COUNCIL STAFF REPORT

CITY COUNCIL *of* SALT LAKE CITY

Item Schedule:
Briefing: August 8, 2017
Set Date: August 29, 2017
Public Hearing: To Be Determined
Potential Action:

TO: City Council Members

FROM: Russell Weeks
Senior Policy Analyst
DATE: August 8, 2017

RE: **Transit Master Plan**

ISSUE AT-A-GLANCE

Goal of the briefing: To determine if the City Council is ready to hold a public hearing on the proposed Transit Master Plan, or if Council Members may have changes to the proposed plan.

- The proposed master plan, initiated by the City Council, appears to be based largely on three things: Salt Lake City's existing street grid system, the existing transit system including the bus, TRAX light-rail and streetcar system in the City, and the Utah Transit Authority's planned core bus network in the City.
- The proposed plan contains a density threshold formula based on residential population and jobs to help determine future transit service levels in the City. (Please see Page 6 for more detail.)
- The plan recommends that the City and UTA build on the two's existing partnership and develop a local service delivery approach that strengthens the relationship and provides Salt Lake City with additional accountability, possibly through an agreement or memorandum of understanding.[1] A key reason for the proposal is the proposed plan describes transit infrastructure and infrastructure investment in the City as "primarily controlled by UTA." The plan says, "Salt Lake City can influence development along the FTN (Frequent Transit Network)."[2] (Please see Page 3 for more detail.)

- The cost for UTA to operate local bus routes in Salt Lake City in 2014 was about $16 million.[3] Implementing the plan completely in about 20 years, may cost an additional $7.7 million a year in operating costs.[4] One option to move the Frequent Transit Network forward is to have Salt Lake City pay UTA to increase bus frequency or span of service on a route.[5] The City Council would have to identify a revenue source to accomplish the option.
- For areas of the City that do not receive transit service, one option would involve the City or UTA or both negotiating with a ride-sharing service such as Uber of Lyft to provide service to transit stops. The plan estimates the annual cost net cost to Salt Lake City would be roughly $500,000 to $900,000.[6] The City Council would have to identify a revenue source to accomplish the option. The plan also describes an option where employers in industrial areas could fund a shared shuttle service to and from major transit stations.[7]
- The plan proposes to add two secondary transit centers where buses could layover, and riders could obtain transfers. The centers would be located somewhere near the intersection of 200 South and 700 East streets and at the University of Utah.[8]
- The plan recommends the City work with UTA to determine the next steps to establish more affordable fare options for transit within Salt Lake City because the standard $2.50 one-way fare is "high for many Salt Lake City families" and reduces transit's competitiveness with other transportation options.[9]
- The plan projects that by 2040, 73 percent of people who live and work in Salt Lake City will be within a quarter mile (two Salt Lake City blocks) walking distance of the Frequent Transit Network.[10]

POLICY QUESTIONS

1. Although City Councils cannot bind future Councils, does the proposed master plan meet the values and goals of the City Council's 2013 *Philosophy Statement Priority: Transportation and Mobility*? (Please see Pages 9 and 10.)
2. To what extent would the proposed transit master plan help the City reach carbon emission reduction goals outlined in the City's *Community Renewable Energy Feasibility Study*?
3. The last public hearing on this item was a Planning Commission public hearing on November 30, 2016, where three people spoke at the hearing before the Planning Commission unanimously voted to forward to the City Council a favorable recommendation. Given the time passage between then and now, to what extent would the City Council like to seek public comment?
4. The master plan includes a formula to help match transit to appropriate levels of housing and job density. Is there flexibility in the plan to allow for transit development to foster housing and job density similar to what has occurred along the S-Line?
5. Are there areas of Salt Lake City where density thresholds might now require a higher level of transit service? Who determines when the thresholds are met, and what happens if density exceeds expectation?
6. The proposed master plan calls for secondary transit hubs near the intersection of 200 South and 700 East streets and at the University of Utah. In terms of land use, is a transit hub

appropriate to locate on 200 South Street? If so, what size would be appropriate? Should the hub have bus parking on the surface or underground? What is the University of Utah's position on a secondary transit hub on its campus?

7. What is more important in a transit network – speed or frequency?
8. Has the Utah Transit Authority's current financial position had any effect on the proposed master plan?
9. Are the federal transportation funding sources listed in the proposed Transit Master Plan still available? How might current federal budget proposals affect those funding sources?

ADDITIONAL & BACKGROUND INFORMATION

Historical Summary

The City Council called for preparing a city-wide transit master plan when it adopted the locally preferred alternative route for the Sugar House "S" line on May 7, 2013. The Council then adopted a motion at its formal meeting June 18, 2013, to allocate $250,000 for the master plan. The adopted motion had three requirements:

- That a scope of work be presented to the Council for review and approval.
- That the scope of work include a plan for raising additional funds to increase the value and quality of the plan, and
- That the scope of work include examination of land use as a key factor, or specify how the Administration intends to link land use plans to the City-wide Transit Plan.[11]

During a retreat September 10, 2013, the City Council discussed what elements a transit master plan would contain. In February 2014 the City Council adopted Resolution No. 1 of 2014 which approved a revised scope of work and a $400,000 budget. The proposed budget included the $250,000 City allocation and an estimated $150,000 from the Utah Transit Authority.[12] The City then put out a request for proposals to do the study and selected Nelson/Nygaard Consulting of San Francisco to research and write it. The goal of the study was to meet objectives in the City Council's 2013 *Philosophy Statement Priority: Transportation and Mobility*.[13]

Frequent Transit Network

The master plan's focal point is a Frequent Transit Network. When fully operational in 20 years the proposed network would cover roughly the area contained by Redwood Road, 1000 North Street, 11th Avenue, the University of Utah, Foothill Drive, 2100 East Street, and 2100 South Street. The North Temple Street TRAX line, including the segment to and from Salt Lake City International Airport would be a component of the network.[14] (Please see Attachment No. 1.)

According to the proposed master plan, a goal is to develop a Frequent Transit Network that becomes "a stable, relatively unchanging part of the system so that riders can rely on it as much as they do the TRAX system."[15]

The network would be based on Salt Lake City's existing street grid, UTA's existing light rail, streetcar, and bus system, and components of UTA's proposed core bus network that are depicted in the 2013 *UTA Network Study*.

North-South bus routes depicted in the 2013 study are routes on North State Street, 500 East Streets, 900 East Street, Highland Drive/1300 East Street, 2100 East Street, and Foothill Drive. East-

West routes depicted in the 2013 study are 2100 South, 100 South, and North and South Temple streets.[16] UTA has not yet designated a core route service but is scheduled to finish a study of core routes in 2018 and implement core route service in 2019.[17]

UTA already operates 15-minute-frequency bus service on Redwood Road (Route 217); 200 South Street (Route 2); 2100 South and 2100 East streets (Route 21); State Street North (Route 200); 500 East Street (Route 205); 900 East Street (Route 209); and Highland Drive and 1300 East Street (Route 220). Current bus service on the routes appear to closely follow the 2013 study's core service network. The length of the routes and service frequency also mirror the concept of a Frequent Transit Network.

According to the proposed Transit Master plan:

"The FTN is designed to serve long, direct citywide corridors. This includes TRAX light rail, Bus Rapid Transit, and other frequent bus modes that are oriented to serve longer-distance trips and have a longer spacing between stops."[18]

Although local transit service is designed to connect neighborhoods and employment areas to a Frequent Transit Network, the local City network is not a key focus of the Transit Master Plan because "the City's limited resources will be focused on the development of the FTN."[19] According to the proposed plan, the City could support UTA in maintaining "a basic or 'lifeline'" level local service to within one-half mile of most residents. The service level is defined a minimum one-hour frequency for 12 hours a day.[20]

The master plan proposes that buses in a Frequent Transit Network would operate on arterial streets or streets where transit is made a priority "where it will be the most rapid and reliable," and that improvement should be made "that reduce transit travel time and make it more competitive with automobile travel." Improvements could include providing transit with priority traffic lanes on high ridership corridors, and that traffic signals within the network could be managed to favor transit vehicles because they carry more people.[21]

It might be noted that priority traffic lanes are not necessarily set apart by barriers such as in a bus rapid transit system, but can be, as in some cities, a traffic lane where buses, taxis, and other commercial vehicles with more than one passenger have priority during peak traffic volumes. Signal management already is used on the TRAX system.

Here are the corridors the master plan proposes the Frequent Transit Network be implemented first (Plan's comments included):

- **200 S. –** performed strongly in the Transit Master Plan analysis and is recommended as a primary east-west transit corridor for bus (and potentially future bus rapid transit and/or streetcar) service between downtown and the University.
- **State Street, 500 E, 900 E, and 1300 E**. Combined with existing TRAX service in the 200 W corridor, frequent bus service on State Street, 500 E, 900 E, and 1300 E would provide north-south connections with approximately half-mile spacing between southern city limits and downtown, as far east as the University of Utah.
- **North and South Temple Streets –** also performed strongly in the Transit Master Plan analysis, and in conjunction with frequent service on 200 S and existing TRAX service in the 400 S corridor, would provide quarter-mile spacing for frequent service through downtown.
- **2100S/2100E.** This east-west and north-south corridor (currently served by Route 21), provides a connection between the Central Pointe TRAX Station and the University along the southern and eastern edges of the frequent grid.

- **Redwood Road.** While it lacks the density of other corridors, Redwood Road is an important, continuous street for transit in west Salt Lake City. It would run along the western edge of the recommended Salt Lake City FTN and would be linked with additional east-west FTN corridors.[22]

The master plan proposes that the following corridors also be considered high priorities: 400 South Street from Redwood Road to the University of Utah; 1300 South and 900 South with a transition at 1300 South between 300 West and Redwood Road; State Street service extended to the Capitol; 500 East and 900 East streets service extended to LDS Hospital and the Avenues; frequent service on 200 West and 600 North streets to connect the Rose Park and Fairpark neighborhoods.[23]

Secondary Transit Centers

Under the proposed transit plan, the City's street grid would become the underlying structure of the transit system instead of a hub and spoke system with the Central Station as the hub. Buses currently routed to the Central Station could travel routes that never go there while they're in service. In addition, Central Station parking spaces where buses layover already operates at capacity during peak travel time.[24] According to the master plan, "creating more layover space for UTA buses is a major factor in enabling additional transit service to be provided in Salt Lake City, including implementation of the envisioned FTN network."[25]

The master plan proposes that two secondary transit hubs be built somewhere near the 200 South and 700 East intersection and at the University of Utah. It might be noted that the Wasatch Front Regional Council's *Unified Transportation Plan for 2015-2040* includes a "200 South transit hub" in Phase 2 of that plan's Salt Lake County transit project list and estimates the cost at $7 million. A transit hub at the University of Utah is listed as a Phase 1 project with an estimated cost of $3 million.[26]

Light-Rail and Streetcar Role

According to the proposed master plan, "The existing light rail and streetcar system already provides frequent service."[27] The master plan is intended to "build off this core network by identifying a high-frequency grid comprised of both rail and bus service."[28] Again, one goal of the Transit Master Plan is to foster a network that is "a stable, relatively unchanging part of the transit system so that riders can rely on it as they do the TRAX system."[29]

The proposed master plan did not directly include future light rail improvements or routes "because they emerged from local or regional plans that have already conducted a detailed study to refine the preferred transit mode for the corridor."[30] However, the study listed rail projects as "additional projects supported by Salt Lake City." They include:

"**TRAX improvements including the Black Line** and other downtown network enhancements. These enhancements would resolve capacity issues necessary to enable direct TRAX service between the Airport and the University, two of Salt Lake City's major travel demand generators."

"**Downtown Streetcar connecting to the University of Utah.** The Transit Master Plan corridor analysis supports transit investments in a downtown streetcar including a connection to the University. The analysis showed strong demand for east-west travel between Downtown and the University of Utah. The locally preferred alternative includes portions of 200 S (west of W Temple Street), 100 S, and S Temple Street. An additional consideration for the project could include coordination with the plan's recommendation to develop a transit center in the vicinity of 200 S. and 500 E."[31]

The master plan also references the S-Line in Sugar House. According to the proposed plan, extending the line was: "Included as an element of the 900 E corridor in the *Transit Master Plan* corridor evaluation. The 900 E corridor is part of the FTN and is also included in the *Transit Master Plan* capital recommendations for Enhanced Bus. The plan will support evolving capital recommendations from the Sugar House Streetcar project that would improve utility of the line, e.g., an extension to 1700 S (consistent with *Regional Transportation Plan*) with a connection to the 900 E FTN corridor. A future extension along 900 E could connect to TRAX service at 400 S."[32]

It might be noted that the three transportation options the Wasatch Front Regional Council presented to the City Council on July 25 as potential components of the next Regional Transportation Plan in 2019 include:

- **Option 1** – Streetcar project on 200/100 South streets; bus rapid transit on State Street and 1300 East Street.
- **Option 2** – TRAX Black Line (airport to University of Utah direct, alleviating the bottleneck at 400 South Street); S-Line extension on Highland Drive to Holladay City Center.
- **Option 3** – Frequent, direct bus service that utilizes Salt Lake City's gridded street network; S-Line extension north to connect to TRAX Red Line.

Area Service outside the Frequent Transit Network

As indicated earlier in this report, when the proposed Frequent Transit Network is fully operational, 73 percent of residents and people who work in Salt Lake City will be within a quarter mile of the network. Areas farther than a quarter mile from the network when the first tier of projects are complete would be likely places for "first-mile, last-mile" service. Areas listed in the proposed master plan include:

- Western Salt Lake City, west of Redwood Road or I-215 (primarily employment-oriented demand)
- University of Utah Research Park (primarily employment-oriented demand)
- Southeast Salt Lake City, including the East Bench (primarily residential)
- Glendale/Poplar Grove neighborhoods (primarily residential)
- Rose Park/Fairpark neighborhoods (primarily residential)
- Northern part of Greater Avenues neighborhood (primarily residential)

The zones include areas that would be within a quarter mile of the network as the network is fully built out.[33] (Please see Attachment No. 2.)

To reach those areas and ultimately areas that still will be outside a fully completed network, the proposed master plan suggests two options:

For employment centers beyond a quarter mile from the network, companies could partner with each other to provide a shared shuttle service.[34] It should be noted that at least one company near the North Temple light-rail line has provided a shuttle bus to employees who use the line.

The City and UTA could partner with transportation network companies such as Uber or Lyft to provide a discounted fare on trips to transit stations or other identified neighborhood destinations such as a grocery store.[35] The plan estimates that in Salt Lake City it costs between $5 and $8 for a person to take an on-demand ride to a nearby transit station. That cost could be reduced through an agreement with a transportation network company in exchange for the City subsidizing the service. The master plan estimates the subsidy could be a net cost to Salt Lake City of between $500,000 and $900,000 a year.[36] Again, a funding source would have to be identified and a budget allocation made for the option.

Density Thresholds

The proposed master plan used a formula based on transit industry standards to develop the Frequent Transit Network recommendations. According to the plan, the formula can be used in the future to help determine when the plan's recommendations can be revised to reflect population or job growth within the City. Here is the formula:

- Operate light rail in areas where there are 12 to 24 or more households per acre and/or 16 to 32 or more jobs per acre.
- Operate Bus Rapid Transit in areas where there are 10 to 15 households per acre and/or 12 to 20 jobs per acre.
- Operate buses every 15 minutes in areas where there are 10 to 12 households per acre and/or 12 to 16 jobs per acre.
- Operate buses every 30 minutes in areas where there are 6 to 10 households per acre and/or 8 to 12 jobs per acre.
- Operate buses every hour in areas where there are 3 to 6 households per acre and/or less than 4 jobs per acre.[37] (Please see Attachment No. 3.)

According to the Administration, the thresholds are best practices based on current industry research and should be used as guidelines rather than standards. Transit planning would take a variety of local conditions into consideration about appropriate densities as would UTA in establishing service levels. The guidelines also can be helpful to communicate to people about the relationship between density and successful transit.[38]

Fare Affordability

The proposed plan notes that "the standard $2.50 fare is high for many Salt Lake City families, especially for short trips within Salt Lake City. This undermines the competitiveness of transit against other transportation options, especially in areas where parking is free; a simpler and more equitable fare system is needed.[39]

Two recommendations in the master plan are to continue to promote the City's hive pass program, which is available to Salt Lake City residents, to "get more passes into hands of people who are not currently using transit," and in the medium term "work with UTA to determine next steps for establishing more affordable fare options for intra-Salt Lake City trips."[40]

Bus Shelters and Access

The proposed master plan notes that 17 percent of the 1,200 bus stops in the City have benches or shelters.[41] The plan also quotes a July 2016 study published by Transit Center that "supports the importance of comfortable and convenient access to transit and locating transit near a mix of uses."[42] The plan quotes the study as saying, 80 percent of all-purpose transit riders walk to transit and that the number of those who ride transit for all kinds of trips is higher where it is easy to walk to transit and where transit is frequent and provides access to many destinations within walking distance.

Among ways to improve bus shelters the proposed plan recommends:

- Direct economic development activities to locate transit-supportive uses, such as cafes, restaurants, and shops, along the Frequent Transit Network.

- Invest in shade treatments, weather protection, pedestrian-scaled lighting, street furniture, bus shelters, street trees, and public art to enhance the attractiveness and safety of the street environment surrounding the Frequent Transit Network.[43]
- Provide business owners and developers with incentives if they sponsor or build transit stops and stations.[44]
- Provide places to park bicycles at transit stops or stations.

Funding

As noted earlier, the cost for UTA to operate local bus routes in Salt Lake City in 2014 was about $16 million.[45] Implementing the proposed Frequent Transit Network completely in about 20 years, may cost an additional $7.7 million a year in operating costs. In addition, the plan estimates that one option to help people who live beyond a quarter mile of the proposed network would be to contract with one or more transportation network company to provide service to transit stations and other places. The estimated cost would be between $500,000 and $900,000 a year. Again, both options would require a funding source and budget allocations. Finally, upgrades for transit stops and stations are recommended to be a UTA/City partnership in the short-term with incentives to developers. In a longer term, the plan suggests an option where a private company might build, own, and maintain transit shelters in exchange for leasing advertising space in them.[46]

The plan reviews a variety of federal funding sources for transit projects and improvements but observes, "Many recent capital projects in the United States have relied largely, if not solely, on local funding for construction and operations."[47] The plan reviews the function and use of a variety of local options including general obligation bonds, sales tax, congestion pricing, vehicle-miles-traveled fees, vehicle registration fees, hotel and rental car taxes, impact fees, and transit access fees among others.[48] How those might be enacted by Salt Lake City might be explored in more detail.

The plan recommends implementing the Frequent Transit Network that would include "an enhanced or new fixed-route service, including longer hours of operation on weekdays and on weekends, increased frequency, service on new corridors, and route extensions to more directly serve key destinations."

Initial priorities in the recommendation include "buying up" evening service on key routes. Providing service longer into the evenings makes transit more usable for both work and non-work trips, according to the proposed plan. The proposed plan says:

"Salt Lake City could provide UTA with a financial contribution to increase frequency or span of service on a route. If the change does not require additional vehicles, i.e., increasing midday or evening service to the same level of service provided at a different time period, no additional vehicles would be required. ... Where the City desires to buy-up service on routes that extend beyond Salt Lake City limits, the City would invest only in service that is within city boundaries. UTA would be responsible for how that service is connected to the rest of the system. For example, service increases that the City buys up could terminate at/near city limits. It is anticipated that once service is demonstrated to meet UTA service standards, the agency would take over provision of that service, as funding allows. UTA and the City would need to document any such agreements in a memorandum of understanding."[49]

The plan goes on to recommend "developing a local service delivery approach that strengthens" the relationship between UTA and Salt Lake City. "The City and UTA should develop an agreement or memorandum of understanding (or a set of agreements) that comprehensively and clearly outlines mutual responsibilities, decision-making structure, and commitments to promote transparency and ensure accountability. The FTN, which represents the City's policy vision for frequent service corridors and service levels, is a key area that could be addressed in such as agreement. The City can provide local funding support to increase frequency and hours of operation

on high priority corridors and implement capital improvements that enhance transit speed and reliability."[50]

Various Statistics

Emissions from cars account for nearly half the air pollutants on the Wasatch Front. ... Transit riders along the Wasatch Front take 120,000 car trips off roads each day, saving 850,000 vehicle miles traveled and keeping 2,000 tons of emissions out of the air.[51]

A substantial portion of all transit trips begin or end in downtown Salt Lake City or the University of Utah area – 70 percent in Salt Lake County; 57 percent from Davis County; 24 percent from Weber County; and (before Front Runner began operating in Utah County) 19 percent from Utah County.[52]

Six percent of Salt Lake City residents take transit to work; 2 percent of all trips in Salt Lake City are made on transit.[53]

Total transit ridership on all lines that touch Salt Lake City increased by 28 percent between 2011 and 2014; boardings in Salt Lake City in the same period increased by 13 percent.[54] (Council Staff Note: The increase might be due to the completion in 2013 of UTA's Frontlines Project in which five rail lines were built. Draper and the Airport lines were the last two lines to open.)

Open UTA Questionnaire – Conducted between the summer of 2015 and October 1, 2015, received 461 responses, including 74 from Salt Lake City. Bus was identified as the most important mode for improvement (45%), followed by TRAX and Streetcar (35%). Improving service span was the most important bus improvement (50%). Late night service was the most important TRAX improvement (47%) and Sunday service was the top priority for FrontRunner enhancement (59%). [55]

Design Your Own System Online Tool – More than 1,412 people participated in the study. Of that, 65 percent (918) of the respondents lived in Salt Lake City.

- Seventy percent of the participants said they would like more service in evenings; followed by Saturday service (58%) and finally Sunday service (39%). The priorities were identical, regardless of respondents' frequency of transit use, age, or income.
- The top capital improvement priority was to increase investments in a rail-based system (46%). This was the top priority regardless of frequency of use, age, or income. Responses from Salt Lake City residents were similar to those of all people who responded, though Salt Lake City residents were somewhat more likely to want to increase investment in the bus system.
- Adults age 45-64, age 65 or older, and low-income respondents were somewhat more likely than other groups to indicate a preference for a bus-based system or incremental improvements to the current system.[56]

Transit Vehicle Capacity – Commuter rail: 100-135 seats per car; TRAX car: 100 person capacity; Streetcar: 100 person capacity; Bus Rapid Transit: 40 to 90 person capacity; Enhanced Bus: 40 to 60 person capacity; Local Bus: 40 to 60 person capacity; Community Shuttle: 15 to 30 person capacity.

CITY COUNCIL PHILOSOPHY STATEMENT PRIORITY: TRANSPORTATION AND MOBILITY – 2013

VISION

Salt Lake City residents should have choices in modes of transportation which are safe, reliable, affordable, and sustainable. Residents should reap the value of well-designed transportation systems that connect residents to neighborhoods and the rest of the region.

The City encourages alternatives to motorized-vehicular transportation and making those options more appealing and accessible to visitors and residents.

VALUES

1.) We support maximizing the accessibility, affordability, and reliability of transportation options into and around the City and support increasing accommodations for non-automotive transportation options.
2) We support educational efforts that will help residents make informed choices about the types of transportation they use.
3) We support reducing the environmental and health impacts created by vehicle emissions.
4) We support efforts that will reduce the need for people to drive alone in vehicles.
5) We value the social, economic and health benefits that come from active transportation options such as bicycling and walking.
6) Pedestrian and bicycle safety are a high priority and we believe they can be compatible with other modes of transportation.
7) We support establishing and maintaining safe routes to schools.
8) We value coordinating with transportation agencies and other municipalities to improve the movement of people throughout the city.
9) As the population of Salt Lake City and the region increases, land use design decisions should reflect the intention to better accommodate all modes of transportation and focus on the movement of people.

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[1] *Salt Lake City* Transit *Master Plan*, Salt Lake City Transportation Division and Nelson\Nygaard Consulting Associates Inc., San Francisco, CA, 2016, March 16, 2017, Page 7-21.
[2] *Transit Master Plan*, Page 6-4.
[3] *Transit Master Plan*, Page 7-21.
[4] *Transit Master Plan*, Page 7-4.
[5] *Transit Master Plan*, Page 7-3.
[6] *Transit Master Plan*, Page 7-7.
[7] *Transit Master Plan Executive Summary*, Pages 16 and 17.
[8] *Transit Master Plan*, Page 2-17.
[9] *Transit Master Plan*, Page 5-13.
[10] *Transit Master Plan Executive Summary*, Page 16.
[11] City Council Meeting Minutes, May 7, 2013.
[12] City Council Meeting Minutes, February 4, 2014.
[13] City Council Staff Report, *Transit Master Plan – Launch*, Russell Weeks, March 17, 2015, Page 2.
[14] *Transit Master Plan*, Figure 2-7
[15] *Transit Master Plan*, Page 2-3.
[16] *UTA Network Study Next Tier Program Final Report*, Lochner Co., June 13, 2013, Page 47.
[17] Discussion, Christopher Chesnut, UTA senior manager of integrated service planning, July 28.
[18] *Transit Master Plan*, Page 2-18.
[19] *Transit Master Plan*, Page 2.18.
[20] *Transit Master Plan*, Page 2-18.
[21] *Transit Master Plan*, Pages 2-2 and 3
[22] *Transit Master Plan*, Page 2-9.
[23] *Transit Master Plan*, Page 2-9.
[24] *Transit Master Plan*, Page 2-17.
[25] *Transit Master Plan*, Page 2-17.
[26] *Utah's Unified Transportation Plan 2015-2040*, Wasatch Front Regional Council, UTA, and others, Page 57.
[27] *Transit Master Plan*, Page 2-1.
[28] *Transit Master Plan*, Page 2-1.
[29] *Transit Master Plan*, Page 2-3.
[30] *Transit Master Plan,* Page 3-11.

[31] *Transit Master Plan,* Pages 3-11 and 12
[32] *Transit Master Plan,* Page 3-17.
[33] *Transit Master Plan,* Page 2-19.
[34] *Transit Master Plan,* Page 2-22.
[35] *Transit Master Plan,* Page 2-22.
[36] *Transit Master Plan,* Page 7-7.
[37] *Transit Master Plan,* Page 6-4.
[38] E-mail, Julianne Sabula, August 2, 2017.
[39] *Transit Master Plan,* Page 5-13.
[40] *Transit Master Plan,* Page 5-13.
[41] *Transit Master Plan* Page 6-10.
[42] *Transit Master Plan,* Page 6-3.
[43] *Transit Master Plan,* Page 6-7.
[44] *Transit Master Plan,* Page 6-9.
[45] *Transit Master Plan*, Page 7-21.
[46] *Transit Master Plan*, Page 6-12.
[47] *Transit Master Plan*, Page 7-14.
[48] *Transit Master Plan*, Pages 7-14-20.
[49] *Transit Master Plan*, Pages 7-1 and 3.
[50] *Transit Master Plan,* Pages 7-20 and 21.
[51] *Unified Transportation Plan,* Page 6.
[52] *UTA Network Study,* Executive Summary Page 4 and Network Study, Page 30.
[53] *Transit Master Plan,* Page 1-8.
[54] *Transit Master Plan,* Page 1-8.
[55] *Transit Master Plan,* Page 1-6.
[56] *Transit Master Plan,* Page 1-7.

Figure 2-7 Frequent Transit Network Vision: Tier 1 and Tier 2

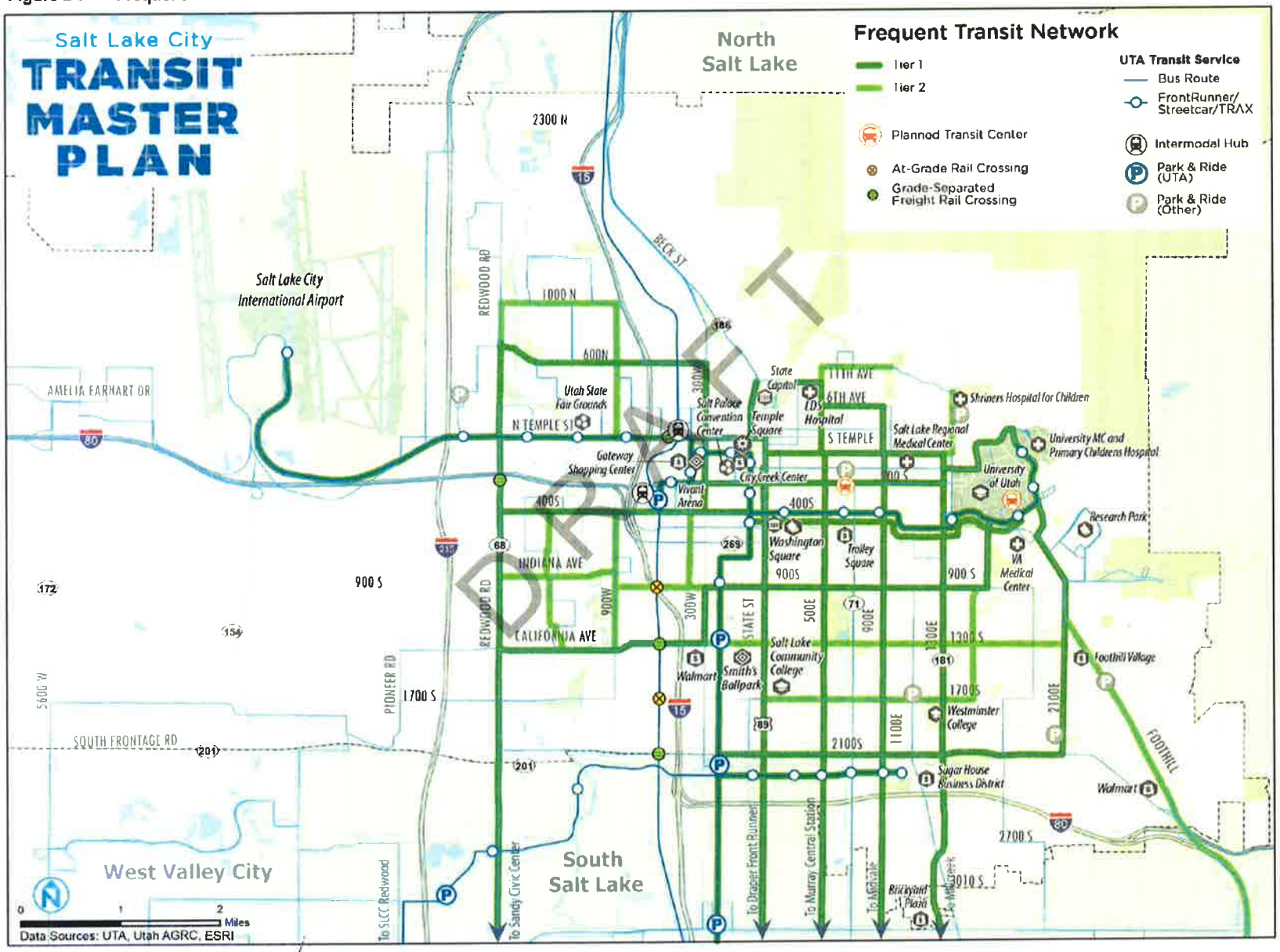
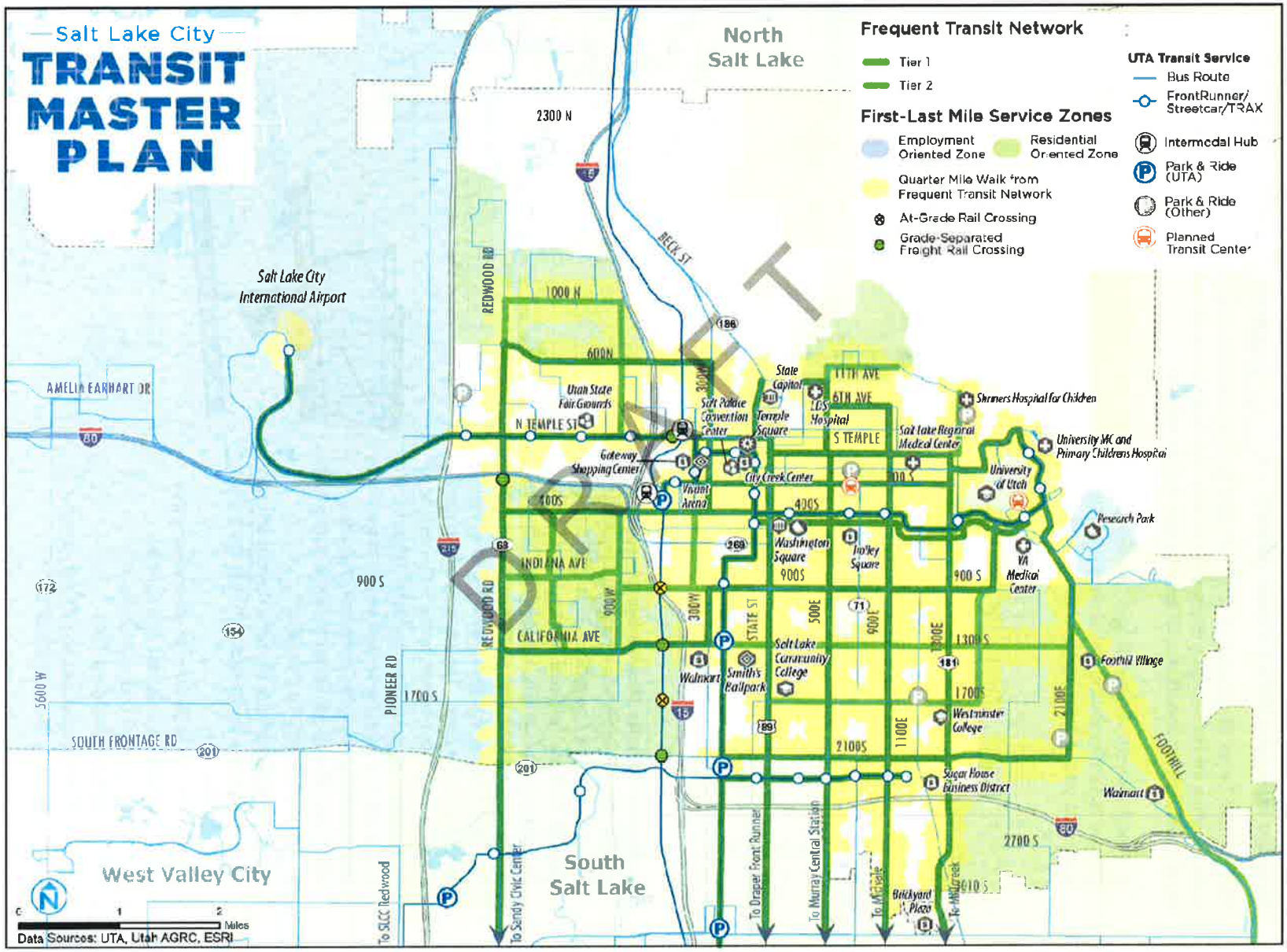


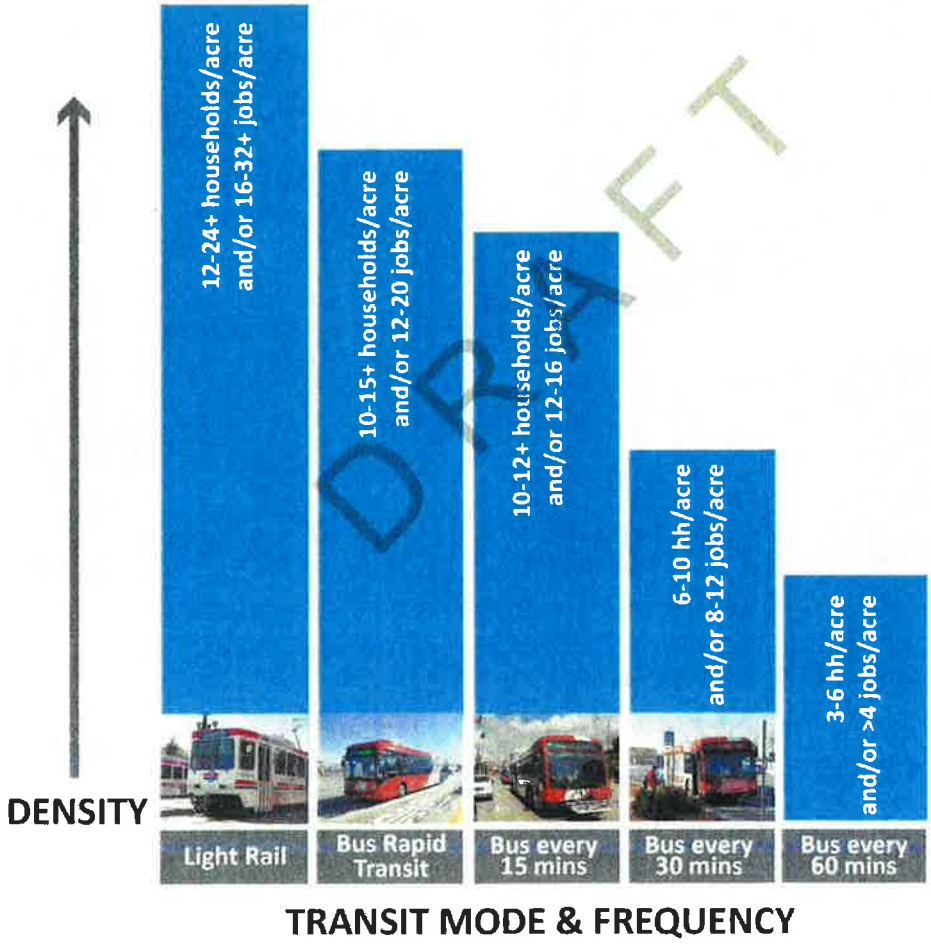
Figure 2-11 First-Last Mile Service Zones with Quarter-Mile Walking Distance from FTN



Furthermore, Salt Lake City can work with UTA to ensure that transit service levels are adequate to support areas as they grow and become more transit-oriented. The Transit Master Plan does not dictate priorities for land use plan updates; rather it provides information for coordination of land use plans, to ensure that future land development patterns are supportive of Transit Master Plan goals.[1]

The thresholds outlined in Figure 6-1 relate density of households and jobs to transit service quality (based on industry standards for when service and capital investments are justified). These thresholds were used to develop FTN recommendations and can be adjusted over time as land use changes. The densities outlined in Figure 6-1 should occur on average in an area; there may be much higher concentrations adjacent to stations and lower concentrations further from station areas. As areas in Salt Lake City reach certain densities, service levels should be adjusted.

Figure 6-1 Transit Mode & General Frequency by Gross Density



Source: Adapted from TCRP Report 100: Transit Capacity and Quality of Service manual, TCRP Report 102: Transit-Oriented Development in the United States, and other sources; employment is converted from household density based on a typical relationship of 4 jobs: 1 dwelling unit

[1] Note: The Transit Master Plan does not include any specific land use or zoning recommendations; area master plans could be re-visited to bring density to match desired transit service levels.

JACQUELINE M. BISKUPSKI
Mayor

DEPARTMENT *of* **COMMUNITY** *and* **NEIGHBORHOODS**

CITY COUNCIL TRANSMITTAL

Patrick Leary, Chief of Staff

Date Received: March 16, 2017
Date sent to Council: March 21, 2017

TO: Salt Lake City Council
Stan Penfold, Chair

DATE: March 16, 2017

FROM: Mike Reberg, Community & Neighborhoods Director

SUBJECT: Salt Lake City Transit Master Plan

STAFF CONTACT: Julianne Sabula, Transit Program Manager, (801) 535-6678

COUNCIL SPONSOR: Lisa Adams

DOCUMENT TYPE: Ordinance

RECOMMENDATION: Adopt the draft Transit Master Plan, with public comments incorporated.

BUDGET IMPACT: N/A

BACKGROUND/DISCUSSION:
The Transit Master Plan is the first plan of its kind for Salt Lake City. The plan evaluates travel patterns and transit needs citywide in order to develop high-level recommendations for transit service, infrastructure, supportive investments, and programs and policies over the next twenty years. It also identifies strategies for implementation, including potential funding sources, key moves for early success and momentum, and a governance model. A key focus of the plan is to respond to and prepare for growth in population and jobs, the desire to improve air quality, changing demographics and transportation preferences, and the impact of transportation choices on health and household budgets.

The Transit Master Plan's primary recommendations include a grid-based network of high frequency transit corridors, development of alternate service models for lower-density residential neighborhoods and employment centers, and safe and convenient access to transit. It also recommends better information and system legibility, fare programs, and supportive land use and parking policies. The Plan's Executive Summary provides a high-level overview of the key recommendations. The full plan,

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including all appendices, can be found on the project website's Project Documents page www.slcrides.org.

The plan will be used by several of the City's agencies to provide guidance in implementing service and infrastructure improvements, as well as to strengthen our relationship and clearly communicate priorities with UTA. The new proposed plan will be used in coordination with the recently adopted Pedestrian & Bicycle Master Plan, the City's overall Transportation Master Plan, Plan Salt Lake and area master plans throughout the City.

RELATIONSHIP TO OTHER PLANS:
The Transit Master Plan builds on past plans, especially those developed and adopted in recent years, such as Plan Salt Lake, Sustainable Salt Lake, the Downtown Plan, the Westside Master Plan, the 2040 Regional Transportation Plan, and Utah's Unified Transportation Plan 2011-2040.

Some of the transit and transportation demand management focused recommendations of this plan will be furthered in the upcoming Transportation Master Plan Update.

PUBLIC PROCESS:
A summary of the public process can be found on pages 8-9 of the plan's Executive Summary and is described in detail in Transit Master Plan Appendix B, "Community Outreach".

Throughout the planning process, the public had the opportunity to shape the direction of the plan. Public engagement included stakeholder interviews with sixteen organizations, two public open houses, eighteen mobile workshops, an online questionnaire, and a unique online game in which over 1,400 participants developed and communicated their priorities for transit. In total about 2,500 comments, survey responses, map mark-ups and "sticky notes" were received.

The plan also received input from an internal Steering Committee including representatives from Engineering, Planning, Economic Development, Sustainability, HAND, CAN leadership and communications team, the RDA, the Mayor's Office – including the Mayor's Accessibility Council – and the City Council Office.

The Transportation Advisory Board, Bicycle Advisory Committee (a standing committee of TAB), and Business Advisory Board have each received briefings to give input throughout the process. The Planning Commission made a positive recommendation for the draft plan on November 30, 2016.

Further summary of the public input at each of these stages was included in the four prior transmittals related to this plan, as sent to the City Council in March 2015, July 2015, October 2015, and July 2016.

The draft plan itself was publicized and available for public comment on October 18, 2016 and comments listed and described herein were received through December 16, 2016.

In addition to the majority of people who viewed the plan directly through the project's website www.slcrides.org, many reviewed it in person at the Transportation Division offices and during various community presentations. The topic was placed on Open City Hall and received

over 485 views (as of December 22, 2016), making it one of the most active topics posted in recent months.

SUMMARY OF COMMENTS ON THE DRAFT PLAN:

Each comment received has been considered independently in a comment resolution matrix. This matrix shows how the City will accept, accept with modifications, or decline each comment, and is attached as Exhibit C. Additional comments from Council and a public hearing process will be similarly incorporated.

The summary below highlights the significant and common themes from the public comment and internal comments on the draft plan.

- **Several people wrote with simple support for the plan** – citing improved transportation for themselves and/or others. There were some requests that the plan be implemented faster, and/or concern that areas not served by the high-frequency network would not be served at all. Several people asked that facilities near their own residences, places of employment, and other specific destinations be prioritized, including those outside of Salt Lake City.

    - Incorporation of comments – We appreciate the support for the plan. The plan suggests phasing that we believe is attainable in terms of overall resources and community support for change. We will clarify in the plan that it does not seek to reduce nor eliminate service, but rather to provide frequent, all-day service where it is most likely to succeed and to support city goals, and to provide new service models and improved access for neighborhoods that are beyond the reach of the frequent network. We encourage those who live in other cities and counties to express their desire for local transit planning to their elected officials, and we are happy to be a resource.

- **Several people expressed a desire for robust transit and transit-supportive infrastructure, including new and improved transit centers, rail connections, dedicated bus lanes, and signal priority**.

    - Incorporation of comments – We have included high-level references to these in the master plan, and will delve into specifics through the corridor and site planning processes.

- **A few people wrote to express general opposition to the plan.** Opposition was a minority opinion, and largely fell within two categories: a desire for a far more aggressive plan and general opposition to UTA.

    - Incorporation of comments – we believe the plan is aspirational but attainable given existing and potential new resources. Should new and/or expanded funding sources become available, the plan could be implemented on a more aggressive schedule. The plan is intended to enhance local

control over where our investments can best serve our community and to be used to communicate our priorities clearly to UTA.

- **A few people had comments related to private auto travel.** Some prefer investments in signal timing and other improvements for vehicles, while others prefer more explicit policies to discourage auto travel.

    - Incorporation of comments – since this is a modal plan focused on transit, it does not delve specifically into the needs of motorists. However, increased transit ridership slows the growth in traffic and congestion, and signal improvements for transit can also benefit traffic flow for cars, especially those travelling in the peak period and peak direction. The plan does recommend Transportation Demand Management (TDM) strategies, which are explored in more detail in the Parking Study (in progress) and TDM and auto travel will be further explored in the forthcoming Transportation Master Plan Update.

- **Integration of bicycles was a common theme** with several members of the public. The majority applauded the integration of bicycles, however some expressed the need to expand and improve transit riders' ability to bring their bikes on transit, especially those who use a bicycle at both ends of their daily commute.

    - No change to the plan recommendations. Active transportation is a strong component of the plan, and the plan emphasizes improvements over which the City has full control. That said, UTA has been exploring and implementing improvements to on-vehicle bike accommodations, including the installation of bus racks that hold three bikes instead of two and the testing of a variety of in-vehicle hooks and racks, especially on the rail system. The Plan's recommendations fully support these efforts.

- **Several suggestions were made to integrate the needs of the disabled community**, and comments on specific language that would raise awareness, reinforce the need to make transit better for those who experience the greatest transportation challenges, and shift the culture toward greater inclusivity.

    - Incorporation of comments – we will make numerous additions to the plan to include more explicit consideration of the wide variety of disabilities affecting people's access to transit, including the achievement of true accessibility with alternate service models, specific references to disabilities in Chapter 4 "Access", and inclusion of disabled populations in Goal 5 "Provide Access to Opportunity for Vulnerable Populations".

    - The plan will also recommend that, outside this master plan process, the City should consider the finer details of accessibility as an integral part of implementation planning. Specifically, the plan will reference the City's Bus Stop and Bike Share Design Guidelines, to be updated in consideration of needs including but not limited to the challenges of travel with mobility devices, better audio and visual cues, and other best practices as identified in

current research and by groups such as the City's Accessibility Council. In practice, City staff will continue to review designs for ADA compliance and best practices, and to implement improvements accordingly.

EXHIBITS:
Exhibit A: Transit Master Plan Executive Summary ("The Plan")
Exhibit B: Draft Transit Master Plan (full technical report)
Exhibit C: Comment Resolution Matrix

SALT LAKE CITY ORDINANCE
No. _____ of 2017

(Adopting the Salt Lake City Transit Master Plan)

An ordinance adopting the Salt Lake City Transit Master Plan.

WHEREAS, the Salt Lake City Planning Commission held public hearings on November 9, 2016 and November 30, 2016 on an application submitted by Salt Lake City Mayor Jackie Biskupski ("Applicant") to adopt a new Salt Lake City Transit Master Plan; and

WHEREAS, at its November 30, 2016 meeting, the planning commission voted in favor of forwarding a positive recommendation to the city council on said application; and

WHEREAS, after a hearing before the city council, the city council has determined that adopting this ordinance is in the best interest of the city.

NOW, THEREFORE, be it ordained by the City Council of Salt Lake City, Utah:

SECTION 1. Adopting the Salt Lake City Transit Master Plan. That the "Salt Lake City Transit Master Plan" is hereby adopted to read and appear as provided in Exhibit "A" attached hereto.

SECTION 2. Effective Date. This ordinance shall become effective on the date of its first publication.

Passed by the City Council of Salt Lake City, Utah, this _____ day of _____, 2017.

_____
CHAIRPERSON

ATTEST AND COUNTERSIGN:

_____
CITY RECORDER

Transmitted to Mayor on _____.

Mayor's Action: _____Approved. _____Vetoed.

_____
MAYOR

_____
CITY RECORDER

(SEAL)

Bill No. _____ of 2017.
Published: _____.

HB_ATTY-#58790-v1-Ordinance_adopting_SLC_Transit_Master_Plan.docx

APPROVED AS TO FORM
Salt Lake City Attorney's Office
Date: February 3, 2017
By: _____
Paul C. Nielson, *Senior City Attorney*

EXHIBIT “A”

Salt Lake City Transit Master Plan

Salt Lake City Transit Master Plan | 2016

EXECUTIVE SUMMARY

Key Moves

To achieve the Transit Master Plan goals and desired community outcomes, the top priorities of the Plan include:

Implement a frequent transit network (FTN) to provide reliable, efficient, and frequent transit service that takes advantage of the City's strong street network grid. Initial priorities are to enhance evening service on key routes, which will make transit more usable for both work and non-work trips, and to implement frequent service in the 200 S corridor.

Develop pilot programs and partnerships for employer shuttles and on-demand shared ride services that extend the reach of fixed route service for employment areas or neighborhoods that lack sufficient density or demand to support cost-effective frequent transit service.

Develop enhanced bus corridors that help transit run faster and more reliably, and offer high quality stop amenities that make riding transit comfortable and attractive. An initial priority is to implement coordinated capital and service improvements on 200 S, a primary east-west transit corridor for bus (and potentially future bus rapid transit and/or streetcar) service between downtown and the University.

Implement a variety of transit-supportive programs and transit access improvements that overcome barriers to using transit in terms of information, understanding, and access (including pedestrian and bicycle facilities and affordability). Initial plan priorities include developing a highly visible frequent service brand and focusing access improvements, rollout of real-time transit information, and targeted transit marketing programs on corridors that will be prioritized for FTN service enhancements.

Acknowledgments

The Salt Lake City Transit Master Plan was prepared by the Salt Lake City Division of Transportation in coordination with the Utah Transit Authority (UTA) and multiple City departments and other community and regional organizations.

Members of the Transit Master Plan Steering Committee provided valuable expertise and assistance throughout development of the Plan. The Planning Commission, City Council, and the Mayor also provided important guidance.

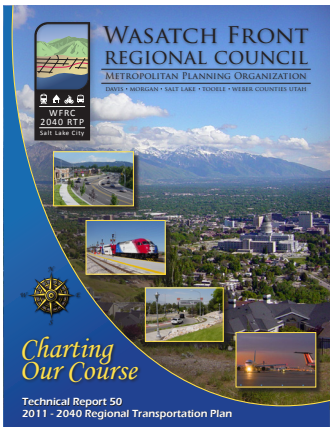
The City would especially like to thank the people of Salt Lake City and the region who provided input through outreach events, online surveys, and other channels during development of the Plan.

Why a Transit Master Plan

The Salt Lake City Transit Master Plan is a blueprint for the future of public transportation in Salt Lake City. It addresses public transit service, facilities, and policies and programs, just as the Pedestrian and Bicycle Master Plan addresses active transportation elements for the city. The Transit Master Plan emphasizes providing choices in travel and reducing dependence on the single occupant automobile. The Plan builds on numerous Salt Lake City and regional plans (see sidebar) that have identified the availability of safe, high quality, and convenient transportation choices as a critical tool to support achievement of broader outcomes (e.g., health, economic competitiveness, and quality of life). The Plan identifies key corridors for high frequency transit; intermodal opportunities to enhance linkages between the pedestrian environment and transit corridors, nodes, and centers; shared mobility options to improve access to transit and serve lower demand neighborhoods; and policies and programs that will leverage investments in transit and support transit ridership.

The Transit Master Plan builds on previous planning efforts including:

- Plan Salt Lake
- Sustainable Salt Lake
- Pedestrian and Bicycle Master Plan
- Downtown Plan
- Northwest Quadrant Master Plan
- 2040 Regional Transportation Plan
- Utah's Unified Transportation Plan 2011-2040

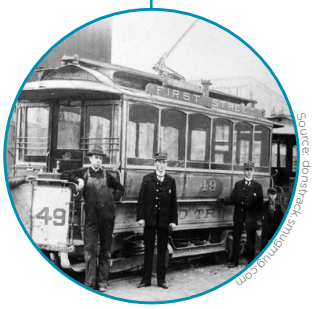


How far we've come

From its humble beginings as a handful of rival independent streetcar operators, the incorporated Utah Transit Authority (UTA) became the fastest growing transit agency in the country by the 1980s. The following two decades were defined by developing and implementing plans for bringing light rail and commuter rail transit to Salt Lake City and the region. The future brings a renewed focus to improve the quality of both bus and rail transit in Salt Lake City through implementation of UTA's Core Route Network and the Salt Lake City Transit Master Plan recommendations.

1889
Electric streetcar begins operating on the mule-drawn lines that were established by SLC Railroad Co. in the 1870s.

1890s
Several streetcar companies form, including Salt Lake Rapid Transit Company. Rail lines are built along major spurs, creating Sugar House as SLC's first streetcar suburb.



Source: downtrack.smugmug.com

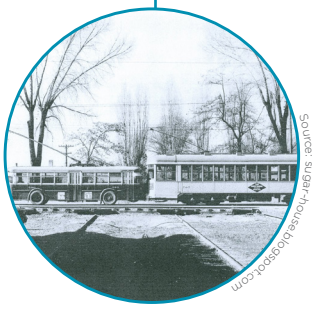
1900s
Fierce competition among rival streetcar lines results in their incorporation into the Consolidated Railway and Power Company.


Source: Utah Historical Society

1908
Trolley Square is constructed and the streetcar system is expanded. For 37 years, the Square is home to over 140 trolley cars.


Source: Utah Historical Society

1920s – 1930s
The transit system in Salt Lake City continues to expand, and while still primarily served by streetcars, electric coaches and gas buses begin to appear. Streetcar lines are increasingly replaced with bus routes.


Source: sugar-house.blogspot.com

1940s
National City Lines buys out and decommissions the trolleys from the Utah Light and Traction Company. Buses fast become the dominant transit mode.


Source: strib.com

Sources: Salt Lake City Corporation and Utah Transit Authority, except where otherwise noted

1950s – 1960s
Low gas prices and highway construction causes a precipitous decline in transit ridership over the next 20 years.

1969
The Utah State Legislature passes enabling legislation called the Utah Public Transit District Act.

1970s – 1980s
UTA is incorporated and farebox revenue is halved, causing an increase in ridership. UTA becomes the fastest growing transit agency in the country.

1995
Winning the bid for the 2002 Winter Olympics makes Salt Lake City a high priority for federal transit funding, and sets the stage for building a rail network.

1999
The first TRAX light rail line opens from Downtown SLC to Sandy.

2008
FrontRunner begins operating in 2008 from Salt Lake City to Ogden.

2010s
The recession's impact on sales tax revenues, at the same time that massive rail expansion is underway, results in cuts to bus service.

2013
Streetcars return to the City with the S Line. The Salt Lake City Council commits funding to the creation of the City's first-ever Transit Master Plan.

Our goals

The Transit Master Plan goals support broader community outcomes that are important to Salt Lake City and clearly define all the desired elements to improve the transit system in Salt Lake City. These goals guided the evaluation of investment options and development of the Plan's recommendations.

1 IMPROVE AIR QUALITY

- Reduce vehicle miles traveled per capita

2 INCREASE THE NUMBER OF PEOPLE RIDING TRANSIT

- Make transit useful for more types of trips
- Improve competitiveness of transit with auto travel

3 PROVIDE A SAFE AND COMFORTABLE TRANSIT ACCESS AND WAITING EXPERIENCE

- Improve bicycle and pedestrian access to transit
- Improve the transit waiting experience and universal accessibility of stops and stations

4 PROVIDE A COMPLETE TRANSIT SYSTEM THAT SUPPORTS A TRANSIT LIFESTYLE

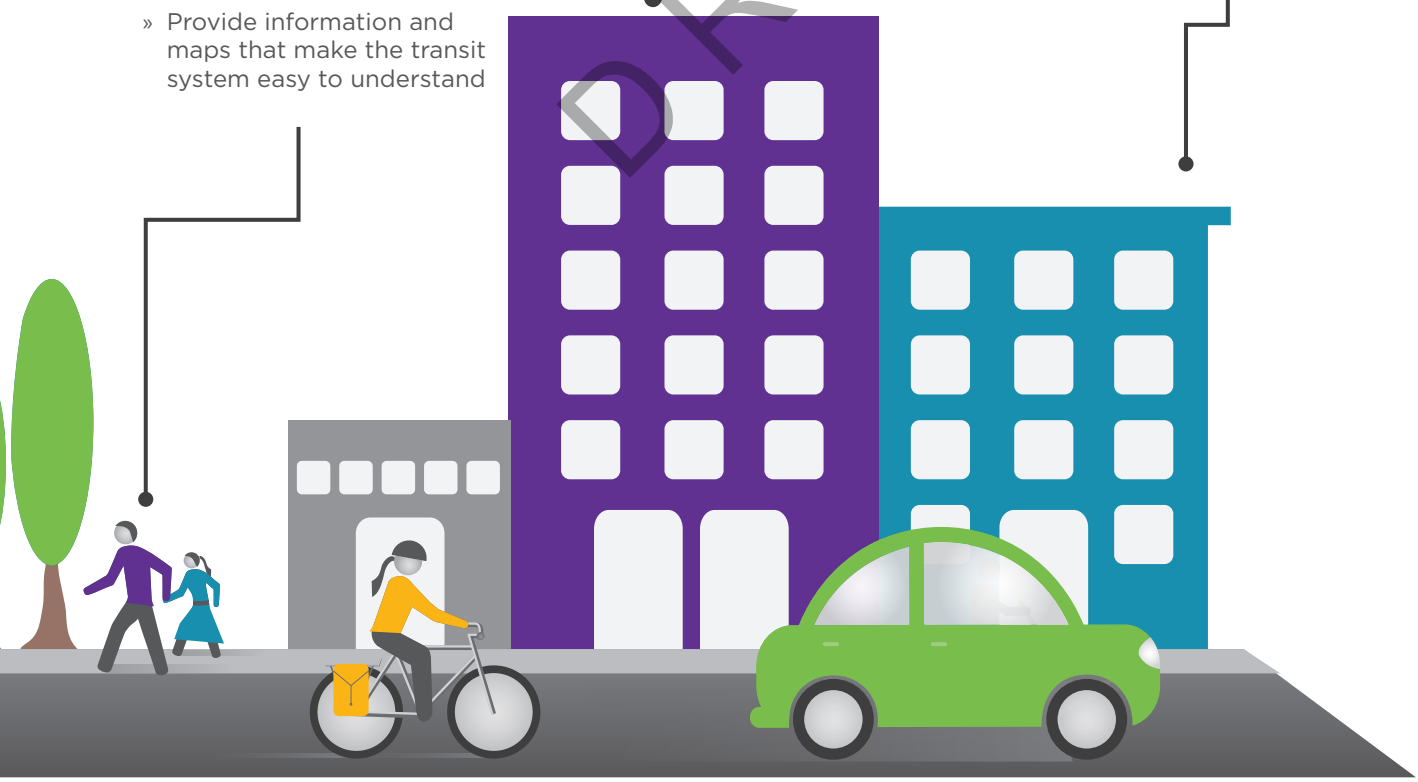
- » Provide reliable, efficient, and frequent transit service
- » Maintain stable service on the core transit network
- » Provide service on the core transit network during the evening and on weekends
- » Provide information and maps that make the transit system easy to understand

5 PROVIDE ACCESS TO OPPORTUNITY FOR VULNERABLE POPULATIONS

- » Design a transit network that supports access to jobs, education, daily needs, and services for transit dependent populations
- » Provide affordable transit options, particularly for low-income households

6 CREATE ECONOMICALLY VIBRANT, LIVABLE PLACES THAT SUPPORT USE OF TRANSIT

- » Align transit investments with transit-supportive land use policies and development
- » Catalyze economic development and jobs in Salt Lake City by providing effective transit service that employers, businesses, and the development community can depend upon



Why now

With changes in demographics, socioeconomic conditions, and transportation preferences, there is an increasing need to reassess how transit service can best serve Salt Lake City's residents, employees, and visitors. The Salt Lake City Transit Master Plan sets a vision to improve transit service to best meet changing preferences and future needs.

1 Transit supports our growing population and economy

Expanded transit service is needed—particularly during times of peak travel—to maintain commute times that are competitive with auto travel, retain and attract businesses, and support the efficient movement of freight.

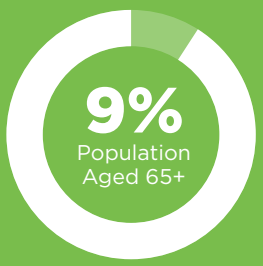
2 Transit carries more people, reducing emissions and improving air quality

On-road transportation accounts for over 15% of total emissions in Salt Lake City. If current trends continue, vehicle miles traveled are expected to increase 1.4% per year.

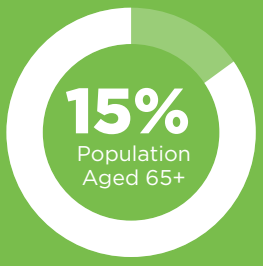
Source: Salt Lake City Community Carbon Footprint (2010).

3 Transit supports changing transportation preferences

The Millennial generation (approximately those born between 1981 and 1997) is driving less and using transit, biking, and walking more.



2014

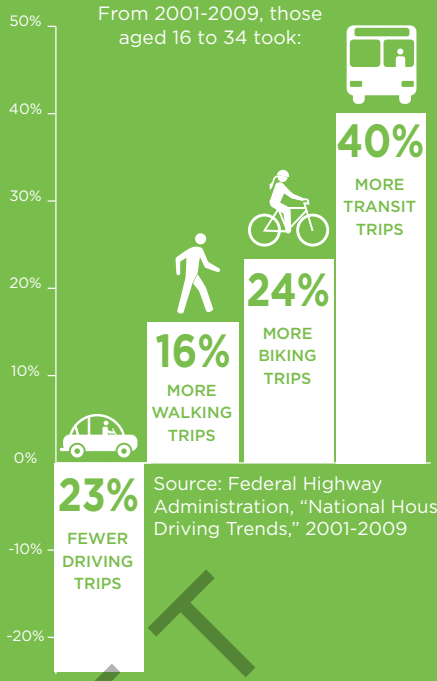


2040

Source: 2014 ACS 5-year Estimates and Utah Governor's Office of Planning and Budget

THE MILLENNIALS ARE TRAVELING DIFFERENTLY

From 2001-2009, those aged 16 to 34 took:



Source: Federal Highway Administration, "National Household Driving Trends," 2001-2009

4 Transit accommodates an aging population of Baby Boomers

As the City's Baby Boomers reach retirement, they will require safe and affordable transit options to stay active and engaged in their communities and access daily services and medical appointments.

5 Transit provides an affordable transportation option

Salt Lake City residents spend an average of 20% of their household income on transportation; transit provides an affordable option for those who most need it.

Source: Housing and Transportation Affordability Index. Transportation Costs as % of Income. http://htaindex.cnt.org/map/"

6 Transit keeps us healthy

Taking transit can help increase physical activity and improve health. The current obesity rate in Salt Lake County is 27%.

Source: Utah Department of Health. Public Health Indicator Based Information System (IBIS). 2016. Retrieved from https://ibis.health.utah.gov/indicator/complete_profile/Obe.html

Public transit users walk an average of **19 minutes daily** getting to and from transit stops

SOURCE: Besser, Lilah, and Andrew Dannenberg. "Walking to Public Transit: Steps to Help Meet Physical Activity Requirements." American Journal of Preventive Medicine 29:4 (2005): 273-80.

What we heard

The Salt Lake City Transit Master Plan public outreach process engaged broad and diverse segments of the population. Opportunities for public involvement occurred throughout the process, from goal setting, to identifying issues and opportunities, to weighing in on priorities. **This is what we heard.**

1 What are your desired outcomes for transit?

Outreach Method: Stakeholder Interviews

# of Participants: 16 organizations

What did we hear? The community's goals for transit were documented through stakeholder interviews and a questionnaire made available to the general public at the outset of the Transit Master Plan. Common themes are listed below:

- To attract riders, public transit must be competitive with private automobile (in time and convenience)
- Support current and future growth areas
- Be a regional destination for culture/commerce
- Meet local and commuter needs
- Build a "transit culture"

2 What are the opportunities to improve transit?

Outreach Method: Mobile Outreach Events

# of Participants: Hundreds of people at 18 events

What did we hear? Key findings from the comment boards are summarized below:

- 18% want improved east-west connections
- 12% want more frequent transit
- 9% want service to run later in the evenings and on weekends

Outreach Method: Open House

# of Participants: 60

What did we hear? Participants were invited to identify which of the Salt Lake City Transit Master Plan's service design principles was the most important to the success of the project.

- Almost 50% of respondents identified "provide simple citywide connections on a high-frequency network" as the most important service design principle

3 What are your priorities?

Outreach Method: Open City Hall Questionnaire

# of Participants: 535

What did we hear?

- 41% of respondents selected transit system convenience and reliability as the most important outcome
- Pedestrian and bicycle access to stops (28%) was the highest ranking improvement
- A citywide network is the most important big idea for a majority of respondents (51%)

Outreach Method: Design Your Transit System Online Tool

# of Participants: 1,400

What did we hear?

The Design Your Transit System tool asked the community to prioritize different levels of service, where transit should be improved, and what capital and other improvements are needed. Key findings are outlined below:

- Improved convenience: 49% selected "Making transit easier and more convenient to use" as their primary decision factor in designing their transit system
- Faster, and more reliable: 56% of survey respondents don't take transit because it takes too long
- Improved connectivity: 54% of survey respondents can't get where they need to go via transit
- Weekend and later service: 70% of survey respondents said they want evening transit service; 58% want more transit service on Saturdays
- Regional and local priorities: Salt Lake City residents want investments in a bus based system; respondents who live outside of Salt Lake City want investments in a bus and rail system
- Improved bicycle and pedestrian access: 43% of survey respondents want improved bike and pedestrian access to transit

Our challenges

Using key findings from the State of the System report, stakeholder input, and public outreach, a gaps analysis was conducted to identify opportunities to improve the transit system in Salt Lake City. **This is what we found.**

Transit service is limited outside of the standard commute. Frequent service is very limited outside of standard commute times, particularly in the evening and on weekends. Some areas of the city with high propensity to use transit have low transit mode share and are not well-served by the existing transit system. For example, of the 44 bus routes that operate in Salt Lake City, only about half operate outside commute periods and provide midday service.*

Transit is not the preferred option. Approximately 6% of Salt Lake City residents take transit to work; only 2% of all trips are made on transit.

Transit boardings outside of Salt Lake City are outpacing boardings inside Salt Lake City. Total transit ridership on all lines that touch Salt Lake City increased by 28% between 2011 and 2014 whereas boardings in Salt Lake City on these lines only increased by 13%.*

Bus stop amenities are limited. There are limited amenities for passengers at bus stops—83% of bus stops do not have a bench or a shelter for people to wait for the bus to arrive.*

> **"I used transit regularly for daily commute for about 6 months. It more than doubled my commute time, and I was constantly worrying about missing the 'last bus.' The (bus) system worked; it was just slow."**
>
> -Design Your Transit System Survey Respondent

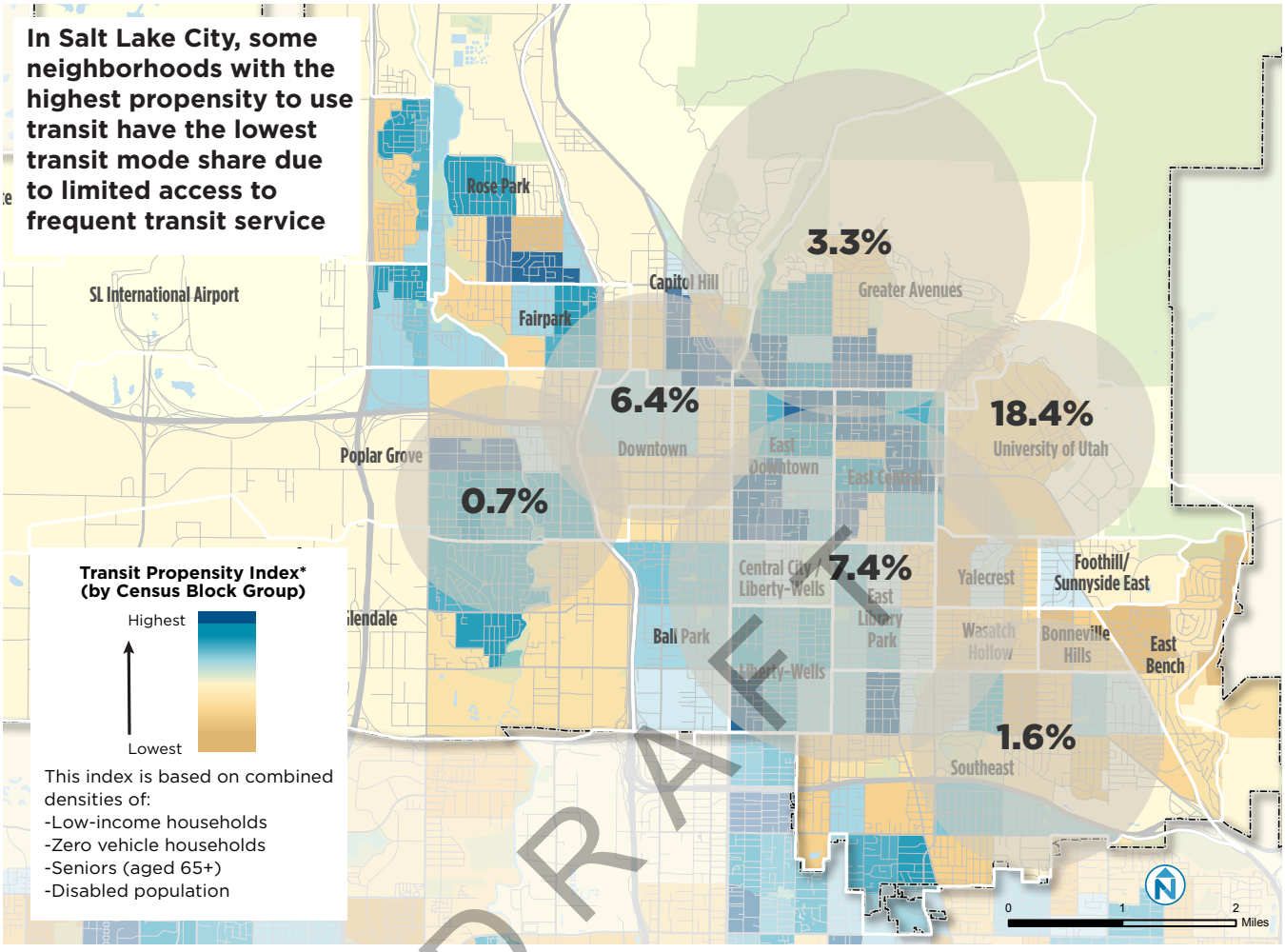
Access to transit is a challenge. Access to transit is challenging in Salt Lake City due to the wide streets and large blocks.

System information is limited. Improved information (e.g., maps, online schedules, and trip planning, etc.) is needed to help residents, employees, and visitors understand how to use the transit system.

Cost of transit is burdensome for some. The cost of transit is particularly burdensome on large families, youth, and transit dependent populations—low-income, older adults, persons with disabilities, and zero car households.

* Note: Based on the State of the System report, which was produced in June 2015 using the best data available at the time.

The Percent of Transit Riders Varies Across Salt Lake City



Bicycle and pedestrian improvements are needed in areas of Salt Lake City, such as Ballpark Station, to connect people safely and comfortably to transit

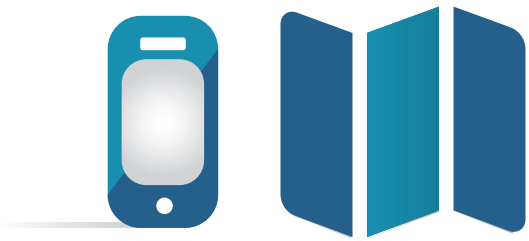
Only 17% of bus stops in Salt Lake City have a bench or shelter for passengers to wait comfortably for the bus to arrive

Building a complete transit system

The Transit Master Plan supports a complete transit system. The policies, programs, and service improvements that support a complete transit system leverage investments in transit service, maximize the benefits of transit, and bring Salt Lake City closer to meeting the goals set forth in the Transit Master Plan. **How does a complete transit system benefit people?**

1. **Expanded frequent transit service** that is fast, reliable, and permanent allows people to ride transit without a schedule and transfer with ease

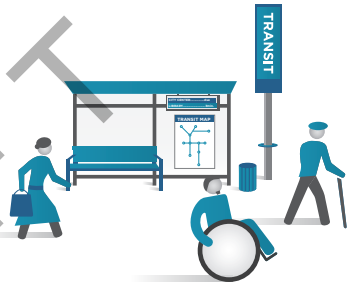
2. **Transit information and legibility** lets riders know when transit will arrive and makes using the system intuitive



3 **Safe and convenient pedestrian and bicycle access** connect people to transit stops and key destinations

4 **On-demand services (e.g., Lyft and Uber) and bike share** serve first and last mile needs and expand service hours

5 **High-quality stops and stations** make transit accessible, comfortable, and convenient



6 **Flexible fare and pass programs** make transit easy to use and affordable for families and low-income people

7 **Coordinated land use, parking, and placemaking policies** help transit connect people to destinations efficiently

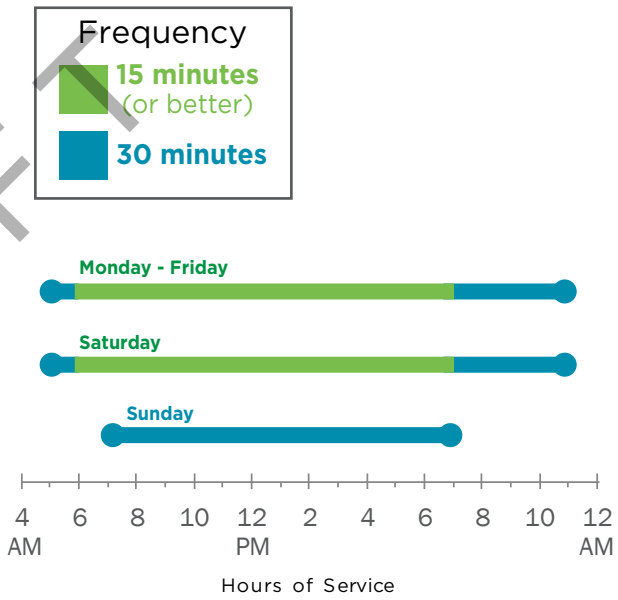
8 **Education and outreach** improve awareness and understanding of how to use the transit system

SALT LAKE CITY'S

Frequent Transit Network

The Transit Master Plan provides a vision for an expanded Frequent Transit Network (FTN); it is a long-term, 20-year vision that identifies the corridors where high-frequency service should be provided in Salt Lake City. Building off the existing grid network, the FTN is a set of designated transit corridors that offers frequent and reliable service connecting major destinations and neighborhood centers seven days a week throughout the day and evening. The lines on the FTN map (following page) do not represent individual routes, but are corridors where frequent service would be provided by a combination of bus or rail technologies. Defining an FTN vision allows Salt Lake City to work closely with Utah Transit Authority (UTA) to set priorities for service provision now and in the future.

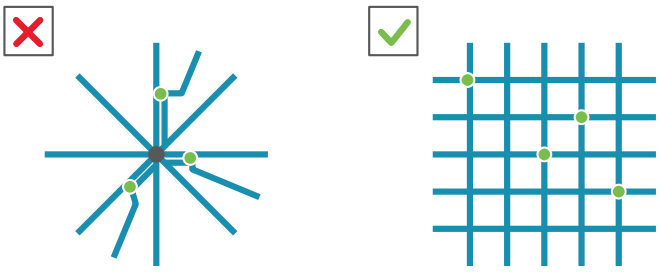
FTN Frequency and Span

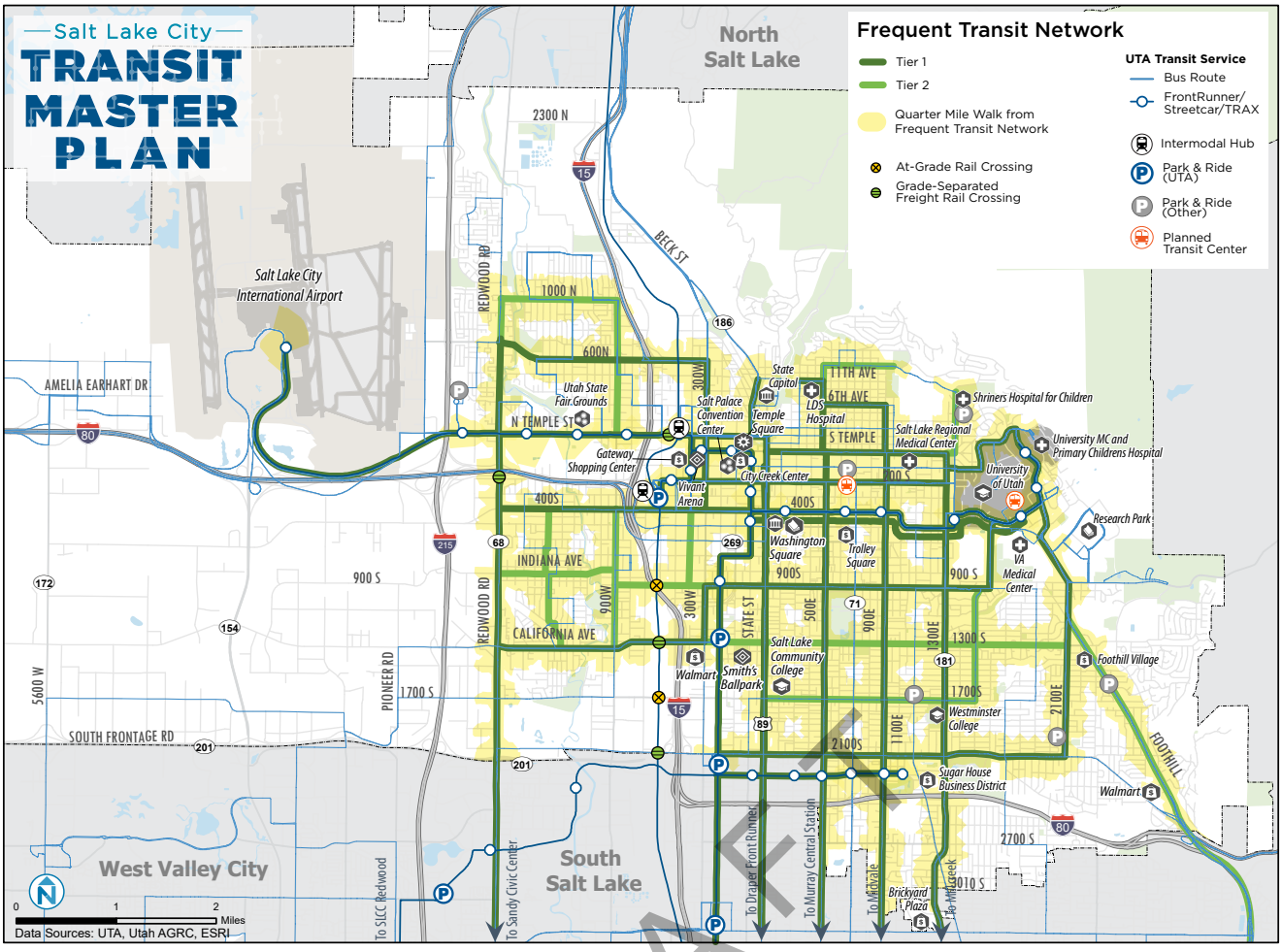


Why a Grid Network?

Salt Lake City's existing, centralized hub model is effective for regional connections but is inefficient for some local trips. Currently, many of UTA's routes terminate at Central Station, which provides good connectivity to commuter rail service, but creates challenges for people who need to travel to other destinations throughout the city, necessitating multiple transfers and/or indirect trips. The FTN builds on Salt Lake City's strong street network grid.

Radial vs. Grid Network





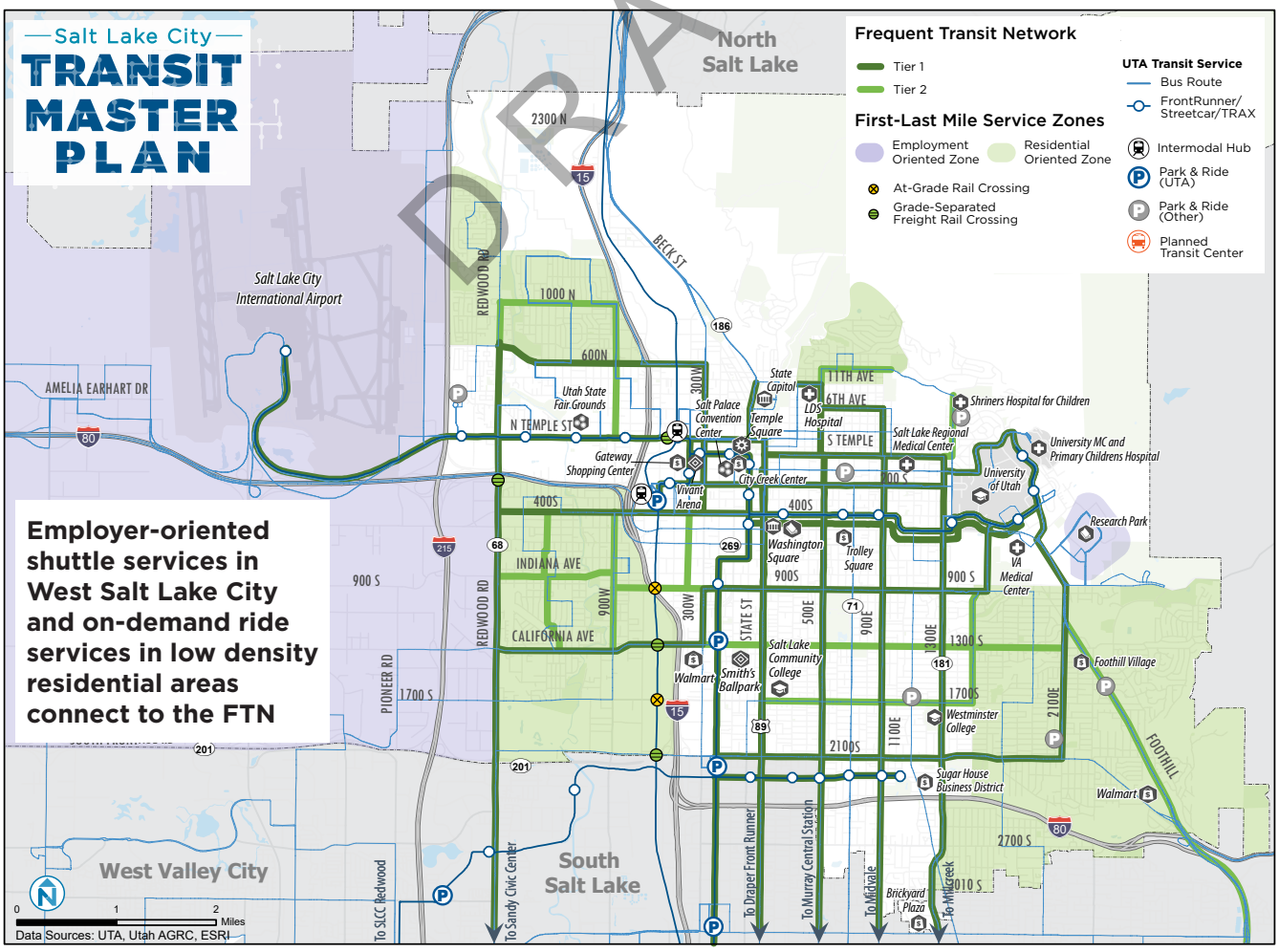
The map above illustrates phased implementation of the corridors that are recommended to create a grid-based Frequent Transit Network in Salt Lake City. The lines on the map do not represent individual routes, but rather provide a sense of the quantity, structure, and geography of coverage that Salt Lake City envisions for the future FTN. The yellow shading represents a quarter mile walking distance from the FTN.

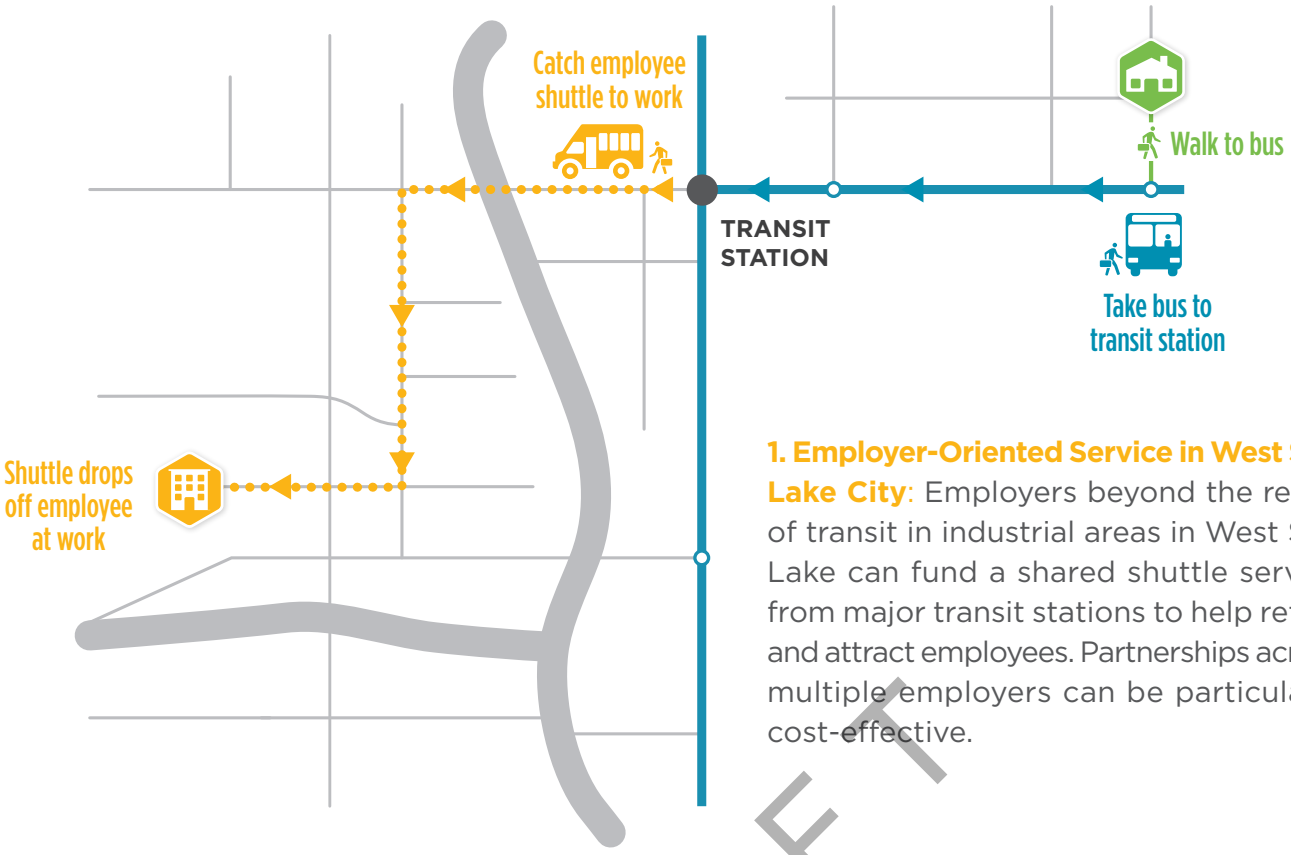
The Frequent Transit Network is:

- **Fast and Reliable:** Operate transit on arterial streets/transit priority streets where it will be most rapid and reliable; make improvements that reduce transit travel time and make it more competitive with automobile travel.
- **Frequent:** Connect major destinations and neighborhood centers with all-day service, 15 minutes or better. Service that operates every 15 minutes or less is considered the minimum service level that allows people to use transit without consulting a schedule.
- **All Day:** A service frequence of 15 minutes or better, between at least 6 a.m. - 7 p.m. on weekdays and Saturdays, with 30-minute service in the evening and on Sundays.
- **Every Day:** Service running 7 days per week maintains a basic level of frequent service on weekends.
- **Stable and Permanent:** Once adopted, it is critical that the FTN become a stable, relatively unchanging part of the transit system that offers riders the same level of reliability as the TRAX system.

Connecting neighborhoods and employment to the FTN

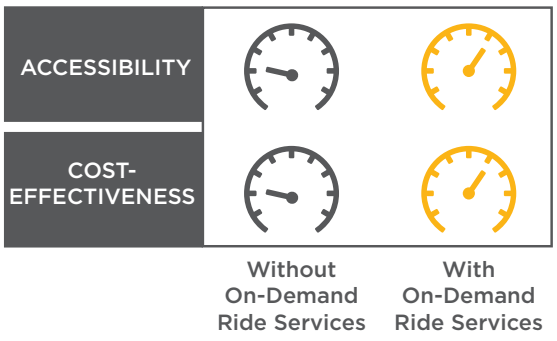
Local transit service extends the reach of transit to neighborhoods and employment areas that are not within walking distance of the Frequent Transit Network. While the FTN (including TRAX light rail, BRT, and other frequent bus modes) serves long, direct citywide corridors, local service routes are designed to connect neighborhoods and employment areas to the FTN. As the FTN is implemented, the local service network should be adjusted to complement the FTN, and maintain a basic level of local service (minimum 60-minute frequency for 12 hours per day) to within a half mile of most residents. **By 2040, 73% of the people projected to live and/or work in Salt Lake City will be within a quarter-mile walking distance of the FTN.** Two additional types of local service are recommended to extend the reach of transit in Salt Lake City.



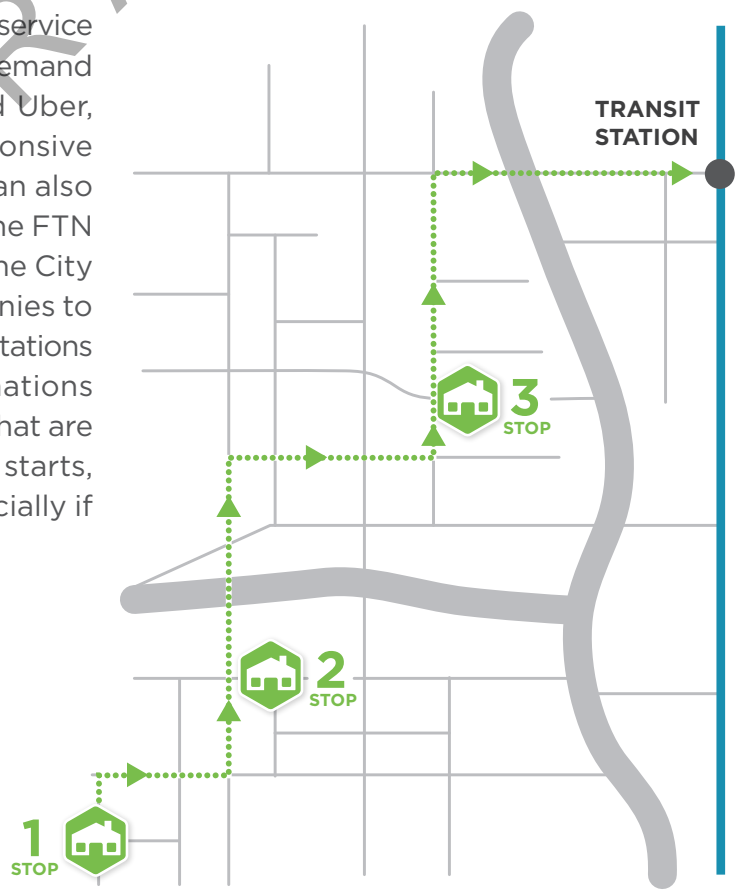


1. Employer-Oriented Service in West Salt Lake City: Employers beyond the reach of transit in industrial areas in West Salt Lake can fund a shared shuttle service from major transit stations to help retain and attract employees. Partnerships across multiple employers can be particularly cost-effective.

2. On-Demand Ride Services in Low-Density Residential Areas: Some neighborhoods in Salt Lake City lack sufficient density or demand to make it cost-effective to provide FTN and/or local service but still have important transit needs. On-demand ride service companies, such as Lyft and Uber, can provide cost-effective demand-responsive shared ride service in these areas. They can also help meet citywide needs to connect to the FTN outside of local transit operating hours. The City and UTA would partner with these companies to provide a discounted fare on trips to transit stations or other identified neighborhood destinations such as a grocery store. Utilizing vehicles that are already on the road reduces traffic, cold starts, and the need for park-and-ride lots, especially if several people can share a ride.



The dials illustrate conceptually that on-demand shared ride services can improve transit access and cost-effectiveness.



Making transit fast and reliable

Capital Investment Principles

The following principles were used, along with a Transit Master Plan analysis of current and potential transit corridors, to guide where Salt Lake City should prioritize capital improvements to make service faster and more reliable.

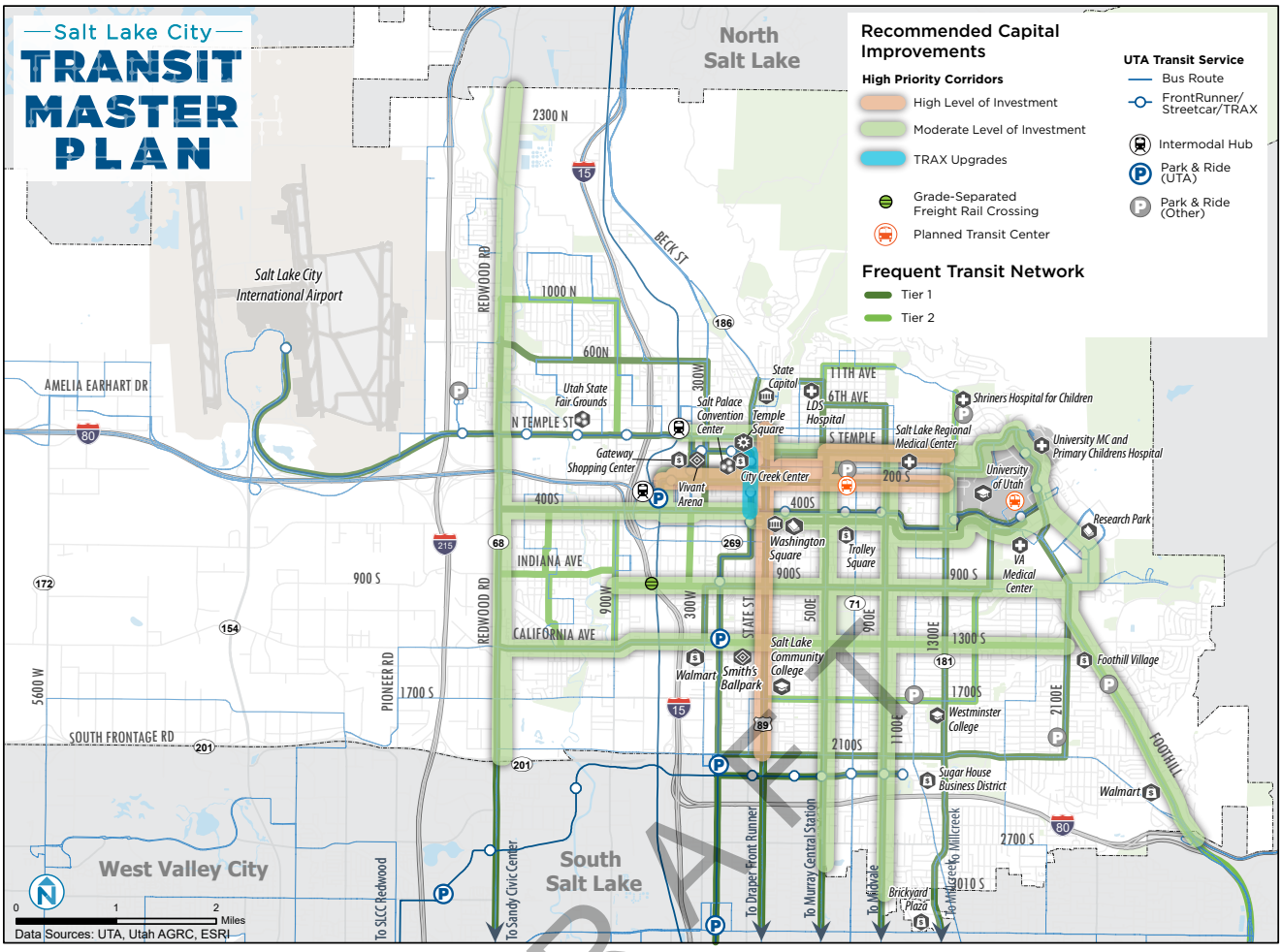
- **Ridership potential**—enhance transit experience for existing riders and attract new riders.
- **Cost-effectiveness**—investment per passenger.
- **Land use**—corridor land use/density that supports a particular mode or level of investment.
- **Corridor conditions**—potential (need) for travel time savings, and right-of-way opportunity or constraint.

Priority Corridors

Capital investments in transit corridors support investments in frequent service and long hours of operation, and help address challenges identified through the Transit Master Plan gaps analysis.

Recommended corridors for transit capital improvements include:

- **200 S**—key east-west bus (and potentially, future bus rapid transit and/or streetcar) corridor between downtown and the University.
- **State Street/500 E/900 E**—north-south enhanced bus corridors spaced about a half mile apart extending from southern city limits through downtown to major destinations, including the State Capitol and LDS Hospital, and into the Avenues neighborhood.
- **400 S**—continuous east-west bus corridor between Redwood Road and the University.
- **900 S and 1300 S/California**—continuous east-west cross-town bus corridors in the center of the city, including service to the Poplar Grove and Glendale neighborhoods.
- **TRAX light rail improvements**—capital improvements to resolve capacity issues that preclude direct service between the Airport and the University.
- **Regional access corridors**—support regional transit on corridors such as Redwood Road, Foothill Blvd, and Beck Street (to South Davis County).



Salt Lake City's highest priorities for capital investments include facilities and corridor management strategies that enhance transit speed and reliability and amenities that improve passenger comfort.

Implementing Priority Corridors

The plan identifies a transit priority toolbox of treatments that can be applied to transit corridors to improve speed and reliability, including dedicated lanes, transit signal priority, queue jumps, off-board fare collection, level boarding, and context-appropriate stop spacing. The toolbox is generally consistent with the NACTO Transit Street Design Guide*, which provides additional design options and implementation details.

Implementation of the Transit Master Plan priority corridors should integrate recommendations in the City's other modal plans, including the Pedestrian and Bicycle Master Plan. This approach recognizes the importance of safe walking and biking access to transit and the cost-effectiveness of coordinating improvements. A first step in developing capital improvements on these corridors would be to conduct a more detailed corridor study to refine the mode, specific alignment, and design.

Enhanced Bus Corridors

Two proposed transit modes for Salt Lake City are enhanced bus corridor and bus rapid transit (BRT). The main difference is that bus rapid transit includes dedicated lanes. Both types of bus service make transit run faster, more reliably, and provide high quality amenities at bus stops and stations. The graphic on page 21 highlights the key elements of enhanced bus corridors.

* http://nacto.org/publication/transit-street-design-guide/

Making transit comfortable and convenient

Access and Amenities

Capital investments help improve the transit experience, providing safe and convenient access to the system and comfort on vehicles and at stops and stations. For many potential transit users, a lack of comfort, convenience, and safe access deters them from using transit. Expanding the current program to enhance amenities at transit stops would address a key system gap—83% of bus stops do not have a bench or a shelter where people can more comfortably wait for the bus to arrive.* Transit investments, such as branding, enhanced stations, and bike parking, can help achieve the Transit Master Plan goal of providing a safe and comfortable transit access and waiting experience. The graphic on the following page illustrates investments in enhanced bus corridors and stations.

BEFORE IMPROVEMENTS:

AFTER IMPROVEMENTS:

Preminary data show an increase in ridership related to capital improvements on 200S

Secondary Transit Centers

Salt Lake Central Station is the city's primary intermodal transportation hub. It connects TRAX, FrontRunner, numerous bus routes, and intercity services. However, it requires out-of-direction travel for some bus routes and its bus layover facilities are at capacity. North Temple Station has similar issues in addition to first and last mile challenges. The Transit Master Plan recommends developing two new transit centers:

- **East Downtown, vicinity of 200 S and 700 E**—would support current high transit demand in east downtown and provide additional layover capacity to support implementation of the FTN.
- **The University of Utah campus**—The University has obtained funding to develop dedicated layover facilities on the campus, needed to expand service to and from the University.

Note: * Based on the State of the System report, which was produced in June 2015 using the best data available at the time.

Mobility Hubs

Located at the intersection of frequent transit corridors, mobility hubs integrate the transit network with multimodal access and connections. They include pedestrian and bicycle improvements and other sustainable modes (e.g., car or bike sharing) designed to connect transit passengers to adjacent neighborhoods and nearby land uses.

ELEMENTS OF HIGH QUALITY BUS CORRIDORS

A TRANSIT SIGNAL PRIORITY

Intersection improvements including transit signal priority (TSP) allow buses to bypass congestion. TSP gives buses earlier and/or longer green lights.

B BRANDING AND VEHICLES

Unique designs make buses and stations more visible, raising awareness and increasing customer expectations for higher levels of service.

Martijn van Exel, Flickr

C ENHANCED STATIONS

Enhanced amenities include raised platforms, off-board fare payment, real-time arrival information, larger shelters, bike parking, and other passenger amenities.

D ENHANCED FARE COLLECTION SYSTEMS

Off-board fare collection using ticket vending machines, card readers, and other tools at stations allow passengers to load without waiting in line to pay their fares.

E BIKE PARKING

Bike parking and GREENbike bike share at stations increase the reach of transit.

Wikimedia Commons, Jim Henderson

F RUNNING WAY IMPROVEMENTS

Could include bus-only lanes that separate transit from traffic and are clearly marked or queue jumps.

Supporting the complete transit network

Fast, reliable, and connected transit service is only one element of a complete transit network in Salt Lake City. Safe and comfortable bicycle and pedestrian access, legible transit information, education and outreach campaigns, affordable pass programs, and supportive land use policies leverage investments in transit service, ensuring more people ride transit more often. Key supportive strategies and recommendations are outlined below.

Bike and Pedestrian Access

A safe and connected network of pedestrian and bicycle facilities are a foundation of a good transit system. Additional mid-block crossings, GREENbike integration, and bike/transit integration can help support a complete transit network. Key recommendations include:

- Create pedestrian and bicycle routes using mid-block crossings and passageways, wide sidewalks, and signage; prioritize mid-block crossings along the FTN
- Treat bike share as an extension of the transit system and prioritize expansion of bike share to provide connections to the FTN
- In partnership with the City's Pedestrian and Bicycle Program, designate a network of multiuse paths; neighborhood byways; and bike lanes that provide direct connections between local destinations and the FTN
- Strengthen the City's existing Complete Streets Ordinance (per the Pedestrian and Bicycle Master Plan) by integrating transit

Transit Information

For people to be able to use transit, they must first know what services exist and understand how to use those services. Providing clear and concise information in multiple formats is critical for a high quality transit system.

Salt Lake City should support UTA in providing real-time information at stops and stations and developing a unique FTN brand. Key recommendations include:

- Provide real-time information displays at bus stops along the FTN
- Establish a Frequent Transit Network brand that is in line with UTA's updated branding efforts and is highly visible and distinguishable from other service types; the brand should expand UTA's existing frequent service branding to include: printed and web/app-friendly maps and schedule information, as well as vehicles, stations, and stops

Education and Outreach

A lack of knowledge and understanding is often the greatest barrier to transit use. Building a "transit culture" through education and promotional programs is a powerful way for Salt Lake City to increase the number of people riding transit for more trips. Key recommendations include:

- Expand on UTA's existing public information campaign to educate Salt Lake City residents, employees, and visitors on the benefits of transit
- Continue to develop an individualized marketing/SmartTrips program that targets neighborhoods along the FTN as service improvements are made; a "New Resident" program is also an effective way to reach new residents

Fare and Pass Programs

Fare and pass programs provide a seamless and more affordable way for passengers—particularly large families, youth, and low-income residents—to access the transit system. Salt Lake City can further promote and expand the HIVE Pass program and work with UTA to improve fare affordability. Key recommendations include:

- Improve fare affordability; work with UTA to determine next steps for establishing more affordable fare options for trips within Salt Lake City
- Promote and expand the HIVE Pass Program to get more passes into hands of people who are not currently using transit

Parking and Land Use Policies

Parking management and land use policies are needed to fully leverage the City's transit investments to ensure a symbiotic connection between development and transit service. Key recommendations include:

- Initiate additional parking studies for areas beyond Downtown and Sugar House to support the FTN
- Establish density thresholds that indicate when certain frequency levels are justified
- Standardize Transit Area Zones to foster appropriate development along the Frequent Transit Network
- Create community gathering places around transit stops and stations (such as plazas, parklets, squares, or parks)

Implementing the Transit Master Plan

Achieving the enhanced transit services, facilities, and supportive programs set forth in the Transit Master Plan will require:

- **Strengthening the City's partnership with UTA.** Implementing the Transit Master Plan will require the City and UTA to continue to build a close partnership. Regular meetings will provide a forum for the two agencies to define their roles related to implementation of the plan, determine the level of local control, and articulate the outcomes of interagency consensus building.
- **New local transit funding sources.** Funding from a variety of public and private sources will be needed to enhance Salt Lake City's transit system and reflect the vision of the Transit Master Plan. The plan identifies potential funding options including expanding existing sources and developing innovative new sources. Private sector opportunities include sponsoring stops and funding employee shuttle services.
- **Establishing new public-private partnerships.** Contracting arrangements for residential on-demand services will need to specify when and where the service will be available, and resolve fare payment, equity, accessibility, and technology considerations. The City could encourage private sector participation by expanding the Transit Station Area Zoning District to include the FTN corridors, and factoring additional transit and transit-supportive investments into its point system.
- **Coordination between City departments.** The plan's recommendations will require support from a variety of City departments—with responsibilities ranging from streets, sidewalks, bicycle facilities, traffic signals, land use, and urban design. Specific early action items will be to standardize design guidance using the NACTO Transit Street Design Guide and to revise the Complete Streets Ordinance to explicitly include transit.
- **Adapting to changing circumstances.** The plan is a flexible, "living" document and the City can apply its principles to evolving needs. For example, the prison that is planned for the northwest quadrant of the city is a major new land use that will generate transit demand.

For more information, or to get in touch, contact the Salt Lake City Transportation Division at (801) 535-6630 or slcrides@slcgov.com