2023 RAISE Discretionary Grant Application

FIRST/LAST MILE CONNECTIONS:

Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections

Appendix A - Project Fact Sheets

Document 6 of 6

February 28, 2023

Submitted by:

UTAH DEPARTMENT OF TRANSPORTATION

In Partnership With:

Utah Transit Authority
Wasatch Front Regional Council
Mountainland Assocation of Governments
Cities of: Magna, Midvale, Millcreek, Ogden, Provo, Salt Lake, Sandy, South Salt Lake, West Valley

Submitted to:

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

Contents

2200 West Bike Lane (ID: AT 50)

Project Overview

This project will create approximately 0.5 mile of bike lanes, along with sidewalk gap completion between 3800 and 4100 South in West Valley City. This project will provide a connection from the south to the bike lanes on 3800 South, along with the West Valley Central light rail station and two bus stations along the Utah Transit Authority's (UTA) 35 (Magna) bus line.

Key Features: Bike lanes, sidewalk gaps

Context: The project will create a safe connection for pedestrians and cyclists from historically disadvantaged neighborhoods just east of the Interstate 15 (I-15) corridor to both the UTA 35 (Magna) bus route and the West Valley Central TRAX station (light rail) along the Green Line. These connections provide good transit access to job centers and other services to the east, along with connections to the greater light rail and commuter rail networks. This project also provides connections to the 3800 South bike lane, which provides safe connections under the I-15 corridor and to many destinations in the Valley Fair Mall area. Although there are complete sidewalks on the west side of the street, creating a complete network by filling the gaps on the east side is important for safety, convenience, and accessibility for all users.

Existing Conditions

On 2200 West, there is a narrow shoulder close to the curb and gutter. There are incomplete sidewalks throughout the segment.

Transit Connections

The 2200 West Bike Lane project in West Valley City will benefit the following three bus and rail stations in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Green Line	TX101744	40.694366	–111.958917	897	912
Bus	35	135243	40.696773	–111.945611	22	17
Bus	35	135280	40.696534	–111.947692	20	23

Map

Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users.

Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve quality of life. For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

As public spaces, sidewalks serve as the front steps to a community, activating streets socially and economically. Safe, accessible, and well-maintained sidewalks have been found to enhance general public health and maximize social capital. Just as roadway expansions and improvements have historically enhanced travel for motorists, superior sidewalk design can encourage walking by making it more attractive. When good walkways are provided, residents can use them for recreational walking, which contributes to both physical and mental health and well-being.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	◐
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	◐
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	◐
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐

Criterion	Benefits	
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1133.06	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$642,146.38	$642,146.38	$513,717.11	$128,429.28
Construction Contingencies – 20%	$128,429.28	$128,429.28	$102,743.42	$25,685.86
Construction Subtotal	**$770,575.66**	**$770,575.66**	**$616,460.53**	**$154,115.13**
Management – 6% of Construction Subtotal	$46,234.54	$46,234.54	$36,987.63	$9,246.91
Design Engineering/Architecture – 15% of Construction Subtotal	$115,586.35	$115,586.35	$92,469.08	$23,117.27
Environmental – 2% of Construction Subtotal	$15,411.51	$15,411.51	$12,329.21	$3,082.30
Construction Engineering/Inspection – 10% of Construction Subtotal	$77,057.57	$77,057.57	$61,646.05	$15,411.51
Management, PE, CE Subtotal	**$254,289.97**	**$254,289.97**	**$203,431.97**	**$50,857.99**
Rights-of-Way	$150,000.00	$150,000.00	$120,000.00	$30,000.00
Total	**$1,174,865.62**	**$1,174,865.62**	**$939,892.50**	**$234,973.12**

Midvale Cottonwood Street Buffered Bike Lane (ID: AT 81)

Project Overview

This project will create a buffered bike lane connection that ties the TRAX line in Midvale on one end to a residential area on the other end.

Key Feature: Buffered bike lane

Context: A neighborhood byway in the residential area will ultimately connect to the Center Street bike lane and a light rail transit center. This project is part of a regional network that has been planned by six cities in this region.

Existing Conditions

There is no bike lane, shoulder, or facilities on the majority of Cottonwood Street in this segment. There are very small shoulders on most of the south section of the segment, but they are not suitable for biking. There are a few incomplete sidewalks on one side, but they are sparse along the segment.

Transit Connections

The Cottonwood Street Buffered Bike Lane in Midvale will benefit the following rail station in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Blue Line	TX153046	40.619458	–111.898381	524	500

Map

Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, buffered bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users. Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere. For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	◐
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	○
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	●
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	◐
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	◐
	Promotes long-term economic growth and other broader economic and fiscal benefits	◐

Criterion	Benefits	
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●
INNOVATION	Uses practices that facilitate accelerated project delivery such as single contractor design-build arrangements, congestion management, asset management, or long-term operations and maintenance	●

Project Budget

Project Element	2010 Census Tract 1124.04	2010 Census Tract 1122.02	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$92,649.61	$45,633.39	$138,283.00	$110,626.40	$27,656.60
Construction Contingencies – 20%	$18,529.92	$9,126.68	$27,656.60	$22,125.28	$5,531.32
Construction Subtotal	**$111,179.53**	**$54,760.07**	**$165,939.60**	**$132,751.68**	**$33,187.92**
Management – 6% of Construction Subtotal	$6,670.77	$3,285.60	$9,956.38	$7,965.10	$1,991.28
Design Engineering/Architecture – 15% of Construction Subtotal	$16,676.93	$8,214.01	$24,890.94	$19,912.75	$4,978.19
Environmental – 2% of Construction Subtotal	$2,223.59	$1,095.20	$3,318.79	$2,655.03	$663.76
Construction Engineering/Inspection – 10% of Construction Subtotal	$11,117.95	$5,476.01	$16,593.96	$13,275.17	$3,318.79
Management, PE, CE Subtotal	**$36,689.25**	**$18,070.82**	**$54,760.07**	**$43,808.05**	**$10,952.01**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$147,868.78**	**$72,830.89**	**$220,699.67**	**$176,559.73**	**$44,139.93**

Main Street and Holden Street Buffered Bike Lanes (ID: AT 86)

Project Overview

This project will add approximately 1.5 miles of buffered bike lanes to the Main Street/Holden Street corridor in Midvale, connecting from Winchester Street south to Center Street. This project will connect to the two light rail stations on the south end and to bus stops throughout the area.

Key Feature: Buffered bike lanes

Context: This Mid-Valley Active Transportation Plan bike lane connects two communities and connects to Midvale Main Street with bike lanes on both ends of the project (north of Winchester Street and the Center Street bike lane (another project being recommended for funding). Midvale Main Street is home to many vulnerable-population businesses, and this access will assist in promoting business. There are many services along the route, including the Midvale Senior Center, grocery store, pharmacy, senior housing facility, senior apartments, city services, and multiple housing complexes.

Existing Conditions

This segment is a five-lane, 35-mph street with a shoulder on both sides of the street. There are sidewalks for most of the segment on both sides.

Transit Connections

The Main Street and Holden Street Buffered Bike Lanes project in Midvale will benefit the following two rail stations in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Red Line	TX101730	40.617138	–111.914906	239	237
Rail	Blue Line	TX153048	40.610541	–111.893216	333	330

Map

Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users. Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere. For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	●
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●

Criterion	Benefits	
CONNECTIVITY	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	●
	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1124.03	2010 Census Tract 1122.01	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$168,854.40	$37,065.60	$205,920.00	$164,736.00	$41,184.00
Construction Contingencies – 20%	$33,770.88	$7,413.12	$41,184.00	$32,947.20	$8,236.80
Construction Subtotal	**$202,625.28**	**$44,478.72**	**$247,104.00**	**$197,683.20**	**$49,420.80**
Management – 6% of Construction Subtotal	$12,157.52	$2,668.72	$14,826.24	$11,860.99	$2,965.25
Design Engineering/Architecture – 15% of Construction Subtotal	$30,393.79	$6,671.81	$37,065.60	$29,652.48	$7,413.12
Environmental – 2% of Construction Subtotal	$4,052.51	$889.57	$4,942.08	$3,953.66	$988.42
Construction Engineering/Inspection – 10% of Construction Subtotal	$20,262.53	$4,447.87	$24,710.40	$19,768.32	$4,942.08
Management, PE, CE Subtotal	**$66,866.34**	**$14,677.98**	**$81,544.32**	**$65,235.46**	**$16,308.86**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$269,491.62**	**$59,156.70**	**$328,648.32**	**$262,918.66**	**$65,729.66**

Midvale TRAX Station to Maple Street Multi-use Path (ID: AT 87)

Project Overview

This project will create a 0.25-mile, 10-foot-wide multi-use path providing additional connectivity to the south of the Midvale Fort Union TRAX station in Midvale and access to neighborhoods and mobile home parks.

Key Feature: Multi-use path

Context: The Midvale Fort Union TRAX station is currently accessible only from the north; this project provides a key access point to the south and direct connections to many neighborhoods, apartment complexes, and mobile home parks. The project also connects these communities to many destinations and employment opportunities to the north along 7200 South. Alternative routes involve approximately four times the travel distance along the busy and uncomfortable arterials of State Street and 7200 South.

Existing Conditions

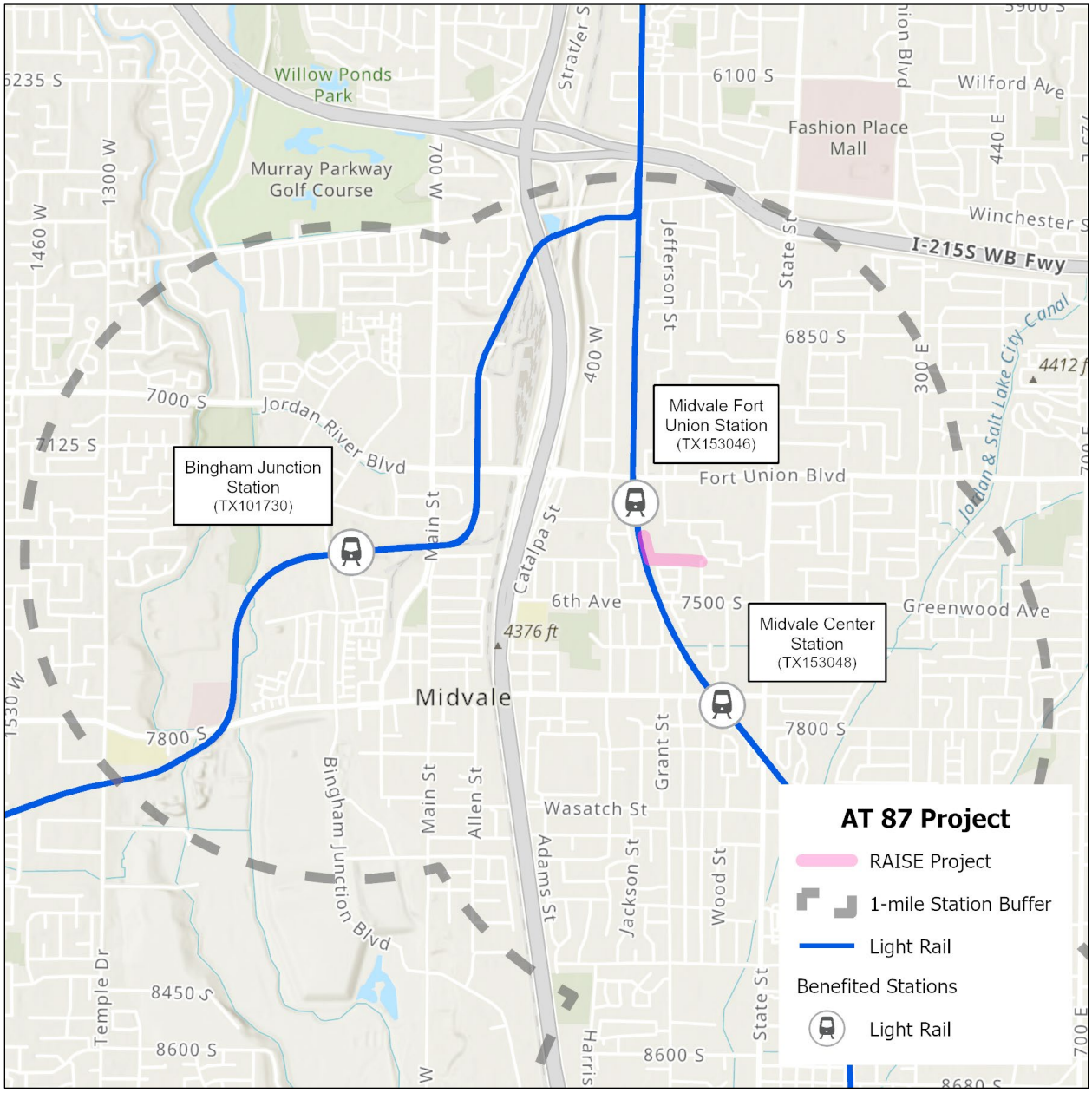
There are no current connections. On the south, Maple Street is a dead end into a gate to the north. There is cement on the ground where the trail will be built, but this segment is not currently accessible to the public.

Transit Connections

The Midvale TRAX Station to Maple Street multi-use path project will benefit the following rail stop in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Blue Line	TX153046	40.619458	–111.898381	524	500

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, shared-use paths provide desirable space for physical activity, which can reduce medical costs and prevent or decrease some types of chronic illnesses due to increased physical activity. Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety. Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's

quality of life by providing opportunities for social connection and safe places for recreation and commuting. For a similar example, MASS DOT quantified the benefits of shared-use paths for several communities.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	◐
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	◐
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●

Criterion	Benefits	
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	◐
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	◐
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	◐
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1124.04	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$527,050.00	$527,050.00	$421,640.00	$105,410.00
Construction Contingencies – 20%	$105,410.00	$105,410.00	$84,328.00	$21,082.00
Construction Subtotal	**$632,460.00**	**$632,460.00**	**$505,968.00**	**$126,492.00**
Management – 6% of Construction Subtotal	$37,947.60	$37,947.60	$30,358.08	$7,589.52
Design Engineering/Architecture – 15% of Construction Subtotal	$94,869.00	$94,869.00	$75,895.20	$18,973.80
Environmental – 2% of Construction Subtotal	$12,649.20	$12,649.20	$10,119.36	$2,529.84
Construction Engineering/Inspection – 10% of Construction Subtotal	$63,246.00	$63,246.00	$50,596.80	$12,649.20
Management, PE, CE Subtotal	**$208,711.80**	**$208,711.80**	**$166,969.44**	**$41,742.36**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00
Total	**$841,171.80**	**$841,171.80**	**$672,937.44**	**$168,234.36**

Millcreek and Murray Border Multi-use Path (ID: AT 91)

Project Overview

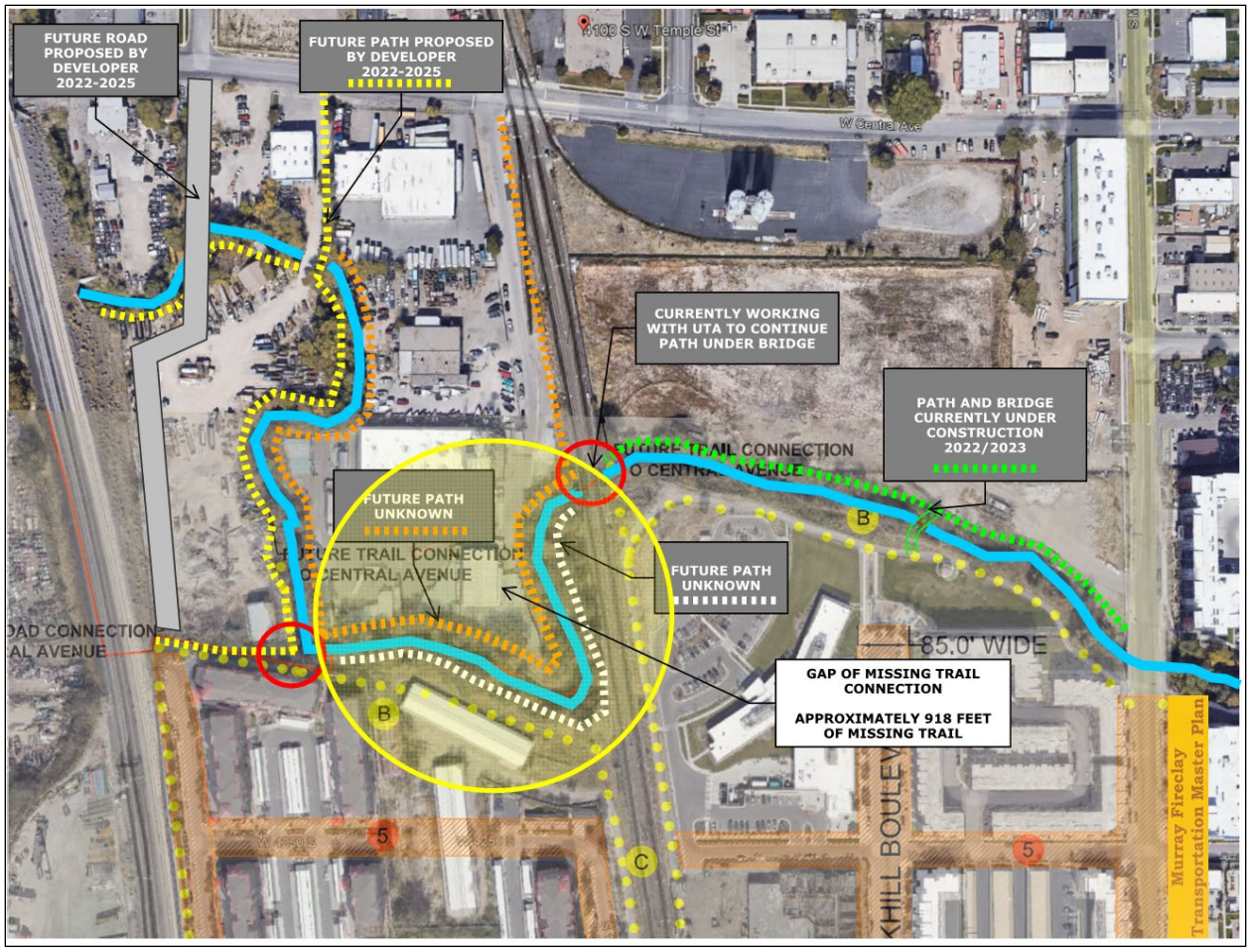
This project will complete a gap in a trail system currently under development. This specific segment spans from the UTA rail corridor in Millcreek and Murray on the east to the existing trail segment behind the apartment complex at Brick Oven Way at its west extent. The segment to the east, which connects to Main Street and existing bike lanes, is currently under construction.

Key Feature: 10-foot-wide, multi-use path

Context: This multi-use path connects to a trail that runs along Big Cottonwood Creek and ties into a bike lane on Main Street on the east end of the project. The west end of the trail will end just east of the Union Pacific railroad tracks and will tie into a section of the trail that is being built by developers at Commerce Drive. An extension on the west side of the development is planned that will create a connection across the I-15 corridor separate from all traffic, creating a needed connection that runs east-west across the Salt Lake Valley. These connections will fill a gap that will provide a comfortable path for all users.

Existing Conditions

The trail picks up from an existing segment that runs along the north side of the apartments at Brick Oven Way, which currently dead ends at this location. The road is planned to connect through the north to Central Avenue by 2025, along with additional trail connections to the north. The current alignment of the project has no existing facilities and runs along Big Cottonwood Creek.


FUTURE ROAD PROPOSED BY DEVELOPER 2022-2025
FUTURE PATH PROPOSED BY DEVELOPER 2022-2025
CURRENTLY WORKING WITH UTA TO CONTINUE PATH UNDER BRIDGE
PATH AND BRIDGE CURRENTLY UNDER CONSTRUCTION 2022/2023
FUTURE PATH UNKNOWN
FUTURE PATH UNKNOWN
85.0' WIDE
GAP OF MISSING TRAIL CONNECTION
APPROXIMATELY 918 FEET OF MISSING TRAIL
W Central Ave
Murray Fireclay Transportation Master Plan

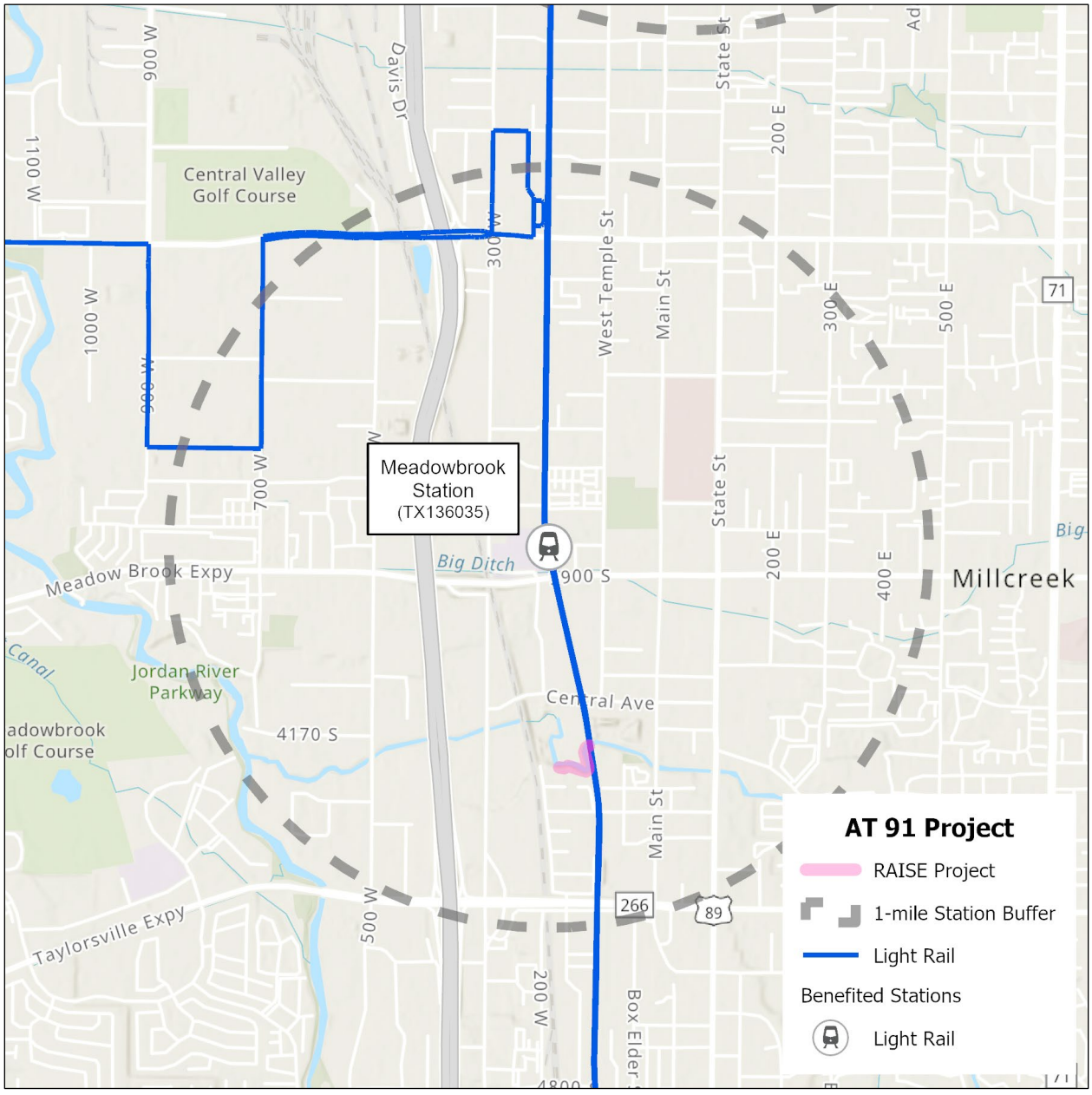

4500 South
TRAX
Murray
North
AT 91 Project

Transit Connections

The Millcreek and Murray Border Multi-use Path project in Millcreek and Murray will benefit the following rail stop in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Red Line Blue Line	TX136035	40.688026	–111.896725	415	405

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, shared-use paths provide desirable space for physical activity, which in turn can reduce medical costs and prevent or decrease some types of chronic illnesses due to increased physical activity. Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety. Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's quality of life by providing opportunities for social connection and safe places for recreation and commuting. For a similar example, MASS DOT quantified the benefits of shared-use paths for several communities.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	◐
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●

Criterion	Benefits	
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1116	2010 Census Tract 1121	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$174,133.64	$174,133.64	$348,267.28	$278,613.82	$69,653.46
Construction Contingencies – 20%	$34,826.73	$34,826.73	$69,653.46	$55,722.76	$13,930.69
Construction Subtotal	**$208,960.37**	**$208,960.37**	**$417,920.74**	**$334,336.59**	**$83,584.15**
Management – 6% of Construction Subtotal	$12,537.62	$12,537.62	$25,075.24	$20,060.20	$5,015.05
Design Engineering/Architecture – 15% of Construction Subtotal	$31,344.06	$31,344.06	$62,688.11	$50,150.49	$12,537.62
Environmental – 2% of Construction Subtotal	$4,179.21	$4,179.21	$8,358.41	$6,686.73	$1,671.68
Construction Engineering/Inspection – 10% of Construction Subtotal	$20,896.04	$20,896.04	$41,792.07	$33,433.66	$8,358.41
Management, PE, CE Subtotal	**$68,956.92**	**$68,956.92**	**$137,913.84**	**$110,331.07**	**$27,582.77**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$277,917.29**	**$277,917.29**	**$555,834.58**	**$444,667.66**	**$111,166.92**

Center Street Protected Bike Lane (ID: AT 100)

Project Overview

This design provides a blend of buffered bike lanes and separated cycle-track ties directly into the Jordan River Trail and the Midvale Center TRAX station in Midvale while also improving access to the Bingham Junction TRAX station. Wherever possible, the separated cycle-track facility was used, providing a high level of safety and comfort for people.

Key Features: Cycle-track, buffered bike lanes

Context: Center Street project provides safe access under I-15 and connects to two light rail stations, multiple bus routes, the Jordan River Parkway trail, and additional bike routes. The project provides access to both the Bingham Junction and the Midvale Center TRAX stations, which are on the Red and Blue TRAX lines, respectively, one with connections to downtown and the other to the University of Utah. These transit services reach into major economic centers to provide additional access to jobs as well as major health centers. This bike path also connects community services, housing complexes, senior housing, playgrounds, and ethnic markets.

Existing Conditions

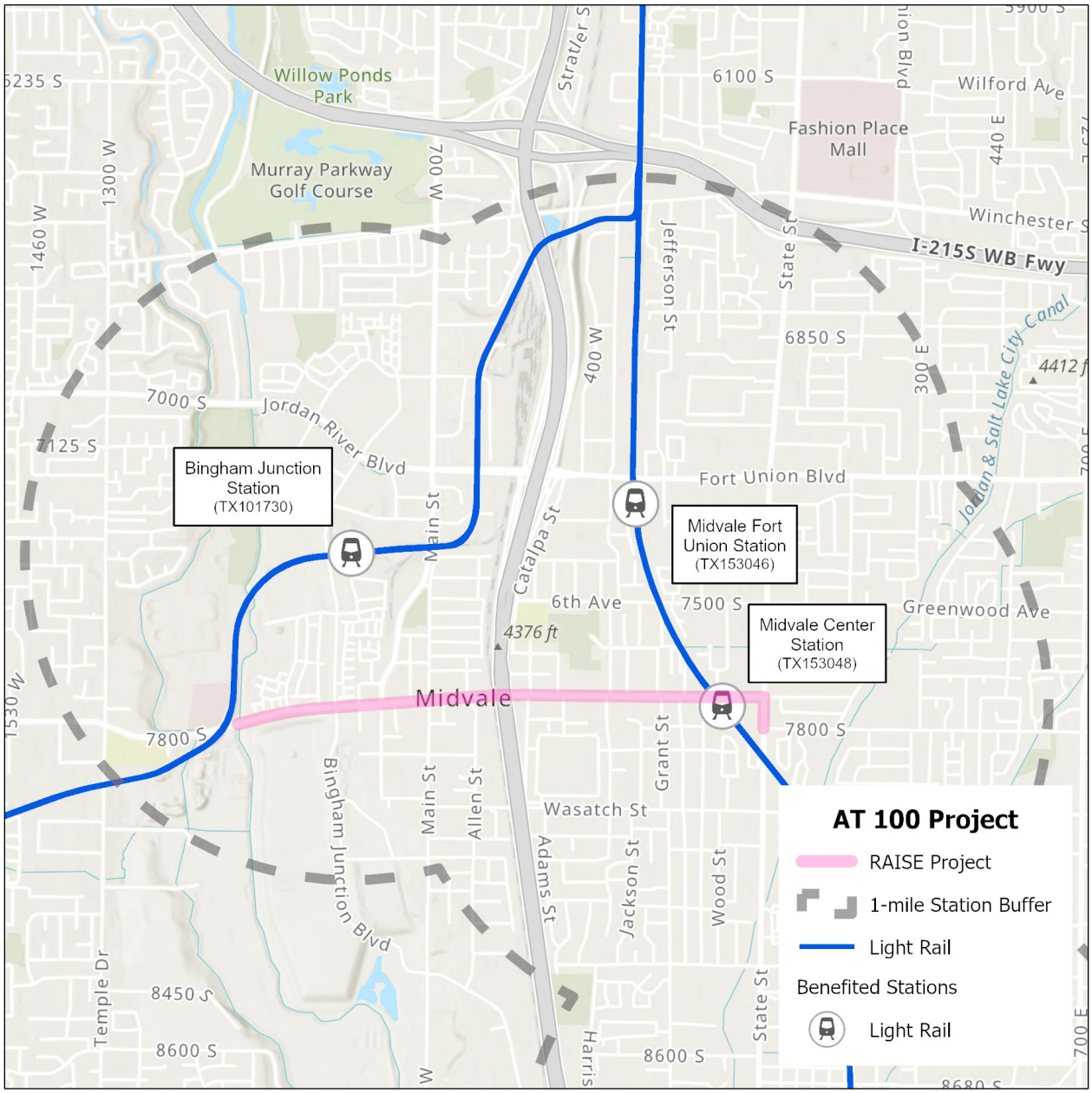
Along the segment, there is a shoulder on both sides of the five-lane road. Along half of the segment, the shoulder is wide enough for safe bicycling; however, on the west side of I-15, many vehicles park on the shoulder. The other half of the segment has a very narrow shoulder which would not comfortably suit a bicyclist. There is a sidewalk for most of the segment on both sides.

Transit Connections

The Center Street protected bike lane in Midvale will benefit the following two rail stations in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Red Line	TX101730	40.617138	–111.914906	239	237
Rail	Blue Line	TX153048	40.610541	–111.893216	333	330

Map



Benefits

General project benefits: To expand on the active transportation benefits detailed in the merit criteria narrative, buffered bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users. The ability to reach everyday destinations is critical to improving health. For example, people need access to grocery stores that provide healthful food, healthcare services for preventive care, and jobs and educational opportunities that contribute to economic well-being. The transportation system plays an important role in ensuring that travelers can reach everyday destinations safely, reliably, and conveniently.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	◐
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	◐
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	●
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	●
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●

Criterion	Benefits	
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	●
	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1124.03	2010 Census Tract 1124.04	2010 Census Tract 1124.02	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$1,460,000	$730,000	$730,000	$2,920,000	$2,336,000	$584,000
Construction Contingencies – 20%	$292,000	$146,000	$146,000	$584,000	$467,200	$116,800
Construction Subtotal	**$1,752,000**	**$876,000**	**$876,000**	**$3,504,000**	**$2,803,200**	**$700,800**
Management – 6% of Construction Subtotal	$105,120	$52,560	$52,560	$210,240	$168,192	$42,048
Design Engineering/ Architecture – 15% of Construction Subtotal	$262,800	$131,400	$131,400	$525,600	$420,480	$105,120
Environmental – 2% of Construction Subtotal	$35,040	$17,520	$17,520	$70,080	$56,064	$14,016
Construction Engineering/ Inspection – 10% of Construction Subtotal	$175,200	$87,600	$87,600	$350,400	$280,320	$70,080
Management, PE, CE Subtotal	**$578,160**	**$289,080**	**$289,080**	**$1,156,320**	**$925,056**	**$231,264**
Rights-of-Way	$0	$0	$0	$0	$0	$0
Total	**$2,330,160**	**$1,165,080**	**$1,165,080**	**$4,660,320**	**$3,728,256**	**$932,064**

4800 West Buffered Bike Lane (ID: AT 107)

Project Overview

This project will create approximately 0.5 mile of buffered bike lanes along with sidewalk gap completion between 3100 and 3800 South in West Valley City. The project will connect residential areas to the north to two bus stations along with other local bus routes.

Key Features: Buffered bike lane, sidewalk gaps

Context: The project will create a safe connection for pedestrians and cyclists from historically disadvantaged neighborhoods north of 3500 South to the UTA 35 (Magna) route, which is a key means of access to various businesses and services to the east, with transfers to the TRAX light rail system. Sidewalk gaps exist on both sides of the road from approximately Lamar Way to 3185 South creating an unsafe condition for pedestrians with no alternative other than the shoulder. Local bus route 248 also serves this corridor with connections to the Green Line TRAX light rail to the east and the Red Line TRAX light rail to the south.

Existing Conditions

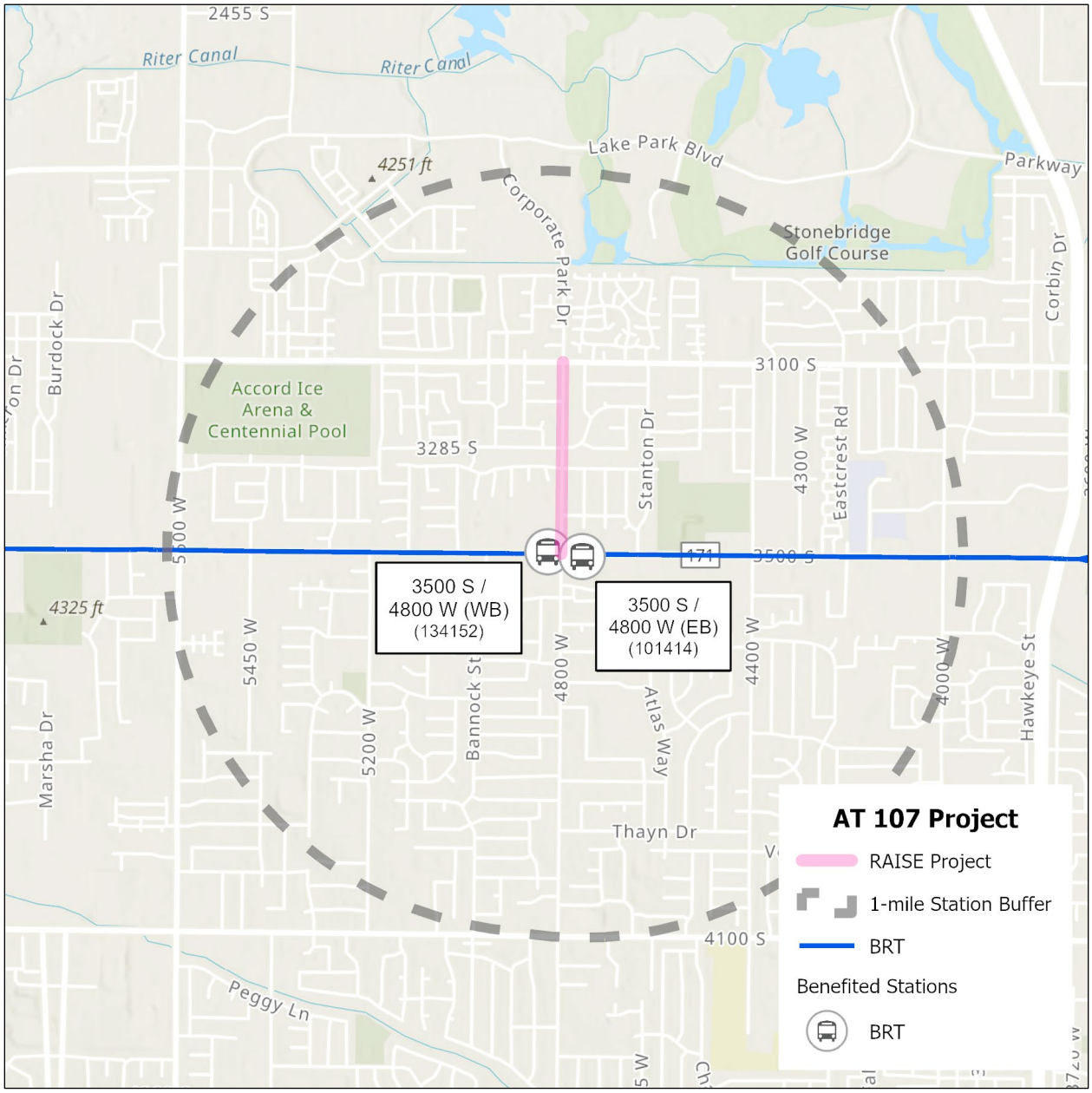
On 4800 West, there is a shoulder on most of the segment. Vehicles can park on the shoulder. There are no current bicycle facilities. There are incomplete sidewalks on both sides of the road.

Transit Connections

The 4800 West Buffered Bike Lane project in West Valley City will benefit the following two bus stops in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Bus	35	134152	40.696659	–112.006412	20	47
Bus	35	101414	40.696494	–112.004686	55	16

Map



Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, buffered bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users. Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere. For example, in 2016, New York City found that every $,1300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

As public spaces, sidewalks serve as the front steps to a community, activating streets socially and economically. Safe, accessible, and well-maintained sidewalks have been found to enhance general public health and maximize social capital. Just as roadway expansions and improvements have historically enhanced travel for motorists, superior sidewalk design can encourage walking by making it more attractive. When good walkways are provided, residents can use them for recreational walking, which contributes to both physical and mental health and well-being.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	◐
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	◐
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	◐
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐

Criterion	Benefits	
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●
INNOVATION	Uses practices that facilitate accelerated project delivery such as single contractor design-build arrangements, congestion management, asset management, or long-term operations and maintenance	●

Project Budget

Project Element	2010 Census Tract 1134.06	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$611,040.67	$611,040.67	$488,832.53	$122,208.13
Construction Contingencies – 20%	$122,208.13	$122,208.13	$97,766.51	$24,441.63
Construction Subtotal	**$733,248.80**	**$733,248.80**	**$586,599.04**	**$146,649.76**
Management – 6% of Construction Subtotal	$43,994.93	$43,994.93	$35,195.94	$8,798.99
Design Engineering/Architecture – 15% of Construction Subtotal	$109,987.32	$109,987.32	$87,989.86	$21,997.46
Environmental – 2% of Construction Subtotal	$14,664.98	$14,664.98	$11,731.98	$2,933.00
Construction Engineering/Inspection – 10% of Construction Subtotal	$73,324.88	$73,324.88	$58,659.90	$14,664.98
Management, PE, CE Subtotal	**$241,972.10**	**$241,972.10**	**$193,577.68**	**$48,394.42**
Rights-of-Way	$951,836	$951,836	$761,468.80	$190,367
Total	**$1,927,056.90**	**$1,927,056.90**	**$1,541,645.52**	**$385,411.38**

State Street (Green Loop) Shared-use Path (ID: AT 139)

Project Overview

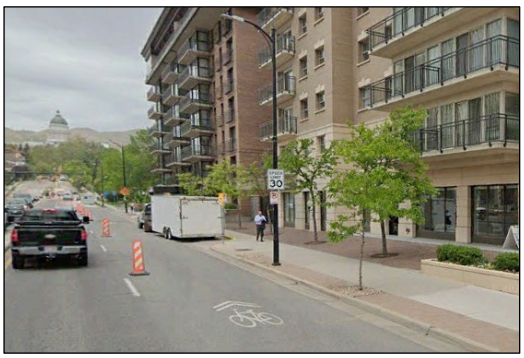
This project will create a shared-use path in Salt Lake City with wayfinding signs throughout the corridor. Additionally, signalized intersection improvements, including bike detection, curb ramp improvements, and bike crossing markings will be developed. Project elements include striping reconfigurations on 2nd Avenue and Canyon Road, potential lane drop and median relocation along State Street, two-way above-curb bikeway along State Street from North Temple to 100 South and on 100 South from State Street to Main Street, and parking and geometry changes along 100 South.

Key Features: Shared-use path and wayfinding

Context: The "Green Loop" is noted as a linear park system that includes key walkability and bike-ability elements with access to transit. This concept was outlined in the Salt Lake City Downtown Plan in 2016, and the State Street shared-use path is a portion of the vision. This portion connects to a TRAX station in the central business district of Salt Lake City and ties to City Creek Park on the north end providing access to beautiful walking trails and an opportunity to be in nature within a downtown environment. This section provides access to multiple jobs, including one of the largest employers in the state, regional transit connections, and community services.

Existing Conditions

Starting at the north point of this project, Canyon Road has sidewalks on both sides of the street. Where the Green Loop shared-use path will be built, there is an existing buffered sidewalk (approximately 9 feet wide) that follows Canyon Road and goes through City Creek Park. Along State Street, there are currently shared lane markings to mark a designated bike route but no designated bike lane. Between 2nd Avenue and 1st Avenue on State Street, there is a 5-foot-wide sidewalk with a few feet of grass buffering the sidewalk from the road. From 2nd Avenue to 100 South, the sidewalk widens to about 8 feet, with trees and on-street parking as a buffer. The existing conditions are very similar on 100 South, with a larger sidewalk (12 feet wide) on the north side with on-street parking and trees serving as a buffer between the road and sidewalk.

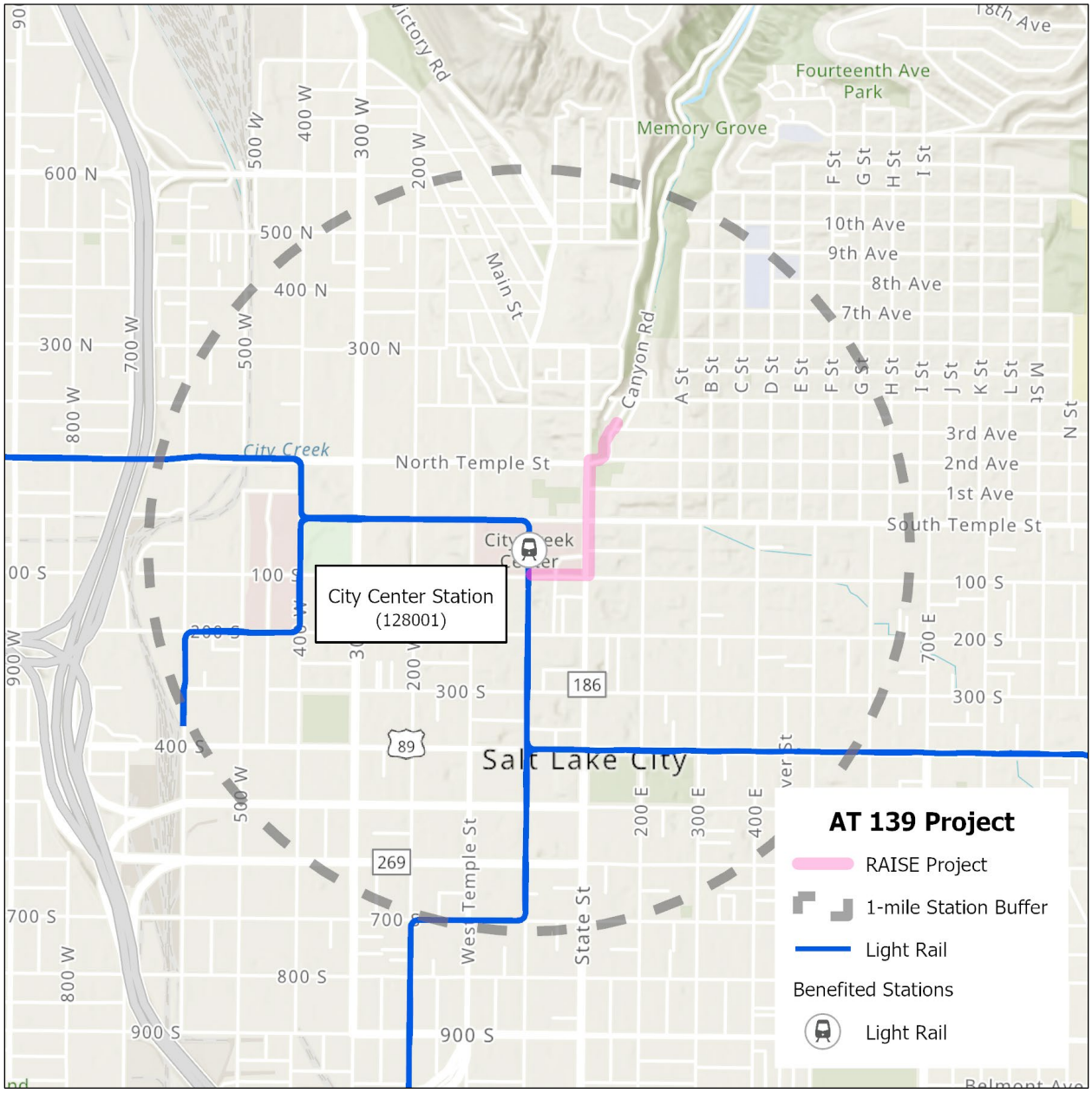


Transit Connections

The State Street (Green Loop) Shared-use Path project in Salt Lake City will benefit the following rail station in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Green Line Blue Line	TX128001	40.768217	–111.891081	831	903

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, paths and trails are an important part of a community. In a well-designed community, homes, parks, stores, and schools are connected by safe walking and biking routes. Such routes allow all members of the community a chance to enjoy the outdoors and get physical and mental health benefits. Sidewalks provide many benefits, including safety, mobility, and overall healthier communities. Sidewalks separated from the roadway are the preferred accommodation for pedestrians. This leads to increased satisfaction with one's quality of life.

Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety. Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's quality of life by providing opportunities for social connection, economic development, and safe places for recreation and commuting.

Lastly, as public spaces, sidewalks serve as the front steps to a community, activating streets socially and economically. Safe, accessible, and well-maintained sidewalks have been found to enhance general public health and maximize social capital. Just as roadway expansions and improvements have historically enhanced travel for motorists, superior sidewalk design can encourage walking by making it more attractive. When good walkways are provided, residents can use them for recreational walking, which contributes to both physical and mental health and well-being.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●

Criterion	Benefits	
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	◐
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census 1140	2010 Census 1011.02	2010 Census 1008	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$1,005,346.61	$520,006.87	$485,339.74	$2,010,693.23	$1,608,554.58	$402,138.65
Contingencies	$301,603.98	$156,002.06	$145,601.92	$603,207.96	$482,566.368	$120,641.59
Construction Subtotal	**1,306,950.59**	**676,008.93**	**630,941.66**	**$2,613,901.19**	**$2,091,120.96**	**$522,780.24**
Management	$78,417.04	$40,560.54	$37,856.50	$156,834.07	$125,467.26	$31,366.81
Design Engineering/ Architecture	$196,042.59	$101,401.34	$94,641.25	$392,085.18	$313,668.14	$78,417.04
Environmental	$26,139.01	$13,520.18	$12,618.83	$52,278.02	$41,822.42	$10,455.60
Construction Engineering/ Inspection	$130,695.06	$67,600.89	$63,094.17	$261,390.12	$209,112.10	$52,278.02
Management, PE, CE Subtotal	**431,293.70**	**223,082.95**	**208,210.75**	**$862,587**	**$690,069.91**	**$172,517.48**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$1,738,244.29**	**$899,091.88**	**$839,152.41**	**$3,476,488.59**	**$2,781,190.87**	**$695,297.72**

Sandy East Jordan Canal Trail Shared-use Path (ID: AT 140)

Project Overview

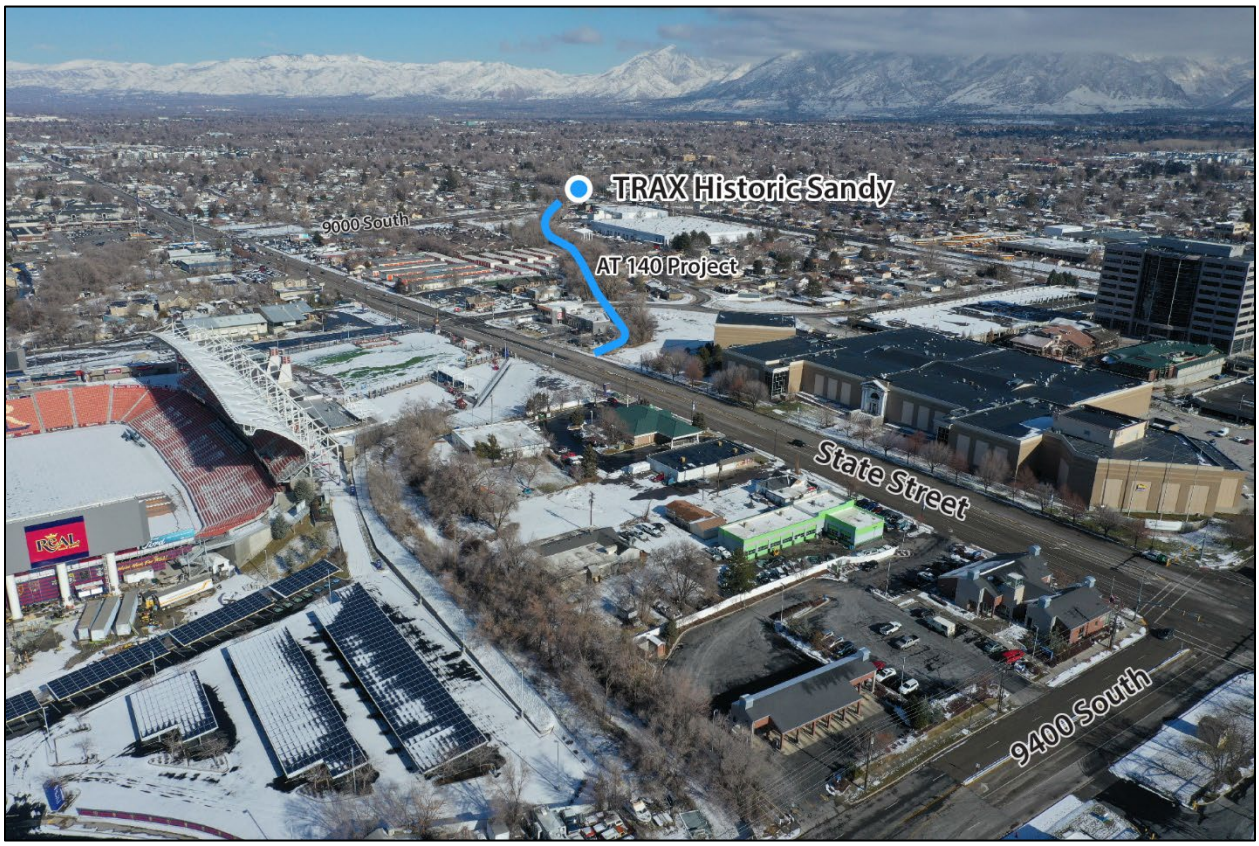
This project will create a new section of trail in Sandy, connecting State Street and Rimando Way north to 9000 South, providing an alternative to State Street and tying into existing sections of the Porter Rockwell Trail. This is also one segment of the East Jordan Canal Trail, which is planned to be a regional trail stretching over 12 miles.

Key Feature: 10-foot-wide paved trail

Context: A multi-use path along the East Jordan Canal offers pedestrians and cyclists an alternative to access major events and large job center locations with a more direct path. This will provide a peaceful nature walk to those coming from a TRAX station and create a more enjoyable experience to encourage transit use to the area. In addition to the direct access this path provides to the Historic Sandy TRAX station, this segment ties directly into the existing Porter Rockwell Regional Trail, which provides direct access to several TRAX stations in the southern portion of Salt Lake County.

Existing Conditions

Center Street, which is the current alternative, has the Porter Rockwell Trail parallel to the street. There is currently no connection along the East Jordan Canal, which would be a shorter distance to the transit stops.

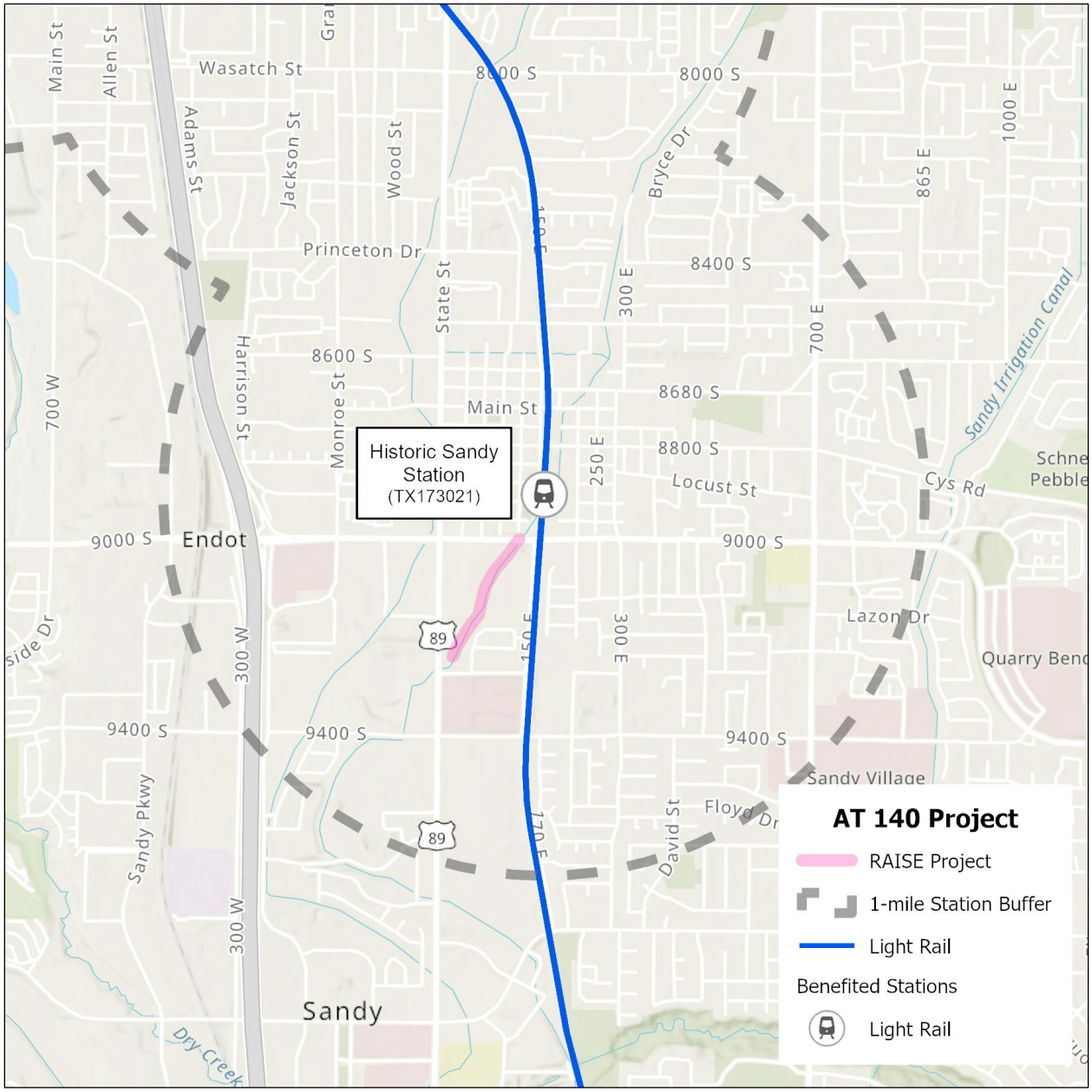


Transit Connections

The Sandy East Jordan Canal Trail Shared-use Path project will benefit the following rail station in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Blue Line	TX173021	40.589811	–111.885661	429	461

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, paths and trails are an important part of a community. In a well-designed community, homes, parks, stores, and schools are connected by safe walking and biking routes. Such routes allow all members of the community a chance to enjoy the outdoors and get physical and mental health benefits.

Shared-use paths provide desirable space for physical activity, which in turn can reduce medical costs and prevent or decrease some types of chronic illnesses due to increased physical activity. Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety.

Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's quality of life by providing opportunities for social connection and safe places for recreation and commuting.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	◐
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●

Criterion	Benefits	
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	◐
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	◐
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	◐
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	◐
	Promotes long-term economic growth and other broader economic and fiscal benefits	◐
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	◐
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	◐
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	◐

Project Budget

Project Element	2010 Census Tract 1127	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$823,376.52	$823,376.52	$658,701.22	$164,675.30
Construction Contingencies – 20%	$164,675.30	$164,675.30	$131,740.24	$32,935.06
Construction Subtotal	**$988,051.83**	**$988,051.83**	**$790,441.46**	**$197,610.37**
Management – 6% of Construction Subtotal	$59,283.11	$59,283.11	$47,426.49	$11,856.62
Design Engineering/ Architecture – 15% of Construction Subtotal	$148,207.77	$148,207.77	$118,566.22	$29,641.55
Environmental – 2% of Construction Subtotal	$19,761.04	$19,761.04	$15,808.83	$3,952.21
Construction Engineering/ Inspection – 10% of Construction Subtotal	$98,805.18	$98,805.18	$79,044.15	$19,761.04
Management, PE, CE Subtotal	**$326,057.10**	**$326,057.10**	**$260,845.68**	**$65,211.42**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00
Total	**$1,314,108.93**	**$1,314,108.93**	**$1,051,287.14**	**$262,821.79**

University Avenue Buffered Bike Lanes (ID: AT 168)

Project Overview

This project will create buffered bike lanes on University Avenue in Provo from Center Street to 800 North. The buffered bike lanes are much needed for volume, connectivity, and safety reasons. It is critical for this corridor to balance vehicles, bikes, pedestrians, and transit to reach education centers, community services, housing, and major employment areas. With Provo being a university town, many cyclists ride in this area, and providing a more comfortable, buffered experience will benefit all users.

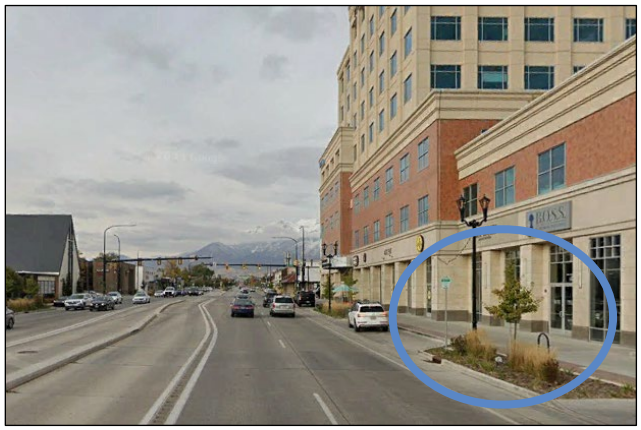
Key Feature: Buffered bike lanes

Context: University Avenue is a portion of the active transportation core network and connects Provo's key activity centers, the downtown area, and Brigham Young University (BYU). This corridor is served by Provo's major transit link, UVX (a BRT line). UVX has been in service since 2018 and has three bus stops on University Avenue, making it a hub for pedestrian and bicycle use and access.

University Avenue is one of the highest-trafficked roads in Provo, having approximately 30,000 to 40,000 average annual daily traffic (AADT) as of 2018 (Provo Transportation Master Plan). Because this road connects Provo's primary activity centers, including downtown and BYU (which has a high concentration of student housing directly east of University Avenue), the road is often busy from morning to night.

Existing Conditions

University Avenue currently has a marked bike lane on both sides of the road. However, the bike lane bleeds into right- turning lanes and parking spots. Current bike markings on the road are fading. There are no facilities to protect bicyclists on this high-volume road. On both sides of the road, there are buffered cement sidewalks for pedestrians.



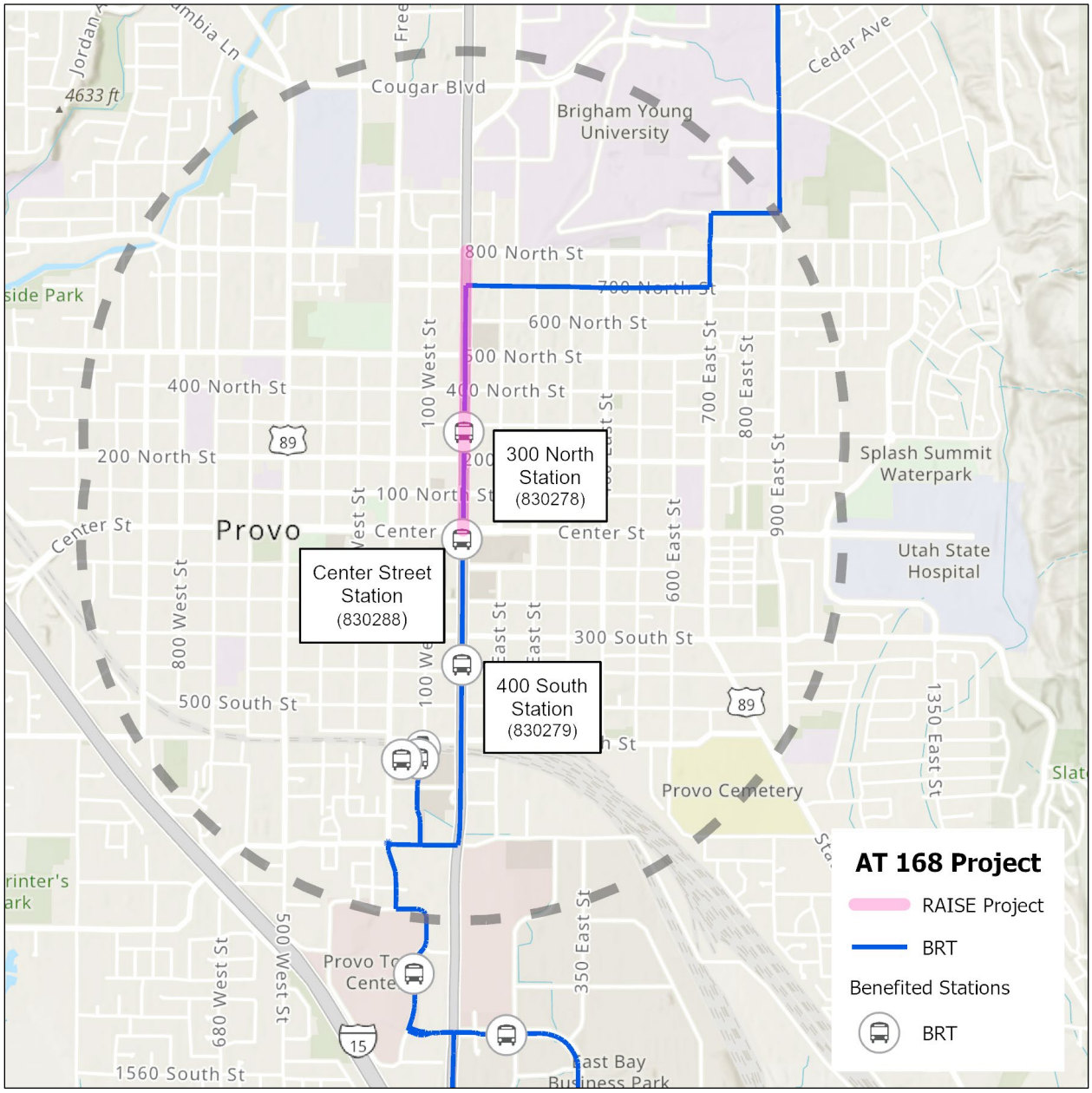
Starting at 700 North and going south past Center Street is a designated BRT line occupying two lanes with three large stations in the middle of University Avenue. This affects the volume and speed of traffic and has increased pedestrian and bicycle use in the area.

Transit Connections

The University Avenue Buffered Bike Lanes project in Provo will benefit the following three bus stops in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Bus	830X	830276	40.228615	–111.658709	117	115
Bus	830X	830278	40.237452	–111.658690	187	175
Bus	830X	830288	40.233380	–111.657560	216	197

Map



Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, buffered bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users.

Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere.

For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐

Criterion	Benefits	
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 19	2010 Census Tract 24	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	1,435,406.90	879,765.52	$2,315,172.42	$1,852,137.94	$463,034.48
Contingencies	287,081.38	175,953.10	$463,034.48	$370,427.59	$92,606.90
Construction Subtotal	**1,722,488.28**	**1,055,718.62**	**$2,778,207**	**2,222,565.52**	**555,641.38**
Management	103,349.29	63,343.12	$166,692.41	$133,353.93	$33,338.48
Design Engineering/ Architecture	258,373.24	158,357.80	$416,731.04	$333,384.83	$83,346.21
Environmental	34,449.77	21,114.37	$55,564.14	$44,451.31	$11,112.83
Construction Engineering/Inspection	172,248.83	105,571.86	$277,820.69	$222,256.55	$55,564.14
Management, PE, CE Subtotal	**568,421.13**	**348,387.15**	**916,808.28**	**733,446.624**	**183,361.66**
Rights-of-Way	0.00	0.00	$0.00	$0.00	$0.00
Total	**2,290,909.41**	**1,404,105.77**	**$3,695,015.18**	**$2,956,012.15**	**$739,003.04**

200 East Bike Lane (ID: AT 173)

Project Overview

This project will develop bike lanes along 200 East from Center Street south to 600 South in Provo.

Key Feature: Bike lanes

Context: 200 East is an important local road that creates a safe system in Provo. The residential street allows for a more comfortable experience for cyclists to access major commercial areas, education centers, and services. To the north of the project limit, solid markings have designated locations for the cyclists, and improvements have been made at an intersection within the project area to better accommodate cyclists. Although the corridor itself is primarily residential, the Provo FrontRunner station on the south end and the business district on the north end make this a critical corridor for accessing services, jobs, and education.

Existing Conditions

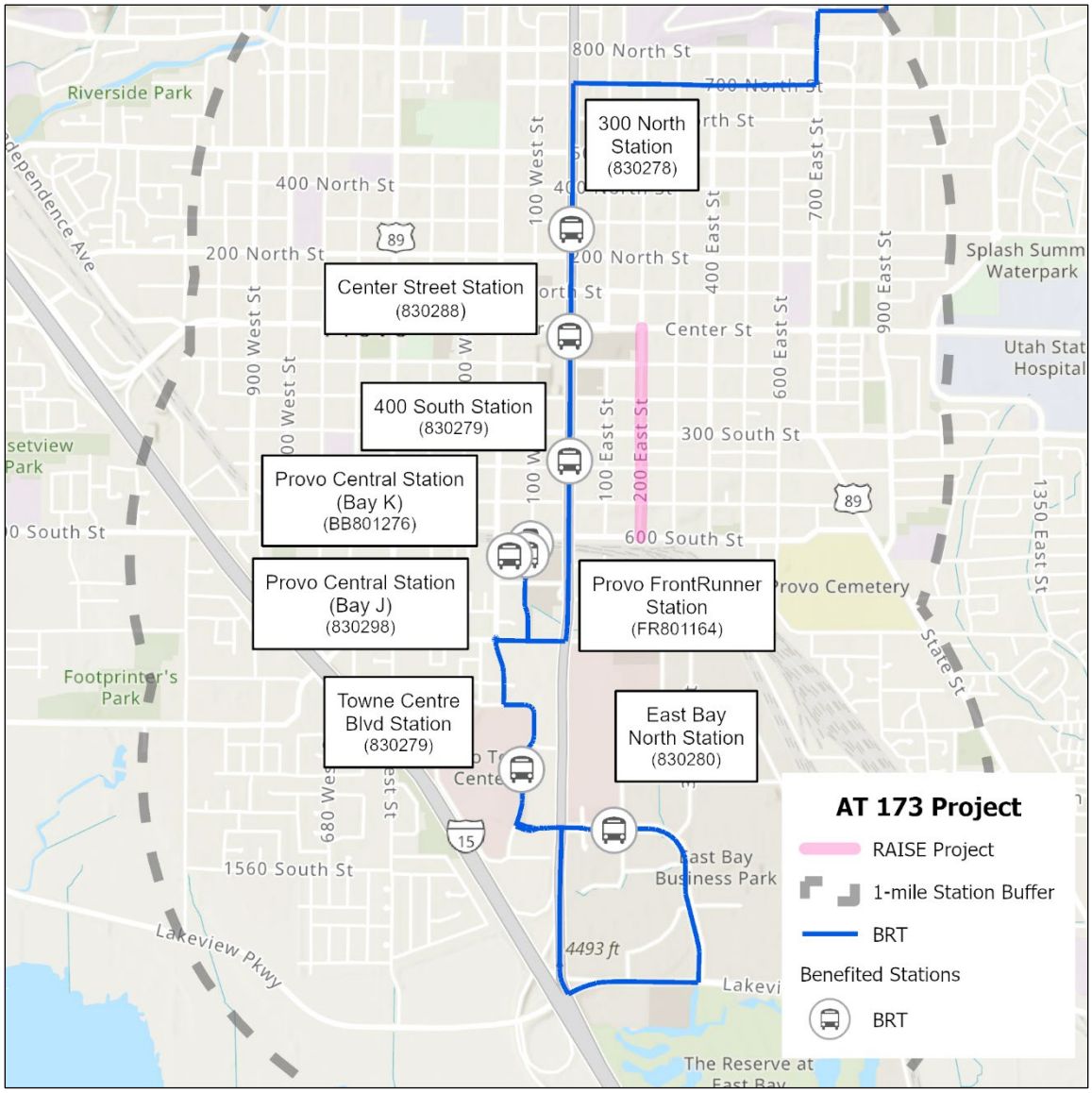
200 East is a local road, and vehicles park along the curb. The street has a buffered 6-foot-wide sidewalk but no bike lane. There are some bicycle sharrows in the middle of the road.

Transit Connections

The 200 East Bike Lane project in Provo will benefit the following five bus stops in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Bus	830X	830276	40.228615	–111.658709	117	115
Bus	830X	830278	40.237452	–111.658690	187	175
Bus	830X	830279	40.216850	–111.660970	63	54
Bus	830X	830280	40.214550	–111.656355	19	20
Bus	830X	830288	40.233380	–111.657560	216	197

Map



Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users.

Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere. For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	◐
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐

Criterion	Benefits	
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	◐
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 24	2010 Census Tract 25	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$119,246.67	$1,205,716.29	$1,324,962.95	$1,059,970.36	$264,992.59
Construction Contingencies – 20%	$23,849.33	$241,143.26	$264,992.59	$211,994.07	$52,998.52
Construction Subtotal	**$143,096.00**	**$1,446,859.54**	**$1,589,955.54**	**$1,271,964.43**	**$317,991.11**
Management – 6% of Construction Subtotal	$8,585.76	$86,811.57	$95,397.33	$76,317.87	$19,079.47
Design Engineering/ Architecture – 15% of Construction Subtotal	$21,464.40	$217,028.93	$238,493.33	$190,794.66	$47,698.67
Environmental – 2% of Construction Subtotal	$2,861.92	$28,937.19	$31,799.11	$25,439.29	$6,359.82
Construction Engineering/ Inspection – 10% of Construction Subtotal	$14,309.60	$144,685.95	$158,995.55	$127,196.44	$31,799.11
Management, PE, CE Subtotal	**$47,221.68**	**$477,463.65**	**$524,685.33**	**$419,748.26**	**$104,937.07**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$190,317.68**	**$1,924,323.19**	**$2,114,640.87**	**$1,691,712.70**	**$422,928.17**

Madison Avenue Improvements/Gold Star Shared-use Path (ID: FLM2_4)

Project Overview

This project is a series of improvements along the Madison Avenue corridor in Ogden, connecting from the Ogden River Trail to 26th Street. This includes a shared-use path connecting the Ogden River Trail to 20th Street, then a series of six intersection improvements to get users safely across major and minor roads. Minor roadway crossing improvements include lighting, pedestrian ramps, and crosswalk markings. Major roadway crossings include bulbouts, landscaping, pedestrian-activated beacons, and high-visibility crosswalk markings.

Key Features: 10-foot-wide shared-use path, pedestrian ramps, intersection bulbouts, high-visibility roadway crossings, and pedestrian-activated beacons

Context: Madison Avenue connects Ogden to the Ogden Parkway Trail. The addition of a shared-use path is a project that has been requested by the neighbors in the area. In 1992, Madison Avenue was vacated for a portion of the proposed trail, leaving a "barricade through the heart of Ogden's poorest neighborhood," as quoted during a city council meeting in 2016, and preventing convenient, direct access to the city's main trail. The intent is to provide a safe path that will connect schools, recreation areas, and services along an improved, tree-lined and green pathway. This path will assist in cleaning up the neighborhood and creating an area the neighbors will use and feel proud to have in their area. Full bus service is one block east of the trail and is accessible through east-west routes.

Existing Conditions

Madison Avenue is currently separated by a school, and there are no connections between the south and north of the school. On the south side, there are buffered sidewalks but no bicycle facilities.

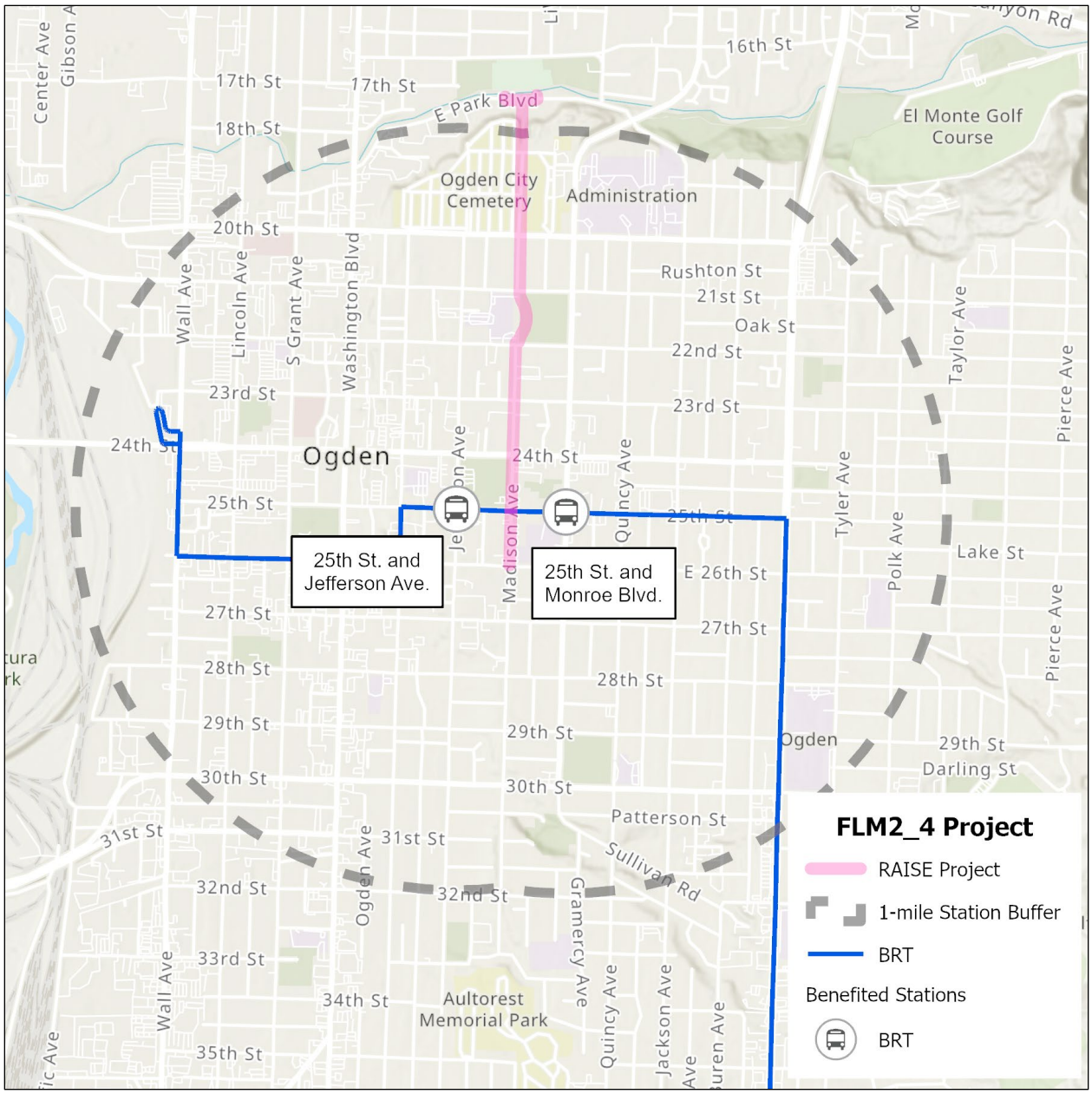
Transit Connections

The Madison Avenue Improvements/Gold Star Shared-use Path project in Ogden will benefit the following two bus stops in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Average Boarding*	Average Alighting*
Bus	OGX	25th St. and Monroe Blvd.	44	44
Bus	OGX	25th St. and Jefferson Ave.	97	97

*Modeled ridership from the Ogden Express Environmental Assessment

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, paths and trails are an important part of a community. Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town.

In a well-designed community, homes, parks, stores, and schools are connected by safe walking and biking routes. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. Such routes allow all members of the community a chance to enjoy the outdoors and get physical and mental health benefits. Shared-use paths provide desirable space for physical activity, which in turn can reduce medical costs and prevent or decrease some types of chronic illnesses due to increased physical activity. Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety.

When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's quality of life by providing opportunities for social connection, economic development, and safe places for recreation and commuting.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	◐
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●

Criterion	Benefits	
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	●
	Promotes long-term economic growth and other broader economic and fiscal benefits	○
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 2009	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$1,534,537	$1,534,537	$1,227,630	$306,907
Construction Contingencies – 20%	$306,907	$306,907	$245,526	$61,381
Construction Subtotal	**$1,841,444**	**$1,841,444**	**$1,473,155**	**$368,289**
Management – 6% of Construction Subtotal	$110,487	$110,487	$88,389	$22,097
Design Engineering/ Architecture – 15% of Construction Subtotal	$276,217	$276,217	$220,973	$55,243
Environmental – 2% of Construction Subtotal	$36,829	$36,829	$29,463	$7,366
Construction Engineering/ Inspection – 10% of Construction Subtotal	$184,144	$184,144	$147,316	$36,829
Management, PE, CE Subtotal	**$607,677**	**$607,677**	**$486,141**	**$121,535**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00
Total	**$2,449,121**	**$2,449,121**	**$1,959,297**	**$489,824**

Jordan & Salt Lake Canal Trail (ID: FLM2_2)

Project Overview

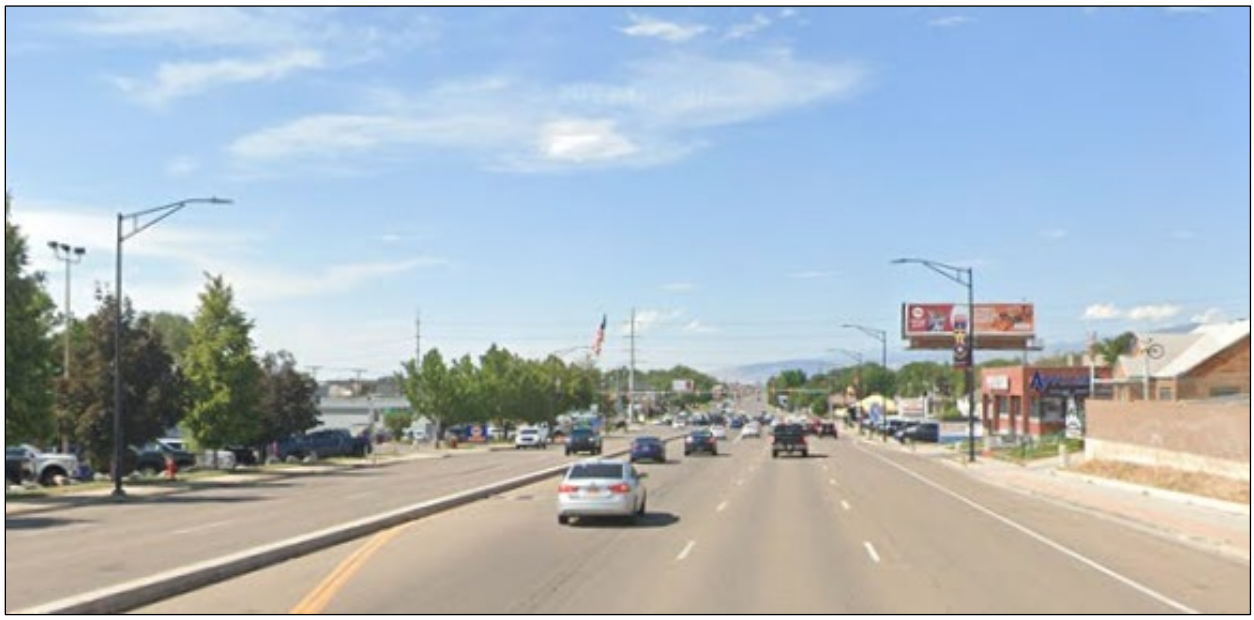
This project will create a new section of trail in Sandy, connecting 9400 South north to 9000 South and providing a much-needed alternative to State Street.

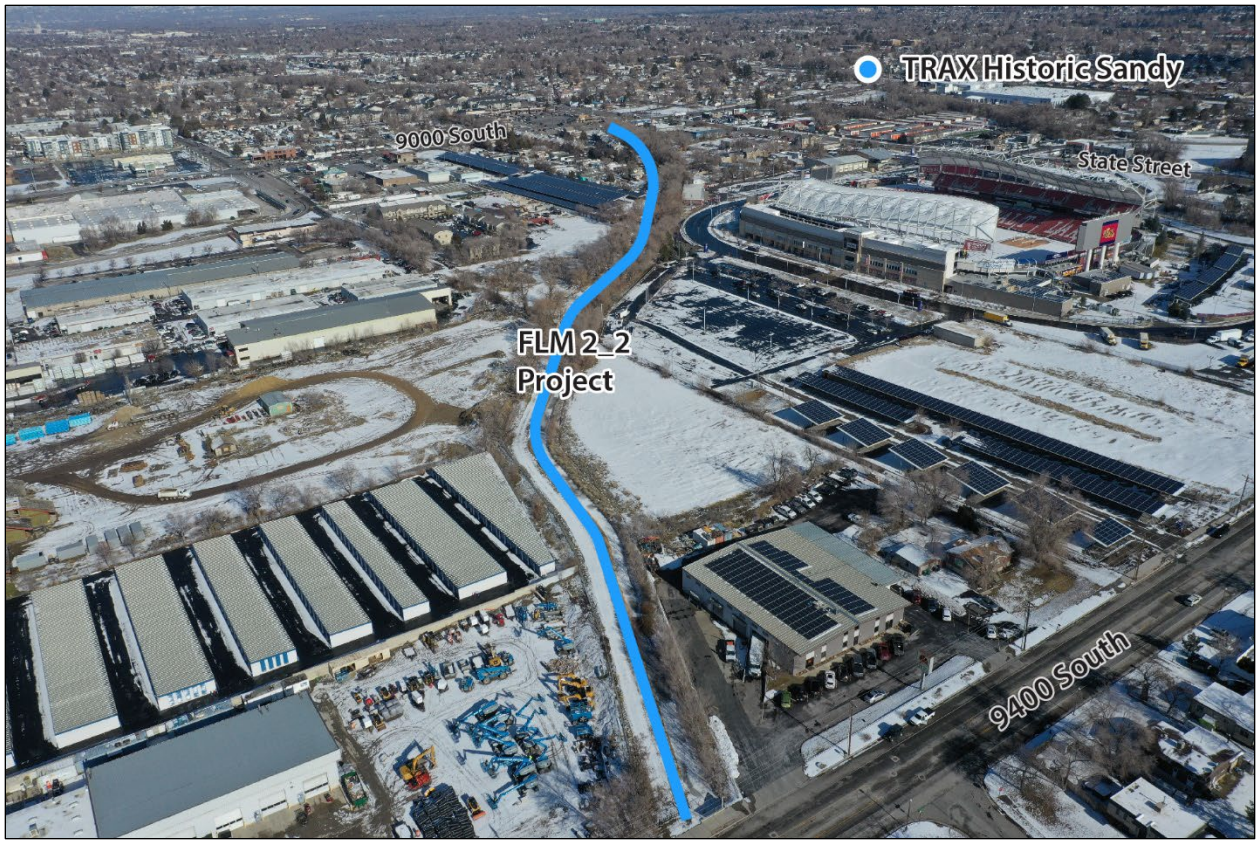
Key Feature: 10-foot-wide paved trail

Context: State Street is a major arterial that is seven lanes of traffic without bike lanes and 6-foot-wide sidewalks up against travel lanes. The path will be accessed by a sidewalk coming from the TRAX station and will ultimately tie into a pedestrian bridge that will cross I-15, creating connections between the east and west sides of an interstate. The Draper FrontRunner station is located on the west side of I-15, and this is an important gap to address to create opportunities for travel along the Wasatch Front.

Existing Conditions

There is no existing facility along the project alignment, which follows the Jordan & Salt Lake Canal. State Street, which is the most direct alternative, has six to seven lanes of traffic, no bike lanes, and unprotected narrow sidewalks.





Transit Connections

The Jordan & Salt Lake Canal Trail project in Sandy will benefit the following rail station in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Blue Line	TX173021	40.589811	–111.885661	429	461

Map

Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, paths and trails are an important part of a community. In a well-designed community, homes, parks, stores, and schools are connected by safe walking and biking routes. Such routes allow all members of the community a chance to enjoy the outdoors and get physical and mental health benefits. Sidewalks provide many benefits, including safety, mobility, and overall healthier communities. Sidewalks separated from the roadway are the preferred accommodation for pedestrians. This leads to increased satisfaction with one's quality of life.

Shared-use paths can also provide mental health benefits by providing a place to exercise, which has been linked to decreasing mental health conditions such as depression and anxiety. Paths can allow people to more easily bike or walk to where they want to go, provide an opportunity for people to get fresh air and exercise, and, in some cases, even attract tourists from out of town. Paths are an amenity that keeps existing residents and attracts new people, an asset that contributes to community identity. When residents use paths frequently, they become an integral part of community life. All in all, connected paths can measurably improve a community's quality of life by providing opportunities for social connection and safe places for recreation and commuting. For a similar example, MASS DOT quantified the benefits of shared-use paths for several communities.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	◐
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	◐
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	◐
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	◐
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●

Criterion	Benefits	
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	◐
	Addresses current or projected system vulnerabilities for underserved communities;	◐
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	◐

Project Budget

Project Element	2010 Census Tract 1126.05	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$1,341,997.96	$1,341,997.96	$1,073,598.37	$268,399.59
Construction Contingencies – 20%	$268,399.59	$268,399.59	$214,719.67	$53,679.92
Construction Subtotal	**$1,610,397.55**	**$1,610,397.55**	**$1,288,318.04**	**$322,079.51**
Management – 6% of Construction Subtotal	$96,623.85	$96,623.85	$77,299.08	$19,324.77
Design Engineering/ Architecture – 15% of Construction Subtotal	$241,559.63	$241,559.63	$193,247.71	$48,311.93
Environmental – 2% of Construction Subtotal	$32,207.95	$32,207.95	$25,766.36	$6,441.59
Construction Engineering/ Inspection – 10% of Construction Subtotal	$161,039.76	$161,039.76	$128,831.80	$32,207.95
Management, PE, CE Subtotal	**$531,431.19**	**$531,431.19**	**$425,144.95**	**$106,286.24**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00
Total	**$2,141,828.75**	**$2,141,828.75**	**$1,713,463.00**	**$428,365.75**

Magna Downtown Revitalization Project (ID: FLM2_1)

Project Overview

This project will complete five sidewalk gap projects, creating a complete sidewalk network surrounding five bus stations in Magna's core. Work will include new sidewalk segments, utility relocation, Americans with Disabilities Act (ADA)–compliant ramps, and bulbouts.

Key Feature: Sidewalks

Context: 2700 South is Magna's Main Street. By improving the gaps to the north and south sidewalks, residential areas are better connected to community services located along Main Street (that is, senior center, theaters, library, parks, schools, churches, and sport areas). These sidewalks also provide access to multiple bus stops that reach commercial areas, stores, and the broader Wasatch Front, where additional jobs and healthcare are available. The UTA 35 (Magna) bus route is a key means of access to various businesses and services to the east. Although sidewalks exist on the other side of the street for most of these gaps, creating a complete network (both sides of the street) is important for safety, convenience, and accessibility for all users.

Existing Conditions

On 9050 West, there is currently a sidewalk on both sides of the road. However, the sidewalks, especially on the east side, are unkept and deteriorating, with the sidewalk falling into the curb and gutter and road.

There is one incomplete sidewalk on 8990 West. The sidewalk is on the east side of the street and exists on only about a third of the road. The rest is overgrown with grass and plants.

8950 West has one complete sidewalk (in good condition) and one incomplete sidewalk. The incomplete sidewalk has deteriorated, and plants have overgrown it.

On 8850 West, there is a buffered sidewalk on the west side. A sidewalk begins on the east side of the road but quickly ends with no sidewalk along the rest of the road.

All sidewalks are about 3 feet wide, except in a few instances where plants and grass have overgrown onto the sidewalk, making the width narrower.

9050 West

8990 West

8850 West

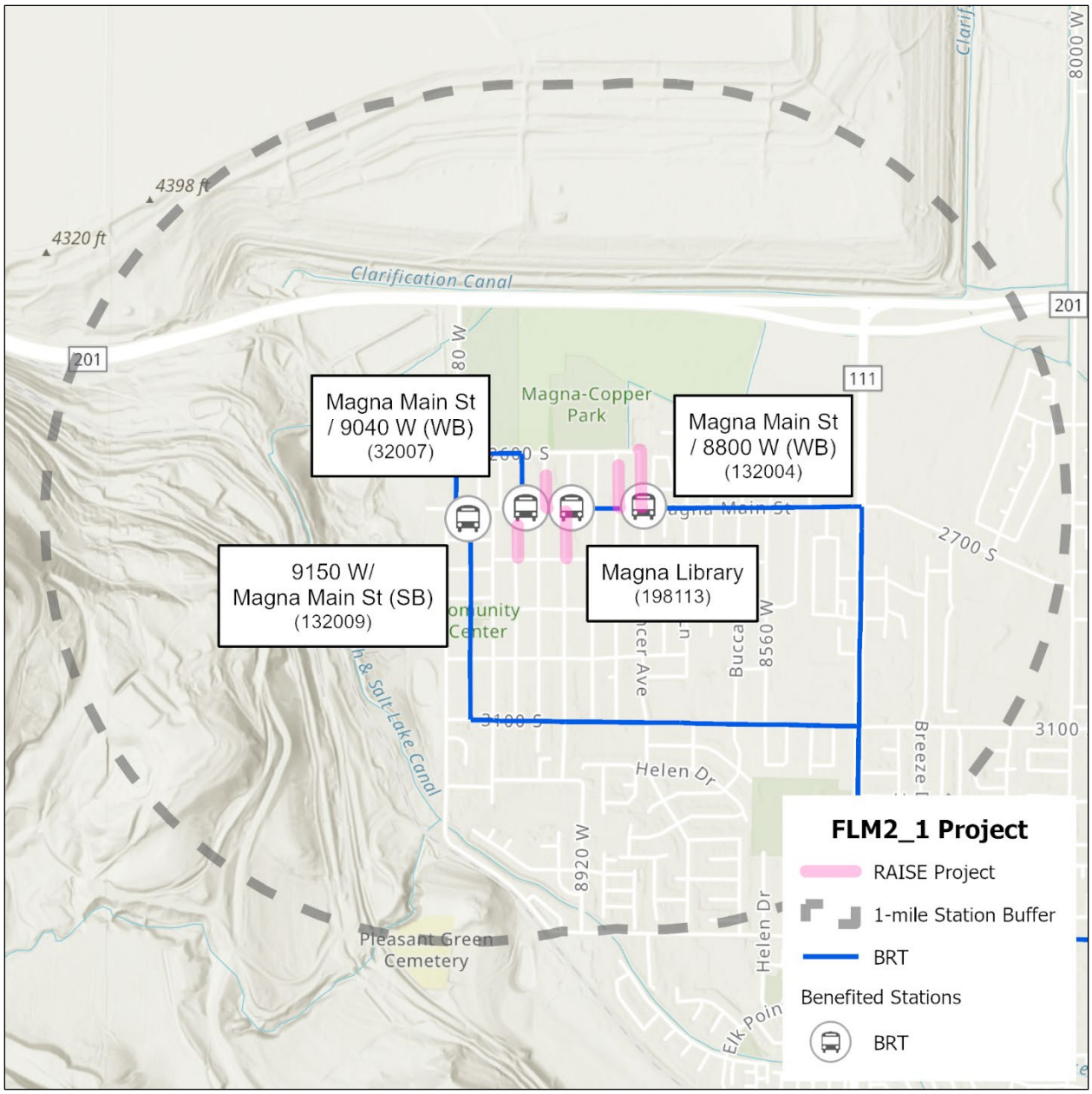
8950 West

Transit Connections

The Magna Downtown Revitalization Project will benefit the following four bus stops in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Bus	35	132004	40.711131	–112.1016340	7	10
Bus	35	132007	40.711031	–112.1069280	14	16
Bus	35	132009	40.710641	–112.1095240	6	5
Bus	35	198113	40.711049	–112.1048642	26	26

Map



Benefits

In addition to the active transportation benefits detailed in the merit criteria narrative, sidewalks provide many benefits including safety, mobility, and overall healthier communities. Sidewalks separated from the roadway are much preferred for the comfort and well-being of pedestrians and/or users with disabilities. This leads to increased satisfaction with one's quality of life.

As public spaces, sidewalks serve as the front steps to a community, activating streets socially and economically. Safe, accessible, and well-maintained sidewalks have been found to enhance general public health and maximize social capital. Just as roadway expansions and improvements have historically

enhanced travel for motorists, superior sidewalk design can encourage walking by making it more attractive. When good walkways are provided, residents can use them for recreational walking, contributing to both physical and mental health and well-being.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	◐
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	◐
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	◐
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Inclusive economic development such as the utilization of Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, and Veteran Owned Businesses	●
	Promotes long-term economic growth and other broader economic and fiscal benefits	●
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	●
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●

Criterion	Benefits	
	Reduce construction and maintenance burdens through efficient and well-integrated design;	◐
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	●
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1139.06	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$2,098,520.40	$2,098,520.40	$1,678,816.32	$419,704.08
Construction Contingencies – 20%	$419,704.08	$419,704.08	$335,763.26	$83,940.82
Construction Subtotal	**$2,518,224.49**	**$2,518,224.49**	**$2,014,579.59**	**$503,644.90**
Management – 6% of Construction Subtotal	$151,093.47	$151,093.47	$120,874.78	$30,218.69
Design Engineering/ Architecture – 15% of Construction Subtotal	$377,733.67	$377,733.67	$302,186.94	$75,546.73
Environmental – 2% of Construction Subtotal	$50,364.49	$50,364.49	$40,291.59	$10,072.90
Construction Engineering/ Inspection – 10% of Construction Subtotal	$251,822.45	$251,822.45	$201,457.96	$50,364.49
Management, PE, CE Subtotal	**$831.014.08**	**$831.014.08**	**$664,811.26**	**$166,202.82**
Rights-of-Way	$377,856.00	$377,856.00	$302,284.80	$75,571.20
Total	**$3,727,094.57**	**$3,727,094.57**	**$2,981,675.65**	**$745,418.91**

Main Street/West Temple Bike Lane (ID: FLM2_5)

Project Overview

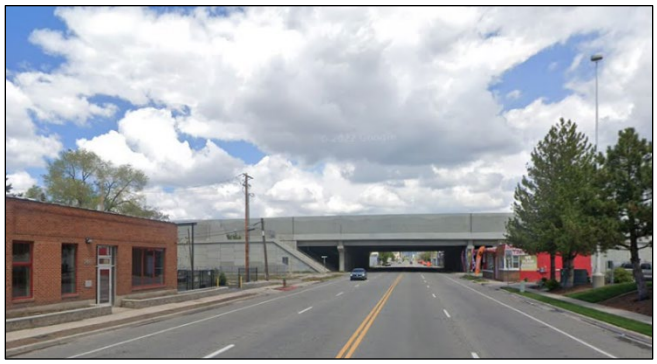
This project will create a corridor of buffered bike lanes on sections of Main Street and West Temple in South Salt Lake, connected by the S-Line Trail. The approximately 1-mile corridor connects from 2100 South south to 2700 South.

Key Feature: Buffered bike lanes

Context: The boundary for Salt Lake City and South Salt Lake is 2100 South, also the north end of this bike lane improvement project. Main Street, north of 2100 South, provides cyclists with a nice bike lane that abruptly stops at the city boundary. The addition of buffered bike lanes will address a significant gap along Main Street. The Central Pointe TRAX station exists at the transition point to West Temple. There is a multi-use trail between Main Street and West Temple; however, the West Temple bike lanes need to be updated and clearly marked to provide the safest, most comfortable experience for cyclists. Main Street is directly adjacent to a major grocery store and multiple businesses, and the project ends at 2700 South, where there is direct access over I-15 that provides an important connection between the east and west sides of the community.

Existing Conditions

On West Temple, there is a bike lane with a large shoulder for parking; however, the paint is fading. There are no bike lanes on Main Street, and the street has very narrow shoulders.

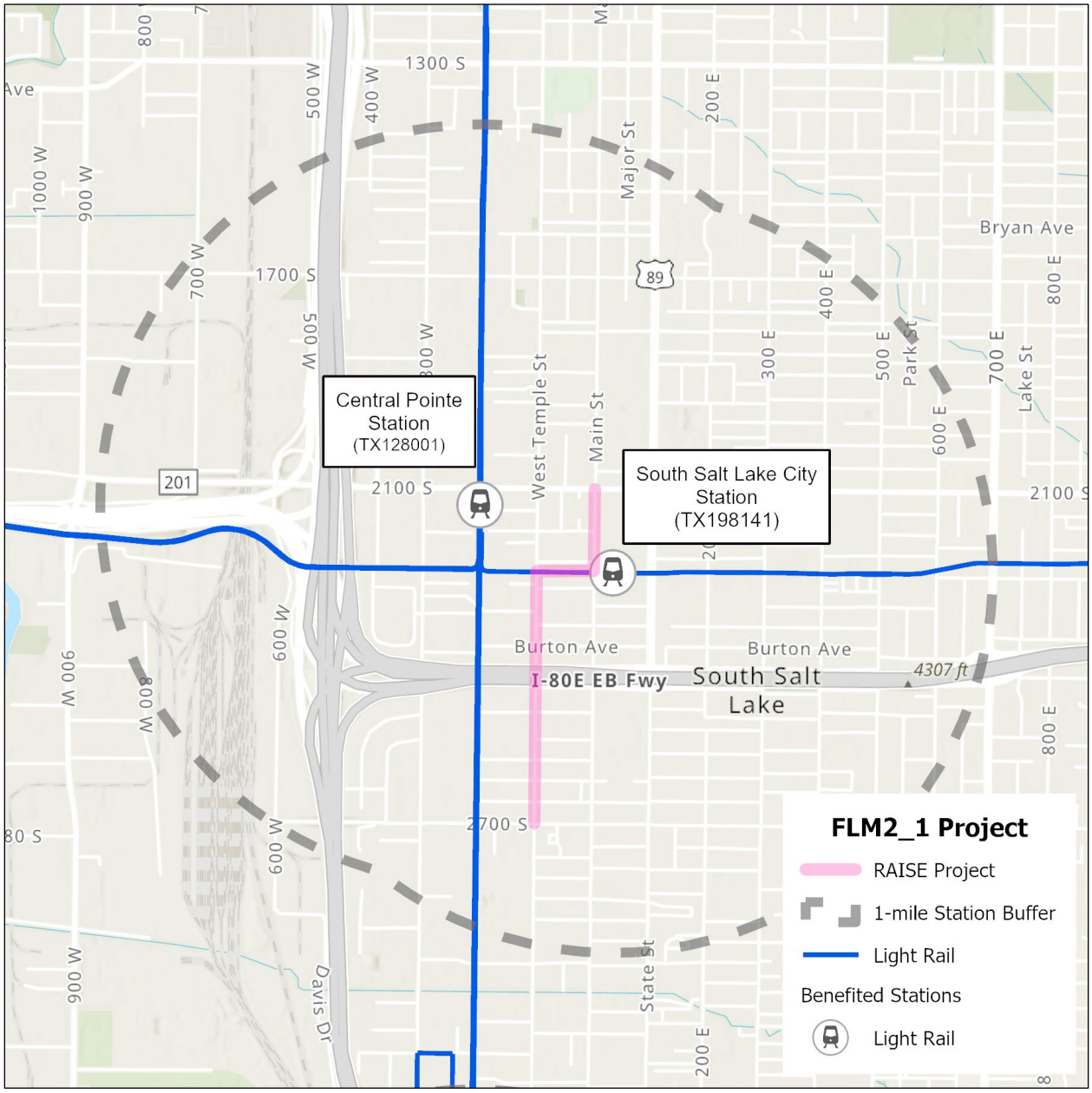


Transit Connections

The Main Street/West Temple Bike Lane project in South Salt Lake will benefit the following two rail stations in a historically disadvantaged area.

Mode	Route ID	Stop or Station ID	Latitude	Longitude	Average Boarding	Average Alighting
Rail	Blue Line	TX125094	40.724801	–111.896861	769	714
Rail	S-Line	TX198141	40.722263	–111.890174	144	152

Map



Benefits

To expand on the active transportation benefits detailed in the merit criteria narrative, buffered bike lanes encourage bicycling by contributing to the perception of safety among users of the bicycle network. Improved safety perception helps biking be more appealing to a wider cross-section of bicycle users. Further, investing in networks of protected bicycle lanes has significant potential to reduce greenhouse gas emissions, lower transport costs, prevent road fatalities, and improve the quality of life for people everywhere. For example, in 2016, New York City found that every $1,300 invested in building bike lanes in 2015 provided benefits equivalent to 1 additional year of life at full health over the lifetime of all city residents, according to a new economic assessment.

Benefits according to merit criteria: This graphic is a qualitative measurement of this project and the benefits defined in the RAISE merit criteria. A black circle indicates the project fully meets the benefit, a half circle indicates the project partially meets the benefit, and a white circle (if present) indicates that the benefit does not apply to the project. This project meets the following percentage of merit criteria:

Criterion	Benefits	
SAFETY	Protects non-motorized travelers and communities from safety risks	●
	Reduces fatalities and/or serious injuries to bring them below the state-wide average for underserved communities	●
ENVIRONMENTAL SUSTAINABILITY	Reduces transportation-related air pollution and greenhouse gas emissions in underserved communities	●
	Implements transportation-efficient land use and design, such as drawing on the features of historic towns and villages that had a mix of land uses, compact and walkable development patterns, accessible green space, and neighborhood centers	●
	Reduces vehicle miles traveled specifically through modal shift to transit or active transportation	●
QUALITY OF LIFE	Increases affordable transportation choices by improving and expanding active transportation usage or significantly reducing vehicle dependence, particularly in underserved communities	●
	Reduces transportation and housing cost burdens by integrating mixed-use development and a diversity of housing types, including affordable housing, with multimodal transportation infrastructure	◐
	Coordinates and integrates land use, affordable housing, and transportation planning in order to create more livable communities and expand travel choices	●
	Improves access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation	●
	Implement transit-oriented development that benefits existing residents and businesses, low-income and disadvantaged communities, and minimizes displacement;	◐
	Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation	●
	Proactively addresses equity	●
MOBILITY & COMMUNITY CONNECTIVITY	Improves system-wide connectivity with access to transit, micro-mobility, and mobility on-demand	●
	Implements plans, based on community participation and data, that identifies and addresses gaps in the existing network	●
	Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options	●
	Includes transportation features that increase the accessibility for non-motorized travelers for underserved communities, such as through a Complete Streets approach	●
ECONOMIC COMPETITIVENESS & OPPORTUNITY	Promotes long-term economic growth and other broader economic and fiscal benefits	◐
	Promotes greater public and private investments in land-use productivity, including rural main street revitalization or locally driven density decisions that support equitable commercial and mixed-income residential development	◐
STATE OF GOOD REPAIR	Restores and modernizes (such as through road diets and complete streets approaches) the existing core infrastructure assets that have met their useful life;	●
	Creates new infrastructure in remote communities that will be maintained in a state of good repair;	●
	Addresses current or projected system vulnerabilities for underserved communities;	●
	Prioritizes improvement of the condition and safety of existing transportation infrastructure within the existing footprint	●

Criterion	Benefits	
PARTNERSHIP & COLLABORATION	Collaborates with public and/or private entities	●
	Documents support from local, regional, or national levels	◐
	Engages residents and community-based organizations to ensure equity considerations for underserved communities are meaningfully integrated throughout the lifecycle of the project	●

Project Budget

Project Element	2010 Census Tract 1115	Total Cost of Element	RAISE Grant (80%)	Local Match (20%)
Construction	$1,247,361.44	$1,247,361.44	$997,889.15	$249,472.29
Construction Contingencies – 20%	$249,472.29	$249,472.29	$199,577.83	$49,894.46
Construction Subtotal	**$1,496,833.72**	**$1,496,833.72**	**$1,197,466.98**	**$299,366.74**
Management – 6% of Construction Subtotal	$89,810.02	$89,810.02	$71,848.02	$17,962.00
Design Engineering/ Architecture – 15% of Construction Subtotal	$224,525.06	$224,525.06	$179,620.05	$44,905.01
Environmental – 2% of Construction Subtotal	$29,936.67	$29,936.67	$23,949.34	$5,987.33
Construction Engineering/ Inspection – 10% of Construction Subtotal	$149,683.37	$149,683.37	$119,746.70	$29,936.67
Management, PE, CE Subtotal	**$493,955.13**	**$493,955.13**	**$395,164.10**	**$98,791.03**
Rights-of-Way	$0.00	$0.00	$0.00	$0.00
Total	**$1,990,788.85**	**$1,990,788.85**	**$1,592,631.08**	**$398,157.77**

APPENDIX B

Letters of Support

Michael S. Lee, Senator
Mitt Romney, Senator
John R. Curtis, Congressman
Blake D. Moore, Congressman
Burgess Owens, Congressman
Chris Stewart, Congressman
Spencer J. Cox, Governor of Utah
Utah Department of Health and Human Services
Utah Division of Multicultural Affairs
Magna Metro Township
Midvale City
Millcreek City
City of Ogden
Provo City
Salt Lake City
Sandy City
South Salt Lake City
West Valley City
Get Healthy Utah

Letters of Support Amendment

The following letters of support were requested when the project list included 16 projects, spanning 10 cities. Nearing the RAISE deadline one project was removed bringing the project total to 15, and the total cooperating cities to 9.

MICHAEL S. LEE
UTAH

ALLYSON BELL
CHIEF OF STAFF

United States Senate

WASHINGTON, DC 20510–4404

COMMITTEES:
JUDICIARY
ENERGY AND NATURAL RESOURCES
COMMERCE, SCIENCE, AND TRANSPORTATION
JOINT ECONOMIC COMMITTEE

February 6, 2023

Mr. Carlos Braceras
Executive Director
Utah Department of Transportation
PO Box 141245
Salt Lake City, UT 84114-1245

RE: Utah Department of Transportation's First/Last Mile Connectivity Project RAISE Grant Application

Dear Mr. Braceras:

It has come to my attention that the Utah Department of Transportation (UDOT), in partnership with the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC) metropolitan planning organization, and the Mountainland Association of Governments (MAG) metropolitan planning organization, is seeking a Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant for a First/Last Mile Connectivity Project through the U.S. Department of Transportation.

From my understanding, regional transportation partners have identified a list of priority projects that will increase connectivity to transit and active transportation networks. Some examples of these projects include new or replaced sidewalks, buffered bike lanes, multi-use paths, railroad crossing improvements, intersection improvements, and other active transportation improvements.

It is the hope of the regional planning organizations listed above that this First/Last Mile Connectivity investment will increase access to public transit options.

It is an honor to serve you and the people of Utah in the United States Senate. Please let me know if I can be of further assistance.

Sincerely,

Michael S. Lee
United States Senator

361A Russell Senate Office Building • (202) 224–5444 • (202) 228–1168 Fax

MITT ROMNEY
UTAH

COMMITTEES
FOREIGN RELATIONS
HEALTH, EDUCATION, LABOR, AND PENSIONS
HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
BUDGET

United States Senate

SR-354
RUSSELL BUILDING
WASHINGTON, DC 20510

125 S. STATE STREET
#8402
SALT LAKE CITY, UT 84138

February 5, 2023

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Letter of Support for the Utah Department of Transportation's First/Last Mile Connectivity Project RAISE Grant Application

Dear Secretary Buttigieg:

I write in strong support for the Utah Department of Transportation's (UDOT's) Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant request for the First/Last Mile Connectivity Project. UDOT is seeking this grant in partnership with the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC) metropolitan planning organization, and the Mountainland Association of Governments (MAG) metropolitan planning organization.

Regional transportation partners have identified a list of priority projects that will increase connectivity to transit and active transportation networks along the Wasatch Front. Some examples of these types of projects include new or replaced sidewalks, buffered bike lanes, multi-use paths, railroad crossing improvements, intersection improvements, and other active transportation improvements.

This First/Last Mile Connectivity funding will make it easier for residents to walk or bike to and from transit, making it easier and more likely that individuals use transit options. That means less traffic congestion, less pollution, more household savings, and more access to services, jobs, and educational opportunities for those with limited access to a personal vehicle.

Again, I strongly support this RAISE Grant request and respectfully urge your full and fair consideration of this application. If you have any questions, please reach out to Kelsey Berg on my staff at Kelsey_Berg@romney.senate.gov.

Sincerely,

Mitt Romney
United States Senator

Congress of the United States
Washington, DC 20515

January 30, 2023

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

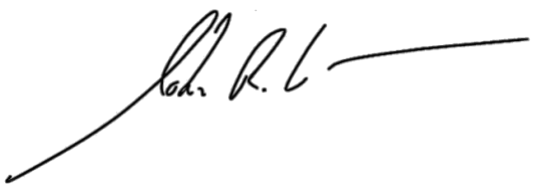
I write to urge full and fair consideration for the Utah Department of Transportation's (UDOT's) Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant request for the First/Last Mile Connectivity Project. UDOT is seeking this grant in partnership with the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC) metropolitan planning organization, and the Mountainland Association of Governments (MAG) metropolitan planning organization.

Regional transportation partners have identified a list of priority projects that will increase connectivity to transit and active transportation networks along the Wasatch Front. Some examples of these types of projects include new or replaced sidewalks, buffered bike lanes, multi-use paths, railroad crossing improvements, intersection improvements, and other active transportation improvements.

This First/Last Mile Connectivity funding will make it easier for residents to walk or bike to and from transit, making it easier and more likely that individuals use transit options. That means less traffic congestion, less pollution, more household savings, and more access to services, jobs, and educational opportunities for those with limited access to a personal vehicle.

Again, I strongly support this RAISE Grant request and respectfully urge your full and fair consideration of this application. If you have any questions, please reach out to Troy Dougall on my staff at Troy.Dougall@mail.house.gov.

Sincerely,



John R. Curtis
Member of Congress

BLAKE D. MOORE
1ST DISTRICT, UTAH

1320 LONGWORTH HOB
WASHINGTON, D.C. 20515
202-225-0453

324 25TH STREET
OGDEN, U.T. 84401
801-625-0107

BLAKEMOORE.HOUSE.GOV

Congress of the United States
House of Representatives
Washington, DC 20515–4401

COMMITTEES

BUDGET

ARMED SERVICES
SUBCOMMITTEE ON READINESS
SUBCOMMITTEE ON CYBER, INNOVATION TECHNOLOGIES, AND INFORMATION TECHNOLOGY

NATURAL RESOURCES
VICE RANKING MEMBER, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
SUBCOMMITTEE ON NATIONAL PARKS, FORESTS, AND PUBLIC LANDS

February 7, 2023

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg,

I am writing in support of the Utah Department of Transportation's (UDOT) Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant request for the First/Last Mile Connectivity Project.

UDOT is working with a coalition of leaders from the Utah Transit Authority, the Wasatch Front Regional Council, and the Mountainland Association of Governments to invest in important infrastructure projects that will increase connectivity to both active transportation and transit for residents and visitors alike in Utah. These projects will play vital roles in reducing pollution and traffic congestion as we work to make it easier to connect our rapidly growing communities.

I encourage and appreciate your full and fair consideration of this important funding request. If you have any questions, please contact Paul Johnson, my Legislative Director, at Paul.Johnson@mail.house.gov.

Sincerely,

Blake D. Moore

Blake Moore
Member of Congress

Congress of the United States
Washington, DC 20515

January 30, 2023

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Letter of Support for the Utah Department of Transportation's First/Last Mile Connectivity Project RAISE Grant Application

Dear Secretary Buttigieg:

I write in strong support for the Utah Department of Transportation's (UDOT's) Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant request for the First/Last Mile Connectivity Project. UDOT is seeking this grant in partnership with the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC) metropolitan planning organization, and the Mountainland Association of Governments (MAG) metropolitan planning organization.

Regional transportation partners have identified a list of priority projects that will increase connectivity to transit and active transportation networks along the Wasatch Front. Some examples of these types of projects include new or replaced sidewalks, buffered bike lanes, multi-use paths, railroad crossing improvements, intersection improvements, and other active transportation improvements.

This First/Last Mile Connectivity funding will make it easier for residents to walk or bike to and from transit, making it easier and more likely that individuals use transit options. That means less traffic congestion, less pollution, more household savings, and more access to services, jobs, and educational opportunities for those with limited access to a personal vehicle.

Again, I strongly support this RAISE Grant request and respectfully urge your full and fair consideration of this application. If you have any questions, please reach out to Miriam Harmer on my staff at Miriam.Harmer@mail.house.gov.

Sincerely,

Burgess Owens
Member of Congress

DISTRICT OFFICES

420 EAST SOUTH TEMPLE STREET, #390
SALT LAKE CITY, UT 84111
(801) 364-5550

253 WEST ST. GEORGE BOULEVARD, #100
ST. GEORGE, UT 84770
(435) 627-1500

Congress of the United States

House of Representatives

Washington, DC 20515–4402

CHRIS STEWART
2ND DISTRICT, UTAH

PERMANENT SELECT COMMITTEE ON INTELLIGENCE
RANKING MEMBER
STRATEGIC TECHNOLOGIES AND ADVANCED RESEARCH SUBCOMMITTEE

COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON INTERIOR, ENVIRONMENT, AND RELATED AGENCIES
SUBCOMMITTEE ON FINANCIAL SERVICES AND GENERAL GOVERNMENT

COMMITTEE ON THE BUDGET

February 7, 2023

The Honorable Pete Buttigieg
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Letter of Support for the Utah Department of Transportation's First/Last Mile Connectivity Project RAISE Grant Application

Dear Secretary Buttigieg:

I am writing today to urge your full and fair consideration for the Utah Department of Transportation's (UDOT's) Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant application for the First/Last Mile Connectivity Project. UDOT is seeking this grant in partnership with the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC) metropolitan planning organization, and the Mountainland Association of Governments (MAG) metropolitan planning organization.

Regional transportation partners have identified a list of priority projects that will increase connectivity to transit and active transportation networks along the Wasatch Front. Examples of these projects include new or replaced sidewalks, buffered bike lanes, multi-use paths, railroad crossing improvements, intersection improvements, and other active transportation improvements.

This First/Last Mile Connectivity funding will support accessibility for residents to walk or bike to and from transit, increasing the ability and likelihood for individuals to utilize transit options. This would help reduce traffic congestion and pollution, increase household savings, and provide access to services, jobs, and educational opportunities for those with limited access to a personal vehicle.

Again, I respectfully urge your full and fair consideration for this RAISE Grant application. If you have any questions, please reach out to Connor Meyers on my staff at Connor.Meyers@mail.house.gov.

Sincerely,

Chris Stewart
Member of Congress

STATE OF UTAH

SPENCER J. COX
GOVERNOR

OFFICE OF THE GOVERNOR
SALT LAKE CITY, UTAH
84114-2220

DEIDRE M. HENDERSON
LIEUTENANT GOVERNOR

Feb. 10, 2023

The Honorable Pete Buttigieg
Secretary of Transportation, U.S. Department of Transportation
1200 New Jersey Ave., SE
Washington, D.C. 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

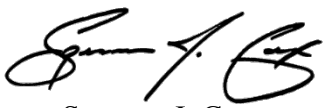
Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 cities, three counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

I fully support this important project and ask for your favorable consideration.

Sincerely,



Spencer J. Cox
Governor of Utah

State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Health & Human Services

TRACY S. GRUBER
Executive Director

NATE CHECKETTS
Deputy Director

DR. MICHELLE HOFMANN
Executive Medical Director

DAVID LITVACK
Deputy Director

NATE WINTERS
Deputy Director

January 30, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities Quality of Life through Access to Opportunities and Healthy Transportation Connections

Dear Secretary Buttigieg,

I am pleased to express my support for the First/Last Mile Connections: Improving Communities Quality of Life Through Access to Opportunities and Healthy Transportation Connections 2023 RAISE Grant Application.

The Utah Department of Health and Human Services (DHHS) is a close partner of the Utah Department of Transportation, who is submitting this grant application on behalf of Utah communities. The importance of transportation options and supportive environments to the health of Utahns of all ages, abilities, and access to opportunities cannot be understated. Addressing the built environment to ensure that all individuals are able to safely travel in whatever way they choose, including by walking or cycling, supports healthy communities and encourages better health of individuals.

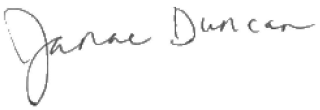
First/Last Mile Connections support these choices, or default options for those who are in some way unable or unwilling to drive, by developing coordinated network connections to transit or to routes that provide a safe and perceived safe ways to get to work, school, health care, and places that address daily needs such as access to healthy foods. Bike lanes, buffered bike lanes, multi-use paths, sidewalks, needed safety supports such as crosswalks, adequate lighting, wayfinding signage, and other features tie the network together to help people move through their community in a safe and equitable way.

The Utah DHHS strongly supports any effort that results in better health and equitable opportunities for all Utah communities. Utah DHHS staff have worked closely with the Utah Department of Transportation for many years to develop tools and policies that support walking and cycling. Being physically active is a powerful tool in improving the health of a community by decreasing chronic disease risk such as heart disease, stroke, certain types of cancers, and can improve chronic disease outcomes for individuals with diabetes and many other conditions. Individuals should not be denied these opportunities because they feel unsafe or limited in their ability to navigate an often restrictive urban environment.

We gratefully express our appreciation for the efforts made by the Department of Transportation to acknowledge and address the challenges many individuals face in their daily efforts regarding transportation access and opportunity. We believe that a strong support of First/Last Mile efforts will help public health and transportation achieve our goals to make Utah a healthy place to live.

I strongly support this First/Last Mile Connections project and ask for your consideration of the proposed efforts put forth in this application.

Sincerely,



Janae Duncan, MPA
Division Director, Division of Population Health

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Utah Division of
Multicultural Affairs

NUBIA PEÑA
Division Director

January 20th, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities Quality of Life through Access to Opportunities and Healthy Transportation Connections

Dear Secretary Buttigieg,

I wish to express my support for the **First/Last Mile Connections: Improving Communities Quality of Life through Access to Opportunities and Healthy Transportation Connections** 2023 RAISE Grant Application.

The RAISE Grant application, being submitted by the UDOT, is a highly collaborative effort between ten cities, three counties, the Utah Department of Transportation, the Utah Transit Authority, the Wasatch Front Regional Council (a Metropolitan Planning Organization (MPO)), and the Mountainland Association of Governments (an MPO). The projects are found and supported in the following communities along the Wasatch Front: Magna Township; Midvale City; Millcreek City; Ogden City; Orem City; Provo City; Salt Lake City; Sandy City; South Salt Lake City; and West Valley City.

The First/Last Mile Connections projects being proposed were identified and prioritized by our Regional transportation partners, taking into account the following criteria: improving conditions for underserved, overburdened, or disadvantaged communities, safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness and opportunity, state of good repair, innovation, partnership, and collaboration.

Specifically, the First/Last Mile Connection projects include bike lanes, buffered bike lanes, multi-use paths, sidewalks, wayfinding signing, safety improvements (crosswalks, lighting, streetscape, intersection improvements), and more.

These First/Last Mile Connection projects are crucial for those without access to cars. These projects enhance safety for non-motorized travelers, are sustainable, improve air quality, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. In partnership with transportation, equity, and planning stakeholders, the Utah Division of Multicultural Affairs released an exploratory white

paper, “The State of Transportation Equity in Utah”, to inform policymakers, community-based organizations, transportation advocates, and interested community members to better understand the disparities that exist in transportation. We applaud and acknowledge the strides that our partners involved in the First/Last Mile Connection have made as we strive for greater connectivity and ability for our communities to thrive and navigate opportunities in our state.

I fully support this extremely important First/Last Mile Connections project and ask for your favorable consideration.

Sincerely,

Nubia Peña
Senior Advisor - Equity & Opportunity
Office of Gov. Spencer J. Cox

Director
Utah Division of Multicultural Affairs
npena@utah.gov

Claudia Loayza
Planning Policy & Engagement Coordinator
Utah Division of Multicultural Affairs
cloayza@utah.gov

MAGNA METRO TOWNSHIP

8952 W Magna Main St
Magna, UT 84044
Phone: (385)258-3690
www.magnametrotownship.org

February 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Magna Township is proposing the following projects for the RAISE grant application: new sidewalk or sidewalk replacement on 9050 West, 8990 West, 8950 West, 8850 West, and 8800 West. These projects are crucial to our city's connections to regional transit, as well as grocery stores, the public library, parks, and other services. The addition of safe sidewalks will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $745,419 in 2026 dollars.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Dan W. Peay

Dan Peay
Mayor
Magna Metro Township

Midvale City
7505 S Holden Street
Midvale, UT 84047
801-567-7200
www.MidvaleCity.org

February 21, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg:

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Our City, Midvale, is proposing the following projects for the RAISE grant application: Center Street protected bike lane; Cottonwood Street buffered bike lane; Main Street/Holden Street buffered bike lane; and Maple Street multi-use path. These projects are crucial to our city's connections to transit and overall mobility, especially for those who may not have access to a vehicle. The addition of these bicycle facilities will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $1,210,170.

I fully support this important project and ask for your favorable consideration.

Sincerely,

[Marcus Stevenson]
[Mayor]

Millcreek City Council
Jeff Silvestrini, Mayor
Silvia Catten, District 1
Thom DeSirant, District 2
Cheri Jackson, District 3
Bev Uipi, District 4

Millcreek City Hall
3330 South 1300 East
Millcreek, Utah 84106
801-214-2700
millcreek.us

January 31, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 12 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Our City, Millcreek, is proposing the following project for the RAISE grant application: multi-use trail along the Millcreek/Murray boarder. This is crucial to our city's connection to transit in that it fills a gap between two trails that will be constructed in coordination with two large multi-family projects thus opening up critical access to transit for residents. The closing of this multi-use trail gap will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $111,166.92.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Jeff Silvestrini
Mayor

Mayor's Office
2549 Washington Blvd.
Suite 910
Ogden, Utah 84401
www.ogdencity.com

January 31, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Our City, Ogden, is proposing the following project for the RAISE grant application: Madison Ave Improvements/Gold Star Shared Use Path. This project is crucial to our city's connections to transit. The addition of pathway and intersection improvements, will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $489,824.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Mike Caldwell
Mayor of Ogden

provo
WELCOME HOME

MAYOR'S OFFICE
TEL (801) 852-6105
445 W CENTER ST
PROVO, UT 84601

February 27, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for nonmotorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Provo City is proposing the following projects as part of the RAISE grant application: buffered bike lanes on University Avenue - $3.7M, and bike lanes on 200 East - $2.1M. These two projects provide increased comfort and safety for cyclists accessing the highly successful UVX BRT route and the Provo Central commuter rail station. Equity will be advanced by improving connectivity for all modes in this area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $1,161,931 in 2026 dollars.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Michelle Kaufusi
Mayor
City of Provo

Erin Mendenhall
Mayor

JON LARSEN P.E.
Division of Transportation
Department of Community and Neighborhoods

February 10, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg:

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, Utah Department of Transportation, Utah Transit Authority, and two metropolitan planning organizations: Wasatch Front Regional Council and Mountainland Association of Governments.

Salt Lake City is proposing the following project for the RAISE grant application: State Street (Green Loop) Shared Use Path. This project is crucial to our city's connections to transit. The addition of a shared use path will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Salt Lake City is committing to matching 20% of the project costs within our jurisdiction in the event that a RAISE grant award is made to Utah Department of Transportation. The 20% match is the equivalent of $695,298.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Jon Larsen

Transportation Division Director

P.O. BOX 144502
349 South 200 East, Ste. 150
SALT LAKE CITY, UT 84114-5502

WWW.SLC.GOV
TEL 801-535-6630

SANDY CITY PUBLIC WORKS

MICHAEL GLADBACH
PUBLIC WORKS DIRECTOR

MONICA ZOLTANSKI
MAYOR

SHANE E. PACE
CHIEF ADMINISTRATIVE OFFICER

February 13, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express Sandy's support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: Wasatch Front Regional Council and Mountainland Association of Governments.

Our City, Sandy, is proposing the following projects as part of the RAISE grant application: Jordan/SL Canal Trail - $2.1M, Jordan Canal Trail - $1.3M. These projects are crucial to our city's connections to transit. The addition of multi-use paths will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this area.

Our city is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $691,188.

I fully support this important project and ask for your favorable consideration.

Sincerely,

MONICA M. ZOLTANSKI
Mayor
Sandy City

SOUTH SALT LAKE CITY ON THE MOVE

February 17, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Our City, South Salt Lake, is proposing the following project for the RAISE grant application: Main Street/West Temple Bike Lane. This project is crucial to our city's connections to transit. The addition of buffered bike lanes will encourage mode shift, reduce air pollutant emissions, and improve quality of life. Equity will be advanced by improving connectivity for all modes in this historically disadvantaged area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $398,158.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Cherie Wood

Mayor Cherie Wood

CHERIE WOOD
MAYOR

220 E MORRIS AVE
SUITE 200
SOUTH SALT LAKE CITY
UTAH
84115
O 801.483.6000
F 801.483.6001

West Valley City

Mayor's Office

February 15, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the **First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project**. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for non-motorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

West Valley City is proposing the following projects for the RAISE grant application:

4800 West buffered bike lanes and sidewalks (3500 South to 3100 South)

2200 West bike lanes and sidewalks (4100 South to 3800 South)

These projects are beneficial to our city's connections to transit on 3500 South. The addition of bike lanes and sidewalks will encourage mode shift, reduce air pollutant emissions, and improve quality of life.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $0.62 million.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Karen Lang

Karen Lang
West Valley City Mayor

GET HEALTHY UTAH

2180 S. 1300 E. #440
Salt Lake City, UT
GetHealthyUtah.org

January 31, 2023
The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Re: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities Quality of Life through Access to Opportunities and Healthy Transportation Connections

Dear Secretary Buttigieg,

I am writing to provide my support for the First/Last Mile Connections: Improving Communities Quality of Life through Access to Opportunities and Healthy Transportation Connections 2023 RAISE Grant Application.

Get Healthy Utah is a nonprofit organization working to improve healthy eating and active living in Utah. Our goal is to create a culture of health through collaboration and supporting best practices. Get Healthy Utah has been part of the Wasatch Choice Vision and collaborates with UDOT and other transportation organizations to improve active transportation, including First/Last Mile connections.

The proposed projects included in UDOT's RAISE Grant application will support our goal of active living and improved quality of life. The projects were identified and prioritized by our Regional transportation partners, taking into account the following criteria: improving conditions for underserved, overburdened, or disadvantaged communities, safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness and opportunity, state of good repair, innovation, partnership, and collaboration. These are all important elements we support in moving forward access to healthy transportation connections.

We envision a Utah where a culture of health permeates every Utah community. We strongly support and advocate for this funding for our Utah communities so we can provide the best possible opportunities for Utahns to engage in healthy choices.

Sincerely,

Alysia Ducuara, Executive Director
Get Healthy Utah

provo
WELCOME HOME

MAYOR'S OFFICE
TEL (801) 852-6105
445 W CENTER ST
PROVO, UT 84601

February 27, 2023

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: Letter of Support for the 2023 RAISE Grant Application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project

Dear Secretary Buttigieg,

I wish to express my support for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project. This group of projects is crucial to make it safer, comfortable, and more convenient to walk or bike to and from transit and will have significant local and regional benefits. Improvements to first-mile and last-mile connectivity make it easier and more likely for residents to use transit and leave their cars at home, which means less driving, less pollution, less traffic congestion, and more. These projects will encourage greater transit use in Salt Lake, Utah, and Weber Counties in Utah.

These projects will improve conditions under the RAISE program criteria; they are sustainable and will enhance safety for nonmotorized travelers, augment the quality of life for residents, increase mobility and connectivity, and improve the economy. This grant application was a highly collaborative effort among 10 Cities, three Counties, the Utah Department of Transportation, the Utah Transit Authority, and two metropolitan planning organizations: the Wasatch Front Regional Council and the Mountainland Association of Governments.

Provo City is proposing the following projects as part of the RAISE grant application: buffered bike lanes on University Avenue - $3.7M, and bike lanes on 200 East - $2.1M. These two projects provide increased comfort and safety for cyclists accessing the highly successful UVX BRT route and the Provo Central commuter rail station. Equity will be advanced by improving connectivity for all modes in this area.

Our City is committed to matching 20% of the project costs within our jurisdiction. This 20% match is the equivalent of $1,161,931 in 2026 dollars.

I fully support this important project and ask for your favorable consideration.

Sincerely,

Michelle Kaufusi
Mayor
City of Provo

2023 RAISE Discretionary Grant Application

FIRST/LAST MILE CONNECTIONS:

Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections

Benefit-Cost Analysis Narrative

Document 5 of 6

February 28, 2023

Submitted by:

UTAH DEPARTMENT OF TRANSPORTATION

In Partnership With:

Utah Transit Authority
Wasatch Front Regional Council
Mountainland Assocation of Governments
Cities of: Magna, Midvale, Millcreek, Ogden, Provo, Salt Lake, Sandy, South Salt Lake, West Valley

Submitted to:

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

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1.Executive Summary

The benefit-cost analysis (BCA) conducted for this grant application compares the costs and benefits associated with the proposed investment project.

The Utah Department of Transportation (UDOT) is requesting RAISE funds for a project that will add or improve active transportation facilities across central Utah, totaling 15 active transportation improvements. The **First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project** (the Project) will make 15 critical active transportation improvements to serve 10 light rail stations and 13 bus stops. The benefited transit stations and stops are located in three counties (Weber, Salt Lake, and Utah counties) and 9 cities (Ogden, Salt Lake City, South Salt Lake, Magna, Midvale, Millcreek, West Valley City, Sandy, and Provo) that are part of the Wasatch Front metropolitan area of Utah, all within historically disadvantaged areas.

The Wasatch Front metropolitan area is home to the majority of Utah's population (about 1.9 million of its 3.4 million residents). The Wasatch Front is projected to grow by 32% by 2050, bringing both new economic opportunities and increasing transportation needs.

The regional planning partners and stakeholders want to maximize the transit system that operates along the Wasatch Front to provide transportation mode choice and manage the growing travel demand.[1] First/last mile (FLM) connectivity is an important concept for increasing transit ridership. FLM connectivity makes it more comfortable and convenient for people to walk or bike to and from transit, making it more likely for them to use transit and leave their cars at home. Often there are barriers to accessing transit, and FLM connectivity helps address and remove those barriers. The existing conditions on the project-area roads can be characterized as primarily two- to five-lane roads with narrow or no shoulders. Limited stretches of bike lanes or "sharrows" do exist on some road segments, but they typically blend with turn lanes and parking spots, and markings are fading. Sidewalks are inconsistent and are missing on many road segments.

The proposed improvements include a combination of sidewalk improvements, installation of dedicated bike lanes, and construction of multi-use pathways that would improve access to area transit stations and stops to pedestrians and cyclists. In addition, the sidewalk and bike infrastructure improvements will increase the trip quality experience to all pedestrians and cyclists using them, save walk or bike time, and improve safety to both pedestrians/cyclists and motorized traffic on affected roads.

UDOT, the Utah Transit Authority (UTA), the Wasatch Front Regional Council (WFRC), the Mountainland Association of Governments (MAG), and the three Counties and 9 Cities (listed above) are working collaboratively to deliver the 15 FLM projects proposed in this RAISE grant application. UDOT is the RAISE grant applicant and will administer and deliver the projects. The local jurisdictions will provide the project match amounts.

A table summarizing the changes expected from the overall Project, and the associated quantified benefits, is provided below.

[1] Wasatch Front Economic Development District, "2018–2023 Comprehensive Economic Development Strategy," June 2019.

Table ES-1: Summary of Project Infrastructure Improvements and Associated Quantified Benefits

Current Status or Baseline and Problems to be Addressed	Changes to Baseline / Alternatives	Type of Impacts	Population Affected by Impact	Benefits/Impacts	Estimated Value, $ Millions
The Wasatch Front metropolitan area is home to 1.9 million residents and is projected to grow by 32% by 2050, bringing both new economic opportunities and increasing transportation needs. The regional planning partners and stakeholders want to maximize the transit system that operates along the Wasatch Front to provide transportation mode choice and manage the growing travel demand. First/last mile (FLM) connectivity is an important concept for increasing transit ridership. FLM connectivity helps address and remove barriers to transit access. The existing conditions on the project-area roads can be characterized as primarily two- to five-lane roads with narrow or no shoulders, very limited or no bike lanes, and missing sidewalks.	The proposed improvements include a combination of sidewalk improvements, installation of dedicated bike lanes, and construction of multi-use pathways that would improve access to area transit stations and stops to pedestrians and cyclists. In addition, the sidewalk and bike infrastructure improvements will increase the trip quality experience to all pedestrians and cyclists using them, save walk or bike time, and improve safety to both pedestrians/cyclists and motorized traffic on affected roads.	Safety: Reduction in roadway accident rate due to bike lane provision	Auto users, pedestrians, cyclists	Reduction in fatalities, injuries, and accident costs due to mitigating impact of bike lanes	$25.5
		Environmental Sustainability: Reduction in vehicle emissions	Auto users, truck operators, Wasatch Front residents	Reduction in vehicle emissions and emission costs due to diversion of some auto trips to transit	$0.3
		Economic Competitiveness: Travel time savings	Pedestrians, cyclists	Reduction in travel time costs due to shorter and faster routes	$6.8
		Mobility and Community Connectivity: Active transportation benefits	Pedestrians, cyclists	Increased comfort, convenience, and safety to pedestrians due to bike lanes and better sidewalks. Health benefits of increased participation in walking and cycling	$2.9
		Economic Competitiveness: Reduction in highway external use costs	Auto users	Reduction in congestion, noise, and overall accidents due to diversion of some auto vehicle-miles traveled to transit	$1.2
		State of Good Repair: Construction of new sidewalks and bike lanes	UDOT, Wasatch Front residents	Residual value of investment	$3.1

Note: All monetary values in the table above are in millions of 2021 discounted using a real discount rate of 7 percent.

The period of analysis used in the estimation of benefits and costs is 25 years, including 5 years of project development and construction and 20 years of operations. Total project development and construction costs are estimated at $30.6 million in 2026 dollars, or $27.2 million in 2021 dollars after adjustment with a gross domestic product (GDP) deflator.

All relevant data and calculations used to derive the benefits and costs of the Project are shown in the BCA model that accompanies this grant application. Based on the analysis presented in the rest of this document, the Project is expected to generate $39.7 million in discounted benefits and $21.9 million in discounted development and construction costs, using a 7 percent real discount rate. Therefore, the Project is expected to generate a net present value of $18.8 million and a benefit/cost ratio of 1.81 as shown below in Table ES- 2.

Table ES-2: Summary of BCA Outcomes, in Millions of 2021 Dollars*

Project Evaluation Metric	Undiscounted	Present Value at 7% Discount Rate	Present Value at 3% Discount Rate
Total benefits	$110.1	$39.7	$68.8
Total costs	$27.2	$21.9	$24.7
Net present value	$82.9	$17.8	$44.1
Benefit/cost ratio	4.05	1.81	2.79
Internal rate of return (%)	13.9%		

**Unless indicated otherwise*

In addition to the monetized benefits, the Project is expected to generate benefits that are more difficult to quantify and monetize. A brief description of those benefits is provided below.

- Safety. This BCA quantifies the accident reduction impact due to the construction of dedicated bike lanes on the project-area roads. The impacts of new multi-use off-street pathways and trails were not quantified because the corresponding crash modification factors were not identified. However, multi-use pathways provide a safer way to travel to cyclists as well as pedestrians and thus improve overall transportation safety.
- Quality of life. By improving safety, comfort, and access to affordable transportation, the Project will enhance the quality of life to all users, and in particular those historically underserved and disadvantaged communities in the project area.
- Mobility and transportation choice. The Project will provide transportation choice when traveling to employment centers and other destinations along the transit corridors. Safe transportation options are critical components of a transportation network that connects people—especially those in low-income households—to jobs, education, and essential services. The Project will provide further connectivity and access to job centers for employees, in turn providing a complete and sustainable transportation network that improves connectivity for all users and modes of travel.

2.Introduction

This document provides detailed technical information on the economic analyses conducted in support of the grant application for the First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project.

- Section 3, Methodological Framework, introduces the conceptual framework used in the BCA.
- Section 4, Project Overview, provides an overview of the Project, including a brief description of existing conditions and proposed alternatives and a summary of cost estimates and schedule.
- Section 5, General Assumptions, discusses the general assumptions used in the estimation of project costs and benefits.
- Section 6, Demand Projections, presents estimates of current and future demand for active transportation, transit demand, and auto vehicle miles diverted to transit.
- Section 7, Benefits Measurement, Data and Assumptions, presents specific data elements and assumptions pertaining to the long-term outcomes of the Project.
- Section 8, Summary of Findings and BCA Outcomes, introduces estimates of the Project's net present value (NPV), its benefit/cost ratio (BCR), and other project evaluation metrics.
- Section 9, BCA Sensitivity Analysis, provides the outcomes of the sensitivity analysis. Additional data tables are provided within the BCA model, including annual estimates of benefits and costs to assist in the review of this application.[2]

[2] The BCA model is provided as part of the application.

3.Methodological Framework

The BCA conducted for this project includes the monetized benefits and costs measured using USDOT guidance, as well as the quantitative and qualitative merits of the Project. A BCA provides estimates of the benefits that are expected to accrue from a project over a specified period and compares them to the anticipated costs of the project. Costs include both the resources required to develop the project and the costs of maintaining the new or improved asset over time. Estimated benefits are based on the projected impacts of the project on both users and non-users, valued in monetary terms.[3]

Although a BCA is just one of many tools that can be used in making decisions about infrastructure investments, USDOT believes that it provides a useful benchmark from which to evaluate and compare potential transportation investments for their contribution to the economic vitality of the Nation.[4]

The specific methodology for this application was developed using the BCA guidance published by USDOT and is consistent with RAISE program guidelines. In particular, the methodology involves:

- Establishing existing and future conditions under the Build and No-Build scenarios;
- Assessing benefits with respect to the selection criteria identified in the Notice of Funding Opportunity (NOFO);
- Measuring benefits in dollar terms, whenever possible, and expressing benefits and costs in a common unit of measurement;
- Using USDOT guidance for the valuation of travel time savings, active transportation benefits, safety benefits, reductions in air pollutant emissions, and reduction in highway congestion, while also relying on other standard industry best practice where applicable;
- Discounting future benefits and costs with the real discount rate recommended by USDOT (7 percent for all benefits except carbon dioxide [CO_2] emissions, which are discounted at a 3 percent real discount rate); and
- Conducting a sensitivity analysis to assess the impacts of changes in key estimating assumptions.

USDOT recommends that the period of analysis covers the full development and construction of the project, plus at least 20 years of operation after construction is complete to account for the benefits and costs of highway transportation projects.[5] USDOT recommends an analysis period of 30 years for "projects involving the initial construction or full reconstruction of highways or other similar facilities" and an operating period of 20 years for "projects aimed primarily at capacity expansion or to address other operating deficiencies."[6] Since the Project aims at capacity expansion and addressing the operational issues in the current active transportation network along the Wasatch front, a 20-year period of operation is used in this BCA.

[3] USDOT, Benefit-Cost Analysis Guidance for Discretionary Grant Programs, January 2023.
[4] Ibid.
[5] Ibid.
[6] Ibid.

4.Project Overview

4.1 Project Description, Current Conditions and Challenges

The **First/Last Mile Connections: Improving Communities' Quality of Life through Access to Opportunities and Healthy Transportation Connections Project** will make 15 critical active transportation improvements to serve 10 light rail stations and 13 bus stops in three counties (Weber, Salt Lake, and Utah counties) and 9 cities (Ogden, Salt Lake City, South Salt Lake, Magna, Midvale, Millcreek, West Valley City, Sandy, and Provo) that are part of the Wasatch Front metropolitan area of Utah. The proposed improvements include a combination of sidewalk improvements, installation of dedicated bike lanes, and construction of multi-use pathways that would improve access to area transit stations. The list of improvements that make up this project is shown in Table 1 below.

Table 1: List of Project Improvements

ID	Description	Facility Type	Project Source*	City
Salt Lake County				
FLM2_1	Downtown Revitalization	Sidewalk	Magna MTP	Magna
AT81	Cottonwood Street Buffered Bike Lane	Buffered bike lane	Mid-Valley ATP	Midvale
AT86	Main Street/700 West Bike Lane	Bike lane	Mid-Valley ATP	Midvale
AT87	TRAX Station to Maple Street Multi-use Path	Shared-use path	Mid-Valley ATP	Midvale
AT100	Center Street Bike Lane	Bike lane	WFRC RTP	Midvale
AT91	Trail along Millcreek/Murray Border Multi-use Path	Shared-use path	Mid-Valley ATP	Millcreek
AT139	State Street (Green Loop) Shared-use Path	Shared-use path	WFRC RTP	Salt Lake City
AT140	East Jordan Canal Trail Shared-use Path	Shared-use path	WFRC RTP	Sandy
FLM2_2	Jordan/Salt Lake Canal Trail	Shared-use path	Sandy ATP	Sandy
FLM2_5	Main Street/West Temple Bike Lane	Buffered bike lane	South Salt Lake Strategic Mobility Plan	South Salt Lake
AT50	2200 West Bike Lane	Bike lane and sidewalk	West Valley City GP	West Valley City
AT107	4800 West Buffered Bike Lane	Buffered bike lane and sidewalk	WFRC RTP	West Valley City
Utah County				
AT168	University Avenue Buffered Bike Lake	Buffered bike lane	Provo MTP	Provo
AT173	200 East Bike Lane	Bike lane	Provo MTP	Provo
Weber County				
FLM2_4	Madison Ave Improvements/Gold Star Shared Use Path	Pathway and intersection improvements	Ogden City Bicycle Master Plan	Ogden

* The projects come from the Magna Master Transportation Plan, the Mid-Valley Active Transportation Plan (ATP), the Ogden City Bicycle Master Plan, the Provo Bicycle Master Plan, the Sandy ATP, the South Salt Lake Strategic Mobility Plan, the WFRC Regional Transportation Plan (RTP), Utah's Unified Transportation Plan, and the West Valley City General Plan (GP).

The project location along the Wasatch Front metropolitan area is home to the majority of Utah's population (about 1.9 million of its 3.4 million residents).[7] The Wasatch Front is defined by several unique geographic features, including the internationally famous, snow-covered Wasatch Mountains range to the east and the expansive Great Salt Lake to the west. These beautiful yet imposing features pose a unique transportation and land use challenge by constraining the overall transportation network. The regional population along the Wasatch Front is projected to grow by 32% by 2050, bringing both new opportunities and increasing transportation needs.[8]

The regional planning partners and stakeholders want to maximize the transit system that operates along the Wasatch Front to provide transportation mode choice and manage the growing travel demand.[9] First/last mile (FLM) connectivity is an important concept for increasing transit ridership. FLM connectivity makes it more comfortable and convenient for people to walk or bike to and from transit through safe and direct connections, making it more likely for them to use transit and leave their personal vehicles at home. Often there are barriers to accessing transit, and FLM connectivity helps address and remove those barriers. The existing conditions on the project-area roads can be characterized as primarily two- to five-lane roads with narrow or no shoulders. Limited stretches of bike lanes or "sharrows" do exist on some road segments, but they typically blend with turn lanes and parking spots, and markings are fading. Sidewalks are inconsistent and are missing on many road segments.

The proposed improvements listed above in Table 1 are intended to directly improve FLM connections to area transit. In addition, the sidewalk and bike infrastructure improvements will increase the trip quality experience to all pedestrians and cyclists using them, save walk or bike time, and improve safety to both pedestrians/cyclists and motorized traffic on affected roads.

UDOT, UTA, WFRC, MAG, and the three Counties and 9 Cities (Ogden, Salt Lake City, South Salt Lake, Magna, Midvale, Millcreek, West Valley City, Sandy, and Provo) are working collaboratively to deliver the 15 FLM projects proposed in this RAISE grant application. UDOT is the RAISE grant applicant and will administer and deliver the projects. The local jurisdictions will provide the project match amounts.

The Project will:

- Construct several new dedicated bike lanes and multi-use paths in the Wasatch Metropolitan area, and
- Expand sidewalk infrastructure, including widening certain sections and building new sidewalk linkages to expand sidewalk infrastructure connections to transit.

[7] Wasatch Front Regional Council, 2023-2050 Regional Transportation Plan – Draft for Public Comment
[8] Ibid.
[9] Wasatch Front Economic Development District, "2018–2023 Comprehensive Economic Development Strategy," June 2019.

4.2 Base Case and Alternatives

A single No-Build (base case) and Build (alternative) scenario have been developed to assess the benefits and costs associated with the Project.

The No-Build scenario assumes that none of the projects listed above in Table 1 are completed in the Wasatch Front area. Given the projected population and traffic growth in the area, transportation challenges will grow as well. Access to transit as a potential mobility option will remain constrained at certain stations, forcing people to use personal vehicles more often.

The Build scenario entails completing the Project as listed above in Table 1. This will help increase the access to transit stations and attractiveness of active transportation in the project area and help divert some vehicle-miles of travel (VMT) away from personal vehicles. In addition to increasing transit ridership and active transportation use, the Project will also reduce vehicle emissions; improve safety to pedestrians, cyclists, and motorized traffic on affected roads; and improve trip amenity and travel times to pedestrian and bike users.

4.3 Project Cost and Schedule

Total future project development and construction costs are estimated at $30.6 million in 2026 dollars. For this BCA, all costs were de-escalated to 2021 dollars using the GDP deflator.[10] The adjusted cost is $27.2 million in 2021 undiscounted dollars and $21.9 million discounted at 7 percent. Preliminary engineering and design work is expected to start later this year. Construction is expected to start in mid-2026 and be completed by late 2027.

Incremental operations and maintenance costs are expected to be minor since much of the maintenance requirements can be combined with existing road and trail maintenance schedules. They were not included in this BCA.

Table 2 provides a summary of project costs.

Table 2. Summary of Project Costs over Lifecycle, Millions of 2021 Dollars

	In Constant Dollars	Discounted at 7 Percent	Discounted at 3 Percent
Construction & Development Costs	$27.2	$21.9	$24.7
Total	$27.2	$21.9	$24.7

[10] The adjustment amounted to dividing 2026 costs by the deflator index of 1.1269 based on the GDP deflator for the years 2021-2026 (Office of Management and Budget of the White House, Table 10.1, https://www.whitehouse.gov/omb/historical-tables/ (Accessed February 202).

4.4 Effects on Selection Criteria

Table 3 maps the main benefit categories associated with the Project onto the selection criteria set forth by USDOT in the NOFO.

Table 3: Benefit Categories and Expected Effects on Selection Criteria

Selection Criterion	Benefit or Impact Category	Description	Monetized	Qualitative
Safety	Reduction in accidents and accident costs due to sidewalks and bike lane installations	Reduction in number of accidents or risks of accidents due to separation of cyclists and pedestrians from motorized traffic resulting in overall safety improvements.	Yes	Yes
Environmental Sustainability	Reduction in environmental emissions	Reduction in environmental emissions, criteria air contaminants, and greenhouse gases due to diversion of some auto VMTs to transit.	Yes	
Quality of Life	Improvement in quality of life to disadvantaged communities	By improving safety, comfort, and access to affordable transportation, the Project will enhance the quality of life to historically underserved and disadvantaged communities in the project area.		Yes
Mobility and Community Connectivity	Active transportation benefits	Improve comfort, convenience, and safety for pedestrians and cyclists due to improved quality of sidewalks and cycling facilities. Health benefits to new facility users.	Yes	
	Community connectivity	New bike lanes and sidewalks will improve connections to transit stations and stops and the destinations they serve.		Yes
Economic Competitiveness and Opportunity	Reduction in travel times	New bike lanes and sidewalks will reduce some distances and allow for higher speeds and thus reduce walk and cycle time compared to the existing conditions.	Yes	
	Reduction in external highway use costs	Reduction in overall VMTs (due to diversion of some trips to transit) can be expected to reduce congestion, noise, and overall number of accidents.	Yes	

5.General Assumptions

This BCA measures benefits against costs throughout a period of analysis beginning at the start of project development and including 20 years of operations.

The monetized benefits and costs are estimated in 2021 dollars with future dollars discounted in compliance with USDOT BCA guidance using a 7 percent real rate (except for CO_2 emissions, which are discounted using a 3 percent real rate).

The methodology makes several important assumptions and seeks to avoid overestimation of benefits and underestimation of costs. Specifically:

- Input prices are expressed in 2021 dollars;
- The period of analysis begins in 2023 and ends in 2047. It includes project development and construction years (2023–2027) and 20 years of operation (2028–2047).
- A constant 7 percent real discount rate is assumed throughout the period of analysis, except for CO_2 emissions which are discounted using a 3 percent real rate; and
- Opening-year demand for active transportation facilities at all locations is an input to the BCA and is assumed to be fully realized in year 1 of full operations (in 2028).

6.Demand Projections

The travel demand forecast is a critical component of the BCA since most of the benefits are driven by the volume of demand over the analysis period under the No-Build and Build scenarios. For this BCA, this includes active transportation demand (with its pedestrian and bicycle trips) and transit ridership (with implied diversion of VMTs from auto to transit under the Build scenario). The two components of travel demand and demand estimates are discussed below.

6.1. Active Transportation (Pedestrian and Bicycle Trips)

Direct data on the number of pedestrians and cyclists across the project area are not available. To approximate bicyclist use of the project routes, UDOT used 2021 data from Strava, an application for tracking bicycle and pedestrian activities. Strava has licensed aggregated and de-identified activity data to UDOT for transportation planning purposes; however, it does not represent a complete count of activity in an area, only Strava users. In a preliminary study, UDOT compared Strava data with bicycle and pedestrian counts at 21 locations in Utah.[11] The study found that Strava users accounted for about 5 percent to 30 percent of the bicycle and pedestrian users in the studied facilities.

Therefore, to approximate the current bicycle and pedestrian activity in the project locations, or the activity in the No-Build scenario, it was assumed for this analysis that the 2021 Strava data represented 15 percent of the total activity. It was further assumed that the number of pedestrians and cyclists will be increasing at an average annual rate equal to the rate of growth in transit ridership in the project areas (presented in the next section; see Table 4).

In the Build scenario, the number cyclists and pedestrians in the project area is expected to increase since the improvements will make cycling and walking safer, more comfortable, and more convenient. The Build trip volumes were estimated assuming a 23 percent increase in bicyclist activity based on infrastructure improvements[12] and a 48 percent increase in pedestrian activity[13] based on prior research on similar projects.

The resulting active transportation trips for 2021, 2028, and 2047 under the No-Build and Build scenario as well as the underlying unadjusted 2021 Strava data are presented below in Table 4 (sorted by facility ID).

[11] RSG, *Strava Expansion (Draft Final)*, prepared for UDOT, March 2021.
[12] Mölenberg et al., "A systematic review of the effect of infrastructural interventions to promote cycling: strengthening causal inference from observational data." October 2019. Note that an increase in bicycle trips in the No-Build scenario was assumed only for projects that affect cyclists which include projects involving bike lanes and construction of multi-use/shared pathways.
[13] RSG and Wall Consultant Group, *Latent Pedestrian Demand (Draft Final)*, prepared for UDOT, February 2021. Note that an increase in pedestrian trips in the No-Build scenario was assumed only for projects that affect pedestrians which include projects involving sidewalk improvements and construction of multi-use/shared pathways.

Table 4: Active Transportation Demand in Project Area, Annual Trips

	2021 Raw Strava Data[a]		2021 Total Extrapolated		2028 No-Build Estimate		2047 No-Build Estimate		2028 Build Estimate		2047 Build Estimate	
Facility ID	Bicycle Trips	Pedestrian Trips	Bicycle Trips	Pedestrian Trips	Bicycle Trips	Pedestrian Trips	Bicycle Trips	Pedestrian Trips	Bicycle Trips	Pedestrian Trips	Bicycle Trips	Pedestrian Trips
AT100	1,000	250	6,667	1,667	8,920	2,230	19,660	4,915	10,972	2,230	24,182	4,915
AT107	700	200	4,667	1,333	4,905	1,402	5,616	1,605	6,034	2,074	6,908	2,375
AT139	3,500	4,000	23,333	26,667	30,965	35,389	66,749	76,284	38,087	52,375	82,101	112,900
AT140	750	2,100	5,000	14,000	6,424	17,987	12,683	35,513	7,902	26,621	15,601	52,560
AT168	4,500	8,000	30,000	53,333	43,388	77,134	118,123	209,996	53,367	77,134	145,291	209,996
AT173	1,300	1,000	8,667	6,667	12,667	9,744	35,486	27,297	15,581	9,744	43,648	27,297
AT50	275	100	1,833	667	2,321	844	4,406	1,602	2,855	1,249	5,419	2,371
AT81	350	50	2,333	333	2,953	422	5,597	800	3,632	422	6,884	800
AT86	500	75	3,333	500	4,460	669	9,830	1,475	5,486	669	12,091	1,475
AT87	150	100	1,000	667	1,266	844	2,399	1,599	1,557	1,249	2,950	2,367
AT91	500	100	3,333	667	5,260	1,052	18,138	3,628	6,469	1,557	22,310	5,369
FLM2_1	10	20	67	133	79	158	125	250	79	234	125	369
FLM2_2	150	150	1,000	1,000	1,285	1,285	2,537	2,537	1,580	1,902	3,120	3,754
FLM2_4	900	115	6,000	767	6,299	805	7,188	918	7,748	1,191	8,841	1,359
FLM2_5	2,700	700	18,000	4,667	28,357	7,352	97,368	25,244	34,879	7,352	119,763	25,244
Total	**17,285**	**16,960**	**115,233**	**113,068**	**159,549**	**157,317**	**405,905**	**393,663**	**196,228**	**186,003**	**499,234**	**453,151**

[a] This table includes aggregated and de-identified data from Strava Metro.

6.2. Transit Ridership and VMT Diverted to Transit

Transit ridership at stations and stops that would benefit from this project were calculated for 2021 using UTA's existing boarding data and then projected to 2050 using the regional travel model.[14]

The Project will make some improvements in directness and, therefore, travel times for bicyclists and pedestrians accessing the project stations and bus stops. These improvements will make transit travel more attractive and can be expected to increase transit ridership at the project stations.

To calculate this increase in ridership, UDOT used UTA's existing boarding data and forecasted 2050 boardings from the regional travel model.[15] Increases were based on walk and bike access and egress boardings and alightings, the rates for which were derived from the 2019 UTA Onboard Survey[16] origin and destination data for each transit mode. Then UDOT calculated the increase in ridership based on the benefits of the 15 FLM projects (the Build scenario), station type, and the percentage of the station's area of influence served by each project. This methodology is based on UTA's 2015 First/Last Mile Strategies Study percentage increases on page 5-9. The calculated increases to walk and bike access trips were then applied to total existing and forecasted ridership to represent the Build scenario. Table 5 presents the results of this analysis. The total increase in transit ridership in the project area is estimated at 0.6 percent.

Table 5: Daily Transit Ridership (Boardings), Current and Projections

Facility ID	2021 Existing	2050 Modeled No-Build	Rate of Growth	2021 Build Forecast	2050 Build Forecast	Percent Increase in Build over No-Build (2050)
AT100	572	1,833	4.1%	578	1,852	1.0%
AT107	75	92	0.7%	76	92	0.6%
AT139	831	2,577	4.0%	834	2,586	0.3%
AT140	429	1,169	3.5%	431	1,175	0.5%
AT168	2,049	8,965	5.2%	2,060	9,003	0.4%
AT173	2,131	9,725	5.4%	2,142	9,768	0.4%
AT50	939	2,414	3.3%	945	2,431	0.7%
AT81	524	1,344	3.3%	532	1,365	1.5%
AT86	572	1,833	4.1%	578	1,852	1.0%
AT87	524	1,344	3.3%	532	1,365	1.5%
AT91	415	2,573	6.5%	418	2,588	0.6%
FLM2_1	53	104	2.4%	53	105	0.7%
FLM2_2	429	1,169	3.5%	431	1,175	0.5%
FLM2_4	141	171	0.7%	142	173	0.8%
FLM2_5	913	5,624	6.5%	920	5,663	0.7%
Total	**10,597**	**40,937**	**4.8%**	**10,672**	**41,191**	**0.6%**

Source: UDOT

Some of the incremental transit riders are expected to be diverting from auto travel. That mode shift implies a reduction in total auto VMT due to diversion of travel to transit.

[14] WFRC regional model, version WF-TDM-v8.3.2-2022-02-04a
[15] Ibid.
[16] RSG, 2019 UTA Onboard Survey, prepared for UTA, April 30, 2020.

Auto VMT diverted to transit were estimated as the number of incremental transit trips that were diverted from auto and the average trip length. The latter data element was approximated based on UTA's data on average trip length of its passengers, including access trip, trip in transit vehicles, and trip distance from the last transit vehicle to the passenger's final destination. Specific data on the share of incremental ridership that would be from auto were not available. Therefore, an assumption of 89 percent was used based on USDOT BCA guidance for the average share of induced active transportation trips coming from motorized modes (Table A-12). The key assumptions used in the estimation of VMT diverted from auto to transit are summarized in Table 6.

Table 6: Assumptions Used in Estimation of VMT Diverted from Auto

Variable Name	Unit	Value	Source and Comments
Incremental Transit Ridership	Daily Boardings	Varies by Year; Annual Values based on Table 4	Calculated based on No Build ridership data from UTA and Build ridership projections from UDOT.
Percent of Incremental Ridership Diverting from Auto	%	89%	USDOT BCA Guidance, January 2023, Table A-12.
Average Transit Trip Length, in Vehicle	Miles/trip		UTA
FrontRunner		31.83	
TRAX		7.07	
BRT, Bus		3.92	
Average First and Last Mile Trip Length to/from Transit	Miles/trip		Calculated based on data from UTA.
FrontRunner		4.32	
TRAX		2.86	
BRT, Bus		2.28	
Number of Trips per Day	Number	2	Total VMT diversion quantified assuming an outbound and a returning trip.
Annualization Factor	Number	296	Transit daily to annual extrapolation factor.
Transit Ridership Mode Distribution at Benefitting Stations and Stops	%	Varies by stop/station	Assumed equal distribution between modes available at benefitting transit stop or station.

VMT diverted from auto to transit were calculated as outlined above separately for each facility. The resulting estimates of total VMT diverted from auto to transit under the Build scenario for selected years in the analysis are shown in Table 7 below. The table shows that, by the end of the analysis period in 2047, the Project is expected to divert over 1.5 million VMT from auto to transit.

Table 7: VMT Diverted from Auto to Transit under the Build Scenario

Year	Annual VMT
2028 (project opening)	693,577
2035	916,893
2045	1,416,273
2047 (last year of BCA analysis period)	1,545,875

7.Benefits Measurement, Data and Assumptions

This section describes the measurement approach used for each benefit and provides an overview of the associated methodology, assumptions, and estimates.

7.1. Safety Benefits

Research indicates that dedicated bicycle lanes can reduce crashes on a roadway.[17] This effect is due to the separation of cyclists and motorized traffic which can prevent or mitigate interactions and conflicts between them.

Bicycle lanes can also benefit pedestrians by shifting some bicycles from sidewalks to the dedicated bike lanes. The presence of a bicycle lane can also have a "calming effect" on motorists by raising their awareness that cyclists are present and that they should be alert to these users. This in turn could result in an overall reduction in number of crashes on the roadway.

It should be acknowledged that empirical research has found mixed results in safety evaluation of bicycle lane additions.[18] However, a review of results posted on Crash Modification Factors (CMF) Clearinghouse website indicates that the vast majority of findings are those of a reduction in the number of crashes. Federal Highway Administration (FHWA) research concludes that bicycle lane additions can reduce total crashes up to 49 percent on urban four-lane undivided collectors and 30 percent on urban two-lane undivided collectors and local roads.[19]

For this BCA, we selected CMF #10733: Install Bicycle Lane. This gives a CMF of 0.901, or a reduction in the number of all crashes by 9.9 percent. CMFs for sidewalks and multi-use paths and trails were not identified. Therefore, this BCA quantifies the safety benefits of bike lane and buffered bike lane projects to be constructed on the existing roads while pointing out significant safety benefits of the other projects in qualitative terms.

Estimating safety benefits with a CMF factor involves first estimating the number of accidents expected in the No-Build scenario. The benefit of the safety treatment (bike lanes in this case), or the reduction in the number of accidents, is then equal to 1 – the CMF value multiplied by the number of No-Build accidents. These are then multiplied by the unit value of accident costs to obtain the monetary estimate of safety improvements.

The expected number of No-Build accidents was estimated on the basis of the average annual number of accidents on roads in the project area over the years 2017–2022 where the project area was defined as a 100-foot buffer along the proposed improvements. This number was considered as representative for 2022. The number of accidents in subsequent years was then estimated as that number multiplied by the rate of growth in annual average daily traffic (AADT) over the years 2022-2050 on the project-area roads. Both the number of accidents and AADT were extracted from UDOT databases. Table 8 below shows the average annual number of accidents and rate of growth in traffic used in the analysis, while Table 9 shows the assumed monetary valuation parameters.

[17] For a brief overview and additional references on safety effect of bicycle lanes, refer to Bicycle Lanes - Safety | Federal Highway Administration (dot.gov).
[18] The safety effects of bicycle lanes could also be affected by their design, and design elements such as handling of turning lanes and parking areas. The analysis of these issues is beyond the scope of this BCA.
[19] Bicycle Lanes - Safety | Federal Highway Administration (dot.gov).

Table 8: Average Annual Number of Accidents and Traffic Growth in the Project Area

Facility ID	Rate of Growth in AADT in Project Area	Average Annual Number of Accidents in Project Area, 2017-2022					
		Fatality	Serious Injury (Category 4)	Moderate Injury (Category 3)	Minor Injury (Category 2)	No injury (Category 1)	Total Crashes
AT100	0.6%	0.17	1.83	12.00	21.17	164.67	80.33
AT107	1.1%	0.17	0.17	5.67	14.50	68.00	33.17
AT139	0.8%	0.17	0.50	6.67	4.67	43.50	21.33
AT140	0.0%	0.00	0.00	1.67	3.67	24.17	10.33
AT168	1.0%	0.00	1.50	10.00	20.33	156.67	69.17
AT173	0.0%	0.00	0.17	0.50	1.00	4.17	3.67
AT50	0.3%	0.00	0.33	3.17	7.67	37.33	18.00
AT81	2.2%	0.00	0.17	2.67	4.33	48.33	22.50
AT86	1.1%	0.00	1.50	9.67	17.33	122.33	62.50
AT87	0.0%	0.17	1.00	8.83	18.17	148.67	64.50
AT91	0.0%	0.00	0.00	0.17	1.00	13.33	7.00
FLM2_1	0.0%	0.17	0.17	0.17	0.17	4.00	2.83
FLM2_2	0.0%	0.17	0.17	6.00	14.17	96.83	41.00
FLM2_4	0.0%	0.17	0.67	1.00	1.83	8.33	4.83
FLM2_5	1.2%	0.00	0.50	4.00	7.00	27.50	0.00
Total all facilities		**1.17**	**8.67**	**72.17**	**137.00**	**967.83**	**441.17**
Bike lanes and buffered bike lanes facilities only		0.50	6.67	54.33	98.00	672.50	310.67

Source: Calculated from UDOT traffic and accident reporting databases.

Note: The light-grey-shaded rows highlight facilities which are either multi-use paths or sidewalks and were not included in the sum of crashes in the bottom row labelled "Bike Lanes and Buffered Bike Lanes Facilities Only." These facilities did not have an assigned CMF for safety impacts calculations.

Table 9: Assumptions for Estimation of Safety Benefits

Variable Name	Unit	Value	Source
Crash Modification Factor for Build Accidents	Number	0.901	CMF#10733: Install Bicycle Lanes, reduction in the number of all crashes. CMF applied to improvements that entail bike lanes (excludes improvements involving only sidewalks or multi-use/shared pathways).
Unit Social Accident Costs			US DOT, Benefit-Cost Analysis Guidance for Discretionary Grants Program, January 2023; Table A-1
Fatality	$/victim	$11,800,000	
Serious Injury	$/victim	$564,300	
Moderate Injury	$/victim	$153,700	
Minor Injury	$/victim	$78,500	
No Injury	$/victim	$4,000	

7.2. Active Transportation Benefits

Dedicated bike lanes, multi-use pathways, and improved sidewalks are expected to improve the trip amenity/quality value experience to cyclists and pedestrians using these facilities.

These benefits were estimated using annual estimates of cycling and pedestrian volumes in the Build scenario (based on Table 4 above) and facility improvement preference values for bike lanes and sidewalks recommended by USDOT in the *Benefit-Cost Analysis Guidance for Discretionary Grant Programs* (measured in terms of $/mile cycled or walked). Full value was attributed to the "existing"/No-Build trips, and the "rule of half" was applied to the incremental Build trips. The average trip length was assumed equal to the facility length since the facilities are relatively short (half of them are less than 0.6 mile, and the longest is 2.51 miles).

The active transportation benefits category in this BCA also includes the health benefits (mortality reduction) for the incremental Build walk and bicycle trips. These benefits were estimated using the approach and valuation factors recommended by USDOT in the *Benefit-Cost Analysis Guidance for Discretionary Grant Programs* which features a value expressed in terms of $/trip (based on the national average trip length) for user-trips diverted from non–active transportation modes in the relevant age range. The calculations were scaled accordingly to account for the actual trip length (compared to the national average) and relevant age range for walk and cycling activities.

Table 10 summarizes key information for the estimation of active transportation benefits for each facility: its length and improvement type. Table 11 that follows provides other assumptions.

Table 10: Project Facilities Information

Facility ID	Length (miles)	Improvement Type
AT100	1.72	Dedicated cycling lane
AT107	0.50	Dedicated cycling lane
AT139	0.59	Multi-use / cycling path, sidewalk (10 feet)
AT140	0.36	Multi-use / cycling path, sidewalk (10 feet)
AT168	2.51	Dedicated cycling lane
AT173	1.28	Dedicated cycling lane
AT50	0.50	Dedicated cycling lane
AT81	0.97	Dedicated cycling lane
AT86	1.50	Multi-use / cycling path
AT87	0.23	Multi-use / cycling path, sidewalk (10 feet)
AT91	0.15	Multi-use / cycling path, sidewalk (10 feet)
FLM2_1	0.37	Sidewalk (3 feet)
FLM2_2	0.59	Multi-use / cycling path, sidewalk (10 feet)
FLM2_4	0.76	Multi-use / cycling path, sidewalk (10 feet)
FLM2_5	1.03	Dedicated cycling lane

Table 11: Assumptions Used in the Estimation of Active Transportation Benefits

Variable Name	Unit	Value	Source and Comments
Bicycle Trips, No Build, Build	Annual Trips	Varies by Year; Annual values from Table 3	Calculated based on Strava data and additional extrapolating assumptions.
Pedestrian Trips, No Build, Build	Annual Trips	Varies by Year; Annual values from Table 3	Calculated based on Strava data and additional extrapolating assumptions.
Cycling Facility Improvement Value	$/cycling mile		USDOT BCA Guidance, January 2023, Table A-9.
Dedicated Cycling Lane		$1.77	
Cycling Path		$1.49	
Sidewalk Improvement Value	$/ foot added per person-mile	0.11	USDOT BCA Guidance, January 2023, Table A-8.
Facility Sidewalk Width Addition	miles	Varies by Facility, Table 9	
Bike Trip Length	miles	Varies by Facility, Table 9	Trip lengths assumed equal to the facility length.
Bicycle Trip Length Cap / National Average		2.38	USDOT BCA Guidance, January 2023, Table A-9. Applicable to Facility AT168 only.
Pedestrian Trip Length	miles	Varies by Facility, Table 9	Trip lengths assumed equal to the facility length.
Pedestrian Trip Length Cap / National Average	miles	0.86	USDOT BCA Guidance, January 2023, Table A-8 and A-12.
Health Benefits (Mortality Reduction)	$/trip		USDOT BCA Guidance, January 2023, Table A-12.
Incremental Walk Trips		$7.20	
Incremental Bicycle Trips		$6.42	
Induced Trips Diverted from Non-Active Modes	%	89%	USDOT BCA Guidance, January 2023, Table A-12.
Users in the Walking Range Age Category (Ages 20 to 74)	%	68%	USDOT BCA Guidance, January 2023, Table A-12.
Users in the Walking Range Age Category (Ages 20 to 64)	%	59%	USDOT BCA Guidance, January 2023, Table A-12.

7.3. Travel Time Savings

The impact of the project improvements on travel time to pedestrians and cyclists was analyzed by comparing current walk and cycle times in the project corridors to those that would be possible with the Project.

Travel time savings can be realized when a project facility creates a shorter, more direct route and—in case of cyclists—when it allows for a faster speed. In cases where the project facility would be an entirely new alignment, the best current alternative travel path was considered for comparison.

Table 12 below shows the existing distances for pedestrian and bike trips in the project corridor and the distances that would result in the Build scenario. Travel times were then calculated for both the No-Build and Build scenarios assuming a speed of 3.2 miles per hour (mph) for pedestrians and 9.8 mph for cyclists in on-street situations and 12.1 mph in off-street situations. The difference between the No-Build and Build scenarios represents the travel time saved in

minutes per trip, shown in Table 12 in the blue-shaded columns. (Note that, in some cases, no travel time savings are expected.)

Travel time savings multiplied by the number of pedestrian and bike users gives total travel time saved. Benefits to existing users were calculated at the full benefit rate, and the rule of half was applied to new users. Travel time savings were monetized using the value of time of $34/hour based on USDOT guidance. Table 13 below provides an overview of all assumptions used in the estimation of travel time savings.

Table 12: Existing and Build Scenario Travel Distances and Resulting Travel Time Savings

Facility ID	Existing Walk Distance (miles)	Existing Bike Distance (miles)	Build Walk Distance (miles)	Build Bike Distance (miles)	Travel Time Saved – Pedestrians (min/trip)	Travel Time Saved – Cyclists (min/trip)
AT100	1.7	2.3	1.7	1.7	0.0	3.7
AT107	0.5	0.5	0.5	0.5	0.0	0.0
AT139	0.6	1.0	0.6	0.6	0.0	2.4
AT140	0.6	0.6	0.3	0.3	5.3	2.1
AT168	0.7	0.9	0.7	0.7	0.0	1.2
AT173	0.5	0.5	0.5	0.5	0.0	0.0
AT50	0.5	0.5	0.5	0.5	0.0	0.0
AT81	1.0	1.0	1.0	1.0	0.0	0.0
AT86	1.5	1.9	1.5	1.5	0.0	2.4
AT87	1.0	1.0	0.3	0.3	13.5	4.7
AT91	0.4	0.4	0.2	0.2	3.8	1.5
FLM2_1	0.4	0.4	0.4	0.4	0.0	0.0
FLM2_2	0.9	0.9	0.6	0.6	6.0	2.6
FLM2_4	1.7	2.0	1.2	1.2	8.6	4.7
FLM2_5	1.0	1.0	1.0	1.0	0.0	0.0

Source: UDOT.

Table 13: Assumptions Used in the Estimation of Travel Time Savings

Variable Name	Unit	Value	Source
Bicycle Trips, No Build, Build	Annual Trips	Varies by Year; Annual, Table 4	Calculated based on Strava data and additional extrapolating assumptions.
Pedestrian Trips, No Build, Build	Annual Trips	Varies by Year; Annual, Table 4	Calculated based on Strava data and additional extrapolating assumptions.
Average Walking Speed	mph	3.2	USDOT BCA Guidance, January 2023, Table A-8.
Average Cycling Speed	mph		USDOT BCA Guidance, January 2023, Table A-9.
On-Street		9.8	
Off-Street Paths		12.1	
Value of Travel Time Savings - Walking, Cycling	$/h	$34.00	USDOT BCA Guidance, January 2023, Table A-3.
Travel Time Saved in Build Scenario - Walking	Min/trip	Varies by Facility, Table 12	Estimated by comparing No Build and Build distances and resulting travel times under typical walking speed.
Travel Time Saved in Build Scenario - Cycling	Min/trip	Varies by Facility, Table 12	Estimated by comparing No Build and Build distances and resulting travel times under typical cycling speed.

7.4. Environmental Sustainability

The Project is expected to have an impact on vehicle emissions and reduce emissions costs due to diversion of some auto VMT to transit.

The amounts of emissions avoided in the Build scenario were estimated based on auto VMT diverted to transit in the Build scenario as discussed in Section 6 (with estimates for key years presented in Table 7) and emission factors for light-duty gasoline vehicles (that is, emission rates in terms of grams/VMT) for key air pollutants: nitrogen oxides (NO_x), sulfur dioxide (SO_2), fine particulate matter ($PM_{2.5}$), and carbon dioxide (CO_2). These were then monetized using unit social costs/damage of emissions recommended by USDOT.

The emission factors were adopted from MOVES runs for the Salt Lake County assuming the speed of 20 mph. The assumed factors for key years are shown in Table 14. For the intermediate years, all emission factors were interpolated. Unit social costs of emissions are shown in Table 15 below.

Table 14: Emission Factors, Grams/VMT

Year	Atmospheric CO_2	Oxides of Nitrogen (NO_x)	Primary Exhaust $PM_{2.5}$ – Total	Sulfur Dioxide (SO_2)
2023	356.6	0.10326	0.00204	0.00237
2030	303.4	0.02637	0.00149	0.00202
2040	273.8	0.00482	0.00116	0.00182
2050	268.1	0.00301	0.00113	0.00178
2060	267.6	0.00269	0.00114	0.00178

Source: MOVES simulations, Salt Lake County, 20 mph speed.

Table 15: Unit Social Costs of Emissions

Variable Name	Unit	Value	Source
Unit Social Costs/Damage of Emissions			USDOT, Benefit-Cost Analysis Guidance for Discretionary Grants Program, January 2023; Table A-6. Values shown are for 2030.
Nitrogen Oxides (NO_x)	$/metric ton	$18,900	
Fine Particulate Matter ($PM_{2.5}$)	$/metric ton	$907,600	
Sulfur Dioxide (SO_2)	$/metric ton	$51,300	
Carbon Dioxide (CO_2)	$/metric ton	$65	

7.5. External Highway Use Cost Reduction Benefits

External highway use costs refer to the monetized impact of congestion, noise, and roadway accidents resulting from highway travel. By diverting some auto VMT to transit, the Project is expected to reduce total network VMT and the social costs of road use.

These benefits were estimated using unit values of external highway use (for congestion, noise, and safety) provided in Table A-14 of the USDOT BCA guidance (January 2023 edition) and shown here in Table 16. These values represent the cost of congestion, noise, and road accidents per VMT. To estimate the benefit of the reduced social cost of road use, these values are multiplied by the total VMT diverted to transit in the Build scenario as discussed in Section 6 (with estimates for key years presented above in Table 7).

Table 16: Assumptions Used in the Estimation of External Highway use Cost Reduction Benefits

Variable Name	Unit	Value	Source
External Highway Use Costs	$/VMT		USDOT BCA Guidance, January 2023, Table A-14. Value used is for light duty vehicles in all locations.
Congestion		$0.109	
Noise		$0.001	
Safety		$0.033	
Total		**$0.143**	

7.6. Residual Value of Assets

The residual value of project assets was calculated assuming a straight-line depreciation and a project life of 50 years. The residual value was added to project benefits in the last year of the analysis period, that is, in year 20.

8.Summary of Findings and BCA Outcomes

The tables below summarize the BCA findings. Annual costs and benefits are estimated over the lifecycle of the Project (25 years from 2023 to 2047). As stated earlier, construction is expected to be completed by the end of 2027. Benefits accrue during the operation of the Project (over the years 2028–2047).

Considering all monetized benefits and costs, the estimated internal rate of return of the Project is 14.1 percent. With a 7 percent real discount rate, the $22.2 million investment would result in $41.0 million in total benefits, a net present value of $18.8 million, and a benefit/cost ratio of approximately 1.85. With a 3 percent real discount rate, the net present value of the Project is $46.0 million, for a benefit/cost ratio of 2.83 (Table 17).

Table 17. Overall Results of the BCA, Millions of 2021 Dollars*

Project Evaluation Metric	Undiscounted	Present Value at 7% Discount Rate	Present Value at 3% Discount Rate
Total discounted benefits	$110.1	$39.7	$68.8
Total capital costs	$27.2	$21.9	$24.7
Net present value	$82.9	$17.8	$44.1
Benefit/cost ratio	4.05	1.81	2.79
Internal rate of return (%)	13.9%		

* *Unless indicated otherwise*

Table 18 compiles all project benefits evaluated. The table demonstrates that safety benefits have the largest share in total project benefits (at about 64 percent) followed by active transportation benefits (at 17 percent of total benefits). Travel time savings and reduction in external highway use costs account for about 10 percent of total benefits.

Table 18. Project Benefits over Lifecycle, Millions of 2021 Dollars

Benefit Categories	Undiscounted	Present Value at 7% Discount Rate	Present Value at 3% Discount Rate
Accident Cost Savings	$64.4	$25.5	$42.2
Environmental Sustainability Benefits	$0.5	$0.3	$0.3
Active Transportation Benefits	$18.7	$6.8	$11.8
Travel Time Savings	$7.7	$2.9	$4.9
External Highway Use	$3.2	$1.2	$2.0
Residual Value of Assets	$15.5	$3.1	$7.6
Total Benefits	**$110.1**	**$39.7**	**$68.8**

9.BCA Sensitivity Analysis

The BCA outcomes presented in the previous sections rely on a large number of assumptions and long-term projections, both of which are subject to considerable uncertainty.

The primary purpose of the sensitivity analysis is to help identify the variables and model parameters whose variations have the greatest impact on the BCA outcomes: the "critical variables."

The sensitivity analysis can also be used to:

- Evaluate the impact of changes in individual critical variables—how much the final results would vary with reasonable departures from the "preferred" or most likely value for the variable; and
- Assess the robustness of the BCA and evaluate, in particular, whether the conclusions reached under the "preferred" set of input values are significantly altered by reasonable departures from those values.

The outcomes of the quantitative sensitivity analysis of the Project, using a 7 percent discount rate,[20] are summarized in Table 18. The largest impact from the sensitivity analysis is driven by changing the assumptions regarding the CMF for safety benefits impacts. Increasing the CMF by 0.025 and effectively reducing the safety benefits impacts by 2.5 percentage points reduces the net present value by 36 percent and the BCR to 1.52. An increase in Project costs by 20 percent would reduce NPV by 21 percent and the BCR to 1.53 while a reduction in Project costs of 20 percent would increase NPV by 21 percent and the BCR to 2.23. Another assumption tested was the Strava adjustment for total activity from 15 percent to 10 percent. This effectively increases the estimate of total active transportation users in the network and consequently increases the benefits that accrue to time savings and facility improvements. This increases the discounted BCR from 1.85 to 2.03, an increase of 27 percent. Exclusion of external highway use cost reduction benefits captures the possibility that the percentage of new transit trips that are diverted from auto is smaller than the assumed rate of 89 percent, or that these trips are short, resulting in a smaller estimate of VMT diverted from auto and the corresponding main benefit of reduction in external highway use costs. Excluding this benefit altogether reduces NPV by 6.5 percent.

For all scenarios examined, the BCR remains well above 1.5.

[20] Unless otherwise specified.

Table 19: Quantitative Assessment of Sensitivity, Summary

Parameters	Change in Parameter Value	New NPV[a]	% Difference from Baseline NPV	New BCR
Capital Costs	Decrease capital cost estimate by 20%	$21.6	21.1%	2.23
	Increase capital cost estimate by 20%	$14.0	-21.1%	1.53
Strava[b] Adjustment for Total Activity	Change Strava to assume data captures 20% of total active transportation activity	$15.4	-13.6%	1.70
	Change Strava to assume data captures 10% of total active transportation activity	$22.6	27.2%	2.03
Exclude External Highway Use Benefits	Exclude external highway use cost reduction benefits	$16.6	-6.5%	1.76
Adjusted Crash Modification Factor	Increase CMF value by 0.025	$11.4	-36.2%	1.52

[a] In millions of 2021 dollars

[b] This table includes aggregated and de-identified data from Strava Metro.