



# **Transit Development and Capital Improvement Plan DRAFT RECOMMENDATIONS**

**January 3, 2014**

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## DRAFT RECOMMENDATIONS

### 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 – all characteristics of much larger transit systems. Financial and community support for transit in Juneau is also exceptional compared to most other small cities, and many members of the community feel passionate about ensuring transit continues to be an integral part of the Juneau.

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/employment 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 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 is 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 the level of 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 as convenient and comfortable and wait times are 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

## 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 within Capital Transit's existing budget, or that would require only minimal increases. The short-term recommendations will resolve most existing operational issues (primarily reliability) and expand service to new areas (Riverside Drive and Montana Creek). However, they do not achieve all of the service expansion objectives, as there is no way to provide all desired service expansion within existing or minimally expanded budget levels. Thus, some service expansion initiatives are in the mid-term, rather than short-term, recommendations. 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 Express service 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.
- **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 Pool, 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 would cost an additional \$540,000 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.
- **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 \$450,000 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.
- **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 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. Instead, service is 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.

- **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, and “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.

## 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

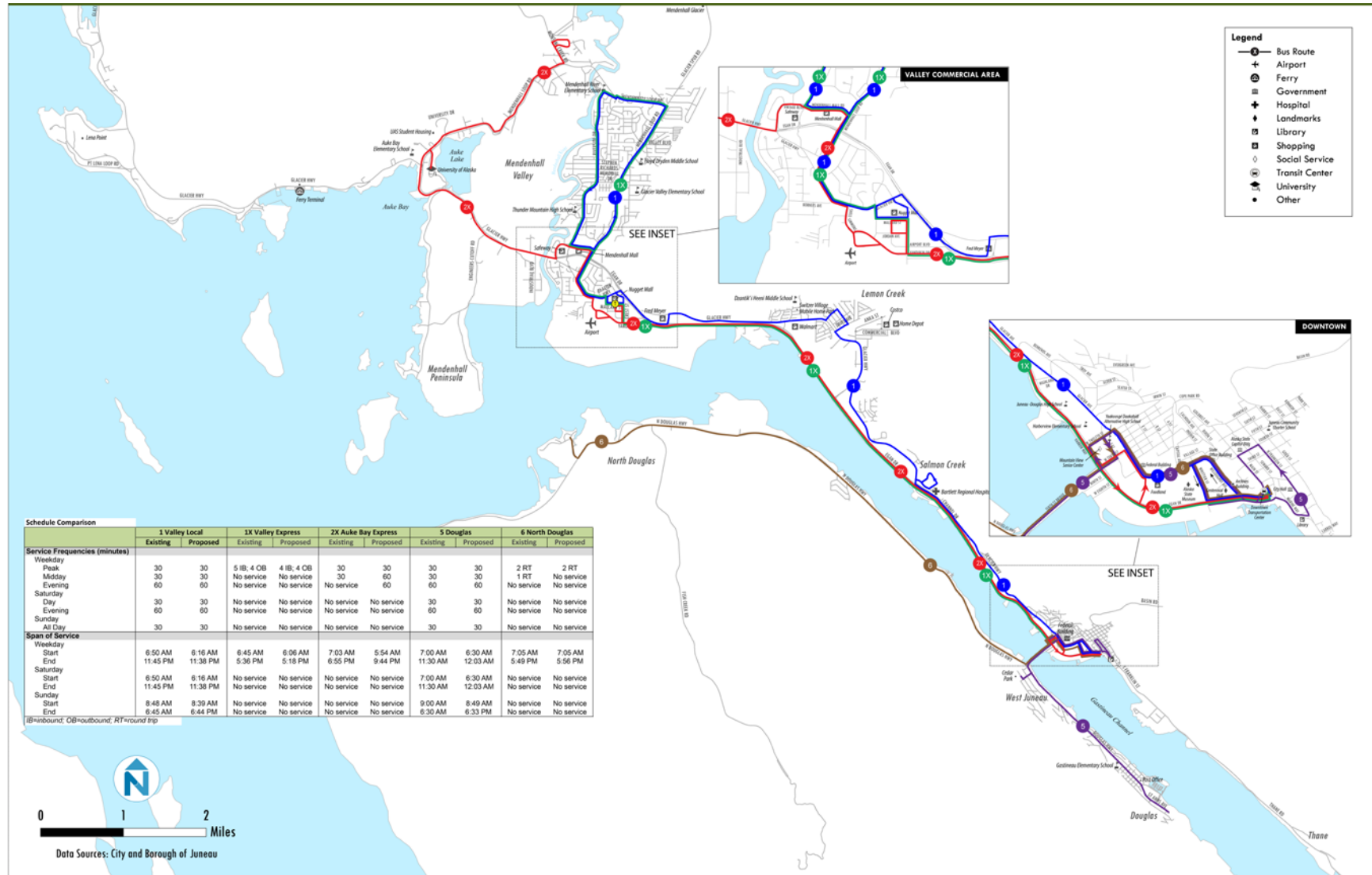
One important note about the recommendations is that Capital Transit’s services are currently scheduled to facilitate transfers at the Nugget Mall and the Federal Building, and when service is operating on schedule, convenient transfers are available between nearly all routes in all directions. However, 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



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Figure 1 Map of Recommended Changes



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.
- 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.

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



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- 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):

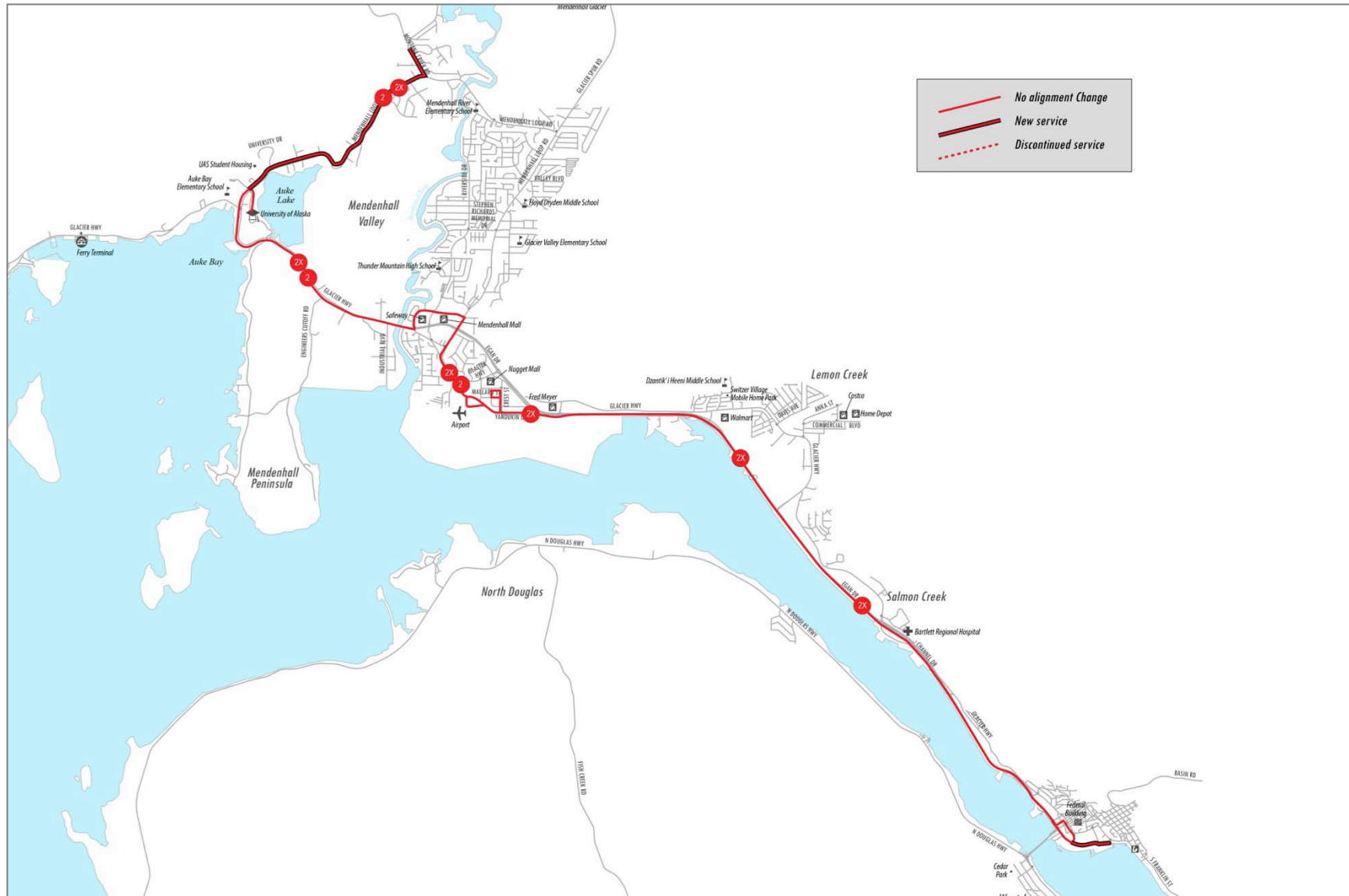
- Add a third bus during peak periods so that it can operate reliably.
- Extend most outer end service to Montana Creek to serve this growing neighborhood and maintain service on Back Loop in lieu of existing Valley Local (3/4) service.
- Extend inner end service to the Downtown Transportation Center.
- 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>1</sup>

<sup>1</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.

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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)





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- 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
Service Frequencies (mins)						
Peak	30	-	-	30	60	60
Midday	30	-	-	60	60	60
Evening	-	-	-	60	60	-
Span of Service						
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 at 7:30 AM) into the regular Douglas schedule to simplify service and plug the hole in the existing Douglas schedule.
- Interline 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.

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.

A comparison of existing Douglas service and the recommended changes are summarized in Table 3.

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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.

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- “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 in the same manner as Route 2X, 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.

## Operating Cost Impacts of Short-Term Recommendations

One of the most important aspects of the TDP is to ensure that services are being provided as cost effectively and efficiently as possible. Related to this is the goal of keeping operating costs at or near the existing budget. While there are ways to reduce costs associated with the recommended changes (through service reductions in certain areas), it is recommended that a relatively minor—\$200,000—increase in total operating costs be considered to make the recommended changes. The impacts of the recommendations are calculated by estimating total pay hours, which consists of time in revenue service, layover, deadhead (trips to and from the beginning of a trip), and prep/cleanup time before and after shift times. The comparison of existing to recommended total pay hours is summarized in Table 5.

Table 5 Summary of Total Pay Hours and Costs (Existing and Recommended)

Day	Pay Hours			Operating Cost Impact
	Existing	Recommended Plan	Change (%)	
Weekdays	142	144	+ 2%	
Saturdays	91	106	+ 17%	
Sundays	64	73	+14%	
Annual	44,300	46,200	+ 4.3%	+\$200,000

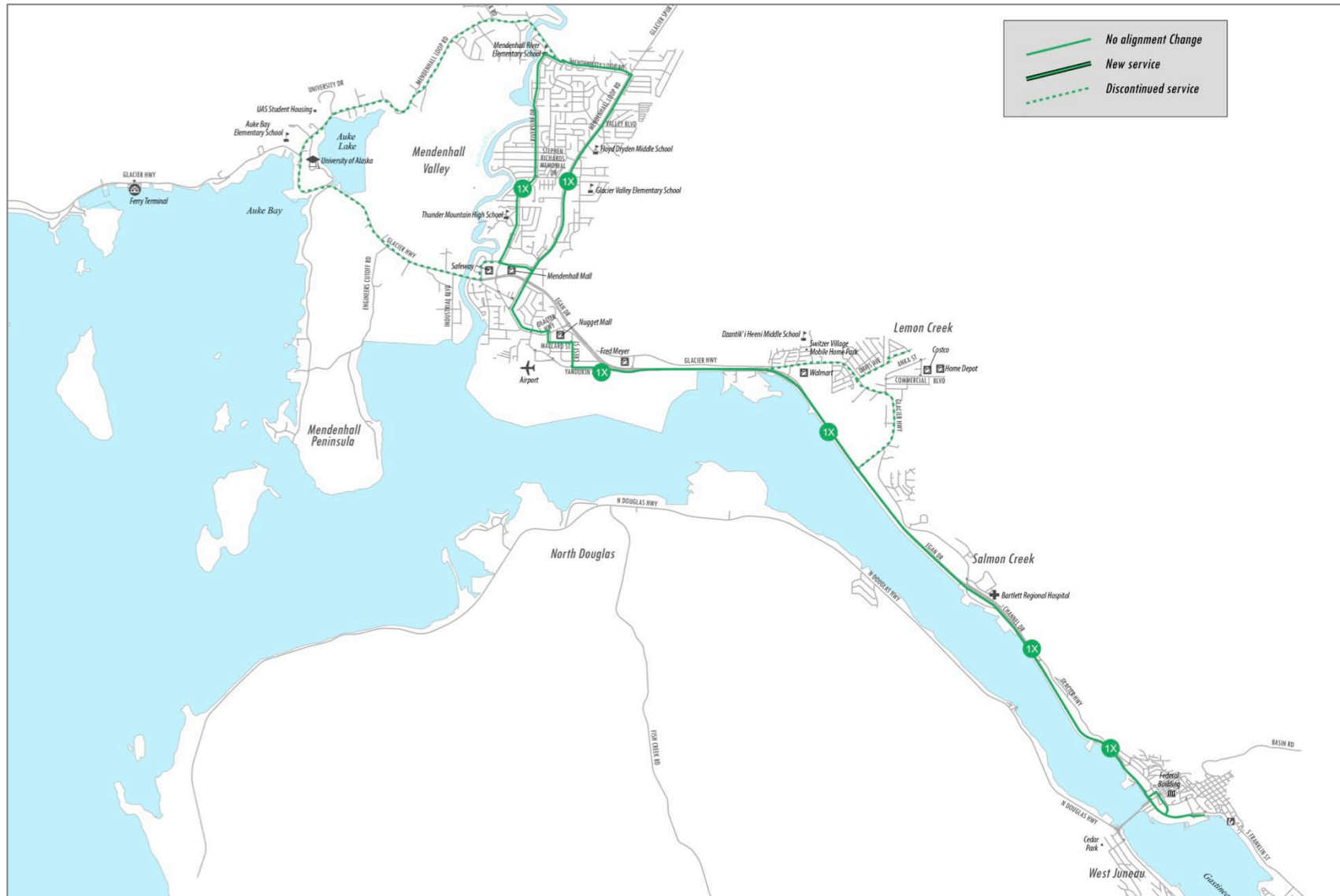
## MID-TERM RECOMMENDATIONS

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.

# Transit Development Plan

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Figure 4 “Additional Service” Changes (with Service Rebranded as Route 1X Mendenhall Valley – Downtown Express)



**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 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 \$540,000 per year.

**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. This would provide service every 60 minutes to both locations, and the cost of this change would be \$450,000 per year. On weekends, 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 two hours, at no increase in costs.

**Provide Earlier and Later Service**

Over the course of this study, many expressed the demand for earlier and later service, as most routes do not start service sufficiently early 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 of 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) would cost approximately \$48,000 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 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>



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In the evening, 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 would be 11:30 PM or later would be \$152,000 per year.

Table 7 Annual Operating Costs for Earlier Service to Serve 7:00 AM Work Start 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 AM	\$96,000
Rt 5 Douglas - Downtown	11:17 PM	12:17 AM	\$16,000
Total			\$152,000

## CAPITAL IMPROVEMENTS

In addition to the operating improvements described above, a number of capital improvements are also recommended. These include technology enhancements, upgrades to Nugget Mall transfer facilities, and better lighting at unlit or poorly lit stops. These improvements have not been split between short-term and long-term, but considering costs and lead-times, most would necessarily fall into the mid-term timeframe.

## 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 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.

## FACILITY IMPROVEMENTS

### 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



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 has been assumed.

### Provide Shelter Lighting

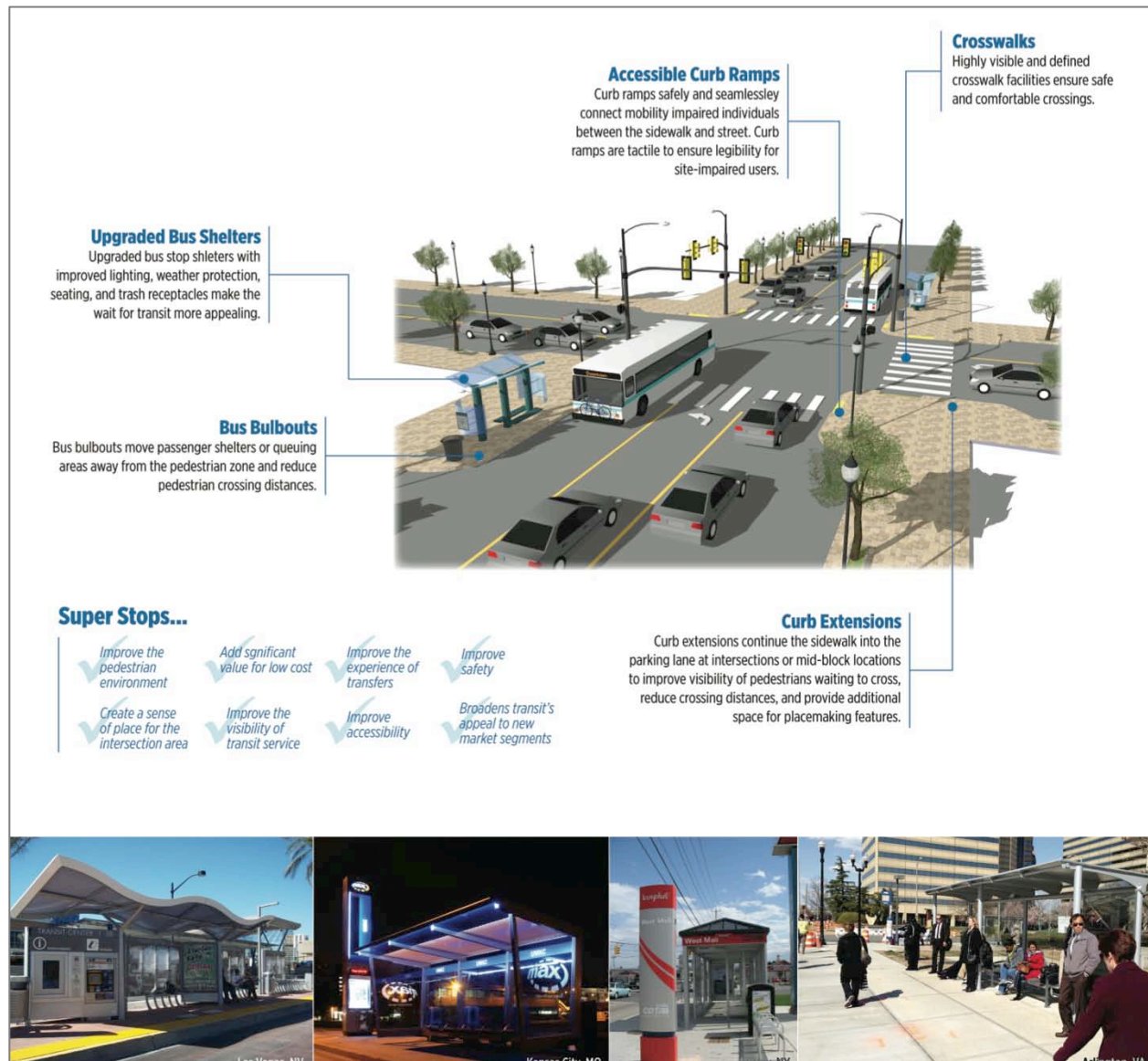
Many of Capital Transit's bus stops are located in unlit or poorly lit locations, which can make waiting uncomfortable. It also makes it difficult for bus operators to see waiting passengers. One lighting

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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, at a cost of approximately \$1,000 per shelter.

Figure 6 Superstop Example



## 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.

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The mid-term recommendations, which would expand service to those areas, would require an increase in operating expenditures \$1.2 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, would require approximately \$2.0 million in capital expenditures, and which could be phased over multiple years (see Table 8).

Table 8 Cost Summary

	Short-Term	Mid-Term	Total
<b>Operating Costs</b>			
<b>Short-Term Changes</b>	\$200,000	--	\$200,000
<b>Mid-Term Expansion</b>			
Lemon Creek Industrial Area		\$550,000	\$540,000
Auke Bay Ferry Terminal		\$450,000	\$450,000
Earlier/Later Service		\$200,000	\$200,000
<b>Total</b>	\$200,000	\$1.2 million	\$1.4 million
<b>Capital Costs</b>			
<b>Technology Improvements</b>			
Automatic Vehicle Location/Computer Aided Dispatch (AVL/CAD)		\$600,000	\$600,000
Scheduling Software		\$300,000	\$300,000
Automatic Passenger Counters (APCs)		\$150,000	\$150,000
Real-Time Passenger Information		\$250,000	\$250,000
Electronic Fareboxes		\$250,000	\$250,000
<b>Total</b>		\$1.6 million	\$1.6 million
<b>Facility Upgrades</b>			
Nugget Mall Transfer Facility Upgrades		\$500,000	\$500,000
Shelter Lighting		\$50,000	\$50,000
<b>Total</b>		\$550,000	\$550,000
<b>Total Capital</b>		\$2.7million	\$2.7 million



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## DRAFT SCHEDULES FOR SHORT-TERM IMPLEMENTATION

### 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						



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## Route 1X Valley Mendenhall Valley – Downtown Express

*Weekdays Only*

Outbound			Valley Loop				Inbound			
DTC	Federal Bldg	Nugget Mall (arr)	Nugget Mall (dep)	Mend Mall	Riverside/ Taku	Mend Mall	Nugget Mall (arr)	Nugget Mall (dep)	Federal Bldg	DTC
				6:06 AM	6:12 AM	6:21 AM	6:27 AM	6:29 AM	6:44 AM	6:50 AM
				6:51 AM	6:57 AM	7:06 AM	7:12 AM	7:14 AM	7:29 AM	7:35 AM
				7:01 AM	7:07 AM	7:16 AM	7:22 AM	7:24 AM	7:39 AM	7:45 AM
				7:06 AM	7:12 AM	7:21 AM	7:27 AM	7:29 AM	7:44 AM	7:50 AM
2:35 PM	2:39 PM	2:54 PM	2:56 PM	3:03 PM	3:09 PM	3:18 PM				
3:05 PM	3:09 PM	3:24 PM	3:26 PM	3:33 PM	3:39 PM	3:48 PM				
4:10 PM	4:14 PM	4:29 PM	4:31 PM	4:38 PM	4:44 PM	4:53 PM				
4:35 PM	4:39 PM	4:54 PM	4:56 PM	5:03 PM	5:09 PM	5:18 PM				

**Juneau's Transit Development Plan**

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**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										
								2X	6:14 AM	5:54 AM	6:04 AM	6:06 AM	6:08 AM	6:23 AM	6:27 AM			
								2X	6:44 AM	6:24 AM	6:34 AM	6:36 AM	6:38 AM	6:53 AM	6:57 AM			
								2X	7:14 AM	6:54 AM	7:04 AM	7:06 AM	7:08 AM	7:23 AM	7:27 AM			
								2X	7:44 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	3:24 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

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## 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
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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							

## Juneau's Transit Development Plan

2013 Update | DRAFT Recommendations Report - December 19, 2013

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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