

- Planned Streetcar Extension
- Planned Streetcar Station
- Existing and Proposed Trails
- Parley's Trail Concept #1
- Parley's Trail Concept #2
- Parley's Trail Extension
- Future Development

2020



Circulation Study
Story Map Document



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TABLE OF CONTENTS

- 01 EXECUTIVE SUMMARY
- 02 COMMUNITY ENGAGEMENT SUMMARY
- 03 FINAL PROJECT, PROGRAM, AND POLICY RECOMMENDATIONS
- 04 BACKGROUND DATA & GAPS AND BARRIERS

About this Document:

This Packaged Story Map document is not meant to be a standalone plan. It is intended to provide archival documentation for the online Story Map created for the Local Link Circulation Study.

THE JOURNEY THAT PEOPLE
MAKE TO GET FROM ONE
ATTRACTION TO THE NEXT
MUST BE AS ENJOYABLE AS THE
PLACE THEY ARE GOING.



EXECUTIVE SUMMARY

Salt Lake City, South Salt Lake, Millcreek and Holladay collaborated on the Local Link Circulation Study to better understand how people travel in and around the Sugar House Business District. With each partner community facing increasing development pressures and growth, it is critical to plan for multimodal transportation choices including transit, bicycle and pedestrian options, and improvements to existing roads. By providing diverse transportation options, the partner communities can increase the resiliency, flexibility, and sustainability of the transportation network. The purpose of the Local Link Circulation Study is to evaluate and accommodate transportation options (walking, bicycling, transit, automobile) and identify gaps and barriers that make it difficult for people to efficiently travel through and around the study area.

GUIDING PRINCIPLES

There are several guiding principles for improving multimodal connections in the study area, including:

- Safety
- Equity
- Transparency & Engagement
- Sustainability
- Choice
- Connectivity
- Health
- Collaboration

THE VISION

These guiding principles were developed collaboratively by the partner communities and support the following vision for transportation in and around the Sugar House Business District:

The transportation network that connects to the Sugar House Business District will be safe, inviting, sustainable, and provide comfortable travel choices for everyone. It promotes a connected network between local neighborhoods and regional centers in South Salt Lake, Millcreek, and Holladay to the Sugar House Business District. Active and Public transportation connections to schools, neighborhood centers, parks, and other public attractions are prioritized.

PUBLIC ENGAGEMENT

XXX people participated in the public process for the Circulation Study. Public outreach efforts were divided into two phases: 1) Existing Conditions and 2) Recommendations. The Existing Conditions phase was focused on learning from locals about opportunities and barriers to walking and biking in and around the study area, while the Recommendations phase was geared towards getting feedback on recommended projects, policies, and programs. In both phases, methods for public input included online surveys and online interactive maps.

KEY NEEDS AND PRIORITIES

Based on the existing conditions analysis and public engagement, several key needs and priorities emerged. These included site and corridor-specific needs at intersections or roadways, but also global needs throughout the study area.

Location-specific needs include:

- Global Address gaps in Parley’s Trail through the Sugar House Business District and South Salt Lake Downtown
- Address east-west connectivity into Sugar House for active transportation users on 2100 S, 2700 S, and 3300 S
- Address connectivity between the Sugar House Business District and Brickyard/Millcreek City Center
- Improve pedestrian conditions at various intersections throughout the study area

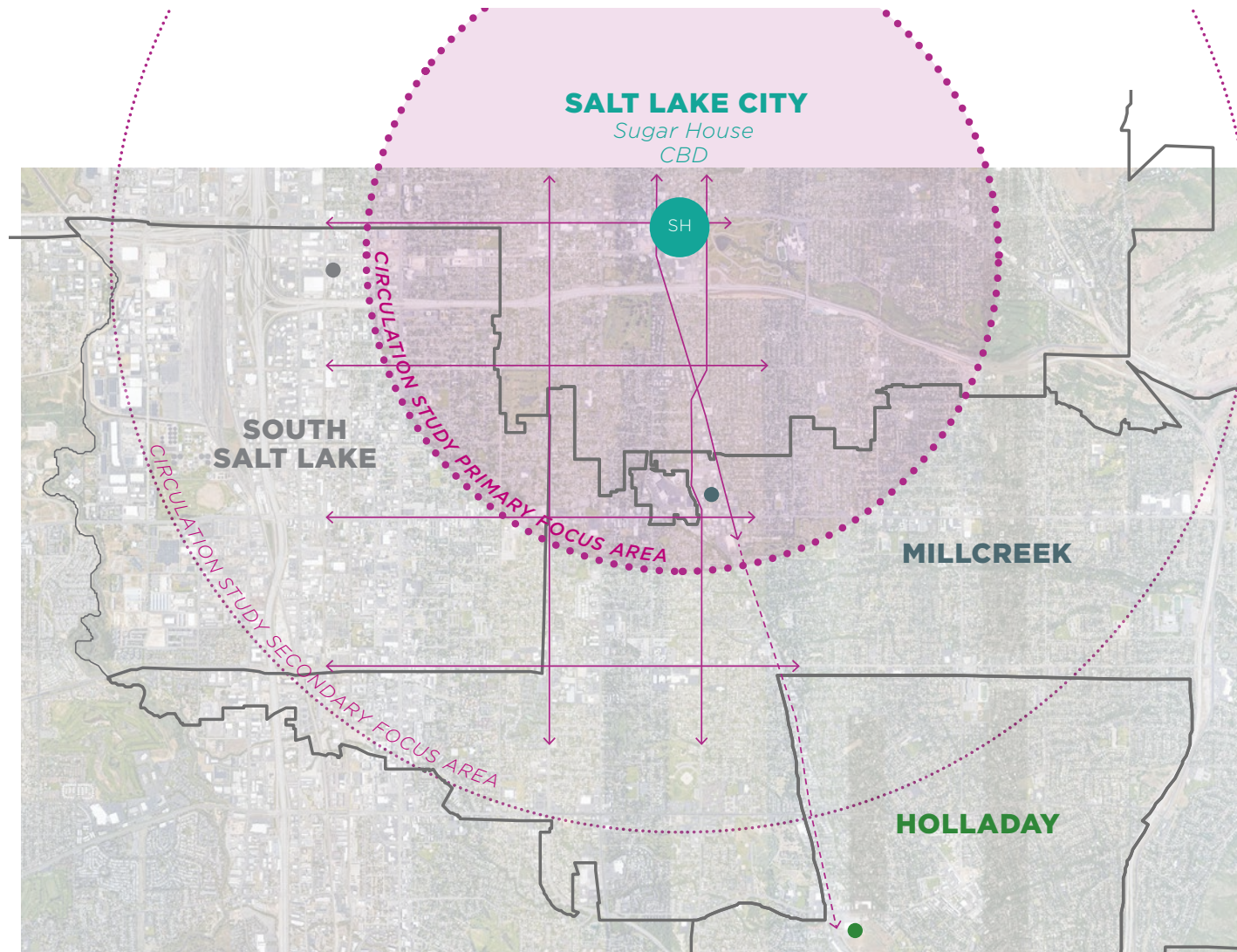
Global needs include:

- Improved first-last mile improvements
- More convenient and secure bike parking
- Comprehensive wayfinding signage
- Comprehensive traffic calming on local streets
- Improved pedestrian realm elements including street trees, site furnishings, and public art, and other placemaking features

EXISTING CONDITIONS

To assess multimodal opportunities, challenges, and needs to the Sugar House Business District, the planning team analyzed a variety of topics, including:

- Key Destinations such as the Sugar House Business District, Millcreek City Center, Brickyard, or South Salt Lake Downtown
- Land Use Density indicating high demand areas for trips
- Planned construction projects, such as road reconstructions, utility projects, or other capital projects that may offer opportunities to reprogram streets or corridors to provide more diverse transportation options
- Bicycle and pedestrian networks identifying where active transportation infrastructure investment may be missing or inadequate
- Safety including bicycle and pedestrian crash history throughout the study area
- Transit network illustrating potential first-last mile priority locations
- Freight networks illustrating corridors that may have special operational considerations for freight traffic



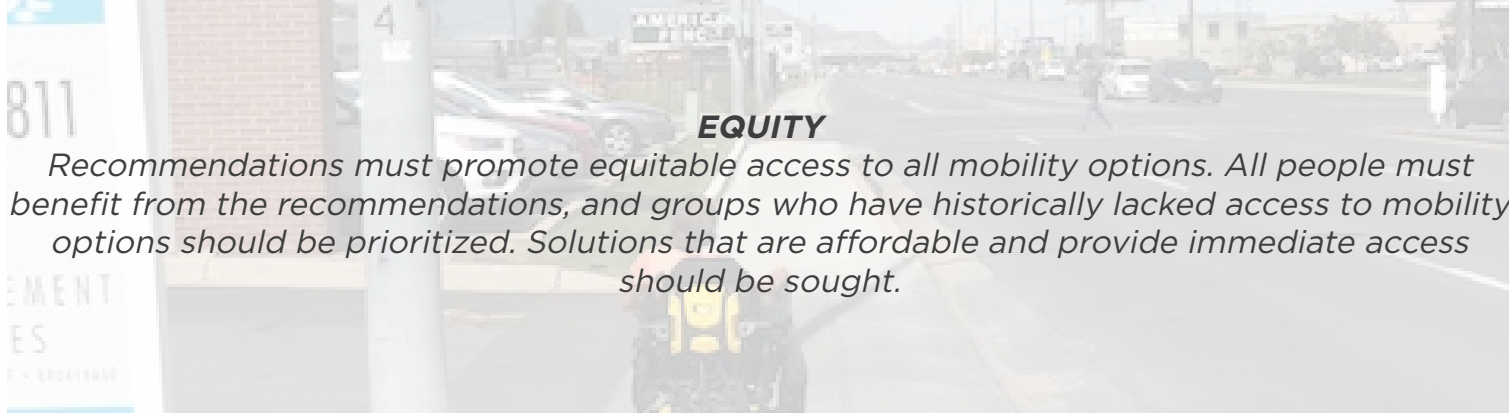
Local Link Circulation Study Area

GUIDING PRINCIPLES



SAFETY

Recommendations must be consistent with goals for achieving Zero Fatalities, reducing conflicts and crashes, and ensuring public safety and security for users of all transportation modes.



EQUITY

Recommendations must promote equitable access to all mobility options. All people must benefit from the recommendations, and groups who have historically lacked access to mobility options should be prioritized. Solutions that are affordable and provide immediate access should be sought.



TRANSPARENCY & ENGAGEMENT

Recommendations must provide a means for data collection and analysis so that the cities and the public can effectively evaluate benefits to and impacts on the transportation system to ensure that the services reflect this Plan's goals.



SUSTAINABILITY

Recommendations must support sustainable options, including ways to meet the cities' environmental goals, improve air quality, promote use of all non-vehicular modes, and support efforts to increase the resiliency of the transportation network in the study area.



CHOICE

Recommendations must provide options and alternatives to promote personal travel choice. Not all connections need to provide access for all transportation types, but all types need to be connected.



CONNECTIVITY

Recommendations must provide a unified plan to connect key destinations regardless of city boundaries. These connections must enable efficient and comfortable travel by all transportation types to important locations within the study area and broader region.



HEALTH

Recommendations must prioritize solutions that promote active and healthy communities.

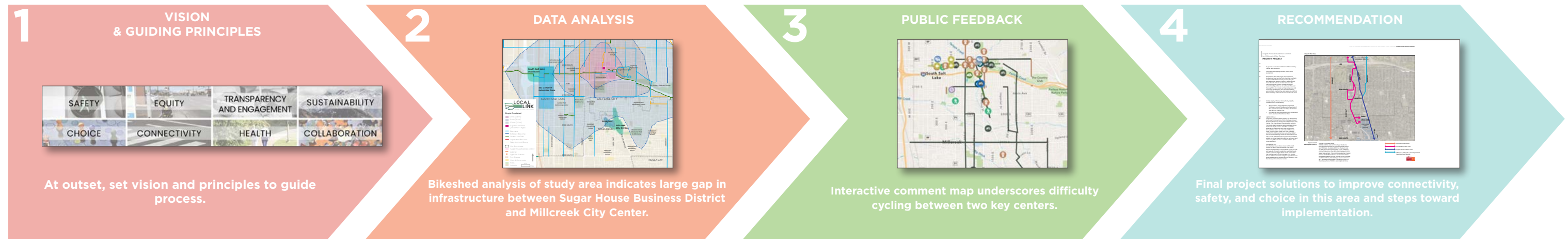


COLLABORATION

The process must leverage partnerships and relationships in and around the study area to balance a diversity of interests, so that recommendations can be implemented and achieve mutually beneficial outcomes.

PROCESS AND FINAL RECOMMENDATIONS

PROCESS OVERVIEW



IMPLEMENTATION

FINAL PROJECT RECOMMENDATIONS

The Local Link Circulation Study analysis revealed several corridors and spots in need of capital improvements. These range from trail alignments with supporting infrastructure to the addition of bicycle lanes in gap areas to improved intersections for pedestrians and cyclists to the creation of complete streets.

Five priority projects are highlighted.

- Corridor Improvement
- Spot Improvement

<p>1 Parley's Trail alignment through the Sugar House Business District</p>	<p>2 Complete street improvements along 2700 South</p>	<p>3 Complete street improvements between Sugar House Business District & Millcreek City Center</p>
<p>4 Improved active transportation along 3300 South</p>	<p>5 Parley's Trail alignment through South Salt Lake Downtown</p>	<p>6 Complete street improvements along 2100 South</p>
<p>7 Two-way bike lanes around Sugar House Park</p>	<p>8 Improved intersections at various complete street intersections</p>	

PROGRAMS & POLICIES RECOMMENDATIONS

Improving circulation and connectivity in the study area will require a variety of improvements. In addition to project or capital improvements, there must be programs and policies that support the new big ideas proposed.

Programs should be overarching, coordinated and span multiple jurisdictions. They will likely require dedicated staff and budgets for startup and maintenance.

Policies will require city ordinances to change or be created to enable the implementation of new ideas.

The eight program and policy recommendations highlighted on the right will help enhance the pedestrian and cycling environment and improve overall circulation in the study area.

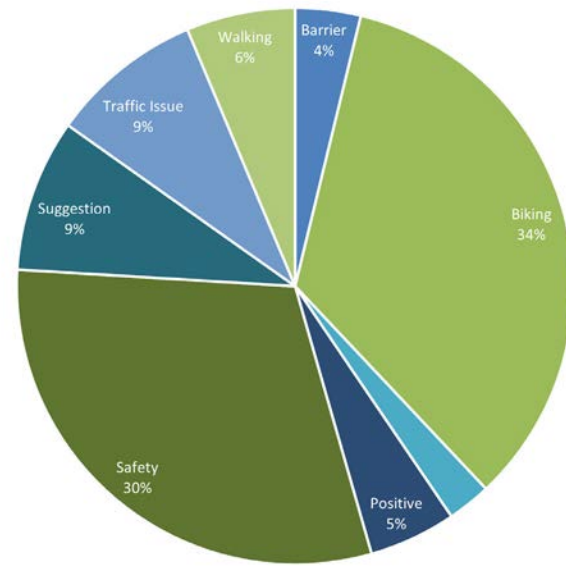
<p>1 Creative placemaking, especially along Highland Drive</p>	<p>2 Green conflict markings on regionally significant bikeways</p>	<p>3 Comprehensive wayfinding and signage</p>
<p>4 Additional bike parking throughout the study area</p>	<p>5 Trail Oriented Development Guidelines</p>	<p>6 Traffic calming</p>
<p>7 Develop mobility hubs at key locations</p>		

COMMUNITY ENGAGEMENT SUMMARY

The study engaged the public over several months in the summer and early fall of 2020. The first format was through an interactive public comment map in which members of the community could leave general or specific comments on circulation in the study area. Specific comments were tied to either points or lines that they drew on a map. Approximately 150 individuals commented or left feedback.

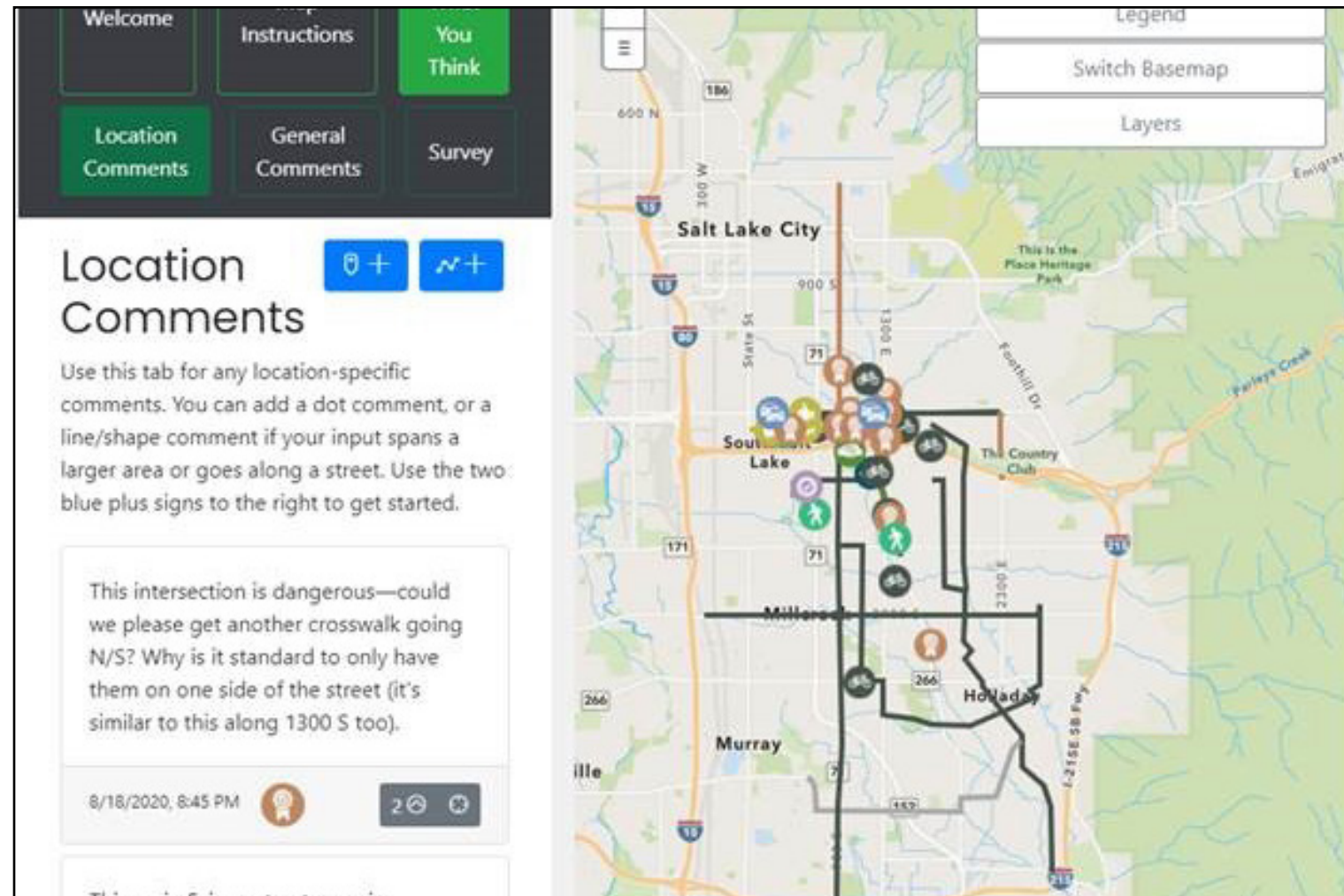
The majority of comments pertained to **safety** and **biking** (see adjacent pie chart). Beyond those overarching comment tags, the three most common big ideas revolved around:

1. Improved signage & wayfinding
2. Need for addition bicycle facilities to improve ridership and safety
3. Improved street crossing environments for pedestrians to improve safety and comfort



Public Map Comment Tags

Wider sidewalks
 Traffic congestion
 Safety
 Protected bike lanes
 Bike facilities connections
 Walkability



Screenshot of Public Comment Map

IMPROVED SIGNAGE AND WAYFINDING

Several comments address the lack of or limited signage for the trails that connect in the study area including Parley's, the McClelland, and the Millcreek Trails.

ADDITIONAL BICYCLE FACILITIES

In general, several corridors were identified as lacking bicycle lanes which made riders feel unsafe traveling along them, especially where cars may be traveling at high speeds.

IMPROVED STREET CROSSINGS

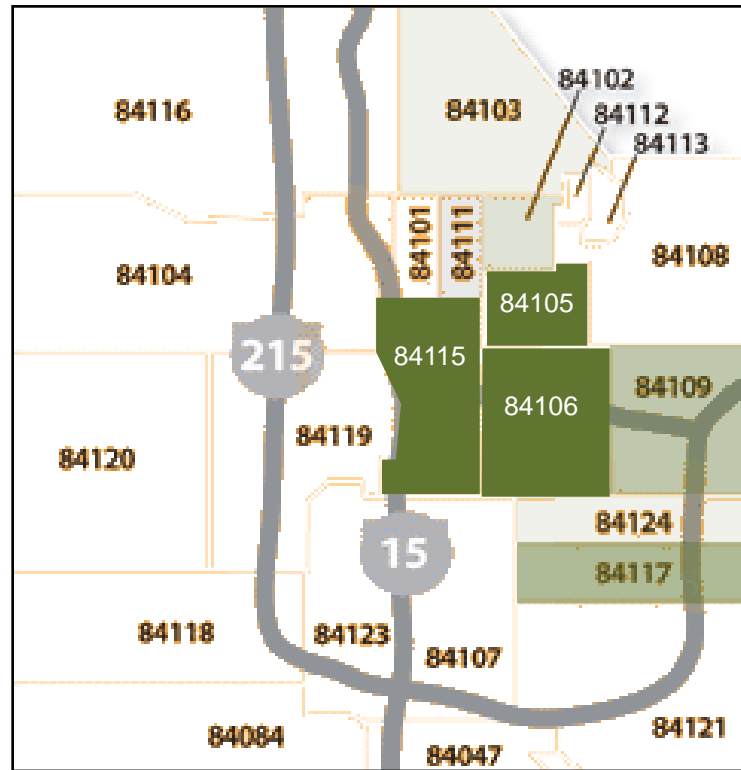
Many intersections or mid-block crossings were identified as places for improved pedestrian infrastructure. Respondents indicated they felt unsafe and did not walk because it was too difficult to connect in some of these areas without better pedestrian facilities.

COMMUNITY ENGAGEMENT SUMMARY (cont.)

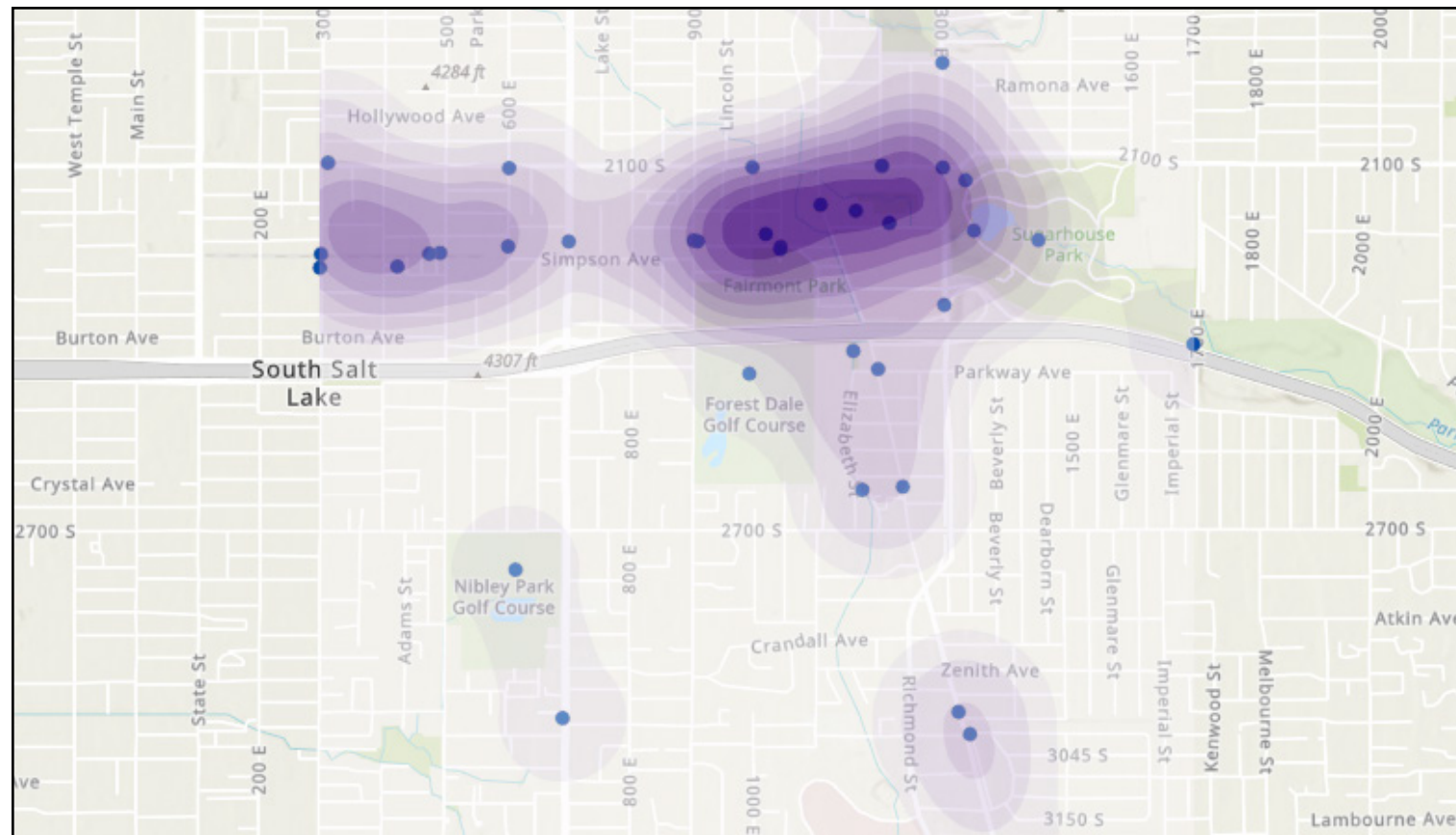
Comment locations originated from areas shade green on the adjacent map. While comments came from several zip codes east of I-80 in the valley, there was the highest concentration from individuals residing in the 84115, 84105, and 84106 zip codes.

A heat map analysis of the comment locations indicate a concentration of feedback between 900 East and 1300 East, north of I-80 and south of 2100 South. This data reveals a desire for improvements in the heart of the Sugar House Business District.

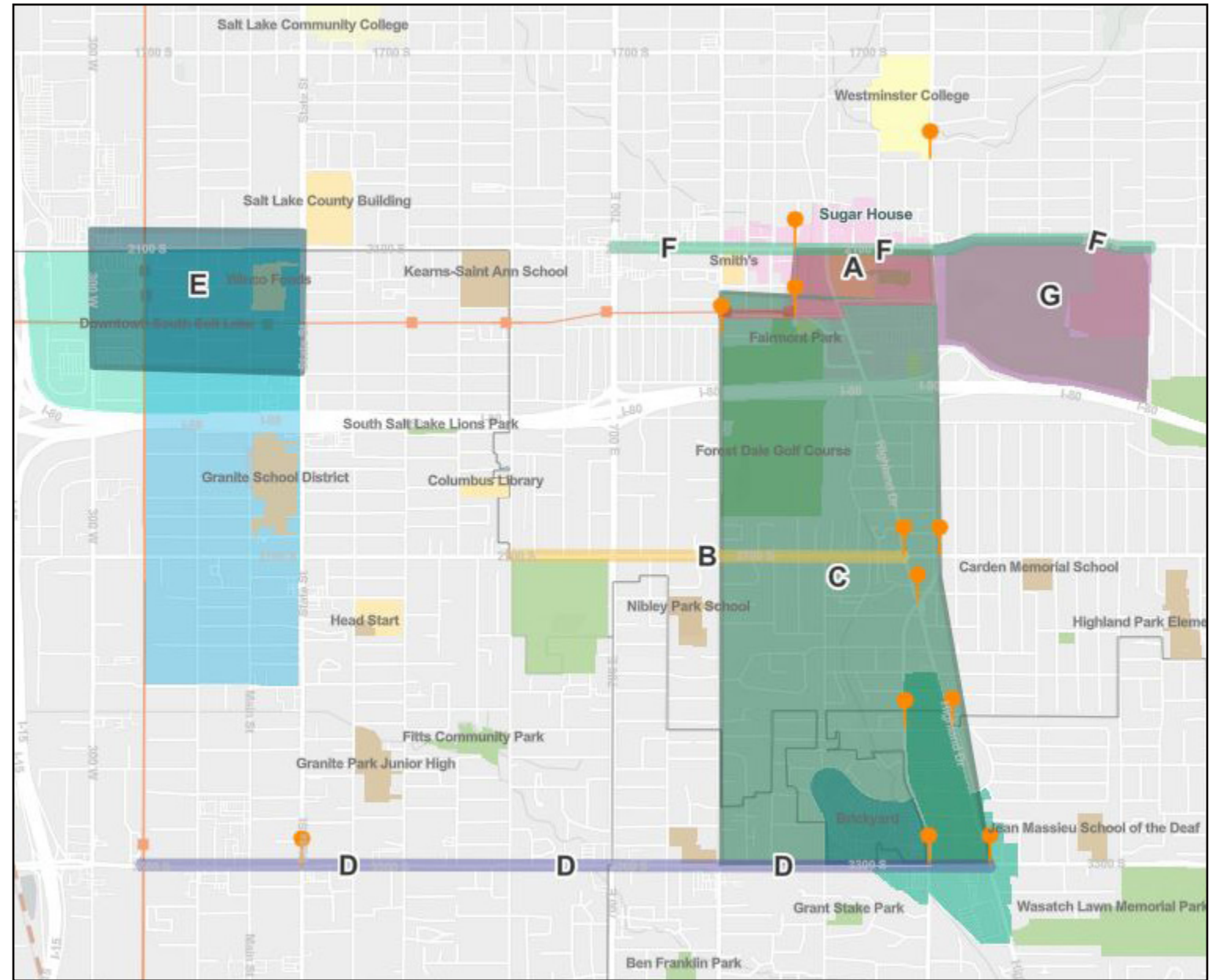
A second, less intense area of concentration is found around the S-Line and Parley's Trail between 300 East and 500 East.



Salt Lake County Zip Code Response Representation



Public Comment Map Heat Map



Final Recommendations Comment Map

The final project recommendations were placed in an interactive map where the public could click more to learn about each proposed solution. They also had the opportunity to rank each recommendation against one another. Approximately 250 individuals ranks the projects as follows.

- The results of the ranking activity are:
1. Parley's Trail Alignment - Sugar House
 2. Sugar House and Millcreek City Center - Complete Streets
 3. 2100 South Complete Streets
 4. 2700 South - Complete Streets
 5. Parley's Trail Alignment - South Salt Lake Downtown
 6. 3300 South - Active Transportation Improvements
 7. Improved intersections
 8. Sugar House Park - Two-way Bike Lanes

FINAL PROJECT RECOMMENDATIONS



Parley's Trail Alignment Sugar House Business District PRIORITY PROJECT

Existing Conditions:

Project Extent: The Draw at Sugar House (1300 E) to S-Line Trail (McClelland)

Description: The current alignment of Parley's Trail through the Sugar House Business District is fairly informal, using a combination of trails, roadways, and sidewalks. The trail is well established as it comes westward out of the undercrossing below 1300 East (the Draw) and into Hidden Hollow. From there, it cuts directly south behind the Wilmington Flat Apartment building in an alleyway with green bikeway marking. As it continues along Wilmington going west, trail users utilize the bike lanes and sidewalks. As it crosses and then goes south on Highland, it has no designated path, so cyclists using it either ride in the traffic lane or on the sidewalk. Finally, as the trail continues west onto Sugarmont, some tactical urbanism planters have been used to delineate the trail from the one-way auto traffic until reaching the Sugarmont streetcar station where an off-street trail resumes

Planning Integration: Safety, Choice, Connectivity, Health, Collaboration

Improvement Description: Develop a continuous, off-street Parley's Trail through the Sugar House business district.

The subsequent pages access various possible alignments through the Sugar House Business District and evaluate the benefits and challenges associated with each. Potential impacts and a cost range is also provided.

Collaborations and Partnerships: Salt Lake City, PRATT, South Salt Lake, Utah Open Lands, property owners of Sugar House Commons, Sugar Alley, Sugarmont Apartments, and other adjacent properties.

Project Plan View

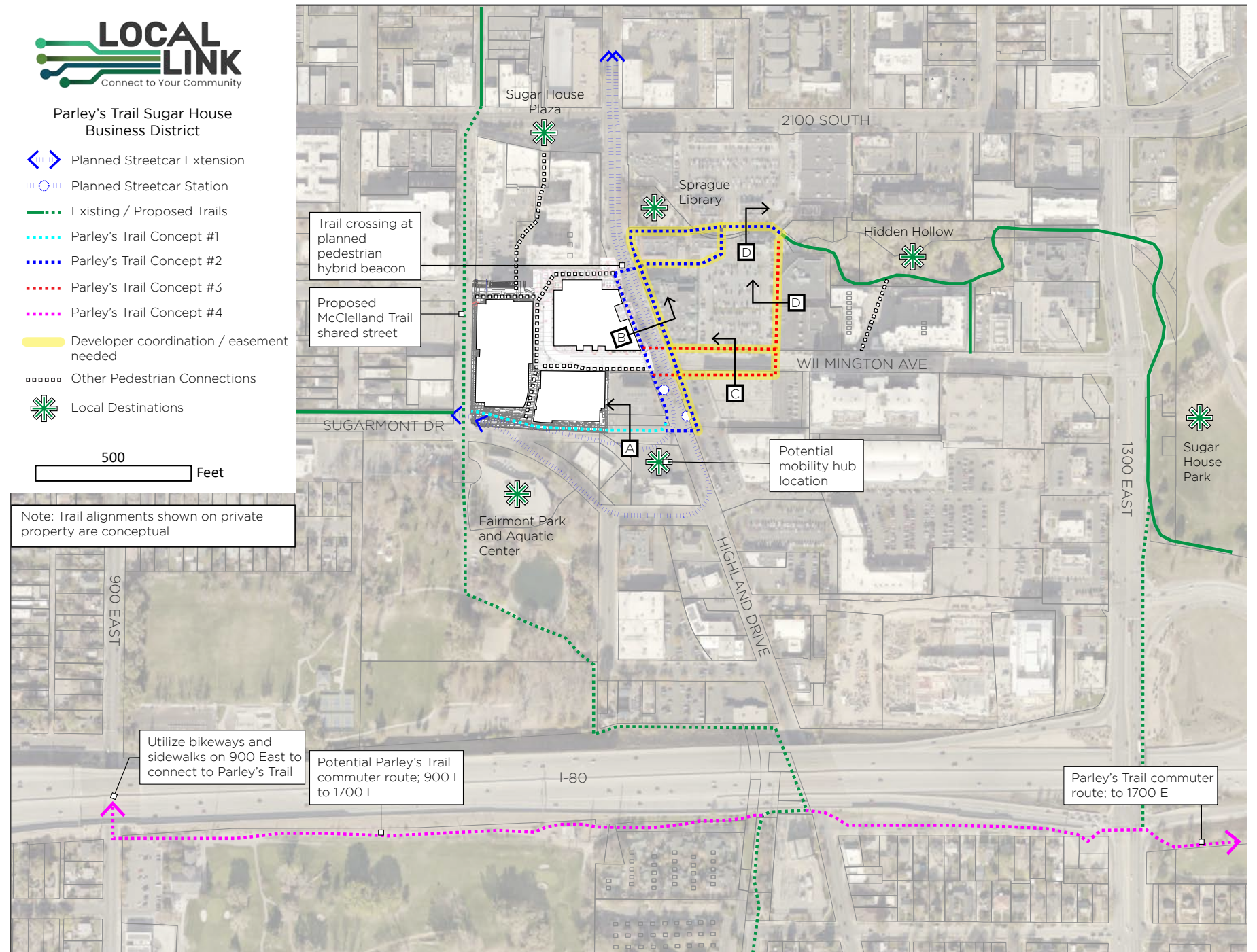


Parley's Trail Sugar House Business District

- Planned Streetcar Extension
- Planned Streetcar Station
- Existing / Proposed Trails
- Parley's Trail Concept #1
- Parley's Trail Concept #2
- Parley's Trail Concept #3
- Parley's Trail Concept #4
- Developer coordination / easement needed
- Other Pedestrian Connections
- Local Destinations

500 Feet

Note: Trail alignments shown on private property are conceptual



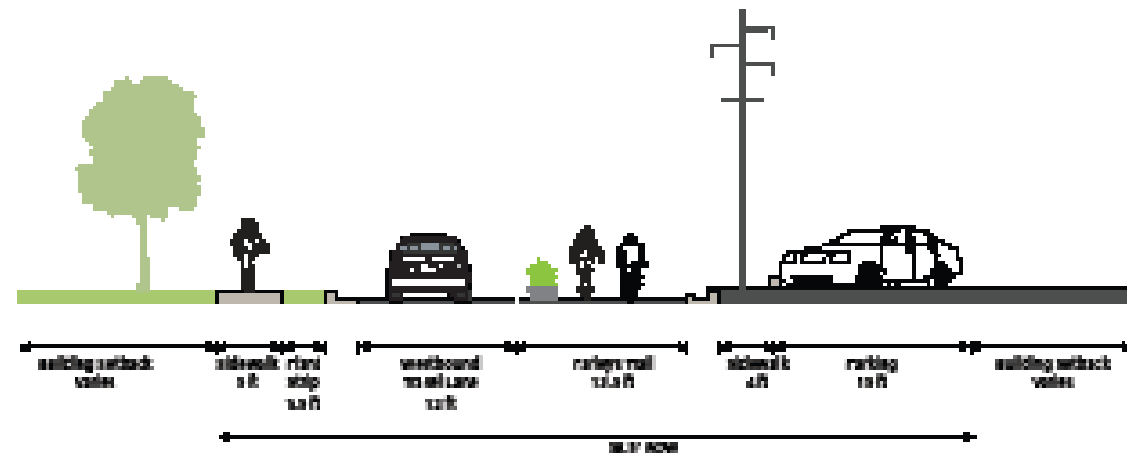
FINAL PROJECT RECOMMENDATIONS (cont.)



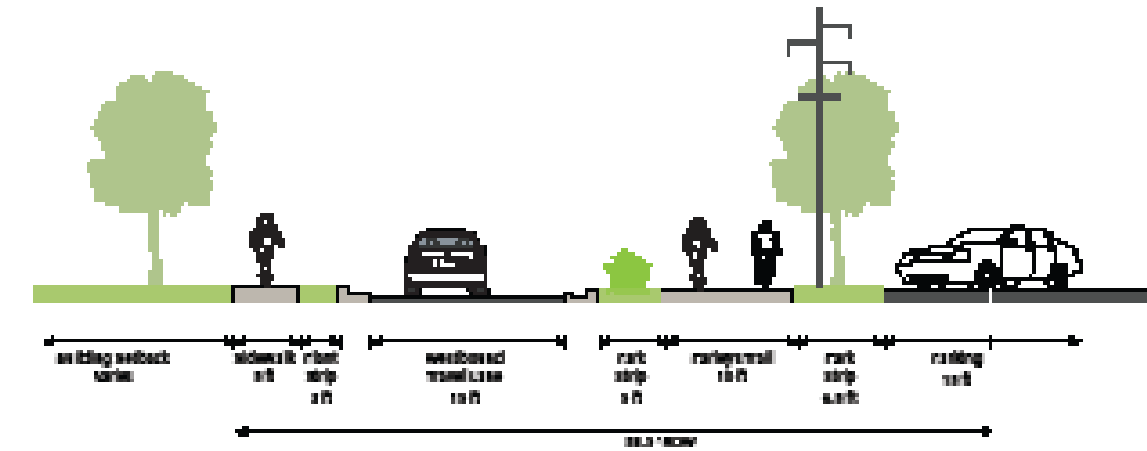
Parley's Trail Alignment
Sugar House Business District

Concept #1: Sugarmont Drive

Existing Cross-section A



Proposed Cross-section A



* Note: Parley's Trail alignment could occur on either side of Wilmington depending on future redevelopment timing and participation by developers.

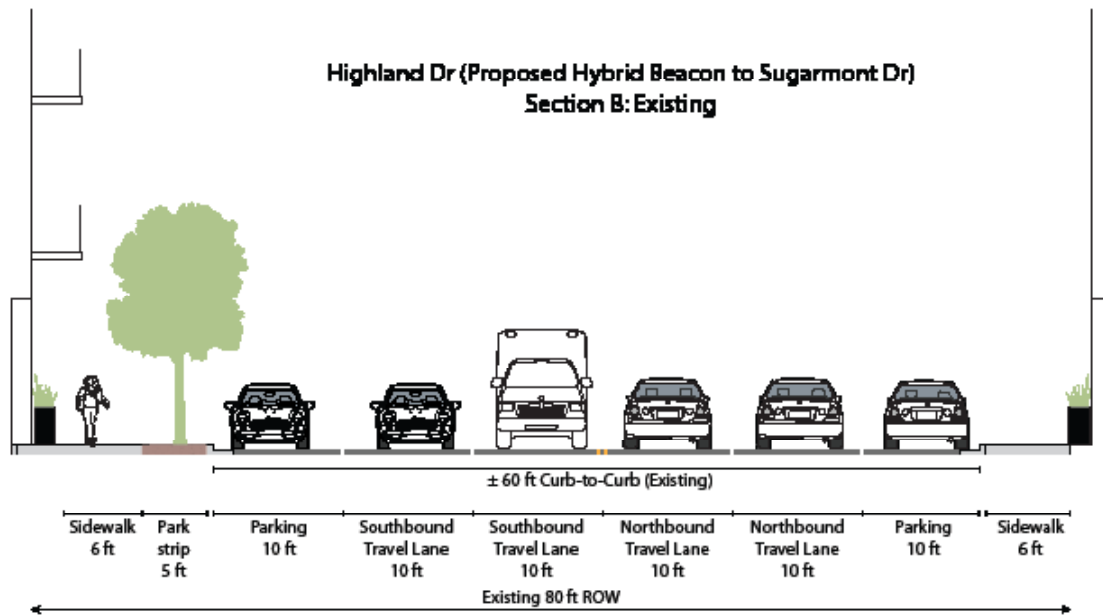
FINAL PROJECT RECOMMENDATIONS (cont.)



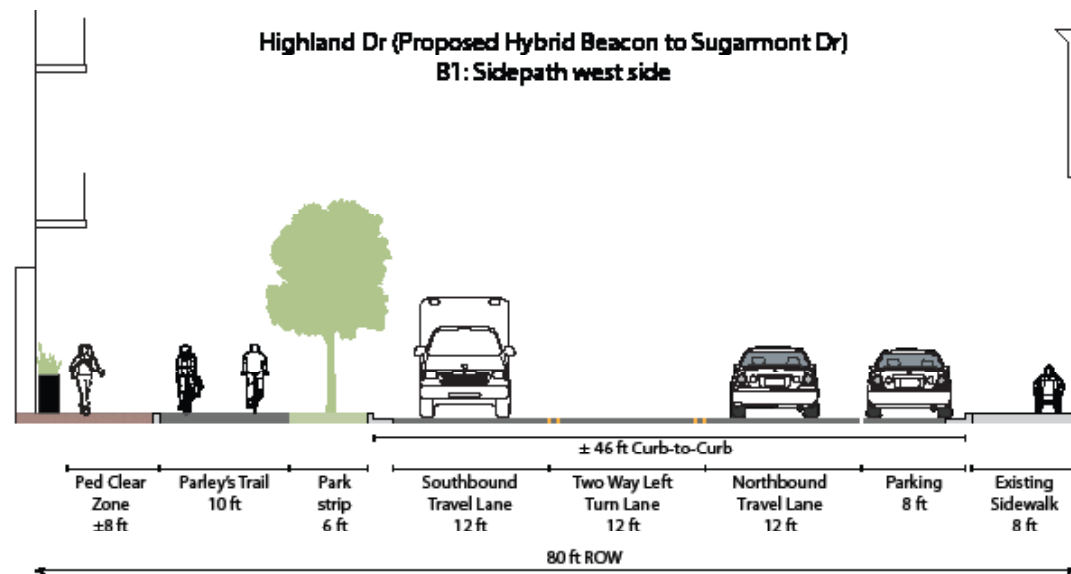
Parley's Trail Alignment
Sugar House Business District

Concept #2: Highland Drive

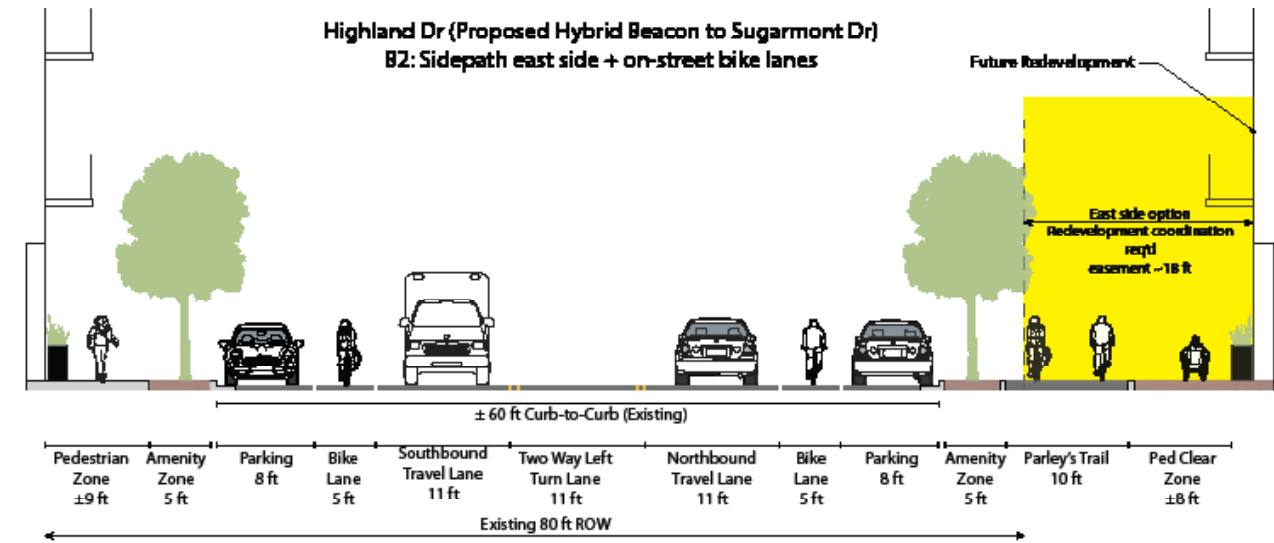
Existing Cross-section B



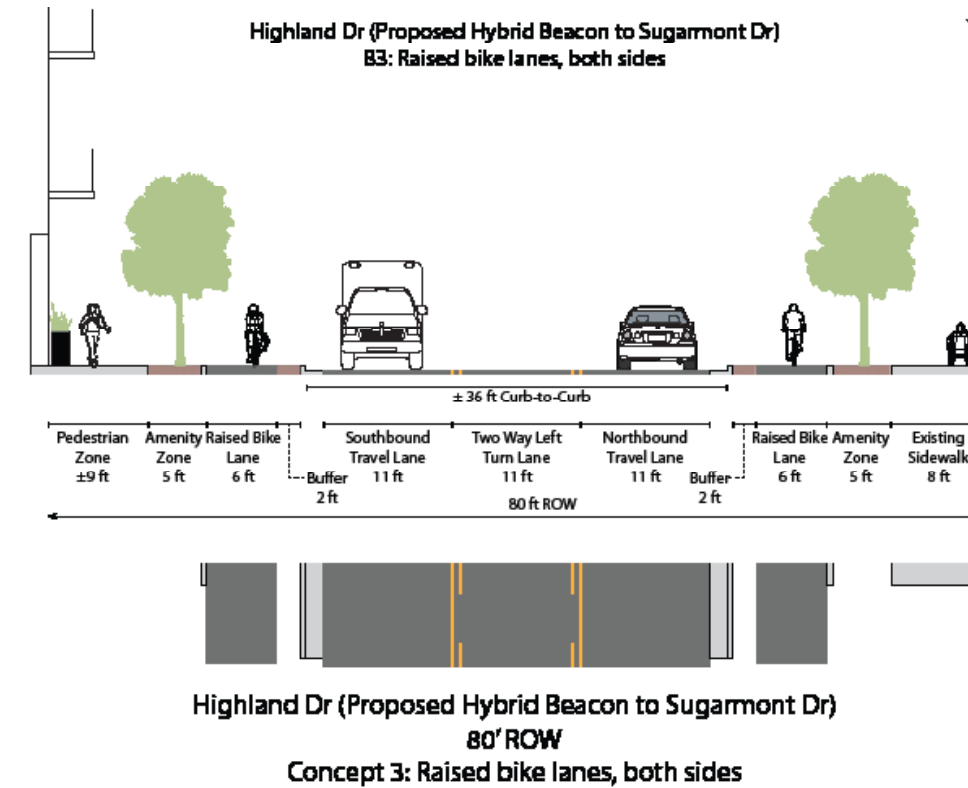
Proposed Cross-section B, Concept 1



Proposed Cross-section B, Concept 2



Proposed Cross-section B, Concept 3

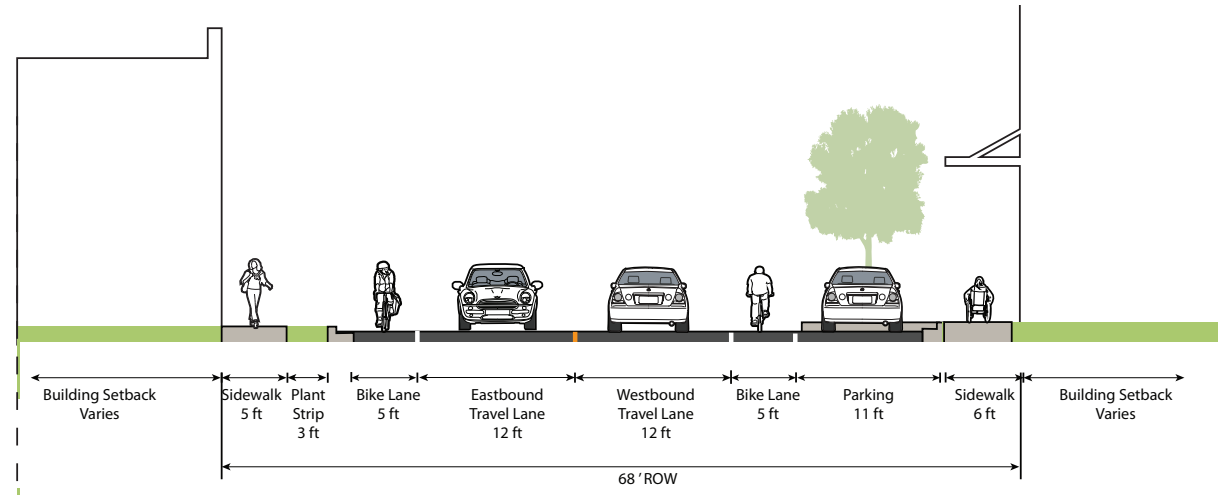


FINAL PROJECT RECOMMENDATIONS (cont.)

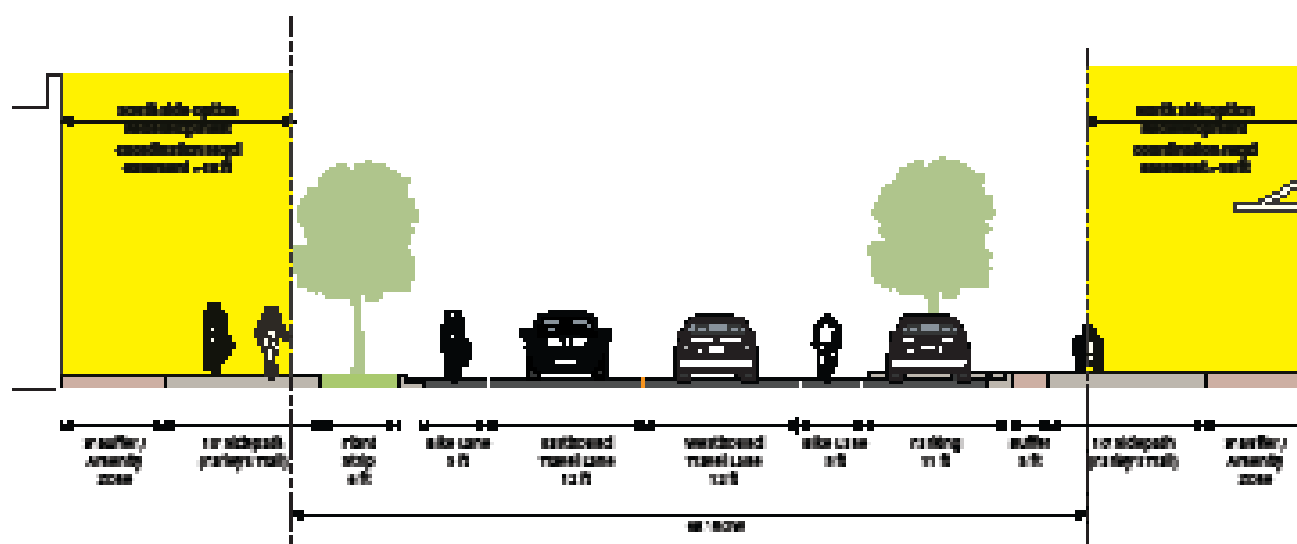


Parley's Trail Alignment
Sugar House Business District
PRIORITY PROJECT

Concept #3: Wilmington Avenue Existing Cross-section C

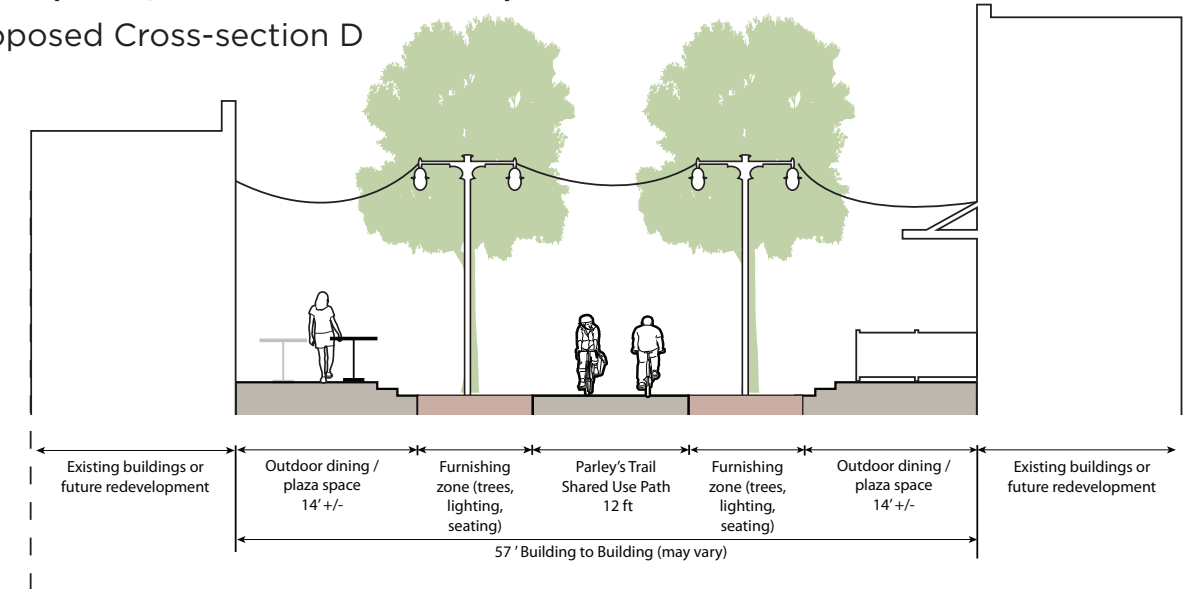


Proposed Cross-section C



* Note: Parley's Trail alignment could occur on either side of Wilmington depending on future redevelopment timing and participation by developers.

Concept #3 / #4: Future Redevelopment Scenario* Proposed Cross-section D



* Note: Trail configuration is conceptual and may vary based upon future redevelopment plans. Graphic is intended to convey desired spatial relationships, buffers, and amenities.

FINAL PROJECT RECOMMENDATIONS (cont.)



Parley's Trail Alignment
Sugar House Business District

	Concept #1: Sugarmont	Concept #2: Highland Drive / Sugar House Commons Redevelopment	Concept #3: Wilmington / Sugar House Commons Redevelopment	Concept #4: Parley's Trail Commuter Route
Cross-Section Narrative/Description	Shift existing Zion's Bank parking within the public ROW north to accommodate a 10' sidepath along Sugarmont. Sidepath would connect to Parley's Trail through the Sugarmont Apartments development and to Sugarmont Station to the west.	Concept #2 would extend Parley's Trail north from Sugarmont Dr. to a planned pedestrian hybrid beacon before crossing into the Sugar House Commons property and connecting into Hidden Hollow. The Highland Drive section has numerous alternatives which will be further studied during the planned Highland Drive reconstruction project.	Concept #3 would extend Parley's Trail east along Wilmington before jogging north through the Sugar House Commons property and connecting into Hidden Hollow. Trail implementation through this section would depend on future redevelopment of adjacent properties.	Concept #4 would provide an option to appeal to commuters who desire a lower trafficked route. This alignment would continue run along the south side of I-80 between Forest Dale Golf Course and 1700 East. From 1700 East to 1300 E, the trail would continue along the south side of I-80 occupying either the I-80 ROW, or the adjacent South Salt Lake-owned parcel. Consideration would need to be given to protecting South Salt Lake's water infrastructure through this section. The trail would cross 1300 E at the interchange and continue west along Driggs Avenue before crossing Highland, intersecting with the McClelland Trail. From there the trail would run in UDOT ROW until reaching the Forest Dale Golf Course where it could run along the existing maintenance road. Consideration would need to be given to mitigating any impacts on golf operations at Forest Dale. Alternatively, this option could utilize the planned McClelland Trail extension to connect back to Parley's Trail and the S-Line.
Additional Improvements	Consider landscape and site furnishings within the park strip/ amenity zone between curb and sidepath. Implement wayfinding signage to direct users to key destinations and notify trail users of turns in the official trail.	Consider implementing trail oriented development guidelines where trail with interface with new development including landscaping buffers, enhanced trail amenities, signage and wayfinding, and active frontages facing the trail.	Consider implementing trail oriented development guidelines along sections through new development including landscaping buffers, enhanced trail amenities, signage and wayfinding, and active frontages facing the trail.	Wayfinding signage and potential privacy or security fencing to protect adjacent infrastructure or golf operations at Forest Dale Golf Course
Potential Impacts	Coordinate with Fire Dept. to ensure access along Sugarmont is acceptable.	Seek to mitigate potential conflicts between trail users and circulation patterns with future redevelopment	Seek to mitigate potential conflicts between trail users and circulation patterns with future redevelopment	<ul style="list-style-type: none"> Need to address ensure protection of South Salt Lake water infrastructure adjacent to I-80 Need to address potential impacts to golf operations at Forest Dale Golf Course Limit impacts to apartments and residences (south of I-80) near the potential trail corridor
Collaborations and Partnerships	Coordination with Zion Bank	Requires extensive coordination with existing property owners and future redevelopment	Requires extensive coordination with existing property owners and future redevelopment	Requires coordination with UDOT, South Salt Lake, and Forest Dale Golf Course
Mobility Benefits	<ul style="list-style-type: none"> Provides a logical extension of Parley's Trail along Sugarmont Provides access to future RDA parcel 	<ul style="list-style-type: none"> Provides good connectivity to future streetcar stations 	<ul style="list-style-type: none"> Takes advantage of the planned hybrid beacon crossing at Highland Drive. Good connectivity to destinations 	<ul style="list-style-type: none"> Provides a direct, east-west option for commuters utilizing Parley's Trail. Could also be used when construction in the Sugar House business district requires closures to Parley's Trail.
Technical Constraints	<ul style="list-style-type: none"> Coordination with Zions Bank Consider future streetcar and RDA development to ensure Parley's Trail alignment is forward compatible 	<ul style="list-style-type: none"> Requires extensive buy-in and coordination with local developers Dependent on future redevelopment efforts 	<ul style="list-style-type: none"> Requires extensive buy-in and coordination with local developers Dependent on future redevelopment efforts 	<ul style="list-style-type: none"> Requires easement through golf course Potential easement needed through South Salt Lake and/or UDOT property
Implementation Costs	Low	Medium	Medium - High	Low
Preferred Concept	✓ Short / Mid-Term	✓ Mid / Long-Term	✓ Long-Term	✓ Mid-Term
Phasing	Seek to implement in conjunction with Highland Drive reconstruction in 2023.	Seek to asses and implement in conjunction with Highland Drive reconstruction in 2023.	TBD; As Sugar House Commons redevelops, continue conversation with developers.	TBD; Water line construction project at Forest Dale slated for 2021 may offer some synergy with trail development.

FINAL PROJECT RECOMMENDATIONS (cont.)



2700 South Complete Streets PRIORITY PROJECT

Existing Conditions:

Project Extent: 700 East and Highland
 Land Use: Neighborhood
 Project Destinations: Multi-family housing, Nibley Park Elementary, Neighborhood Commercial Destinations
 Street Classification: Collector
 Typology: Neighborhood Corridor & Neighborhood Center

Corridor Functions:	Typology Benchmark	Current
Person Mobility	Medium	Low
Greening	Medium/Low	Medium
Placemaking	Medium	Low
Curbside Diversity	Medium/Low	Medium/Low
Vehicle Mobility	Medium	Medium

AADT: 10,000
 Posted Speed: 35 MPH
 Right of Way Width: 66' typical
 Curb to Curb Width: 40' typical
Project Alignment: Safety, Equity, Choice, Connectivity, Health, Collaboration
Guiding Principles:

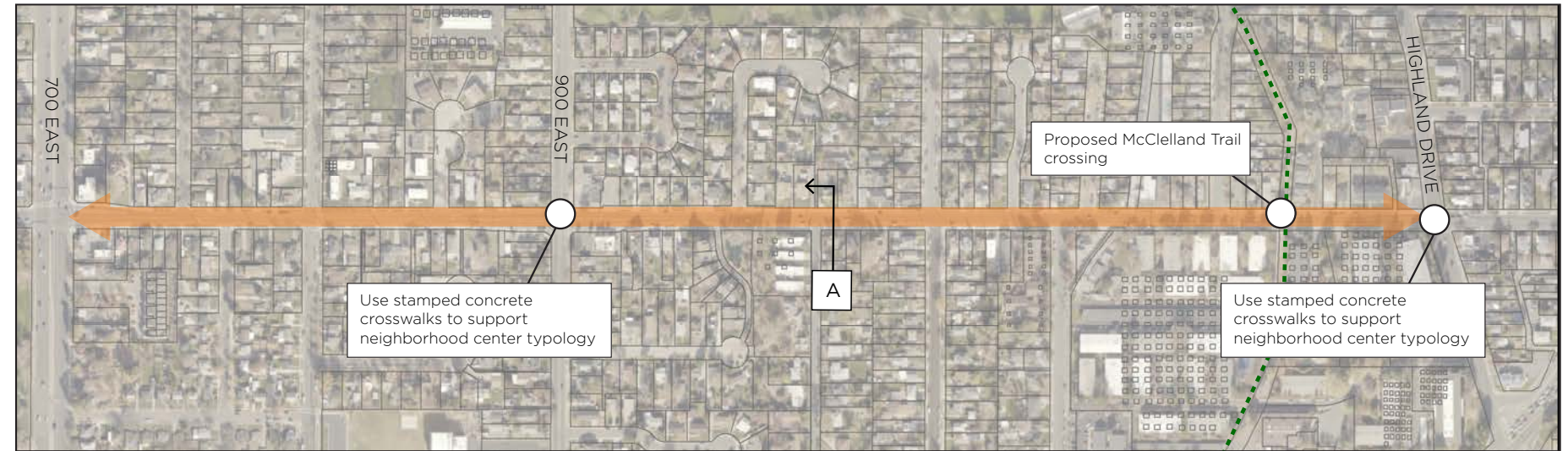
- Planning Integration:**
- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.
 - No transit on 2700 S
 - Planned McClelland Trail crossing at / or near Elizabeth Street.

Corridor Improvement Description: Add bike lanes. Restrict parking on one side of the street. Conduct parking demand analysis to confirm viability of parking reduction and locations.

Collaborations and Partnerships: Salt Lake City, Millcreek City, Utah Transit Authority, utility companies, property owners, developers

Implementation Phasing: Medium; No currently planned road reconstruction activities

Project Plan Image



Corridor Images



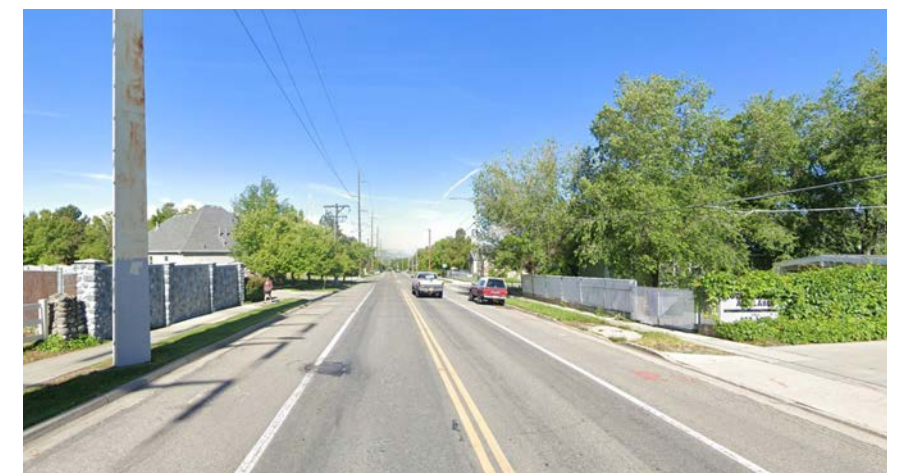
Neighborhood center at the intersection of 2700 S and 900 E.



The future McClelland Trail crossing should be safe and comfortable.



The intersection of 2700 S and Highland Dr sees high traffic volumes.



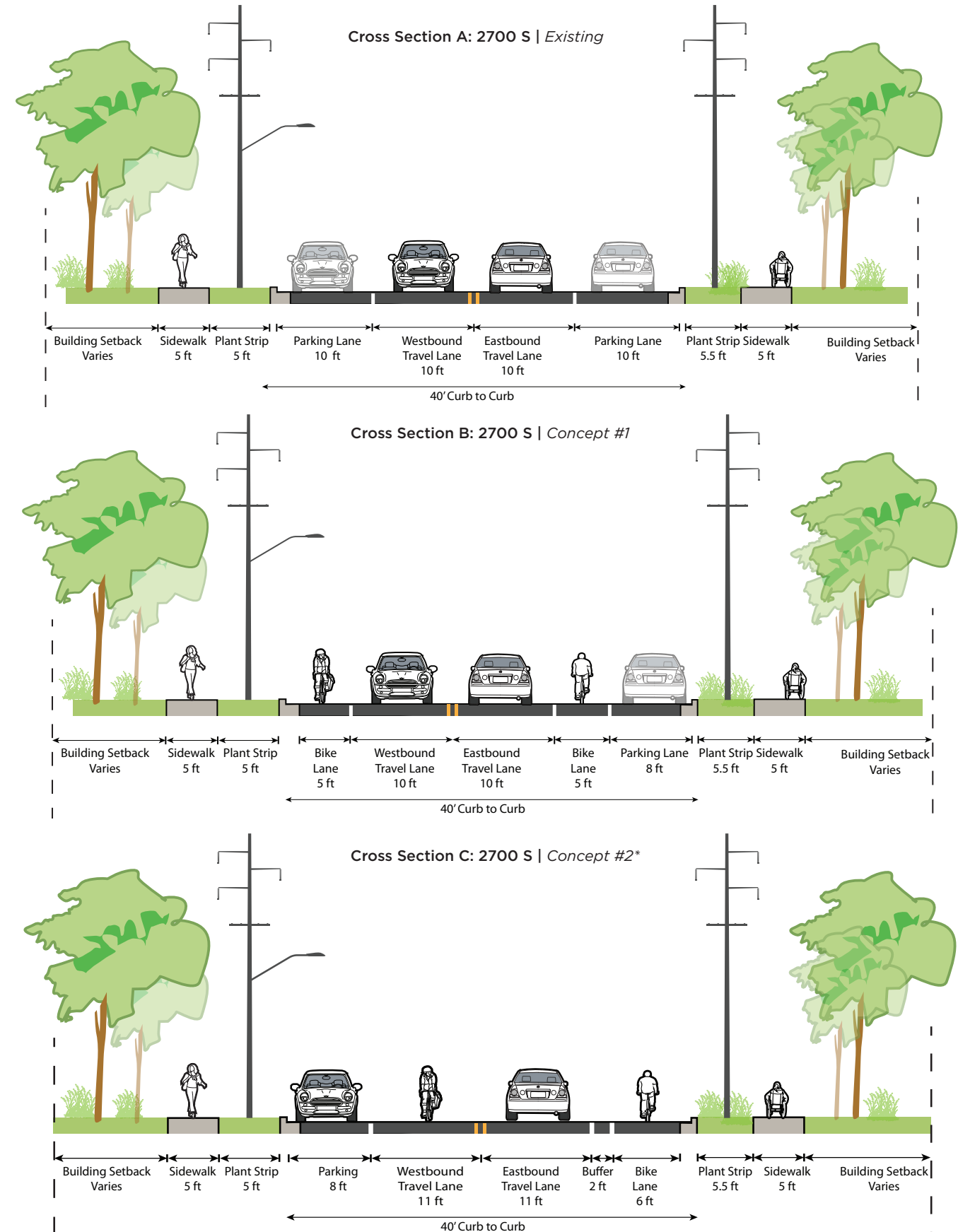
Utility poles on the south side of 2700 S are a barrier to road reconstruction.

FINAL PROJECT RECOMMENDATIONS (cont.)



2700 South Concepts
Complete Streets
PRIORITY PROJECT

	Concept #1 - Bike Lanes	Concept #2 - Climbing Lane / Bike Lane
Cross-Section Narrative	Stripe bike lanes on 2700 S. Restrict parking on one side of the corridor to create room for bike lanes.	Stripe buffered bike lane on the eastbound side of the street and implement shared lane markings in the downhill, westbound lane. Restrict parking on one side of the corridor.
Additional Improvements	<p>Consider implementation of colored concrete crosswalks at neighborhood business nodes at 900 E and/or Highland to support placemaking initiatives.</p> <p>Presence of overhead power lines limits opportunities for street tree plantings, however, coordinate with City Forestry to determine if appropriate species and locations could be implemented.</p> <p>Accommodate future McClelland Trail crossing at / or near Elizabeth Street.</p>	<p>Consider implementation of colored concrete crosswalks at neighborhood business nodes at 900 E and/or Highland to support placemaking initiatives.</p> <p>Presence of overhead power lines limits opportunities for street tree plantings, however, coordinate with City Forestry to determine if appropriate species and locations could be implemented.</p> <p>Accommodate future McClelland Trail crossing at / or near Elizabeth Street.</p>
Potential Impacts	Restrict parking on one side of the street. Conduct parking demand analysis to confirm viability of parking reduction and locations.	Restrict parking on one side of the street. Conduct parking demand analysis to confirm viability of parking reduction and locations.
Collaborations and Partnerships	Salt Lake City, Millcreek City, Utah Transit Authority, utility companies, property owners, developers	Salt Lake City, Millcreek City, Utah Transit Authority, utility companies, property owners, developers
Mobility Benefits	<ul style="list-style-type: none"> Provides safe and comfortable east-west route for those bicycling both directions 	<ul style="list-style-type: none"> Provides safe comfortable route for those bicycling east. High traffic volumes and speeds on this road may deter less confident riders from traveling westbound.
Technical Constraints	<ul style="list-style-type: none"> Pending results of a future parking demand analysis, on-street parking removal may be contentious 	<ul style="list-style-type: none"> Pending results of a future parking demand analysis, on-street parking removal may be contentious
Implementation Costs	<ul style="list-style-type: none"> Low - Medium 	<ul style="list-style-type: none"> Low - Medium
Preferred Concept	✓	
Phasing	Medium-term; No roadway reconstruction currently planned	Medium-term; No roadway reconstruction currently planned



*For consideration from 900 East to Highland Drive.

FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District to Millcreek City Center PRIORITY PROJECT

Existing Conditions:

Project Extent: Sugar House Business District to Millcreek City Center and Brickyard

Land Use: Commercial shopping centers, office, and residential

Description: Despite the fact that Sugar House plaza is located just over a mile from the most northern section of the Millcreek City Center, bicycle- and walk-shed analysis found it takes cyclists more than 15 minutes to bike between the two commercial centers. Highland Drive's current configuration as an vehicular-focused thoroughfare has made cycling dangerous and uninviting. Pedestrians also find the walking environment unattractive and rarely do you find them traveling between the two centers by foot.

Project Alignment:

Guiding Principles: Safety, Equity, Choice, Connectivity, Health, Collaboration, Sustainability

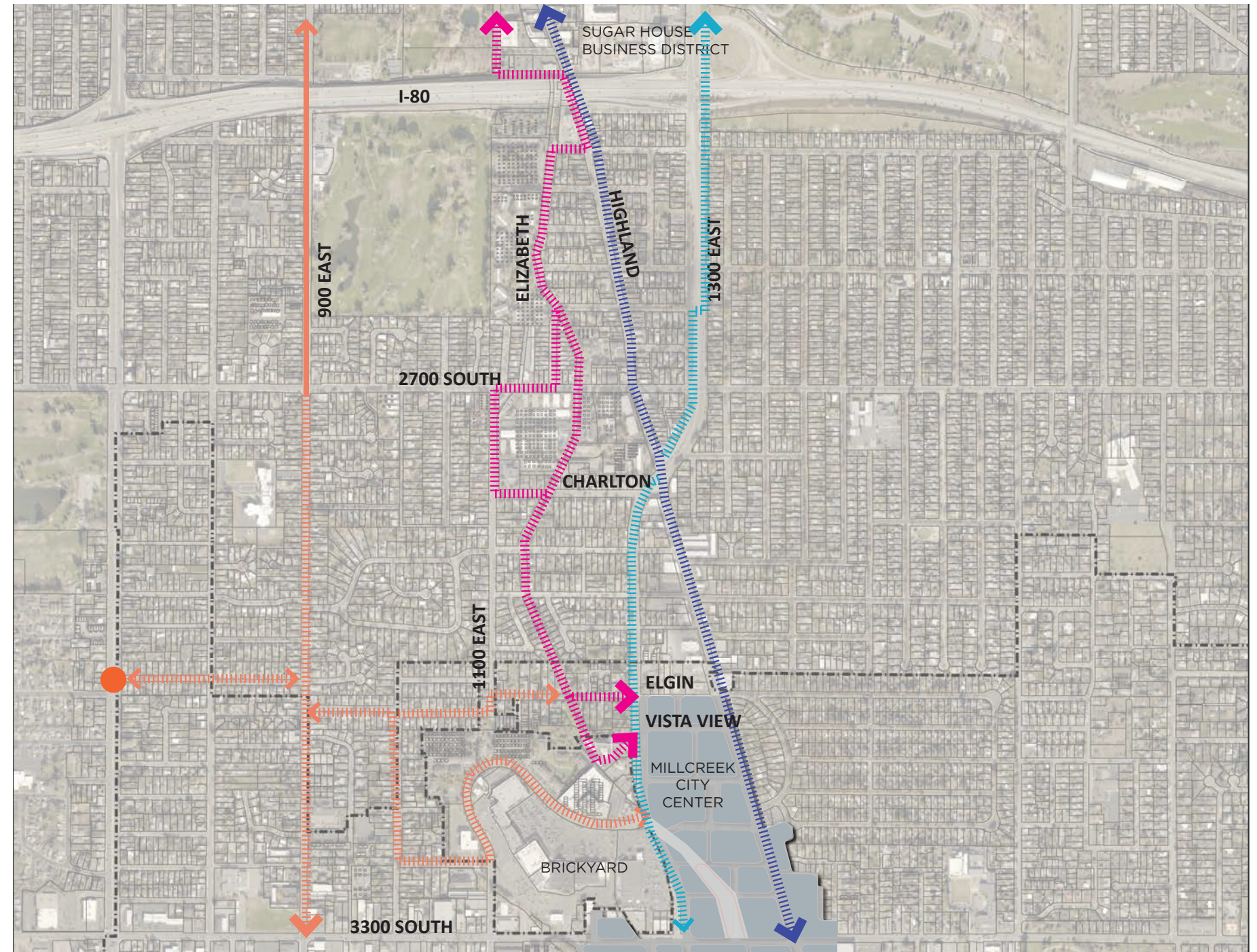
Planning Integration:

- Bicycle lanes along Highland align with Millcreek's recent transportation analysis of the corridor and Salt Lake City's Pedestrian and Bicycle Master Plan
- McClelland Trail route aligns with Jordan and Salt Lake Canal Trail Master Plan
- Bicycle lanes along 1300 East align with Salt Lake City's Pedestrian & Bicycle Master Plan, the WFRC's 2019-2050 Regional Transportation Plan, and UDOT's plans.
- Bicycle lanes along 900 East align with the WFRC's 2019-2050 Regional Transportation Plan

Improvement Description:

There are multiple viable options for developing north-south connections from the Sugar House Business District to Brickyard and Millcreek's City Center. The map shows three possible options: 1300 East, Highland Drive, the McClelland Trail, and 900 East. Each of these routes will be discussed in more detail on the following pages.

Project Plan View



- 900 East Bike Lanes
- McClelland/Canal Trail
- Highland Drive Bike Lanes
- 1300 East Sidepath / Frontage Road Neighborhood Byway / Bike Lane

FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District
to Millcreek City Center

PRIORITY PROJECT

	Route #1: Highland Drive Bicycle Lanes	Route #2: McClelland Trail	Route #3: 1300 East Sidepath / Frontage Road Neighborhood Byway / Bike Lane	Route #4: 900 East Bicycle Lanes
Cross-Section Narrative/Description	<p>Cross Section A1: North of I-80. Remove one lane to make room for bike lanes. Add two-way left turn center lane. Stripe bike lanes on both sides of the street.</p> <p>Cross Section A2: I-80 to Richmond. Remove parking on one side of the street to make room for bike lanes. Stripe bike lanes on both sides of the street.</p> <p>Cross Section A3: South of Richmond. Remove one lane to make room for bike lanes. Add two-way left turn center lane. Stripe bike lanes on both sides of the street.</p>	<p>Implement McClelland/Canal Trail as preferred alignment illustrated in 2013 Plan. Combination of bicycle lanes, on-street shared lane markings, and off-street trail.</p> <p>Pursue long-term opportunities to overcome private property barriers and connect directly into Brickyard.</p>	<p>Connect planned 1300 East shared use path from 2100 South to Stratford Ave (on east side of street) to bicycle boulevard on interior street on west side of 1300 East, south of Stratford. Utilize existing hybrid beacon for crossing. Continue bike lanes along 1300 E / Richmond to 3300 South.</p>	<p>Develop bike lanes on 900 E to connect to planned bikeways north of 2700 S in Salt Lake City to bike lanes in Millcreek. Requires removal of the existing two-way left turn lane.</p>
Additional Improvements	<p>Improve pedestrian crossings at key locations in line with City's 2021 re-striping pilot program.</p>	<p>Opportunities for public art, wayfinding and signage.</p>	<p>Improve pedestrian access across Frontage Road crossings of east-west streets</p> <p>Improve Highland / Richmond intersection to facilitate bicycle and pedestrians traveling along the Frontage Road to seamlessly transition to Highland Drive.</p> <p>Improve pedestrian / trail crossings through the I-80 interchange</p>	<p>Implement bikeway wayfinding signage. Sign to connections to Brickyard and Millcreek City Center</p>
Potential Impacts	<p>Elimination of two traffic lanes may create congestion north of I-80.</p> <p>South of I-80, restricted parking on one side of the street. Conduct parking demand analysis to confirm viability of parking reduction and locations.</p>	<p>Right-of-way purchasing required. Narrowing traffic lanes. On-street parking reduction.</p>	<p>Narrowing lanes may cause congestion.</p> <p>May require ROW acquisition.</p>	<p>Requires removal of the existing two-way left turn lane.</p>
Collaborations and Partnerships	<p>Salt Lake City; Millcreek City</p>	<p>Coordinate with City Arts Council and Department.</p>	<p>Salt Lake City; UDOT</p>	<p>Salt Lake City, Millcreek</p>
Mobility Benefits	<ul style="list-style-type: none"> Most direct and immediate route connecting Sugar House BD to Millcreek City Center Added lanes in Salt Lake City would align with new lanes to be added in Millcreek 	<ul style="list-style-type: none"> Low-stress route Scenic route through Salt Lake City residential neighborhoods. 	<ul style="list-style-type: none"> Provides high-comfort connection between Sugar House Business District and Parley's Trail to Millcreek 	<ul style="list-style-type: none"> Important regional bikeway connection that extends south to Millcreek, Murray, and Sandy
Technical Constraints	<ul style="list-style-type: none"> Requires lane configuration to convert 2 travel lanes in each direction to one lane in each direction with a two-way left turn lane Requires parking removal on the 2-lane segment of Highland Great candidate for road diet according to the Federal Highway Association's Road Diet Guide as currently traffic volume does not exceed 10,000 vehicles per day 	<ul style="list-style-type: none"> Private property barriers preventing connectivity into Brickyard commercial center. Crossing large collector streets such as 2700 South Crossing improvements, such as a pedestrian hybrid beacon, are needed to connect end of the McClelland Trail (Elgin Avenue) to Millcreek City Center across Richmond. 	<ul style="list-style-type: none"> ROW Pinch point for the proposed 1300 E sidepath near the Stratford Avenue intersection. 	<ul style="list-style-type: none"> Verify removal of two way left turn lane will not substantially affect vehicular operations
Implementation Costs	<p>Low</p>	<p>High</p>	<p>High</p>	<p>Low</p>
Preferred Concept	<p>✓</p>	<p>✓</p>	<p>✓</p>	<p>✓</p>
Phasing	<p>TBD; Resurfacing of Highland planned for 2021</p>	<p>TBD; McClelland Trail construction planned for north of I-80 to start of Elizabeth</p>	<p>TBD</p>	<p>TBD</p>

FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District
to Millcreek City Center

HIGHLAND DRIVE

Existing Conditions:

Project Extent:	2100 South and 3300 South		
Land Use:	Neighborhood		
Project Destinations:	Sugar House Business District; Millcreek City Center; Brickyard		
Street Classification:	Collector		
Typology:	Destination Street		
Corridor Functions:	Person Mobility	Typology Benchmark	Current
	High	High	Medium
	Greening	Medium	High
	Placemaking	High	Medium/High
	Curbside Diversity	High	High
	Vehicle Mobility	Low	Low
AADT:	9,500		
Posted Speed:	30 MPH		
Right of Way Width:	50-80' typical		
Curb to Curb Width:	42' typical		
Project Alignment:	Safety, Equity, Choice, Connectivity, Health, Collaboration		
Guiding Principles:			

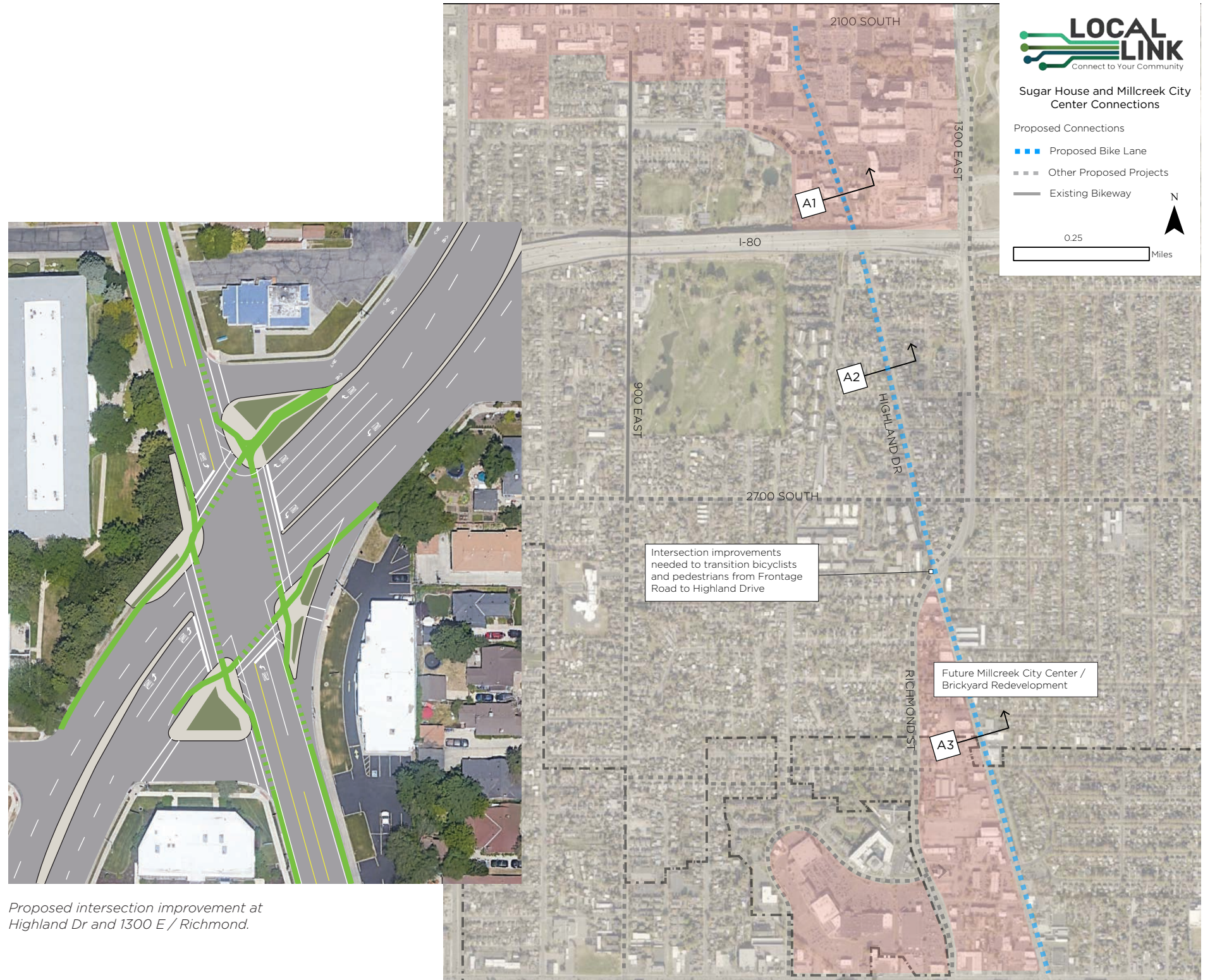
Planning Integration:

- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.

Corridor Improvement Description:

The most direct route from the Sugar House Business District to Brickyard and Millcreek's City Center lies along Highland Drive. North of I-80, four lanes of traffic would be reduced to three lanes with one center turn lane and bike lanes on each side of the road. After coming south under the I-80 overpass until Richmond, bicycle lanes would be added and on-street parking would be retained on one side. South of Richmond, bicycle lanes would be added, on-street parking would be removed, and a two-way left turn lane would be added.

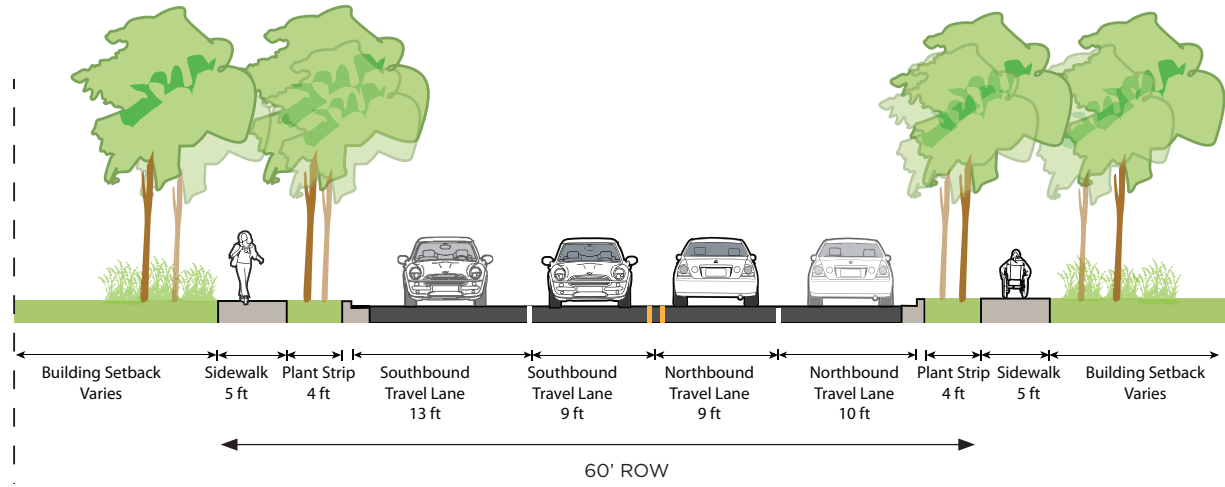
Project Plan View



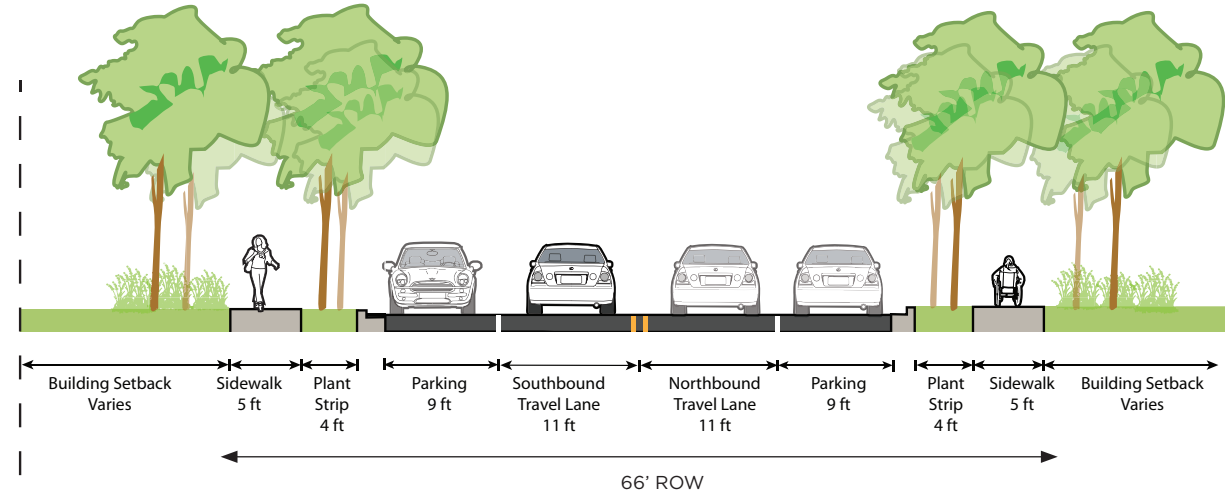
Proposed intersection improvement at Highland Dr and 1300 E / Richmond.

FINAL PROJECT RECOMMENDATIONS (cont.)

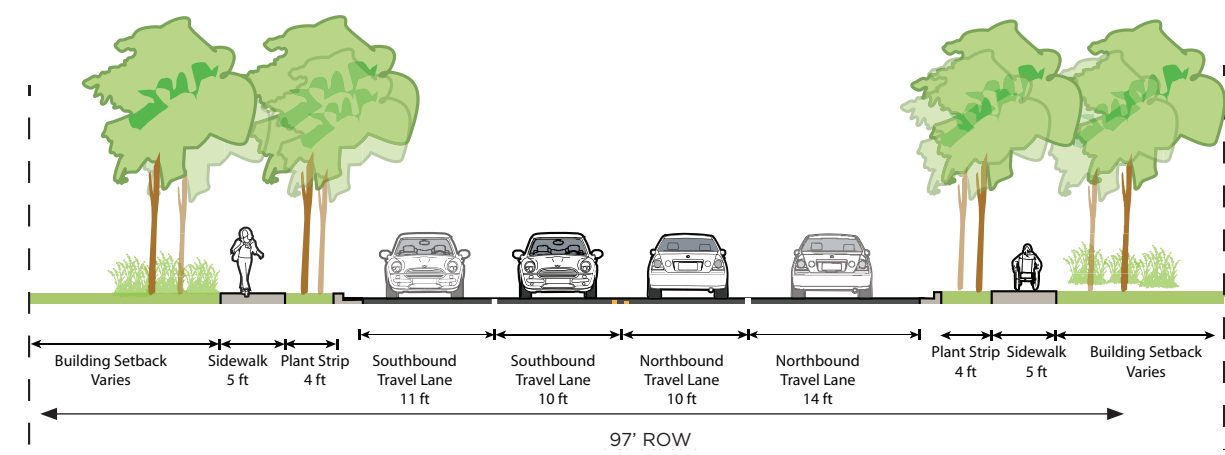
Cross Section A2: Highland Dr | Existing



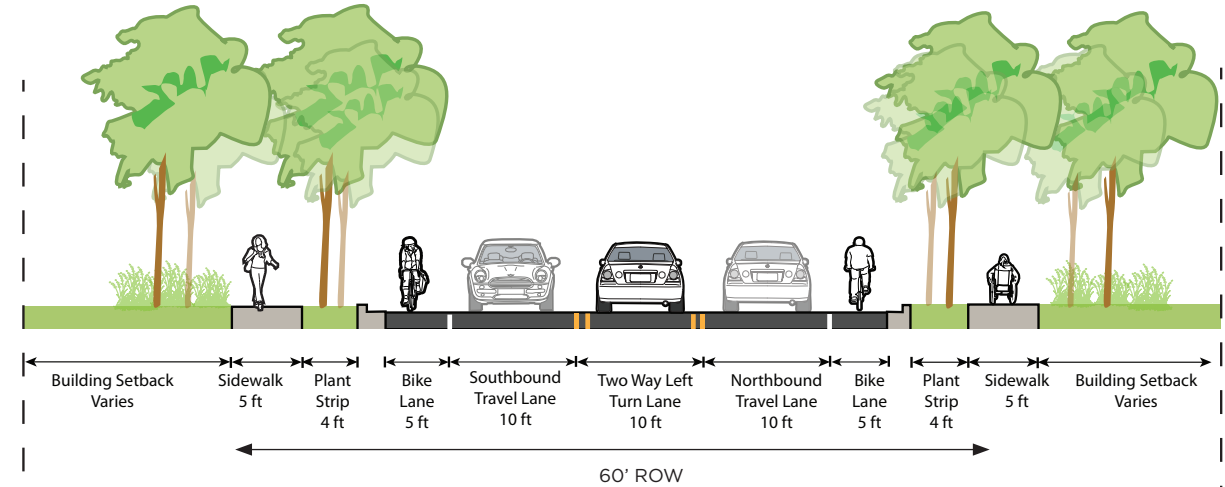
Cross Section A2: Highland Dr | Existing



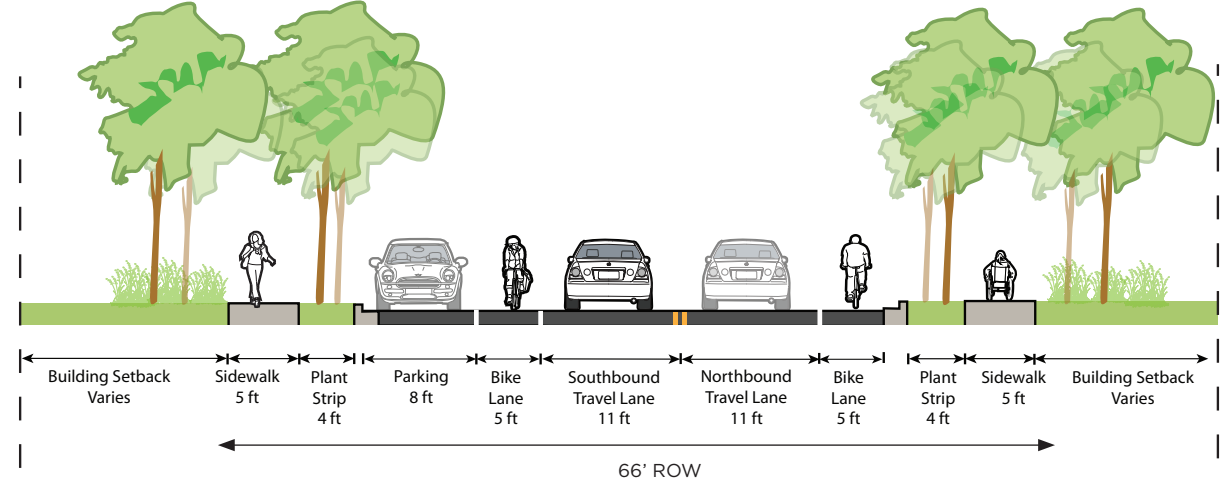
Cross Section A3: Highland Dr | Existing



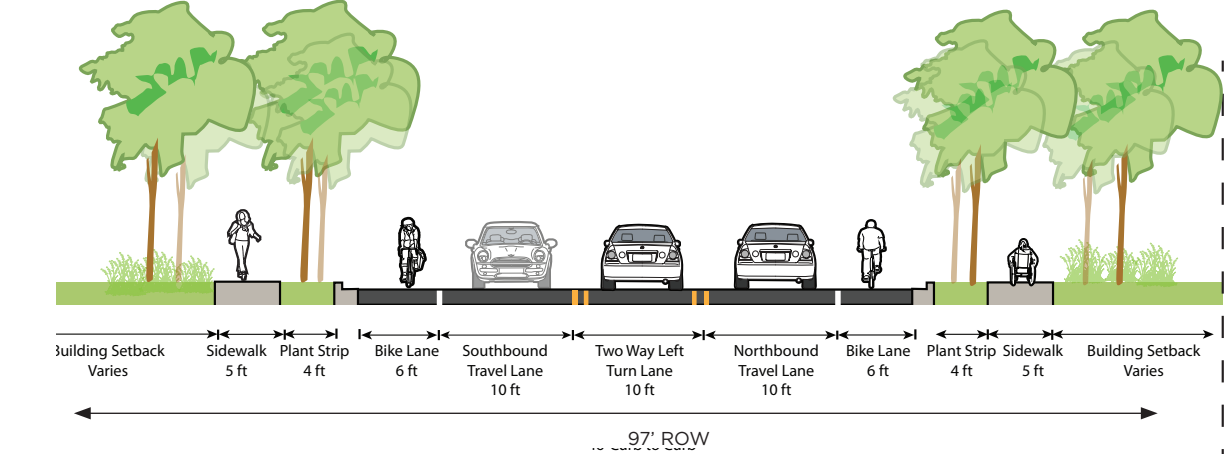
Cross Section A1: Highland Dr | Proposed



Cross Section A2: Highland Dr | Proposed



Cross Section A3: Highland Dr | Proposed



FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District
to Millcreek City Center

MCCLELLAND TRAIL

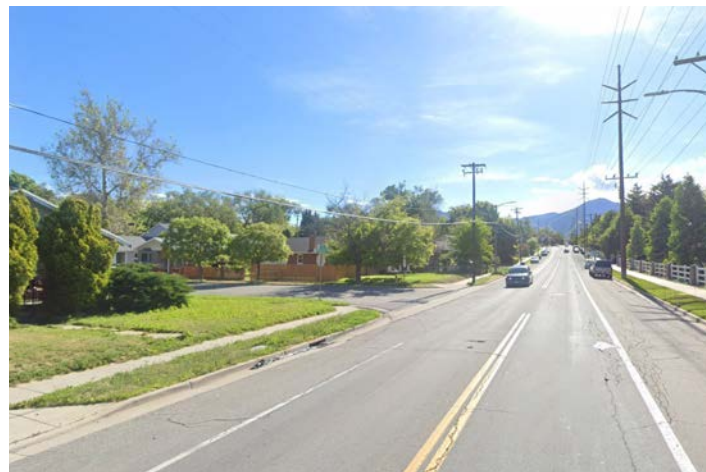
Existing Conditions:

Project Extent:	2100 South and Brickyard
Land Use:	Neighborhood
Project Destinations:	Sugar House Business District; Millcreek City Center; Brickyard
Street Classification:	N/A
Typology:	N/A
Right of Way Width:	Varies

Project Alignment: Safety, Equity, Choice, Connectivity, Health, Collaboration
Guiding Principles:

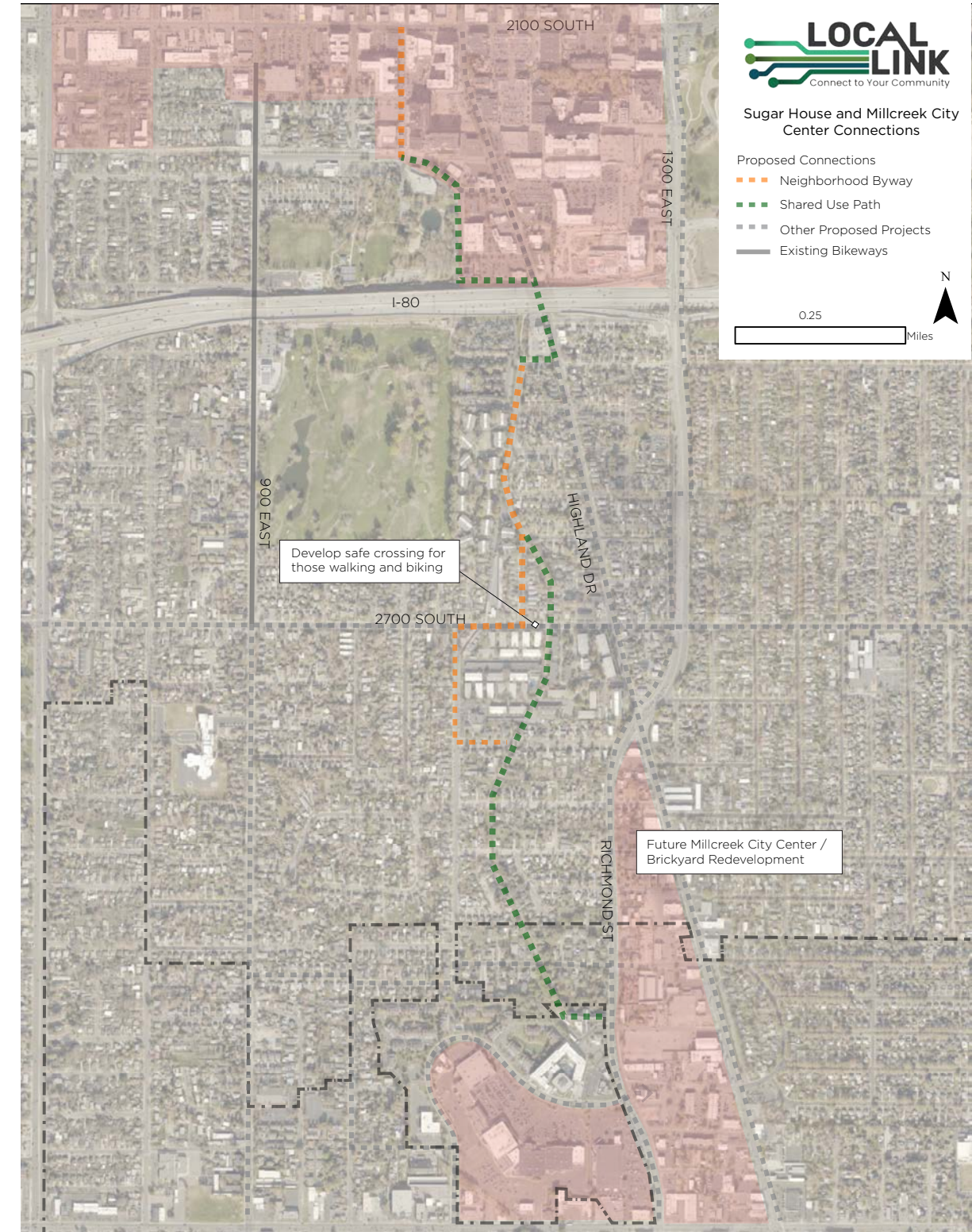
- Planning Integration:**
- Proposed shared use path and neighborhood byway identified in the Salt Lake City Pedestrian & Bicycle Master Plan and the Jordan and Salt Lake City Canal Implementation Plan

Corridor Improvement Description: An alternate, lower stress route north-south would run along the McClelland Trail which follows Highland Drive to Elizabeth south of I-80 and weaves through residential neighborhoods until it arrives at Elgin where it can connect to the northern part of the Millcreek City Center. Future efforts should investigate opportunities to acquire easements through private property into the Brickyard commercial center.



The future McClelland Trail crossing at 2700 South should be safe and comfortable.

Project Plan View



FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District
to Millcreek City Center

1300 EAST / RICHMOND STREET

Existing Conditions:

Project Extent: 2100 South and 3300 South
Land Use: Commercial; Neighborhood
Project Destinations: Sugar House Business District; Millcreek City Center; Brickyard
Street Classification: Arterial
Typology: Destination Thoroughfare

Corridor Functions:	Typology Benchmark	Current
Person Mobility	High	Medium/Low
Greening	Medium	Low
Placemaking	High	Low
Curbside Diversity	Medium	Medium/Low
Vehicle Mobility	Medium/Low	High

AADT: 35,000

Posted Speed: 40 MPH

Right of Way Width: 70-196' typical

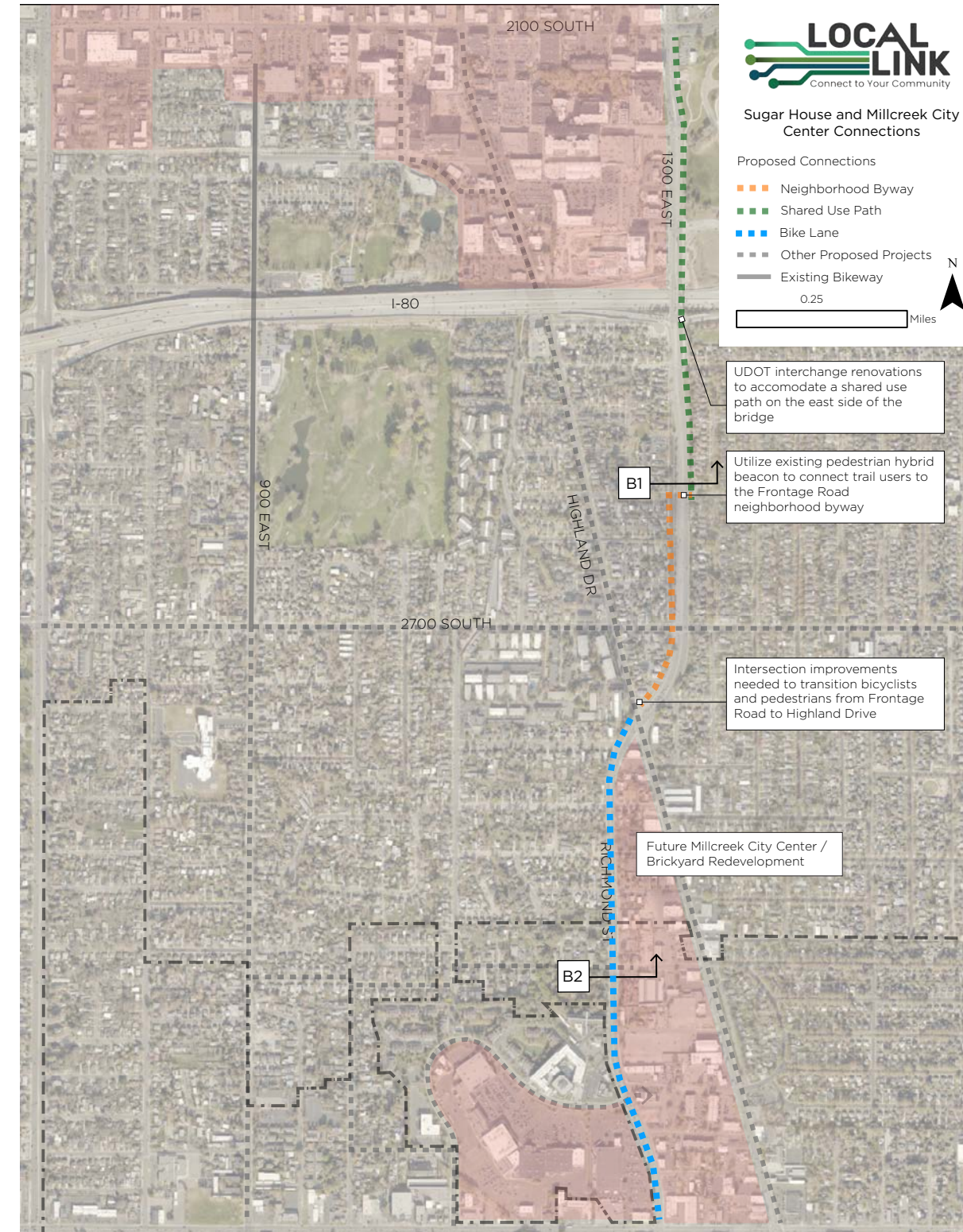
Curb to Curb Width: 90' typical

Project Alignment: Safety, Equity, Choice, Connectivity, Health, Collaboration

- Planning Integration:**
- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.
 - Bike lanes identified in the Wasatch Choice: 2019-2050 Regional Transportation Plan
 - Shared use path identified in UDOT's plans.

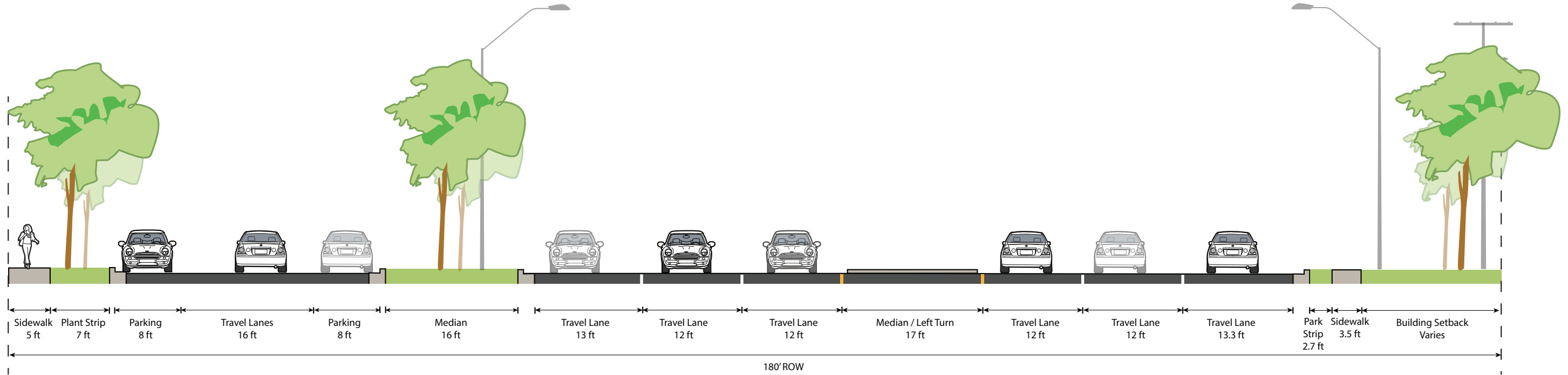
Corridor Improvement Description: 1300 E and the adjacent Frontage Road also provide opportunities to connect Sugar House and Millcreek. Available ROW on the east side of 1300 E could accommodate a new sidepath connecting across the I-80 interchange and into Sugar House Park. The existing pedestrian hybrid beacon at Stratford Avenue could connect the proposed sidepath across 1300 E to the frontage road. From there, the frontage road could serve as a neighborhood byway connection south to the intersection of 1300 E and Highland Drive. At this intersection, bike lanes will continue along Richmond until 3300 South.

Project Plan View

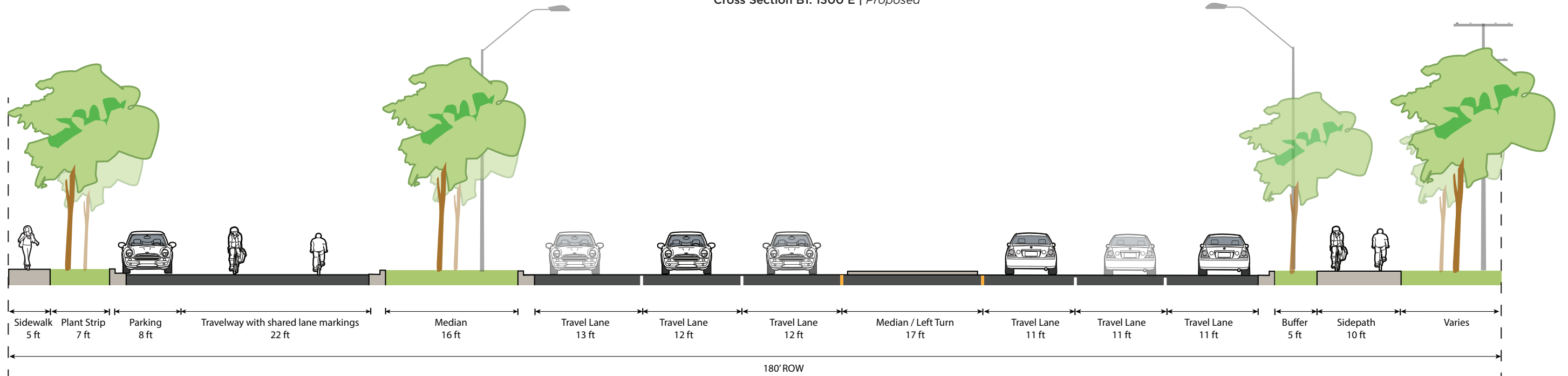


FINAL PROJECT RECOMMENDATIONS (cont.)

Cross Section B1: 1300 E | Existing

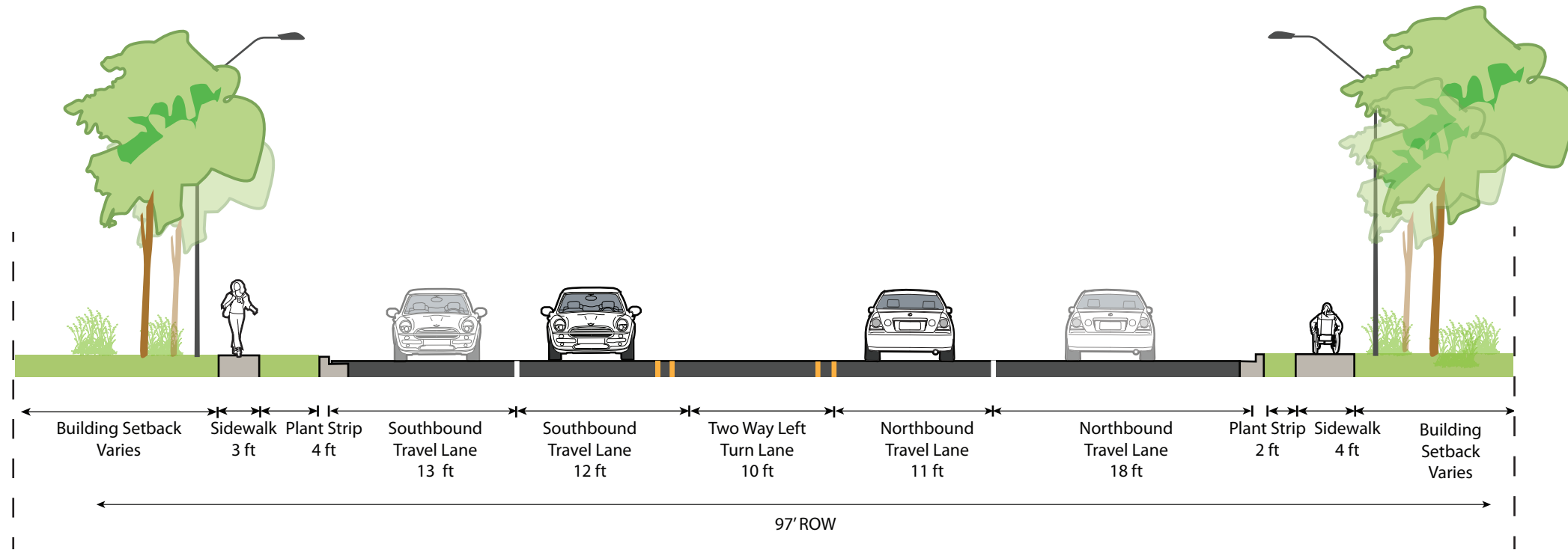


Cross Section B1: 1300 E | Proposed

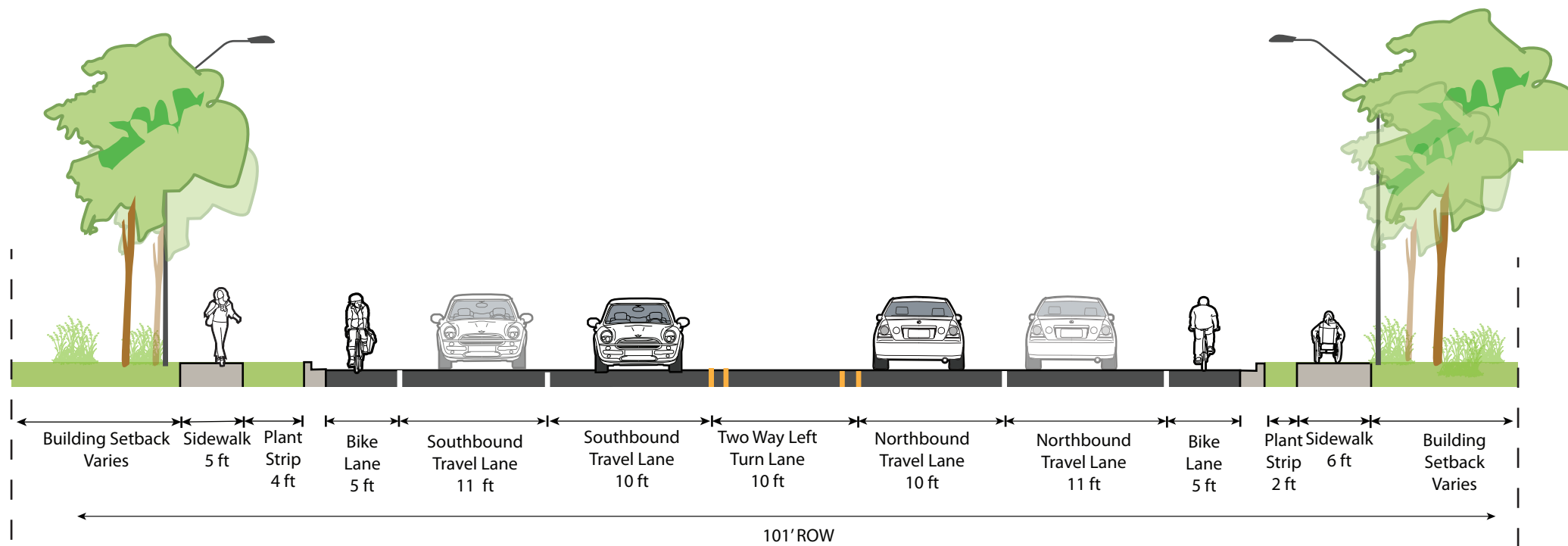


FINAL PROJECT RECOMMENDATIONS (cont.)

Cross Section B2: Richmond / 1300 E | Existing



Cross Section B2: Richmond / 1300 E | Proposed



FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Business District to Millcreek City Center

900 EAST

Existing Conditions:

- Project Extent: 2700 South and 3300 South
- Land Use: Neighborhood
- Project Destinations: Multi-family housing, Nibley Park Elementary, Neighborhood Commercial Destinations
- Street Classification: Collector
- Typology: Neighborhood Corridor & Neighborhood Center

Corridor Functions:

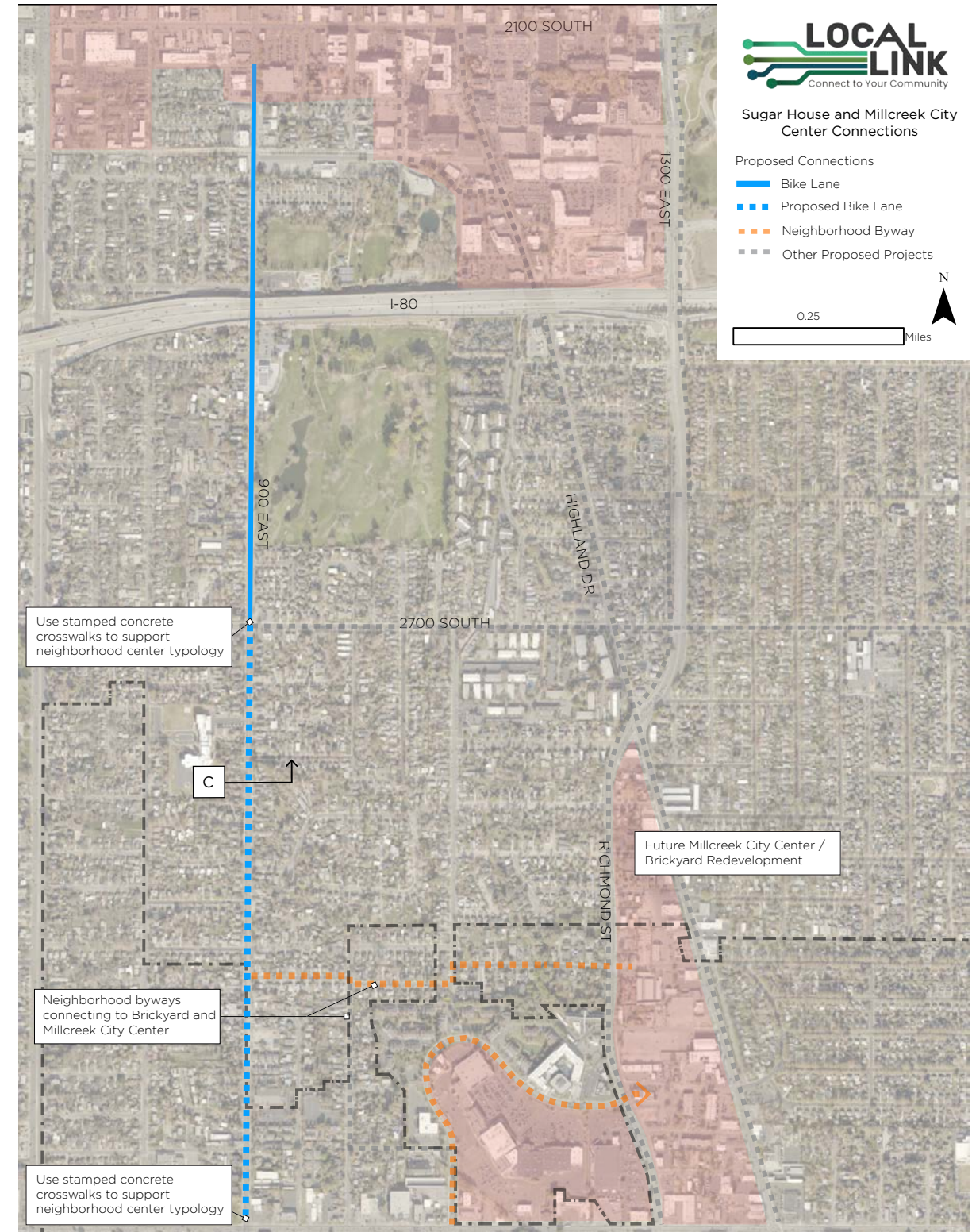
	Typology Benchmark	Current
Person Mobility	Medium	Low
Greening	High	Medium
Placemaking	Medium	Low
Curbside Diversity	Medium/Low	Low
Vehicle Mobility	Medium	High

- AADT: 9,500
- Posted Speed: 30 MPH
- Right of Way Width: 64' typical
- Curb to Curb Width: 48' typical
- Project Alignment:** Safety, Equity, Choice, Connectivity, Health, Collaboration
- Guiding Principles: Safety, Equity, Choice, Connectivity, Health, Collaboration
- Planning Integration:
 - Missing link between Sugarhouse and Millcreek City Center / Brickyard
 - Bike lanes identified in the WFRC 2019-2050 Regional Transportation Plan
 - Transit on 900 E

Corridor Improvement Description:

900 E also provides opportunities to connect from the Sugar House Business District to Brickyard and Millcreek's City Center. From 2700 S to 3300 S, the three lane cross section would be reduced to two lanes, eliminating the two way left turn lane, with bike lanes on each side of the road. Neighborhood byway connections will be added to fill in the missing link between 900 E and Millcreek City Center / Brickyard.

Project Plan View



FINAL PROJECT RECOMMENDATIONS (cont.)

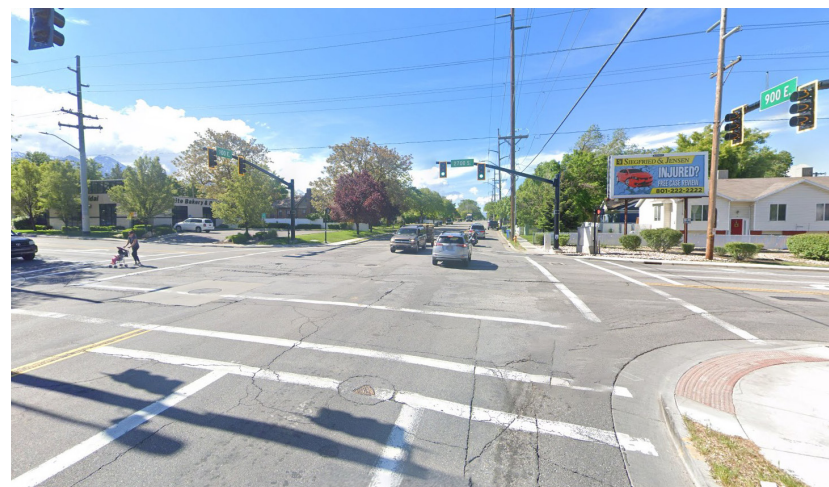
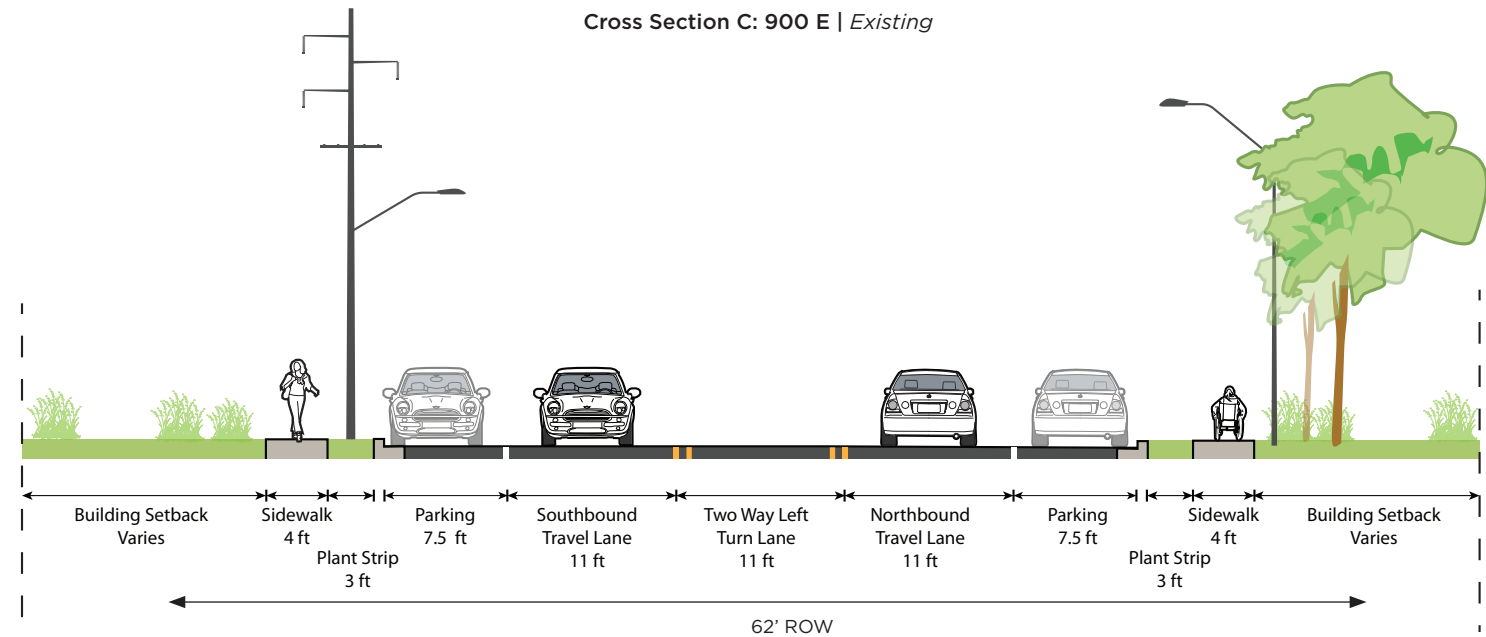


Sugar House Business District
to Millcreek City Center

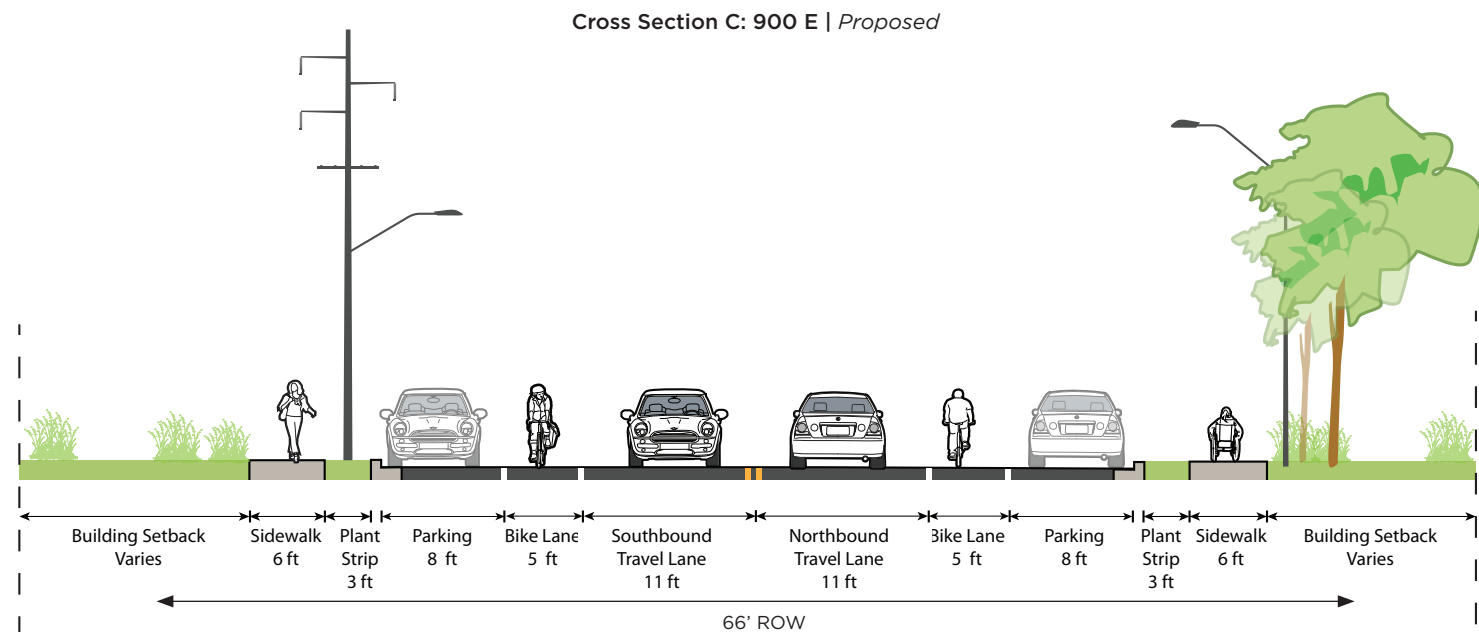
900 EAST



South view of existing 900 East cross section by Nibley Park School.



Neighborhood center at the intersection of 900 East and 2700 South.



FINAL PROJECT RECOMMENDATIONS (cont.)



3300 South Complete Streets

Existing Conditions:

Project Extent:	300 West to Highland Drive
Land Use:	Commercial and Industrial
Project Destinations:	Millcreek TRAX Station, Brickyard Shopping Center, Millcreek City Center, Roosevelt Elementary School, Jean Massieu School of the Deaf, Wasatch Lawn Memorial Park, Millcreek Trail
Street Classification:	Arterial/Highway
AADT:	20,000-30,000
Posted Speed:	35 MPH
Right of Way Width:	70'-103'
Curb to Curb Width:	52'-86'
Project Alignment: Guiding Principles:	Safety, Equity, Choice, Connectivity, Health, Collaboration, Sustainability

Planning Integration: South Salt Lake Strategic Mobility Plan goals and policies include building a complete street network and enhancing pedestrian and bike safety at intersections.

BRT is shown as a phase 2 unfunded transit solution for this corridor in the 2050 Wasatch Choice Plan.

A new corridor study funded by WFRC, Millcreek City, and South Salt Lake is set to begin in 2020 to examine transforming the 3300 South corridor.

Corridor Improvement Description:

- Potential to create transit priority lanes
- Potential to create buffered bike lanes
- Consider burying utility lines and increasing sidewalk widths for pedestrians

Potential Impacts:

Reduced lane width; lowered capacity for individual vehicle throughput

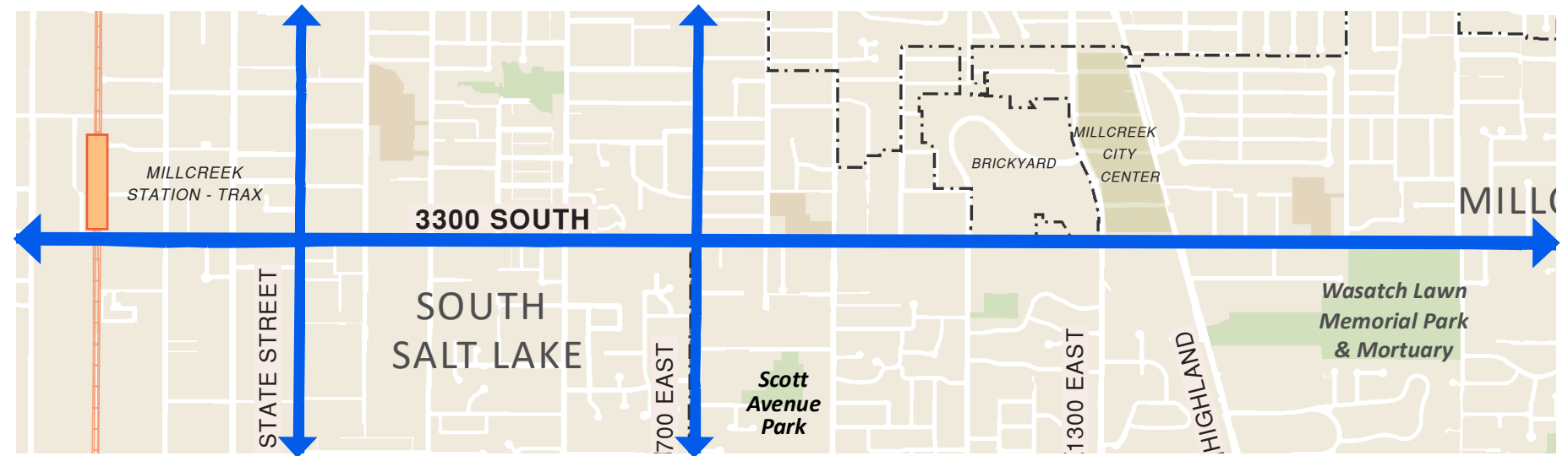
Collaboration and Partnerships:

Coordinate with UDOT, WFRC, Millcreek, South Salt Lake, utility providers, private property owners

Implementation Phasing:

Long-term; upcoming study to determine phasing and possible timeline

Project Plan View



Corridor Images



Seven Travel Lanes near West Temple



Center Turn Lane and Large Overhead Utilities on North Side



Narrow Sidewalks with No Street Buffer and Utility Poles on Curb



Long Crossing Distances at Intersections for Pedestrians

FINAL PROJECT RECOMMENDATIONS (cont.)



Parley's Trail Alignment

South Salt Lake Downtown

PRIORITY PROJECT

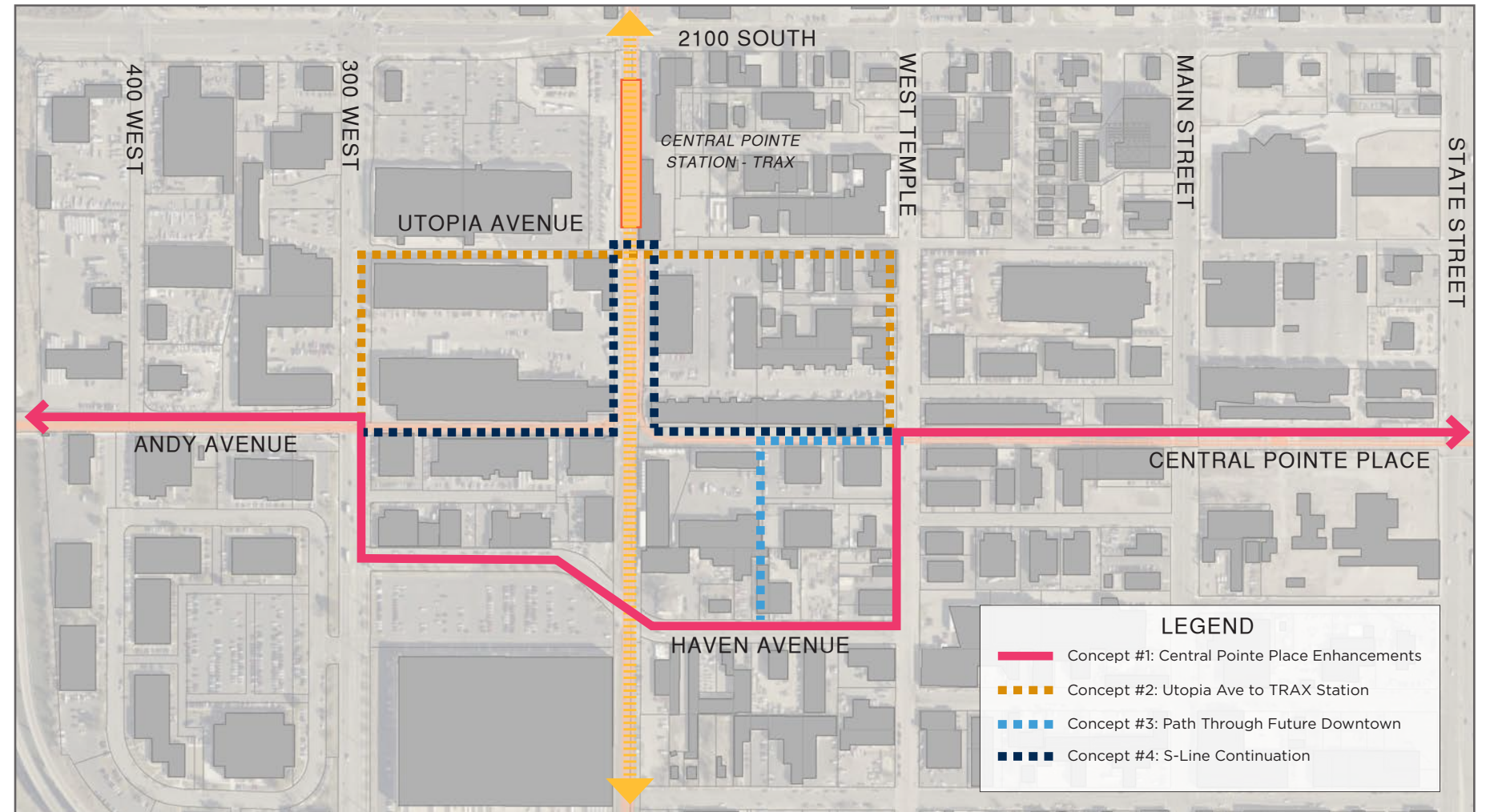
Existing Conditions:

- Project Extent: Parley's Trail - State Street to 300 West
- Land Use: Urban Center
- Project Destinations: South Salt Lake Downtown, Sugar House Central Business District, Central Point TRAX Station, Neighborhood Grocery, Multi-family housing

Description:

The current alignment of Parley's Trail through the South Salt Lake Downtown between State Street and West Temple can be confusing and unsafe. The trail is well-established and easy to follow as it comes westward out of Sugar House. After crossing State Street, the trail informally shares a one of two travel lanes along Central Pointe Place which includes diagonal, front-in, on-street parking. From there, the trail crosses somewhat awkwardly at the crosswalk intersection with Main Street and continues as a shared use path in the S-Line Corridor. This intersection at Main Street will become a key future active transportation intersection, with a planned north-south regional bike route connecting Salt Lake City and South Salt Lake on Main Street and West Temple respectively. After heading further west, the trail jogs south utilizing on-street bike lanes at West Temple, until Haven Avenue, where signage indicates the trail heads west. New alignments, enhancements to signage and wayfinding, and other options for trail markings will be considered in this project.

Project Plan Image



Project Alignment:

Safety, Equity, Choice, Connectivity, Collaboration

Guiding Principles:

Planning Integration:

- Future corridor preserved for double-track S-Line in the future
- Ongoing planning effort between Salt Lake City and South Salt Lake for a regional north-south bicycle route on Main & West Temple

Improvement Description:

Provide separated facility for Parley's Trail through South Salt Lake Downtown between State Street and West Temple

Collaborations and Partnerships:

South Salt Lake, Salt Lake City, Salt Lake County, UDOT, UTA, property owners along the S-Line and other adjacent properties.



Parley's Trail Current Route Along Central Pointe Place in South Salt Lake Downtown



Parley's Trail Crossing State Street

FINAL PROJECT RECOMMENDATIONS (cont.)



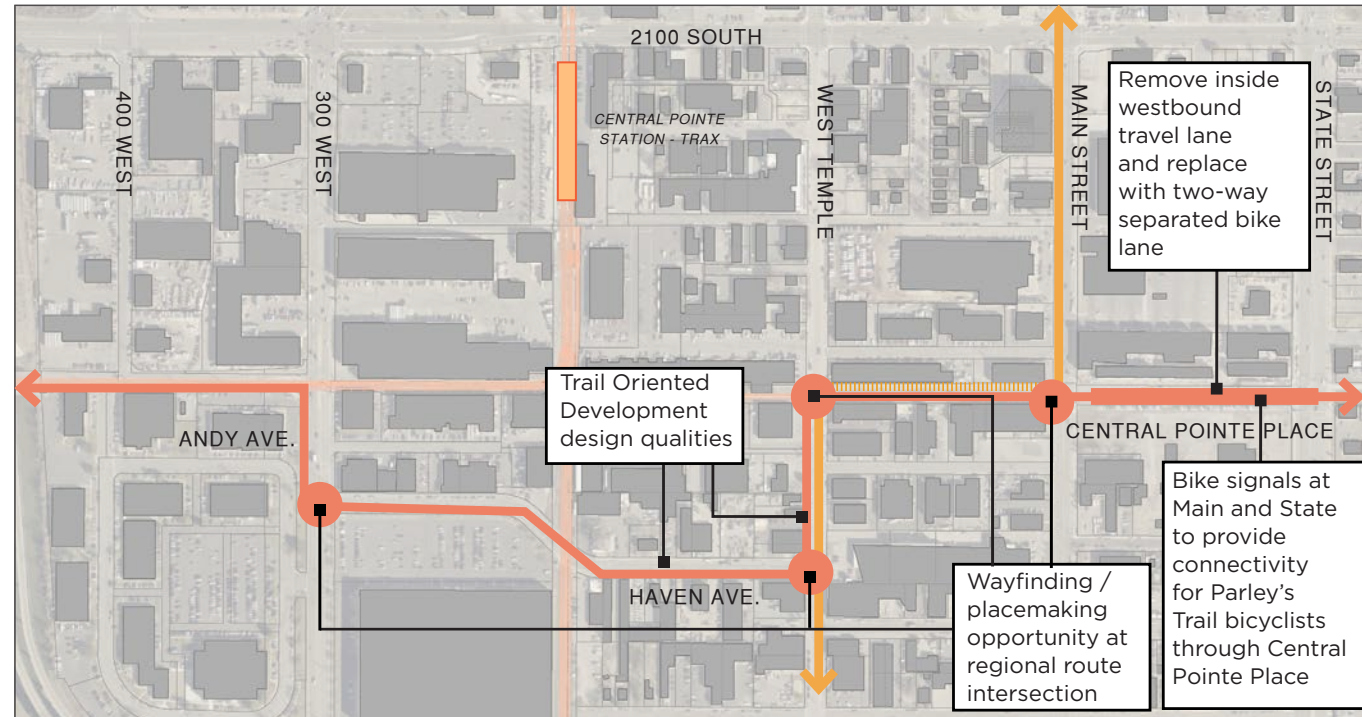
Parley's Trail Alignment
South Salt Lake Downtown
PRIORITY PROJECT

	Concept #1: Central Pointe Place Enhancements	Concept #2: Utopia Ave to TRAX Station	Concept #3: Path Through Future Downtown Development	Concept #4: S-Line Continuation
Cross-Section Narrative/Description	Replace inside westbound travel lane with a two-way separated bike lane and buffer. Install bike signals on either end of Central Pointe Place (Main and State) to cross Parley's Trail bicyclists to the proposed two-way separated bike lane. Pedestrians would use the existing sidewalk on the north side of Central Pointe Place to travel along Parley's Trail.	Utilize existing bike lanes and sidewalk along West Temple to connect Parley's Trail users to Utopia Ave. Add crosswalks to intersection. Improve Utopia by painting shared lane markings in the travel lanes for cyclists and constructing missing sections of sidewalks for pedestrians. Seek to negotiate an easement through private property at the end of Utopia into the Central Pointe TRAX station. Extend improvements west to 300 West.	Extend Parley's Trail along S-Line and route the trail south along new mid-block street shown in Downtown Master Plan so that trail passes through new development on a lower stress road than West Temple.	Extend Trail straight west from West Temple so that it stays parallel to the S-Line. Route the path north parallel to the S-Line and cross the TRAX at the existing pedestrian crossing at the southern end of the Central Pointe platform. Easements or acquisition would be needed to create a continuous corridor from West Temple to 300 West
Additional Improvements	<p>Prominent, colorful, and clear wayfinding could be added directing users south along West Temple to route continuation on Haven Avenue.</p> <p>Trail-oriented development guidelines are opportunities for adjacent land uses and buildings to embrace the trail alignment along West Temple.</p> <p>Prominent street paint indicating shared bicycle-auto lane could enhance cyclist visibility across TRAX line on Haven Avenue.</p> <p>Add signage for travelers along path for directions to TRAX Central Pointe Station,</p> <p>Install flangeway filler on the north side (currently unused) rails across State Street to mitigate for catching bicycle wheels</p>	<p>Prominent, colorful, and clear wayfinding could be added directing users north along West Temple to trail continuation on Utopia. Trail signage could indicate distance to TRAX station and even some TRAX line times.</p> <p>Trail-oriented development guidelines are opportunities for adjacent land uses and buildings to embrace the trail alignment along West Temple.</p> <p>Opportunities to better integrate trail with light rail station and use mobility hub typologies to enhance station for all mobility types.</p>	<p>Another north-south connection for cyclists and pedestrians would increase the active transportation traffic of the new Downtown.</p> <p>Additional landscaping, public art, signage, and other placemaking elements could make this path very vibrant.</p> <p>Opportunities to implement trail-oriented development design guidelines.</p>	<p>Trail-oriented development guidelines are opportunities for adjacent land uses and buildings to embrace the trail.</p> <p>Opportunities to better integrate trail with light rail station and use mobility hub typologies to enhance station for all mobility types.</p>
Potential Impacts	Possible conflict with fire access conditions although the eastbound lanes and streetcar on Central Pointe Place have a similar configuration. If the streetcar was double-tracked in the future, the two-way bike lane would need to be removed.	Trail users would need to cross light rail line twice.	Impact on possible new developments on block between S-Line, Haven, and West Temple.	Moving utility box will be expensive and difficult while S-Line is operating. Trail would have to cross two sets of tracks, potentially on private property. Bridge over utility box, while feasible, would likely be cost-prohibitive.
Collaborations and Partnerships	PRATT, South Salt Lake, Private property owners, Salt Lake County	PRATT, South Salt Lake, Private property owners, UTA, Salt Lake County	PRATT, South Salt Lake, Private property owners, UTA, Salt Lake County	PRATT, South Salt Lake, Private property owners, UTA, Salt Lake County
Mobility Benefits	<ul style="list-style-type: none"> Aligns with Parley's Trail defined in Downtown Master Plan and 2020 Mobility Strategic Plan Utilizes active transportation infrastructure in place, such as bicycle lanes on West Temple 	<ul style="list-style-type: none"> Would be the only direct connection between Parley's Trail and TRAX 	<ul style="list-style-type: none"> Extends Parley's Trail along S-Line further west Allows trail to continue south along a potentially slower speed street 	<ul style="list-style-type: none"> Direct and straight routing of Parley's Trail Connection to TRAX Station
Technical Constraints	<ul style="list-style-type: none"> Central Pointe Place north side recently reconstructed 	<ul style="list-style-type: none"> Would need easement through private property after Utopia Ave ends to reach Central Pointe Station Would need to work with UTA to determine if a trail crossing at the southern end of the Central Pointe TRAX Station is feasible 	<ul style="list-style-type: none"> Would need to be constructed in conjunction with redevelopment in this area 	<ul style="list-style-type: none"> Costly to move existing UTA streetcar utility infrastructure blocking extension of Parley's Trail Would require easements on private property
Implementation Costs	Low - Medium	Medium - High	Medium - High	High
Preferred Alternative	✓ (short-term)		Potential for Long-Term Implementation	Limited potential for Long-Term Implementation

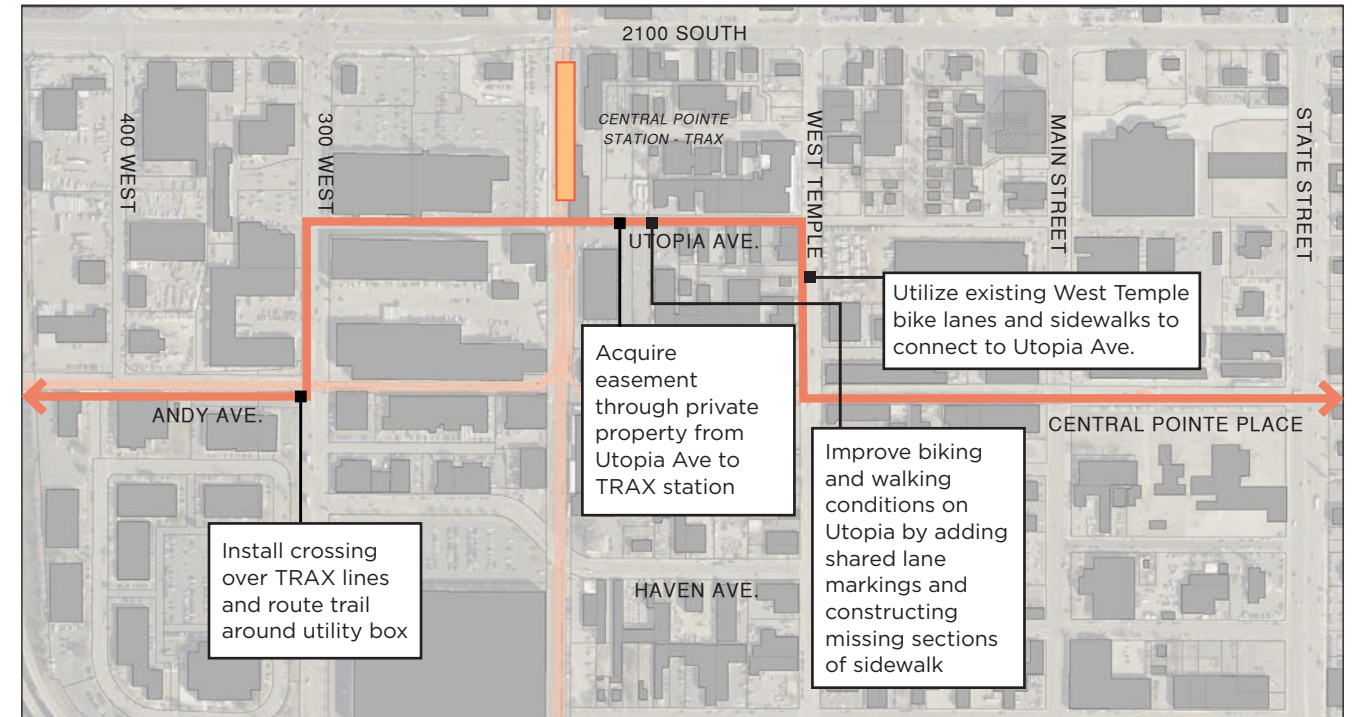
FINAL PROJECT RECOMMENDATIONS (cont.)



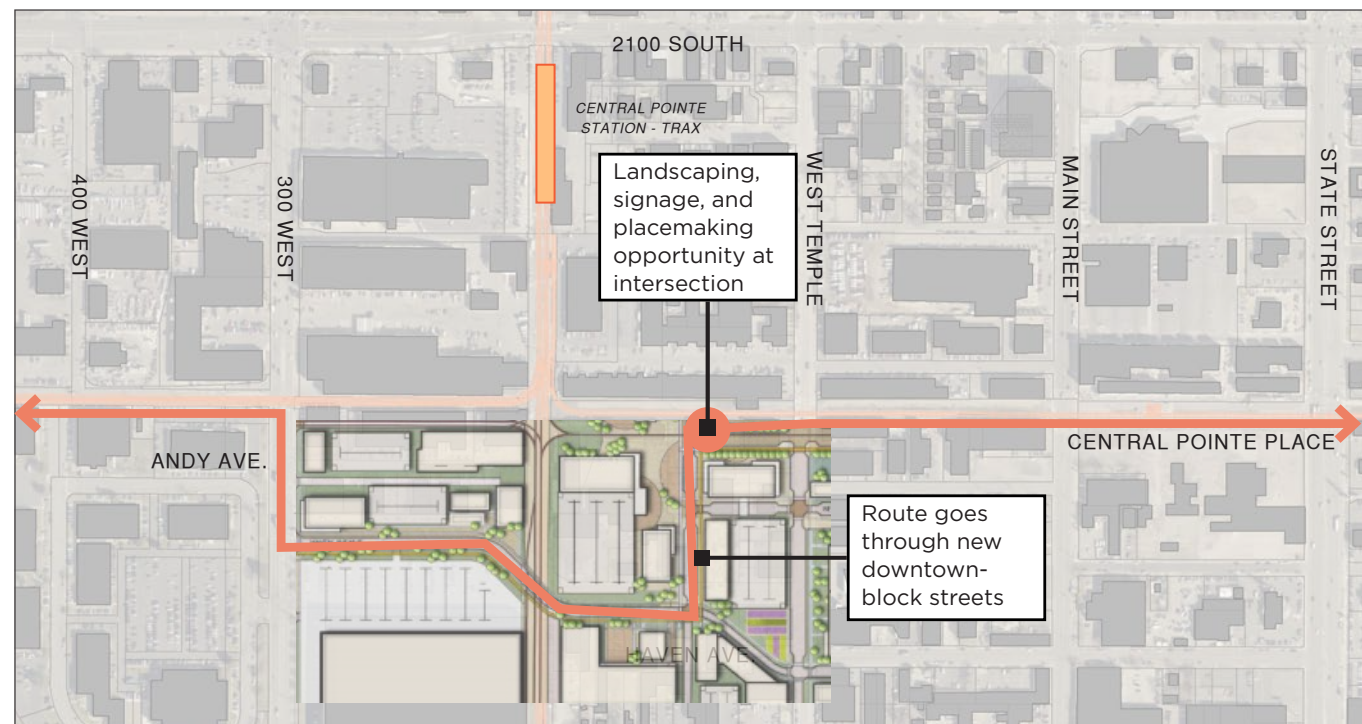
Parley's Trail Alignment
South Salt Lake Downtown
PRIORITY PROJECT



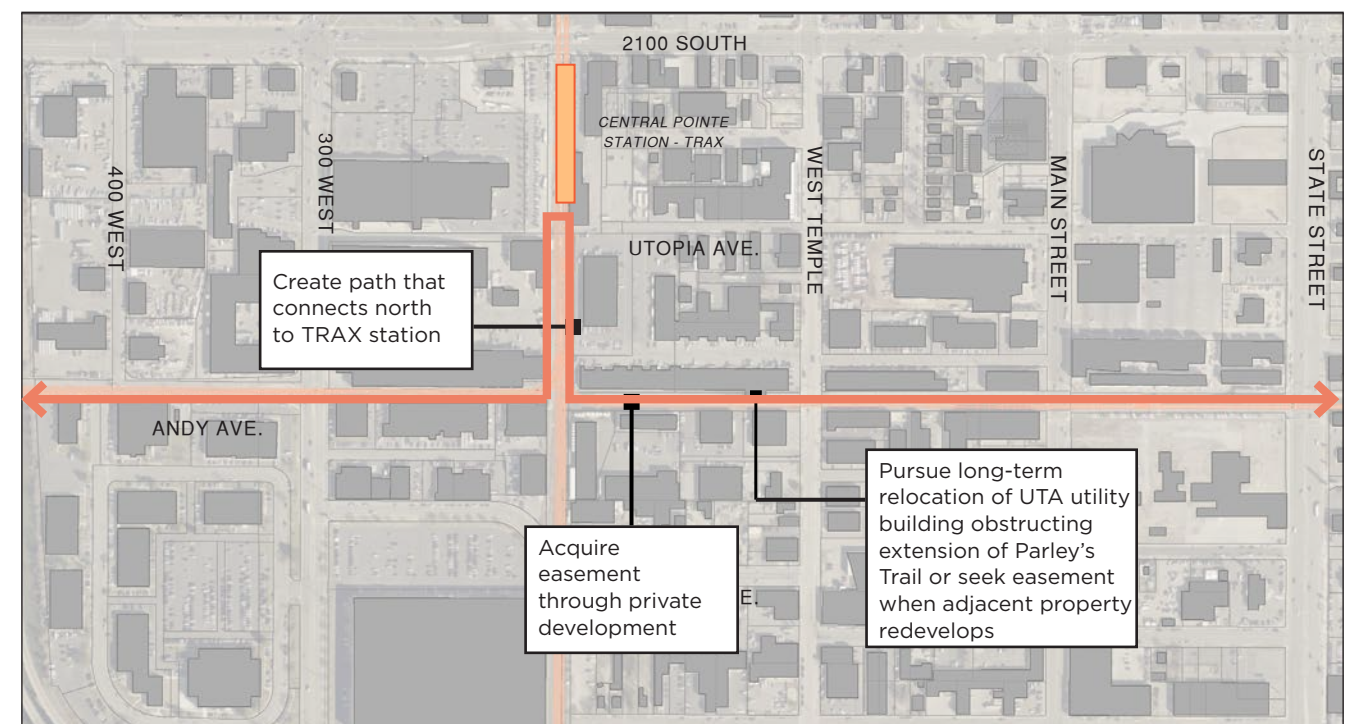
CONCEPT #1 : CENTRAL POINTE PLACE ENHANCEMENTS



CONCEPT #2 : UTOPIA AVE TO TRAX STATION



CONCEPT #3 : PATH THROUGH FUTURE DOWNTOWN DEVELOPMENT



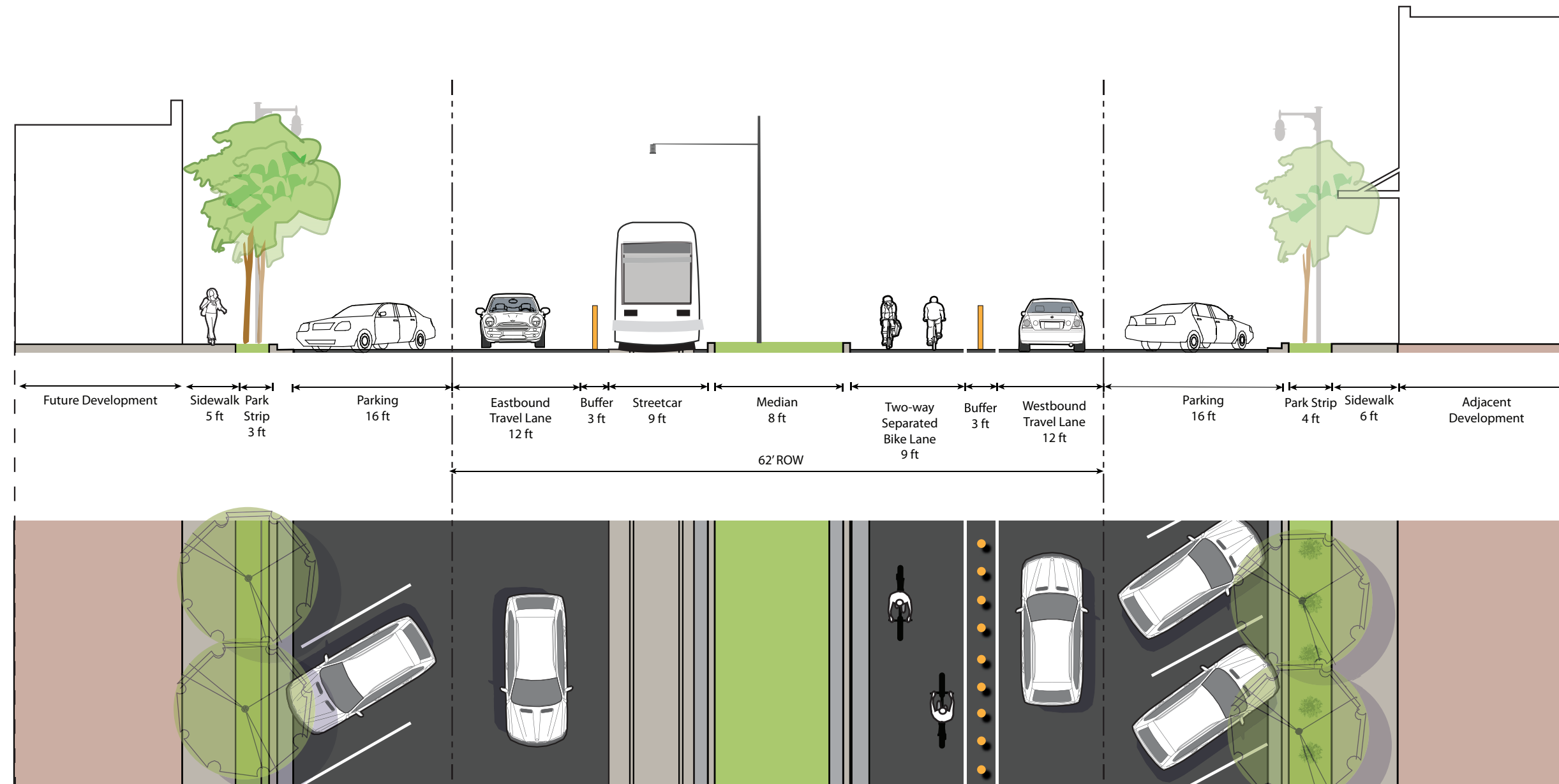
CONCEPT #4 : S-LINE CONTINUATION

FINAL PROJECT RECOMMENDATIONS (cont.)



Parley's Trail Alignment
 South Salt Lake Downtown
PRIORITY PROJECT

CentralPointe Place (Proposed) - State Street to Main Street



-Construct bike signals at traffic signals to mitigate conflicting left turn movements across Parley's Trail

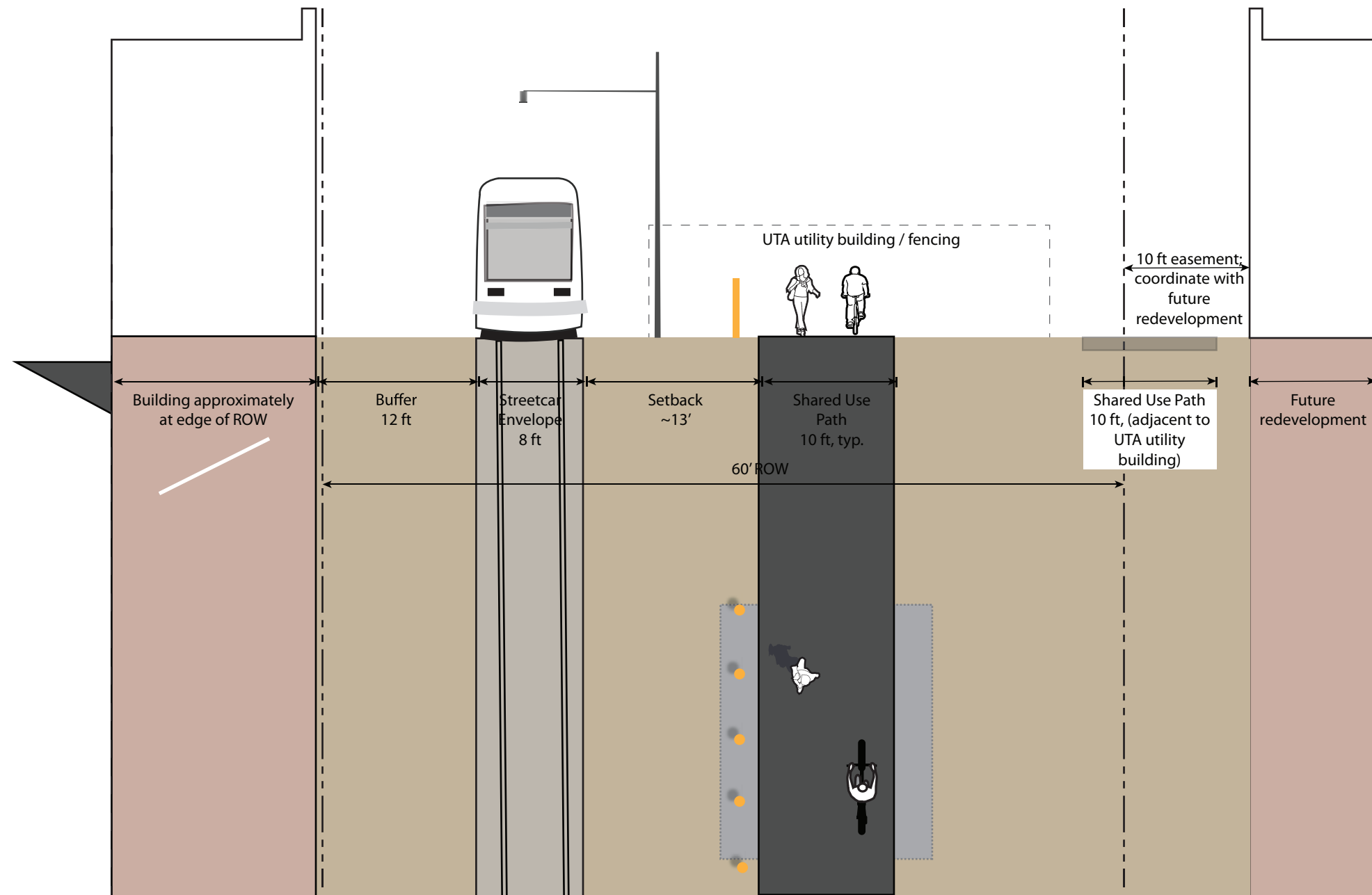
**Note that park strip and sidewalk dimensions on the north side of the street are not accurate due to lack of recent satellite imagery.

FINAL PROJECT RECOMMENDATIONS (cont.)



Parley's Trail Alignment
South Salt Lake Downtown
PRIORITY PROJECT

West Temple to TRAX Lines; TRAX Lines to 300 West



- Follows same cross section as West Temple to Main Street
- At RR tracks, the pathway will extend north to 2100 South and then back south

FINAL PROJECT RECOMMENDATIONS (cont.)



2100 South Complete Streets

Existing Conditions:

- Project Extent: 700 West to 1700 West
- Land Use: Commercial and Multi-family residential
- Project Destinations: Sugar House Business District, Smith's Grocery Store, Sugarhouse Park, Sugarhouse Shopping Center, The Vue Shopping Center
- Street Classification: Minor Arterial
- Typology: Destination Street, Urban Village Main Street, and Neighborhood Corridor

Functional Assessment for Destination Street:

	Typology Benchmark	Current
Max Design Speed	25mph	30 mph
Person Mobility	Medium	Medium
Greening	High	Medium
Placemaking	Medium	Medium
Curbside Diversity	Medium/Low	Low
Vehicle Mobility	Medium	High

- AADT: 20,000-30,000
- Posted Speed: 35 MPH
- Right of Way Width: 75'
- Curb to Curb Width: 40' - 58'
- Project Alignment:** Safety, Equity, Choice, Connectivity, Health, Collaboration, Sustainability
- Guiding Principles:

Planning Integration:

Salt Lake City's Transit Master Plan designates 2100 South as a Tier 1 Frequent Transit Network, indicating its importance as a major transit corridor. In fact, it is the southernmost east-west corridor designated Tier 1 in the City.

The City's Bicycle and Pedestrian Master Plan shows buffered bike lanes north of Sugarhouse Park recommended in the next 10 years, but no other designated lanes between 900 East and 1300 East.

Corridor Improvement Description:

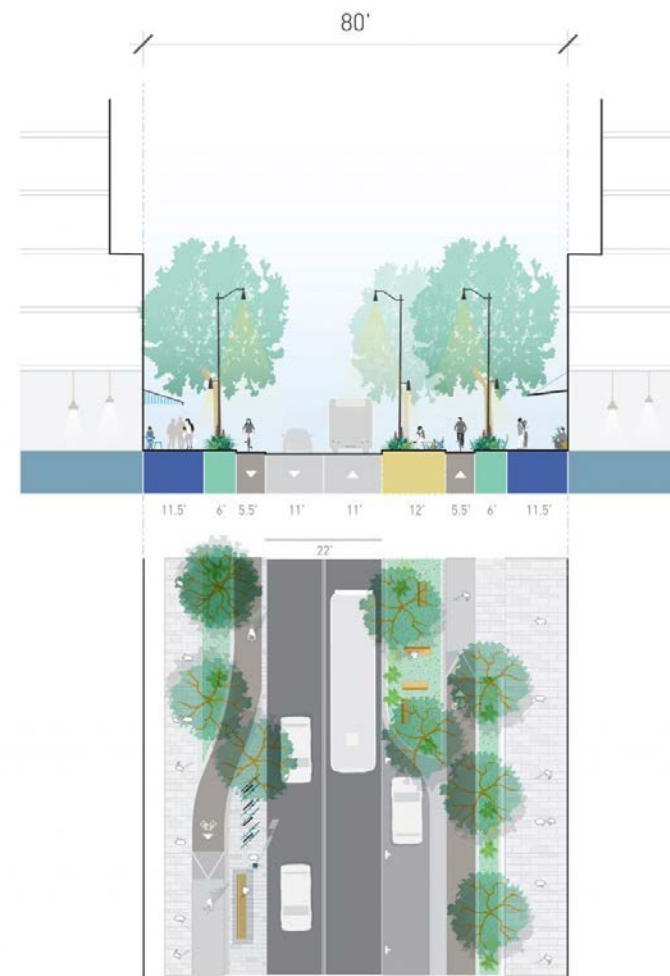
A dedicated study for improving 2100 South from 700 East to 1700 East will be conducted by Salt Lake City in the coming years.

Salt Lake City, utility companies, property owners, developers

Corridor Plan View



Short-term; road reconstruction planned for 2025



SLC Typologies Design for Destination Street

Corridor Images



East View with Sugar House Monument Plaza and The Vue in the Distance



Four Lanes and a Concrete Median in Sections of Street

FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Park Loop PRIORITY PROJECT

Existing Conditions:

Project Extent: 1300 East, 1700 East, 2100 South, I-80

Land Use: Park, Commercial, Residential

Description: Currently, the roads around Sugarhouse Park, including 1300 East, 2100 South, and I-80, act as barriers for those walking and bicycling. Extending the Parley's Trail to 2100 South will help bicyclists to get to the newly implemented bike lanes on 1300 South from points south. Creating a separated bike lane on the south side of 2100 South and a bike lane on the north side of 2100 South will provide a key connection between 1300 East and 1700 East, allowing bicyclists to efficiently travel between two bikeway corridors.

Project Alignment:

Safety, Equity, Choice, Connectivity, Health, Collaboration, Sustainability

Guiding Principles:

Planning Integration:

- Bicycle lanes / shared use path along the 1300 East overpass align with the Salt Lake City Pedestrian & Bicycle Master Plan, the WFRC's 2019-2050 Regional Transportation Plan, and UDOT's plans
- Protected bicycle lanes along 2100 South identified in the Salt Lake City Pedestrian & Bicycle Master Plan

Improvement Description:

There are two viable options for development north-south and east-west connections around Sugar House Park. The map shows these options: a shared use path along the western side of Sugar House Park and a separated bike lane / bike lane along 2100 South from 1300 East to 1700 East. These routes will be discussed in more detail on the following pages.

Project Plan View



FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Park Loop PRIORITY PROJECT

	Route #1: 1300 East Shared Use Path	Route #2: 2100 South Separated Bike Lane / Bike Lane
Cross-Section Narrative/Description	Develop shared use path connecting the existing Parley's Trail to 2100 South using the perimeter of Sugar House Park.	Develop a separated bike lane on the south side of 2100 South from 1300 East to 1700 East in exterior eastbound traffic lane. Develop bike lane on the north side of 2100 South.
Additional Improvements	Opportunities for public art, wayfinding and signage. Improve pedestrian / trail crossings through the I-80 interchange.	Improve 1300 East / 2100 South intersection to seamlessly transition from the 1300 East bike lanes to the 2100 South facilities. Improve intersection crossings at 1500 East and major businesses.
Potential Impacts	Right-of-way purchasing may be required.	Removal of one lane of traffic in the eastbound direction.
Collaborations and Partnerships	Coordinate with City Arts Council and Department; UDOT	Coordinate with Salt Lake City
Mobility Benefits	<ul style="list-style-type: none"> • Low-stress route • Key connector to 1300 East bike lanes from the Parley's Trail 	<ul style="list-style-type: none"> • Provides high-comfort connection between Sugar House Business District and 1700 East
Technical Constraints	<ul style="list-style-type: none"> • Private property barriers preventing connectivity around Sizzler's • Crossing improvements are needed to connect end of the trail to the 1300 East bike lanes. 	<ul style="list-style-type: none"> • Crossing large major streets such as 1500 East • Traffic study required
Implementation Costs	High	High
Preferred Concept	✓	✓
Phasing	TBD	TBD



Extending the existing Parley's Trail along 1300 East to 2100 South will provide more options for those traveling north-south.



Creating a separated bike lane on the south side of 2100 South will provide more options for those from the Sugar House Business District to destinations to the east.

FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Park Loop PRIORITY PROJECT

Existing Conditions:

Project Extent:	I-80 and 2100 South	
Land Use:	Park; Commercial	
Project Destinations:	Sugar House Business District; 1300 East bike lanes; Parley's Trail	
Street Classification:	Arterial	
Typology:	Destination Thoroughfare	
Corridor Functions:	Typology Benchmark	Current
	Person Mobility High	Medium/Low
	Greening Medium	Low
	Placemaking High	Low
	Curbside Diversity Medium	Medium/Low
	Vehicle Mobility Medium/Low	High
AADT:	35,000	
Posted Speed:	40 MPH	
Right of Way Width:	70-196' typical	
Curb to Curb Width:	90' typical	
Project Alignment: Guiding Principles:	Safety, Equity, Choice, Connectivity, Health, Collaboration	

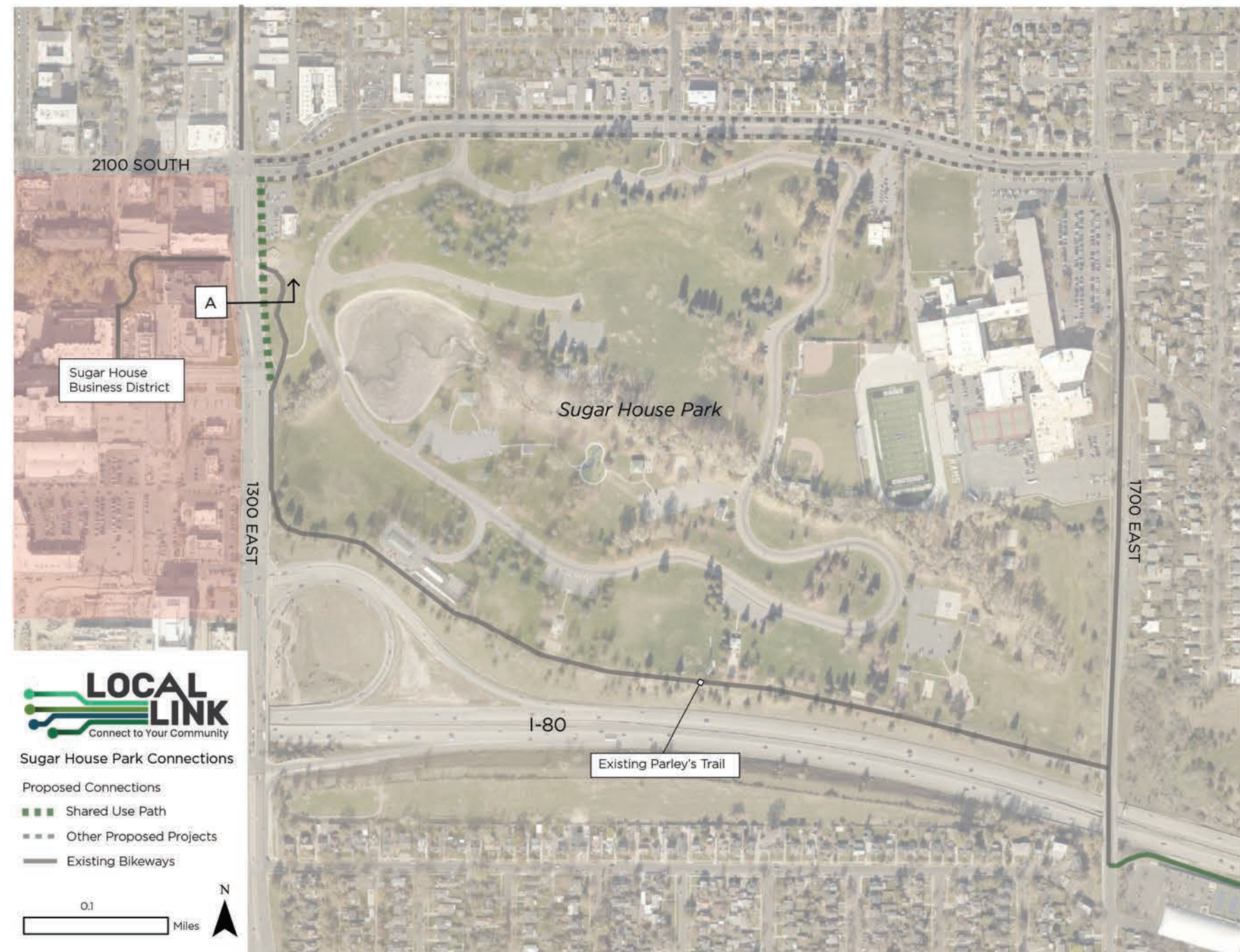
Planning Integration:

- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.
- Bike lanes identified in the Wasatch Choice: 2019-2050 Regional Transportation Plan

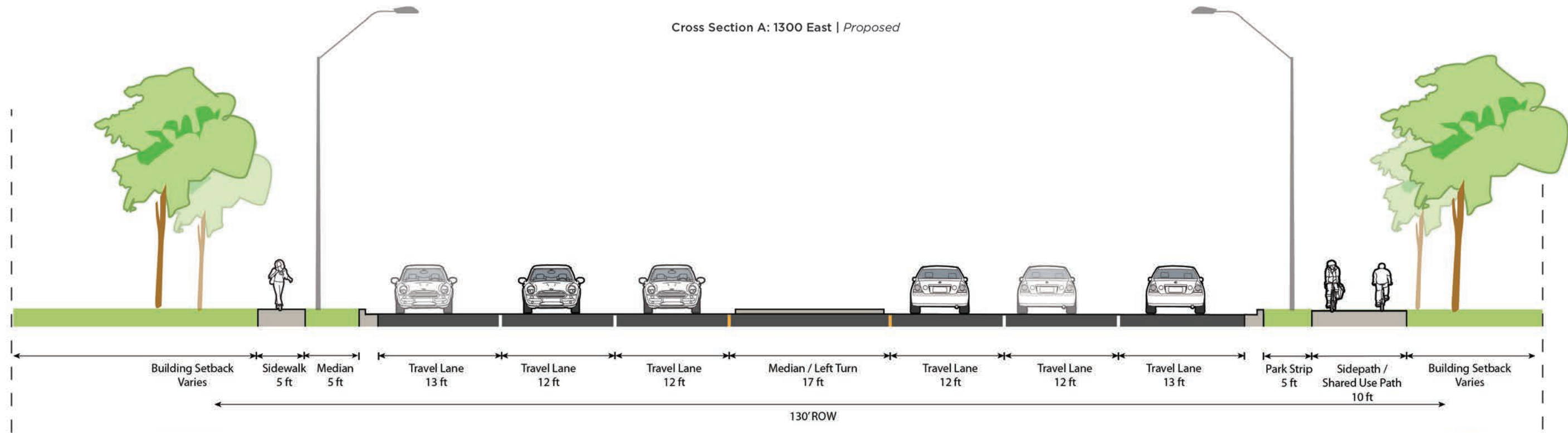
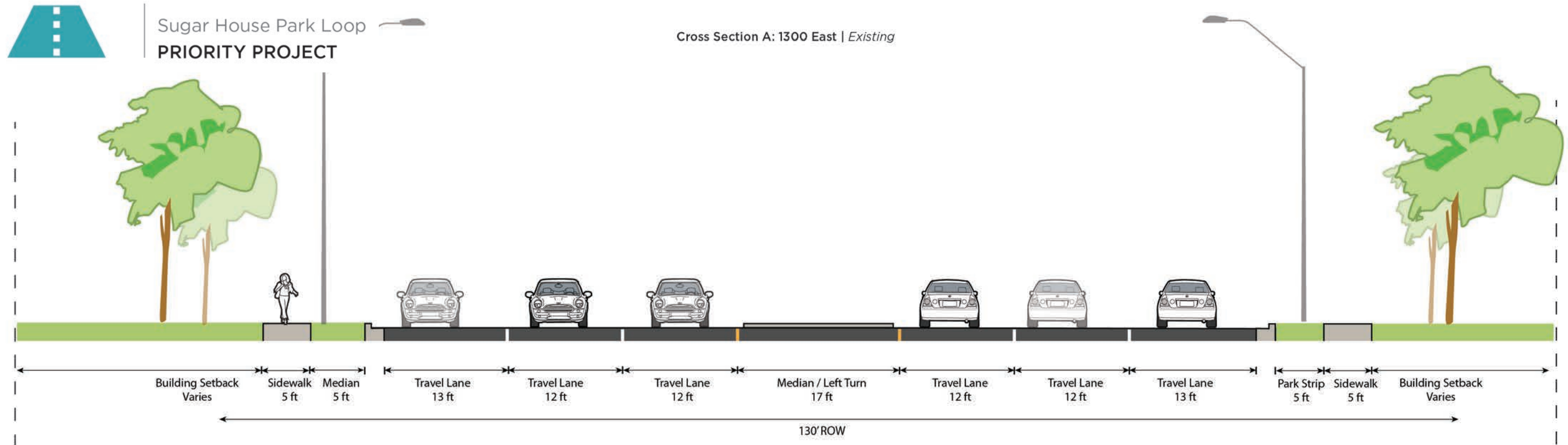
Corridor Improvement Description:

Currently, there is not an easy way to travel from the existing Parley's Trail to neighborhoods north of 2100 South and along 1300 East. Developing a shared use path along the western perimeter of Sugar House Park will allow pedestrians and bicyclists to easily get from point A to point B. The proposed shared use path would extend from the existing Parley's Trail to 1300 East, traversing around the existing Sizzler's restaurant.

Project Plan View



FINAL PROJECT RECOMMENDATIONS (cont.)



FINAL PROJECT RECOMMENDATIONS (cont.)



Sugar House Park Loop PRIORITY PROJECT

Existing Conditions:

Project Extent:	1300 East and 1700 East																		
Land Use:	Park; Neighborhood; Commercial																		
Project Destinations:	Sugar House Business District; Sugar House Park; Parley's Trail																		
Street Classification:	Arterial																		
Typology:	Urban Village Main Street																		
Corridor Functions:																			
	<table border="0"> <thead> <tr> <th></th> <th>Typology Benchmark</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>Person Mobility</td> <td>High</td> <td>Medium</td> </tr> <tr> <td>Greening</td> <td>Medium/High</td> <td>Medium</td> </tr> <tr> <td>Placemaking</td> <td>High</td> <td>Medium</td> </tr> <tr> <td>Curbside Diversity</td> <td>High</td> <td>Medium</td> </tr> <tr> <td>Vehicle Mobility</td> <td>Medium</td> <td>Medium</td> </tr> </tbody> </table>		Typology Benchmark	Current	Person Mobility	High	Medium	Greening	Medium/High	Medium	Placemaking	High	Medium	Curbside Diversity	High	Medium	Vehicle Mobility	Medium	Medium
	Typology Benchmark	Current																	
Person Mobility	High	Medium																	
Greening	Medium/High	Medium																	
Placemaking	High	Medium																	
Curbside Diversity	High	Medium																	
Vehicle Mobility	Medium	Medium																	
AADT:	23,000																		
Posted Speed:	30 mph																		
Right of Way Width:	118' typical																		
Curb to Curb Width:	85' typical																		

Project Alignment: Safety, Equity, Choice, Connectivity, Health, Collaboration

Guiding Principles:

- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.

Planning Integration:

- Bike lanes identified in Salt Lake City's Pedestrian and Bicycle Master Plan.

Corridor Improvement Description: Currently, there is not an easy way to travel from the Sugar House Business District to 1700 East. Developing a separated bike lane along the south side of 2100 South will allow bicyclists to easily get from point A to point B. Implementation of this facility will require removal of one lane of east-bound traffic. On the northern side of the road, a bike lane should be developed.

Project Plan View

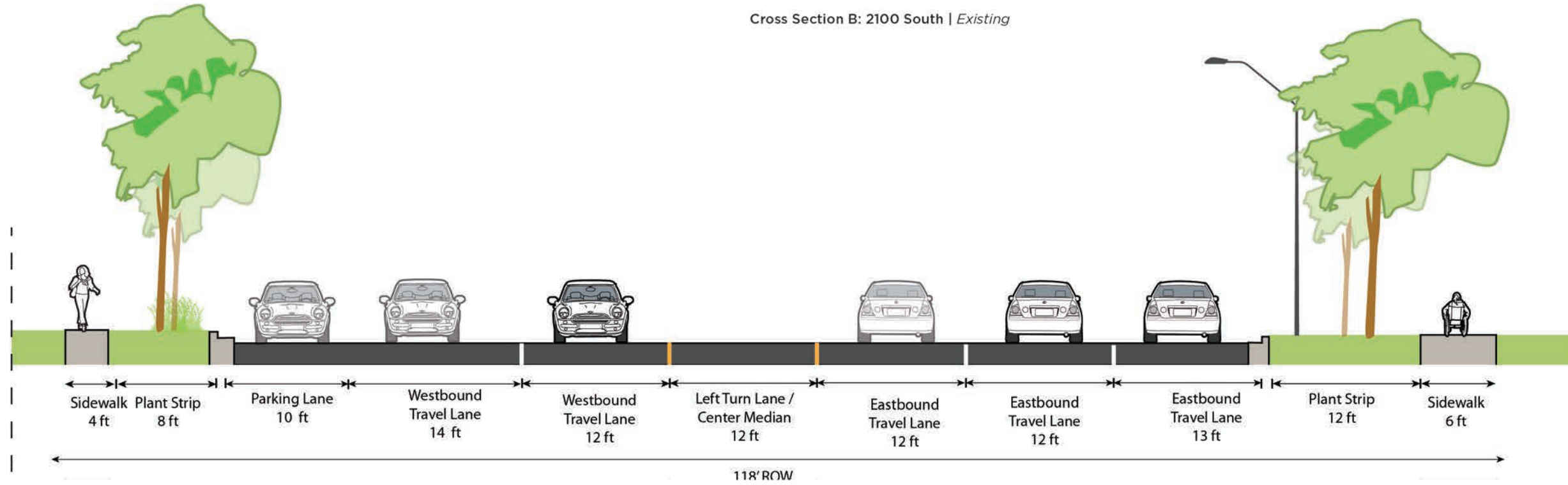


FINAL PROJECT RECOMMENDATIONS (cont.)

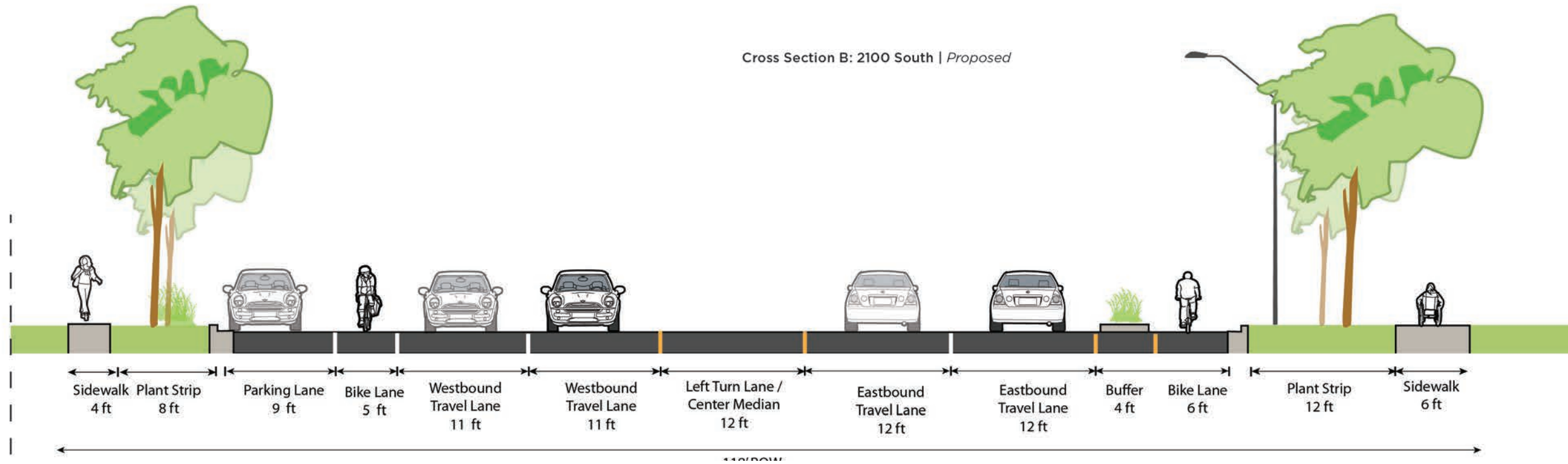


Sugar House Park Loop
PRIORITY PROJECT

Cross Section B: 2100 South | Existing



Cross Section B: 2100 South | Proposed



FINAL PROJECT RECOMMENDATIONS (cont.)



Intersection Improvements

Various Locations

Existing Conditions:

Program Extent: Sugar House Business District, Highland Drive

Project Alignment:
Guiding Principles: Safety, Sustainability, Choice, Connectivity, Health, Collaboration

Planning Integration: This recommendation supports the safety, choice, health, and collaboration guiding principles.

Collaborations and Partnerships: Salt Lake City Arts Council, Utah Arts Alliance, Salt Lake County Arts & Culture

Implementation Phasing: Short- to mid-term

Intersections are statistically the most dangerous part of the street network as they are complex environments where a variety of users are negotiating the same space. Since the chance for conflict between users is highest at intersections, special care must be taken to implement design elements that control vehicle speed and minimize conflict points.

Complete street intersections should consider the following principles to guide the development of pedestrian and bicycle accommodations in the project scoping, planning, and design phases.

PEDESTRIANS AND BICYCLISTS WILL BE THERE

- Whether or not you meet the transportation needs of pedestrians and bicyclists, they will use a facility.

ONE DECISION AT A TIME

- Design intersections so motorists, pedestrians, and bicyclists only need to make one decision at a time.

SLOW IT DOWN

- Where appropriate, use treatments that reduce the speed of motorized vehicles at intersections while maintaining operational efficiency.

SHORTEN CROSSINGS

- Reducing crossing distance reduces the time it takes for pedestrians and bicyclists to cross and results in less exposure to crashes.

IMPROVE VISIBILITY

- Always ensure maximum visibility of pedestrians and bicyclists.

CLARIFY THE RIGHT-OF-WAY

- Use design treatments to clarify to pedestrians, bicyclists, and motorists who has the right-of-way.

INTERSECTION IMPROVEMENT TREATMENTS

The services and amenities commonly considered in mobility hub planning include the following:

SIGNAGE & STRIPING

HAWK BEACONS



A high-intensity activated crosswalk (hawk) beacon allows protected pedestrian crossing in spot locations and allows vehicle traffic to flow freely when not lit.

DECORATIVE CROSSINGS



Decorative crosswalks help increase visibility of crossing areas in an aesthetically pleasing manner. They provide a unique streetscape design treatment emphasizing pedestrian's presence and primacy.

FOUR-WAY STOPS



Four-way stop intersections enhance safety for all users and can reduce crash occurrences by 45%.

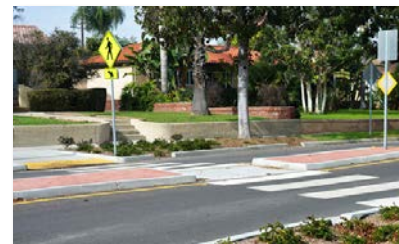
PEDESTRIAN LEADING INTERVAL



Signals configured to allow pedestrians to walk before motorists go can reduce conflicts between pedestrians and turning vehicles.

INFRASTRUCTURE & OPERATIONS

PEDESTRIAN REFUGE/SAFETY ISLAND



Pedestrian refuge island reduces the exposure time experienced by a pedestrian crossing large intersections with many lanes traveling in both directions.

BULBOUTS/CURB EXTENSIONS



These traffic calming tools extend the sidewalk into the parking lane to narrow the roadway and lengthen the sidewalk at intersections for enhanced pedestrian safety.

RAISED INTERSECTIONS & CROSSWALKS



Raised crosswalks and intersections bring the level of the roadway up to the sidewalk forcing vehicles to slow when crossing and also making pedestrians more visible.

AUTOMOBILE MOVEMENT RESTRICTIONS



Restricting automobile movements such as turning right on red can reduce the conflicts between pedestrians, cyclists, and motorists, especially in areas where visibility is obscured.

PROGRAM AND POLICY RECOMMENDATIONS



Creative Placemaking Sugar House BD, Highland Drive

Existing Conditions:

- Program Extent:** Sugar House Business District, Highland Drive
- Land Use:** Commercial District
- Program Destinations:** Shopping centers, S-Line, Parley's Trail, U of U Health Clinic, Sugarhouse and Fairmont Parks
- Project Alignment:**
Guiding Principles: Safety, Sustainability, Choice, Connectivity, Health, Collaboration
- Planning Integration:** This recommendation supports the safety, choice, health, and collaboration guiding principles.

Program Description: A creative placemaking program in the Sugar House Business District would formalize activities and small improvements that encourage people to spend time outside on the streets of the commercial areas. It would include staff time and funding to encourage public art installations, street furnishings, and activities and events that boost social and economic vibrancy.

Potential Impacts:

Collaborations and Partnerships: Conflicts with vehicles created by temporary or permanent placemaking elements would need to be mitigated.

Implementation Phasing: Salt Lake City Arts Council, Sugar House Chamber of Commerce, Utah Arts Alliance, Salt Lake County Arts & Culture

Short- to mid-term



PROGRAM AND POLICY RECOMMENDATIONS (cont.)



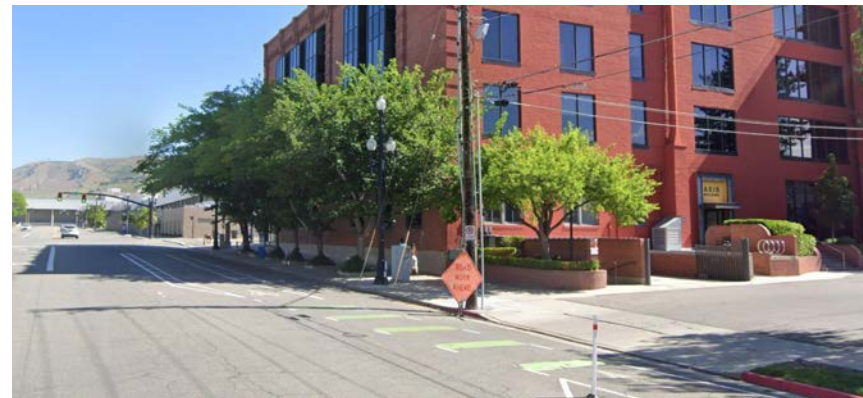
Green Conflict Markings on Regionally-Significant Bikeways

Existing Conditions:

Program Extent:	Neighborhood centers within the study area including the Sugar House Business District, South Salt Lake Downtown, Brickyard, and Millcreek's City Center
Description:	Green conflict markings on bikeways increase the visibility of the facility, highlight potential areas of conflict, and reinforces priority to bicyclists in conflict areas. Historically, Salt Lake City has used green conflict markings near Downtown bikeways where bikeway use is highest. As the neighborhood centers within the study area, such as the Sugar House Business District, continue to grow and attract more trips, green conflict markings should be implemented on new and existing bikeways. Color should always be applied consistently to facilitate clear understanding for all roadway users.
Project Alignment: Guiding Principles:	Safety, Choice, Connectivity, Collaboration
Planning Integration:	Supports multimodal goals inherent in plans including the Salt Lake City Pedestrian and Bicycle Plan Update, the Millcreek City Center Master Plan, and the South Salt Lake Downtown Master Plan.
Collaborations and Partnerships:	Salt Lake City, South Salt Lake, Millcreek, Holladay
Implementation Phasing:	Short- to mid-term
Potential Recommended Corridors:	<ul style="list-style-type: none"> • Highland Drive • Parley's Trail through the Sugar House Business District • 900 East • 2700 South

TYPICAL APPLICATION

Green conflict markings are typically used within bikeways, especially at turning conflict areas, intersections, and driveways. These locations present areas where typical vehicle movements frequently encroach into bicycle space, but where the prevailing speed of turning traffic is low enough that motorist yielding behavior can be expected.



Photos (top to bottom): Typical application of green conflict markings (NACTO, 2019). Example of green conflict markings on 200 W in Salt Lake City.

Dashed Color in Conflict Area

- Color should be applied in a dashed pattern within a dashed bicycle lane to indicate conflict area/merging area.
- Dashed application of color pavement mimics typical traffic striping layouts, where dashed markings indicate areas where merging is permitted.
- Colored surface should be skid resistant and retro-reflective.
- Normal white bike lane lines should be provided along the edges of the colored lane to provide consistency with other facilities and to enhance nighttime visibility.
- A "Yield to Bikes" sign should be used at intersections or driveway crossings to reinforce that bicyclists have the right-of-way at colored bike lane areas.

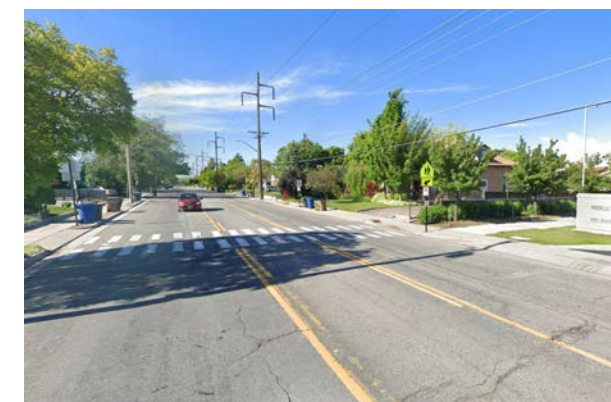
Maintenance costs vary depending on paint and material used.



The intersection of **Highland Drive and 2100 South** is an area that could benefit from green conflict markings.



The intersection of **Highland Drive and Wilmington Ave (Parley's Trail)** is an area that sees large volumes of bicycle traffic traveling along the Parley's Trail.



900 East is a regionally-significant bikeway and could benefit from green conflict markings, especially near high-conflict areas such as Nibley Park Elementary.

Benefits of Green Conflict Markings

- Promotes the multi-modal nature of a corridor
- Increases the visibility of bicyclists
- Discourages illegal parking in the bike lane
- When used in conflict areas, raises motorist and bicyclist awareness to potential areas of conflict
- Increases bicycle comfort through clearly delineated space
- Increases motorist yielding behavior
- Helps reduce bicycle conflicts with turning motorizes

PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Wayfinding & Signage Local Link Study Area

Existing Conditions:

Program Extent: Sugar House Business District, Downtown South Salt Lake, Millcreek City Center, along major trails and bicycle corridors

Project Alignment: Choice, Connectivity, Collaboration, Transparency & Engagement
Guiding Principles:

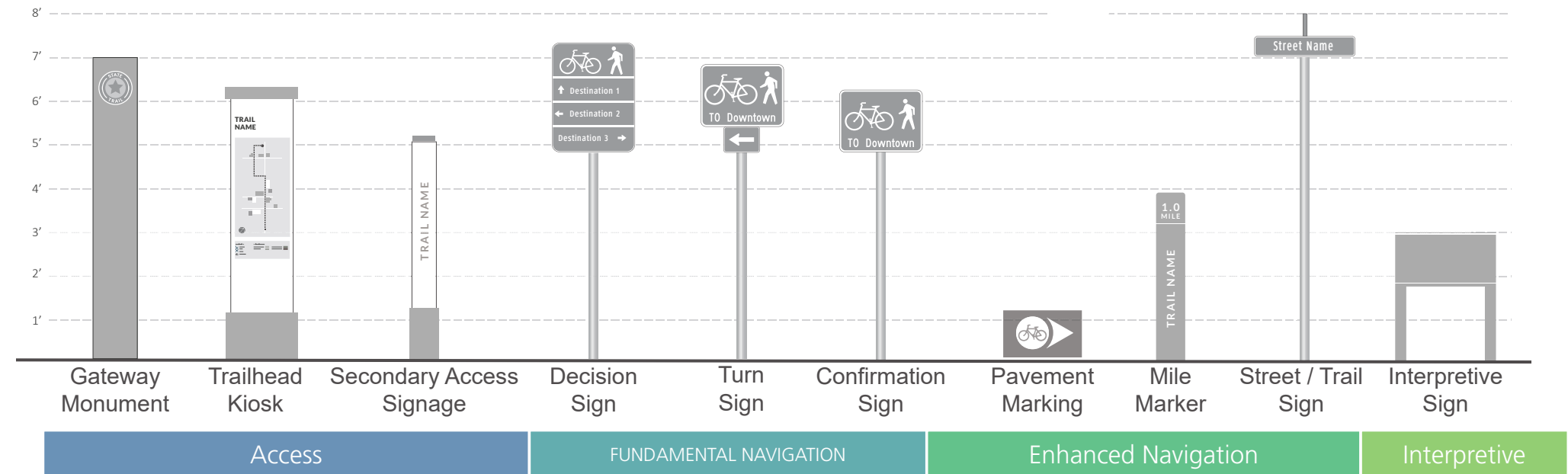
Planning Integration: Good wayfinding and signage is part of the Millcreek City Center and South Salt Lake Strategic Mobility master plans.

Program Description: Successful signage and wayfinding projects include a comprehensive network that develops a variety of sign types for different users. The signage is legible, consistent, and demonstrates a hierarchy of information and sign types. Identity and placemaking should be supported by signage and information in the signage should be inclusive using symbols, icons, or multilingual text.

Collaborations and Partnerships: Create a consistent visual language with a clear hierarchy of signage types including access signs indicating primary gateways, fundamental and enhanced navigation for wayfinding, and educational interpretive signage.

Implementation Phasing: South Salt Lake, Salt Lake City, Millcreek, Salt Lake County, and WFRC

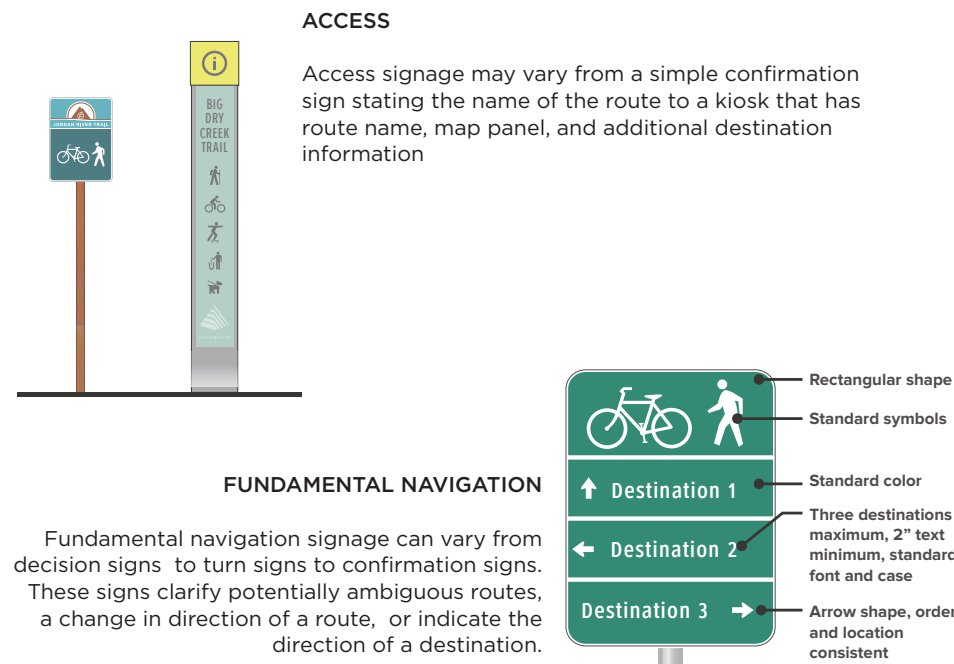
Short- to mid-term



Trail wayfinding and signage elements



The Indianapolis Cultural Trail is very well defined and marked in a variety of ways that include pavement paint, art, and consistent application of the trail logo.



ENHANCED NAVIGATION

Enhanced navigational elements provide additional wayfinding information to trail users. They tend to vary in content and formatting. They include pavement markings such as trail logos or shared lane markings. Mile markers and street/trail signs are also considered under enhanced navigation.

INTERPRETIVE

Interpretive signs illuminate the power of place with content that informs, educates, and entertains the public. More than just dates and fact, interpretive panels inspire a feeling of stewardship in site visitors, strengthening awareness of cultural and natural resources.



PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Wayfinding & Signage

WAYFINDING PRINCIPLES

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

CONNECT PLACES

Wayfinding enables both residents and visitors to travel between destinations and to discover new ones. Wayfinding connects neighborhoods and provides navigational assistance to both local and regional destinations. Effective wayfinding is an extension to the bicycling and walking network and provides a seamless travel experience for non-motorized users.

PROMOTE ACTIVE TRAVEL

A wayfinding network should encourage increased rates of active transportation by creating a clear and attractive system that is easy to understand. The presence of wayfinding signs should help to communicate that walking and bicycling to many destinations is possible. Wayfinding helps overcome physical barriers that discourage the use of active transportation modes of travel.

MAINTAIN MOTION

Bicycling and walking require physical effort. Frequent stopping and starting to check for directions may lead to frustration and discourage use. Consistent, clear, and visible wayfinding elements allow people walking and bicycling to navigate while maintaining their state of motion. The wayfinding information needs to be presented in a manner that is quick to read and easy to comprehend.

BE PREDICTABLE

Effective wayfinding networks are predictable. When information is predictable, patterns emerge and users rely on the network. Predictability also helps user to understand new situations quickly, whether it be navigating a new intersection or traveling to a destination for the first time. Predictability should relate to all aspects of wayfinding placement and design.

KEEP IT SIMPLE

For a wayfinding network to be effective, information needs to be presented clearly and logically. The presentation of information needs to be balanced; too much information can be difficult to understand; too little and decision-making becomes impossible. To be successful, wayfinding information must be provided in advance of major changes in the path of travel and confirmed when the maneuver is complete.



CASE STUDIES

WalkYourCity.org - helps encourage community walkability by connecting people to city neighborhoods through signs created and installed by community members. It includes web-based campaign management and data collection that can provide maps and directions for people's smart phones.

Citizens, community development groups and real estate companies are using the program's sign builder to design and install campaigns that embrace walkability on their communities.

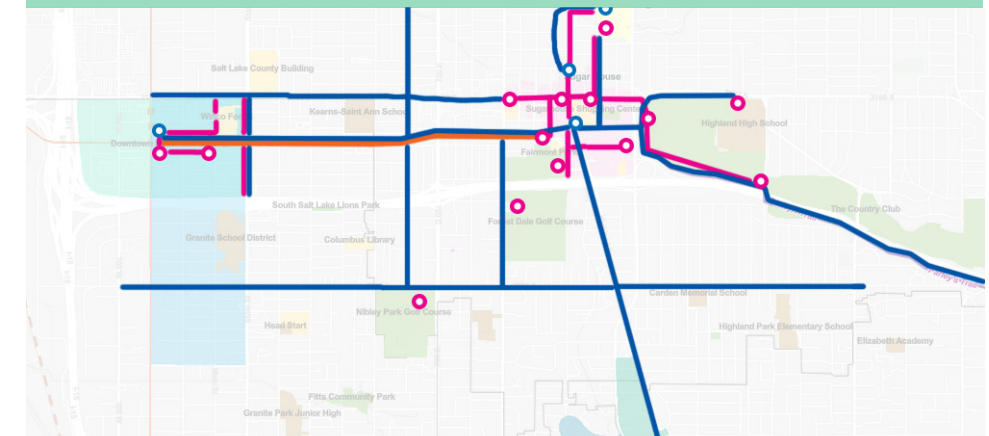
Ledgible London - is a pedestrian focused wayfinding effort that tries to coordinate signage across multiple neighborhoods in London. Prior to these efforts, an inventory of pedestrian signage in the city center identified 32 separate sign systems. The myriad of sign types lacked the consistency and confused citizens and visitors. Since 2005 the campaign's ongoing effort boasts over 500 signs as well as digital maps and smartphone apps that aid pedestrian navigation.

Walk Your City and other focused wayfinding efforts like Legible London demonstrate the way clear signage and citizen engagement can promote more active transportation choices, making communities healthier, safer, and more vibrant. Ideas present in signage campaigns like these are good case studies and examples and elements of them can be adopted within a comprehensive signage and wayfinding effort for the Local Link study area.



The Spanish city of **Pontevedra** implemented a drastic policy to promote pedestrian activity by closing the city center to vehicular traffic. The clear pedestrian signage campaign adopts colors, symbols and styles frequently seen in rail and bus wayfinding.

Identifying key locations within the Local Link study area then analyzing distances and routes between locations is the first step in creating a comprehensive wayfinding effort. Clear signage adapted for different users including bicyclists and pedestrians is crucial to activating streets across the study area and creating connection throughout neighborhoods and cities.



PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Bicycle Parking Sugar House Business District

Existing Conditions:

Program Extent: Sugar House Business District

Project Alignment:

Guiding Principles: Safety, Sustainability, Choice, Connectivity, Health

Planning Integration:

This recommendation supports the safety, equity, choice, health, and collaboration guiding principles.

Collaborations and Partnerships:

Salt Lake City, Utah Transit Authority, and WFRC.

Implementation Phasing:

Short- to mid-term

Bicycle parking is an important component of the bicycle network. This study recommends that the cities incorporate the Association of Bicycle and Pedestrian Professionals' Bicycle Parking Guidelines into its development codes, making sure to specify proper rack placement and design.

SHORT TERM BICYCLE PARKING

Short term bicycle parking should be 1) close to the users' destination and 2) easy to use. It should be designed for people visiting businesses and community activity centers, trips typically lasting around 2 hours. In order to optimize use, short term bicycle parking should be easy to find and easy to use.

- Racks should be **less than 50'** from the entrance it serves.
- **Adequate lighting** should be provided if the location is likely see use outside of daylight hours.
- Racks should be **sturdy and well-anchored.**
- Racks should be located in a **highly visible location**, and ideally visible from within the destination.

LONG TERM BICYCLE PARKING


Long term bicycle parking is designed for users that may need to leave their bikes unattended for longer than 2 hours, such as transit users, employees, and residents. These racks should value security and weather over convenience and can be provided in a variety of forms, such as a room within an office or apartment, a locked area within a parking garage, or bike lockers at a transit stop.

- Racks should provide a **secure and protected location** for long term users to park their bicycles.
- Access to parked bicycles should be **limited to the group of users** that will be using the long term parking through user-supplied locks, keys, smart cards, and other technologies.
- Racks should **accommodate a variety of bicycles and accessories**, including recumbents, trailers, and children's bikes.

RACK STYLES

When properly designed and installed, these rack styles typically meet all performance criteria and are appropriate for use in nearly any application.


SHORT TERM RACK STYLES



INVERTED U

Two points of ground contact

Can be installed in series on rails to create free standing bicycle parking in variable quantities.

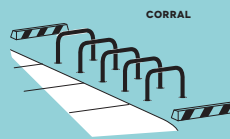


POST & RING

One point of ground contact

Less likely to have bikes parked perpendicular.

Easy to convert from unused parking meters




CORRAL

Work well in areas that have limited sidewalk space

Use on-street areas that are unsuitable for car parking

One parking space can fit 8-12 bicycles

LONG TERM RACK STYLES




TWO-TIER

Used for high density indoor parking

Includes lift assist for upper-tier parking

Can create safety concern




VERTICAL

Used for high density indoor parking

Not accessible to all types of bikes

Can create safety concern



STAGGERED WHEELWELL-SECURE

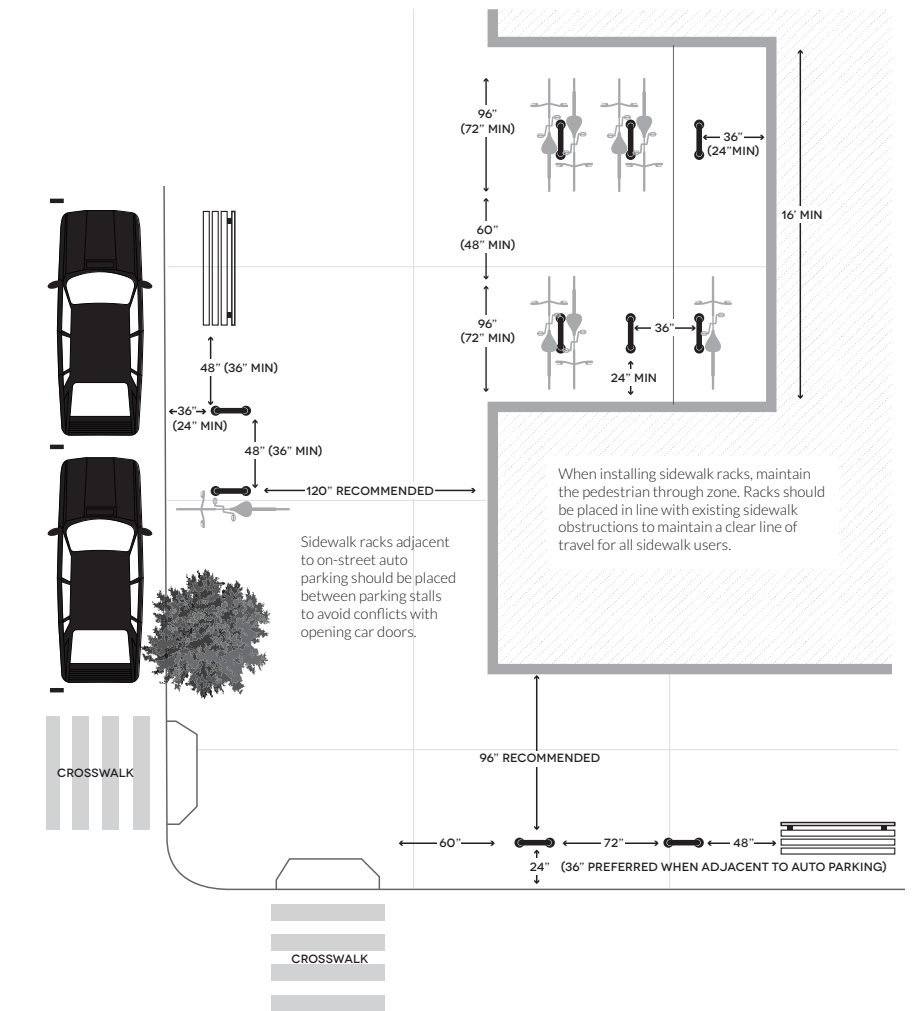
Variation of wheelwell-secure rack

Fits more parking in constrained spaces

Can reduce usability

RACK PLACEMENT

The following minimum spacing requirements apply to common bike rack installations, such as the inverted-U. Recommended clearances are given first, with minimums provided in parentheses. Note that the typical bicycle footprint is approximately 6' x 2', but some bikes may extend to 10' or longer.



Source: *Essentials of Bike Parking: Selecting and installing bicycle parking that works.* Association of Pedestrian and Bicycle Professionals, 2015.

PROGRAM AND POLICY RECOMMENDATIONS (cont.)

WHERE ARE RACKS NEEDED IN SUGAR HOUSE?

Short-term bicycle parking is needed near many of the businesses and community activity centers in the Sugar House business District, including:

- The new apartment complex on Sugarmont Dr and McClelland St
- In the Sugar House Commons Development
- Within Fairmont Park and at the Fairmont Aquatic Center
- Near the Olive Garden and Sugar House Shopping Center
- At the Premier Plaza

Long-term bicycle parking is needed in all apartment buildings, near transit centers, and near major employment centers, such as the Sugar House Plaza.

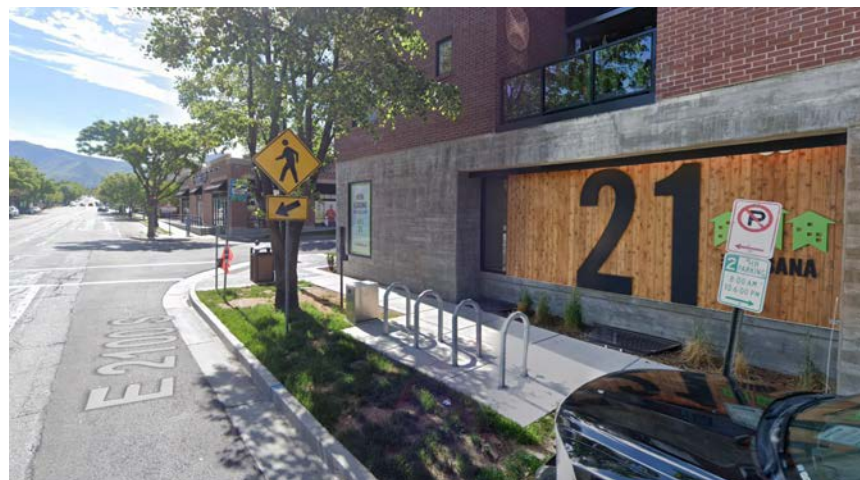
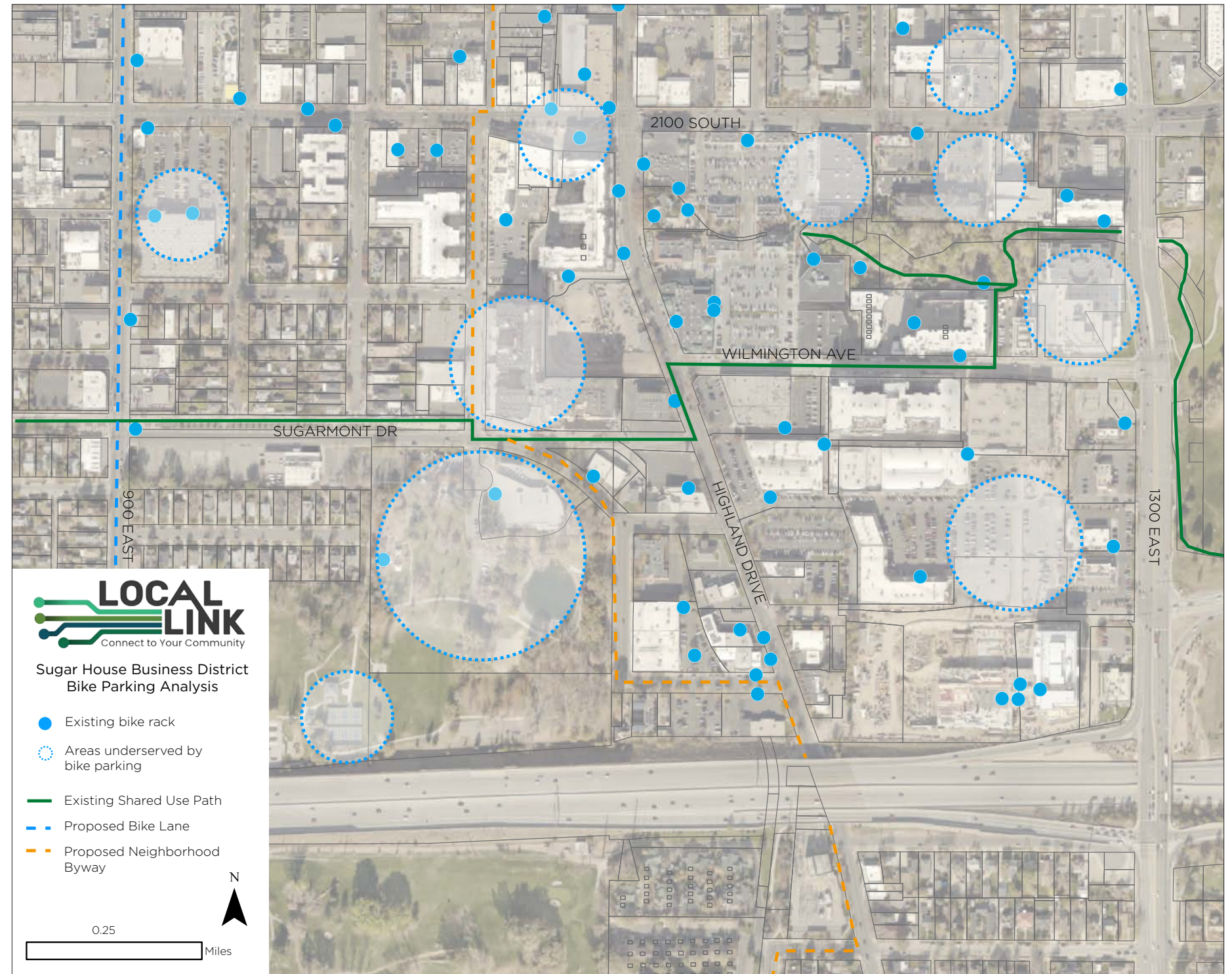


Photo 1: Existing inverted U rack near SLC Med Spa, Sport Clips, and Paw Paw.
Photo 2: Existing inverted U rack near bus stop on 2100 South.



PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Trail Oriented Development Local Link Study Area

Existing Conditions:

Program Extent: Primarily along urban or urbanizing areas of established trails such as Parley's and the McClelland Trail.

Land Use: Mixed use, commercial, residential

Project Alignment: Guiding Principles: Safety, Sustainability, Choice, Connectivity, Health, Collaboration

Planning Integration: This form of development is compatible with the development patterns and proposed urban forms espoused in the Sugar House, South Salt Lake Downtown, and Millcreek City Center master plans.



Program Description:

Trail oriented development is an evolution of urban development from auto-centric to people-friendly design. Similar to transit oriented development, trail oriented development leverages infrastructure that supports active ways of getting around in urbanized areas.

Trail oriented development creates a safe and inviting environment for pedestrians and cyclists around active transportation paths connecting key destinations to activate districts and increase sense of place.

Furthermore, trails add economic development value. The value of properties within a block of the Indianapolis Cultural Trail have soared nearly 150 percent since the trail's opening in 2008. In both Salt Lake City and San Francisco, the replacement of some street parking with protected bike lanes along specific corridors resulted in higher retail sales in those areas. (Source: ULI)

Collaborations and Partnerships:

Implementation Phasing:

PRATT, Salt Lake City, South Salt Lake, Millcreek City, private developers and property owners

Mid-term to long-term; can and should happen as redevelopment occurs along these routes.



LANDSCAPE SIGNAGE & WAYFINDING SITE AMENITIES & MATERIALS ACTIVE FRONTAGES



BUILDING STORE FRONT CIRCULATION LANDSCAPE BUFFER TRAIL

PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Trail Oriented Development
Local Link Study Area



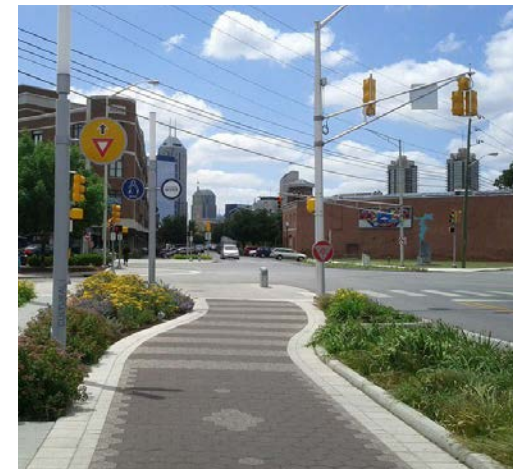
ACTIVE FRONTAGE AND ACCESS - Buildings should provide direct access from the trail and provide pedestrian-scale, high-quality frontages that provide a “front door” experience to adjacent development. Active uses such as patios or outdoor dining should be oriented towards the trail



SITE AMENITIES & MATERIAL CONSISTENCY - Adjacent development should include supporting site furnishings like benches, trash receptacles, bike parking and repair stands. Urban design of adjacent exterior spaces should include high quality materials and amenities that contribute to a rich pedestrian environment.



APPROPRIATE LANDSCAPING AND BUFFERS - Landscaping along the trail should meet CPTED (Crime Prevention Through Environmental Design) principles while helping to shade the trail, reduce urban heat island effects, separate trail from adjacent uses, and provide opportunities to manage stormwater runoff.



WAYFINDING & SIGNAGE - Path material should have consistency to aid in wayfinding and placemaking. Signage typography, colors and visual style should be consistent throughout the trail. Traffic crossing becomes at intersections, protective bollards and landscape buffers should work together to provide pedestrian safety and encourage trail use for a variety of users.

PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Coordinated Traffic Calming Strategy

Existing Conditions:

Program Extent: Applicable to local streets within and around the Sugar House Business District

Project Alignment: Safety, Sustainability, Choice, Connectivity, Health
Guiding Principles: Collaboration

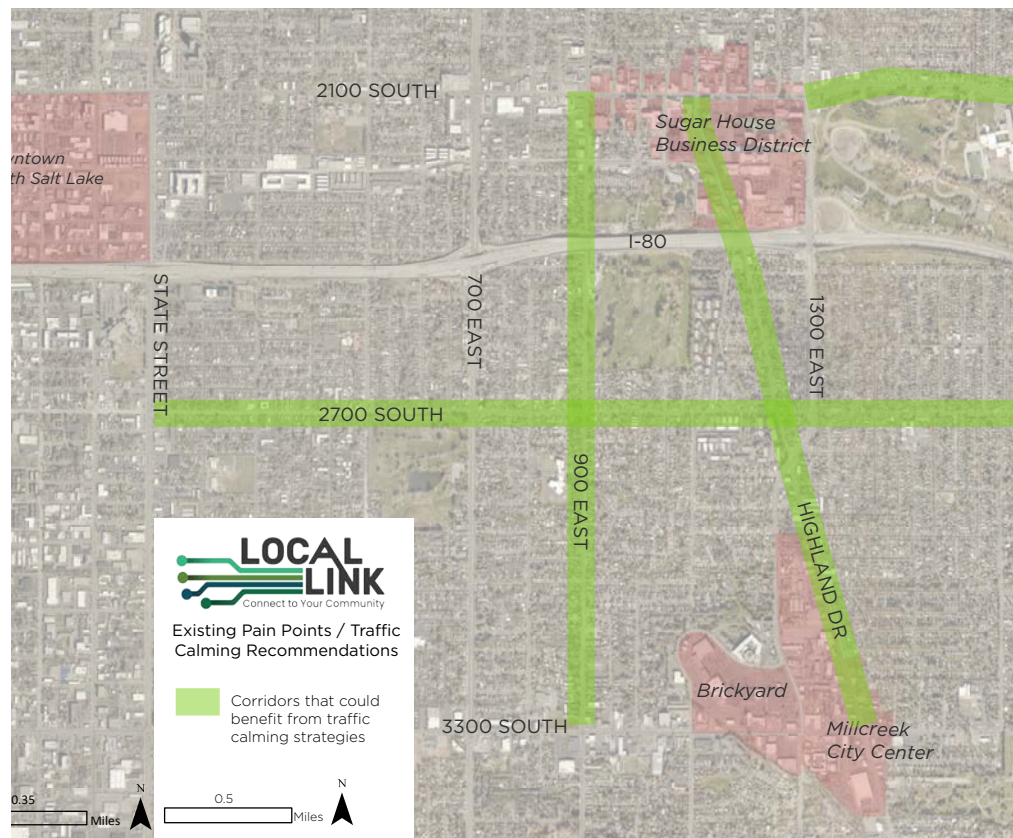
Planning Integration: Salt Lake City is currently exploring development of a city-wide traffic calming program. This recommendation seeks to provide a framework to support neighboring jurisdictions near the Sugar House Business District to develop their own traffic calming strategies to provide a consistent approach across jurisdictional boundaries.

Salt Lake City, South Salt Lake, Millcreek

Collaborations and Partnerships:

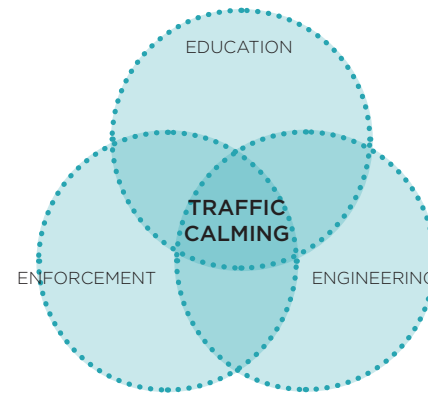
Short- to mid-term

Implementation Phasing:



WHAT IS TRAFFIC CALMING?

Traffic calming involves physical measures to reduce motor vehicle speeds and/or cut-through traffic volumes in the interest of promoting street safety and livability. Education and enforcement strategies can also be used in addition to engineered infrastructure, although engineering strategies are often found to be most effective in influencing slower speeds and desired volumes.



WHY TRAFFIC CALMING MATTERS

The speed and frequency with which bicyclists and pedestrians are passed directly impact their sense of comfort and safety. Slower vehicular speeds reduce the likelihood of collisions by improving motorists' ability to see and react to pedestrians and cyclists and minimize conflicts at driveways and other turning locations. Slower speeds also reduce the severity of injury and property damage when collisions do occur.

A well-designed traffic calming program results in individual corridors or a network of streets that feel safe, promote active travel, and enhance neighborhoods' sense of place and livability.

APPLICATION

Successful traffic calming programs consider both flexibility and structure, striking a balance between analytical decision making and deploying solutions quickly. Salt Lake City, South Salt Lake, Millcreek, and Holladay should seek to implement traffic calming programs that are consistent across jurisdictional boundaries but easily adaptable to the local context. To guide the implementation process, each city should define and develop a data-driven priority rating system that scores streets and districts based on identified prioritization factors, such as:

- Traffic volumes and speeds
- The presence of existing or planned neighborhood byways
- Crash statistics
- Sidewalk availability
- Residential density
- Latent demand for walking and biking
- Equity

It is important to note that Salt Lake City is currently developing a traffic calming prioritization program; lessons learned from this effort can be shared and adapted to each city's unique context to promote consistency in the region.

FUNCTIONAL REQUIREMENTS

All traffic calming operates on the principle of deflecting the direction of motor vehicles and interfering with the ability to travel a straight, level path. Vertical deflection such as speed humps, maintains a vehicles straight path, but requires a brief elevation change. Horizontal shifts, such as chicanes, require vehicles to travel a meandering path and narrow the visual field to reduce travel speeds.

HORIZONTAL DEFLECTION

Mini Traffic Circles are a type of horizontal traffic calming that can be used at minor street intersections to reduce conflict potential and severity at intersections and to reduce traffic speeds along a street.



Curb Extensions are extended sidewalk or landscaped areas on one or both sides of the road to reduce the roadway width. By reducing crossing distances, curb extensions also facilitate easier and safer pedestrian movement.



Chicanes are raised curbs that create a horizontal shifting of the travel lanes along a road. The shifting lanes reduce speeds by eliminating long stretches of straight roadway where motorists can pick up speed.



VERTICAL DEFLECTION



Speed Humps are raised areas, typically 3-4" high, in the roadway pavement surface extending across the roadway. Speed humps can be round or flat-topped.



Raised Intersections can eliminate grade changes from the pedestrian path and give pedestrians greater prominence as they cross the street.

PROGRAM AND POLICY RECOMMENDATIONS (cont.)



Micromobility Infrastructure and Mobility Hubs Various Locations

Program Extent: Neighborhood centers and near high ridership transit routes

Project Alignment: Choice, Connectivity, Collaboration
Guiding Principles:

Planning Integration: This recommendation supports the equity, choice, health, and connectivity guiding principles.

Collaborations and Partnerships: Salt Lake City, South Salt Lake, Millcreek, Salt Lake County, Utah Transit Authority, WFRC, and the Salt Lake City Redevelopment Agency.

Implementation Phasing: Mid- to long-term

Transportation is undergoing a rapid evolution in Salt Lake County. Technology-enabled services have expanded the suite of options available for getting from point A to B. Urban transportation systems now need to reflect:

ON-DEMAND SERVICES

- In addition to biking, walking, driving, and taking transit, many people have **access to on-demand services from private companies** (taxis, Uber, Lyft), scooter share, bike share, car-sharing, and micro-transit shuttles.

ROLE OF PRIVATE SECTOR

- New business models have increased the role of the **private sector in transportation and changed the nature of services operating in the public right-of-way.**

TRIP PLANNING

- Trip-planning services** are changing the way people make decisions about routes, mode, and cost to travel.

ELECTRIC VEHICLES

- Global trends toward electric vehicles, combined with the locally-adopted goals for reduced greenhouse gas emissions, has **increased demand for electric charging options** as part of public infrastructure.

E-COMMERCE

- E-commerce is reducing personal trips** to retail stores and restaurants and **increasing the volume of urban delivery and courier trips** occurring.

CURB SPACE DEMAND

- There is increasing **demand for curb space** for transit services, ride-share, pick-up and drop off, walkways, bikeways, and freight delivery.

As a result, cities and transit agencies around the country are identifying new ways to connect the expanded suite of mobility options to one another and to manage use of the right-of-way. By creating a physical platform for integrating public and private, shared and individual, transportation services, mobility hubs offer one such strategy.

MOBILITY HUB ELEMENTS

In practice, mobility hubs are the sum of their parts. The services and amenities commonly considered in mobility hub planning include the following:

TRANSIT AND TRIP-MAKING SERVICES

Micro-transit pick up & drop off area	Transit ticket and integrated payment kiosks	Bus, shuttle, or light rail stop	Real time transit information & other shared mode information

PARKING AND CHARGING SERVICES

Electric vehicle charging	Short term bike parking	Long term bike parking	Bikeshare & scootershare parking	Freight loading/unloading area	Carshare parking and access points

PRIORITY ACCESS

Prioritized walkways	Prioritized bike and micro-mobility access	Safe bicycle and pedestrian crossings

AMENITIES

Community space	Retail	Activated furnishing zone with appropriate support infrastructure

WHY MOBILITY HUBS MATTER

Current trends related to new and emerging transportation technology, suggest that the site programming and available amenities of a mobility hub can aid the City in:

- MAKING TRAVEL CHOICES BETTER FOR EVERYONE
- EXPANDING COVERAGE OF TRANSPORTATION SERVICES
- MANAGING PRIVATE MOBILITY SERVICES



The S-Line Streetcar is part of Salt Lake City's Frequent Transit Network (FTN) for those traveling to or from the Sugar House Business District.

PROGRAM AND POLICY RECOMMENDATIONS (cont.)

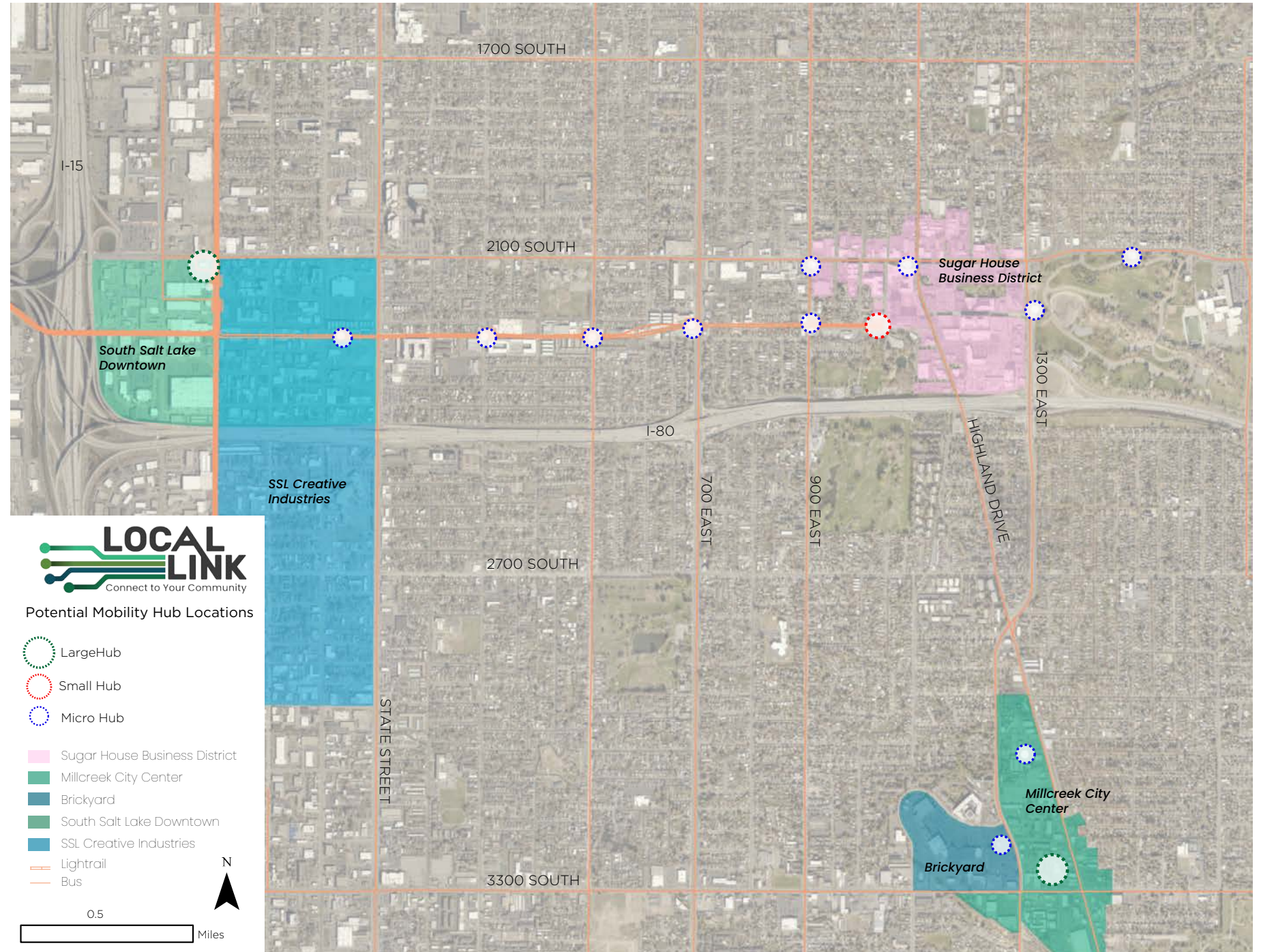


Micromobility Infrastructure and Mobility Hubs Various Locations

	LARGE HUB	SMALL HUB	MICRO HUB
Bus and/or shuttle stop	●	●	●
Fixed guideway transit stop (BRT or LRT)	●	○	
Transit ticket kiosks	●	●	●
Seating	●	●	○
Shelter/Shade Structure	●	●	●
Indoor waiting area	●	○	
Bikeshare and scootershare parking	●	●	●
Short term bike parking	●	●	●
Long term bike parking	●	○	
Personal vehicle parking*	○	○	
Carshare	○	●	○
Electric vehicle charging*	○	●	○
TNC pick-up/drop-off	●	●	○
Wayfinding	●	●	●
Real-time information	●	●	●
Wifi hub*	●	○	○
Water fountains	●	●	○
Restrooms*	●	●	○
Sidewalks	●	●	●
Safe pedestrian crossings	●	●	●
Dedicated bike infrastructure	●	●	●
Active public space*	●	○	○
Convenience retail**	○	○	○

* May require coordination with adjacent private development
 ** Convenience retail could include uses such as gyms/showers, convenience day care, package delivery, etc.

● Recommended ○ May be included



BACKGROUND DATA

KEY POINTS IN THE STUDY AREA

The study area includes three existing or developing central business districts or downtowns in the Salt Lake Valley.

Sugar House Business District

Since the 2013 Circulation Study in this area, the Sugar House Business District has seen tremendous transformation and continues to. The area south of 2100 South, north of I-80, east of 900 East, and west of 1300 East, has had significant redevelopment of new shopping, housing, hospitality, and office space. The new development is denser, more compact, and has an overall urban feel.

South Salt Lake Downtown

South Salt Lake is building a downtown city center across 235 acres at the northeast corner of where I-80 and I-15 meet. Over the course of its development, the City expects more than 2,500 new multi-family housing units, 1.5 million square feet of retail and 3 million square feet of office/commercial space, plus parks, a greenway, Parley's Trail, and cultural and social attractions.

Millcreek City Center

The newly incorporated City of Millcreek is also building a city center. Its city center will be located north of 3300 South, between Highland Drive and 1300 East. It will feature a prominent and vibrant multi-use open space at its center with mixed uses including office, residential, retail, and civic buildings surrounding it. It will include over 100,000 square feet of office, over 40,000 square feet of retail, and over 450 multifamily units over the next decade.

The land uses in and between these three centers includes a broad mix of commercial, office, residential, and industrial (in South Salt Lake). In addition to the general land uses described above, there are a number of other destinations in the study area:

- 2 Colleges (Salt Lake Community College, Westminster College)
- 17 K-12 Schools (3 High Schools, 2 Junior High Schools, 11 Pre-K & Elementary Schools, 1 School for the Deaf and Blind)
- 10 Parks
- 2 Libraries (Sprague Branch Public Library, Millcreek Community Library)
- 3 Hospitals or Health Clinics (University of Utah health Clinic - Sugar House, St. Mark's Hospital, South Main Public Health Center)
- 3 Community or Recreation Centers (Fairmont Aquatic Center, Columbus Center, Central Park Community Center)
- Salt Lake County Government Center
- South Salt Lake Creative Industries Zone
- Entertainment and Shopping Areas (Brickyard Shopping Center, Sugar House Shopping Center, Century 16 Theatre, Cinemark Theatre)
- Parley's Trail and S-Line Corridor

In addition to the point and district destinations and features of the study area, Parley's Trail and the S-Line Corridor currently define a prominent transit and active transportation corridor running east-west between the Sugar House Business District and South Salt Lake's Downtown



Key Destinations in Study Area

BACKGROUND DATA (cont.)

ONGOING AND PLANNED CONSTRUCTION

Salt Lake City, South Salt Lake, and Millcreek have a number of upcoming and ongoing road construction projects. The map shows six classifications of construction projects: bus stop improvements, road reconstruction projects, road resurfacing projects, road re-striping projects, road reconstruction projects, trail projects, and water storm and sewer projects. This study can take advantage of this future construction work to make recommendations that may inform some of the final designs selected for each of these roads. Specific improvements are listed below by construction year:

2020

- Reconstructing Elizabeth Street - Stratford Avenue to Whitlock Avenue
- Reconstructing Zenith Avenue - 800 East to 900 East
- Reconstructing Parkway Avenue - Elizabeth Street to Highland Drive
- Canal Replacement & Green Infrastructure Improvements - Wilmington Avenue to Ashton Avenue
- Route 21 Bus Stop Enhancements

2021

- Reconstructing 900 East - Hollywood Avenue to 2700 South
- Resurfacing Highland - Warnock to Salt Lake City line

2023

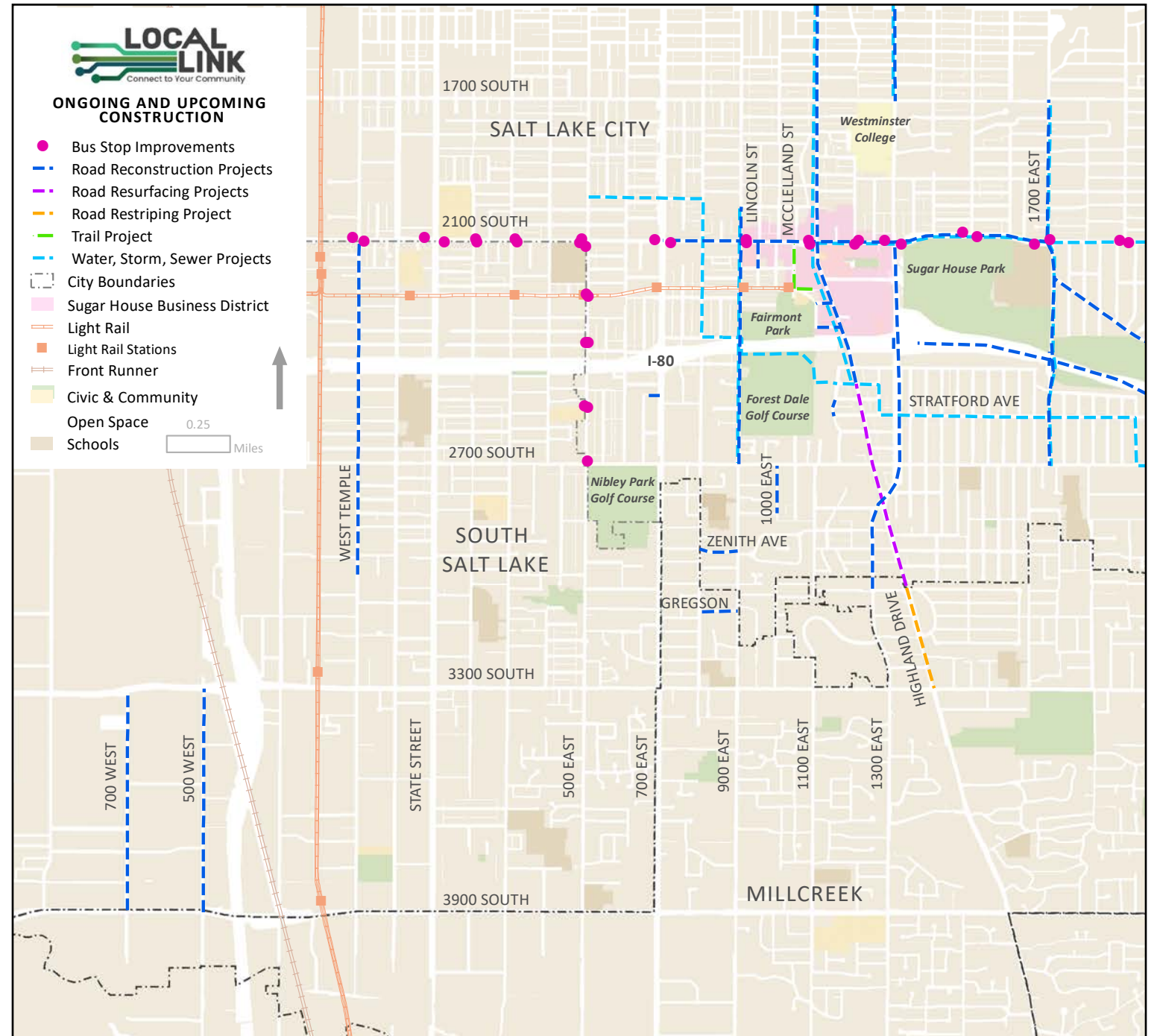
- Reconstructing 1100 East / Highland Drive - Ramona Avenue to Warnock Avenue
- Reconstructing Ashton Avenue - 1100 East to Highland Drive
- Reconstructing 1000 East - Atkin Avenue to 2700 South
- Reconstructing Lincoln Street - Elm Avenue to 2100 South
- Reconstructing Meadow Lane - Green Street to 700 East
- Reconstructing Gregson Avenue - 900 East to Lincoln Street
- Reconstructing Simpson Avenue - 1100 East to Highland Drive

2024

- Reconstructing 1300 East - 2100 South the Salt Lake City Boundary

2025

- Reconstructing 2100 South - 700 East to 1700 East



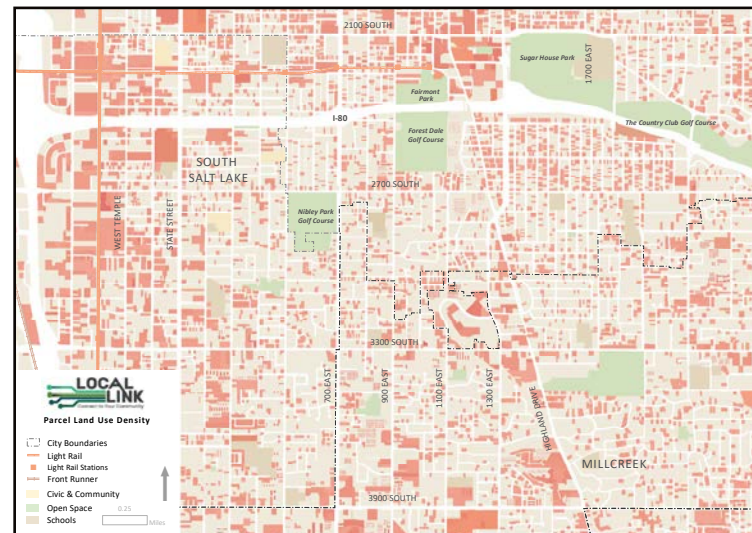
Ongoing and Planned Construction in Study Area

BACKGROUND DATA (cont.)

LAND USE DENSITY

The following four maps illustrate existing and future land use density in the study area. Together, they illustrate areas of higher building density located in and around the Sugar House Business District, much of the South Salt Lake Area adjacent to I-80, and property in and around the Brickyard Shopping Center and the Millcreek City Center.

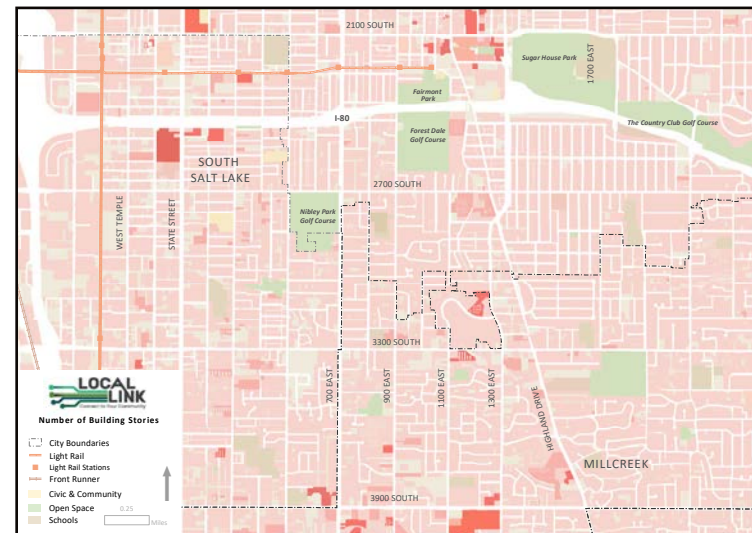
This first map illustrates parcel-building density which is the total building square feet divided by the parcel size. It shows the intensity of development on each parcel. The darker the red, the more intense the parcel-building density. Parcels that are not red are likely single family homes with large lots, open spaces and parks, or other parcels with small buildings.



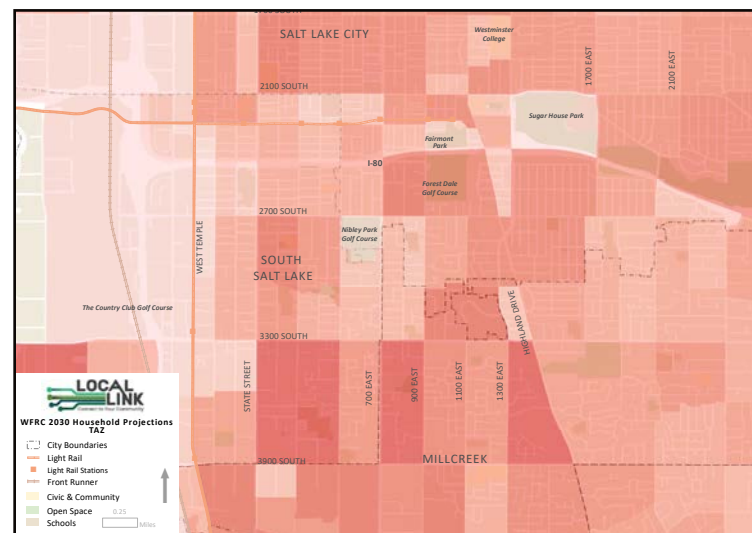
Parcel Land Use Density

This map shows parcels with multiple building stories. The darker the red, the more building stories. There is a concentration in the Sugar House Business District, the parcel of the Salt Lake County Building, the area near South Salt Lake's Creative Industries Zone, and along 3900 South near St. Mark's Hospital.

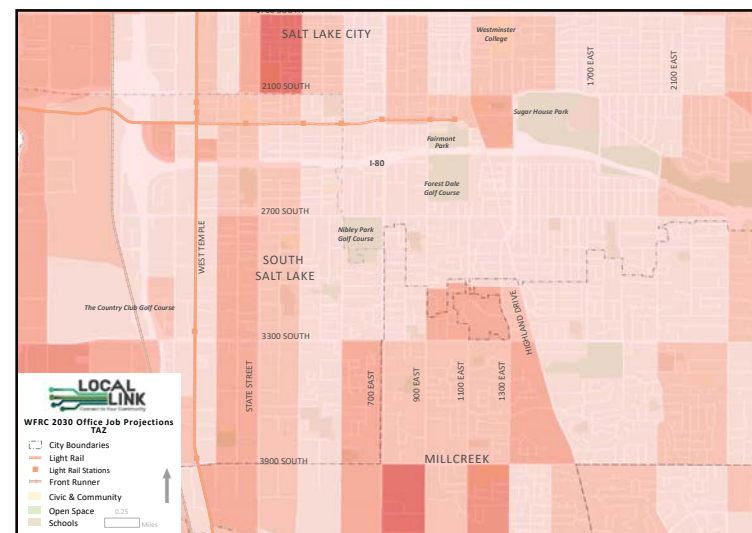
The third and fourth maps show Household and Office Job estimates according to the Wasatch Front Regional Council's 2030 projections by transportation analysis zone (TAZ). While households are spread throughout the study area, there appear to be clusters south of 3300 South and north of 2100 South. This 2030 office projection map shows concentrations in the southeast corner of the Sugar House Business District and the



Number of Building Stories



2030 No. of Households Projections

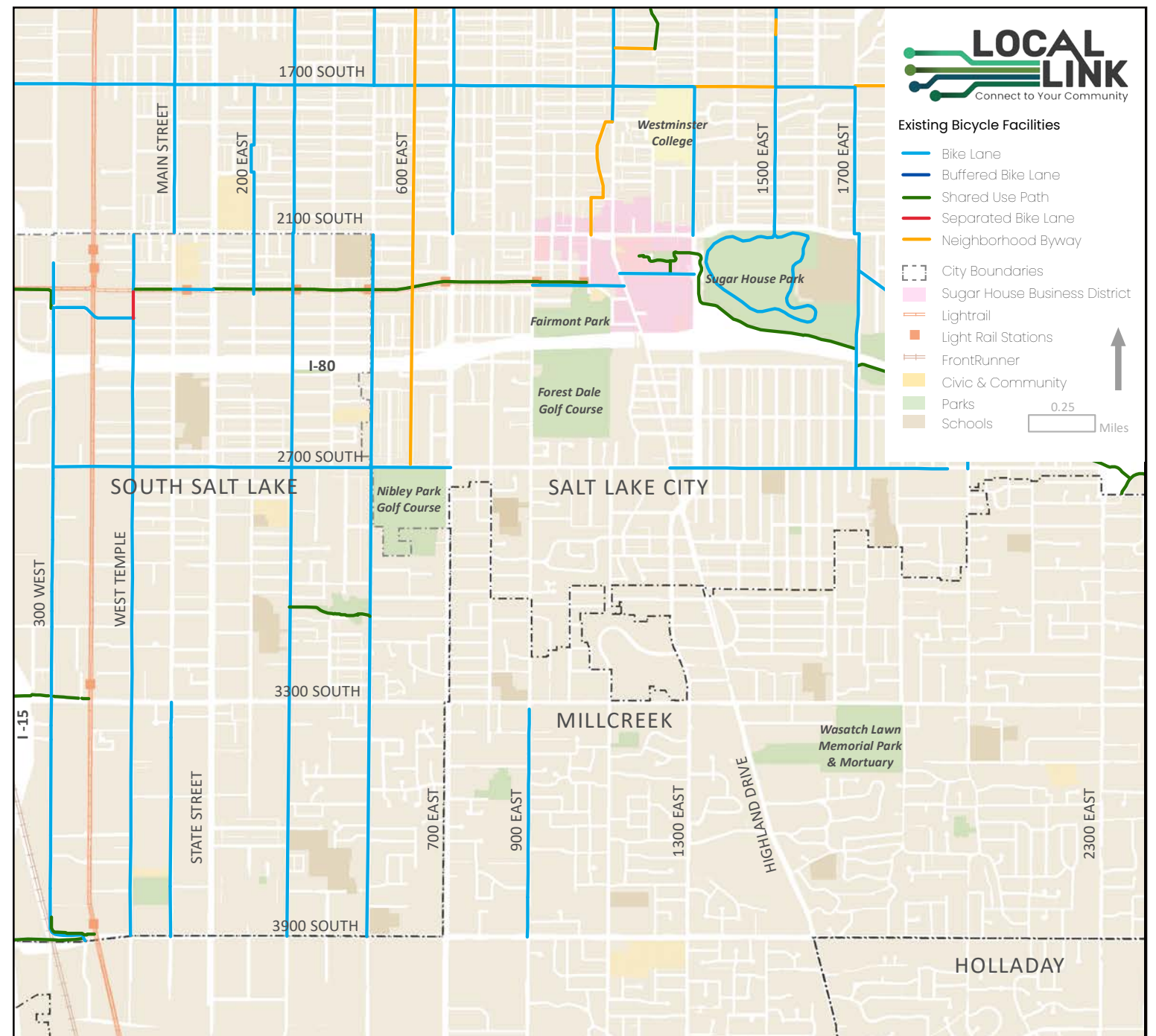


2030 No. of Office Jobs Projections

BICYCLE FACILITIES

The Sugar House Business District possesses a number of important bikeway connections offering adjacent neighborhoods convenient access to numerous shopping and entertainment destinations. This includes east-west connections like Parley's Trail and bicycle facilities on 2700 S.

The McClelland Trail provides a good north-south route linking Sugar House to the 9th & 9th District. Bicycle facilities are generally deficient in linking the Sugar House Business District to points south including Millcreek City Center and Brickyard. Parley's Trail also possess a vital gap between the Sugarmont TRAX station and "The Draw" where Parley's Trail crosses under 1300 East into Sugar House Park.



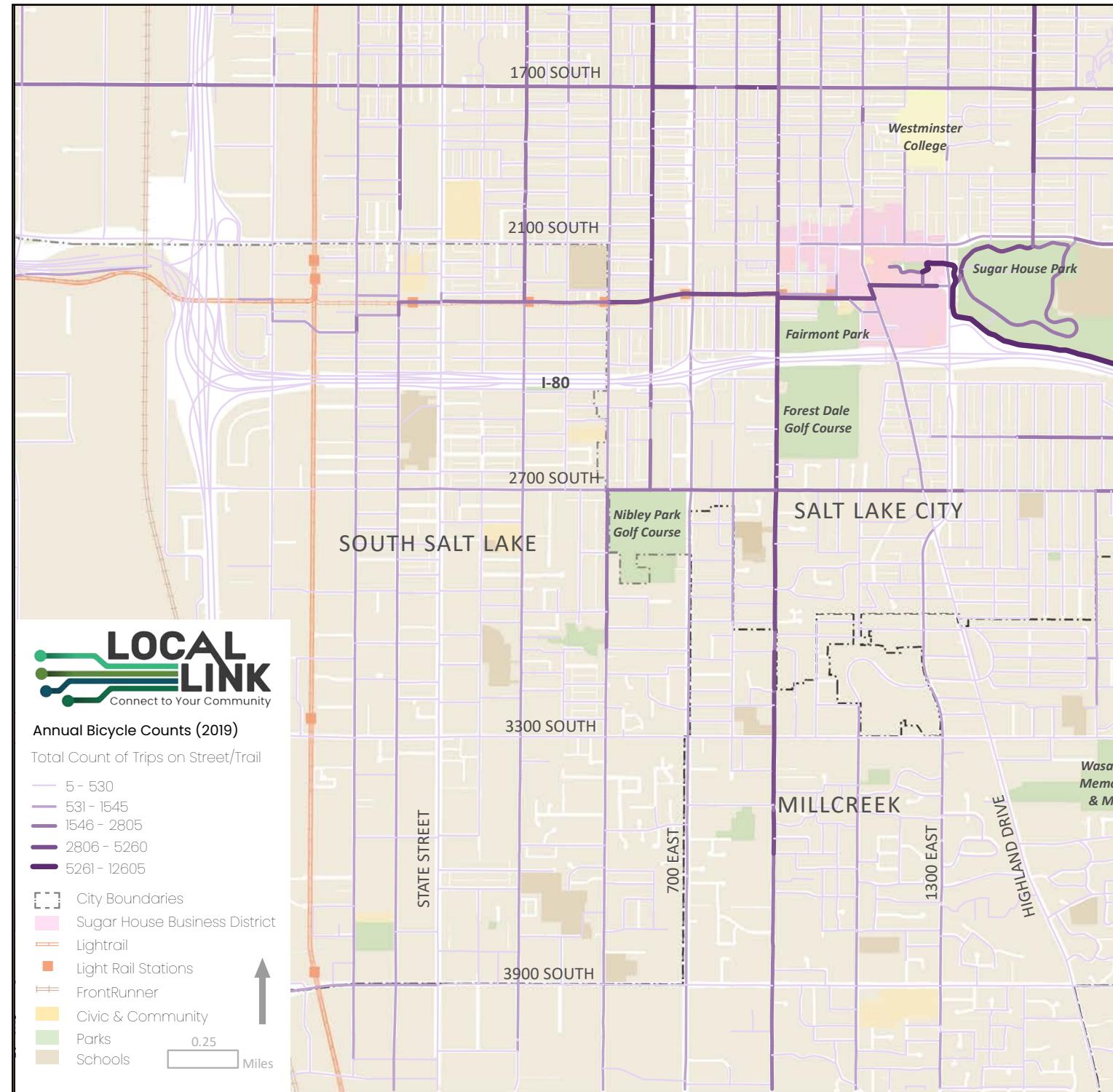
Existing Bicycle Facilities

BACKGROUND DATA (cont.)

ANNUAL STRAVA DATA BICYCLE COUNTS (2019)

The most heavily used corridors by Strava users include Parley's Trail, 1700 South, and 2700 South going east-west. This is likely attributed to the bicycle infrastructure on those roads and trails.

Going north-south, there are more corridors used by riders, but the most heavily used are 900 East, 2100 East, and 2300 East south of I-80. Additional routes that seem to see higher volumes include Main Street, 300 East, 500 East, and 1300 East south of 3300 South.

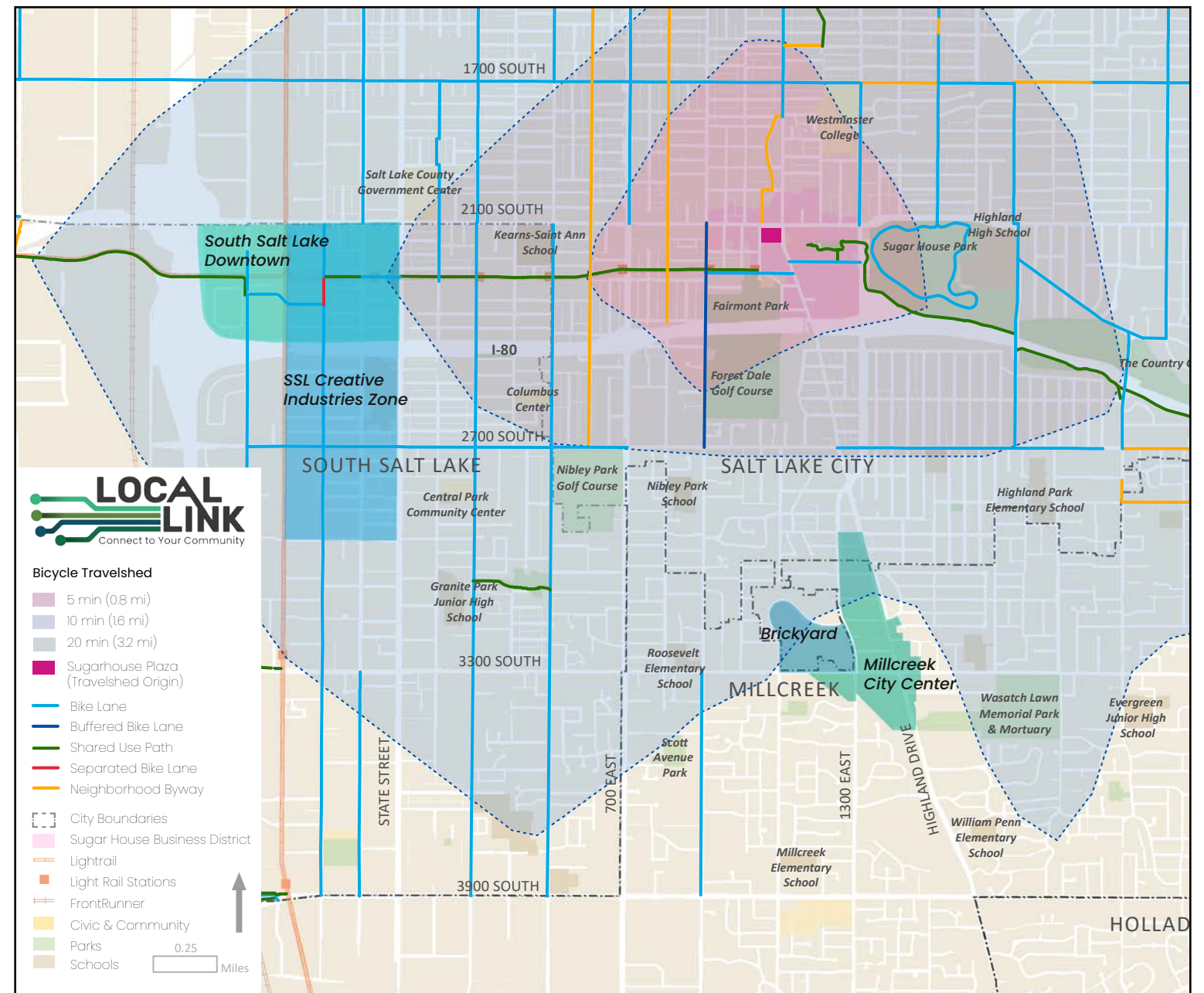


Strava Annual Bicycle Ridership 2019

BICYCLE TRAVELSHED ANALYSIS

The planning team analyzed existing bikeways and low volume roadways suitable for bicycling to understand how accessible the Sugar House Business District is via surrounding neighborhoods based on typical trip durations of 5-, 10-, and 20-minutes. Sugar House Plaza was used as the origin for determining these "travelsheds". Given a gridded street network and ample streets suitable for bicycling, travelsheds would appear diamond-shaped. In Sugar House, east-west connectivity is strong thanks to the existence of Parley's

Trail. Connections north towards Westminster and the East Liberty Park neighborhood are also good thanks to the McClelland Trail and several low-volume local streets. Bicycle connectivity begins to breakdown traveling south out of Sugar House. A lack of suitable bicycle facilities on 1300 E or Highland prevents access to Brickyard and Millcreek City Center within the 10- and 20-minute travel sheds. With improved bikeways, it could be possible to easily bike between the Sugar House Business District and Brickyard / Millcreek City Center in as little as 10-minutes.



Bicycle Travelshed Analysis

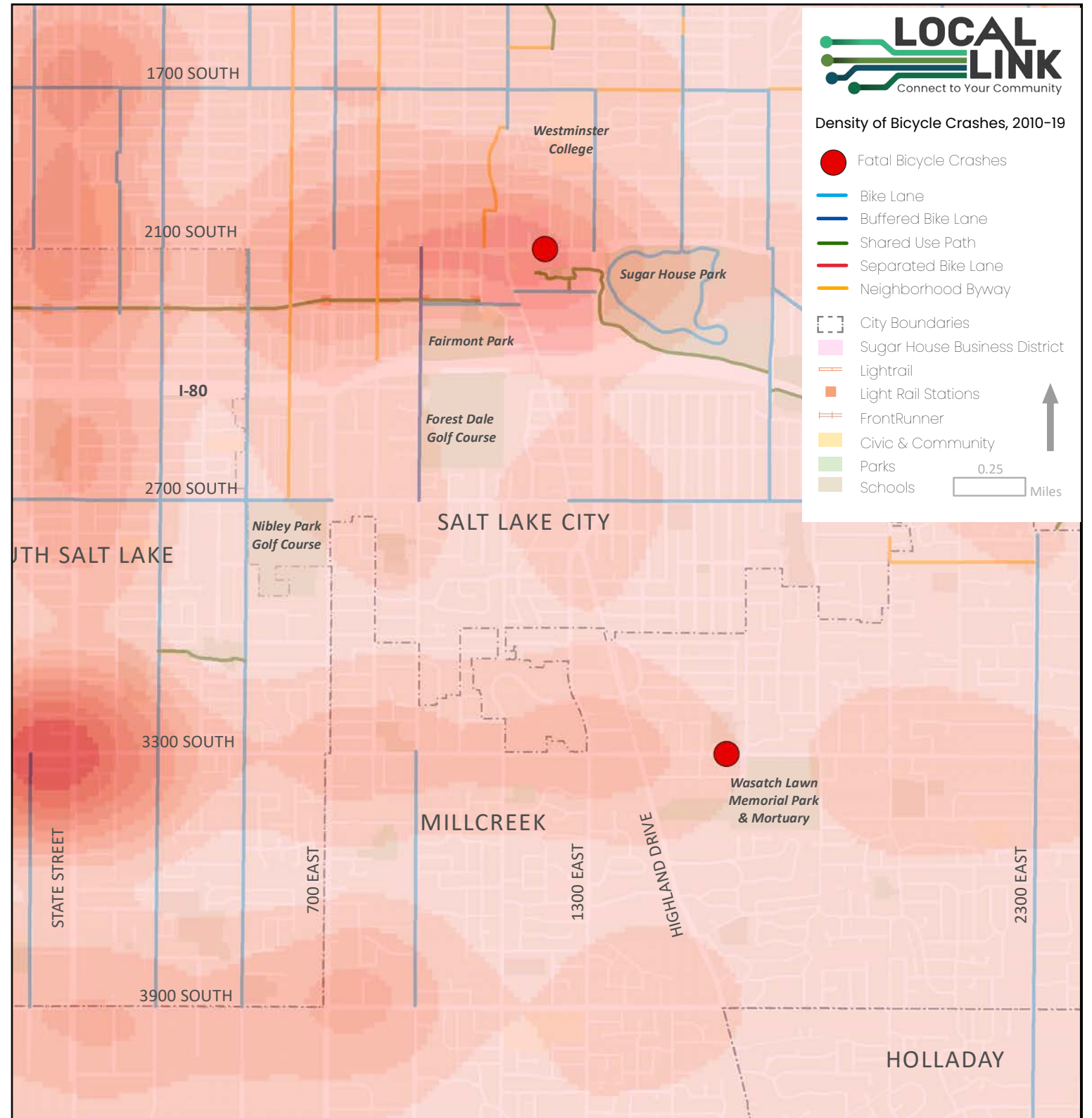
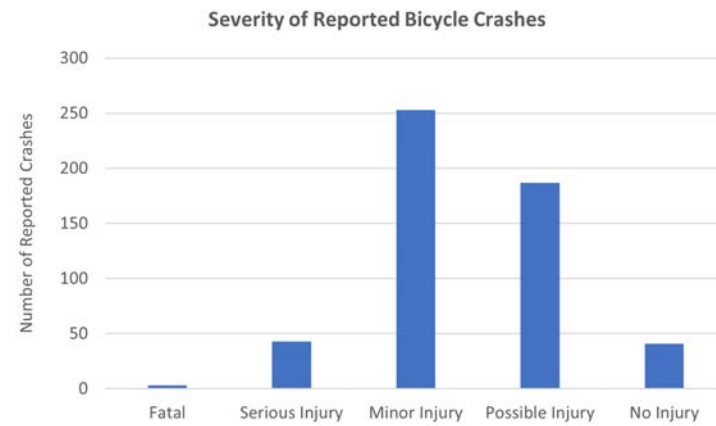
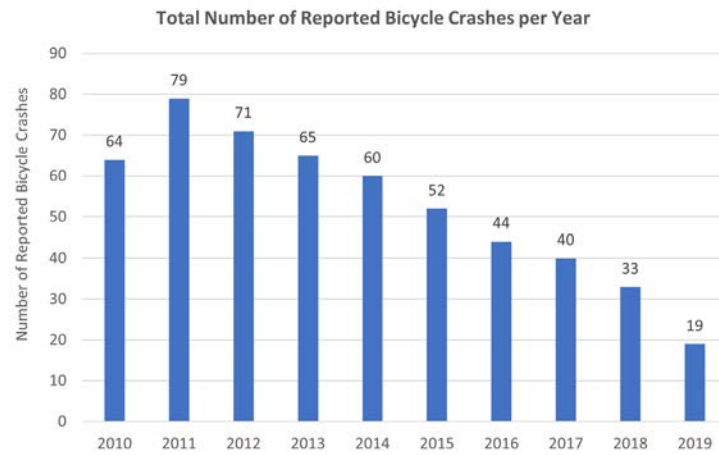
BACKGROUND DATA (cont.)

BICYCLE CRASHES

The planning team analyzed bicycle crashes between 2010 to 2019 by severity, location, year of occurrence, and daylight characteristics. Between 2010 and 2019, there were a total of 527 reported crashes involving bicycles. As shown in Figure 1, 3 of these crashes were fatal; 43 were reported as causing “serious injury;” 253 were reported as causing “minor injury;” 187 were reported as causing “possible injury;” and 41 were reported as causing “no injury.” The three fatal injuries occurred at the intersection of 2100 South and 1200 East, 3300 South and 1570 East, and 900 West and 3100 South.

70% (366) bicycle crashes occurred at intersections, while 30% (161) occurred at non-intersections. Only two percent of crashes occurred at a bicycle or pedestrian path intersection. 30% (160) of bicycle crashes occurred on roadways with designated bicycle infrastructure, whereas 70% (367) occurred on roadways without designated bicycle infrastructure, pointing to the importance of developing safe and comfortable bicycle facilities. The majority of crashes occurred on the largest arterial roads such as State Street, 2100 South, and Highland Drive.

Reported bicycle crashes have decreased over time, with earlier years showing higher number of crashes than later years as shown in Figure 2. In 2011, 79 crashes were recorded. In 2019, only 19 crashes were recorded. Note that this could be due to incomplete crash reporting.



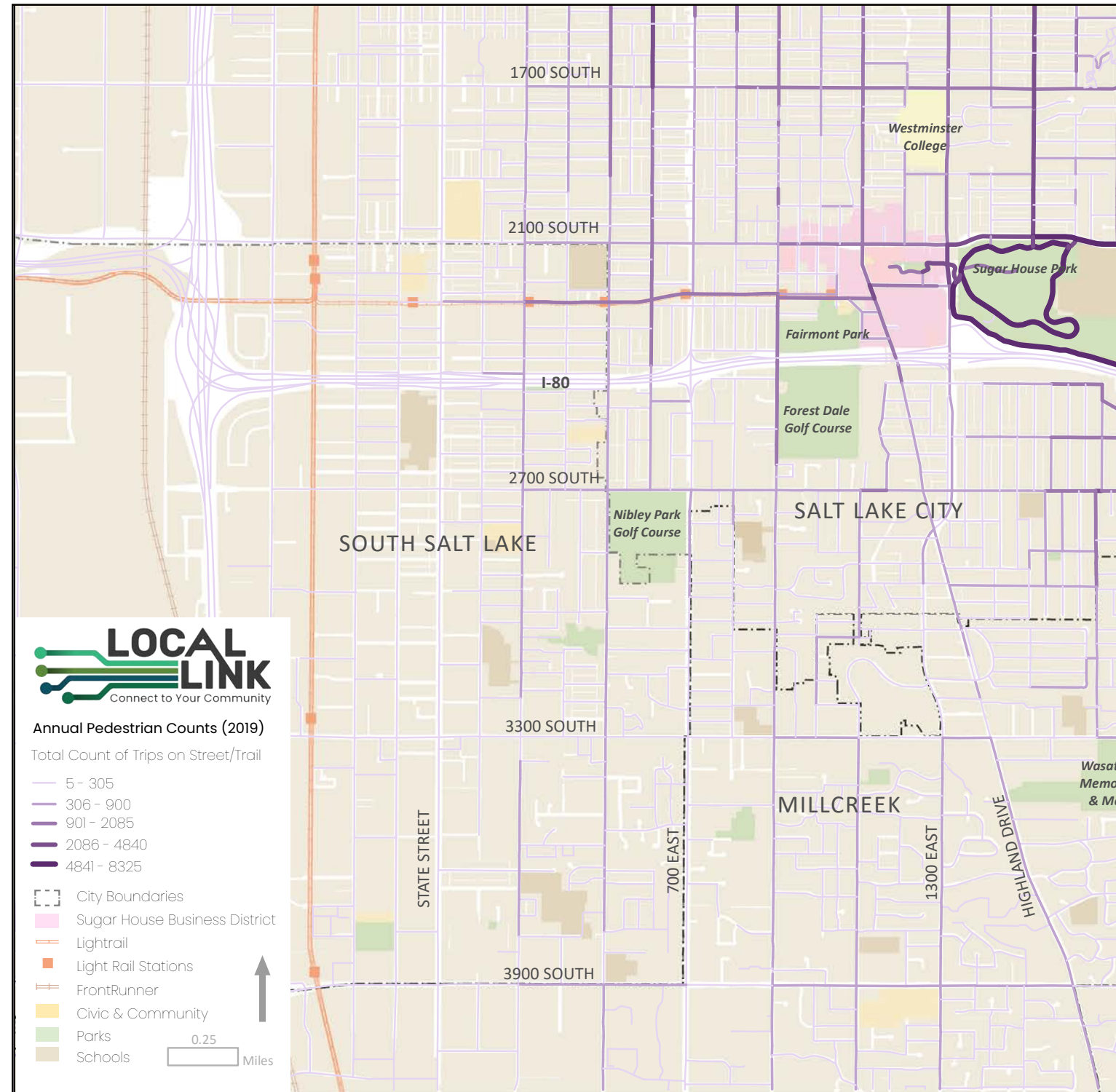
Density of Bicycle Crashes, 2010-19

BACKGROUND DATA (cont.)

ANNUAL STRAVA DATA PEDESTRIAN COUNTS (2019)

The pedestrian count data indicates the heaviest activity in and leading to Sugar House Park, which makes sense given its recreational nature. 1100 East, 2100 South, and the S-Line and Parley's trail also see

a fair number of pedestrian counts. More pedestrian activity seems to occur in the northeast quadrant of the study area.

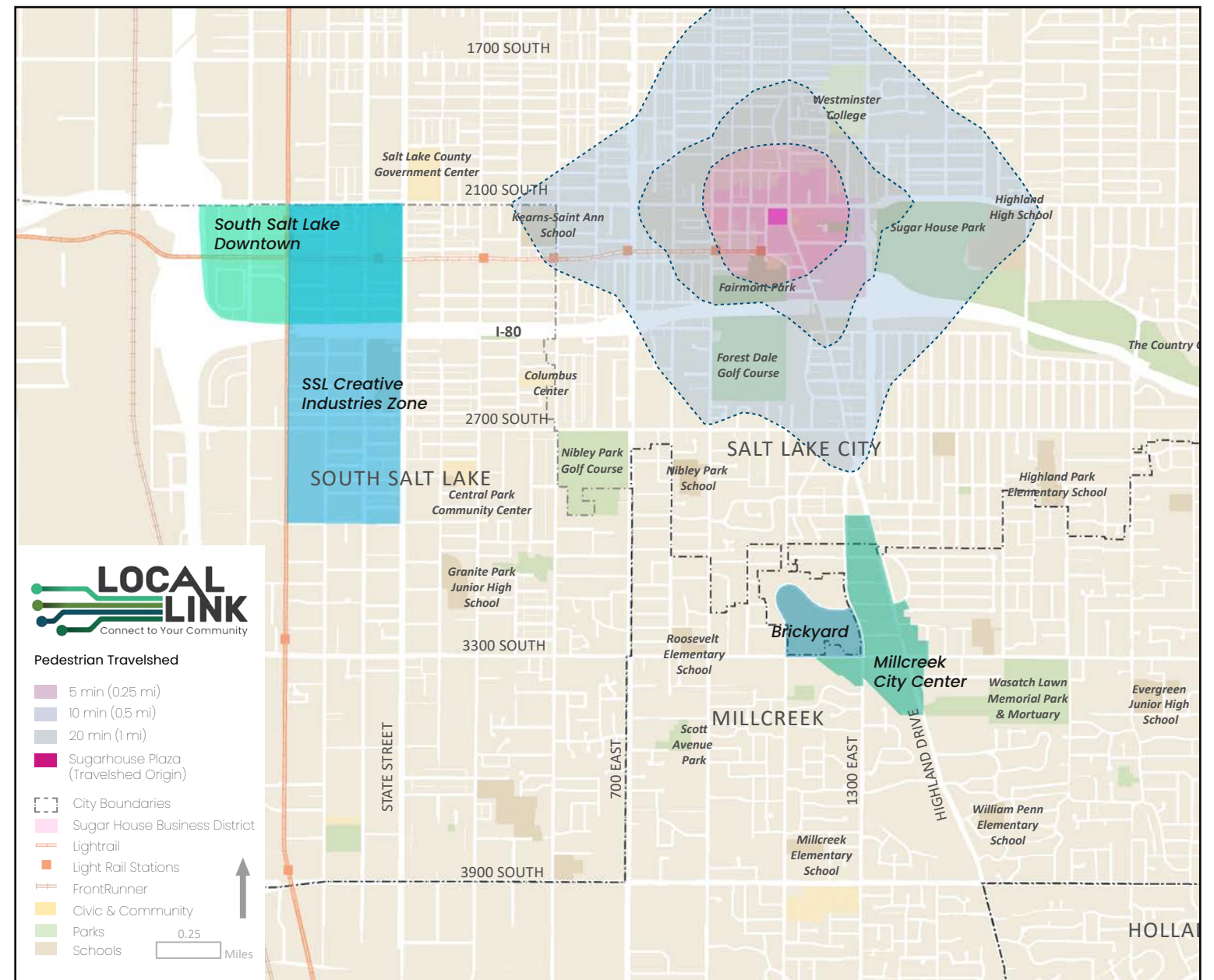


Strava Annual Bicycle Ridership 2019

PEDESTRIAN TRAVELSHED ANALYSIS

The planning team analyzed existing sidewalks suitable for walking to understand how accessible the Sugarhouse Business District is via surrounding neighborhoods based on typical trip durations of 5-, 10-, and 20-minutes. Sugarhouse Plaza was used as the origin for determining these "travel-sheds." Given the area's gridded street network that's outfitted with sidewalks on most streets, the pedestrian travel shed is roughly diamond shaped similarly to the bicycle travel shed. Connectivity to the north, west, and east is strong thanks to the existence of sidewalks on nearly every

street in these neighborhoods. Connectivity to the south is weaker due to the lack of sidewalks on some local roads, dead-end cul-de-sacs, and the division of some neighborhoods by Interstate 80. Many roads either dead-end at the Interstate or do not provide adequate walking facilities, presenting a challenge for those walking to the south of the Sugarhouse Business District. With focused investment on implementing missing sidewalk links and connecting cul-de-sacs, the 20-minute pedestrian travel shed could be expanded to include the Highland Park Elementary School neighborhoods and other nearby areas.



Pedestrian Travelshed Analysis

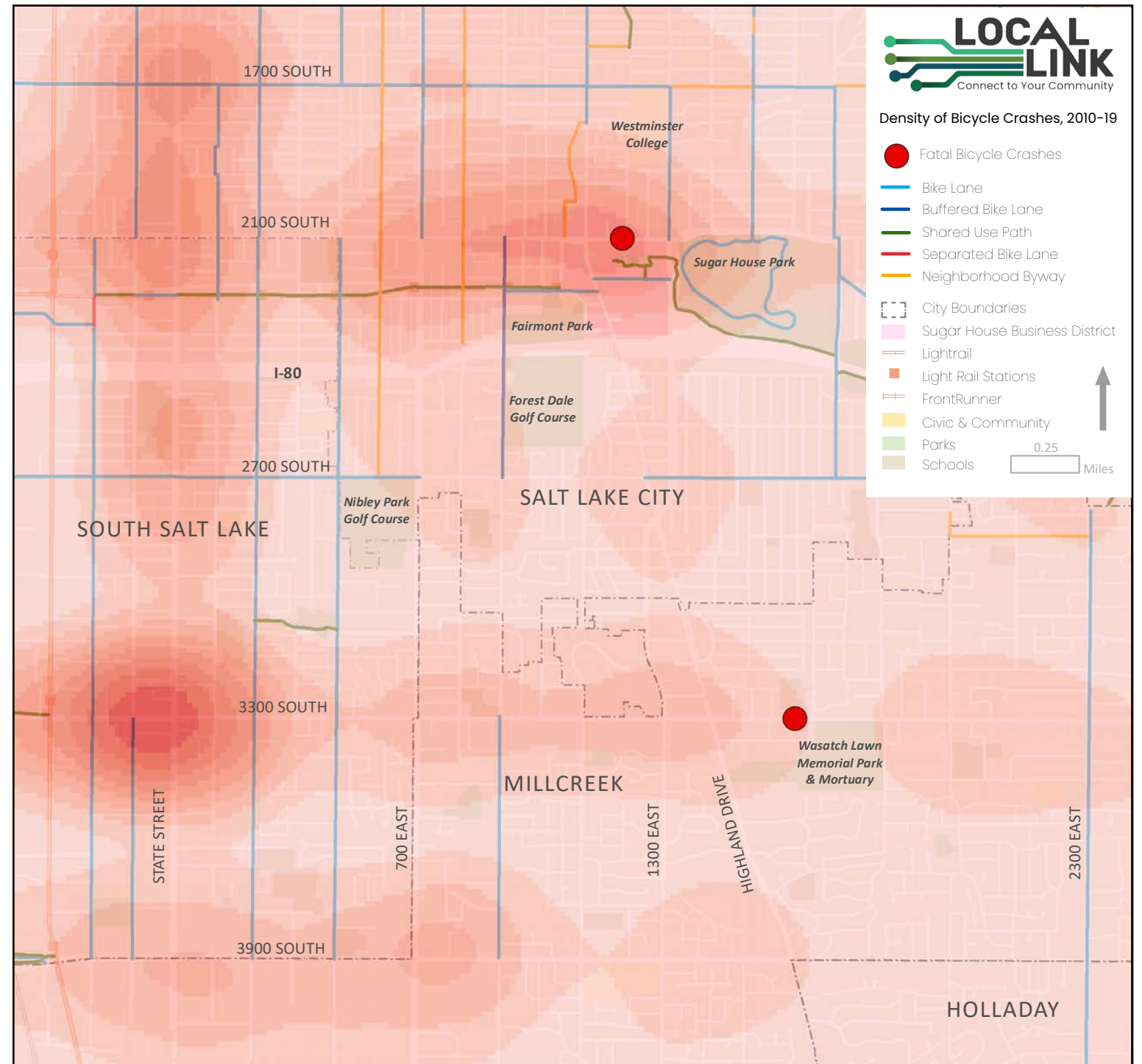
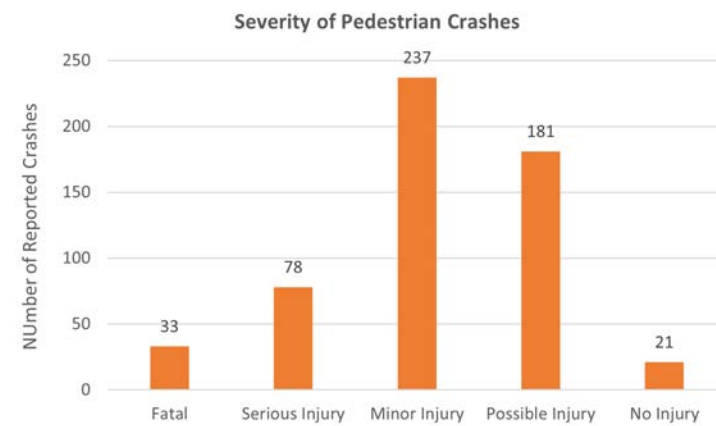
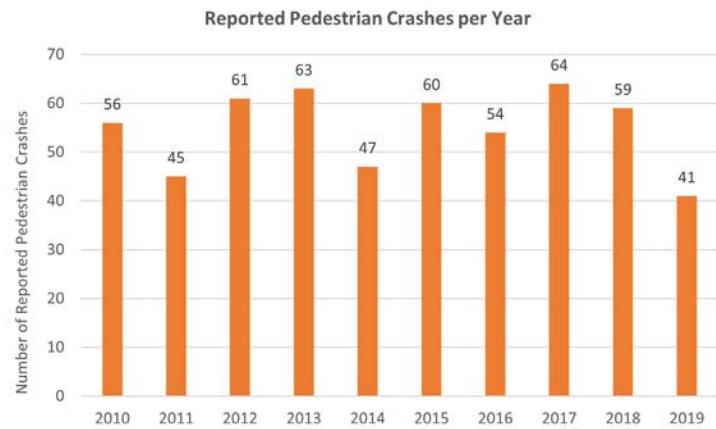
BACKGROUND DATA (cont.)

PEDESTRIAN CRASHES

The planning team analyzed pedestrian crashes between 2010 to 2019 by severity, location, year of occurrence, and daylight characteristics. Between 2010 and 2019, there were a total of 550 reported crashes involving pedestrians. As shown in Figure 4, 33 of these crashes were fatal; 78 were reported as causing “serious injury;” 237 were reported as causing “minor injury;” 181 were reported as causing “possible injury;” and 21 were reported as causing “no injury.”

69% (378) of pedestrian crashes occurred at intersections, while 31% (172) occurred at non-intersections. Crashes appear to be centered around commercial areas with high to moderate pedestrian activity, such as the Sugarhouse Business District, 3300 South and State Street, and 2100 South and State Street.

The number of reported crashes has varied over time, with the majority of crashes occurring in 2017 (64), 2013 (63), and 2015 (60). 2019 showed the lowest number of reported crashes, with only 41 crashes reported. Note that this number could be due to incomplete crash reporting.



Density of Bicycle Crashes 2010-19

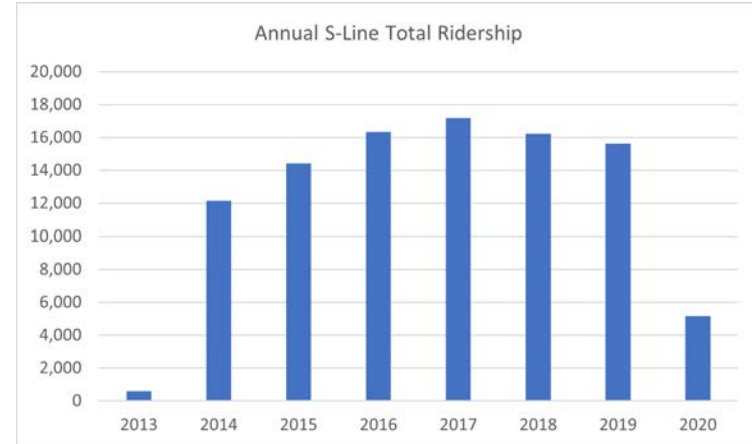
BACKGROUND DATA (cont.)

TRANSIT CONNECTIONS

The study area is well served by bus transit with routes running along major north-south and east-west corridors. A summary of the bus routes and their peak period headways in the study area is shown in the table below.

The study area is also served by light rail service including three TRAX lines on the west side and a streetcar (the S-Line) which runs from Central Pointe Station in South Salt Lake to its terminus at Fairmont Station in the Sugar House Business District. At Central Pointe Station, riders can transfer from the S-Line to the Green, Blue, and Red TRAX light rail lines. These lines reach West Valley and the Salt Lake City International Airport, Draper and Salt Lake Central Station, and Daybreak and the University of Utah, respectively. The table below provides a summary of light rail service.

Route	Name	Mode	Peak Frequency
4	400 South	Local Bus	30
17	1700 South	Local Bus	30
21	2100 South / 2100 East	Local Bus	15
33	3300 South	Local Bus	15
35M	MAX – 3500 South	Bus Rapid Transit	15
200	3900 South	Local Bus	15
205	State Street North	Local Bus	15
209	500 East	Local Bus	15
213	900 East	Local Bus	15
220	1300 East / 1100 East	Local Bus	30
223	Highland Drive / 1300 East	Local Bus	15
307	2300 East/ Holladay Blvd	Fast Bus	6 Trips
313	Cottonwood Heights Fast Bus	Fast Bus	6 Trips
320	Highland Drive Fast Bus	Fast Bus	4 Trips
354	Sandy / U of U Fast Bus	Fast Bus	6 Trips

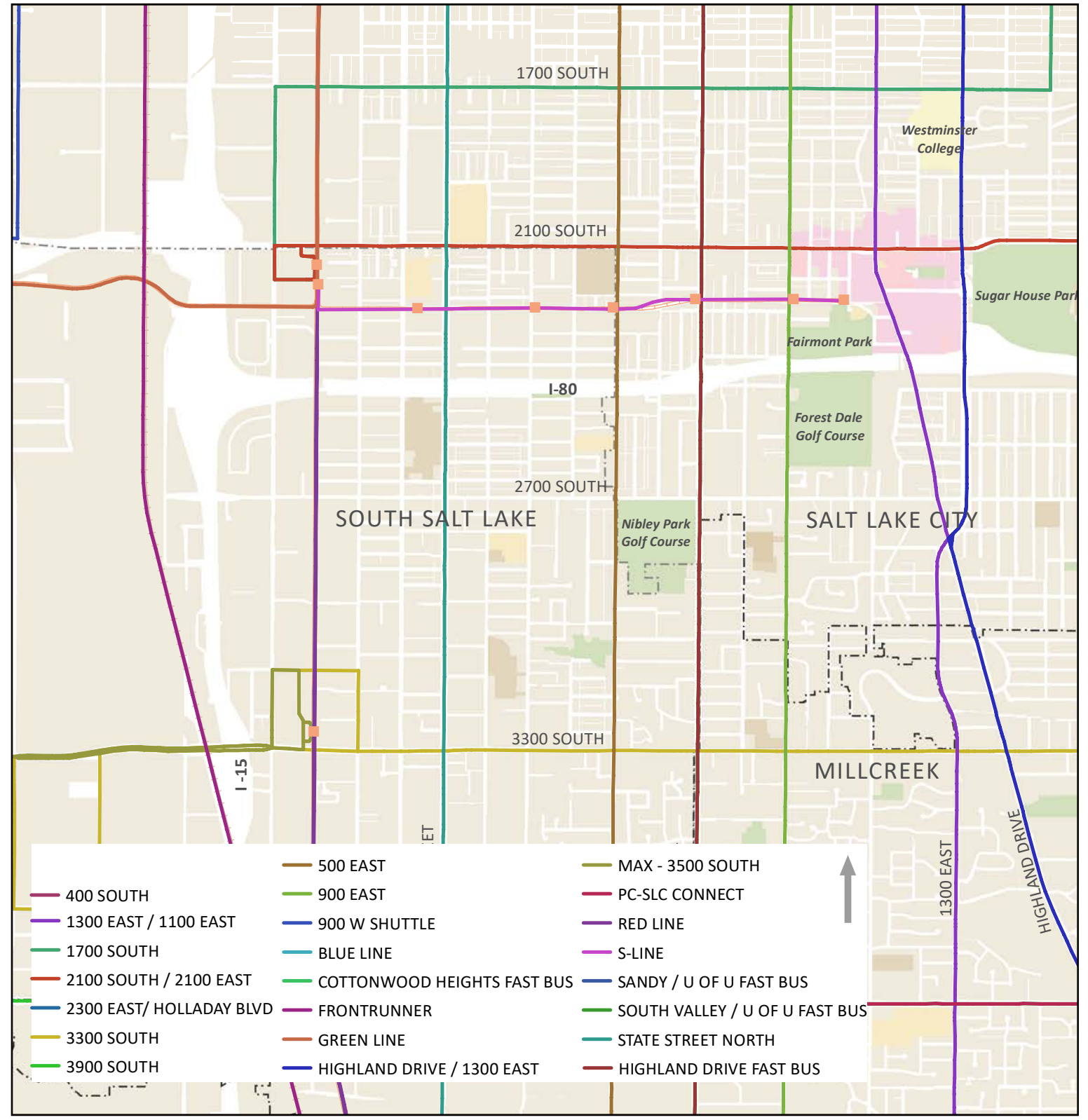
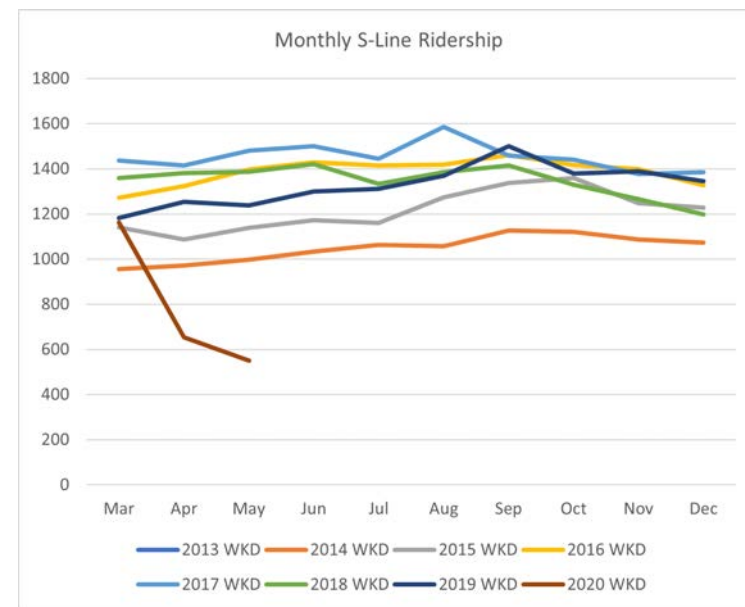


The two charts below show more detailed information on S-Line ridership. The first shows a steady increase in ridership from 2014 to 2017 and then a slight drop in years 2018 and 2019. The second chart shows that ridership remains steady throughout the months, with slight peaks in August and September.

An Alternatives Analysis (AA) study will be conducted following this study to explore extending the S-Line south of its current terminus at Fairmont Station to Millcreek and Holladay, either down Highland Drive or 1300 East or a combination of north-south streets.

The region's heavy rail commuter line, Front Runner, also appears on the map, but is considered out of the study area.

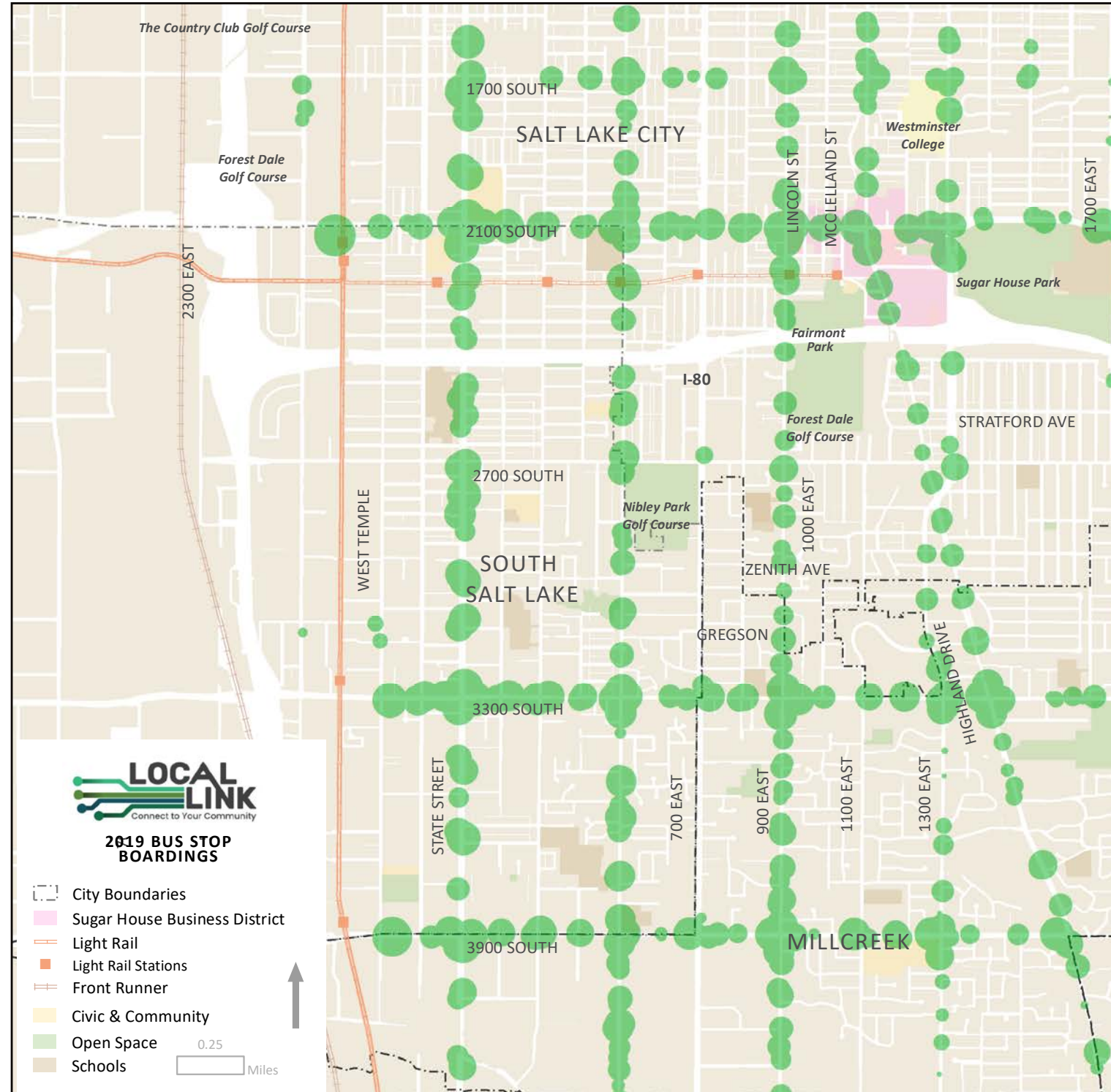
Route	Name	Mode	Peak Frequency
701	Blue Line	Light Rail	15
703	Red Line	Light Rail	15
704	Green Line	Light Rail	15
720	S-Line	Streetcar	15



BACKGROUND DATA (cont.)

TRANSIT BOARDINGS

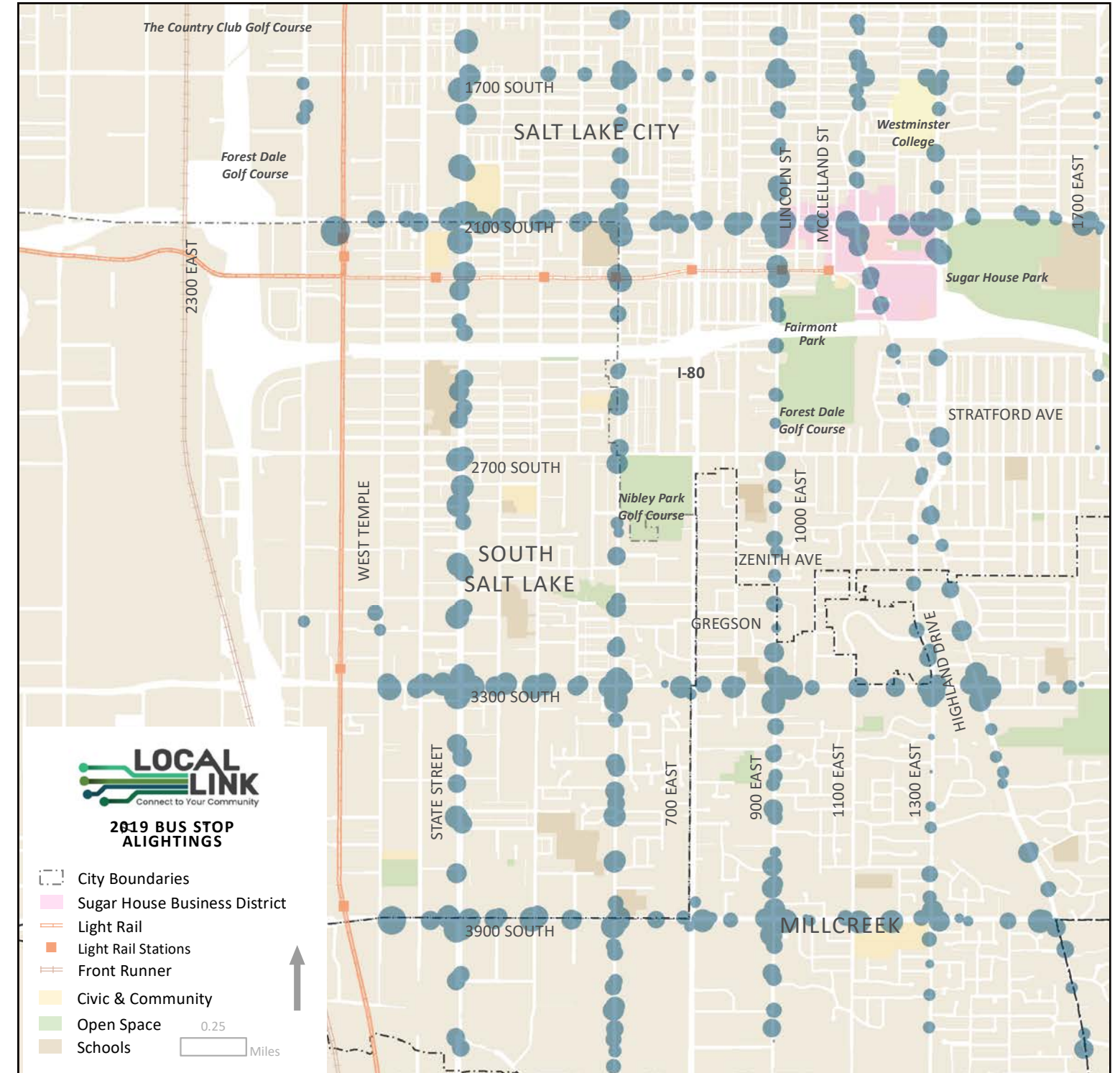
The map shows average daily boardings at bus stops and S-Line stations. It shows that the majority of boardings occur along the S-Line, 2100 South, 3300 South, and at major road intersections such as 900 East and 3900 South.



Bus Stop Boardings

TRANSIT ALIGHTINGS

The map shows average daily boardings at bus stops and S-Line stations. It shows that the majority of boardings occur along the S-Line, 2100 South, 3300 South, and at major road intersections such as 900 East and 3900 South.



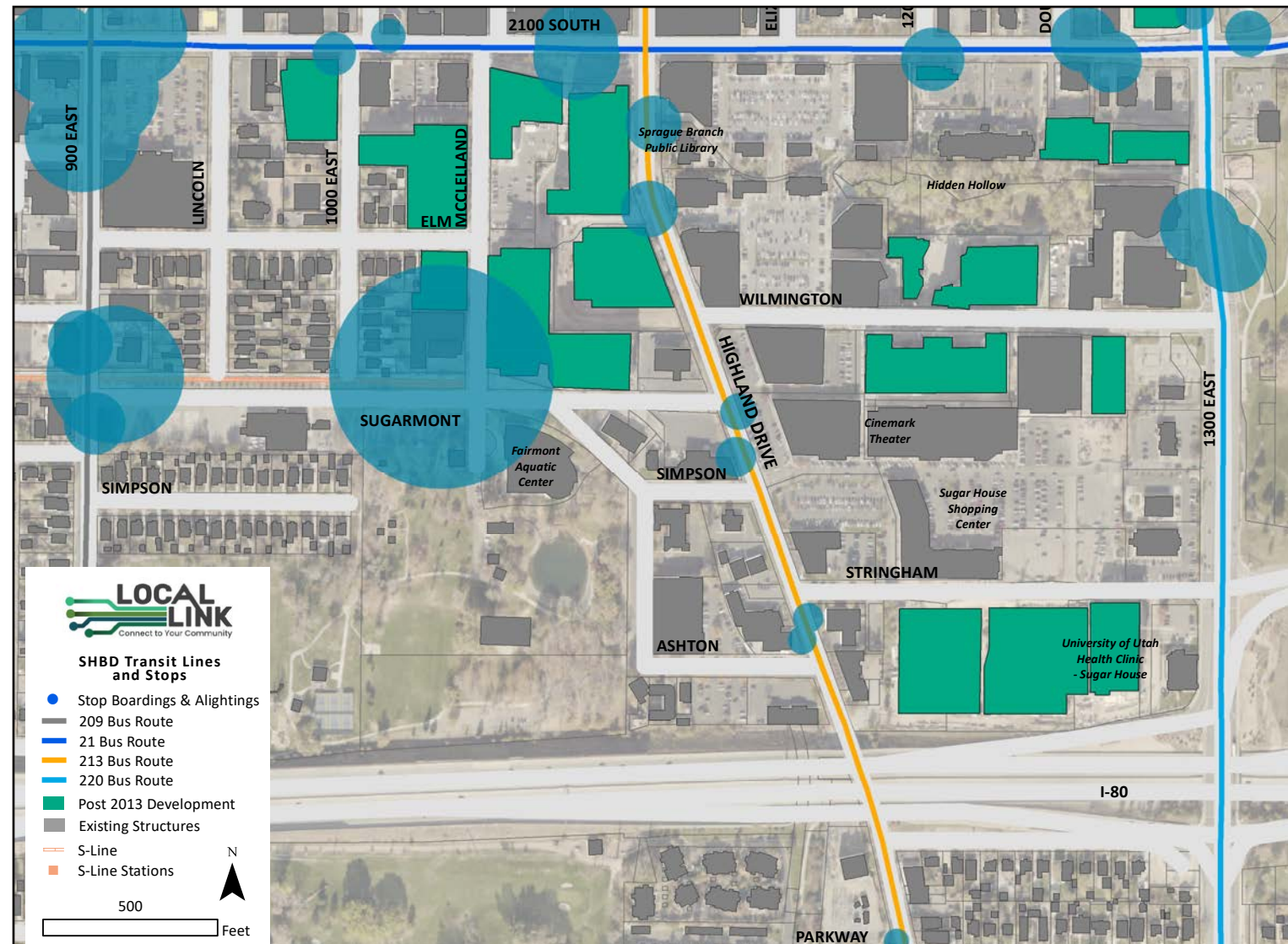
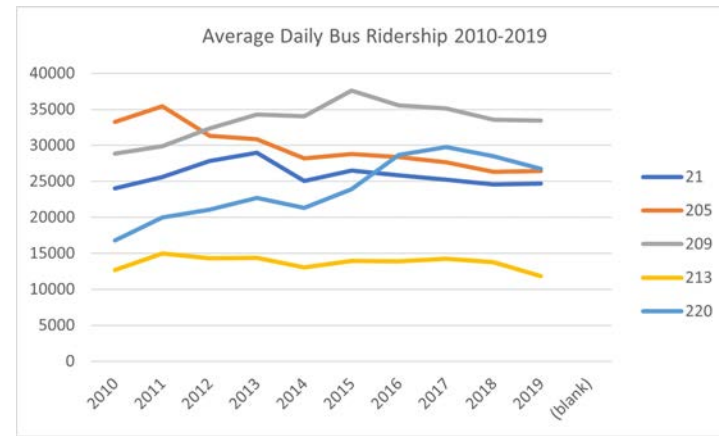
Bus Stop Alightings

BACKGROUND DATA (cont.)

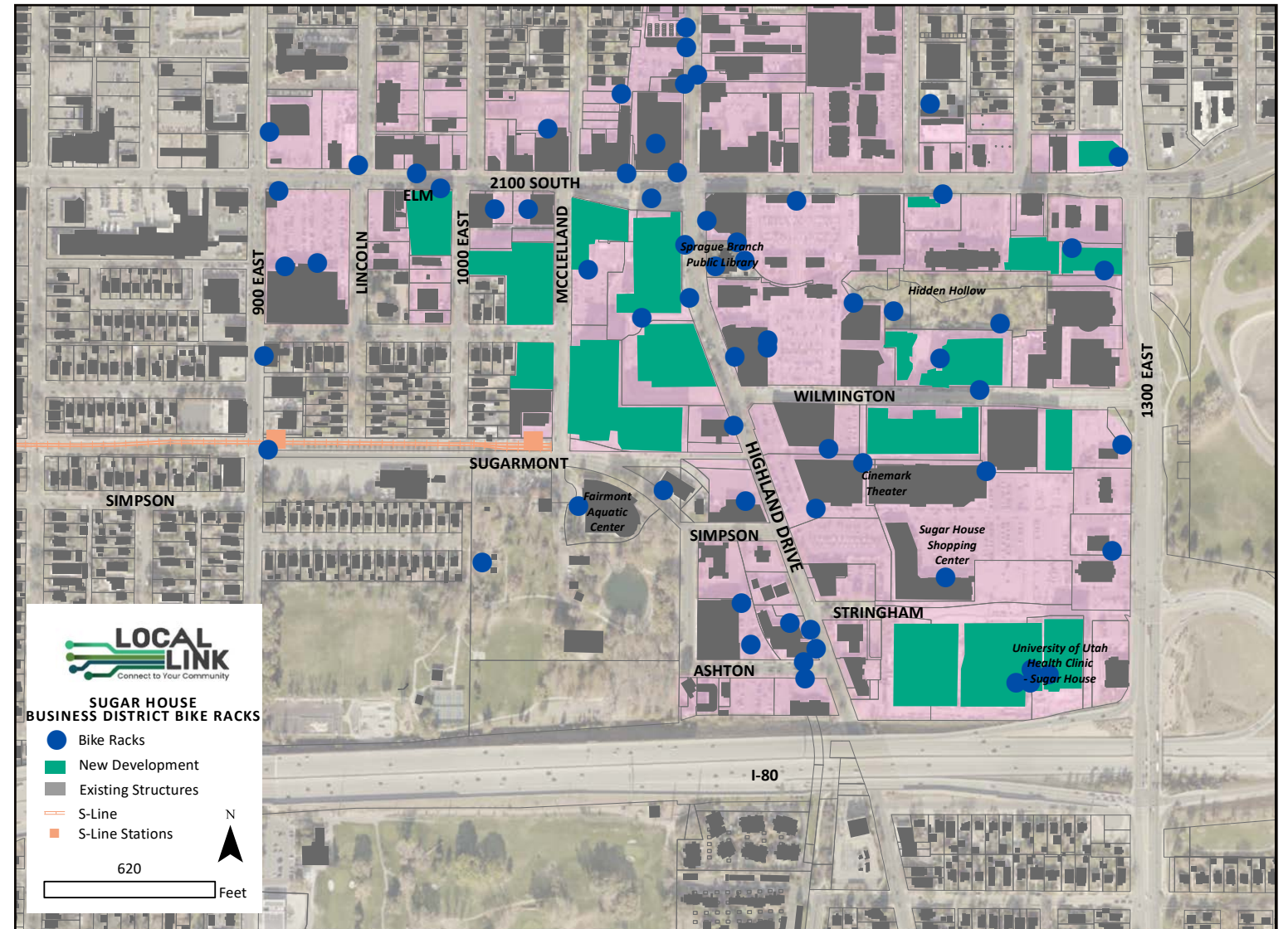
SUGAR HOUSE TRANSIT SERVICE

The Sugar House Transit Service map shows four bus lines (209, 21, 213, 220) and the S-Line streetcar route as well as 2019 total average daily boardings and alightings for stops in the study area. The map illustrates a concentration of activity at the Fairmont Station (corner of McClelland and Sugarmont), and at 900 East and 2100 South. Some of the new office development in Sugar House such as the University of Utah Health Clinic likely has not been around long enough to impact bus stop use on Highland Drive between Ashton and Stringham, but it is likely that location will begin to see more activity. The line chart below shows average daily ridership on bus lines that run through the Sugar House Business District from 2010 to 2019. Ridership has remained mostly flat or has

risen for most lines except route 205, which has seen a slow decline that has flattened since 2011. All lines saw a small dip in service in 2014, which may be related to the launch of the S-Line.



Transit Stop Boardings and Alightings in Sugar House Business District



Sugar House Business District Bike Rack Locations

SUGAR HOUSE BICYCLE RACKS

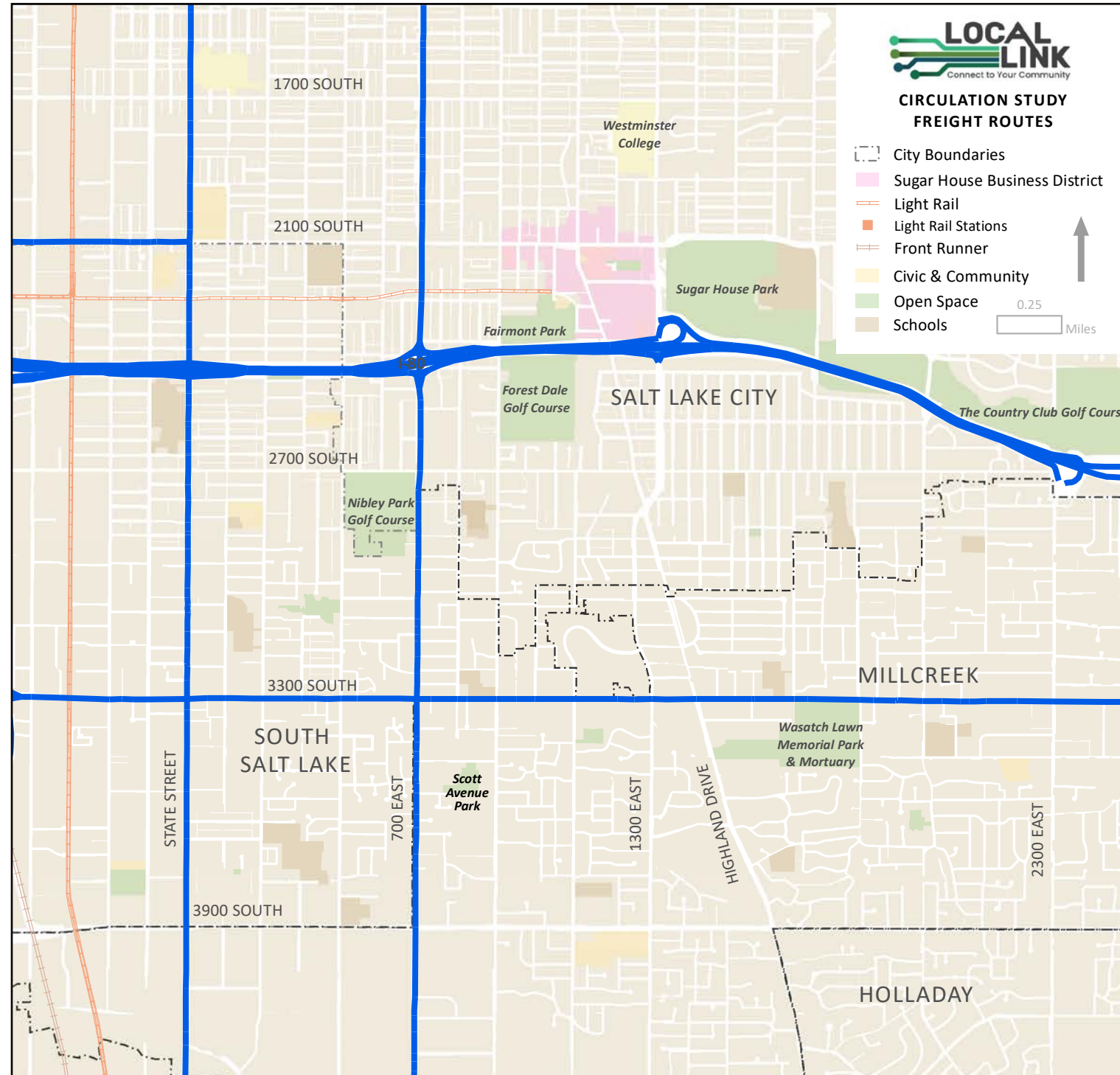
The map above shows the location of bicycle racks throughout the Sugar House Business District. Several of the new building developments that have been completed have nearby racks. There are cluster of racks near the Sprague Library, on the west side of Highland Drive and within the shopping center north of Ashton. The main gaps in bicycle racks appear to be where newer construction has not been completed, such as near the Sugarmont Apartments. Other gaps appear to be north of 2100 South between 1100 East and 1300 East, and east of Highland Drive around Stringham.

BACKGROUND DATA (cont.)

FREIGHT NETWORK

The freight network through the study area consists of freeways, arterials, and major collectors. These routes include I-80, I-15, State Street, 700 East, 3300 South, and 2100 South west of State Street. These roads tend to be auto-priority and should likely be avoided as routes for active transportation. If active transportation

facilities are to be added to these corridors, they should include high comfort facilities so they are safe for pedestrians and cyclists.

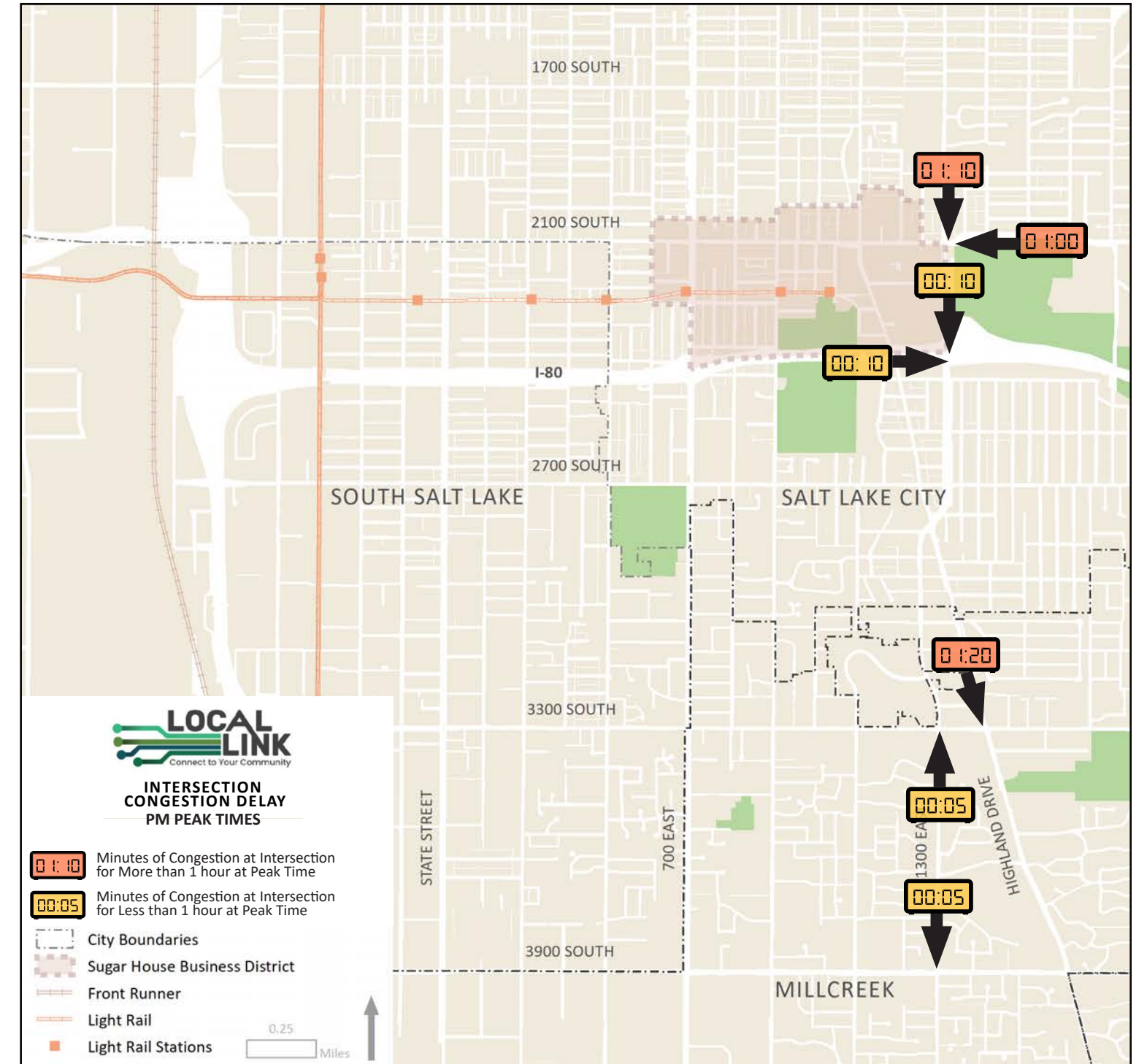


Freight Network

INTERSECTION AUTOMOBILE CONGESTION - PM

An analysis of automobile wait times at intersections in the study area during peak evening hours indicate that there are only a few main problem areas. In the Sugar House area, the intersection of 1300 East and 2100 South has significant delays for vehicles traveling south on 1300 East and west on 2100 South. That delay and

congestion can last for over an hour of time. Another intersection that sees delays for a prolonged period of time, approximately one hour and twenty minutes during rush hour, is the southbound traffic on Highland Drive at the intersection of 3300 South. A few other congestion areas are indicated, but that congestion doesn't last more than 5-10 minutes during peak time.



Intersection Congestion Delays - AM Peak Times

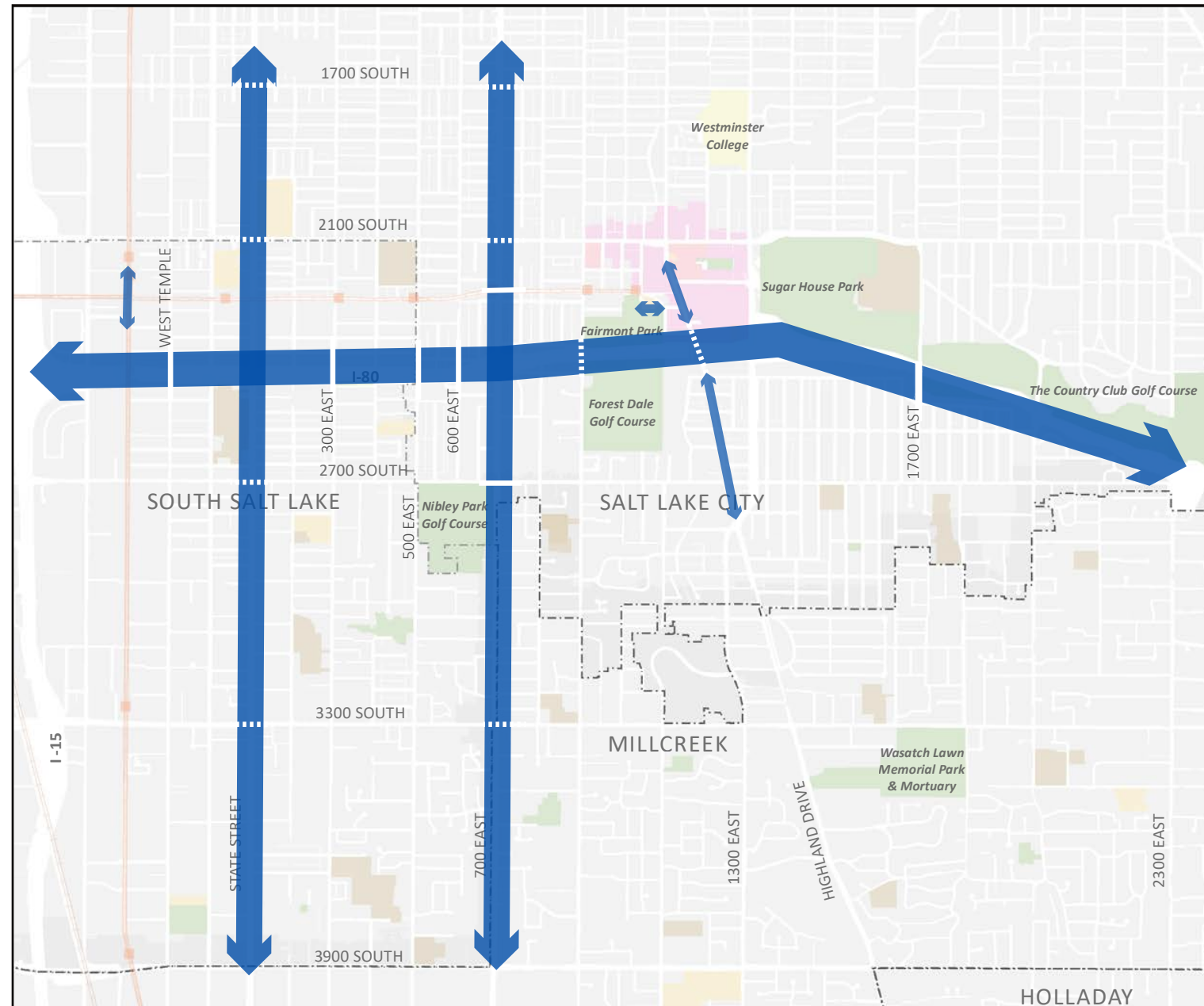
GAPS AND BARRIERS ANALYSIS

BARRIERS

The study area is dissected by three large linear barriers: I-80 dividing areas north and south, and State Street and 700 East dividing areas east and west. These auto-priority thoroughfares can be challenging and create undesirable conditions for traveling for cyclists and pedestrians. The thick blue lines on the map indicate these barriers' locations. White lines across them indicate safer or more welcoming crossing conditions. Dashed white lines indicate locations where it is physically possible to cross, but the environment

may not be ideal and will likely deter all but the most determined of people.

Smaller barriers are also indicated to show smaller corridors that are difficult to cross. They are at the intersection of the S-Line and TRAX lines near Central Pointe Station, between the Sugar House Business District and Millcreek City Center along Highland Drive, and a small point along Sugarmont Drive between McClelland Street and Highland Drive.



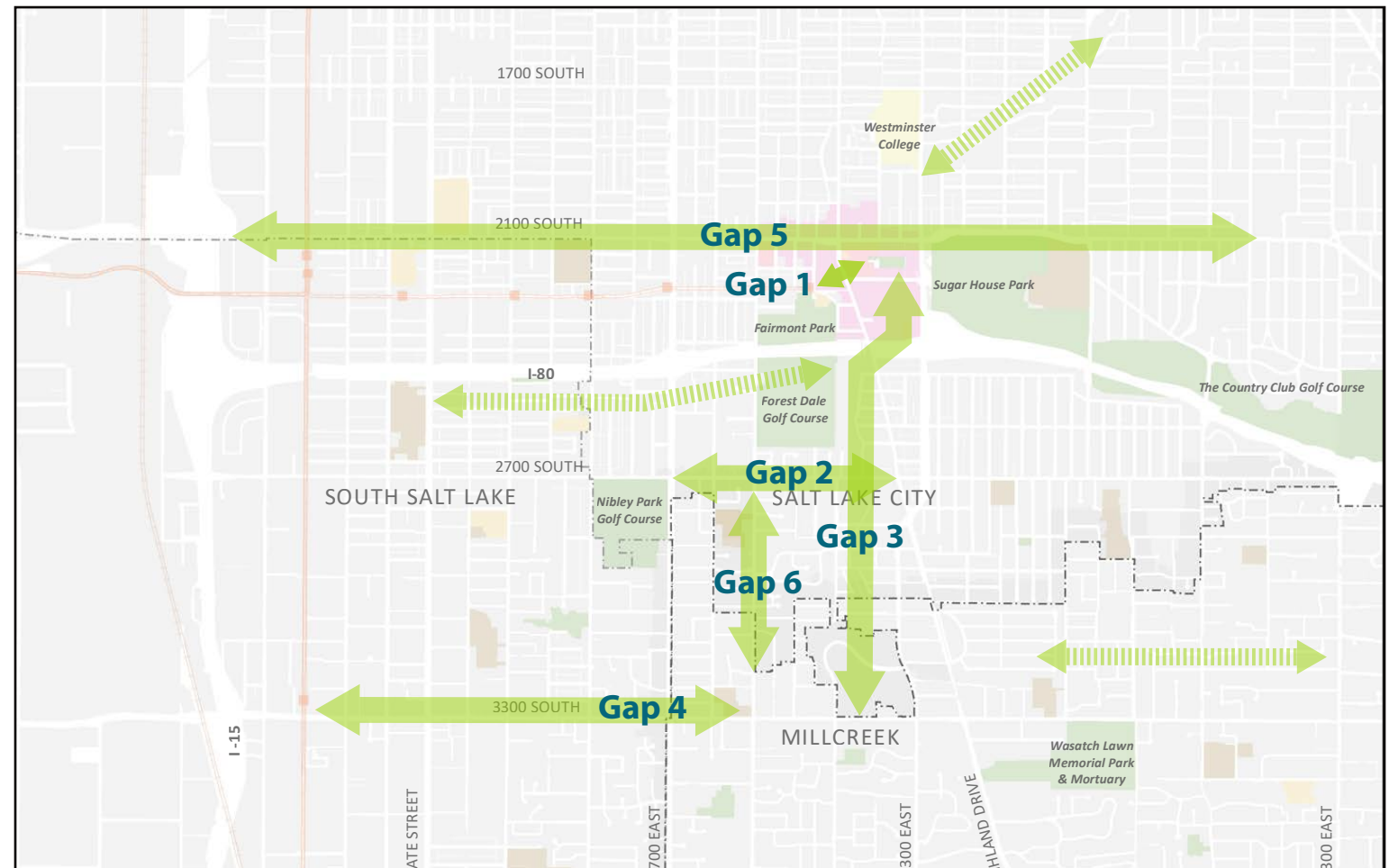
Identified Barriers in Study Area

GAPS

The gaps on the map depict areas and corridors of missing connections or infrastructure for active transportation in the study area. There are six primary gaps listed below. Additional gaps in connectivity are illustrated with dashed lines. Those include connections from the northeast neighborhoods into the Sugar House Business District, connections east-west through the City of Millcreek, and a possible connection south of I-80 that could function as an alternate route to cycling infrastructure that exists on 2700 South and Parley's Trail.

- Gap 4: 3300 South: Gaps in bikeway and pedestrian infrastructure; future study planned
- Gap 5: 2100 South: lacking bikeways, inconsistent pedestrian facilities outside of Sugar House Business District
- Gap 6: 900 East - 2700 South to 3300 South- Gap in regional bikeway network; connects to Millcreek City and planned Salt Lake City bikeway

- Gap 1: Parley's Trail through Sugar House Business District
- Gap 2: 2700 South - 700 East to 1300 East- gap in bikeway infrastructure
- Gap 3: Sugar House Business District to Millcreek City Center/ Brickyard; gaps in bikeway and pedestrian infrastructure



Identified Gaps in Study Area

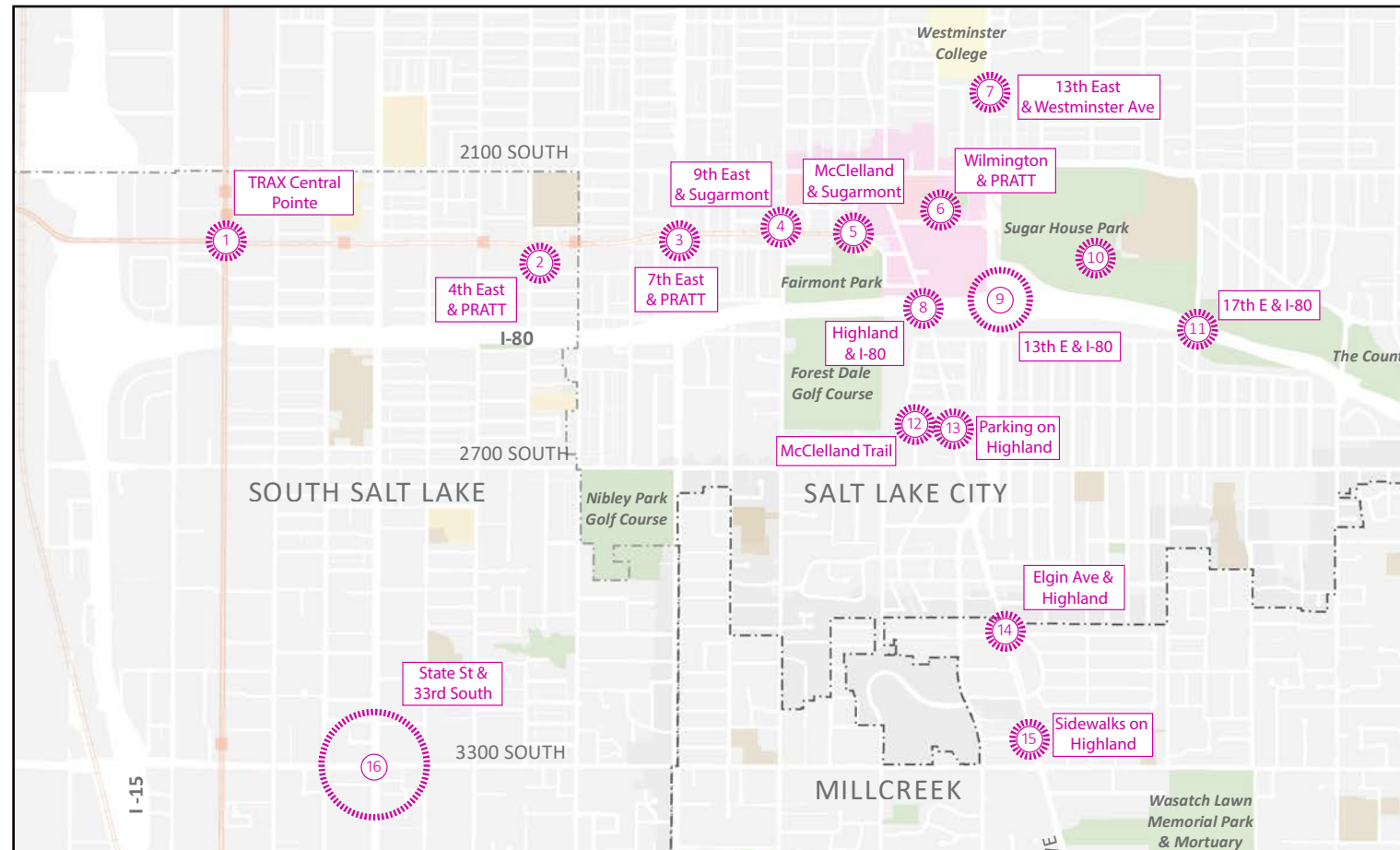
GAPS AND BARRIERS ANALYSIS (cont.)

PAIN POINTS

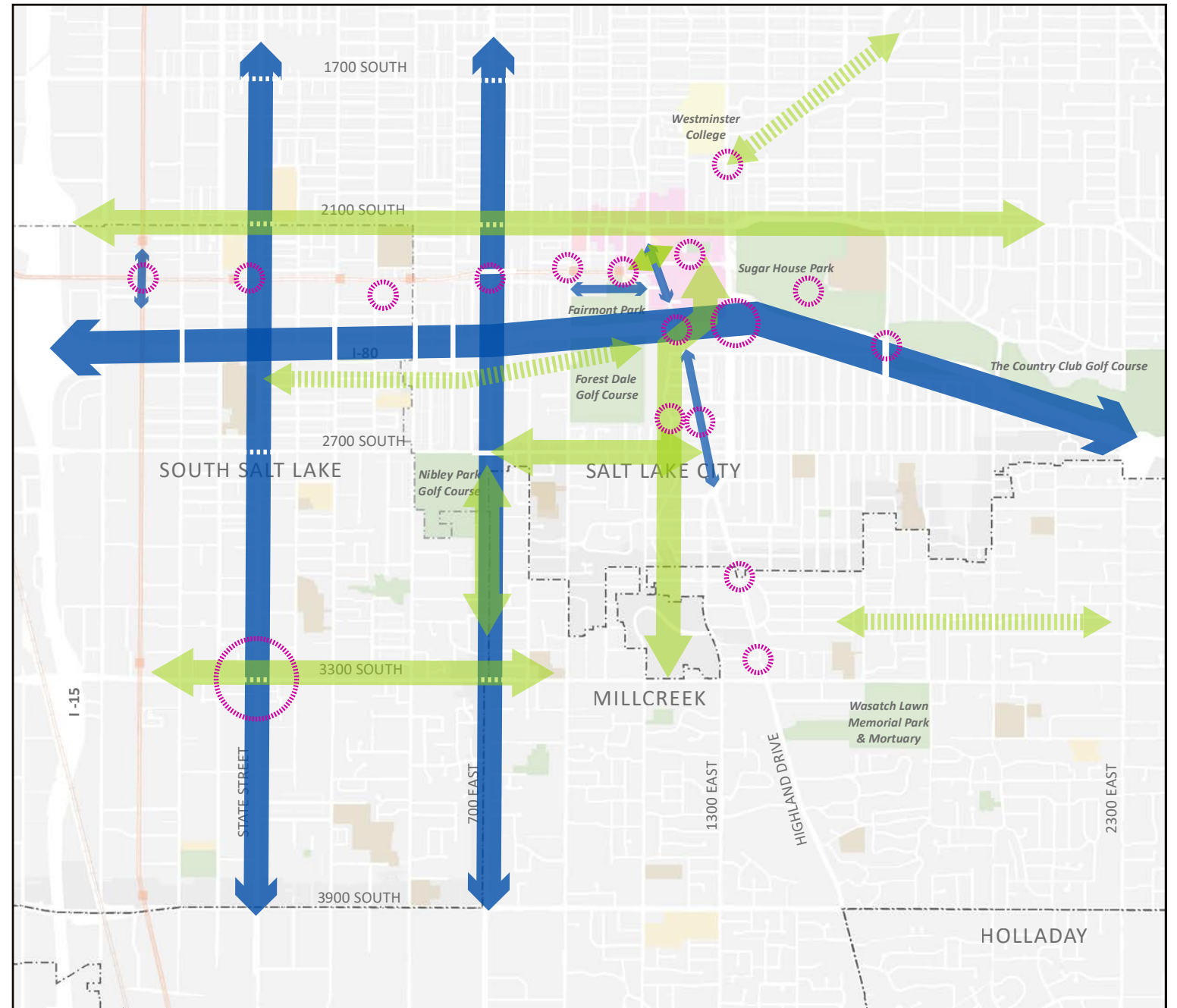
The third map in this series illustrates specific pain points across the study area. These are comprised of trail areas that are confusing, dangerous or difficult intersections to cross, missing active transportation infrastructure such as sidewalk, and other similar issues that make connectivity in the area challenging.

1. Parley's Trail route confusing
2. Lack of sidewalk on 400 East creates difficulty accessing the S-Line
3. Signal to cross is slow and de-incentivizes biking
4. Dangerous crossing conditions for pedestrians/ cyclists via multi-use path
5. Confusing and dangerous intersection
6. Parley's Trail signage and location confusing - often blocked by vehicles
7. Difficulty crossing 1300 East via Westminster Ave even though it is a common route to SHBD from northeast

8. Tunnel not inviting to AT, but wide enough for additional facilities
9. This intersection is extremely difficult/ unfriendly to cyclists/ pedestrians
10. Difficulty crossing 2100 South into park, signs about directionality not clear, lack of bike racks
11. Difficult crossing at 1700 East - debris and snow accumulate in protected northbound bike lane
12. McClelland Trail not clear
13. Parking on Highland Drive not used - bike lane opportunity?
14. Difficult intersection to cross
15. Sidewalks in poor condition - but wide enough to install shared use path
16. Dangerous crossing conditions



Identified Pain Points in Study Area



Compilation of Barriers, Gaps, and Pain Points