Appendix C
Public & Agency Outreach

AGENCY SCOPING

Ritter, Michelle

From: Noble, Steven
Sent: Monday, February 10, 2014 3:53 PM
To: Creely, Emily; Hansen, Kristen; Grgich, Christopher; Kilpatrick, Kelly
Subject: FW: Request for Comments: Richardson Hwy / Steese Expy Corridor Study
Attachments: Concept 1 Scoping Package 02_10_14.pdf; Concept 2 Scoping Package 02_10_14.pdf; Concept 3 Scoping Package 02_10_14.pdf

FYI

From: Cavallo, Christopher A (DOT) [mailto:christopher.cavallo@alaska.gov]
Sent: Monday, February 10, 2014 3:46 PM
To: jewel_bennett@fws.gov; combes.marcia@epamail.epa.gov; Curtis.Jennifer@epa.gov; william.s.meyers@poa02.usace.army.mil; christy.a.everett@poa02.usace.army.mil; Bittner, Judith E (DNR); Kent, Lynn J T (DEC); dick.mylius@alaska.gov; Milles, Christopher C (DNR); Jacobs, Laura L (DFG); Morris, William A (DFG); Boeck, Laurie A (DFG); Harms, Catherine (DFG); Winters, Jack F (DFG); djgardino@ci.fairbanks.ak.us; mayor@co.fairbanks.ak.us; dsims@co.fairbanks.ak.us; mjschmetzer@ci.fairbanks.ak.us; admin@doyon.com; lands@doyon.com; rtansy@ahtna.net; Thomas, Joe (LAA); Guttenberg, David (LAA); Miller, Bob (LAA); Nelson, Brett D (DOT); Masters, Joseph A (DPS sponsored); Lewis, Nicole (DOA sponsored); 's05jacobso@blm.gov'; 'shartmann@blm.gov'; 'jcfox@ci.fairbanks.ak.us'; Bainbridge, Steven T (DEC); Edwards, Alice L S (DEC); Fish, James T (DEC); Hardesty, Joan E (DEC); James, David D (DFG); Sackinger, Robert B (DNR); Titus, James Stephen (DOT); 'sean.palmer@alaska.gov'; Ryan Anderson; Sakalaskas, Jason (DOT); Potter, Steve B (DOT); Chapman, Judy (DOT); Smith, Kevin L (DOT); Gardner, Debora G (DOT); 'info@doyon.com'; 'Soderlund.Dianne@epamail.epa.gov'; 'curtis.jennifer@epa.gov'; 'martin.gayle@epamail.epa.gov'; 'dhickok@explorefairbanks.com'; 'tthompson@fnsb.us'; 'jjacobson@co.fairbanks.ak.us'; 'planning@co.fairbanks.ak.us'; 'dsims@co.fairbanks.ak.us'; 'jdavison@co.fairbanks.ak.us'; 'rogerf.ruiz@hotmail.com'; 'property@co.fairbanks.ak.us'; 'shook@fnsb.us'; 'fndgh@uaf.edu'; 'mayor@co.fairbanks.ak.us'; 'parks@co.fairbanks.ak.us'; 'staylor@fnsb.us'; 'SCJohnson@co.fairbanks.ak.us'; 'solidwaste@fnsb.us'; 'transportation@co.fairbanks.ak.us'; 'kate.siftar@wainwright.army.mil'; 'jeanne.hanson@noaa.gov'; 'sue_masica@nps.gov'; 'mitch.flynn@Steesefire.org'; 'info@tananachiefs.org'; 'ellen.h.lyons@usace.army.mil'; 'melissa.riordan@usace.army.mil'; 'lisa.graham2@us.army.mil'; 'carrie.mcenteer@us.army.mil'; 'jewel_bennett@fws.gov'; 'bob_henszey@fws.gov'
Cc: Beck, Albert M L (DOT); Storey, Benjamin M (DOT); Noble, Steven
Subject: Request for Comments: Richardson Hwy / Steese Expy Corridor Study

Please review the attached scoping letters and provide comments by March 3, 2014. Responses can be sent directly to me or Ben Storey at benjamin.storey@alaska.gov. Our standard comment period is 30 days, however due to the early collaboration we've had with agencies and stakeholders on this project we're requesting comments sooner.

The Alaska Department of Transportation and Public Facilities (DOT&PF) is requesting comments for the Richardson Highway / Steese Expressway Corridor Study (Project No: NH-000S(781) / 60799). DOT&PF teamed up with DOWL HKM to develop a corridor concept that addresses safety, mobility, air quality, freight operations, and sustainability in the corridor. Through two public open houses and three stakeholder workshops, we've narrowed down three concepts for consideration. A preliminary analysis of anticipated environmental impacts resulting from each concept is presented in the attached scoping letters (one letter per concept). Comments to these scoping letters will help in the selection of the preferred concept.

Please note at this time, none of these concepts are scheduled for construction. This effort is only for a study from with future projects will be further developed and constructed. For more information, visit the project website at http://dot.alaska.gov/nreg/richardson-steese/. Also note, the Purpose and Need is the same for each corridor concept.

If you've received this message in error please disregard or pass on to those individuals within your organization who may wish to provide comments. Feel free to ask questions or request clarification at any time.

Thanks,

Christopher A. Cavallo, P.E.
Design Engineer
Alaska DOT&PF Northern Region Pre-Construction
2301 Peger Road, Fairbanks, Alaska 99709
Phone: (907) 451-5458
christopher.cavallo@alaska.gov

State of Alaska Department of Transportation & Public Facilities
Statewide Design & Engineering Services

AGENCY SCOPING
REQUEST FOR EARLY COORDINATION

Project Name: **Richardson Hwy/Steese Expy Corridor High Mobility/Low Access Concept**
Project Number (state/federal): **60799/NH-000S(781)**
Comments Due Date: **March 3, 2014**
Anticipated Level of Documentation: **To be Determined**

Dear Commenter:

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Alaska Division of the Federal Highway Administration (FHWA), is requesting your comments on a proposed project in preparation for completing the project's environmental documentation. To ensure that all factors are considered in the development of the environmental document we request your comments on the project proposal, project-area resources, and any project-related permits or clearances to be obtained from your agency. Please provide your written comments by **March 3, 2014.**

To ensure that your comments are addressed in the project's documentation, please refer to the project by the above name or number, and send or e-mail your comments to:

Brett Nelson - Northern Region Environmental Coordinator
Attention: Benjamin Storey - Environmental Impact Analyst
Alaska Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, AK 99709
Email: benjamin.storey@alaska.gov Phone: 907-451-2229

_____

Brett Nelson/Regional Environmental Coordinator Date

Attachments: (1) Figures 1-4 (2) Purpose and Need (3) Further Information

I. Purpose and Need of Project

See Attachment 2

II. Project Description & Alternatives

Concept Descriptions:

Concept 1 - High Mobility / Low Access (this Scoping Letter)
Concept 2 - Moderate Mobility / Moderate Access (refer to Concept 2 Scoping Letter)
Concept 3 - Low Mobility / High Access (refer to Concept 3 Scoping Letter)

The proposed project consists of motorized and non-motorized traffic improvements to resolve projected operational deficiencies through the design year 2040 with a primary emphasis on mobility and a secondary emphasis on property access. The project will construct grade-separated intersections to develop a controlled access, freeway-type facility through the project corridor (see Attachment 1, Figure 2).

The proposed improvements under this concept provide the most optimal corridor safety and capacity for projected traffic growth through the design year of the three concepts being considered for the corridor. In comparison to the other concepts, Concept 1 provides the greatest corridor safety and greatest capacity for projected traffic growth through the design year.

Primary features include:

- Converting at-grade intersections to grade-separated interchanges at the following locations:
  - Farmers Loop Road / Steese Expressway
  - Johansen Expressway / Steese Expressway
  - Trainor Gate Road / Steese Expressway
  - College Road / Steese Expressway
  - 3rd Street / Steese Expressway
  - Airport Way / Steese Expressway

Associated improvements include:

- New/expanded pedestrian facilities;
- Reconstruction/widening of the Steese Expressway bridge over the Chena River;
- Constructing railroad overpasses at Trainor Gate Road and at the Richardson Highway westbound off-ramp;
- Controlling access to properties adjacent to the Steese Expressway;
- Storm drain and utility modifications; and
- Intersection controls (e.g., signalization, roundabouts, new auxiliary lanes, channelization).

III. Location

The project begins at the "6-mile" Badger Road interchange on the Richardson Highway (MP 357) and ends at the Chena Hot Springs Road interchange on the Steese Expressway (MP 5), near Fairbanks, Alaska (Attachment 1, Figure 1). The following table presents the sections and coordinates (WGS 84) defining the location of the project.

Township	Range	Section	Meridian	USGS Quad Map	Start Latitude/End Latitude	Start Longitude/End Longitude
001N	001W	35;36;	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

001S	001W	1;2;11; 12;14	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

IV. Environmental Consequences

A. Right-of-Way (ROW) Impacts:

1. ROW required:
   a. Property required from a state or federal agency.
      (1) State Park Name: **No**
      (2) State Refuge or Critical Habitat Area Name: **No**
      (3) Federal Park Name: **No**
   b. Property required from local government entity. **2**
   c. Business or residential property required.
      (1) Residential: (indicate number) **3** (2) Business: (indicate number) **20**
   d. Property required from a Tribe or ANCSA corporation.
      Name: **No**

2. Describe: Right-of-way acquisition from residential and/or commercial properties will result from road widening for new through lanes on the Old Steese Highway, addition of frontage roads, and construction of grade-separated intersections. This potential for right-of-way acquisition must be continually assessed and quantified throughout the design process. State refuge and government-owned land is shown in Attachment 1, Figure 4.

B. Socio-Economic Impacts:

1. Project could affect community cohesion, neighborhoods, or other community facilities. **Yes**
2. Project could affect economic development, such as established area businesses. **Yes**
3. Project could affect travel patterns and accessibility. **Yes**
4. Project could disproportionately affect minorities or disadvantaged persons (E.O. 12898) **Potential**

The project is in close proximity to residential and commercial development; however, comments from the public did not indicate any unresolvable concerns about the project affecting community cohesion. Controlling access on the Steese Expressway could lead to greater perceptions that the Steese Expressway is a barrier to community cohesion. New frontage roads will address access to adjacent properties to minimize impacts or improve access to economic development. The new interchanges will become the primary crossings of the Steese Expressway. While traffic patterns and local residents and businesses may be affected temporarily during construction, the overall concept will relieve congestion and have a net benefit when completed.

The project will be evaluated to address potential effects on minority and low-income populations.

For additional information, see Attachment 2

C. Impacts to Historic Properties:

1. National Register listed eligible/potentially eligible historic properties in project area/area of potential effect (APE). **Potential**
2. Places of traditional religious or cultural importance to Tribes are present in the project area. **None identified at the planning stage**
3. Historic Properties survey may be required to identify if sites are present. **Yes**
4. Possible adverse effect on historic properties. **None identified at the planning stage**

Although an APE has not been established, the nearest National Register of Historic Places property is located more than half a mile away. There are 22 resources listed on the Alaska Heritage Resources Survey in the project area. The majority are historic buildings and features from the periods relating to the founding of Fairbanks, arrival of the Alaska Railroad, and World War II.

Consultation in accordance with Section 106 of the National Historic Preservation Act will need to be conducted with the State Historic Preservation Officer and local tribal entities. Traditional Cultural Properties (TCPs) are identified during Section 106 consultation. A resource survey is not planned at this time.

D. Fish & Wildlife Impacts:

1. Project could affect anadromous or resident fishes. **Yes**
2. Problem fish pass culverts within the project area. **No**
3. Essential Fish Habitat (EFH) present in the project area. **Yes**
4. Wildlife Resources:
   a. Project in area of high wildlife/vehicle accidents. **No**
   b. Project could bisect migration corridors. **No**
   c. Project could segment habitat. **No**
   d. Species of concern to OHMP/ADF&G in the project area **No**
5. Bald Eagle and Golden Eagle Protection Act:
   a. Eagle nesting tree(s) in the project area. **No**
6. Describe:

The ADF&G Atlas to the Catalog of Waters Important to the Spawning, Rearing or Migration of Anadromous Fishes identified the Chena River (334-40-11000-2490-3301) as a spawning and rearing ground for Chinook salmon and a spawning ground for chum salmon. Work below the ordinary high water mark during bridge reconstruction will require a Title 41 permit to be obtained from DNR. An EFH assessment would also be needed.

Because suitable habitat for Bald Eagles is present within the study area and proposed work may include removing trees, an eagle survey may be required to determine if any active or alternate nests are located within the project area. Any vegetation clearing will occur outside the migratory bird nesting period from May 1 to July 15.

E. Threatened and Endangered (T&E) Species Impacts:

1. Listed T&E species present. **No**
2. T&E species migrate through the project area. **No**
3. Proposed species present in project area. **No**
4. Candidate species present in the project area. **No**
5. Critical habitat in the project area. **No**
6. Describe:

According to recent guidance from the United States Fish and Wildlife Service, no threatened or endangered species occur in the Fairbanks North Star Borough (per "List of Endangered, Threatened, Proposed, Candidate and Delisted Species in Alaska," Updated May 24, 2013 by National Marine Fisheries Service Alaska Regional Office).

F. Waters of the U.S and Water Bodies:

1. Project affects Waters of the U.S. (as defined by USACE), Section 404/10/103. **Yes**
2. Project affects Navigable Waters of the U.S. (as defined by USACE), Sec. 10. **Yes**
3. Project affects a Cataloged Anadromous Fish Stream (i.e., 41.14.870). **Yes**
4. Proposed river or stream involvement:

Reconstruction/widening of the Steese Expressway bridge would likely require work below Chena River's ordinary high water.

5. Describe:

The Chena River has been determined by the U.S. Army Corps of Engineers (USACE) to be a navigable waterway for its entire length. A Section 9 Permit from the U.S. Coast Guard may be needed. Work on the bridge would also require a floodplains permit from the Fairbanks North Star Borough Department of Community Planning.

G. Wetlands Impacts:

1. Project involves wetlands as defined by USACE. **Yes**
2. Wetlands delineated in accordance with DOT&PF/FHWA/USACE Agreement. **No**
3. Acres: Less than 2 acres
4. Fill: Such factors are unknown at this time.
5. Dredge: Such factors are unknown at this time.
6. USACE authorization required: **Yes**

7. Describe:

Wetlands have been identified by the USFWS National Wetland Inventory in the vicinity of the corridor between the Johansen Expressway and Farmers Loop Road and within the vicinity of the Richardson Highway off ramp, as shown in Attachment 1 (Figure 4). The improvements planned for the Steese Expressway and Farmers Loop intersection will likely result in small impacts to wetlands. Once construction design plans begin to develop, a field review will be conducted to confirm the status of wetlands present. If widening of the existing footprint results in fill being placed in the wetland, a Section 404 CWA Permit from the USACE and a Section 401 Water Quality Certification from the ADEC will be required.

H. Alaska Coastal Management Program (ACMP):

1. Project within the ACMP boundary. **No**
2. Project within a local coastal management district. **No**
3. Describe: The project area is not within a coastal zone.

I. Hazardous Waste:

1. Known or potentially contaminated sites along the corridor. **Yes**
2. ROW required from, or extensive excavation adjacent to, a known hazardous waste site. **Yes**
3. The existing and/or proposed ROW is contaminated. **No**
4. Potential for encountering hazardous waste during construction is high. **No**
5. Describe:

A search of the ADEC contaminated site database revealed 6 active sites and 5 closed sites with institutional controls either within the project limits, or within 500 feet. Contaminants in the area are related to pipeline construction, military activities, and include hydrocarbons, solvents and other chemicals, particularly in the vicinity of the Johansen Expressway and Old Steese Highway (see Attachment 1, Figure 3). A Phase 1 Environmental Site Assessment may need to be conducted prior to construction.

For additional information, see Attachment 3

J. Air Quality Impacts (NEPA and Conformity):

1. NEPA (all projects):
   a. The project is located in an air quality nonattainment or maintenance area (i.e. CO or PM-10). **Yes**
      If yes, indicate CO ☒ or PM-2.5 ☒
   b. The project is of the type exempt from an air quality analysis per 40 CFR 93.126 (Table 2 and Exempt Projects). **No**

The project will fully eliminate stop and go traffic on the Steese and Richardson highways within the project limits, thereby significantly reducing idling time. As a result, air quality will improve since emissions are higher when vehicles idle. The conversion of six at-grade, signalized intersections to grade-

separated interchanges will create a freeway-type facility on the Steese and Richardson highways that will be significantly more effective in reducing air quality than Concepts 2 or 3.

2. Conformity (projects in nonattainment areas only): **Yes**

   a. The project is identified in the approved STIP. **No**

   b. The project is in the most current air quality conformity (i.e., TIP). **No**

   c. Have there been any changes in the project design concept and scope, as described in the STIP and TIP conformity analysis **No**

3. Describe:

Air quality is a major concern of this study. Project priorities will be influenced by their effectiveness at minimizing air quality contaminants and achieving standards set by the Environmental Protection Agency.

K. Floodplains Impacts (23 CFR Part 650, Subpart A):

1. Project encroaches onto a 100-year floodplain. **Yes**
2. Project involves a regulatory floodway. **No**
3. Project is located within an area protected by local flood hazard ordinances. **Yes**
4. Flood hazard permit is required from local government. **Yes**
5. Describe:

Portions of this project are located in the 100-year floodplain of the Chena River, Little Chena River and the Chena Slough. The Fairbanks North Star Borough Department of Community Planning administers a floodplain ordinance, called Title 15, and an approved floodplain permit is required for any development within the flood hazard area (Flood Zone A) or floodway.

L. Noise Impact (23 CFR Part 772):

1. There are noise-sensitive receivers/land uses adjacent to the proposed project **Yes**
2. The project is located on new location, would result in substantial changes in vertical or horizontal alignment, or would increase the number of through lanes **Yes**

Concept elements are in close proximity to "sensitive receivers" including cemeteries, schools, churches, and residences, and the project(s) will need to analyze their potential impacts with a noise analysis.

For additional information, see Attachment 1, Figure 3 and Attachment 3

M. Water Quality Impact:

1. Project could involve a public or private drinking source. **No**
2. Project could result in a discharge of storm water to Waters of the U.S. **Yes**
3. Project could affect a designated impaired water body. **Yes**

a. List name(s) and location(s):

The Chena River and Noyes Slough are considered "high priority" waterbodies through the Alaska Clean Water Actions (ACWA) ranking process because of impairment from petroleum hydrocarbons, oil and grease and sediment. Noyes Slough was also listed as polluted from residues (debris). Urban run-off is considered the primary source. The slough and the river both have approved management plans that limit the Total Maximum Daily Load (TMDL) of pollutants.

4. Is there a municipal separate storm sewer system (MS4) NPDES permit or will runoff be mixed with discharges from an NPDES permitted industrial facility. **Yes**
5. If extensive dewatering (>250,000 gallons) is anticipated, is the area to be dewatered within 1 mile of a contaminated site **No**
6. Describe:

The City of Fairbanks and DOT&PF own and operate storm sewer systems through a system of subsurface storm sewers, roadside ditches, and surface streets. Off-site sedimentation is expected to be minimal and best management practices (BMP's) will be implemented for the purpose of meeting state and federal water quality standards. A project specific erosion and sediment control plan will be developed prior to construction initiation. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented by the construction contractor. The SWPPP will comply with applicable APDES permits.

N. Section 4(f)/6(f):

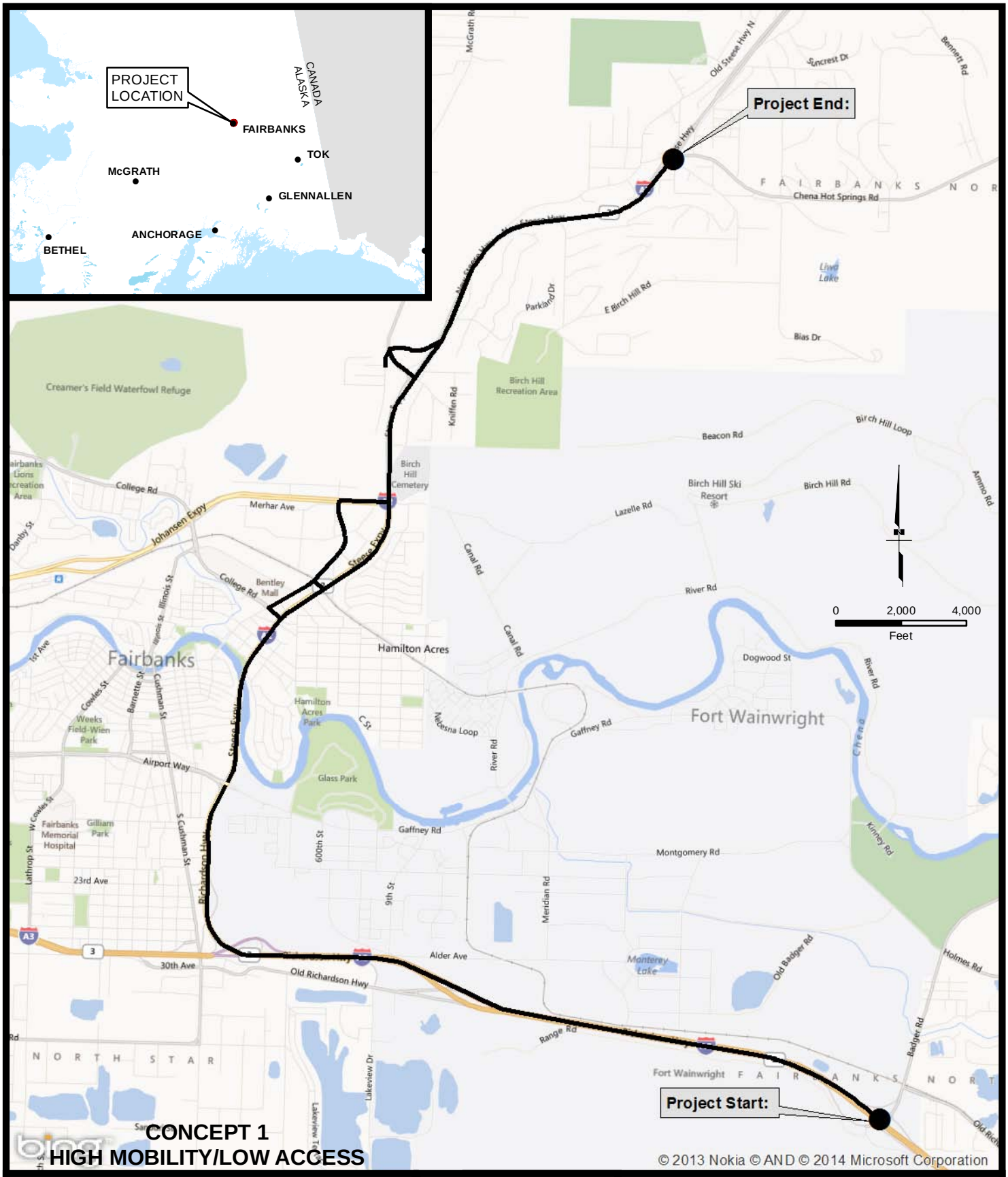
1. There would be a "use" of land from 4(f) properties. **Potential**
2. Section 6(f) properties affected by the proposed action. **No**
3. List agency(s) with jurisdiction: **Fairbanks North Star Borough**
4. Describe:

The proposed project is consistent with local land use and transportation plans, including the Fairbanks North Star Borough Regional Comprehensive Plan. The potential for Section 4(f) impacts to parks near the bridge over the Chena River may exist and further assessment is necessary pending project development (See Attachment 1, Figure 4). Also, any potential impacts involving historic properties will undergo Section 4(f) review and evaluation. Impacts to 6(f) lands are not anticipated due to their absence from the corridor.

O. Permits and Authorizations

1. USACE, Section 404/10/103: **Yes**
2. USCG, Section 9: **Yes**
3. ADF&G Title 16: **Yes**
4. Flood Hazard: **Yes**
5. ADEC 401: **Yes**
6. ADEC Storm Non-domestic Storm Water Disposal Plan Approval: **Yes**
7. APDES GP: **Yes**

11. Other. *If "yes," list.* **No**



Project Location and Vicinity Map

Sec. 35; 36 (T1N;1W)
Sec. 1;2;11;12;14 (T1S;1W)
Fairbanks Meridian, Alaska
USGS Topo Maps Fairbanks D2

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 1

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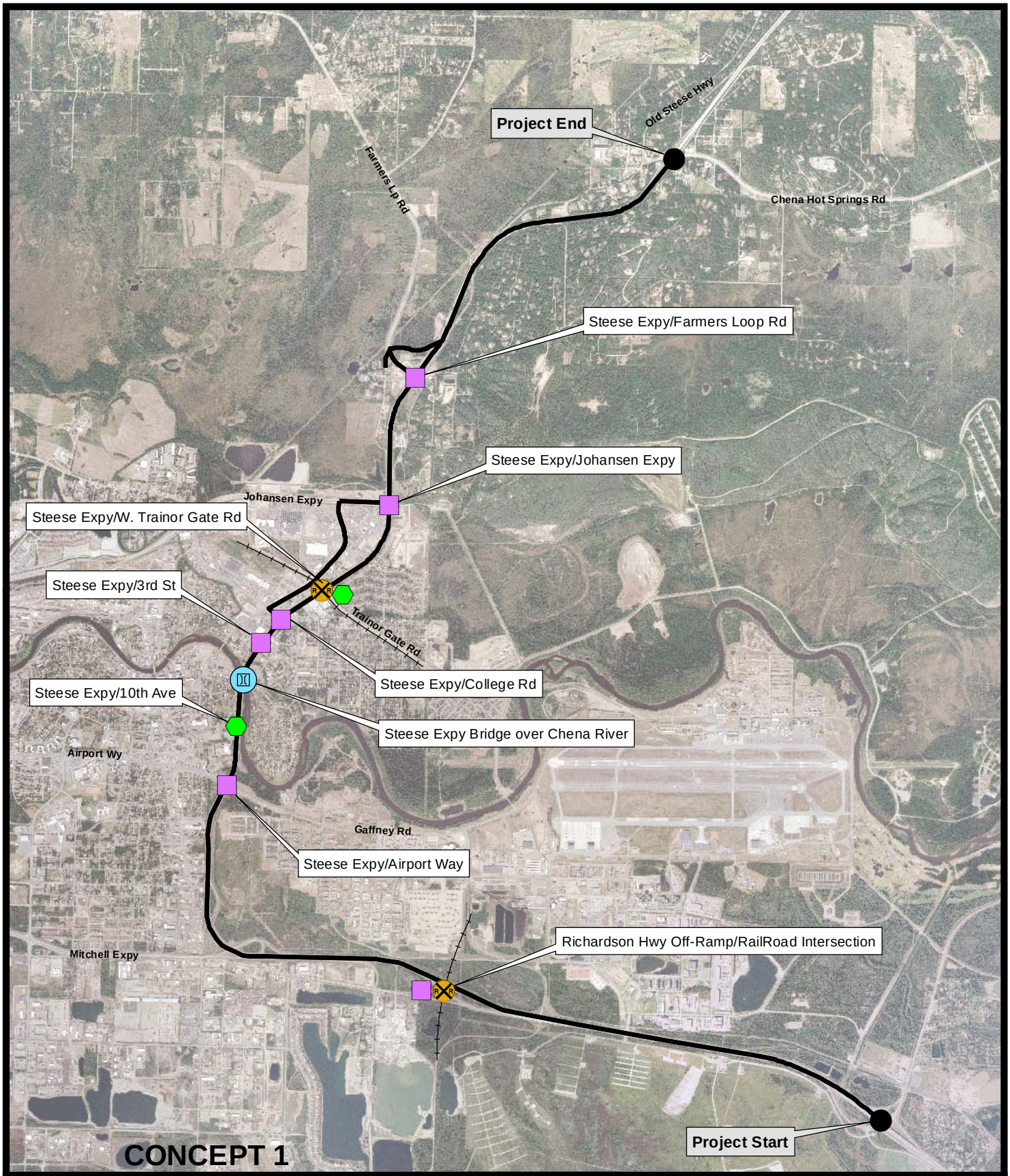

Project Corridor and Associated Modifications

Railroad Modifications

Intersection Connections to Frontage Roads

Bridge Reconstruction

Grade-Separated Conversion

Railroad Overpass

0 2,000 4,000

Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 2

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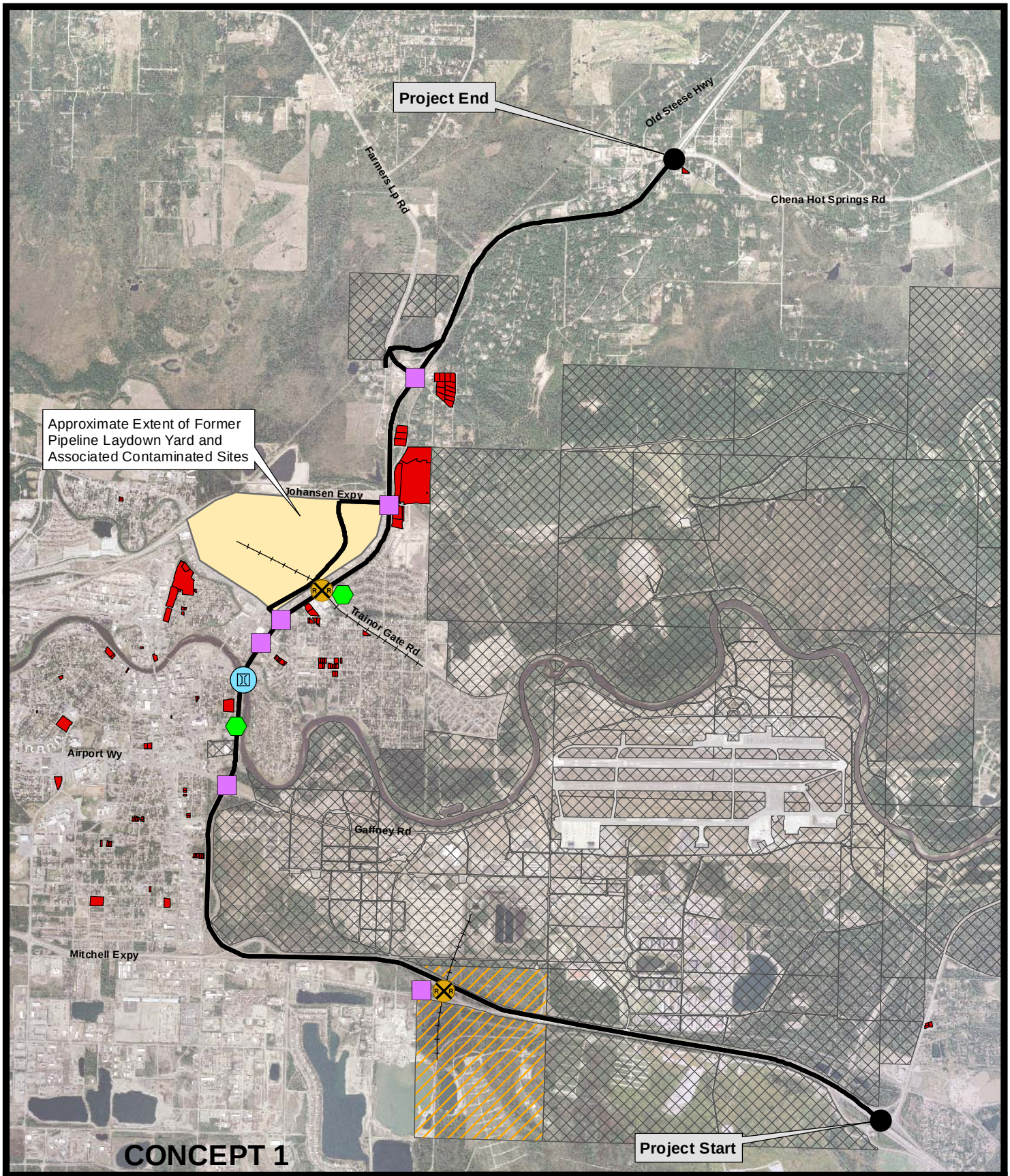

- Project Corridor and Associated Modifications
- Railroad Modifications
- Federal Lands
- Machine Gun Range Firing Line
- Church or Cemetery
- Intersection Connections to Frontage Roads
- Bridge Reconstruction
- Grade-Separated Conversion
- Railroad Overpass

0 2,000 4,000
Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 3

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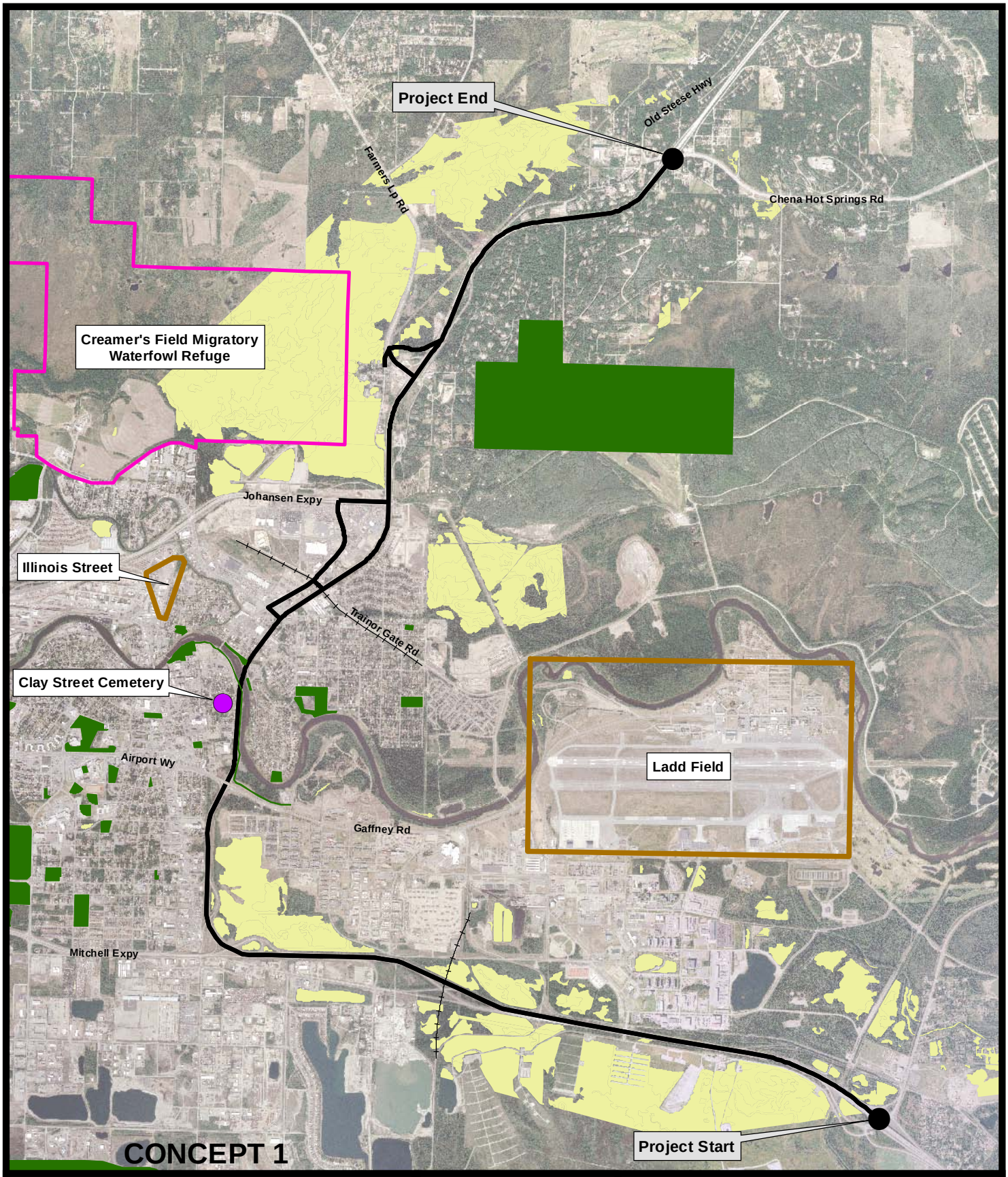

Project Corridor and Associated Modifications
Railroad Modifications
Cultural Resource District
Cultural Resource Point
Wetlands
Parks

0 2,000 4,000
Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 4

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The Alaska Department of Transportation and Public Facilities (ADOT&PF), in cooperation with the Alaska Division Office of the Federal Highway Administration (FHWA), is developing a Planning and Environmental Linkage (PEL) Study for the Fairbanks, Alaska area Richardson Highway / Steese Expressway corridors from Badger Road interchange (Richardson Highway milepost 360) to Chena Hot Springs Road interchange (Steese Highway milepost 5).

Purpose

The purpose of the study is to collaborate with State, local, and federal agencies, the general public, and interested stakeholders to develop a shared corridor concept that meets long-range transportation needs to improve safety, mobility, air quality, and freight operations. Additionally, the concept will promote improvements that reduce transportation deficiencies (e.g. delay and congestion), enhance the corridor's sustainability (e.g. infrastructure longevity and maintenance costs), and minimize environmental and social impacts.

Project Need Summary

I – Safety

Safety for motorized and non-motorized traffic needs improvement by developing a corridor concept that:

- Upgrades the transportation infrastructure to current ADOT&PF design standards where practical
- Reduces conflict points
- Reduces the frequency and severity of crashes at "high crash locations"
- Improves pedestrian and bicycle crossings

II – Mobility

The mobility of people and goods in the corridor needs improvement by developing a concept that:

- Reduces delay and congestion
- Improves intersection and road segment Level of Service (LOS) to C or better where practical
- Balances the need for adjacent property access
- Accommodates projected traffic growth

III – Air quality

Air pollution in the existing non-attainment and maintenance area needs reduction by developing a corridor concept that:

- Meets the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards
- Reduces vehicle idle times

IV – Freight operations

Freight operations need enhancement by developing a corridor concept that:

- Provides efficient transportation of goods and services
- Minimizes existing at-grade railroad crossings as practical
- Reduces vertical clearance obstructions (e.g. traffic signal mast arms)

V – Sustainability

The overall corridor sustainability and longevity needs enhancement by:

- Considering future developments and corridor growth in collaboration with the general public, local governments and planning authorities, and interested stakeholders
- Minimizing maintenance and operation costs to the extent practical

Study Corridor

At present, the Richardson Highway predominantly serves through-traffic for the communities of Fairbanks and North Pole, while the Steese Expressway serves a mixture of through- and local-traffic in Fairbanks. The Richardson Highway transitions into the Steese Expressway at the Airport Way / Gaffney Road intersection; both roads are primarily four-lane divided major arterials. The 2010 Annual Average Daily Traffic (AADT) volumes were 23,910 and 21,761 for the Richardson Highway and Steese Expressway respectively.

Richardson Highway

The Richardson Highway, comprised of Alaska Routes 1, 2 and 4, is classified as an interstate highway and is the only major east / westbound transportation corridor linking Interior Alaska with Canada. Adjacent land use in the study corridor consists primarily of industrial, commercial, and military infrastructure. Within the study corridor, the Richardson Highway provides access to:

- Residential communities / developments between Fairbanks and North Pole
- Fort Wainwright – home to the U.S. Army Garrison and units of the U.S. Army Alaska (USARAK) including the 1st Stryker Brigade Combat Team, 25th Infantry Division, the 16th Combat Aviation Brigade, and the Medical Department Activity-Alaska. In addition, the fort has 7,700 soldiers,

approximately 8,200 family members, and about 1,250 Army and Department of Defense civilian employees.[1] Fort Wainwright is a strategic position for the U.S. Army to deploy troops anywhere in the world for contingencies ranging from humanitarian relief to combat operations.[2] Fort Wainwright also generates 28% of all revenue in the Fairbanks North Star Borough (FNSB)[3]

- Alaska Routes 2 (Elliott Highway), 3 (George Parks Highway), and 6 (Steese Highway)

Beyond the study corridor, the Richardson Highway provides access to:

- North Pole, Moose Creek, Salcha, Delta Junction, Paxon, Glennallen, and other smaller communities in eastern Interior Alaska

- Badger Road – an urban minor arterial which loops north and then southeast back to North Pole. This road provides access to:
    - Residential developments between Fairbanks and North Pole
    - Fort Wainwright
    - Ticasuk Brown Elementary School

- Eielson Air Force Base (AFB) – home to the 354th Fighter Wing and 168th Air Refueling Wing. In addition, the base has approximately 2,500 military workers, more than 2,000 military and family members living on base, and 480 civilian employees. Eielson AFB supports the U.S. Army Alaska with close air support, theater airlift, reconnaissance missions, and weather analysis.[4] Eielson AFB also generates 10% of all revenue in the FNSB[5]

- Fort Greely – home to the 49th Missile Defense Battalion and 59th Signal Battalion. In addition, the fort has a total work force of approximately 1,030 and 1,620 residents. Fort Greely is an integral part of the Nation's Ballistic Mission Defense System and is a National Security Asset. Its mission is to engage and destroy limited intermediate- and long-range missile threats in

[1] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[2] Fort Wainwright Home of the Arctic Warriors. *The Official Homepage of Fort Wainwright, Alaska*. Retrieved November 20, 2013, from http://www.wainwright.army.mil/sites/local/.
[3] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.
[4] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[5] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.

space to protect the U.S. In addition, Fort Greely hosts missions of the Cold Regions Test Center and the Northern Warfare Training Center.[6]

- Various State-managed recreation, Federal subsistence, and military training lands
- Alaska Routes 8 (Denali Highway) and 10 (Copper River Highway), as well as the Tok-Cutoff Road and Glenn Highway
- Alaska Highway – the only interstate highway connecting Alaska to the contiguous 48 United States of America
- Valdez – via Alaska Route 4. Valdez is the southern terminus of the Trans Alaskan Pipeline System (TAPS). North Slope crude oil is measured and stored at the Valdez Marine Terminal, loaded onto tankers, and sent to market.[7] Valdez is also the northernmost ice-free deepwater port in the U.S. with the best access to Alaska's interior, the U.S. Pacific Northwest, Northern Canada, and Pacific Rim trade routes[8]

Steese Expressway

The Steese Expressway is classified as an urban principal arterial, and is the only north / southbound transportation corridor in eastern Fairbanks. The Steese Expressway transitions into Alaska Route 6 (Steese Highway) at milepost 11 in Fox. Adjacent land use between the Airport Way / Gaffney Road and Johansen Expressway intersections is primarily industrial, commercial, and military infrastructure. Proximate land use between the Johansen Expressway intersection and Chena Hot Springs Road interchange is primarily residential housing with light commercial infrastructure and community space (e.g. Birch Hill Cemetery, churches, recreational park access) interspersed throughout. Recent surges in commercial development (e.g. Wal-Mart, Home Depot, Fred Meyer, etc.) near Trainor Gate Road and the Johansen Expressway intersections have generated higher traffic demand on the Steese Expressway which also provides access to:

- Airport Way / Gaffney Road – Airport Way is a westbound urban principal arterial while Gaffney Road is an eastbound urban local road. These roads provide access to:
  - Residential and commercial developments
  - Fairbanks International Airport
  - Fort Wainwright
  - Lathrop High and Ryan Middle Schools

[6] History of Fort Greely. (2013). *The Official Homepage of Fort Greely, Alaska*. Retrieved December 18, 2013, from http://www.greely.army.mil/about/history.aspx.
[7] (2011). The Valdez Marine Terminal. *Alyeska Pipeline Service Company*. Retrieved November 21, 2013, from http://www.alyeska-pipe.com/.
[8] Port. *City of Valdez, Alaska*. Retrieved November 21, 2013, from http://www.ci.valdez.ak.us.

- 3rd Street – an east / westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Fairbanks' commercial business district

- College Road – a westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Creamer's Field State Migratory Waterfowl Refuge
  - University of Alaska, Fairbanks (UAF) campus
  - Nordale Elementary School
  - Various State of Alaska agency office locations

- Trainor Gate Road – a westbound urban minor collector. This road provides access to:
  - Fort Wainwright Army Post
  - Residential developments
  - Ladd Elementary and Tanana Middle Schools

- Johansen Expressway / City Lights Boulevard – Johansen Expressway is a westbound urban principal arterial, while City Lights Boulevard is an eastbound urban local road. These roads provide access to:
  - Western Fairbanks
  - Alaska Route 3 (George Parks Highway)
  - Birch Hill Cemetery
  - ARRC freight distribution and passenger rail-yard
  - Local freight distribution trucking centers

- Farmers Loop Road / Fairhill Road – Farmers Loop Road is a rural minor arterial that loops northwest then southwest to its intersection with College Road. Fairhill Road is a southeast bound urban local road. These roads provide access to:
  - Residential developments
  - UAF campus
  - Birch Hill Recreation Area
  - Pearl Creek Elementary

- Chena Hot Springs Road – the study corridor's northern terminus located near milepost 6, is an eastbound rural minor arterial that becomes a rural major collector. This road provides access to:
  - Residential developments
  - Two Rivers community
  - Weller and Two Rivers Elementary Schools
  - State managed recreation lands
  - Chena Hot Springs Resort

Beyond the study corridor, the Steese Expressway provides access to:

- Alaska Route 2 (Elliott Highway) – serving communities between Manley Hot Springs and Fairbanks, while providing access to various State and Federal managed lands (e.g. White Mountains National Recreation Area)
- Alaska Route 6 (Steese Highway) – serving communities between Circle and Fairbanks, while providing access to various State and Federal managed lands (e.g. Yukon Flats National Wildlife Refuge and Yukon-Charley River National Preserve)
- Alaska Route 11 (Dalton Highway) – serving the oil industry and TAPS northern terminus at Prudhoe Bay along with the smaller communities between the North Slope and Fairbanks. Also provides access to various park lands (e.g. Gates of the Arctic National Park and Preserve), as well as University of Alaska research lands and facilities.

Project Need Details

I – Safety

The following table provides crash data from 2006-2010 for "high crash locations" within the study corridor:

Intersection	Number of Crashes	Safety Index	Major Crashes	Fatal Crashes
Airport Way	106	0.96	1	0
3rd Street	119	1.58	3	1
College Road	87	0.87	3	0
Trainor Gate	80	1.03	2	0
Johansen Expressway	35	0.40	2	1

If any of the following criteria is met, the intersection is considered a high crash location[9]:

- Safety index greater than 0.90
- Major crashes equal 2 or greater
- Fatal crashes equal 1 or greater

In addition to the high crash locations, other corridor areas exist for the potential for severe crashes. These locations include two at-grade railroad crossings and a stop-controlled crossing of the Richardson Highway off-ramp onto the Old Richardson Highway. Although these areas have not yet experienced crash patterns, any accident would almost certainly be a high severity crash resulting in major injury or fatality. Upgrading the corridor to current ADOT&PF design standards and reducing the number of conflict points will improve transportation safety for motorized and non-motorized users by reducing crash frequency and severity.

[9] *Alaska Highway Safety Improvement Program Handbook.* (12th ed.). (2013). Juneau: Alaska Department of Transportation and Public Facilities.

Pedestrian and bicycle use is prohibited on the Steese Expressway and currently a separated, shared-use path exists along each side of the road between Airport Way and College Road. At College Road, the path on the eastern side ends, while the path on the western side continues northward to Farmers Loop Road. Generally the path width is 5 feet, though in some sections can range between 5 to 8 feet wide. The American Association of State Highway and Transportation Officials (AASHTO), recommends a minimum paved width for two-directional shared use paths of 10 feet. In rare instances, a reduced width of eight feet can be adequate.[10] FMATS identified and prioritized the following intersections as exhibiting a need for pedestrian and bicycle crossing improvements[11]:

- Steese Expressway / 3rd Street – High priority
- Steese Expressway / Johansen Expressway – Medium priority
- Steese Expressway / Farmers Loop Road – Low priority

Facilities for pedestrians and bicyclists along the Richardson Highway from "6-mile" Badger Road interchange to the Airport Way intersection are minimal. Unimproved road shoulders currently serve non-motorized users. However, a project was recently proposed to construct a separated pedestrian and bicycle facility in this corridor stretch.[12]

II –Mobility

The study corridor has undergone significant changes in land-use without updated planning for correspondingly appropriate improvements to transportation infrastructure.[13] As a result, a new traffic analysis is required to determine the validity of previous corridor recommendations. The updated analysis revealed the existing corridor infrastructure can't accommodate projected traffic volume growth without resulting in failing Levels of Service (LOS). The LOS is a common, quantitative service measure of intersection and road segment congestion that characterizes operating conditions in terms of traffic performance measures related to speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. The Transportation Research Board's Highway Capacity Manual 2010 (HCM) defines six levels of service, ranging from A to F, used to identify operating conditions on a given roadway or intersection. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst.[14] LOS grades are assigned to intersections based on average vehicle delay:

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[10] *Guide for the Development of Bicycle Facilities.* (1999). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[11] *FMATS Non-Motorized Transportation Plan.* (2012). Anchorage: Kittelson & Associates, Inc..
[12] ADOT&PF (2013, August 20). *Richardson Highway MP 356-362 Bicycle/Pedestrian Path* – 2013-2015 Alaska Statewide Transportation Improvement Program, Need ID: 25598. Retrieved November 18, 2013, from http://www.dot.state.ak.us/stwdplng/cip/stip/.
[13] *Steese Expressway Corridor Study Fairbanks, Alaska State Project No. A2056 Master Plan Report.* (1988). Tampa: Greiner, Inc..
[14] *HCM2010 Highway Capacity Manual.* (2010). Washington DC: Transportation Research Board of the National Academies.

Level of Service	Average Delay
A	Less than 10 seconds
B	10 to 20 seconds
C	20 to 35 seconds
D	35 to 55 seconds
E	55 to 80 seconds
F	Greater than 80 seconds

In heavily developed sections of metropolitan areas, conditions may make the use of LOS D appropriate. However, this level should be used sparingly and at least a LOS C should be sought.[15] As the land surrounding Fairbanks is developed, traffic volumes in the study area are projected to increase as follows:

Road	2010 AADT (vehicles)	2040 AADT (vehicles)
Richardson Highway	23,910	39,752
Steese Expressway	21,761	29,109
Airport Way	17,725	24,436
3rd Street	10,730	13,950
College Road	14,785	16,226
Trainor Gate Road	6,545	7,951
Johansen Expressway	18,193	24,457
Farmers Loop Road	6,780	9,582

The Alaska Department of Labor and Workforce Development projects a population increase for the FNSB as follows:[16]

2010 Population	2035 Population
98,000 people	132,076 people

This projected increase results in an average, annual growth rate of 1.15%. Improving the transportation infrastructure of the Richardson and Steese Expressway corridors is necessary to support this projected growth. Based on the traffic analysis and projected growth, the following table provides predicted morning and afternoon peak LOS grades by intersection:

[15] *A Policy on Geometric Design of Highways and Streets* (4th ed.). (2001). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[16] Alaska Department of Labor and Workforce Development (2012, April). Alaska Population Projections 2010-2035. *Alaska Department of Labor and Workforce Development.* Retrieved October 21, 2013, from http://labor.alaska.gov/research/pop/popproj.htm.

Intersection	2040 AM Level of Service	2040 PM Level of Service
Steese Expy / Airport Rd	F	F
Steese Expy / 10th Ave	A	B
Steese Expy / 3rd St	F	D
Steese Expy / College Rd	F	C
Steese Expy / Trainor Gate Rd	F	D
Steese Expy / Johansen Expy	F	D
Steese Expy / Farmers Loop Rd	F	E

ADOT&PF will coordinate with local planning agencies and stakeholders to develop a corridor concept that accommodates future traffic volumes and reduces road-user costs to the extent practical. Generally road-user costs such as fuel and oil usage, wear on tires, repairs, delay to motorists, and crashes that result from speed changes, stops, and waiting can be reduced by increasing mobility. The developed concept will attempt to enhance and balance the mobility and access needs of all corridor users. ADOT&PF will also encourage local governing agencies to balance both future land development and access control with the FMATS Long-range Transportation Plan (LTP), thereby promoting overall corridor sustainability.

III – Air quality

Air quality standards have changed since the last corridor plan and future transportation improvements need to consider future air quality impacts. Portions of Fairbanks and North Pole are classified as U.S. Environmental Protection Agency (EPA) maintenance areas for carbon monoxide (CO). Additionally a portion of the Fairbanks North Star Borough is classified as an EPA nonattainment area for fine particulate matter ($PM_{2.5}$). Maintenance areas are zones that meet air quality standards, but need funding for improvements and programs to maintain acceptable air quality standards. Nonattainment areas are zones where air quality levels persistently exceed national ambient air quality standards. Although Fairbanks has improved for CO and PM_{10} pollutants since the early 1980s, it's still required to monitor air quality impacts resulting from transportation projects under the Clean Air Act (CAA).

Section 110 of the CAA, 42 U.S.C. §7410, requires state and local air pollution control agencies adopt federally approved control strategies to minimize air pollution. The resulting body of regulation is known as a State Implementation Plan (SIP). With assistance from the Alaska Department of Environmental Conservation (ADEC), Fairbanks and North Pole must periodically prepare updates to the SIP to demonstrate maintenance of CO and PM air quality standards.[17] The CAA prohibits federal actions that would cause air quality violations or jeopardize attainment of air quality standards; currently defined under the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards. This policy

[17] Alaska Department of Environmental Conservation (2013, April 22). State Implementation Plan (SIP). *Alaska Department of Environmental Conservation*. Retrieved October 21, 2013, from http://dec.alaska.gov/air/anpms/SIP/SIPhome.htm.

requires review of all planned transportation projects in Alaska's nonattainment and maintenance areas to ensure air quality won't decrease. This analysis, known as "conformity," requires demonstration that highway and transit projects are consistent with the most recent SIP emissions budget for CO and PM.

Proposed FMATS MTP and Transportation Improvement Program (TIP) construction projects within nonattainment and maintenance areas must undergo regional and project-level analysis to ensure conformity to the SIP. The regional analysis evaluates the combined emission impacts of all projects regardless of funding source in an area for each year in the TIP timeframe (approximately 20 years). The project-level analysis evaluates emission impacts at the project location to ensure localized "hot-spot" violations won't result. A concept will be developed that is consistent with federal and local air quality requirements. The concept will improve air quality through the reduction of transportation deficiencies and increasing mobility through the corridor (e.g. reducing vehicle idle time).

IV – Freight operations

Approximately 90 percent of Alaska's unrestricted revenue is generated through oil and gas exploration, development, and production, with most generated from activities on Alaska's North Slope.[18] As of early 2013, North Slope oil accounted for approximately 8% of all U.S. oil production, or about 535,000 barrels per day.[19] Alaska's oil and gas industry use the corridor daily to access the North Slope haul route (Alaska Route 11 – Dalton Highway). Title 17 of the Alaska Administrative Code 25.014 designates the Richardson Highway and Steese Expressway as official truck routes for long combination vehicles. The existing congestion in the study corridor results in high road-user costs for freight operators. The addition of low vertical clearance obstructions (e.g. traffic signal mast arms) limits shipment sizes, resulting in increased truck traffic. Besides being heavier, trucks are generally slower and occupy more roadway space. Consequently, trucks have a greater individual effect on traffic operation than passenger vehicles.[20]

ADOT&PF will collaborate with commercial shipping operations to develop a corridor concept that optimizes freight operations for long- and short-hauls while also minimizing negative impacts. This coordination effort may also identify existing transportation deficiencies that restrict/constrain freight operations. ADOT&PF will also partner with ARRC to minimize impacts to rail operations within the corridor and identify opportunities to improve and / or eliminate existing at-grade crossings and other deficiencies.

[18] Alaska Department of Revenue – Tax Division (2013, Spring). Revenue Sourcesbook Spring. *Alaska Department of Revenue*. Retrieved October 21, 2013, from http://www.tax.alaska.gov/programs/sourcebook/index.aspx.
[19] U.S. Energy Information Administration (2013, September 27). Crude Oil Production. *U.S. Energy Information Administration*. Retrieved October 21, 2013, from http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm.
[20] *A Policy on Geometric Design of Highways and Streets* (6th ed.). (2011). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).

V – Sustainability

The current study corridor won't sustain projected traffic volumes without resulting in failing service levels. In addition, available funding for transportation projects has declined in recent years leading to increased competition for limited federal and state resources. As such, ADOT&PF will coordinate with the public, local agencies, and stakeholders to develop a concept that improves the longevity and sustainability of the corridor while reducing maintenance and operations costs. In addition consideration will be given to the future growth of residential, commercial, and military developments such as:

- Fort Wainwright's plan to relocate its Trainor Gate Road access to the Johansen Expressway / Steese Expressway intersection
- ARRC's Northern Rail Extension Project – this project extends an existing rail line from its terminus near North Pole, 80 miles to a terminus in the vicinity of Delta Junction. The new line will provide improved transportation options for the U.S. military, mass transit, and freight movement between Fairbanks / North Pole and Delta Junction[21]

[21] Alaska Railroad Corporation (2005). Northern Rail Extension Project. *Alaska Railroad Northern Rail Extension Website*. Retrieved November 20, 2013, from http://www.northernrailextension.com/index.html.

ATTACHMENT 3—Further Information

1. Steese Expressway/Farmers Loop Road
    - Wetlands impacts
    - ROW impacts
    - Proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Proximity to Army Permafrost Research Project
2. Steese Expressway/Johansen Expressway
    - proximity to business district may potentially require a more in-depth socioeconomic impact analysis
    - proximity to large area of contaminated sites[i]
    - ROW impacts likely; proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - proximity to cemetery and churches will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
3. Steese Expressway/W. Trainor Gate Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - AHRS sites to the east of the highway are related to military infrastructure may necessitate analysis but no 4(f) analysis expected.
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
4. Steese Expressway/College Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
5. Steese Expressway Bridge
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Graehl Park and Riverside Park within project vicinity; may require 4(f) analysis
6. Steese Expressway/10th Avenue
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
7. Steese Expressway/Airport Way
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis

- Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
- Military boundary adjacent to project area

8. Richardson Highway: West-Bound Off-Ramp and Railroad intersection
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Military boundary adjacent to project area
    - Potential wetland impacts

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[i] Contaminated Sites:

- Bentley Mall East Satellite (32 College Rd): Active site with institutional controls; contamination from PCE and TCE
- Tesoro Northstar #103 (527 Old Steese Highway): Cleanup complete with institutional controls; groundwater and soil contamination still present; Complex site with deed notice; consult DEC
- US Travel Systems (230 Old Steese Hwy): Active site; contamination from USTs; as of 2011, benzene, DRO and GRO above groundwater cleanup levels
- Holiday Store #618 (203 3rd. Street): Cleanup complete with institutional controls; contamination from underground storage tanks; groundwater contaminated; consult record of decision
- Steese Mall (201 Old Steese Hwy.): Active site

State of Alaska Department of Transportation & Public Facilities

Statewide Design & Engineering Services

AGENCY SCOPING
REQUEST FOR EARLY COORDINATION

Project Name: **Richardson Hwy/Steese Expy Corridor Moderate Mobility/Moderate Access Concept**
Project Number (state/federal): **60799/NH-000S(781)**
Comments Due Date: **March 3, 2014**
Anticipated Level of Documentation: **To be Determined**

Dear Commenter:

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Alaska Division of the Federal Highway Administration (FHWA), is requesting your comments on a proposed project in preparation for completing the project's environmental documentation. To ensure that all factors are considered in the development of the environmental document we request your comments on the project proposal, project-area resources, and any project-related permits or clearances to be obtained from your agency. Please provide your written comments by **March 3, 2014.**

To ensure that your comments are addressed in the project's documentation, please refer to the project by the above name or number, and send or e-mail your comments to:

Brett Nelson - Northern Region Environmental Coordinator
Attention: Benjamin Storey - Environmental Impact Analyst
Alaska Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, AK 99709
Email: benjamin.storey@alaska.gov Phone: 907-451-2229

_____

Brett Nelson/Regional Environmental Coordinator Date

Attachments: (1) Figures 1-4 (2) Purpose and Need (3) Further Information

I. Purpose and Need of Project

See Attachment 2

II. Project Description & Alternatives

Concept Descriptions:

Concept 1 - High Mobility / Low Access (refer to Concept 1 Scoping Letter)
Concept 2 - Moderate Mobility / Moderate Access (this Scoping Letter)
Concept 3 - Low Mobility / High Access (refer to Concept 3 Scoping Letter)

The proposed project consists of motorized and non-motorized traffic improvements to resolve projected operational deficiencies through the design year 2040 with a balanced emphasis on both mobility and property access. The project will construct grade-separated intersections that progress the corridor toward a controlled access, freeway-type facility through the established corridor (see Attachment 1, Figure 2). At-grade intersections will continue to exist at the intersections of Steese Expressway with College Road and 3rd Street. In comparison to the other concepts, Concept 2 provides greater overall safety benefits and greater capacity for projected traffic growth through the design year than Concept 3, but less than Concept 1.

Primary features include:

- Converting at-grade intersections to grade-separated interchanges at the following locations:
  - Farmers Loop Road / Steese Expressway
  - Johansen Expressway / Steese Expressway
  - Trainor Gate Road / Steese Expressway
  - Airport Way / Steese Expressway
- Intersection capacity improvements (e.g., new auxiliary lanes and a third southbound through lane) at the following locations:
  - College Road / Steese Expressway
  - 3rd Street / Steese Expressway

Associated improvements include:

- New/expanded pedestrian facilities;
- Reconstruction/widening of the Steese Expressway bridge over the Chena River;
- Constructing railroad overpasses at Trainor Gate Road and at the Richardson Highway westbound off-ramp;
- Controlling access to properties adjacent to the Steese Expressway;
- Storm drain and utility modifications;
- Additional through lanes on the Old Steese Highway; and
- Intersection controls (e.g., signalization, roundabouts, new auxiliary lanes, channelization).

III. Location

The project begins at "6-mile" Badger Road interchange on the Richardson Highway (MP 357) and ends at the Chena Hot Springs Road interchange on the Steese Expressway (MP 5), near Fairbanks, Alaska (Attachment 1, Figure 1). The following table presents the sections and coordinates (WGS 84) defining the location of the project.

Township	Range	Section	Meridian	USGS Quad Map	Start Latitude/End Latitude	Start Longitude/End Longitude
001N	001W	35;36;	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

001S	001W	1;2;11; 12;14	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

IV. Environmental Consequences

A. Right-of-Way (ROW) Impacts:

1. ROW required:
   a. Property required from a state or federal agency.

      (1) State Park Name: **No**
      (2) State Refuge or Critical Habitat Area Name: **No**
      (3) Federal Park Name: **No**

   b. Property required from local government entity. **2**

   c. Business or residential property required.
      (1) Residential: (indicate number) **3** (2) Business: (indicate number) **20**

   d. Property required from a Tribe or ANCSA corporation.
      Name: **No**

2. Describe: Right-of-way acquisition from residential and/or commercial properties will result from road widening for new through lanes on the Steese Expressway and the Old Steese Highway, addition of frontage roads, and construction of grade-separated intersections. This potential for right-of-way acquisition must be continually assessed and quantified throughout the design process. State refuge and government-owned land is shown in Attachment 1, Figure 4.

B. Socio-Economic Impacts:

1. Project could affect community cohesion, neighborhoods, or other community facilities. **Yes**
2. Project could affect economic development, such as established area businesses. **Yes**
3. Project could affect travel patterns and accessibility. **Yes**
4. Project could disproportionately affect minorities or disadvantaged persons (E.O. 12898) **Potential**

The project is in close proximity to residential and commercial development; however, comments from the public did not indicate any unresolvable concerns about the project affecting community cohesion. Controlling access on the Steese Expressway could lead to greater perceptions that the expressway is a barrier to community cohesion. New frontage roads will address access to adjacent properties to minimize impacts or improve access to economic development. The new interchanges will become the primary crossings of the Steese Expressway. Access changes in the vicinity of 3rd Avenue and College Road will be minimal since these intersections will remain at-grade. While traffic patterns and local residents and businesses may be affected temporarily during construction, the overall concept will relieve congestion and have a net benefit when completed.

The project will be evaluated to address potential effects on minority and low-income populations.

For additional information, see Attachment 1, Figure 3 and Attachment 3

C. Impacts to Historic Properties:

1. National Register listed eligible/potentially eligible historic properties in project area/area of potential effect (APE). **Potential**

2. Places of traditional religious or cultural importance to Tribes are present in the project area. **None identified at the planning stage.**

3. Historic Properties survey may be required to identify if sites are present. **Yes**

4. Possible adverse effect on historic properties. **None identified at the planning stage.**

Although an APE has not been established, the nearest registered historic place is located more than half a mile away. There are 22 resources listed on the Alaska Heritage Resources Survey in the project area. The majority are historic buildings and features from the periods relating to the founding of Fairbanks, arrival of the Alaska Railroad, and World War II.

Consultation in accordance with Section 106 of the National Historic Preservation Act will need to be conducted with the State Historic Preservation Officer and local tribal entities. Traditional Cultural Properties (TCPs) are identified during Section 106 consultation. A resource survey is not planned at this time.

D. Fish & Wildlife Impacts:

1. Project could affect anadromous or resident fishes. **Yes**
2. Problem fish pass culverts within the project area. **No**
3. Essential Fish Habitat (EFH) present in the project area. **Yes**
4. Wildlife Resources:
   a. Project in area of high wildlife/vehicle accidents. **No**
   b. Project could bisect migration corridors. **No**
   c. Project could segment habitat. **No**
   d. Species of concern to OHMP/ADF&G in the project area **No**
5. Bald Eagle and Golden Eagle Protection Act:
   a. Eagle nesting tree(s) in the project area. **No**

6. Describe:

The ADF&G Atlas to the Catalog of Waters Important to the Spawning, Rearing or Migration of Anadromous Fishes identified the Chena River (334-40-11000-2490-3301) as a spawning and rearing ground for Chinook salmon and a spawning ground for chum salmon. Work below the ordinary high water mark during bridge reconstruction will require a Title 41 permit to be obtained from DNR. An EFH assessment would also be needed.

Because suitable habitat for Bald Eagles is present within the study area and proposed work may include removing trees, an eagle survey may be required to determine if any active or alternate nests are located within the project area. Any vegetation clearing will occur outside the migratory bird nesting period from May 1 to July 15.

E. Threatened and Endangered (T&E) Species Impacts:

1. Listed T&E species present. **No**
2. T&E species migrate through the project area. **No**
3. Proposed species present in project area. **No**
4. Candidate species present in the project area. **No**
5. Critical habitat in the project area. **No**
6. Describe:

According to recent guidance from the United States Fish and Wildlife Service, no threatened or endangered species occurs in the Fairbanks North Star Borough (per "List of Endangered, Threatened, Proposed, Candidate and Delisted Species in Alaska," Updated May 24, 2013 by National Marine Fisheries Service Alaska Regional Office).

F. Waters of the U.S and Water Bodies:

1. Project affects Waters of the U.S. (as defined by USACE), Section 404/10/103. **Yes**
2. Project affects Navigable Waters of the U.S. (as defined by USACE), Sec. 10. **Yes**
3. Project affects a Cataloged Anadromous Fish Stream (i.e., 41.14.870). **Yes**
4. Proposed river or stream involvement:

Reconstruction/widening of the Steese Expressway bridge would likely require work below Chena River's ordinary high water.

5. Describe:

The Chena River has been determined by the U.S. Army Corps of Engineers (USACE) to be a navigable waterway for its entire length. A Section 9 Permit from the U.S. Coast Guard may be needed. Work on the bridge would also require a floodplains permit from the Fairbanks North Star Borough Department of Community Planning.

G. Wetlands Impacts:

1. Project involves wetlands as defined by USACE. **Yes**
2. Wetlands delineated in accordance with DOT&PF/FHWA/USACE Agreement. **No**
3. Acres: Less than 2 acres
4. Fill: Such factors are unknown at this time.
5. Dredge: Such factors are unknown at this time.
6. USACE authorization required: **Yes**

7. Describe:

Wetlands have been identified by the USFWS National Wetland Inventory in the vicinity of the corridor between Johansen Expressway and Farmers Loop Road and within the vicinity of the Richardson Highway Off-ramp, as shown in Attachment 1 (Figure 4). The improvements planned for the Steese Expressway and Farmers Loop intersection will likely result in small impacts to wetlands. Once construction design plans have been developed, a field review will be conducted to confirm the status of wetlands present. If widening of the existing footprint results in fill being placed in the wetland, Section 404 CWA Permit from the USACE and a Section 401 Water Quality Certification from the ADEC will be required.

H. Alaska Coastal Management Program (ACMP):

1. Project within the ACMP boundary. **No**
2. Project within a local coastal management district. **No**
3. Describe: The project area is not within a coastal zone.

I. Hazardous Waste:

1. Known or potentially contaminated sites along the corridor. **Yes**
2. ROW required from, or extensive excavation adjacent to, a known hazardous waste site. **Yes**
3. The existing and/or proposed ROW is contaminated. **No**
4. Potential for encountering hazardous waste during construction is high. **No**
5. Describe:

A search of the ADEC contaminated site database revealed 6 active sites and 5 closed sites with institutional controls either within the project limits, or within 500 feet. Contaminants in the area are related to pipeline construction, military activities, and include hydrocarbons, solvents and other chemicals, particularly in the vicinity of Johansen Expressway and Old Steese Highway (see Attachment 1, Figure 3). A Phase 1 Environmental Site Assessment may need to be conducted prior to construction.

For additional information, see Attachment 3

J. Air Quality Impacts (NEPA and Conformity):

1. NEPA (all projects):
   a. The project is located in an air quality nonattainment or maintenance area (i.e. CO or PM-10). **Yes**
      If yes, indicate CO ☒ or PM-2.5 ☒

b. The project is of the type exempt from an air quality analysis per 40 CFR 93.126 (Table 2 and Exempt Projects). **No**

The project will eliminate stop and go traffic at several intersections and reduce idling time. As a result, air quality will improve since emissions are higher when vehicles idle. The conversion of four at-grade, signalized intersections to grade separated interchanges proposed as part of the project will be significantly more effective in reducing air quality than Concept 3, but less than Concept 1.

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2. Conformity (projects in nonattainment areas only): **Yes**

   a. The project is identified in the approved STIP. **No**

   b. The project is in the most current air quality conformity (i.e., TIP). **No**

   c. Have there been any changes in the project design concept and scope, as described in the STIP and TIP conformity analysis **No**

3. Describe:

Air quality is a major concern of this study. Projects priorities will be influenced by their effectiveness at minimizing air quality contaminants and achieving standards set by the Environmental Protection Agency.

K. Floodplains Impacts (23 CFR Part 650, Subpart A):

1. Project encroaches onto a 100-year floodplain. **Yes**
2. Project involves a regulatory floodway. **No**
3. Project is located within an area protected by local flood hazard ordinances. **Yes**
4. Flood hazard permit is required from local government. **Yes**
5. Describe:

Portions of this project are located in the 100-year floodplain of the Chena River, Little Chena River and the Chena Slough. The Fairbanks North Star Borough Department of Community Planning administers a floodplain ordinance, Title 15, and an approved floodplain permit is required for any development within the flood hazard area (Flood Zone A) or floodway.

L. Noise Impact (23 CFR Part 772):

1. There are noise-sensitive receivers/land uses adjacent to the proposed project **Yes**
2. The project is located on new location, would result in substantial changes in vertical or horizontal alignment, or would increase the number of through lanes **Yes**

Concept elements are in close proximity to "sensitive receivers" including cemeteries, schools, churches, and homes, and the project(s) will need to analyze their potential impacts with a noise analysis.

For additional information, see Attachment 1, Figure 3 and Attachment 3

M. Water Quality Impact:

1. Project could involve a public or private drinking source. **No**
2. Project could result in a discharge of storm water to Waters of the U.S. **Yes**
3. Project could affect a designated impaired water body. **Yes**
   a. List name(s) and location(s):

The Chena River and Noyes Slough are considered "high priority" waterbodies through the Alaska Clean Water Actions (ACWA) ranking process because of impairment from petroleum hydrocarbons, oil and grease and sediment. Noyes Slough was also listed as polluted from residues (debris). Urban run-off is considered the primary source. The slough and the river both have approved management plans that limit the Total Maximum Daily Load (TMDL) of pollutants.

4. Is there a municipal separate storm sewer system (MS4) NPDES permit or will runoff be mixed with discharges from an NPDES permitted industrial facility. **Yes**
5. If extensive dewatering (>250,000 gallons) is anticipated, is the area to be dewatered within 1 mile of a contaminated site **No**
6. Describe:

The City of Fairbanks and DOT&PF own and operate storm sewer systems through a system of subsurface storm sewers, roadside ditches, and surface streets. Off-site sedimentation is expected to be minimal and best management practices (BMP's) will be implemented for the purpose of meeting state and federal water quality standards. A project specific erosion and sediment control plan will be developed prior to construction initiation. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented by the construction contractor. The SWPPP will comply with applicable APDES permits.

N. Section 4(f)/6(f):

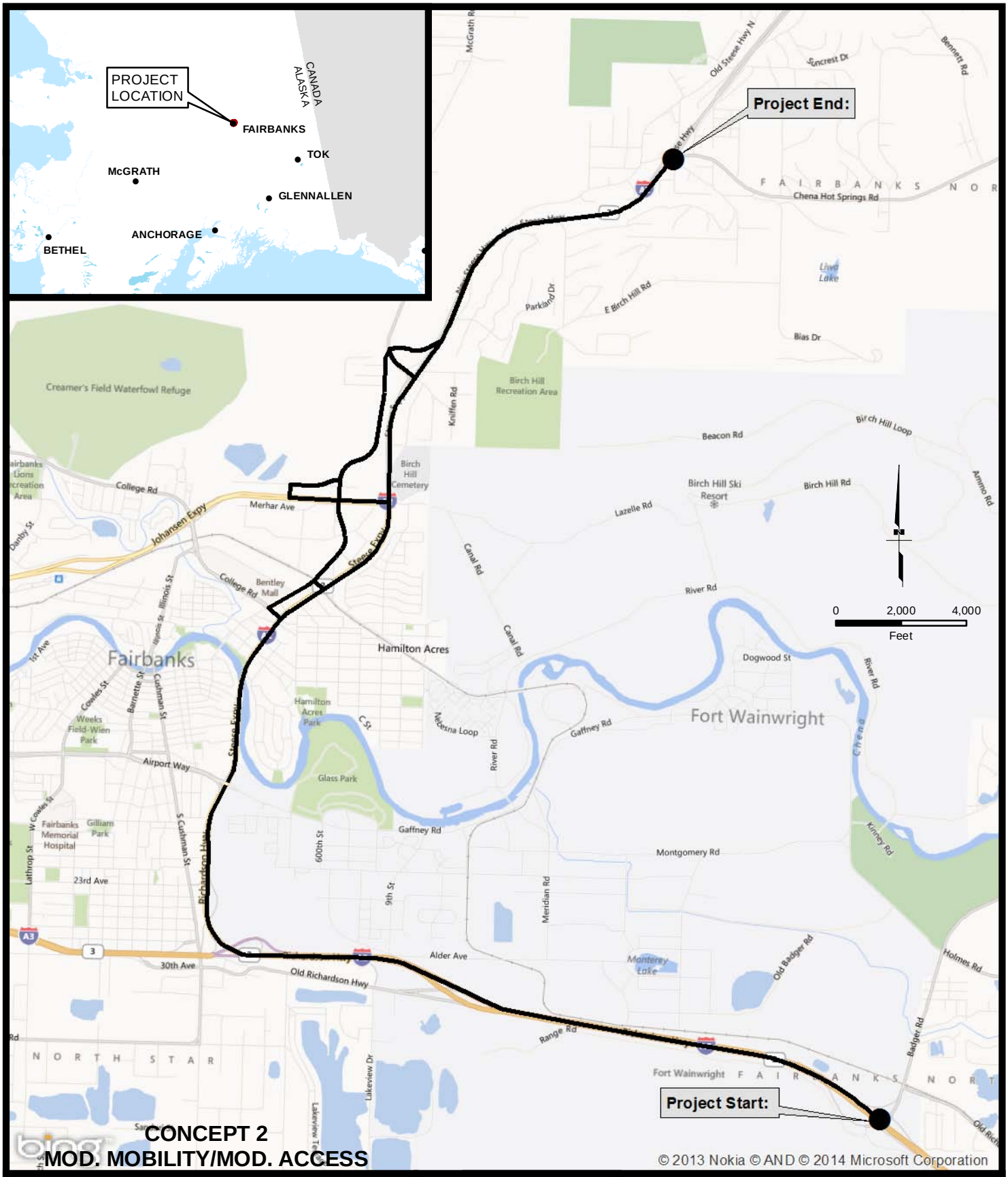
1. There would be a "use" of land from 4(f) properties. **Potential**
2. Section 6(f) properties affected by the proposed action. **No**
3. List agency(s) with jurisdiction: **Fairbanks North Star Borough**
4. Describe:

The proposed project is consistent with local land use and transportation plans, including the Fairbanks North Star Borough Regional Comprehensive Plan. The potential for Section 4(f) impacts to parks near the bridge over the Chena River may exist and further assessment is necessary pending project development (See Attachment 1, Figure 4). Also, any potential impacts involving historic properties will undergo Section 4(f) review and evaluation. Impacts to 6(f) lands are not anticipated due to their absence from the corridor.

O. Permits and Authorizations

1. USACE, Section 404/10/103: **Yes**
2. USCG, Section 9: **Yes**
3. ADF&G Title 16: **Yes**
4. Flood Hazard: **Yes**
5. ADEC 401: **Yes**
6. ADEC Storm Non-domestic Storm Water Disposal Plan Approval: **Yes**
7. APDES GP: **Yes**

11. Other. *If "yes," list.* **No**



Project Location and Vicinity Map

Sec. 35; 36 (T1N;1W)
Sec. 1;2;11;12;14 (T1S;1W)
Fairbanks Meridian, Alaska
USGS Topo Maps Fairbanks D2

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 1

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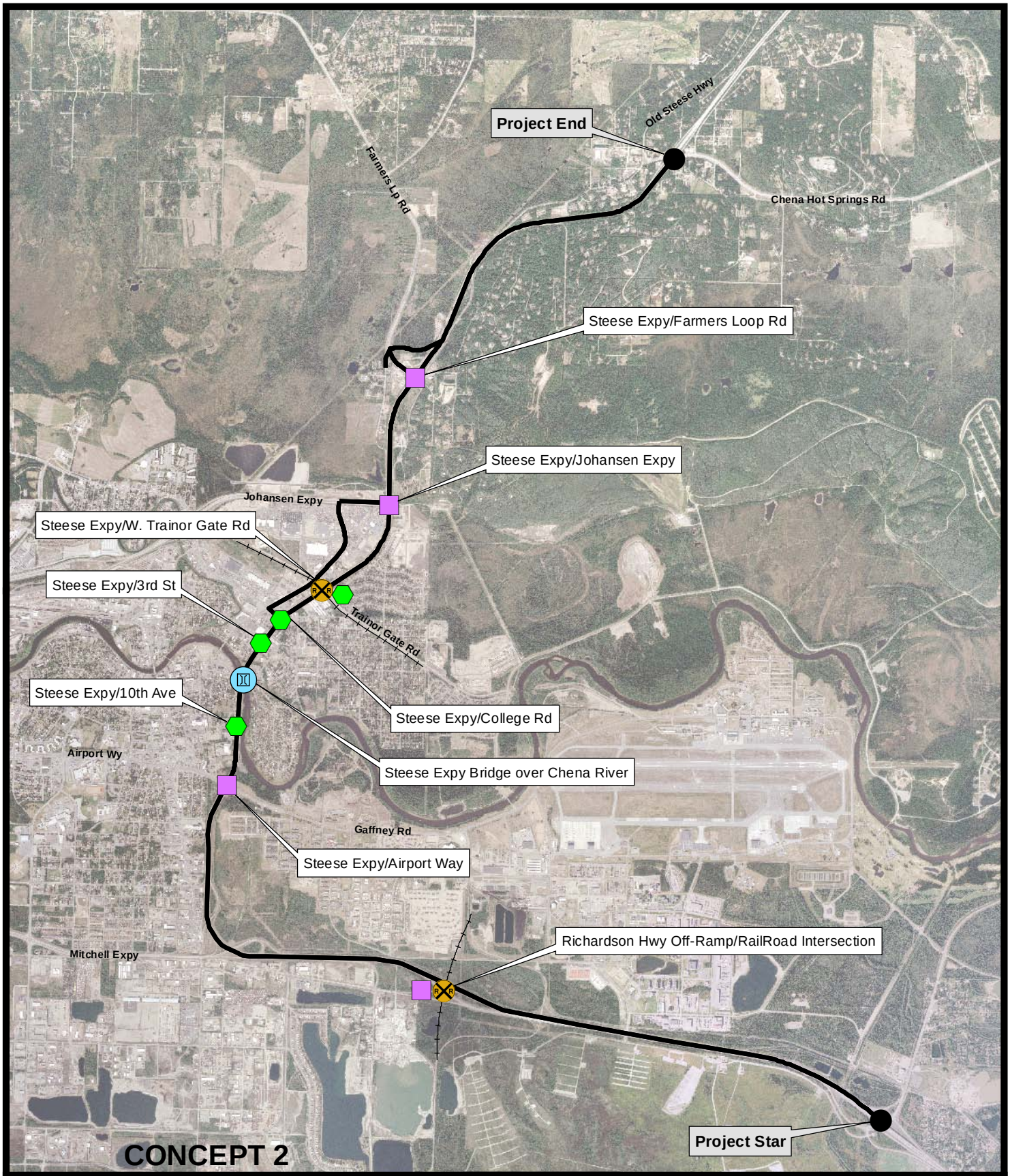

Project Corridor and Associated Modifications

Railroad Modifications

At-Grade Intersection Improvements

Bridge Reconstruction

Grade-Separated Conversion

Railroad Overpass

0 2,000 4,000

Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 2

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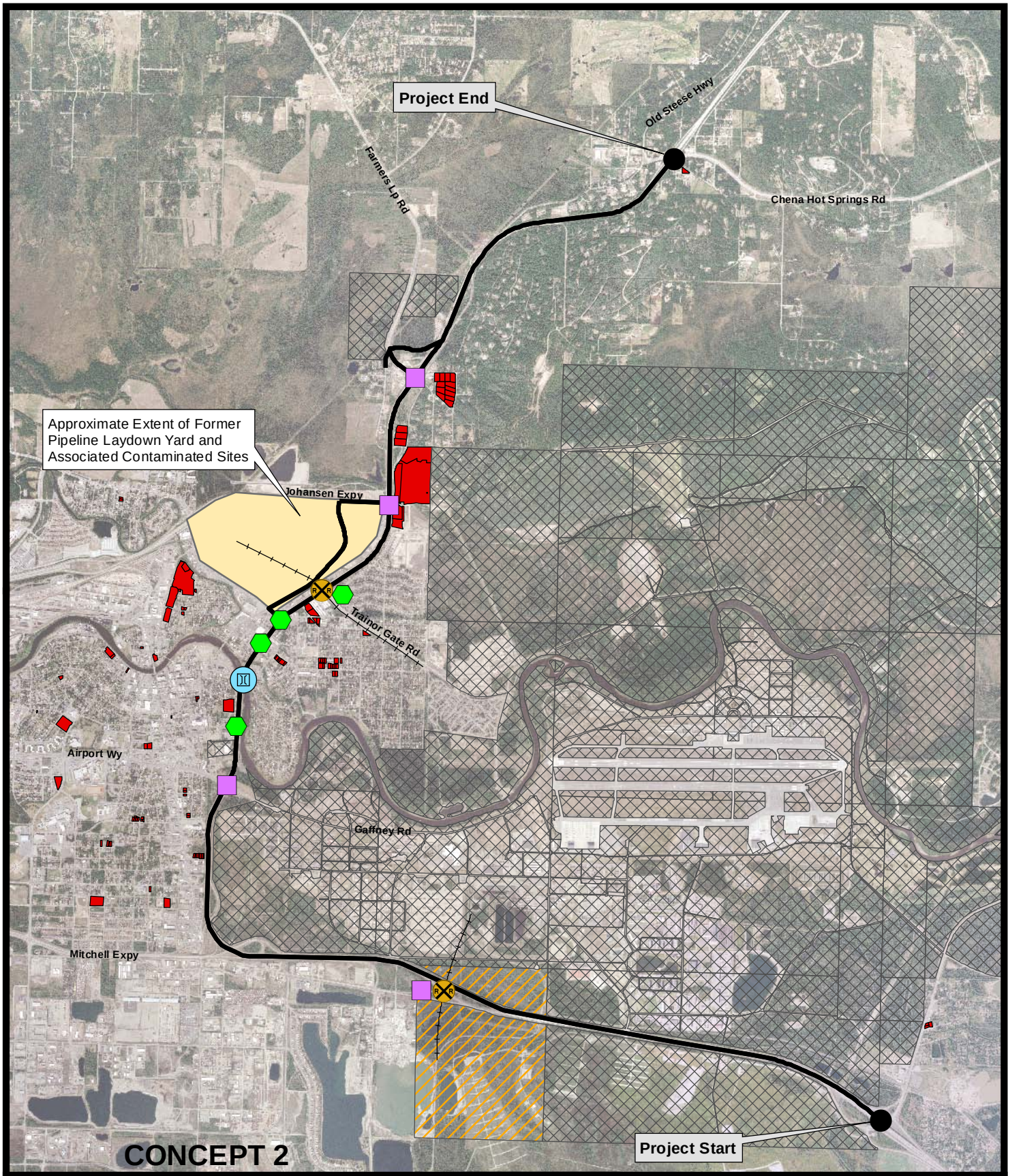

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 3

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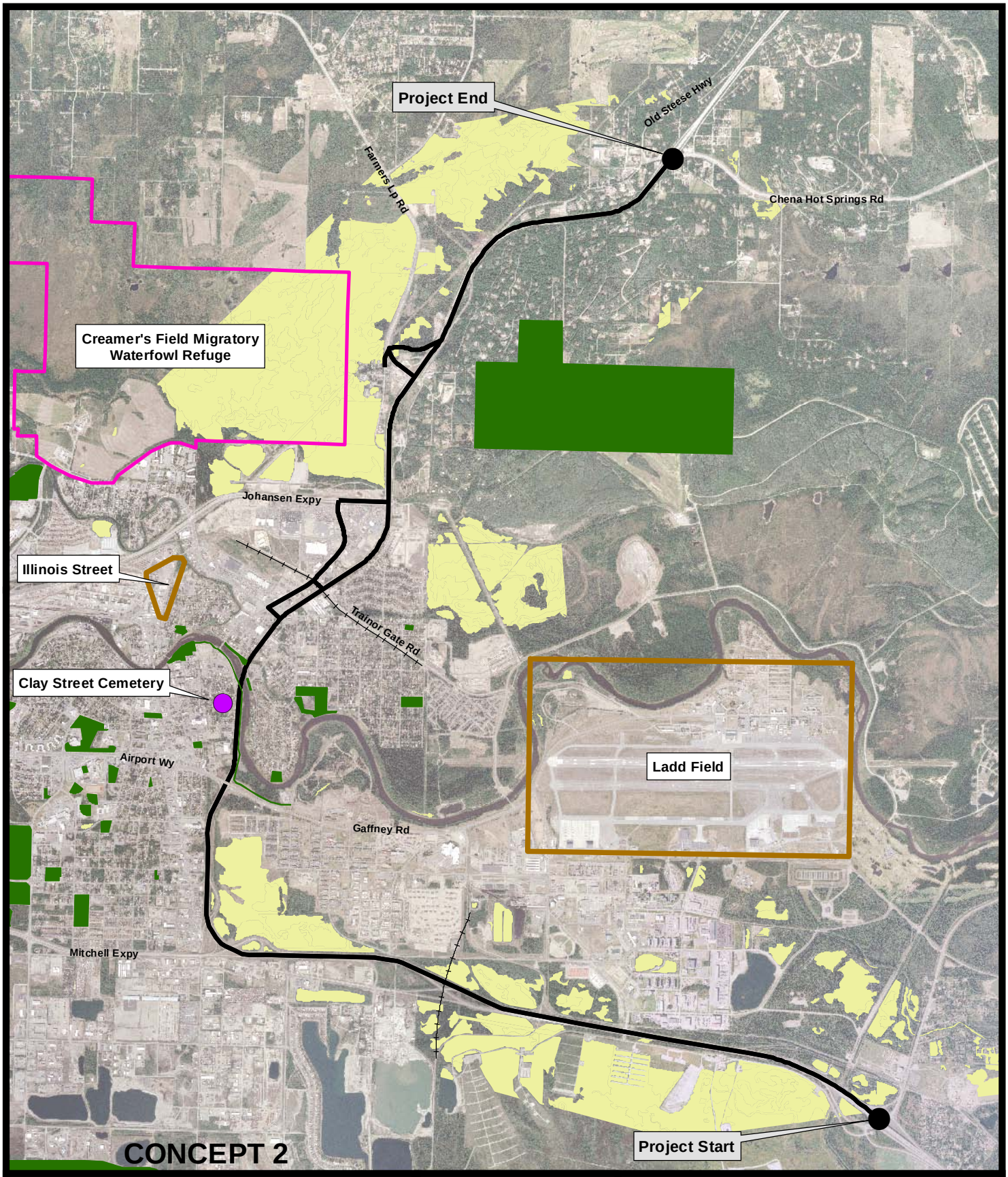

Project Corridor and Associated Modifications
Railroad Modifications
Cultural Resource District
Cultural Resource Point
Wetlands
Parks

0 2,000 4,000
Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 4

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The Alaska Department of Transportation and Public Facilities (ADOT&PF), in cooperation with the Alaska Division Office of the Federal Highway Administration (FHWA), is developing a Planning and Environmental Linkage (PEL) Study for the Fairbanks, Alaska area Richardson Highway / Steese Expressway corridors from Badger Road interchange (Richardson Highway milepost 360) to Chena Hot Springs Road interchange (Steese Highway milepost 5).

Purpose

The purpose of the study is to collaborate with State, local, and federal agencies, the general public, and interested stakeholders to develop a shared corridor concept that meets long-range transportation needs to improve safety, mobility, air quality, and freight operations. Additionally, the concept will promote improvements that reduce transportation deficiencies (e.g. delay and congestion), enhance the corridor's sustainability (e.g. infrastructure longevity and maintenance costs), and minimize environmental and social impacts.

Project Need Summary

I – Safety

Safety for motorized and non-motorized traffic needs improvement by developing a corridor concept that:

- Upgrades the transportation infrastructure to current ADOT&PF design standards where practical
- Reduces conflict points
- Reduces the frequency and severity of crashes at "high crash locations"
- Improves pedestrian and bicycle crossings

II – Mobility

The mobility of people and goods in the corridor needs improvement by developing a concept that:

- Reduces delay and congestion
- Improves intersection and road segment Level of Service (LOS) to C or better where practical
- Balances the need for adjacent property access
- Accommodates projected traffic growth

III – Air quality

Air pollution in the existing non-attainment and maintenance area needs reduction by developing a corridor concept that:

- Meets the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards
- Reduces vehicle idle times

IV – Freight operations

Freight operations need enhancement by developing a corridor concept that:

- Provides efficient transportation of goods and services
- Minimizes existing at-grade railroad crossings as practical
- Reduces vertical clearance obstructions (e.g. traffic signal mast arms)

V – Sustainability

The overall corridor sustainability and longevity needs enhancement by:

- Considering future developments and corridor growth in collaboration with the general public, local governments and planning authorities, and interested stakeholders
- Minimizing maintenance and operation costs to the extent practical

Study Corridor

At present, the Richardson Highway predominantly serves through-traffic for the communities of Fairbanks and North Pole, while the Steese Expressway serves a mixture of through- and local-traffic in Fairbanks. The Richardson Highway transitions into the Steese Expressway at the Airport Way / Gaffney Road intersection; both roads are primarily four-lane divided major arterials. The 2010 Annual Average Daily Traffic (AADT) volumes were 23,910 and 21,761 for the Richardson Highway and Steese Expressway respectively.

Richardson Highway

The Richardson Highway, comprised of Alaska Routes 1, 2 and 4, is classified as an interstate highway and is the only major east / westbound transportation corridor linking Interior Alaska with Canada. Adjacent land use in the study corridor consists primarily of industrial, commercial, and military infrastructure. Within the study corridor, the Richardson Highway provides access to:

- Residential communities / developments between Fairbanks and North Pole
- Fort Wainwright – home to the U.S. Army Garrison and units of the U.S. Army Alaska (USARAK) including the 1st Stryker Brigade Combat Team, 25th Infantry Division, the 16th Combat Aviation Brigade, and the Medical Department Activity-Alaska. In addition, the fort has 7,700 soldiers,

approximately 8,200 family members, and about 1,250 Army and Department of Defense civilian employees.[1] Fort Wainwright is a strategic position for the U.S. Army to deploy troops anywhere in the world for contingencies ranging from humanitarian relief to combat operations.[2] Fort Wainwright also generates 28% of all revenue in the Fairbanks North Star Borough (FNSB)[3]

- Alaska Routes 2 (Elliott Highway), 3 (George Parks Highway), and 6 (Steese Highway)

Beyond the study corridor, the Richardson Highway provides access to:

- North Pole, Moose Creek, Salcha, Delta Junction, Paxon, Glennallen, and other smaller communities in eastern Interior Alaska

- Badger Road – an urban minor arterial which loops north and then southeast back to North Pole. This road provides access to:
    - Residential developments between Fairbanks and North Pole
    - Fort Wainwright
    - Ticasuk Brown Elementary School

- Eielson Air Force Base (AFB) – home to the 354th Fighter Wing and 168th Air Refueling Wing. In addition, the base has approximately 2,500 military workers, more than 2,000 military and family members living on base, and 480 civilian employees. Eielson AFB supports the U.S. Army Alaska with close air support, theater airlift, reconnaissance missions, and weather analysis.[4] Eielson AFB also generates 10% of all revenue in the FNSB[5]

- Fort Greely – home to the 49th Missile Defense Battalion and 59th Signal Battalion. In addition, the fort has a total work force of approximately 1,030 and 1,620 residents. Fort Greely is an integral part of the Nation's Ballistic Mission Defense System and is a National Security Asset. Its mission is to engage and destroy limited intermediate- and long-range missile threats in

[1] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[2] Fort Wainwright Home of the Arctic Warriors. *The Official Homepage of Fort Wainwright, Alaska*. Retrieved November 20, 2013, from http://www.wainwright.army.mil/sites/local/.
[3] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.
[4] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[5] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.

space to protect the U.S. In addition, Fort Greely hosts missions of the Cold Regions Test Center and the Northern Warfare Training Center.[6]

- Various State-managed recreation, Federal subsistence, and military training lands
- Alaska Routes 8 (Denali Highway) and 10 (Copper River Highway), as well as the Tok-Cutoff Road and Glenn Highway
- Alaska Highway – the only interstate highway connecting Alaska to the contiguous 48 United States of America
- Valdez – via Alaska Route 4. Valdez is the southern terminus of the Trans Alaskan Pipeline System (TAPS). North Slope crude oil is measured and stored at the Valdez Marine Terminal, loaded onto tankers, and sent to market.[7] Valdez is also the northernmost ice-free deepwater port in the U.S. with the best access to Alaska's interior, the U.S. Pacific Northwest, Northern Canada, and Pacific Rim trade routes[8]

Steese Expressway

The Steese Expressway is classified as an urban principal arterial, and is the only north / southbound transportation corridor in eastern Fairbanks. The Steese Expressway transitions into Alaska Route 6 (Steese Highway) at milepost 11 in Fox. Adjacent land use between the Airport Way / Gaffney Road and Johansen Expressway intersections is primarily industrial, commercial, and military infrastructure. Proximate land use between the Johansen Expressway intersection and Chena Hot Springs Road interchange is primarily residential housing with light commercial infrastructure and community space (e.g. Birch Hill Cemetery, churches, recreational park access) interspersed throughout. Recent surges in commercial development (e.g. Wal-Mart, Home Depot, Fred Meyer, etc.) near Trainor Gate Road and the Johansen Expressway intersections have generated higher traffic demand on the Steese Expressway which also provides access to:

- Airport Way / Gaffney Road – Airport Way is a westbound urban principal arterial while Gaffney Road is an eastbound urban local road. These roads provide access to:
  - Residential and commercial developments
  - Fairbanks International Airport
  - Fort Wainwright
  - Lathrop High and Ryan Middle Schools

[6] History of Fort Greely. (2013). *The Official Homepage of Fort Greely, Alaska*. Retrieved December 18, 2013, from http://www.greely.army.mil/about/history.aspx.
[7] (2011). The Valdez Marine Terminal. *Alyeska Pipeline Service Company*. Retrieved November 21, 2013, from http://www.alyeska-pipe.com/.
[8] Port. *City of Valdez, Alaska*. Retrieved November 21, 2013, from http://www.ci.valdez.ak.us.

- 3rd Street – an east / westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Fairbanks' commercial business district

- College Road – a westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Creamer's Field State Migratory Waterfowl Refuge
  - University of Alaska, Fairbanks (UAF) campus
  - Nordale Elementary School
  - Various State of Alaska agency office locations

- Trainor Gate Road – a westbound urban minor collector. This road provides access to:
  - Fort Wainwright Army Post
  - Residential developments
  - Ladd Elementary and Tanana Middle Schools

- Johansen Expressway / City Lights Boulevard – Johansen Expressway is a westbound urban principal arterial, while City Lights Boulevard is an eastbound urban local road. These roads provide access to:
  - Western Fairbanks
  - Alaska Route 3 (George Parks Highway)
  - Birch Hill Cemetery
  - ARRC freight distribution and passenger rail-yard
  - Local freight distribution trucking centers

- Farmers Loop Road / Fairhill Road – Farmers Loop Road is a rural minor arterial that loops northwest then southwest to its intersection with College Road. Fairhill Road is a southeast bound urban local road. These roads provide access to:
  - Residential developments
  - UAF campus
  - Birch Hill Recreation Area
  - Pearl Creek Elementary

- Chena Hot Springs Road – the study corridor's northern terminus located near milepost 6, is an eastbound rural minor arterial that becomes a rural major collector. This road provides access to:
  - Residential developments
  - Two Rivers community
  - Weller and Two Rivers Elementary Schools
  - State managed recreation lands
  - Chena Hot Springs Resort

Beyond the study corridor, the Steese Expressway provides access to:

- Alaska Route 2 (Elliott Highway) – serving communities between Manley Hot Springs and Fairbanks, while providing access to various State and Federal managed lands (e.g. White Mountains National Recreation Area)
- Alaska Route 6 (Steese Highway) – serving communities between Circle and Fairbanks, while providing access to various State and Federal managed lands (e.g. Yukon Flats National Wildlife Refuge and Yukon-Charley River National Preserve)
- Alaska Route 11 (Dalton Highway) – serving the oil industry and TAPS northern terminus at Prudhoe Bay along with the smaller communities between the North Slope and Fairbanks. Also provides access to various park lands (e.g. Gates of the Arctic National Park and Preserve), as well as University of Alaska research lands and facilities.

Project Need Details

I – Safety

The following table provides crash data from 2006-2010 for "high crash locations" within the study corridor:

Intersection	Number of Crashes	Safety Index	Major Crashes	Fatal Crashes
Airport Way	106	0.96	1	0
3rd Street	119	1.58	3	1
College Road	87	0.87	3	0
Trainor Gate	80	1.03	2	0
Johansen Expressway	35	0.40	2	1

If any of the following criteria is met, the intersection is considered a high crash location[9]:

- Safety index greater than 0.90
- Major crashes equal 2 or greater
- Fatal crashes equal 1 or greater

In addition to the high crash locations, other corridor areas exist for the potential for severe crashes. These locations include two at-grade railroad crossings and a stop-controlled crossing of the Richardson Highway off-ramp onto the Old Richardson Highway. Although these areas have not yet experienced crash patterns, any accident would almost certainly be a high severity crash resulting in major injury or fatality. Upgrading the corridor to current ADOT&PF design standards and reducing the number of conflict points will improve transportation safety for motorized and non-motorized users by reducing crash frequency and severity.

[9] *Alaska Highway Safety Improvement Program Handbook.* (12th ed.). (2013). Juneau: Alaska Department of Transportation and Public Facilities.

Pedestrian and bicycle use is prohibited on the Steese Expressway and currently a separated, shared-use path exists along each side of the road between Airport Way and College Road. At College Road, the path on the eastern side ends, while the path on the western side continues northward to Farmers Loop Road. Generally the path width is 5 feet, though in some sections can range between 5 to 8 feet wide. The American Association of State Highway and Transportation Officials (AASHTO), recommends a minimum paved width for two-directional shared use paths of 10 feet. In rare instances, a reduced width of eight feet can be adequate.[10] FMATS identified and prioritized the following intersections as exhibiting a need for pedestrian and bicycle crossing improvements[11]:

- Steese Expressway / 3rd Street – High priority
- Steese Expressway / Johansen Expressway – Medium priority
- Steese Expressway / Farmers Loop Road – Low priority

Facilities for pedestrians and bicyclists along the Richardson Highway from "6-mile" Badger Road interchange to the Airport Way intersection are minimal. Unimproved road shoulders currently serve non-motorized users. However, a project was recently proposed to construct a separated pedestrian and bicycle facility in this corridor stretch.[12]

II –Mobility

The study corridor has undergone significant changes in land-use without updated planning for correspondingly appropriate improvements to transportation infrastructure.[13] As a result, a new traffic analysis is required to determine the validity of previous corridor recommendations. The updated analysis revealed the existing corridor infrastructure can't accommodate projected traffic volume growth without resulting in failing Levels of Service (LOS). The LOS is a common, quantitative service measure of intersection and road segment congestion that characterizes operating conditions in terms of traffic performance measures related to speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. The Transportation Research Board's Highway Capacity Manual 2010 (HCM) defines six levels of service, ranging from A to F, used to identify operating conditions on a given roadway or intersection. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst.[14] LOS grades are assigned to intersections based on average vehicle delay:

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[10] *Guide for the Development of Bicycle Facilities.* (1999). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[11] *FMATS Non-Motorized Transportation Plan.* (2012). Anchorage: Kittelson & Associates, Inc..
[12] ADOT&PF (2013, August 20). *Richardson Highway MP 356-362 Bicycle/Pedestrian Path* – 2013-2015 Alaska Statewide Transportation Improvement Program, Need ID: 25598. Retrieved November 18, 2013, from http://www.dot.state.ak.us/stwdplng/cip/stip/.
[13] *Steese Expressway Corridor Study Fairbanks, Alaska State Project No. A2056 Master Plan Report.* (1988). Tampa: Greiner, Inc..
[14] *HCM2010 Highway Capacity Manual.* (2010). Washington DC: Transportation Research Board of the National Academies.

Level of Service	Average Delay
A	Less than 10 seconds
B	10 to 20 seconds
C	20 to 35 seconds
D	35 to 55 seconds
E	55 to 80 seconds
F	Greater than 80 seconds

In heavily developed sections of metropolitan areas, conditions may make the use of LOS D appropriate. However, this level should be used sparingly and at least a LOS C should be sought.[15] As the land surrounding Fairbanks is developed, traffic volumes in the study area are projected to increase as follows:

Road	2010 AADT (vehicles)	2040 AADT (vehicles)
Richardson Highway	23,910	39,752
Steese Expressway	21,761	29,109
Airport Way	17,725	24,436
3rd Street	10,730	13,950
College Road	14,785	16,226
Trainor Gate Road	6,545	7,951
Johansen Expressway	18,193	24,457
Farmers Loop Road	6,780	9,582

The Alaska Department of Labor and Workforce Development projects a population increase for the FNSB as follows:[16]

2010 Population	2035 Population
98,000 people	132,076 people

This projected increase results in an average, annual growth rate of 1.15%. Improving the transportation infrastructure of the Richardson and Steese Expressway corridors is necessary to support this projected growth. Based on the traffic analysis and projected growth, the following table provides predicted morning and afternoon peak LOS grades by intersection:

[15] *A Policy on Geometric Design of Highways and Streets* (4th ed.). (2001). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[16] Alaska Department of Labor and Workforce Development (2012, April). Alaska Population Projections 2010-2035. *Alaska Department of Labor and Workforce Development.* Retrieved October 21, 2013, from http://labor.alaska.gov/research/pop/popproj.htm.

Intersection	2040 AM Level of Service	2040 PM Level of Service
Steese Expy / Airport Rd	F	F
Steese Expy / 10th Ave	A	B
Steese Expy / 3rd St	F	D
Steese Expy / College Rd	F	C
Steese Expy / Trainor Gate Rd	F	D
Steese Expy / Johansen Expy	F	D
Steese Expy / Farmers Loop Rd	F	E

ADOT&PF will coordinate with local planning agencies and stakeholders to develop a corridor concept that accommodates future traffic volumes and reduces road-user costs to the extent practical. Generally road-user costs such as fuel and oil usage, wear on tires, repairs, delay to motorists, and crashes that result from speed changes, stops, and waiting can be reduced by increasing mobility. The developed concept will attempt to enhance and balance the mobility and access needs of all corridor users. ADOT&PF will also encourage local governing agencies to balance both future land development and access control with the FMATS Long-range Transportation Plan (LTP), thereby promoting overall corridor sustainability.

III – Air quality

Air quality standards have changed since the last corridor plan and future transportation improvements need to consider future air quality impacts. Portions of Fairbanks and North Pole are classified as U.S. Environmental Protection Agency (EPA) maintenance areas for carbon monoxide (CO). Additionally a portion of the Fairbanks North Star Borough is classified as an EPA nonattainment area for fine particulate matter ($PM_{2.5}$). Maintenance areas are zones that meet air quality standards, but need funding for improvements and programs to maintain acceptable air quality standards. Nonattainment areas are zones where air quality levels persistently exceed national ambient air quality standards. Although Fairbanks has improved for CO and PM_{10} pollutants since the early 1980s, it's still required to monitor air quality impacts resulting from transportation projects under the Clean Air Act (CAA).

Section 110 of the CAA, 42 U.S.C. §7410, requires state and local air pollution control agencies adopt federally approved control strategies to minimize air pollution. The resulting body of regulation is known as a State Implementation Plan (SIP). With assistance from the Alaska Department of Environmental Conservation (ADEC), Fairbanks and North Pole must periodically prepare updates to the SIP to demonstrate maintenance of CO and PM air quality standards.[17] The CAA prohibits federal actions that would cause air quality violations or jeopardize attainment of air quality standards; currently defined under the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards. This policy

[17] Alaska Department of Environmental Conservation (2013, April 22). State Implementation Plan (SIP). *Alaska Department of Environmental Conservation*. Retrieved October 21, 2013, from http://dec.alaska.gov/air/anpms/SIP/SIPhome.htm.

requires review of all planned transportation projects in Alaska's nonattainment and maintenance areas to ensure air quality won't decrease. This analysis, known as "conformity," requires demonstration that highway and transit projects are consistent with the most recent SIP emissions budget for CO and PM.

Proposed FMATS MTP and Transportation Improvement Program (TIP) construction projects within nonattainment and maintenance areas must undergo regional and project-level analysis to ensure conformity to the SIP. The regional analysis evaluates the combined emission impacts of all projects regardless of funding source in an area for each year in the TIP timeframe (approximately 20 years). The project-level analysis evaluates emission impacts at the project location to ensure localized "hot-spot" violations won't result. A concept will be developed that is consistent with federal and local air quality requirements. The concept will improve air quality through the reduction of transportation deficiencies and increasing mobility through the corridor (e.g. reducing vehicle idle time).

IV – Freight operations

Approximately 90 percent of Alaska's unrestricted revenue is generated through oil and gas exploration, development, and production, with most generated from activities on Alaska's North Slope.[18] As of early 2013, North Slope oil accounted for approximately 8% of all U.S. oil production, or about 535,000 barrels per day.[19] Alaska's oil and gas industry use the corridor daily to access the North Slope haul route (Alaska Route 11 – Dalton Highway). Title 17 of the Alaska Administrative Code 25.014 designates the Richardson Highway and Steese Expressway as official truck routes for long combination vehicles. The existing congestion in the study corridor results in high road-user costs for freight operators. The addition of low vertical clearance obstructions (e.g. traffic signal mast arms) limits shipment sizes, resulting in increased truck traffic. Besides being heavier, trucks are generally slower and occupy more roadway space. Consequently, trucks have a greater individual effect on traffic operation than passenger vehicles.[20]

ADOT&PF will collaborate with commercial shipping operations to develop a corridor concept that optimizes freight operations for long- and short-hauls while also minimizing negative impacts. This coordination effort may also identify existing transportation deficiencies that restrict/constrain freight operations. ADOT&PF will also partner with ARRC to minimize impacts to rail operations within the corridor and identify opportunities to improve and / or eliminate existing at-grade crossings and other deficiencies.

[18] Alaska Department of Revenue – Tax Division (2013, Spring). Revenue Sourcesbook Spring. *Alaska Department of Revenue*. Retrieved October 21, 2013, from http://www.tax.alaska.gov/programs/sourcebook/index.aspx.
[19] U.S. Energy Information Administration (2013, September 27). Crude Oil Production. *U.S. Energy Information Administration*. Retrieved October 21, 2013, from http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm.
[20] *A Policy on Geometric Design of Highways and Streets* (6th ed.). (2011). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).

V – Sustainability

The current study corridor won't sustain projected traffic volumes without resulting in failing service levels. In addition, available funding for transportation projects has declined in recent years leading to increased competition for limited federal and state resources. As such, ADOT&PF will coordinate with the public, local agencies, and stakeholders to develop a concept that improves the longevity and sustainability of the corridor while reducing maintenance and operations costs. In addition consideration will be given to the future growth of residential, commercial, and military developments such as:

- Fort Wainwright's plan to relocate its Trainor Gate Road access to the Johansen Expressway / Steese Expressway intersection
- ARRC's Northern Rail Extension Project – this project extends an existing rail line from its terminus near North Pole, 80 miles to a terminus in the vicinity of Delta Junction. The new line will provide improved transportation options for the U.S. military, mass transit, and freight movement between Fairbanks / North Pole and Delta Junction[21]

[21] Alaska Railroad Corporation (2005). Northern Rail Extension Project. *Alaska Railroad Northern Rail Extension Website*. Retrieved November 20, 2013, from http://www.northernrailextension.com/index.html.

ATTACHMENT 3—Further Information

1. Steese Expressway/Farmers Loop Road
    - Wetlands impacts
    - ROW impacts
    - Proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Proximity to Army Permafrost Research Project
2. Steese Expressway/Johansen Expressway
    - proximity to business district may potentially require a more in-depth socioeconomic impact analysis
    - proximity to large area of contaminated sites[i]
    - ROW impacts likely; proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - proximity to cemetery and churches will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
3. Steese Expressway/W. Trainor Gate Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - AHRS sites to the east of the highway are related to military infrastructure may necessitate analysis but no 4(f) analysis expected.
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
4. Steese Expressway/College Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
5. Steese Expressway Bridge
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Graehl Park and Riverside Park within project vicinity; may require 4(f) analysis
6. Steese Expressway/10th Avenue
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
7. Steese Expressway/Airport Way
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis

- Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
- Military boundary adjacent to project area

8. Richardson Highway: West-Bound Off-Ramp and Railroad intersection
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Military boundary adjacent to project area
    - Potential wetland impacts

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[i] Contaminated Sites:

- Bentley Mall East Satellite (32 College Rd): Active site with institutional controls; contamination from PCE and TCE
- Tesoro Northstar #103 (527 Old Steese Highway): Cleanup complete with institutional controls; groundwater and soil contamination still present; Complex site with deed notice; consult DEC
- US Travel Systems (230 Old Steese Hwy): Active site; contamination from USTs; as of 2011, benzene, DRO and GRO above groundwater cleanup levels
- Holiday Store #618 (203 3rd. Street): Cleanup complete with institutional controls; contamination from underground storage tanks; groundwater contaminated; consult record of decision
- Steese Mall (201 Old Steese Hwy.): Active site

State of Alaska Department of Transportation & Public Facilities
Statewide Design & Engineering Services

AGENCY SCOPING
REQUEST FOR EARLY COORDINATION

Project Name: **Richardson Hwy/Steese Expy Corridor Low Mobility/High Access Concept**
Project Number (state/federal): **60799/NH-000S(781)**
Comments Due Date: **March 3, 2014**
Anticipated Level of Documentation: **To be determined**

Dear Commenter:

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Alaska Division of the Federal Highway Administration (FHWA), is requesting your comments on a proposed project in preparation for completing the project's environmental documentation. To ensure that all factors are considered in the development of the environmental document we request your comments on the project proposal, project-area resources, and any project-related permits or clearances to be obtained from your agency. Please provide your written comments by **March 3, 2014.**

To ensure that your comments are addressed in the project's documentation, please refer to the project by the above name or number, and send or e-mail your comments to:

Brett Nelson - Northern Region Environmental Coordinator
Attention: Benjamin Storey - Environmental Impact Analyst
Alaska Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, AK 99709
Email: benjamin.storey@alaska.gov Phone: 907-451-2229

_____

Brett Nelson/Regional Environmental Coordinator Date

Attachments: (1) Figures 1-4 (2) Purpose and Need (3) Further Information

I. Purpose and Need of Project

See Attachment 2

II. Project Description & Alternatives

Concept Descriptions:

Concept 1 - High Mobility / Low Access (refer to Concept 1 Scoping Letter)
Concept 2 - Moderate Mobility / Moderate Access (refer to Concept 2 Scoping Letter)
Concept 3 - Low Mobility / High Access (this Scoping Letter)

The proposed project consists of motorized and non-motorized traffic improvements to resolve projected operational deficiencies through the design year 2040 with a primary emphasis on property access and a secondary emphasis on mobility. Under this concept, increasing delays in the project area will be mitigated by constructing improvements at nine area intersections, and by expanding the collector level road network adjacent to the Steese Expressway corridor between Farmers Loop and Johansen Expressway (Attachment 1, Figure 2).

The proposed improvements will mitigate some of the anticipated traffic growth, but will not achieve the typical level of service performance metrics at all project area intersections. In comparison to the other concepts, Concept 3 provides the lowest overall safety benefits and lowest capacity for projected traffic growth through the design year.

Associated improvements include:

- New/expanded pedestrian facilities;
- Additional through lanes on the Old Steese Highway and southbound Steese Expressway;
- Storm drain and utility modifications;
- Intersection controls (e.g., signalization, roundabouts, new auxiliary lanes, channelization);
- Extending Old Steese Highway to Farmers Loop;
- Constructing an overpass at the Richardson Highway westbound off-ramp; and
- Reconstruction of the Steese Expressway bridge over the Chena River.

Existing access to adjacent properties will remain mostly unchanged.

III. Location

The project begins at "6-mile" Badger Road interchange on the Richardson Highway (MP 357) and ends at the Chena Hot Springs Road interchange on the Steese Expressway (MP 5), near Fairbanks, Alaska (Attachment 1, Figure 1). The following table presents the sections and coordinates (WGS 84) defining the location of the project.

Township	Range	Section	Meridian	USGS Quad Map	Start Latitude/End Latitude	Start Longitude/End Longitude
001N	001W	35;36;	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

001S	001W	1;2;11; 12;14	Fairbanks	Fairbanks D-2 (SE)	64.8078/64.8879	-147.5764/ -147.6209

IV. Environmental Consequences

A. Right-of-Way (ROW) Impacts:

1. ROW required:
   a. Property required from a state or federal agency.
      (1) State Park Name: **No**
      (2) State Refuge or Critical Habitat Area Name: **No**
      (3) Federal Park Name: **No**
   b. Property required from local government entity. **2**
   c. Business or residential property required.
      (1) Residential: (indicate number) **4** (2) Business: (indicate number) **21**
   d. Property required from a Tribe or ANCSA corporation.
      Name: **No**

2. Describe: Right-of-way acquisition from residential and/or commercial properties will result from road extensions and widening for new through lanes on the Steese Expressway and on the Old Steese Highway. This potential for right-of-way acquisition must be continually assessed and quantified throughout the design process. State refuge and government-owned land is shown in Attachment 1, Figure 4.

B. Socio-Economic Impacts:

1. Project could affect community cohesion, neighborhoods, or other community facilities. **Yes**
2. Project could affect economic development, such as established area businesses. **Yes**
3. Project could affect travel patterns and accessibility. **Yes**
4. Project could disproportionately affect minorities or disadvantaged persons (E.O. 12898) **Potential**

The project is in close proximity to residential and commercial development; however, comments from the public did not indicate any unresolvable concerns about the project affecting community cohesion. Right-of-way acquisition from adjacent businesses could affect economic development, but this concept has the least impact on changes to business access and traffic patterns for commercial areas. While traffic patterns and local residents and businesses may be affected temporarily during construction, the project will relieve congestion and have a net benefit when completed.

The project will be evaluated to address potential effects on minority and low-income populations.

For additional information, see Attachment 1, Figure 3 and Attachment 3

C. Impacts to Historic Properties:

1. National Register listed eligible/potentially eligible historic properties in project area/area of potential effect (APE). **Potential**
2. Places of traditional religious or cultural importance to Tribes are present in the project area. **None identified at the planning stage**
3. Historic Properties survey may be required to identify if sites are present. **Yes**
4. Possible adverse effect on historic properties. **None identified at the planning stage**

Although an APE has not been established, the nearest registered historic place is located more than half a mile away. There are 22 resources listed on the Alaska Heritage Resources Survey in the project area. The majority are historic buildings and features from the periods relating to the founding of Fairbanks, arrival of the Alaska Railroad, and World War II. Right-of-way acquisition is not anticipated from any of these parcels as part of Concept 3.

Consultation in accordance with Section 106 of the National Historic Preservation Act will need to be conducted with the State Historic Preservation Officer and local tribal entities. Traditional Cultural Properties (TCPs) are identified during Section 106 consultation. A resource survey is not planned at this time.

D. Fish & Wildlife Impacts:

1. Project could affect anadromous or resident fishes. **Yes**
2. Problem fish pass culverts within the project area. **No**
3. Essential Fish Habitat (EFH) present in the project area. **Yes**
4. Wildlife Resources:
   a. Project in area of high wildlife/vehicle accidents. **No**
   b. Project could bisect migration corridors. **No**
   c. Project could segment habitat. **No**
   d. Species of concern to OHMP/ADF&G in the project area **No**
5. Bald Eagle and Golden Eagle Protection Act:
   a. Eagle nesting tree(s) in the project area. **No**
6. Describe:

The ADF&G Atlas to the Catalog of Waters Important to the Spawning, Rearing or Migration of Anadromous Fishes identified the Chena River (334-40-11000-2490-3301) as a spawning and rearing ground for Chinook salmon and a spawning ground for chum salmon. Work below the ordinary high water mark during bridge reconstruction will require a Title 41 permit to be obtained from DNR. An EFH assessment would also be needed.

Because suitable habitat for Bald Eagles is present within the study area and proposed work may include removing trees, an eagle survey may be required to determine if any active or alternate nests are located within the project area. Any vegetation clearing will occur outside the migratory bird nesting period from May 1 to July 15.

E. Threatened and Endangered (T&E) Species Impacts:

1. Listed T&E species present. **No**
2. T&E species migrate through the project area. **No**
3. Proposed species present in project area. **No**
4. Candidate species present in the project area. **No**
5. Critical habitat in the project area. **No**
6. Describe:

According to recent guidance from the United States Fish and Wildlife Service, no threatened or endangered species occurs in the Fairbanks North Star Borough (per "List of Endangered, Threatened, Proposed, Candidate and Delisted Species in Alaska," Updated May 24, 2013 by National Marine Fisheries Service Alaska Regional Office).

F. Waters of the U.S and Water Bodies:

1. Project affects Waters of the U.S. (as defined by USACE), Section 404/10/103. **Yes**
2. Project affects Navigable Waters of the U.S. (as defined by USACE), Sec. 10. **Yes**
3. Project affects a Cataloged Anadromous Fish Stream (i.e., 41.14.870). **Yes**

4. Proposed river or stream involvement:

Reconstruction/widening of the Steese Expressway bridge would likely require work below Chena River's ordinary high water.

5. Describe:
The Chena River has been determined by the U.S. Army Corps of Engineers (USACE) to be a navigable waterway for its entire length. A Section 9 Permit from the U.S. Coast Guard may be needed. Work on the bridge would also require a floodplains permit from the Fairbanks North Star Borough Department of Community Planning.

G. Wetlands Impacts:

1. Project involves wetlands as defined by USACE. **Yes**
2. Wetlands delineated in accordance with DOT&PF/FHWA/USACE Agreement. **No**
3. Acres: 5
4. Fill: Such factors are unknown at this time.
5. Dredge: Such factors are unknown at this time.
6. USACE authorization required: **Yes**

7. Describe:

Wetlands have been identified by the USFWS National Wetland Inventory in the vicinity of the corridor between Johansen Expressway and Farmers Loop Road, as shown in Attachment 1, Figure 4. The project to extend Old Steese Highway to Farmers Loop will likely result in wetland impacts. An existing Section 404 Permit (POA-2004-1127) for wetland fill in the project area also contains an easement stipulating maintenance of a vegetative buffer. The proposed extension of the Old Steese Highway to Farmers Loop Road would cross this easement and require approval from the USACE. Once construction design plans begin to develop, a field review will be conducted to confirm the status of wetlands present. If widening of the existing footprint results in fill being placed in the wetland, Section 404 CWA Permit from the USACE and a Section 401 Water Quality Certification from the ADEC will be required.

H. Alaska Coastal Management Program (ACMP):

1. Project within the ACMP boundary. **No**
2. Project within a local coastal management district. **No**
3. Describe: The project area is not within a coastal zone.

I. Hazardous Waste:

1. Known or potentially contaminated sites along the corridor. **Yes**
2. ROW required from, or extensive excavation adjacent to, a known hazardous waste site. **Yes**
3. The existing and/or proposed ROW is contaminated. **No**
4. Potential for encountering hazardous waste during construction is high. **No**
5. Describe: **No**

A search of the ADEC contaminated site database revealed 6 active sites and 6 closed sites with institutional controls either within the project limits, or within 500 feet. Contaminants in the area are related to pipeline construction, military activities, and include hydrocarbons, solvents and other chemicals, particularly in the vicinity of Johansen Expressway and Old Steese Highway (see Attachment 1, Figure 3). A Phase 1 Environmental Site Assessment may need to be conducted prior to construction.

For additional information, see Attachment 3

J. Air Quality Impacts (NEPA and Conformity):

1. NEPA (all projects):
   a. The project is located in an air quality nonattainment or maintenance area (i.e. CO or PM-10). **Yes**
      If yes, indicate CO ☒ or PM-2.5 ☒
   b. The project is of the type exempt from an air quality analysis per 40 CFR 93.126 (Table 2 and Exempt Projects). **No**

This project will retain signalized, at-grade intersections and would not reduce stop and go traffic at these intersections. However, over the design life of the project, the improvements will relieve congestion on the Steese Expressway and Richardson Highway, slowing the growth in emissions from idling during congested periods. This concept has the lowest potential for reducing emissions amongst the three

concepts.

2. Conformity (projects in nonattainment areas only): **Yes**

   a. The project is identified in the approved STIP. **No**

   b. The project is in the most current air quality conformity (i.e., TIP). **No**

   c. Have there been any changes in the project design concept and scope, as described in the STIP and TIP conformity analysis No

3. Describe: **No**

Air quality is a major concern of this study. Project priorities will be influenced by their effectiveness at minimizing air quality contaminants and achieving standards set by the Environmental Protection Agency.

K. Floodplains Impacts (23 CFR Part 650, Subpart A):

1. Project encroaches onto a 100-year floodplain. **Yes**
2. Project involves a regulatory floodway. **No**
3. Project is located within an area protected by local flood hazard ordinances. **Yes**
4. Flood hazard permit is required from local government. **Yes**
5. Describe:

Portions of this project are located in the 100-year floodplain of the Chena River, Little Chena River and the Chena Slough. The Fairbanks North Star Borough Department of Community Planning administers a floodplain ordinance, Title 15, and an approved floodplain permit is required for any development within the flood hazard area (Flood Zone A) or floodway.

L. Noise Impact (23 CFR Part 772):

1. There are noise-sensitive receivers/land uses adjacent to the proposed project **Yes**
2. The project is located on new location, would result in substantial changes in vertical or horizontal alignment, or would increase the number of through lanes **Yes**

Concept elements are in close proximity to "sensitive receivers" including cemeteries, schools, churches, and residences, and the project(s) will need to analyze their potential impacts with a noise analysis.

For additional information, see Attachment 1, Figure 3 and Attachment 3

M. Water Quality Impact:

1. Project could involve a public or private drinking source. **No**
2. Project could result in a discharge of storm water to Waters of the U.S. **Yes**
3. Project could affect a designated impaired water body. **Yes**
   a. List name(s) and location(s):

The Chena River and Noyes Slough are considered "high priority" waterbodies through the Alaska Clean Water Actions (ACWA) ranking process because of impairment from petroleum hydrocarbons, oil and

grease and sediment. Noyes Slough was also listed as polluted from residues (debris). Urban run-off is considered the primary source. The slough and the river both have approved management plans that limit the Total Maximum Daily Load (TMDL) of pollutants.

4. Is there a municipal separate storm sewer system (MS4) NPDES permit or will runoff be mixed with discharges from an NPDES permitted industrial facility. **Yes**
5. If extensive dewatering (>250,000 gallons) is anticipated, is the area to be dewatered within 1 mile of a contaminated site **No**
6. Describe:

The City of Fairbanks and DOT&PF own and operate storm sewer systems through a system of subsurface storm sewers, roadside ditches, and surface streets. Off-site sedimentation is expected to be minimal and best management practices (BMP's) will be implemented for the purpose of meeting state and federal water quality standards. A project specific erosion and sediment control plan will be developed prior to construction initiation. A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented by the construction contractor. The SWPPP will comply with applicable APDES permits.

N. Section 4(f)/6(f):

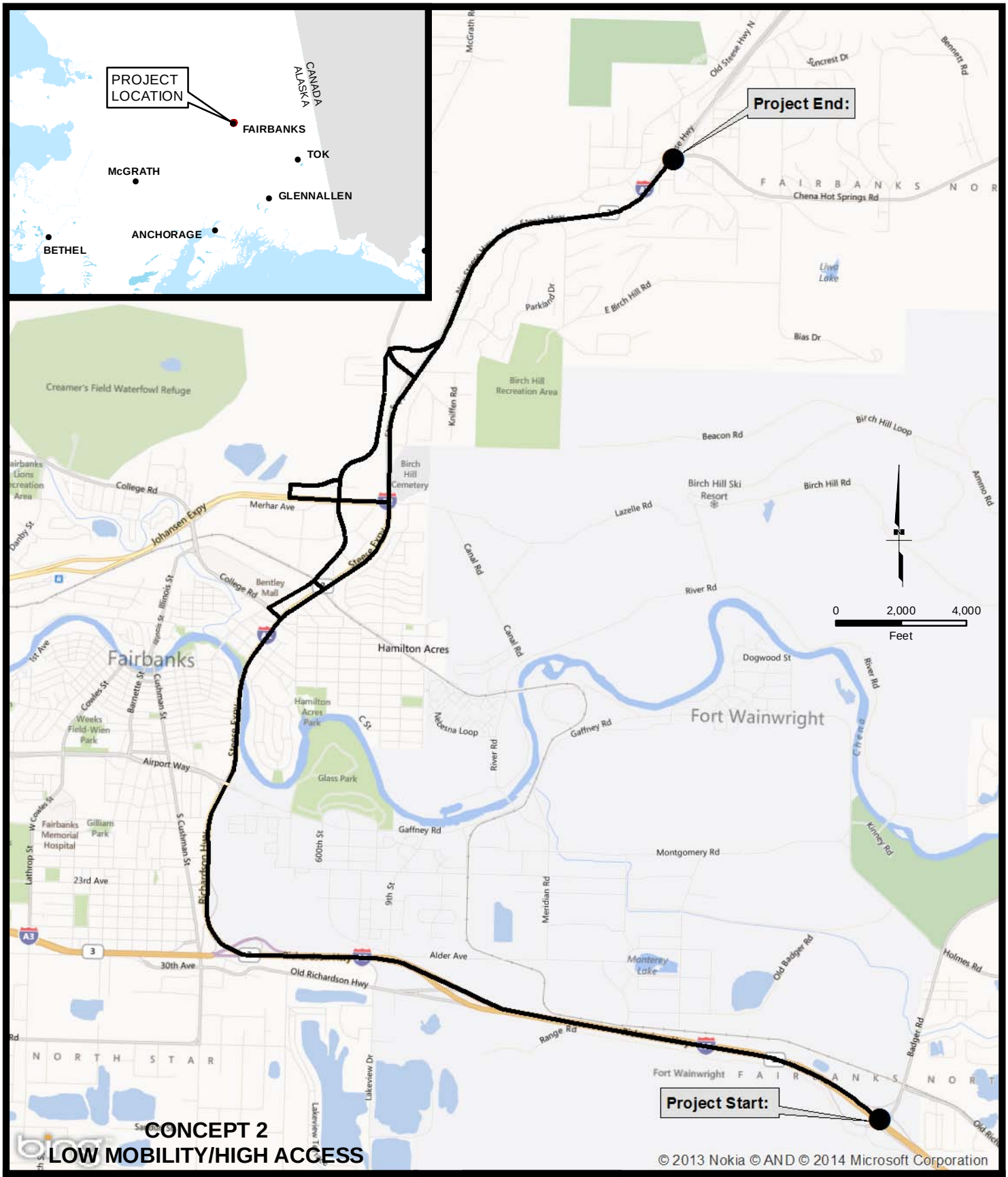
1. There would be a "use" of land from 4(f) properties. **Potential**
2. Section 6(f) properties affected by the proposed action. **No**
3. List agency(s) with jurisdiction: **Fairbanks North Star Borough**
4. Describe:

The proposed project is consistent with local land use and transportation plans, including the Fairbanks North Star Borough Regional Comprehensive Plan. The potential for Section 4(f) impacts to parks near the bridge over the Chena River may exist and further assessment is necessary pending project development. Impacts to 6(f) lands are not anticipated due to their absence from the corridor.

O. Permits and Authorizations

1. USACE, Section 404/10/103: **Yes**
2. USCG, Section 9: **Yes**
3. ADF&G Title 16: **No**
4. Flood Hazard: **No**
5. ADEC 401: **Yes**
6. ADEC Storm Non-domestic Storm Water Disposal Plan Approval: **Yes**
7. APDES GP: **Yes**

11. Other. *If "yes," list.* **No**



Project Location and Vicinity Map

Sec. 35; 36 (T1N;1W)
Sec. 1;2;11;12;14 (T1S;1W)
Fairbanks Meridian, Alaska
USGS Topo Maps Fairbanks D2

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 1

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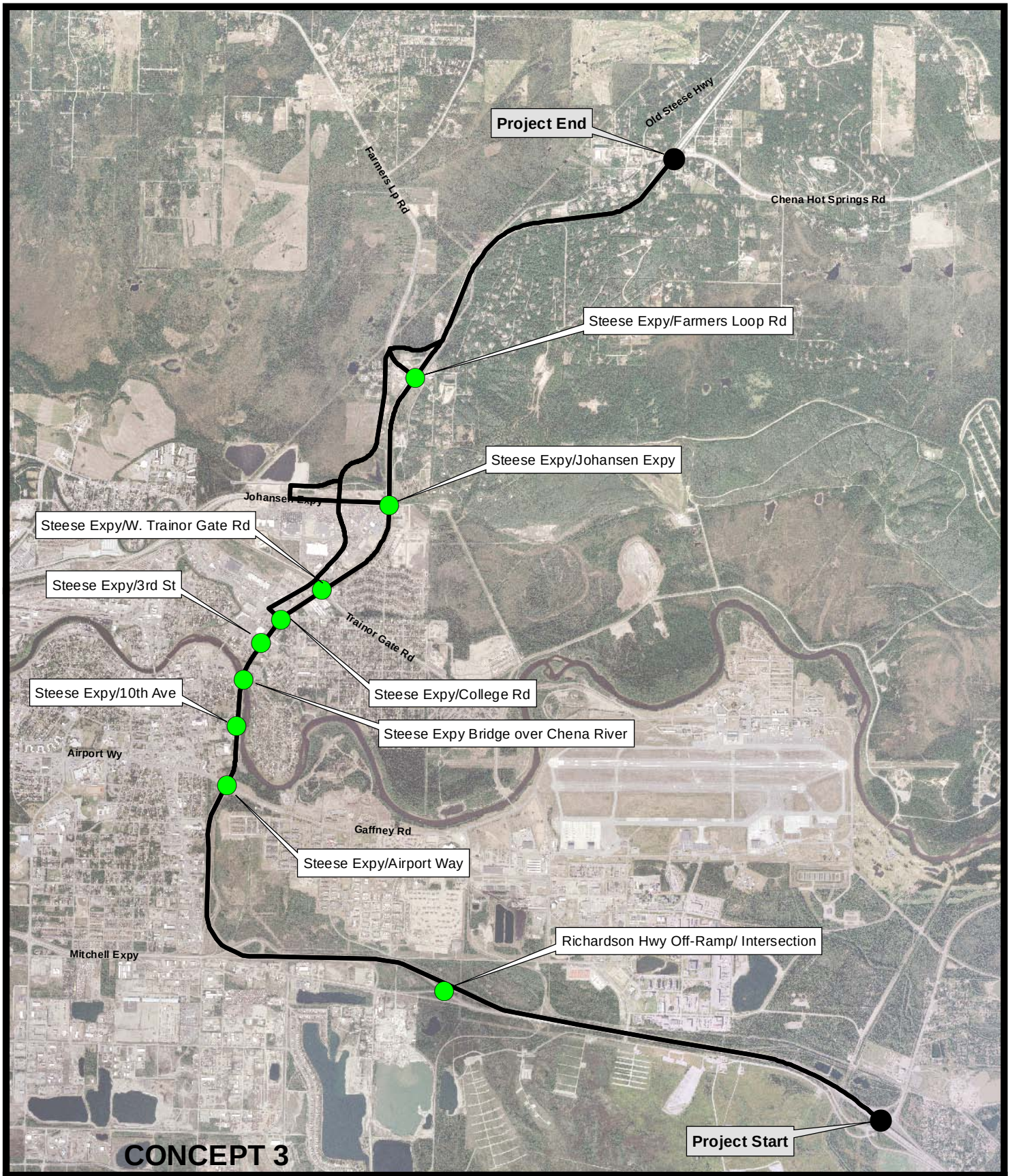

Project Corridor and Associated Modifications

Primary Corridor Intersections

0 2,000 4,000

Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 2

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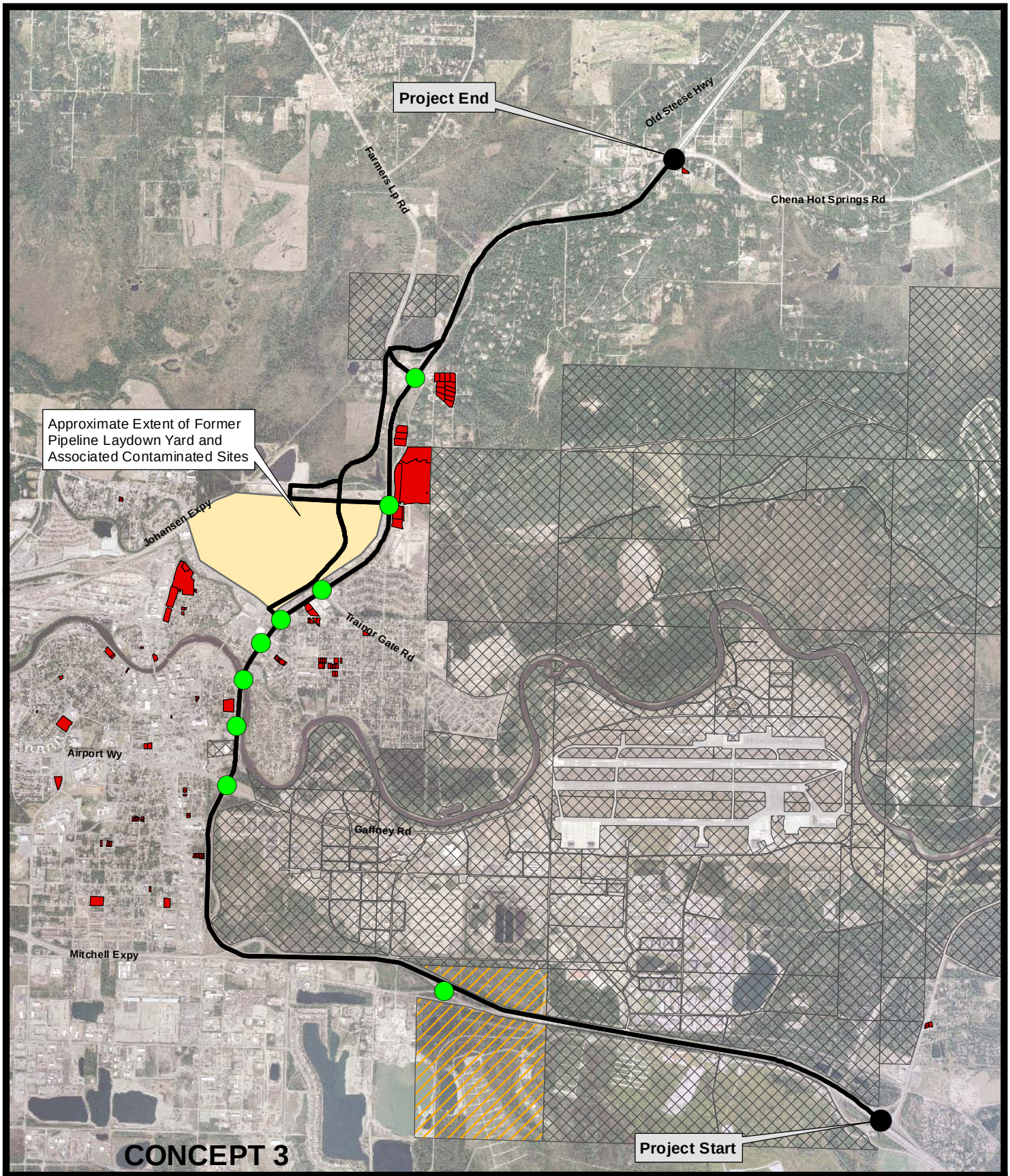

- Project Corridor and Associated Modifications
- Federal Lands
- Machine Gun Range Firing Line
- Church or Cemetery
- Primary Corridor Intersections

0 2,000 4,000
Feet

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 3

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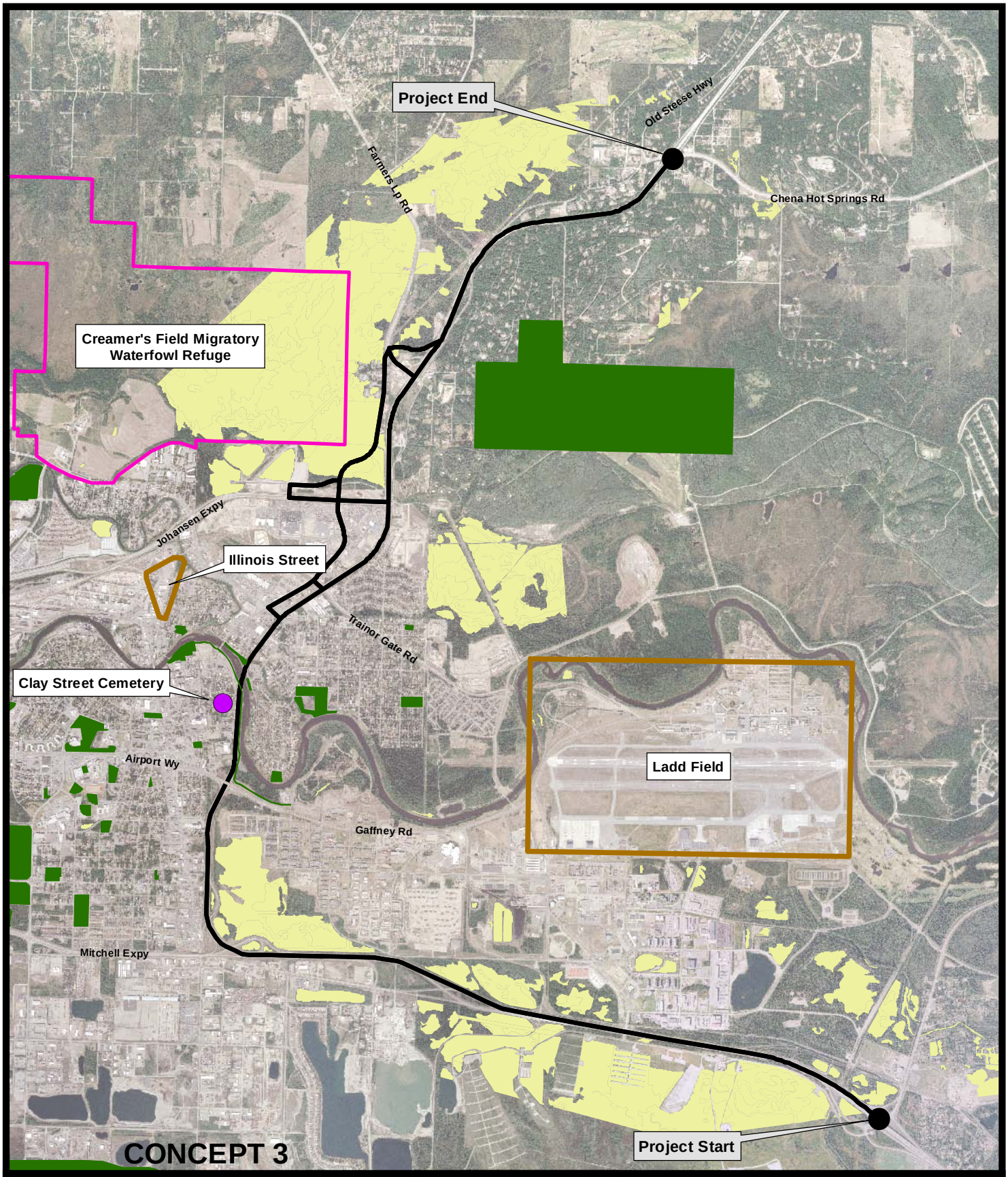

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No. 60799/NH-000S(781)
Richardson Highway/Steese Expressway
Agency Scoping

Fairbanks, Alaska

DATE: 2/3/2014 | FIGURE 4

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The Alaska Department of Transportation and Public Facilities (ADOT&PF), in cooperation with the Alaska Division Office of the Federal Highway Administration (FHWA), is developing a Planning and Environmental Linkage (PEL) Study for the Fairbanks, Alaska area Richardson Highway / Steese Expressway corridors from Badger Road interchange (Richardson Highway milepost 360) to Chena Hot Springs Road interchange (Steese Highway milepost 5).

Purpose

The purpose of the study is to collaborate with State, local, and federal agencies, the general public, and interested stakeholders to develop a shared corridor concept that meets long-range transportation needs to improve safety, mobility, air quality, and freight operations. Additionally, the concept will promote improvements that reduce transportation deficiencies (e.g. delay and congestion), enhance the corridor's sustainability (e.g. infrastructure longevity and maintenance costs), and minimize environmental and social impacts.

Project Need Summary

I – Safety

Safety for motorized and non-motorized traffic needs improvement by developing a corridor concept that:

- Upgrades the transportation infrastructure to current ADOT&PF design standards where practical
- Reduces conflict points
- Reduces the frequency and severity of crashes at "high crash locations"
- Improves pedestrian and bicycle crossings

II – Mobility

The mobility of people and goods in the corridor needs improvement by developing a concept that:

- Reduces delay and congestion
- Improves intersection and road segment Level of Service (LOS) to C or better where practical
- Balances the need for adjacent property access
- Accommodates projected traffic growth

III – Air quality

Air pollution in the existing non-attainment and maintenance area needs reduction by developing a corridor concept that:

- Meets the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards
- Reduces vehicle idle times

IV – Freight operations

Freight operations need enhancement by developing a corridor concept that:

- Provides efficient transportation of goods and services
- Minimizes existing at-grade railroad crossings as practical
- Reduces vertical clearance obstructions (e.g. traffic signal mast arms)

V – Sustainability

The overall corridor sustainability and longevity needs enhancement by:

- Considering future developments and corridor growth in collaboration with the general public, local governments and planning authorities, and interested stakeholders
- Minimizing maintenance and operation costs to the extent practical

Study Corridor

At present, the Richardson Highway predominantly serves through-traffic for the communities of Fairbanks and North Pole, while the Steese Expressway serves a mixture of through- and local-traffic in Fairbanks. The Richardson Highway transitions into the Steese Expressway at the Airport Way / Gaffney Road intersection; both roads are primarily four-lane divided major arterials. The 2010 Annual Average Daily Traffic (AADT) volumes were 23,910 and 21,761 for the Richardson Highway and Steese Expressway respectively.

Richardson Highway

The Richardson Highway, comprised of Alaska Routes 1, 2 and 4, is classified as an interstate highway and is the only major east / westbound transportation corridor linking Interior Alaska with Canada. Adjacent land use in the study corridor consists primarily of industrial, commercial, and military infrastructure. Within the study corridor, the Richardson Highway provides access to:

- Residential communities / developments between Fairbanks and North Pole
- Fort Wainwright – home to the U.S. Army Garrison and units of the U.S. Army Alaska (USARAK) including the 1st Stryker Brigade Combat Team, 25th Infantry Division, the 16th Combat Aviation Brigade, and the Medical Department Activity-Alaska. In addition, the fort has 7,700 soldiers,

approximately 8,200 family members, and about 1,250 Army and Department of Defense civilian employees.[1] Fort Wainwright is a strategic position for the U.S. Army to deploy troops anywhere in the world for contingencies ranging from humanitarian relief to combat operations.[2] Fort Wainwright also generates 28% of all revenue in the Fairbanks North Star Borough (FNSB)[3]

- Alaska Routes 2 (Elliott Highway), 3 (George Parks Highway), and 6 (Steese Highway)

Beyond the study corridor, the Richardson Highway provides access to:

- North Pole, Moose Creek, Salcha, Delta Junction, Paxon, Glennallen, and other smaller communities in eastern Interior Alaska

- Badger Road – an urban minor arterial which loops north and then southeast back to North Pole. This road provides access to:
    - Residential developments between Fairbanks and North Pole
    - Fort Wainwright
    - Ticasuk Brown Elementary School

- Eielson Air Force Base (AFB) – home to the 354th Fighter Wing and 168th Air Refueling Wing. In addition, the base has approximately 2,500 military workers, more than 2,000 military and family members living on base, and 480 civilian employees. Eielson AFB supports the U.S. Army Alaska with close air support, theater airlift, reconnaissance missions, and weather analysis.[4] Eielson AFB also generates 10% of all revenue in the FNSB[5]

- Fort Greely – home to the 49th Missile Defense Battalion and 59th Signal Battalion. In addition, the fort has a total work force of approximately 1,030 and 1,620 residents. Fort Greely is an integral part of the Nation's Ballistic Mission Defense System and is a National Security Asset. Its mission is to engage and destroy limited intermediate- and long-range missile threats in

[1] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[2] Fort Wainwright Home of the Arctic Warriors. *The Official Homepage of Fort Wainwright, Alaska*. Retrieved November 20, 2013, from http://www.wainwright.army.mil/sites/local/.
[3] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.
[4] History of Fort Wainwright. (2013). *The Army in Alaska Fort Wainwright Fort Greely Installation Guide 2013*, 10. Retrieved November 20, 2013, from http://www.mybaseguide.com/base/army/army-in-alaska.
[5] (2012). Military. *Fairbanks Economic Development Corporation*. Retrieved November 20, 2013, from http://www.investfairbanks.com/projects/military.

space to protect the U.S. In addition, Fort Greely hosts missions of the Cold Regions Test Center and the Northern Warfare Training Center.[6]

- Various State-managed recreation, Federal subsistence, and military training lands
- Alaska Routes 8 (Denali Highway) and 10 (Copper River Highway), as well as the Tok-Cutoff Road and Glenn Highway
- Alaska Highway – the only interstate highway connecting Alaska to the contiguous 48 United States of America
- Valdez – via Alaska Route 4. Valdez is the southern terminus of the Trans Alaskan Pipeline System (TAPS). North Slope crude oil is measured and stored at the Valdez Marine Terminal, loaded onto tankers, and sent to market.[7] Valdez is also the northernmost ice-free deepwater port in the U.S. with the best access to Alaska's interior, the U.S. Pacific Northwest, Northern Canada, and Pacific Rim trade routes[8]

Steese Expressway

The Steese Expressway is classified as an urban principal arterial, and is the only north / southbound transportation corridor in eastern Fairbanks. The Steese Expressway transitions into Alaska Route 6 (Steese Highway) at milepost 11 in Fox. Adjacent land use between the Airport Way / Gaffney Road and Johansen Expressway intersections is primarily industrial, commercial, and military infrastructure. Proximate land use between the Johansen Expressway intersection and Chena Hot Springs Road interchange is primarily residential housing with light commercial infrastructure and community space (e.g. Birch Hill Cemetery, churches, recreational park access) interspersed throughout. Recent surges in commercial development (e.g. Wal-Mart, Home Depot, Fred Meyer, etc.) near Trainor Gate Road and the Johansen Expressway intersections have generated higher traffic demand on the Steese Expressway which also provides access to:

- Airport Way / Gaffney Road – Airport Way is a westbound urban principal arterial while Gaffney Road is an eastbound urban local road. These roads provide access to:
  - Residential and commercial developments
  - Fairbanks International Airport
  - Fort Wainwright
  - Lathrop High and Ryan Middle Schools

[6] History of Fort Greely. (2013). *The Official Homepage of Fort Greely, Alaska*. Retrieved December 18, 2013, from http://www.greely.army.mil/about/history.aspx.
[7] (2011). The Valdez Marine Terminal. *Alyeska Pipeline Service Company*. Retrieved November 21, 2013, from http://www.alyeska-pipe.com/.
[8] Port. *City of Valdez, Alaska*. Retrieved November 21, 2013, from http://www.ci.valdez.ak.us.

- 3rd Street – an east / westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Fairbanks' commercial business district

- College Road – a westbound urban minor arterial. This road provides access to:
  - Residential and commercial developments
  - Creamer's Field State Migratory Waterfowl Refuge
  - University of Alaska, Fairbanks (UAF) campus
  - Nordale Elementary School
  - Various State of Alaska agency office locations

- Trainor Gate Road – a westbound urban minor collector. This road provides access to:
  - Fort Wainwright Army Post
  - Residential developments
  - Ladd Elementary and Tanana Middle Schools

- Johansen Expressway / City Lights Boulevard – Johansen Expressway is a westbound urban principal arterial, while City Lights Boulevard is an eastbound urban local road. These roads provide access to:
  - Western Fairbanks
  - Alaska Route 3 (George Parks Highway)
  - Birch Hill Cemetery
  - ARRC freight distribution and passenger rail-yard
  - Local freight distribution trucking centers

- Farmers Loop Road / Fairhill Road – Farmers Loop Road is a rural minor arterial that loops northwest then southwest to its intersection with College Road. Fairhill Road is a southeast bound urban local road. These roads provide access to:
  - Residential developments
  - UAF campus
  - Birch Hill Recreation Area
  - Pearl Creek Elementary

- Chena Hot Springs Road – the study corridor's northern terminus located near milepost 6, is an eastbound rural minor arterial that becomes a rural major collector. This road provides access to:
  - Residential developments
  - Two Rivers community
  - Weller and Two Rivers Elementary Schools
  - State managed recreation lands
  - Chena Hot Springs Resort

Beyond the study corridor, the Steese Expressway provides access to:

- Alaska Route 2 (Elliott Highway) – serving communities between Manley Hot Springs and Fairbanks, while providing access to various State and Federal managed lands (e.g. White Mountains National Recreation Area)
- Alaska Route 6 (Steese Highway) – serving communities between Circle and Fairbanks, while providing access to various State and Federal managed lands (e.g. Yukon Flats National Wildlife Refuge and Yukon-Charley River National Preserve)
- Alaska Route 11 (Dalton Highway) – serving the oil industry and TAPS northern terminus at Prudhoe Bay along with the smaller communities between the North Slope and Fairbanks. Also provides access to various park lands (e.g. Gates of the Arctic National Park and Preserve), as well as University of Alaska research lands and facilities.

Project Need Details

I – Safety

The following table provides crash data from 2006-2010 for "high crash locations" within the study corridor:

Intersection	Number of Crashes	Safety Index	Major Crashes	Fatal Crashes
Airport Way	106	0.96	1	0
3rd Street	119	1.58	3	1
College Road	87	0.87	3	0
Trainor Gate	80	1.03	2	0
Johansen Expressway	35	0.40	2	1

If any of the following criteria is met, the intersection is considered a high crash location[9]:

- Safety index greater than 0.90
- Major crashes equal 2 or greater
- Fatal crashes equal 1 or greater

In addition to the high crash locations, other corridor areas exist for the potential for severe crashes. These locations include two at-grade railroad crossings and a stop-controlled crossing of the Richardson Highway off-ramp onto the Old Richardson Highway. Although these areas have not yet experienced crash patterns, any accident would almost certainly be a high severity crash resulting in major injury or fatality. Upgrading the corridor to current ADOT&PF design standards and reducing the number of conflict points will improve transportation safety for motorized and non-motorized users by reducing crash frequency and severity.

[9] *Alaska Highway Safety Improvement Program Handbook.* (12th ed.). (2013). Juneau: Alaska Department of Transportation and Public Facilities.

Pedestrian and bicycle use is prohibited on the Steese Expressway and currently a separated, shared-use path exists along each side of the road between Airport Way and College Road. At College Road, the path on the eastern side ends, while the path on the western side continues northward to Farmers Loop Road. Generally the path width is 5 feet, though in some sections can range between 5 to 8 feet wide. The American Association of State Highway and Transportation Officials (AASHTO), recommends a minimum paved width for two-directional shared use paths of 10 feet. In rare instances, a reduced width of eight feet can be adequate.[10] FMATS identified and prioritized the following intersections as exhibiting a need for pedestrian and bicycle crossing improvements[11]:

- Steese Expressway / 3rd Street – High priority
- Steese Expressway / Johansen Expressway – Medium priority
- Steese Expressway / Farmers Loop Road – Low priority

Facilities for pedestrians and bicyclists along the Richardson Highway from "6-mile" Badger Road interchange to the Airport Way intersection are minimal. Unimproved road shoulders currently serve non-motorized users. However, a project was recently proposed to construct a separated pedestrian and bicycle facility in this corridor stretch.[12]

II –Mobility

The study corridor has undergone significant changes in land-use without updated planning for correspondingly appropriate improvements to transportation infrastructure.[13] As a result, a new traffic analysis is required to determine the validity of previous corridor recommendations. The updated analysis revealed the existing corridor infrastructure can't accommodate projected traffic volume growth without resulting in failing Levels of Service (LOS). The LOS is a common, quantitative service measure of intersection and road segment congestion that characterizes operating conditions in terms of traffic performance measures related to speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. The Transportation Research Board's Highway Capacity Manual 2010 (HCM) defines six levels of service, ranging from A to F, used to identify operating conditions on a given roadway or intersection. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst.[14] LOS grades are assigned to intersections based on average vehicle delay:

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[10] *Guide for the Development of Bicycle Facilities.* (1999). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[11] *FMATS Non-Motorized Transportation Plan.* (2012). Anchorage: Kittelson & Associates, Inc..
[12] ADOT&PF (2013, August 20). *Richardson Highway MP 356-362 Bicycle/Pedestrian Path* – 2013-2015 Alaska Statewide Transportation Improvement Program, Need ID: 25598. Retrieved November 18, 2013, from http://www.dot.state.ak.us/stwdplng/cip/stip/.
[13] *Steese Expressway Corridor Study Fairbanks, Alaska State Project No. A2056 Master Plan Report.* (1988). Tampa: Greiner, Inc..
[14] *HCM2010 Highway Capacity Manual.* (2010). Washington DC: Transportation Research Board of the National Academies.

Level of Service	Average Delay
A	Less than 10 seconds
B	10 to 20 seconds
C	20 to 35 seconds
D	35 to 55 seconds
E	55 to 80 seconds
F	Greater than 80 seconds

In heavily developed sections of metropolitan areas, conditions may make the use of LOS D appropriate. However, this level should be used sparingly and at least a LOS C should be sought.[15] As the land surrounding Fairbanks is developed, traffic volumes in the study area are projected to increase as follows:

Road	2010 AADT (vehicles)	2040 AADT (vehicles)
Richardson Highway	23,910	39,752
Steese Expressway	21,761	29,109
Airport Way	17,725	24,436
3rd Street	10,730	13,950
College Road	14,785	16,226
Trainor Gate Road	6,545	7,951
Johansen Expressway	18,193	24,457
Farmers Loop Road	6,780	9,582

The Alaska Department of Labor and Workforce Development projects a population increase for the FNSB as follows:[16]

2010 Population	2035 Population
98,000 people	132,076 people

This projected increase results in an average, annual growth rate of 1.15%. Improving the transportation infrastructure of the Richardson and Steese Expressway corridors is necessary to support this projected growth. Based on the traffic analysis and projected growth, the following table provides predicted morning and afternoon peak LOS grades by intersection:

[15] *A Policy on Geometric Design of Highways and Streets* (4th ed.). (2001). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).
[16] Alaska Department of Labor and Workforce Development (2012, April). Alaska Population Projections 2010-2035. *Alaska Department of Labor and Workforce Development.* Retrieved October 21, 2013, from http://labor.alaska.gov/research/pop/popproj.htm.

Intersection	2040 AM Level of Service	2040 PM Level of Service
Steese Expy / Airport Rd	F	F
Steese Expy / 10th Ave	A	B
Steese Expy / 3rd St	F	D
Steese Expy / College Rd	F	C
Steese Expy / Trainor Gate Rd	F	D
Steese Expy / Johansen Expy	F	D
Steese Expy / Farmers Loop Rd	F	E

ADOT&PF will coordinate with local planning agencies and stakeholders to develop a corridor concept that accommodates future traffic volumes and reduces road-user costs to the extent practical. Generally road-user costs such as fuel and oil usage, wear on tires, repairs, delay to motorists, and crashes that result from speed changes, stops, and waiting can be reduced by increasing mobility. The developed concept will attempt to enhance and balance the mobility and access needs of all corridor users. ADOT&PF will also encourage local governing agencies to balance both future land development and access control with the FMATS Long-range Transportation Plan (LTP), thereby promoting overall corridor sustainability.

III – Air quality

Air quality standards have changed since the last corridor plan and future transportation improvements need to consider future air quality impacts. Portions of Fairbanks and North Pole are classified as U.S. Environmental Protection Agency (EPA) maintenance areas for carbon monoxide (CO). Additionally a portion of the Fairbanks North Star Borough is classified as an EPA nonattainment area for fine particulate matter ($PM_{2.5}$). Maintenance areas are zones that meet air quality standards, but need funding for improvements and programs to maintain acceptable air quality standards. Nonattainment areas are zones where air quality levels persistently exceed national ambient air quality standards. Although Fairbanks has improved for CO and PM_{10} pollutants since the early 1980s, it's still required to monitor air quality impacts resulting from transportation projects under the Clean Air Act (CAA).

Section 110 of the CAA, 42 U.S.C. §7410, requires state and local air pollution control agencies adopt federally approved control strategies to minimize air pollution. The resulting body of regulation is known as a State Implementation Plan (SIP). With assistance from the Alaska Department of Environmental Conservation (ADEC), Fairbanks and North Pole must periodically prepare updates to the SIP to demonstrate maintenance of CO and PM air quality standards.[17] The CAA prohibits federal actions that would cause air quality violations or jeopardize attainment of air quality standards; currently defined under the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards. This policy

[17] Alaska Department of Environmental Conservation (2013, April 22). State Implementation Plan (SIP). *Alaska Department of Environmental Conservation*. Retrieved October 21, 2013, from http://dec.alaska.gov/air/anpms/SIP/SIPhome.htm.

requires review of all planned transportation projects in Alaska's nonattainment and maintenance areas to ensure air quality won't decrease. This analysis, known as "conformity," requires demonstration that highway and transit projects are consistent with the most recent SIP emissions budget for CO and PM.

Proposed FMATS MTP and Transportation Improvement Program (TIP) construction projects within nonattainment and maintenance areas must undergo regional and project-level analysis to ensure conformity to the SIP. The regional analysis evaluates the combined emission impacts of all projects regardless of funding source in an area for each year in the TIP timeframe (approximately 20 years). The project-level analysis evaluates emission impacts at the project location to ensure localized "hot-spot" violations won't result. A concept will be developed that is consistent with federal and local air quality requirements. The concept will improve air quality through the reduction of transportation deficiencies and increasing mobility through the corridor (e.g. reducing vehicle idle time).

IV – Freight operations

Approximately 90 percent of Alaska's unrestricted revenue is generated through oil and gas exploration, development, and production, with most generated from activities on Alaska's North Slope.[18] As of early 2013, North Slope oil accounted for approximately 8% of all U.S. oil production, or about 535,000 barrels per day.[19] Alaska's oil and gas industry use the corridor daily to access the North Slope haul route (Alaska Route 11 – Dalton Highway). Title 17 of the Alaska Administrative Code 25.014 designates the Richardson Highway and Steese Expressway as official truck routes for long combination vehicles. The existing congestion in the study corridor results in high road-user costs for freight operators. The addition of low vertical clearance obstructions (e.g. traffic signal mast arms) limits shipment sizes, resulting in increased truck traffic. Besides being heavier, trucks are generally slower and occupy more roadway space. Consequently, trucks have a greater individual effect on traffic operation than passenger vehicles.[20]

ADOT&PF will collaborate with commercial shipping operations to develop a corridor concept that optimizes freight operations for long- and short-hauls while also minimizing negative impacts. This coordination effort may also identify existing transportation deficiencies that restrict/constrain freight operations. ADOT&PF will also partner with ARRC to minimize impacts to rail operations within the corridor and identify opportunities to improve and / or eliminate existing at-grade crossings and other deficiencies.

[18] Alaska Department of Revenue – Tax Division (2013, Spring). Revenue Sourcesbook Spring. *Alaska Department of Revenue*. Retrieved October 21, 2013, from http://www.tax.alaska.gov/programs/sourcebook/index.aspx.
[19] U.S. Energy Information Administration (2013, September 27). Crude Oil Production. *U.S. Energy Information Administration*. Retrieved October 21, 2013, from http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_a.htm.
[20] *A Policy on Geometric Design of Highways and Streets* (6th ed.). (2011). Washington DC: American Association of State Highway and Transportation Officials (AASHTO).

V – Sustainability

The current study corridor won't sustain projected traffic volumes without resulting in failing service levels. In addition, available funding for transportation projects has declined in recent years leading to increased competition for limited federal and state resources. As such, ADOT&PF will coordinate with the public, local agencies, and stakeholders to develop a concept that improves the longevity and sustainability of the corridor while reducing maintenance and operations costs. In addition consideration will be given to the future growth of residential, commercial, and military developments such as:

- Fort Wainwright's plan to relocate its Trainor Gate Road access to the Johansen Expressway / Steese Expressway intersection
- ARRC's Northern Rail Extension Project – this project extends an existing rail line from its terminus near North Pole, 80 miles to a terminus in the vicinity of Delta Junction. The new line will provide improved transportation options for the U.S. military, mass transit, and freight movement between Fairbanks / North Pole and Delta Junction[21]

[21] Alaska Railroad Corporation (2005). Northern Rail Extension Project. *Alaska Railroad Northern Rail Extension Website*. Retrieved November 20, 2013, from http://www.northernrailextension.com/index.html.

ATTACHMENT 3—Further Information

1. Steese Expressway/Farmers Loop Road
    - Wetlands impacts
    - ROW impacts
    - Proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Proximity to Army Permafrost Research Project
2. Steese Expressway/Johansen Expressway
    - proximity to business district may potentially require a more in-depth socioeconomic impact analysis
    - proximity to large area of contaminated sites[i]
    - ROW impacts likely; proximity to residential development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - proximity to cemetery and churches will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
3. Steese Expressway/W. Trainor Gate Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - AHRS sites to the east of the highway are related to military infrastructure may necessitate analysis but no 4(f) analysis expected.
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
4. Steese Expressway/College Road
    - proximity to large area of contaminated sites with institutional controls
    - nearby cemetery and churches will factor into noise analysis;
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
5. Steese Expressway/3rd Street
    - proximity to business district and residential area may potentially require a more in-depth socioeconomic impact analysis
6. Steese Expressway/10th Avenue
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
7. Steese Expressway/Airport Way
    - proximity to cemetery will factor into noise analysis and may potentially require a more in-depth socioeconomic impact analysis

- Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
- Military boundary adjacent to project area

8. Richardson Highway: West-Bound Off-Ramp and Railroad intersection
    - Proximity to residential and commercial development will potentially require a more in-depth socioeconomic impact and noise analysis.
    - Military boundary adjacent to project area
    - Potential wetland impacts

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[i] Contaminated Sites:

- Bentley Mall East Satellite (32 College Rd): Active site with institutional controls; contamination from PCE and TCE
- Tesoro Northstar #103 (527 Old Steese Highway): Cleanup complete with institutional controls; groundwater and soil contamination still present; Complex site with deed notice; consult DEC
- US Travel Systems (230 Old Steese Hwy): Active site; contamination from USTs; as of 2011, benzene, DRO and GRO above groundwater cleanup levels
- Holiday Store #618 (203 3rd. Street): Cleanup complete with institutional controls; contamination from underground storage tanks; groundwater contaminated; consult record of decision
- Steese Mall (201 Old Steese Hwy.): Active site

PUBLIC OPEN HOUSE MEETINGS

Richardson Highway/Steese Expressway Planning & Environmental Linkage Study Open House Notes June 24, 2013

The Alaska Department of Transportation and Public Facilities (DOT&PF) and DOWL HKM conducted an Open House for the Richardson Highway/Steese Expressway Planning & Environmental Linkage Study on Monday, June 24, 2013 at the Noel Wien Library in Fairbanks, Alaska. The purpose of the meeting was to discuss the project objective, present preliminary concepts, and gather information and concerns about the project corridor and concepts from stakeholders. Nineteen people signed in at the meeting.

The meeting was announced in the Fairbanks Daily News-Miner on the two Sundays prior to the open house as well as on the day of the Open House. It was also publicized on the DOT&PF Facebook site, on the KUAC Community Events online calendar, and in a Fairbanks Daily News-Miner column written by Dermot Cole. Meeting information was also shared with the Fairbanks Metropolitan Area Transportation System's Policy Committee, Technical Committee, and support staff.

The meeting was held from 5:00 p.m. to 7:00 p.m. in the library auditorium. Representatives from the project team were available to discuss project details, clarify information, and answer questions. Project materials included displays of corridor zones, proposed concepts, and a large aerial roll plot of the project corridor. The public was encouraged to provide feedback to project team members, on written comment forms, or via email.

The following is a summary of the public comments received and project team responses from the open house:

Close the signal at the existing Farmers Loop Road/Steese Expressway intersection and build an interchange at a new (realigned) Farmers Loop Road/Steese Expressway intersection at Crest Drive.
An interchange concept for Farmers Loop Road/Steese Expressway is being evaluated as part of this PEL study. The Crest Drive location would be evaluated in a future project-specific interchange study.

Put in a roundabout at West Trainor Gate Road and the Old Steese Highway.
Alaska Railroad Corporation (ARRC) right-of-way constraints will not allow for this alternative.

The Steese Expressway needs interchanges at Third Street, College Road, Johansen Expressway, and Airport Way.
Steese Expressway interchanges at Johansen Expressway and Airport Way are being evaluated as part of this PEL study.

Build an interchange to replace where Northside and Hunter streets cross the Johansen Expressway.
Right-of-way impacts on adjacent parcels would be significant and increased traffic would overload the ramp intersections.

Eliminate the Trainor Gate connector road between the Steese Expressway and Old Steese Highway—traffic gets too backed up for the Steese Expressway/Trainor Gate intersection to function properly.
This concept is being evaluated as part of the PEL study, however it will require additional improvements associated with the closure of this segment of roadway.

The Old Farmers Loop to Old Steese Highway connection concept is good, but do not want to see a roundabout here because it will unnecessarily slow down Farmers Loop traffic that is heading to the Steese Expressway. Signal or stop control is more appropriate.
Intersection control options will be considered as part of a future project-specific evaluation.

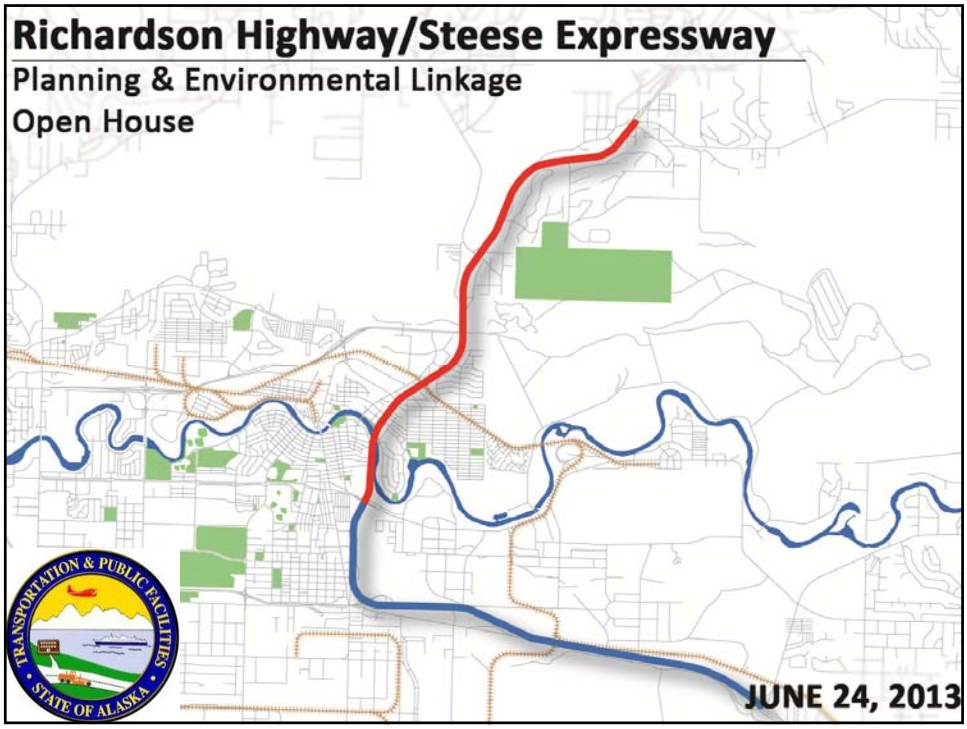
The grade-separated overpass at the Steese Expressway/Airport Way intersection is needed.
This concept is currently being evaluated.

Not sure about dual roundabouts at Chena Hot Springs Road, but better visibility is needed for vehicles traveling from the east and west.
The dual roundabouts are being constructed as part of a separate Highway Safety Improvements (HSIP) project. This PEL study is evaluating additional improvements for those roundabouts.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
OPEN HOUSE
JUNE 24, 2013

PRINT NAME	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	GENDER *	RACE * (W, AN, B, H, A, P, O)
Donna Gardino	donna.gardino@fmats.us	F	W
Chris Cavallo	christopher.cavallo@alaska.gov	m	w
Cayman Irvine	cayman.irvine@gmail.com		
Duff McEnteer	duffmcenteer@yahoo.com	m	w
Gary Newman	gary@chena.org		
Barry Hoopes	barry.hoopes@alaska.gov	m	w
Chena Newman	chena@chena.org	F	w
Clark Milne	cmilne@dowlhkm.com	m	w
Brandon Brefczynski	brandon.brefczynski@akleg.gov	M	w
Ted Johnson	TRSJohnson@alaska.net	xx	w
Kellen Spillman	KSpillman@fnsb.us	m	w
Steve Thompson	smthomp13@yahoo.com – State Rep	m	w
Charles Whitaker	mariacharlie@mosquitonet.com		
JC PHILLIPS	PO BOX 70567 FBKS AK 99707	M	W
Al Beck	albert.beck@alaska.gov	m	w
Don Callahan	606 Bennington Dr. 99709	m	w
Steve Noble	snoble@dowlhkm.com	m	w
Mary Ann Nickles	manickles@alaska.com	F	w
Rachel Steer	RSteer@dowlhkm.com	F	w

*This information is voluntary. It is used by DOT&PF to track the fair and equal representation by the public in programs administered by DOT&PF.



AGENDA

- Safety minute
- Introductions
- PEL definition, goals, and process
- What has been completed so far?
- Conceptual improvements to mitigate congestion issues
- Gather input on presented concepts and ideas for new concepts

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer
- Barry Hooper, Preliminary Design & Environmental Group Chief
- Hannah Blankenship, Publications Specialist

DOWL HKM

- Steve Noble, P.E., Project Manager
- Chris Grgich, P.E., Traffic Engineer
- Rachel Steer, Project Coordination

WHAT IS A PEL STUDY?

- One of 10 initiatives included in FHWA's "Every Day Counts" program to shorten project delivery time.
- An approach to transportation decision making that:
  - Considers environmental, community, and economic goals early in the planning stage;
  - Carries those considerations through project development, design, and construction;
  - Tries to identify "red flags."
- A seamless decision-making process that:
  - Minimizes duplication of effort;
  - Promotes environmental stewardship; and
  - Reduces delays in project implementation.

A VIABLE PEL STUDY MUST:

- Involve the public as well as interested state, local, tribal, and federal agencies;
- Document relevant decisions in a form that is identifiable and available for review during the NEPA scoping process; and
- Be accepted by the Federal Highway Administration (FHWA).

PEL KEY STEPS

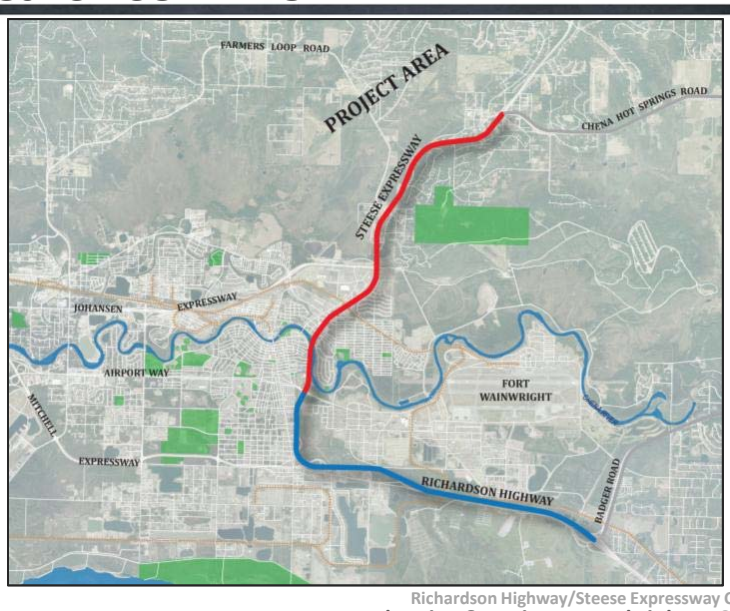
We are here

- Identify transportation deficiencies;
- Develop project concepts that consider:

-Feasibility	-Land use
-Logical termini	-Freight movement
-Cost	-ROW impacts
-Air quality	-Environmental impacts
-Multi-modal traffic	-and more…

- Identify direct, indirect, and cumulative impacts for the preliminary class of action determination; and
- Use this information and analysis in future project development.

PROJECT CORRIDOR



CORRIDOR CHARACTERISTICS

- High-volume principal arterials
- Traverse's some of the fastest growing areas in the FNSB
- Vital links connecting North Pole and Fairbanks to the National Highway System

TRAFFIC ANALYSIS

- Started with FMATS 2035 MTP
- Built on previous studies
- Created regional model
- Calibrated the model to current conditions (land use, traffic network changes, etc.)
- Identified near-term (2015), mid-term (2030), and long-term (2040) operational deficiencies

MULTI-MODAL CONSIDERATIONS

- Richardson/Steese are obvious corridors for parallel multi-modal access, but are often barriers for cross movements—particularly where controlled access exists.
- No new counts for non-motorized movements were conducted in this project.
- Desire for additional non-motorized access in the corridor is noted in previous projects.
- Each project/concept will require a more detailed evaluation of multi-modal access and compatibility with the Fairbanks Non-Motorized Transportation Plan (NMTP).

TRAFFIC ENGINEERING REPORT

- Draft version released February 2013
- Included:
  - Six study zones
  - Traffic volume estimates for:
    - 2015
    - 2030
    - 2040
  - Intersection and segment capacity analysis
  - Deficiency identification

ZONE 1 — Chena Hot Springs Road Interchange

IDENTIFIED ISSUES—ZONE 1

- Chena Hot Springs Road Interchange
  - Proposed single lane roundabouts reach capacity by 2030
  - Heavy westbound to southbound traffic demand

MITIGATION IDEAS — ZONE 1

- Convert single lane roundabouts to dual lane roundabouts
- Provide two westbound travel lanes
- Northbound right-turn slip ramp
- Consider pedestrian improvements to develop connectivity across the Steese Expressway

ZONE 2 — Farmers Loop Road Interchange
ZONE 3 — Johansen Expressway Commercial District

Zone 2

Zone 3

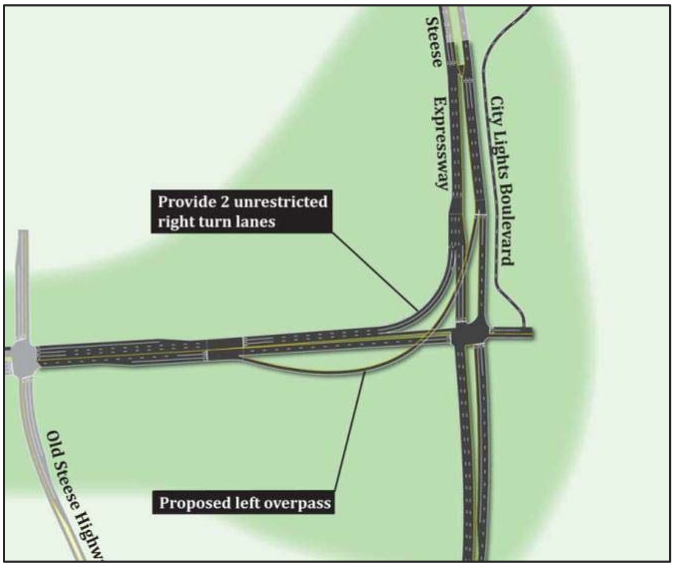
IDENTIFIED ISSUES — ZONES 2 & 3

- **Farmers Loop to Johansen Expressway**
  - Heavy travel demand
  - Signal timing and spacing along Johansen Expressway limits flow
  - Lack of local-level infrastructure between Johansen Expressway and Farmers Loop
- **College Road corridor**
  - Signal timing uncoordinated

MITIGATION IDEAS — ZONES 2&3

- New Steese/Johansen interchange
- New connection from Old Steese to Farmers Loop
- Realign Old Steese north of Farmers Loop
- New collector network improvements
- Add southbound third lane to Steese Expressway
- Spot intersection improvements
- Signal coordination and re-timing
- Non-motorized traffic improvements

MITIGATION IDEA — ZONE 3



ZONE 4 – Central Business District/Airport Way

IDENTIFIED ISSUES — Zone 4

- Airport Way/Steese Expressway
  - Very high directional demand (southbound critical)
  - High turning movement demand on Steese Expressway
  - Lack of auxiliary lanes limits signal efficiency
  - Main access Fort Wainwright gate

- Airport Way/Cushman Street
  - Shared through/turning lanes are inefficient
- Airport Way/Barnette Street
  - High eastbound through demand
  - Conflicting left-turns on permitted-only movements failing

MITIGATION IDEAS — ZONE 4

- Add third southbound travel lane to Steese Expressway (Zones 3 & 4)
- New Airport Way/Steese Expressway interchange
- Spot intersection improvements
- Signal coordination and re-timing
- Non-motorized traffic improvements

ZONE 5 — Old Richardson Highway Industrial District

IDENTIFIED ISSUES — ZONE 5

- Old Richardson Highway westbound/ Richardson Highway eastbound
  - Safety and capacity concerns at the stop controlled crossing of the westbound off ramp with the eastbound freeway
  - Concerns about at-grade railroad crossing

MITIGATION IDEAS — ZONE 5

- Construct overpass for Old Richardson off-ramp
- Non-motorized traffic movements
- Consider railroad overpass

ZONE 6 – Badger Road Interchange

ZONE 6 – Badger Road Interchange

- Signal timing improvements
- Non-motorized traffic movements

NEXT STEPS

- Public open house #1 — We are here
- Refine concepts and environmental analysis
- Public open house #2 (late summer/early fall)
- Final concepts (November 2013)

QUESTIONS/COMMENTS

Submit Your Comments

Rachel Steer, Project Coordinator
1901 Airport Way, Suite 102
Fairbanks, AK 99701
rsteer@dowlhkm.com
907-374-0275

Richardson Highway/Steese Expressway Planning & Environmental Linkage Study Open House #2 Notes October 8, 2013

The Alaska Department of Transportation and Public Facilities (DOT&PF) and DOWL HKM conducted a second Open House for the Richardson Highway/Steese Expressway Planning & Environmental Linkage Study on Tuesday, October 8, 2013 at the Noel Wien Library in Fairbanks, Alaska. The purpose of the meeting was to present corridor concepts under consideration and to gather information and concerns about the project corridor and concepts from stakeholders. Thirty-six people signed in at the meeting.

An advertisement for the meeting was published in the Fairbanks Daily News-Miner on October 3 and October 8. The meeting was also publicized via an advertising campaign on the DOT&PF Facebook site, on the KUAC Community Events online calendar, on KBFX's Charlie O'Toole radio show (October 7), and in a Fairbanks Daily News-Miner article on October 5. Meeting information was also shared with the Fairbanks Metropolitan Area Transportation System's Policy Committee, Technical Committee, and support staff and local media organizations.

The meeting was held from 5:00 p.m. to 7:00 p.m. in the library auditorium. Steve Noble, project manager for DOWL HKM, gave a presentation on the project background, objective, corridor concepts, and next steps. Representatives from the project team were available to discuss project details, clarify information, and answer questions. Project materials included graphics depicting the four major concepts. The first three concepts showed improvements to the Steese Expressway and the fourth concept addressed improvements to the Richardson Highway.

The public was encouraged to provide feedback to project team members in person, on written comment forms, or via email.

The following is a summary of the public comments received and project team responses from the open house:

How do these concepts and projects affect roads and areas downstream of the project study area?
In general the impacts to areas outside of the study corridor are minimal. There are some improvements necessary to areas outside of the project area, but they are going to be needed whether or not these projects move forward.

The main problem in Fairbanks is North-South traffic flow. I strongly encourage you to pursue building Farmers Loop Extension so that it can provide alternative access to the commercial areas south of Old Farmers Loop and closing access to Trainor Gate Road. Leave options open for future expansion.
Thank you for your input.

When do environmental assessments occur?

Currently, a preliminary environmental review of each of these concepts/concepts is being conducted. This review will highlight any environmental red flags that may delay or hinder project development in the future. This information will impact what concepts/projects will move forward in this study.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
OPEN HOUSE #2
OCTOBER 8, 2013

PRINT NAME	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	GENDER *	RACE * (W, AN, B, H, A, P, O)
Larry Knapman	knappy@alaska.com	M	W
Steve Noble	snoble@dowlhkm.com	M	W
Chris Cavallo	christopher.cavallo@alaska.gov	M	W
Emily Mesker	aemesker13@gmail.com	F	W
Leah Aronar-Brown			
Ron Tanner	rwtanner@gci.net	M	W
Ryn Anderson	ryn.anderson@ahtna.com	M	W
DONNA GARDINO	donna.gardino@fmats.us	F	W
Addie Vargas		F	W
DON GOERTZ	KHEVRON@WARPMAIL.NET	M	W
Patrick Cotter	patrickcotter@pdceng.com	M	W
Eric Chase	echase.ake@gmail.com	M	
John Brown		M	W
Stephanie Flichmann	stefany@alaska.net	F	W
Philip Streeter	pstreeter@ACSALASKA.NET	M	W
Kim Streeter			
Aaron Buckley	aaron.buckley@fmats.us	M	W
Joe Rheehan	joe.rheehan@gci.net	M	Why Ask?

*This information is voluntary. It is used by DOT&PF to track the fair and equal representation by the public in programs administered by DOT&PF.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
OPEN HOUSE #2
OCTOBER 8, 2013

PRINT NAME	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	GENDER *	RACE * (W, AN, B, H, A, P, O)
Jae Hill	jhill@fnsb.us		
Kellen Spillman	Kspillman@fns6.us	M	W
Marilyn Fye	marilyn@designalaska.com	F	W
Tom Josephson	TJosephson@DOWLHKM.com	M	W
Eva Zamzow	~~BOX~~ PO Box 10345, Fairbanks AK 99710	F	W
GARY NEWMAN	garye@chena.org		
Renee Van Nort	renee@vannort.com	F	W
Cyndie Warbelow - Tack	plant@alaska.net		
Jenifer Earl	jenifer earl@rocketmail.com	F	W
Sara Mason	smason@dowlhkm.com	F	W
DAVID PECK	CASTLEDRUMMER(M)YAHOO.COM	M	H
J C Phillips	j-c-phillips-iii@yahoo.com	M	W
Powell, Dolores J	DJTPowell@YAHOO.COM	F	W
Rachel Steer	RSteer@dowlhkm.com	F	W
Gary Jenkins	gjenkins@dowlhkm.com	M	W
Sylvia Burns	sburnsak@gmail.com	F	W
Elizabeth Bonnell	baconbets@hotmail.com	F	
Jerry KW Brown	GKW Brown@Alaska.com	M	B A

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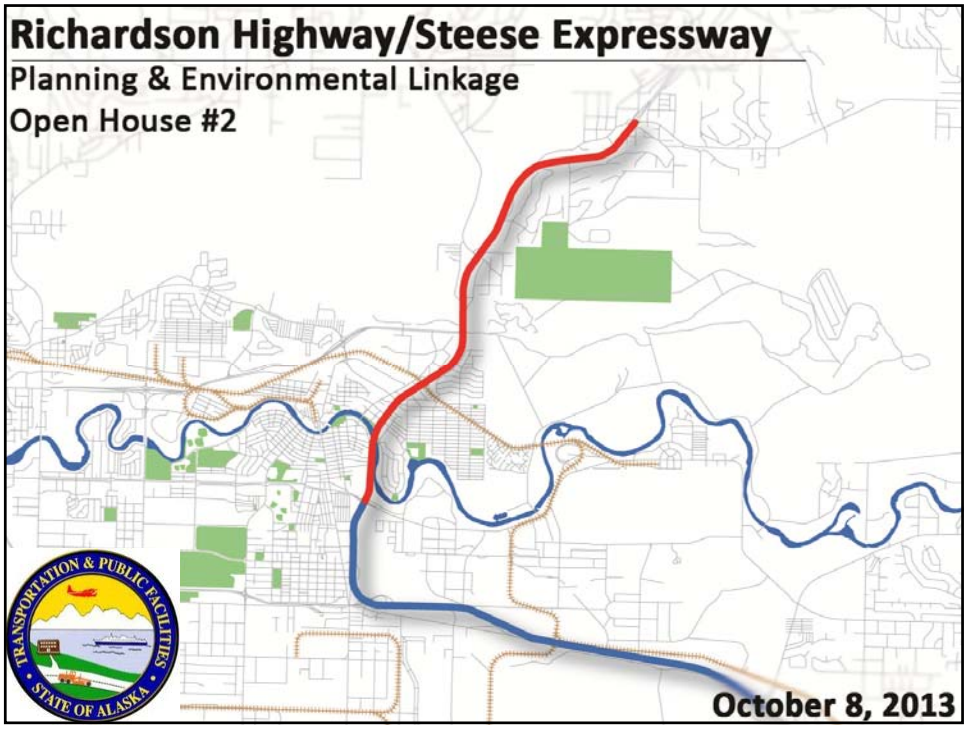


AGENDA

- Safety minute
- Introductions
- PEL definition, goals, and process
- What has been completed so far?
- Corridor concepts
- What's next?
- Questions/comments

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Rachel Steer, Project Coordinator

WHAT IS A PEL STUDY?

- An approach to transportation decision making that:
  - Considers environmental issues early in the planning process;
  - Carries those considerations through project development, design, and construction; and
  - Tries to identify "red flags."
- A seamless decision-making process that:
  - Minimizes duplication of effort;
  - Promotes environmental stewardship; and
  - Reduces delays in project implementation.

PROCESS

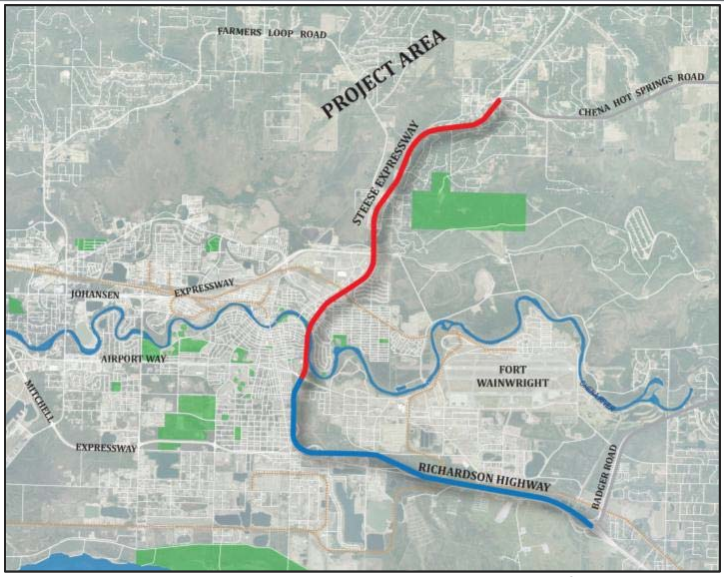
We are here

- Identify transportation deficiencies.
- Develop project concepts that consider:

-Feasibility	-Land use
-Logical termini	-Freight movement
-Cost	-ROW impacts
-Air quality	-Environmental impacts
-Multi-modal traffic	-and more…

- Identify direct, indirect, and cumulative impacts.
- Use this information and analysis in future project development.

PROJECT CORRIDOR



CORRIDOR CHARACTERISTICS

- High-volume principal arterials
- Vital links connecting North Pole and Fairbanks to the National Highway System
- Traverses some of the fastest growing areas in the FNSB

TRAFFIC ANALYSIS

- Built on previous studies
- Created localized model
- Calibrated the model to current conditions (land use, traffic network changes, etc.)
- Non-motorized traffic (compatibility with Non-motorized Transportation Plan)

TRAFFIC ENGINEERING REPORT

- Draft version released February 2013
- Included:
  - Traffic volume estimates for:
    - 2015
    - 2030
    - 2040
  - Intersection and segment capacity analysis
  - Deficiency identification
  - Mitigation alternatives

HOW TO DECIDE?

- Numerous options are conceivable
- Draft Purpose and Need
- Corridor Concepts
  - High mobility, low access
  - Moderate mobility, moderate access
  - Low mobility, high access

Mobility — Emphasis on reducing travel time for through traffic.
Accessibility — Emphasis on providing direct connection to adjacent properties

DRAFT PURPOSE AND NEED

Purpose

- Identify future traffic conditions
- Develop concepts that address:
  - Safety
  - Congestion/delay
  - Access
  - Mobility
  - Minimization of impacts
- Recommend specific projects

DRAFT PURPOSE AND NEED

Need

- This is a major route serving a mix of through and local traffic
- This is a designated truck route
- Land development is driving traffic growth
- The corridor serves several special traffic generators
- There is a lack of continuity for bicycle and pedestrian facilities

CONCEPT 1—HIGH MOBILITY/LOW ACCESS

- Focuses on maximizing capacity and travel speed
- Improves Richardson Highway/Steese Expressway as freeway-type facilities
- Interchanges at major roadways
- Frontage roads provide access to adjacent roads and property

CONCEPT 1—ADVANTAGES/DISADVANTAGES

Advantages

- Highest capacity/lowest travel time
- Has capacity for additional growth
- Removes commuter traffic from adjacent roadways
- Highest predicted safety

Disadvantages

- Highest initial cost
- More right-of-way acquisition than Concepts 2 and 3
- Less direct bicycle and pedestrian connectivity
- Fewer locations of residential/commercial access

CONCEPT 2—MODERATE MOBILITY/MODERATE ACCESS

- Mix of at-grade and grade-separated intersections (interchanges)
- Attempts to balance corridor mobility and access

CONCEPT 2—ADVANTAGES/DISADVANTAGES

Advantages

- Moderate cost and right-of-way acquisition.
- Improved bicycle and pedestrian access
- Minimal change to residential/commercial access

Disadvantages

- Continued delay at at-grade intersections
- At-grade intersections have more crashes than interchanges

CONCEPT 3—LOW MOBILITY/HIGH ACCESS

- No new interchanges
- Maintain existing access
- Maximize existing at-grade intersections and develop adjacent road network

CONCEPT 3—ADVANTAGES/DISADVANTAGES

Advantages

- Moderate cost and right-of-way acquisition
- Bicycle and pedestrian connectivity accommodated in corridor

Disadvantages

- Highest travel time
- Greatest delay
- Minimal overall safety improvements
- Limited long-term capacity options

NEXT STEPS

- Refine concepts and purpose and need
- Additional environmental analysis
- Agency review
- Final concepts (December 2013)
- Public open house #3 (December 2013)

QUESTIONS/COMMENTS

Submit Your Comments

Rachel Steer, Project Coordinator
1901 Airport Way, Suite 102
Fairbanks, AK 99701
rsteer@dowlhkm.com
907-374-0275

Subject: Richardson Highway/Steese Expressway Planning and Environmental Linkage Study, DOT&PF Super Open House
Date: April 19, 2014
Time: 10:00 a.m.-2:00 p.m.
Location: Hutchison Career Center, 3750 Geist Road, Fairbanks, AK 99709
DOT&PF Attendees: Al Beck, P.E., Project Manager; Chris Cavallo, P.E., Project Engineer
DOWL HKM Attendees:
Chris Grgich, Design Engineer; Rachel Steer, Public Involvement Manager

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NOTES

Chris Grgich and Rachel Steer (DOWL HKM) attended the Northern Region DOT&PF's Super Open House on Saturday, 4/19/14 at the Hutchison Career Center in Fairbanks. Members of the public were invited to learn about DOT&PF Northern Region's 2014 construction projects and ongoing planning efforts.

The project team spoke at length with approximately 30-40 people and had an opportunity to gather meaningful input on which concept they preferred. A majority expressed a preference for the mobility provided in Concepts 1 and 2, however there were two individuals who preferred Concept 3. Of those who said mobility should be a priority, Concept 2 was preferred. Some expressed concerns about Concept 1 impacts to the area around College Road and 3rd Street. Most of the people in favor of Concept 2 understood that it would still require impacts to College Road and 3rd Street related to widening and turn lanes and that there would be more congestion in this area than with Concept 1.

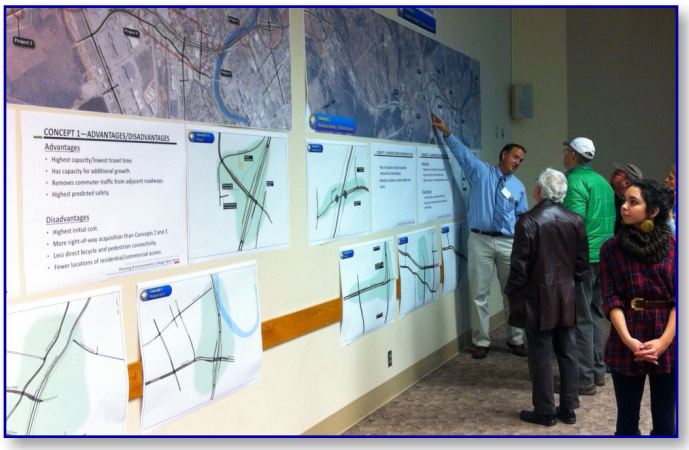
The project team spoke with two gentlemen from Alaska West Express who shared some of the challenges associated with getting large loads from Anchorage and Valdez to the North Slope on the Richardson Highway. Many of their loads are too tall to go under the Mitchell Expressway so they have to exit there and circle around Fairbanks using either a) the Johansen Expressway or b) Goldstream Road. They requested that new interchanges along the project corridor be designed with these larger height and weight loads in mind. They are going to send large load trailer specifications for distribution to the project team.

Alaska Department of Transportation & Public Facilities

Northern Region

Fact Sheet

Richardson Highway/Steese Expressway Planning and Environmental Linkage (PEL) Study
DOT&PF Project, AKSAS # 60799



FAQ

Q: What's a PEL study?

A: PEL stands for "Planning and Environmental Linkage." PEL studies are one of the Federal Highway Administration's (FHWA) Every Day Counts program initiatives designed to speed project delivery. The study is essentially a planning document for the corridor, with the goal of developing project concepts with community and public input. This study differs from past studies because of the environmental linkage component. Environmental impacts will be identified for each concept. Through public, local government, and resource agency cooperation, undesirable concepts will be eliminated before they reach project level. Through the PEL study, DOT&PF can identify "red flags" early and make better informed decisions on which projects go forward and which shouldn't.

The objective of the Richardson Highway/Steese Expressway PEL Study is to evaluate traffic operations in the study area, identify conceptual engineering solutions that address operational deficiencies, and prepare a planning level analysis of the environmental and engineering impacts of each concept. This PEL study is being completed in consultation with public and agency stakeholders and results will be incorporated into the next Fairbanks Metropolitan Transportation Plan to guide transportation and project decisions.

Q: What area does the study cover?

A: The project begins at "6-mile" Badger Road interchange on the Richardson Highway and ends at the Chena Hot Springs Road interchange on the Steese Expressway (see map on back page).

Contact us to be added to the project mailing list:

Al Beck, P.E.
Northern Region DOT&PF
2301 Peger Road
Fairbanks, AK 99709-5316
(907) 451-2276
albert.beck@alaska.gov

Rachel Steer, Public Involvement Manager
DOWL HKM
1901 Airport Way, Suite 102
Fairbanks, AK 99701
(907) 562-2000
rsteer@dowlhkm.com

For more information:

http://dot.alaska.gov/nreg/richardson-steese/

Richardson Highway/Steese Expressway Planning and Environmental Linkage (PEL) Study
DOT&PF Project, AKSAS # 60799

Q: When will concepts developed from this study be constructed?

A: Each concept was developed to address either a current or future traffic deficiency. As such, some concepts may be constructed within the next five years while others may not be constructed for up to 20 years. As concepts are finalized, recommendations for construction dates will be developed.

Q: When will the study be complete?

A: The final PEL study will be complete in summer 2014.

Q: What sorts of concepts for the corridor are being developed?

A: We're looking at the corridor as a whole and developing three overall concepts.

Concept 1: High Mobility/Low Access

- Reduces travel time for through traffic while limiting access to adjacent roads and property. This concept converts major at-grade intersections to grade-separated interchanges, and converts the study corridor to a controlled access facility.

Concept 2: Moderate Mobility/Moderate Access

- Balances corridor mobility and access by blending at-grade intersection improvements with grade-separated interchanges.

Concept 3: Low Mobility/High Access

- Maximizes direct traffic access to adjacent properties by maintaining and improving existing transportation infrastructure. Most intersections remain at-grade.

Q: What do "mobility" and "access" mean as they relate to the corridor concepts?

A: Mobility emphasizes reducing travel time through the corridor. Access emphasizes providing direct connection to adjacent properties along the corridor.

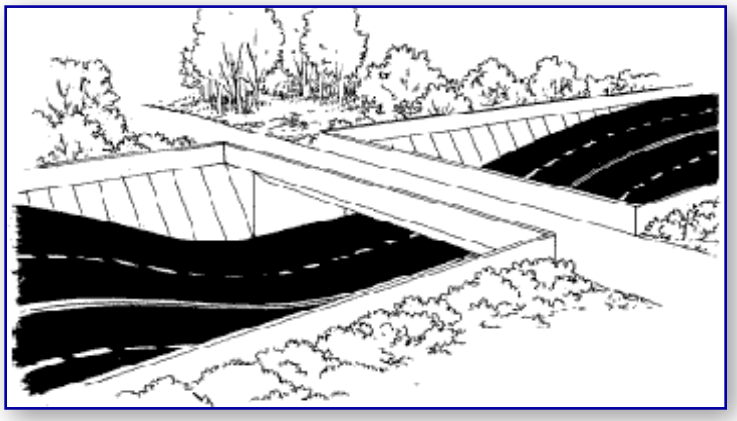
Q: What's an at-grade intersection?

A: The general area where two or more roads join or cross. Common traffic controls for at-grade intersections include traffic signals, stop signs, or yield signs. Intersections may have 3 or more legs. The most common intersection type has four legs.

An at-grade intersection joins two or more roads and can include traffic signals, stop signs, or yield signs.

Fact Sheet

Richardson Highway/Steese Expressway Planning and Environmental Linkage (PEL) Study
DOT&PF Project, AKSAS # 60799



A grade-separated interchange connects two or more roads on different levels. Drawing courtesy of www.transitfacts.com.

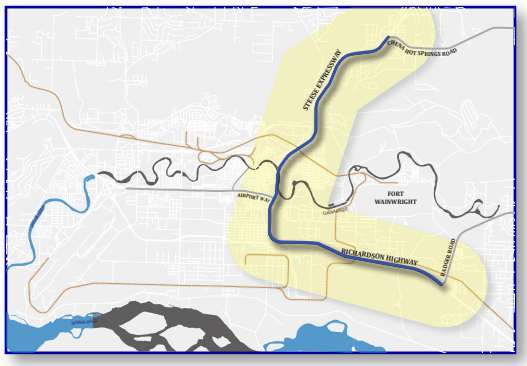
Q: What's a grade-separated interchange?

A: A system of interconnecting two or more roads on different levels. There are multiple configurations to design an interchange, but some of the more popular types include: diamond, cloverleaf, and single-point urban interchange (SPUI). Common names for interchanges include overpass, underpass, and flyover.

Q: Has DOT&PF coordinated with other stakeholders on this study?

A: The project team has conducted extensive outreach with agencies and the public including four interagency work sessions and two public open houses.

See reverse for study corridor!



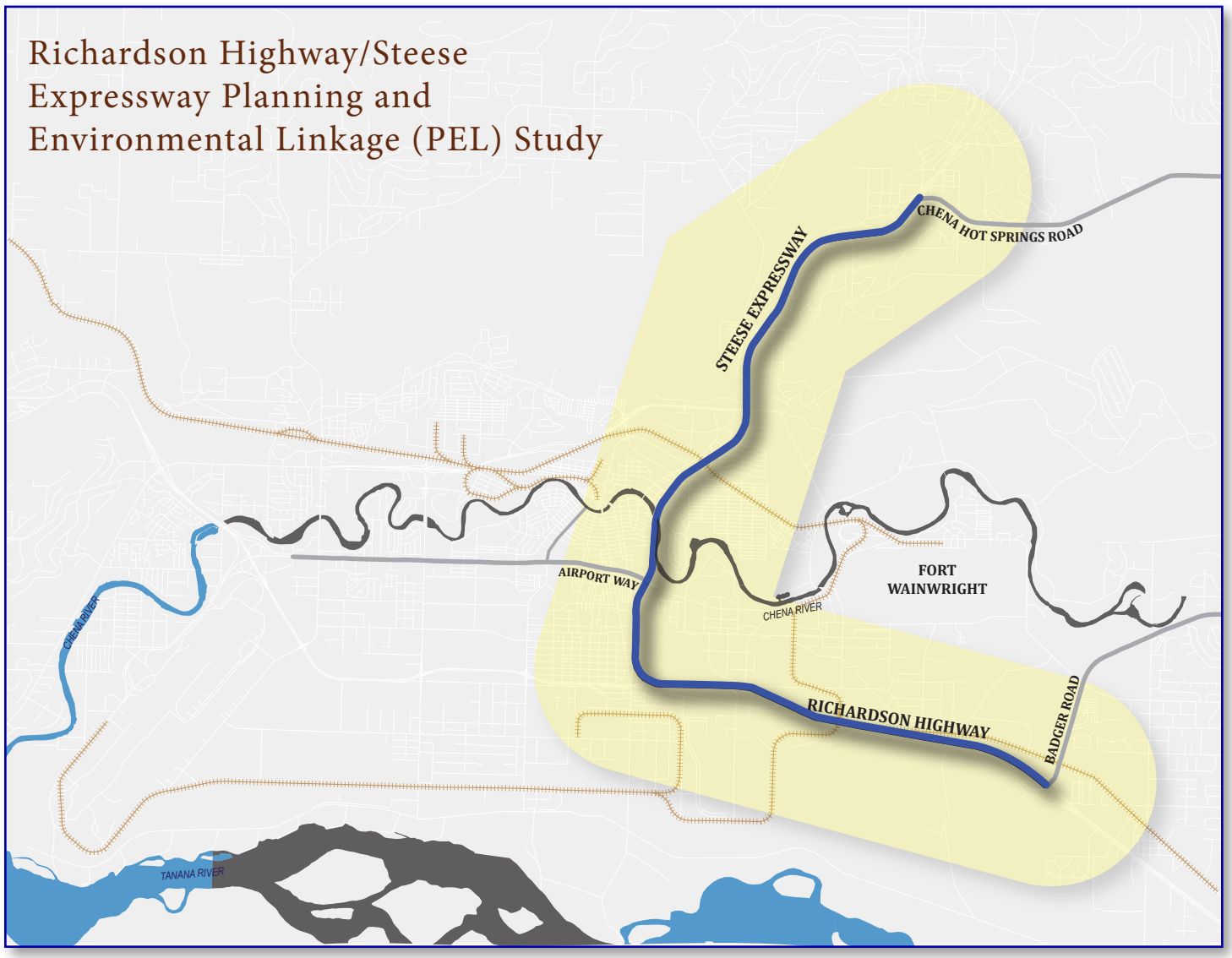
Visit the project website:
http://dot.alaska.gov/nreg/richardson-steese/

Alaska Department of Transportation & Public Facilities
Northern Region

Fact Sheet

Richardson Highway/Steese Expressway Planning and Environmental Linkage (PEL) Study
DOT&PF Project, AKSAS # 60799

Study Corridor



For more information, contact us:

Al Beck, P.E.
Northern Region DOT&PF
2301 Peger Road
Fairbanks, AK 99709-5316
(907) 451-2276
albert.beck@alaska.gov

Rachel Steer, Public Involvement Manager
DOWL HKM
1901 Airport Way, Suite 102
Fairbanks, AK 99701
(907) 562-2000
rsteer@dowlhkm.com

http://dot.alaska.gov/nreg/richardson-steese/

Richardson Highway/Steese Expressway Planning & Environmental Linkage Study Work Session #1 Notes June 19, 2013

Steve Noble (DOWL HKM) thanked the work session participants for taking the time to be at the meeting. He described the Planning and Environmental Linkage (PEL) process that was developed by the Federal Highway Administration (FHWA). PELs are done early in the planning process so that larger projects can be coordinated or linked early in their development and the environmental process can be streamlined in the long run. He then briefly described the project corridor as an area that is largely an arterial and collector roadway network along the Richardson Highway and Steese Expressway corridors. Over the last 18 months, DOWL HKM and DOT&PF have been conducting a traffic analysis for this project. This analysis was built upon previous studies including the 2035 Fairbanks Metropolitan Area Transportation System's (FMATS) Metropolitan Transportation Plan (MTP) and the Fairbanks Non-Motorized Transportation Plan. Near- (2015), mid- (2030), and long- (2040) term operational deficiencies and concept solutions were identified based off of this data. These years will align with the MTP that is being developed (so that it can be incorporated into that document). Steve said the project team split the project corridor into six study zones, moving from north to south, for TransCAD analysis. He pointed out that most of the time, the PM peak time is what drives the congestion. However, in this project corridor the AM peak time is what determined the majority of congestion and failing segments or intersections. Most of the analysis and concepts presented will address deficiencies that are exhibited in the AM peak hours.

Steve said that most of the concepts presented today will not specifically address non-motorized facilities. Many of the non-motorized elements of these presented concepts will be integrated as projects moving forward in the concept-to-design phase.

Donna Gardino (FMATS) said this route has been designated as a U.S. Bike Route by the Alaska State Pedestrian/Bike Coordinator, but there are bike restrictions in some sections of the corridor and those will need to be addressed.

Zone 1—Chena Hot Springs Road Interchange

Steve said issues in this zone include a proposed Highway Safety Improvement Project (HSIP) for a single lane roundabout that will reach capacity by 2030 and heavy westbound to southbound traffic demand. HSIP projects are not usually designed for the long term.

Mitigation Ideas

- Convert single lane roundabouts to dual-lane roundabouts

- Provide two westbound travel lanes
- Northbound right turn slip ramp

Steve pointed out that the bridge likely can't be widened, which would limit the two westbound travel lanes. He said in the bigger picture, this project may be on the lower end of the priority list of the concepts presented today. What he envisions for the PEL process is to develop a short- to mid-term priority list and then a second, mid- to long-term priority list.

Jae Hill (FNSB) asked why the project team did not consider a Single Point Urban Interchange (SPUI) model instead of roundabouts.

Donna said air quality is improved with roundabouts.

Zaid Hussein (DOWL HKM) said roundabouts are driver-driven as opposed to signal-driven (non-human) intersections and crash severities are much lower.

Steve said that a longer-term solution is to do a more in depth interchange analysis.

Bryce Ward (North Pole) said a lot of the traffic is heading from Chena Hot Springs Road to Fairbanks and he anticipates additional growth. He suggested a bypass lane heading north from the Steese so that through-traffic would not have to go through the roundabout.

Donna pointed out there is an ongoing Chena Hot Springs Road trail connection project. There will be bypass lanes on the new Helmericks Avenue roundabouts going in this summer.

Al Beck (DOT&PF) pointed out that plans and projects like this will be added to the concepts as they are refined.

Zone 2—Farmers Loop Road Interchange and Zone 3—Johansen Expressway Commercial District

Steve said it is difficult to separate these zones because they are so interconnected. There is a lot of traffic coming from Farmers Loop Road and turning right onto the Johansen Expressway that contributes to congestion. Additionally, there is not much of a collector-level road network in this area, so vehicles are using the expressways to directly access commercial areas. There are also signal timing and coordination issues along College Road.

Mitigation Ideas

- New connection to Farmers Loop from Old Steese
- Realign Old Steese north of Farmers Loop
- New collector-level network improvements

- Add southbound third lane to Steese Expressway
- New Steese/Johansen interchange
- Spot intersection improvements
- Signal coordination and re-timing

Zaid described the proposed Option A concept to improve the existing Old Farmers Loop and connect it from the Old Steese Highway to the Johansen Expressway. This would create a new collector-level roadway on the east side of the expressway, serving the commercial area to the south. Traffic models show approximately 10,000 vehicles will use that roadway each day. The goal of this option is to maintain or stay below 30,000 AADT through 2040 on the northbound segment of the Steese Expressway. This volume will maintain an acceptable level of service (LOS C) at the intersection of the Johansen and Steese expressways without having to build a grade-separated interchange before 2030. Zaid said this proposed concept would split the load between the two roadways, and that people seeking the commercial district on the south side of the area would take Old Farmers Loop.

Steve reiterated that the objective of this concept is to reduce collector-level traffic on the Steese and Johansen expressways. As an extension of this collector-level grid, this concept recommends the new segment extend all the way to College Road.

Mike Schmetzer (Fairbanks) asked what growth rate the project team was using.

Zaid said the project team used the FMATS growth model in its TransCAD calibrations. This model uses data that is broken down by census blocks. There are 178 geographical locations (Traffic Analysis Zones-TAZ) in the FMATS model and growth is not linear or constant from TAZ to TAZ. Before the TransCAD program was calibrated, growth rates were higher in the core of Fairbanks. After discussing this with FMATS planners, it was decided to reduce the growth rate and population projections for the core of Fairbanks. The areas surrounding Fairbanks will grow at a higher rate than the core of Fairbanks in the future because surrounding areas have a higher potential for growth.

Donna asked what volume of traffic would dictate a dual-lane roundabout.

Zaid said roundabouts are perfect for high left turn, low through-traffic situations.

Steve said there is not a set threshold when you go from a single lane to a dual-lane roundabout but in this case, the dual-lane roundabout is needed as soon as the connection is built because a single lane roundabout will not serve the anticipated volumes.

Rynnieva Moss (aide to Sen. Coghill) asked if this solves the problem for people who objected to extending the Old Steese Highway in the past.

Al described a previous project (Old Steese to McGrath Road Connector) that was shut down in the past. However, this concept has a completely different alignment (it utilizes an existing alignment) and purpose (collector-level use).

Donna pointed out the intersection of Hunter Street and Merhar Avenue, south of where the proposed Old Farmers Loop would cross the Johansen Expressway is private and there is an existing access issue in this area.

Zaid said this concept will not bring additional traffic into the commercial/private development areas. The only thing that will change is the location of where people enter the site.

Kellen said there is a large preliminary plat that was recently approved south of the Johansen Expressway with significant wetlands.

Al said the Corps of Engineers provided a break in the vegetative buffer in a previous plat and the idea behind this concept is to use that buffer.

Kellen confirmed the plat has not been modified. He asked about ground quality/maintenance issues that were raised with the Old Steese to McGrath Connector project—would those be similar with this proposed concept?

Al said the existing segment of Old Farmers Loop is already maintained and there is very little new roadway proposed with this concept.

Kathleen Siftar (Fort Wainwright) said the base is considering creating a new access gate at Lazelle Road (off of the Steese/Johansen intersection) in the long-term (5-10 years) plan. This would include closing Trainor Gate Road and it may change the vehicle numbers at the main gate. There will be a temporary opening as part of the 2014 Arctic Winter Games to test out this option.

Warren Cummings (Fairbanks Fire) said there is a future fire station site at the Steese/Johansen intersection. It has been identified there since the late-1970's.

Rynnieva said the Steese Volunteer Fire Department will likely ask the legislature for funding starting next year.

OPTION B

Zaid presented Option B for Zones 2 and 3. The goal with this option is to lower the traffic volumes on the expressways even more than Option A. The only way to drop it is to encourage people on the Old Steese Highway to take the collector-level roads (instead of the expressway). This concept would realign the existing Old Steese Highway and tie it in to a new Farmers Loop alignment. It will reduce volumes at Farmers Loop/Steese Expressway by 30-50% and will prioritize the expressway by allowing more green time on the north-south signal (reducing emissions). It will also improve the level of service at the gas station located near the intersection of Farmers Loop and Steese Expressway.

Zaid said both Option A and B will still require an additional southbound lane on the Steese Expressway by 2030 all the way to the Richardson Expressway.

Bryce said it is important to look at where people are coming from to get to the transfer station. There are a lot of people travelling from Chena Hot Springs Road and Fox that use the transfer station.

Steve reiterated these are concepts, not project plans. An alternative to creating the collector-level network would be to build an interchange where the Steese and Johansen intersect. The project team showed tight diamond and flyover options, but Steve emphasized this could be any number of interchange operations. The third southbound lane on the Steese Expressway would still be needed with this concept and whether the interchange has a connection to the east (Fort Wainwright) would be figured out as part of the planning process.

Kathleen asked if there is enough right-of-way (ROW) room for an interchange configuration with a historic cemetery and a church in adjacent quadrants of the Steese/Johansen intersection.

Steve said interchange options would address adjacent land use and environmental considerations as the PEL process moves forward. If the collector-level network and the third southbound lane on the Steese are built, there is no need for an interchange at the

Steese/Johansen intersection. Alternatively, if the third southbound lane on the Steese Expressway and the intersection are built, the collector-level network is not needed.

Bryce said the Option B works well and that combining collector-level traffic with expressway traffic is not as effective for long-term planning.

Next, Zaid presented a short-term solution for the intersection of College Road, Bentley Trust Road, and Illinois Street. In the short-term, a dual southbound right turn lane and merge lane is proposed. This will potentially impact the bridge that is currently in construction. The project team is looking at ways to mitigate the impact on the bridge. A dual-lane roundabout still requires another merge lane for southbound right turn movements. A long-term solution is to coordinate the signal timing on all of the intersections along this corridor. This will also reduce vehicle emissions.

Steve said the project team has identified physical/engineering solutions as part of this project. Other intersection and segment deficiencies within this zone can be solved by coordinating signal timing and turn movements.

Brian Lindamood (ARRC) said he does not see any of the intersection layouts shown with this concept as being feasible because there is not enough ROW land available.

Al said any proposed improvements would go through a diagnostic team analysis and work sessions with ARRC to confirm there are no rail conflicts or impacts.

Brian said ARRC is getting ready to close the section of West Trainor Gate Road (near the Laidlaw bus depot). ARRC would support eliminating the entire West Trainor Gate Road link between the Old Steese Highway (or the Steese Expressway) and Helmericks Avenue. He asked for the project team to consider ways to lessen traffic on West Trainor Gate Road.

Donna said she sees a lot of bikes and pedestrians cutting through an undeveloped lot in this area. She has bike/pedestrian counts to share if needed.

ARRC has looked at doing a grade-separated crossing from Noyes Slough to the Johansen Expressway.

Zone 4—Central Business District/Airport Way

Steve said Zone 4 has high southbound directional demand. Almost all of the vehicles coming up and down the Steese Expressway are moving toward the west side of the expressway. Additionally, there are signal phasing issues that result in lost green time at Airport Way and Steese Expressway and Airport Way and Barnette.

Mitigation Ideas

- Continue third southbound lane on Steese Expressway
- New Airport Way/Steese Expressway interchange
- Spot intersection improvements
- Signal coordination and re-timing
- Non-motorized traffic improvements

Steve said the extension of the third southbound lane on the Steese Expressway from Farmers Loop Road to the existing three lane section near Airport Way is included in the presented concepts. The Airport Way/Steese Expressway intersection has significant congestion. An at-grade improvement at Airport Way is a short-term measure to increase capacity. In the long run, this area will require an interchange to address anticipated volumes.

Warren said 10th Avenue is a primary emergency response route.

Donna said the graphics are confusing and they will need legends and spelled-out lane descriptions.

Kathleen asked if controlled access is a priority.

Al said the controlled-access designation currently exists. Ideally, the controlled access would be every 1-1.5 miles. Currently, the access points are closer and DOT&PF would like to continue the emphasis on through-movement and controlled access on highways and expressways.

Steve said the appropriate level of access needs to be built into the road network (corridors and local roadways).

Rynnieva asked if ROW would need to be acquired for the proposed concepts in this corridor.

Al said side streets, corners, or directional ramps would likely need to be acquired.

Jae noted that all of this modeling was focused on peak hour and physical improvements only. He suggested looking at programmatic solutions such as staggered start times for employers, carpooling incentives, or alternative solutions to dealing with congestion.

Donna asked how deep the PEL will go into determining things such as air quality impacts.

Steve said the TransCAD model is capable of predicting a before/after air quality performance. He asked if the travel demand model project (separate project/contract) looks at other non-physical improvements.

Donna said she didn't think so.

Kellen said the current TransCAD model only assumes vehicular mode (1.26 occupants/vehicle). There is not a multi-modal aspect to the current model.

Zaid reiterated the geometrical improvements (added lanes) provide substantial reductions in delay. The LOS will still be F at the Steese Expressway/Airport Way intersection, but the delay time will be reduced by 2/3.

Steve presented an interchange concept for the Steese Expressway/Airport Way intersection with the Steese Expressway shown going over the top of Airport Way. There are a variety of ways to solve the capacity and delay issues at the Barnette Street and Cushman Street intersections with Airport Way. The presented concept will eliminate the split-phase signal (three legs of the intersection have a red and one has green).

Warren mentioned the Cushman Complete Streets project. Cushman will remain northbound only and Barnette will stay southbound only over the bridge. Cushman and Barnette will become two-lanes north of Airport Way.

Steve said DOWL HKM is working with DOT&PF to improve signal timing on Airport Way. Some of those improvements will benefit the roadway.

Al said some of these project concepts are lower on the priority list because they are getting out of the project scope. DOT&PF is trying to get all these concept recommendations to FHWA by November.

Jae asked if the PEL study (and additional access control) will include provisions for pedestrian routes.

Al said the project team will be looking at ways to create/continue those east/west connections.

Zone 5—Old Richardson Highway Industrial District

Steve said Zone 5 has primarily one issue: the westbound stop-controlled freeway crossing of Old Richardson.

Mitigation Ideas

- Eliminate stop-controlled intersection where Old Richardson crosses Richardson Highway

Steve presented a concept to replace the stop-controlled intersection with an overpass. He said Pam Golden mentioned there is not a documented safety issue at this intersection but it does violate all functional hierarchy principles in terms of traffic engineering.

Warren asked if there is any way to incorporate the railroad crossing (southeast of the Old Richardson intersection) with this concept.

Brian said 6-10 trains a week cross the Richardson Highway at this location approximately and 10-20% of all freight traffic on the railroad crosses at this location. Trains are usually 20-30 cars long and typically pass through the area at night. About four years ago ARRC looked at how to do a grade-separated crossing at this location. It is ARRC's long-term intent to avoid going through the middle of Fort Wainwright. He will get the engineering report to Steve. ARRC is not tied to where they would cross the Richardson Highway. This crossing is a major concern from ARRC's perspective.

Kathleen will find out if the realignment corridor (around base) has been preserved by Fort Wainwright. She said Fort Wainwright is working on a project to build a pedestrian bridge at the old gate so that soldiers can walk from the base to the range. Previously deployed soldiers are now back in Fairbanks and there will be increased pedestrian traffic in this area.

Warren said the stops and deceleration lanes at the railroad crossing still create a traffic hazard.

ZONE 6

Steve briefly discussed minor signal timing and phasing improvements and non-motorized traffic movement planning at the Badger Road intersection. There are no physical improvements proposed.

Steve then reviewed the next steps in the PEL process and reminded PEL work session attendees there will be an open house on Monday, June 24. The next PEL work session will likely be held in mid to late-July. Meeting notes will be prepared after each work session. Kellen said the emphasis of the discussion today has been discussing the symptom (traffic), not the problem (development). For example, if subdivision in the borough was stopped, the forecasted growth would not be as large. He suggested looking at partial land use restrictions as a way to manage growth (and traffic).

Steve said this fits directly into the Travel Demand Model forecasting that is being conducted by FMATS. The presented model has been built off of the forecasted planning process (a consequence of the previous planning process).

Kellen said the solution might be a two-pronged approach with physical improvements and planning-level/development changes.

Gage Schutte (Alaska West Express) said Pruhdoe Bay is getting busier and truck traffic will increase.

Steve said freight movements were adjusted in the recent corridor analysis to reflect a growth rate that is comparable to historical rates.

Gage said effective roundabout designs make a difference for big, heavy loads because they can't cross bridges and they have to take on/off ramps.

Al said DOT&PF is taking the permitted oversize load truck routes into account in the planning process. He emphasized that DOT&PF is trying to accommodate freight traffic.

Donna said the FMATS MTP update (starting this summer) will have a freight section that identifies issues. She asked Gage to participate in that process.

Gage said HazMat loads have to stop at the ARRC crossing on the Richardson Highway. This is a big risk, even with the acceleration/deceleration lanes. Alaska West has an institutional policy

not to use the Old Richardson off ramp when accessing the truck yard. Alaska West runs trucks that have 53' trailers with 300" trucks.

Steve invited participants to the open house on Monday, June 24 and reminded work session participants that comments are due on June 26.

Warren requested continued use of the Opti-Com system at all signals.

Al thanked everyone for participating and reiterated that this PEL will continue to look at planning-level concept development.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
Planning & Environmental Linkage Work Session #1
JUNE 19, 2013

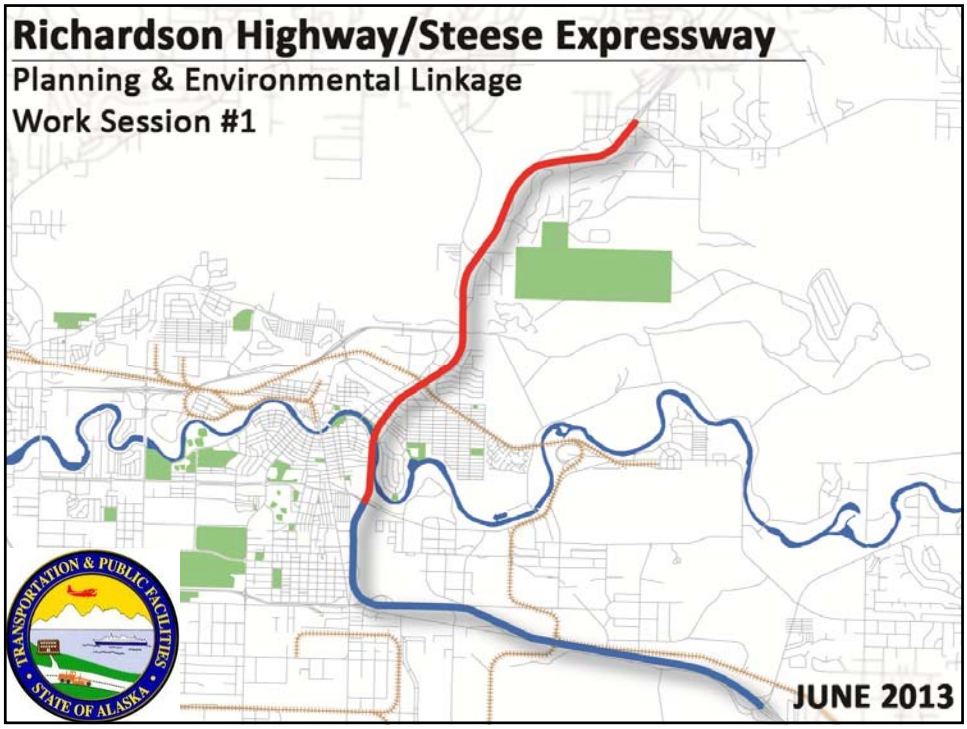
PRINT NAME	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	GENDER *	RACE * (W, AN, B, H, A, P, O)
BRIAN LINDAMOOD	lindamood6@akr.com	M	W
GAGE SCHUTTE	gage@awe.lynden.com	M	W
Bill Butler	bill.butler@northpolealaska.org	M	W
Chris Carollo	christopher.carollo@alaska.gov	m	w
Al Beek	albert.beek@alaska.gov	m	w
Barry Hooper	barry.hooper@alaska.gov	m	w
Steve Noble	snoble@dowlhkm.com	m	w
KATE SIFTAR	KATHLEEN.D.SIFTAR.CIV@MAIL.MIL	F	W
Greg Wyman	gwyman@gvea.com	M	W
Rynnieva Mass	RYNNIEVA.MASS@AK.LEG.GOV	F	W
Bryce Ward	mayor@northpolealaska.com		
Donna Gardino	donna.gardino@fmats.us		
Kellen Spillman	kspillman@fnsb.us		
Jae Hill	jhill@fnsb.us		
Waeeen Cummings	wbcummings@ci.fairbanks.ak.us		
Hannah Blankenship	hannah.blankenship@alaska.gov		
Mike Schmetzer	mjschmetzer@ci.fairbanks.ak.us		

*This information is voluntary. It is used by DOT&PF to track the fair and equal representation by the public in programs administered by DOT&PF.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
Planning & Environmental Linkage Work Session #1
JUNE 19, 2013

PRINT NAME	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	GENDER *	RACE * (W, AN, B, H, A, P, O)
Benjamin Storey	benjamin.storey@alaska.gov		
Zaid Hussein	zhussein@dowlhkm.com		
Kristen Hansen	khansen@dowlhkm.com		
Judy Chapman	judy.chapman@alaska.gov		
Rachel Steer	rsteer@dowlhkm.com		

**This information is voluntary. It is used by DOT&PF to track the fair and equal representation by the public in programs administered by DOT&PF.*



PEL WORK SESSION #1 AGENDA

- Safety minute
- Introductions
- PEL definition, goals, and process
- Present findings of Draft Traffic Engineering Report
- Present conceptual improvements to mitigate congestion issues
- Gather input on presented concepts and ideas for new concepts

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Kristen Hansen, Environmental Lead
- Zaid Hussein, P.E., Project Engineer
- Rachel Steer, Project Coordination

WHAT IS A PEL STUDY?

- One of 10 initiatives included in FHWA's Every Day Counts program to shorten project delivery time
- An approach to transportation decision making that:
  - Considers environmental, community, and economic goals early in the planning stage;
  - Carries those considerations through project development, design, and construction;
  - Tries to identify "red flags."
- A seamless decision-making process that:
  - Minimizes duplication of effort;
  - Promotes environmental stewardship; and
  - Reduces delays in project implementation.

A VIABLE PEL STUDY MUST:

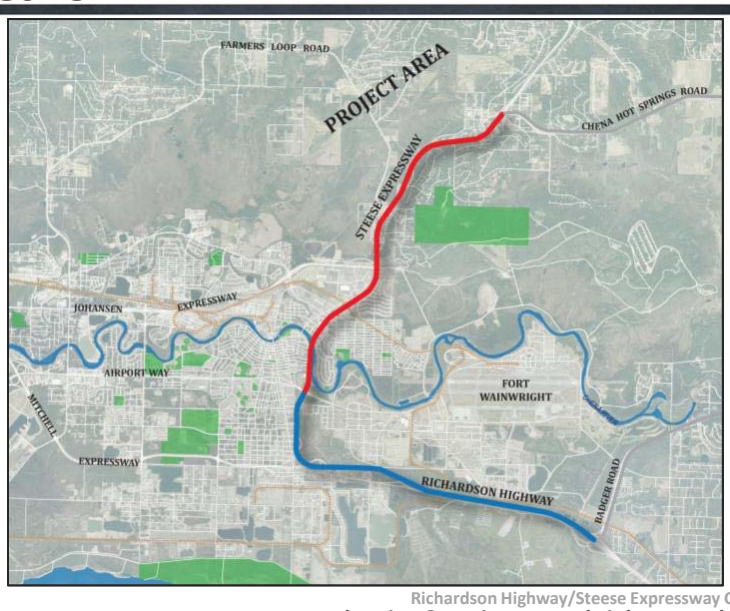
- Involve interested state, local, tribal, and federal agencies as well as the public;
- Document relevant decisions in a form that is identifiable and available for review during the NEPA scoping process and can be appended to or referenced in the NEPA document; and
- Be accepted by the NEPA lead agencies.

PEL PROCESS

We are here!

- Identify transportation deficiencies;
- Develop project concepts that consider feasibility, logical termini, cost, air quality, multi-modal traffic, land use, freight movement, ROW impacts, environmental impacts, etc.;
- Identify direct, indirect, and cumulative impacts for the preliminary class of action determination; and
- Use this information and analysis in future project development.

PROJECT AREA



PROJECT CORRIDOR

- High-volume principal arterials
- Traverse some of the fastest growing areas in the FNSB
- Vital links connecting North Pole and Fairbanks to the National Highway System

TRAFFIC ANALYSIS

- Started with FMATS 2035 MTP
- Built on previous studies
- Created regional model
- Calibrated the model to current conditions (land use, traffic network changes, etc.)
- Identified near-term (2015), mid-term (2030), and long-term (2040) operational deficiencies

WHAT IS LOS?

LEVEL OF SERVICE COLOR KEY

- **LOS A** - *Free Flow*
- **LOS B** - *Reasonably Free Flow*
- **LOS C** - *Stable Flow*
- **LOS D** - *Approaching Unstable Flow*
- **LOS E** - *Unstable Flow*
- **LOS F** - *Breakdown Flow*

MULTI-MODAL CONSIDERATIONS

- Richardson/Steese are obvious corridors for parallel multi-modal access, but are often barriers for cross movements—particularly where controlled access exists.
- No new counts for pedestrian movements were conducted in this project.
- Desire for additional pedestrian access in the corridor is noted in previous projects.
- Each project/concept will require a more detailed evaluation of multi-modal access and compatibility with the Fairbanks Non-Motorized Transportation Plan (NMTP).

TRAFFIC ENGINEERING REPORT

- Draft version released February 2013
- Included:
  - Six study zones
  - Traffic volume estimates for:
    - 2015
    - 2030
    - 2040
  - Intersection and segment capacity analysis
  - Deficiency identification

ZONE 1 — Chena Hot Springs Road Interchange

IDENTIFIED ISSUES—ZONE 1

- Chena Hot Springs Road Interchange
  - Proposed single lane roundabouts reach capacity by 2030
  - Heavy westbound to southbound traffic demand

MITIGATION IDEAS/PLANNING LEVEL COSTS — ZONE 1

- Convert single lane roundabouts to dual lane roundabouts
- Provide two westbound travel lanes
- Northbound right-turn slip ramp
- Consider pedestrian improvements to improve connectivity across the Steese Expressway

ZONE 2 — Farmers Loop Road Interchange

ZONE 3 – Johansen Expressway Commercial District

IDENTIFIED ISSUES — ZONES 2 & 3

- **Farmers Loop to Johansen Expressway**
  - **Heavy travel demand:**
    - High eastbound right and northbound left demand at Farmers Loop
    - High eastbound left and southbound right demand at Johansen Expressway/Steese Expressway
    - Signal timing and spacing along Johansen Expressway limits flow
    - Lack of local-level infrastructure between Johansen Expressway and Farmers Loop
- **College Road corridor**
  - Signal timing uncoordinated

MITIGATION IDEAS/PLANNING LEVEL COSTS— ZONES 2&3

- New connection from Old Steese to Farmers Loop
- Realign Old Steese north of Farmers Loop
- New collector network improvements
- Add southbound third lane to Steese Expressway
- New Steese/Johansen interchange
- Spot intersection improvements
- Signal coordination and re-timing
- Non-motorized traffic improvements

ZONE 4 – Central Business District/Airport Way

IDENTIFIED ISSUES — Zone 4

- Airport Way/Steese Expressway
  - Very high directional demand (southbound critical)
  - High demand to west from north and south (northbound left and southbound right)
  - Shared through/left turn lanes on three approaches
    - » Requires split phasing, increasing lost green time at signal
  - Main access Fort Wainwright gate
- Airport Way/Cushman Street
  - Northbound shared through/left and shared through/right
    - » Requires split signal phasing, increases lost green time
- Airport Way/Barnette Street
  - High eastbound through demand
  - Conflicting left-turns on permitted only movements failing

MITIGATION IDEAS/PLANNING LEVEL COSTS — ZONE 4

- Add third southbound travel lane to Steese Expressway (Zones 3 & 4)
- New Airport Way/Steese Expressway interchange
- Barnette Street quadrant roadway
- Spot intersection improvements
- Signal coordination and re-timing
- Non-motorized traffic improvements

ZONE 5 — Old Richardson Highway Industrial District

IDENTIFIED ISSUES — ZONE 5

- Old Richardson Highway Westbound/ Richardson Highway Eastbound
  - Stop controlled crossing of freeway westbound
  - Westbound stop control over capacity in near term

MITIGATION IDEAS/PLANNING LEVEL COSTS — ZONE 5

- Construct overpass for Old Richardson off-ramp
- Non-motorized traffic movements

ZONE 6 – Badger Road Interchange

ZONE 6 – Badger Road Interchange

- Signal timing/phasing improvements
- Non-motorized traffic movements

NEXT STEPS

- PEL work session #1
- Public open house #1—June 24
- Environmental analysis
- PEL work session #2—July 2013
- Presentation to FHWA
- Public open house #2
- PEL work session #3
- Final concepts included in MTP update—November 2013

QUESTIONS/COMMENTS

- Comments on these concepts are due within one week of the PEL work session (due by June 26th)

- Public open house

  Monday, June 24

  5:00 p.m. to 7:00 p.m.

  Noel Wien Library Auditorium

  1215 Cowles Street

Steve Noble (DOWL HKM) and Al Beck (DOT&PF) welcomed the work session participants and thanked them for participating in the Planning and Environmental Linkage (PEL) process.

Steve reviewed the PEL process and highlighted its purpose to identify transportation deficiencies; develop project concepts that consider a broad range of factors (cost, feasibility, freight movement, land use, multi-modal considerations, environmental impacts); and identify direct, indirect, and cumulative impacts for the preliminary class of action determination. This information will be used for future project development. The purpose of today's work session is to narrow down the concepts so they can be presented to the Federal Highways Administration (FHWA).

Donna Gardino (FMATS) asked when the project team expects to present this information to FHWA.

Steve said he expects this to happen in mid-August.

Rep. Doug Isaacson asked if this was all part of FMATS.

Donna said the FMATS long-range planning study will be starting soon. The PEL study will inform the FMATS long-range planning project team as they identify projects suitable for Statewide Transportation Improvement Program (STIP) funding and update their air quality modeling.

Steve reviewed some of the general comment themes that the project team heard in the first work session and at the first open house meeting. The project team is primarily focused on roads, but multi-modal considerations are being taken into account. Concepts will require future evaluation for multi-modal access on a project-specific basis.

Donna said performance measure for projects that go into the STIP need to address one or more of the national goals.

Al said that he would like to discuss that in more detail with Donna.

Steve said the project team determined that, to maximize efficiency, a baseline concept that updates the signal timing and phasing throughout the corridor was applied to all of the project concepts presented today.

Concept 1-Chena Hot Springs Road Interchange

Steve said this concept has changed slightly from the concept that was presented at PEL #1.

Al reiterated the concepts that are graphically presented today are not project plans, they are only being used to depict traffic lanes and general travel. Actual designs will be determined on a project-by-project basis.

Rep. Isaacson asked if anything is being done to accommodate off-road vehicles for safe transit.

Al said state statutes prohibit the DOT&PF from building mixed-use multi-modal facilities. A lot of roadway damage occurs when off-road vehicles travel just on the edge of pavement.

Rep. Isaacson said changes in statute are where he comes in. He asked if there are easier or more appropriate ways to address this need.

Al said the best way to address this is by building that access when new facilities are constructed, however the solution is still not cheap.

Steve reviewed the level of service (LOS) and delay for the Chena Hot Springs Road interchange. The proposed concept 1 improvements will be needed by 2030. Environmental Considerations include the need to evaluate ROW acquisition and land use impacts. It is unlikely there will be 4(f) impacts and the potential for wetland impacts is low.

Concept 2-Old Steese to Old Farmers Loop Extension

Steve said this concept serves the high travel demand between the Johansen Expressway and the Steese Expressway. This concept extends the Old Steese Highway northward from the Johansen Expressway.

Al said the area to the north of the Johansen Expressway has a plat dedication for a future alignment.

Rep. Isaacson asked why the original McGrath connection (previously proposed project) was abandoned.

Steve said this option takes advantage of the Old Farmers Loop Road extension and the Harold Bentley Avenue corridor to create a collector network for vehicles travelling to the commercial district south of Johansen Expressway.

Al said the McGrath road connection was abandoned for many reasons including impacts/ROW acquisition at Creamer's Field, future Creamer's Field expansion plans, a moose migration corridor, and soil conditions in the proposed road corridor (long-term maintenance costs). This concept does not connect to McGrath Road (minimizing some of the soils issues and eliminating encroachments into Creamer's Field land) and it does not resolve the level of service issues at area intersections.

Steve said this concept allows the Johansen and Steese expressways to better accommodate through traffic by creating collector-level road infrastructure. Part of this concept does include building additional capacity at Northside and Hunter avenues.

Mike Schmetzer (City of Fairbanks) pointed out that the area to the north of Northside and Harold Bentley avenues is quickly developing and if proposed intersections to the north of Harold Bentley Avenue will need to go outside of the existing easement, that future development will need to be taken into account.

Al said there is a conservation easement on the north side of this area. The Corps of Engineers said this easement will be very challenging to modify.

Steve said this concept builds in collector-level access that does not currently exist, taking some of the demand off of Johansen and Steese expressways, however the LOS tables show that some of these intersections will still fail (level D, E, or F) by 2030 or 2040. The objective of Concept 2 is to show an alternative to building an interchange at Johansen and Steese.

Zaid Hussein (DOWL HKM) said earlier concepts proposed extending Harold Bentley Avenue to College Road. After further modeling, it was determined that a majority of traffic was going into the commercial area to the south of Johansen Expressway, not to College Road.

Rep. Isaacson asked about access for the transfer station and businesses in the area.

Steve said access would need to be revised so that vehicles would access via a smaller driveway (eliminating access directly off of Farmer's Loop). If something like this project is not done, then two interchanges will need to be built, one at Farmers Loop Road and one at the Johansen Expressway. Multiple environmental analyses will likely be needed (noise, land use planning, historical properties, contaminated sites, wildlife corridors, hydrology, geotechnical) and there is a potential for wetland impacts.

Jae Hill (FNSB) asked what the maintenance costs would be for this concept. Were there similar maintenance concerns for the McGrath Connector project?

Al said he estimates it to be $50,000/year additional cost to maintain with an additional $100-300,000 maintenance effort every 2-4 years. He does have the same concerns as were expressed with the McGrath Connector except the existing portion of Old Farmers Loop has had time to settle and thaw.

Jae said he would prefer the interchange be built instead of building the extension and then eventually building an interchange.

Concept 3—Richardson/Steese Corridor: Farmers Loop to Airport Way

Steve said this concept includes several individual projects. They are considered individually but are grouped together only for illustration. All of the projects within Concept 3 include widening the Steese Expressway (adding a 3rd southbound through lane from Farmers Loop Road to the Mitchell Expressway).

Al said a lot of the environmental analysis in future project planning will be based on the purpose and need statements that result from this project.

Concept 3A

Steve presented intersection improvements and an interchange option for the Farmers Loop Road/Steese Expressway area. He noted that the concept graphic shows a tight diamond, but it is only for illustration and the specific interchange configuration would be determined as part of a project-specific interchange analysis.

Chris Grgich (DOWL HKM) said ramp lengths and interchange specifics would need to be evaluated on a project-specific basis. The concepts presented here today are only for graphic illustration.

Bryce Ward (City of North Pole) asked what it does for LOS.

Steve said there are significant LOS improvements—bringing LOS up to A, B, or C by 2040.

Al pointed out there are also significant safety improvements associated with an interchange (reduction in head-on crashes, for example).

Concept 3B

Steve presented an interchange at Johansen Expressway and Steese Expressway. He said this interchange takes the place of the Old Farmers Loop Extension project. He pointed out one factor that will weigh heavily into this option is whether Fort Wainwright moves forward with plans to open a gate at this intersection.

Bryce pointed out this intersection is heavily used by freight trucks.

Steve said interchanges generally accommodate freight loads better than signalized intersections.

Concept 3C—Alternative 1-Airport Way/Steese Expressway Intersection Improvements

This builds all reasonable improvements to accommodate anticipated traffic.

Zaid said one of the downsides is this makes a very long pedestrian crossing across the Richardson Highway. If signals are adjusted to accommodate for this (dedicated pedestrian calls), then the LOS drops below the acceptable range.

Concept 3C—Alternative 2- Airport Way/Steese Expressway Interchange

Steve said an interchange will be able to handle the traffic and pedestrians, however adjacent roadways will need to be evaluated to determine if their current level of access is still appropriate.

Warren Cummings (City of Fairbanks Fire Department) said he objects to closing 10th Avenue. It is a major emergency route for fire and police and it is also a primary route for Westmark buses.

Concept 3D—Steese Expressway: Trainor Gate to 10th Avenue Intersection Improvements

Mike asked if the project team had looked at making that leg of Trainor Gate Road a one-way. The 2008 traffic study showed that traffic can access Bentley Trust Avenue, but it can't get out. He would suggest making it a one-way with access out from Bentley Trust Avenue.

Steve said the project team had only looked at removing access to Trainor Gate Road (Concept 5), but they can look at making it a one-way.

Al said Alaska Railroad Corporation (ARRC) was looking at vacating the ROW on the leg of Trainor Gate Road that is adjacent to its rail facilities.

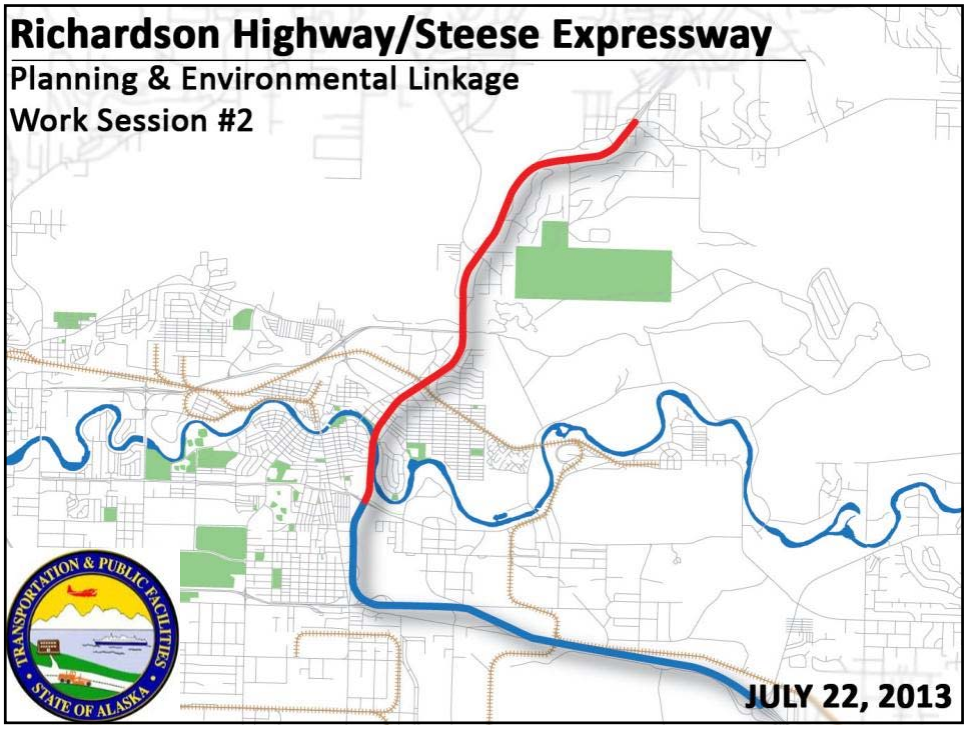
Concept 5—Close Trainor Gate Road connection

Steve said the LOS on the Old Steese Highway can be maintained with the closure of Trainor Gate Road, however other intersections (3rd Street & College Road) will fail because of the additional left-turning movements that are no longer accommodated at Trainor Gate Road. If this concept moves forward, additional evaluation of restrictions on turning movements or interchange concepts will be needed to tie the two intersections together.

Steve thanked the work session participants for attending. He requested that comments be submitted within two weeks.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
Planning & Environmental Linkage Work Session #2
JULY 22, 2013

PRINT NAME	AGENCY	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	PHONE
Steve Noble	DOWL	snoble@dowlhkm.com	562-2000
Zaid HUSSEIN	DOWL	Zhussein@dowlhkm.com	562-2000
Rachel Steer	DOWL	rsteer@dowlhkm.com	"
Al Beck	DOT&PF	albert.beck@alaska.gov	451-5359
DONNA GARDINO	FMATS	Donna.gardino@fmats.us	459 6786
GAGE SCHUTTE	ALASKA WEST EXPRESS	gage@awe.lynden.com	328-4339
Chris Cavallo	DOT	christopher.cavallo@alaska.gov	451-5375
MICHAEL SCHMETZER	COF	MJSCHMETZER@ci.fairbanks.ak.us	590-3701
Kellen Spillman	FNSB	Kspillman@fnsb.us	459-1266
Joe Hill	FNSB	jhill@fnsb.us	459-1277
Barry Hooper	DOT&PF	barry.hooper@alaska.gov	451-2218
KATE SIFTAR	FORT WAINWRIGHT	KATHLEEN.D.SIFTAR.CIV@MAIL.MIL	361-3315
Gary Jenkins	DOWL	gjenkins@dowlhkm.com	374-0275
Doug Isaacson	State Legis	rep.doug.isaacson@akleg.gov	457-2818
WARREN B CUMMINGS	CITY OF FAIRBANKS	W Cummings@ci.fairbanks.ak.us	450-6604
RYAN ANDERSON	DOT&PF	ryan.anderson@Alaska.gov	451-5129
Bryce Ward	Mayor North Pole	Mayor@northpolealaska.com	488-3002
Hannah Blankenship	DOT+PF	hannah.blankenship@alaska.gov	



PEL WORK SESSION #2 AGENDA

- Safety minute
- Introductions
- PEL process review
- What we've heard so far
- Newly developed and refined concepts
- Discussion

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Chris Grgich, P.E., Traffic Engineer
- Zaid Hussein, P.E., Project Engineer
- Rachel Steer, Project Coordination

PEL PROCESS

We are here

- Identify transportation deficiencies;
- Develop project concepts that consider:

-Feasibility	-Land use
-Logical termini	-Freight movement
-Cost	-ROW impacts
-Air quality	-Environmental impacts
-Multi-modal traffic	-and more…

- Identify direct, indirect, and cumulative impacts for the preliminary class of action determination; and
- Use this information and analysis in future project development.

WHAT WE'VE HEARD SO FAR

General Themes:

- Various HSIP and multi-modal projects are in the planning or development process.
- Fort Wainwright and ARRC plans will impact future concept development.
- Preference for appropriate level of access built into road network (collector, arterial, expressway).
- Pedestrian and emergency service routes, air quality impacts, and freight traffic forecasts need to be considered.

MULTI-MODAL CONSIDERATIONS

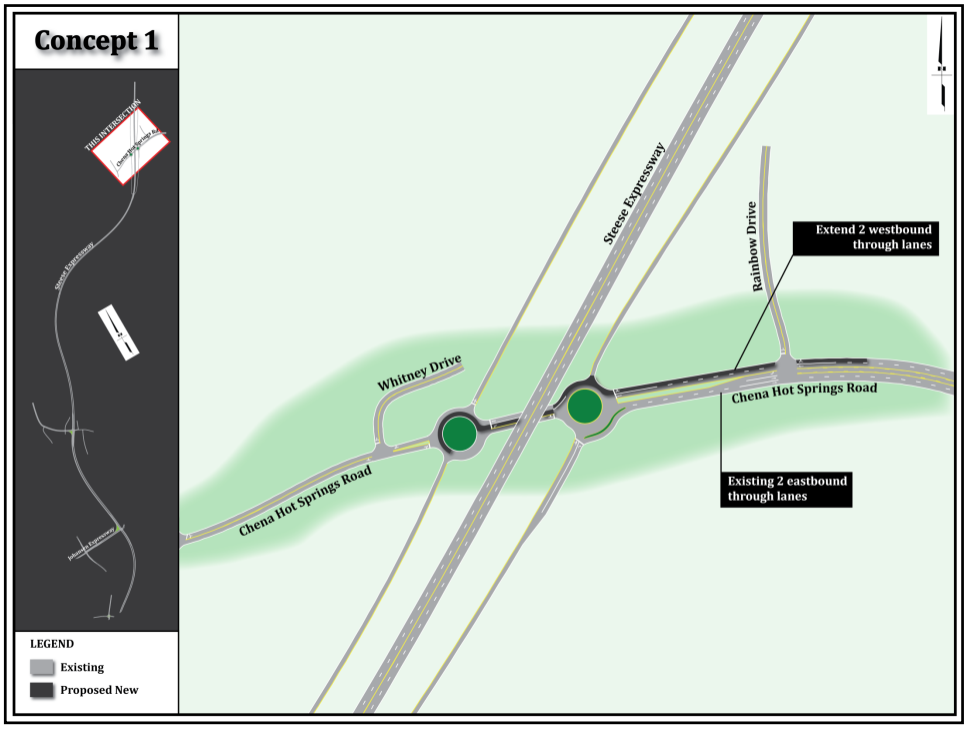
- Richardson/Steese corridors are often barriers for cross movement.
- No new counts for pedestrian movements were conducted in this project.
- Desire for additional pedestrian access in the corridor.
- Concepts will require a future evaluation of multi-modal access and compatibility with the Fairbanks Non-Motorized Transportation Plan (NMTP).

Baseline Concept

- Update signal timing and phasing
  - Coordinates signals along corridors with master signals
  - Decreased delay throughout network
  - Minimal cost (assuming no hardware improvements needed)
  - No environmental impacts

CONCEPT 1 — Chena Hot Springs Road Interchange

- HSIP project in progress will replace existing stop controlled intersections with roundabouts.
- Safety improvement, not capacity improvement.
- Roundabouts projected to fail by 2030.
- Add two circulating lanes westbound and right turn slip lanes.



CONCEPT 1 — LOS & Delay

Concept 1	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Chena Hot Springs / NB Steese Expressway	E	47.8	A	6.7	A	7.9	A	4.5
Chena Hot Springs / SB Steese Expressway	F	55.1	C	15.6	C	15.8	B	10.5
Chena Hot Springs / Rainbow Drive	E	36.4	C	18.0	C	17.8	C	15.6
Chena Hot Springs / Whitney Drive	B	10.8	B	11.8	B	10.8	B	11.8
Chena Hot Springs / Old Steese Highway	C	21.6	C	15.0	C	21.6	C	15.0

CONCEPT 1 — Chena Hot Springs Road Interchange

Environmental Considerations

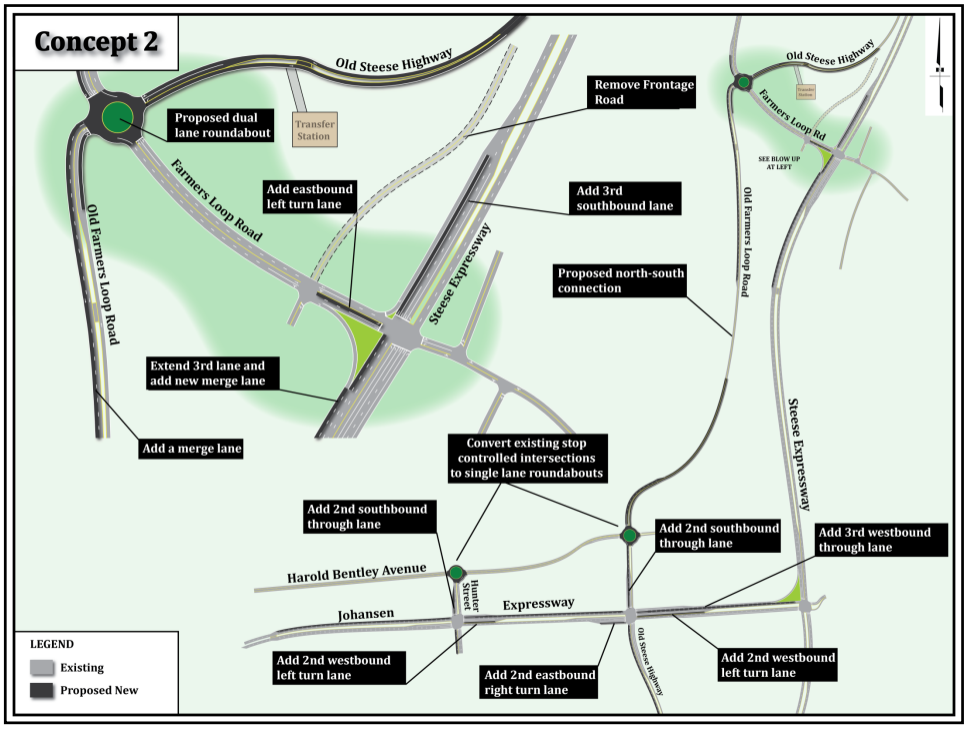
- Evaluate ROW acquisition and land use impacts
- 4(f) impacts unlikely
- Potential for wetland impacts is low

Conceptual Cost Estimates

Lane widening	$2 million
Intersection widening	$5 million

CONCEPT 2 — Old Steese to Old Farmers Loop Extension

- Extend Old Steese Highway north to connect to Old Farmers Loop right-of-way.
- Serves travel demand between Johansen Expressway and Farmers Loop Road.
- Includes:
  - Realignment of Old Steese Highway north of Farmers Loop Road
  - Additional westbound lane on Johansen Expressway
  - Various intersection upgrades



CONCEPT 2 — LOS & Delay: AM Peak Hour

Concept 2 (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Farmers Loop Road/Old Farmers Loop Road	B	13.0	B	14.0	A	9.1	C	16.5
Farmers Loop Road/Old Steese Highway	F	3146.1	F	7213.2	C	15.5	C	19.3
Farmers Loop Road/Steese Expressway	F	302.9	F	400.7	C	23.9	D	39.2
Johansen Expressway/Steese Expressway	E	78.2	F	137.2	E	69.3	F	128.1
Johansen Expressway/ Northside Boulevard-Old Steese Highway	B	19.5	D	39.4	D	46.4	D	50.8
Johansen Expressway/Hunter Street	D	36.4	E	77.0	C	26.3	C	32.3

CONCEPT 2 — LOS & Delay: PM Peak Hour

Concept 2 (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Farmers Loop Road/Old Farmers Loop Road	B	10.5	B	10.9	B	10.7	C	15.6
Farmers Loop Road/Old Steese Highway	F	887.4	F	1688.0	B	13.7	C	15.8
Farmers Loop Road/Steese Expressway	E	65.2	F	85.3	C	21.6	C	24.5
Johansen Expressway/Steese Expressway	D	36.2	D	49.4	C	24.7	C	31.5
Johansen Expressway/ Northside Boulevard-Old Steese Highway	C	26.0	B	16.5	C	31.8	C	33.2
Johansen Expressway/Hunter Street	B	16.8	B	19.4	C	22.3	C	28.6

CONCEPT 2 — Old Steese to Old Farmers Loop Extension

Environmental Considerations

- Analyses likely needed
  - Noise
  - Socioeconomic impacts
  - Section 106
  - 4(f)
  - Phase 1 ESA (contaminated sites in area)
  - Wildlife
  - Hydrology
- Potential wetland impacts

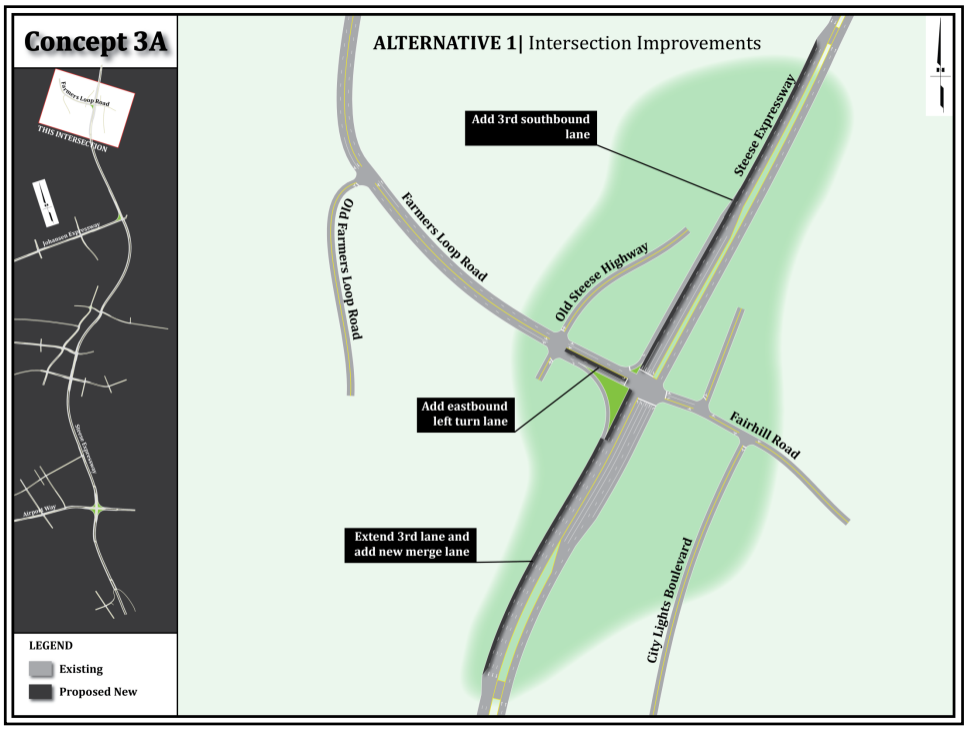
Conceptual Cost Estimates

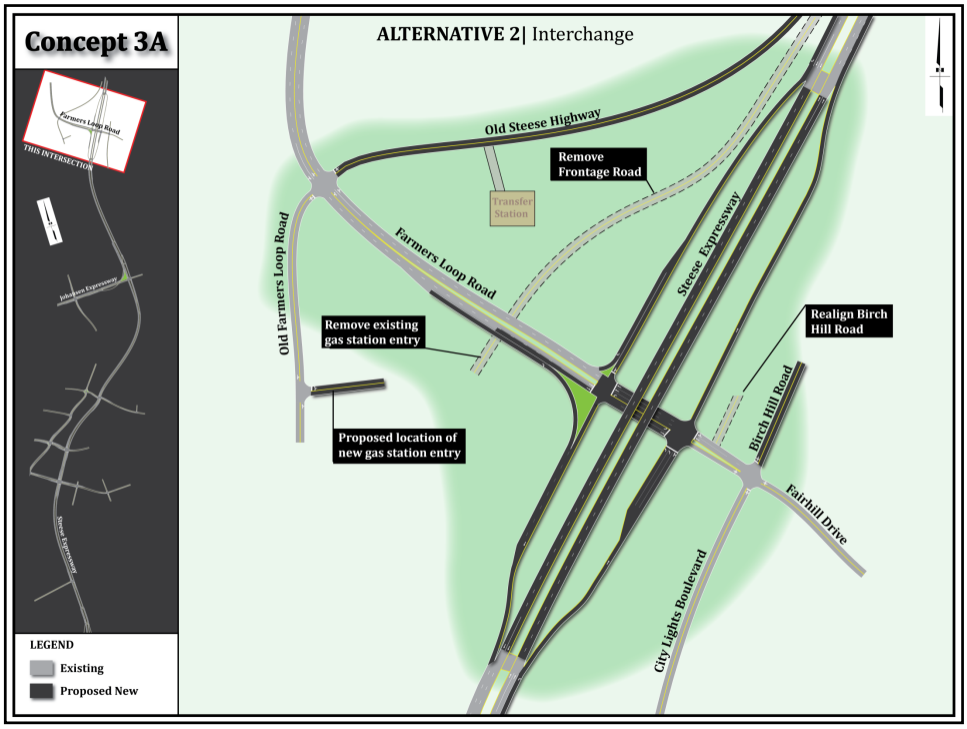
Old Steese Highway extension	$18 million
Johansen lane widening	$2 million
Intersection upgrades and widening	$17 million

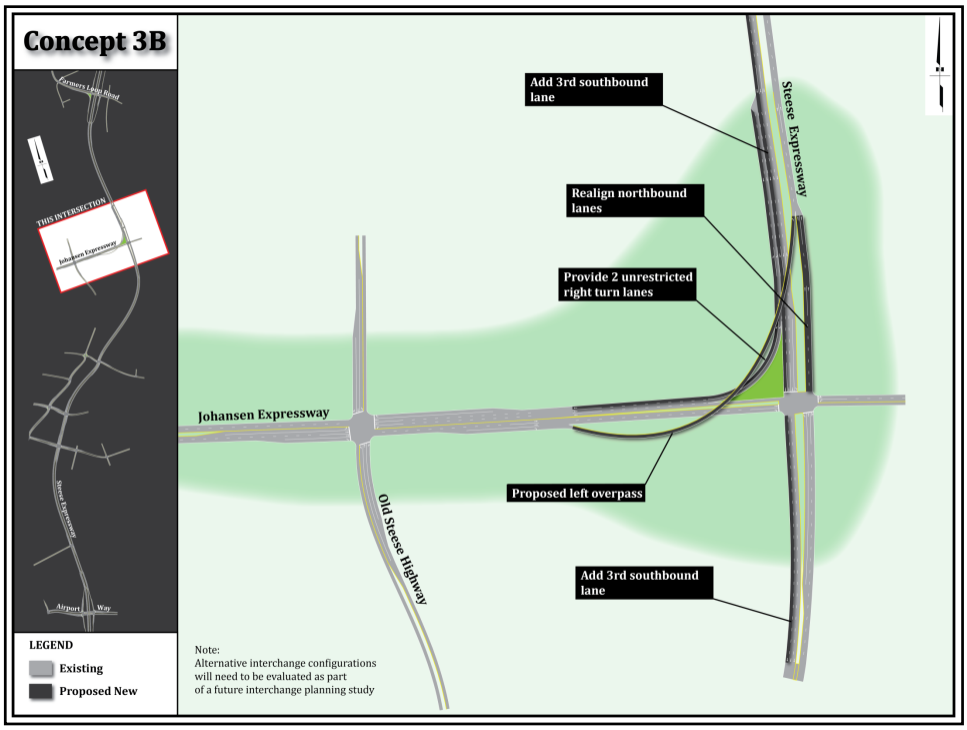
CONCEPT 3 — Richardson/Steese Corridor: Farmers Loop to Airport Way

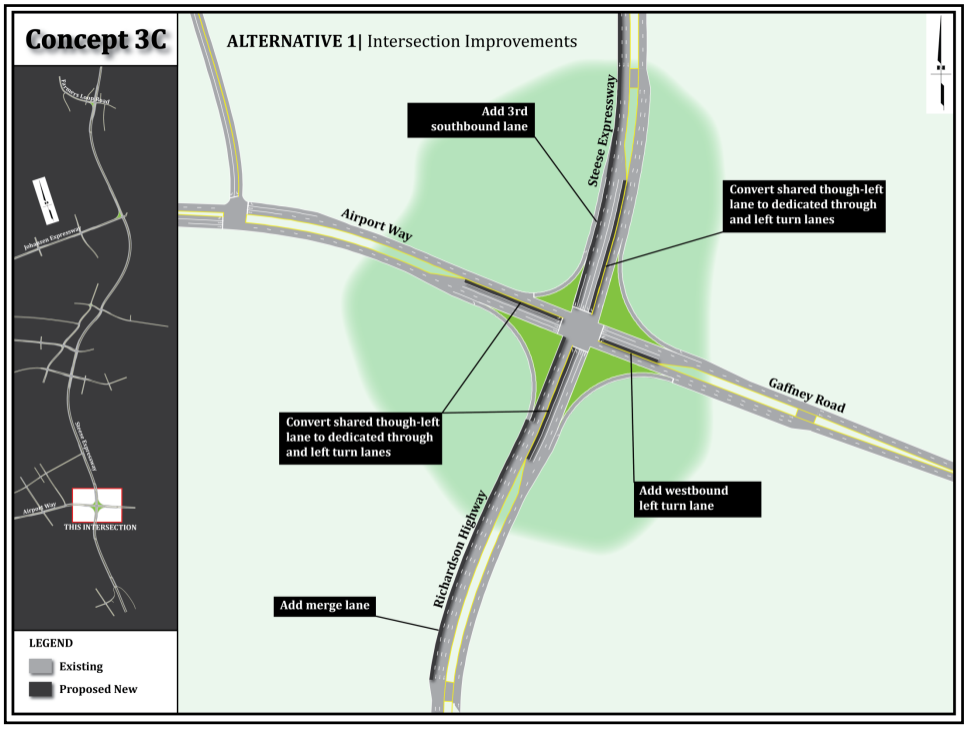
Includes several individual projects:

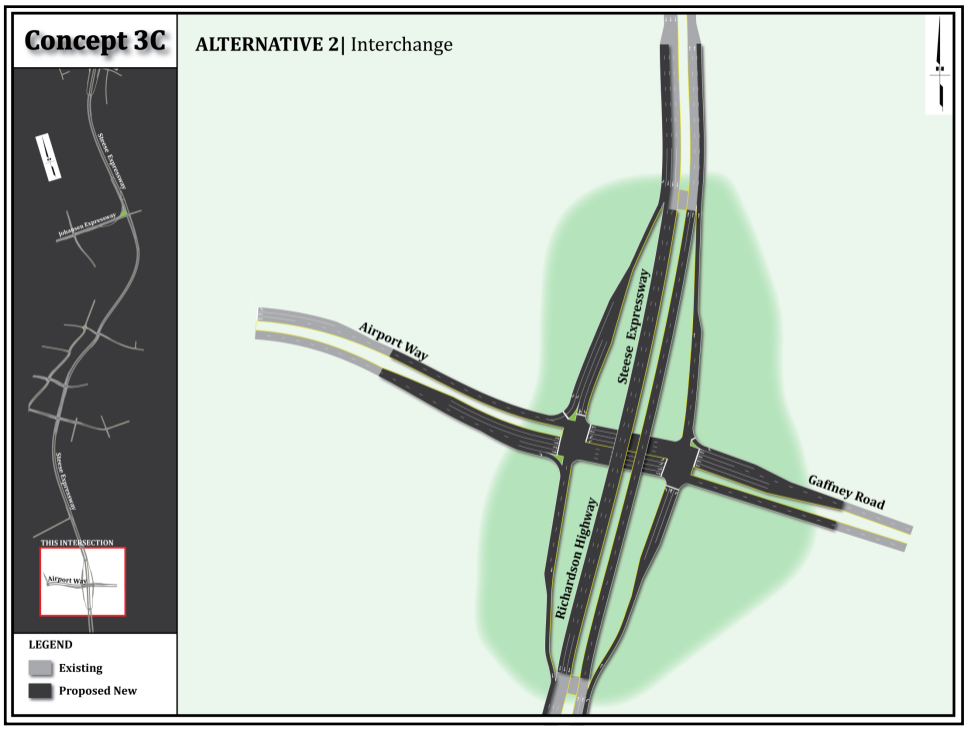
- Baseline: Steese Expressway widening (included in all concepts)
  - 3rd Southbound through lane from Farmers Loop Road to Mitchell Expressway
- Concept 3A: Farmers Loop Road/Steese Expressway
  - Intersection improvements vs. interchange
- Concept 3B: Johansen Expressway/Steese Expressway interchange
- Concept 3C: Airport Way/Steese Expressway
  - Intersection improvements vs. interchange
- Concept 3D: Steese Expressway: Trainor Gate to 10th Ave. intersection improvements

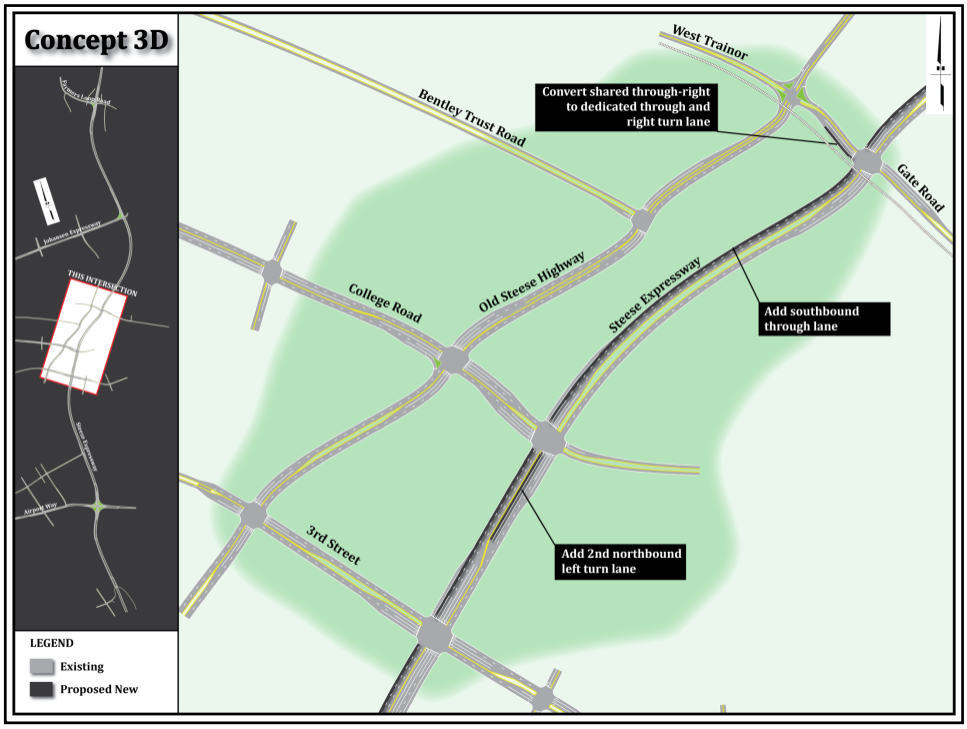



Concept 3A
ALTERNATIVE 2| Interchange
Old Steese Highway
Remove Frontage Road
Transfer Station
Old Farmers Loop Road
Farmers Loop Road
Steese Expressway
Remove existing gas station entry
Realign Birch Hill Road
Proposed location of new gas station entry
Birch Hill Road
Fairhill Drive
City Lights Boulevard
THIS INTERSECTION
LEGEND
Existing
Proposed New


Concept 3B
Add 3rd southbound lane
Steese Expressway
Realign northbound lanes
Provide 2 unrestricted right turn lanes
Johansen Expressway
Proposed left overpass
Old Steese Highway
Add 3rd southbound lane
THIS INTERSECTION
LEGEND
Existing
Proposed New
Note:
Alternative interchange configurations will need to be evaluated as part of a future interchange planning study


Concept 3C
ALTERNATIVE 1| Intersection Improvements
Add 3rd southbound lane
Steese Expressway
Convert shared though-left lane to dedicated through and left turn lanes
Airport Way
Gaffney Road
Convert shared though-left lane to dedicated through and left turn lanes
Add westbound left turn lane
Richardson Highway
Add merge lane
THIS IN TERSECTION
LEGEND
Existing
Proposed New


Concept 3C
ALTERNATIVE 2| Interchange
Steese Expressway
Airport Way
Steese Expressway
Gaffney Road
Richardson Highway
THIS INTERSECTION
Airport Way
LEGEND
Existing
Proposed New



CONCEPT 3 — Intersection Improvements: LOS & Delay: AM Peak Hour

Concept 3 Intersections	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road	F	302.9	F	400.7	C	27.0	E	77.0
Steese Expressway/Johansen Expressway	E	78.2	F	137.2	D	39.0	E	79.9
Steese Expressway/Trainor Gate Road	F	105.7	F	154.0	D	38.4	E	65.5
Steese Expressway/College Road	E	59.6	F	103.3	C	27.6	D	51.8
Steese Expressway/3rd Street	F	89.7	F	121.0	D	43.4	E	69.8
Steese Expressway/10th Avenue	A	4.2	A	2.5	A	4.3	A	2.3
Steese Expressway-Richardson Highway/Airport Way-Gaffney	F	144.0	F	188.8	D	42.3	D	49.8

CONCEPT 3 — Intersection Improvements: LOS & Delay: PM Peak Hour

Concept 3 Intersections	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road	E	65.2	F	85.3	C	22.5	C	24.6
Steese Expressway/Johansen Expressway	D	36.2	D	49.4	C	34.6	D	48.4
Steese Expressway/Trainor Gate Road	C	32.3	D	45.4	B	18.1	C	20.3
Steese Expressway/College Road	C	21.4	C	24.9	D	41.8	D	43.9
Steese Expressway/3rd Street	C	31.3	C	34.7	C	22.7	C	29.3
Steese Expressway/10th Avenue	A	10.0	B	12.7	A	7.1	B	13.7
Steese Expressway-Richardson Highway/Airport Way-Gaffney	F	118.4	F	149.8	D	47.4	E	58.5

CONCEPT 3 — Interchange Improvements: LOS &Delay

Concept 3 Interchange	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/Farmers Loop Road (northbound ramps)	F	400.7	F	85.3	B	12.6	B	17.1
Steese Expressway/Farmers Loop Road (southbound ramps)					A	3.4	A	0.7
Steese Expressway/Johansen Expressway	F	137.2	D	49.4	C	21.2	B	12.9
Steese Expressway/Airport Way (northbound ramps)	F	188.8	F	149.8	C	25.8	B	18.0
Steese Expressway/Airport Way (southbound ramps)					C	32.7	C	23.1

CONCEPT 3 — Richardson/Steese Corridor: Farmers Loop to Airport Way

Environmental Considerations

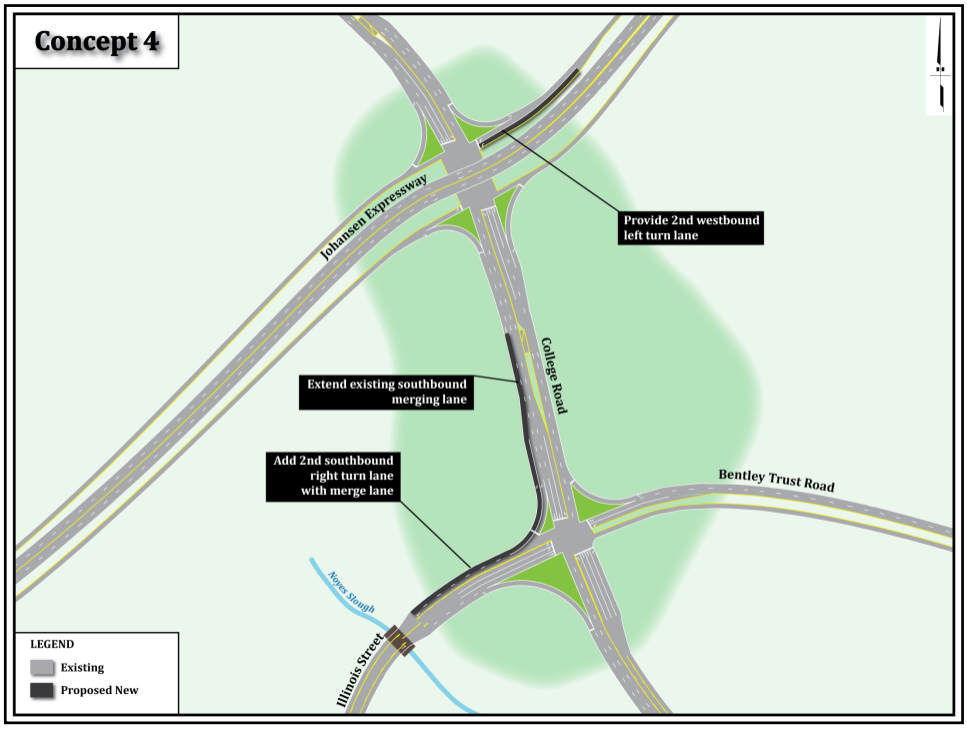
- Analyses possibly needed
  - Noise
  - Land use
  - Phase 1 ESA (contaminated sites in area)
- Potential wetland impacts
- ROW impacts likely
- Historic sites related to military infrastructure to east

Conceptual Cost Estimates

Intersection Improvements	$32 million
Interchange Improvements	$170 million

CONCEPT 4 — College Road Corridor

- Johansen Expressway/College Road interchange improvements.
- College Road/Bentley Trust Road improvements.



CONCEPT 4 — LOS & Delay: AM Peak Hour

Concept 4 Intersections (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
College Road/ Johansen Expressway	C	25.3	C	30.0	C	21.6	C	25.5
College Road/Illinois Street-Bentley Trust Road	B	19.5	C	20.6	--	--	C	21.3
College Road/ Crossover Way	A	7.8	A	8.7	--	--	--	--

CONCEPT 4 — LOS & Delay: PM Peak Hour

Concept 4 Intersections (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
College Road/ Johansen Expressway	C	22.7	C	21.6	C	20.7	C	20.1
College Road/Illinois Street-Bentley Trust Road	C	22.2	C	23.6	--	--	C	23.2
College Road/ Crossover Way	B	14.7	B	10.2	--	--	--	--

CONCEPT 4 — College Road Corridor

Environmental Considerations

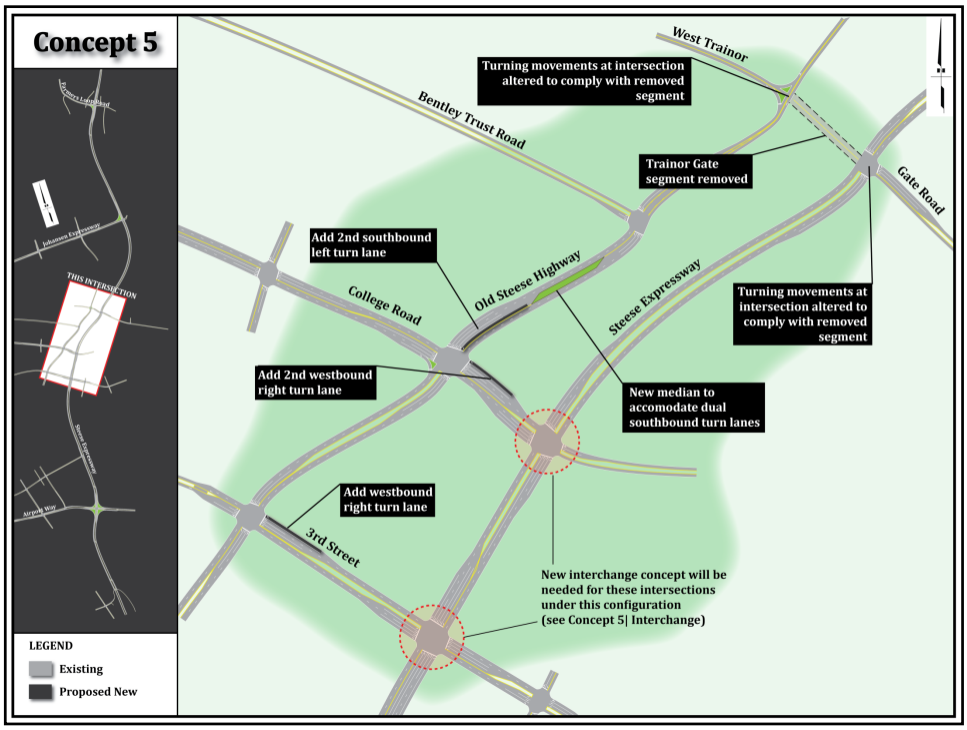
- **Analyses possibly needed**
  - Noise
  - Section 106
  - 4(f) historic building and district in area
- **Potential wetland impacts**

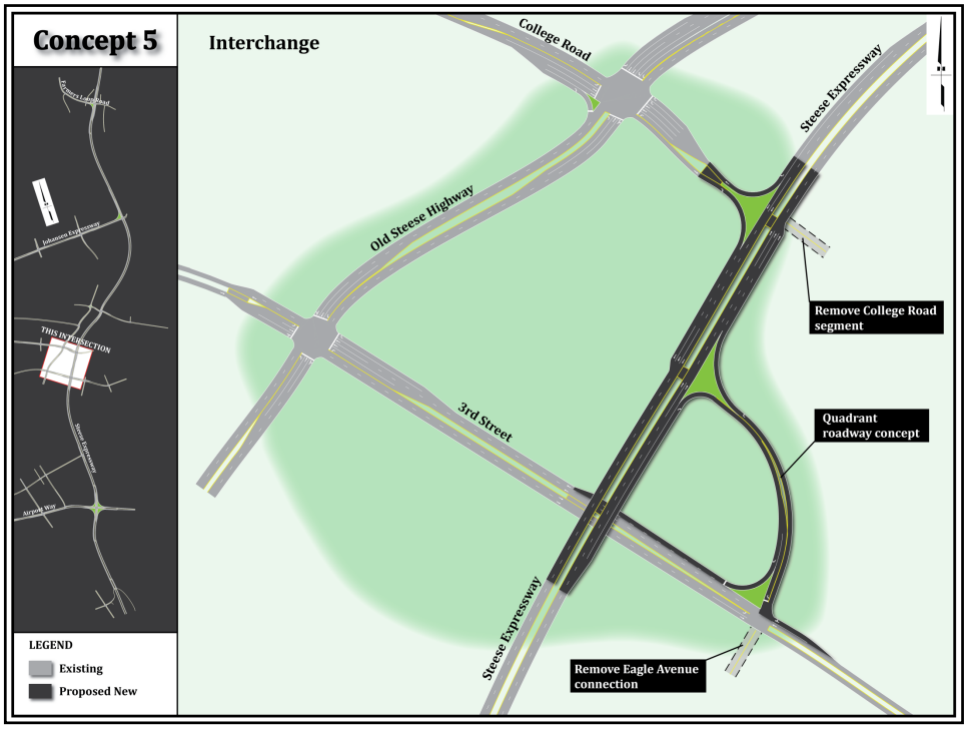
Conceptual Cost Estimates

Johansen/College Road Interchange	$12 million
College Road/Illinois Intersection	$3 million

CONCEPT 5 — Old Steese Corridor

- Close Trainor Gate between Old Steese Highway and Steese Expressway
  - Will require improvements at:
    - Trainor Gate/Old Steese Highway
    - Trainor Gate/Steese Expressway
- Intersection upgrades
  - College Road/Old Steese Highway
  - 3rd Street/Old Steese Highway





CONCEPT 5 — LOS & Delay: AM Peak Hour

Concept 5 Intersections (AM Peak Hour)	Without Improvements				With Improvements			
	2030 A.M.		2040 A.M.		2030 A.M.		2040 A.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/ Trainor Gate Road	F	105.7	F	154.0	B	13.4	B	13.7
Old Steese Highway/ Bentley Trust Road	A	5.8	A	6.8	A	7.1	A	8.5
Old Steese Highway/ College Road	C	30.2	C	32.0	C	32.5	C	33.6
Old Steese Highway/ 3rd Street-Minnie Street	C	25.3	C	31.9	C	24.9	C	28.8

CONCEPT 5 — LOS & Delay: PM Peak Hour

Concept 5 Intersections (PM Peak Hour)	Without Improvements				With Improvements			
	2030 P.M.		2040 P.M.		2030 P.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Steese Expressway/ Trainor Gate Road	C	32.3	D	45.4	A	5.5	A	5.2
Old Steese Highway/ Bentley Trust Road	A	6.0	A	7.0	A	6.2	A	6.9
Old Steese Highway/ College Road	C	28.2	C	31.7	C	25.8	C	29.1
Old Steese Highway/ 3rd Street-Minnie Street	B	19.1	C	21.0	C	20.2	C	22.0

CONCEPT 5 — Old Steese Corridor

Environmental Considerations

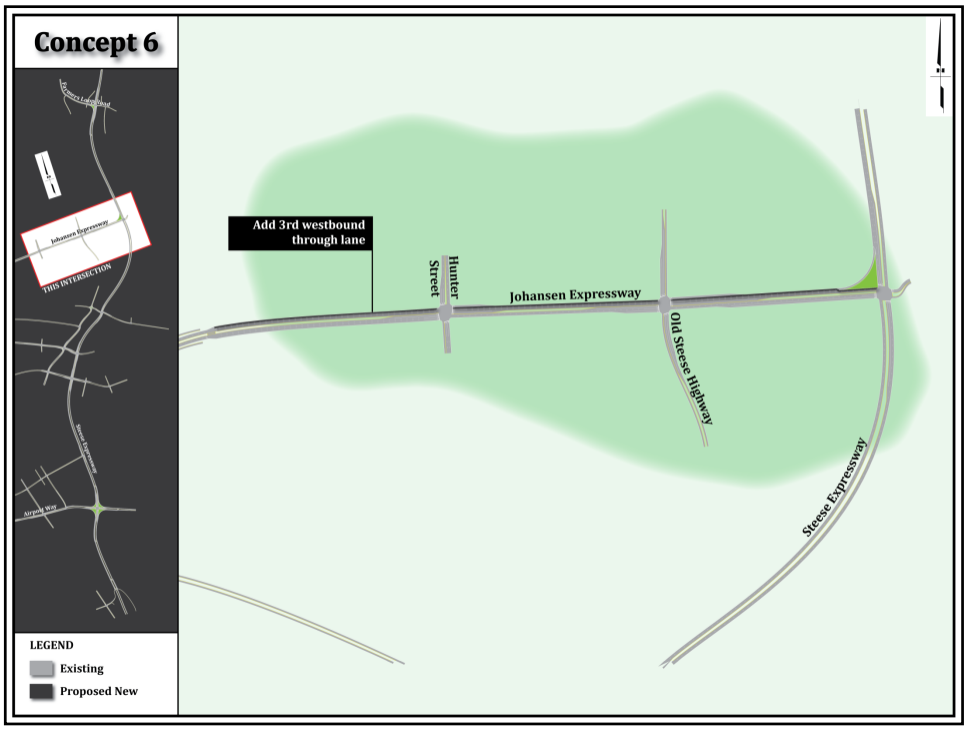
- **Analyses that may be needed**
  - Land use changes and access to private property (related to Trainor Gate closure)
  - Phase 1 ESA may be needed for acquisition of parcel south of right turn lane (contaminated sites in area)

Conceptual Cost Estimates

Trainor Gate Closure	$5 million
College Road/Old Steese Highway Intersection Improvements	$2 million
3rd Street/Old Steese Highway Intersection Improvements	$2 million

CONCEPT 6 — Johansen Expressway Corridor

- Old Steese Highway-Northside Drive/Johansen Expressway intersection improvements
- Hunter Street/Johansen Expressway intersection improvements



CONCEPT 6 — LOS & Delay

Concept 6	Without Improvements				With Improvements			
	2040 A.M.		2040 P.M.		2040 A.M.		2040 P.M.	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Johansen Expressway/ Old Steese Highway-Northside Boulevard	D	39.4	B	16.5	C	21.0	C	23.3
Johansen Expressway/Hunter Street	E	77.0	B	19.4	C	23.0	C	21.6

CONCEPT 6 — Johansen Expressway Corridor

Environmental Considerations

- Potential wetland impacts
- Evaluate ROW acquisition and land use impacts

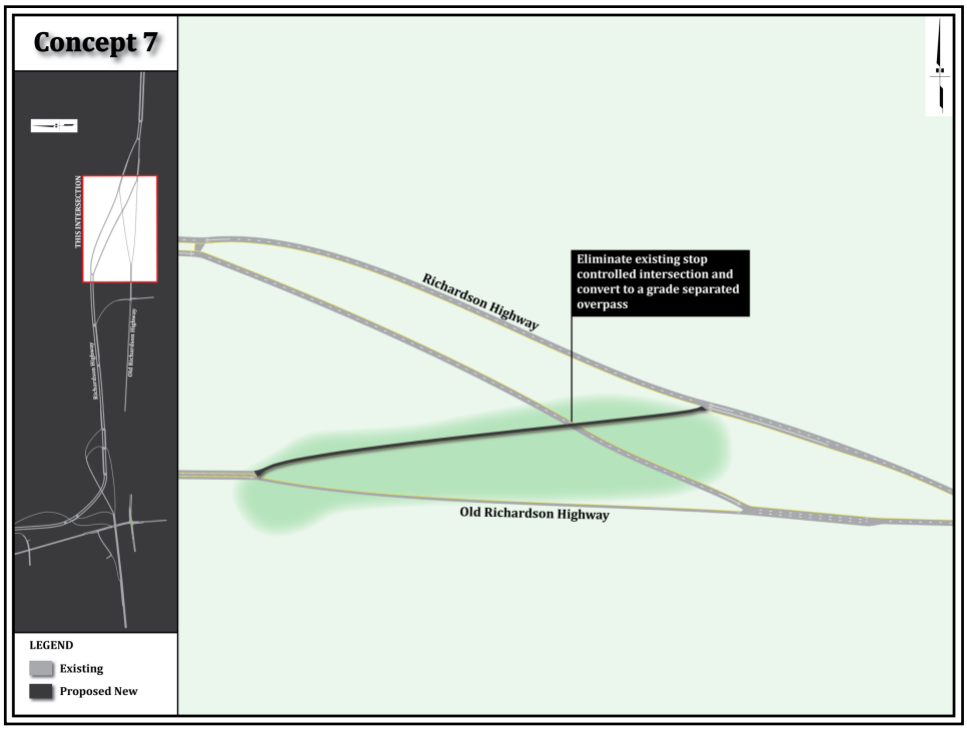
Conceptual Cost Estimates

Old Steese Highway/Johansen Expressway	$2 million
Hunter Street/Johansen Expressway	$2 million

CONCEPT 7 — Richardson Highway Off Ramp

- **Construct a grade separated off-ramp**
- **Level of Service & Delay**
  - Not able to be evaluated
- **Environmental Considerations**
  - Potential wetland impacts
- **Conceptual Cost Estimate**

Richardson Highway off ramp overpass	$12 million



NEXT STEPS

Fall 2013

- Presentation to FHWA
- Public open house #2
- PEL work session #3
- Final concepts included in MTP update

QUESTIONS/COMMENTS

- Submit comments by Friday, August 2
- Send comments to:

Rachel Steer, DOWL HKM
1901 Airport Way, Suite 102
Fairbanks, AK 99701
1-800-478-3695
rsteer@dowlhkm.com

Steve Noble (DOWL HKM) gave a brief overview of the Federal Highway Administration's Planning and Environmental Linkage study process and progress completed to date. Steve said the project team has attempted to integrate all known projects in planning, design, or construction into the graphics shown for these concepts. The interchanges shown on the graphics do not necessarily mean that type of interchange is prescribed. They are shown as diverging diamonds only for illustrative purposes.

Concept 1—High Mobility/Low Access

Concept 1 offers the highest capacity and lowest travel times. It removes commuter traffic from adjacent roadways and pulls motorists that have a longer drive on to the Steese Expressway. These type of roadways also have a good safety record. Disadvantages are high initial costs, greater right-of-way acquisition, less direct multi-modal options, and limitations to access at some interchanges/intersections.

Brian Lindamood (ARRC) asked the project team to look at what it would take to bring the railroad up and over Trainor Gate Road.

Gage Schutte (AK West Express) said he would prefer the roadway go over Trainor Gate Road. Going under would limit the size of loads. Currently, between Valdez and Fairbanks the limits are around 17' 8" high.

Dave Sanchez (Ft. Wainwright Planning) said a temporary access to Ft. Wainwright is planned at Trainor Gate. Ideally, Ft. Wainwright would like to have a more permanent access at this location, however there are concerns about environmental issues with ground contamination at the tank farm in the area.

Concept 2—Moderate Mobility/Moderate Access

Steve said Concept 2 has a more moderate cost and right-of-way acquisition, improved multi-modal access, and minimal change to residential/commercial access. Disadvantages are continued delay at the remaining at-grade intersections and the fact that at-grade intersections would have more crashes than interchanges.

Jae Hill (FNSB) said he prefers the Concept 2 approach because Concept 1 does not align with planning and design efforts currently adopted by the FNSB long-range planning division.

Al Beck (DOT&PF) said part of the reason for developing Concept 1 was to develop ideas for long-term transportation solutions (2030-2040) as area properties are redeveloped.

Steve said he thinks of Concept 2 as a stepping stone toward Concept 1 with interchanges at both ends but continued moderate to high access available at 3rd Street and College Road and 10th Avenue.

Jae Hill said the right-of-way acquisition required with Concept 1 takes away high-value real estate that would otherwise be utilized for business and neighborhood development. Concept 2 fits what FNSB has heard from the city and from the current and near-term economic outlook.

Zaid Hussein (DOWL HKM) said the 3rd Street widening project has been included in the long-term analysis.

Concept 3—Low Mobility/High Access

Steve said this concept prioritizes access and attempts to build adjacent/parallel facilities and network improvements. Advantages of this concept are moderate cost and moderate right-of-way acquisition and accommodations for multi-modal connectivity. Disadvantages are highest travel times, greatest delay, minimal overall safety improvements, and limited long-term capacity options.

Jae said Concept 3 does not match with FNSB's goals.

None of the attendees voiced support for Concept 3 as a viable option.

Brian Lindamood said Concepts 2 and 3 do not preclude ARRC from going up and over Trainor Gate Road.

Richardson Highway

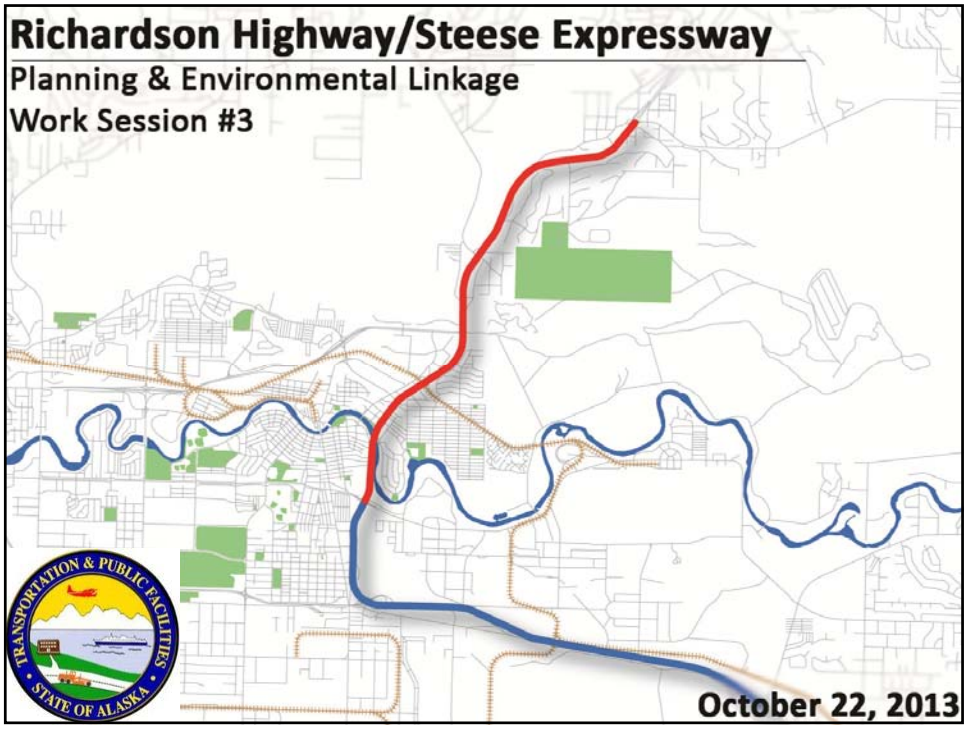
Steve said the final concept identifies two projects on the Richardson Highway addressing issues with the railroad crossing and the at-grade left-turn onto the Old Richardson Highway.

Brian suggested building a grade-separated interchange at the Old Richardson Highway exit and then the railroad would move its crossing back to this location. He also mentioned that Ft. Wainwright is looking for a place for its troops to cross over or under the Richardson Highway on their way to the shooting range and an interchange at this location might provide a pedestrian crossing for troops.

Steve said the project team will continue to refine the purpose and need and concepts and then take the concepts to FHWA. He expects one more PEL work session and one more open house in December.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
Planning & Environmental Linkage Work Session #3
October 22, 2013

PRINT NAME	AGENCY	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	PHONE
Brian Lindamood	ARRC	lindamoodb@arrc.com	265-3095
Steve Noble	DOWL	snoble@dowlhkm.com	374-0275
Chris Cavallo	DOT+PF	christopher.cavallo@alaska.gov	451-5375
Paul Karczmarczyk	DOT+PF	paul.karczmarczyk@alaska.gov	451-2288
Jamison Fox	City of Fairbanks	jcfox@ci.fairbanks.ak.us	459-6758
GAGE SCHUTTE	ALASKA WEST EXPRESS	gage@awe.lynden.com	388-2777
ZAID S. HUSSEIN	DOWL HKM	zhussein@dowlhkm.com	562-2000
DAVE SANCHES	FTWW MASTER PLANNING	DAVID.J.SANCHES.CIV@MAIL.MIL	361-4163
Benjamin Storey	DOT	benjamin.storey@alaska.gov	451-2229
Jan Hill	FNSB	jhill@fnsb.us	459-1272
JOE BYRNES	AK LEGISLATURE aide to SEN KELLY	joe.byrnes@akleg.gov	378-6566
Ryan Anderson	DOT&PF	ryan.anderson@alaska.gov	451-5129
Sara Mason	DOWL HKM	smason@dowlhkm.com	374-0275
Rachel Steer	DOWL HKM	RSteer@dowlhkm.com	562-2000
Al Beck	DOT+PF	albert.beck@alaska.gov	451-5359



AGENDA

- Safety minute
- Introductions
- PEL definition, goals, and process
- Corridor concepts
- What's next?
- Questions/comments

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Zaid Hussein, Traffic Engineer
- Rachel Steer, Project Coordinator

WHAT IS A PEL STUDY?

- An approach to transportation decision making that:
  - Considers environmental issues early in the planning process;
  - Carries those considerations through project development; and
  - Tries to identify "red flags."
- A seamless decision-making process that:
  - Minimizes duplication of effort;
  - Promotes environmental stewardship; and
  - Reduces delays in project implementation.

PROCESS

We are here

- Identify transportation deficiencies.
- Develop project concepts that consider:

-Feasibility	-Land use
-Logical termini	-Freight movement
-Cost	-ROW impacts
-Air quality	-Environmental impacts
-Multi-modal traffic	-and more…

- Identify direct, indirect, and cumulative impacts.
- Use this information in project development.

HOW TO DECIDE?

- Numerous options are conceivable
- Draft Purpose and Need
- Corridor Concepts
  - High mobility, low access
  - Moderate mobility, moderate access
  - Low mobility, high access

Mobility — Emphasis on reducing travel time for through traffic

Accessibility — Emphasis on providing direct connection to adjacent properties

DRAFT PURPOSE AND NEED

Purpose

- Identify future traffic conditions
- Develop concepts that address:
  - Safety
  - Congestion/delay
  - Access
  - Mobility
  - Minimization of impacts
- Recommend specific projects

DRAFT PURPOSE AND NEED

Need

- This is a major route serving a mix of through and local traffic
- This is a designated truck route
- Land development is driving traffic growth
- The corridor serves several special traffic generators
- There is a lack of continuity for bicycle and pedestrian facilities

CONCEPT 1—HIGH MOBILITY/LOW ACCESS

- Focuses on maximizing capacity and travel speed
- Improves Richardson Highway/Steese Expressway as freeway-type facilities
- Interchanges at major roadways
- Frontage roads provide access to adjacent roads and property

CONCEPT 1—ADVANTAGES/DISADVANTAGES

Advantages

- Highest capacity/lowest travel time
- Has capacity for additional growth
- Removes commuter traffic from adjacent roadways
- Highest predicted safety

Disadvantages

- Highest initial cost
- More right-of-way acquisition than Concepts 2 and 3
- Less direct bicycle and pedestrian connectivity
- Fewer locations of residential/commercial access

CONCEPT 2—MODERATE MOBILITY/MODERATE ACCESS

- Mix of at-grade and grade-separated intersections (interchanges)
- Attempts to balance corridor mobility and access

CONCEPT 2—ADVANTAGES/DISADVANTAGES

Advantages

- Moderate cost and right-of-way acquisition.
- Improved bicycle and pedestrian access
- Minimal change to residential/commercial access

Disadvantages

- Continued delay at at-grade intersections
- At-grade intersections have more crashes than interchanges

CONCEPT 3—LOW MOBILITY/HIGH ACCESS

- No new interchanges
- Maintain existing access
- Maximize existing at-grade intersections and develop adjacent road network

CONCEPT 3—ADVANTAGES/DISADVANTAGES

Advantages

- Moderate cost and right-of-way acquisition
- Bicycle and pedestrian connectivity accommodated in corridor

Disadvantages

- Highest travel time
- Greatest delay
- Minimal overall safety improvements
- Limited long-term capacity options

NEXT STEPS

- Refine concepts and purpose and need
- Additional environmental analysis
- Agency review
- Final concepts (December 2013)
- Public open house #3 (December 2013)

QUESTIONS/COMMENTS

Submit Your Comments

Rachel Steer, Project Coordinator
1901 Airport Way, Suite 102
Fairbanks, AK 99701
rsteer@dowlhkm.com
907-374-0275

Steve Noble (DOWL HKM) gave a brief overview of the Federal Highway Administration's Planning and Environmental Linkage (PEL) study process. The project team has generated a purpose and need for the study, not the corridor. PEL Study needs that have been identified are safety (both motorized and non-motorized), mobility, freight, and air quality. He reviewed the public and agency outreach effort, which has included two open houses, four work sessions, agency scoping, and coordination with the Alaska Railroad Corporation (ARRC). When the project first started, the project team identified several individual projects throughout the corridor. After public and agency feedback, the project team has refined its concepts into three corridor concepts:

- Concept 1: High mobility, low access
- Concept 2: Moderate mobility, moderate access
- Concept 3: Low mobility, high access

Ryan Anderson (DOT&PF) asked if Concept 3 would still be controlled access.

Steve said no. Concept 1 is generally a freeway-type facility, Concept 2 would remain at-grade in the middle section of the Steese Expressway, but would be freeway-like north and south of that section. Concept 3 would not be controlled access, rather it would focus on maintaining access to adjacent properties.

Concept 1—High Mobility, Low Access

Steve said that under this concept, the Richardson Highway and Steese Expressway would become freeway-type facilities and frontage roads would provide access to adjacent roads and property. The Steese Expressway would remain at two lanes in each direction. The railroad would be raised over the Steese Expressway and Old Steese Road at Trainor Gate Road.

Concept 2—Moderate Mobility/Moderate Access

Steve said Concept 2 is similar to Concept 1, but with less capacity available between 3rd Street and College Road. Trainor Gate Road would still have a connection to the Old Steese Highway, but it would be limited to one-way northbound traffic. This concept would have one fewer interchange and no impact to the Chena River Bridge. One challenge of this concept is that once a facility that feels and looks like a freeway is created, good signal detection and advanced warning will be needed to help when stopping traffic mid-section.

Donna Gardino (FMATS) asked if Farmers Loop Extension was being extended to Northside Drive on Concepts 1 or 2.

Steve said this is only proposed on Concept 3.

Donna suggested incorporating the Farmers Loop Road Extension into all three concepts to reduce congestion on the Steese Expressway.

Chris Grgich (DOWLH KM) said mobility on the Johansen Expressway is lost when cross-traffic that would move onto the Farmers Loop Extension is added.

Steve said there are also some environmental considerations that would make the Farmers Loop Extension project less desirable.

Al said he was the project manager for the Old Steese to McGrath Connector—which could be considered very similarly to the Farmers Loop Road Extension shown in Concept 3. There are not only wetlands in the area of this proposed extension, but there is a conservation easement that would require realigning the route in a way that would require vehicles to travel slowly. Also, the Alaska Department of Fish and Game (ADF&G) manages Creamer's Field on behalf of the Department of Natural Resources (DNR) and they do not like the idea of additional traffic and access to the area.

Concept 3—Low Mobility/High Access

Steve said this includes extension of a third southbound lane on the Steese Expressway from Johansen Expressway to the connection with Richardson Highway. The bridge over the Chena River would need to be reconstructed because of this additional lane and roadway level of service does not rise above C.

Donna asked if this analysis included estimates of greenhouse gas emissions.

Steve said the traffic modeling software, TransCAD, does incorporate some air quality information and it shows that Concept 3 does not help to reduce emissions.

Steve reviewed a summary of public and agency comments received to date. There have been more comments in favor of Concepts 1 and 2 and few in favor of Concept 3.

Donna Gardino added that the City of North Pole is very concerned about freight access in relation to natural gas delivery.

Steve reviewed some of the coordination between DOT&PF and ARRC (called Diagnostic Team meetings) to discuss future performance of railroad crossings as a result of changes from any of the proposed corridor projects. The group concluded that future projects in the corridor under Concepts 1 and 2 should be compatible with grade-separated railroad crossings.

Al reiterated that Diagnostic Team discussions will continue throughout the PEL Study and with future projects that result or evolve from the PEL study.

Steve reviewed the concept matrix for planning and environmental criteria.

Jae Hill (Fairbanks North Star Borough) asked why Concept 3 impacts more parcels than Concept 2.

Steve said the additional third southbound lane on the Steese Expressway and impacts to properties along the Farmers Loop Extension contribute to that number being higher than in Concept 2.

Steve reviewed the concept matrix for traffic and engineering criteria.

Jae said the number of parcel takes in the 3rd Street and College Road will inherently impact the traffic demand in the area. If there are significant parcel takes in this area, the businesses in the area will not exist any longer, thus traffic demand in the area will drop.

Steve said a significant number of the parcels that will be impacted by each concept are easements, not entire takes of properties. This type of study is high-level, so depictions of parcel takes along the corridor are like crayon drawings and should not be interpreted as full parcel takes or condemnations to specific properties. There are a lot of different considerations that will contribute toward minimizing impacts to existing properties in the future.

Jae asked if any consideration has come out of the city's concern for reduced fire/emergency access at 10th Avenue.

Steve said Concepts 1 and 2 minimize impacts to travel time for fire/emergency services, but a detailed analysis of travel times has not been done.

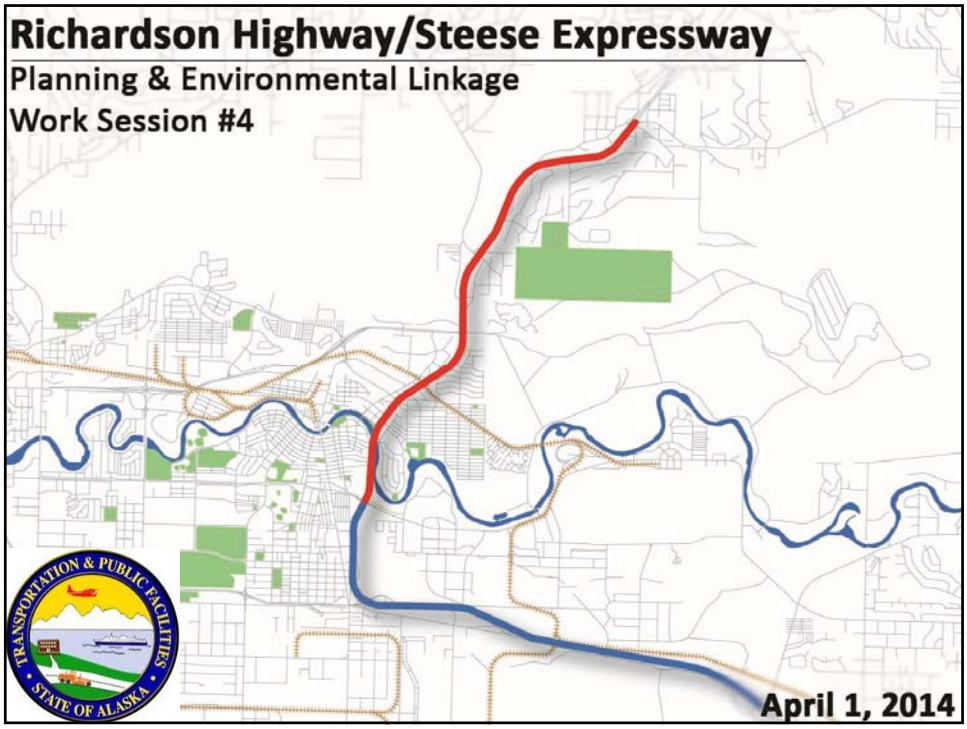
Ryan asked how projects that are in design are being handled.

Steve said all foreseeable projects and projects currently in design have been incorporated into the analysis baseline. These projects will be listed so that it is clear the model is based on what has been included to date.

Steve outlined the next steps in the project which include continued consultation with the Federal Highway Administration (FHWA). The project team will prioritize or dismiss concepts that do not meet the study purpose and need, then they will identify individual projects that have independent utility and logical termini. The traffic engineering report will be finalized and the PEL Study Report will be completed. The next public open house will be this spring (May 2014).

RICHARDSON HIGHWAY/STEESE EXPRESSWAY CORRIDOR STUDY
Planning & Environmental Linkage Work Session #4
April 1, 2014

PRINT NAME	AGENCY	EMAIL (OR MAILING ADDRESS IF NO EMAIL ACCESS)	PHONE
Mark Peterburs	ARRC	peterbursm@akrr.com	907.578.1762
DONNA GARDINO	FMATS	Donna.Gardino@fmats.us	4596786
DAVE SANCHES	FWA-MPW-MP	DAVID.SANCHES.CIV@MAIL.MIL	361-4163
CAROLINE MANIACI	DOT&PF	caroline.maniaci@alaska.gov	451-2293
Linda Mahlen	DOT&PF	linda.mahlen@alaska.gov	451-2385
Jae Hill	FNSB	jhill@fnsb.us	459-1277
Ryan Anderson	DOT&PF	ryan.anderson@alaska.gov	451-5129
Clark Milne	DOT&PF	cmilne@dowlhkm.com	374-0275
Emily Creely	DOWL HKM		
Chris Johnston	DOT&PF	Chris.johnston@alaska.gov	451-2322
Rachel Steer	DOWL HKM	RSteer@dowlhkm.com	562-2000
Steve Noble	"	snoble@dowlhkm.com	562-2000
Chris Cavallo	DOT&PM	christopher.cavallo@alaska.gov	451-5458
Benjamin Storey	DOT&PM	benjamin.storey@alaska.gov	451-2229
Brett Nelson	DOT&PF	brett.nelson@alaska.gov	451-2238
Tim Wooster	DOT&PF	tim.wooster@alaska.gov	451-2271
Chris Grgich	DOWL HKM	cgrgich@dowlhkm.com	562-2000



AGENDA

- Introductions
- PEL definition, purpose, and need
- Efforts to date
- Concept updates
- Public and agency comments
- Concept evaluation
- What's next?
- Questions/comments

INTRODUCTIONS Project Team

DOT&PF

- Al Beck, P.E., Project Manager
- Chris Cavallo, P.E., Project Engineer

DOWL HKM

- Steve Noble, P.E., Project Manager
- Chris Grgich, P.E., Traffic Engineer
- Emily Creely, Environmental Analyst
- Rachel Steer, Project Coordinator

PEL STUDY NEED -- SAFETY

- Improve future safety for motorized and non-motorized traffic by developing concepts that:
  - Upgrade transportation infrastructure to meet current DOT&PF design standards where practicable,
  - Reduce conflict points for motorized and non-motorized use,
  - Reduce the frequency and severity of crashes, and
  - Improve pedestrian and bicycle crossings.

PEL STUDY NEED -- MOBILITY

- Enhance the mobility of travelers in the corridor by developing concepts that:
  - Reduce traffic delay and congestion,
  - Improve intersection and road segment Level of Service (LOS) to C or better where practicable to account for projected traffic growth, and
  - Accommodate access to adjacent properties.

PEL STUDY NEED -- FREIGHT

- Optimize existing freight transport operations by developing concepts that:
  - Provide for efficient movement of freight,
  - Minimize at-grade railroad crossings to the degree practicable, and
  - Reduce vertical clearance obstructions (e.g. traffic signal mast arms).

PEL STUDY NEED – AIR QUALITY

- Reduce air pollution in the Air Quality Non-Attainment and Maintenance areas which overlap the study area by developing concepts that:
  - Meet the 2006 24-hour $PM_{2.5}$ National Ambient Air Quality Standards,
  - Reduce vehicle idle times at intersections, and
  - Improve vehicle travel time through the corridor.

PROJECT EFFORTS TO DATE

- Draft Traffic Engineering Report
- Identification of 3 corridor concepts
- Agency, public, and stakeholder outreach
- Agency scoping
- Alaska Railroad coordination

CORRIDOR CONCEPTS

- Concept 1
  - —High mobility, low access
- Concept 2
  - —Moderate mobility, moderate access
- Concept 3
  - —Low mobility, high access

Mobility —	Emphasis on reducing travel time for through traffic
Accessibility —	Emphasis on providing direct connection to adjacent properties

CONCEPT 1—HIGH MOBILITY/LOW ACCESS

- Focuses on maximizing capacity and travel speed
  - — Improves Richardson Highway/Steese Expressway as freeway-type facilities
  - — Interchanges at major roadways
  - — Frontage roads provide access to adjacent roads and property
- Updates to Concept 1 since the last PEL work session

CONCEPT 2—MODERATE MOBILITY/MODERATE ACCESS

- Attempts to balance corridor mobility and access
  - Mix of at-grade and grade-separated intersections (interchanges)
  - Primary difference is at Steese/3rd and Steese/College
- Updates to Concept 2 since the last PEL work session

CONCEPT 3—LOW MOBILITY/HIGH ACCESS

- Maintain existing access to adjacent property
  - No new interchanges
  - Maximize capacity from the existing at-grade intersections and develop adjacent road network
- Updates to Concept 3 since the last PEL work session

PUBLIC COMMENTS SUMMARY

- Signal timing is a major problem in the corridor.
- Appropriate, major/expensive improvements, rather than band-aids, are necessary.
- The railroad needs to be considered as part of this study—current at-grade railroad crossings are a transportation problem in Fairbanks.
- Grade-separated crossings are needed on the Steese Highway at Farmers Loop Road, Trainor Gate Road, Johansen Expressway, and Airport Way.
- Improved bike access is needed.
- We love/hate roundabouts.

AGENCY COMMENTS SUMMARY

- Increased truck traffic related to natural gas delivery should be considered.
- Pedestrians and bicyclists need to be accommodated throughout the corridor.
- The potential for noise impacts throughout the corridor is of concern.
- Wetland impacts as a result of connecting Johansen Expressway to Farmers Loop Road is of concern.
- Maintaining access for military operations should be a priority.

DOT&PF/ARRC COORDINATION MEETINGS

- **GOAL**
  - Evaluate future performance of railroad crossings as a result of traffic changes from proposed corridor projects.
- **RECOMMENDATIONS**
  - Concepts 1 & 2
    - Grade separation at Old Steese Highway
    - Grade separation at Steese Expressway
    - Grade separation at Richardson Highway
  - Concept 3
    - Improvements do not preclude future grade separation
- **CONCLUSION**
  - Future projects in the corridor should be compatible with grade-separated railroad crossings.

CONCEPT EVALUATION—PLANNING AND ENVIRONMENTAL

CRITERION/ CONCEPT	CONCEPT 1	CONCEPT 2	CONCEPT 3
Consistent with Metropolitan Transportation Plan	●	●	○
Impacts to wetlands and waterways (# acres)	~7	~4	~7
Environmental justice impacts	unknown	unknown	unknown
Minimizes noise impacts	◒	◒	○
Minimizes air quality impacts	●	◒	○
Proximity (w/in 50 feet) of contaminated sites	4	4	2
Right-of-way impacts (# of parcels)	252	149	198
# of potentially impacted cultural/ historic resources	2	1	1
# of potentially impacted 4(f)/6(f) properties	4	1	3

● = Yes/Favorable ◒ = Potential/ Somewhat Favorable ○ = No/ Unfavorable

ELIGIBLE AND POTENTIAL SECTION 106 STRUCTURES (HISTORIC)

- National Register of Historic Places in vicinity of corridor:
  - Clay Street Cemetery (7th & Clay Street)
  - Illinois Street Historic District (300-700 Illinois Street)
  - Ladd Field

- >100 structures over 40 years old that have not been assessed for historical significance

CONCEPT EVALUATION—TRAFFIC AND ENGINEERING

CRITERION/ CONCEPT	CONCEPT 1	CONCEPT 2	CONCEPT 3
Meets functional roadway classification	●	◒	○
Maintains access to adjacent properties	◒	◒	●
Utility impacts	◒	◒	◒
Improves travel time from north and south	●	◒	○
Improves traffic safety	●	◒	○
Improves non-motorized safety	●	◒	○
Improves non-motorized connectivity	◒	◒	◒
Provides long-term capacity	●	◒	○
Cost	$296M	$211M	$205M

● = Yes/Better ◒ = Somewhat/Good ○ = No

NEXT STEPS

- Consultation with FHWA
- Prioritize or dismiss concepts that do not meet the purpose and need
- Public open house #3 (Spring 2014)
- Identify individual projects that have independent utility and logical termini
- Finalize Traffic Engineering Report
- Complete PEL Study Report

QUESTIONS/COMMENTS

Submit Your Comments

Rachel Steer, Project Coordinator
1901 Airport Way, Suite 102
Fairbanks, AK 99701
rsteer@dowlhkm.com
907-374-0275

ARRC DIAGNOSTIC TEAM

NOTES

- Safety minute

- Existing conditions

Steve Noble (DOWL HKM) said the at-grade crossing is problematic for the trucking community, which has a policy against using the off-ramp. The distance between the railroad crossing and the ramp is too short for their trucks. Steve said the crossing does not meet accident thresholds for grade-separation and the off-ramp does not meet accident thresholds for grade-separation.

- Review inventory data

Brian Hanson (DOWL HKM) and Zaid Hussein (DOWL HKM) presented predicted crash rates based on Zaid's formula and went through the packet they prepared that included:

- *Accident Prediction Values (APV) for existing and future railroad/highway grade crossings using 2040 vehicle movements*
- *Annual average daily traffic volumes for the Richardson Highway/Steese Expressway*
- *The 2013 Annual Web Accident Prediction System (WBAPS) Report for Public At-Grade Highway-Rail Crossings*
- *A ten-year collision history*
- *An abbreviated highway-rail crossing inventory profile*

- Discuss anomalies

Brian H. said that this model does not consider vehicle to vehicle collisions and the model only considers five years of crash data.

Pamela Golden (DOT&PF) confirmed that the Steese Expressway (Steese) should be listed as having six lanes. She confirmed that this railroad crossing on the Steese is listed as a passive system when it should be listed as an active system.

Pamela asked if school bus crossings were included in the calculations.

Brian H. said no.

Pamela said that they should be.

There was a discussion on which traffic counts were used.

There are different traffic counts on either side of the crossing. Steve asked Pamela how this has been addressed in the past.

Pamela said that generally DOT&PF is not looking for specific traffic counts at crossings. She recommended averaging the two numbers.

Brian H. said the higher of the two numbers was used for the Steese and the lower of the two for the Old Steese. Only one number was available for the Richardson Highway.

- Review predicted APV

Brian H. showed a summary table using 2040 data to calculate the APV for the Steese, Old Steese Highway, and Richardson Highway based on either one or two crashes within a 5-year period. Based on the calculations, out of the three crossings, the Steese would require grade separation in 2040.

Brian H. said the Steese crossing was ranked #2 in the highest number of accidents.

Brian Lindamood (ARRC) said that the Alaska Railroad Corporation (ARRC) is not going to accept a design that prevents grade separation in the future. He said if one highway receives grade separation, the other one has to as well. The last workshop showed support for moving the Steese to limited access and using the Old Steese as a collector road.

Chris Cavallo (DOT&PF) asked if ARRC ever pursues funding for grade-separating roads/rails instead of going through DOT&PF.

Brian L. said the crossing facilities included in this project belong to DOT&PF and not ARRC, so the fiduciary responsibility lies with them.

Pamela asked if trains were limited by school hours. Brian said no, ARRC runs trains by night on Trainer Gate Road by policy, but they are not required to do this.

Steve asked Brian L. how many trains run on the Steese.

Brian L. said six, but this number could increase to eight.

Steve discussed the desired pedestrian undercrossing, which would give the military base direct access to their firing range.

Steve asked Zaid to mark the first map with "length between the base?" and asked him to show stop-controlled intersections.

- Review PEL concepts relative to ARRC crossings

Zaid reviewed the three concepts under consideration:

- *1) Keeping the Steese at-grade with Trainer Gate. The railroad would stay at-grade and there would be the option of exploring one-way traffic from the Steese to Old Steese.*
    - *Low mobility/high access option*
    - *Traffic congestion would not be solved*
    - *LOS would not be acceptable in the future*
    - *If the one-way is reversed, intersections on the Old Steese would fail*
- *2) Hybrid solution. Keeping the railroad at-grade with Trainer Gate and making the Steese go over the top of Trainor Gate.*
    - *The downside is the Steese and Old Steese intersections would remain unchanged*
- *3) Three level solution. Steese stays at-grade, the Old Steese goes under, and the railroad goes over the Steese. Since one level is beneath grade, this means the railroad is raised only one level.*

- Discuss alternatives and compare locations

Regarding the Three Level Solution, Zaid asked what would be the disadvantage of having Trainer Gate go under the Steese.

Al said the problem would be the displaced left-turn, which would no longer be possible.

Brian H. asked whether having the railroad go under the Steese would be a possibility. He asked how many feet would be required. Brian L. said 23 feet is required and the road would need to be at 28 feet.

Zaid asked Al if he is opposed to a three level option.

Al said he is not opposed to three levels if the Steese comes over the top.

Zaid said the Steese would have to come over the railroad and that would be a very high structure.

Al said he would suggest going back to the AASHTO guidelines and seeing what the recommended grades are. He said the issue is whether Trainor Gate needs to be open. He asked if the Steese intersections would fail if Trainer Gate were closed.

Pamela said yes, but Steve added that he thought this would not happen until 2030..

Zaid says this justifies the need for an interchange.

Steve said this is an elegant solution: if you eliminate lefts and make Trainer Gate an on- and off-ramp, the railroad goes up and over.

Al said an EIS may be required if no solution can be found that pleases the railroad and users. He said an interchange may require an EIS as opposed to an EA.

Brian L. asked what warrants an EIS.

Chris said if there are significant impacts, an EIS is warranted.

Steve said a smaller footprint can be achieved. The frontage roads can be brought in a lot tighter.

Chris asked if completely moving the railroad were an option.

Brain L. said no, the railroad connects to the military base.

Brian H. said three levels will be required unless Trainer Gate is moved or the railroad is moved.

Zaid said if interchanges were incorporated, two lanes instead of three would be required.

Pamela said an interchange does not solve the Trainer Gate problem. It solves the College Road/Steese problem, but what about College Road/Old Steese? This will become the new busy spot.

Zaid said when he closed the one-way traffic on the north-bound lane, the intersections on the Steese failed, but the intersections on Old Steese did not.

Al proposed a cloverleaf on Trainer Gate Road.

Steve said this would mean a tremendous amount of impact for 7,000 vehicles and a problem at 3rd Avenue and College Road that remains unsolved. He said Trainer Gate should eventually be closed.

Pamela asked about an interchange at College Road.

Steve said mobility was preferred over access.

Zaid said the public response was that they didn't want to impact businesses.

Steve said ROW seems wide, but with pedestrian/bike facilities, ect., space is limited.

Brian said that pedestrians have been moved from Gambell and Ingra to Cordova in Anchorage. Maybe a similar solution can be achieved in Fairbanks.

Steve said that this area does not have the grid-like pattern that Anchorage has.

Brian asked about installing an off-ramp from 3rd Avenue onto Trainer Gate.

Steve said that 900 feet is not enough space.

Steve said that the project team is circling around the problem of phasing a high mobility, low access road.

Steve said that it sounded like an option should be explored that ties into the Old Steese project (which potentially puts a one-way movement onto Trainer Gate). The project team should return to the PEL and see what ROW impacts would be necessary for the high mobility options and the closure of Trainer Gate. He suggested exploring an option where an EA would be sufficient.

Al said enough research associated with the environmental process would need to be completed to reasonably dismiss alternatives and not have to revisit them.

Discussing future phasing options, Zaid suggested converting Trainer Gate into a one-way with a 2-phase signal and moving the railroad above. In the future, he suggested moving the Steese above the railroad track.

Steve said that in the future, 3rd Avenue and College Road could instead receive interchanges and the two-phased signal could be eliminated altogether.

Zaid said it would be important to leave the movements at the Steese and Trainer Gate as is for now and make sure the railroad is high enough to accommodate a future intersection.

Steve said that is one option. Another option would be to get rid of left turns on the Steese and Trainer Gate and force traffic to turn elsewhere.

Al said one meeting was budgeted and he does not think the DT Report can be finished based on this meeting.

Steve said the next PEL workshop will be held mid-Dec/early Jan.

Al said it might be best not to incorporate the Diagnostic Team Meeting with the PEL session and instead have a separate workshop in the next two to three weeks.

Steve said the alternatives need to be determined prior to the PEL or another work session may be required.

Zaid asked if it could be assumed that pedestrians can be rerouted from the Steese.

Steve said that it should be assumed that they will be parallel to the Steese.

Chris and Al said that they would send the ROW map to DOWL HKM.

Zaid asked Steve how far along the Old Steese Highway project was.

Steve said the base map is getting pulled together and future phases have not been negotiated. He said the timing was good to make changes to public outreach and scope.

Zaid asked if the traffic analysis could be initiated on the Old Steese.

Steve said the traffic analysis needs to be completed as part of the PEL at the conceptual and modeling level.

- Discuss crossing assumptions and analysis scenarios

NEXT MEETING

Sometime between December 15 and 20

RICHARDSON HIGHWAY/STEESE EXPRESSWAY
Diagnostic Team Meeting #1
November 15, 2013

PRINT NAME	AGENCY	ADDRESS	PHONE
Steve Noble	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Zaid Hussein	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Brian Hanson	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Al Beck	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-2276
Chris Cavallo	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-5375
Pam Golden	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-2283
Brian Lindamood	ARRC	327 W. Ship Creek Ave., Anchorage, AK 99501	907-265-3095
Lesley Lepley	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000

AGENDA

- Safety minute

- Review PEL concepts relative to ARRC crossings

Steve Noble (DOWL HKM) said the project team has created and refined options since the first Diagnostic Team meeting on 11/25/13.

Steese Expressway Corridor: 3rd Street to Trainor Gate Road

Option 1 (4-lane section)

Grade separate Steese Expressway at 3rd Street and College Road

- Steese Expressway is raised only one level at 3rd Street and College Road and goes back to existing grade at Trainor Gate Road
- Provide a shared frontage road, on-ramps and off-ramps at 3rd Street and College Road due to close proximity
- Remove the Trainor Gate Road connection between Steese Expressway and Old Steese Highway
- Railroad is raised over the Steese Expressway
- Southbound off-ramp could be extended between Trainor Gate Road and College Road as an option

Steve said if the high mobility option is selected as part of the PEL Study recommendations, this corridor can be built with four lanes, not six.

Brian Lindamood (ARRC) asked if an earthen embankment is envisioned or if retaining walls would be used.

Steve said it is likely that most of the area would use earthen embankments with some limited use of retaining walls. Steve said he understands that a three-level option may not be realistic so the project team has focused on two-level options that will achieve most of what the project team is trying to attain while continuing to investigate the three-level options.

Al Beck (DOT&PF) said the three-level option can still be moved forward.

Pam Golden (DOT&PF) asked if northbound traffic could continue all the way to Trainor Gate Road.

Zaid Hussein (DOWL HKM) said yes.

Al asked if it was feasible to make the frontage road a two-way segment on the south side of where Trainor Gate Road intersections with the Steese Expressway.

Pam said she likes this concept from a traffic perspective. If the Trainor Gate Road connection to the Steese Expressway is taken out, local residents will still have access to the Steese Expressway.

Al asked if this option would accommodate a pedestrian bridge.

Ideas for accommodating a pedestrian crossing near Trainor Gate Road were discussed.

Steve said the railroad crossing could be its own project with independent utility.

Brian said currently there are between two and six trains passing through this area per day. He thinks that number may increase. He said there may be a Golden Valley Electric transmission line in the area and he estimated it would take one construction season to construct this grade-separation project, but two seasons to complete all elements (landscaping, finish work, etc).

Al asked for ARRC feedback on potentially closing C, D, or F Street off of Trainor Gate Road.

Brian said the City of Fairbanks has insisted that the C Street crossing of Trainor Gate Road and the railroad stay open. ARRC was given authority to close D Street. In looking to the future, ARRC has signed a Memorandum of Understanding that states the Borough and ARRC will work together to find funding for an EIS that will look for a solution to the ARRC's railroad routing challenges through Fairbanks.

Option 2 (6-lane section)
Grade separate Steese Expressway at 3rd Street and College Road
Steve said that depending on the sequencing, if the interchanges are to be built later, the third travel lane on the Steese Highway may be built first.

Option 3 (Three level)
Steese Expressway stays at-grade, Trainor Gate Road goes under, and the railroad goes over the Steese Expressway

- Railroad is raised only one level
- Requires relocation of the Old Steese Highway/Trainor Gate Road intersection to the west

Steve said this option is very expensive and likely would have significant maintenance and utility issues.

Zaid said the expressway ramps extend 1,100-12,000 feet on each side of the interchange.

Al said he is pretty sure the water table is high and the projected maintenance associated with this three-level option would likely force its elimination.

Option 4 (No grade separation)
One-way traffic on Trainor Gate Road between Old Steese Highway and Steese Expressway

- Most likely, this option will recommend one-way traffic in the westbound direction on Trainor Gate Road
- Does not address need for railroad grade separation

Zaid said this option causes College Road and 3rd Street to fail.

Steve said this option could be phase 1 of Option 3, making the intersection one-way in. This option is likely 10 years out and would be incorporated into the Old Steese Highway project.

Chris Cavallo (DOT&PF) asked if the Old Steese Highway would need to be widened.

Steve said this is to be determined.

Pam said Fred Meyer is planning a 5,000 foot expansion and REI is planning to move into the adjacent commercial area. She noted that it is likely she will not be able to put in for any large dollar amount HSIP projects until 2016-2017.

Option 5 (same as option 4)
Railroad goes over the Steese Expressway and Old Steese Highway

- Provides a hybrid solution that can be upgraded later to Option 1 or 2

Steve said this option has not changed since the first diagnostic team meeting.

<u>Richardson Highway at 3-Mile Gate</u>

Option 1
Grade separate westbound off-ramp to allow right hand exit in advance of railroad

Steve said discussions would need to be initiated with Ft. Wainwright regarding the pedestrian underpass and proposed interchange in this area.

Option 2
Reconfigure/re-align main line and ramps and provide a Tight Diamond Interchange

- Other Options?

- Meeting summary

Steve said a memo will be created summarizing the results of the Diagnostic Team discussions. He asked for additional guidance on what ARRC and DOT&PF want DOWL HKM to submit.

Brian said he will share the Diagnostic Team process and final product from a recent Glenn Highway project.

Al will send the Diagnostic Team memo from Helmericks Ave. He said the Diagnostic Team memo will be included as part of the PEL Study.

Chris said the PEL study will be referenced as part of future specific projects.

Chris Johnston (DOT&PF) said the Old Steese Project will likely reference the results of this Diagnostic Team process in its engineering and environmental work.

Brian said any changes to the conclusions of the Diagnostic Team report will trigger the project team to do a new Diagnostic Team analysis.

Zaid said there is not a solution for the moderate access/moderate mobility option. The general consensus was a preference for Option 1.

Pam asked if the amount of right-of-way needed will be a selling point for any of the concepts.

Steve said it would be helpful to investigate this question. He said the bridge over the Chena River would likely need to be widened to accommodate the increased design speed and additional lanes. Additional engineering and investigation is still needed to determine if this can be avoided.

Zaid asked for the bridge as-built information from DOT&PF.

Chris said he would get this information to Zaid.

Al said that he would like the scoping letters go out in early January with a late-January PEL #4 work session (1/23 or 1/30) at the DOT&PF T2 conference room and an Open House in early February.

RICHARDSON HIGHWAY/STEESE EXPRESSWAY
Diagnostic Team Meeting #2
December 17 ,2013

PRINT NAME	AGENCY	ADDRESS	PHONE
Steve Noble	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Zaid Hussein	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Rachel Steer	DOWL HKM	4041 B Street, Anchorage, AK 99503	907-562-2000
Al Beck	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-2276
Chris Cavallo	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-5375
Pam Golden	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-2283
Brian Lindamood	ARRC	327 W. Ship Creek Ave., Anchorage, AK 99501	907-265-3095
Chris Johnston	DOT&PF	2301 Peger Rd., Fairbanks, AK 99709	907-451-2322