MATANUSKA-SUSITNA BOROUGH
Transportation Advisory Board (TAB)
MINUTES

Edna DeVries, Mayor

Jesse Peterson - Chair
Terry Gorlick – Vice Chair
Randy Durham
Kristina Whitman
Tim Alley
Pierce Schwalb

Julie Spackman – Staff Support

Michael Brown, Borough Manager

PLANNING & LAND USE DEPARTMENT
Alex Strawn, Planning & Land Use Director
Jason Ortiz, Planning & Land Use Deputy Director
Wade Long, Development Services Manager
Fred Wagner, Platting Officer

Location:
MSB DSJ BLDG.
Room 203
350 E. Dahlia Ave. Palmer, AK

April 10, 2026
REGULAR MEETING
10:00 a.m.

I. CALL TO ORDER 10:03 a.m.

II. ROLL CALL – DETERMINATION OF QUORUM – Quorum established
Present In Person: Jesse Peterson, Terry Gorlick, Tim Alley.
Present online: Pierce Schwalb
Absent: Randy Durham, Kristina Whitman

Guests: Rod Hanson, North Lakes Community Council; Jennifer Busch, Valley Transit.

III. PLEDGE OF ALLEGIANCE

IV. APPROVAL OF AGENDA

Motion to approve: Gorlick. Second: Alley. None opposed. Motion passed unanimously.

V. APPROVAL OF MINUTES

A. February 13, 2026.

Motion to approve: Gorlick. Second: Alley. None opposed. Motion passed unanimously.

VI. AUDIENCE PARTICIPATION (*three minutes per person for items not scheduled for public hearing*)

Rod Hanson, North Lakes Community Council: request for Transportation Advisory Board (TAB) to reconsider support for the Northern route selection for the Engstrom/Trunk Connector.

The Board agreed to conduct a Special Meeting on May 29, 2026 at 10:00 a.m. to receive a presentation from the North Lakes Community Council and hear from

other community members about the Engstrom/Trunk route selection. In addition, the Board requested MSB Dept. of Public Works staff to attend.

VII. STAFF/AGENCY REPORTS & PRESENTATIONS

A. MSB Nominations Update for the Metropolitan Transportation Plan – Julie Spackman, MSB Long Range Planner. The MSB submitted 61 nominations for consideration. Additional information is available at the MatSu Valley Planning for Transportation website: mvpmpo.org

B. TAB meeting schedule and MSB legislation – Alex Strawn, Director, MSB Planning & Land Use Dept. This Board meets quarterly. Staff will monitor legislation that's transportation related and communicate with the Chairperson about whether or not to schedule special meetings. If desired, special meetings can be scheduled to provide timely input to legislation for the Assembly.

C. Transit funding determination from ADOT&PF – Alex Strawn & Jason Ortiz. The Commissioner of the AK. Dept. of Transportation & Public Facilities determined the percentage of federal 5307 funding to be divided between the MSB and the Ak. Railroad: the MSB will get 90% and the railroad will get 10%.

VIII. UNFINISHED BUSINESS

None.

IX. NEW BUSINESS

A. Transit Continuity – Jason Ortiz, Deputy Director, MSB Planning & Land Use Dept. The MSB Manager's budget proposes to maintain the current level of funding for public transit in the MSB at $750,000/year. Resolution supporting the continuity of transit services provided for Board to consider.

i. Motion to adopt TAB Resolution 26-02: Gorlick. Second: Schwalb. None opposed. Motion passed unanimously.

B. MSB 11.08 Closures – Jesse Peterson, Chairperson, introduced a resolution regarding the recent changes in weight restrictions.

i. Motion to adopt TAB Resolution 26-03: Alley. Second: Gorlick. Discussion.

1. Motion to amend TAB Resolution 26-03: Gorlick. Seconded: Alley. No one opposed. Motion to amend passed unanimously.
2. Motion to amend TAB Resolution 26-03 as amended: Schwalb. Seconded: Gorlick. No one opposed. Motion to amend passes unanimously.
3. Motion to amend Resolution 26-03: Alley. Seconded: Gorlick. No one opposed. Motion to amend passed unanimously.
4. Question called: Gorlick. No one opposed to main motion to adopt TAB Resolution 26-03 as amended. Main motion passed unanimously.

X. MEMBER COMMENTS: None.

XI. NEXT MEETING DATES:

A. Friday, May 29, 2026. 10:00 a.m. Location to be announced.
B. Friday, July 24, 2026. 10:00 a.m.

XII. ADJOURNMENT – 12:04 p.m.

MINUTES APPROVED: _____
Date

_____
Jesse Peterson, Chair

ATTEST:

_____
Julie Spackman, Clerk

20260529 Rod Hanson Comments - Engstrom to Trunk Project - TAB

Good morning! For the record, I'm Rod Hanson, representing the North Lakes Community Council.

Thanks for your willingness to hear and consider public input today on this very important Engstrom to Trunk Connector Road project.

The single most important and frustrating issue in our Community Council area is the three mile stretch of Bogard between Trunk Road and Seldon Road. For years, the area has grown and this section of Bogard has been neglected. We are fed up with the traffic delays and the number of accidents and near misses that have become too common along that stretch. The stretch of Bogard between Trunk and Engstrom is the worst. It's like running a gauntlet when travelling through the area. Recently, there was actually a fatality in that stretch of road and accidents at the Engstrom intersection are becoming a common occurrence. Public Safety should be the single highest priority for investment and is certainly the expectation of Borough taxpayers.

In 2021, voters approved a bond package to construct the Southern Route connection between Trunk and Engstrom. We did so in the context of Bogard Road traffic concerns. The project then morphed into one more focused on overall access to the Fishhook Triangle and became less about being part of a safety solution.

In 2024, Central Gravel Products applied for a Conditional Use Permit for their new location on the northwest corner of Engstrom and Bogard. The Community Council immediately recognized the impending risks of gravel trucks entering the most dangerous section of Bogard Road. Instead of fighting against the gravel pit, we decided on a much more collaborative approach and pointed out the benefits of the Southern Route project in addressing Bogard safety. We unsuccessfully advocated for construction of the Southern Route at that time. We were very disappointed when the Planning Commission did not even include a "condition of approval" requiring Central Gravel to switch over to that new road if and when it was constructed.

In that same timeframe, the council was heavily engaged in the Borough's planning efforts for the Bogard - Seldon Corridor Access Management Plan or CAMP. We strongly agreed with the principles adopted in that plan. One of the key principles approved in the CAMP included limiting new commercial and private direct access onto Bogard. The CUP for Central Gravel was approved in direct conflict with that key principle!

That's the big picture context. It is why we **strongly support the Southern Route as the common sense alternative for this important project!**

You asked me on April 10th to provide you with the background and history of our public input on this project. On April 14th, I sent you copies of documentation dating back to July of 2023. We trust you've skimmed through those documents and recognize Input from the community and then to the Borough has been extensive … and consistent.

The 3-page document from the NLCC in your packets today simply provides a framework for today's discussion and clearly spells out our request. Please refer to it during my comments.

Let's start in the middle of page 1 … our request:

- We are asking that you retract TAB Resolution 26-01. It appears to us that the resolution was likely pre-drafted for you as an Advisory Board. While there may have been some adjustments made to the draft resolution before it was approved, we do not believe it reflects a thoughtful and considered view of your board members. How could it without fully understanding the public input?
- We are asking you to switch your support from the Northern Route to the Southern Route and prepare a new resolution as described in the first bullet.
- *If you disagree and still want to support a Northern Route, we ask you to modify your resolution based on today's discussion.*

Moving on to page 2 of today's document …

We've boiled our concerns with a Northern Route selection into six major categories:

1. Public Safety: Having a driveway for Central Gravel Products on Bogard Road isn't working. It's not working now … and it will still be an unsafe situation after the DOT completes the Roundabout at Engstrom and Bogard. The administrative controls put in place by the State are ineffective. Likewise the administrative controls put in place by the Borough for the "in-only" driveway off of Engstrom are also ineffective. We are actively working with the State and the Gravel Pit operator to establish stronger engineering controls. We have heard many concerns from area residents and I have personally witnessed, taken video, and documented dangerous situations involving trucks on both Bogard and Engstrom. Can you imagine a daily summer flow of gravel trucks (including side

dumps) flowing through the Engstrom / Bogard roundabout? Assuming that the new roundabout is going to actually make it safe is a bad assumption.

2. Traffic Analysis: I believe you were all recently provided a copy of the Traffic Analysis. As a technical board yourselves, I highly encourage you to review that analysis and its conclusions and recommendations. The analysis is referenced in the Route Selection Report and characterized as being supportive of a Northern Route. In fact, the report shows the Southern Route being more favorable in several categories. At best, it shows a weak case for a Northern Route.

3. ROW Acquisition: This issue is brushed aside in the Draft Route Selection Report. The facts on the ground, which the Borough is fully aware of, are:
    a. A Northern Route decision will run into a buzz saw of opposition, costing Borough taxpayers a lot of time and money. The Borough will end up in court as property owners fight for their rights.
    b. The operator of Central Gravel Products now owns the southern tract of property where he is operating. He has offered to locate the Southern Route ROW entirely on his side of his northern property line, thereby eliminating the need for any ROW negotiations with the property owner to the north. The Kircher family owns the other affected parcels and they have also indicated a willingness to provide ROW.

4. Financial Stewardship: The quality of the cost estimates in the DRAFT Route Selection Report are understandably vague at this stage of planning. They are partly based on costs-per-mile assumptions. Even so, the Northern Route is shown at twice the cost of the Southern Route. However, there are again well known "facts on the ground" that are not being reflected or considered when comparing costs between the routes. The cost differences between the Southern and Northern Routes will grow substantially as engineering proceeds.
    a. The owner of Central Gravel Products has also gone on record, in writing, with the Borough indicating his willingness to significantly assist in construction of the road bed from Engstrom to Trunk. This is not even referenced in the Public Works recommendations.
    b. The complexities of the Northern Route (multiple anadromous stream crossings, and areas with significantly deep organic soils) are

acknowledged in the text of the DRAFT report, but the cost estimates do not appear to take these complexities into consideration.

c. Nothing has been factored into the cost estimates to account for the strong opposition to ROW acquisition on the Northern Route.
d. Public Works needs to more directly address these issues. The Assembly cares deeply about the overall cost impact of transportation infrastructure to their constituents. Ignoring these factors won't fly with the current Assembly.

5. Timing: It goes without saying. All of the things we've talked about will drive the schedule for a Northern Route way out into the future as compared to the Southern Route. Those who actually use this transportation infrastructure are fed up with how long it takes to address problems. Even if you believe a Northern Route Selection provides a more technically advantageous traffic solution, this is a case where "Perfection is the enemy of the greater good". We need solutions now! Timing also affects costs. The longer it takes to get to construction, the more it will cost the taxpayers.

6. Impacts on the Environment - Please listen carefully to feedback from others who point out the potential negative impacts of a Northern Route on the environment, including seven anadromous stream crossings. By contrast, the environmental impacts of development along the Southern Route, with one major crossing at Wasilla Creek are much less impactful.

There are other "red herring" issues you should be aware of ...

- Snow Drifting: The Borough points to snow drifting concerns on South Engstrom. Those have largely been addressed already in cooperation with the gravel pit operator and construction of a berm as we suggested. There are now also good community ideas on how to effectively address the drifting southwest of Cornelius lake.

- Public Works has suggested that the Southern Route is being pushed for the benefit of Central Gravel Products. This is not the case. The least impact for his operation is to continue with access onto Bogard Road. It will cost his operation money to switch over to a new Southern Route connector for primary access. He will have to move his office, move his scales, and construct new internal roads. A Southern route connector would also split up his gravel mining lease. He has property leased from the Havemeisters north of a future road. Such a road adds complexity to his operation. He is willing to do so ... he is not asking to do so for his benefit.

Bottom line, we believe the Draft Route Selection Report is unfairly biased toward a Northern Route Selection. Put yourselves out 20 years from now. Bogard Road will be improved (eventually), but traffic will continue to grow with development. The gravel operation will still be going under their 30-year lease. A Southern Route will be necessary, even if a Northern Route were in place now. The more responsible and balanced decision would be an aggressive commitment to build the Southern Route as soon as possible. If the future shows a need for a Northern Route, then take on that challenge later.

I'm happy to take any questions today ... or if you decide on another work session, I would be happy to participate again at that time.

Thank you.

My name is Simon Gilliland and I am going to move quickly because I have a lot more than 3 minutes of technical data and analysis to convey. I am here in support of the route in the TIP 21 package which the voters approved which is the southern route listed in the report. It not only follows parcel lines which will be least obtrusive to private property but is also half the length and less challenging topography and faster construction timeline than any other construction options considered which is benefit to the public and the taxpayer. This is the fiscally prudent and voter approved project which should be constructed and supported by this board.

Examining the HLD reports we need to discuss the Traffic Analysis Report which you were not provided in the published packet for the meeting, but the clerk provided for you today. On page 23 is Table 5. The origination traffic volumes for an analysis must be the same throughout the table or it skews the results and implies data that may and likely is not accurate. In the case of Table 5 the origination traffic ADT is 585 vehicles higher under the Northern routes than the no build option and 675 higher than the southern route. This leads to the table showing the traffic on the northern routes would be nearly double the southern route but where did this additional originating traffic appeared from that only the northern route will ever carry is a mystery. This question requires further questions and analysis by the board. It appears that maybe this added traffic volume would come from land that could only be developed if the road was constructed which significantly skews the results and artificially prejudices the traffic as higher on this northern alignment when drivers traveling down Engstrom would never actually change routes. I point specifically to the ADT totals of Engstrom and the proposed northern connector both individually being higher than Engstrom and the southern route.

If you look at Table 6 further down the same page, it shows there is minimal to no difference in the queue lengths at the future location of the Bogard-Enstrom Roundabout between the northern and southern alignments. The likely reason the northern routes have a slightly longer queue on the southbound column of the tables is because as seen in Table 5 there is a higher anticipated traffic level on Engstrom with a northern route alignment.

The error stemming from the originating traffic flow totals not being consistent across the different analyzed routes truly effected the recommended outcome if you are basing a report on objective analysis from reviewed traffic flow data calculations and not entering with a predisposition to a certain desired outcome.

Not mentioned in the scoping report is that there are two locations where existing easements and ROW connect roads over to Palmer-Fishhook from the densely populated area to the east of Wolf Lake at the northern end of Engstrom. In relation to where the Stone Creek to Aspen Ridge Rd alignment intersects Fishhook in HDL's report these are a

1/4 mile north at Farm Meadows Ave, a voter approved TIP 18 project, and 1/4 mile south via a 66 ft section line easement over to Cunningham Rd which connects to Fishhook. Why are these existing ROW and easements which were reserved for precisely the purpose of providing access and connectivity to the area ignored in favor of the Stone Creek to Aspen Ridge which does not have existing easements? Instead of using these existing routes available to the borough why are we pushing a road through private property?

This Stone Creek to Aspen Ridge route in the report also assumes it would have to take off from the same location as the northern routes but this is not the closest constructed road location in the network that could be connected to or where a large segment of the traffic originates which is Aspen Ridge Road corridor itself. Therefore, the same project start point as the northern alignments is not the most cost-effective place to route traffic from the densely populated area east of Wolf Lake. This added distance and related costs a road utilizing the route shown for Stone Creek to Aspen Ridge in the report further detracts from the actual advantages of any northern route potentially considered. If the easternly end of Aspen Ridge Road was connected to Fishhook it would be 1.2 miles of new or improved dirt road along Farm Meadows, and 1.1 miles of new road and possibly a 1/2 mile of upgrades to the paved Cunningham alignment. These existing easements and previously voter bond approved routes are not even mentioned in the HDL report.

I might add that the report looks at a no build option but never an Engstrom upgrade option to increase road capacity. Not even a sentence indicating it was considered beyond the introduction paragraph than mentions that improvement might include existing road upgrades.

As a final note the northern route location the borough is pushing is routed through the middle of portions of a 175 acre fenced pasture and is twice as long as the southern route and will likely result in required eminent domain takings which will further slow the process of completing a route that will already be significantly more challenging to design and construct thus lengthening the timeline for completion. The borough's refusal to consider following the parcel boundaries on either of these two northern routes but instead insisting that the road must cut through the parcels and pastures; likely bisecting the large 175 acre fenced pasture into four separate usable areas is disgusting. The fact they proposed a second northern route that cuts through the middle of three other 20 acre parcels with its meandering radiuses and did not follow these parcel lines either proves flagrant disregard for private property and the detrimental effect these random road locations have on private property values and private owners ability to use their property as they desire and have for the past 48 to 100+ years it has been in their respective families.

The section line easement location over the Cunningham meets the desired mile spacing from Tex-Al for a major collector if it was punched all the way out to Fishhook, which was a reason listed for the Stone Creek to Aspen Ridge route not being desirable per the report. There are easements east of Cunningham continuing toward Palmer-Fishhook, but a full 66 ft section line easement no longer exists due to platting easement vacations.

For ADT and traffic origination location reference, just the northern half of this square mile densely populated region at the north end of Engstrom east of Wolf Lake using the lot count method the platting process uses for road classifications would generate an ADT of likely 1,000. If it is assumed that 50% of the 100 lots in these 320 acres that Aspen Ridge Rd passes through have an end destination of Palmer, or Trunk Rd/Anchorage and the remaining half have a Wasilla destination that is 500 ADT heading east towards Palmer-Fishhook. When we start looking outward from this Aspen Ridge Road corridor these numbers would likely increase the use of this road for egress to the east out to Palmer-Fishhook Road.

ENGSTROM ROAD TO TRUNK ROAD CORRIDOR
TRAFFIC ANALYSIS

DRAFT

Prepared for:

Matanuska-Susitna Borough
350 East Dahlia Avenue
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Prepared by:

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Reviewed by:
Shawn Hull, P.E.
Project Manager

October 2025

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FIGURES

TABLES

APPENDICES

LIST OF ABBREVIATIONS

AADT ..... Average Annual Daily Traffic
AMATS ..... Anchorage Metropolitan Area Traffic Solutions
DOT&PF ..... Department of Transportation and Public Facilities
HDL ..... HDL Engineering Consultants, LLC
HSIP ..... Highway Safety Improvement Plan
LOS ..... Level of Service
LRTP ..... Long Range Transportation Plan
MSB ..... Matanuska-Susitna Borough
OSHP ..... Official Streets and Highways Plan
ROW ..... Right-of-Way
TAZ ..... Transportation Analysis Zones
TIP21 ..... Transportation Infrastructure Program (2021)

1.0 INTRODUCTION

The Matanuska-Susitna Borough (MSB) proposes construction of a new road connecting Engstrom Road and Trunk Road to provide an alternate travel route between these existing roadways. This development will improve connectivity and reduce congestion to meet the needs of current and future traffic volumes, which are constricted by the Fishhook and North Lakes areas' limited collector-level road network. Improvements may include right-of-way (ROW) acquisition, existing road upgrades and new road construction, intersection improvements, creek crossing(s), utility relocations, pedestrian facilities, drainage improvements, and signage and striping.

HDL Engineering Consultants, LLC (HDL) is under contract with MSB to complete a traffic analysis to determine future traffic conditions in the area for each selected connector route between Engstrom Road and Trunk Road.

2.0 PROJECT HISTORY AND BACKGROUND

2.1 Population Location

The project is located in Sections 22, 23, 26, and 27, Township 18 South, Range 1 East, of the Seward Meridian; Latitude 61°37'37.5", Longitude 149°14'15.1". The analysis area is generally bounded to the west by Engstrom Road, to the south by Bogard Road, to the east by Trunk Road and Palmer-Fishhook Road, and to the north by Tex-Al Road (Figure 1).

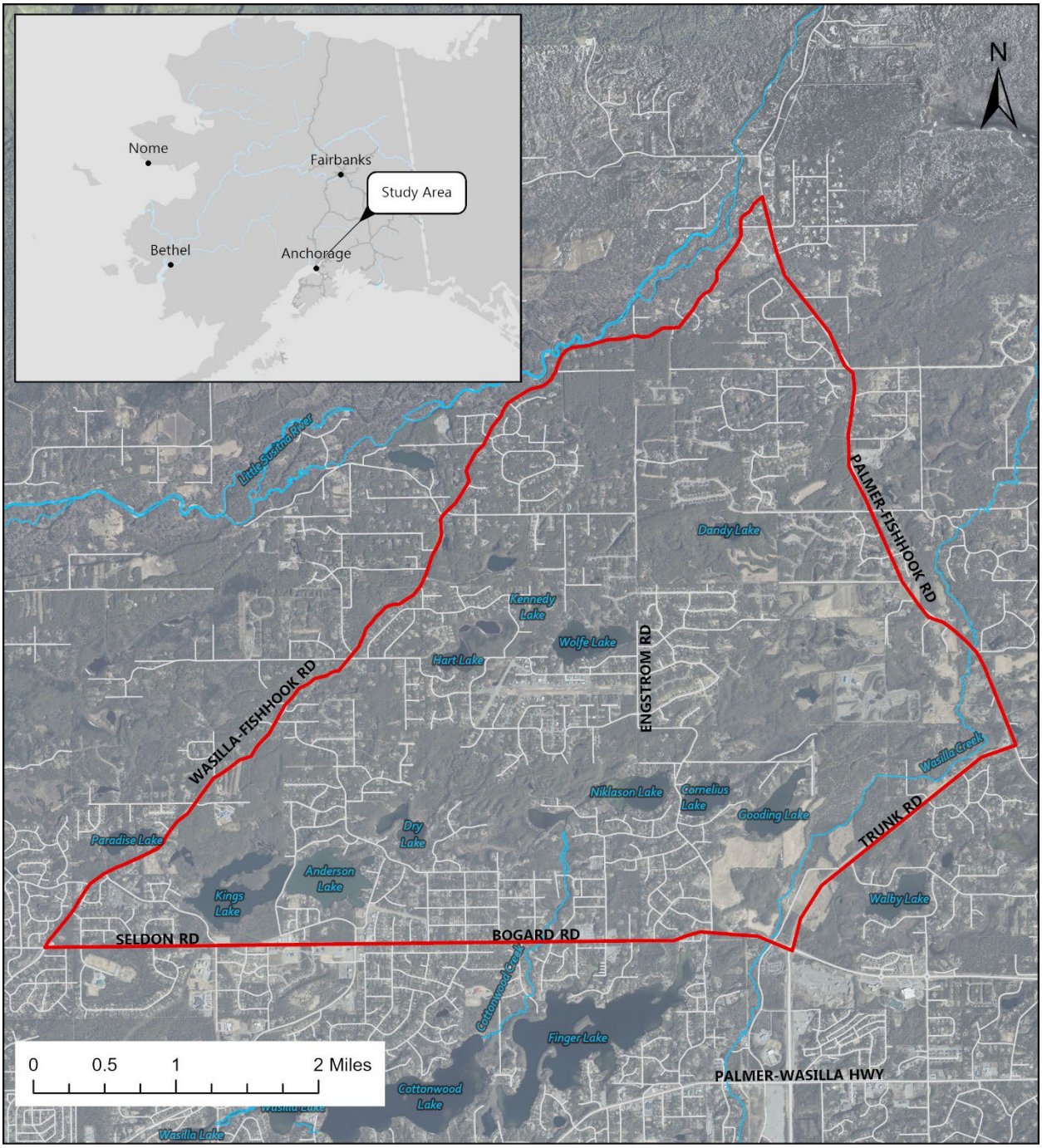

Figure 1: Project Area

2.2 Existing Facilities and Land Use

There is no current direct connection between Engstrom Road and Trunk Road. Traffic traveling to and from Trunk Road and Engstrom Road must use Bogard Road and enter using the only collector intersection serving the project area. This has resulted in a high concentration of traffic at the Engstrom Road and Bogard Road intersection, particularly left-turning traffic from Engstrom Road onto Bogard Road. The intersection has limited sight distance, which, coupled with high traffic volumes, has contributed to congestion and a crash rate higher than the statewide average for similar intersections.

Engstrom Road is classified by the MSB 2022 Official Streets and Highway Plan (OSHP) as a major collector. The paved surface is 24 feet wide and accommodates two-way traffic (one travel lane in each direction), and the existing speed limit is 35 mph. Trunk Road is classified by the MSB OSHP as a major arterial and consists of one 12-foot lane and an 8-foot shoulder in each direction, with a 12-foot separated pathway along the northwest side.

Adjacent land use largely consists of single-family and multi-family developments intermixed with some agricultural and industrial facilities. Additionally, large areas within the project area, including areas along the proposed connection routes, remain undeveloped.

2.3 Transportation Planning

Considerable steady population growth throughout the MSB has occurred over the last several decades, which has increased demand on the poorly connected network of local roads. The MSB's 2035 Long Range Transportation Plan (LRTP) specifically identified congestion issues along Engstrom Road, and a need to reduce congestion and provide an alternate access to Trunk Road or Palmer-Fishhook Road. The project has been developed in accordance with the 2035 LRTP and 2022 OSHP, and was approved by voters as part of the 2021 Transportation Infrastructure Program (TIP21).

3.0 PROJECT DEVELOPMENT

In 2022, the MSB solicited proposals to design a connector from Engstrom Road to Trunk Road that was generally in line with the existing North Old Homestead Road; this was referred to as the "Southern Route" alternative. Subsequently, HDL performed an evaluation for the MSB of an alternate route beginning approximately 1 mile to the north on Engstrom Road, referred to as the "Northern Route".

The Southern and Northern Routes were presented to the public in an open-house meeting on March 26th, 2025. Based on public input from the meeting, the MSB and HDL expanded the project to include evaluation of additional routes, designated as "Northern Routes 1 and 2" and the "Stone Creek to Aspen Ridge Route". The four routes were selected for further evaluation and traffic analysis based on criteria including minimum intersection spacing, MSB planned and future planned projects, and ongoing and future residential development (Figure 2).

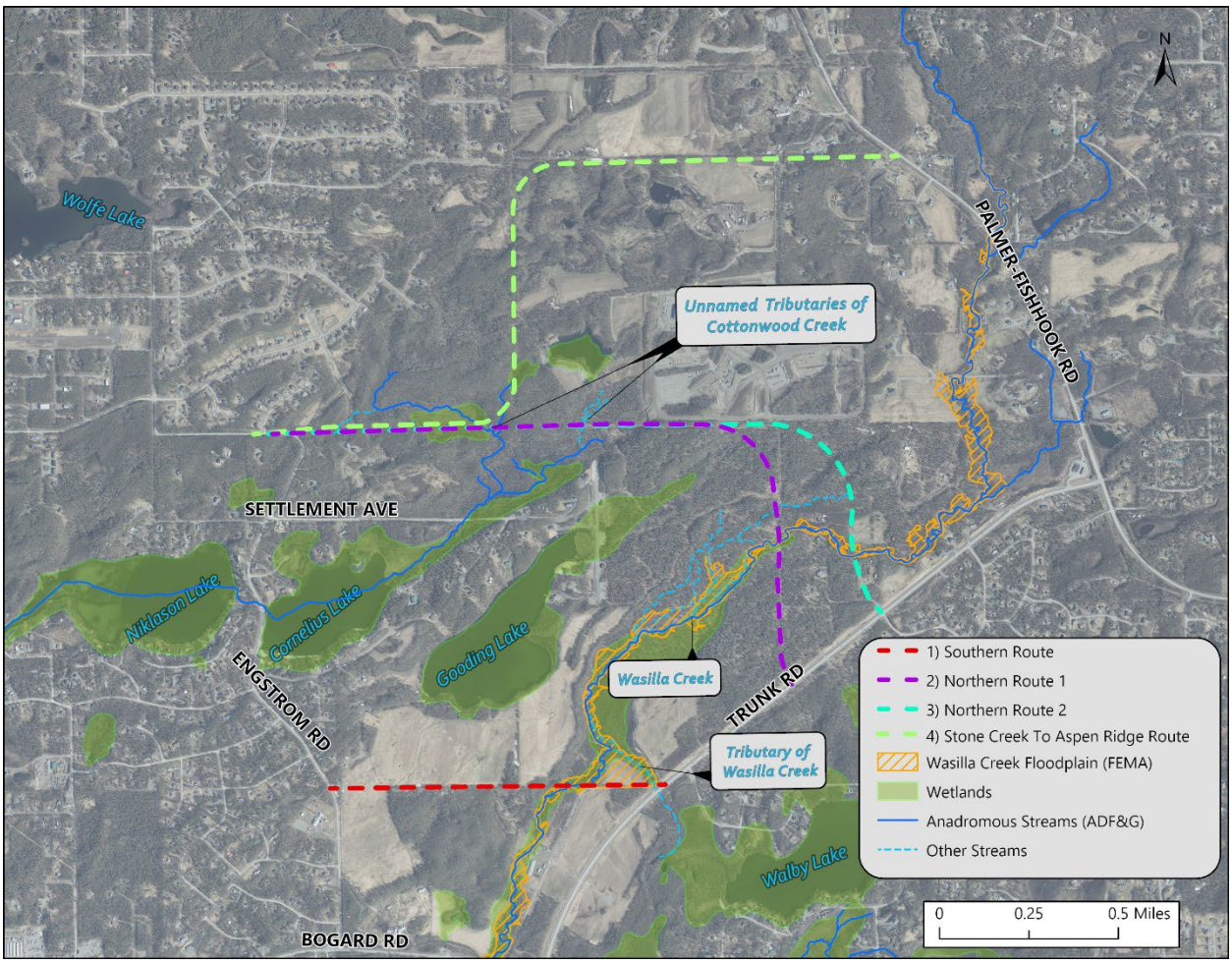

Figure 2: Selected Routes and Future Development

The selected routes are described in the sections below.

3.1 Southern Route

The proposed Southern Route begins approximately 0.4 miles north of the Bogard Road/Engstrom Road intersection and extends east, merging into North Old Homestead Road. This route was presented to voters as part of TIP21. The Southern Route is approximately 0.9 miles long and would require construction of a new approach/intersection with Engstrom Road and make use of the existing approach of North Old Homestead Road to Trunk Road. A new gravel extraction site has been permitted in this area, and gravel operations would likely make use of this route.

3.2 Northern Route 1

Northern Route 1 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. The proposed intersection location with Trunk Road aligns with a proposed future collector road north of Walby Lake, as identified in the OSHP.

3.3 Northern Route 2

Northern Route 2 to Trunk Road follows the same alignment as the Northern Route 1, but continues approximately 800 feet further east before turning south to make use of the existing intersection of North Heaton Road with Trunk Road.

3.4 Stone Creek to Aspen Ridge Route

The Stone Creek to Aspen Ridge Route follows the same alignment eastward as the two Northern Routes for approximately 0.5 miles and then turns north towards Aspen Ridge Road. It then extends along Aspen Ridge Road eastward before intersecting with Palmer-Fishhook Road at Snicker Avenue.

4.0 DESIGN CRITERIA AND TYPICAL SECTION

A future potential connector roadway between Engstrom Road and Trunk Road is depicted in the MSB's LRTP as a major collector. The design speed and posted speed limit have yet to be determined. For the purpose of this analysis, 40 mph has been selected as the design speed.

The typical section for each proposed route consists of two 12-foot lanes, 6-foot shoulders, 10-foot wide 4H:1V foreslopes, and 3H:1V backslopes (Figure 3). Pedestrian facilities will be considered in accordance with the MSB's 2023 Bike and Pedestrian Plan and may include a 10-foot separated path.

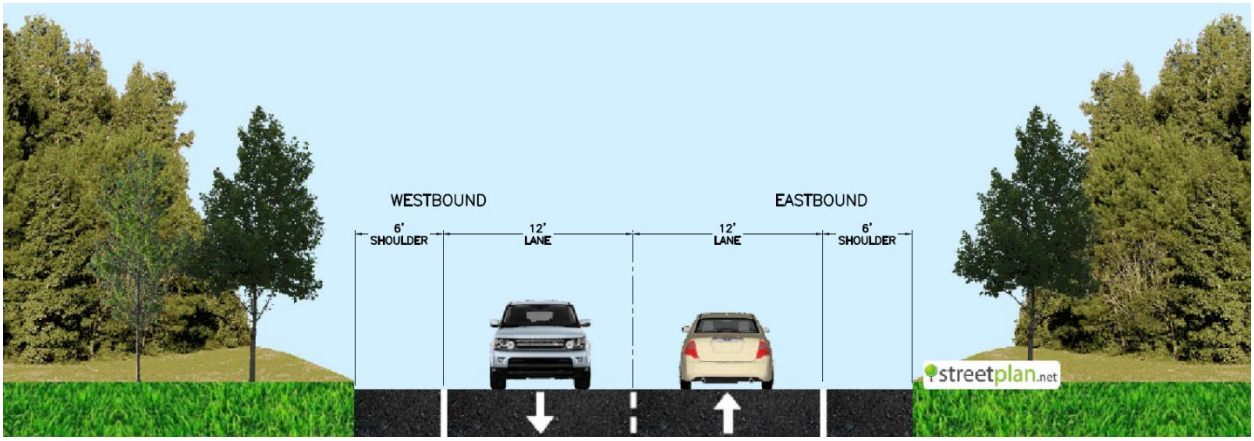

Figure 3: Major Collector Typical Section

Additional sections may be considered as the design progresses. These sections may include retaining walls, guardrail, slope variations, and shoulder width variations at applicable locations, such as creek crossings and areas requiring significant cut or fill.

5.0 CRASH HISTORY

Collision data for the project area was obtained from the MSB's online traffic data resource and is summarized in Table 1.

Table 1: Intersection Crash History (2018-2022)

LOCATION	SEVERITY					TOTAL CRASHES
	No Apparent Injury	Possible Injury	Suspected Minor Injury	Suspected Serious Injury	Fatal Injury	
Engstrom Rd/Bogard Rd/ Green Forest Dr Intersections	11	8	2	0	0	21
Trunk Rd/Bogard Rd Roundabout	40	5	2	0	0	47
Engstrom Rd (Bogard Rd to Aspen Ridge Rd)	13	4	1	1	0	19
Bogard Rd (Engstrom Rd to Trunk Rd)	10	2	2	0	1	15
Trunk Rd (Bogard Rd to Palmer-Fishhook Rd)	4	1	1	1	0	11

The majority of the collisions in the five-year study period occurred at the Trunk Road/Bogard Road roundabout, but did not result in serious injuries or fatalities. The number of crashes resulting in injury or possible injury was slightly higher for the Engstrom Road/Bogard Road/Green Forest Drive intersection than for surrounding roadways; the Department of Transportation and Public Facilities' (DOT&PF) Highway Safety Improvement Program (HSIP) roundabout project at this intersection is intended to address these crashes. One fatality occurred within the project area during the study period, on Bogard Road between Engstrom Road and Trunk Road.

6.0 EXISTING TRAFFIC CONDITIONS

Existing daily traffic counts and peak hour volumes were determined using volumes recorded by HDL in 2024, and data collected by DOT&PF traffic recorder sites within or adjacent to the project area.

6.1 2024 Traffic Counts

HDL performed a 24-hour traffic count within the project area on Thursday, October 3, 2024, using a MioVision Traffic Recorder camera. School was in session, and the roadways were clear of snow during this period. The counts were performed at the roundabout at the intersection of Trunk Road and Bogard Road. Existing traffic for other intersections within the project area was determined using data from the nearby DOT&PF traffic recorder sites.

6.2 Existing Traffic Volumes, Level of Services, and Delays

Engstrom Road serves as the primary access route for the existing subdivisions between Tex-Al Drive and Bogard Road. Existing traffic volumes often result in substantial queues and delay times at the Engstrom Road and Bogard Road intersection (Figure 4).

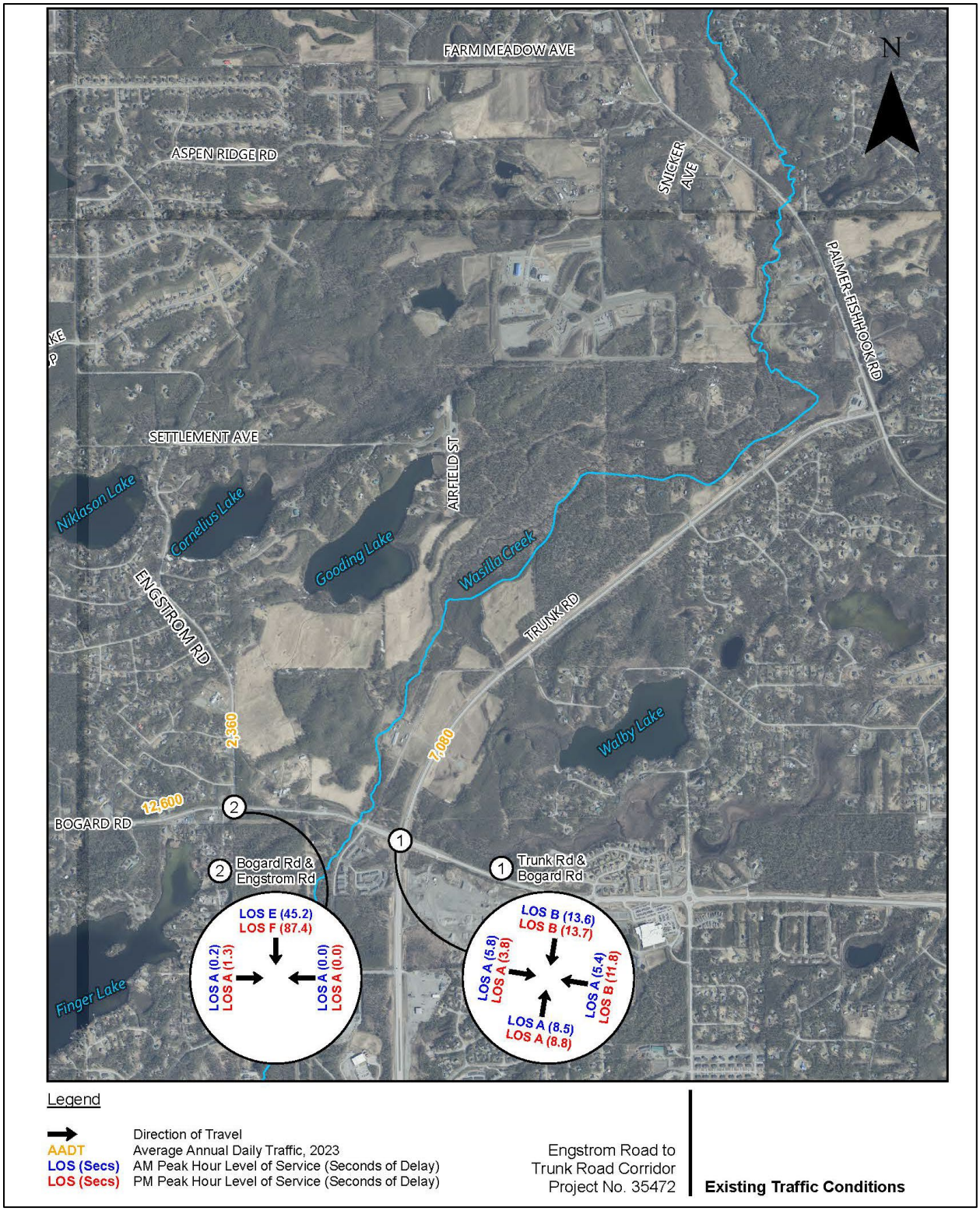

Figure 4: Existing Traffic Conditions

7.0 TRAFFIC FORECASTS

Future traffic conditions were forecasted for the Design Year (2050) based on outputs from the DOT&PF's Draft Intraregional Traffic Corridor Study Model. The model was originally produced for Anchorage Metropolitan Area Transportation Solutions (AMATS) in 2016 and was updated in 2019. The updates to the AMATS base model included current socioeconomic data and increased density of the transportation analysis zones (TAZ) and road network features within the MSB. More information is available in the *Draft Mat-Su Intra-Regional Corridor Study: Travel Demand Model 2019 Update Technical Memorandum* (Kinney Engineering, LLC, April 2022). The model assumes the future construction of other adjacent projects identified in the MSB's planning documents, including the Engstrom Road North Extension and the Tex-Al Drive Extension, as well as the DOT&PF's planned roundabout at the Engstrom Road and Bogard Road intersection.

Calculated growth rates for various roadway segments within the roadway corridor are presented in Table 2.

Table 2: Calculated Annual Growth Rates

LOCATION	ANNUAL GROWTH RATE
Bogard Road, Sebastion to Engstrom	2.26%
Bogard Road, Trunk to 49th State	2.78%
Trunk Road, Katherine to Bogard	1.86%
Trunk Road, Bogard to Palmer-Fishhook	0.97%
Engstrom, Bogard to Hart Lake	3.35%
Palmer-Fishhook, Alpine to Trunk	-0.09%
Palmer-Fishhook, Trunk to Farm Loop	1.12%

The future construction of the Engstrom Road, Bogard Road, and Green Forest Drive roundabout by the DOT&PF will significantly affect traffic delays in the project area. The future traffic conditions presented in this report address these anticipated changes.

7.1 Traffic Volume Forecasts

Traffic volumes were calculated for Engstrom Road, Bogard Road, and Trunk Road for the Design Year (2050) under the No Build condition (Figure 5). Levels of Service (LOS) and delay times were calculated for the Engstrom Road/Bogard Road and Bogard Road/Trunk Road intersections for the existing and future design years.

The alignment and intersection locations of each proposed route impact future traffic volumes, LOS, and delay times on the adjacent connecting roadways. To reflect this, for each of the proposed routes, Design Year (2050) volumes were forecasted for Engstrom Road, Bogard Road, and Trunk Road, in addition to the selected route. Design Year (2050) intersection LOS and delays were analyzed for the Engstrom Road/Bogard Road, Bogard Road/Trunk Road, and Trunk Road/Palmer-Fishhook Road intersections for each proposed route, in addition to the LOS and delays for the connecting intersections for each route. Stop-control was assumed for all future potential intersections.

Future traffic conditions for the No Build condition are presented in Figure 5; future conditions for the four proposed routes are presented in Figures 6, 7, 8, and 9. Intersection delay times and LOS are presented in Table 3.

Table 3: Intersection Level of Service and (Delay in Seconds)

INT.		2023 EXISTING (STOP CONTROLLED AT ENG/BOG)				2050 NO BUILD				2050 SOUTHERN ROUTE				2050 NORTHERN ROUTE 1				2050 NORTHERN ROUTE 2				2050 STONE CREEK TO ASPEN RIDGE ROUTE			
DIRECTION		EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
ENGSTROM/ BOGARD ROUNDABOUT	AM	A (0.2)	A (0.0)	-	E (45.2)	F (299.9)	C (21.8)	C (23.5)	F (178.9)	F (253.1)	D (26.1)	C (21.6)	F (117.8)	F (258.7)	D (26.0)	C (21.8)	F (124.7)	F (258.7)	D (26.0	C (21.8)	F (124.7)	F (275.7)	D (25.8)	C (22.5)	F (146.7)
	PM	A (1.3)	A (0.0)	-	F (87.4)	F (115.2)	F (142.2)	C (18.4)	F (236.4)	F (91.0)	F (148.1)	C (17.1)	F (166.0)	F (93.8)	F (147.3)	C (17.3)	F (174.0)	F (93.8)	F (147.3)	C (17.3)	F (174.0)	F (102.3)	F (145.2)	C (17.7)	F (198.9)
TRUNK/ BOGARD ROUNDABOUT	AM	A (5.8)	A (5.4)	A (8.5)	B (13.6)	E (35.4)	A (7.3)	E (45.7)	F (230.8)	E (39.5)	A (7.3)	E (47.8)	F (257.2)	E (39.0)	A (7.3)	E (47.5)	F (254.2)	E (39.0)	A (7.3)	E (47.5)	F (254.2)	E (37.8)	A (7.3)	E (47.2)	F (245.0)
	PM	A (3.8)	B (11.8)	A (8.8)	B (13.7)	A (7.0)	F (56.5)	E (47.6)	F (217.6)	A (7.3)	F (55.3)	F (57.2)	F (219.5)	A (7.3)	F (55.0)	F (55.2)	F (220.4)	A (7.3)	F (55.0)	F (55.2)	F (220.4)	A (7.2)	F (56.0)	F (51.8)	F (220.0)
TRUNK/ PALMER FISHOOK	AM					B (10.4)	-	A (5.6)	A (0.0)	B (10.4)	-	A (5.6)	A (0.0)	B (10.4)	-	A (5.6)	A (0.0)	B (10.4)	-	A (5.6)	A (0.0)	B (11.0)		A (5.2)	A (0.0)
	PM					C (15.7)	-	A (3.0)	A (0.0)	C (15.7)	-	A (3.0)	A (0.0)	C (15.7)	-	A (3.0)	A (0.0)	C (15.7)	-	A (3.0)	A (0.0)	C (20.0)		A (2.6)	A (0.0)
ENGSTROM/ CONNECTOR	AM									-	A (9.3)	A (0.0)	A (1.1)	A (0.0)	A (1.4)	B (11.1)	-	A (0.0)	A (0)	B (8.8)	-	A (0.0)	A (1.5)	B (11.2)	-
	PM									-	B (11.9)	A (0.0)	A (1.2)	A (0.0)	A (1.6)	C (17.8)	-	A (0.0)	A (0)	B (8.9)	-	A (0.0)	A (1.4)	C (17.5)	-
TRUNK/ CONNECTOR	AM									D (25.2)	-	A (0.9)	A (0.0)	E (39.9)		A (1.1)	A (0.0)	F (55.1)	F (80.1)	A (1.0)	A (0.1)	A (9.1)		A (1.4)	A (0.0)
	PM									C (18.8)	-	A (0.7)	A (0.0)	E (38.5)		A (0.9)	A (0.0)	F (79.0)	F (151.5)	A (0.9)	A (0.4)	A (9.6)		A (1.3)	A (0.0)

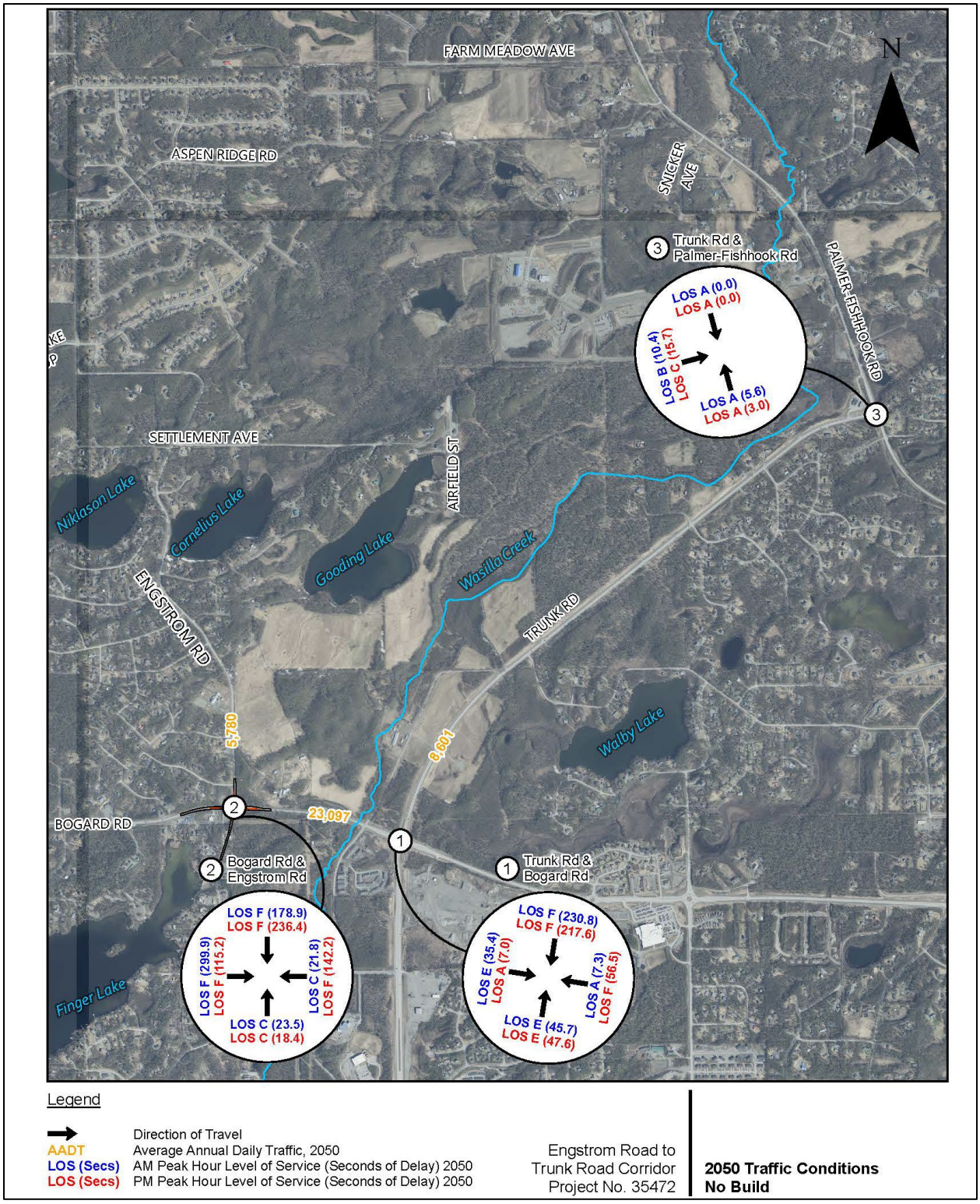

Figure 5: No Build 2050 Traffic Conditions

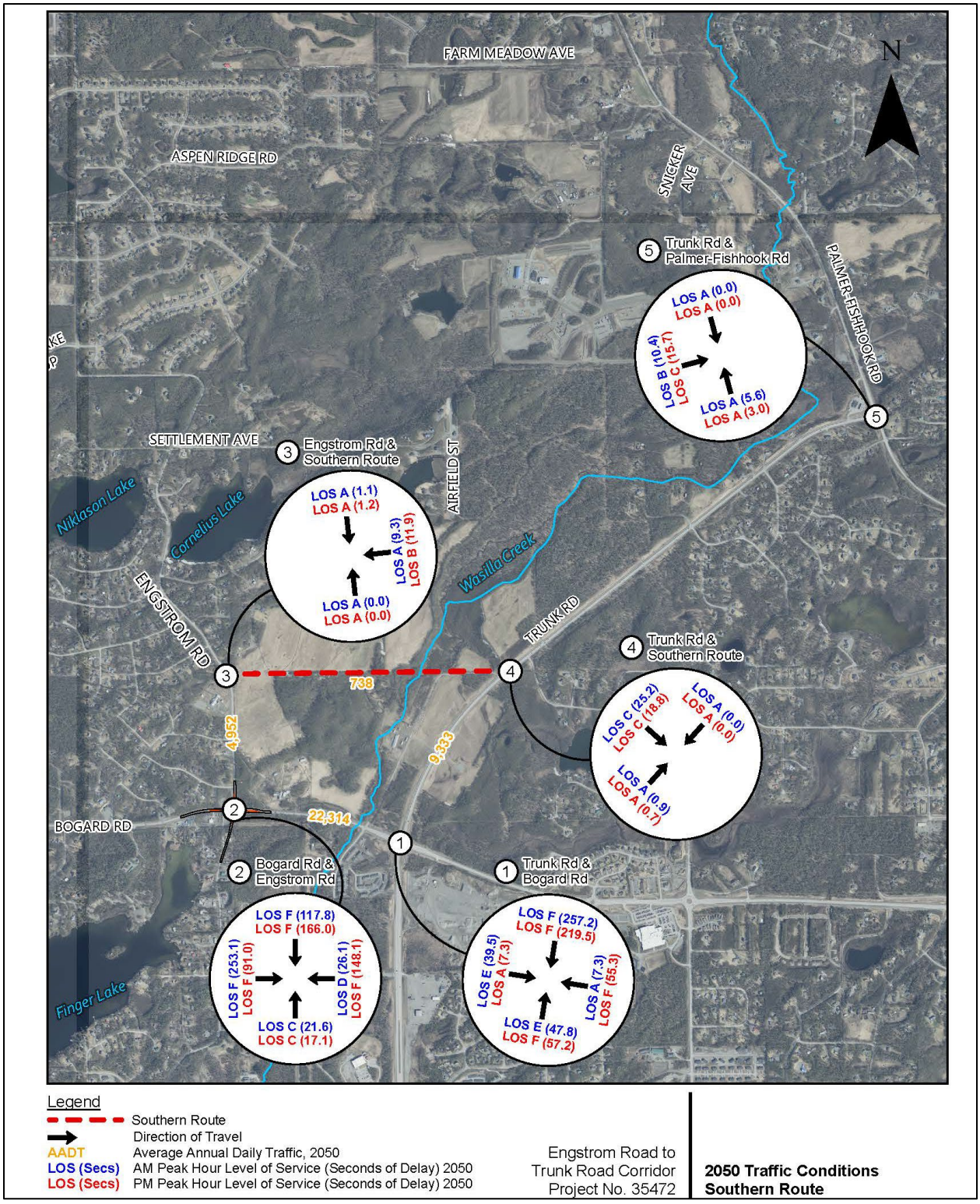

Figure 6: Southern Route 2050 Traffic Conditions

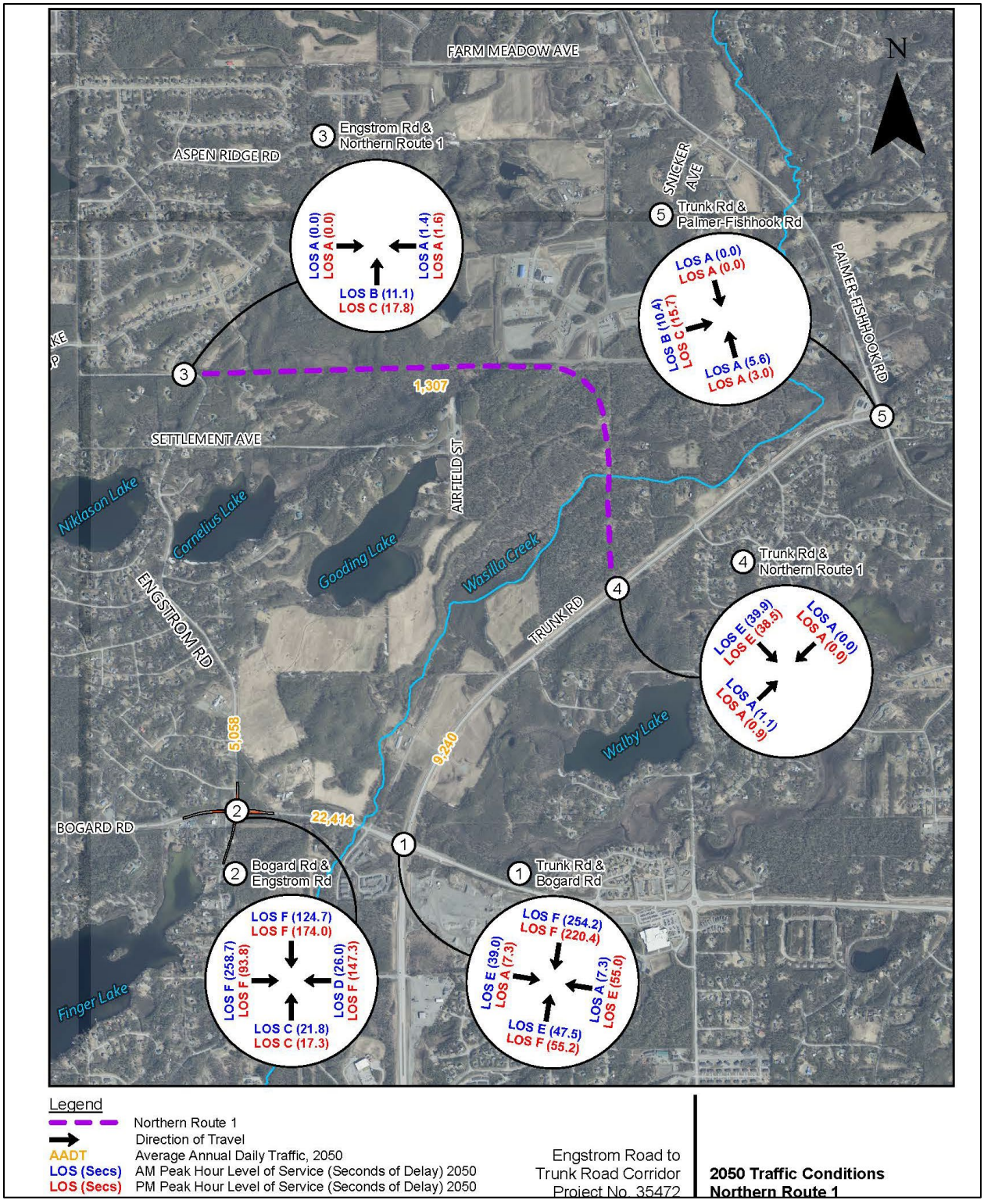

Figure 7: Northern Route 1 2050 Traffic Conditions

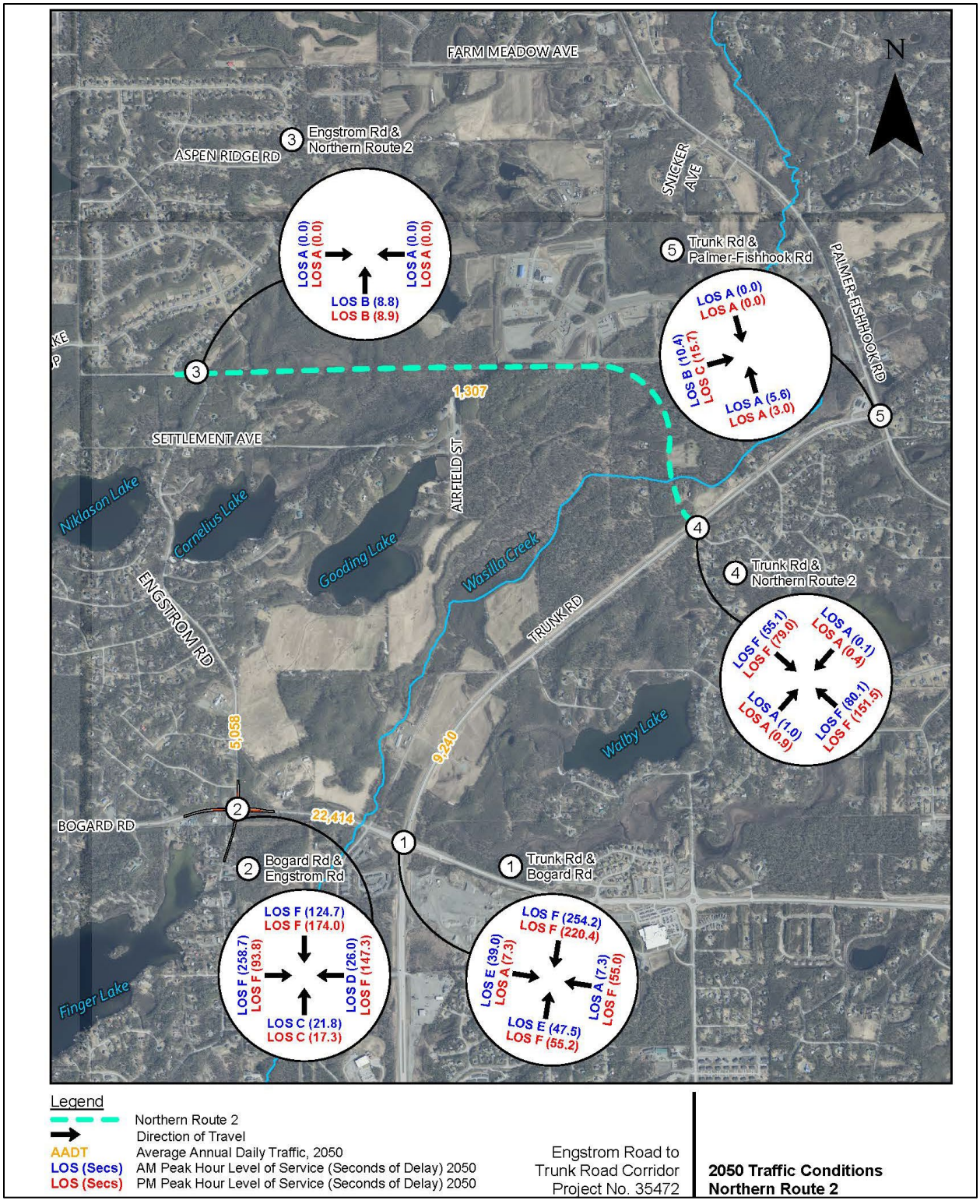

Figure 8: Northern Route 2 2050 Traffic Conditions

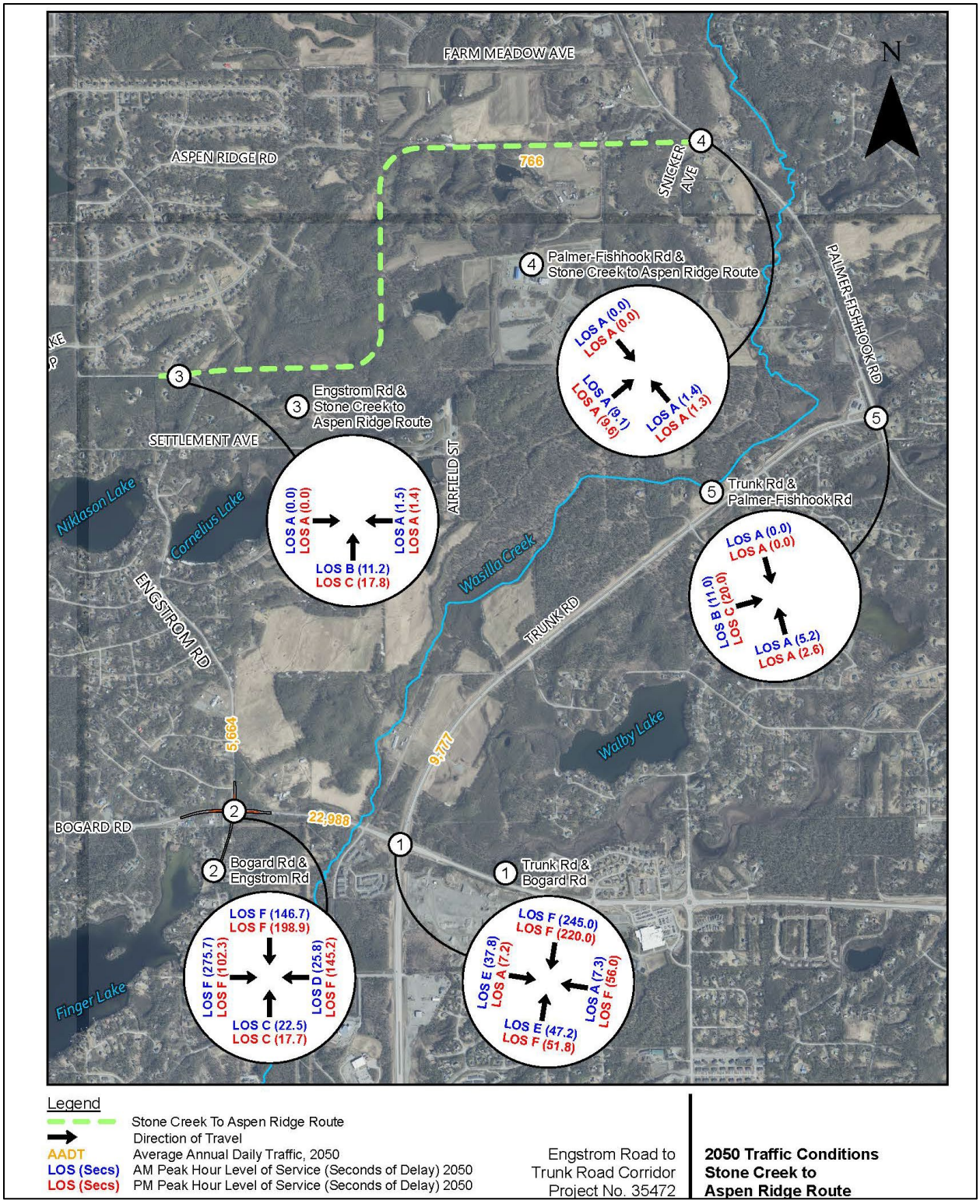

Figure 9: Stone Creek to Aspen Ridge Route 2050 Traffic Conditions

8.0 ANALYSIS RESULTS

Each of the four selected routes evaluated in this analysis will result in different future Design Year (2050) traffic conditions. The information presented in this report, in addition to other decision criteria, is intended to aid in the comparison and selection of a preferred alternative

8.1 Traffic Delay Comparison

Table 4 compares the overall intersection delay times for the four proposed routes at the future Engstrom Road/Bogard Road roundabout and the Trunk Road/Bogard Road roundabout against the No Build option for the Design Year (2050).

Each of the proposed routes will result in decreased delay times for vehicles queuing at the Engstrom Road/Bogard Road roundabout when compared to the No Build. Northern Routes 1 and 2 will improve total wait times by nearly twice as many seconds as the Stone Creek to Aspen Ridge Route, and the Southern Route provides the greatest reduction in traffic delay overall for this intersection.

Table 4: 2050 Critical Intersections - LOS (Delay in Seconds)

INT.		2050 NO BUILD				2050 SOUTHERN ROUTE				2050 NORTHERN ROUTE 1				2050 NORTHERN ROUTE 2				2050 STONE CREEK TO ASPEN RIDGE ROUTE			
		Entire Intersection				Entire Intersection				Entire Intersection				Entire Intersection				Entire Intersection			
DIRECTION/TIME		EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB
ENGSTROM/ BOGARD ROUNDABOUT	AM	F 174.3				F -27.7				F -24.3				F -24.3				F -13.8			
		F 299.9	C 21.8	C 23.5	F 178.9	F -46.8	D +4.3	C -1.9	F -61.1	F -41.2	D +4.2	C -1.7	F -54.2	F -41.2	D +4.2	C -1.7	F -54.2	F -24.2	D +4	C -1	F -32.2
	PM	F 139.1				F -13.9				F -12.4				F -12.4				F -7.6			
		F 115.2	F 142.2	C 18.4	F 236.4	F -24.2	F +5.9	C -1.3	F -70.4	F -21.4	F +5.1	C -1.1	F -62.4	F -21.4	F +5.1	C -1.1	F -62.4	F -12.9	F +3	C -0.7	F -37.5
TRUNK/ BOGARD ROUNDABOUT	AM	F (83.0)				F +12.6				F +11.0				F +11.0				F +6.7			
		E 35.4	A 7.3	E 45.7	F 230.8	E +4.1	A 0	E +2.1	F +26.4	E +3.6	A 0	E +1.8	F 23.4	E +3.6	A 0	E +1.8	F +23.4	E +2.4	A 0	E +1.5	F +14.2
	PM	F (68.4)				F +6.2				F +5.3				F +5.3				F +3.2			
		A 7.0	F 56.5	E 47.6	F 217.6	A +0.3	F -1.2	F +9.6	F +1.9	A +0.3	F -1.5	F +7.6	F +2.8	A +0.3	F -1.5	F +7.6	F +2.8	A +0.2	F -0.5	F +4.2	F -2.4

8.2 Traffic Volumes Comparison

As depicted in Figures 5 through 9, traffic volumes in the Design Year (2050) for each of the evaluated routes vary based on the location of the proposed intersections with Engstrom Road and either Palmer-Fishhook Road or Trunk Road. These volumes are compared against the volumes for the future No Build option in Table 5.

Table 5: 2050 Critical Roadway Segments: Forecasted Volumes Comparison (AADT)

ROADWAY SEGMENT	2050 NO BUILD	2050 SOUTHERN ROUTE	2050 NORTHERN ROUTE 1	2050 NORTHERN ROUTE 2	2050 STONE CREEK TO ASPEN RIDGE ROUTE
Engstrom Rd	5,780	4,952	5,058	5,058	5,664
Bogard Rd: Engstrom Rd to Trunk Rd	23,097	22,314	22,414	22,414	22,988
Trunk Rd: Bogard Rd to Palmer-Fishhook Rd	8,601	9,333	9,240	9,240	9,777
Proposed Connector Route	–	738	1,307	1,307	766

Traffic volumes on Trunk Road will increase in the design year under all conditions as nearby residential developments expand. All four of the proposed routes will additionally increase traffic volumes on Trunk Road by redirecting traffic from adjacent roadways. Traffic volumes on Engstrom Road and Bogard Road are most significantly decreased by the selection of the Southern Route. The Southern Route also has the lowest traffic volumes on the new connector itself; this is due to its proximity to Bogard Road. Traffic allocated to the new Southern Route is redirected almost exclusively from Engstrom Road and Bogard Road. A new connection in this location does not provide alternative travel routes for residents of the neighborhoods north of Cornelius and Niklason Lakes. Similarly, the Stone Creek to Aspen Ridge Route connects to Palmer-Fishhook Road at a location far enough north of the local neighborhoods to disincentivize most residents from selecting it as an alternative travel route.

Both the Northern Routes connect to Engstrom Road and Trunk Road at locations that make them viable alternative travel routes for a large portion of residents in the area, and therefore, their connector route volumes are the highest. While they do not pull as many vehicles directly from the adjacent Engstrom and Bogard roadways, they attract more vehicles from a broader area than either of the Southern or Stone Creek to Aspen Ridge Routes.

8.3 Intersection Queue Length Comparison

Intersection queue lengths at Engstrom Road and Bogard Road are a substantial source of traffic delays and contribute to driver frustration. Table 6 compares queue lengths generated by each proposed route at the future roundabout against the No Build option, for the Design Year (2050).

Table 6: 95th-Percentile Queue Lengths at Engstrom/Bogard Roundabout (Vehicles)

YEAR/ROUTE	AM PEAK				PM PEAK			
	EB	WB	NB	SB	EB	WB	NB	SB
2050 No Build	86	14	1	23	39	58	1	20
2050 Southern Route	78	16	1	16	34	58	1	15
2050 Northern Route 1	79	16	1	17	34	58	1	16
2050 Northern Route 2	79	16	1	17	34	58	1	16
2050 Stone Creek to Aspen Ridge Route	78	16	1	16	34	58	1	15

Each route reduces queue lengths for every leg of the future roundabout for both morning and evening peak traffic times, with the exception of the AM westbound leg, where each route will increase the queue length by two vehicles. While queue lengths are otherwise very similar across all four routes, the Southern Route and Stone Creek to Aspen Ridge Route reduce the southbound queue lengths by one additional vehicle for both AM and PM peak traffic hours.

9.0 SUMMARY

This analysis evaluates future traffic data (2050) for the four proposed connector routes between Engstrom Road and Trunk Road or Palmer-Fishhook Road and compares these routes against the future No Build option. For each proposed route option, the LOS and delay times at the future Engstrom Road/Bogard Road roundabout are considered in addition to forecasted traffic volumes on the connector route itself, and the potential reduction of traffic volumes on Engstrom Road provided by the selection of that route.

Using these criteria, each route is scored on a scale of 1-5, with one representing the most desirable results in a given category. Table 7 summarizes the scoring results for each proposed route.

Table 7: Scoring Results for Proposed Routes

ROUTE	LOS AND DELAY	ROUTE TRAFFIC VOLUMES	ENGSTROM TRAFFIC VOLUME REDUCTION
2050 No Build	5	N/A	5
Southern Route	1	4	1
Northern Route 1	2	1	2
Northern Route 2	2	1	2
Stone Creek to Aspen Ridge Route	4	3	4

Of the four build routes selected for traffic analysis in this report, Northern Routes 1 and 2 both receive the best ratings overall. These two routes are recommended for further evaluation in the Route Selection Report.

APPENDIX A

Synchro Inputs/Outputs

APPENDIX B

Traffic Model Volume Outputs Map