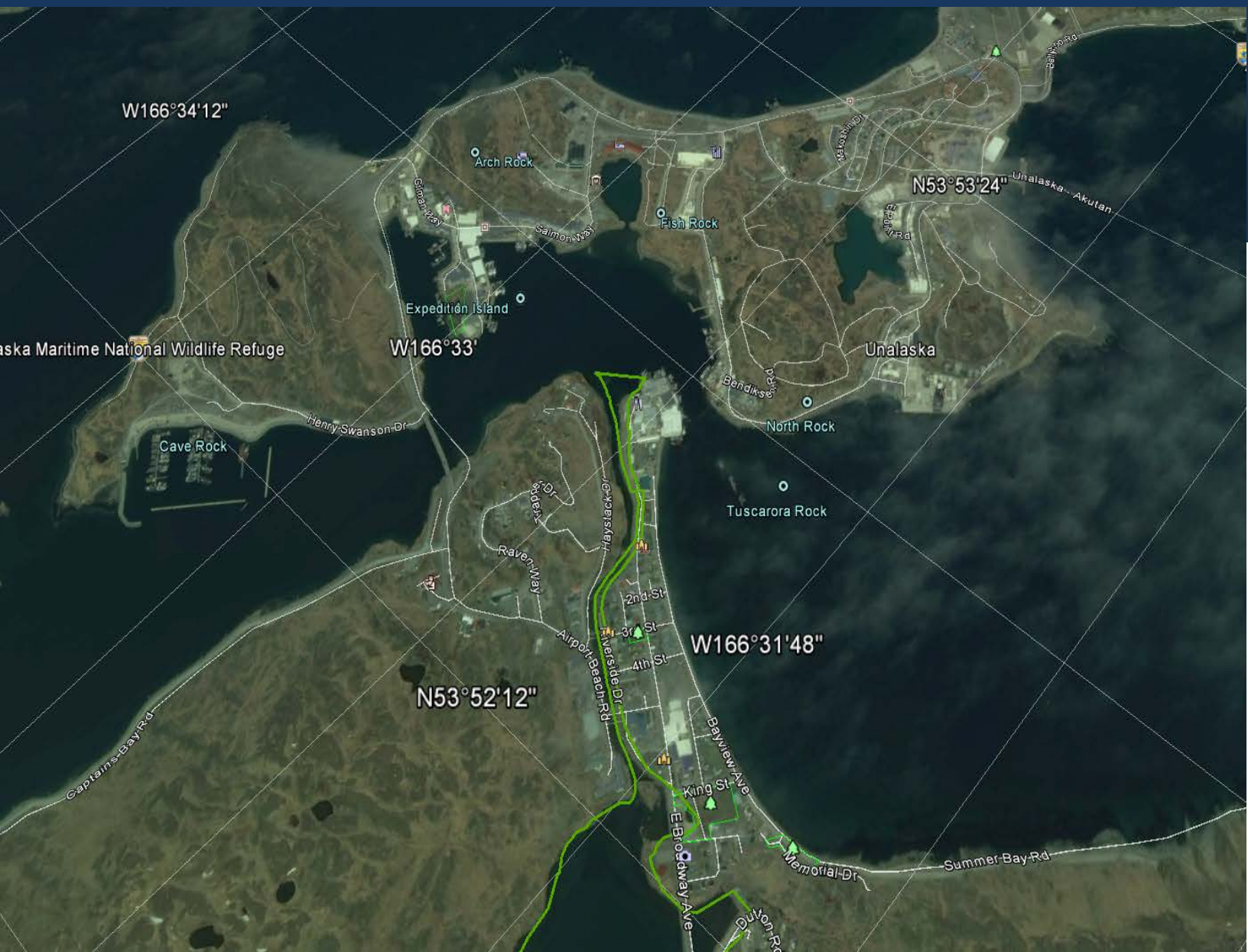


# TRANSPORTATION STUDY 2017-2018

City of Unalaska  
Planning Department  
2018



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# Introduction to Public Transit

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## *What is Public Transit?*

Public transit, or mass transit, is non-exclusive group transportation. The “public” in “public transportation” refers to the *nature* of the transportation, rather than its ownership. The government does not always own the transportation, in other words. When it comes to determining whether or not transit is public, we have to ask whether or not it is open to the general public. Since subways, buses, and ferries are open to the general public and also *shared* simultaneously by unrelated groups, they are examples of public transit. Taxis, on the other hand, while open to the general public, do not carry unrelated groups, and consequently cannot be considered examples of public transit. Cruise ships also cannot be considered examples of public transit, because while they carry disparate groups, they are not open to the general public, as their cost is objectively prohibitive. Bike sharing, interestingly, is a hybrid. A single bike would not be considered public transit since it can only carry individuals, but the system as a whole could be considered public transit.

Public transit, in order to be public transit, **must provide diverse, unrelated groups the ability to simultaneously travel to a destination, regardless of who provides the service.** For the remainder of the document, this is the definition we will use.

## *A History of Public Transit*

The first public bus system was created by esteemed physicist/theologian/philosopher Blaise Pascal in 1662 in Paris. However, it was created as a novel, luxury service, and as such fizzled out within the next ten years. It would not return to Parisian streets until 1826, where it then spread like wildfire. While buses at that time, in both Europe and America, were glorified (and gigantic) horse carriages, they were popular and successfully catered to a middle class clientele, making them one of the first true examples of public transit, at least at the urban scale. (Trains and ferries fulfilled longer and shorter range transit goals.)

Buses would evolve quickly moving toward the 20<sup>th</sup> century. Rail tracks were laid in cities to smooth out the rides for passengers, and later cable cars would exploit these same tracks to do away with horses as the primary power source, cleaning up and speeding up the cars. Streetcars were the next innovation in bus transit, which moved the motor from outside the bus to inside it. This allowed for buses to reach higher speeds, and consequently for people to live farther out from the city center. This had the positive



Figure 1: A San Francisco Cable Car

effect of allowing people to live in healthier, less polluted areas of the city, but also had negative effects on walkability and community interaction. Social areas diverged from residential areas, creating the first examples of the distinct land uses that we see today.

Ultimately, the advent of the automobile made mid-1900 bus systems indistinguishable from those we have today.<sup>1</sup>

### **Transit in the 21<sup>st</sup> Century**

Nowadays, buses operate as one of two main forms of urban public transportation. Light rail is its primary competitor. Light rail, however, requires significantly larger infrastructural investments, is more difficult to maintain, but does carry larger amounts of people longer distances with less interruption. Bus systems can also make changes to their infrastructure, routes, etc. at very little cost, a trait not shared by light rail.<sup>2</sup>

Modern buses, unlike their cable car or streetcar predecessors, are internally powered. Gasoline-fueled buses are the most prolific type of modern bus, though diesel-fueled ones are also common. Electric buses are also being incorporated into urban transit systems and hailed as the most environmentally friendly of environmentally friendly vehicles.



**Figure 2: The PCR Minibus on the S-Curves**

Modern buses come in many shapes and sizes. The smallest ones seat about the same amount of people as a large station wagon, and the largest ones are either “articulated” or “double-decker”. The former, sometimes called “slinky buses” or “wobble buses” can be up to eighty feet long, and seat 200 people. Double-decker buses, which have two decks, or stories, can seat around 80 people or more if they are the rare “double-decker articulated” bus. The conventional “city bus”, however, is approximately 40 feet long. Anything smaller is considered a “minibus”.

Most large, urban cities in the United States have a bus system. In 2017, Americans took 10.1 billion trips using public transportation. These trips were provided by the 7,700 public and private transit-providing organizations in the country. Despite this, 45% of the country remains without a public transit option,<sup>3</sup> which limits their access to amenities necessary to maintain a reasonable standard of living.

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<sup>1</sup> gogocharters.com

<sup>2</sup> lbid.

<sup>3</sup> apta.com

# Merits of Public Transit in Unalaska

## Traffic Camera and Bus Studies

### Summary

From August 14<sup>th</sup> to September 9<sup>th</sup>, 2017, the City of Unalaska Planning Department conducted a traffic camera study. Data was collected from 7:00am to 11:00pm Monday through Saturday at eight different locations along Airport Beach road. The purpose of this study was to determine general Unalaska traffic patterns, as well as understand the distribution of modes of transit (car, bike, taxi, pedestrian, truck) at the observed locations. These locations are also control points to determine whether or not the bus study, which ran for one week during the traffic camera study and one week in January 2018, caused a noticeable change in either the traffic patterns or distribution of modes of transit.

|                      | August Period | January Period |
|----------------------|---------------|----------------|
| Riders               | 266           | 1,350          |
| Drivers <sup>4</sup> | 13            | 10             |
| Costs                | ~\$8,500      |                |
| Stops                | 25            | 10             |
| Buses                | 1             | 2              |

Figure 3: Bus Study Statistics

During the bus study, surveys were distributed to riders in English, Spanish, Tagalog, and Japanese. The survey was designed to determine whether or not interest in a bus system was significant amongst Unalaskans, how far Unalaskans were willing to walk to reach a stop, what sort of transportation they would use if the bus was not available, and other conclusions regarding the potential necessity of a public transit system.

### Results from the Traffic Camera Study

Over the month-long course of the study, over 20,000 daily vehicle transits were recorded through the studied intersections. Around 7,000 trips are taken on Airport Beach Road daily.

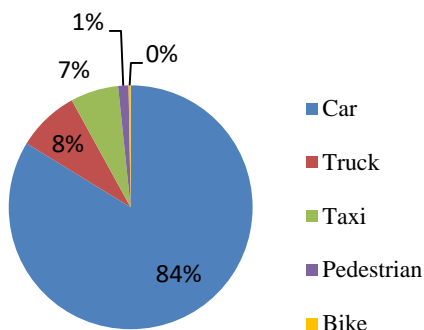


Figure 4: Average Citywide Vehicle Use

What is remarkable, however, is just how high the proportion of cars and pickups relative to other vehicles was during the study. The Planning Department expects that personal vehicle ownership is so proportionally high in Unalaska for three reasons:

1. While the City is relatively small compared to other towns its size, Unalaska is incredibly long, stretching over seven miles from the end of the Valley to the elbow of the Spit. This distance, in combination with the fact that necessary amenities such as Safeway or the PCR do not have any similar institutions more evenly distributed across the island all but require residents to own or rent a car.

2. Unalaska's weather is unpredictable and

<sup>4</sup> All drivers were City employees.

unforgiving. This often makes open-air transportation such as biking or walking prohibitively unpleasant.

3. Taxis are also prohibitively expensive for many residents. (See Figure 5.) Traveling by taxi is unsustainable or at least limits people’s ability to engage in community events, get to work, etc.

Traffic in Unalaska reaches its peak in the mid-afternoon. This is consistent with common-sense assumptions, as students are leaving school, employees are leaving work, and shoppers are running errands. It is also a time of day when people are switching roles – from laborer to parent, teacher to homeowner, employee at a large business to business-owner at a small business etc. “Putting on a different hat” often requires moving from one venue to a different one. In Unalaska, mid-afternoon is a time when many community members “put on a different hat.” The volume of traffic reflects this. (See Figure 6 for detail.)

| Description                   | Rate   |
|-------------------------------|--|
| Flag Drop                     | \$2.65   |
| Per Mile                      | \$3.00   |
| Per Minute Waiting Time       | \$1.06   |
| Per Hour Charter              | \$80.00  |
| 3+ Riders per Party           | \$5.30 for each additional fare                                |
| Rate Discount for Seniors     | -\$1.00 when total rate <\$10<br>-\$2.00 when total rate >\$10 |
| Westward to Safeway           | \$11.05  |
| Airport to Grand Aleutian     | \$7.45   |
| <i>Northern Victor</i> to PCR | \$17.65  |

Figure 5: UCO 9.12.065 Taxicab Service Rates

Most of the traffic during this period in town is headed north on Airport Beach Road to the Amaknak Retail Area, where Safeway and Alaska Ship Supply are located. These two intersections, respectively, are at East Point Road and Salmon Way. Salmon Way has the highest daily through traffic (Figure 7), as it is the access point for the Grand Aleutian Hotel, Gas n’ Go service station, Unisea, Inc., Alaska Ship Supply, the Dutch Harbor Post Office, and Key Bank.

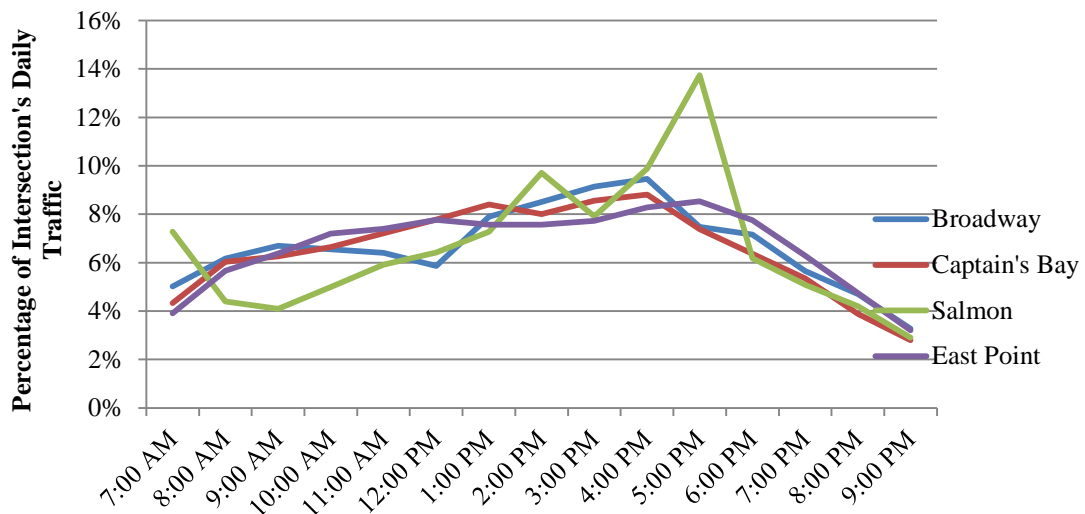


Figure 6: Hourly Traffic Volume



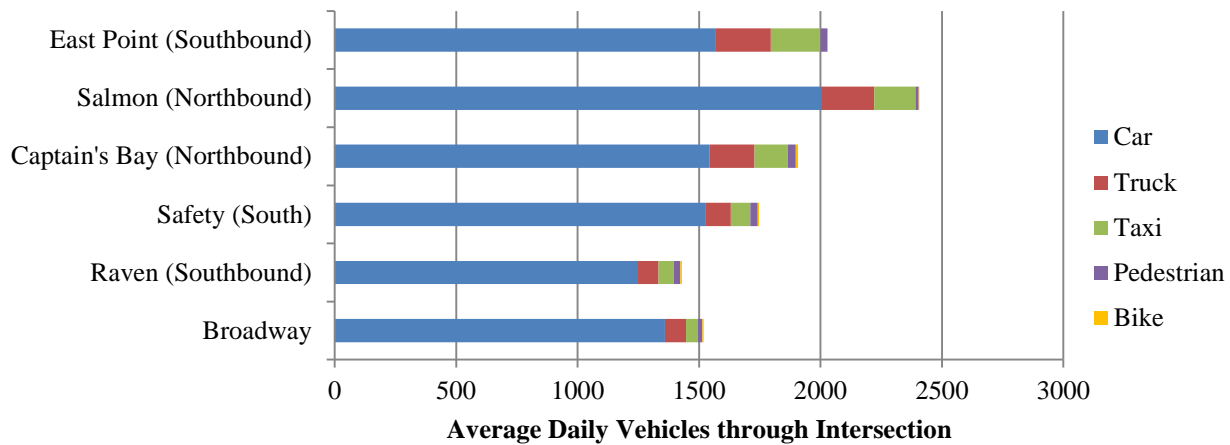


Figure 7: Traffic on Airport Beach Road

### **Results from Bus Study Survey**

45% of the 190 survey respondents did not have a valid driver’s license. Except in the case of youth under the age of 16 whose parents or guardians have a car at home, this population would be unable to use a personal automobile to traverse the island, requiring them to use one of the other methods of island transportation. These other methods remain prohibitive, and often result in community members being unable to leave residences. This conclusion is reinforced by the observation that 25% of respondents reported they were traveling to their destination from their residence and 32% traveling from their place of work. Without the bus, many of the respondents would have remained at or near home, since much of the population without a valid driver’s license work at the processing plants, which offer bunkhouses on site to live in.

72% of respondents walked under five minutes to reach a bus stop, while only 13% walked more than five minutes. This suggests that all residential areas on the island should be located at least within five minutes of a bus stop; otherwise the same prohibitive effects that prevent an individual from walking to their destination will prevent them from accessing the bus stop.

While only 13% of respondents said they were traveling to work, 30% of respondents were headed to shop at one of the island’s retail businesses. This is consistent with traffic camera observations, and shows the benefit provided by the bus service when it comes to giving people access to basic amenities that would otherwise be inaccessible.

The survey also asked respondents what price they would be willing to pay for a single bus fare. The average response hovered in the \$2.00 to \$4.00 range, but ranged as high as \$10.00 and as

low as \$0. Day and monthly bus passes were also proposed, on the condition that they would provide a value discount per ride.

77% of riders reported that frequency of service during both periods of the study was adequate. Better signage was suggested as a way to improve route information.

## **An Observed Need**

### **Economic Development Opportunities**

According to the American Public Transit Association (APTA), public transit provides an explosive boost to a region's economy, simply because it allows for **more people to go more places**. For every \$1.00 invested in the capital costs related to a public transit system, a community can expect to see a \$3.00 return in increased business sales and a \$3.20 return from every \$1.00 invested in operational costs.

This economic benefit is likely more pronounced in Unalaska than elsewhere because of the peculiar geographical and climatic circumstances that come with being on an Aleutian island. This is because **Unalaska's proportionally high rate of car traffic relative to other vehicle traffic is not complemented by an equally high rate of car ownership relative to total population**. During peak fishing season, Unalaska's population can swell to approximately 11,000 people<sup>5</sup>, and the City has a permanent population of about 5,000. However, according to the most recently acquired vehicle statistics (2016), there are only 2,237 personal vehicles on the island.



**Figure 8: Photo of Bus Riders in August 2017**

During the fishing season's peak, this means there is approximately 7 people for every one personal vehicle. Furthermore, **because Unalaska lacks a connection to the Alaskan road system most of the transient population arrives via plane or ferry, without a personal vehicle**. This leaves, during peak months, around 85% of Unalaskan residents and visitors reliant on Unalaska's three other transportation modes: walking, bicycling, and taxis. If 84% of Unalaskan traffic is car traffic, seven thousand total trips are taken on Airport Beach Road daily, the average American takes 4.1 car trips per day<sup>6</sup>, and average Alaskans<sup>7</sup> own 0.91 vehicles per

<sup>5</sup> ci.unalaska.ak.us

<sup>6</sup> bts.gov

<sup>7</sup> Permanent Unalaskan residents are considered "average Alaskans", in this case.

capita<sup>8</sup>, then we can expect about 1,900 Unalaskans to travel down Airport Beach Road daily in a car. If travel via bike, foot, or taxi can be averaged at 2 trips per day, and each bike, pedestrian, or taxi carries one traveler at a time, then we can expect about 560 Unalaskans make a trip on Airport Beach Road daily on foot, a bike, or in a taxi.

**The remaining 8,538 visitors and residents, or 77.6% of the island population during peak fishing season, do not regularly leave their place of residence to access a retail or community amenity on a daily basis.** While some of the 8,538 people who do not own their own means of transportation can afford a taxi, have family members with vehicles, or carpool to their destination, the majority cannot leave their place of residence or temporary accommodations. Furthermore, those who can leave do not do so as frequently as they could if they did not share a vehicle with other people.

A public transit system in Unalaska would allow the 8,538 visitors and residents who do not otherwise leave their residences the opportunity to do so. If these 8,538 people left their residences at a *quarter of the rate of* those who currently do (77.6% of the population daily), we could expect 1,643 more people (19.2% of the 12,400) using retail and recreational amenities on a daily basis. If the average Unalaskan behaves similarly to the average American, then, according to the Bureau of Labor Statistics’ annual Consumer Expenditure Survey, they will spend \$29 a day on food, entertainment, and apparel<sup>9</sup>, all which require a mode of transportation to access.

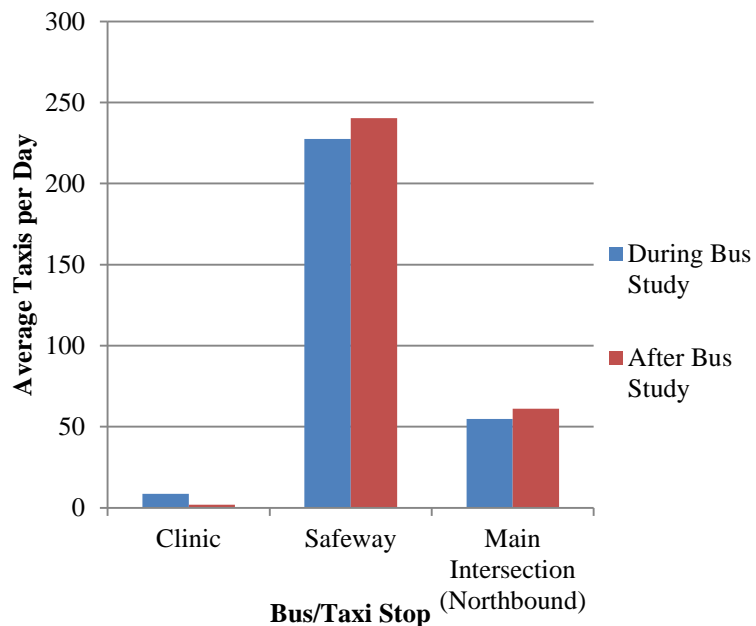


Figure 9: Impact of Bus Study on Taxi Operation

Compounded, this would mean a **net increase in island sales of \$47,647 daily during peak fishing season**, a clear and significant economic benefit. This is in addition to the costs that would be offset by the processing companies transitioning to use the bus system as their primary method for transporting employees.

<sup>8</sup> capitol-tires.com

<sup>9</sup> It is worth mentioning that Unalaskans are culturally distinct from other places in the United States. Unalaska's high population of foreign immigrants who sustain their families in other countries with their wages here are highly conscious of their finances, and likely do not spend as liberally as the “typical” American. However, the cost-of-living is high in Unalaska relative to the rest of the US, so we expect that the high prices balance out the decreased spending frequency.

As a final note, a worry presented during the proposal period for the study was that the bus would interfere with taxi operation and redirect potential taxi patrons. Using the traffic camera data at East Point Drive, Lavelle Court, and Broadway and Fifth, it was determined that no statistically significant effect<sup>10</sup> could be observed between taxi operation when the bus for the bus study was running and when it was not. The Planning Department expects this lack of a discrepancy to be due to the clientele that use the taxi generally not overlapping with the clientele that would take advantage of the bus.

### Safety, Public Welfare, and Community Engagement

In addition to the substantial economic benefit potentially provided by an Unalaskan public transit system, it is necessary to consider how a public transit system can improve the lives of Unalaskans. Improvements come in one of two varieties. Either the solution adds something new and positive or it mitigates something old and problematic. A transit system would do both.

Public transit gives people who would otherwise not have options more of them. It allows them to get to the dentist, doctor, or other **medical professionals for regular treatment**. It gives them **access to parks, hiking trails, and entertainment** options that allow them to de-stress and interact positively with their fellow citizens. Public transit provides lower income community members with **significant savings options**, too. Instead of spending their time traveling by foot to their destination or their money on other methods of transportation, they are able to save for other, more discretionary expenses or for the long-term.

The mitigation effects of an established public transit system are easier to specifically identify. They include:

1. **Decreased congestion and increased roadway capacity** due to more travelers using the bus system.
2. **Decreased driving related arrests and crimes**. Unalaska has experienced 42 DUI arrests, 35 vehicle crashes, and 63 moving violations so far this year<sup>11</sup>. Providing inexpensive, convenient transport to and from popular nightlife locations can provide an important reduction in risky behavior motivated by a lack of alternative transit options. Additionally, good transit options take drivers off the road, leading to a decrease in speeding citations, erratic and distracted driving, and other related hazards.

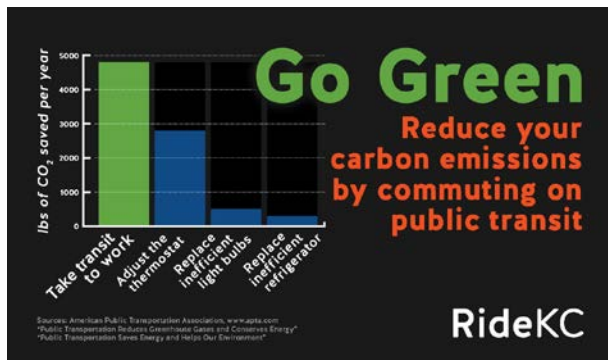


Figure 10: Environmental Benefits of Public Transit

<sup>10</sup> Difference between 'During' and 'After' data was not statistically significant (p-value = 0.05) for Safeway (t=0.615) and Main Intersection (t=0.303) stops, and statistically significant for the Clinic (t=0.046). The latter's significance suggests that it was not due to chance that more taxis ran during the bus study than after it. However, insufficient data was collected for statistical robustness, so all significance calculations should be viewed within that context.

<sup>11</sup> Unalaska Public Safety (September 5<sup>th</sup>, 2018)

3. Transit is also **safer** than driving for the traveler. The American Public Transit Association reports that traveling via public transit reduces a traveler’s likelihood of being in an accident by 90%, and that public transit is ten times safer per mile than a personal vehicle.
4. **Negative environmental effects are also mitigated** by effective public transit<sup>12</sup>. While buses generally get worse mileage than cars overall, their shared use qualities save the United States 4.2 billion gallons of gas annually, and the nation’s carbon emissions by 37 million metric tons.

## Envisioning Unalaskan Public Transit

### Summary

An Unalaskan bus system would be a step forward in economic, social, and transportation development that the island has never seen before. As such, the Planning Department believes it would be worthwhile for the name of the bus system to be decided by the community. Bus systems like Gulkana’s Soaring Eagle Transit hearken back to their cultural roots. The Planning Department thinks that an opportunity like this should not be missed, and that a name should be sourced from the Unalaskan public that remembers our Aleut heritage while simultaneously realizing the new opportunities available to Unalaskans in the 21<sup>st</sup> century.

The proposed bus system remembers its marine predecessors by going from island to island, like the native *iqyaċ*, fulfilling a crucial and important role in islanders’ daily life. How, where, and when a bus system would do this is the subject of the following chapter, which lays out a comprehensive plan regarding what a bus system in



Figure 11: The August Period’s Blue Route

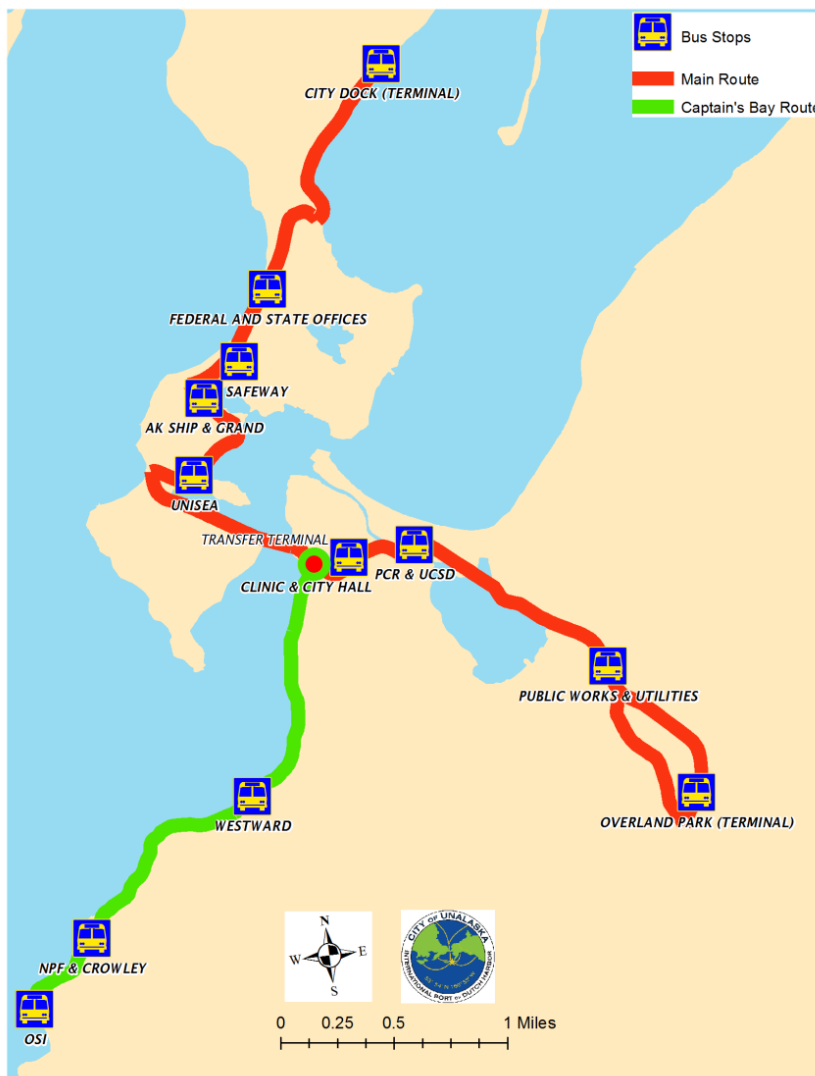
<sup>12</sup> kcata.org

Unalaska could practically look like. Much of this plan is inspired by how the *bus study's* system was laid out, but with a few changes. The logistics of acquiring the proposed system are the subject of the following chapter. A table of costs for many of the elements described below can be found in Appendix A: Table of Relevant Costs and Estimated Financial Impact.

## Routes and Stops

The City Planning Department is proposing two separate bus routes. The Main Route would run from the Unalaska Marine Center's City Dock to the intersection of Steward Road and East Broadway. The proposed Main Route is most similar to the Blue Route of the August period of the bus study. That route was an "access" based model, rather than "coverage" based one. This meant that it sought to give riders the quickest access to their destinations rather than picking them up at every possible location passengers might be expected.

During the August period of the study, the Blue Route was judged to be the more successful of the two routes. The Gold Route, which serviced 24 stops on a "coverage" based system, serviced the APL dock, Fuel Dock, Coastal Dock, and Kovirzhka Road stops. Only 7 passengers (out of



259) were picked up between these four stops during the August period. As a result, when the second half of the study was completed, in January, the Standard Oil and Strawberry Hill coverage areas that were serviced by these four stops were removed. The January Route was a rerun of August's Blue Route, and serviced 10 stops. The other stops cut were OSI and North Pacific Fuel, which were judged not to have enough riders to make service worthwhile, and some of the ones along East Broadway and Steward Road, whose service was consolidated into three main hubs.

The January period of the study ran just prior to the opening of Pollock A season, when the population of

Figure 12: Proposed Routes for Unalaska Bus System

Unalaska had swollen to its peak. It was in January that OSI, whose stop had been removed from the schedule, reached out to the City. The company had appreciated the service in August, and was interested in its continuance during peak fishing season.

With OSI's request in mind, the Planning Department is also proposing the Captain's Bay Route, which would act as a supplement to the Main Route. The Captain's Bay Route would run up and down Captain's Bay Road, and make four stops: Offshore Systems Inc., North Pacific Fuel, Westward and the transfer terminal.

The combined route system differs from the study's Blue Route in the following ways:

1. Instead of a single route with a spur down Captain's Bay Road, the system runs the separate Main Route and its supplementary Captain's Bay Route.
2. Instead of the Captain's Bay Route only including the stop at Westward, it includes four stops – the transfer terminal at the intersection of Captain's Bay and Airport Beach Road, Westward, North Pacific Fuel, and Crowley.
3. The route system has a transfer point between one route and the other route.
4. The Main Route travels south on Steward Road to the Overland Park terminal before heading north again on East Broadway Road. The Blue Route only traveled on Steward. Not crossing the intersection and staying on the same side of the road throughout the whole trip increases safety, and since there are no scheduled stops on Steward Road, no conflict is created by only having buses run in one direction on the segments of the loop.

### **Schedules, Vehicles, and Drivers**

Travel from the Overland Park Terminal to the City Dock Terminal on Airport Beach Road takes a maximum of twenty minutes, one-way. Travel from the proposed transfer terminal at the corner of Airport Beach Road and Captain's Bay Road to Westward takes approximately eight minutes, round-trip. Finally, travel from the transfer terminal to OSI takes approximately twenty minutes, round trip.

It has been expressed to the City Planning Department that an hourly bus service is too infrequent. Anecdotal evidence supports that a system that provided service on a half-hourly basis would be satisfactory to the general Unalaska population.

In order for the system to provide half-hourly service to each stop on the Main Route, the operator would need to run two buses on the route. It is theoretically possible to travel the seven and a half miles that make up the Main Route in fifteen minutes at thirty miles-per-hour. However, the slight delays racked up at each stop, in addition to the time spent picking up passengers who hailed the bus not at an official stop, would compound into significant delays later in the day, since there would be no time left over at the end of each hour for the bus to reset to the beginning of its schedule. Consequently, in order to run half-hourly service on the Main Route, the operator would need two buses. Each bus, at the end of its twenty-minute northbound or southbound trip, would wait ten minutes at either the City Dock or Overland Park terminal before starting its return trip.

In order to provide half-hourly service on the Captain’s Bay Route, the operator would only require one bus. Since the trip from the transit terminal to OSI takes twenty minutes, the bus would wait for ten minutes after each round trip at the transit terminal before starting its next round trip to OSI.

The vision for the system described above requires three vehicles. It is important to note, however, that this proposal does not take into account potential maintenance problems that could and will arise during the normal operation of a bus system. In the system proposed above, if one bus fell out of non-stop operation, the minimum reduction in service would be a thirty minute delay on the Main Route. This delay would be extremely problematic, especially if riders are trusting the bus system to get them to work, home, or elsewhere in a timely manner.

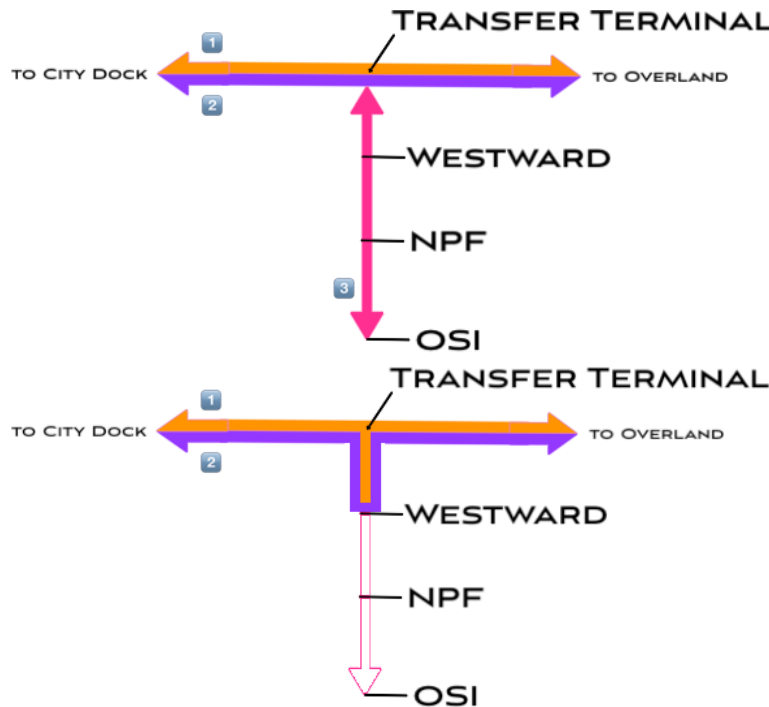
To eliminate this risk, **the Planning Department recommends that the operator purchase a fourth bus in addition to the regularly operating three.** This way, the operator could rotate the four buses among the maintenance garage, where each bus would undergo monthly preventative maintenance (one would be in the garage each week), the paved, light wear-and-tear Main Route, and the unpaved, heavier wear-and-tear Captain’s Bay route. Monthly maintenance would drastically reduce the chances of a potentially catastrophic equipment failure during travel, as well as effectively eliminate the chances of two buses needing maintenance at the same time, a situation that would require a drastic decrease in service.

| Stop                       | Blue Route |     | Gold Route |     |
|----------------------------|------------|-----|------------|-----|
|                            | N          | S   | N          | S   |
| Overland                   | :00        | :45 | :00        | :59 |
| Steward & E. Broadway      | :01        | XX  | :01        | XX  |
| MAC Enterprises            | :02        | XX  | :02        | XX  |
| Steward & Eagle            | :03        | XX  | :03        | XX  |
| Public Works               | :04        | :40 | :04        | :55 |
| Loop & E. Broadway         | :06        | :38 | :06        | :54 |
| Loop & Ptarmigan           | :07        | :37 | :07        | :53 |
| Armstrong & Lake           | :09        | :35 | :09        | :50 |
| PCR                        | :12        | :28 | :12        | :43 |
| Alyeska                    | :14        | :30 | :14        | :45 |
| PCR                        | :16        | :28 | :16        | :43 |
| Clinic                     | :18        | :26 | XX         | XX  |
| OSI                        | XX         | XX  | :27        | :33 |
| North Pacific Fuel/Crowley | XX         | XX  | :29        | :30 |
| Westward                   | :23        | :21 | :31        | :27 |
| UNISEA                     | :29        | :15 | :37        | :25 |
| Grand Aleutian Hotel       | :32        | :13 | :39        | :23 |
| AK Ship Supply             | :33        | :12 | :40        | :22 |
| Safeway                    | :34        | :10 | :42        | :20 |
| Coastal                    | XX         | XX  | :43        | :18 |
| APL                        | XX         | XX  | :45        | :17 |
| Fuel Dock                  | XX         | XX  | :47        | :15 |
| Kovirzhka                  | XX         | XX  | :49        | :13 |
| Federal & State Offices    | XX         | XX  | :51        | :10 |
| Tom Madsen Airport         | :38        | :06 | XX         | XX  |
| City Dock                  | :42        | :04 | :54        | :04 |
| Kloosterboer               | :44        | :02 | :56        | :02 |
| Gordon Jensen              | :46        | :00 | :58        | :00 |

Figure 13: August Period Study Schedules



However, the Planning Department recognizes that there are scenarios in which financial burdens outweigh other potential non-monetary costs. In the event that starting a bus system would be one of the scenarios, there is a way in which the bus system could be operated with three so that only two stops lose service and only an eight-minute delay is incurred on half the



**Figure 14: Compensation Options if Fourth Bus Breaks in a Four Bus System vs. if Third Bus Breaks in a Three Bus System**

stops of the Main Route. (In the event of a maintenance issue.)

This is possible because the three-bus system has the potential to provide its own failsafe redundancy. If a maintenance issue existed that took one bus out of service, the bus running the Captain’s Bay Route would switch to servicing the Main Route. The Main Route would add the Westward stop, as well as the eight minute round trip necessary to access it from Airport Beach Road. This would create an eight-minute delay on the remaining half of the Main route, but since the round trip was only increased to 28 minutes, the ten minute cushion at the terminal that the route

normally has would prevent delays from compounding over the course of the day.

This three-bus alternative should only be considered if the four-bus system is judged to be infeasible. It does not provide sufficient time for regular maintenance, all but guaranteeing that service will have to be cut at NPF and OSI when maintenance does need to be done, and lowers the lifespan of the buses such that any value gained from not purchasing an extra one is lost because of the accelerated rate of wear.

In addition to the amount of buses necessary to run the system, it is necessary to consider the ridership capacity in each bus. Relevant considerations here include the style of the bus (flat faced, school bus, van), and the proportion of riders to empty seats that will give the system the appearance that it is in regular use, and not just going back and forth on the taxpayers’ dime. The costs of different capacity, style, and length buses are provided in the Table of Costs and Estimated Financial Impact, in Appendix A. Vehicle insurance is also a relevant consideration.

These buses will need drivers. The Federal Motor Carrier Safety Administration mandates specific “Hours of Service Rules”, as seen in Figure 14.

In order to remain compliant with the FMCSA’s regulations and Department of Labor standards, the system will need to have at least two full time drivers per bus available per day, with an additional part time driver per day, assuming that the buses will run for ten or more hours daily. To comply with the 60/70 hour limit, an additional two drivers would be needed to cover the remaining day of the week. Each driver, then, would work a shift a day, except on one day of the week, which they would have off, while the part time employees fill the gaps in the 40 hour week. Finally, an extra employee would be worth having to cover sick days, vacation, etc. This comes to a minimum total of 12 employees necessary to operate the service, 10 full time and 2 part times.

Lastly, the City will need to decide what sort of fueling option it prefers for its buses. Buses come in five different varieties – gasoline, diesel, fuel cell, liquid natural gas, and electric. The respective costs for each of these options, as well as the estimated “miles per gallon” of diesel at the Power Plant that an electric bus would consume are also provided in Appendix A.

### Fares and Transfers

The exact amount charged per ride is subject to a couple different considerations. Firstly, it is nearly impossible to run a bus system at an immediate profit. Kodiak Area Transit System charges \$2.00 a ride, but has calculated that the average cost to Kodiak Senior Care, which manages the system, is about \$18.00 a ride, or nine times the fare. Bus system operators generally

do not derive their value from direct profits, but rather from the economic and social development encouraged by the bus system. We expect that the projected increase in business sales due to viable transit when the population is at its peak would be \$70,673 per day. **Consequently, the city’s current 3% sales tax revenue would rise by \$1,429.41 per day. This increase in revenues would cover the expenses of a \$500,000 per year bus system in 350 days,** even with the newly mobile population only being 25% economically active.

| Regulation            | Description  |
|-----------------------|--|
| 10-Hour Driving Limit | May drive a maximum of 10 hours after 8 consecutive hours off duty.  |
| 15-Hour Limit         | May not drive after having been on duty for 15 hours, following 8 consecutive hours off duty. Off-duty time is not included in the 15-hour period. |
| 60/70- Hour Limit     | May not drive after 60/70 hours on duty in 7/8 consecutive days.   |

Figure 15: FMCSA Hours of Service Rules

Frequently, fares are used to recoup the remaining costs between what is paid annually for a transit system and what is provided via tax revenue, partnerships, advertising, and federal and state grants. In Unalaska’s case, sales tax revenue due to increased economic activity would recoup costs on its own, so fares would be more discretionary. Since the average rider indicated in the bus study that they would be willing to pay two to four dollars, the fare should probably be around that.

Most fares would be collected on buses, in cash, to keep it simple and avoid unnecessary investments in a more complex electronic system. While this requires riders to pay using exact change, this is not an unusual practice for public transit systems nationwide. The cash boxes

onboard the buses would be emptied at the end of the day by an authorized employee with a key and the cash would then be deposited in the relevant account.

In addition to the basic, single-ride fare, multi-ride punch cards could be sold at City Hall, the PCR, Safeway, processing plants, and other locations around the island. A ten punch card would have a discounted price per ride, and a punch card that provided even more rides (fifteen, twenty) would have even better value. These punch cards could be brought onto the bus, hole-punched by the driver, and then returned to the rider for later reuse. A coffee shop style “Ride the bus nine times, get your tenth ride free!” system could also be an option, as could an “unlimited day pass” for a higher total but lower cost per ride aimed primarily at the needs of short term visitors.

Since the proposed system has a transfer point at the intersection of Airport Beach and Captain’s Bay Roads, a transfer system would also need to be in place. This could be as simple as printing out a deck of transfers in the morning before service starts and issuing them to riders on the Captain’s Bay Route and those who ask for them on the Main Route or as complex as plastic “Unalaska Bus System” tokens that would be issued in the same way as the paper transfers but be deposited in the cash box and reissued the next day instead of hole-punched and invalidated.

### **Infrastructure**

In addition to routes, stops, schedules, vehicles, drivers, fares, and transfers, a fully operational bus system requires physical additions to the built infrastructure. The minimum expectation for a bus system would be signage indicating where each bus stop is along a route, while the maximum infrastructural improvement could include everything up to terminal buildings, covered bus garages, heated and enclosed bus stops with inside benches, and bump-outs built into the road system for buses to pull over to drop people off at their desired stop. The degree of infrastructural development desired is subject to Council’s discretion, but there are funding sources (specifically federal grants) that could potentially make the highest degree of development a possibility at minimal cost to the City. These funding sources are explored in greater detail in the next chapter and in Appendix B.

## **Making Unalaskan Transit a Reality**

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### **Options**

Looking around at other communities we can find numerous methods of delivering public transit services to people. Some are public and some are semi-public systems. They can include a transit authority, municipally owned and operated, municipally owned and contractor operated, as well as a private venture system.

## Municipally Owned and Operated

Juneau, Alaska's transit system is one example of a municipally owned and operated transit system. The service began in 1971 and is considered to be a successful transit system in Alaska.

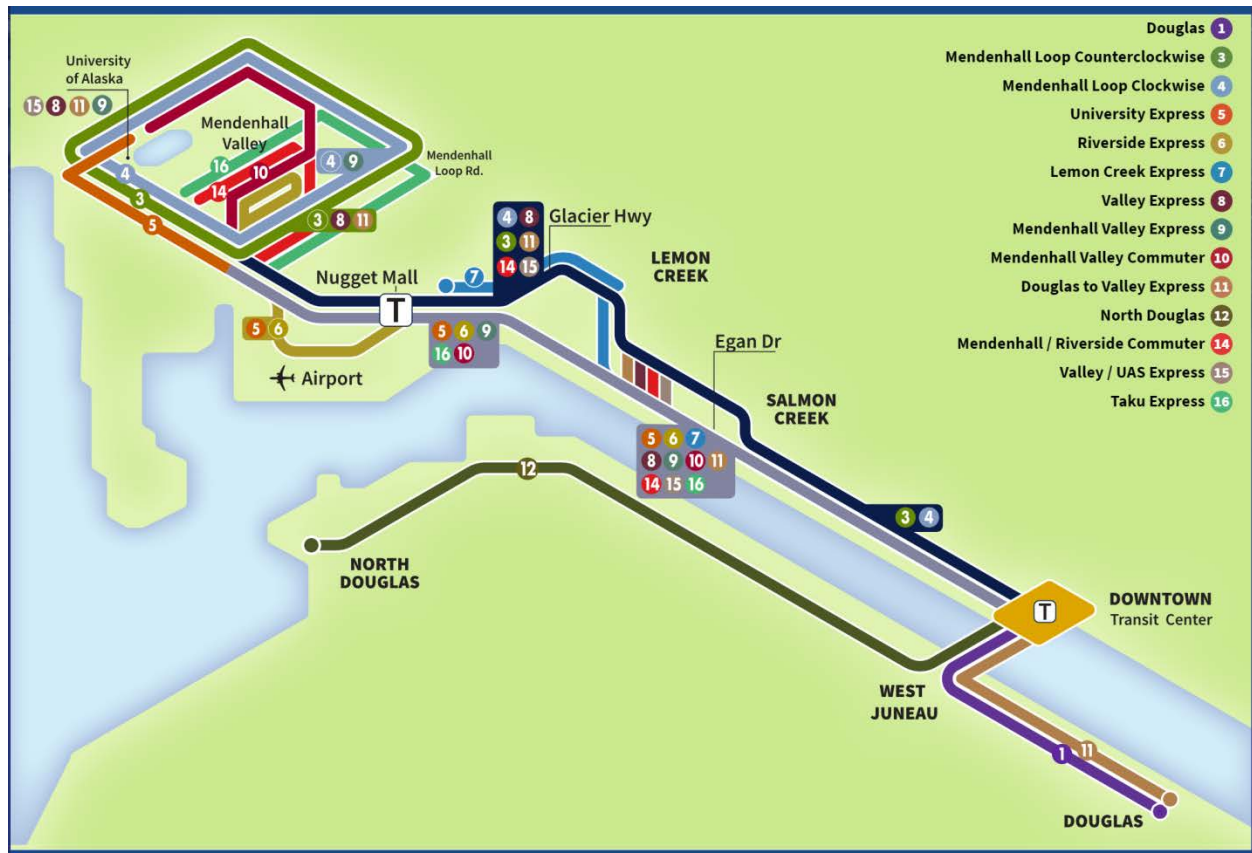


Figure 16: Capital Transit Route Map, Juno AK

Juneau's estimated population in 2017 is 30,388. Its transit system, called Capital Transit, offers ridership to more than a million people annually. It is funded "primarily by general fund revenues from the City and Borough of Juneau and passenger fare revenues. The capital costs of vehicles and facilities are provided by the State of Alaska and the Federal Transit Administration. Only the local match for capital grants (10-20%) is provided by the Capital Transit Budget."<sup>13</sup>

## Contractor-Operated

Contractor-Operated means the city acquires the capital for a transit system, but hires a private contractor to operate the system. In this instance the City of Unalaska would issue a request for proposals to seek parties – businesses interested in operating the transit service. The operator would be responsible for insurance, operation, maintenance, and fee collection in exchange for profit obtained by operating the service.

<sup>13</sup> <https://juneaucapitaltransit.org/about-us/>, Capital Transit

According to a study by the U.S. General Accounting Office, “para-transit, demand response, and commuter rail are more likely to be contracted out, and fixed-route bus, heavy rail, and light rail are most often operated by the transit agency.”<sup>14</sup> The study cites the ability of private contractors to be more flexible, and cheaper, in scheduling and paying drivers as reasons in support of contracting services. However, the study cites officials from national and local unions as saying “while contracting may provide some short-term cost savings to transit agencies, in their view the savings are almost entirely from lower wages and benefits paid by the private companies to employees.”<sup>15</sup>

Unstated thus far, the obvious benefit from using a contractor operated system is that the city can control its liability and costs for a transit system. It also absolves the city / municipality from having the burden of scheduling issues both in terms of staff, supervision, as well as bus operation and service routes.

Kodiak Area Transit System uses this form for system operation. Rather than hire an entirely new contractor, Kodiak Senior Care, which manages the system, contracts to the same company that runs the Kodiak school system’s buses, First Student.

The Unalaska Planning Department approached Island Services about their interest in operating a public transit on the island. Island Services currently provides the Unalaska City School District with bussing services for its pupils. The company admitted Unalaska is the only place where it operates busses; it is a refuse removal company and also operates waste management services on the island. The company said it would be interested in evaluating the opportunity once this study is completed.

### **Transit Authority**

Another method of implementing a transit system is to create a public transit authority. Alaskan legislation enables local governments to create a transit authority. Once created, each representing government, or member, has appointment authority over a certain number of the entity’s members. Once created, transit authorities have the abilities similar to those of municipalities where it comes to levying taxes for transit purposes. The implied benefits of a transit authority include the transfer of liability and operations to a third party.

### **Funding**

A strategy to fund a transportation system for Unalaska will depend on the kind of system the City chooses to develop. There are a variety of ways that other places use to fund transit service and pay for associated capital costs.

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<sup>14</sup> PUBLIC TRANSIT Transit Agencies’ Use of Contracting to Provide Service, 2013, page 2, GAO

<sup>15</sup> Ibid, summary page

### **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 25% and 50%. Voter approval would be needed to utilize this as a funding source.

### **Marine Passenger Fee**

In researching other Alaska communities, Juneau collects a \$5 per passenger fee on every arriving cruise ship passenger. Juneau uses those funds on projects that enhance the tourism experience. Since the bus service would be available to visiting tourists, it would be acceptable to designate some of the 'passenger fees' to support a bus service on the island. It's worth noting, however, that Unalaska does not receive the number of visitors as Juneau and other Alaskan tourist communities.

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

Many local governments impose taxes and fees that are paid by visitors. This is an incremental collection tax that is designed to offset some of the impacts visitors impose on the community. Unalaska already has hotel-motel room tax and uses part of it to fund the Convention and Visitors Bureau. The city could potentially also use some of the funds to support a transit system. These fees are usually collected through hotel taxes and car rental fees.

### **Fuel and Vehicle Taxes**

Local governments in Alaska may impose registration taxes. These are collected annually through the Department of Motor Vehicles when vehicle owners obtain new registrations and licenses. It can be a flat tax or can be based on vehicle value or age. The fees can be used for any purpose.

Local governments can also enact fuel taxes. These funds are typically collected to support roadway maintenance and paving activities. However taxes can also be used to fund local transit operations. The City currently has a \$50/year vehicle tax.

### **Partnerships**

Many transit systems are designed using partnerships between the public and private sector. As 'small' as Unalaska can seem, it also has some fairly 'large' operations on the island. It has several large seafood processing plants that employ a potentially significant number of transit riders, as well as shipping companies that can assist with delivering capital equipment. There are also two native organizations that have a large presence on the island. The first is the local native village corporation, the Ounalashka Corporation, a large property owner that leases property for profit. The other is the Qawalangin Tribe, the local and federally recognized tribe. Together these entities represent many of the native islanders who are often underserved, in terms of transportation services and other services

## **Advertising**

Just about all transit systems offer some form of advertising on their vehicles and shelters. It is not anticipated that advertising will generate a significant amount of revenue for Unalaska. However it is an opportunity to use to the degree possible. According to information in the Juneau 2014 Capital Transit Plan, Fairbanks generates \$18,000 per year in advertising revenue, while a much bigger city like Anchorage generates nearly \$400,000.

## **Rider Fares**

It was clear during the transit study weeks wherein Unalaska offered free bus service that the riders appreciated the service. Information collected suggested riders would be willing to pay anywhere from \$0 - \$10 per ride, with the average being somewhere around \$4 per trip. It is anticipated that rider fees would pay for a significant portion of the Unalaska transit system due to the relatively high number of carless, temporary workers on the island during fishing seasons.

## **Grants and Multi-Jurisdictional Grant Opportunities**

The Alaska Community Transit (ACT) website lists fourteen communities in our state that receive grant funding. The communities range from City of Anchorage's extensive 'People Mover', to Ketchikan's smaller 'The Bus'. ACT's mission is to provide access and mobility within the communities of Alaska, both urban and non-urban, through transit services that are safe, appealing, efficient, and easily-available to both the general public and transit-dependent populations. The fourteen communities currently receiving funding are:

- Anchorage – People Mover
- Bethel – Bethel Public Transit System
- Fairbanks – MACS Transit
- Girdwood – Glacier Valley Transit
- Gulkana – Soaring Eagle Transit
- Hollis – Inter-Island Ferry Authority
- Juneau – Capital Transit
- Ketchikan – The Bus
- Kodiak – Kodiak Area Transit System
- Mat-Su – Valley Transit
- Sitka – The Ride
- Soldotna – Central Area Rural Transit (CARTS)
- Talkeetna – Sunshine Transit
- Tok – Interior Alaska Bus Line

Unalaska also has the opportunity to partner with the Qawalangin Tribe and Ounalashka Corporation to apply for a blend of federal, state, and tribal grant funds. "The U.S. Department of Transportation (USDOT) announced the opportunity to apply for \$5 million in competitive grant funding to support transit for Native American tribes and Alaska Native villagers in rural

areas. The funding program supports projects that will provide greater access to jobs, schools, and health care in tribal areas where transit is currently limited or nonexistent.”<sup>16</sup> In fiscal year 2017, the Federal Transit Administration (FTA) awarded Tribal Transit funds to 36 competitively selected projects in 19 states.

The FTA administers 30 grant programs. Of these, 15 are competitive programs that must be applied for in order to win funding. Thirteen are formula based programs, and two are ‘set asides’ wherein they are administratively awarded based on a set of criteria programmatically unique to the funding’s purpose(s). One of these is ‘The Tribal Transit Program’ from the Formula Grants for Rural Areas program consisting of a \$25 million formula program and a \$5 million discretionary grant program subject to the availability of appropriations. A 10% local match is required under the discretionary program, however, there is no local match required under the formula program.

Unalaska qualifies for the Tribal Transit funding program. The community appears to qualify for eight (8) of the grant programs outright by virtue of its location as a rural community, or because the Qawalangin Tribe is a federally recognized tribal organization, or because we can design a system with elements that meet the conditions of the grant opportunity. Some reasons why we would not qualify for grants administered by the FTA are because they are geared toward fixed rail transit, highway systems, colleges and university areas, areas with non-attainment pollution issues, are for ferry transportation systems, research and design opportunities and or deal with federally declared disaster recovery assistance program areas. A complete list and description of all the grant opportunities can be found in Appendix B.

## Possible Transit Model for Unalaska

### **Route**

The model we tested that seemed to demonstrate a reasonable result for Unalaska is a two route system. The first route would consist of two buses operating on the half hour between the City Dock and Overland Park. The second route would operate on Captains Bay Road and navigate between OSI and a connection with the first route at Airport Beach Road.

### **Ridership & Revenue**

The following assumptions are based on the two trial weeks the city operated bus service. Rider estimates were deflated to maintain a conservative approach to the assumptions. Hours of operation, seasonal routes and rider fees are controlled variables.

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<sup>16</sup> <https://www.transit.dot.gov/about/news/us-department-transportation-announces-5-million-funding-opportunity-tribal-transit>





Figure 17: Simplified Map of Unalaska Bus System

The first scenario proposes two busses running every half hour along the north-south main route. A prediction of 10 riders total per hour, 20 hours of daily service for seven days per week. Assume route hours to be 5:00am – 12:00pm (20 hours) generates 200 riders per day. At a rate of \$3 per ride, this scenario produces \$600 per day, thus \$4,200 weekly.

The second scenario would operate a third bus along Captains Bay Road during the fishing seasons. The bus would also operate on the half hour. Its anticipated ridership would be slightly greater at 7 riders per hour. Holding the other controlled variables the same as scenario 1, that route would generate 140 riders per day producing \$420 per day or \$2,940 weekly.

### Direct Income/Expenses

There are three basic numbers needed to evaluate a potential new program: startup costs, operating

expenses and income, and indirect income and benefit. Appendix A indicates the revenue of the proposed bus scenarios would yield about \$500,000 annually. The operation costs for the system are estimated at about \$1.55 million annually. That would leave a deficit of approximately \$1 million to operate the service.

### Indirect Income & Benefit

However there are the multipliers provide a return to the city indirectly, either through increased sales tax revenue or an increase in business activity resulting from additional people circulating cash in our local economy. In a previous section of this report, Observed Need, the Economic Development that occurs as the result of an investment in a transit system is given a multiplier of 3 to 1, anticipating a return of \$3 to the community for every \$1 invested in the service. That's a conservative estimate provided by models studied in areas that have a lot of leakage to surrounding communities, whereas Unalaska has no cross over social and community opportunities connected to our street system like there are in other places. Even if there is only a 1 to 1 return on an investment, city businesses and service providers should reap a return benefit

of the \$1.55 million annually. Since Unalaska's geography prohibits 'economic leakage' to adjacent communities' there should be significantly more stable returns on investment approaching the 3-1 indicator. A predicted return of \$3 to \$1, or \$4.5 million annually in this scenario, is a confident estimate.

### **Startup Costs**

Appendix B indicates a list of potential grants that could be applied for to obtain startup costs. There are 16 grants listed as qualified grants, those which the City of Unalaska and or potential partners are eligible to apply. In addition to startup costs, some of these resources also provide for operating costs. Many of the grants sources in Appendix B would be more successful if a tribal organization was a project partner. For instance, if the Q Tribe was interested then the city would be eligible for *Public Transportation on Indian Reservations Program; Tribal Transit Program* grant and the *Tribal Transit Formula Grants - 5311(c)(2) grant*.

Unalaska also has the potential to work collaboratively with shipping and processing companies in establishing a system here. Processing companies' workers would be one of the larger ridership groups to benefit from a transit system, being most do not have personal transportation on the island. If a project with costs and anticipated outcomes were proposed to this group the benefit gained might be very attractive to assist with such a project. And a big expense for shipping four busses to the island might be defrayed the shipping companies also decided to be a partner in the project.

## Summary and Departmental Recommendation

This study documents there is a need and interest in public transit on Unalaska. The island's ratio of cars to workers alone demonstrates there is unrealized economic potential to be gained by increasing the circulation of people throughout the community. Outcomes anticipated by introducing public transit also include the following:

1. Increased mobility for young residents aged 10-16 throughout the community
2. Transportation support to/from youth programs at school, PCR and the public library
3. Alternative to walking during poor/inclement weather for island residents and visitors
4. Alternative transportation option for community elderly residents
5. Investment in public transit increases circulation of income in the community exponentially

Other, socio-economic outcomes that are not demonstrably noted via revenue or costs should include a community image and rebranding opportunity. In a community that is so reliant on guest workers to facilitate the functioning of the local economy, the attractiveness of working in Unalaska can only increase with the opportunity for local transit mobility. Other Alaskan communities that have implemented public transit appear to be improving their economies overall, and the introduction of transit highlights community capacity to remain current with modern times.

Moving forward might include developing a partnership with the local Qawalangin Tribe and several businesses to initiate a public transit system. Together with the Q Tribe there are financial resources available that can offset or nearly cover the initial costs of the transit system. Indirectly, the additional resources collected by the city's 3% sales tax should pay for the ongoing operations and maintenance costs of such a system, while also providing capital dollars for future capital costs.

If the city is indeed interested in pursuing transit further, it might be prudent to meet with other Alaskan communities that have implemented transit. This study highlights anticipated revenues and costs, however it is always recommended to seek additional information prior to implementing a major program or change to services. The city could also contract for an additional study of the potential transit options, whoever that consultant is would benefit from the information created by this study.

However it also seems Unalaska is a relatively small community by comparison to many, and the linear layout of the island road system doesn't lend itself to many alternate routes and transportation system options. The money put toward an additional study could be put toward capital costs for a system rather than a larger study. Simply put, it's not that complicated of an issue to examine and make a decision about in comparison to a system being considered for a metropolitan area.

Instead, another option would be to convene a stakeholder meeting between the city, QTribe, and several of the islands larger companies. A path forward might be to prepare refined costs of capital acquisition and system operation, while also gaging interest among stakeholders for transit. Forming a partnership together could spell a formula to explore grant opportunities and diagram means of sharing the costs to initialize a transit system together for the benefit of island residents and workers. This is the option that the Planning Department recommends the City Council consider and, if acceptable, the next phase will be to facilitate discussions toward a better understanding of what it would take to realize a public transit system on Unalaska.

## Appendix A: Table of Costs and Financial Impact

### Start-up cost

|            |               |  |
|------------|---------------|--|
| Bus        |               |  |
| Used       | 120,000.00    | Cost is average from government surplus research. 4 x \$30,000     |
| New        | 400,000.00    | Average cost of new PCR style bus based on research. 4 x \$100,000 |
| Bus Sign   | 3,000.00      | Quoted cost  |
| Schedules  | 8,000.00      | Based on research of print services.                               |
| Tickets    | 5,000.00      | Based on research of print services.                               |
| Total Used | \$ 136,000.00 |  |
| Total New  | \$ 416,000.00 |  |

### Operating cost

|              |            |              |   |
|--------------|------------|--------------|---|
| Employees    |            |              | Multiplier Used                                   |
| FT Driver*   | 123,411.00 | 1,234,110.00 | x10 drivers                                       |
| PT Driver*   | 74,082.00  | 148,164.00   | x2 drivers  |
| Admin*       |            | 94,571.00    |   |
| Insurance**  | 768.00     | 3,072.00     | x3 busses   |
| Fuel         | 1,089.00   | 56,628.00    | x3 busses x365 days, based on cost to run PCR Bus |
| Maintenance  | 2,600.00   | 7,800.00     | x3 busses, 3 year average for PCR bus             |
| Yearly Total |            | 1,544,345.00 |   |

\* Unalaska Light Equipment Operator, and Admin 2 position (assumes 2,080 hrs, no overtime), based on HR suggestion and current staff cost

\*\*Based on current PCR bus, per city insurer

### Projected System Wide Annual Revenue

|                          |            |            |                                   |
|--------------------------|------------|------------|-----------------------------------|
|                          | N/S Bus    | Westward   |                                   |
| Riders/hr                | 8          | 7          | Based on average riders per hour  |
| Rate                     | 3.00       | 3.00       | Average based on rider suggestion |
| Revenue/hr               | 24.00      | 21.00      |                                   |
| Revenue/dy               | 480.00     | 420.00     |                                   |
| Revenue/wk               | 3,360.00   | 2,940.00   |                                   |
| Revenue/yr               | 174,720.00 | 152,880.00 |                                   |
| # of busses              | 2          | 1          |                                   |
| Total                    | 349,440.00 | 152,880.00 |                                   |
| Projected Annual Revenue |            | 502,320.00 |                                   |

Planning consulted with Unalaska's Human Resources Manager to derive requirements about number of drivers per working requirements.

Planning worked with Unalaska's Risk Manager to estimate insurance requirements.

## Appendix B: List of Available Grants

### Qualified Grant Opportunities

#### **Access and Mobility Partnership Grants**

This program provides competitive funding to support innovative capital projects for the transportation disadvantaged that will improve the coordination of transportation services and non-emergency medical transportation services.

#### **Better Utilizing Investments to Leverage Development (BUILD)**

Transportation Grants Program (formerly TIGER) US DOT's Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants program funds investments in transportation infrastructure, including transit.

#### **Bus & Bus Facilities Infrastructure Investment Program**

Provides funding through a competitive allocation process to states and transit agencies to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. The competitive allocation provides funding for major improvements to bus transit systems that would not be achievable through formula allocations.

#### **Enhanced Mobility of Seniors & Individuals with Disabilities - Section 5310**

Formula funding to states for the purpose of assisting private nonprofit groups in meeting transportation needs of the elderly and persons with disabilities.

**Expedited Project Delivery for Capital Investment Grants Pilot - 3005(b)** Allows up to eight projects over the life of the pilot program to be selected for expedited grant awards. Projects must be supported through a public-private partnership and demonstrate local financial commitment, technical capacity, and a certification that the existing transit system is in a state of good repair.

#### **Flexible Funding Programs - Surface Transportation Block Grant Program - 23 USC 133**

Provides funding that may be used by states and localities for a wide range of projects to preserve and improve the conditions and performance of surface transportation, including highway, transit, intercity bus, bicycle and pedestrian projects.

#### **Formula Grants for Rural Areas - 5311**

Provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destinations.



Figure 18: Bus Stop Sign and Brochures

**Grants for Buses and Bus Facilities Formula Program - 5339(a)**

Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. In addition to the formula allocation, this program includes two discretionary components: The Bus and Bus Facilities Discretionary Program and the Low or No Emissions Bus Discretionary Program.

**Human Resources & Training - 5314 (b)**

Provides for grants or contracts for human resource and workforce development programs as they apply to public transportation activities.

**Low or No Emission Vehicle Program - 5339(c)**

Provides funding through a competitive process to states and transit agencies to purchase or lease low or no emission transit buses and related equipment, or to lease, construct, or rehabilitate facilities to support low or no emission transit buses. The program provides funding to support the wider deployment of advanced propulsion technologies within the nation's transit fleet.

**Mobility on Demand (MOD) Sandbox Demonstration Program - 5312**

Funds projects that promote innovative business models to deliver high quality, seamless and equitable mobility options for all travelers.

**Pilot Program for Transit-Oriented Development Planning – Section 20005(b)**

Provides funding to local communities to integrate land use and transportation planning with a transit capital investment that will seek funding through the Capital Investment Grant (CIG) Program.

**Public Transportation on Indian Reservations Program; Tribal Transit Program**

The Tribal Transit Program is a set-aside from the Formula Grants for Rural Areas program consisting of a \$25 million formula program and a \$5 million discretionary grant program subject to the availability of appropriations. A 10-percent local match is required under the discretionary program, however, there is no local match required under the formula program.

**Rural Transportation Assistance Program - 5311(b)(3)**

Provides funding to states for developing training, technical assistance, research, and related support services in rural areas. The program also includes a national program that provides information and materials for use by local operators and state administering agencies and supports research and technical assistance projects of national interest.

**Technical Assistance & Standards Development - 5314(a)**

Provides funding for technical assistance programs and activities that improve the management and delivery of public transportation and development of the transit industry workforce.

**Tribal Transit Formula Grants - 5311(c)(2)(B)**

Provides funding to federally recognized Indian tribes to provide public transportation services on and around Indian reservations or tribal land in rural areas. Funding is provided as a set-aside within of the Formula Grants to Rural Areas program and allocated both by statutory formula and through a competitive discretionary program.

## **Non-Qualified Grant Opportunities**

### **Capital Investment Grants - 5309**

FTA's primary grant program for funding major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit, this discretionary grant program is unlike most others in government. Instead of an annual call for applications and selection of awardees, the law requires that projects seeking CIG funding complete a series of steps over several years to be eligible for funding.

### **Commuter Rail Positive Train Control Grants**

Authorized by the Fixing America's Surface Transportation (FAST) Act (Section 3028), the fiscal year 2017 Commuter Rail Positive Train Control Grant Program offers funding to states, local governments and transit agencies that operate commuter rail systems to install positive train control systems required under 49 U.S.C. 20157 (Implementation of positive train control systems).

### **Flexible Funding Programs - Congestion Mitigation and Air Quality Program - 23 USC 149**

CMAQ provides funding to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter. States that have no nonattainment or maintenance areas still receive a minimum apportionment of CMAQ funding for either air quality projects or other elements of flexible spending. Funds may be used for any transit capital expenditures otherwise eligible for FTA funding as long as they have an air quality benefit

### **Flexible Funding Programs - National Highway Performance Program - 23 USC 119**

Provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS.

### **Low and No-Emission Component Assessment Program (LoNo-CAP)**

On September 29, 2016, FTA announced the opportunity for eligible institutions of higher education to apply for funding to conduct testing, evaluation, and analysis of low or no emission (LoNo) components intended for use in LoNo transit buses used to provide public transportation. The deadline for applications is November 28, 2016.

### **Metropolitan & Statewide Planning and NonMetropolitan Transportation Planning - 5303, 5304, 5305**

Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Planning needs to be cooperative, continuous, and comprehensive, resulting in long-range plans and short-range programs reflecting transportation investment priorities.

### **Passenger Ferry Grant Program - Section 5307**

Provides competitive funding to public ferry systems in urbanized areas.



**Public Transportation Emergency Relief Program - 5324**

Helps states and public transportation systems pay for protecting, repairing, and/or replacing equipment and facilities that may suffer or have suffered serious damage as a result of an emergency, including natural disasters such as floods, hurricanes, and tornadoes. It provides authorization for Section 5307 and 5311 funds to be used for disaster relief in response to a declared disaster.

**Public Transportation Innovation - 5312**

Provides funding to develop innovative products and services assisting transit agencies in better meeting the needs of their customers.

**Safety Research and Demonstration Program**

The Safety Research and Demonstration (SRD) Program is part of a larger safety research effort at the U.S. Department of Transportation that provides technical and financial support for transit agencies to pursue innovative approaches to eliminate or mitigate safety hazards. The SRD program focuses on demonstration of technologies and safer designs.

**State of Good Repair Grants - 5337** Provides capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed guide-way and high-intensity motorbus systems to maintain a state of good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management plans.

**Transit Cooperative Research Program - 5312(i)**

Research program that develops near-term, practical solutions such as best practices, transit security guidelines, testing prototypes, and new planning and management tools.

**Urbanized Area Formula Grants - 5307**

Provides funding to public transit systems in Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.

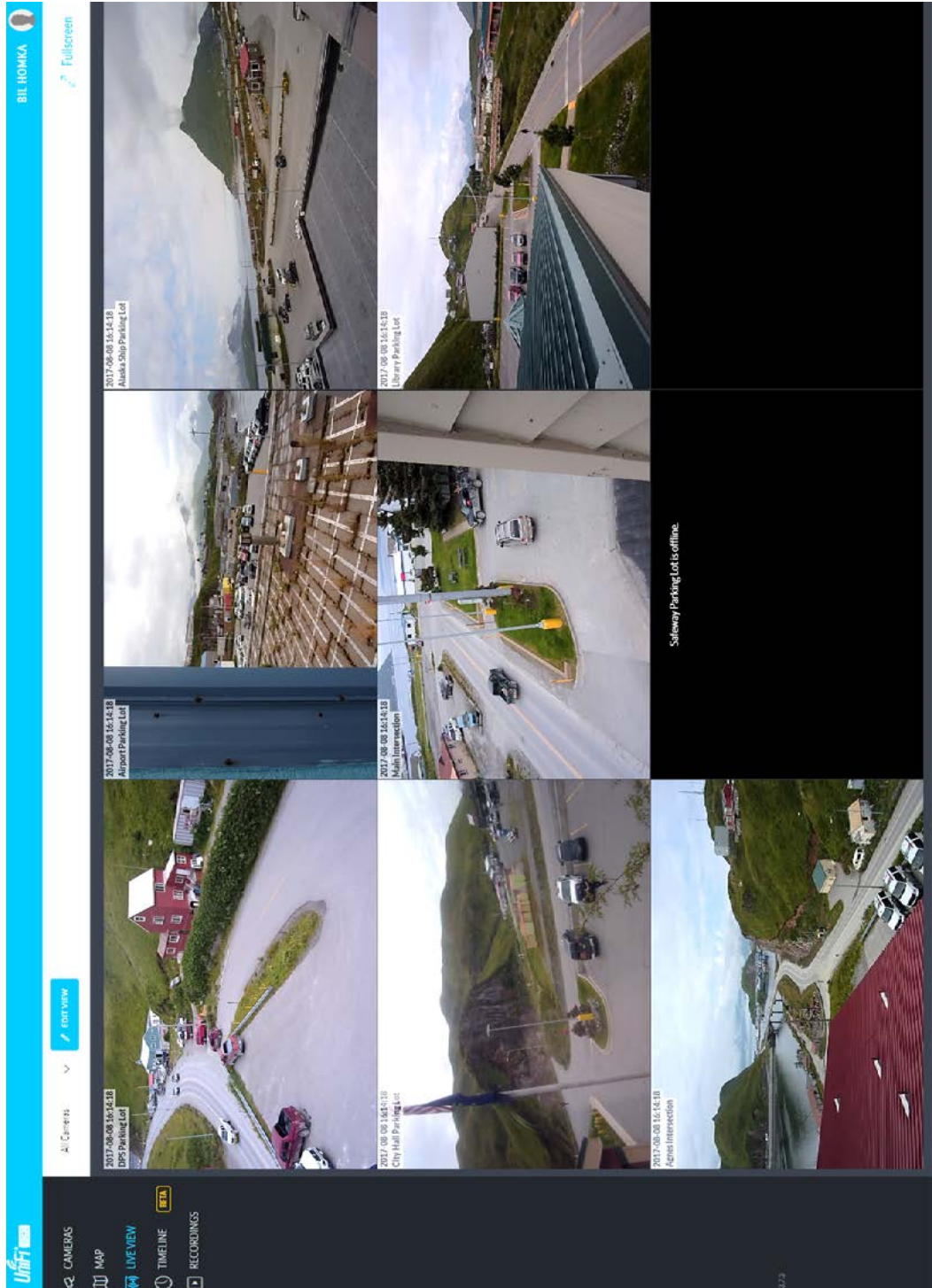
**Zero Emission Research Opportunity (ZERO)**

On November 22, 2016, FTA announced the opportunity for nonprofit organizations to apply for funding to conduct research, demonstrations, testing, and evaluation of zero emission and related technology for public transportation applications.

# Appendix C: Traffic Count Information

## 8 Cameras

Live streaming video recorded for viewing and counting at 8 locations in city



## Vehicle Counts

### 8 Camera Locations Cameras

| Main Intersection (N) |          |            |          |         |          |          |
|-----------------------|----------|------------|----------|---------|----------|----------|
| Monday                | Tuesday  | Wednesday  | Thursday | Friday  | Saturday | Average  |
| 1599                  | 946      | 1240       | 1508     | 1554    | 1310     | 1359     |
| 91                    | 51       | 101        | 97       | 118     | 63       | 87       |
| 54                    | 39       | 40         | 52       | 56      | 49       | 48       |
| 17                    | 9        | 12         | 24       | 26      | 24       | 19       |
| 9                     | 1        | 2          | 7        | 4       | 12       | 6        |
| City Hall (S)         |          |            |          |         |          |          |
| Monday                | Tuesday  | Wednesday  | Thursday | Friday  | Saturday | Average  |
| 989                   | 1357     | 1320       | 1360     | 1303    | 1165     | 1249     |
| 76                    | 98       | 96         | 87       | 86      | 65       | 85       |
| 62                    | 63       | 59         | 63       | 68      | 63       | 63       |
| 29                    | 28       | 19         | 24       | 31      | 24       | 26       |
| 14                    | 7        | 3          | 7        | 5       | 6        | 7        |
| Agnes (N)             |          |            |          |         |          |          |
| Monday                | Tuesday  | Wednesday  | Thursday | Friday  | Saturday | Average  |
| 1486.111              | 1535.25  | 1562       | 1554.375 | 1579    | 1385.542 | 1543.347 |
| 208.8889              | 163      | 190.25     | 196.125  | 165.25  | 134.4583 | 184.7028 |
| 148                   | 129      | 133.5      | 129.125  | 146     | 105.5    | 137.125  |
| 34.66667              | 33.75    | 30.75      | 30.875   | 36.25   | 27.70833 | 33.25833 |
| 16.88889              | 7.5      | 4.25       | 4.875    | 12      | 3.458333 | 9.102778 |
| Safeway (S)           |          |            |          |         |          |          |
| Monday                | Tuesday  | Wednesday  | Thursday | Friday  | Saturday | Average  |
| 1765.5                | 1529     | 1359       | 1580.556 | 1593.5  | 1339.667 | 1565.511 |
| 270.5                 | 217.25   | 180.5      | 222.5556 | 255.5   | 200      | 229.2611 |
| 224.5                 | 211.25   | 175.75     | 196.5556 | 213.5   | 184.6667 | 204.3111 |
| 31.5                  | 30.5     | 16         | 26.88889 | 40      | 23       | 28.97778 |
| 2                     | 3        | 0.75       | 1        | 1.5     | 1.666667 | 1.65     |
| DPS (S)               |          |            |          |         |          |          |
| Monday                | Tuesday  | Wednesday  | Thursday | Friday  | Saturday | Average  |
| 1643                  | 1498.333 | 1490.33333 | 1513.75  | 1490.75 | 1374.411 | 1527.233 |
| 104                   | 92.33333 | 98.6666667 | 103.75   | 119     | 64.91071 | 103.55   |
| 88.5                  | 80.33333 | 74.6666667 | 76       | 81.5    | 63.32143 | 80.2     |
| 30.5                  | 26.33333 | 24         | 29.5     | 38.5    | 23.53571 | 29.76667 |
| 2.5                   | 4        | 3.33333333 | 8.5      | 9       | 4.035714 | 5.466667 |

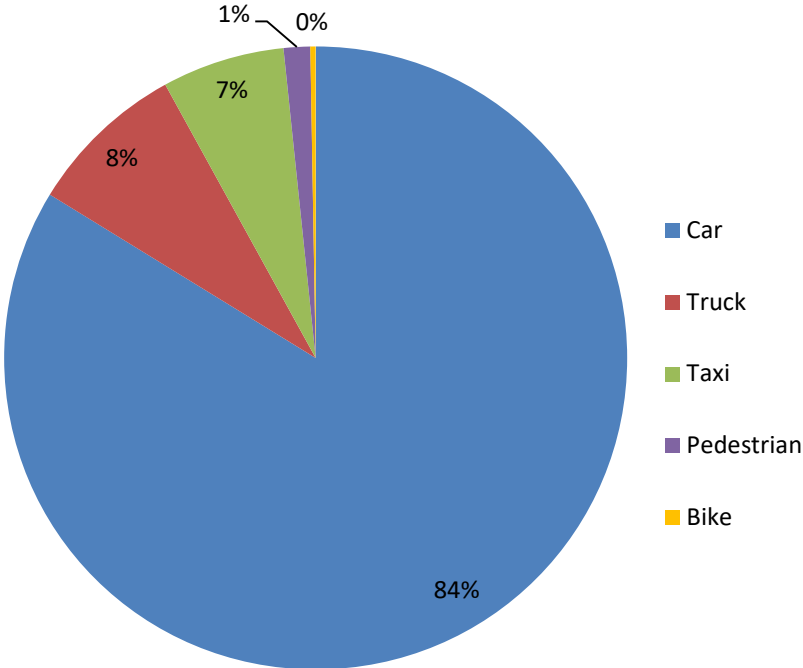
| Airport Beach Road Traffic Flow Through Popular Intersections |          |            |             |             |            |            |            |              |
|---|----------|------------|-------------|-------------|------------|------------|------------|--------------|
|   | Broadway | Raven (Sou | Safety (Sou | Captain's B | Salmon (No | East Point | (Southbour | extrapolated |
| Car   | 1359     | 1249       | 1527        | 1543        | 2003       | 1566       | 1541       | incomplete   |
| Truck   | 87       | 85         | 104         | 185         | 218        | 229        | 151        | complete     |
| Taxi  | 48       | 63         | 80          | 137         | 170        | 204        | 117        |              |
| Pedestrian  | 19       | 26         | 30          | 33          | 14         | 29         | 25         |              |
| Bike  | 6        | 7          | 5           | 9           | 2          | 2          | 5          |              |
| Library (West)  |          |            |             |             |            |            |            |              |
|   | Monday   | Tuesday    | Wednesda    | Thursday    | Friday     | Saturday   | Average    | Li           |
| Car   | 173      | 167        | 151         | 110         |            |            | 150.25     |              |
| Truck   | 2        | 2          | 3           | 4           |            |            | 2.75       |              |
| Taxi  | 4        | 10         | 8           | 10          |            |            | 8          |              |
| Pedestrian  | 44       | 63         | 45          | 50          |            |            | 50.5       |              |
| Bike  | 13       | 19         | 5           | 20          |            |            | 14.25      |              |
| Alaska Ship (North)   |          |            |             |             |            |            |            |              |
|   | Monday   | Tuesday    | Wednesda    | Thursday    | Friday     | Saturday   | Average    |              |
| Car   | 1404     | 1686.25    | 1802        | 1787        | 3334       | 2672       | 2002.65    |              |
| Truck   | 260      | 195        | 112         | 136         | 386        | 330        | 217.8      |              |
| Taxi  | 180      | 137.5      | 106         | 139         | 287        | 224        | 169.9      |              |
| Pedestrian  | 12       | 8.75       | 0           | 13          | 37         | 14         | 14.15      |              |
| Bike  | 0        | 0          | 4           | 1           | 4          | 0          | 1.8        |              |
| Airport (Terminal)  |          |            |             |             |            |            |            |              |
|   | Monday   | Tuesday    | Wednesda    | Thursday    | Friday     | Saturday   | Average    |              |
| Car   | 343      | 415        | 274         | 308         | 388        |            | 345.6      |              |
| Truck   | 14       | 14         | 11          | 25.33333    | 28         |            | 18.46667   |              |
| Taxi  | 85       | 54         | 51          | 52          | 56         |            | 59.6       |              |
| Pedestrian  | 27       | 29         | 28          | 8           | 48         |            | 28         |              |
| Bike  | 1        | 1          | 1           | 2.666667    | 0          |            | 1.133333   |              |

## Sample Count

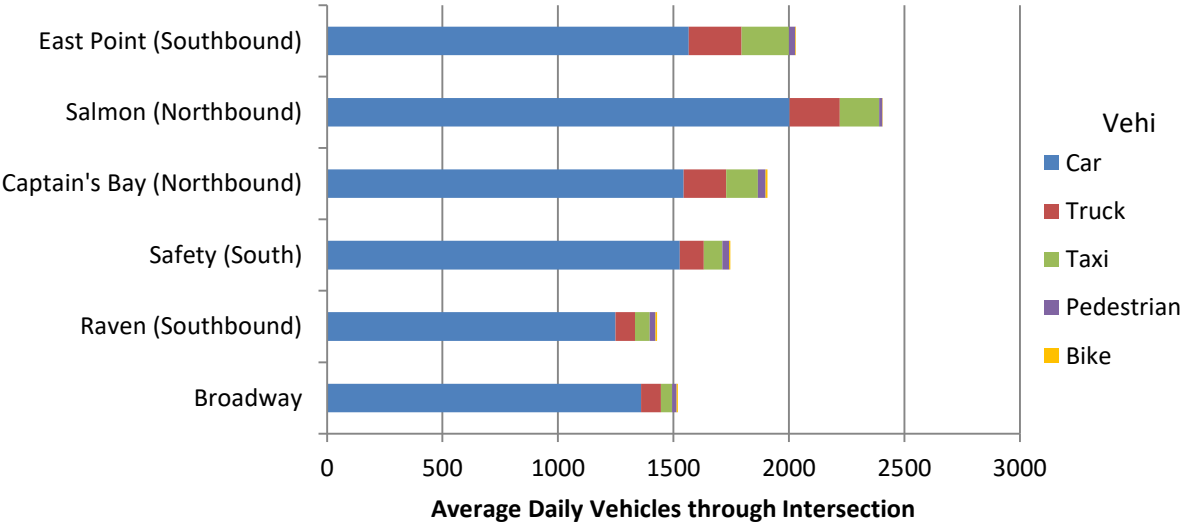
Sheet from Safeway Camera Location, 3 Hours

| AUGUST 22, 2017 SAFWAY 7:00 AM TO 8:00 AM |         |           |    |             |       |
|---|---------|-----------|----|-------------|-------|
| TOTAL                                     |         | NB        | SB | PARKING LOT | TOTAL |
| 261                                       | CARS    |           |    |             |       |
| 36  | TRUCK   |           |    |             |       |
| 41  | CABS    | NO RECORD |    |             |       |
| 4   | WALKERS |           |    |             |       |
| 0   | BIKERS  |           |    |             |       |
| 342                                       | TOTAL   |           |    |             |       |
| 8:00 AM TO 9:00 AM                        |         |           |    |             |       |
| TOTAL                                     |         | NB        | SB | PARKING LOT | TOTAL |
| 334                                       | CARS    | 77        | 83 | 36          | 196   |
| 38  | TRUCK   | 13        | 10 | 1           | 24    |
| 54  | CABS    | 10        | 10 | 15          | 35    |
| 3   | WALKERS | 2         | 2  | 6           | 10    |
| 0   | BIKERS  | 0         | 0  | 0           | 0     |
| 429                                       | TOTAL   |           |    |             | 265   |
| 9:00 AM TO 10:00 AM                       |         |           |    |             |       |
| TOTAL                                     |         | NB        | SB | PARKING LOT | TOTAL |
| 280                                       | CARS    | 88        | 85 | 35          | 208   |
| 39  | TRUCK   | 18        | 17 | 2           | 37    |
| 52  | CABS    | 18        | 16 | 12          | 46    |
| 2   | WALKERS | 3         | 1  | 7           | 11    |
| 0   | BIKERS  | 1         | 0  | 0           | 1     |
| 373                                       | TOTAL   |           |    |             | 303   |
| 10:00 AM TO 11:00 AM                      |         |           |    |             |       |
| TOTAL                                     |         | NB        | SB | PARKING LOT | TOTAL |
| 248                                       | CARS    | 103       | 88 | 41          | 232   |
| 32  | TRUCK   | 15        | 13 | 0           | 28    |
| 36  | CABS    | 16        | 17 | 16          | 49    |
| 6   | WALKERS | 0         | 1  | 3           | 4     |
| 4   | BIKERS  | 1         | 2  | 0           | 3     |
| 326                                       | TOTAL   |           |    |             | 316   |

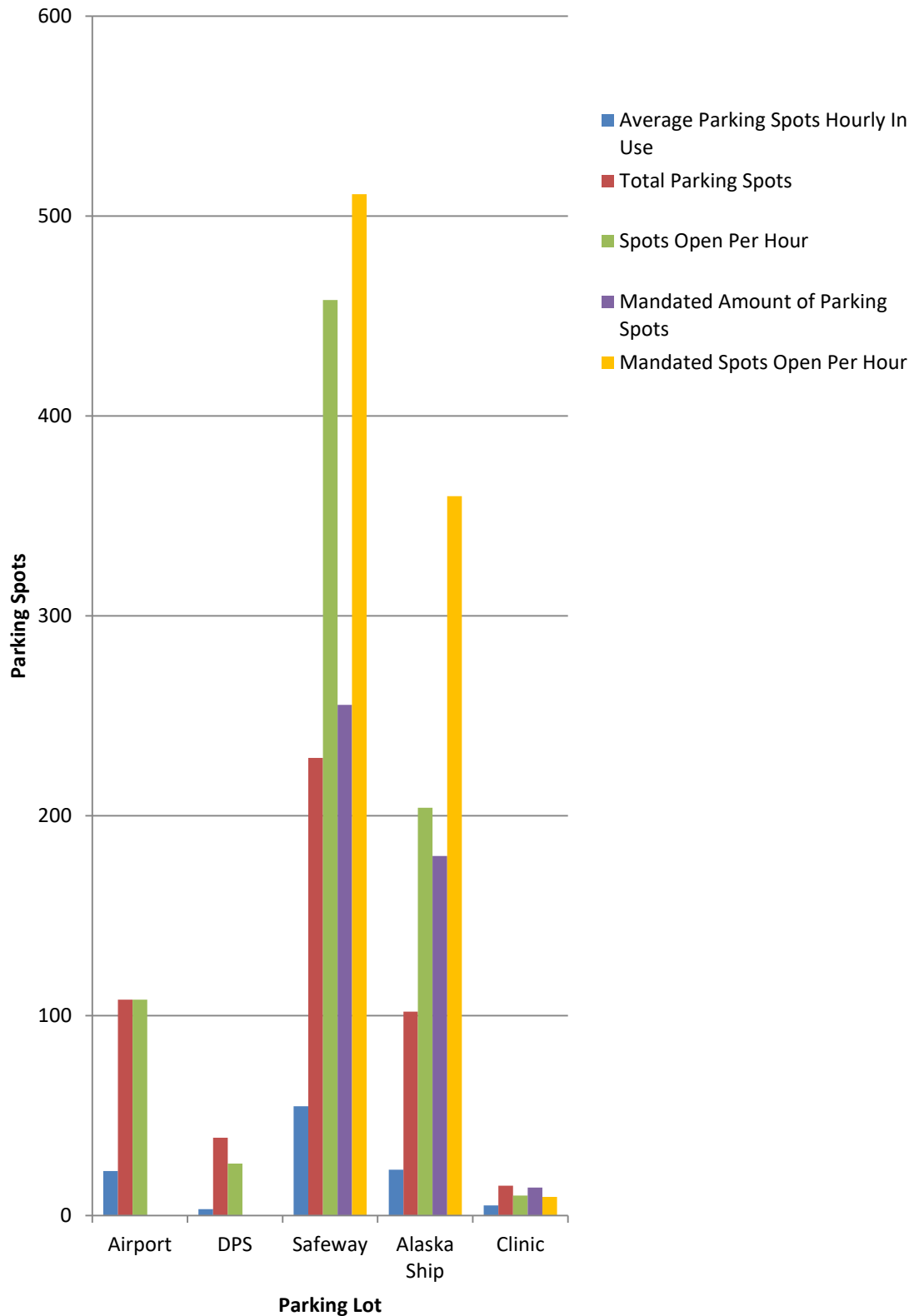
### Average Citywide Daily Vehicle Use



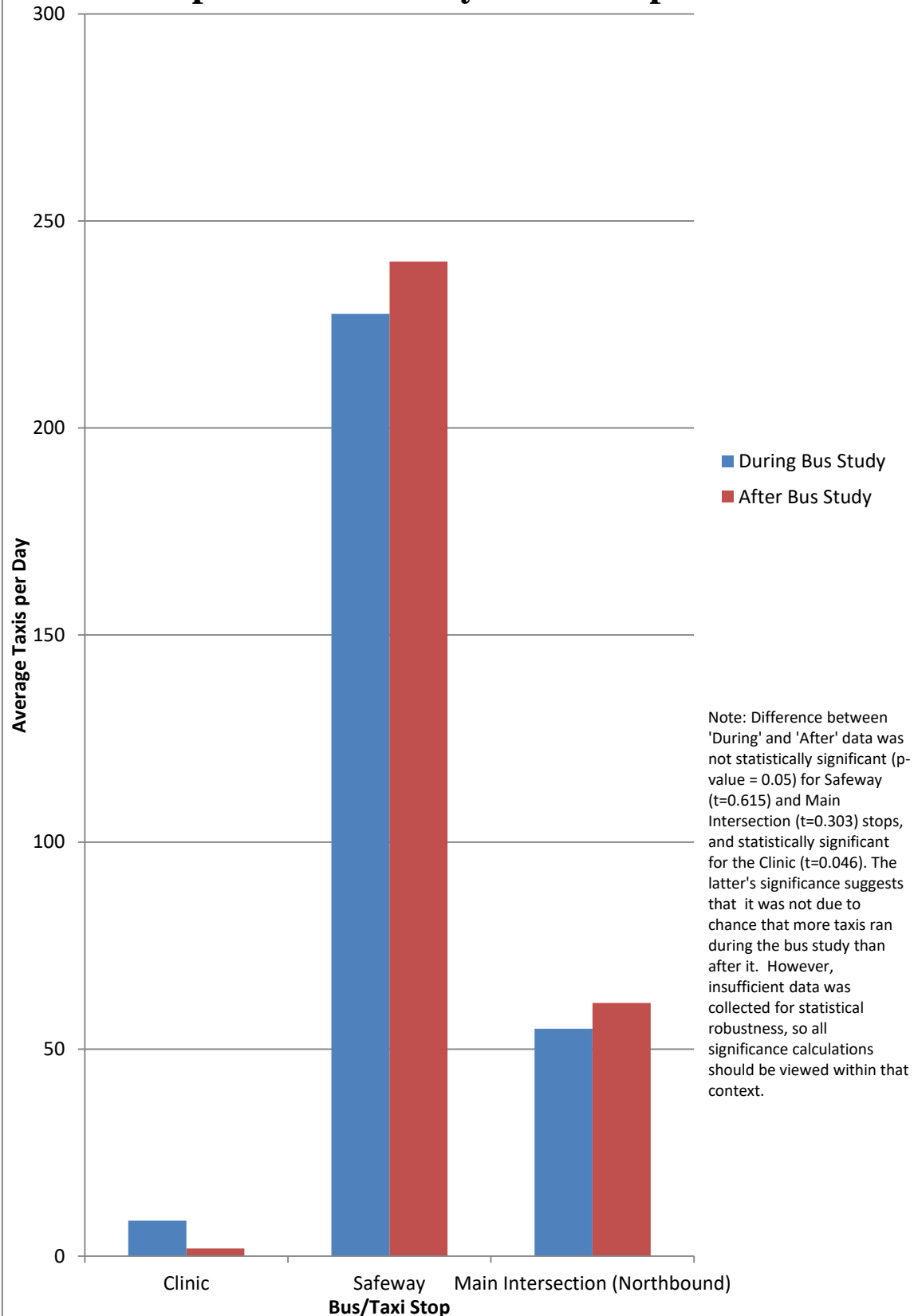
### Average Daily Traffic on Airport Beach Road through Popular Intersections



## Parking Analysis Based on Observed Lot Usage



## Impact of Bus Study on Taxi Operation






# Appendix D: Support Materials

## Brochure

The brochure was produced in four languages: English, Tagalog, Spanish and Japanese.

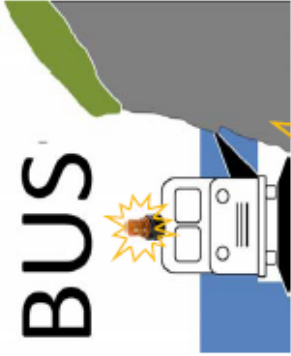
English

Transportation Study




**Unalaska CITY BUS**

January 13, 2018  
To  
January 19, 2018



**BUS**



Look for Flashing Light on Bus

CITY OF UNALASKA  
(907) 581-3100

### How To Use This Bus

All Bus rides are free for this test run.

The bus only has 12 seats. We may not be able to pick up everyone during this study.

You may board the bus at a marked bus stop:



Or you may wave to flag down the bus as it drives by, and if you are in a safe location and the bus has room, the bus driver may stop at their discretion to pick you up.

You may only get off the bus at marked bus stops.

Scheduled times are approximate, and may vary with winter weather.

Times in RED are adjustments, bus will not leave before printed time.

Slime line rain gear and dirty coveralls will not be allowed.

**CITY OF UNALASKA**



43 Raven Way  
PO Box 610  
Unalaska, AK 99685  
Phone: (907) 581-3100  
Fax: (907) 581-4181

### Transportation Study


The City of Unalaska is conducting a transportation study to identify the transit issues and needs of the community, now and into the future.

Unalaska's linear layout presents challenges for pedestrians, tourists, and processors who must often bear through our island's extreme weather too.

High costs to bring vehicles to island continue to increase. Additionally, the environment is especially hard on vehicles adding to maintenance and ownership costs.

As we look to the future with Comprehensive Plan 2030, we need to be aware of the challenges that our community faces over the next decade. Your help is important so we can present the best possible options for our communities future.

Thank you.



## Media

# The Arctic Sounder

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## Unalaska tests public bus service

August 18th 12:35 pm | [Carey Restino](#)

print  email 

As part of a larger transportation study, the city of Unalaska is offering free public transportation during the day this week in an effort to find out more about the transportation needs of the community.

The free rides, which started on Monday and run through Aug. 20, will be offered between 7 a.m. and 11 p.m. on a 12-seater city-owned bus. Participants will be asked to complete surveys asking about their experience and opinions about public transportation.

The bus will travel from Overland Drive past city hall, grocery stores, the airport and Westward Seafoods before ending at Gordon Jensen. From 6 p.m. to 11 p.m. the route will also include stops out to OSI and UNISEA. All stops will be marked with a sign saying "bus stop" but pedestrians may flag down the bus as it drives by if they are in a safe location and the bus has room to stop. Riders may only get off at designated stops, however.

The study will also evaluate traffic counts and patterns as well as vehicle types using temporary cameras mounted to various city buildings. According to a pamphlet put out for the public explaining the study, the city's "linear layout presents challenges for pedestrians, tourists and processors who must often bear through our island's extreme weather, too."

The brochure noted that the cost of bringing vehicles to the island continues to increase, and the environment is especially hard on vehicles, adding to maintenance and ownership costs.

"As we look to the future with Comprehensive Plan 2030, we need to be aware of the challenges that our community faces over the next decade," the city wrote. "Your help is important so we can present the best possible options for our community's future."

"Slime line" rain gear and dirty coveralls, however, will not be allowed.

Brochures detailing the bus schedule will be available at city offices and bulletin boards around town.

## Unalaska city bus tests positive with riders

August 25th 1:02 pm | [Jim Paulin](#)

[print](#) [email](#)

Does Unalaska need a public bus service?

That's what the city government wants to know, and all last week it ran a free public bus route from one end of town to the other, from Dutch Harbor to Unalaska Valley.

City employees, especially from the planning department, drove the airporter-style van, picking up 261 passengers, according to Planning Director Bil Homka, who is overseeing the \$5,000 project, including another test week coming up in January.

Another 61 filled out surveys, asking how long it took to get to a bus stop, was their destination home, work, shopping, or medical or other appointment, and what would be a reasonable price for a bus ride. Homka said there will likely be a fee, if the bus system is approved by the city council, along with funding for two buses. He said a day pass, covering rides all day, is one likely scenario.

Homka said the riders were overwhelmingly in favor of a bus system.

The political question, he said, is whether the council would approve a public service competing with the private taxi cabs. Most of the riders last week, he said, were "typically not the type who take the cab."

One taxi driver, Joey Vo, of Blue Checker, who owns four taxis, doesn't like the idea of a city bus system, and said it would be a "waste of money."

But she emphasized that taxis perform services that a bus doesn't, like waiting outside a store while sailors and fishermen are shopping and keeping their luggage in the taxi, especially when they only have a short amount of time on land away from their boats.

"We didn't pay any attention to the bus. We didn't have to," she said. The bus didn't take any business away from the taxis, she said.

Homka said the entire route, with one bus, is a 2-hour trip. That's why he thinks two buses would be needed, and of a larger size than the recreation department's 15-seat van that was used in the test runs.

The first runs were a learning experience, and one lesson is that A-frame or sandwich board bus stop signs tend to get blown down by the wind. Signs announcing the stops were then attached to buildings. The Ballyhoo Lions Club school bus shelters also served as city bus stops.

Local seafood processing companies and supermarkets are very supportive of a bus system, said the planning department's James Price. One surprise, he said, was no customers at Alyeska Seafood's convenience store. And while initial plans called for the bus to go to docks at the end of the Dutch Harbor Spit, he said the spit portion was removed because it took up too much time. So now, the northern terminus is at Icicle Seafoods' processing vessel Gordon Jensen on Ballyhoo Road. The southern starting and ending point remains the same, at the tennis courts at the corner of Overland Drive and East Broadway Ave.

Homka said he still needs to review the data gathered, to prepare a more comprehensive report for the city council.

Jim Paulin can be reached at [jpaulin@reportalaska.com](mailto:jpaulin@reportalaska.com)

**Mileage Log (August)**

Records were kept on all expenses for the study. Mileage and gas activity logs were kept to validate charges to gas accounts. Below is a sample log.

**Bus Study - Gas Usage**

| Date      | Card Number | Vehicle | Odometer                           | Miles/day | Product          | Quantity | Price            | Extprice        | MPG            |
|-----------|-------------|---------|------------------------------------|-----------|------------------|----------|------------------|-----------------|----------------|
|           |             |         | Beginning Odometer<br><b>35590</b> |           |                  |          |                  |                 |                |
| 8/14/2017 | 0317        | RC5818  | 35794                              | 204       | Unleaded         | 18.9     | \$ 2.558         | \$ 48.346       | 10.79          |
| 8/15/2017 | 0317        | RC5818  | 36004                              | 210       | Unleaded         | 20.9     | \$ 2.558         | \$ 53.462       | 10.05          |
| 8/16/2017 | 0317        | RC5818  | 36213                              | 209       | Unleaded         | 20.2     | \$ 2.558         | \$ 51.572       | 10.35          |
| 8/17/2017 | 0317        | RC5818  | 36424                              | 211       | Unleaded         | 22       | \$ 2.558         | \$ 56.276       | 9.59           |
| 8/18/2017 | 0317        | RC5818  | 36634                              | 210       | Unleaded         | 18.5     | \$ 2.558         | \$ 47.323       | 11.35          |
| 8/19/2017 | 0317        | RC5818  | 36847                              | 213       | Unleaded         | 20.1     | \$ 2.558         | \$ 51.416       | 10.60          |
| 8/20/2017 |             |         |                                    |           | <b>NO RECORD</b> |          |                  |                 |                |
| 8/21/2017 | 0317        | RC5818  | 37062                              | 215       | Unleaded         | 21.3     | \$ 2.607         | \$ 55.5291      | 10.09          |
|           |             |         |                                    | 1472      |                  | 141.9    | <b>TOTAL: \$</b> | <b>363.9239</b> | <b>10.40</b>   |
|           |             |         |                                    |           |                  |          | Year             | \$ 18,924.0428  | <b>AVG MPG</b> |
|           |             |         |                                    | 10.37     |                  |          |                  |                 |                |

## Rider Surveys

Surveys were passed out to passengers while riding the bus during the transit test weeks. The surveys were printed in four languages: English, Tagalog, Spanish and Japanese.

English



# Rider Survey For the Unalaska Transportation Plan



Survey conducted by:  
**City of Unalaska Planning  
Department**

Phone: (907) 581-3100  
Email: [planning@ci.unalaska.ak.us](mailto:planning@ci.unalaska.ak.us)

Place  
Stamp  
Here

**CITY OF UNALASKA  
PLANNING DEPARTMENT  
PO BOX 610  
UNALASKA, AK 99685**

The City of Unalaska is conducting a transportation study to identify the transportation issues and needs of the community, now and into the future.

This survey will help the City identify if there is a need and desire for local bus service, and with other sources of data will help inform the Comprehensive Plan for 2030.

Please assist us by completing the survey. No signature or personal identification is necessary.

Simply return the survey to the bus driver, City Hall, or mail to:

**City of Unalaska  
PO Box 610  
Unalaska, AK 99685**



**Your Input is Important to Us!**

Please check your answers below - Thank You for taking our survey!

1. **How did you get to the bus stop?**  
a.  Walked less than 5 minutes  
b.  Walked between 5 and 10 minutes  
c.  Walked more than 10 minutes  
d.  Other
2. **What was the last place you came from before boarding this bus?**  
a.  Home e.  Personal Appt.  
b.  Work f.  Social/Recreation  
c.  School g.  Doctor/Dentist  
d.  Shopping h.  Other \_\_\_\_\_
3. **What was the location of that place?**  
(Note the nearest intersection or name of building/store)  
a.  Intersection \_\_\_\_\_  
b.  Building/Store \_\_\_\_\_
4. **After departing this bus, what is your destination?**  
a.  Home e.  Personal Appt.  
b.  Work f.  Social/Recreation  
c.  School g.  Doctor/Dentist  
d.  Shopping h.  Other \_\_\_\_\_
5. **What is the location of that destination?**  
(Note the nearest intersection or name of building/store)  
a.  Intersection \_\_\_\_\_  
b.  Building/Store \_\_\_\_\_
6. **After departing this bus, how will you get to your final destination?**  
a.  Walk less than 5 minutes  
b.  Walk between 5 and 10 minutes  
c.  Walk more than 10 minutes  
d.  Other

7. **How often do you expect to take the bus?**  
a.  Less than once a week  
b.  1 to 3 days a week  
c.  4 to five days a week
8. **Do you have a driver's license?**  
a.  Yes b.  No
9. **How many vehicles do you and others in your household own?**  
a.  Zero b.  One  
c.  Two d.  Three  
e.  Four or more
10. **What is your employment status?**  
a.  Full-time d.  Unemployed  
b.  Part-time e.  Looking  
c.  Retired f.  Other
11. **Do you feel expanded bus service is needed? If yes, in what neighborhood?**  
\_\_\_\_\_  
\_\_\_\_\_
12. **What do you feel is a fair price per bus ride?**  
\_\_\_\_\_  
\_\_\_\_\_

13. **Based on your experience, do you agree, disagree, or have no opinion on the following statements?**  
a. Frequency of service is adequate:  
 Agree  Disagree  No Opinion  
b. Schedule/route information is readily available:  
 Agree  Disagree  No Opinion
14. **Do you have any comments or suggestions regarding bus service?**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Mangyaring suriin ang iyong mga sagot sa ibaba - Salamat sa pagsagot saming survey!

- Paano ka nakarating sa hintuan ng bus?**
  - Lumakad ng wala pang 5 minuto
  - Lumakad sa pagitan ng 5-10 minuto
  - Lumakad ng mahigit pasa 10 minuto
  - Iba pa
- Saan ka huling nanggaling bago ka sumakay sa bus na ito?**
  - Bahay
  - Trabaho
  - Eskwela
  - Pamilihan
  - Personal Appt.
  - Sosyal/Libangan
  - Doktor/Dentista
  - Iba pa
- Saan ang lokasyon ng lugar na iyon? (Tandaan ang pinakamalapit na:)**
  - Interseksyon
  - Gusali/Pamilihan
- Pagkatapos umalis sa bus na ito, saan ang iyong destinasyon?**
  - Bahay
  - Trabaho
  - Eskwela
  - Pamilihan
  - Personal Appt.
  - Sosyal/Libangan
  - Doktor/Dentista
  - Iba pa
- Saan ang lokasyon ng lugar na iyon? (Tandaan ang pinakamalapit na:)**
  - Interseksyon
  - Gusali/Pamilihan
- Pagkatapos umalis sa bus na ito, paano ka nakarating sa iyong huling destinasyon?**
  - Lumakad ng wala pang 5 minuto
  - Lumakad sa pagitan ng 5-10 minuto
  - Lumakad ng mahigit pasa 10 minuto
  - Iba pa

- Gaano mo inaasahan na sasakay sa bus?**
  - Mas mababa sa isang beses sa isang Linggo
  - Isa o tatlong araw sa isang Linggo
  - Apat o limang araw sa isang Linggo
- Mayroon ka bang lisensya sa pagmamaneho?**
  - Meron
  - Wala
- Ilang sasakyan meron ka at ang miyembro ng iyong pamilya?**
  - Wala
  - Isa
  - Dalawa
  - Tatlo
  - Apat o higit pa
- Ano ang kalagayan mo sa trabaho?**
  - Full-time
  - Part-time
  - Nagretiro
  - Walang Trabaho
  - Naghahanap
  - Iba pa
- Sa palagay mo, kailangan ba ng ekspansyon ng bus? Kung oo, saang bahagi/lugar?**
  - Full-time
  - Part-time
  - Nagretiro
  - Walang Trabaho
  - Naghahanap
  - Iba pa
- Sa iyong palagay, mga magkano ang pamasaha sa pagsakay ng bus? (Magbigay ng patas na presyo)**
  - Full-time
  - Part-time
  - Nagretiro
  - Walang Trabaho
  - Naghahanap
  - Iba pa

- Batay sa iyong karanasan, sang-ayon kaba, hindi sang-ayon, o walang opinyon sa mga sumusunod na pahayag?**
  - Sapat na ang serbisyo ng bus:**
    - Sang-ayon
    - Hindi Sang-ayon
    - Walang Opinyon
  - Impormasyon ng Iskedyul/Ruta ay madaling gamitin/maintindihan:**
    - Sang-ayon
    - Hindi Sang-ayon
    - Walang opinyon
- Meron ka bang komento o mungkahi tungkol sa serbisyo ng bus?**

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## Appendix E: Acknowledgments

Many people and city departments assisted with this transportation study. Most of the assistance was needed during the two public transit operation weeks operated in August 2017 and January 2018. Due to city policies and insurance restrictions, only city personnel were able to assist in driving vehicles during the public transit weeks. Employees who helped drive the busses have an asterisk (\*) after their name. Everyone's assistance is greatly appreciated.

### **Planning**

William M. Homka, Director \*  
Thomas Roufus, Associate Planner \*  
James Price, GIS Administrator \*  
Judy Huling, Administrative Assistant  
Christian Schmidt, Student Intern  
Ira Mae Cristobal, Intern  
Keylene Esnardo, Intern

### **Parks, Culture & Recreation**

Carlos Tayag, Recreation Program Coordinator \*  
Nick Cron, Operations Manager \*  
Sean Peters, Lifeguard \*  
Nichel Kernin, Recreation Program Coordinator \*

### **Public Works**

Tom Cohenour, Director \*  
Timothy Napper, Wastewater Operator II \*  
Beau Blankenship, Installation maintenance Worker \*  
Jim Dixon, Roads Crew Chief

### **Utilities**

Dan Winters, Director \*  
Trudie Rose, Supply Division Supervisor \*  
Kevin Kloft, Water Operator III \*  
Jason Gates, Wastewater Operator II \*  
Erik Hernandez, Water Operator II \*  
William "BJ" Cross, Solid Waste Operator II \*  
Joel Collins, Utility Lineman Chief \*

### **Administration**

Debbie Hanson-Zueger, Risk Management Manager  
Kelly Styles, Human Resources Director (Past)  
Michelle Murdock, Human Resources Director

### **City Clerks**

Marjie Veeder, City Clerk \*  
Roxanna Winters, Deputy City Clerk \*

### **City Council**

Rachelle Hatfield, City Councilwoman \*