



# On-Demand Transit Study

**The City of Glenwood Springs**  
Final Report - October 2019

Via Mobility, LLC.



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# 1

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# Executive Summary

# 1. Executive Summary

The City of Glenwood Springs has carried out this on-demand transit feasibility study (the Study) to understand how shared, on-demand transit (microtransit) can successfully complement or replace the Ride Glenwood Springs fixed-route bus in Glenwood Springs, Colorado. Ride Glenwood Springs (RGS) is an intra-City, year-round public transit service, funded by the City of Glenwood Springs and operated by the Roaring Fork Transit Authority (RFTA). RGS currently consists of one fixed route with a 30 minute-headway, operated using two vehicles from 6:06 am to 7:53 pm daily. The fare is \$1 per day for an unlimited number of trips.

While RGS is a relatively high performing bus route, carrying an average of 470 passengers per day or 17 passengers per hour, it faces a number of challenges. It does not serve some areas of Glenwood Springs, including South Glenwood Springs, the Red Mountain neighborhood, and the area surrounding Donegan Road in the north of the City. Ridership has slowly been declining while the cost of the service has increased over time.<sup>1</sup> The City's most recent Transit Operations Plan update, completed in 2018, identified significant redundancies between RGS and the Roaring Fork Transportation Authority's (RFTA) Valley Local and BRT services. The Transit Operations Plan recommended on-demand transit as a tool to address many of these issues.<sup>2</sup> On-demand transit (microtransit) is a form of Demand Responsive Transit (DRT) that offers flexible routing and/or flexible scheduling of vehicles, typically booked through a smartphone application (with additional booking options for those without smartphones). Possible pick-up/drop-off stops are restricted (usually within a geofenced area) and passengers are typically asked to walk to meet their vehicle.

The Study investigated three alternative approaches to on-demand transit. The first option (**Scenario 1 - Replace RGS**) examined a full replacement of Ride Glenwood Springs with an on-demand service. The second alternative (**Scenario 2 - Adjust RGS, Add On-Demand**) proposed reducing RGS to a single vehicle by retaining the highest performing sections of the route, and potentially adjusting headways, stopping locations, and service hours. These changes would allow the service to operate using a single vehicle, releasing ~\$0.5M in funding which could be used to fund an on-demand service across the City. The final alternative (**Scenario 3 - Keep RGS, Add On-Demand**) would retain RGS without modification, in addition to an on-demand service. In this scenario, the on-demand service could be positioned as a premium, higher-priced alternative to RGS.

A trade-off matrix is shown below. Each scenario was evaluated based on three main criteria:

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<sup>1</sup> Annual ridership has declined from 211,000 trips in 2014 to 170,000 trips in 2018. Source: Transit Operations Plan and RFTA Ridership Data

<sup>2</sup> For the purposes of this report, no adjustments to RFTA Valley Local or VelociRFTA BRT services have been proposed, but there remains a significant opportunity to better integrate these services with RGS.

1. **Impact on existing RGS users:** Can existing riders continue to use RGS without adjusting their behavior or changing their booking method?
2. **Scale and impact:** How many riders will be able to use the new service? How large of an impact will the new service have on congestion, parking demand, air quality, etc.?
3. **Cost:** How much will the service cost in total (RGS + on-demand)? How will fare revenue offset these costs?

Scenario	Adjustment for Existing RGS users	Scale and Impact of Service	Cost impact <sup>3</sup>
<b>Scenario 1 - Replace RGS</b>	<b>Major adjustment</b> - all existing RGS users will need to book trips using the on-demand platform (smartphone app, call center, etc.)	<b>Large impact</b> - the on-demand fleet will have the capacity to grow ridership and will improve the experience of most passengers.	<b>Lowest cost</b> - the estimated operating cost is \$0.9 - \$1.4M for a third-party operated (TaaS) service. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.
<b>Scenario 2 - Adjust RGS, Add On-Demand</b>	<b>Moderate adjustment</b> - the majority of users can continue to use RGS if they prefer, although some passengers may be impacted by changes to the route and/or timetable.	<b>Large Impact</b> - the on-demand fleet will have moderate capacity for growth and will improve the experience of many passengers.	<b>Medium cost</b> - the estimated combined operating cost is \$1.3 - \$1.7M for a third-party operated (TaaS) service and RGS service operated by RFTA. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.
<b>Scenario 3 - Keep RGS, Add On-Demand</b>	<b>No adjustment</b> - all RGS users can continue to the service without adjusting their behavior.	<b>Medium Impact</b> - the on-demand service will only reach a small number of riders relative to Scenarios 1 and 2.	<b>Highest cost</b> - the estimated operating cost is \$1.6 - \$1.9M for a third-party operated (TaaS) service and RGS operated by RFTA. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.

Each scenario provides different opportunities and risks for the City of Glenwood Springs. **Scenario 1 - Replace RGS** provides an opportunity to transform transit in Glenwood Springs, grow ridership significantly, and could operate largely within the existing budget. However, it will require that all existing riders transition to the on-demand service, even if they prefer RGS in its current form. **Scenario 2 - Adjust RGS, Add On-Demand** takes a more conservative approach, adjusting but retaining RGS. It will likely require a modest increase in funding in order to fund RGS and the on-demand service. **Scenario 3 - Retain RGS, Add On-Demand** is the most conservative approach

<sup>3</sup> Cost impact assumes RFTA continues to operate RGS at the current rates. The on-demand cost assumptions vary by fleet size and are detailed in **Section 5.6 - Funding and Budget**.

as there will be no change to RGS. It will provide an opportunity to test on-demand transit without impacting existing riders, who can choose to migrate to the new service over time. It will require all existing funding to operate RGS, and additional funding for the on-demand service. The City may also choose not to proceed with on-demand transit at this time. However, a trend of declining ridership and increasing operating costs suggest that indefinitely maintaining RGS in its current form could result in future funding challenges.

If executed successfully, on-demand transit could provide an opportunity for the City of Glenwood Springs to reverse declining ridership, expand transit coverage, and provide a viable alternative to driving for more residents. This could help to reduce congestion, alleviate parking constraints, and improve air quality. If the service is widely adopted by visitors to Glenwood Springs, it could provide an economic boost and improve access to attractions in the area. However, any changes to RGS must consider the impact on existing passengers. While the majority of comments in the survey conducted as part of this study were supportive of on-demand transit, it will be important to ensure all existing passengers are considered as part of any proposed changes.

# 2

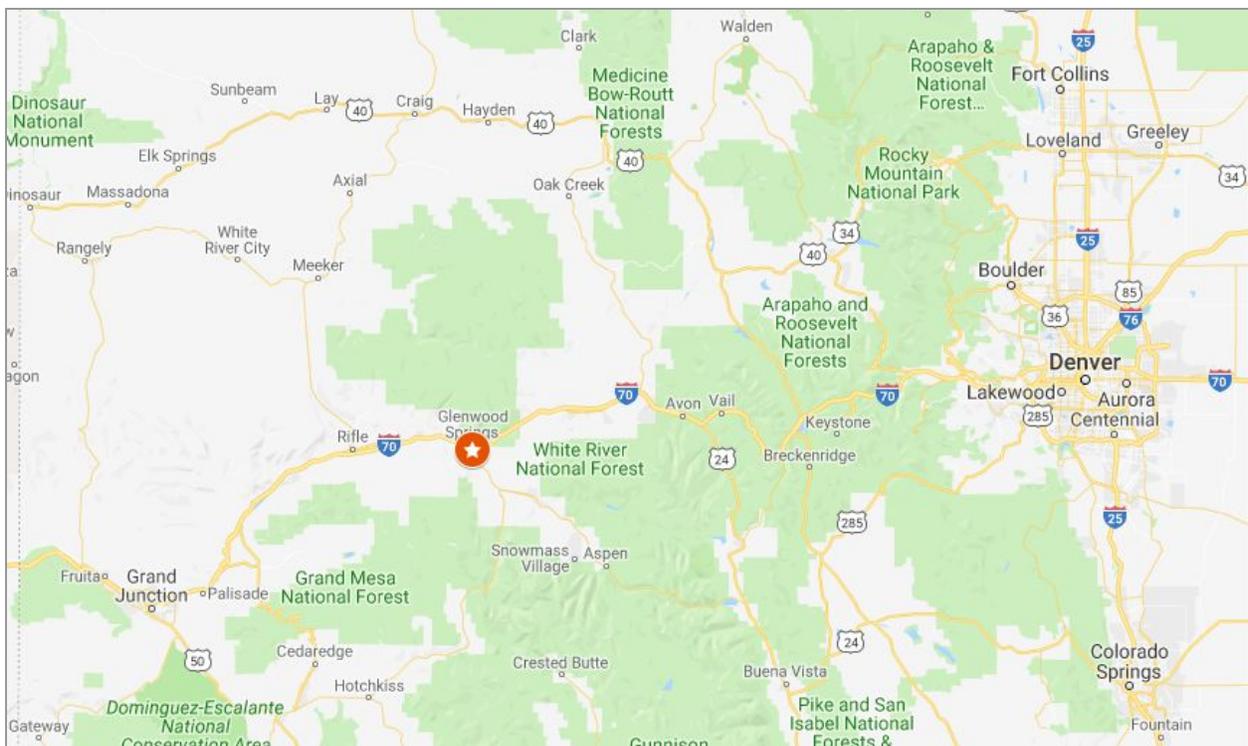
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## **Project Overview**

## 2. Project Overview

### 2.1 Background

Glenwood Springs is located in Colorado's Roaring Fork Valley, approximately 160 miles west of Denver and 90 miles east of Grand Junction. The City has a population of approximately 10,000.<sup>4</sup> In addition to Glenwood Springs, the valley is the location of major snowsport and active tourism destinations including Aspen and Snowmass. The entire valley is defined by the Roaring Fork River, which weaves through Glenwood Springs.



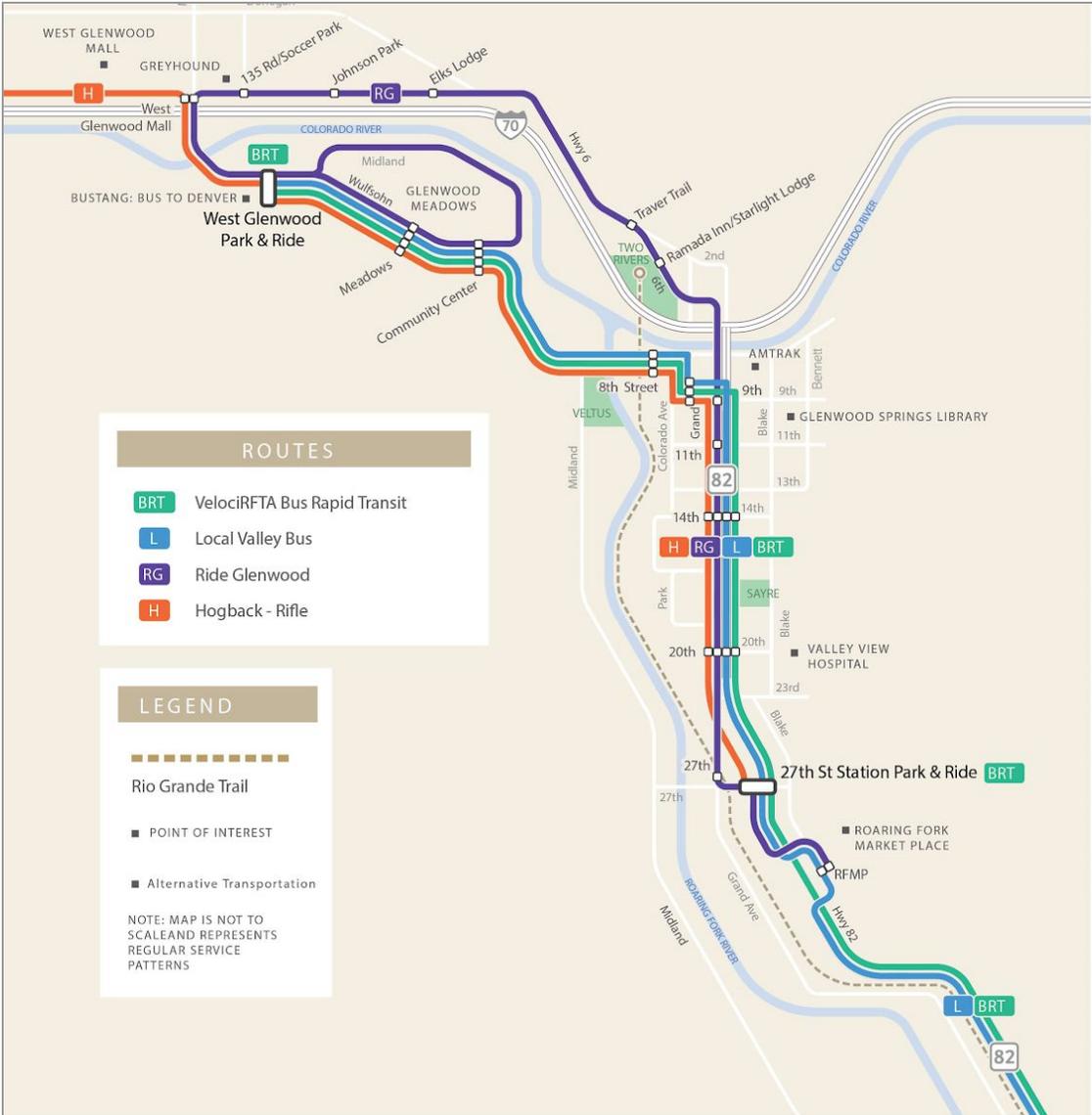
*Map showing the location of Glenwood Springs.*

Tourism, including retail, lodging, and food services is among the most significant industries and is one of the largest employers in Glenwood Springs, along with health care and local government.<sup>5</sup> Major demand centers include downtown Glenwood Springs, the West Glenwood Mall, the West Glenwood Park and Ride, Glenwood Springs Station (Amtrak), and the Roaring Fork Marketplace.

<sup>4</sup> U.S. Census Bureau

<sup>5</sup> Colorado Department of Local Affairs

At present, the City of Glenwood Springs supports one bus route. This local service is called Ride Glenwood Springs (RGS), and is operated by the regional Roaring Fork Transportation Authority (RFTA) on behalf of the City of Glenwood Springs. RFTA also operates the Roaring Fork Valley Local and VelociRFTA BRT services, which operate in part within Glenwood Springs, as well as several other services around the region. The West Glenwood Park and Ride is a transit hub, with connections between RGS, the Valley Local, the VelociRFTA, the Bustang inter-city bus service, and the RFTA Hogback Route, which connects to Rifle. The operating hours of each service varies by season, with longer service hours during the summer and winter months.



Map showing Ride Glenwood Springs and all other RFTA routes passing through Glenwood Springs.

- **Ride Glenwood Springs:** RGS is operated by RFTA on behalf of the City of Glenwood Springs. RGS is operated daily between West Glenwood and the Roaring Fork Marketplace. The route

includes a loop south of the Colorado River in the Glenwood Meadows area, with a stop at the Glenwood Park and Ride, stops at the West Glenwood Mall, and then proceeds east into downtown Glenwood Springs, where it runs south along Highway 82. The southern terminus of the route is the Roaring Fork Marketplace. One vehicle is operated in each direction.

- **Roaring Fork Valley Local:** The Valley Local stops frequently within Glenwood Springs, operates from approximately 4am to midnight (subject to seasonal variation), and runs with 30-minute headways. It originates at the West Glenwood Park and Ride and runs along most of the same route as the RGS service, continuing on up the valley to Aspen.
- **VelociRFTA:** The VelociRFTA, the nation's first rural Bus Rapid Transit route, follows the same route as the Valley Local but with only 12 stops and 10 to 15 minute headways. It runs from approximately 4:30am until 11:00pm, subject to seasonal variation. There are two VelociRFTA stops in Glenwood Springs: one at the West Glenwood Park and Ride and one at 27th Street.

In addition to these fixed-route buses, RFTA operates ADA Complementary Paratransit within  $\frac{3}{4}$  of a mile of RGS service, as well as the Traveler service, on behalf of Garfield County, within a five-mile radius of Highway 82 in Glenwood Springs for qualifying individuals.

## 2.2 Goals

The City is interested in exploring opportunities to increase mobility in Glenwood Springs through providing on-demand transit to areas that are currently unserved by RGS and the Valley Local, and in improving the quality of service in areas that are currently served by transit by reducing the average amount of time riders wait for a pickup, the average distance they walk to a pickup, and the average time they spend in a vehicle before reaching their destination.

## 2.3 Challenges and Opportunities

Transit operations in Glenwood Springs face a number of challenges including:

- The Roaring Fork River bisects the City and areas such as South Glenwood Springs and the Red Mountain neighborhood are located across the river from Highway 82. These neighborhoods lack the density to support fixed-route bus service, so residents need to walk long distances if they would like to use the bus.

- While both RGS and the Valley Local run every thirty minutes, headways and therefore wait times are unpredictable because the Valley Local and RGS are frequently delayed, particularly during the afternoon rush hour.

However, the geography of Glenwood Springs presents a number of opportunities for the successful operation of on-demand transit.

- The City is relatively compact and linear, which will support highly efficient on-demand operations. This is reflected in the good performance of the existing RGS service, which carries an average of 470 riders a day and 17 passengers per hour at peak times. This is both an opportunity and a challenge--an on-demand service must operate very efficiently to serve existing ridership while also accommodating new demand.
- On-demand transit can provide convenient transportation to and from resorts and shopping, dining, and other points of interest around Glenwood Springs. Tourists may be unwilling to try a bus, while on-demand transit may feel more familiar to them, particularly those who regularly use ride-hailing services.
- On-demand transit can provide convenient service to and from medical and social-services agencies that are not served by transit at present.

## 2.4 On-Demand Transit Overview

On-demand transit (microtransit) is a form of Demand Responsive Transit (DRT). These transit services offer flexible routing and/or flexible scheduling of vehicles, typically booked through a smartphone application. Microtransit providers build routes so as to match demand (trip) and supply (driven vehicle) and extend the efficiency and accessibility of the transit service. Possible pick-up/drop-off stops are restricted (usually within a geofenced area). Vehicle type can vary, but on-demand transit is often operated by a van or minibus. Conceptually, microtransit fits somewhere between private individual transportation (cars or taxicabs) and public mass transit (bus). Trips are typically subsidized by a city government or transit agency. It improves access to mobility by offering high-quality service where fixed-route buses can't operate efficiently, by upgrading dial-a-ride and paratransit services, or by providing critical first mile/last mile connections to high-frequency transit.

When customers request a ride using an app or by calling a dispatcher, a vehicle is dynamically routed to pick them up near their location and take them to their destination, while picking up and dropping off other passengers along the way and balancing rider convenience and overall service efficiency.

On-demand transit services that are run through partnerships with transit authorities and city governments address the equity, accessibility, and environmental needs of the public more comprehensively than private ride pooling services operated by transportation network companies (TNCs) such as Uber or Lyft. They are purpose-built for seamless sharing at scale and designed to serve everyone:

- More efficient sharing reduces congestion and CO2 emissions
- Accessible vehicles are available for people with mobility challenges
- Riders without smartphones can dial into a dispatch number or book online
- People without credit cards can pay with cash or vouchers

# 3

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# Study Methodology

## 3. Study Methodology

The purpose of this Study is to understand if on-demand transit is feasible in Glenwood Springs, and, if so, how different service design parameters will impact the performance of the on-demand transit network. In particular, the City is interested in learning how on-demand transit can either complement or replace the existing fixed-route RGS service. Via's approach to the Study included:

1. Working with the City to understand the goals of the Study;
2. Reviewing ridership data and interviewing City and RFTA staff to better understand existing transit and specialized transportation ridership data, as well as other drivers of potential demand for on-demand transit in Glenwood Springs;
3. Projecting demand;
4. Simulating scenarios to determine if on-demand transit is a cost-effective and feasible alternative or complement to fixed-route transit in Glenwood Springs; and
5. Conducting public and stakeholder outreach and engagement including street- and online-surveys and stakeholder focus groups.
6. Generating different service scenarios using simulation outputs and making recommendations as to the feasibility and potential operation of on-demand transit in Glenwood Springs.

### 3.1 Understanding Goals

On-demand transit can achieve a number of goals for transit agencies, including:

- Providing transit in previously underserved areas (transit deserts)
- Providing suburban mobility
- Retiring under-performing fixed route services
- Providing first- and last-mile connections to fixed route services
- Mitigating traffic congestion
- Reducing parking congestion
- Upgrading a paratransit offering

The City's goals were to improve the quality of service for existing RGS customers while extending service to areas of Glenwood Springs that are not served by the existing fixed-route. The City also seeks to grow ridership and manage increasing operational costs.

## 3.2 Reviewing Existing Conditions

Via worked with City staff to define a proposed on-demand transit service zone that included the entirety of Glenwood Springs. City and RFTA staff provided ridership data for RGS and Valley Local service as well as ADA Complementary Paratransit and the Traveler service.

## 3.3 Designing Scenarios

In working with the City and through public and stakeholder engagement, Via developed three distinct on-demand transit service scenarios, which are described in greater detail in **Section 5.1 - Proposed Scenarios**. These reflect the possibility that on-demand transit could either replace fixed-route RGS service altogether, could complement a modified RGS fixed-route using a single vehicle, or could operate in addition to the existing two-vehicle RGS service. Via determined that these three scenarios should be considered in order to provide the City with a robust alternatives analysis that can be used to inform decision-making about the future of RGS service.

The location and relative density of trip origin and destination points, which are critical inputs to Via's on-demand transit simulation tool, will vary between these scenarios—for example, where some fixed-route service is maintained along Highway 82, demand for on-demand transit service along that corridor would be reduced.

## 3.4 Projecting On-Demand Transit Demand

For Via's on-demand transit simulations, demand was modeled as the **volume and distribution of ride requests** over a given period of time. For this report, historic fixed-route and specialized transportation ridership was used to project demand (see Existing Conditions and Demand for more details). Real-world ridership will depend on a wide range of factors, some specific to the Glenwood Springs area, others dependent on operational elements like marketing budget or quality of service goals. These factors include:

- Travel patterns
- Alternative modes of travel (e.g. availability of buses, taxis, bicycles)
- Demographics (e.g. age, income, access to vehicles, mobility characteristics, mode choice)
- Pedestrian infrastructure
- Seasonality of demand (e.g. tourist season)
- Employment density
- Residential density
- Retail and entertainment density
- Fare structure
- Parking availability

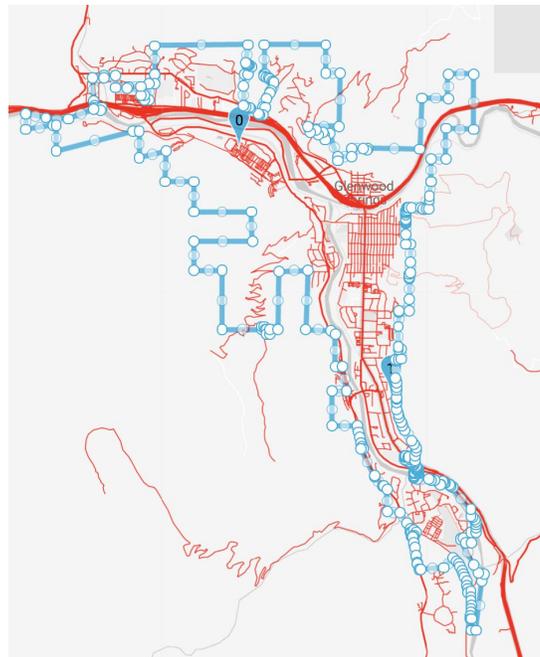
- Marketing budget and effectiveness
- Weather conditions
- Congestion levels

Via benchmarked against quality of service at peak hours, when demand is highest, in order to accurately guide fleet size requirements. During off-peak hours, the full fleet would not be required.

## 3.5 Simulation Overview

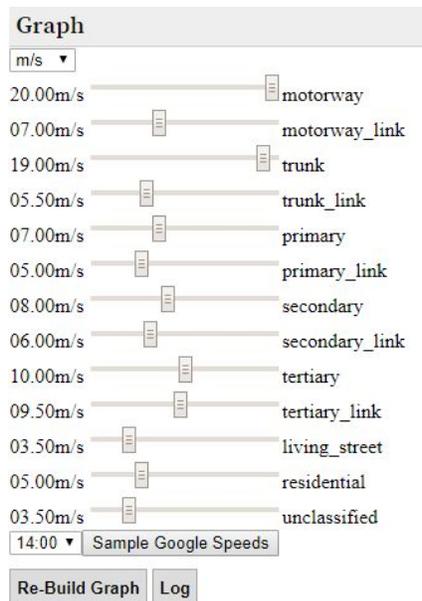
On-demand transit simulations were conducted to determine the quality of service based on different fleet sizes, demand scenarios, and service areas. This highly technical exercise leveraged Via's on-demand transit simulation tool, which predicts how different zones and fleet configurations will perform as real on-demand transit services. This process is described below:

1. **Uploaded on-demand transit service zone options.** The origins and destinations of all trips are limited to these zones. Different zones were tested in order to understand how zone boundary changes impacted overall service performance.
2. **Generated underlying road map** by pulling data within the service zone boundaries from OpenStreetMap, including all roads categorized by type, turn restrictions, and street walkability and drivability information.



*Screenshot of Via's simulation tool, showing a potential on-demand transit zone (outlined in blue) and two "terminals," which are discussed below. The red lines show roads, with different widths representing different road classifications, each with a different traffic speed.*

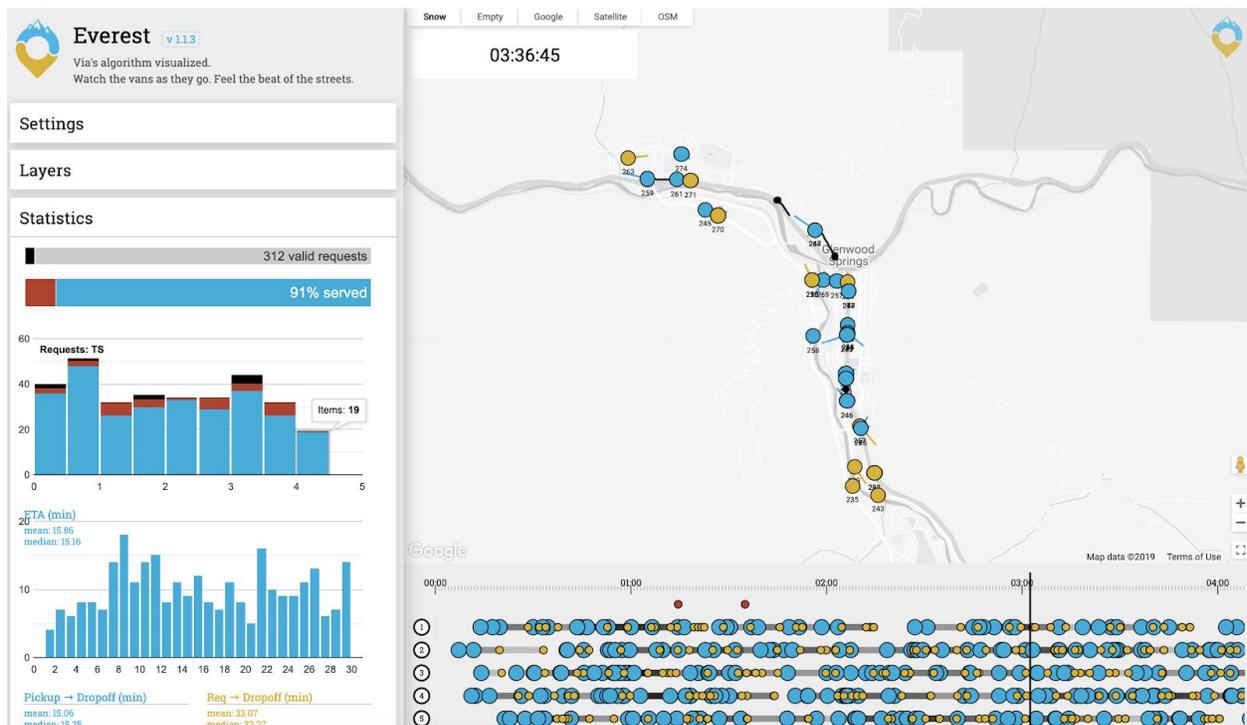
3. **Determined traffic speeds** by querying Google’s Maps APIs for traffic speeds specific to the time of day during which the service is being simulated. This ensured that wait times and trip times of the simulated service reflect real-world traffic data at the time of day for which service is being modeled.



Screenshot of Via’s simulation tool, showing the different road types in an on-demand transit zone. Each road type has a different average vehicle speed, taken from Google’s Maps API based on the selected time of day.

4. **Set “terminals”** to designate staging areas for vehicles that do not have active ride assignments. Terminals are safe parking areas that are distributed throughout the service zone. When empty, vehicles are routed to the terminal where the system has predicted demand. This ensures that each vehicle is used efficiently and that passengers benefit from the shortest possible wait times.
5. **Generated “Virtual Bus Stops”** to determine safe places for pickups and drop-offs. Virtual Bus Stops were generated throughout the zone, at points where vehicles can safely park. Virtual Bus Stop generation considered unique features of the zone, such as the pedestrian walking map, no parking/standing areas, and bus stops.
6. **Input demand scenario(s)** to simulate the number and types of trip requests we expect to see in the zone. See Section 3.4, Projecting On-Demand Transit Demand, for more details.
7. **Set simulation parameters** by determining the optimal configuration for achieving service quality and passenger aggregation targets. These inputs—like fleet size, vehicle capacity, optimal wait times, and walk distances to/from Virtual Bus Stops—are those we adjust most

frequently when creating and iterating upon a new service. After these variables were set, we performed a number of different simulations for each zone, testing how adjusting service parameters impacted the quality of service, capacity, and efficiency. A screenshot of the simulation tool is shown below.



*Screenshot of a simulation performed using Via's simulation tool. The map displays routing, pickups, and drop-offs, while the dashboard left of the map displays key performance indicators including the number of requests, wait time distributions, and pickup and drop-off walking distance.*

## 3.6 Scenarios and Recommendations

After completing a series of simulations, we determined the total on-demand transit fleet size necessary to accommodate the peak-hour demand associated with different average daily ridership scenarios, as well as minimum vehicle size, and approximate weekly vehicle hours, since the number of vehicles required to be on the road to provide a steady quality of service will vary with demand at different hours of the day and on different days of the week. On the basis of these scenarios, we were able to determine that on-demand transit is a feasible component of the transit system in Glenwood Springs, and that depending on the City's priorities an on-demand transit service could either complement an adjusted RGS fixed-route, or could replace RGS fixed-route service altogether. For more details, see **Section 5 - Analysis and Recommendations**.

# 4

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# Public Engagement

## 4. Public Engagement

The City and Via carried out a robust public and stakeholder engagement strategy to better understand how people use RGS and how they might use an on-demand transit service. A survey was designed and administered in person at various locations around Glenwood Springs, and was subsequently distributed via the City website as well as several email lists. Via also participated in two stakeholder focus groups—one comprised of transit and transportation stakeholders, another of general stakeholders.

### 4.1 Survey

A full summary of the results of the survey can be found in **Appendix A - Public Engagement Summary**.

The key findings were:

#### **Current Transit Use**

- Over half of respondents use public transit for travel within Glenwood Springs, although only one-third used it more than once per week. There was an even split of passengers choosing RGS and the RFTA Valley Local. 12% of respondents used the Traveler.
- While some riders used RGS and the RFTA Valley Local interchangeably, other passengers preferred to just use one of the two services. Riders who chose to limit their trips to just one of the services usually did so because their passes were not accepted on the other mode or they were travelling to an area only served by one of the two routes.
- Less than 20% of respondents used taxi services for trips within Glenwood Springs, and the majority of those who do use taxis rely on them for less than one trip per week.

#### **Potential On-Demand Transit Use**

- 64% of respondents would use a smartphone app to book their trip, but it is important to provide other options including a call center and SMS/text booking.
- Passengers are willing to wait an average of 15 minutes to be picked up after they request a trip (although this varied widely among respondents).
- Passengers would be willing to walk an average of 6 minutes to meet their vehicle, or roughly a quarter of a mile.<sup>6</sup>
- While the average passenger is willing to pay \$3 for a one-way trip, more than one in four passengers would prefer a fare of \$1 or less.

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<sup>6</sup> This is consistent with well-established transportation planning principles, which hold that most people will walk up to a quarter of a mile to a bus stop.

- Scenario 2, where the City would replace a portion of the RGS route with on-demand service while providing service to additional neighborhoods, was the most popular, with 65% support and 23% neutral. Only 12% were opposed to this scenario.
- Overall, there were 42 positive comments, 16 negative comments, and 20 neutral or other comments. To read all comments, see **Appendix A - Public Engagement Summary**.

## 4.2 Focus Groups

As part of the public engagement process for the Glenwood Springs On-Demand Public Transit Planning Project, Via conducted two focus groups on behalf of the City of Glenwood Springs to discuss the potential for on-demand transit with interested stakeholders.

**Time, Date, Location:**

July 22nd and 23rd, 2019

2:00 - 3:30pm

City Hall Engineering Conference Rooms

Focus Group Attendees	
Focus Group #1 Transportation Stakeholders	Focus Group #2 Community Stakeholders
<ul style="list-style-type: none"> <li>• Dan Blankenship – RFTA CEO</li> <li>• Kurt Ravenschlag – RFTA COO</li> <li>• David Johnson – RFTA Senior Planner</li> <li>• Jason White – RFTA Planner</li> <li>• Rich Burns – The Traveler</li> <li>• Jared Rains – RE-1 School District</li> <li>• Heather Hill – Valley Taxi</li> <li>• Ralph Trapani – Transportation Commission</li> <li>• Sandy Lowell – Transportation Commission</li> </ul>	<ul style="list-style-type: none"> <li>• Judy Martin – Garfield County Senior Services</li> <li>• Bruce Kime – Mountain Valley Developmental Services</li> <li>• Lisa Langer – Glenwood Springs Chamber Resort Association</li> <li>• Angie Anderson – Glenwood Springs Chamber Resort Association</li> <li>• Stacey Gavrell – Valley View Hospital</li> <li>• Sheryl Bower – Garfield County</li> <li>• Steve Beckley – Glenwood Adventure Park/Iron Mountain Hot Springs</li> <li>• Sandi Brown - Amtrak</li> </ul>

Stakeholder feedback from the two meetings is provided below, categorized by topic. For each topic, the notes include the key discussion points and any recommendations or conclusions that were reached. A summary of key feedback is provided at the conclusion of this memo.

## 1. Current Transit Options - Underserved Areas

- **Key Discussion Areas**

- Attendees at both focus groups recognized the need to expand service to underserved areas. RGS previously served an extended area including South Glenwood Springs and the Red Mountain neighborhood. While it was agreed that it would be desirable to bring coverage back to these areas, it was also recognized that demand may not be high enough to justify a fixed-route service.
- Development and population growth in Glenwood Meadows suggests additional fixed-route service might be needed/desirable in this area. However, RGS does not offer a compelling service from the Meadows as you must loop back past West Glenwood Mall before continuing on to other destinations. Donegan Road is another area where service would be valued. When service was offered here during the Grand Avenue Bridge replacement, anecdotal feedback was that riders found it useful.
- Mountain Valley Developmental Services (located in South Glenwood Springs) currently has no fixed-route bus options nearby. They transport approximately 10-15 passengers each day to the 27th Street Station. They would strongly support a transit service in their area.
- The option of providing a connection to South Canyon was discussed. However, given how far South Canyon is from Glenwood Springs and the predominantly recreational nature of trips to this area, it was agreed that this area is unlikely to be covered during the initial pilot.
- Hospital workers are likely to be supportive of this service as many of them live away from the current bus route (for example, along Midland Avenue). Also, if hours were extended, they could use this service as they work odd shifts.

- **Recommendations**

- Expand coverage to currently unserved areas to reduce single-occupancy vehicle traffic and provide more options for residents.
- If budget allows, expand service hours to provide options for evening events and shift workers.

## 2. Existing Bus Routes

- **Key Discussion Areas**

- Many bus riders use both RGS and the RFTA Valley Local services interchangeably, despite the fare difference (\$1 per trip vs \$1 per day). Some focus group attendees were surprised that riders use the Valley Local service for trips within Glenwood Springs even though it is more expensive.
- RGS has limited service hours, meaning it is not well suited for people going out for dinner or to an evening event. One attendee spoke about attending an event by bus in the evening and being stranded when they realized the bus doesn't run after 8 pm.
- In the long term, adding a BRT station downtown and realigning the Valley Local service along Hwy 6 will provide more options after RGS service ends at 8 pm. RFTA is exploring this possibility, however this change isn't expected in the immediate future.
- Valley Local services coming 'downvalley' are often running late (typical delays are 10-20 minutes). The current RGS seems relatively reliable and on-time by comparison.

- **Recommendations**

- If the budget allows, extend service hours.
- The City and RFTA should continue to discuss future realignment of the Valley Local route as a way of expanding transit service coverage over the longer term. However, the current routing should be used in the evaluation of potential on-demand service. Do not rely on the 'downvalley' Valley Local service to replace RGS, given its unreliability.

## 3. On-Demand Technology Requirements

- **Key Discussion Areas**

- We discussed vehicle waiting points. There was a concern that vehicles would roam the city when not in use. However, it was explained that vehicles should have preassigned waiting points when there are no active trips.
- We discussed 'Virtual Bus Stops'. There was a preference to have as many pickup and dropoff locations as possible but also ensure passengers are provided with a direct route between destinations. This will need to be a careful balance. There was a

concern these locations may be hard to find. While physical markers may make stops easier to find, the cost and complexity of managing so many stops could be challenging.

- It was agreed that accurate pickup and journey time predictions are critical if this service is to be an improvement from the existing Ride Glenwood service. This requires software providers to build in factors such as real-time traffic speeds into the model.

- **Recommendation**

- Ensure technology allows vehicles to have waiting points assigned when the service is not busy to minimize Vehicle Miles Travelled (VMT) and provide drivers with access to restrooms.
- Ensure technology provides clear descriptions of pickup and dropoff locations, including major landmarks and intersections nearby.
- Ensure technology providers have tools designed to accurately predict pickup and journey times.

#### 4. Fares

- **Key Discussion Areas**

- It is important that riders know the fare prior to booking.
- There was a concern that many riders are lower-income and fares of \$2-\$9 would be too high. It was explained that \$2-\$9 fares were just an example, and the City will determine the actual fares based on rider input and budget forecasts. It was agreed that, if RGS was replaced, it would be very important to ensure nobody is adversely affected by a fare increase.
- Integrating taxis and other transportation providers into the Rider App would be desirable, and will provide options for those who are willing to pay higher fares for a private journey.
- The ability to vary fares by factors such as destination, age, length of journey, etc. could all be useful features. However, many attendees also supported charging a simple, flat fee. One idea was to charge an evening surcharge to cover the cost of extended service hours.
- It was agreed that discounted fares should be used to incentivize certain travel behaviors, such as connecting to a bus.

- It is considered very important that existing fare passes are accepted by any new system. Fare equalization between RGS and RFTA services would be important if riders are expected to move from RGS to the Valley Local service.
- The ability to allow companies to pay for the rides of employees and customers was exciting to some attendees, particularly to those working in the tourism sector.

- **Recommendation**

- Ensure any change in fares does not result in current riders being financially excluded from the service.
- Investigate opportunities to capture higher fares from those who benefit most from the new service and have the ability to pay.
- Determine whether providers could integrate taxi providers and other providers into their Rider App.
- Ensure technology providers have the ability to vary fares by parameters such as destination and time of day.
- Encourage providers to provide technology to allow companies to pay for riders for employees and customers.

## 5. Accessibility

- **Key Discussion Areas**

- There was agreement that the service should be ADA compliant and provide rides to those with limited mobility.
- We discussed the fact that not every vehicle needs to be ADA compliant to provide equivalent service to all users. Federal requirements may vary based on the type of funding used to provide this service. While there is a lack of clarity about federal funding requirements right now, the City is clear that this would be a priority, whether or not it is required.
- In order to communicate special pickup requirements with drivers (for passengers with special needs), it was agreed that an ideal platform will allow this information to be communicated through the Rider and Driver Applications. A counter-argument to this is that right now, bus drivers don't have that information either.
- Amish Mennonite communities might not be able to use the service through a smartphone. To address this, kiosks could provide booking options for everyone. They could be at the visitor center, hotel lobbies, Amtrak station, etc.

- **Recommendations**

- Provide ADA compliant vehicles.
- Ensure technology providers can provide ADA compliant rides to those who need them.
- If possible, seek a technology provider that allows riders to input special pickup requirements.
- If possible, seek a technology provider that can offer kiosk booking options.

## 6. Quality of Service

- **Key Discussion Areas**

- As Glenwood Springs is quite hilly in some areas, walking distances should be lower in the areas with steep streets, particularly when people are asked to walk uphill.
- One of the reasons few tourists use the bus is the long walks, particularly from the Amtrak station.
- The Sunnyside Retirement Center would be a useful area to serve. However, the service should not ask these elderly residents to walk too far.
- For riders with limited mobility, we should aim to pick them up at their origin or destination where possible.
- Allowing people to pre-schedule rides and schedule recurring rides is an important functionality that would be valued.

- **Recommendations**

- Ensure there are virtual bus stops at the top and bottom of steep hills so that riders are not asked to walk up steep roads.
- Provide a 'virtual bus stop' close to the Amtrak Station.
- Ensure on-demand technology can provide a door-to-door service for those who need it.
- Ensure on-demand technology allows trips to be prescheduled.

## 7. Drivers

- **Key Discussion Areas**

- Driver recruitment was raised as a potential challenge for the service provider. Attendees stressed that it is important that bidders are aware of driver shortages and recruitment challenges that exist in and around Glenwood Springs.
- There was concern from some attendees that drivers may have low morale if they are not kept busy during quiet periods. However, a well designed service would efficiently match supply and demand to ensure vehicles were not waiting around without passengers.
- There was a concern that drivers may not be offered sufficient hours of work by the operator. It was agreed that drivers should be offered sufficient hours to rely upon.
- It was recognized that the vehicle choice will have an impact on driver licensing requirements. Larger vehicles will require commercial driver licenses, while smaller vehicles may not. There is potential to share drivers with the school district.

- **Recommendations**

- If bidders are asked to provide vehicles and drivers, the City should provide details about licensing requirements, recruitment challenges, and other information that may affect their ability to provide the service.

## 8. Vehicles

- **Key Discussion Areas**

- Electric vehicles would be highly desirable and could potentially be funded through dedicated funding sources and grants.
- Some attendees feel that the current RGS buses don't look like tourist buses. Any new vehicles should look like something a tourist would use. Some attendees preferred larger vehicles to give people more space, while others felt that people would prefer smaller vehicles that feel more like a taxi.
- Bike storage was discussed. While some attendees said it would be desirable, most agreed that it would typically be quicker to ride a bike for trips entirely within the city limits, meaning that bike storage is not a priority.
- Allowing a TNC (such as Uber or Lyft) to operate the service is a potential option. However, attendees from RFTA and the City of Glenwood Springs were concerned about driver training and monitoring standards. In addition, a per-ride subsidy

model like those typically used with TNCs could also be more expensive, depending on the level of ridership.

- Many RFTA buses do not have low floors, meaning wheelchair boardings can take a very long time. This contributes to unreliable timetable issues.

- **Recommendations**

- Any new vehicles should have low floors or the ability to easily offer service to wheelchair users.
- Electric vehicle grants should be investigated to provide funding.
- Vehicle design and branding should encourage tourists to use the service.

## 9. Passenger Behaviour

- **Key Discussion Areas**

- There was a concern that customers may try to use the service as a private taxi and make multiple stops along the way. We discussed how an on-demand service, unlike a taxi, is not designed to provide this high-touch personalized service.
- There were concerns about many riders of different demographics and backgrounds riding together. However, the consensus was that having a service that is open to anyone is a requirement for this project. A key element of public transit is that everyone is treated fairly and equally.
- Passengers may just walk up to a vehicle and ask for a ride. This was discussed and it was agreed that there should be a process to encourage these passengers to book a ride (with support from the driver or a brochure).

- **Recommendations**

- Ensure drivers and passengers do not expect or allow unplanned deviations from the route for passengers, except under exceptional circumstances.
- Develop a plan for dealing with passengers who walk up to the vehicle without a booking.
- Choose vehicles with enough space for all passengers, so people have enough personal space.

## 10. Other

- **Key Discussion Areas**

- One way to sell this to the community could be to calculate how many trips will be avoided and the impact this may have on congestion and parking. This will help bring businesses and local residents on-board.
- A dispatcher will be required for the service. While this will be an additional cost, it will provide a personal touch for the service. The City could also investigate services where a third-party provides dispatch support.
- The service should be designed to comfortably accommodate Spanish speakers.
- The ability to use this service to reduce the likelihood of drunk driving could benefit the community.

- **Recommendations**

- Ensure the Rider App is available, at a minimum, in Spanish.
- Consider extending service hours.

## Summary

A number of key themes were identified during the focus groups.

- Most attendees agreed that on-demand transit could provide a better service for visitors and residents than existing fixed-route transit. They were excited about the opportunity on-demand transit could hold for Glenwood Springs.
- Some attendees, in particular those attending the transportation focus group, were concerned that offering an on-demand service to replace existing services could isolate or upset existing bus and paratransit users. If the service replaced RGS, they would require assurances that riders were not being provided a service that was worse than what currently exists.

Most attendees, in particular those who work closely with visitors and tourists, were excited about the potential this service holds for visitors to the town.

# 5

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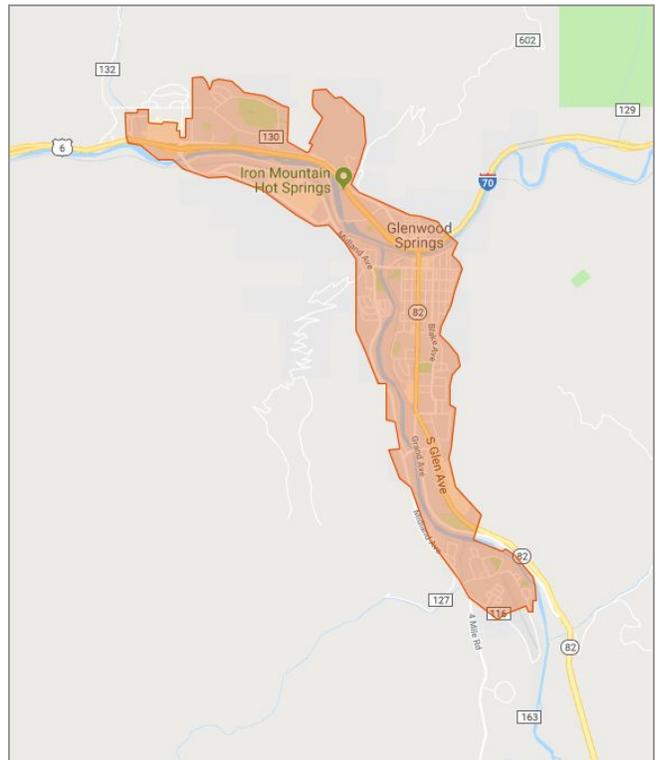
## **Analysis and Recommendations**

## 5. Analysis and Recommendations

### 5.1 Proposed Scenarios

The proposed service zone and operating scenarios were determined on the basis of input from the City of Glenwood Springs. The following constraints and considerations helped to narrow the potential options to three service scenarios:

- **Service Zone:** One of the main goals of providing an on-demand service is to expand coverage to areas of Glenwood Springs that are not well served by RGS or RFTA routes. Therefore, the service zone was designed to provide coverage throughout the city limits.
- **Replacement of RGS:** It was recognized from the outset that a full replacement of the existing fixed-route RGS is likely to be opposed by some riders, in particular those who are well served by the existing route, or are uncomfortable with using an on-demand technology. Therefore, it was agreed that at least one scenario should retain RGS service in its current form.
- **RFTA Coordination:** There are a number of opportunities to better integrate RGS with RFTA services. For example:
  - **Fares:** RGS charges \$1 per day, while RFTA charges \$1 per one-way trip within Glenwood Springs. For passengers taking multiple trips per day, this incentivizes them to take RGS, even if RFTA makes more sense for their trip. Also, fare passes are not accepted interchangeably across the services.
  - **Timetable:** While RGS and the RTFA Valley local are roughly timed to run at equal intervals which could significantly reduce effective headways for riders in Glenwood Springs willing to take either service, this does not always occur. For example, the 'down valley' RFTA Valley Local runs an average of 11 minutes late during weekday afternoons.



- **Vehicles:** Some riders prefer the RFTA vehicles to RGS, or vice versa, depending on their personal priorities.

However, for the purposes of this study, Via assumed changes to RFTA services were out of scope. As soon as feasible, these coordination issues should be addressed, irrespective of the outcome of this study.

The following three scenarios were selected for further investigation:

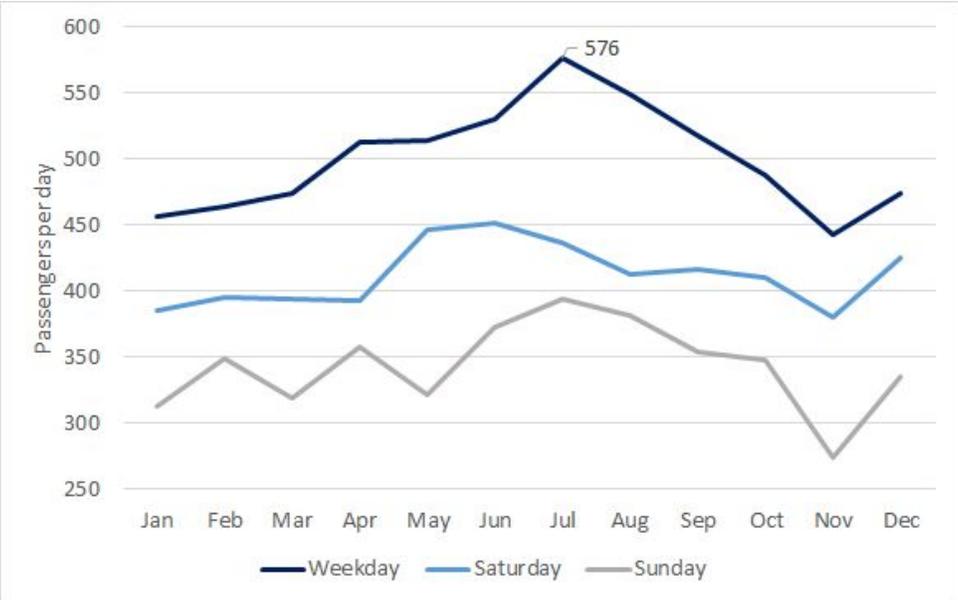
1. **Replace RGS Entirely (“Replace RGS”):** In this scenario, the City would replace fixed-route RGS service in full, with a new on-demand service covering the entire city limits. At a minimum, the replacement on-demand service would need to accommodate all existing RGS ridership.
2. **Replace a portion of the existing RGS Service and provide service to additional neighborhoods with on-demand transit (“Adjust RGS, Add On-Demand”):** In this scenario, the City would operate RGS using a single vehicle (instead of the current two vehicles). In order to reduce the vehicle requirement to a single vehicle, the City would need to make several changes to RGS, including reducing the length of the route (for example, removing the loop between West Glenwood Mall, Glenwood Meadows, and West Glenwood Park and Ride), reducing headway to 40 minutes, removing stops along the route, and/or reducing service hours to cut the number of vehicle hours required. In practice, changes to RGS would be most easily implemented if introduced at the same time as the on-demand service. By integrating RGS with the selected on-demand service, passengers would either be directed to the bus, or booked an on-demand trip. In fact, if RGS is seamlessly integrated, an app could provide a very similar experience for both RGS and on-demand passengers.
3. **Offer an on-demand service in addition to RGS (“Keep RGS, Add On-Demand”):** In this scenario, the City would make no changes to RGS. While this would ensure existing riders are not displaced, it would require additional funding from public or private sources. One alternative version of this scenario could entail operating an on-demand service at nights or on weekends to familiarize passengers with booking and riding on-demand. By positioning this service as a premium offering, fare revenue could help to subsidize some of the operating costs.

## 5.2 Expected Demand

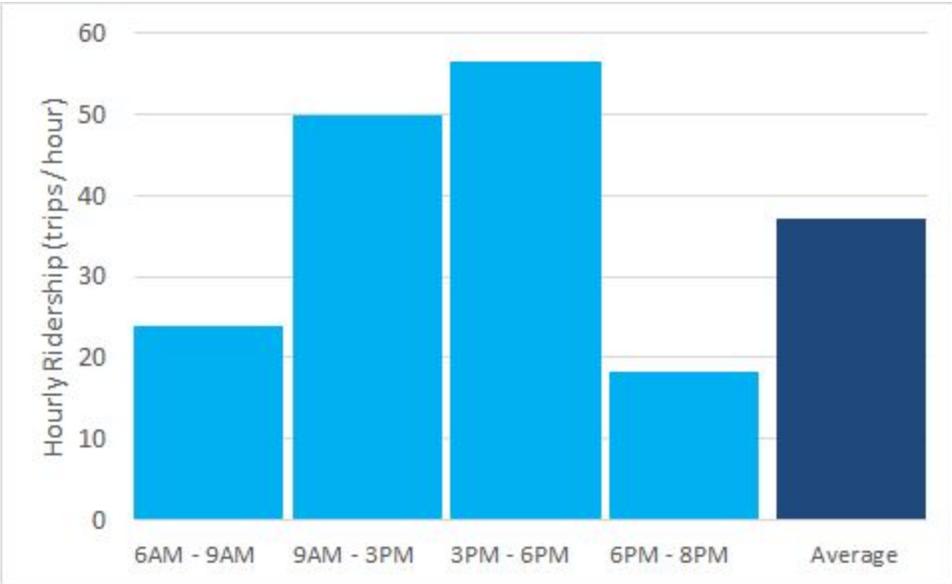
Via analyzed stop-level longitudinal transit ridership data for RGS as well as Traveler data for all trips within Glenwood Springs. It is critical that any proposed on-demand service can meet peak ridership

to ensure passengers are not stranded during periods of high demand, so care was taken to understand how ridership varied on an hourly, daily, and seasonal basis.

**Fixed-Route Ridership by Month (2018 data)**



**Ridership by Time of Day (2018 data)**



The average daily ridership is 500 passengers per day, peaking in the summer months at 550 - 600 passengers per weekday. Average hourly ridership is approximately 33 trips per hour, and the peak hour ridership is approximately 50% higher than the average, or about 50 trips per hour. Using this information, Via developed the following demand scenarios.

<b>Demand Scenarios</b>	<b>On-Demand Daily Ridership</b>	<b>RGS Daily Ridership</b>	<b>On-Demand Hourly Ridership</b>	<b>On-Demand Peak Hourly Ridership</b>
<b><i>Scenario 1 - Replace RGS</i></b>	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low (existing average)	500	0	33	50
Medium	600	0	40	60
High	750	0	50	75
<b><i>Scenario 2 - Adjust RGS, Add On-Demand</i></b>	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low	200	300	13	20
Medium	240	300	16	24
High	300	300	20	30
<b><i>Scenario 3 - Keep RGS, Add On-Demand</i></b>	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low	100	500	7	10
Medium	120	500	8	12
High	150	500	10	15

**Paratransit Ridership (The Traveler)**

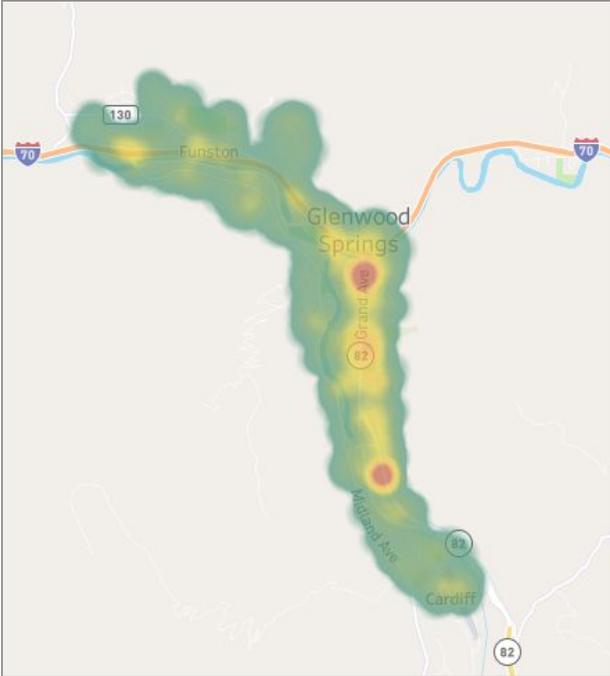
Via also investigated paratransit ridership and concluded that the number of trips is low compared to fixed route ridership. On average, 15 - 25 paratransit trips per day are carried out within Glenwood Springs, or approximately 1-3 trips per hour. In all scenarios described above, this level of ridership could be comfortably accommodated.

**Expected Origin / Destination Patterns**

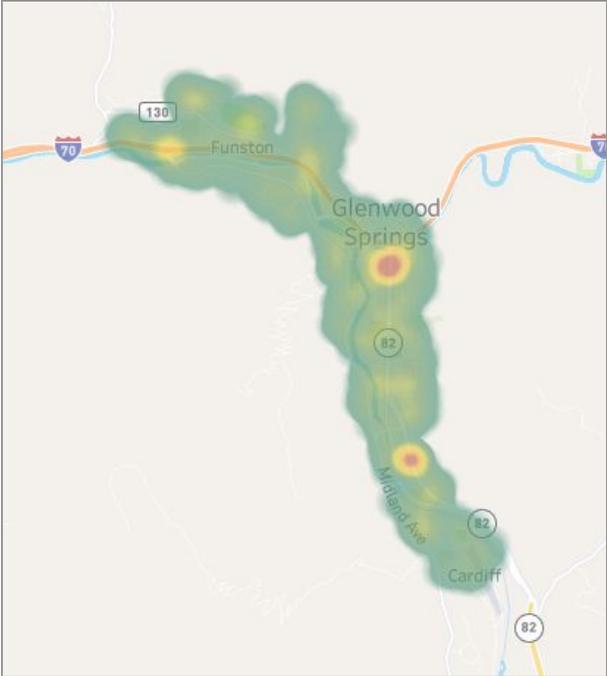
The expected origin and destination patterns for each scenario are shown below, where green color represents a low density of origins/destinations while yellow, orange, and red representing increasing origin/destination density. These demand patterns were determined using existing RGS stop level ridership as well as US Census Bureau data showing population density throughout Glenwood Springs.

**Scenario 1 - Replace RGS** shows ridership largely concentrated along the existing RGS corridor, where many key points of interest are located. **Scenario 2 - Adjust RGS, Add On-Demand** has more dispersed demand patterns, given the requirement that riders only use the on-demand service for trips that are not easily served by RGS (note the map only shows origins and destinations for on-demand trips). **Scenario 3 - Keep RGS, Add On-Demand** has similar patterns to Scenario 1, but assumes fewer trips as a result of a higher fares.

**Scenario 1: Replace RGS**



**Scenario 2: Adjust RGS, Add On-Demand**



**Scenario 3: Keep RGS, Add On-Demand**



Images: Heat maps of predicted trip origins and destinations. Yellow and orange indicate a high density of trip origins and destinations, while green indicates a lower density of origins and destinations.

## 5.3 Simulation Parameters

Via began by assuming the following service design parameters. In most cases, these service parameters establish outer bounds, and the average customer experience is characterized by much shorter walking distances, wait times, and detours than the maximum permitted. These parameters were informed by Via's experience operating similar services and were supported by the results of the survey, described in **Section 4.1 - Survey**.

Design Parameter	Recommendation
<b>Maximum pick-up / dropoff walk</b>	400 meters, or approximately 6 minutes (average walking distances were significantly shorter. See <b>Section 5.3 - Simulation Results</b> for more details).
<b>Maximum wait time</b>	30 minutes (average wait times were significantly shorter, see <b>Section 5 - Simulation Results</b> for more details).
<b>Maximum detour</b>	15 minutes maximum detour compared to the most direct route. This means that no passenger riding in a given vehicle will experience a detour of more than 15 minutes.
<b>Fleet Composition</b>	Vehicles with either 6 or 12 seats were simulated. See <b>Section 5.3 - Simulation Results</b> for the minimum recommended vehicle size for each scenario. Larger vehicles, including the fleet currently operating the RGS routes could also be used. However, care must be taken to ensure any turn restrictions and/or narrow roads are restricted in the routing software to ensure vehicles do not get stuck.

## 5.4 Simulation Results

The results of the simulations are shown in the following table.

Demand Scenarios	Daily Ridership	On-Demand Fleet Size	Average Wait	Average Walk Distance	Minimum Vehicle Size
<b>Scenario 1 - Replace RGS</b>	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	500	4	8 - 13	500 - 600 feet	12+
Medium	600	4	10 - 15		
High	750	5	10 - 15		
<b>Scenario 2 - Adjust RGS, Add On-Demand</b>	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	200	2	12 - 17	300 - 400 feet	6+
Medium	240	3	10 - 15		
High	300	3	11 - 16		
<b>Scenario 3 - Keep RGS, Add On-Demand</b>	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	100	2	7 - 12	200 -300 feet	6+
Medium	120	2	8 - 13		
High	150	2	10 -15		

### Scenario 1: Replace RGS

In order to entirely replace fixed-route RGS service, Via estimates a minimum fleet size of four vehicles will be required. During peak hours, all four vehicles will be required to complete the estimated 50 rides per hour (low demand). In this scenario, each vehicle must achieve vehicle utilization (passengers per vehicle hour) of 12-15 passengers per vehicle hour during peak periods. As a result, riders may be expected to walk further than Scenarios 2 and 3 in order to maximize vehicle productivity. Given the high ridership, each vehicle should have 12+ seats to ensure all riders can be accommodated. In addition, the provision of new service in areas of the City that are not currently served by RGS, and the additional convenience of on-demand transit, may induce new ridership. Should daily ridership increase significantly, a fifth vehicle may be required to meet this new demand.

### Scenario 2: Adjust RGS, Add On-Demand

Scenario 2 assumes lower demand for microtransit than Scenario 1 (200-300 trips per day vs 500-750 trips per day) and will require a minimum of two on-demand vehicles, in addition to one fixed-route bus. This is because the majority of riders are expected to continue to use the fixed-route bus for journeys along the Hwy 82 and Route 6 corridors. The on-demand service will be dedicated to completing trips that are more difficult to serve, given they do not entirely fall along these corridors. As a result of these more difficult to serve trips, vehicles are expected to achieve lower utilization (10-12 passengers per vehicle hour during peak periods). Given the lower level of demand, simulations predicted that vehicles with a minimum of six seats would be sufficient.

### Scenario 3: Keep RGS, Add On-Demand

Scenario 3 is designed to provide transit throughout Glenwood Springs, supplementing the existing fixed-route RGS service. In this scenario, the service would likely need to be self-funding, as RGS will continue to operate and require the bulk of existing transit funding. As a result, higher fares are recommended which are expected to result in lower ridership than in Scenarios 1 and 2. We recommend launching this service with two vehicles for all three demand scenarios.

## 5.5 Operating Model

### 5.5.1 Partnership Model

The City seeks to understand what operating model would best suit the city's budget and other requirements. For the purposes of this report, Via has investigated two alternative service models:

1. **Transportation as a Service (TaaS):** In this model, an on-demand transit vendor provides a turnkey solution that includes on-demand transit technology, plus drivers, vehicles, and operations management. The advantages of a TaaS solution include potentially lower hourly per-vehicle costs than current operations, as well as scalability—a service could be launched with current service hours and a given fleet size and, as ridership grows, the City could evaluate whether to increase fleet size and/or extend operating hours.
2. **Software as a Service (SaaS):** In this model, the City may prefer to provide on-demand transit services using the existing fleet, drivers, and operations team (or new vehicles and resources procured by the City or by RFTA). Depending on the solution the City selects, ongoing service design and optimization, operational support, and customer service may be included. The advantages of this approach include the greatest continuity from existing RGS and Traveler services and limiting the necessity to reallocate vehicles and drivers to other

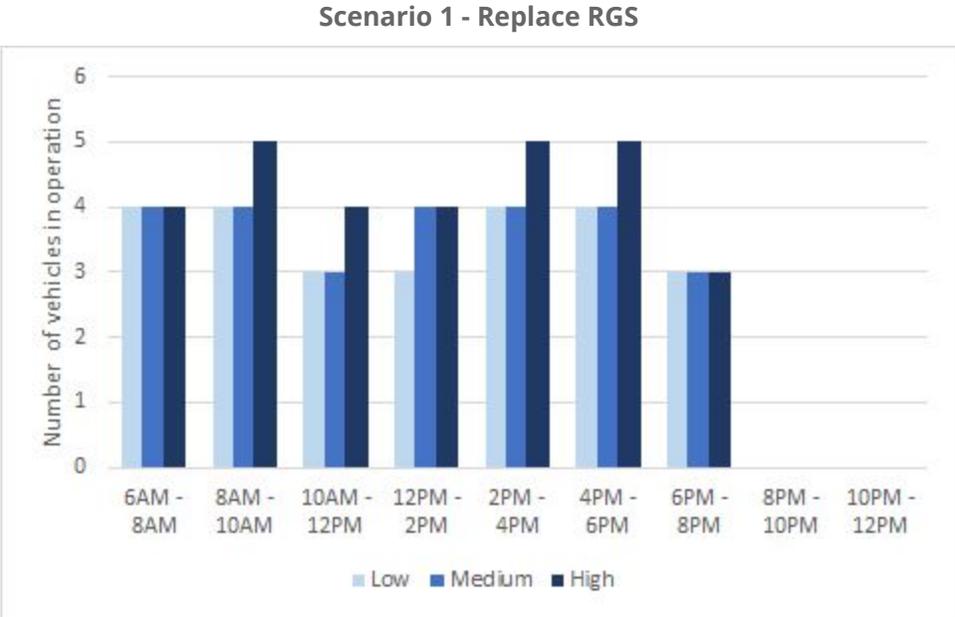
routes or services. It is recommended that any platform solution include, at a minimum, the following:

- Dynamic vehicle routing
- Passenger aggregation (sharing)
- Rider and driver apps
- Supporting for booking by phone, some form of cash payment for unbanked individuals, etc.
- Backend administrative tools
- Ongoing technical, operational, and marketing support

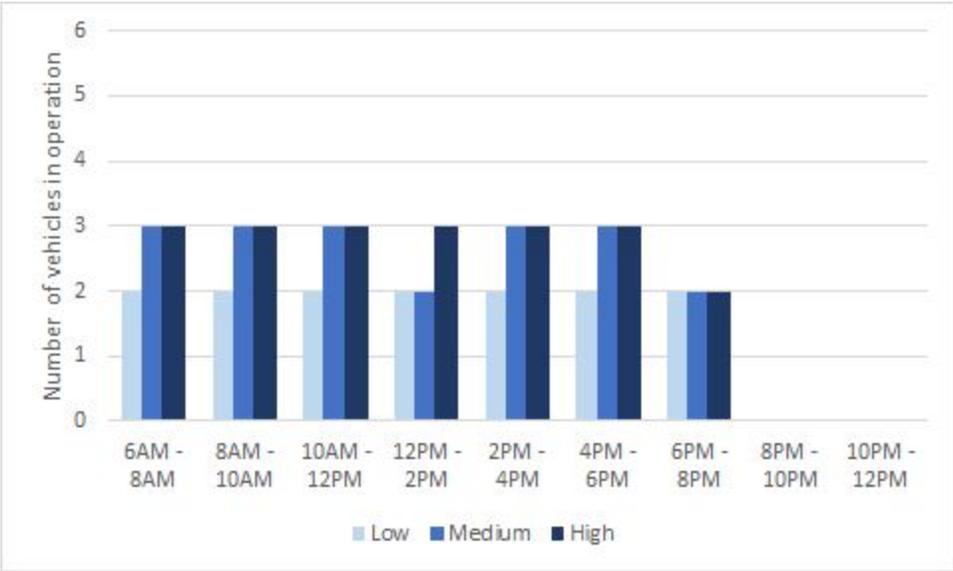
Furthermore, as discussed above, should the City pursue Scenario 2, a solution that can direct riders to either a fixed-route RGS vehicle or to an on-demand vehicle depending on their location and their requested trip is suggested.

### 5.5.2 Service Hours

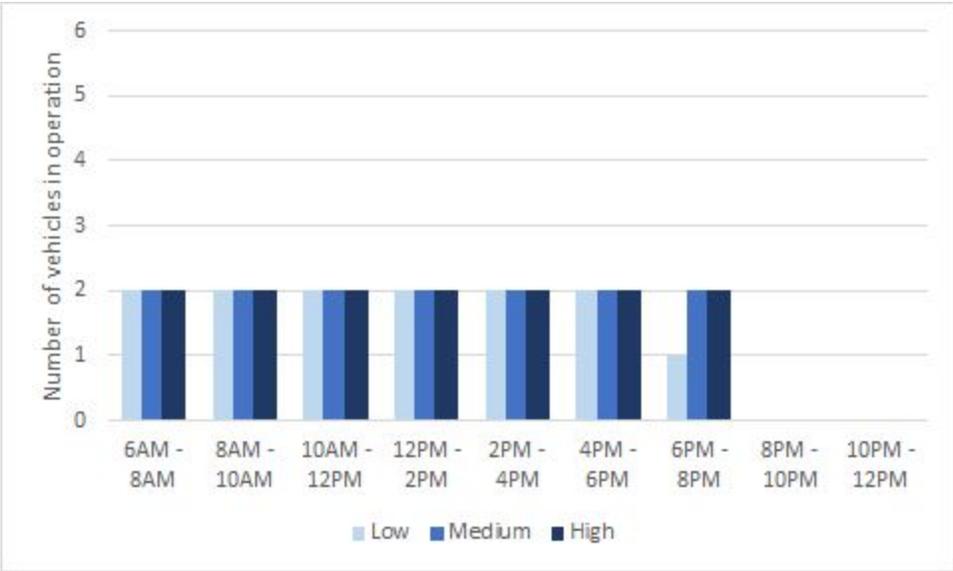
RGS currently operates between the hours of 6AM and 8PM. An on-demand service provides an excellent opportunity to extend service hours, as the service could operate at low cost during off-peak hours (perhaps just one vehicle during very low demand periods). In order to estimate service hours, fleet models were developed based on expected demand by hour of the day. The three graphs below show the estimated fleet size for Scenarios 1 - 3, maintaining current operating hours.



**Scenario 2 - Adjust RGS, Add On-Demand**



**Scenario 3 - Keep RGS, Add On-Demand**



**Weekly and Annual Vehicle Hour Forecasts**

The estimated number of vehicle hours required for each scenario are provided below. This information can be used to estimate the cost of each scenario. The number of vehicles in operation throughout the day will be adjusted to meet demand, with all vehicles operating during peak hours. Note that for Scenarios 2 and 3, the table below does not include the vehicle hours required to operate fixed-route RGS service.

The estimated on-demand vehicle hours provided below are based on two different operating hour assumptions:

- **Retain the current operating hours of 6:00 AM to 8:00 PM.** For this scenario, vehicles are expected to be in use between 80% and 93% of the time.
- **Extend the operating hours from 6:00 AM to 12:00 AM (midnight).** For this scenario, vehicles are expected to be in use between 72% and 88% of the time.<sup>7</sup>

Demand Scenario	6am - 8pm Operations	6am - 12am Operations
<b>Scenario 1 - Replace RGS</b>	<b>Vehicle hours / year</b>	<b>Vehicle hours / year</b>
1- Low	15,000 - 18,000	18,000 - 21,000
1 - Medium	16,000 - 19,000	19,000 - 22,000
1- High	19,000 - 22,000	23,000 - 26,000
<b>Scenario 2 - Adjust RGS, Add On-Demand*</b>	<b>Vehicle hours / year</b>	<b>Vehicle hours / year</b>
2- Low	8,000 - 11,000	9,000 - 12,000
2 - Medium	11,000 - 14,000	13,000 - 16,000
2 - High	12,000 - 15,000	15,000 - 18,000
<b>Scenario 3 - Keep RGS, Add On-Demand*</b>	<b>Vehicle hours / year</b>	<b>Vehicle hours / year</b>
3 - Low	7,000 - 9,000	8,000 - 10,000
3- Medium	7,500 - 9,500	9,000 - 11,000
3 - High	8,000 - 10,000	10,000 - 12,000

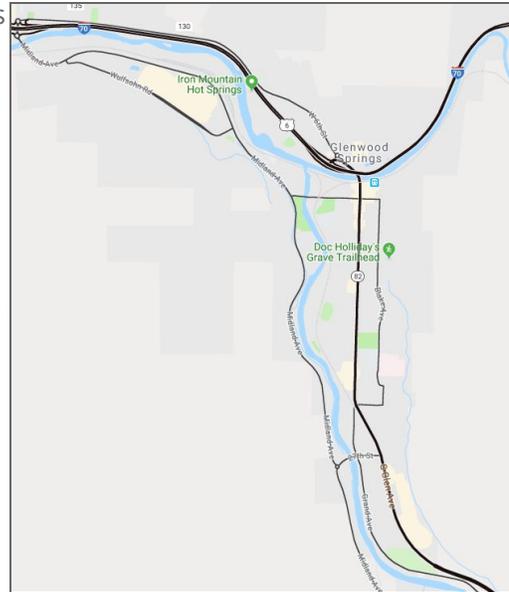
\* Note that additional vehicle hours will be required to provide fixed-route service in Scenarios 2 and 3. See **Section 5.6 - Funding and Budget** for a information on total costs including both RGS and on-demand.

<sup>7</sup> Vehicle time-in-use percentages were determined by building an hourly model of how many vehicles would be required by time of day. The vehicles are used less during the late evening, resulting in lower vehicle time-in-use percentages for the longer operating hour scenario.

### 5.5.3 Pickup and Drop-off Locations

On-demand transit services usually ask passengers to walk a short distance to a ‘virtual bus stop’ to maximize the system's efficiency and limit detours. Each microtransit provider has their own method for determining virtual bus stops, but the City should ensure all providers choose stopping locations where vehicles can safely collect passengers.

Care must be taken to ensure the optimal number of stops are provided. When too many stops are offered, the capacity of the service is reduced as vehicles are required to make detours to meet each passenger. If too few stops are offered, walking distances will be long and riders will not want to use the service. For **Scenario 1 - Replace RGS** and **Scenario 2 - Adjust RGS, Add On-Demand**, we recommend locating stops along all main roads with some additional stops at key locations (see map of main roads, right). For **Scenario 3 - Keep RGS, Add On-Demand**, we recommend a corner-to-corner model, where most riders are only asked to walk to their nearest intersection. We do not believe a door-to-door or curb-to-curb service will be able to achieve the ridership forecasts for any of the three scenarios.<sup>8</sup>



*Map showing the main roads in Glenwood Springs as black lines.*

### 5.5.4 Vehicles

As described in **Section 5 - Analysis and Recommendations**, the service requires vehicles with 6+ seats (**Scenario 2 - Adjust RGS, Add On-Demand** and **Scenario 3 - Keep RGS, Add On-Demand**) or 12+ seats (**Scenario 1 - Replace RGS**). The City may choose to operate with even larger vehicles, which would be acceptable. However, doing so may increase the cost per mile due to higher fuel and maintenance costs.

### 5.5.5 Drivers

Depending on the scenario selected and the level of ridership, and therefore the number of vehicles in service, between five and 13 drivers will be required (approximately 1.5 - 2.5 drivers per fleet vehicle). Depending on the service model the City selects, these drivers may be RFTA employees, City

<sup>8</sup> Door-to-door or curb-to-curb service should always be provided for riders with disabilities.

employees, employees of a private operator, or independent contractors. Feedback gathered during focus groups indicated that driver recruitment may be a challenge, and so the City, or any contractor charged with operating a service, should develop a strategy for effectively recruiting and retaining drivers.

### 5.5.6 Paratransit

Currently, RFTA provides ADA-compliant paratransit within  $\frac{3}{4}$  of a mile of the RGS route. In addition, the Garfield County Traveler (operated by RFTA) provides accessible transit within a five (5) mile radius off of Interstate 70 between Parachute and Glenwood Springs, and a five (5) mile radius off of Highway 82 between Glenwood Springs and Carbondale.

It is recommended that any on-demand service provided as a result of this study is fully accessible. While not all vehicles are required to be accessible, the booking platform should have the ability to allocate riders with disabilities to vehicles that meet their requirements. For this report, Via assumed all vehicles in the fleet would be fully accessible to provide limited mobility passengers with equivalent levels of service.

An accessible on-demand transit service can alleviate pressure on the more costly Traveler and ADA Complementary paratransit services while providing a better experience for passengers who can enjoy real-time bookings and shorter wait times.

### 5.5.7 Fares

Currently, RGSs receives \$100,000 in fare revenue each year with approximately 170,000 trips per year (average fare of \$0.59)<sup>9</sup>. While the survey indicated that many riders would be willing to pay significantly more than \$1 per trip for an on-demand service, many existing riders expressed concern about increased fares. RGS allows unlimited trips for \$1 per day, so even charging \$1 per trip would be a significant price increase for riders who make multiple daily trips.

Our fare recommendations are described below:

**Scenario 1 - Replace RGS Entirely:** If fixed-route RGS service is replaced in full by on-demand service, fares should not exceed \$1 per trip to ensure the service does not become unaffordable to those who rely upon it.

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<sup>9</sup> 2019 GWS Municipal Services Contract

**Scenario 2 - Replace a portion of the existing RGS Service and provide service to additional neighborhoods:** In this scenario, passengers can still access the fixed-route RGS for the majority of trips (excluding the Meadows and West Glenwood Park and Ride). Therefore, there is an opportunity to charge higher fares, because most RGS users can continue to use RGS. If the City chooses to increase fares for the on-demand service, the impact could be significant. For example, an average fare of \$2 per trip would result in an additional \$100,000 - \$200,000 in fare revenue on top of the RGS revenue of \$60,000.<sup>10</sup>

**Scenario 3 - Offer an on-demand service in addition to RGS:** In this scenario, the on-demand transit service should aim to cover a significant portion of operating costs from fare revenue. Via recommends a fare of \$2 - \$4 per passenger. Discounts for additional riders on each booking are recommended to reduce the cost to families and larger groups, and to reflect the fact that group bookings exert less stress on the system than individual trips.

Because improvements in convenience and quality of service can draw more riders into the transit network, the on-demand transit system may reach capacity during peak periods. This can be addressed by increasing walking distances to maximize fleet productivity during peak hours. Alternative options include solutions such as pricing incentives, booking eligibility restrictions, and other tools that ensure those who need the service most are prioritized, and the service is scaled in a cost-efficient way.

If Glenwood Springs elects to move forward with a supplemental, on-demand service without a premium fare model, and instead operates with a fare between \$1 and \$2 per trip, the City could seek to control demand by limiting service to evenings and weekends.

## 5.5.8 Booking Options

While most on-demand transit customers will book their ride using a dedicated Glenwood Springs on-demand transit rider app, public on-demand transit must be accessible to those who don't use a smartphone. This was backed up by the survey results, which indicate that a small percentage of respondents harbor concerns about using an app to book rides. Riders should be able to book a ride by contacting a call center, which can create a user profile for riders who don't have one yet, and can dispatch rides upon request. The City may also be interested in exploring the option of creating booking kiosks at key locations, where riders can contact the call center and request a ride. For example, passengers arriving on Amtrak would see the kiosk on arrival and could easily book a trip to their hotel without downloading the app. During the focus group, business owners described how these kiosks would be valuable for hotels and other tourism focused businesses.

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<sup>10</sup> RGS revenue under Scenario 2 is expected to be \$60,000 (~100,000 annual trips at \$0.59 / trip)

## 5.5.9 Autonomous Vehicles

The key parameters for an on-demand transit service operated using autonomous vehicles (AVs) would not differ in any substantial way from a conventional service, with the exception that specialized approaches would need to be employed to ensure smooth and safe operation of shared vehicles without an operator. AVs could positively impact the economics of a service, lowering operating costs and therefore facilitating a larger fleet and higher quality of service, however it is unlikely that AVs will be in service without an operator in the immediate future. Because this Study is focused on the near term, AVs are unlikely to factor in an implementation.

## 5.5.10 Performance Targets

Via recommends exploring performance targets to maximize ridership and ensure on-demand transit providers are incentivized to grow the success of the service.

One common method is allowing service providers (in a TaaS model) to collect and retain farebox revenue and offset this through discounted pricing. For example, instead of paying a fully burdened rate per vehicle hour, bidders would be asked to provide a discounted rate per vehicle hour but retain farebox revenue. This structure would further align service provider's interest in the success of this service. By recouping their discount through farebox revenue, bidders would take on additional risk, creating a system in which they only make up for the discounts they have provided through strong ridership performance. The City would set the fare structure to ensure providers do not increase fares. If the service fails to achieve both strong demand and efficiency, providers will not recoup their costs.

## 5.6 Funding and Budget

### 5.6.1 Installation Costs

#### 5.6.1.1 TaaS Installation Costs

Depending on the provider, installation costs may be amortized across the life of the contract. Some providers may charge an upfront fee while others do not. For simplicity, Via has provided cost estimates inclusive of all costs in **Section 5.6.2 - Ongoing Costs**.

#### 5.6.1.2 SaaS Installation Costs

For a SaaS solution, installation costs consist of the following components.

Cost	Estimated Range	Description
<i>Type of Cost</i>	<i>US\$ (one-time expenses)</i>	<i>Details of Cost Category</i>
<b>Vehicle acquisition</b>	Varies by vehicle type.	Cost of acquiring vehicles for the service (assuming they are not already available). This may include vehicle registration costs, wraps (branding), retrofitting for accessibility, and more.
<b>Driver acquisition</b>	Varies depending on RFTA / City of Glenwood Springs recruiting process and requirements.	Cost to hire and train drivers for the service. Note that drivers providing ADA-compliant services may need additional, specialized training.
<b>Hardware and Data Plans</b>	\$200 -500 per tablet plus ongoing data plan subscription	Cost to purchase tablets, mounts, chargers, and dispatcher hardware (computer, phone, etc.) Each device will require an active data plan. A Mobile Device Management (MDM) plan may also be required to ensure tablets are only used for business purposes.
<b>Software installation fees</b>	\$20,000 - \$50,000	Software installation fees vary depending on the provider provider and the size of the deployment.
<b>Marketing</b>	\$10,000 - \$40,000	Cost to market the service prior to launch, ensuring riders are aware of any changes. This includes the cost of providing referral incentives (e.g., refer a friend and get \$5).

## 5.6.2 Ongoing Costs

### 5.6.2.1 TaaS Ongoing Costs

As discussed in **Section 5.6.1.1 - Installation Costs**, installation costs have been captured as part of the fully-loaded hourly rates below. These costs include everything required to operate an on-demand service:

- On-demand software
- Drivers
- Vehicles
- Operations management

The following cost estimates were obtained using a pricing model adjusted for the Glenwood Springs labor market. These costs were validated against a number of publicly available pricing

sources.<sup>11</sup> Costs include a minimum of two (2) Wheelchair Accessible Vehicles (WAVs) under each scenario. As demonstrated in the table below, the hourly cost decreases as the fleet size increases. This is because the fixed costs of operating an on-demand service can be spread across a larger number of vehicle hours as fleet size increases. Fixed costs include administration and dispatch costs, technology (software), marketing, and overhead.

<b>Fleet Size</b>	<b>6 seat vehicles (e.g., Mercedes Metris, Chrysler Pacifica)</b>	<b>12+ seat vehicles (e.g., Mercedes Sprinter, Ford Transit)</b>
<b>Total number of vehicles</b>	<b>Fully-loaded cost per vehicle hour (\$)</b>	<b>Fully-loaded cost per vehicle hour (\$)</b>
2 vehicles	\$74 - \$96	\$76 - \$98
3 vehicles	\$59 - \$76	\$61 - \$79
4 vehicles	\$54 - \$69	\$55 - \$72
5 vehicles	\$50 - \$65	\$52 - \$67
6 vehicles	\$48 - \$63	\$50 - \$65

Using the cost information in the table above, estimated annual costs for each operating scenario are shown in the table below. All costs exclude fare revenue, which is expected to be between \$100,000 - \$200,000 per year.

<b>Scenario</b>	<b>Estimated Vehicle Hours</b>	<b>Estimated On-Demand Service Cost</b>	<b>Estimated RGS Cost<sup>12</sup></b>	<b>Estimated Total Cost</b>
<b>Scenario 1 - Replace RGS</b>	<b>Annual vehicle hours</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>
1 - Low	15,000 - 18,000	\$0.9 - \$1.2M	\$0	\$0.9 - \$1.2M
1 - Medium	16,000 - 19,000	\$1.0 - \$1.3M	\$0	\$1.0 - \$1.3M
1 - High	19,000 - 22,000	\$1.1 - \$1.4M	\$0	\$1.1 - \$1.4M
<b>Scenario 2 - Adjust RGS, Add On-Demand</b>	<b>Annual vehicle hours</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>
2 - Low	8,000 - 11,000	\$0.7 - \$0.9M	\$0.5 - \$0.6M	\$1.3 - \$1.5M

<sup>11</sup> Ohio DOT Transit Study - <http://www.dot.state.oh.us/Divisions/Planning/Transit/TransitNeedsStudy/Documents/PerformanceAnalysisDemandResponse.pdf>, Centennial, CO Call and Ride <https://www.motorists.org/blog/microtransit-costs-too-much-per-passenger/>,

<sup>12</sup> Source: 2019 RGS Municipal Service Contract

2 - Medium	11,000 - 14,000	\$0.8 - \$1.1M	\$0.5 - \$0.6M	\$1.3 - \$1.7M
2 - High	12,000 - 15,000	\$0.8 - \$1.1M	\$0.5 - \$0.6M	\$1.3 - \$1.7M
<b>Scenario 3 - Keep RGS, Add On-Demand</b>	<b>Annual vehicle hours</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>	<b>Annual cost (\$)</b>
3 - Low	7,000 - 9,000	\$0.6 - \$0.8M	\$1.0 - \$1.1M	\$1.6 - \$1.9M
3 - Medium	7,500 - 9,500	\$0.6 - \$0.8M	\$1.0 - \$1.1M	\$1.6 - \$1.9M
3 - High	8,000 - 10,000	\$0.7 - \$0.9M	\$1.0 - \$1.1M	\$1.7 - \$1.9M

### 5.6.2.2 SaaS Ongoing Costs

If the City of Glenwood Springs chooses to operate a service under a Software-as-a-Service contract, the main differences relate to vehicles, drivers, and operations management. The number of vehicle hours required would remain the same as in a TaaS model.

- **Vehicles:** The City could use its existing vehicle fleet. This may be cheaper if a fleet has already been purchased. Note that the City could also explore a TaaS-hybrid model where providers are able to use the City's existing fleet.
- **Drivers:** The City could use its existing driver pool (currently provided through an agreement with RFTA).
- **Operations Management:** The City would be required to manage the service. Usually this requires one person at all times. This individual would act as a dispatcher, receiving phone bookings, managing driver issues, and more.
- **Operating costs:** The City currently pays approximately \$110 per vehicle hour for 9,800 hour per year.<sup>13</sup>
- **Software costs:** The City would be required to pay for the ongoing software costs associated with the on-demand service. These costs vary significantly between providers depending on the features and functionality of their software. Software costs typically increase depending on the fleet size. A two-vehicle fleet may cost between \$10K - \$30K per year, while a five-vehicle fleet may cost between \$30K - \$60K per year.

## 5.7 Timeline and Next Steps

On September 19, 2019, Via and the City of Glenwood Springs shared an initial draft of this report with the Glenwood Springs City Council. The Council expressed support for proceeding with an on-demand service in Glenwood Springs, including the possibility of eventually replacing all fixed-route RGS service with on-demand service, but also indicated that limiting disruption for

<sup>13</sup> 2019 GWS Municipal Services Contract - Annual RGS cost \$1,092,709

current RGS riders and maintaining a consistent level of City funding for transit are priorities. The Council invited City staff to submit an initial service proposal following the submission of this Final Report.

The City of Glenwood Springs should proceed with the following steps.

1. **Share report:** Share the final results of this study with all stakeholders. This should include this report with the Council, RFTA, and community groups.
2. **Decide whether and how to proceed:** The City should decide whether or not an on-demand service will be pursued and, if so, identify an appropriate scale and timeframe. A supplemental on-demand service as described in Scenario 3 may be a desirable first step.
3. **Coordinate with RFTA:** If the City chooses to proceed with an on-demand service, discussions with RFTA will be required to create a plan for any changes to RGS.
4. **Conduct Procurement:** We recommend sharing a copy of this report with potential on-demand providers to ensure they understand the requirements for an on-demand service in Glenwood Springs.<sup>14</sup>
5. **Marketing:** Communicate the on-demand service to new and existing riders in the weeks prior to launch.
6. **Adjust and Refine:** Following launch, continue to monitor and adjust the service based on performance, rider feedback, demand patterns, and budget.

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<sup>14</sup> The City should allow sufficient time for tasks such as vehicle procurement, driver recruitment, and service marketing.

# 6

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## **Summary of Recommendations**

## 6. Summary of Recommendations

This study evaluated the feasibility of on-demand transit within Glenwood Springs. Overall, RGS is a relatively high performing bus route with an average of 17 trips per vehicle hour. In comparison, many larger towns and cities aim to exceed 10-15 trips per vehicle hour<sup>15</sup>, which Glenwood Springs does despite having a much smaller population and more limited network. For this reason, any changes to RGS must be carefully considered.

However, there are a number of current challenges with RGS. In particular, there are areas in Glenwood Springs that are not well served by RGS. Ridership has slowly been declining, while the population continues to increase. The town is congested during peak hours and the majority of residents still drive for almost all trips. On-demand transit can help to address these issues, attract more riders to RGS and other RFTA routes, and increase the mobility of visitors and residents alike.

Via developed three viable scenarios as part of this study. Each scenario provides a different opportunity for the City of Glenwood Springs. **Scenario 1 - Replace RGS** provides an opportunity to transform transit in Glenwood Springs, grow ridership significantly, and operate largely within the existing budget. However, it will require that all existing riders transition to the on-demand service, even if they prefer RGS in its current form. **Scenario 2 - Adjust RGS, Add On-Demand** takes a more conservative approach, adjusting but retaining RGS. It will likely require a modest increase in funding. **Scenario 3 - Retain RGS, Add On-Demand** is the most conservative approach as there will be no change to RGS. It will provide an opportunity to test on-demand transit without impacting existing riders, who can choose to migrate to the new service over time. The City may also choose not to proceed with on-demand transit at this time. It seems unlikely that ridership will increase under this scenario, given declining ridership over the past five years. Operating costs are expected to increase, which may result in funding challenges in the future. The City should determine which scenario best reflects its long term vision for the system and develop an implementation plan that takes the City Council's concerns regarding budget and rider disruption into account.

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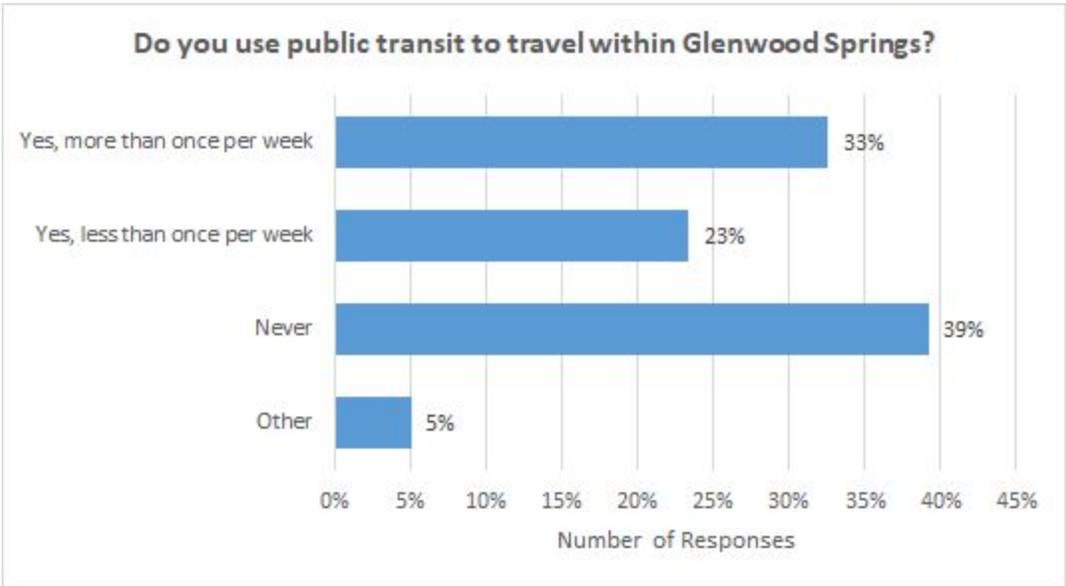
<sup>15</sup> Best Practices in Evaluation Transit Performance  
[https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/transit/pages/bestpracticesinevaluatingtransitperformancefinalreport.pdf?sfvrsn=48878730\\_0](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/transit/pages/bestpracticesinevaluatingtransitperformancefinalreport.pdf?sfvrsn=48878730_0)

# Appendix A - Public Engagement Summary

## 4.1 Survey

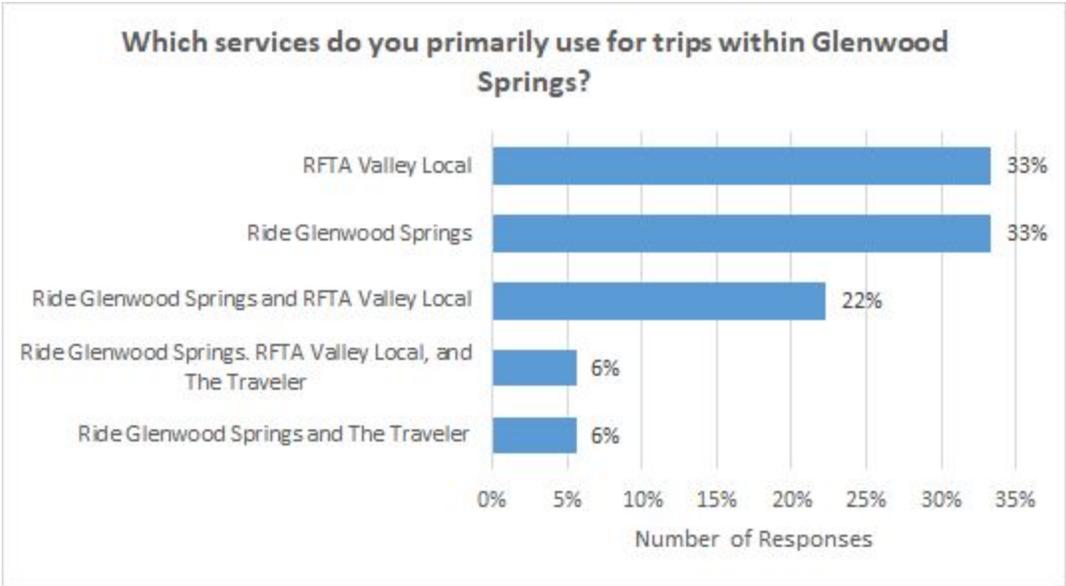
### Question 1 - Transit Use

- **Question:** Do you use public transit to travel within Glenwood Springs?
- **Purpose:** The purpose of this question is to understand what percentage of respondents are regular users of transit services.
- **Discussion:** The survey captured a broad sample of different riders, with over half of respondents using transit services at some point. ~40% of respondents had never used transit services. The 'Other' category was mainly completed by respondents stating that they used the service very rarely.



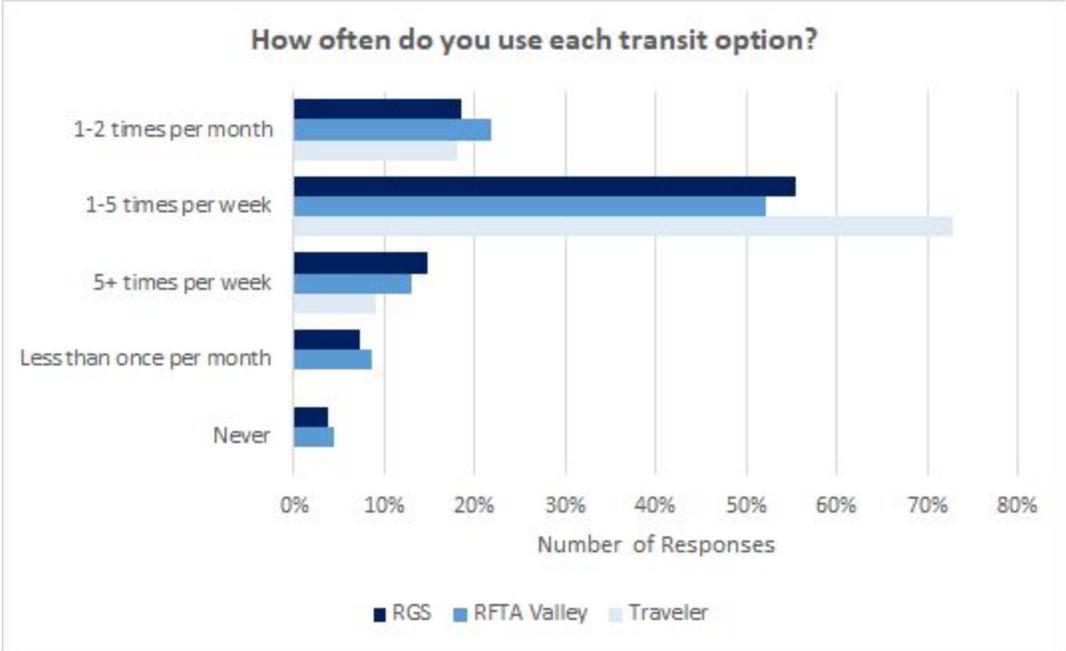
### Question 2 - Transit Mode Choice

- **Question:** Which services do you primarily use for trips within Glenwood Springs?
- **Purpose:** The purpose of this question is to understand what services riders typically use for trips within Glenwood Springs.
- **Discussion:** The survey captured an even mix of RFTA Valley Local and RGS passengers. 12% of respondents use the Traveler service in addition to fixed-route services, which indicates the survey reached a significant number of Traveler users.



### Question 3 - Transit Use by Mode

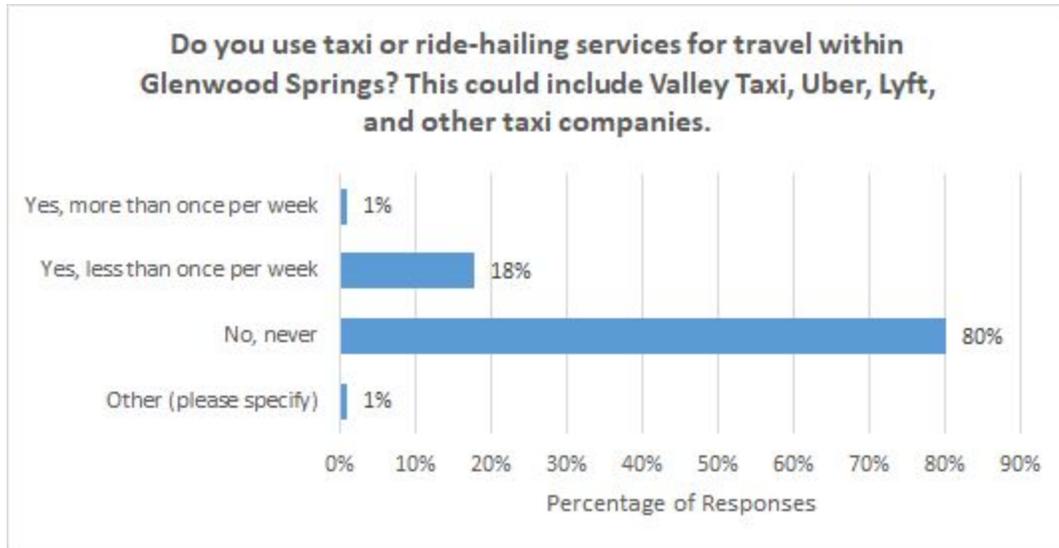
- **Question:** How often do you use each transit option?<sup>16</sup>
- **Purpose:** The purpose of this question is to understand how often respondents used each of the three main transit services available within Glenwood Springs.
- **Discussion:** The majority of respondents use transit between 1-5 times per week. There was no significant difference across RGS, RFTA Valley Local, and the Traveler.



<sup>16</sup> This question was broken down by different transit services, but for simplicity data has been compiled into overall transit use.

## Question 4 - Taxi Use

- **Question:** Do you use taxi or ride-hailing services for travel within Glenwood Springs? This could include Valley Taxi, Uber, Lyft, and other taxi companies.
- **Purpose:** The purpose of this question is to understand how often respondents used taxi and ride-hailing services for trips within Glenwood Springs.
- **Discussion:** The majority of respondents do not use taxi services regularly.

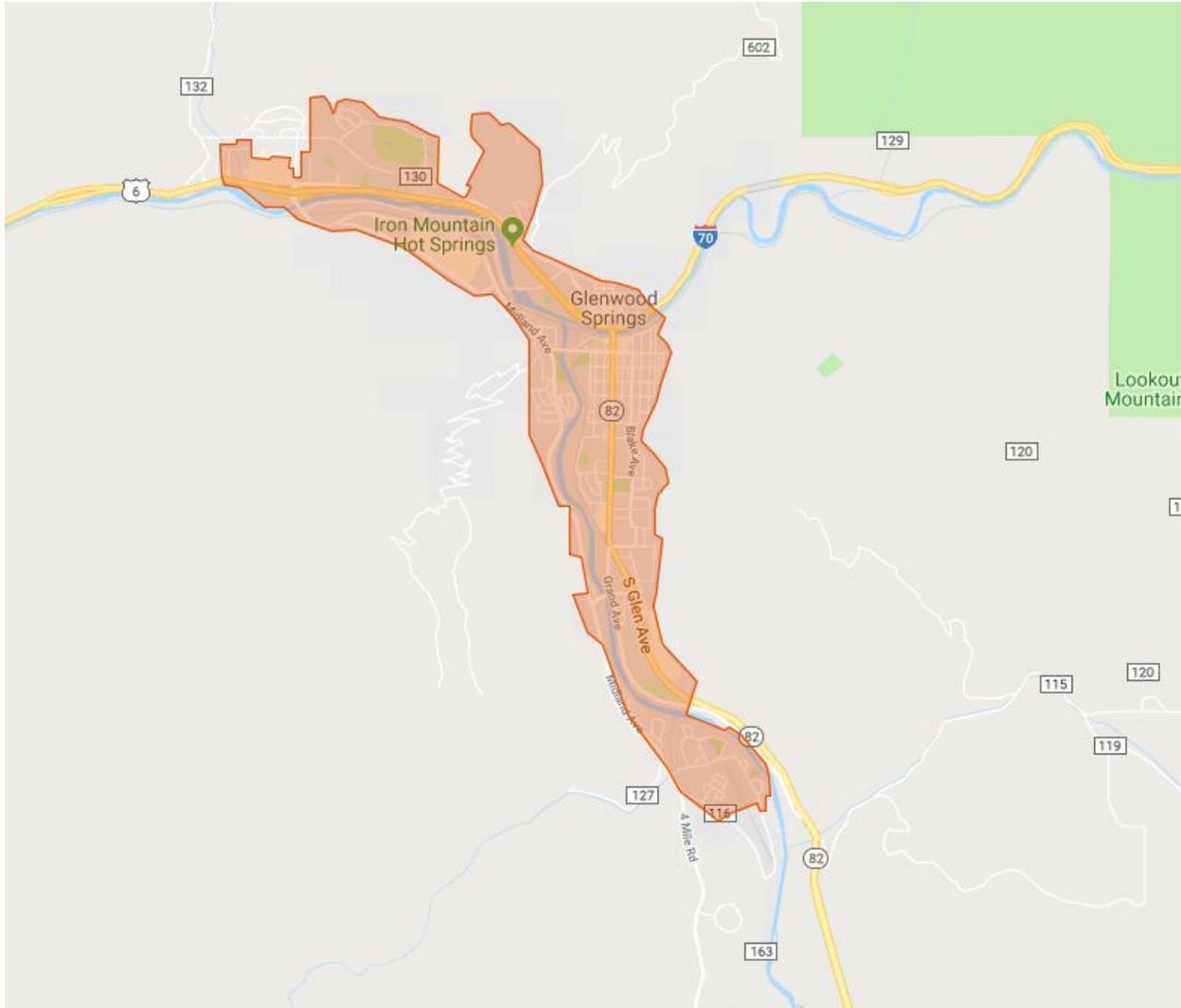


Note: At this point in the survey, a detailed description of how an on-demand service would operate was provided. The information that was shared is shown below:

*An on-demand bus service is being considered by the City of Glenwood Springs.*

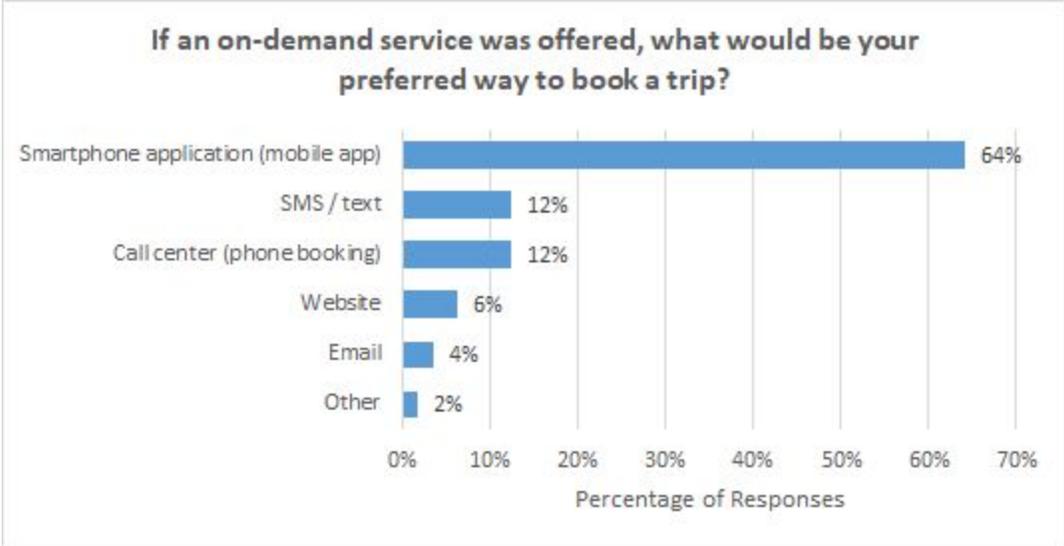
*How would it work?*

- *You can request a ride using a smartphone app, phone call, or text message.*
- *You would wait for a vehicle to come and pick you up nearby (you might have to walk for a few minutes to meet the vehicle).*
- *If you have a smartphone, you can watch your vehicle approaching on your phone.*
- *You would usually wait between 10-20 minutes to be picked up.*
- *The vehicle would stop to pick up other passengers along the way.*
- *Fares would be consistent with current Ride Glenwood and RFTA fares.*
- *You could travel anywhere within the zone shown below.*



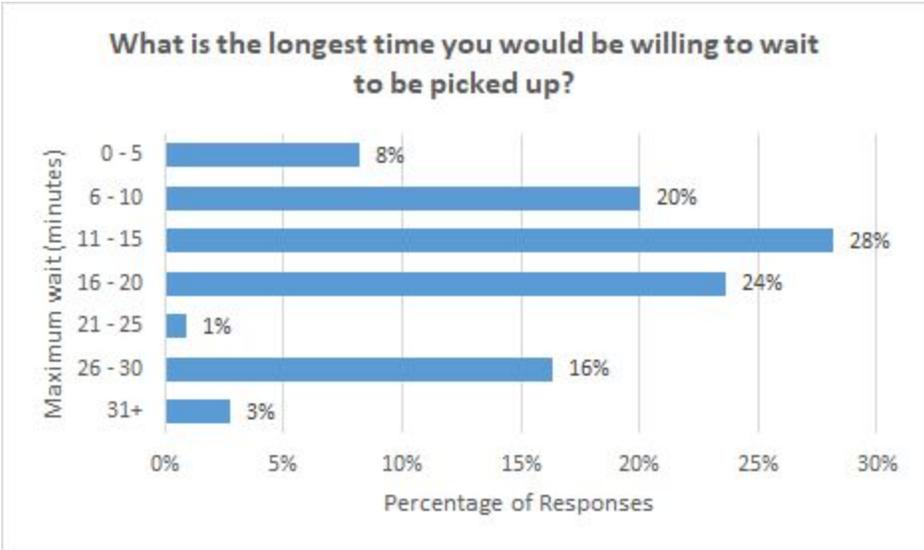
## Question 5 - Preferred Mode of Booking

- **Question:** If an on-demand service was offered, what would be your preferred way to book a trip?
- **Purpose:** To understand what methods of booking should be offered if a service is launched.
- **Discussion:** The majority of riders would use a smartphone app to book a trip. Call center and SMS / text booking were the next most popular options, with 12% of riders saying they would use each option.



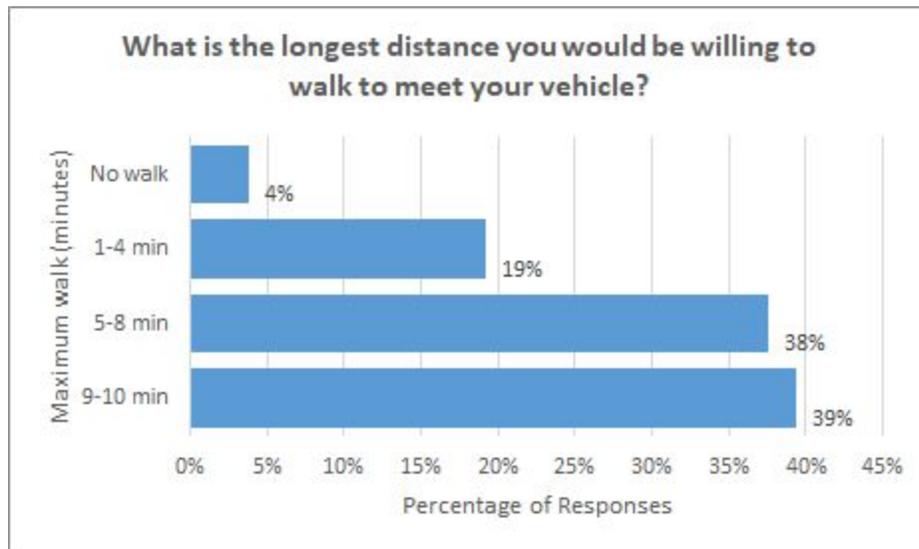
### Question 6 - Wait Times

- **Question:** Once you request a trip, you will have to wait for the vehicle to pick you up at a nearby location. What is the longest time you would be willing to wait?
- **Purpose:** To understand what quality of service expectations riders have.
- **Discussion:** The median wait time expectation was 15 minutes. There was a relatively wide range of wait time expectations, and it will be difficult to please all potential passengers.



## Question 7 - Walking Distance

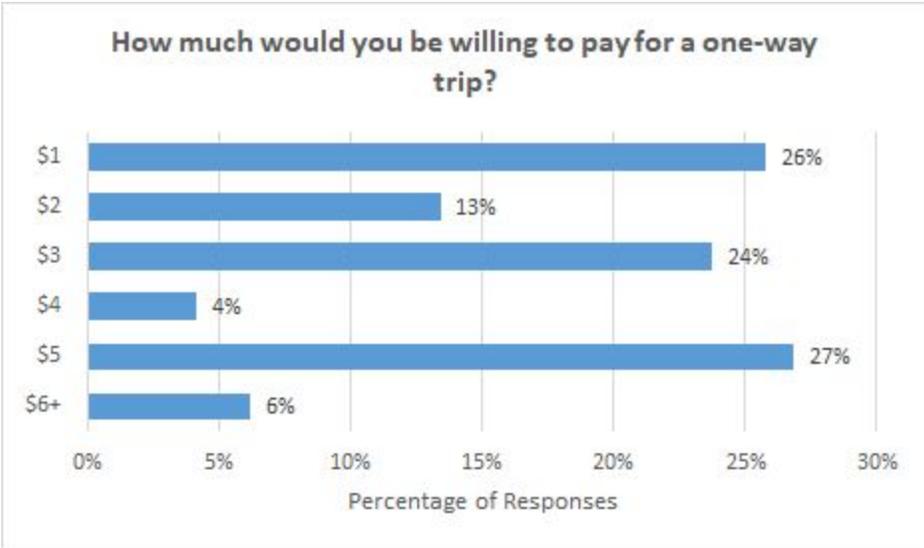
- **Question:** Once you request a trip, you will have to walk to meet the vehicle at a nearby street corner or bus stop. What is the longest distance you would be willing to walk to meet your vehicle? (choose 0 - 10 minutes)
- **Purpose:** To understand passengers' willingness to walk to meet their vehicle.
- **Discussion:** The median walking distance expectation was 5 minutes and the average was 6.4 minutes. Via typically assumes a walking pace of 2-3 miles per hour<sup>17</sup> which results in an average walking distance of 0.2 - 0.3 miles. This aligns with commonly accepted standards of providing transit within 0.25 miles where possible.



## Question 8 - Fares

- **Question:** How much would you be willing to pay for a one-way trip?
- **Purpose:** To understand passengers' willingness to pay for an on-demand service.
- **Discussion:** There was a wide range of fare expectations across passengers. 26% of passengers would not be willing to pay more than the \$1 existing fare. The median and mean fare was \$3. Almost one in three passengers would be willing to pay \$5 or more.

<sup>17</sup> <https://www.ncbi.nlm.nih.gov/medgen/926116>

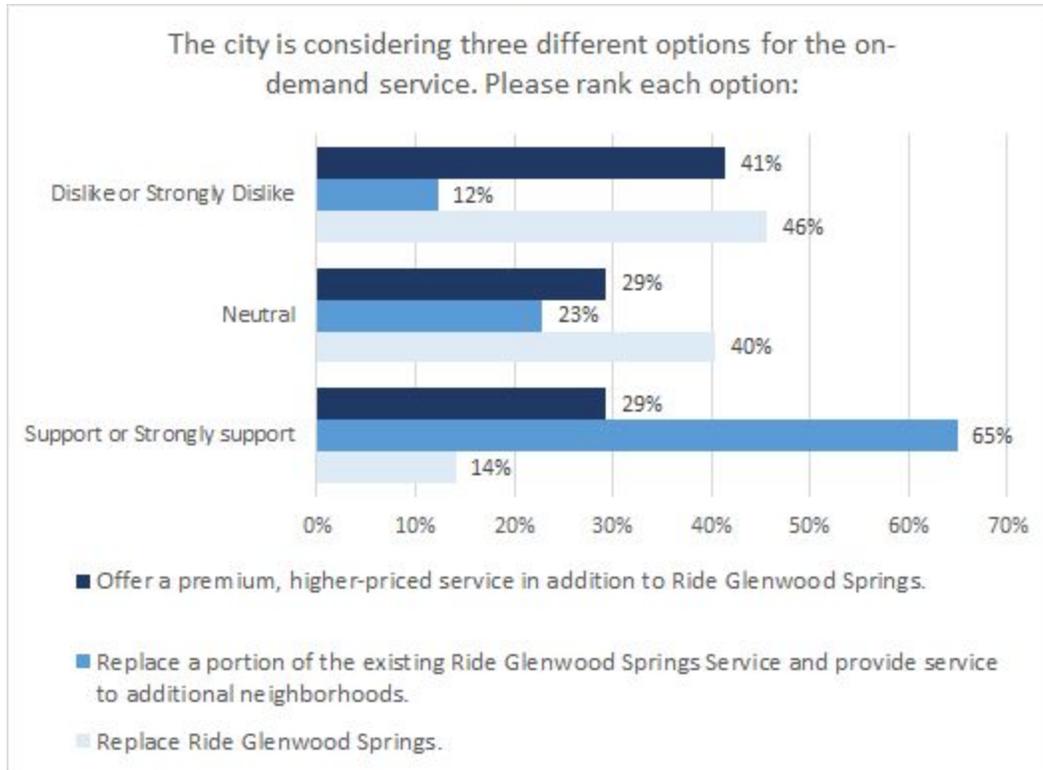


### Question 9 - Service Option Preferences

- **Question:** The city is considering three different options for the on-demand service:
  - Replace the RGS service completely.
  - Replace a portion of the existing RGS Service and provide service to additional neighborhoods.
  - Offer a premium, higher-priced service in addition to RGS (you could use it anywhere within the Glenwood Springs).

Please rank each option.

- **Purpose:** To understand whether respondents were supportive of each proposed service option.
- **Discussion:** Respondents were most supportive of an option that replaces some of the Glenwood Springs route while providing service to additional neighborhoods (65% were supportive while only 12% were opposed to the idea). The least popular option was a full RGS replacement, with 14% of respondents supporting the change and 46% opposed.



### Question 10 - Overall Opinion of Service

- **Question:** Please provide general comments regarding a potential on-demand transit service in Glenwood Springs. Do you like the idea? What concerns do you have?
- **Purpose:** To allow respondents to share their opinions on the service.
- **Discussion:** Overall, there were 42 positive comments, 16 negative comments, and 20 neutral or other comments.

**Positive:**

- I am not proud to say I don't use ride glenwood at all but I actually might use this proposed service occasionally
- I do like this idea, and would prefer that additional service be provided to other neighborhoods that don't currently have it.
- I like it, am deaf but the text availability would be perfect . I am a senior , so wait time needs to be maybe 15 min or less, preferably. It would reduce the number of trips I make to town in my vehicle, be better for traffic congestion. Healthier for me .
- I like that South Glenwood is part of the options.
- I like the idea.
- I like the idea but personally I'd love to see a public transportation option extended up to Parachute.

- I like the idea, especially for those in a hurry. I just go to meadows and the bus works well for me.
- I like the idea of it but wouldn't want to stop regularly scheduled busses to ensure folks can get where they need to go when they need to
- I like the idea. But I'm a bit concerned about replacing RGS
- I like the idea. I wonder if it is accurate or not
- I like the idea. It will help parking and traffic
- I love the idea
- I love the idea! My teen loves using public transportation, but since we live in Cardiff Glen, it is not an option for her. I hope this thing flies! Thanks for thinking outside the box.
- I love the idea. Feel safer using the service.
- I think finding additional public transportation options in GWS is crucial. We need public transportation that provides access to South Midland (Sopris Elementary/Cardiff Glenn). We also need public transportation options for late weekend nights for people heading out to downtown for food and fun.
- I think it a good idea
- I think it sounds really positive I would really like this service
- I think that creating a ride-sharing service similar to Uber or Lyft would have a higher usage rate.
- I think this could make public transit more useful to older adults and professionals who need to get into the downtown core where parking is scarce.
- I think this is a great idea! I've always wanted transit service to the Glenwood Park neighborhood. I would definitely use it.
- Like idea for evenings going out etc
- Love good dial a ride
- Love the idea. Concerned about safety and availability - would late night be an option?
- Love the idea. I believe it would service a wider range of our population and tourists
- It could be a good idea. It would have to be faster than the bus
- It would be great to cut down on traffic and help tourism
- Just a visitor but always good to provide options
- Overall you like the idea. Want to take bike for free.
- Si me gustaria para saber done esta el camion y Cuando llegara a la parada
- Sounds great for older seniors
- The Park East area needs transportation, and many of the individuals that would utilize it wouldn't be able to pay a high premium. \$1 would be feasible.
- Visitors or folks who do not normally use the bus but have to in a pinch and do not want the hassle of hailing a ride
- Yes like. Concerned about privacy
- I think it's a good idea. Will there be bus stops for it? How will the bus driver know who to pick up?
- I think it's awesome for people who are disabled

- It's a great (I work at Mountain Valley)
- It's a great idea
- I like the idea. It's cool seem modern.
- I would use this in emergencies as a premium service if I'm running late
- It could be really helpful I'd be interested to see how it turns out

**Negative:**

- I don't like the idea. Keep the same service as we have now. Some folks may not have a phone or access to wifi.
- I think it would hurt more people than it would help. There would be less buses running and they run every 20 minutes right now.
- I think this is a terrible idea. All the buses in GWS are empty as it is & just hog the road and slow down traffic. Why would you have more empty buses driving around picking people up and competing with lyft or uber? Just get rid of the empty buses & save money \$\$\$ you "so desperately need".
- I think this is a very stupid idea and a waste of money,
- I would get more out of improvements/options for first mile last mile connections rather than changing RGS.
- I would prefer they kept RGS.
- Like I stated before, my son with disabilities who uses the bus and Traveler is not capable of understanding or using a service in which he needs to make calls, texts or technology to obtain transportation. He understands bus schedules and knows how to look at a time and get himself to a specified place at a particular time but not on demand with phones or emails.
- Na
- No
- Prefer fixed route
- Unnecessary
- Yes, concerning, should not replace RGS.
- I don't like the idea because I think there will be too many buses clogging up the streets.
- I'm accustomed to using whatever I'm given. I could see it being delayed by too many stops. I wouldn't want to miss the hog back ?
- I wouldn't use it. I like my schedule
- I love Ride Glenwood. I use it everyday, please don't get rid of it. Drivers should be taught how to go to the hospital.

**Neutral or Other:**

- Need new equipment
- General comments: bus drivers are unfair and rude. Wants more female drivers
- Given the traffic I had to drive 3 min but it was too far to walk

- How long would the ride to the destination take? That would be extremely important to provide to users with the app. Not just the wait for pickup, but the overall time of the wait and the trip.
- I only ride RFTA up valley. I ride my bike within Glenwood Springs, and I only drive if I have to carry large items.
- I personally used public transportation a lot when I lived up-valley. However I live in south Glenwood and there are no options over in our neighborhood. I think a bus stop and/or we-cycle would greatly improve my use of the bus.
- I would have to think about it before deciding how I feel
- I'd like to see how it works first before I make a decision.
- I'm glad that staff is trying to be creative with the next generation of transit and mobility. My main concern is traffic. While potentially a solution for folks w/o personal vehicles (which is not a small portion of the community), it seems like it would take away from other key benefits to public transit: environment and traffic reduction. Perhaps an "off-peak" discount or a peak hour/surge pricing to encourage use outside of the really busy hours? In much larger cities, I do like to use ride-sharing apps (like Lyft and Uber) and I am intrigued by the idea of picking up fellow passengers as a form of micro transit. If a service like this were enacted, it would be great to see it as a trial/pilot program that has flexibility to adapt. I would also be concerned with seasonality - I would guess that winter usage would be much higher as people are less inclined to walk/bike in winter conditions. What would the implications for staffing/vehicles/wait times, etc. In town/crosstown access isn't really a priority for me, but increased access to New Castle/Carbondale is important to me. Separate program, but would like to see the downtown BRT station sooner rather than later. I'm sure that this has already happened, but I bet Aspen has good insights on a program like this with their Downtowner shuttle. Different program, but maybe some interesting insights. Would also highly encourage conversations with transit providers (taxi) early as they can be a cranky and loud bunch.
- Interesting concept. I work here but don't live. If I wait 5 minutes for a ride and I walk 5 minutes to catch the ride. I could be in my car and at my meeting site in 10 minutes. I don't think it would save me time. During the bridge closure, I could walk faster than I could ride the bus.
- My concern is that homeowners will be asked to pay even higher property taxes.
- Make sure to vet drivers. I would use it more often. Maybe have 6 vehicles available
- Sounds interesting
- weather...summer walking and waiting not such an issue. Winter, shorter distance and wait time for obvious reasons
- what about tourists?
- Get the homeless off of it !! Get security on it !! Charge more than \$1.00, and have the demand service only in areas not on the Ride GW routes. Don't contract RFTA drivers & their buses, let the city do it themselves !!!!
- Longer service hours. As long as rgs is open later I wouldn't need this service

- I feel neutral I don't understand it enough
- You could increase fares once you prove it is reliable. Maybe \$2. Don't think there is enough people for that. Ride Glenwood is never full.
- Not enough info yet.

## Question 11 - Respondent Information

- **Question:** It would be helpful to know a little more about you. Are you a:
  - Year-round local resident
  - Seasonal local resident
  - Work in Glenwood Springs but live elsewhere
  - Visitor / tourist
  - Other
- **Purpose:** To understand where survey respondents live.
- **Discussion:** The majority of respondents were year-round local residents.

