Chapter

4

MTP2040

LINK - CONNECT - MOVE

Existing Conditions

The existing transportation system affects how we live, work, and play in the region. Understanding how the existing system works can help us identify trends that may become more serious problems in the future.

Chapter

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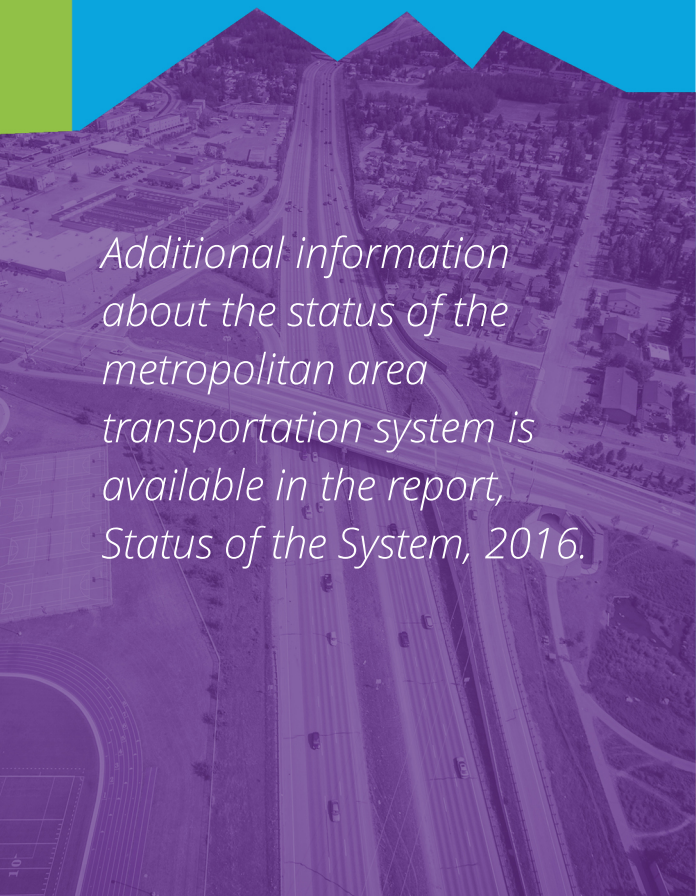


Additional information about the status of the metropolitan area transportation system is available in the report, Status of the System, 2016.

Transportation System Today

The Anchorage metropolitan area relies on a well-performing transportation system to efficiently move people and goods. At its best, an efficient transportation system can provide a quality experience for all users, enhance their safety, and influence the cost and speed of freight shipments.

The Anchorage transportation system is shaped by infrastructure, available travel options, and how we manage the system. Consistent with the 2035 MTP and Interim 2035 MTP, this chapter describes the overall transportation network and the performance of these essential elements:

- Roads
- Public transportation
- Non-motorized system
- Freight distribution and regional connections

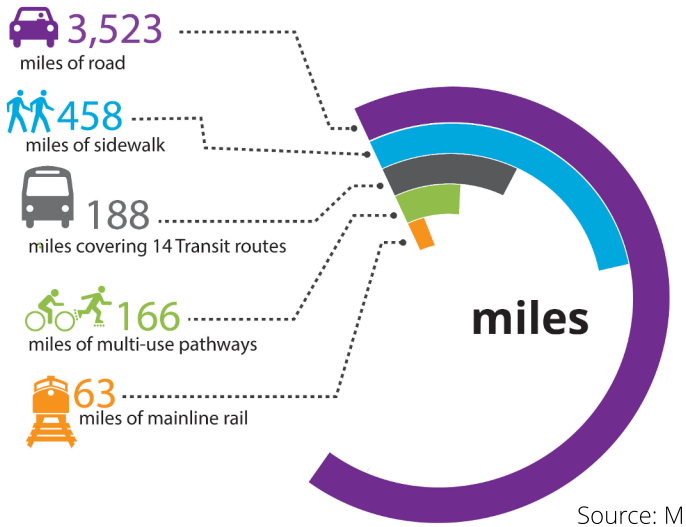
This chapter also describes changes to the system since the adoption of the 2035 MTP in 2012. Additional information about the status of the metropolitan area transportation system is available in the 2016 AMATS Status of the System report.

System Overview

The Anchorage transportation system is made up of a network of roadways, transit facilities and services, rail and goods movement facilities, airports, a seaport, and bicycle and pedestrian facilities. Figure 4-1 depicts the physical attributes of Anchorage's current system. The transportation system allows residents and visitors to safely and efficiently access the goods and services they need.

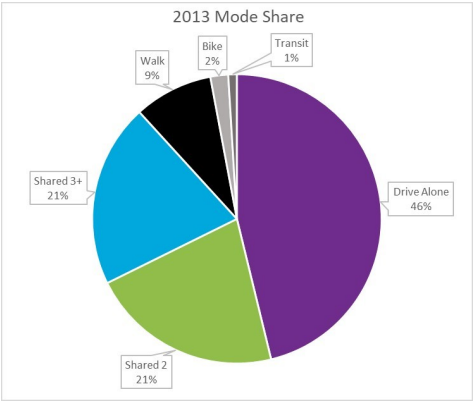
As shown in Figure 4-2, according to the AMATS Travel Model, auto travel is the dominant mode of transportation with biking and transit being the least used modes. Transit and non-motorized mode share are expected to increase slightly in the future. Transit use has the highest percent increase across all modes. This may be due to a combination of factors including more frequent transit service and predicted increases in land use density along key transit corridors.

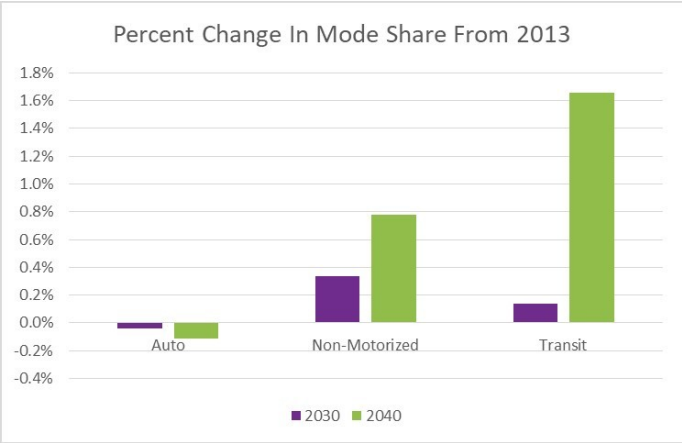
Figure 4-1 Miles of Existing System by Mode



Source: Municipality of Anchorage GIS Data

Figure 4-2 Mode Share





Transportation Improvements Since 2012

Improvements to the region's roadways are vital for the continued growth and sustainability of the area. Roadway and bridge rehabilitations and expansions have the potential to reduce congestion and increase the mobility and safety of Anchorage residents. Table 4-1 and Figure 4-3 detail the roadway projects completed in the Anchorage Bowl and Chugiak-Eagle River since 2012, when the 2035 MTP was released.

Table 4-1 MTP Road Projects Completed Since 2012 - Anchorage Bowl and Chugiak-Eagle River

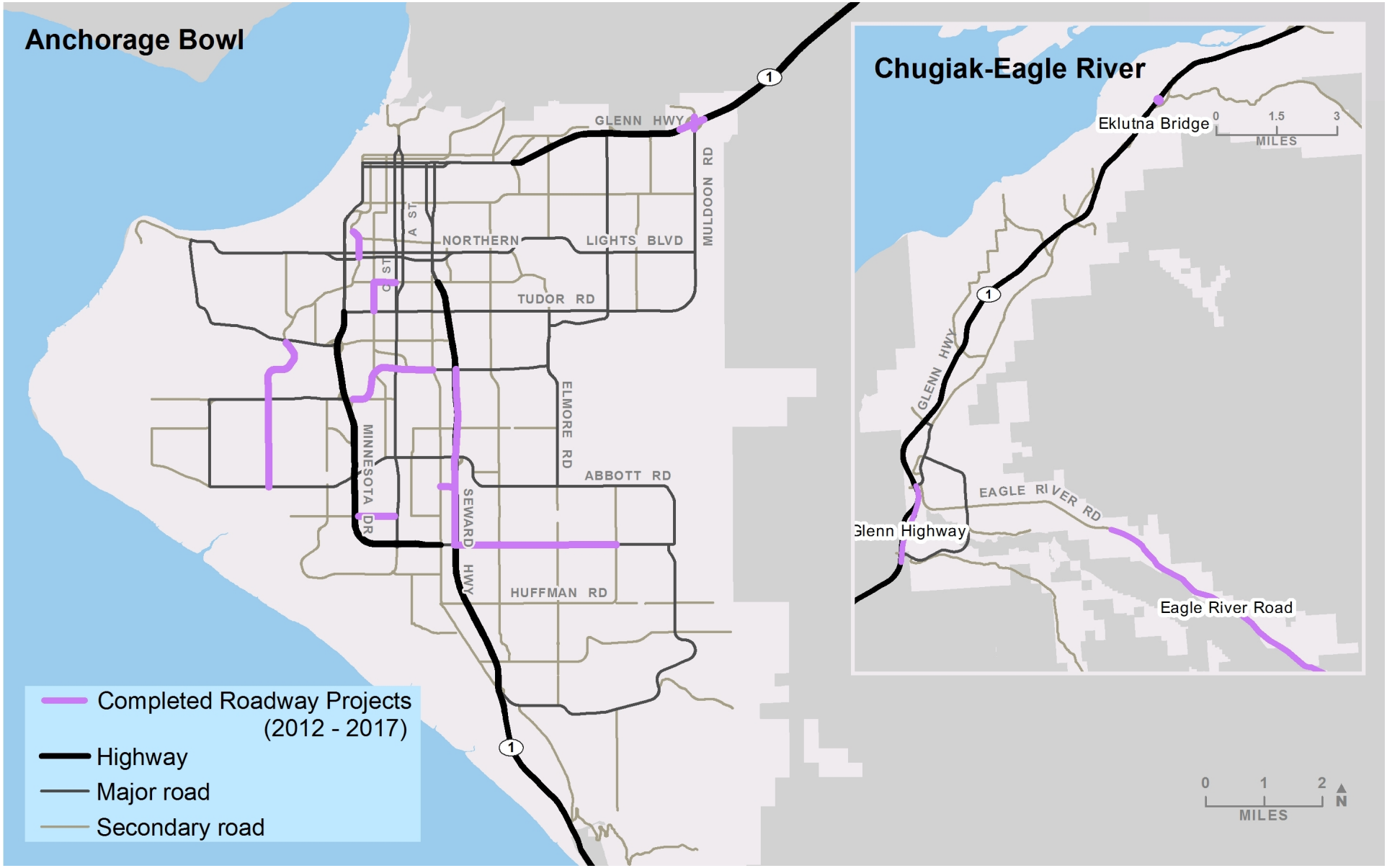
MTP 2035 #	Project Name	Location	Project Description
101	Seward Highway - Dimond Blvd to Dowling Road	Dimond Blvd to Dowling Road	Reconstruction
102	Dowling Road Extension - Phase II	C Street to Minnesota Drive	Add new facility
103	100th Ave Extension – Minnesota Dr to C St	Minnesota Dr to C St	Add new facility
105*	Glenn Hwy – Hiland Rd to Old Glenn Hwy (Artillery Rd – Eagle River)	Hiland Rd to Old Glenn Hwy (Artillery Rd)	Add new facility
106	Muldoon Rd Interchange	Glenn Hwy at Muldoon Rd	Reconstruction
109	Jewel Lake Rd – Dimond Blvd to International Airport Rd	Dimond Blvd to International Airport Rd	Rehabilitation
110	Arctic Blvd Rehabilitation – 36th Ave to Tudor Rd	36th Ave to Tudor Rd	Rehabilitation

* Project is currently in construction.

Table 4-1 MTP Road Projects Completed Since 2012 - Anchorage Bowl and Chugiak-Eagle River cont.

MTP 2035 #	Project Name	Location	Project Description
112	Spenard Rd Rehabilitation – Hillcrest Dr to Benson Blvd	Hillcrest Dr to Benson Blvd	Rehabilitation
113	O'Malley Rd – Seward Hwy to Lake Otis Pkwy	Seward Hwy to Lake Otis Pkwy	Reconstruction
122	Eagle River Rd Rehabilitation – MP 5.3-MP 12.6 (Eagle River)	MP 5.3-MP 12.6	Rehabilitation
123	Eklutna River Bridge Rehabilitation/Replacement (Eagle River)	Old Glenn Hwy	Rehabilitation
124	Abbott Rd – Lake Otis Pkwy to Birch Rd	Lake Otis Pkwy to Birch Rd	Rehabilitation
135	Regional Travel Survey	Southcentral Region	Survey
135	Travel Options Report Recommendations	Southcentral Region	Report
135	South Anchorage and Hillside Intersection Study	Nine intersections in South Anchorage and Hillside communities	Study
135	Complete Streets Plan	AMATS	Policy
135	Freeway Incident Management Plan	Glenn Highway	Incident Management Plan

Figure 4-3. MTP Road Projects Completed Since 2012 - Anchorage Bowl and Chugiak-Eagle River



The MOA and DOT&PF have been working together to fund and construct bicycle and pedestrian projects. Since 2012, there have been a number of significant non-motorized projects completed and in construction.

Table 4-2 summarizes these projects.

Table 4-2 MTP Non-Motorized Projects Completed Since 2012 - Anchorage Bowl and Chugiak-Eagle River

MTP 2035 #	Project Name	Location	Project Description
503	Northern Lights Blvd	LaHonda Dr to Lois Dr	New Sidewalk
504	Checkmate Dr	Tudor Rd to Emmanuel Ave	New Sidewalk
513	10th Ave	P St to Medfra St	Bicycle Blvd
514	Arctic Blvd	Northern Lights Blvd to Fireweed Lane	Bicycle Lanes
524	Arctic Blvd	Fireweed Lane to 10th Ave	Bicycle Lanes
544	Wisconsin St	Spenard Rd to Northern Lights Blvd	Bicycle Lanes
554	Elmore Rd	Huffman Rd to O'Malley Rd	Shoulder
554	Elmore Rd	DeArmoun Rd to Huffman Rd	Bicycle Lane
555	Hillside Drive/Rabbit Creek Road	Clarks Rd to Abbott Rd	Shoulder
561	Peterkin Ave	Meyer St to N. Bunn	Bicycle Blvd
564	Raspberry Rd	Jewel Lake Rd to Minnesota Drive	Bicycle Lanes
573	Boniface Pkwy	DeBarr Rd to Carrs	New Sidewalk
606	DeArmoun Rd	Old Seward Hwy to 140th Ave	Bicycle Lane
609	Old Seward Hwy	Rabbit Creek to Hamilton Drive	Bicycle Lane and Shoulder

Table 4-2. MTP Non-Motorized Projects Completed Since 2012 - Anchorage Bowl and Chugiak-Eagle River cont.

MTP 2035 #	Project Name	Location	Project Description
610	Turnagain Pkwy	Northern Lights Blvd to Illiamna Ave	Shared Road Bicycle Facility
620	4th Ave	Bunnell St to Boniface Blvd	New Sidewalk
N/A	Eagle River Road	VFW Rd to Eagle River Loop	Bicycle Lanes
N/A	Eagle River Loop	Glenn Hwy to Eagle River Rd	Install bike lanes and bike shoulder

Roadways

Anchorage's public roadway network remains the primary resource for the movement of people and goods throughout the region. The importance of regional mobility and economic development cannot be overstated; the latest commute data from the U.S. Census Bureau indicates that driving is the most common mode for accessing employment, with over 75% of employees driving alone and an additional 12% carpooling[1]. The 2014 Regional Household Travel Survey found that 86% of all trips were made by private vehicle[2]. Total travel volume is a function of population and mode choice.

According to the 2016 Status of the System report, the average annual population growth rates between 2010 and 2013 averaged 1.3% for the MOA and 2.8% for the Matanuska-Susitna Borough while traffic on the Glenn Highway increased by 1.4%.

Road Characteristics

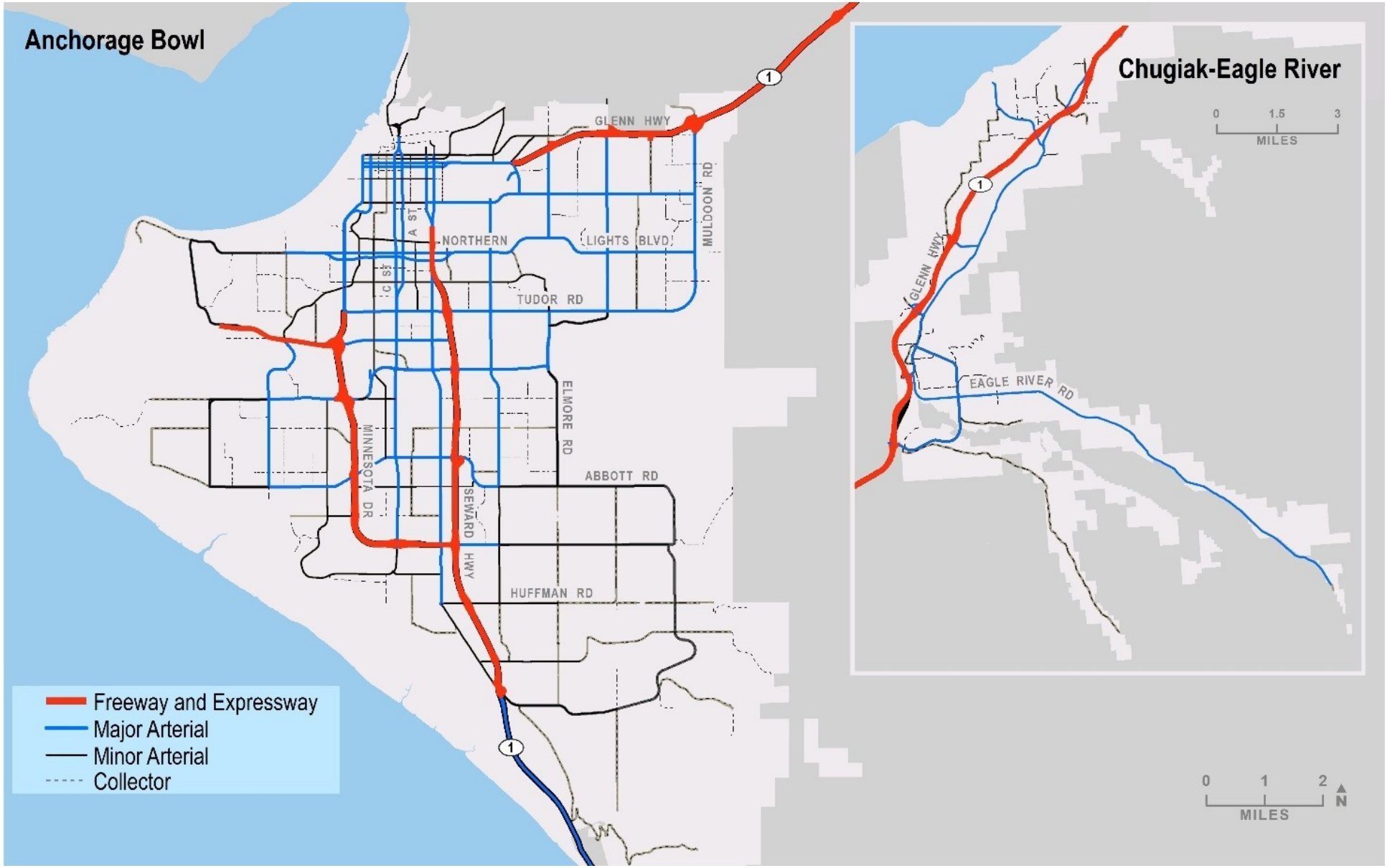
The region's roadway segments can be categorized by functional class , indicating the general capacity and purpose of the roadway, as described in Table 4-3 and shown on Figure 4-4.

Additionally, some of the roadways are designated as part of the National Highway System (NHS), indicating their strategic importance for the movement of goods and people (see Figure 4-5). Road ownership and maintenance are the responsibility of local, state, and federal agencies, as well as private entities. The State of Alaska owns many of the primary roadways that carry heavy traffic volumes, including the majority of the designated NHS roads, but the MOA owns and maintains a higher percentage of the total mileage.

Table 4-3. Road Classification

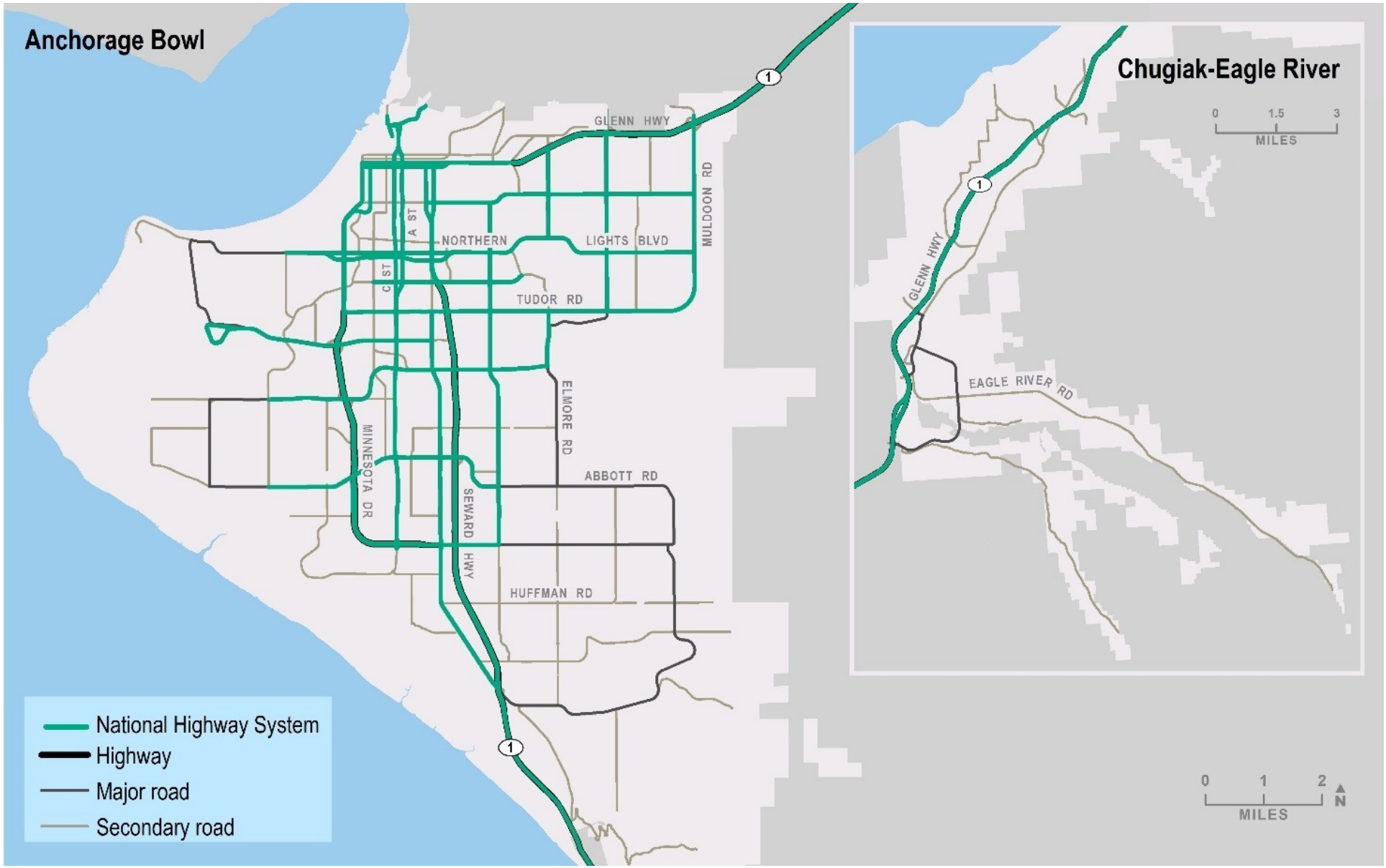
Facility Type	Characteristics	Examples
Freeway	Over 40,000 daily cars, variable number of lanes	Glenn and Seward Highways, Minnesota Drive
Expressway	Over 20,000 daily cars, 4 to 6 lanes	International Airport Road between Minnesota Drive and the airport
Major Arterial	Over 20,000 daily cars, 4 to 6 lanes	Tudor Road, Northern Lights Blvd, Old Seward Highway
Minor Arterial	10,000 to 20,000 daily cars, 2 to 4 lanes	Huffman Road
Collector	2,000 to 10,000 daily cars, 2 to 4 lanes	Baxter and Wisconsin Roads
Local	Less than 2,000 daily cars, 1 to 2 lanes	Neighborhood streets

Figure 4-4 Roadway Functional Classification



Source: Municipality of Anchorage GIS Data; Official Streets and Highways Plan 2014

Figure 4-5. National Highway System



Source: Municipality of Anchorage GIS Data

Roadway Congestion

Congested roadways hinder the ability of residents, employees, and logistics companies to complete daily activities. Reducing congestion and increasing mobility are important in maintaining Anchorage's economic competitiveness and residents' quality of life. This section highlights the average congestion levels, in terms of Level of Service, during commute hours for highways and intersections. Additionally, it discusses the average travel times for key corridors and the effects of collisions on non-recurring congestion.

Highway Level of Service

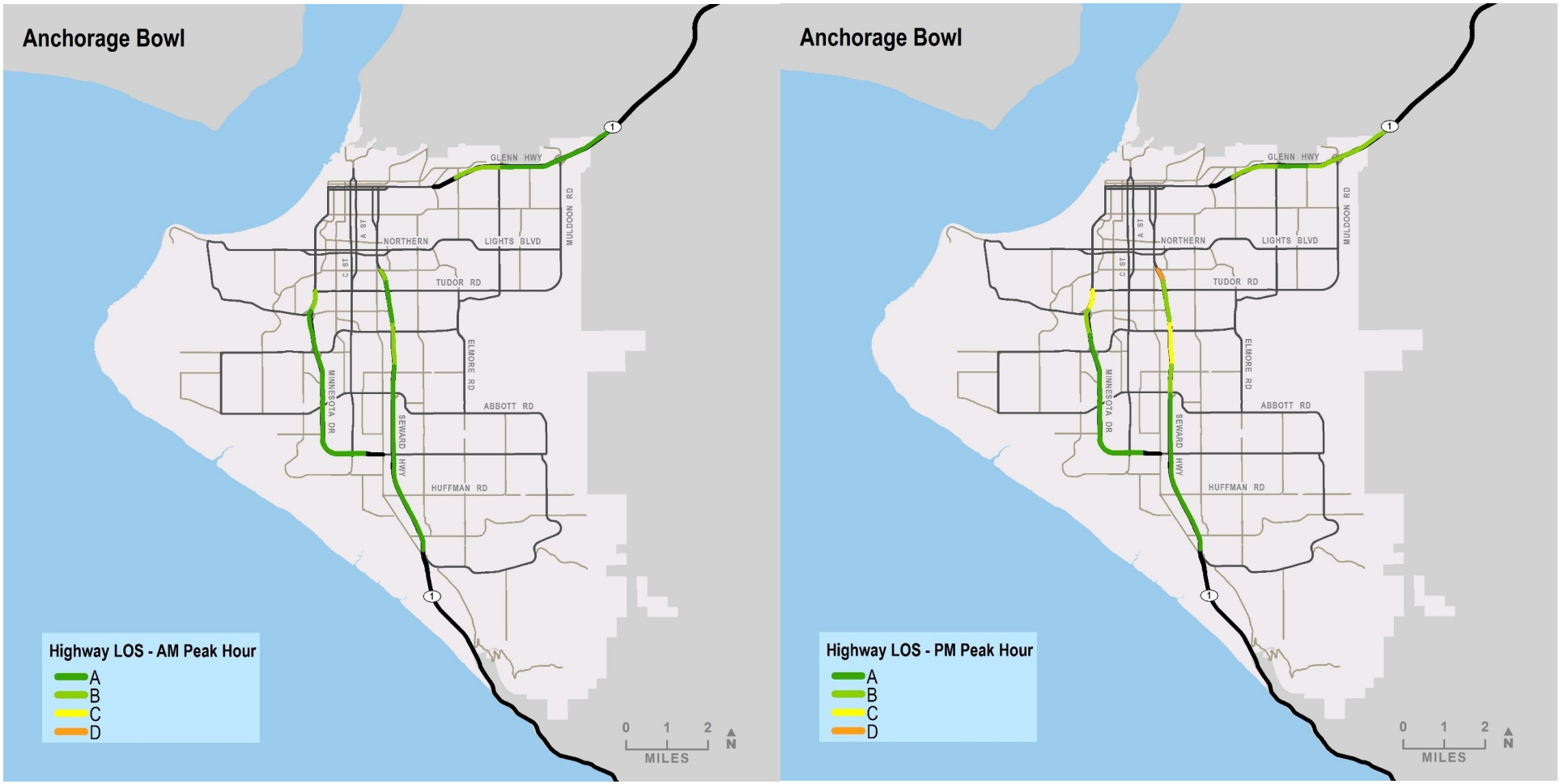
A measure of congestion for roads, where access is limited and flow is continuous, can be expressed using the Highway Segment Level of Service (LOS). The LOS for highways is based on traffic density, in terms of passenger cars per mile per lane, taking into account the freeway geometry and peak traffic volumes. This measure characterizes the extent to which the traffic flow exceeds the design capacity of the roadway. Table 4-4 shows the relationship of density and LOS; anything rated D, E, or F is typically considered congested.

Figure 4-6 shows the morning and afternoon LOS for the highways in the Anchorage region. During the AM peak hour commute, conditions on the main highways in Anchorage are uncongested (above LOS C). For the PM peak hour, Seward Highway experiences congested conditions, with the highest level of congestion occurring between 36th Avenue and Tudor Road.

Table 4-4 Level of Service Criteria for Highway Segments

Level of Service	Density (passenger cars per hour per lane)	Speed (mph)	Traffic Volume (passenger cars per hour per lane)
A	0-11	65	0-410
B	11-18	65	710-1,170
C	18-26	65	1,170-1,680
D	26-35	60-65	1,680-2,090
E	35-45	52-60	2,090-2,350
F	>45	<52	>2,350

Figure 4-6. Highway LOS, Average AM and PM Peak Hours, 2013



Source: Status of the System Report, 2016, based on Municipality of Anchorage Traffic Department Travel Time Reports, Volumes from DOT&PF Annual Traffic Volume Reports.

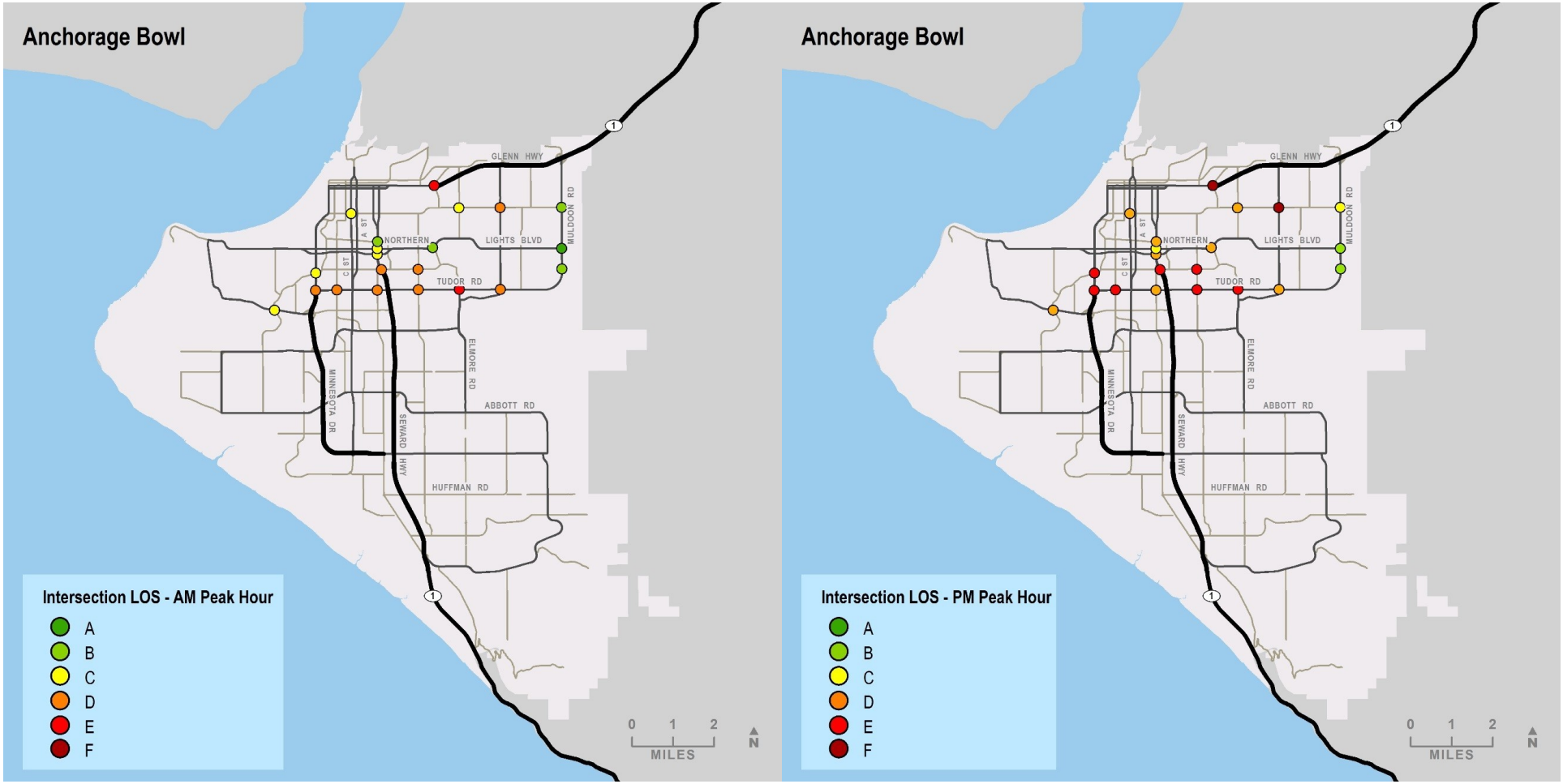
Note: No segments meeting Level of Service E or F were identified

Intersection Level of Service

Intersection LOS evaluates traffic conditions on roadways with traffic signals or stop signs. Similar to highway LOS, this metric reflects congestion levels at intersections, according to the available roadway capacity, speed, or delay experienced. In the case of an intersection, LOS A is uncongested, meaning that all vehicles will move through an intersection during a single green-light cycle, while an LOS of F is saturated, indicating that drivers have to wait for multiple cycles or at least experience significant delay. It is important to note that LOS measures delay, which is correlated with congestion, but long delays could be caused by other factors such as poorly timed traffic signals, multi-modal traffic, or particular operational conditions.

Figure 4-7 shows the intersection LOS for the peak hour morning and afternoon commutes in 2013. In general, intersection delay in the afternoon is worse than during the morning commute periods. In the morning, the intersections with the highest level of delay, with an LOS E rating, are Glenn Highway at Airport Heights Drive, and Tudor Road at Elmore Road. Tudor Road experiences LOS D for much of the corridor. Unsurprisingly, similar to when the Glenn Highway becomes stop controlled, the Seward Highway experiences an LOS of D when it encounters a traffic signal at 36th Avenue. In the afternoon, all intersections experience the same or worse delay than in the morning. Two intersections are LOS F (Glenn Highway at Airport Heights Drive and Boniface Parkway at DeBarr Road), and intersections along the Tudor Road corridor experience LOS D or E.

Figure 4-7. Intersection LOS, Average AM and PM Peak Hours, 2013

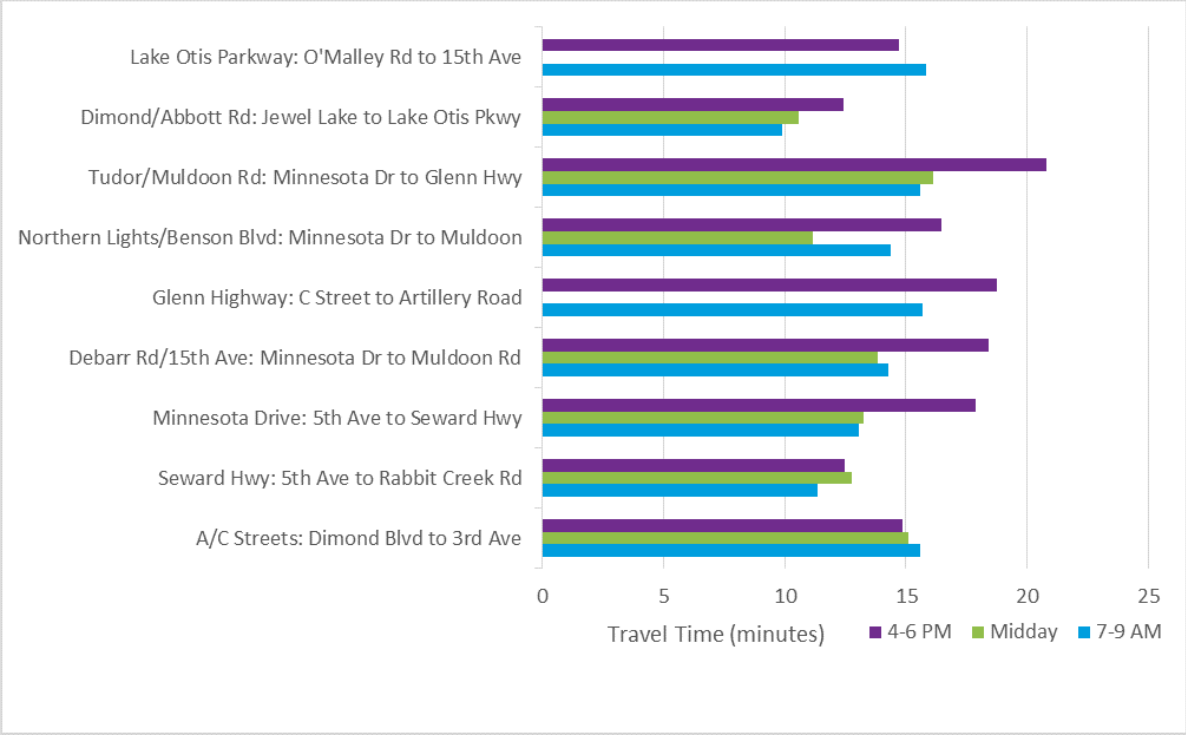


Source: Status of the System Report 2016, based on Municipality of Anchorage Traffic Department Travel Time Reports, Volumes from DOT&PF Annual Traffic Volume Reports.

Roadway Travel Times

Corridor travel time is another method for assessing roadway conditions and congestion levels. This measure shows the average time it takes to travel from an origin to a destination, and can be used to assess vehicular, transit, or non-motorized travel times. Generally, longer travel times and more congestion occur during commuting hours, when many users are getting to and from home and work. To track travel time changes over time, the AMATS Status of the System reports collects travel times on the same corridors for each report. The latest travel time data by time of day, collected in 2013 by MOA, is displayed in Figure 4-8. A comparison of afternoon travel time data from previous years is displayed in Figure 4-9.

Figure 4-8.Automobile Travel Times by Time of Day, Fall 2013



Source: AMATS Status of System 2016, based on Municipality of Anchorage Traffic Department Travel Time Reports.

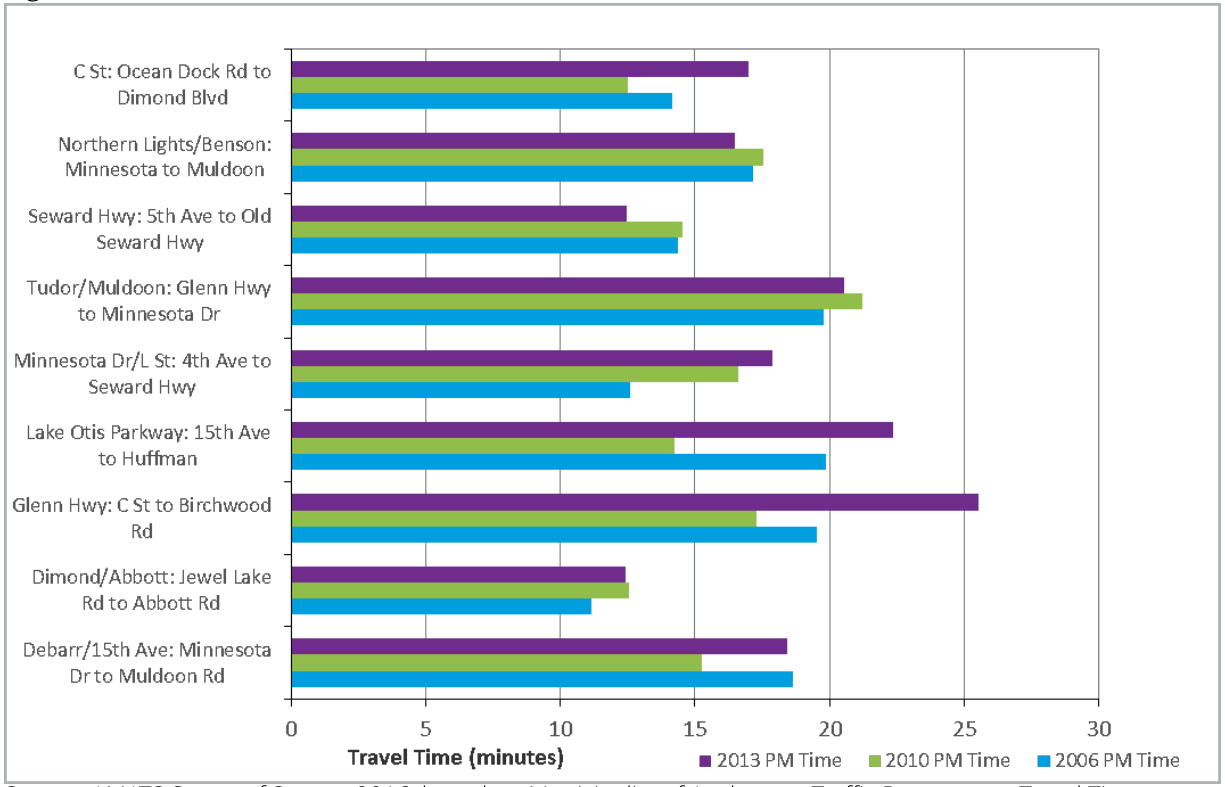
Consistent with the highway and intersection LOS analyses, as seen in Figure 4-8, afternoon congestion is higher and travel times are longer than during other time periods. For all but two of the road segments listed, the travel time is 10% to 37% higher during the 4–6 PM travel time than during the 7–9 AM travel time. Notably, midday travel is generally slightly more congested than morning travel on four of the seven roads for which mid-day data is available.

Figure 4-9 shows changes in the peak afternoon travel time in 2006, 2010, and

2013. After the general decrease in travel times from 2006 to 2010, most corridors saw an increase in travel times by 2013. This trend means that the majority of corridors in 2014 had higher travel times than in 2006. Minnesota Drive/L Street and Glenn Highway had the most significant travel time increases over the 9 years, with travel time increases of more than 20%.

It is notable that travel times are largely dependent on speed and roadway improvements. Also, infrequent events, such as crashes or severe weather, can cause delays that affect all users. All users also include public transportation vehicles, emergency vehicles, school buses, and freight shipments, which could mean increased costs of shipment. Both predictable delays, such as rush-hour congestion, and unpredictable delays increase congestion and are cumbersome to users taking all types of trips.

Figure 4-9. PM Peak Period Travel Times: 2006, 2010, 2013



Source: AMATS Status of System 2016, based on Municipality of Anchorage Traffic Department Travel Time Reports.

The majority of corridors in 2014 had higher travel times than in 2006. Minnesota Drive/L Street and Glenn Highway had the most significant travel time increases over the 9 years, with travel time increases of more than 20%.

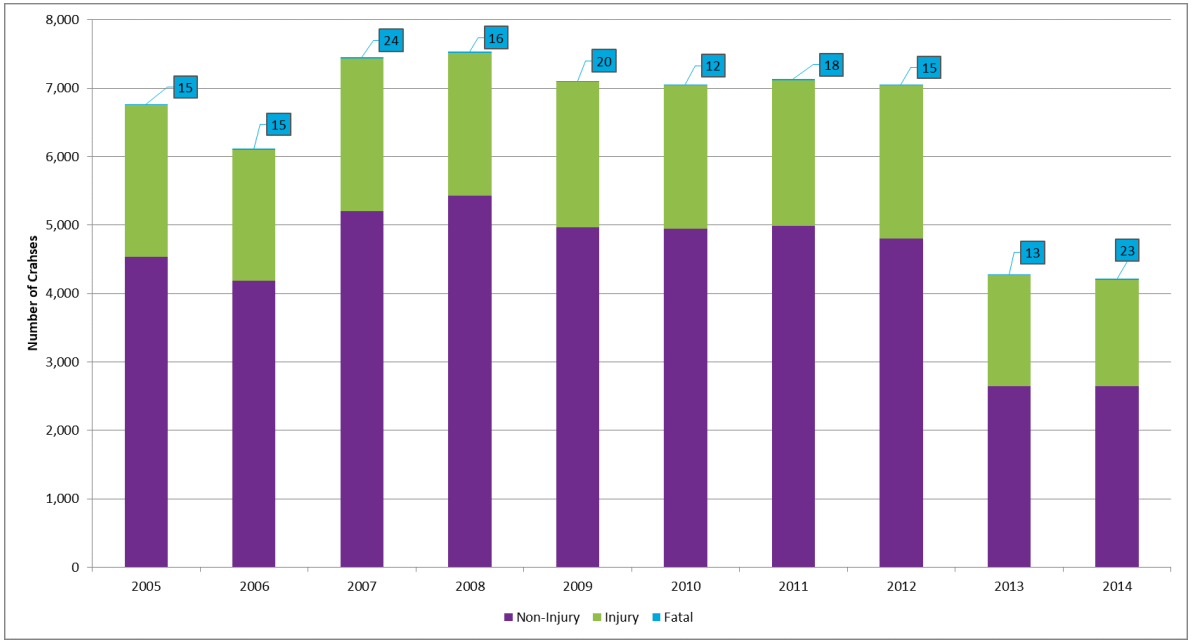
Traffic Safety and Non-recurring Congestion

One of the primary goals of transportation managers is to maintain systems that are safe and reliable for the movement of people and goods. Monitoring traffic collisions over time allows planners and engineers to identify unsafe roadways or conflict zones. Data in Figure 4-10 show vehicle crash trends in the MOA.

Between 2005 and 2012, total crashes ranged from 6,000 to 8,000 crashes per year. While 2013 shows a decrease in the number of crashes, it should be noted that the reporting methodology changed from 2012 to 2013 to comply with State mandates. As a result, a direct comparison of 2013/2014 data to previous years is not recommended.

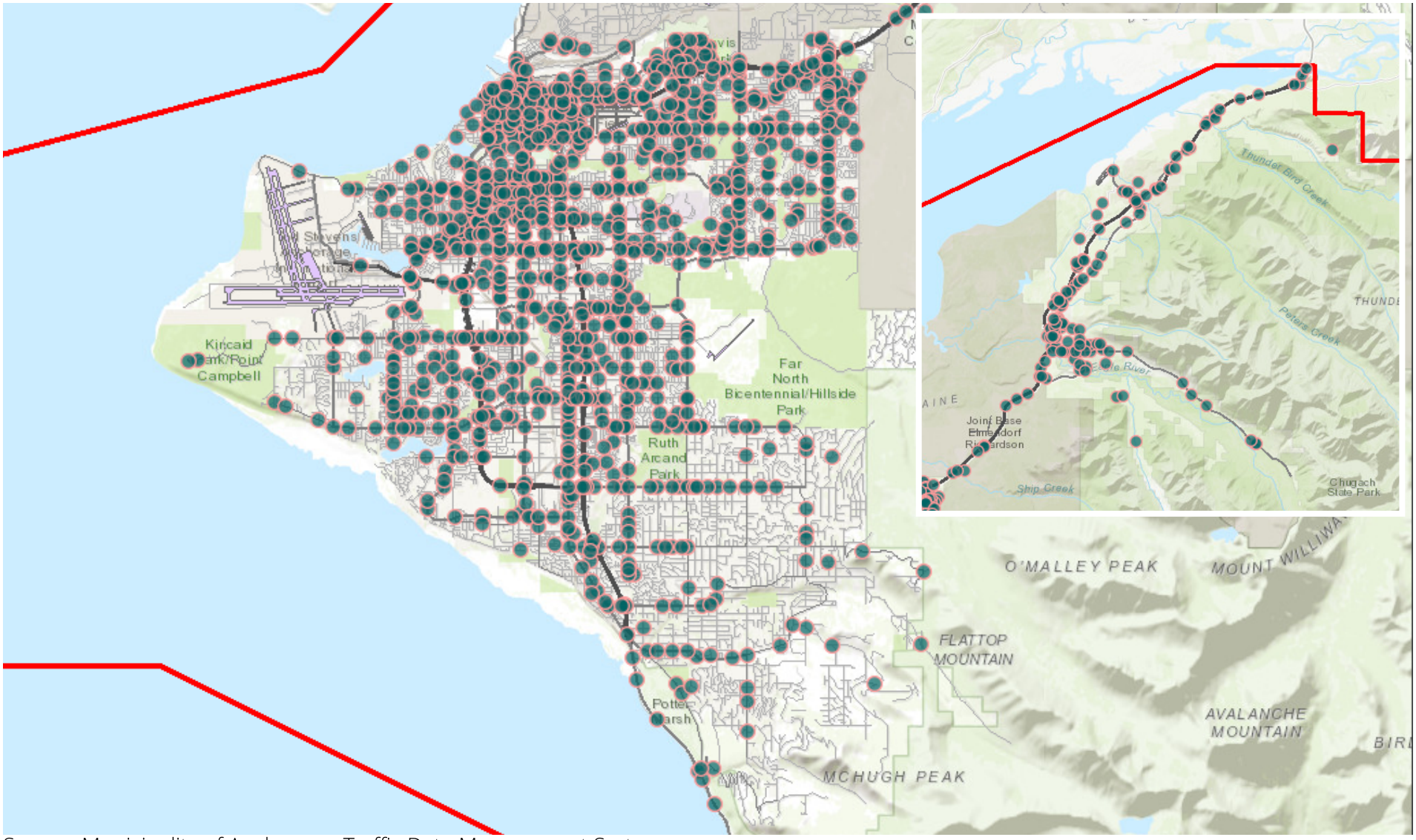
In terms of fatal crashes (indicated in Figure 4-10 call-outs), the number of fatalities is low but varies significantly by year, and there is no evident pattern suggesting that this type of crash has increased or decreased. Despite a decrease in overall vehicle crashes since 2013, the number of total fatal crashes remained steady with the previous 8 years. Traffic crashes can occur on any roadway; however, they cluster in areas with higher volumes. Figure 4-11 shows the location of vehicle crashes in 2014. Crashes are higher on major arterials and freeways, where average speeds are higher. In 2014, the intersection of East Benson Boulevard and Seward Highway had the highest number of incidents, and eight additional locations had at least 25 collisions. These include Boniface Parkway and DeBarr Road, C Street and

Figure 4-10.Vehicle Crashes by Type, 2005-2014



Note: Number in call-out boxes represents the number of crashes involving fatalities.
Crash reporting methodology changed from 2013 to 2014. Direct comparison of 2013/2014 data to previous years is not recommended.
Source: MOA Traffic Report, 2014

Figure 4-11. Vehicle Crashes, 2014



Source: Municipality of Anchorage, Traffic Data Management System

West 6th Avenue, Airport Heights Drive and Glenn Highway, Boniface Parkway and East Northern Lights Boulevard, East 36th Avenue and Seward Highway, East Northern Lights Boulevard and Seward Highway, and the Glenn Highway and Muldoon Road ramps. In the Chugiak-Eagle River region in 2014, the locations with greatest number of crashes were the intersection of Glenn Highway and Hiland Road/Eagle River Loop, followed by the Glenn Highway and the South Birchwood Loop and North Birchwood Loop ramps.

Table 4-5 shows the number of vehicular crashes, and their severity, on the Glenn Highway between 2005 and 2014. The severity of crashes on highways, given the increased speeds, are worse than that on arterial roadways. Crashes on the Glenn Highway were twice as likely to be fatal than crashes on all other roadways during the same period.

Traffic safety is not only important for the health and well-being of the Anchorage and Chugiak-Eagle River communities, it is also important for the operations of the roadway system. Unpredictable traffic conditions and beyond-normal rush hour traffic can be especially frustrating for commuters or travelers, as the extra time may cause them to be late for work or miss appointments. Non-recurring congestion has numerous causes, such as severe weather, road work, special events, stalled vehicles, and vehicle crashes. Table 4-5 shows that the stretch of Glenn Highway in the MOA generally sees more than 200 crashes per year, increasing the probability of congestion due to unpredictable events. While MOA lacks specific data for the overall impact of these events, reducing non-recurring delay through incident management is a high priority in maintaining the efficiency of the regional transportation system.

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Table 4-5 Glenn Highway Crash Fatalities, 2005-2014

Year	Fatalities	Total
2005	1	419
2006	0	195
2007	0	198
2008	2	299
2009	4	522
2010	4	205
2011	2	354
2012	0	230
2013	1	165
2014	0	178

Source: Municipality of Anchorage, Traffic Data Management System.

Public Transportation

The Municipality of Anchorage's Public Transportation Department (PTD) aims to connect the region with safe, reliable transportation options through People Mover, AnchorRIDES, and RideShare. People Mover provides fixed-route bus service in Anchorage and Eagle River. RideShare is a subsidized vanpooling program for groups of five or more riders who work and travel at agreed-upon times, days, and locations.

Bus Service

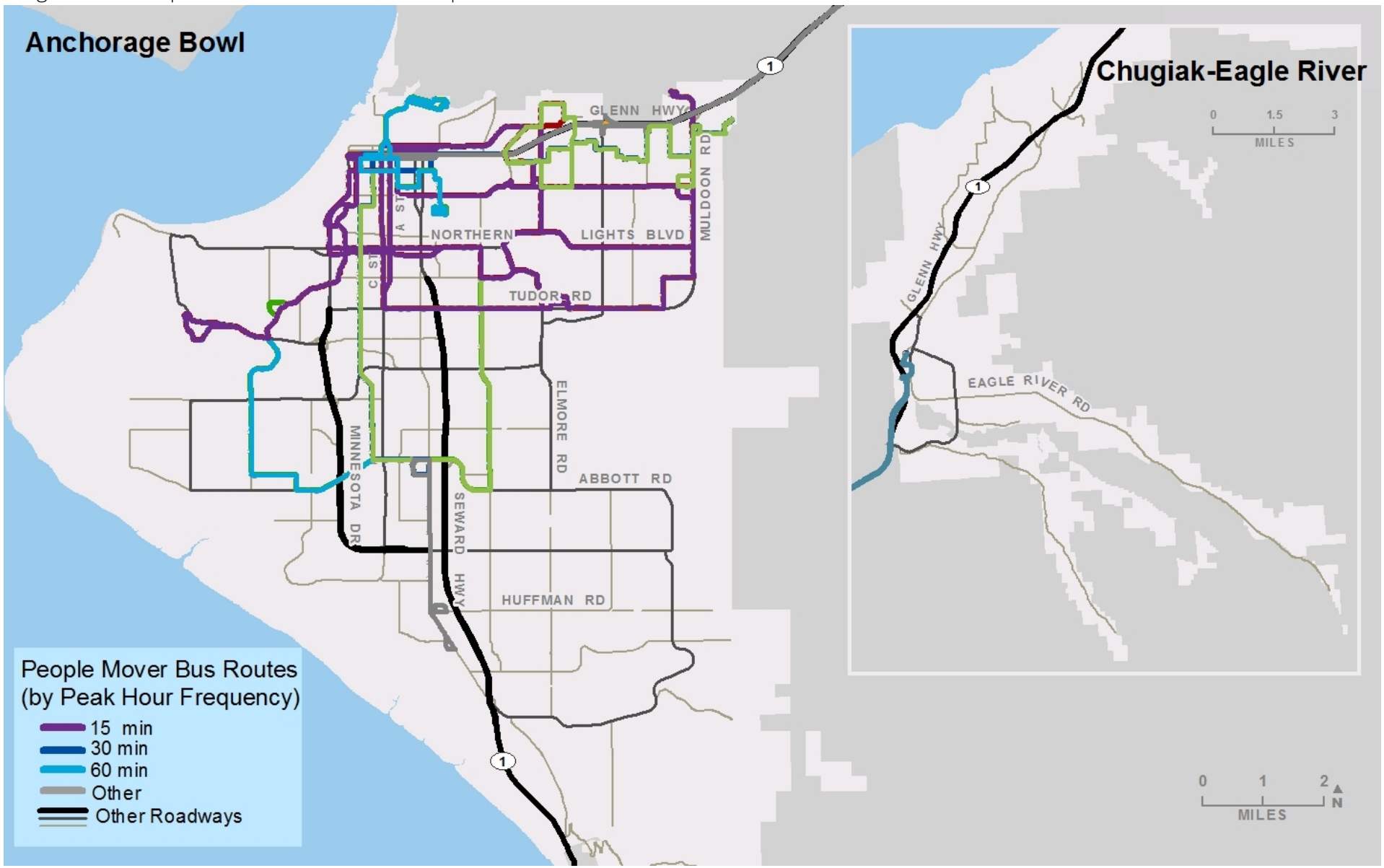
On October 23, 2017, a new transit system was implemented that improves bus frequency on many routes in the region. Prior to October 2017, People Mover operated one route on 20-minute headways (minutes between bus service), three on 30-minute headways, nine on 60-minute headways, and one commuter route with limited service. Today, the new system has more frequent service, including, between the hours of 6 AM and 8:30 PM: four frequent routes with headways of 15 minutes, five with varying headways between 15 and 30-minutes, three with 60-minute headways, and two commuter routes that operate during peak periods only. Figure 4-12 shows the location of the 14 different fixed bus routes in Anchorage as of April 2020. Frequencies of bus services for all routes after 8:30 PM and on weekends range from 30 to 60 minutes. Routing assistance, as well as service times and locations, can be found on the People Mover website or by calling 343-6543.

Prior to the launch of the new bus system in October 2017, there were two transit connections between Chugiak-Eagle River and the Anchorage Bowl. Riders could take People Mover Route 102, a fixed-route commuter service during peak hours, or Eagle River Connect, a deviated fixed-route service for the link between Chugiak-Eagle River and the University Medical (U-Med) area. As of April 2020, People Mover Route 92 provides the Anchorage Bowl to Eagle River connection with approximately 30-minute (morning) and 30/60-minute (afternoon) headways during peak hours.

The latest People Mover map can be found on the People Mover website.

According to Vision Zero, there have been no fatalities associated with People Mover buses.

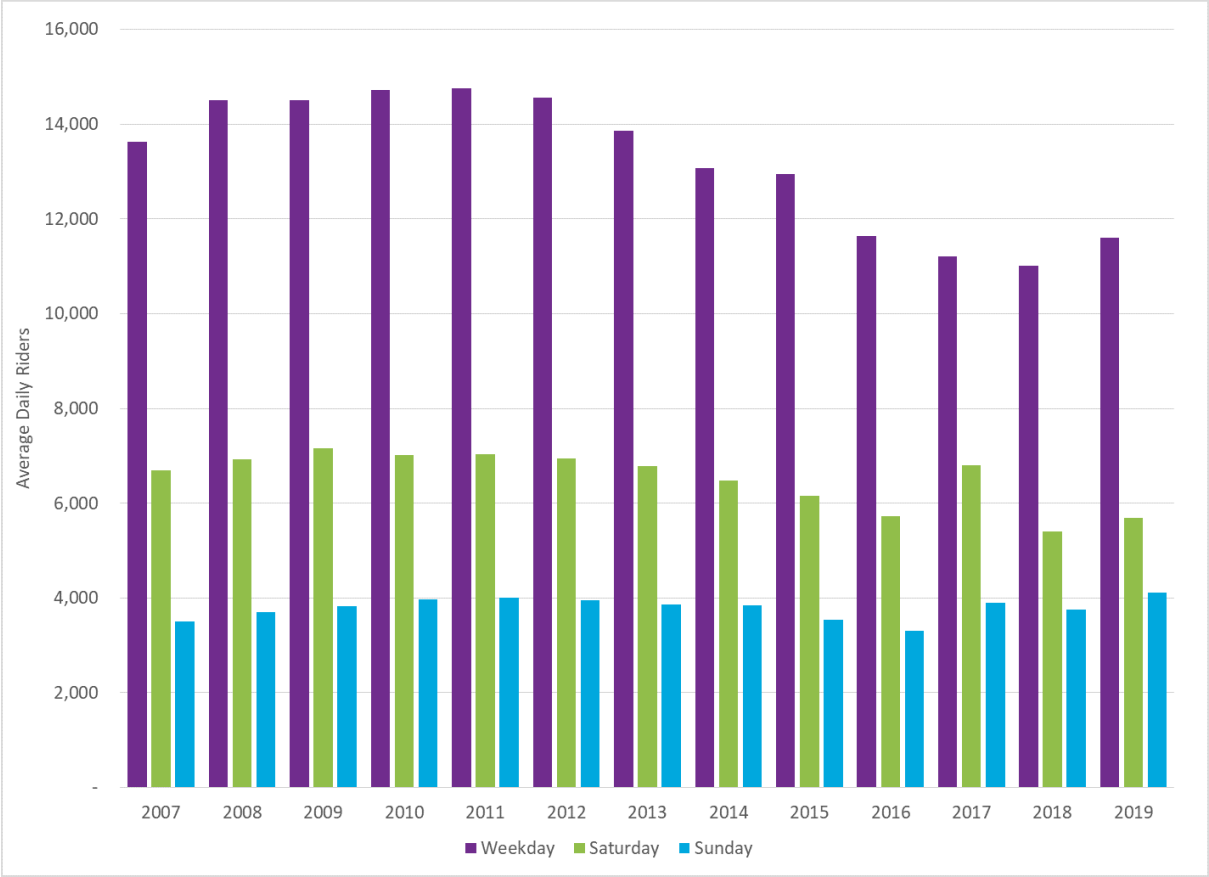
Figure 4-12 People Mover Bus Routes, as of April 2020



Source: Municipality of Anchorage

In 2008, for the first time since 1983, the system surpassed an annual ridership of 4 million. People Mover has experienced slightly declining ridership ever since. Transit ridership is affected by many factors, some outside the control of the transit agency. Factors include the population and employment density, the fare cost compared to other transportation costs, travel time, reliability of service, frequency of service, and other amenities. After the launch of the new bus system in October 2017, ridership is now increasing. Figure 4-13 shows the average daily riders by People Mover for weekday and weekend trips between 2007 and 2019.

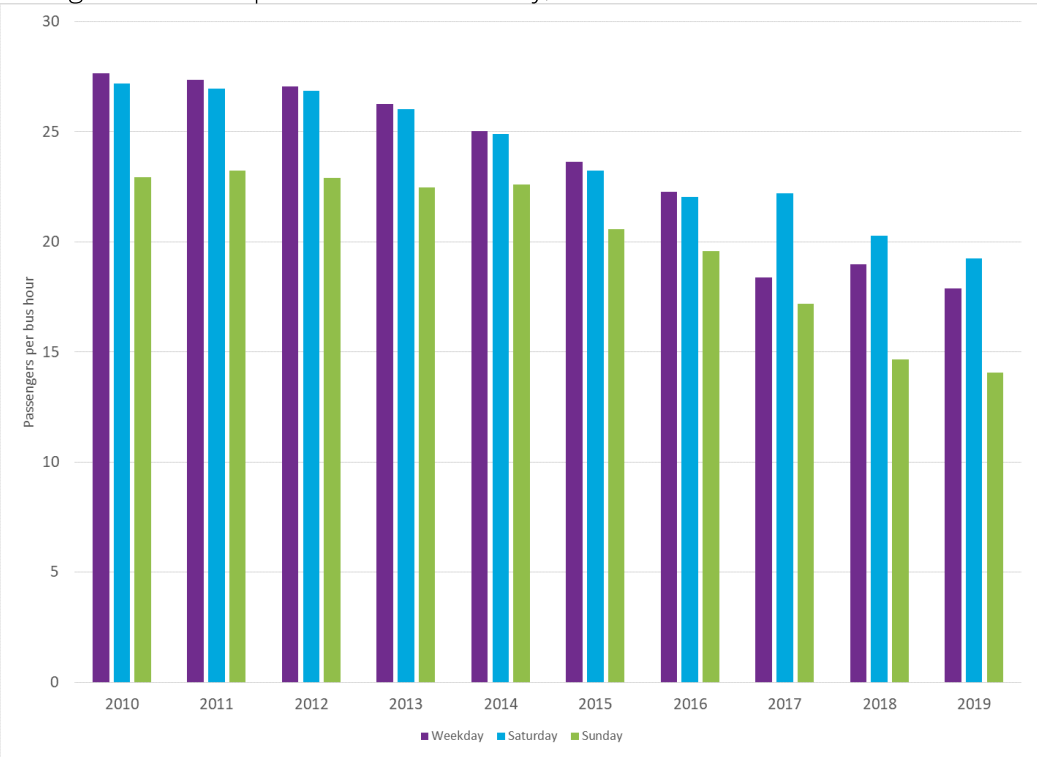
Figure 4-13 People Mover Average Daily Riders, 2007-2019



Source: National Transit Database

Looking beyond ridership alone, agencies track other metrics to determine how cost-effective their services are compared to similarly sized agencies. One such metric, transit system productivity, is a ratio of ridership to revenue hours. Transit systems aimed at maximizing ridership typically have higher productivity than those that are designed to provide service coverage. Prior to October 2017, People Mover operated a system aimed at providing service coverage over maximizing ridership. Between 2010 and 2016, bus revenue hours remained about the same, while ridership declined. Revenue hours increased with the new bus system in an effort to increase ridership. Figure 4-14 illustrates the slight decline in productivity from 26.7 passengers per bus hour in 2010 to 21.7 passengers per bus hour in 2016. In 2018, it begins to increase as more riders use the new bus system.

Figure 4-14 People Mover Productivity, 2010-2019



Source: Municipality of Anchorage

Paratransit

Paratransit services are provided through AnchorRIDES for seniors age 60 and over, and for people with disabilities who need an alternative to People Mover. PTD also offers AnchorRIDES, a demand responsive, curb-to-curb transportation service for seniors and people with disabilities. AnchorRIDES is a service that meets the requirements of the American's with Disabilities Act (ADA) and is eligible for FTA paratransit funding. It also receives state and federal subsidies. Trips on AnchorRIDES increased from 173,000 passengers in 2001 to a peak in 2011 of 198,500 passengers, dropping to 123,520 in 2019.

Ride Sharing

Ride sharing, also known as carpooling, is an important component of a multi-modal transportation network. According to the most recent census data, almost 12% of all employees in the Anchorage area carpool to work. Most carpooling occurs among friends and family; the 2014 regional household travel survey found that of the 12% of carpool commute trips, only 17% include driving with a non-household member (2% of all commute trips). To complement informal carpooling, organized ride sharing services are an increasingly important transportation mode. Anchorage's ride sharing system, RideShare, offers participants the opportunity to commute in organized carpools and vanpools. As shown in Table 4-6, there was a significant increase in vanpooling participation from 2005 to 2014, from 375 to 1,152 in 2011, though participation decreased in 2014 to 840. However, active vanpools remain steady at 65 and have experienced a steady increase since 2006. Active carpoolers have decreased steadily over time, from 659 to 250, though it may be possible that informal carpools have been established outside the formal RideShare program.

Table 4-6 Anchorage Ride Sharing Statistics, 2005-2014

Year	Registered Applicants	Active Carpools	Active Carpoolers	Active Vanpools	Active Vanpoolers
2005	4,602	328	659	24	375
2006	4,822	278	557	41	569
2007	4,946	181	365	42	637
2008	4,774	179	361	52	810
2009	4,823	179	361	52	917
2010	4,772	178	359	55	985
2011	5,151	137	276	66	1,152
2012	5,291	135	272	65	992
2013	2,249	124	250	65	972
2014	1,507	N/A	N/A	65	840

Source: AMATS Status of the System, 2016

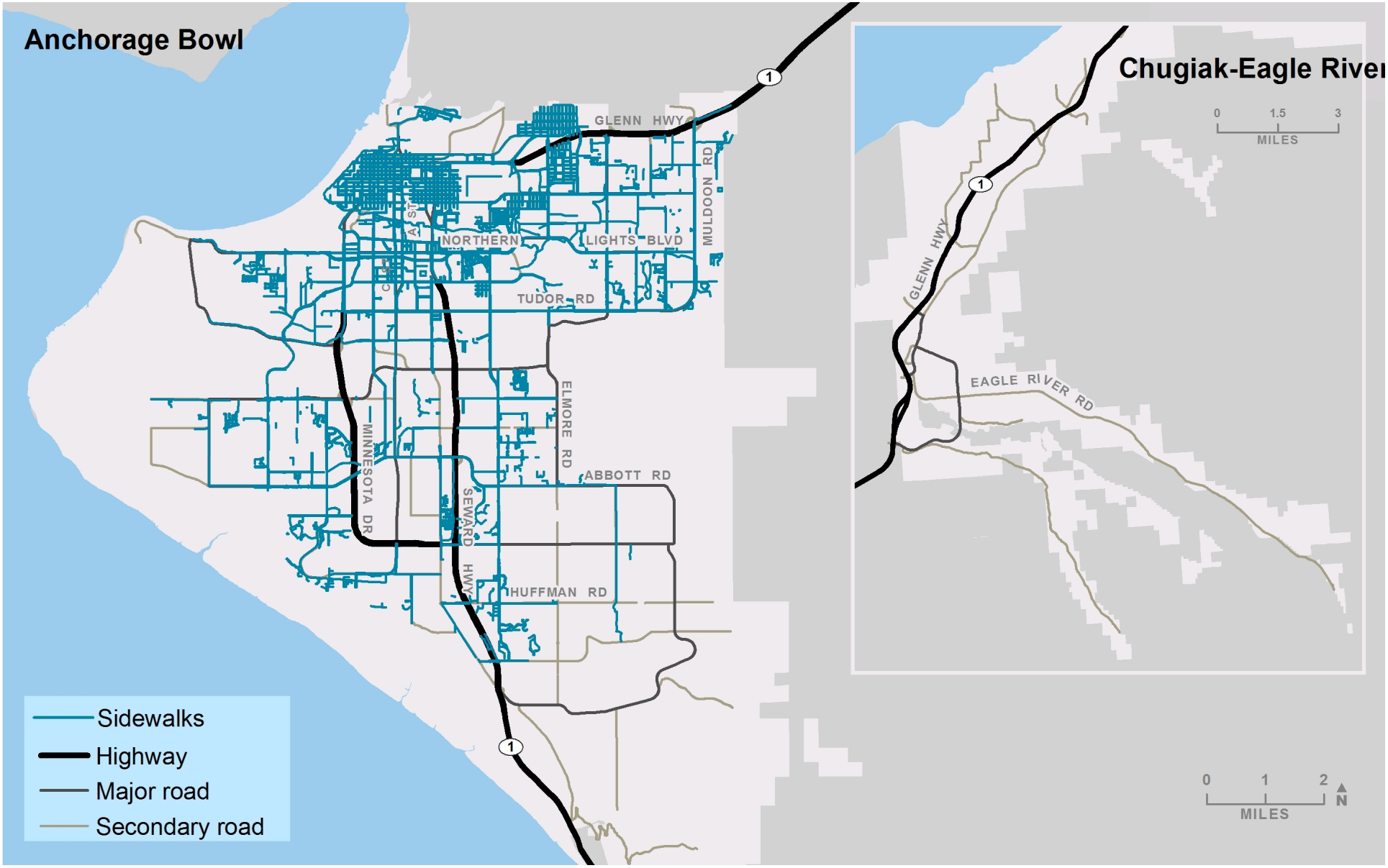
Non-Motorized Transportation

The Anchorage region has both pedestrian and bicycle systems that allow for residents to commute, run errands, and travel for other purposes without the use of a vehicle. Non-motorized trips are better for the environment, improve public health, are low cost, and can reduce congestion. Welcoming pedestrian and bicycle networks are serious and important components of a modern transportation system and especially important in Alaska. At a statewide level, close to 8% of employees in Alaska walk to work, more than any other state in the US (excluding the District of Columbia), and the state ranks number 6 in terms of bicycle commute mode share[1]. According to the 2016 Benchmarking Report by the Alliance for Biking & Walking, Alaska spends more per capita on bicycling and walking projects than any other state; however, Alaska also ranks number one in pedestrian and bicyclist fatalities per commuter[3]. In the Anchorage region, bicycling and walking to work are 3.1% and 1.2%, respectively, lower than the statewide averages. Based on the AMATS regional household travel survey for all trips, including running errands and recreational travel, bicycling is used for 1.5% of all trips and walking is used for 8.2% of trips.

Pedestrian System

Planning for pedestrian facilities in Anchorage is supported by the 2007 Pedestrian Plan. According to the 2016 Status of the System report, Anchorage has approximately 458 miles of sidewalks. Figure 4.12 shows the current location of sidewalk infrastructure in the Anchorage Bowl and Chugiak-Eagle River. Sidewalks are more common in the Anchorage Bowl area compared to Chugiak-Eagle River, given its rural character. In general, older neighborhoods such as Downtown, Fairview, Mountain View, Airport Heights, College Village, and South Addition are more likely to have complete sidewalk neighborhoods.

Figure 4-15 Sidewalks in Anchorage Bowl and Chugiak-Eagle River



Source: Municipality of Anchorage, 2017

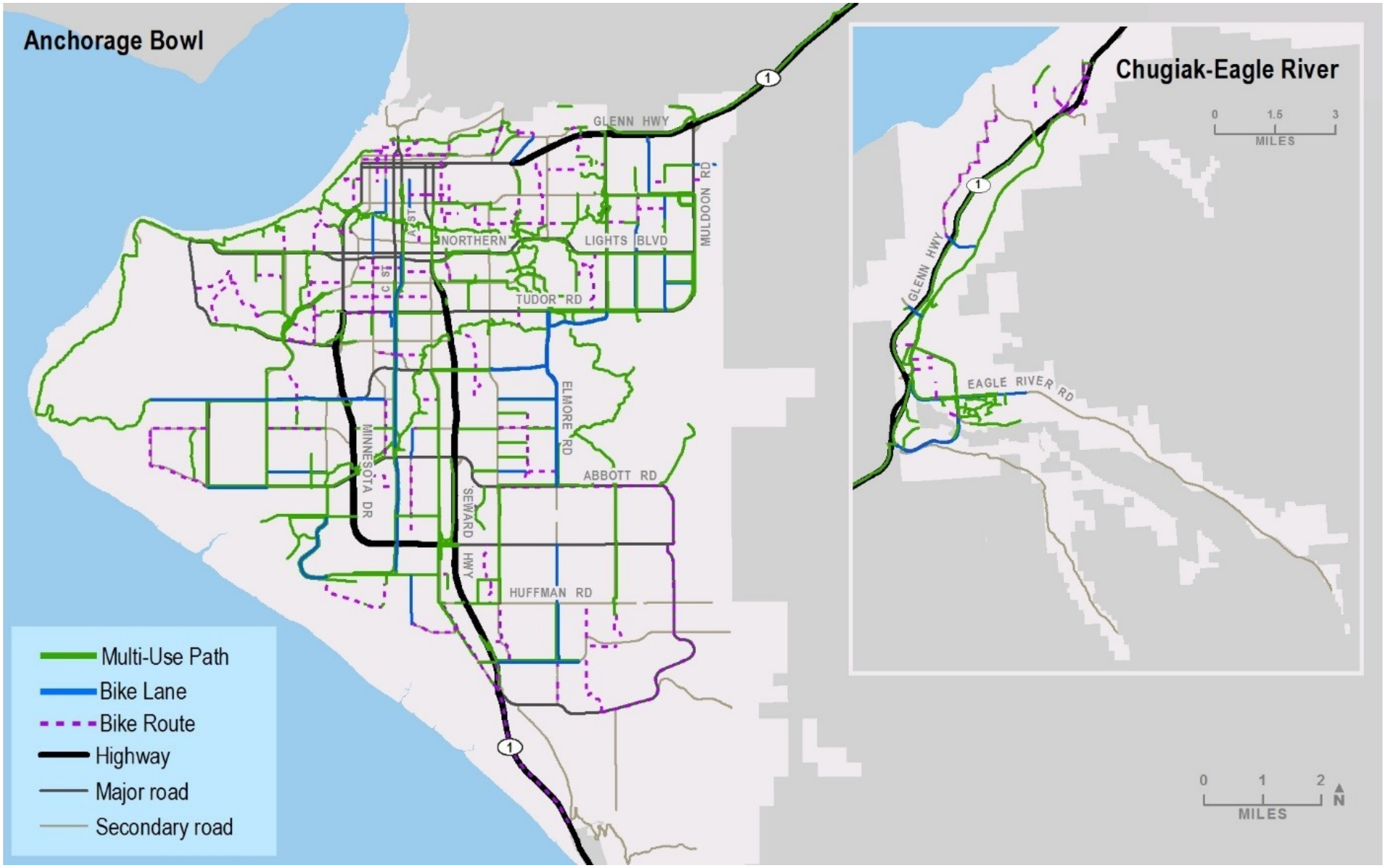
Bicycle System

An important mode of transportation, particularly in urban regions, is the bicycle. Figure 4.16 shows bicycle facilities in the Anchorage Bowl and Chugiak-Eagle River. According to Anchorage's Bicycle Plan 2010, there are 214 miles of bicycle facilities. Of the entire network, 204 miles correspond to multi-use pathways, 8 miles are greenbelt trails, 8 miles are bicycle lanes, and 2 miles are shared roadways.

Accurate estimates of bicycling activity are important for planners to understand travel patterns and implications for the safety and public health of residents. Estimates of bicycle ridership come from surveys (Census and Household Travel Surveys), but these data points do little for the understanding of where bicyclists are riding and why they choose to utilize or avoid certain routes. For better estimates of bicycling in specific locations, manual counts are necessary. The MOA conducted Bike to Work day counts between 2007 and 2014 and the results are detailed in Table 4.7. With the exception of 2013, when it snowed on Bike to Work Day[4], the data highlights a steady increase in bike to work day participation over the six year period, with year to year increases at most count locations. Furthermore, the increase of fat-tire bicycles, better for riding on snow, has made commuting by bicycle more popular year-round in Anchorage.

Mobile phone data and automated count technologies can be utilized in the future to better understand bicycling activity in the Anchorage region.

Figure 4-16.Bicycle Facilities in Anchorage Bowl and Chugiak-Eagle River



Source: Municipality of Anchorage, 2014

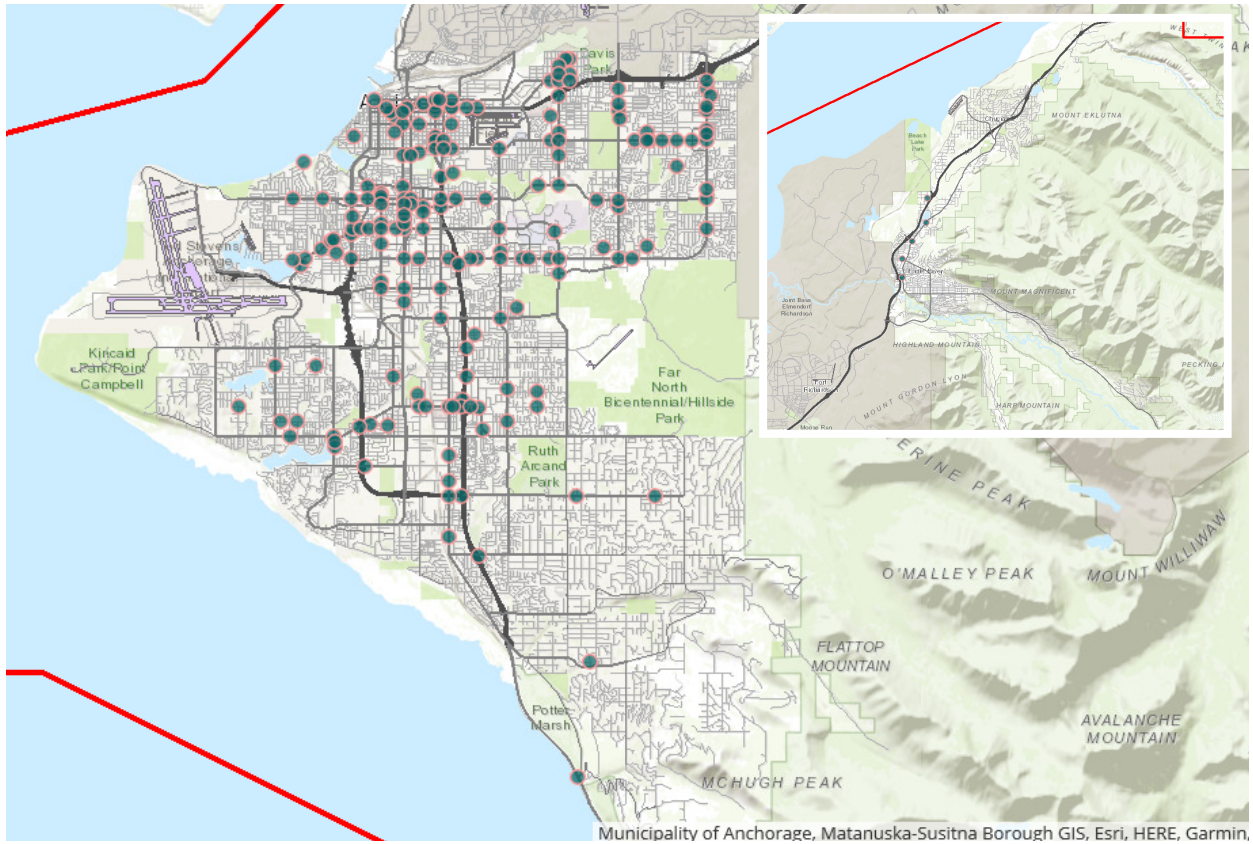
Table 4-7 Bike to Work Day Counts, 2007-2014

Location	2007	2008	2009	2010	2011	2012	2013	2014
Coastal/Chester Creek Trail – West end of Westchester Lagoon	124	188	170	259	263	403	143	427
A Street and Chester Creek Trail	225	308	274	258	568	693	328	699
Seward Highway and Chester Creek Trail	238	316	301	436	593	719	393	781
Chester Creek Trail – Northern Lights Boulevard overpass at Goose Lake	159	242	231	336	455	466	223	529
Campbell Creek Trail at Bittner House – South of Dowling	67	71	81	120	139	123	51	237
Tudor Road and Elmore Road	94	160	179	341	412	408	156	426
Tudor Road and C Street	170	171	209	303	266	364	147	394
Lake Otis Parkway and 36th Avenue	91	103	99	128	123	132	63	135
Lake Otis Parkway and Abbott Road	55	71	51	87	96	111	71	110
10th Avenue and N Street	63	101	72	109	129	161	57	216
15th Avenue and Arctic Boulevard/E Street	115	122	93	138	192	170	72	197
Benson Boulevard and Minnesota Drive	21	31	37	52	56	65	33	101
Boniface Parkway and Glenn Highway			58					
Glenn Highway and Muldoon Road						121	27	103
Jewel Lake and International Airport Road						170	54	124
Total	**1,422**	**1,884**	**1,855**	**2,567**	**3,292**	**4,106**	**1,818**	**4,479**

Source: Annual Traffic Report, Municipality of Anchorage, Traffic Engineering

Collisions involving bicyclists-vehicles and pedestrians-vehicles occur with higher frequency in areas frequented by bicyclists and pedestrians (Figure 4-17). These include areas with higher population density and areas with high density of employment or shopping destinations, such as downtown Anchorage and Northern Lights Blvd. In 2014, the highest number of crashes involving bicyclists and pedestrians occurred at East Northern Lights Boulevard and Seward Highway. The next highest number of incidents occurred on C Street and West Tudor Rd, East Benson Blvd and Seward Highway, and Boniface Pkwy and East Northern Lights Blvd. In the Chugiak/Eagle River region, there are five locations with reported crashes involving a pedestrian or bicyclist. Three of these locations are at an intersection with Old Glenn Highway.

Figure 4-17 Crashes involving Bicyclists-Vehicles and Pedestrians-Vehicles, 2014



Source: Municipality of Anchorage, Traffic Data Management System

Figure 4-18 shows the number of pedestrian and vehicle crashes between 2003 and 2012. Figure 4-19 shows the number of bicycle and vehicle crashes for the same time frame.

Figure 4-18 Pedestrian-Vehicle Crashes, 2003-2012

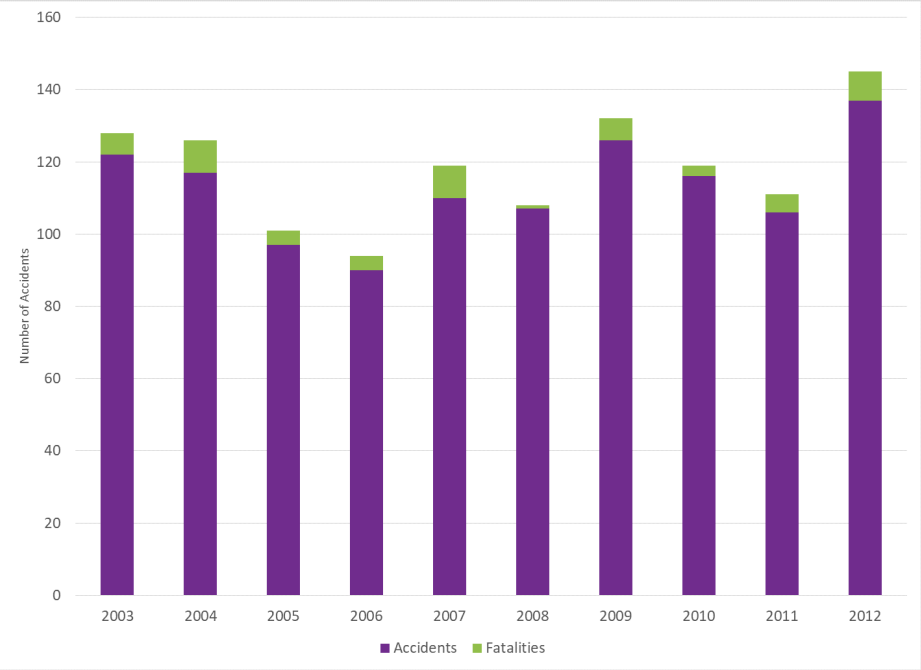
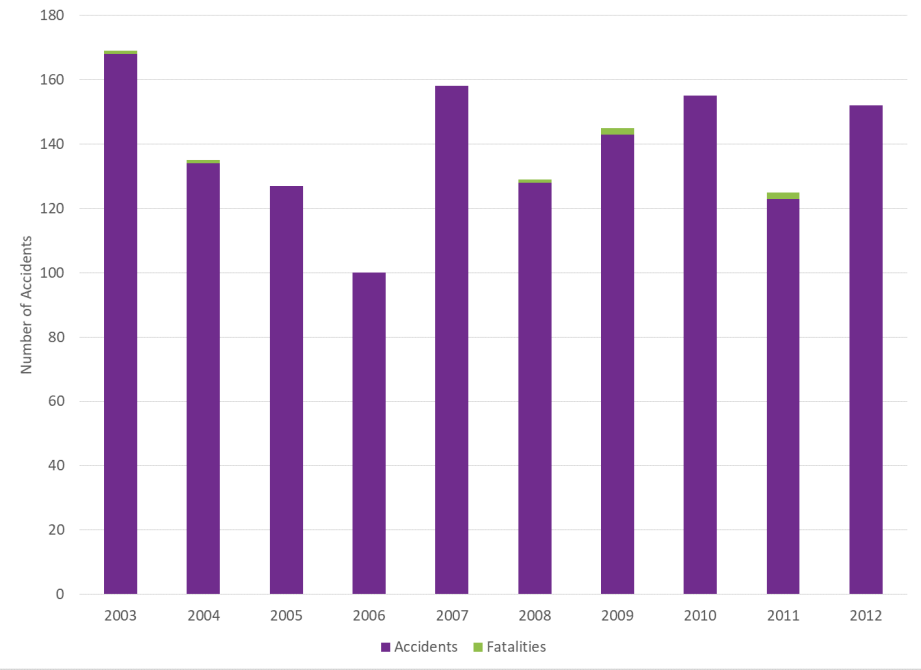


Figure 4-19 . Bicycle-Vehicle Crashes, 2003-2012

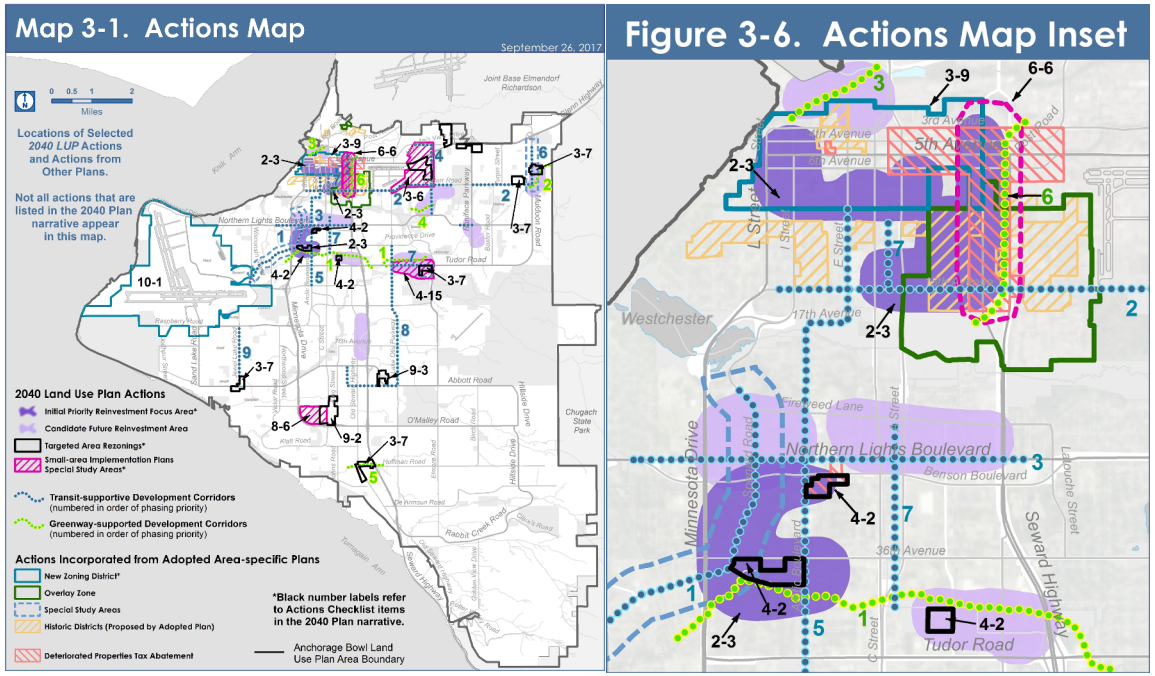


Land Use

2040 Anchorage Land Use Plan

Transportation patterns are influenced by land use. The *Anchorage 2040 Land Use Plan (2040 LUP)* sets the stage for future growth and development in the Anchorage Bowl. It recognizes a need to maximize land use efficiencies while protecting and enhancing our neighborhood characteristics and natural resources. Many of the key Actions needed to implement the *2040 LUP* are shown on Figure 4-20. Many of these Actions take place in Downtown and Midtown.

Figure 4-20.Actions Map from the *2040 Anchorage Land Use Plan*



Source: Anchorage 2040 Land Use Plan

Note: Search "Anchorage 2040 Land Use Plan" to go to an interactive version of this map.

Freight Distribution and Regional Connections

Modal Freight and Regional Highway Links

Truck transportation remains the most important mode of transportation for freight movement from Anchorage to the surrounding regions. It is estimated that 90% of the consumer goods for 85% of Alaska comes through the Port of Alaska. Containers are loaded onto trains and trucks for regional and local distribution. A large share of freight from the Port of Alaska and the Ted Stevens Anchorage International Airport is moved by truck, using the region's freeways and principal arterials. Table 4-8 shows the daily truck volumes at selected locations in Anchorage.

Table 4-8. Daily Truck Volumes at Selected Locations, 2014

Roadway Location	Number of Single-Unit Trucks	Number of Truck/Tractor Units	Trucks as a Percentage of All Vehicles (%)
Alyeska Highway, Girdwood	291	38	11%
DeArmoun Road, Anchorage	568	32	11%
Old Seward Highway, Anchorage	332	97	5%
O'Malley Road, Anchorage	534	251	7%
Rabbit Creek Road, Anchorage	317	46	5%
Hillside Drive, Anchorage	120	16	6%
Elmore Road, Anchorage	670	612	10%
Jewel Lake Road, Anchorage	458	44	4%
International Airport Road, Anchorage	602	48	5%
Minnesota Drive, Anchorage	932	539	4%
Wisconsin Street, Anchorage	748	145	9%
3rd Avenue, Anchorage	892	399	12%
Debarr Road, Anchorage	314	24	2%
Providence Drive, Anchorage	96	23	3%
Eagle River Road, Eagle River	170	85	7%

Source: AMATS Freight Mobility Study

Port of Alaska

The Port of Alaska (POA) is a deep-water port that provides service through four bulk carrier berths and two petroleum berths. The POA serves virtually all of Alaska's population centers through its rail, trucking, and air connections. Over 250 communities rely on cargo shipped through the POA, and 74% of all waterborne non-fuel freight arriving in Southcentral Alaska passes through the POA[6]. Figure 4-21 details the tonnage of cargo transported through the POA between 2008 and 2015. Domestic trade is the primary traffic through the POA, and although it suffered a decline in 2009, since 2010 it has increased at an average constant rate of 3%. Foreign trade has increased since 2008, doubling by 2010 and remaining steady through 2014, and then doubling again in 2015. While foreign exports are significant in some years, imports make up a large majority of foreign trade. The recent trends at the POA are expected to remain stable for the near future.

Figure 4-21.Port of Alaska Tonnage, 2008-2015

Source: American Association of Port Authorities

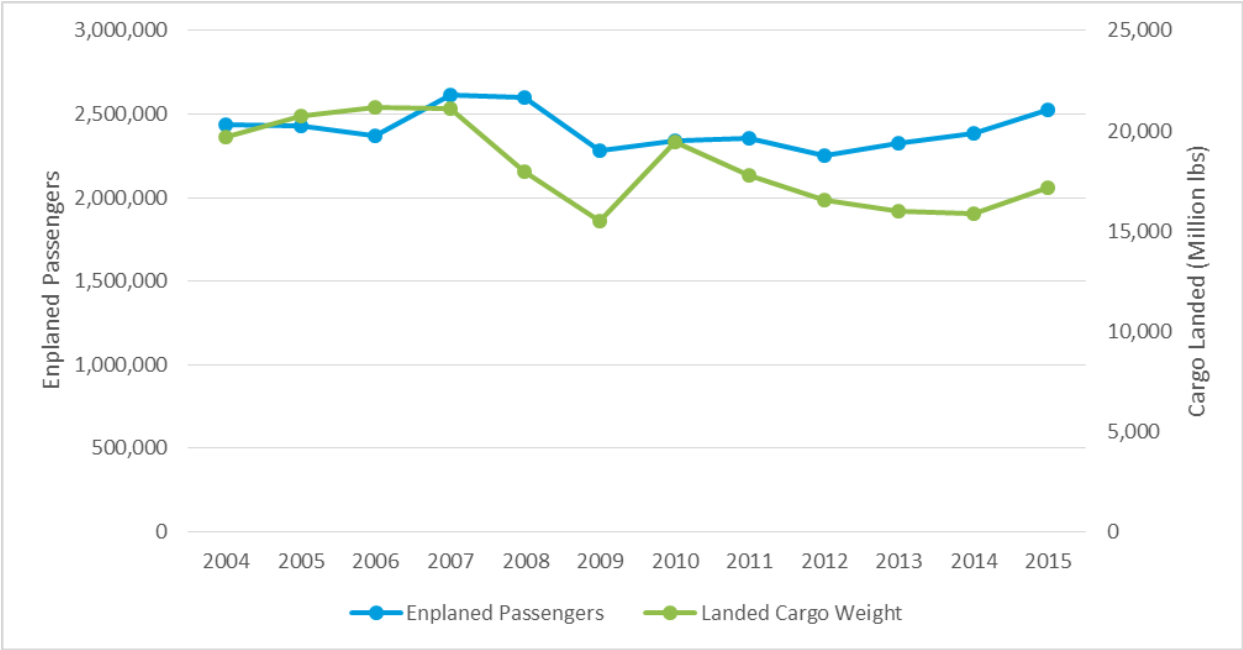
Aviation

The Ted Stevens Anchorage International Airport (TSAIA) is the busiest airport in Alaska in terms of both passenger enplanements and cargo tonnage. TSAIA is crucial to cargo movement throughout the state. For many years, TSAIA carried more volume of air cargo than any airport in the United States, and since 2008, it is second only to Memphis in total tonnage carried, due to its strategic importance as a fueling station and crew stop for international air traffic. Approximately three-quarters of TSAIA cargo does not get offloaded in Anchorage; rather, the airlines stop to refuel at TSAIA while on international trips[5].

Figure 4-22 shows the total number of enplaned passengers in the past decade, as well as the total cargo landed, according to the information collected by the Federal Aviation Administration.

Air travel to TSAIA, in both cargo and enplaned passengers, declined significantly during the great recession. Annual enplaned passenger travel revived and is up 4% over the past decade, but has not reached its pre-recession peak. Air cargo volume rebounded briefly after the recession, but is down 13% from 2004 levels.

Figure 4-22. TSAIA Enplaned Passengers and Cargo Volumes,

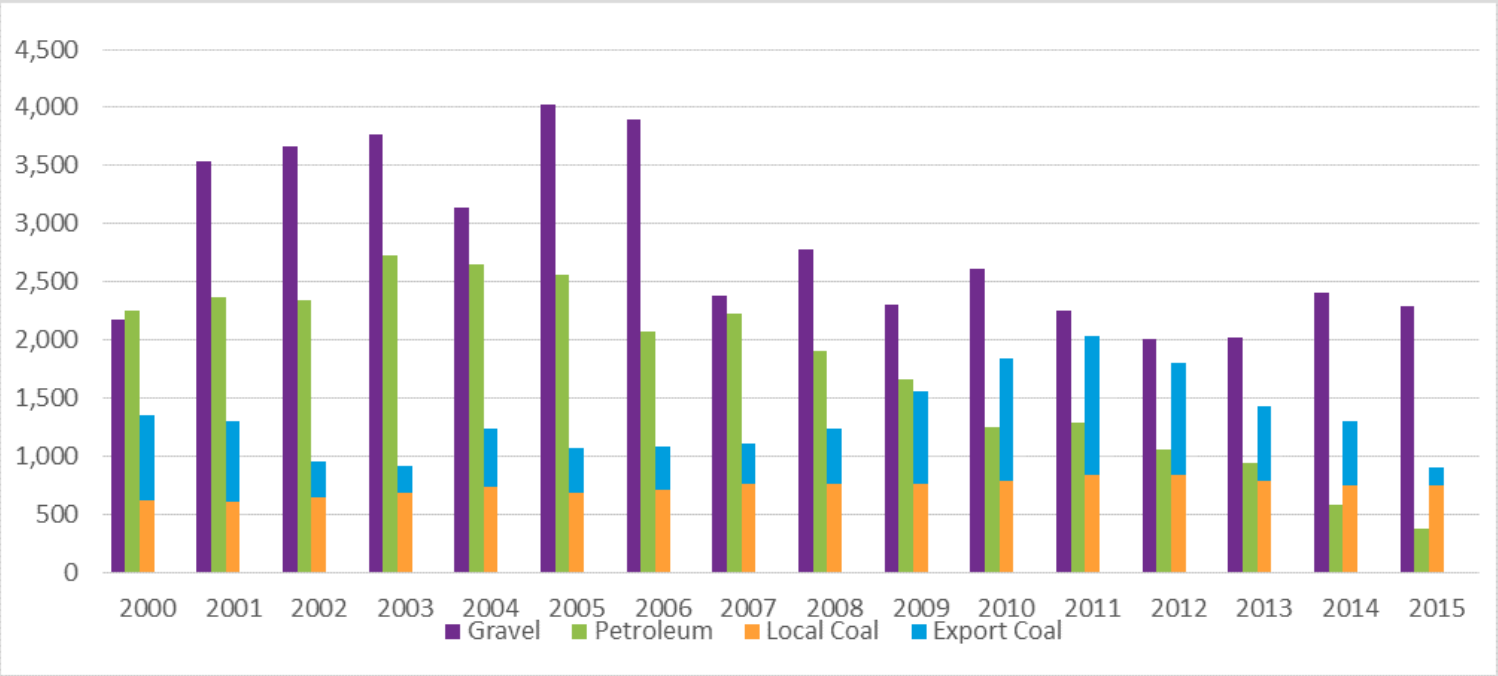


Source: AMATS Status of the System 2016, based on data from the Federal Aviation Administration

Railroad

Freight rail is an important component of Anchorage's transportation network, allowing the movement of cargo without adding stress to the roadway networks. The Alaska Railroad Corporation (ARRC) operates more than 650 miles of passenger and freight rail in Alaska, and is the sole railroad provider in Anchorage. Figure 4-23 shows the freight rail cargo tonnage from 2000 to 2015, highlighting the change in coal, petroleum, and gravel tonnage. Overall, total tonnage carried on freight rail decreased by almost one quarter, though there have been increases in some types of cargo. Coal rail transport increased between 2000 and 2010, but has since declined to the lowest total tonnage in the reported period, largely driven by a dramatic decrease in exported coal. Gravel transport, largely driven by local construction, reached a high in 2005 at over 4 million tons, but has since declined and remained steady between roughly 2 and 2.5 million tons since 2007. Petroleum transport decreased even more significantly, with a reduction from approximately 2.7 million tons in 2003 to less than 400,000 tons in 2015.

Figure 4-23 Alaska Railroad Freight Tonnage (Thousand Tons), 2000-2015

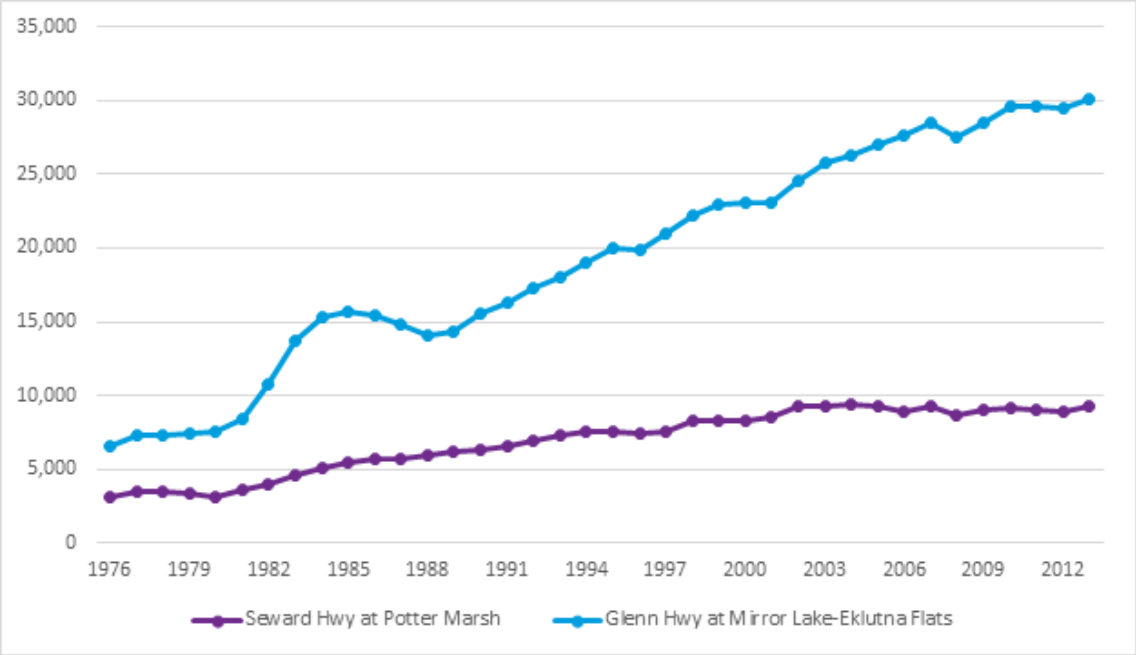


Source: Alaska Railroad Corporation, Alaska Draft Rail Plan

Regional Connections

Railroad tracks and only two road connections, the Glenn Highway and Seward Highway, link Anchorage by land to the north and south, serving freight distribution and travelers via an intermodal transportation system. This travel corridor is essential as no alternative roadway routes existing between Anchorage and the rest of the state. If these routes are closed due to a crash or other emergency event, travel to and from Anchorage becomes severely limited. Other key access roads on the NHS connect the regional Glenn and Seward highways to TSAIA, the Port of Alaska, and the Alaska Railroad.

Figure 4-24 Daily Traffic Volume across AMATS Boundaries, 1976-2013



Regional Highway Connections

Anchorage's primary connections to the rest of Alaska are the Glenn and Seward highways. The Glenn Highway, a 135-mile highway, connects Anchorage to the northwest. The Seward Highway runs through the Anchorage Bowl to its termination in Seward 125 miles to the south. Daily traffic volumes on these two roadways show how connected Anchorage is to the surrounding regions (see Figure 4-24). Daily traffic on the Glenn Highway has increased five-fold since the 1970s and will continue to increase with the projected population growth in the Matanuska-Susitna Borough. Traffic on the Seward Highway has increased steadily over the past 40 years, though not as significantly as the traffic to the north.

Regional Passenger Transportation

Rail travel is an important component of the regional transportation system. The ARRC carried approximately 522,100 passengers

statewide in 2019 and 531,600 in 2018, mostly Alaska visitors and cruise ship passengers.

The Glenn Highway corridor links the Anchorage Bowl with Chugiak-Eagle River and the Matanuska-Susitna Borough. Valley Transit, based in Wasilla, offers the only year-round, regularly scheduled public transportation service with five buses a day. It offers 14 peak period commuter round-trips Monday through Saturday between Downtown Anchorage and several park-and-ride lots in the Borough. In 2019 Valley Transit began fare free Fridays for senior and youth on the commuter route. Commuter ridership was approximately 51,465 in 2019 and 50,574 in 2018. Over the next 5 years they plan to replace their fleet with over-the-road commuter coaches, and to update their fare collection system.

Notes

[1] American Community Survey, 2011-2015 5-Year Estimates. https://www.census.gov/programs-surveys/acs/technical-documentation/table-and-geography-changes/2015/5-year.html

[2] Regional Household Travel Survey. 2014. Prepared for AMATS by RSG. December 23, 2014. https://www.muni.org/Departments/OCPD/Planning/AMATS/Documents/2015%20Docs/Regional%20Household%20Travel Survey/RHTS_FINAL_122314.pdf

[3] Alliance for Biking and Walking. 2016 Benchmarking Report. http://www.bikewalk alliance.org/resources/benchmarking

[4] Alaska Dispatch News. 2013. "A snowy Bike to Work Day in Anchorage." https://www.adn.com/anchorage/slideshow/photos-snowy-bike-work-day-anchorage/2013/05/18/

[5] Anchorage Freight Mobility Study. June 2017. Prepared for AMATS. http://www.muni.org/Departments/OCPS/Planning/AMATS/Documents/Freight_Mobility/Study_2016/FMS_final.pdf

[6] Cargo Distribution. https://www.,portofalaska.com/services/cargo distribution