

CHAPTER

6



Implementation

The purpose of this chapter is to provide a clear strategy for implementation of the NMP. In order to do this, a realistic assessment of typical project cost, scope and maintenance needs is necessary. This chapter includes six example projects of varying facility types. They include preliminary concept design, cost opinions, funding options, and timeline. In addition to the concept design for these projects, this chapter also explores program, policy, and other system-wide recommendations that can further support infrastructure improvements; and identifies next steps for developing a comprehensive active transportation network that supports a variety of trip purposes and user types.

6.1 Policy + Programs

Policy and programs provide a framework for promoting and improving the nonmotorized transportation network that builds on the infrastructure recommendations outlined in Chapters 4 and 5. Policies help guide AMATS Planning area agencies as they address items related to nonmotorized transportation, while programs provide an actionable response to a key issue or concern. The following sections provide policy and program recommendations as well as key actions and next steps for implementation.

POLICY RECOMMENDATIONS

Updates to current policy and development of new guidance can help AMATS promote non-motorized facility use and work toward achieving the goals outlined in this document.

As part of this plan, a targeted policy review was conducted to identify opportunities for policy updates, further exploration, or program development. The result of this review is a compilation of policy recommendations that include a broad range of policies and actions that support the goals of the NMP.

To help identify the priority action items to implement the identified policy and program recommendations, AMATS staff identified program areas and policy areas that should be considered for short-term implementation. These items were prioritized for reasons such as ongoing agency interest, opportunity to leverage ongoing program efforts, or coordination with other agency actions. Details regarding these programs, policies, and action items can be found on subsequent pages.

RECOMMENDATION: COORDINATE IMPLEMENTATION WITH OTHER RELATED PLANS, PROGRAMS AND POLICIES

The goals and recommendations of this plan align with those of several previously completed plans and programs in the AMATS area, including the Anchorage Bicycle Plan (2010), the Anchorage Climate Action Plan (2019), the Anchorage Vision Zero Action Plan (2018), the Municipality of Anchorage Safe Routes to School Manual, and others. It will be important to coordinate the implementation of this plan's recommended projects and programs with the recommendations and priorities set forth in these previous plans.

Some specific goals and policies from these previous plans and recommendations for plan integration are included below.

» Anchorage Bicycle Plan (2010)

- A summary of the Bicycle Plan is provided in Chapter 2 of this report.
- Goal 5 of the Bicycle Plan is to "Provide support facilities and amenities designed to enhance the bicycle network and encourage the use of bicycling as a practical transportation system," and the related policies to achieve this goal are as follows:
 - Policy 5.1 Review zoning codes for bicycle parking to included requirements for bicycle parking in well-monitored, lit, secure areas that are protected from the elements and are convenient to the entrances of buildings.
 - Policy 5.2 Include short- and long-term bicycle parking that is covered and protected at public facilities.
 - **Recommendation:** Review and update Title 21 to provide end of trip bicycle infrastructure consistent with design guidance included in Chapter 7 of the NMP

» Anchorage Climate Action Plan (2019)

- The Climate Action Plan includes a section focusing on land use and transportation with the following broad goals outlined, which have implications for the implementation of this NMP:
 - Improve transit options and non-motorized accessibility to major centers
 - Encourage land use planning that reduces the distance people have to travel by car and increases community resiliency
 - Transition to vehicles that are highly efficient and run on low-carbon and renewable energy fuels
- **Recommendation:** Cross reference the The Climate Action Plan with the NMP in order to ensure efficient progress towards the mutual goals.

» Municipality of Anchorage Safe Routes to School Manual (2021-2022)

- The 2021-2022 SRTS Manual provides routing information and maps for students to safely travel to and from each school in the Anchorage School District.
- The preferred walking routes and crossings should be prioritized for pedestrian facility, lighting, and crossing improvements where needed, and should also be prioritized for winter maintenance and plowing, in order to ensure the safe travel to and from school for students, since children are some of the community's most vulnerable pedestrians (see Section 7.2 for characteristics of pedestrians by age).
- **Recommendation:** Future prioritization or reprioritization of NMP project recommendations should factor in whether the project is located on a SRTS preferred route.

» Schools on Trails Program

- Schools on Trails is a program run through the Anchorage Park Foundation that supports outdoor teaching experiences by providing training and resources for teachers to connect to the outdoors and provide students with

outdoor educational experiences.

- The program provides maps that highlight the connections between schools in the Anchorage area and nearby public green spaces.

- **Recommendation:** Coordination with this program, in conjunction with the SRTS program is recommended in order to identify and prioritize non-motorized facility needs near schools and along school walking routes.

» Anchorage Vision Zero Action Plan (2018)

- The Vision Zero Action Plan has been summarized within this report (see Chapter 2) and its action items that are relevant to this NMP are highlighted.
- Of utmost importance is the action item that calls for the creation of a multi-agency Vision Zero Task Force, which can be an entity to help coordinate cross-departmental and jurisdictional collaboration as the recommendations from this NMP and the other previous plans are implemented.
- **Recommendation:** Cross reference plan action items with the NMP in order to ensure efficient progress towards the mutual goals.

» AMATS Complete Streets Policy (2018)

- AMATS adopted a [Complete Streets Policy](#) in 2018 that defines "Complete Streets" as streets that are designed, used and operated to enable safe access for all traffic (defined as pedestrians, bicyclists, motorists and public transportation users of all ages and abilities) to safely move through the transportation network.
- This Complete Streets policy allows AMATS to work towards creating a balanced street network that encourages pedestrian and bicycle travel and provides safe and comfortable roadways for all users.
- **Recommendation:** Cross reference the Complete Streets Policy with NMP action items to ensure efficient progress towards plan goals.

» **Anchorage 2040 Land Use Plan (2017)**

- The 2040 Land Use Plan is summarized in Chapter 2 of this NMP report.
- This NMP seeks to adhere to the land use decisions made in the Anchorage 2040 Land Use Plan, and as the NMP is implemented, steps should be taken to coordinate the projects with policies outlined in the Land Use Plan.
- **Recommendation:** Cross reference plan action items with the NMP in order to ensure efficient progress towards the mutual goals.

» **Additional Relevant Plans to consult with and coordinate implementation:**

- Spenard Corridor Plan (2020)
- Chugach Way Area Transportation Elements Report (forthcoming)
- Street Typology Plan (forthcoming): This plan will provide additional roadway design guidance that will incorporate Complete Streets principles to ensure non-motorized facilities along major corridors and routes, taking into account the transit analysis and land use analysis, as specified in this NMP and the 2040 Land Use Plan, respectively.

REVIEW AND UPDATE DESIGN GUIDANCE STANDARDS AND LAND USE ORDINANCES

Topics to review and update include:

- » Bicycle parking requirements (short- and long-term)
- » Bicycle amenity standards (showers, changing rooms, repair stations, etc.)
- » Lighting - specifically pedestrian-scaled lighting
- » Block length/distance between signalized crossings. Review relevant guidance and land use codes on crossing distances. Consider implementing policies regarding maximum distances between signalized crossings based on national best practices and standards, e.g., NACTO Design Guidance

ADDITIONAL POLICIES TO CONSIDER

AMATS should consider additional policies to anticipate and address the following broad issues related to the provision of a safe and convenient non-motorized network.

- » **ADA Accessibility:** Consider implementing a policy or program dedicated to improving walkability/ADA compliance as part of a standard project delivery process for locations such as public schools, recreation centers, bus stops, parks and libraries.
- » **Grade Separation Improvements:** Develop a dedicated source of funding for maintenance and upkeep of grade separated infrastructure in order to address aging infrastructure and incorporate bicycle and pedestrian crossings into the new infrastructure.
- » **Railroad Crossing Improvements:** Work with the Alaska Railroad to assess opportunities to improve pedestrian and bicycle railroad crossings.
- » **Implement New Mobility Solutions:** Anticipate the impacts of new and emerging mobility technologies, such as e-bikes, electric scooters, bike and scooter share programs, and electric and autonomous vehicles. It will be important to balance the impact that these emerging technologies can have on the competing right-of-way and curb space needs of non-motorized modes.

PROGRAM RECOMMENDATIONS

Providing a comfortable and safe environment for people using active transportation requires not only a focus on specific projects and engineering, but also on supporting investments through education, encouragement, and enforcement. Programmatic recommendations can include options such as internal agency trainings, safety campaigns, residential and business transportation demand management programs, safe routes to school programs, and many others. Programs intended to increase active transportation and promote greater awareness of these modes provide an opportunity for AMATS and the Municipality of Anchorage to coordinate across departments and collaborate with other agencies and community organizations.

The following program recommendations were selected in coordination with AMATS staff and build on the policy opportunities identified in the previous section. This program action supports and implements 2040 LUP Action 5-3.

DATA CONSOLIDATION

» **Relevant Goals:** 1, 5, 6

» **Purpose:** Consolidate and standardize data sources, including spatial data, related to non-motorized transportation to facilitate coordinated planning and maintain an up-to-date inventory of existing assets.

» **Target Audience:** Agency staff and partners, general public, developers

» **Potential Partners:** AMATS, Anchorage Health Department, Alaska DOT&PF, MOA Parks & Recreation Department, Recreation, MOA Traffic, and Geographic Data and Information Center (GDIC)

» **Timeframe:** 1-3 years; data maintenance ongoing

» **Description:** Data regarding non-motorized assets is currently stored in a variety of formats and managed by multiple departments. Some data, such as previous plan recommendations, are not stored in a consistent format or represented

in spatial data, creating difficulty in tracking historical recommendations and projects.

This recommendation encourages AMATS to consolidate and standardize data, particularly spatial data related to sidewalks and non-motorized modes. Data should include information such as facility type, width, maintenance responsibility, condition, and other relevant information. This data should reflect area-wide facilities, in order to provide a consolidated view of the AMATS Planning area. A comprehensive dataset can facilitate improved planning and implementation; sustain institutional knowledge; clearly document maintenance agreements; improve identification of network gaps for targeted infill projects, and improve project activities with partner agencies and organizations.

» Further, data maintenance should be scheduled and updated regularly in order to remain current. This is critical to on-going data driven planning efforts. A process should be established for acquiring data from projects and plans, including specifying data requirements as a regular aspect of project scoping.

» **Sample Programs:** Puget Sound Regional Council Pedestrian and Bicycle Data Collection and Consistency

» **Next Step:** Identify and convene a work-group to identify partner departments, agencies, and organizations and establish a work plan for data consolidation. With this work-group, establish a list of near-term goals, steps to reach these goals, and who is responsible for each set. Consider setting up a structure that encourages review of the data among participants after a committee has reach an initial goal. Prioritize which data should be consolidated and unified first based on upcoming project needs, funding requirements, or partnership opportunities. In addition to near-term goals, identify a longer-term vision for data consolidation and maintenance, identify the platform on which this data should be hosted, and incorporate data into gap analysis and roadway maintenance schedules to identify and implement network infill projects in conjunction with regular

roadway maintenance and resurfacing projects.

INTERNAL STAFF TRAININGS

» **Relevant Goals:** 1, 3, 7

» **Purpose:** Internal staff trainings can increase understanding of active transportation user needs and relevant federal and state guidance to designing and implementing facilities and programs.

» **Target:** AMATS and other agency staff

» **Potential Partners:** Alaska DOT&PF, Local Advocacy Groups, Anchorage Health Department, MOA Traffic, PM&E

» **Timeframe:** Ongoing

» **Description:** Offering technical trainings to agency staff can increase understanding of

bicycle/pedestrian user needs, best practice design guidance, safety measures, and educational campaigns to promote bicycle and pedestrian safety. A variety of training opportunities can provide staff with information and background to improve active transportation design, safety, and implementation in the AMATS Planning area. The following table describes organizations and related trainings that may be applicable to the AMATS Planning area.

» **Next Step:** Identify internal and intra-agency partners and assess opportunities for joint learning. Consider any ongoing trainings already held by partner agencies; assess if trainings, such as those listed above, can be integrated into current ongoing education programs.

Table 6.1: Training Available

AGENCY/ ORGANIZATION	TRAINING/ACTIVE TRANSPORTATION GUIDES
Federal Highway Administration (FHWA)	<ul style="list-style-type: none"> » Small Town and Rural Multimodal Networks Guide (2017) » Achieving Multimodal Networks (2016) » Resurfacing Guide (2016) » Separated Bike Lane Planning and Design Guide (2015) » Manual on Uniform Traffic Control Devices (2009) » Alaska Traffic Manual Supplement (2016)
American Association of State Highway and Transportation Officials (AASHTO)	<ul style="list-style-type: none"> » Flexibility Guide (2004) » Guide for the Development of Bicycle Facilities (2012) » Guide for the Planning, Design and Operation of Pedestrian Facilities (2004, 2017) » Green Book (2011) » Low Volume Roads (2001, 2017)
National Association of City Transportation Officials (NACTO)	<ul style="list-style-type: none"> » Urban Street Design Guide (2013) » Urban Bikeway Design Guide (2014)
Institute of Transportation Engineers (ITE)	<ul style="list-style-type: none"> » Walkable Urban Thoroughfares (2010)

NON-MOTORIZED COUNTS PROGRAM

» **Relevant Goals:** 1, 6, 7

» **Purpose:** Data collection related to active transportation is essential to determine whether changes in mode share, safety, or crash risk are occurring. Robust data collection can support funding opportunities and demonstrate change over time and create the opportunity to partner with other agencies and departments to gather data in support of project outcomes.

» **Target:** AMATS

» **Potential Partners:** MOA Parks & Recreation Department, MOA Traffic, Alaska DOT&PF, local advocacy organizations

» **Timeframe:** Ongoing

» **Description:** Anchorage has a growing counts program that aims to understand the use of current non-motorized facilities. This program, conducted in coordination with AMATS and the MOA Parks and Recreation Department initially focused on shared use pathways. Collection of shared use pathway usage began in 2003. Focus on non-motorized usage on roadways and pathways began in 2017 for AMATS. Permanent counters on shared use pathways is a coordinated effort between Traffic and Parks. Bike to Work Day information utilizes volunteer, short-duration counts on each year. By working to expand this program—through additional automated permanent and short term count locations, clear partnerships with advocacy organizations, and established guidelines for project evaluation—Anchorage can continue to develop a more robust dataset that can support future project implementation, funding opportunities, and a better understanding of demand throughout the municipality. Bike to Work Day manual counts should continue, regardless of permanent or short term counter locations, to encourage community participation, provide for continued data

comparison over time, and to assess opportunities for future permanent count locations.

» **Sample Programs:** Minnesota DOT Bicycle and Pedestrian Counts; Washington DOT Bicycle and Pedestrian Counts. City of Calgary Annual Bicycle Count

» **Next Steps:** In addition to identifying future grant opportunities to fund additional count locations, explore opportunities to overcome challenges associated with getting permanent counters added to on-road, sidewalk and pathway projects, particularly for counter accuracy and opportunities to conduct counts along on-road facilities. Further, consider utilizing portable counters short term counts as a method for project evaluation; develop clear criteria for counting before and after project implementation.

DRIVER EDUCATION PROGRAM

» **Relevant Goals:** 1, 3, 7

» **Purpose:** Support driver education that encourages sharing the road with pedestrians and bicyclists and includes an overview of current laws and common conflicts.

» **Target:** Residents eligible for driver's licenses, current drivers; people 50 and over

» **Potential Partners:** Alaska DOT&PF; Alaska Department of Administration, Division of Motor Vehicles; Anchorage School District; Bike Anchorage; Anchorage Health Department, AARP; SafeAlaskans; MOA Traffic, Funding; AMATS-TIP, Transportation Alternatives Program Funds (TAP)

» **Timeframe:** Ongoing

» **Description:** Develop education materials that address bicycle and pedestrian safety in driver education training and licensing programs.

Messaging includes information about common conflicts, how to safely share the road with bicycles and pedestrians, and reviews current laws and how they apply to each mode. Consider integrating information into beginning drivers' education courses, offering the course to businesses and other organizations that rely on vehicle trips, or partnering with organizations to promote improved safety for bicyclists and pedestrians in Anchorage. Further opportunities could include developing a diversion program for certain traffic offenses.

» **Sample Programs:** Fort Collins, CO Bike Friendly Driver Program; Orange County Transportation Authority

» **Next Step:** Utilize the open source materials available through Fort Collins, Colorado to assess which materials and messages will be most applicable to AMATS. Identify a staff member to lead the effort and begin developing materials for AMATS. Identify opportunities for implementation and the scope of implementation—will this program be geared toward new drivers or offered as an opportunity for current drivers? Under what context should the program be offered? Identify partners, such as local advocacy groups, who may want to also host trainings for members.

SAFE ROUTE TO SCHOOL (SRTS)

» **Relevant Goals:** 1,2,3,7

» **Purpose:** SRTS programs aim to improve safety near schools through infrastructure improvements and encourage increased active transportation through programmatic outreach to students and families.

» **Target Audience:** Students, Parents, School Staff, Community members

» **Potential Partners:** Anchorage School District, Anchorage Schools and Parent-Teacher

Associations, Municipality of Anchorage, State of Alaska, Bike Anchorage

» **Timeframe:** Ongoing

» **Description:** Safe Routes to School (SRTS) refers to a variety of multi-disciplinary programs aimed at promoting healthy alternatives to driving alone in the family car, while improving traffic safety around school areas through education, fun events, enforcement, safety reminders, and engineering measures. Walking and biking to school are healthy alternatives to being driven, and can provide a sense of independence for children. Riding the bus and carpooling similarly reduce traffic and improve safety for the school community, and can be part of promoting healthy lifestyles.

In addition to more traditional infrastructure-based approaches that focus on opportunities for intervention, SRTS programs can also involve partnerships among municipalities, school districts, community organizations, parent volunteers, and law enforcement agencies or other community groups to provide education and encouragement around active transportation. Among the goals of a SRTS programs are improved safety for children, establishing good health and fitness habits in families, and decreased traffic and air pollution from private automobiles. SRTS programs can help to address parents' safety concerns by encouraging greater compliance with traffic laws and implementation of safer streets near schools.

Schools and partners can implement a wide variety of encouragement activities, depending on volunteer and school staff capacity and interest. Popular events include Walk to School Day and Bike to School Day.

» **Sample Programs:** King County Metro Safe Routes to School Toolkit; Minnesota Safe Routes to School

» **Next Step:** Building on the Municipality of

Anchorage's existing SRTS Manual and pedestrian route maps, next steps for establishing a more comprehensive program should identify potential partners for an expanded educational and encouragement-focused campaign and systematic infrastructure improvements. Consider a pilot program approach that partners with select schools to identify specific education and encouragement needs to test program scope and implementation methods. The program can also include walk audits and infrastructure upgrades the complement existing walking route maps. Consider convening a Task Force to define goals and problems at each pilot school; a resulting safety action plan can help participants and municipality better understand what efforts are most needed. Refer to existing materials through the sample programs listed above or through the National Partnership for Safe Routes to School to identify materials and opportunities for implementation within the AMATS Planning area. Incorporate Safe Routes to School (SRTS) into the project prioritization process, where projects that connect students to schools receive higher priority scoring.

» OPEN STREETS/PARKLET/POP UPS PILOT PROGRAM

» Relevant Goals: 7

» **Purpose:** Open Streets and Parklet Pilot Programs help residents re-imagine the use of public space. Open Streets events restrict motor vehicle access on designated days to allow for non-motorized uses in the right of way, while parklet programs repurpose existing on-street parking spaces into small parks to active streets in a cost-effective way.

» **Target:** AMATS, General Public, people 50 or more years of age

» **Potential Partners:** MOA Parks & Recreation Department, Advocacy Organizations, Businesses, MOA PM&E, MOA Traffic, Alaska DOT + PF,



Figure 6.1: Example parklet in Seattle, Washington

AARP

» **Timeframe:** Ongoing

» **Description:** Open Streets and Parklet Pilot programs can help re-imagine the use of public space, promote active lifestyles, and broaden transportation choices. While these two programs are distinct, they include similar goals of promoting use of public space. An Open Street program focuses on restricting motor vehicles on designated roadways for a time period. Many cities open roadways to walking and rolling for a day or an afternoon to promote active transportation, encourage community interaction, and celebrate neighborhoods or districts; the locations may stay the same for each event, but they also can change to promote different areas of the municipality, commemorate the opening of a new facility, or coincide with other community-based cultural celebrations. Open Streets events should be held regularly—whether that is once a year or once a quarter.

A Parklet Pilot program, on the other hand, focuses on the use of a very specific location. Often implemented in existing on-street parking spaces, the idea builds on the popular world-wide celebration of Park(ing) Day by establishing a permit process that allows for a semi-permanent installation of a small park space. Some cities have allowed the use of Parklets to extend café outdoor seating space, while others simply reclaim underutilized parking spaces and may instigate a larger change in the use of public space. Anchorage has celebrated Park(ing) Day for several years; existing effort surrounding this celebration could be leveraged to develop a formal program that allows for more permanent implementation. Cities, such as Montreal and Quebec, Canada, may provide a strong example for AMATS to explore in terms of incentivizing parklet development and

implementation considerations for winter weather.

» **Sample Programs:** Montreal, Quebec; Philadelphia, PA Parklet Guidelines; Open Streets MPLS – Minneapolis, MN; Fort Collins Open Streets – Fort Collins, CO; pop-up Winter Market in Fairview

» **Next Step:** Identify potential partners and ongoing community celebrations for an upcoming event. Engage local advocacy groups as well as citizen advisory groups to develop and implement an event. Consider developing an outline for a parklet implementation program and conduct public engagement to determine program needs.

Continue to engage with local groups to support Park(ing) Day demonstration parklets. For Park(ing) Day celebrations, consider expanding the area of implementation to include other neighborhood centers. AMATS could establish a method for participants to sign up to participate; provide instructions and background regarding what the event is, where parklets can be located, and where participating parklets can be found on that day. An online webmap marking locations or a walking/bicycling tour hosted by a local group are two options. Park(ing) day can provide a great opportunity to gather feedback from the public regarding similar programs, such as a parklet implementation program, to promote a new program or event that the municipality is promoting, or to establish partnership with groups that can help bring a more complete program in the future.

Explore opportunities to continue to use public spaces in innovative ways as has been done in response to the COVID-19 pandemic. Examples of such innovation include the repurposing of public rights-of-way—including sidewalks, parking spaces and street space—as outdoor dining and curbside pickup spaces for restaurants, and expanded pedestrian travel way. AMATS could

explore opportunities to establish agreements and policies to enable more long-term adaptations that last beyond the immediate needs of the pandemic and social distancing measures to serve as placemaking projects.

WINTER MAINTENANCE STRATEGY

» **Relevant Goals:** 1, 3, 4

» **Purpose:** Developing a clear, focused winter maintenance strategy for non-motorized facilities can encourage use of active transportation network year-round.

» **Target:** Agency level, AMATS, MOA & ADOT&PF Maintenance and Operations, MOA Parks & Recreation Department

» **Potential Partners:** AMATS, MOA & ADOT&PF Maintenance and Operations, MOA Parks & Recreation Department

» **Timeframe:** 1 year

» **Description:** Establishing a unified winter maintenance approach that includes active transportation facilities – both on road and off—can encourage greater use of facilities year-round. This program should consider both existing maintenance agreements as well as opportunities to modify and expand upon current practices. Based on the peer cities review, approaches can vary and may include options such as prioritizing plowing based on facility type and location. Establishing a firm schedule and approach that can be easily communicated with the public can encourage more consistent use of active transportation facilities, even in the event of a snow storm.

The program should consider potential partnerships among agencies, departments, and

other organizations active in the area. This is similar to existing arrangements and should be evaluated to maximize efficiency and effectiveness.

Further, the type of plowing or grooming treatment applied to facilities should also be considered. Snow clearing programs should include sidewalks, particularly those providing access to transit, and should accommodate a variety of modes, including skiing, along shared use pathways and sidepaths. Grooming protocols are currently in place for Anchorage's trails (Coastal Trail, Campbell Creek Trail and Chester Creek Trail) to facilitate skiing, and these pathway grooming protocols could be adapted to provide for bicycle access as well along shared use pathways or sidepaths.

Longer term, AMATS should consider establishing a designated winter network. This network would provide for bicycle and pedestrian travel, and other winter modes if desired. Some cities have found that bicycle boulevard and shared use pathway networks, for example, provide a more comfortable path of travel for active modes during snow events. Unlike major roadways with parking or bicycle lanes that are used for snow storage and force bicyclists to travel in the motor vehicle wheel path, bicycle boulevards can provide a lower-stress route that is better suited for travel during winter months. As AMATS builds out the recommended network included in this plan and refines a comprehensive winter maintenance program, a designated winter network could be mapped and promoted to increase public awareness of travel options during the winter season.

Further, roadway, shared use pathway, and sidewalk design and implementation should be approached

with snow storage and operating space for active modes in mind.

- » **Sample Programs:** Calgary, AB; Montreal, QC; Minneapolis, MN.
- » **Next Step:** Identify a working group, a Winter Maintenance Task Force, to establish winter maintenance policy and procedures. The group should include representatives from existing winter maintenance agreements and should evaluate potential membership in the working group during the first meeting.

This working group should hold a second Winter Maintenance Forum as a follow up to the first forum held in September 2017 (see Chapter 3 for summary of recommendations and action items that came out of that forum). This second Winter Maintenance Forum can be an opportunity to develop a winter maintenance route map, which will establish a winter bicycling and skiing network, and coordinate winter maintenance equipment, among other issues.

This working group should also consider holding an event, such as a Disaster Relief Trial, in conjunction with local advocacy and non-profit groups to better understand the need for and impact of a quality winter active transportation network.

Finally, this working group should establish cost estimates and funding mechanisms to carry out the Winter Maintenance Strategy.

WAYFINDING SIGNAGE

» **Relevant Goals:** 1, 3, 5, 7

» **Purpose:** A comprehensive wayfinding signage system helps users identify the best routes and enhances their ability to connect to major destinations.

» **Target:** Non-motorized transportation users in Anchorage

» **Potential Partners:** AMATS, MOA Traffic, Alaska DOT, and PF Maintenance and Operations

» **Timeframe:** 2-5 years

» **Description:** A wayfinding signage program can enhance resident's and visitor's orientation and can give users a unique experience, while improving comfort and predictability by alerting both bicyclists/ walkers and motorists to the presence of biking and walking routes. The recommended network of enhanced shared roadways (which includes bicycle boulevards and yield roadways) should be marked with wayfinding signage to help bicyclists and walkers navigate the shared roadways that connect to other bicycle facilities and shared use paths.

The program should provide signs that 1) identify bicycle routes, 2) identify cross-streets on bicycle paths where road signs are not visible (for example, at intersections on off-road shared use paths), and 3) alert users to “dead end” and “no outlet” roadways that have non-motorized pathway connections. Streamlining route-finding will greatly improve the usability of the non-motorized network, and will also improve safety by allowing users focus on other traffic rather than devoting time and attention to wayfinding.

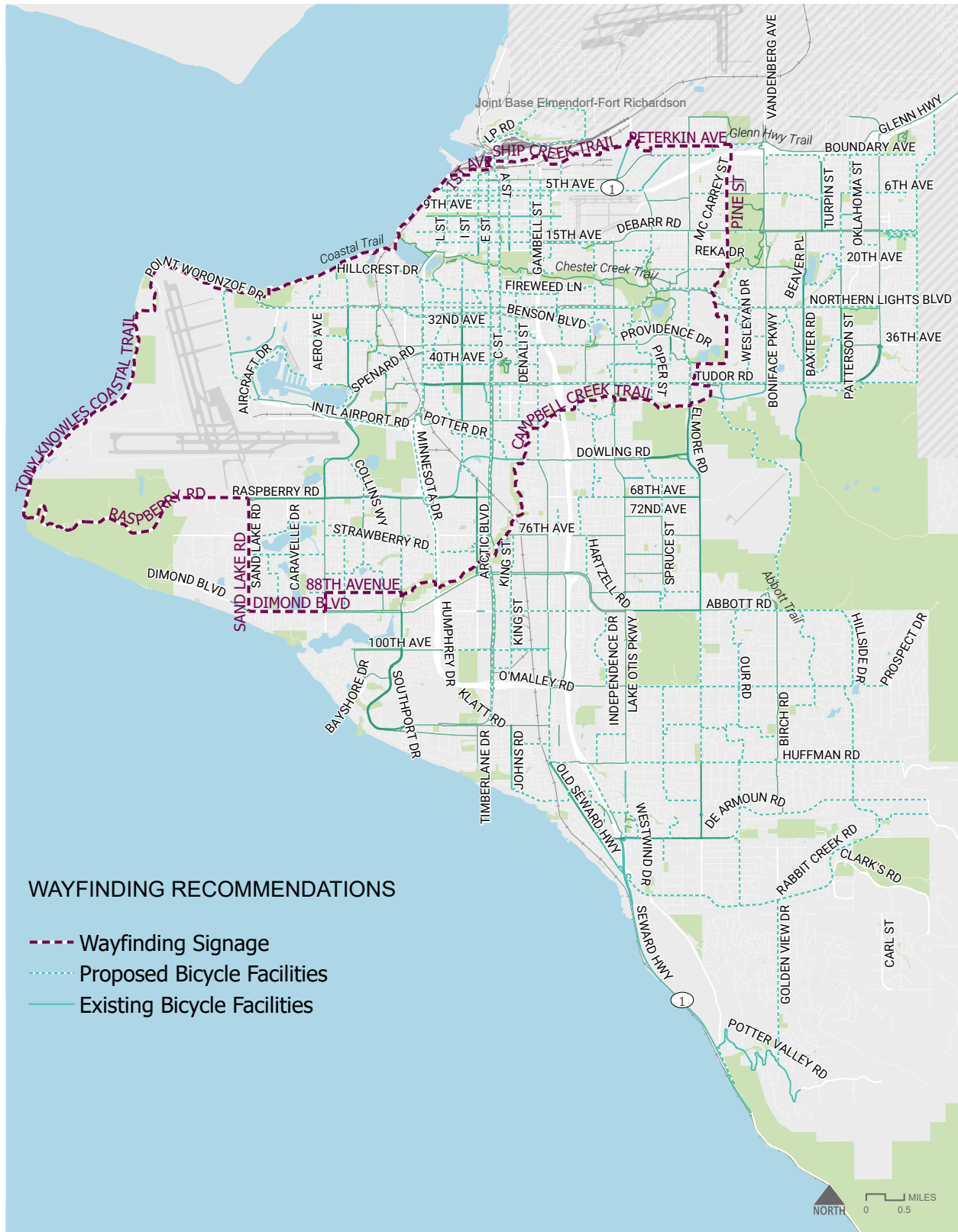
The wayfinding signage should incorporate indigenous names into the signage, in alignment with the Indigenous Place Names Project that is already underway through the Anchorage Parks Foundation.

A preliminary wayfinding network has been identified that corresponds to the Moose Loop. The following streets should be signed as a first step. Signing can include green "Bike Route" signs (Chapter 7 for details) or custom signing may be developed to highlight the unique identity of the Moose Loop:

- Raspberry Road from Kincaid Park Chalet (where it meets the Tony Knowles Coastal Trail) to Sand Lake Road
- Sand Lake Road south to Dimond Boulevard (state-maintained road)
- Dimond Boulevard east to Jewel Lake Terrace (state-maintained road)
- Jewel Lake Terrace north one block to 88th Avenue (where it enters the Campbell Creek Trail)
- Campbell Creek Trail travels east and south for 7.5 miles, merges into the Chester Creek Trail, crosses the bridge at Northern Lights Boulevard at Bettye Davis East Anchorage High School and connects to Russian Jack Park at Pine Street
- Pine Street/McCarrey Street north to Mountain View Drive (some signage exists)
- Mountain View Drive west to N. Lane Street
- N. Lane Street through Louie G. Mizelle Park to Peterkin Avenue
- Peterkin Avenue (signage already exists) to Meyer Street
- Meyer Street south to Richmond Avenue
- Richmond Avenue west to where it merges into Ship Creek Trail at Tyson Elementary School
- Ship Creek Trail travels west for 2.5 miles to the intersection with N. C Street
- N. C Street (state maintained road) to W. 1st Avenue
- W. 1st Avenue/Christensen Drive to W. 2nd Avenue
- W. 2nd Avenue merges on to Tony Knowles Coastal Trail

» **Next Step:** Establish a working group to develop a brand and design for the wayfinding signage, and to develop a plan for signed routes and signage locations.

Figure 6.2: Recommended Wayfinding Routes



ADDITIONAL PROGRAMS TO CONSIDER

Other programs to consider include the following:

» **Evaluation Program:** Develop performance indicators to measure progress toward the NMP's goals and objectives as outlined in Table I.II. Potential areas to consider for monitoring and evaluating include those found in [AMATS Complete Streets Policy](#), as well as the following:

- The percentage of trips (commute and non-commute) made by non-motorized modes
- The reduction in Greenhouse Gases related to mode shifts away from motor vehicles to non-motorized modes
- The number of safe crossings implemented or suggested performance indicators.

» **Bicycle Parking Incentive Program:** Incentivize companies and developers to include bicycle parking and other amenities, such as showers and changing rooms, into the design of new commercial and residential buildings

» **Enforcement Program:** Enforcement of roadway laws and speed limits plays an important role in establishing a safe environment for walking, biking, and traveling by other non-motorized modes. Enforcement programs can include speed limit enforcement campaigns, speed feedback signs, and bicycle police forces. In addition, law enforcement training programs exist to educate officers on the rights and responsibilities of all roadways to help them become better advocates for the safety of more vulnerable roadway users—namely pedestrians and bicyclists, and in particular children.

» **Project Prioritization Program:** The prioritization process that was used for the NMP can continue to be updated in future years as high ranking projects are implemented and the next tier of projects to be built are identified. In updating the priority rankings, some additional criteria may be considered to incorporate into the scoring matrix, including:

- Safe Routes To School (SRTS): the project is within the vicinity of a school
- Highways Safety Improvement Program (HSIP) ranking: the project has been ranked by HSIP as a high priority
- Transit Supportive Development (TSD): the project falls within a TSD, as identified in the Anchorage 2040 Land Use Plan
- Greenway-Supported Development: the project falls within a GSD, as identified in the Anchorage 2040 Land Use Plan

» **"Ride the Moose" Program:** The Moose Loop (see Chapter 2 for details) is a 32-mile loop of trails that connects dozens of parks, neighborhoods, and destinations. A "Ride the Moose" campaign could be used to increase awareness about the loop and promote its use as part of a healthy lifestyle that includes active transportation and recreation.

6.2 Project Development

This section outlines preliminary concept-level design for six specific projects. These projects are examples of a variety of facility types and were selected from the network recommendations (as outlined in Chapter 5). These six example projects were chosen to be representative of the types of bicycle and pedestrian project recommendations in the Plan. They show realistic examples of what implementation of each type of project might look like, including the coordination of intersection improvements to connect new and existing facilities. These examples help the general public make informed decisions when they are recommending projects for funding. These project locations include:

- » 10th Avenue and Cordova Street Intersection
- » Campbell Creek Trail Crossing at Lake Otis Parkway
- » Fireweed Lane – Bicycle and Pedestrian Improvements
- » 27th Avenue – Bicycle Boulevard
- » 40th Avenue – Sidewalk Infill
- » Coronado Street – Separated Shared-Use Pathway

For each project, the following details are provided:

- » Project description and locator map
- » Project challenges
- » Concept design¹
- » Construction cost opinion
- » Maintenance cost opinion
- » Funding options
- » Timeline

¹ The facility types and concept designs provided on the following pages were developed and reviewed by engineers, but they are only examples of what can be implemented and are not intended as required design features.

Representative Project #1:

10th Avenue and Cordova Street Intersection

PROJECT DESCRIPTION

The intersection of Cordova Street and East 10th Avenue represents an important node in Anchorage's evolving non-motorized network. First, it is identified as a preferred crossing location in the Safe Routes to Schools Manual for Denali Elementary School, located at the northwest corner. Second, East 10th Avenue (from P Street to Medfra St, 1.8 miles) was converted to a bicycle boulevard in 2017. Lastly, Cordova Street (from 16th St to 3rd Ave, 0.9 miles) was reconfigured to include bicycle lanes (south of 9th Ave) and shared use markings (north of 9th Ave). Previous projects neglected to include intersection improvements, conceivably due to funding or schedule constraints.

Both East 10th Avenue and Cordova Street were identified as priority network links during public and agency stakeholder involvement. Cordova Street is a neighborhood collector with a 2017 average annual daily traffic (AADT) count of 2,221 and a posted speed limit of 30 mph. East 10th Avenue is a local road with a 25 mph posted speed limit. The intersection is two-way stop controlled on both East 10th Avenue approaches.

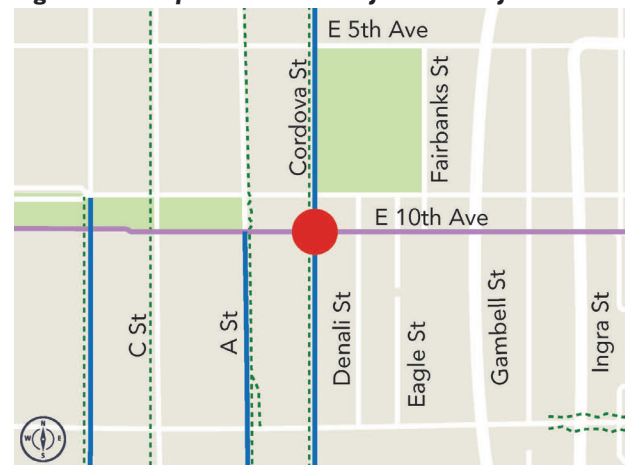
In order to improve the intersection for non-motorized users, the following upgrades are proposed:

- » Construct curb bulb-outs in the northeast and southeast corners to improve parking delineation and reduce pedestrian crossing distances on the north and east leg.

- » Reduce vehicular lanes on Cordova Street from 12 to 11 feet and repurpose the 2 foot gain in the form of a buffered bicycle lane along the east (parking) side of the street.
- » Extend the north-south bicycle lanes through the intersection and add conspicuity with green colored markings.
- » Add green colored markings to the ingress bicycle lanes to discourage encroachment by right turning vehicles.

PROJECT LIMITS

Figure 6.3: Representative Project #1 Project Limits



Red: project limits; blue: existing bicycle lanes; green dashed: existing pathway; purple: existing

Figure 6.4: Representative Project #1 10th Avenue and Cordova Street Intersection Plan View

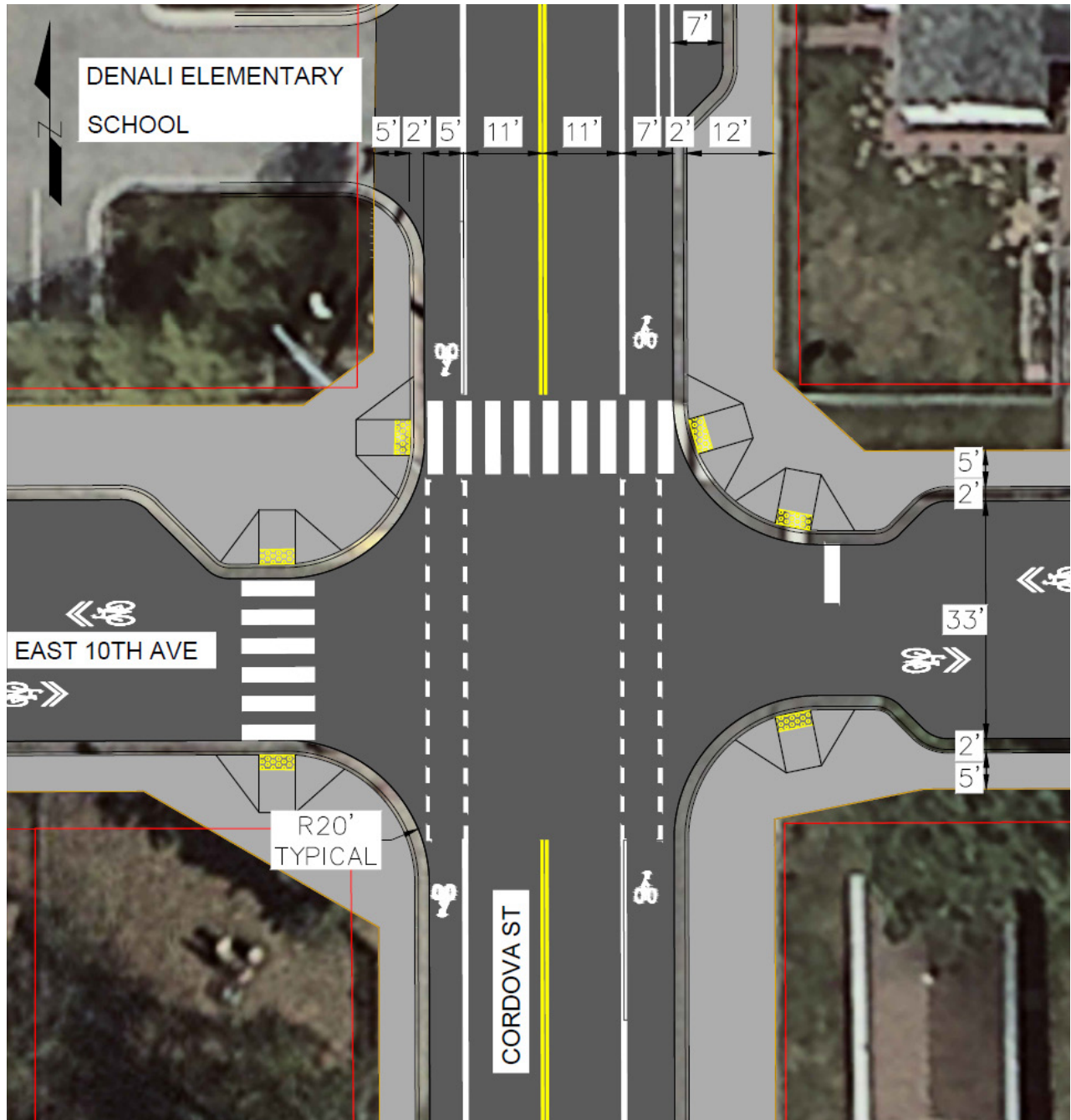


Figure 6.5: Representative Project #1: 10th Avenue and Cordova Street Visualization



PROJECT CHALLENGES

Maintenance and skid resistance: Large area pavement markings are in their infancy in Anchorage. Concerns with longevity, replacement costs, and skid resistance have been brought up. Possible solutions are to use skid resistant inlaid markings or green colored concrete. However, given that roadway pavement provides sufficient friction components, another option includes applying a colored friction surface in accordance with the manufacturer’s specifications. If applied during appropriate seasonal conditions, it has been successful for securing the friction component, but after one season of plowing the aggregate, if not applied correctly, can begin to wear. Another solution is the application of a colored paint that is not epoxy-based. This requires additional maintenance, but will minimize friction-related issues.

**MAINTENANCE COST OPTION
(2021 DOLLARS)**

Table 6.2: Representative Project #1: 10th Avenue and Cordova Street Maintenance Cost Options

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	\$6,660
Routine Maintenance	\$4,440

PROJECT COST OPTION (2021 DOLLARS)

Table 6.3: Representative Project #1: 10th Avenue and Cordova Street Project

DESCRIPTION	ITEM	CALCULATION	ESTIMATED COST
Engineering	A		\$222,000
Construction	B		\$577,200
Utility Relocation	C		\$55,500
Right-of-Way Acquisition	D		\$22,200
Subtotal	E	A + B + C + D	\$876,900
Construction Engineering	F	20% of B	\$115,440
Contingency	G	30% of E	\$263,070
Total (rounded)	H	E + F + G	\$1,255,000

FUNDING OPTIONS

- » Municipality of Anchorage, Anchorage Roads and Drainage Area (ARDSA) Bonds
- » AMATS funding, Transportation Improvements Program (TIP) and Transportation Alternatives Program (TAP)
- » State Grant: Safe Routes to School funding via ADOT&PF Transportation Alternatives Program

IMPLEMENTATION PROCESS

Acquire funding to enable the project to advance through the following project development phases:

- » Application and FHWA approval for experimental traffic control devices
- » 65% Design, associated community involvement and agency review
- » Final Plans
- » Construction of proposed improvements

Representative Project #2:

Campbell Creek Trail - Lake Otis Parkway Crossing

PROJECT DESCRIPTION

The majority of the Campbell Creek Trail is unimpeded by roadway crossings. Lake Otis Parkway represents the last obstacle for users to travel the length of the trail. To cross Lake Otis Parkway, trail users must follow a rather circuitous route that crosses four stop-controlled side streets, two signalized crossings at Waldron Drive, and enter a tunnel under Lake Otis Parkway. This path adds approximately 0.5 miles to the route and increases conflict points among drivers and users of the trail. The Anchorage Pedestrian Plan (APP) and the Metropolitan Transportation Plan (MTP) identify the intersection of Campbell Creek Trail and Lake Otis Parkway as a crossing that needs to be improved for non-motorized users.

An above grade (separated) crossing is desirable for safety reasons, network consistency, winter grooming, and comfort. The alignment for the grade separated crossing begins approximately 500 feet west of E 47th Court. From there, it follows an existing private shared use pathway toward St. Mary's Episcopal Church. To cross Lake Otis Parkway, this alternative constructs a 175-foot long

steel truss bridge north of E 47th Court. After crossing Lake Otis Parkway, it follows the existing shared use pathway east of Lake Otis Parkway and replaces an existing bridge over Campbell Creek, east of Campbell Park. The new alignment rejoins the existing shared use pathway on the south side of a small ball field east of the park. In addition to constructing two bridges, this alternative consists of approximately 2,000 feet of cast-in-place concrete and mechanically stabilized earth retaining walls. These walls are required to minimize the footprint and impacts to nearby properties.

PROJECT LIMITS

Figure 6.6: Representative Project #2 Campbell Creek Trail - Lake Otis Parkway Crossing Project Limits

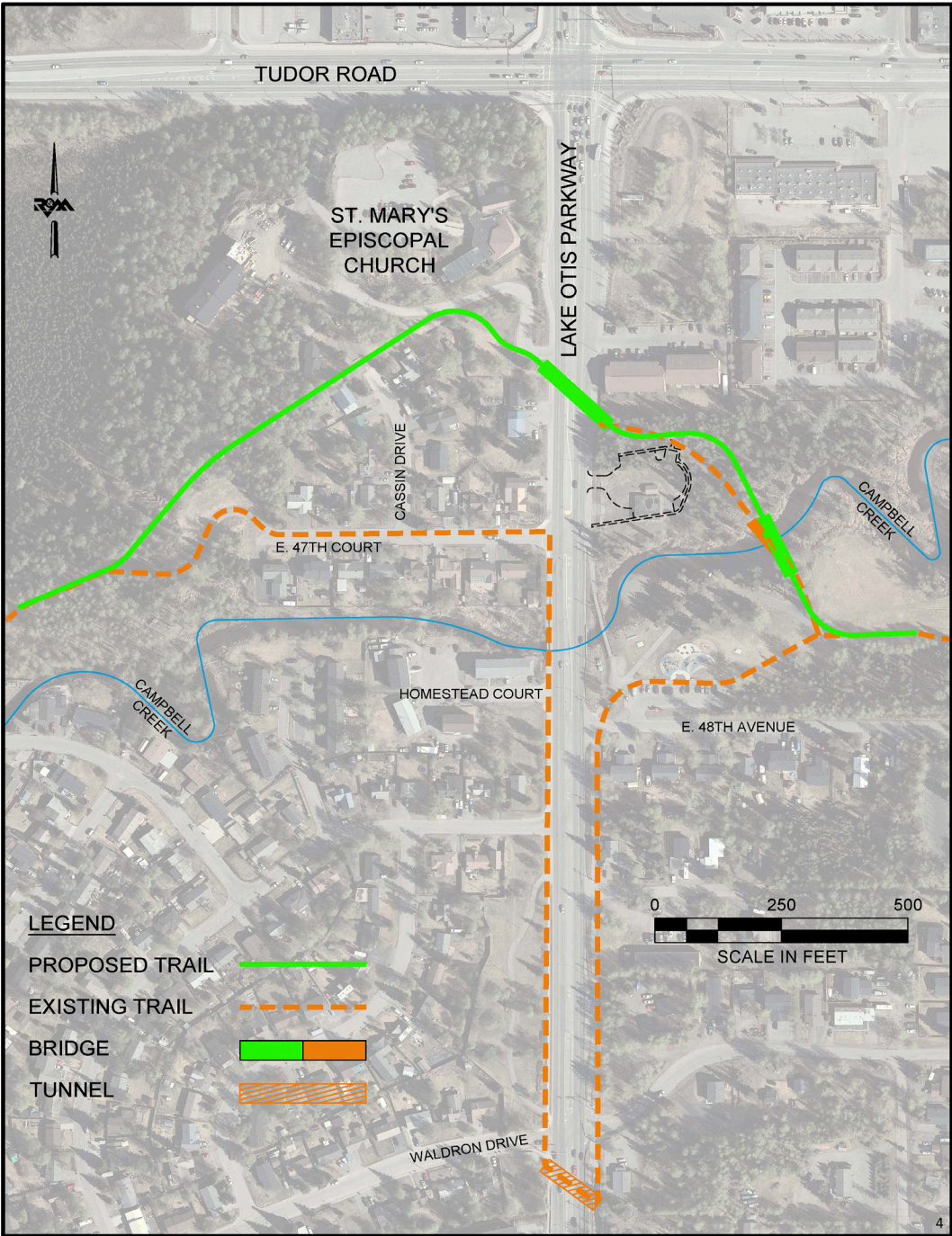


Figure 6.7: Representative Project #2 Campbell Creek Trail - Lake Otis Parkway Crossing, Cross Section

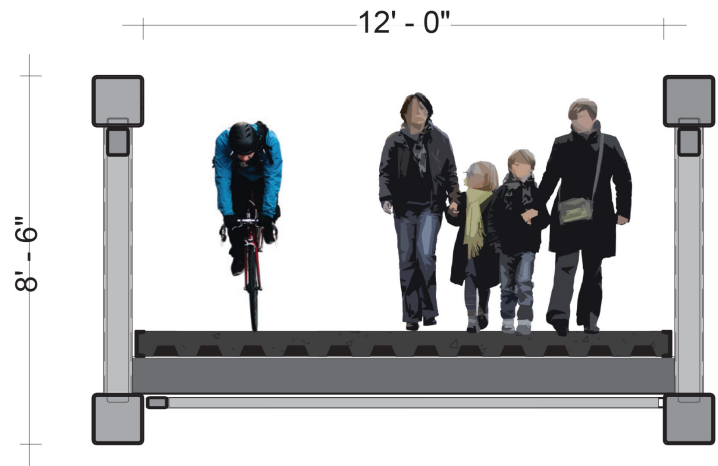


Figure 6.6: Representative Project #2 Campbell Creek Trail - Lake Otis Parkway Crossing, Visualization



Image courtesy of Bettisworth North

PROJECT CHALLENGES

Right-of-Way (ROW): Despite constructing retaining walls, this alternative impacts nearby structures and properties. It requires the full acquisition of one property and partial acquisition of six others. In addition to ROW impacts, this alternative would realign the driveway that serves St. Mary's Episcopal Church. On the east side of Lake Otis Parkway, the shared use pathway would be elevated as it passes south of a multi-family residence. In order to protect the privacy of the residents, a visually obstructing fence or wall would be required on the north side of the shared use pathway.

Neighborhood Access: A grade separated crossing eliminates the conflict between traffic on Lake Otis Parkway and users of the Campbell Creek Trail. However, it is less convenient for neighborhood residents trying to access Campbell Park from the west. An at-grade crossing between Tudor Road and Waldron Drive was analyzed but found to be unfeasible due to traffic volumes, speed, and proximity to existing signalized intersections.

PROJECT COST OPTION (2021 DOLLARS)

Table 6.4: Representative Project #2: Campbell Creek Trail - Lake Otis Pkwy Crossing Cost Options

DESCRIPTION	ITEM	CALCULATION	ESTIMATED COST
Engineering	A		\$1,087,800
Construction (includes 25% contingency)	B		\$7,181,700
Utility Relocation	C		\$1,110,000
Right-of-Way Acquisition (includes 50% contingency)	D		\$1,065,600
Subtotal	E	A + B + C + D	\$10,445,100
Construction Engineering	F	20% of B	\$1,436,340
Total (rounded)	G	E + F	\$11,881,000

FUNDING OPTIONS

- » Municipality of Anchorage, Anchorage Roads and Drainage Area (ARDSA) Bonds
- » Nonprofit contributions, Anchorage Park Foundation, Alaska Trails
- » AMATS Funding, Transportation Improvements Program (TIP) and Transportation Alternatives Program (TAP)

MAINTENANCE COST OPTION
(2021 DOLLARS)

Table 6.5: Representative Project #2 Campbell Creek Trail - Lake Otis Pkwy Crossing, Maintenance

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	N/A
Routine Maintenance	\$9,990

IMPLEMENTATION PROCESS

Acquire funding to enable the project to advance through the following project development phases (note that particular funding sources may have additional process requirements):

- » Parks & Recreation Advisory Board review
- » Design, associated community involvement and agency review
- » Final Plans
- » Construction of proposed Improvements

Representative Project #3:

Fireweed Lane

PROJECT DESCRIPTION

West Fireweed Lane between Spenard Road and Seward Highway is a four lane minor arterial with a posted speed limit of 35 mph. The 2017 AADT ranged from 5,076 to 8,716, decreasing from east to west. The ADOT&PF owns and maintains the majority of West Fireweed Lane, while the MOA owns and performs summer maintenance on the segment between Arctic Boulevard and Spenard Road.

Land use along the corridor is predominately commercial, with an access density of one every 50 feet (106 per mile). Two schools are located adjacent to West Fireweed Lane: North Star School and Stellar Secondary School. Existing non-motorized facilities are limited to sidewalks on both sides, interrupted by frequent curb cuts. Crossing opportunities are present at the signalized intersection and the signalized mid-block crossing between the schools.

The alternatives for Fireweed Lane assume a reduction in the total number of travel lanes or a “road diet.” Removing a lane on Fireweed Lane creates an opportunity to provide enhanced pedestrian and bicycle facilities within the right-of-way that becomes freed up. Given the volumes and speed on this roadway, it is recommended that bicyclists be separated from motorized traffic.

Assuming an annual growth of 0.9% would result in a maximum 2045 AADT of 11,200. That puts the project squarely in the “Often Good Candidates” category according to FHWA guidelines for 3-lane conversions. It will however require intersection analysis to assure satisfactory operations.

The recommendation for bicyclists is a protected bicycle lane, separated from motor vehicles by a curb and raised to be adjacent to and level with the sidewalk. This type of protected bicycle lane, referred to as a raised cycle track, has advantages over an on-road bicycle lane (see Figure 6.8 and 6.9 on facing page). The raised cycle track will feature a distinguishing pattern and/or flush edge treatment to visually separate it from the pedestrian space. The raised cycle track can also accommodate temporary snow storage during winter months when bicycle traffic is lower, and it has the added advantage of increasing the bicyclists level of comfort through the physical separation.

PROJECT LIMITS

Figure 6.8: Representative Project #3 Project Limits



Red: project limits; blue: existing bicycle lanes; green dashed: existing pathway; orange: existing paved shoulder

Figure 6.9: Representative Project #3 Cross Section

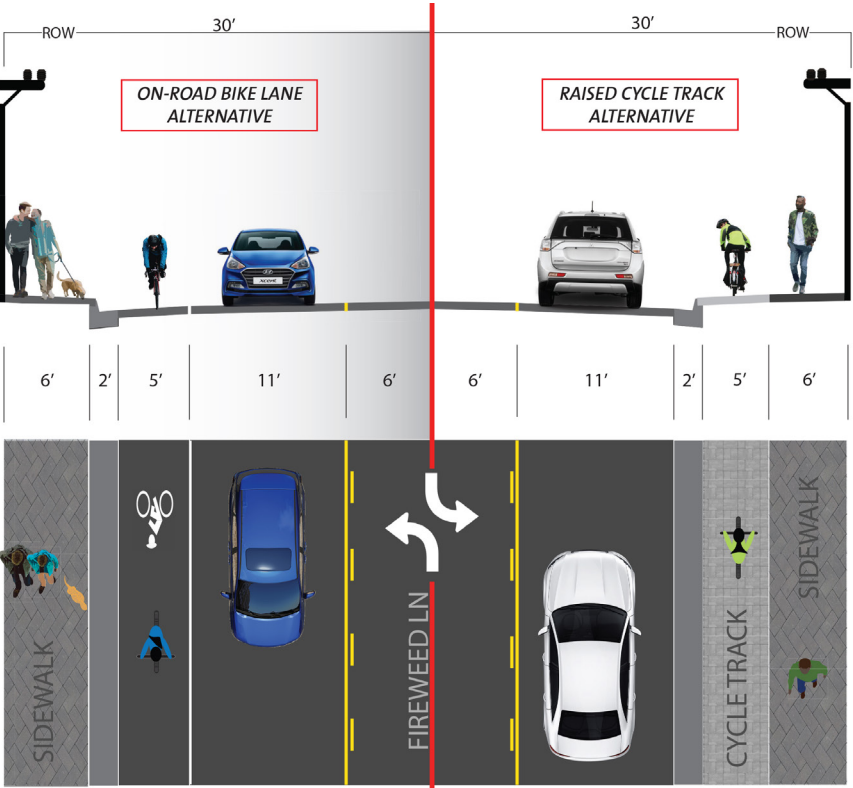
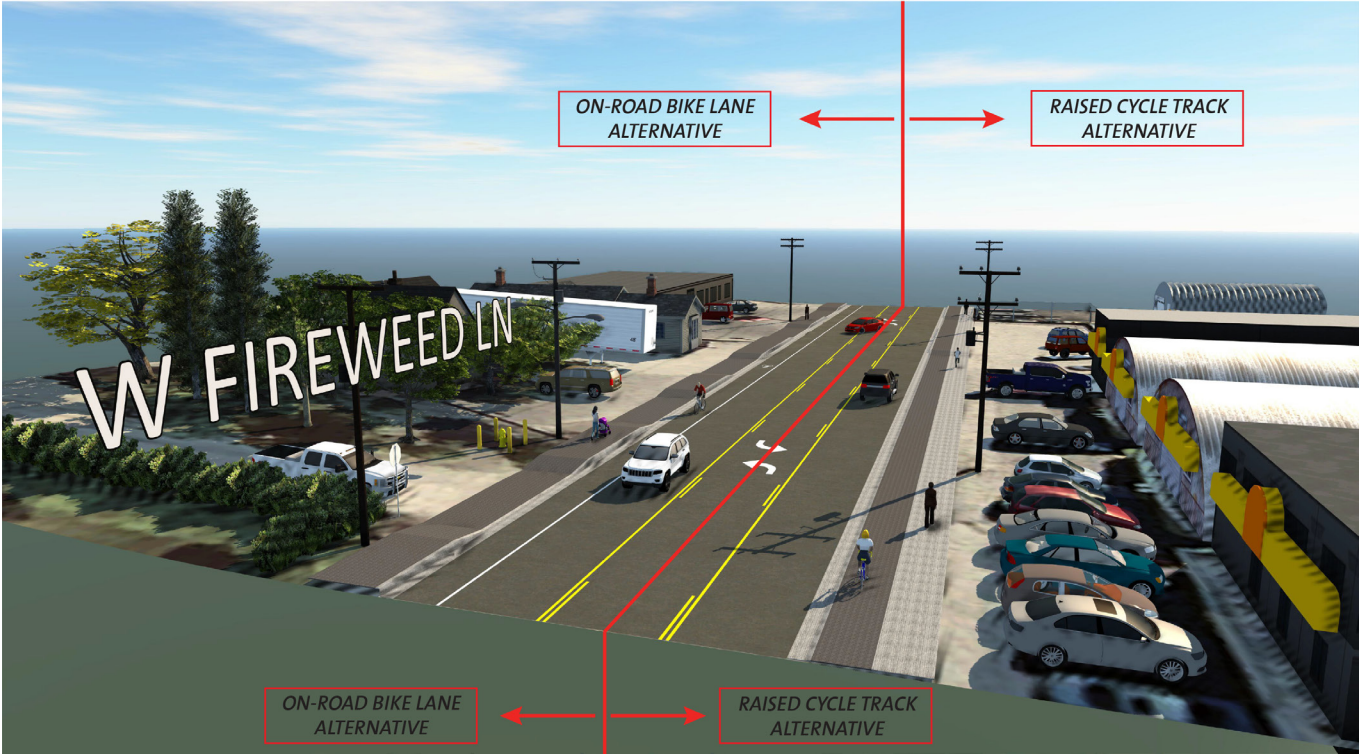


Figure 6.10: Representative Project #3 Visualization



PROJECT CHALLENGES

Business stakeholders: previous attempts to upgrade Fireweed Lane were met with opposition from the local business community over access and traffic capacity concerns. Successes from the recently completed (and similar) Spenard Road project should be leveraged during the Context Sensitive Solutions (CSS) and Context Sensitive Design (CSD) stakeholder involvement. Before/ after data from recent road diet projects (Spenard Road, Arctic Boulevard) could be evaluated to show skeptics that road diets and non-motorized improvements can benefit businesses and users alike.¹

Parking: many of the businesses fronting Fireweed Lane utilize parking immediately behind the existing sidewalk, as shown in the visualization above. Successful implementation of non-motorized improvements will necessitate reorganizing parking and consolidating access. One solution, employed on Spenard Road, was to purchase vacant lots and construct off-street parking lots to offset the loss of parking behind the pathway/sidewalk.

Phasing: the scope of the improvements is too large to bear for a single project under the current financial climate. It is recommended that future studies evaluate dividing the corridor into logical phases.

¹ Arancibia, D., Farber, S., et al. (2019). Measuring the Local Economic Impacts of Replacing On-Street Parking with Bike Lanes: A Toronto (Canada) Case Study. Journal of the American Planning Association. Retrieved from <https://doi.org/10.1080/01944363.2019.1638816>.

Utilities: Utility poles limit the available right-of-way for the sidewalk. Coordination with electric utility companies is necessary to confirm that the undergrounding of utilities on Fireweed is planned. Other considerations for undergrounding include adequate room in the subsurface ROW corridor and costs. Land surveying, as-builts, and ROW/ easement research should be conducted in addition to other preliminary engineering tasks. Decisions to undergrounding utilities will be part of the design and engineering phase the project.

PROJECT COST OPTION (2021 DOLLARS)

Table 6.6: Representative Project #3 Fireweed Ln Project Cost Options*

DESCRIPTION			ESTIMATED COST
Engineering	A		\$3,330,000
Construction	B		\$17,760,000
Utility Relocation	C		\$3,330,000
Right-of-Way Acquisition	D		\$2,220,000
Subtotal	E	A + B + C + D	\$26,640,000
Construction Engineering	F	20% of B	\$3,552,000
Contingency	G	30%** of E	\$7,992,000
Total (rounded)	H	E + F + G	\$38,184,000

* Project cost estimates includes the full cost of the project from engineering (to determine upgrading the road to full MOA or DOT standards, including the proposed cross-section for Fireweed Lane shown as part of Representative Project #3) through construction.

** Contingency is typically 20% to 30% of total project costs. For Fireweed Lane, contingency is at the higher 30% because of the complexity of the adjacent land ownership, access, driveways, utilities, and ROW width. Spenard Road was also researched as similar context to assist in determining contingency.

AMATS NON-MOTORIZED PLAN

FUNDING OPTIONS

» AMATS funding, Bicycle Plan Implementation, Long Range Transportation Plan Implementation, Transportation Improvements Program (TIP)

MAINTENANCE COST OPTION (2021 DOLLARS)

Figure 6.7: Representative Project #3 Fireweed Ln Maintenance Cost Options

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	\$122,100
Routine Maintenance	\$144,300

IMPLEMENTATION PROCESS

Acquire funding to enable the project to advance through the following MOA Context Sensitive Solutions Strategy and development phases:

- » Concept Report, associated community involvement and Planning & Zoning Commission informational review
- » Design Study Report, associated community involvement and public review
- » 65% Design and Urban Design Commission public hearing and approval
- » Final Plans
- » Construction of proposed improvements
- » Transfer ownership and maintenance responsibility from ADOT&PF to MOA

Representative Project #4:

27th Avenue Bicycle Boulevard

PROJECT DESCRIPTION

West 27th Avenue between Minnesota Drive and Blueberry Road was identified in the previous non-motorized plans and remains to be a priority corridor for pedestrian and bicyclist improvements.

East-west connectivity through Midtown Anchorage is dominated by high-volume, high-speed arterials. It is desirable to develop a non-motorized network along lower volume, lower speed roadways that parallel the arterials. West 27th Avenue provides connectivity to the Chester Creek Trail via the pathway along Minnesota Drive and the A Street pathway via the sidewalk along West Northern Lights Boulevard. Contained within a quarter mile boundary are a number of retail establishments, bike shops, restaurants, schools, and high-density residential units.

Even though the entire $\frac{3}{4}$ mile corridor is classified as a local road, each of the three segments varies significantly in adjacent land use, right-of-way width, and traffic volume, thereby necessitating a different facility type to suit each context:

- » **Minnesota Drive to Spenard Road** - shared-use pathway on north side, sidewalk on south side, no shared-use road due to high traffic volumes
- » **Spenard Road to Arctic Boulevard** - bicycle boulevard with sidewalk on south side
- » **Arctic Boulevard to Blueberry Road** - One-way eastbound (motorized) and bicycle boulevard with buffered westbound bicycle lane

The intersection of West 27th Avenue and Spenard Road was recently realigned and crossing improvements were installed. It is recommended that additional signage and/or signalization be installed to further emphasize the crossing. Spare conduits were installed across Spenard Road to facilitate future improvements such as an electrical warning device. The intersection of West 27th Avenue and Arctic Boulevard should be reconfigured to allow for right-in/right-out only by extending the existing, raised median and adding cut throughs for bicyclists. The eastern most segment of West 27th Avenue is proposed to be one-way

PROJECT LIMITS

Figure 6.11: Representative Project #4 Project Limits



Red: project limits; blue: existing bicycle lanes; green dashed: existing pathway; orange: existing paved shoulder

Figure 6.12: Representative Project #4 27th Ave Bicycle Blvd Cross Section

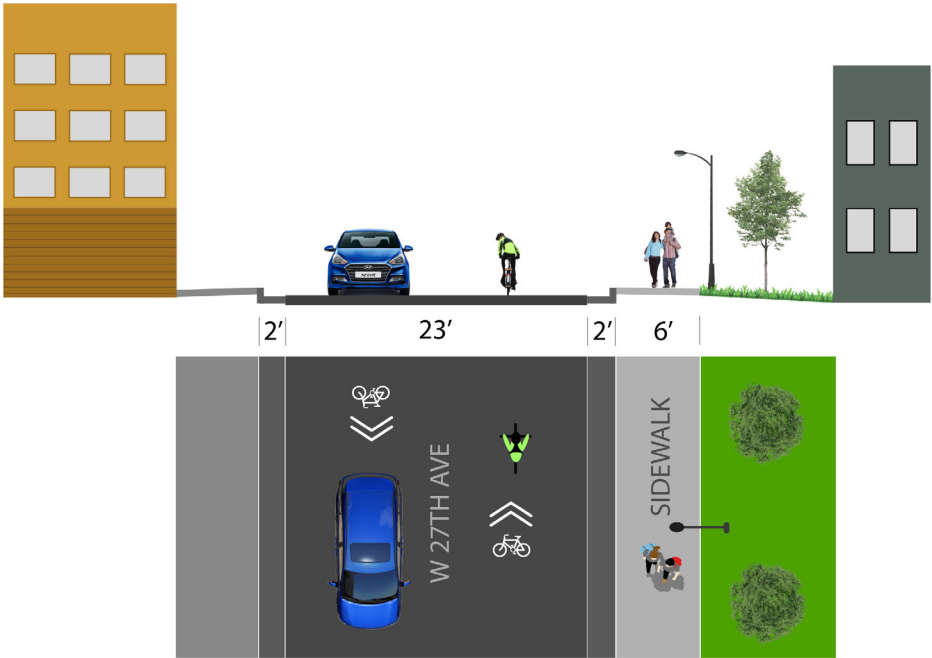


Figure 6.13: Representative Project #4 27th Ave Bicycle Blvd Visualization - Minnesota Drive



Figure 6.14: Representative Project #4 27th Ave Bicycle Blvd Visualization - Spenard Road to Arctic Boulevard



Figure 6.15: Representative Project #4 27th Ave Bicycle Blvd Visualization - Arctic Boulevard to Blueberry Road



PROJECT CHALLENGES

On-street parking: demand for on-street parking is high, particularly near the Bear Tooth Theatre pub.

Offset intersection: West 27th Avenue is offset across Arctic Boulevard.

Connectivity: connecting West 27th Avenue to the surrounding non-motorized network will require improvements along Minnesota Boulevard to extend the improvements to the signalized crossing at West 26th Avenue.

Fire Department access: additional street width is required in front of multi-story buildings.

Utility relocations: overhead electric will require relocation/undergrounding.

MAINTENANCE COST OPTION (2021 DOLLARS)

Table 6.9: Representative Project #4 27th Avenue Bicycle Boulevard Project Maintenance Cost

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	\$61,050
Routine Maintenance	\$38,850

PROJECT COST OPTION (2021 DOLLARS)

Table 6.8: Representative Project #4 27th Avenue Bicycle Boulevard Project Cost Options

DESCRIPTION		CALCULATION	ESTIMATED COST
Engineering	A		\$1,110,000
Construction	B		\$3,996,000
Utility Relocation	C		\$1,365,300
Right-of-Way Acquisition	D		\$166,500
Subtotal	E	A + B + C + D	\$6,637,800
Construction Engineering	F	20% of B	\$799,200
Contingency	G	30% of E	\$1,991,340
Total (rounded)	H	E + F + G	\$9,428,000

FUNDING OPTIONS

- » MOA ARDSA (Anchorage Roads and Drainage Area) bonds

IMPLEMENTATION PROCESS

Concept Report and pre-Draft Design Study Report has already been completed and through the community involvement process as well as the Anchorage Planning and Zoning Commission at Concept Phase.
See <http://w27thaveimprovements.com/> for more information.

Additional funding will enable the project to:

- » Advance to the Public Review version of the Design Study Report
- » 65% Design and Urban Design Commission (UDC) review and approval
- » Final Plans
- » Construction of proposed improvements



Bicycle parking

Representative Project #5:

40th Avenue Sidewalk

PROJECT DESCRIPTION

West 40th Avenue is a discontinuous roadway that extends from Lake Hood to the Cuddy Family Midtown Park. The segment between Arctic Boulevard and the Cuddy Family Midtown Park, classified a collector roadway, was identified as a priority corridor by the public and the agency advisory group. Like much of Midtown, West 40th Avenue serves a predominately commercial area, providing access to several high rises that house native corporations, energy companies, and financial institutions.

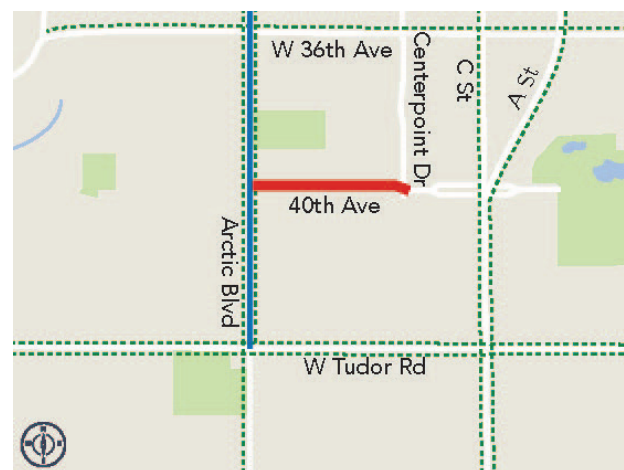
Similar to the 27th Avenue bicycle boulevard project, bicyclists and pedestrians traveling through Midtown favor lower volume/lower speed roadways as alternatives to the busy east-west arterials. This segment of West 40th Avenue has a 2017 AADT of 1,464 and a posted speed limit of 25 mph, making it a pleasant environment for non-motorized users. In addition to the Cuddy Family Midtown Park, West 40th Avenue also provides connectivity to the ZJ Loussac Public Library, another civic destination.

Currently, no dedicated non-motorized facilities exist between Arctic Boulevard and Centerpoint Drive, a distance of approximately 1,200 feet. West 40th Avenue was already identified in the previous edition of the Bicycle Plan as a shared use roadway and recommended to receive a separated pathway. The existing Right-of-Way will not support the addition of a separated pathway. For this reason, and the corridor's propensity for a shared roadway, it is recommended to complete the missing sidewalk link by adding curb & gutter and sidewalk along the north side.

In addition, while the NMP does not make prescriptive recommendations about amenities along corridors, it does generally support amenities that create more comfortable pedestrian environments—benches, trash receptacles, and the like. Amenity type and location will be determined during the design phase, which undergoes a public stakeholder process to determine the needs of the corridor and its users, consistent with the MOA's adopted context sensitive design policy. Agencies responsible for maintenance of sidewalks and amenities in the right-of-way will also be engaged for snow storage/maintenance considerations.

PROJECT LIMITS

Figure 6.16: Representative Project #5 Project Limits



Red: project limits; green dashed: existing pathway

Figure 6.17: Representative Project #5 40th Avenue Sidewalk Cross

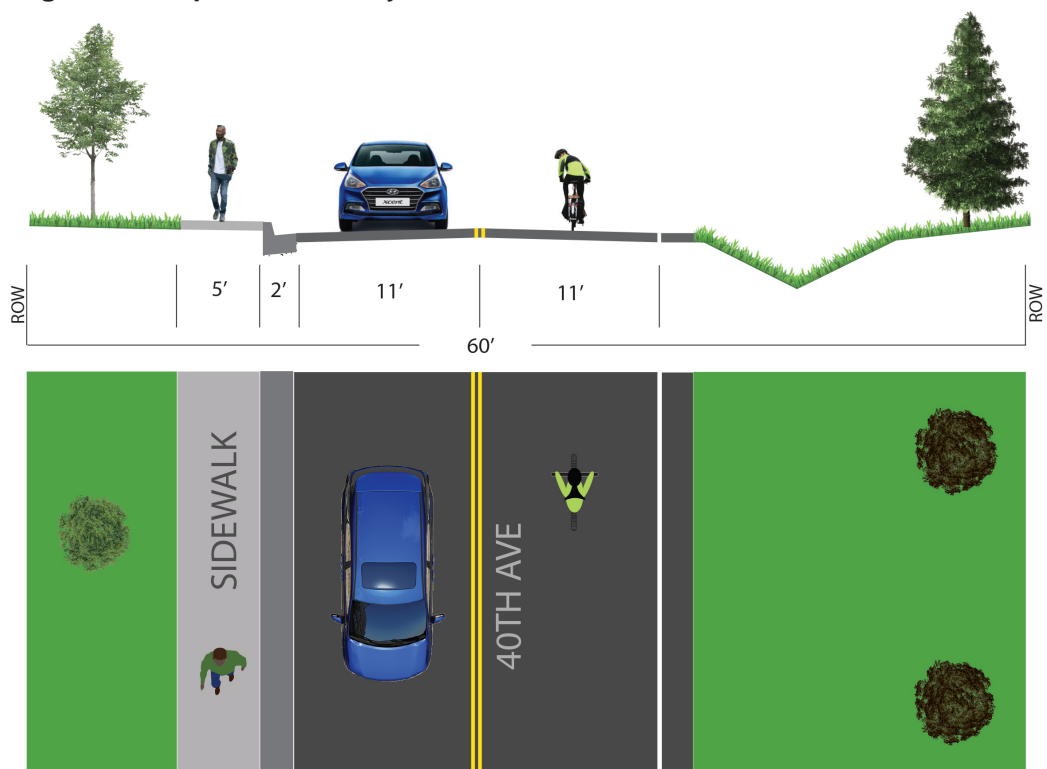


Figure 6.18: Representative Project #5 40th Avenue Sidewalk



PROJECT CHALLENGES

Drainage: roadway drainage is conveyed through ditches and driveway culverts. Adding curb & gutter will necessitate the addition of an underground storm drain system or other innovative/green infrastructure solutions. Retaining the open drainage on one side will be easier to maintain, enhance the quality of runoff destined for Fish Creek, and reduce overall project costs.

Transients: area stakeholders are very concerned about issues such as vandalism and illegal camps. Public facilities should incorporate features that discourage these activities with increased lighting (particularly pedestrian level lighting), open landscaping, and other Crime Prevention Through Environmental Design (CPTED) features. An increase in non-motorized activity will have a positive impact on how the space is used which in turn could help deter vandalism.

PROJECT COST OPTION (2021 DOLLARS)

Table 6.10: Representative Project #5 40th Avenue Sidewalk Project Cost Options

DESCRIPTION	ITEM	CALCULATION	ESTIMATED COST
Engineering	A		\$222,000
Construction	B		\$643,800
Utility Relocation	C		\$55,500
Right-of-Way Acquisition	D		\$11,100
Subtotal	E	A + B + C + D	\$932,400
Construction Engineering	F	20% of B	\$128,760
Contingency	G	30% of E	\$279,720
Total (rounded)	H	E + F + G	\$1,341,000

MAINTENANCE COST OPTION (2021 DOLLARS)

Table 6.11: Representative Project #5 40th Avenue Sidewalk Maintenance Cost Options

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	\$11,100
Routine Maintenance	\$16,650

FUNDING OPTIONS

- » MOA Anchorage Roads and Drainage Area (ARDSA) bonds
- » AMATS funding, AMATS Bicycle Plan implementation and Complete Streets Policy Implementation
- » Transportation Improvements Program (TIP) and Transportation Alternatives Program (TAP)

IMPLEMENTATION PROCESS

Acquire funding to enable the project to advance through the following development phases:

- » Design, associated community involvement and agency review
- » Final Plans
- » Construction of proposed improvements

Representative Project #6:

Coronado Street

PROJECT DESCRIPTION

Coronado Street in Chugiak-Eagle River is an east-west collector linking the Old Glenn Highway to the North Eagle River Loop Road via Eagle River Loop Spur, a distance of approximately 0.6 miles. The current roadway is strip paved, with narrow shoulders and shallow drainage ditches on both sides. Roadway illumination is virtually non-existent and dedicated non-motorized facilities are absent. The existing Right-of-Way (ROW) width is approximately 60 feet, the posted speed limit is 25 mph, and the 2017 AADT was 1,162 (Coronado Street) and 346 (Eagle River Loop Spur).

The zoning is a mix of Commercial (CE-RO), Two Family Residential (CE-R-2D), and Multiple Family Residential (CE-R-2M). The land use transitions from Town Center along the western end of Coronado Street to medium/high density residential for most of the remainder. The 2010 Anchorage Bicycle Plan recommended a shared roadway. In the 2007 Anchorage Pedestrian Plan, Coronado Street was ranked 45 out of 319 and slated to receive a sidewalk and lighting.

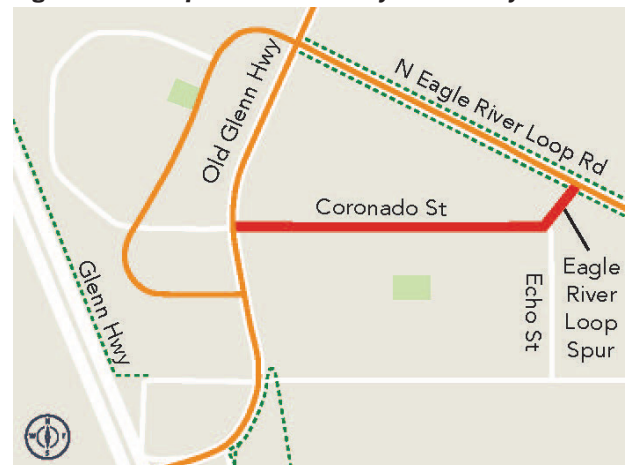
The neighboring Coronado Park development includes a mix of ownership and rental housing, and a mix of units that serve seniors and families. At full buildout, the site will include 185 units, 83 of which are reserved for senior households. These units all access Coronado Street from the south. In addition, Coronado Street provides a connection between pathways along Old Glenn Highway and North Eagle River Loop Road.

Coronado Street and Eagle River Loop Spur will be upgraded to closely conform with Anchorage's Design Criteria Manual (DCM) collector road standards. Due to the limited ROW width, it is proposed to include a separated pathway on the south side only, with paved shoulders and curb & gutter on both sides. Limiting the pathway to one side reduces and/or eliminates costly and time consuming ROW acquisitions and has successfully been applied to other area road upgrades, such as Old Eagle River Road.

Similar to Project #5, the type and location of amenities, such as benches and trash receptacles, will be determined during the design phase of this project and will be subject to a public stakeholder process to determine the needs of the corridor and its users.

PROJECT LIMITS

Figure 6.19: Representative Project #6 Project Limits



Red: project limits; green dashed: existing pathway; orange: existing paved shoulder

Figure 6.20: Representative Project #6 Coronado Street Cross

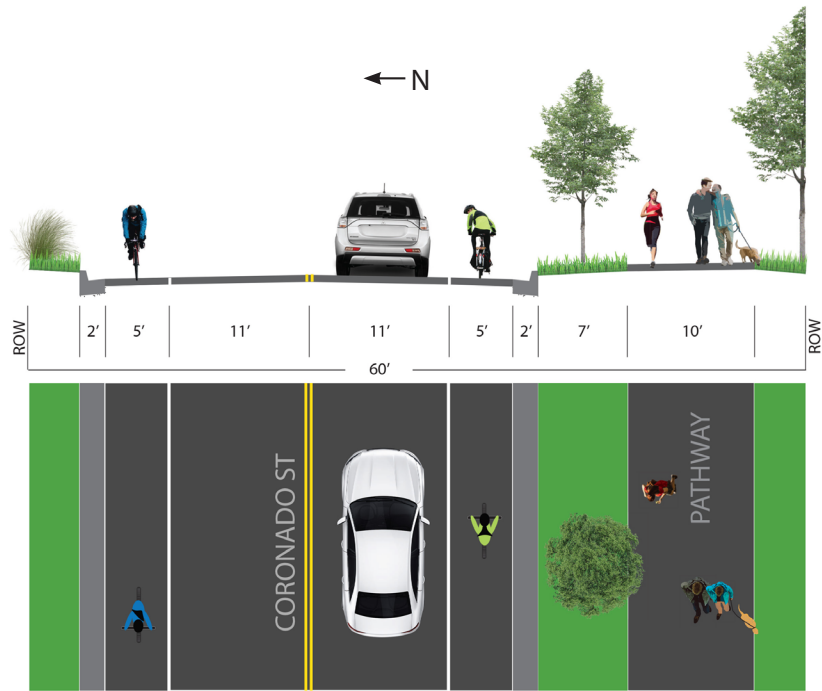


Figure 6.21: Representative Project #6 Coronado Street Visualization



PROJECT CHALLENGES

Roadway standards: Title 21 and the Design Criteria Manual require dedicated pedestrian facilities on both side of an urban collector. In order to maintain separation (i.e., snow storage) and minimize ROW acquisition, a single shared-use separated pathway is proposed. This will require close coordination with MOA Planning to assure a smooth P&ZC/UDC review.

Topography: Eagle River Loop Spur may require retaining walls to prevent the widening from impacting private property access. Retaining walls add significant cost and should be programmed into future project nominations.

Intersection: The intersection of Coronado Street, Eagle River Loop Spur, and Echo Street is stop controlled on the Eagle River Loop Spur approach. It is possible to improve the intersection geometry by switching stop control to the Echo Street approach, which also allows the pathway to cross at a stop controlled location.

A lack of designated crossings along the Old Glenn Highway burdens non-motorized users with out-of-direction travel to access the west side of the central business district. Crossing improvements of the Old Glenn Highway in the vicinity of Coronado Street should be considered. The 2003 Chugiak-Eagle River Central Business District Revitalization Plan suggested a crossing approximately 180 feet to the north along with circulation improvements between Business Boulevard and Old Glenn Highway.

PROJECT COST OPTION (2021 DOLLARS)

Table 6.12: Representative Project #6 Coronado Street Project Cost Options

DESCRIPTION	ITEM	CALCULATION	ESTIMATED COST
Engineering	A		\$1,665,000
Construction	B		\$5,550,000
Utility Relocation	C		\$222,000
Right-of-Way Acquisition	D		\$111,000
Subtotal	E	A + B + C + D	\$7,548,000
Construction Engineering	F	20% of B	\$1,110,000
Contingency	G	30% of E	\$2,264,400
Total (rounded)	H	E + F + G	\$10,922,000

MAINTENANCE COST OPTION (2021 DOLLARS)

Table 6.13: Coronado Street Maintenance Cost

DESCRIPTION	ESTIMATED RECURRING ANNUAL MAINTENANCE COSTS
Snow Hauling	N/A
Routine Maintenance	\$44,400

FUNDING OPTIONS

- » MOA Roads and Drainage Area bonds
- » AMATS funding, AMATS Bicycle Plan implementation and Complete Streets Policy Implementation
- » Transportation Improvements Program (TIP) and Transportation Alternatives Program (TAP)

IMPLEMENTATION PROCESS

Acquire funding to enable the project to advance through the following MOA Context Sensitive Solutions Strategy and development phases:

- » Concept Report, associated community involvement and Planning & Zoning Commission informational review
- » Design Study Report, associated community involvement and public review
- » 65% Design and Urban Design Commission public hearing and approval
- » Final Plans
- » Construction of proposed improvements

6.3 Next Steps

This and previous chapters of this plan outline an approach for promoting non-motorized transportation throughout the AMATS Planning area. Through detailed analysis of existing conditions, review of previous planning efforts, and coordination with stakeholders, this plan presents a prioritized network for bicycle and pedestrian travel.

Through the course of this planning effort, several opportunities for further addressing the needs of nonmotorized transportation were identified. In addition to implementing the projects and programs listed above, the following items should be considered as a way to build on the work presented here:

» **Recreational Trails Plan:** Anchorage and the surrounding area have a robust system of recreational trails that accommodate walking, mountain biking, skiing, and a variety of other non-motorized modes. A separate planning effort should be explored that aims to not only catalogue this entire network but examine ways to improve existing trails, enhance connections to the trail network, and expand opportunities for recreational trails.

» **Sidepath Evaluation:** The existing network of sidepaths (shared use pathways alongside roadways) provides dedicated travel space for nonmotorized modes along many of the AMATS Planning area's busy roads. However, in many locations the existing sidepaths do not provide the necessary width, nor are protections in place to improve travel across driveways or through intersections. The sidepath network should provide a low-stress travel alternative along major roadways. Especially as the network ages, it is important to assess the quality of these facilities. AMATS should consider a study that examines existing sidepaths for width, surface quality, separation from roadway, driveway treatment, and interaction with roadways at intersections.

Table 6.14: Implementation Matrix: Immediate (0-5 years)

	IMPLEMENTATION ACTION	RELATED POLICY/GOAL	FUNDING SOURCES	IMPLEMENTATION PARTNERS
IMMEDIATE (0-5 YEARS)	Implement 5 High Priority Bicycle Projects	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS h & ATAP	ADOT&PF, MOA PM&E, MOA Traffic
	Implement Projects on 3 High Priority Pedestrian Corridors	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP	ADOT&PF, MOA PM&E, MOA Traffic
	Implement 1 Internal Staff Training	Goals 1, 3, and 7	AMATS PL	ADOT&PF, Local Advocacy Groups, MOA Parks & Rec
	Develop Data Consolidation Program Including Sidepath Evaluation	Goals 1, 5, and 6	MOA OECD, MOA Parks & Rec, MOA IT, AMATS TIP	AMATS, ADOT&PF, MOA Parks & Rec, MOA Traffic
	Create Winter Maintenance Task Force and Develop Winter Maintenance Strategy	Goals 1, 3, 4, and 5	AMATS PL, MOA Parks & Rec, MOA M&O, ADOT&PF	AMATS, MOA M&O, ADOT&PF, MOA Parks & Rec, MOA Traffic, Other Organizations Assisting with Winter Maintenance
	Hold 2nd Winter Maintenance Forum to develop prioritized winter maintenance route map	Goals 1, 3, 4, and 5	AMATS PL, MOA Parks & Rec, MOA M&O, ADOT&PF	AMATS, MOA M&O, ADOT&PF, MOA Parks & Rec, MOA Traffic, Other Organizations Assisting with Winter Maintenance
	Develop a Complete Streets Policy Checklist	Goals 1, 3, 4	N/A	MOA & State Transportation Agencies, MOA Traffic
	Develop Recreational Trails Plan	All Goals	AMATS TIP, AMATS TAP, ATAP, MOA Parks & Rec	MOA Parks & Rec, MOA Traffic
	Continue Open Street/ Parklet Pilot Program	Goal 7		MOA Parks & Rec, Advocacy Organizations
	Continue Safe Routes to School Program	Goals 1, 2, 3, and 7	AMATS TIP, AMATS TAP, ATAP, Alaska Trails, DHHS, ADHSS	Anchorage School District, Anchorage School District and Parent-Teach Associations, MOA, Local Advocacy Groups
	Review AMATS lighting policies and design guidance	Goals 1, 3, and 5		AMATS
	Implement High Priority Programs and Policies	Goals 1, 2, 3, 6 and 7	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	AMATS, MOA Traffic, MOA Parks & Rec, ADOT&PF
	Create an interactive webmap for existing and planned non-motorized facilities within the AMATS area	Goals 1, 2, 5, and 7		MOA GIS

Table 6.15: Implementation Matrix: Mid-term (5-10 years)

	IMPLEMENTATION ACTION	RELATED POLICY/GOAL	FUNDING SOURCES	IMPLEMENTATION PARTNERS
MID-TERM (5-10 YEARS)*	Develop connections to the Moose Loop's Campbell Creek and Coastal Trails	Goals 1 and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	Anchorage Parks Foundation
	Implement All High Priority Bicycle Projects	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	ADOT&PF, MOA PM&E, MOA Traffic
	Implement Projects on All High Priority Pedestrian Corridors	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	ADOT&PF, MOA PM&E, MOA Traffic
	Implement 5 medium priority bicycle projects	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	ADOT&PF, MOA PM&E, MOA Traffic
	Develop and Expand Non-Motorized Count Program	Goals 1, 6 and 7	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	MOA Parks & Rec, Alaska DOT&PF, MOA Traffic, Local Advocacy Organizations
	Develop Program for Regular Internal Staff Training	Goals 1, 3, and 7	AMATS PL	MOA Transportation Agencies
	Develop Driver Education Program	Goals 1, 3, and 7	State of Alaska DMV	Alaska DOT&PF, Alaska Department of Admin, Division of Motor Vehicles, Anchorage public schools, Bike Anchorage; AARP; SafeAlaskans; MOA Traffic, Funding; AMATS-TIP, Transportation Alternatives Program Funds (TAP)
	Continue and Expand Safe Routes to School Program	Goals 1, 2, 3, and 7	AMATS TIP, AMATS TAP, ATAP, Alaska Trails, DHHS, ADHSS	Anchorage School District, Anchorage School District and Parent-Teach Associations, MOA, Local Advocacy Groups
	Continue Open Street/Parklet Pilot Program	Goal 7		MOA Parks & Rec, Advocacy Organizations, Businesses
	Develop performance metrics	Goal 6		
	Implement half of the Programs and Policies	Goals 1, 2, 3, 6, and 7	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	AMATS, MOA Traffic, MOA Parks & Rec, ADOT&PF

*** It is assumed that actions from the immediate list is continued (e.g., the Open Street/Parklet Pilot Program)**

Table 6.16: Implementation Matrix: Long Term (10 or More Years)

	IMPLEMENTATION ACTION	RELATED POLICY/GOAL	FUNDING SOURCES	IMPLEMENTATION PARTNERS
LONG-TERM (10 OR MORE YEARS)*	Implement all medium and low priority bicycle projects	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	ADOT&PF, MOA PM&E, MOA Traffic
	Implement Projects on All Identified Pedestrian Corridors	Goals 1, 2, 3, and 5	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	ADOT&PF, MOA PM&E, MOA Traffic
	Implement all of the Programs and Policies	Goals 1, 2, 3, 6, and 7	AMATS TIP, Municipal Bonds, AMATS TAP & ATAP, Alaska State Grant Funds	AMATS, MOA Traffic, MOA Parks & Rec, ADOT&PF

*** It is assumed that actions from the immediate and mid-term lists are continued (e.g., continuation of the Safe Routes to School Program)**

Goal 1

» Increase the Use of Non-motorized system

Goal 2

» Promote + Improve Health + Quality of Life

Goal 3

» Improve Safety + Security

Goal 4

» Optimize Maintenance for All Seasons

Goal 5

» Connect Communities Through All Modes to All Destinations

Goal 6

» Measure Non-motorized Use + Assets

Goal 7

» Build Community Through Education + Involvement

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