Utah Transit Authority Microtransit Planning Project

Prepared by Via Mobility, LLC

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Provided by

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1. Executive summary.

In recent years, microtransit (also known as on-demand transit) has emerged as a promising alternative to fixed-route transit. In particular, microtransit shows significant potential in the following areas: providing first-and-last mile connections to transit; improving mobility in hard-to-serve areas; reducing private vehicle dependence; and replacing underperforming flex and fixed route buses.

The Utah Transit Authority (UTA) serves more than 1.8 million people living across one of the largest geographic service areas of any transit agency in the United States. In order to meet the diverse needs of the community, the Authority is continually evaluating new ways to serve riders.

In late 2019, **UTA launched UTA on Demand by Via**, a microtransit pilot in southern Salt Lake County. Prior to the launch of this service, a similar microtransit planning study was also conducted to help guide decisions regarding service quality, cost, and ridership. The service has grown steadily since launch and been popular with riders — it completed approximately 400 - 500 trips per day prior to the spread of COVID-19, with an average customer satisfaction rating of 4.8 out of 5.0. If the pilot is deemed successful, this study will provide guidance on where and how microtransit can be extended in the UTA service area.

In order to identify areas with a high potential for successful microtransit service, the project team first conducted a spatial assessment across the UTA service area. The methodology for identifying microtransit opportunity areas was based on transit need and transit potential, and was determined in close collaboration with stakeholders through a workshop held in November 2019. A total of 18 microtransit opportunity zones were identified, largely in lower-density suburban, rural, and industrial areas outside of Salt Lake City.

Each microtransit opportunity area was then refined through engagement with UTA planners and two stakeholder focus groups. The project team identified the most likely use cases for each zone, such as first-and-last mile connections to transit, or general purpose trips in areas with limited transit coverage. Low, medium, and high ridership projections were developed for each zone based on several criteria including existing transit ridership levels, parking availability, walkability, diversity of use cases, poverty rates, and number of zero-vehicle households. These ridership estimates were developed prior to the impact of COVID-19, and while there remains significant uncertainty about the long term impacts on transit ridership, the low scenario may be the most appropriate to consider in the short-to-medium term. The zones were then simulated using an agent-based microtransit simulation tool to determine the number of vehicles and vehicle hours required to meet a desired level of service — typically average wait times of 10 - 30 minutes and walking distances of less than a quarter mile.

The results of the simulations were then compiled into an evaluation matrix that highlights the performance of each zone against UTA's goals and objectives. While UTA's ultimate prioritization of the service zones for implementation will depend on the relative importance assigned to each of the evaluation criteria, some zones performed more strongly than others.

Highest-ranked zones: North Ogden, South Davis County, South Valley, South Jordan, Sandy, Southern Salt Lake County (current pilot zone), Tooele County, and Springville/Spanish Fork.

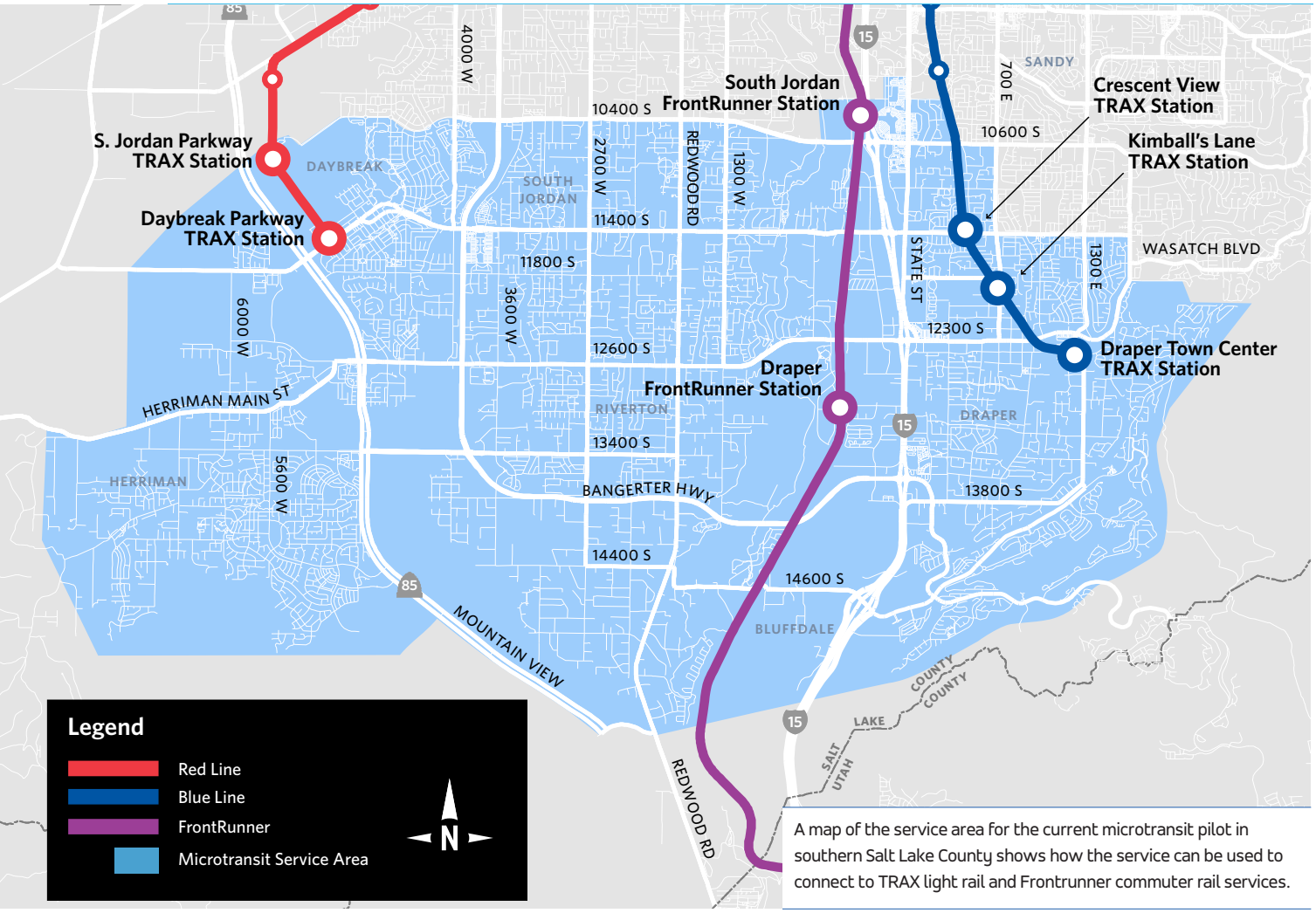
Moderate-ranked zones: West Weber County, West Davis County, Lindon/Vineyard, North Utah County, and West Provo.

Lower-ranked zones: Brigham City, West Salt Lake City Industrial /Inland Port, East Millcreek, Eagle Mountain / Saratoga Springs, Lehi, and South Utah County.

If UTA decides to proceed with new microtransit zones (beyond the current pilot), the actual zones that are selected will depend on several factors beyond those identified in the evaluation matrix, such as funding availability at the time of launch and adjustments to the UTA fixed route network.

All microtransit services should be designed to be accessible for all riders, including those with disabilities. The project team carried out an accessibility analysis to better understand how to ensure that microtransit services are accessible to all users, and held a workshop with the UTA Committee for Accessible Transportation. This report identifies several service design features that are recommended for accessible microtransit, such as multiple booking channels, a WCAG 2.0 compliant Android and iOS app, door-to-door or curb-to-curb trips for riders that require them, and a sufficient number of wheelchair accessible vehicles to ensure equivalent wait times.

As UTA navigates the budgetary and operational challenges caused by COVID-19 and its impact on ridership, this report is intended to provide a roadmap for potential microtransit expansion beyond the existing pilot. The next steps are to conduct public engagement on the highest potential zones and where feasible, launch additional microtransit services.



A map of the service area for the current microtransit pilot in southern Salt Lake County shows how the service can be used to connect to TRAX light rail and Frontrunner commuter rail services.

2. Project overview.

The Utah Transit Authority (UTA) provides public transportation throughout the Wasatch Front region of Utah. The agency has a service area of approximately 1,400 square miles, across which it operates fixed route buses, flex-route (deviated fixed route) buses, paratransit services, vanpool services, three light rail lines (TRAX), a streetcar line (S-Line), and a commuter rail train (FrontRunner) from Ogden City through Salt Lake City to Provo City.

In late 2019, UTA launched UTA on Demand by Via, a microtransit pilot in southern Salt Lake County (see **3. Microtransit overview** for a description of microtransit). This public-private partnership was implemented to test whether microtransit can complement existing transit services by providing a flexible route, on-demand, and shared ride service. In addition, microtransit may offer more equitable, accessible, efficient, and convenient transportation for individuals with cognitive and mobility disabilities.

This study provides guidance to UTA regarding the possible future expansion of microtransit services following the completion of the pilot. The study outlines UTA's goals and objectives for microtransit, identifies locations where microtransit address these goals and objectives, simulates and prioritizes potential microtransit zones, and discusses how to ensure microtransit is accessible to those with disabilities. The results of the project will help UTA to plan for microtransit services as part of its Five-Year Service Plan.

3. Microtransit overview.

Microtransit, also known as on-demand transit, uses technology to route a fleet of vehicles based on real-time passenger demand.

Microtransit is similar to a bus in that passengers are asked to walk to meet a vehicle at a 'virtual bus stop' that may, in general, be up to ¼ of a mile from their requested location. However, it is different from a bus in that there are no schedules or route maps. Instead, trips must start and end within zones that fill gaps in the bus network.

Passengers can book a trip using a smartphone application ("app"), a website, or through a call center. Each microtransit service has specific operating hours and geographies that constrain where and when a passenger can travel.

To book a ride, a passenger starts by indicating the number of passengers in their party and their desired pickup and drop-off locations. When booking using the app, passengers will clearly see the geofenced zone in which service is offered. Requesting a trip beyond this zone is not possible, so passengers always know where the microtransit service is available. Once the passenger submits a trip request, they are given a proposal that tells them when the vehicle will arrive and where to meet it. Typically, passengers must wait between 5 -20 minutes for a trip, although this may vary depending on the level of demand and the number of vehicles available. Passengers can track the vehicle in real-time using the app. The passenger is provided with vehicle information—for example: license plate, driver name, driver photo, and vehicle ID number. Passengers can usually cancel a ride at any time before pickup, but as cancellations may negatively affect other passengers, a small fee is often charged to discourage cancellations.

Once the vehicle arrives, the driver confirms the passenger's details using the driver app. Passengers can pay using credit and debit cards, **UTA transit passes**, cash, vouchers, and more. It is important to include options for people without credit cards or bank accounts to ensure that the service is accessible to all. The passenger is then taken to their destination. Along the way, the vehicle will pick up and drop off other passengers heading in the same direction, but care is taken to avoid lengthy detours for passengers already on board. The passenger can track their progress using the app. After each trip, passengers may be automatically emailed a receipt. Passengers may also be able to provide real-time and post-trip feedback through the app.

Any type of vehicle can be used, but minivans or small cutaway buses are generally recommended over full-sized buses or sedans.

4. UTA's microtransit goals and objectives.

In order to understand where and how microtransit can be integrated into UTA's network, the project team first identified UTA's goals and objectives for this type of service. These were identified through a workshop with UTA stakeholders and two focus group meetings with external stakeholders that included state and local government agencies, major employers, community organizations, and nonprofits.

The key goals of microtransit in the region are:

Provide first-and-last-mile connections to transit: Microtransit can provide high-quality first-and-last mile connections to help grow transit ridership on the existing UTA network, particularly near high-frequency commuter rail (Frontrunner) and light rail (TRAX) routes.

Improve mobility in hard-to-serve areas: Microtransit can provide service in areas where traditional fixed route buses may not be cost effective or well utilized. These areas are typically low density, but may also include areas with difficult geographies (e.g., steep streets), small and isolated neighborhoods, and more.

Reducing private vehicle dependence: As UTA seeks to reduce congestion and improve air quality, it hopes to entice individuals who otherwise would not use transit to leave their private vehicles at home. Microtransit can be an effective tool in capturing these riders.

Replace underperforming flex and fixed route buses: UTA has several routes that operate with relatively low ridership, resulting in a high cost per passenger. Microtransit could replace these fixed route services at a lower cost, freeing up funding available for investment into other areas of the network.

5. Transit needs assessment.

Microtransit must be designed to meet the needs of passengers and each zone may have its own unique goals and use-cases. For example, it can help to eliminate transit 'deserts' in low-density areas, or to provide high-quality first-and-last mile connections in denser areas.

5.1 Methodology.

The following methodology was used to identify areas where implementing a microtransit service could achieve one or more of UTA's goals and objectives. This methodology is based on three important characteristics - **transit need, transit potential**, and **existing transit service levels**.

- **Transit potential** reflects population and employment density. Areas with high transit potential may be served by various modes of transit. Areas with medium-to-low transit potential are often poor candidates for fixed-route transit, but may be well served by microtransit.

- **Transit need** focuses on socio-economic characteristics such as income, automobile availability, age, and disability status, which are indicative of a higher propensity to use transit.

- **Transit service level** is the quality and quantity of transit available in an area. It is based on proximity to a transit stop, frequency of service, and historical ridership in the area.

To identify opportunities for microtransit service in the Salt Lake City region, the study team began by examining the Transit Potential and Transit Need of the region, by Traffic Analysis Zones (TAZ). All TAZs within a four-mile buffer of the UTA fixed route network were included in these analyses. A four-mile buffer was selected because this buffer distance captures all of the significantly developed areas in the Salt Lake City region.

5.2 Transit needs assessment results.

Within the UTA service area, Transit Potential and Transit Need are generally well-aligned (see **Figure 1 - Transit potential index** and **Figure 2 - Transit need index**). The few exceptions include:

- The Glendale and Inland Port areas south of the Salt Lake City International Airport. Transit Potential outpaces Transit Need in this area, likely due to industrial land uses and the number of jobs in the neighborhood. Because more factors are used in the Transit Need analysis, the presence of these jobs is less salient in the Transit Need scores.

- The Herriman area scores higher in Transit Potential than Transit Need, as do areas west of Riverton and South Jordan.

- The commercial and employment corridor of US 15 has a higher Transit Potential than Transit Need, especially around the South Jordan FrontRunner Station.

- Conversely, some neighborhoods in West Valley City and Kearns have a higher Transit Need than Transit Potential.

In addition to areas with high Transit Need but low Transit Potential, there are several other scenarios in which microtransit could be a more suitable mobility tool than fixed route service. In fact, any part of the UTA service area with low Transit Potential, regardless of Transit Need, can be considered a candidate for microtransit service, simply because fixed route service is unlikely to be an effective option. **Figure 3 - Low transit potential** map highlights areas of the region with low Transit Potential (5 or fewer people and/or jobs per acre).

However, high Transit Potential does not guarantee high transit-use if other key elements, such as a supportive pedestrian environment, are missing from an area. Thus, some parts of the UTA service area that do have the density to support fixed route service (more than five people and/or jobs per acre) can also be good candidates for microtransit service, especially if fixed route service in the area has failed to attract significant ridership. **Figure 4 - UTA service network and transit potential index** highlights areas that fit this criteria.

To assess whether a TAZ is effectively served by fixed route service, the study team placed a half-mile buffer around every rail station and high-ridership bus stop (10+ passengers per day). The half-mile buffer represents the maximum distance that most transit riders are willing to walk to access transit service, although this distance varies greatly depending on the quality of the pedestrian environment. **Figure 5 - Transit potential index of areas poorly served by existing fixed-route transit** highlights areas that are either unserved or poorly served by the current fixed-route transit network.

A full set of demographic maps, along with an overview of the methodology used to calculate Transit Potential and Transit Need are included in the Appendix.

FrontRunner is a commuter rail train with service from Ogden in central Weber County through Davis County, Salt Lake City, and Salt Lake County to Provo in central Utah County.

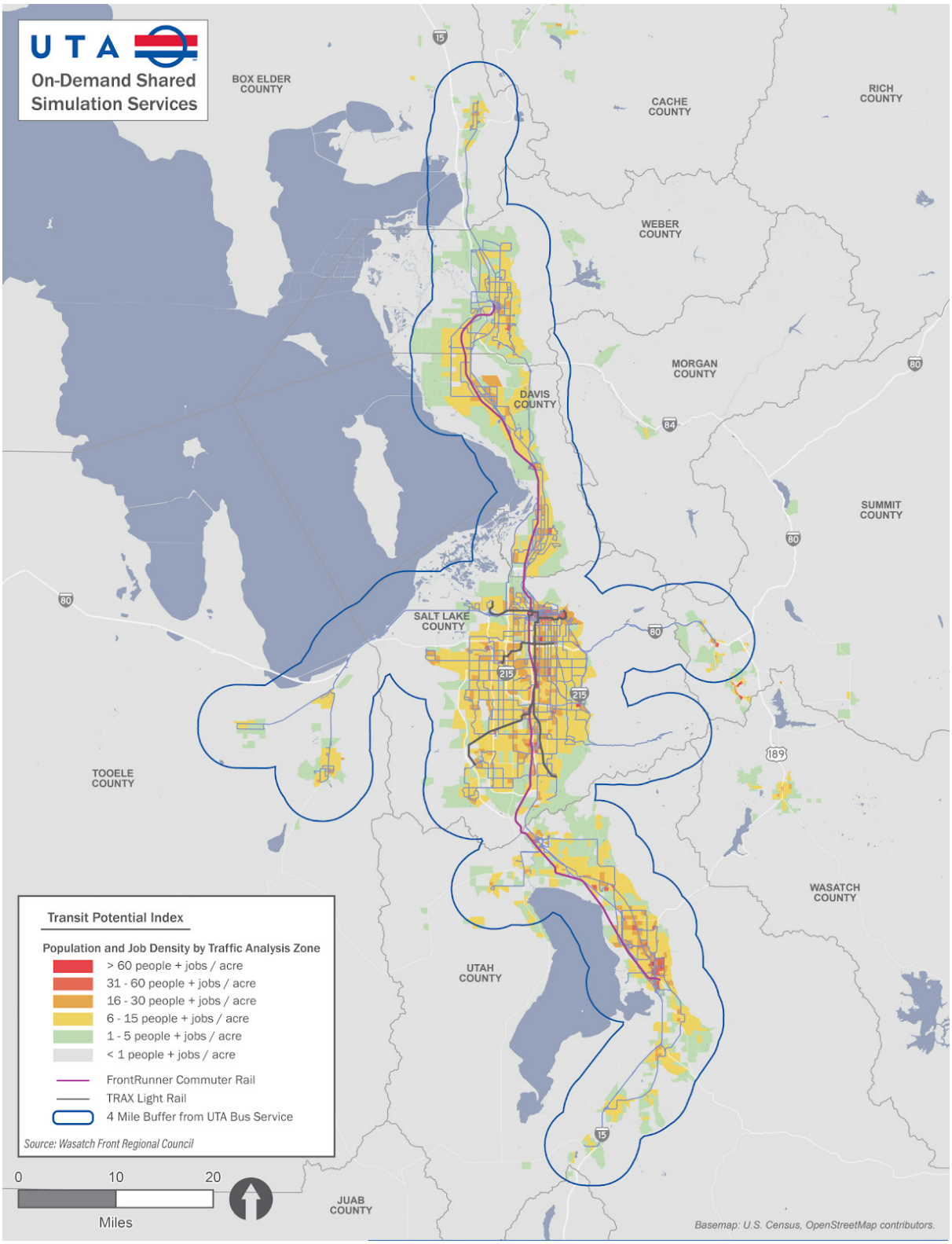


Figure 1 - Transit potential index: Transit potential is an analysis of population and employment density. Areas with high transit potential may be served by various modes of transit. Areas with medium-to-low transit potential are often poor candidates for fixed-route transit, but may be well served by microtransit.

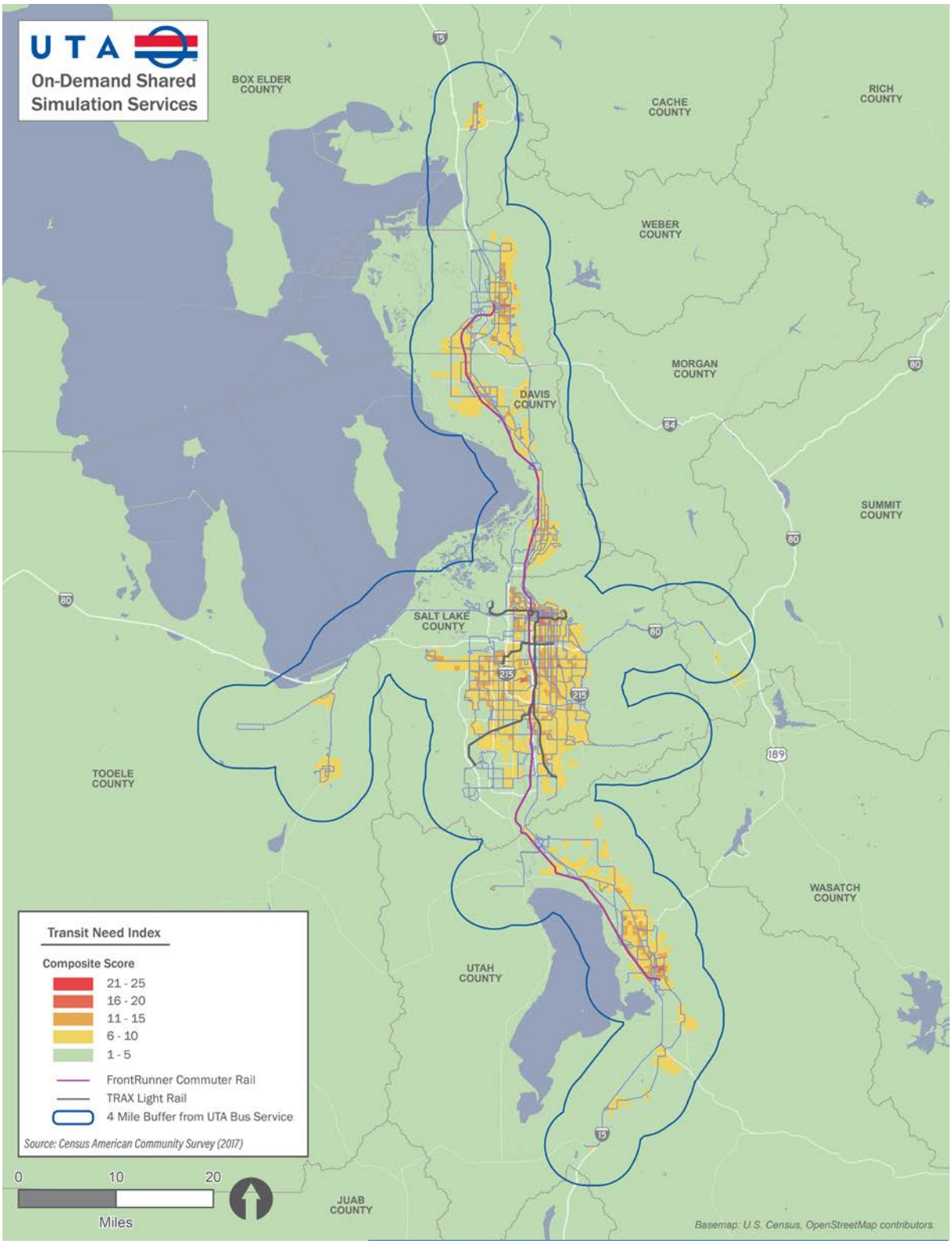


Figure 2 - Transit need index: Transit need focuses on socio-economic characteristics such as income, automobile availability, age, and disability status, which are indicative of a higher propensity to use transit.

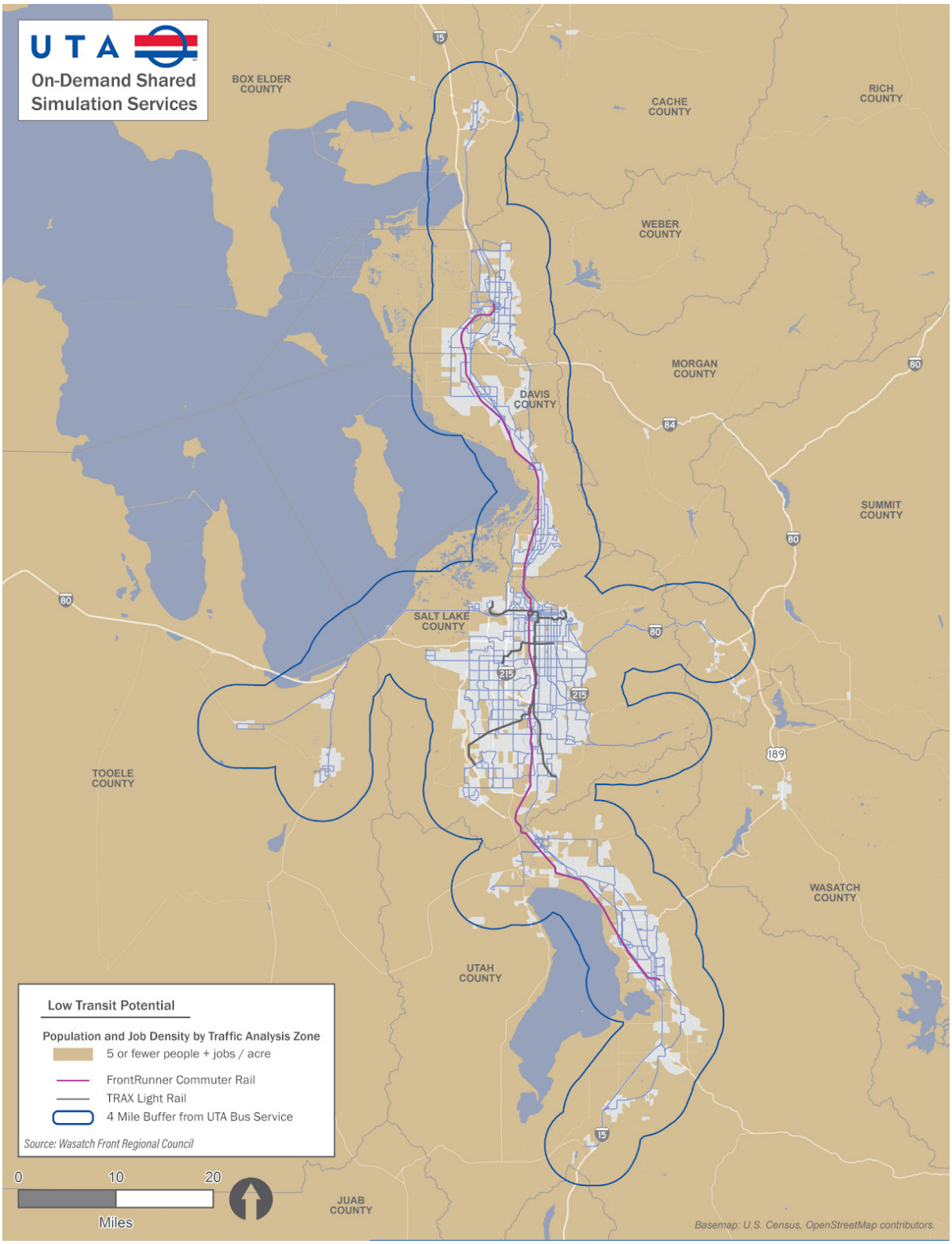


Figure 3 - Low transit potential areas: Any part of the UTA service area with low Transit Potential, regardless of Transit Need, can be considered a candidate for microtransit service, simply because fixed route service is unlikely to be an effective option. This image highlights areas of the region with low Transit Potential (5 or fewer people and/or jobs per acre).

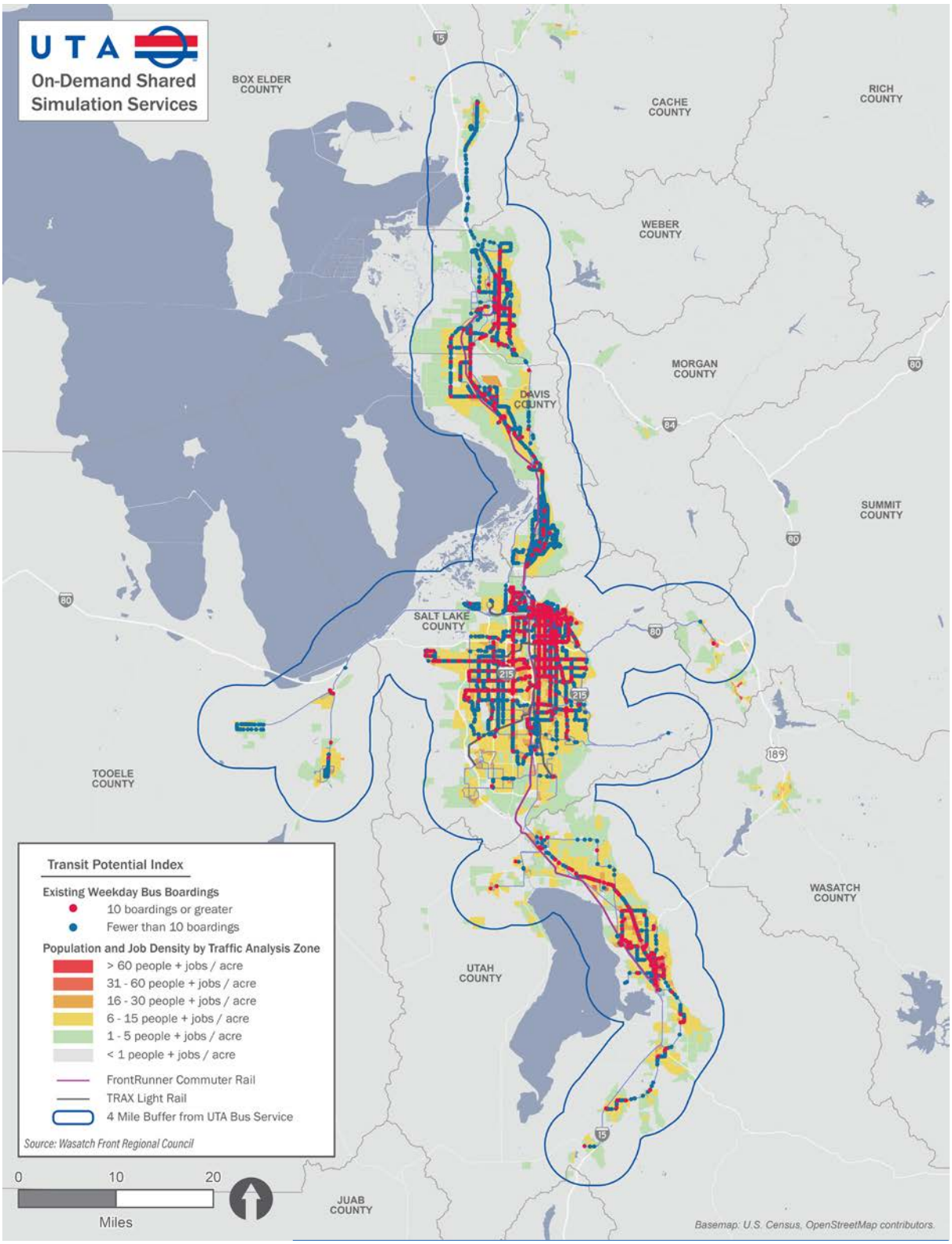


Figure 4 - UTA service network and transit potential index: This map shows the existing UTA service network, overlayed on the map of Transit Potential. Bus stops are color-coded by average weekday ridership. High-ridership stops (greater than 10 boardings per day) are shown in red, while low-ridership stops (less than 10 boardings per day) are shown in blue.

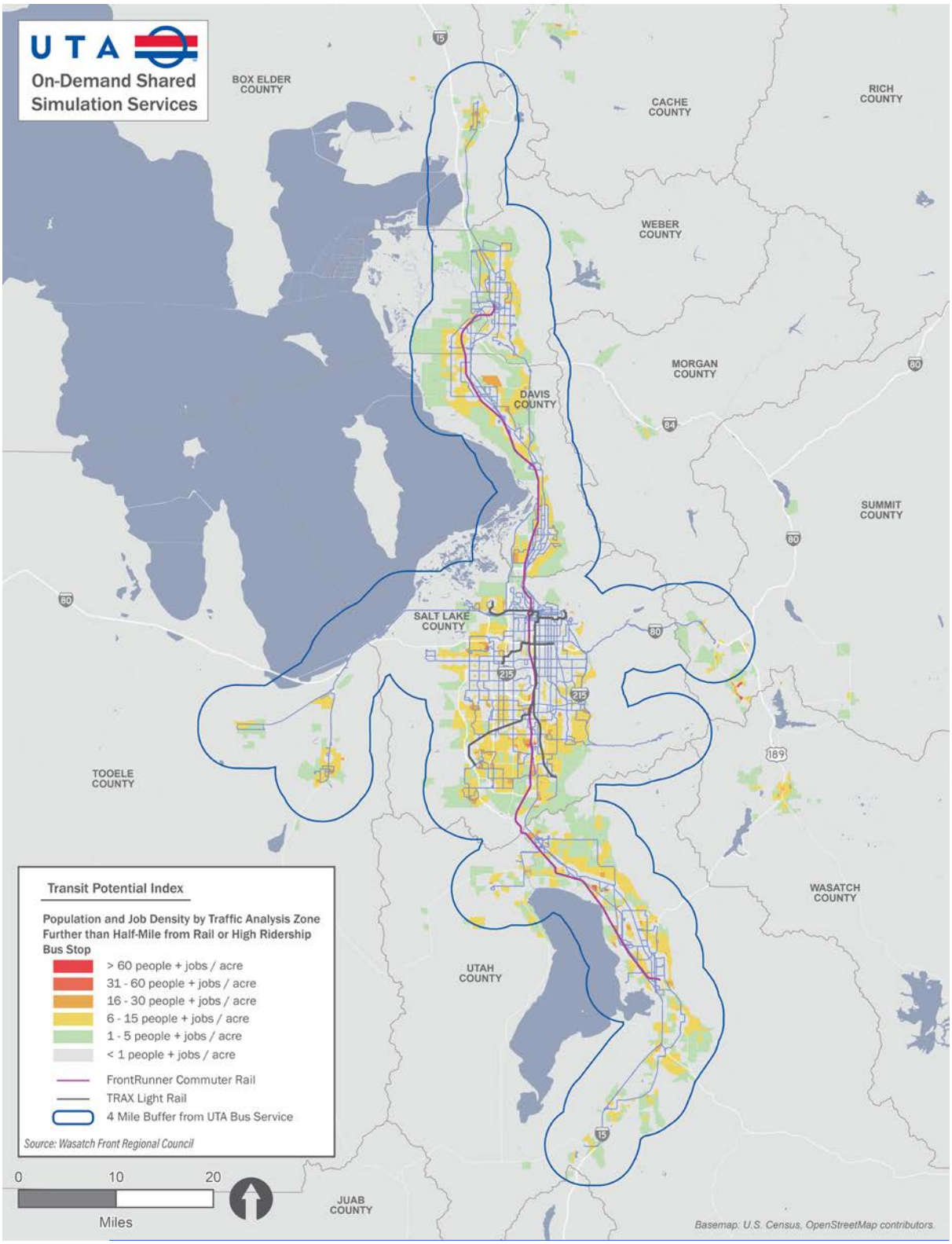


Figure 5 - Transit potential index of areas poorly served by existing fixed-route transit: This map shows the Transit Potential of areas that are either unserved or poorly served by the current fixed-route transit network. Poorly served areas are defined as those TAZs that are more than half a mile from a rail station or a high-ridership bus stop. Among these TAZs, the ones with the highest Transit Potential are the strongest candidates for microtransit service.

5.3 Microtransit opportunity zones.

Based on the technical analyses described, the project team identified 19 microtransit opportunity zones for further analysis and modeling. As shown in **Figure 6 - Microtransit Opportunity Zones**, these zones are distributed throughout UTA's service area, extending as far north as Brigham City and as far south as Santaquin.

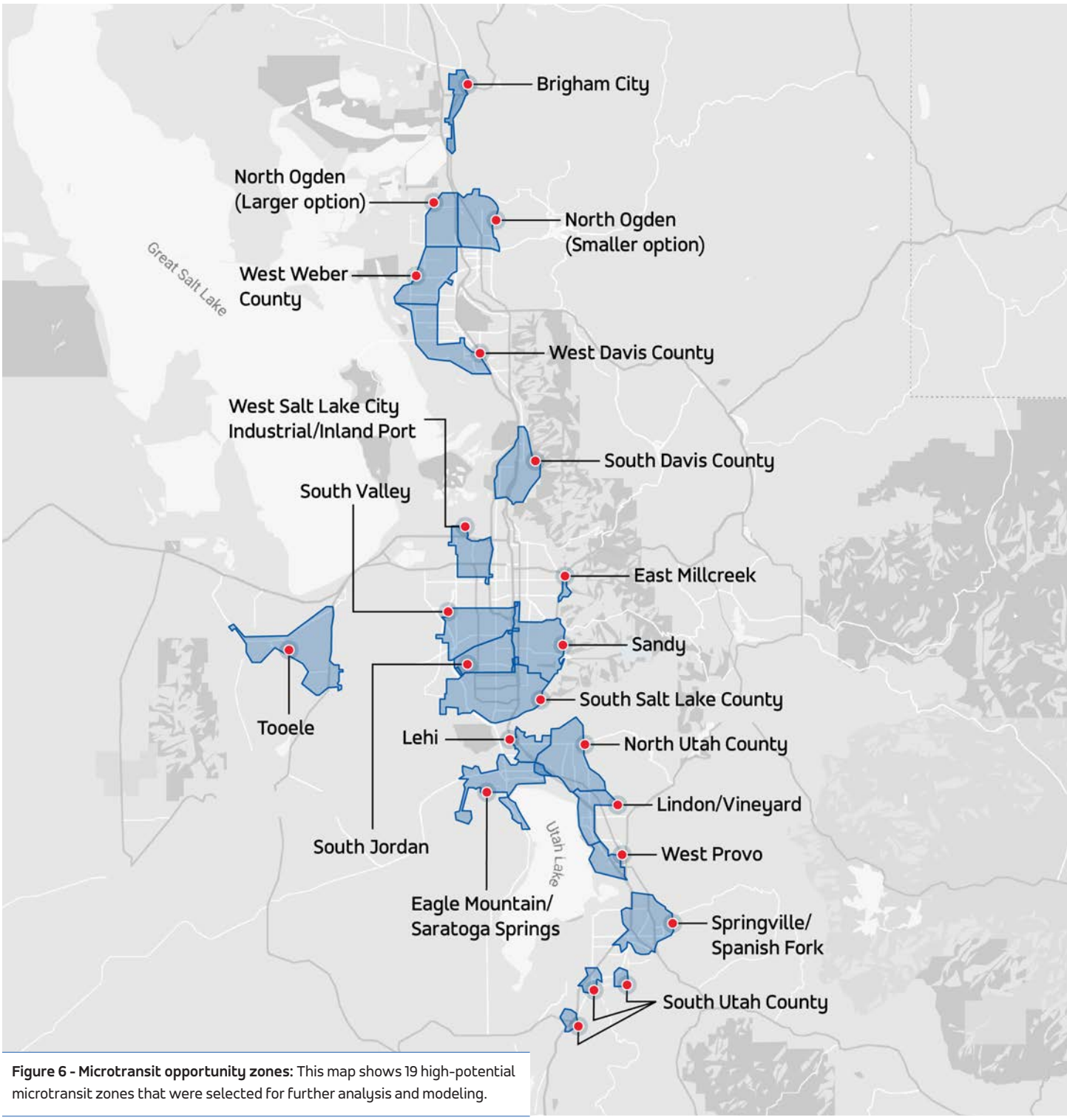


Figure 6 - Microtransit opportunity zones: This map shows 19 high-potential microtransit zones that were selected for further analysis and modeling.

5.4 Zone refinement.

After identifying the broad areas where microtransit services would address UTA's goals and objectives, each zone was examined more closely to understand:

Use cases.

The types of trips that passengers would use the microtransit service for in each zone. FrontRunner is a commuter rail train with service from Ogden in central Weber County through Davis County, Salt Lake City, and Salt Lake County to Provo in central Utah County.

Boundaries.

The area that a trip must start and end within. While general boundaries were identified in **5.3 Microtransit Opportunity Zones**, exact boundaries are determined based on factors such as major roads, bus routes, or geographic features.

Trip restrictions.

In some zones, certain trips may be allowed or denied despite the zone boundaries. Most commonly, these restrictions are implemented where there is a fixed route service like a bus or train that could complete certain trips more cost-effectively.

> The recommendations for each zone are presented in **7. Zone-by-Zone Simulation Results**.

6. Estimate ridership.

Demand estimates inform important decisions such as the size of the fleet and level of funding required for each zone. They are also a useful measure of how many people will benefit from a microtransit service.

6.1 Methodology.

In order to understand how well each zone will perform, ridership estimates were based largely on two factors:

1. The number of residents living in each zone.
2. The number of workers who have a place of employment within the zone.

However, some zones are likely to have a higher microtransit mode share than others. Mode share is the percentage of travelers using a particular type of transportation – meaning, microtransit zones with a higher mode share score will capture a larger percentage of trips. To estimate ridership, Via developed an overall mode share score for each zone based on Via's internal demand model. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure. The factors that were decided to have the most significantly impact for this study were:

Demand factor	Explanation
Transit ridership	In areas where existing transit ridership is high, individuals are more likely to leave their car at home and use transit. In areas where private vehicle use is dominant, enticing drivers from their cars is typically more difficult.
Parking availability at stations	The price and availability of parking at key destinations such as transit stations or major retail destinations will impact demand. When parking is difficult to find or expensive, individuals are more likely to consider alternative options.
Walkability and street grid patterns	In zones with poor walkability or street grid patterns, individuals are less likely to use public transportation. This qualitative ranking includes: • **Walking infrastructure:** Areas with good quality sidewalks, pedestrian crossings, and signalized intersections, are more appealing to pedestrians. • **Road design:** High-speed, wide roads and highways are less appealing to pedestrians than slower, narrower streets. Large grids with long distances between intersections are less appealing than smaller, more walkable blocks. • **Land-use:** Industrial or sparsely developed areas are less appealing to pedestrians than residential and retail-orientated areas.
Diversity of use cases	In zones with a mix of residential, commercial, and industrial areas, the likelihood that an individual can use a microtransit service to get somewhere useful is higher. Therefore, zones with mixed-use cases were expected to have a higher microtransit mode share than purely residential or industrial zones, for example.

Relative poverty rate	Low-income households are more likely to use transit as it is typically more affordable than owning a private vehicle.
Zero vehicle household	Households without a private vehicle are more likely to use transit.

6.2 Demand estimates by zones.

A low, medium, and high ridership estimate was developed for each zone. Due to the impact of COVID-19 on transit ridership, demand is likely to fall between the low and medium scenarios in the short term.

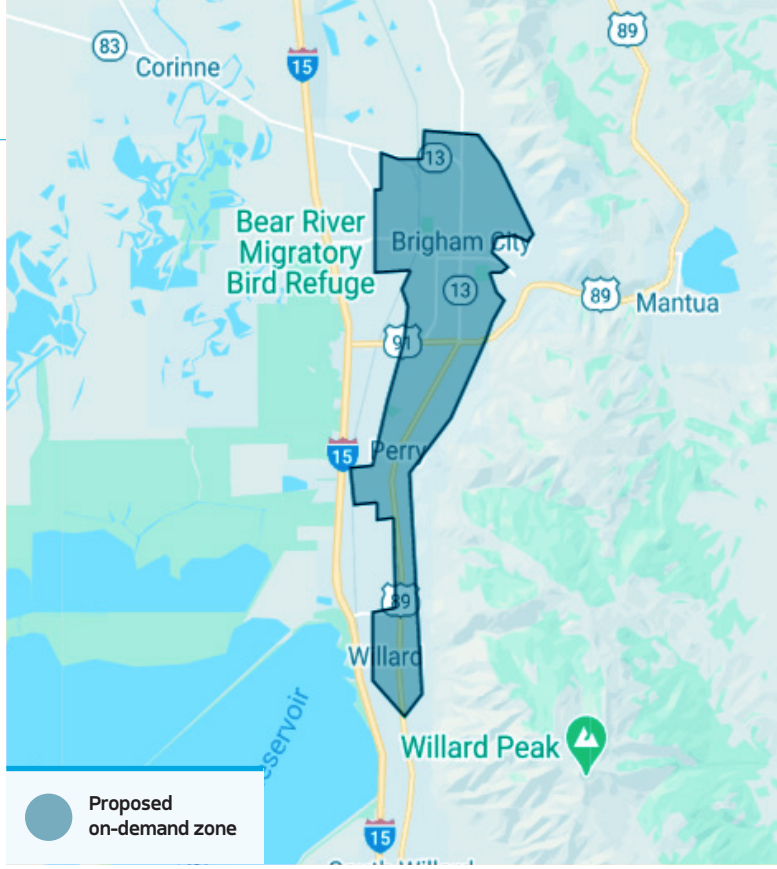
Zone name	Ridership estimate (passengers per weekday)		
	Low	Med	High
Brigham City	53	95	153
North Ogden Small	153	275	440
North Ogden Large	174	313	500
West Davis County	150	270	432
West Weber County	62	112	179
South Davis County	184	331	529
West Salt Lake City Industrial/Inland Port.	47	85	136
East Millcreek	23	41	66
South Valley	316	568	909
South Jordan	166	300	479
Sandy	375	675	1080
Tooele County	94	170	272
Lehi	82	148	237
Eagle Mountain / Saratoga Springs	92	166	266
North Utah County	319	574	919
Lindon / Vineyard	105	189	302
West Provo	87	156	250
Springville/Spanish Fork	133	239	382
South Utah County	49	88	141

7. Zone-by-zone simulation results.

The following pages detail the result from each zone.

ZONE OVERVIEW

Brigham City On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
11.7 sq.mi	24k people	2.0k people per sq. mi	8k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves mobility throughout Brigham City, Perry, and Willard.
- Provides access to grocery stores, retail stores, and employers.
- Potentially replaces Flex Route F638.

Major trip generators:

- Walmart
- Brigham City Community Hospital
- Box Elder High School
- Utah State Universtiy Brigham City

Expected use cases:

Likely — Coverage service

Likely — Flex bus route replacement (F638)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

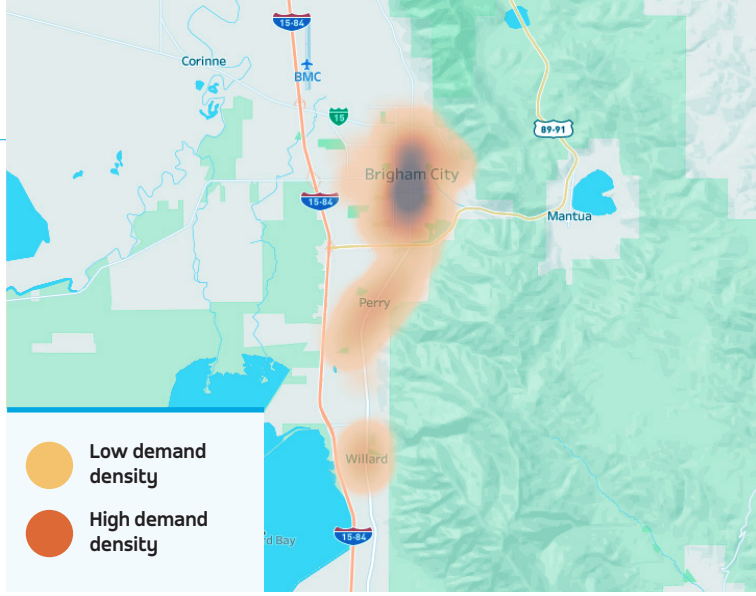
SIMULATION RESULTS

Brigham City.

Eligible trips: All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	N/A
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	11 / 25

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	50	100	150	Passengers per day
Weekly ridership	270	480	760	Passengers per week
Annual ridership	14,000	25,000	40,000	Passengers per year

Estimating fleet requirements and quality of service:

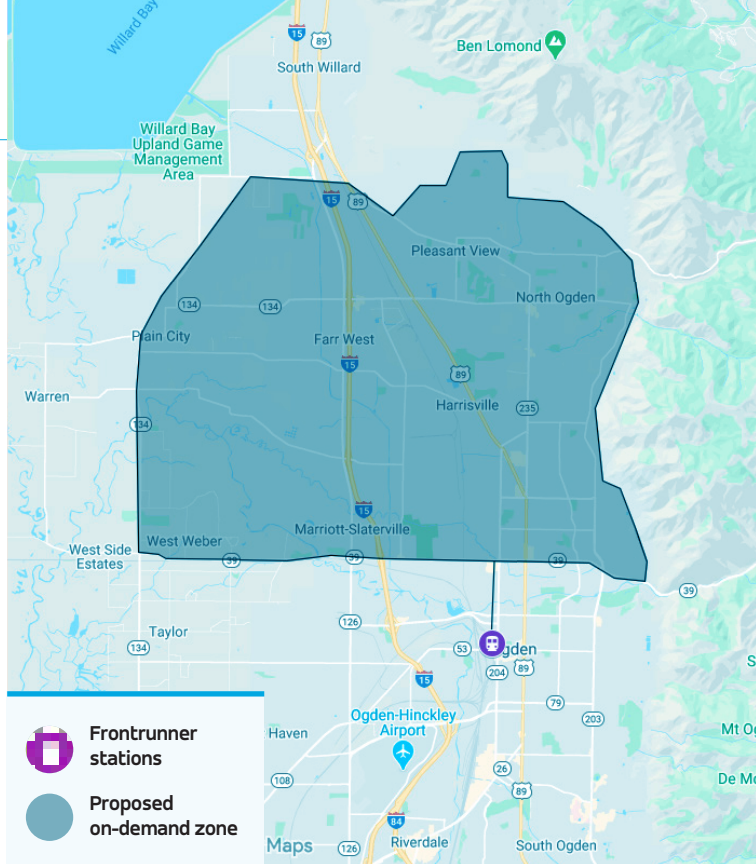
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	2	3	4	Vehicles
Annual vehicle hours	8,000	11,000	15,000	Vehicle hours per year
Vehicle utilization	1.9 - 2.4	2.2 - 2.7	2.9 - 3.4	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

North Ogden (Larger Zone) On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
47.2 sq.mi	77k people	1.6k people per sq. mi	24k jobs

Zone design rationale:

The zone is the larger of two alternatives selected for investigation in North Ogden: It was selected for the following reasons:

- Improves connections from neighborhoods both east and west of US 15 to Ogden FrontRunner Station and nearby commercial areas.
- Expands transit to areas that currently have limited or no transit, including Farr West and Plain City.
- Complements the high ridership bus routes running along Washington Boulevard. Complements and potentially provides an alternative to the low-moderate ridership Ogden / BDO Flex Route F618.

Major trip generators:

- Ogden FrontRunner Station
- Business Depot Ogden
- Ogden-Weber Technical College
- Golden Spike Event Center
- Two Walmart locations

Expected use cases:

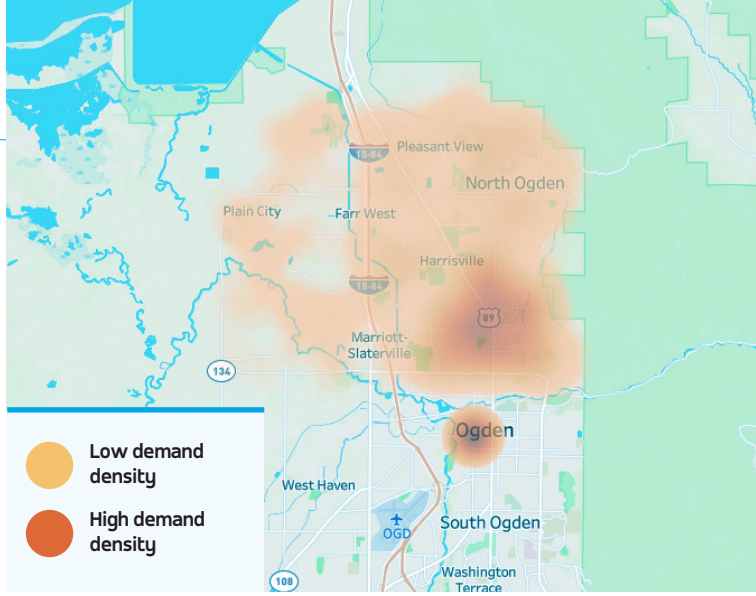
Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement (#613, F618)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

North Ogden (Larger Zone).



Eligible trips:

All trips are allowed within the zone, although trips along Washington Boulevard may be restricted if they are more effectively served by existing bus routes.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Moderate
Parking availability at stations	Available
Walkability and grid pattern	Poor
Diversity of use cases	Moderate
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	170	310	500	Passengers per day
Weekly ridership	1,000	1,8000	3,000	Passengers per week
Annual ridership	50,000	100,000	160,000	Passengers per year

Estimating fleet requirements and quality of service:

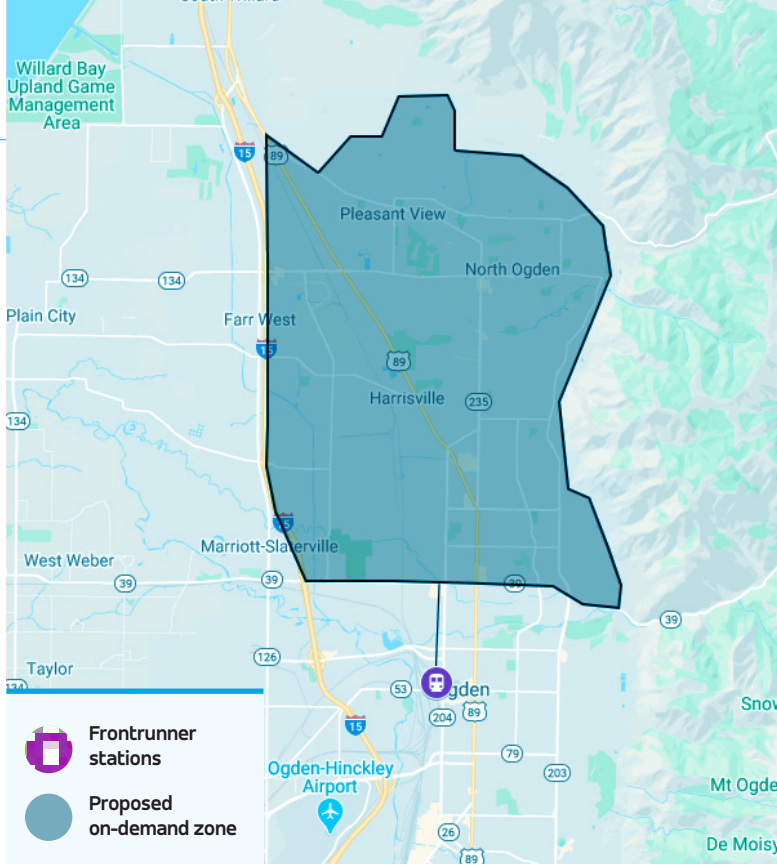
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	6	8	11	Vehicles
Annual vehicle hours	22,000	32,000	41,000	Vehicle hours per year
Vehicle utilization	2.3 - 2.8	3.0 - 3.5	3.7 - 4.2	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

North Ogden (Smaller Zone) On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
27.1 sq.mi	65k people	2.4k people per sq. mi	16k jobs

Zone design rationale:

This zone is the smaller of two alternatives selected for investigation in North Ogden. It was selected for the following reasons:

- Improves connections from neighborhoods east of US 15 to Ogden FrontRunner Station and nearby commercial areas. Unlike the larger zone, it does not extend west of US 15. It requires fewer vehicles and a smaller budget.
- Complements the high ridership bus routes running along Washington Boulevard. Complements and potentially provides an alternative to the low-moderate ridership Ogden / BDO Flex Route F618.

Major trip generators:

- Ogden FrontRunner Station
- Business Depot Ogden
- Ogden's George S. Eccles Dinosaur Park
- Ogden-Weber Technical College
- Golden Spike Event Center
- Walmart

Expected use cases:

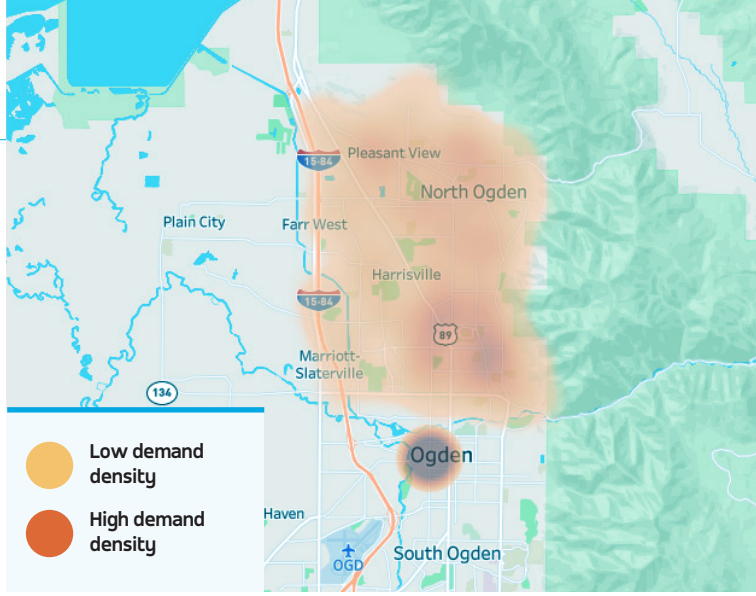
Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement (#613, F618)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

North Ogden (Smaller Zone).



Eligible trips:

All trips are allowed within the zone, although trips along Washington Boulevard may be restricted if they are more effectively served by existing bus routes.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Moderate
Parking availability at stations	Available
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**12 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	170	280	440	Passengers per day
Weekly ridership	900	1,600	2,600	Passengers per week
Annual ridership	50,000	90,000	140,000	Passengers per year

Estimating fleet requirements and quality of service:

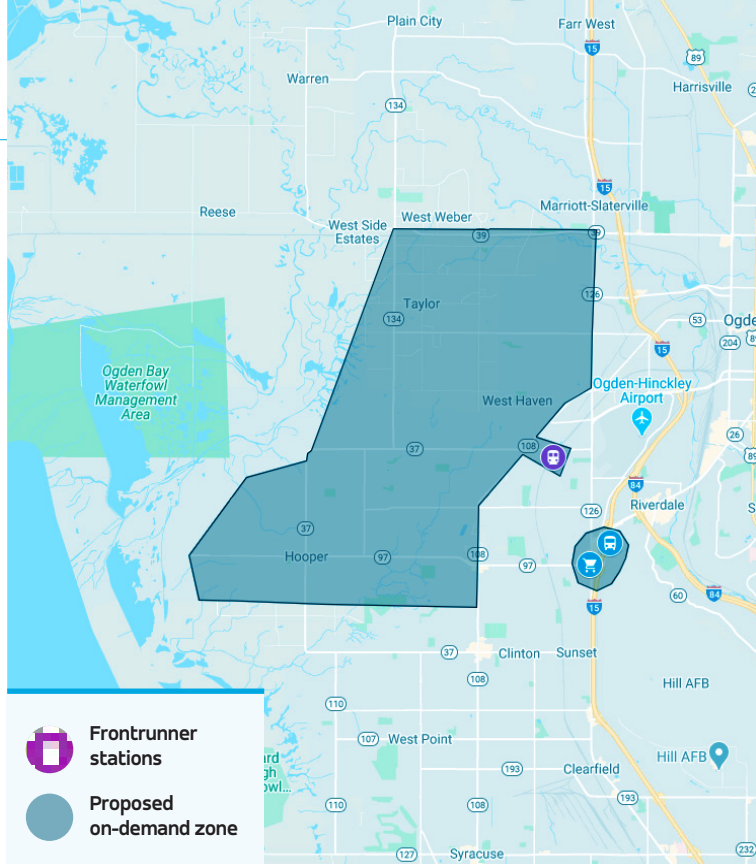
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	5	8	9	Vehicles
Annual vehicle hours	19,000	26,000	34,000	Vehicle hours per year
Vehicle utilization	2.4 - 2.9	32 - 3.7	4.0 - 4.5	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below. [2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

West Weber County On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
28.5 sq.mi	35k people	1.3k people per sq. mi	5k jobs

Zone design rationale:

This zone was selected for the following reasons:

- Improves connections from neighborhoods west of US 15 to Roy FrontRunner Station and Roy Park & Ride.
- Provides connections between low-density suburban neighbourhoods in western areas of the zone and retail and commercial destinations in Roy.

Major trip generators:

- Roy FrontRunner Station
- Roy Park & Ride
- Harmons Grocery Roy

Expected use cases:

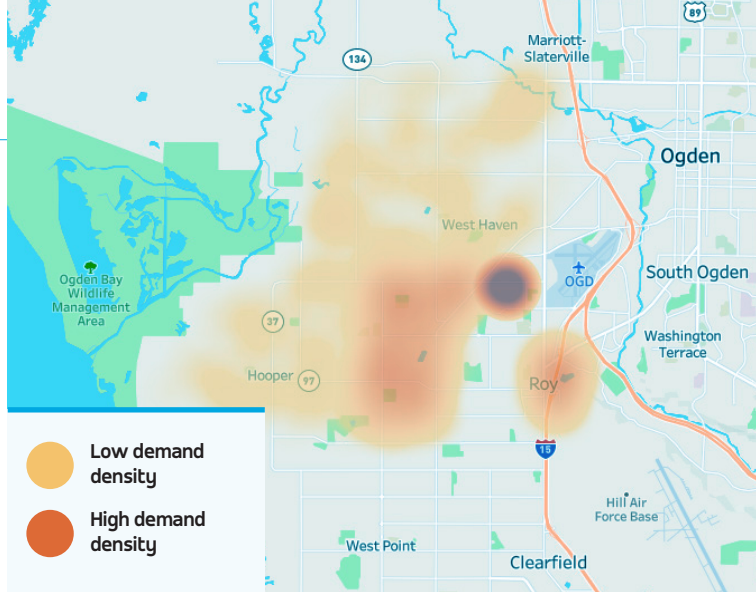
Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

West Weber County.



Eligible trips:

All trips are allowed within the zone, including a service island in the City of Roy.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Available
Walkability and grid pattern	Low
Diversity of use cases	Low
Relative poverty rate	Low
Zero-vehicle households	Low
Overall mode share score	**9 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	60	110	180	Passengers per day
Weekly ridership	380	670	1,000	Passengers per week
Annual ridership	19,000	35,000	56,000	Passengers per year

Estimating fleet requirements and quality of service:

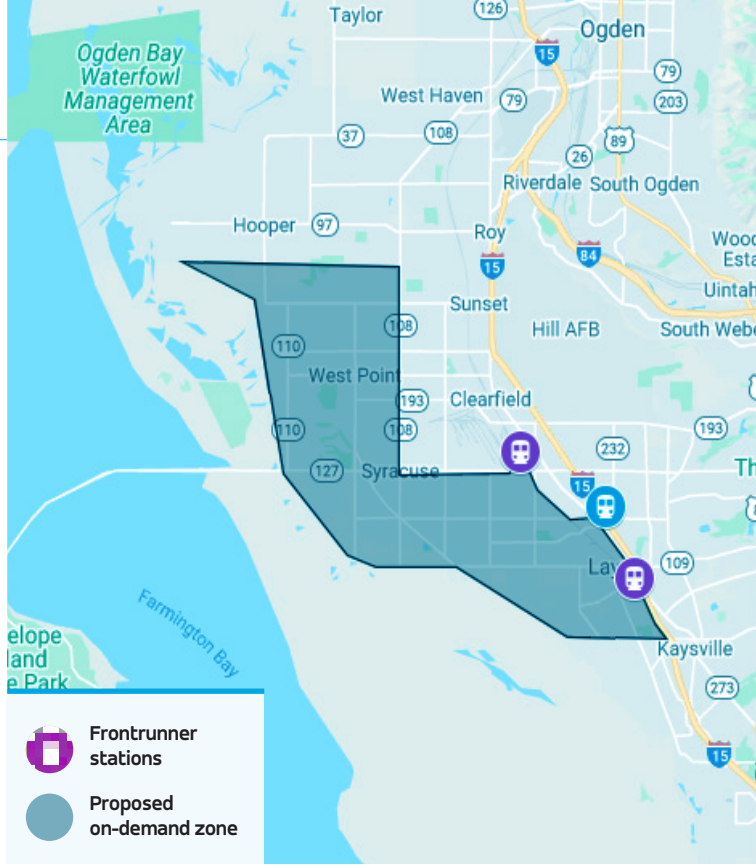
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	3	4	5	Vehicles
Annual vehicle hours	12,000	15,000	19,000	Vehicle hours per year
Vehicle utilization	1.5 - 2.0	2.1 - 2.6	2.9 - 3.4	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

West Davis County On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
30.3 sq.mi	64k people	2.1k people per sq. mi	20k jobs

Zone design rationale:

This zone was selected for investigation for the following reasons:

- Improves connections from underserved neighborhoods west of US 15 to Layton and Clearfield Stations (excluding areas served by Route 626).
- Provides access to grocery stores, other retail stores, and several major employers in Layton.

Major trip generators:

- Layton FrontRunner Station
- Clearfield FrontRunner Station
- Walmart in Layton
- Layton Village Shopping Center
- Layton Hospital

Expected use cases:

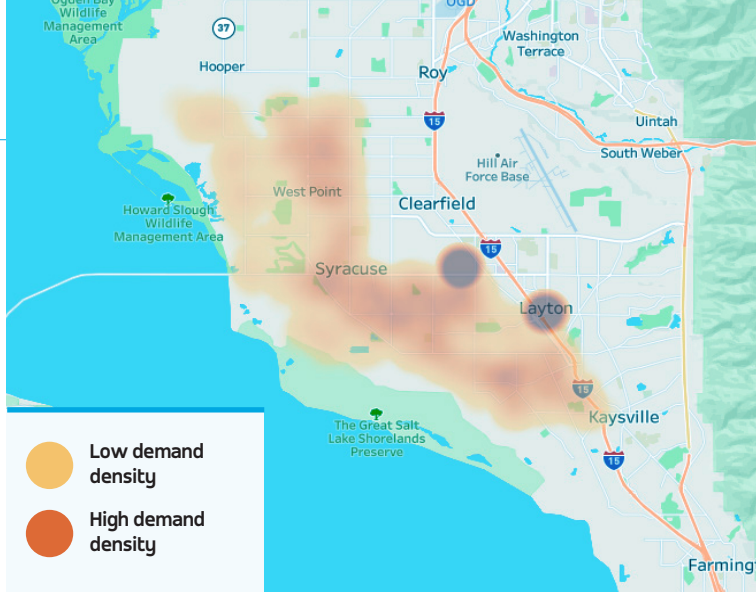
Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

West Davis County.



Eligible trips:

All trips are allowed within the zone.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Limited
Walkability and grid pattern	Low-Moderate
Diversity of use cases	Moderate
Relative poverty rate	Moderate
Zero-vehicle households	Low
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	150	270	430	Passengers per day
Weekly ridership	900	1,600	2,600	Passengers per week
Annual ridership	50,000	80,000	130,000	Passengers per year

Estimating fleet requirements and quality of service:

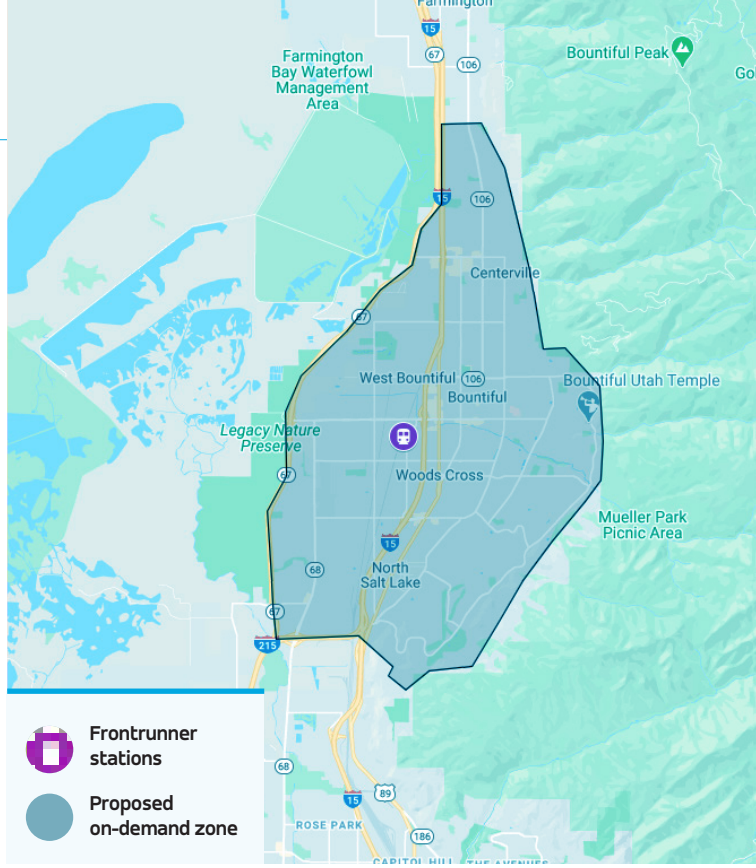
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	6	9	13	Vehicles
Annual vehicle hours	22,000	34,000	49,000	Vehicle hours per year
Vehicle utilization	2.0 - 2.5	2.3 - 2.7	2.7 - 3.2	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

South Davis County On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
28.0 sq.mi	92k people	3.3k people per sq. mi	29k jobs

Zone design rationale:

This zone was selected for investigation for the following reasons:

- Replaces Routes 460, 461, 462, 463, 471, and F605.
- Improves connections from neighborhoods both east and west of US 15 to Woods Cross FrontRunner Station, including hard to serve areas in foothills.
- Serves riders who are not within walking distance of the well-performing bus routes running along Main St. and Orchard Dr.

Major trip generators:

- Woods Cross FrontRunner Station
- Walmart in Centerville
- Lakeview Hospital
- Bountiful Utah Template

Expected use cases:

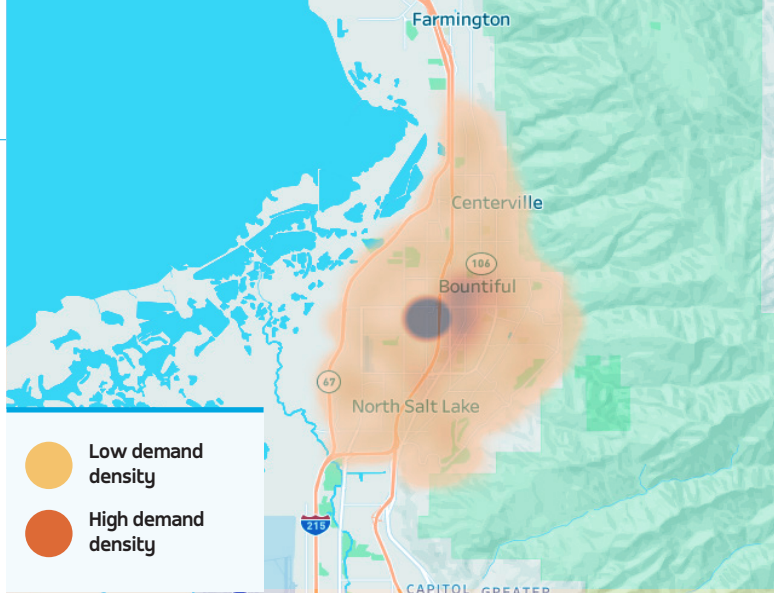
Likely	First-and-last mile connections
Likely	Coverage service
Likely	Bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

South Davis County.



Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Available
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	330	530	850	Passengers per day
Weekly ridership	1,900	3,200	5,100	Passengers per week
Annual ridership	100,000	160,000	260,000	Passengers per year

Estimating fleet requirements and quality of service:

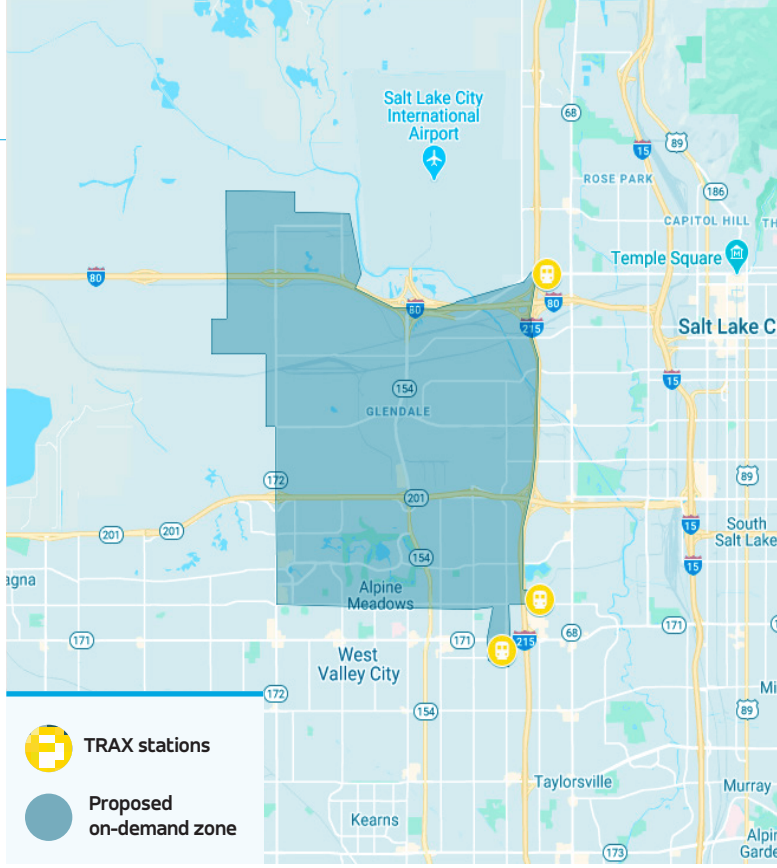
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	7	9	12	Vehicles
Annual vehicle hours	27,000	34,000	45,000	Vehicle hours per year
Vehicle utilization	3.5 - 4.0	4.4 - 4.9	5.8 - 6.3	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

West Salt Lake City Industrial / Inland Port On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
21.0 sq.mi	4.6k people	0.1k people per sq. mi	72k jobs

Zone design rationale:

This zone was selected for investigation for the following reasons:

- Improves connections from industrial areas in western Salt Lake City and the Inland Port area to three Green Line TRAX Stations.
- Expands transit coverage to areas with limited or no existing fixed-route bus service.

Major trip generators:

- Three Green Line Trax Stations
- Westlake Business Park
- Amazon Fulfillment Center

Expected use cases:

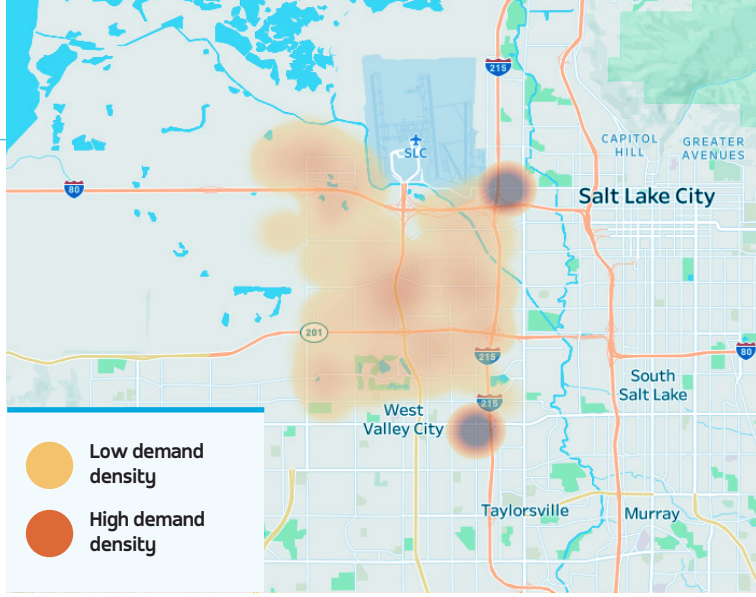
Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Frequent Service Hours:** • Weekday 5 AM - Midnight • Saturday 5 AM - Midnight • Sunday 7 AM - 7 PM

SIMULATION RESULTS

West Salt Lake City Industrial / Inland Port.



Eligible trips:

All trips are allowed within the zone.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Available
Walkability and grid pattern	Low
Diversity of use cases	Low
Relative poverty rate	N/A
Zero-vehicle households	N/A
Overall mode share score	**4 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	50	90	140	Passengers per day
Weekly ridership	240	430	680	Passengers per week
Annual ridership	12,000	22,000	35,000	Passengers per year

Estimating fleet requirements and quality of service:

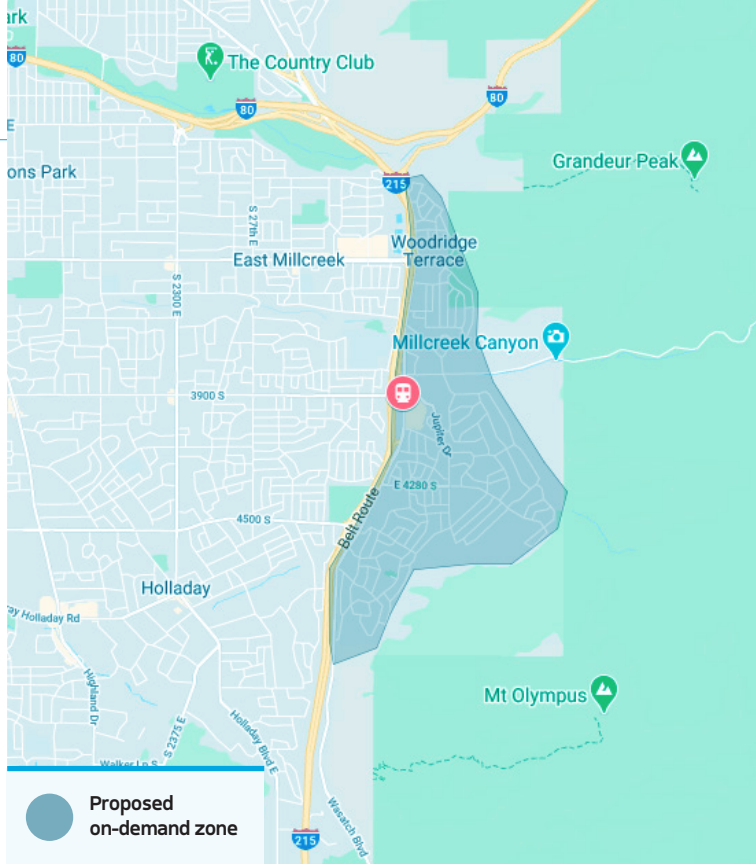
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	2	3	4	Vehicles
Annual vehicle hours	8,000	11,000	15,000	Vehicle hours per year
Vehicle utilization	1.7 - 2.2	2.1 - 2.6	2.5 - 3.0	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

East Millcreek On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
2.1 sq.mi	9.1k people	4.3k people per sq. mi	1.2k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Provides connections from residential, steep areas of East Millcreek to Olympus Park and Ride, allowing connections to Routes 4 and 354 and local Routes 33, 39, and 45.
- Expands transit coverage to areas not current served by fixed-route buses.

Major trip generators:

- Olympus Cove Park and Ride
- Olympus Hills Shopping Center
- Churchill Junior High

Expected use cases:

Likely — Coverage service

Likely — Flex bus route replacement (F638)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

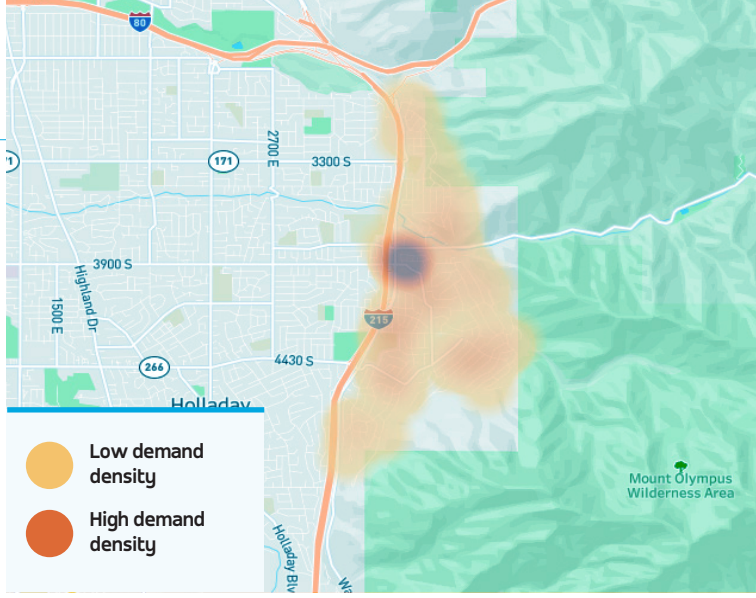
SIMULATION RESULTS

East Millcreek.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Moderate
Parking availability at stations	Available
Walkability and grid pattern	High
Diversity of use cases	Moderate
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**13 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	20	40	65	Passengers per day
Weekly ridership	140	250	400	Passengers per week
Annual ridership	7,000	13,000	21,000	Passengers per year

Estimating fleet requirements and quality of service:

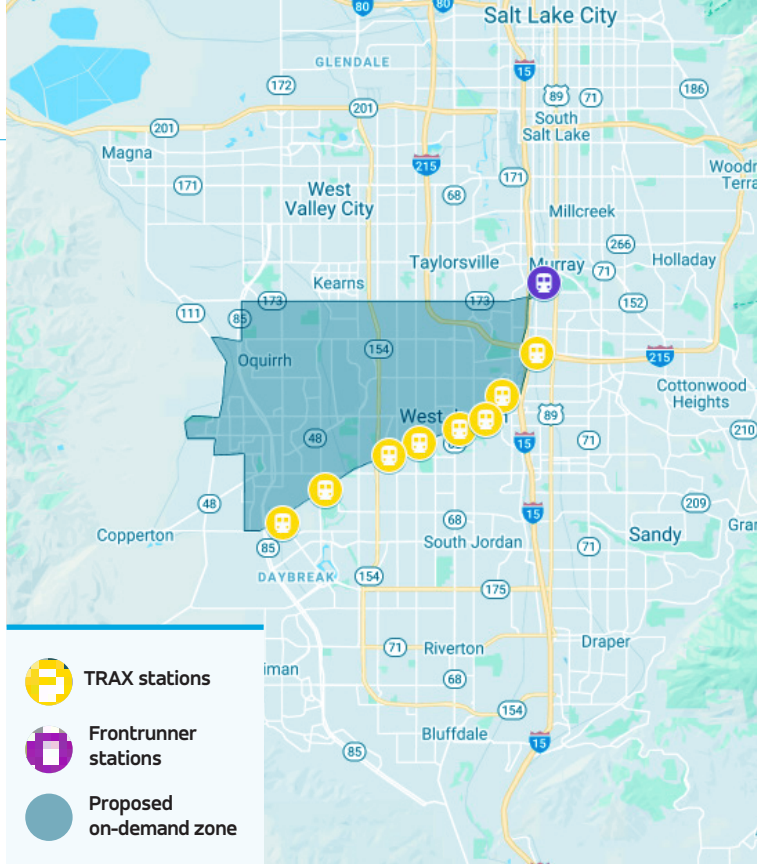
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	1	2	2	Vehicles
Annual vehicle hours	5,000	7,000	8,000	Vehicle hours per year
Vehicle utilization	1.5 - 2.0	1.8 - 2.3	2.3 - 2.8	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

South Valley On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
33.6 sq.mi	140K people	4.1k people per sq. mi	39k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections from neighborhoods west of US 15 to Murray Central Frontrunner Station.
- Imroves connections to Blue Line and Red Line TRAX Stations along the southern and eastern borders of the zone.
- Provides transit coverage in areas with limited service.

Major trip generators:

- Murray Central FrontRunner Station
- Two Blue Line stations
- Eight Red Line stations
- Jordan Landing shopping mall
- Three Walmart locations
- Intermountain Primary Children's at Wasatch Canyons
- West Jordan Soccer Complex

Expected use cases:

Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

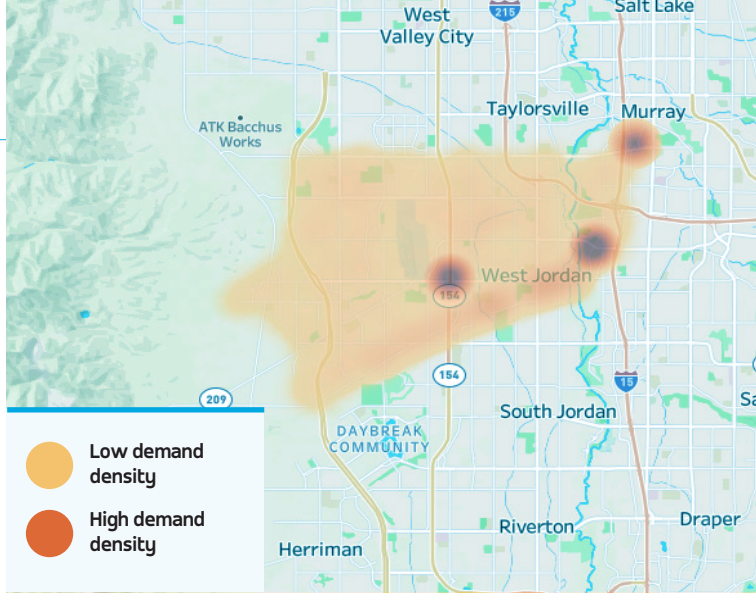
SIMULATION RESULTS

South Valley.

Eligible Trips: All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Moderate
Parking availability at stations	Available
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Low
Overall mode share score	11 / 25

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	320	570	900	Passengers per day
Weekly ridership	1,900	3,400	5,4000	Passengers per week
Annual ridership	100,000	180,000	280,000	Passengers per year

Estimating fleet requirements and quality of service:

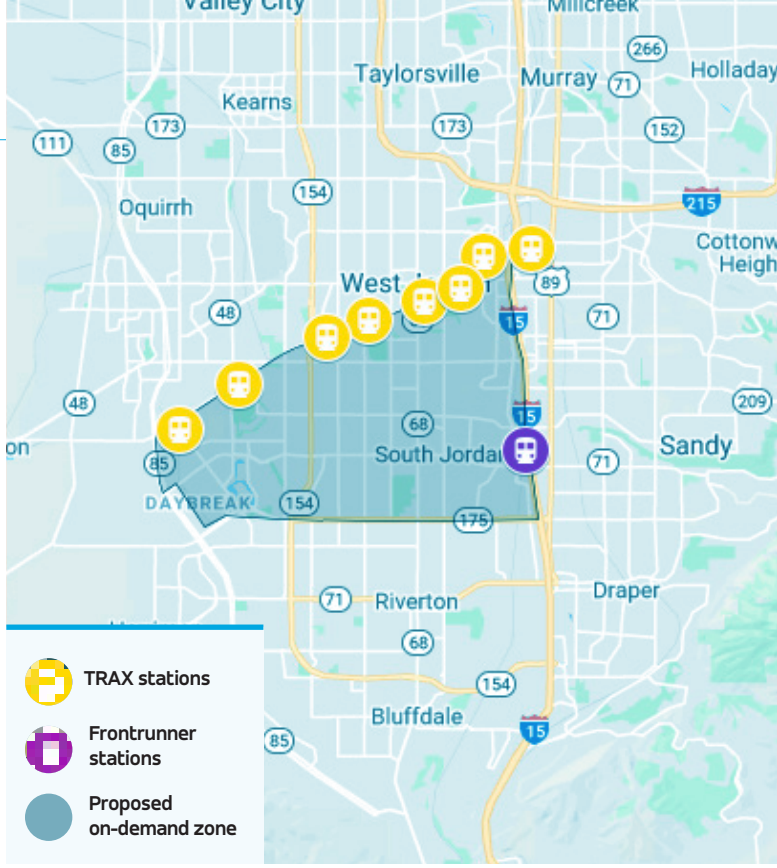
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	10	16	21	Vehicles
Annual vehicle hours	37,000	60,000	75,000	Vehicle hours per year
Vehicle utilization	2.5 - 3.0	2.8 - 3.4	3.4 - 3.9	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

South Jordan On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
16.3 sq.mi	71K people	4.3k people per sq. mi	30k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections from neighborhoods west of US 15 to South Jordan Frontrunner Station.
- Imroves connections to Red Line TRAX Stations along the northern border of the zone, and provides a connection to one Blue Line TRAX Station at Fashion Place West.
- Provides transit coverage in areas with limited service.

Major trip generators:

- Murray Central FrontRunner Station
- Eight Red Line stations
- One Blue Line Station
- Jordan Valley Medical Center
- Salt Lake Community College: Jordan Campus

Expected use cases:

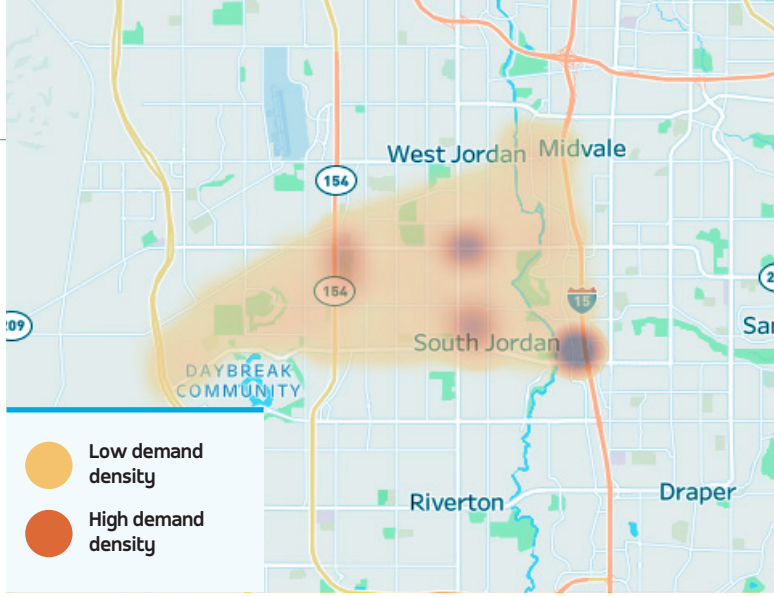
Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

South Jordan.



Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Moderate
Parking availability at stations	Available
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Low
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	170	300	480	Passengers per day
Weekly ridership	1,000	1,800	2,900	Passengers per week
Annual ridership	50,000	90,000	150,000	Passengers per year

Estimating fleet requirements and quality of service:

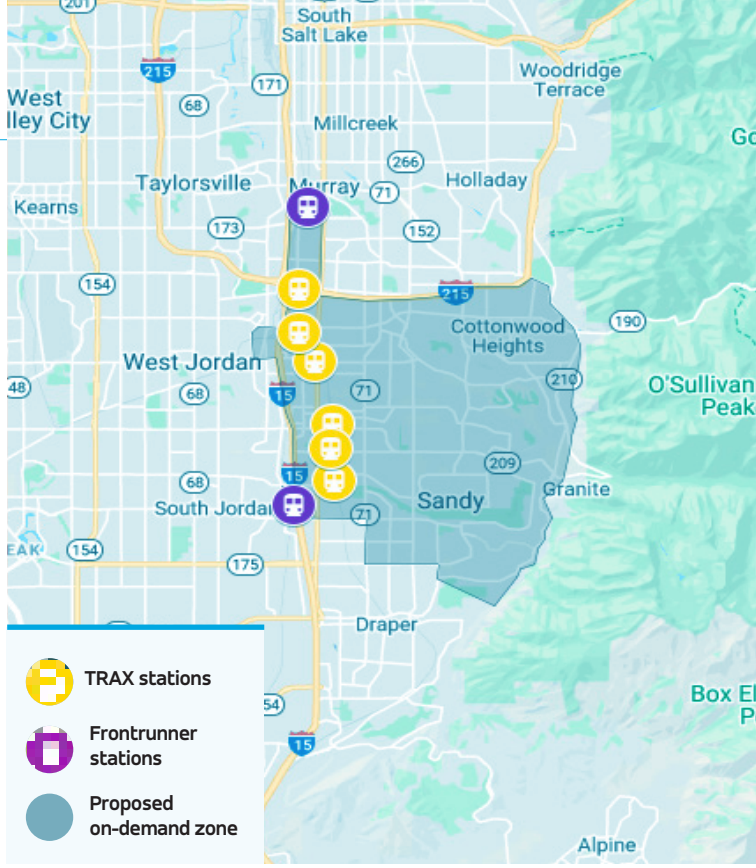
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	4	6	9	Vehicles
Annual vehicle hours	15,000	22,000	34,000	Vehicle hours per year
Vehicle utilization	3.1 - 3.6	3.8 - 4.3	4.2 - 4.7	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Sandy On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
35.6 sq.mi	148K people	4.1k people per sq. mi	63k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections from neighborhoods east of US 15 to Murray Central and South Jordan Frontrunner Stations.
- Improves connections to Blue and Red Line TRAX Stations along the eastern border of the zone.
- Provides transit coverage in areas with limited service, including foothill neighborhoods with hard-to-serve circuitous road networks.

Major trip generators:

- Murray Central and South Jordan FrontRunner Stations
- Four Blue Line stations, two Red Line Stations, and two stations that serve both the Blue and Red Lines
- Alta View Hospital
- Quarry View Shopping Mall
- The Shops at Fort Union Shopping Mall
- Two Walmart locations.

Expected use cases:

Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday - No Service

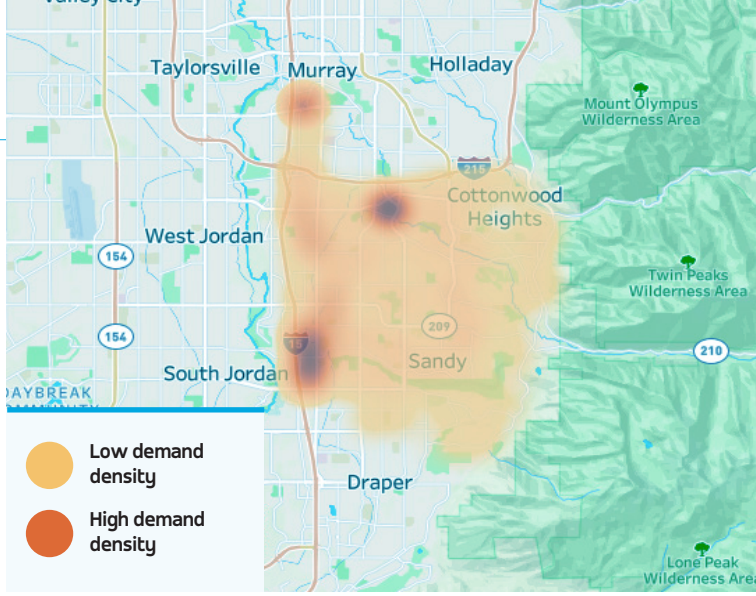
SIMULATION RESULTS

Sandy.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Available
Walkability and grid pattern	Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	380	680	1,100	Passengers per day
Weekly ridership	2,300	4,000	6,500	Passengers per week
Annual ridership	120,000	210,000	340,000	Passengers per year

Estimating fleet requirements and quality of service:

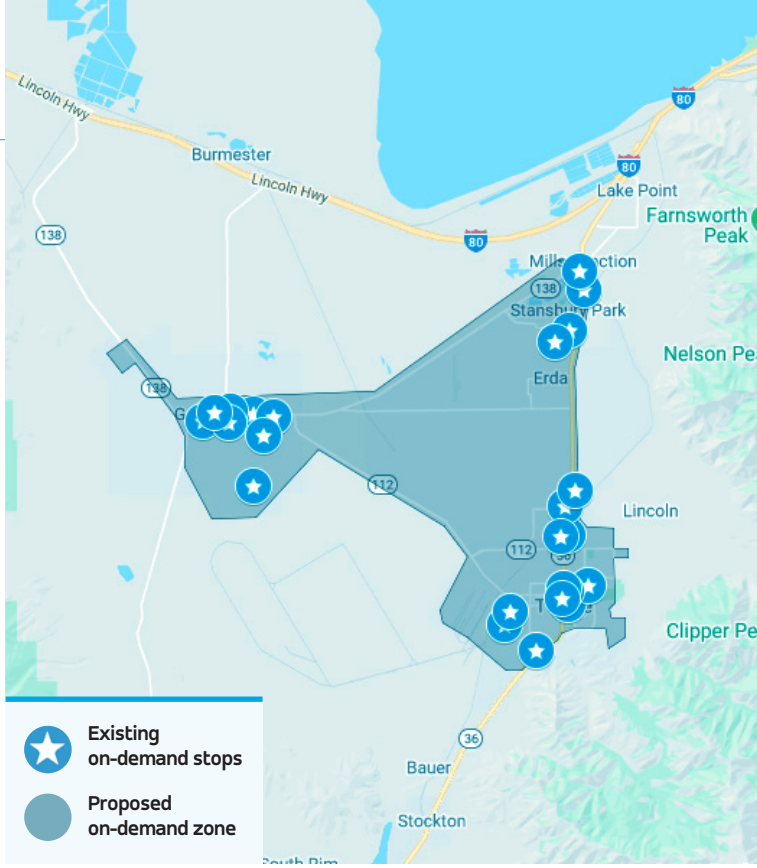
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	10	14	18	Vehicles
Annual vehicle hours	37,000	52,000	67,000	Vehicle hours per year
Vehicle utilization	2.8 - 3.3	3.8 - 4.3	4.7 - 5.2	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Tooele On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
50.4 sq.mi	43K people	0.9k people per sq. mi	5.6k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections between Tooele, Grantsville, and Stansbury Park.
- Improves and potentially replaces Flex Routes F400 and F402 that currently operates in City of Tooele. These routes average approximately four and six passengers per hour, respectively.
- Improves and potentially replaces the Tooele On-Demand bus service.

Major trip generators:

- Tooele Main Street
- North Pointe Medical Clinic
- Valley Behavioural Health
- Stansbury High School
- Two Walmart locations, including one Walmart distribution center in Grantsville

Expected use cases:

Likely	Existing bus replacement (flex route and on-demand)
Likely	Coverage service
Possible	First-and-last mile connections (buses to Salt Lake City)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 30 - 40 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - No Service • Sunday - No Service

SIMULATION RESULTS

Tooele.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	N/A
Walkability and grid pattern	Moderate
Diversity of use cases	Poor
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	10 / 25

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	90	170	270	Passengers per day
Weekly ridership	470	850	1,400	Passengers per week
Annual ridership	25,000	44,000	70,000	Passengers per year

Estimating fleet requirements and quality of service:

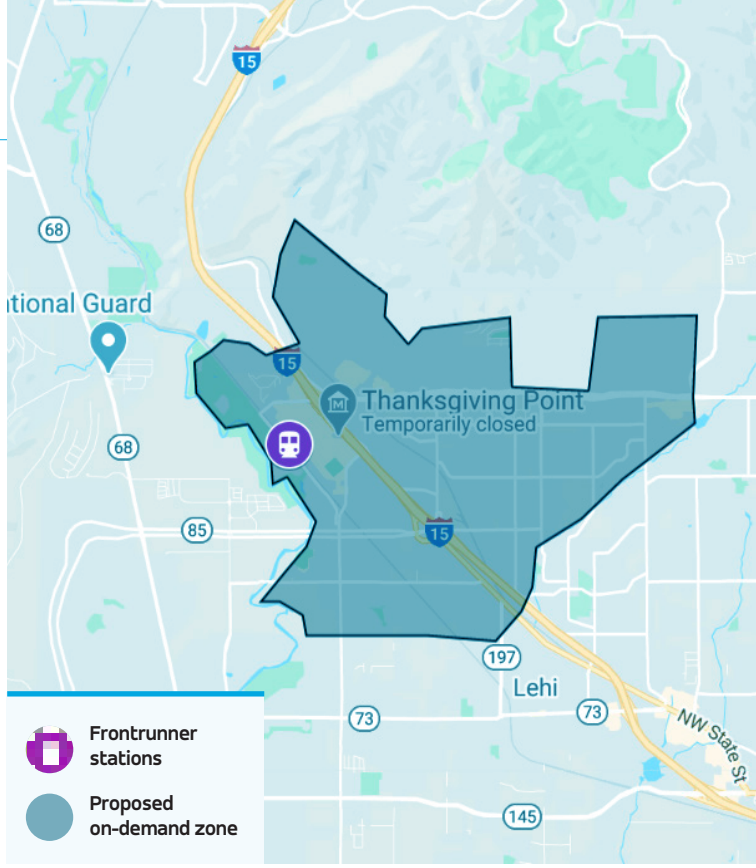
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	4	6	7	Vehicles
Annual vehicle hours	13,000	19,000	22,000	Vehicle hours per year
Vehicle utilization	1.8 - 2.3	2.2 - 2.7	3.0 - 3.5	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Lehi On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
10.5 sq.mi	31K people	3.0k people per sq. mi	20k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections to the Lehi Frontrunner Station.
- Provides a high quality connection to 'Silicon Slopes' employers.
- Improves connections to major retail, medical, and other destinations such as the Outlets at Traverse Mountain and Thanksgiving Point.

Major trip generators:

- Lehi Frontrunner Station
- Thanksgiving Point.
- Mountain Point Medical Center.
- Outlets at Traverse Mountain
- Adobe
- Xactware

Expected use cases:

Likely	First-and-last mile connections
Likely	Coverage service
Possible	Partial bus replacement

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - 6 AM - 9 PM • Sunday - No Service

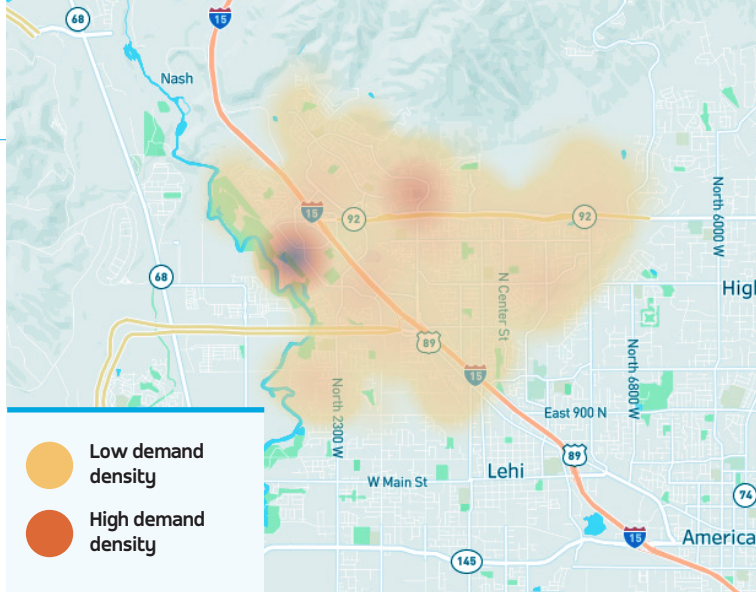
SIMULATION RESULTS

Lehi.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Available
Walkability and grid pattern	Low-Moderate
Diversity of use cases	Highly Mixed
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	**11 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	80	170	240	Passengers per day
Weekly ridership	500	900	1,400	Passengers per week
Annual ridership	26,000	46,000	74,000	Passengers per year

Estimating fleet requirements and quality of service:

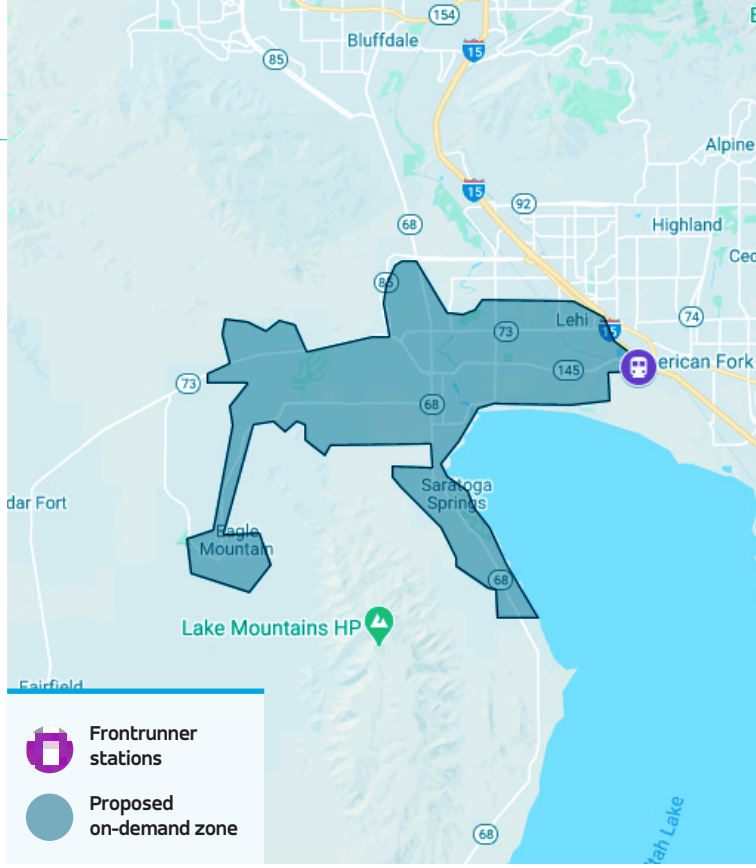
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	3	5	6	Vehicles
Annual vehicle hours	11,000	19,000	22,000	Vehicle hours per year
Vehicle utilization	2.2 - 2.7	2.4 - 2.9	3.2 - 3.7	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Eagle Mountain & Saratoga Springs On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
34.8 sq.mi	55K people	1.7k people per sq. mi	9k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Provides transit coverage in low density neighborhoods of Eagle Mountain and Saratoga Springs.
- Improves connections to American Fork Frontrunner Station.
- Provides connections to Lehi Main Street Historic District.

Major trip generators:

- American Fork Frontrunner Station
- Lehi Main Street Historic District
- Walmart Supercenter (Crossroads Blvd)

Expected use cases:

Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 15 - 25 minute wait • Maximum 30 - 40 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - No Service • Sunday - No Service

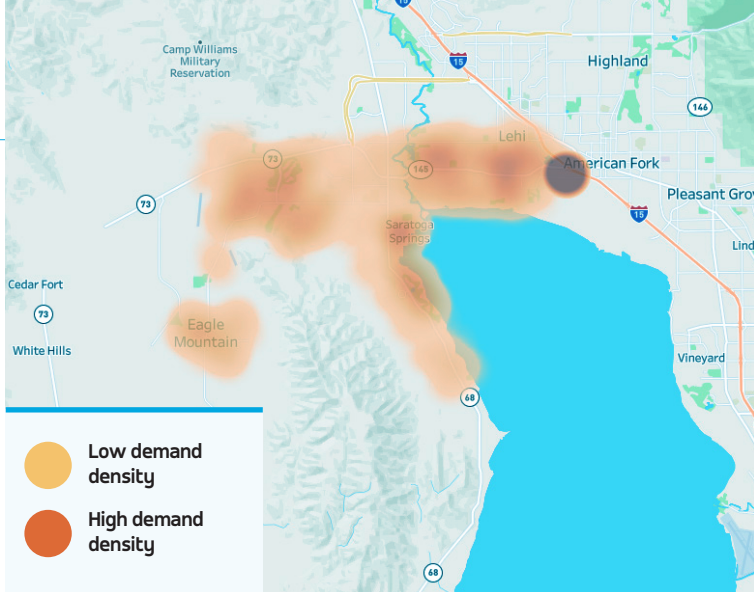
SIMULATION RESULTS

Eagle Mountain & Saratoga Springs.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Limited
Walkability and grid pattern	Low
Diversity of use cases	Low
Relative poverty rate	Low
Zero-vehicle households	Low
Overall mode share score	**9 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	90	170	270	Passengers per day
Weekly ridership	460	570	920	Passengers per week
Annual ridership	24,000	43,000	69,000	Passengers per year

Estimating fleet requirements and quality of service:

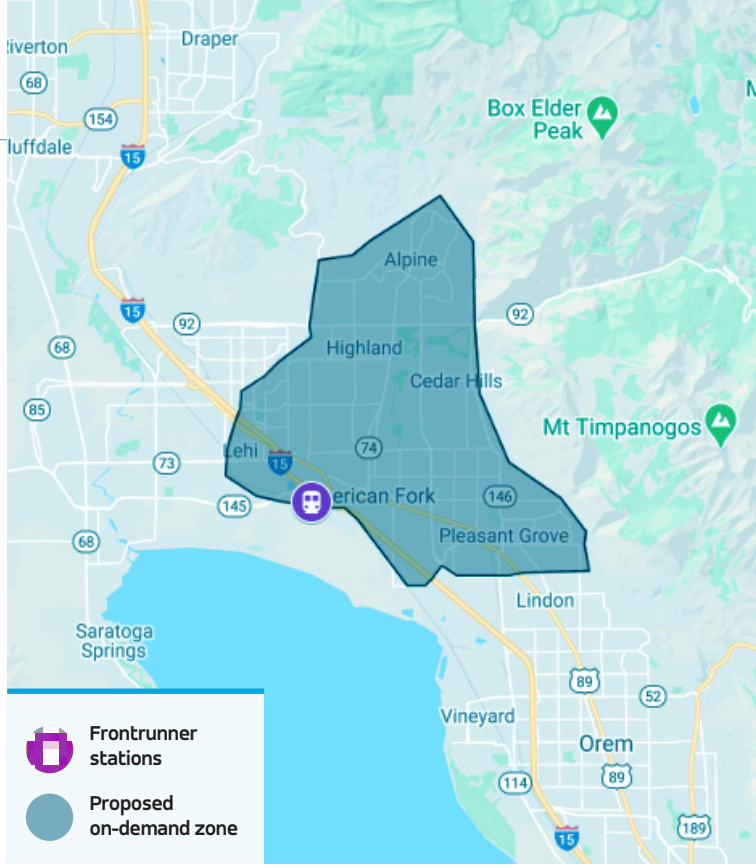
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	5	7	10	Vehicles
Annual vehicle hours	16,000	22,000	31,000	Vehicle hours per year
Vehicle utilization	1.3 - 1.8	1.8 - 2.3	2.0 - 2.5	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

North Utah County On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
37.6 sq.mi	116k people	3.1k people per sq. mi	49k jobs

Zone design rationale:

This zone was selected for investigation for the following reasons:

- Improves connections to the American Fork Frontrunner Station.
- Expands transit coverage to areas with limited or no existing bus services, such as areas of Highland, Cedar Hills, and Alpine.
- Improves connections to major retail, medical, and other destinations such as American Fork Hospital, The Meadows Shopping Center, and Walmart in Cedar Hills.

Major trip generators:

- American Fork Frontrunner Station
- American Fork Hospital
- The Meadows Shopping Center
- Walmart in Cedar Hills

Expected use cases:

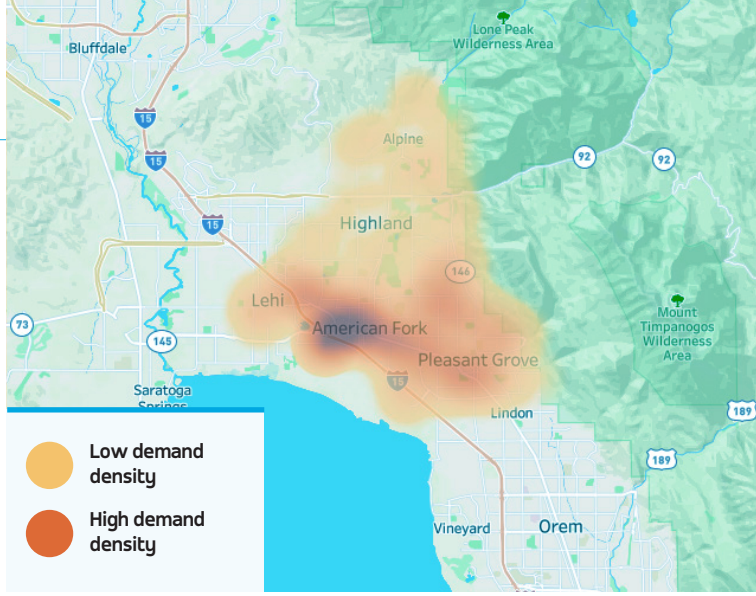
Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Frequent Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday 7 AM - 7 PM

SIMULATION RESULTS

North Utah County.



Eligible trips:

All trips are allowed within the zone.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Limited
Walkability and grid pattern	Moderate
Diversity of use cases	Mixed
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	**13 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	320	570	920	Passengers per day
Weekly ridership	1,900	3,400	5,500	Passengers per week
Annual ridership	100,000	180,000	290,000	Passengers per year

Estimating fleet requirements and quality of service:

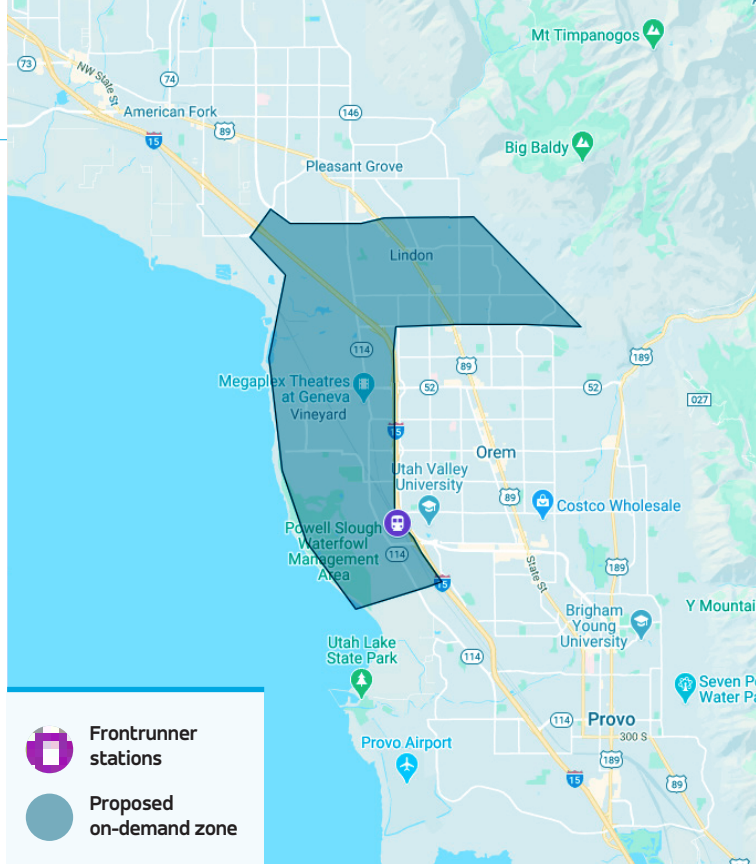
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	9	13	18	Vehicles
Annual vehicle hours	34,000	49,000	67,000	Vehicle hours per year
Vehicle utilization	2.9 - 3.4	3.7 - 4.3	4.2 - 4.7	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Lindon / Vineyard On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
15.6 sq.mi	26k people	1.7k people per sq. mi	23k jobs

Zone design rationale:

This zone was selected for investigation for the following reasons:

- Improves connections to Orem Frontrunner Station and the Utah Valley Express bus route.
- Provides a connection to the southwestern entrance to Utah Valley University near Orem Frontrunner Station.
- Expands transit coverage to areas with limited or no existing bus services, including fast growing areas of Vineyard and suburban areas in Lindon.

Major trip generators:

- Orem Frontrunner Station
- Utah Valley University (southwestern entrance only)
- Retail and residential developments at Geneva

Expected use cases:

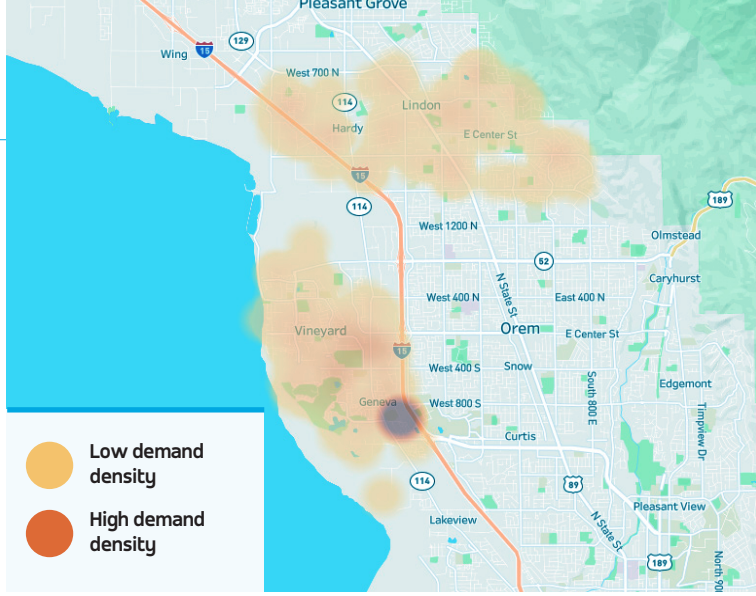
Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Frequent Service Hours:** • Weekday 6 AM - 9 PM • Saturday 6 AM - 9 PM • Sunday No Service

SIMULATION RESULTS

Lindon / Vineyard.



Eligible trips:

All trips are allowed within the zone.

Estimated demand scenarios:

Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Limited
Walkability and grid pattern	Low
Diversity of use cases	Mixed
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**13 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	100	190	302	Passengers per day
Weekly ridership	630	1,100	1,800	Passengers per week
Annual ridership	33,000	59,000	94,000	Passengers per year

Estimating fleet requirements and quality of service:

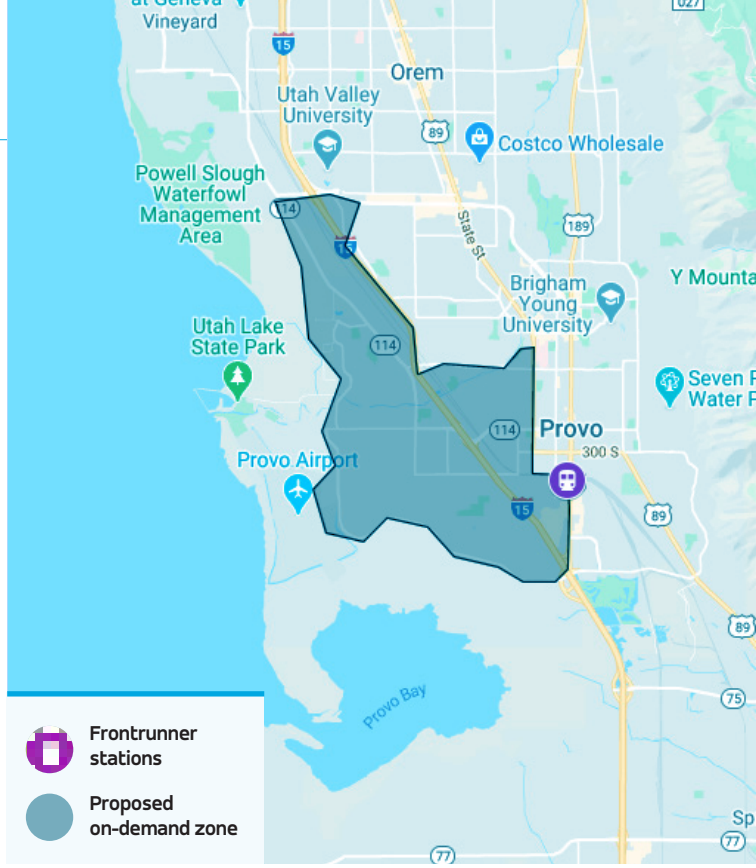
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	4	5	7	Vehicles
Annual vehicle hours	14,000	19,000	26,000	Vehicle hours per year
Vehicle utilization	2.2 - 2.7	3.0 - 3.5	3.4 - 3.9	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

West Provo On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
11.5 sq.mi	28K people	2.4k people per sq. mi	5k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Improves connections to the Provo Frontrunner Station.
- Expands transit coverage to areas with limited or no existing bus services, such as Provo Airport, and areas in Lake View, Fort Utah, and Sunset.
- Improves connections to Provo Town Center and nearby retailers.

Major trip generators:

- Provo Frontrunner Station
- Provo Airport
- Utah Valley Hospital
- Walmart

Expected use cases:

Likely	First-and-last mile connections
Likely	Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - 6 AM - 9 PM • Sunday - No Service

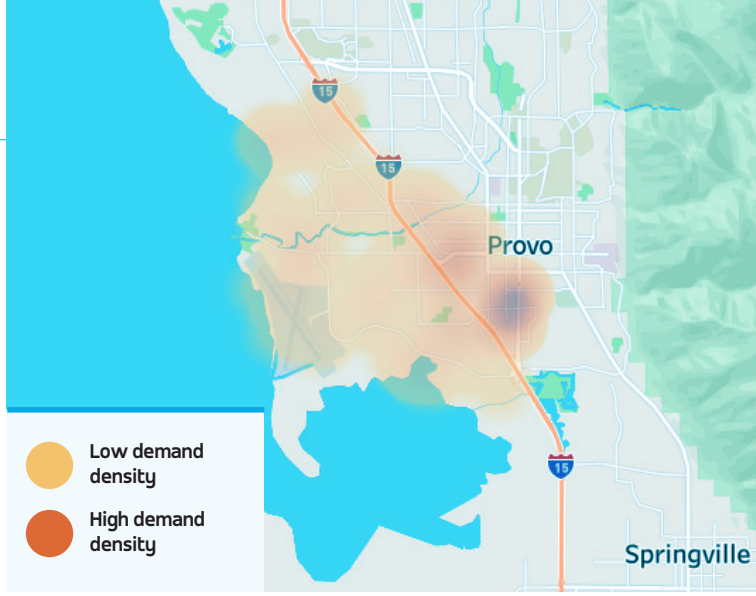
SIMULATION RESULTS

West Provo.

Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.



Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	Limited
Walkability and grid pattern	Moderate
Diversity of use cases	Mixed
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**15 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	90	160	250	Passengers per day
Weekly ridership	520	930	1,400	Passengers per week
Annual ridership	27,000	49,000	78,000	Passengers per year

Estimating fleet requirements and quality of service:

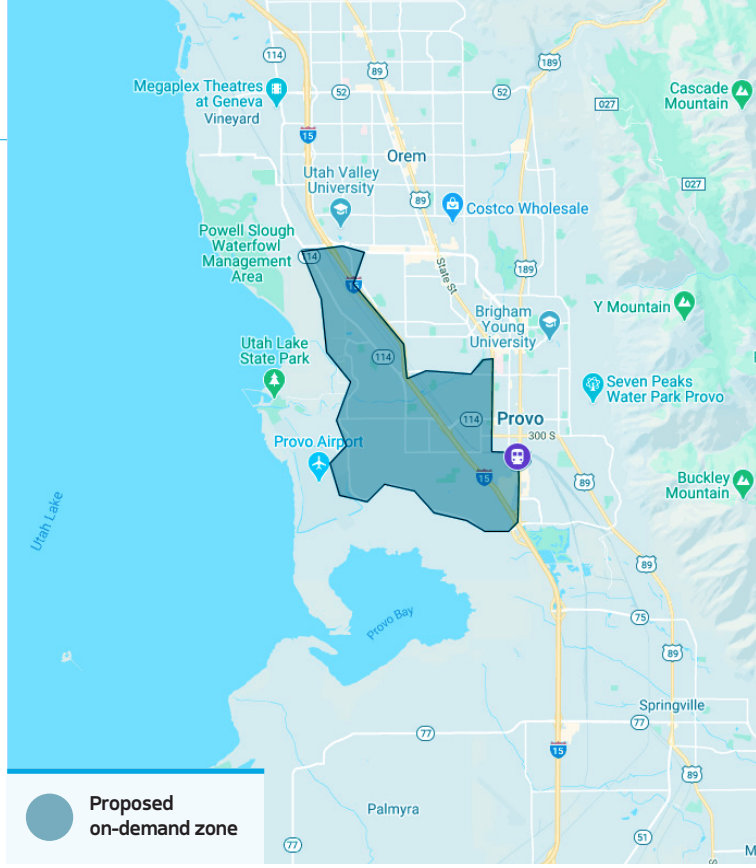
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	3	4	4	Vehicles
Annual vehicle hours	11,000	15,000	17,000	Vehicle hours per year
Vehicle utilization	2.3 - 2.8	3.1 - 3.6	4.4 - 4.9	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

Springville / Spanish Fork On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
32.2 sq.mi	72K people	2.2k people per sq. mi	25k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Expands transit coverage to areas with limited or no existing bus services, such as parts of Springville, Spanish Fork, and Mapleton.

Major trip generators:

- Spanish Fork Hospital
- Two Walmart locations
- Costco

Expected use cases:

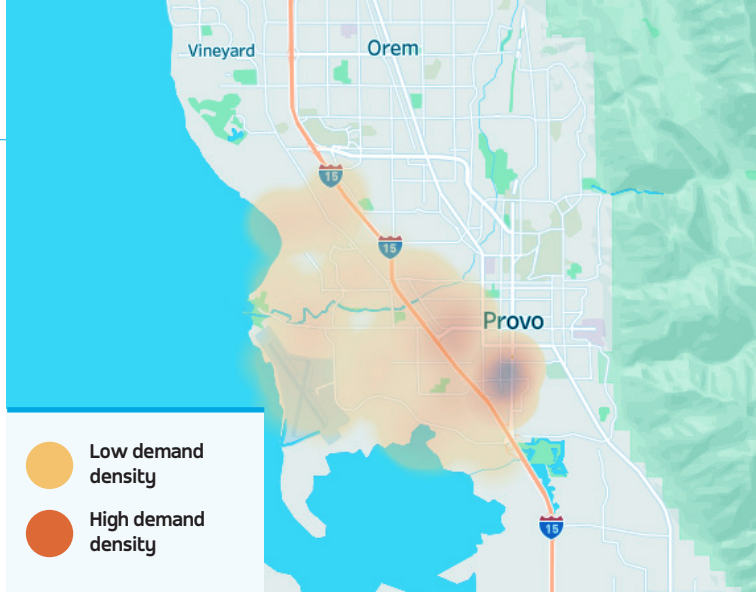
Likely	Coverage service
Possible	First-and-last mile connections (to buses)

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 5 - 15 minute wait • Maximum 15 - 25 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - 6 AM - 9 PM • Sunday - No Service

SIMULATION RESULTS

Springville / Spanish Fork



Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	N/A
Walkability and grid pattern	Low-Moderate
Diversity of use cases	Moderate
Relative poverty rate	Low
Zero-vehicle households	Moderate
Overall mode share score	**9 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	130	240	380	Passengers per day
Weekly ridership	800	1,400	2,300	Passengers per week
Annual ridership	41,000	75,000	120,000	Passengers per year

Estimating fleet requirements and quality of service:

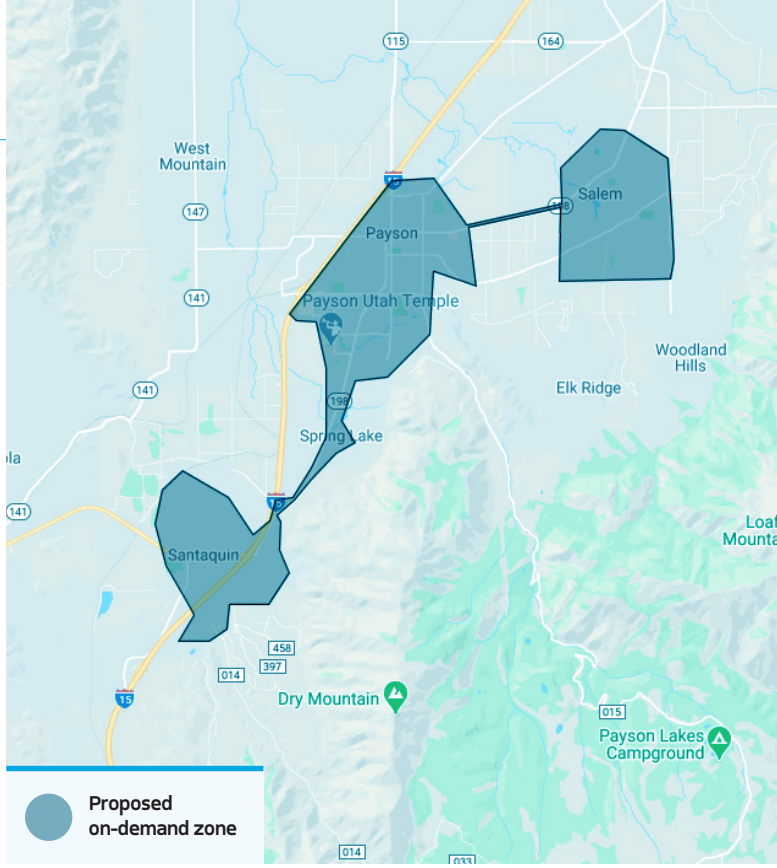
Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	4	6	8	Vehicles
Annual vehicle hours	15,000	22,000	30,000	Vehicle hours per year
Vehicle utilization	2.7 - 3.2	3.2 - 3.7	3.8 - 4.3	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

ZONE OVERVIEW

South Utah County On-Demand Transit.



Key zone statistics:

Zone Size	Population	Pop. Density	Employment
12.0 sq.mi	32K people	2.7k people per sq. mi	6k jobs

Zone design rationale:

The zone was selected for investigation for the following reasons:

- Expands transit coverage to areas with limited or no existing bus services, such as parts of Santaqui, Spring Lake, Payson, and Salem.

Major trip generators:

- Mountain View Hospital
- Walmart
- Payson Utah Temple

Expected use cases:

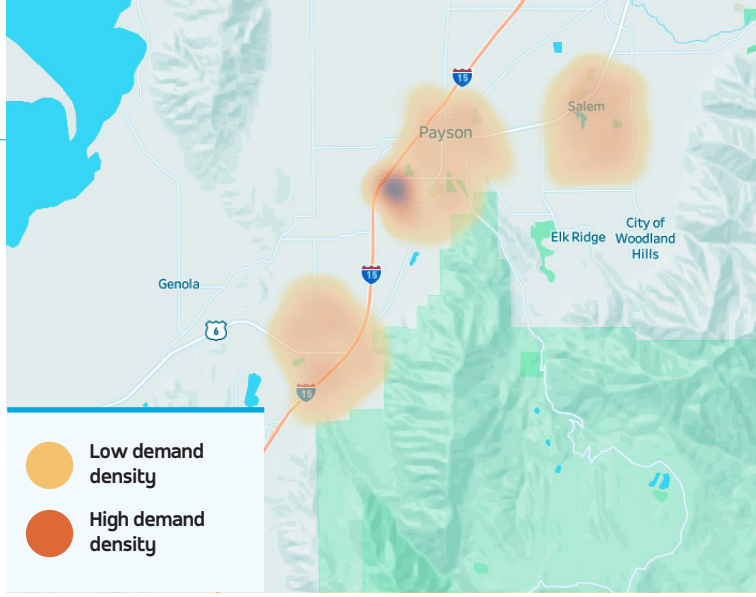
Likely Coverage service

Recommended parameters:

Service type	Corner-to-corner
Maximum walking distance	Standard (up to 1/4 mile)
Maximum wait time	**Low wait time targets:** • Average 15 - 25 minute wait • Maximum 30 - 40 minute wait
Maximum detour	Standard detours allowed
Service hours	**Standard Service Hours:** • Weekday 6 AM - 9 PM • Saturday - No Service • Sunday - No Service

SIMULATION RESULTS

South Utah County.



Eligible trips:
All trips are allowed within the zone.

Estimated demand scenarios:
Travel patterns are based on the locations of households, employment, and major trip generators such as rail stations. A heatmap of expected origins and destinations is shown (top right). Areas shown in darker orange are expected to have a higher density of demand, while light orange areas are expected to have a lower density of demand.

To estimate the level of demand, Via developed an overall mode share score that corresponds with a 'capture rate' based on Via's internal demand model. The factors that influence the mode share score are shown in the table (right). A mode share is the percentage of travelers using a particular type of transportation – meaning, on-demand transit zones with a higher mode share score will capture a larger percentage of trips. In practice, there are a wide variety of factors that can influence demand, such as the marketing budget and fare structure.

Demand drivers:

Transit ridership per capita	Low
Parking availability at stations	N/A
Walkability and grid pattern	Low
Diversity of use cases	Low
Relative poverty rate	Moderate
Zero-vehicle households	Moderate
Overall mode share score	**8 / 25**

Demand Scenario[2]	Low	Medium	High	Units
Daily ridership	50	90	140	Passengers per day
Weekly ridership	240	440	700	Passengers per week
Annual ridership	13,000	23,000	37,000	Passengers per year

Estimating fleet requirements and quality of service:

Using the demand estimates, Via simulates the quality of service at peak hours, when demand is highest, in order to recommend the optimal fleet size. During off-peak hours, the full fleet would not be required.

Demand Scenario	Low	Medium	High	Units
Fleet size	3	4	5	Vehicles
Annual vehicle hours	9,000	12,000	16,000	Vehicle hours per year
Vehicle utilization	1.3 - 1.8	1.7 - 2.2	2.2 - 2.7	Passengers per vehicle hour

[1] Ridership often takes between 3 to 12 months to develop as individuals change their travel habits. Therefore during the initial few months to one year, ridership may be lower than the estimates shown below.
[2] Daily, weekly, and annual ridership estimates are based on the operating hours and days described in 'Recommended Parameters'

8. Prioritization of zones.

8. Prioritization of zones.

Like all transit agencies, UTA has a limited budget and competing funding priorities, and not all zones are likely to proceed beyond the planning phase. In order to prioritize the implementation of the potential microtransit zones, each zone was compared against UTA's goals and objectives.

On the basis of our engagement with UTA leadership and staff, the project team identified five broad UTA goals and objectives: expanding transit coverage, providing cost efficient service, replacing underperforming bus routes, supplementing ADA paratransit, and increasing equity.

As the relative importance of each goal is subjective, the project team has chosen to present the information in a table rather than provide an overall score (each metric is weighed equally). The current microtransit pilot zone in southern Salt Lake County is included for comparison purposes. It is recommended that UTA leadership refer to this table when evaluating potential microtransit service expansion.

8.1 Prioritization methodology.

Each zone was classified into one of three groups (low / medium / high) for each of the five criteria outlined below:

1. **Expands transit coverage:** The number of additional residents and workers that would gain transit coverage if the microtransit zone was launched. A resident/worker was determined to be outside UTA fixed route coverage if they are more than half a mile from an existing transit stop.

    1.1. Low: <10,000 residents and workers
    1.2 Medium: 10,000 - 20,000 residents and workers
    1.3 High: >20,000 residents and workers

2. **Provides cost-efficient transit service:** The cost efficiency of a service is largely driven by the utilization (passengers per vehicle hour). The expected utilization was determined using the average of the low, medium, and high scenarios and was an output of Via's microtransit simulations.

    2.1 Low: <2.5 passengers per vehicle hour
    2.2 Medium: 2.5 - 3.0 passengers per vehicle hour
    2.3 High: >3.0 passengers per vehicle hour

3. **Replaces underperforming bus routes:** The number of low-ridership bus routes that can be removed and replaced with the microtransit service at a similar or lower cost-per-passenger

    3.1. Low: No bus routes could be replaced
    3.2. Medium: 1 bus route could be replaced
    3.3. High: 2+ bus routes could be replaced

4. **Supplements ADA paratransit service:** The percentage of paratransit origins and destinations that fall within the microtransit service zone. While not all of these trips will be completed using microtransit (the majority are interzone trips), paratransit users can use microtransit to connect to a fixed-route transit service (or a paratransit vehicle) for the rest of the trip.

    4.1. Low: Less than 1.0% of UTA paratransit origins and destinations
    4.2. Medium: 1.0% - 3.0% of UTA paratransit origins and destinations
    4.3. High: More than 3.0% of UTA paratransit origins and destinations

5. **Increases equity:** The percentage of residents who are historically underserved minorities. The minority population was defined as all individuals who do not identify as non-Hispanic Whites.

    5.1. Low: <5% minority residents
    5.2. Medium: 5-10% minority residents
    5.3 High: >10% minority residents

8.2 Microtransit zone prioritization matrix.

Zone	Resources required	Expands transit coverage	Provides cost efficient transit	Replaces bus routes	Supplements paratransit service	Increases equity
	Thousands of annual vehicle service hours required to operate zone ('000s)	Number of residents and jobs that would gain transit access	Passengers per vehicle hour	Number of bus routes that can be partially or fully replaced	Percentage of paratransit origins/ destinations within the zone	Percentage minority population living in the zone
Brigham City	12	5,000	2.6	1	0.1%	9%
North Ogden (Small)	32	20,000	3.5	1	4.2%	15%
North Ogden (Large)	26	7,000	3.2	1	4.1%	18%
West Weber County	35	45,000	2.6	0	2.1%[1]	12%
West Davis County	15	22,000	2.5	0	1.5%[1]	10%
South Davis County	35	10,000	4.9	5	2.9%	7%
West Salt Lake City Industrial/Inland Port.	12	12,000	2.4	1	0.1%	42%
East Millcreek	7	1,000	2.5	0	0.9%	3%
South Valley	52	21,000	3.2	5	9.7%	21%
South Jordan	24	10,000	4.0	0	4.4%	12%
Sandy	52	20,000	4.1	0	9.9%	9%
South Salt Lake County (current pilot zone)	52	47,000	3.0	5	3.6%	7%
Tooele County	18	21,000	2.6	2	0.2%	11%
Lehi	18	14,000	2.9	1	0.2%	7%
Eagle Mountain/ Saratoga Springs	23	43,000	2.0	0	0.0%	8%
North Utah County	50	71,000	3.9	0	1.6%	6%
Lindon / Vineyard	20	11,000	3.2	0	0.7%	10%
West Provo	14	5,000	3.6	1	0.8%	26%
Springville/Spanish Fork	22	57,000	3.5	0	1.6%[1]	10%
South Utah County	12	13,000	2.0	0	0.4%[1]	11%

[1] Less than 50% of this zone is within 3/4 mile of paratransit so currently the majority of residents are not eligible for paratransit service

High Medium Low

8.3 Future microtransit expansions.

As well as the zones identified in the previous section of the report, there are several promising opportunities for future microtransit expansion.

1. **Off-peak microtransit services:** UTA ridership drops significantly during off-peak hours, such as evenings and weekends. During these periods, many low-ridership routes could be operated at lower cost using microtransit. In addition, passengers tend to have a lower walking distance and wait time tolerance at night. Microtransit could reduce walking distances and ensure passengers only need to go outside as their vehicle approaches. These services would be particularly valuable to essential workers who often rely on infrequent public transit during off-peak hours.

   An example service zone could encompass the routes shown below by **Figure 7 - Routes with low off-peak ridership**. The eight bus routes displayed on the map were selected because they have only 600 trips per week from 8pm onwards. UTA could stop operating these bus routes at 8 PM and instead offer a broader late night microtransit service covering most of Salt Lake City. To ensure the remaining bus routes are not cannibalized, passengers who request a trip that could be completed using a fixed route would be told to use this option when they try to book using the microtransit app.

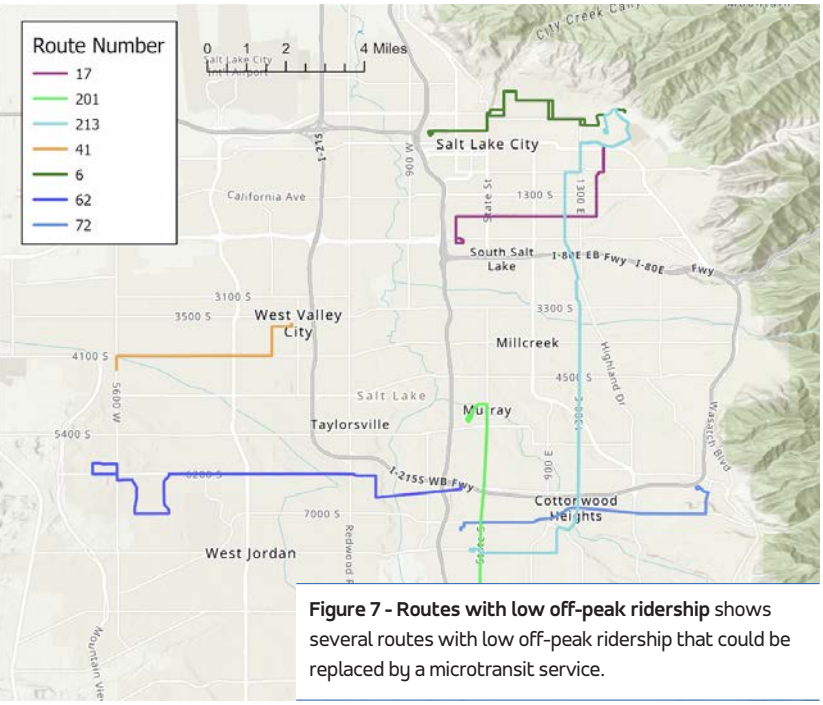


Figure 7 - Routes with low off-peak ridership shows several routes with low off-peak ridership that could be replaced by a microtransit service.

2. **Combined microtransit zones:** Several microtransit zones are located in adjacent areas (for example, Sandy, South Salt Lake County, South Jordan, and South Valley). If these zones were combined, passengers would be able to access additional destinations. However, this would increase the average distance of each trip, and therefore, reduce the capacity of the service. In order to address this, UTA could consider the following options:

   a. Charge distance-based fares for longer trips.
   b. Require passengers to transfer when travelling from one zone to another.
   c. Allow passengers to travel between zones, but guide them to a fixed route service where feasible.

3. **Integrated mobility solution:** UTA could expand microtransit to cover the entire UTA service area over time. While it would be inefficient to serve all trips using microtransit, the microtransit rider app could direct passengers to the optimal mode for their specific trip. For example, a passenger may be directed to a microtransit vehicle for the first leg of their trip, followed by a bus to their final destination. In theory, microtransit vehicles would be able to travel anywhere in the UTA service area, but areas that are well served by buses and trains would rarely or never require a microtransit vehicle. This model would be most successful if real-time vehicle locations for both fixed route and on-demand services were available so transfers are coordinated and seamless even during irregular operations.

9. Accessibility.

Under the Americans with Disabilities Act (ADA), all public transportation services must be accessible, including microtransit. As accessible service must provide equivalent access to individuals with disabilities, as defined by the following service characteristics:

1. Response time;
2. Fares;
3. Geographic area of service;
4. Hours and days of service;
5. Restrictions or priorities based on trip purpose;
6. Availability of information and reservations capability; and
7. Any constraints on capacity or service availability.

The project team developed accessibility recommendations based on input from;

1. **UTA Committee for Accessible Transportation (CAT) workshop:** On July 7, 2020, the project team held a virtual workshop with several individuals from the CAT. The workshop attendees represented individuals with several categories of disability. Each attendee was provided with an opportunity to test UTA's current microtransit app and provide more general input on microtransit services.
2. **Via:** As the consultant leading this study and a microtransit and paratransit operator, Via teams provided direct input for this project.
3. **Meeting The Challenge (MTC):** Geoff Ames is an Accessibility Implementation Executive Consultant at Meeting the Challenge. Geoff provided input based on his experience working on accessibility projects across the US.

In order to provide equivalent service and to reflect the unique considerations of an on-demand, technology enabled microtransit service, the following recommendations have been developed. As UTA is likely to procure the required microtransit technology from a third-party developer, it is recommended that these features are discussed with potential software providers to ensure they can be provided.

9.1 Mobile app design.

The selected smartphone application and booking website should comply with the Web Content Accessibility Guidelines (WCAG) 2.1. These guidelines cover a wide range of recommendations for making Web content more accessible. During the CAT workshop, several individuals provided commentary on the app design. In particular, recommendations from this workshop were:

- Ensure the mobile app is available on both iOS and Android so it is compatible with most devices.
- Provide a mobile application guide or video tutorial so those who are not familiar with smartphone applications can teach themselves how to make a booking.
- Ensure the booking flow is intuitive and streamlined. While feedback was generally positive, some users struggled to easily cancel their trip during testing as they could not locate the option on their screen.

9.2 Alternative booking methods.

Different booking methods are suitable for different passengers so providing several alternatives is important.

Booking method	Suitable for:	Unsuitable for:
Smartphone application and website	✓ Hearing impairments ✓ Speech impairments ✓ Language barriers	✗ Non-smartphone and computer owners ✗ Visually impaired ✗ Dexterity issues ✗ Some cognitive disabilities
SMS reservations	✓ Hearing impairments ✓ Speech impairments ✓ Non-smartphone and computer owners	✗ Visually impaired ✗ Dexterity issues ✗ Some cognitive disabilities
Call center	✓ Non-smartphone and computer owners ✓ Visually impaired ✓ Dexterity issues ✓ Some cognitive disabilities	✗ Hearing impairments ✗ Speech impairments ✗ Language barriers

9.3 Curb-to-curb vs door-to-door

While corner-to-corner trips should be the default to maximize efficiency, passengers who have certain disabilities or who are unable to walk to a virtual bus stop should be provided with a curb-to-curb or door-to-door service.

- **Curb-to-curb:** These services pick up and deliver passengers at the curb or roadside directly outside their destination. Passenger assistance is generally not rendered other than for actual boarding and alighting.

- **Door-to-door:** These services extend beyond curb-to-curb service by also including assistance to the door of the building where the passenger is travelling to/from. In the current pilot in southern Salt Lake County, UTA has implemented procedures to provide door-to-door assistance for a small number of passengers who may require it.

The majority of passengers with a disability are comfortable using a curb-to-curb service. However, for some passengers, a curb-to-curb service is not enough, as they may be unable to safely travel from the curb to the door.

Microtransit services have a unique opportunity to provide a hybrid between a door-to-door and curb-to-curb service for passengers. For example, the driver app can inform the driver if a passenger requires assistance to their door. As the recommended vehicles are small and maneuverable, the driver can typically travel beyond the curb and park the vehicle directly outside the door of the building. As the number of passengers in a vehicle is typically low, drivers and passengers can communicate specific drop off requirements and use their judgement when stepping outside the vehicle to assist a passenger.

In order to implement both door-to-door and curb-to-curb trips, the following steps are required:

- The driver app allows pickup and dropoff notes so the driver is notified if assistance to the door is required.

- Drivers are provided with training for these situations.

- A process is established to allow passengers with disabilities to request a door-to-door service where they are unable to travel to/from the curb.

9.4 Pickup navigation.

The pickup process presents unique challenges for passengers with disabilities, particularly for those with visual or cognitive disabilities. Two specific recommendations can help to reduce friction during the pickup process:

1. **Driver pickup notes:** Passengers with disabilities should have the option to add information to their profile that will be shared with their driver upon arrival at the pickup location. For example, passengers with visual impairments may request that their driver sound the horn on arrival. It is important that this system is 'opt-in' to protect the privacy of passengers. It is also important that these messages are not seen as an opportunity for passengers to request special accommodations that extend beyond the mandate of the service, such as asking a driver to enter a building and tell the passenger they have arrived. For this reason, it is recommended that these notes are added by a dispatcher through the call center, rather than by passengers themselves. This idea was raised independently during the Committee for Accessible Transit (CAT) workshop, where individuals explained that they would most likely voluntarily submit this information to streamline the pickup process.

2. **Multiple pickup points for major destinations:** For large facilities with multiple entrances, such as hospitals and universities, the microtransit software should allow passengers to specify which pickup location within the facility they will wait at (for example, a particular door or sign). This feature can help to reduce confusion for all passengers during pickup and dropoff. When launching a zone, effort should be made to identify these locations in advance, and locations that are expected to have a high number of trips by individuals with disabilities should be prioritized.

An additional feature could be to allow a driver to see the location of a passenger using their GPS-enabled device. Depending on the selected software provider, this feature may be technically challenging and involve additional development cost. Many passengers are apprehensive about sharing their location so may choose not to opt into this service.

9.5 Accessible vehicles.

Regulations for individuals with disabilities require that demand-responsive services provide an equivalent level of service to individuals with disabilities[2]. If this condition is met, there is no requirement to ensure that all vehicles are accessible. Based on the expected level of demand for accessible vehicles, **approximately 25**% of the fleet in each zone should be accessible vehicles to provide equivalent wait times for all passengers. For fleets smaller than four vehicles, the percentage may need to be even higher (for example, a four vehicle fleet may require 2 accessible vehicles). While it is possible to provide an entirely accessible fleet, there is limited upside to doing so. If the fleet is fully accessible, operating and capital costs will be higher. Accessible vehicles often have reduced seating capacity, reducing the capacity of the service.

9.6 Customer support.

Some passengers, such as those with hearing impairments, may prefer to contact customer support in writing. Therefore, it is recommended that UTA allows passengers to communicate with a real person using either email, SMS, or the smartphone app.

9.7 Integration with paratransit.

Paratransit trips are typically more expensive to serve than microtransit trips, while also being less convenient for the customer due to the advanced booking requirements and lack of a smartphone app. Therefore, it is in everyone's interest that trips are completed using the microtransit service where possible. However, 80 - 90% of all paratransit trips extend beyond the proposed microtransit zones. There are several approaches to completing trips that extend beyond a microtransit zone:

- **Status quo:** Continue to complete trips that meet UTA's ADA paratransit criteria separately from the microtransit service. Paratransit passengers will only use the microtransit service if their trip begins and ends in the same microtransit zone.
- **Encourage connections to fixed-route transit:** All UTA fixed-route transit services are accessible, but in many cases passengers struggle to travel the first-and-last mile to a fixed route stop. In this option, passengers are encouraged to use the microtransit service to reach an accessible transit stop within their service zone. From there, the passenger can connect to fixed-route transit to complete their journey. However, some passengers may face a barrier at the other end of their trip, as there may be a gap between the fixed route service and their final destination. In this case, UTA will need to provide a paratransit or microtransit trip to complete the journey. Paratransit-eligible passengers are provided with a UTA transit pass, so free connections to fixed-route transit are possible when using this pass.
- **Encourage connections to paratransit:** In this option, passengers use the microtransit service to complete part of their trip (to the edge of the microtransit zone) and then connect to a paratransit service. In this option, the paratransit and microtransit trips must be coordinated so the passenger is not left unattended or in an exposed location.

The following approach is recommended for UTA, depending on the origin and destination of each trip:

- **Trips entirely within a microtransit zone:** Passengers should be encouraged to use the microtransit service as there are no advanced booking requirements and the service is fully-accessible. It is important to note that passengers have the right to request a paratransit trip if their origin and destination are within ¾ of a mile of fixed route stop and should not be forced to use a microtransit service if they do not wish to.
- **Trips within an origin/destination outside the microtransit zone but accessible from an accessible fixed route stop:** Passengers should be encouraged to use the microtransit service to connect to/from a fixed route service to reach their destination. This alternative allows passengers to travel 'on-demand' while still providing an accessible route.

[2] §37.77 (b) If the system, when viewed in its entirety, provides a level of service to individuals with disabilities, including individuals who use wheelchairs, equivalent to the level of service it provides to individuals without disabilities, it may purchase new vehicles that are not readily accessible to and usable by individuals with disabilities.

- **Trips with an origin/destination outside the zone that is not accessible using fixed-route transit:** Passengers should be encouraged to use the microtransit service to travel to a designated paratransit connection location, where they can connect with a paratransit vehicle. These trips are not 'on-demand' and would need to be booked as a multi-leg paratransit trip. To make this process seamless for passengers, UTA needs to ensure the transfer between vehicles is managed well. This will require a technology solution to allow paratransit dispatchers to oversee and book trips on the microtransit platform.
  In some cases, if the passenger is close to the edge of the microtransit zone, they may be able to directly meet the paratransit vehicle at a designated meeting point, eliminating the complexity of timing the connection between the microtransit and paratransit legs.

In order to encourage passengers to use microtransit where possible, UTA will need to educate both paratransit passengers and UTA booking agents. There are two recommended processes to educate passengers:

1. **Zone launch:** When each microtransit zone is launched, proactively reach out to paratransit riders who frequently travel to/from this area to let them know how to use the new service.
2. **Booking a trip:** When a passenger requests a trip within an origin/destination within a microtransit zone, UTA paratransit booking agents should inform the passenger about the microtransit service (while still making it clear they are eligible for paratransit, if this is the case). This will require booking agents to be aware of the location of microtransit zones. If a passenger can use microtransit to connect to a fixed route service, the specific routes and transfer point should be explained. A list of locations that are fully accessible using fixed route services should be developed.

As noted, passengers always have the right to request a paratransit trip when travelling within ¾ of a mile of a fixed route stop. However, by providing a more flexible option for passengers, many will choose microtransit over paratransit. Additionally, paratransit eligible passengers can use microtransit at no cost with their UTA transit pass so can save money by using this option.

While the recommendations outlined above specifically focus on the integration between microtransit and paratransit, a separate report on the potential impact of new technologies on UTA's paratransit service has also been developed and is expected to be published in September 2020.

10. Operation plans.

10.1 Service operator.

UTA has two alternative service models to consider:

1. **Third-party operated:** This model, also known as a turnkey contract or Transportation-as-a-Service model, is where UTA contracts a microtransit vendor to provide the entire service, including the microtransit technology, drivers, vehicles, and operations management. The advantages of a TaaS solution include potentially lower hourly per-vehicle costs than a UTA-operated service, as well as scalability—a service could be launched and scaled relatively quickly. This model is currently being used for the southern Salt Lake County microtransit pilot service.
2. **UTA-operated:** This model, also known as a Software as a Service (SaaS) model, is where UTA procures the microtransit technology from a third-party vendor, while using its existing fleet, drivers, and operations team (or new vehicles and resources procured by the UTA). Depending on the technology solution UTA selects, ongoing service design and optimization, operational support, and customer service may be provided by the software provider. The advantages of this approach include the ability to leverage UTA's existing drivers and fleet.

It is recommended that UTA evaluate the costs and benefits of each option to determine which is more suitable for each zone. Some zones, like Tooele, may be better suited for a UTA-operated service model as an on-demand service, including vehicles and drivers, is currently operational.

10.2 Vanpool.

The UTA vanpool program leases vans to people who travel to and from similar locations. These vanpools help riders to make their commute more productive and reduce emissions and congestion. Vehicles typically seat seven to 15 passengers and the cost is split evenly. Many vanpool services are promoted by large employers who have a sufficient employee base to aggregate trips from different areas.

Microtransit technologies may be able to improve the UTA's vanpool experience in several ways:

Simpler trips: A rider app, similar to that used for microtransit services, would allow vanpool passengers to book their trip in advance and track their vehicle in real-time.

Improved trip sharing: If trips are pre-booked, the number of seats that are available is known in advance. This means the vanpool could be opened to more riders while ensuring nobody is turned away from a vehicle.

Integration with microtransit zones: Some vanpool trips occur in potential future microtransit zones. UTA could integrate these vanpool services into the microtransit zone to assign non-vanpool riders to a vanpool vehicle if they are travelling to the same location. Alternatively, if a vanpool vehicle is overbooked, these trips could seamlessly be assigned to a microtransit vehicle.

11. Next Steps.

UTA intends to use this microtransit study to inform future transit choices. UTA has identified several next steps following this study:

1. **UTA's Five-Year Service Plan:** UTA is required by law to develop a Five-Year Service Plan every two years. This report will support the development of that plan. Microtransit will be evaluated alongside other transit choices for inclusion in UTA's long-term transit plans, and the microtransit zones identified as candidates in this report should be considered as potential candidates for service expansion
2. **Microtransit Accessibility:** The report makes several accessibility-related recommendations that will ensure all current and future microtransit services are accessible for all users
3. **COVID-19 Service Changes:** As UTA continues to respond to ridership changes due to the impact of COVID-19, this report can help to evaluate the costs and benefits of using microtransit to replace low-ridership routes.
4. **Service Choices Study:** UTA is currently conducting a service choices study, which is a public outreach and planning effort using input collected from the community. This report can inform this study.
5. **Stakeholder and Community Engagement:** Many UTA stakeholders, including mayors and community boards, regularly advocate for additional service in their areas. This report can help to inform these discussions.
6. **Paratransit Plan:** UTA can use this report to inform potential changes to paratransit service. In particular, paratransit demand is likely to be lower in zones where microtransit is available. Integration between the paratransit and microtransit services should be provided.
7. **Specialized Transportation Plan:** UTA is currently developing a specialized transportation plan, and microtransit is one tool to improve mobility for individuals who use these services.
8. **Funding Applications:** This report will be used by UTA to access or apply for new funding streams for microtransit services.

For any questions related to this study, please contact Jaron Robertson, Director of Innovative Mobility Solutions at UTA (JRobertson@rideuta.com).

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