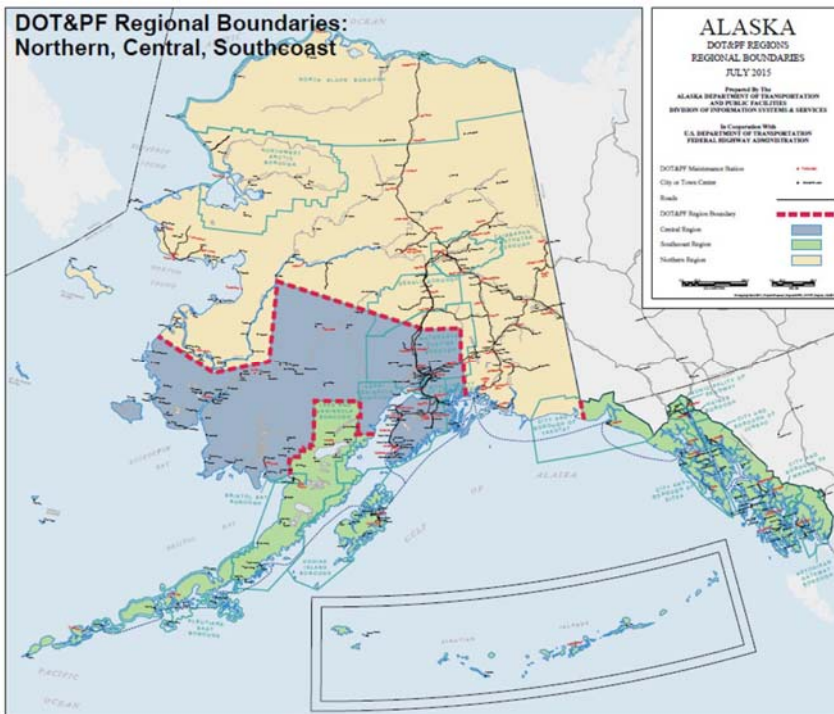


# UA JEAC POSITION PAPER - TRANSPORTATION SECTOR

## TRANSPORTATION BACKGROUND

Alaska's transportation infrastructure system supports a wide range of communities, from urban Anchorage to more isolated areas in western Alaska, like Bethel, and coastal communities such as Kodiak Island and Juneau. The Alaska Department of Transportation and Public Facilities (DOT&PF) has jurisdiction over, and maintains, constructs, designs, as well as operates the state's transportation infrastructure systems, which include more than:

- **5,600** centerline miles of paved and gravel highways
- **11,766** lane miles of roads/highways
- **300** aviation facilities, with **240** State Airports and **2** International Airports
- **35** Ferry Terminals, **21** Harbors, and **10** Ferries
- **3,500** nautical miles of the Alaska Marine Highway
- **836** DOT&PF owned bridges, and **2** DOT&PF owned tunnels
- **2.5** mile Anton Anderson Memorial Tunnel – longest highway tunnel in North America



In order to better serve Alaskan communities, DOT&PF is divided into 3 administrative regions:

- **Northern Region (based in Fairbanks)** – maintains all of the Alaska, Richardson, Taylor, Denali, and Dalton Highways, along with portions of the Glenn and Parks Highways.
- **Central Region (based in Anchorage)** – maintains the Sterling and Seward Highways, as well as parts of the Glenn and Parks Highways, and incorporates the most urban areas, but also some of the most remote villages along the Yukon-Kuskokwim delta.
- **Southcoast Region (based in Juneau)** – serves the coastal communities along the Alaska Peninsula, and the Aleutian Chain, which make up about 98,000 Alaskan residents.

Along with highways, each region also divides the state's support for our aviation, ferry system, and bridges. Only four Southcoast communities have access to the continental highway system (Skagway, Haines, Hyder, and Valdez). In addition to the roadway system, DOT&PF currently maintains the Alaska Marine Highway System (AMHS), headquartered in Ketchikan. The AMHS manages the operations and maintenance of the state fleet of ten ferry vessels.

## TRANSPORTATION FACTS & ECONOMIC IMPACT

DOT&PF is one of the largest state departments, with about **\$8.1 Billion** in transportation asset infrastructure, consisting of about **3,363** permanent full-time, part-time, and non-permanent employees. DOT&PF's mission to "**Keep Alaska Moving** through service and infrastructure" is guided by the **Statewide Long-Range Transportation Plan**, which provides the future direction for our highways, aviation, transit, rail, marine, bicycle, and pedestrian transportation. This transportation plan informs the **Statewide Transportation Improvement Program (STIP)**, the **Airport Improvement Program (AIP)**, and capital and operating budgets.

- The STIP is the state's four-year program for transportation system preservation and development. It includes interstate, state, and some local highways, bridges, ferries, and public transportations needs. It doesn't include airports.

- The AIP is used to fund the planning and development of public-use airports that are included in the National Plan of Integrated Airport System. Eligible airport projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. Aviation planning provides the basis for funding and design of our airport projects throughout the state.

## Airports

The Alaska Aviation System is **the largest system in North America**. DOT&PF owns and operates 242 airports including the Fairbanks and Anchorage (ANC) International Airports. ANC is a vital gateway for trade and commerce between North America and Asia. The largest aircraft in the world can land at both of these airports.



The economic contribution of the Aviation Industry in Alaska is huge. Aviation is a critical component of the economy and vitality of Alaska's communities by supporting local businesses and employing citizens in year round operations.

### The Aviation industry contributes:

- **\$3.5 Billion** to the state economy (includes operations of airports and direct spending associated with airports)
- **47,000** jobs, this represents **10%** of all jobs in Alaska
- **8%** of Alaska's gross state product

### Alaska's Aviation Industry supports:

- **306** certified air carriers providing commercial and on-demand services
- **7,933** active pilots
- **9,346** registered aircraft in Alaska
- **747** recorded landing areas (public, private, and military)
- **114** seaplane bases in Alaska (most in the country)
- **55** paved runways
- **227** aviation weather camera sites

### Ted Stevens Anchorage International Airport:

- **1 in 10 jobs** in Anchorage tied to the Airport for a total of **15,577 jobs**
  - *\$724M in direct annual payroll*
  - *\$303M in annual payroll jobs in the community*
- **5 million** passengers transit the airport annually
- Lake Hood located at ANC is **the world's largest and busiest seaplane base**
- **#6 Airport** in the world for cargo throughput
- **#2 Airport** in North America for landed cargo weight

### Fairbanks International Airport

- **11,800 feet** of runway
- **1 in 20 jobs** in Fairbanks tied to the Airport for a total of **1,900 jobs**
- **\$225M** in economic output
- **#82** in the nation in total aircraft movements (2015)
- **1 million** passengers transit the airport annually
- Float pond with **322** tie downs and **185** float pond spaces

Rural Airports are vital to Alaskan communities providing them with access to essential supplies, mail, schools, medical/dental services and travel:

- **82%** of the communities in Alaska are not accessible by road
- **251** communities are exclusively accessed by air

## Highways and Roads

DOT&PF maintains roads that are part of the National Highway System (NHS) and other arterials, collectors and local roads.



***DOT&PF's transportation mission promotes and supports economic development by ensuring safe, efficient, and reliable access to local, national, and international markets for Alaska's people, goods, and resources, and for freight-related activity critical to the State's economy.***

DOT&PF's roadway inventory includes:

- **5,629** center line miles of roads/highways (**3,750** paved, **1,861** unpaved)
  - **2,229** center line miles of NHS roads
- **5.2 billion** annual vehicle miles traveled
- **836** DOT&PF owned bridges
- **2** DOT&PF owned tunnels
- **1,026** total bridges and **3** tunnels inspected by DOT&PF including state, municipal and borough owned
- **9** Weigh Stations
- **4** Safety Corridors
  - Seward Highway, Potter Marsh to Girdwood (MP117 to MP87)
  - Parks Highway, Wasilla to Houston (MP44.5 to MP53)
  - Sterling Highway, Sterling to Soldotna (MP83 to MP93)
  - Knik-Goose Bay Road, Palmer-Wasilla Highway to Point MacKenzie Road (MP.75 to MP17)

**Highway safety** is a fundamental commitment of DOT&PF, as evidenced in their actions immediately following the 7.0M earthquake that hit Anchorage at 8:29am on November 30, 2018. Statewide emergency response teams rallied to ensure the community's safety. DOT&PF's Maintenance and Operations crews as well as Construction, along with private



Contractors, mobilized quickly to repair road damage around the affected areas. A slope stability failure along the Minnesota Road northbound offramp at International Airport Road collapsed the roadway, trapping one vehicle and its driver. Within 72 hours, DOT&PF had repaired the roadway, amidst continuing aftershocks (ranging from 1.2 to 5.0M) through the weekend as well as high winds gusting up to 60 miles per hour, icy and rain conditions, in winter. As much as DOT&PF's mission is to support Alaska's economy, its responsibility for the safety of the Alaskan people is paramount.



# MAJOR TRANSPORTATION INFRASTRUCTURE OUTLOOK

Anticipated large-scale DOT&PF transportation projects needing engineers, with a 5 to 10 year outlook, follows a trajectory comparable to the DOT&PF projects for 2018.

In 2018, DOT&PF will have over **\$900 million** in horizontal construction contracts advertised on the street:

- **90 percent** of the \$900M is in federal dollars
- **\$624M** is in roads and highways
- **\$271M** is in aviation (95% is in federal dollars, 5% is a state match)
- **123** active DOT&PF projects across the state
- **54** communities benefit from the infrastructure projects for this construction season

## TRANSPORTATION NEEDS ENGINEERS

DOT&PF currently maintains an in-house engineering staff of about 500 P.E./E.I.T. engineers, providing design and construction expertise to complete projects around the state. Engineering expertise at DOT&PF is vital to aviation and highway design, but also in geotechnical and materials work, hydrology and marine design, as well as construction. For many projects, engineers are sent across the state to either provide inspection services during construction, or visit a remote project site in western Alaska, like Toksook Bay. Understanding how permafrost impacts and informs road or airport design is vital, and the transportation industry needs engineers who can address arctic conditions here in Alaska, as well as the climate impacts.

As part of DOT&PF's commitment to serving the public, a very strong relationship has been built between DOT&PF and Alaska's engineering community. Engineering consulting firms across the state are contracted for professional services for the design of airports, roadways, bridges, ports and harbors, along with public facilities. DOT&PF's need to deliver projects drives this partnership up to about 70% outsourcing to engineering firms, which further supports our state economy. Not only does DOT&PF project a future need for engineers in-house, but the need for consultant engineers from local firms to support the transportation industry. Additionally, DOT&PF's forward thinking leadership looks to a migration toward more project management. This is an area future DOT&PF engineers ought to be aware of and may wish to focus on.

There is no doubt the transportation industry needs engineers. In order to maintain and grow Alaska's transportation infrastructure to support future demand, DOT&PF will need the expertise and unique problem-solving skill set that engineers bring with them to keep Alaska moving.

### References:

1. DOT&PF Home Page: <http://www.dot.state.ak.us/>
2. DOT&PF Brief, Workforce Considerations – Engineer Focus (June 18, 2018)
3. DOT&PF Legislative Fact Sheet (updated January, 2018)
4. DOT&PF Alaska Statewide Long-Range Transportation Plan – Let's Keep Moving 2036: Policy Plan (December, 2016)
5. DOT&PF Alaska Airports and Aviation 2017 Annual Report (2017)
6. DOT&PF Strategic Plan (DOT&PF website, [http://dot.alaska.gov/comm/strategic\\_plan.shtml](http://dot.alaska.gov/comm/strategic_plan.shtml))