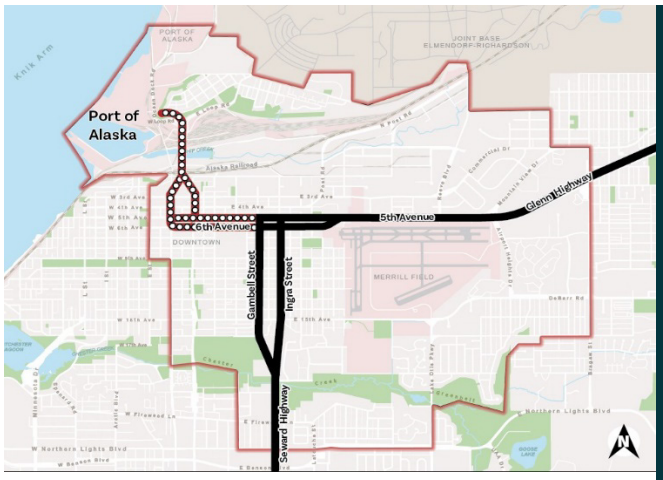

AMATS: Seward Highway to Glenn Highway Connection
Planning & Environmental Linkage Study
State Project No.: CFHWY00550
Federal Project No.: 0001653

Alternatives Refinement and Initial Screening Report

DRAFT

December 2024

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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Table of Contents

Figures

Tables

Appendices

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	*Non-Motorized Plan*
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 describe the results of the alternative refinement and Level 1 fatal flaw screening process that was used in the Seward-Glenn Connection Planning and Environmental Linkages (PEL) Study. The Level 1 screening process provides information about whether each alternative evaluated has fatal flaws.

Screening Process Overview

The overall screening process consists of several steps, including alternatives development, Initial Alternatives (Level 1) Fatal Flaw Screening, further alternatives refinement, and Detailed (Level 2) Alternatives Screening, which ends with the identification of a Recommended Alternative or Alternatives. Initial Alternatives (Level 1) Fatal Flaw Screening is intended to be a coarse-level screening focused on eliminating the alternatives that have fatal flaws which are unacceptable to the community, or impacts so severe given the anticipated benefits, that they are not reasonable. This level entailed designing preliminary alternatives and developing qualitative and quantitative evaluation measures. Detailed (Level 2) Alternatives Screening will analyze the smaller subset of alternatives that pass the Initial Alternatives (Level 1) Fatal Flaw Screening, and they will be evaluated at a higher level of detail. The Detailed (Level 2) Alternatives Screening will use screening criteria that focus on the needs identified in the Purpose and Need Statement, environmental impacts, costs, and technical feasibility, with the intent of showing differences between the detailed alternatives and resulting in the identification of a Recommended Alternative or Alternatives.

Federal regulations at 23 USC 168(c)(1)(D) authorize the "preliminary screening of alternatives and elimination of unreasonable alternatives" during the PEL Study process, and the adoption or incorporation by reference of that elimination decision during the environmental review process. Federal regulations at 23 CFR 450 require that the alternatives development and evaluation process is rational, thoroughly documented, and includes public involvement. Additionally, the Alaska Department of Transportation and Public Facilities (DOT&PF) *Planning and Environmental Linkages (PEL) Guidebook*[1] provides guidance regarding the alternatives development and evaluation process. This PEL Study will follow applicable statutes, regulations, and DOT&PF guidance throughout the process.

According to Federal Highway Administration (FHWA) and the Council on Environmental Quality (CEQ) regulations and guidance,[2] there are three primary reasons why an alternative might be

[1] Available at https://dot.alaska.gov/rfpdocs/25213030/pel_guidebook.pdf
[2] AASHTO (American Association of State Highway and Transportation Officials). 2016. *Practitioner's Handbook #7: Defining the Purpose and Need, and Determining the Range of Alternatives for Transportation Projects*. August 2016). Available at: https://environment.transportation.org/wp-content/uploads/2021/05/ph07-2.pdf?msclkid=f9da01a9c03f11ec9eb286bb046fc009

determined to be not reasonable[3] during a NEPA screening process and eliminated from further consideration:

1. An alternative does not satisfy the purpose and need of the project.
2. An alternative is determined not to be practical or feasible[4] from a technical and economic standpoint and using common sense.[5]
3. An alternative substantially duplicates another alternative; that is, it is otherwise reasonable but offers little or no advantage for satisfying the project's purpose and it has greater impacts and/or costs[6] than other, similar alternatives.

The draft screening measures were shared with the public and provided for public comment during the second Public Meeting (May 25, 2022) and comment period (May 23 to June 24, 2022), along with information on the Draft Purpose and Need, System Performance Memo, Origin-Destination Study and No-build Travel Memo results. The criteria were then updated to reflect the input received during that comment period. The alternatives development process is depicted in Figure 1.

On February 7, 2024, DOT&PF held a public meeting to present the preliminary alternatives for public review and comment. An online public meeting was held between February 7 and April 7, 2024. A 60-day public comment period ran from February 7 to April 7, 2024. Subsequently, the alternatives screening process was updated in November by reframing the Initial Alternatives (Level 1) Fatal Flaw Screening to address fatal flaw factors identified by members of the public and affected communities. These fatal flaw screening factors were adopted to elevate certain stakeholder concerns regarding potentially unacceptable adverse impacts of alternatives on residential and commercial relocations, environmental justice, parks, historic properties, and community facilities.

In the revised Initial Alternatives (Level 1) Fatal Flaw Screening process, impacts to residential and commercial relocations, historic resources, and parks have been evaluated to identify

[3] Alternatives can be eliminated in the screening process based on any factor that is relevant to reasonableness. An alternative that does not meet the purpose and need is, by definition, unreasonable. For that reason, it can be eliminated in the screening process. An alternative that does meet the purpose and need can still be rejected as unreasonable based on other factors, including environmental impacts, engineering, and cost. For example, if two alternatives both meet the purpose and need to a similar degree, but one is much higher impact and more costly, those factors can be cited as a basis for rejecting the higher-impact alternative as unreasonable (AASHTO 2016; see previous footnote).

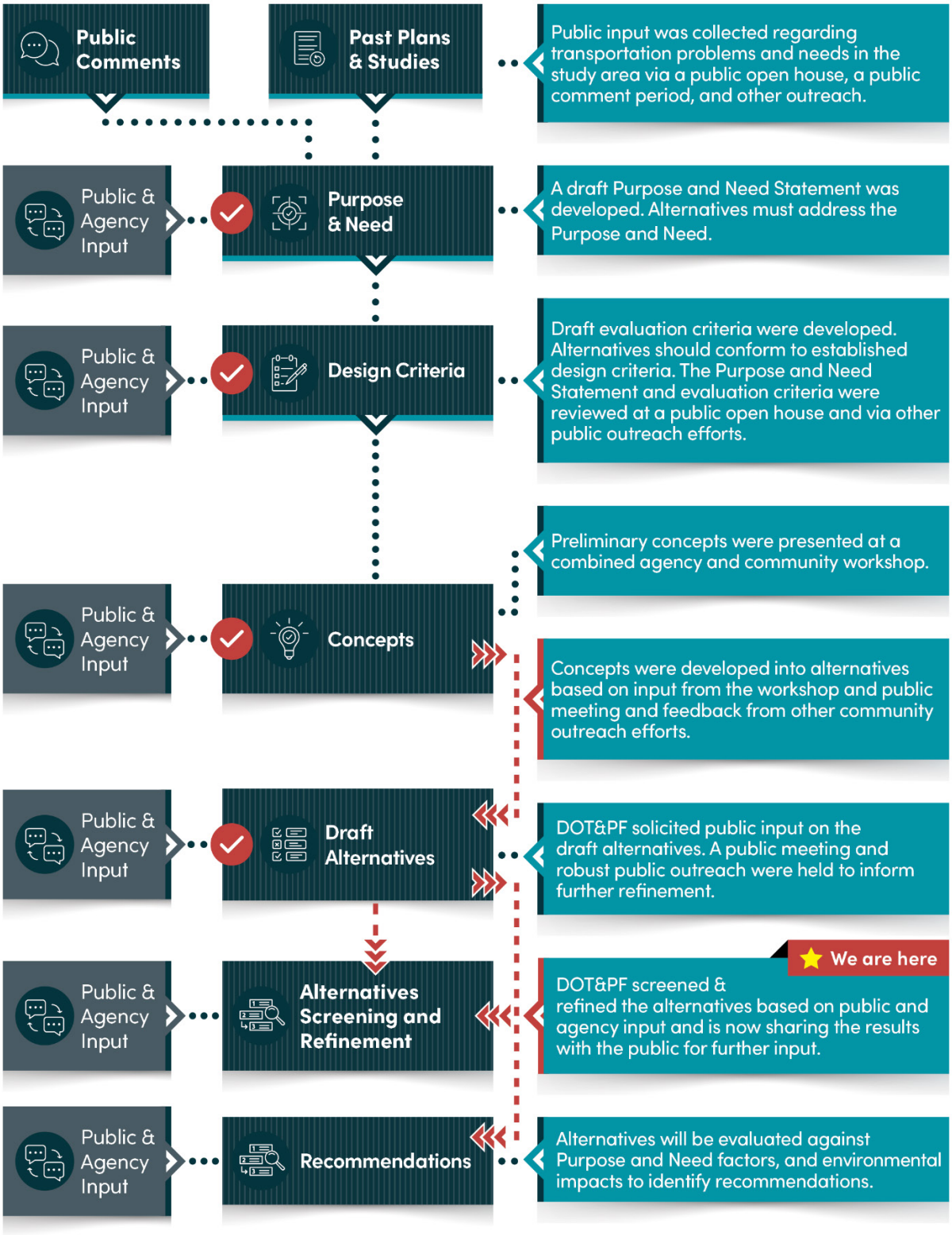
[4] "Feasibility" considers if the alternative is physically incapable of being built or has other technical issues that are so challenging that they result in unusually difficult construction requirements, ongoing maintenance difficulties, or other unacceptable environmental or social impacts.

[5] This item comes from the *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, Question 2a. Note that "feasible" is different from the "feasible and prudent" definition at 23 CFR 774.17. The term "common sense," as expressed in the screening process, is defined by the best judgment of subject matter experts.

[6] While costs will be a consideration in the development and screening of alternatives, no maximum cost criteria have been identified at this time. A financial evaluation and report will be prepared for the project later in the process that could identify a cost ceiling. If this occurs, the cost ceiling screen will be applied to all reasonable alternatives under consideration at the time. If a cost ceiling is not identified, then costs will be used for alternatives comparison purposes only.

whether any of the alternatives are unreasonable due to unacceptably high impacts compared to similar alternatives. The impacts of each alternative will be shown in pure numbers; no scale or thresholds will be presented. This allows for the direct comparison of impacts across all alternatives. The determination of “unacceptably high” impacts will be made as a comparison of all alternatives and in review of community comments on the draft Initial Alternatives (Level 1) Fatal Flaw Screening results.

Figure 1 Alternatives Development Process



The preliminary alternatives and draft Initial Alternatives (Level 1) Fatal Flaw Screening results are being shared with the public to gather ideas for improvements and comments in December

2024. Alternatives that score poorly have been identified and are recommended to be eliminated from further consideration during the Detailed (Level 2) Alternatives Screening process. Preliminary alternatives that move forward from the Initial Alternatives (Level 1) Fatal Flaw Screening will be refined further into to increase engineering detail and further minimize impacts to social, economic, and natural resources.

Refining the alternatives will produce information about each alternative's design, whether and how well they meet the Purpose and Need Statement, environmental impacts, and costs. The project team may make refinements to the alternatives, such as adding desirable elements to each alternative based on the results of the Initial Alternatives (Level 1) Screening and public input, with the intent of creating alternatives that best meet the Purpose and Need Statement.

Technical, environmental, and economic screening criteria will be used in the Detailed (Level 2) Alternatives Screening process. Each alternative's performance will be determined for each screening criterion, and a respective score will be assigned. The resulting scores will allow for the comparison of alternatives' performance and identification of the best-performing alternatives. The best-performing alternative(s) may be identified as the Recommended Alternative or Alternatives.

For additional information about the screening criteria, please see the December 2024 Revised Recommended Alternative Selection Criteria Memo on the PEL Study web site.

2 Draft Alternatives

The project team developed the preliminary alternatives based on a review of existing planning documents and stakeholder input. The project team shared the preliminary alternatives with the public and other stakeholders at a public meeting, small group meetings, an online open house, community council presentations, and by other means. Stakeholders and the public were given a 60-day comment period (February 7, 2024, to April 7, 2024) to provide feedback on the preliminary alternatives. For additional information about the initial alternatives, please see the December 2024 Alternative Report on the PEL Study website.

Initial Alternatives (presented February 2024)

The preliminary alternatives were kept as presented for the preliminary screening. A summary of those alternatives is below:

- **No Action Alternative:** This alternative is required by the National Environmental Policy Act (NEPA) and serves as a baseline for comparison. This alternative assumes all the MTP 2050 projects are implemented except for the complete street projects along the existing interstate system: 5th Avenue, 6th Avenue, Ingra Street, and Gambell Street.

- **2050 MTP Alternative:** This alternative consists of the improvements adopted in the AMATS 2050 MTP which include reducing lanes on Gambell and Ingra Streets and 5th and 6th Avenues with nonmotorized improvements. It also includes nonmotorized improvements and lane reductions at various locations on 15th Avenue within the Study Area, and Phase 1 of a Fairview Greenway.

- **Alternative A:** This alternative would provide a continuous freeway through the study area connecting the Glenn and Seward Highways as envisioned in the AMATS 2040 MTP. The alignment would run parallel to the north side of 3rd Avenue, before curving onto on Hyder St. 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. The alignment would be depressed starting at the 5th Avenue undercrossing, where it would continue to be depressed with various cross streets connecting overhead, eventually daylighting from the depressed section south of East 15th Avenue. At the southern end, the project would connect to improvements identified in the Midtown Congestion Relief PEL near 20th Avenue. Gambell Street would become a two-way, two-lane main street with on-street parking and wider non-motorized space; Ingra Street would become a 3-lane, two-way street with a two-way left-turn lane and a greenway connection between the Chester Creek and Ship Creek trails.

- **Alternative B:** This alternative would provide a continuous freeway through the study area connecting the Glenn and Seward Highways. 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. Full interchanges would be built at Airport Heights Drive, 5th/6th Avenues, and East 15th Avenue/Ingra Street, similar to Alternative A. 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 with various cross streets connecting overhead, eventually daylighting from the depressed section south of East 15th Avenue. Hyder Street would become a pedestrian-oriented corridor with a greenway connection between the Chester Creek and Ship Creek trails.

- **Alternative B Variations**: 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), while utilizing the existing NHS right-of-way along Ingra Street. 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, a portion of the alignment north of 3rd Avenue from Alternative A, and the depressed alignment along Ingra Street from Alternative B. These variations try to reduce private right-of-way and relocation impacts, and not impact Hyder Street so projects from local plans (e.g., greenway connection) can be implemented there.

- **Alternatives C1 and C2:** Alternatives C1 and C2 are variations of each other. Both would create a continuous freeway through the study area connecting the Glenn and Seward Highways. Each takes a diagonal alignment that traverses south of Merrill Field along the parcel line with Alaska Regional Hospital (without impacting any structures), before crossing Merrill Field Drive (south access) across from Lake Otis Parkway, then traversing 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, and parallel to, 15th Avenue (allowing 15th Avenue to remain intact as an important east-west connection). 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.

- **Alternative D:** This alternative 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. 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 in a depressed cross-section at Fireweed Lane per the Midtown Congestion Relief PEL.

Combined with these alternatives there were multiple options to connect Port of Alaska and Ship Creek industrial area users to the National Highway System. These port connection options are summarized below and are presented in the Draft Detailed Alternatives Report. Several options explore variations of extending Gambell and Ingra Streets north to tie into the road network in the Ship Creek valley. The idea for an extension of Gambell and Ingra was identified from a review of past AMATS plans and studies. The other options were developed by the project team to connect to an interchange at Airport Heights Drive. The following describes the Port Options

- A connection from Gambell and Ingra Streets north down the bluff to First Avenue. In the Draft Detailed Alternatives Report this option was called “Port Option 1.” In this report, this option is called “MTP+ #1” because it has been matched up to the MTP+ alternative.
- A connection from Gambell and Ingra Streets north down the bluff connecting to Ship Creek Avenue with a bridge over the railroad tracks. In the Draft Detailed Alternatives Report this option was called “Port Option 2.” In this report this option is called “MTP+ #2” because it has been matched up to the MTP+ alternative.
- A connection from Gambell and Ingra Streets north from the bluff’s edge on a long bridge over the railroad yard and Ship Creek to Whitney Road. In the Draft Detailed Alternatives Report, this option was called “Port Option 3”, and it was matched up with preliminary Alternatives A, AB1, and AB2 in the Detailed Alternatives Report. In this report, this option has been renamed “MTP+ #3” because it has been matched up to the refined MTP+ alternative.
- A connection from an interchange at Post Road with trucks accessing the port via unmodified Post Road, Whitney Road, and Ocean Dock Road. It was matched up to preliminary Alternative B in the Detailed Alternatives Report. It has been matched up to refined Parkway Alternative AB in this report. Because no improvements are proposed for this connection it is not evaluated for screening purposes.

- A connection from an interchange at Airport Heights Drive that would go under Mountain View Drive, Commercial Drive, and Reeve Boulevard and traverse along a reconstructed 1st Avenue to Post Rd. From there, trucks would utilize unmodified Post Road, Whitney Road, and Ocean Dock Road to access the port. It was matched up to preliminary Alternatives C1 and C2 in the Detailed Alternatives Report. It has been matched up to refined Parkway Alternatives C and D in this report.
- A connection from an interchange at Airport Heights Drive that would go under Mountain View Drive and Commercial Drive to an intersection with Reeve Boulevard and traverse along Viking Drive and bridging over Ship Creek to connect to Whitney Drive. It was matched up to preliminary Alternative D in the Detailed Alternatives Report. It has been matched up to refined Parkway Alternatives C and D in this report and has been refined to include a bridge over the at-grade Whitney Road railroad crossing. The port connection could span over Post Road, or Post Road could be raised to create an at-grade intersection with the port connection. More analysis and stakeholder involvement is necessary to select the most feasible variant for this port connection option.

Options for the refined alternatives are presented in Figure 9 Port Connections. For additional information regarding each of the previous alternatives, please see the *Detailed Alternatives Report* (Seward-Glenn PEL Detailed Alternatives Report).

New (Refined) Alternatives

During the alternatives public comment period, DOT&PF received about 280 comments from the public, stakeholders, tribes, and agencies. Most commenters indicated support for, concerns about, or a combination of support and concern, on the preliminary alternatives. A comment summary and the detailed comments can be found on the project website.

People had a wide array of reasons for supporting alternatives, including that the alternative(s) has the fewest negative impacts on the surrounding neighborhoods, properties, and businesses; promotes commercial growth in Fairview by removing tens of thousands of vehicles from neighborhood streets; provides easy access to Downtown; uses existing routes; minimizes construction impacts; improves efficiency of freight movements; reduces the potential for cut-through traffic; improves safety for bicyclists and pedestrians; and improves trail connections. Some supportive comments included references to improved mobility and support for the redevelopment of Fairview. Alternative D received the most comments in favor, with the Metropolitan Transportation Plan (MTP) 2050, which received roughly 25% less favorable comments, in second place.

Commentors also expressed general concerns about the preliminary alternatives. Topics of concern included residential and commercial relocations; changes in travel patterns; loss of community cohesion and other neighborhood impacts; impacts to community facilities like parks and trails; reductions in property values; construction-related impacts; noise impacts; air quality impacts; impacts to prioritization and utilization of annual road construction and maintenance budgets; and impacts to environmental justice (low-income and minority) populations.

Commentors raised 14 specific key topics and areas of support or concern related to the preliminary alternatives, with parks and wildlife and neighborhood impacts most frequently cited.

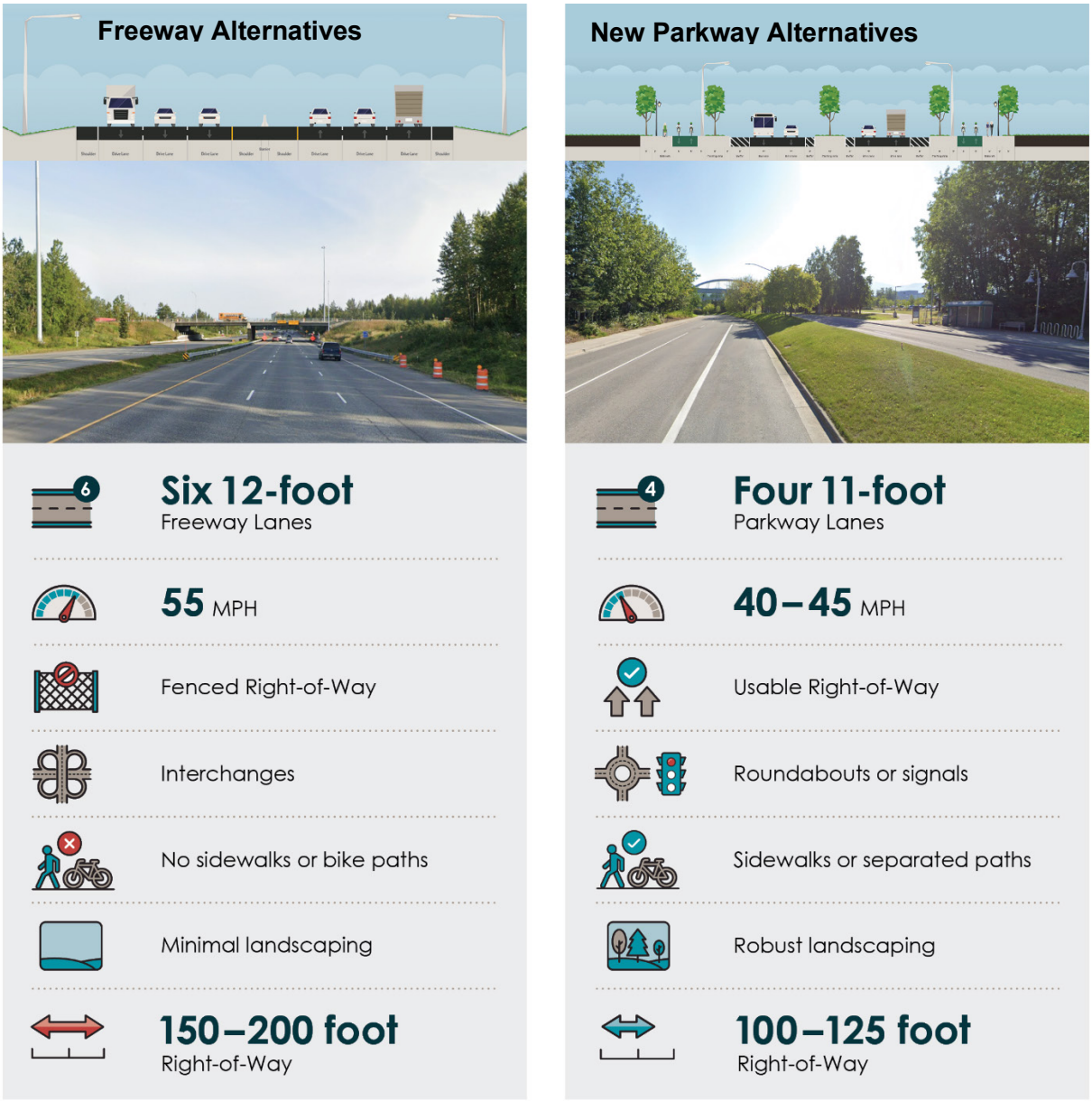
Other topics included environmental justice, project need, safety, cost, freight movements, noise, airport impacts, and relocation/right-of-way concerns.

The project team developed new/refined alternatives based on public comments. They are new in that they have a very different functional class, speeds, widths, and other features. They are "refined" in that they share alignment similarities with the draft alternatives presented in *Detailed Alternatives Report.* Whereas the draft alternatives were freeways, the new/refined alternatives are parkways (arterial streets). The changes in functional class and streetscape are highlighted in Figure 2 Freeway and Parkway Alternatives.

The project team developed four new/refined alternatives including alternative that focused on improving the adopted MTP 2050 was developed in addition to three roadway alternatives that are based on a new arterial street (not a new freeway) connection with slower speeds, less emphasis on vehicle mobility fewer, fewer and narrower lanes, adjacent sidewalks and

pathways, tunnels, and reduced impacts to neighborhoods and parkland. Each of these alternatives are described in more detail below.

Figure 2 Freeway and Parkway Alternatives



New (Refined) Alternatives Developed based on Stakeholder Input

MTP+

The MTP+ Alternative is based on the MTP alternative with the following additions:

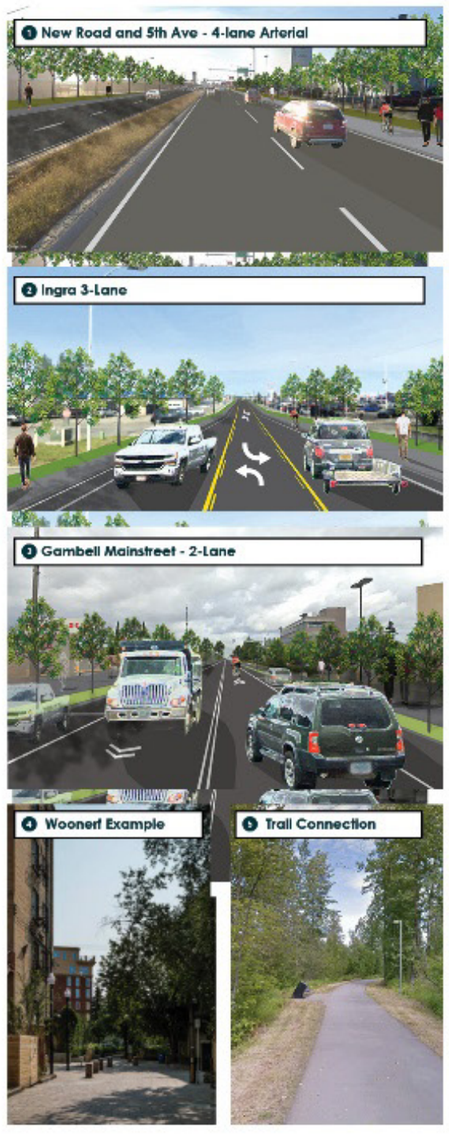
- Frequent Express Bus Service from the Matanuska-Susitna Borough (MSB) to downtown and midtown
- Upgrade Route 92 transit service from Eagle River to downtown and midtown
- New express transit service from Dimond Center to downtown and midtown via C Street

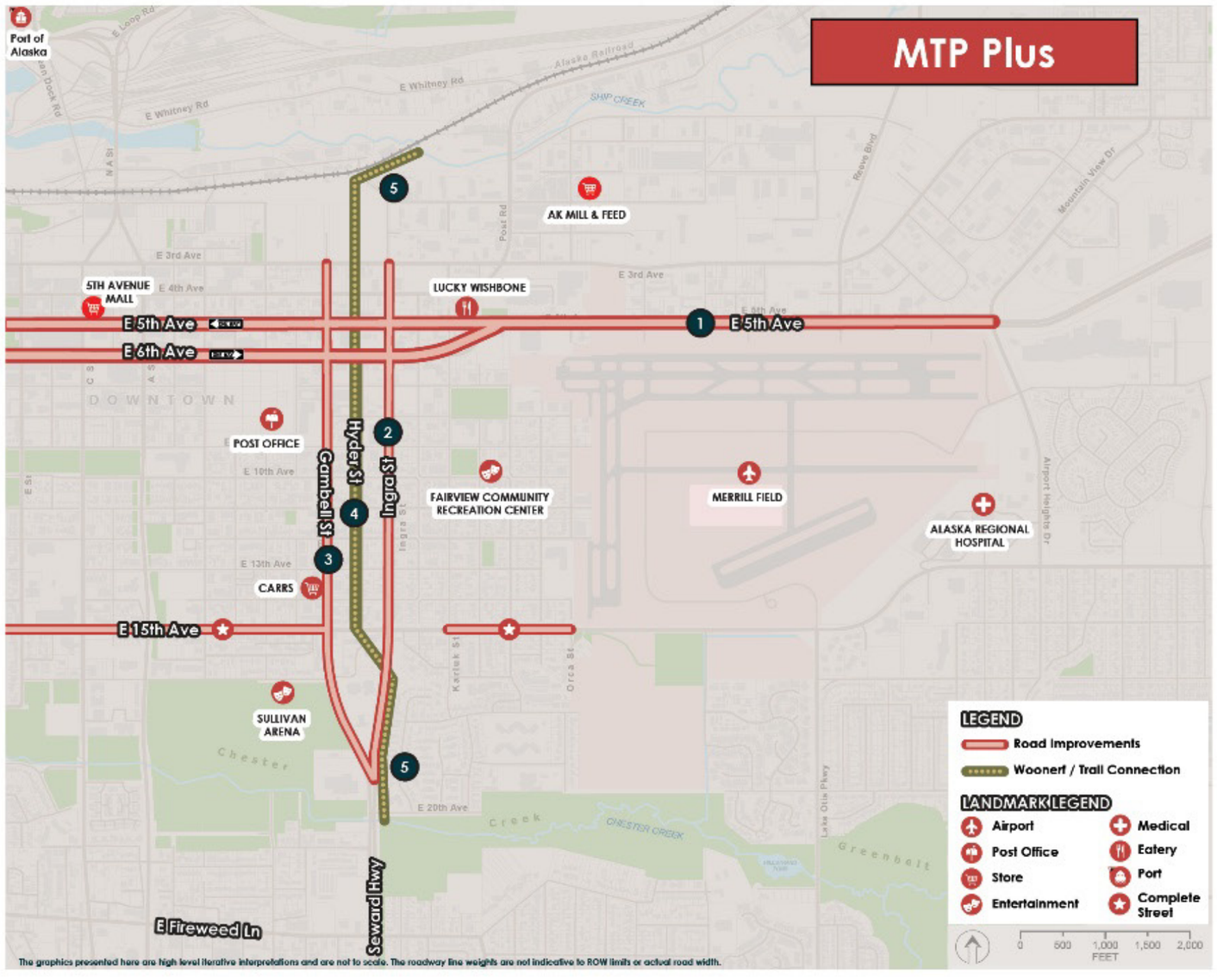
- Upgrade Route 85 from Huffman Road to Downtown
- New Downtown, Midtown, and U-Med transit service via Ingra/Gambell and 36th Avenue
- Eliminate transit fares – system wide
- Double rideshare program capacity in project corridor
- Additional non-motorized and transit amenities
- Increase remote activities such as telework, telemedicine, and e-learning
- Incentives to increase land development density to match or exceed those identified in the 2040 Land Use Plan

This alternative includes redeveloping Gambell Street as a two-lane two-way main street with Ingra Street being redeveloped as a 3-lane road. Reducing the number of lanes on these two roads makes existing right-of-way available for non-motorized features, additional streetscaping, and similar improvements (see Figure 8).

This alternative also includes extending the trail that is part of the Hyder Street woonerf north to connect with the Ship Creek trail creating a trail connection from the Ship Creek Trail to the Chester Creek Trail.

Figure 3 MTP+ Alternative





The MTP Plus alternative is intended to:

- Enhance the MTP 2050 within the study area
- Support the desired Fairview main street concept on Gambell Street without building a new parkway

Traffic Reduction Ideas:

- Frequent express bus service from Mat-Su Borough to downtown and midtown Anchorage
- Upgrade transit service from Eagle River to downtown
- New express transit service from Dimond Center to downtown and midtown via C Street
- Upgrade transit route from Huffman to downtown
- New downtown, midtown, and U-Med transit service via Ingra/ Gambell and 36th
- Eliminate transit fares system wide
- Double rideshare program in project corridor
- Additional non-motorized and transit amenities
- Increase telework, telemedicine, e-learning, etc.
- Incentivize increased density to match or exceed the 2040 Land Use Plan

NOTE: The vehicular traffic demand reduction strategies would also add value to a recommended alternative that includes a new "Parkway" road connection between the Seward and Glenn Highways.

Parkway Alternative AB

This alternative is based on preliminary Alternative AB1, but two roadway segments were replaced by tunnels due to community concerns about right-of-way and relocation impacts (see Figure 3 or Appendix A). The first tunnel is in Fairview under, and following the same alignment as, Ingra Street (between 15th and 4th Avenues) and with the second tunnel parallel and adjacent to the north side of 3rd Avenue (between Reeve Boulevard and the Mountain View Drive). These tunnels would allow surface streets, utilities, and buildings to remain in place. Traffic maintenance during construction would be limited to the tunnel portals, since tunneling activities wouldn't impact existing traffic patterns on the surface streets above.

The connecting road would be developed as a 40-45 mph arterial road with a slower speed limit than the 55 mph freeway alternative. Gambell Street would be redeveloped as a two-lane, two-way main street with on-street parking; with Ingra Street being redeveloped as a 3-lane, two-way road with a center two-way left-turn lane. Reducing the number of lanes on these two roads makes existing right-of-way available for non-motorized features, additional streetscaping, and similar improvements. The Fairview Greenway trail is proposed on Hyder Street to connect the Ship Creek Trail with the Chester Creek Trail. Hyder is proposed as a 'woonerf', which can accommodate the Fairview Greenway trail.

Northbound and southbound ramps would be constructed around the tunnel portals to provide access between the Seward Highway and Ingra Street. An interchange with roundabouts would be used to connect Airport Heights Drive and Mountain View Drive to the Glenn Highway and new parkway (Figure 5: right inset 1), and an interchange at the north end of the tunnel would be used to connect parkway traffic to the port and downtown via Post Road and 5th/6th Avenues, respectively. Partial access to the parkway connection would be used at Reeve Blvd to provide access to JBER and industrial uses in this area and reduce regional demand on neighborhood streets, particularly 5th and 3rd Avenues along Merrill Field.

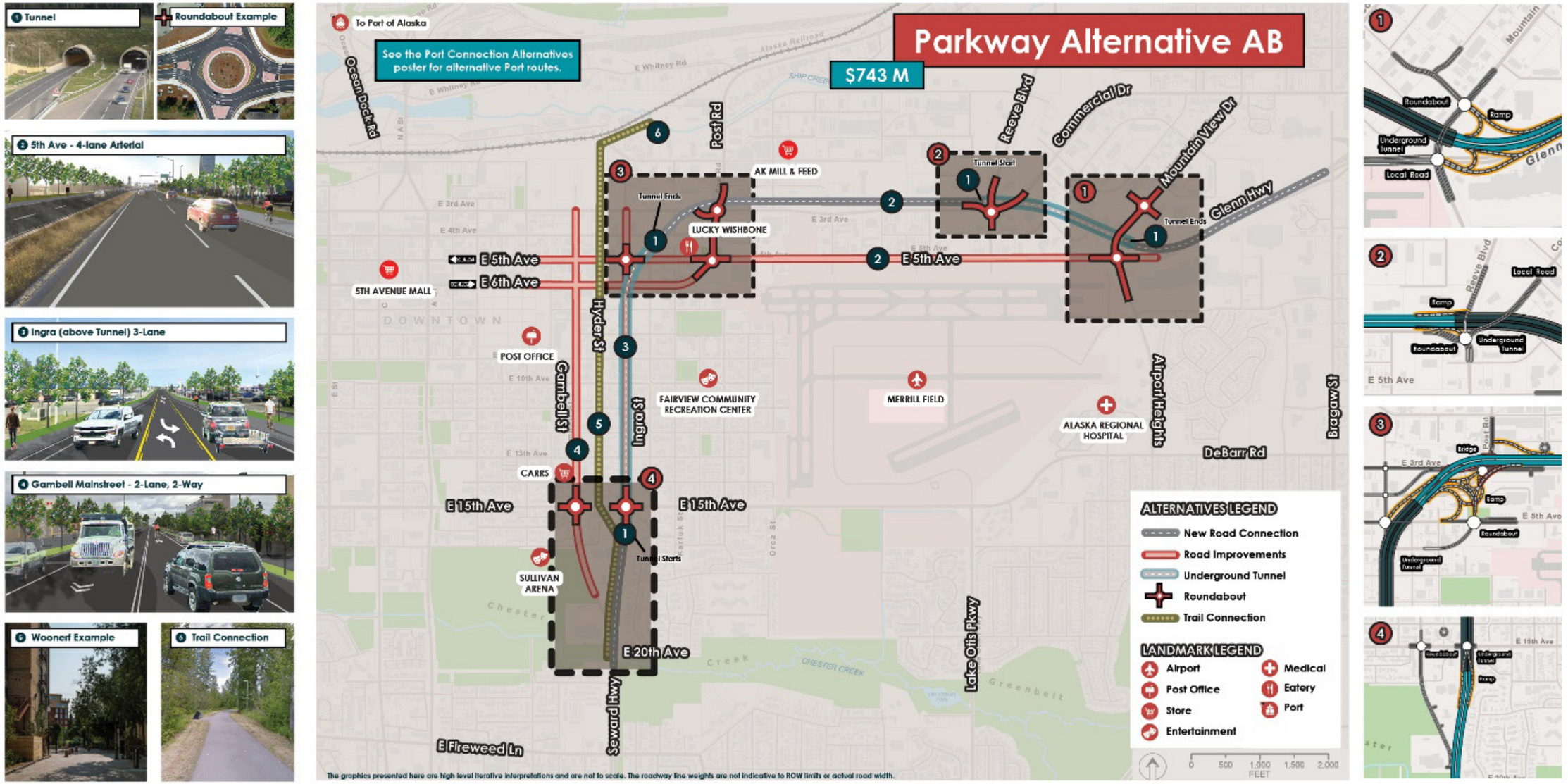
Tunnel configuration options include: side-by-side tunnel (two side-by-side tunnels serving opposite directions of travel) or a stacked tunnel (with opposing travel directions above and below each other) (see Figures 3 and 4)). Tunnels would be constructed through boring, rather than an open cut trench, to be less disruptive to adjacent and overlying land uses, structures, and utilities. Transporting specific forms of hazardous materials in a tunnel may be a safety risk so some freight might be prohibited from using the tunnel and would continue to use Ingra Street, or be rerouted to the A-C Couplet or other parallel north-south roadways suitable for freight traffic.

The side-by-side tunnel configuration has been eliminated since it is more expensive and doesn't offer any meaningful benefits over the stacked tunnel configuration; however, further engineering analysis is required during the design phase to determine which option is selected.

Figure 4 Side-by-Side Tunnel Example

Figure 5 Stacked Tunnel Example

Figure 6 Parkway Alternative AB



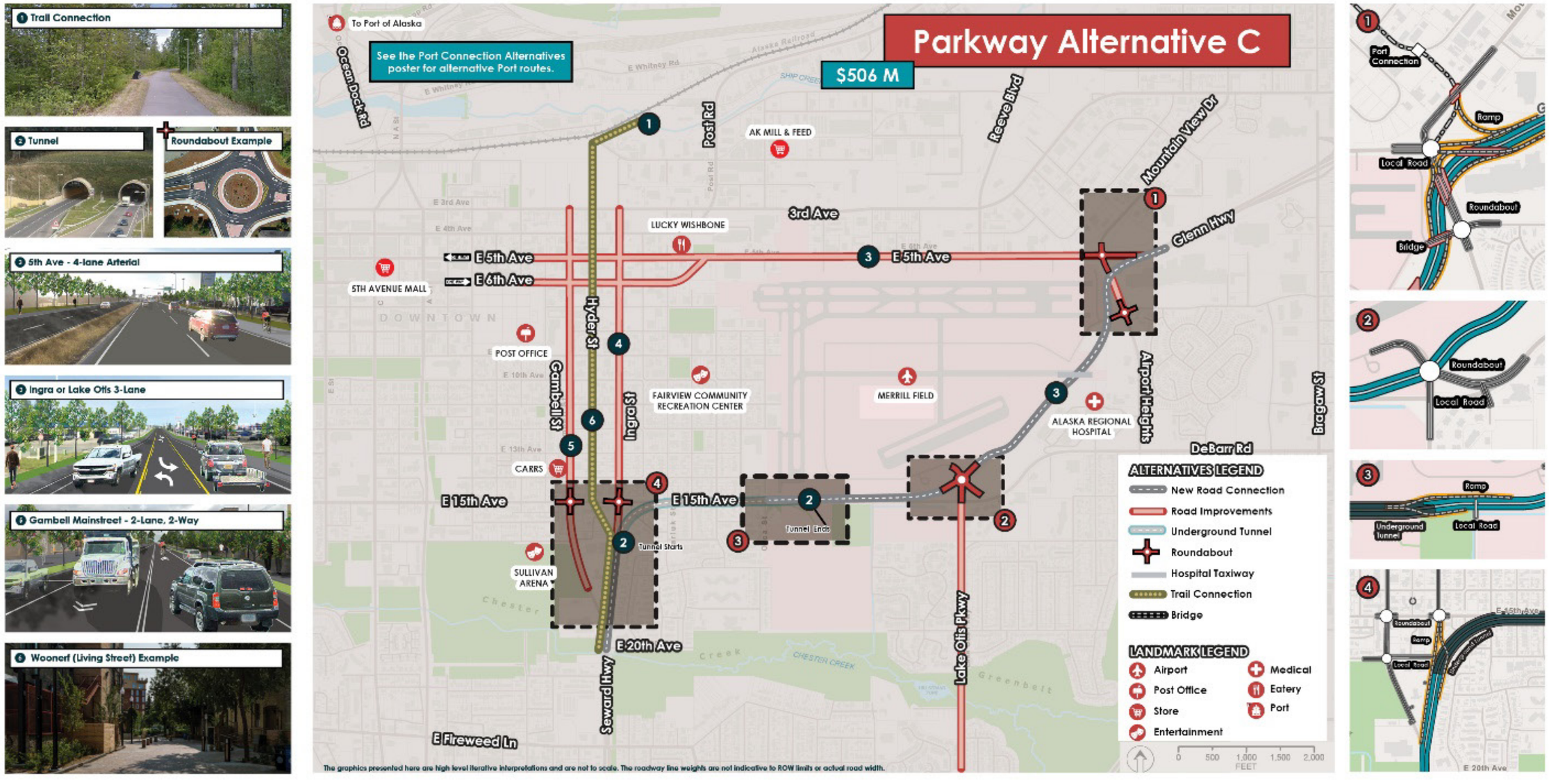
Parkway Alternative C

Parkway Alternative C is based on the preliminary Alternative C1 alignment, except the segment through south Fairview has been replaced with a tunnel (see Figure 6 or Appendix A) under and along the existing 15th Avenue alignment, roughly between Sitka and Ingra Streets. The south tunnel portal would be in roughly the same location as refined Alternative AB. East of Sitka Street, the parkway connection becomes 15th Avenue and shares a roadway with local traffic using 15th Avenue as an east-west connection between Airport Heights and destinations west of Orca Street. The parkway alignment between Lake Otis Boulevard and the Glenn Highway remains similar to the preliminary alternative, following the parcel line between Merrill Field and Regional Hospital, except the slower speed allows smaller curvature to avoid impacts to the former Northway Mall structure.

The connecting road would be developed as a 40-45 mph arterial road with a slower speed limit than the 55 mph freeway alternative. See Refined Alternative AB for information on proposed Ingra Street, Gambell Street, Hyder Street, Fairview Greenway trail, general parkway, and tunneling configuration recommendations.

The interchange at Airport Heights Drive / Mountain View Dr / 5th Avenue (Figure 6: right inset 1) includes a roundabout at the existing signalized intersection and another roundabout at the existing Penland Parkway / Airport Heights Drive intersection to provide access to Downtown, Mountain View, and Airport Heights neighborhoods. This interchange also includes access to a port connection route for freight vehicles to access the Port of Alaska from the Seward and Glenn Highways. A roundabout, instead of an interchange, is proposed at the Lake Otis Parkway / 15th Avenue / DeBarr Road intersection (Figure 6: right inset 2) to provide access to the south end of Merrill field, Airport Heights and Fairview neighborhoods, and the University-Medical (U-Med) district. Downtown and Ingra-Gambell Couplet would be accessed by northbound traffic from the Seward Highway using ramps around the south tunnel portal connected to roundabouts at 15th Avenue.

Figure 7 Parkway Alternative C

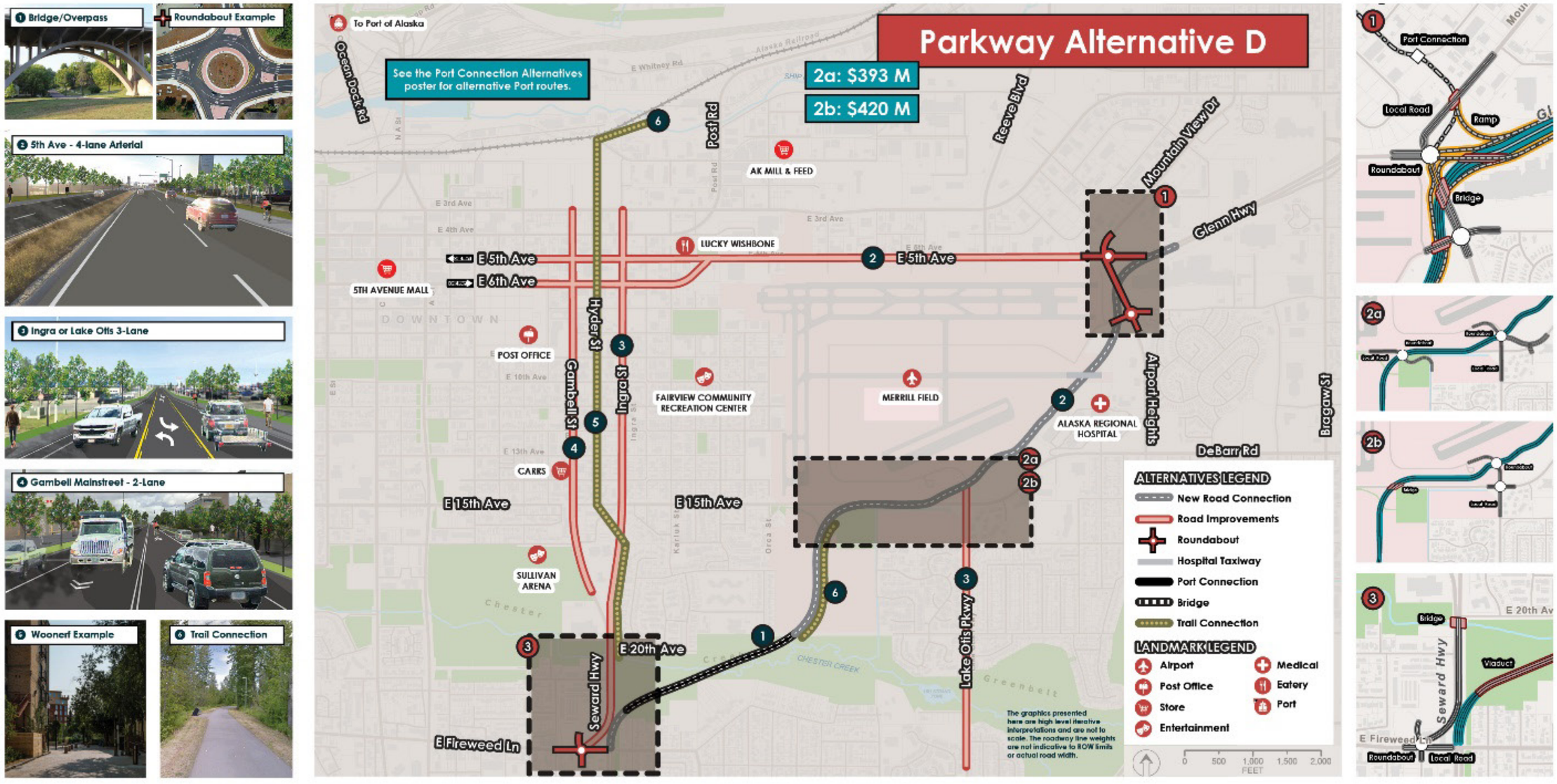


Parkway Alternative D

Parkway Alternative D is based on the preliminary Alternative D (see Figure 7 or Appendix A). This alternative is based on a 40-45 mph arterial road with a slower speed limit then the 55 mph preliminary alternative. This allows the road location to shift, reducing park impacts (Woodside Park and Sitka Street Park) and increasing the distance between the road and residential areas. This alternative continues to include a bridge over the Chester Creek Greenbelt, but now avoids the large open greenspace along the Chester Creek Trail and direct impacts to homes in Rogers Park. See Refined Alternative AB for information on proposed Ingra Street, Gambell Street, Hyder Street, Fairview Greenway trail, and general parkway recommendations.

See refined Alternative C for information on the interchange at Airport Heights Dr / Mountain View Dr / Glenn Highway, and the at-grade roundabout intersection at Lake Otis Parkway / DeBarr Road / 5th Avenue. There are two variants (Figure 7: right insets 2a and 2b), for the parkway connection's intersection with 15th Avenue: 1) a bridge over 15th Avenue; or a roundabout with 15th Avenue and a re-aligned Sitka Street with minimal impacts to Sitka Street Park. The existing signalized intersection would be maintained at the Seward Highway / Fireweed Lane intersection (Figure 7: Inset 3), but a new roundabout is proposed to the west at the Fireweed Lane / Gambell Street intersection to provide access to Downtown and Fairview for northbound traffic coming from the Seward Highway. If recommendations from the Midtown Congestion Relief (MCR) PEL are ever constructed along the Seward Highway, the parkway connection elevation would need to be modified to go under Fireweed Lane. The new roundabout to the west would be compatible with this future configuration, while it's assumed a roundabout on the east side of the new Fireweed Lane overpass would be built to accommodate traffic from the northbound frontage road on the east side of the Seward Highway proposed in the MCR PEL.

Figure 8 Parkway Alternative D

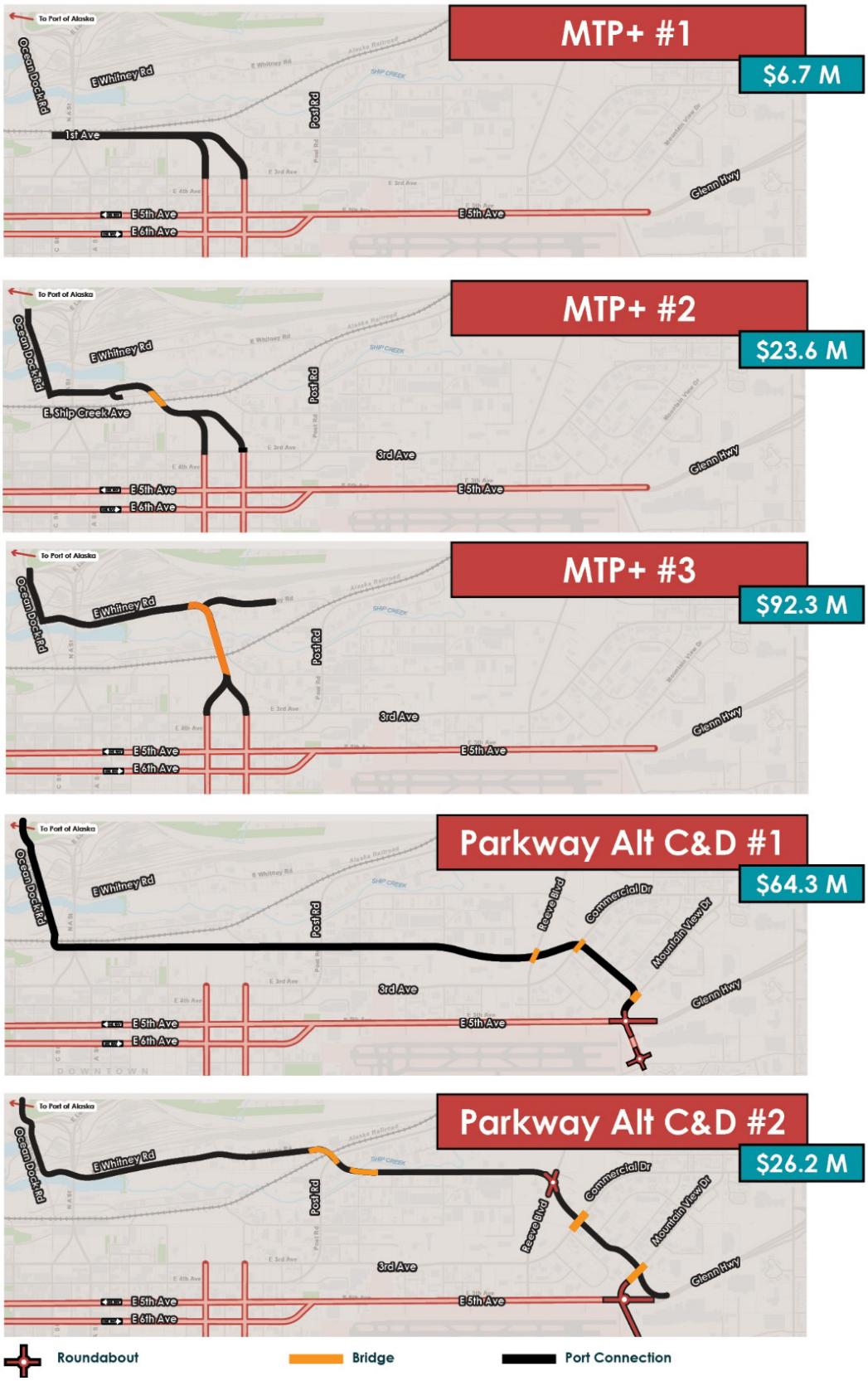


Port Options

- A connection from Gambell and Ingra Streets north down the bluff to First Avenue called “MTP+ #1”
- A connection from Gambell and Ingra Streets north down the bluff connecting to Ship Creek Avenue with a bridge over the railroad tracks called “MTP+ #2.”
- A connection from Gambell and Ingra Streets north from the bluff’s edge on a long bridge over the railroad yard and Ship Creek to Whitney Road. called “MTP+ #3.”
- A connection to post road with trucks accessing the port via Post Road, Whitney Road, and Ocean Dock Road for Parkway Alternative AB. Because no improvements are proposed for this connection, it is not evaluated for screening purposes and is not depicted.
- A connection from an interchange at Airport Heights Drive that would go under Commercial Drive and Reeve Boulevard and traverse along a reconstructed 1st Avenue. for Parkway Alternative C or D.
- A connection from an interchange at Airport Heights Drive that would go under Commercial Drive to an intersection with Reeve Boulevard and traverse along Viking Drive and bridging over Ship Creek and the railroad tracks to connect to Whitney Drive for Alternative C or D.

See Figure 9 Port Connections for visual depictions of the port connection options.

Figure 9 Port Connections



3 Alternatives Screening

Initial Alternatives (Level 1) Fatal Flaw Screening

The Initial Alternatives (Level 1) Fatal Flaw Screening was revised in response to public input on the alternatives, as described in section 1. This screening evaluates the alternatives for fatal flaws to determine which alternatives should advance to Level 2 screening. All alternatives (both the old/preliminary and new/refined) underwent the same screening.

Residential and Commercial Impacts

Public feedback received during the alternative development comment period indicated that the number of potential residential and commercial relocations caused by the alternatives was a substantial concern to the community in many ways. As a result, the preliminary screening was updated to include or elevate the following criteria to Level 1:

- Number of residential parcels impacted,
- Number of residential parcels totally acquired,
- Number of potential household relocations,
- Number of non-residential parcels impacted, and
- Number of non-residential parcels to be acquired

Right-of-way and Relocations. For the preliminary highway alternatives (A, B, AB1, AB2, C1, C2, and D) both a 4 lane and 6 lane option were evaluated. For the new/refined alternatives (Parkway AB, Parkway C, and Parkway D) only a 4-lane cross section was evaluated. The project team superimposed the footprint of each alternative with MOA tax assessor data to determine right-of-way and relocation impacts. If the alternative required acquisition of more than 50% of a parcel, or a portion of a parcel that would result in the parcel not having legal access, meeting setback requirements, the primary building would be impacted, or similar issues, it was assumed that the entire parcel would need to be acquired by the project and the household or business would be relocated.

Housing and Environmental Justice. Feedback on the preliminary alternatives indicated that people were concerned about the potential number of relocations as Anchorage, like other communities, is facing a housing shortage and there may not be enough available housing for people to relocate to. This is compounded by the fact that many of the relocated households are in low-income areas, making it even more difficult to find affordable housing. Additionally, under the Uniform Relocation Act, which is required when utilizing federal funds for project right-of-way activities, commensurate housing would have to be built before relocating any residents of impacted residential units, which would be a substantial and likely infeasible undertaking for DOT&PF.

The Council on Environmental Quality (CEQ) has developed the Climate and Economic Justice Screening Tool (CEJST) to identify communities that are disadvantaged. A census tract is considered disadvantaged if it meets the thresholds for at least one of the tool's burden categories (climate change, energy, housing, legacy pollution, transportation, water and

wastewater, and workforce development) or are within the boundaries of Federally Recognized Tribes. According to CEJST, there are several Census Tracts in the study area which are considered disadvantaged. (see Figure 10).

The project team superimposed the residential relocations with the disadvantaged census tracts to identify how many potential residential relocations would occur in these areas. The results are shown in Table 1.

The CEJST also identifies census tracts which are at a disadvantaged due to housing costs. These tracts are those where the share of households that are both earning less than 80% of the Housing and Urban Development's Area Median Family Income and are spending more than 30% of their income on housing. The housing cost disadvantaged census tracts are shown in Figure 10.

Section 4(f) Resources

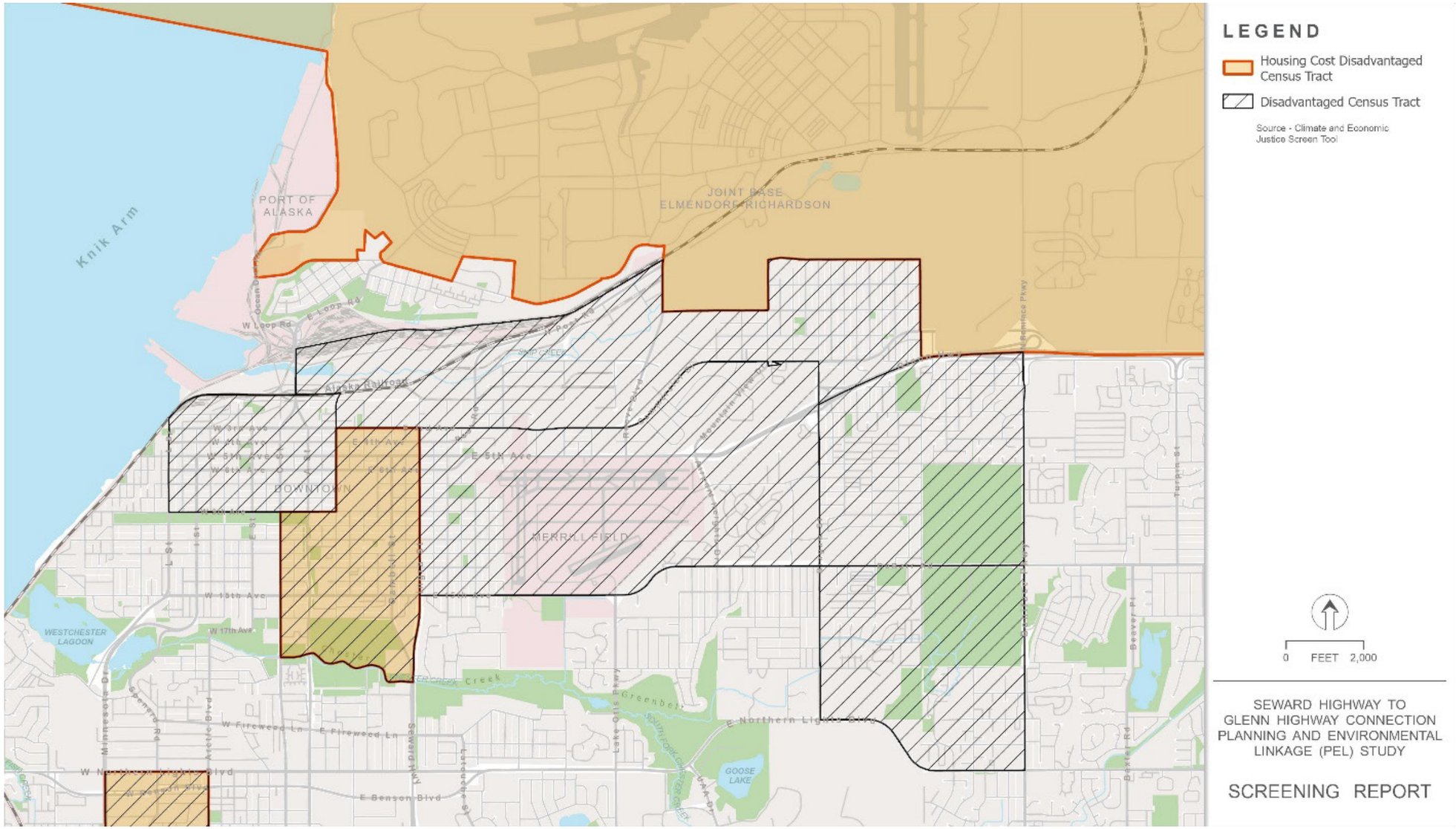
Section 4(f) of the Department of Transportation Act of 1966 (49 USC Section 303) applies to publicly owned parks, recreation areas, wildlife and waterfowl refuges, and publicly or privately owned significant historic properties. The requirements of Section 4(f) apply only to agencies within the U.S. Department of Transportation (USDOT) and agencies that receive funding or approvals from the USDOT, like DOT&PF. Section 4(f) prohibits USDOT agencies (or their representative) from approving the use of any Section 4(f) land for a transportation project except:

- If the USDOT agency makes a determination that (1) there is no prudent and feasible alternative that would avoid the use of the Section 4(f) property and (2) the project includes all possible planning to minimize harm to that property; or
- if there is no feasible and prudent avoidance alternative and all remaining alternatives have Section 4(f) uses, the approved alternative would cause least overall harm[7] in light of Section 4(f)'s preservation purpose; or
- if the use of Section 4(f) property qualifies for a *de minimis* impact determination.

Section 6(f) of the Land and Water Conservation Fund (LWCF) Act (16 USC 4601 et seq.) applies to public properties that have received federal LWCF funds to acquire, develop, or improve public outdoor recreation facilities. Section 6(f)(3) of the LWCF Act requires that no property acquired or developed with LWCF assistance be converted to a use other than public outdoor recreation unless the National Park Service approves replacement property of reasonably equivalent use and location, and of at least equal fair market value. Parts of the Chester Creek Greenbelt are Section 6(f) resources. Likely Section 4(f) and 6(f) resources in the study area are shown in Figure 11.

[7] 23 CFR 774 3(c) includes a list of factors to consider in making the determination of least overall harm. They include the ability to mitigation impacts to Section 4(f) property, the degree to which alternatives meet the project's purpose and need, costs differences, and impacts to other resources.

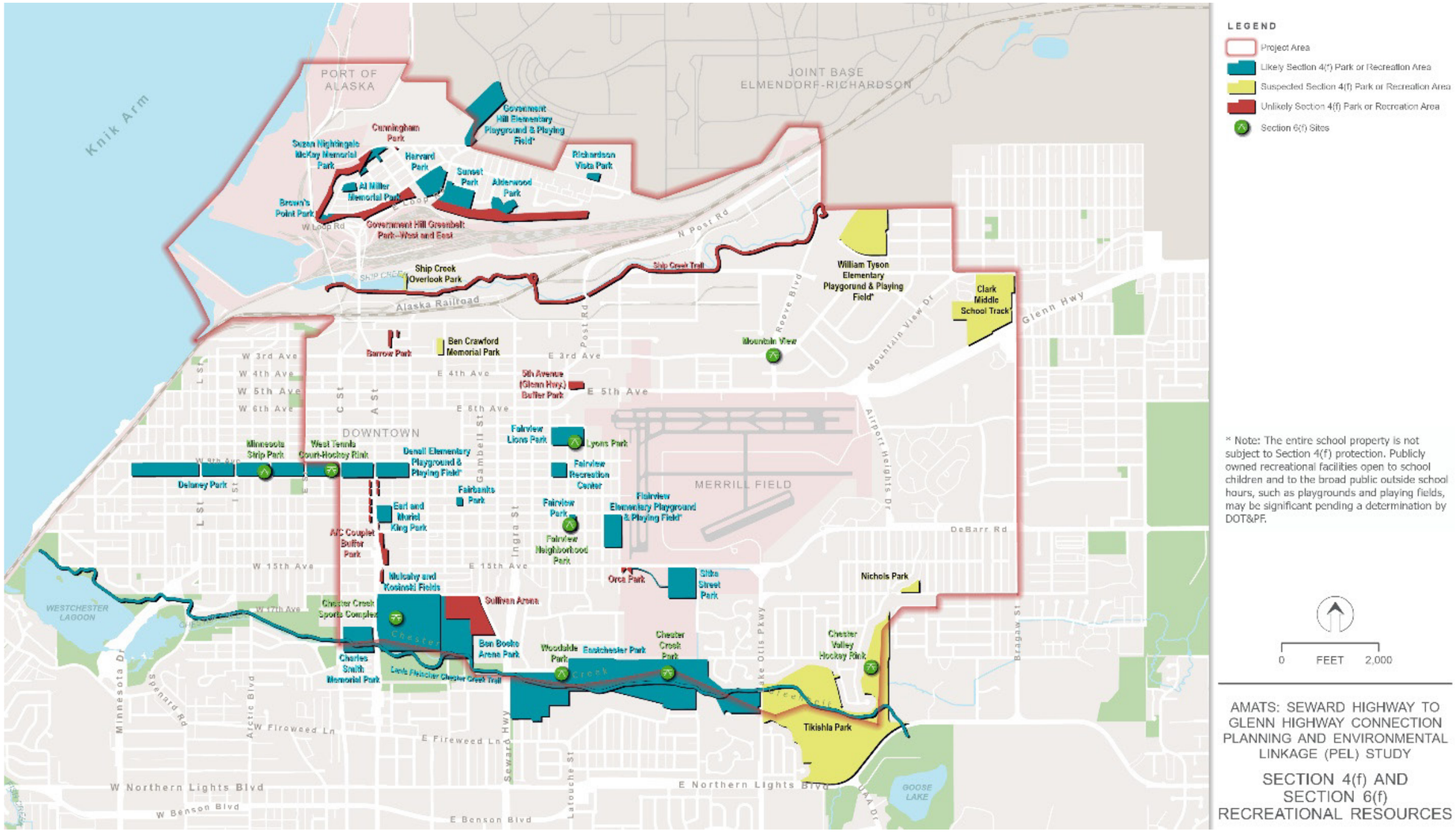
Figure 10. Disadvantaged Census Tracts



Source: CEJST 2024[8]

[8] Explore the map - Climate & Economic Justice Screening Tool (geoplatform.gov)

Figure 11 Section 4(f) and 6(f) Resources in the Study Area



For additional information regarding Section 4(f) resources, please see the *Basic Description of the Environmental Setting* report on the PEL Study website.

Based on a preliminary screening of the alternatives, all new roadway alternatives would require some use of a Section 4(f) resource, with some also impacting a 6(f) resource. For the purposes of this analysis, structures over 45 years in age were also evaluated. Due to the age and history of the area, these structures have the potential to become historic properties before a project alternative is constructed.

Community Facilities

Stakeholders expressed concerns about the potential for adverse impacts or relocation of community facilities, especially schools and churches.

Summary of Initial Alternatives (Level 1) Fatal Flaw Screening Results

Table 1 shows the results of the screening process. Based on the results of the initial alternative (Level 1) fatal flaw screening, preliminary Alternatives A-D were eliminated from further consideration because they would have impacts that are considered unacceptable to the community. Furthermore, these alternatives substantially duplicate the new/revised parkway alternatives, offer little or no advantage for satisfying the Study's Purpose and Need, and have greater impacts. Consequently, these preliminary alternatives are recommended to not be advanced into the Level 2 screening.

Table 1 Summary of Fatal Flaw Screening Results

Criteria	No Regional Road Connection			Freeway Alternatives												Parkway Alternatives			Port Options				
				A		AB 1		AB2		B		C1		C2		D		Parkway Alternative AB	Parkway Alternative C	Parkway Alternative D					
	No Action	MTP 2050	MTP +	4 lane	6 lane	4 lane	6 lane	4 lane	6 lane	4 lane	6 lane	4 lane	6 lane	4 lane	6 lane	4 lane	6 lane	4 lane	4 lane	4 lane	MTP+ 1	MTP+ 2	MTP+ 3	C&D 1	C&D 2
Relocations, Right-of-way, Environmental Justice																									
Number of residential parcels impacted	0	0	0	60	63	59	**73**	63	74	**55**	70	52	54	55	62	8	8	16	9	2	0	0	0	0	0
Number of residential parcels fully acquired	0	0	0	43	46	44	54	49	52	44	50	40	42	41	49	6	6	0	0	0	0	0	0	0	0
Potential Residential Relocations (# of housing units)	0	0	0	209	213	197	256	488	531	325	443	148	177	167	196	8	8	0	0	7	0	0	0	0	0
Residential Relocations in disadvantaged Census Tract	0	0	0	139	135	151	187	443	453	305	365	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Residential Relocations in Census Tracts with a Housing Burder	0	0	0	120	116	31	30	31	31	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of non-residential parcels impacted	0	0	0	119	124	114	126	105	113	97	101	50	59	41	42	25	26	68	54	44	3	11	3	14	7
Number of non-residential parcels to be acquired	0	0	0	81	77	85	87	69	76	66	69	24	25	15	16	11	11	28	6	3	0	1	2	4	2
Section 4(f) impacts																									
Number of Parks Impacted	0	0	0	3	3	3	3	4	4	3	4	4	5	5	5	3	3	2	3	5	0	0	0	0	0
Section 4(f) Park impacts (acres)	0	0	0	0.61	0.65	0.61	0.61	1.17	1.28	0.83	1.04	1.64	2.25	2.21	3.13	1.93	2.25	0.16	0.47	1.42	0	0	0	0	0
Known Historic Properties directly impacted	0	0	0	34	35	41	41	47	49	44	34	46	26	23	28	0	0	6	3	2	2	28	1	0	17
Potential Historic Properties (structure older than 1980) Impacted	0	0	0	61	64	45	62	44	60	44	61	62	47	46	50	12	12	4	3	2	0	0	1	4	3
Community Facilities																									
Community Facility impacted	0	0	0	2	2	3	2	2	2	2	2	2	2	2	2	3	3	0	3	3	0	0	0	0	0

Shading is used only to draw attention to the relative severity of the potential impacts. Red highlights the highest levels impacts, orange the medium impacts and green lower levels of impact.

Preliminary Alternatives A, AB1, AB2, and B were eliminated due to the number of residential parcels impacted, the number of potential residential relocations, the potential relocations in census tracts with a housing burden, impacts to non-residential parcels, the number of non-residential parcels to be acquired, and the impacts to existing and potential historic structures. Parkway Alternative AB has a similar alignment but with substantially fewer impacts due to the proposed tunnels under Fairview and the industrial area in Mountain View.

Preliminary Alternatives C1 and C2 were eliminated due to the number of residential parcels impacted, the number of parks impacts, the acres of parkland impacted, and the impacts to known and potential historic structures. Parkway Alternative C has a similar alignment but with substantially fewer impacts.

Preliminary Alternative D was eliminated due to park impacts, which are higher than several other alternatives. Based on the requirements of Section 4(f) to show all possible planning to minimize harm to the park, the project team was able revise the alternative alignment to produce Parkway Alternative D with fewer park impacts. Therefore, preliminary Alternative D will be eliminated from further consideration because it substantially duplicates Parkway Alternative D while having greater impacts to Section 4(f) protected parklands.

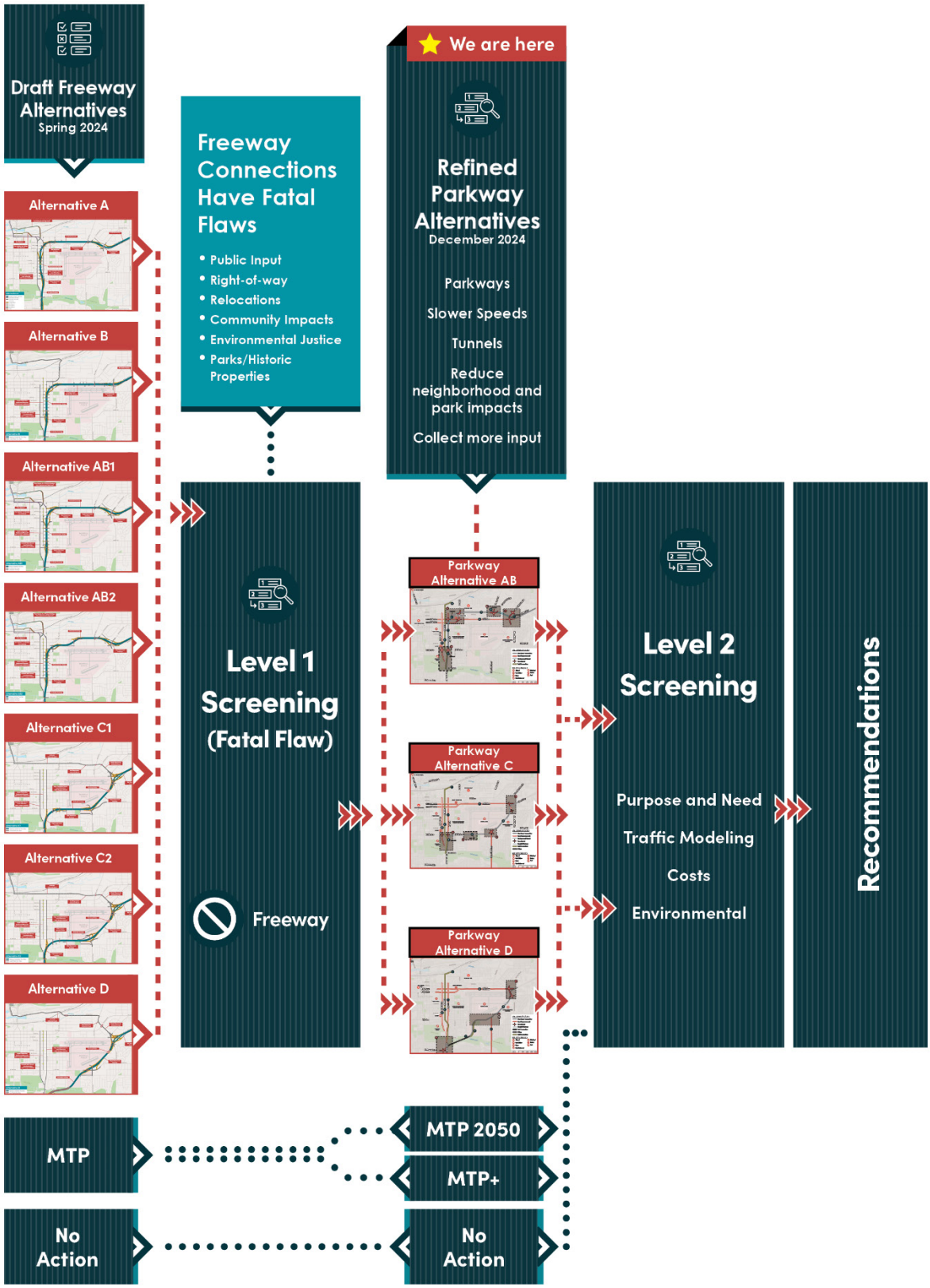
As expected, the new/revised alternatives, which were reengineered with a narrower footprint and smaller curve radii, have considerably fewer impacts. As such, refined alternatives Parkway AB, Parkway C, and Parkway D are recommended to move forward for public input and Level 2 Screening.

The MTP Alternative and MTP+ Alternative are also advanced, as they do not have any impacts associated with the Initial Alternatives (Level 1) Fatal Flaw screening criteria.

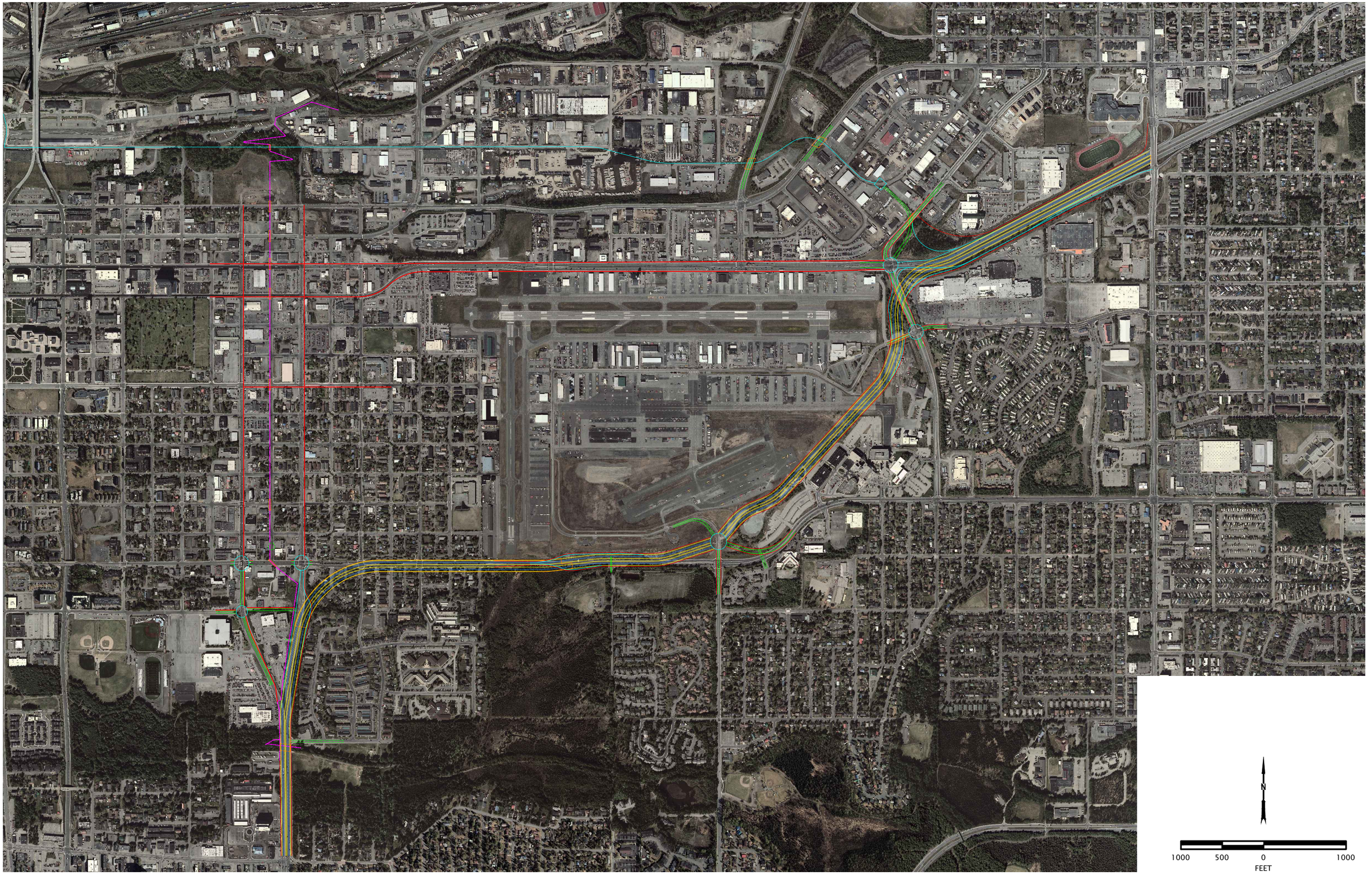
The No Action Alternative is also advanced, as it is required in the National Environmental Policy Act process and for comparison purposes.

Figure 12 Screening Summary graphically depicts a summary of the screening recommendations.

Figure 12 Screening Summary



Appendix A: Conceptual Design Drawings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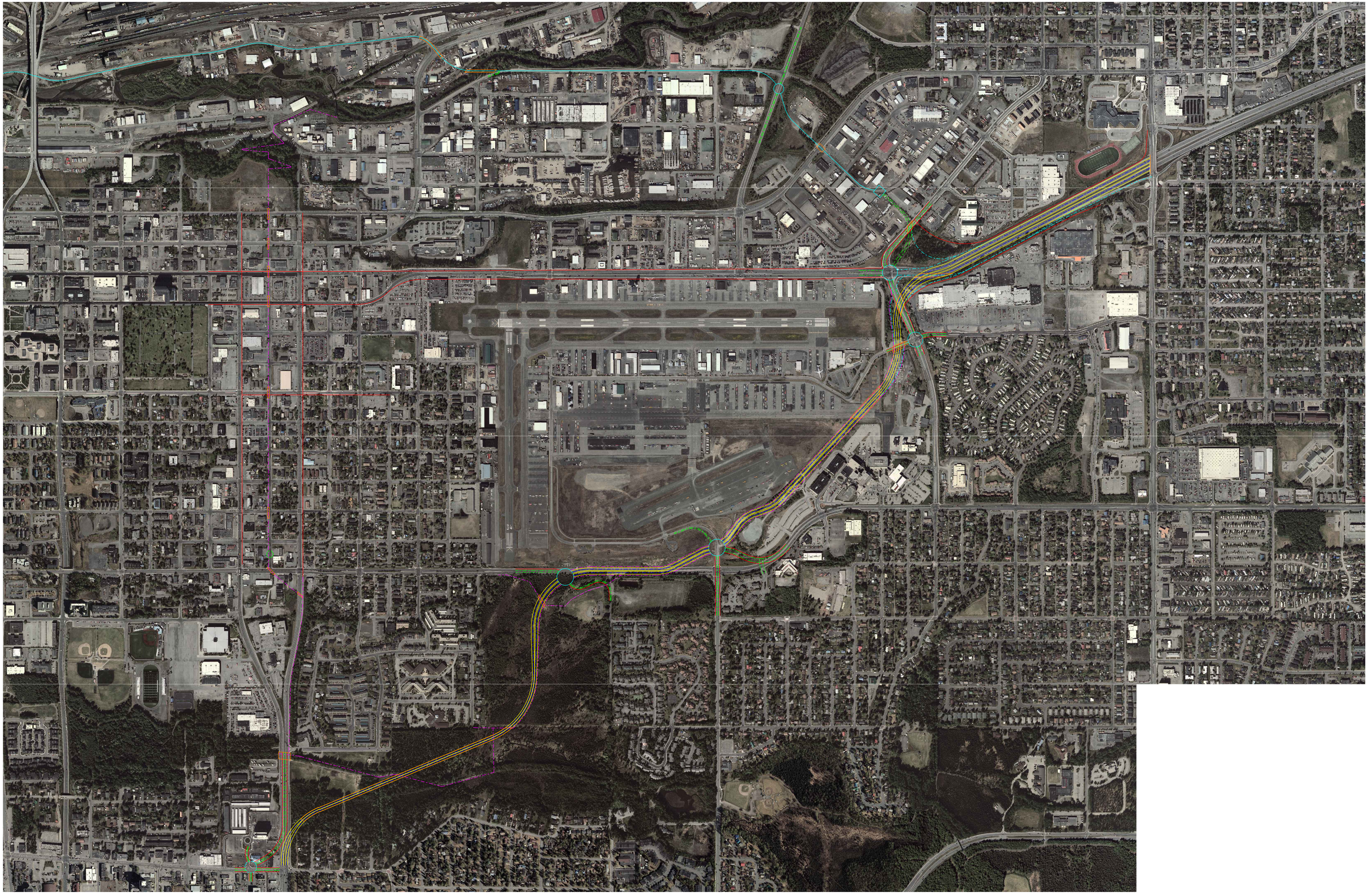

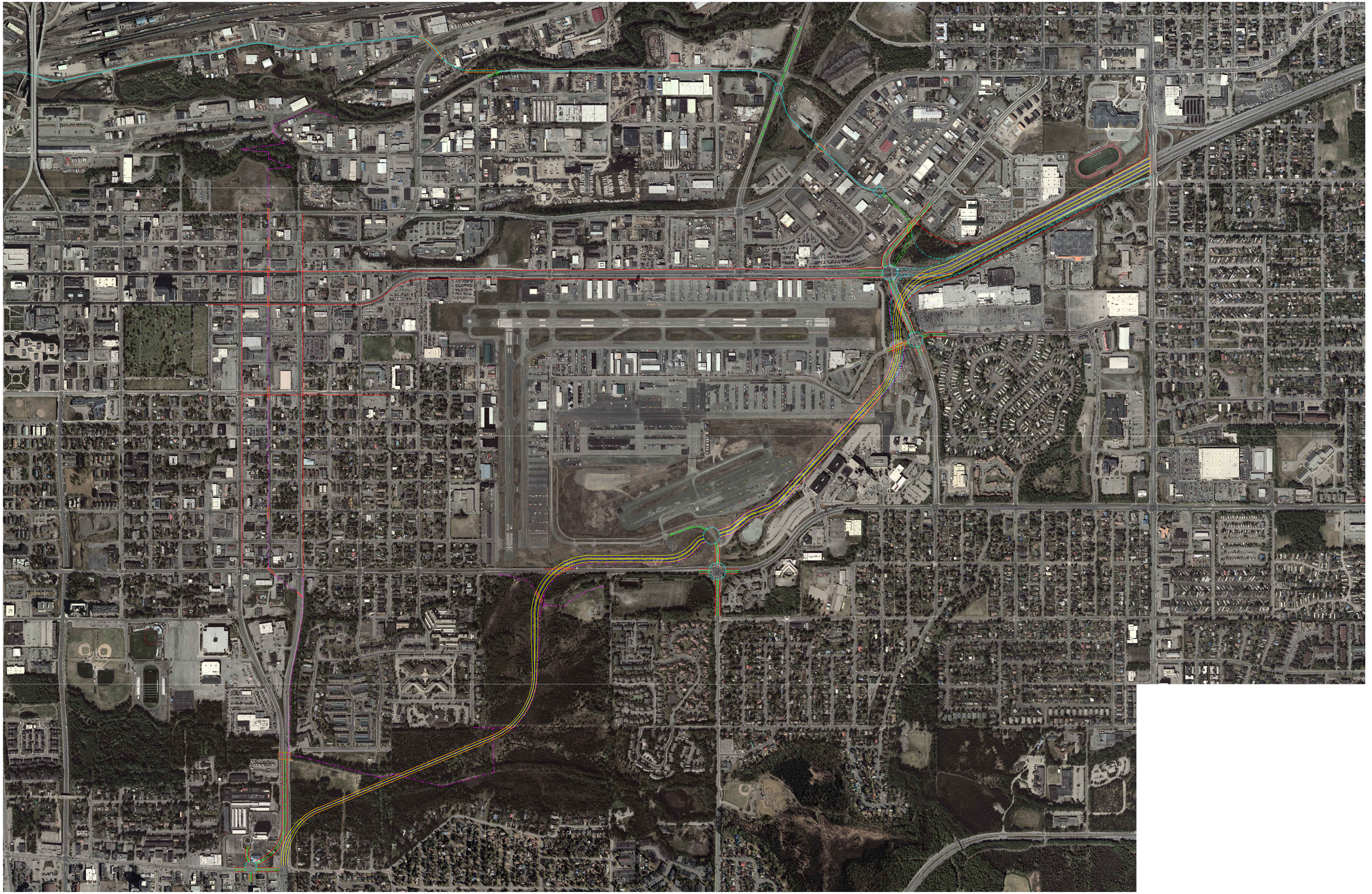

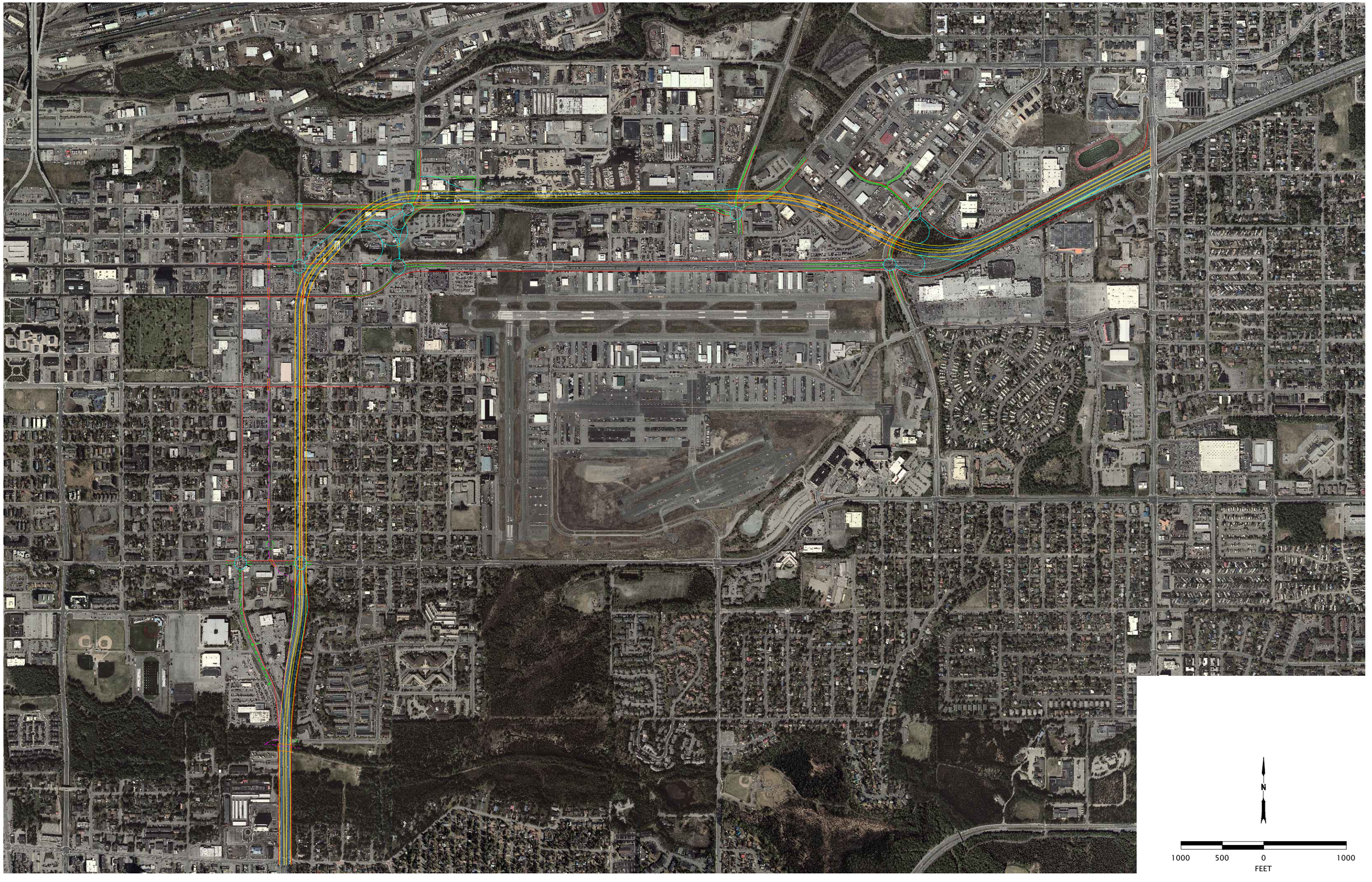
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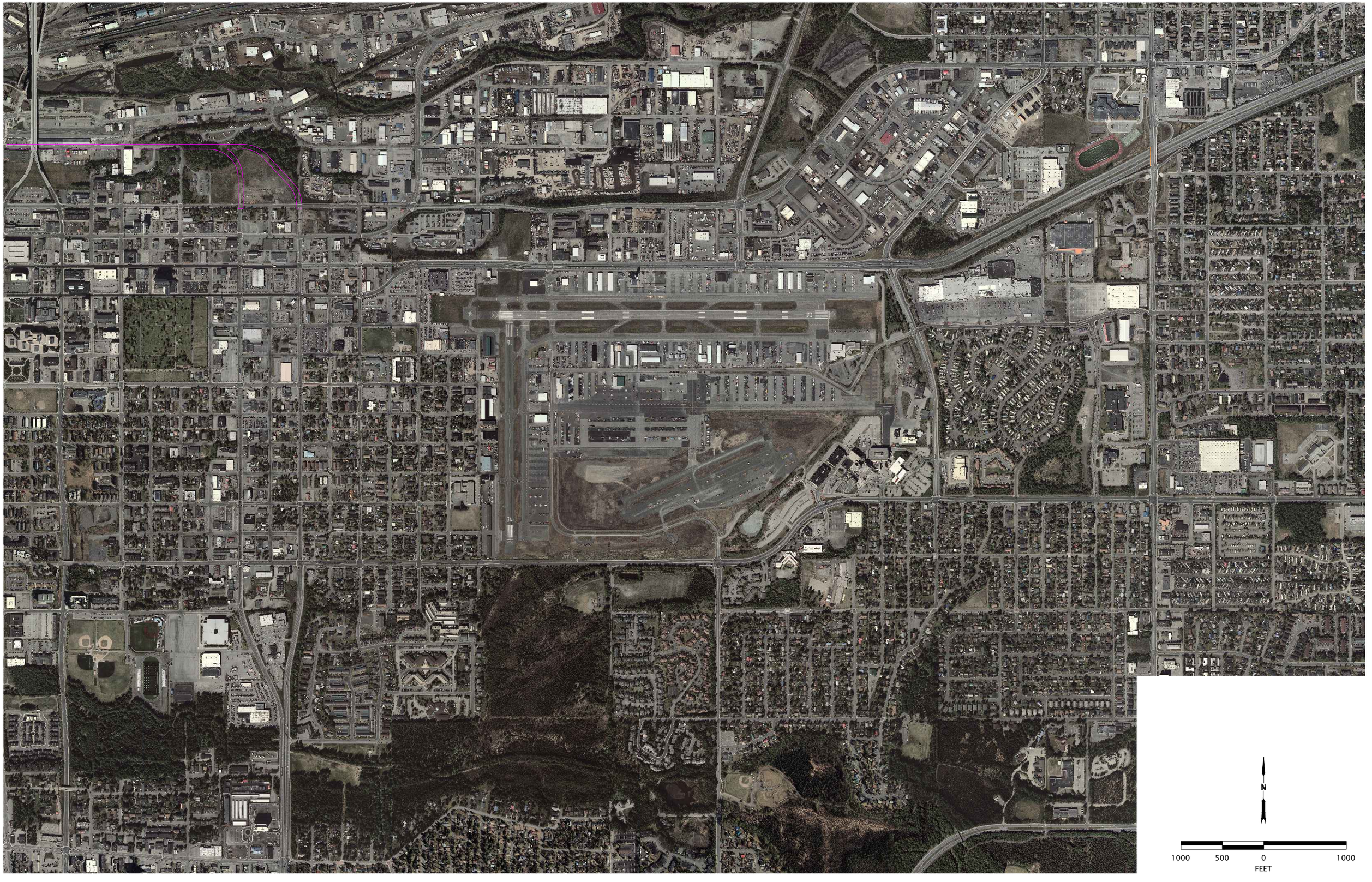
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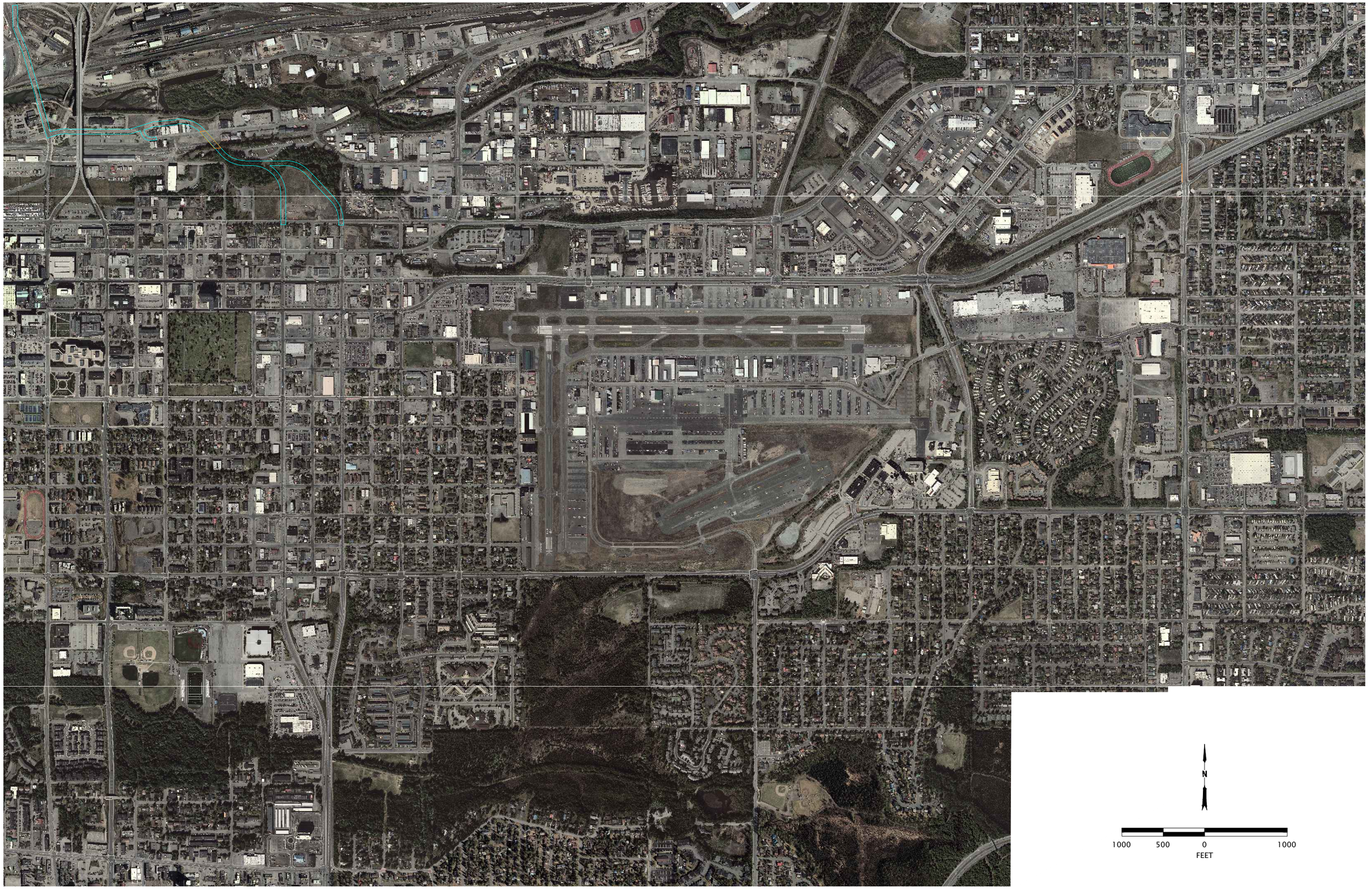
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