



AMATS: Seward Highway to Glenn Highway Connection
Planning & Environmental Linkage Study
State Project No.: CFHWY00550
Federal Project No.: 0001653

Detailed Alternatives Report

DRAFT

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This planning document may be adopted in a subsequent environmental review process in accordance with 23 USC 168 Integration of Planning and Environmental Review.

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 USC 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

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Acronyms and Abbreviations

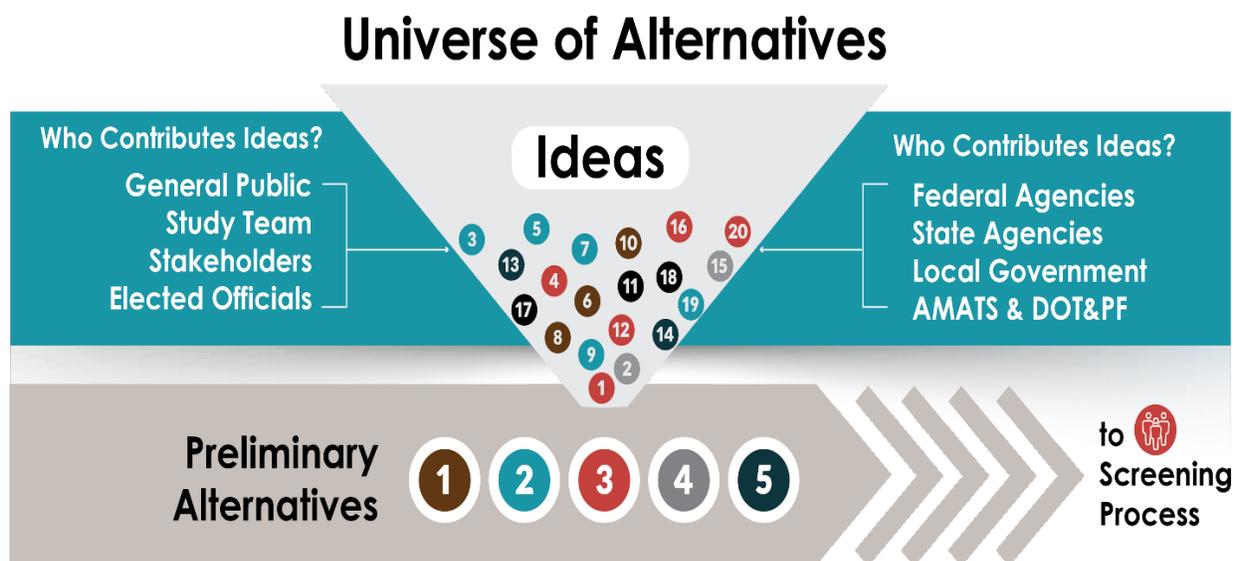
ADA	Americans with Disabilities Act
AMATS	Anchorage Metropolitan Area Transportation Solutions
DOT&PF	Alaska Department of Transportation and Public Facilities
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
MOA	Municipality of Anchorage
MTP	Metropolitan Transportation Plan
NEPA	National Environmental Policy Act
NMP	<i>Non-Motorized Plan</i>
NHS	National Highway System
PEL	Planning and Environmental Linkages
POA	Port of Alaska
RSA	runway safety area
TIP	Transportation Improvement Program
TSAIA	Ted Stevens Anchorage International Airport

1 Introduction

The purpose of this report is to present and obtain input on the alternatives proposed for evaluation in the Seward-Glenn Connection Planning and Environmental Linkages (PEL) Study. The alternatives are intended to satisfy the purpose and needs identified for the project in the “[Purpose and Need Statement](#)” and to conform to the design criteria presented in Appendix A. These design criteria and associated design elements are intended to provide a toolbox for developing the alternatives and will be used to refine alternatives as they move forward for more detailed analysis.

Through the PEL outreach process, the project team solicited ideas from the public, agencies, Tribes, and elected officials. To date, the project team has received more than 200 separate comments with ideas for alternatives and transportation improvements within the study area. Figure 1 depicts the sources of input on alternatives. See the project website (www.sewardglennconnection.com) for a list of the ideas and suggestions garnered from the PEL outreach to date.

Figure 1. Alternatives Input



The team also reviewed plans and studies to identify planned improvements and ideas that were considered prior to this study. The project team developed a range of concepts based on the past plans and public input, and explored these concepts with stakeholders from study area neighborhoods as well as city and state transportation and planning officials in a workshop setting (see Appendix B for a summary of the concepts and workshop input). Based on the workshop, the project team refined the concepts and developed six alternatives: a No Build alternative; a 2050 Metropolitan Transportation Plan [MTP] alternative; and four primary build alternatives, some with more than one variation in alignment (see Chapter 4 for additional information about each alternative). The alternatives are multimodal, meaning they include a

range of potential road and nonmotorized (e.g., bicycle, pedestrian) improvements that support the desired system performance within the study area.

We need your help!

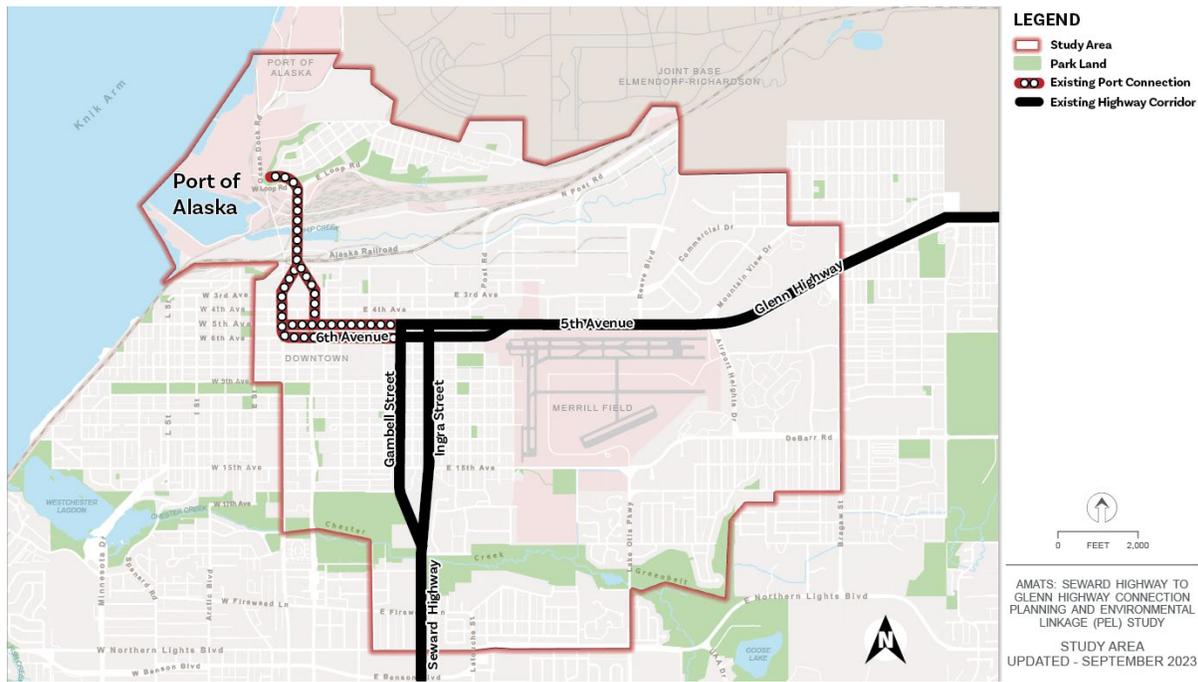
The project team is now asking for your input. Please review this report and, in particular, the alternatives in Chapter 4 and provide your feedback. Do you have other ideas for solving the transportation challenges within the study area? Do you have concerns with the alternatives or ideas for improving them? If so, please provide your comments by April 7, 2024.

The project team will refine the alternatives based on your input, then evaluate them to determine how well they satisfy the purpose and need for the project as well as provide information regarding potential environmental and cost implications.

2 Project Description

The Seward-Glenn Connection PEL Study will identify and evaluate options to improve transportation safety, access, connectivity, and livability. The study area generally follows Bragaw Street on the east, Northern Lights Boulevard on the south, C Street on the west, and Joint Base Elmendorf-Richardson on the north. It includes areas where potential transportation improvements could be developed between the Glenn and Seward Highways as well as to and from the Port of Alaska (POA). The study area is broad enough to also gauge how traffic levels on parallel routes may be affected. The alternatives identify potential transportation improvements within the project study area, which is shown in Figure 2.

Figure 2. Study Area

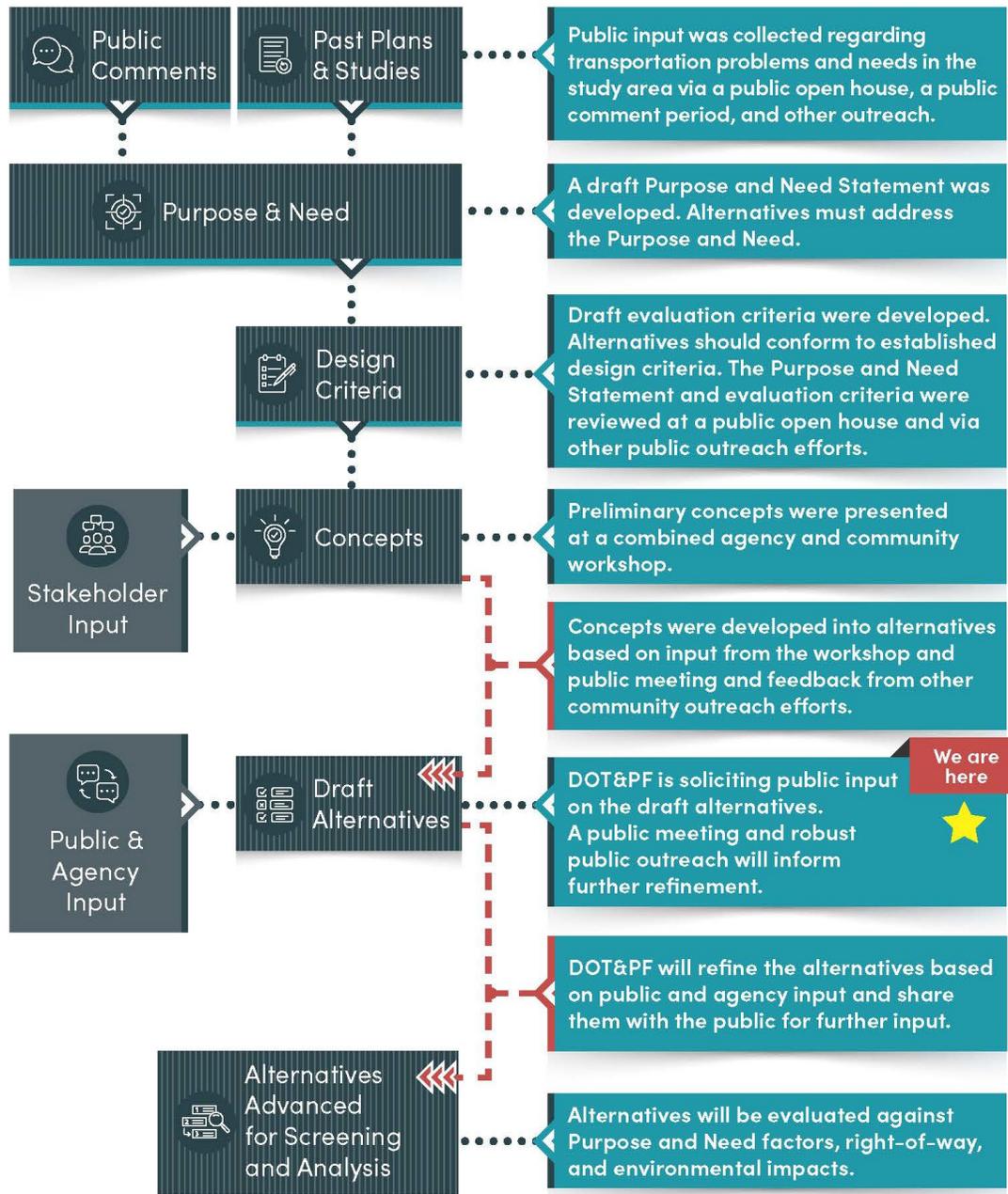


3 Alternative Development Methodology

3.1 Introduction

This chapter describes the process the project team used to create the alternatives presented in Chapter 4. This process is summarized in Figure 3.

Figure 3. Seward-Glenn PEL Alternatives Development Process



The project team created initial alternatives based on public input at three separate public/stakeholder meetings, a review of past plans and studies, and project team ideas to try to resolve the transportation problems identified in the "[Purpose and Need Statement](#)." Initial concepts were presented and refined based on input from study area neighborhoods as well as city and state transportation and planning officials at a February 2023 workshop. The remainder of this chapter summarizes the process.

3.2 Public Input on Alternatives

As previously mentioned, the project team solicited ideas for alternatives through three rounds of previous stakeholder engagement and have received more than 200 comments related to transportation improvements within the study area.

The comments regarding alternatives ranged from ideas for upgrading the existing transportation system, to developing new roads, to considering improving other modes of transportation. A sampling of the comments received include:

- *I want to make sure the connection from the POA to the new project is part of this project. At 3rd/4th Ingra area.*
- *A bridge [Chester Creek crossing at Seward Hwy] would be really cool to promote fish passage. The current [Chester Creek] culvert is in bad shape and is really wacky. Also, having a bridge would open up the pedestrian pathway making is less susceptible to shady activity.*
- *I think the idea of connecting these two highways makes a lot of sense. I am curious to see what their plans are. Do they have any preliminary drawings or ideas on how they are going to connect them, or are they still in the research stage?*
- *Move the [Seward] highway below grade through to the Glenn and restore neighborhood connectivity, green spaces, and bike and pedestrian friendly routes above. This will improve both flow of through traffic and livability of this part of Anchorage. It benefits everyone.*
- *Would East Whitney be a target for shipping traffic to be diverted instead of going through downtown? Connect between here and Post Road maybe? Then connect to the highway over there?*
- *Please downsize the Gambell-Ingra couplet. It has a negative effect on the community. The traffic can be hosted elsewhere.*
- *Install a toll booth between Eagle River and Muldoon (or between Eagle River and Eklutna) to transfer some of the cost of maintaining Anchorage's roads and other infrastructure to the commuters who wear them down and then leave every day and don't pay property tax.*
- *Slip lane from Airports Height to the Glenn Highway northbound should either include a speed table to give pedestrians priority or should be completely removed. This is an easy place for pedestrians to get hit.*
- *Instead expanding the highway or facilitating more traffic cutting through the city, we urge the project team to seek solutions that will reduce our expensive dependency on vehicular traffic.*

- *Recommendation for Design or Alternatives: Lots of pedestrian and bike friendly designs.*
- *Suggestion for Purpose: There should also be language that provides for a dedicated express highway from the Glenn Highway, Airport Heights intersection aligned just below the Merrill Field airport, over 15th Avenue and through Sitka Street Park, Chester Creek Greenbelt Park, Woodside Park and connecting to the Seward Highway at Gambell Street.*

All comments, including those regarding alternatives, received and DOT&PF's responses are available in the project library on the project web site at <https://sewardglennconnection.com/>.

3.3 Past Plans and Studies

As mentioned above, the project team also identified potential improvements through a review of past plans and studies. The following plans were reviewed:

- *Four-Year Program Summary AMATS FFY 2019–2022 TIP; 2022; Anchorage Metropolitan Area Transportation Solutions (AMATS)*
- *AMATS Non-motorized Plan (NMP), Draft; 2021; AMATS*
- *Our Downtown: Anchorage Downtown District Plan, 2023, Municipality of Anchorage (MOA)*
- *Downtown Plan, 2007, MOA*
- *Alaska Railroad Projects, 2020, Alaska Railroad corporation*
- *2040 Metropolitan Transportation Plan: Anchorage Bowl and Chugiak-Eagle River, 2020, AMATS*
- *Draft 2050 Metropolitan Transportation Plan for the Anchorage Bowl and Chugiak-Eagle River, August 2023, AMATS*
- *Public Transportation 2019 System Report, 2020, People Mover*
- *Transit on the Move: 2020 Transit Plan, 2020, People Mover*
- *Anchorage Climate Action Plan, 2019, MOA*
- *3rd & Ingra/Former Alaska Native Service Hospital Master Plan, 2019, MOA*
- *Anchorage Freight Mobility Study, 2017, AMATS*
- *Anchorage 2040 Land Use Plan: A Supplement to Anchorage 2020 – Anchorage Bowl Comprehensive Plan, 2017, MOA*
- *Alaska Statewide Long Range Transportation Plan, Let's Keep Moving 2036: Policy Plan, 2016, Alaska Department of Transportation and Public Facilities (DOT&PF)*
- *Mountain View Targeted Neighborhood Plan, 2016, MOA*
- *Official Streets and Highways Plan: Maps, Policies, and Standards; 2014; AMATS*
- *Fairview Neighborhood Plan, 2014, MOA*
- *Ship Creek Framework Plan, 2014, MOA*
- *Anchorage Original Neighborhoods Historic Preservation Plan, 2013, MOA*
- *Gambell Street Redevelopment and Implementation Plan, 2013, MOA*
- *Government Hill Neighborhood Plan, 2013, MOA*
- *2035 Metropolitan Transportation Plan, 2012, AMATS*

- Highway-to-Highway Environmental Impact Statement (EIS) materials, circa 2010, DOT&PF
- *Anchorage Bicycle Plan: Bicycles as a Mode of Transportation. An element of the MOA Nonmotorized Transportation Plan*; 2010; AMATS
- *Anchorage Pedestrian Plan: making Anchorage a better, safer place to walk*; 2007; AMATS
- *Transit on the Move*, 2020, MOA
- *Anchorage Downtown Comprehensive Plan*, 2007, MOA
- *Anchorage Bowl 2025 Long-Range Transportation Plan*, 2005, AMATS
- *East Anchorage Study of Transportation*, 2003, DOT&PF
- *Anchorage 2020: Anchorage Bowl Comprehensive Plan*, 2002, MOA
- *New Seward Highway Major Investment Study*, 2002, DOT&PF
- *Glenn Highway Major Investment Study*, 2001, DOT&PF
- *Long Range Transportation Plan*; 1984, 1991, 1994, 1997, and 2001; AMATS
- *Major Corridors Study*, 1982, DOT&PF
- *Long Range Element*, 1976, City of Anchorage
- *Revised Transportation Plan*, 1972, AMATS
- *Anchorage Metropolitan Area Transportation Plan*, 1968, AMATS
- *Anchorage Freeway Study*, 1963, DOT&PF
- *AMATS: C Street/Ocean Dock Road Access Ramps Reconnaissance Study*, 2018, DOT&PF
- *Midtown Congestion Relief PEL*, 2020, DOT&PF
- *Merrill Field Airport Master Plan Update and Noise Study*; 2016; Merrill Field Airport, MOA

For additional information on these documents, see the *System Performance Memorandum* and *A Basic Description of the Environmental Setting Report* prepared as part of the PEL, available in the project library (<https://sewardglennconnection.com>).

Ideas that were culled from the plans and studies that were included in the initial concepts presented at the February 2023 workshop included:

- Gambell Street in Fairview as a two-way, two-lane main street from the *Fairview Neighborhood Plan* and the Anchorage Land Use Plan Map
- A Greenway Supportive Development Corridor connecting Chester Creek and Ship Creek along Ingra Street from the Anchorage Land Use Plan Map
- A depressed freeway connection from the Seward Highway to the Glenn Highway along Hyder Street from the 2040 MTP
- Converting 5th and 6th Avenues from one-way to two-way streets from the *Downtown Plan*
- A freeway connection south of Merrill Field/along 15th Avenue from the Highway-to-Highway project.
- An extension of Lake Otis Parkway from Airport Heights/Glenn Highway to DeBarr Road from the *2005 Long Range Transportation Plan* with 2027 Knik Arm Crossing Revisions

- A reconstruction of Lake Otis Parkway between DeBarr Road and Northern Lights Boulevard from the adopted 2040 MTP
- An extension of Ingra and Gambell Streets north of 3rd Avenue (to Whitney Avenue) for POA/industrial access from DOT&PF's Alaska 2035 Long Range Transportation Policy Plan

3.4 Purpose and Need

According to the Federal Highway Administration (FHWA), the purpose and need of a project is essential in establishing a basis for the development of the range of reasonable alternatives, and assists with the identification and eventual selection of a preferred alternative. For this project, DOT&PF has established the following purpose statement for the PEL:

The proposed purpose is to improve mobility, accessibility, safety, and livability for people and goods traveling on or across the roadway system connecting the Seward Highway, Glenn Highway, and POA by all modes (including people on foot, bicycles, or buses) while improving community cohesion. The intent is to (1) maintain the functionality of the National Highway System (NHS) while meeting the local travel needs of residents that live, play, and work in the area and must safely travel across or along those roadways; and (2) improve neighborhood connections, quality of life, and accommodate adopted plans, as practicable.

The following needs have been identified:

Reduce Conflicting Travel Functions: *Serving competing regional and local travel functions on the highway network in the study area leads to conflicts that reduce mobility, safety, and accessibility for all users.*

Improve Safety: *Crashes for vehicles and people walking and bicycling are elevated at several study area intersections.*

Promote Social Equity and Economic Development: *Current highway and arterial design on the Seward/Glenn Highway corridor in the study area is inconsistent with the vision expressed in recently adopted plans. Those plans envision improving neighborhood redevelopment, community cohesion, and quality of life.*

In creating the alternatives, DOT&PF is striving to satisfy the identified purpose and solve the problems identified in each of the need statements. For additional details on the purpose and needs, see the Purpose and Need Statement on the project library page at <http://sewardglennconnection.com/>.

3.5 Design Criteria

The project team developed design criteria to be used as a basis to guide development of potential alternatives. The design criteria are presented in Appendix A: *Alternative Design*

Criteria Technical Memorandum. The criteria are based on published design guidance from the DOT&PF, MOA, and AMATS' *Official Streets and Highways Plan*, among other sources. The design criteria, and associated design elements are intended to provide a toolbox that can be used in developing and refining the alternatives. The proposed design criteria and elements are multimodal and provide design guidance on a range of potential road, bicycle, and pedestrian improvements that support the desired system performance within the study area, and are responsive to the purpose and needs identified for the PEL Study. Design criteria and recommendations are presented for freeways, expressways, major arterial streets, minor arterial streets, transit-supportive corridors, industrial streets, greenway supported development, and main street corridors. Also included is guidance on potential pedestrian and bicycle facilities that could be incorporated into the alternatives as they are refined. Readers are encouraged to consult Appendix A to find additional details on these potential improvement types and design treatments as they review the concepts and alternatives presented in this report.

3.6 Alternatives Development Workshop

On February 28, 2023, the project team held an alternatives development workshop with representatives from study area neighborhoods, members of the project's committees (Technical Committee, Citizen Advisory Committee, Agencies and Tribes Committee, and Executive Committee), transportation planners and engineers from the MOA and DOT&PF, and local and state elected officials from Anchorage and the Matanuska-Susitna Valley. The workshop was an opportunity for area stakeholders, transportation professionals, and local leaders to come together to help shape the range of alternatives to be explored in the PEL study. The workshop purpose was to get input about the technical feasibility of the concepts presented to the group and determine if any refinements were needed before the initial alternatives were presented to the community.

The workshop started with an overview presentation by the project team and was followed by different engagement opportunities to allow participants to help shape and comment on the concepts. The project team prepared preliminary concepts and invited participants to comment on those concepts through an open house session. Participants then broke into small groups (one per concept) to discuss the comments as well as brainstorm modifications and pros and cons. The initial concepts from the workshop are presented below, along with pros and cons and documentation of workshop comments on each concept. For a list of invitees, workshop attendees, and notes and comments collected at the workshop, see Appendix B.

The seven initial concepts presented and discussed at the workshop are summarized below, including an initial analysis of whether the concepts would meet the purpose and need. For details on these concepts, see Appendix B:

- **Concept 1 – Lake Otis-Reeve Connector:** This concept would include an arterial extension connecting Reeve Boulevard and Lake Otis Parkway (between Merrill Field and Alaska Regional Hospital) to a new interchange at Airport Heights Drive/Glenn Highway. Gambell Street would be redeveloped as a main street.

This concept on its own would not satisfy the purpose and need. It does not meet the need to “reduce conflicting travel functions” because it does not effectively separate local and regional travel. A connection to Lake Otis Parkway was identified as beneficial for getting traffic to and from the U-Med area.

- **Concept 2 – Hyder Greenway/Woonerf Street:** This concept would include a greenway street (and/or woonerf) along Hyder Street, with Ingra Street converted to an at-grade six-lane major arterial street. Gambell Street would be redeveloped as a main street.

This concept on its own would not satisfy the purpose and need. It does not meet the need to “reduce conflicting travel functions” because it does not effectively separate local and regional travel. The concept of using Hyder Street for a north-south greenway street (or woonerf) connecting the Chester Creek Trail to the Ship Creek Trail has merit as a viable nonmotorized facility.

- **Concept 3 – Ingra Parkway:** This concept would include a greenway street/parkway on Ingra Street, with travel lanes separated by a greenspace/trail connecting Chester and Ship Creeks. Gambell Street would be redeveloped as a main street.

This concept on its own would not satisfy the purpose and need. It does not meet the need to “reduce conflicting travel functions” because it does not effectively separate local and regional travel. The wide right-of-way necessary as well as associated housing and business impacts was determined to not be acceptable given the limited travel and conflict reduction benefits.

- **Concept 4 – Couplets:** A series of three-lane couplets north-south on Ingra and Hyder Streets and east-west on 3rd and 5th Avenues would be developed. In the remaining right-of-way of each street, an improved pedestrian and trail connection would be developed. Gambell Street would be redeveloped as a main street.

This concept on its own would not satisfy the purpose and need. It does not meet the need to “reduce conflicting travel functions” because it does not effectively separate local and regional travel. The idea of reducing a lane of arterial travel on Gambell and Ingra Streets was suggested as an interim improvement.

- **Concept 5 – 2040 MTP Freeway Preservation:** This concept would provide a continuous expressway through the study area connecting the Glenn and Seward Highways on the same alignment as the Seward Highway-Glenn Highway Connection in the 2040 MTP, but it would not be trenched/depressed. At-grade intersections would remain at 5th, 6th, 9th, 13th, and 15th Avenues. The intent would be to “preserve” the option of building a depressed expressway at a later date by building the highway connection on the surface as an interim project. Gambell Street would be redeveloped as a main street, and Ingra Street would be redeveloped as a greenway supported development street.

This concept would not satisfy the purpose and need. It does not meet the need to “reduce conflicting travel functions” because it does not effectively separate local and regional travel. Workshop participants expressed concerns that this “preservation” project would be built, but the remaining phases planned in the 2040 MTP would not.

- **Concept 6 – 2040 MTP:** This concept would provide a continuous freeway through the study area connecting the Glenn and Seward Highways. Portions of the alignment would be depressed, with major cross streets bridging over top. This alternative is from the adopted 2040 MTP. Gambell Street would be redeveloped as a main street, and Ingra Street would be redeveloped as a greenway supported development street.

This concept effectively separates regional and local travel on different grade levels, thereby reducing conflicts and improving safety. Concerns were expressed regarding the substantial right-of-way needed and the subsequent housing and business impacts. This concept is moving forward for detailed refinement, and will explore variations in alignment to try to reduce housing and business relocation impacts to better meet the need to “Promote Social Equity and Economic Development.”

- **Concept 7 – 15th Avenue Bypass:** This concept would create a continuous freeway connecting the Glenn and Seward Highways diagonally on an alignment south of Merrill Field and 15th Avenue. Gambell Street would be redeveloped as a main street, and Ingra Street would be redeveloped as a greenway supported development street.

This concept would separate regional and local travel on different grade levels, thereby reducing conflicts and improving safety. Traffic heading Downtown would likely still use surface streets (Gambell/Ingra Streets and 5th/6th Avenues) but traffic through Fairview would be reduced by eliminating broader regional traffic. Concerns were expressed regarding the substantial right-of-way needed as well as the subsequent housing and business impacts in South Fairview. This concept is moving forward for detailed refinement and will explore variations in alignment to try to reduce relocation impacts to better meet the need to “Promote Social Equity and Economic Development.”

Details regarding these concepts, including maps, pros and cons, and comments and suggestions from workshop participants are included in Appendix B.

In summary, the following ideas and concepts have been carried forward to create the alternatives detailed in Chapter 4:

- **No Action Alternative:** This alternative is required by the National Environmental Policy Act (NEPA) and serves as a baseline for comparison.
- **Concept 6 – 2040 MTP:** This concept was carried forward with several variations in alignment:
 - **Alternative A:** This is the alignment from the 2040 MTP.
 - **Alternative B:** This alignment tries to maximize use of the existing NHS (along 5th Avenue and Ingra Street) while leaving Hyder Street to become a pedestrian-oriented corridor.

- **Alternative B Variations:** These variations combine the north portion of Alternative A and the south portion of B alignments using two different connection variants to try to reduce private right-of-way and relocation impacts, and not impact Hyder Street so projects from local plans can be implemented there.
- **Concept 7 – 15th Avenue Bypass:** This concept was carried forward with several variations in alignment:
 - **Alternative C:** This alignment is similar to the concept described above but includes a connection to Lake Otis Parkway to facilitate U-Med access.
 - **Alternative D:** This alignment maximizes use of MOA land (Merrill Field, MOA Street Maintenance Snow Disposal Site, and park land) to try to reduce private right-of-way and relocation impacts. To minimize park impacts to the Chester Creek Greenbelt, a bridge (viaduct) would be built over the park land. Bridge piers would still require the use of park property.
- **Gambell Main Street:** All alternatives include reducing the number of lanes on Gambell Street and reconstructing it as a “main street.” Various street, sidewalk, trail, parking, and landscaping configurations are possible while still staying within the 60-foot right-of-way along Gambell Street.
- **Chester Creek-Ship Creek Trail Connector:** All alternatives include a regional connecting trail as part of a greenway street or woonerf, either along Ingra Street or Hyder Street.
- **POA Connections:** Each of the alternatives includes potential connections/upgrades of an NHS facility for connecting the POA to the Seward and Glenn Highways.

4 Draft Alternatives

The alternatives presented in this chapter include a No Action Alternative; a 2050 MTP Alternative; and four primary build alternatives, some with variations in alignment that were created from the concepts summarized in Section 3.6, which were based on public and agency input through three rounds of public meetings.

Overall Design Approach

The project team incorporated the following ideas into each proposed build alternative, to the extent possible:

- Improve Local Travel, Livability, and Economic Development
 - A main street design on Gambell Street
 - Complete street or woonerf design on Ingra Street and/or Hyder Street
 - Reduced lanes on 5th and 6th Avenues and Gambell and Ingra Streets as described in 2050 MTP
 - Pedestrian bridge (over depressed freeway alternatives) or nonmotorized upgrade on 10th Avenue
- Improve Nonmotorized Travel and Livability
 - Regional trail connecting Chester Creek Trail to Ship Creek Trail to form a loop around Anchorage's urban core (via proposed Fairview greenway connection, Ship Creek Trail, Coastal Trail, and Chester Creek Trail)
 - Pedestrian accommodations via bridges or tunnels across major roadways
 - Roadway bridge over Chester Creek at the Seward Highway to improve pedestrian undercrossing comfort and return the creek to natural settings for fish passage
 - Trail connections from Bragaw Street to Reeve Boulevard
- Reduce Travel Conflicts and Improve Safety
 - Reduced local and regional travel conflicts by depressing the highway or routing it to bypass neighborhoods
 - Removal of POA traffic from neighborhoods
- Improve Freight Movement, Reduce Conflicts, and Improve Safety
 - Reduced truck traffic on local streets by connecting the POA directly to a highway interchange
 - Increased freight mobility by keeping trucks on freeways and rerouting them to industrial streets without stop lights
- Improve Regional Travel
 - Free-flow highway connection from the Seward Highway to the Glenn Highway
 - Removal of the gap between existing controlled-access freeways, improving connectivity for regional travelers
- Consistency with Adopted Plans
 - Accommodation/promotion of planned improvements from:
 - 2050 MTP
 - Anchorage Land Use Plan Map
 - *Fairview Neighborhood Plan*
 - *Gambell Street Redevelopment and Implementation Plan*

4.1 No Action Alternative

4.1.1 Description

The No Action Alternative tests what will happen if nothing is constructed to try to alleviate the transportation problems identified in the purpose and need statement. A No Build Alternative is required for any future NEPA Environmental Assessment or EIS alternatives analyses that stem from this PEL study, and is included in this PEL Study as the basis of comparison for impacts associated with potential build alternatives.

For this PEL study, the No Action Alternative assumes that no substantial road or nonmotorized improvements are made to Gambell and Ingra Streets and 5th and 6th Avenues within the study area,

and no improvements are made to POA access routes. Table 1 identifies the AMATS 2050 MTP projects for these NHS roads that are assumed to not be built. All other projects identified in the 2050 MTP are assumed to be constructed in the No Action Alternative. For additional information on these projects, please see the 2050 MTP.

Design Approach

- Tests what happens if no improvements are made to regional or local travel on the NHS corridor
- Required to be studied to ensure PEL information is eligible for inclusion in future environmental processes

Features

- No roadway nor nonmotorized improvements on Gambell and Ingra Streets or 5th and 6th Avenues
- No new dedicated POA connection
- No nonmotorized improvements connecting Ship Creek Trail and Chester Creek Trail

Table 1. AMATS 2050 MTP Projects Omitted as Part of the No Action Alternative

MTP Number	Project	Timeline
CPS026	5th & 6th Avenue Complete Streets (I to Reeve): Remove a lane of traffic, slow speeds, add protected bike lanes, and upgrade pedestrian infrastructure; consider adding green scaping and urban tree planting	Long term
CPS118	Ingra Street (3rd Avenue to 15th Avenue): Rehabilitate Ingra Street to a three-lane boulevard and include separated nonmotorized facilities	Long term
CPS092	Gambell Street (3rd Avenue to 15th Avenue): Rehabilitate to a three-lane boulevard and include separated nonmotorized facilities	Long term

Additionally, the No Action Alternative assumes the following improvements from other adopted plans would also not occur:

- The Seward Highway/Glenn Highway Connection project identified in the 2040 MTP. The No Action Alternative assumes that no highway connections would be built.
- A two-way Gambell main street concept from the *Fairview Neighborhood Plan* and Anchorage Land Use Plan Map. Gambell Street would remain a four-lane arterial street, one-way southbound.
- New connections or upgrades between the POA and NHS.

- The primary freight route between the POA and NHS would continue to be the A/C Street viaduct to 5th and 6th Avenues. Ocean Dock Road (between the POA entrance and Whitney Road) and Whitney Road (between North C Street and Post Road) would not be upgraded.
- “Greenway Supported Development Corridor” along Ingra Street from the Anchorage Land Use Plan Map (and identified in the AMATS 2050 MTP on Hyder Street). No new trail connection would be constructed connecting the Ship Creek Trail and Chester Creek Trail.
- “Secondary Pedestrian Corridor” upgrade on Gambell Street (East 16th Avenue to East 5th Avenue) and Ingra Street (East 15th Avenue to East 5th Avenue).
- “Primary Pedestrian Corridor” upgrade on East 5th Avenue (Reeve Circle to L Street) and East 6th Avenue (East 5th Avenue to L Street) from the NMP would not occur.
- The 5th Avenue, Concrete Street to Karluk Street Improvements would not be made.
- “Separated Bikeways” on Gambell Street (East 15th Avenue to 3rd Avenue) and Ingra Street (East 13th Avenue to East 3rd Avenue) and on East 5th Avenue (Karluk to M Street) and East 6th Avenue (Karluk to L Street) from the NMP would not occur.

All other planned roadway, transit, and nonmotorized improvements in the 2050 MTP in the corridor are assumed to occur. See the 2050 MTP for details on other planned projects within the study area.

4.1.2 Environmental Considerations

- Adverse environmental impacts associated with the build alternatives would be avoided.
- The Ingra/Gambell corridor (couplet) would continue to bisect the Fairview community and continue to result in community cohesion issues.
- Nonmotorized users would continue to encounter mobility and safety concerns.
- Without a new route for regional traffic, traffic-related safety, noise, and air quality concerns would remain or potentially increase. The community stated that these hinder economic development within the area.
- Land use redevelopment as envisioned in the Anchorage Use Plan Map would be more difficult, if not impossible to be realized. Residential and business relocations are not anticipated.

4.1.3 Purpose and Need Considerations

The No Action Alternative would not meet the purpose and need established for the PEL as discussed below.

Improve Mobility and Accessibility by All Modes

- ***Maintain the functionality of the NHS.*** No improvements would be made to the NHS. Access to the POA would remain as it is today. Functionality of the NHS would remain a problem as described in the Purpose and Need Statement.
- ***Meet local travel needs.*** No improvements would be made to improve mobility or accessibility for local needs.

- **Reduce conflicting travel functions.** Gambell and Ingra Streets would continue to function for both local and regional travel. Conflicts identified in the Purpose and Need Statement would remain.

Improve Safety for All Modes

- **Reduce conflicting travel functions.** Because regional and local travel would continue to use the same facilities, and no improvements would be built, safety issues would remain, especially the potential for vehicle and bicyclist/pedestrian crashes. Minor safety improvements would occur due to lighting and similar facility improvements that are in the adopted plans.

Improve Livability and Quality of Life

- **Improve neighborhood connections and cohesion.** Without improvements, neighborhood connections would remain as they are today. The Fairview community would continue to be separated by the eight-lane couplet on Gambell and Ingra Streets.
- **Accommodate adopted plans that support redevelopment.** Planned improvements of a Gambell main street and Ingra Greenway Supportive Development Corridor would not be built.

4.2 2050 MTP (No Highway Connection) Alternative

4.2.1 Description

Regional Roadway Improvements.

This alternative will test the improvements to Gambell and Ingra Streets and 5th and 6th Avenues that are included in the draft 2050 MTP¹. No highway connection between the Glenn and Seward Highways would be included². The 2050 MTP projects that are relevant to the NHS routing through the study area are summarized in Table 2. Readers are encouraged to consult the 2050 MTP for additional details.

In accordance with the 2050 MTP, this concept would remove a lane of traffic on 5th and 6th Avenues and Ingra and

Design Approach

- Tests 2050 MTP
- Includes no highway connection to support regional and POAt traffic

Features

- Includes lane reductions on Gambell and Ingra Streets and 5th and 6th Avenues with nonmotorized improvements
- No new dedicated POA connection, but does include improvements to Whitney Road
- Includes phase 1 of a Fairview Greenway and woonerf-style street on Hyder Street; does not fully connect Ship Creek and Chester Creek Trails

¹ The draft 2050 MTP is scheduled to be adopted in February 2024.

² The Seward Highway-Glenn Highway connection project that was the impetus for this PEL was included in the AMATS 2040 MTP but was not carried forward into the 2050 MTP.

Gambell Streets. Specifically, it would include the road improvements recommended in the draft 2050 MTP and included in Table 2.

Table 2. AMATS 2050 MTP Projects within the Project Corridor

MTP Number	Project	Timeline
CPS026	5th and 6th Avenue Complete Streets (I Street to Reeve Boulevard): Remove a lane of traffic, slow speeds, add protected bike lanes, and upgrade pedestrian infrastructure. Consider adding green scaping and urban tree planting	Long term
CPS006	15th Avenue (L Street to Gambell Street): Rehabilitate to a two-lane roadway with protected bike lanes, reduce speed, raise medians, and add single lane roundabouts at K, E, and Cordova Streets. Remove telephone poles and add street lighting, crosswalks at intersections, ADA ramps, and signage.	Long term
CPS008	15th Avenue Complete Street and North-South Crossing (Karluk Street to Orca Street): Reconstruct to remove a lane of traffic and add speed reduction, protected bike lanes, and pedestrian under/overpass crossings where possible.	Long term
CPS118	Ingra Street (3rd Avenue to 15th Avenue): Rehabilitate Ingra Street to a three-lane boulevard and include separated nonmotorized facilities	Long term
CPS117	Ingra Street (15th Avenue to 20th Avenue): Install slower speed notification infrastructure.	Long term
CPS092	Gambell Street (3rd Avenue to 15th Avenue): Rehabilitate to a three-lane boulevard and include separated nonmotorized facilities.	Long term
CIP8	Ocean Dock Road Upgrade (POA Entrance to Whitney Road)	Short term
CIP11	Whitney Road Upgrade (North C Street to Post Road)	Short term
TIP CS 17	5th Avenue (H Street to Cordova Street) and 6th Avenue (L Street to Cordova Street) Signals and Lighting Upgrade: Replace traffic signals and lighting systems to meet current electrical safety standards and design criteria; sidewalks and pavement will be replaced as necessary to facilitate electrical work and meet ADA requirements.	Short term
TIP HSIP 1	Gambell Street Utility Pole Removal and Increased Lighting	TIP
TIP HSIP 2	Gambell and Ingra Streets – Overhead Signal Indication Upgrades	TIP
NMO038	5th and 6th Avenue (M Street to Reeve Boulevard): Rehabilitate to remove a lane of vehicular traffic on each road, add a separated bikeway, widen sidewalks, and improve nonmotorized crossing infrastructure.	Short term
TIP HSIP 3	5th Ave: Concrete Street to Karluk Street Pedestrian Improvements	TIP
TIP HSIP 6	Ocean Dock Road Railroad Crossing Device Upgrades	TIP
NMO193	Gambell and Ingra Streets (East 16th Avenue to East 3rd Avenue): Construct pedestrian infrastructure.	Short term

Notes: ADA = Americans with Disabilities Act; TIP = Transportation Improvement Program

Local Roadway and Nonmotorized Improvements. The 2050 MTP has identified additional road and nonmotorized improvements within the project area. These improvements propose to

make roads that allow all traffic modes (including pedestrians, bicycles, motorists, and public transportation users of all ages and abilities) to move through the transportation network more safely. These improvements include:

- **East 4th Avenue Signal and Lighting Upgrade (Cordova Street to Ingra Street):** Reconstruct the traffic signal and street lighting system along 4th Avenue between Cordova and Ingra Streets. Sidewalk and curb ramps will also be replaced.
- **3rd Avenue Signals and Lighting Upgrade (E Street to Cordova Street):** Replace traffic signals and lighting systems to meet current electrical safety standards and design criteria; sidewalks and pavement will be replaced as necessary to facilitate electrical work and meet Americans with Disabilities Act requirements.
- **A and C Complete Streets Project (9th Avenue to 15th Avenue):** Reconstruct to reduce speeds and allow safe nonmotorized travel, encourage high-quality residential development, and reduce vehicle and noise pollution.
- **9th Avenue (LaTouche Street to Gambell Street):** Construct pedestrian infrastructure.
- **6th Avenue (Bragaw Street to Cherry Street):** Redesign to be a primarily nonmotorized route, including new nonmotorized infrastructure, intersection redesign, traffic calming, lighting, and wayfinding. Consider enhanced shared roadway as per the NMP.
- **3rd Avenue (C Street to Post Road):** Construct pedestrian infrastructure, including adding nonmotorized crossing infrastructure at A and Karluk Streets.
- **13th Avenue (Nelchina Street to C Street and E Street to S Street):** Construct missing sidewalks, widen existing sidewalks, and construct an enhanced shared roadway as per the NMP.
- **Tract J Emergency Access Road:** The Tract J project supports the POA and aims to construct a new, high-standard access road that can better accommodate heavy truck traffic as an alternative to Ocean Dock Road or Bluff Road should an emergency condition block their use. The project also includes necessary improvements to drainage and roadway lighting.

For a complete list of improvements within the project area, please see the 2050 MTP.

4.2.2 Environmental Considerations

- Reducing traffic capacity on multiple streets may result in increased congestion or increases in cut-through traffic. Reducing the number of roadway lanes and improving the nonmotorized infrastructure is anticipated to slow traffic and improve safety.
- Regional and local traffic would continue to mix on the project corridor, which would not satisfy the purpose and need. Regional traffic would continue using Ingra and Gambell Streets, bisecting east and west Fairview and continuing community cohesion issues.
- Lighting, signage, traffic calming, and similar improvements would result in improved safety for nonmotorized users.
- An improved nonmotorized transportation network is likely to increase the number of people who walk and bike within the area. Increased nonmotorized transportation use may also result in health benefits to those users.

- Adding separation between travel lanes and sidewalks will provide room for snow storage which will increase safety during winter for non-motorized users.

4.2.3 Purpose and Need Considerations

Improve Mobility and Accessibility by All Modes

- **Maintain the functionality of the NHS.** Improvements on the NHS would result in reduced capacities and slower speeds. Conflicts with stoplights, side streets, and driveways would remain. Access to the POA would remain as it is today. The functionality of the NHS may not be maintained due to the increase in vehicle congestion, and conflicts with local use would remain a problem as described in the Purpose and Need Statement.
- **Meet local travel needs.** Local travel would be improved overall as several roads would be improved; however, local vehicle travel may be negatively impacted due to potential increases in vehicle congestion on Ingra and Gambell Streets. A lane reduction on the couplet may also reduce prioritization for vehicles on the side street, increasing local trip durations. Bike and pedestrian improvements throughout the study area would benefit nonmotorized mobility and accessibility. The improved nonmotorized network may result in travelers walking or biking more and driving less.
- **Reduce conflicting travel functions.** Gambell and Ingra Streets would continue to function for both local and regional travel. Conflicts identified in the Purpose and Need Statement would remain.

Improve Safety for All Modes

- **Improve vehicle safety.** Safety issues are expected to remain because regional and local travel would continue to use the same facilities. However, safety would be anticipated to improve because of slower speeds and improved space for nonmotorized uses. Additionally, safety improvements would be associated with the lighting and similar improvements identified in the 2050 MTP.
- **Improve nonmotorized safety.** Nonmotorized improvements, such as sidewalks adjacent to slower speed roadways and dedicated bike lanes, would improve pedestrian and biker safety. A reduction in vehicle lanes on the Ingra-Gambell couplet may make east-west nonmotorized crossing maneuvers more difficult due to shorter gaps between vehicle platoons and longer traffic signal cycle lengths required to accommodate longer vehicle queues in less lanes.

Improve Livability and Quality of Life

- **Improve neighborhood connections and cohesion.** Without a new regional connection, existing traffic patterns would remain largely as they are today but on fewer lanes, which may result in increased congestion. The Fairview community would continue to be separated by regional trips on Gambell and Ingra Streets. The new nonmotorized improvements would improve the quality of life.

- **Accommodate adopted plans that support economic redevelopment.** Reducing the number of lanes on Gambell and Ingra Streets means less space would exist for regional travel. If these streets were to be redeveloped in accordance with local land use plans, which include a two-way Gambell main street and an Ingra Greenway Supportive Development Corridor, regional travel may cause congested conditions and potentially cut through traffic onto local roads. While the planned street redevelopments are intended to improve the quality of life for the neighborhood and promote economic redevelopment; without a place for the regional traffic, the benefits of those plans may not materialize.

4.3 Alternative A

4.3.1 Description

Regional Roadway Improvements. This alternative would provide a continuous freeway through the study area connecting the Glenn and Seward Highways (Figure 4) as envisioned in the 2040 MTP. Interchanges would be built at Airport Heights Drive and 5th/6th Avenues, and a partial interchange would be built at East 15th Avenue/Ingra Street. At the southern end, the project would connect to improvements identified in the Midtown Congestion PEL.

The alignment takes advantage of topography associated with the Ship Creek and Chester Creek valleys. Entering the study area on the Glenn Highway westbound, a new Airport Heights Drive/Glenn Highway interchange would be built, then the highway would head northwestward, staying low to traverse underneath Mountain View Drive, Commercial Drive, and Reeve Boulevard. The alignment would traverse along the northern side of East 3rd Avenue below the bluff at-grade and stay low as it turns southward along Hyder Street going over East 3rd Avenue and then under East 4th and East 5th Avenues. It would be depressed along Hyder Street (see Figure 5 through Figure 7) with various cross streets connecting overhead, eventually daylighting from the depressed section south of East 15th Avenue. This alignment is in the adopted 2040 MTP as *MTP#214 Seward Highway/Glenn Highway Connection – 20th Avenue (Chester Creek) to 13th Avenue.*

POA access would be tied into the interchange at Gambell and Ingra Streets by extending those streets over the bluff north of 3rd Avenue. Several variants of how to connect into the Ship Creek

Design Approach

- Test the 2040 MTP highway connection alignment
- Allow Ingra Street to be used as a collector road to accommodate local traffic circulation in Fairview

Features

- Depressed alignment on Hyder Street to separate regional and local traffic to reduce conflicts
- Interchange to directly access Downtown
- Multiple options for POA access using an extension of Gambell and Ingra Streets
- Uses alignment ideas from past adopted plans
- Greenway trail connection along Ingra Street

valley are possible, including a surface connection to East 1st Avenue or bridges and ramps connecting to either Ship Creek Avenue or Whitney Road.

Figure 4. Alternative A: Roadway and Highway Improvements



Figure 5 through Figure 9 show what the freeway might look like for both the depressed and at-grade sections (which correspond to the map labels). For the depressed sections, the highway would be below the normal ground level with retaining walls on the sides. The concept is anticipated to be between 4 and 6 lanes wide, depending on traffic forecasts. The cross-sections may also be able to be reduced by using a median F-shape barrier to eliminate the grassy median between the opposing travel lanes.

Figure 5. Depressed Freeway Example



Figure 6. Depressed Highway Cross-Section (Four Lanes)



Figure 7. Depressed Highway Cross-Section (Six Lanes)



Figure 8. At-Grade Highway Cross Section (Four Lanes)



Figure 9. At-Grade Highway Cross Section (Six Lanes)



Local Roadway Improvements. Gambell Street would be reconstructed as a two-way “Main Street,” including a reduction in lanes and speed limits as well as improved pedestrian and bike facilities with enhanced landscaping and pedestrian-scale lighting. The exact roadway configuration of the main street has not been determined but could include on-street parking, bike lanes, wider sidewalks, space for street furniture, or other amenities. See Figure 10 and Figure 11 for examples of main street design ideas. The intent is to reconstruct the street so the improvements fit within the existing 60-foot right-of-way, precluding the need to acquire ROW from the businesses intended to benefit from the roadway improvements.

Ingra Street would be reconstructed as a two-way arterial street, with one lane in each direction, a center turn lane, improved pedestrian and bike facilities, and landscaping. A regional connecting trail from the Ship Creek Trail to the Chester Creek Trail would be incorporated along Ingra Street. The intent is to reconstruct Ingra Street so the improvements fit within the existing 60-foot right-of-way; however, some ROW acquisitions and relocations may be necessary to accommodate the desired improvements. It should be noted that it may not be

feasible to add a northbound freeway on-ramp at 15th Avenue, due to limited length for the ramp to drop in elevation enough to go under 13th Avenue, therefore requiring vehicular traffic to utilize Ingra Street to get from 15th Avenue to Downtown or areas in Anchorage farther north.

Figure 10. Gambell Main Street with On-Street Parking (60 feet wide)

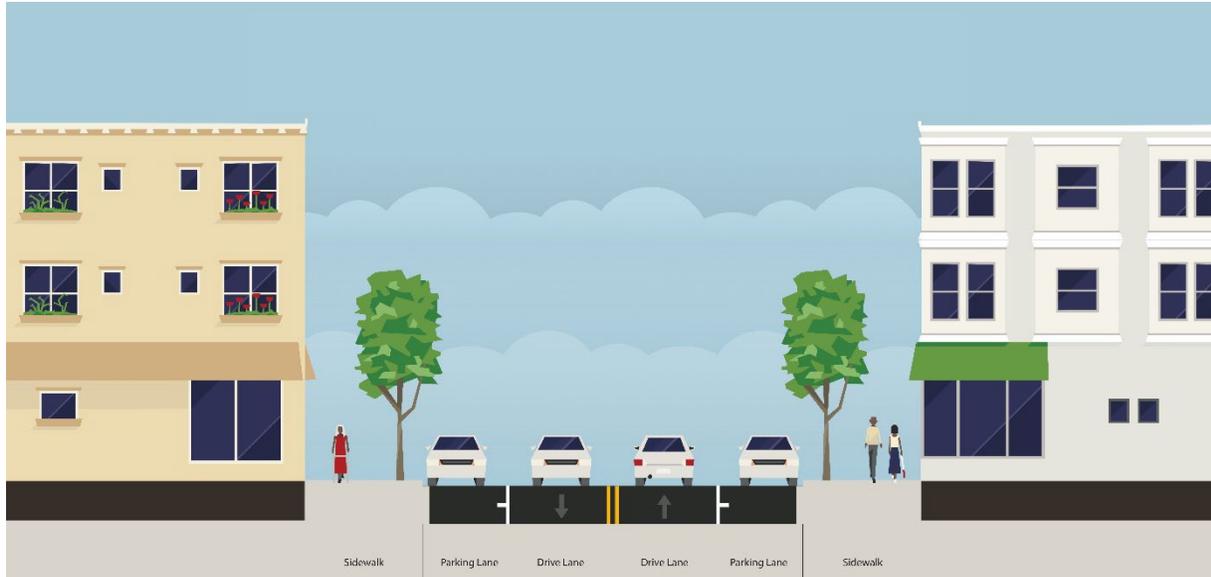


Figure 10 shows one concept for a potential Gambell main street that fits within the existing 60-foot-wide right-of-way. It features wider sidewalks than today and on-street parking on both sides of the road. A median strip along the curb separates pedestrians from the parking lanes. It's assumed higher-mobility bicycle facilities (i.e., dedicated bike lanes) are a lower priority on a main street due to the limited ROW width and desire for pedestrians to move safely while visiting shops, socializing on sidewalks, and relaxing on benches. None of which is a conducive environment for higher-mobility bicycle activity. Furthermore, slower vehicle speeds and only two lanes of two-way traffic are a safer environment for bicyclists to ride in the traffic lane.

Figure 11 shows 4th Avenue in Anchorage, which is an example of a main street with two parking lanes and two travel lanes in a 60-foot right-of-way.

Figure 11. Main Street Example – 4th Avenue, Anchorage

Source: Google Earth

Nonmotorized Improvements. Nonmotorized improvements are depicted in Figure 12. With regional traffic on a separate highway facility, one traffic lane that is currently devoted to vehicles on each of Gambell and Ingra Streets and 5th and 6th Avenues could be repurposed for nonmotorized uses or other amenities as identified in 2050 MTP and the NMP. A bike and pedestrian trail connection, along Ingra Street between the Chester Creek Trail and Ship Creek Trail, would improve nonmotorized mobility and accessibility. See Figure 13 through Figure 15 for examples of how the street could look. Such a connection through Fairview would create a regional loop trail (Fairview Greenway-Ship Creek Trail-Coastal Trail-Chester Creek Trail). The cross streets of Airport Heights Drive, Commercial Drive, Reeve Boulevard, East 3rd Avenue, East 4th Avenue, East 5th Avenue, East 6th Avenue, East 9th Avenue, East 13th Avenue, and East 15th Avenue would all include nonmotorized connections over the highway as part of the streetscape. East 10th Avenue would provide a nonmotorized bridge to support the existing bike boulevard route along 10th Avenue.

Figure 12. Alternative A: Nonmotorized Improvements

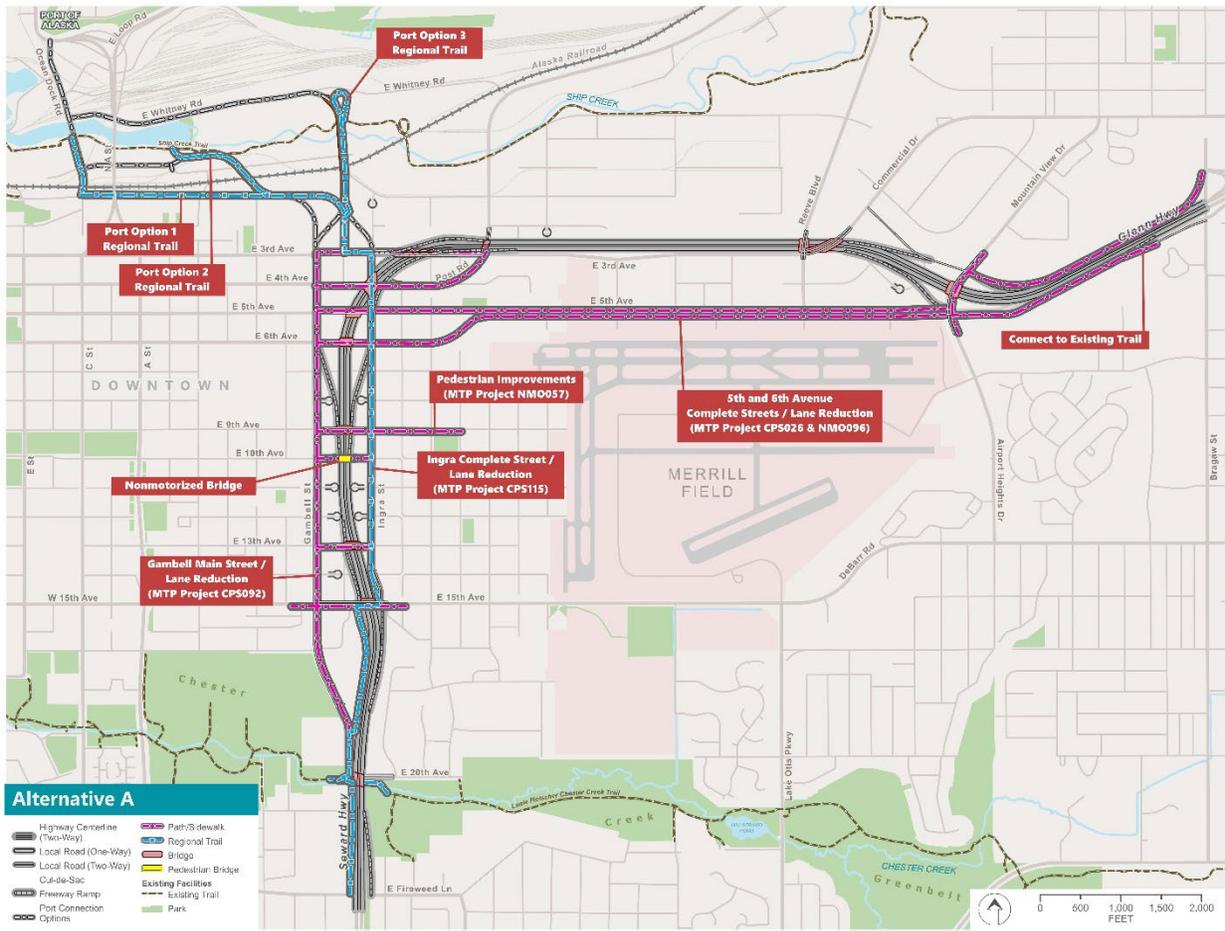


Figure 13. Ingra Street with Center Turn Lane and Cycle Tracks (60 feet wide)



Figure 13 shows a concept for a potential Ingra Street that fits within the existing 60-foot-wide right-of-way. It features a shared directional cycle track/sidewalk (see Figure 14) on each side and includes a center turn lane to access driveways or side streets. A 4-foot buffer would separate the vehicle travel lanes from the nonmotorized facilities.

Figure 14 shows how a shared bike lane and sidewalk might look along Ingra Street depicted in the cross section above.

Figure 14. Directional Cycle Track and Sidewalk



Figure 15 shows an example of a three-lane complete street on Spenard Road in Anchorage.

Figure 15. Three-lane Complete Street – Spenard Road, Anchorage



4.3.2 Environmental Considerations

- Right-of-way needs along Hyder Street and north of 3rd Avenue would cause land use, economic, and social impacts.
- Residential and business/industrial relocations would be necessary.
- Residential relocations may require housing of last resort.
- Business relocations would cause economic and neighborhood impacts.
- Without sufficient local street connections or other mitigation, the alignment would bisect east and west Fairview, creating community cohesion impacts.
- Out-of-direction travel would result across the depressed highway sections because not every cross street would be bridged over the highway.
- POA traffic may avoid Downtown, reducing conflicting travel functions and congestion within that area.
- Adverse impacts, especially along Hyder Street, would largely be borne by low income and minority residents creating potential environmental justice concerns.
- Regional traffic and associated noise would be below grade along Hyder Street and through Mountain View, likely reducing noise impacts there.
- Air quality may improve as fewer vehicles would be stopped in traffic or idling at signals.
- Impacts on historic properties would likely occur, either through necessary acquisition or a change in setting. These impacts could also be Section 4(f) of the Department of Transportation Act uses.

- Constructing the improvements at East 20th Avenue along the Seward Highway would affect Eastchester Park/Chester Creek Greenbelt, which is a Section 4(f) and Section 6(f) of the Land and Water Conservation Act property.

4.3.3 Purpose and Need Considerations

Improve Mobility and Accessibility by All Modes

- **Maintain the functionality of the NHS.** Mobility and accessibility functions of the NHS would be enhanced through a continuous freeway, improving regional travel efficiency by reducing conflicts with stoplights, side streets, and driveways. This alignment provides for freeway connectivity to both Downtown and Midtown from both the Seward and Glenn Highways. Connecting POA traffic directly to a 5th/6th Avenue highway interchange would allow POA and Ship Creek industrial area truck traffic to access the highway without traversing through Fairview or Downtown on surface streets.
- **Meet local travel needs.** Local travel would be improved because east-west travel in Fairview would no longer be hindered by higher speed regional traffic. Both motorized and nonmotorized travel would face reduced travel conflicts from regional traffic. However, because not every local street would connect across the highway, some out-of-direction travel would occur. Bike and pedestrian improvements, along either Ingra Street or Gambell Street (or both), between the Chester Creek Trail and Ship Creek Trail would improve nonmotorized mobility and accessibility. Such a connection through Fairview would create a regional loop trail (Fairview Greenway-Ship Creek Trail-Coastal Trail-Chester Creek Trail). This alternative would reduce traffic and create space for the planned nonmotorized improvements from the NMP and the complete streets projects in the 2050 MTP on Gambell and Ingra Streets and 5th and 6th Avenues by reducing the number of travel lanes.
- **Reduce conflicting travel functions.** Regional and local travel functions would be separated by grade (a vertical separation based on digging down and putting the freeway at a lower elevation than the current ground elevation), reducing potential conflicts.

Improve Safety for All Modes

- **Improve vehicle safety.** Because regional and local travel functions would be separated by grade, potential conflicts would be reduced, thereby increasing safety for all modes by removing tens-of-thousands of vehicles every day from streets used for local travel. Gambell Street would be converted to a main street, with reduced lanes and slower speeds, improving safety. Similarly, Ingra Street would have less traffic and would be redesigned to serve local travel with fewer travel lanes, buffers for snow storage, and slower speeds.
- **Improve nonmotorized safety.** Nonmotorized improvements, like sidewalks adjacent to slower speed roadways and dedicated bike lanes, would improve pedestrian and biker safety.

Improve Livability and Quality of Life

- **Improve neighborhood connections and cohesion.** Because the higher speed through-traffic would be below grade on its own, separate alignment, Gambell and Ingra Streets could be redeveloped, and local travelers (roadway and nonmotorized) trying to cross the regional traffic would not have to deal with that higher speed through-traffic, thereby improving community cohesion. The new connection to the regional trail network would improve the quality of life.
- **Accommodate adopted plans that support economic redevelopment.** Providing regional traffic with its own separate alignment means Gambell and Ingra Streets could be redeveloped in accordance with local land use plans, which include a two-way Gambell main street and an Ingra Greenway Supportive Development Corridor. Both these planned street redevelopments are intended to improve the quality of life for the neighborhood and promote economic redevelopment.

4.4 Alternative B

4.4.1 Description

Regional Roadway Improvements. This alternative would provide a continuous freeway through the study area connecting the Glenn and Seward Highways (Figure 16). Full interchanges would be built at Airport Heights Drive, 5th/6th Avenues, and East 15th Avenue/Ingra Street. The highway connection is similar in concept to Alternative A but attempts to reduce right-of-way impacts by using existing NHS right-of-way along East 5th Avenue and Ingra Streets as much as possible. A one-way frontage road along the southern side of East 5th Avenue would maintain existing access to Merrill Field. The alignment would be depressed starting along 5th Avenue, traversing under East 6th Avenue, and then turning southward onto an alignment along Ingra Street, where it would continue to be depressed (see the cross-sections in Figure 5 through Figure 7) with various cross streets connecting overhead, eventually daylighting from the depressed section south of East 15th Avenue.

POA access would be tied into the interchange at Ingra and Karluk Streets by improving Post and Whitney Roads. It would also be possible to incorporate new freight facilities that tie into Ship Creek Ave, similar to Alternative A.

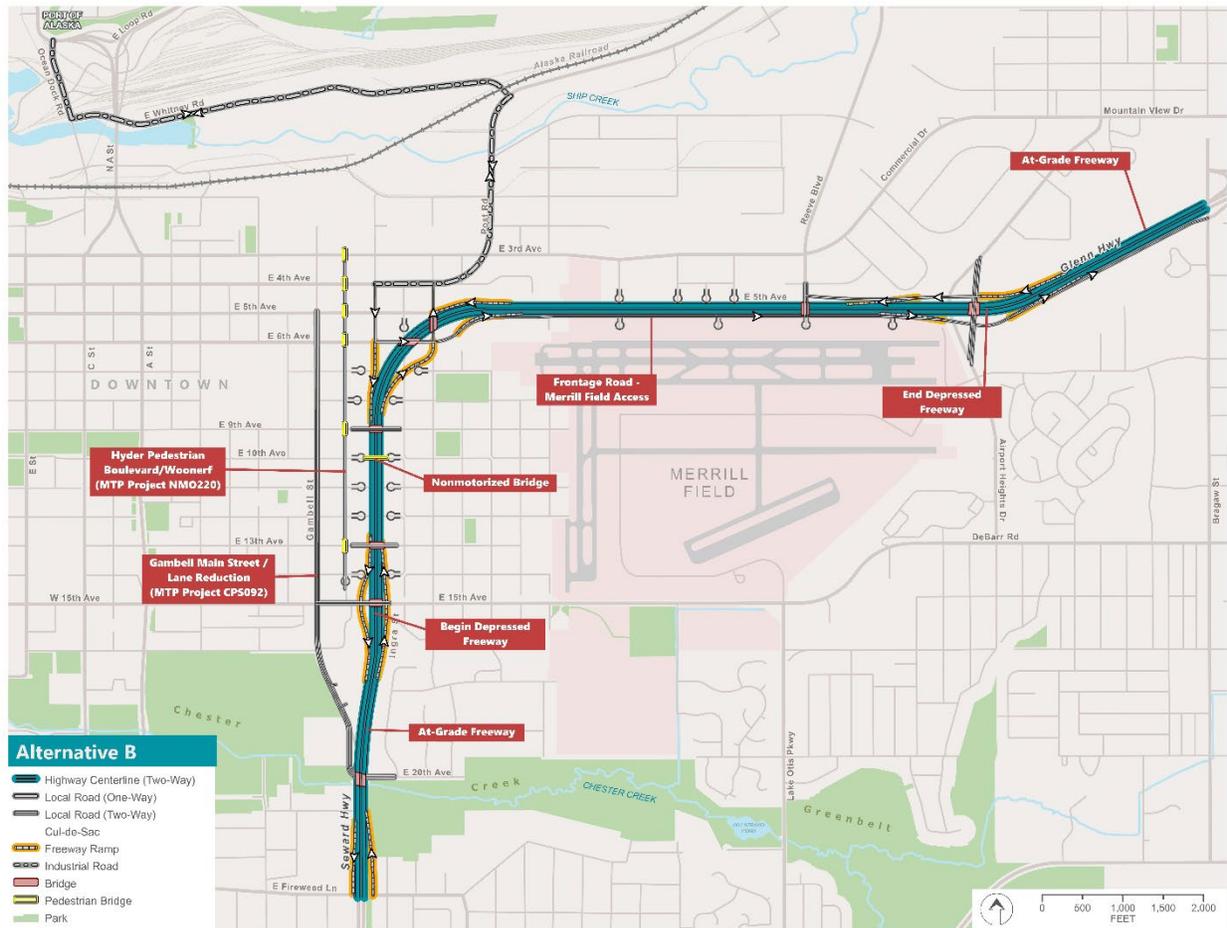
Design Approach

- Maximize use of existing DOT&PF right-of-way (on 5th Avenue and Ingra Street)
- Allow Hyder Street to be used as a woonerf and greenway connection between Ship Creek and Chester Creek Trails
- Use a shorter version of a highway connection through Fairview with reduced business relocations at the northern end

Features

- Depressed alignment on Ingra Street to separate regional and local traffic to reduce conflicts
- Interchange to directly access Downtown
- Frontage road for Merrill Field access
- POA connection upgrade via Post Road-Whitney Road to a new interchange
- Greenway trail connection and woonerf on Hyder Street

Figure 16. Alternative B: Roadway and Highway Improvements

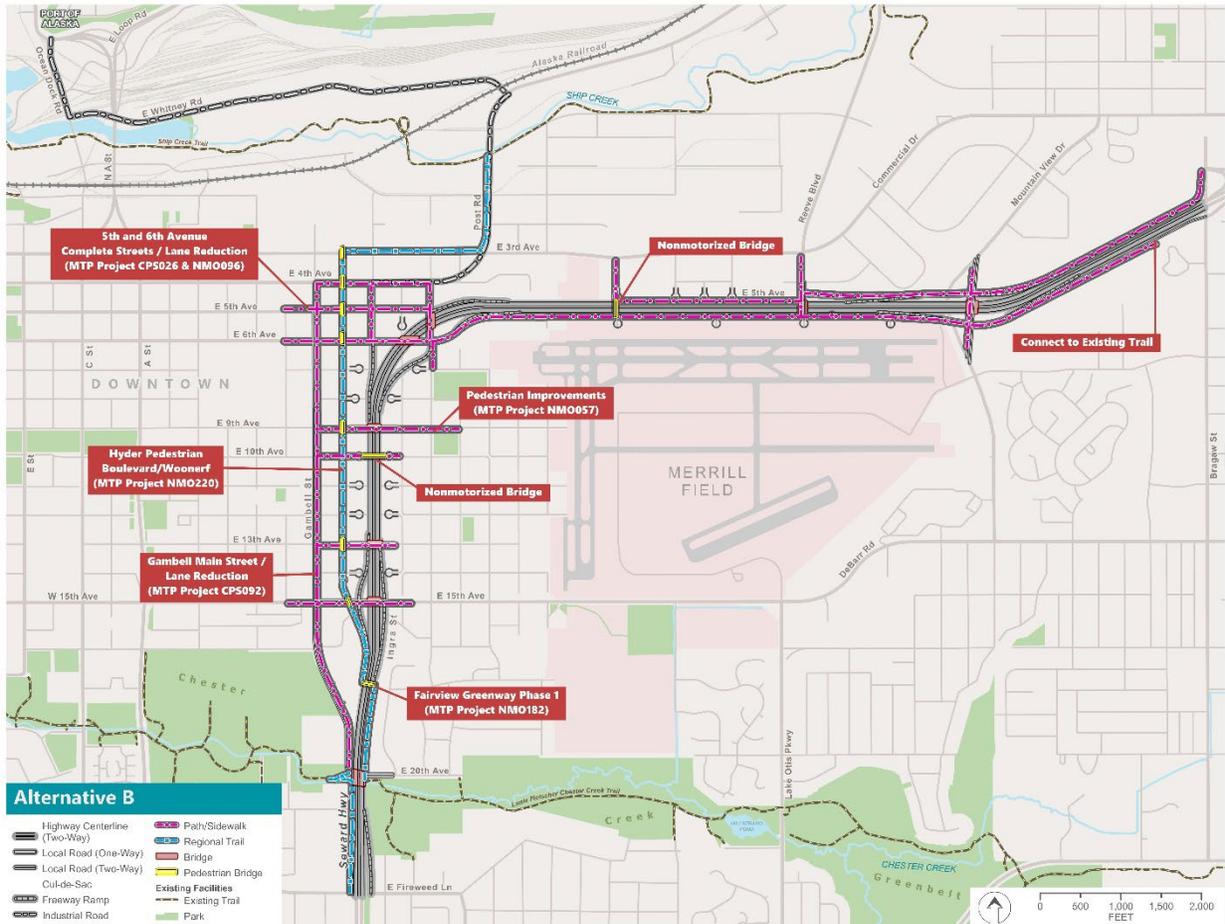


Local Roadway Improvements. Gambell Street would be reconstructed as a two-way “Main Street,” including a reduction in travel lanes and speed limits as well as improved pedestrian and bike facilities with enhanced landscaping and pedestrian-scale lighting. The exact roadway configuration of the main street has not been determined but could include on-street parking, bike lanes, wider sidewalks, and space for street furniture or other amenities. See Figure 10 and Figure 11 for examples of main street ideas. The intent is to reconstruct the street so that the improvements fit within the existing 60-foot right-of-way, precluding the need to acquire ROW from the businesses intended to benefit from the roadway improvements.

Nonmotorized Improvements. Nonmotorized improvements are depicted on Figure 17. East-west nonmotorized connections (a shared use path) would be included on both sides of the highway between Bragaw and Gambell Streets as part of the frontage road system. The cross streets of Airport Heights Drive, East 6th Avenue, East 9th Avenue, East 13th Avenue, and East 15th Avenue would all include nonmotorized connections over the highway as part of the streetscape. East 10th Avenue would provide a nonmotorized bridge to support the bike route along 10th Avenue. The complete street projects on 5th Avenue and Ingra Street envisioned in the 2050 MTP would not be built because the highway alignment would use the right-of-way

along those streets. Additionally, Gambell Street could include pedestrian and bike improvements associated with the main street design described above.

Figure 17. Alternative B: Nonmotorized Improvements



A regional trail connection would be constructed along Hyder Street in the style of a woonerf (or “living street”) to connect Chester Creek Trail to the Ship Creek Trail (see Figure 18). A woonerf allows drivers, bicyclists, pedestrians, and others to share the same space simultaneously. These are typically viewed more as social spaces instead of purely vehicle spaces. The four vital elements of a woonerf are: (1) well-defined entrances, (2) a shared and well-marked space, (3) physical barriers to slow traffic, and (4) landscaping and street furniture (Reardon 2016). Figure 18 shows an example of a woonerf-style street.

Figure 18. Woonerf “Living Street” Example



4.4.2 Environmental Considerations

- Right-of-way needs along East 5th Avenue and Ingra Street would cause land use, economic, and social impacts.
- Residential and business/industrial relocations would be necessary.
- Residential relocations along Ingra Street may include housing of last resort.
- Business relocations would cause economic and neighborhood impacts.
- The Glenn Highway would traverse through the runway protection zone of the north-south runway for Merrill Field.
- Access and circulation to Merrill Field along 5th Avenue would be affected.
- Out-of-direction travel east-west would result across the depressed highway sections because not every cross street would be bridged over the highway.
- The alignment would bisect east and west Fairview, creating community cohesion impacts, because not every cross street would be bridged over the highway.
- Adverse impacts, especially along Ingra Street, would largely be borne by low-income/minority residents creating potential environmental justice concerns.
- Regional traffic and associated noise would be below grade along Ingra Street and part of East 5th Avenue, likely reducing noise impacts there (as compared to a highway alignment on the surface).
- Air quality may improve as fewer vehicles would be stopped in traffic or idling at signals.

- Impacts on historic properties would likely occur, either through necessary acquisition or a change in setting. These impacts could also be Section 4(f) uses.
- Constructing the improvements at East 20th Avenue along the Seward Highway would affect Eastchester Park/Chester Creek Greenbelt, a Section 4(f) and Section 6(f) property.

4.4.3 Purpose and Need Considerations

Improve Mobility and Accessibility by All Modes

- ***Maintain the functionality of the NHS.*** Mobility and accessibility functions of the NHS would be enhanced through a continuous freeway, improving regional travel efficiency by reducing conflicts with stoplights, side streets, and driveways. This alignment provides for freeway connectivity to both Downtown and Midtown. Connecting POA traffic directly to a highway interchange at Ingra/Karluk Streets would allow POA and Ship Creek industrial area traffic to access the highway network more easily, reducing truck traffic on Downtown and North Fairview streets.
- ***Meet local travel needs.*** Local travel would be improved. East-west travel would no longer be hindered by higher speed regional traffic because of the grade-separation of the depressed freeway. Nonmotorized travel would face reduced travel conflicts. A bike and pedestrian connection, along either Hyder Street or Gambell Street (or both), between the Chester Creek and Ship Creek Trails would improve nonmotorized mobility and accessibility. Such a connection through Fairview would create a regional loop trail (Fairview Trail-Ship Creek Trail-Coastal Trail-Chester Creek Trail).
- ***Reduce conflicting travel functions.*** Regional and local travel functions would be separated by grade, reducing potential conflicts.

Improve Safety for All Modes

- ***Improve vehicle safety.*** Regional and local travel functions would be separated by grade, reducing potential conflicts by removing tens-of-thousands of vehicles every day from streets used for local travel, thereby increasing safety. Gambell Street would be converted to a main street, with reduced lanes, buffers for snow storage, and slower speeds, thereby improving safety.
- ***Improve nonmotorized safety.*** Hyder Street would be redesigned to serve as a north-south living street, improving the safety of nonmotorized north-south travel.

Improve Livability and Quality of Life

- ***Improve neighborhood connections and cohesion.*** Because the higher speed through-traffic would be below grade on its own, separate alignment, Gambell and Hyder Streets could be redeveloped to support local goals. Local travelers (roadway and nonmotorized) trying to cross the regional traffic would not have to deal with that higher speed through-traffic. The connection to the regional trail network would also improve the quality of life.
- ***Accommodate adopted plans that support economic redevelopment.*** Providing regional traffic with its own separate alignment means Gambell Street could be redeveloped in accordance with local land use plans, which include a two-way main

street. A Greenway Supportive Development Corridor could be developed along Hyder Street. Both these street redevelopments are intended to improve the quality of life for the neighborhood and are envisioned to promote economic redevelopment.

4.4.4 Design Variations

<p>Design Approach AB1</p> <ul style="list-style-type: none"> • Use existing DOT&PF right-of-way (on Ingra Street) • Use the northern part of Alternative A with the southern part of Alternative B to try to reduce commercial impacts • Eliminate Merrill Field north access impacts • Eliminate Merrill Field north runway safety area (RSA) impacts <p>Features</p> <ul style="list-style-type: none"> • Interchange to directly access Downtown • Airport Heights interchange and routing from Alternative A to reduce commercial impacts along 5th Avenue • Extends Ingra highway alignment from Alternative B through north Fairview to connect to Alternative A alignment north of 3rd Avenue. • Depressed alignment on Ingra Street to separate regional and local traffic to reduce conflicts • Utilizes existing 5th Avenue for north Merrill Field access • POA connection upgrade • Greenway trail connection and woonerf on Hyder Street 	<p>Design Approach AB2</p> <ul style="list-style-type: none"> • Use existing DOT&PF right-of-way (on Ingra Street) • Use parts of Alternatives A and B to try to reduce commercial impacts • Reduce Merrill Field north access impacts • Use Merrill Field north RSA to reduce commercial impacts along 3rd Avenue <p>Features</p> <ul style="list-style-type: none"> • Interchange to directly access Downtown • Airport Heights interchange and routing from Alternative A to reduce commercial impacts along 5th Avenue • Cross through Merrill Field runway protection zone to connect Alternatives A and B • Depressed alignment on Ingra Street to separate regional and local traffic to reduce conflicts • Utilizes existing 5th Avenue for north Merrill Field access • POA connection upgrade • Greenway trail connection and woonerf on Hyder Street
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Two variations of Alternative B have been identified (AB1 and AB2). These variations reflect attempts to reduce the right-of-way impacts of Alternative B (especially along 5th Avenue). Each variant includes a combination of the roadway improvements of both Alternatives A and B, but uses a different alignment to connect them. Each alternative includes the proposed interchange at Airport Heights Drive, and a portion of the alignment north of 3rd Avenue from Alternative A and the depressed alignment along Ingra Street from Alternative B. AB1 avoids all of 5th Avenue and follows north of 3rd Avenue like Alternative A; however, instead of turning southward onto an alignment of Hyder Street (as does Alternative A), it turns southward onto an alignment of Ingra

Street. Alternative AB2 avoids a portion of 5th Avenue. It includes the Airport Height interchange and follows an alignment north of 3rd Avenue, but turns southward using the runway protection zone from the north-south Merrill Field Runway to weave its way onto an alignment of Ingra Street. The roadway and nonmotorized plan view maps are depicted in Figure 19 through Figure 22.

Figure 19. Variant AB1: Roadway and Highway Improvements

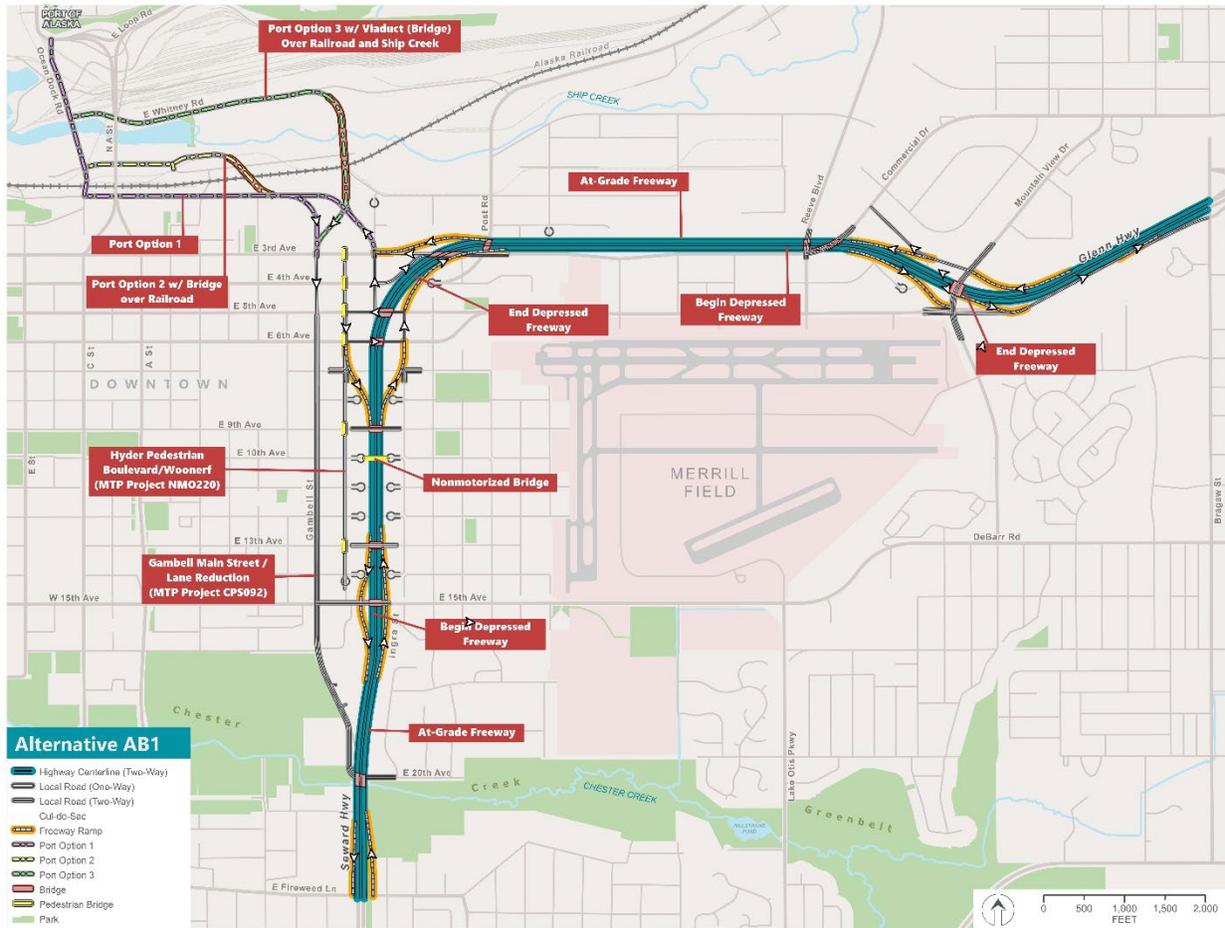


Figure 20. Variant AB2: Roadway and Highway Improvements

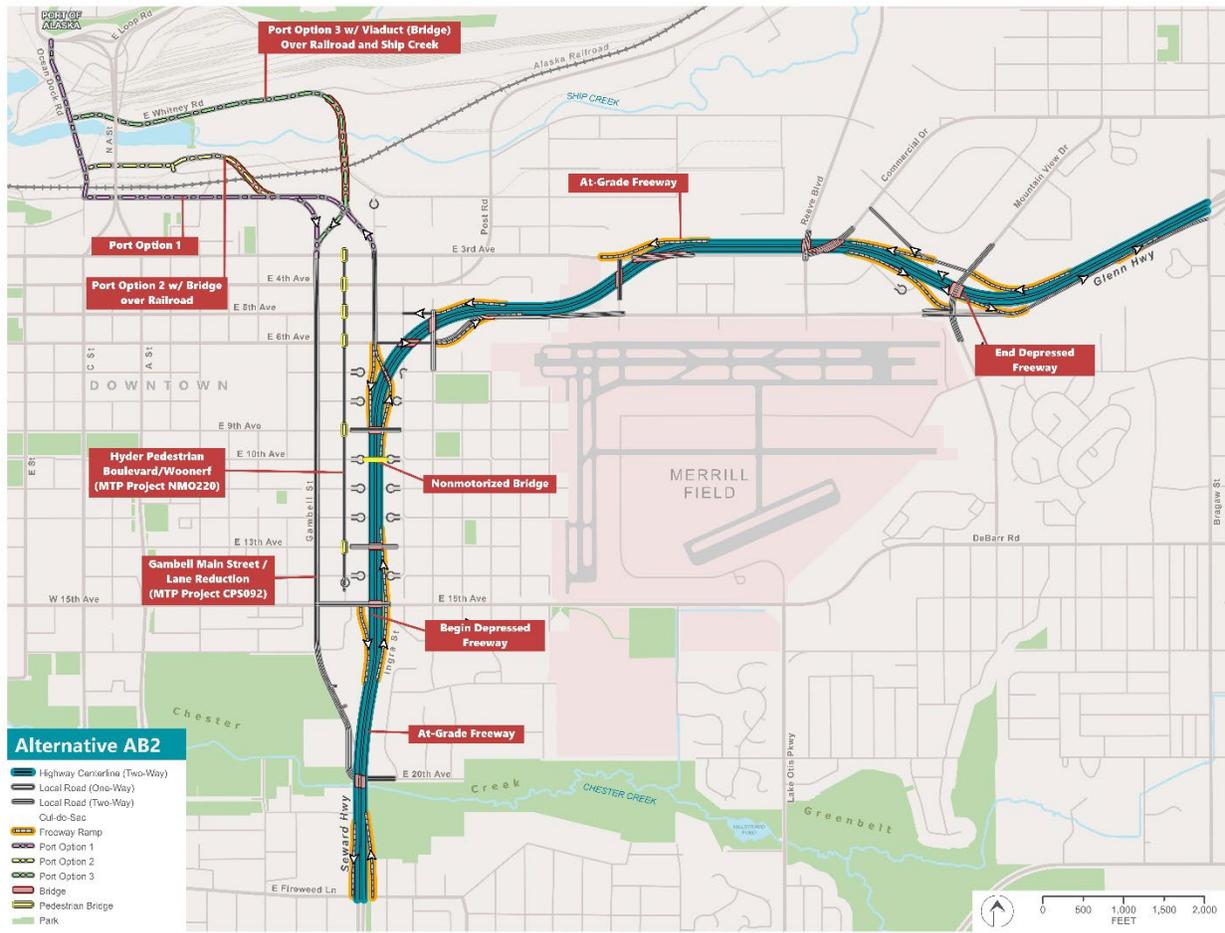


Figure 21. Variant AB1: Nonmotorized Improvements

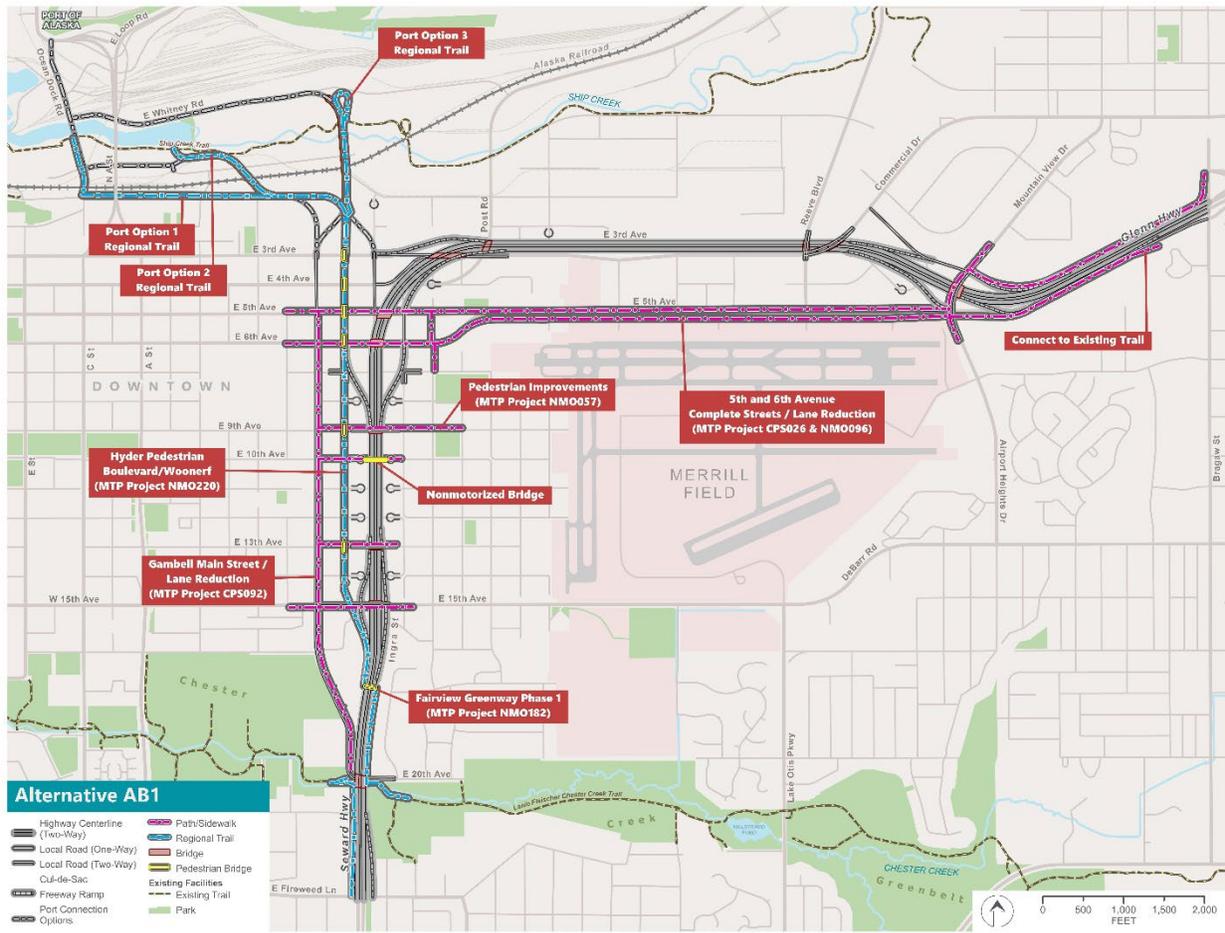
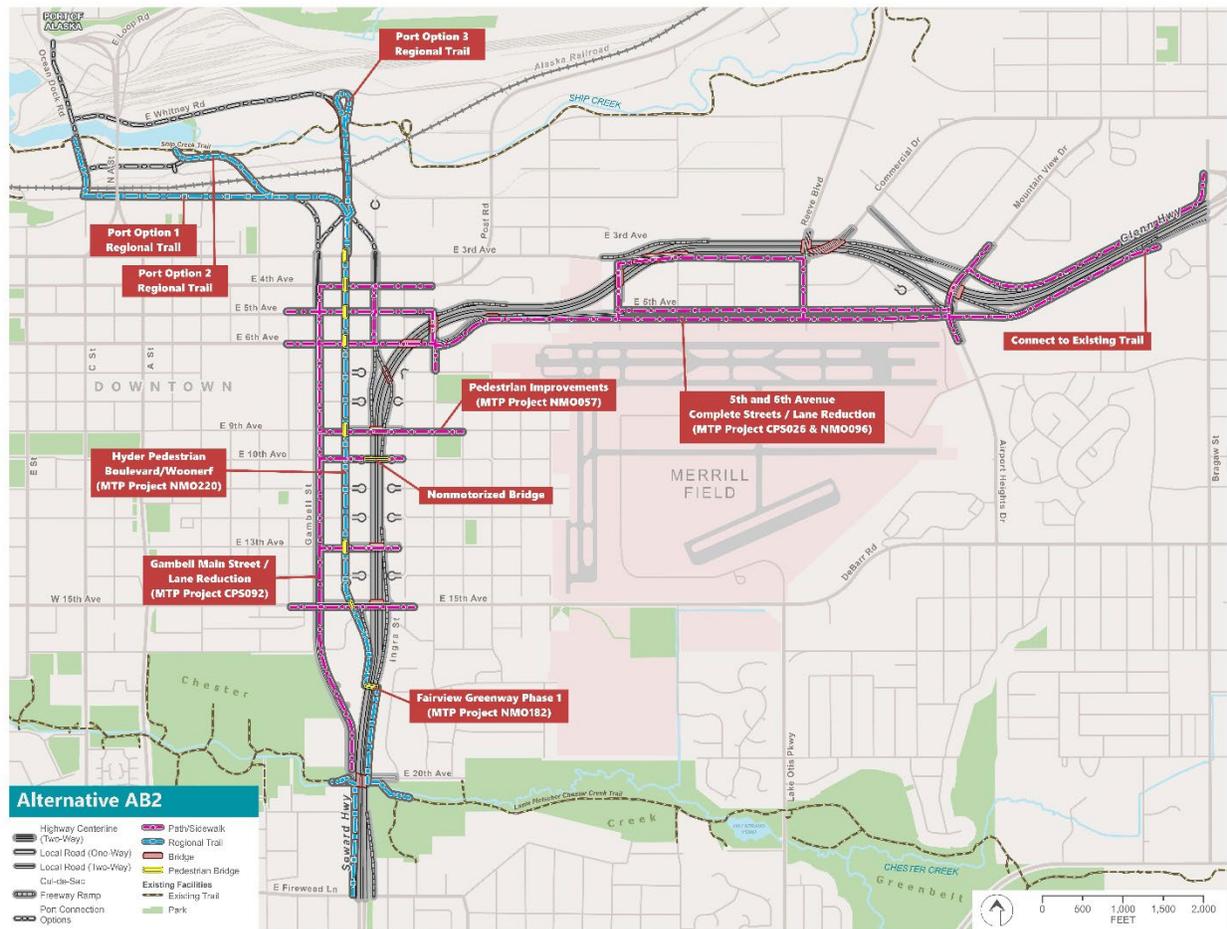


Figure 22. Variant AB2: Nonmotorized Improvements



4.5 Alternatives C1 and C2

4.5.1 Description

Regional Roadway Improvements. This concept would create a continuous freeway through the study area connecting the Glenn and Seward Highways. A full interchange would be built at Airport Heights Drive/5th Avenue and at Lake Otis Parkway/15th Avenue, and a partial interchange would be built at Ingra Street/15th Avenue. Alternatives C1 and C2 are variations of each other. Each takes a diagonal alignment that traverses south of Merrill Field along 15th Avenue to rejoin the Seward Highway just south of 15th Avenue. Both include a depressed section at the southern end of Fairview. The C1 alignment is on 15th Avenue (displacing 15th Avenue to try to reduce right-of-way relocations) while C2 is aligned just south of 15th Avenue (allowing 15th Avenue to remain intact as an important east-west connection). See Figure 23 and Figure 24 for plan view depictions of the roadway configurations of Alternatives C1 and C2.

From a new Airport Heights Drive/Glenn Highway interchange, the highway would head southwestward and traverse between Merrill Field and Alaska Regional Hospital onto an alignment on or along East 15th Avenue (C1 is on 15th Avenue, and C2 is aligned just south of 15th Avenue). The alignment takes advantage of topography associated with the Chester Creek

Valley, allowing the highway to stay low as it traverses southwest of Merrill Field, going under Medfra and Karluk Streets through a depressed highway segment through south Fairview before turning southward onto the existing Seward Highway alignment after daylighting from the depressed highway section south of 15th Avenue. This is an alternative that was identified during the Highway-to-Highway EIS project.

<p>Design Approach C1</p> <ul style="list-style-type: none"> • Reduce relocation impacts by using underutilized land and public right-of-way south and southwest of Merrill Field • Reduce length of physical barrier (depressed freeway) through the Fairview neighborhood • Largely bypass Fairview and Downtown to reduce regional trip lengths • Reduce ROW acquisition impacts by utilizing the existing 15th Avenue Alignment • Reduce traffic impacts during construction by proposing freeway alignment length off of existing roadway alignments (compared to Alternatives A, B, and AB variants) • Allow for phased freeway construction by proposing segments with independent utility (e.g., U-Med/Glenn Hwy Connection via Lake Otis Pkwy interchange) <p>Features</p> <ul style="list-style-type: none"> • Make use of public right-of-way south of Merrill Field and on 15th Avenue • Make use of the mostly vacant Northway Mall • Interchange to access U-Med via Lake Otis Parkway • Depressed alignment on 15th Avenue to separate regional and local traffic to reduce conflicts • Requires freeway ramps in South Fairview to provide access to and from 15th Avenue for regional traffic east of Ingra Street • POA connection upgrade via 1st Avenue, under Reeve Boulevard and Commercial Drive to a new interchange • Greenway trail connection and woonerf on Hyder Street 	<p>Design Approach C2</p> <ul style="list-style-type: none"> • Same as C1, but alignment shifted south of 15th Avenue to keep 15th Avenue continuous • Eliminate impacts to existing 15th Avenue complete street • Allow local traffic to use the existing east-west connection on 15th Avenue and not be required to use the proposed freeway for short trips • Reduce traffic impacts during construction by proposing freeway alignment off of existing roadway alignments (compared to Alternatives A, B, AB variants, and C1) • Allow for phased freeway construction by proposing segments with independent utility (e.g., U-Med/Glenn Hwy Connection via Lake Otis Pkwy interchange) <p>Features</p> <ul style="list-style-type: none"> • Depressed alignment along 15th Avenue to separate regional and local traffic to reduce conflicts • Make use of the public land south of Merrill Field and on 15th Avenue • Do not require freeway ramps in south Fairview since 15th Avenue functionality is maintained • Make use of the mostly vacant Northway Mall • Interchange to access U-Med via Lake Otis Parkway • POA connection upgrade via 1st Avenue, under Reeve Boulevard and Commercial Drive to a new interchange • Greenway trail connection and woonerf on Hyder Street
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Traffic to and from the Glenn Highway heading to and from Midtown, South Anchorage, and the Ted Stevens Anchorage International Airport (TSAIA) would find this diagonal route efficient, and it is expected it would divert traffic off 5th and 6th Avenues and Gambell and Ingra Streets. However, some regional traffic from South Anchorage headed Downtown would still be anticipated to traverse north-south through Fairview. By diverting some traffic to the highway, Ingra Street is proposed to be reconstructed as a two-way, three-lane arterial street with one lane northbound, one lane southbound, and a center turn lane (see Figure 13 through Figure 15). Similarly, traffic from the Glenn Highway headed Downtown would continue to use 5th and 6th Avenues. However, it is anticipated that traffic that currently cuts through Downtown to access Minnesota Drive via I and L Streets would likely stay on the highway to Northern Lights/Benson Boulevard, Tudor Road, or Dowling Road, thereby reducing traffic through Downtown.

Industrial access to the POA is proposed to connect to the interchange at Airport Heights via an upgrade and extension of East 1st Avenue connecting to Industrial Way by traversing under Reeve Boulevard and Commercial Drive. By intercepting POA-bound traffic at the new interchange and providing a more direct route with higher-mobility, the intention would be to keep as much truck traffic as possible on the highway and off Gambell and Ingra Streets and 5th and 6th Avenues.

Figure 23 and Figure 24 show the Alternatives C1 and C2 variants.

Figure 23. Alternative C1: Roadway and Highway Improvements

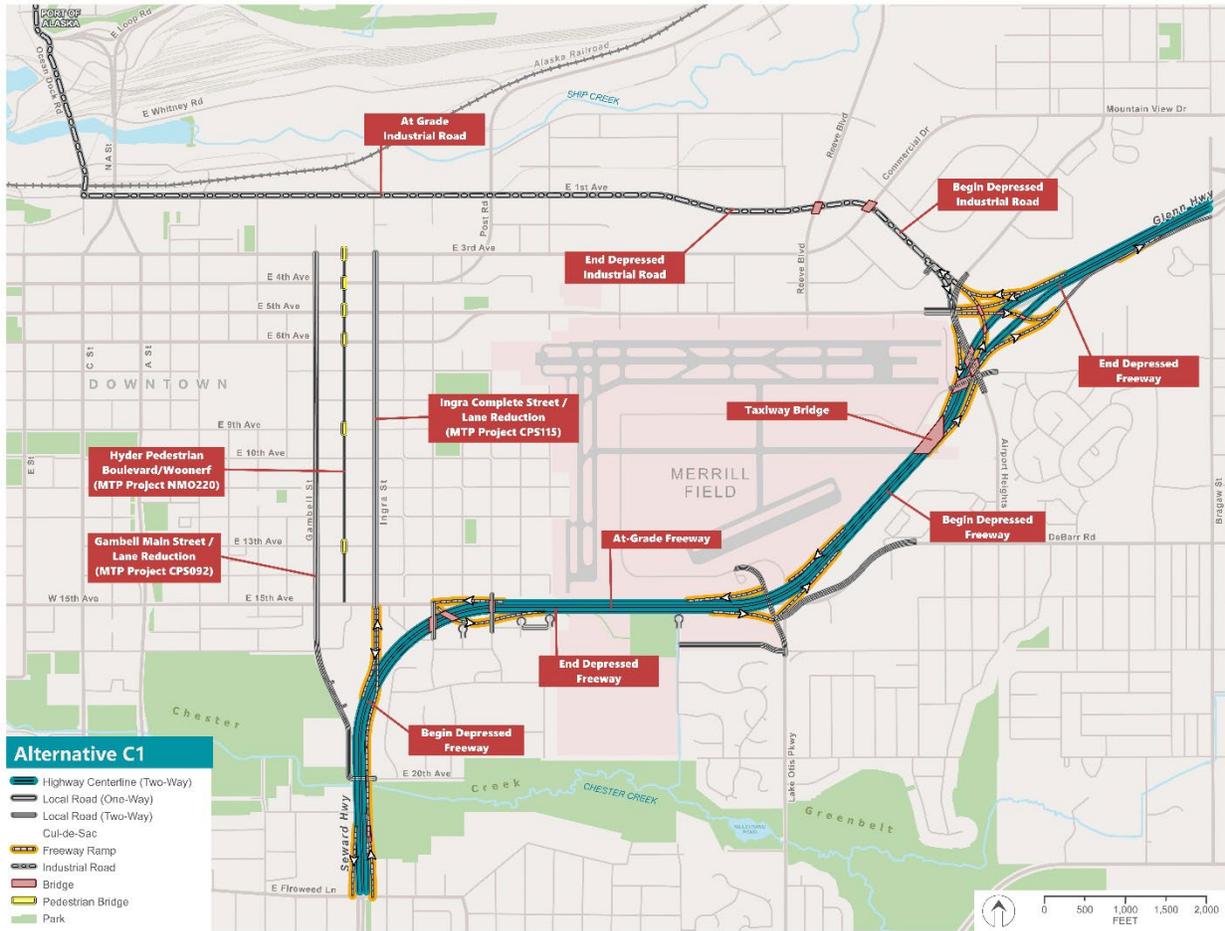
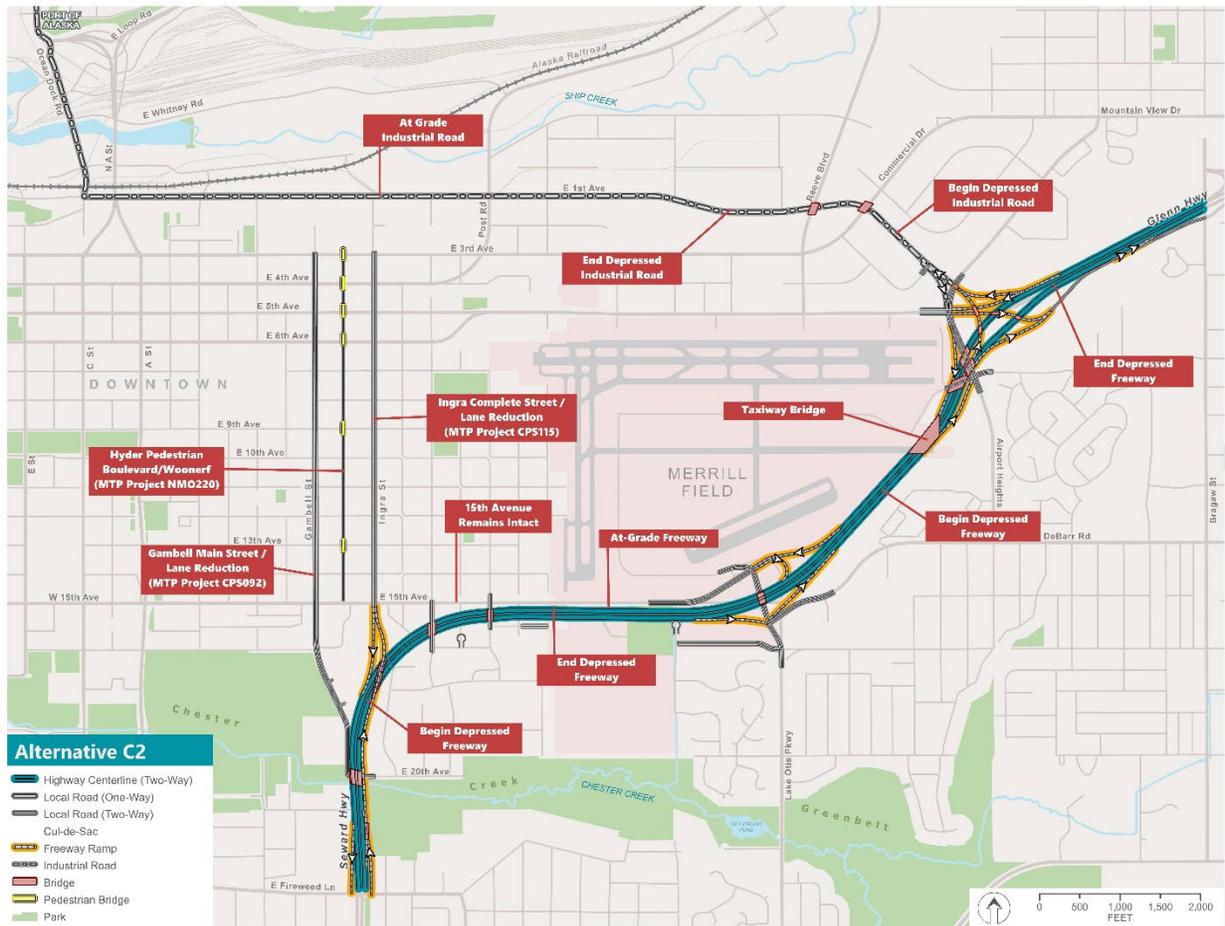


Figure 24. Alternative C2: Roadway and Highway Improvements

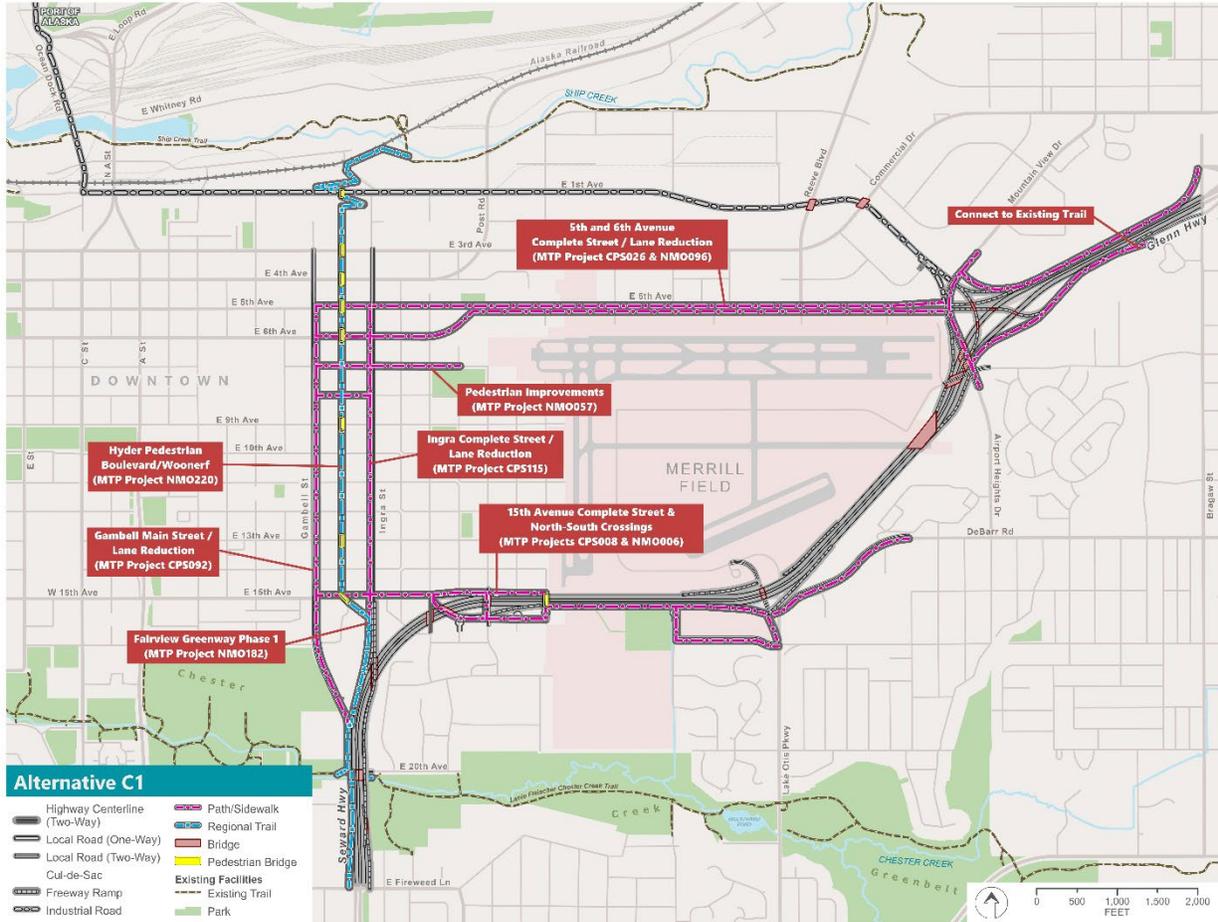


Local Roadway Improvements. With the traffic reduction through Fairview, Gambell Street is proposed to be reconstructed as a main street (see Figure 10 through Figure 11 for potential concepts). Ingra Street would continue to accommodate regional traffic headed Downtown but would be reconstructed as a three-lane arterial street with one lane northbound and one lane southbound. Hyder Street is proposed to function for the greenway street corridor (or woonerf) to provide regional nonmotorized connectivity as a loop trail connecting the Chester Creek Trail to Ship Creek Trail to form a loop with the Coastal Trail. Karluk and Medfra Streets would be bridged over the highway along 15th Avenue to maintain neighborhood connections to south Fairview.

Nonmotorized Improvements. The separated bikeway along 15th Avenue proposed in the NMP would be constructed as part of the project. Hyder Street is proposed to function for the greenway street corridor and to provide regional connectivity as a loop trail connecting the Chester Creek Trail to Ship Creek Trail to form a loop with the Coastal Trail. In fact, all three north-south roadways through Fairview (Gambell, Hyder, and Ingra Streets) would have nonmotorized improvements. This is consistent with the vision established in the 2050 MTP, which calls for three-lane boulevards on Gambell and Ingra Streets and a greenway/woonerf street on Hyder Street. The reduction in traffic anticipated along 5th and 6th Avenues would allow

the complete street projects proposed in the NMP and 2050 MTP to be constructed. Figure 25 and Figure 26 depict the nonmotorized improvements proposed for Alternatives C1 and C2.

Figure 25. Alternative C1: Nonmotorized Improvements



- Potential noise impacts on Alaska Regional Hospital could occur, requiring mitigation.
- The MOA snow dump at 15th Avenue and Lake Otis Parkway would be affected, reducing its capacity.
- Potential impacts on Sitka Street Park³ could require the park to be relocated.
- Access to the Eastridge Subdivision from 15th Avenue would be cut off. Replacement access would be provided at the Lake Otis Parkway and 16th Avenue intersection.
- Potential noise impacts at Eastridge Subdivision and South Fairview could occur due to the at-grade freeway segment, requiring mitigation
- Right-of-way impacts south of East 15th Avenue and west of Orca Street would cause land use and social impacts.
- Residential and business relocations would be necessary.
- Relocations may include housing of last resort.
- Business relocations could cause economic and neighborhood impacts.
- The alignment could further bisect the southern portion of Fairview from the rest of the neighborhood (more than the existing 4-lane 15th Avenue), creating community cohesion impacts.
- Adverse impacts may largely be borne by low-income/minority residents.
- Regional traffic and associated noise would be below grade at the southern end of Fairview, likely reducing noise impacts there (as compared to a highway alignment on the surface).
- Air quality may improve within Fairview as fewer vehicles would be stopped in traffic or idling at signals.
- Impacts on historic properties may occur, either due to acquisition or a change in setting. These impacts could also be Section 4(f) uses.

4.5.3 Purpose and Need Considerations

Improve Mobility and Accessibility by All Modes

- **Maintain the functionality of the NHS.** Mobility and accessibility functions of the NHS would be enhanced through a continuous freeway, improving regional travel efficiency by reduced conflicts with stoplights, side streets, and driveways. Connecting POA traffic directly to an Airport Heights Drive/Glenn Highway interchange would allow POA and Ship Creek industrial area traffic that is headed northward to get to the highway network more easily, reducing truck traffic on Downtown streets.
- **Meet local travel needs.** Local travel would be improved. East-west travel within Fairview would be less hindered by higher speed regional movements because some traffic would be diverted from Fairview to the new highway. However, under this alternative, some current Seward Highway traffic would still likely use Ingra Street to reach Downtown destinations. Nonmotorized travel would face reduced travel conflicts

³ Note that the *Merrill Field Airport Master Plan Update and Noise Study* (2016) denotes this area as a “community use area” not a park. The plan indicates that the community use area is planned to be moved.

within Fairview because traffic would be reduced and speeds lowered. A bike and pedestrian connection, along either Hyder Street or Gambell Street (or both), between the Chester Creek and Ship Creek Trails would improve nonmotorized mobility and accessibility. Such a connection through Fairview would create a regional loop trail (Fairview Trail-Ship Creek Trail-Coastal Trail-Chester Creek Trail).

- **Reduce conflicting travel functions.** Regional and local travel functions would be separated by grade southwest of Merrill Field, reducing potential conflicts associated with the high-speed facility. Other parts of the alignment are routed to largely avoid conflicts with the local street network. Traffic on 5th and 6th Avenues and Gambell and Ingra Streets would be reduced, thereby reducing travel conflicts for crossing these streets.

Improve Safety for All Modes

- **Improve vehicle safety.** Regional and local travel functions would be separated by grade where the highway traverses through South Fairview, minimizing potential conflicts. Traffic on 5th and 6th Avenues and Gambell and Ingra Streets would be reduced, thereby reducing travel conflicts for crossing these streets and improving safety. Gambell Street would be converted to a main street, with reduced lanes and slower speeds, improving safety.
- **Improve nonmotorized safety.** With the reduction in traffic on 5th and 6th Avenues, 15th Avenue (Alternative C2 only), and Gambell and Ingra Street, the complete street projects in the 2050 MTP (lane reductions and nonmotorized improvements) would be facilitated, providing a safer nonmotorized streetscape there.

Improve Livability and Quality of Life

- **Improve neighborhood connections and cohesion.** Because the higher speed through-traffic volumes on Gambell and Ingra Streets would be greatly reduced, cohesion would be improved. This is anticipated to allow Gambell Street to be redeveloped as a main street for local traffic. Connection to the regional trail network along Hyder, Gambell, or Ingra Street would improve the quality of life. This alternative uses public land from Merrill Field, a snow dump, and public right-of-way, which may result in fewer social/economic acquisition impacts compared to other alternatives.
- **Accommodate adopted plans that support economic redevelopment.** Providing regional traffic with its own separate alignment means Gambell Street could be redeveloped in accordance with local land use plans, which includes a two-way Gambell Street main street. Hyder Street is proposed to serve as the north-south Greenway Supportive Development Corridor. Ingra Street could receive a road diet with a reduction in lanes and non-motorized improvements. All three of these street redevelopments are intended to improve the quality of life for the neighborhood and are envisioned to promote economic redevelopment.

4.6 Alternative D

4.6.1 Description

Regional Roadway Improvements.

Roadway improvements are depicted on Figure 27. This concept would create a continuous freeway through the study area connecting the Glenn and Seward Highways. A full interchange would be built at Airport Heights Drive/Glenn Highway and at 15th Avenue/Lake Otis Parkway, and a partial interchange would be built at Ingra Street/15th Avenue. Similar to the C Alternatives, the highway would head southwestward from a new Airport Heights Drive/Glenn Highway interchange (identical to the one proposed for Alternatives C1 and C2) and traverse between Merrill Field and Alaska Regional Hospital, crossing 15th Avenue where it would use the MOA snow dump and Merrill Field runway safety area property to continue in a diagonal southwestward direction. Prior to entering the East Chester Creek Greenbelt property, the highway would be elevated, spanning over the greenbelt, trail, and creek on a viaduct (long bridge) and connecting to the Seward Highway at Fireweed Lane (see Figure 28 and Figure 29).

Design Approach

- Maximize use of public land to minimize relocation impacts
- Completely bypass Fairview and Downtown to minimize (a) trip lengths for regional travel; and (b) freeway length
- Eliminate the physical barrier (depressed freeway) through the Fairview neighborhood
- Minimize traffic impacts during construction by proposing freeway alignment off of existing roadway alignments (compared to all other alternatives)
- Allow for phased freeway construction by proposing segments with independent utility (e.g., U-Med / Glenn Hwy Connection via Lake Otis Pkwy interchange)
- Eliminate commercial relocations and nearly eliminate residential relocations

Features

- Make use of the mostly vacant Northway Mall
- Make use of public land south of Merrill Field and south of 15th Avenue
- Cross over the Chester Creek Greenbelt on a viaduct (long bridge) to reduce park/trail impacts
- Interchange to access U-Med via Lake Otis Parkway
- POA connection upgrade via Whitney Road-Viking Drive and then under Commercial Drive to a new interchange
- Greenway trail connection and woonerf on Hyder Street
- Add trail connection from Chester Creek to DeBarr Road

Figure 27. Alternative D Roadway and Highway Improvements

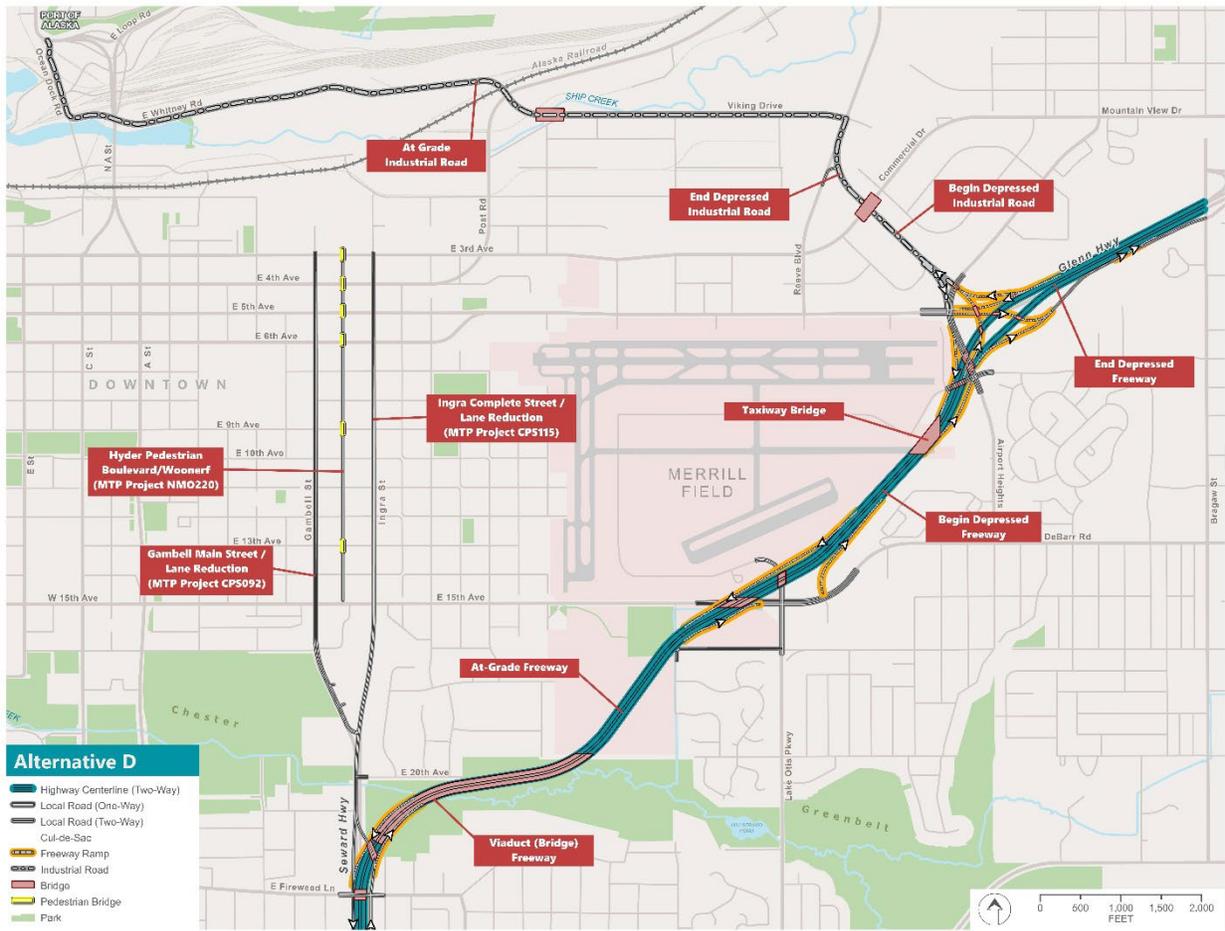


Figure 28. Cross-Section of Viaduct Bridge over a Park



Figure 29. Example of a Viaduct Bridge over a Park



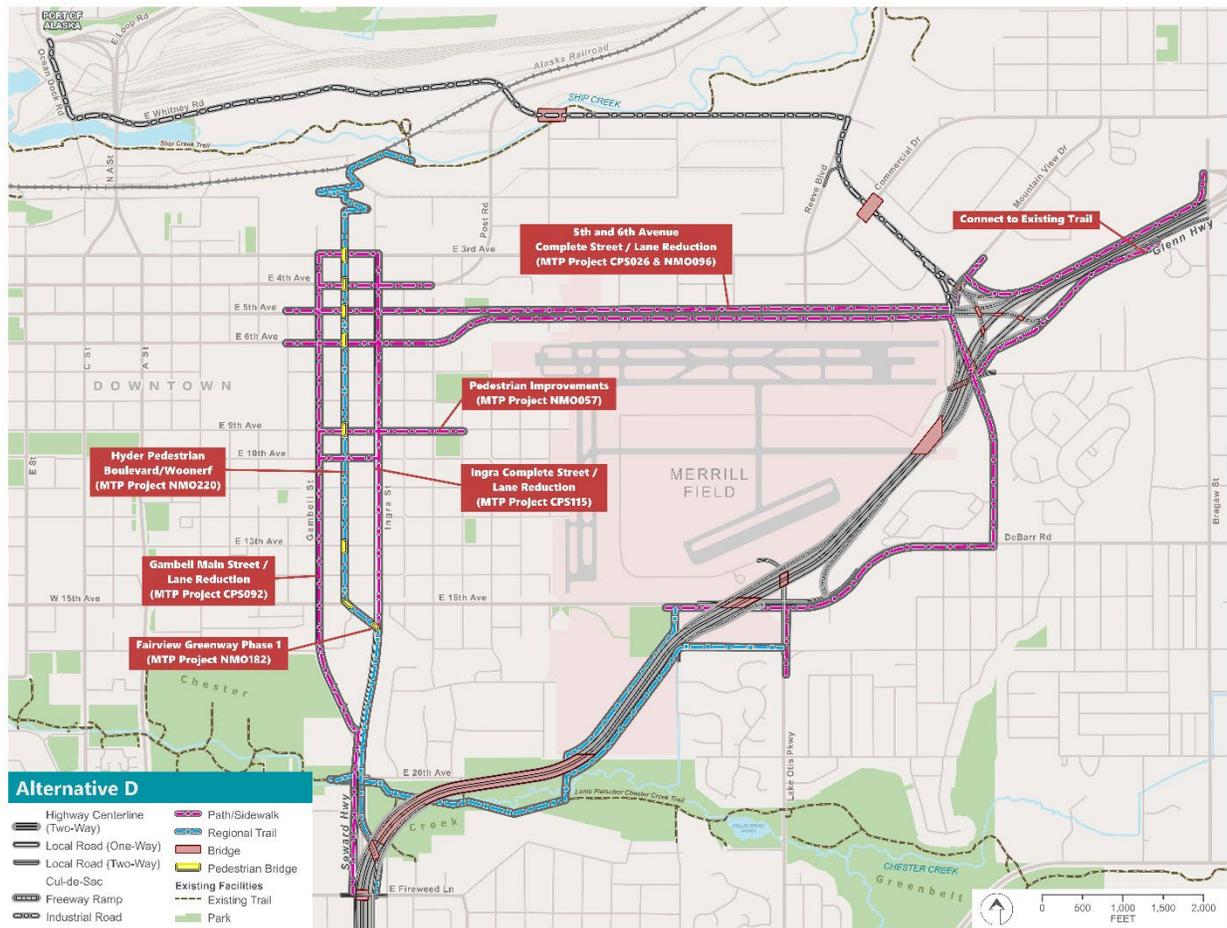
Traffic between the Glenn Highway and Midtown, South Anchorage, and TSAIA would find this diagonal route efficient, and it is expected it would divert considerable traffic off 5th and 6th Avenues and Gambell and Ingra Streets. Regional traffic to and from Midtown and South Anchorage headed Downtown would still be anticipated to traverse north-south through Fairview on Ingra Street. With the shifting of some traffic to the new highway alignment, however, Ingra Street is anticipated to be able to be reconstructed as a three-lane arterial street with one lane in each direction, and also allowing Gambell Street to be redeveloped as a Main Street. Traffic to and from the Glenn Highway headed Downtown would continue to use 5th and 6th Avenues. However, it is anticipated that traffic that currently cuts through Downtown to access Minnesota Drive via I and L Streets would likely stay on the new highway alignment to Northern Lights/Benson Boulevard, Tudor Road, or Dowling Road, thereby reducing traffic through Downtown and allowing the lane reductions on 5th and 6th Avenue, proposed in the 2050 MTP, to be more feasible.

Industrial access to the POA is proposed to use Whitney Road connected to Viking Drive with a new bridge over Ship Creek, continuing on Viking Drive, which would be extended under Commercial Drive, to the new highway interchange at Airport Heights/Glenn Highway. By intercepting POA-bound traffic at the new interchange and providing a more direct route with higher mobility, the intention would be to keep as much truck traffic as possible on the highway and off Gambell and Ingra Streets and 5th and 6th Avenues.

Local Roadway Improvements. With traffic shifted to the new highway alignment, Gambell Street is proposed to have sufficient traffic reduction for it to be feasible to be redeveloped as a main street (see Figure 10 and Figure 11 for potential concepts). Similar to the C Alternatives, Ingra Street would continue to be needed for regional traffic headed Downtown but is proposed to be reduced by one lane and reconstructed as a two-way, three-lane arterial street (see Figure 13 through Figure 15). With the lane reductions, there would be space for improved bike and/or pedestrian facilities and landscaping. As recommended in the 2050 MTP, Hyder Street is proposed to function for the greenway street corridor/woonerf (See Figure 18 for an example of a woonerf) and to provide regional connectivity as a loop trail connecting the Chester Creek Trail to Ship Creek Trail to form a loop with the Coastal Trail.

Nonmotorized Improvements. As mentioned above, all three north-south roadways through Fairview (Gambel, Hyder, and Ingra Streets) would have nonmotorized improvements. This is consistent with the vision established in the 2050 MTP, which calls for three-lane boulevards on Gambell and Ingra Streets and a greenway/woonerf street on Hyder Street. The reduction in traffic anticipated along 5th and 6th Avenues would allow for the nonmotorized improvements proposed in the NMP and proposed complete street/lane reductions in the 2050 MTP to be constructed. Additionally, this alternative would include nonmotorized improvements along the new highway alignment, thereby connecting Mountain View (at Bragaw Street) and Penland Park mobile home park to the Chester Creek Trail. A plan view of nonmotorized improvements is depicted in Figure 30.

Figure 30. Alternative D Nonmotorized Improvements



4.6.2 Environmental Considerations

- Right-of-way impacts at the Northway Mall would occur.
- The road would cross through the runway protection zone on the western end of the east-west runway and on the southern end of the north-south runway of Merrill Field.
- The alternative interferes with the Merrill Field-Alaska Regional Hospital taxiway/medevac flights. The alignment may be able to traverse under the taxiway, with the taxiway replaced on a bridge over the highway.
- Access and circulation to Merrill Field from 15th Avenue and Airport Heights Drive would be affected. Replacement access and internal circulation changes may be able to mitigate for the impacts.
- Right-of-way impacts on Merrill Field would affect some tiedowns and camping areas. These impacts may be mitigated with a bridge / depressed freeway segment.
- Potential environmental justice impacts on residents of the Penland Park mobile home park could occur.
- The highway alignment traverses the former Merrill Field landfill, which would raise constructability, hazardous materials, and cost issues; although, the proposed freeway alignment is limited to newer, less deep areas of the former landfill.

- Potential noise impacts on Alaska Regional Hospital could occur, requiring mitigation.
- The MOA snow dump would be affected, reducing its capacity.
- Potential Impacts on Sitka Street Park⁴ could occur, which could require the park to be relocated.
- Access to the Eastridge Subdivision from 15th Avenue would be cut off. Replacement access would be provided at the Lake Otis Parkway and 16th Avenue intersection.
- Potential noise impacts at Eastridge Subdivision and South Fairview could occur due to the at-grade freeway segment, requiring mitigation.
- Visual and noise impacts on the Chester Creek Greenbelt could occur from an overhead bridge, requiring mitigation measures on the bridge.
- Footprint impacts on the Chester Creek Greenbelt could occur from bridge piers. This may be a Section 4(f) use; however, mitigation measures could be offered (e.g., new paved trails along the freeway corridor between the Chester Creek Trail and Lake Otis / 15th Avenue; and Fairview Greenway connection between Chester Creek Trail and Shop Creek Trail (see Figure 30); and a new bridge over Chester Creek at the Seward Highway to improve the roadway undercrossing for recreational and other users.
- Residential right-of-way and noise impacts north of Fireweed Lane and east of the Seward Highway could occur, requiring mitigation.
- Air quality may improve in Fairview as fewer vehicles would be stopped in traffic or idling at signals.

4.6.3 Purpose and Need Considerations

Improve Mobility and Accessibility by All Modes

- **Maintain the functionality of the NHS.** Mobility and accessibility functions of the NHS would be enhanced through a continuous freeway, improving regional travel efficiency by reduced conflicts with stoplights, side streets, and driveways. Connecting POA traffic directly to an Airport Heights Drive/Glenn Highway interchange would allow POA and Ship Creek industrial area traffic that is headed northward to get to the highway network more easily, reducing truck traffic on Downtown streets. The alignment provides improved NHS access to Midtown, U-Med, and TSAIA.
- **Meet local travel needs.** Local travel would be improved. East-west travel within Fairview would be improved and would be less hindered by higher speed regional movements because some traffic would be diverted from Fairview. However, some Seward Highway traffic would still likely use Ingra Street. Nonmotorized travel would face reduced travel conflicts within Fairview because traffic would be reduced and speeds lowered. Improved bike and pedestrian connections along Gambell, Hyder, and Ingra Streets would improve nonmotorized mobility and accessibility as well as benefit local travel needs. A nonmotorized trail connection through Fairview would create a

⁴ Note that *Merrill Field Airport Master Plan Update and Noise Study* (2016) denotes this area as a “community use area” not a park. The plan indicates that the community use area is planned to be moved.

regional loop trail (Fairview Greenway-Ship Creek Trail-Coastal Trail-Chester Creek Trail), further enhancing local mobility.

- **Reduce conflicting travel functions.** Regional and local travel functions would be separated by bridging over the trails in the Chester Creek Greenbelt at the new crossing locations. Other parts of the alignment are routed to largely avoid conflicts with the local street network. Traffic on 5th and 6th Avenues and Gambell and Ingra Streets would be reduced, thereby reducing travel conflicts for local users crossing these streets.

Improve Safety for All Modes

- **Improve vehicle safety.** Traffic on 5th and 6th Avenues and Gambell and Ingra Streets would be reduced, thereby reducing travel conflicts for vehicles crossing these streets and improving safety. Gambell Street would be converted to a main street, with reduced lanes and slower speeds, improving safety.
- **Improve nonmotorized safety.** With the reduction in traffic on 5th and 6th Avenues, 15th Avenue, and Gambell and Ingra Streets, the complete street projects (lane reductions and nonmotorized improvements) would be facilitated providing a safer nonmotorized streetscape there.

Improve Livability and Quality of Life

- **Improve neighborhood connections and cohesion.** Because the higher speed through-traffic volumes on Gambell and Ingra Streets would be greatly reduced, cohesion would be improved. This is anticipated to allow Gambell Street to be redeveloped as a main street for local traffic. Connection to the regional trail network along Hyder, Gambell, or Ingra Street would improve the quality of life. This alternative uses public land for most of its right-of-way from Merrill Field, a snow dump, East Chester Creek Greenbelt, and public right-of-way, which may result in fewer social/economic acquisition impacts compared to all other alternatives.
- **Accommodate adopted plans that support economic redevelopment.** Providing regional traffic with its own separate alignment means Gambell, Ingra, and Hyder Streets could be redeveloped in accordance with local land use plans, which includes a two-way Gambell Street main street. Hyder Street is proposed to serve as the north-south Greenway Supportive Development Corridor, and redevelopment of Ingra Street would provide space for enhanced nonmotorized improvements and safer local access. Each of these street redevelopments is intended to improve the quality of life for the neighborhood and is envisioned to promote economic redevelopment in accordance with adopted land use plans.

5 References

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Appendix A:
Alternative Design Criteria
Technical Memorandum



AMATS: Seward Highway to Glenn Highway Connection
Planning & Environmental Linkage Study
State Project No.: CFHWY00550
Federal Project No.: 0001653

Alternative Design Criteria Technical Memorandum

September 2022

This planning document may be adopted in a subsequent environmental review process in accordance with 23 USC 168 Integration of Planning and Environmental Review.

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 USC 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

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Appendices

Appendix A: *Alaska Highway Preconstruction Manual* (HPCM) Figure 1100-1 Design Designation Form and Figure 1100-2(a) Project Design Criteria for New and Reconstruction Projects

Acronyms and Abbreviations

2040 LUP	<i>Anchorage 2040 Land Use Plan</i>
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AMATS	Anchorage Metropolitan Area Transportation Solutions
ATM	<i>Alaska Traffic Manual Supplement</i>
CSS	Context Sensitive Solutions
DCM	<i>Design Criteria Manual</i>
DOT&PF	Alaska Department of Transportation and Public Facilities
FHWA	Federal Highway Administration
GSD	Greenway-supported Development
HPCM	<i>Alaska Highway Preconstruction Manual</i>
MOA	Municipality of Anchorage
MUTCD	<i>Manual on Uniform Traffic Control Devices for Streets and Highways</i>
NACTO	National Association of City Transportation Officials
NMP	<i>Non-Motorized Plan</i>
OSHP	<i>Official Streets and Highway Plan</i>
PEL	Planning and Environmental Linkages
POA	Port of Alaska
TSD	Transit-supportive Development
USDOT	U.S. Department of Transportation

1 Introduction

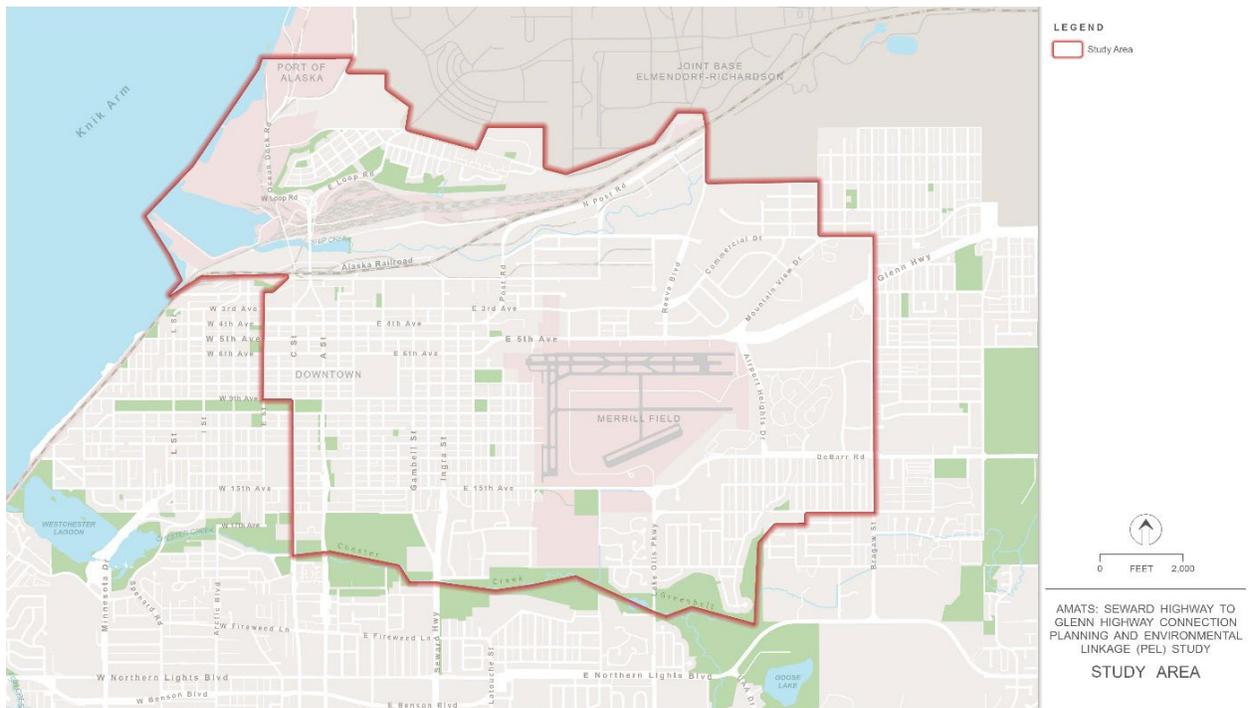
The purpose of this *Alternative Design Criteria Technical Memorandum* is to present the design criteria to be used as a basis for preparing the preliminary alternatives for evaluation in the Seward-Glenn Mobility Planning and Environmental Linkages (PEL) Study. The design criteria, and associated design elements, are intended to provide a toolbox that can be used in developing and refining the alternatives. The proposed design criteria and elements need to be inclusive enough to provide design guidance on a range of potential road, bicycle, and pedestrian improvements that support the desired system performance in the study area and also be responsive to the purpose and need identified for the PEL Study.

2 Project Description

The Seward-Glenn Mobility PEL Study will identify and evaluate options to improve transportation mobility, safety, access, and connectivity between the Seward Highway, near 20th Avenue, and the Glenn Highway, east of Airport Heights Drive. The study will also identify ways to improve access to and from the Port of Alaska (POA) to the highway network.

The preliminary project design criteria will be applicable to alternatives that will be analyzed within the project study area, which is shown in Figure 1. Certain components of a design alternative may extend beyond the Study Area boundaries shown in Figure 1.

Figure 1. Study Area



3 Methodology

The study area includes a mix of state- and Municipality of Anchorage (MOA)-owned roadways. Therefore, the project team reviewed and presents in this memorandum design requirements for both MOA and state facilities. Design criteria for state-owned roadways were developed based on the adopted standards of the Alaska Department of Transportation and Public Facilities (DOT&PF; DOT&PF 2020). Design criteria for MOA-owned roadways were developed based on the adopted standards in MOA's *Design Criteria Manual* (DCM; MOA 2007). Pedestrian and bicycle facilities, as well as transit designs, were based on MOA (2007) standards. The project team also reviewed MOA's *Official Streets and Highway Plan* (OSHP; MOA 2014) and *AMATS Complete Streets Policy* (AMATS 2018) to provide additional guidance. Other design guidance, such as that from the National Association of City Transportation Officials, was reviewed to provide additional guidance, particularly for potential walking and biking improvements.

4 Design Elements

This section presents descriptions and features associated with potential transportation design elements anticipated to be applicable in the study area. Anchorage Metropolitan Area Transportation Solutions (AMATS) has adopted a Complete Streets policy, which is defined 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” (AMATS 2018). Complete Streets relies on the use of the best and latest design guidance to maximize design flexibility. The alternatives to be developed for the PEL Study will comply with the Complete Streets policy. The following summarizes the design elements and criteria that will guide development of the preliminary alternatives. Guidance and criteria are presented for roadway, transit, and bicycle and pedestrian facilities.

4.1 Road and Highway Design

This section presents potential roadway design elements anticipated to be applicable in the study area. The descriptions are based on traffic forecast information and facility performance needs documented in the *Purpose and Need Statement* and *System Performance Memorandum*. As indicated above, the road and highway design elements will comply with the MOA-adopted Complete Streets policy (AMATS 2018). The roadway design elements presented below may be combined with transit, bicycle, and pedestrian elements to achieve compliance with the policy.

In addition to the general descriptions and guidelines presented below, Appendix A contains the following additional engineering details for roadway and highway design: (1) *Alaska Highway Preconstruction Manual* (HPCM; DOT&PF 2020) Figure 1100-1 Design Designation Form, and (2) Figure 1100-2(a) Project Design Criteria for New and Reconstruction Projects. These design criteria will be used as guidelines for the design of DOT&PF roads in each project alternative. However, these design criteria are meant to be flexible and fit in with the planned land use

context of the area. Additionally, not all roads in the study area are DOT&PF-owned roads. If an alternative includes an MOA road, it must be consistent with the MOA's DCM (MOA 2007) as well as other applicable plans regarding street development.

The MOA applies a Context Sensitive Solutions (CSS) approach to all transportation projects in the MOA. CSS involves "taking into consideration the land use and environment adjacent to the roadway when planning and designing a project so as to make the improvement blend in with the surrounding community" (MOA 2008). Incorporating these elements is consistent with the MOA's CSS policy and helps develop alternatives that are economic, social, and cultural assets as well as providing for the efficient movement of goods, services, and people.

The following summarizes key roadway design elements that are part of the proposed toolbox for developing alternatives for this PEL Study.

4.1.1 Freeways

According to the MOA's (2014) OSHP, freeways are limited access, high-speed roadways with grade-separated interchanges. Their only function is to carry vehicle traffic. Because access is controlled, and parking and at-grade intersections are not allowed, they are highly efficient transporters of goods and people. These streets provide a potential solution where more than 40,000 trips per day need to be served. They should be built to freeway design standards, with full grade separations at intersecting streets and a minimum right-of-way width of 150 feet.

The OSHP (MOA 2014) identifies the following general guidelines for freeway development. Freeways should:

- Either connect or provide easy access to major traffic generators
- Be designed to handle through traffic (although this should be given secondary consideration due to the small percentage of total trips that are classified as through trips within the urban area)
- Not bisect communities or neighborhoods; where such an area is bisected, provision should be made for access across the freeway, particularly at those locations where fairly extensive pedestrian movement can be expected in the future
- Only be considered when the arterial system cannot meet the demand placed upon it; traffic volumes must be well in excess of the design capacity of major arterials before freeway construction is considered
- Be decided based on the total cost of freeway construction, including socioeconomic costs, to ensure the best route is selected
- Provide for landscaping to provide a buffer, improve aesthetics, and serve as a major entrance to and through the community
- Have a minimum right-of-way width that is 150 feet

Freeways are limited access, high-speed roadways with grade-separated interchanges. In the study area, the DOT&PF classifies the Glenn Highway, Seward Highway, Ingra Street, and Gambell Street Interstate (i.e., freeway). Figure 2 shows the Glenn Highway, which is an example of a freeway in the study area.

Figure 2. Freeway Example – Glenn Highway, Anchorage

4.1.2 Expressways

According to the OSHP (MOA 2014), expressways are divided arterial highways that primarily serve through traffic; they differ from freeways by the degree to which access is controlled. The OSHP (MOA 2014) indicates that expressways may have either full or partial control of access, and may have either at-grade or grade-separated intersections. Expressways typically serve more than 20,000 trips per day and require a minimum right-of-way width of 130 feet.

The OSHP (MOA 2014) identifies the following general guidelines for expressway development. Expressways should:

- Function as through traffic roadways, connecting major employment and activity centers with residential areas or serving as bypass routes for areawide through trips
- Be designed for either full or partial access control
- Not have residential and collector streets nor private driveway connections onto the expressway
- Be located so they will not bisect neighborhoods or communities
- Provide for safe pedestrian crossings in activity areas
- Provide for landscaping to buffer the effect of vehicular operations upon adjacent areas, improve aesthetics, and serve as a major entrance to and through the community

Expressways are divided arterial highways that may have either at-grade or grade-separated intersections. Figure 3 shows International Airport Road, which is an example of an expressway in the study area.

Figure 3. Expressway Example –International Airport Road, Anchorage

4.1.3 Major Arterial Streets

According to the OSHP (MOA 2014), arterials are intended to move large volumes of vehicles and goods on longer inter-area trips, and move traffic to and from the freeway/expressway system. Major arterials also connect major traffic generators within a city, and they link important inter-city routes by forming an integrated system within the community. A secondary function of major arterials is to provide land access. The OSHP (MOA 2014) states that traffic volumes on these streets will typically be more than 20,000 trips per day, and major arterials should have at least four travel lanes, paved shoulders (for emergency parking), and a divider wherever possible. Access should be carefully controlled, and residential development should be served from side streets. Recommended minimum right-of-way width varies between 60 and 130 feet, depending on the street class.

The OSHP (MOA 2014) identifies the following general guidelines for major arterial development. Major arterials should:

- Provide direct linkage between major employment and activity centers, and connect these centers with large residential areas
- Provide little or no direct land access
- Serve as the primary distribution system to and from freeways and expressways
- Provide major parallel traffic routes to the freeway system
- Prevent direct access from residential lots or smaller clusters of such lots during the design of future subdivisions along major arterials
- Control access from commercially and industrially developed areas onto major arterials
- Be sited in appropriate locations that prevent isolation of residential areas or neighborhoods from major service facilities such as parks and schools, and provide safe pedestrian access to such facilities

- Use landscaping to buffer residential or public use areas such as parks and schools from major arterials

Figure 4 shows 15th Avenue, east of Ingra Street, which is an example of a major arterial street in the study area.

Figure 4. Arterial Street Example – 15th Avenue, east of Ingra Street, Anchorage



4.1.4 Minor Arterial Streets

Minor arterial streets are intended primarily to move through traffic, but they also provide an important land access function. Access should be at block intervals wherever possible. Minor arterials serve less concentrated traffic-generating areas such as neighborhood shopping areas and schools. They distribute traffic from neighborhood collector streets to major arterials as well as between major arterials. Direct access is controlled to a lesser degree on minor arterials than on major arterials. These streets typically carry 10,000 to 20,000 vehicles per day. They should have two to four moving lanes and paved shoulders for emergency parking. Recommended minimum right-of-way width varies between 60 and 80 feet, depending on the street class.

The OSHP (MOA 2014) identifies the following general guidelines for minor arterial development. Minor arterials should:

- Serve as the distribution link between major arterials and lower classification streets such as collector or residential streets
- Discourage direct access to minor arterials from individual lots
- Connect smaller residential areas such as residential neighborhoods
- Connect residential areas with community schools, neighborhood business areas, and recreational facilities
- Provide landscaping to buffer areas and improve aesthetics

- Connect neighborhoods by providing for safe pedestrian access facilities

Figure 5 shows Mountain View Drive, which is an example of a minor arterial street in the study area.

Figure 5. Minor Arterial Street Example – Mountain View Drive, Anchorage



4.2 Street Typology

To be consistent with adopted plans, a number of other design considerations must be considered. This section describes concepts from adopted plans that will have applicability in developing alternatives within the study area. These concepts will need to coordinate with the road and highway design elements described in Section 4.1.

The OSHP¹ (MOA 2014) provides “Street Typology Guidance” that recognizes that “the traditional functional classification system needs to be supplemented to induce a more balanced street function that emphasizes adjacent land uses and accommodates all users—pedestrians, bicyclists, transit users, and motorists.” The *Anchorage 2040 Land Use Plan* (2040 LUP; MOA 2017) map also sets forth guidance recognizing that street topology is an important consideration in planning for transportation improvements. The plan specifies that street typology addresses the design features in the street right-of-way that respond to the surrounding land uses and development patterns. The plan indicates that “Street Typologies provide a framework to allow street design flexibility that can prioritize walking, bicycling, or public transit modes of travel in certain land use policy areas” (MOA 2017). Importantly, the plan expects that OSHP Street types will be coordinated well with the 2040 LUP land use designations and “Traditional Neighborhood Design” to help achieve walkable, livable, and healthy communities (MOA 2017).

¹ An AMATS Street Typologies Plan is anticipated to begin in Federal Fiscal Year 2024.

The following typologies are particularly relevant within the study area.

4.2.1 Transit Corridors

According to the OSHP (MOA 2014), transit corridors are transit streets that are located in areas of medium- to high-intensity land use. In these corridors, alternative modes of travel are emphasized, and an increased use of pedestrian, bicycle, and transit design elements is promoted. The plan indicates that transit streets typically consist of two to four travel lanes, and that additional lanes along transit streets should be considered only as a last resort. The plan suggests that expansion of parallel routes should be first examined as a possible solution to congestion problems and recommends that if this alternative expansion to handle capacity is not possible, negative impacts on the pedestrian environment should be mitigated to the maximum extent feasible. The plan identifies improvements such as transit shelters and indicates landscaping in medians and along street edges is desirable to make transit streets more attractive to pedestrians and transit users. The 2040 LUP map indicates that Transit-supportive Development (TSD) areas represent “growth-supporting features” that are an overlay of the base land uses (MOA 2017). Within the study area, TSD is recommended along 15th Avenue/DeBarr Road as well as portions of A and C Streets.

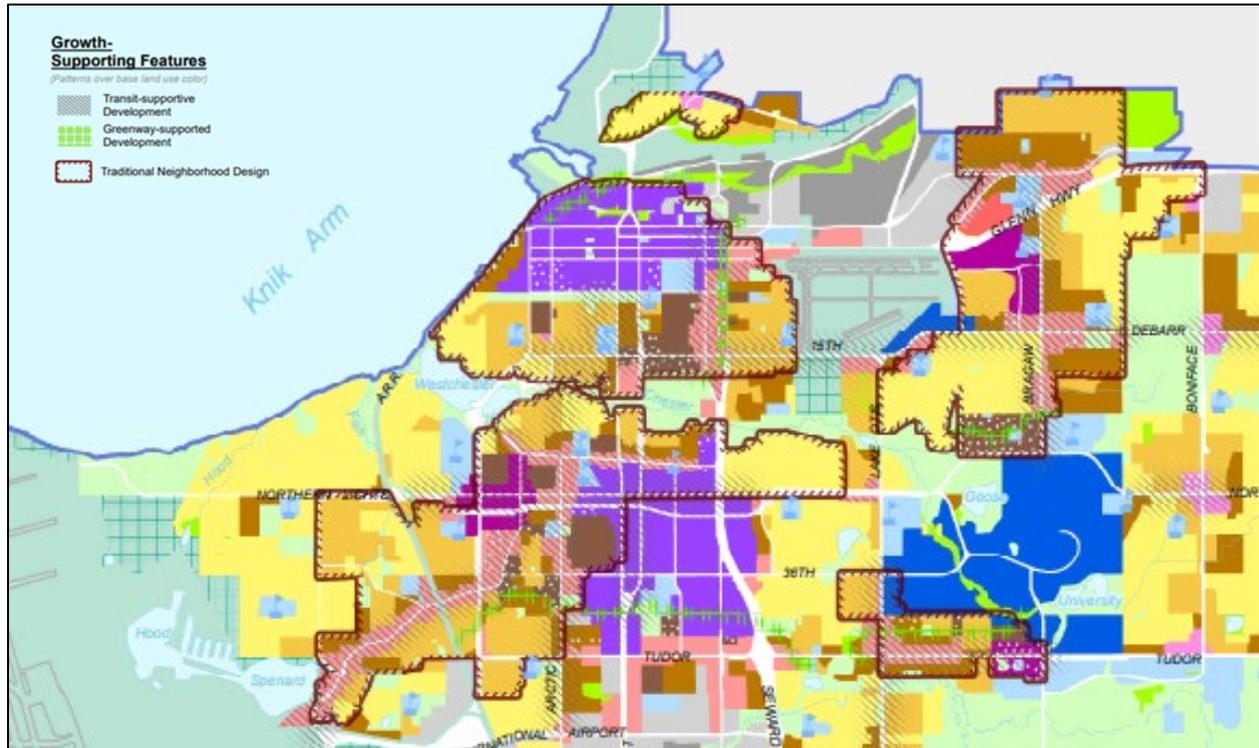
4.2.2 Industrial Streets

The access improvements to/from the POA evaluated in the PEL Study should be developed in accordance with the “Industrial Street” typology. The OSHP (MOA 2014) indicates that “industrial streets are designed to accommodate significant volumes of large vehicles such as trucks, trailers, and other delivery vehicles.” The plan suggests that industrial streets typically consist of two to four travel lanes, which are generally wider to accommodate movement of larger vehicles. With regards to bicycle and pedestrian facilities, the plan indicates that because industrial areas often have relatively low residential density, bicycle and pedestrian travel is often less frequent than in other types of neighborhoods but still should be accommodated. Additionally, the plan indicates that on-street bicycle lanes and on-street parking are rare on industrial streets.

4.3 Land Use Elements

Figure 6 provides the 2040 LUP map. The following 2040 LUP (MOA 2017) designations are particularly relevant within the study area.

Figure 6. Anchorage Land Use Plan Map



4.3.1 Greenway-supported Development

The 2040 LUP (MOA 2017) identified a Greenway-supported Development (GSD) corridor along Ingra Street in the study area. A GSD is intended to be a corridor where new development will “incorporate natural open spaces, creek corridors, and pedestrian routes” (MOA 2017). The plan indicates that GSDs are a development concept that focuses on catalyzing new infill and redevelopment projects, based on a creek or greenway restoration. The plan hopes that future redevelopment projects would interface with revitalized urban creeks, wetlands, wildlife habitats, public spaces, or multi-use trails. The plan indicates that “for GSDs to most effectively catalyze redevelopment and alternative access modes, they should connect to existing pedestrian corridors and trails” (MOA 2017).

4.3.2 Main Street Corridor

The 2040 LUP (MOA 2017) identifies a Main Street Corridor designation along Gambell Street and the western side of Ingra Street in the study area. The plan envisions that this land use designation will provide “for commercial and mixed-uses within urban neighborhoods that can evolve as pedestrian-oriented, transit-served ‘main street’ development” (MOA 2017). The plan includes specific corridors, such as along Gambell Street, that feature “transit access, wider

sidewalks, pedestrian amenities, street tree landscaping, and relocation of utility poles and boxes and other impediments to a safe, comfortable pedestrian environment” (MOA 2017). The OSHP (MOA 2014) further defines the vision for a Main Street Typology:

Unlike commercial streets, main streets are designated to promote walking, bicycling, and transit within attractive landscaped corridors.... Main streets generally consist of two to four travel lanes. On-street parking is usually provided to serve adjacent land uses. Curb extensions within the parking lane can accommodate tree wells. To further create a pedestrian-friendly atmosphere, main streets have wide sidewalks (10 feet or greater, depending on the expected pedestrian traffic), landscaping, street furniture, outdoor cafes, plazas, and other features.

4.3.3 Transit-supportive Development Corridors

According to the 2040 LUP, TSD identifies corridors where “expanded public transit service will support a compact, walkable pattern of commercial, residential, and/or mixed-use development” (MOA 2017). TSD could affect street design for up to 0.25 mile or a 5- to 15-minute walk from a transit route. The 2040 LUP (MOA 2017) indicates:

Road improvements on the TSD corridor should incorporate expanded sidewalks, strategically placed crosswalks, enhanced street furniture, highly visible transit facilities, and other pedestrian amenities. TSDs continue to accommodate through traffic, and some roadway improvements may be needed to address congestion. Such improvements should minimize impacts on the pedestrian environment and transit service.

4.4 Transit Elements

Providing access to transit stops and creating a supportive environment for transit service is another important consideration. One key design feature that should be considered is accessibility to the transit service. A clear width of 8 to 12 feet is preferred where transit is present and may be wider depending on activity levels (NACTO 2016). Nearby crosswalks should be accessible, with special attention given to people with mobility issues or no or low vision (NACTO 2016). Curb ramps should be provided as needed, and should be designed in a way that reduces the accumulation of water and snow (NACTO 2016).

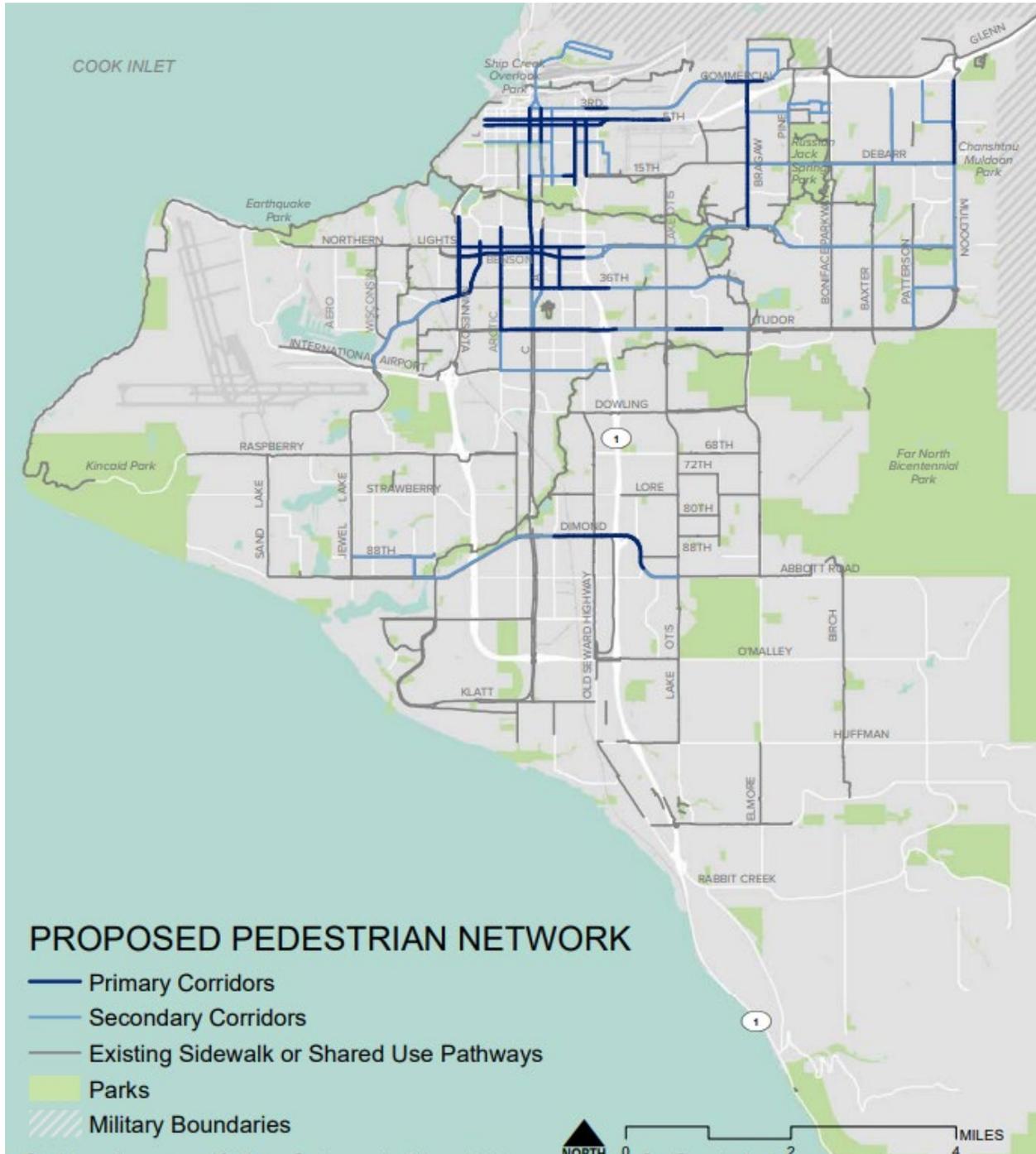
Other design considerations that support transit service include intersection improvements such as queue jump lanes (i.e., a short, dedicated transit-only lane that allows a transit vehicle to have priority at a traffic signal).

Another consideration is the location of the transit stop. Determining if the transit stop would be located on-street versus off-street depends on many factors, including the road’s functional classification, speed, traffic volume, and anticipated transit boardings and alightings. For the purposes of this study, it is assumed that transit stops on roads classified as major arterials or above will have off-street transit stops, and other roads will have on-street transit stops.

4.5 Pedestrian Elements

Safe and comfortable design elements for bicyclists and pedestrians are an important consideration for the project. The *Non-Motorized Plan* (NMP; AMATS 2021) identifies several roads in the study area as primary or secondary pedestrian corridors (Figure 7).

Figure 7. Pedestrian Corridors



Source: AMATS 2021

According to the NMP (AMATS 2021):

Primary Corridors represent roadways that fall within areas of high demand and high equity need, or are identified as high collision corridors; they represent the greatest potential to positively impact the pedestrian network. Secondary Corridors are roadways that fall within only one of the criteria but also provide access to transit, close gaps between primary corridors, or were identified through public input.

The NMP (AMATS 2021) provides design guidelines that can be used as a starting point for pedestrian improvements along these corridors. Sidewalks are the most fundamental part of the pedestrian network. The DCM (MOA 2007) indicates that pedestrian facilities should be installed on both sides of arterials and collectors, on local streets as specified in Anchorage Municipal Code 21, and along the frontage of new development or redevelopment. According to the DCM (MOA 2007), sidewalks in central business districts B-2A, B-2B, and B-2C have a recommended width of 12 feet, and the minimum width of pedestrian facilities in other areas is 5 feet. The DCM (MOA 2007) also states that, where possible, the sidewalk should be separated from the road by 7 feet or more.

The NMP (AMATS 2021) indicates that, according to the *Urban Street Design Guide* (NACTO 2013), sidewalks should be a minimum of 6 feet wide. These widths typically refer to the pedestrian through zone, which is the portion of the sidewalk that is intended for pedestrian travel. Additional space is often needed adjacent to the private property line to provide some separation from buildings or other elements at the property line.

Amenities such as lighting, street trees (Figure 8), planting strips, art, and special paving can often improve the pedestrian environment and encourage higher levels of pedestrian travel.

Other design elements that may improve the pedestrian environment are summarized below.

Curb Extensions: Curb extensions, also known as bulb-outs or neckdowns, extend the sidewalk into the parking lane and reduce the effective street width (PEDSAFE n.d.). They often encourage motorists to travel more slowly, reduce turning speeds, and prevent motorists from blocking a curb ramp or crosswalk. They should not extend more than 6 feet from the curb.

Figure 8. Street Trees



Source: NACTO 2013

Median Refuge Island: Median refuge islands (Figure 9) are protected spaces placed in the middle of the road. They create a two-stage road crossing, making it easier and safer to cross multiple lanes of traffic. The minimum width is 6 feet, with widths of 10 feet or more being desirable (NACTO 2014).

Tighter Curb Radius: As shown in Figure 10, decreasing curb radii makes the crossing distance for pedestrians shorter, lowers the speed of turning motorists, and makes it easier for motorists and pedestrians to see each other. However, it may also increase the time it takes for a motorist to make the turn and result in motorists driving over the curb to make the turn. Additionally, moving the crosswalk and stop bar farther from the cross street may result in drivers moving closer to the cross street to look for oncoming traffic, which may result in their vehicle blocking the crosswalk.

Shared Use Path: A shared use path is a dedicated travel area for pedestrians and other non-motorized users that is separate from motorized traffic. Shared use paths often have a width of 10 to 12 feet, but this can vary depending on the anticipated volume of non-motorized users.

4.6 Bicycle Elements

The NMP (AMATS 2021) also proposes separated bikeways and enhanced shared roadways on several roads in the study area (see Figure 11).

A separated bikeway includes buffered bicycle lanes (Figure 12) and protected bicycle lanes (Figure 13). A buffered bicycle lane is a conventional bicycle lane with an additional painted buffer space. The preferred minimum overall width is 7 feet, which includes an 18-inch-wide painted buffer. A protected bicycle lane is a bicycle lane that is separated from vehicle traffic by a painted buffer and physical barriers. The minimum recommended width of a protected bicycle lane is 8 feet, which includes 3 feet of physical buffer space.

Enhanced shared roadways refer to roads that include improvements designed to improve bicycle use. An example of an enhanced shared roadway is a bicycle boulevard (Figure 14). Bicycle boulevards are streets that give bicycle travel priority over other users.

Figure 9. Median Refuge Island



Source: NACTO 2014

Figure 10. Tighter Curb Radius

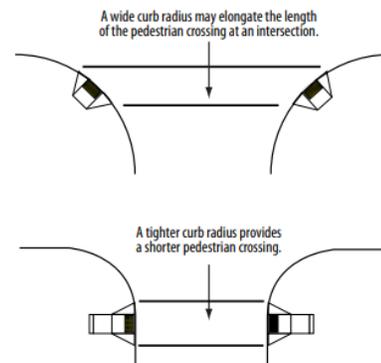
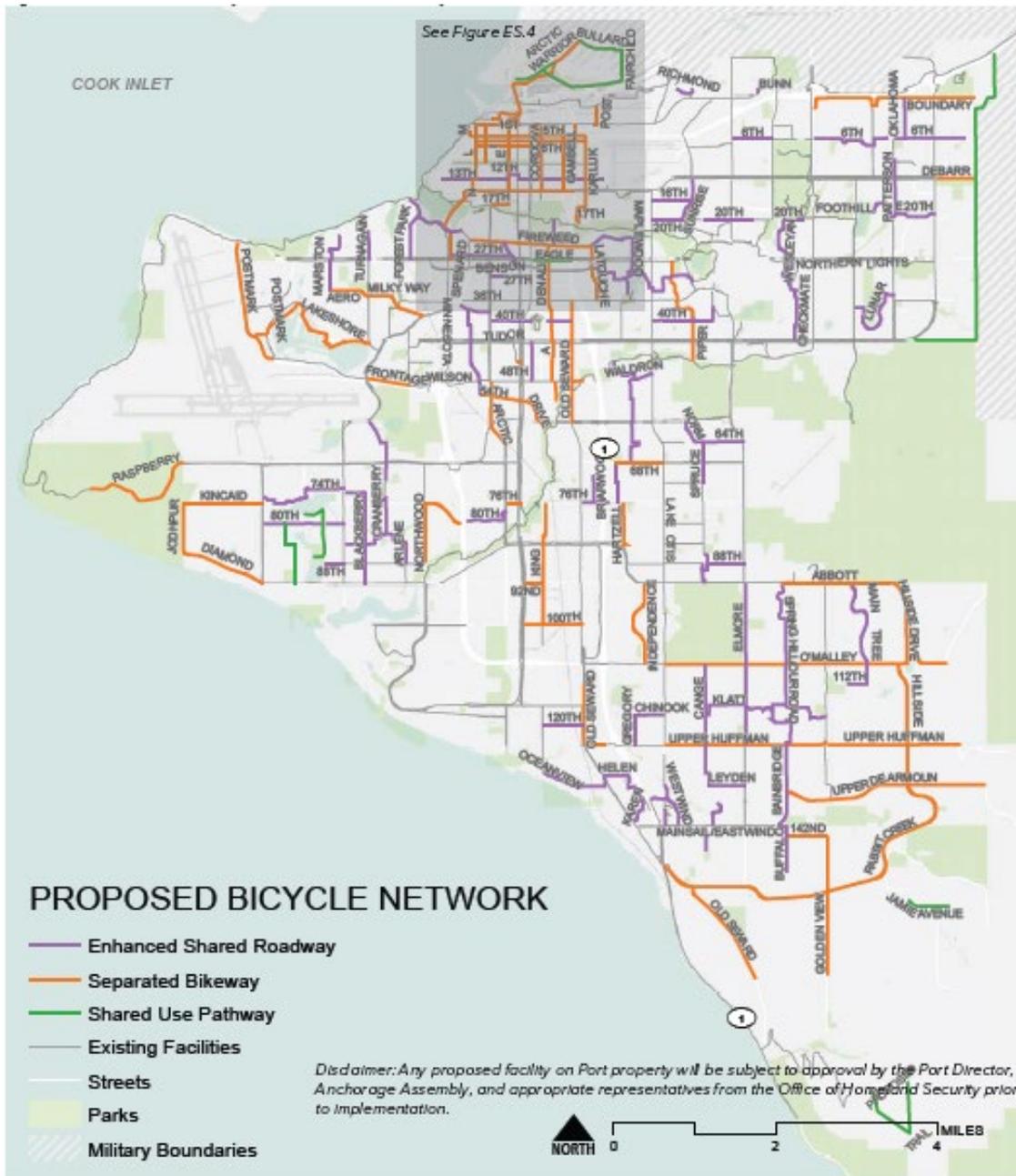


Exhibit 5-4: Pedestrian crossing distances for wide turning radii are longer than when using a tight radii.

Source: Wisconsin Department of Transportation 2010

Figure 11. Proposed Bicycle Network



Source: AMATS 2021

Figure 12. Buffered Bicycle Lane



Source: NACTO 2014

Figure 13. Protected Bicycle Lane



Source: Hudson 2018

Figure 14. Bicycle Boulevard



Source: Alta n.d.

Other non-motorized options that may be considered include:

- **Shared use pathways:** This is a multi-use path that is typically designed to accommodate pedestrians, bicyclists, and other non-motorized users. They are typically fully separated from traffic.
- **Signed routes:** These are routes that are preferred for bicycling. They usually do not have a dedicated space for bicyclists, but may have some design features that encourage bicycling. These typically are best implemented on roads with low traffic volumes.
- **Paved shoulders:** The paved shoulder on the edge of a road may provide a space for bicyclists and pedestrians to travel. The recommended width of the paved shoulder varies with the functional classification of the road.
- **Bicycle lanes:** This is a facility for exclusive bicycle use that is located adjacent to a roadway.
- **Bike Box:** A bike box (Figure 15) is a designated area at a signalized intersection that gives bicyclists a safe way to get ahead of traffic during a red light. Bike boxes are typically 10 to 16 feet deep. They usually require an intersection to restrict right turns

Figure 15. Bike Box



Source: NACTO 2014

on a red light. A stop line should be installed prior to the bike box to indicate where motor vehicles should stop prior to entering the box. Pavement marking should also be used to designate the space as a bike box. It is desirable to use colored pavement, signage, and other features to help delineate the space.

Additional guidance on the design of non-motorized features can be found in:

- Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD; FHWA 2022)
- Alaska Traffic Manual Supplement (ATM; DOT&PF 2016)
- American Association of State and Highway Officials (AASHTO) *Guide for the Development of Bicycle Facilities* (AASHTO 2012)
- AASHTO *Guide for the Planning, Design, and Operation of Pedestrian Facilities* (AASHTO 2021)
- National Association of City Transportation Officials' (NACTO) *Urban Bikeway Design Guide* (NACTO 2014)
- NACTO's *Urban Street Design Guide* (NACTO 2013)
- U.S. Department of Transportation (USDOT), FHWA's *Small Town and Rural Multimodal Networks* guide (FHWA 2016)
- USDOT, FHWA and U.S. Department of Agriculture, U.S. Forest Service, *Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds* (FHWA and Forest Service 2007)
- U.S. Department of Justice *2010 ADA [Americans with Disabilities Act] Standards for Accessible Design* (Department of Justice 2010)
- *Rails-with-Trails: Lessons Learned – Literature Review, Current Practices, Conclusions* (USDOT 2002)
- DOT&PF's Alaska HPCM (DOT&PF 2020)
- MOA's DCM (MOA 2007)
- MOA's *Anchorage Bicycle Plan* (MOA 2010)
- MOA's *Areawide Trails Plan* (MOA 1997)
- *2021–2022 Safe Routes to School Manual* (MOA 2021)

4.7 Other Roadway Configurations

Other communities have implemented different road configurations to address similar access, mobility, and safety concerns. Some of those configurations include:

- **Multiway Boulevard:** Multiway boulevards (Figure 16) are a street type that separates faster moving lanes of traffic in the middle of the road from local traffic through the use of medians. These boulevards are gaining popularity because they reduce congestion, support infill development, and improve pedestrian safety. A multiway boulevard may be appropriate for streets that serve substantial amounts of local and through traffic. They typically require more than 100 feet of right-of-way.
- **Parkway:** In the United States, a parkway (Figure 17) typically refers to a road in a park or connecting to a park. The term may also be applied to scenic highways and limited access routes. They often originated as routes for scenic recreational driving, and have fewer access points and driveways.
- **Neighborhood Main Street:** According to NACTO, a neighborhood main street is “a nexus of neighborhood life with high pedestrian volumes, frequent parking turnover, key transit routes, and bicyclists all vying for limited space” (NACTO 2013). Main street designs should limit traffic speeds and have frequent, well-designed pedestrian crossings. According to NACTO, these streets are more successful when they have undergone a road “diet” and have converted from four to three (or six to five) lanes, with bicycle lanes and a center turn lane or median (NACTO 2013). These streets may also benefit from dedicated loading zones near the intersection.
- **Pedestrian Street:** A pedestrian street is a street that is for the exclusive use of pedestrians. They are most appropriate on corridors that have commercial activity on both sides.
- **Woonerf:** A woonerf (Figure 18), sometimes called a living street, allows drivers, bicyclists, pedestrians, and others to share the same space simultaneously. These are typically viewed more as social spaces instead of purely vehicle spaces. The four vital elements of a woonerf are: (1) well-defined entrances, (2) a shared and well-marked space, (3) physical barriers to slow traffic, and (4) landscaping and street furniture (Reardon 2016).

Figure 16. Example of a Multiway Boulevard



Figure 17. Minnehaha Parkway, Minneapolis



Source: Collins 2014

Figure 18 Woonerf in Winnipeg, Manitoba



Source: Transportation Association of Canada n.d.

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Appendix A
Alaska Highway Preconstruction Manual
(HPCM) Figure 1100-1 Design Designation
Form and Figure 1100-2(a) Project Design
Criteria for New and Reconstruction Projects

DESIGN STANDARDS. In the Municipality of Anchorage (MOA), the road ownership and maintenance responsibility is divided between the MOA and Alaska Department of Transportation and Public Facilities (DOT&PF). For this PEL study, it is assumed that Minor Arterials would be designed according to MOA standards, while Freeways, Expressways, and Major Arterials would be designed to DOT&PF standards.

DESIGN DESIGNATION. The average annual daily traffic (AADT) is derived from daily traffic volume values for 2019 and 2050 produced by the travel model. The freeway AADT is taken from traffic volumes of the Seward Highway at 20th Avenue and the Glenn Highway at Airport Heights Drive. The ramp AADT is taken from traffic volumes at the Glenn Highway and Bragaw Street, and the Seward Highway and Tudor Road. The minor arterial AADT is taken from traffic volumes of Northern Lights Boulevard at Seward Highway and A/C Street at 15th Avenue. The collector AADT is taken from traffic volumes of 15th Avenue at Ingra Street and Bragaw Street at the Glenn Highway.

DESIGN SPEED. The design speed of the roads included in each alternative will vary depending on the functional classification of the proposed road and the nature of the alternative.

The frontage roads and cross streets will be designed for the alignment and speed recommended by the owner agencies' manuals (DOT&PF *Alaska Highway Preconstruction Manual* [HPCM; DOT&PF 2020] or MOA's *Design Criteria Manual* [DCM; MOA 2007]).

The current edition of DOT&PF's HPCM (DOT&PF 2020) states that 60 miles per hour (MPH) is the minimum design speed for an urban interstate, and 60 MPH should also be used for a freeway in rolling terrain, similar to what will be encountered through Anchorage. The American Association of State and Highway Officials (AASHTO) *Policy on Geometric Design of Highways and Streets* (AASHTO 2011) states that 70 MPH is desirable for the overall quality and safety of an urban freeway, but speeds should never be less than 50 MPH.

The Seward and Glenn Highways, south of Tudor Road and east of Airport Heights Drive, respectively, are controlled-access facilities signed for a speed limit of 65 MPH. The design speed for the Seward Highway is 70 MPH (CH2MHill 2008), and for the Glenn Highway is 65 MPH (DOWL 2008). Therefore, a desirable design speed for an improved freeway connection would be 70 MPH. If needed for safety or environmental concerns, a minimum design speed of 60 MPH may be used after rigorous review and concurrence by the DOT&PF. DOT&PF collectors will be designed for speeds of at least 30 MPH. DOT&PF urban arterials in rolling terrain will be designed for speeds between 30 and 60 MPH.

AASHTO's *Policy on Geometric Design of Highways and Streets* (AASHTO 2011) states that urban arterials should have a design speed between 30 and 50 MPH, and the selected design speed should depend on several factors such as the spacing of signalized intersections, the presence or absence of curb and gutter, and the amount and type of access to the street.

According to the DCM (MOA 2007), MOA minor arterials will be designed at 45 MPH, with a posted speed of 35 MPH.

LANE AND SHOULDER WIDTH. AASHTO recommends 12-foot travel lanes and 10-foot outside shoulders on principal arterials. The DCM (MOA 2007) allows for 10- to 12-foot lanes on MOA roads, based on truck volumes. It is assumed that 12 feet will be used unless areas of low truck traffic are identified. Shoulders on MOA roads can range between 2 and 12 feet, per the DCM (MOA 2007). Shoulder widths of 8-foot constant outside and 4-foot constant inside are assumed to provide for bicycle traffic through these areas while not unduly expanding roadway footprints unless other bicycle facilities are provided.

AASHTO also recommends 12-foot travel lanes for urban arterials but allows for no shoulders due to costly/restricted right-of-way, while recommending a minimum 2-foot-of-shy distance between the curb and lane. However, shoulders up to 8 feet should be provided when possible to provide space for disabled vehicles, extra maneuvering room, speed-change width for turning into side streets and driveways, and temporary space for plowed snow.

The frontage road and cross street driving lanes, parking lanes, and shoulder widths will be designed as recommended by the owner agencies' manuals (DOT&PF HPCM [DOT&PF 2020] or MOA DCM [MOA 2007]).

MEDIAN. The DOT&PF medians should have sufficient width to accommodate snow storage and be flexible enough to accommodate future needs. For DOT&PF roads, this includes the portions of the Glenn and Seward Highways as they enter the study area. MOA divided major arterials should be designed with a 15-foot median or a minimum width of 4 feet when constrained by right-of-way. MOA minor arterials should be designed with 14-foot width for the purpose of a two-way left-turn lane. MOA collectors should not have medians unless left turns at signalized intersections are a primary movement.

The following section contains the design criteria and sample cross-sections for the following facilities:

- Interstate (Highway/Freeway)
- Expressway
- Major Arterial
- Minor Arterial
- Ramp
- Bus

DESIGN CRITERIA ACRONYMS/ABBREVIATIONS

3R	resurfacing, restoration, and rehabilitation
AADT	average annual daily traffic
AASHTO	American Association of State and Highway Officials
ADT	average daily traffic
DCM	<i>Design Criteria Manual</i> (MOA 2007)
Des.	Design

DHV	design hour volume
DOT&PF	Alaska Department of Transportation and Public Facilities
FHWALH	Federal Highway Administration's <i>Lighting Handbook</i> (FHWA 2012)
GB	"Green Book" (see also PGDHS; AASHTO 2011)
HPCM	<i>Alaska Highway Preconstruction Manual</i> (DOT&PF 2020)
LOS	Level of Service
MOA	Municipality of Anchorage
MP	Milepost
MPH	mile(s) per hour
PCM	see HPCM
PGDHS	<i>Policy on Geometric Design of Highways and Streets</i> (AASHTO 2011)

REFERENCES

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PROJECT DESIGN DESIGNATION

Project: **Seward to Glenn, 20th Avenue to Bragaw Street (Freeway)**

State Route Number: 130000 and 135000 Route Name: Seward Highway and Glenn Highway

Project Limits: Seward Highway at Fireweed Lane to Glenn Highway at Bragaw Street

State Project Number: CFHWY00550 Federal Aid Number: 0001653

Project Description: The connection of the Seward and Glenn Highways with a new controlled-access freeway, beginning at Milepost (MP) 124.0 of the Seward Highway (Tudor Road Interchange) and ending at MP 0.7 of the Glenn Highway (Bragaw Street Interchange); approximate length is 4.6 miles. The work will construct an 8- to 10-lane freeway segment between the Seward and Glenn Highways, providing a continuous free-flow through Anchorage.

Design Functional Classification: Urban Principal Arterial Rural Principal Arterial
 Major Collector Minor Collector Local
 Other

New Construction – Reconstruction (4R) Rehabilitation (3R) Other:

Project Design Life (years): 5 10 20 25 Other: _____

	<u>Existing</u> <u>Year</u> 2020	<u>Construction</u> <u>Year</u> 2025	<u>Mid-Life</u> <u>Year</u> 2035	<u>Design</u> <u>Year</u> 2050
(approximate demand) ADT:	54,000	55,500	58,500	63,000
DHV (10%):				6,300
Peak Hour Factor (8.22%):				
Directional Distribution (50/50):				
Percent Recreational Vehicles (___%):				
Percent Commercial Trucks (___%):				
Linear Growth Rate (300 Vehicles/ Year):				
Pedestrians (Number/Day):				
Bicyclists (Number/Day):				
Equivalent Single Axle Load (ESAL):				
Pavement Design Year:		2035		

Design Vehicles for Turning: WB-120 Interstate Double-Trailer Truck Combination

Design Vehicle Loading: HS15 HS20 HS25 HL93 Other: _____

Recommend: _____
Garrett Rutherford, EIT
HDR Alaska

Date

APPROVED: _____
Luke Bowland, PE
Regional Preconstruction Engineer

Date

INTERSTATE (HIGHWAY/FREEWAY)

Project Design Criteria

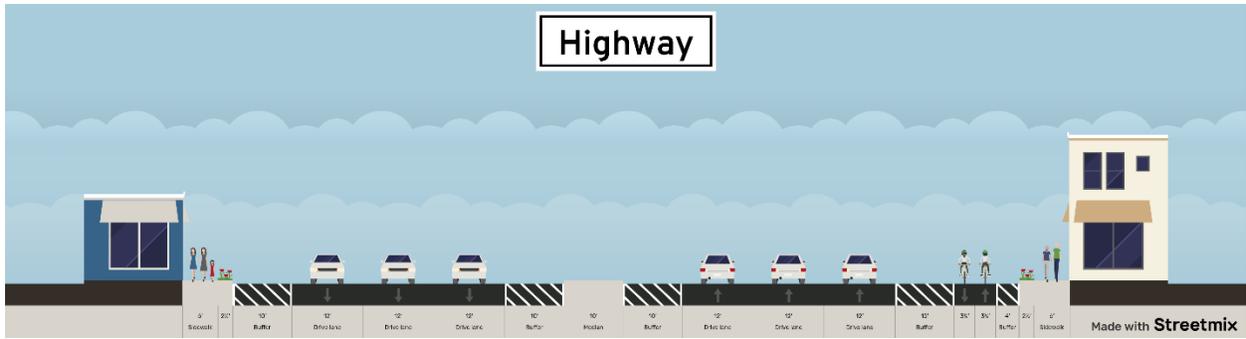
Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification:	Highway/Freeway	PGDHS, p 1-11
Design Year:	2050 Present AADT: 40,000+	RSG Data
Design Year AADT:	40,000+ Mid Design Period AADT: 40,000+	RSG Data
DHV:	6,300 Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	Des.70 MPH;PGDHS,p8-2
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	12'	Google Earth
Existing Shoulder Width:	Outside: 10' Inside: 10'	Google Earth
Existing Lane + Shoulder Width:	56'	3 lane, Google Earth
Lane + Shoulder Width for 4R:	56'	3 lane, GB p 4-7,4-8
Existing Superelevation Rate:		
Min. Radius for 4R:	2050' (Evaluate Curves tighter than this)	GB, p 3-32
Min. K-Value for Vert. Curves (4R):	Sag: 181 Crest: 247	GB,p3-161,3-155,3-157
Stopping Sight Distance:	730'	GB,p 3-4
Passing Sight Distance:	1200'	GB,p 3-9
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	18'	PCM,Table 1130-1
Degree of Access Control:	Full	GB,p 2-63
Median Treatment:	50' or 10'-30'	GB,p 8-8
Existing Illumination:	Continuous	Google Earth
Proposed Illumination:	Continuous	FHWALH, p 34
Curb Usage and Type:	4"	GB, p 4-16
Existing Bicycle Accommodations:	0'	Google Earth
Proposed Bicycle Accommodations:	0'	PCM,Table 1210-1
Existing Pedestrian Accommodations:	6'	Google Earth
Proposed Pedestrian Accommodations:	8'	GB, p 4-56
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:	210'	GB, p 3-153
Max Grade:	4%	GB, p 8-4
Min. Grade:	0.50%	GB, p 3-119
Side Slope Ratios to Clear Zone:	6:1, 4:1 min	PCM, Table 1130-2
Bridge Loading:	HL-93	GB, p 6-7
Clear Zone:	30'	PCM,Table 1130-2

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

Approved - Preconstruction Engineer: _____ Date: _____



EXPRESSWAY

Project Design Criteria

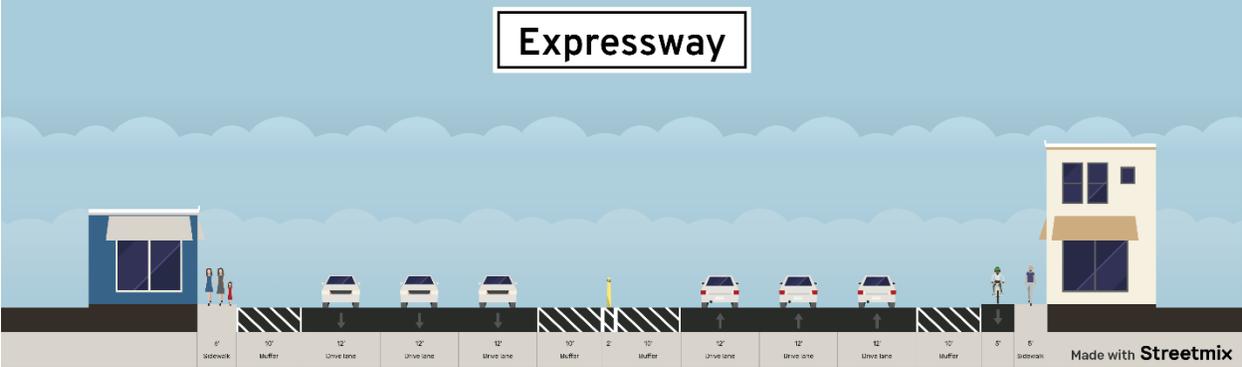
Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification: Expressway		PGDHS, p 1-11
Design Year:	2050 Present AADT: 40,000+	RSG Data
Design Year AADT:	40,000+ Mid Design Period AADT: 40,000+	RSG Data
DHV:	6,300 Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	Des.70 MPH;PGDHS,p8-2
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	12'	Google Earth
Existing Shoulder Width:	Outside: 10' Inside: 10'	Google Earth
Existing Lane + Shoulder Width:	56'	3 lane, Google Earth
Lane + Shoulder Width for 4R:	56'	3 lane, GB p 4-7,4-8
Existing Superelevation Rate:		
Min. Radius for 4R:	2050' (Evaluate Curves tighter than this)	GB, p 3-32
Min. K-Value for Vert. Curves (4R):	Sag: 181 Crest: 247	GB,p3-161,3-155,3-157
Stopping Sight Distance:	730'	GB,p 3-4
Passing Sight Distance:	1200'	GB,p 3-9
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	18'	PCM,Table 1130-1
Degree of Access Control:	Limited	GB,p 2-63
Median Treatment:	50' or 10'-30'	GB,p 8-8
Existing Illumination:	Continuous	Google Earth
Proposed Illumination:	Continuous	FHWALH, p 34
Curb Usage and Type:	4"	GB, p 4-16
Existing Bicycle Accommodations:	0'	Google Earth
Proposed Bicycle Accommodations:	0'	PCM,Table 1210-1
Existing Pedestrian Accommodations:	6'	Google Earth
Proposed Pedestrian Accommodations:	8'	GB, p 4-56
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:	210'	GB, p 3-153
Max Grade:	4%	GB, p 8-4
Min. Grade:	0.50%	GB, p 3-119
Side Slope Ratios to Clear Zone:	6:1, 4:1 min	PCM, Table 1130-2
Bridge Loading:	HL-93	GB, p 6-7
Clear Zone:	30'	PCM,Table 1130-2

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

Approved - Preconstruction Engineer: _____ Date: _____



MAJOR ARTERIAL

Project Design Criteria

Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification:	Major Arterial	PGDHS, p 1-11
Design Year:	2050 Present AADT: 20-40,000	RSG Data
Design Year AADT:	20-40,000 Mid Design Period AADT: 20-40,000	RSG Data
DHV:	4,500 Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	Des.45;PGDHS,p2-58
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	12'	Google Earth
Existing Shoulder Width:	Outside: 8' Inside: 4'	Google Earth
Existing Lane + Shoulder Width:	36'	2 lane, Google Earth
Lane + Shoulder Width for 4R:	40'	2 lane, p 3-103,10-102
Existing Superelevation Rate:		
Min. Radius for 4R:	643' (Evaluate Curves tighter than this)	GB, p 3-32
Min. K-Value for Vert. Curves (4R):	Sag: 79 Crest: 175	GB,p 3-161,3-155,3-157
Stopping Sight Distance:	360'	GB,p 3-4
Passing Sight Distance:	700'	GB,p 3-9
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	16.5'	PCM,Table 1130-1
Degree of Access Control:	Partial	GB,p 2-71
Median Treatment:	14'	GB,p 6-14
Existing Illumination:	Continuous	Google Earth
Proposed Illumination:	Continuous	FHWALH, p 34
Curb Usage and Type:	Express	GB, p 4-16
Existing Bicycle Accommodations:	0'	Google Earth
Proposed Bicycle Accommodations:	8' sep	PCM,Table 1210-1
Existing Pedestrian Accommodations:	0'	Google Earth
Proposed Pedestrian Accommodations:	6'	GB, p 4-56
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:	135'	GB, p 3-153
Max Grade:	4%	GB, p 8-4
Min. Grade:	0.50%	GB, p 3-119
Side Slope Ratios to Clear Zone:	6:1, 4:1 min	PCM, Table 1130-2
Bridge Loading:	HL-93	GB, p 6-7
Clear Zone:	22-28'	PCM,Table 1130-2

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

Approved - Preconstruction Engineer: _____ Date: _____



MINOR ARTERIAL

Project Design Criteria

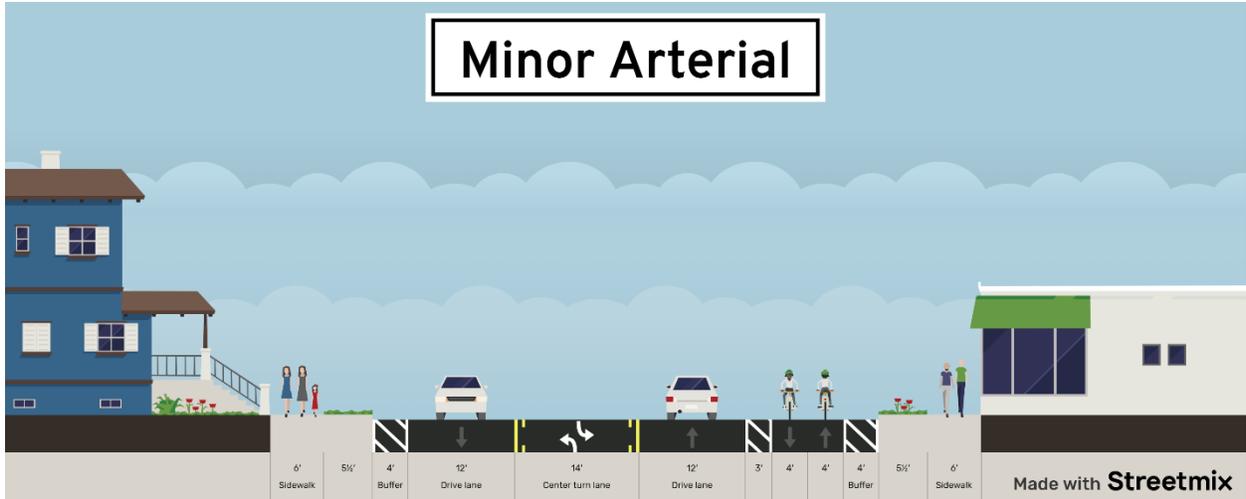
Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification: Minor Arterial		PGDHS, p 1-11
Design Year:	2050 Present ADT: 10-20,000	RSG Data
Design Year ADT:	10-20,000 Mid Design Period ADT: 10-20,000	RSG Data
DHV:	1,500 Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	Des.35;DCM,p 1-3,1-4
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	12'	Google Earth
Existing Shoulder Width:	Outside: 4' Inside: 4'	Google Earth
Existing Lane + Shoulder Width:	32'	2 lane, Google Earth
Lane + Shoulder Width for 4R:	33'	2 lane, p 3-103,10-102
Existing Superelevation Rate:		
Min. Radius for 4R:	643' (Evaluate Curves tighter than this)	GB, p 3-32
Min. K-Value for Vert. Curves (4R):	Sag: 49 Crest: 29	DCM, Fig 1-16,1-17
Stopping Sight Distance:	250'	DCM, p 1-49
Passing Sight Distance:	550'	GB, p 3-9
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	16.5'	PCM,Table 1130-1
Degree of Access Control:	None	GB,p 2-71
Median Treatment:	0'	DCM, Table 1-3
Existing Illumination:	Continuous	Google Earth
Proposed Illumination:	Continuous	FHWALH, p 34
Curb Usage and Type:	Barrier	DCM, p 1-56
Existing Bicycle Accommodations:	0'	Google Earth
Proposed Bicycle Accommodations:	6' lane	PCM,Table 1210-1
Existing Pedestrian Accommodations:	5'	Google Earth
Proposed Pedestrian Accommodations:	6'	GB, p 4-56
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:	105'	GB, p 3-153
Max Grade:	6%	DCM, p 1-45
Min. Grade:	0.50%	DCM, p 1-45
Side Slope Ratios to Clear Zone:	6:1, 4:1 min	PCM, Table 1130-2
Bridge Loading:	HL-93	GB, p 6-7
Clear Zone:	18'	PCM,Table 1130-2

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

Approved - Preconstruction Engineer: _____ Date: _____



RAMP

Project Design Criteria

Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification:	Ramps	PGDHS, p 1-11
Design Year:	2050 Present AADT: 18,500	RSG Data
Design Year AADT:	20,000 Mid Design Period AADT: 19,250	RSG Data
DHV:	2,000 Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	Des.35-60;PGDHS,p8-2
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	12'	Google Earth
Existing Shoulder Width:	Outside: 6' Inside: 4'	Google Earth
Existing Lane + Shoulder Width:	34'	2 lane, Google Earth
Lane + Shoulder Width for 4R:	42'	2 lane, p 3-103,10-102
Existing Superelevation Rate:		
Min. Radius for 4R:	231'-833' (Evaluate Curves tighter than this)	GB, p 3-32
Min. K-Value for Vert. Curves (4R):	Sag: 37-136 Crest: 19-151	GB,p 3-161,3-155,3-157
Stopping Sight Distance:	200-570'	GB,p 3-4
Passing Sight Distance:	N/A	GB,p 3-9
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	N/A	PCM,Table 1130-1
Degree of Access Control:	Full	GB,p 2-63
Median Treatment:	N/A	GB,p 8-8
Existing Illumination:	Continuous	Google Earth
Proposed Illumination:	Continuous	FHWALH, p 34
Curb Usage and Type:	4"	GB, p 4-16
Existing Bicycle Accommodations:	0'	Google Earth
Proposed Bicycle Accommodations:	0'	PCM,Table 1210-1
Existing Pedestrian Accommodations:	0'	Google Earth
Proposed Pedestrian Accommodations:	6'	GB, p 4-56
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:	90'-180'	GB, p 3-153
Max Grade:	4%	GB, p 8-4
Min. Grade:	0.50%	GB, p 3-119
Side Slope Ratios to Clear Zone:	6:1, 4:1 min	PCM, Table 1130-2
Bridge Loading:	HL-93	GB, p 6-7
Clear Zone:	18'-30'	PCM,Table 1130-2

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

Approved - Preconstruction Engineer: _____ Date: _____

BUS

Project Design Criteria

Project Name: Seward to Glenn		Source/Comments
Project Number: CFHWY00550		
Functional Classification:	Bus	PGDHS, p 1-11
Design Year:	2050 Present ADT:	RSG Data
Design Year ADT:	Mid Design Period ADT:	RSG Data
DHV:	Directional Split: 50/50	Both assumed(DHV 10%)
Percent Trucks:	Equivalent Axle Loading:	
Pavement Design Year:	2035 Design Vehicle:	
Terrain:	Rolling Number of Roadways:	
Design Speed:	<input type="checkbox"/> As-Built <input type="checkbox"/> Posted	
85th Percentile Speed:	<input type="checkbox"/> Speed Study <input type="checkbox"/> Project Drive-thru <input type="checkbox"/> Derived from Existing Geometrics	
Existing Lane Width:	11'	Google Earth
Existing Shoulder Width:	Outside: 6' Inside: 0'	Google Earth
Existing Lane + Shoulder Width:	17'	1 lane, Google Earth
Lane + Shoulder Width for 4R:	20'	1 lane, DCM p 7-6
Existing Superelevation Rate:		
Min. Radius for 4R:	25' (Evaluate Curves tighter than this)	DCM, p 7-2
Min. K-Value for Vert. Curves (4R):	Sag: 12 Crest: 10	DCM, p 7-5
Stopping Sight Distance:		
Passing Sight Distance:		
Existing Bridge No(s):	0	
Existing Bridge Width(s):	0	
Surface Treatment:	T/W: Paved Shoulders: Paved	
Vertical Clearance:	14'	DCM, p 7-6
Degree of Access Control:	None	GB,p 2-71
Median Treatment:	11'	DCM, Table 1-3
Existing Illumination:	At stops	Google Earth
Proposed Illumination:	At stops	DCM, p 7-32
Curb Usage and Type:		
Existing Bicycle Accommodations:		
Proposed Bicycle Accommodations:		
Existing Pedestrian Accommodations:	5'	Google Earth
Proposed Pedestrian Accommodations:	5'	DCM, p 7-23, 7-25
Misc. Criteria:	emax = 6%	GB, p 3-30,3-31
Level of Service (LOS):	C	GB, p 2-66
Min. Length of Vertical Curve:		
Max Grade:		
Min. Grade:		
Bus Stop Spacing:	800'	DCM, p 7-10
On-Street Bus Pullout:	20'	DCM, p 7-6
Off-Street Bus Pullout:	12'	DCM, p 7-6
Boarding Pad	30'x8'	DCM, p 7-23
Ammenities	Shelter, benc	DCM, p 7-25, 7-27

The shaded area represents features requiring 3R evaluation per Section 1160.

Proposed - Designer/Consultant: _____ Date: _____

Endorsed - Engineering Manager: _____ Date: _____

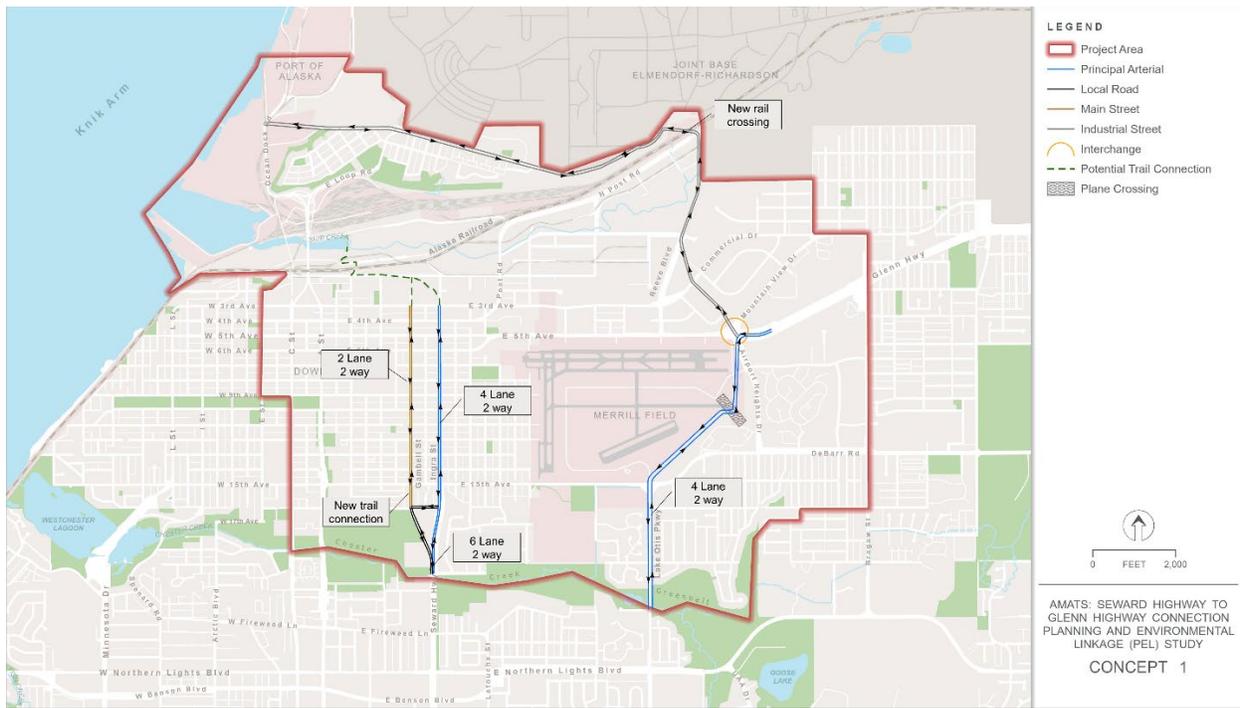
Approved - Preconstruction Engineer: _____ Date: _____

Appendix B:
Preliminary Alternatives Memorandum

Preliminary Alternatives and Input

The project team prepared preliminary alternatives and presented these concepts at a stakeholder workshop held at the Fairview Community Center on February 28, 2023. This section describes the preliminary alternatives, presents pros and cons of each concept, summarizes the input received at the workshop, and provides recommendations for developing the alternatives. Documentation of the workshop results is included as Attachment 1. The project team used the input on these preliminary alternatives concepts to develop the alternatives presented in Chapter 4 of the *Detailed Alternatives Report*.

Concept 1 – Lake Otis-Reeve Connector



Description

This concept would provide a new interchange at Airport Heights Drive/Glenn Highway. A new arterial connection would be made from this interchange to Lake Otis Parkway, which would be upgraded to a four-lane arterial (a Lake Otis extension/upgrade has been in several past Anchorage Metropolitan Area Transportation Solutions (AMATS) transportation plans). An industrial road connection would be improved from the new interchange to the Port of Alaska (POA) along Reeve Boulevard through Government Hill. This concept was intended to test whether traffic to and from the U-Med area and the POA could be served by these arterial connections, thereby reducing the traffic burden on Gambell and Ingra Streets and 5th and 6th Avenues through Downtown and Fairview. The concept would change the four one-way northbound lanes on Ingra Street to two-way (two northbound and two southbound). Gambell Street would become a two-way, two-lane main street, including a nonmotorized connection between Chester and Ship Creeks.

Pros

- Provides 10 north-south arterial lanes on Gambell and Ingra Streets, and Airport Heights Drive
- Could divert northbound truck traffic through the Ship Creek industrial area to the Glenn Highway (as opposed to through Downtown)
- Would provide an improved arterial connection from U-Med to the Glenn Highway
- Could allow Ingra Street to be converted to a greenway street and allow creation of a two-way, two-lane Gambell Street main street (in accordance with adopted plans)
- Lane reduction on Gambell and Ingra Streets would provide space for improved bike and pedestrian upgrades as well as a trail connection from Chester Creek to Ship Creek

Cons

- Right-of-way would be needed along Lake Otis Parkway.
- A gated crossing of the Merrill Field-Alaska Regional taxiway would be needed.
- Potential impacts on a low-income housing development in Government Hill could occur.
- Regional mobility would not be well-served. Traffic to and from South Anchorage to Downtown, POA, and Joint Base Elmendorf-Richardson would still likely use Gambell and Ingra Streets. Traffic from the Glenn Highway to/from Midtown would remain on 5th/6th Avenues and Gambell/Ingra Streets.
- Traffic impacts on Fairview would likely remain, and the community would remain bisected.

Workshop Comments***Things People Liked/Positive Comments***

- Does a good job of dealing with some of the traffic going to U-Med
- I think it would catch on quickly, especially with Trucker's Association
- Really like the POA access for this one, it's simple and separates the traffic effectively
- Has a good overpass plan [Airport Hight Interchange]
- I like that it connects Chester Creek to the Ship Creek trail (bike loop), like that it incorporated main street on Gambell
- POA connection to the interchange is a good idea
- I like that there is no more couplet in Fairview
- Yes, to no highway as a connection
- More truck traffic from the POA would be off A/C Streets
- Like 2-way streets in Fairview
- Like idea of moving people to UMED area
- Going East of Merrill is great
- POA traffic directed out of neighborhood
- Main street on Gambell
- Trail connection Chester Creek to Ship Creek

Things People Disliked/Criticisms/Concerns

- Doesn't help with congestion
- This option has one of the least potentials to improve downtown/the downtown traffic situation
- Don't see that it benefits Fairview all that much
- Doesn't solve root Purpose and Need issues

- POA access is over-complicated
- There are about 35 homes in that section [along Lake Otis Parkway], would those be torn down? That seems like a bad idea during a housing crisis.
- When outbound commuters take this route, they think Lake Otis will be less congested, but it will not in the long run. Airport Heights will become more traffic filled cutting through the neighborhood. People are already speeding down E. 20th. “Speaking for everyone in Airport Heights, we hate this idea”
- School buses already have difficulty getting in and out of schools on Lake Otis as it is, if you add additional traffic, we’ll never be able to get in or out of there in a reasonable time
- Literally takes all the POA truck traffic and puts it through Richardson Vista, which has the highest population density in Government Hill. This just shifts freight mobility from an area that has 100 residents to an area with 1,000s of residents – right into their back yard.
- Not consistent with prior studies like MTP and doesn’t solve the downtown traffic
- This option will not substantially change the corridor on Hyder
- POA connection seems to add travel time/access
- Seems to move where congestion occurs (can Lake Otis handle this?) without fully addressing issues (connection across town)
- Shifts impact to another neighborhood (Lake Otis) [regional traffic] onto an MOA facility
- Extra added high-volume of traffic from POA past Wendler and Lake Otis schools would make it difficult for people and traffic
- NO major green addition to neighborhood
- Lack of safe pedestrian/bike focused N/S corridor
- Anchorage is experiencing a housing crisis. Losing 30+ homes to add lanes to a road that is generally NOT congested is a terrible idea. Expansion is only inducing demand.
- This freight plan moves trucks right into low-income housing on Government Hill.

Neutral Comments/Suggestions to Change/Improve the Concept

- Would need Lake Otis Pkwy upgrade to extend south to Northern Lights Blvd.
- Doesn’t connect the Interstate system, if added/combined with Concept 7 it would be better.
- Need to show pedestrian improvements.
- Would Airport Heights be converted to a major arterial?
- Add a greenbelt on Hyder
- Improve nonmotorized crossings East-West like 15th Ave bike boulevard, 15 Ave, etc.
- To solve them rather than increasing capacity on the system we should come up with individual solutions:
 - Alternative access to UMED from Glenn makes sense
 - A change to the MTP to allow for a connection from the Seward Highway to international Airport [south of the study area] will reduce pressure on downtown from the Glenn.

Description

This concept would develop a greenway street (and/or woonerf) along Hyder Street. Ingra Street would be converted to a six-lane major arterial street (three northbound lanes and three southbound lanes). This concept would also explore the ramification of converting 5th and 6th Avenues to two-way traffic west of Gambell Street (as envisioned in the draft *Downtown Plan*). Gambell Street would be converted to a two-lane, two-way main street as envisioned in the *Fairview Neighborhood Plan* and Anchorage Land Use Plan Map. Hyder Street would provide for a north-south trail connection from Chester Creek to Ship Creek. East-west cross streets marked in orange on the map would no longer allow vehicle traffic across Ingra Street (nonmotorized crossings on these streets would continue to be allowed). These discontinuous streets line up with streets on the eastern side of Ingra Street, where there is already neighborhood traffic calming. POA access would be via an extension of Ingra Street to 1st Avenue.

Pros

- Lane reduction on Gambell Street would provide space for improved bike and pedestrian upgrades.
- A regional trail connection from Chester Creek to Ship Creek would occur along Hyder Street, fulfilling the vision from the Anchorage Land Use Plan Map (although on Hyder Street as opposed to Ingra Street).
- Would allow creation of a two-way, two-lane Gambell Street main street (in accordance with adopted plans)

Cons

- Right-of-way would be needed along Ingra Street for the six-lane major arterial street, which may include residential relocations.
- Pedestrians and bicyclists would need to cross six lanes of two-way arterial traffic. Currently, nonmotorized users only cross four lanes of traffic at a time. Also note that crossing against traffic from one direction is generally easier to navigate safely.
- The Hyder Street woonerf would conflict with routing for the Seward-Glenn Highway connection in the adopted 2040 Metropolitan Transportation Plan (MTP) (see Concept 6).

Workshop Comments

Things People Liked/Positive Comments

- Captures the idea of a green street through the Fairview area.
- Interest in the concept for north/south routing of bicyclists, as long as it is wide enough.
- I like the idea of closing streets to mitigate cut through traffic and make it more neighborhood oriented.
- Should make downtown more accessible.
- If you can take the element of just the green street park area and not have the highway go through that would be great.
- We favor reverting the downtown streets into 2-way streets
- Would support couplet going away if this project helped with capacity issues, that needs to be addressed.
- I love the green, I would love to see a greenway or park, but I still think you have the 6-lane highway there dividing the neighborhood, so I'm not sure how that reconnects the community.

- I like that the greenway and the main street weren't separated by 6 lanes of traffic like they were in so many other ones. Pedestrian friendly main street is nice.
- Like greenbelt trail connection

Things People Disliked/Criticisms/Concerns

- While it does look nice, it doesn't address capacity issues of putting highway/new lanes through the neighborhood.
- Doesn't help larger regional connectivity.
- Maps 2, 3, and 4 do not communicate well what's happening with interstate traffic. All others show this much better. The first three maps feel like a different language than the other 4.
- Don't like that you still can't get from east to west Fairview without crossing lots of high-speed traffic.
- Green streets just feel like a token rather than a connection to the rest of the city.
- Have you looked at capacity impacts of getting the couplet out of downtown?
- Runs POA traffic through downtown?
- A Diamond boulevard type road next to Fairview will not resolve all of the needs
- Impacts downtown worse than it is now
- Doesn't help NHS. No separation of uses
- High impact on 6-lane to Glenn/DT interchange
- Is this alternative allowing access for pedestrian access along Ingra?
- Half measures are insufficient
- Create bigger separation of neighborhood
- 6-lane highway still divides neighborhood, Alt 3 is better

Neutral Comments/Suggestions to Change/Improve the Concept

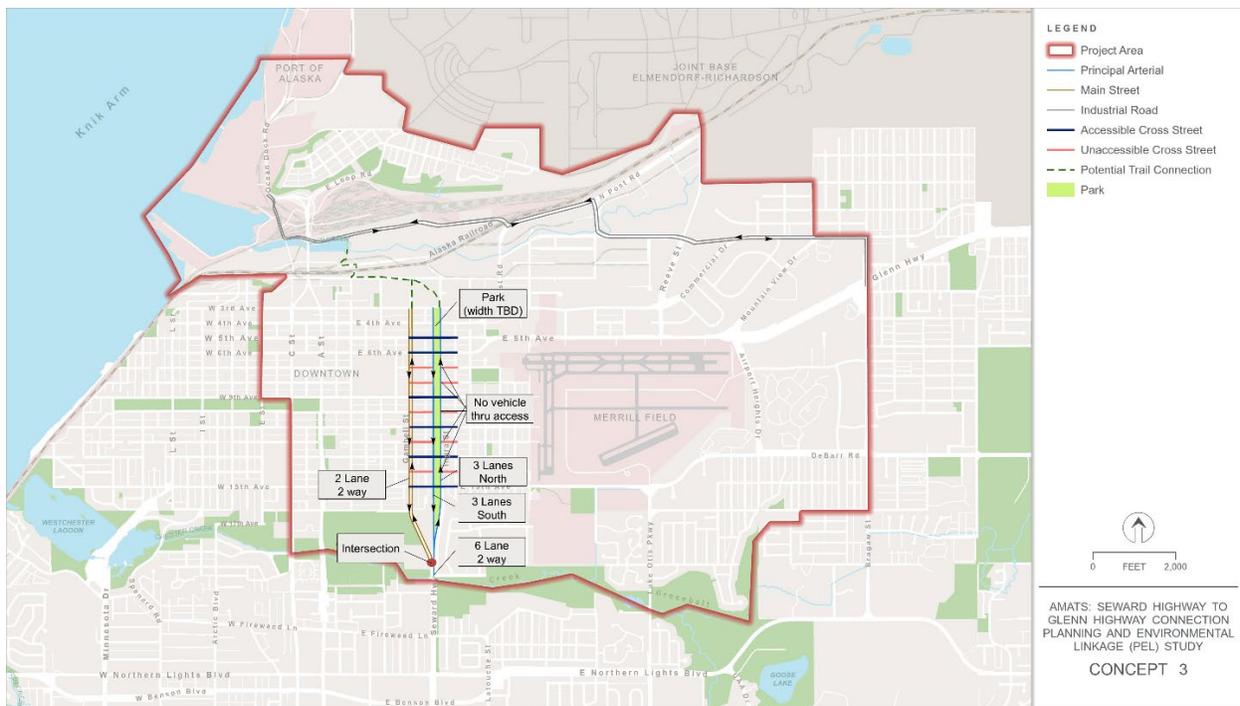
- Turn 5th and 6th into 2-way streets.
- We'd like to see modeling of removing the couplet
- Anchorage is the heart of the state, if we don't fix what's happening with our downtown traffic (it's not fun to go downtown or walk around) in addition to fixing what's going on at Ingra and Gambell, we won't reclaim our streets and we'll lose people (young aged people especially), we need to make it a livable city or people will continue to leave, this is a chance to fix that.
- I think Fairview has a specific idea of what it wants a greenway to be. It has to be more than just street trees.
- Add greenbelt and Gambell main streets character for the other alternates with depressed highway or bypass
- Weight lines on map – 6 lanes wider to show ROW impacts
- Sullivan access from highway?
- How large would 5th/ Ingra intersections be? How to manage the turn movements?
- Left turn lanes at intersections...so far 7 lane.
- Have you looked at capacity impacts of getting the couplet out of downtown?

- I think you need to draw lanes (number of) on each map

Recommendations

The right-of-way along Hyder Street is under-utilized and could be used for a woonerf/greenway connection that emphasizes nonmotorized travel. The project team recommends carrying this idea forward as part of one or more alternatives. However, it is important to note that it would conflict with the adopted 2040 MTP's Seward to Glenn Highway connection project. The *Downtown Plan* calls for two-way traffic on 5th and 6th Avenues; this idea should be tested through modeling. Adding two additional lanes on Ingra Street would mean pedestrians would have to cross six lanes of two-way traffic (currently, they cross four lanes and only from one direction). Increasing the size of this street on the surface is not consistent with the purpose and need as it increases local/regional traffic conflicts.

Concept 3 – Ingra Parkway



Description

The Anchorage Land Use Plan Map calls for Ingra to become a “Greenway Supported Development Corridor,” which is described as a corridor where “new development will incorporate natural open spaces, creek corridors, and pedestrian routes and should connect to existing pedestrian corridors and trails.” This concept explores greenway street/parkway on Ingra Street as a streetscape that could help to realize this vision. Travel lanes would be separate by a greenspace/trail connecting Chester Creek and Ship Creek, with one-way travel lanes on each side. To try to maintain the regional traffic functionality, three lanes each direction are proposed. Like Concept 2, east-west cross streets marked in orange on the map would no longer allow vehicle traffic across Ingra Street (nonmotorized crossings on these streets would

continue to be allowed). A main street would be developed on Gambell Street. This concept tests elements from the *Fairview Neighborhood Plan*, *Downtown plan*, and Anchorage Land Use Plan Map together to see how they function as a system. POA access would be improved to connect to the Bragaw Street interchange on the Glenn Highway, via an extension of Commercial Drive to Viking Drive.

Pros

- Maintains eight lanes north-south on Gambell and Ingra Streets
- Provides a separation of the northbound and southbound lanes on Ingra Street, meaning nonmotorized travelers need only cross three lanes of traffic at a time and from only one direction at a time
- Closing some cross streets to traffic reduces vehicle conflict points and would provide space for east-west nonmotorized facilities.

Cons

- Large right-of-way impacts along Ingra Street, possibly including housing of last resort acquisitions, could occur.
- Would not improve regional mobility
- Pedestrians and bikes would still be in conflict with all National Highway System (NHS) regional traffic.

Workshop Comments

Things People Liked/Positive Comments

- Captures this idea of a green street through Fairview area.
- Interest in the concept for north/south routing of bicyclists, as long as it is wide enough.
- I like idea of closing streets to mitigate cut through traffic and make it more neighborhood oriented.
- Should make downtown more accessible.
- If you can take the element of just the green street park area and not have the highway go through that would be great.
- Would support couplet going away if this project helped with capacity issues, that needs to be addressed.
- I think the concept of a greenway is exciting, I like that it only has 3 lanes N/S on either side. There are places with no vehicle thru access, so there's cool things that could happen with that.
- One of the key factors in this study is how it affects tourism. Closing the [regional bike] loop would benefit tourism in the area and drastically increase things such as bike rental.
- I like a pedestrian-first, cars-last design
- Like the dedicated greenway with bike trail
- Like the reduction on E & W side streets
- More green!
- Really like how concepts of main street and Fairview Greenways are being considered as part of effort
- Like the main street
- Like the additional greenspace

Things People Disliked/Criticisms/Concerns

- I like the greenway, however greenspace continued inside a federal interstate will not be used by anyone but the homeless
- Token greenspace not usable
- Greenbelt between 6 lanes of traffic is a NO
- Greenspace will be difficult to keep/control ped traffic - what will it look like?
- Park strip works because it is wide enough to be activated
- Greenway ½ size of the park strip between 6 lanes of traffic doesn't seem inviting
- Doesn't solve the downtown couplet problems
- Air quality now is worse moving these 6 lanes together
- Doesn't help NHS – no separation of uses
- While it does look nice, it doesn't address capacity issues of putting highway/new lanes through the neighborhood.
- Doesn't help larger regional connectivity.
- Green streets just feel like a token rather than a connection to the rest of the city.
- Parks is a misnomer; it can be a park if you made it wide enough, but a parkway isn't a replacement for one.
- That idea (above) doesn't solve traffic congestion
- I wouldn't want to bike in between the six lanes of traffic, and if you're going to keep it in the neighborhood like that, it's right on the houses

Neutral Comments/Suggestions to Change/Improve the Concept

- Turn 5th and 6th into 2-way streets.
- We'd like to see modeling of removing the couplet
- Anchorage is the heart of the state, if we don't fix what's happening with our downtown traffic (it's not fun to go downtown or walk around) in addition to fixing what's going on at Ingra and Gambell, we won't reclaim our streets and we'll lose people (young aged people especially), we need to make it a livable city or people will continue to leave, this is a chance to fix that.
- The labeling is confusing on the maps
- We favor reverting the downtown streets into 2-way streets
- Direct the freight access down Reeve instead of Mountain View
- Narrow down where the green loop encloses the neighborhood
- Widen green space
- Another way to address Fairview with narrow greenway who maintains?
- What happens at Hyder?
- Where would we move the post office?
- Realignment to the Ingra/Hyder corridor is the best way to make greenspace work. Then you have real greenspace to work with.
- Direct freight down Reeve instead of along Commercial Drive
- Need an option showing

Pros

- Downtown westbound through traffic would be moved to 3rd Avenue instead of going through the center of Downtown on 5th Avenue. This would allow 5th Avenue to be two way and would reduce traffic in the Downtown core.
- Could be implemented with relatively little right-of-way
- A 3rd/6th Avenue couplet in Downtown is a project identified in the 2040 MTP.

Cons

- The Municipality of Anchorage (MOA) Planning Department expressed that this concept is not consistent with the draft *Downtown Plan*, which envisions 5th and 6th Avenues being converted to two-way traffic.
- Workshop participants see this concept as simply moving the couplet to Hyder Street but not providing a substantive improvement for local connectivity.
- This concept would not meet the purpose and need because regional and local travel conflicts would continue. All NHS travel would continue to be routed through Fairview.

Workshop Comments

Things People Liked/Positive Comments

- 3 lanes on the couplets allows for wider sidewalks & less ROW acquisition
- I do like how it opens up downtown
- Would make Gambell a main street (2 way)
- Like the reduction of the multi-lane one-way streets to improve walkability of downtown

Things People Disliked/Criticisms/Concerns

- Impacts DT more than what's happening now
- I do not want couplets
- The 3rd / 6th couplet concept is very opposed by AAA
- No more couplets downtown that will impact walking, traffic, etc.
- This doesn't do anything to improve except "main" street
- Who likes "couplets"?
- Doesn't seem like "POA" traffic would go this way?
- How much traffic through downtown is headed to the airport? Why can't alternative access routes to the airport be recorded in this study?
- 4 lanes westbound on 3rd Ave to C would be disastrous to East 3rd Ave
- People do not like the downtown 1-way couplets.
- This one doesn't do enough for Fairview or the problem of traffic.
- Anybody that owns a business on 3rd Avenue will hate this.
- Downtown plan shows 3rd Ave. as a bike Blvd.
- I thought the discussion more peripherally downtown was interesting, but it would affect the museum and the Dena'ina center. If the goal is to alleviate freight moving downtown, I don't think it accomplishes that.
- This concept ignores right of way (air quality, noise, etc.). Doesn't address how it affects the people that live there. Pollution doesn't stop at the end of the laneway.

- Doesn't address very good movement through neighborhood
- Concept does not adequately address downtown tourism planning
- All the concepts ignore land use immediately adjacent to ROW
- Not interested in a bike lane between big 3-way streets
- I don't think of 3rd and 6th as being the "edges" of downtown. For instance, City Hall and Dena'ina Center are on 7th

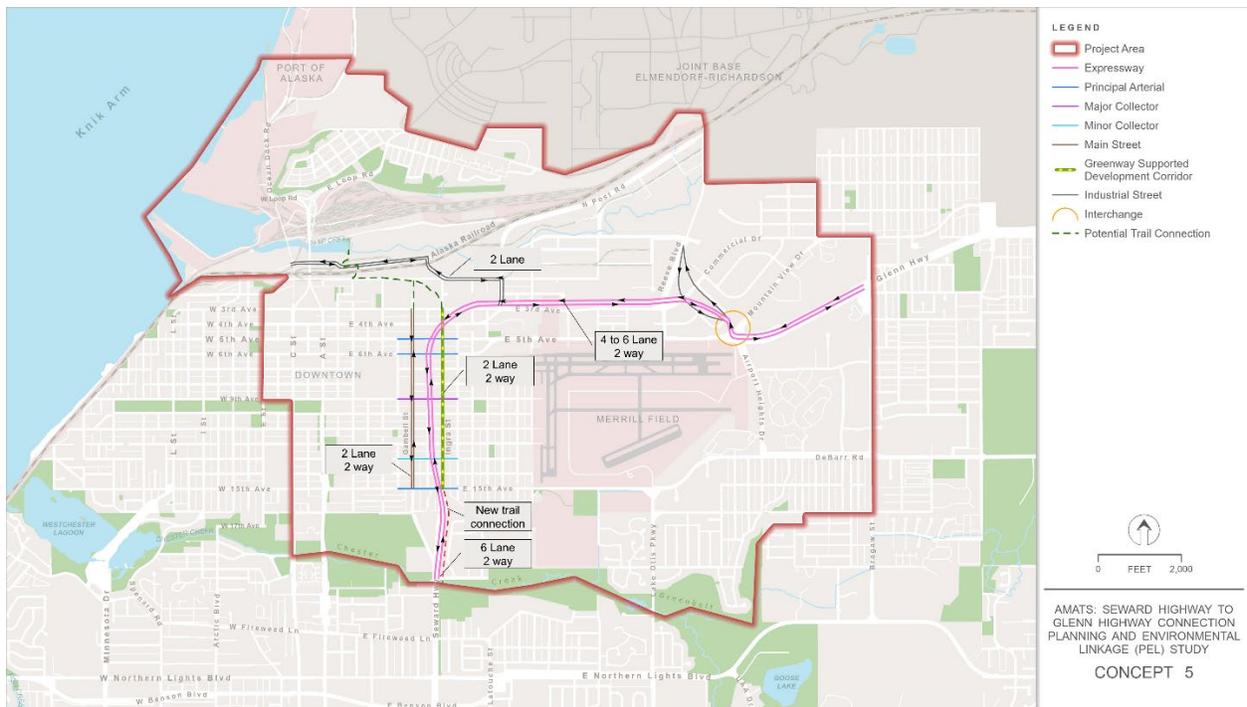
Neutral Comments/Suggestions to Change/Improve the Concept

- Move traffic to an area that doesn't have residents near it or reduce all traffic speeds and provide a buffer
- Options do not show access along Gambell – Ingra is addressed

Recommendations

Moving the southbound couplet was not seen as providing benefits. It was seen as just moving the couplet to Hyder and Ingra Streets, which would not meet the purpose and need. The project team recommends carrying forward the planned improvements, including a trail connection between the Ship Creek and Chester Creek Trails. Additionally, the project team recommends considering reducing the Gambell/Ingra Street couplet to three lanes as an interim phase with a more ultimate regional connection.

Concept 5 – H2H Preservation



Description

This concept would provide a continuous expressway through the study area connecting the Glenn and Seward Highways. It would follow the alignment of the Seward Highway-Glenn

Highway Connection highway alignment from the 2040 MTP, but it would not be trenched/depressed. It was added as a concept as a potential way to acquire and preserve the needed right-of-way for the freeway connection (in case the 2040 MTP alternative is not affordable in a reasonable timeframe). Under this concept, an interchange would be built at Airport Heights Drive. From there, the expressway would head northwestward, to traverse along the northern side of 3rd Avenue, climbing as it turns southward along Hyder Street, with surface intersections along Hyder Street and various cross streets disconnected (similar to other expressways in Anchorage, such as C Street south of Tudor Road). POA access would be tied into the interchange at Airport Heights Drive and at an at-grade intersection with Post Road.

Pros

- Preserves right-of-way and alignment for the eventual depressed freeway
- Provides the Fairview neighborhood with certainty as to the location of the final freeway connection
- Could provide an interim phase toward the eventual freeway construction, should funding for the full freeway connection not become available in a timely manner
- Would maintain NHS functionality

Cons

- The at-grade expressway would create an even greater barrier until such time as the freeway is depressed below grade. This was deemed inconsistent with the purpose and need.
- There would be an added cost of constructing the at-grade expressway, then removing that investment as the depressed sections are constructed.
- There is concern that the depressed sections would never happen, or would take too long, resulting in Fairview having a barrier that is worse than existing conditions.

Workshop Comments

Things People Liked/Positive Comments

- It has a place for the highway to go, improves the National Highway System
- Like trail connection

Things People Disliked/Criticisms/Concerns

- I would like us to get away from this concept that assuming MTP concept is too expensive, my biggest fear of concept 5 that it would work and be harder to get funding in the long term, we don't have to build concept 6 all at once and can be phased to make it more affordable.
- "We don't want an institutionalized looking corridor"
- 10 lanes [north-south through Fairview] for how long?
- Worst one of all, incredibly terrible on all fronts.
- This should not move beyond this phase.
- Needs to be cut and cover.
- Does not solve Fairview issues.
- This option will not meet the social and economic needs.
- Highway through Fairview does not allow safe East – West connection and nonmotorized access.

- Pedestrian traffic on 3rd Ave would lead to lots of conflict.
- Access to Brother Francis & Resource Center will conflict with highway
- Still runs a federal interstate through a densely populated neighborhood
- No ability for peds to cross
- Terrible idea. This is not NYC in the 1960's. NO Robert Moose Freeway!!
- No safe bike or pedestrian E W
- Greenway and Main Street separate by expressway
- No reconnection of community
- Concepts ignore neighborhood initiatives to create an innovative area

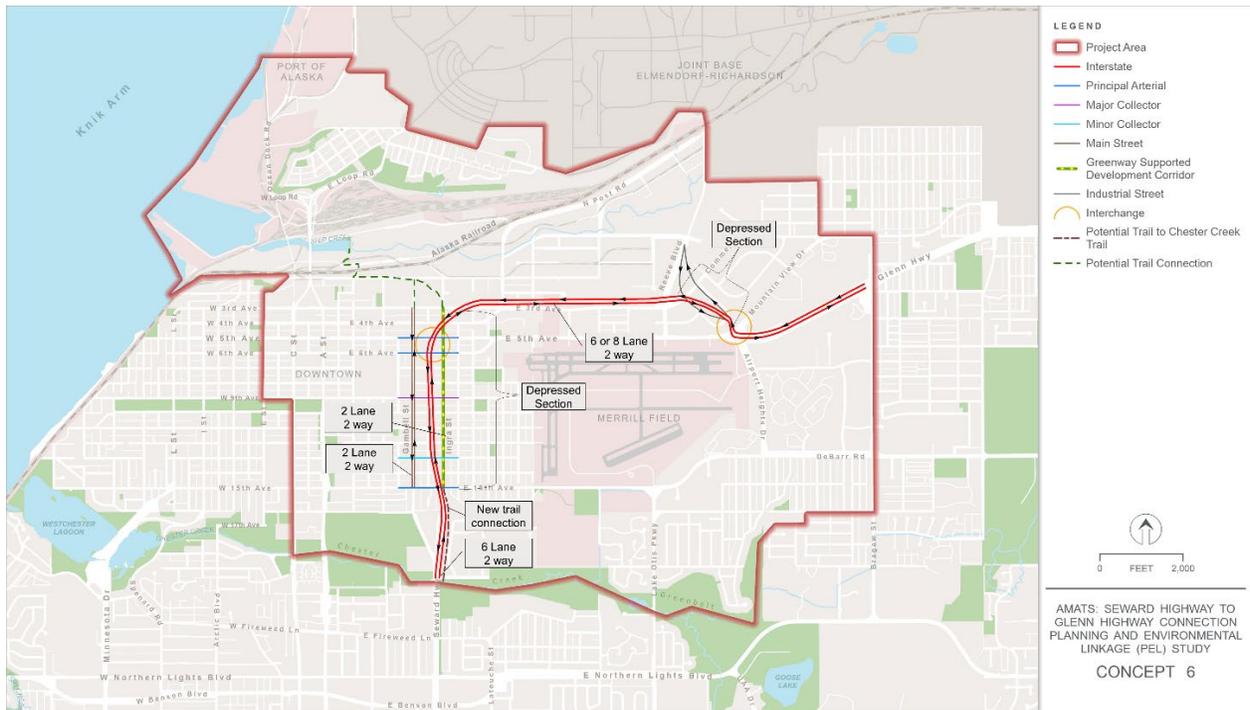
Neutral Comments/Suggestions to Change/Improve the Concept

- Consider renaming streets in the area?
- Add more green space to insulate the neighborhood
- Build some greenspace to insulate the neighborhood
- Need to show a concept exploring TDM/TSM
- Need to show how concepts address environmental justice
- Need to address MTP showing issue & grade separation at 15th and New Seward.

Recommendation

The concept was deemed inconsistent with the purpose and need. It would basically put a high-speed expressway through Fairview. It would not improve the conflicts associated with regional and local travel. The project team does not recommended developing this concept into an alternative.

Concept 6 – Metropolitan Transportation Plan



Description

This concept would provide a continuous freeway through the study area, connecting the Glenn and Seward Highways. Interchanges would be built at Airport Heights Drive, 5th/6th Avenues, and 15th Avenue. The alignment takes advantage of topography associated with the Ship Creek and Chester Creek valleys. From Airport Heights Drive, the highway would head northwestward, under Mountain View and Commercial Drives and Reeve Boulevard. It would traverse the northern side of 3rd Avenue, staying low as it turns southward along Hyder Street, then going under 3rd, 4th, and 5th Avenues. It would stay depressed along Hyder Street, with various cross streets connecting overhead, eventually daylighting from the trench south of 15th Avenue. This alternative is in the 2040 MTP. POA access would be tied into the Airport Heights Drive interchange.

Pros

- Consistent with the adopted 2040 MTP
- Consistent with the *Fairview Neighborhood Plan*
- Through-traffic would be below grade through Fairview, removing conflicts between regional and local trips.
- Would allow Gambell and Ingra Streets to be redeveloped for local trips as a main street and greenway street, respectively
- Regional traffic and associated noise would be below grade, reducing neighborhood impacts.

Cons

- Right-of-way needs along Hyder Street and north of 3rd Avenue would be extensive.
- Out-of-direction east-west travel for nonmotorized trips across depressed highway sections (because it is unlikely that every cross street will be bridged over the highway) would occur.

- Provides for freeway connectivity to both Downtown and Midtown

Workshop Comments

Things People Liked/Positive Comments

- This has the ability to truly transform not just Fairview but all of downtown in a very positive way.
- It creates a separation from the interconnection of the two highways, offers options for bicycles and pedestrians. Will help reduce crashes in the area from interactions between cars/pedestrians/etc.
- Separates people whose mindset is “I am going from one highway to the other” from people who just live in the community and don’t use it.
- This one gives the best method of people being able to access things like the grocery store with as few automobile interactions as possible
- This one! Good separation of uses
- Obviously depressed is ideal
- Please listen to these comments – It is what we want – thank you!
- It is an adopted plan
- This is the #1 and only option
- Agreed!
- This would work if DOT&PF was serious about spending the money
- This cut and cover needs to show extent and corners
- Please avoid conflicts between pedestrian and traffic – prefer a depressed highway

Things People Disliked/Criticisms/Concerns

- Only problem with this is the timing. The neighborhood can’t wait another 30 years to reconnect
- Don’t do in phases
- Afraid it won’t be implemented in a timely manner
- Need to restore economic prosperity after taking revenue generating properties

Neutral Comments/Suggestions to Change/Improve the Concept

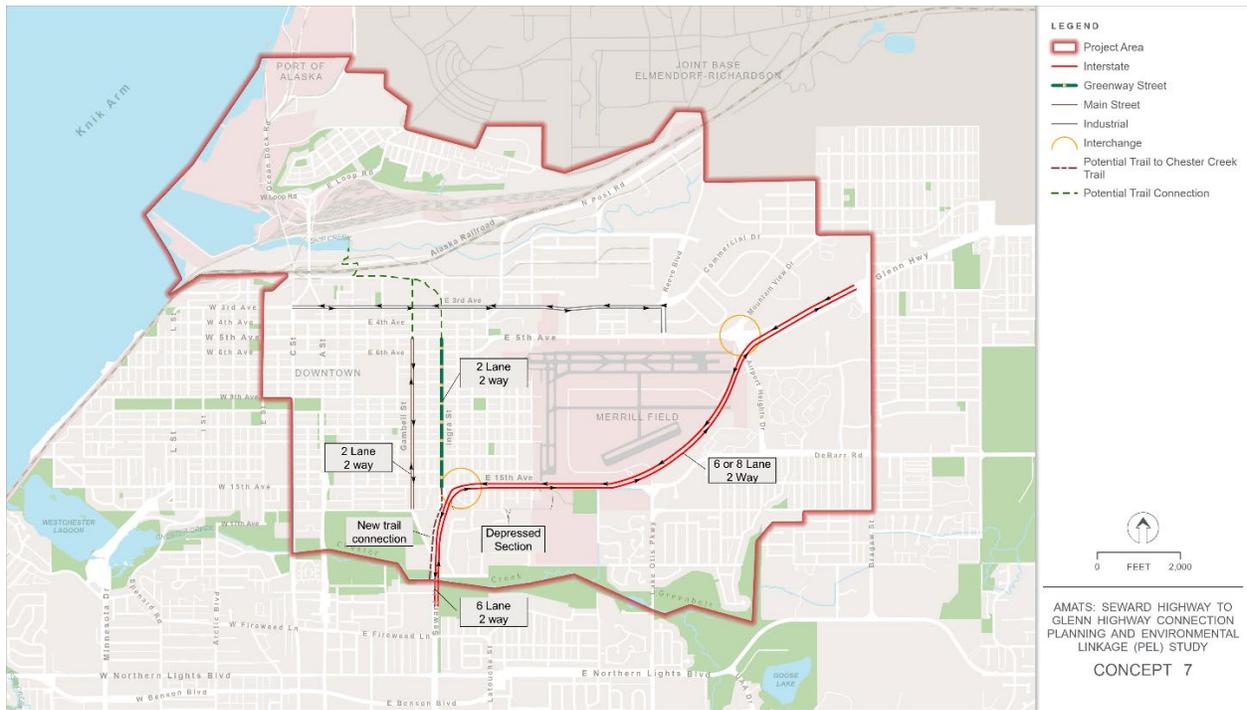
- Include removal of the couplet as part of this concept
- Needs to show covers with buildings on them.
- Concept 6 graphic does not indicate the trench along Hyder. Could be perceived as surface connection
- Is cost a factor because there’s only so many highway dollars? NEPA cannot eliminate something based solely on cost.
- It’s the busiest road in the biggest city in the state, and the state owns and maintains it, the state can figure out how to put money in there, the community can figure out how to ask for grants, we can ask for funding and write letters, I disagree that there’s not money, just that it’s not being given to this project.

- “Governor, this is your busiest street, lets fix it. These are some of your poorest people, help them. It is a choice that they’re making to hurt these people.”
- What’s stopping the MTP concept from actually getting built? Is there not political support? Something else? If there is a big push to make it happen will we hit some other unknown roadblock? It’s not like the mayors and community doesn’t support it.
- Downtown community council is for this as stated in a recent resolution
- It’s the only one that makes Fairview whole again and doesn’t split it down the middle.
- With any of the concepts that come out of this, there is going to be a preservation component, make a moratorium on development to make it more economical in the long run.
- Muni has lots of property going to waste right now. Muni should be responsible for assisting with relocations.
- If we’re going to recommend this as an alternative, keep bells and whistles as much as possible to bare minimum, they could come back at later time, keep it barebones, build a cut and cover, do the niceties at another time.
- “If we do the bare necessities, it takes longer than to just do it right”
- Lack of movement on this for decades is very disappointing
- Need new investment along the corridor
- Build the covers strong enough to support 2-3 story buildings for commerce
- Airport Heights Community Council preferred version, solidarity with Fairview
- Can’t we just build a tunnel there if we’re already excavating?
- Maybe in the planning process build scalability into the design for future development. Even if we can’t imagine it today due to funding, futureproof the structures and build upgrades into the plan for future potential.
- While a tunnel could be prohibitively expensive, making it a toll system could help reduce the cost.
- Are the costs really so great that we can’t do this and not before H2H preservation [Concept 5]?
- Be sure to connect the POA
- Consider a host of finance options FHWA/Mega EPA Brownfield Ingra grants. Raise grants.

Recommendation

The project team recommends developing this concept into an alternative for consideration in the Planning and Environmental Linkages (PEL) Study. The concept appears to meet the purpose and need. Alternative alignments should be explored to reduce right-of-way impacts.

Concept 7 – 15th Avenue Bypass



Description

This concept would create a continuous freeway through the study area, connecting the Glenn and Seward Highways. Interchanges would be built at Airport Heights Drive and 15th Avenue. From Airport Heights Drive, the highway would head southwestward and traverse between Merrill Field and Alaska Regional Hospital onto an alignment along 15th Avenue. The alignment takes advantage of topography associated with the Chester Creek valley, staying low as it traverses southwest of Merrill Field, going under Medfra and Karluk Streets, turning southward onto an alignment with the Seward Highway, and daylighting from the trench south of 15th Avenue. This is an alternative that was identified during the Highway-to-Highway Environmental Impact Statement. POA access would be along 3rd Avenue.

Pros

- Uses public land from Merrill Field, the MOA snow dump, and other public right-of-way
- Less private right-of-way needed compared to the 2040 MTP concept (Concept 6)
- Diverts traffic from the Glenn Highway heading to/from Midtown and U-Med out of Fairview and Downtown
- Provides an improved connection to Alaska Regional and U-Med from the Glenn Highway

Cons

- Traverses the former Merrill Field landfill, which raises constructability and cost issues
- Interferes with the Merrill Field-Alaska Regional taxiway
- Right-of-way would be needed along 15th Avenue west of Orca Street
- Could bisect the southern portion of Fairview
- Traffic headed from South Anchorage to the POA or Downtown likely would still traverse through Fairview

Workshop Comments

Things People Liked/Positive Comments

- This seems realistic for 3rd to work east of C street
- Moves through traffic (airport, midtown) away from downtown
- Could be alternative #2 with cut and cover
- Works if you make it a cut and cover
- [Going south] around Merrill Field reduces traffic on Ingra and Gambell
- Like using Merrill Field space
- Good separation of users!
- Redirects through traffic well
- Yes! And add Alt #1 access from the POA as well.
- Take all you like! Anchorage is having a housing crisis not a private plane storage crisis. Take as much of the airfield as needed.
- Depressed lane gives ability to through traffic

Things People Disliked/Criticisms/Concerns

- Lots of traffic comes up Seward Highway and goes downtown, how does this divert those people or cause issues for them? Or for people heading to base?
- 70-80% of traffic in downtown is either destined to or coming from midtown.
- People will not see neighborhood benefit due to POA traffic issue.
- What are the challenges in constructing across a landfill?
- The biggest difference between concepts 6 & 7 are “where is the access node for the freeway traffic into downtown?” In concept 7, it’s 15th which still pushes a lot of traffic through the Fairview area.
- This is not an accurate reflection on what kind of right-of-way is needed, especially with the
- Impacts access to Alaska Regional/Flight Med
- Impacts the Fire Dept’s training center
- Gets rid of one of Anchorage’s best examples of Complete Streets (15th Avenue) and replaces it with controlled access roads.
- Runs the risk of entirely isolating south Fairview
- East Chester Flats was destroyed by a similar project
- You would have to destroy more houses just for a frontage road.
- Both East Chester and East Ridge subdivisions, which already have very limited access, would have even less access, relying solely on east 20th.
- Route is not at grade with airfield, so I don’t know what kind of problems the cost perspective would have.
- What kind of displacement would this cause to people living in the area?
- This radius [the curve at 15 and Ingra] doesn’t look realistic
- Radius is NOT realistic
- Impacts to old landfill at Merrill Field

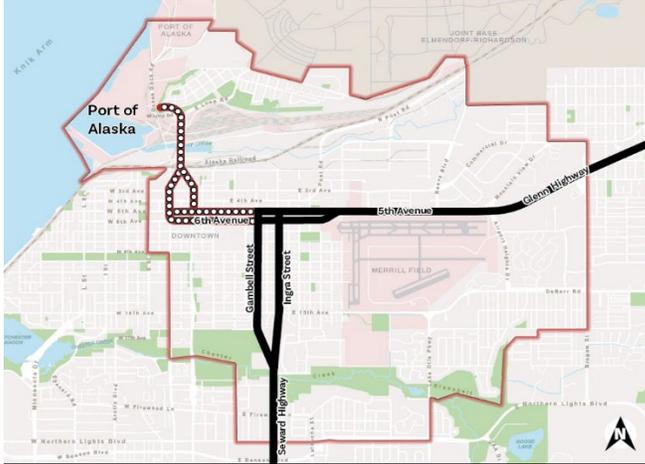
- Don't impact Merrill Field
- Removing complete streets and replacing with a sunken freeway is NOT neighborhood friendly.
- Means more negative impacts to Fairview

Neutral Comments/Suggestions to Change/Improve the Concept

- I'm interested to hear how concepts 6 and 7 compare, are either accomplishing P&N?
- Would it just be a simple matter of figuring out the POA connection? Is that the only concept that needs to be addressed?
- Merrill Field is busiest GA airport in the nation, do cut and cover through Merrill to not interfere with aviation operations. It's a Muni asset.
- By rerouting, how would it affect people going to and from the airport?
- Just wanted to remind people that Anchorage is experiencing a housing crisis, not a private plane access crisis.
- Include removal of 5/6 couplet (2-way streets) in this concept
- Consider a host of financing
 - FHWA
 - EPA Brownfield
 - INFRA
 - Raise
 - MEGA
- Take 5th, 6th, & 3rd off NHS
- How would POA traffic connect? Can the trucks move off A & C?
- Add more direct/new freight connection through industrial area (new alignment) – take trucks out of downtown (off A & C streets)

Recommendation

The project team recommends this concept to move forward for refinement. This concept appears to meet the purpose and need. This concept is recommended to include a different POA connection into the Airport Heights Drive interchange to reduce freight traffic through Downtown and North Fairview. Alternate alignments should be explored that might reduce right-of-way impacts. A connection to Lake Otis Parkway should be included to facilitate U-Med access.



AMATS: Seward Highway to Glenn Highway Connection
Planning & Environmental Linkage Study
State Project No.: CFHWY00550
Federal Project No.: 0001653

Public Outreach Summary

DRAFT

April 2023

This planning document may be adopted in a subsequent environmental review process in accordance with 23 USC 168 Integration of Planning and Environmental Review.

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 USC 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

Prepared for:

Alaska Department of Transportation and Public Facilities

Prepared by:

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Attachments

Attachment A: Alternatives Workshops Presentation

Attachment B: Project Posters

Attachment C: Constraints Map

Attachment D: Invitation Email

Attachment E: Workshop Calendar Invitations

Acronyms and Abbreviations

2040 LUP	<i>Anchorage 2040 Land Use Plan</i>
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
AMATS	Anchorage Metropolitan Area Transportation Solutions
ATM	<i>Alaska Traffic Manual Supplement</i>
CSS	Context Sensitive Solutions
DCM	<i>Design Criteria Manual</i>
DOT&PF	Alaska Department of Transportation and Public Facilities
FHWA	Federal Highway Administration
GSD	Greenway-supported Development
HPCM	<i>Alaska Highway Preconstruction Manual</i>
MOA	Municipality of Anchorage
MUTCD	<i>Manual on Uniform Traffic Control Devices for Streets and Highways</i>
NACTO	National Association of City Transportation Officials
NMP	<i>Non-Motorized Plan</i>
OSHP	<i>Official Streets and Highway Plan</i>
PEL	Planning and Environmental Linkages
POA	Port of Alaska
TSD	Transit-supportive Development
USDOT	U.S. Department of Transportation

Introduction

Through the PEL public outreach process, DOT&PF has solicited ideas from the public, agencies, Tribes, and elected officials. This Workshop Summary is a tool to help track and document public involvement activities. It details a series of two workshops, the delivery of which served as a key tactic to gather input on early-stage design concepts for the Seward Glenn Mobility PEL Study. The information collected in the workshops, will combine with the feedback from previous public outreach, to help guide development of refined alternative concepts which will be presented for comment to the broad Anchorage and Alaska public at a public meeting to be held in late spring or early summer.

Overview

Project Description

The Seward-Glenn Mobility PEL Study will identify and evaluate options to improve transportation mobility, safety, access, and connectivity between the Seward Highway, near 20th Avenue, and the Glenn Highway, east of Airport Heights Drive. The study will also identify ways to improve access to and from the Port of Alaska (POA) to the highway network.

The preliminary alternatives identify potential transportation improvements within the project study area. Certain components of a design alternative may extend beyond the Study Area boundaries.

Purpose and Need

According to FHWA, the purpose and need of a project is essential in establishing a basis for the development of the range of reasonable alternatives and assists with the identification and eventual selection of a preferred alternative. For this project, DOT&PF has established the following purpose statement for the PEL:

The proposed purpose is to improve mobility, accessibility, safety, and livability for people and goods traveling on or across the roadway system connecting the Seward Highway, Glenn Highway, and POA by all modes (including people on foot, bicycles, or buses) while improving community cohesion. The intent is to (1) maintain the functionality of the NHS while meeting the local travel needs of residents that live, play, and work in the area and must safely travel across or along those roadways; and (2) improve neighborhood connections, quality of life, and accommodate adopted plans, as practicable.

The following needs have been identified:

Reduce Conflicting Travel Functions: *Serving competing regional and local travel functions on the highway network in the study area leads to conflicts that reduce mobility, safety, and accessibility for all users.*

Improve Safety: *Crashes for vehicles and people walking and bicycling are elevated at several study area intersections*

Promote Social Equity and Economic Development: *Current highway and arterial design on the Seward/Glenn Highway corridor in the study area is inconsistent with the vision expressed in recently adopted plans. Those plans envision improving neighborhood redevelopment, community cohesion, and quality of life.*

In creating the preliminary concepts and ultimately project alternatives, DOT&PF is striving to satisfy the identified purpose and solve the problems identified in each of the need statements. For additional details on the purpose and needs, see the *Purpose and Need Technical Memo* on the project library page at <http://sewardglennmobility.com/>.

Alternatives Workshops

On February 28, 2023, DOT&PF held an alternatives development workshop with representatives from study area neighborhoods, members of the [project's committees](#), transportation planners and engineers from the City of Anchorage and DOT&PF, and local and state elected officials from Anchorage and the Mat-Su Valley. The workshop was an opportunity for area stakeholders, transportation professionals, and local leaders to come together to help shape the range of alternatives to be explored in the PEL.

The workshop started with an overview presentation by the project team followed by different engagement opportunities to allow participants to help shape and comment on draft concept designs.

- For a list of invitees and workshop attendees at the workshop see Attachment 1.
- The presentation given at the workshop is in attachment 2.
- The initial concepts from the workshop are presented in attachment 3, along with pros and cons and documentation of workshop comments on each concept.

Workshops Summary

During Session #1, Amy Burnett, HDR, provided opening remarks. John McPherson, HDR, then presented a slide deck (Attachment A) that included the project overview and status, the Purpose and Need Statement, the Alternative Identification process, and the Alternative Concepts maps. During Session #2, because there were fewer attendees, John McPherson covered all information from the presentation during a small group discussion using the posters as visual aids.

Posters showcasing the Alternative Concepts, Purpose and Need Statement, and Design Elements (Attachment B) were available in the meeting room. Following John's presentation, the attendees were invited to place comments, via colored sticky notes, on the Alternative Concepts maps to easily identify and demonstrate their agreement (green), disagreement (red), or neutrality/requests for more information (yellow). The team facilitated small group discussions

focused on reviewing the collected comments and, using a constraints map on each table (Attachment C) as needed, collaboratively sketching out an alternative route that best considered all perspectives. Each table then reported on two to three highlights of their discussion.

Attendance

More than 100 invitations were sent (a complete list of organizations is included below) for the workshops. Session #1 had 26 attendees and Session #2 had 15 attendees. Nine of the 41 attendees were project team members and/or DOT leadership (6 HDR, 3 DOT&PF).

Table 1: Organizations/Groups Invited to the Workshops

3rd Avenue Radicals	Fairview Business Association
Alaska Department of Environmental Conservation	Fairview Community Center
Airport Heights Community Council	Fairview Community Council
Alaska Railroad Corporation	Government Hill Community Council
Alaska Regional Hospital	Joint Base Elmendorf-Richardson
Alaska State Legislature	Knik Tribal Council
Alaska Trucking Association	Matanuska-Susitna Borough
Anchorage Assembly	Merrill Field
Anchorage Chamber of Commerce	Municipality of Anchorage (MOA) Long-Range Planning
Anchorage Economic Development Corporation	MOA Parks and Recreation
Anchorage Fire Department	MOA Planning Department
Anchorage Metropolitan Area Transportation Solutions	MOA Public Transportation
Anchorage Police Department	MOA Public Transportation Department
Anchorage School District	MOA Street Maintenance
Anchorage Senior Activity Center	MOA Office of Emergency Management
Bike Anchorage	Mountain View Community Council
DOT&PF Bridge Group	Native Village of Eklutna
DOT&PF Cultural Resources Specialist	NeighborWorks Alaska
DOT&PF Planning Department	Port of Alaska
DOT&PF Statewide Environmental Office	Rogers Park Community Council
DOT&PF Street Maintenance	State Historic Preservation Officer
Downtown Community Council	TOTE
Eklutna, Inc.	United States Army Corps of Engineers

Table 2: Project Team & DOT Leadership

DOT&PF
Kelly Summers

HDR
John McPherson

Kevin Jackson
Wolfgang Junge

Laurie Cummings
Taylor Horne
Alice Rademacher
Amy Burnett
Rory McAllister

Outreach

The workshops were advertised in the following ways:

- Two emails were sent to the Workshop Invitee List (Attachment D).
- Follow-up phone calls were made to invitees who did not respond by the RSVP deadline.
- Calendar invitations were sent to those who RSVP'd for the workshops (Attachment E).

Concepts

The seven initial concepts discussed at the workshop were (Attachment B):

- **Concept 1 – Lake Otis-Reeve Connector:** This concept would include an arterial extension connecting Reeve Boulevard and Lake Otis Parkway to a new interchange at Airport Heights Drive/Glenn Highway. Gambell Street would be redeveloped as a main street.
- **Concept 2 – Hyder Greenway/ Woonerf Street:** This concept would include a greenway street (and/or Woonerf) along Hyder Street with Ingra Street converted to a 6-lane major arterial street. Gambell Street would be redeveloped as a main street.
- **Concept 3 – Ingra Parkway:** This concept would include a greenway street/parkway on Ingra Street with travel lanes separated by a greenspace/trail connecting Chester Creek and Ship Creek. Gambell Street would be redeveloped as a main street.
- **Concept 4 – Couplets:** A series of 3-lane couplets north-south on Ingra and Hyder Streets and East West on 3rd and 5th Avenues would be developed. In the remaining right-of-way, an improved pedestrian and trail connection would be developed. Gambell Street would be redeveloped as a main street.
- **Concept 5 – Freeway Preservation:** This concept would provide a continuous expressway through the study area connecting the Glenn Highway and Seward Highway on the same alignment as the Seward Highway-Glenn Highway Connection in the MTP, but it would not be trenched/depressed. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.
- **Concept 6 – Metropolitan Transportation Plan:** This concept would provide a continuous freeway through the study area connecting the Glenn Highway and Seward Highway. Portions of the alignment would be in a trench with cross streets bridging over top. This is the alternative that is in the adopted 2040 Metropolitan Transportation Plan. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.
- **Concept 7 – 15th Avenue Bypass:** This concept would create a continuous freeway connecting the Glenn Highway and Seward Highway diagonally on an alignment south of Merrill Field and south of 15th Avenue. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.

Summary of Comments

The project team received significant, helpful comments to help inform the next iteration of the Alternative Concepts. Feedback was collected from more than 130 sticky notes attached to the Alternative Concepts posters, a facilitated full-group review of each concept poster, and robust Q&A and general comment sessions.

Overall, the workshop attendees found positives and negatives about all Alternative Concepts, with many recommendations for an alternative that combines aspects from more than one concept.

Table 3: Pros of Each Alternative Concept

Name	Pros
Alternative Concept 1	<ul style="list-style-type: none"> • Good Port connections and access. • Good Gambell connection. • Reduces traffic to U-Med District. • Removes Fairview couplet. • Has a good overpass plan.
Alternative Concepts 2&3	<ul style="list-style-type: none"> • Good greenbelt trail connection. • Excited about the concept of the greenway. • Closing the loop could benefit tourism and things like bike rentals. • Good pedestrian-first, cars-last design.
Alternative Concept 4	<ul style="list-style-type: none"> • Three lanes allow for wider sidewalks and less right-of-way acquisition. • Like the idea of turning Gambell into a Main Street design.
Alternative Concept 5	<ul style="list-style-type: none"> • Good separation of uses. • Good trail connection. • Could transform all of Fairview and downtown in a positive way. • Downtown Community Council is for this. • Improves the National Highway System (NHS).
Alternative Concept 6	<ul style="list-style-type: none"> • Could create good separation from the highways and offer good paths for bicycles and pedestrians. • Separates highway-only traffic from the community. • Gives good access to things like grocery stores with few automobile interactions. • This is what we want! • Will work if DOT&PF is serious about spending the money to do it right.
Alternative Concept 7	<ul style="list-style-type: none"> • Good separation of users. • Redirects thru-traffic well. • Eliminates traffic congestion in downtown.

Table 4: Cons of Each Alternative Concept

Name	Cons
Alternative Concept 1	<ul style="list-style-type: none"> • Negatively impacts the NHS. • No sustainability. • Shifts traffic impacts to another neighborhood (Lake Otis). • Does not solve root Purpose & Need issues. • Nothing showing pedestrian improvements. • Puts truck traffic through area with high housing density (Government Hill).

	<ul style="list-style-type: none"> • Converts Airport Heights into major arterial. • Negatively impacts school bus traffic. • Airport Heights already has a speeding problem, this will make it worse.
Alternative Concepts 2&3	<ul style="list-style-type: none"> • Green streets feel like a token rather than a connection to the city. • Still separates foot traffic from grocery store. • Doesn't address through traffic concerns. • "Park" is a misnomer, this isn't a park. • Six-lane traffic does not connect the neighborhood to the city. • Runs Port traffic through downtown. • Half measures are insufficient. • This will just turn Fairview into another Dimond Boulevard in a bad way for pedestrians. • Token green space is unusable. • Doesn't solve downtown couplet problems. • Greenway needs to be more than just street trees. • Does not solve traffic congestion.
Alternative Concept 4	<ul style="list-style-type: none"> • Doesn't improve current design. • High-speed roads through neighborhoods. • Does not address freight moving downtown. • Ignores right-of-way (air quality, noise, etc.). • Doesn't address how pollution affects people who live in the area.
Alternative Concept 5	<ul style="list-style-type: none"> • This should not move beyond this phase. • Worst alternative of all. • Does the bare minimum. • Terrible despite cost effectiveness. • Does not solve Fairview issues. • Would make pedestrian traffic dangerous. • Cuts access to Brother Francis shelter. • Runs an interstate through a densely populated neighborhood.
Alternative Concept 6	<ul style="list-style-type: none"> • Would make the whole corridor look institutionalized. • Simply not an affordable option. • Timing would take too long. • Does not do enough to avoid conflicts between pedestrians and highway system. • Lack of movement on this project for decades is disappointing. • Airport Heights Community Council preferred version.
Alternative Concept 7	<ul style="list-style-type: none"> • Doesn't address port traffic. • Doesn't seem realistic. • Don't impact Merrill Field. • Cuts access to Fire Department training center. • Might entirely isolate Fairview. • East Chester Flats was destroyed by similar project. • Major displacement to people living in the area.

Table 5: Requested Changes to Each Alternative Concept

Name	Changes
Alternative Concept 1	<ul style="list-style-type: none"> • Consider other Port access routes. • Find ways to remove 5th and 6th Avenue couplets. • Add alternative access to U-Med. • Consider turning Ingra into three-lane road with center turn lane.

	<ul style="list-style-type: none"> • Improve non-motorized crossings. • Map is not consistent with prior Municipal Transit Plan (MTP) studies.
Alternative Concepts 2&3	<ul style="list-style-type: none"> • Weight lines on map to show right-of-way impacts. • Show how Sullivan access from highway works. • Turn downtown streets into two-way. • Show modeling of removing couplet. • Widen the green space. • Direct traffic down Reeve. • Map does not communicate what is happening with interstate traffic.
Alternative Concept 4	<ul style="list-style-type: none"> • Leave Gambell as Main Street. • Address needs of people not just traffic. • Make traffic slower or move to a less densely populated area.
Alternative Concept 5	<ul style="list-style-type: none"> • Add more green space to insulate the neighborhoods. • Consider renaming and labeling roads. • Show estimated costs of this and other alternatives. • Show concept exploring traffic demand management. • Address MTP showing grade separation.
Alternative Concept 6	<ul style="list-style-type: none"> • Consider a tunnel with a toll system. • Prefer it to be built all at once, rather than in phases. • Be sure to factor in connection to the Port. • Depressed road is ideal. • Show cut and cover extent on map.
Alternative Concept 7	<ul style="list-style-type: none"> • Include removal of 5/6 couplet in this concept. • Take 5th, 6th, and 3rd Avenues off NHS. • Show airport connection plan. • Show benefits/problems with constructing on a landfill. • Apply ideas from Alternatives 1–4 into 6 and 7 to complete the system.

Summary

The project team will utilize the information received from workshop participants in the next stage of the PEL Study, which is to develop refined alternative concepts which will be presented for broad public feedback in late spring/early summer 2023.

Attachment A

Alternatives Workshops Presentation



Seward Glenn Mobility PEL Study

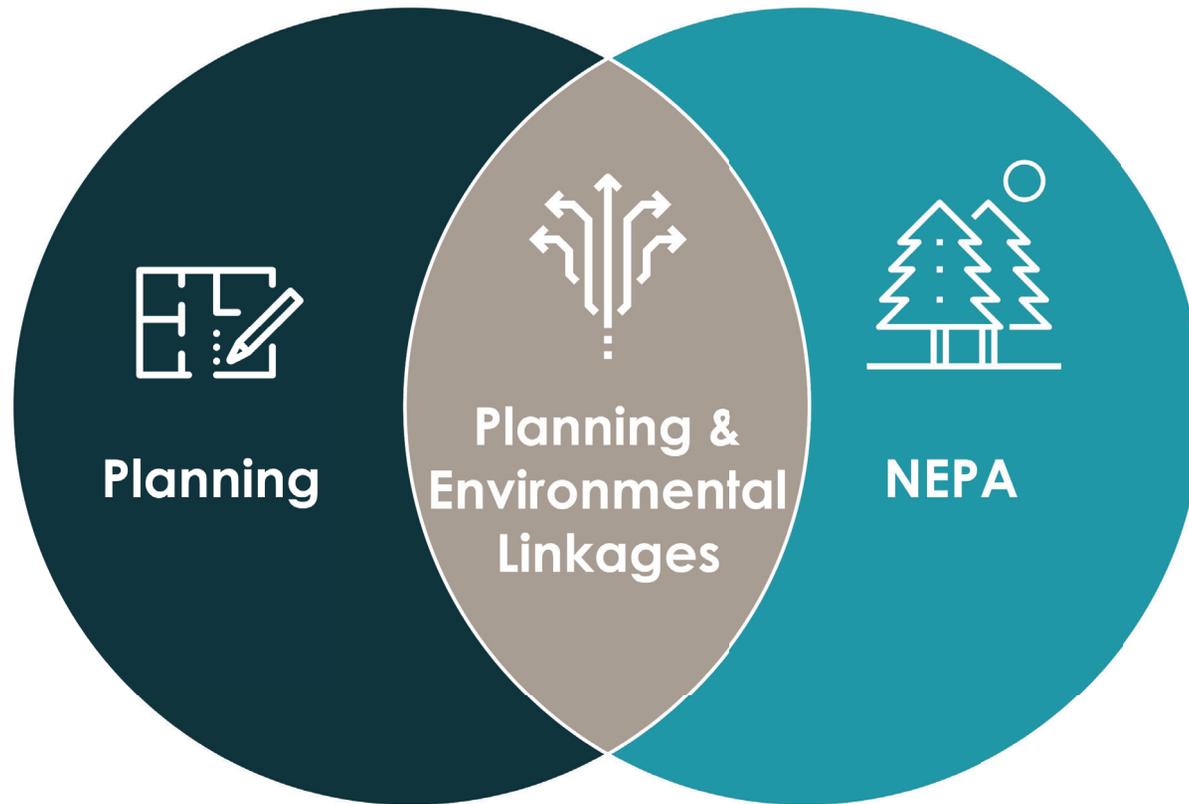


February 28, 2023
Alternatives Workshop

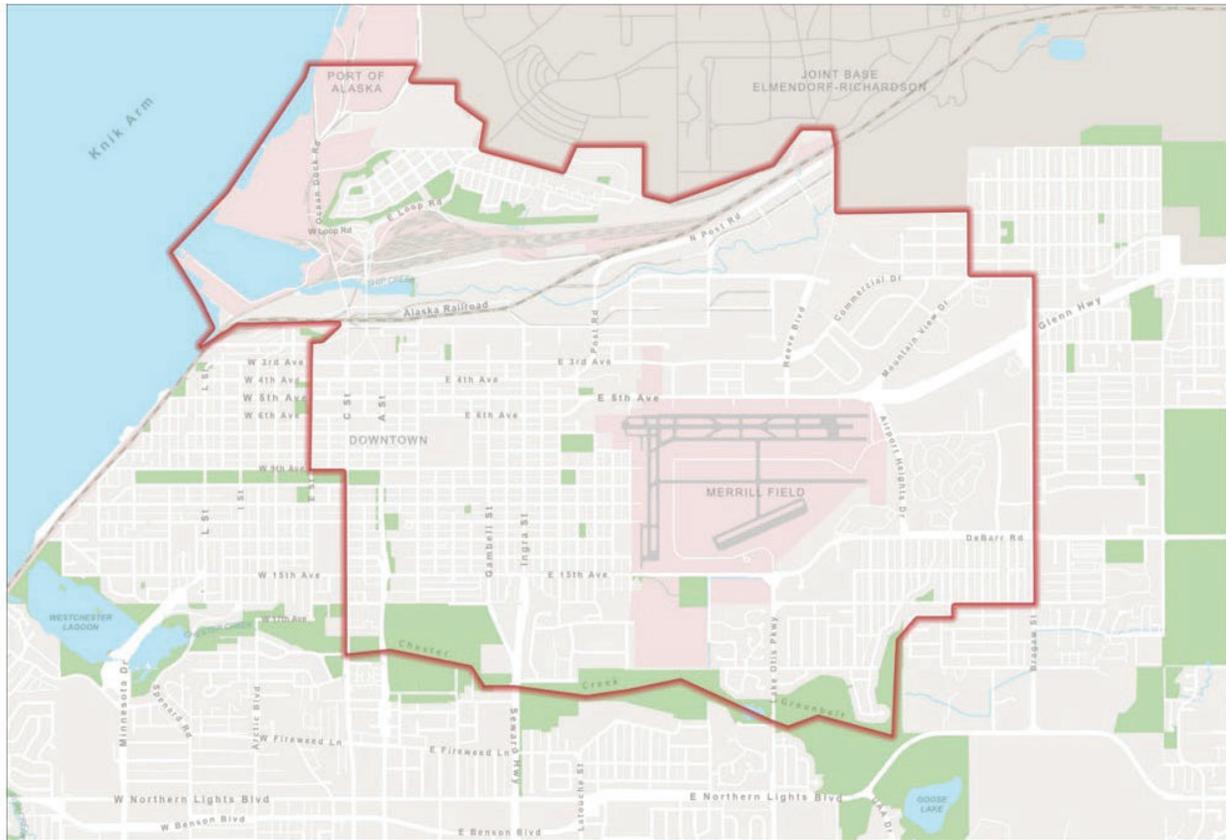




What is a PEL Study?



Seward Glenn Mobility PEL Study

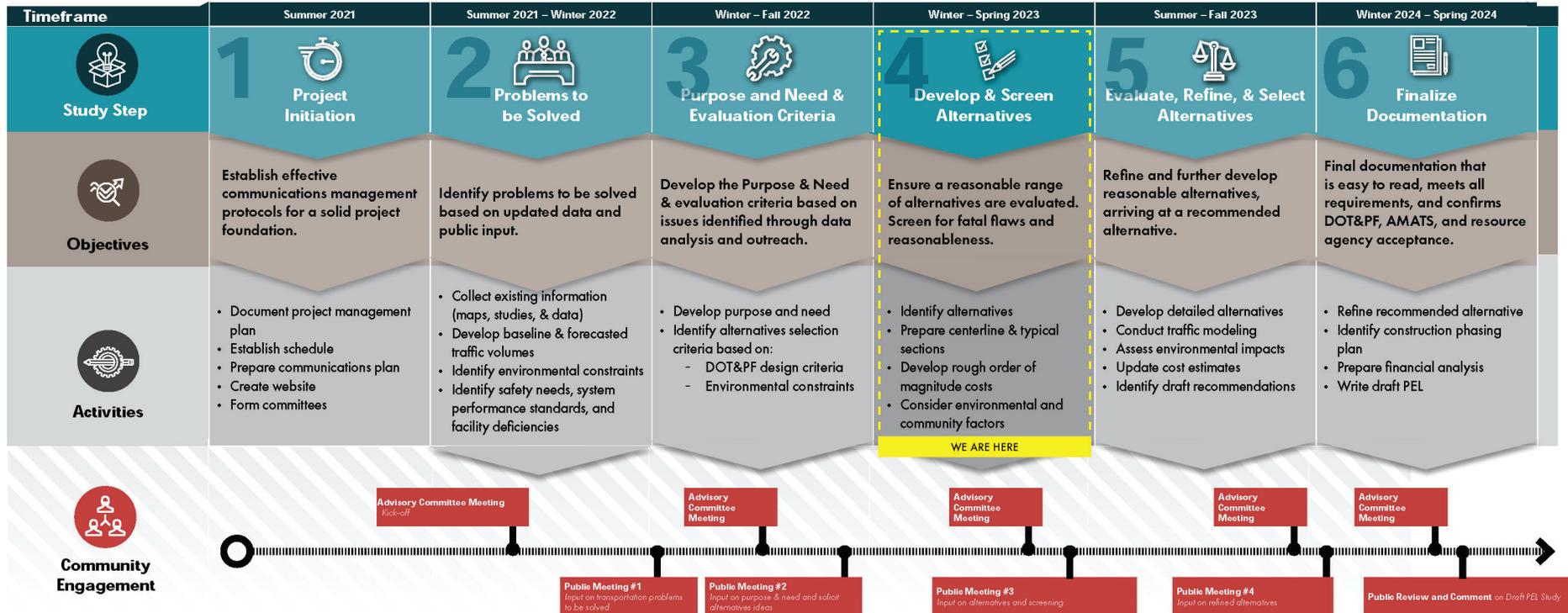


Study Description

“...identify and evaluate options to improve transportation **mobility, safety, access, and connectivity** between the **Seward Highway, near 20th Avenue** and the **Glenn Highway, east of Airport Heights**. The project will also identify ways to **improve access to and from the Port of Alaska** to the highway network.”

Where are we?

PROJECT SCHEDULE



Purpose and Need Statement

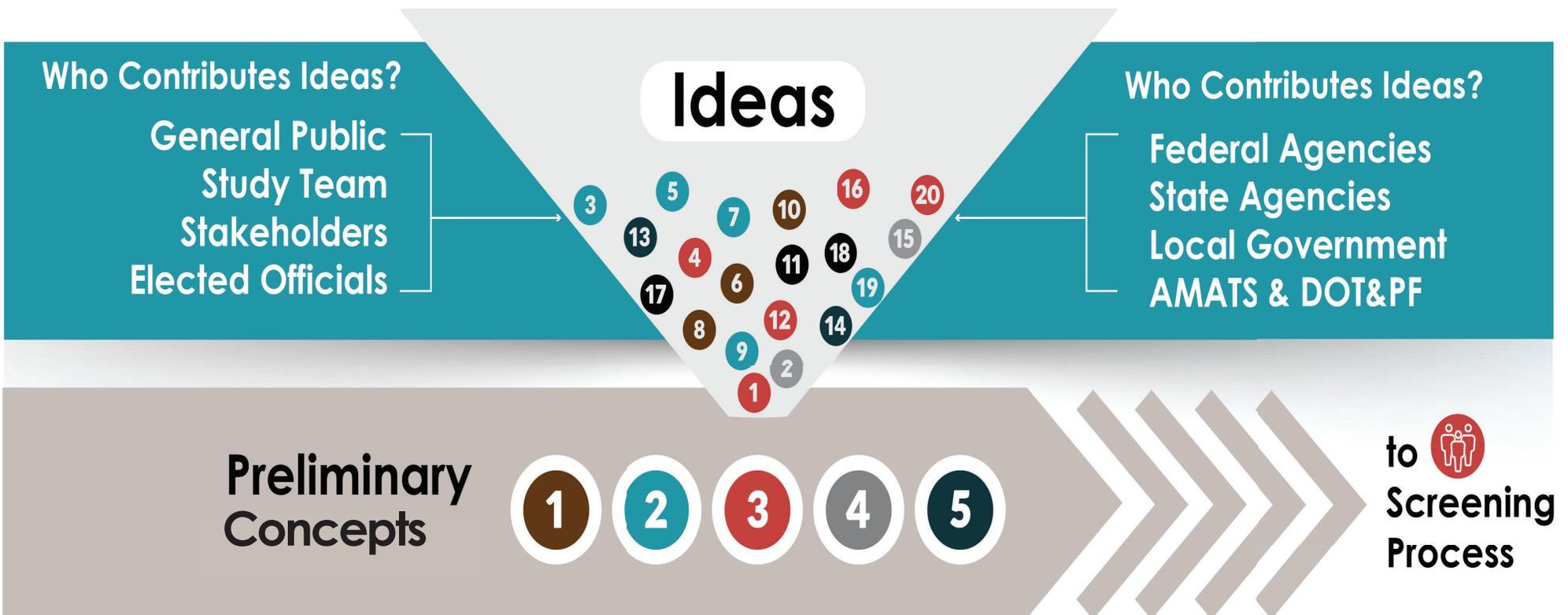
- **Maintain the functionality of the National Highway System while meeting the local travel and safety needs**
- **Improve neighborhood connections, quality of life, and accommodate adopted plans**

Needs

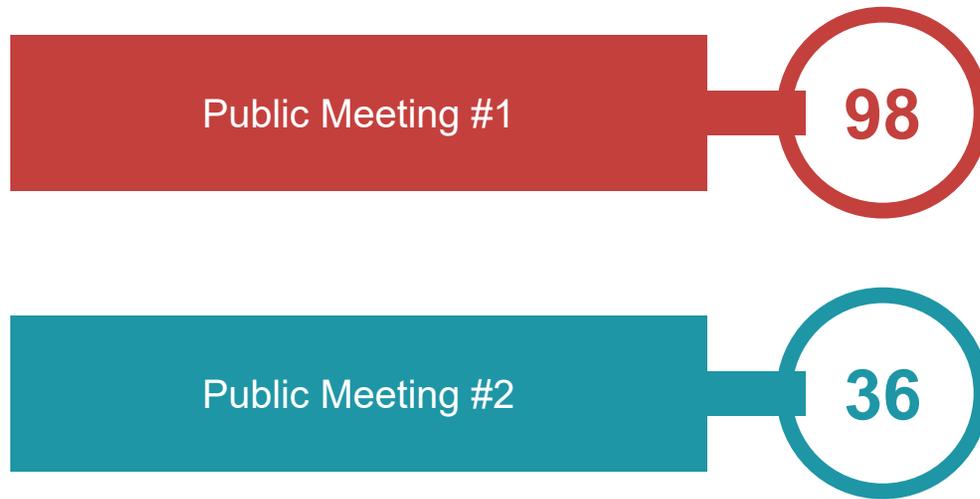
- **Reduce Conflicting Travel Functions**
- **Improve Safety**
- **Promote Social Equity and Economic Development**

Alternative Identification Process

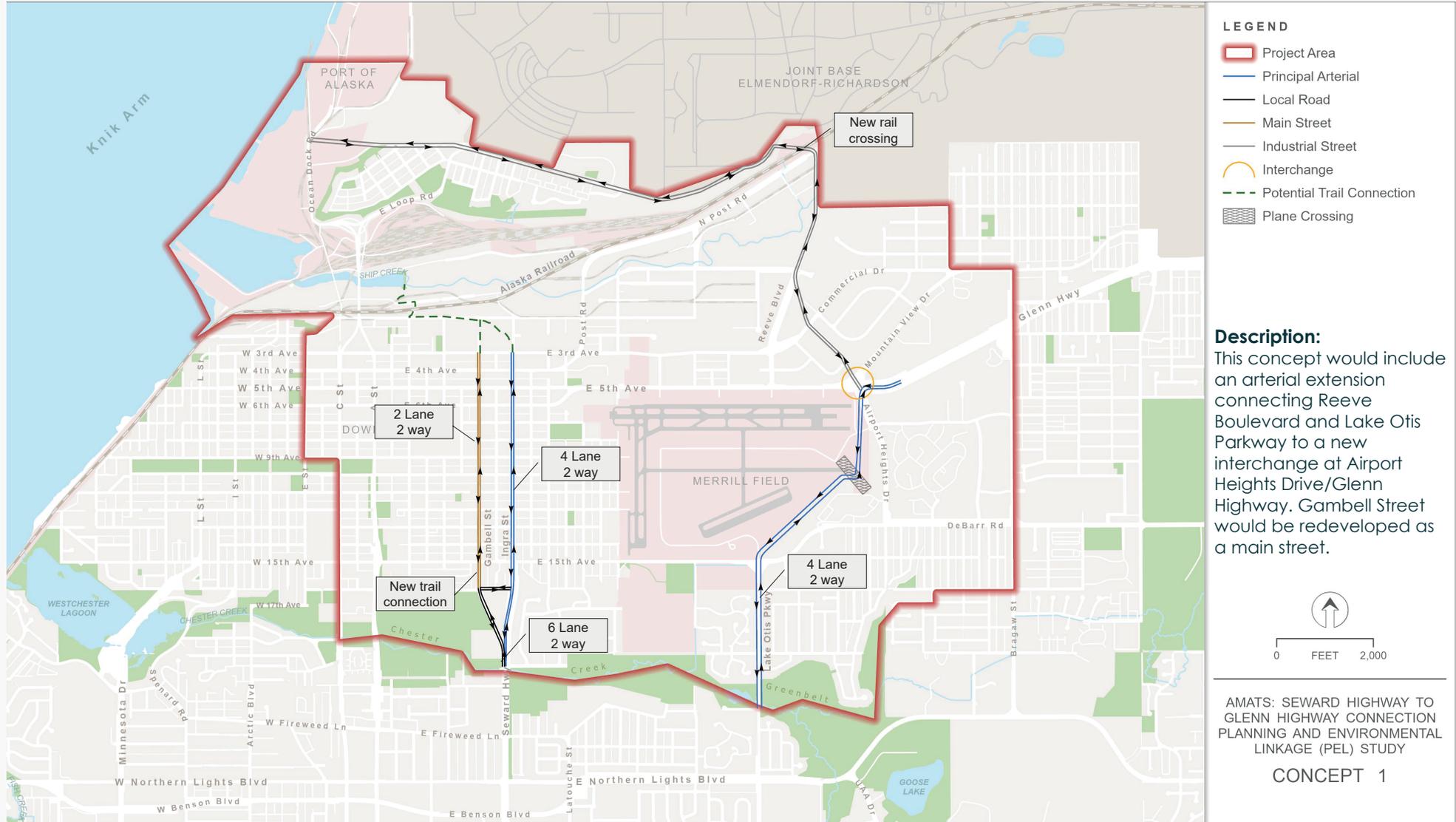
Universe of Concepts



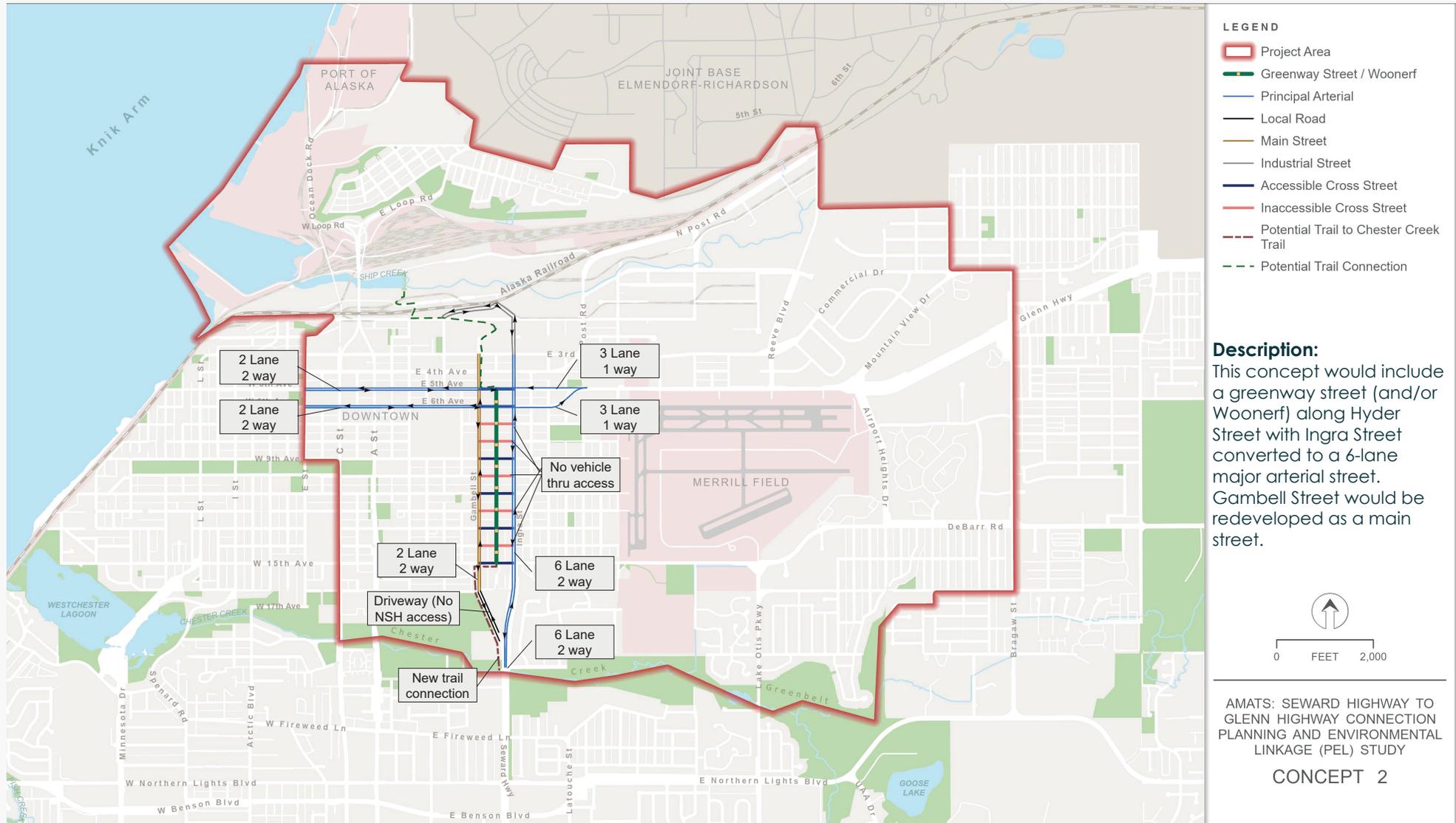
Public Alternative Ideas



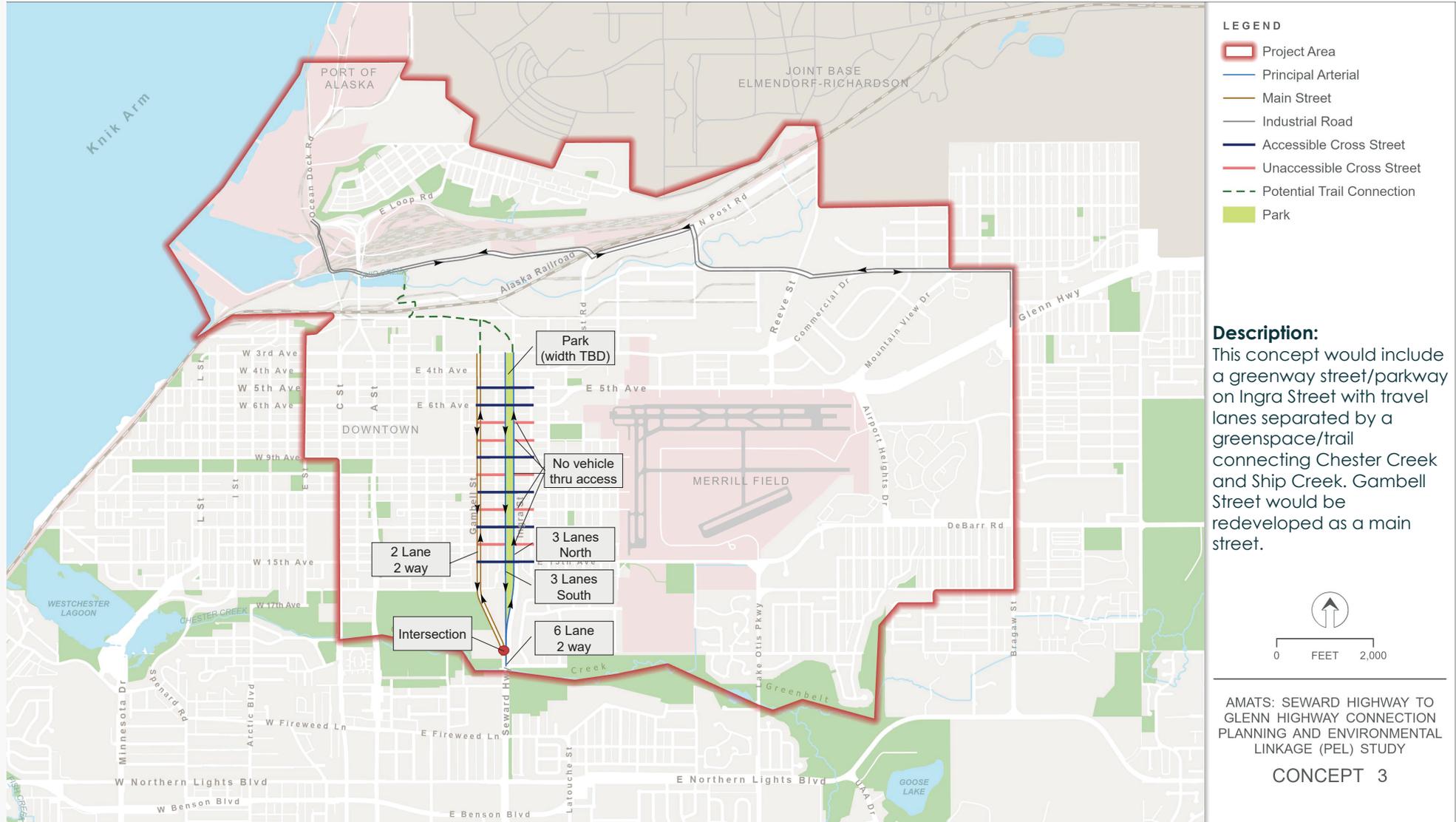
Concept 1 – Lake Otis-Reeve Connector



Concept 2 – Hyder Greenway Street



Concept 3 – Ingra Greenway



- LEGEND**
- Project Area
 - Principal Arterial
 - Main Street
 - Industrial Road
 - Accessible Cross Street
 - Unaccessible Cross Street
 - Potential Trail Connection
 - Park

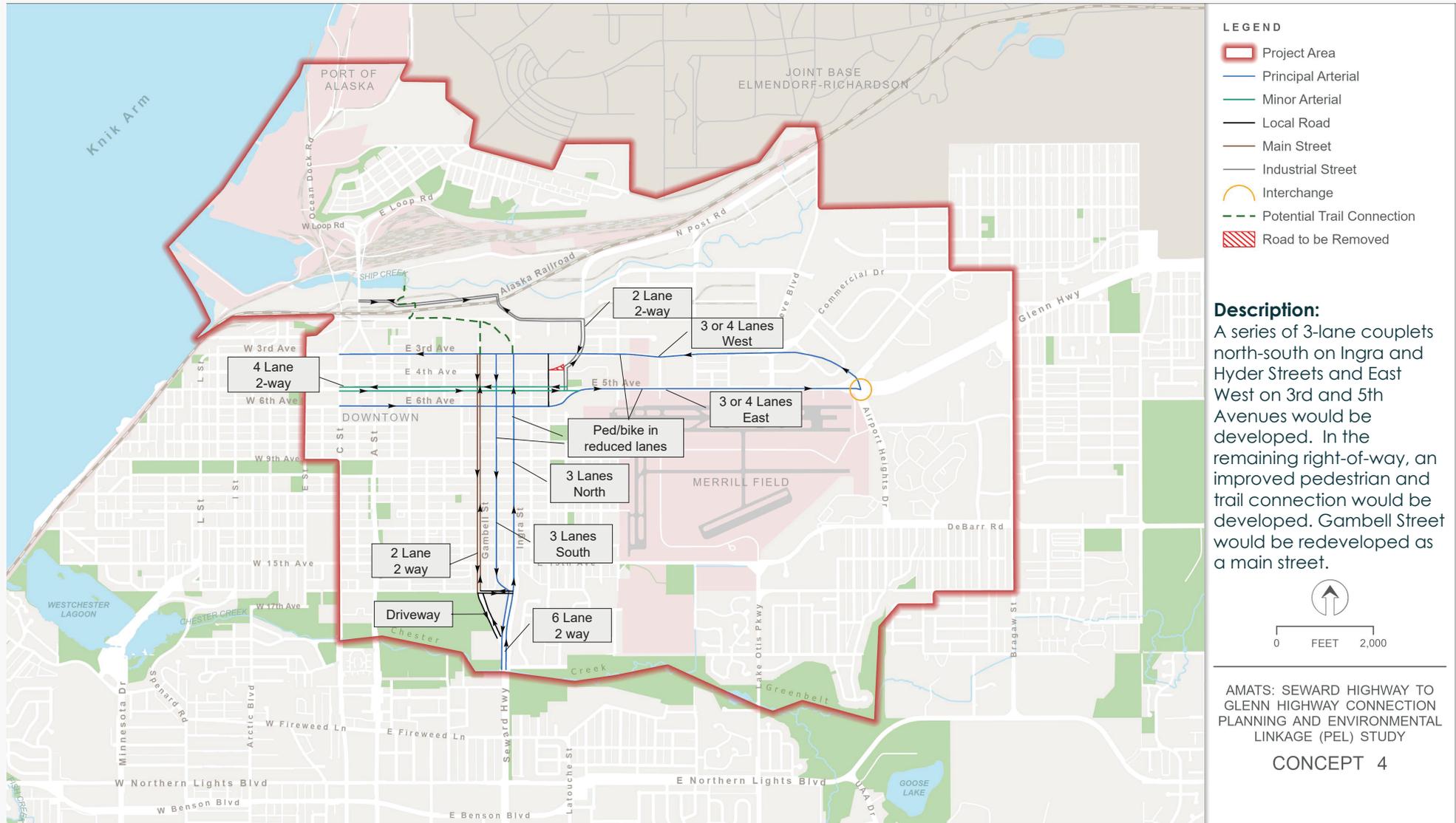
Description:
 This concept would include a greenway street/parkway on Ingra Street with travel lanes separated by a greenspace/trail connecting Chester Creek and Ship Creek. Gambell Street would be redeveloped as a main street.



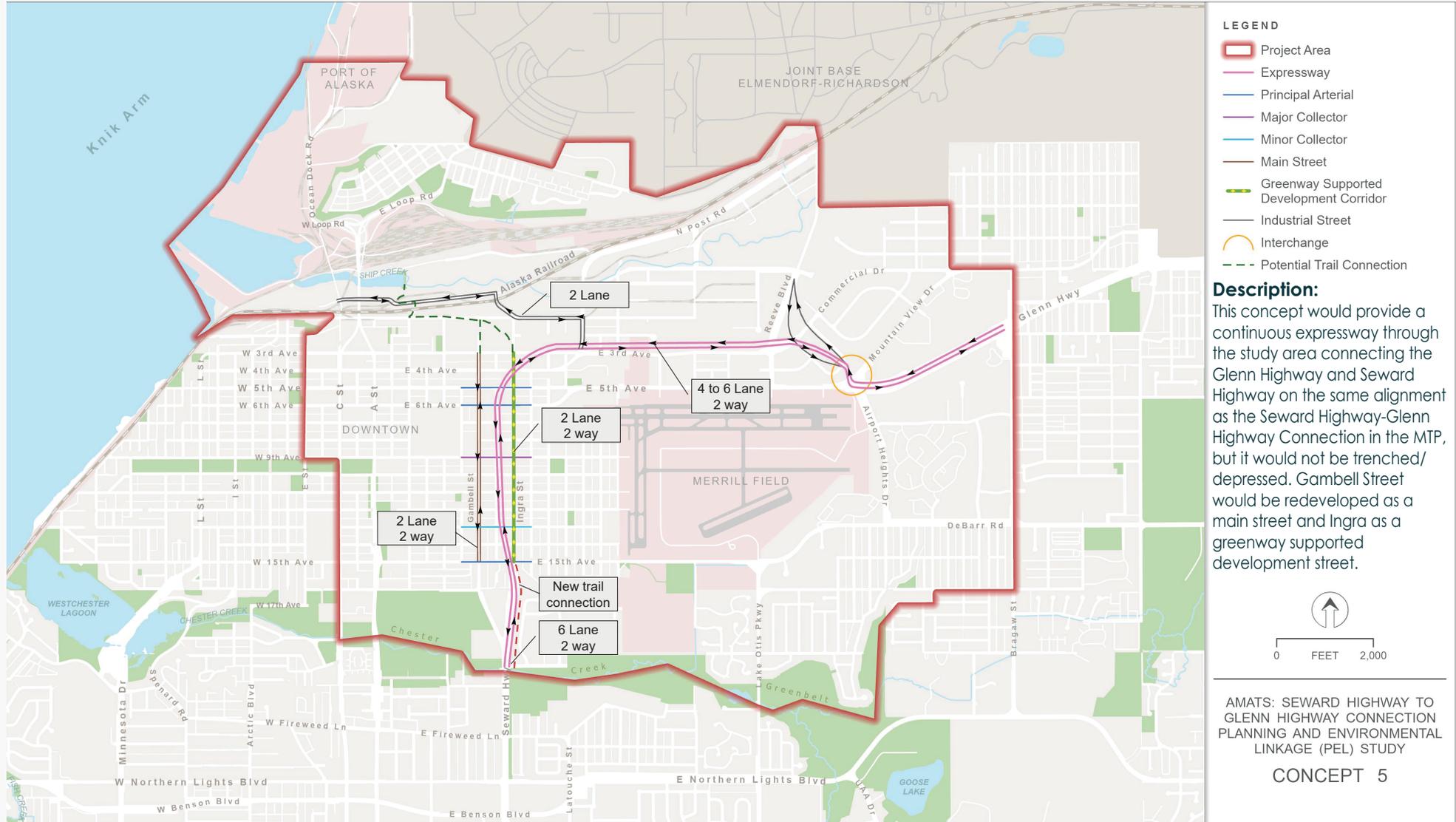
AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

CONCEPT 3

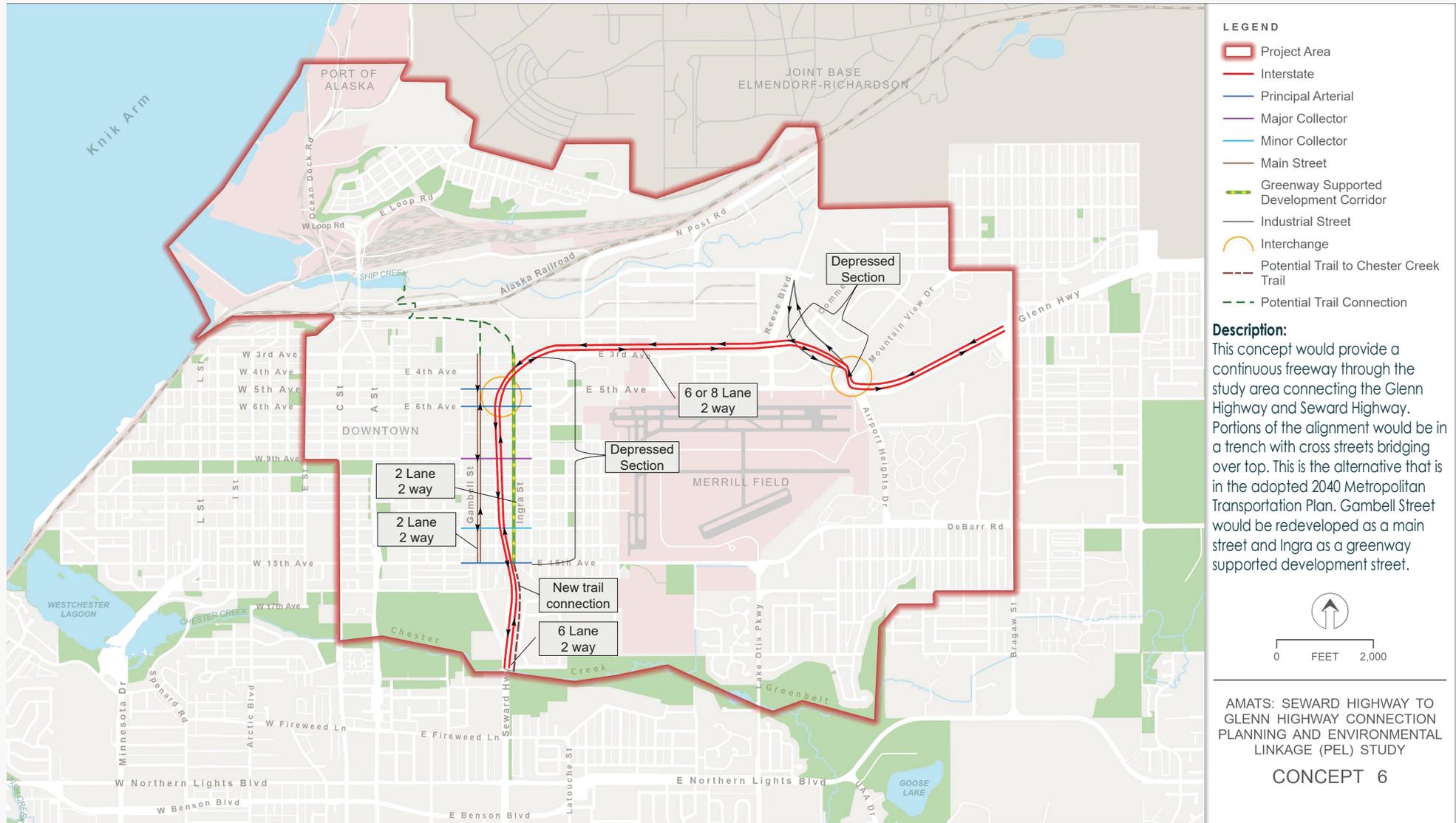
Concept 4 – Couplets



Concept 5 – H2H Preservation



Concept 6 - MTP



- LEGEND**
- Project Area
 - Interstate
 - Principal Arterial
 - Major Collector
 - Minor Collector
 - Main Street
 - Greenway Supported Development Corridor
 - Industrial Street
 - Interchange
 - Potential Trail to Chester Creek Trail
 - Potential Trail Connection

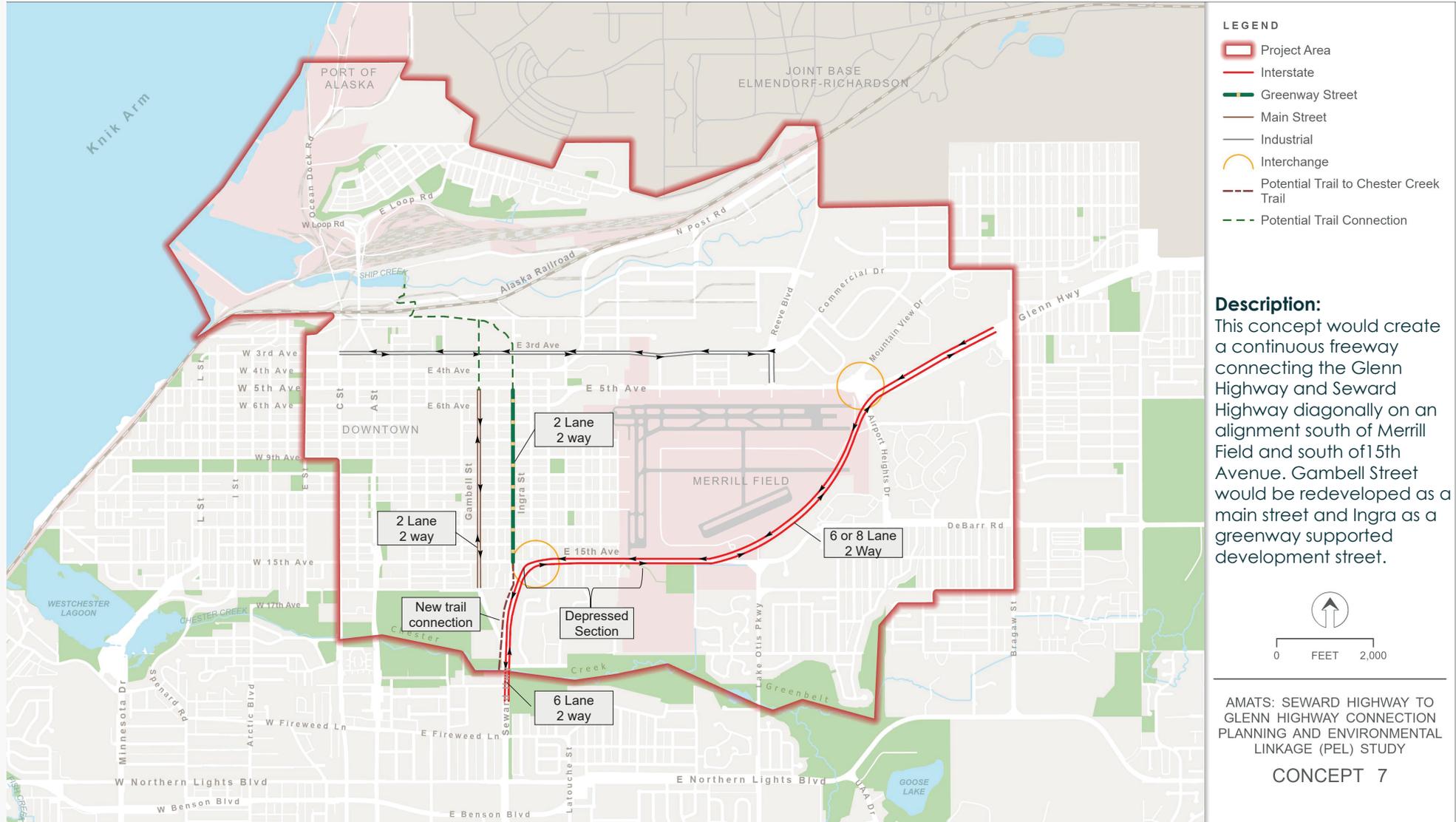
Description:
 This concept would provide a continuous freeway through the study area connecting the Glenn Highway and Seward Highway. Portions of the alignment would be in a trench with cross streets bridging over top. This is the alternative that is in the adopted 2040 Metropolitan Transportation Plan. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.



AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

CONCEPT 6

Concept 7 – 15th Avenue Bypass



- LEGEND**
- Project Area
 - Interstate
 - Greenway Street
 - Main Street
 - Industrial
 - Interchange
 - Potential Trail to Chester Creek Trail
 - Potential Trail Connection

Description:
 This concept would create a continuous freeway connecting the Glenn Highway and Seward Highway diagonally on an alignment south of Merrill Field and south of 15th Avenue. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.



AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

CONCEPT 7

Design Elements

Freeway



According to the MOA's (2014) OSHP, freeways are limited access, high-speed roadways with grade-separated interchanges. These streets provide a potential solution where more than 40,000 trips per day need to be served. They should be built to freeway design standards, with full grade separations at intersecting streets and a minimum right-of-way width of 150 feet.

Expressway



According to the OSHP (MOA 2014), expressways are divided arterial highways that primarily serve through traffic; they differ from freeways by the degree to which access is controlled. The OSHP (MOA 2014) indicates that expressways may have either full or partial control of access and may have either at-grade or grade-separated intersections. Expressways typically serve more than 20,000 trips per day and require a minimum right-of-way width of 130 feet.

Major Arterial



According to the OSHP (MOA 2014), arterials are intended to move large volumes of vehicles and goods on longer inter-area trips and move traffic to and from the freeway/expressway system. A secondary function of major arterials is to provide land access. Traffic volumes on these streets will typically be more than 20,000 trips per day, and should have at least four travel lanes, paved shoulders (for emergency parking), and a divider wherever possible. Access should be carefully controlled, and residential development should be served from side streets. Recommended minimum right-of-way width varies between 60 and 130 feet.

Industrial Street



The access improvements to/from the POA evaluated in the PEL Study should be developed in accordance with the "Industrial Street" typology. The OSHP (MOA 2014) indicates that "industrial streets are designed to accommodate significant volumes of large vehicles such as trucks, trailers, and other delivery vehicles." The plan suggests that industrial streets typically consist of two to four travel lanes, which are generally wider to accommodate movement of larger vehicles. Bicycle and pedestrian travel is often less frequent but still should be accommodated.

Minor Arterial



Minor arterial streets are intended primarily to move through traffic, but they also provide an important land access function. Access should be at block intervals wherever possible. Minor arterials serve less concentrated traffic-generating areas such as neighborhood shopping areas and schools. They distribute traffic from neighborhood collector streets to major arterials as well as between major arterials. Direct access is controlled to a lesser degree on minor arterials than on major arterials. These streets typically carry 10,000 to 20,000 vehicles per day. They should have two to four moving lanes and paved shoulders for emergency parking. Recommended minimum right-of-way width varies between 60 and 80 feet, depending on the street class.

Main Street Corridor



The 2040 LUP (MOA 2017) identifies a Main Street Corridor designation along Gambell Street. The plan envisions that this land use designation will provide "for commercial and mixed-uses within urban neighborhoods that can evolve as pedestrian-oriented, transit-served 'main street' development" (MOA 2017). Such a street would feature "transit access, wider sidewalks, pedestrian amenities, street tree landscaping, and relocation of utility poles and boxes and other impediments to a safe, comfortable pedestrian environment" (MOA 2017).

Greenway-supported



The 2040 LUP (MOA 2017) identified a Greenway-supported Development (GSD) corridor along Ingra Street in the study area. A GSD is intended to be a corridor where new development will "incorporate natural open spaces, creek corridors, and pedestrian routes" (MOA 2017). The plan indicates that GSDs are a development concept that focuses on catalyzing new infill and redevelopment projects, based on a creek or greenway restoration. The plan hopes that future redevelopment projects would interface with revitalized urban creeks, wetlands, wildlife habitats, public spaces, or multi-use trails. The plan indicates that "for GSDs to most effectively catalyze redevelopment and alternative access modes, they should connect to existing pedestrian corridors and trails" (MOA 2017).

Woonerf

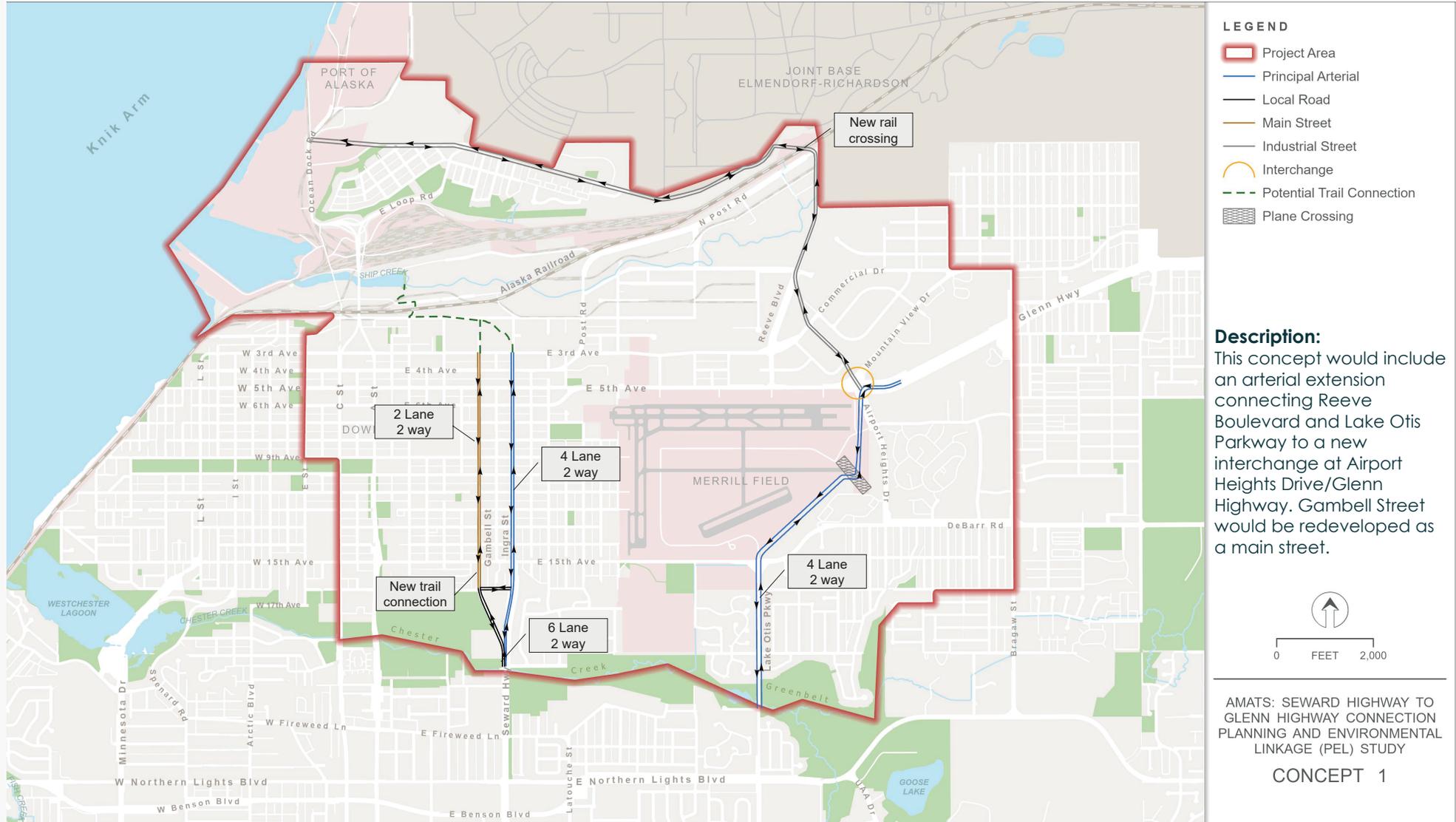


A woonerf, sometimes called a living street, allows drivers, bicyclists, pedestrians, and others to share the same space simultaneously. These are typically viewed more as social spaces instead of purely vehicle spaces. The four vital elements of a woonerf are: (1) well-defined entrances, (2) a shared and well-marked space, (3) physical barriers to slow traffic, and (4) landscaping and street furniture (Reardon 2016).

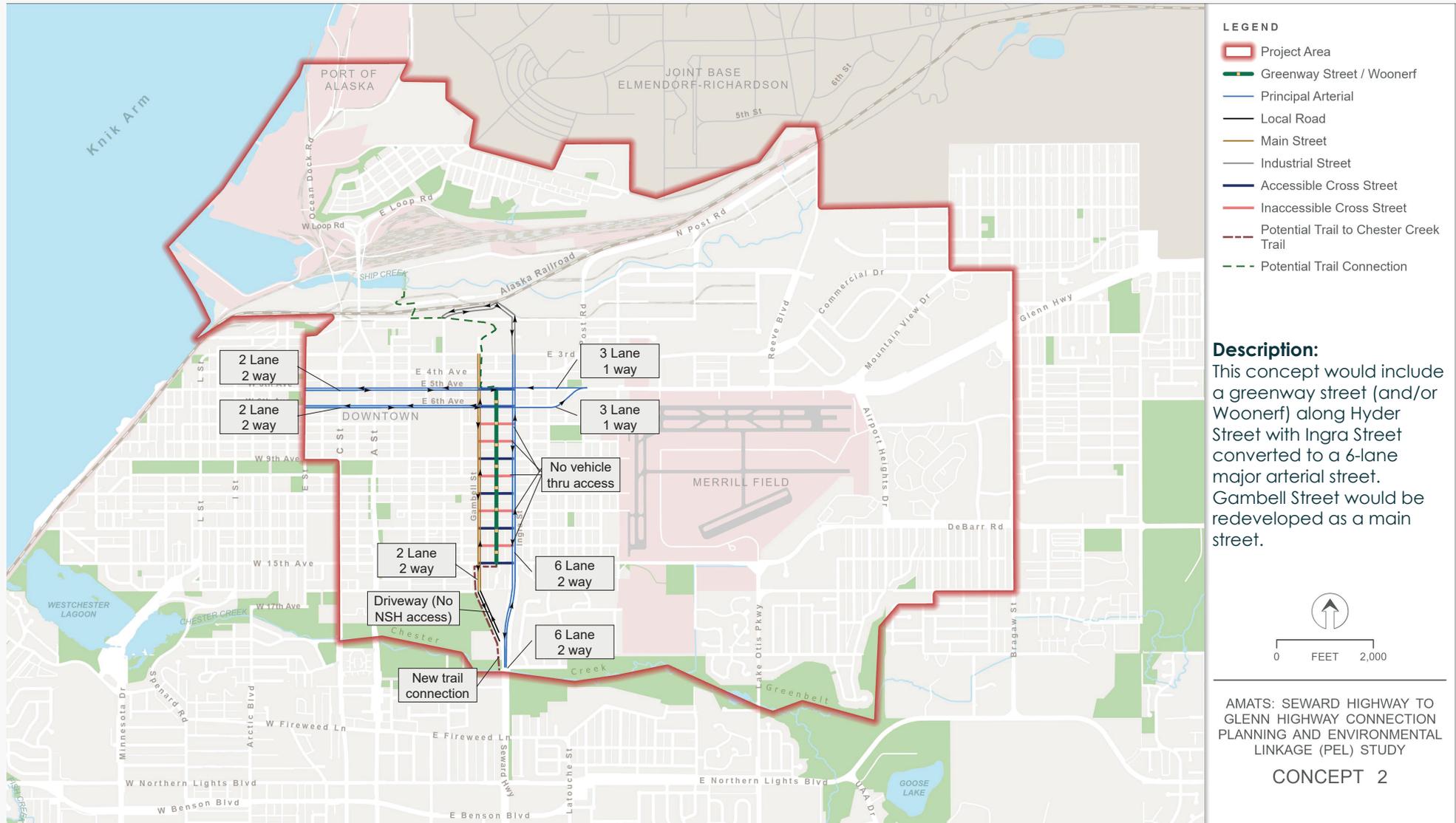
Attachment B

**Project Posters with summary
descriptions**

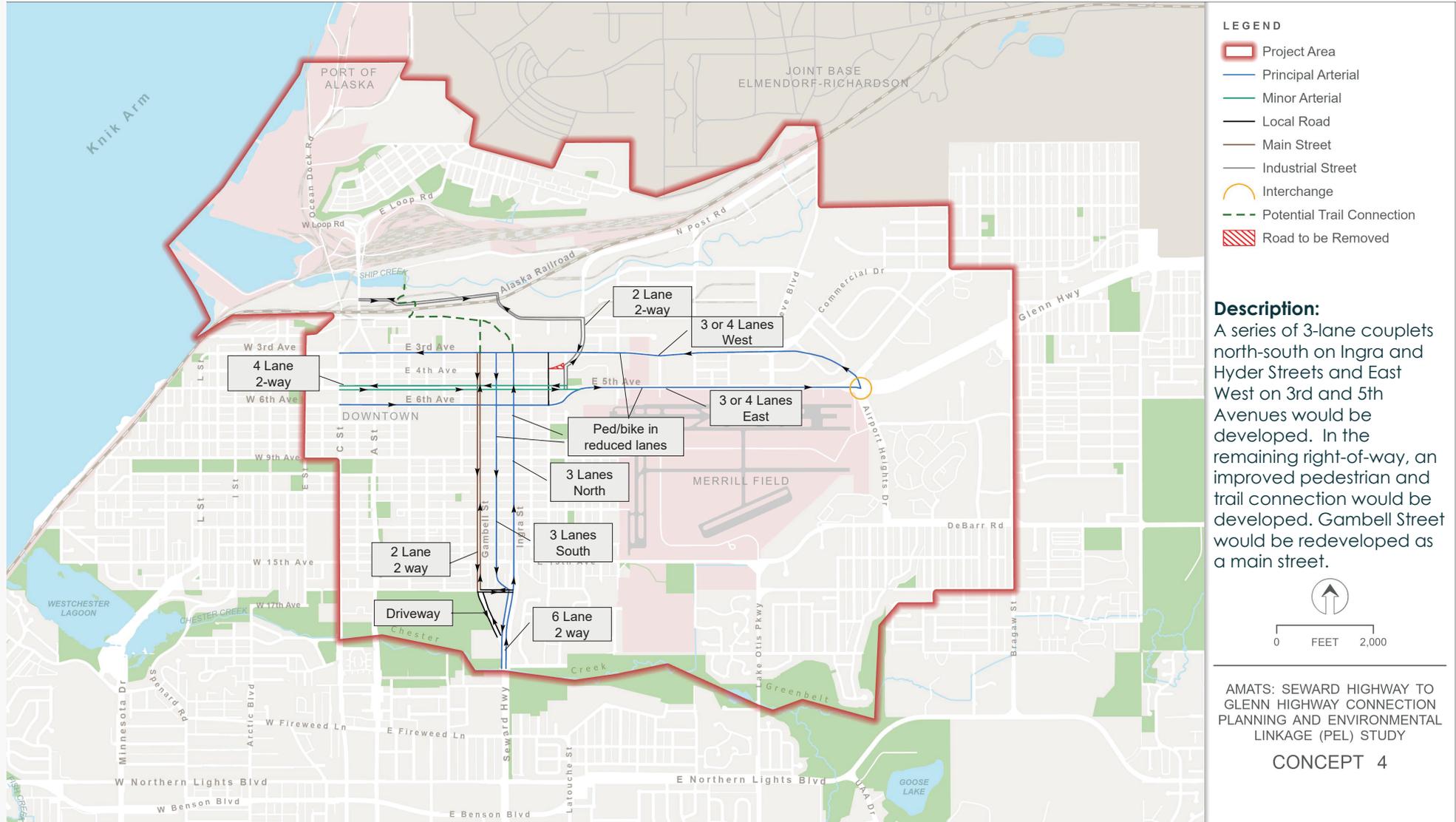
Concept 1 – Lake Otis-Reeve Connector



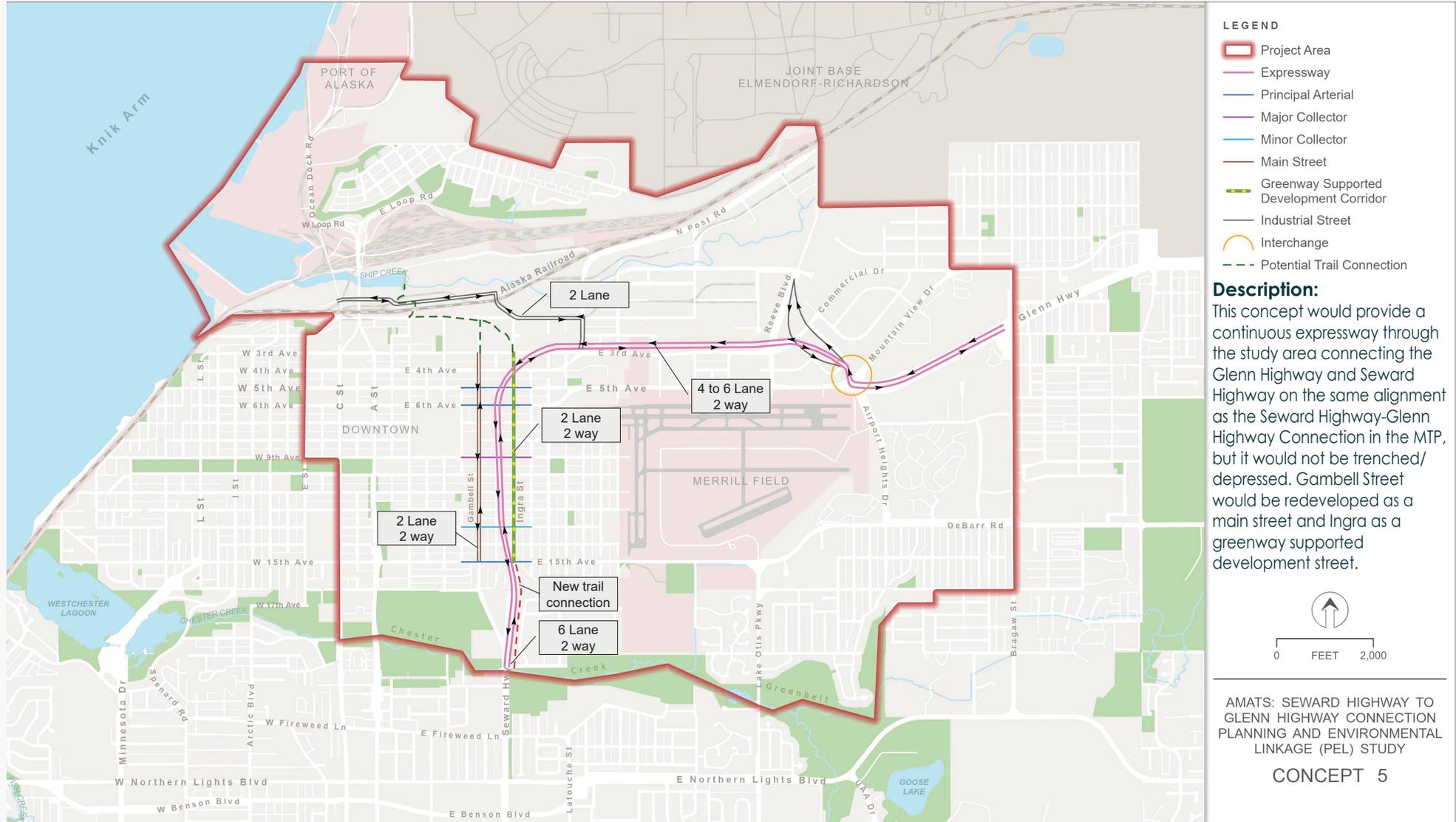
Concept 2 – Hyder Greenway Street



Concept 4 – Couplets



Concept 5 – H2H Preservation



- LEGEND**
- Project Area
 - Expressway
 - Principal Arterial
 - Major Collector
 - Minor Collector
 - Main Street
 - Greenway Supported Development Corridor
 - Industrial Street
 - Interchange
 - Potential Trail Connection

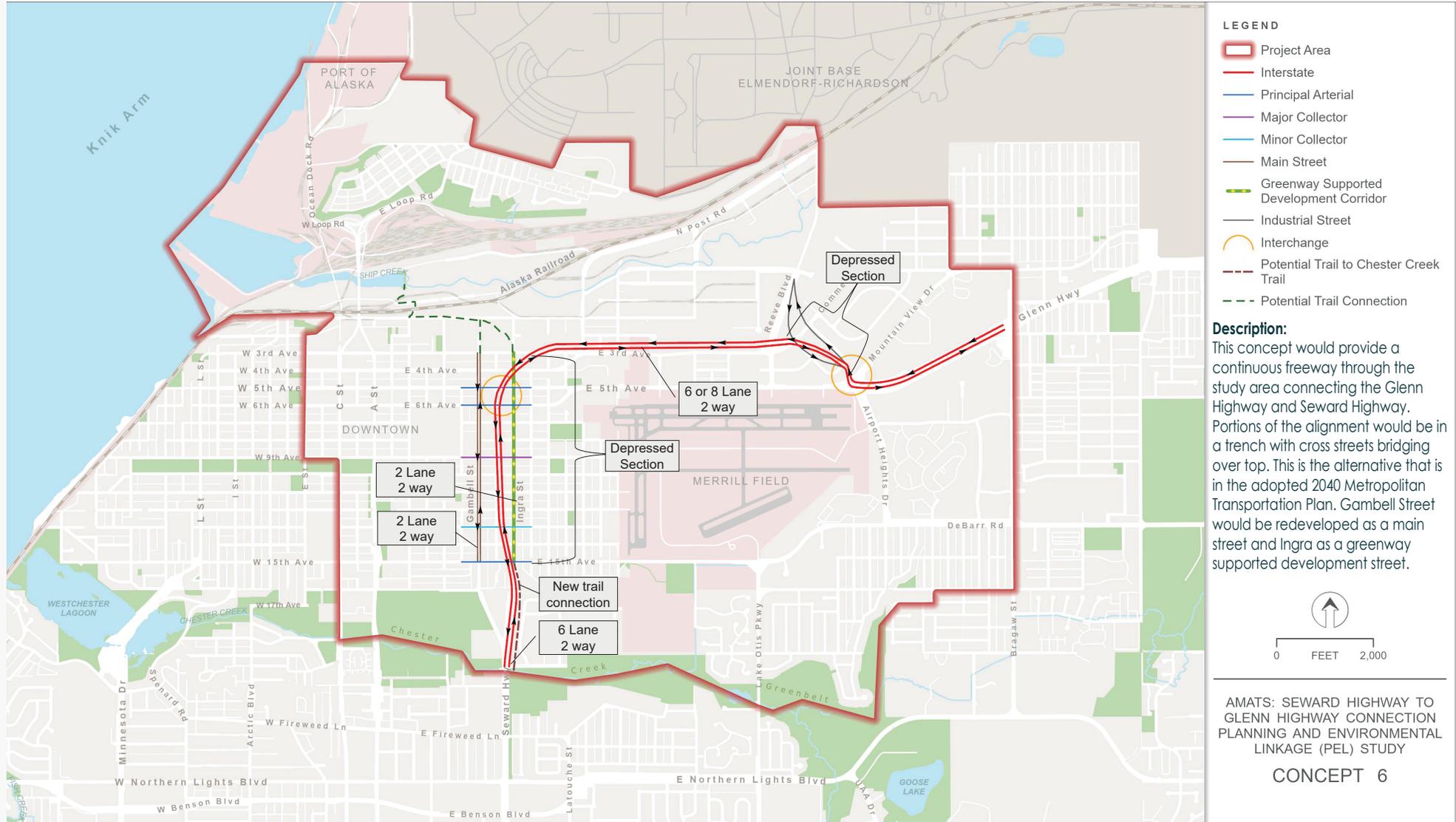
Description:
This concept would provide a continuous expressway through the study area connecting the Glenn Highway and Seward Highway on the same alignment as the Seward Highway-Glenn Highway Connection in the MTP, but it would not be trenched/depressed. Gambell Street would be redeveloped as a main street and Ingra as a greenway supported development street.



AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

CONCEPT 5

Concept 6 - MTP



LEGEND

- Project Area
- Interstate
- Principal Arterial
- Major Collector
- Minor Collector
- Main Street
- Greenway Supported Development Corridor
- Industrial Street
- Interchange
- Potential Trail to Chester Creek Trail
- Potential Trail Connection

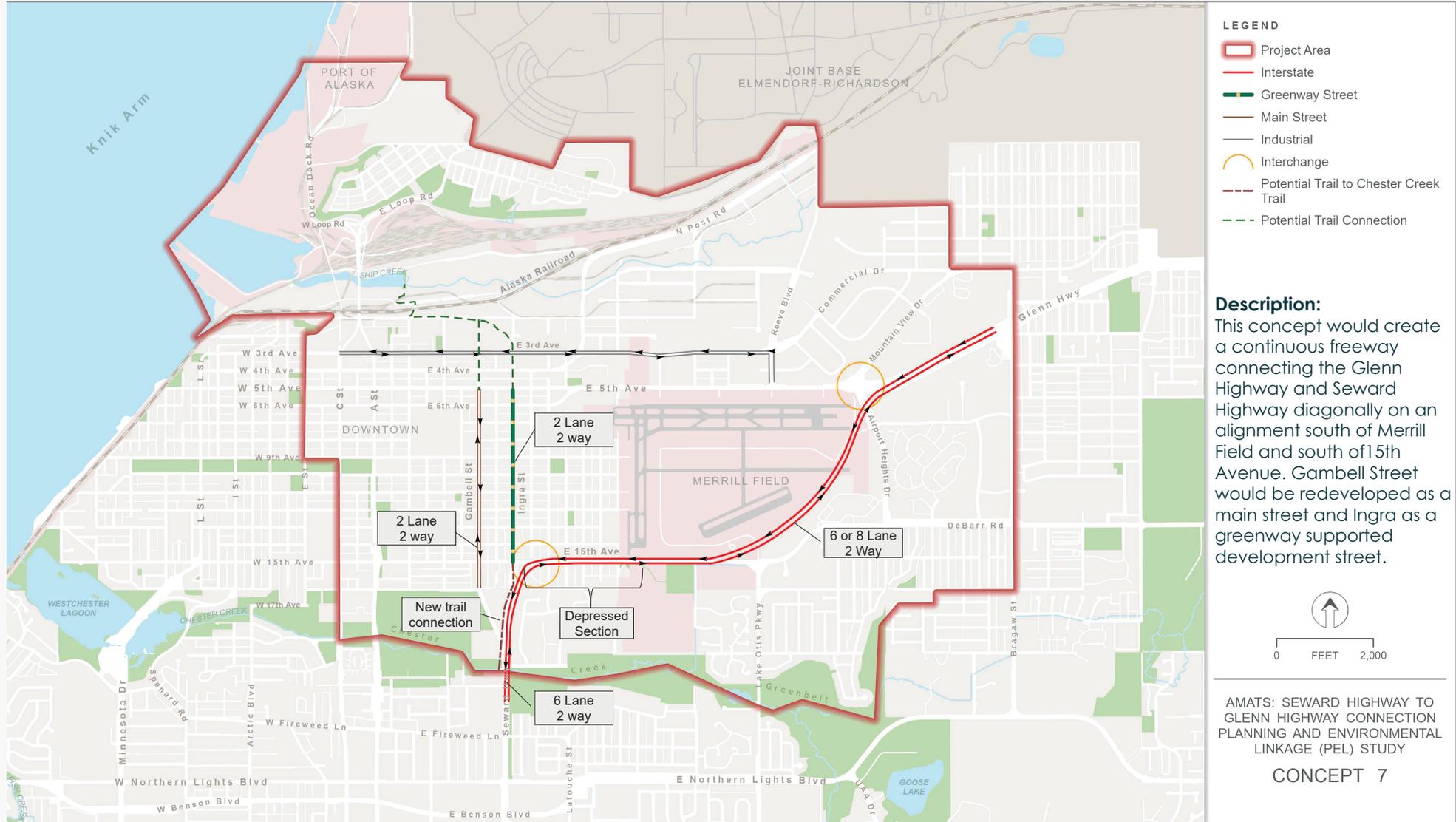
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AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

CONCEPT 6

Concept 7 – 15th Avenue Bypass



- LEGEND**
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 - Interstate
 - Greenway Street
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 - Industrial
 - Interchange
 - Potential Trail to Chester Creek Trail
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Description:
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AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

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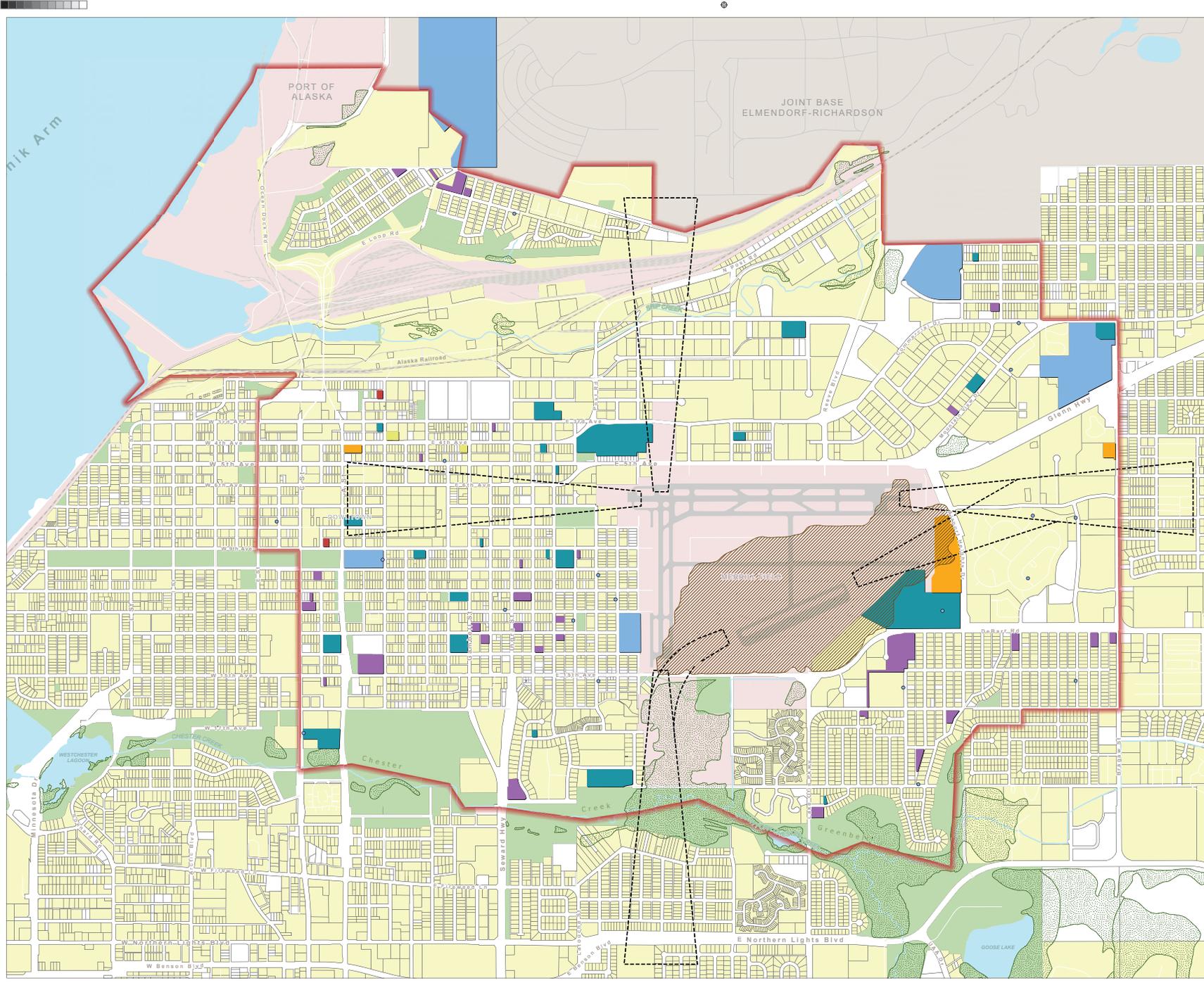
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Attachment C

Constraints Map



- LEGEND**
- Project Area
 - Park
 - Wetland
 - Merrill Field Landfill
 - Merrill Field Runway Protection Zone
 - Parcels**
 - Vacant Land/ROW
 - Developed Parcel
 - Special Land Use**
 - Child Care Facility
 - Fire Station
 - School
 - Recovery Residence
 - Government Services
 - Church
 - Other Special Land Uses



AMATS: SEWARD HIGHWAY TO GLENN HIGHWAY CONNECTION AND ENVIRONMENTAL LINKAGE (PEL) STUDY

ALTERNATIVE WORKSHOP

Attachment D

Invitation Email

Alternatives Workshop Invite: Seward and Glenn Highways Planning and Environmental Linkages Study

2 messages

Seward Glenn Mobility PEL Study <info@sewardglennmobility.com>
To: Seward Glenn Mobility PEL Study <info@sewardglennmobility.com>

Fri, Feb 3, 2023 at 10:35 AM

Seward Glenn Mobility PEL Study Alternatives Workshop

[Please RSVP before 5:00 PM on February 10, 2023](#)



At the workshop, you will have the opportunity to provide input and help shape the alternatives for the Seward Glenn Mobility Planning and Environmental Linkage (PEL) Study. We need your insight to help develop the best possible new alternatives for connecting the Seward and Glenn Highways.

Workshop Details:

Date: February 28, 2023

Time: Session 1* (12:00pm – 3:00pm), Session 2* (4:30pm – 7:30pm)

Location: Fairview Recreation Center (1121 E 10th Ave. Anchorage, AK)

*A light meal will be offered during each session.

[Click here to RSVP before 5:00 PM on February 10, 2023](#)

For additional information, please contact the project team at info@sewardglennmobility.com or 907-206-2289.

Please note: This workshop is for invited attendees. If you would like to send an alternate representative from your organization, please contact the project team at info@sewardglennmobility.com. A public meeting will be held later during the alternative development process to obtain public input.

Background: The Alaska Department of Transportation and Public Facilities (DOT&PF), Central Region, is conducting a Planning and Environmental Linkages (PEL) Study of the Seward Highway to Glenn Highway connection. This project will create a plan to consider potential improvements from the Seward Highway near 20th Avenue, to the Glenn Highway east of its intersection with Airport Heights Drive. For additional information, please visit www.sewardglennmobility.com.

Alice Rademacher <ajkrademacher@gmail.com>
To: Alice Rademacher <Alice.Rademacher@hdrinc.com>

Fri, Feb 3, 2023 at 1:17 PM

[Quoted text hidden]

Alternatives Workshop Reminder: Seward and Glenn Highways Planning and Environmental Linkages Study

1 message

Seward Glenn Mobility PEL Study <info@sewardglennmobility.com>
To: Seward Glenn Mobility PEL Study <info@sewardglennmobility.com>

Thu, Feb 9, 2023 at 9:23 AM

REMINDER**Seward Glenn Mobility PEL Study Alternatives Workshop****Please RSVP before 5:00 PM on February 10, 2023**

At the workshop, you will have the opportunity to provide input and help shape the alternatives for the Seward Glenn Mobility Planning and Environmental Linkage (PEL) Study. We need your insight to help develop the best possible new alternatives for connecting the Seward and Glenn Highways.

If the session you want to attend is closed and you are not able to attend the other session, then please contact the project team by email at info@sewardglennmobility.com or by phone at (907) 206-2289.

Workshop Details:**Date:** February 28, 2023**Time:** Session 1* (12:00pm – 3:00pm), Session 2* (4:30pm – 7:30pm) _**Location:** Fairview Recreation Center ([1121 E 10th Ave. Anchorage, AK](#))

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Attachment E

Workshop Calendar Invitations



Alternatives Workshop: Seward and Glenn Highways Planning and Environmental Linkages Study



Tue 2/28/2023 12:00 PM - 3:00 PM



Fairview Recreation Center



15 minutes before



SAVE THE DATE!

We look forward to seeing you at the Seward Glenn Mobility Planning and Environmental Linkage (PEL) Study workshop.

Participants will include representatives from state and local agencies, local business and organizations, and Community Councils. This will be an active meeting where participants break into small groups to discuss project constraints and identify potential solutions that address the needs of the diverse users. Your input will help ensure development of the best possible alternatives for connecting the Seward and Glenn highways.

If you have time and an interest, check out the materials below in preparation:

- Project Website: sewardglennmobility.com
- [Purpose and Need Statement](#)
- [Recommended Alternative Selection Criteria Memorandum](#)
- [System Performance Memorandum](#)
- [A Basic Description of the Environmental Setting Report](#)

A light meal will be offered during the workshop. For additional information, please contact the project team at info@sewardglennmobility.com or 907-206-2289.

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Alternatives Workshop: Seward and Glenn Highways Planning and Environmental Linkages Study



Tue 2/28/2023 4:30 PM - 7:30 PM



Fairview Recreation Center



15 minutes before



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