



# City and Borough of Juneau Transit Development Plan FINAL REPORT

February 13, 2014



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# Transit Development Plan

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## 1 INTRODUCTION

Unlike many small cities across the country, transit in Juneau is very well utilized and is an important part of the transportation infrastructure and daily life. In fact, ridership on Capital Transit is among the highest in the country for a community of its size. Buses in Juneau are frequently full, service is provided seven days a week, and service extends well into the evening, which are all characteristics of much larger transit systems. Financial and community support for transit in Juneau is also exceptional compared to most other small cities, with many very passionate about ensuring transit continues to be an integral part of Juneau's transportation system.

However, in recent years, physical changes in the community (traffic, new signals, etc.) and increasing ridership on the transit system have meant buses are running behind schedule more often, some transfers are being missed, and buses are overcrowded at certain times of the day. Operators are also having a harder time staying on schedule, especially in the late afternoon, and they often do not have time for a break after driving very long routes. At the same time, there are demands for service to areas of the community that do not currently have transit service – in particular Riverside Drive, the Lemon Creek industrial area, and the Ferry Terminal. Similarly, there are demands for earlier and later service to certain areas, like UAS, the employment center in Lemon Creek, and downtown Juneau. And while service has been improved over the last 20 years, such as more frequent express service since the last Transit Development Plan, the route structure has not changed as much as the community has. While the permanence of transit in Juneau is a benefit, the existing transit system can no longer be maintained as is, let alone meet new service demands. At the same time, it is recognized that funding is constrained, and thus this Transit Development Plan has focused on recommendations that do not significantly increase operating costs. Because resources are not infinite, changes to the system necessarily come with strengths and weaknesses.

The City and Borough of Juneau (CBJ) recognizes that transit services must periodically be reviewed to ensure they are effectively bringing people where they need to go. As such, a Transit Development Plan (TDP) is performed about every five years. As with other TDPs, this update was performed to evaluate how well Capital Transit and Care-A-Van are serving existing population, employment and activity centers in the community, as well as the overall productivity and effectiveness of individual bus routes. This TDP update consisted of the following key tasks, all of which have resulted in the recommendations included in this report:

- **A Comprehensive Operations Analysis** that included:
  - A **market analysis** that identified concentrations of population and employment, as well as other activity centers that have the ability to effectively support transit
  - **Stakeholder outreach**, including extensive stakeholder interviews and meetings to discuss common objectives and perceived travel needs throughout the Juneau area.
  - **Customer and non-rider surveys** conducted during the spring and summer of 2013 to identify the travel patterns and desires of more than 2,000 riders, as well as individuals who don't currently ride Capital Transit or Care-A-Van.

- A **peer review** of five other communities around Alaska and the country that have some characteristics similar to Juneau.
- **Detailed route evaluations** that consisted of in-depth analysis of the market each route is intended to serve, its ridership patterns, its strengths and weaknesses, and opportunities for improvement.
- **Development of service scenarios** that included:
  - **Three service scenarios** that presented different ways transit could be provided in Juneau.
  - **Presentation of the service scenarios to the public** as well as the Assembly and Planning Commission.
  - **An online survey** soliciting input on the service scenarios.
  - **Ongoing communication with a Project Management Team** to discuss technical issues and concerns.

The information gained during this process led to the recommendations in this Plan. The recommendations incorporate a number of common improvement themes, plus specific changes to each route, as described in subsequent sections. It is important to reiterate that the context for all recommendations is a goal to minimize the need for increased local financial support for transit.

All of the recommendations are based on the following service goals:

1. Ensure that routes have adequate time to operate on-schedule.
2. Better match service levels with ridership demand to ensure resources are being used in the most efficient way possible.
3. Evaluate requests/demand for service to new areas, including:
  - Riverside Drive
  - Lemon Creek industrial/employment area
  - Ferry Terminal
4. Strive to ensure high-quality and convenient service, so that:
  - When a transfer is required, make it convenient and comfortable with wait times as short as possible.
  - Service is provided for commuter needs during peak periods as well as riders using the service during non-peak times and on weekends.
  - Some service continues to operate through the core of downtown (Franklin, Fourth, and Main).
5. Ensure that service design, marketing information, buses, and other elements of the service are as legible and easy-to-understand as possible.

## 2 OVERVIEW OF RECOMMENDATIONS

As described at the beginning of this document, Capital Transit is very successful, but is also stretched very thin, and due to financial constraints, does not serve all areas where there is demand. The framework for this effort was to determine:

- Short-term changes that could be made over the next two years within Capital Transit's existing budget, or that would require only minimal increases.
- Mid-term improvements that could be made in years three to five that would grow the system to meet the most important unmet demands.

Within this overall framework, the study was also guided by a number of service goals, which were:

1. Ensure that routes have adequate time to operate on schedule.
2. Provide service to new residential and employment areas including Riverside Drive, the Lemon Creek industrial/employment area, Juneau International Airport and the AMHS Ferry Terminal.
3. Maintain timed-transfers to the greatest extent possible, and provide convenient and comfortable transfer locations.
4. Operate all downtown service to, from, or via the Downtown Transit Center.
5. Match service levels with ridership demand to ensure resources are being used as efficiently as possible.
6. Ensure that service design, marketing information, buses, and other elements of the service are as legible and easy-to-understand as possible.

The short-term recommendations will resolve most existing operational issues (primarily reliability) and expand service to Riverside Drive, which is the highest density area in Juneau that is not served, and Montana Creek. However, they do not achieve all of the service expansion objectives, as there is no way to provide service to the Lemon Creek Industrial Area, the Auke Bay ferry terminal, and implement a downtown circulator within existing or minimally expanded budget levels. Thus, some service expansion initiatives are in the mid-term, rather than short-term, recommendations, or are not included. A summary of how each major objective is addressed follows:

- **Improve on-time performance:** Existing Valley Local and Express routes are increasingly operating behind schedule at certain times of the day, resulting in late arrivals and missed transfers. In addition, drivers have little or no time for layover and recovery at certain times of the day, resulting in routes remaining behind schedule on successive trips. The proposed short-term changes would resolve all on-time performance issues. The most significant ways in which this would be done include:
  - Add a third bus to the Express route during peak periods to provide additional schedule time (and allow service to be extended to Montana Creek and the Downtown Transportation Center (DTC)). However, to offset the cost of the additional bus, midday service frequencies would be reduced from every 30 to every 60 minutes.

- Shorten Valley Local service to operate to and from the Downtown Transit Center rather than around the downtown loop, and via a more direct alignment through Lemon Creek.
- **Maintain timed-transfers:** On paper, Capital Transit provides perfectly timed transfers between nearly all routes; in practice, late buses mean that many are being missed. The proposed short-term changes would provide reliable timed-transfers for the large majority of existing riders. However, longer transfers would be required for some trips, most notably non-peak direction travel between Douglas and the Mendenhall Valley or Lemon Creek.
- **Provide service along Riverside Drive:** Riverside Drive is the highest demand area in Juneau that is not served, and is the location of important public facilities such as the Dimond Park Aquatic Center, a soon-to-be-constructed Library, Thunder Mountain High School and multiple sports fields. The short-term recommendation includes seven day a week service to Riverside Drive with reconfigured Valley Local service.
- **Maintain service to Back Loop:** Ridership on “Back Loop” portion of Mendenhall Loop Road is low, but existing riders rely on the service. With the shifting of Valley Local service to Riverside Drive, the short-term recommendations include extending Express service to Montana Creek via the Back Loop. However, service to the Back Loop and Auke Bay would end approximately two hours earlier than it now does (late evening ridership in this area is low).
- **Provide service to Lemon Creek Industrial Area:** The Lemon Creek Industrial Area, which is where Costco, the Alaskan Brewing Company, Home Depot and other major employers are located, is another high demand area that is not served. The provision of service to this area, which primarily benefit employees, but also shoppers, would cost an additional \$550,000 per year and cannot be accommodated within existing budget levels, and thus is not included in the short-term recommendations. It has, however, been included in the mid-term recommendations and can be implemented when funding becomes available.
- **Provide service to Auke Bay Ferry Terminal:** A significant amount of demand was expressed throughout this study for service to the Auke Bay ferry terminal. However, the provision of this service would cost \$500,000 per year and cannot be accommodated within existing budget levels, and thus is also not included in the short-term recommendations. It has, however, been included in the mid-term recommendations and can be implemented when funding becomes available.
- **Implement a Downtown Circulator route:** There was significant demand expressed during this study for a dedicated downtown circulator to provide service every 15 minutes. The implementation of a downtown circulator bus that operates from 7:00 AM to 11:00 PM seven days a week would cost approximately \$600,000 per year to operate and cannot be accommodated within existing budget levels.<sup>1</sup> Instead, service would be provided around the downtown loop every 30 minutes by the Douglas route.
- **Provide earlier service for workers with early work start times:** Existing service is generally designed to serve work trips that start at 8:00 AM, while many workers start earlier. The short-term recommendation includes earlier service on the Valley Local and Express routes to better serve start times as early as 7:00 AM.

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<sup>1</sup> Construction and operation of a fixed-guideway circulator system would be more expensive to initiate, but would likely result in increased private investment along the alignment and higher tax revenues. As a fixed-guideway system is likely a longer-term project than the five-year planning horizon of this TDP, this project did not include a market analysis or impact study of such a system.

- **Provide later Express service between UAS and downtown:** Service on the Express route currently ends at 6:03 PM from downtown and 6:27 PM from UAS, and thus does not serve evening classes. The short-term recommendation adds new Route 2 Auke Bay – Nugget Mall service that would operate until 8:47 PM from the Nugget Mall and until 9:22 PM from UAS with connections to and from downtown at the Nugget Mall. However, as mentioned above, Valley Local service would no longer operate via the Back Loop, and thus the proposed service would end earlier than the existing Valley Local route that now indirectly serves UAS.
- **Implement technology improvements to improve operations and passenger information:** Capital Transit performs many functions manually that most other transit systems have automated. The mid-term recommendations include procurement and implementation of technology solutions that are now used as a matter of course by most transit systems:
  - Computer Aided Dispatch (CAD) and Automatic Vehicle Location (AVL) so that Capital Transit can know where its vehicles are and quickly respond to problems, and provide passengers with real-time passenger information.
  - Electronic fareboxes, to improve fare handling and provide better ridership information.
  - Automatic Passenger Counters (APCs) to track ridership and loads on an ongoing basis, so that Capital Transit can make service adjustments more quickly than every five years (the TDP cycle).
  - Real-Time Passenger Information via signs at major transit points and via smartphones.
  - Improved web and printed information, and the provision of schedule information via Google Maps.
- **Make service simpler and easier to understand:** There are a number of existing service elements that are confusing to many, and especially potential new riders. These include the alternating loop service in the Mendenhall Valley, “Additional Service” trips that are similar to, but different than, existing services, and in the case of Douglas service, create a “hole” in the regular schedule, and inconsistent route nomenclatures. The short-term recommendations would make service simpler and easier to understand in a number of ways:
  - Rebrand all routes with a name and a number.
  - Operate loop service through the Mendenhall Valley counter-clockwise only.
  - Combine the different Mendenhall Valley and Lemon Creek “Additional Service” express trips into a new Route 1X Mendenhall Valley – Downtown Express route in which all trips would operate in a consistent manner.



## 3 SHORT-TERM RECOMMENDATIONS

The short-term recommendations consist of low cost changes and improvements that would resolve existing operating issues, provide better service to most riders, expand service into some new areas, and provide better service information to existing and potential new riders.

### SYSTEMWIDE IMPROVEMENTS

For people to be able to use transit, they must first know that it is there and be able to understand how to use it. This means that it is extremely important for transit systems to provide clear and concise information on their available services. Furthermore, transit in Juneau serves a very broad cross-section of the area's residents, workers, and visitors. Because different people access, use, and process information in different ways, transit systems must deliver clear and consistent information in a number of different ways. For example, many seniors are not web-literate, and thus the provision of information via the web will not reach many older residents. For this reason, telephone and printed information must be provided. However, telephone and printed information will not reach many younger riders, who rely primarily on the Internet. For transit systems to reach the people that they are there to serve, it is essential that they provide effective information in ways that will reach all potential riders.

Proposed improvements for Capital Transit include consistently numbering and naming routes to provide greater clarity on where they go, improving printed marketing information, and getting Capital Transit on Google Transit.

#### Designate All Routes with Numbers and Names

Capital Transit inconsistently labels routes with numbers and names, or just names. To make it easier for passengers to refer to routes and understand how they operate, all routes should be rebranded with both a number and a name. The following are suggested designations for the proposed new and revised services:

- 1 Mendenhall Valley - Downtown
- 1X Mendenhall Valley – Downtown Express
- 2 Montana Creek/Auke Bay – Nugget Mall
- 2X Montana Creek/Auke Bay - Downtown Express
- 5 Douglas - Downtown
- 6 North Douglas - Downtown

The route names and numbers should also be used consistently on all schedules, bus head signs, on marketing materials, etc.

#### Publish Schedule Information on Google Transit

Google Transit is increasingly becoming an important trip planning tool for transit riders across the country. Just a few years ago, Google Transit's availability was limited to larger or more extensive systems – but no longer. Even small and rural communities are taking advantage of Google Transit. While the service is free to use, there are costs associated with formatting schedule and bus stop

information into the General Transit Feed Specifications, or GTFS. The GTFS is essentially a common format that transit providers can use to incorporate transit schedules, fares and associated geographic information into Google Maps. Due to the interest in getting into Google Transit, the wait time can be substantial. As such, it is recommended that Capital Transit begin this process as soon as possible – even if it is before service changes are implemented as part of this TDP. Once a transit agency has submitted their GTFS to Google, and has been accepted, changes are relatively easy to make. (Additional information about Google Transit can be found at: <https://developers.google.com/transit/>. The National Rural Transit Assistance Program also provides support and software for GTFS development: [www.nationalrtap.org](http://www.nationalrtap.org).)

## Produce System Map and Single Brochure with Simplified Schedules

For many riders, the starting point for determining whether service is available is a system map. Effective system maps display the services that are available with enough detail to allow the user to determine origins, destination, major attractions, and routes. Similarly, a single transit brochure allows riders (or potential riders) to quickly understand all available transit services.

While Capital Transit had historically prepared a system map and brochure, and the website has an interactive system map, print versions have been replaced by two schedule pamphlets with simplified route maps:

- One of the brochures is blue and labeled simply “Bus Schedule.” This brochure clearly presents the schedules for Route 3/4 Valley Local and Douglas service. It less clearly presents information on North Douglas service and most of the “Additional Service” peak period express trips that are provided between the Mendenhall Valley and Lemon Creek and downtown.
- The second brochure is red and labeled as “Express Bus Schedule.” This brochure clearly presents UAS/Auke Bay – Downtown express service schedule, but does not present any information on the “Additional Service” peak period express trips (which as described above, are presented in the “Bus Schedule” brochure).

Because these brochures present the schedule information inconsistently, some riders—or more importantly, potential riders—can be confused by the two schedules, or just pick up the Bus Schedules brochure and think that the routes presented therein are the only services available. To provide clearer information on available services, the existing two brochures should be combined into a single brochure.

## Upgrade Website

Websites for transit systems have become ubiquitous, and most people interested in using transit find the information they desire on the Internet. While Capital Transit makes good use of its website within the City’s site, the website is easy to find via search engines, and the website is simple to link from other sites or put on printed materials ([www.juneau.org/capitaltransit](http://www.juneau.org/capitaltransit)), it would be preferable to have a stand-alone website specifically for Capital Transit with links back to the CBJ website. The website should include all of the same information as the brochure (system map, schedules, fare information, etc.), but could also include some additional features, such as:

- Links to a Facebook page and/or Twitter feed
- Trip planner (using Google Transit, when available)
- Information on news, events and rider alerts
- Ability for users to provide input about the system (phone, email, comment form)

## ROUTE CHANGES

This section presents specific recommended short-term route changes. A map of the proposed changes is shown in Figure 1, and draft schedules are presented at the end of this report for each route.

One important note about the recommendations is that Capital Transit's services are currently scheduled to facilitate transfers at the Nugget Mall and the Federal Building, and when service is operating on schedule, convenient transfers are available between nearly all routes in all directions. However, because travel times have been increasing, more and more transfers are being missed, and with increased travel times, there is no possible way to continue to provide timed transfers between all routes. These recommendations maintain very convenient transfers for most, but not all, riders. Key information on transfer-related elements of the recommended service plan is as follows:

- **Maintain Nugget Mall as outer transfer location.** The Nugget Mall has served as the main transfer location for the Express and Local buses in the Mendenhall Valley for many years and it offers a good location for transferring passengers (on Mallard Street). While passenger facilities are minimal (there are two small shelters), the location is relatively easy to access, there are sidewalks on both sides of the street, a marked crosswalk across Mallard Street, and a door directly into the Nugget Mall close to the bus stop. For these reasons, it is recommended that in the short-term, this remain the main transfer location in the Mendenhall Valley.
- **Maintain timed-transfers for the major travel flows.** There are a number of important timed transfers in the existing system, particularly:
  - Mendenhall Valley Local (Routes 3 and 4) to the Express route (both directions) at the Nugget Mall
  - Mendenhall Valley Local (Routes 3 and 4) to the Douglas route (both directions) at the Federal Building

Maintaining these transfers is a primary focus of the service changes. However, because of modified route alignments, timed transfers between the Valley Local (Route 1) and the Douglas Local (Route 5) occur in one direction in the morning (inbound Route 5 to outbound Route 1) and the other direction in the late afternoon and evening (inbound Route 1 to outbound Route 5). This is because ridership from Douglas is largely inbound to Juneau in the morning and outbound to Douglas in the afternoon/evening.

**Operate all service to/from or via the Downtown Transportation Center.** Besides the buses themselves, the Downtown Transportation Center (DTC) is most visible feature of Capital Transit, and provides a very comfortable transfer location. As such, it is recommended that all routes serve the DTC – both for symbolic reasons as well as operational reasons related to driver layover and recovery.

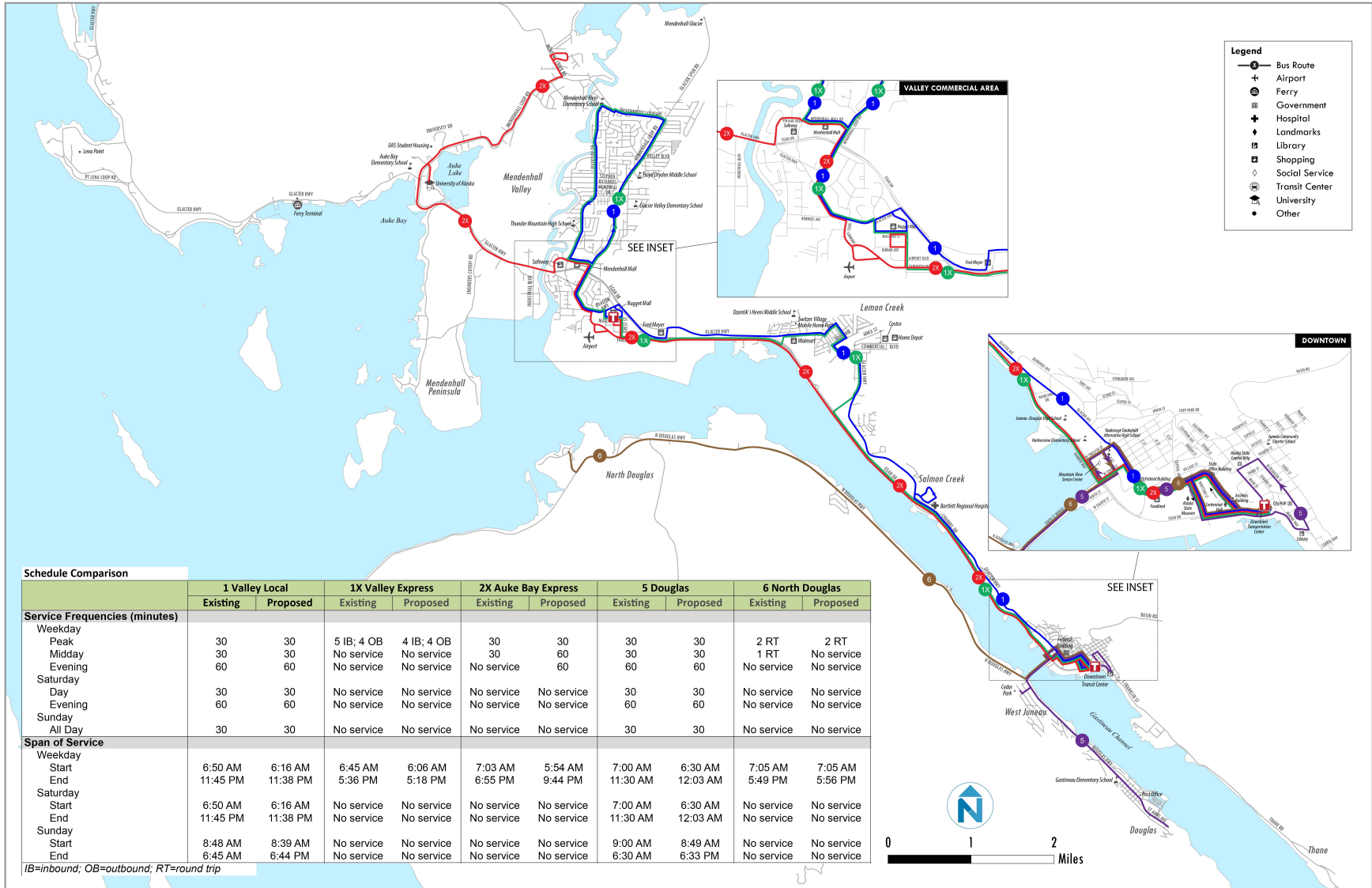
### Route 3/4 Valley Local (Rebrand as Route 1 Mendenhall Valley – Downtown)

Route 3/4 is Capital Transit's highest ridership route, and in most respects is very successful. However, there are a number of issues, which are:

- Bus running times have increased due to heavier traffic, new traffic lights, and heavy ridership to the extent that the route is now experiencing significant on-time performance issues, especially in the late afternoon. As a result, transfers are being missed and drivers often do not have sufficient time for breaks.
- The route does not serve Riverside Drive, where demand is among the highest in Juneau, and where new community facilities have been and continue to be located.

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**Figure 1 Map of Recommended Changes**



- The alternating loop operation through the Mendenhall Valley (Route 3 counter-clockwise/Route 4 clockwise) is confusing and makes service frequencies irregular.

To resolve these issues, the following changes are recommended (see also Figure 2):

- Revise the outer loop so that all service operates counter-clockwise via Mendenhall Loop Road, Mint Way, and Riverside Drive. This shift will continue to provide frequent service to the eastern part of Mendenhall Loop Road and provide additional service coverage to an area with high population density (Riverside Drive), serve activity centers at Dimond Park (high school, library, pool), and improve the simplicity service and provide more consistent service.
- Shorten the deviation through Lemon Creek to operate via Central Avenue, Lund Street and Davis Avenue. This change will reduce travel times for through passengers while still providing convenient service to Lemon Creek, and the time savings will help resolve reliability issues.
- Operate service to and from the Downtown Transit Center instead of via the downtown loop to shorten running times, also to resolve on-time performance issues.
- Start weekday service earlier, at 6:16 AM, to serve 7:30 AM work start times.
- Rebrand the route as Route 1 Mendenhall Valley – Downtown.

With the exception of the earlier weekday service described above, service spans and frequencies would remain essentially as they are today (see Table 1).

**Table 1 Valley Local and Route 1 Schedule Comparison**

	Existing Route 3/4			Proposed Route 1		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
<b>Service Frequencies (mins)</b>						
Peak	30	30	30	30	30	30
Midday	30	30	30	30	30	30
Evening	60	60	-	60	60	-
<b>Span of Service</b>						
Start	6:50 AM	6:50 AM	8:48 AM	6:16 AM	6:46 AM	8:39 AM
End	11:45 PM	11:45 PM	6:45 PM	11:38 PM	11:38 PM	6:44 PM

## Express Route (Rebrand as Route 2 Montana Creek/Auke Bay – Nugget Mall and Route 2X Montana Creek/Auke Bay – Downtown Express)

The existing Express route operates between UAS and the Archives Building in downtown. This route is also experiencing on-time performance issues and currently does not operate all the way into downtown because it does not have sufficient time to do so. Because transfers between this route and the Valley Local route are so important, many of the recommended changes are designed to ensure that these connections can be provided more reliably (see also Figure 3). They would also provide seven day a week and evening service to and from the airport:

- Add a third bus during peak periods so that it can operate reliably.
- Extend most outer end service to Montana Creek to serve this growing neighborhood and maintain service on Back Loop in lieu of existing Valley Local (3/4) service.
- Extend downtown service to the Downtown Transportation Center.

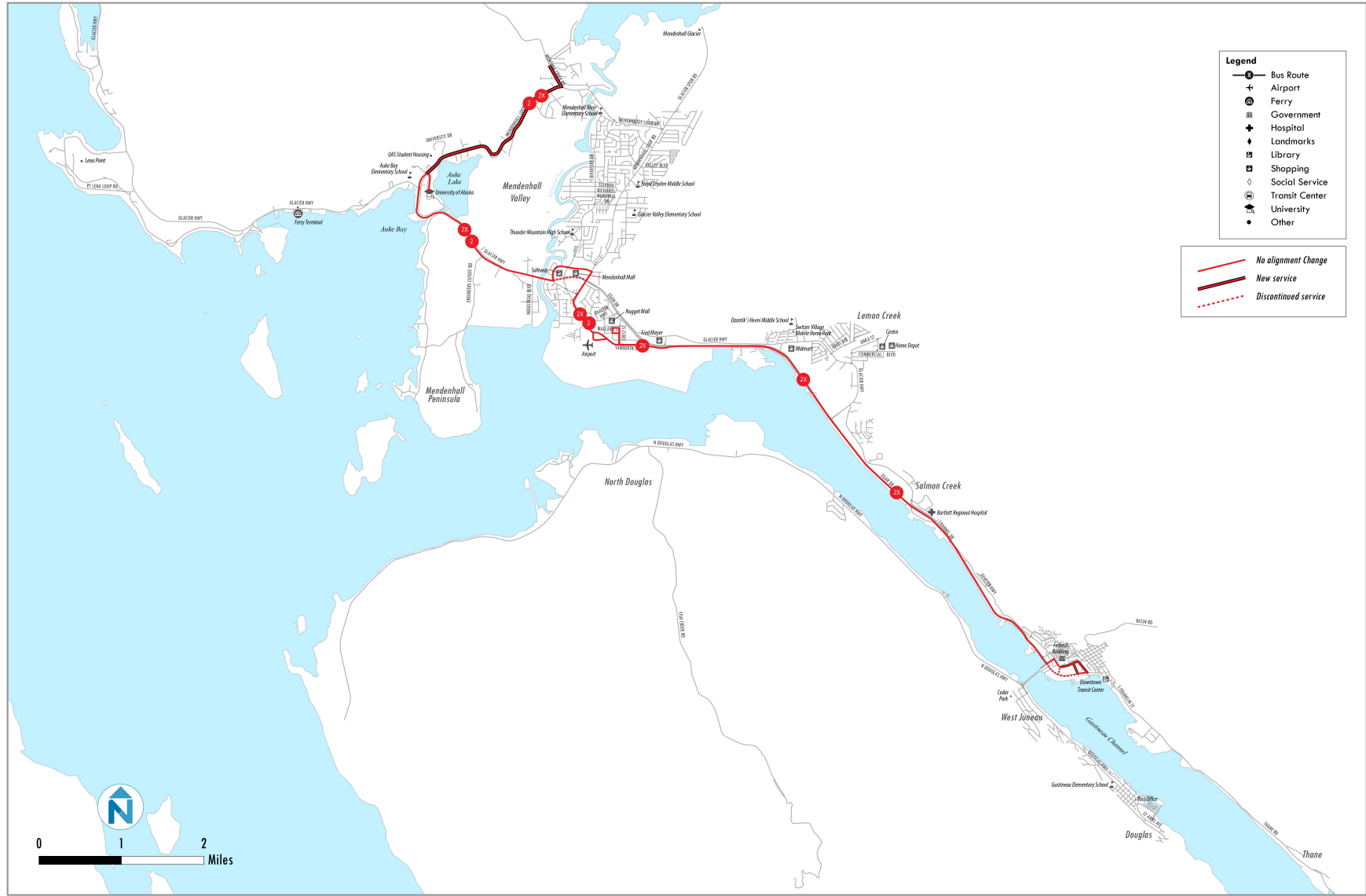
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**Figure 2 Valley Local Changes (with Service Rebranded as Mendenhall Valley – Downtown)**



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**Figure 3 Express Route Changes (with Service Rebranded as Route 2 Montana Creek/Auke Bay – Nugget Mall and 2X Montana Creek/Auke Bay – Downtown)**



- Start weekday service earlier (at 5:45 AM with an arrival in downtown at 6:30 AM) to better serve earlier work start times.
- Operate weekday service later (until 9:32 PM) to better serve evening classes at UAS.
- Add weekend service between Montana Creek and the Nugget Mall via UAS to replace Valley local service that would be shifted to Riverside Drive, with timed transfers to Route 1 Mendenhall Valley – Downtown at the Nugget Mall.<sup>2</sup> This would also provide service to the airport on weekends, with connections to and from downtown at the Nugget Mall.
- To mitigate the cost increases of adding a third bus and the extended service, operate evening trips only between Montana Creek and the Nugget Mall (with timed transfers to Route 1), and reduce lightly utilized midday service from every 30 minutes to every 60 minutes).
- Brand the Montana Creek/Auke Bay – Nugget Mall evening and weekend service as Route 2 Montana Creek – Nugget Mall, and the weekday service between Montana Creek and downtown as Route 2X Montana Creek/Auke Bay – Downtown Express.

A comparison of Route 2/2X service characteristics to the existing Express schedule is provided below in Table 2.

**Table 2 Express and Route 2/X Schedule Comparison**

	Existing Express			Proposed Route 2/2X		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
<b>Service Frequencies (mins)</b>						
Peak	30	-	-	30	60	60
Midday	30	-	-	60	60	60
Evening	-	-	-	60	60	-
<b>Span of Service</b>						
Start	7:03 AM	-	-	5:54 AM	6:05 AM	9:05 AM
End	6:55 PM	-	-	9:44 PM	8:05 PM	6:05 PM

## Douglas (Rebrand as Route 5 Douglas – Downtown)

The Douglas route generally operates very well, and only minor changes are proposed:

- Incorporate AM peak “Douglas Express” morning trip (that departs St Anns Avenue at 7:30 AM) into the regular Douglas schedule to simplify service and plug the hole in the existing Douglas schedule.
- Interline<sup>3</sup> early morning Douglas trips with the new Route 2X Auke Bay/Montana Creek Express so that passengers traveling from Douglas can choose to stay on the same bus and continue on Route 2X to the Nugget Mall, UAS or Auke Bay during these times. (Due to schedule constraints, a similar interline would not work during other times.)
- Rebrand Service as Route 5 Douglas – Downtown.

<sup>2</sup> It should be noted that although later service would be provided into UAS, the provision of service to the Back Loop with Route 2 will mean that service to Auke Bay will end earlier than with the current Valley Local service that operates until approximately 11:30 PM on weekdays and Saturdays. However, nighttime ridership in those areas is very light.

<sup>3</sup> Interlining means that two routes are operated in combination. In this case, buses that operate from Douglas to downtown, instead of turning around to operate back to Douglas, would become Route 2X trips and operate to Montana Creek. Passengers traveling from Douglas to locations along Route 2X would be able to stay on the same bus through downtown.



Other important notes about Route 5 include:

- All service would continue to provide service around the downtown loop.
- In the morning, timed-transfers would be provided at the Federal Building between inbound Route 5 Douglas service and outbound Route 1 Mendenhall Valley – Downtown service, and the reverse would be the case in the afternoon. This would maintain timed-transfers for most riders. However, with the schedule changes that would be required so that Route 1 will operate reliably, transfers in the off-peak direction would not be timed, and would be 20 minutes. However, these transfers would be reliable, which is not the case with the current transfers that appear very good on paper but that often do not work well in practice.

**Table 3 Douglas and Route 5 Schedule Comparison**

	Existing Douglas			Proposed Route 5		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
<b>Service Frequencies (mins)</b>						
Peak	30	30	30	30	30	30
Midday	30	30	30	30	30	30
Evening	60	60	-	60	60	-
<b>Span of Service</b>						
Start	7:00 AM	7:00 AM	9:00 AM	6:30 AM	6:30 AM	8:49 AM
End	11:30 PM	11:30 PM	6:30 PM	11:33 PM	11:33 PM	6:33 PM

### North Douglas (Rebrand as Route 6 North Douglas)

While service is limited to North Douglas and ridership is low compared to other routes in the system, it is recognized that this is an important lifeline service for some people. However, because an important objective of this planning process is to focus on the most efficient use of resources spent on the system, the midday trip is recommended for elimination due to very low ridership (only two riders in each direction observed during on-board surveying). The existing resources spent on this one midday trip accounts for about 1.1% of total annual expenses, which could be better allocated elsewhere in the system. The route should also be branded as Route 6 North Douglas - Downtown.

Table 4 presents a comparison of existing and proposed service.

**Table 4 North Douglas Schedule Comparison**

	Existing North Douglas			Proposed Route 6		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
<b>Service Frequencies (mins)</b>						
Peak	2 RT	-	-	2 RT	-	-
Midday	1 RT	-	-	-	-	-
Evening	-	-	-	-	-	-
<b>Span of Service</b>						
Start	7:00 AM	-	-	7:05 AM	-	-
End	5:55 PM	-	-	5:56 PM	-	-

## “Additional Service” Valley Express Trips (Rebrand as Route 1X Mendenhall Valley – Downtown Express)

Capital Transit publicizes four AM inbound and three PM outbound trips that provide peak period peak direction service. These trips are similar to each other but vary slightly:

- “Lemon Creek Express,” which consists of a single AM inbound trip that operates between Switzer Village and downtown via Lemon Creek with no outbound counterpart.
- “Mendenhall Valley Commuter Morning Run,” which consists of a single AM inbound trip that operates between Auke Bay and downtown via Riverside Drive and Egan Drive. This trip does not have a direct outbound counterpart.
- “Mendenhall Valley Express Morning Runs,” which consists of two AM inbound trips that operate between the Auke Bay and downtown via the Mendenhall Loop Road and Egan Drive. These trips do not have a direct outbound counterpart.
- “Lemon Creek/Mendenhall Valley Express Afternoon Runs,” which consists of PM outbound trips that operate between downtown and the Mendenhall Valley via Lemon Creek. These trips do not have a direct inbound counterpart.

These trips are designed to provide faster service during peak periods and to relieve pressure on the Valley Local and Express routes during the peak commute periods. However, they are confusing to understand, especially for new riders, and not all trips are publicized.

To make service easier to understand and more consistent, it is recommended that all of the Mendenhall Valley and Lemon Creek “Additional Service” express routes be consolidated into a new Mendenhall Valley – Downtown express route that provides all service in the same manner (see Figure 4):

- From the Downtown Transportation Center, operate to the Federal Building and then via Egan Drive to the Nugget Mall via Egan Drive and Lemon Creek, and then through the Mendenhall Valley in the same manner as Route 1 (Mendenhall Loop Road, Mint Way, and Riverside Drive).
- On weekdays, provide four AM inbound and four PM outbound trips.
- Brand the route as Route 1X Mendenhall Valley – Downtown Express.

## PARK AND RIDE PROGRAM

At the present time, anecdotal information and observations indicate that many riders access Capital Transit service by informally parking along routes at locations such as UAS and the Nugget Mall. However, the provision of formal park and ride spaces could increase ridership by those who are beyond walking distance of service by increasing awareness of park and ride opportunities, and use by those who are uncomfortable parking in unofficial/informal spaces.

The most cost-effective approach for Capital Transit to provide park and ride spaces would be to develop arrangements for the use of existing lots that are underutilized and/or not used on weekdays (for example, at churches). Potential locations include UAS, the Mendenhall Mall, and the Nugget Mall along the Valley Local and Express routes. It may also be desirable to develop at least one location along the Douglas route for residents who live beyond walking distance of the route.

The costs of developing park and ride spaces in this manner should range from very low to low, although specific costs would need to be determined as the program is developed. At public facilities such as UAS,

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**Transit Development Plan**  
 2014 Update

**Figure 4** New Mendenhall Valley – Downtown Express Route



institutions are often willing to make spaces available at no cost. At private properties such as malls, owners often make spaces in underutilized areas available at no cost in return for the additional business that park and ride users bring. One study found that Park & Ride users are 1.55 times more likely to shop at retail centers with shared parking for Park & Ride facilities, which translates into an additional \$1,000 dollars per Park & Ride user being spent each year at retail centers that share parking spaces.<sup>4</sup> In other cases, transit systems lease the spaces at widely varying rates or pay a one-time upfront rate. Some churches are willing to provide space as a contribution to the public good, lease the spaces, or request donations from those using the spaces.

In most cases, transit systems make limited capital improvements at the lots, including the installation of shelters, signage, and delineation of the spaces. In cases where the spaces are adjacent to existing stops, the improvements are often limited to signage and, and if necessary, the delineation of spaces.

To implement a park and ride program, Capital Transit should take the following steps:

1. Identify potential locations. As described above, three potential locations that are well served by Capital Transit are UAS, the Mendenhall Mall, and the Nugget Mall.
2. Meet with property owners to determine their willing to make some spaces available for park and ride and at what cost and under what terms.
3. Develop a Capital Transit policy that defines the costs, payments, terms, and capital improvements that it would make in return for the use of spaces.
4. Negotiate agreements with individual property owners.
5. Make required capital improvements.
6. Publicize the availability of new/formalized park and ride locations.

## CARE-A-VAN PROGRAM CHANGES

The evaluation of Care-A-Van operations and performance that was conducted as part of the Comprehensive Operations Analysis and presented in that document demonstrate that the program provides a high level of transportation to Juneau's most vulnerable population, but also identified a number of areas where changes could be considered to better meet future needs within available resources, and that should be investigated further.

## Trip Accounting

Capital Transit contracts with Southeast Senior Services (SESS) to provide its paratransit service. Its' contract is based on a fixed-cost, and SESS provides the paratransit service as part of its overall program that includes other senior-related transit services. The provision of Capital Transit paratransit service as part of its overall program allows SESS to realize operational efficiencies by sharing rides across its different programs.

However, the mixing of rides among different programs means that the actual costs of the provision of Capital Transit's paratransit services is not known, and the paratransit program may be subsidizing other program costs to the extent that other medical transportation programs, most notably Medicaid, are receiving fewer federal funds than they may be entitled. A second challenge relates to compliance. In its last Federal Transit Administration (FTA) triennial audit, Care-A-Van was cited for denying too many

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<sup>4</sup> Virginia Department of Transportation Statewide Park & Ride Program Best Practices Guide, February 2013

trips. ADA requires that paratransit operators have sufficient capacity to meet demand; Care-A-Van was unable to meet demand largely because the service is available to both older adults and people with disabilities. In the short-term this problem has been addressed by giving individuals with disabilities priority over people who participate purely in the program based on age.

At the same time, there are potential disadvantages associated with clearer lines between the programs, namely that it could undermine coordinated service delivery. Currently, the programs have similar service levels and eligibility criteria, which makes it easier for SESS to mingle trips and coordinate rides. In addition, the existing format allows Care-A-Van to provide the same high level of service to all riders regardless of funding source or trip purpose.

## Expand Use of Paratransit Technology

SESS uses ParaPlan software to schedule and manage the Care-A-Van service. While the system is helpful, it does not fully coordinate and integrate the reservation, scheduling and dispatch systems. Paratransit scheduling software including vehicle tracking technology would allow SESS to more closely coordinate the trip reservations with scheduling and then support management of the schedule in real-time when drivers are on the road.

A more sophisticated system would improve the scheduling of trips, provide drivers with better information, ensure that service meets ADA standards, provide real-time information for drivers and dispatchers, and automatically record travel times and mileages by passenger and trip.

However, paratransit scheduling software is an expensive investment both in terms of the capital costs associated with purchasing the system but also staff resources that need to be invested in learning and managing the system. The general rule for paratransit scheduling software is that the more sophisticated systems become cost effective when agencies provide at least 200 trips a day. The Care-A-Van program provides on the order of 150 trips a day, which is below this threshold; however SESS with its combined services provides closer to 200 trips a day. Thus a combined effort may achieve efficiencies. Furthermore, as Care-A-Van must provide services during the same hours of operation as Capital Transit, and must serve the same geographic area, any expansion in Capital Transit's hours of operation or geographic coverage may increase the eligible demand for Care-A-Van services.

## Implement Expanded Set of Performance Measures

Nationally, many communities experienced a growth in paratransit demand over the past few years. Some demand is attributed to the economic recession and reductions in human service agency budgets, which may have led to some riders using paratransit instead of other transportation programs. It is also widely believed that demand for paratransit service will increase steadily over the next few years as the population ages. As a result, Capital Transit should consider tracking key trend indicators, such as cost per passenger as well as usage data (annual riders, the number of unduplicated riders enrolled in Care-A-Van and the number of trips per rider).

For example, in the past four years (2009-2012), the cost per passenger has fluctuated substantially and ranged from a 3% increase to an 11% increase and a 4% decrease. While year-to-year fluctuations are expected, as are moderate rates of cost increases, large differences are not. Tracking this information will assist Capital Transit in understanding why costs changed significantly, if changes are reflect unique circumstances or part of a longer trend; and if necessary, signal when Capital Transit needs to develop programs and policies to contain costs.

## Operating Efficiency and Effectiveness

SESS sets a maximum cost per rider in its contract of \$28.65 and SESS effectively guarantees Capital Transit this rate. However, it is not an actual rate that reflects the actual cost of a paratransit trip. As Capital Transit considers changing some of Care-A-Van's program rules, there is value in understanding some other metrics of service cost. These metrics can help guide investment decisions, such as the potential value of investing in paratransit scheduling software.

Some of the standard paratransit metrics used throughout the industry include:

- Operating cost per vehicle hour
- Passenger trips per vehicle hour
- Administrative expenses as a portion of total operating expenses
- No-shows as portion of all trips

## Transition from Lump-Sum to Fixed-Price

Nationally, most contracted transit and paratransit services are paid according to the amount of service provided, typically based on hours of service or a cost per trip. Most operators use fixed-price contracts because more of the responsibility of controlling costs of service is assigned to the contractor.

The primary advantage associated with moving towards a fixed-price contract is that Capital Transit will have more control over costs and how costs relate to the amount and type of service provide. The main disadvantages of moving away from lump sum contracts is that they will require more effort to manage for both the contract manager (Capital Transit) and the contractor (SESS), and this could increase the administrative cost of the service.

## Implement Fares and Extend the VIP Bus Pass to Seniors

Care-A-Van provides rides free-of-charge with a recommended donation of \$4.00 per trips. Data is not clear with regards to how many people pay a donation and how many ride for free. SESS ridership reports suggest that a significant number of riders—as many as 70%—pay the suggested donation; but annual budgets suggest much lower revenues (between \$1,500 and \$3,000) raised by collecting donations.

ADA allows transit operators to charge passengers up to twice the fixed-route fare for paratransit service and charging a fare is an easy and straightforward way to manage demand and potentially lower the cost of service. Capital Transit could also extend the VIP Bus Pass program, which is currently available only to persons with disabilities, to seniors. This would create an incentive for using fixed route service.

## Limit Care-A-Van Service to ADA Minimum Requirements

As discussed, Care-A-Van provides a high level of service that is much appreciated by riders and the community. The service is also highly integrated and coordinated with other human service transportation programs, a practice that makes the system more cost-efficient as compared with national standards. That said, Care-A-Van currently goes above and beyond the minimum requirements for ADA service and there may be cost savings associated with moving the service towards the minimum.

Opportunities include:

- **Eliminate Age-Based Criteria**—Older adults aged 60 or older are eligible to use Care-A-Van service purely based on their age. ADA regulations, however, do not automatically qualify people for the service based on age, but instead require complementary paratransit for individuals

unable to use fixed-route transit because of a disability. Thus, Care-A-Van could stop providing the service to people who are aged 60 or older and are able to use fixed-route transit.

- **Level of Service**—ADA requires that complementary paratransit be provided as a curb-to-curb service so that passengers are expected to wait for the vehicle at the curb in front of their pick-up location. The law does not require that drivers go into buildings and homes to greet and assist passengers into the vehicle, except if required based on an individual’s disability.
- **Service Area/Time of Day**—Care-A-Van currently serves North Douglas at all times of the day, but per ADA only needs to serve this area at certain times of the day.

## Move Toward Categorical Eligibility

Once riders are deemed eligible to use Care-A-Van service, they are granted permanent unconditional eligibility. This means they once they are deemed eligible to use the service, they are able to use it for as long as they wish and for any trip. This compares with ADA regulations that allow transit agencies to assign passengers different levels of eligibility:

- Unconditional Eligibility – individuals who are unable to use fully accessible fixed-route service for any purpose and are unconditionally certified for any and all trips.
- Conditional Eligibility – individuals who are able to use accessible fixed-route service for some but not all trips. These individual are certified for paratransit service for some, but not all trips.
- Temporary/Transitional/Recurring Conditions – individuals who have a temporary or recurring condition that limits their ability to use fixed-route service. Individuals in this category have unconditional or conditional eligibility; the difference is that eligibility is defined according to a length or period of time.

The primary reason for implementing functional assessments and categorical eligibility for Care-A-Van would be to control costs and limit access to the service to individuals who require the higher level of service. However, this would be administratively more complex to implement, as it would require additional staff to assess people’s abilities and disabilities under a variety of conditions and circumstances.

## OPERATING COST IMPACTS OF SHORT-TERM RECOMMENDATIONS

The operating cost impacts of the recommended changes would consist of one-time implementation costs plus ongoing operating costs. The one-time costs would consist of the elements described above in the Systemwide Changes section, which include Google Transit implementation, the development of a system map and new schedules, and the updating of Capital Transit’s website. These costs would total approximately \$20,000 if outside parties were contracted to conduct the work, less if it were performed internally or by other city departments (see Table 5).

In term of ongoing operating cost impacts, one of the most important aspects of the TDP is to ensure that services are being provided as cost effectively and efficiently as possible, and to keep operating costs at or near the existing budget. A large number of trade-offs were considered as part of the development of this plan, and reductions have been recommended in some areas to make the overall system stronger (for example, 60 minute off-peak service on the Express route). However, the Project Management Team concluded that the trade-offs required to make all changes within the existing budget require reductions were not desirable (for example, reductions in spans of service and/or reduced weekend service). Thus, the recommended changes would require an increase in Capital Transit’s operating budget of approximately \$200,000 per year (see also Table 5).

In addition, operating costs could increase to some extent if Capital Transit determines that it should, or needs to, lease park and ride spaces. On the other hand, costs could also be reduced if some or all of the Care-A-Van changes presented above are implemented. However, these cost and savings have not been included as additional program development will be needed before they can be determined.

**Table 5 Changes in Fixed-Route Pay Hours and Operating Costs**

Day	Pay Hours			Operating Cost
	Existing	Recommended	Change (%)	Impact
<b>One-Time Implementation Costs</b>				
Google Transit <sup>5</sup>				\$7,000
System Map/Schedules <sup>6</sup>				\$5,000
Update Website <sup>7</sup>				\$7,000
<b>Total</b>				<b>\$19,000</b>
<b>Service Changes</b>				
Weekdays	142	144	+ 2%	
Saturdays	91	106	+ 17%	
Sundays	64	73	+14%	
<b>Annual</b>	<b>44,300</b>	<b>46,200</b>	<b>+ 4.3%</b>	<b>+\$200,000</b>

### CAPITAL REQUIREMENTS FOR SHORT-TERM RECOMMENDATIONS

As described in more detail in Chapter 5, a number of capital-related improvements are recommended to improve and enhance service. However, none of the short-term service improvements, save some minor shelter and signage improvements at park and ride lots, would hinge on associated capital improvements. Furthermore, the short-term improvements would reduce fixed-route peak vehicle requirements by one bus, which would produce capital cost savings over time as one less bus would need to be replaced.

<sup>5</sup> Estimate based on 40 hours at \$180 per hour.

<sup>6</sup> Estimate based on 32 hours at \$180 per hour

<sup>7</sup> Estimate based on 40 hours at \$180 per hour



## 4 MID-TERM RECOMMENDATIONS

The recommended mid-term improvements consist of service expansion that would require additional operating funds and capital improvements that would require a number of years to implement, and that would also require the identification of capital funding.

### SERVICE CHANGES

#### Provide Service to Lemon Creek Industrial Area

Based on input from existing riders as well as the community, one of the most important changes recommended in the mid-term will be to operate Route 1 into the Lemon Creek Industrial area to better serve Costco, Home Depot, Alaskan Brewing Company, and other businesses and especially employees in this area.

As outlined above, a number of short-term changes are recommended for Valley Local service. However, these changes would not allow enough time to deviate into the Lemon Creek industrial area. After extensive evaluation of different options, it was determined that the best way to serve this area was to extend the round trip operating time by 30 minutes so that the route could deviate into this area in both directions. This change would extend the round trip travel time to 150 minutes, which would require the deployment of one additional bus to maintain existing 30 minute headways. This service would cost \$550,000 per year to operate and would increase peak vehicle requirements by one.

#### Provide Service to Auke Bay Ferry Terminal

To maintain service to the Back Loop in the short-term, it is recommended that Express service (rebranded as Route 2/2X) be extended to Montana Creek, and to fund that extension, midday service be reduced from every 30 minutes to every 60 minutes. On weekdays, with a restoration of midday service to every 30 minutes, and the provision of evening service every 30 minutes, outer end service could be reconfigured to alternate between Montana Creek and the Ferry Terminal (which would reduce peak period service to the Back Loop to every 60 minutes). On weekends, with one additional bus deployed, the proposed Route 2 Montana Creek – Nugget Mall route could alternate its trips between Montana Creek and the Ferry Terminal to provide service to each every 60 minutes, and every 30 minutes between Auke Bay and the Nugget Mall. This service would increase operating costs by \$500,000 per year, but would not require additional vehicles.

*Note that this expanded service could also be provided only during the summer when demand is highest, and the provision of seasonal service would reduce the cost of this service to approximately \$150,000 (assuming service for 3.5 months).*

#### Provide Earlier and Later Service

Over the course of this study, many expressed a desire for earlier and later service, as most routes do not start early enough to serve 7:00 AM work start times, or late work end times. As financial resources permit, it is recommended that Capital Transit's span of service be expanded to start earlier and end later.

At the present time, and with the short-term recommendations, the first trips on the Valley Local and Douglas routes, which are two of Capital Transit's highest ridership routes, do not arrive in downtown until after 7:00 AM. Providing earlier service on those routes (which would be rebranded as Routes 1 and 5) on weekdays and Saturdays would cost approximately \$50,000 per year. The two other major routes—the proposed Routes 1X Mendenhall Valley–Downtown Express, and 2X Montana Creek/Auke Bay – Downtown Express—would serve 7:00 AM starts with the short-term recommendations.

**Table 6 Annual Operating Costs for Earlier Weekday and Saturday Service to Serve 7:00 AM Work Start Times**

	First Arrival in Downtown		Annual Operating Cost
	Short-Term Recs	To Serve 7:00 AM Starts	
Rt 1 Mendenhall Valley - Downtown	7:20 AM	6:50 AM	\$32,000
Rt 1X Mendenhall Valley – Downtown Express	6:50 AM	6:50 AM	\$0
Rt 2X Montana Creek/Auke Bay – Downtown Express	6:27 AM	6:27 AM	\$0
Rt 5 Douglas - Downtown	7:12 AM	6:42 AM	\$16,000
<b>Total</b>			<b>\$48,000</b>

The short-term recommendations would not significantly change the evening end of service, and the last trips would depart from downtown between 8:47 PM (Route 2X Montana Creek/Auke Bay – Downtown Express) and 11:17 PM (Route 1 Mendenhall Valley – Downtown) (see Table 7). The cost to extend service so that the last departures on all major routes on weekdays and Saturdays would be 11:30 PM or later would be approximately \$150,000 per year. Neither earlier or later service would require additional vehicles.

**Table 7 Annual Operating Costs for Later Weekday and Saturday Service to Serve 11:30 Departure Times**

	First Arrival in Downtown		Annual Operating Cost
	Short-Term Recs	To Provide Service until at least 11:30 PM	
Rt 1 Mendenhall Valley - Downtown	10:35 PM	11:35 PM	\$40,000
Rt 1X Mendenhall Valley – Downtown Express	No evening service	NA	\$0
Rt 2X Montana Creek/Auke Bay – Downtown Express	8:47 PM	11:47 PM	\$96,000
Rt 5 Douglas - Downtown	11:17 PM	12:17 AM	\$16,000
<b>Total</b>			<b>\$152,000</b>

*Note that, in a similar manner as for service to the Auke Bay ferry terminal, earlier and later service could also be provided only during the summer when demand is highest, and the provision of seasonal service would reduce the cost of this service to approximately \$60,000 (assuming service for 3.5 months). It could also be possible to fund this service using cruise Marine Passenger Fee revenues. In this case, it may also be possible to shift implementation of this expanded service to the short-term.*

### Provide Holiday Service

Currently, Capital Transit does not provide service on six holidays, which are New Year's Day, Memorial Day, July 4<sup>th</sup>, Labor Day, Thanksgiving, and Christmas. While travel is significantly lower on these days than on other holidays, many Juneau residents still need to travel for work and other purposes, and especially on Memorial Day, July 4<sup>th</sup>, and Labor Day. The operating cost to provide service with Sunday schedules on all six holidays would range from \$40,000 to \$55,000 per year, with the lower figure for the provision of the proposed short-term services on the six holidays, and the higher figure for the provision of expanded service (to Lemon Creek industrial area and the Auke Bay ferry terminal) on the six holidays.

The provision of service on only the three busier holidays—Memorial Days, July 4<sup>th</sup>, and Labor Day—would cost half as much.

### **OPERATING COST IMPACTS OF MID-TERM RECOMMENDATIONS**

Implementation of all of the Mid-Term recommendations would increase annual operating costs by approximately \$1.3 million per year if all services were implemented on a year round basis (see Table 8).

**Table 8 Annual Operating Cost Impacts of Mid-Term Improvements**

	Total
<b>Operating Costs</b>	
Lemon Creek Industrial Area	\$550,000
Auke Bay Ferry Terminal	\$500,000
Holiday Service (all six holidays, with Mid-Term improvements)	\$55,000
Earlier/Later Service	\$200,000
<b>Total</b>	<b>\$1,305,000</b>

### **CAPITAL REQUIREMENTS FOR MID-TERM RECOMMENDATIONS**

As described in more detail in Chapter 5, a number of capital-related improvements are recommended to improve and enhance service. The Mid-Term recommendations would increase peak vehicle requirements by one (to provide Valley Local service via the Lemon Creek industrial area). However, since the Short-Term recommendations would reduce peak vehicle requirements by one, that bus would be available, and Capital Transit would not need to purchase an additional bus to operate the additional service.

## 5 CAPITAL IMPROVEMENT PLAN

In addition to the operating improvements described above, a number of capital improvements are also recommended. These start with regular “course of business” elements such as vehicle replacement, maintenance equipment, and upgrade’s to Capital Transit’s administration, operations, and maintenance facility. They also include technology enhancements, upgrades to Nugget Mall transfer facilities, better lighting at unlit or poorly lit stops, and bicycle lockers at key locations. These items, similar to the service changes described in the previous chapters, are intended to improve and enhance service.

*Note that all costs presented in this chapter represent the total cost of improvements. With the availability of funds from other sources, particularly for bus replacement, CBJ’s share of the costs will be lower. This chapter also includes updated cost estimates for some items that are in CBJ’s current capital plan, such as electronic fareboxes, that are lower than previous estimates.*

### VEHICLE AND EQUIPMENT REPLACEMENT

Like all transit systems, Capital Transit must replace its vehicles on a periodic basis and does so based on age. Over the next five years, Capital Transit will need to replace (see also Table 9):

- Seven 35’ buses at \$300,000 each (three in FY 2016 and four in FY 2017).<sup>8</sup>
- Seven paratransit vans at approximately \$50,000 each (four in FY 2015, four in FY 2016, and three in FY 2017).
- Four service vehicles at approximately \$25,000 to \$50,000 each (a pick-up and van in FY 2015, an SUV in FY 2018 and another in FY 2019).

**Table 9 Vehicle and Equipment Replacement Plan**

Capital Costs	FY 2015 - 2016	FY 2017 - 2019	Total	Notes
35' Buses	\$900,000	\$1,200,000	\$2,100,000	3 in FY2016, 4 in FY2018
Paratransit Vans	\$400,000	\$150,000	\$550,000	4 in FY 2015, 4 in FY2016, 3 in FY2017
Service Vehicles	\$105,000		\$105,000	2 in FY 2016, 1 in FY2018, 1 in FY2019
Misc Equipment	\$20,000	\$10,000	\$30,000	Vehicle lift in FY2015 and generator in FY2017
<b>Total</b>	<b>\$1,425,000</b>	<b>\$1,360,000</b>	<b>\$2,785,000</b>	

Capital Transit has also programmed the purchase of a vehicle lift in FY 2015 (\$17,000) and a generator in FY 2017 (\$7,500). Total vehicle and equipment replacement costs will total \$1.4 million for FY 2015-2015 and \$1.4 million for FY 2017-FY 2019.

<sup>8</sup> All costs are in FY 2014 dollars, and do not include inflation.

## **FACILITY IMPROVEMENTS**

### **Operations Facility**

The CBJ's 2012 bond bill included \$3.05 million to re-side the administration, operations, and maintenance facility and to improve the heating system, and it is anticipated that this work could occur in FY 2017 or FY 2018.

### **Upgrade Nugget Mall Transfer Facility**

For the foreseeable future, the Nugget Mall will continue to be Capital Transit's primary outer hub, and this location, although one of the most important and highest ridership stops in the Capital Transit system, has only very basic facilities (see Figure 5).

**Figure 5**      **Nugget Mall Transfer Facility**



Source: Google Street View

Considering the importance of this location, these facilities should be upgraded to at least “superstop” status, in which comfortable facilities and a wide range of amenities are provided (see Figure 6). The cost of developing a superstop would be largely dependent upon the design and included elements, and could range in cost from approximately \$100,000 to over \$1 million. For the purposes of this plan, a capital cost of \$500,000, and a timeframe of FY 2017 to FY 2019 were assumed.

### **Ongoing Shelter Improvement Program**

Capital Transit has an ongoing shelter improvement program that budgets approximately \$75,000 per year to install shelters at stops that currently do not have shelters, to upgrade existing shelters, and replace older shelters. This plan will continue that program at existing funding levels. In addition, and as

**Figure 6 Superstop Example**



described in the following two sections, it is also recommended that the program be expanded to provide lighting and bicycle lockers at key locations.

**Provide Shelter Lighting**

Many of Capital Transit’s bus stops are located in unlit or poorly lit locations, which can make waiting uncomfortable. It also makes it difficult for bus operators to see waiting passengers. One lighting solution would be to install solar powered lighting, which can be done for approximately \$1,000 per shelter. It is recommended that Capital Transit undertake a program to install solar powered lighting at shelters in unlit and poorly lit locations as part of its ongoing stop improvement program, at a cost of approximately \$10,000 per year.

## Provide Bicycle Lockers

Bicycle lockers provide those who desire to ride their bicycles to and from the bus at one end of their trips with a secure and weatherproof place to leave their bicycles. Typically, lockers hold one bicycle as well as bicycle gear such as locks, lights, and other equipment, and are leased to users on a monthly or longer basis. The arrangement provides users with the certainty that it will be available and the transit system with revenue to defer program costs. Many transit systems also make lockers available on an on-demand basis for an hourly fee. For example, Metro Transit in Minneapolis leases lockers for \$48 per year, and RioMetro in Albuquerque leases lockers for \$24 for six months.

Bike lockers can cost between less than \$1,000 and \$2,000 each, and need a solid foundation upon which they can be secured. It is recommended that Capital Transit begin to install bicycle lockers at high ridership locations on an ongoing basis as part of its stop improvement program, at a cost of approximately \$10,000 per year.

Figure 7      **Bicycle Lockers**



## TECHNOLOGY ENHANCEMENTS

Several technology improvements are recommended to enable Capital Transit to provide more reliable service, to provide better customer information, and to better track ridership and performance on an ongoing basis:

- **Automatic Vehicle Location (AVL)/Computer Aided Dispatch (CAD)**, which would provide the ability for Capital Transit to know where buses are throughout the day and communicate more effectively with bus operators, which would in turn allow the system to better responded to delays and incidents. According to the USDOT Research and Innovative Technology Administration (RITA) publication, *Intelligent Transportation Systems Benefits, Costs, Deployment, and Lessons Learned* (2008 Update), the deployment of AVL/CAD can produce schedule adherence improvements in the range of 9 to 23%. The cost of an AVL/CAD system would be approximately \$600,000.

- **Scheduling software**, which would allow Capital Transit to develop bus and driver schedules more efficiently, make schedule adjustments, and monitor performance over time. The cost of scheduling software would be approximately \$150,000.
- **Automatic passenger counters (APCs)** would count the number of passengers getting on and off the bus at each stop on an ongoing basis, which would provide better information to Capital Transit staff on how the system is being utilized. Data on passenger boarding activity could be collected throughout the year to better understand seasonal differences. The cost of an APC system that would be tied into the AVL/CAD system would be approximately \$150,000.
- **Real-time passenger information**, which would also be tied into the AVL/CAD system, could provide passengers with information on the current location of buses, estimated actual departure times at individual stops via smartphones and fixed signage at stops. The development of a system to provide real-time information via smartphones would be approximately \$65,000, and the provision of estimated actual departure times via signs at stops would be approximately \$150,000 for 10 stops, and \$4,000 for each additional location.
- **Electronic fareboxes** would allow Capital Transit to accept electronic fare media and collect more robust boarding data. Implementation of an electronic fare collection system involves numerous up-front and ongoing costs to establish and maintain fare collection equipment, as well as internal and external processes to print and distribute tickets and passes, collect and reconcile fares, and conduct other customer relations and financial transactions. Estimated costs for electronic fareboxes and associated items are \$250,000.

For the purposes of this plan, it was assumed that these ITS improvements would be implemented between FY 2017 and FY 2019, although earlier would be preferable.

### CAPITAL PLAN SUMMARY

Over the next five years, the capital improvements identified as part of this effort would cost approximately \$8.0 million, with \$2.1 million in expenditures in the short-term between FY 2015 and FY 2016, and \$6.2 million between FY 2017 and FY 2019 (see Table 10).



**Table 10 Capital Plan Summary**

	Short-Term FY 2015-16	Mid-Term FY 2017-19	Total Total	Note
<b>Vehicles and Equipment</b>				
35' Buses	\$900,000	\$1,200,000	\$2,100,000	3 in FY2016, 4 in FY2018
Paratransit Vans	\$400,000	\$150,000	\$550,000	4 in FY 2015, 4 in FY2016, 3 in FY2017
Service Vehicles	\$105,000		\$105,000	2 in FY 2016, 1 in FY2018, 1 in FY2019
Misc Equipment	\$20,000	\$10,000	\$30,000	Vehicle lift in FY2015 and generator in FY2017
Subtotal	\$1,425,000	\$1,360,000	\$2,785,000	
<b>Technology Improvements</b>				
Automatic Vehicle Location (AVL)	\$215,000	\$60,000	\$275,000	
Computer Aided Dispatch (CAD)	\$280,000		\$280,000	
Scheduling Software		\$255,000	\$255,000	
Automatic Passenger Counters (APCs)		\$170,000	\$170,000	
Real-Time Passenger Information		\$195,000	\$195,000	
Electronic Fareboxes		\$325,000	\$325,000	
Subtotal	\$495,000	\$1,005,000	\$1,500,000	
<b>Facility Upgrades</b>				
Admin and Maintenance Facility Improvements		\$3,050,000	\$3,050,000	
Nugget Mall Transfer Facility Upgrades		\$500,000	\$500,000	
New Shelters/Shelter Upgrades and Replacement	\$150,000	\$225,000		\$75,000 per year
Shelter Lighting	\$20,000	\$30,000	\$50,000	\$10,000 per year
Bicycle Lockers	\$20,000	\$30,000	\$50,000	\$10,000 per year
Subtotal	\$190,000	\$3,835,000	\$4,025,000	
<b>Total Capital</b>	<b>\$2,110,000</b>	<b>\$6,200,000</b>	<b>\$8,310,000</b>	

## 6 TOTAL COST SUMMARY

Juneau is served with an impressively successful transit system, but one whose success has exceeded its capacity to deliver. It has also fallen behind technologically, and its manual processes provide further challenges in meeting its passengers' needs. The short-term recommendations presented in this report would address the system's most pressing short term issues with a modest increase in operating costs (\$200,000 per year), but would not be sufficient to serve new areas, particularly the Lemon Creek Industrial Area and the Auke Bay Ferry Terminal. There would be approximately \$20,000 in one-time implementation costs associated with the short-term improvements, but no directly associated capital costs. However, a number of technology improvements are proposed to improve overall system performance, as well as normal vehicle and equipment replacement costs, and these would total \$2.1 million (see Tables 11 and 12).

**Table 11 Operating Cost Summary**

	Short-Term FY 2015-16	Mid-Term FY 2017-19	Total
<b>One-Time Implementation Costs</b>			
Google Transit	\$7,000		\$7,000
System Map/Schedules	\$5,000	\$5,000	\$10,000
Update Website	\$7,000		\$7,000
<b>Total</b>	<b>\$19,000</b>	<b>\$5,000</b>	<b>\$24,000</b>
<b>Annual Operating Costs</b>			
<b>Short-Term Service Changes (per Year)</b>	<b>\$200,000</b>		<b>\$200,000</b>
<b>Mid-Term Service Expansion (per Year)</b>			
Lemon Creek Industrial Area		\$550,000	\$550,000
Auke Bay Ferry Terminal		\$500,000	\$500,000
Holiday Service		\$55,000	\$55,000
Earlier/Later Service		\$200,000	\$200,000
Subtotal		\$1,305,000	\$1,305,000
<b>Short and Mid-Term Total</b>	<b>\$200,000</b>	<b>\$1,305,000</b>	<b>\$1,505,000</b>

The mid-term recommendations, which would expand service to the Lemon Creek industrial area and the Auke Bay ferry terminal, add earlier and later service, and holiday service, would require an increase in operating expenditures of approximately \$1.3 million per year. Technological improvements, which would provide Capital Transit with the ability to better track service on an ongoing basis to more quickly adjust to changing demand, provide better customer information, and improve internal processes in line with what most other transit systems already do, plus vehicle replacement and facility upgrade costs, would require a total of approximately \$6.2 million in capital expenditures, and which would be phased over three years.

City and Borough of Juneau  
**Transit Development Plan**

2014 Update

**Table 12 Capital Cost Summary**

	Short-Term FY 2015-16	Mid-Term FY 2017-19	Total
<b>Capital Costs</b>			
<b>Vehicles and Equipment</b>			
35' Buses	\$900,000	\$1,200,000	\$2,100,000
Paratransit Vans	\$400,000	\$150,000	\$550,000
Service Vehicles	\$105,000		\$105,000
Misc Equipment	\$20,000	\$10,000	\$30,000
Subtotal	\$1,425,000	\$1,360,000	\$2,785,000
<b>Technology Improvements</b>			
Automatic Vehicle Location (AVL)	\$215,000	\$60,000	\$275,000
Computer Aided Dispatch (CAD)	\$280,000		\$280,000
Scheduling Software		\$255,000	\$255,000
Automatic Passenger Counters (APCs)		\$170,000	\$170,000
Real-Time Passenger Information		\$195,000	\$195,000
Electronic Fareboxes		\$325,000	\$325,000
Subtotal	\$495,000	\$1,005,000	\$1,500,000
<b>Facility Upgrades</b>			
Admin and Maintenance Facility Improvements		\$3,050,000	\$3,050,000
Nugget Mall Transfer Facility Upgrades		\$500,000	\$500,000
New Shelters/Shelter Upgrades and Replacement	\$150,000	\$225,000	
Shelter Lighting	\$20,000	\$30,000	\$50,000
Bicycle Lockers	\$20,000	\$30,000	\$50,000
Subtotal	\$190,000	\$3,835,000	\$4,025,000
<b>Total Capital</b>	<b>\$2,110,000</b>	<b>\$6,200,000</b>	<b>\$8,310,000</b>

## 7 FUNDING OPTIONS

One of CBJ's challenges in implementing the improvements recommended in this plan will be to fund them. This chapter presents an overview of selected funding sources that could potentially be used to fund Capital Transit service improvements and capital costs. This information is presented at a high level, and additional analysis would be needed to determine political feasibility, and for most, the amount of potential revenue that could be generated.

### **Dedicated Transit Sales Tax**

Dedicated transit sales taxes have been implemented to fund operating and/or capital costs throughout the country, particularly in western states and California. The most common amounts are ¼% and ½%. In Juneau, as is often the case elsewhere, voter approval is needed to implement a dedicated sales tax. Thus, to win approval, sales tax initiatives are frequently linked to a specific program of projects that specifies the improvements that will be implemented with the new revenues.

In Juneau, a ¼% sales tax would generate approximately \$2.2 million per year, which would fund operating costs for the proposed short and mid-term improvements, and provide approximately \$0.7 million in capital funding. A ½% sales tax would generate approximately \$4.3 million per year.

### **Marine Passenger Fee**

Juneau collects a \$5 per passenger fee on every arriving cruise ship passenger, and those funds can be used to fund projects that enhance the tourism experience and offset community impacts created by the cruise ship industry. Those funds could potentially be used to fund seasonal summertime service improvements, provided that such service provides a direct benefit to cruise ship passengers or mitigates problems caused by the industry.

### **Taxes and Fees Imposed on Visitors**

Most local governments, not surprisingly, prefer to implement taxes and fees that are paid by visitors rather than their own residents. Two common ways in which this is done are through hotel taxes and rental car fees, and which are set at varying rates.

### **Fuel and Vehicle Taxes**

In Alaska, local governments can enact registration taxes based on vehicle value or age and the proceeds can be used for any purpose. Local governments can also enact fuel taxes, and while most are used for road purposes, they could also be used for transit purposes.

### **Partnerships**

Many transit systems form partnership with other entities in which they provide service in exchange for contributions. One of the more common types of partnerships are "UPass" arrangements with local universities in which universities pay a negotiated rate for "free" transit for all of their students (and sometimes faculty as well) with costs frequently funded through student fees. In Juneau, UAS would be a

potential UPass partner, especially with the proposed mid-term improvements to UAS, and as a way to implement service to the ferry terminal earlier. Another potential partnership could be with Alaskan Brewing Company, which is based in the Lemon Creek industrial area. With Valley Local service expanded to serve the industrial area, that route could provide convenient service between downtown and the brewery to cruise ship passengers at a lower cost than the current private shuttle.

## Advertising

Most transit systems now have some form of advertising on vehicles and at shelters. In most cases, the amount of revenue generated is relatively low, and not high enough to fund a large amount of service. In Alaska, Fairbanks generates \$18,000 per year in advertising revenue, while Anchorage generates nearly \$400,000.

# **APPENDIX A: DRAFT SCHEDULES FOR SHORT-TERM IMPLEMENTATION**

# Transit Development Plan

2014 Update

## Route 1 Mendenhall Valley – Downtown

Seven days a week, service outside of shaded area does not run on Sunday

Outbound					Valley Loop				Inbound					
DTC	Federal Bldg	Hospital	Lemon Creek	Nugget Mall (arr)	Nugget Mall (dep)	Mend Mall	Riverside/ Taku	Mend Mall	Nugget Mall (arr)	Nugget Mall (dep)	Lemon Creek	Hospital	Federal Bldg	DTC
						6:16 AM	6:22 AM	6:31 AM	6:37 AM	6:39 AM	6:53 AM	7:02 AM	7:14 AM	7:20 AM
						6:46 AM	6:52 AM	7:01 AM	7:07 AM	7:09 AM	7:23 AM	7:32 AM	7:44 AM	7:50 AM
						7:16 AM	7:22 AM	7:31 AM	7:37 AM	7:39 AM	7:53 AM	8:02 AM	8:14 AM	8:20 AM
6:58 AM	7:02 AM	7:12 AM	7:23 AM	7:37 AM	7:39 AM	7:46 AM	7:52 AM	8:01 AM	8:07 AM	8:09 AM	8:23 AM	8:32 AM	8:44 AM	8:50 AM
7:28 AM	7:32 AM	7:42 AM	7:53 AM	8:07 AM	8:09 AM	8:16 AM	8:22 AM	8:31 AM	8:37 AM	8:39 AM	8:53 AM	9:02 AM	9:14 AM	9:20 AM
7:58 AM	8:02 AM	8:12 AM	8:23 AM	8:37 AM	8:39 AM	8:46 AM	8:52 AM	9:01 AM	9:07 AM	9:09 AM	9:23 AM	9:32 AM	9:44 AM	9:50 AM
8:28 AM	8:32 AM	8:42 AM	8:53 AM	9:07 AM	9:09 AM	9:16 AM	9:22 AM	9:31 AM	9:37 AM	9:39 AM	9:53 AM	10:02 AM	10:14 AM	10:20 AM
8:58 AM	9:02 AM	9:12 AM	9:23 AM	9:37 AM	9:39 AM	9:46 AM	9:52 AM	10:01 AM	10:07 AM	10:09 AM	10:23 AM	10:32 AM	10:44 AM	10:50 AM
9:28 AM	9:32 AM	9:42 AM	9:53 AM	10:07 AM	10:09 AM	10:16 AM	10:22 AM	10:31 AM	10:37 AM	10:39 AM	10:53 AM	11:02 AM	11:14 AM	11:20 AM
9:58 AM	10:02 AM	10:12 AM	10:23 AM	10:37 AM	10:39 AM	10:46 AM	10:52 AM	11:01 AM	11:07 AM	11:09 AM	11:23 AM	11:32 AM	11:44 AM	11:50 AM
10:28 AM	10:32 AM	10:42 AM	10:53 AM	11:07 AM	11:09 AM	11:16 AM	11:22 AM	11:31 AM	11:37 AM	11:39 AM	11:53 AM	12:02 PM	12:14 PM	12:20 PM
10:58 AM	11:02 AM	11:12 AM	11:23 AM	11:37 AM	11:39 AM	11:46 AM	11:52 AM	12:01 PM	12:07 PM	12:09 PM	12:23 PM	12:32 PM	12:44 PM	12:50 PM
11:28 AM	11:32 AM	11:42 AM	11:53 AM	12:07 PM	12:09 PM	12:16 PM	12:22 PM	12:31 PM	12:37 PM	12:39 PM	12:53 PM	1:02 PM	1:14 PM	1:20 PM
11:58 AM	12:02 PM	12:12 PM	12:23 PM	12:37 PM	12:39 PM	12:46 PM	12:52 PM	1:01 PM	1:07 PM	1:09 PM	1:23 PM	1:32 PM	1:44 PM	1:50 PM
12:28 PM	12:32 PM	12:42 PM	12:53 PM	1:07 PM	1:09 PM	1:16 PM	1:22 PM	1:31 PM	1:37 PM	1:39 PM	1:53 PM	2:02 PM	2:14 PM	2:20 PM
12:58 PM	1:02 PM	1:12 PM	1:23 PM	1:37 PM	1:39 PM	1:46 PM	1:52 PM	2:01 PM	2:07 PM	2:09 PM	2:23 PM	2:32 PM	2:44 PM	2:50 PM
1:28 PM	1:32 PM	1:42 PM	1:53 PM	2:07 PM	2:09 PM	2:16 PM	2:22 PM	2:31 PM	2:37 PM	2:39 PM	2:53 PM	3:02 PM	3:14 PM	3:20 PM
1:58 PM	2:02 PM	2:12 PM	2:23 PM	2:37 PM	2:39 PM	2:46 PM	2:52 PM	3:01 PM	3:07 PM	3:09 PM	3:23 PM	3:32 PM	3:44 PM	3:50 PM
2:35 PM	2:39 PM	2:49 PM	3:00 PM	3:14 PM	3:16 PM	3:23 PM	3:29 PM	3:38 PM	3:44 PM	3:46 PM	4:00 PM	4:09 PM	4:21 PM	4:27 PM
3:05 PM	3:09 PM	3:19 PM	3:30 PM	3:44 PM	3:46 PM	3:53 PM	3:59 PM	4:08 PM	4:14 PM	4:16 PM	4:30 PM	4:39 PM	4:51 PM	4:57 PM
3:35 PM	3:39 PM	3:49 PM	4:00 PM	4:14 PM	4:16 PM	4:23 PM	4:29 PM	4:38 PM	4:44 PM	4:46 PM	5:00 PM	5:09 PM	5:21 PM	5:27 PM
4:05 PM	4:09 PM	4:19 PM	4:30 PM	4:44 PM	4:46 PM	4:53 PM	4:59 PM	5:08 PM	5:14 PM	5:16 PM	5:30 PM	5:39 PM	5:51 PM	5:57 PM
4:35 PM	4:39 PM	4:49 PM	5:00 PM	5:14 PM	5:16 PM	5:23 PM	5:29 PM	5:38 PM	5:44 PM	5:46 PM	6:00 PM	6:09 PM	6:21 PM	6:27 PM
5:05 PM	5:09 PM	5:19 PM	5:30 PM	5:44 PM	5:46 PM	5:53 PM	5:59 PM	6:08 PM	6:14 PM	6:16 PM	6:30 PM	6:39 PM	6:51 PM	6:57 PM
5:35 PM	5:39 PM	5:49 PM	6:00 PM	6:14 PM	6:16 PM	6:23 PM	6:29 PM	6:38 PM	6:44 PM	6:46 PM	7:00 PM	7:09 PM	7:21 PM	7:27 PM
6:35 PM	6:39 PM	6:49 PM	7:00 PM	7:14 PM	7:16 PM	7:23 PM	7:29 PM	7:38 PM	7:44 PM	7:46 PM	8:00 PM	8:09 PM	8:21 PM	8:27 PM
7:35 PM	7:39 PM	7:49 PM	8:00 PM	8:14 PM	8:16 PM	8:23 PM	8:29 PM	8:38 PM	8:44 PM	8:46 PM	9:00 PM	9:09 PM	9:21 PM	9:27 PM
8:35 PM	8:39 PM	8:49 PM	9:00 PM	9:14 PM	9:16 PM	9:23 PM	9:29 PM	9:38 PM	9:44 PM	9:46 PM	10:00 PM	10:09 PM	10:21 PM	10:27 PM
9:35 PM	9:39 PM	9:49 PM	10:00 PM	10:14 PM	10:16 PM	10:23 PM	10:29 PM	10:38 PM	10:44 PM	10:46 PM	11:00 PM	11:09 PM	11:21 PM	11:27 PM
10:35 PM	10:39 PM	10:49 PM	11:00 PM	11:14 PM	11:16 PM	11:23 PM	11:29 PM	11:38 PM						

# Transit Development Plan

2014 Update

## Route 1X Valley Mendenhall Valley – Downtown Express

*Weekdays Only*

Outbound				Valley Loop				Inbound				
DTC	Federal Bldg	Lemon Creek	Nugget Mall (arr)	Nugget Mall (dep)	Mend Mall	Riverside/ Taku	Mend Mall	Nugget Mall (arr)	Nugget Mall (dep)	Lemon Creek	Federal Bldg	DTC
					5:55 AM	6:01 AM	6:10 AM	6:16 AM	6:18 AM	6:29 AM	6:42 AM	6:48 AM
					6:25 AM	6:31 AM	6:40 AM	6:46 AM	6:48 AM	6:59 AM	7:12 AM	7:18 AM
					6:45 AM	6:51 AM	7:00 AM	7:06 AM	7:08 AM	7:19 AM	7:32 AM	7:38 AM
					6:55 AM	7:01 AM	7:10 AM	7:16 AM	7:18 AM	7:29 AM	7:42 AM	7:48 AM
3:10 PM	3:14 PM	3:27 PM	3:21 PM	3:23 PM	3:30 PM	3:36 PM	3:45 PM					
3:40 PM	3:44 PM	3:57 PM	3:51 PM	3:53 PM	4:00 PM	4:06 PM	4:15 PM					
4:10 PM	4:14 PM	4:27 PM	4:21 PM	4:23 PM	4:30 PM	4:36 PM	4:45 PM					
4:40 PM	4:44 PM	4:57 PM	4:51 PM	4:53 PM	5:00 PM	5:06 PM	5:15 PM					



City and Borough of Juneau  
**Transit Development Plan**  
 2014 Update

**Route 2 Montana Creek/Auke Bay – Nugget Mall/Route 2X Montana Creek/Auke Bay – Downtown Express**  
*Weekday Service*

Outbound								Inbound											
Route	DTC	Federal Bldg	Nugget Mall (arr)	Nugget Mall (dep)	Airport	UAS	Montana Cr (Arr)	Route	Montana Cr (Dep)	UAS	Airport	Nugget Mall (arr)	Nugget Mall (dep)	Federal Bldg	DTC	Franklin St	4th St	DTC	
								2X		5:54 AM	6:04 AM	6:06 AM	6:08 AM	6:23 AM	6:27 AM				
								2X	6:14 AM	6:24 AM	6:34 AM	6:36 AM	6:38 AM	6:53 AM	6:57 AM				
								2X	6:44 AM	6:54 AM	7:04 AM	7:06 AM	7:08 AM	7:23 AM	7:27 AM				
								2X	7:14 AM	7:24 AM	7:34 AM	7:36 AM	7:38 AM	7:53 AM	7:57 AM				
2X	7:18 AM	7:22 AM	7:37 AM	7:39 AM	7:41 AM	7:51 AM	8:03 AM	2X	8:14 AM	8:24 AM	8:34 AM	8:36 AM	8:38 AM	8:53 AM	-	8:58 AM	9:00 AM	9:03 AM	
2X	7:48 AM	7:52 AM	8:07 AM	8:09 AM	8:11 AM	8:21 AM	8:33 AM	2X	8:44 AM	8:54 AM	9:04 AM	9:06 AM	9:08 AM	9:23 AM	-	9:28 AM	9:30 AM	9:33 AM	
2X	8:18 AM	8:22 AM	8:37 AM	8:39 AM	8:41 AM	8:51 AM	9:03 AM	2X	9:14 AM	9:24 AM	9:34 AM	9:36 AM	9:38 AM	9:53 AM	-	9:58 AM	10:00 AM	10:03 AM	
2X	9:18 AM	9:22 AM	9:37 AM	9:39 AM	9:41 AM	9:51 AM	10:03 AM	2X	10:14 AM	10:24 AM	10:34 AM	10:36 AM	10:38 AM	10:53 AM	-	10:58 AM	11:00 AM	11:03 AM	
2X	10:18 AM	10:22 AM	10:37 AM	10:39 AM	10:41 AM	10:51 AM	11:03 AM	2X	11:14 AM	11:24 AM	11:34 AM	11:36 AM	11:38 AM	11:53 AM	-	11:58 AM	12:00 PM	12:03 PM	
2X	11:18 AM	11:22 AM	11:37 AM	11:39 AM	11:41 AM	11:51 AM	12:03 PM	2X	12:14 PM	12:24 PM	12:34 PM	12:36 PM	12:38 PM	12:53 PM	-	12:58 PM	1:00 PM	1:03 PM	
2X	12:18 PM	12:22 PM	12:37 PM	12:39 PM	12:41 PM	12:51 PM	1:03 PM	2X	1:14 PM	1:24 PM	1:34 PM	1:36 PM	1:38 PM	1:53 PM	-	1:58 PM	2:00 PM	2:03 PM	
2X	1:18 PM	1:22 PM	1:37 PM	1:39 PM	1:41 PM	1:51 PM	2:03 PM	2X	2:14 PM	2:24 PM	2:34 PM	2:36 PM	2:38 PM	2:53 PM	-	2:58 PM	3:00 PM	3:03 PM	
2X	2:18 PM	2:22 PM	2:37 PM	2:39 PM	2:41 PM	2:51 PM	3:03 PM	2X	3:22 PM	3:32 PM	3:42 PM	3:44 PM	3:46 PM	4:01 PM	-	4:06 PM	4:08 PM	4:11 PM	
2X	2:56 PM	3:00 PM	3:15 PM	3:17 PM	3:19 PM	3:29 PM	3:41 PM	2X	4:22 PM	4:32 PM	4:42 PM	4:44 PM	4:46 PM	5:01 PM	-	5:06 PM	5:08 PM	5:11 PM	
2X	3:26 PM	3:30 PM	3:45 PM	3:47 PM	3:49 PM	3:59 PM	4:11 PM	2X	5:22 PM	5:32 PM	5:42 PM	5:44 PM	5:46 PM	6:01 PM	-	6:06 PM	6:08 PM	6:11 PM	
2X	3:56 PM	4:00 PM	4:15 PM	4:17 PM	4:19 PM	4:29 PM	4:41 PM	2	5:52 PM	6:02 PM	6:12 PM	6:14 PM							
2X	4:26 PM	4:30 PM	4:45 PM	4:47 PM	4:49 PM	4:59 PM	5:11 PM	2	6:22 PM	6:32 PM	6:42 PM	6:44 PM							
2X	4:56 PM	5:00 PM	5:15 PM	5:17 PM	5:19 PM	5:29 PM	5:41 PM	2		6:39 PM	6:49 PM	6:51 PM							
2X	5:26 PM	5:30 PM	5:45 PM	5:47 PM	5:49 PM	5:59 PM	6:11 PM	2	7:22 PM	7:32 PM	7:42 PM	7:44 PM							
2X	5:56 PM	6:00 PM	6:15 PM	6:17 PM	6:19 PM	6:29 PM		2	8:22 PM	8:32 PM	8:42 PM	8:44 PM							
2X	6:26 PM	6:30 PM	6:45 PM	6:47 PM	6:49 PM	6:59 PM	7:11 PM	2	9:22 PM	9:32 PM	9:42 PM	9:44 PM							
2				7:47 PM	7:49 PM	7:59 PM	8:11 PM												
2				8:47 PM	8:49 PM	8:59 PM	9:11 PM												

Note: Schedule shift at 2:56 PM to correspond to commuter needs and connections to Route 1

*Weekend Service; service outside of shaded area does not run on Sunday*

Outbound				Inbound			
Nugget Mall (dep)	Airport	UAS	Montana Cr (Arrive)	Montana Cr (Depart)	UAS (Depart)	Airport	Nugget Mall (arr)
6:39 AM	6:41 AM	6:51 AM	6:58 AM	6:05 AM	6:15 AM	6:25 AM	6:32 AM
7:39 AM	7:41 AM	7:51 AM	7:58 AM	7:05 AM	7:15 AM	7:25 AM	7:32 AM
8:39 AM	8:41 AM	8:51 AM	8:58 AM	8:05 AM	8:15 AM	8:25 AM	8:32 AM
9:39 AM	9:41 AM	9:51 AM	9:58 AM	9:05 AM	9:15 AM	9:25 AM	9:32 AM
10:39 AM	10:41 AM	10:51 AM	10:58 AM	10:05 AM	10:15 AM	10:25 AM	10:32 AM
11:39 AM	11:41 AM	11:51 AM	11:58 AM	11:05 AM	11:15 AM	11:25 AM	11:32 AM
12:39 PM	12:41 PM	12:51 PM	12:58 PM	12:05 PM	12:15 PM	12:25 PM	12:32 PM
1:39 PM	1:41 PM	1:51 PM	1:58 PM	1:05 PM	1:15 PM	1:25 PM	1:32 PM
2:39 PM	2:41 PM	2:51 PM	2:58 PM	2:05 PM	2:15 PM	2:25 PM	2:32 PM
3:46 PM	3:48 PM	3:58 PM	4:05 PM	3:12 PM	3:22 PM	3:32 PM	3:39 PM
4:46 PM	4:48 PM	4:58 PM	5:05 PM	4:12 PM	4:22 PM	4:32 PM	4:39 PM
5:46 PM	5:48 PM	5:58 PM	6:05 PM	5:12 PM	5:22 PM	5:32 PM	5:39 PM
6:46 PM	6:48 PM	6:58 PM	7:05 PM	6:12 PM	6:22 PM	6:32 PM	6:39 PM
7:46 PM	7:48 PM	7:58 PM	8:05 PM	7:12 PM	7:22 PM	7:32 PM	7:39 PM

City and Borough of Juneau  
**Transit Development Plan**  
 2014 Update

**Route 5 Douglas – Downtown**  
*Seven days a week, service outside of shaded area does not run on Sunday*

Outbound				Inbound							
DTC	Fed Bldg	Cordova St	Post Office	St. Anns (Dep)	Post Office	Cordova St	Federal Bldg	Franklin St	4th St	DTC	
6:30 AM	6:34 AM	6:39 AM	6:46 AM	6:49 AM	6:52 AM	6:57 AM	7:02 AM	7:07 AM	7:09 AM	7:12 AM	
7:00 AM	7:04 AM	7:09 AM	7:16 AM	7:19 AM	7:22 AM	7:27 AM	7:32 AM	7:37 AM	7:39 AM	7:42 AM	
7:30 AM	7:34 AM	7:39 AM	7:46 AM	7:49 AM	7:52 AM	7:57 AM	8:02 AM	8:07 AM	8:09 AM	8:12 AM	
8:00 AM	8:04 AM	8:09 AM	8:16 AM	8:19 AM	8:22 AM	8:27 AM	8:32 AM	8:37 AM	8:39 AM	8:42 AM	
8:30 AM	8:34 AM	8:39 AM	8:46 AM	8:49 AM	8:52 AM	8:57 AM	9:02 AM	9:07 AM	9:09 AM	9:12 AM	
9:00 AM	9:04 AM	9:09 AM	9:16 AM	9:19 AM	9:22 AM	9:27 AM	9:32 AM	9:37 AM	9:39 AM	9:42 AM	
9:30 AM	9:34 AM	9:39 AM	9:46 AM	9:49 AM	9:52 AM	9:57 AM	10:02 AM	10:07 AM	10:09 AM	10:12 AM	
10:00 AM	10:04 AM	10:09 AM	10:16 AM	10:19 AM	10:22 AM	10:27 AM	10:32 AM	10:37 AM	10:39 AM	10:42 AM	
10:30 AM	10:34 AM	10:39 AM	10:46 AM	10:49 AM	10:52 AM	10:57 AM	11:02 AM	11:07 AM	11:09 AM	11:12 AM	
11:00 AM	11:04 AM	11:09 AM	11:16 AM	11:19 AM	11:22 AM	11:27 AM	11:32 AM	11:37 AM	11:39 AM	11:42 AM	
11:30 AM	11:34 AM	11:39 AM	11:46 AM	11:49 AM	11:52 AM	11:57 AM	12:02 PM	12:07 PM	12:09 PM	12:12 PM	
12:00 PM	12:04 PM	12:09 PM	12:16 PM	12:19 PM	12:22 PM	12:27 PM	12:32 PM	12:37 PM	12:39 PM	12:42 PM	
12:30 PM	12:34 PM	12:39 PM	12:46 PM	12:49 PM	12:52 PM	12:57 PM	1:02 PM	1:07 PM	1:09 PM	1:12 PM	
1:00 PM	1:04 PM	1:09 PM	1:16 PM	1:19 PM	1:22 PM	1:27 PM	1:32 PM	1:37 PM	1:39 PM	1:42 PM	
1:30 PM	1:34 PM	1:39 PM	1:46 PM	1:49 PM	1:52 PM	1:57 PM	2:02 PM	2:07 PM	2:09 PM	2:12 PM	
2:00 PM	2:04 PM	2:09 PM	2:16 PM	2:19 PM	2:22 PM	2:27 PM	2:32 PM	2:37 PM	2:39 PM	2:42 PM	
2:30 PM	2:34 PM	2:39 PM	2:46 PM	2:49 PM	2:52 PM	2:57 PM	3:02 PM	3:07 PM	3:09 PM	3:12 PM	
3:00 PM	3:04 PM	3:09 PM	3:16 PM	3:19 PM	3:22 PM	3:27 PM	3:32 PM	3:37 PM	3:39 PM	3:42 PM	
3:30 PM	3:34 PM	3:39 PM	3:46 PM	3:49 PM	3:52 PM	3:57 PM	4:02 PM	4:07 PM	4:09 PM	4:12 PM	
4:00 PM	4:04 PM	4:09 PM	4:16 PM	4:19 PM	4:22 PM	4:27 PM	4:32 PM	4:37 PM	4:39 PM	4:42 PM	
4:17 PM	4:21 PM	4:26 PM	4:33 PM	4:36 PM	4:39 PM	4:44 PM	4:49 PM	4:54 PM	4:56 PM	4:59 PM	
4:47 PM	4:51 PM	4:56 PM	5:03 PM	5:06 PM	5:09 PM	5:14 PM	5:19 PM	5:24 PM	5:26 PM	5:29 PM	
5:17 PM	5:21 PM	5:26 PM	5:33 PM	5:36 PM	5:39 PM	5:44 PM	5:49 PM	5:54 PM	5:56 PM	5:59 PM	
5:47 PM	5:51 PM	5:56 PM	6:03 PM	6:06 PM	6:09 PM	6:14 PM	6:19 PM	6:24 PM	6:26 PM	6:29 PM	
6:17 PM	6:21 PM	6:26 PM	6:33 PM	6:36 PM	6:39 PM	6:44 PM	6:49 PM	6:54 PM	6:56 PM	6:59 PM	
7:17 PM	7:21 PM	7:26 PM	7:33 PM	7:36 PM	7:39 PM	7:44 PM	7:49 PM	7:54 PM	7:56 PM	7:59 PM	
8:17 PM	8:21 PM	8:26 PM	8:33 PM	8:36 PM	8:39 PM	8:44 PM	8:49 PM	8:54 PM	8:56 PM	8:59 PM	
9:17 PM	9:21 PM	9:26 PM	9:33 PM	9:36 PM	9:39 PM	9:44 PM	9:49 PM	9:54 PM	9:56 PM	9:59 PM	
10:17 PM	10:21 PM	10:26 PM	10:33 PM	10:36 PM	10:39 PM	10:44 PM	10:49 PM	10:54 PM	10:56 PM	10:59 PM	
11:17 PM	11:21 PM	11:26 PM	11:33 PM								

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**Route 6 North Douglas**  
*Weekdays Only*

Outbound				Inbound			
DTC	Federal Bldg	Bonnie Doon	Sundown Drive	Sundown Drive	Bonnie Doon	Federal Bldg	DTC
7:05 AM	7:09 AM	7:11 AM	7:21 AM	7:31 AM	7:33 AM	7:47 AM	7:51 AM
5:10 PM	5:14 PM	5:16 PM	5:26 PM	5:36 PM	5:38 PM	5:52 PM	5:56 PM