



U.S. DEPARTMENT OF TRANSPORTATION

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FEDERAL TRANSIT ADMINISTRATION
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July 27, 2021

John MacKinnon, Commissioner
Alaska Department of Transportation and Public Facilities
PO Box 112500
3132 Channel Drive
Juneau, AK 99811

Dear Mr. MacKinnon:

Your transmittal of July 26, 2021 requested approval to incorporate Amendment 2 of the 2019 – 2022 Anchorage Metropolitan Area Transportation Solutions (AMATS) Transportation Improvement Program (TIP) into the Statewide Transportation Improvement Program (STIP). Interagency consultation has determined that changes to the TIP has met all the requirements of US Code Title 23, Section 134. That these changes are exempt from conformity and a conformity determination is not required per 40 CFR 93.104(c). The STIP remains fiscally constrained.

Incorporation of AMATS TIP Amendment 2 into the 2020 – 2023 STIP is approved. Federal approvals of administrative modifications are not required, but we acknowledge that the changes from AMATS Administrative Modification 2 will be incorporated into the STIP.

If you have any questions, please contact Julie Jenkins, FHWA Financial Manager at (907) 586-7476, or Mr. Ned Conroy, FTA Community Planner at (206) 220-4318.

Sincerely,

Sandra A. Garcia-Aline
Division Administrator
Federal Highway Administration

Linda M. Gehrke
Regional Administrator
Federal Transit Administration

Ecc: Craig Lyon, Planner AMATS Coordinator, MOA
James Marks, Division Operation Manager, DOT&PF
James Starzec, AMATS Area Transportation Planner, DOT&PF
Todd VanHove, Planning Chief, Anchorage Field Office, DOT&PF
Ned Conroy, Community Planner, FTA
Julie Jenkins, Financial Manager, FHWA

Table 1. Four-Year Program Summary
AMATS FFY 2019-2022 TIP Amendment #2

PROJECT LOCATION	FEDERAL FISCAL PROGRAMMING YEAR (\$ in Thousands)				4-year total	% of 4-year Non-NHS \$
	October 1 - September 30					
	2019	2020	2021	2022		
Non-National Highway System (Table 2)						
Roadway Improvements without Pavement Replacement Projects	\$10,015	\$21,616	\$13,870	\$10,828	\$56,329	46.6%
Pavement Replacement Projects (Table 7)	\$4,050	\$2,985	\$8,874	\$4,777	\$20,686	17.1%
	\$14,065	\$24,601	\$22,744	\$15,605	\$77,015	
Non-motorized (Table 3)	\$600	\$1,723	\$3,982	\$2,450	\$8,755	7.2%
Plans and Studies (Table 4)	\$6,050	\$800	\$1,000	\$500	\$8,350	6.9%
Congestion Mitigation & Air Quality (Table 5)	\$8,574	\$2,970	\$2,970	\$12,141	\$26,655	22.1%
Non-National Highway System Subtotal for Non-NHS roads, non-motorized & CMAQ projects	\$29,360	\$30,094	\$30,696	\$30,696	\$120,846	100.0%
STIP Non-National Highway System Allocation from ADOT&PF's CTP programs [as of 3/14]	\$29,360	\$30,094	\$30,696	\$30,696	\$120,846	
AMATS CMAQ program set aside [as of 3/14]	\$2,255	\$2,311	\$2,358	\$2,358	\$9,281	
STIP Non-NHS Allocation for all projects (including CTP and CMAQ allocation)	\$31,615	\$32,405	\$33,054	\$33,054	\$130,127	
Other Funded Projects within the Municipality of Anchorage						
Highway Safety Improvement Program (Table 8)	\$12,431	\$22,854	\$16,584	\$13,779	\$65,648	
National Highway System (Table 9)	\$26,000	\$45,000	\$25,000	\$25,000	\$115,500	
Transit Capital FTA Section 5307 to MOA (Table 10)	\$6,734	\$7,060	\$7,378	\$9,935	\$31,107	
Transit Capital FTA Section 5307 to ARRC (Table 10)	\$3,890	\$3,940	\$5,280	\$4,200	\$17,310	
Transit Capital FTA Section 5337 [State of Good Repair] to ARCC (Table 10)	\$600	\$1,700	\$4,400	\$4,580	\$11,280	
TOTAL PROGRAM ALLOCATION = (Non-NHS + NHS + HSIP Set Aside +AMATS Pave./Bridge Refurbish.+ all FTA 5307, 5337, and 5309)	\$79,015	\$110,648	\$89,338	\$88,190	\$367,191	
Other Federal Funded Projects within AMATS (Table 11)	\$71,504	\$111,280	\$77,238	\$863,000	\$1,123,022	
TOTAL FEDERAL FUNDING For Transportation Improvements within AMATS & the MOA	\$150,519	\$221,928	\$166,576	\$951,190	\$1,490,213	

Notice to MOA Project Managers / Project Sponsors! If your project includes ITS elements and uses funds from the federal highway trust fund, prior to acquisition, construction, or implementation, you must demonstrate compliance with federal Systems Engineering Analysis requirements. Complete the ADOT&PF Systems Engineering Analysis Checklist, link below, and submit to FHWA through ADOT&PF Central Region Planning.

* Totals include match. The match is funded with State or Local funding.

**Table 2. Roadway Improvements
AMATS FFY 2019-2022 TIP Amendment #2**

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING				Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				YEAR (Sin Thousands)						
				October 1 - September 30						
2019	2020	2021	2022							
G	2159	O'Malley Road Reconstruction [Seward Highway to Hillside Drive] - Reconstruct the roadway to improve safety and capacity at intersections and improve pedestrian facilities and 3 lane section east of Lake Otis Pkwy, and 5 lane section between Seward Hwy and Lake Otis Pkwy. Landscaping @ 5% of Construction \$ = to be determined. \$1.0M in Design and \$4.3M ROW funding for Phase I in 2015. \$500,000 ROW in 2016 for Phase II. \$12.2M in U/C funding for Phase I in 2017 is A/C into 2016 for a total of \$26.7M. Phase I will receive additional funds of \$4.2M from FFY 2013 GO Bond or other non-AMATS sources of funding such as NHPP or statewide STP funds. Phase II is funded with the remainder of the FFY 2013 GO Bond supplemented by TIP funds.	2019 - ROW/C 2020 - U/C 2021 - C	\$3,500	\$19,496	\$9,745	\$0	\$0	\$32,741	\$32,741
						← A/C →				
G	29252	Glenn Highway Integrated Corridor Management Study [ICM] - Project will produce a final Concept of Operations for a comprehensive ICM approach to the Glenn Highway operations, to address traffic congestion, including congestion caused by crashes.	2019 - Study	\$400	\$0	\$0	\$0	\$0	\$400	\$400
G	2174	Abbott Road Rehabilitation [Lake Otis Parkway to Birch Road] - project will increase from 2 to 4 lanes and improve intersections and pedestrian facilities. Project recommended to be developed as a 3R per ADOT's Pre-Construction Manual. \$1.5M in ROW funding is A/C from 2015 into 2014. \$7.7M in U/C funding is A/C from 2017 into 2016.	2019 - U/C	\$500	\$0	\$0	\$0	\$0	\$0	\$0
	RDY00001	Fireweed Lane Rehabilitation [Spenard Road to Seward Highway] - This project would rehabilitate Fireweed Lane from Spenard Road to the Seward Highway and include a road diet, changing Fireweed from 4 lanes to 3 lanes (2 with a center turn lane). This project would also include non-motorized improvements.	2019 - D 2022 - D	\$1,000	\$0	\$0	\$1,000	\$47,000	\$2,000	\$49,000
	RDY00002	C Street/Ocean Dock Road Ramp and Intersection Improvements - This project would rehabilitate the C Street/Ocean Dock Road Intersection based on the alternative #3 produced from the C Street/Ocean Dock Road Reconnaissance Study completed in 2018. Project would include non-motorized and drainage improvements.	2019 - D 2021 - ROW	\$500	\$0	\$1,000	\$0	\$6,000	\$1,500	\$7,500
	RDY00003	Spenard Road Rehab [Benson Blvd to Minnesota Dr] - Project will rehabilitate to improve traffic flow. This project would also include non-motorized improvements. Project shall not include improvements to the Minnesota Intersection except ADA requirements on the east side.	2019 - D 2022 - ROW 2021 - D	\$1,500	\$0	\$1,500	\$0	\$55,500	\$3,000	\$58,500
	RDY00004	Dr. Martin Luther King Jr Avenue Extension - Extend Dr. Martin Luther King Jr Avenue from Elmore Road to the south end of Piper Drive. The new roadway would include non-motorized improvements.	2019 - D 2021 - D 2022 - D	\$1,500	\$0	\$0	\$2,000	\$9,270	\$3,500	\$12,770
	RDY00005	Rabbit Creek Road Reconstruction [Seward Highway to Goldenview Drive] - Project would reconstruction Rabbit Creek Road from the Seward Highway to Goldenview Drive with a center turn lane and includes non-motorized improvements.	2022 - D	\$0	\$0	\$0	\$1,500	\$10,300	\$1,500	\$11,800
	RDY00006	East 4th Ave Signal and Lighting Upgrade [Cordova St to Ingra St] - Reconstruct the traffic signal and street lighting system along 4th Ave between Cordova St and Ingra St. Sidewalk and curb ramps will also be replaced.	2019 - D 2020 - D 2021 - ROW - D 2022 - ROW	\$500	\$0	\$0	\$324	\$4,950	\$824	\$5,774
	RDY00007	Potter Drive Rehabilitation [Arctic Blvd to Dowling Road] - This project would rehabilitate Potter Drive from Arctic Boulevard to Dowling Road and include non-motorized improvements.	2020 - D 2021 - D 2022 - ROW D	\$0	\$500	\$0	\$1,250	\$5,500	\$1,750	\$7,250

*Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

**Table 2. Roadway Improvements
AMATS FFY 2019-2022 TIP Amendment #2**

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING				Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				YEAR (Sin Thousands)						
				October 1 - September 30						
2019	2020	2021	2022							
	RDY00008	Transportation Demand Management Projects - Funding for implementation of project #PLN0008 the Transportation Demand Management study of the University Medical District.	2022 - Implementation	\$0	\$0	\$0	\$4,124	\$0	\$4,124	\$4,124
	RDY00009	Seward Highway to Glenn Highway Connection PEL Design - Implement the projects identified as part of the PEL done for the Seward Highway to Glenn Highway Connection.	2022 - D	\$0	\$0	\$0	\$0	\$1,000	\$0	\$1,000
	RDY00010	Mountain Air Drive [Rabbit Creek Road to Sandpiper Drive] - Extend Mountain Air Drive from Rabbit Creek Road to Sandpiper Drive. Recommend separated pathway. Purpose: Circulation, access, and safety.	2020 - D 2022 - ROW	\$0	\$1,000	\$0	\$0	\$13,500	\$1,000	\$14,500
	RDY00011	Safety Improvement Program (Traffic Count Support) 2019-2022 - Collect traffic data within the AMATS area completed by the ADOT&PF Central Region Highway Data Section and MOA Traffic Department Data Section.	2019-22 Programming	\$615	\$620	\$625	\$630	\$0	\$2,490	\$2,490
	RDY00012	Pavement Replacement Program - This program will provide a single funding source for several pavement overlay and/or replacement projects. Improvements are also expected to include ADA and some existing curb and sidewalk repair. May include those projects listed in Table 7 or other priorities.	2019-22 Programming	\$4,050	\$2,985	\$8,874	\$4,777	\$20,000	\$20,686	\$40,686
	RDY00013	Academy Drive/ Vanguard Drive Area Traffic Circulation Improvements [Brayton Drive to Abbott Road] - Project would improve and align Academy Drive and Vanguard Drive west of Abbot Road. Project would include non-motorized improvements and consider adjacent land use.	2021 - D	\$0	\$0	\$2,000	\$0	\$18,735	\$2,000	\$20,735
		The contingency list of projects for each year will consist of the following year's projects.	ANNUAL TOTALS	\$14,065	\$24,601	\$22,744	\$15,605	\$191,755	\$77,515	\$269,270
		STIP ALLOCATIONS FOR ALL TYPES OF NON-NHS PROJECTS = CTP.		\$29,360	\$30,094	\$30,696	\$30,696	\$24,955	\$120,846	
		Approximate percentage (%) for roadways		34%	72%	45%	35%	4-year average	47%	
		Approximate percentage (%) for pavement replacement projects		14%	10%	29%	16%	4-year average	17%	

*Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

**Table 3. Non-Motorized
AMATS FFY 2019-2022 TIP Amendment #2**

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (Sin Thousands)					Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				October 1 - September 30							
				Carryover	2019	2020	2021	2022			
G	29257	Dimond Center Pedestrian and Transit Improvements - Multiphase effort focusing on pedestrian, bicycle, transit and travel way improvements. Primary improvements includes sidewalk connectivity, bicycle infrastructure, pedestrian and bicycle signals/signage, traffic calming techniques, lighting and other safety related infrastructure to ensure compliance with ADA.		\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
G	26628	Bicycle Plan Project Implementation - Project would sign, stripe, and mark bike lanes or shoulders on existing roadways within the AMATS boundary area to create a safe, connected network of bicycle facilities as identified in the Anchorage Bicycle plan. Project consists of nominated projects Core Bicycle Network Phase I-III.		\$0	\$0	\$200	\$0	\$0	\$0	\$0	\$200
G	26629	Pedestrian Plan Project Implementation - Project would improve pedestrian safety and construct missing links as identified in 2007 Anchorage Pedestrian Plan. FFY16 funded with non-AMATS sources.		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	NMO00001	Downtown Trail Connection - Project will construct a connection between the Tony Knowles Coastal Trail to the Ship Creek Trail in downtown Anchorage.	2019 - D 2021 - D 2022 - ROW	\$0	\$300	\$0	\$1,600	\$100	\$7,595	\$2,000	\$9,595
	NMO00002	Fish Creek Trail Connection [Northern Lights Blvd to the Tony Knowles Coastal Trail] - This project will construct a connection of the Fish Creek Trail to the Tony Knowles Coastal Trail.	2020 - D 2022 - D ROW	\$0	\$0	\$500	\$0	\$1,010	\$7,100	\$1,510	\$8,610
	NMO00003	Tudor Road Pathway Connection [Chugach Foothills Connector Phase II to Regal Mountain Drive] - This project would construct a connection from the phase II of the Chugach Foothills Connector to Regal Mountain Drive.	2019 - D 2021 - C	\$0	\$0	\$0	\$500	\$0	\$0	\$500	\$500
	NMO00006	Potter Marsh Improvements - This project would make improvements to the Potter Marsh southern parking facility.	2020 - D 2022 - U/C	\$0	\$0	\$113	\$0	\$510	\$0	\$623	\$623
	NMO00008	Anchorage Areawide Pathway and Trails Pavement Replacement - This program will provide a single funding source for several pathway/trail pavement replacement projects. May include those projects listed in Table 7 or other priorities.	2019-22 - D/U/C	\$0	\$300	\$910	\$2,382	\$830	\$10,000	\$4,422	\$14,422
		The contingency list of projects for each year will consist of the following year's projects.	Section Totals	\$2,000	\$600	\$1,723	\$3,982	\$2,450	\$24,695	\$9,255	\$33,950
		STIP ALLOCATIONS FOR ALL TYPES OF NON-NHS PROJECTS = CTP		\$29,360	\$30,094	\$30,696	\$30,696	\$30,696	4 year total=	\$120,846	
		Approximate percentage (%) for all Non-Motorized projects		2%	6%	13%	8%	4-year Avg=	7.2%		

*Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

Table 4. Plans and Studies
AMATS FFY 2019-2022 TIP Amendment #2

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (in Thousands)				Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				October 1 - September 30						
				2019	2020	2021	2022			
		Studies and Plans								
G	PLN00001	AMATS MTP - Funding for the Municipality of Anchorage AMATS Metropolitan Transportation Plan.	2020 - Plan	\$0	\$800	\$200	\$0	\$800	\$1,000	\$1,800
	PLN00002	TSMO Strategic Implementation Plan - This study will develop the AMATS Transportation Systems Management & Operations (TSMO) strategic plan, and will provide overall direction, goals, and strategic outcomes for the program. The project will translate AMATS strategic elements (including 2040 MTP Implementation Plan, ITS Implementation Plan, CMP Implementation Plan, and Transportation Demand Management Plan) into a combined Five-Year TSMO implementation plan document that will provide overall direction and strategic outcomes, with specific projects with related cost estimates, services and activities.	2020 - Study	\$0	\$0	\$500	\$0	\$0	\$500	\$500
	PLN00003	Seward Highway to Glenn Highway Connection Planning and Environmental Linkages (PEL) Study [20th Ave to Glenn Hwy/Airport Heights Intersection] - The intent of this PEL is to define a vision for the future of this connection, identify environmental and resource concerns and opportunities in the study area, and use the information to develop reasonable alternatives through consultation with the affected agencies and the public.	2019 - Study	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$5,000
	PLN00004	2040 Secondary Street Deficiency Analysis and Prioritization - This project will conduct an area-specific review of existing collector and local street networks that connect or run parallel to major arterials in the Anchorage Bowl. This review will identify deficiencies and needed additional local and collector street connections, intersection and access improvements, right-of-way widths, and pedestrian connections.	2019 - Study	\$0	\$0	\$150	\$0	\$0	\$150	\$150
	PLN00005	Chugach Way Area Transportation Element Study - This project would provide recommendations on the transportation elements developed as part of the Chugach Way Small Area Plan.	2019 - Study	\$150	\$0	\$0	\$0	\$0	\$150	\$150
	PLN00006	92nd Ave Extension Reconnaissance Study - This project will look at the challenges with extending 92nd Ave from Old Seward Highway to King Street and offer recommendations based on safety, congestion, non-motorized improvements, and freight mobility.	2021 - Study	\$0	\$0	\$0	\$250	\$0	\$250	\$250
	PLN00007	Port of Alaska Multimodal Improvements Study - This project will study and make recommendations on how to improve the Ocean Dock Road connection to the Port of Alaska.	2019 - Study	\$400	\$0	\$150	\$0	\$0	\$550	\$550
	PLN00008	University Medical District Transportation Demand Management (TDM) Study - Project will complete a TDM study, evaluating transportation demand throughout the entire University Medical District and make recommendations for funding future project.	2019 - Study	\$500	\$0	\$0	\$0	\$0	\$500	\$500
	PLN00009	AMATS Safety Plan - This project will create a comprehensive safety plan that will provide a coordinated framework for reducing fatalities and serious injuries on the surface transportation network in the AMATS planning area.	2021 - Study	\$0	\$0	\$0	\$250	\$0	\$250	\$250
		The contingency list of projects for each year will consist of the following year's projects.	ANNUAL TOTALS	\$6,050	\$800	\$1,000	\$500	\$800	\$8,350	\$9,150
			STIP ALLOCATIONS FOR ALL TYPES OF NON-NHS PROJECTS = CTP	\$29,360	\$30,094	\$30,696	\$30,696	4 year total=	\$120,846	
Notice to MOA Project Managers/Project Sponsors! If your project includes ITS elements and uses funds from the federal highway trust fund, prior to acquisition, construction, or implementation, you must demonstrate compliance with federal Systems Engineering Analysis requirements. Complete the ADOT&PF Systems Engineering Analysis Checklist and submit to FHWA through ADOT&PF Central Region Planning.										

*Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

Table 5. Congestion Mitigation Air Quality (CMAQ)
AMATS FFY 2019-2022 TIP Amendment #2

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (in Thousands)				Estimated funding needs after 2022	Est project cost 2019 - 2022	Est total project cost			
				Carryover	October 1 - September 30								
					2019	2020	2021				2022		
SIP-Mandated Projects and Programs													
	CMQ00001	Anchorage Ridesharing/Transit Marketing 2019-2022 - This project funds the Municipal Share-A-Ride program which promotes, subsidizes, and contract manages an area-wide vanpool commuter service; and a comprehensive public transportation marketing effort.	2019-2022 Programming		\$900	\$900	\$900	\$900	\$0	\$3,600	\$3,600		
	CMQ00002	Air Quality Public & Business Awareness Education Campaign 2019-2022 - The goal of this program is to further inform the public about air quality issues and what steps people may take to reduce pollution.	2019-2022 Programming		\$300	\$300	\$300	\$300	\$0	\$1,200	\$1,200		
			Section Totals		\$1,200	\$1,200	\$1,200	\$1,200	\$0	\$4,800	\$4,800		
			STIP Non-National Highway System Allocation from ADOT&PF's CMAQ program [as of 3/14]					\$1,200	\$1,200	\$1,200	\$1,200	\$0	\$4,800
Programs													
	CMQ00003	Arterial Roadway Dust Control 2019-2022 - Magnesium chloride (MgCl2) dust palliative will be applied to approximately 70 miles of high volume State and Municipal roadways prior to and after spring sweeping. FFY16 funded with non-AMATS sources.	2019-2022 Implementation		\$200	\$200	\$200	\$200	\$0	\$800	\$800		
	CMQ00004	Traffic Control Signalization 2019-2022 - Program would provide proactive efficiencies with better/more updated signal timing plans to address intersection congestion and improve air quality. Funding supports development of Traffic Management Center and emergency vehicle and low priority transit signal preemption.	2019-2022 Programming		\$350	\$350	\$350	\$350	\$0	\$1,400	\$1,400		
	CMQ00005	Bus Stop & Facility Improvements - This projects funds the upgrade of facility and bus stop sites to meet both the federally mandated Americans with Disabilities Act [ADA] requirements and the operational needs. Typical bus stop improvements include bus shelters, benches, trash receptacles, landscaping, grading, pacing, utility relocations, lighting, curb adjustments, drainage, constructing paths, and construction/reconstruction of turnouts. Typical facility improvements include upgrades, rehabilitation, and construction/reconstruction not limited to safety, security, facility equipment, structures, underground storage tanks, parking lots, sidewalks, and drainage. Table 5 of CMAQ funds supplement FTA funds in project 4, 8, and 11 on Table 10. FFY19-2021 AMATS funding is supplemented with CMAQ funding outside the AMATS allocation. FFY19 funding is additionally supplemented with \$172,000 in FTA funding outside the AMATS allocation.	2019-2022 Implementation		\$3,458	\$1,265	\$1,321	\$1,379	\$4,509	\$7,423	\$11,932		
	CMQ00006	Multimodal Trip Planner and Smartphone Application - project will provide for operation of multimodal trip planner and smartphone app to provide carpool, vanpool, and bicycle commuter matching, transit and shuttle schedules, and multimodal directions.	2019-2022 Implementation		\$70	\$0	\$0	\$0	\$0	\$70	\$70		
	CMQ00007	Capital Vehicles - This project provides funding for replacement of the Public Transportation Department. The fleet consists of 13-passenger vans, MV-1, 22' and 40' buses that provide service to RideShare, AnchorRIDES, and People Mover. Vehicles will be replaced based on the FTA defined useful life and the People Mover Fleet Management Plan. Table 5 of CMAQ funds supplement FTA funds in project 2, 6, and 10 on Table 10. FFY19-2021 AMATS funding is supplemented with CMAQ funding outside the AMATS allocation. \$1.75M in 2019 funding should be prioritized toward electric fleet vehicles if at all possible. FFY19 funding is additionally supplemented with \$245,000 in FTA funding outside the AMATS allocation.	2019-2022 - Purchase	\$418	\$3,703	\$0	\$2,210	\$11,381	\$6,000	\$17,294	\$23,294		
	CMQ00008	Demo Operations / Expansion - This project will provide for operational assistance and/or operational service expansion for fixed route, demand response, and/or microtransit public transit service. Table 5 of CMAQ funds supplement FTA funds in project 3, 5, 9, and 10 on Table 10. FFY19-2021 AMATS funding is supplemented with CMAQ funding outside of AMATS allocation.	2019-2022 Programming	\$ 2,210	\$2,210	\$2,210	\$0	\$0	\$0	\$4,420	\$4,420		
			Section Totals		\$8,574	\$2,970	\$2,970	\$12,141	\$9,151	\$31,407	\$40,558		
			ANNUAL TOTALS		\$8,574	\$2,970	\$2,970	\$12,141	\$9,151	\$31,407	\$40,558		
			STIP ALLOCATIONS FOR ALL TYPES OF NON-NHS PROJECTS = CTP					\$29,360	\$30,094	\$30,696	\$30,696	4 year total= \$120,846	
			Approximate percentage (%) for all Congestion Mitigation/Air Quality (CMAQ) projects					29%	10%	10%	40%	4-year Avg= 22.1%	
Notice to MOA Project Managers/Project Sponsors! If your project includes ITS elements and uses funds from the federal highway trust fund, prior to acquisition, construction, or implementation, you must demonstrate compliance with federal Systems Engineering Analysis requirements. Complete the ADOT&PF Systems Engineering Analysis Checklist and submit to FHWA through ADOT&PF Central Region Planning.													

*Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

**Table 6. Transportation Alternatives Program
AMATS FFY 2019-2022 Amendment #2**

Grandfathered Project	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (Sin Thousands)				Estimated funding needs after 2022	Est project cost 2019-2022
				October 1 - September 30					
				2019	2020	2021	2022		
G	TAP00001	Chugach Foothills Connector, Phase II - Project will construct a multi-use path on Tudor Road between Regal Mountain Drive and Campbell Airstrip Road.	2019 - D 2020 - D 2021 - C	\$200	\$483	\$4,325	\$0	\$0	\$5,008
G	TAP00002	AMATS Mountain View Drive Pathway Reconstruction - Project will reconstruct a multi-use pathway connecting Peterkin Avenue with Mountain View Drive between Bliss Street and North Bunn Street.	2019 - U/C	\$750	\$810	\$0	\$0	\$0	\$1,560
G	TAP00003	Anchorage Arewide Trails Rehabilitation - Project will rehabilitate the Fish Creek trail from Kiwanis Fish Creek Park to Barbara Street.	2019 - U/C	\$0	\$0	\$0	\$0	\$0	\$0
Section Totals				\$950	\$1,293	\$4,325	\$0	\$0	\$6,568

*Programmed amounts includes a 20% match. *Projects are not listed in priority order. Project totals include match. The match is funded with either State or Local funding.

**Table 7. Pavement Replacement Program
AMATS FFY 2019-2022 TIP Amendment #2**

2019 - 2022 TIP, Pavement Replacement Projects	
	Project Location
1	Airport Heights Road - Debarr Road to Glenn Hwy
2	Boundary Ave - Boniface Pkwy to Oklahoma
3	Brayton Drive - Dearmoun Road to - O'Malley Road
4	Elmore Rd - Huffman Rd to O'Malley Rd
5	Fireweed Ln - Spenard Road to Arctic Blvd
6	Hiland Rd - MP 0 to MP 3.2
7	Post Rd - 3rd Ave to Reeve Blvd
8	Rabbit Creek Rd - Old Seward Hwy to Hillside Dr
9	Upper Huffman - Hillside Dr to Toilsome Hill Dr
10	Reeve Blvd - 5th Ave to Post Road
11	DeArmoun Road - Hillside Drive to Canyon Road
12	Old Seward Highway Spur - Old Seward Highway to Potter Valley Road
13	Muldoon Road - Golden Bear Drive to JBER Gate
14	Muldoon Road - Debarr Road to Boundary Avenue
15	Eagle River Loop Road - Old Glenn Highway to Eagle River Road
16	Hillside Drive - DeArmoun Road to Abbott Road
17	VFW Road - Eagle River Road to Eagle River Loop Road
18	88th Avenue - Lake Otis Parkway to Abbott Road
	*Projects not in priority order
	Pavement Replacement Annual Totals shown in Table 2

2019 - 2022 TIP, Pathway and Trail Pavement Replacement Projects	
	Project Location
1	20th Ave Sidewalk - Bragaw Street to Tikishla Park
2	Debarr Road - Boniface to Muldoon (southside sidewalk)
3	Airport Heights Road - Debarr Road to Glenn Hwy
4	Northern Lights Blvd - Lois Drive to Minnesota Drive (southside pathway)
5	Jewel Lake Pathway - Raspberry Road to International Airport Road
6	A Street - East 36th Avenue to West Fireweed Lane
7	Northern Lights Boulevard - Seward Highway to Minnesota Drive
8	Minnesota Drive - Hillcrest Drive to W. Northern Lights Boulevard
9	Minnesota Drive - Hillcrest Drive to Spenard Road
10	Post Road - East 3rd Avenue to Viking Drive
	*Projects not in priority order
	Pavement Replacement Annual Totals shown in Table 3

**Table 8. Highway Safety Improvement Program (HSIP)
AMATS FFY 2019-2022 TIP Amendment #2**

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (\$ in Thousands)				Estimated funding needs after 2022	Est project cost 2019- 2022	Est total project cost
				October 1 - September 30						
				2019	2020	2021	2022			
19217	HSP0001	HSIP: Jewel Lake Rd Widening, 88th Ave to Strawberry	2019 - U/C	\$2,193	\$0	\$0	\$0	\$0	\$2,193	\$2,193
19217	HSP0002	CR Traffic Safety Corridor Left Turn Lanes	2019 - D/C	\$2,478	\$0	\$0	\$0	\$0	\$2,478	\$2,478
19217	HSP0003	HSIP: Anchorage Pedestrian Lighting	2019 - D 2021 - U/C	\$725	\$0	\$3,390	\$0	\$0	\$4,115	\$4,115
19217	HSP0004	HSIP: C St: Tudor and Dimond Intersections	2019/2020 - D 2019 - R 2021 - U/C	\$900	\$400	\$9,681	\$0	\$0	\$10,981	\$10,981
19217	HSP0005	HSIP: Minnesota Dr Weaving Lane - Int'l Airport to Raspberry	2019 - U/C	\$2,423	\$0	\$0	\$0	\$0	\$2,423	\$2,423
19217	HSP0006	HSIP: Minnesota Dr Guide Sign Upgrades	2017 - D/U 2019 - C	\$334	\$0	\$0	\$0	\$0	\$334	\$334
19217	HSP0007	HSIP: Seward Hwy Rockfall Mitigation	2019 - D 2020 - C	\$600	\$19,182	\$0	\$0	\$0	\$19,782	\$19,782
19217	HSP0008	HSIP: Arctic Blvd Railroad Signal Relocation	2019 - U	\$590	\$0	\$0	\$0	\$0	\$590	\$590
19217	HSP0009	HSIP: Gambell St. Utility Pole Removal and Increased Lighting	2019/2020 - D 2022 - R	\$553	\$1,000	\$0	\$1,250	\$7,000	\$2,803	\$9,803
19217	HSP0010	HSIP: Gambell and Ingra Streets - Overhead Signal Indication Upgrades	2019/2020 - D 2022 - U/C	\$500	\$732	\$0	\$8,325	\$0	\$9,557	\$9,557
19217	HSP0011	HSIP: Portage Glacier Rd & Potter RR Crossing Improvements	2019 - D/U	\$985	\$0	\$0	\$0	\$0	\$985	\$985
19217	HSP0012	HSIP: HFST Removal in Selected Locations	2019 - D 2020 - C	\$150	\$756	\$0	\$0	\$0	\$906	\$906
19217	HSP0013	HSIP: A St. Midtown Couplet Over Signal Indication U/G	2020 - D 2021 - U/C	\$0	\$784	\$1,992	\$0	\$0	\$2,776	\$2,776
19217	HSP0014	HSIP: 5th Ave: Concrete St to Karluk St Pedestrian Improvements	2021 - D 2022 - U/C	\$0	\$0	\$805	\$3,867	\$0	\$4,672	\$4,672
19217	HSP0015	C St. and 16th Ave Overhead Flashing Beacon	2022 - D	\$0	\$0	\$0	\$110	\$394	\$110	\$504
19217	HSP0016	Old Seward Hwy and Industry Way Intersection Improvements	2022 - D	\$0	\$0	\$0	\$227	\$2,738	\$227	\$2,965
19217	HSP0017	O'Malley Bridge Trainsman Handrail and Fence Upgrades	2021 - D/C	\$0	\$0	\$358	\$0	\$0	\$358	\$358
19217	HSP0018	HSIP: O'Malley Bridge Trainsman Handrail and Fence Upgrades	2021 - D/U	\$0	\$0	\$358	\$0	\$0	\$358	\$358
Total				\$12,431	\$22,854	\$16,584	\$13,779	\$10,132	\$65,648	\$75,780

*Projects are not listed in priority order. Project totals include match. The match is funded with State funding.

Table 9. National Highway System (NHS)
AMATS FFY 2019-2022 TIP Amendment #2

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (\$in Thousands)				Estimated funding needs after 2021	Est project cost 2018- 2021	Est total project cost
				October 1 - September 30						
				2018	2019	2020	2021			
27470	NHS0001	Anchorage Glenn Highway Muldoon Road Interchange Reconstruction - Reconstruct interchange at Muldoon and Glenn Highway.	2018 - C	\$0	\$0	\$0	\$0	\$0	\$0	\$0
29730	NHS0002	Seward Highway Dowling Road Interchange Rehabilitation - Project will improve the Dowling Road roundabouts, the associated highway ramps, and make other improvements as needed to enhance safety and increase traffic flow.	2018 - D	\$1,000	\$0	\$0	\$0	\$14,000	\$1,000	\$15,000
29731	NHS0003	Seward Highway O'Malley Road to Dimond Boulevard Reconstruction - This project funds the design and ROW purchase for the final segments of this project reconstructing the Seward Highway from Dimond Boulevard to O'Malley Road and includes an underpass to connect 92nd Avenue (west of the Seward Highway) with Academy Drive (east of the Seward Highway), and construction is funded under Need ID 30691.	2019 - D/ROW	\$0	\$20,000	\$0	\$0	\$0	\$20,000	\$20,000
30691	NHS0004	Seward Highway O'Malley Road to Dimond Boulevard Reconstruction Phase II - This is the second phase of the Seward Highway project, and will reconstructs the Seward Highway from Dimond Boulevard to O'Malley Road. Project includes an underpass to connect 92nd Avenue (west of the Seward Highway) with Academy Drive (east of the Seward Highway). The design and first construction phase are under Need ID 29731.		\$0	\$0	\$0	\$0	\$76,500	\$0	\$76,500
18924	NHS0005	Pavement and Bridge Rehabilitation - Crack sealing, surface treatment drainage, signage, guardrail, illumination, and other refurbishments to prolong the life of road pavement and bridges and their safety related structures. Project includes NHS Lane Delineators, Destination & Distance Signing, Pavement Markings and Signalization, Abandoned Vehicle Program, Road Surfacing and Transfer, Road Surface Treatments, and improve curb ramps to meet ADA standards (in coordination with Need ID 30397). The scope does not include landscaping or other elements inconsistent with a pavement preservation focus. This is a DOT&PF central region wide program with approximately \$25M going to projects within the AMATS area on an annual basis with a majority going to the NHS.	2018-2021+ - All Phases	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$100,000	\$125,000
The contingency list of projects for each year will consist of the following year's projects.				\$26,000	\$45,000	\$25,000	\$25,000	\$115,500	\$121,000	\$236,500

*Projects are not listed in priority order. Project totals include match. The match is funded with State funding.

**Table 10. Transit
AMATS FFY 2019-2022 TIP Amendment #2**

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (in Thousands)					Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				October 1 - September 30							
				Carryover	2019	2020	2021	2022			
19458	TRN00001	Preventative Maintenance/Capital Maintenance - FTA [Federal Transit Administration] allows grantees to use capital funds for overhauls and preventative maintenance. FTA assistance for those items is based on a percentage of annual vehicle maintenance costs.	2019 - 2022 - Implementation	\$0	\$3,986	\$3,986	\$4,500	\$4,500	\$13,500	\$16,972	\$30,472
19462	TRN00002	Fleet Replacement/Expansion - This project funds the fleet expansion and replacement for the AnchorRIDES paratransit service, as well as the fixed route fleet.	2019 - 2022 - Implementation	\$0	\$375	\$313	\$200	\$200	\$600	\$1,088	\$1,688
19464	TRN00003	ADA Complementary Paratransit Services - Costs associated with ADA paratransit programs are eligible for this funding. The project funds the ADA paratransit eligibility process with a transportation skills assessment and a travel training program for people who could benefit from individualized instruction regarding how to independently ride People Moved buses. May also be used to purchase AnchorRIDES trips.	2019 - 2022 - Implementation	\$0	\$0	\$0	\$400	\$400	\$1,200	\$800	\$2,000
19457	TRN00004	Bus Stop Improvements/1% Section 5307 Transit Improvements - This project funds the upgrade of bus stop sites to meet both the federally-mandated Americans with Disabilities Act [ADA] requirements and the operational needs. Typical improvements include bus shelters, benches, trash receptacles, landscaping, grading, paving, utility relocations, lighting, curb adjustments, drainage, constructing paths, and construction/reconstruction of turnouts. Table 10 FTA funds supplement CMAQ funds for the Bus Stop & Facility Improvements project in Table 5.	2019 - 2022 - Implementation	\$0	\$0	\$549	\$25	\$25	\$75	\$599	\$674
19463	TRN00005	ITS/Automated Operating System/Management Information Systems - This projects funds information systems necessary for efficient management of the public transportation system. Typical projects include: Geographical Information Systems [GIS] capabilities, upgrades to the automated maintenance system, refueling, and inventory system; a new computerized dispatch system; and upgrades to the scheduling/run-cutting process, customer information and telephone communications system, and desktop computers. This project also funds staff and capital resources to provide project oversight and capital for ITS for all modes of public transportation services. Provide day to day operational support to all ITS projects.	2019 - 2022 - Purchase	\$0	\$0	\$0	\$50	\$50	\$0	\$100	\$100
19459	TRN00006	Fleet Improvement/Support Equipment/Support Vehicle - This project funds improvements to existing transit and paratransit fleets. Typical projects include a ticket reader and issue attachment, which issues passenger passes on the bus; security systems; transit/signal improvements for headway enhancements; mechanical equipment and other improvements for facilities; mobile display terminals' and vehicle communications, radios and locations systems. This project also funds the purchase of replacement vehicles and equipment to support operation of the transit system. Typical purchases include pickup racks, maintenance trucks with special equipment, supervisor vehicles, shift change vehicles, fork lifts, sweepers, and bus access snow removal equipment.	2019 - 2022 - Purchase	\$0	\$718	\$430	\$500	\$500	\$1,500	\$2,148	\$3,648
29264	TRN00007	Transit Centers/Support Facilities - This project supports an on-going effort to provide major transit facilities key areas of the city and major destinations. The Anchorage Comprehensive Plan and 2040 Land Use Plan (LUP) identified neighborhood, town, regional commercial, and city centers that function as focal points for community activities with a mix of retail, residential, and public services and facilities. Anchorage Talks Transit coordinated with the LUP and implemented a frequent bus network along transit supportive development corridors. These corridors should provide pedestrian connections to surrounding neighborhoods and transit. Existing and future facility improvements along these corridors and in areas like Midtown, Downtown, U-Med, Dimond Center and Muldoon, are vital to the implementation of these community planning documents.	2019 - 2022 - Implementation	\$0	\$709	\$775	\$750	\$750	\$2,250	\$2,984	\$5,234
	TRN00008	Operating Assistance - Section 5307 operating assistance for fixed route, demand responsive, and/or Microtransit public transit service.	2019 - 2022 - Implementation	\$0	\$0	\$0	\$0	\$300	\$3,000	\$300	\$3,300
		subtotal FTA Section 5307 & 5340		\$0	\$5,788	\$6,053	\$6,425	\$6,725	\$22,125	\$24,991	\$47,116

*Projects are not listed in priority order. Project totals include match. The match is funded with State or Local funding.

**Table 10. Transit
AMATS FFY 2019-2022 TIP Amendment #2**

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (Six Thousands)					Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				October 1 - September 30							
				Carryover	2019	2020	2021	2022			
19119	TRN00009	Section 5310 Enhanced Mobility of Seniors & Individuals w/ Disabilities. - Projects may include purchasing buses and vans; wheelchair lifts, ramps, and securement devices; transit-related information technology systems including scheduling/routing/one-call systems; mobility management programs; and acquisition of transportation services under a contract, lease, or other arrangement. Other activities may include travel training; volunteer driver programs; building an accessible path to a bus stop, including curb-cuts, sidewalks, accessible pedestrian signals or other accessible features; improving signage or way-finding technology; providing same day service or door-to-door service; purchasing vehicles to support new accessible taxi, ride-sharing and/or vanpooling programs; and mobility management programs.		\$0	\$219	\$231	\$237	\$240	\$624	\$927	\$1,551
27969	TRN00010	Section 5339 Bus and Bus Facilities Program - This program includes capital projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities, including technological changes or innovations to modify low or no emission vehicles or facilities.		\$1,380	\$727	\$776	\$716	\$720	\$1,614	\$2,939	\$4,553
	TRN00011	Section 5339(b) Bus and Bus Facilities Competitive Program - This competitive program addresses significant repair and maintenance needs, improves the safety of transit systems, and deploys connective projects that include advanced technologies. Examples include projects to replace, rehabilitate and purchase buses, vans, and related equipment; to replace, rehabilitate, and construct bus-related facilities; including technological changes or innovations to modify vehicles and/or facilities.		\$5,313	\$0	\$0	\$0	\$2,250	\$1,614	\$2,250	\$3,864
subtotal FTA section 5307, 5310, 5316, 5317, 5340 Transit funding to the MOA				\$6,693	\$6,734	\$7,060	\$7,378	\$9,935	\$25,977	\$31,107	\$57,084
Alaska Railroad - FTA Section 5307 (Rail Tier) Funds											
21314	10	1% Transit Security on the Alaska Railroad Corporation projects	2019 - 2022 - Implementation	\$0	\$120	\$120	\$0	\$0	\$450	\$240	\$690
19658	11	Preventive Maintenance - This project partially funds statewide maintenance costs of passenger vehicle railcars and locomotives. Preventive maintenance is defined as all activities, supplies, materials, labor, services and associated costs required to preserve or extend the functionality and serviceability of the asset.	2019 - 2022 - Implementation	\$0	\$3,450	\$3,500	\$3,500	\$3,500	\$87,500	\$13,950	\$101,450
21314	12	1% Associated Transit Enhancements - can include benches, landscaping, and other transit related amenities.	2019 - 2022 - Implementation	\$0	\$120	\$120	\$0	\$0	\$410	\$240	\$650
19634	13	Track Rehab - Rail and tie rehabilitation inside AMATS boundaries including shoulder widening, siding program, drainage, State of Good Repair and improvement projects related to track infrastructure.	2019 - 2022 - Implementation	\$0	\$200	\$200	\$1,315	\$700	\$1,500	\$2,415	\$3,915
31091	14	Radio and Communication System - Replace, upgrade or improvements to radio and communication locations, equipment, systems or components.	2019 - 2022 - Implementation	\$0	\$0	\$0	\$50	\$10	\$100	\$60	\$160
19635	15	Bridge Rehabilitation - Bridge engineering, preventive maintenance, rehabilitation, replacements, and other bridge improvements within AMATS boundaries.	2020 - 2022 - Implementation	\$0	\$0	\$0	\$0	\$250	\$100	\$250	\$350
new	16	Signal and Detector System - Replace, upgrade or improve in-track detector and at-grade signal systems equipment and communication components within AMATS boundaries.	2021 - 2022 - Implementation	\$0	\$0	\$0	\$350	\$0	\$0	\$350	\$350
new	17	Facility Rehab - Within AMATS boundaries replace, upgrade or improve ARRC buildings and related functional appurtenances.	2022 - 2022 - Implementation	\$0	\$0	\$0	\$65	\$0	\$0	\$65	\$65
subtotal FTA Section 5307 (Rail Tier) Transit funding to Railroad				\$0	\$3,890	\$3,940	\$5,280	\$4,200	\$90,060	\$17,570	\$107,630
Alaska Railroad - FTA Section 5337 (State of Good Repair) Funds											
19634	14	Track Rehab - Rail and tie rehabilitation inside AMATS boundaries including shoulder widening, siding program, drainage, State of Good Repair and improvement projects related to track infrastructure.	2019 - 2022 - Implementation	\$0	\$100	\$0	\$500	\$320	\$1,200	\$920	\$2,120
19658	15	Preventive Maintenance - This project partially funds statewide maintenance costs of passenger vehicle railcars and locomotives. Preventive maintenance is defined as all activities, supplies, materials, labor, services and associated costs required to preserve or extend the functionality and serviceability of the asset.	2019 - 2022 - Implementation	\$0	\$500	\$1,700	\$3,900	\$3,900	\$9,500	\$10,000	\$19,500
19635	16	Bridge Rehabilitation - Bridge engineering, preventive maintenance, rehabilitation, replacements, and other bridge improvements within AMATS boundaries.	2020 - 2022 - Implementation	\$0	\$0	\$0	\$0	\$360	\$5,640	\$360	\$6,000
subtotal FTA Section 5337 (SGR) funding to Railroad				\$0	\$600	\$1,700	\$4,400	\$4,580	\$16,340	\$11,280	\$27,620

*Projects are not listed in priority order. Project totals include match. The match is funded with State or Local funding.

Table 10. Transit
AMATS FFY 2019-2022 TIP Amendment #2

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	FEDERAL FISCAL PROGRAMMING YEAR (in Thousands)					Estimated funding needs after 2022	Est project cost 2019-2022	Est total project cost
				October 1 - September 30							
				Carryover	2019	2020	2021	2022			
		Alaska Railroad - FTA Section 5337 (SGR) Funds		\$0	\$0	\$0	\$0	\$0	\$0	\$0	
		<i>subtotal FTA Section 5337 funding to Railroad</i>		\$0	\$600	\$800	\$4,400	\$4,580	\$17,400	\$10,380	
		<i>subtotal FTA Sections 5307 (Rail Tier) & 5337 Transit funding to ARRC</i>		\$0	\$4,490	\$5,640	\$9,680	\$8,780	\$106,400	\$28,850	
		Total Transit Program (FTA {5307+5337})		\$6,693	\$11,224	\$12,700	\$17,058	\$18,715	\$132,377	\$59,957	
		<i>The Municipality of Anchorage's Transportation Improvement Program (TIP) process is used to satisfy the public participation process of the Program of Projects (POP) that is required in U.S.C. Section 5307. The POP as presented is the proposed Program of Projects and will also be the final Program of Projects unless amended.</i>									

*Projects are not listed in priority order. Project totals include match. The match is funded with State or Local funding.

Table 11. Other Federal, State, and Local Funded Projects within the AMATS Area
AMATS FFY 2019-2022 TIP Amendment #2

STIP Need ID	TIP Need ID*	PROJECT LOCATION	PROJECT PHASING PLAN	Funding Source	FEDERAL FISCAL PROGRAMMING YEAR (\$in Thousands)					Estimated funding needs after 2021	Est project cost 2018 - 2021	Est total project cost
					October 1 - September 30							
					Carryover	2018	2019	2020	2021			
	OFS00001	Anchorage Port Modernization Project (APMP). Deducted from the 2019 number is \$20M received from the state.	2018-2021 Programming	State GF GO Bond	\$108	\$70,000	\$53,000	\$74,000	\$863,000	\$0	\$1,060,108	\$1,060,108
19482	OFS00002	AK094 & AK105 - Construction & Road Improvements @ APU.	2018 - D 2019 - ROW/U 2020 - C	Earmark	\$0	\$1,004	\$1,030	\$3,238	\$0	\$0	\$5,272	\$5,272
26849	OFS00003	People Mover Transportation, Community, and System Preservation Program Winter City Pedestrian Safety & Bus Stop Improvements- project will improve safety, accessibility, and maintenance of existing pedestrian facilities and bus stops during winter months. [Federal share only]		FHWA Grant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28471	OFS00004	Campbell Tract Facility Alternate Entrance Alignment - Relocate the CTF entrance road 260' to align with East 68th Avenue.	2018/19 - D 2019 - C	FLAP	\$0	\$500	\$3,000	\$0	\$0	\$0	\$3,500	\$3,500
33008	OFS00005	Buses and Bus Facilities Infrastructure Investment Project - Replace and upgrade the information technology system for the Public Transportation Department. This project will improve the reliability of the bus system and help the city meet growing demand for transit.		FTA Grant 5339b	\$0	\$0	\$4,250	\$0	\$0	\$0	\$4,250	\$4,250
	OFS00006	Glenn Highway/Hiland Road to Artillery Road Reconstruction - Add a 3rd lane to both northbound and southbound Glenn Highway. Improvements at Hiland Road and Artillery Road Interchanges on the Glenn Highway. Replace Eagle River bridges with capacity for pathway and future HOV lanes. First construction phase will be northbound improvements. FFY 2013 GO Bond funding = \$35M.	2019 - C	State Fund	\$0	\$0	\$50,000	\$0	\$0	\$0	\$50,000	\$50,000
					\$108	\$71,504	\$111,280	\$77,238	\$863,000	\$0	\$1,123,022	\$1,123,022

*Projects are not listed in priority order. Project totals include match. The match is funded with State or Local funding.

**AIR QUALITY CONFORMITY DETERMINATION
FOR THE SECOND AMENDMENT TO THE
ANCHORAGE 2019-2022
TRANSPORTATION IMPROVEMENT PLAN**

Prepared By:

Municipality of Anchorage

Health Department

Environmental Health Services – Air Quality Program

April 14, 2021

INTRODUCTION AND BACKGROUND

Anchorage Metropolitan Area Transportation Solutions (AMATS) is the federally recognized metropolitan planning organization (MPO) which is responsible for planning the transportation network within the Municipality of Anchorage. AMATS has proposed Amendment #2 to the 2019-2022 Transportation Improvement Plan (TIP) which include the addition of a new road project and deletion of an existing road project after the FHWA's approval of an air quality conformity determination for that TIP. Hence, this updated air quality conformity report is being presented to obtain a new conformity determination for the modified 2019-2022 TIP, including addition of the new Academy / Vanguard Traffic Circulation Improvements project and also deletion of the C Street/Ocean Dock Road Ramp and Intersection Improvements project (RDY00002) via TIP Amendment #2.

Federal transportation conformity rules were created pursuant to the 1970 Clean Air Act and its 1991 amendments to reasonably assure that federally-funded transportation plans, programs, and projects are consistent with State Implementation Plans to achieve and maintain National Ambient Air Quality Standards (NAAQS) in metropolitan areas within each state. The Alaska State Implementation Plan (SIP) contains limited maintenance plans (LMPs) for both carbon monoxide (CO) and PM₁₀ i within the Municipality of Anchorage. The US Environmental Protection Agency's (EPA) Limited Maintenance Plan (LMP) option allows for the demonstration of probable future compliance with the NAAQS based on analysis of current air monitoring data rather than a comparison of modeled air pollutant emissions against an established motor vehicle emissions budget. Emissions budgets in areas meeting established LMP qualification criteria may be treated as essentially not constraining for the length of the maintenance period because it is unreasonable to expect that an area satisfying those criteria will experience so much growth during that period such that a violation of the NAAQS would result.

This document includes a review of the most current CO and PM₁₀ pollutant design values derived from air monitor data collected within the respective air pollutant maintenance area to confirm that Anchorage continues to maintain LMP eligibility criteria within its CO and PM₁₀ Maintenance Areas. This same form of air monitor data analysis was originally used to establish air quality conformity for the 2019-2022 TIP.

Part 1 of this report will describe the conformity analysis performed for the Anchorage CO Limited Maintenance Area. Part 2 will address conformity for the Eagle River PM₁₀ Limited Maintenance Area.

ⁱ PM₁₀ is airborne particulate matter consisting of particles that are 10 microns or less in aerodynamic diameter. Prolonged inhalation of excessive concentrations of such particles can have health impacts on susceptible individuals including infants, children, and the elderly.

Figure 1.1
Anchorage CO and Eagle River PM-10 Limited Maintenance Areas



Interagency Consultation

AMATS staff presented to the Interagency Consultation Team (ICT) a draft air quality conformity report for the Anchorage 2019-2022 TIP on July 30, 2018. The ICT consists of representatives from the Anchorage Health Department, the Alaska Department of Environmental Conservation, the Alaska Department of Transportation, the Federal Highway Administration, and the US Environmental Protection Agency. The conformity report for the Anchorage 2019-2022 TIP was posted for 30-day public comment during October-November 2018. The 2019-2022 TIP and accompanying conformity determination were submitted to the FHWA/FTA Alaska Administrator in December 2018 and received administration approval for inclusion into the Alaska 2018-2021 State Implementation Plan on February 26, 2019.

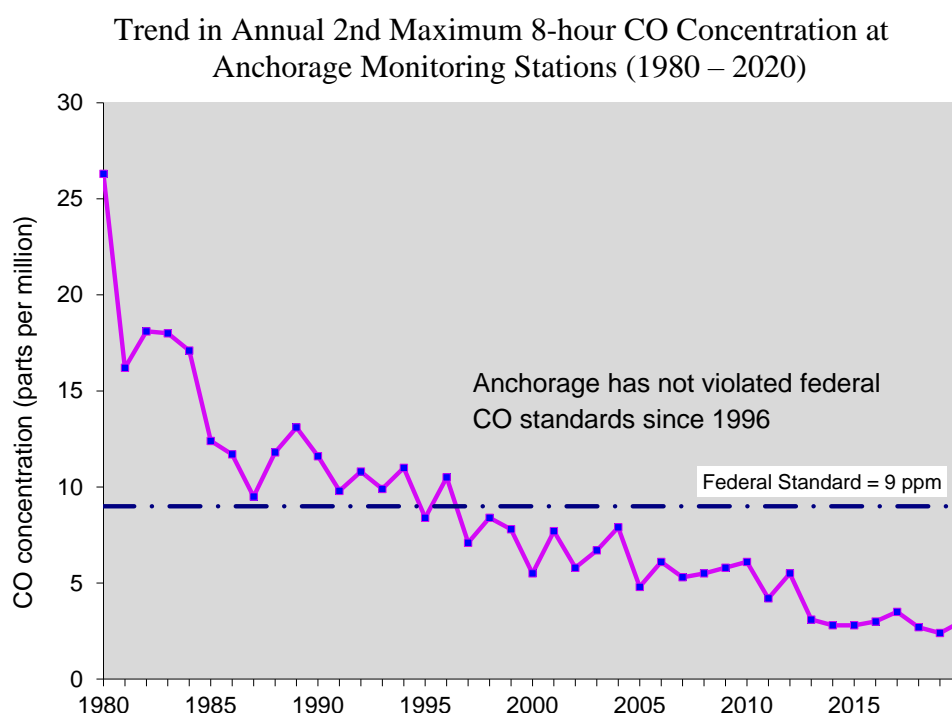
On September 23, 2020 AMATS staff consulted the ICT regarding Amendment #1 to the 2019-2022 TIP. ICT members agreed that the programs and projects included in Amendment #1 were exempt from a conformity determination under the provisions of [40 CFR §93.126, Table 2](#). On January 15, 2021 AMATS staff consulted the ICT to consider an updated conformity determination to satisfy demonstration of conformity for the proposed Amendment #2 of the 2019-2022 TIP. Amendment #2 would add a safety study project for the AMATS transportation network; would add the Academy Drive / Vanguard Drive Traffic Circulation Improvements project to the TIP, and would remove the Ocean Dock Rd / C Street Ramps and Intersection project (RYD00002) from the TIP. ICT members agreed that the contents of the draft conformity determination report, including review of most recent monitor data statistics characterizing the Anchorage CO and Eagle River PM₁₀ limited maintenance areas is appropriate to update the conformity for the 2019-2022 TIP, including Amendment #2.

PART 1: CONFORMITY ANALYSIS FOR THE ANCHORAGE CO MAINTENANCE AREA

1.1 Anchorage CO Attainment Status

Anchorage was first identified as experiencing high levels of ambient CO concentrations in the early 1970s. In the early 1980s as many as 50 violations of the national ambient air quality standard (NAAQS) were measured in a single year. However, in the past three decades there has been a steady decline in ambient CO due to improvements in motor vehicle emission control technology. Local control programs such as carpooling and vanpooling programs and public awareness programs that encourage motorists to reduce cold start CO emissions by using engine block heaters prior to starting have also contributed to emission reductions. CO concentrations have declined by over 70% since the 1980s and there have been no violations of the NAAQS since 1996. The trend in CO concentrations is shown in Figure 1.2.

Figure 1.2



In February 2004, on behalf of the Municipality of Anchorage, the State of Alaska requested that the EPA re-designate Anchorage from a nonattainment area for CO to an area that has attained the standard. This request was accompanied by a maintenance plan that showed Anchorage should continue to maintain compliance with the NAAQS. The EPA approved that plan in June 2004, and re-designated the nonattainment area as the Anchorage CO Maintenance Area, effective as of July 23, 2004 ([69 FR 3493569](#)) signifying agreement that Anchorage has attained compliance with the CO NAAQS.

The CO Maintenance Plan has been amended several times since 2004. On May 2, 2014 the EPA approved the Anchorage Carbon Monoxide Limited Maintenance Plan which streamlines the air quality conformity demonstration process ([79 FR 11707](#)).ⁱⁱ Under the Limited Maintenance Plan (LMP) option, an emissions budget test is not required because maintenance of the eligibility

ⁱⁱ The Anchorage CO Maintenance Plan is included as part of the Alaska Air Quality Control Plan or SIP. Thus, an amendment of the CO Maintenance Plan requires an amendment of the larger SIP document. All SIP amendments are subject to approval by the EPA.

criteria to qualify for the LMP assures a very low potential to exceed the NAAQS. However, the local metropolitan planning organization (i.e. AMATS) must still adhere to the administrative requirements for conformity rules concerning use of federal transportation funds. These include the requirements to complete interagency consultation in accordance with 40 CFR Part 93.112, and to fulfill the public consultation process in accordance with 23 CFR Part 450.316, which requires involvement of interested parties during the development of transportation plans and opportunity for the public to review and comment on a proposed plan. In addition, the MPO must adhere to the requirements for fiscal constraint of transportation plans consistent with 23 CFR 450.322(b)(11) and ensure that all transportation plans provide for continued implementation of transportation control measures as committed to in the SIP.

1.2 Compliance with CO Limited Maintenance Area Eligibility Criteria

Under the LMP there is no requirement to project emissions over the maintenance period in order to demonstrate conformity with a motor vehicle emissions budget. EPA policy outlined in the Oct 6, 1995 Memorandum by Joseph Paisie titled, Limited Maintenance Plan Option for Nonclassifiable CO Nonattainment Areas, states that if an area is at or below 85 percent of the NAAQS, continuation of transportation control measures already in the SIP should provide adequate assurance of maintenance over the applicable 10-year maintenance period. When EPA approves a limited maintenance plan, the agency is concluding that an emissions budget may be treated as essentially non-constraining for the length of the maintenance period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the CO NAAQS would result. In order to qualify for the CO LMP option, a non-attainment or maintenance area must have a design value that is equal to or less than 7.65 ppm (85 percent of the CO NAAQS exceedance level) based on 8 consecutive quarters of data.ⁱⁱⁱ The design value for the area must continue to be at or below 7.65 ppm until the time of final EPA action on the plan. Effective May 2, 2014, the EPA approved an Alaska SIP revision which included a second 10-Year CO Limited Maintenance Plan (LMP) for Anchorage ([79 FR 11707](#)).

Table 1-1 shows annual second maximum 8-hr CO concentrations for all active monitoring sites, and resultant CO Design values for the Anchorage CO Maintenance Area. To meet the CO LMP eligibility criteria, the design value for the limited maintenance area must be 7.65 ppm or less. The Garden site in the Airport Heights neighborhood of Anchorage is the only CO site operating since 2015; all others have been discontinued.

Table 1.1
Anchorage CO Design Values by Year

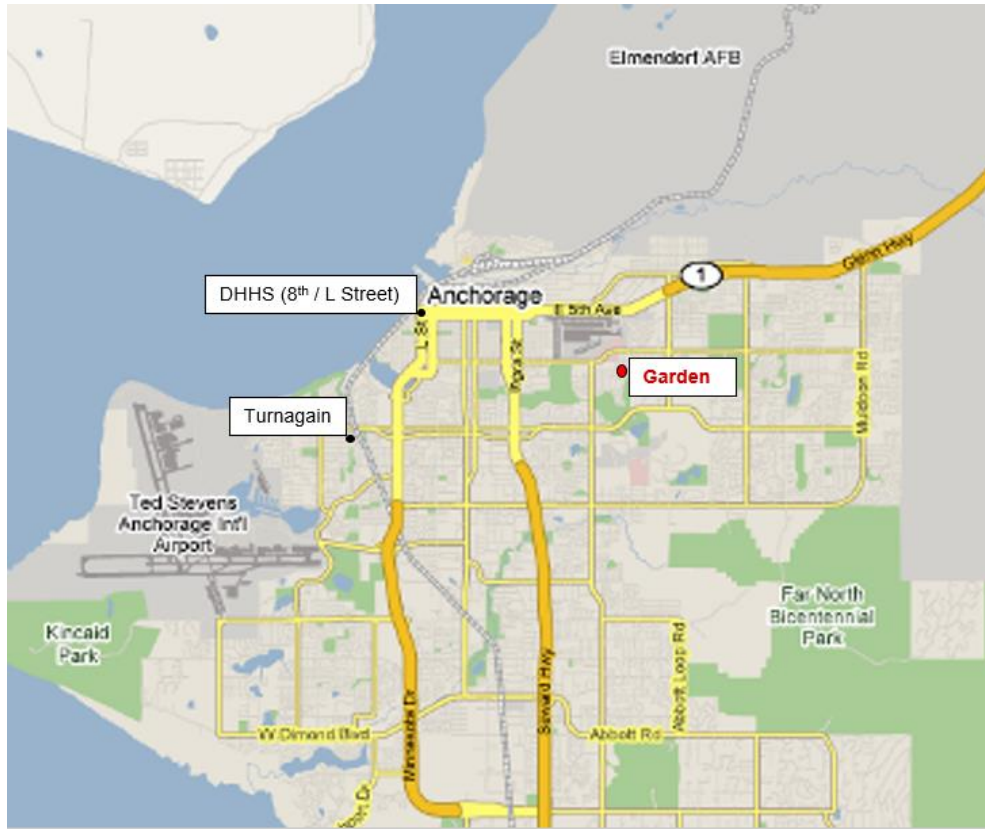
	Garden 20200018	Turnagain 20200048	DHHS 20200052	Annual DV	Area DV
2010	4.4	6.1	3.6	6.1	6.1
2011	3.6	6.1	2.8	6.1	6.1
2012	4.3	5.5	2.8	5.5	6.1
2013	3.1	4.0		4.0	5.5
2014	3.1	3.1		3.1	3.1
2015	2.8			2.8	3.1
2016	3.0			3.0	3.0
2017	3.5			3.5	3.5
2018	2.7			2.7	3.5

ⁱⁱⁱ A design value is the historical maximum concentration of an air pollutant for an area when determined in the same or commensurate manner as the NAAQS allowing for direct comparison. The 8-hour, CO design value is determined by examining the annual second maximum rolling, 8-hour concentration at each monitoring site over a two-year period. For each site, the higher of the two values is the design value for that site for that two-year period. The highest design value among the individual sites is the design value for the limited maintenance area as a whole.

2019	2.4			2.4	2.7
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As of December 31, 2019, the Anchorage CO design value is 2.7 ppm CO, which is well below the CO LMP eligibility criteria of 7.65. Hence Anchorage remains compliant with EPA’s CO limited maintenance plan eligibility criteria.

Figure 1.3
Anchorage CO Monitoring Site Locations with
Garden (active site) in Red.



1.3 Additional Conformity Requirements for CO LMP

1.3.1 Transit Service

Section 93.110 of the air quality conformity regulations states that the conformity determination for transportation plans must discuss how transit operating policies (including fares and service levels) and assumed transit ridership have changed since the previous transportation plan conformity determination was approved.

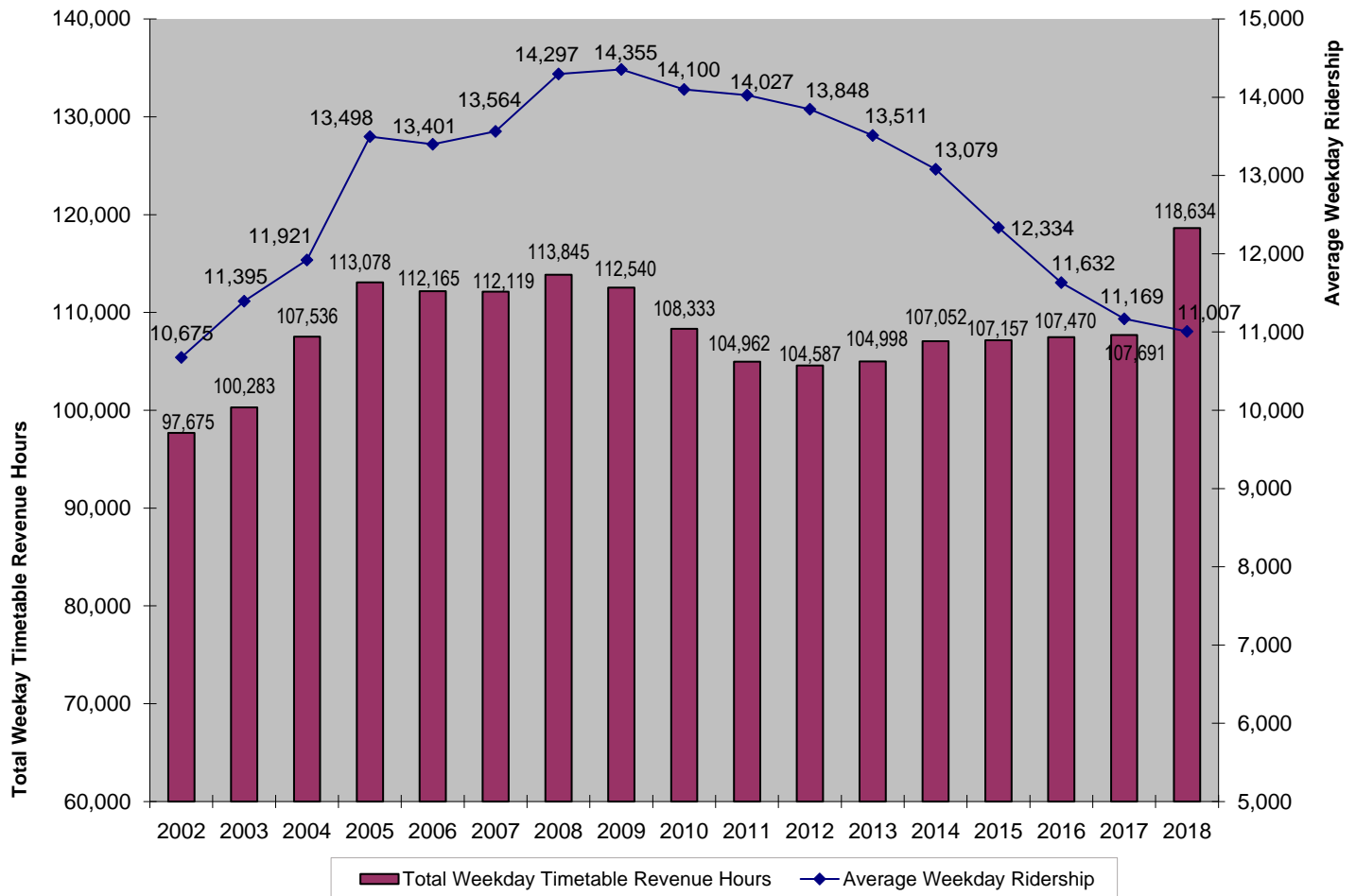
On January 1, 2014 Anchorage cash bus fares increased from \$1.75 to \$2.00 and 30-day passes increased from \$55 to \$60; however, at the same time fares for youth, senior and disabled riders dropped to half of the full-fare price. A prior increase in cash fares from \$1.50 to \$1.75 occurred in October 2005. In January 1, 2012, the cost of a monthly pass increased from \$50 to \$55; a day pass increased from \$4 to \$5; a monthly pass for senior/disabled increased from \$15 to \$19.25; and a senior/disabled daily pass increased from \$1.25 to \$1.50.

Figure 1.4 shows how transit service levels, expressed as total annual weekday timetable revenue hours, have varied between 2002 and 2018. On October 23, 2017, the Anchorage Public Transportation Department launched a city-wide revision of bus routes and schedules to provide more frequent and timely service and maximize transfer opportunities for bus riders. As a result, an additional 10% more service hours were provided and are reflected in 2018. Ridership continued to

decline during the first full year of the new bus system, but the rate of decline (-1.4%) was significantly reduced from prior 9 years of annual decline (-3.2% annual average).

Figure 1.4

Trend in Transit Service and Ridership (2002-2018)



1.3.2 Transportation Control Measures (TCMs)

In maintenance areas such as the Municipality of Anchorage, priority must be given to the implementation of TCMs included in the SIP. Transportation control measures are defined as any measure that is specifically identified and committed to in the applicable implementation plan or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Ride-sharing and transit marketing are the only TCMs identified in the CO Maintenance Plan. They are funded in the current Transportation Improvement Program. Although these measures are identified in the Plan, no CO reduction is claimed for them.

Similar to the trend in transit bus usage, the RideShare van-pool program has seen about 30% fewer participants in recent years when compared to the five years of peak participation, 2009 – 2014, which averaged about 1000 participants per year (see Table 1.2).

It is difficult to distinguish the effect that transit and RideShare pricing and promotion have had on ridership because other factors, such as the price of gasoline, socio-economic influences, and changes in service also affect ridership.

Table 1.2

Vanpool Program Participation (2005-2018)

Year	Number of Vanpools	Number of Vanpoolers
2009	52	917
2010	54	923
2011	66	1152
2012	65	992
2013	65	972
2014	65	972
2015	65	842
2016	65	659
2017	60	664
2018	73	695

1.4 Conclusion regarding Anchorage CO Conformity

This analysis demonstrates that Anchorage is well positioned to maintain the CO NAAQS. Anchorage Air Program staff has also determined that the 2019–2022 TIP including Amendment #2 is consistent with the Alaska State Implementation Plan in finding that no element of the Anchorage 2019–2022 TIP or its amendments will undermine the objective to reduce ambient CO in Anchorage, nor will it interfere with implementation of any CO control measure identified in the Alaska SIP.

PART 2: CONFORMITY ANALYSIS FOR THE EAGLE RIVER PM-10 AREA

2.1 Eagle River PM₁₀ Attainment Status - Qualification as a Limited Maintenance Area for Conformity Purposes

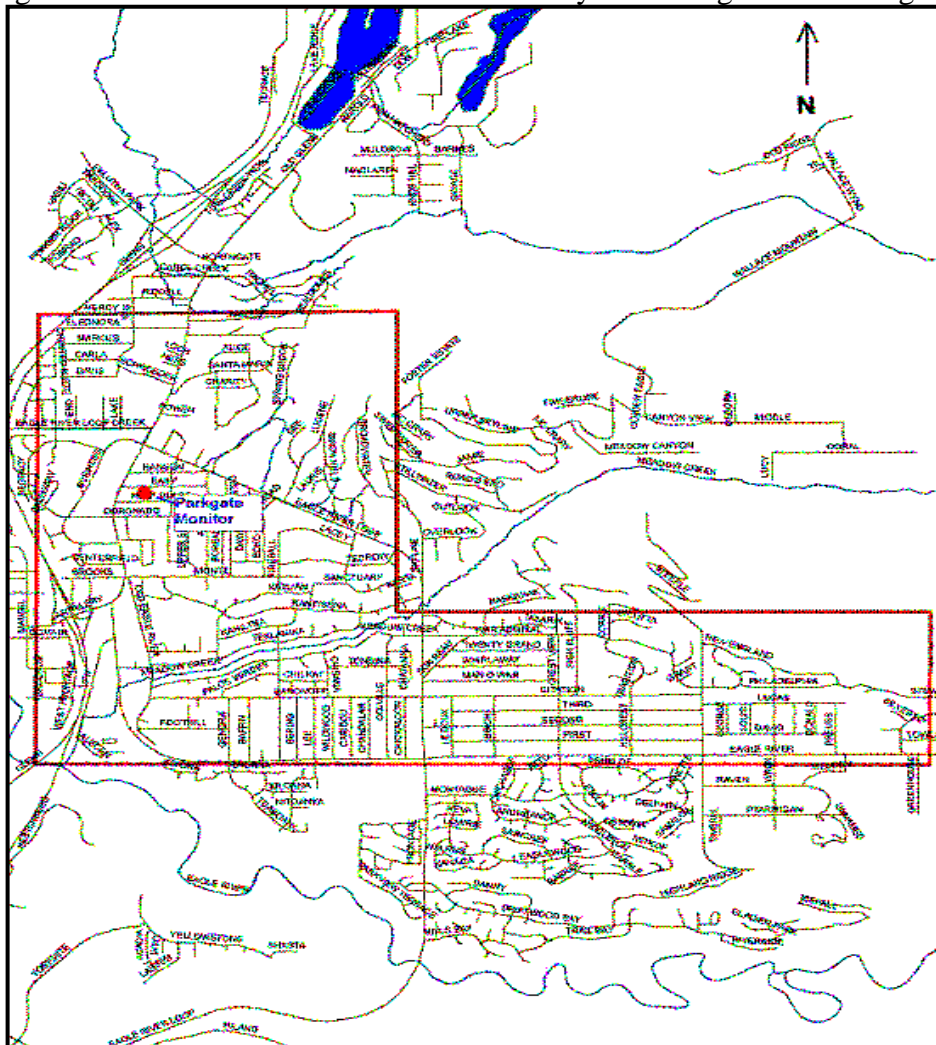
Between 1985 and 1987 Eagle River frequently violated the NAAQS for PM₁₀ (particulate matter air pollution with an aerodynamic diameter less than or equal to 10 μm in size). The main source of this pollution was identified as unpaved roads in the area. As a consequence, in 1991 the EPA designated a nine square kilometer area in Eagle River as a moderate nonattainment area for PM₁₀ and required the submission of an air quality attainment plan to bring the area into compliance with the PM₁₀ NAAQS.

In 1991, the Municipality of Anchorage and the Alaska Department of Environmental Conservation prepared the *Eagle River PM₁₀ Control Plan*, which was submitted to the EPA as amendment to the Alaska SIP to address the PM₁₀ problem in Eagle River. The plan outlined an ambitious road paving program to reduce emissions from this source. The EPA approved the plan as an amendment to the SIP in 1993 (58 FR 43084).

By 1993 most of the 22 miles of unpaved local roads in the 9 km² PM₁₀ problem area were either surfaced with recycled asphalt or paved. By 2007 there were no unpaved local roads within the problem zone.

Figure 2.1

Eagle River Limited Maintenance Area Boundary with Parkgate Monitoring Site



The road paving and recycled asphalt surfacing program has dramatically reduced PM₁₀ concentrations in Eagle River. The last violations of the PM₁₀ NAAQS occurred in 1987.^{iv}

In October 2010, the EPA made a determination that Eagle River had attained the PM₁₀ NAAQS (75 FR 64162). However, before Eagle River could be officially re-designated as an attainment area, a maintenance plan had to be submitted to EPA to demonstrate that the air quality control measures in place in Eagle River are sufficient to ensure continued maintenance of the PM₁₀ NAAQS.

The EPA offers a streamlined process of gaining re-designation to attainment to areas that can demonstrate they have a low risk of violating the PM₁₀ NAAQS. This is known as the Limited Maintenance Plan (LMP) option. When EPA approves a limited maintenance plan, the agency is concluding that an emissions budget may be treated as essentially non constraining for the length of the maintenance period because it is unreasonable to expect that such an area will experience so much growth in that period that a violation of the PM₁₀ NAAQS would result.

Nonattainment areas that wish to qualify for this streamlined process must show that: (1) their average design value (DV) over the past five years is below 98 µg/m³ and therefore have a low probability of violating the NAAQS, and (2) that PM₁₀ emissions anticipated from growth in motor vehicle travel in the area are unlikely to cause a future violation.^v Eagle River met both of these criteria. In September 2010, on behalf of the Municipality of Anchorage, the State submitted the *Eagle River PM₁₀ Limited Maintenance Plan* to EPA as a proposed amendment to the SIP.

EPA approved the Eagle River PM₁₀ LMP, effective March 8, 2013 ([78 FR 900](#)). Areas that have been designated as “limited maintenance areas” or have had their LMPs approved for conformity purposes have a simplified conformity procedure. This simplified LMP procedure is used in this analysis.

2.2 PM₁₀ LMP Conformity Criteria

Areas with approved LMPs or areas that have had them approved for conformity determinations are not required to perform an emission budget test as long as the area continues to meet the LMP criteria. Areas with an LMP are required to annually re-compute their 5-year average DV to determine whether it is below 98 µg/m³ and therefore still meets this LMP criterion.^{vi} Table 2.1 shows that the 5-year average DV in Eagle River continues to meet this requirement. The method used to compute these 5-year average DVs is explained in detail in the Appendix of this document.

Table 2.1
5-Year Average Eagle River PM₁₀ Design Values

5-Year Period	Average DV (µg/m ³)
2005-2009	81
2010-2015	92
2015-2019	87
LMP Qualification Criteria	≤ 98 µg/m³

^{iv} PM₁₀ concentrations have exceeded the 150 µg/m³ NAAQS on a few occasions since 1987, but all of these “exceedances” have been attributed to natural events. These include glacial river dust transported by high winds from the Matanuska River and volcanic ash resulting from the eruption of the Mt. Spurr volcano in August 1992. EPA excludes these events when considering whether an area has met the NAAQS.

^v PM₁₀ LMP guidance is outlined in a memorandum from Lydia Wegman, Director, Air Quality Standards and Strategies Division, EPA, August 9, 2001.

^{vi} This requirement is found in the Wegman PM₁₀ LMP guidance. Although it is not a requirement of the transportation conformity rule, AMATS agreed to include the Eagle River PM₁₀ Limited Maintenance Area design value analysis in this conformity determination as an outcome of interagency consultation.

The following conformity requirements from [§93.109](#) Table-1 are still applicable to maintenance areas that have had their LMPs approved by the EPA for conformity purposes:

TABLE 1 – CONFORMITY CRITERIA from 40 CFR §93.109

All Actions at all times:	
§ 93.110	Latest planning assumptions
§ 93.111	Latest emissions model
§ 93.112	Consultation
Transportation Plan:	
§ 93.113(b)	TCMs
§ 93.118 or § 93.119	Emissions budget and/or Interim emissions
TIP:	
§ 93.113(c)	TCMs
§ 93.118 or § 93.119	Emissions budget and/or Interim emissions
Project (From a Conforming Plan and TIP):	
§ 93.114	Currently conforming plan and TIP
§ 93.115	Project from a conforming plan and TIP
§ 93.116	CO, PM10, and PM2.5 hot-spots.
§ 93.117	PM10 and PM2.5 control measures
Project (Not From a Conforming Plan and TIP):	
§ 93.113(d)	TCMs
§ 93.114	Currently conforming plan and TIP
§ 93.116	CO, PM10, and PM2.5 hot-spots.
§ 93.117	PM10 and PM2.5 control measures
§ 93.118 or § 93.119	Emissions budget and/or Interim emissions

As per 40 CFR 93.113(b), the transportation plan must: (1) provide for timely implementation of the TCMs in the applicable SIP; and (2) nothing in the transportation plan should interfere with a TCM in the SIP. Both these conditions have been met. When the *Eagle River PM₁₀ Control Plan* was submitted to EPA in 1991, 6.6 miles of the 22 miles of unpaved road in the problem zone had already been paved or surfaced with recycled asphalt product (RAP). The plan assumed that an additional 8.6 miles of paving or recycled asphalt surfacing would be completed by 1993. This was accomplished; by 1993 over 15 miles of the 22 miles of unpaved roads in the problem zone had been paved or RAP-treated. By 2007, there were no unpaved roads in the problem zone.

The *Eagle River PM₁₀ Control Plan* also called for changes in winter traction sanding practices to reduce PM-10 emissions during the spring break-up period. These included reductions in the amount of sand applied and new specifications that limited the silt content in the sand to 2% or less. These measures were implemented in 1989 and still maintained. The fact that Eagle River has been in compliance with the NAAQS since 1989 attests to the effectiveness of the implemented control strategies. There are no projects or constraints in the TIP, its proposed amendments or in the Anchorage 2040 Metropolitan Transportation Plan that would interfere with the continued implementation of these TCMs.

2.3 Conclusion regarding Eagle River PM-10 Conformity

This analysis demonstrates that the 2019–2022 TIP, including Amendments #1 & #2, is in conformance with the Alaska State Implementation Plan for air quality and meets conformity requirements outlined in 40 CFR Part 93 for PM₁₀. Furthermore, it has been determined that no element of the TIP or its amendments will undermine the ability for Eagle River to continue PM₁₀ control measures and maintain continued compliance with the PM₁₀ NAAQS.

APPENDIX

Computation of PM₁₀ Design Value Concentration for Eagle River

Computation of PM₁₀ Design Value Concentrations for Eagle River

Computational methods for determining the 24-hour design value (DV) are outlined in the *PM₁₀ SIP Development Guideline (EPA-450/2-86-001, June 1987)*. The empirical frequency distribution approach (see Section 6.3.3 of the guideline) was used to determine the site-specific PM₁₀ concentration that would be expected to be exceeded at a frequency of once every 365 days.

The empirical frequency distribution method was used to compute the Eagle River PM₁₀ DV for the most recent five-year period, 2015-2019, in accordance with EPA's Wegman memo guidance to determine qualification for the PM₁₀ limited maintenance plan option (Lydia Wegman, Director EPA-AQSSD, Aug 9, 2001). During this period, the number of valid 24-hour average PM₁₀ measurements (n) was 1819. These concentrations were arranged in order of magnitude and were assigned rank where the highest concentration was rank = 1, and lowest was rank = 1811. An abbreviated version of this table is shown below. During this period, the lowest PM₁₀ concentration measured was 1 µg/m³ (rank = 1811) and the highest was 168 µg/m³ (rank = 1).

Table 1

Date	PM-10 (µg/m ³)	<i>i</i> rank	$P = i/n$ Proportion of observations with equal or higher concentration
4/3/2019	168	1	0.0005
3/24/2016	110	2	0.0011
3/1/2016	105	3	0.0016
4/3/2019	105	4	0.0022
2/6/2015	90	5	0.0027
3/2/2016	86	6	0.0033
1/4/2016	82	7	0.0038
3/3/2016	82	8	0.0044
4/1/2019	79	9	0.0049
3/11/2016	77	10	0.0055
11/27/2019	1	1807	0.9978
11/28/2019	1	1808	0.9984
12/1/2019	1	1809	0.9989
12/7/2019	1	1810	0.9995
12/29/2019	1	1811	1

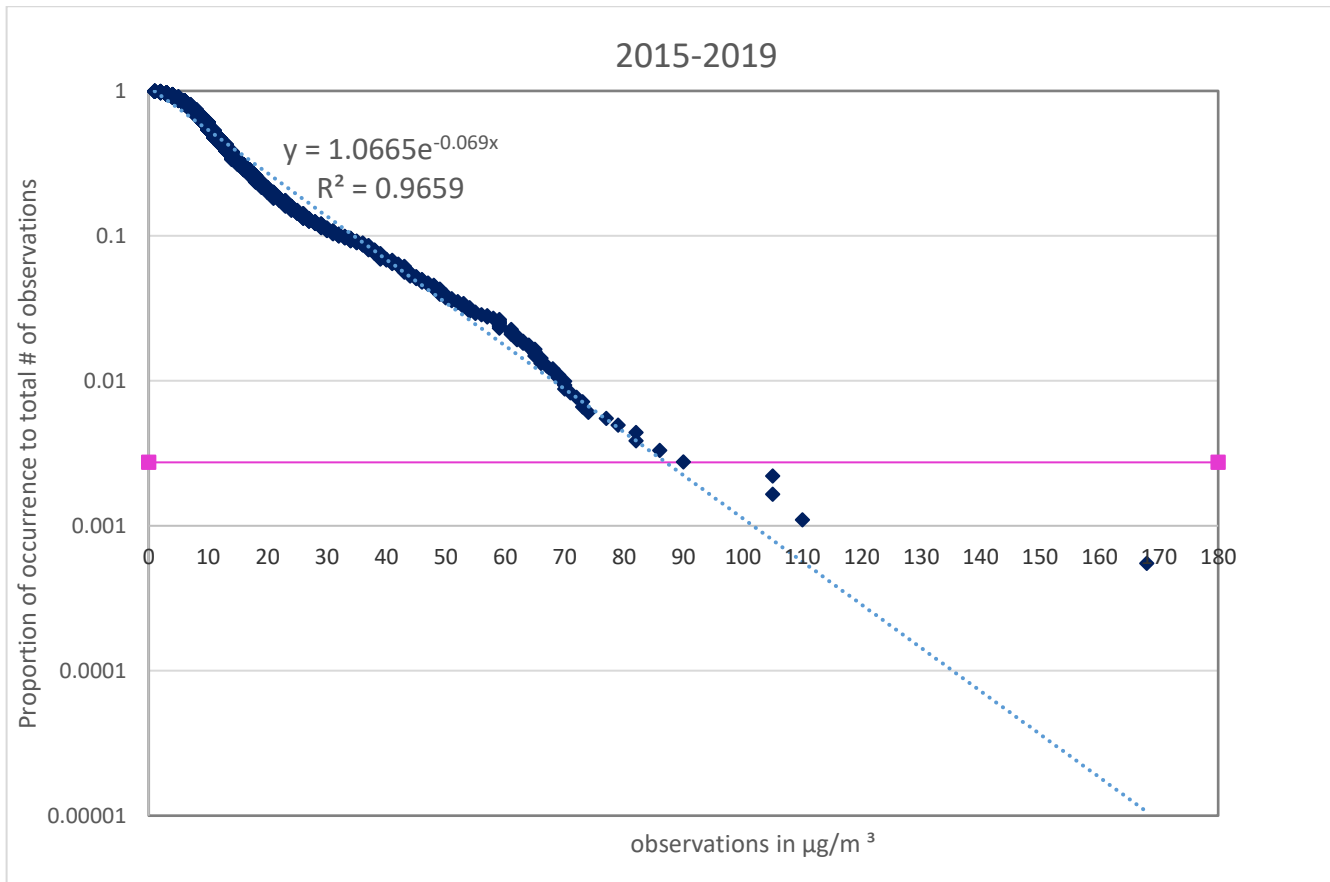
The Eagle River PM₁₀ Design Value for comparison to the PM₁₀ LMP eligibility criteria was determined from the empirical frequency plot of 24-hour PM₁₀ data, and was calculated as the concentration that corresponds to $P = 1/365$. This resulting concentration represents the highest expected concentration during a one-year or 365-day period. The design value concentration can be computed directly from the equation of the best-fit line as follows:

The best-fit, natural logarithm plot is $y = 1.066 e^{-0.06854x}$

For expected concentration (x) at a given probability of once per year:

$$y = 1/365 = 0.00274 = 1.066 e^{-0.06854x}$$

Solving for x yields $x = 87.0 \mu\text{g}/\text{m}^3$



Inputting the value of 0.00274 (equivalent to 1/365) into the best-fit line equation and solving for the corresponding concentration, yields a PM_{10} concentration of $87.0 \mu\text{g}/\text{m}^3$.

Per EPA data handling rules for PM_{10} data, decimal values are truncated. Hence, the Eagle River PM_{10} DV for 2015-2019 is properly truncated to $87 \mu\text{g}/\text{m}^3$.

This design value is compliant with EPA's primary, PM_{10} LMP Qualification Criteria: $\leq 98 \mu\text{g}/\text{m}^3$.