is part of a chain of trips is too long to consider using an active mode, the entire tour may be better made using a vehicle.
- **Personal Preference**. Some members of the community may elect to never bike or walk even if an all ages and abilities network is provided in a community.
- **Physical Impairment**. Some members of the community may have an impairment that prevents them from comfortably using active transportation.

[1] Oak Ridge National Laboratory (ORNL). (n.d.). National household travel survey. Federal Highway Administration. https://nhts.ornl.gov/.

- **Seasonal Weather**. Active trips become more difficult to accomplish in difficult weather conditions. While walking and biking trips may still be viable in many instances, there may be sometimes where it is inadvisable, such as a heat wave or unhealthy air conditions.

Given the nature of intrazonal trips that start and end in the same aggregation geography and thus are not represented by a line that may be evaluated for parallelism and proximity, they must be associated to projects in a different manner. Instead, they are proportionally allocated within a buffered distance of the project which requires the assumption that intrazonal trips are distributed evenly across the aggregation geography. In large, rural geographies, this assumption breaks down as trip generators and attractors are more clustered around human activity which is not as evenly distributed as in denser urban or suburban settings.

Relatedly, OD lines show trips starting and ending at the arbitrary centroid of the aggregation geography, but trips start and end at many points throughout the geography. Again, this may impact trip estimates in more rural areas because there's a higher chance that the actual trip origins and destinations are further from the centroid and thus less accurately represented by the OD line.

Furthermore, modal shift estimates are highly correlated with the project length, since longer projects have a higher probability of being closer to more OD lines. By adjusting the modal shift based on project length, we can better understand the relative impact of the facilities, rather than just looking at the raw sum of modal shift estimates for each facility. Both the totals and the estimates by project length are useful to compare.

Finally, there are additional considerations based on the source of the OD data. Replica Places is an activity-based model developed off a combination of mobile, land use, census, and survey data to generate census-block level OD estimates that can be used to estimate trip distances and understand common origins-destinations. Their data also provides estimates of mode split and trip purpose based on their synthetic populations that are created as part of their estimation process.

Results

The results of the traveler alignment analysis are displayed in **Figure 2**, overlaid on the origin-destination data that the analysis draws from. Longer projects were broken into approximately two-mile long segments for analysis purposes. The top 5 corridors with the highest active trip conversion potential are all on the eastern side of Midvale. Fort Union Boulevard from South 700 E to Wasatch Boulevard by the Fort Union Canyon Center shows the highest projected induced bike trip potential. Generally, active mode shift potential is higher on north-south projects. The projects west of I-15 are all received lower mode shift potential compared to the rest of the city. The top 10 projects by average mode shift potential are described in **Table 1**.

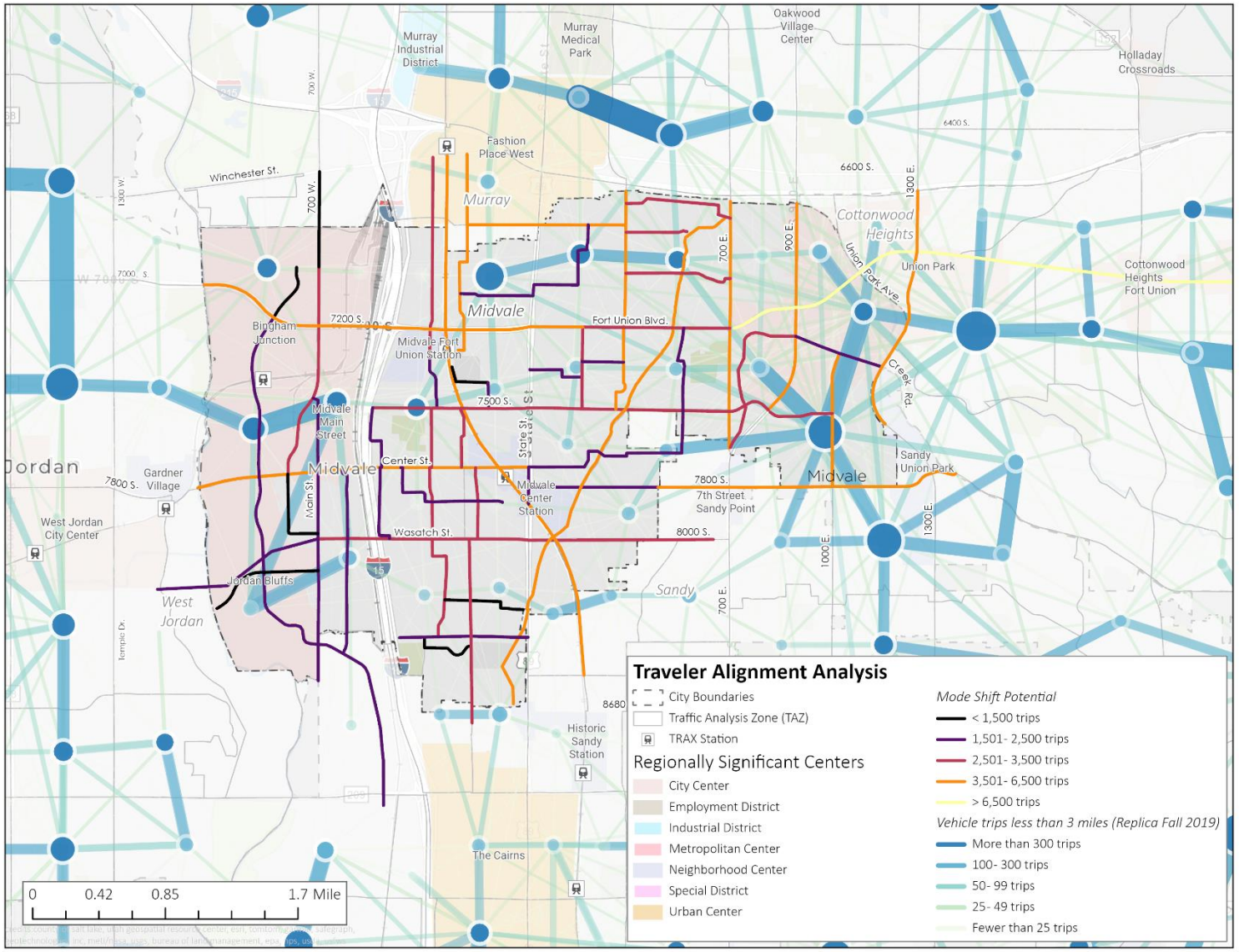


Figure 2. Results of the Traveler Alignment Analysis showing active mode shift potential of each proposed project for Fall 2019.

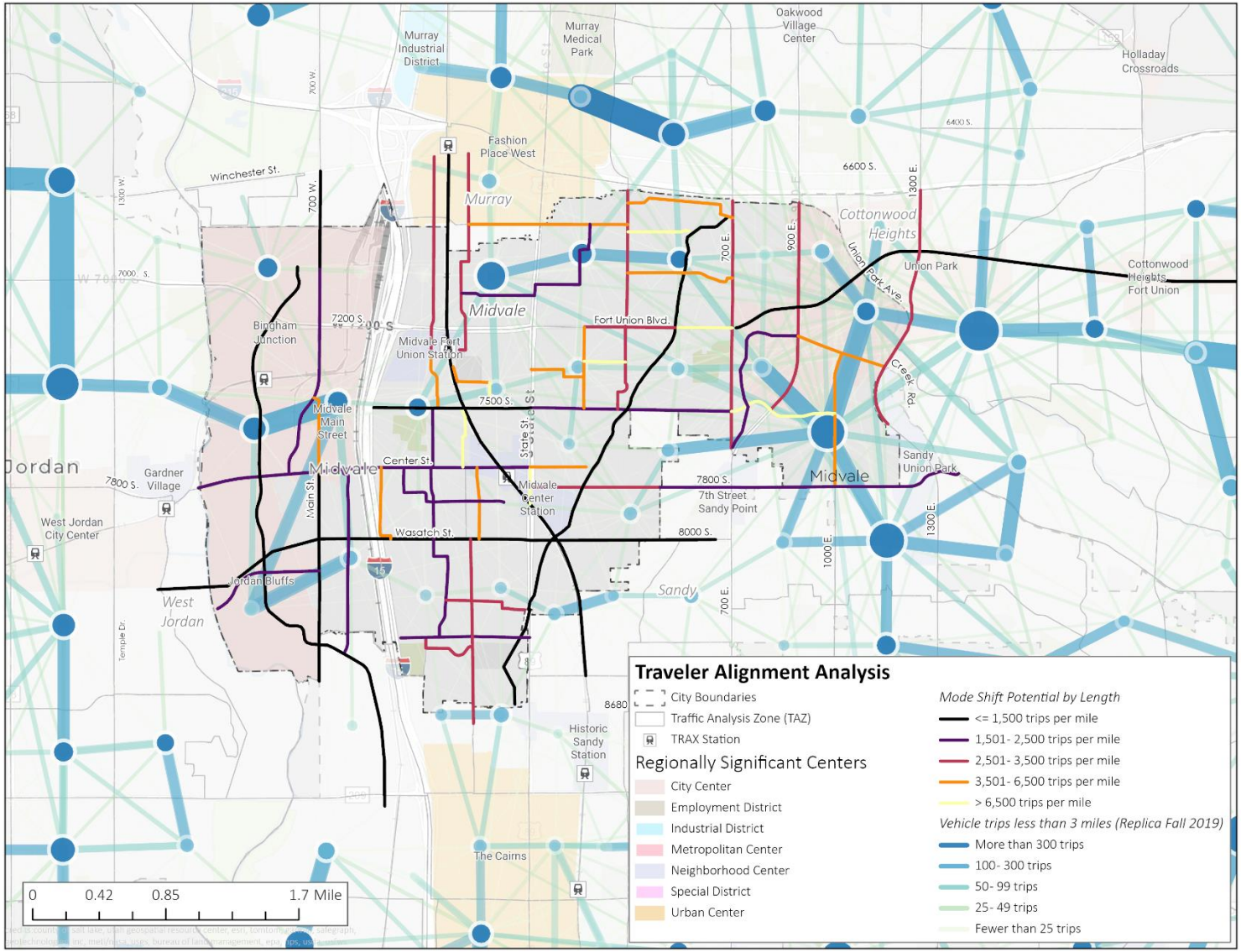


Figure 3. Results of the Traveler Alignment Analysis showing active mode shift potential of each proposed project by the project's length for Fall 2019.

Appendix A: Replica Background

REPLICA

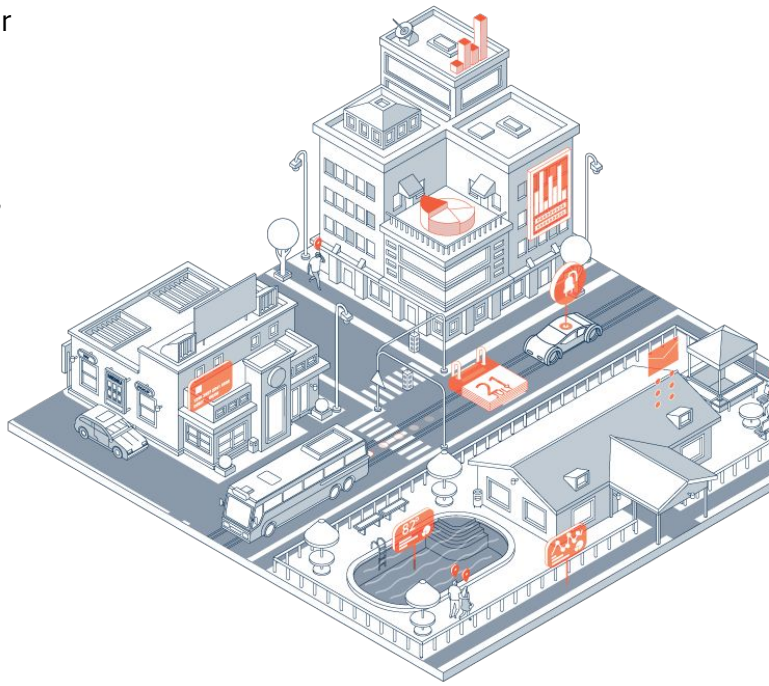
Data & analytics for those who need to make critical decisions about the physical world.

What is Replica?

Founded within Google, and operating independently since 2019, **Replica** works with hundreds of public sector agencies, professional services firms, and private companies around the country.

The Replica platform provides customers with a holistic, up-to-date picture, with datasets spanning **mobility**, **demographics, economic activity, and land use.**

From **corridor studies** to **site selection**, **equity analyses** to **transit expansion, economic impact analyses** to **EV infrastructure implementation,** customers know they can trust Replica for the data they need to make the most informed decisions.



What Do Customers Do With Replica?

Customers across the country use Replica for dozens of use cases, including:

- Generating **Origin-Destination Matrices** for specific trip modes, purposes, and travel demographics
- Prioritizing locations for **active transportation infrastructure** to achieve **Vision Zero**
- Creating **EV charging implementation** plans based on EV trip behavior and VMT
- Monitoring **commute modes and travel times**
- Crafting **public transit revitalization plans**
- Understanding the **total addressable market for next-gen mobility** and tolling technologies
- Conducting **environmental reviews** for new development and zoning changes, including the **analysis of VMT**
- Quantifying the **impact of major events**, policy changes, and infrastructure improvements

Appendix C

Road Projects Estimate

Road Projects

Table of Contents

Road Projects

700 West

Midvale City - Roadway CIP Opinion of Probable Costs - August 16, 2024 700 West - Complete 5-Lane Cross-Section - 1,990' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	83,362	$1,500,513
HMA - 7"	Ton	$120	4,228	$507,340
Curb and Gutter (2.5' width)	L.F.	$78	2,985	$232,830
Sidepath (12' width, 6" Thick)	S.F	$15	35,820	$537,300
Untreated Base Course (8")	C.Y.	$56	3,356	$187,962
Pavement Marking	L.F.	$2	26,865	$53,730
Pavement Message	E.A.	$200	149	$29,850
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	83,580	$585,060
			Construction Cost	$3,679,585
SWPPP	L.S.	5%		$183,979
Mobilization	L.S.	10%		$367,958
Traffic Control	L.S.	5%		$183,979
Utility Coordination	L.S.	10%		$367,958
			Subtotal	$1,103,875
Preconstruction Engineering	L.S.	10%		$367,958
Construction Engineering	L.S.	10%		$367,958
Contingency	L.S.	30%		$1,655,813
			Total Project Cost	$7,175,190

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Road Projects

Ft Union Boulevard

Midvale City - Roadway CIP **Opinion of Probable Costs - August 16, 2024** **Ft Union Blvd - Add/restripe 3rd WB Travel Lane - 3,135' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1	9,405	$9,405
Pavement Marking	L.F.	$2	9,405	$18,810
Pavement Message	E.A.	$470	94	$44,204
Sign	E.A.	$150	8	$1,200
			Construction Cost	$73,619
SWPPP	L.S.	5%		
Mobilization	L.S.	10%		$7,362
Traffic Control	L.S.	5%		$3,681
			Subtotal	$11,043
Preconstruction Engineering	L.S.	10%		$7,362
Construction Engineering	L.S.	10%		$7,362
Contingency	L.S.	25%		$24,846
			Total Project Cost	$124,231

Road Projects

Jordan River Blvd

Midvale City - Roadway CIP **Opinion of Probable Costs - August 16, 2024** **Jordan River Blvd - Widening - 2,090' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	87,550	$1,575,907
HMA - 7"	Ton	$120	4,440	$532,835
Curb and Gutter (2.5' width)	L.F.	$78	3,135	$244,530
Sidepath (12' width, 6" Thick)	S.F	$15	37,620	$564,300
Untreated Base Course (8")	C.Y.	$56	3,525	$197,407
Pavement Marking	L.F.	$2	28,215	$56,430
Pavement Message	E.A.	$200	157	$31,350
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	87,780	$614,460
			Construction Cost	$3,862,219
SWPPP	L.S.	5%		$193,111
Mobilization	L.S.	10%		$386,222
Traffic Control	L.S.	5%		$193,111
Utility Coordination	L.S.	10%		$386,222
			Subtotal	$1,158,666
Preconstruction Engineering	L.S.	10%		$386,222
Construction Engineering	L.S.	10%		$386,222
Contingency	L.S.	30%		$1,737,999
			Total Project Cost	$7,531,327

Road Projects

7800 South

Midvale City - Roadway CIP Opinion of Probable Costs - August 16, 2024 7800 South - Widening -1,556' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	65,183	$1,173,300
HMA - 7"	Ton	$120	3,306	$396,694
Curb and Gutter (2.5' width)	L.F.	$78	2,334	$182,052
Sidepath (12' width, 6" Thick)	S.F	$15	28,008	$420,120
Untreated Base Course (8")	C.Y.	$56	2,624	$146,969
Pavement Marking	L.F.	$2	21,006	$42,012
Pavement Message	E.A.	$200	117	$23,340
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	65,352	$457,464
			Construction Cost	$2,886,952
SWPPP	L.S.	5%		$144,348
Mobilization	L.S.	10%		$288,695
Traffic Control	L.S.	5%		$144,348
Utility Coordination	L.S.	10%		$288,695
			Subtotal	$866,086
Preconstruction Engineering	L.S.	10%		$288,695
Construction Engineering	L.S.	10%		$288,695
Contingency	L.S.	30%		$1,299,128
			Total Project Cost	$5,629,556

Road Projects

State Street

Midvale City - Roadway CIP **Opinion of Probable Costs - August 16, 2024** **State Street - Widening - 1,820' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	76,241	$1,372,342
HMA - 7"	Ton	$120	3,867	$464,000
Curb and Gutter (2.5' width)	L.F.	$78	2,730	$212,940
Sidepath (12' width, 6" Thick)	S.F	$15	32,760	$491,400
Untreated Base Course (8")	C.Y.	$56	3,070	$171,905
Pavement Marking	L.F.	$2	24,570	$49,140
Pavement Message	E.A.	$200	137	$27,300
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	76,440	$535,080
			Construction Cost	$3,369,107
SWPPP	L.S.	5%		$168,455
Mobilization	L.S.	10%		$336,911
Traffic Control	L.S.	5%		$168,455
Utility Coordination	L.S.	10%		$336,911
			Subtotal	$1,010,732
Preconstruction Engineering	L.S.	10%		$336,911
Construction Engineering	L.S.	10%		$336,911
Contingency	L.S.	30%		$1,516,098
			Total Project Cost	$6,569,758

Road Projects

900 East

Midvale City - Roadway CIP **Opinion of Probable Costs - August 16, 2024** **900 East - Widening - 4,313' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	180,663	$3,251,927
HMA - 7"	Ton	$120	9,163	$1,099,577
Curb and Gutter (2.5' width)	L.F.	$78	6,470	$504,621
Sidepath (12' width, 6" Thick)	S.F	$15	77,634	$1,164,510
Untreated Base Course (8")	C.Y.	$56	7,275	$407,377
Pavement Marking	L.F.	$2	58,226	$116,451
Pavement Message	E.A.	$200	323	$64,695
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	181,146	$1,268,022
			Construction Cost	$7,922,180
SWPPP	L.S.	5%		$396,109
Mobilization	L.S.	10%		$792,218
Traffic Control	L.S.	5%		$396,109
Utility Coordination	L.S.	10%		$792,218
			Subtotal	$2,376,654
Preconstruction Engineering	L.S.	10%		$792,218
Construction Engineering	L.S.	10%		$792,218
Contingency	L.S.	30%		$3,564,981
			Total Project Cost	$15,448,251

Road Projects

Tuscany View Road

Midvale City - Roadway CIP **Opinion of Probable Costs - August 16, 2024** **Tuscany View Road - Extension - 1,537' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	60,095	$1,081,710
HMA - 7"	Ton	$120	3,048	$365,727
Curb and Gutter (2.5' width)	L.F.	$78	2,152	$167,840
Sidepath (12' width, 6" Thick)	S.F	$15	25,822	$387,324
Untreated Base Course (8")	C.Y.	$56	2,420	$135,496
Pavement Marking	L.F.	$2	19,366	$38,732
Pavement Message	E.A.	$200	108	$21,518
Sign	E.A.	$150	280	$42,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	60,250	$421,753
			Construction Cost	$2,662,101
SWPPP	L.S.	5%		$133,105
Mobilization	L.S.	10%		$266,210
Traffic Control	L.S.	5%		$133,105
Utility Coordination	L.S.	10%		$266,210
			Subtotal	$798,630
Preconstruction Engineering	L.S.	10%		$266,210
Construction Engineering	L.S.	10%		$266,210
Contingency	L.S.	30%		$1,197,946
			Total Project Cost	$5,191,098

Appendix D

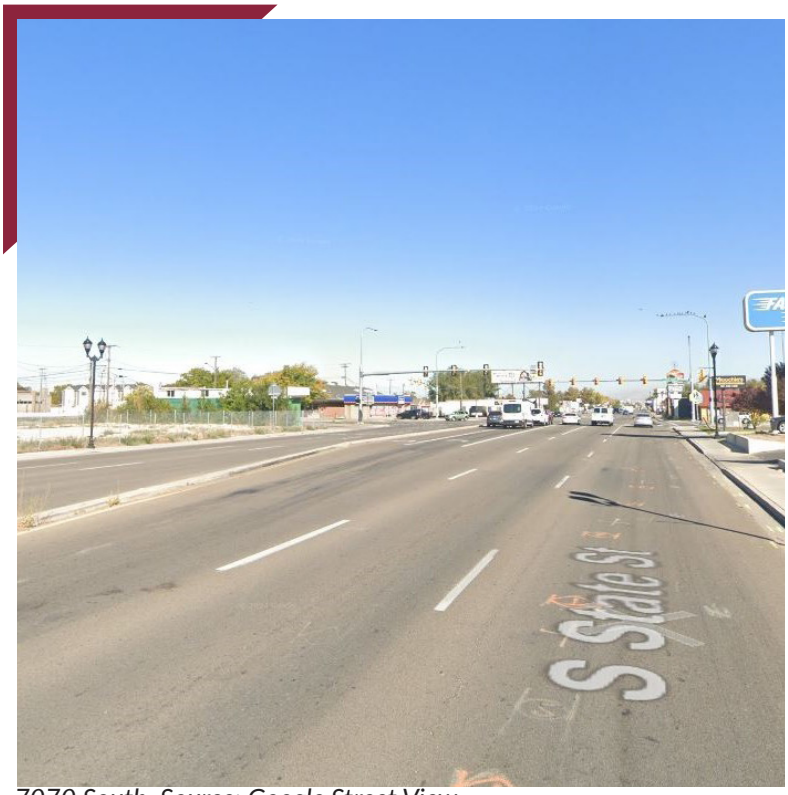
Active Transportation Projects Estimate

Active Transportation Projects

Table of Contents

Active Transportation Projects

State Street



7070 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Major Arterial

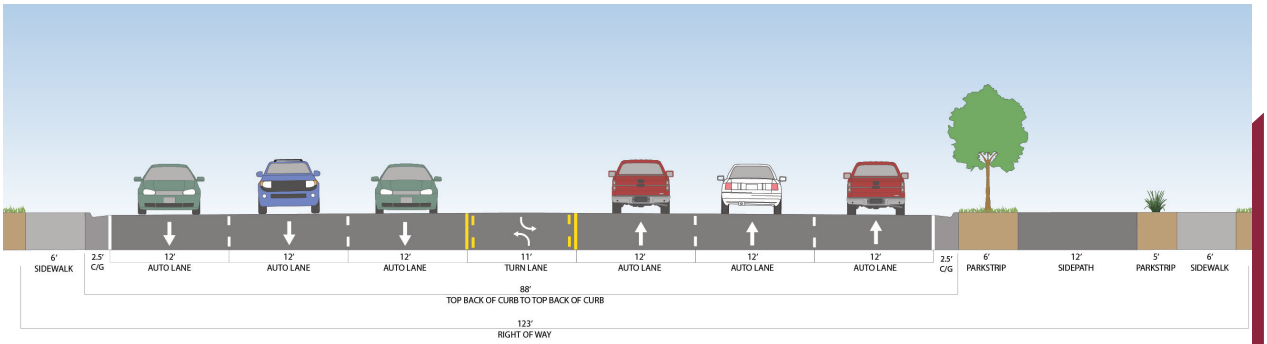
NUMBER OF LANES
7

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, no separation from traffic

RIGHT OF WAY
66'

PROPOSED SECTION



Typical State Street Section

PROJECT DESCRIPTION

This project would install a 12 foot separated side-path on the west side of State Street. The path would be separated from the street by a six foot park strip. Since this project would not impact lanes, it would require increasing the right of way by expanding it further west from where it currently stands. As such the exact dimensions of this project are very tentative.

ESTIMATED COST:

$3,620,199

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

Parametrix
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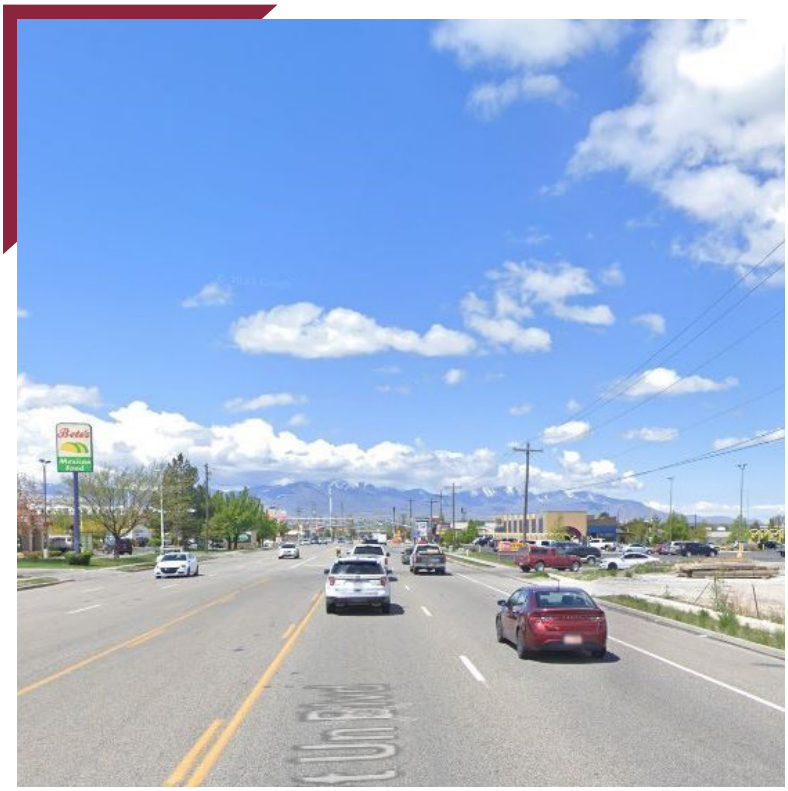
Cost Breakdown

State Street

Midvale City - Active Transportation Segment Opinion of Probable Costs - August 16, 2024 State Street - Major Arterial - 123' Right Of Way - 945' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$20	8,761	$175,219
Curb and Gutter (2.5' width)	L.F.	$78	1,181	$92,138
Sidepath (12' width)	S.F	$15	9,450	$141,750
Untreated Base Course (12")	C.Y.	$56	3,688	$206,535
Granular Borrow	C.Y.	$50	999	$49,973
Pavement Marking	L.F.	$2	1,181	$2,363
Pavement Message	E.A.	$470	12	$5,552
Sign	E.A.	$150	4	$563
Parkstrip (Landscape + Irrigation)	S.F.	$7	12,994	$90,956
Right of Way Acquisition	L.S.	-	-	$1,165,725
			Construction Cost	$1,930,773
SWPPP	L.S.	5%		$96,539
Mobilization	L.S.	10%		$193,077
Traffic Control	L.S.	5%		$96,539
Utility Coordination	L.S.	10%		$193,077
			Subtotal	$579,232
Preconstruction Engineering	L.S.	10%		$193,077
Construction Engineering	L.S.	10%		$193,077
Contingency	L.S.	25%		$724,040
			Total Project Cost	$3,620,199

Active Transportation Projects

Fort Union Boulevard (City Limit to Ranamee Drive)



Location: 80 West. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

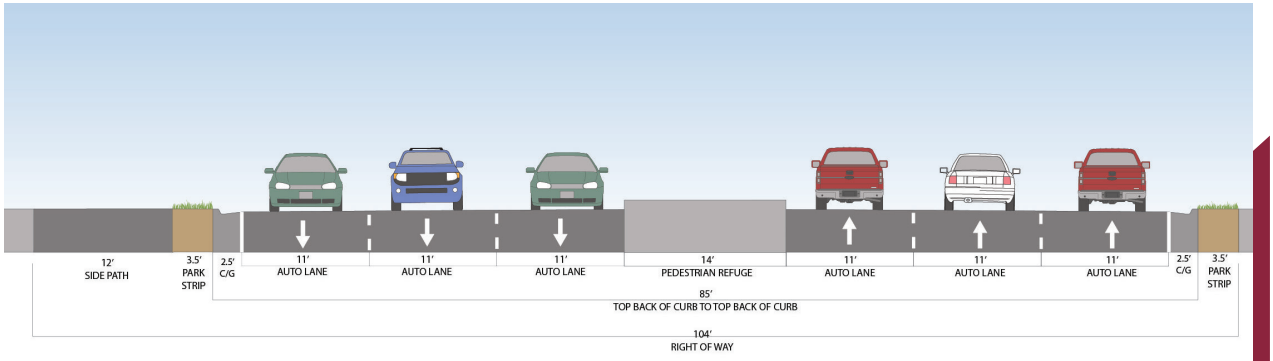
NUMBER OF LANES
5-6

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, inconsistent separation from traffic

RIGHT OF WAY
90'-105'

PROPOSED PROJECT



Typical Fort Union Boulevard Section

PROJECT DESCRIPTION

This project would install a 12 foot sidepath on the north side of the street, as well as 14 foot pedestrian refuge island/median in what is now the center turn lane, which would vary depending on the section. The center turn lane would still be kept intact for certain sections of the road with high volumes of left turns. Sidewalk width and travel lanes would not be impacted by this project.

ESTIMATED COST:

$15,064,412

Parametrix + Historic Bid-Based estimation for project identification allows a tolerance range of -40% to +100%

Parametrix
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Cost Breakdown

Fort Union Boulevard (City Limit to Ranamee Drive)

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Ft Union (City Limit to Ranamee Dr) - Minor Arterial - 90'-105' Right of Way - 10,175' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$20	13,494	$269,875
Asphalt (5" patch and repair)	Ton	$120	2,762	$331,428
Curb and Gutter (2.5' width)	L.F.	$78	40,700	$3,174,600
Pedestrian Refuge Islands	S.F	$15	42,735	$641,025
Sidepath (12' width, 6" Thick)	S.F	$15	164,835	$2,472,525
Granular Borrow	C.Y.	$50	1,591	
Remove Existing Paint	L.F.	$.5	91,575	$45,788
Pavement Marking	L.F.	$2	91,575	$183,150
Pavement Message	E.A.	$470	153	$71,734
Parkstrip (Landscape + Irrigation)	S.F.	$7	53,419	$373,931
			Construction Cost	$7,876,817
SWPPP	L.S.	5%		$393,841
Mobilization	L.S.	10%		$787,682
Traffic Control	L.S.	8%		$630,145
Utility Coordination	L.S.	10%		$787,682
			Subtotal	$2,599,350
Preconstruction Engineering	L.S.	10%		$787,682
Construction Engineering	L.S.	10%		$787,682
Contingency	L.S.	25%		$3,012,882
			Total Project Cost	$15,064,412

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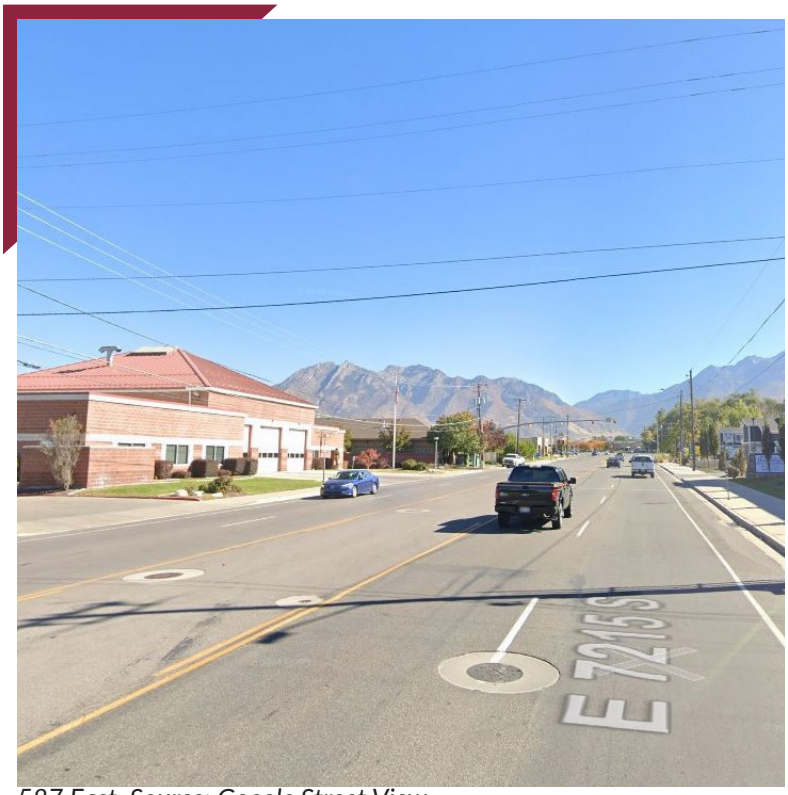
Active Transportation Projects

Fort Union Boulevard (Ramanee Drive to Union Park Ave)



587 East. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

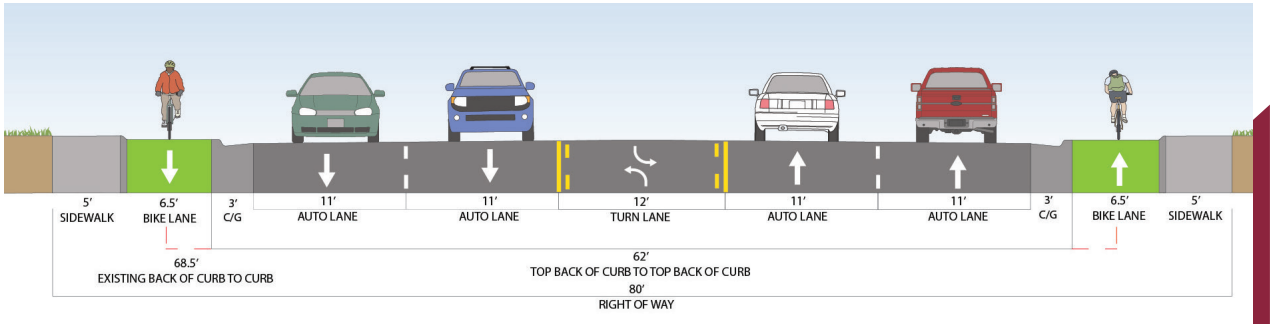
NUMBER OF LANES
5-6

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, inconsistent separation from traffic

RIGHT OF WAY
85'-122'

PROPOSED SECTION



Typical Fort Union Boulevard Section

PROJECT DESCRIPTION

This project would install separated bike lanes going in both directions, whose width would range from 6.5-7 feet depending on the segment. For more narrow segments, they would be separated by a concrete barrier and on wider segments they would separated by a park strip. Travel lanes and sidewalk width would not impacted, though sidewalks would be more separated from traffic.

ESTIMATED COST:

$4,473,979 (Ramanee Dr to J&SLC Canal)
$1,757,892 (J&SLC Canal to 700 E)
$2,768,920 (700 E to Union Park Ave)

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

Parametrix
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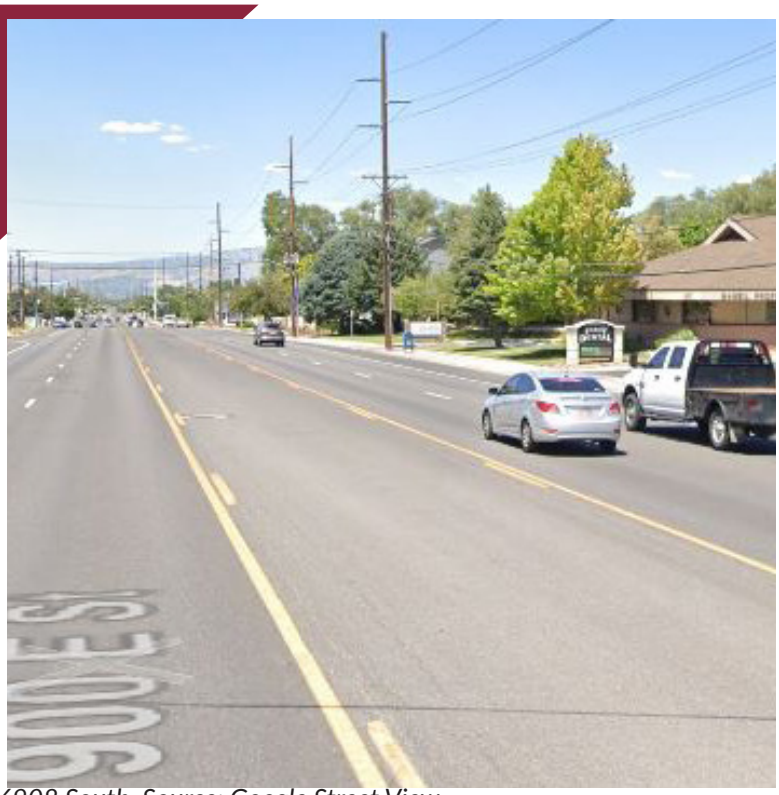
Cost Breakdown

Fort Union Boulevard (Ramanee Drive to Union Park Ave)

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Ft Union (Ranmanee Dr to Union Park Dr) - Minor Arterial - 85'-102' Right of Way - 7,500' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$20	7,260	$145,208
HMA - 1/2"	Ton	$120	2,498	$299,785
Curb and Gutter (2.5' width)	L.F.	$78	22,500	$1,755,000
Bike Lane (7' width, 6" Thick)	S.F	$15	146,250	$2,193,750
Untreated Base Course (6", 12")	C.Y.	$56	2,847	$159,444
Pavement Marking	L.F.	$2	78,750	$157,500
Pavement Message	E.A.	$470	113	$52,875
Sign	E.A.	$150	33	$4,950
Parkstrip (Landscape + Irrigation)	S.F.	$7	60,750	$425,250
			Construction Cost	$5,193,762
SWPPP	L.S.	5%		$259,688
Mobilization	L.S.	10%		$519,376
Traffic Control	L.S.	8%		$415,501
Utility Coordination	L.S.	10%		$519,376
			Subtotal	$1,713,942
Preconstruction Engineering	L.S.	10%		$519,376
Construction Engineering	L.S.	10%		$519,376
Contingency	L.S.	35%		$1,054,334
			Total Project Cost	$9,000,790

Active Transportation Projects

900 East



6908 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

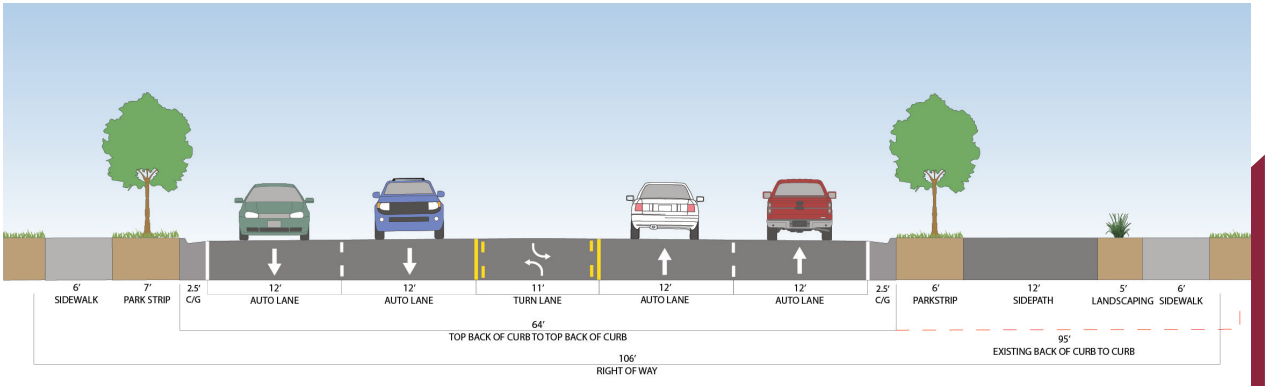
NUMBER OF LANES
5

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, inconsistent separation from traffic

RIGHT OF WAY
106'

PROPOSED SECTION



Typical 900 East Section

PROJECT DESCRIPTION

This project would install a 12 foot sidepath on one of the side of the street, which would be separated from traffic by a parkstrip. The shoulders and parking would be eliminated on both sides of the street, though travel lanes and sidewalk width would not be impacted by this project.

ESTIMATED COST:

$7,170,081

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

Cost Breakdown

900 East

Midvale City - Active Transportation Segment Opinion of Probable Costs - August 16, 2024 900 East - Minor Arterial - 106' Right of Way - 6,945' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$20	11,425	$228,491
HMA - 1/2"	Ton	$120	1,782	$213,892
Curb and Gutter (2.5' width)	L.F.	$78	10,418	$812,565
Sidepath (12' width, 6" Thick)	S.F	$15	62,505	$937,575
Untreated Base Course (6", 12")	C.Y.	$56	2,508	$140,443
Pavement Marking	L.F.	$2	62,505	$125,010
Pavement Message	E.A.	$470	104	$48,962
Sign	E.A.	$150	30	$4,500
Parkstrip (Landscape + Irrigation)	S.F.	$7	187,515	$1,312,605
			Construction Cost	$3,824,043
SWPPP	L.S.	5%		$191,202
Mobilization	L.S.	10%		$382,404
Traffic Control	L.S.	5%		$191,202
Utility Coordination	L.S.	10%		$382,404
			Subtotal	$1,147,213
Preconstruction Engineering	L.S.	10%		$382,404
Construction Engineering	L.S.	10%		$382,404
Contingency	L.S.	25%		$1,434,016
			Total Project Cost	$7,170,081

Active Transportation Projects

Bingham Junction Boulevard

Location: 7500 South Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

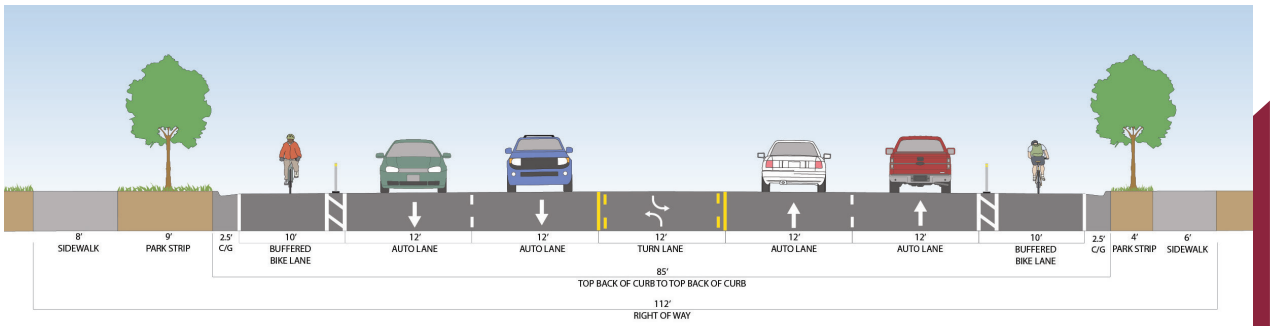
NUMBER OF LANES
5-6

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, generally separated from traffic

RIGHT OF WAY
112'

PROPOSED PROJECT



Typical Bingham Junction Section

PROJECT DESCRIPTION

This project would install ten foot buffered bike lanes on both sides of the street, upgrading the existing painted shoulder on both sides. In addition delineator post can be installed to provide additional safety for people biking. The widths of existing travel lanes, the center turn lane, and sidewalks would not be impacted by this project.

ESTIMATED COST:

$110,572

Parametrix + Historic Bid-Based estimation for project identification allows a tolerance range of -40% to +100%

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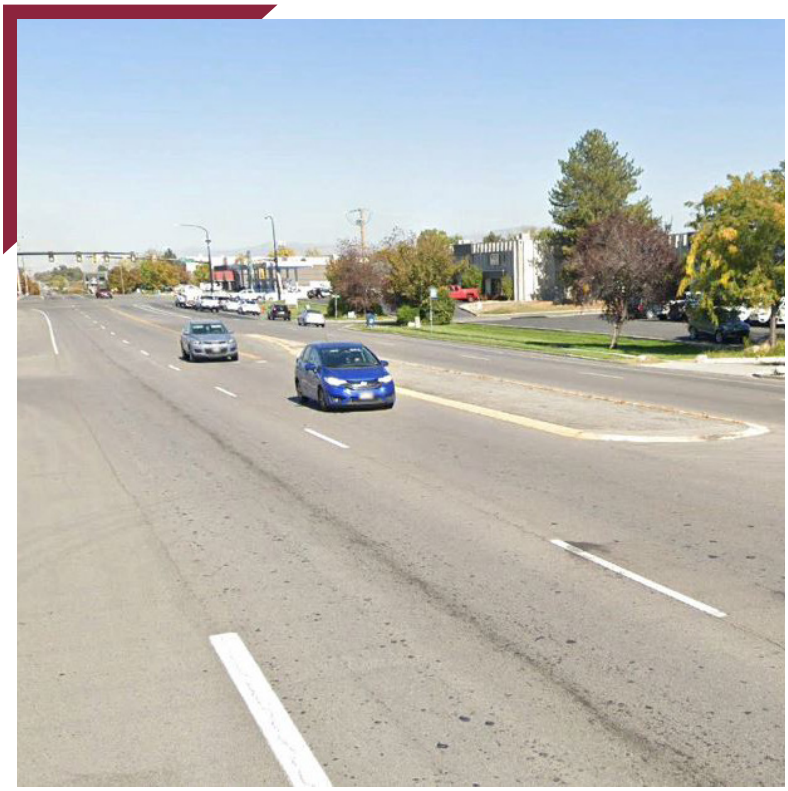
Cost Breakdown

Bingham Junction Boulevard

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Bingham Junction Blvd (7200 S to Center St) - Minor Arterial - 106' Right of Way - 4,240' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1.0	0	$0
Pavement Marking	L.F.	$2	8,480	$16,960
Pavement Message	E.A.	$470	42	$19,928
Signs	E.A.	$150	10	$1,500
Delineator Post	E.A.	$80	339	$27,136
			Construction Cost	$65,524
Mobilization	L.S.	10%		$6,552
Traffic Control	L.S.	5%		$3,276
			Subtotal	$9,829
Preconstruction Engineering	L.S.	10%		$6,552
Construction Engineering	L.S.	10%		$6,552
Contingency	L.S.	25%		$22,114
			Total Project Cost	$110,572

Active Transportation Projects

Holden Street (Phase 1)



Location: Holden St & Buena Vista Ln. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

NUMBER OF LANES
4

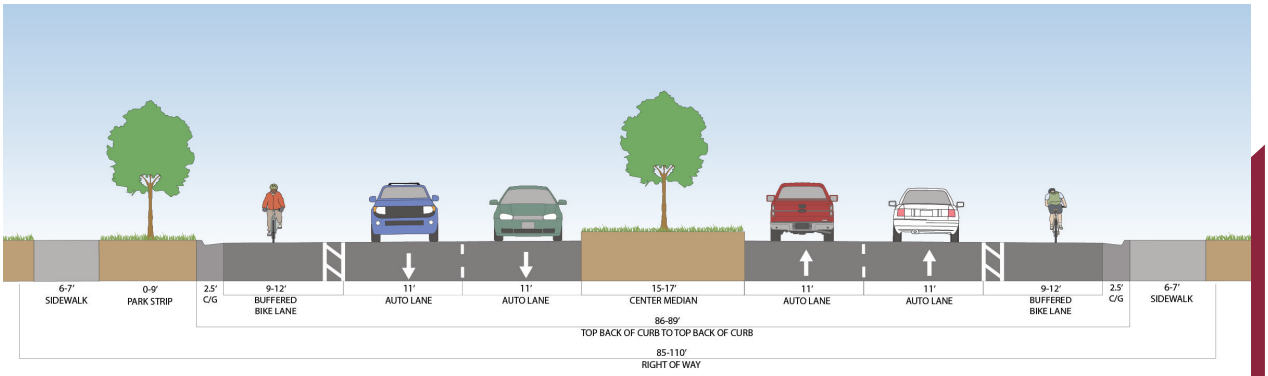
BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, but are not consistent throughout the corridor

RIGHT OF WAY
85'-115'

FIRST LAST MILE
Project funded (Phase 1), Road Diet with grade separated bike path (Phase 2)

PROPOSED SECTION



Typical Holden Street Section

PROJECT DESCRIPTION

This project would add a buffered bike lane going in both directions, with the width varying from 9-12 feet depending on the specific section. The median would be widened to between 15 and 17 feet depending on the segment and would be planted. Sidewalk width and travel lanes would not be impacted by this project.

ESTIMATED COST

$415,000 (FLM Estimate, Center to Winchester)

Parametrix + Historic Bid-Based estimation for project identification allows a tolerance range of -40% to +100%

Parametrix
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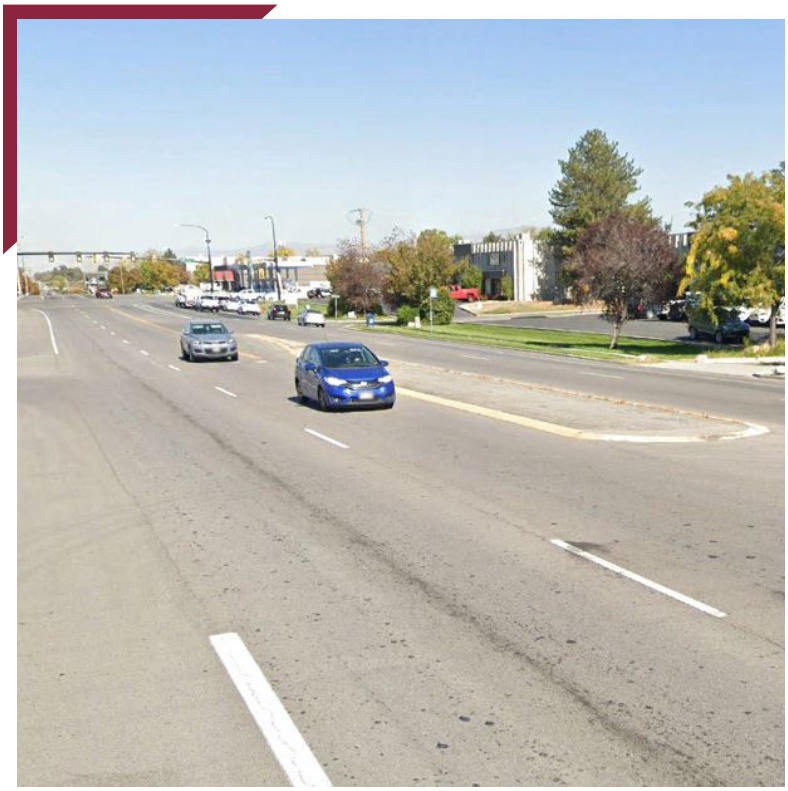
Active Transportation Projects

Holden Street (Phase 2)



Location: Holden St & Buena Vista Ln. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Arterial

NUMBER OF LANES
4

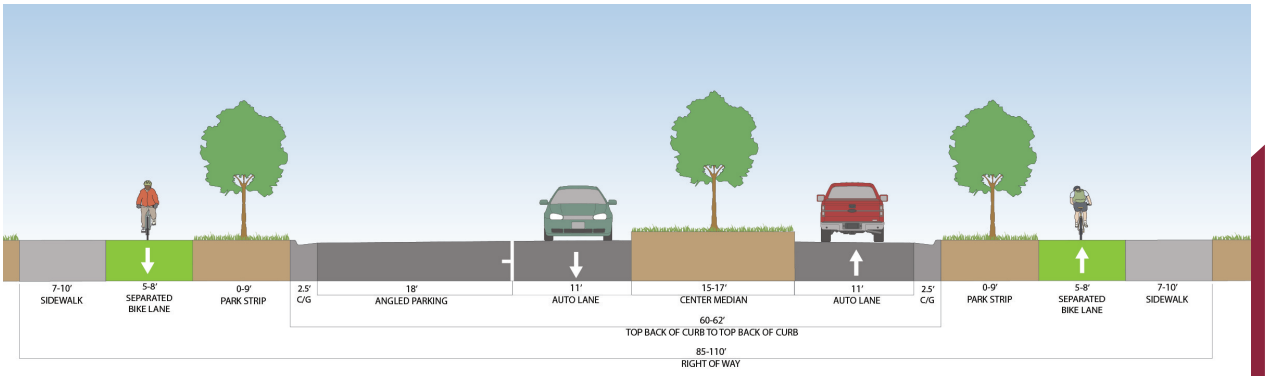
BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, but are not consistent throughout the corridor

RIGHT OF WAY
85'-115'

FIRST LAST MILE
Project funded (Phase 1), Road Diet with grade separated bike path (Phase 2)

PROPOSED SECTION



Typical Holden Street Section

PROJECT DESCRIPTION

This project would install bike lanes separated by curb and gutter and park strips on both sides of the street. Sidewalks would also be widened on both sides of the street. Angeled parking would be provided on the east side of the street. Two travel lanes would be eliminated to accomodate these changes.

ESTIMATED COST

$2,857,481 (Separated Bike Lane)

Parametrix + Historic Bid-Based estimation for project identification allows a tolerance range of -40% to +100%

Parametrix
let's create tomorrow, together

Cost Breakdown

Holden Street (Phase 2)

Midvale City - Active Transportation Segment Opinion of Probable Costs - August 16, 2024 Holden - Minor Arterial - 106' Right of Way - 5,475' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$20	3,878	$77,563
Asphalt (5" patch and repair)	Ton	$120	1,486	$178,336
Curb and Gutter (2.5' width)	L.F.	$78	9,855	$768,690
Pavement Marking	L.F.	$2	18,068	$36,135
Pavement Message	E.A.	$470	82	$38,599
Signs	E.A.	$150	18	$2,700
Parkstrip (Landscape + Irrigation)	S.F.	$8	73,913	$591,300
			Construction Cost	$1,693,322
Mobilization	L.S.	10%		$169,332
Traffic Control	L.S.	5%		$84,666
			Subtotal	$253,998
Preconstruction Engineering	L.S.	10%		$169,332
Construction Engineering	L.S.	10%		$169,332
Contingency	L.S.	25%		$571,496
			Total Project Cost	$2,857,481

Active Transportation Projects

Center Street

339 West. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Major Collector

NUMBER OF LANES
5

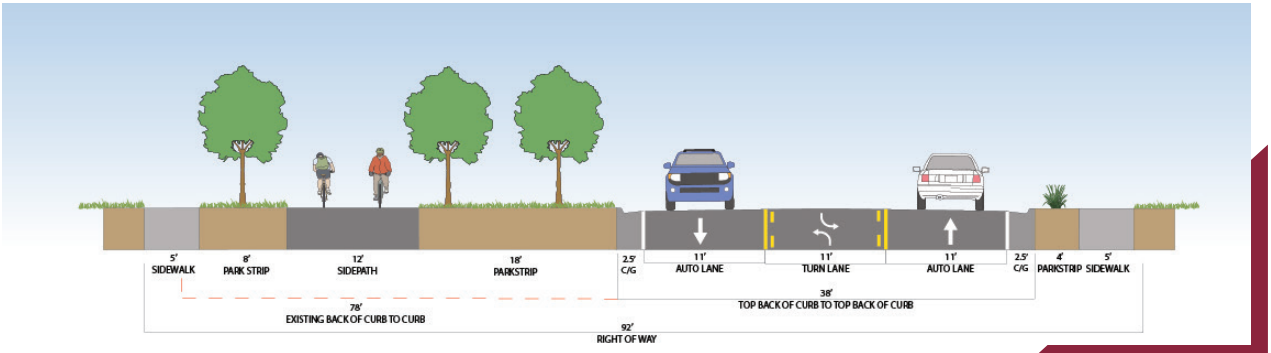
BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, generally separated from traffic

RIGHT OF WAY
92'-108'

FIRST LAST MILE
Project funding

PROPOSED SECTION



Typical Center Street Section

PROJECT DESCRIPTION

This project would install a 12 foot shared use path on the south side of the street. The path would be separated from the road by an 18 foot parkstrip. Two travel lanes would be eliminated, road dieting the street down to two travel lanes and a center turn lane. Sidewalk width would not be impacted by this project.

ESTIMATED COST:

$35,379,306

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

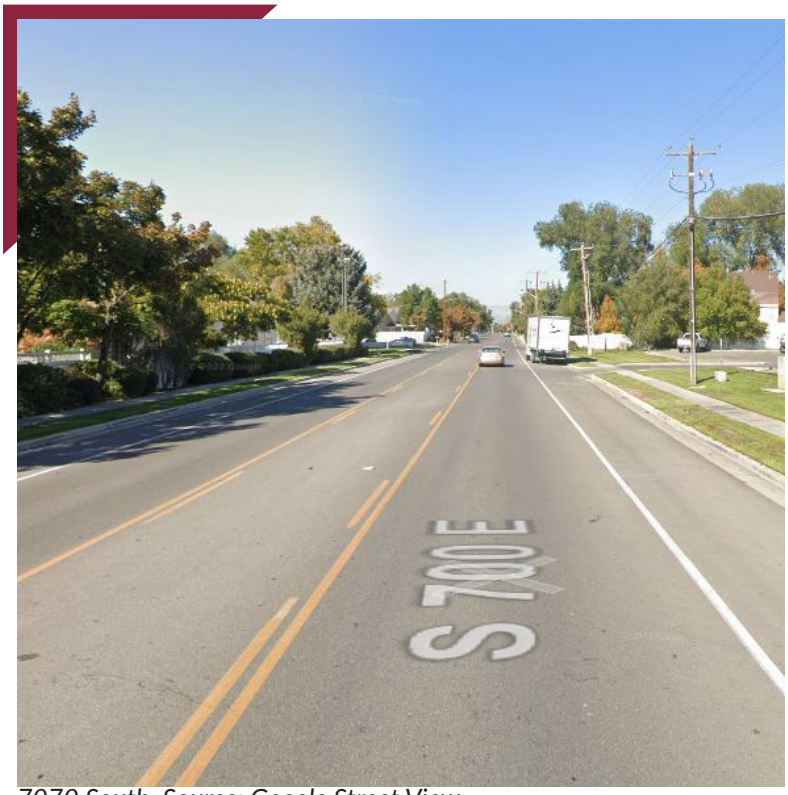
Cost Breakdown

Center Street

Midvale City - Active Transportation Segment Opinion of Probable Costs - August 16, 2024 Center St - Major Collector - 92'-108' Right of Way - 9,975' Length				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Excavation and Removals	C.Y.	$18	417,820	$7,520,763
HMA - 7"	Ton	$120	21,192	$2,543,074
Curb and Gutter (2.5' width)	L.F.	$78	14,963	$1,167,075
Sidepath (12' width, 6" Thick)	S.F	$15	179,550	$2,693,250
Untreated Base Course (8")	C.Y.	$56	16,825	$942,172
Drainage	C.Y.	$50	914	
Signals	L.F.	$1	69,825	
Pavement Marking	L.F.	$2	134,663	$269,325
Pavement Message	E.A.	$200	150	$29,925
Sign	E.A.	$150	300	$45,000
Parkstrip (Landscape + Irrigation)	S.F.	$7	418,950	$2,932,650
			Construction Cost	$18,143,235
SWPPP	L.S.	5%		$907,162
Mobilization	L.S.	10%		$1,814,323
Traffic Control	L.S.	5%		$907,162
Utility Coordination	L.S.	10%		$1,814,323
			Subtotal	$5,442,970
Preconstruction Engineering	L.S.	10%		$1,814,323
Construction Engineering	L.S.	10%		$1,814,323
Contingency	L.S.	30%		$8,164,456
			Total Project Cost	$35,379,308

Active Transportation Projects

700 East



7070 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Collector

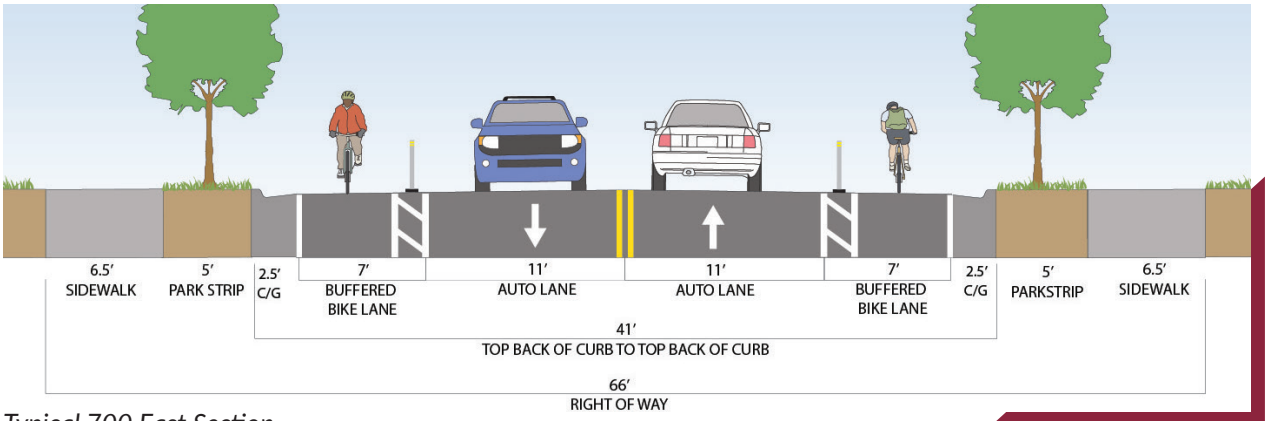
NUMBER OF LANES
3

BIKE FACILITIES
5 foot shoulder (not officially designated as bike lane)

SIDEWALKS
Exist on both sides, generally separated from traffic

RIGHT OF WAY
66'

PROPOSED SECTION



Typical 700 East Section

PROJECT DESCRIPTION

This project would install 7 foot buffered bike lanes going in both directions, which could be augmented with delineator posts. The center turn lane would be eliminated. Sidewalk widths would not be impacted. Estimated Cost:

ESTIMATED COST:

$291,716

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

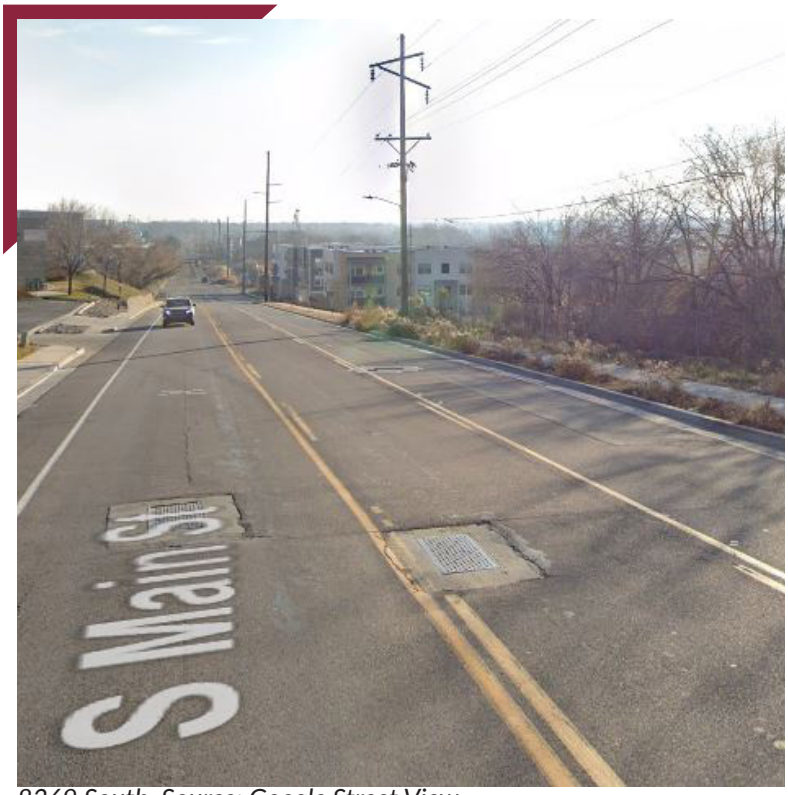
Cost Breakdown

700 East

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **700 E - Major Collector - 66' Right of Way - 6,250' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1.0	31,250	$31,250
Pavement Marking	L.F.	$2	31,250	$62,500
Pavement Message	E.A.	$470	78	$36,719
Sign	E.A.	$150	16	$2,400
Delineator Post	E.A.	$80	500	$40,000
			Construction Cost	$172,869
Mobilization	L.S.	10%		$17,287
Traffic Control	L.S.	5%		$8,643
			Subtotal	$25,930
Preconstruction Engineering	L.S.	10%		$17,287
Construction Engineering	L.S.	10%		$17,287
Contingency	L.S.	25%		$58,343
			Total Project Cost	$291,716

Active Transportation Projects

Main Street (Center Street to City Limit)



8269 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Collector

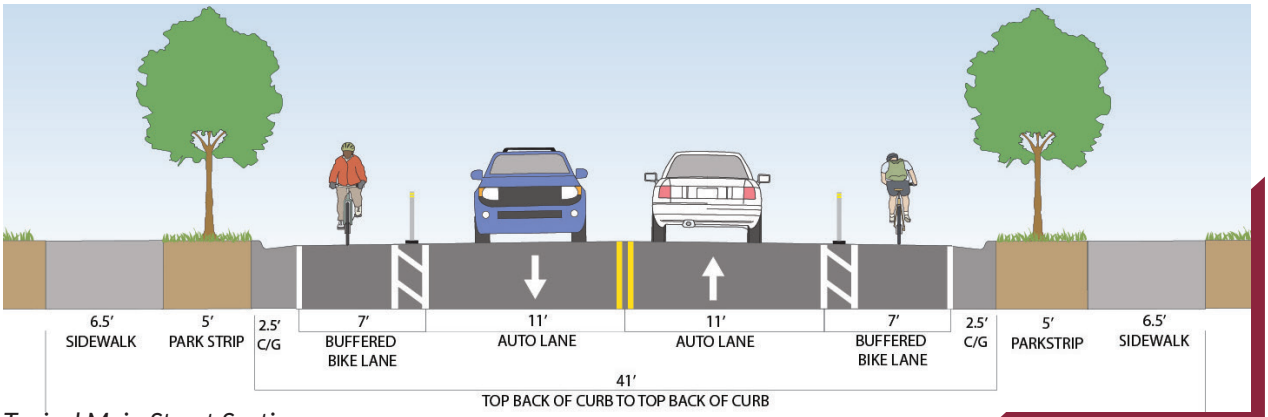
NUMBER OF LANES
2-3

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, generally separated from traffic

RIGHT OF WAY
66'

PROPOSED SECTION



Typical Main Street Section

PROJECT DESCRIPTION

This project would install buffered bike lanes going in both directions, which could be augmented with delineator posts. Where existing currently, the center turn lane will be eliminated. Sidewalk widths will not be impacted by this project.

ESTIMATED COST:

$166,033

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

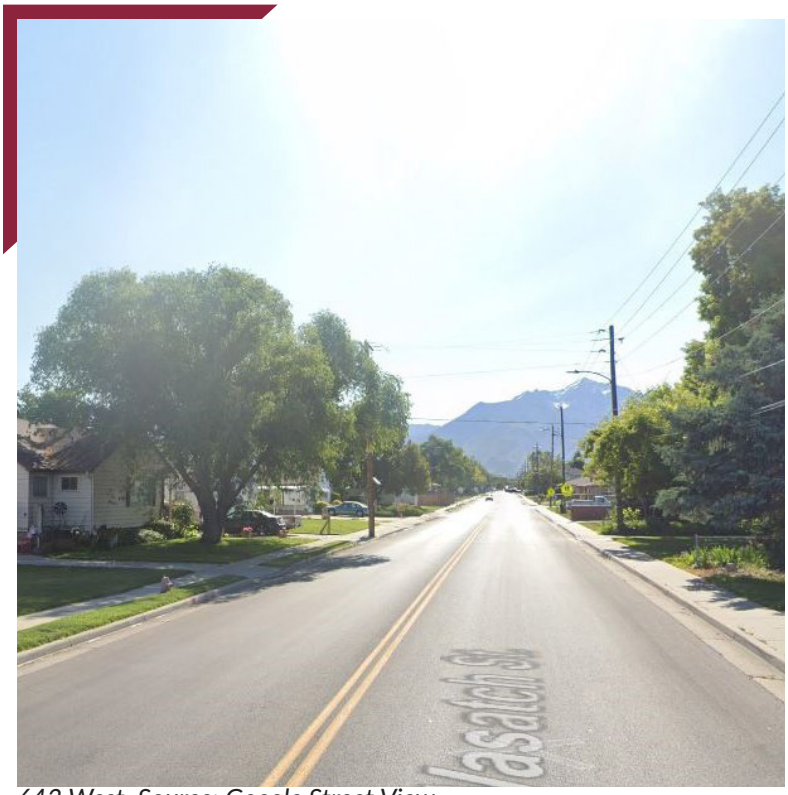
Cost Breakdown

Main Street (Center Street to City Limit)

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Main St (Center to City Limit) - Minor Collector - 66' Right of Way - 5,350' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1	26,750	$26,750
Pavement Marking	L.F.	$2	1,672	$3,344
Pavement Message	E.A.	$470	67	$31,431
Signage	E.A.	$150	18	$2,625
Delineator Post	E.A.	$80	428	$34,240
			Construction Cost	$98,390
Mobilization	L.S.	10%		$9,839
Traffic Control	L.S.	5%		$4,920
			Subtotal	$14,759
Preconstruction Engineering	L.S.	10%		$9,839
Construction Engineering	L.S.	10%		$9,839
Contingency	L.S.	25%		$33,207
			Total Project Cost	$166,033

Active Transportation Projects

Wasatch Street / 8000 South



643 West. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Collector

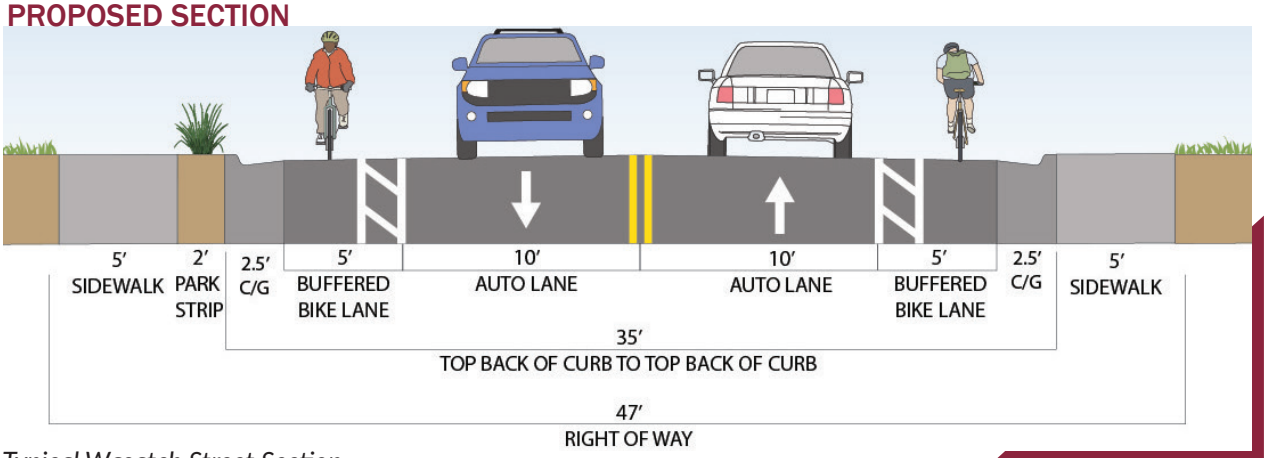
NUMBER OF LANES
2

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, inconsistent separation from traffic

RIGHT OF WAY
47'-60'

PROPOSED SECTION



Typical Wasatch Street Section

PROJECT DESCRIPTION

This project would install buffered bike lanes going in both directions, which could be augmented with delineator posts. Bike lane width would range from 4-7 feet depending on the section. Travel lanes could be narrowed slightly and where existing the shoulder would be converted into the bike lane. Sidewalk width would not be impacted by this project.

ESTIMATED COST:

$292,678

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

Cost Breakdown

Wasatch Street/ 8000 South

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Wasatch/8000 S - Minor Collector - 47'-60' Right of Way - 10,170' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1	20,340	$20,340
Pavement Marking	L.F.	$2	50,850	$101,700
Pavement Message	E.A.	$470	102	$47,799
Sign	E.A.	$150	24	$3,600
			Construction Cost	$173,439
Mobilization	L.S.	10%		$17,344
Traffic Control	L.S.	5%		$8,672
			Subtotal	$26,016
Preconstruction Engineering	L.S.	10%		$17,344
Construction Engineering	L.S.	10%		$17,344
Contingency	L.S.	25%		$58,536
			Total Project Cost	$292,678

Active Transportation Projects

7800 South

7070 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Minor Collector

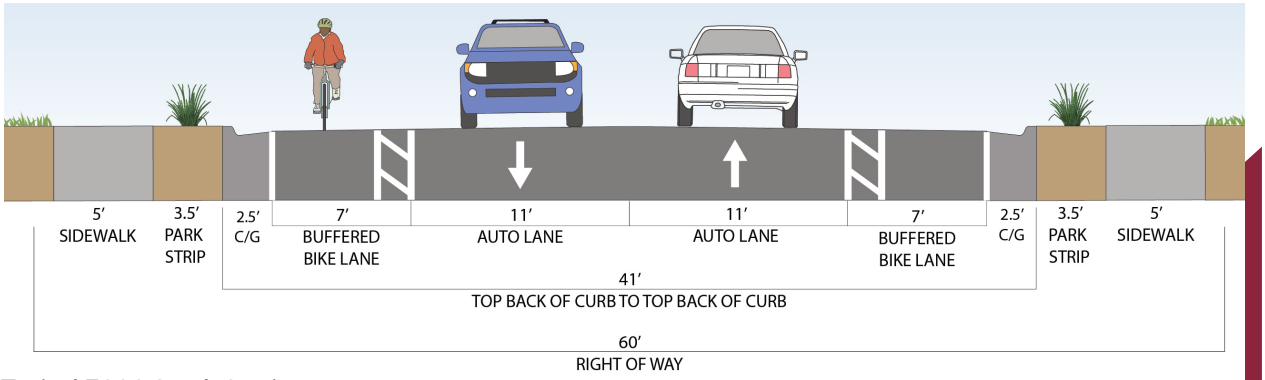
NUMBER OF LANES
2

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, inconsistent separation from traffic

RIGHT OF WAY
60'-66'

PROPOSED SECTION



Typical 7800 South Section

PROJECT DESCRIPTION

This project would install 7 foot buffered bike lanes going in both directions, which could be augmented with delineator posts. The center turn lane may be eliminated depending on the segment. Sidewalk widths would not be impacted.

ESTIMATED COST:

$66,275

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

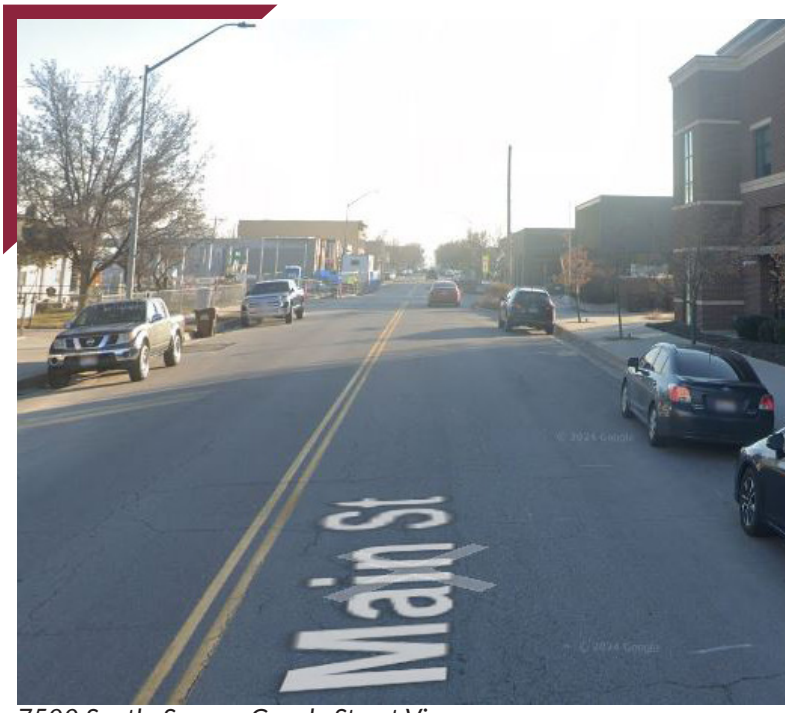
Cost Breakdown

7800 South

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **7800 S - Minor Collector - 60'-66' Right of Way - 3,334' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1.0	6,668	$6,668
Pavement Marking	L.F.	$2	6,668	$13,336
Pavement Message	E.A.	$470	33	$15,670
Sign	E.A.	$150	24	$3,600
			Construction Cost	$39,274
Mobilization	L.S.	10%		$3,927
Traffic Control	L.S.	5%		$1,964
			Subtotal	$5,891
Preconstruction Engineering	L.S.	10%		$3,927
Construction Engineering	L.S.	10%		$3,927
Contingency	L.S.	25%		$13,255
			Total Project Cost	$66,275

Active Transportation Projects

Main Street (700 West to Center Street)



7500 South. Source: Google Street View

EXISTING CONDITIONS

FUNCTIONAL CLASSIFICATION
Local

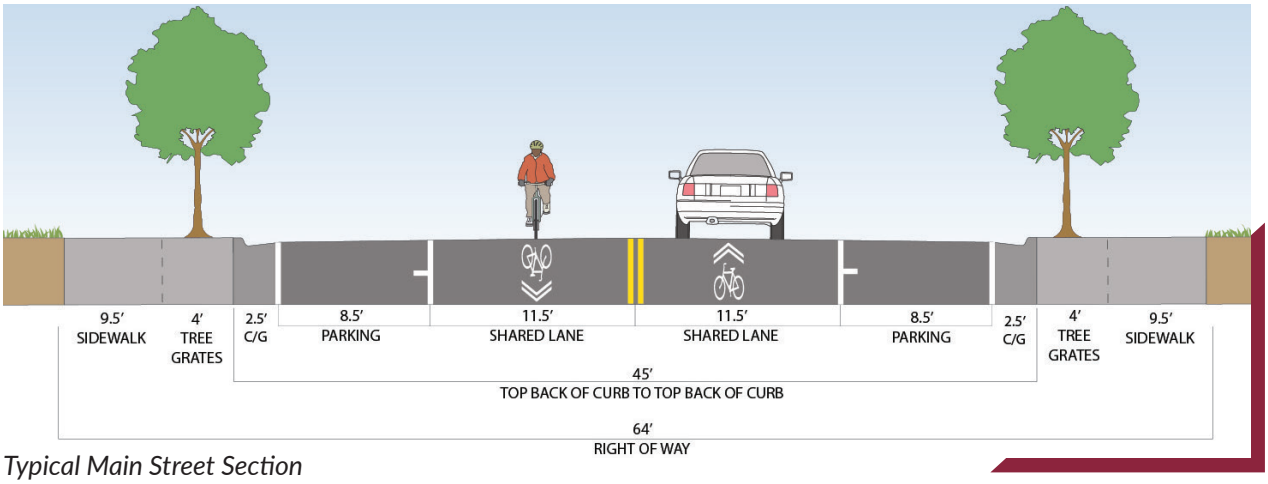
NUMBER OF LANES
2

BIKE FACILITIES
None

SIDEWALKS
Exist on both sides, wider than average sidewalks.

RIGHT OF WAY
64'

PROPOSED SECTION



Typical Main Street Section

PROJECT DESCRIPTION

This project would install painted sharrow signs, edge lines and parallel parking ticks lines on both sides of the street. No other parts of the right of way would be affected.

ESTIMATED COST:

$57,401

Parametrix estimation for project identification allows a tolerance range of -50% to +200%

Cost Breakdown

Main Street (700 West to Center Street)

Midvale City - Active Transportation Segment **Opinion of Probable Costs - August 16, 2024** **Main St (700 W to Center St) - Local Street - 60'-66' Right of Way - 1,965' Length**				
Item	**Unit**	**Unit Cost**	**Quantity**	**Cost**
Remove Existing Paint	L.F.	$1	7,860	$7,860
Pavement Marking	L.F.	$2	7,860	$15,720
Pavement Message	E.A.	$470	20	$9,236
Sign	E.A.	$150	8	$1,200
			Construction Cost	$34,016
Mobilization	L.S.	10%		$3,402
Traffic Control	L.S.	5%		$1,701
			Subtotal	$5,102
Preconstruction Engineering	L.S.	10%		$3,402
Construction Engineering	L.S.	10%		$3,402
Contingency	L.S.	25%		$11,480
			Total Project Cost	$57,401

Appendix E

Impact Fee Facilities Plan

1. Transportation Impact Fees

1.1 Requirements

As part of the development of the TMP, an Impact Fee Facilities Plan (IFFP) was to be created. The IFFP is a required document, along with an Impact Fee Analysis, for the adoption of a transportation impact fee. The Impact Fees Act of the Utah Code (11-36a-302) specifically states what is required of an IFFP. In essence the IFFP identifies eligible projects and associated fees for system improvements required by new development within a 10-year planning horizon. The state code has specific eligibility requirements for an IFFP:

- Facilities must be sourced from an adopted plan, in this case the TMP.
- Facilities must constitute a system improvement, i.e. a measurable capacity improvement through roadway widening or creation of a new facility.
- There must be a rational nexus between the established need and the facilities identified.
- Eligible fees include those incurred directly by the city, excluding state, federal or other sources.

1.2 Eligibility

In order to determine if there is a need for system improvements within the 10-year planning horizon a 2034 No-Build capability analysis was performed. The result of the analysis is shown in Figure 28 of the TMP. Facilities showing a capacity need under this scenario include:

- 7200 South, 700 West to State Street.
- Union Park Ave, north of Fort Union Boulevard.
- 7800 South, Ponderosa Way to 1000 East.
- River Gate Drive, from Bingham Junction Boulevard to 700 West.

Of these 10-year capacity needs, only one has a capacity project identified within the TMP (Table 6), 7200 South. This, however, is a state facility and so improvements would not incur costs to the city. The other three potential capacity needs are not addressed through projects within the TMP. Based on the eligibility requirements described above, there are no eligible projects to base an IFFP.

1.3 Existing Excess Capacity

Existing excess capacity is a remaining potential avenue for the city to base a transportation impact fee. The “buy-in capacity” calculation enables the city to charge new development for past capacity improvements paid for by the city. If existing capacity exists and new development can be shown to utilize it, then the proportionate share of the cost for the capacity being used can be the basis for an impact fee. The city would be required to document past city expenditures for capacity improvements in a process that would require the services of a certified financial institution and the development of an Impact Fee Analysis.

Appendix F

Federal Funding Opportunities Summary

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Highway, Transit, and Safety Funds

November 16, 2023

This table indicates likely eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

	Pedestrian and Bicycle Funding Opportunities: Highway, Transit, and Safety Funds **Key:** $ = Activity likely eligible. Restrictions may apply, see program notes and guidance. ~$ = Eligible, but not competitive unless part of a larger project.																												
	Federal Highway Administration														**Federal Lands**			**OST Grant**							**OST Loan**		**FTA**			**NHTSA**	
Activity or Project Type	ATIIP	BRI	CRP	CMAQ	HSIP	RHCP	NHPP	PROT	STBG	TASA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TTPSF	INFRA	RAISE	RCN	SS4A	SMART	Thrive	RRIF	TIFIA	FTA	AoPP	TOD	402	405
Access enhancements to public transportation (benches, bus pads, lighting)	$		$	$			$	$	$	$				$	$	$		$	$	$	~$			~$	~$	$				
Americans with Disabilities Act (ADA)/504 Self Evaluation / Transition Plan	$		$						$	$	$		$		$	$					$		TA				$	~$		
Barrier removal for ADA compliance	$	$	$				$	$	$	$	$	$		$	$	$		$	$	$	~$			~$	~$	$				
Bicycle plans	$		$					$	$	$		$	$		$	$	$			~$	$					$	$	~$		
Bicycle helmets (project or training related)	~$				$				$	$SRTS		$				$													$	
Bicycle helmets (safety promotion)	~$				$				$	$SRTS		$				$														
Bicycle lanes on road	$		$	$	$	$	$	$	$	$		$		$	$	$	$	~$	~$	$	$			~$	~$	$				
Bicycle parking (see Bicycle Parking Solutions)	$		$	$			$		$	$	$	$		$	$	$		~$	~$	$	~$			~$	$	$				
Bike racks on transit	$		$	$					$	$					$	$			~$	$	~$				~$	$				
Bicycle repair station (air pump, simple tools, electric outlets)	$		$						$	$					$	$			~$	$	~$			~$	~$	$				
Bicycle share (capital and equipment including charging stations and outlets; not operations)	$		$	$			$		$	$					$	$		~$	~$	$	~$			~$	~$	$				
Bicycle storage or service centers (e.g. at transit hubs) including charging stations and outlets; not operations)	$		$	$					$	$					$	$			~$	$	~$			~$	$	$				
Bridges / overcrossings for pedestrians and/or bicyclists	$	$	$	$	$	$	$	$	$	$	$	$			$	$	$	$	$	$	$			~$	~$	$				
Bus shelters and benches	$		$	$			$	$	$	$				$	$	$		$	$	$	~$			~$	~$	$				
Charging stations for electric bicycles and scooters NEW	$		$	$					$	$	$				$	$						~$		~$	~$					
Coordinator positions: State/local (CMAQ/STBG limited)				$					$	$SRTS		$				$					~$									
Community Capacity Building (develop organizational skills and processes)	~$												$			$				NAE	~$		TA				~$	~$		
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)	$		$	~$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$	$				
Curb ramps	$	$	$	~$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$	$				
Counting equipment	$				$	$	$		$	$	$	$	$		$	$	$	$		$	~$				~$	$				
Data collection and monitoring for pedestrians and/or bicyclists	$		$		$	$	$		$	$	$	$	$		$	$	$	$	$	$	$				~$	$	~$	~$		
Emergency and evacuation routes for pedestrians and/or bicyclists	$		$				$	$	$	$	$	$			$	$		$	$	$	~$				$	$	~$	~$		
Encouragement and education activities related to safe access for bicyclists and pedestrians NEW	~$			$	$				$	$SRTS	$	$	$			$					~$	~$								
Historic preservation (pedestrian, bicycle, transit facilities)	~$		$						$	$				$	$	$			~$	~$	~$			~$	~$	$				
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, lighting, shade, trees, water fountains); usually part of larger project	$		$				~$	$	$	$					$	$		~$	~$	~$	~$			~$	~$	$				
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	$		$	~$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$	$				
Maps (for pedestrians and/or bicyclists) (see Idea Book)	$		$	$					$	$		$	$	$		$					$					$				
Micromobility projects, including scooter share (capital and equipment, including charging stations and outlets; not operations)	$		$	$					$	$					$	$			$	$	~$	~$		~$	~$					
Paved shoulders for pedestrian and/or bicyclist use	$	$	$	$	$	$	$	$	$	$		$		$	$	$	$	~$	$	$	$			~$	~$					
Pedestrian plans	$		$					$	$	$		$	$		$	$	$	~$	$	~$	$					$	$	$		
Public education and awareness programs to inform motorists and nonmotorized road users on nonmotorized road user safety NEW	~$				$				$	$SRTS		$				$													$	$

Pedestrian and Bicycle Funding Opportunities: Highway, Transit, and Safety Funds

Key: $ = Activity likely eligible. Restrictions may apply, see program notes and guidance. ~$ = Eligible, but not competitive unless part of a larger project.

	Federal Highway Administration														Federal Lands			OST Grant							OST Loan		FTA			NHTSA	
Activity or Project Type	ATIIP	BRI	CRP	CMAQ	HSIP	RHCP	NHPP	PROT	STBG	TASA	RTP	SRTS	PLAN	NSBP	FLTTP	TTP	TTPSF	INFRA	RAISE	RCN	SS4A	SMART	Thrive	RRIF	TIFIA	FTA	AoPP	TOD	402	405
Rail at-grade crossings	$		$		$	$	$	$	$	$	$	$			$	$	$	$	$	$	~$			$	$	$				
Recreational trails	$							$	$	$	$			$	$	$			$	$	~$				~$					
Resilience improvements to pedestrian and bicycle facilities or to protect or enhance use. REVISED	$	~$	~$	~$			$	$	$	$	$	$	note	$	$	$		$	$	$	~$	~$		~$	~$					
Road Diets (pedestrian and bicycle portions)	$		$	$	$		$	$	$	$		$			$	$	$	$	$	$	$			~$	$					
Road Safety Assessment for pedestrians and bicyclists	$				$	$			$	$			$		$	$	$			$	$		TA		~$		~$			
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike traffic safety laws	~$				$				$	$SRTS		$	$			$					$						~$	~$	$	$
Safety education positions					$				$SRTS	$SRTS		$				$					$								$	
Safety enforcement (including police patrols)					$				$SRTS	$SRTS		$				$					$								$	$
Safety program technical assessment (for peds/bicyclists)	~$				$				$SRTS	$SRTS		$	$		$	$				$	$		TA						$	
Separated bicycle lanes	$	$	$	$	$	$	$	$	$	$		$		$	$	$	$	$	$	$	$			~$	~$	$				
Shared use paths / transportation trails	$		$	$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$	$				
Sidewalks (new or retrofit)	$	$	$	$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$	$				
Signs, signals, signal improvements (incl accessible pedestrian signals) see note	$		$	$	$	$	$	$	$	$		$		$	$	$	$	$	$	$	$	$		~$	~$	$				
Signing for pedestrian or bicycle routes	$		$	$	$		$	$	$	$		$		$	$	$	$	$	$	$	$			~$	~$	$				
Spot improvement programs (programs of small projects to enhance pedestrian and bicycle use) REVISED	$		$	~$	$	$	$		$	$	$	$			$	$	$	$	$	~$	$	~$		~$	~$	$				
Stormwater mitigation related to pedestrian and bicycle project impacts REVISED	$				$	$	$	$	$	$	$	$	note		$	$	$	$	$	$	~$			~$	~$	$	note	note		
Technical Assistance (see Cross-cutting notes) NEW	~$			~$	$				$	$	$	$	note			$	$			~$	~$	~$	TA							
Traffic calming	$		$		$		$	$	$	$		$			$	$	$	$	$	$	$			~$	~$	$				
Trail bridges	$		$	~$	$	$	$	$	$	$	$	$			$	$	$	$	$	$	~$			~$	$					
Trail construction and maintenance equipment	$		$						$	$	$				~$	~$	~$				~$			~$	~$					
Trail/highway crossings and intersections	$	$	$	~$	$	$	$	$	$	$	$	$		$	$	$	$	$	$	$	$			~$	~$					
Trailside/trailhead facilities (restrooms, water, but not general park amenities)	$		~$						$	$	$			$	$	$			~$					~$	~$					
Training	~$			$	$				$	$	$	$	$			$					$		TA				~$	~$	$	
Training for law enforcement on ped/bicyclist safety laws	~$			~$	$				$SRTS	$SRTS		$				$					$						~$	~$	$	$
Tunnels / underpasses for pedestrians and/or bicyclists	$		$	$	$	$	$	$	$	$	$	$			$	$	$	$	$	$	$			$	$	$				
Vulnerable Road User Safety Assessment	$				$				$	$		$	$			$	$			$			TA				~$	~$		

Refer to section 4.4.2 of the Midvale Transportation Masterplan for information on regional and county funding sources.

Abbreviations (alphabetical order)

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
AoPP: Areas of Persistent Poverty Program
ATIIP: Active Transportation Infrastructure Investment Program [web link under development]
BIL: Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act (Pub. L. 117-58)
BRI: Bridge Programs, including: BFP: Bridge Formula Program; BIP: Bridge Investment Program; BRR: Bridge Replacement and Rehabilitation Program
CMAQ: Congestion Mitigation and Air Quality Improvement Program
CRP: Carbon Reduction Program
FLTTP: Federal Lands and Tribal Transportation Programs: Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Federal Lands Planning Program and related programs for Federal and Tribal lands such as the Nationally Significant Federal Lands and Tribal Projects program
FTA: Federal Transit Administration Capital Funds
PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds (FHWA and/or FTA funding)
PROTECT: Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation
RAISE: Rebuilding American Infrastructure with Sustainability and Equity
RCN: Reconnecting Communities and Neighborhoods Grant Program (includes Reconnecting Communities Pilot Program (RCP) and Neighborhood Access and Equity programs)
RHCP: Railway-Highway Crossings (Section 130) Program
RRIF: Railroad Rehabilitation and Improvement Financing (loans)
RTP: Recreational Trails Program
SMART: Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program
SRTS: Safe Routes to School Program (and related activities)
SS4A: Safe Streets and Roads for All
STBG: Surface Transportation Block Grant Program

HSIP: Highway Safety Improvement Program IIJA: Infrastructure Investment and Jobs Act (Pub. L. 117-58), also known as the Bipartisan Infrastructure Law INFRA: Infrastructure for Rebuilding America Discretionary Grant Program NAE: Neighborhood Access and Equity Program NHPP: National Highway Performance Program NHTSA 402: National Highway Traffic Safety Administration State and Community Highway Safety Grant Program NHTSA 405(g): National Highway Traffic Safety Administration National Priority Safety Programs (Nonmotorized safety) NSBP: National Scenic Byways Program	TASA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program, Transportation Enhancements) Thrive: Thriving Communities Initiative (TA: Technical Assistance) TIFIA: Transportation Infrastructure Finance and Innovation Act (loans) TOD: Transit-Oriented Development TTP: Tribal Transportation Program TTPSF: Tribal Transportation Program Safety Fund

Cross-cutting notes

This table indicates likely eligibility for pedestrian, bicycle, and micromobility activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects must meet program eligibility requirements. See notes and links to program information below. Although the primary focus of this table is stand-alone activities and projects, programs can also fund pedestrian and bicycle facilities as part of larger projects. Project sponsors are encouraged to consider Complete Streets and Networks that routinely integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects. The Federal-aid eligibility of the pedestrian and bicycle elements are considered under the eligibility criteria applicable to the larger highway project. Pedestrian and bicycle activities also may be characterized as environmental mitigation for larger highway projects, especially in response to impacts to a Section 4(f) property or work zone safety, mobility, and accessibility impacts on bicyclists and pedestrians.

- See FHWA's Policy on Using Bipartisan Infrastructure Law Resources to Build a Better America.
- See FHWA Bicycle and Pedestrian Planning, Program, and Project Development (Guidance), Publications, Pedestrian and Bicyclist Safety, and Bicycle transportation and pedestrian walkways statute at 23 U.S.C. 217.
- Bicycle Project Purpose: 23 U.S.C. 217(i) requires that bicycle facilities "be principally for transportation, rather than recreation, purposes". However, 23 U.S.C. 133(b)(7) and 133(h) authorize recreational trails under STBG and TASA, therefore, 23 U.S.C. 217(i) does not apply to trail projects (including for bicycle use) using STBG or TASA funds. Section 217(i) applies to bicycle facilities other than trail-related projects, and section 217(i) applies to bicycle facilities using other programs (NHPP, HSIP, CMAQ). The transportation requirement under section 217(i) only applies to bicycle projects, not to any other trail use or transportation mode.
- Signs, signals, signal improvements includes ensuring accessibility for persons with disabilities. See Accessible Pedestrian Signals. See also Proven Safety Countermeasures, such as Crosswalk Visibility Enhancements, Leading Pedestrian Interval signals, Lighting, Pedestrian Hybrid Beacons, and Rectangular Rapid Flashing Beacons.
- Technical Assistance includes assisting local agencies and other potential grantees to identify pedestrian and bicycle safety and infrastructure issues, and to help them develop and implement successful projects. Technical assistance may be authorized under a program or sometimes as a limited portion of a program. See FHWA links to Technical Assistance and Local Support.
- The DOT Navigator is a resource to help communities understand the best ways to apply for grants, and to plan for and deliver transformative infrastructure projects and services.
- Aspects of DOT initiatives may be eligible as individual projects. Activities above may benefit safe, comfortable, multimodal networks; environmental justice; and equity.
- Occasional DOT or agency incentive grants may be available for specific research or technical assistance purposes.
- Operation costs: In general, ongoing and routine operation costs (such as ongoing costs for bike sharing or scooter sharing) are not eligible unless specified within program legislation. See links to program guidance for more information.

Program-specific notes

DOT funding programs have specific requirements that activities and projects must meet. Eligibility must be determined on a case-by-case basis. See links to program guidance for more information.

FHWA Programs

- ATIIP (IIJA § 11529): Subject to appropriations. Projects costing at least $15,000,000 to develop or complete active transportation networks and spines, or at least $100,000 to plan or design for active transportation networks and spines.
- BRI: BFP, (IIJA, Div. J, title VIII, para. (1)), BIP (23 U.S.C. 124), BRR (Department of Transportation Appropriations Act, 2022): For specific highway bridge projects and highway bridge projects that will replace or rehabilitate a bridge; project must consider pedestrian and bicycle access as part of the project and costs related to their inclusion are eligible under these programs.
- CRP (23 U.S.C. 175): Projects should support the reduction of carbon dioxide emissions from on-road highway sources.
- CMAQ (23 U.S.C. 149): Projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance for a list of projects that may be eligible for CMAQ funds. CMAQ funds may be used for shared use paths, but not for trails that are primarily for recreational use.
- HSIP (23 U.S.C. 148): Projects must be consistent with a State's Strategic Highway Safety Plan and (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem. Certain noninfrastructure safety projects can also be funded using HSIP funds as specified safety projects.
- RHCP (23 U.S.C. 130): Projects at all public railroad crossings including roadways, bike trails, and pedestrian paths.
- NHPP (23 U.S.C. 119): Projects must benefit National Highway System (NHS) corridors and must be located on land adjacent to any highway on the National Highway System (23 U.S.C. 217(b)).
- PROTECT (23 U.S.C. 176): Funds can only be used for activities that are primarily for the purpose of resilience or inherently resilience related. With certain exceptions, the focus must be on supporting the incremental cost of making assets more resilient.
- STBG (23 U.S.C. 133): Broad eligibility for pedestrian, bicycle, and micromobility projects under 23 U.S.C. 206, 208, and 217 (23 U.S.C. 133(b)(7)). Activities marked "$SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 12th grade. Nonconstruction projects related to safe access for bicyclists and pedestrians (such as bicycle and pedestrian education) are eligible under STBG (23 U.S.C. 217(a)).

- TASA (23 U.S.C. 133(h)): Broad eligibility for pedestrian, bicycle, and micromobility projects. Activities marked "$SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 12th grade.
- RTP (23 U.S.C. 206): Projects for trails and trailside and trailhead facilities for any recreational trail use. RTP projects are eligible under TA Set-Aside and STBG.
- SRTS (23 U.S.C. 208): Projects for any SRTS activity. FY 2012 was the last year for dedicated - funds, but funds are available until expended. SRTS projects are eligible under TA Set-Aside and STBG.
- PLAN (23 U.S.C. 134 and 135): Funds must be used for planning purposes, for example: Maps: System maps and GIS; Safety education and awareness: for transportation safety planning; Safety program technical assessment: for transportation safety planning; Training: bicycle and pedestrian system planning training. Transportation planning associated with activities would be eligible, SPR and PL funds are not available for project implementation or construction.
- NSBP (23 U.S.C. 162): Discretionary program subject to annual appropriations. Projects must directly benefit and be located on or near an eligible designated scenic byway.

FHWA Federal Lands Programs

- FLTTP (23 U.S.C. 201-204): Projects must provide access to or within Federal or Tribal lands. Programs include: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Federal Lands Planning Program) and related programs for Federal and Tribal lands such as the Nationally Significant Federal Lands and Tribal Projects (NSFLTP) program.
  - Federal Lands Transportation Program (23 U.S.C. 203): For Federal agencies for projects that provide access within Federal lands.
  - Federal Lands Access Program (FLAP) (23 U.S.C. 204): For State and local entities for projects that provide access to or within Federal or Tribal lands.
- TTP (23 U.S.C. 202): For federally recognized Tribal governments for projects within Tribal boundaries and public roads that access Tribal lands.
- TTPSF (23 U.S.C. 202(e)(1) and 23 U.S.C. 148(a)(4)): Grants available to federally recognized Indian Tribes through a competitive, discretionary program to plan and implement transportation safety projects.

OST Grant Programs

- INFRA (IIJA § 11110): Funds projects that improve safety, generate economic benefits, reduce congestion, enhance resiliency, and hold the greatest promise to eliminate freight bottlenecks and improve critical freight movements.
- RAISE (IIJA § 21202): Funds capital and planning grants to help communities build transportation projects that have significant local or regional impact and improve safety and equity.
- RCN: Combines RCP (IIJA § 11509 and div. J, title VIII, Highway Infrastructure Programs, para. (7)), which provides funds for planning grants and capital construction grants that relate to a transportation facility that creates a barrier to community connectivity and Neighborhood Access and Equity Grant Program, Inflation Reduction Act (IRA) § 60501; enacted as Pub. L. 117-169, 23 U.S.C. 177, which provides funds for projects that improve walkability, safety, and affordable transportation access and funding for planning and capacity building activities in disadvantaged or underserved communities.
- SMART (IIJA § 25005): Provides grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety.
- SS4A (IIJA § 24112): Discretionary program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Projects must be identified in a comprehensive safety action plan (§ 24112(a)(3)).
- Thrive (Department of Transportation Appropriations Act, 2022 (Pub. L. 117-103, div. L, title I): Technical assistance, planning, and capacity-building support in selected communities.

OST Loan Programs

- RRIF (Chapter 224 of title 49 U.S.C.): Program offers direct loans and loan guarantees for capital projects related to rail facilities, stations, or crossings. Pedestrian and bicycle infrastructure components of "economic development" projects located within ½-mile of qualifying rail stations may be eligible. May be combined with other grant sources.
- TIFIA (Chapter 6 of title 23 U.S.C.): Program offers secured loans, loan guarantees, or standby lines of credit for capital projects. Minimum total project size is $10 million; multiple surface transportation projects may be bundled to meet cost threshold, under the condition that all projects have a common repayment pledge. May be combined with other grant sources, subject to total Federal assistance limitations.

FTA Programs

- FTA (49 U.S.C. 5307): Multimodal projects funded with FTA transit funds must provide access to transit. See Bicycles and Transit, Flex Funding for Transit Access, the FTA Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law, and FTA Program & Bicycle Related Funding Opportunities.
  - Bicycle infrastructure plans and projects must be within a 3-mile radius of a transit stop or station. If more than 3 miles, within a distance that people could be expected to safely and conveniently bike to the particular stop or station.
  - Pedestrian infrastructure plans and projects must be within a ½ mile radius of a transit stop or station. If more than ½ mile, within a distance that people could be expected to safely and conveniently walk to the particular stop or station.
  - FTA funds cannot be used to purchase bicycles for bike share systems.
- FTA AoPP (Further Consolidated Appropriations Act, 2020 (Pub. L. 116-94); Consolidated Appropriations Act, 2021 (Pub. L. 116-260)): Promotes multimodal planning, engineering, and technical studies, or financial planning to improve transit services, facilities, and access in areas experiencing long-term economic distress, not for capital purchases.
- FTA TOD: Provides planning grants to support community efforts to improve safe access to public transportation, services, and facilities, including for pedestrians and cyclists. The grants help organizations plan for transportation projects that connect communities and improve access to transit and affordable housing, not for capital purchases.

NHTSA Programs

- NHTSA 402 (23 U.S.C. 402): Project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details.
- NHTSA 405 (23 U.S.C. 405): Funds are subject to eligibility, application, and award. Project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details. The Bipartisan Infrastructure Law expanded the eligible use of funds for a Section 405 Nonmotorized Safety grant beginning in FY 2024. See 23 U.S.C. 1300.26. For prior year grant awards, FAST Act eligible uses remain in place.
- Project agreements involving safety education, or any other positions must specify hours of eligible activity required to perform the project. Project agreements may not be expressed in terms of full or part time positions.