

# ENGSTROM ROAD TO TRUNK ROAD CORRIDOR ROUTE SELECTION REPORT

**DRAFT**

**Prepared for:**



Matanuska-Susitna Borough  
350 East Dahlia Avenue  
Palmer, Alaska 99645

**Prepared by:**



1617 S. Industrial Way, Suite 3  
Palmer, AK 99645  
907.746.5230

**Reviewed by:**

Shawn Hull, P.E.  
Project Manager

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## LIST OF ABBREVIATIONS

AADT .....	Annual Average Daily Traffic
COP .....	City of Palmer
COW .....	City of Wasilla
DOT&PF .....	Alaska Department of Transportation & Public Facilities
FHWA .....	Federal Highway Administration
GCI .....	General Communications, Inc.
HDL .....	HDL Engineering Consultants, LLC
HSIP .....	Highway Safety Improvement Program
LOS .....	Level of Service
L RTP .....	Long Range Transportation Plan
MEA .....	Matanuska Electric Association
MSB .....	Matanuska-Susitna Borough
MTA .....	Matanuska Telephone Association
OSHP .....	Official Streets & Highways Plan
ROW .....	Right-of-Way
TIP .....	2021 Transportation Infrastructure Projects

# 1.0 INTRODUCTION

The Matanuska-Susitna Borough (MSB) is reviewing potential routes for a major collector roadway from Engstrom Road to Trunk Road or Palmer-Fishhook Road in the Fishhook Area. This Route Selection Report presents the alignment analysis and recommends a route that will address the area’s need for improved connectivity and safety, as well as a route that will accommodate current and future traffic volumes. The project study area in this evaluation is shown in Figure 1.

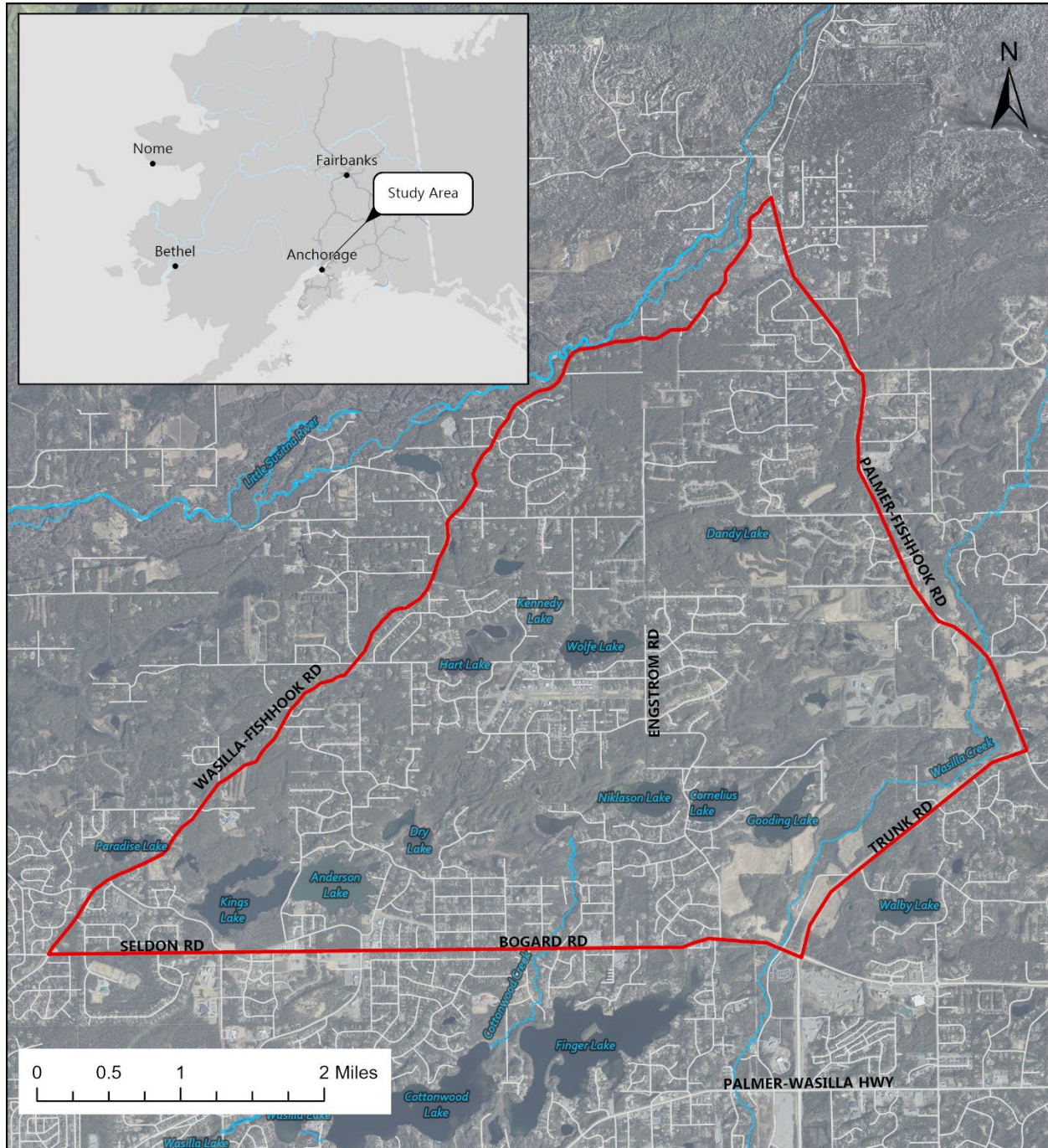


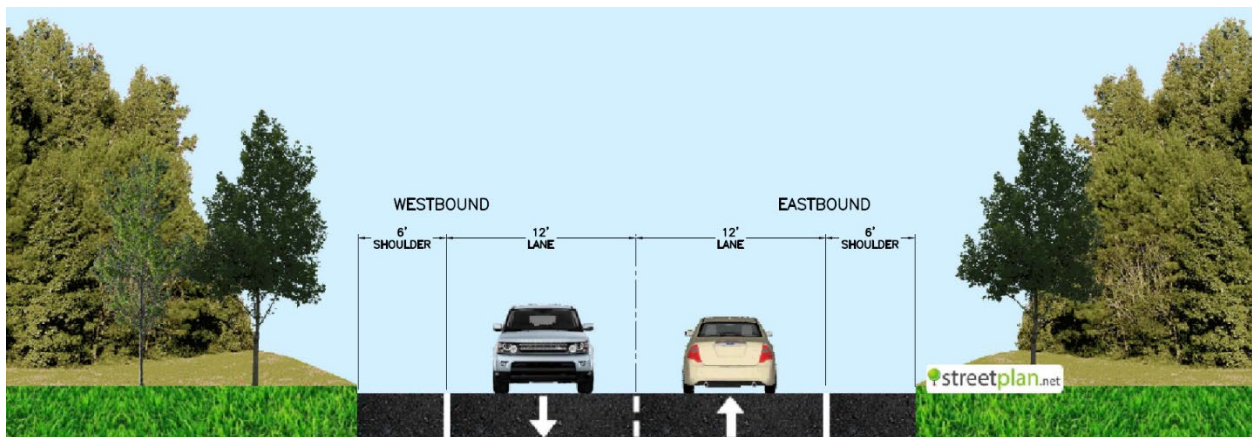
Figure 1: Project Area

The Engstrom Road to Trunk Road Corridor project area is located within a subset of the MSB's Core Area, referred to locally as the Fishhook Triangle. The Fishhook Triangle area is bound by Wasilla-Fishhook Road, Palmer-Fishhook Road, Trunk Road, and Bogard Road, and is comprised of portions of the Fishhook, North Lakes, and Farm Loop communities.

## 1.1 Purpose and Need

Both the rapid increase in residential and commercial development within the Fishhook Triangle and the corresponding increase in local traffic have increased demand on the poorly connected network of local roads. Currently, Engstrom Road serves as a north-south collector roadway from the center of the Fishhook Triangle south to Bogard Road. There are no direct connections between Engstrom Road and Trunk Road or Palmer-Fishhook Road. Traffic traveling to and from Trunk Road and Engstrom Road must use Bogard Road and enter using the only collector intersection serving the area within the Fishhook Triangle. This has resulted in a high concentration of traffic at the Engstrom Road and Bogard Road intersection. In particular, left-turning traffic from Engstrom Road onto Bogard Road has limited sight distance and faces heavy congestion. Also, the crash rate at this intersection is higher than the statewide average for similar intersections.

The MSB has identified the need to construct a major collector roadway between Engstrom Road and either Palmer-Fishhook Road or Trunk Road to provide congestion relief, safety improvements, and alternative access along Engstrom Road (Figure 2). According to the MSB's February 2025 Design Criteria Manual, a major collector roadway is designed to permit relatively unimpeded traffic movement and is intended for use in commercial/industrial or high-density residential areas.



**Figure 2: Major Collector Roadway**

The proposed project may include:

- Construction of a major collector roadway from Engstrom Road to either Palmer-Fishhook Road or Trunk Road.
- Drainage Improvements
- Construction of water crossings (bridges or culverts) at Wasilla Creek and other waterways in the area
- Wetland impacts
- Right-of-Way (ROW) acquisitions
- Signage and other roadside hardware
- Lighting
- Utility work
- Vegetation clearing and grubbing
- Non-motorized pathway (pending funding availability)

## 2.0 OVERVIEW OF THE PROJECT AREA

### 2.1 Population Growth

The MSB, along with its Core Area, has experienced continued rapid growth over the last several decades. According to the MSB's 2022 Official Streets and Highways Plan (OSHP), the population growth rate in the MSB has increased approximately 6% per year since the 1980s. The expectation is that this level of growth will continue through 2045. As a rural area with no mass transit system in place, increases in traffic volumes will outpace upgrades to the existing road network. As population and traffic volumes grow, road congestion and safety issues on the existing road network will become exponentially worse if improvements are not made.

### 2.2 Land Use and Transportation Goals

The Fishhook Triangle is not located within a city zoning boundary or within an MSB special-use district. Land uses within the Fishhook Triangle consist of undeveloped lands, low- and high-density residential parcels, commercial, industrial, and agricultural development. Due to a lack of land use and zoning requirements, land uses in the area are intermixed with no restrictions.

The proposed project conforms with the goals and objectives of local and regional land use and transportation plans.

### 2.3 Matanuska-Susitna Borough Comprehensive Plan

The MSB's Comprehensive Plan outlines the long-term vision for land use, development, and resource management within the MSB. It provides policies to guide growth, emphasizing integrated transportation, protection of residential neighborhoods, and consideration of environmental resources in future development decisions. Relevant land use and transportation goals include:

- Promoting street connectivity
- Protecting property values through compatible development
- Considerations for environmental protection in new development

#### 2.3.1 Fishhook Comprehensive Plan

The Fishhook Community Council area (an MSB-recognized local planning area) overlaps the study area and outlines the following goals and objectives that are relevant to the MSB's proposed project:

- Transportation Goal: Develop a secondary road network that limits direct access to state arterials and ensures local roads intersect state routes at safe and regular intervals.
- Environmental and Community Objectives: Maintain scenic, recreational, and residential qualities; preserve natural vegetative buffers along roadways for wildlife movement and visual character; discourage development that could affect public land access, fish and wildlife habitat, or groundwater quality.

### ***2.3.2 2035 MSB Long Range Transportation Plan***

The 2035 MSB Long Range Transportation Plan (LRTP) assesses projected growth in the MSB over a 20-year horizon and identifies key elements of the future transportation system needed to serve its growing communities. It supports the development of new transportation corridors, such as the proposed Engstrom–Trunk connection, to enhance mobility and accommodate anticipated development. It also identifies a common public concern that new road construction can lead to increased traffic speeds, higher traffic volumes, and associated safety risks. The proposed project was identified in the 2035 MSB LRTP:

*“Assess various alternatives to relieve congestion on Engstrom Road and provide a second access to Trunk Road or Palmer-Fishhook Road.”*

The project was approved by voters as part of the 2021 Transportation Infrastructure Projects (TIP21).

### ***2.3.3 2022 Official Streets and Highways Plan***

The 2022 OSHP serves as the MSB’s official guide for identifying existing and future roadway corridors necessary to support regional growth and mobility. It outlines planned connections, including a conceptual corridor between Engstrom Road and Trunk Road designated as a future major collector roadway to improve east-west traffic circulation.

## **2.4 Planned Future Development**

Planned future development within the Fishhook Triangle is described below and shown in Figure 3.

### ***2.4.1 Planned Subdivisions***

There are three planned residential subdivisions that are platted for development within the Fishhook Triangle. The Stone Creek subdivision is located off Engstrom Road. Just north of Tex-Al, there are two additional residential subdivisions planned.

### ***2.4.2 Gravel Extraction Site***

A new gravel extraction site is currently being developed immediately north of Bogard Road and east of Engstrom Road. There are shared-use safety concerns with the addition of truck traffic to the Engstrom Road corridor.

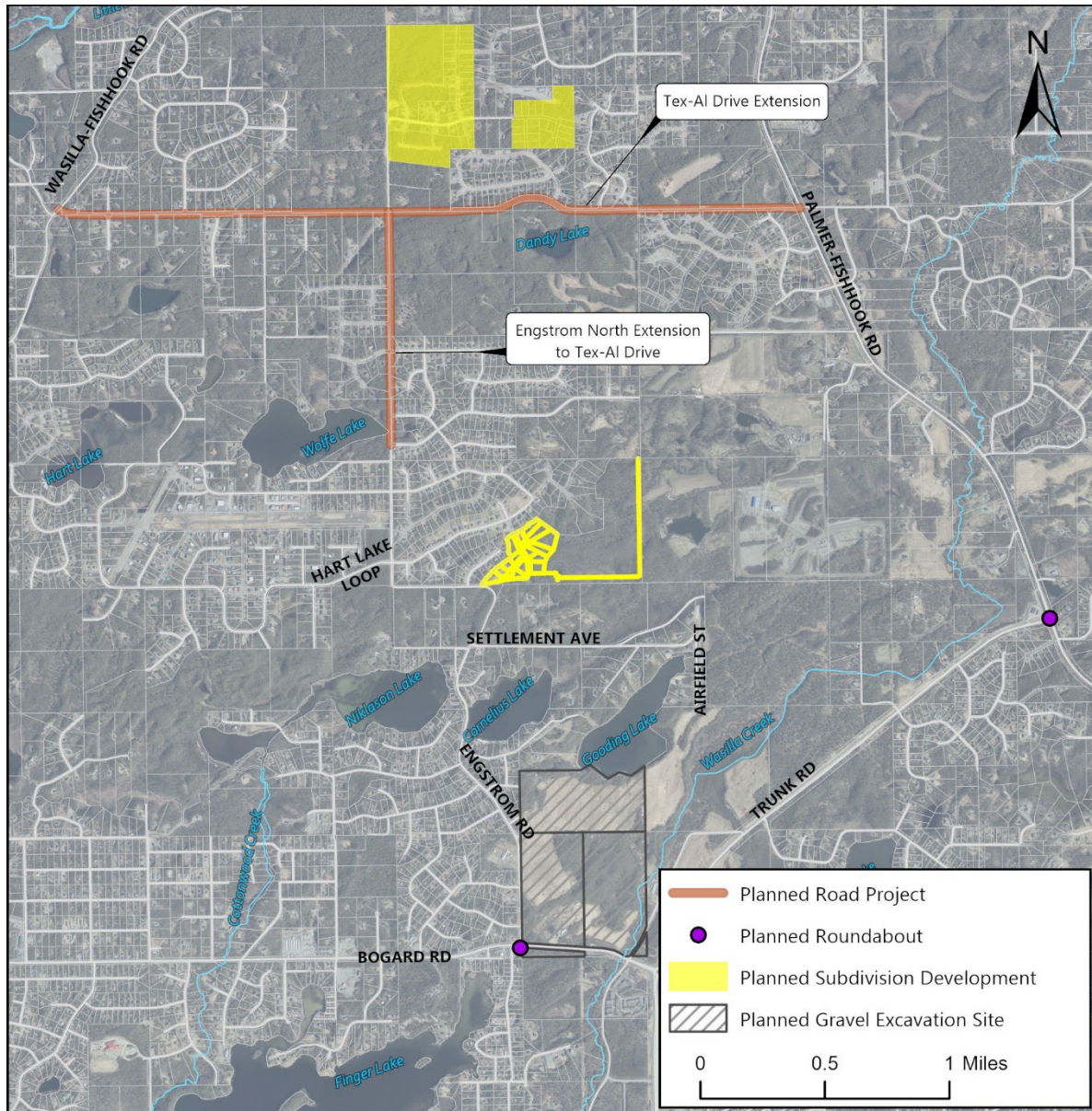


Figure 3: Planned Future Development

2.4.3 Level of Service

Intersection Level of Service (LOS) is a method to describe how well traffic moves through an intersection. It is based on calculations used to determine the amount of time vehicles are delayed by the intersection. Letter grades are used to categorize how well an intersection functions. Table 1 gives a description of what the letter grades indicate.

**Table 1: Intersection Level of Service**

<b>Level of Service</b>	<b>Description</b>
A	Cars move freely. Delays are less than 10 seconds. There's almost no stopping or waiting.
B	Traffic is light. Some cars might have to stop, but not for long.
C	Things slow down a bit. Some cars might need to wait, but most people are still moving.
D	Traffic is getting busy. Cars wait longer or need to stop more often, but things still move.
E	The intersection is close to being overloaded, lots of cars are waiting. Traffic may feel jammed.
F	Traffic hardly moves. Delays are long and it feels like the intersection isn't working at all.

The current LOS for the Engstrom leg of the Engstrom Road/Bogard Road intersection is LOS E to F during AM and PM peak traffic periods. With expected continued growth, traffic forecasting indicates that delays will increase significantly on Engstrom Road by the project design year of 2050 to a LOS F during all peak traffic periods.

#### **2.4.4 Utilities**

Utilities in the area include electricity, telephone, internet, and natural gas. Utilities generally follow the existing road network, with service lines extending to individual parcels. The following utility companies maintain and operate the existing facilities within the Fishhook Triangle area:

- Matanuska Electric Association (MEA) – overhead and buried electric
- Matanuska Telephone Association (MTA) – overhead and buried communication/fiber optic
- Enstar Natural Gas Company – buried gas
- General Communications, Inc. (GCI) – buried communication

Individual parcels utilize private or shared water wells and privately maintained septic systems. Municipal water and sewer services are not currently available within the Fishhook Triangle. The City of Palmer (COP) water and sewer system terminates near Colony High School. The COP is currently developing a long-range plan to extend its system to the west, with the goal of connecting to the City of Wasilla (COW) system for redundancy and resiliency. The preferred alternative for the extension continues along Bogard Road, the southern border of the study area.

#### **2.4.5 Pedestrian Facilities**

In the Fishhook Triangle area, pedestrian facilities are currently limited to a separated multi-use pathway along Trunk Road. There are plans for adding pedestrian improvements along Bogard Road as part of the Department of Transportation and Public Facilities' (DOT&PF) Safety and Capacity Improvements project. The MSB's LRTP also adopted the strategy of establishing non-motorized design requirements on all major collector roads in the MSB Core Area as part of its goal to improve connectivity (Goal 3).

The MSB hosted a public open house regarding the Engstrom to Trunk Road Corridor project in March 2025 (described in more detail in Section 4.6). Public feedback collected during and after the project

open house meeting indicates strong support for the addition of pedestrian facilities in the Fishhook Triangle. This is also consistent with the 2017 Fishhook Comprehensive Plan that highlights the community's desire for designated bike trails.

#### ***2.4.6 Wind and Snow Drift***

The Mat-Su Valley is impacted by strong winds throughout the year, especially in the Palmer area. Operations and Maintenance staff combat drifted snow piles that often close Engstrom Road at the curve south of Glade Court (beginning of the proposed Southern Route) and the section near Cornelius Lake. An alternative route would reduce the impact of these road closures.

#### ***2.4.7 Planned Transportation Improvements***

##### ***Engstrom North Extension to Tex-Al (MSB)***

Currently in the preliminary design phase, the MSB proposes to extend Engstrom Road by establishing a new roadway connection between East Wolf Creek Road and East Aspen Ridge Road and upgrading the existing sections of roadway from East Wolf Creek Road to East Tex-Al Drive and East Aspen Ridge Road to East Beechcraft Road. Upon completion, the entire length of the project corridor will consist of a two-lane roadway designed and constructed to major collector roadway standards.

##### ***Tex-Al Drive Extension, Upgrade and Pathway (MSB)***

The MSB is in the design phase of a proposed upgrade and extension of Tex-Al Drive between Palmer-Fishhook Road and Wasilla-Fishhook Road, providing a new connection and pathway. Currently, there are no east-west connections between Palmer-Fishhook Road and Wasilla-Fishhook Road north of Trunk Road. This project aims to:

1. Improve area traffic and pedestrian circulation
2. Provide an alternate route between Palmer-Fishhook Road and Wasilla-Fishhook Road
3. Shorten commuting time for residents in the area
4. Provide safer secondary access in case of road closures
5. Shorten emergency response time
6. Improve safety at the intersections on the east and west ends of Tex-Al Drive

##### ***Bogard Road at Engstrom Road/Green Forest Drive Intersection Improvements (DOT&PF)***

DOT&PF, in cooperation with the Federal Highway Administration (FHWA), is in the design phase of a proposed single lane roundabout at the intersection of Bogard Road with Engstrom Road and Green Forest Drive (Figure 3). The project is being developed and funded through the Highway Safety Improvement Program (HSIP), which specifically targets reducing fatalities and severe injury crashes on Alaska's roadways. The purpose of DOT&PF's Bogard Road to Engstrom Road/Green Forest Drive Intersection Improvements project is to improve safety at the intersections of Green Forest Drive and Engstrom Road with Bogard Road. The accident rate for these intersections exceeds the statewide average for similar intersections. These two existing intersections are within 200 feet of each other, which creates overlapping influence areas that potentially increase the accident rate.

*Palmer-Fishhook Road & Trunk Road Roundabout (DOT&PF)*

The DOT&PF is working on an HSIP project to reconstruct the Palmer-Fishhook Road and Trunk Road intersection. Anticipated improvements include a single-lane roundabout to replace the existing traffic control measures, consisting of stop control for Trunk Road at this three-way intersection. The purpose of the project is to improve safety by mitigating rear-end, head-on, and angle collisions related to high speeds and left-turning movements. The DOT&PF is pursuing the current project as a cost-effective solution to meet the fast-growing traffic volumes and improve safety for all user groups at the intersection, including, vehicular, bicycle, and pedestrian.

*Bogard Road Safety and Capacity Improvements (DOT&PF)*

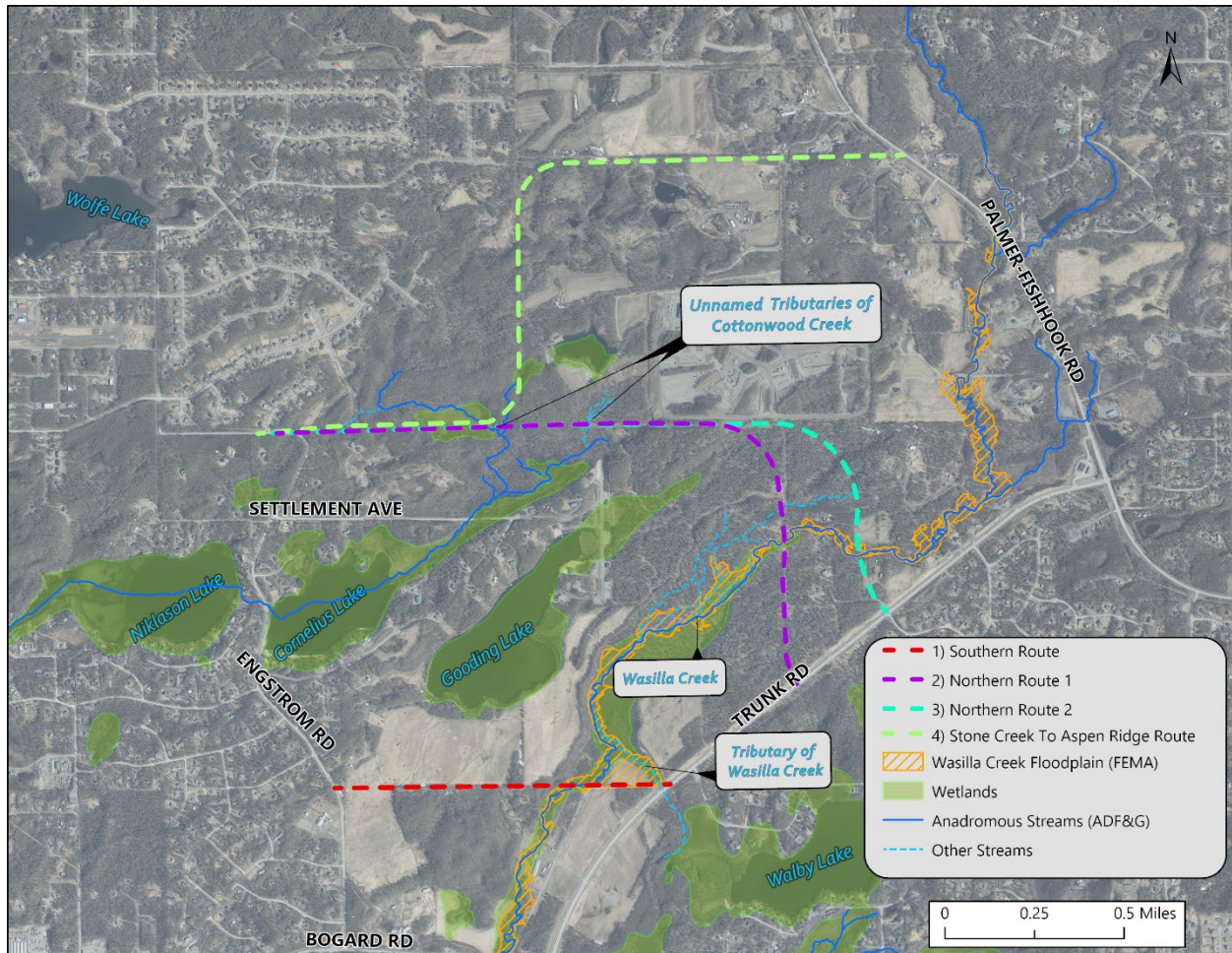
The DOT&PF is in the preliminary design stage of a safety and capacity improvements project to upgrade Bogard Road between Trunk Road and Grumman Circle to an arterial highway standard. The project will construct a pathway and will provide safety and capacity improvements, which may include roundabouts, raised medians, widened shoulders, turn lanes, drainage, signage, addressing access management issues, improving intersections as necessary, and providing an improved clear zone.

**2.4.8 Department of Transportation and Public Facilities**

The Fishhook Triangle is delimited by four DOT&PF-owned and operated roads: Wasilla-Fishhook Road, Palmer-Fishhook Road, Trunk Road, and Bogard Road. Any proposed connections or upgrades that impact these roads will require consultation between the MSB and DOT&PF. All four route options require a connection with either Trunk Road or Palmer-Fishhook Road. Once a route is selected by the MSB, further government-to-government coordination will be required to determine the appropriate intersection design that meets the needs of the MSB, DOT&PF, and the traveling public.

### 3.0 ROUTE OPTIONS

Four proposed routes plus the No Build option have been identified for analysis through preliminary planning, reconnaissance engineering, and public input (Figure 4). Each of the proposed routes, including the No Build option, is described in further detail below.



**Figure 4: Proposed Route Options**

#### 3.1 No Build

The No Build option consists of maintaining the existing roadway network. No improvements or new connections would be made to Trunk Road or Palmer-Fishhook Road. With expected continued growth, traffic forecasting indicates that delays will increase significantly on Engstrom Road by the project design year of 2050 to a LOS F during all peak traffic periods.

The No-Build option does not satisfy the purpose and need of this project for the following reasons.

- An alternate route between Engstrom Road and Trunk Road or Palmer-Fishhook Road would not be established.
- Safety improvements would not be addressed. Traffic volumes are expected to continue to increase, and an increase in traffic volume beyond the existing roadway’s design capacity greatly increases the likelihood of crashes and a reduction in safety.

- Traffic congestion would continue to get worse, and the LOS would continue to decrease.

### 3.2 Southern Route

The proposed Southern Route (Figure 5) begins approximately 0.4 miles north of the Bogard Road-Engstrom Road intersection and extends east, merging into North Old Homestead Road. This is the alignment presented to voters as part of the TIP21. The Southern Route is approximately 0.9 miles long and would require construction of a new approach/intersection with Engstrom Road. While this alternative makes use of the existing approach to Trunk Road, improvements would be required to, at a minimum, widen the approach to match the assumed typical section and accommodate the existing multi-use pathway along Trunk Road.

The close proximity to both the existing Trunk Road-Bogard Road roundabout and the proposed (currently in design) Bogard Road-Engstrom Road roundabout provides limited added benefit in reducing congestion, i.e., improving LOS and increasing connectivity.

Key attributes of the Southern Route are summarized below.

- Less than 1 mile long
- Uses existing approach at Trunk Road (requires DOT&PF approval)
- Anadromous stream crossing of Wasilla Creek
- Less than 0.5-mile separation from Bogard Road roundabouts at Trunk Road and Engstrom Road (proposed)
- Up to seven impacted parcels
- Aligns with road network spacing for a minor collector corridor

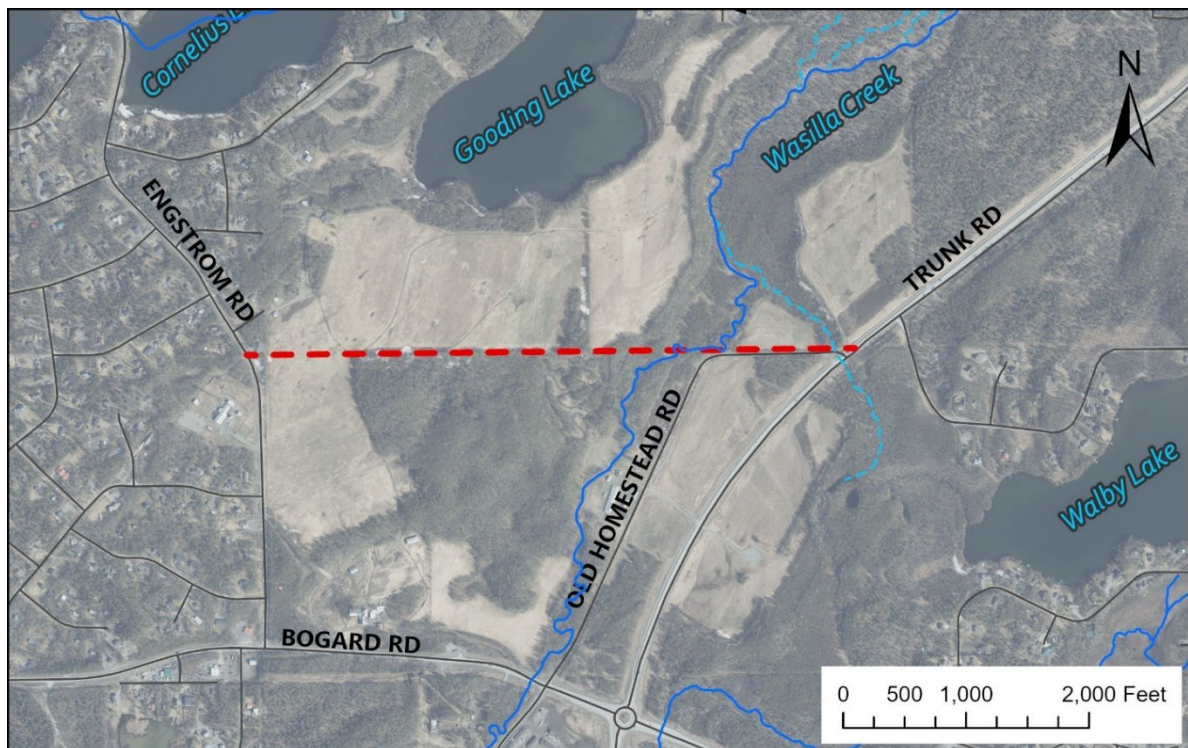


Figure 5: Southern Route

### 3.3 Northern Route 1

The proposed Northern Route 1 (Figure 6) begins approximately 1.6 miles north of the Bogard Road-Engstrom Road intersection, extends east along the ¼ Section line of Section 22 to Section 23, then turns southeast and then south, where it connects to Trunk Road approximately 0.2 miles southwest of Heaton Road. The proposed corridor is approximately 1.9 miles long and would require a new intersection at both Engstrom Road and Trunk Road. Trunk Road is owned and maintained by DOT&PF and will require coordination with them on the connection and an appropriate intersection configuration. The proposed intersection location with Trunk Road aligns with a proposed future collector road north of Walby Lake, identified in the OSHP.

The MSB recently approved an application for the development of the Stone Creek Phase 6 Tract Z residential subdivision, which is the property immediately north of the proposed alignment near the western end and extends approximately 3,200 feet east off of Engstrom Road. This alignment is shown in the Traffic and Safety Analysis to reduce traffic congestion at the Engstrom Road-Bogard Road intersection by providing an additional option for residents living in areas further to the north.

Key attributes of the north alignment are summarized below.

- Approximately 2 miles long
- Proposed intersection with Trunk Road aligns with future collector road north of Walby Lake
- Anadromous stream crossings of Wasilla Creek and tributary of Cottonwood Creek
- Greater than 1.5-mile separation from Bogard Road roundabouts at Trunk Road and Engstrom Road (proposed)
- Up to 12 impacted parcels
- Reduces future traffic volume increase from Stone Creek Development on Engstrom Road
- Provides alternate collector-level route around annual road closures caused by snow drifts that typically occur south of Cornelius Lake
- Aligns with road network spacing for a major collector roadway
- Reduces ROW costs by utilizing the future Stone Creek development roadway ROW along the proposed western connection

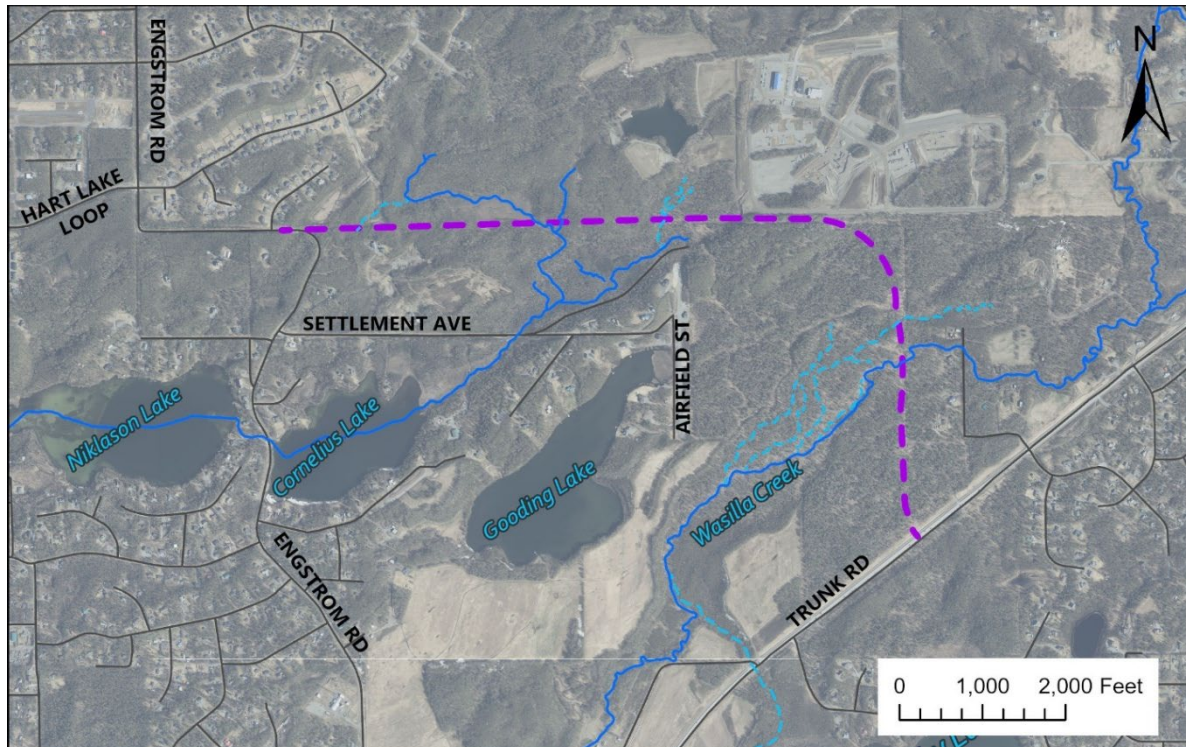


Figure 6: Northern Route 1

### 3.4 Northern Route 2

The proposed Northern Route 2 (Figure 7) begins approximately 1.6 miles north of the Bogard Road-Engstrom Road intersection, extends east along the  $\frac{1}{4}$  Section line of Section 22 and part of Section 23, then turns south where it connects to Trunk Road at Heaton Road. The proposed corridor is approximately 1.9 miles long and would require a new intersection at Engstrom Road and an upgraded intersection at Trunk Road. Trunk Road is owned and maintained by DOT&PF and will require coordination for the connection and an appropriate intersection configuration. The proposed intersection location with Trunk Road aligns with North Forestwood Drive.

The MSB recently approved an application for the development of the Stone Creek Phase 6 Tract Z residential subdivision, which is the property immediately north of the proposed alignment near the western end and extends approximately 3,200 feet east off of Engstrom Road. This alignment is shown in the Traffic and Safety Analysis to reduce traffic congestion at the Engstrom Road-Bogard Road intersection by providing an additional option for residents living in areas further to the north.

Key attributes of the Northern Route 2 are summarized below.

- Approximately 2-miles long
- Proposed intersection with Trunk Road is an existing 4-way intersection
- Anadromous stream crossings of Wasilla Creek and tributary of Cottonwood Creek
- Greater than 1.5-mile separation from Bogard Road roundabouts at Trunk Road and Engstrom Road (proposed)
- Up to 17 impacted parcels

- Reduces future traffic volume increase from Stone Creek Development on Engstrom Road
- Provides alternate collector-level route around annual road closures caused by snow drifts that typically occur south of Cornelius Lake
- Aligns with road network spacing for a major collector roadway
- Reduces ROW costs by utilizing the future Stone Creek development roadway ROW along the proposed western connection

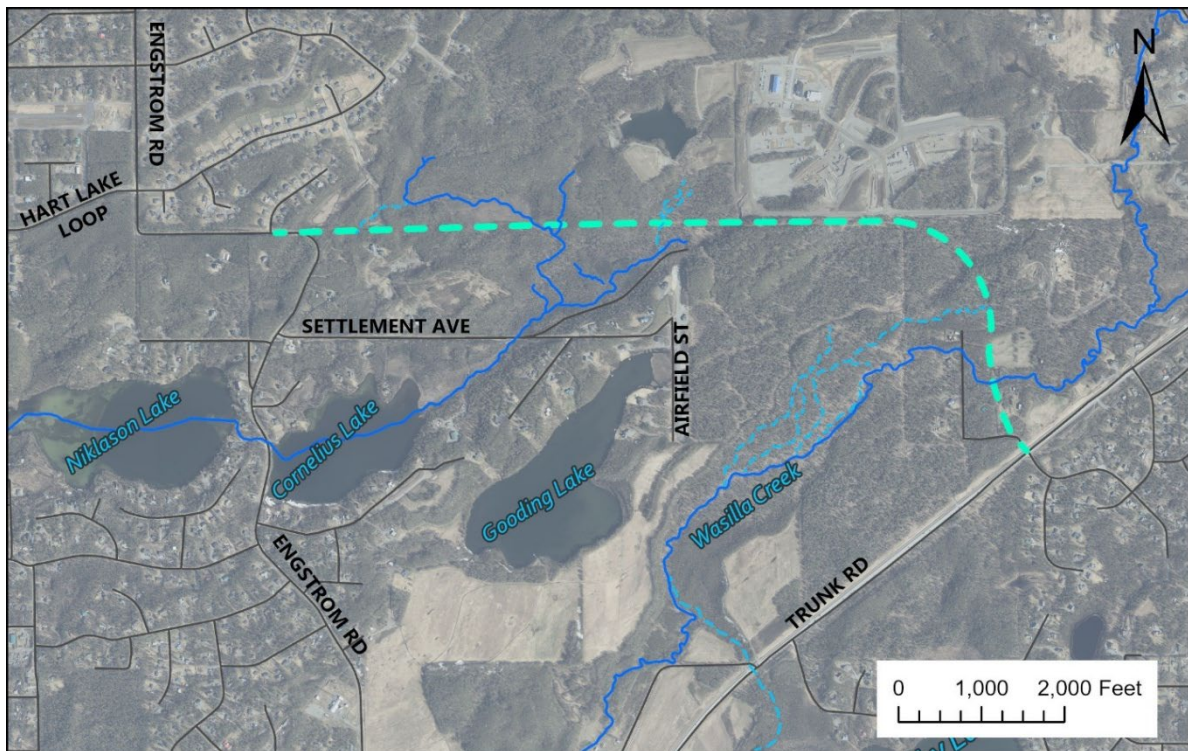


Figure 7: Northern Route 2

### 3.5 Stone Creek to Aspen Ridge Route

The proposed Stone Creek to Aspen Ridge Route (Figure 8) begins approximately 1.6 miles north of the Bogard Road-Engstrom Road intersection, extends east along the  $\frac{1}{4}$  Section line of Section 22, then turns north along the Section 22/23 Line, and turns east where it connects to Palmer-Fishhook Road at Snicker Avenue. The proposed corridor is approximately 2.5 miles long and would require a new intersection at Engstrom Road and an upgraded intersection at Palmer-Fishhook Road. Palmer-Fishhook Road is owned and maintained by DOT&PF and will require coordination with them on the connection and an appropriate intersection configuration.

The MSB recently approved an application for the development of the Stone Creek Phase 6 Tract Z residential subdivision, which is the property immediately north and west of the proposed alignment near the western end and extends approximately 3,200 feet east off of Engstrom Road. This alignment may help reduce traffic congestion at the Engstrom Road-Bogard Road intersection by moving the corridor further north and diverting a portion of traffic to Palmer-Fishhook Road, where it could be further distributed between Trunk Road and Glenn Highway.

Key attributes of the Stone Creek to Aspen Ridge Route are summarized below.

- Approximately 2.5 miles long
- Proposed connection with Palmer-Fishhook Road is at an existing intersection
- Anadromous stream crossings of tributary of Cottonwood Creek
- Greater than 1.5-mile separation from Bogard Road roundabouts at Trunk Road and Engstrom Road (proposed)
- Up to 19 impacted parcels
- Anticipated to reduce future traffic volume increase from Stone Creek Development on Engstrom Road
- Provides alternate collector-level route around annual road closure caused by snow drift south of Cornelius Lake
- Aligns with road network spacing for a minor collector corridor
- Reduces ROW costs by utilizing the future Stone Creek development roadway ROW along the proposed western connection
- Requires out-of-direction travel to reach Bogard Road

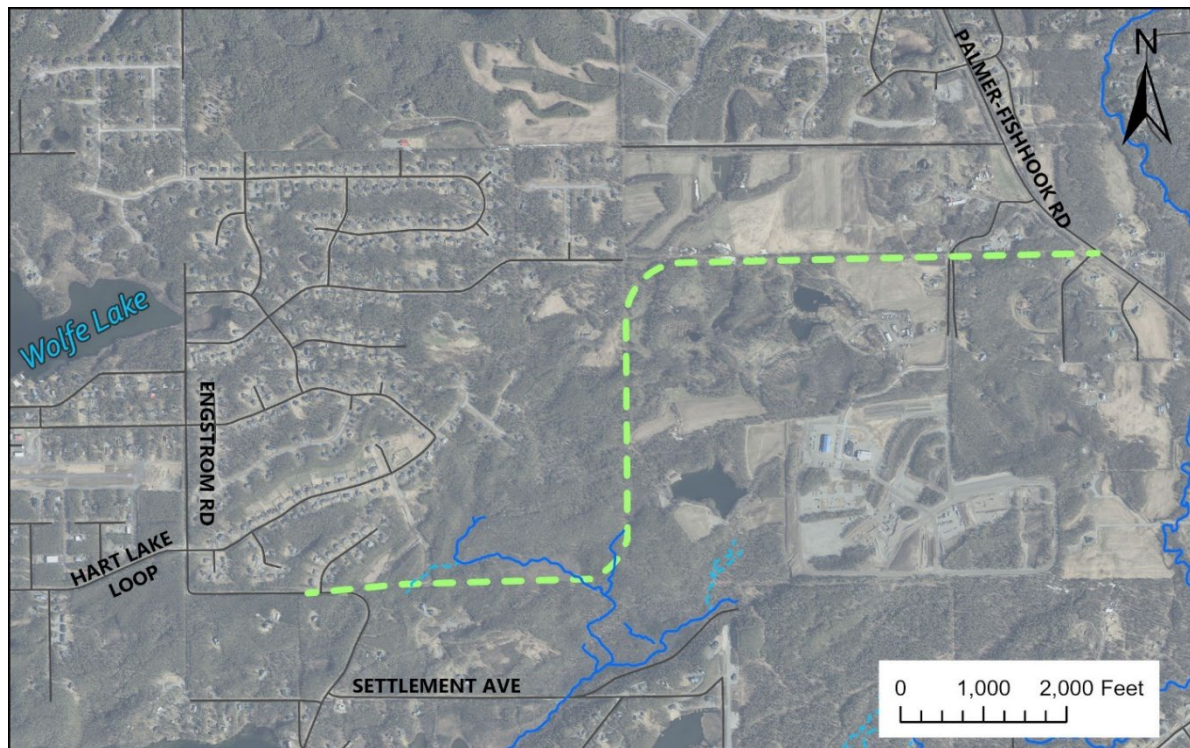


Figure 8: Stone Creek to Aspen Ridge Route

## 4.0 SELECTION CRITERIA

The No Build option and four route alignments were evaluated based on the following key criteria: Connectivity and Access; Mobility and Use; Environmental; Engineering/Constructability; Community Impacts; Other Considerations. The results of the route evaluation are shown in Table 2.

### 4.1 Connectivity and Access

Connectivity and Access evaluate how well the route meets the need of improving connectivity. For collector roadways, spacing should be no less than 0.5 miles for minor collector roadways and 1.0 miles for major collector roadways. The Southern Route provides a reduced level of network resiliency compared to the other three build options due to its proximity to Bogard Road and due to being located south of Gooding Lake, an area known for snow accumulation sufficient to close Engstrom Road. Both the Southern Route and the Stone Creek to Aspen Ridge Route provide ideal spacing for minor collector roadways; both Northern Routes provide ideal spacing for a major collector roadway.

While the intersection improvements at Bogard Road and Engstrom Road/Green Forest Drive address safety (crashes), it does not address the MSB's goal of improved connectivity and reduced congestion. Alternate collector routes are still needed to provide access to and from subdivisions in the Fishhook Triangle. As discussed earlier, Engstrom Road is consistently, albeit briefly, closed in the winter due to high winds and drifted snow; the intersection improvements with Bogard Road provide no solution for traffic in this situation.

Comments provided by DOT&PF staff concur that alternate access would provide more than just congestion relief and safety improvements along Engstrom Road by balancing the traffic volume load across collector roads. An alternate collector road would provide additional route options for emergency services, school buses, detours for construction or emergencies (such as winter weather closures), and reduce volumes along residential roads that have previously been used as collector roads. Further, DOT&PF staff indicated the South Route would not be a prudent option given its close proximity to Bogard Road.

### 4.2 Mobility and Use

Mobility and Use evaluate how effectively each route reduces congestion and how likely it is to be utilized. The Traffic and Safety Analysis (Appendix A) looked at forecasted traffic volumes in the design year (2050) and compared each option. When looking at the Engstrom-Bogard intersection, the analysis found that all the proposed routes reduced delay over the No Build option during peak periods. The Southern and Northern Routes reduced overall intersection delay by 12 to 28 seconds, while the Stone Creek to Aspen Ridge option reduced overall intersection delay by 8 to 14 seconds.

The Traffic and Safety Analysis looked at future 2050 traffic volumes that would utilize the new roadway, as well as any change in volumes on Engstrom for each route. The Southern Route is anticipated to have an annual average daily traffic (AADT) of about 700 while reducing the traffic on Engstrom by the same amount. The two Northern Route options will have an AADT of about 1,300 while reducing traffic on Engstrom by 700 vehicles. The Stone Creek to Aspen Ridge route will have an AADT of about 800 while reducing the traffic on Engstrom by about 100 vehicles.

### 4.3 Environmental

A Preliminary Environmental Impact Evaluation (Appendix B) has been performed to identify potential environmental impacts associated with each route. The No Build option is the only option that effectively eliminates/prevents impacts on potential historic resources, wetland impacts, floodplain impacts, and fish habitat and stream crossings.

The Southern Route reduces/minimizes impacts on potential historic resources, wetland impacts, and stream crossings with a single crossing point with Wasilla Creek; however, floodplain impacts are considered high due to the location of the Wasilla Creek crossing and the portion of the route between the stream crossing and Trunk Road that borders the Wasilla Creek Floodplain.

Both Northern Routes have a high degree of impact or potential impact on historic resources, wetlands, and fish habitat and stream crossings. Due to the high number of crossings of Wasilla Creek, Cottonwood Creek, and their tributaries, floodplain impacts are considered fair based on the proximity of the routes to the Wasilla Creek Floodplain.

The Stone Creek to Aspen Ridge Route has a high degree of impact on wetlands due to the total number of wetland crossings; impact on floodplains is low with no mapped floodplain along the route; impacts on fish habitat and stream crossings, or potential impact on historic resources are considered fair based on the lower number of Cottonwood Creek tributaries crossings.

### 4.4 Engineering/Constructability

Engineering and constructability compare overall cost for bridge or structure (such as large diameter culverts), construction, maintenance, and ROW requirements for each route. The Southern Route has the lowest construction and maintenance cost due to its total length; a fair level of ROW costs due to the smaller number of impacted properties; however, the cost for a bridge is the highest of the options due to the greater crossing span distance of Wasilla Creek, wetlands, and floodplain. Both Northern Routes are considered to have fair structure/bridge requirements due to the smaller crossing widths of each crossing; both are considered fair for maintenance and ROW costs due to the longer length and fewer number of total impacted properties. The Stone Creek to Aspen Ridge Route is considered fair for structure/bridge requirements due to the smaller crossing widths of each crossing; construction, maintenance, and ROW costs are considered high due to the longest length and the high number of properties impacted.

### 4.5 Other Considerations

Historically, utility impacts can provide significant cost increases to a project, particularly in the MSB, where utility companies have installed many of their facilities within the road ROW, even when utility ROW exists. The No Build option is the only option that does not impact utilities. The Southern and Northern Routes are considered fair with anticipated impacts located near the intersections at the start and end of the routes. The Stone Creek to Aspen Ridge Route is anticipated to have a greater magnitude of utility impacts due to the greater number of established buildings and homes along the eastern half of the route.

## 4.6 Public Engagement

Community Impacts focus on identifying the route(s) that meet the purpose and need of the project, are consistent with MSB plans and policies, and have overall support from the community.

### 4.6.1 Public Open House

The MSB hosted a public open house meeting on March 26, 2025, introducing the project's purpose and need, summarizing the project's history, and outlining the MSB's initial route considerations for an east-west connection between Engstrom Road and Trunk Road. At the time, the MSB was considering three options, including the No Build, the Southern Route, and the Northern Route. The goal of the meeting was to solicit the public's feedback on the options presented and gather comments regarding additional route options that should be considered.

Attendees at the meeting voiced strong support for the project and for the route they preferred. Supporters of the Southern Route emphasized its lower cost and perceived shorter timeline to construction and associated the recently permitted adjacent gravel excavation pit with additional potential cost savings. They also reminded the project team that the Southern Route was the alignment depicted to voters in the TIP21, and that acquiring ROW for the Northern Route would prove a substantial obstacle to the project.

Supporters of the Northern Route felt that, unlike the Southern Route, it addressed the issues of limited connectivity in the area and provided emergency access. They were aware that some portions required ROW for the Northern Route had already been purchased by the MSB, and communicated that their only significant concern with this route was the possible extended construction timeline.

Additional comments were submitted via the project website both before and after the meeting. Approximately 80% of comments received via the website and during the public meeting supported the selection of the Northern Route as the preferred option.

A full summary of the March 26, 2025, public open house is included in Appendix C.

### 4.6.2 Additional Routes Considered but Dismissed

As a result of the public open house and the feedback received, additional route alignments were identified by the design team. The routes are presented below and were considered but ultimately eliminated from further analysis for the following reasons:

- Engstrom Road to Palmer-Fishhook Road along ¼ Section Line of Section 22, 23, & 24 – did not meet the 0.5-mile minimum intersection spacing
- Farm Meadow Avenue extension from Engstrom Road to Palmer-Fishhook Road – too close to the Tex-Al Drive extension
- Aspen Ridge Road upgrade and extension from Engstrom Road to Palmer-Fishhook Road – excessive impacts on private properties required for existing road upgrades to major collector roadway
- Settlement Avenue upgrade and extension from Engstrom Road to Palmer-Fishhook Road – excessive impacts on private properties required for existing road upgrades to major collector roadway

### 4.6.3 *Public Survey*

An online survey was posted to the project website and distributed via email to all project contacts on July 21, 2025. The results of the survey indicate that 63% of respondents would prefer a connection from Engstrom Road to Trunk Road, rather than to Palmer-Fishhook Road. Additionally, 25% of respondents prioritize "Access and Connectivity" over other project concerns, such as "traffic increase to residential areas (23%), "safety" (18%), "impacts on private property" (18%), "cost" (10%), and "environmental impacts" (7%).

Combined engagement responses to the public involvement campaign for the project indicate the following:

- Interested parties that support the project generally favor the development of a Northern Route over the Southern Route
- Prefer a connection to Trunk Road rather than Palmer-Fishhook Road
- Prioritize selection of a route option that improves access and connectivity

**Table 2: Route Evaluation Matrix**

Criteria	No Build	South	North 1	North 2	SC to AR
<b>Transportation Planning Goals and Objectives</b>					
Does the route meet the purpose and need of the project? (Yes/No)	Red	Yellow	Green	Green	Yellow
Is the route consistent with adopted plans and policies (OSHP & LRTP)? (Yes/No)	Red	Green	Green	Green	Green
<b>Connectivity and Access</b>					
Does the route increase network resilience by providing alternate access?	Red	Yellow	Green	Green	Green
Does the route integrate with surrounding streets?	Red	Green	Green	Green	Green
Does the route meet major collector roadway spacing recommendations?	Red	Yellow	Green	Green	Yellow
<b>Mobility and Safety</b>					
Will the route improve LOS at Engstrom-Bogard?	Red	Green	Green	Green	Yellow
Will the route be utilized by traffic in the area?	Red	Yellow	Green	Green	Red
<b>Environmental</b>					
Will the route minimize or mitigate impacts on historic resources?	Green	Yellow	Red	Red	Red
Degree of wetland impacts	Green	Yellow	Red	Red	Red
Degree of floodplain impacts	Green	Red	Yellow	Yellow	Green
Fish Habitat & stream crossings	Green	Yellow	Red	Red	Yellow
<b>Engineering/Constructability</b>					
What is the Structure/Bridge requirements?	Green	Red	Yellow	Yellow	Yellow
What is the overall route cost?	—	—	—	—	—
<i>Construction</i>	Green	Yellow	Red	Red	Red
<i>Maintenance</i>	Red	Green	Yellow	Yellow	Red
<i>ROW</i>	Green	Yellow	Yellow	Yellow	Red
<b>Other Considerations</b>					
Utilities	Green	Yellow	Yellow	Yellow	Red

Color Rankings: Red=poor; Yellow=fair; Green=good

## 5.0 RECOMMENDATIONS

The purpose of this report is to provide information to support the MSB's decision on selecting a route for further design development and construction that meets the purpose and need of the project with the greatest overall positive impact on the community. Following this criterion, the No Build option does not meet the purpose and need of the project and therefore is not recommended as the preferred option. The remaining four routes do meet the purpose and need of the project and are discussed further below.

### 5.1 Southern Route

The Southern Route meets the purpose and need of the project and meets the overall criteria at a fair level. Notably, there are three poorly met criteria: major collector roadway spacing recommendations, degree of floodplain impacts, and structure/bridge requirements. While the route meets minimum spacing recommendations for a minor collector roadway, it does not meet recommended spacing for a major collector roadway. Further, DOT&PF staff indicated the Southern Route would not be a prudent option given its close proximity to Bogard Road. The Southern Route is anticipated to reduce congestion at the Engstrom-Bogard intersection; however, it is also anticipated to carry the lowest AADT, indicating a lower benefit to the overall road network. Due to the topography and alignment of Wasilla Creek and the Wasilla Creek Floodplain at the east end of the route, impacts are significant, and a bridge is anticipated due to the span of the crossing. As part of the overall collector road network and in keeping with the OSHP and LRTP, this route is recommended for a future project as a minor collector roadway; it is not recommended for the Engstrom Road to Trunk Road Corridor project.

### 5.2 Northern Routes 1 & 2

Both Northern Routes meet the purpose and need of the project and meet the overall criteria at a fair to good level. Notably, there are three poorly met criteria: degree of wetland impacts, fish habitat & stream crossings, and construction cost. Both routes share the same approximately 1,000-foot wetland crossing at the western end of the routes, along with crossings of Wasilla Creek and Cottonwood Creek tributaries. All identified routes, including the Northern Routes, will require a Section 404 Clean Water Act permit from the USACE; the extent of waterbody and wetland impacts will be quantified once a route is selected and the roadway alignment has been further refined. Due to the overall length of the routes, both Northern Routes are estimated at approximately double the construction cost of the Southern Route.

The criteria where both Northern Routes outpace the other options include Connectivity and Access, and Mobility and Use. Of the other options, the Northern Routes best increase network resiliency, integrate with surrounding streets (existing and planned), and meet the recommended spacing for major collector roadways. They also reduce congestion at the Engstrom-Bogard intersection.

Additionally, based on public comments received during the Public Open House (March 26, 2025) and public survey (issued July 23, 2025), there is overwhelming community support for a Northern Route. Common/recurring comments include needing alternate access for emergency services and vehicles to avoid snowdrifts south of Cornelius Lake, reducing traffic at the Engstrom-Bogard intersection, and routing traffic from newer subdivisions in the area to Trunk Road (an arterial-level roadway).

Because both Northern Routes meet the evaluation criteria equally and differ only in their north-south location and terminus with Trunk Road, for the purpose of this recommendation, they are both the preferred option. It is recommended that these two routes be considered for design development and the final route be determined based on supporting fieldwork for Environmental, Cultural Resources, Geotechnical, and H&H recommendations, as well as ROW acquisition.

### **5.3 Stone Creek to Aspen Ridge Route**

The Stone Creek to Aspen Ridge Route was identified through public comment during Public Open House #1 (March 26, 2025). While it does meet the purpose and need of the project, it ranks worst of the four routes at meeting evaluation criteria. Most notably, it has the least benefit to the Engstrom-Bogard intersection, and has the highest anticipated construction, maintenance, and ROW costs, the greatest anticipated utility impacts, a high degree of wetland impacts, and does not meet the recommended spacing for major collector roads. For these reasons, it is not recommended for the Engstrom Road to Trunk Road Corridor project. However, it should be considered as a future minor collector roadway project as the area south of Tex-Al Drive continues to develop.

### **5.4 Conclusion**

Based on this analysis, it is recommended that either Northern Route 1 or 2 be further developed in design to connect Engstrom Road to Trunk Road as identified in the OSHP and LRTP.

**APPENDIX A**  
**Traffic and Safety Analysis**

**APPENDIX B**  
**Preliminary Environmental Overview**

**APPENDIX C**  
**Public Open House Summary**