THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Transportation and Public Facilities

STATEWIDE ADMINISTRATIVE SERVICES

3132 Channel Drive
P.O. Box 112500
Juneau, Alaska 99811-2500
Main: 907.465.3900
dot.state.ak.us

March 26, 2021

The Honorable Dan Ortiz
Chair, House Finance Subcommittee
State Capitol, Room 513
Juneau, AK 99801

Dear Representative Ortiz:

In response to questions posed by the House Finance Subcommittee on Saturday, March 13, 2021, the following information is provided:

1. **Provide average daily volume of traffic on the Old Glenn Highway to the Knik River Bridge versus Big Lake Road.**

2019 Traffic Data			
Old Glenn Highway = Priority 2		Big Lake Road = Priority 3	
Mile Post	Traffic Volume	Mile Post	Traffic Volume
16.1-17.6	9,518	0.0-3.3	3,677
17.6-18.1	9,145	3.2-3.6	3,248
12.6-14.6	5,359	3.6-4.0	3,231
14.6-16.1	5,176	4.0-5.1	1,834
11.5-12.6	3,625	5.1-9.0	1,399
8.6-10.8	1,751		
0.3-8.6	1,561		

Source: https://akdot.maps.arcgis.com/home/webmap/viewer.html?webmap=7c1e1029fdb64d7a86449d55ef05e21c

2. **Provide information on how the department determines the placement of car counters for vehicle traffic data.**

The primary objective is to count enough locations on a roadway therefore the traffic volume estimates available for a given highway segment accurately portray the traffic volume on that segment. However, there are many factors that determine the actual placement of counters, including traffic volume, limited access (*few intersecting roads*) versus unlimited access (*intersecting roads and driveways*), and rural versus urban areas. The higher volume roads with limited access, like the Glenn Highway between Anchorage and Palmer, is treated as homogenous traffic sections where counters are located between the on/off ramps. Additionally, the Glenn Highway has more placement of counters within urban boundaries as opposed to when it becomes more rural.

On lower volume roads such as Big Lake Road (<5,000 AADT) which has unlimited access, counters are carefully considered in locations that will collect the best free flow of traffic or where traffic would not slow or stop due to turning, signalization, or stop signs. The Old Glenn Highway near Knik River also has unlimited access, so counters are located along free flowing segments and are closer together near Palmer where traffic volumes are higher (~10,000) and more sparsely located in the rural locations where volumes taper off.

Other factors that could determine counter placement include highway construction projects with work zones and street sweepers that can tear up the road tubes. Counters are not placed from October through May due to harsh weather conditions and snowplow operations.

In general, DOT&PF has two types of traffic counters:

1. Short term (ST) stations are one of two types:
    a. Pneumatic hose counts (aka road tubes), and temporary inductance loop counts. Pneumatic hose counts are performed with a pneumatic tube (rubber hose) that is stretched across the lanes of traffic and fastened to each shoulder. One end of the hose is connected to a traffic counter. As vehicles pass over the hose, the impact of the axles is detected, counted, and stored in the counter.
    b. Inductance loop are sensors buried beneath the roadway and act as metal detectors to record vehicle traffic as it crosses the sensor. They are connected to a counter in a small cabinet on the roadside. The more commonly used counts are the pneumatic hose counts and they are set out to collect a full seven days to account for weekdays and weekends. DOT&PF sets 1,800 to 2,200 ST counts per year. The department is federally required to collect all public roads within a six year cycle and higher functionally classed roads (Interstates, Principal Arterials) on a three year cycle and may be more often if requested by department Design and Engineering staff for an upcoming highway improvement project or to validate a segment's volume. Special circumstances may exist on Interstates or National Highway System highways that warrant annual counts to ensure the highest rate of accuracy.

2. Continuous count stations (CCS) use sensors embedded in the road that collect year-round. They are strategically located where they can best represent counts for all types of roads in Alaska. The department owns and maintains 115 CCS statewide.

3. Girdwood to Seward is a Priority 1 road, while Girdwood to Anchorage and up to Palmer, the Glenn Highway road is a priority 2. Why aren't they the same?

Most of the Seward Highway is Priority 1. Girdwood to approximately Summit Lake on the Seward Highway is Priority 2 based on traffic volumes. Since there are no Priority 1 roads serviced by the maintenance station in the area it essentially gets Priority 1 treatment. The Glenn Highway is priority 1 from Anchorage through Palmer until outside of Sutton then it becomes a priority 2 due to decreased traffic volume.

4. How much does it cost per mile to plow a road with a tow plow versus two trucks? Also, what is the average cost per day to plow the Glenn Highway versus the Steese Highway?

When comparing plowing configurations, the tow plow is approximately two-thirds of the cost of a two-plow truck configuration. The width of roadway cleared in a single pass is relatively equal under light to normal snow accumulations.

Of special Note: While tow plows appear to be more cost effective they do have limitations so proper fleet management is necessary to ensure they are used in the right circumstances. Depending upon snow depth, type of snow (heavy wet snow), roadway width (narrow road), and grades of roadway (hills), a tow plow may not be the proper configuration and a reduction of performance in clearing area and or quality of snow removal may be seen. Plow trucks also perform functions such as sanding and scraping operations which are not performed by a tow plow.

To best answer this question we have provided the total winter maintenance costs for the Glenn Highway and the Steese Highway. I believe the intent of the question was to see the difference in costs associated with these two roadways and we believe this total annual cost information provides more accurate information versus review of daily expenditures which can be highly variable depending upon the day and ongoing weather systems.

Glenn Highway Total Winter Maintenance Costs	$1,551,664
Steese Highway Total Winter Maintenance Costs	$1,130,316

5. **Provide link to Department of Administration, Division of Personnel and Labor Relations Labor Trades and Crafts (LTC) collective bargaining agreement. When was the most recent contract negotiated?**

   The most recent contract for the Labor, Trades and Crafts Unit is effective July 1, 2018 through June 30, 2021. http://doa.alaska.gov/dop/fileadmin/LaborRelations/pdf/contracts/LTC2018-2021.pdf

6. **What maintenance stations are still closed?**

   Central and O'Brien Creek maintenance stations closed in 2016; Thompson Pass is only open in the winter beginning in 2016.

7. **How easy is it transfer a road to local control?**

   To transfer ownership of a road requires a quitclaim deed. However, local entities don't generally opt to take a facility and the associated maintenance costs. The ownership transfer process can vary depending upon on how DOT&PF holds ownership that is why the process is hard to generalize without talking about the specifics on a roadway.

   Maintenance agreements can be entered into and are with several local entities including the Municipality of Anchorage. These agreements usually exchange larger locally owned roads for smaller state-owned roads. The key to making these agreements work is mutual benefit. It is important for both side of the agreement to have offsetting facilities/costs.

   The process of transferring maintenance responsibility to another government entity can be accomplished through use of a Memorandum of Agreement (MOA) as described in our DOT&PF Right-of-Way Manual 9.10.9 road transfers. An MOA can have varying levels of complexity depending upon the requirements or duties being transferred. While the process of drafting such an agreement may be easy, executing an agreement is problematic if there is not incentive for both parties to do so. With the ongoing fiscal constraint at all levels, we find it very difficult to reassign duties to another entity. In the cases where this has been a success we have "traded" duties creating efficiencies between both parties. Many communities throughout Alaska are unincorporated therefore the department is the primary and sometime only provider for roadway maintenance.

8. **Is there a different level of responsibility on maintenance of roads and highways depending on which borough the department is negotiating with? How is that determined? Who is responsible for what?**

   Normally there will not be a difference in maintenance responsibility if the department is working towards an agreement to transfer maintenance to a borough. We try to transfer the total maintenance, not partial responsibility. In some cases, agreements have been reached to trade "seasonal" maintenance duties (example would be to trade winter maintenance plowing) which provides efficiencies for both entities.

   The department is responsible for maintaining an identified network of roadways. If a roadway is not included in this network, depending upon its location and ownership, other boroughs or cities may be responsible for these roadways. If there's interest for a specific road and who maintains it, we can research that with the city or borough it's located in.

   Questions regarding the different classes of borough and how they operate are best left to those organizations since different classes of borough have different powers, responsibilities, and capabilities.

9. **Did the closure of Silvertip, Birch Lake, and Chitina save money or did it break even because of the increase in work for other stations?**

   Yes, there was a reduction in the Maintenance and Operations budget. The closure of Silvertip came as the result of approximately $800.0 in budget cuts. Five (5) positions were lost as the result. The position losses were spread across the region. This was to avoid layoffs and keep as many operators on the Seward Highway as possible.

   There was a regional budget reduction of approximately $750.0 for the closure of Birch Lake and Chitina stations. A cost savings was realized with two facility closures, three positions deleted, and the removal of several pieces of equipment. These closures reduced the level of service on the Richardson, Edgerton, and local roadway adjacent to these stations.

10. **Provide a table showing the items related to the $7,900.0 UGF reduction shown on slide 22 versus what is shown on slide 25. Includes both highways and aviation.**

FY2022 Budget Actions - Highways and Aviation	UGF	DGF	FEDERAL	OTHER
Add Authority to Cover Collective Bargaining Unit Increases for 37.5 to 40-hour Work Week	$ 716.0	$ -	$ -	$ -
Align Authority for Projected Motor Fuel Tax Shortfall	$ 502.8	$ (502.8)	$ -	$ -
Dalton District Shift Change - Two Week On/Two Week Off	$ -	$ -	$ 1,298.6	$ -
Delete Authority No Longer Needed	$ -	$ (1,232.2)	$ -	$ (32.8)
Fund Source Swap to Utilize Federal Aviation Administration CARES Act Funding and Displace UGF	$ (9,287.8)	$ -	$ 9,287.8	$ -
FY2022 Salary Adjustments	$ 25.8	$ 3.1	$ -	$ 12.0
Maintenance and Operations Funding for Reopening of Chitina and Birch Lake Maintenance Stations	$ -	$ -	$ 794.6	$ -
Maintenance and Operations Funding For Reopening of Silvertip Maintenance Station	$ -	$ -	$ 620.0	$ -
Maintenance and Operations Funding for Rural Airport Paint Striping	$ -	$ -	$ 2,302.3	$ -
One-time Use of FAA CARES Act Federal Funding to Cover Aviation Fuel Tax Shortfall	$ -	$ -	$ 276.4	$ (276.4)
Terminate Maintenance on Non-DOT Roads	$ (25.0)	$ -	$ -	$ -
Transfer from Central Region Support Services for Core Services Alignment	$ 141.5	$ -	$ -	$ -
Transfer from Human Resources to Fund Employee Based Rates - DOPLR/IRIS HRM	$ -	$ -	$ -	$ 354.3
Transfer from Information Systems and Services for Employee Based Rates Funding - OIT	$ -	$ -	$ -	$ 595.4
Grand Total	$ (7,926.7)	$ (1,731.9)	$ 14,579.7	$ 652.5

If you have any further questions, please feel free to contact me at 465-2956.

Sincerely,

Dom Pannone
Administrative Services Director

cc: House Finance Subcommittee Members
The Honorable John MacKinnon, Commissioner, DOT&PF
John Binder, Deputy Commissioner, DOT&PF
Rob Carpenter, Deputy Commissioner, DOT&PF
Mike Lesmann, Legislative Liaison, DOT&PF
Andy Mills, Special Assistant to the Commissioner, DOT&PF