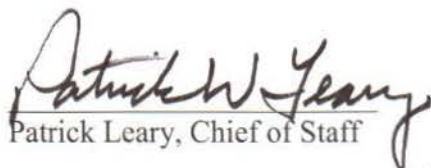





CITY COUNCIL TRANSMITTAL

  
Patrick Leary, Chief of Staff

Date Received: February 9, 2018  
Date sent to Council: February 12, 2018

TO: Salt Lake City Council  
Erin Mendenhall, Chair

DATE: January 25, 2018

FROM: Mike Reberg, Community & Neighborhoods Director 

SUBJECT: Redwood Road Corridor Study Update

STAFF CONTACT: Jonathan Larsen, Transportation Director, 801-535-6630

DOCUMENT TYPE: Information Only

RECOMMENDATION: N/A

BUDGET IMPACT: No budget impact

**BACKGROUND/DISCUSSION:** The Redwood Road Multimodal Transportation Study is a 9 month study evaluating land use and multimodal transportation options along Redwood Road from the northern Salt Lake City boundary to approximately 114000 South in South Jordan City. The financial partners and steering committee members include representatives from Utah Department of Transportation (UDOT), the Utah Transit Authority (UTA), Wasatch Front Regional Council (WFRC), Salt Lake County, West Valley City, Taylorsville City, West Jordan City, South Jordan City, and Sandy City. UTA is the primary project manager on this effort.

Jacobs, the lead consultant for the corridor planning effort, is performing the technical evaluation which includes traffic volume collection and analysis, existing conditions analysis, and ideas about future multi-modal considerations. Since transportation improvements serve as a catalyst for land use changes, Leland Consulting Group is also providing a land-use feasibility analysis to serve as a baseline for a future land use implementation plan along the Redwood corridor.

As a partner at the table, Salt Lake City has been working with the consultants, UTA and others, to see that our adopted Westside Master Plan land-use recommendations are incorporated into the study. We are also working with Jacobs and Leland Consulting to ensure our constituent needs, which differ from much of the rest of the corridor, are represented in design considerations.

At this time, Jacobs and Leland Consulting have provided their Existing Conditions Report (Attachment A), draft Preferred Alternative (Attachment B) and Land Use Analysis memo (Attachment C) to the steering committee for circulation.

### **STUDY DELIVERABLES:**

The Study will provide two deliverables for the participating entities:

1. A regional vision for Redwood Road that includes a Preferred Alternative
2. An implementation plan for the overall corridor tailored to each specific city that included phasing.

### **PREFERRED ALTERNATIVE RECOMMENDATIONS:**

The recommendations for the Salt Lake City section of Redwood Road are consistent with the recommendations made in the City's adopted Westside Master Plan. The importance of keeping and enhancing bike lanes, repairing and widening sidewalks, improving transit stops and connections, and providing safe pedestrian crossings is captured in the Preferred Alternative.

The Land Use Analysis explains how the catalytic nature of transportation improvements spur land use development and redevelopment. The neighborhood and regional nodes identified in the Westside Master Plan are highlighted in this Analysis. Some of these nodes include Redwood Road at North Temple and the 9-Line urban trail crossing near 900 South.

The final implementation plan – a document still being drafted by the consultants – will provide phasing options for implementing changes ranging from near term (0-5 years) to long term (15+ years).

### **NEXT STEPS:**

Once the final implementation plan for the Redwood Road Multimodal Study is completed, the findings will be released to the public with detailed information on the process. The project website ([www.redwoodroadstudy.com](http://www.redwoodroadstudy.com)) will include a story map that shows the corridor conditions today, and the plans for the future. Once this implementation plan is finalized, cities will have a guide for seeking funding to pursue capital investments on Redwood Road. We also suggest informing Council Members representing Districts 1 and 2, in order to brief them on this work.

**PUBLIC PROCESS:** An initial public survey was conducted in April 2017 at the start of the study. This survey was available online as well as in person at various nodes along Redwood Road, and was provided in both English and Spanish. 506 people took the survey and of those, 166 respondents indicated they were from or interested in the Salt Lake section and a summary of their survey results has been developed (Attachment D).

A Redwood Road charrette was held in October 2017 with various stakeholders from the steering committee to look at several design alternatives for the corridor. The suggestions and recommendations that came out of the charrette, and other detailed reviews shaped the draft Preferred Alternative Scenario (Attachment B).

Once the Preferred Alternative has been provided to Mayors and City Councils along the corridor, the design will be taken to the public again along with information illustrating how this design was formed.

**EXHIBITS:**

- Attachment A - Existing Conditions Report
- Attachment B - Draft Preferred Alternative
- Attachment C - Land Use Analysis Memo
- Attachment D - Public Survey Summary, SLC Results

# Attachment A

Redwood Road Existing Conditions Report



TRANSIT



ROADWAY



BICYCLES



PEDESTRIANS



LAND USE

## SECTION 1

# Existing Conditions

### INTRODUCTION

The Redwood Road Multimodal Transportation Study is identifying and analyzing options for transportation along Redwood Road, from Salt Lake City to South Jordan. The vision of the study is an open, inclusive collaboration that will:

- Identify a unified vision that preserves and enhances Redwood Road.
- Create a preferred multimodal solution that addresses transit, roadway, bicycles, pedestrians and land use.
- Lay a framework for implementation.

The outcome of the study will be a final implementation plan—a road map that outlines the next steps for the project partners to take in implementing the short-, medium- and long-term aspects of the Preferred Solution. The implementation plan will identify timing and potential funding of separate portions of the Preferred Solution. Although the Preferred Solution will be identified for the full corridor, it will not be a one-size-fits-all solution. Portions will be tailored to the context, needs and future plans of each municipality and particular segment of the corridor.

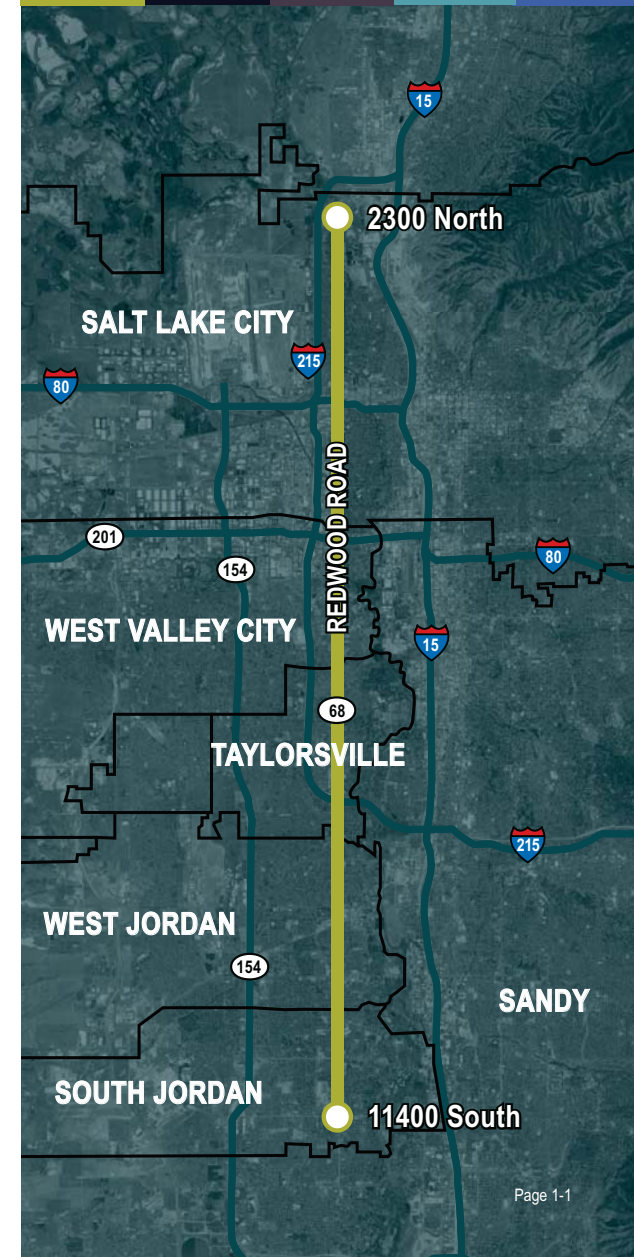
Efforts have been undertaken to determine the existing conditions of the corridor in terms of transit, roadway, bicycles, pedestrians and land use. Data collection efforts have included coordination with project partners, review of completed and concurrent studies, site tours, a land use market analysis and interviews, and a public survey.

Representatives from the following project partners make up the decision-making body of the study:

- Wasatch Front Regional Council (WFRC)
- Utah Transit Authority (UTA)
- Utah Department of Transportation (UDOT)
- Salt Lake County
- Salt Lake City
- West Valley City
- Taylorsville City
- West Jordan City
- South Jordan City
- Sandy City

Each project partner is at varying stages of planning efforts. The intent of the study is not to duplicate existing data or recommendations, but rather to build upon such efforts to identify comprehensive transportation recommendations from a perspective that would benefit the entire Redwood Road corridor.

The following sections summarize the key existing conditions and takeaways for each of these categories. This data establishes the foundation from which the study team and project partners will identify needs along the corridor, as well as potential solutions and opportunities to address these needs.







# TRANSIT

## TRANSIT SERVICE ON REDWOOD ROAD

Transit service on Redwood Road is currently provided by bus route 217 (15-minute headways) and bus route 218 (30-minute headways). Transit service either nearby or intersecting Redwood Road includes FrontRunner commuter rail, TRAX light rail, and various bus routes (including local service, Express, FLEX, and bus rapid transit (BRT)). See Figure 1.

## RIDERSHIP

Weekday ridership for route 217 is 1,910 northbound and 1,890 southbound; while ridership for route 218 is 290 northbound and 330 southbound.<sup>1</sup> **Ridership is highest at stops with connections to other transit lines** (Table 1), with 345 bus stops on or near Redwood Road, 10 TRAX stations within 1 mile of Redwood Road, and three FrontRunner stations within 1 mile of Redwood Road.

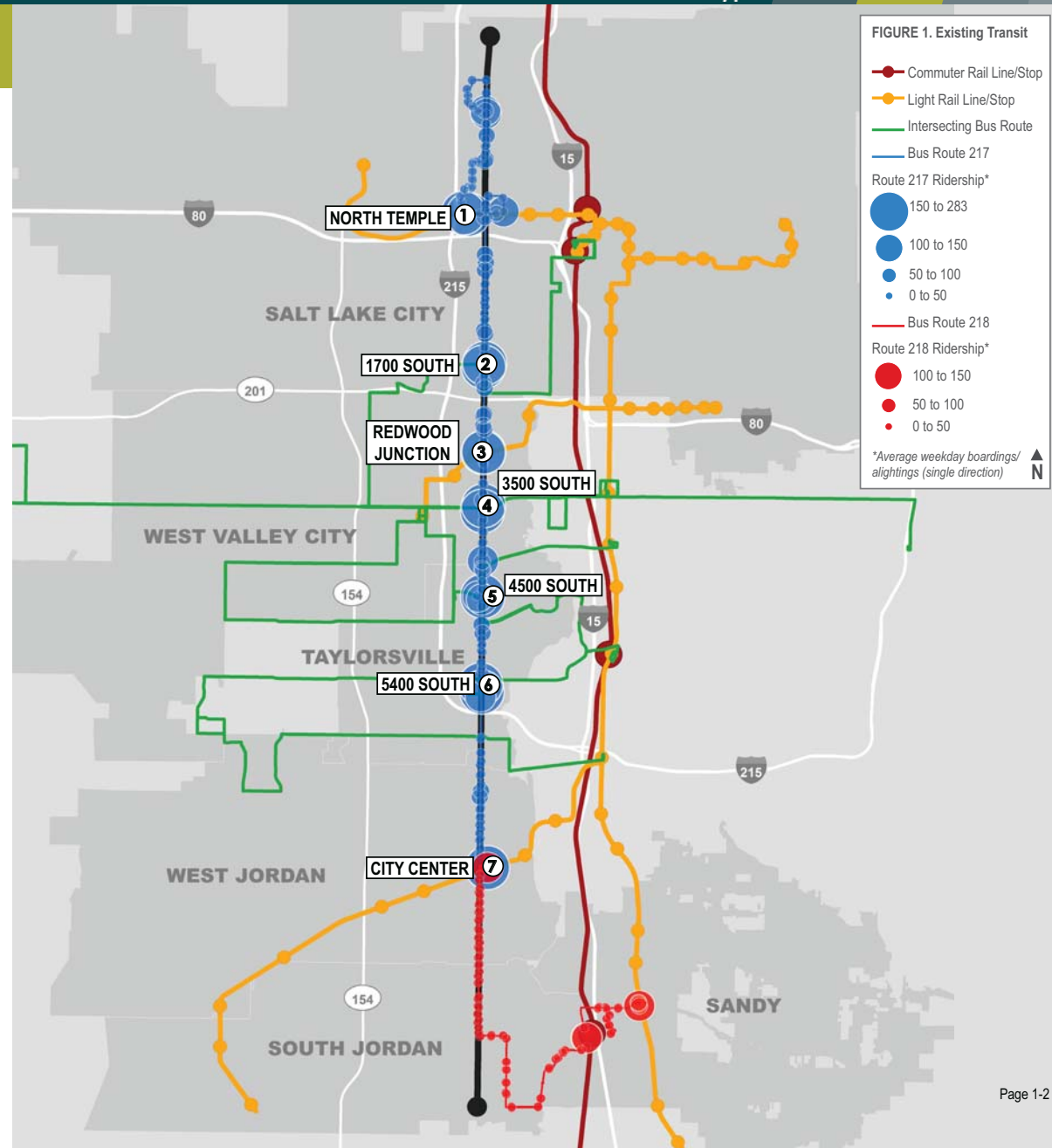
TABLE 1. Top 10 Highest Ridership Stations

STOP	CONNECTIONS
① North Temple	Airport Line, TRAX to Downtown
② 1700 South	900 West Shuttle (30 min.)
③ Redwood Junction	West Valley Line
④ 3500 South	MAX BRT (15 min.)
⑤ 4500 South	4700 South (30 min.)
⑥ 5400 South	5400 South (15 min.)
⑦ City Center	West Jordan Line

## TRANSIT SERVICE GAP

**There is no transit service on Redwood Road south of 10400 South.** Bus route 218 diverts from Redwood Road at 10400 South, leaving no transit service along the corridor south of that point. Similarly, there is low ridership, and few transit options south of the West Jordan Line / City Center connection.

<sup>1</sup> Avenue Consultants. 2017. Redwood Road Multimodal Transportation Study Traffic Data.





# ROADWAY

## ROADWAY CHARACTERISTICS

Redwood Road is a major arterial that supports north-south travel west of I-15. Redwood Road from approximately 1700 South in Salt Lake City to South Jordan is a seven-lane roadway, with a five-lane section north of 1700 South. The current posted speed on Redwood Road is 45 miles per hour.

## ROADWAY OPERATIONS

Level of service (LOS) is a qualitative measure describing the operating conditions as perceived by motorists. LOS A–F is used as the scale describing operational conditions of a roadway or intersection, with LOS A representing free-flow conditions and LOS F representing gridlock and severe congestion. LOS D or better is considered an acceptable LOS for the Redwood Road corridor.

**Currently, nine of the 42 major intersections along Redwood Road are operating at a failing LOS.** By the year 2040, 27 of the 42 major intersections along Redwood Road will be operating at a failing LOS.<sup>1</sup>

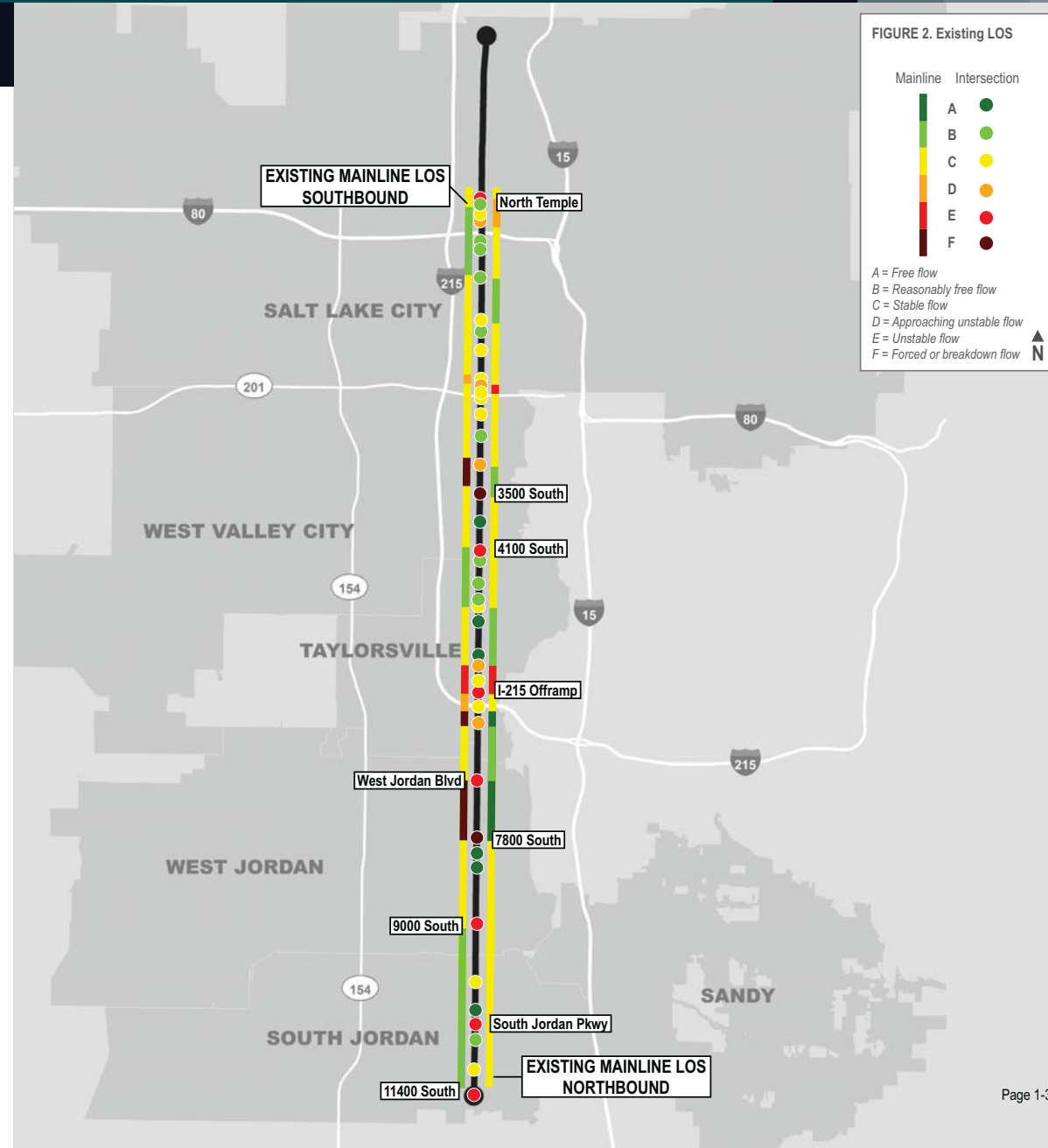
**There are 2 miles of southbound mainline operating at a failing LOS.** By the year 2040, approximately 4.5 miles of northbound mainline Redwood Road and 7 miles of southbound mainline will be operationally failing and severely congested (see Figures 2 and 6).

## SAFETY

The Safety Index for Redwood Road has been reported based on a statewide safety comparison of other comparable roadways, taking into account the different traffic patterns and volumes. The Safety Index is a combination of four equally weighted safety analysis sub-scores: Crash Rate Score, Severe Crash Rate Score, Crashes per Mile Score, Severe Crashes per Mile Score (years 2013–2015). The Safety Index for Redwood Road is reported with a rating of good to moderate to poor conditions. **Redwood Road has poor safety conditions from 9800 South in South Jordan to 700 North in Salt Lake City.**<sup>2</sup>

<sup>1</sup> Avenue Consultants. 2017. Redwood Road Multimodal Transportation Study Traffic Data.

<sup>2</sup> UDOT. 2017. Safety Index Data 2013–2015.



# BICYCLES

## BICYCLE FACILITIES ON REDWOOD ROAD

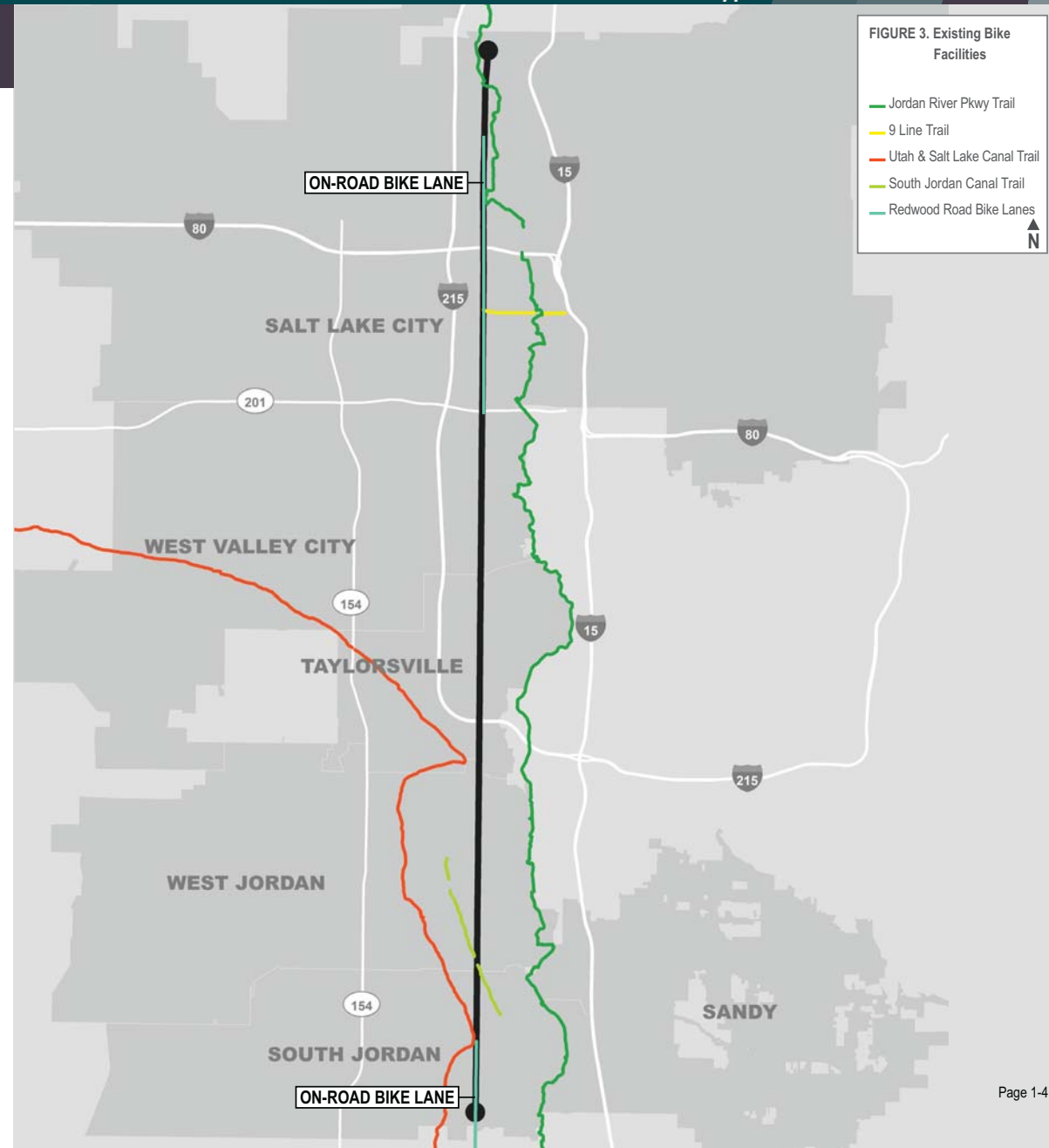
There are two segments of designated bike lanes along Redwood Road—from approximately 1100 North to 2100 South in Salt Lake City and 1.25 miles in South Jordan, ending at 10400 South. See Figure 3.

## REGIONAL & LOCAL TRAIL CONNECTIONS

Various regional and local trails either intersect Redwood Road or connect nearby. Regional trails include the Jordan River Parkway and Utah and Salt Lake Canal Trail; local trails include the 9 Line and South Jordan Canal trails. Along the 19-mile corridor, there are only 10 connections to the Jordan River Parkway with Redwood Road on designated bike facilities, nine of which are in Salt Lake City.

## REGIONAL NORTH-SOUTH BIKE ACCESS

UDOT, in coordination with WFRC and UTA, is concurrently undertaking the Salt Lake County Westside Bicycle Connectivity Study to identify an appropriate, beneficial, and feasible north-south bikeway(s) for the purpose of regional connectivity through Salt Lake County between 1300 West/Jordan River Trail and 2700 West. The resulting alignment and bikeway recommendations will be incorporated into this study as well as future capital improvement plans by local jurisdictions, UDOT, UTA, and WFRC. Ultimately, the Salt Lake County Westside Bicycle Connectivity Study will seek to identify a regional bikeway alignment that responds to user needs while integrating with other modes and land uses throughout the corridor.







# WALKABILITY

## PEDESTRIAN FACILITIES

Sidewalks exist along both sides of Redwood Road for the majority of the corridor. An approximately 1.25-mile segment in Salt Lake City is missing sidewalk, from 1100 North to the Jordan River Parkway Trail. The corridor includes three pedestrian bridges at approximately 2600 South (across from Rosewood Elementary School), 4400 South (across from Eisenhower Junior High School), and approximately 7525 South.

## INTERSECTION WIDTH

This 19-mile stretch of Redwood Road has 42 signalized intersections, including various intersections with free-right turn movements for automobiles—which can create a challenging pedestrian crossing environment. Fourteen intersections are 130' or wider; these wide intersections increase the exposure time experienced by a pedestrian in the intersection, and can add to pedestrians feeling exposed or unsafe while crossing. The widest intersections along the corridor include the following:

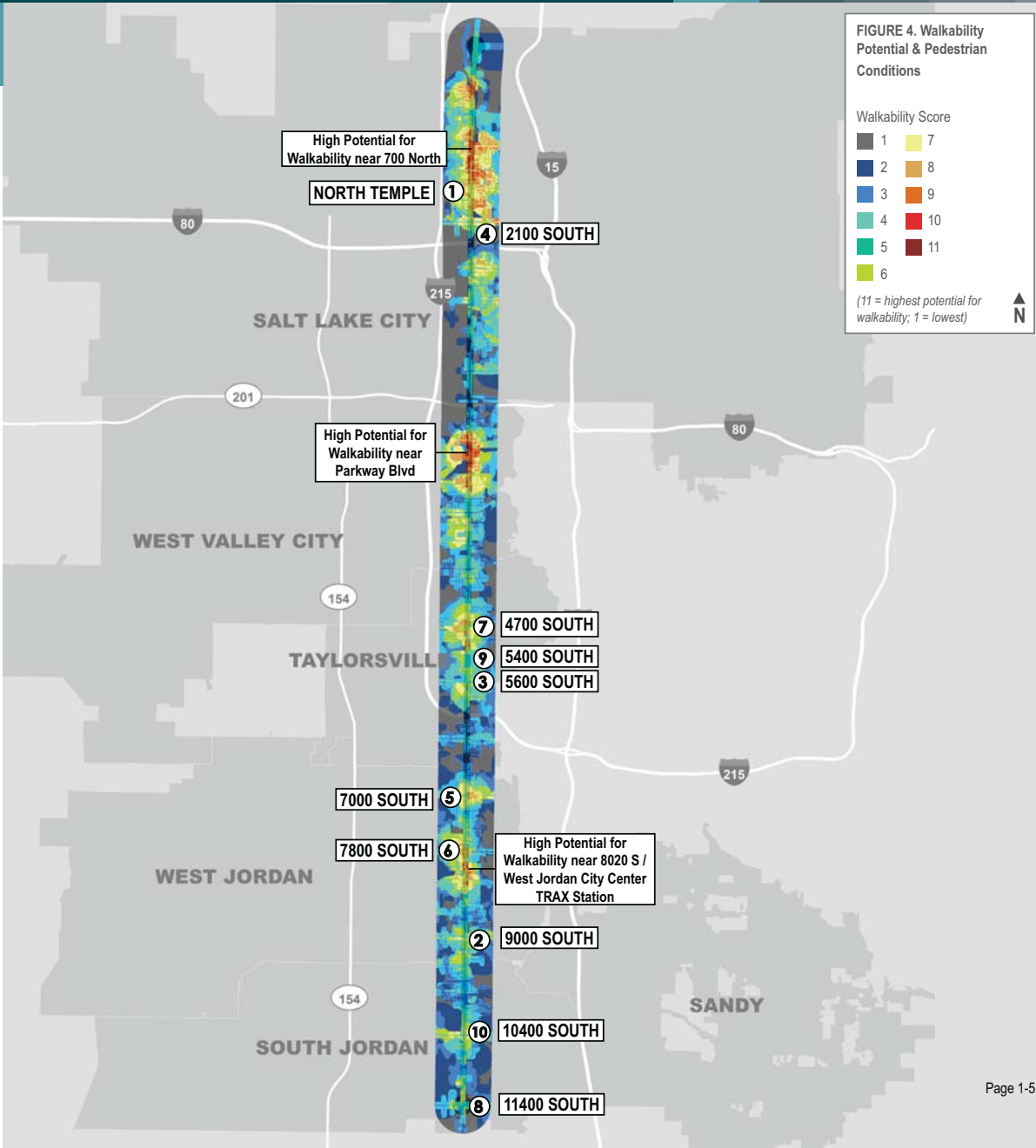
TABLE 2. Top 10 Widest Intersections

INTERSECTION	CITY	WIDTH	INTERSECTION	CITY	WIDTH
① North Temple	Salt Lake	148'	⑥ 7800 South	West Jordan	138'
② 9000 South	South Jordan	148'	⑦ 4700 South	Taylorsville	138'
③ 5600 South	Taylorsville	143'	⑧ 11400 South	South Jordan	135'
④ 2100 South	Salt Lake	140'	⑨ 5400 South	Taylorsville	134'
⑤ 7000 South	West Jordan	138'	⑩ 10400 S - South Jordan Pkwy	South Jordan	134'

## WALKABILITY

Redwood Road was analyzed for its walkability potential based on proximity to light rail stations, parks, schools, shared-use paths, and significant intersections (Figure 4). Based on this analysis, the cities ranked accordingly in terms of potential for walkability:

- 1<sup>st</sup> Salt Lake City
- 2<sup>nd</sup> West Valley
- 3<sup>rd</sup> West Jordan
- 4<sup>th</sup> Taylorsville
- 5<sup>th</sup> South Jordan



# LAND USE

## REDEVELOPMENT AREAS

Each city along the corridor has some type of redevelopment area that covers a portion of the study area. Of the 19 RDAs on the corridor, most are focused on commercial development. Exceptions include the 9-Line RDA, which is touted to encourage connectivity and employment, and Merit Medical RDA and Decker Lake EDA, which are solely focused on employment. Most areas are targeting a mixed-use component, which may or may not include residential uses.

## JOB & HOUSEHOLD DENSITY

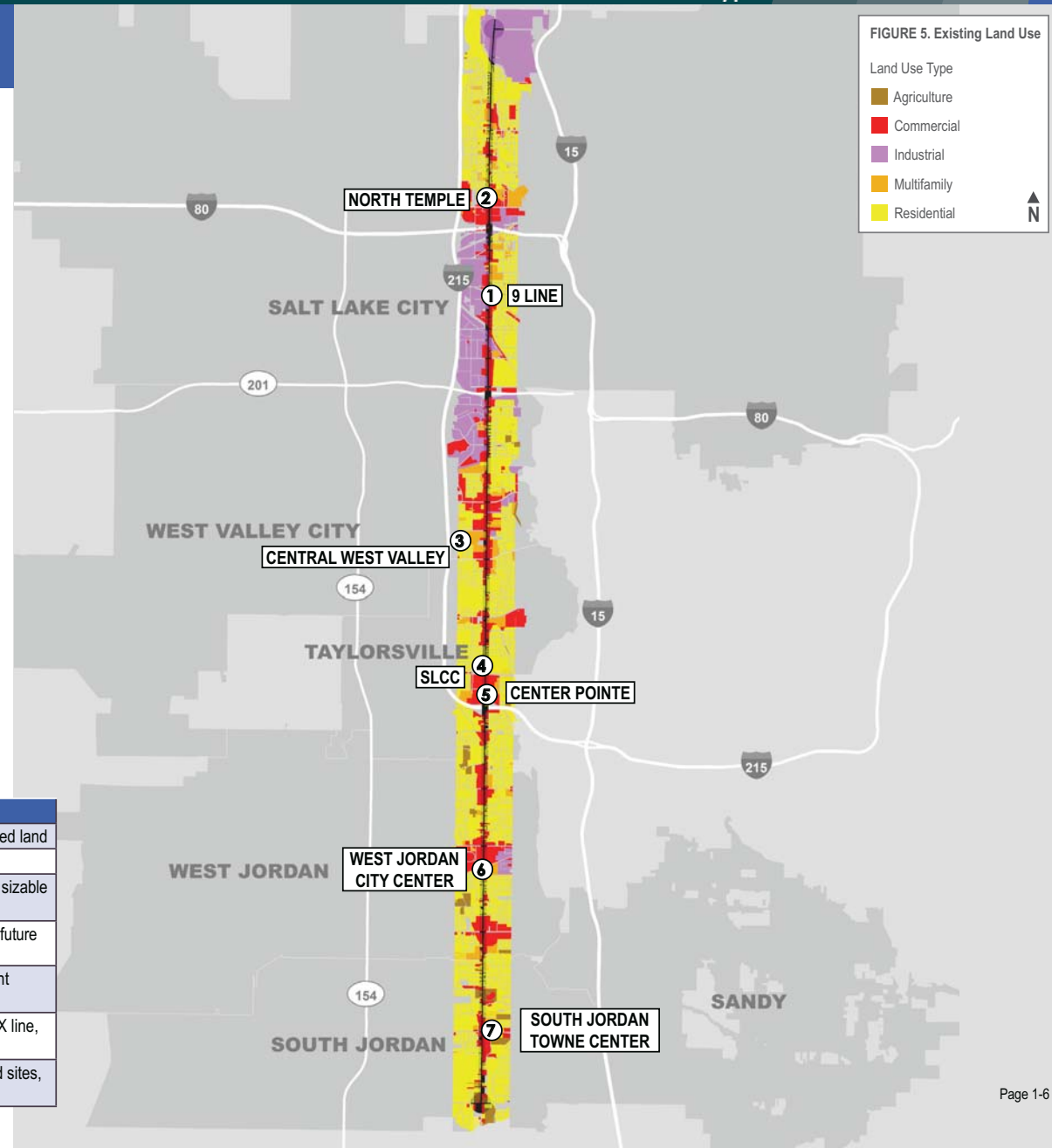
The highest employment densities along Redwood Road are adjacent to freeways and interstates, including Redwood and I-80, I-215, and SR-201 with one exception (West Jordan City Center). Along Redwood, employment is highest in Salt Lake City, West Valley and Taylorsville. High-density residential areas along Redwood Road are sporadic, with smaller clustering of residential areas adjacent to more urban commercial areas along all of Redwood Road (where transit-oriented development (TOD) and mixed-use projects may be more prevalent). South Jordan and West Jordan have the lowest population densities along the corridor, reflective of their status as largely suburban bedroom communities with a high proportion of single-family homes.

## KEY NODES

The following key nodes have the highest potential for TOD with multimodal transportation investment.

TABLE 3. Key Nodes with Highest Potential for TOD

NODE	RATIONALE
① 9 Line	Recreation access, redevelopment area with public, private interest, underutilized land
② North Temple	Transit hub, higher density population and employment, redevelopment potential
③ Central West Valley	Strong commercial, redevelopment areas in place, higher population densities, sizable vacant land, WFRC Urban Center/Station Community (transit-based)
④ SLCC	Major activity center and employer, nearby amenities can be leveraged, potential future redevelopment and programming opportunities
⑤ Center Pointe	Commercial center, significant employment, existing redevelopment area; recent redevelopment activity, designated WFRC Town Center
⑥ West Jordan City Center	Commercial center, multiple redevelopment area incentives, near existing TRAX line, recent development activity, nearby amenities to be leveraged
⑦ South Jordan Towne Center	Recent development activity, multiple redevelopment areas, major underutilized sites, WFRC Center, major employment (Merit Medical)





TRANSIT



ROADWAY



BICYCLES



PEDESTRIANS



LAND USE

## SECTION 2

# Purpose and Need

### PURPOSE & NEED STATEMENT

#### Need

- By 2040, the population along Redwood Road will increase by 24%.
- By 2040, the majority of major intersections along Redwood Road and the southbound mainline of Redwood Road will be operationally failing and severely congested.
- The majority of Redwood Road lacks bicycle facilities; approximately 5 miles of the 19 total miles along Redwood Road include designated bike facilities.
- Walkability potential for pedestrians along Redwood Road is highest near several of the largest intersections along Redwood Road, with crossing distances up to 148 feet and limited pedestrian safety design features.

#### Purpose

Provide improved automobile, transit, bike and pedestrian transportation options to accommodate future population growth, projected roadway congestion and a lack of high-quality transit, bike and pedestrian facilities along the Redwood Road corridor; enhance redevelopment of land uses and transit-oriented development (TOD).

### POPULATION GROWTH

- Population growth by 2040 for the corridor (~1 mile radius) will be 21%, with a 31% increase in households.
- Employment growth by 2040 for the corridor (~1 mile radius) will be 15%.
- 54% of the population growth and 57% of the employment growth will be in the southern portion of the corridor (south of 7000 South).
- Population growth for each of the cities along the Redwood Road corridor will increase as follows:
  - Salt Lake City: 14%
  - West Valley City: 27%
  - Taylorsville: 6%
  - West Jordan: 93%
  - South Jordan: 117%

### TRANSIT

With the population growth and the projected increase to automobile congestion along Redwood Road, there is a need to improve transit service, frequency and reliability to attract riders and increase the person-throughput along the corridor.

Currently, there is no transit service along Redwood Road south of 10400 in South Jordan. Plans for higher density commercial and residential growth near the point of the mountain and the ongoing development of the Sandy City Center will increase the demand for transit service to these areas.

There is a need to enhance the transit connection on Redwood Road to planned routes such as the Sandy circulator, which is located on 9000 South from Redwood Road to Sandy to provide reliable and frequent transit to the Sandy City Center and the Sandy TRAX station.

The transit stops located on Redwood Road with the highest ridership are located at intersections with other major transit routes. Increased ridership is directly related to connections to high-quality, frequent, and reliable transit routes intersecting the corridor. The stops with the highest ridership along Redwood Road are located at light rail stations (two TRAX Green Line stations on North Temple, the TRAX Green Line Redwood Junction station in West Valley City, and the TRAX Red Line West Jordan City Center station) and at intersections with high-quality service bus routes (3500 South MAX BRT and local bus routes on 4100 South, 4700 South, and 5400 South).

- Passengers on bus route 217 travel an average of 3.5 miles on the bus, while passengers on bus route 218 travel an average of 2.5 miles.
- 32% of transit users in the study area travel using the bus systems; 68% of transit users use rail systems for at least one leg of their trip.
- 42% of study area transit users are traveling to and from downtown Salt Lake City, and 18% are traveling to and from the University of Utah campus and medical center.
- Connections to transit for pedestrians can improve the usability of the transit service and increase ridership.

WALKABILITY

Walkability potential for pedestrians along Redwood Road is highest near several of the largest intersections, with crossing distances up to 148 feet and limited pedestrian design features.

Improvements to pedestrian design features at large intersections with high potential of walkability are needed to create safe and comfortable crossings for pedestrians. In addition, continuous sidewalks are an immediate need for the section of Redwood Road in Salt Lake City that lacks sidewalks today.

BIKE

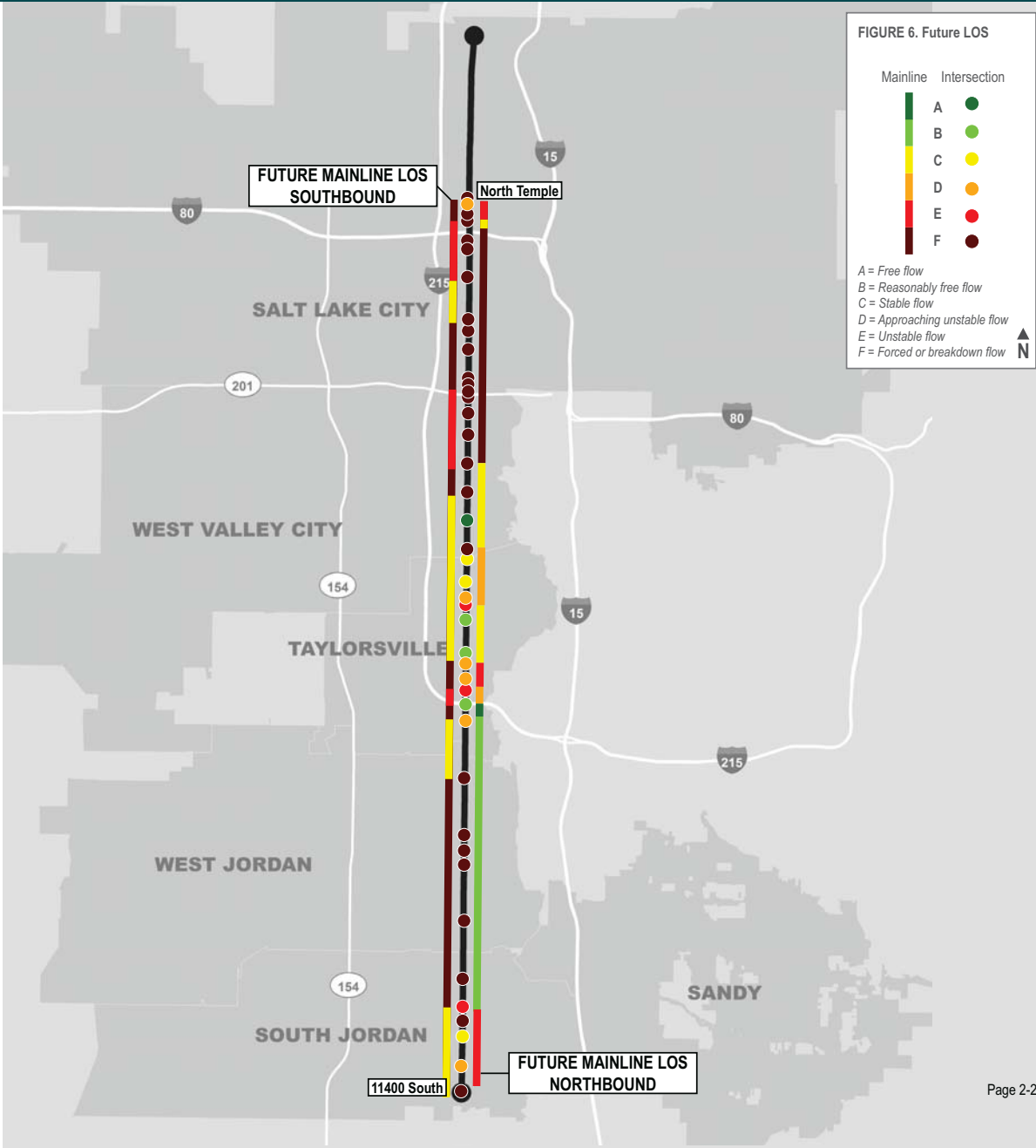
The majority of Redwood Road lacks bicycle facilities (approximately 5 miles of the 19-mile project corridor have bike facilities on Redwood Road). In addition, there are only pockets of connections to east-west facilities. There are 10 connections for bikes and/or multi-use trails to the Jordan River Trail—a regionally significant trail parallel to Redwood Road—nine of which are located in Salt Lake City.

ROADWAY

Roadway congestion along Redwood Road is projected to worsen based on increased population and the associated congestion within the overall roadway network, and redevelopment of portions of Redwood Road and the surrounding areas. The majority of major intersections and the southbound mainline of Redwood Road will be operating at a failing LOS, indicating severe congestion and gridlock during peak periods in year 2040.

**Mainline Redwood Road Operations:** By the year 2040, approximately 4.5 miles of northbound mainline Redwood Road and 7 miles of southbound mainline will be operationally failing and severely congested (see Figure 6).

**Redwood Road Intersection Operations:** By the year 2040, 27 of the 42 major intersections along Redwood Road will be operating at a failing LOS (Figure 6).

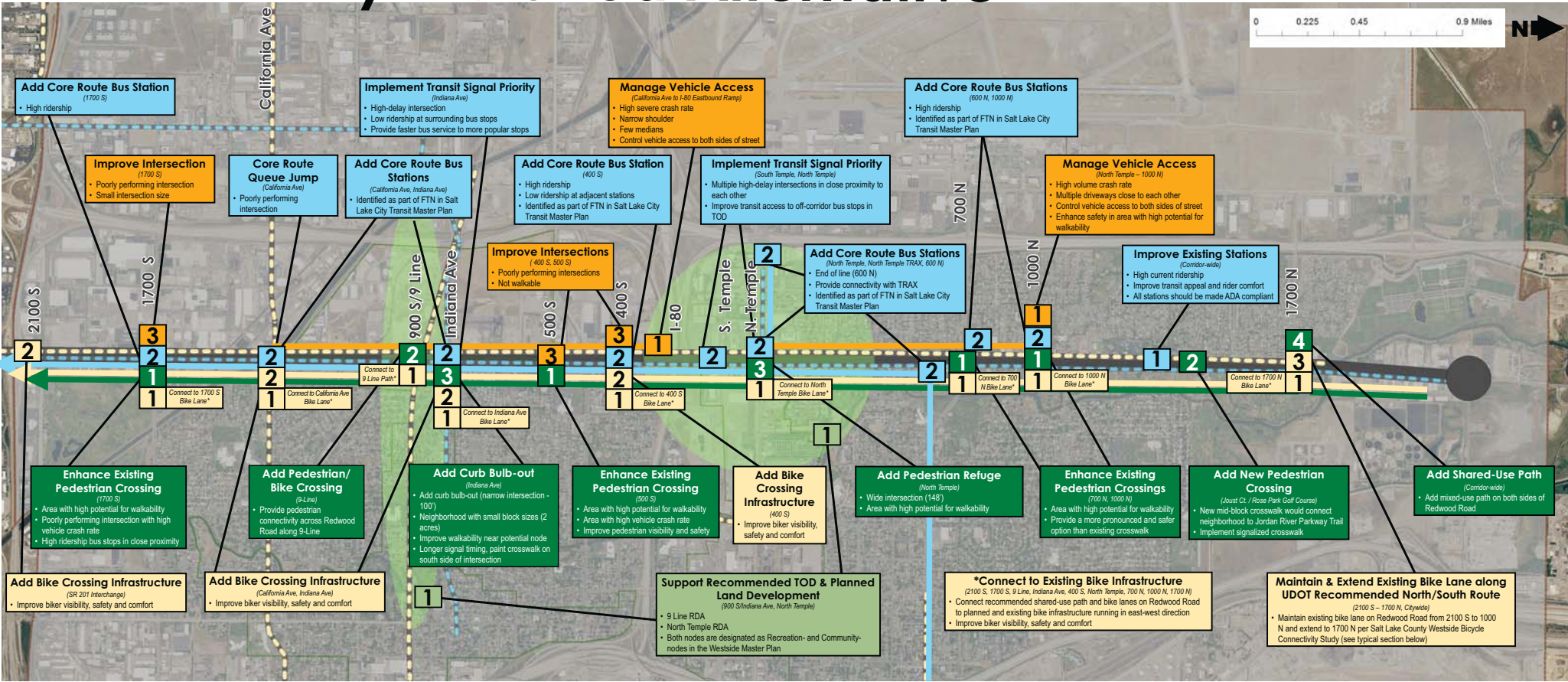


# Attachment B

Draft Preferred Alternative Scenario for Redwood Road



# Salt Lake City Preferred Alternative



## Roadway Recommendations

Recommended Access Management Area

- 1 Access Management**  
Implement access management solutions to control vehicle cross-traffic, thereby improving LOS and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.
- 2 Turn Movement Improvements**  
Add right-turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.
- 3 Intersection Improvements**  
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

## Transit Recommendations

Planned Bus Rapid Transit/Core Route  
Recommended Core Route

- 1 Existing Station Improvements**  
Improve existing stations to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. At a minimum, benches and shelters should be installed at all stops. All improvements must be ADA compliant.
- 2 Core Route Bus**  
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, more frequent travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route would initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

## Walkability Recommendations

Recommended Shared-Use Path

- 1 Enhance Existing Pedestrian Crossing**  
Improve existing crossings to increase pedestrian safety and convenience. Possible improvement techniques include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.
- 2 Add New Pedestrian Crossing**  
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.
- 3 Add Pedestrian Infrastructure**  
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.
- 4 Add Shared-Use Path**  
Add a shared-use path with a minimum width of 10' along entire Redwood Road corridor on both sides of street.

## Bicycle Recommendations

Planned Bike Lane  
Recommended Bike Lane

- 1 Connecting Facility Location and Type**  
**Connect Bike Paths/Lanes/Routes**  
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.
- 2 Add/Enhance Bike Crossing & Intersection Infrastructure**  
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.
- 3 Add Bike Lane**  
Maintain existing bike lane on Redwood Road from 2100 S to 1000 N and extend to 1700 N. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, AADT, and number of lanes. UDOT's Salt Lake County Westside Bicycle Connectivity Study recommends the following typical section for the Redwood Road route through Salt Lake City.



UDOT Salt Lake County Westside Bicycle Connectivity Study

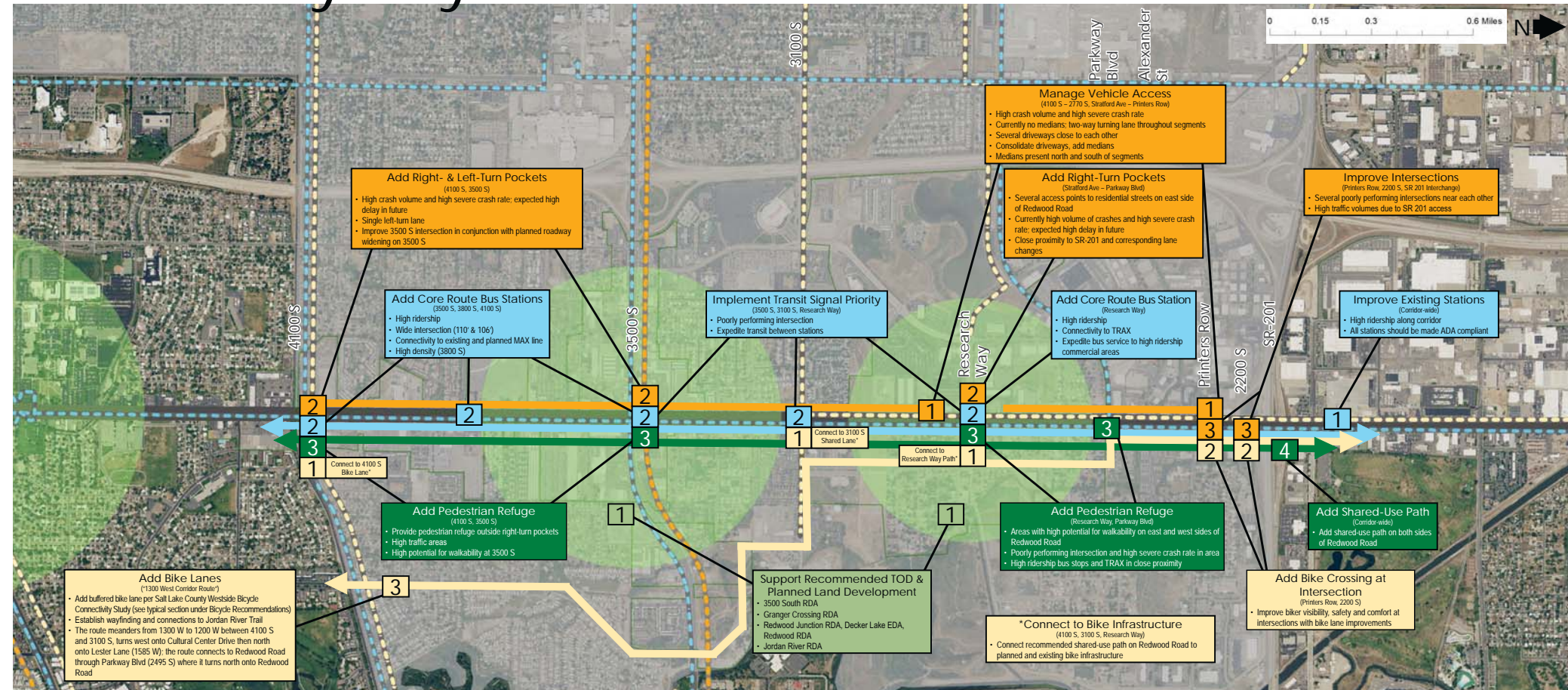
## Land Use Recommendations

Planned Redevelopment/Economic Development Areas

- 1 Transit-Oriented Development (TOD)**  
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.



# West Valley City Preferred Alternative



## Roadway Recommendations

Recommended Access Management Area

- 1 Access Management**  
Implement access management solutions to control vehicle cross-traffic, thereby improving LOS and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.
- 2 Turn Movement Improvements**  
Add right-turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.
- 3 Intersection Improvements**  
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

## Transit Recommendations

Planned Bus Rapid Transit/Core Route  
Recommended Core Route

- 1 Existing Station Improvements**  
Improve existing stations to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. At a minimum, benches and shelters should be installed at all stops. All improvements must be ADA compliant.
- 2 Core Route Bus**  
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, more frequent travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route would initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

## Walkability Recommendations

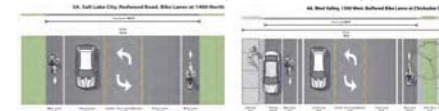
Recommended Shared-Use Path

- 1 Enhance Existing Pedestrian Crossing**  
Improve existing crossings to increase pedestrian safety and convenience. Possible improvement techniques include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.
- 2 Add New Pedestrian Crossing**  
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.
- 3 Add Pedestrian Infrastructure**  
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.
- 4 Add Shared-Use Path**  
Add a shared-use path with a minimum width of 10' along entire Redwood Road corridor on both sides of street.

## Bicycle Recommendations

Planned Bike Lane  
Recommended Bike Lane

- 1 Connecting Facility Location and Type**  
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.
- 2 Add/Enhance Bike Crossing & Intersection Infrastructure**  
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.
- 3 Add Bike Lane**  
Add bike lane on 1300 W Corridor Route per UDOT's Salt Lake County Westside Bicycle Connectivity Study. Add bike lane on Redwood Road from 3500 S to existing bike lane at 2100 S. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, AADT, and number of lanes. UDOT's study recommends the following typical sections for the route.



UDOT Salt Lake County Westside Bicycle Connectivity Study

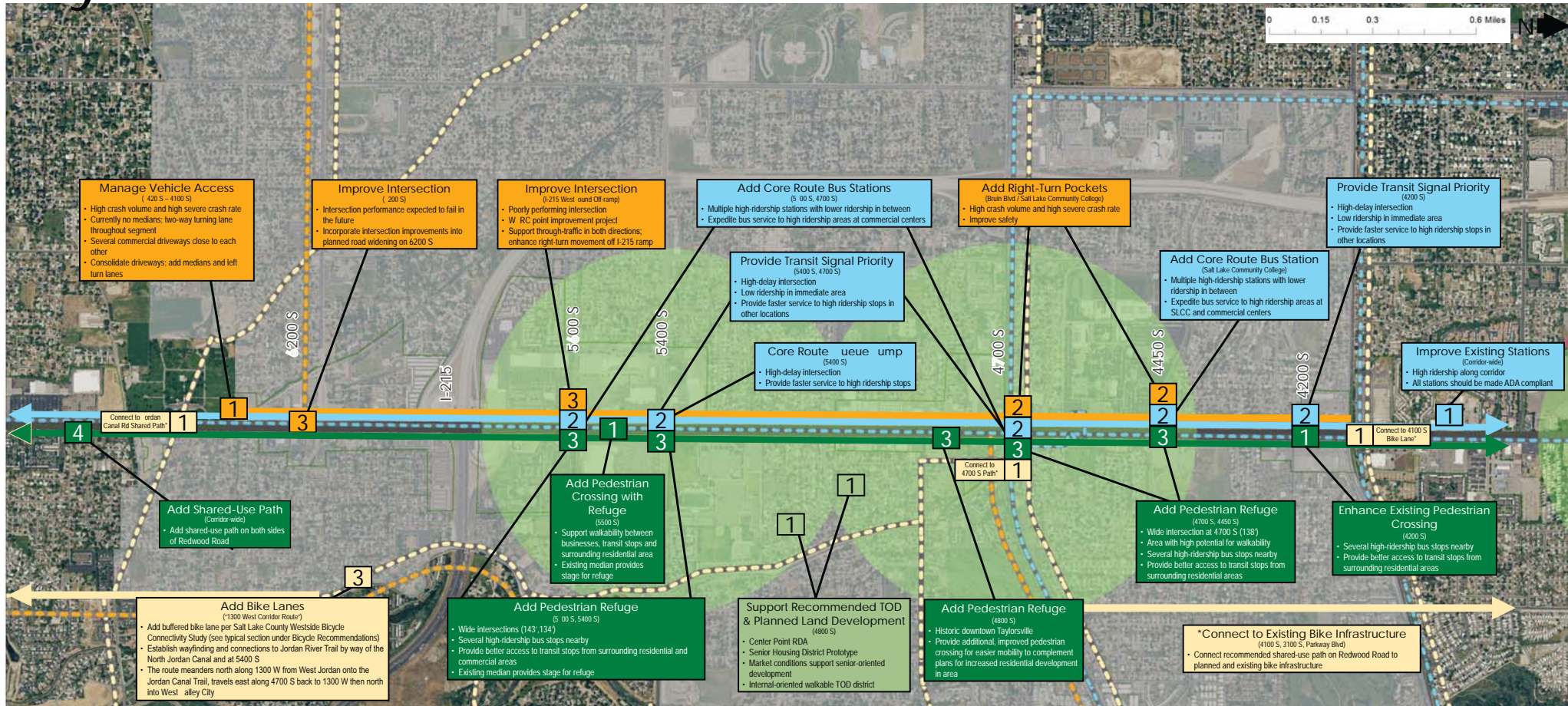
## Land Use Recommendations

Planned Redevelopment/Economic Development Areas

- 1 Transit-Oriented Development (TOD)**  
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.



# Taylorville Preferred Alternative



## Roadway Recommendations

Recommended Access Management Area

- 1 Access Management**  
Implement access management solutions to control vehicle cross-traffic, thereby improving LOS and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.
- 2 Turn Movement Improvements**  
Add right-turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.
- 3 Intersection Improvements**  
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

## Transit Recommendations

Planned Bus Rapid Transit/Core Route  
Recommended Core Route

- 1 Existing Station Improvements**  
Improve existing stations to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. At a minimum, benches and shelters should be installed at all stops. All improvements must be ADA compliant.
- 2 Core Route Bus**  
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, more frequent travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route would initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

## Walkability Recommendations

Recommended Shared-Use Path

- 1 Enhance Existing Pedestrian Crossing**  
Improve existing crossings to increase pedestrian safety and convenience. Possible improvement techniques include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.
- 2 Add New Pedestrian Crossing**  
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.
- 3 Add Pedestrian Infrastructure**  
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.
- 4 Add Shared-Use Path**  
Add a shared-use path with a minimum width of 10' along entire Redwood Road corridor on both sides of street.

## Bicycle Recommendations

Planned Bike Lane  
Recommended Bike Lane

- 1 Connecting Facility Location and Type**  
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.
- 2 Add/Enhance Bike Crossing & Intersection Infrastructure**  
Provide safe, visible crossings for bike lanes at intersections. May include bike boxes and/or green paint.
- 3 Add Bike Lane**  
Add bike lane on 1300 W Corridor Route per UDOT's Salt Lake County Westside Bicycle Connectivity Study. Add bike lane on Redwood Road from 3500 S to existing bike lane at 2100 S. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, AADT and number of lanes. UDOT's study recommends the following typical section for the route.



UDOT Salt Lake County Westside Bicycle Connectivity Study

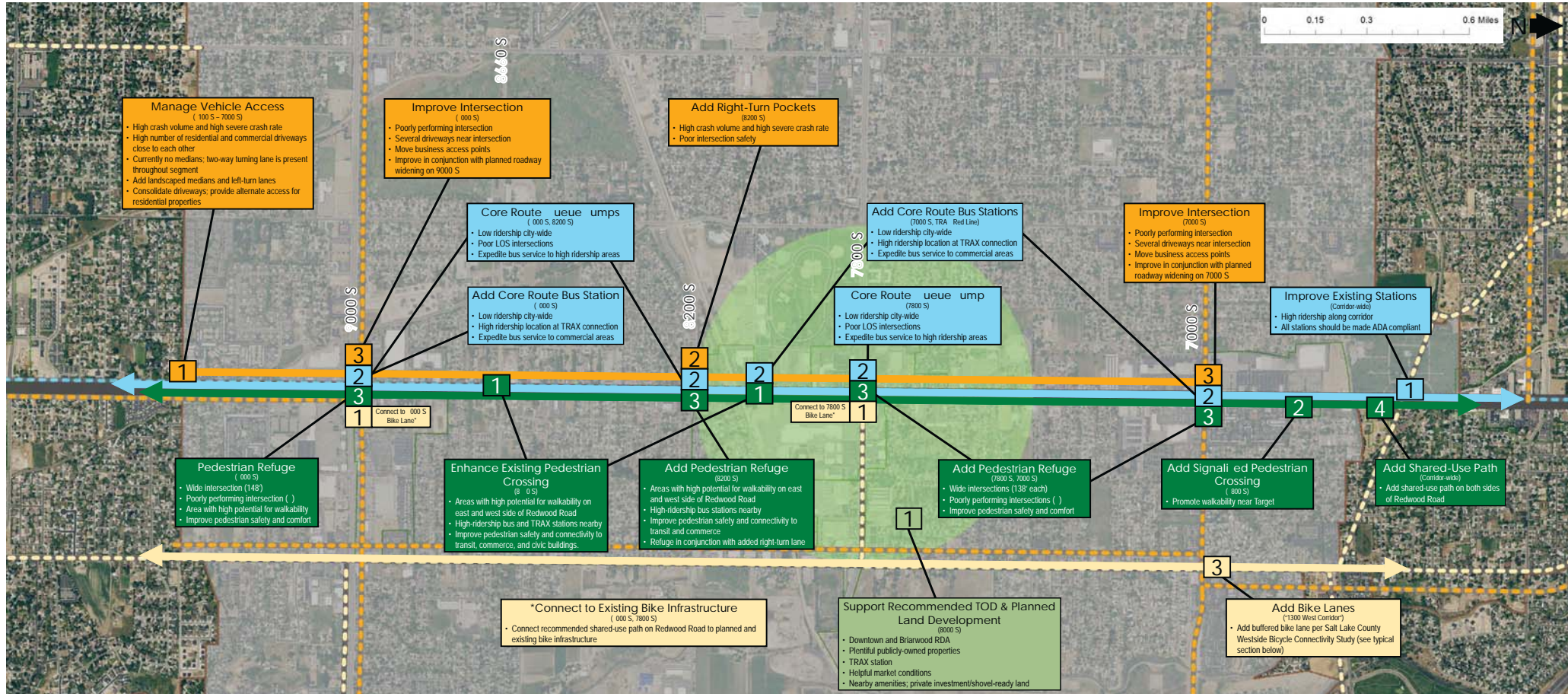
## Land Use Recommendations

Planned Redevelopment/Economic Development Areas

- 1 Transit-Oriented Development (TOD)**  
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.



# West Jordan Preferred Alternative



## Roadway Recommendations

Recommended Access Management Area

- 1 Access Management**  
Implement access management solutions to control vehicle cross-traffic, thereby improving LOS and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.
- 2 Turn Movement Improvements**  
Add right-turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.
- 3 Intersection Improvements**  
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

## Transit Recommendations

Planned Bus Rapid Transit/Core Route  
Recommended Core Route

- 1 Existing Station Improvements**  
Improve existing stations to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. At a minimum, benches and shelters should be installed at all stops. All improvements must be ADA compliant.
- 2 Core Route Bus**  
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, more frequent travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route would initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

## Walkability Recommendations

Recommended Shared-Use Path

- 1 Enhance Existing Pedestrian Crossing**  
Improve existing crossings to increase pedestrian safety and convenience. Possible improvement techniques include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.
- 2 Add New Pedestrian Crossing**  
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.
- 3 Add Pedestrian Infrastructure**  
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic calming effects. This includes the addition of pedestrian refuge islands or curb built-outs.
- 4 Add Shared-Use Path**  
Add a shared-use path with a minimum width of 10' along entire Redwood Road corridor on both sides of street.

## Bicycle Recommendations

Planned Bike Lane  
Recommended Bike Lane

- 1 Connecting Facility Location and Type**  
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.
- 2 Add/Enhance Bike Crossing & Intersection Infrastructure**  
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.
- 3 Add Bike Lane**  
Add bike lane on 1300 W Corridor Route per UDOT's Salt Lake County Westside Bicycle Connectivity Study. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, AADT, and number of lanes. UDOT's study recommends the following typical sections for the route.



UDOT Salt Lake County Westside Bicycle Connectivity Study

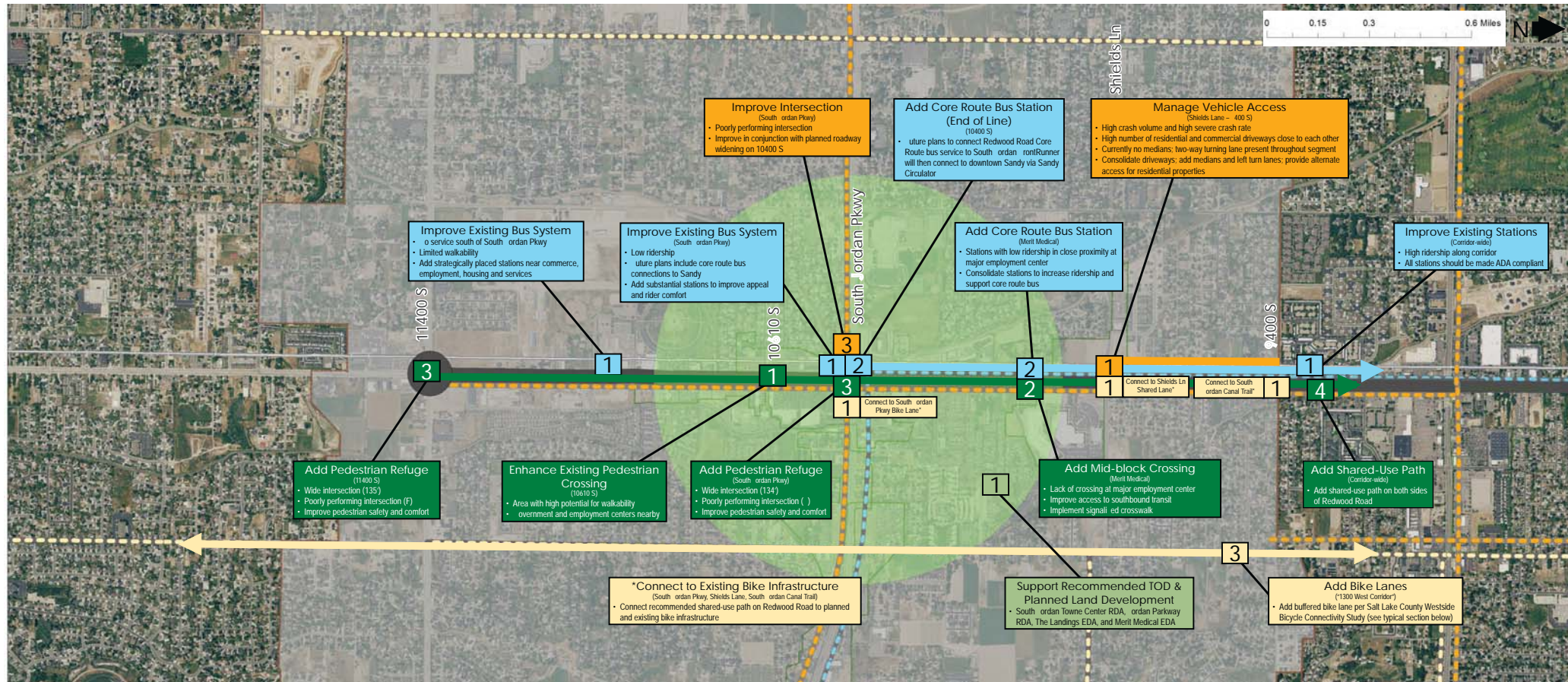
## Land Use Recommendations

Planned Redevelopment/Economic Development Areas

- 1 Transit-Oriented Development (TOD)**  
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.



# South Jordan Preferred Alternative





# Attachment C

Land Use Feasibility Memo

# Redwood Road Corridor Study

## Land Use Analysis

PREPARED FOR

**JACOBS**<sup>™</sup>

PREPARED BY

 **LELAND CONSULTING GROUP**

November 2017

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## INTRODUCTION

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### Project Background

The Redwood Road Multimodal Transportation Study, led by Utah Transit Authority, is a planning project that considers land use and multimodal transportation options along Redwood Road from Salt Lake City to South Jordan. The planning study includes two main deliverables:

1. An agreed upon regional vision for Redwood Road and the identification of a Preferred Alternative that supports roadway, transit and active transportation investments.
2. An implementation plan that identifies short-term (0-5 years), medium-term (5-15 years), and long-term (15+ years) projects for the overall corridor within each city.

Since a project goal is that recommended transportation improvements serve as catalysts for land use change, Leland Consulting Group conducted a market analysis to ensure transportation improvements were informed by an understanding of existing and future market conditions. The analysis served as a baseline document to guide later tasks, including the land use analysis and implementation strategy discussed in this memorandum.

Background summary information is in the Appendix.

### Task Description, Goals and Objectives

This analysis presents various land use scenarios to address market demand supportive of transit options. This includes the following components:

- Concept alternatives for catalyst transit-oriented development (TOD) areas. Each site alternative includes a description of the proposed land use program (mix of uses) and key findings regarding economic feasibility. Feasibility gaps are identified if proposed concepts are not feasible.
- Where funding gaps exist, potential strategies are discussed to reduce or bridge the gap.
- A preferred corridor land use scenario that includes the site-specific concepts as well as broader land use changes at the corridor level (based on existing plans, market forecasts, and other considerations).

Strategic recommendations are based on the above analyses. Strategies include, where relevant, recommended land use policies and strategies that would encourage redevelopment and transit-supportive or transit-oriented development.

## EXECUTIVE SUMMARY AND STRATEGIC RECOMMENDATIONS

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### Overview

The market analysis identified 19 nodes along the corridor that have some potential to serve as TOD opportunity sites based on market conditions, designation in existing plans and studies, or recommendations from economic development staff at each city. From that list of 19 nodes, four were selected for more detailed analysis here. The following table summarizes those four, the rationale for prioritizing them, and the near- and long-term land use opportunities for each.

**Table 1. Summary of Land Use Opportunities**

Node and Location	Rationale and Node Features	Near-term Opportunities and Typologies	Long-term Opportunities and Typologies
<b>9-Line</b> 900 S	Recreational node and unique asset. Underutilized land with proposed redevelopment area, receiving significant private and public attention, lack of neighborhood amenities other than recreational features. Identified by City as Community and Recreational Node.	Continued light industrial uses (particularly craft industrial and manufacturing), townhomes, low- to medium-density multifamily apartments, employment-supportive low-density retail, especially rehab (locally-serving retail and restaurants).	Trail-oriented development; high-density mixed-use residential and commercial uses, redevelopment of existing industrial uses to higher value uses, residential reinvestment on the east, adaptive reuse, next generation employment and job creation.
<b>Research Way</b> 2270 S	TRAX station and low- and medium-density employment uses (office/industrial). Little vacant land but older single family to the east. Redevelopment areas on the west side. Designated WFRC Station Community and Town Center.	Townhomes, low- to medium-density multifamily apartments, low-density employment-supportive and locally-serving retail and restaurants (particularly upgraded or rehabbed).	Higher density mixed use transit-oriented development supportive of employment growth. Redevelopment of older single-family to the east to higher density residential uses. Infill development to the west.
<b>Taylorville</b> 4800 S	Major activity center (Town/Urban Center per WFRC) and employer with unique assets (e.g. SLCC). Existing community amenities (commercial, recreational, etc.), existing senior and student populations, underutilized commercial properties.	Townhomes and horizontal mixed-use development: low-density multifamily apartments (e.g. three-story garden walkups), low- and moderate-density senior housing, low-density locally-serving commercial development supportive of senior and student population	High-density mixed-use residential district (horizontal and/or vertical), including a mix of housing typologies (mid-rise, garden, townhomes), redevelopment of older commercial properties to mixed-use, retail and neighborhood office development supportive of senior and nearby student populations, potential student housing.
<b>West Jordan City Center</b> 8000 S	Existing civic/commercial district, multiple redevelopment areas, nearby TRAX line and station, recent civic/public development activity, recreational amenities, significant publicly-owned properties and underutilized land.	Civic and mixed-use (vertical or horizontal) residential district: transit-oriented development on publicly-owned land near TRAX station to build momentum in the market. Low- and med-density multifamily apartments thereafter.	Development of public owned sites, such as the vacant lot adjacent to the TRAX station and the West Jordan School District Auxiliary Services building (former mall). Development may include office and mixed-use residential. The City should explore partnerships with additional land owners and develop parking.



## Findings

In order to determine whether TOD is feasible at each node, the team prepared a financial feasibility analysis of the recommended land use program (mix of uses), prevailing land values, lease rates, and construction costs. A summary of the findings from this analysis is as follows:

**Apartments are generally feasible** throughout the corridor. There is somewhat of an equilibrium in the residential market today, and some denser (with structured parking) multifamily projects may only be feasible with rent premiums or with financial assistance (e.g., land write-downs and TIF). Higher-density wrap (multifamily housing surrounding a parking structure) and podium projects will become increasingly feasible as rents rise toward and above \$2 per square foot per month, allowing developers to cover the higher costs of redevelopment (as opposed to “greenfield” development on vacant sites).

**Retail is largely overbuilt throughout the corridor, but is financially feasible if a project can attract tenants.** This is largely due to higher rents per square foot that can be achieved on a case-by-case basis.

**Speculative office development is not currently feasible** on the corridor. Recent suburban development has mostly been owner-occupied and/or purpose built, and therefore does not follow predictable market trends. Some medical office – which is often also owner-occupied – will likely be feasible in isolated pockets as local populations increase. This type of development is often found in retail locations in addition to office parks.

**Phasing development is critical.** Phasing allows the market to develop, encouraging development to follow a natural evolution of increasing densities and intensities over time.

**Future development should balance high-quality pedestrian-oriented urban design with suburban economics.** High-density developments with structured parking may not be feasible in the corridor. Therefore, developments need to be adaptable to fluctuating market conditions and balance walkability with surface parking.

The following chart provides an overview of each development type’s feasibility, from feasible (green) to potentially feasible (yellow), to not feasible (red). The left side shows short-term feasibility, which is based on existing market conditions, and the right side shows projected long-term feasibility, based on assumptions such as increasing rents, continued private development, population and employment growth, and the introduction of the Recommended Alternative transportation improvements. “Potentially feasible” development types are projects which may require assistance to bridge certain funding gaps, such as financial, regularly, or physical incentives. It is important to note that while high-density development types (mixed-use, office) are not likely to be feasible in the near-term, projects can *look* urban while maintaining suburban economics (e.g., surface parking).

**Figure 1. Short- and Long-term Feasibility by Development Type**

	Short-term Feasibility				Long-term Feasibility			
	Node 1: 9-Line	Node 2: Research Way	Node 3: 4800 South/ Senior District	Node 4: WJ City Center	Node 1: 9-Line	Node 2: Research Way	Node 3: 4800 South/ Senior District	Node 4: WJ City Center
Townhomes	●	●	●	●	●	●	●	●
Medium Density Multifamily	●	●	●	●	●	●	●	●
High Density Residential	●	●	●	●	●	●	●	●
Very High Density Residential	●	●	●	●	●	●	●	●
Mixed-use Residential High Density	●	●	●	●	●	●	●	●
Mixed-use Residential Very High Density	●	●	●	●	●	●	●	●
Low Density Office	●	●	●	●	●	●	●	●
High Density Office	●	●	●	●	●	●	●	●
Very High Density Office	●	●	●	●	●	●	●	●
Mixed-use Office High Density	●	●	●	●	●	●	●	●
Mixed-use Office Very High Density	●	●	●	●	●	●	●	●
Low Density Retail	●	●	●	●	●	●	●	●

Source: Leland Consulting Group

## Guiding Principles

The land use strategies are based on the project vision, policies in existing plans along the corridor, and stakeholder outreach conducted for this study. The following guiding principles serve as a framework for evaluating more detailed land use strategies.

- **Establish pulse points of development** which allow and encourage for a mix of uses and densities. Areas which already contain higher density populations and jobs provide a solid platform on which to intensify, densify, and diversify the urban environment, either through infill, redevelopment or new construction.
- **Build on existing plans and work.** Local authorities have undertaken varying levels of planning projects on the corridor. Furthermore, each City on the corridor has redevelopment areas in place. As such, strategies are intended to build on the findings and plans of existing and previous work.
- **Increase connections** to residential neighborhoods and commercial and industrial districts by focusing on walkable mixed-use projects and a range of transportation and mobility options.
- **Develop context-sensitive strategies** for each node. That is, each node is unique and will have a different optimal mix of uses, scale, and character that reflect local market and economic conditions. These uses and building types should have relevancy to the employment and demographic structure in each jurisdiction.
- **Develop flexible implementation strategies.** Residential, commercial, and lifestyle preferences across all demographics are rapidly changing, and new strategies will have to be flexible and adaptable. Corridors change over long periods of time and plans should allow for market conditions to evolve, starting small and building market momentum over time.

## **Strategic Recommendations**

The strategic land use recommendations are separated into two categories: 1) Corridor-wide strategies that apply the entire length of the corridor; and 2) Nodal-specific strategies that apply to each the four prioritized nodes.

### **Corridor-wide Strategies**

#### **Strategy 1      Prioritize good design rather than high density development.**

Description: Develop design standards for corridor and pulse point development that encourage walkability without requiring higher densities that may not be economically feasible. Potential areas for design standards include setbacks, building form, internal circulation, and parking. For residential properties, developments can be built to suburban garden apartment densities (i.e., surface parked), but with high-quality urban design with “human-scale” architecture, adjacent buildings with complementary uses fronting the street, and hidden or screened off-street parking. While structured parking may not be economically feasible today, developments can be built to the highest densities possible before structured parking is required. Density can be increased by reducing or eliminating parking requirements in TOD areas, encouraging shared parking agreements between adjacent uses, and including quality urban designs that promote other modes including transit, bicycling, and walking.

Rationale: Market economics currently do not support the high cost of structured parking in the corridor. Good design, rather than typical downtown densities, can result in high value walkable projects.

Timing: Short-term. Design standards can be developed early to ensure future development enhances the nodal area.

#### **Strategy 2      Form coalitions to address shared corridor land use and transportation visions.**

Description: Form coalitions either corridor-wide or between adjacent cities and regional agencies, such as WFRC and the County in order to leverage resources and strengthen opportunities for project implementation. Coordinated zoning would promote a consistent land use pattern throughout the corridor. Examples in the area include (1) the Utah Transportation Coalition, which is a coalition of public and private sector partners, including the Utah Association of Counties, Utah League of Cities and Towns, UTA, Salt Lake Chamber, and UDOT; and (2) Pleasant View City and Farr West City collaborated on a joint-zoning for the 2700 N Corridor. Utilize these coalitions or partnerships to convene distinct stakeholders and address opportunities.

Rationale: The Redwood Road Corridor is a collection of distinct areas with particular market, demographic, land use, and economic conditions. The 17-mile corridor bisects five cities, making any unified or consistent regulations challenging. Adjacent cities (or even all cities located on the corridor) can mitigate these challenges by forming coalitions and leveraging each other’s success. Furthermore, some key nodes are located on the border of two cities, further demonstrating the need for collaborative efforts. Lastly, additional parties can act as conveners with existing stakeholders where a single project champion may not exist.

Timing: Short/Mid-term. Cities and agencies can begin the conversation early, so the resulting work can be implemented as soon as possible.

#### **Strategy 3      Prioritize recommended streetscape improvements at the identified TOD nodal areas.**

Description: Create a phased plan for streetscape improvements which prioritizes identified TOD nodal areas.

Rationale: Streetscape improvements are integral to attracting private investment and are a core element of this plan. Improvements will need to be phased and prioritized as funding becomes available. TOD nodal areas have the most potential to catalyze further growth and will receive the densest development on the corridor. Therefore, implementing recommended improvements near these TOD nodes will maximize leverage.

Timing: Short-term, as funding becomes available.

#### **Strategy 4      Update zoning to allow residential uses and mixed-use development.**

Description: Zoning codes along the corridor, particularly at key identified nodal areas, should allow residential uses and mixed-use development types, even on commercial property directly fronting Redwood Road. In this context, mixed-use can be vertical (e.g., housing above retail in a single building) or horizontal (e.g., retail at the front of a lot on Redwood Road, with housing at the back of the lot away from Redwood Road). However, it is important that these regulations *enable* mixed uses without *requiring* them, since market conditions may not support mixed-use development currently. Cities may establish an “overlay” or a “floating zone” in the zoning ordinance that modifies physical requirements such as minimum lot size or required minimum setbacks to enable more infill development. Shared zones or overlays that span jurisdictions would be beneficial and provide for a more predictable development environment.

Rationale: Transit is best supported mixed-use development that includes both commercial and residential uses. Currently, parts of the corridor have commercial zoning that does not allow for residential uses. As the feasibility analysis showed, residential uses are in demand and feasible and have the best chance to fill in many of the vacant and underutilized parts of the corridor.

Timing: Short-term. Zoning codes should be updated now so development occurs whenever market demand allows.

#### **Strategy 5      Assist with and expand available funding tools to bridge funding gaps, if any.**

Description: Catalog available funding mechanisms (e.g., tax-increment financing, federal and state grants and programs, and local incentive options). Designate a staff person within each city to market and communicate funding mechanisms and incentives to prospective developers. The staff person should gain expertise in available funding and incentives and, if necessary, assist in applications.

Rationale: Some development types are unlikely to be feasible until the market improves. However, local authorities and regional agencies can provide or assist with funding for certain developments to help them become feasible or “pencil.” This strategy should be utilized for catalytic projects that will build momentum in the market

Timing: Short-term.

#### **Strategy 6      Leverage unique assets.**

Description: Tailor land use projects to the unique anchors and opportunity sites that exist along the corridor. Some of these anchors include educational institutions such as Salt Lake Community College, regional recreation assets such as the 9-Line, large employers such as Merit Medical, or large underutilized properties such as the West Jordan School District Auxiliary Services building.

Rationale: Major anchors are spread throughout the corridor, drawing hundreds or thousands of people to the corridor on a daily basis. Rather than working from scratch or creating generic development types, build off these anchors to create context-sensitive TOD opportunities that leverage this existing market base.

Timing: Short/Mid-term.

#### **Strategy 7      Promote compact, mixed-use development near transit.**

Description: Plan for and encourage development that achieves transit-supportive densities and a mix of adjacent uses within transit station areas and corridors. Conduct station area planning around planned and existing transit hubs and stations. Work with transit providers to target investments to areas with higher intensity/density land use designations. Provide diverse housing types affordable to a full range of incomes within transit communities.

Rationale: In keeping with development “pulse points” on the corridor, the densest development should be near transit stations – either bus or rail – to assemble a transit-supportive critical mass of residents and workers. Encouraging transit use should also result in less reliance on automobiles for area residents.

Timing: Short-term. New zoning regulations should be consistently written into existing code to allow a mix of dense land uses within a certain radius of existing and planned transit stations.

#### **Strategy 8      Strategically manage parking in pedestrian- and transit-oriented developments.**

Description: Establish guiding principles for parking in pedestrian- and transit-oriented developments, based on the premise that growth and development is anticipated and will drive demand for parking. Amend code guidelines related to shared parking opportunities that could impede efficiencies for new development. Develop a plan to assess performance of area parking supply and demand, including inventory and utilization analysis, and conduct business outreach to identify parking issues. Add bike parking at strategic locations to create connections between parking, transit, and development. Additional actions for managing parking might include reducing minimum parking requirements in TOD areas and supporting reduced parking requirements with incentives, such as shared parking, bicycle parking, and transit subsidies for building tenants. Where and when dense development occurs, consider constructing structured parking in strategically located areas that can be shared by adjacent developments to promote a compact development pattern. If structured parking is required, consider building standards that would facilitate transitioning to other uses in the future since the emergence of autonomous vehicles may reduce parking demand in the long term.

Rationale: Parking remains one of the most expensive components of a new development and, as such, any mitigating efforts to reduce parking requirements or consolidate parking demand would offset development costs and increase project feasibility. Further, TOD areas – which should consist be compact, walkable urban developments – would likely be harmed by excessive surface parking.

Timing: Short/mid-term. Parking management can be integrated into existing code and marketed to prospective developers by cities immediately. Developing more complex parking management techniques and/or parking structures will require more time and resources.

### **Nodal Specific Strategies**

The following strategies are specific to each of the four nodes evaluated in this analysis.



## 9-Line Nodal Area

The 9-Line nodal area is characterized by an east-to-west multimodal trail, light industrial and commercial development, and underutilized parcels. While near-term opportunities are likely limited to low- to medium-density residential uses and continued employment-oriented development, such as light industrial and build-to-suit office, longer-term opportunities include higher-density mixed-use residential and commercial uses, potentially leveraging the uniqueness of the 9-Line to achieve rent premiums and therefore enabling developers to build higher density structures. Specific recommendations are as follow.

- **Implement the proposed redevelopment area.** The Salt Lake City Redevelopment Agency (RDA) is studying the formation of a redevelopment area around the 9-Line trail. Tax increment financing would help bridge the funding gap for new projects, regardless of whether they were feasible in the current market. At present, industrial uses remain one of the best uses of the land. Implementing the RDA and allowing additional uses (such as multifamily residential and mixed-use) would likely increase the value of the land and attract higher-value uses.
- **Revise zoning to allow residential/mixed use uses on the east side of Redwood Road.** Consider changing the existing Commercial Corridor (CC) zoning to mixed-use, or at least allow a mix of uses in the existing CC zone. The revision should be part of a wider effort to target multifamily residential uses, which would ideally be internally focused and leverage the trail. Market new zoning and incentivizes such as TIF (only available with the implementation of the redevelopment area) and tax credits relating to housing to encourage development. This is a mid-term action, which would likely require the redevelopment of underutilized properties.
- **Improve east-west connections,** especially once the next phase of the 9-Line has been built. Explore public-private partnerships for the nodal area to build market momentum. This is likely a mid/long-term option as the trail must first be purchased from Pacific Railroad and capital improvements will then need to be made.
- **Market the nodal area as a long-term trail-oriented development area,** using other examples and previous work (e.g., master plan, concept shown right). Trails can be an important employee amenity, which can impact a company's decision to relocate. This is a mid-term action, dependent on the City rezoning the land and the implementation of the RDA.



*Looking east at a typical intersection, from the 2015 9-Line Corridor Master Plan*

## Research Way Nodal Area

The Research Way nodal area is centered around a TRAX light rail station and a significant employment cluster to the west of Redwood. Despite the lack of existing TOD, there are opportunities for dense mixed-use development types given the proximity of transit and the existing daytime population. Therefore, medium- to high-density multifamily residential development (most likely with a locally-serving retail component for placemaking purposes) on the east side of Redwood Road is recommended, with infill development on the west side over the long-term as the market improves. Specific recommended actions are as follow.

- **Develop a long-term area master plan** which prioritizes the transition of the older single-family properties to the east (closest to Redwood Rd.) to higher intensity uses. A master plan should build on existing policy framework, such as the West Valley City General Plan, which included recommendations by Bonneville

Research to continue developing commercial and manufacturing uses to the west, residential and office uses to the east, and median density mixed-use near the station.

- Mixed-use should integrate a mix of complementary high-activity uses, including transit-supportive commercial, residential and employment uses. This nodal area is one of the few areas where employment/office/industrial is the predominant land use; preserve and enhance this character by adding compact mixed-use development on the east side to increase activity throughout the day.
- Revise zoning from commercial to mixed-use on the east side of Redwood Road to encourage the transition to higher-density residential uses. The creation of a redevelopment area would enable the use of tax-increment financing, a significant tool to incentivize development. Further, as the area is largely built out, incentives may be necessary to build momentum in the market and improve the residual land value. On the other hand, the current market should support the development of vacant parcels, which may result in an improved market and allow for the redevelopment of existing surrounding structures.
- **Develop design standards geared toward urban development**, per the West Valley City General Plan, which calls for the promotion of a more urban environment along Redwood Road and near LRT stops. While there is existing vacant and/or underutilized land, redevelopment to higher density building types may require financial incentives, such tax-increment financing (TIF), which would require the creation of a redevelopment area for the east side of Redwood Road.

#### **4800 S Nodal Area**

Located just south of the major intersection at 4700 South, this area has been flagged as a future senior housing district by Taylorsville City. The area's existing underutilized commercial properties should be redeveloped to mixed-use properties over the long-term and interconnected within the area to help foster an amenity-rich district. Residential development should be predominately senior multifamily housing in the near-term, with some student- and market-rate mixed-use multifamily housing development later. Commercial development should be a secondary land use, supportive of the nearby residential uses. Specific recommendations are as follow.

- **Commission a housing market study** for more specific/targeted development. Existing studies have been mostly conceptual or focused on transportation improvements rather than land use. Further studies need to be conducted on the market to assess whether the area will support additional housing (specifically senior and/or student housing). Use the findings of the study to market the area to prospective developers.
- **Explore the creation of a redevelopment area** surrounding the nodal area. Incentives may be necessary to catalyze redevelopment of existing structures – given the area is relatively built out and has few opportunities for new green-field development. Rents in the area do not currently warrant redevelopment of existing structures to new uses, so additional funding will be required to bridge funding gaps. A redevelopment area would allow Taylorsville to offer tax-increment financing as a funding tool available to prospective developers.
- **Prioritize streetscape improvements which create/improve east-west connectivity**, particularly for pedestrians. Redwood road is a significant edge which pedestrians are unlikely to want to cross. Therefore, east-west connectivity is imperative.

- **Leverage the existing assets to encourage housing development** (e.g., senior center, park, heritage center, trails, mass transit). Additional rooftops will support the adjacent commercial center until redevelopment is possible.

### **West Jordan City Center Nodal Area**

Significant tracts of publicly-owned properties characterize the West Jordan City Center nodal area. Properties include the West Jordan School District building, UTA-owned land which includes the TRAX Park and Ride lot, and other city-owned land. Phased horizontal mixed-use development is initially recommended closest to the existing TRAX station, with development spreading north to 7800 South. The existing Park and Ride parking may be absorbed into a new parking garage to serve the area's new development. Over the long-term, the area can be a walkable high-density civic and mixed-use residential district. However, residential uses should be the primary focus, given the area's strong residential market conditions, low supply of apartments, and high existing employment uses.

- **Form partnerships and coalitions and collaborate with existing land owners** to develop a vision for the area's publicly-owned and more significant properties.
- **Develop a district master plan** which encompasses developments on both sides of the road. Specifically include publicly-owned properties in the plan and develop site criteria and program elements for proposed redevelopment projects.
- **Solicit a developer through an RFP/RFQ process to redevelop publicly-owned property**, including the city-owned property adjacent to the TRAX station and the West Jordan School District's property. These developments can serve as catalyst demonstration projects to build momentum in the local market.
- **Leverage the momentum of civic developments** on the west side of Redwood Road. While most recent retail development has occurred much further west of the West Jordan City Center, recent development in this nodal area has taken the form of civic development on the west side of Redwood Road including City Hall, courtrooms, and the Salt Lake County Library, giving the area a significant daytime population. This population drives demand for additional locally-serving retail, restaurants, and other commercial uses.
- **Promote circulation between the west and east** sides of Redwood Rd. While most of the corridor is distinctly separated by Redwood Road, West Jordan City Center is a rare district on the corridor that has the potential to create a unified district that spans Redwood Road. As such, there are opportunities to connect the daytime employee population and recent development to prospective or future residential and commercial uses on the east side.

## **DEVELOPMENT FEASIBILITY ANALYSIS**

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To support the land use recommendations, a feasibility analysis was conducted of potential TOD development types. This analysis was used to identify opportunities and challenges to new types of development, which further guided the selection of recommendations.

### **Development Types**

This memorandum is predominately a feasibility analysis of various development types. These development types include rental housing (apartments and townhomes), retail, and office. These building types are outlined on the following page.

Several preliminary conclusions were put forth prior to the analysis – based on LCG’s market research, prior project experience and general expertise. Regardless of location, market conditions, and growth projections, we find that:

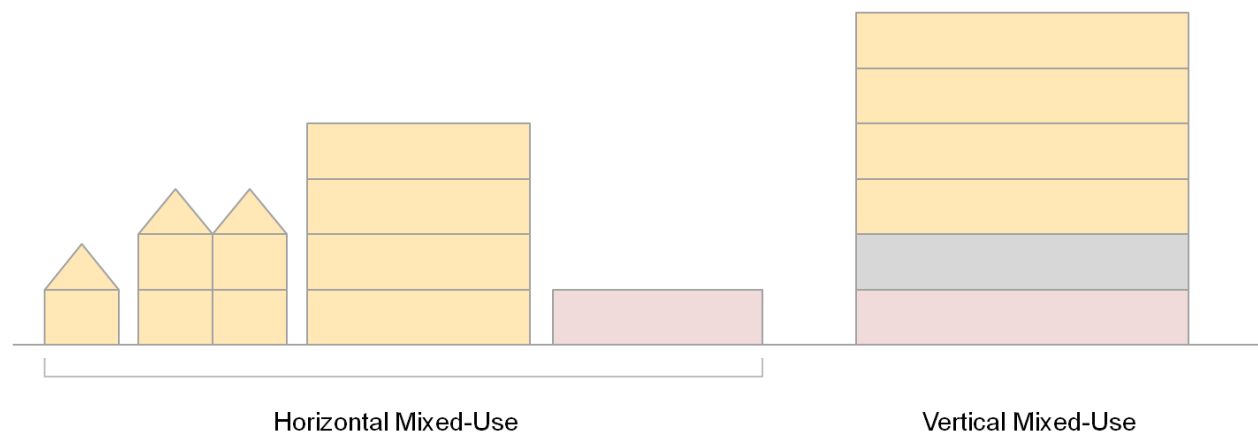
- Construction costs for any given project typically increase as density increases,
- High density uses often require parking structures and concrete construction, and
- The type of parking on the property is often the most important factor to a project’s financial feasibility.

That said, vertical mixed-use projects typically demand higher cost premiums than horizontal mixed-use developments. Therefore, vertical mixed use requires higher demand from potential residents, office, and retail tenants, meaning horizontally mixed uses are more likely to be feasible and thereafter built in the corridor. The market will likely only support vertical mixed-use in special locations.

**Figure 2. Development Types**



**Figure 3. Cost Premiums: Vertical Mixed-Use Versus Horizontal Mixed-Use**



Source: Leland Consulting Group

Rent revenue is one of the most important variables that affects development feasibility. The chart below shows estimated rents for the corridor, assuming well-executed, new construction projects. These rents were developed based on a review of buildings now for lease in the corridor.

Based on typical practice, we assume that most retail rents are triple net (NNN, in which tenants pay property taxes and operating expenses), and the “average” office rent is modified gross (in which landlords and tenants each pay some operating expenses).

**Table 2. Corridor Rents by Land Use**

Land Use	Rent Type	Highest on Corridor	9-Line	Research Way	4800 S	WJCC
<b>Apartments</b>	Gross	\$1.92	\$1.73	\$1.73	\$1.92	\$1.92
<b>Office</b>	Modified Gross (MG)	\$29.10	\$29.10	\$20.70	\$23.85	\$26.19
<b>Retail</b>	Triple Net (NNN)	\$30.00	\$24.00	\$24.00	\$30.00	\$24.00

Source: CBRE, Cushman & Wakefield LoopNet, and Leland Consulting Group

## Missing Middle Housing

The illustration below (developed by the firm Opticos) shows the general range of densities likely to satisfy the bulk of anticipated demand in the Redwood corridor. The smaller footprints and moderately increased densities allow for more efficient use of public and shared recreational amenities, reducing maintenance demands on senior and young adult households (such as yard care and snow removal). Note that the illustration does not necessarily reflect the recommended corridor elements.

**Figure 4. Missing Middle Housing**



Source: Opticos

Mid-rise development types, like that pictured on the far right of the illustration, are ideally suited to major nodal areas, where the high population can help to fully activate commercial centers. Mid-rise multifamily are typically also best when oriented around transit and integrate commercial uses.

## Feasibility Analysis

The following charts show the general feasibility of residential, retail, and office development types. Feasibility is based on the results of a pro forma, which shows a project’s modeled yield in relation to the target yield. When

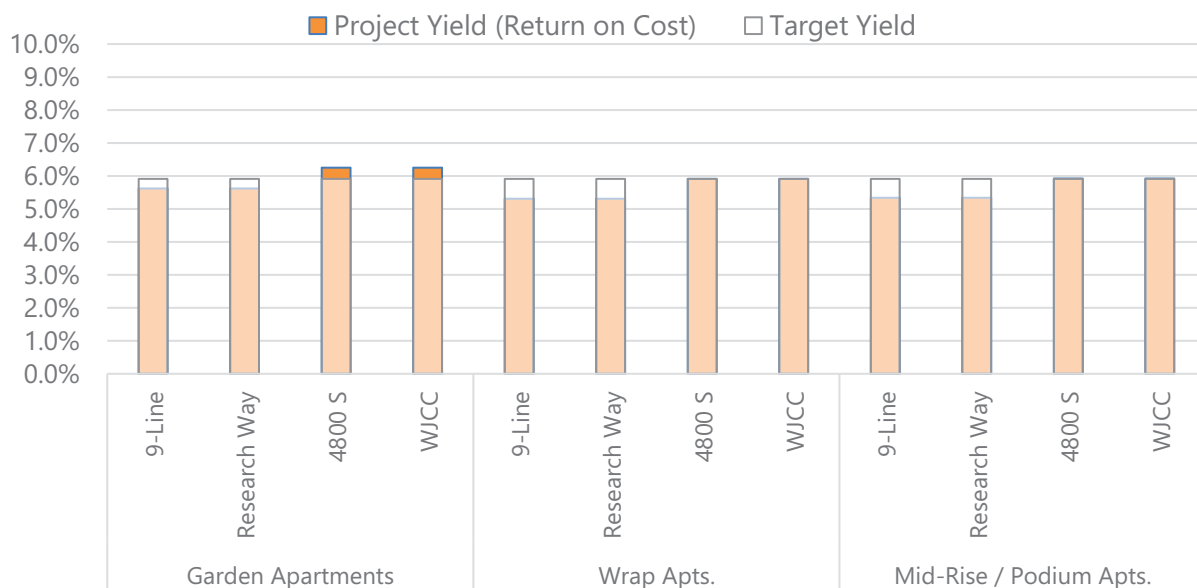
the former exceeds the latter, the project is profitable and therefore feasible. The pro forma included inputs like construction costs, projected achievable rents, land value, operating expenses, and capitalization rates.

## Residential Development

Residential development, as outlined earlier, includes several building types. The resulting chart for residential apartment development in the pro forma analysis shows:

- Apartment housing (of all types) is feasible or very nearly feasible throughout the corridor. The pro forma analysis is a snapshot analysis, but in reality, most of the inputs will be in a constant state of flux. For example, rents will change depending on the building's amenities, the targeted demographic, and the quality of the buildings; land value will change depending on the owner, whether land contains improvements, and how it is zoned; and construction costs change depending on inflation, the cost of labor and materials, and buildings standards. Therefore, the *level* of feasibility is not as important as knowing that housing, in general, is a feasible development type throughout the corridor.
- Garden apartments (including townhomes) are the most feasible residential building type. This is mostly due to the high costs of constructing structured parking. With that said, while garden apartments may provide a developer with a higher return as it relates to a *percentage* of the initial investment, higher density apartment developments such as mid-rise/podium and wrap apartments would provide a developer with a higher *overall* return on the initial investment.
- Residential development is generally most feasible at the 4800 S and West Jordan City Center nodes, due in part to higher projected achievable rents. Feasibility would increase throughout the corridor if rent premiums could be achieved.

**Figure 5. Return on Investment: Apartment Development**

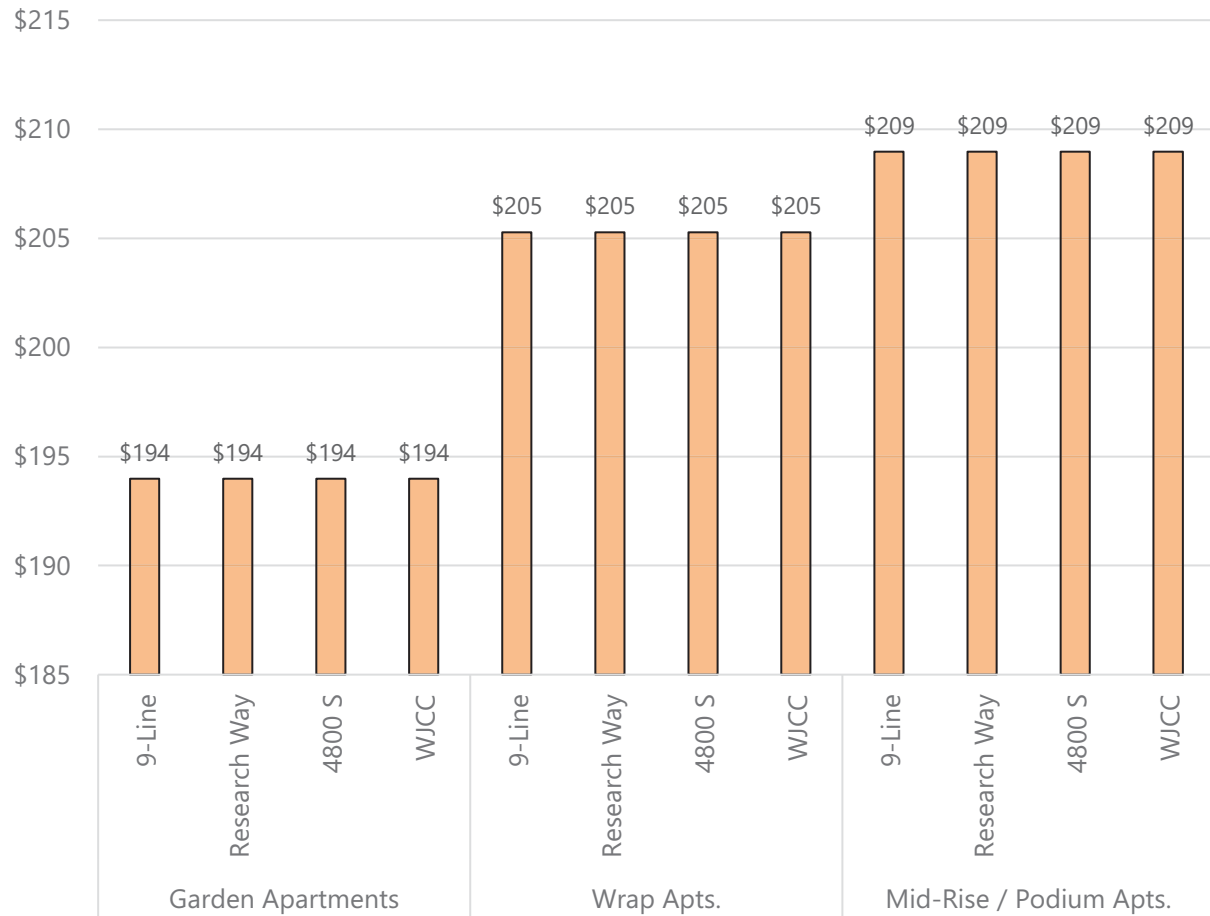


The chart below shows total project cost per square foot for housing projects. As density increases, projects cost more per square foot, due to the cost of structured parking and other "cost premiums." These higher-cost



projects only make financial sense in special locations where revenues are also higher – for example, directly next to a BRT and TRAX station in West Jordan.

**Figure 6. Total Project Cost per Square Foot, Apartment Development**

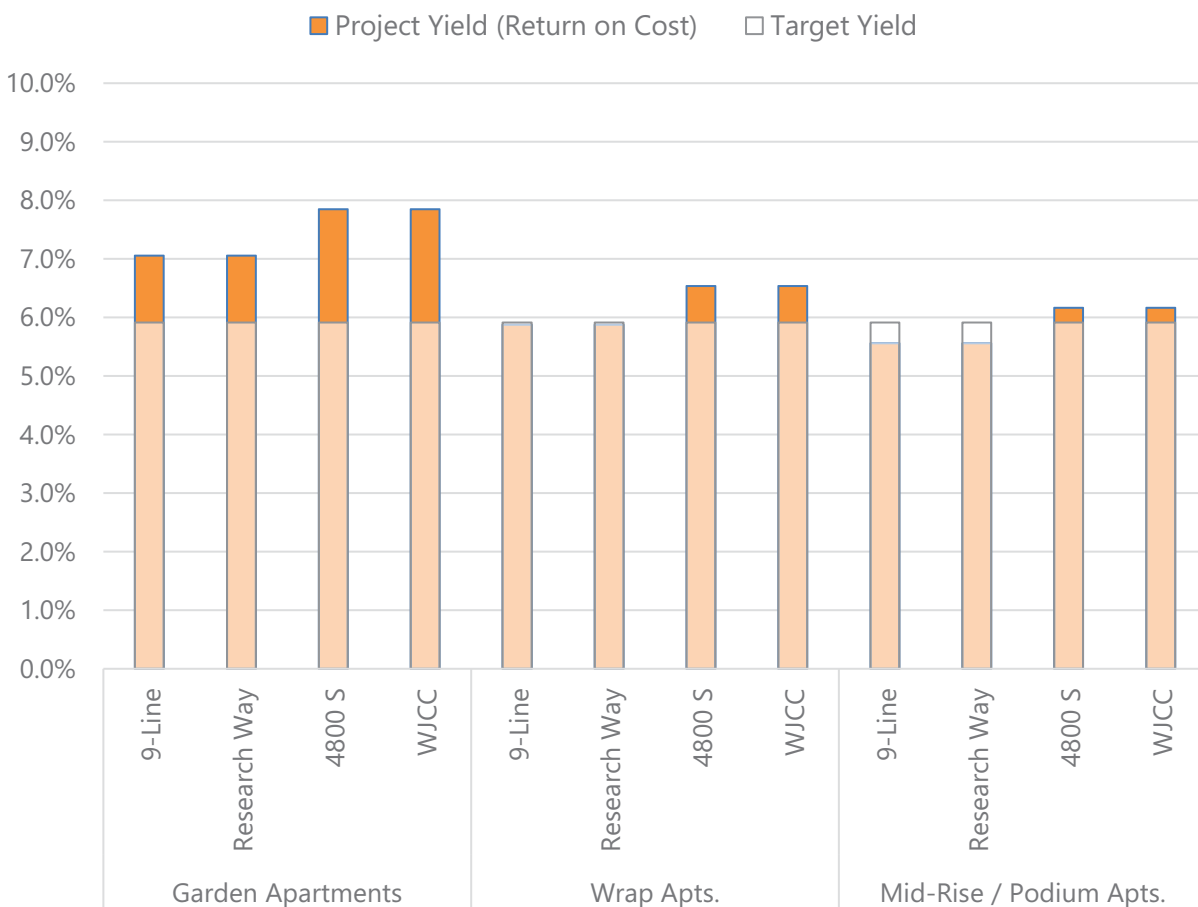


The graph below shows a scenario where the land costs from the development are removed from the development equation, significantly improving feasibility – indicating how certain incentives and/or funding can result in positive project outcomes. (in other models, land is estimated to cost \$20 PSF on average.)

Land cost can be significantly reduced or eliminated in certain cases – primarily when developers already own land, or when the public sector owns land and elects to sell land at below-market values in order to encourage certain kinds of development such as transit-oriented developments or catalytic projects.

While a land write-down is a significant incentive tool to incentivize development on publicly-owned land, it is one of many tools available to local authorities. Even in locations where the land is entirely privately-owned, cities can enter into agreements to reduce a project’s overall cost, such as committing to capital improvements (utilities, infrastructure, streetscape, etc.), utilizing tax-increment financing (TIF) in urban renewal/redevelopment areas, or waiving impact fees and expediting the permitting and plan review process.

**Figure 7. Return on Investment: Apartment Development, Added Incentives**



## Retail Development

Retail feasibility is more nuanced than residential. The Redwood Road corridor is generally overbuilt in retail, as indicated throughout LCG’s earlier research and stakeholder feedback. Further, existing retail stores are typically older, single-story structures.

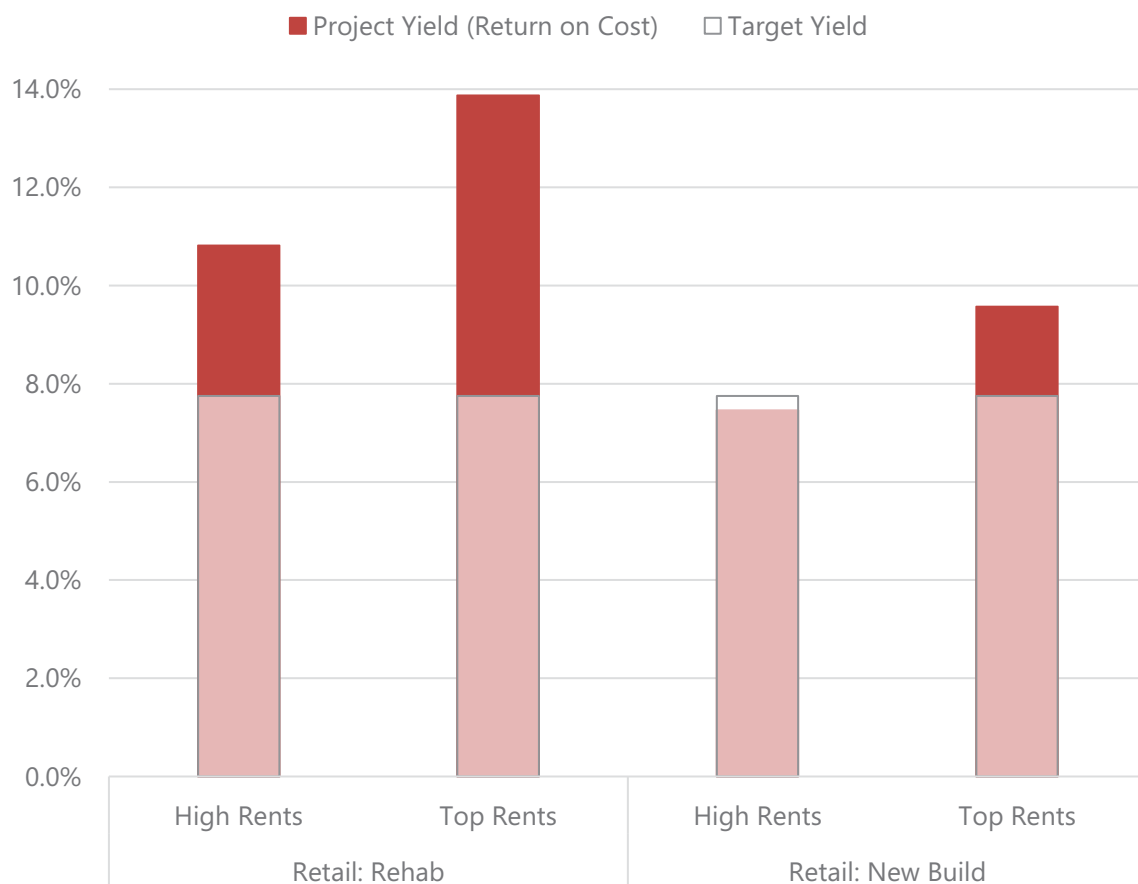
Retail development was modeled using several scenarios:

- “High” rents (asking rents for newer projects on the corridor) and “top” rents (asking rents for the newest projects on the corridor).
- Assuming rehab of existing spaces, and “new build” – demolition of existing space and construction of new space.

Because of the lower cost of rehab/adaptive reuse projects and the large supply of retail properties on the corridor, commercial rehab projects are likely to have a high return on investment – higher, for example, than new apartment development. Existing commercial properties can be rehabbed and converted to new commercial uses – retail, restaurants, fitness centers, ethnic retailers – and even office.

By contrast, *new* retail development will be feasible only in certain locations where top of market rents can be achieved, due to higher costs for demolition and new construction.

**Figure 8. Return on Investment: Retail**



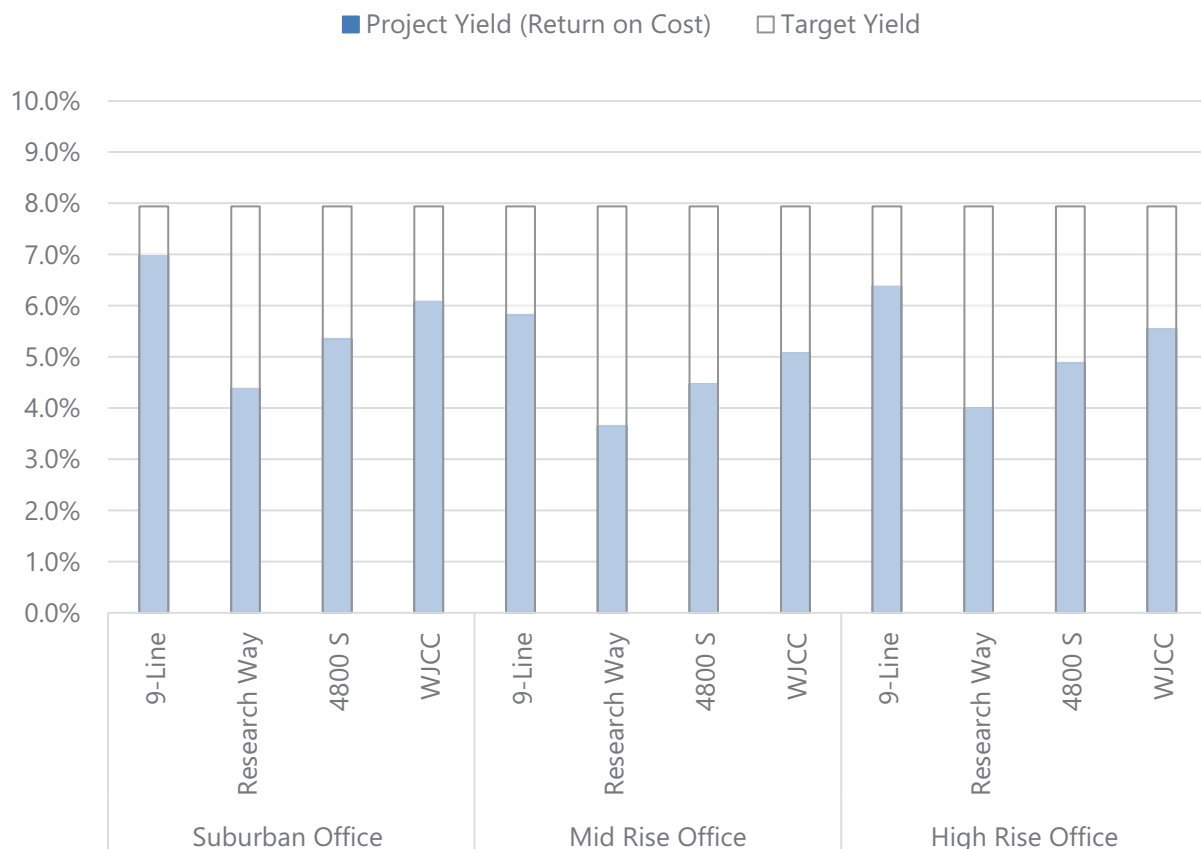
## Office Development

The pro forma analysis assessed the feasibility of speculative office development, which is defined as space built for general office demand. This contrasts with custom office development, which is custom built for a specific purpose or tenant.

It is important to highlight this difference. Custom office development does not conform to standard market conditions as it is regularly owner-occupied, where rent is not a factor and location is generally not as important. Custom office has been built throughout the corridor, some older and some newer, such as the new Petzl headquarters in West Valley City. Speculative office development, on the other hand, is generally clustered downtown and a few other locations (such as the View72 Corporate Center in Midvale). Not surprisingly, then, it has not been built for many years on the corridor.

The pro forma analysis shows new, speculative office development will be difficult in the corridor regardless of the development type or density. This is for several reasons: office rents are low compared to new, high quality office construction costs; and office is currently not a favored investment type due to generally high vacancies and historic overbuilding.

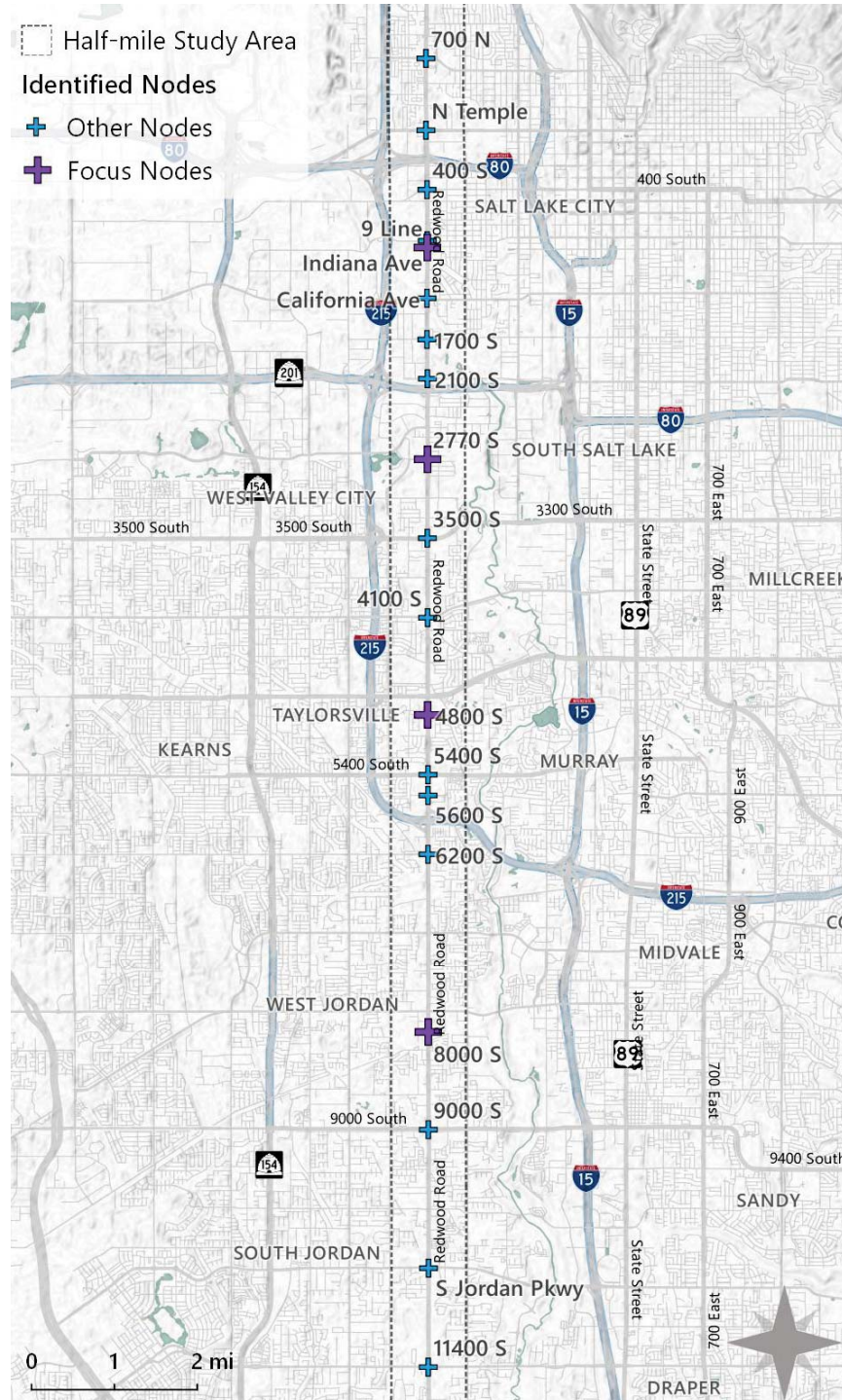
**Figure 9. Return on Investment: Office**



## NODAL OVERVIEW AND DEVELOPMENT EXAMPLES

### Corridor

**Figure 10. Selected Nodes and Corridor Overview**



Source: Salt Lake County, AGRC, and Leland Consulting Group

LCG identified 18 nodes in the Redwood Road corridor which showed potential for transit-oriented development. Every identified node was based on information provided in stakeholder interviews and extensive market research. For the purposes of this task, four “Focus Nodes” were selected as key catalyst sites. Catalyst sites were deemed to be area where there was significant and sometimes unique potential for development. For the purposes of demonstrating a range of land use alternatives, sites which showed a distinct range of features, opportunities, challenges, and land uses were deliberately selected.

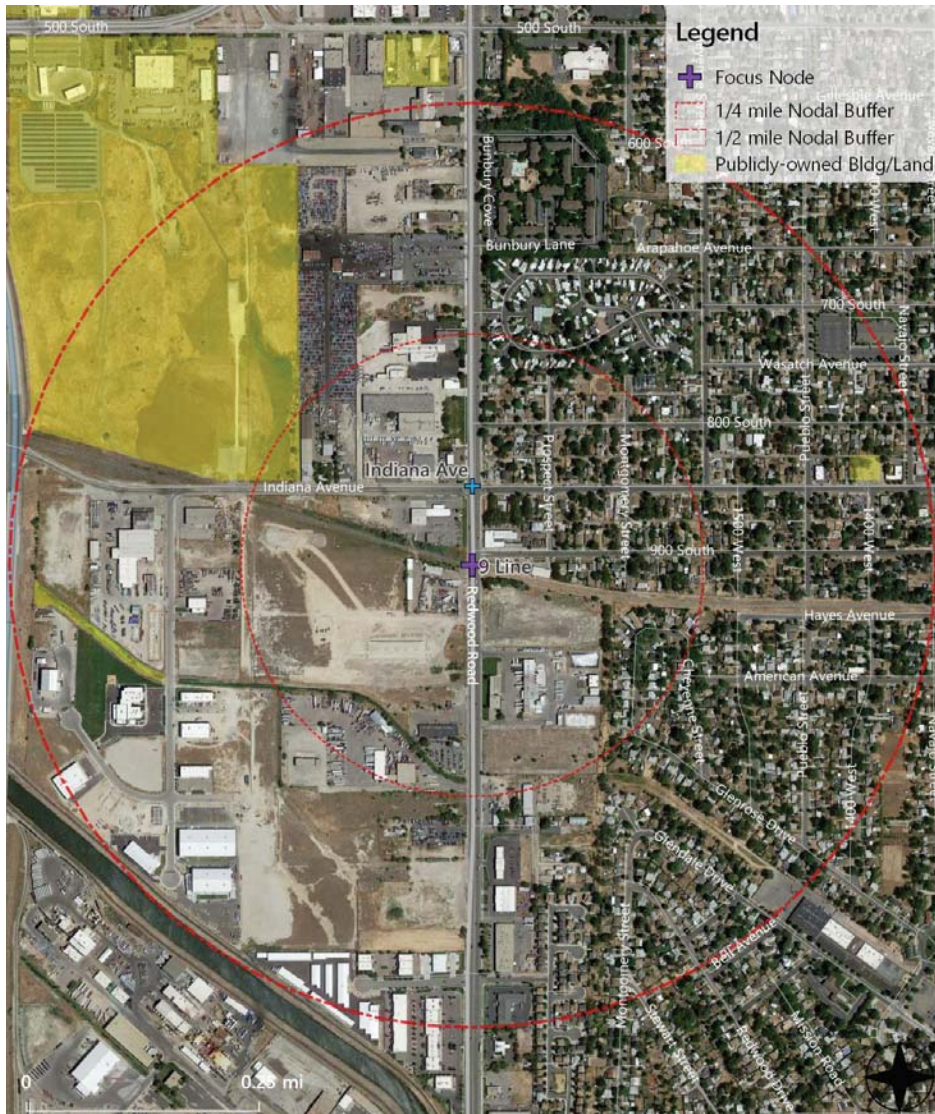
The four *Focus Nodes* (from north to south) are:

- 900 S (9-Line)
- 2770 S (Research Way)
- 4800 S
- 8000 S (West Jordan City Center)

All but one of these nodes (4800 S) is located within or adjacent to a redevelopment area



## 9-Line (900 S)



Source: Salt Lake County, AGRC, and LCG

## Overview

The 9-line is a paved multi-modal trail which terminates at Redwood Road from the east. The trail is a unique asset, highlighted by the proposed 9-Line Redevelopment Area, and identified by Salt Lake City in the 9-Line Master Plan and the Westside Master Plan.

It is characterized by underutilized industrial land to the west and immediately east (frontage on Redwood) and older single-family neighborhoods behind.

Recent development activity within a quarter mile of the node is limited. However, smaller office, flex, and industrial properties have been

built southwest of the node near the canal, and approximately 130,000 square feet of light industrial is either planned or under construction on the parcels in the southwest quadrant of the quarter-mile nodal area. These developments are simple, one- to two-story warehouse-type buildings, contrary to standard TOD building standards. However, buildings add scale and employment-based uses add workers to the area, who help drive demand for additional amenities and retailers.

Furthermore, Redwood Road has historically served as a distinct divider between employment and residential uses in this section of the corridor. With this new development, industrial should remain the predominant building type on the west side of Redwood. On the east, there are industrial and commercial properties which are prime redevelopment opportunities, but only if the market improves.

## Near-term Development Types

Near term opportunities for the nodal area closely follows existing development patterns. In other words, infill and new industrial development will continue to add local employment and, in doing so, will increase potential feasibility of future commercial development as rents increase and streetscape improvements occur.

Below are two examples of small-scale employment-based mixed-use projects which could be a short-term typology well-suited to the existing industrial uses on the east side of Redwood Road.



**Shasta Building** (left): a former warehouse turned creative office, retail, and flex space which leverages its location on one of Portland's busiest bicycle corridors.

**Pitman Building** (right): an employment-based mixed-use project built from the ground up in low-rent area, featuring commercial kitchens and offices.

## Long-term Development Types

The long-term opportunities for the 9-Line are significantly greater. Development surrounding the 9-Line can look to other trail-oriented developments for inspiration, like the Atlanta Beltline and the Eastside Rail Corridor (ERC) in Bellevue, Washington.



**The Atlanta Beltline** is a former railway corridor turned multiuse trail surrounding the core of Atlanta, Georgia. The first 10 years of the project generated an eight-to-one return-on-investment. The Beltline traversed industrial areas and parcels of underutilized land. Like the

9-Line, the Beltline provides unprecedented opportunities for commercial and residential development, radiating from the parks and trails to the adjacent neighborhoods and beyond. In fact, in 2013, REMAX Realty explained that homes near the Beltline were selling within 24 hours. Before the project began, homes along the corridor typically stayed on the market for 60 to 90 days.



Similarly, the **ERC** is a multiuse trail connecting Woodinville to Renton, Washington. REI recently decided to locate its new campus in the Spring District, citing the ERC as pivotal to that decision. Google also expanded its Kirkland, WA campus recently, which now straddles the ERC.

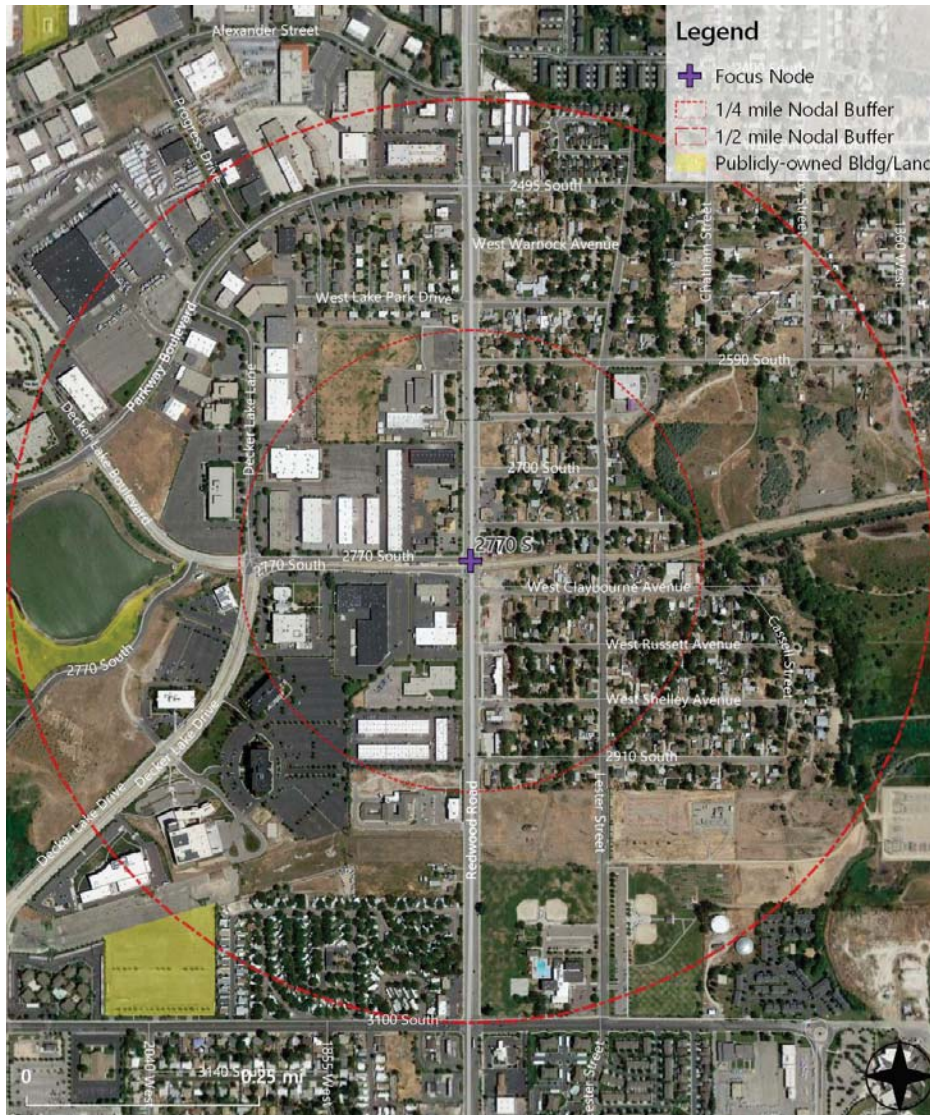


Further afield in **Des Moines, Iowa**, residential developers have identified trail access as an amenity for which they can achieve a revenue or rent premium. The **Bici Flats**, a 154-unit multifamily property, are located at the intersection of three paved trails that connect pedestrians and cyclists to downtown. According to the developer, "although Bici Flats is on the edge of downtown Des Moines, [they] will be able to charge downtown core rental rates because of the access that the trails provide." Similar rent premiums may be



achieved around the 9-Line, particularly once the western section of the trail is complete. Achieving these rent premiums would make construction of medium/high-density residential and mixed-use developments feasible.

## Research Way (2770 South)



Source: Salt Lake County, AGRC, and LCG

### Overview

The Research Way nodal area is characterized by low-density office and industrial uses to the west and older single-family residential to the east. Redwood Junction, a TRAX light rail station, is located on Research Way just west of Redwood Road and serves the Green Line, connecting West Valley Central Station, at around 3500 S and 2700 W, to downtown Salt Lake City.

While there has been little recent development activity around the nodal area, significant development has occurred further along the Green Line around Valley Fair Mall. This development reflects the

Central Valley submarket's emerging market for residential and commercial uses. Multifamily residential development in the Research Way area may require some acquisition of older single-family homes to the east but would require zoning revisions which allow residential uses and probably some sort of incentive to encourage redevelopment and bridge any funding gap. Once such changes are made, this area has the potential to become an "18-hour neighborhood" where employers activate the area during the day and residents at night.

### Near-term Development Types

Research Way is one of the more challenging nodal areas. There is little vacant land and many older properties, mostly single-family residential, so new development will likely be limited to multifamily residential on the little

land currently available. Phased development with gradually increasing densities as properties become available is recommended, starting with low, three-to-four story, surface-parked apartment units.



**The Lofts at 1201, in Durango, Colorado,** offer 57,500 SF of retail, office and residential “live/work” space. This equates to 22 lofts and give commercial/office units. The Lofts reflect a flexible solution to low area rents in the Mountain West.



**La Valentina North and La Valentina Station Apartments, in Sacramento, California,** are part of a phased transit-oriented development adjacent to a light rail station. La Valentina North (bottom) consists of 18 affordable split-level townhome-style rental units. La Valentina Station Apartments (top) is a 63-unit mixed-use, affordable housing infill development project along light-rail. Both properties are surface parked and separated by an alleyway.



The 1-acre site, formerly occupied by auto-body shops, had been vacant for 20 years and had become a destination for drug dealers when the city's Housing and Redevelopment Agency put out a request for proposals in 2007.

Completed in 2012, the \$25 million project was supported by public and private financing which included in part, \$11.8 million in 9% Low Income Housing Tax Credits; \$8.8 million in assistance from SHRA including City HOME funds, City Housing Trust Funds, Alkali Flat Tax Increment funds and Community Development Block Grant-Recovery funds; a \$631,000 grant from the CalReuse Remediation Program, and a \$417,000 Townhomes of the Future

grant award through SMUD. While the developer utilized a number of programs to help with financing, they were also creative with the design, using less expensive materials to keep down the total construction cost (with construction costing only \$167 per square foot). La Valentina showed how urban form can be built to suburban economics, especially when intelligently designed and various funding sources are utilized.

## Long-term Development Types

The long-term goal for the Research Way nodal area should be a mixed-use TOD office/employment district, leveraging existing employment hubs and the nearby TRAX station. Such a district would include a well-integrated mix of complementary high-activity uses, including transit-supportive commercial, residential and employment uses.



**The Solstice Apartments in Missoula, Montana** is a small-scale vertical mixed-use project, constructed in 2011. It includes 34 affordable/workforce housing units and 17,400 square feet of office and retail space. The project was a public-private partnership, funded through the City, the RDA, a bank, nonprofit affordable housing group, and others. The Solstice serves as a good example of utilizing funding tools to bridge funding gaps in the Mountain West.





**Brown Crossing, Idaho** is a mixed-use project that includes 92 residential units and 59,000 SF commercial infill development (retail, office, entertainment). It is Anchored by a brew house and has a mix of professional services and shopping retailers. Brown Crossing is considered mostly horizontal mixed use, showing the benefit of good design.

## Taylorville (4800 S)



Source: Salt Lake County, AGRC, and LCG

### Overview

The 4800 S nodal area is characterized by frontage retail and service-based commercial, recreational uses, and single-family residential uses. It is mostly built out and has little vacant land.

The City of Taylorville has identified this area as a future senior housing district due to the existing presence of health-based and community amenities and senior housing.

Opportunities for increased walkability exist, as is often the case, away from the main intersection – located at 4700 South. The locally-serving smaller road at 4800 S is more appropriately sized for TOD.

It is important to note that, further north, Salt Lake Community College presents another unique demographic to tap. SLCC has its own plans for student housing to the west of its campus, but future development may pencil as the area redevelops. In the meantime, targeting students may be a worthwhile marketing strategy for existing and future commercial development.

## Near-term Development Types

In the near-term, housing should be the primary focus. Additional rooftops can help provide the impetus needed to boost rents to achieve higher densities and mixed-use buildings at a later date, particularly senior- and student-oriented developments which leverage both the senior district work done by the City and the presence of SLCC to the north. Further, additional rooftops would support existing retail, and potentially drive retail demand to a point where redevelopment of the low-density commercial space is feasible.

Examples of housing typologies are as follow.



**The Rose Villa Senior Community in Portland, Oregon** was a former garden community of low density apartments, redeveloped into cottages, apartments, and common space. (Pictured: Main Streets Apts.)

Creation of “pocket neighborhoods” promoted walkability within the larger community, which transitioned up to a new Main Street and Town Center that boasted amenities at street level and loft apartments above.



Closer to West Jordan are **The Gardens in South Jordan**, a 60-unit senior multifamily property (over 55 years-old) built in 2013. The Gardens show that densities are feasible even in more suburban areas of the corridor.

## Long-term Development Types

A phased development approach could result in a dense, walkable, mixed-use housing district targeted at senior communities. This would be in line with the previous conceptual work already completed at the streetscape level by Taylorsville City, as follows.



**Figure 11. Senior Housing District Pedestrian Corridor Prototype**



Source: City of Taylorsville

Some examples of case study typologies are as follow.



Senior City in Federal Way, Washington is a mixed-use transit-oriented development project which include senior apartments and office. The project shares a parking garage with the adjacent transit center, an effective practice to mitigate many of the expensive parking costs associated with higher density developments.



K14 in Eugene, Oregon is a mixed-use transit-oriented student housing project. The building includes underground parking, 45 residential units and ground floor retail space. The market would not have supported such a development, if not for special funding utilized by the developers, who sought tax exemptions and tapped the specialized student housing market. This housing typology can be a model for the nodal area when Taylorsville's market improves, Salt Lake Community Colleges grows or decides to pursue off-campus housing, and/or there is significant growth in demand in the student housing market.



## West Jordan City Center (8000 S)



Source: Salt Lake County, AGRC, and LCG

### Overview

West Jordan City Center, approximately spanning from just north of the intersection at Redwood and 7800 S to 8200 S, is characterized by civic, recreational, and office uses to the west of Redwood Road, and underutilized commercial uses to the east. The TRAX light rail line runs southwest from the east with a station located at approximately 8050 S and 1600 W.

While a large new Salt Lake County Library was recently constructed in the area, there has been very little recent private investment. Further along the TRAX line, however, a 40-acre master planned TOD is in various stages

of completion – mostly planned or under construction – at Jordan Valley Station (about 3300 W). The development includes up to 1,396 residential units and retail, restaurant, medical, and professional office uses. Phase One included NOVI, a 270-unit apartment community. Rents at NOVI are some of the highest in the County, showing the rent premiums associated with TOD.

The area encompassing West Jordan City Center consists of several publicly-owned properties. These property owners include Salt Lake County, UTA, West Jordan School District, and West Jordan City. The school district building (a former big box retail store) – currently used as offices – is a prime redevelopment site.

Multiple redevelopment areas are in place at the City Center, enabling tax-increment financing as a significant incentive for redevelopment projects. Market conditions are also strong compared to other suburban locations in Salt Lake City, with the “Central Valley” submarket outperforming others (per CBRE data) and strong local socioeconomic conditions.

## Near-term Development Types



**The City of Plano, Texas** was a typical dated suburban location in the early 2000s, with little in the way of a recognizable downtown. Then, in 2002, a light rail station was built, and the City began to plan the area's future as a "Transit Town Center." The City developed a Downtown Development Plan and approved a "Redevelopment Concept" which specifically called for higher density mixed-use development near the station. Significantly, the City initiated public-private partnerships (PPPs) and utilized funding tools to incentivize the redevelopment of city-owned land.



The catalyst property was a city-owned 3.2-acre site next to the transit center (for context, this is about double the size of West Jordan's site next to the City Center TRAX Station). The City of Plano made the initial infrastructure that would otherwise fall to the developer, waived the impact fees, and heavily discounted the land lease, which increased the feasibility of the 200+ unit project.

A few years later the City partnered with the same developer on another 3-acre city-owned site to build a 229-unit mixed-use project, again waiving certain costs to make that project financial feasible. These two developments jumpstarted the market after the recession, attracting new development and investment to the downtown area and turning Plano's downtown into a compact, walkable, mixed-use TOD district.



**West Park Promenade in Billings, Montana**, is a horizontal mixed-use adaptive reuse project. Built in 1962, the property formerly housed an enclosed 800,000-square-foot mall. After suffering from high vacancies for a number of years, it was redeveloped as an outdoor lifestyle center with multifamily residential units. Most of the original structure remains intact after the developer split the existing mall structure, built a retail promenade, and rehabbed and upgraded the internal retail spaces and external appearance.

The development is now vastly more walkable and pedestrian connectivity is significantly improved. The residential component of the development has continued to be implemented in phases to meet market demand as it grows (the recently-built Avenue C Apartments is pictured).

West Park Promenade is an excellent example of phased, design-focused adaptive reuse and infill development where market conditions do not necessarily support initial major redevelopment.

## Long-term Development Types

The West Jordan City Center has the potential to become a major mixed-use TOD district. However, this requires the market to improve and identification of and collaboration with the correct partners.

Examples of major redevelopment mixed-use projects include the following.





**Belmar in Lakewood, Colorado**, was once home to a 35-year-old, 104-acre, 1.4 million square foot transitional enclosed mall. Recent redevelopment of the area (due in part to the presence of the West Alameda Avenue Corridor RDA) has recently resulted in Belmar becoming downtown Lakewood.

The project includes 1,300 residential units (38% owned, 62% rented), 1.1 million square feet of retail space, 900,000 square feet of office and hotel space, and has about 2,500 employees in the area.

Initially, the Lakewood Redevelopment Authority partnered with Continuum Partners in the redevelopment of Belmar, providing financial support for public improvements, such as sidewalks, streetlights, parks and parking structures.

Both tax increment financing (TIF) and a public improvement fee (PIF) which supported revenue bonds were used. Beginning in 2003, Lakewood Reinvestment Authority pledged \$500,000 in Alameda Corridor property tax increment toward the repayment of the bonds, plus an annual growth of 3%. The agreement terminates when all bonds have been retired and the developer is fully reimbursed for public improvements, or August 1, 2027 whichever comes first. In addition, the City will rebate half of its 3% lodgers' tax toward the repayment of bonds issued for public improvements when the planned hotel is completed.

While the project required significant investment, Belmar now generates approximately \$200 million a year in retail sales and contributes 2.5 percent of Lakewood's total sales tax revenue.



**Thornton Place in Seattle, Washington** converted a 9-acre suburban parking lot into a dense, mixed-use community centered around 2.7 acres of new open space. The development includes 530 housing units (including a significant portion of affordable and affordable units at a density of 96 dwelling units per acre), 50,000 square feet of retail space (including a multiplex cinema), and 880 underground parking stalls, of which 350 are shared with the region's transit operator. A creative parking deal – a co-investment between METRO and the developer which was calculated based

on hours of use – lessened costs while increasing efficiency. The developer also took advantage of the City of Seattle's "Multi Family Tax Exemption" program, which provide tax exemptions for the first 12 years of operations.



**The Marmalade Block in Salt Lake City, Utah** was Salt Lake RDA-owned land known which was subdivided and sold off through a developer RFQ process.

Now, a large 270-unit mixed use residential and retail project is under construction on the northwest corner of the Marmalade block. The project consists of three buildings and a shared two-story podium.





The RDA and the City contributed significant public investment, including street improvements, utility upgrades, land write downs, loans, and assistance for the construction of parking, among others.

The result should be a walkable, high-density mixed-use development.

### Example Land Use Program

The West Jordan City Center is a unique area with endless possibilities. Five contiguous parcels total approximately 26.6 acres on the east side of Redwood Road, including the parcel which contains the West Jordan School District and two UTA-owned parcels containing the TRAX Park and Ride parking lot. Redevelopment of the area will be a phased process in keeping with changing market conditions. That said, the following program highlights the land uses that may the area could ultimately support.

In order to create a walkable, urban, transit-oriented development future development should be in keeping with the following attributes:

- Total Floor Area Ratio (FAR) greater than 1.0;
- Residential development totaling at least 85 percent of all building area (not including parking);
- Residential densities greater than 40 dwelling units per acre; and
- Residential parking ratios no more than, on average, one space per residential unit and four spaces per 1,000 square feet of commercial space, with shared parking between residential and non-residential uses.

Given the attributes outlined above, the site may include the following land uses.

- 1,000 residential units
  - A mix of studios, one-bedroom, two-bedroom, and limited three-bedroom apartments available to a mix of incomes and ages.
- 190,000 square feet commercial
  - 120,000 square feet office
  - 70,000 square feet locally-serving retail
- Parking garage
  - Shared use, to serve the UTA Park and Ride (replacing the current surface parking), as well as nearby future development as calculated on hours of use – i.e., residential parking demand during the evening, weekend, and at night, office demand during the work day, and retail throughout the week, except overnight.

## APPENDIX

The following map consolidate the redevelopment areas of the five cities located along the Redwood Corridor.

### Market Analysis Summary

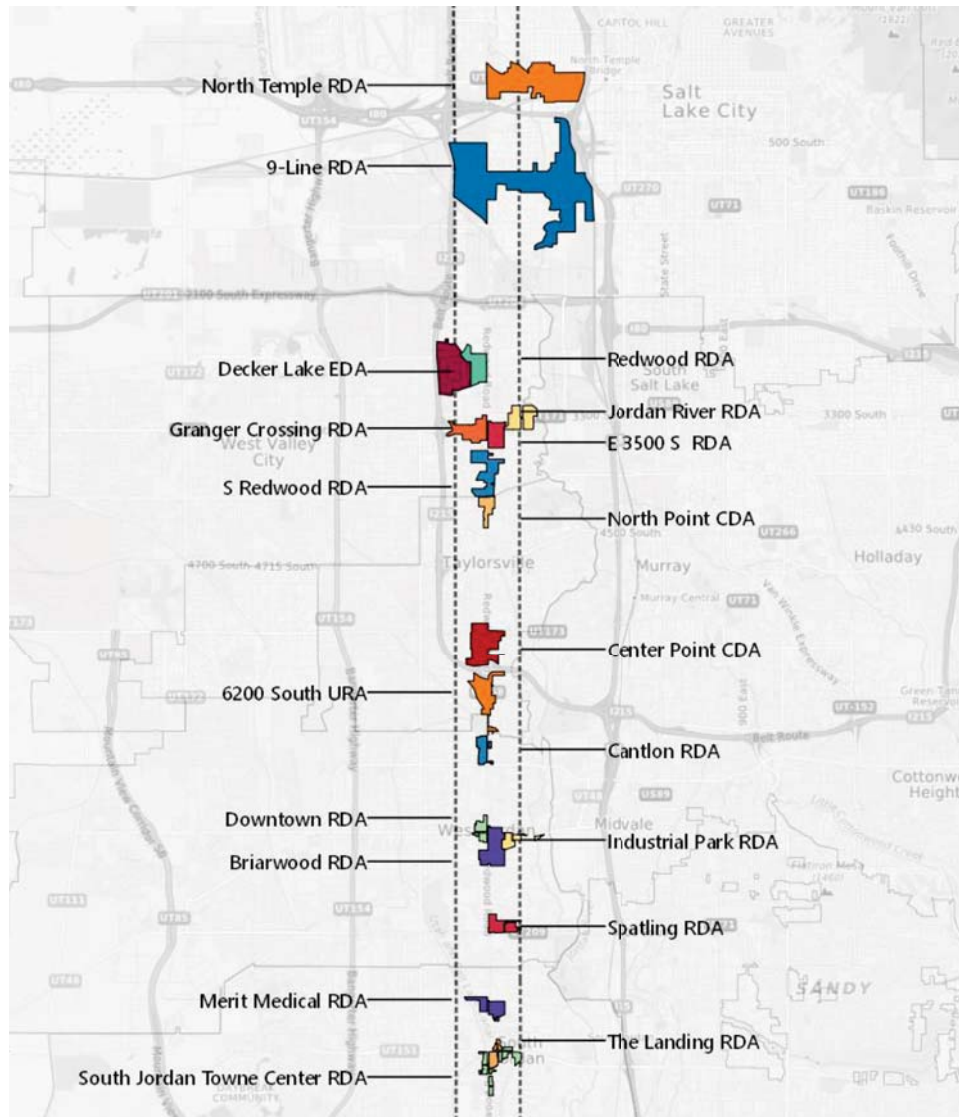
The table below provides some key assumptions for moving forward, based on the data and information provided throughout this market analysis.

**Table 3. Land Use Market Analysis Summary**

Land Use	Notes
Residential	<ul style="list-style-type: none"> <li>The regional residential market is strong, driven by a high demand for new housing. This will likely fall within the category of “missing middle housing.”</li> <li>The Redwood Road corridor has generally underperformed relative to the broader region, but some new higher-density residential developments in Salt Lake City (apartments) and West Valley (townhomes) have exceeded expectations.</li> <li>Home values are higher in the southern sections of the corridor, reflective of the larger and newer housing stock.</li> <li>Developing a diverse mix of housing focused in nodal areas and near recent development activity can absorb some of the demand generated by the high population growth projected in the county.</li> </ul>
Commercial	<ul style="list-style-type: none"> <li>The corridor is overbuilt for commercial and alternative commercial corridors are generating more sales tax for most study area cities.</li> <li>Redevelopment areas have increased commercial development clusters at major intersections.</li> <li>Office development is sparse, with small office space (medical, law, small business, etc.) the primary form. Achievable office rents are low relative to other areas, and is unlikely to incentivize significant office development.</li> <li>Population growth, particularly with the Millennial generation, will drive demand for commercial amenities and mixed-use, transit-oriented development, albeit relatively insignificantly.</li> <li>Demand for traditional suburban commercial development is in decline. Transitional or phased redevelopment of underutilized sites and buildings throughout the corridor should be a priority.</li> </ul>
Industrial	<ul style="list-style-type: none"> <li>Industrial development is concentrated in Salt Lake City and West Valley and is likely to remain in place with little future change. City planning documents have identified these industrial districts as major employment areas that are integral to the city.</li> <li>Redwood Road is a transitional zone between residential and industrial land uses.</li> </ul>
Other	<ul style="list-style-type: none"> <li>Institutional and civic development along the corridor has resulted in employment-based districts, causing increased commercial development activity. City centers (such as that in South Jordan and West Jordan) have been recently built up.</li> </ul>

## Redevelopment Areas

**Figure 12: Location of Redevelopment Areas**



Source: Study Area Cities and Leland Consulting Group

**Table 4: Status of Redevelopment Areas**

Name	Area	City	Type	Status
North Temple	North Temple	Salt Lake City	RDA	Active
9-Line	900 S	Salt Lake City	RDA	Proposed
Decker Lake	2700 S/I-215	West Valley	EDA	Active
Redwood	2770 S	West Valley	RDA	Active
Granger Crossing	3500 S (West)	West Valley	RDA	Active
Jordan River	3500 S (East)	West Valley	RDA	Active
E 3500 S	3500 S	West Valley	RDA	Active
S Redwood	3900 S	West Valley	RDA	Active
North Point	4100 S (South)	Taylorsville	CDA	Active
Center Point	5400 S	Taylorsville	CDA	Active
6200 South	6200 S	Taylorsville	URA	Active
Cantlon	6600 S	West Jordan	RDA	Active
Downtown	7800 S (West)	West Jordan	RDA	Active
Industrial Park	7800 S (East)	West Jordan	RDA	Active
Briarwood	8000 S	West Jordan	RDA	Active
Spatling	9000 S	West Jordan	RDA	Active
Merit Medical	9800 S	South Jordan	RDA	Active
The Landing	10400 S	South Jordan	RDA	Active
South Jordan Towne Center	10400 S	South Jordan	RDA	Active

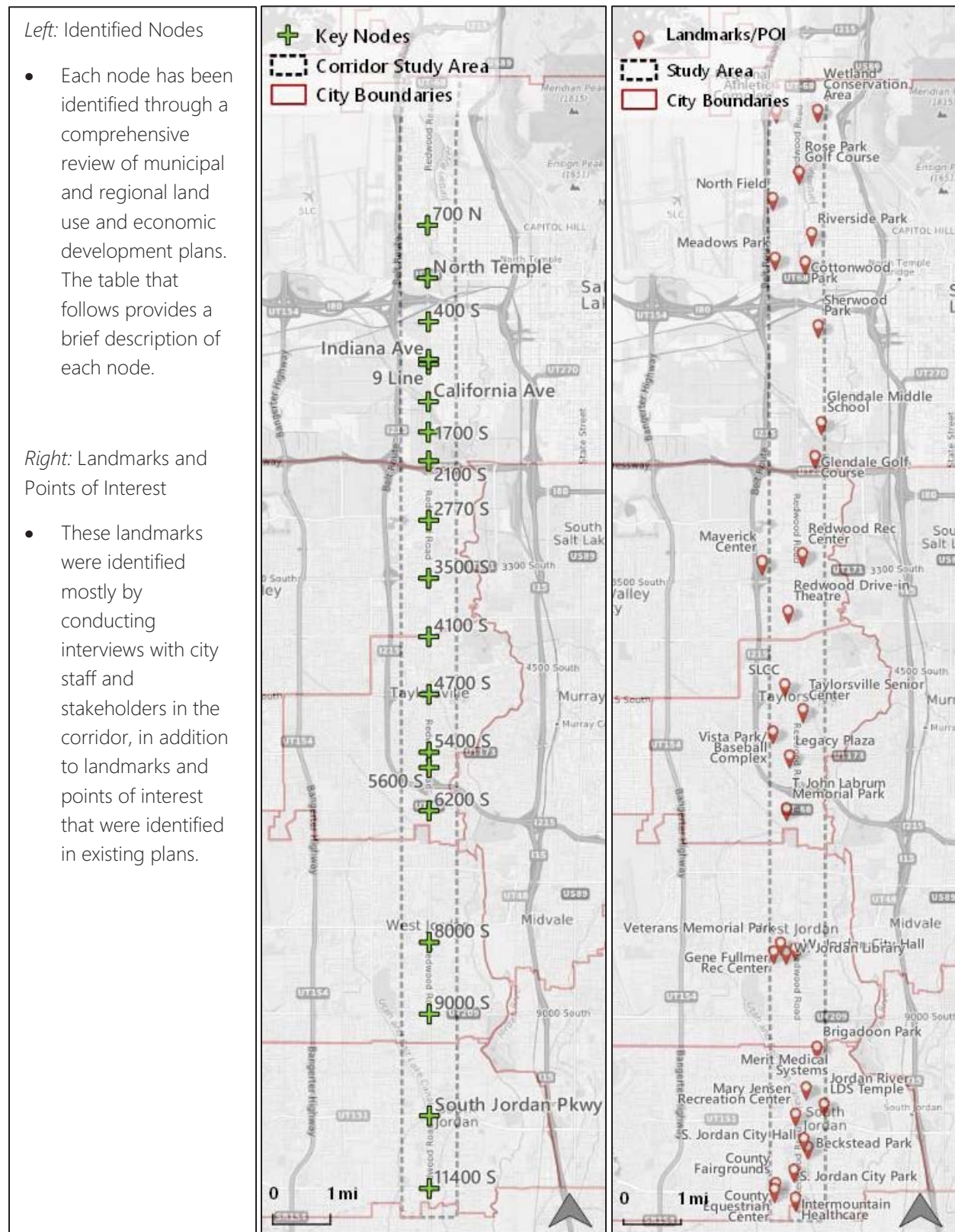
Source: Study Area Cities and Leland Consulting Group

## Activity Centers: Nodes, Centers, Landmarks, and Land Utilization

This section focuses on the various components of an ‘activity center’ – places that attract local or regional interest, commercial activity, and traffic. By identifying where activity centers currently exist in the corridor we can catalog existing development successes. Thereafter, these successes can be leveraged by focusing additional development efforts in such areas. Most of the nodes and centers outlined in this section have already been the focus of individual municipalities. Thus, it makes sense to build upon prior planning efforts. (For a description and summary of the source of these nodes in the cities’ planning documents, see the Appendix.)



**Figure 13: Identified Nodes (Left) and Selected Landmarks (Right)**



Source: WFRC, AGRC and Leland Consulting Group

**Table 5: Key Nodes, Redwood Road Corridor, North to South**

Node (Address)	Notes
700 North	Major intersection, connecting to Redwood Capitol Hill neighborhood/downtown
North Temple	Transit (TRAX) node and located in a RDA
400 South	Designated a "Regional Node" in the Westside Master Plan
Indiana Ave	Located in a future RDA. Designated a "Community Node" in the Westside Master Plan
900 South (9-Line)	Located in a future RDA. Designated a "Recreational Node" in the 9-Line Trail Master Plan
California Ave	Designated a "Community Node" in the Westside Master Plan
1700 South	Designated a "Regional Node" in the Westside Master Plan
2100 South	Designated a "Regional Node" in the Westside Master Plan
2770 South	Located in an RDA. Listed in the West Valley City General Plan as a major transit node
3500 South	Multiple URAs surround this node
4100 South	Commercial Node encompassing two redevelopment areas
4700 South	In Taylorsville's Economic Development Plan, 4700 S is a major focus area
5400 South	Located in a CDA. Identified in Taylorville's Center Pointe Master Plan as a major commercial node.
5600 South	Located in a CDA. Identified in Taylorville's Center Pointe Master Plan as a major commercial node.
6200 South	Located in a URA. Identified in Taylorville's Economic Development Plan as a major employment-based node.
8000 South	Transit/retail node in West Jordan City Center surrounded by multiple RDAs.
9000 South	Commercial node located in an RDA.
South Jordan Pkwy	A civic/retail node in the Town Center, surrounded by two RDAs.
11400 South	Listed as a "gateway" in the South Jordan General Plan

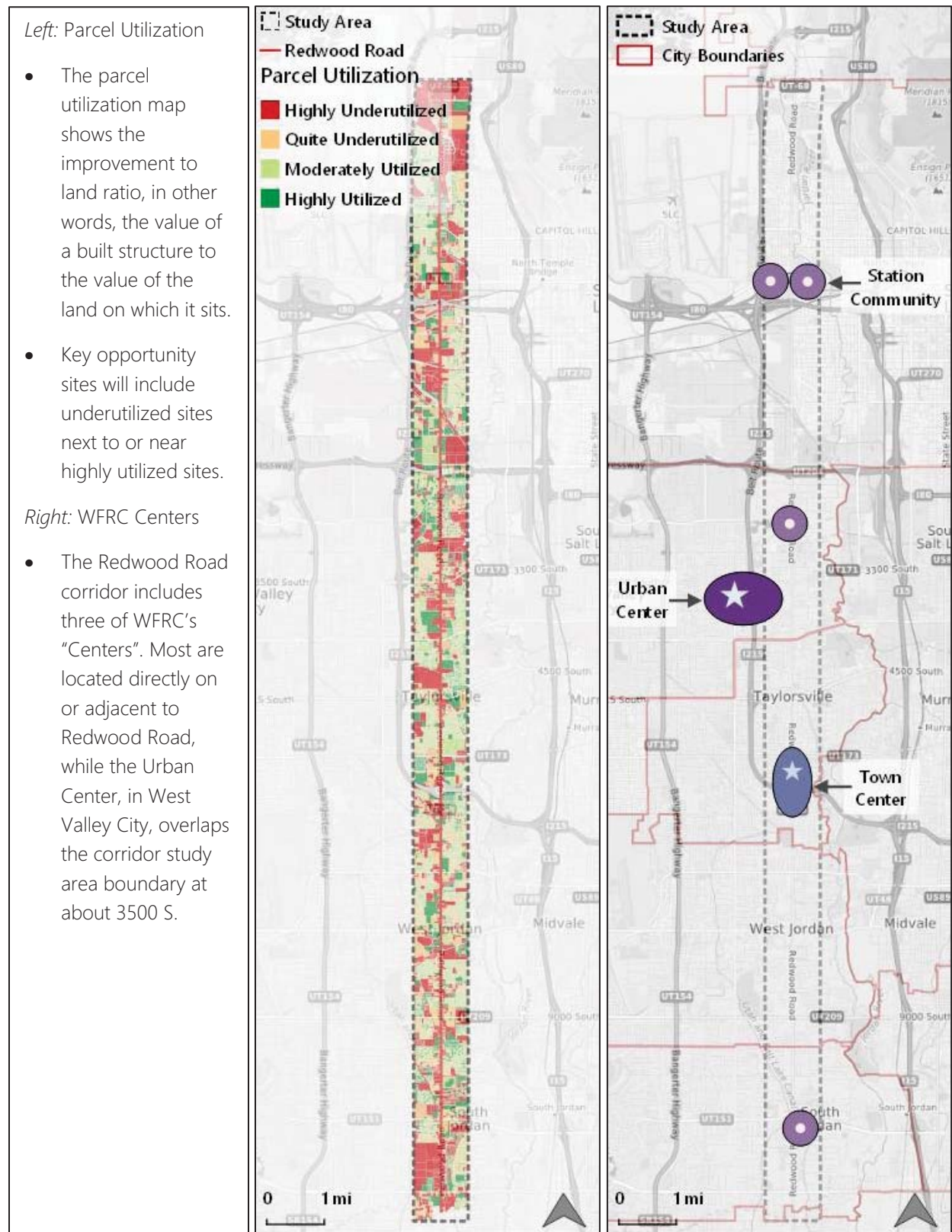
Source: Study Area Cities Plans (see appendix) and Leland Consulting Group

There are many major nodes throughout the corridor. Existing land use and economic development plans in each city identify most of the nodes listed in the table and mapped out above. The plans generally outline the targeted uses for the land and should be adhered to. In many cases, the nodes identified above fall within the boundaries of redevelopment areas. Where possible, efforts should be targeted at areas that encompass the maximum amount of activity centers and redevelopment areas in order to attain development incentives.

Figure 14 shows parcel utilization and WFRC Centers. Both provide additional evidence of where best to focus development efforts<sup>1</sup>.

<sup>1</sup> The parcel utilization value is calculated by dividing the building or improvement value by the land value. These are as follow. Highly Underutilized (typically vacant): 0 to 0.5; Quite Underutilized: 0.5 to 1.5; Moderately Utilized: 1.5 to 2.5; and Highly Utilized: 2.5 and greater.

**Figure 14: Parcel Utilization (Left) and WFRC Centers (Right)**



Source: AGRC, WFRC and Leland Consulting Group

## **WFRC Centers**

In WFRC's Regional Transportation Plan (2015), centers are described as "historical and emerging regional destinations of economic activity and importance." Like nodes, these centers should absorb some of the expected growth and expand to provide mixed-use and walkable development types. WFRC identified six different types and intensity of regional centers, of which the Redwood Corridor has three: Urban Center, Town Center, and Station Community

Urban Centers are described as being the focus of commerce and local government services benefitting a market area of a few hundred thousand people. Ideally, Urban centers should be served by high-capacity transit and major streets. Town Centers provide localized services to tens of thousands of people within a two- to three-mile radius. Station Communities are geographically small, high-intensity centers surrounding high-capacity transit, and their focus can vary from employment to housing and commercial.



# Attachment D

Public Survey – Salt Lake City Specific Results

# PUBLIC SURVEY RESULTS SUMMARY - SALT LAKE CITY

April 2017

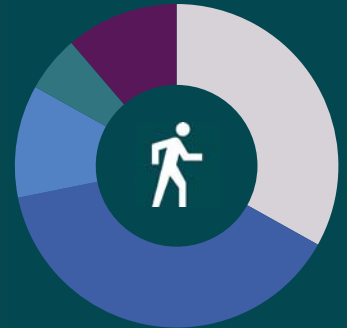
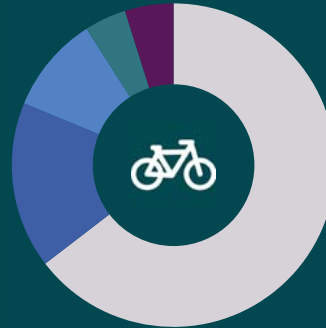
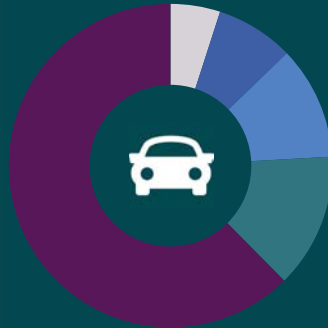
To engage the communities along Redwood Road, the study team conducted an online survey regarding which modes people use on Redwood Road, how satisfied they are with each mode, and areas for improvements. The following summarizes the results for the Salt Lake City portion of the corridor.

**161**  
Responses \*

\*Estimated total of Salt Lake City respondents based on survey responses.

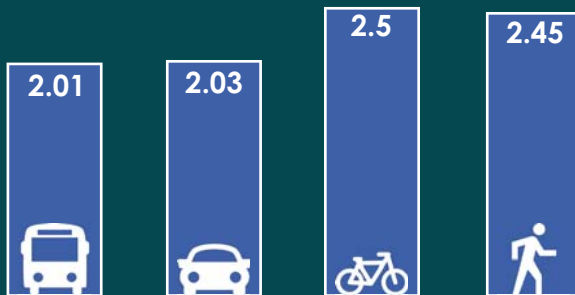
## How Often Do You Use...

Never  
A few times a year  
At least once a month  
At least once a week  
More than once a week



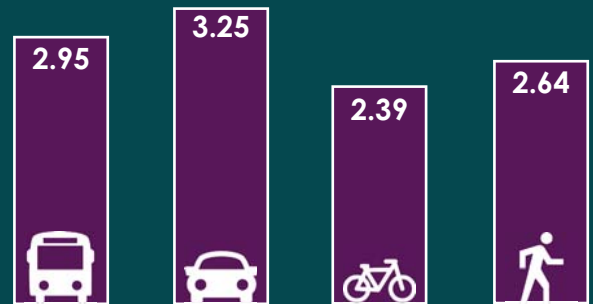
## Improvement Priority

**Average by Mode:** Respondents were asked to rank the transportation modes in order of priority for improvements on a scale of 1 to 4 (1 = highest priority, 4 = lowest priority).



## Satisfaction with Current Conditions

**Average by Mode:** For each mode, respondents were asked to rate their level of satisfaction with current conditions on a scale of 1 to 5 (1 = worst, 5 = best).



## Top Improvements Desired by Mode

Respondents were able to choose multiple improvements for each mode.

### TRANSIT

Better bus connections to other transit service

More frequent service

Better amenities at current stops

### DRIVING

Reduced traffic congestion

Improved traffic signal timing

Reduced crashes

### CYCLING

More / improved areas designated for bikes

More / improved access to trails

Improved transit connections

### WALKING

Better sidewalks

More visible / frequent crosswalks

More / improved connections to trails