

Appendix A

Needs Assessment Technical Memorandum



Needs Assessment

July 21, 2013



INTRODUCTION

The Utah Transit Authority (UTA) is conducting an Alternatives Analysis (AA) to better understand current and future transit needs of residents in southern Davis County through the planning horizon of 2040.

The Needs Assessment stands as the seminal document showing project justification and summary of relevant information for a potential major investment which may be the outcome of this study. A draft of the Purpose & Need is included. The Purpose & Need will be subject to refinement if the project proceeds into an environmental phased governed by the National Environmental Protection Act (NEPA); however the overall intent of the Purpose & Need elements will need to remain intact for a project or projects developed from this basis to continue to project development without a supplemental evaluation. In essence, the Purpose & Need element of the Needs Assessment includes the reasons for a project to be explored at this stage, and then advanced once it is defined and evaluated.



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For this stage of an Alternatives Analysis, data and information have been collected from key agencies. This includes quantitative and qualitative information used to identify and support projects and strategies to be developed as a transportation or set of transportation solutions.

The initial premise is that a transit solution is needed. The justification and process for this assertion is established through the following components:

- Needs Assessment (compilation & analysis of a wide variety of transportation and urban planning indicators)
- Goals & Objectives
- Purpose & Need Statement



Study Area

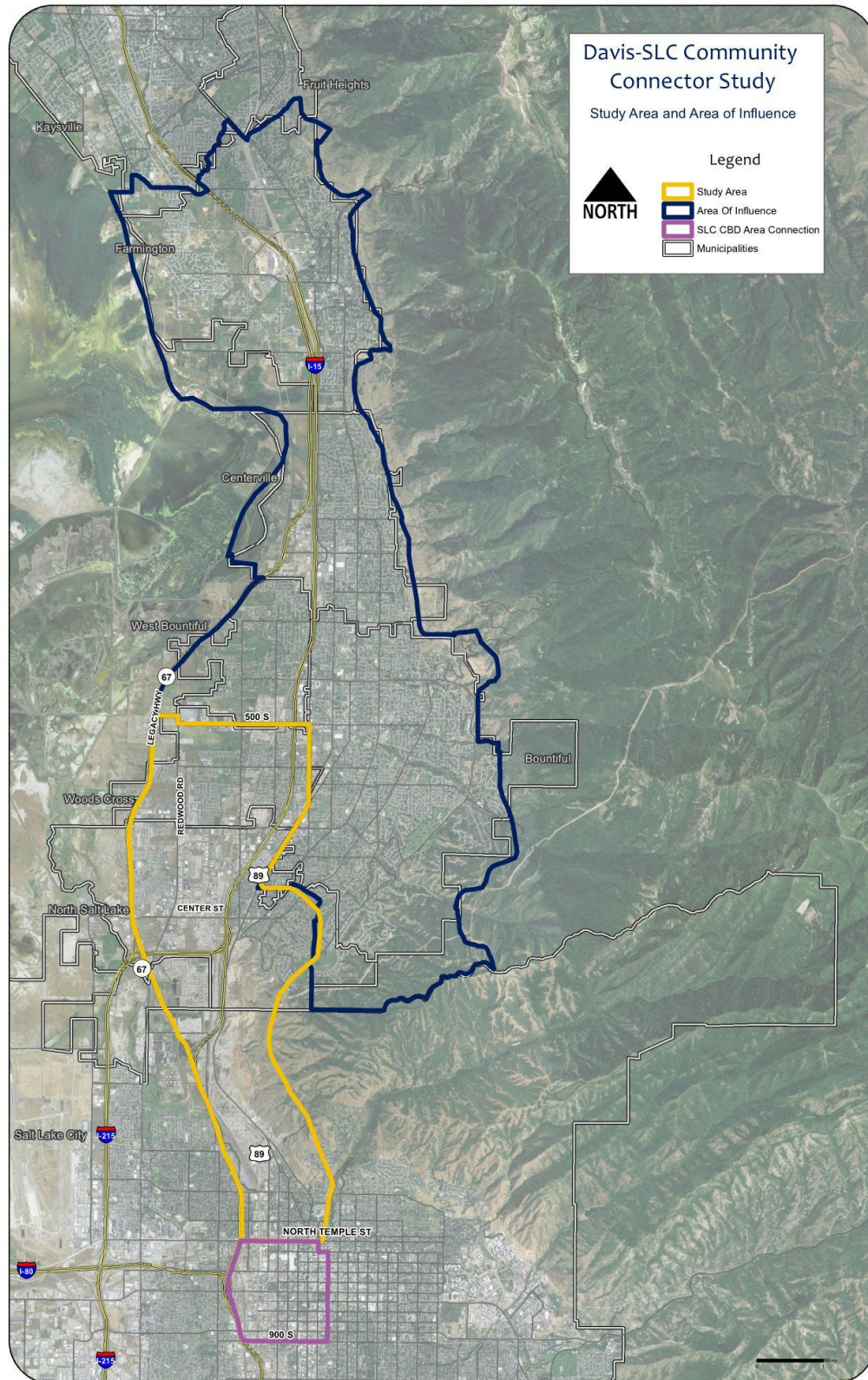
The Study Area, as shown on the following page, includes the northern portion of Salt Lake City and a large portion of North Salt Lake. The Study area also encompasses sections of South Davis County and Salt Lake County.

Primary stakeholders for the project are drawn from community members and agencies within the study area. In addition, a Planning Influence Area was delineated to take into consideration potential future expansion and needs of communities to the north including Bountiful, Centerville, and Farmington. The Study Area is linear, and representative of developed areas constrained to the east by the Wasatch Front Mountains and to the west by the Great Salt Lake. This project is also significant at a regional context. The Study Area represents a gateway to Salt Lake City as well as connections to activities and transportation within the metropolitan area. Study

A Planning Influence Area was identified to consider north/south needs as they affect the Study Area. The downtown CBD Area, which represents an area of highest employment and population in the region, is adjacent to and contiguous with the Study Area, provides opportunities to integrate transportation systems and will be considered in the development of alternatives.



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Study Area includes:

- Northern portions of Salt Lake City
- City of North Salt Lake
- Eastern portion of Woods Cross

Planning Area of Influence Area includes:

- Bountiful
- Centerville
- Farmington
- Downtown Salt Lake City

Major activity centers in the Study Area include:

- LDS Conference Center
- Marmalade District
- Capitol Hill
- Eagle Ridge
- Downtown North Salt Lake
- FrontRunner Woods Cross Commuter Rail Station

PRIOR STUDIES

Wasatch Choices 2040

In 2004, the state's two largest metropolitan planning organizations – Wasatch Front Regional Council (WFRC) and Mountainland Association of Governments (MAG) – collaborated with Envision Utah, the Utah Department of Transportation, and the Utah Transit Authority to conduct a public process called “Wasatch Choices 2040” in order to find a more effective approach to transportation planning in Weber, Davis, Salt Lake and Utah Counties. Thousands of residents, local technical experts and elected officials contributed to Wasatch Choices 2040 through workshops, scenario building, independent polling, and on-line surveys. Wasatch Choices 2040 identified a series of growth principles to guide development decisions and make our transportation system more efficient and cost-effective. Subsequently, WFRC, MAG and Envision Utah, in close collaboration with local elected officials, further refined the vision, creating *The Wasatch Choice for 2040*. In 2010, the elected officials comprising WFRC formally adopted *The Wasatch Choice for 2040* as the vision for addressing our region's growth and as the foundation for our long-range regional transportation plan.

The Wasatch Choice report is result of community outreach and focus group studies to determine what the Wasatch community would like to see in their transit and redevelopment future to help foster a high



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quality of life. The Wasatch Front Community would like to redevelop older urban areas along heavily used transportation corridors and nodes. The community would like to introduce more mixed-use development in existing commercial centers. Wasatch community growth and development desires are summarized below:

- Emphasizing growth centers - Create a heart of a community
- Land Recycling – Create City Centers in existing commercial areas.
- Variety in housing – The community would like more housing options; town homes and condos, but still maintain single family homes as the majority of housing options
- Bicycle and Pedestrian routes – more of these to help connect communities

Wasatch Front Regional Council (WFRC) Regional Transportation Plan (RTP)

In May of 2011 The Wasatch Front Urban Area Regional Transportation Plan was adopted. The RTP is the Salt Lake and Ogden / Layton Urbanized Areas' fiscally constrained plan for highway, transit, and other facility improvements to meet projected travel demand over the next 30 years. Developed in accordance with federal guidelines, the 2040 RTP includes highway and transit facilities identified by region-wide planners, engineers, elected officials, various transportation committees, stakeholders, state agencies, and the general public that would best serve the needs of the Wasatch Front Region and its two urbanized areas. The planning process and the steps used to develop the 2040 RTP are presented, along with an analysis and evaluation of four highway and transit alternatives that contributed to the final recommendations. Social, economic, and environmental impacts of the 2040 RTP recommendations were examined, analyzed and documented. The Wasatch Front Urban Area Regional Transportation Plan: 2011 - 2040 also includes recommendations for a regional bicycle network. The financial aspects of the 2040 RTP include projected revenues over the next 30-year period to cover the estimated costs for recommended highway and transit improvements.

The RTP utilized a 9-step planning process that provided a straightforward approach to the complex task of planning for regional transportation growth and travel demand. It also used socioeconomic projections for approximately 1,000 traffic zones throughout the Wasatch Front Region to determine over the next 30 years that the population will increase from approximately 1,600,000 people to 2,500,000 people.

Regional traffic modeling, utilizing projected 2040 population, employment and transportation mode choice information, was generated and analyzed. This analysis determined the following mobility deficiencies:

- I-15 along the Wasatch Front in Weber, Davis and Salt Lake Counties
- E/W flow in the central-west portion of Salt Lake County, b/t 3100 S and 6200 S



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WFRC Transportation Improvement Plan (TIP)

The TIP provides information on the transportation planning and programming process and identifies the funding sources for short range transportation improvement in the WFRC area. The TIP identifies projects funded by the Surface Transportation Program (STP), the Congestion Mitigation/Air Quality Program (CMAQ) and other Federal-Aid highway programs, as well as state funded projects, federal transit projects and locally funded projects. Information on the types of improvements, costs, and phasing of each project are also provided.

- The projects included in this report will implement the Long Range Highway and Transit Plans for the region, help meet the short range needs of the area and provide for the maintenance of the existing transportation system.
- A six year program, four funded years and two Concept Development years, of highway and transit projects funded by federal, state, and local revenues
- An approved list of the priority project for the Wasatch Front region
- Financially constrained
- Found to conform with state air quality plans
- Incorporated into the Statewide Transportation Improvement Program
- A continuing, comprehensive and cooperative Transportation Planning Process

Wasatch Mobility Management Study (February 2010)

The Wasatch Front Mobility Management Project was a year-long project, conducted from January 2009 through January 2010, that defined a mobility management program for the coordination of community transportation services in the Utah Transit Authority (UTA) service area. In the Final Report, system inventories and unmet needs were identified separately for three sub-regions: (1) Box Elder, Weber, and Davis Counties; (2) Salt Lake and Tooele Counties; and (3) Utah County. Although significant services are available to address transportation needs of seniors, persons with disabilities, and persons with low income, the mobility of these three populations is still limited.

The consulting team developed a series of coordination strategies designed to build on current successes to better meet unmet needs. The development of these strategies utilized input from providers, stakeholders, focus group participants, and attendees of the public open houses. The consulting team also borrowed from national best practices and examples. Approximately 16 to 20 strategies were developed and grouped into three phases as follows:

Phase 1 Strategies would initially focus on developing local coordination efforts, and are on the critical path to implementing more advanced strategies. They also are designed to institute partnerships among local service providers.

Phase 2 Strategies build upon the Phase 1 strategies and introduce new local coordinated services and coordination efforts that also focus on building partnerships with UTA.



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Phase 3 Strategies build upon the local (Phase 1 and 2) coordination efforts, expand upon the co-mingling of compatible trips sponsored by different funding sources, and ultimately can involve better coordination of regional services and travel. These strategies are typically more complex and require a longer lead time to implement.

Legacy Parkway Supplemental Environmental Impact Statement/Reevaluation

In 2001, several plaintiffs filed suit against the Environmental statement (EIS) UDOT prepared for Legacy Parkway, a 14-mile highway in southern Davis County. The plaintiffs contended, in part, that transit had not been adequately assessed in the document. UDOT prepared and SEIS considering ways to integrate Legacy Parkway with an expansion of mass transit. Following publication of the SEIS, UDOT and project opponents reached a settlement to avoid further litigation. The settlement agreement was signed by the State of Utah and plaintiffs in November 2005 and required UDOT to provide funding to conduct an environmental study for bus rapid transit or light rail from Salt Lake City to Farmington. The AA and the South Davis Transit Corridor Project ESR are the results of this provision of the settlement agreement.

South Davis Transit Needs Assessment

The SDTNA for South Davis County and Salt Lake City was completed in 2005 to assess the need for improved transit. The analysis identified potential north-south corridors and evaluated a range of transit technologies to serve the length of the corridor from downtown Salt Lake City to Farmington. Initial transit alignments were identified as part of the SDTNA through a public process. The initial alignments represented the range of north-south options that could serve the entire length of the corridor. The resulting recommendation from this study included both bus rapid transit (BRT) and streetcar, operation in combination of shared (mixed flow) and exclusive guideways.

Utah's Unified Transportation Plan 2011-2040

The Utah Department of Transportation (UDOT), Cache Metropolitan Planning Organization (Cache MPO), Wasatch Front Regional Council (WFRC), Mountainland Association of Governments (MAG), and the Dixie Metropolitan Planning Organization (Dixie MPO) have developed a unified plan that encompasses the entire state. The report takes into consideration the strategic goals of UDOT and the MPOs and focuses on preserving infrastructure, optimizing mobility, improving safety, and strengthening the economy. Additionally, the report considers the population growth of Utah and how the transportation needs will be updated to reflect the increase in population. The Unified Plan goes on to discuss each region's needs, the planning process, a breakdown of the projects needed in each region and funding availability.

South Davis Alternatives Analysis

UTA completed a previous study (South Davis Transit Study Alternatives Analysis) in spring 2008. Previous efforts built a foundation of data and experience that will be updated and expanded upon to inform the current study and set the stage to identify desired transportation investments. While the previous study selected a mode and LPA, they are not pre-determined for the current study – all mode and



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alignment options will be considered in the context of current and future conditions. The opening of FrontRunner commuter rail service since the study has created new opportunities in the study area.

South Davis Draft Environmental Study Report

The Draft Environmental Study Report, led by UDOT, was conducted between 2008 and 2010. The environmental study led to a re-evaluation of alternatives based on public and agency input.

GROWTH

Salt Lake County, a portion of which is in our study area, currently represents 37% of the population of the State of Utah. According to the Wasatch Front Regional Council, the population of the Wasatch Front will increase by approximately 65% within 30 years. The Study Area for the Davis-SLC Community Connector will be significantly impacted by this future growth and the resulting increased travel demand. As shown in the table below, population within the study area is projected to increase by 23% from 2007 to 2040 and employment is anticipated to increase by 33%. Major development along many corridors is already underway which may influence project priorities within the study area.

Trends anticipated for the Study Area and the Planning Area of Influence combined provide similar numbers, compared to only the Study Area, with a projected 31% increase in population and a 33% increase employment.

The study team has identified extensive and relevant development activity as described in the Revitalization element of this document that provides an even stronger indication of growth patterns. The difference between projections for the entire region and the Study Area (lower within the Study Area) are indicative of largely built out neighborhoods that are in close proximity to the established core of the region rather than a lack of market trends. Redevelopment and infill activity will continue to increase demand for access, mobility and services.

As the gateway for employment and activities in Salt Lake, growth to the north of our Study Area may also significantly influence travel through and within the Study Area. For example, WFRC estimates that by 2040, West Haven will grow from 4,853 people to 33,995, and Hooper will grow from 4,975 to 22,515. Both of these communities are located north of the Study Area in Weber County where land is available to accommodate future growth.



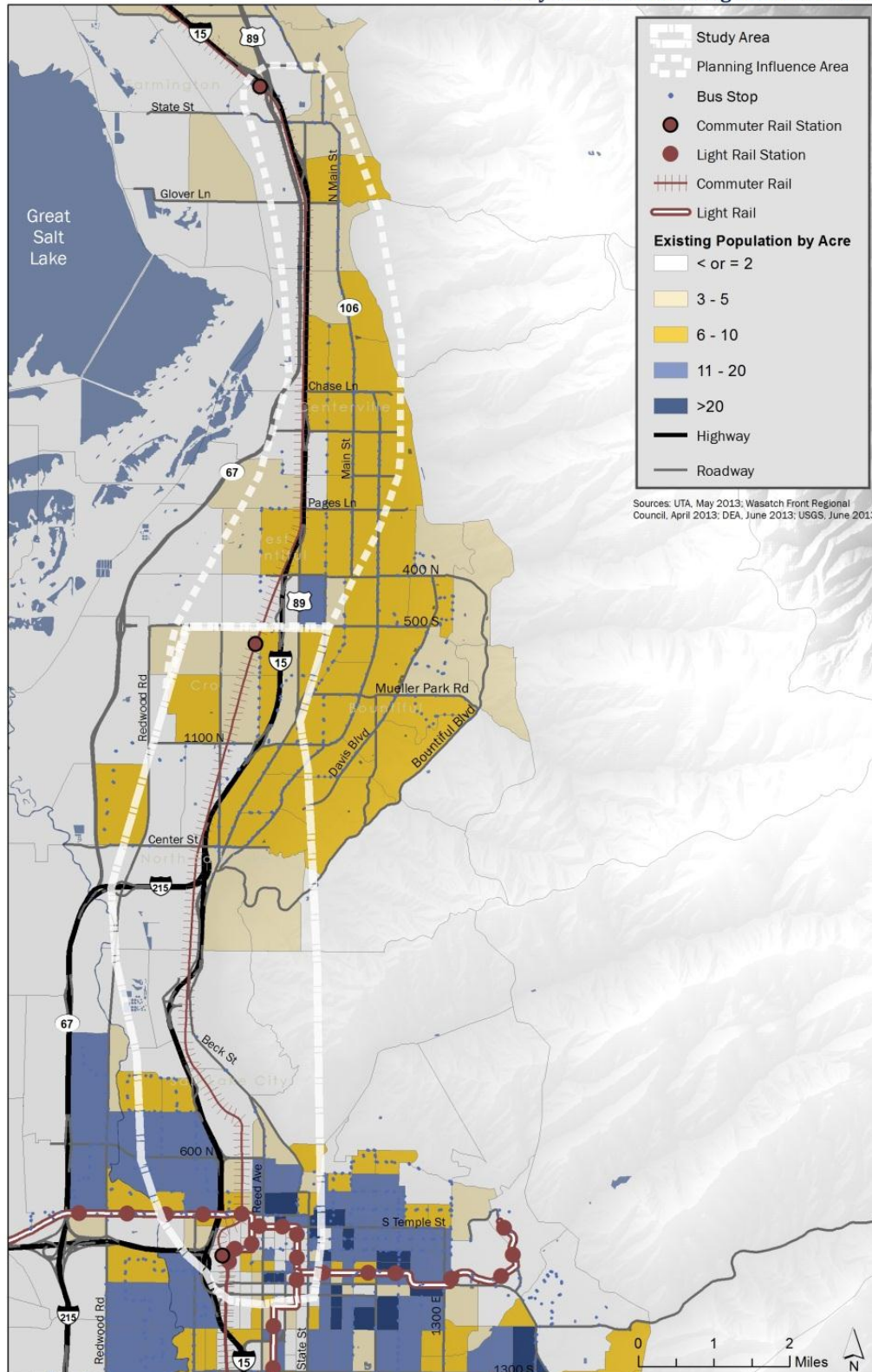
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South Davis Data Analysis – July 2013 Revised Study Area and Area of Influence Boundaries									
	Present Year - Baseline (2007)			Future Forecast Year (2040)			Percent Change (2007 to 2040)		
Boundary	Population	Employment	Transit Dependent Households*	Population	Employment	Transit Dependent Households*	Population	Employment	Transit Dependent Households*
Study Area	54,735	31,178	10,142	67,120	41,430	25,741	22.63%	32.88%	153.80%
Study Area and Area of Influence	138,050	67,387	29,319	180,359	89,631	38,222	30.65%	33.01%	30.37%
*Defined as households with 0 or 1 vehicles									
Sources: Wasatch Front Regional Council TAZ Data (TAZ Boundaries, 2007 and 2040: Population, Employment, Auto Ownership); JUB (Study Area Boundary, Planning Influence Area Boundary)									



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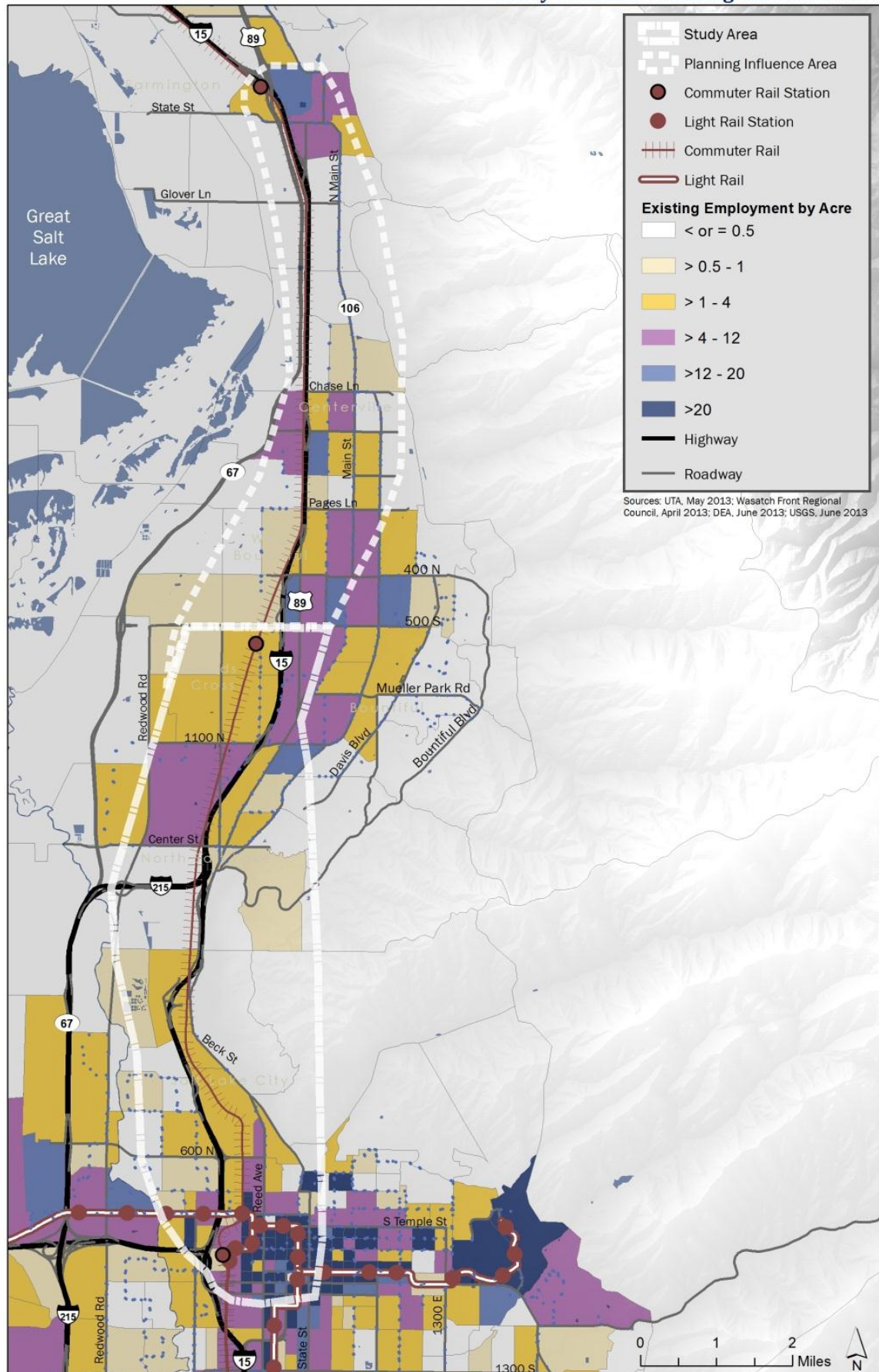
Existing Population - Study Area and Planning Influence Area





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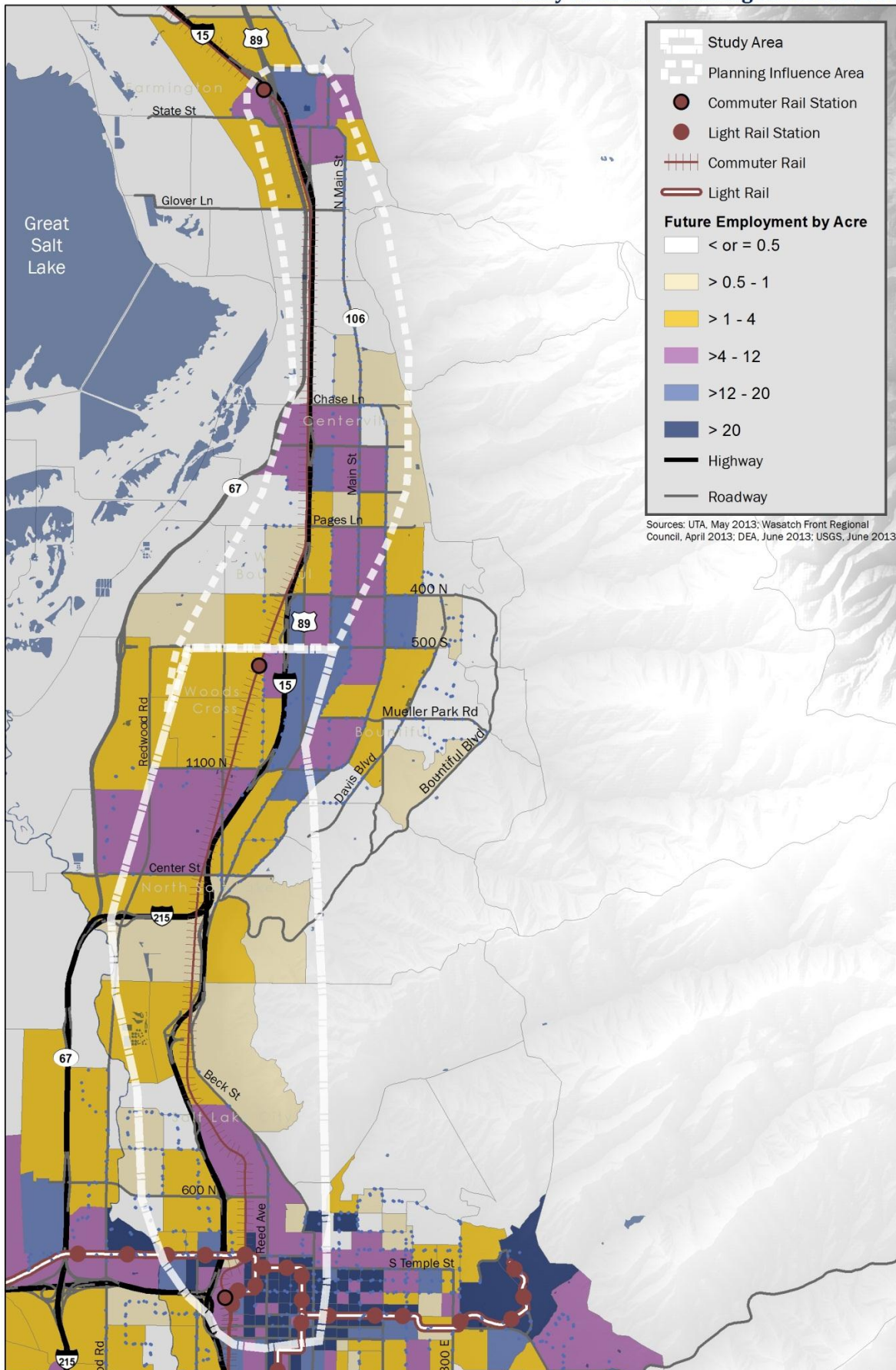
Existing Employment - Study Area and Planning Influence Area





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Future Employment - Study Area and Planning Influence Area





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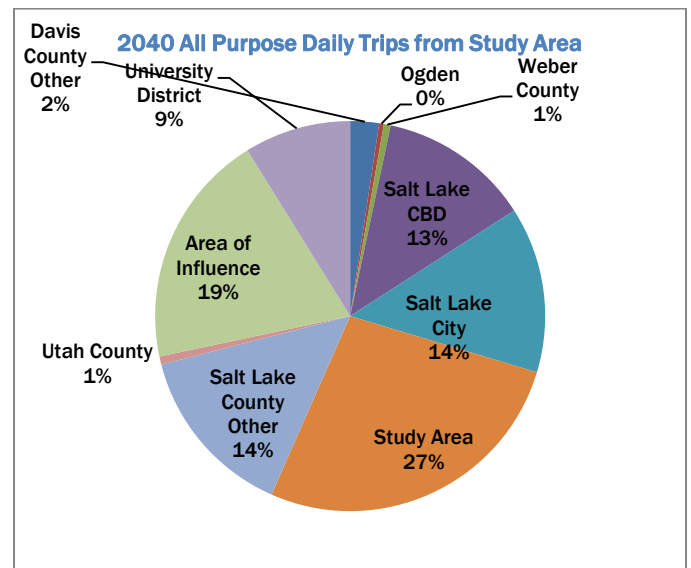
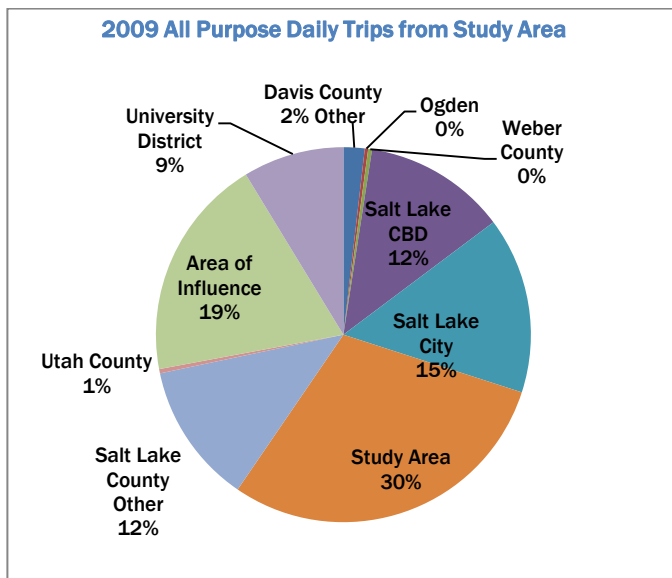
GAPS

Gaps have been identified within the existing services as compared to travel needs and the equitable distribution of transit services within the region

Travel Patterns – All Daily Trips

A first step in understanding gaps is to evaluate travel trends. Illustrations on the following pages depict finding. . Data presented for travel patterns was derived from WFRC's trip tables.

- 2009 largest # of all-purpose trips for all modes is within the Study Area (30%)
- 2009 second largest trip pattern from the Study Area is to Salt Lake City (15%)
- 2009 strong concentrated travel pattern to the University District in SLC (9%)
- 2009 strong travel pattern to areas of Salt Lake County outside of Salt Lake City and University District (12%)
- 2009 strong travel pattern to the Area of Influence
- 2009 weak travel pattern north of Area of Influence
- 2009 minimal travel pattern south to Utah County

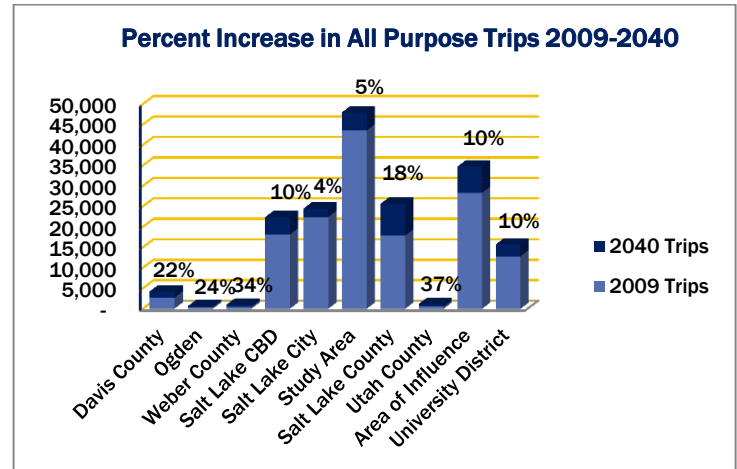
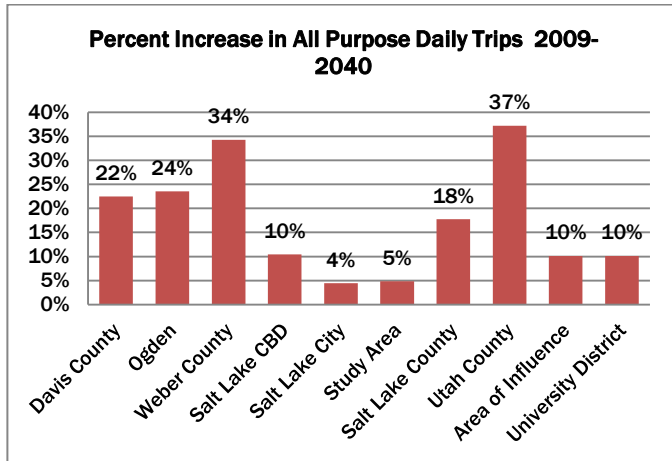


- 2040 percentage increase in travel north to other parts of Davis County, and Weber County outside of Ogden from Study Area
- 2040 strong increase to Ogden (+24%) from Study Area
- 2040 larger percentage increase in trips to areas outside of Study Area
- 2040 University District attracts more travel from Study Area (+10%)



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- 2040 trips within Study Area decrease as a percentage of total
- 2040 large percentage increase from Study Area to Utah County (+37%)



Travel Patterns – Peak Trips

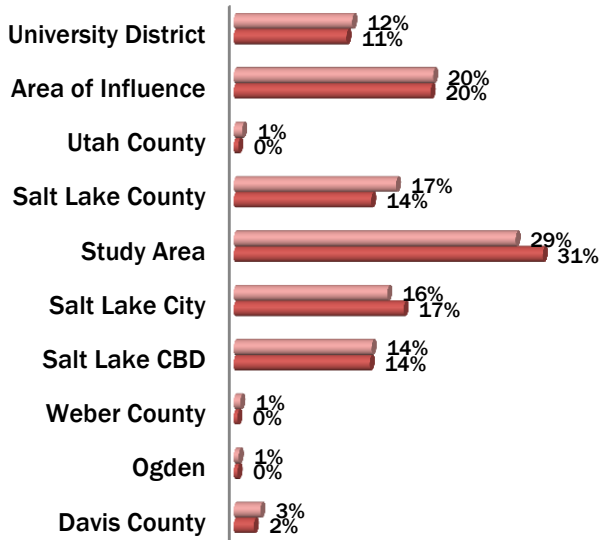
- 2009 largest percent of peak period trips outside of Study Area to University District & Salt Lake City (28%)
- 2009 largest single area peak period trip attraction from Study Area is Area of Influence (20%)
- 2009 Area of Influence peak period travel to Study area is only 9%
- 2009 more trips stay within Area of Influence (29%) than Study Area (52%)



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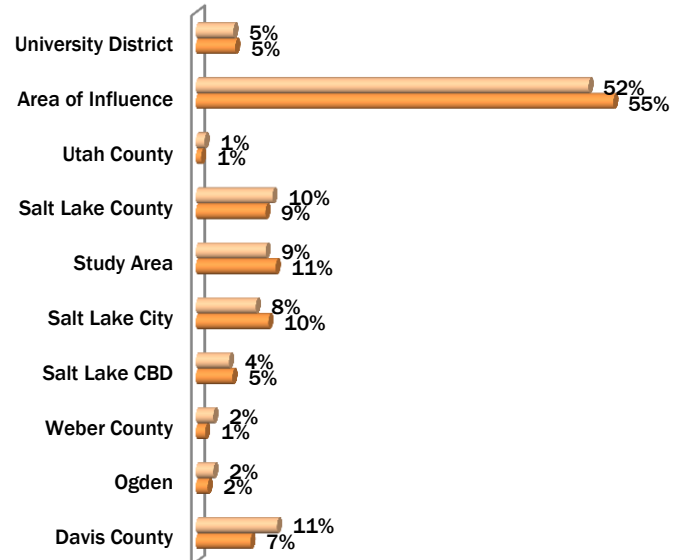
Percent of Peak All Purpose Trips from the Study Area

■ 2040 ■ 2009



Percent of Peak All Purpose Trips from the Area of Influence

■ 2040 ■ 2009



- 2040 peak period travel patterns are very similar to 2009.

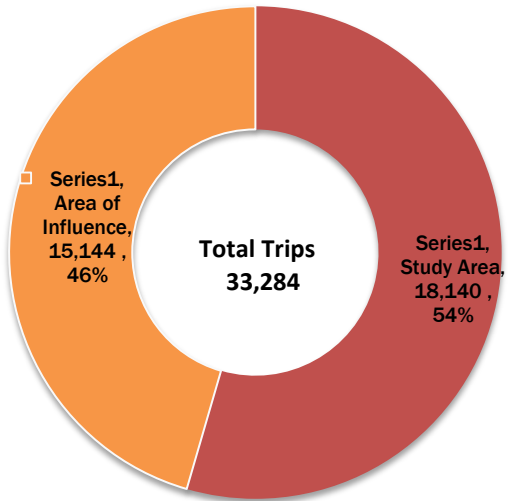
Travel Patterns – Trips to SLC CBD

- 2009 large travel pattern from both Study Area and Area of Influence to SLC CBD
- 2009 Study Area trips to CBD are larger than from Area of Influence to SLC CBD

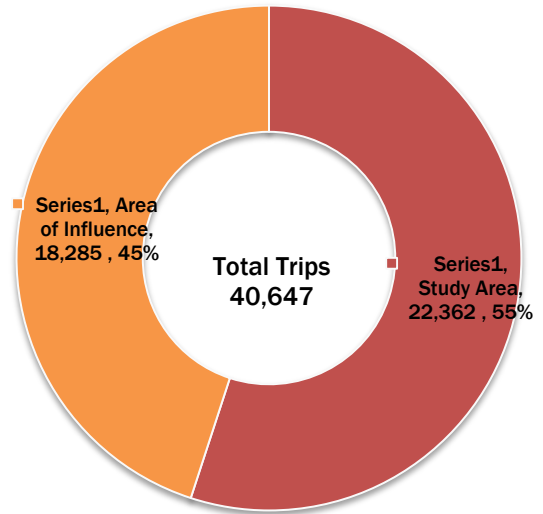


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2009 Trips to Salt Lake Central Business District



2040 Trips to Salt Lake Central Business District



- 2040 Large travel pattern from both Study Area and Area of Influence to SLC CBD
- 2040 Study Area trips to CBD are larger than from Area of Influence to SLC CBD
- 2040 travel to SLC CBD increases significantly

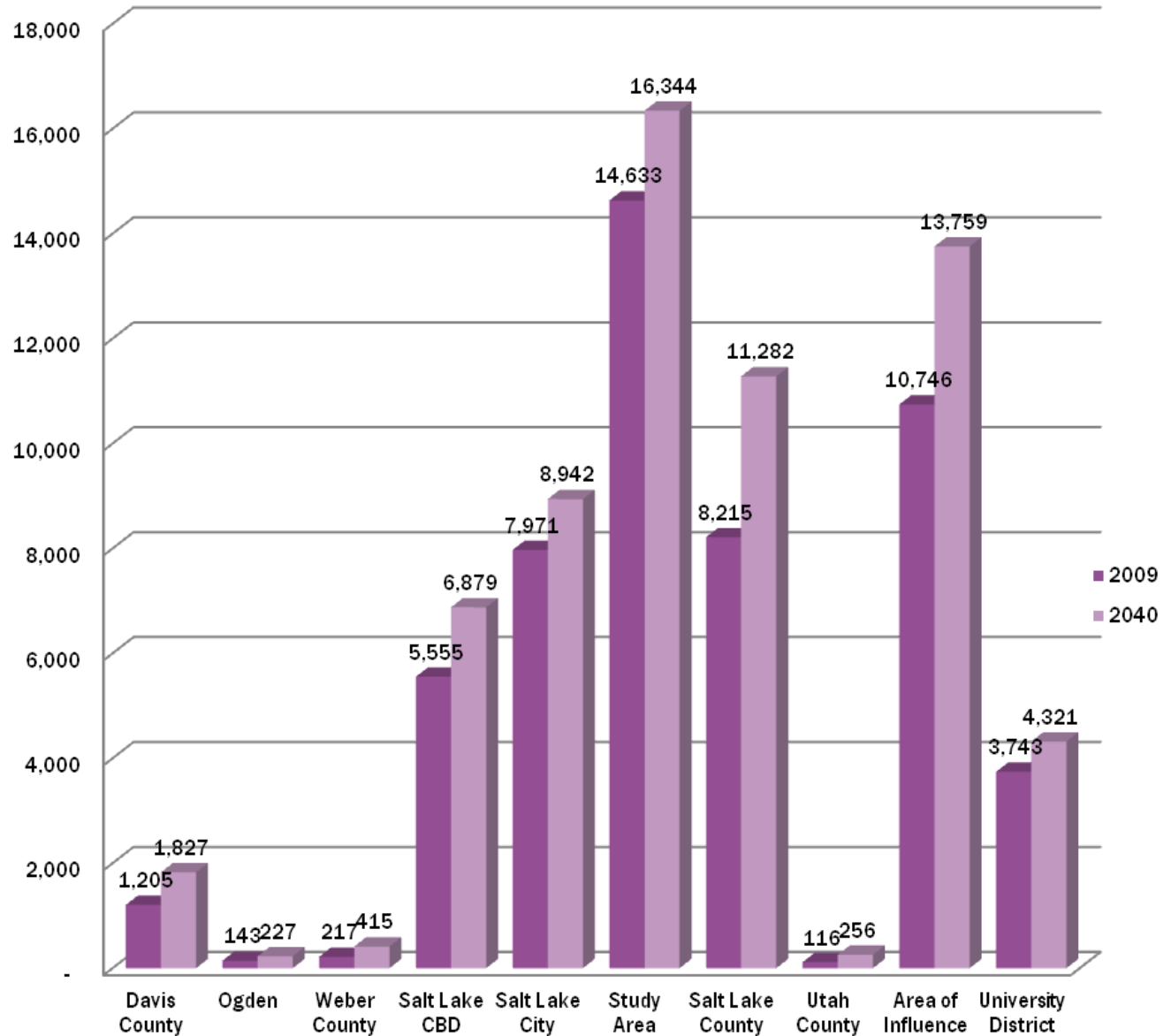
Travel Patterns – Non Home Based Trips

- 2009 and 2040 non home based trips are significant to Area of Influence in addition to within Study Area



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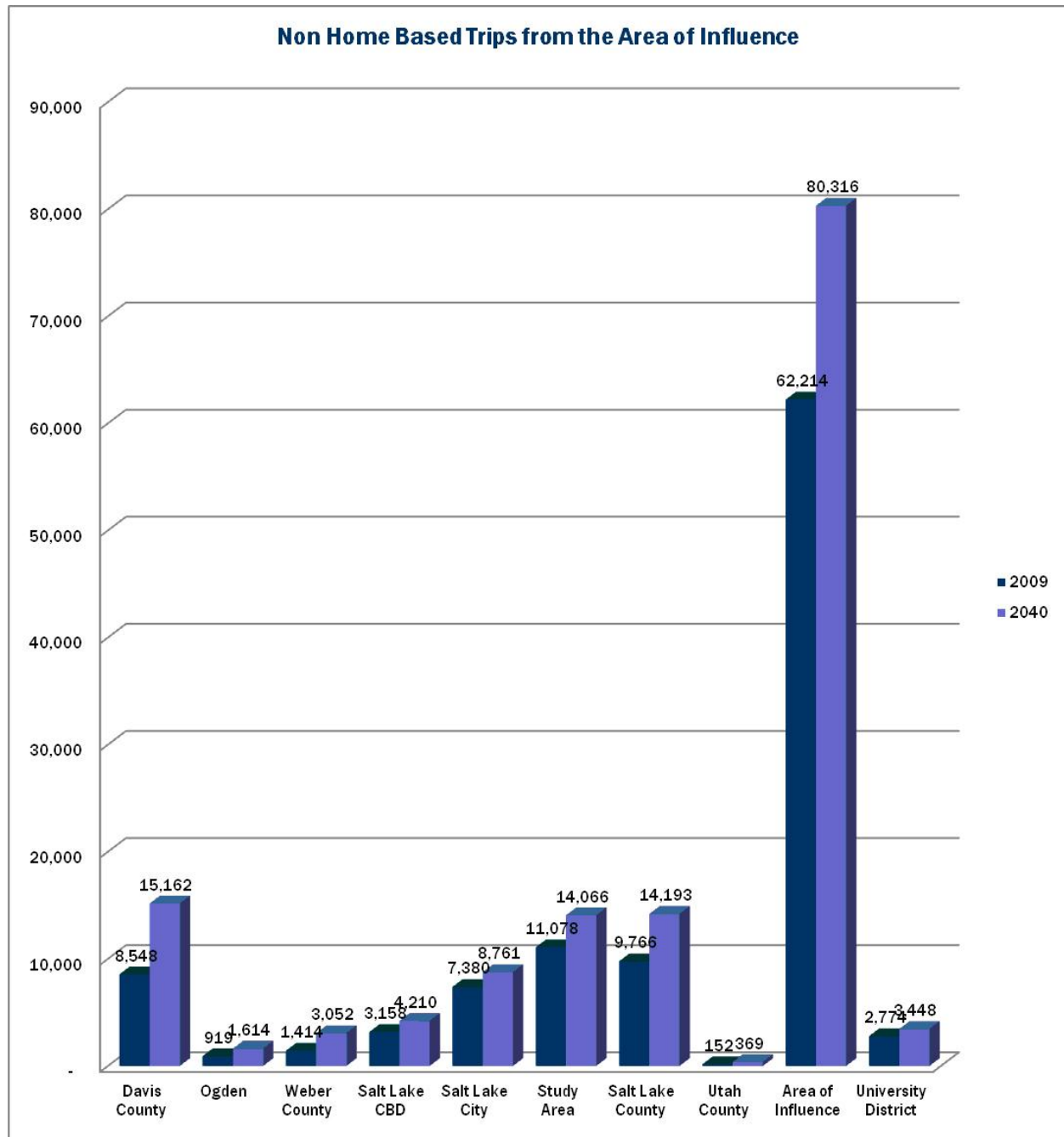
Non Home Based Trips from the Study Area



- 2009 & 2040 few non-home based trips travel outside of Area of Influence

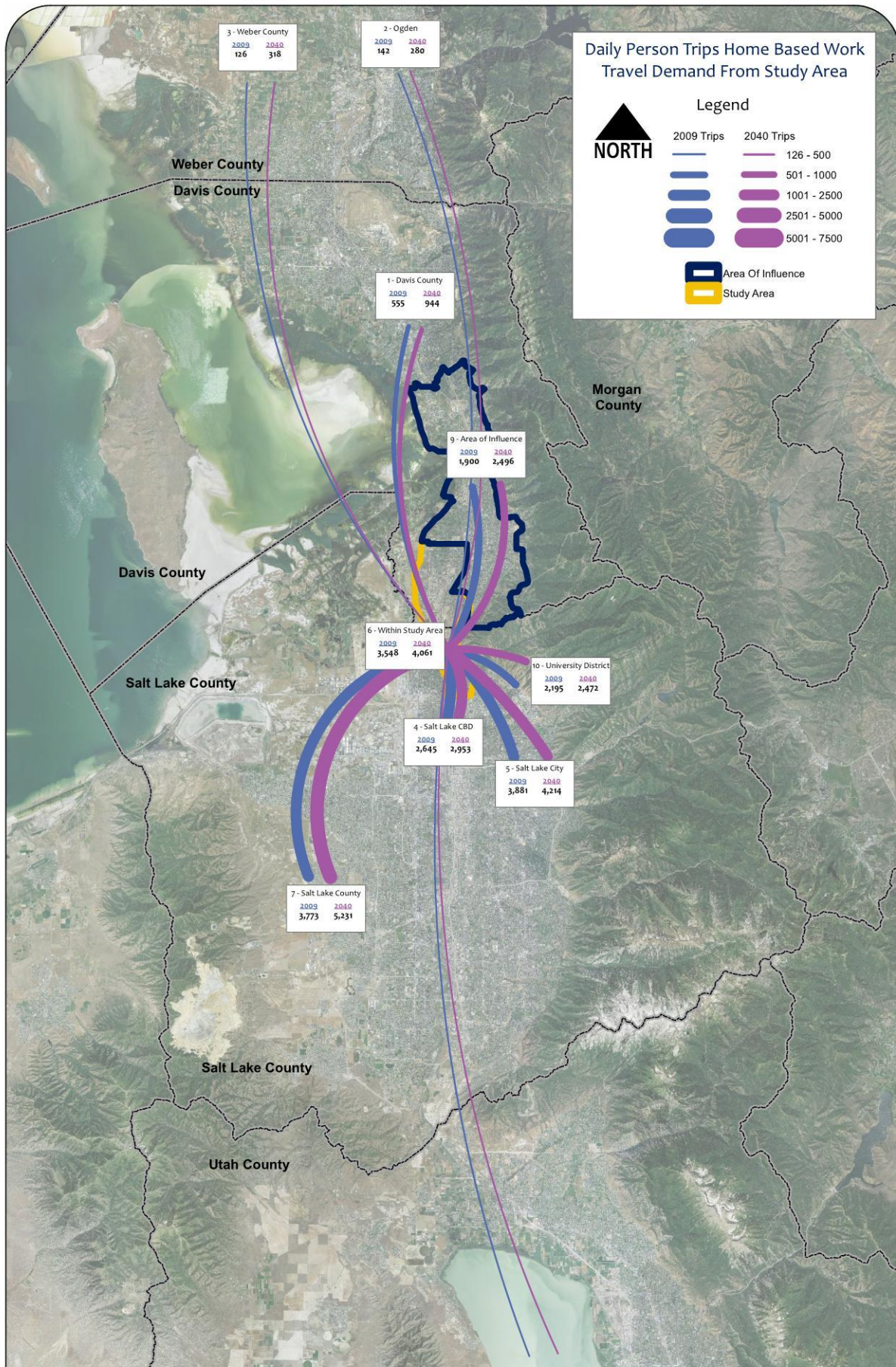


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EXISTING TRANSIT SERVICES

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Many gaps are present within the existing transit services. Routes 470 and 455 through the study exhibit some of the highest ridership of any routes in the region according to the following table. In fact, Route 470 is the second highest bus ridership route in the UTA system. Route 200 outside the study area, is the only route with higher weekday boardings. Route 200 runs through the core Salt Lake City mostly along State Street.

Routes 455 and 470 perform well despite highly variable service schedules for current operations. Headways for Route 455 vary from 28 minutes to 2 hour and 15 minute intervals, a low level of service. Headways for Route 470 vary from 30 minutes to 1 hour and 55 minutes. Travel from the Study Area to the University District provides the most productive segment on route 470. Both routes are long and do not provide express commuter service.

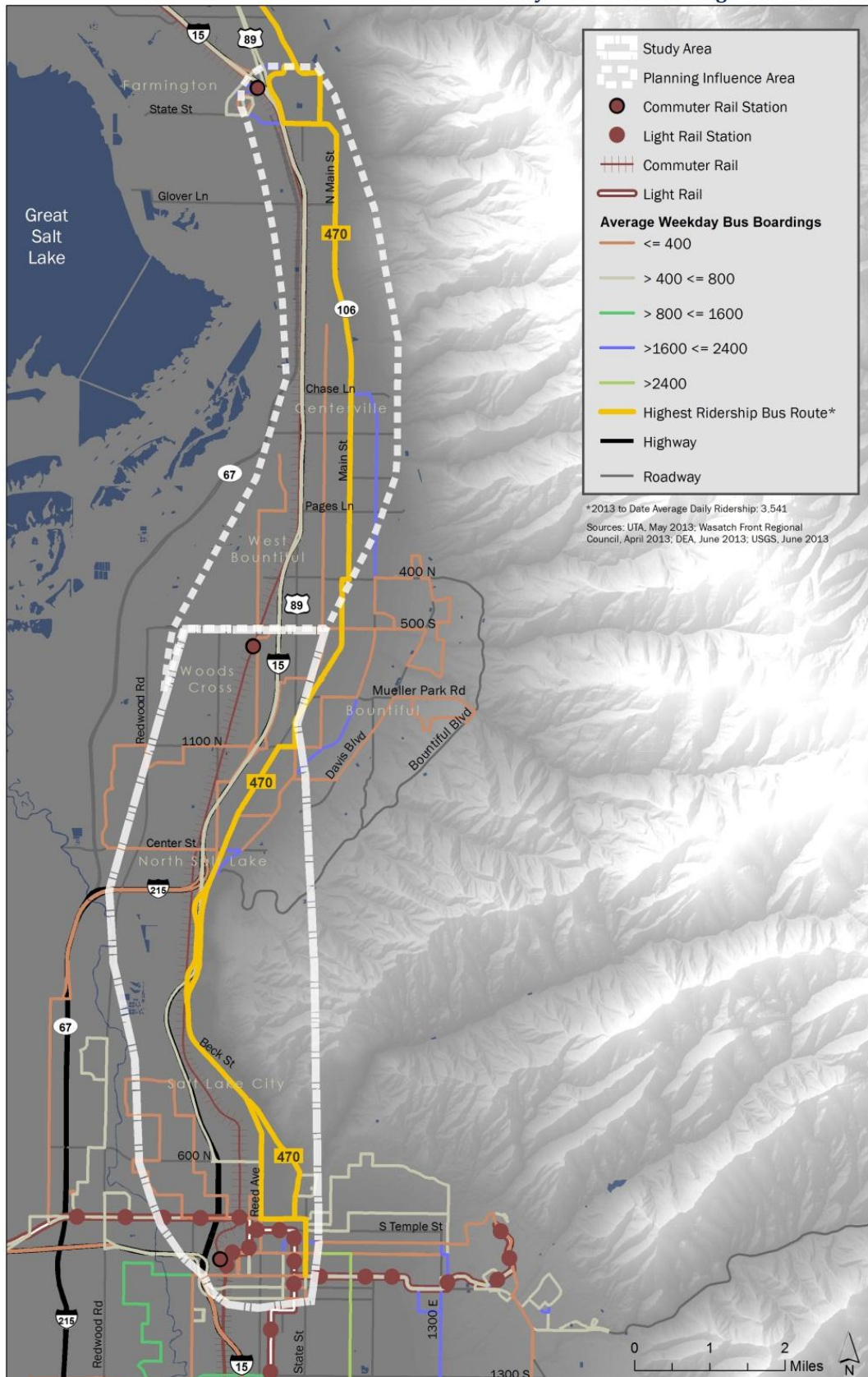
In addition, few amenities and lack of reliability contribute to gaps within service, even for these popular routes.

Study Area and Planning Influence Area	
Bus Route	Average Weekday Bus Boardings (Jan 2013 - May 2013)
11	427
2X	166
2	2304
200	3963
205	2596
220	1962
3	615
347	0
451	366
455	1657
456	66
460	62
461	103
462	110
463	50
470	3973



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Existing Bus Routes - Study Area and Planning Influence Area

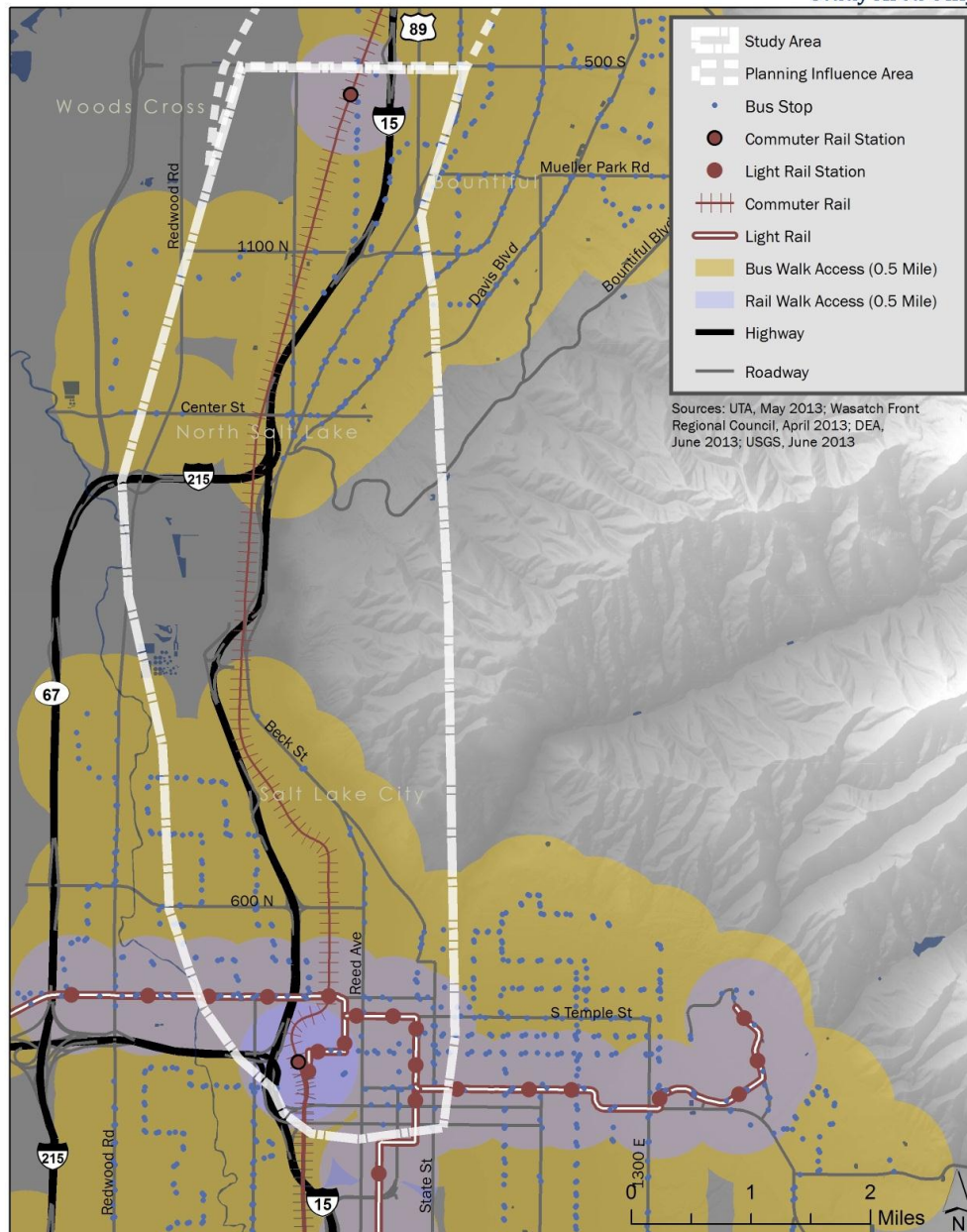




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An analysis was done to identify where the extent of transit fall short, as show on the following map. The map shows that the Study Area has very good transit service. Gaps are primarily related to the level and consistency of services that are currently provided, rather than neighborhood coverage within the Study Area.

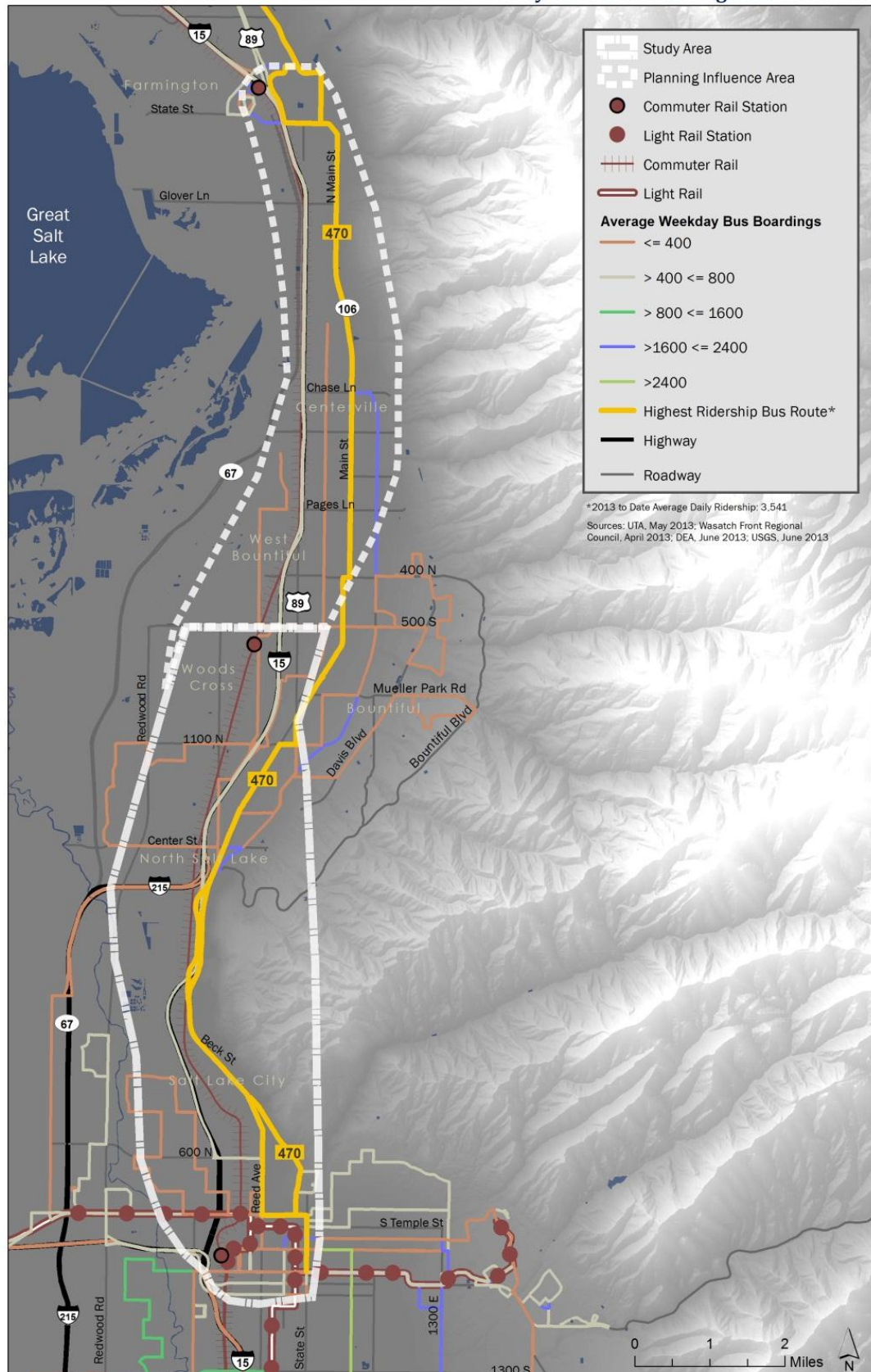
**Downtown Bus and Rail Walk Access -
Study Area Only**





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Existing Bus Routes - Study Area and Planning Influence Area





BARRIERS

Many physical barriers to transportation and neighboring communities currently are present within the study area. The Wasatch Mountains to the East and the Great Salt Lake to the west present natural geographic restrictions. In addition I-15, Legacy Parkway, railroad facilities and rock quarries present man made barriers. Few access points to I-15, the main transportation corridor are available. Transportation solutions need to not only avoid barriers, but also tie communities within the study area in a more cohesive manner to increase transportation options and quality of life.

BIKE & PEDESTRIAN DEFICIENCIES

A lack of bike and pedestrian facilities exist within the corridor. The development of a bikeway from North Salt Lake to downtown Salt Lake creates opportunities, however the character of the corridor through industrial areas warrants an exploration of enhanced facilities. Efforts to create a more walkable environment along highway 89 with town centers and higher density development will require physical improvements. The proximity of the Study Area to a large urban core, with successful strides in mode shift to alternative modes further propels this concept. Over 1 billion of investment over the past decade has been focused on downtown Salt Lake City to increase the urban experience. This has included plazas, new developments, light rail systems, and bus enhancements. The city continues to move forward in this arena, with the potential addition of a streetcar system and BRT services.



REVITALIZATION

Revitalization of highly urban corridors within the Study Area is a primary objective to enhance community livability and encourage economic development. Many transit-supportive development activities are underway or planned. Based on a recent assessment of development trends summarized in the following tables, a tremendous amount of emergent activity is supporting infill and redevelopment.

	Anticipated Development
Woods Cross	<ul style="list-style-type: none">• Legacy Gateway – 900 acre CDA along 500 South and Redwood Road
West Bountiful	<ul style="list-style-type: none">• 1,000 acre business park at 500 South and Redwood Road• 1 acre of residential development in the 400 North area
North Salt Lake City	<ul style="list-style-type: none">• Business Park CDA – 750 acres along Redwood Road• Eaglewood Village – 96 acres, multi-family units
Salt Lake City	<ul style="list-style-type: none">• West Capitol Hill/Marmalade District – 90 acres, library, mixed use (limited ground floor retail, housing above), townhomes, and open space• 100 South and 400 West – Two 400 room hotels• Royal Wood Office Plaza & Shilo Inn Suites Hotels – Both potential 800 room hotels• Former Salt Lake City Fleet Block – Part of the RDA's Granary District Project Area• Broadway Park Lofts – 40 condominiums at 360 West and 300 South• Rio Grande District – Wasatch Choices 2040 Catalytic Site• Plaza at State Street – 200 affordable housing units• Neumont University – Classrooms, faculty offices, and student apartments



AIR QUALITY

The region continues to struggle with air quality non-conformity. According to the Utah Division of Environmental Quality, Salt Lake County has experienced 22 days last winter (2012) in which pollution exceeded acceptable federal standards.

Wasatch Front Region Non-attainment Designations, June 2013

Area	Designation	Pollutant
Salt Lake City	Maintenance Area	Carbon Monoxide (CO)
Ogden City	Maintenance Area, Moderate Non-Attainment Area	Carbon Monoxide (CO)
Salt Lake County	Moderate Non-Attainment Area	Particulate Matter (PM10)
Salt Lake (including Davis, Salt Lake, and portions of Weber, Box Elder, and Tooele Counties)	Moderate Non-Attainment Area	Particulate Matter (PM2.5)

Transportation solutions that contribute to attainment are a critical factor in the development of solutions within the study area.

MARKETS

Existing transit services serve few markets within the study area. FrontRunner Commuter Rail primarily provides access for longer distance commuters from outside of the study area. Local bus service lacks adequate frequency and amenities to serve a wide range of markets. Markets that are identified for future improvements include:

- Transit dependents
- Commuters to downtown
- Bike and walk transfers to transit
- Travel within the study area
- Travelers to and from FrontRunner commuter rail

A table of transit dependent populations in addition to a map are shown below.



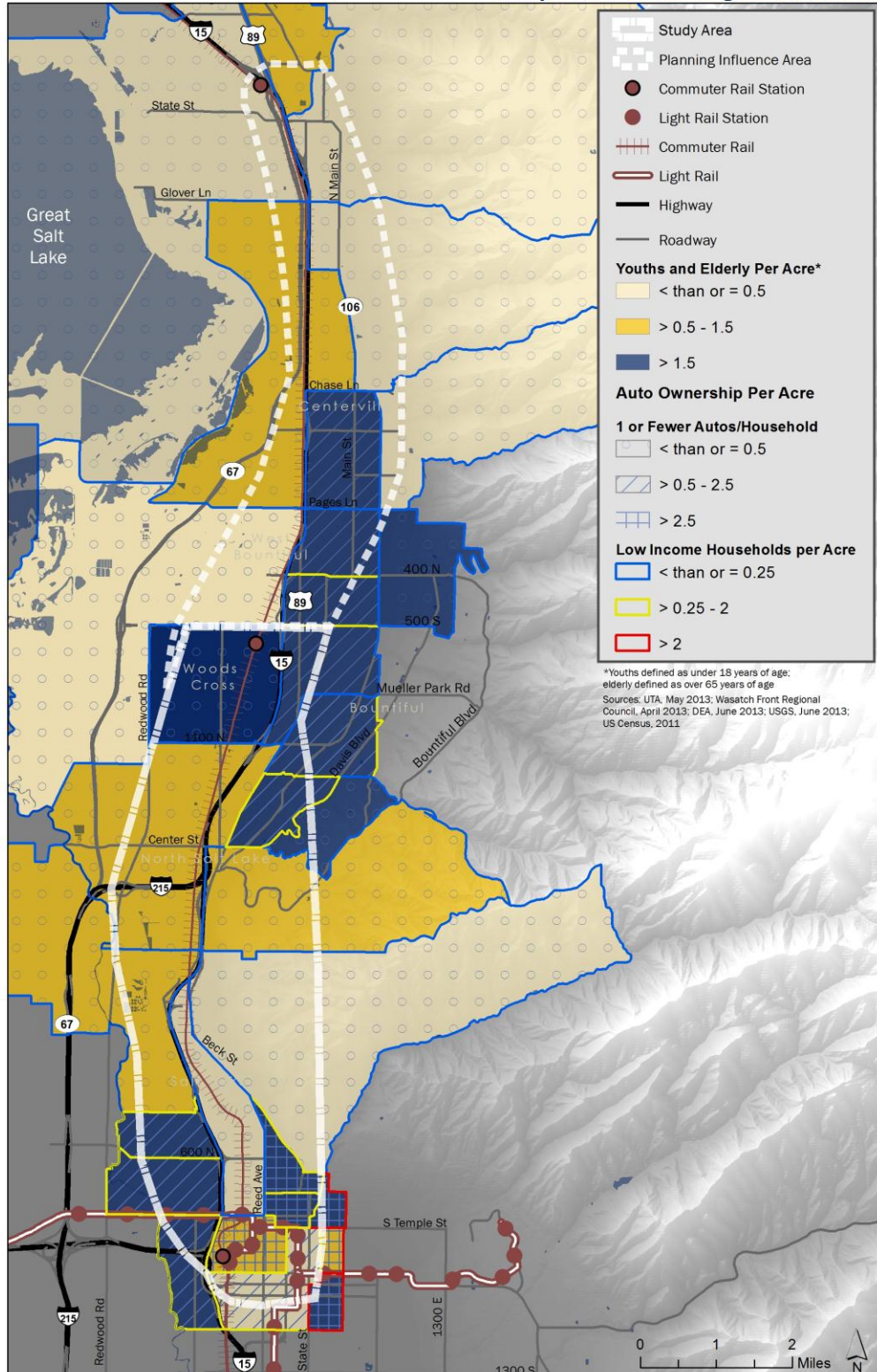
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Transit Dependent Population Data - Census Data Only (Future Data Not Available)			
	Present Year - Census Data (2011 ACS 5-Year Estimate)*		
Boundary	Vehicles <=1 (Households)	Age <18 or >65 (Individuals)	Low Income (Households)
Study Area	10,839	30,065	3,554
Study Area and Area of Influence	20,335	87,269	5,592
Sources: US Census (2011 American Community Survey 5-Year Estimate); JUB (Study Area Boundary, Planning Influence Area Boundary)			



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Existing Transit Dependent Population - Study Area and Planning Influence Area





Purpose

- Increase mobility, connectivity, and travel choices
- Support local and regional land use initiatives
- Promote economic development

Need

- Projected growth
- Service gaps
- Access & mobility barriers
- Bicycle & pedestrian facilities
- Revitalization (deteriorating neighborhoods & corridors)
- Air quality mitigation
- Markets not served